

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

Date and Time of Notification:	Monday 25 th March 2024, 15:28hrs
Person / Company:	Power and Water Corporation
Incident:	Discharge of fully treated effluent from Alice Springs Ponds to Ilparpa Swamp

<p>(a) the incident causing or threatening to cause pollution</p>	<p><i>i. Description of the waste that was discharged.</i></p> <p>Fully treated, highly diluted effluent</p>																																																																													
	<p><i>ii. Indicative wastewater quality for the discharge.</i></p> <p>The water quality was highly diluted, as the rainfall for the preceding week was 158mm (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.</p> <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> <tr> <td>Zinc</td> <td>µg/L</td> <td><10</td> <td><10</td> </tr> <tr> <td>Chromium</td> <td>µg/L</td> <td><5</td> <td><5</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	Zinc	µg/L	<10	<10	Chromium	µg/L	<5
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	Environmental Indicators			
	Total Suspended Solids	mg/L	165	288
	Volatile Suspended Solids	mg/L	135	258
	Biological Oxygen Demand	mg/L	50	110
	<p>There are no recent monitoring results for this discharge point, as there is no current waste discharge licence in place requiring this location to be sampled.</p> <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. It is estimated though to be approximately 1.7ML in 24 hours, based on approximate flow rates.</p>			
(b) the place where the incident occurred	<p><i>i. Description of the Power & Water 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>(1) Discharge Point: 133.8321497E, -23.7403570S (2) Final Discharge Point: 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 Power & Water 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 11:00hrs on the 24/03/2024, Power & Water operators attended the site and confirmed the overflow at approximately 09:00hrs on the 25/03/2024. The overflow is believed to have stopped at around 11:40hrs, 26/03/2024 and was visually confirmed early this afternoon 26/03/2024.</p> <p><i>ii. How Power & Water 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>Excessive rainfall (158mm in the previous 7 days) led to inflows exceeding the capacity of the sewer infrastructure. Power & Water operators were unable to access the WWTP site due to flooding, and could not implement diversions in time. As access to the site became available, diversions were put in place, assisting with levelling ponds and it is anticipated the overflow will cease then. Weather dependant.</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 flooding events.</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	Power & Water Environmental Team on behalf of Water Services

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Appendix A – Location map



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Appendix B – Photographs



Image 1: Discharge from Pond C3. Historical image used.

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Image 2: Final discharge point. Historical image used.



Image 3: Emergency discharge spillway at pond C3, showing that the overflow has ceased. Taken 26/03/2024.