

**From:** [Springborg, Denise](#)  
**To:** [Ciaranca, Michael A NFG NG MAARNG \(USA\)](#)  
**Cc:** [Downing, Jane](#); [Azevedo, Alexandra](#)  
**Subject:** RE: EPA/MassDEP/MAARNG Meeting  
**Date:** Tuesday, October 4, 2022 12:22:36 PM

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Hello Mike,

Please confirm that you received a Teams meeting invite. I just sent it.

Thank you,  
Denise

*Denise C. Springborg, P.E.*

Drinking Water Quality & Protection Section, Chief  
EPA Region 1 Boston  
617-918-1681

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**From:** Downing, Jane <[Downing.Jane@epa.gov](mailto:Downing.Jane@epa.gov)>  
**Sent:** Tuesday, October 4, 2022 10:55 AM  
**To:** Azevedo, Alexandra <[Azevedo.Alexandra@epa.gov](mailto:Azevedo.Alexandra@epa.gov)>; Springborg, Denise <[Springborg.Denise@epa.gov](mailto:Springborg.Denise@epa.gov)>  
**Subject:** FW: EPA/MassDEP/MAARNG Meeting

Hi Alex/Denise

This person will need a TEAMS meeting invite for tomorrow

Thanks  
Jane

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**From:** Ciaranca, Michael A NFG NG MAARNG (USA) <[michael.a.ciaranca.nfg@army.mil](mailto:michael.a.ciaranca.nfg@army.mil)>  
**Sent:** Tuesday, October 04, 2022 10:39 AM  
**To:** Downing, Jane <[Downing.Jane@epa.gov](mailto:Downing.Jane@epa.gov)>  
**Cc:** McDonough, Alexander VINCENT (Alex) MAJ USARMY NG MAARNG (USA) <[alexander.v.mcdonough.mil@army.mil](mailto:alexander.v.mcdonough.mil@army.mil)>; Baganha, Paulo A CW3 USARMY NG MAARNG (USA) <[paulo.a.baganha.mil@army.mil](mailto:paulo.a.baganha.mil@army.mil)>  
**Subject:** RE: EPA/MassDEP/MAARNG Meeting

Jane,

Can you please send me a Teams invite also to [ciaranca@verizon.net](mailto:ciaranca@verizon.net)?

Thank you and have great day,

Mike

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**From:** Downing, Jane <[Downing.Jane@epa.gov](mailto:Downing.Jane@epa.gov)>

**Sent:** Monday, October 3, 2022 5:38 PM

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

**Cc:** Springborg, Denise <[Springborg.Denise@epa.gov](mailto:Springborg.Denise@epa.gov)>; Wilkin, Rick <[Wilkin.Rick@epa.gov](mailto:Wilkin.Rick@epa.gov)>; Pinaud, Leonard (DEP) <[leonard.pinaud@state.ma.us](mailto:leonard.pinaud@state.ma.us)>; Ciaranca, Michael A NFG NG MAARNG (USA) <[michael.a.ciaranca.nfg@army.mil](mailto:michael.a.ciaranca.nfg@army.mil)>; Porter, Matthew N COL USARMY NG MAARNG (USA) <[matthew.n.porter.mil@army.mil](mailto:matthew.n.porter.mil@army.mil)>; Su, Chunming <[Su.Chunming@epa.gov](mailto:Su.Chunming@epa.gov)>; Traviglia, Andrea <[Traviglia.Andrea@epa.gov](mailto:Traviglia.Andrea@epa.gov)>; Moraff, Kenneth <[Moraff.Ken@epa.gov](mailto:Moraff.Ken@epa.gov)>

**Subject:** [Non-DoD Source] EPA/MassDEP/MAARNG Meeting

Good Afternoon Paulo

Thanks for your message. We look forward to meeting with you and the MAARNG team on Wednesday Oct 5 from 10:00-1:00. We will endeavor to close the meeting at 1:00 to allow time for you to miss the Boston pm traffic. As described, you will come into the main doors at 5 Post Office Square and go through metal detectors and security. Continue to the first floor main elevators to the 15<sup>th</sup> floor. The meeting room is 1540 – Madison Room. There will be an opportunity for a TEAMS connection if anyone needs that.

