

# DE BEERS

GROUP OF COMPANIES

April 28, 2018

Angela Love  
Regulatory Officer  
Mackenzie Valley Land and Water Board  
7<sup>th</sup> Flr – 4922 48<sup>th</sup> Street  
P.O. Box 2130  
Yellowknife, NT X1A 2P6

Dear Ms. Love,

**Subject: Follow-Up Spill Report – Spill of Greywater under Kitchen - Gahcho Kué Mine – March 28, 2018 (GNWT Spill # 2018-107)**

**Incident Summary:**

At approximately 15:30 on March 28, 2018, a spill of approximately 300 litres of greywater was discovered under the kitchen at the Gahcho Kué Mine. The leak was noticed by a worker after receiving complaints of an odor emanating from an open access hatch during snow removal in the area. Upon initial investigation, it was discovered that a plastic (ABS) pipeline (drain pipe) used to convey greywater from the sinks and dishwasher in the kitchen to a lift station was broken, resulting in the greywater pooling under the kitchen trailer units. This pipeline is both heat-traced and insulated. It was discovered that the metal pipe hangers which are used to suspend the pipe were anchored to oriented strand board (OSB) only, instead of to more secure, solid wood floor joist (frame). This resulted in the hanger fasteners eventually pulling free of the OSB, causing the pipe to fall to the ground and break. Further investigation showed there was insufficient blocking to provide additional support to the pipe. The spilled greywater appeared to be entirely contained on the engineered gravel pad under the trailer, and there was no evidence that it had spread from the immediate area. Photos are attached.

Immediate corrective actions implemented to control and remediate the spill included the following:

1. The water supply to the kitchen was shut off and locked out;
2. A vac truck was used to remove the pooled greywater from under the trailer, and dispose of it in the on-site waste water treatment plant; and
3. The broken pipe was replaced, the pipe hangers were attached to the wood floor joist, and wooden blocking installed to provide additional support to the pipe.

A DIVISION OF DE BEERS CANADA INC.  
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Based on the volume of greywater removed by the vac truck immediately following the discovery of the spill, it is estimated that the total volume of spilled material was approximately 300 litres.

An NT-NU Spill Report was completed and submitted via email to the NWT Spills Hotline (spills@gov.nt.ca) at 13:38 on March 29, 2018.

## **Root Cause Analysis:**

The results of an internal De Beers investigation determined that the cause of the spill was improper fastening of two metal pipe hangers to insecure material (oriented strand board), which failed to support the weight and caused a section of the pipe to drop to the ground and break.

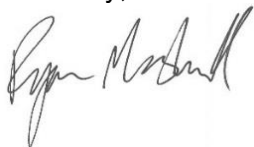
## **Corrective Actions:**

The following additional measures have been implemented to mitigate the effects of the spill and prevent a recurrence:

1. Lime was spread over the affected area to limit microbial growth and eliminate odours in order to reduce the potential to attract wildlife. This action was completed on March 29;
2. The damaged section of pipe, along with the failed pipe hangers, were replaced, and the pipe was re-suspended off the ground, with the hangers attached to secure wood floor joist. This action was completed on March 28;
3. Additional blocking was installed to provide additional support beneath the suspended pipe. This action was completed on March 28.

The internal investigation relating to this incident has been concluded and the corrective actions complete. Should you have any questions or concerns, please do not hesitate to contact the undersigned at your convenience.

Sincerely,



Ryan Marshall  
Environmental Coordinator / Gahcho Kué Mine  
416.645.1695 (x6621)  
ryan.marshall@debeersgroup.com

**Attachments:** 1. Copy of the original NT-NU spill report; and  
2. Photos.

# NT-NU SPILL REPORT

OIL, GASOLINE, CHEMICALS AND  
OTHER HAZARDOUS MATERIALS



## NT-NU 24-HOUR SPILL REPORT LINE

Tel: (867) 920-8130 • Fax: (867) 873-6924 • Email: spills@gov.nt.ca

### REPORT LINE USE ONLY

A	Report Date: MM   DD   YY	Report Time:	<input type="checkbox"/> Original Spill Report <b>OR</b> <input type="checkbox"/> Update # _____ to the Original Spill Report	Report Number:	
	Occurrence Date: MM   DD   YY	Occurrence Time:			
C	Land Use Permit Number (if applicable):	Water Licence Number (if applicable):			
D	Geographic Place Name or Distance and Direction from the Named Location:		Region: <input type="checkbox"/> NT <input type="checkbox"/> Nunavut <input type="checkbox"/> Adjacent Jurisdiction or Ocean		
E	Latitude: _____ Degrees _____ Minutes _____ Seconds		Longitude: _____ Degrees _____ Minutes _____ Seconds		
F	Responsible Party or Vessel Name:		Responsible Party Address or Office Location:		
G	Any Contractor Involved:		Contractor Address or Office Location:		
H	Product Spilled: <input type="checkbox"/> Potential Spill	Quantity in Litres, Kilograms or Cubic Metres:	U.N. Number:		
I	Spill Source:	Spill Cause:	Area of Contamination in Square Metres:		
J	Factors Affecting Spill or Recovery:	Describe Any Assistance Required:	Hazards to Persons, Property or Environment:		
K	Additional Information, Comments, Actions Proposed or Taken to Contain, Recover or Dispose of Spilled Product and Contaminated Materials:				
L	Reported to Spill Line by:	Position:	Employer:	Location Calling From:	Telephone:
M	Any Alternate Contact:	Position:	Employer:	Alternate Contact Location:	Alternate Telephone:

### 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 <input type="checkbox"/> AANDC <input type="checkbox"/> NEB <input type="checkbox"/> Other: _____			Significance: <input type="checkbox"/> Minor <input type="checkbox"/> Major <input type="checkbox"/> Unknown		File Status: <input type="checkbox"/> Open <input type="checkbox"/> Closed
Agency:		Contact Name:	Contact Name:	Remarks:	
Lead Agency:					
First Support Agency:					
Second Support Agency:					
Third Support Agency:					

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Photo showing the replaced pipe after corrective actions were completed. The metal pipe hanger has been re-secured to wood instead of OSB material. As visible on the ground, Lime was applied to mitigate odours and prevent microbial growth.

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Photo showing the replaced pipe after corrective actions were completed. Blocking was added as extra support beneath the metal hanger supported sections of the pipe.