

From: Ken Anderson <andersonk@ae.ca>
Sent: June 20, 2025 11:48 AM
To: Boswick, Robert
Cc: Brenda Poulsen (utility@rmofgrey.ca); Genaille, Dee; Burland Ross, Siobhan
Subject: RE: DRAFT Licence - RM of Grey - St. Claude Aerated Wastewater Treatment Lagoon
Attachments: 20194231-01_St_Claude_Civil_20250617.pdf

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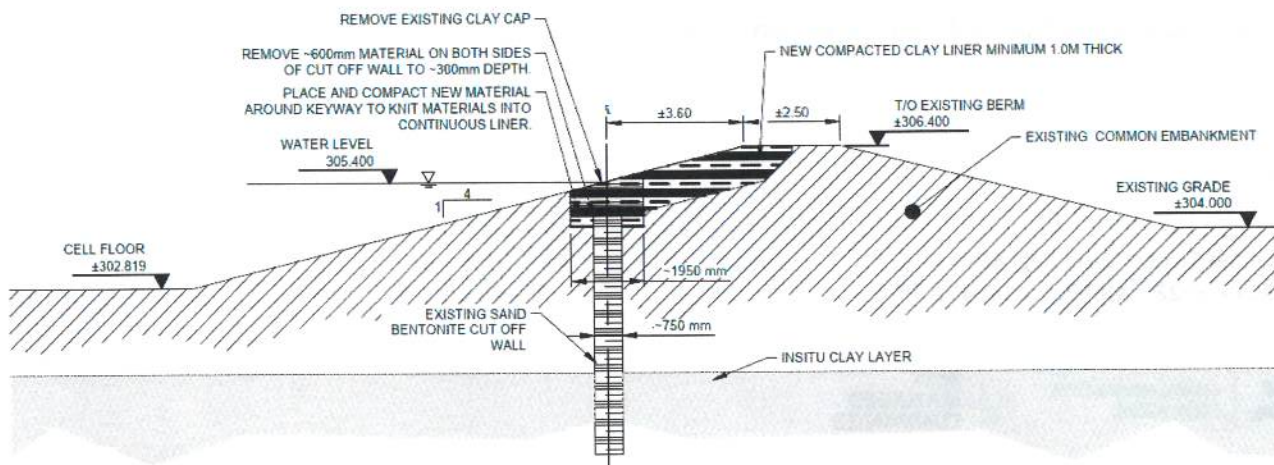
Hi Rob.

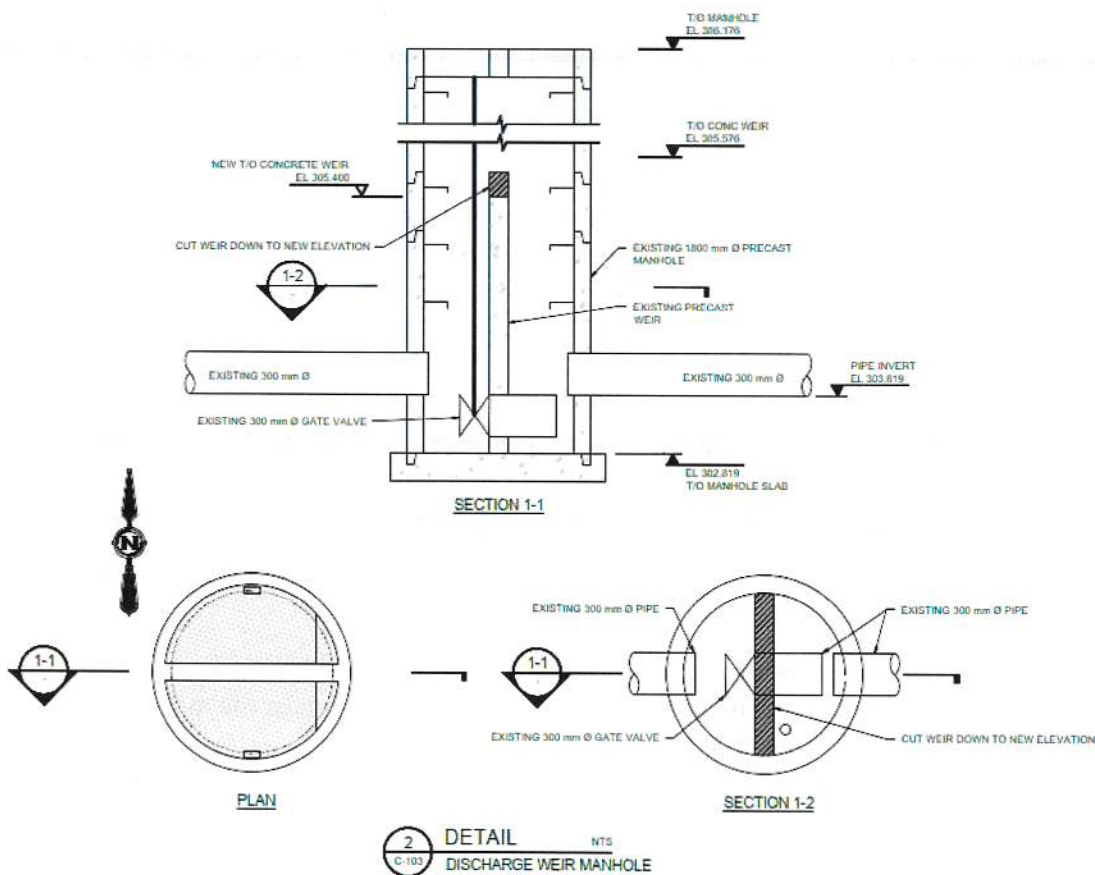
Attached are the most recent drawings we're working on for the Lagoon Tender Package.

