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RESPONSES TO U S EPA REGION V COMMENTS REGARDING PHASE II INTERIM  
MEASURES WORK PLAN SOLID WASTE MANAGEMENT UNIT 17 (SWMU 17) NSA CRANE  
IN  
3/5/2013  
U S NAVY

**ATTCHMENT A**

**Response to U.S. EPA Region 5 Comments Regarding Phase II (Ditches, Streams, and Floodplains) of the Solid Waste Management Unit 17 Interim Measures Work Plan**

**RESPONSES TO U.S. EPA REGION 5 COMMENTS REGARDING THE INTERIM MEASURES  
WORKPLAN FOR THE NSA CRANE PCB CAPACITOR BURIAL/POLE YARD (SWMU 17)  
DATED DECEMBER 2012 (VERSION1)**

**MARCH 5, 2013**

**Background:**

EPA Region 5 provided comments regarding the ditches, streams, and flood plains portion of the planned Interim Measure for Solid Waste Management Unit 17 as documented in the Interim Measures Work Plan dated December 2012. Draft responses were presented to EPA Region 5 during a teleconference on February 22, 2013, which was attended by representatives from EPA Region 5, NSA Crane, NAVFAC, and Tetra Tech and final changes to the response to comments and the IMWP were agreed to. The responses below reflect the changes to which the teleconference participants agreed. The wording of these responses differs slightly from wording discussed during the teleconference to reflect adjustments that were required to make the revisions compatible with existing text and figures.

*Comment 1:*

Referring to pages 3-4 and 3-19, the correct regulatory citation is 40 CFR §761.79(b)(1)(ii).

**Response 1:**

**The requested changes to reference citations have been made on pages 3-4 and 3-19.**

*Comment 2:*

Referring to the second sentence of Section 3.2.1, are there PCB sediments > 50 ppm present in the Northwest Ditch and Ditch 8a and 8b? If so, are these areas should be identified on the appropriate figures, boundaries between > 50 ppm and < 50 ppm identified, and an explanation of excavation sequencing provided (e.g, removal of > 50 ppm area first).

**Response 2:**

**There are sediments with >50 ppm contamination at the top of the Northwest Ditch but not in Ditch 8, which includes excavation segments 8a and 8b.**

**Interim Measures (IMs) are described in the IMWP for ditches, which don't have water in them for much of the year, and for streams that have water all year round or nearly so. During Phase 1 of the IM (i.e., SWMU 17 building areas) TSCA and non-TSCA excavations will occur concurrently but TSCA (>50 mg/kg) and non-TSCA wastes (≤50 mg/kg) will be segregated. Navy is sensitive to the need to segregate these two types of waste. In general, the plan is to excavate ditches, streams, and associated flood plains from higher to lower elevation. This will prevent recontamination that could occur if excavation was done from lower to higher elevation. The expectation that high-to-low elevation excavation will occur and the supporting rationale are explicitly described in a new paragraph added to the end of Section 3.0. The same paragraph emphasizes the need to segregate TSCA and non-TSCA level waste. Excavation boundaries have been reviewed to ensure they are clearly marked, including boundaries between TSCA and non-TSCA level excavations.**

*Comment 3:*

Referring to the disposal of sediments which accumulate in erosion and sediment control devices as noted in Section 3.2.1, will these be managed based on the PCB levels within the areas being cleaned (i.e. > 50 ppm area sediments will remain segregated from < 50 ppm sediments for disposal)? Similar comment for Section 3.2.2 and 3.2.3

**Response 3:**

**Wastes will be managed according to *in-situ* total PCB concentrations which are reflected in the designated TSCA or non-TSCA areas as identified in the updated SWMU 17 IMWP figures. Throughout the IMWP, Navy has added clarification that erosion and sediment control devices must be used in a way that ensures segregation of TSCA from non-TSCA wastes and prevents contamination of non-TSCA areas with TSCA level contamination.**

*Comment 4:*

Referring to Section 3.2.1.1, 3.2.1.2, and 3.2.1.3, please provide additional explanation on how the width of excavation within the drainage channels was determined for the purposes of this workplan, the rationale for their use to address the known contamination, and how they will be set in the field.