The proposes agenda is:

10:00-10:15 – Introductions/Opening Remarks (e.g. Schedule)

10:15-11:45- BMP Discussion

11:45-12:00 – Stormwater Management

12:00-12:30 – Baseline Contaminant Conditions

12:30-1:00 – Others: (e.g. Copper Leaching Study); and Next Steps (e.g. Monitoring Plan)

To help with discussions, attached are following

- ~ Menu of Enhanced BMPs (as per Guidance Documents);
- ~ Comments on Stormwater Management Plan

Given the extent of the BMP List, I expect that 100% resolution will not be accomplished on Wednesday . Hopefully, discussions will engender productive and timely follow up.

That's it for now

Let me know if any questions/concerns

Have a good night

Jane

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

Cell - 781-264-1789

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**From:** Baganha, Paulo A CW3 USARMY NG MAARNG (USA) <[paulo.a.baganha.mil@army.mil](mailto:paulo.a.baganha.mil@army.mil)>  
**Sent:** Monday, October 03, 2022 2:57 PM  
**To:** Downing, Jane <[Downing.Jane@epa.gov](mailto:Downing.Jane@epa.gov)>; Driscoll, Keith J NFG (USA) <[keith.j.driscoll.nfg@army.mil](mailto:keith.j.driscoll.nfg@army.mil)>; McDonough, Alexander VINCENT (Alex) MAJ USARMY NG MAARNG (USA) <[alexander.v.mcdonough.mil@army.mil](mailto:alexander.v.mcdonough.mil@army.mil)>  
**Cc:** Springborg, Denise <[Springborg.Denise@epa.gov](mailto:Springborg.Denise@epa.gov)>; Wilkin, Rick <[Wilkin.Rick@epa.gov](mailto:Wilkin.Rick@epa.gov)>; Pinaud, Leonard (DEP) <[leonard.pinaud@state.ma.us](mailto:leonard.pinaud@state.ma.us)>; Ciaranca, Michael A NFG NG MAARNG (USA) <[michael.a.ciaranca.nfg@army.mil](mailto:michael.a.ciaranca.nfg@army.mil)>; Porter, Matthew N COL USARMY NG MAARNG (USA) <[matthew.n.porter.mil@army.mil](mailto:matthew.n.porter.mil@army.mil)>; Su, Chunming <[Su.Chunming@epa.gov](mailto:Su.Chunming@epa.gov)>; Traviglia, Andrea <[Traviglia.Andrea@epa.gov](mailto:Traviglia.Andrea@epa.gov)>  
**Subject:** RE: Request for Information

Good afternoon Jane,

To clarify what is happening at the lab with our samples. Vicksburg lab will complete all sample tests (if they haven't already). The problem we are running into is the time between the completion of the lab tests and the interpretation of the results. This is something Vicksburg has to do which involves transferring the data from the instrument to the LIMS data management system. Then, their data validator reviews the QA/QC data and performs various checks on the data before working it up into an electronic data package. Unfortunately, they have a 1 to 2-month backlog working through the data and generating the reports. Once they have completed their review and generated their report, it goes back to the New Hampshire office work out the findings and complete the report. Once we have a firm ETA on when our samples will be complete, we will share that with the group.

As for the meeting this week, 1000 works for us and the following are the people we anticipate attending the meeting for the MAARNG. If there any last minute adds, I will get you those names ASAP. I'm assuming that Len Pinaud will be making his own arrangements for this meeting.

1. Matthew Porter
2. John Bagaglio
3. Alexander McDonough
4. Paulo Baganha
5. Michael Ciaranca

After some internal discussion, we like the following added to the meeting's agenda.

1. Updated timeline for any letters or reports
2. Feedback in support of monitoring plan development that was discussed on 25 July 2022
3. A list of BMPs that will be discussed

If we can get the agenda as soon as possible so we have ample time to review and prepare ourselves ahead of the meeting. We want to ensure that we have all necessary information readily available for a productive meeting. Please do not hesitate to contact me if you have any questions.