We are including in the scope of works to lower the weir in the manhole from the aerated cells to make the maximum water level in the aerated cells 305.400, to maintain the 1.0m freeboard.

We are also now including the extension of the cut-off wall to the top of the berm to provide the containment in the full freeboard around the aerated cells.

Srips of the details we updated.





Let me know if you require anything further for the finalization of the EAL.

Thanks!

Ken

Ken Anderson, P.Eng.

Manager, Water

Associated Engineering Ltd.

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From: Boswick, Robert

Sent: June 18, 2025 1:47 PM

To: Ken Anderson

Cc: Brenda Poulsen (utility@rmofgrey.ca) ; Genaille, Dee ; Burland Ross, Siobhan

Subject: RE: DRAFT Licence - RM of Grey - St. Claude Aerated Wastewater Treatment Lagoon

Good afternoon Ken,

The plan below could work as long as the liquid level in the aeration cells does not then exceed an elevation of 305.400 (if the top of dyke elevation actually is 306.400).

Please confirm that that will be the case.

Thank you,

Robert Boswick, P.Eng.

Senior Environmental Engineer, Environmental Approvals Branch

Environment and Climate Change

robert.boswick@gov.mb.ca / Cel.: 204-918-5853 / FAX: 204-945-5229

Box 35 - 14 Fultz Blvd., Winnipeg, MB R3Y 0L6

From: Ken Anderson <andersonk@ae.ca>

Sent: June 10, 2025 12:33 PM

To: Boswick, Robert <Robert.Boswick@gov.mb.ca>

Cc: Brenda Poulsen (<utility@rmofgrey.ca> <utility@rmofgrey.ca>); Genaille, Dee <Dee.Genaille@gov.mb.ca>; Burland Ross, Siobhan <Siobhan.BurlandRoss@gov.mb.ca>; Ken Anderson <andersonk@ae.ca>

Subject: RE: DRAFT Licence - RM of Grey - St. Claude Aerated Wastewater Treatment Lagoon

I understand, thanks Rob.