**Response 4:**

**Stream channel widths were measured at surface water/sediment sampling locations for the purpose of estimating excavation volumes (as documented in IMWP Appendix A). These measured widths were averaged and the average widths were used to estimate sediment excavation and disposal volumes for discrete stream segments. During excavation, however, the plan is to remove sediment over the entire bottom width of a stream channel or ditch at each point within the channel, regardless of location. This will ensure that even though the calculation sheets indicate an average width used for estimated sediment volumes to be removed from channels, all potentially contaminated sediment from stream bottoms will be excavated.**

**Floodplains adjacent to several of the stream channels and ditches designated for excavation will also be excavated. Because of this, there will effectively be no stream channel remaining at those locations. In these cases the channel will be reconstructed after excavation of contaminated soil and sediment. Clarification to distinguish between the sediment waste volume estimation process and the planned sediment excavation requirements has been added to the IMWP, as the last paragraphs of Sections 2.5 and 3.0. In addition, references to those sections were made in various places throughout the IMWP to ensure that excavation width requirements are not overlooked.**

*Comment 5:*

Referring to Section 3.2.1.1, Node 8 does not appear on Figure 3-1.

**Response 5:**

**On Figure 3-1, excavation node 8 is northwest of excavation node 7. However, upon further review, the reference to Node 8 is inconsistent with the text because numbering of excavation nodes changed in this version of the IMWP. The text of Section 3.2.1.1 has been revised as follows:**

**“Sediment in the Northwest Ditch from the western edge of the Dump/Fill Area excavation node 82 to the southern edge of Floodplain Area 3C (excavation node 23) will be removed. The uppermost portion of the Northwest Ditch overlaps with the planned Dump/Fill Area excavation and is therefore covered in detail in Section 2.5.4.1, which describes the Dump/Fill Area excavation.**

The volume of sediment to be removed from the Northwest Ditch is based on the average thickness of sediment overlying consolidated soils, average width of the channel (base width plus height of channel banks), and length of the channel from the edge of the Dump/Fill Area to the lowest elevation of the Northwest Ditch. The extent of excavation in the Northwest Ditch is identified on Figure 3-1. The field location may differ slightly from that shown on Figure 3-1, but this entire channel length of the ditch should be excavated, excluding the Building Area excavation portion. Northing and easting coordinates for the beginning and end of the Northwest Ditch are provided in Table 3-2."

*Comment 6:*

Referring to the second paragraph on page 3-9 and last paragraph on page 3-10 referencing construction debris, if within a known contaminated area, this material should be handled similar to debris noted in other portions of the workplan (i.e., disposed under the assumption that the PCB contamination level of the debris is commensurate with the in place PCB contamination level of the collected soil). On page 3-11, debris of a natural origin should also be disposed of based on whether they are within a known contaminated area.

**Response 6:**

The intent is to dispose of construction debris and large rocks in contact with soil or sediment in the same manner as the soil or sediment in contact with the debris. If this debris is not in contact with soil or sediment and is otherwise non-hazardous, the intent is to dispose of the debris as non-hazardous waste. If debris is vegetation (i.e., of a natural origin), the vegetation will be cut at a ft above ground level or higher and disposed as non-hazardous waste. Grass debris generated through mowing is exempt from this requirement. Text has been added to pages 3-9, 3-10 and 3-11, and throughout the IMWP as necessary to ensure the intent is clear.

The second paragraph of page 3-9 has been modified as follows:

"Manmade materials (concrete, lumber, etc.) will likely be found within some stream excavation areas. Such debris found to be in contact with sediment will be assumed to be contaminated at the same PCB concentrations as the sediment in which it is found and must be disposed in the same manner as the contaminated sediment. Debris that is not in contact with contaminated soil or sediment, is determined not to contain or be contaminated with PCBs, and is otherwise non-hazardous, may be disposed as non-hazardous waste. The volume of manmade material to be removed from the stream excavation areas is estimated to be approximated at 10 cy. Buried or partially buried natural debris such as large rocks, tree stumps, or branches must be disposed under the assumption that the contamination level of this debris is the same as soil or sediment with which it is in contact. Growing vegetation (except grass) may be cut at one foot (or higher) above ground level and disposed as non-hazardous waste. Cutting of vegetation higher than 1 ft above ground surface should be limited to minimize waste volume. Mowed grass will be exempt from these requirements."

The last paragraph of page 3-10 and the bottom paragraph of page 3-11 have been modified similarly.

Grass debris generated from mowing will be treated as non-hazardous waste.

