

KAFB BFF



-----Original Message-----

From: Agnew, Diane, NMENV

Sent: Friday, December 2, 2016 2:30 PM

To: BODOUR, ADRIA A CIV USAF HAF AFCEC/CZRX <adria.bodour.1@us.af.mil>

Cc: Morse, Earl <emorse@eaest.com>; Marley, Robert <rmalley@eaest.com>; Jercinovic, Devon <djercinovic@eaest.com>; Amy Sanchez <Amy.E.Sanchez@usace.army.mil>; Salazar, Carlos F CIV USARMY CESP A (US) <Carlos.F.Salazar@usace.army.mil>; Simpler, Trent W CIV USARMY CESP A (US) <Trent.Simpler@usace.army.mil>; Phaneuf, Mark J SPA (Mark.J.Phaneuf@usace.army.mil) <Mark.J.Phaneuf@usace.army.mil>; Linda Dreeland <Linda.Dreeland@usace.army.mil>; Julie McNeill <jmcneill@portageinc.com>; Kieling, John, NMENV <john.kieling@state.nm.us>; McQuillan, Dennis, NMENV <dennis.mcquillan@state.nm.us>

Subject: RE: KAFB-106239 Downhole Geophysical Logging Information

Dear Devon,

I have received and reviewed your reply to my email dated November 29, 2016. The additional detail provided in the two attachments, along with the in-line comment responses in the body of your email, adequately address the requirements of Condition 2 in NMED's November 16, 2016 letter approving with conditions the Work Plan for Bulk Fuels Facility Expansion of the Dissolved-Phase Plume Groundwater Treatment System Design Revision 1.

Thank you,

Diane

Diane Agnew
New Mexico Environment Department
(505) 222-9555 (Direct)
(505) 660-3809 (Mobile)

-----Original Message-----

From: BODOUR, ADRIA A CIV USAF HAF AFCEC/CZRX [<mailto:adria.bodour.1@us.af.mil>]

Sent: Friday, December 2, 2016 11:40 AM

To: Agnew, Diane, NMENV <Diane.Agnew@state.nm.us>

Cc: Morse, Earl <emorse@eaest.com>; Marley, Robert <rmalley@eaest.com>; Jercinovic, Devon <djercinovic@eaest.com>; Amy Sanchez <Amy.E.Sanchez@usace.army.mil>; Salazar, Carlos F CIV USARMY CESP A (US) <Carlos.F.Salazar@usace.army.mil>; Simpler, Trent W CIV USARMY CESP A (US) <Trent.Simpler@usace.army.mil>; Phaneuf, Mark J SPA (Mark.J.Phaneuf@usace.army.mil) <Mark.J.Phaneuf@usace.army.mil>; Linda Dreeland <Linda.Dreeland@usace.army.mil>; Julie McNeill <jmcneill@portageinc.com>

Subject: RE: KAFB-106239 Downhole Geophysical Logging Information

Hi Diane,

Thanks for letting me know that you didn't get this message. Please see below and attached about the geophysicals on extraction well KAFB-106239.

Cheers, Adria

KAFB4469



-----Original Message-----

From: Jercinovic, Devon [<mailto:djercinovic@eaest.com>]

Sent: Thursday, December 01, 2016 5:07 PM

To: Amy Sanchez <Amy.E.Sanchez@usace.army.mil>; Salazar, Carlos F CIV USARMY CESPA (US)

<Carlos.F.Salazar@usace.army.mil>; Simpler, Trent W CIV USARMY CESPA (US)

<Trent.Simpler@usace.army.mil>; Phaneuf, Mark J SPA

(Mark.J.Phaneuf@usace.army.mil) <Mark.J.Phaneuf@usace.army.mil>; Linda Dreeland

<Linda.Dreeland@usace.army.mil>; BODOUR, ADRIA A CIV USAF HAF AFCEC/CZRX

<adria.bodour.1@us.af.mil>; Julie McNeill <jmcneill@portageinc.com>

Cc: Morse, Earl <emorse@eaest.com>; Marley, Robert <rmarley@eaest.com>

Subject: FW: KAFB-106239 Downhole Geophysical Logging Information

Importance: High

Diane, the USACE has asked me to forward responses (in blue below) to your comments received Tuesday. We have provided additional information in responses and provided two attachments for your review.

We have also requested documentation from the manufacturer on the unit calibration, but may not receive until tomorrow. As we are scheduled to log the hole either late Saturday or Sunday. I did not want to hold up other responses while we wait.

Please let us know what additional information you may require. When we get resolution on responses, all information provided via email will be incorporated into the R2 Work Plan as requested.

