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	January 2022
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
Jan-22	Cadmium	(mg/m3)	Every 6 months							0.2		
Jan-22	Chlorine	(mg/m3)	Every 6 months							20		
Jan-22	Fluorine	(mg/m3)	Every 6 months							30		
Jan-22	Hydrogen chloride	(mg/m3)	Every 6 months							50		
Jan-22	Mercury	(mg/m3)	Every 6 months							0.05		
Jan-22	Nitrogen Oxides	(mg/m3)	Continuous	93.6%	Jan-22	237	637	814	850	980	No	
Jan-22	Solid Particles	(mg/m3)	Quarterly							50		
Jan-22	Sulfur dioxide	(mg/m3)	Continuous	93.7%	Jan-22	429	764	1038	1400	1700	No	
Jan-22	Sulfuric acid mist and sulfur trioxide (as SO3)	(mg/m3)	Every 6 months							100		
Jan-22	Type 1 and Type 2 substances in aggregate	(mg/m3)	Every 6 months							0.75		
Jan-22	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
Jan-22	Cadmium	(mg/m3)	Every 6 months							0.2		
Jan-22	Chlorine	(mg/m3)	Every 6 months							20		
Jan-22	Fluorine	(mg/m3)	Every 6 months							30		
Jan-22	Hydrogen chloride	(mg/m3)	Every 6 months							50		
Jan-22	Mercury	(mg/m3)	Every 6 months							0.05		
Jan-22	Nitrogen Oxides	(mg/m3)	Continuous	93.3%	Jan-22	233	576	792	850	980	No	
Jan-22	Solid Particles	(mg/m3)	Quarterly							50		
Jan-22	Sulfur dioxide	(mg/m3)	Continuous	93.8%	Jan-22	424	712	950	1400	1700	No	
Jan-22	Sulfuric acid mist and sulfur trioxide (as SO3)	(mg/m3)	Every 6 months							100		
Jan-22	Type 1 and Type 2 substances in aggregate	(mg/m3)	Every 6 months							0.75		
Jan-22	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
Jan-22	Cadmium	(mg/m3)	Every 6 months									
Jan-22	Carbon dioxide	(%)	Every 6 months									
Jan-22	Chlorine	(mg/m3)	Every 6 months									
Jan-22	Flow rate	(m3/s)	Continuous									
Jan-22	Fluorine	(mg/m3)	Every 6 months									
Jan-22	Hydrogen chloride	(mg/m3)	Every 6 months									
Jan-22	Mercury	(mg/m3)	Every 6 months									See note at end of report regarding installation of continuous monitoring instrumentation.
Jan-22	Moisture	(%)	Continuous									
Jan-22	Oxygen (O2)	(%)	Continuous									
Jan-22	Solid Particles	(mg/m3)	Quarterly									
Jan-22	Sulfuric acid mist and sulfur trioxide (as SO3)	(mg/m3)	Every 6 months									
Jan-22	Temperature	(°C)	Continuous									
Jan-22	Type 1 and Type 2 substances in aggregate	(mg/m3)	Every 6 months									
Jan-22	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
Jan-22	Cadmium	(mg/m3)	Every 6 months									
Jan-22	Flow rate	(m3/s)	Continuous									
Jan-22	Mercury	(mg/m3)	Every 6 months									
Jan-22	Moisture	(%)	Continuous									See note at end of report regarding installation of continuous monitoring instrumentation.
Jan-22	Oxygen (O2)	(%)	Continuous									
Jan-22	Solid Particles	(mg/m3)	Quarterly									
Jan-22	Temperature	(°C)	Continuous									
Jan-22	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
Jan-22	Cadmium	(mg/m3)	Every 6 months									
Jan-22	Carbon dioxide	(%)	Every 6 months									
Jan-22	Chlorine	(mg/m3)	Every 6 months									
Jan-22	Flow rate	(m3/s)	Continuous									
Jan-22	Fluorine	(mg/m3)	Every 6 months									
Jan-22	Hydrogen chloride	(mg/m3)	Every 6 months									
Jan-22	Mercury	(mg/m3)	Every 6 months									See note at end of report regarding installation of continuous monitoring instrumentation.
