Briana Anderson - City of Coleraine

From: Daniel Mandich - City of Coleraine
Sent: Friday, October 16, 2020 11:55 AM
To: Briana Anderson - City of Coleraine; John Dimich
Subject: Fw: Letter of Support from the Minnesota Pollution Control Agency
Attachments: UMN-NRRI-Letter to Coleraine_20201014.pdf

agenda item - require Coleraine Council approval per John Dimich NRRI Coleraine Labs Sulfate Treatment Pilot Test

Please see the attached letter and advise how to proceed.

I would like to tour the site, does anyone else want to go?

Thanks

Dan

From: Shashi Rao <fshashik@d.umn.edu>
Sent: Thursday, October 15, 2020 2:11 PM
To: Daniel Mandich - City of Coleraine <dmandich@cityofcoleraine.com>; cbtwwtp@hotmail.com <cbtwwtp@hotmail.com>
Cc: Harry Bertram <harryb@cityofcoleraine.com>
Subject: Letter of Support from the Minnesota Pollution Control Agency

Hello Dan and Chuck-

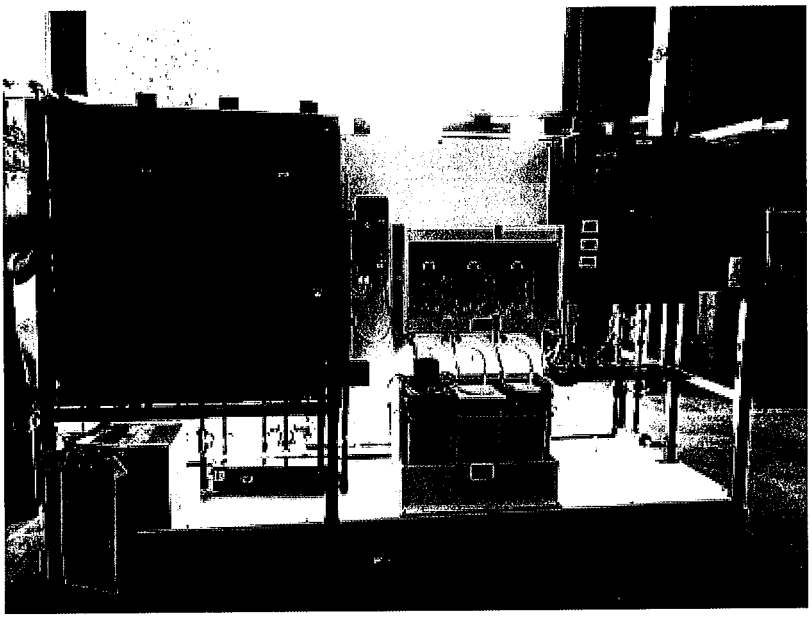
I trust your week is treating you well. I spoke with you both a week ago on our sulfate removal project. NRRI Coleraine Labs is planning to conduct a pilot demonstration trial to remove sulfate contaminants from tap water. The pilot test will use barium chloride to precipitate sulphate from the Coleraine tap water. The pilot study will be conducted in campaigns over a period of 2 months at a flow rate of 1-2 GPM during the winter of 2020-2021. The pilot demonstration system will be operated for 8 hours during the first week and will be operated in 5-day experimental campaigns for the remaining period. The effluent water from the pilot demonstration is expected to contain barium (<100 mg/L), chloride (<200 mg/L) and sulphate (<10 mg/L).