Thank you,  
Paulo

Regards,

Mr. Paulo A. Baganha  
Environmental Program Manager

JFHQ-MA CFMO  
2 Randolph Road  
Hanscom AFB, MA 01731  
Office: 339-202-3960  
Cell: 508-958-2709

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**From:** Downing, Jane <[Downing.Jane@epa.gov](mailto:Downing.Jane@epa.gov)>  
**Sent:** Thursday, September 29, 2022 4:49 PM  
**To:** Driscoll, Keith J NFG (USA) <[keith.j.driscoll.nfg@army.mil](mailto:keith.j.driscoll.nfg@army.mil)>; McDonough, Alexander VINCENT (Alex) MAJ USARMY NG MAARNG (USA) <[alexander.v.mcdonough.mil@army.mil](mailto:alexander.v.mcdonough.mil@army.mil)>  
**Cc:** Springborg, Denise <[Springborg.Denise@epa.gov](mailto:Springborg.Denise@epa.gov)>; Wilkin, Rick <[Wilkin.Rick@epa.gov](mailto:Wilkin.Rick@epa.gov)>; Pinaud, Leonard (DEP) <[leonard.pinaud@state.ma.us](mailto:leonard.pinaud@state.ma.us)>; Ciaranca, Michael A NFG NG MAARNG (USA) <[michael.a.ciaranca.nfg@army.mil](mailto:michael.a.ciaranca.nfg@army.mil)>; Porter, Matthew N COL USARMY NG MAARNG (USA) <[matthew.n.porter.mil@army.mil](mailto:matthew.n.porter.mil@army.mil)>; Su, Chunming <[Su.Chunming@epa.gov](mailto:Su.Chunming@epa.gov)>; Baganha, Paulo A CW3 USARMY NG MAARNG (USA) <[paulo.a.baganha.mil@army.mil](mailto:paulo.a.baganha.mil@army.mil)>; Traviglia, Andrea <[Traviglia.Andrea@epa.gov](mailto:Traviglia.Andrea@epa.gov)>  
**Subject:** [Non-DoD Source] RE: Request for Information

Good Afternoon Keith

Appreciate the update on the copper study. Knowing the long-standing schedule of the copper fate and transport study and overall project, EPA is concerned with the possibility of a report not ready until "..... [sometime in November, although I don't have a firm ETA.](#)" We are also asking for clarification of the previous statement which is more in line with the schedule " [and I anticipate most samples to be analyzed by the end of next week.](#) " Please reconcile the difference between the two sentences, such as analyzed by end of next week versus providing results by several months. If it is the latter case, we recommend you consider subcontracting or contracting with a different lab. There are also other means you should pursue to work with the lab to keep to a schedule or expedite. A firm ETA is needed.

Appreciate your offer to come to EPA offices in Boston for the October 5 meeting. We will take you up on that offer. While not necessary, please send along a list of personnel who will be attending. You will all need to go through security at the McCormack Building entrance at 5 Post Office Square. For today, if it works for you and your team, let's assume a start date of 10:00 am. We are currently working on an agenda – let me know if there are any specific topics you would like included. Note , along with continued review of MAARNG plans for the proposed project, we have spent many weeks looking through the BMP guidances and hope to provide a BMP options list to you early next week to generate discussion.

That's it for now

Let me know if any questions

Thanks

Jane

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

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

**Sent:** Wednesday, September 28, 2022 2:28 PM

**To:** Downing, Jane <[Downing.Jane@epa.gov](mailto:Downing.Jane@epa.gov)>; McDonough, Alexander VINCENT (Alex) MAJ USARMY NG MAARNG (USA) <[alexander.v.mcdonough.mil@army.mil](mailto:alexander.v.mcdonough.mil@army.mil)>