Jan-22	Moisture	(%)	Continuous									
Jan-22	Oxygen (O2)	(%)	Continuous									
Jan-22	Solid Particles	(mg/m3)	Quarterly									
Jan-22	Sulfuric acid mist and sulfur trioxide (as SO3)	(mg/m3)	Every 6 months									
Jan-22	Temperature	(°C)	Continuous									
Jan-22	Type 1 and Type 2 substances in aggregate	(mg/m3)	Every 6 months									
Jan-22	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
Jan-22	Cadmium	(mg/m3)	Every 6 months									
Jan-22	Flow rate	(m3/s)	Continuous									
Jan-22	Mercury	(mg/m3)	Every 6 months									
Jan-22	Moisture	(%)	Continuous									See note at end of report regarding installation of continuous monitoring instrumentation.
Jan-22	Oxygen (O2)	(%)	Continuous									
Jan-22	Solid Particles	(mg/m3)	Quarterly									
Jan-22	Temperature	(°C)	Continuous									
Jan-22	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
Jan-22	Cadmium	(mg/m3)	Every 6 months									
Jan-22	Carbon dioxide	(%)	Every 6 months									
Jan-22	Chlorine	(mg/m3)	Every 6 months									
Jan-22	Flow rate	(m3/s)	Continuous									
Jan-22	Fluorine	(mg/m3)	Every 6 months									
Jan-22	Hydrogen chloride	(mg/m3)	Every 6 months									
Jan-22	Mercury	(mg/m3)	Every 6 months									See note at end of report regarding installation of continuous monitoring instrumentation.
Jan-22	Moisture	(%)	Continuous									
Jan-22	Oxygen (O2)	(%)	Continuous									
Jan-22	Solid Particles	(mg/m3)	Quarterly									
Jan-22	Sulfuric acid mist and sulfur trioxide (as SO3)	(mg/m3)	Every 6 months									
Jan-22	Temperature	(°C)	Continuous									
Jan-22	Type 1 and Type 2 substances in aggregate	(mg/m3)	Every 6 months									
Jan-22	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
Jan-22	Cadmium	(mg/m3)	Every 6 months									
Jan-22	Flow rate	(m3/s)	Continuous									
Jan-22	Mercury	(mg/m3)	Every 6 months									
Jan-22	Moisture	(%)	Continuous									See note at end of report regarding installation of continuous monitoring instrumentation.
Jan-22	Oxygen (O2)	(%)	Continuous									
Jan-22	Solid Particles	(mg/m3)	Quarterly									
Jan-22	Temperature	(°C)	Continuous									
Jan-22	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
Jan-22	Cadmium	(mg/m3)	Every 6 months									
Jan-22	Carbon dioxide	(%)	Every 6 months									
Jan-22	Chlorine	(mg/m3)	Every 6 months									
Jan-22	Flow rate	(m3/s)	Continuous									
Jan-22	Fluorine	(mg/m3)	Every 6 months									
Jan-22	Hydrogen chloride	(mg/m3)	Every 6 months									
Jan-22	Mercury	(mg/m3)	Every 6 months									See note at end of report regarding installation of continuous monitoring instrumentation.
Jan-22	Moisture	(%)	Continuous									
Jan-22	Oxygen (O2)	(%)	Continuous									
Jan-22	Solid Particles	(mg/m3)	Quarterly									
Jan-22	Sulfuric acid mist and sulfur trioxide (as SO3)	(mg/m3)	Every 6 months									
Jan-22	Temperature	(°C)	Continuous									
Jan-22	Type 1 and Type 2 substances in aggregate	(mg/m3)	Every 6 months									
Jan-22	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
Jan-22	Cadmium	(mg/m3)	Every 6 months									
Jan-22	Flow rate	(m3/s)	Continuous									
Jan-22	Mercury	(mg/m3)	Every 6 months									
Jan-22	Moisture	(%)	Continuous									See note at end of report regarding installation of continuous monitoring instrumentation.
