

From: [McDonough, Alexander VINCENT \(Alex\) MAJ USARMY NG MAARNG \(USA\)](#)
To: [Downing, Jane](#); [Driscoll, Keith J NFG \(USA\)](#); [Baganha, Paulo A CW3 USARMY NG MAARNG \(USA\)](#)
Cc: [Springborg, Denise](#); [Wilkin, Rick](#); [Pinaud, Leonard \(DEP\)](#); [Ciaranca, Michael A NFG NG MAARNG \(USA\)](#); [Porter, Matthew N COL USARMY NG MAARNG \(USA\)](#)
Subject: RE: Request for Information
Date: Wednesday, September 7, 2022 2:52:20 PM
Attachments: [Sierra Range Alternatives Analysis and BMPP2 Stratgey final.pdf](#)
[09 Jan 07 FINAL SAR P2 Overview reduced file size.pdf](#)

Jane,

During our in person July meeting you had asked if there was any BMP documents that we could send over. Dr. Ciaranca just sent me these two documents and I wanted to share them with you. The Sierra range alternatives analysis go through the analysis that was conducted in order to determine the most beneficial and viable BMPs when the range was originally designed (it was initially designed for lead round use before the copper EPR round was available). The SAR P2 Overview I think you already have but these are useful to look at together. If you have any questions please let me know. Thanks.

Respectfully,

ALEXANDER V. MCDONOUGH
MAJ, MP
DPTMS Officer

Headquarters Camp Edwards
Building 3468
Beaman Rd
Camp Edwards, MA 02542

Phone: (339)202-9303
Cell: (774)286-1373

From: Downing, Jane <Downing.Jane@epa.gov>
Sent: Wednesday, September 7, 2022 10:26 AM
To: Driscoll, Keith J NFG (USA) <keith.j.driscoll.nfg@army.mil>; McDonough, Alexander VINCENT (Alex) MAJ USARMY NG MAARNG (USA) <alexander.v.mcdonough.mil@army.mil>; Baganha, Paulo A CW3 USARMY NG MAARNG (USA) <paulo.a.baganha.mil@army.mil>
Cc: Springborg, Denise <Springborg.Denise@epa.gov>; Wilkin, Rick <Wilkin.Rick@epa.gov>; Pinaud, Leonard (DEP) <leonard.pinaud@state.ma.us>
Subject: [Non-DoD Source] Request for Information

Hi Major McDonough/Keith

This is to check in on a number of critical matters.

In order for EPA to complete the SSA project review of the proposed MPMGR in the coming months, there are a number of time critical items that have been planned and/or are requested:

~ The approved Copper Leaching Study outline has a number of deliverables that are beyond the respective deadlines, or will soon be before us. Specifically, we request that MAARNG provide the requested summary letter of field sampling and batch findings (due July 29) and column analysis (end date August 12), and any other relevant information. The start date for review of the overall draft report is scheduled for September 19. Please provide the draft report on September 19, or before, so that EPA can review the draft report by around September 23. – If any of these dates are not doable, provide an amended schedule to complete tasks as soon as possible.

~ The establishment of contaminant baseline for the KD range (West and East) is critical to EPA's assessment of the MPMGR project and determination of contaminants of concern. We have looked through the details of a number of sampling-related reports to identify all media sampling results and their respective time frames. In order to accurately characterize the KD range contaminant baseline, we request that MAARNG provide a series of sampling results summaries and maps. In particular, we request separate summary tables for each media for each sampling event. For each designated sampling date, each table should provide for each detected contaminant, detection limit, number of samples taken, number of detects, range of detects, mean of detects and any other available metric. Our understanding is that sampling has been conducted at the KD range at least in 1999, 2000 and 2015. There may be other rounds that should be tabulated. It is very important that the most recent round conducted at KD West, after remediation, should be submitted and tabulated. Furthermore, to put the sampling in context, we suggest that maps be created which shows the sampling locations for the soil and groundwater sampling sites and results. Knowing whether and where sampling was conducted in KD West or KD East, and before or after remediation, provides a needed context to the results. If there is a better way of displaying this information, please let us know. Since additional document reviews hinge on this sampling information, we request that the information be submitted by September 15. If more time is needed for the maps, please provide the tables by September 15, and the maps soon thereafter.

As previously stated, under the goal of pollution prevention, we continue to pursue enhanced BMPs. At some point in the future, we will be setting up a meeting/call to discuss new ideas from EPA, MAARNG, and MassDEP.

Let me know if any questions. I would be happy to further clarify or discuss the above or any other matter still in discussion (e.g. Monitoring Plan).

