

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	October 2016	
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	98.5% limit	Exceedance (yes/no)	Comments
October 2016	Chlorine (free residual)	milligrams per litre	Monthly	1	06.10.2016	0.06	0.06	0.06	0.2		No	
October 2016	Temperature	degrees celsius	Continuous	100%	October 2016	20.7	28.8	32.1	37.5	35	No	98.5% limit not exceeded for year to date
October 2016	Oil and Grease	Visible	Continuous	100%	October 2016	NIL	NIL	NIL				No visible oil or grease detected during October 2016

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	
October 2016	Ammonia	milligrams per litre	Quarterly	1	06.10.2016	<0.05	<0.05	<0.05				
October 2016	Cadmium	milligrams per litre	Quarterly	1	06.10.2016	<0.00021	<0.00021	<0.00021				
October 2016	Copper	milligrams per litre	Quarterly	1	06.10.2016	<0.001	<0.001	<0.001				
October 2016	Lead	milligrams per litre	Quarterly	1	06.10.2016	0.0002	0.0002	0.0002				
October 2016	Manganese	milligrams per litre	Quarterly	1	06.10.2016	0.0072	0.0072	0.0072				
October 2016	Nitrate + nitrite (oxidised nitrogen)	milligrams per litre	Monthly	1	06.10.2016	0.04	0.04	0.04				
October 2016	Nitrogen (total)	milligrams per litre	Quarterly	1	06.10.2016	0.7	0.7	0.7				
October 2016	pH	pH	Monthly	1	06.10.2016	8.23	8.23	8.23	6.5 - 9.5	No		
October 2016	Phosphorus (total)	milligrams per litre	Monthly	1	06.10.2016	0.1	0.1	0.1				
October 2016	Reactive Phosphorus	milligrams per litre	Monthly	1	06.10.2016	0.05	0.05	0.05				
October 2016	Selenium	milligrams per litre	Quarterly	1	06.10.2016	0.0248	0.0248	0.0248				
October 2016	Total Kjeldahl Nitrogen	milligrams per litre	Quarterly	1	06.10.2016	0.7	0.7	0.7				
October 2016	Total Suspended Solids	milligrams per litre	Fortnightly	4	4, 6, 10 & 24.10.2016	7	11	22	50	No		
October 2016	Zinc	milligrams per litre	Quarterly	1	06.10.2016	0.006	0.006	0.006				

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	
October 2016	Ammonia	milligrams per litre	Quarterly	1	06.10.2016	1.58	1.58	1.58				
October 2016	Cadmium	milligrams per litre	Quarterly	1	06.10.2016	0.00114	0.00114	0.00114				
October 2016	Copper	milligrams per litre	Quarterly	1	06.10.2016	<0.001	<0.001	<0.001				
October 2016	Lead	milligrams per litre	Quarterly	1	06.10.2016	<0.0002	<0.0002	<0.0002				
October 2016	Manganese	milligrams per litre	Quarterly	1	06.10.2016	0.0656	0.0656	0.0656				
October 2016	Nitrate + nitrite (oxidised nitrogen)	milligrams per litre	Monthly	1	06.10.2016	0.23	0.23	0.23				
October 2016	Nitrogen (total)	milligrams per litre	Quarterly	1	06.10.2016	1.7	1.7	1.7			No discharge to Mannering Bay during October 2016	
October 2016	pH	pH	Monthly	1	06.10.2016	7.87	7.87	7.87				
October 2016	Phosphorus (total)	milligrams per litre	Monthly	1	06.10.2016	<0.05	<0.05	<0.05				
October 2016	Selenium	milligrams per litre	Quarterly	1	06.10.2016	<0.0021	<0.0021	<0.0021				
October 2016	Total Kjeldahl Nitrogen	milligrams per litre	Quarterly	1	06.10.2016	1.5	1.5	1.5				
October 2016	Total Suspended Solids	milligrams per litre	Monthly	1	06.10.2016	6	6	6	50	No		
October 2016	Zinc	milligrams per litre	Quarterly	1	06.10.2016	<0.005	<0.005	<0.005				