Jan-22	Oxygen (O2)	(%)	Continuous									
Jan-22	Solid Particles	(mg/m3)	Quarterly									
Jan-22	Temperature	(°C)	Continuous									
Jan-22	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
Jan-22	Nitrogen Oxides	(mg/m3)	Continuous	93.6%	Jan-22	269	634	816			N/A	
Jan-22	Sulfur dioxide	(mg/m3)	Continuous	93.6%	Jan-22	350	748	1042			N/A	

POINT 13 **Boiler number 5 combined exhaust - duct C and D (points 6 and 7) marked and shownas 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
Jan-22	Nitrogen Oxides	(mg/m3)	Continuous	93.6%	Jan-22	204	640	846			N/A	
Jan-22	Sulfur dioxide	(mg/m3)	Continuous	93.8%	Jan-22	445	779	1035			N/A	

POINT 14 **Boiler number 6 combined exhaust - duct A and B (points 8 and 9) marked and shownas 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
Jan-22	Nitrogen Oxides	(mg/m3)	Continuous	93.0%	Jan-22	228	591	790			N/A	
Jan-22	Sulfur dioxide	(mg/m3)	Continuous	93.1%	Jan-22	374	738	1002			N/A	

POINT 15 **Boiler number 6 combined exhaust - duct C and D (points 10 and 11) marked and shownas 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
Jan-22	Nitrogen Oxides	(mg/m3)	Continuous	93.5%	Jan-22	211	562	954			N/A	
Jan-22	Sulfur dioxide	(mg/m3)	Continuous	94.5%	Jan-22	408	685	918			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/Measurement 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
Jan-22	Chlorine (free residual)	(mg/L)	Monthly during discharge	1	11/01/2022	<0.1	<0.1	<0.1		**0.2**	No	
Jan-22	Copper	(mg/L)	Monthly during discharge	1	11/01/2022	0.003	0.003	0.003		**0.005**	No	
Jan-22	Iron	(mg/L)	Monthly during discharge	1	11/01/2022	0.071	0.071	0.071		**0.3**	No	
Jan-22	Oil and Grease	Visible	Continuous during discharge	100%	Jan-22	NIL	NIL	NIL				
Jan-22	Selenium	(mg/L)	Monthly during discharge	1	11/01/2022	<0.002	<0.002	<0.002		**0.005**	No	
Jan-22	Temperature	(°C)	Continuous during discharge	100%	Jan-22	25.8	31.5	36.7	**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
Jan-22	Aluminium	(mg/L)	Monthly during discharge	1	11/01/2022	0.052	0.052	0.052				
Jan-22	Ammonia	(mg/L)	Monthly during discharge	1	11/01/2022	0.16	0.16	0.16				
Jan-22	Arsenic (III)	(mg/L)	Monthly during discharge	1	11/01/2022	<0.0025	<0.0025	<0.0025				
Jan-22	Arsenic (V)	(mg/L)	Monthly during discharge	1	11/01/2022	0.0078	0.0078	0.0078				
Jan-22	Cadmium	(mg/L)	Monthly during discharge	1	11/01/2022	<0.0002	<0.0002	<0.0002				
Jan-22	Chromium (trivalent)	(mg/L)	Monthly during discharge	1	11/01/2022	0.003	0.003	0.003				
Jan-22	Chromium (VI) Compounds	(mg/L)	Monthly during discharge	1	11/01/2022	0.017	0.017	0.017				
Jan-22	Copper	(mg/L)	Monthly during discharge	1	11/01/2022	<0.001	<0.001	<0.001				
