

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

Date and Time of Notification:	Tuesday 25/02/2020 16:17hrs
Person / Company:	Power and Water Corporation (PWC)
Incident:	Discharge of raw sewage from sewerage network (no gross pollutants)

(a) the incident causing or threatening to cause pollution	i. Description of the waste that was discharged. Raw sewage (no gross pollutants) ii. Indicative wastewater quality for the discharge. Inflow data to Palmerston WWTP was 16.04ML/day , and rainfall leading up to the overflow was 0.00mm for the preceding 3 days (Darwin Airport – 014015), Therefore indicative wastewater quality for this overflow can be assumed to be average dry weather flows, with little dilution to be assumed. 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) iii. Volume of the waste that was discharged. 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	Parkland behind 6 Wright Crescent, Lot 5983 Gray (Palmerston) i. Description of the PWC asset from which the discharge occurred. Overflow from sewer reticulation system manhole cover AC80. ii. GPS coordinates of the discharge point from the PWC asset, and the final coordinates of the final discharge point. Discharge Point: 130.9801139, -12.4872737 Final discharge points are immediately downstream and surrounding of the above co-ordinates.																																			

	<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> Access to the public is possible, as the overflow occurred on vacant land. The affected area has been disinfected and barricaded off with signage erected, as per the PWC Sewage Spills/Overflow Response Work Instruction.
(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 09:30hrs by PWC staff on 25/02/2020 and the spill stopped by 10:30hrs 25/02/2020. <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 09:30hrs (25/02/20) 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 a blockage in the main line, because of rags and fat build-up in the gas trap. Fat and other substances have been incorrectly disposed of into the sewer network by customers, resulting in the blockage and the overflow. When fats, oils and meat juices are put down the sink it is usually as a liquid, but as it cools it can become more solid and cause build-up, resulting in bad odours and blockages in the sewerage system. This can lead to the sewage overflows into the environment, households and businesses. Public education about what can be disposed in sewer/is flushable: https://www.powerwater.com.au/about/what-we-do/wastewater/sewer-blockages-and-overflows/think-before-you-put-it-down-the-sink In the aim of prevention, this material is available on the PWC website and is used as an educational tool for customers. <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/businesses; 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, the spill was caused by a blockage in the main line, as a result of residents disposing of unsuitable items into the sewage network. PWC has limited control in preventing spills as a result of inappropriate item disposal. The receiving environment in this case was to a vacant public open space.
(e) the attempts made to prevent, reduce, control, rectify or clean up the pollution or resultant	<i>i. Confirmation signage and fencing has been erected, as appropriate.</i>

environmental harm caused or threatening to be caused by the incident	The site has had barricading and warning signage installed to alert the general public as per Sewage Spills/Overflow Response Work Instruction, see photographs below. PWC has attempted to prevent this type of overflow by providing public education material on their website, see above link. PWC is unable to control the actions of individual residents and what they dispose of into the sewage system, including waste cooking oils and fats, rags or other items. Clean up was consistent with PWC's Sewage Spills/Overflow Response Work Instruction, to minimise risk to public health. Response undertaken as per an 'Unsealed Land' receiving environment, as per 'Attachment 1 - Receiving environment and clean-up procedures' of the PWC Sewage Spills/Overflow Response Work Instruction – attached for your reference. Based upon the small discharge area, no gross pollutants being present in the discharge, and receiving environment (open land), any environmental impact as a result of this event is believed to be minimal and short lived. The discharge was localised, allowing liming of the area, followed by access restriction by fencing and signage. Liming reduces pathogen risks (as per Department of Health requirements) and aids in odour reduction. <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 public health and the environment. Response undertaken as per an 'Unsealed Land' receiving environment, as per 'Attachment 1 - Receiving environment and clean-up procedures' of the PWC Sewage Spills/Overflow Response Work Instruction – attached for your reference.
(f) the identity of the person notifying the NT EPA	PWC Environmental Team on behalf of Water Services

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Appendix A – Locations Map



Appendix B – Photos of site

Photo 1 - Fencing and warning signage in place



Photo 2 - Fencing, signage and liming of area



Photo 3 - Fencing, signage and liming of area

