
From: Kevin VanSickle <kvansickle@gcdcwws.com>
Sent: Thursday, January 15, 2015 4:40 PM
To: Prysby, Mike (DEQ)
Subject: Pilot Study
Attachments: DEQ comments answers, Contrafast Pilot Proposal.doc

Mike,

I have answered the questions from the comments sent about the pilot study. I am still working with WesTech for the final proposal.

Today there was a phone conversation with Mike Winegard and he asked if there were any further comments about the PDR. You had sent some initial comments about the PDR and had stated that more would be coming. So can you give be an update if there are more comments about the PDR?

Thank you,

Kevin VanSickle
Water Plant Superintendent
Genesee County Drain Comminssioner
Division of Water & Waste Services
G-4610 Beecher Rd.
Flint, MI 48532

Direct: 810-600-4150
Mobile: PPI

GCDC WTP
Pre-treatment Contrafast
Proposed Pilot Plant Study
MDEQ Comments
12/22/2014

1. The duration of the pilot test is only 24 days which is significantly less than the 3-month minimum requested in our 10/31/2014 comments letter. We will re-iterate that the pilot study must be conducted for a minimum of three months. This will also provide each of the eight operating scenarios more than one week of pilot testing.
   The main reason for the pilot study is to determine which coagulation chemicals are best. A one month study should be able to determine this. The coagulation chemicals will be tested for ALUM and Ferric Sulfate, so two weeks will test each of the coagulations. Also Polymer will also be tested.

2. The Process Flow Diagram shows differences in the flow direction and the sludge re-cycle entry point as opposed to the full-scale clarifier shown in WesTech's Contrafast brochure. The proposed pilot plant shows flow from the rapid mix being directed into the reactor's draft tube from top to bottom which is opposite to the flow configuration shown in the full scale design. The proposed pilot also places a second sludge re-cycle inlet at the rapid-mix while the full scale design places one sludge recycle inlet at the bottom of the draft tube.
   WesTech answer
   I have reviewed the design with my group, and we have determined we can reconfigure the flow arrangement in the pilot by making some minor changes to the piping arrangement. It has the appropriate flanges to allow this. We will make the flow directions match the full scale design.

   The pilot plant needs to be designed in the same manner as the proposed full-scale plant. Although the pilot plant may be designed to re-cycle sludge at the rapid-mix location, this cannot utilized if it is not intended to be used for full-scale treatment. Also, the flow direction through the reactor's draft tube needs to be similar to the direction used in full-scale treatment.
   See the answer above. There is a valve that closes the sludge to the rapid mix location so the sludge will only go to the reactor.

3. The full-scale design shows a short baffle wall (high velocity upflow port) to help prevent settling in the reactor as it transfers the water to the settling chamber. The pilot design (as shown in the Process Flow Diagram) does not appear to have this baffle wall.
   WesTech answer