

DE BEERS GROUP

August 08, 2024

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Government of the Northwest Territories
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Subject: Follow-Up Spill Report – Hydraulic Oil – Gahcho Kué Mine – July 13, 2024 (GNWT Spill #2024269)

Pursuant to Part H Condition 3(d) of Water License MV2005L2-0015, De Beers Canada Inc. (De Beers) is submitting this follow-up spill report for GNWT Spill #2024269, which occurred at the Gahcho Kué Mine at 12:00 on July 13, 2024.

An NT-NU Spill Report was completed and submitted via email to the NWT Spills Hotline (spills@gov.nt.ca) at 08:27 on July 14, 2024.

Incident Summary:

At approximately 13:25 on July 13, 2024, the Environment Department received notification of a hydraulic oil spill involving a Komatsu PC 5500, designated as SH-002, which was located at the Build Pad. The specific location of the spill is illustrated in **Figure 1**. The incident occurred at 12:00 during the course of routine maintenance operations on the shovel. At the time, the maintenance team was engaged in aligning the shovel's bucket body with its back wall. During this procedure, a critical failure occurred in the clam cylinder hose. This failure precipitated an unforeseen collapse of the back wall, which subsequently led to the uncontrolled release of 200 liters of hydraulic oil. The extent and nature of the spill are depicted in **Figure 2**.

Immediate Actions:

All maintenance activities involving the shovel were promptly halted. Immediate response measures were implemented, including the deployment of spill containment pads and the construction of a gravel berm. These actions were taken to effectively contain and manage the spill within the affected area. The shovel was relocated away from the spill site to get better access to the contaminated material. All contaminated materials were collected, placed into appropriately labeled drums, and then transported to the designated Waste Management Area (WMA). There, the materials will be processed for off-site disposal in accordance with regulatory standards.

Given the nature of the spill and the characteristics of the affected area—specifically, its lined surface and gravel pad—the overall environmental impact is assessed as minimal. The area was confirmed to be completely free of any residual contaminants, as illustrated in **Figure 3**.

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Root Cause:

Following a comprehensive investigation into the recent spill incident, it has been determined that the primary cause was attributable to a manufactured parts failure, coupled with workplace factors. Specifically, the investigation revealed that the spill originated from a failure of a hose, which led to the separation of the flange head from the hose assembly. This equipment malfunction appears to be a direct consequence of inadequate quality control measures implemented by the original equipment manufacturer (OEM).

Furthermore, the investigation uncovered deficiencies in the inspection protocols followed by DeBeers staff. It was noted that the new components, which were installed on the machinery, had not undergone thorough inspection prior to their integration into operational equipment. This oversight in the pre-installation inspection process contributed to the failure of the hose and subsequent spill.

Follow-Up Actions:

In response to the incident, De Beers has initiated a series of comprehensive corrective actions designed to mitigate the risk of spill recurrence and ensure the ongoing reliability of operations. These actions include:

1. **Inspecting Hydraulic Hoses:** Conducted a thorough examination of hydraulic hoses on two additional shovels that utilize the same OEM hose to identify and address any potential future issues.
2. **Engaging with the OEM:** Followed up with the original equipment manufacturer to review their quality control procedures and investigate the root cause of the hose failure at the point of production. This will help in understanding the failure mechanism and implementing measures to prevent future occurrences.

Should you have any questions or concerns, or require any additional information, please do not hesitate to contact the undersigned at your convenience.

Sincerely,



Michelle Burger
Environmental Coordinator / Gahcho Kué Mine
867.679.5812
Michelle.Burger@debeersgroup.com

Attachments:

- Figure 1. Location of GNWT Spill #2024269
- Figure 2. Spill at Build Pad, GNWT Spill #2024269
- Figure 3. Verification of Spill Clean Up, GNWT Spill #2024269
- Figure 4. NT-NU Spill Report GNWT Spill #2024269

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Figure 1. Location of GNWT Spill #2024269

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Figure 2. Spill at Build Pad, GNWT Spill #2024269

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Figure 3. Verification of Spill Clean Up, GNWT Spill #2024269