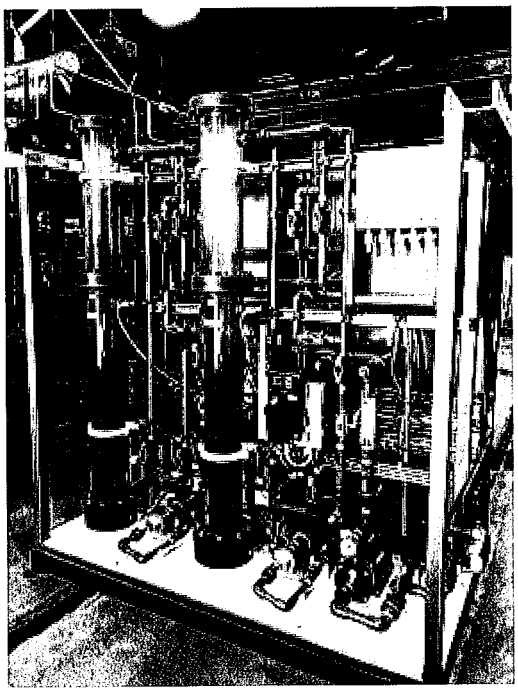
The drainage of this effluent into the city sewage pipe is approved by Mr. Scott Kyser at the Minnesota Pollution Control Agency (see attached approval from MPCA). NRRI will do its best to minimize the dosing of barium chloride to the extent possible while also meeting the scientific goals of the experiment. Please approve the discharge of effluent from the sulfate treatment pilot test to the city sewage pipe inside the facility. Please contact me if you have any questions or comments.

Your time and support are greatly appreciated.

Kindest regards,
Shashi

P.S: You will see a few pictures of our pilot system below. You're welcome to tour of facility anytime.





Shashi Rao
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To: Chuck Brisk **(Coleraine Bovey Taconite Wastewater Treatment Plant)**

CC: Dan Mandich, Harry Bertram, Adrian Hanson, Shashi Rao, Kevin Kangas, Linnea Henkels, Jean Cranston, Steve Berger, Rolf Weberg, Lucinda Johnson, Paul Mack

NRRI Coleraine Labs Sulfate Treatment Pilot Test

NRRI Coleraine Labs is planning to conduct a pilot demonstration trial to remove sulfate contaminants from tap water. The pilot test will use barium chloride to precipitate sulfate from the Coleraine tap water. The pilot study will be conducted in campaigns over a period of 2 months at a flow rate of 1-2 GPM during the winter of 2020-2021. The pilot demonstration system will be operated for 8 hours during the first week and will be operated in 5-day experimental campaigns for the remaining period. The effluent water from the pilot demonstration is expected to contain barium (<100 mg/L), chloride (<200 mg/L) and sulfate (<10 mg/L). The drainage of this effluent into the city sewage pipe is approved by Mr. Scott Kyser at the Minnesota Pollution Control Agency (Appendix 1).

NRRI will do its best to minimize the dosing of barium chloride to the extent possible while also meeting the scientific goals of the experiment. Please approve the Coleraine labs to discharge effluent from the sulfate treatment pilot test to the sewage pipe inside the facility.

Thanks,

Mei Cai
Research Associate
Natural Resources Research Institute (NRRI)
218-788-2686
mcai@d.umn.edu
10/13/2020

Adrian Hanson
Professor
Department of Civil Engineering
University of Minnesota Duluth
218-726-6438
athanson@d.umn.edu

Appendix 1. The email communication between the project team and Scott Kyser (MPCA)

Adrian Hanson Thu, Oct 8, 1:01 PM (6 days ago)

to Scott, me, Shashi, Wesley, Adrian

Scott:

We have moved out 2 gpm pilot to the NRRI lab in Colrain MN. We are actually treating tap water at this point, but we are just a few miles from Grand Rapids so we may end up treating treated wastewater from Grand Rapids. The City is willing to have us discharge the water from the pilot plant into their sanitary sewer via the floor drains in the lab area, however, they would like assurance that they are not violating their permit.

Who would we contact to get a letter of this nature? We have data on our treated water quality, Colrain drinking water quality etc... Can you advise us on this?

Adrian

Adrian T. Hanson, Ph.D., PE, BCEE
Department Civil Engineering
Professor (Environmental)
(575)640-0212

Kyser, Scott (MPCA) Tue, Oct 13, 8:33 AM (1 day ago)

to Adrian, me, Shashi, Wesley

Hi,

A 2 GPM pilot test is fine with me.

This e-mail counts as the approval. Sending the waste stream to the Coleraine WWTP is approved. Shouldn't be a problem with Coleraine's WWTP permit.

Thanks,

Scott Kyser
651-895-9146