To: Rumrill, Nancy[Rumrill.Nancy@epa.gov]
From: Rao, Kate
Sent: Fri 6/3/2016 3:56:16 PM
Subject: FW: Technical Direction Memo: Contract No. EP-C-15-022, WA 0-90; Task 1, Subtask 1.2 -- Excelsior Mining Company - Class III UIC Permit # R9UIC-AZ1-FY-16-1, Permit Technical Review Analysis

Nancy – are you ok with the revised est of LOE? See below message from Jonathan.

Kate

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Kate Rao
Drinking Water Protection Section (WTR 3-2)
USEPA Region 9
75 Hawthorne St., San Francisco, CA 94105
tel: (415) 972-3533 / fax: (415) 947-3549

From: Jonathan Koplos [mailto:Jonathan.Koplos@cadmusgroup.com]
Sent: Friday, June 03, 2016 8:50 AM
To: Rao, Kate <Rao.kate@epa.gov>
Cc: Rumrill, Nancy <Rumrill.Nancy@epa.gov>; Jim Walker <jar Ex. 6 - Personal Privacy ; Albright, David <Albright.David@epa.gov>
Subject: RE: Technical Direction Memo: Contract No. EP-C-15-022, WA 0-90; Task 1, Subtask 1.2 -- Excelsior Mining Company - Class III UIC Permit # R9UIC-AZ1-FY-16-1, Permit Technical Review Analysis

Hi Kate,

We're now starting the QA review of the draft Excelsior comments which total about 27 pages. Depending on what we find in the review and if we need to follow-up with Jim on any questions, I'd estimate this might take a total of Ex. 4 - CBI hrs.

Please let me know if you have any questions.

Jonathan

Jonathan Koplos, Ph.D.

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From: Rao, Kate [mailto:Rao.kate@epa.gov]
Sent: Wednesday, May 25, 2016 9:57 AM
To: Jonathan Koplos <Jonathan.Koplos@cadmusgroup.com>
Cc: Rumrill, Nancy <Rumrill.Nancy@epa.gov>; Jim Walker <jar Ex. 6 - Personal Privacy
Albright, David <Albright.David@epa.gov>
Subject: RE: Technical Direction Memo: Contract No. EP-C-15-022, WA 0-90; Task 1, Subtask 1.2 -- Excelsior Mining Company - Class III UIC Permit # R9UIC-AZ1-FY-16-1, Permit Technical Review Analysis

Morning Jonathan. Thanks for the email and update on the progress you are making with the Excelsior tech review. Nancy has been in contact with Jim on this TDM and understands that the material to review is extensive and the technical nature of the proposed project is very

complex so going over the Ex. 4 - CBI LOE estimate seems reasonable. If you think you'll go over Ex. 4 - CBI LOE, please let me know.

Thanks. Kate

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Kate Rao
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From: Jonathan Koplos [mailto:Jonathan.Koplos@cadmusgroup.com]
Sent: Tuesday, May 24, 2016 1:56 PM
To: Rao, Kate <Rao.kate@epa.gov>
Cc: Rumrill, Nancy <Rumrill.Nancy@epa.gov>; Jim Walker <Ex. 6 - Personal Privacy
Subject: RE: Technical Direction Memo: Contract No. EP-C-15-022, WA 0-90; Task 1, Subtask 1.2 -- Excelsior Mining Company - Class III UIC Permit # R9UIC-AZ1-FY-16-1, Permit Technical Review Analysis

Hi Kate and Nancy,

Work is proceeding well on this Excelsior TD. Based on the work so far, we might be using around Ex. 4 - CBI hrs +/- to get the Technical Analysis Review to you (now scheduled for June 2). It is a big application with lots of material to read and process.

Just an FYI.

Thanks,

Jonathan

From: Rao, Kate [mailto:Rao.kate@epa.gov]
Sent: Thursday, March 24, 2016 6:34 PM
To: Jonathan Koplos <Jonathan.Koplos@cadmusgroup.com>
Cc: Albright, David <Albright.David@epa.gov>; Rumrill, Nancy <Rumrill.Nancy@epa.gov>; Dermer, Michele <Dermer.Michele@epa.gov>; Parrotta, Nancy <Parrotta.Nancy@epa.gov>; Adams, Tammy <Adams.Tammy@epa.gov>
Subject: Technical Direction Memo: Contract No. EP-C-15-022, WA 0-90; Task 1, Subtask 1.2 -- Excelsior Mining Company - Class III UIC Permit # R9UIC-AZ1-FY-16-1, Permit Technical Review Analysis

Hi Jonathan – another work request under WA 0-90. Please let me know who the technical lead will be on this project. I have one hardcopy application with CDs that I will send to the tech lead and have another set of CDs (includes complete revised application) that I can send to you if needed. Nancy Rumrill is the tech lead for EPA.

Please let me know if you have any questions.

Thanks. Kate

Contract No. EP-C-15-022, Workplan Assignment No. 0-90

R9 Tech Support for Implementation of the UIC Program – Excelsior Mining Company - Class III UIC Permit #R9UIC-AZ1-FY-16-1

[Task 1; Subtask 1.2 - Permit Technical Review Analysis]

Technical Direction

Background: Excelsior Mining Company (Excelsior) has submitted a UIC area permit application to operate a Class III ISR copper mining facility in Chochise County, AZ. EPA determined that the application, which includes an aquifer exemption, is administratively

complete (see attached letter). The applicant also submitted an Aquifer Protection Permit to the Arizona Department of Environmental Quality (ADEQ) and this is also available on CD.

Action: Under Task 1, Subtask 1.2 – Technical Review Analysis, review and provide an evaluation of Excelsior's permit application, including the aquifer exemption proposal, dated *February 2016/revised March 2016*. The following evaluation must be conducted:

- Analyze well log data and testing results submitted by the prospective owner or operator.

- Evaluate local and regional geology, including injection zone and confining zone characteristics.

- Assess area of review (AoR) determinations or zone of endangering influence calculations, including information related to aquifer exemptions (if applicable).

- Provide recommendations for any corrective action required at existing wells within the AoR.

- Identify and recommending technical terms and conditions to be imposed in the draft permit (related to well operation, monitoring, testing, reporting, and other activities required by applicable UIC Program regulations).

- Evaluate proposed plugging and abandonment plans.

- Assess the acceptability of proposed financial assurance procedures/mechanisms.

- Review and evaluation other applicable attachment(s) in the permit application.

Deliverable: Provide a technical analysis summarizing the results of the technical review of the permit application. The analysis should include an itemized list of additional information necessary to clarify, modify, or supplement the permit application materials. Deliverable should be emailed in WORD to Kate Rao and Nancy Rumrill. If necessary, based on further technical direction from Kate Rao, Cadmus may be asked to evaluate subsequent submittals made to address the identified technical deficiencies, until the permit application is determined to be technically sufficient.

Material:

- Hardcopy permit application (dated February 2016/revised March 2016) which includes CDs of a) February 2016 application, b) February 2016/revised March 2016 permit application, and c)

ADEQ APP Application January 2016.

- March 24, 2016 Admin Review letter from EPA to Excelsior (attached).

Estimated LOE: Ex. 4 - CBI hours

Schedule: Due 8 weeks from the date of this TDM (May 19, 2016).

Kick-off Call: Nancy Rumrill with schedule a call with the Cadmus tech lead once the material is received to discuss the TDM. (LOE [illegible] hour)