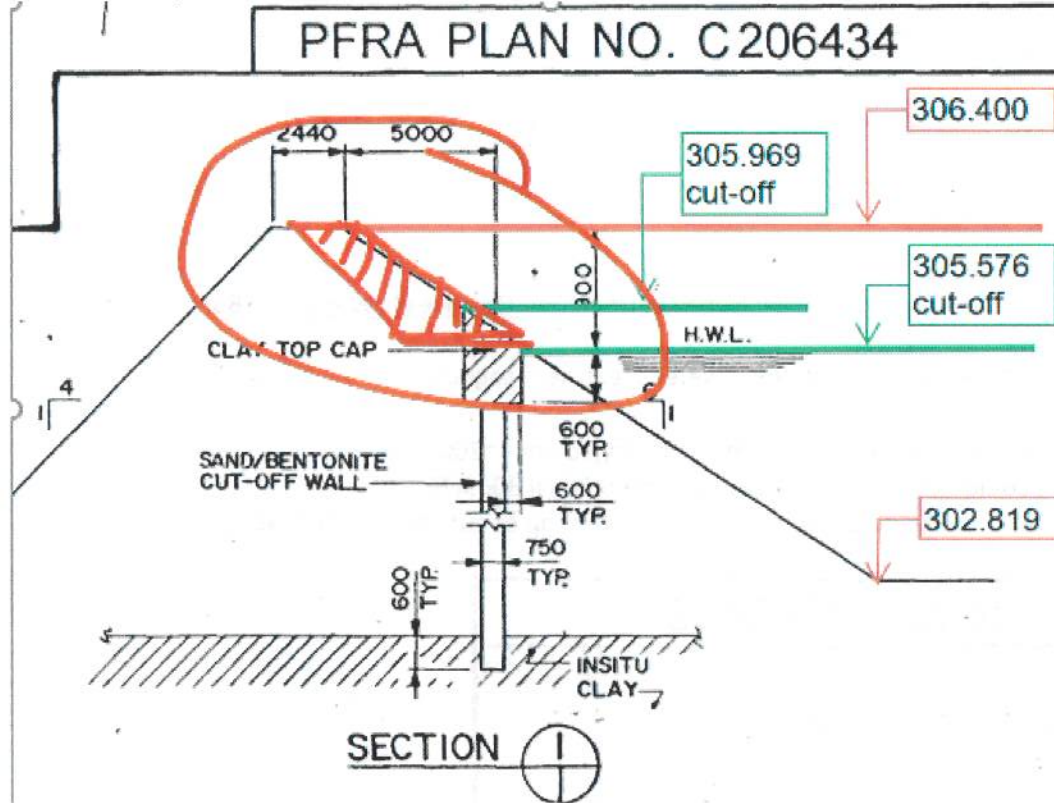
We will then have to expand the scope of works to include liner upgrades to the aerated cells around the three sides and tie this into our liner around the storage cell.

This would then make a continuous liner encasement around the perimeter of the three cells.

The detail for the liner extension would be similar to what we are doing around the storage cell, but we are not extending the berm heights (just level them off to a consistent elevation).

This should then give the 1.0 m free board that is lined with 1.0m thick clay around the interior perimeter.

1.0m thick clay liner around the aerated cells would be thus:



I assume this then would be compliant with the updated License?

Regards,

Ken

Ken Anderson, P.Eng.

Manager, Water

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From: Boswick, Robert <Robert.Boswick@gov.mb.ca>

Sent: June 6, 2025 1:56 PM

To: Ken Anderson <andersonk@ae.ca>

Cc: Brenda Poulsen (<utility@rmofgrey.ca> <utility@rmofgrey.ca>); Genaille, Dee <Dee.Genaille@gov.mb.ca>; Burland Ross,

Siobhan <Siobhan.BurlandRoss@gov.mb.ca>

Subject: RE: DRAFT Licence - RM of Grey - St. Claude Aerated Wastewater Treatment Lagoon

Good afternoon Ken,

Yes. For some time now, all Environment Act Licences for new or altered/expanded wastewater treatment lagoons, aerated or facultative, identify that a minimum 1.0 metre freeboard is required to be maintained in all cells at all times. All lagoons must be continuously lined across the bottom and up to the dyke tops whether the liner consists of placed and compacted or naturally existing clay type soils (minimum 1.0 metre thick), soil-bentonite cut-off wall, or HDPE. Clay type soil and soil-bentonite cut-off liners are required to have a hydraulic conductivity of less than 1.0×10^{-7} centimeters/second at all locations. Other specifications apply to HDPE lined lagoon cells.

Our current assessment suggests that the existing elevations of the existing liner, dyke tops, and the proposed operating depth of the aerated cells will not likely be able to achieve the requirements unless specific, acceptable alterations are made.

Please contact me for discussion as necessary.

Thank you,

Robert Boswick, P.Eng.

