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LETTER AND ATTACHED APPENDIX D OF THE FINAL INTERIM MEASURES WORK PLAN  
FOR SOLID WASTE MANAGEMENT UNIT 21 (SWMU 21) DRMO STORGAE LOT NSA  
CRANE IN  
10/17/2014  
TETRA TECH



**TETRA TECH**

PITT-10-14-031

October 17, 2014

Project No. 112IG06018

Ms. Linda Cole, P.E.  
NAVFAC Mid-Atlantic  
9342 Virginia Avenue  
Building Z-144, 1st Floor  
Norfolk, Virginia 23511-3015

Reference: NAVFAC Atlantic Biological Resource Services  
CLEAN Contract No. N62470-08-D-1008  
Contract Task Order No.: F272

Subject: **Final** for SWMU 21 (DRMO Storage Lot) Interim Measures Work Plan (IMWP)  
*Appendix D*

Dear Ms. Cole:

The final SWMU 21 IMWP was distributed on October 9, 2014. Appendix D was inadvertently not included in the hard copies distributed but was included in the pdf file on the CD. Please add the enclosed Appendix D to the previously distributed hard copy of the document. I apologize for this error.

Please contact Rick Barringer at (412) 921-8524 (email: [Rick.Barringer@tetrattech.com](mailto:Rick.Barringer@tetrattech.com)) or Ralph Basinski at (412) 921-8308 (email: [Ralph.Basinski@tetrattech.com](mailto:Ralph.Basinski@tetrattech.com)) with any questions or comments.

Sincerely,

Ralph R. Basinski  
NSA Crane Activity Coordinator

RRB/stc

Enclosure

cc: Mr. Tom Brent, NSA Crane (letter/5 enclosures)  
Ms. Linda Cole, (letter/enclosure)  
Mr. Christian Soucier, Ph.D, Tetra Tech (letter)  
Mr. Maher Itani, Tetra Tech (letter)  
Ms. Delight Buenaflor, Tetra Tech (letter/enclosure)  
Mr. Rick Barringer, Tetra Tech (letter/enclosure)  
Mr. Ralph Basinski, Tetra Tech (letter/enclosure)  
Regional Database Manager (letter)  
Project File – CTO F272 (letter/enclosure)

**APPENDIX D**

**REGULATORY AGENCY APPROVALS**

**Approval from Indiana Department of Environmental Management (IDEM) - #1**

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

From: GRIFFIN, DOUG [mailto:DGRIFFIN@idem.IN.gov]  
Sent: Thursday, July 31, 2014 1:31 PM  
To: Brent, Thomas CIV NAVFAC MW, PWD Crane EV; Ramanauskas, Peter  
Subject: RE: DRAFT FINAL SWMU 21 IMWP

Tom, I compared the figures in this version to the figures I marked up and scanned from the last version and only see one change. Figure 3-9 Pb area 7B has been removed. Not a concern for me.

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

From: Brent, Thomas CIV NAVFAC MW, PWD Crane EV [mailto:thomas.brent@navy.mil]  
Sent: Tuesday, July 29, 2014 3:04 PM  
To: GRIFFIN, DOUG; Ramanauskas, Peter (ramanauskas.peter@epa.gov)  
Subject: DRAFT FINAL SWMU 21 IMWP

Doug/Pete,

I'm sending you a PDF of the SWMU 21 IMWP in advance of the "official" submittal. You'll receive an email from AMRDEC as to how to download. This is the version the contractors will see. We are being told by the money folks that we have to make an award by 22 September. I don't know that a lot has changes since the previous version, although some of the discrete excavation boundaries will have changed. Your questions or comments are certainly welcome (although, a blanket approval would be even better).

Thanks,  
Tom

**Approval from Indiana Department of Environmental Management (IDEM) - #2**

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

From: GRIFFIN, DOUG [mailto:DGRIFIN@idem.IN.gov]  
Sent: Thursday, July 31, 2014 11:30 AM  
To: Brent, Thomas CIV NAVFAC MW, PWD Crane EV  
Subject: RE: SWMU 21 DRMO IMWP

OK, as long as it appeases TSCA. The overall exposure is going to come out below RCG standards.