Jan-22	Iron	(mg/L)	Monthly during discharge	1	11/01/2022	0.037	0.037	0.037				
Jan-22	Lead	(mg/L)	Monthly during discharge	1	11/01/2022	<0.0002	<0.0002	<0.0002				
Jan-22	Manganese	(mg/L)	Monthly during discharge	1	11/01/2022	0.0055	0.0055	0.0055				
Jan-22	Nickel	(mg/L)	Monthly during discharge	1	11/01/2022	<0.0005	<0.0005	<0.0005				
Jan-22	Nitrate + nitrite (oxidised nitrogen)	(mg/L)	Monthly during discharge	1	11/01/2022	0.16	0.16	0.16				
Jan-22	Nitrogen	(mg/L)	Monthly during discharge	1	11/01/2022	<0.5	<0.5	<0.5				
Jan-22	pH	pH	Monthly during discharge	1	11/01/2022	8.78	8.78	8.78		**6.5 - 9.5**	No	
Jan-22	Phosphorus	(mg/L)	Monthly during discharge	1	11/01/2022	0.08	0.08	0.08				
Jan-22	Reactive Phosphorus	(mg/L)	Monthly during discharge	1	11/01/2022	0.04	0.04	0.04				
Jan-22	Selenium	(mg/L)	Monthly during discharge	1	11/01/2022	0.084	0.084	0.084				
Jan-22	Total Kjeldahl Nitrogen	(mg/L)	Monthly during discharge	1	11/01/2022	<0.5	<0.5	<0.5				
Jan-22	Total Suspended Solids	(mg/L)	Monthly during discharge	1	11/01/2022	7	7	7		**50**	No	
Jan-22	Vanadium	(mg/L)	Monthly during discharge	1	11/01/2022	0.0804	0.0804	0.0804				
Jan-22	Zinc	(mg/L)	Monthly during discharge	1	11/01/2022	<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
Jan-22	Aluminium	(mg/L)	Monthly during discharge	1	11/01/2022				No			
Jan-22	Ammonia	(mg/L)	Monthly during discharge	1	11/01/2022				No			
Jan-22	Arsenic (III)	(mg/L)	Monthly during discharge	1	11/01/2022				No			
Jan-22	Arsenic (V)	(mg/L)	Monthly during discharge	1	11/01/2022				No			
Jan-22	Cadmium	(mg/L)	Monthly during discharge	1	11/01/2022				No			
Jan-22	Chromium (trivalent)	(mg/L)	Monthly during discharge	1	11/01/2022				No			
Jan-22	Chromium (VI) Compounds	(mg/L)	Monthly during discharge	1	11/01/2022				No			
Jan-22	Copper	(mg/L)	Monthly during discharge	1	11/01/2022				No			
Jan-22	Iron	(mg/L)	Monthly during discharge	1	11/01/2022				No			
Jan-22	Lead	(mg/L)	Monthly during discharge	1	11/01/2022				No			
Jan-22	Manganese	(mg/L)	Monthly during discharge	1	11/01/2022				No			
Jan-22	Nickel	(mg/L)	Monthly during discharge	1	11/01/2022				No			No discharge from EPA Point 24 during January 2022
Jan-22	Nitrate + nitrite (oxidised nitrogen)	(mg/L)	Monthly during discharge	1	11/01/2022				No			
Jan-22	Nitrogen	(mg/L)	Monthly during discharge	1	11/01/2022				No			
Jan-22	pH	pH	Monthly during discharge	1	11/01/2022				No	6.5 - 9.5	No	
Jan-22	Phosphorus	(mg/L)	Monthly during discharge	1	11/01/2022				No			
Jan-22	Reactive Phosphorus	(mg/L)	Monthly during discharge	1	11/01/2022				No			
Jan-22	Selenium	(mg/L)	Monthly during discharge	1	11/01/2022				No			
Jan-22	Total Kjeldahl Nitrogen	(mg/L)	Monthly during discharge	1	11/01/2022				No			