**Cc:** Springborg, Denise <[Springborg.Denise@epa.gov](mailto:Springborg.Denise@epa.gov)>; Wilkin, Rick <[Wilkin.Rick@epa.gov](mailto:Wilkin.Rick@epa.gov)>; Pinaud, Leonard (DEP) <[leonard.pinaud@state.ma.us](mailto:leonard.pinaud@state.ma.us)>; Ciaranca, Michael A NFG NG MAARNG (USA) <[michael.a.ciaranca.nfg@army.mil](mailto:michael.a.ciaranca.nfg@army.mil)>; Porter, Matthew N COL USARMY NG MAARNG (USA) <[matthew.n.porter.mil@army.mil](mailto:matthew.n.porter.mil@army.mil)>; Su, Chunming <[Su.Chunming@epa.gov](mailto:Su.Chunming@epa.gov)>; Baganha, Paulo A CW3 USARMY NG MAARNG (USA) <[paulo.a.baganha.mil@army.mil](mailto:paulo.a.baganha.mil@army.mil)>; Traviglia, Andrea <[Traviglia.Andrea@epa.gov](mailto:Traviglia.Andrea@epa.gov)>

**Subject:** RE: Request for Information

Good afternoon Jane-

This is the latest response we received yesterday afternoon from Jay Clausen of the Army Corps of Engineer in regard to the status Copper Fate and Transport study.

“It seems unlikely we will have a draft report in Oct. Samples have been sent to Vicksburg for analyses and I anticipate most samples to be analyzed by the end of next week. However, the lab is backed up in regards to working up the data and providing results by several months. Consequently, I am anticipating data not to arrive until sometime in November, although I don't have a firm ETA.

We have been working on the Intro, Background, and Methods. However, without the data we won't have any Results, Discussion, or Conclusions. We already provided the annotated bibliography to the EPA so we won't have much new except for detailed discussion of Methods. Consequently, I

think we need to wait until we have the results.”

In regard to the proposed in person meeting the MAARNG is available to attend at EPA offices or the MAARNG could host another onsite meeting at Camp Edwards. Whichever location EPA would prefer. Once the meeting is established the MAARNG is requesting a copy of the agenda ahead of time.

Thank you.

Keith

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**From:** Downing, Jane <[Downing.Jane@epa.gov](mailto:Downing.Jane@epa.gov)>  
**Sent:** Tuesday, September 27, 2022 12:22 PM  
**To:** McDonough, Alexander VINCENT (Alex) MAJ USARMY NG MAARNG (USA) <[alexander.v.mcdonough.mil@army.mil](mailto:alexander.v.mcdonough.mil@army.mil)>  
**Cc:** Driscoll, Keith J NFG (USA) <[keith.j.driscoll.nfg@army.mil](mailto:keith.j.driscoll.nfg@army.mil)>; Springborg, Denise <[Springborg.Denise@epa.gov](mailto:Springborg.Denise@epa.gov)>; Wilkin, Rick <[Wilkin.Rick@epa.gov](mailto:Wilkin.Rick@epa.gov)>; Pinaud, Leonard (DEP) <[leonard.pinaud@state.ma.us](mailto:leonard.pinaud@state.ma.us)>; Ciaranca, Michael A NFG NG MAARNG (USA) <[michael.a.ciaranca.nfg@army.mil](mailto:michael.a.ciaranca.nfg@army.mil)>; Porter, Matthew N COL USARMY NG MAARNG (USA) <[matthew.n.porter.mil@army.mil](mailto:matthew.n.porter.mil@army.mil)>; Su, Chunming <[Su.Chunming@epa.gov](mailto:Su.Chunming@epa.gov)>; Baganha, Paulo A CW3 USARMY NG MAARNG (USA) <[paulo.a.baganha.mil@army.mil](mailto:paulo.a.baganha.mil@army.mil)>; Traviglia, Andrea <[Traviglia.Andrea@epa.gov](mailto:Traviglia.Andrea@epa.gov)>  
**Subject:** [Non-DoD Source] RE: Request for Information

Hi Major McDonough

Thanks for the information – we will evaluate and let you know if any follow up.

Regarding next steps, we have cleared our calendars for October 5. Perhaps a face to face would be most helpful? One major agenda topic will be enhanced BMPs. Before the meeting, I hope to provide a list for discussion.

Meanwhile, what is the latest of the copper leaching study – is there an ETA for the draft report?

