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January 27, 2021

Terry Giroux
Vale Canada Limited
487 Power
Copper Cliff ON
P0M 1N0

Email: terry.giroux@vale.com

FS - LF Variance

Service Request No.: 2969662, 2969672, 2969686, 2969696, 2969706, 2969714
Fuels Safety Private Fuel Outlet - Self Serve
Installed at address: Various Locations

**Re: Variance from Clauses 1.3.1, 4.1.8 & 4.3.2.4 of the Liquid Fuels Handling Code 2017,
O. Reg. 217/01**

Dear Terry Giroux,

Vale Canada wants to continue operation of six liquid fuel storage and dispensing systems at the addresses listed below.

487 Power Street, Copper Cliff, ON, P0M 1N0 – SR 2969662
117 Coleman Mine Road, Levack, ON, P0M 2C0 – SR 2969672
1039 Regional Road 24, Lively, ON, P3Y 1H7 – SR 2969686
1702 Godfrey Drive, Copper Cliff, ON, P0M 1N0 – SR 2969696
60 Mine Road, Garson, ON, P3L 1N6 – SR 2969706
1530 Frood Road, Sudbury, ON, P3A 4R7 – SR 2969714

Previous variances were granted on May 8, 2020 under SR 2746298, 2818064, 2818072, 2818080, 2818084 and 2818090 to have the piping and hose deficiencies resolved by December 31, 2020. Vale Canada is now requesting an extension until May 1, 2021 to address the piping pressure relief and to replace the hoses.

Vale Canada has a project underway to install new fuel management systems to monitor its fuel consumption. Potential system features include:

- cardlock/keylocks at each site;
- upgrades to the existing level controls; and
- complete storage tank replacements, if necessary.

This proposed fuel management system was sent out to tender for a design-build solution. The final vendor decision was not determined until October 2020. As such, Vale Canada would like to wait until the vendor and project details are confirmed before making any fuel management system changes.

Current fuel management system deficiencies at the sites, along with their respective mitigation methods, are as follows:

All six sites have fuel hoses that are not certified by the Underwriters' Laboratories of Canada (ULC). Clause 1.3.1 of the Liquid Fuels Handling Code (LFHC) requires that equipment be approved for use. There are no ULC certified 1.5" dispensing hoses in the market.

Mitigation method: Vale Canada has provided a letter from Derek Demers, P. Eng. that compares the following three hoses, manufactured by Arctic, to the CAN/ULC-S612, *Standard for Hose and Hose Assemblies for Flammable and Combustible Liquids*:

- Arctic Glacier Multi-purpose (NL3268)
- ContiTech Arctic Ortac 300 (NL3270)
- Low-Temp Arctic Multi-purpose (NL3280)

All three hoses meet or exceed the ULC requirements for pressure rating, temperature, construction material, thickness of cover, electrical bonding and couplings. However, the manufacturer was unwilling to provide testing information (which they deem proprietary) in order to compare directly to Section 5 of the ULC standard. Arctic manufactures the 1-inch ContiTech BC Cold Flex (NL3109) hose which is ULC listed. The data sheet for the NL3109 states "For 1 ¼ inch or above refer to our NL3270 or NL3268", which implies that the three hoses listed above are manufactured to the same standard as the ULC listed NL3109 hose. Vale Canada will replace all the hoses with the Arctic NL3268, NL3270 or NL3280 hoses by **May 1, 2021**.

Five sites (excluding 117 Coleman Mine Rd) do not have pressure relief for the piping. Clause 4.1.8 of the LFHC requires that piping have pressure relief. Vale Canada is installing new fuel management systems to monitor incoming, consumption and dispensing of fuels. This project includes installing a cardlock/keylock system at each site and upgrading the existing level controls. To avoid re-configuring the piping twice, Vale Canada would prefer to re-configure the piping systems when the new cardlock/keylock system is installed. Also, since it is winter, it is unlikely that the pipe will experience over-pressure.

Mitigation method: Periodic inspection of the tank systems in accordance with LFHC Section 7 (Table 4). In addition, Vale Canada will ensure that the pressure relief is compliant by **May 1, 2021**.

One site (487 Power St) has an emergency vent that is less than six inches above the spill container. Clause 4.3.2.4 of the LFHC requires that emergency vents be at least six inches above the spill container.