Have a Good Day
Jane

Jane Downing
Chief, Drinking Water and Municipal Assistance Branch
EPA Region 1

617-918-1571

From: Driscoll, Keith J NFG (USA) <keith.j.driscoll.nfg@army.mil>

Sent: Thursday, August 25, 2022 1:02 PM

To: Downing, Jane <Downing.Jane@epa.gov>; McDonough, Alexander VINCENT (Alex) MAJ USARMY NG MAARNG (USA) <alexander.v.mcdonough.mil@army.mil>; Baganha, Paulo A CW3 USARMY NG MAARNG (USA) <paulo.a.baganha.mil@army.mil>

Cc: Springborg, Denise <Springborg.Denise@epa.gov>; Wilkin, Rick <Wilkin.Rick@epa.gov>; Pinaud, Leonard (DEP) <leonard.pinaud@state.ma.us>

Subject: RE: Cu F&T Literature review feedback and additional information

Good afternoon Jane-

Thank you for your review of the literature search and your comments. The MAARNG will review your comments and recommendations.

We have put a request into the Army Corps of Engineers for a status update on the timeline and product delivery. Once we receive the requested information we will forward that information on to you.

In discussion with the EMC EO we understand that the EPA is looking for further MPMG design drawings specifically the details of the stormwater design outside of what you already have. Would you like a complete set of the design drawing documents? It's a substantial electronic file so DoD safe would have to be utilized again. In an effort to document this process please send all future requests through me so I can ensure that you receive all the requested information in a timely manner.

Keith

From: Downing, Jane <Downing.Jane@epa.gov>

Sent: Tuesday, August 23, 2022 4:40 PM

To: McDonough, Alexander VINCENT (Alex) MAJ USARMY NG MAARNG (USA) <alexander.v.mcdonough.mil@army.mil>; Driscoll, Keith J NFG (USA) <keith.j.driscoll.nfg@army.mil>; Baganha, Paulo A CW3 USARMY NG MAARNG (USA) <paulo.a.baganha.mil@army.mil>

Cc: Springborg, Denise <Springborg.Denise@epa.gov>; Wilkin, Rick <Wilkin.Rick@epa.gov>; Pinaud, Leonard (DEP) <leonard.pinaud@state.ma.us>

Subject: [Non-DoD Source] Cu F&T Literature review feedback and additional information

Hi Major McDonagh/Keith/Paulo

Hope you are doing well

To move us forward in our joint assessment and evaluation of the proposed multi-purpose machine gun range at Joint Base Cape Cod, we provide the following suggestions for improvements of the Literature Search, conducted as part of the Copper Leaching Study, and additional information.

We have reviewed the literature search on “Copper Transport & Fate”. The document (titled “Copper F&T Study Bibliography.pdf; dated July 1 , 2022) provides an annotated synopsis of about 30 research articles/chapters on the environmental behavior of copper in soil and groundwater. The articles examined appear to be appropriate for the JBCC project. Several comments and suggestions are provided for potential ways to improve the background literature search:

1. Please provide a short summary or synthesis of the key findings of the literature search, to include (1) basic copper chemistry including solubility controls (pH, major ion complexes, organic complexes); (2) information about adsorption/desorption behavior of copper with aquifer solids, including the main controls of pH, DOC, and aquifer mineralogy; and (3) information on the corrosion of elemental copper to form copper oxides. The intent here is to formulate some general understanding and prediction about the behavior of Cu in site soils and the potential migration of Cu to groundwater, if that level of knowledge is available based on the published literature.
2. It was noted in Task 1 of the SOW describing the literature search that “we will look through prior data collected from JBCC such as soil profiles and lysimeters and see if there is any indication of Cu movement”. This information was not provided in the literature review, please provide this information, or otherwise comment on the availability of these data.
3. It was noted in Task 1 of the SOW describing the literature search that “we will also glean any site-specific information on soil calcium and pH levels”, variables considered to be important for controlling the mobility of copper in the environment. Please provide this site-specific information & link to the general summary and literature synthesis as requested in comment 1.

We do not currently see the need to discuss these literature review comments via conference call. However, we are eager to review and discuss the site-specific data to be collected in Tasks 2-4, including results of the soil profiling, lysimeter sampling, and laboratory batch and column tests.

Also, we are continuing the assessment of information which will lead to future comments on the Multi-Media Action Levels and Potential Contaminants of Concern provided in your draft Monitoring Plan. As described at our last meeting, under the goal of reducing the threat of contaminant releases to the environment, EPA is examining enhanced Best Management Practices (BMPs), beyond that which we have already discussed (e.g. designated bullet recovery). As you update the Monitoring Plan, based on preliminary EPA comments including the designated bullet recovery schedule, we encourage you and your team to similarly pursue additional BMPs. At an appropriate time, we will be in touch to examine these additional BMPs.

Let us know if any questions relating to the above.

Thanks

Jane

Jane Downing
Chief, Drinking Water and Municipal Assistance Branch
EPA Region 1
617-918-1571