Message

From: Rebecca Hollis [rhollis@cleanenergysystems.com]
Sent: 2/18/2020 8:17:10 PM
To: Ho, Yenhung [Ho.Yenhung@epa.gov]; Albright, David [Albright.David@epa.gov]
CC: Wayne Rowe [rowe5@slb.com]; Wade Zaluski [WZaluski@slb.com]
Subject: RE: GSDT Notifications for CES Permit App

Also, thank you for the update on the potential to transmit supporting CBI electronically. We will wait to hear from you as to whether the method your regional office identified is approved by EPA HQ.

Thanks again,
-Rebecca

From: Rebecca Hollis
Sent: Tuesday, February 18, 2020 12:14 PM
To: Ho, Yenhung <Ho.Yenhung@epa.gov>; Albright, David <Albright.David@epa.gov>
Cc: Wayne Rowe <rowe5@slb.com>; Wade Zaluski <WZaluski@slb.com>
Subject: RE: GSDT Notifications for CES Permit App

Hi Calvin,

Thank you for the prompt and detailed response.

Per your recommendation, we reviewed Section 3.1.5, "Pre-Operational Testing Program" of the *Recordkeeping, Reporting, and Data Management Guidance for Owners and Operators*. After an internal discussion, we believe the document we prepared titled, "Attachment G: Construction Details" contains the relevant information on injection well construction, pre-injection testing plan, test procedures, etc. required for the "Pre-Operational Testing" module of the GS Data Tool.
As you may recall, Attachment G was one of the documents we were not sure where to upload in the GS Data Tool during our initial submission. After consulting EPA, we added it to the Project Information Tracking module (Initial Permit Application tab, Item 4) – email attached for reference only. Given the RRDM guidance, it make sense that this detail would also apply to the "Pre-Operational Testing" module. So, I have uploaded Attachment G to this module.

As for the Proposed Pre-Operational Testing Schedule, we were able to locate and download a Testing and Monitoring Template (Excel file) from EPA. We have completed this template for the proposed Mendota site and uploaded it as well to the "Pre-Operational Testing" module. So, the "Welcome" tab of the module would look like this:

Attachment G: Construction Details

TM_Spreadsheet_Template.xlsx

Please advise if you concur with this approach.
Since no wells have been drilled or field samples collected yet, the remaining tabs were fairly simple to complete.

If you agree, I believe we can submit the "Pre-Operational Testing" module today, which should, complete our submission for the Mendota site.

Thanks again,
-Rebecca

Rebecca Hollis
Director Business Development -

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The Power to Reverse Climate Change

From: Ho, Yenhung <Ho.Yenhung@epa.gov>
Sent: Friday, February 14, 2020 3:08 PM
To: Rebecca Hollis <rhollis@cleanenergysystems.com>; Albright, David <Albright.David@epa.gov>
Cc: Wayne Rowe <rowe5@slb.com>; Wade Zaluski <WZaluski@slb.com>
Subject: RE: GSDT Notifications for CES Permit App

Hi Rebecca,

CES is required to submit into the "Pre-Operational Testing" module a proposed pre-operational well and formation testing program that meets the requirements of 40 CFR 146.87. See Section 3.1.5 of the Recordkeeping, Reporting, and Data Management Guidance for Owners and Operators (attached).

Our regional IT security office identified an authorized file transfer service, but is checking with HQ to make sure it can be used where CBI is involved. We will let you know as soon as we hear back.

Thanks,
Calvin

Calvin Ho
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415-972-3262

From: Rebecca Hollis <rhollis@cleanenergysystems.com>
Sent: Thursday, February 13, 2020 1:10 PM
To: Albright, David <Albright.David@epa.gov>; Ho, Yenhung <Ho.Yenhung@epa.gov>
Cc: Wayne Rowe <rowe5@slb.com>; Wade Zaluski <WZaluski@slb.com>
Subject: RE: GSDT Notifications for CES Permit App

David and Yenhung,

First, thank you for the call this morning Yenhung, and for taking the time to talk through this a bit.

I spoke again with the team and we believe we can fill in references to the requested information in the "Alt PICS Timeframe Demonstration" module. That is, we will indicate where in the application material we already submitted the requested info/data is presented. I believe we can get this uploaded and submitted today.

The "Pre-Operational Testing" module however would take a bit more effort. The majority of the tabs we can fill in with "0" meaning no wells drilled or data collected yet. However, the first tab, "Welcome," requires two documents:

> "Upload a **proposed pre-operational testing plan** pursuant to 40 CFR 146.82(a)(8) here. Please make sure the most up-to-date version of the plan is uploaded."
>
> "Upload a **proposed pre-operational testing schedule** here. Pursuant to 40 CFR 146.87(f), this schedule must be submitted 30 days prior to conducting the first test, and any schedule changes must be submitted 30 days in advance of the next scheduled test."