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

From: Brent, Thomas CIV NAVFAC MW, PWD Crane EV [mailto:thomas.brent@navy.mil]  
Sent: Thursday, July 17, 2014 9:42 AM  
To: GRIFFIN, DOUG  
Subject: RE: SWMU 21 DRMO IMWP

Doug - since PCB Area 2 is considered far enough inside the fence so as not to cause a recontamination issue outside the fence, the TSCA low occupancy standard was applied (=25 ppm). SB119 had a detection of 11.4 mg/kg.

Thanks,  
Tom

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

From: GRIFFIN, DOUG [mailto:DGRIFIN@idem.IN.gov]  
Sent: Wednesday, July 16, 2014 9:53 AM  
To: Brent, Thomas CIV NAVFAC MW, PWD Crane EV  
Subject: SWMU 21 DRMO IMWP

Tom, I've read thru the workplan and found only one discrepancy. North Central Area - PCB Area 2: Shouldn't SB119 be included with the excavation?

Otherwise no comments.

**Approval from U.S. EPA Region V**

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

From: Ramanauskas, Peter [mailto:ramanauskas.peter@epa.gov]  
Sent: Monday, October 06, 2014 10:05 PM  
To: Brent, Thomas CIV NAVFAC MIDLANT, PWD Crane  
Cc: Basinski, Ralph; Barringer, Rick  
Subject: RE: DRAFT FINAL SWMU 21 IMWP

Hi Tom,

I don't have any additional comments on the IMWP, so go please move forward with that (if IDEM is OK with the rest of the plan). I just want to see if when you submit the final IMWP, you should submit it to USEPA with a cover letter requesting a TSCA approval under 761.61.

I'll check in with our Regional Counsel again.

Thanks,  
Pete

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

From: Brent, Thomas CIV NAVFAC MIDLANT, PWD Crane [mailto:thomas.brent@navy.mil]  
Sent: Monday, October 06, 2014 11:33 AM  
To: Ramanauskas, Peter  
Cc: Basinski, Ralph; Barringer, Rick  
Subject: RE: DRAFT FINAL SWMU 21 IMWP

Pete,

The pre-start meeting with the contractor is tomorrow. Do you think you could let us know soon as to whether or not you will have any more comments?

Thanks,  
Tom

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

From: Brent, Thomas CIV NAVFAC MW, PWD Crane EV  
Sent: Wednesday, September 17, 2014 9:36 AM  
To: 'Ramanauskas, Peter'  
Cc: GRIFFIN, DOUG; Cole, Linda L CIV NAVFAC MIDLANT, IPTNE; Basinski, Ralph; 'Barringer, Rick'  
Subject: RE: DRAFT FINAL SWMU 21 IMWP

Pete,

Attached are the responses to your comments along with a tracked-changes version of Section 3 of the IMWP. Please let us know if you have any more questions or if we may finalize the document.

Thanks,  
Tom

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

From: Ramanauskas, Peter [mailto:ramanauskas.peter@epa.gov]  
Sent: Thursday, July 31, 2014 3:40 PM  
To: GRIFFIN, DOUG; Brent, Thomas CIV NAVFAC MW, PWD Crane EV  
Subject: RE: DRAFT FINAL SWMU 21 IMWP

Tom,

I only looked at the PCB section 3.2.1 and Figures 3-2 to 3-4.

- With respect to confirmation sampling in the PCB areas, Tetra Tech should better describe how these will be collected (e.g. composites? Frequency?).

- For PCB subareas 1 & 2, recommend perform some confirmation sampling at the 2 ft bgs level as it doesn't look like you've got deeper clean samples there.

- For 21SB250, perform post-removal confirmation sampling around this location.

- Subarea 3C: text refers to "sections" of the western perimeter excavation. Which sections? For the base of the excavation, there should be more than one floor sample given the size of the area.

