

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

Date and Time of Notification:	Sunday 27 th December 2020, 16:59hrs
Person / Company:	Power and Water Corporation (PWC)
Incident:	Discharge of diluted sewage from sewerage network

(a) the incident causing or threatening to cause pollution	<i>i. Description of the waste that was discharged.</i> Raw and highly diluted sewage <i>ii. Indicative wastewater quality for the discharge.</i> Inflow data to Ludmilla WWTP was on average 29.6ML/day, and rainfall leading up to the overflow was 47mm for the preceding 3 days (Darwin Airport – 014015), meaning that flows for the day were above twice the average dry weather flows. At 21:00hrs, flow into Ludmilla was 2.63ML/hr, which is equivalent to 63ML/day; therefore there was between 3x and 5x average dry weather flows just prior to the event, meaning a lot of dilution was present. Please refer to the following table for indicative wastewater quality. Table 1: Inflow to Ludmilla Wastewater Treatment Plant <table><tr><th>Inflow volume</th><th>median inflow kL</th><th>median E coli</th><th>90th percentile inflow kL</th><th>90th percentile E coli</th></tr><tr><td>below ADWF</td><td>11,040</td><td>11,199,000</td><td>12,925</td><td>15,531,000</td></tr><tr><td>>ADWF (14.5 ML/day)</td><td>15,274</td><td>9,804,000</td><td>22,206</td><td>17,148,300</td></tr><tr><td>>2x ADWF (29.0 ML/day)</td><td>31,673</td><td>4,884,000</td><td>37,166</td><td>14,385,600</td></tr><tr><td>>3x ADWF (43.5 ML/day)</td><td>43,629</td><td>4,611,000</td><td>50,506</td><td>12,843,600</td></tr><tr><td>>5x ADWF (72.5 ML/day)</td><td>71,558</td><td>5,002,000</td><td>78,578</td><td>5,905,200</td></tr><tr><td>>WDL limit (89.5 ML/day)</td><td>102,445</td><td>102,445</td><td>148,575</td><td>13,704,400</td></tr></table> (ADWF= Average Dry Weather Flow ~14.5 ML/day in 2013/14) <i>iii. Volume of the waste that was discharged.</i> The volume of waste discharged is unknown. No telemetric monitoring occurs at the site of discharge.	Inflow volume	median inflow kL	median E coli	90th percentile inflow kL	90th percentile E coli	below ADWF	11,040	11,199,000	12,925	15,531,000	>ADWF (14.5 ML/day)	15,274	9,804,000	22,206	17,148,300	>2x ADWF (29.0 ML/day)	31,673	4,884,000	37,166	14,385,600	>3x ADWF (43.5 ML/day)	43,629	4,611,000	50,506	12,843,600	>5x ADWF (72.5 ML/day)	71,558	5,002,000	78,578	5,905,200	>WDL limit (89.5 ML/day)	102,445	102,445	148,575	13,704,400
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(b) the place where the incident occurred	<i>i. Description of the PWC asset from which the discharge occurred.</i> Overflow relief gully (ORG) at 7 Brooks Place, Milner. <i>ii. GPS coordinates of the discharge point from the PWC asset, and the final coordinates of the final discharge point.</i> Discharge Point: 130.8640084E, -12.3889286S Final Discharge Point: Immediately surrounding ORG																																			

	<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> There is no public access to the spill site, as it occurred on private property. All residents at the property have been made aware of the spill and advised to avoid contact with the area.
(c) the date and time of the incident	<i>i. The time and date of commencement and cessation of the discharge.</i> The commencement time of the overflow is unknown. The overflow was observed at approximately 22:00hrs by PWC staff on 26/12/2020 and the spill stopped by 22:30hrs 26/12/2020. <i>ii. How PWC were notified, or became aware of the discharge.</i> This overflow was reported by one of the residents to the PWC call centre, who then relayed the information to the on-call PWC operations staff. PWC personnel attended the site at 22:00hrs (26/12/2020) and undertook action to resolve the situation and make it safe. <i>iii. The process by which the discharge occurred.</i> The cause of the spill was due to excessive inflow and infiltration into the sewerage system, caused by the monsoonal weather event. The system failed to keep up with demand and overflowed at the residents overflow relief gully. <i>iv. The reason why the discharge occurred.</i> As per (c) iii. Sewerage network infrastructure has been designed to overflow with the best public health and environmental outcomes possible. Design focuses on not overflowing directly inside houses; rather discharge is designed to occur in a controlled manner at locations which can be accessed for infrastructure repair and clean up and with minimal public health or environmental impacts.
(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	<i>i. Confirmation signage and fencing has been erected, as appropriate.</i> No signage or fencing was erected in this instance, as the spill occurred at a fenced, private residence. All residents residing there were advised to avoid contact with the area. <i>ii. Decontamination of the site as appropriate.</i> Clean up consistent with Sewage Spills/Overflow Response Work Instruction as appropriate to the location, and to minimise risk to the Environment. Site inspected for any gross pollutants of which none were observed, and the surrounding surface was cleaned. Landholders advised not to enter affected areas for a minimum of 5 days after clean up.

(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



Appendix B – Photograph of the ORG post clean up and disinfection



Appendix C – Photograph of the spill site post clean up and disinfection

