Northern Territory Environment Protection Authority

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

Date and Time of Notification:	Monday 8th April 2019, 3:23pm
Person / Company:	Power and Water Corporation (**PWC**)
Incident:	Overflow of highly diluted sewage from the Lakeside Drive and Rapid Ck SPS to Rapid Creek.

(a) the incident causing or threatening to cause pollution

i. Description of the waste that was discharged.

Highly diluted sewage.

ii. Indicative wastewater quality for the discharge.

No sampling of the discharge water occurred at the time of the overflow. PWC has engaged CDU to undertake wet weather overflow water quality study. Due to the poor wet season currently being experience the results of the study are unlikely to be received by PWC until the end of the year (2019/2020 wet season). The aim of this project is to describe the quality of wastewater at both the discharge point and further downstream "source tracking".

Indicative wastewater quality for this overflow can be found in Table 1. Wastewater quality data has been extrapolated from inflow data to the Ludmilla Wastewater Treatment Plant (WWTP). Inflow rates have been determined through a review of SCADA data records for inflow to the Ludmilla WWTP. The data indicates that average inflow volumes from 17:00pm 6/04/19 to 17:00PM 7/04/19 was 532.76L/sec, equating to 46ML/day. A comparison of this information against the inflow volume listed in Table 1, suggests that flows being experienced at the treatment plant were between >3 times Average Dry Weather Flow (ADWF). Flows greater than 2 times ADWF are considered to be significantly diluted.

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 (approx. 14.5 L/day)	15,274	9,804,000	22,206	17,148,300
>2xADWF (approx.. 29 ML/day)	31,673	4,884,000	37,166	14,385,600
>3xADWF approx. 43.5 L/day)	43,629	4,611,000	50,506	12,843,600
>5xADWF (approx. 72.5 L/day)	71,558	5,002,000	78,578	5,905,200

(ADWF= Average Dry Weather Flow)
90th percentile inflow: Protection of aquatic food for human consumption

iii. Volume of the waste that was discharged.

The volume of waste discharged is believed to be >1kL, however the

	exact volume is unknown. No telemetric monitoring occurs at the Lakeside Drive and Rapid Creek SPS's discharge pipe.
(b) the place where the incident occurred	Lakeside Drive and Rapid Creek SPS's discharge pipe (see map below). *i. Description of the PWC asset from which the discharge occurred.* Lakeside Drive and Rapid Creek SPS's (as per map below). Wastewater from the Lakeside Drive and Rapid Creek SPS's share a balance pipe between the two SPS and use a common discharge point into Rapid Creek, as per the map below. *ii. GPS coordinates of the discharge point from the PWC asset, and the final coordinates of the final discharge point.* As per map below. *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.* Public access is available throughout the area via access tracks throughout the area.
(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 was approximately 18:00pm 6/04/19 and stopped at approximately 2:20am 8/04/19. *ii. How PWC were notified, or became aware of the discharge.* PWC operations group were notified prior to the overflow occurring via a high level alarm in the wet-well. This alarm activates when wastewater levels within the wet-well exceed a certain level. Once the capacity of the wet-well is exceeded the overflow occurs. Following the high-level alarm PWCs operations staff attend the site regularly to monitor the overflow. *iii. The process by which the discharge occurred.* A wet weather event has inundated the sewer system with stormwater run-off resulting in an overflow from specifically designed overflow relief pipe between both SPS's which discharges directly to Rapid Creek. *iv. The reason why the discharge occurred.* A wet weather event has inundated the sewer system with stormwater run-off resulting in an overflow from specifically designed overflow relief pipe. Prior to an overflow occurring, there are 2 sections of the sewage system that are designed to have storage capacity prior to the overflow occurring, these include: • Collection of wastewater within the wet-well • Sewage backs up into mains before overflow occurs (system design ensures overflows to the creek occur before overflows occur within households)

	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	Prevent/ Rectify: Incident rectification based on reduction in catchment rainfall levels. Overflows will cease when volumes in the system reduce. Control: Crews Monitoring site to manage overflow pathway and collect any solid material (No gross pollutants were observed). Clean-up: Site monitoring for and clean-up of gross pollutants (giving considerations to weather conditions). No gross pollutants were observed. *i. Confirmation signage and fencing has been erected, as appropriate.* Fencing is not possible due discharge occurring within the creek itself via a submerged pipe. Clear signage was displayed as per Sewage Spills/Overflow Response Work Instruction. *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 the environment.
(f) the identity of the person notifying the NT EPA	PWC Environmental Team on behalf of Water Services

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