

Hoffman, Andrew

From: Hoffman, Andrew
Sent: Wednesday, March 31, 2021 11:41 AM
To: 'Chris Buckman'
Cc: Hull, Richard; Peter L. Britz; Soukup, James; Mongeon, Robin; Wimsatt, Mike
Subject: RE: HB 494 Pilot Study Results Memorandum

Chris,

Thank you for submitting the 2020 Pilot Study Results Memorandum. NHDES offers the following comments on the Memorandum for your consideration moving forward.

Introduction, page 2, third paragraph: The 2020 direct field-scale application of the chosen passive technology, versus first conducting a controlled laboratory bench-scale test, is discussed. Time limitations put forth in HB 494 aside, a bench-scale study would likely have provided useful information for the design of the 2020 field-scale pilot that would have resulted in cost savings and improved performance. It is highly recommended that a bench-scale study be conducted prior to the design and deployment of the next field-scale pilot treatment system.

Treatment Technology, page 3, first paragraph: Supporting the downstream end of the treatment blankets one foot above the channeled bottom did not provide sufficient hydraulic head to force water through the non-woven geotextile blanket material and enclosed treatment media. A bench-scale study would allow refinement of the field-scale pilot treatment system design to ensure hydraulic requirements are met.

Physical Observations, page 3: A bench-scale study would allow for the evaluation of a sediment filter placed up-gradient of the treatment system that would reduce pre-mature clogging of the treatment media, and/or the material containing the treatment media, thus extending the life and possibly reducing cost of the treatment system. Regular maintenance of the filter may be required to ensure optimal performance of the treatment system.

Recommendations, page 4: The memo concludes that the BAM technology was ineffective because the contact time between the surface water and the adsorptive media was insufficient. Because the use of adsorbent media is the primary method for treatment of PFAS in water, contact time will continue to be of primary importance in evaluating other treatment options. As a result, in order to design an effective field-scale pilot treatment system, a study is needed to document the base flow in the target portion of Berrys Brook to facilitate contact time calculations.

Additional information that will need to be gathered in order to successfully design an effective field-scale pilot treatment system that will meet the objectives of HB 494 include, but may not be limited to: (1) stream flow gauging to develop a hydrograph for the treatment area; (2) evaluation of other methods of containing the treatment media versus the woven geotextile used in the 2020 pilot study; (3) identification of other absorptive media that are more coarse and thereby more permeable; and (4) development of a list of other technologies that could be applied including both active and passive methods.

I would be happy to discuss in more detail. Please let me know if you would like to set up a meeting.

Best regards,
Drew

Andrew Hoffman, P.E.

NH Department of Environmental Services | Hazardous Waste Remediation Bureau

29 Hazen Drive, Concord, NH 03302-0095 | email: Andrew.J.Hoffman@des.nh.gov | Phone: (603) 271-4060

From: Chris Buckman <cbuckman@haleyward.com>

Sent: Tuesday, March 16, 2021 2:51 PM

To: Hoffman, Andrew <Andrew.J.Hoffman@des.nh.gov>

Cc: Hull, Richard <Hull.Richard@epa.gov>; Peter L. Britz <plbritz@cityofportsmouth.com>

Subject: HB 494 Pilot Study Results Memorandum

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

Drew-

Please find the attached results memorandum for the pilot study completed last fall in response to the requirements of House Bill 494 (HB 494). We are in the process of getting the attached memo uploaded to OneStop but wanted to provide you with a copy in advance.

If you have any questions, please let me know.

Regards-

Chris



Chris Buckman, PG
Senior Project Geologist
t: 207.795.6009 m: 331.222.2271 D: 207.404.5958
a: 415 Lisbon Street, Suite 200, Lewiston, ME 04240

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