Senior Environmental Engineer, Environmental Approvals Branch

Environment and Climate Change

robert.boswick@gov.mb.ca / Cel.: 204-918-5853 / FAX: 204-945-5229

Box 35 - 14 Fultz Blvd., Winnipeg, MB R3Y 0L6

From: Ken Anderson <andersonk@ae.ca>

Sent: June 2, 2025 10:17 AM

To: Boswick, Robert <Robert.Boswick@gov.mb.ca>

Cc: Brenda Poulsen (utility@rmofgrey.ca) <utility@rmofgrey.ca>; Genaille, Dee <Dee.Genaille@gov.mb.ca>; Burland Ross, Siobhan <Siobhan.BurlandRoss@gov.mb.ca>

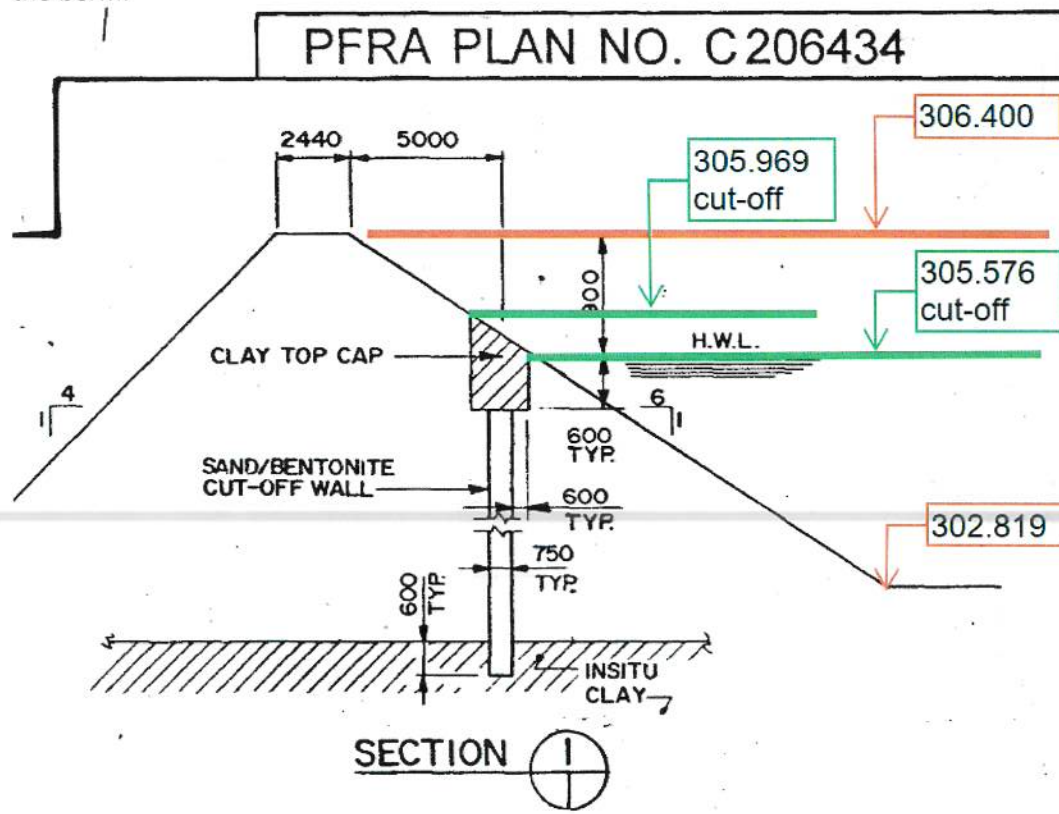
Subject: RE: DRAFT Licence - RM of Grey - St. Claude Aerated Wastewater Treatment Lagoon

Hi Rob,

The survey found the dyke to be on average the 306.400, the top of berm ranged +or- ~200mm.

Settlement and compaction over 30 years could not show it remained at the original 306.476.

The drawings are a bit limited in details, but it makes sense your elevation of the top of cut-off does not extend to the top of the berm.



Would you be expecting us to upgrade these cells to extend the clay liner to the 1.0m free board elevation (top of berm)?

Regards,

Ken

Ken Anderson, P.Eng.

Manager, Water

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From: Boswick, Robert <Robert.Boswick@gov.mb.ca>

Sent: May 30, 2025 2:51 PM

To: Ken Anderson <andersonk@ae.ca>

Cc: Brenda Poulsen (utility@rmofgrey.ca) <utility@rmofgrey.ca>; Genaille, Dee <Dee.Genaille@gov.mb.ca>; Burland Ross, Siobhan <Siobhan.BurlandRoss@gov.mb.ca>

Subject: RE: DRAFT Licence - RM of Grey - St. Claude Aerated Wastewater Treatment Lagoon

Thanks for your prompt responses Ken.

