

## Vales Point Power Station Monthly Environmental Data Summary



LICENCE NO	761	<a href="http://www.epa.nsw.gov.au/prpoeapp/">http://www.epa.nsw.gov.au/prpoeapp/</a>
LICENCE HOLDER	SUNSET POWER INTERNATIONAL PTY LTD	
REPORTING PERIOD	May 2019	
ADDRESS	VALES POINT ROAD, MANNERING PARK NSW	

POINT 1 Cooling water outlet at Wyee Bay, marked and shown as "VPOC" on the Plan (VX837351, 30.06.2015, DOC15/381265).											
Month	Pollutant	Unit of Measure	Sample/Measurement Frequency	Samples Collected & Analysed	Date Sampled	Lowest Sample Value	Mean of Samples	Highest Sample Value	EPL Limit	Exceedance (yes/no)	Comments
May-19	Chlorine (free residual)	milligrams per litre	Monthly	1	13/5/2019	0.05	0.05	0.05	0.2	No	
May-19	Temperature	degrees celsius	Continuous	100%	May-19	23.2	28.4	31.6	37.5	No	
May-19	Oil and Grease	Visible	Continuous	100%	May-19	NIL	NIL	NIL			No visible oil or grease detected during May 2019.

POINT 2 Discharge from the ash water recycle system to the cooling water outlet canal, marked and shown as "VPADB" on the Plan (VX837351, 30.06.2015, DOC15/381265).											
Month	Pollutant	Unit of Measure	Sample/Measurement Frequency	Samples Collected & Analysed	Date Sampled	Lowest Sample Value	Mean of Samples	Highest Sample Value	EPL Limit	Exceedance (yes/no)	Comments
May-19	Ammonia	milligrams per litre	Quarterly								
May-19	Cadmium	milligrams per litre	Quarterly								
May-19	Copper	milligrams per litre	Quarterly								
May-19	Lead	milligrams per litre	Quarterly								
May-19	Manganese	milligrams per litre	Quarterly								
May-19	Nitrate + nitrite (oxidised nitrogen)	milligrams per litre	Monthly	1	13/5/2019	0.09	0.09	0.09			
May-19	Nitrogen (total)	milligrams per litre	Quarterly								
May-19	pH	pH	Monthly	1	13/5/2019	8.58	8.58	8.58	6.5 - 9.5	No	
May-19	Phosphorus (total)	milligrams per litre	Monthly	1	13/5/2019	0.17	0.17	0.17			
May-19	Reactive Phosphorus	milligrams per litre	Monthly	1	13/5/2019	0.09	0.09	0.09			
May-19	Selenium	milligrams per litre	Quarterly								
May-19	Total Kjeldahl Nitrogen	milligrams per litre	Quarterly								
May-19	Total Suspended Solids	milligrams per litre	Fortnightly	13	May-19	<2	12	83*	50	Yes	*The background TSS concentration in Lake Macquarie was higher than TSS concentration at EPA2 when the exceedance occurred.
May-19	Zinc	milligrams per litre	Quarterly								

POINT 4 Seepage from ash dam rehabilitated area, marked and shown as "VPADS" on the Plan (VX837351, 30.06.2015, DOC15/381265).											
Month	Pollutant	Unit of Measure	Sample/Measurement Frequency	Samples Collected & Analysed	Date Sampled	Lowest Sample Value	Mean of Samples	Highest Sample Value	EPL Limit	Exceedance (yes/no)	Comments
May-19	Ammonia	milligrams per litre	Quarterly								
May-19	Cadmium	milligrams per litre	Quarterly								
May-19	Copper	milligrams per litre	Quarterly								
May-19	Lead	milligrams per litre	Quarterly								
May-19	Manganese	milligrams per litre	Quarterly								
May-19	Nitrate + nitrite (oxidised nitrogen)	milligrams per litre	Monthly	1	13/5/2019						** Seepage water sampled is captured and pumped back to the ash dam. There was no licence 'discharge to waters' (i.e. to Mannerling Bay) during May 2019.
May-19	Nitrogen (total)	milligrams per litre	Quarterly								
May-19	pH	pH	Monthly	1	13/5/2019						
May-19	Phosphorus (total)	milligrams per litre	Monthly	1	13/5/2019						
May-19	Selenium	milligrams per litre	Quarterly								
May-19	Total Kjeldahl Nitrogen	milligrams per litre	Quarterly								
May-19	Total Suspended Solids	milligrams per litre	Monthly	1	13/5/2019				50	No	
May-19	Zinc	milligrams per litre	Quarterly								