- Subarea 5: there do not appear to be clean perimeter samples at the 2-4 foot interval. Similar to our OJT discussion, if you want to use characterization samples to define excavation limits, you need to show clean intervals at the limits/depths of the excavation.

- For the purposes of PCB disposal, are you going to need a letter from us referencing approval under 761.61(a) or (c)? Or are you planning to dispose of all PCB impacted materials in a TSCA landfill as allowed for under 761.61(b) without a specific approval. Just thinking ahead a bit.

Let me know if you have questions.

Thanks,  
Pete

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

From: GRIFFIN, DOUG [mailto:DGRIFFIN@idem.IN.gov]  
Sent: Thursday, July 31, 2014 12:31 PM  
To: Brent, Thomas CIV NAVFAC MW, PWD Crane EV; Ramanauskas, Peter  
Subject: RE: DRAFT FINAL SWMU 21 IMWP

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

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Thanks,

Tom

**Approved Responses to Comments Provided by U.S. EPA Region V**

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

From: Ramanauskas, Peter [mailto:ramanauskas.peter@epa.gov]

Sent: Thursday, July 31, 2014 3:40 PM

To: GRIFFIN, DOUG; Brent, Thomas CIV NAVFAC MW, PWD Crane EV

Subject: RE: DRAFT FINAL SWMU 21 IMWP

Tom,

I only looked at the PCB section 3.2.1 and Figures 3-2 to 3-4.

**Comment #1 - With respect to confirmation sampling in the PCB areas, Tetra Tech should better describe how these will be collected (e.g. composites? Frequency?).**

Response #1 - The following text (shown below in *italic font*) will be inserted at the end of Section 3.1 to introduce the technical basis for the confirmation sampling program for the IM at SWMU 21:

*Tetra Tech will perform confirmation sampling of specific excavation areas when pre-excavation soil analytical data and stream bed material analytical data are insufficient to identify the limits of vertical or horizontal contamination-specific excavation areas. Confirmation samples will be collected at all excavation sidewalls where data are not available at the horizontal boundary of the excavation. The sidewalls will be sampled so that a single soil composite sample will represent a segment of up to 50 linear feet of excavation sidewall. For each depth interval (typically two-foot) within a sidewall segment, six individual aliquots will be collected and composited into a single representative sample. The six grab samples will be collected in a zig zag pattern separated by equal distances. The first sample will be collected approximately one-third of the depth from the top of the interval of interest, with the second sample collected from the middle of the interval, and the third sample collected from approximately two-thirds of the distance from the top of the interval of interest. The same pattern will be repeated for the next three aliquots in the composite soil sample. For excavations that are greater than two feet high, the same sidewall length will be sampled in a similar fashion in two foot depth intervals (or less) as needed.*

*Samples will be collected from all excavation floors where data are not available at the vertical boundary of the excavation. A minimum of one soil composite sample will be collected from each subarea (as needed) and consist of five discrete soil sample aliquots collected from the excavation floor. A 5-point composite sample will be collected from the excavation floors. The soil sample aliquot pattern will be similar to the five dots on the face of a game dice. One composite soil sample will be collected for each 1,200 square feet of excavation floor (an area roughly covering about 35 feet by 35 feet).*

**Comment #2 - For PCB subareas 1 & 2, recommend perform some confirmation sampling at the 2 ft bgs level as it doesn't look like you've got deeper clean samples there.**

Response #2 - The excavation depth was misstated as two feet below ground surface in the text discussion of PCB Subareas 1A and 1B presented in Section 3. The actual excavation depth planned for PCB Subareas 1A and 1B should be indicated as one foot below ground surface, and was correctly stated in Table 3-3. The text has been modified to correct this inconsistency. The PCB subarea soils that lie directly west of and border Haynes Branch will be excavated to remove detected soil PCB concentrations greater than one part per million (>1 ppm). The following sentence has been added to the end of the paragraph describing PCB Subareas 1A and 1B in Section 3.2.1:

*Confirmation samples will be collected from the excavation floor of PCB subareas 1A and 1B to verify that the cleanup standard for PCBs in soil outside the DRMO fence line (<1 ppm) have been met.*

Similar changes have been made in the IMWP for Subareas PCB Subareas 3C and 5 and also for Lead Subareas 4 and 8, as noted below in the responses to Comment #3 and Comment #5.

