

MINUTES OF KICK OFF MEETING
NORTHERN AREA GROUNDWATER RFI Including Background Investigation
HDR/OBG JV
CONTRACT NUMBER: W912DQ18D3010
TASK ORDER NUMBER: W912BV19F0038
Meeting Date 25 April 2019
Meeting Location: Conference Call
Meeting Duration: 1400CT-1600CT (2 PM to 4PM CT)

Common acronyms and abbreviations used in these minutes:

BRAC: Base Re-alignment and Closure	PG: Professional Geologist
CCR: Coal Combustion Residuals	QA: Quality Assurance
DL: Detection Limit	QAPP: Quality Assurance Project Plan
EPA: Environmental Protection Agency	QC: Quality Control
ERDC: Engineer Research and Development Centre	RCRA: Resource Conservation and Recovery Act
FWDA: Fort Wingate Depot Activity	RL: Reporting Limit
GC/MS : Gas Chromatograph/Mass Spectrometer	SOW: Statement of Work
GIS: Geographic Information System	TNT: 2,4,6-Trinitrotoluene
HASP: Hazard Assessment and Signage Program	UFP: Uniform Federal Policy
IDW: Investigation Derived Waste	UPL: Upper Prediction Limit
LOD: Limit of Detection	USACE: U.S. Army Corps of Engineers
LOQ: Limit of Quantitation	USCS: Unified Soil Classification System
MDL: Method Detection Limit	USDA: U.S. Department of Agriculture
NMED: New Mexico Environment Department	VOCs: Volatile Organic Compounds
OESS: Ordnance and Explosive Safety Specialists	

Attendance

USACE

- Saqib Khan (Project Manager, PG)
- Mark Patterson (BRAC Program Mgr and BRAC Env. Coordinator)
- Steven Smith (FWDA Program Manager)
- Heather Theel (ERDC Program Manager)
- Daisy Pate (Technical Manager)
- Cheryl Montgomery (Lead for Risk Assessment)
- David Becker (Technical Reviewer, Geology))
- Hugh Rieck (Technical Reviewer, Geology)
- Michael Scoville (On-Site Coordinator/TM)
- Jessica Wright (Chemist)

HDR Inc.

- Charles O'Neill (Project Manager, PG)
- Gregory Kelly (Senior Geologist, Leading the Field Work)
- May Raad (Principal Statistician, Leading the Statistics for Groundwater Study)
- Lisa Voyce (Leading the Human Health Risk Assessment)
- Olga Kosta (Statistician)
- Mayble Abraham (Risk Assessor)

Sundance Consulting Inc.

- Angela Makin (Administrative Support to FWDA)
- Christy Esler (Administrative Support to FWDA)

Absent

- Angela Lane (USACE, Chemistry Lead)
- Chelsea Montoya (USACE)
- Scottie Fiehler (Chief, Army Environmental Center)

1. Sign in & Introductions.....ALL

Saqib Khan began Kick-Off Meeting with a roll call of all present HDR, USACE, and Sundance employees and outlined the agenda (Background for each attendee is provided in Attendance section).

Saqib Khan explained that the Contractor must follow the contract scope and the approved RFI Work Plan. At anytime, any of the PDT member cannot ask the contractor (HDR) to perform tasks that are not stated in the SOW. No one except the KO can make such decisions. For instance sampling from a well that is not in the scope. For any changes in conditions or additional scope required, Saqib Khan should be immediately notified so that the modifications of the scope can be re-addressed . Any deviation from the approved work must be communicated with NMED in advance. Changes can be covered in Attachment C.

Mark Patterson outlined the following:

- The USACE has had quality control issues with previous contractors. Contractors must meet the terms of the contract and produce high quality deliverables. Steven Smith will handle corrective measures if there are issues with the performance. It is important to communicate any issues early on to get the project back on course.
- Safety on the field is the main priority. The contractor must ensure safety with the staff. Any near misses or incidents should be reported.

Steven Smith explained how the Corrective Action Process and Quality Control Plan is followed. The document is reviewed thoroughly by the USACE to ensure that all of the content (text, tables, figures, references, etc.) is appropriate. If there are issues, then the document is sent back with a warning. Scottie Fiehler is also involved with the QC process. Communication with the USACE is encouraged but the Project Manager (Saqib Khan) should be involved on all communication so that he remains in the loop for all project matters.

Charles O'Neill introduced the HDR team members (see above) and outlined the three main tasks HDR will be performing:

1. Field efforts including drilling soil borings, installing wells and collecting samples of soil gas, soil and groundwater;
2. Background groundwater quality evaluation; and,
3. Reporting of field investigation including risk assessment.