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NT-NU SPILL REPORT

OIL, GASOLINE, CHEMICALS AND
OTHER HAZARDOUS MATERIALS



NT-NU 24-HOUR SPILL REPORT LINE
Tel: (867) 920-8130 • Email: spills@gov.nt.ca

REPORT LINE USE ONLY

A	Report Date: 07 13 24	Report Time: 1:25 pm	<input checked="" type="checkbox"/> Original Spill Report	Report Number:	
B	Occurrence Date: 07 13 24	Occurrence Time: 12:00 pm	<input type="checkbox"/> Update # _____ to the Original Spill Report		
C	Land Use Permit Number (if applicable): MV2021D0009	Water Licence Number (if applicable): MV2005L2-0015			
D	Geographic Place Name or Distance and Direction from the Named Location: De Beers Group (Canada) Gahcho Kue Mine (Kennady Lake, NT)	Region: <input checked="" type="checkbox"/> NT <input type="checkbox"/> Nunavut <input type="checkbox"/> Adjacent Jurisdiction or Ocean			
E	Latitude: 63 Degrees 26 Minutes 14 Seconds	Longitude: 109 Degrees 11 Minutes 38 Seconds			
F	Responsible Party or Vessel Name: De Beers Group	Responsible Party Address or Office Location: Suite 300 - 1601 Airport Road NE, Calgary Alberta Canada T2E 6X8			
G	Any Contractor Involved: SMS	Contractor Address or Office Location:			
H	Product Spilled: <input type="checkbox"/> Potential Spill Hydraulic Oil	Quantity in Litres, Kilograms or Cubic Metres: Approximately 200L	U.N. Number:		
I	Spill Source: Hydraulic Shovel (SH-002)	Spill Cause: Failed Cylinder Hose	Area of Contamination in Square Metres: 5m		
J	Factors Affecting Spill or Recovery: None	Describe Any Assistance Required: None	Hazards to Persons, Property or Environment: None		
K	<p>Additional Information, Comments, Actions Proposed or Taken to Contain, Recover or Dispose of Spilled Product and Contaminated Materials:</p> <p>At approximately 13:25 on July 13, 2024, the Environment department was notified of a hydraulic oil spill from SH-002 located at the Build Pad. The shovel was in the process of planned maintenance. As the body of the shovel was about to get in alignment with the back wall, the clam cylinder hose failed causing the back wall to fall forward. This resulted in a spill of approximately 200L of hydraulic oil. The maintenance of the shovel was immediately stopped and spill pads were placed, along with a gravel berm, to keep the spill contained.</p> <p>The shovel will be moved and contaminated material will be scrapped up, placed into drums, and transported to the waste management area for off-site disposal. The environmental impact is deemed minimal due to the small size and characteristics of the affected area (lined, gravel pad).</p> <p>A follow-up report outlining the root cause and corrective/preventive actions taken in response to this incident will be submitted within 30 days.</p>				
L	Reported to Spill Line by: Jarrett Vornbrock	Position: Sr. Enviro Tech	Employer: De Beers	Location Calling From: GK Mine Site	Telephone: (867) 679-5850
M	Any Alternate Contact: Mason Elwood	Position: Env. Superintendent	Employer: De Beers	Alternate Contact Location: Offs-Site	Alternate Telephone: (867) 679-5814

REPORT LINE USE ONLY

N	Received at Spill Line by:	Position:	Employer:	Location Called:	Report Line Number:
	Lead Agency: <input type="checkbox"/> EC <input type="checkbox"/> CCG/TCMSS <input type="checkbox"/> GNWT <input type="checkbox"/> GN <input type="checkbox"/> ILA			Significance: <input type="checkbox"/> Minor	File Status: <input type="checkbox"/> Open
	<input type="checkbox"/> AANDC <input type="checkbox"/> NEB <input type="checkbox"/> Other: _____			<input type="checkbox"/> Major <input type="checkbox"/> Unknown	<input type="checkbox"/> Closed
	Agency:	Contact Name:	Contact Time:	Remarks:	
	Lead Agency:				
	First Support Agency:				
	Second Support Agency:				
	Third Support Agency:				

Figure 4. NT-NU Spill Report GNWT Spill #2024269