



From: Agnew, Diane, NMENV

Sent: Tuesday, November 29, 2016 2:17 PM

To: 'Jercinovic, Devon' <djercinovic@eaest.com>

Cc: Simpler, Trent (Trent.Simpler@usace.army.mil) <Trent.Simpler@usace.army.mil>; Phaneuf, Mark J SPA (Mark.J.Phaneuf@usace.army.mil) <Mark.J.Phaneuf@usace.army.mil>; Amy Sanchez <Amy.E.Sanchez@usace.army.mil>; Salazar, Carlos F SPA <Carlos.F.Salazar@usace.army.mil>; Linda Dreeland <Linda.Dreeland@usace.army.mil>; adria.bodour.1@us.af.mil; Julie McNeill <jmcneill@portageinc.com>; Morse, Earl <emorse@eaest.com>; Marley, Robert <rmrley@eaest.com>

Subject: RE: KAFB-106239 Downhole Geophysical Logging Information

Hello Devon,

I have reviewed your email along with the attached memo from the EA contracted geophysical logging company. This information was sent to respond to Condition 2 in NMED's November 16, 2016 letter approving the *Work Plan for Bulk Fuels Facility Expansion of the Dissolved-Phase Plume Groundwater Treatment System Design Revision 1*. Unfortunately, the information provided does not adequately address the requirements of Condition 2 for the following reasons:

- There is no information nor detail on calibration methods to be used, either in the shop or in the field, to demonstrate that the instrumentation is calibrated and operating properly. It is not clear how the proposed "MIS Model 4RSP-1000" compares to the instrumentation that will actually be used for logging, what input/output will be used to verify instrument calibration, or what actions will be taken if the logging tool(s) fail calibration.
- EA appears to be relying on paragraph 3 of the memo to respond to the request for information on equipment decontamination. The memo proposes a procedure for decontamination and it is clear GeoCam Inc. requires input and confirmation from EA. Additionally, the memo does not describe how the investigation derived waste (IDW) liquid from the equipment decontamination will be managed upon generation.
- EA's geophysical subcontractor is proposing both downhole and up-hole passes with the logging instrumentation for quality control. There is no discussion of what metrics will be followed once the logs have been submitted "for review by EA Engineering to ensure repeatability." The language in the email below implies the review will occur during post-processing when it would be too late to repeat logging of an interval, if needed, as presumably the well construction will be complete by then.
- The GeoCam Inc. statement of qualifications demonstrates that this is a subcontractor with the capability to conduct the proposed logging but the statement "This is one of 2 firms we routinely utilize on EPA projects for similar open borehole logging" is insufficient for demonstrating how calibration and data quality will be measured and verified.
- It is clear from the memo that EA's subcontractor is relying on EA oversight of the logging to verify calibration and quality control metrics. Bullet 2 in the email below implies that the logs will not be reviewed until after processing. Not only is this inconsistent with the memo from GeoCam Inc. it does not address documentation of field oversight and calibration.

NMED understands that the intention of the geophysical logging at 106239 is meant to supplement the lithology logs from the mud rotary drilling of the borehole. Additionally, this log will likely be incorporated into future sequence stratigraphy to verify and enhance our model for the subsurface geology in the plume core. For those reasons, it is crucial that the geophysical data collected from the open borehole of 106239 be of sufficient quality to be used for those purposes.

KAFB4464



NMED cannot approve the information as provided. Please provide the additional information identified above in order to meet the requirements of Condition 2 of NMED's November 16th letter. Please let me know if you have any questions or would like to schedule a meeting to discuss further.

Diane Agnew
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From: Jercinovic, Devon [mailto:djercinovic@eaest.com]
Sent: Wednesday, November 23, 2016 1:00 PM
To: Agnew, Diane, NMENV <Diane.Agnew@state.nm.us>
Cc: Simpler, Trent (Trent.Simpler@usace.army.mil) <Trent.Simpler@usace.army.mil>; Phaneuf, Mark J SPA (Mark.J.Phaneuf@usace.army.mil) <Mark.J.Phaneuf@usace.army.mil>; Amy Sanchez <Amy.E.Sanchez@usace.army.mil>; Salazar, Carlos F SPA <Carlos.F.Salazar@usace.army.mil>; Linda Dreeland <Linda.Dreeland@usace.army.mil>; adria.bodour.1@us.af.mil; Julie McNeill <jmceill@portageinc.com>; Morse, Earl <emorse@eaest.com>; Marley, Robert <rmarley@eaest.com>
Subject: KAFB-106239 Downhole Geophysical Logging Information

Diane,

Per Condition 2 of the approval for the Revision 1 of the Work Plan, NMED requested that additional information be included in the work plan regarding the downhole geophysical logging of KAFB-106239. We will include the required information in the next revision of the work plan in progress now. Additionally, we have attached the information we received today to this email for your review in advance, as the geophysical logging is scheduled for Thursday, December 1, 2017 (assuming we maintain the current drilling footage rate).

- EA proposed downhole geophysical logging to supplement the lithologic information due to limitations of mud logging.
- There are no field forms involved, the entire process is automated with only reports being provided after processing, typically electronic, but we can request hard copy as well.
- The information is brief but does describe procedure, calibration, and decontamination required.
- This is one of 2 firms we use routinely utilize on EPA projects for similar open borehole logging.

Please let me know if you require additional information.

Thank you, Devon

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