Mitigation method: A new storage tank facility is being constructed at this site. Therefore, the deficient tank will be out of service by **June 1, 2021**.

One site (1702 Godfrey Drive) has a spill container that has a drilled hole plugged with washers, bolts and silicone.

Mitigation method: A new approved spill container will be installed, in accordance with clause 1.3.1 of the LFHC, when the facility is upgraded by **June 1, 2021**.

Some locations have a horizontal tank in a dike, while others have a double-wall aboveground storage tank. To further mitigate the abovementioned deficiencies, Vale Canada will continue periodic monitoring of the tank systems, in accordance with LFHC Section 7 (Table 4). In addition, the horizontal and the double-wall tanks at each site will be subject to weekly visual inspections performed by a certificate holder and monthly inspections by a petroleum mechanic.

Please be advised that your variance application dated December 1, 2020 has been approved because of the above mitigations:

Please be advised that this variance will not take effect until 15 days from the date of posting the decision on the Environmental Registry. This decision of the Director is subject to a right of appeal, under the Environmental Bill of Rights, if such an appeal is filed within 15 days from date of posting. In the event an appeal is filed, this decision of the director may be subsequently stayed, disallowed or significantly altered. Notice of an appeal will be placed on the Environmental Bill of Rights registry.

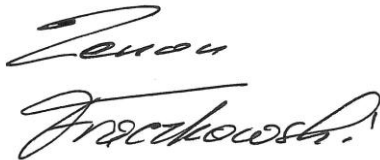
This variance is allowed under the authority of subsection 36.(3)(c) of the *Technical Standards and Safety Act, 2000*, (the "Act") and subject to such conditions as may be specified herein, being that:

- The installation/system/appliance dealt with in this variance must be inspected and may be periodically audited by TSSA. Please contact Adam Wells at 705-499-4867 or awells@tssa.org to arrange for the initial inspection;
- Vale Canada will replace all the hoses with the Arctic NL3268, NL3270 or NL3280 hoses by **May 1, 2021**;
- Vale Canada shall periodically inspect the tank systems in accordance with LFHC Section 7 (Table 4). In addition, Vale Canada will ensure that the pressure relief is compliant by **May 1, 2021**;
- The deficient tank at 487 Power St will be taken out-of-service by **June 1, 2021**;
- A new approved spill container will be installed at 1702 Godfrey Drive, when the facility is upgraded by **June 1, 2021**;
- Non-conformity with the conditions specified shall thereby cause the allowed variance to become null and void;
- The applicant accepts full responsibility for any and all damages resulting from the use of the thing to which the variance applies. The applicant further accepts full responsibility for any impacts to the health and safety of any person in consequence of the allowance of the variance or of non-conformity with the conditions specified. The Technical Standards and Safety Authority accepts no responsibility for any such damages or impacts;
- In the event of any claims against the Technical Standards and Safety Authority arising from allowance of the variance or non-conformity with the conditions specified, the applicant agrees to indemnify the Technical Standards and Safety Authority and agrees to hold it harmless from such claims and attendant costs;
- The variance process is subject to public access under the TSSA Access and Privacy Code (available upon request). The fact that a variance has been granted and information about any public conditions, such as a requirement to post a sign, may be released on request. Subject to law and the TSSA Access and Privacy Code, proprietary information will not be subject to release;
- The applicant shall pay the fee associated with the review of the variance; and
- A copy of the variance letter shall always be kept readily available and permanently legible in the vicinity of the appliance/equipment.

This variance only relates to the Act and regulations made thereunder and does not exempt you from compliance with other applicable regulatory requirements. The installation may be subject to an inspection to ensure compliance with the terms of the variance.

Should you have any questions or require further assistance, please contact Ann-Marie Barker at 416.734.3354 or by e-mail at abarker@tssa.org. When contacting TSSA regarding this file, please refer to the Service Request number provided above.

Yours truly,

The image shows two handwritten signatures in black ink. The first signature is 'Zenon' and the second is 'Fraczkowski'. Both are written in a cursive, flowing style.

Zenon J. Fraczkowski, P. Eng.
Manager, Fuels Safety Engineering
Delegated Authority under section 36(3) (c) of TSS Act

- c. Adam Wells, TSSA (awells@tssa.org)
Guy Castagne, TSSA (gcastagne@tssa.org)