Please confirm that the existing top of dyke elevation for the aeration cells is consistently at (or very near) 306.400 m.

Note that if the identified aeration cell floors are at 302.819 m and Clause 7. g) of the current Environment Act Licence No. 1666 S3 (<https://www.gov.mb.ca/sd/eal/registries/241.40st.claude/1666s3-0241-40.pdf>) required that the cutoffs around those cells need only be (and were) installed to an elevation of 3.15 metres above the base of the aeration cells that would suggest that the top of the cutoff elevation would currently be at or near 305.969 m, leaving a difference of 0.431 m.

Please contact me for discussion as necessary.

Thank you,

Robert Boswick, P.Eng.

Senior Environmental Engineer, Environmental Approvals Branch

Environment and Climate Change

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Box 35 - 14 Fultz Blvd., Winnipeg, MB R3Y 0L6

From: Ken Anderson <andersonk@ae.ca>

Sent: May 30, 2025 1:59 PM

To: Boswick, Robert <Robert.Boswick@gov.mb.ca>

Cc: Brenda Poulsen (utility@rmofgrey.ca) <utility@rmofgrey.ca>; Genaille, Dee <Dee.Genaille@gov.mb.ca>; Burland Ross, Siobhan <Siobhan.BurlandRoss@gov.mb.ca>

Subject: RE: DRAFT Licence - RM of Grey - St. Claude Aerated Wastewater Treatment Lagoon

Hi Rob,

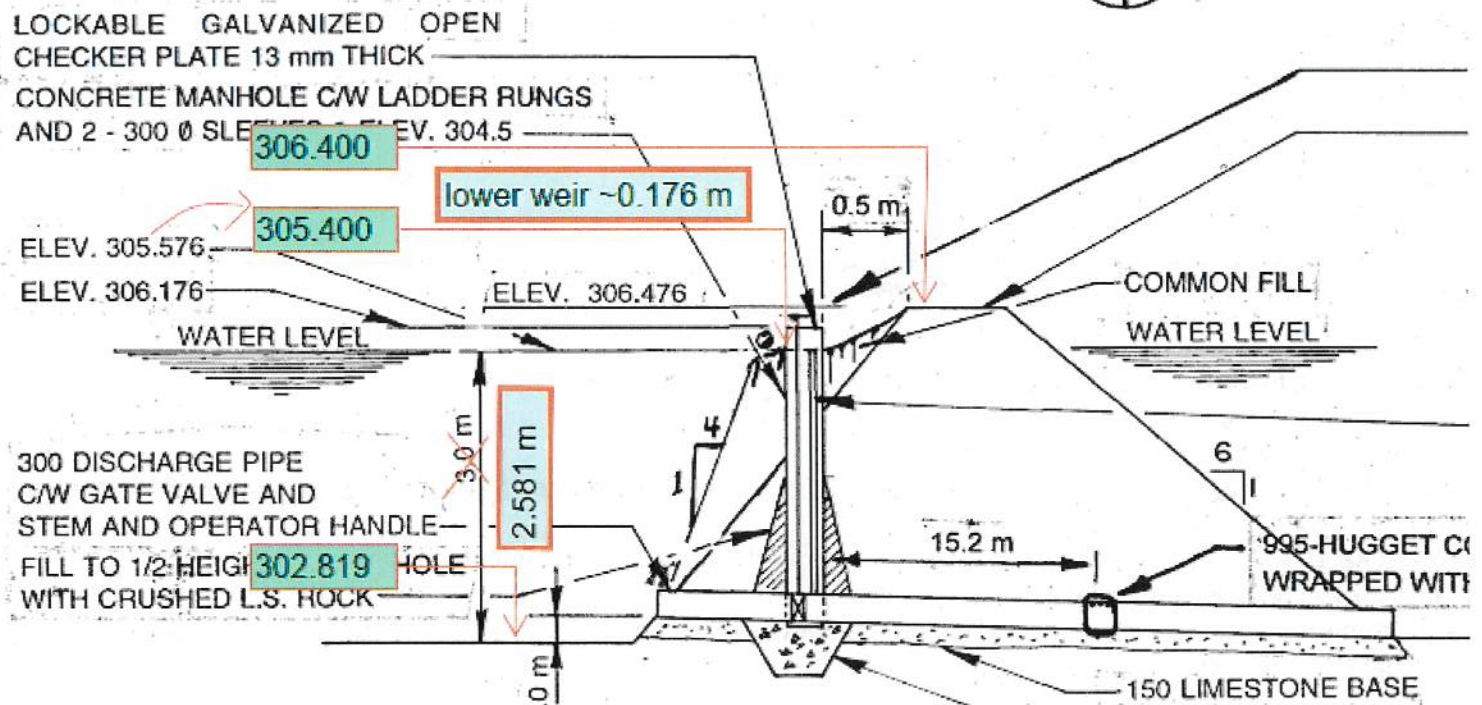
Good talk today, thanks.