Jan-22	Total Suspended Solids	(mg/L)	Monthly during discharge	1	11/01/2022				No	50	No	
Jan-22	Vanadium	(mg/L)	Monthly during discharge	1	11/01/2022				No			
Jan-22	Zinc	(mg/L)	Monthly during discharge	1	11/01/2022				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
Jan-22	Aluminium	(mg/L)	Daily for any discharge >2 hrs						No			
Jan-22	Ammonia	(mg/L)	Daily for any discharge >2 hrs						No			
Jan-22	Arsenic (III)	(mg/L)	Daily for any discharge >2 hrs						No			
Jan-22	Arsenic (V)	(mg/L)	Daily for any discharge >2 hrs						No			
Jan-22	Cadmium	(mg/L)	Daily for any discharge >2 hrs						No			
Jan-22	Chromium (trivalent)	(mg/L)	Daily for any discharge >2 hrs						No			
Jan-22	Chromium (VI) Compounds	(mg/L)	Daily for any discharge >2 hrs						No			
Jan-22	Copper	(mg/L)	Daily for any discharge >2 hrs						No			
Jan-22	Iron	(mg/L)	Daily for any discharge >2 hrs						No			
Jan-22	Lead	(mg/L)	Daily for any discharge >2 hrs						No			
Jan-22	Manganese	(mg/L)	Daily for any discharge >2 hrs						No			No discharge from EPA Point 25 during January 2022
Jan-22	Nickel	(mg/L)	Daily for any discharge >2 hrs						No			
Jan-22	Nitrate + nitrite (oxidised nitrogen)	(mg/L)	Daily for any discharge >2 hrs						No			
Jan-22	Nitrogen	(mg/L)	Daily for any discharge >2 hrs						No			
Jan-22	pH	pH	Daily for any discharge >2 hrs						No	6.5 - 9.5	No	
Jan-22	Phosphorus	(mg/L)	Daily for any discharge >2 hrs						No			
Jan-22	Reactive Phosphorus	(mg/L)	Daily for any discharge >2 hrs						No			
Jan-22	Selenium	(mg/L)	Daily for any discharge >2 hrs						No			
Jan-22	Total Kjeldahl Nitrogen	(mg/L)	Daily for any discharge >2 hrs						No			
Jan-22	Total Suspended Solids	(mg/L)	Daily for any discharge >2 hrs						No	50	No	
Jan-22	Vanadium	(mg/L)	Daily for any discharge >2 hrs						No			
Jan-22	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
Jan-22	Aluminium	(mg/L)	Quarterly	1	11/01/2022	0.416	0.416	0.416				
Jan-22	Ammonia	(mg/L)	Quarterly	1	11/01/2022	4.01	4.01	4.01				
Jan-22	Arsenic (III)	(mg/L)	Quarterly	1	11/01/2022	<0.005	<0.005	<0.005				
Jan-22	Arsenic (V)	(mg/L)	Quarterly	1	11/01/2022	<0.005	<0.005	<0.005				
Jan-22	Cadmium	(mg/L)	Quarterly	1	11/01/2022	<0.0002	<0.0002	<0.0002				
Jan-22	Chromium (trivalent)	(mg/L)	Quarterly	1	11/01/2022	0.002	0.002	0.002				
Jan-22	Chromium (VI) Compounds	(mg/L)	Quarterly	1	11/01/2022	<0.001	<0.001	<0.001				
Jan-22	Copper	(mg/L)	Quarterly	1	11/01/2022	0.002	0.002	0.002				
Jan-22	Electrical Conductivity	(us/cm)	Quarterly	1	11/01/2022	35000	35000	35000				Advised by water quality monitoring consultants that some results published in Jan 2022 were incorrect. Correct values are now in the table. Corrected report republished Feb 2022.