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	
October 2016	Ammonia	milligrams per litre	Daily for discharge >2 hrs									
October 2016	Cadmium	milligrams per litre	Daily for discharge >2 hrs									
October 2016	Copper	milligrams per litre	Daily for discharge >2 hrs									
October 2016	Lead	milligrams per litre	Daily for discharge >2 hrs									
October 2016	Manganese	milligrams per litre	Daily for discharge >2 hrs									
October 2016	Nitrate + nitrite (oxidised nitrogen)	milligrams per litre	Daily for discharge >2 hrs									
October 2016	Nitrogen (total)	milligrams per litre	Daily for discharge >2 hrs								No discharge from EPA Point 18 during October 2016	
October 2016	pH	pH	Daily for discharge >2 hrs						6.5 - 9.0			
October 2016	Phosphorus (total)	milligrams per litre	Daily for discharge >2 hrs									
October 2016	Selenium	milligrams per litre	Daily for discharge >2 hrs									
October 2016	Total Kjeldahl Nitrogen	milligrams per litre	Daily for discharge >2 hrs									
October 2016	Total Suspended Solids	milligrams per litre	Daily for discharge >2 hrs						50			
October 2016	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
October 2016	Arsenic	milligrams per litre	Quarterly	1	06.10.2016	0.01	0.01	0.01			
October 2016	Cadmium	milligrams per litre	Quarterly	1	06.10.2016	<0.00021	<0.00021	<0.00021			
October 2016	Calcium	milligrams per litre	Quarterly	1	06.10.2016	851	851	851			
October 2016	Chromium	milligrams per litre	Quarterly	1	06.10.2016	<0.0005	<0.0005	<0.0005			
October 2016	Copper	milligrams per litre	Quarterly	1	06.10.2016	0.0016	0.0016	0.0016			
October 2016	Electrical conductivity	microsiemens per centimetre	Quarterly	1	06.10.2016	35900	35900	35900			
October 2016	Iron	milligrams per litre	Quarterly	1	06.10.2016	74.1	74.1	74.1			
October 2016	Lead	milligrams per litre	Quarterly	1	06.10.2016	0.0008	0.0008	0.0008			
October 2016	Magnesium	milligrams per litre	Quarterly	1	06.10.2016	1000	1000	1000			
October 2016	Manganese	milligrams per litre	Quarterly	1	06.10.2016	4.36	4.36	4.36			
October 2016	Nickel	milligrams per litre	Quarterly	1	06.10.2016	0.0188	0.0188	0.0188			
October 2016	pH	pH	Quarterly	1	06.10.2016	5.56	5.56	5.56			
October 2016	Potassium	milligrams per litre	Quarterly	1	06.10.2016	103	103	103			
October 2016	Selenium	milligrams per litre	Quarterly	1	06.10.2016	<0.0021	<0.0021	<0.0021			
October 2016	Sodium	milligrams per litre	Quarterly	1	06.10.2016	6140	6140	6140			
October 2016	Standing Water Level	metres	Quarterly	1	06.10.2016	3.79	3.79	3.79			
October 2016	Zinc	milligrams per litre	Quarterly	1	06.10.2016	0.01	0.01	0.01			

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
October 2016	Arsenic	milligrams per litre	Quarterly	1	06.10.2016	0.0022	0.0022	0.0022			
October 2016	Cadmium	milligrams per litre	Quarterly	1	06.10.2016	0.00008	0.00008	0.00008			
October 2016	Calcium	milligrams per litre	Quarterly	1	06.10.2016	34	34	34			
October 2016	Chromium	milligrams per litre	Quarterly	1	06.10.2016	0.0008	0.0008	0.0008			
October 2016	Copper	milligrams per litre	Quarterly	1	06.10.2016	0.0144	0.0144	0.0144			
October 2016	Electrical conductivity	microsiemens per centimetre	Quarterly	1	06.10.2016	1880	1880	1880			
October 2016	Iron	milligrams per litre	Quarterly	1	06.10.2016	5.77	5.77	5.77			
October 2016	Lead	milligrams per litre	Quarterly	1	06.10.2016	0.0048	0.0048	0.0048			
October 2016	Magnesium	milligrams per litre	Quarterly	1	06.10.2016	32	32	32			
October 2016	Manganese	milligrams per litre	Quarterly	1	06.10.2016	0.117	0.117	0.117			
October 2016	Nickel	milligrams per litre	Quarterly	1	06.10.2016	0.0055	0.0055	0.0055			
October 2016	pH	pH	Quarterly	1	06.10.2016	5.38	5.38	5.38			
October 2016	Potassium	milligrams per litre	Quarterly	1	06.10.2016	4	4	4			
October 2016	Selenium	milligrams per litre	Quarterly	1	06.10.2016	0.0008	0.0008	0.0008			
October 2016	Sodium	milligrams per litre	Quarterly	1	06.10.2016	260	260	260			
October 2016	Standing Water Level	metres	Quarterly	1	06.10.2016	0.67	0.67	0.67			
October 2016	Zinc	milligrams per litre	Quarterly	1	06.10.2016	0.524	0.524	0.524			

