

From: [Andy Cumming](#)
To: [Walter Ceroici](#)
Cc: [Stephanie Fleck](#); [Mike Iwanysyn](#); [Scott Cunningham](#)
Subject: RE: RCC Report
Date: Tuesday, November 3, 2020 8:30:43 AM
Attachments: [image001.png](#)

Thanks Walter, and everyone else who looked at this report for me.

I appreciate your feedback and comments and the quick turn around. I have not yet reached a decision on the proposed groundwater protection suitability, however, I am of the opinion that it is the applicant's responsibility to demonstrate how the required groundwater requirements can be met. Depending on further discussions with the applicant I may come back to you for a more formal report to include in my decision.

Regards.

Andy

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From: Walter Ceroici
Sent: Tuesday, November 3, 2020 6:33 AM
To: Andy Cumming <Andy.Cumming@nrcb.ca>
Cc: Stephanie Fleck <Stephanie.Fleck@nrcb.ca>; Mike Iwanysyn <Mike.Iwanysyn@nrcb.ca>; Scott Cunningham <Scott.Cunningham@nrcb.ca>
Subject: RE: RCC Report

Sci-Tech staff have reviewed the *Woods Environmental and Infrastructure Solutions* report on the use of RCC at the Muilwijk site for the calf shelter, and calf/feeder pens. Although we appreciate the additional details and specifics at the site, including the professional opinions provided and extra work completed, it is our view that additional information is required in order to assess whether the RCC at the site meets AOPA liner requirements. Below are some additional information requirements (shown in red text) in response to statements made in the consultant's report.

- *"Permeability through RCC and typical hardened concrete is widely documented"*. Provide some specific information sources to support this statement and elaborate on how findings from these sources has led to the professional opinion that an RCC liner is appropriate for this site.
- *"Considering a 10 m by 10 m section of RCC mat containing one 20 mm wide crack in both directions (the cracked area having an assumed permeability of 1×10^{-4} cm/sec), and a conservative estimate of 1×10^{-9} cm/sec for RCC, the average calculated permeability through the 150 mm thick RCC mat would be 9.0×10^{-8} cm/sec."* Provide methodology and calculations to show how the "average calculated permeability" was determined.

From your email, the operation is located in a higher groundwater vulnerability area (underlain by some sand, with nearby sand and gravel pits). Given the groundwater vulnerability and the fact that the use of RCC as a liner at CFOs is still novel in Alberta, there may be merit in requiring the operator to provide a RCC liner inspection and maintenance program. We had some discussion about requiring groundwater monitoring, but can appreciate the challenges of requiring this at an older CFO.

Feel free to contact any of us if you have any questions.

Walter

From: Andy Cumming

Sent: Friday, October 30, 2020 10:08 AM

To: Walter Ceroici <Walter.Ceroici@nrcb.ca>; Scott Cunningham <Scott.Cunningham@nrcb.ca>; Mike Iwanyshyn <Mike.Iwanyshyn@nrcb.ca>

Subject: FW: RCC Report

Gentlemen,

I have an application in front of me where the applicant has told me that the soils under their proposed feedlot cannot meet AOPA requirements. They have not provided any information on subsurface soils. The CFO is proposed to be located in an area where there are several gravel pits nearby, so this observation makes some sense. Their application, LA19036, is for a small for a feedlot including a barn floor (solid manure). They are proposing an alternative liner for the pen and barn floors. They describe this as; "6"-7" of roller compacted concrete to make a durable liner, professionally installed". There was no additional information provided. I was in contact with them in May and asked them to provide details to show how their proposed liner can meet the AOPA groundwater protection requirements.

They told me that the RCC floors in the barn and pens had been installed last fall (November I believe) without a permit. When I was advised about this I informed compliance and enforcement order EO20-01 was issued.

They sent the attached email and report to me yesterday as their response to my request to show how the already installed RCC can meet AOPA requirements. I am seeking your help to confirm whether or not the report can satisfactorily show that the RCC liner can meet AOPA requirements.

I know that you are really busy right now but would appreciate your feedback and input on this. I can work with you on a timeline that accommodates your schedules. I'm also happy to set up a meeting at a convenient time to discuss this further.

Irrespective of the decision I make on this application it is likely that it will be rfr'd, so I will be preparing my decision accordingly.

I thank you in advance for your assistance and feedback on this.

Andy

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From: Arie and Willemiek Muilwijk [mailto: [REDACTED]]
Sent: Thursday, October 29, 2020 2:59 PM
To: Andy Cumming <Andy.Cumming@nrcb.ca>
Subject: Fwd: RCC Report

Hello Andy,
Attached is the report from John Lobbezoo concerning the REC.
I hope this will help with the process of the permit.
Thanks
Arie

Sent from my Samsung Galaxy smartphone.

----- Original message -----

From: "Lobbezoo, John" <john.lobbezoo@woodplc.com>
Date: 2020-10-29 1:17 PM (GMT-07:00)
To: Arie and Willemiek Muilwijk [REDACTED] >
Subject: RCC Report

Arie,
Attached please find our report which you can use to support your current NRCB permit application.
If you have any questions with this, don't hesitate to call or email.
Regards,
JL

John Lobbezoo, P.Eng.

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