Jeff Fountain
Superintendent - Environment
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March 3, 2022

Mr. James Capotosto, Director
Environmental Approvals Branch
Manitoba Environment. Climate & Parks
1007 Century St.
Winnipeg, MB R3H 0W4

Dear Mr Capotosto,

Re: Notice of Alteration to Environment Act Licence 960VC – File No. 557.10
Vale Manitoba Operations – Decommissioning No. 5 & 6 Copper Ponds.

Following the successful decommissioning of No.4 Copper Pond and with favourable market conditions last year, Vale Manitoba Operations is looking to now begin the process of decommissioning No. 5 and 6 copper ponds starting this spring. These ponds have exceeded their safe lifespan and a few seepage points have been identified and reported to Environmental Compliance and Enforcement Branch. Furthermore, with the loss of our Mill PSN circuit due to the tank failure on September 19, 2021, Vale no longer has the means to treat Pond Soluble Nickel (PSN) from the copper ponds. This has resulted in pond liquid approaching the legal freeboard limits in both ponds with no treatment options available in-house.

Vale has secured a third party to evaluate the ponds and to prepare a scope of work for the treatment of PSN liquid to allow for safe discharge of effluent to the Tailings Management Area (TMA). This work will be followed by the excavation, treatment, bagging and shipment of pond solids from the ponds as PSN removal allows, in the same manner as solids handling from No. 4 copper pond was done. All materials will be shipped to Sudbury for intermediary storage and transfer to customers. Please see the attached scope of work for details.

The work proposed to empty the ponds will be followed by a full decommissioning in the same manner that No. 4 Pond was decommissioned in 2021. Clay and rock used in berm construction will be used for exposed tailings remediation. All liners will be landfilled (and clay covered) and the area will be graded to the natural elevation and revegetated. The work proposed is expected to be completed over the course of five spring/summers starting in spring 2022.

The work proposed will include environmental considerations such as dust prevention, liquid handling, and emergency/spillage mitigation. In order to prevent dust and seepage issues, all solids material will be bagged prior to transportation in double lined one-ton bags. Where material extraction requires temporary storage of materials, the material will be stored on impermeable pads equipped with a sump and covered with a 20-mil liner. All bagged material will be shipped out on regular rotation to Sudbury for transfer to the market. All bulk material prep and bagging activities will be conducted within an enclosed area with concrete floor to prevent dust generation and to contain any seepage that may occur for material handling. Any seepage captured during bulk material handling will be directed to the PSN/filtrate treatment train (described in the scope of work attached).

Vale has undergone significant investigation into the proposed PSN treatment described in the attached scope of work. The option to use Magnesium Oxide as a metals precipitant/pH neutralizing agent in the PSN treatment train has been evaluated for it's impact on the TMA and ultimately our final discharge. No

impact on effluent quality is expected at the final discharge point and impacts within the TMA are expected to be minimal. Monitoring within the TMA will be increased to ensure there is no impact on the effluent quality. There will also be point monitoring within the PSN treatment train and at the discharge of the temporary plant into the TMA. This discharge point will be located in area 1 of the TMA to allow for the longest possible retention time within the TMA.

Please accept the Notice of Alteration form (enclosed), and the supplemental information as a formal request for review of this proposed alteration to Manitoba Operations currently operating under the authority of Environment Act Licence No. 960VC. We thank you for your time and consideration. Due to a lack of options for filtrate (PSN) removal outside of what's proposed herein and the potential impact of high liquid levels within in the pond, on pond integrity, Vale humbly requests that this proposal be considered time sensitive.