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
October 2016	Arsenic	milligrams per litre	Quarterly	1	06.10.2016	0.0006	0.0006	0.0006			
October 2016	Cadmium	milligrams per litre	Quarterly	1	06.10.2016	<0.00005	<0.00005	<0.00005			
October 2016	Calcium	milligrams per litre	Quarterly	1	06.10.2016	2	2	2			
October 2016	Chromium	milligrams per litre	Quarterly	1	06.10.2016	0.0017	0.0017	0.0017			
October 2016	Copper	milligrams per litre	Quarterly	1	06.10.2016	0.0019	0.0019	0.0019			
October 2016	Electrical conductivity	microsiemens per centimetre	Quarterly	1	06.10.2016	452	452	452			
October 2016	Iron	milligrams per litre	Quarterly	1	06.10.2016	0.591	0.591	0.591			
October 2016	Lead	milligrams per litre	Quarterly	1	06.10.2016	0.0034	0.0034	0.0034			
October 2016	Magnesium	milligrams per litre	Quarterly	1	06.10.2016	9	9	9			
October 2016	Manganese	milligrams per litre	Quarterly	1	06.10.2016	0.0453	0.0453	0.0453			
October 2016	Nickel	milligrams per litre	Quarterly	1	06.10.2016	0.0049	0.0049	0.0049			
October 2016	pH	pH	Quarterly	1	06.10.2016	5.29	5.29	5.29			
October 2016	Potassium	milligrams per litre	Quarterly	1	06.10.2016	2	2	2			
October 2016	Selenium	milligrams per litre	Quarterly	1	06.10.2016	<0.0002	<0.0002	<0.0002			
October 2016	Sodium	milligrams per litre	Quarterly	1	06.10.2016	56	56	56			
October 2016	Standing Water Level	metres	Quarterly	1	06.10.2016	2.43	2.43	2.43			
October 2016	Zinc	milligrams per litre	Quarterly	1	06.10.2016	0.009	0.009	0.009			

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
October 2016	Arsenic	milligrams per litre	Quarterly	1	06.10.2016	0.0022	0.0022	0.0022			
October 2016	Cadmium	milligrams per litre	Quarterly	1	06.10.2016	<0.00021	<0.00021	<0.00021			
October 2016	Calcium	milligrams per litre	Quarterly	1	06.10.2016	512	512	512			
October 2016	Chromium	milligrams per litre	Quarterly	1	06.10.2016	0.0022	0.0022	0.0022			
October 2016	Copper	milligrams per litre	Quarterly	1	06.10.2016	0.0029	0.0029	0.0029			
October 2016	Electrical conductivity	microsiemens per centimetre	Quarterly	1	06.10.2016	41000	41000	41000			
October 2016	Iron	milligrams per litre	Quarterly	1	06.10.2016	34	34	34			
October 2016	Lead	milligrams per litre	Quarterly	1	06.10.2016	0.0019	0.0019	0.0019			
October 2016	Magnesium	milligrams per litre	Quarterly	1	06.10.2016	1060	1060	1060			
October 2016	Manganese	milligrams per litre	Quarterly	1	06.10.2016	0.836	0.836	0.836			
October 2016	Nickel	milligrams per litre	Quarterly	1	06.10.2016	0.0034	0.0034	0.0034			
October 2016	pH	pH	Quarterly	1	06.10.2016	6.52	6.52	6.52			
October 2016	Potassium	milligrams per litre	Quarterly	1	06.10.2016	250	250	250			
October 2016	Selenium	milligrams per litre	Quarterly	1	06.10.2016	<0.0021	<0.0021	<0.0021			
October 2016	Sodium	milligrams per litre	Quarterly	1	06.10.2016	7570	7570	7570			
October 2016	Standing Water Level	metres	Quarterly	1	06.10.2016	0.07	0.07	0.07			
October 2016	Zinc	milligrams per litre	Quarterly	1	06.10.2016	0.073	0.073	0.073			