Jan-22	Iron	(mg/L)	Quarterly	1	11/01/2022	38.6	38.6	38.6				
Jan-22	Lead	(mg/L)	Quarterly	1	11/01/2022	0.0010	0.0010	0.0010				
Jan-22	Magnesium	(mg/L)	Quarterly	1	11/01/2022	820	820	820				
Jan-22	Manganese	(mg/L)	Quarterly	1	11/01/2022	4.51	4.51	4.51				
Jan-22	Nickel	(mg/L)	Quarterly	1	11/01/2022	0.0197	0.0197	0.0197				
Jan-22	pH	pH	Quarterly	1	11/01/2022	5.54	5.54	5.54				
Jan-22	Potassium	(mg/L)	Quarterly	1	11/01/2022	101	101	101				
Jan-22	Selenium	(mg/L)	Quarterly	1	11/01/2022	<0.002	<0.002	<0.002				
Jan-22	Sodium	(mg/L)	Quarterly	1	11/01/2022	5860	5860	5860				
Jan-22	Standing Water Level	(m)	Quarterly	1	11/01/2022	3.75	3.75	3.75				
Jan-22	Vanadium	(mg/L)	Quarterly	1	11/01/2022	0.0008	0.0008	0.0008				
Jan-22	Zinc	(mg/L)	Quarterly	1	11/01/2022	0.019	0.019	0.019				

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
Jan-22	Aluminium	(mg/L)	Quarterly	1	11/01/2022	2.57	2.57	2.57				
Jan-22	Ammonia	(mg/L)	Quarterly	1	11/01/2022	0.06	0.06	0.06				
Jan-22	Arsenic (III)	(mg/L)	Quarterly	1	11/01/2022	0.0013	0.0013	0.0013				
Jan-22	Arsenic (V)	(mg/L)	Quarterly	1	11/01/2022	0.0015	0.0015	0.0015				
Jan-22	Cadmium	(mg/L)	Quarterly	1	11/01/2022	0.00011	0.00011	0.00011				
Jan-22	Chromium (trivalent)	(mg/L)	Quarterly	1	11/01/2022	0.002	0.002	0.002				
Jan-22	Chromium (VI) Compounds	(mg/L)	Quarterly	1	11/01/2022	0.002	0.002	0.002				
Jan-22	Copper	(mg/L)	Quarterly	1	11/01/2022	0.0198	0.0198	0.0198				
Jan-22	Electrical Conductivity	(us/cm)	Quarterly	1	11/01/2022	1120	1120	1120				Advised by water quality monitoring consultants that some results published in Jan 2022 were incorrect. Correct values are now in the table. Corrected report republished Feb 2022.
Jan-22	Iron	(mg/L)	Quarterly	1	11/01/2022	5.86	5.86	5.86				
Jan-22	Lead	(mg/L)	Quarterly	1	11/01/2022	0.0090	0.0090	0.0090				
Jan-22	Magnesium	(mg/L)	Quarterly	1	11/01/2022	19	19	19				
Jan-22	Manganese	(mg/L)	Quarterly	1	11/01/2022	0.150	0.150	0.150				
Jan-22	Nickel	(mg/L)	Quarterly	1	11/01/2022	0.0272	0.0272	0.0272				
Jan-22	pH	pH	Quarterly	1	11/01/2022	5.71	5.71	5.71				
Jan-22	Potassium	(mg/L)	Quarterly	1	11/01/2022	3	3	3				
Jan-22	Selenium	(mg/L)	Quarterly	1	11/01/2022	0.0014	0.0014	0.0014				
Jan-22	Sodium	(mg/L)	Quarterly	1	11/01/2022	148	148	148				
Jan-22	Standing Water Level	(m)	Quarterly	1	11/01/2022	0.63	0.63	0.63				
Jan-22	Vanadium	(mg/L)	Quarterly	1	11/01/2022	0.005	0.005	0.005				
Jan-22	Zinc	(mg/L)	Quarterly	1	11/01/2022	1.46	1.46	1.46				

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 & Analysed	Date Sampled	Lowest Sample Value	Mean of Samples	Highest Sample Value	99 Percentile Concentration Limit	100 Percentile Concentration Limit	Exceedance (yes/no)	Comments
Jan-22	Aluminium	(mg/L)	Quarterly	1	11/01/2022	4.34	4.34	4.34				
Jan-22	Ammonia	(mg/L)	Quarterly	1	11/01/2022	0.05	0.05	0.05				
Jan-22	Arsenic (III)	(mg/L)	Quarterly	1	11/01/2022	<0.0005	<0.0005	<0.0005				
Jan-22	Arsenic (V)	(mg/L)	Quarterly	1	11/01/2022	<0.0005	<0.0005	<0.0005				
Jan-22	Cadmium	(mg/L)	Quarterly	1	11/01/2022	<0.00005	<0.00005	<0.00005				
Jan-22	Chromium (trivalent)	(mg/L)	Quarterly	1	11/01/2022	<0.001	<0.001	<0.001				
Jan-22	Chromium (VI) Compounds	(mg/L)	Quarterly	1	11/01/2022	0.004	0.004	0.004				
Jan-22	Copper	(mg/L)	Quarterly	1	11/01/2022	0.0041	0.0041	0.0041				
Jan-22	Electrical Conductivity	(us/cm)	Quarterly	1	11/01/2022	455	455	455				Advised by water quality monitoring consultants that some results published in Jan 2022 were incorrect. Correct values are now in the table. Corrected report republished Feb 2022.