That’s it for now

Have a good day

Jane

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

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**From:** McDonough, Alexander VINCENT (Alex) MAJ USARMY NG MAARNG (USA) <[alexander.v.mcdonough.mil@army.mil](mailto:alexander.v.mcdonough.mil@army.mil)>  
**Sent:** Tuesday, September 27, 2022 8:27 AM  
**To:** Downing, Jane <[Downing.Jane@epa.gov](mailto:Downing.Jane@epa.gov)>  
**Cc:** Driscoll, Keith J NFG (USA) <[keith.j.driscoll.nfg@army.mil](mailto:keith.j.driscoll.nfg@army.mil)>; Springborg, Denise <[Springborg.Denise@epa.gov](mailto:Springborg.Denise@epa.gov)>; Wilkin, Rick <[Wilkin.Rick@epa.gov](mailto:Wilkin.Rick@epa.gov)>; Pinaud, Leonard (DEP) <[leonard.pinaud@state.ma.us](mailto:leonard.pinaud@state.ma.us)>; Ciaranca, Michael A NFG NG MAARNG (USA) <[michael.a.ciaranca.nfg@army.mil](mailto:michael.a.ciaranca.nfg@army.mil)>; Porter, Matthew N COL USARMY NG MAARNG (USA) <[matthew.n.porter.mil@army.mil](mailto:matthew.n.porter.mil@army.mil)>; Su, Chunming <[Su.Chunming@epa.gov](mailto:Su.Chunming@epa.gov)>; Baganha, Paulo A CW3 USARMY NG MAARNG (USA) <[paulo.a.baganha.mil@army.mil](mailto:paulo.a.baganha.mil@army.mil)>  
**Subject:** FW: Request for Information

Jane,

Please see below and attached in reference to your information request. If I received more from IAGWSP I will send it your way. Also, could you provide feedback for a 5 October meeting? 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

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**From:** Richardson, Pamela J NFG NG MAARNG (USA) <[pamela.j.richardson.nfg@army.mil](mailto:pamela.j.richardson.nfg@army.mil)>  
**Sent:** Monday, September 26, 2022 12:23 PM  
**To:** McDonough, Alexander VINCENT (Alex) MAJ USARMY NG MAARNG (USA) <[alexander.v.mcdonough.mil@army.mil](mailto:alexander.v.mcdonough.mil@army.mil)>; Cody, Shawn C CIV CPMS (USA) <[shawn.c.cody.civ@army.mil](mailto:shawn.c.cody.civ@army.mil)>; Smith, Darrin R CTR USARMY CENAE (USA) <[Darrin.R.Smith@usace.army.mil](mailto:Darrin.R.Smith@usace.army.mil)>; Kaso, Gina A CIV USARMY CENAE (USA) <[Gina.A.Kaso@usace.army.mil](mailto:Gina.A.Kaso@usace.army.mil)>  
**Cc:** Porter, Matthew N COL USARMY NG MAARNG (USA) <[matthew.n.porter.mil@army.mil](mailto:matthew.n.porter.mil@army.mil)>; Ciaranca, Michael A NFG NG MAARNG (USA) <[michael.a.ciaranca.nfg@army.mil](mailto:michael.a.ciaranca.nfg@army.mil)>; Driscoll, Keith J NFG (USA) <[keith.j.driscoll.nfg@army.mil](mailto:keith.j.driscoll.nfg@army.mil)>; Baganha, Paulo A CW3 USARMY NG MAARNG (USA) <[paulo.a.baganha.mil@army.mil](mailto:paulo.a.baganha.mil@army.mil)>

**Subject:** RE: Request for Information

Attached is the Draft Rapid Response Action (RRA) Soil Contamination Delineation Report from September 2000. It describes an effort to characterize soil contamination in several areas (including KD Range) in advance of a Rapid Response (Soil Removal) Action we performed in late 2000. Soil grid locations with elevated concentrations of nitroglycerin, RDX, HMX, TNT, dieldrin, and/or lead were excavated in September and October 2000 from the rocket firing positions and from the two target areas. The excavations were as deep as two feet below the ground surface.

This document provides more detail on soil sampling results near the firing line. I am trying to locate the final version of this as well as a completion report for the RRA but thought I would send this in the interim.

Darrin Smith also provided the attached KD Range excerpt from the 2018 Training Areas Investigation report and notes: "This along with the attached figures and Appendix Table should be what she is looking for. This of course is all in the IR, but the entire IR would be too big to send via email."