Thank you, Devon

Devon E. Jercinovic, PG, PMP

EA Engineering, Science, and Technology, Inc., PBC

Program Manager II

320 Gold Ave. SW, Suite 1300

Albuquerque, NM 87102

Cell: 505.401.1181

Office: 505.715.4248

Email: djercinovic@eaest.com <<mailto:djercinovic@eaest.com>>

www.eaest.com <<http://www.eaest.com/>>

From: Agnew, Diane, NMENV [<mailto:Diane.Agnew@state.nm.us>]
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 <rmarley@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.

Agreed and providing addition information: The MIS Model 4RSP-1000 will be used on this project and is factory calibrated. The equipment includes software to perform a field calibration verification as described on the attached field form. If the unit fails the calibration, the backup tool string will be utilized and confirmed with for field calibration before use.

* 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.

Agreed and providing additional information: Decontamination prior to deployment down the borehole will be performed in a polyethylene trough placed on a plastic liner at the drilling site. The GCI field operator will spool 580-Ft of wireline onto pad in a figure eight pattern. The wireline will be laid into the trough and soaked in an Alconox™ solution. After 20 minutes, the wireline will be spooled back onto the winch while being cleaned by a wiper wrapped around the cable. The downhole tools and sheave will be cleaned in the same solution contained in the trough. The same procedure will be performed following the logging and prior to demobilization from the site. All IDW water will be contained in the trough until decontamination is completed and subsequently transferred to a storage container suitable for storage in the EA IDW yard pending analytical results.

* 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.

Agreed and providing clarification: The repeatability evaluation is performed in the field before the logging tool is removed from the borehole.

The operator will perform the downhole pass and the uphole pass and the log will be processed for downhole and uphole runs. The logs will be laid either next to, or on top of one another in the field to visually confirm repeatability. There is no automated (statistical) comparison of the logs for repeatability. An example sample log comparing the downhole and uphole passes is attached. Once the logging operator confirms the validity of the data, he will finalize, print and provide to EA staff onsite one copy of the repeatability report for final approval. Once approved, the logging truck will rig down and the final geophysical log will be emailed to EA.

* 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.

Agreed. Additional information on calibration is provided in Item 1 and information on repeatability (data quality) in Item 3.

* 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.

Agreed with clarification: The field equipment is factory calibrated and field checked with manufacturer's internal software linked to the acquisition tool. The operator fills out the Calibration Verification Form (attached) and EA is responsible for approving the record indicating that the verification was performed. EA has requested that the manufacturer provide the most recent calibration certificate or similar evidence of 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.

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

New Mexico Environment Department

(505) 222-9555 (Direct)

(505) 660-3809 (Mobile)

From: Jercinovic, Devon [<mailto:djercinovic@eaest.com>]
Sent: Wednesday, November 23, 2016 1:00 PM
To: Agnew, Diane, NMENV <Diane.Agnew@state.nm.us <<mailto:Diane.Agnew@state.nm.us>> >
Cc: Simpler, Trent (Trent.Simpler@usace.army.mil <<mailto:Trent.Simpler@usace.army.mil>>)
<Trent.Simpler@usace.army.mil <<mailto:Trent.Simpler@usace.army.mil>> >; Phaneuf, Mark J SPA
(Mark.J.Phaneuf@usace.army.mil <<mailto:Mark.J.Phaneuf@usace.army.mil>>)
<Mark.J.Phaneuf@usace.army.mil <<mailto:Mark.J.Phaneuf@usace.army.mil>> >; Amy Sanchez
<Amy.E.Sanchez@usace.army.mil <<mailto:Amy.E.Sanchez@usace.army.mil>> >
>; Salazar, Carlos F SPA <Carlos.F.Salazar@usace.army.mil
<<mailto:Carlos.F.Salazar@usace.army.mil>> >; Linda Dreeland <Linda.Dreeland@usace.army.mil
<<mailto:Linda.Dreeland@usace.army.mil>> >; adria.bodour.1@us.af.mil
<<mailto:adria.bodour.1@us.af.mil>> ; Julie McNeill <jmcneill@portageinc.com
<<mailto:jmcneill@portageinc.com>> >; Morse, Earl <emorse@eaest.com <<mailto:emorse@eaest.com>> >;
Marley, Robert <rmarley@eaest.com <<mailto: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 routinely utilize on EPA projects for similar open borehole logging.

Please let me know if you require additional information.

Thank you, Devon

Devon E. Jercinovic, PG, PMP

EA Engineering, Science, and Technology, Inc., PBC

Program Manager II

320 Gold Ave. SW, Suite 1300

Albuquerque, NM 87102

Cell: 505.401.1181

Office: 505.715.4248

Email: djercinovic@eaest.com <<mailto:djercinovic@eaest.com>>

www.eaest.com <<http://www.eaest.com/>>