



Josh Arneson <jarneson@richmondvt.gov>

FW: copy of email From David Ferguson form Vt Agency of Natural Resources regarding Richmond Water Tank

donmorin@accessvt.com <donmorin@accessvt.com>

Wed, Oct 21, 2020 at 10:33 AM

To: Bard Hill <bardrhill@gmail.com>

Cc: Josh Arneson <jarneson@richmondvt.gov>, Kendall Chamberlin <kchamberlin@richmondvt.gov>

From: donmorin@accessvt.com <donmorin@accessvt.com>**Sent:** Wednesday, October 21, 2020 10:31 AM**To:** 'david.sander@richmondvt.org' <david.sander@richmondvt.org>**Subject:** copy of email From David Ferguson form Vt Agency of Natural Resources regarding Richmond Water Tank

Hi David :

Per Bard, I am sending this attachment to all members of the Water Sewer Commission in a separate email a copy of the email I got from David Ferguson from VT ANR in order to comply with Vt meeting transparencies rules.

I understand and agree with your comment that lengthy litigation may not be the solution to the water tank seeps. For me, the seeps are a concern, especially knowing that special coating on rebar was not used and that the water tank is partial exposed. I feel that an expert in water tanks should inspect the tank and give a report on the tank. My main concerns are this:

1. The water in tank is corrosive to steel, and the reinforcing steel is not coated. Rusting of the reinforcing steel will cause the steel to expand.
2. The tank is partially above ground. When ever the temperature falls below freezing, the outside of the concrete wall for a depth will be subject to freezing temperatures and if water is present, then expansion and spalling will result. See sketch B for temperature gradient in wall when temp outside is below zero.
3. Concrete is not water proof. Many tiny capillary channels form in concrete and these capillary allow water to pass through them. (sketch A). As a result, some of the concrete adjacent to these capillary are wet and are subject to freezing and thawing. The result is spalling of concrete.
4. One of the firms that I called on said that the tank should have been designed all in accordance with ACI (American Concrete Institute) recommendations. I would like to know this was done.

As a fellow member of the commission, I want to know if we have a problem and if we do, how we fix it.

This email will be sent to all fellow members of the Water / Sewer commission as per the minutes of the previous meeting.

Thanks

don

10/28/2020

Town of Richmond VT Mail - FW: copy of email From David Ferguson form Vt Agency of Natural Resources regarding Richmond Water ...



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1465K

donmorin@accessvt.com

From: donmorin@accessvt.com
Sent: Wednesday, September 16, 2020 8:49 AM
To: 'Ferguson, Andrew'
Subject: RE: Richmond Water tank

Hi Andrew:

Thanks for your response. Your letter and forthcoming report will be an item that will be discussed at the next couple of Water Sewer Commission meetings.

Thanks again.
don

From: Ferguson, Andrew <Andrew.Ferguson@vermont.gov>
Sent: Wednesday, September 16, 2020 8:43 AM
To: donmorin@accessvt.com
Cc: 'Bard Hill' <bardhill@gmail.com>; Arneson, Joshua <jarneson@richmondvt.gov>; Kendall Chamberlin <kchamberlin@richmondvt.gov>
Subject: RE: Richmond Water tank

Good morning Don-

Sorry for my late response. I have been in the field the last few days and I am just getting caught up. I have emailed with Kendall regarding storage tank seepage. These are the following steps we typically take when a situation arises.

The first thing that the Division would recommend is to hire a certified structural engineer to preform an in depth inspection of the tank. Based on their findings the Division, in discussion with the Water System would then recommend and discuss options. Also, I am hesitant to make any decisions or speculations on what may be going on with out seeing it first. I am familiarizing myself with the water system today ahead of my inspection as well as the findings of the engineer that most recently inspected the tank.

As I told Kendall, if no action had been taken a head of my inspection and I saw the heavy weeps all around the tank, new or old, I would recommend the system hire an engineer and have them preform a comprehensive inspection. Depending on the age of the tank I would also recommend contacting the manufacturer. These are just the first steps, but with out seeing anything first it is hard to make a definitive decision on the health of the tank.

Once I am done with the inspection I will write a Sanitary Survey Letter that will contain all of the deficiencies /recommendations. I hope this has helped even though I cannot provide a hard and fast answer at this time. Please feel free to contact me if you have any questions or concerns.

Thanks –

Andrew Ferguson
System Operations Specialist
Phone (802) 585-8089

Fax (802) 828-1541
Andrew.ferguson@vermont.gov



Agency of Natural Resources
Department of Environmental Conservation
Drinking Water and Groundwater Protection Division
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Montpelier VT 05620-3521

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“Due to the coronavirus (COVID-19) we are taking additional safety measures to protect our employees and customers and are now working remotely while focusing on keeping our normal business processes fully functional. Please communicate with our staff electronically or via phone to the greatest extent possible since our processing of postal mail may be slowed during this period.