2. Discuss Administrative Requirements.....Army PM/Pg.M

Saqib Khan provided an overview of what to expect at the FWDA site. There are three government trailers. The USACE operates out of Trailer #1. Other contractors will also be working full time on site. Daily briefings are held at 6 am to all consultants on site so that each contractor is aware of what everyone is working on and where. HDR's work is involved in the Northern area of the Site. HDR is not allowed to visit other areas of the site without an escort.

Saqib Khan then went over the following administrative requirements:

a. Monthly Cost/Schedule Reporting

USACE requires monthly reports regarding cost, schedule, invoices, and changes in SOW. Invoices are required on a monthly basis.

b. Daily Reporting during Field Efforts

Daily progress reporting is required at the end of each day during field efforts. Any technical or safety issues on the field should be included in the reporting. Saqib Khan will be available 24/7 by phone when HDR employees are on the field in case there are any issues. Mark Patterson should also be contacted if there is any danger or accident(s).

c. Weekly Lookaheads

HDR is required to provide weekly look-aheads on progress, schedule, and forecasting to see where HDR is regarding project efforts and if they are on schedule so that HDR can adjust if there are any issues.

d. Submittals (See deliverables)

e. CPARs Evaluation(s)

A satisfactory CPAR rating is good as it indicates that the contractor is meeting all requirements in the scope. The only time a very good rating comes into play is if a contractor met expectations ahead of schedule and saved the government money.

The rating policy has recently changed. The government now allows contractors to comment and evaluate on their evaluation.

f. Contractor Manpower Reporting

Contractor manpower reports are done on a fiscal year basis.

Charles O'Neill mentioned that HDR that will set up and prepare the necessary reports for USACE.

g. Process for using Consulting Services

The process for using Consulting Services is in Attachment C. If modifications outside of the scope of work are required, then HDR must provide an approximate fee for the work. The Attachment is first sent to Saqib Khan who will sign off on it and then provide it to Steven Smith.

h. Antiterrorism and Operations Security Requirements

Since this is a former military facility, anyone who will be working on-site needs to go through training and a background check. The boxes checked in SOW Section 6.2 are applicable to HDR.

i. Requirement for HDR to provide minutes for every meeting and teleconference during the course of the project & Government's expectation for HDR to provide active communication for the entirety of the project.

HDR will provide project meeting and call minutes within 15 days to Saqib Khan who will review and send to team.

Additional discussion:

Steven Smith informed HDR that the field notification requirements for any upcoming field work are:

- 30 calendar days to the NMED
- 45 calendar days to the USACE

Charles O'Neill/HDR will let Saqib Khan know when HDR plans on doing field work within the appropriate time frame. Saqib Khan will then notify USACE and NMED. Charles O'Neill will work closely with Saqib Khan and Angela Makin.

Mark Patterson added that any certifications required to be on-site need to be submitted in advance to the USACE. Christy Esler mentioned that Vanessa Shorthair is in Trailer #1 at Wingate and works with Sundance to provide support on-site for regulatory compliance files and training records.

Action Item: Christy Esler will send a list of contacts that may be needed to Charles O'Neill (and cc Saqib Khan).

Charles O'Neill said that the tentative date for starting field work is mid-June. They are working with Yellow Jacket Drilling.

3. Discuss Scope of Work.....HDR/OBG JV

a. Major Tasks & Approach to Major Tasks (Fieldwork)

i. U/G Utility Locate

Gregory Kelly, who is leading the field work, went over HDR's field program plan. HDR will conduct the necessary pre-mobilization tasks:

- Doing a site walk to get coordinated with the site
- Setting up an office trailer
- Getting prepared for electrical hookup
- Delivering portable bathrooms
- Staking proposed drilling locations based on GIS coordinates
- Locating underground utility services
- Getting familiar with site prior to drilling tasks

Mike Scoville mentioned that Rich Cruz, the lead caretaker for the U/G utility locate on-site, should be contacted. Rich Cruz can offer guidance and help with any other contacts.

Action Item: Saqib Khan is to setup up a phone call next week with HDR, Rich Cruz and the USACE before HDR mobilizes on-site. Mark Patterson added that Rick Oldbrick is the other caretaker on-site and that he should also be included on the call in case Rich Cruz is unavailable.

Steven Smith added that HDR should inform Saqib Khan when they plan on performing tasks on-site so that there are no surprises with arrivals at the site.

ii. Soil gas Study via Geoprobe near former Gas Station

There are up to 100 borings on grid.