Pam

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**From:** McDonough, Alexander VINCENT (Alex) MAJ USARMY NG MAARNG (USA) <[alexander.v.mcdonough.mil@army.mil](mailto:alexander.v.mcdonough.mil@army.mil)>  
**Sent:** Friday, September 23, 2022 1:11 PM  
**To:** Cody, Shawn C CIV CPMS (USA) <[shawn.c.cody.civ@army.mil](mailto:shawn.c.cody.civ@army.mil)>; Smith, Darrin R CTR USARMY CENAE (USA) <[Darrin.R.Smith@usace.army.mil](mailto:Darrin.R.Smith@usace.army.mil)>; Richardson, Pamela J NFG NG MAARNG (USA) <[pamela.j.richardson.nfg@army.mil](mailto:pamela.j.richardson.nfg@army.mil)>; Kaso, Gina A CIV USARMY CENAE (USA) <[Gina.A.Kaso@usace.army.mil](mailto:Gina.A.Kaso@usace.army.mil)>  
**Cc:** Porter, Matthew N COL USARMY NG MAARNG (USA) <[matthew.n.porter.mil@army.mil](mailto:matthew.n.porter.mil@army.mil)>; Ciaranca, Michael A NFG NG MAARNG (USA) <[michael.a.ciaranca.nfg@army.mil](mailto:michael.a.ciaranca.nfg@army.mil)>; Driscoll, Keith J NFG (USA) <[keith.j.driscoll.nfg@army.mil](mailto:keith.j.driscoll.nfg@army.mil)>; Baganha, Paulo A CW3 USARMY NG MAARNG (USA) <[paulo.a.baganha.mil@army.mil](mailto:paulo.a.baganha.mil@army.mil)>  
**Subject:** FW: Request for Information

Shawn,

Per our conversation please see below for the EPA's question for KD range. Any information you or your team can provide would be appreciated. Have a good weekend.

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

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**From:** Downing, Jane <[Downing.Jane@epa.gov](mailto:Downing.Jane@epa.gov)>  
**Sent:** Friday, September 23, 2022 11:09 AM  
**To:** McDonough, Alexander VINCENT (Alex) MAJ USARMY NG MAARNG (USA) <[alexander.v.mcdonough.mil@army.mil](mailto:alexander.v.mcdonough.mil@army.mil)>; Driscoll, Keith J NFG (USA) <[keith.j.driscoll.nfg@army.mil](mailto:keith.j.driscoll.nfg@army.mil)>; Baganha, Paulo A CW3 USARMY NG MAARNG (USA) <[paulo.a.baganha.mil@army.mil](mailto:paulo.a.baganha.mil@army.mil)>  
**Cc:** Springborg, Denise <[Springborg.Denise@epa.gov](mailto:Springborg.Denise@epa.gov)>; Wilkin, Rick <[Wilkin.Rick@epa.gov](mailto:Wilkin.Rick@epa.gov)>; Pinaud, Leonard (DEP) <[leonard.pinaud@state.ma.us](mailto:leonard.pinaud@state.ma.us)>; Ciaranca, Michael A NFG NG MAARNG (USA) <[michael.a.ciaranca.nfg@army.mil](mailto:michael.a.ciaranca.nfg@army.mil)>; Porter, Matthew N COL USARMY NG MAARNG (USA) <[matthew.n.porter.mil@army.mil](mailto:matthew.n.porter.mil@army.mil)>; Su, Chunming <[Su.Chunming@epa.gov](mailto:Su.Chunming@epa.gov)>  
**Subject:** [Non-DoD Source] RE: Request for Information

Major McDonough  
Hope you are well

We appreciate the information relating to sampling conducted at KD range, both East and West.

Our assessment leads us, at this point in time, to one follow up question:  
Please provide the locations and results specific to the 1999/2000 sampling rounds. While Figure 5 of the 2022 report provides a depiction of locations and results, it is focused around the areas of excavation in KD West . We are particularly interested in understanding the locations with corresponding results of sampling conducted outside these areas, including the firing line. In other words, the narrative in Section 2.2 of the 2022 report provides a summary of the soil sampling results, but not all the locations.

