Northern Territory Environment Protection Authority

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

Date and Time of Notification:	Thursday 20/03/2020 08:30hrs
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 Ludmilla WWTP was 11.39ML/day, and rainfall leading up to the overflow was 3mm for the preceding 24 hours (Darwin Airport – 014015), meaning that flows below ADWF where present resulting in raw sewage overflowing.

Table 1: Inflow to Ludmilla Wastewater Treatment Plant

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

(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. The area affected as reported by site crews was approximately 8 square meters, surrounding the manhole cover.

(b) the place where the incident occurred

Mullen Gardens Park Alawa

i. Description of the PWC asset from which the discharge occurred.

Sewer manhole cover in the middle of Mullen Gardens Park, Alawa.

ii. GPS coordinates of the discharge point from the PWC asset, and the final coordinates of the final discharge point.

Discharge Point: 130.8735708, -12.3770582

	Final discharge point was the grass surrounding the sewer manhole cover as per the above co-ordinates. *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.* Access to the public is possible, as the manhole cover is in the middle of Mullen Gardens park. The affected area has been thoroughly cleaned via vacuum truck from Mick Excavation Pty Ltd, who are suitably licenced for this activity under EPL 232, and disinfected the area as per the PWC Sewage Spills/Overflow Response Work Instruction Attachment 1- Receiving environment and clean-up procedures - Unsealed land (beaches, parks, open land and gardens) and public footpaths. Any pooling wastewater and gross pollutants were vacuumed up, followed by liming of the area to disinfect the area. This will be followed up within 5 days time with the addition of 50mm of clean topsoil.
(c) the date and time of the incident	*i. The time and date of commencement and cessation of the discharge.* The commencement time of the overflow is unknown. The overflow was observed at approximately 11:40hrs by PWC staff on 19/03/2020 and the spill was stopped by 11:55hrs 19/03/2020. *ii. How PWC were notified, or became aware of the discharge.* This overflow was reported by one of the nearby residents to the PWC call centre. This information was then relayed to the on-call PWC operations staff. PWC personnel attended the site at 11:40hrs (19/03/20) and undertook action to resolve the situation and make it safe. *iii. The process by which the discharge occurred.* The cause of the spill was due to a blockage in the main line, because of rags and fat build-up. Fat and other non-disintegrating items like wet wipes and kitchen paper towels have been incorrectly disposed of into the sewer network by customers, resulting in the blockage and the overflow. When fats and oils 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. *iv. The reason why the discharge occurred.* 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 that 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. In addition to the above, with the recent shortages of toilet paper, due to panic buying as a result of the CONVID-19 virus, residents have resorted to using items such as baby wipes, wet wipes and kitchen paper towels, which do not break down like toilet paper does, exacerbating the problem of residents disposing of fats and oils into the sewer system. This will most likely remain an issue for PWC for the foreseeable future.
(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. Confirmation signage and fencing has been erected, as appropriate.* The spill area had been thoroughly cleaned up using a vacuum truck and disinfected as per Sewage Spills/Overflow Response Work Instruction - Attachment 1- Receiving environment and clean-up procedures - Unsealed land (beaches, parks, open land and gardens) and public footpaths. *ii. Decontamination of the site as appropriate.* 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. The crew contracted to conduct the unblocking of the sewer network and the clean-up and disinfection on behalf of PWC was Mick Excavations Pty Ltd. All waste from the clean up was taken to the East Arm bio-solids facility. Further targeted education campaigns on inappropriate items being disposed of into the sewer system is currently being contemplated by PWC and will be rolled out in a month or two, subject to funding approval.
(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 cause of the spill – combination of fats, grease and non-disintegrating rags, prior to clean up.

Appendix C – Photograph of the spill site, upon arrival, prior to clean up.

Appendix D – Photograph of the spill site, post clean up showing barricading, applied lime and warning signage.