

# HAMLET OF KUGLUKTUK

## Action Remediation (AR) Plan

### Water, Sewage, and Solid Waste Facilities

Prepared by: Manager of Infrastructure & Projects **March 2026**

## Executive Summary

The Hamlet of Kugluktuk is committed to the responsible operation of its municipal water, sewage, and solid waste systems. This Action Remediation (AR) Plan outlines the corrective measures required to address issues identified through inspections, operational reviews, and post-incident assessments. The plan reflects the Hamlet's commitment to environmental stewardship, regulatory compliance, and the protection of community infrastructure.

The AR Plan focuses on six priority areas:

- Erosion mitigation at the backwash pond
- Removal of debris from the sewage lagoon
- Hydrocarbon cleanup beneath the decanting pump
- Improvements to battery storage
- Restoration of propane cylinder storage
- Development of a comprehensive land farm remedial action plan

Implementation is scheduled for Winter 2025 through Spring 2026.

## 1. Introduction

The Hamlet of Kugluktuk operates critical municipal infrastructure that supports community health and environmental protection. Regular inspections and operational reviews have identified several areas requiring corrective action. This AR Plan provides a structured, accountable approach to addressing these issues and ensuring continued compliance with territorial and federal requirements.

The plan is designed to be clear, actionable, and aligned with the Hamlet's operational capacity and seasonal constraints.

## 2. Regulatory Context

The following legislation, licences, and guidelines govern the activities described in this plan:

- **Nunavut Waters and Nunavut Surface Rights Tribunal Act**
- **Municipal Water Licence**
- **Environmental Protection Act (Nunavut)**
- **Guideline for the Management of Hazardous Waste**
- **Guideline for Industrial Waste Discharges**
- **Transportation of Dangerous Goods Regulations**
- **CCME Soil Quality Guidelines**

The Hamlet will complete all remediation activities in accordance with these requirements and any additional direction provided by the Water Licence Inspector.

## **3. Facility Overview**

### **3.1 Water Treatment Plant & Backwash Pond**

The backwash pond receives discharge from the water treatment plant. Seasonal overflow has resulted in localized erosion along the outflow channel, requiring stabilization.

### **3.2 Sewage Lagoon & Decanting System**

The sewage lagoon includes a decanting pump and fuel supply system. Issues identified include hydrocarbon leaks, inadequate containment, and the presence of a 502L drum and rock material on the lagoon berm.

### **3.3 Solid Waste Facility**

The solid waste facility includes:

- Battery storage area
- Propane cylinder storage
- Land farm for hydrocarbon-impacted soil
- Post-fire debris and compromised containers from the 2023 incident

## **4. Summary of Inspection Findings**

Inspections and operational reviews identified the following priority issues:

1. Erosion at the backwash pond overflow
2. 502L drum and rock material on the sewage lagoon berm
3. Hydrocarbon-impacted soil beneath the decanting pump
4. Battery storage requiring improved compliance
5. Loss of propane cylinder storage crates due to land farm fire

6. Need for a comprehensive remedial action plan for land farm cleanup and long-term management

These findings form the basis of the remediation actions outlined in Section 5.

## 5. Remediation Actions

### 5.1 Erosion Mitigation at Backwash Pond

**Objective:** Stabilize erosion and protect the overflow channel. **Actions:**

- Install geotechnical filter cloth along erosion-prone sections.
- Place riprap over the geotech to dissipate flow energy.
- Conduct seasonal inspections and add material as required. **Target Completion:** Spring 2026

### 5.2 Removal of 502L Drum and Rock Material

**Objective:** Remove debris and prevent contamination. **Actions:**

- Extract and remove the drum and rock material.
- Transport debris to hazardous waste storage for proper disposal.
- Install secondary containment for the decanting pump fuel supply.
- Ensure containment meets GNWT and federal standards. **Target Completion:** Spring 2026

### 5.3 Hydrocarbon Cleanup Beneath Decanting Pump

**Objective:** Remove contaminated soil and prevent future releases. **Actions:**

- Excavate hydrocarbon-impacted soil and transport to the land farm.
- Replace with clean, compacted fill.
- Repair all leaks on the decanting pump.
- Install secondary containment beneath the fuel tank. **Target Completion:** Spring 2026

### 5.4 Battery Storage Compliance

**Objective:** Maintain compliant hazardous waste storage. **Actions:**

- Continue using poly-lined containment units.
- Improve signage and public communication.
- Conduct routine inspections and record volumes. **Target Completion:** Spring 2026

## 5.5 Propane Cylinder Storage Restoration

**Objective:** Restore compliant storage following fire damage. **Actions:**

- Replace storage crates lost during the land farm fire.
- Deploy new pallet boxes and reorganize cylinders.
- Install placards and hazard labels.
- Implement quarterly inspections. **Target Completion:** Spring 2026

## 5.6 Land Farm Remedial Action Plan

**Objective:** Address post-fire impacts and restore land farm functionality. **Actions:**

- Remove and dispose of all drums and containers.
- Conduct post-fire cleanup and stockpile contaminated soil for bioremediation.
- Incinerate petroleum products from compromised containers.
- Dispose of all compromised containers following incineration.
- Establish long-term monitoring for soil treatment. **Target Completion:**
- Plan submission: Winter 2025–2026
- Field cleanup: Spring 2026

# 6. Monitoring & Reporting

## 6.1 Monitoring Program

- Seasonal inspections of erosion control, containment systems, and hazardous waste storage
- Quarterly inspections of propane cylinder storage
- Annual land farm assessment, including soil sampling
- Operational logs for decanting pump maintenance and fuel handling

## 6.2 Reporting Requirements

- Annual Water Licence Report
- Hazardous Waste Inventory Updates
- Incident Reports (as required)
- Submission of the Land Farm Remedial Action Plan

# 7. Implementation Schedule

<b>Action Item</b>	<b>Winter 2025</b>	<b>Spring 2026</b>	<b>Summer 2026</b>	<b>Ongoing</b>
Erosion mitigation	–	Install geotech & riprap	Inspection	Seasonal
Drum & debris removal	–	Removal & containment install	–	–
Hydrocarbon cleanup	–	Excavation & repairs	–	–
Battery storage compliance	–	–	–	Routine inspections
Propane cylinder storage	–	Crate replacement & reorganization	–	Quarterly
Land farm remedial plan	Draft & submit	Cleanup & implementation	Monitoring	Annual

## 8. Conclusion

The Hamlet of Kugluktuk is committed to completing all remediation activities by Spring 2026 and maintaining compliance with territorial and federal environmental requirements. This AR Plan provides a clear, structured approach to addressing current issues, restoring safe operation of municipal facilities, and supporting long-term environmental stewardship.