Jan-22	Iron	(mg/L)	Quarterly	1	11/01/2022	6.65	6.65	6.65				
Jan-22	Lead	(mg/L)	Quarterly	1	11/01/2022	0.0022	0.0022	0.0022				
Jan-22	Magnesium	(mg/L)	Quarterly	1	11/01/2022	6	6	6				
Jan-22	Manganese	(mg/L)	Quarterly	1	11/01/2022	0.0022	0.0022	0.0022				
Jan-22	Nickel	(mg/L)	Quarterly	1	11/01/2022	0.057	0.057	0.057				
Jan-22	pH	pH	Quarterly	1	11/01/2022	6.01	6.01	6.01				
Jan-22	Potassium	(mg/L)	Quarterly	1	11/01/2022	1	1	1				
Jan-22	Selenium	(mg/L)	Quarterly	1	11/01/2022	0.0004	0.0004	0.0004				
Jan-22	Sodium	(mg/L)	Quarterly	1	11/01/2022	42	42	42				
Jan-22	Standing Water Level	(m)	Quarterly	1	11/01/2022	2.46	2.46	2.46				
Jan-22	Vanadium	(mg/L)	Quarterly	1	11/01/2022	0.0050	0.0050	0.0050				
Jan-22	Zinc	(mg/L)	Quarterly	1	11/01/2022	0.012	0.012	0.012				

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 & Analysed	Date Sampled	Lowest Sample Value	Mean of Samples	Highest Sample Value	99 Percentile Concentration Limit	100 Percentile Concentration Limit	Exceedance (yes/no)	Comments
Jan-22	Aluminium	(mg/L)	Quarterly	1	11/01/2022	0.21	0.21	0.21				
Jan-22	Ammonia	(mg/L)	Quarterly	1	11/01/2022	1.08	1.08	1.08				
Jan-22	Arsenic (III)	(mg/L)	Quarterly	1	11/01/2022	<0.005	<0.005	<0.005				
Jan-22	Arsenic (V)	(mg/L)	Quarterly	1	11/01/2022	<0.005	<0.005	<0.005				
Jan-22	Cadmium	(mg/L)	Quarterly	1	11/01/2022	<0.0002	<0.0002	<0.0002				
Jan-22	Chromium (trivalent)	(mg/L)	Quarterly	1	11/01/2022	<0.001	<0.001	<0.001				
Jan-22	Chromium (VI) Compounds	(mg/L)	Quarterly	1	11/01/2022	0.002	0.002	0.002				
Jan-22	Copper	(mg/L)	Quarterly	1	11/01/2022	<0.001	<0.001	<0.001				
Jan-22	Electrical Conductivity	(us/cm)	Quarterly	1	11/01/2022	48000	48000	48000				Advised by water quality monitoring consultants that some results published in Jan 2022 were incorrect. Correct values are now in the table. Corrected report republished Feb 2022.