POINT 18 Overboarding of Ash Dam, marked and shown as "VPADD" on the Plan (VX837351, 30.06.2015, DOC15/381265).											
Month	Pollutant	Unit of Measure	Sample/Measurement Frequency	Samples Collected & Analysed	Date Sampled	Lowest Sample Value	Mean of Samples	Highest Sample Value	EPL Limit	Exceedance (yes/no)	Comments
May-19	Ammonia	milligrams per litre	Daily for discharge >2 hrs								
May-19	Cadmium	milligrams per litre	Daily for discharge >2 hrs								
May-19	Copper	milligrams per litre	Daily for discharge >2 hrs								
May-19	Lead	milligrams per litre	Daily for discharge >2 hrs								
May-19	Manganese	milligrams per litre	Daily for discharge >2 hrs								
May-19	Nitrate + nitrite (oxidised nitrogen)	milligrams per litre	Daily for discharge >2 hrs								
May-19	Nitrogen (total)	milligrams per litre	Daily for discharge >2 hrs								No discharge from EPA Point 18 during May 2019
May-19	pH	pH	Daily for discharge >2 hrs						6.5 - 9.0		
May-19	Phosphorus (total)	milligrams per litre	Daily for discharge >2 hrs								
May-19	Selenium	milligrams per litre	Daily for discharge >2 hrs								
May-19	Total Kjeldahl Nitrogen	milligrams per litre	Daily for discharge >2 hrs								
May-19	Total Suspended Solids	milligrams per litre	Daily for discharge >2 hrs						50		
May-19	Zinc	milligrams per litre	Daily for discharge >2 hrs								

POINT 19 Groundwater bore, marked and shown as "VPGM/D3" on the Plan (VX837351, 30.06.2015, DOC15/381265).											
Month	Pollutant	Unit of Measure	Sample/Measurement Frequency	Samples Collected & Analysed	Date Sampled	Lowest Sample Value	Mean of Samples	Highest Sample Value	EPL Limit	Exceedance (yes/no)	Comments
May-19	Arsenic	milligrams per litre	Quarterly								
May-19	Cadmium	milligrams per litre	Quarterly								
May-19	Calcium	milligrams per litre	Quarterly								
May-19	Chromium	milligrams per litre	Quarterly								
May-19	Copper	milligrams per litre	Quarterly								
May-19	Electrical conductivity	microsiemens per centimetre	Quarterly								
May-19	Iron	milligrams per litre	Quarterly								
May-19	Lead	milligrams per litre	Quarterly								
May-19	Magnesium	milligrams per litre	Quarterly								(next quarterly sample scheduled for July 2019)
May-19	Manganese	milligrams per litre	Quarterly								
May-19	Nickel	milligrams per litre	Quarterly								
May-19	pH	pH	Quarterly								
May-19	Potassium	milligrams per litre	Quarterly								
May-19	Selenium	milligrams per litre	Quarterly								
May-19	Sodium	milligrams per litre	Quarterly								
May-19	Standing Water Level	metres	Quarterly								
May-19	Zinc	milligrams per litre	Quarterly								

POINT 20 Groundwater bore, marked and shown as "VPGM/D5" on the Plan (VX837351, 30.06.2015, DOC15/381265).											
Month	Pollutant	Unit of Measure	Sample/Measurement Frequency	Samples Collected & Analysed	Date Sampled	Lowest Sample Value	Mean of Samples	Highest Sample Value	EPL Limit	Exceedance (yes/no)	Comments
May-19	Arsenic	milligrams per litre	Quarterly								
May-19	Cadmium	milligrams per litre	Quarterly								
May-19	Calcium	milligrams per litre	Quarterly								
May-19	Chromium	milligrams per litre	Quarterly								
May-19	Copper	milligrams per litre	Quarterly								
May-19	Electrical conductivity	microsiemens per centimetre	Quarterly								
May-19	Iron	milligrams per litre	Quarterly								
May-19	Lead	milligrams per litre	Quarterly								
May-19	Magnesium	milligrams per litre	Quarterly								(next quarterly sample scheduled for July 2019)
May-19	Manganese	milligrams per litre	Quarterly								
May-19	Nickel	milligrams per litre	Quarterly								
May-19	pH	pH	Quarterly								
May-19	Potassium	milligrams per litre	Quarterly								
May-19	Selenium	milligrams per litre	Quarterly								
May-19	Sodium	milligrams per litre	Quarterly								
May-19	Standing Water Level	metres	Quarterly								
May-19	Zinc	milligrams per litre	Quarterly								

