

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

Date and Time of Notification:	Monday 30/11/2021 16:33hrs (initial) Thursday 16/06/2022 16:00hrs (amended)
Person / Company:	Power and Water Corporation (PWC)
Incident:	Overflow of diluted fully treated effluent

(a) the incident causing or threatening to cause pollution	<i>i. Description of the waste that was discharged.</i>
	Overflow of diluted fully treated effluent.
	<i>ii. Indicative wastewater quality for the discharge.</i>
	The overflows were diluted, fully treated effluent. Indicative wastewater quality for these overflows can be found in Table 1.
	<i>Table 1. Wastewater monitoring results</i>

	Physical and General Chemical			
Sample Date	Ammonia as N (Organic) (mg/L)	Nitrate + Nitrite as N (NOx)	Turbidity (lab) (NTU)	pH (lab) (pH units)
3/02/2021	5.8	0.2	130.0	7.22
	Phosphorus - Filterable Reactive as P (mg/L)	Phosphorus Total (mg/L)		
	0.4	1.3		

	<i>iii. Volume of the waste that was discharged.</i>
	The volume of waste discharged is unknown as via an unmetred overflow point.

| (b) the place where the incident occurred | *i. Description of the PWC asset from which the discharge occurred.* |
| Angurugu Wastewater Ponds, Angurugu – Groote Eylandt. |
| *ii. GPS coordinates of the discharge point from the PWC asset, and the final coordinates of the final discharge point.* |
| Discharge Point : 136.4520053 E, -13.9805287 S (infiltration basin) Discharge Point:2: 136.4519466 E, -13.9801340 S (Irrigation field) Final discharge point: 136.4497329 E, -13.9788225 S (Angurugu Creek) |

	<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> Overflow is from the infiltration basin and the irrigation field after treatment ponds, so effluent is “fully” treated. Discharge is to a purpose built drain, which flows across an unnamed mine access road and ultimately to Angurugu Creek, that is accessible to the public. Communication is in place including appropriate signage along the drain to alert the public and prevent them coming in close proximity, see attached photographs.
(c) the date and time of the incident	<i>i. The time and date of commencement and cessation of the discharge.</i> Start date and time is unknown but believed to be approximately 30/11/2021. The discharge was still occurring at the initial time of reporting, then stopped and recommenced periodically until the 14th June 2022, when it was confirmed that the intermittent overflows had ceased. <i>ii. How PWC were notified, or became aware of the discharge.</i> The Essential Services Operator looking after the facility notified the Water and Sewage Network Coordinator. The event was then entered into our event management system, at which point Environmental Services was notified. <i>iii. The process by which the discharge occurred.</i> Monsoonal weather associated with the wet season resulted in 144.0mm falling in November prior to the overflow starting. Treated effluent from Angurugu is disposed of by a combination of infiltration, irrigation and evaporation. During and after monsoonal bursts rainfall input to the ponds and effluent input from the community exceeds the infiltration, irrigation and evaporation capacity of the site and overflow from the infiltration basin occurs. There was also a period of time when the irrigation sprinklers were not being managed effectively enough, to prevent overflows. <i>iv. The reason why the discharge occurred.</i> Effluent is disposed of via evaporation, irrigation and infiltration, but due to rainfall, and abovementioned irrigation issues, this saturated the treatment pond irrigation and infiltration area resulting in fully treated effluent overflowing from the site. PWC prepared designs in 2013 to formalise and install an outfall pipe to the Angurugu River to allow controlled discharge of treated effluent during periods of high rainfall. Traditional owners of the land and another group of sacred site custodians could not agree on alignment of the outfall pipe so a permanent solution was not able to be constructed. Issues with retaining essential services operators (ESOs) is also proving to be problematic at times, especially when they leave without notice, which resulted in the irrigation field malfunctioning due to blocked sprinkler heads.

(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> Fencing not appropriate in this instance, with no anticipated access by the public. Warning signage has been erected, see attached photographs. Diversion drains in place to direct the effluent from the ponds across the road and into bushland. Signage has been placed within the area to alert the public and the overflow area is located within a restricted road reducing the probability of the public coming in contact with the wastewater. The PWC Technical Coordinator will also be investigating options for improving onsite controls such as bunding/earthworks prior to wet seasons to improve containment of overflows on site. Irrigation issues rectified, such as unblocking of sprinkler heads, and improved management of run times. An investigation of the inflow rates and water balance options will also be undertaken to determine options for upgrading the irrigation system and potentially increase sprinkler capacity on site. Power and Water management will also be having a meeting in early July with a representative of the Anindilyakwa Land Council to discuss opportunities of reusing some of the wastewater on a nearby tree lot, to help reduce pressure on the infiltration and irrigation fields. The feasibility of this idea is still to be determined. <i>ii. Decontamination of the site as appropriate.</i> Overflow is diluted and treated effluent, sewage debris is not present. Natural processes (UV disinfection) will provide disinfection of the discharge. Mosquito larvae baiting has also been undertaken since the overflows began, to prevent an increase in biting insects within the community.
(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 – Photographs of warning signage along facility fence and spill path

