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**Ministère de l'Environnement de la
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Division de la conformité en matière
d'eau potable et d'environnement
Direction régionale du Centre-Ouest
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June 10, 2021

Eric Azzopardi
Vale, Port Colborne refinery
187 Davis Street, Box 250
Port Colborne, ON L3K 5V2
Email: Eric.Azzopardi@vale.com

Dear Eric:

On August 28, 2020, Vale presented the ministry with an updated Port Colborne Community Action Plan (PCCAP). As stated in the updated PCCAP, the ministry and Vale did not reach a consensus on the updated Community Based Risk Assessment (CBRA) submitted in 2014. However, the ministry agreed in concept to the proposed PCCAP prepared by Vale dated March 2017 as a path forward to manage elevated metals surrounding the Vale operation, recognizing that action plan details needed to be finalized following the stakeholder consultation process.

As noted, Vale has committed to completing the PCCAP activities related to human health, with exposure reduction measures specifically for the toddler, and the natural environment in a manner that benefits the overall community of Port Colborne.

In the August 2020 submission, Vale has revisited the science behind the CBRA and in turn revised the proposed PCCAP to reflect new science. As noted in ministry correspondence dated November 26, 2020, the ministry will not re-evaluate the data as we stand behind our initial review and do not want to risk a further delay in Vale's completion of the PCCAP proposed in 2017. The PCCAP has been presented to Port Colborne City Council and to specific stakeholders where Vale has committed publicly to implement the plan.

As discussed with you on several occasions, information on Vale's website needs to be presented in full transparency on the actions that Vale committed to with regards to the proposed PCCAP along with supporting information from the ministry and various stakeholder groups. As it currently stands, the proposed PCCAP (2017) is posted on Vale's website with supporting information and communications leading up to that document. Vale has undertaken work associated with finalizing the PCCAP as well as numerous other activities related to the various studies that need to be

completed for the natural environment assessment. Considering all of this work and Vale's public accountability, it would be in Vale's best interest to finalize the PCCAP (2017) actions by taking into consideration the ministry and stakeholder feedback as a result of your outreach activities rather than starting the consultation process over for a new PCCAP.

As the ministry and Vale work toward a positive outcome in the finalization and implementation of the PCCAP (2017), the ministry's technical review of the outstanding studies and work needed to finalize the PCCAP actions serve to ensure that the work is supportable and in the public interest. To continue with public accountability and transparency, a copy of the finalized PCCAP and the ministry's review comments need to be posted on the Vale website. As such, the ministry has reviewed all documents provided by Vale since the submission of your updated PCCAP (August 2020) and provides the following comments/concerns that the ministry would like to see addressed as Vale works toward the finalization of your PCCAP:

1. Human Health

- a. Provide a summary of the reduction in soil/dust exposure that will result in each of the Best Management Practices proposed
 - Gravel – 0.30 m depth minimum ensures that gravel will not easily be disturbed and exposure to the soil below will not occur. This value is in line with the depth of gravel used at risk assessment sites.
 - Bare soil areas – 0.15 to 0.20 m of topsoil followed by hydroseed – Good quality topsoil of a sufficient quantity ensures that the hydroseed will take. The depth of 0.15 m to 0.20 m of topsoil is in line with standard industry practice for establishing a healthy, vibrant lawn. Removal of the bare soil and replacement with good quality topsoil will prevent unintentional or incidental soil ingestion, dermal contact with soil and inhalation of airborne soil particles in the event that the hydroseed does not take in the bare soil areas. Simply placing hydroseed on bare soil areas will not likely be effective in reducing exposure to the soil.
 - Sod –for the same reasons noted above for hydroseeding – 0.15 m to 0.20 m of topsoil should be placed down prior to sod being put down in the area. In some cases, this may involve removal of the existing soil that is in place.
 - Gardens – Ingestion of foods from backyard gardens can be a significant pathway of exposure to contaminants. In order to ensure reduction in exposure to contaminants and to ensure fruit and vegetable vitality, up to 0.91 m of soil is recommended for deep rooting vegetables (sweet potatoes, tomatoes, winter squash, etc.). This is in line with the 1.0 metre of clean cap that is required for risk assessments on contaminated sites in a residential setting. Medium rooted vegetables require up to 0.61 m of good quality soil. Shallow rooted vegetables require up to 0.45 m of soil. These values are in line with standard garden industry practices.
- b. Provide an overall summary of stakeholder comments received
- c. Provide a map of playgrounds and schools in the concentration bands and action taken with supporting rationale *.

2. Natural Environment

a. Crops

- i. When can the MECP expect the final report from Professor Hale*?
 - See attached comments from the Ministry's review on your assessment of chronic copper in sheep which recommends that risk management measures to address sheep farming within the area of elevated soil copper concentrations be added.
- ii. Yield studies – provide detailed study proposal* along with time frames of work to be completed
- iii. Soil mapping - provide detailed proposal* along with time frames of work to be completed

b. Risk based soil concentrations for vegetation in non-agricultural areas

- i. provide detailed proposal* along with time frames of work to be completed
- ii. The range of values for terrestrial plants and soil invertebrates proposed (from 1,170 mg/kg in clay soils to 2,300 mg/kg in organic soils) falls within the range of values the ministry provided to Vale of between 1,200 and 2,400 mg/kg Ni (see Attachment #3 - Suggested Ministry Approach to Derive SSTLs for the Natural Environment ERA from the Aug 10, 2018 memo to Vale). Vale's rationale supporting these values should reflect the ministry's analysis as well.

c. Best management Practices for growing ornamentals – provide status of work* and timing of when work is to be completed.

d. Copper sensitive pet assessment - provide status of work* and timing of when work is to be completed.

e. Woodlot

- i. Provide comprehensive workplan* of the study along with time frames for all activities to be undertaking including but not limited to soil mapping, tree inventory, and tree disease assessment
- ii. Any woodlots that are not secure from trespassers must be made secure. Please provide what measures* will be undertaken and a timeline for implementation.
- iii. Irrespective of the work being completed on the woodlot, Vale should take steps to register the woodlots on title. If Vale does not take steps to initiate this process, the MECP will initiate the registration on title.

f. Aquatic environment

- i. Provide comprehensive workplan* of the study along with time frames for all activities to be undertaken including but not limited to toxicity sampling (fish, sediment)

3. Communication Plan – current plan includes provision of PCCAP information through the community board at Vale’s annual open house, updates within the annual Port Colborne Refinery Community Report, maintenance of the general Vale email for questions, MECP quarterly meetings, annual PPCAP summary and continued posting and maintenance of CBRA/PCCAP website.
 - a. Vale’s response to the following concerns raised by the ministry need to be specifically addressed in the communication plan and posted on Vale’s website for community access:
 - i. Pica child
 - ii. Ni sensitive Individuals
 - iii. Growing gardens
 - iv. Growing Ornamentals – see 2c above
 - v. Maintenance of exposure reduction measures for residents along with contact information if they have questions
 - vi. Exposure reducing activities – ie: handwashing, taking shoes, etc.

4. Stakeholder engagement – provide a summary of comments from each stakeholder and actions put into place by Vale to address any concerns.

While some comments above are to be considered in the finalization of the PCCAP, the ministry would like a response from Vale by June 30, 2021 along with timelines in which the various documents requested will be provided to the ministry (denoted by *). If you have any questions as you review the above information, please do not hesitate in contacting me.

Sincerely,



Issues Project Coordinator

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- cc. Lisa Lanteigne – Vale via email: Lisa.Lanteigne@vale.com
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