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
October 2016	Arsenic	milligrams per litre	Quarterly	1	06.10.2016	0.0008	0.0008	0.0008			
October 2016	Cadmium	milligrams per litre	Quarterly	1	06.10.2016	0.00006	0.00006	0.00006			
October 2016	Calcium	milligrams per litre	Quarterly	1	06.10.2016	4	4	4			
October 2016	Chromium	milligrams per litre	Quarterly	1	06.10.2016	0.0024	0.0024	0.0024			
October 2016	Copper	milligrams per litre	Quarterly	1	06.10.2016	0.003	0.003	0.003			
October 2016	Electrical conductivity	microsiemens per centimetre	Quarterly	1	06.10.2016	1070	1070	1070			
October 2016	Iron	milligrams per litre	Quarterly	1	06.10.2016	0.026	0.026	0.026			
October 2016	Lead	milligrams per litre	Quarterly	1	06.10.2016	0.0016	0.0016	0.0016			
October 2016	Magnesium	milligrams per litre	Quarterly	1	06.10.2016	15	15	15			
October 2016	Manganese	milligrams per litre	Quarterly	1	06.10.2016	0.0728	0.0728	0.0728			
October 2016	Nickel	milligrams per litre	Quarterly	1	06.10.2016	0.0063	0.0063	0.0063			
October 2016	pH	pH	Quarterly	1	06.10.2016	4.85	4.85	4.85			
October 2016	Potassium	milligrams per litre	Quarterly	1	06.10.2016	3	3	3			
October 2016	Selenium	milligrams per litre	Quarterly	1	06.10.2016	<0.0002	<0.0002	<0.0002			
October 2016	Sodium	milligrams per litre	Quarterly	1	06.10.2016	146	146	146			
October 2016	Standing Water Level	metres	Quarterly	1	06.10.2016	0.02	0.02	0.02			
October 2016	Zinc	milligrams per litre	Quarterly	1	06.10.2016	0.03	0.03	0.03			

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
October 2016	Cadmium	milligrams per cubic metre	Yearly						1	No	
October 2016	Chlorine	milligrams per cubic metre	Yearly						200	No	
October 2016	Copper	milligrams per cubic metre	Yearly								
October 2016	Hydrogen chloride	milligrams per cubic metre	Yearly						100	No	
October 2016	Mercury	milligrams per cubic metre	Yearly						1	No	
October 2016	Moisture	percent	Yearly								
October 2016	Molecular weight of stack gases	grams per gram mole	Yearly								
October 2016	Nitrogen Oxides	milligrams per cubic metre	Continuous	100%	October 2016	389	589	895	1500	No	
October 2016	Sulfuric acid mist and sulfur trioxide (as SO3)	milligrams per cubic metre	Yearly						100	No	
October 2016	Sulphur dioxide	parts per million	Continuous	100%	October 2016	178	210	238	600	No	
October 2016	Temperature	degrees Celsius	Yearly								
October 2016	Total Fluoride	milligrams per cubic metre	Yearly						50	No	
October 2016	Total Solid Particles	milligrams per cubic metre	Yearly						100	No	
October 2016	Type 1 and Type 2 substances in aggregate	milligrams per cubic metre	Yearly						5	No	
October 2016	Undifferentiated Particulates	milligrams per cubic metre	Continuous	100%	October 2016	9.2	14.7	35.3			
October 2016	Velocity	metres per second	Yearly								
October 2016	Volatile organic compounds	parts per million	Yearly								
October 2016	Volumetric flowrate	cubic metres per second	Yearly								

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
October 2016	Cadmium	milligrams per cubic metre	Yearly						1	No	
October 2016	Chlorine	milligrams per cubic metre	Yearly						200	No	
October 2016	Copper	milligrams per cubic metre	Yearly								
October 2016	Hydrogen chloride	milligrams per cubic metre	Yearly						100	No	
October 2016	Mercury	milligrams per cubic metre	Yearly						1	No	
October 2016	Moisture	percent	Yearly								
October 2016	Molecular weight of stack gases	grams per gram mole	Yearly								
October 2016	Nitrogen Oxides	milligrams per cubic metre	Continuous	100%	October 2016	646	992	1079	1500	No	
October 2016	Sulfuric acid mist and sulfur trioxide (as SO3)	milligrams per cubic metre	Yearly						100	No	
October 2016	Sulphur dioxide	parts per million	Continuous	100%	October 2016	166	195	216	600	No	
October 2016	Temperature	degrees Celsius	Yearly								
October 2016	Total Fluoride	milligrams per cubic metre	Yearly						50	No	
October 2016	Total Solid Particles	milligrams per cubic metre	Yearly						100	No	
October 2016	Type 1 and Type 2 substances in aggregate	milligrams per cubic metre	Yearly						5	No	
October 2016	Undifferentiated Particulates	milligrams per cubic metre	Continuous	100%	October 2016	13.1	17.2	21.8			
October 2016	Velocity	metres per second	Yearly								
October 2016	Volatile organic compounds	parts per million	Yearly								
October 2016	Volumetric flowrate	cubic metres per second	Yearly								

GENERAL COMMENTS

Last annual stack test on Points 11 & 12 completed in March 2016 and reported in April 2016. Next annual stack test scheduled for February/March 2017.