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Joseph Mackenzie  
Chair  
Wek'èezhii Land and Water Board  
#1, 4905-48th Street  
Yellowknife, NT  
X1A 3S3

Jamie Steele  
North Slave Regional Office  
Department of Lands  
Government of the Northwest Territories  
#16 Yellowknife Airport  
Yellowknife, NT  
X1A 3T2

**Subject: W2016D0003: Spill 2019127 Follow-Up Report**

As requested by the Inspector, and pursuant to Part C, Condition 18(c) of Land Use Permit W2016D0003, Dominion Diamond Mines ULC (Dominion) is providing a follow-up report on Spill 2019127 which occurred on March 20, 2019 at the Sable Fuel Tank Farm. The purpose of this report is to provide updates on the ongoing clean-up of Spill 2019127 and to provide a plan moving forward.

**Summary**

- At approximately 18:30 on March 20<sup>th</sup> a Generator Day Tank (9,000 L capacity) within the Sable Fuel Tank containment berm called for fuel from one of the four bulk tanks (467,000 L each) through the programmable logic controller (PLC) system.
- The pump continued to drain diesel from the bulk fuel tank and overflow the Generator Day Tank for approximately 8.5 hours until the bulk tank drained to a level that caused a loss of suction. The loss of suction caused the pump to shut off and stop the overflow.
- The event overflowed approximately 111,000 L of diesel into the contained berm.
- The fuel was effectively contained within the lined berm with no release to the environment.

**Root Cause**

The failure was caused by the High Level and High High Level switches freezing due to condensation from the temperature changes at the Ekati mine. The level floats were not able to move up and down because they were frozen.

**Immediate Action Taken**

The Hydrocarbons Department discovered the overflow and immediately closed off the bulk tank and shut off power to the pumps. Access to the Fuel Tank Farm was closed to both light vehicles and heavy equipment. A full inspection of the containment berm was conducted to ensure that all diesel was being contained within the lined berm. The Environment Department was contacted to help assess the spill. The Environment Department contacted the Inspector and reported the spill to the ENR Online Spill Reporting Database.

The Hydrocarbons Department was able to recover ~85,000 L of the spill from the containment berm and pump it directly back into the bulk tank it drained from. That bulk tank has been closed off until the water can be drained off the bottom and filtered so that the product can still be used in the future. After pumping of the fuel ceased, Dominion has deployed absorbent spill response equipment (pads, booms, etc.) to recover free-standing diesel and has pumped contaminated water out into storage totes on an as-needed basis.

Figure 1. Location of Spill 2019127 at Sable Development



Figure 2. Sable Fuel Farm berm near Generator Day Tank before water removal (August 20, 2019)