The remediation goal developed for soil PCB contamination inside the DRMO fence line (like PCB Subarea 2) was focused on areas where soil PCBs concentrations were > 25 ppm. Soil excavation at PCB Subarea 2 will extend to a depth of 4 feet bgs. Confirmation sampling will be required at PCB Subarea 2, along those excavation perimeter walls (between sampling points 21SB86 and 21SB87) where the soil sampling performed at the excavation nodes did not continue beyond a vertical depth of 2 feet bgs. The need for confirmation sampling is already identified for PCB Subarea 2 in the last two sentences of that subsection. No changes are required in the text.

**Comment #3 - For 21SB250; perform post-removal confirmation sampling around this location.**

Response #3 - Soil sampling location 21SB250 lies within the proposed excavation for Lead Area 4. Confirmation soil sampling for lead will be required for the excavation walls and floor at Lead Area 4. The last three sentences of the discussion for PCB Subarea 3C have been modified to better describe the confirmation sampling requirements, as follows:

*Confirmation sampling for PCBs and lead will be completed in Lead Area 4. PCB confirmation samples will be collected along the perimeter of PCB Subarea 3C that is contiguous to Lead Area 4 to verify that cleanup standards have been met. The total vertical extent of the soil PCB contamination in PCB Subarea 3C is not fully delineated, especially outside the DRMO fence line; therefore, a floor sample from the bottom of the excavation will be collected to confirm that the PCB cleanup goal has been met on the excavation floor. The estimated volume of PCB-contaminated soil to be removed from PCB Subarea 3C is 915 cy, as presented in Table 3-3.*

**Comment #4 - Subarea 3C: text refers to "sections" of the western perimeter excavation. Which sections? For the base of the excavation, there should be more than one floor sample given the size of the area.**

Response #4 - As noted in the Response to Comment #3, Tetra Tech will perform confirmation sampling at PCB Subarea 3C. The sentence referring to "sections" of the western perimeter was deleted as part of the text change to address Comment #3.

The technical approach for excavation floor sampling and the general area to be represented by an excavation floor sample is described in the new text added to address Comment #1. No additional text changes are required to address the comment about floor confirmation samples and area size.

**Comment #5 - Subarea 5: there do not appear to be clean perimeter samples at the 2-4 foot interval. Similar to our OJT discussion, if you want to use characterization samples to define excavation limits, you need to show clean intervals at the limits/depths of the excavation.**

Response #5 – Similar to the situation described in Comment #3 for 21SB250, soil sampling location 21SB48 lies within the proposed excavation to address Lead Area 8. The following sentence has been added at the end of the discussion of PCB Subarea 5:

*Confirmation sampling for PCBs will be performed in Lead Area 8 and in PCB Area 5 to confirm that cleanup standards have been met.*

A similar statement has been added to the discussion of Lead Area 8:

*Confirmation sampling for PCBs will also be performed in Lead Area 8 in the vicinity of Soil Sample 21SB48 to confirm that cleanup standards have been met in this excavation area.*

**Comment #6 - For the purposes of PCB disposal, are you going to need a letter from us referencing approval under 761.61(a) or (c)? Or are you planning to dispose of all PCB impacted materials in a TSCA landfill as allowed for under 761.61(b) without a specific approval. Just thinking ahead a bit.**

Response #6 – PCB-impacted soils will be disposed in accordance with 40 CFR 761.61(a). Soils with PCB concentrations of 50 ppm and greater will be disposed in a TSCA or RCRA Subtitle C landfill. A letter from EPA referencing approval of landfill disposal of regulated wastes under 40 CFR 761(a) will be required.