

SECTION 14 INCIDENT REPORT (*Waste Management and Pollution Control Act*)

Date and Time of Notification:	Thursday 11 th November 2021, 14:36hrs
Person / Company:	Power and Water Corporation (PWC)
Incident:	Discharge of fully treated effluent from Alice Springs Ponds to Ilparpa Swamp

(a) the incident causing or threatening to cause pollution	<i>i. Description of the waste that was discharged.</i>																																																																				
	Fully Treated, Highly Dilute Effluent																																																																				
	<i>ii. Indicative wastewater quality for the discharge.</i>																																																																				
	The water quality was highly dilute, as the rainfall for the preceding 48-hour period was 118mm (Alice Springs Airport – 15590), this meant the flows were extreme weather flows. Please refer to the following table for indicative wastewater quality from previous discharges in 2016 and 2017. Note: site only discharges in extreme weather events.																																																																				
	<table border="1"> <thead> <tr> <th colspan="2"></th> <th colspan="2">Discharge Monitoring Results at SAA100 (Outfall 2)</th> </tr> <tr> <th>Field Characteristics</th> <th>Units</th> <th>Sep 2016</th> <th>May 2017</th> </tr> </thead> <tbody> <tr> <td>pH</td> <td>pH units</td> <td>9.07</td> <td>7.91</td> </tr> <tr> <td>Electrical Conductivity</td> <td>µS/cm</td> <td>2940</td> <td>3180</td> </tr> <tr> <td>Dissolved Oxygen</td> <td>% sat</td> <td>118.9</td> <td>46.0</td> </tr> <tr> <td>Temperature</td> <td>°C</td> <td>18.7</td> <td>16.4</td> </tr> <tr> <td colspan="4">Nutrients</td> </tr> <tr> <td>Filterable Reactive Phosphorus</td> <td>mg/L</td> <td>0.57</td> <td>1.8</td> </tr> <tr> <td>Total Phosphorus</td> <td>mg/L</td> <td>2.4</td> <td>7.3</td> </tr> <tr> <td>Ammonia</td> <td>mg/L</td> <td>18</td> <td>46</td> </tr> <tr> <td>Nitrate</td> <td>mg/L</td> <td>0.39</td> <td><0.1</td> </tr> <tr> <td>Nitrite</td> <td>mg/L</td> <td><0.1</td> <td><0.1</td> </tr> <tr> <td colspan="4">Bacteriological</td> </tr> <tr> <td><i>E.coli</i></td> <td>cfu/100mL</td> <td>145</td> <td>435</td> </tr> <tr> <td colspan="4">Metals</td> </tr> <tr> <td>Aluminium</td> <td>µg/L</td> <td>140</td> <td>20</td> </tr> <tr> <td>Copper</td> <td>µg/L</td> <td><10</td> <td><10</td> </tr> </tbody> </table>			Discharge Monitoring Results at SAA100 (Outfall 2)		Field Characteristics	Units	Sep 2016	May 2017	pH	pH units	9.07	7.91	Electrical Conductivity	µS/cm	2940	3180	Dissolved Oxygen	% sat	118.9	46.0	Temperature	°C	18.7	16.4	Nutrients				Filterable Reactive Phosphorus	mg/L	0.57	1.8	Total Phosphorus	mg/L	2.4	7.3	Ammonia	mg/L	18	46	Nitrate	mg/L	0.39	<0.1	Nitrite	mg/L	<0.1	<0.1	Bacteriological				<i>E.coli</i>	cfu/100mL	145	435	Metals				Aluminium	µg/L	140	20	Copper	µg/L	<10	<10
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	Zinc	µg/L	<10	<10
	Chromium	µg/L	<5	<5
	Environmental Indicators			
	Total Suspended Solids	mg/L	165	288
	Volatile Suspended Solids	mg/L	135	258
	Biological Oxygen Demand	mg/L	50	110
	<p><i>iii. Volume of the waste that was discharged.</i></p> <p>The volume of waste discharged is unknown. No telemetric monitoring occurs at this discharge point.</p>			
(b) the place where the incident occurred	<p><i>i. Description of the PWC asset from which the discharge occurred.</i></p> <p>Overflow relief point near the outlet of pond C3 (final maturation pond of C set) at the Alice Springs Ponds.</p> <p><i>ii. GPS coordinates of the discharge point from the PWC asset, and the final coordinates of the final discharge point.</i></p> <p>Photo 1: Discharge Point (Point 1): 133.8321538E, -23.7403845S Photo 2: Final Discharge Point (Point 2): 133.8353127E, -23.7434124S (Stormwater drain)</p> <p><i>iii. Indicate any locations nearby to the discharge point where public can gain ready-access, such as public open spaces through which the discharge moves.</i></p> <p>The discharge flow is controlled across PWC land until it then exits at the southern fence line. After which it then flows into the Ilparpa Swamp. Access to the waterway is possible, as site is public land. However, access to flood water is discouraged by the Northern Territory Government due to drowning risks.</p>			
(c) the date and time of the incident	<p><i>i. The time and date of commencement and cessation of the discharge.</i></p> <p>The estimated commencement time is approximately 12:20hrs on the 10/11/2021, PWC operators attended the site and confirmed the overflow at 16:00hrs on the 10/11/2021. It is estimated that the discharge ceased at 12:00hrs on the 11/11/2021.</p> <p><i>ii. How PWC were notified, or became aware of the discharge.</i></p> <p>Operator was monitoring pond level trends, attended site when it was safe to do so and confirmed the discharge.</p> <p><i>iii. The process by which the discharge occurred.</i></p> <p>Extreme rainfall in the proceeding 48hours led to inflows exceeding the capacity of the sewer infrastructure. PWC operators were unable to access the WWTP site due to flooding, and could not implement</p>			

	<p>diversions in time. As access to the site became available, diversions were put in place, assisting with levelling ponds, and resulting in cessation of the discharge.</p> <p><i>iv. The reason why the discharge occurred.</i></p> <p>As per (c) iii.</p>
(d) how the pollution has occurred, is occurring or may occur	As per (c) iii & (c) iv.
(e) the attempts made to prevent, reduce, control, rectify or clean up the pollution or resultant environmental harm caused or threatening to be caused by the incident	<p><i>i. Confirmation signage and fencing has been erected, as appropriate.</i></p> <p>Fencing and signage not reasonable or practical in extreme flooding.</p> <p><i>ii. Decontamination of the site as appropriate.</i></p> <p>Due to the highly dilute and fully treated nature of the discharge, disinfection is not appropriate.</p> <p><i>iii. Attempts made to prevent, reduce or control the discharge</i></p> <p>Operator attended site when safe and reduced flow to the discharging 'C' pond set by diverting flow to 'B' pond set. Effluent pumps were increased to 100% of capacity to assist balancing of pond levels in a timely manner.</p>
(f) the identity of the person notifying the NT EPA	PWC Environmental Team on behalf of Water Services

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Appendix A – Location map Point 1 (Labelled 1 Below) and Point 2 (Labelled 2 below) as per section (b)



Appendix B – Photographs

Photo 1: (Point 1 as per Section (b)): Discharge from Pond C3 Taken 16:04hr 10/11/2021



Photo 2: (Point 2 as per Section (b)): Discharge Point to Environment. Taken 16:10hr 10/11/2021