So the 3.0m liquid depth is wrong on the plans.

The correct liquid depth to use in Licence is **2.581m**.

This is based on lowering the weir 0.176 m to go from 0.9m freeboard to your required 1.0m freeboard.

The water level, berm level and floor are all ok, it was that note of 3.0m liquid depth that was inaccurate.



As for Peak Day Flow, we estimate it to be 910 m³/day for 2040.

Thanks!

Ken

Ken Anderson, P.Eng.

Manager, Water

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From: Boswick, Robert <Robert.Boswick@gov.mb.ca>

Sent: April 11, 2025 8:34 AM

To: Ken Anderson <andersonk@ae.ca>

Cc: Brenda Poulsen (utility@rmofgrey.ca) <utility@rmofgrey.ca>; Genaille, Dee <Dee.Genaille@gov.mb.ca>; Burland Ross, Siobhan <Siobhan.BurlandRoss@gov.mb.ca>

Subject: RE: DRAFT Licence - RM of Grey - St. Claude Aerated Wastewater Treatment Lagoon

Hello Ken,

Upon last review of the most recent draft Environment Act licence for the RM of Grey – St. Claude aerated wastewater treatment lagoon it came to our attention that the identified elevation of the dyke tops of the aeration cells is 306.400 m and the bottom elevations are 302.819 m. With a proposed maximum operating depth of liquid in these cells of 2.75 m, the top of liquid elevation would be 305.569 m. This results in only 0.83 metre of freeboard in these cells which is not permissible under Manitoba's lagoon licencing requirements. There must be a minimum 1.0 m freeboard in the design of all lagoon cells.

Please identify a choice of action for this matter.

Please discuss as necessary.

Robert Boswick, P.Eng.

Senior Environmental Engineer, Environmental Approvals Branch

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Box 35 - 14 Fultz Blvd., Winnipeg, MB R3Y 0L6

From: Ken Anderson <andersonk@ae.ca>

Sent: August 7, 2024 6:58 PM

To: Boswick, Robert <Robert.Boswick@gov.mb.ca>

Cc: Ken Anderson <andersonk@ae.ca>; Brenda Poulsen (utility@rmofgrey.ca) <utility@rmofgrey.ca>; Genaille, Dee <Dee.Genaille@gov.mb.ca>

Subject: RE: DRAFT Licence - RM of Grey - St. Claude Aerated Wastewater Treatment Lagoon

Hi Rob, so sorry for the delay on this. Hope your summer is going well.

Please find attached our comments from myself, the RM and the MWSB.

We all had similar notes and comments on same things. Not too many.

Let me know if you have any questions on any of these comments or need further details.

Thank you for your patience!

Regards,

Ken

Ken Anderson, P.Eng.

Manager, Water

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From: Boswick, Robert <Robert.Boswick@gov.mb.ca>

Sent: Thursday, June 13, 2024 9:24 PM

To: Brenda <utility@rmofgrey.ca>

Cc: Nathan Wittmeier <Nathan.Wittmeier@gov.mb.ca>; Ken Anderson <andersonk@ae.ca>; Burland Ross, Siobhan <Siobhan.BurlandRoss@gov.mb.ca>

Subject: DRAFT Licence - RM of Grey - St. Claude Aerated Wastewater Treatment Lagoon

Good day,

Attached please find a DRAFT Environment Act Licence relative to the RM of Grey – St. Claude aerated wastewater treatment lagoon upgrade and land application of biosolids Environment Act Proposal.

Note that this DRAFT licence is for discussion purposes and is subject to alteration prior to finalization.

Please review the DRAFT licence and return comments to me.

Please contact me for related discussion as necessary.

Thank you,

Robert Boswick, P.Eng.

Senior Environmental Engineer, Environmental Approvals Branch

Environment and Climate Change

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