Charles O'Neill added that they are either setting up a mobile lab or they will use HAPSITE GC/MS to get real-time results from soil gas in Tedlar bag. This is a deviation from the proposed scope in that the field analyzer initially proposed to be used cannot detect the 1,2-Dichloroethane compound. Therefore, they need a either a mobile lab with a GC or a portable GC to detect 1,2-Dichloroethane

iii. Soil Boring/Monitoring Wells Installation

The plan is to use a sonic rig for all drilling. HDR will submit the permits to NMED prior to drilling for approval. HDR plans on drilling up to 31 borings using the sonic rig. All of the cores of the samples will be sieved and put into wooden boxes for archiving. There will be 20 alluvial wells (60ft) and 7 bedrock wells (150-160ft) and 4 supplemental wells near MW-23. The sonic rig runs a rod with a split spoon sampler to collect soil samples above the water table in up to 9 borings to analyze for VOCs. Also, 12 geotech samples will be collected and analyzed for moisture content, Atterberg limits, porosity, etc. The USCS and ASTM soil classification will be used. Total organic compounds will also be collected. The geotech samples will be collected in the southern portion of the Northern Area near the TNT leach beds.. Background wells will also be installed at the northern edge of the property towards the highway. Monitoring wells 2 inches in diameter will be installed and developed using standard development procedures (<100 NTU for turbidity of these wells). Dedicated bladder pumps for each well will be used for low flow purging and sampling.

iv. Groundwater Sample Collection

Will wait at least 7 days after construction before sampling. A full suite of analysis will be conducted including: Semi-VOCs, VOCs, perchlorate, total petroleum hydrocarbons, explosives, metals (total and dissolved), mercury, pesticides, nitrate, and nitrite.

v. Slug Testing

A minimum of 6 wells (3 in alluvial and 3 in bedrock) will be selected for slug testing. These wells have not been selected yet. Selection will be based on optimal locations. Standard testing with slug in and then out will be performed. If time permitting, HDR will try slug in and out testing twice for each well.

vi. Site wide Monitoring Wells Survey

A licensed surveyor will be used on site to survey existing and new wells. Some wells are 20 years old. A new baseline may need to be established to improve accuracy of groundwater elevation measurements.

Saqib Khan is happy to hear that the GC is being brought in as they are smaller size and have higher accuracy.

Charles O'Neill added that HDR is looking at two options, the mobile lab and a handheld GC.

HDR is to re-survey 100 wells and provide the data to the USACE.

Action Item: Saqib Khan confirmed that Well 69 is currently not in the scope so the Consulting Services should be used to request it to be added.

Charles O'Neill added that the general strategy is to mobilize to trailer. Start with soil gas, then conduct sonic drilling and well installation one week into the program. They will start installing wells in the most difficult locations due to the monsoon season starting in the summer. The slick muddy conditions may make it more difficult to access remote location during these conditions. IDW (water, soil, and cuttings) generated during drilling will be containerized and transported off-site by Waste Management. After field work, HDR has 180 days to submit report with new data.

vii. Background GW Evaluation Report Update

Addressed in Section 4. c.

viii. Draft Schedule

4. Deliverables.....HDR/OBG JV

- a. Kick-Off Meeting Minutes**
- b. PMP/QCP / SSHP/APP/AHA**
- c. Northern Area GW Background Evaluation Report**

May Raad, who is leading the statistical report and evaluation, described the statistical process. HDR's methods closely follow the U.S. EPA Unified Guidance. The historical background data is studied for outliers. Trend tests are applied and variability across the wells is assessed prior to pooling the data. The distribution (lognormal, normal, gamma or nonparametric) of the data is analyzed so that the correct test statistic is determined. To study background, the UPL statistical test statistic is computed. The UPL represents the upper concentration levels. The site data is then compared to the background statistic. The USACE will be notified whether there is an exceedance in the downgradient concentrations. Imputation methods are used when dealing with the issue of non-detects.

Mark Patterson reminded Cheryl Montgomery that HDR should be up to speed on resolving issues on data quality and how to process and evaluate it according to the risk guidance. This includes addressing LOD/LOQ issues. Cheryl Montgomery explained that the regulator prefers that the analysis be kept simple and in accordance to the guidance; otherwise, the regulator may send the analysis back.

May Raad agreed that she will simplify the language as well as share the statistical approach with Cheryl Montgomery to get her perspective of what is expected.

Charles O'Neill asked if there is a separate QAPP that has other reporting limits than the ones mentioned in the work plan. Cheryl Montgomery said that the USACE does not have a site-wide UFP-QAPP for these projects as the NMED prefers site by site analysis. The risk assessment values in the work plan are well defined and should be used. The data quality objectives are below screening levels. The data quality objectives and analytical limits per screening limits for each constituent of concern should be used.

Saqib Khan mentioned that he reviewed the LOQ table with Charles O'Neill and will provide Charles O'Neill with a list of LOQs. The state wanted to use screening levels as LOQs, which Saqib Khan disagreed with.

