April 8, 2021

Natural Resources Conservation Board

19th Floor Contennial Place

250-5th Street SW

Calgary, Alberta T2P 0R4

Attention: Ms. Laura Friend;

Re: LA19036 – Written Submission from Applicant for Board Review

This submission constitutes Mr. Arie Muilwijk (the Muilwijks) response to the Natural Resources Conservation Board (NRCB) Board review of decision LA19036.

The Board has asked for additional information on roller compacted concrete (RCC) use as a liner to meet groundwater protection requirements and identified four hearing issues for review. Please consider the following:

Hearing issue 1: RCC liner and AOPA standards

See Consultant report: John Lobbezoo, Wood

See Consultant report: John Both, Rock Solid Concrete

Hearing issue 2: Potential conditions for catch basin and fly control

1) Leak detection system for the catch basin

The installation of a leak detection system below the catch basin is not warranted for the following reasons:

a) Site risk determination as per the NRCB's ERST indicates the site is a low risk to groundwater and surface. In fact, it scores lower than all the other facilities for groundwater risk.
b) The water well is upgradient of the catch basin (should have been scored = 1) and approximately 130m from the catch basin edge.

c) In the Board's decision to grant the review, the Board indicates there is an expectation that the NRCB policies and guidelines are followed. NRCB Policy 2016-7, Section 9.1 Environmental risks of existing facilities states: *When issuing a permit for an expansion or modification to an existing CFO, approval officers will include conditions that require the permit holder to mitigate the risks, if the risks are determined to be moderate or high under the ERST scoring system.*
    a. Low risk site suggests no further action is required.
d) The ERST does not suggest water table elevation nor subsoil material alone (or in combination) require additional attention.

Hearing issue 3: risk associated with water well

The AO has gone to great effort to provide several unwarranted and incorrect assessments in his decision summary. The AO has also provided several recommended permit conditions and actions should the Board over-turn his decision.

The Board is requested to direct the AO to provide a water well exemption assessment as part of the review hearing, so that the applicant is not surprised by any outstanding barriers to his application should the Board approve his permit.

Hearing issue 4: deemed permit capacity

It is agreed with the recent AO submission that the grandfathered capacity is based on historic permit capacity.

In addition to the above issues the Muilwijk's would present the following comments:

ERST Assessment – in General

1) Depth to water table = 2.7-3.5 m below ground level. This variance affects multiple risk scores.
2) The drilling test data suggest silty clay loam is also present on site. This changes the base material to medium texture and affects multiple risk scores.
3) NRCB Field staff completed an ERST assessment as part of their Leak Detection Program in 2011, specifically looking at the existing facilities. Risk scores were rated as low. Monitoring requirements have been adjusted accordingly.

   It is noted that permit LA10054N suggests: *The results of the risk screening exercise indicated the catch basin has a low potential to impact the uppermost groundwater resource. The catch basin facility has over 20 meters of clay till underlying the bottom of the facility and above the uppermost groundwater resource. The nearest water well is over 100 meters away and is up slope. Given the geologic materials under the facility and the*

distance to the closest water well, it is unlikely that the groundwater quality would be impacted by this facility.

The Board is asked to clarify how NRCB field staff risk assessment (from 2011 and 2021) could vary so drastically considering there have been no changes to the existing facilities. This would likely require the Board to address the discrepancy between reported depth to the uppermost groundwater resource (UGR).

It is more likely that the UGR is identified in water well record 115735 at 24.2 m (80 ft) below ground level based on the water well construction information.

Respectfully Submitted,

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