Also, we are quickly approaching the end of September which was the expected deadline for the Copper Leaching Study. We ask that you work to expedite any work needed to meet this timeline. Please let us know the status of the study and expected date of deliverable.

Finally, EPA appreciates the sharing of additional BMP guidance. I would like to continue discussions about how enhanced BMPS may be deployed to minimize the release of pollutants at the proposed MPMG use at the KD range. Do you and your team have any availability in the upcoming week or week thereafter.

Happy to further discuss any of the above

Have a good day  
Jane

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

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**From:** McDonough, Alexander VINCENT (Alex) MAJ USARMY NG MAARNG (USA)  
<[alexander.v.mcdonough.mil@army.mil](mailto:alexander.v.mcdonough.mil@army.mil)>  
**Sent:** Wednesday, September 07, 2022 1:59 PM  
**To:** Downing, Jane <[Downing.Jane@epa.gov](mailto:Downing.Jane@epa.gov)>; Driscoll, Keith J NFG (USA)  
<[keith.j.driscoll.nfg@army.mil](mailto:keith.j.driscoll.nfg@army.mil)>; Baganha, Paulo A CW3 USARMY NG MAARNG (USA)  
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**Cc:** Springborg, Denise <[Springborg.Denise@epa.gov](mailto:Springborg.Denise@epa.gov)>; Wilkin, Rick <[Wilkin.Rick@epa.gov](mailto:Wilkin.Rick@epa.gov)>; Pinaud, Leonard (DEP) <[leonard.pinaud@state.ma.us](mailto:leonard.pinaud@state.ma.us)>; Ciaranca, Michael A NFG NG MAARNG (USA)  
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<[matthew.n.porter.mil@army.mil](mailto:matthew.n.porter.mil@army.mil)>  
**Subject:** RE: Request for Information

Jane,

I reached out to the Impact Area Ground Water Study Program (IAGWSP) in reference to the your second question. In response I was provided the draft KD West close out document which is attached to this email. This document includes maps and figures per your request. For KD East please refer to the Small Arms Investigation Report dated 2014 page 5-47, Tables 3-3A and B, and table 5-5, and figures 5-18A and B. That is the most current data for KD East. If you have any other questions or need us to resend the Small Arms Investigation Report please let me know. Thanks.

Respectfully,

ALEXANDER V. MCDONOUGH  
MAJ, MP  
DPTMS Officer

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**From:** Downing, Jane <[Downing.Jane@epa.gov](mailto:Downing.Jane@epa.gov)>

**Sent:** Wednesday, September 7, 2022 10:26 AM

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

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**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

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**From:** Driscoll, Keith J NFG (USA) <[keith.j.driscoll.nfg@army.mil](mailto:keith.j.driscoll.nfg@army.mil)>  
**Sent:** Thursday, August 25, 2022 1:02 PM  
**To:** Downing, Jane <[Downing.Jane@epa.gov](mailto:Downing.Jane@epa.gov)>; McDonough, Alexander VINCENT (Alex) MAJ USARMY NG MAARNG (USA) <[alexander.v.mcdonough.mil@army.mil](mailto:alexander.v.mcdonough.mil@army.mil)>; Baganha, Paulo A CW3 USARMY NG MAARNG (USA) <[paulo.a.baganha.mil@army.mil](mailto:paulo.a.baganha.mil@army.mil)>  
**Cc:** Springborg, Denise <[Springborg.Denise@epa.gov](mailto:Springborg.Denise@epa.gov)>; Wilkin, Rick <[Wilkin.Rick@epa.gov](mailto:Wilkin.Rick@epa.gov)>; Pinaud, Leonard (DEP) <[leonard.pinaud@state.ma.us](mailto: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

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**From:** Downing, Jane <[Downing.Jane@epa.gov](mailto: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](mailto:alexander.v.mcdonough.mil@army.mil)>; Driscoll, Keith J NFG (USA) <[keith.j.driscoll.nfg@army.mil](mailto:keith.j.driscoll.nfg@army.mil)>; Baganha, Paulo A CW3 USARMY NG MAARNG (USA) <[paulo.a.baganha.mil@army.mil](mailto:paulo.a.baganha.mil@army.mil)>  
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**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  
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