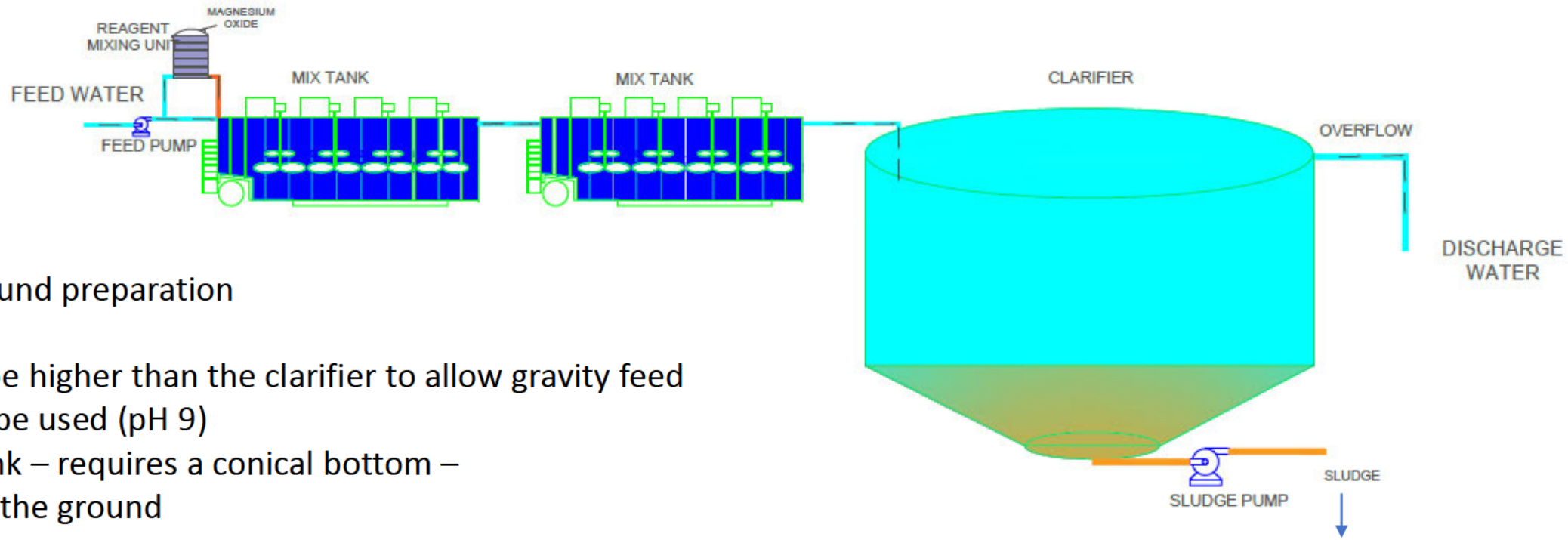
If you have any questions or need further information, please contact Jeff Fountain – Environmental Superintendent at 204-778-2649.

Respectfully,

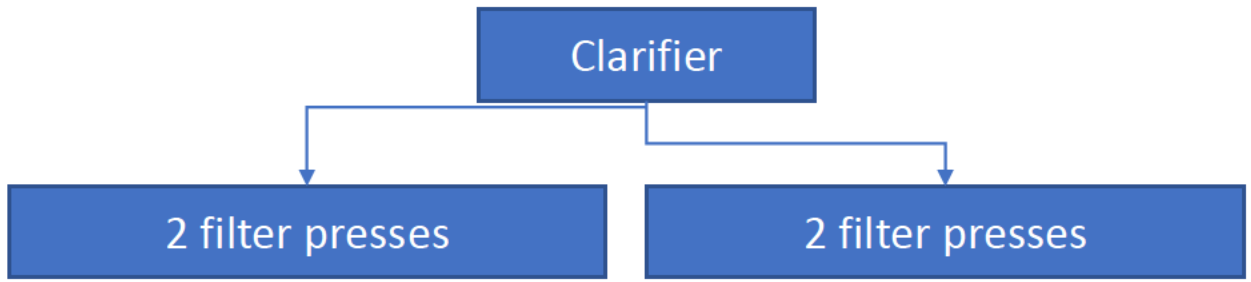
[redacted]

