July 28th, 2017 Vault refuge genset spill

Please find the following information as a follow up to the Spill report submitted July 28th 2017 by Agnico Eagle Meadowbank division. This detailed report is submitted to the Inspector in compliance with the conditions under the Nunavut Water Board License 2AM-MEA1525, Part H, Item 8c.

Spill Description

During regular maintenance work, a technician noticed a fuel smell from his work area. The worker notified immediately his supervisor and the Environmental department. Upon inspection it was determined that the source was from underneath the Vault refuge genset tank.

Spill location: Easting 65’03’46” 95’59’31”

There were no off site impact or discharge to any receiving watercourses. The distance to the closest lake is estimated at 650 meters.

Cause of Spill

After investigation (see in appendix), it was assessed that the spill most probably originated from the refilling procedures of the tank. Consumption logs were verified and tabulated, pointing towards human error during refuelling.

Remediation Actions

Being underneath the tank, the recovery work had to be planned and assessed with the Energy and Infrastructure and Mine Departments. Level of the tank had to be lowered to safely lift and remove from the location. As well the area is part of the electrical feed of the Vault refuge station, thus electrical cables around the area had to be identified and taken away for the planned clean-up work. A complete shut-down of the refuge had to be planned, delaying recovery work. A PID meter was used to assist in locating contaminated area. To ensure stability of the ground for the tank reset, the whole area was dug to a stable and level depth. Thus, more material was removed from the recovery work. All material removed was considered contaminated and disposed at the approved Landfarm. The area was backfilled with proper material and the tank reinstalled at the same location.

Corrective measures

An investigation was completed and amongst causes was identified:

> *Improper loading; Inadequate inspection; Inadequate warning system; Procedure not followed; Inadequate engineering; Inadequate work standards.*

Corrective measures identified were:

> *Review and modify procedure with all fuel truck drivers and the facts of this incident. Review the responsibilities of the fuel truck drivers if a spill occurs while fueling and actions to be taken.*
>
> *Research the options to provide the level reading of fuel tanks around site to the operator while filling them.*

Closure

We trust that the above details described appropriately the spill incident that occurred at the Meadowbank on July 28th, 2017 and the cleanup activities. Please contact the undersigned should you have any questions.

Robin Allard
Environmental Senior Coordinator
robin.allard@agnicoeagle.com
T: 819.759.3555 x6744
Agnico Eagle Mines Limited
Meadowbank Division

AGNICO EAGLE

Appendix A

Investigation Report

AGNICO EAGLE
MEADOWBANK

Accident/Incident Investigation Form

PERSON AND TIME

Name: Steven Chasse Employee #: _____

Department: E&I Work station: _____

Supervisor: Eric Parent Witness: _____

Date: July 29th 2017 Time: 10am Overtime: ☐ **Yes** ☒ **No**

Shift: ☐ 8H ☐ 10H ☒ 12H ☒ Day ☐ Night

Supplementary details in the statement (if applicable) ☐ Appendix

While electrician was running cables under the fuel tank for Gen04/Gen04 he noticed that there was a spill under the tank. He reported it to his supervisor Eric Parent. A spill report was then completed with details of the situation to environment department.

Witness statements (if any):

TASK & ORGANIZATION

Task at the time of the accident: N/A

Experience in this task: N/A Frequency of this task: Once a day

Movement at the time of the accident:

We are not sure when the spill happened exactly so it is not possible to know exactly who was responsible.

Body position: N/A

Type of work: ☐ Team ☒ Solo

Is there a written work procedure: ☐ Yes ☐ No ☒ N/A

Was it followed: ☐ Yes ☐ No ☒ N/A

Training received for this task: ☐ Yes ☒ No Date: _____ Length: _____

Information received for this task: ☒ Yes ☐ No Date: _____ _____

LOCATION AND ENVIRONMENT

Exact location of the incident: Behind Gen05 and under the 11,000L Fuel Tank

Layout and cleanliness of the site:

N/A

Physical condition of the site (ground conditions, ventilation, temperature, lighting, dust, etc.):

☒ Compliant ☐ Non-Compliant ☐ N/A

Details (if non-compliant):

Photo: ☐ Yes ☒ No

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EQUIPMENT, MATERIALS AND TOOLS

Identify equipment, materials or tools involved in the accident (if any):
Fuel Truck and 11,000 L Fuel Tank

Condition of equipment, materials or tools:

☐ Compliant ☐ Non-Compliant ☒ N/A

Details (if non-compliant):

Is there an equipment maintenance procedure? ☐ Yes ☐ No ☒ N/A

Date of last preventive maintenance: N/A

Personal protective equipment involved (boots, hat, eyewear, mask, visor, gloves…):
N/A

Condition of personal protective equipment involved: ☐ Compliant ☐ Non-Compliant ☒ N/A

Details (if non-compliant):

Were they appropriate to the task? ☐ Yes ☐ No ☒ N/A

Details (if non-compliant):

Photo: ☒ Yes ☐ No

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ANALYSYS *(Investigation of immediate and fundamental (root) causes)*

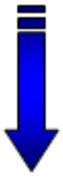
Reconstruct the chronological order including the causes and effects of the accident:

Damage or Injury:

Approximatly 200 Liters of fuel spilled under the tank.

Fact(s):
(Why?)

Fuel spill occured sometime end of July. It is unknown when exactly the spill occured. Gen04 & Gen05 both use this fuel tank. Fuel tank has a capacity of 11,000 Liters. G4 runs at 1.08Liters per minute & G5 runs at 1.51Liters per minute. We do not know who was the driver when the spill occured.



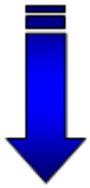
Immediate Cause(s):
(Why?)

Improper loading: There is a possibility that the driver overfilled the tank which caused the spill. No one reported a spill in this area as it was found after the fact.

Inadequate inspection: The driver may not have inspected the tank level correctly before filling the tank.

Inadequate warning system: There is no level sensor in the tank to warn the driver of the percentage of tank level.

Temperature exposure: It is possible that the tank was filled to a high level and that the temperature caused an expansion in the tank causing the spill.



Fundamental (Root) Causes(s):
(Why?)

Inadequate engineering/ Inadequate tools/equipment: No level sensor or local level display on the fuel tank or automatic shut off on fuel truck.

Inadequate work standards: Possibility that the driver was distracted or for another reason overfilled the tank.

CORRECTIVE MEASURES

Corrective measure # 1

Review and modify procedure if required with all fuel truck drivers and the facts of this incident. Review the responsibilities of the fuel truck drivers if a spill occurs while fueling and actions to be taken.

Responsibility: Pat Camarotto Due Date:

Corrective completed ☐ By: _____ Date: _____

Corrective measure # 2

Research the options to provide the level reading of fuel tanks around site to the operator while filling them. Only tanks that have a potential for a spill of 100 liters or more should require the level reading.

Responsibility: Lee-Christophe Bouchard Due Date: September 1st, 2017

Corrective completed ☐ By: _____ Date: _____

Corrective measure # 3

Responsibility: _____ Due Date:

Corrective completed ☐ By: _____ Date: _____

Corrective measure # 4

Responsibility: _____ Due Date:

Corrective completed ☐ By: _____ Date: _____

Corrective measure # 5

Responsibility: _____ Due Date:

Corrective completed ☐ By: _____ Date: _____

OHSC Hourly Representative: _____ Signature

OHSC Management Representative: _____ Signature

Participant(s):

_____ _____

_____ _____

_____ _____

Date _____