So, we would still appreciate your guidiance on this module.
As well as information on how to safely transmit a copy of our Project Narrative that includes CBI.

Thanks again,
-Rebecca

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From: Rebecca Hollis
Sent: Thursday, February 13, 2020 10:10 AM
To: Albright, David <Albright.David@epa.gov>
Cc: Ho, Yenhung <Ho.Yenhung@epa.gov>; Wayne Rowe <rowe5@slb.com>; Wade Zaluski <WZaluski@slb.com>
Subject: RE: GSDT Notifications for CES Permit App

Hi again, David,

We reviewed the feedback provided by Molly. Then went back and took a harder look at GS Data Tool modules: Pre-Operational Testing, and Alt PICS Timeframe Demonstration, as well as our application material. The short summary is that we did not submit information through the two modules because we felt at our current stage (Preconstruction) we have not drilled wells or collected the site-specific detail requested. That being said, much of the information is presented (based on computational modeling) throughout other sections of our application. So, if EPA requires these two modules be completed at this phase, we can work to provide as much info as possible at this time.

In our re-review, I did see the check boxes in the Project Information module that I did check for both the Pre-Operational Testing and Alt PICS Timeframe Demonstration modules. So, this was indeed an inconsistency with our application, my mistake, and a good catch by EPA.

To provide more detail on the modules and our reasoning for not submitting them at this time:

> **"Pre-Operational Testing:** this module supports the submission of geologic, hydrogeologic, and well-related data collected during the construction of a new well or during/after conversion of a Class VI well prior to commencing injection pursuant to 40 CFR 146.82(c)."

- This was not submitted because CES is in the Preconstruction Phase. There is no well-related data collected because a well has not been drilled at this time.
- Operational testing schedules are presented in the Attachments submitted under Project Plan Submissions.

> **"Alternative PISC Timeframe Demonstration:** this module is used to submit an alternative PISC timeframe demonstration by owners or operators who opt to make this demonstration pursuant to 40 CFR 146.93(c)."

- As per our evaluation in Section 5 of ATTACHMENT E: POST-INJECTION SITE CARE AND SITE CLOSURE PLAN 40 CFR 146.93(a), This pre-construction application is proposing a ten year post monitoring period following the cessation of injection operations. This alternative post injection site care (PISC) timeframe, pursuant to 40 CFR 146.93(c)(1) is based on the computational modeling to delineate the AoR; predictions of plume migration, pressure decline, and carbon dioxide trapping. Once site-specific (characterization well, 3D seismic, etc.) has been acquired, CES will either complete the alternative post-injection site care plan or modify the monitoring time-frame for the "*Monitoring Above the Confining Zone*" and "*Carbon Dioxide Plume and Pressure Front Tracking*" sections of this attachment.
- Because this conclusion is based on only computational modeling, CES concluded it was not the time to submit this module. The requested items to submit are presented in the submitted Narrative and Attachments A through Attachments H.

Please advise if EPA requires CES to submit these modules at this time.

Thank you again,

-Rebecca

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From: Rebecca Hollis
Sent: Tuesday, February 11, 2020 9:59 AM
To: Albright, David <Albright.David@epa.gov>
Cc: Ho, Yenhung <Ho.Yenhung@epa.gov>
Subject: RE: GSDT Notifications for CES Permit App

Thank you, David.

I will review this with the team and get back to you ASAP.

Thanks again for your assistance in this matter.

Best,
-Rebecca

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From: Albright, David <Albright.David@epa.gov>
Sent: Tuesday, February 11, 2020 9:44 AM
To: Rebecca Hollis <rhollis@cleanenergysystems.com>
Cc: Ho, Yenhung <Ho.Yenhung@epa.gov>
Subject: FW: GSDT Notifications for CES Permit App

Hi Rebecca, below is the text of the message sent to me by Molly McEvoy, per our discussion a moment ago. We can discuss at your convenience.

Thanks, David

Hi David,

The information CES submitted via the GSDT is formally submitted to EPA, but I'm not sure if they are done submitting for this application.

I would expect to see submissions into the Pre-Operational Testing module. They did not submit anything to this module but it's possible they included the information required under 146.82(a)(8) in another module. They also have not submitted data into any of the optional modules (e.g., Alternative PISC Timeframe Demonstration).

I'm looking at their form submissions and it appears CES marked in the Project Information module that they would be submitting data into the Pre-Operational Testing module and Alt PICS Timeframe Demonstration module. I can't tell for sure from their submissions, so it may be necessary to confirm with CES that they are done submitting information to EPA.

I'll work on adding your emails to the email notifications list for this project. Let me know if you need any other help with the GSDT.

Thanks,
Molly