May Raad asked if it is possible to get the MDLs from the lab and clarification on whether an LOD is equivalent to an MDL and an LOQ is equivalent to an RL. Cheryl Montgomery affirmed that the labs report an LOD and an LOQ. The labs also include a DL. Anything between LOQ and DL is considered a J. Anything below the DL is qualified as U. According to Cheryl Montgomery:

- LOQ and RL are equivalent
- LOD and MDL are equivalent
- $LOQ > LOD > DL$

Angela Lane is the chemistry lead who should be contacted on such matters.

Action Item: HDR requires clarification on whether the LOD is being used to report non-detects.

d. Groundwater RFI Report

Charles O'Neill explained that the Groundwater RFI report includes two main elements:

1. Reporting of field work (boring logs, soil gas soil and groundwater results, slug test results with hydrogeological values, MW survey, and data tables)
2. Human Health Risk Assessment (HHRA) (led by Lisa Voyce)

Lisa Voyce described the HHRA process. First, the team ensures that the data is of sufficient quality for risk assessment. The HHRA is based on Superfund, RCRA permit, NMED guidance (including recent update). Cleanup levels will be developed based on input from NMED and RCRA guidance. HHRA will be performed for each plume. Plumes may change by alluvial vs bedrock.. The team will ensure to meet regulatory requirements and will work together with Cheryl Montgomery.

Charles O'Neill added that the RFI report will include plume maps.

Saqib Khan commented that the purpose of the RFI report is to determine the horizontal and vertical extent of groundwater contamination using almost 20 years of data. The vertical extent has not been completely done as of this call. It is critical in determining whether the plume(s) have migrated off-site. There are risks of exposure to these 6 plumes, in particular RDX and perchlorate. The same plumes are in the bedrock. We have issued with lower LOQ/LOD values that the previous lab was unable to meet.

Action Item: Mark Patterson commented that the BRAC cleanup team meeting is twice a year, where the status of current projects is discussed. HDR is asked to present status of project in November and late April where the scope and field work of the project will be discussed for 15 to 20 minutes. The meeting is not open to the public.

Action Item: Saqib Khan is to set up a meeting with the Risk staff of USACE (Cheryl Montgomery) and HDR (Lisa Voyce) to share lessons learned when working with State of New Mexico regulator regarding risk. For instance, dealing with the LOQ.

- e. Contractor Manpower Reporting**
- f. Monthly Progress Reports**

Mark Patterson mentioned that they have had issues with contractors going through so many revisions on document quality that it has impacted the schedule and deadlines. It is important to work closely with Saqib Khan and Angela Makin to prevent this from occurring.

Action Item: Mark Patterson added that if there are any deviations on site (ex., weather), then Charles O'Neill is to immediately notify Saqib Khan. Field change orders must be communicated to Saqib Khan who will then communicate to regulators (NMED).

Mark Patterson remarked that there will be other on-site contractors so it is important to work together and respect everyone's space. There should be no speeding on-site. In addition, all areas and equipment should be kept neat and organized.

5. Meetings

- a. BCT Meeting #1
- b. BCT Meeting #2

Steven Smith mentioned that the first BCT meeting is in the fall.

Saqib Khan added this is a public meeting that includes both State and Federal tribes, the USACE, and sometimes a Congressional representative.

6. Discussions..... ALL

Formatting of Files

Heather Theel suggested that there be a conversation about database formatting and submittal of data. The client requires a searchable database. A conversation on how to format these files may be useful.

Saqib Khan responded that they have not yet agreed to the client's comments about a searchable database e.g. Access. He will let Charles O'Neill know what they decide to do with the format.

OESS Support:

Mark Patterson asked if any of this work required OESS support.

Saqib Khan responded sometimes to provide oversight. Parcel 11, CMW 19 and CMW 21 are further north. There are no wells in that vicinity. All the wells in the work plan have already been reviewed. Cultural sites have been identified and have been cleared.

Daisy mentioned that all wells must be in HASP to increase level of awareness.

Turbidity

Hugh Rieck asked Gregory Kelly if there are any provisions for groundwater sampling other than low flow because he expects that we will be seeing some high turbidity ratings. Turbidity has been a problem in the past and the regulator has questioned the data usability because of that. Passive groundwater sampling may be a useful option in mitigating turbidity, e.g. SnapSampler, whole water sampler where turbidity is encountered, or other. Alternative sampling techniques should be looked into. This is something that should be discussed further. The passive diffusion bags only work for VOCs.

Saqib Khan added that if HDR finds high turbidity, then an email can be sent to the State asking for deviation.

Cheryl Montgomery is reading a state position paper called "Use of low-flow and other non-traditional techniques for RCRA sampling" that could be helpful.

Daisy Pate added that water in alluvial layer typically looks like it has coffee grounds.

Action Item: Saqib Khan will set up an informal meeting with the project delivery team in the next two weeks to go over lessons learned regarding the site.

7. Action ItemsArmy PM/ HDR/OBG JV

No additional action items were specified.