Jan-22	Iron	(mg/L)	Quarterly	1	11/01/2022	38	38	38				
Jan-22	Lead	(mg/L)	Quarterly	1	11/01/2022	0.0004	0.0004	0.0004				
Jan-22	Magnesium	(mg/L)	Quarterly	1	11/01/2022	1320	1320	1320				
Jan-22	Manganese	(mg/L)	Quarterly	1	11/01/2022	0.678	0.678	0.678				
Jan-22	Nickel	(mg/L)	Quarterly	1	11/01/2022	<0.0005	<0.0005	<0.0005				
Jan-22	pH	pH	Quarterly	1	11/01/2022	6.61	6.61	6.61				
Jan-22	Potassium	(mg/L)	Quarterly	1	11/01/2022	297	297	297				
Jan-22	Selenium	(mg/L)	Quarterly	1	11/01/2022	<0.002	<0.002	<0.002				
Jan-22	Sodium	(mg/L)	Quarterly	1	11/01/2022	11500	11500	11500				
Jan-22	Standing Water Level	(m)	Quarterly	1	11/01/2022	0.03	0.03	0.03				
Jan-22	Vanadium	(mg/L)	Quarterly	1	11/01/2022	0.0015	0.0015	0.0015				
Jan-22	Zinc	(mg/L)	Quarterly	1	11/01/2022	0.017	0.017	0.017				

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
Jan-22	Aluminium	(mg/L)	Quarterly	1	11/01/2022	0.55	0.55	0.55				
Jan-22	Ammonia	(mg/L)	Quarterly	1	11/01/2022	0.06	0.06	0.06				
Jan-22	Arsenic (III)	(mg/L)	Quarterly	1	11/01/2022	<0.0005	<0.0005	<0.0005				
Jan-22	Arsenic (V)	(mg/L)	Quarterly	1	11/01/2022	<0.0005	<0.0005	<0.0005				
Jan-22	Cadmium	(mg/L)	Quarterly	1	11/01/2022	0.00005	0.00005	0.00005				
Jan-22	Chromium (trivalent)	(mg/L)	Quarterly	1	11/01/2022	0.002	0.002	0.002				
Jan-22	Chromium (VI) Compounds	(mg/L)	Quarterly	1	11/01/2022	<0.001	<0.001	<0.001				
Jan-22	Copper	(mg/L)	Quarterly	1	11/01/2022	0.0062	0.0062	0.0062				
Jan-22	Electrical Conductivity	(us/cm)	Quarterly	1	11/01/2022	951	951	951				Advised by water quality monitoring consultants that some results published in Jan 2022 were incorrect. Correct values are now in the table. Corrected report republished Feb 2022.
Jan-22	Iron	(mg/L)	Quarterly	1	11/01/2022	2.50	2.50	2.50				
Jan-22	Lead	(mg/L)	Quarterly	1	11/01/2022	0.0015	0.0015	0.0015				
Jan-22	Magnesium	(mg/L)	Quarterly	1	11/01/2022	12	12	12				
Jan-22	Manganese	(mg/L)	Quarterly	1	11/01/2022	0.0015	0.0015	0.0015				
Jan-22	Nickel	(mg/L)	Quarterly	1	11/01/2022	0.0136	0.0136	0.0136				
Jan-22	pH	pH	Quarterly	1	11/01/2022	5.10	5.10	5.10				
Jan-22	Potassium	(mg/L)	Quarterly	1	11/01/2022	3	3	3				
Jan-22	Selenium	(mg/L)	Quarterly	1	11/01/2022	<0.0002	<0.0002	<0.0002				
Jan-22	Sodium	(mg/L)	Quarterly	1	11/01/2022	131	131	131				
Jan-22	Standing Water Level	(m)	Quarterly	1	11/01/2022	-0.27	-0.27	-0.27				
Jan-22	Vanadium	(mg/L)	Quarterly	1	11/01/2022	0.0012	0.0012	0.0012				
Jan-22	Zinc	(mg/L)	Quarterly	1	11/01/2022	0.060	0.060	0.060				

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.