Jeff Fountain
Superintendent – Environment
Vale Manitoba Operations

c. J. Windsor (EAB)
S. Burland-Ross (EAB)
R. Barrette (Vale)



Earthworks ground preparation
Level ground
Mix tanks can be higher than the clarifier to allow gravity feed
or a pump will be used (pH 9)
Clarification tank – requires a conical bottom –
to be built into the ground



Stainless steel Pump
- Will be rented
- by Secure

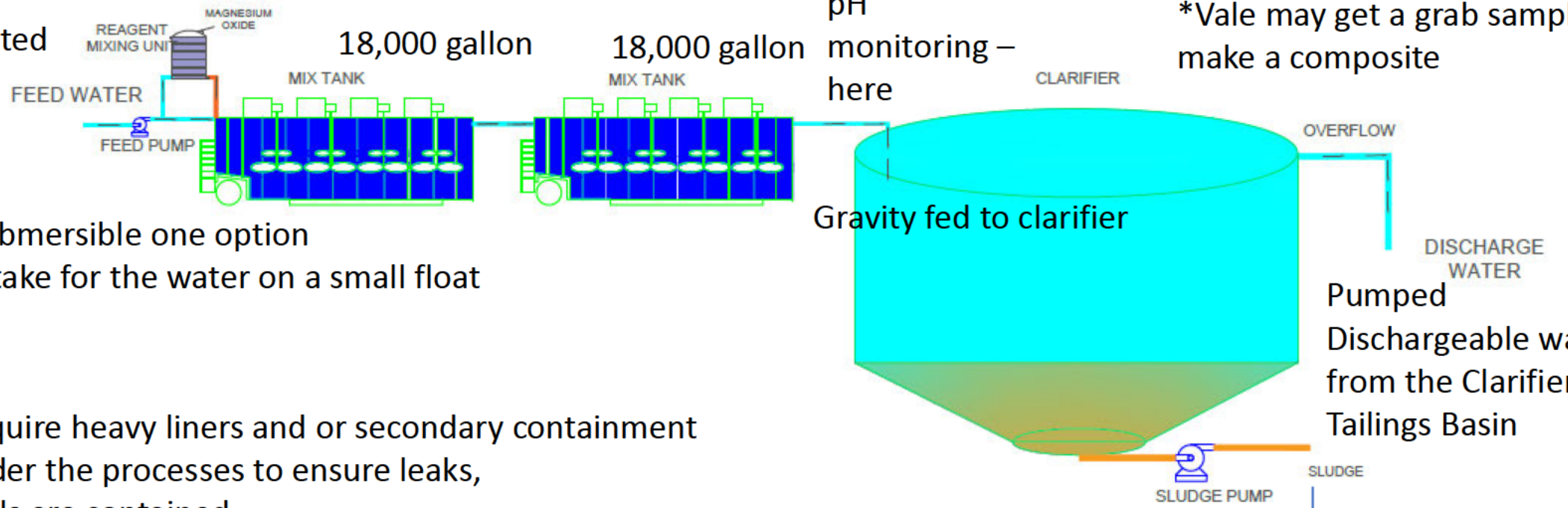
5000 gallon
With jumbo bag on top

18,000 gallon

18,000 gallon

pH monitoring – here

Daily samples to the lab – 4 hours samples
*Vale may get a grab sampler to make a composite



Submersible one option
Intake for the water on a small float

Gravity fed to clarifier

Pumped Dischargeable water from the Clarifier to the Tailings Basin

Require heavy liners and or secondary containment under the processes to ensure leaks, spills are contained

2 presses

Under the presses – 3 sided bin for the filter cake – with secondary containment
Lime the product before bagging – to dry it a bit more

Pumped – or goes to the same pipeline as the Clarifier overflow
Dischargeable water from the filter press to the Tailings Basin


Mixing Area
Bagging Area
Additional Mixing Area
Concrete Storage Pad
Tailings Management Area
Treated Filtrate discharge to TMA
6
5
Presses here
Treatment Train location