Rennaker, Joanne (DEQ)

From: Hansen, Jeff <jrhansen@lan-inc.com>
Sent: Wednesday, July 08, 2015 8:52 AM
To: Busch, Stephen (DEQ)
Cc: Prysby, Mike (DEQ); Brent Wright (bwright@cityofflint.com); mglasgow@cityofflint.com; Matta, Samir; Green, Warren
Subject: RE: Flint WTP GAC Permit Application
Attachments: CarbonExchangeGravityFilters_carbontransferprocedure.pdf; FS.SOP.4.8 - Filter Disinfection Using Sodium Hypochlorite.pdf; Calgon_F400.pdf; Flint WTP Ph-II Seg-3 GAC_07-07-15-to-MDEQ.pdf; Flint-GACandCL2-specs-toMDEQ_07-07-15.pdf

Steve,

In general response to your comments, our agreement with Flint is a design/build type so on the plans we have called out specific make/models to match what Flint currently uses for a number of items on your list rather than developing entire spec sections.

Specific responses to your comments are shown below in red. Revised plans and specs are attached and we will send hard copies by mail. Attachments are as follows:

1. Calgon Filtrasorb 400 GAC media data sheet
2. Calgon media change out procedures
3. Calgon disinfection procedures
4. Revised plans – there is only 1 change to a single note on sheet 6 as described below
5. Revised specs – added sections for piping, valves and pipe testing

Thanks,

Jeffrey R. Hansen
Senior Project Manager

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From: Busch, Stephen (DEQ) [mailto:BUSCHS@michigan.gov]
Sent: Monday, July 06, 2015 3:50 PM
To: Hansen, Jeff
Cc: Matta, Samir; Green, Warren; mglasgow@cityofflint.com; Brent Wright (bwright@cityofflint.com); Prysby, Mike (DEQ)
Subject: Flint WTP GAC Permit Application

Our office received the permit application "Fint WTP Phase II, Segment 3 Filter Media Replacement" on June 30, 2015.

The only specifications provided with the permit application were for the following:

- 05550 Bolts, Anchor Bolts And Expansion Anchors
- 09928 Protective Coating Systems

Aside from information shown on the plan sheets and what was listed in the previously submitted basis of design document, no other specifications were provided regarding:

- GAC and Sand media, including removal, installation, ripening, and disinfection procedures
  Plan sheet 5 calls out effective size, uniformity coefficient, and specific gravity for GAC and sand. Also, we have selected Calgon's product Filtrasorb 400 in our agreement. We did not want to dictate means and methods on the plans or specs. However, Calgon procedures are attached for your reference as well as their Filtrasorb 400 product sheet.

- Chlorine piping, joints, valves, installation, support, etc.
  Chlorine piping and valves are to be ASAHI Chem Prolok which are dual wall HDPE with butt fused joints and also the same type as the existing mid point chlorination piping. We will add a specification for this and have added some wording to the pipe call out near the center of sheet 6. Specific supports are called out on the plans and notes refer to sections 09928 for coating and 05550 for anchor bolts. See Key Note #1 on sheet 6. Key note call outs are designated with a number inside a hexagon in the plan view.

- Water tight hatch to be installed
  The Bilco hatch specified in Key Note #2 on sheet 6 with the options listed is water tight.

- Chlorine gas detector equipment
  The specific make/model of the chlorine detection equipment is called out with Key Note #3 on sheet 6. That type was selected to match other chlorine gas detectors currently used at the plant.

Regarding the Protective Coating Systems specs and their related appendix, these are general in nature listing every part of the plant as potentially being recoated. Plan notes discuss a few items to be coated/recoated, but it is not entirely clear what the full scope of the coating work will consist of. Coating will only be applied to those items where it is called for on the plans, which are the hangers/supports.

We request any additional specification information regarding the above be provided for approval.

It is also noted that the basis of design is based on a flow of 30 MGD, approximately 2.5 gpm/ft^2 filter loading rate. The existing filters are currently rated for 36 MGD at 3 gpm/ft^2. This would cause the WTP capacity rating to be lowered to 30 MGD. **Any future request to expand filter capacity back to 36 MGD would need to be demonstrated through filter performance testing. We showed 30 mgd in the basis of design and on the application form only because it is unlikely Flint demands will reach 36 mgd in the next 20 years. However, we would like to maintain the 36 mgd rating – do you need the basis of design and permit application resubmitted for this?**

Stephen Busch, P.E.
Lansing and Jackson District Supervisor
Office of Drinking Water and Municipal Assistance
MDEQ
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