Division staff contact information can be found online here: <https://dec.vermont.gov/water/contacts>

Thank you for your patience during this challenging time. We wish you and your family the best.”

From: donmorin@accessvt.com <donmorin@accessvt.com>
Sent: Wednesday, September 9, 2020 12:30 PM
To: Ferguson, Andrew <Andrew.Ferguson@vermont.gov>
Cc: 'Bard Hill' <bardrhill@gmail.com>; Arneson, Joshua <jarneson@richmondvt.gov>; Kendall Chamberlin <kchamberlin@richmondvt.gov>
Subject: Richmond Water tank

EXTERNAL SENDER: Do not open attachments or click on links unless you recognize and trust the sender.

Hi Andrew:

I am a Richmond resident that is on the Richmond Water sewer Commission and have a engineering and construction background. I am a little concerned about visual seeps that the Richmond Concrete Water tank has. At last night's meeting, the commission agreed to wait for your inspection report before acting on a pending motion to hire an engineer that has extensive experience in concrete water tanks to inspect it.

I am unsure of what we should do as a board and appreciate your view and recommendations on the water tank.

I am curious about your background and your experience in assessing concrete water tanks, problems and fixes.

don morin
238-5780

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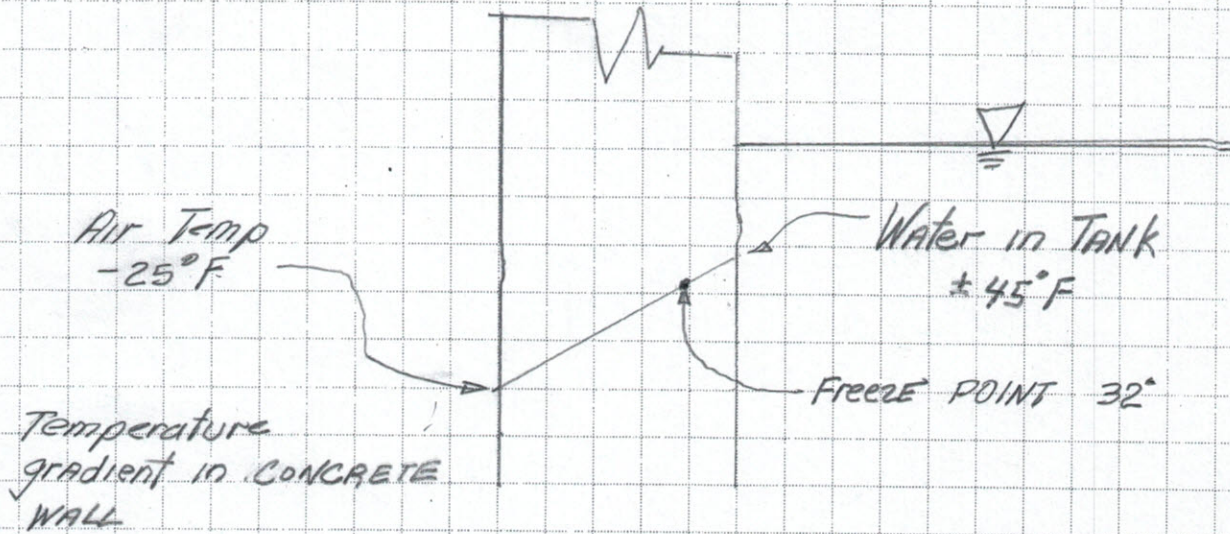
JOB Richmond Water Tank

SHEET NO. BWT #1 OF _____

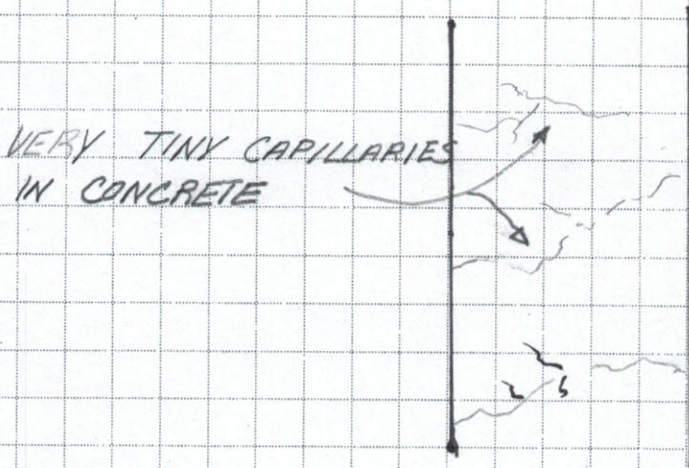
CALCULATED BY _____ DATE _____

CHECKED BY _____ DATE _____

SCALE _____



SKETCH A



SKETCH B

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(rev date 1-1-2020)