POINT 21 Groundwater bore, marked and shown as "VPGM/D6" on the Plan (VX837351, 30.06.2015, DOC15/381265).											
Month	Pollutant	Unit of Measure	Sample/Measurement Frequency	Samples Collected & Analysed	Date Sampled	Lowest Sample Value	Mean of Samples	Highest Sample Value	EPL Limit	Exceedance (yes/no)	Comments
May-19	Arsenic	milligrams per litre	Quarterly								
May-19	Cadmium	milligrams per litre	Quarterly								
May-19	Calcium	milligrams per litre	Quarterly								
May-19	Chromium	milligrams per litre	Quarterly								
May-19	Copper	milligrams per litre	Quarterly								
May-19	Electrical conductivity	microsiemens per centimetre	Quarterly								
May-19	Iron	milligrams per litre	Quarterly								
May-19	Lead	milligrams per litre	Quarterly								(next quarterly sample scheduled for July 2019)
May-19	Magnesium	milligrams per litre	Quarterly								
May-19	Manganese	milligrams per litre	Quarterly								
May-19	Nickel	milligrams per litre	Quarterly								
May-19	pH	pH	Quarterly								
May-19	Potassium	milligrams per litre	Quarterly								
May-19	Selenium	milligrams per litre	Quarterly								
May-19	Sodium	milligrams per litre	Quarterly								
May-19	Standing Water Level	metres	Quarterly								
May-19	Zinc	milligrams per litre	Quarterly								

POINT 22 Groundwater bore, marked and shown as "VPGM/D8" on the Plan (VX837351, 30.06.2015, DOC15/381265).											
Month	Pollutant	Unit of Measure	Sample/Measurement Frequency	Samples Collected & Analysed	Date Sampled	Lowest Sample Value	Mean of Samples	Highest Sample Value	EPL Limit	Exceedance (yes/no)	Comments
May-19	Arsenic	milligrams per litre	Quarterly								
May-19	Cadmium	milligrams per litre	Quarterly								
May-19	Calcium	milligrams per litre	Quarterly								
May-19	Chromium	milligrams per litre	Quarterly								
May-19	Copper	milligrams per litre	Quarterly								
May-19	Electrical conductivity	microsiemens per centimetre	Quarterly								
May-19	Iron	milligrams per litre	Quarterly								
May-19	Lead	milligrams per litre	Quarterly								
May-19	Magnesium	milligrams per litre	Quarterly								(next quarterly sample scheduled for July 2019)
May-19	Manganese	milligrams per litre	Quarterly								
May-19	Nickel	milligrams per litre	Quarterly								
May-19	pH	pH	Quarterly								
May-19	Potassium	milligrams per litre	Quarterly								
May-19	Selenium	milligrams per litre	Quarterly								
May-19	Sodium	milligrams per litre	Quarterly								
May-19	Standing Water Level	metres	Quarterly								
May-19	Zinc	milligrams per litre	Quarterly								

POINT 23 Groundwater bore, marked and shown as "VPGM/D10" on the Plan (VX837351, 30.06.2015, DOC15/381265).											
Month	Pollutant	Unit of Measure	Sample/Measurement Frequency	Samples Collected & Analysed	Date Sampled	Lowest Sample Value	Mean of Samples	Highest Sample Value	EPL Limit	Exceedance (yes/no)	Comments
May-19	Arsenic	milligrams per litre	Quarterly								
May-19	Cadmium	milligrams per litre	Quarterly								
May-19	Calcium	milligrams per litre	Quarterly								
May-19	Chromium	milligrams per litre	Quarterly								
May-19	Copper	milligrams per litre	Quarterly								
May-19	Electrical conductivity	microsiemens per centimetre	Quarterly								
May-19	Iron	milligrams per litre	Quarterly								
May-19	Lead	milligrams per litre	Quarterly								
May-19	Magnesium	milligrams per litre	Quarterly								(next quarterly sample scheduled for July 2019)
May-19	Manganese	milligrams per litre	Quarterly								
May-19	Nickel	milligrams per litre	Quarterly								
May-19	pH	pH	Quarterly								
May-19	Potassium	milligrams per litre	Quarterly								
May-19	Selenium	milligrams per litre	Quarterly								
May-19	Sodium	milligrams per litre	Quarterly								
May-19	Standing Water Level	metres	Quarterly								
May-19	Zinc	milligrams per litre	Quarterly								