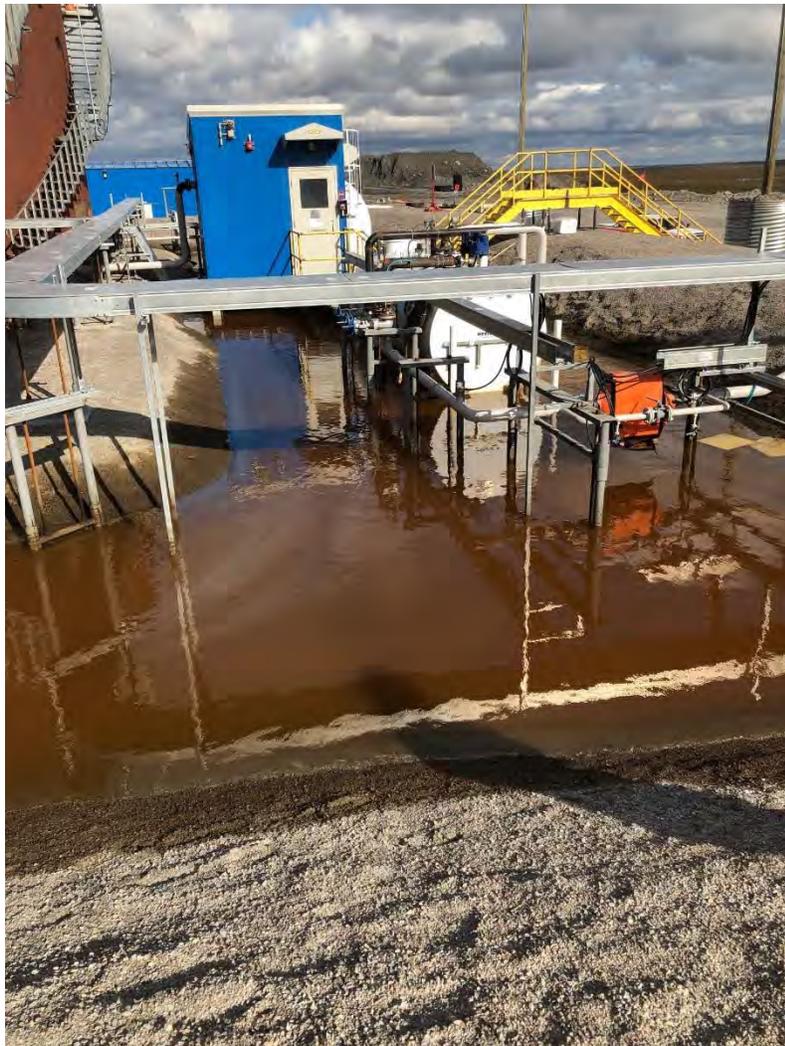


Figure 3. Absorbents used to collect diesel in containment berm (photo taken August 20, 2019)



Figure 4. Improvement within containment berm between August and follow-up inspection in October (photo taken October 8, 2019)





## Follow Up Action Taken

- The Instrumentation Department has programmed timers into the PLC that limits how much fuel can be pumped from the bulk tanks to each day tank. The PLC has been programmed to only allow filling of each day tank for the amount of time it takes to fill it. With this addition, even if the High and High High Level sensors fail the pump will only feed fuel to the day tanks for the set amount of time before kicking out.
- Dominion continues to conduct daily inspections of all tank farms on site to check for leakage, pipe and valve conditions, availability of spill response equipment, and several other health, safety, and environmental criteria. The daily inspection includes a walk around the perimeter of the tank farms to ensure no liquids are escaping the lined, bermed containment areas. The daily presence of personnel at the Sable Tank Farm allows for ongoing clean-up efforts including the placement of absorbents to collect free-standing diesel within the berm and pumping the free-standing contaminated water. The water collects in the berm as a result of rain water and melt water and flushes the hydrocarbons from the contaminated gravel. The water is removed on an as-needed basis to remove the contaminants and ensure that pipe connections and tanks within the containment berm are visible and accessible for inspection. The contaminated water is placed into totes for eventual shipment off site.
- Dominion conducts more intensive weekly inspections of all tank farm on site, including the Sable Tank Farm. Aspects of the system such as overfill protection, leak detection, and condition of the containment berm are inspected in greater detail.
- The Ekati Diamond Mine is currently experiencing freezing temperatures which will continue into spring of 2020. Intensive clean-up efforts will recommence in spring when the snow within the containment berm begins to melt. Over the winter, Dominion will continue to perform daily and weekly inspections of the tank farm and ensure that all contaminated material (snow, ice, gravel) remains within the lined, bermed containment until such time that clean-up can recommence in spring.
- At this time, Dominion does not plan to attempt excavation of any of the gravel within the berm. Daily inspections of the perimeter of the berm, as well as the retention of standing water in the containment, confirm that the lined, bermed containment is working as designed. Dominion does not want to risk doing damage to the liner beneath the gravel bed, or risk compromising the containment in any other way through the use of heavy equipment.

Dominion will continue to work with the Inspector as clean-up efforts continue for Spill 2019127. We trust this report is clear and informative. If you have any questions or comments please contact the undersigned at [dustin.chaffee@ddcorp.ca](mailto:dustin.chaffee@ddcorp.ca) or (867) 669-6164 or Lynn Boettger at [lynn.boettger@ddcorp.ca](mailto:lynn.boettger@ddcorp.ca) or (867) 766-6914.



**Dominion Diamond Mines**

**Dominion Diamond Mines ULC**

900-606 4 Street SW

(403) 910-1933

Calgary, Alberta T2P1T1

(403) 910-1934 fax

[www.ddmines.com](http://www.ddmines.com)

Yours Sincerely,

Dustin Chaffee  
Environment Advisor - Permitting  
Dominion Diamond Mines ULC