

File: 3.3.4

October 24, 2024

Alberta Environment & Protected Areas
Regional Service – Northern Division
111 Twin Atria Building
4999-98 Ave
Edmonton, AB T6B 2X3

Submitted by email

Attn: Regional Director

**Subject: Approval 486-03-03
Forcemain Break – Reference # 434402**

In accordance with the Release Reporting Regulation, enclosed is Alberta Capital Region Wastewater Commission's, operating as *ARROW Utilities: A Capital Region Commission (ARROW)*, written report for the above event.

Yours truly,



Dana Giddings
HSE Specialist

Members:

Beaumont

Bon Accord

Gibbons

Fort Saskatchewan

Leduc

Leduc County

Morinville

Parkland

St. Albert

Spruce Grove

Stony Plain

Strathcona County

Sturgeon County

**Alberta Capital Region Wastewater Commission
Operating Approval 486-03-03**

Reference # 434402

Release Date: Exact Start Unknown - between October 19-21, 2024
Release stopped October 24, 2024

Location: Manhole: 903-MH-168
Service Address: 5 m East of 903-MH-168, 668 m Northwest of Mark
Messier Trail and 156 St. Edmonton, Alberta

Contaminant: Untreated wastewater

Quantity: estimated > 900 m³

Events:

October 21, 2024

14:25 – During transmission system inspections ARROW discovered a forcemain break and notified the Control Room that wastewater was surfacing at the location described above. The Operator followed the path of the flowing wastewater to determine the extent of the release and the collection point in a private retention feature. The contained wastewater remained below the overflow level of the retention feature cells. It was confirmed that no untreated wastewater entered any water body and did not impact environmentally sensitive areas, as per Environmental Sensitivity Mapping records developed by Spencer Environmental (2016).

14:30 – Reported the contravention to Alberta Environment and Protected Areas.

16:30 – ARROW collected three grab samples of the wastewater (Lab analysis results are included at the end of this report) and installed fencing around the immediate break site.

Containment and Control Actions:

October 21, 2024

ARROW initiated a diversion plan to divert flows to the Spruce Grove lagoons to reduce flows to the Parkland Pump Station and held an onsite strategy meeting with land agent and other contractor supports. Plug installation to begin the diversion was confirmed in place by 18:25 and 24-hour monitoring in place. As a redundancy a pump around system was installed at the diversion location to prevent potential additional releases.

ARROW land agent contractor worked to determine effected landowners and start approvals for Right of Entry Agreements.

Acknowledgement from EPCOR Goldbar Wastewater Treatment Plant to allow the pump around system from Parkland Pump Station to Trumpeter Lift Station (EPCOR owned) was received and mobilization plan confirmed. This pump around isolates the

Parkland Pump Station and reduces all pump cycles to accommodate pending repairs at the break site.

October 22, 2024

Locates confirmed for the break site and equipment preparation for mobilizing to the on October 23, 2024. Mobilization of access equipment for the Parkland Pump Station to Trumpeter Lift Station pump around was completed. ARROW reassessed the site and confirmed that the extent of the release remained within the private retention feature and 24-hour monitoring of the diversion location continued.

October 23, 2024

Contact with the landowner and access permissions were confirmed. The landowner confirmed that as of Friday, October 18, 2024, the private retention feature was dry. This suggests that the break happened between Saturday October 19 and its discovery on Monday October 21, 2024.

The recovery plan for collecting wastewater from the private retention feature began with the deployment of hydrovac trucks and approval for discharging into a nearby EPOCR manhole. This was initiated to mitigate wastewater levels exceeding the capacity of the private retention feature. Hydrovac operation removed approximately 900 m³ and operated until 21:00 as water levels were brought down and sustained.

Mobilization of access equipment to the break site was completed.

ARROW and an Alberta Environment and Protected Areas Officer evaluated the site, reviewing ongoing actions and recovery plans. No major concerns were noted, and efforts to contain, mediate, and assess for repairs were acknowledged as ongoing.

Spencer Environmental completed preliminary assessment with ARROW by inspecting the impacted areas and confirmed containment of release and that no untreated wastewater entered any water body and that it did not affect environmentally sensitive areas.

October 24, 2024

Parkland Pump Station to Trumpeter Lift Station pump around online as of 07:30 and will remain in place until repairs are completed. Parkland Pump Station pumps are offline therefore no further wastewater will be pumped through the forcemain until the repairs can be completed, effectively ceasing the release of wastewater from the break site.

The excavation to uncover the damaged pipe is underway.

Further removal of contained wastewater from the private retention feature and initial cleanup efforts underway.

Causes and Future Actions

The root cause of the release will be investigated after exposing the compromised section of the force main. The pressure alarms were not activated because the break happened far beyond the highest point in the forcemain. As a result, static pressure

alarms did not detect the break, which is why our monitoring systems did not initiate an alert.

Priority tasks include ongoing efforts to collect and clean up standing wastewater, 24-hour monitoring of the diversion and pump around operations, and managing excavation at the break site. After exposing the break site, an assessment will be performed to confirm repairs and strategize the long-term cleanup process. An updated estimate of the release volume will be included in a follow-up letter once further evaluations at the break site are completed.

Spencer Environmental will provide environmental report to ARROW with remediation recommendations, if required.

Sample Results:

Sample ID	Sampling Date	pH	TSS (mg/L)	BOD (mg/L)	NH3-N (mg/L)	Un-ionized NH3	TP (mg/L)
10-21-24-Pond #1	10/21/24	7.80	22	*	34.5	0.589	4.90
10-21-24-Pond #2	10/21/24	7.70	16	*	32.6	0.444	3.83
10-21-24-MH-168	10/21/24	7.38	440	*	43.3	0.284	7.45

*Note: BOD analysis pending completion, results to be provided in follow up letter.