POINT 11 Stack serving Boiler Unit No. 5, marked and shown as "11" on the Plan (VX837351, 30.06.2015, DOC15/381265).											
Month	Pollutant	Unit of Measure	Sample/Measurement Frequency	Samples Collected & Analysed	Date Sampled	Lowest Sample Value	Mean of Samples	Highest Sample Value	EPL Limit	Exceedance (yes/no)	Comments
May-19	Cadmium	milligrams per cubic metre	Yearly	1	Apr-19	0.00042	0.00042	0.00042	1	No	
May-19	Chlorine	milligrams per cubic metre	Yearly	1	Apr-19	0.041	0.041	0.041	200	No	
May-19	Copper	milligrams per cubic metre	Yearly	1	Apr-19	0.003	0.003	0.003			
May-19	Hydrogen chloride	milligrams per cubic metre	Yearly	1	Apr-19	0.026	0.026	0.026	100	No	
May-19	Mercury	milligrams per cubic metre	Yearly	1	Apr-19	0.0004	0.0004	0.0004	1	No	
May-19	Moisture	percent	Yearly	1	Apr-19	4	4	4			Stack gas testing on unit 5 was undertaken during April 2019. Stack Gas Test Report provided to Delta on 3 June 2019.
May-19	Molecular weight of stack gases	grams per gram mole	Yearly	1	Apr-19	30.2	30.2	30.2			
May-19	Nitrogen Oxides	milligrams per cubic metre	Continuous	100%	May-19	429	590	749	1500	No	
May-19	Sulfuric acid mist and sulfur trioxide (as SO3)	milligrams per cubic metre	Yearly	1	Apr-19	4.1	4.1	4.1	100	No	
May-19	Sulphur dioxide	parts per million	Continuous	100%	May-19	197	322	418	600	No	
May-19	Temperature	degrees Celsius	Yearly	1	Apr-19	95.5	95.5	95.5			
May-19	Total Fluoride	milligrams per cubic metre	Yearly	1	Apr-19	1.9	1.9	1.9	50	No	
May-19	Total Solid Particles	milligrams per cubic metre	Yearly	1	Apr-19	4.3	4.3	4.3	100	No	
May-19	Type 1 and Type 2 substances in aggregate	milligrams per cubic metre	Yearly	1	Apr-19	0.006	0.006	0.006	5	No	
May-19	Undifferentiated Particulates	milligrams per cubic metre	Continuous	100%	May-19	9.5	31.7	40.7			
May-19	Velocity	metres per second	Yearly	1	Apr-19	14	14	14			
May-19	Volatile organic compounds	parts per million	Yearly	1	Apr-19	0.03	0.03	0.03			
May-19	Volumetric flowrate	cubic metres per second	Yearly	1	Apr-19	170	170	170			

**POINT 12 Stack serving Boiler Unit No. 6, marked and shown as "12" on the Plan (VX837351, 30.06.2015, DOC15/381265).**

Month	Pollutant	Unit of Measure	Sample/Measurement Frequency	Samples Collected & Analysed	Date Sampled	Lowest Sample Value	Mean of Samples	Highest Sample Value	EPL Limit	Exceedance (yes/no)	Comments
May-19	Cadmium	milligrams per cubic metre	Yearly		Mar-19	0.00018	0.00018	0.00018	1	No	
May-19	Chlorine	milligrams per cubic metre	Yearly		Mar-19	0.19	0.19	0.19	200	No	
May-19	Copper	milligrams per cubic metre	Yearly		Mar-19	0.0017	0.0017	0.0017			
May-19	Hydrogen chloride	milligrams per cubic metre	Yearly		Mar-19	0.55	0.55	0.55	100	No	
May-19	Mercury	milligrams per cubic metre	Yearly		Mar-19	0.00043	0.00043	0.00043	1	No	
May-19	Moisture	percent	Yearly		Mar-19	6.5	6.5	6.5			
May-19	Molecular weight of stack gases	grams per gram mole	Yearly		Mar-19	30.4	30.4	30.4			
May-19	Nitrogen Oxides	milligrams per cubic metre	Continuous	100%	May-19	579	847	1004	1500	No	
May-19	Sulfuric acid mist and sulfur trioxide (as SO3)	milligrams per cubic metre	Yearly		Mar-19	8.3	8.3	8.3	100	No	
May-19	Sulphur dioxide	parts per million	Continuous	100%	May-19	253	321	370	600	No	
May-19	Temperature	degrees Celsius	Yearly		Mar-19	112.5	112.5	112.5			
May-19	Total Fluoride	milligrams per cubic metre	Yearly		Mar-19	0.7	0.7	0.7	50	No	
May-19	Total Solid Particles	milligrams per cubic metre	Yearly		Mar-19	34.1*	34.1*	34.1*	100	No	
May-19	Type 1 and Type 2 substances in aggregate	milligrams per cubic metre	Yearly		Mar-19	0.05	0.05	0.05	5	No	
May-19	Undifferentiated Particulates	milligrams per cubic metre	Continuous	100%	May-19	4.3	7.7	9.4			
May-19	Velocity	metres per second	Yearly		Mar-19	17	17	17			
May-19	Volatile organic compounds	parts per million	Yearly		Mar-19	0.12	0.12	0.12			
May-19	Volumetric flowrate	cubic metres per second	Yearly		Mar-19	200	200	200			

Stack gas testing on unit 6 was undertaken during March 2019. Stack Gas Test Report provided to Delta on 3 June 2019.

**GENERAL COMMENTS**