*Comment 7:*

Referring to the first sentence on page 3-12, disposal of this debris should be based on both observation as well as surrounding PCB soil levels (i.e. under the assumption that the contamination level is the same as the collected soil total PCB concentration).

**Response 7:**

**Clarification as described in the Response to Comment 6 has been provided for text on page 3-12 and other appropriate places in the IMWP.**

*Comment 8*

Referring to Section 3.15.2, prior to beginning tree removal work, check in with the USFWS to ensure they have no additional concerns related to this project.

**Response 8:**

**It is understood that EPA Region 5 has provided a copy of the IMWP to the U.S. Fish and Wildlife Service. In addition, the NSA Crane Biologist has made the requested inquiry to the USFWS.**

*Comment 9:*

Referring to Appendix A, page 4, Boggs Creek Location 17SD105, prior to removal of these sediments, it may be worth tightening up the boundaries with additional samples surrounding point 17SD105 or excavating the entire section of sediment, if it is a smaller area of sediment.

**Response 9:**

**The plan is to excavate all sediment in the depositional area at 17SD105. Paragraph 1 of IMWP Section 2.5.2.1 has been revised to emphasize that the excavation limits on Figure 2-5 are approximate and that all sediment in the depositional area around location 17SD105 must be removed.**

*Comment 10:*

Referring to Figure 2-7, the excavation of Ditch 8a should continue to the downstream known clean sample at 17SW/SD025.

**Response 10:**

**Instead of automatically extending the excavation boundary downstream, additional sampling will be conducted to delineate sediment contamination greater than 1 mg/kg, if any, between the current downstream excavation boundary and location 17SW/SD025. Paragraph 1 of Section 2.5.1.3 has been revised as follows:**

**“The two ditch segments of Ditch 8 that were identified for sediment/soil removal are labeled Ditch 8a and Ditch 8b on Figure 2-7. The downstream contamination/excavation boundary of Segment 8a is tentatively depicted pending confirmation sampling that will occur prior to or near the beginning date of excavation. The additional sampling will occur between locations 17SW/SD025 and 17SW/SD127 to more precisely establish the extent of contamination in Ditch 8a, as described in Section 3.2.1.2. Removals of soil (Ditch 8a) and sediment (Ditch 8b) are planned for these two segments of Ditch 8 and the soil flanking the ditch, which is more akin to a swale, near sampling location 17SW/SD007 (i.e., in Ditch 8a). Removal of the contaminated soil and sediment will prevent downstream migration of PCBs in this Ditch. The last paragraph of Section 2.5 describes in more detail how excavation volumes were determined and how wide the actual excavations will be, but note that Ditch 8 does not contain TSCA level contamination.”**

The first paragraph of Section 3.2.1.2 had been revised as follows:

**“Ditch 8, Segment 8a, is near the beginning of Ditch 8 and the soil of this area to be excavated is shown on Figure 3-1. The downstream excavation boundary of Segment 8a, however, is tentatively depicted pending confirmation sampling that will occur prior to or near the beginning date of the excavation (see next paragraph). Important information about estimated sediment removal volumes and other information is provided in Table ES-1.”**

A new paragraph has been added to Section 3.2.1.2 as follows:

**“Additional sampling between locations 17SW/SD025 and 17SW/SD127 will occur to more precisely establish the extent of contamination in Ditch 8a. The downstream boundary of Ditch 8a will be extended downstream to include all samples with >1mg/kg total PCBs based on 3-day turnaround analysis for PCBs. At least two soil samples will be collected to represent the 0-1 ft interval. The additional samples will be sequentially analyzed from upstream to downstream, as needed, to bound the contamination.”**

*Comment 11:*

Appendix A, page 5, Boggs Creek (Ditch 3 – Stream Segment 1): Please clarify if the proposed removal will include sediments within the pooled (blue shaded areas of Figure 2-8) as part of the stream channel removal. If not, why not? The shaded pink area of the channel, as shown on Figure 2-8, should extend downstream to the known clean sample point at 17SW/SD123.

**Response 11:**

For most stream channels and ditches, the pink colored line representing drainage channel excavations is wider than the drainage channel symbol on IMWP figures, indicating that the entire stream width is to be excavated. This same line width was used for Ditch 3 – Segment 1. In the case of Ditch 3 – Segment 1, however, the pink line is not as wide as the drainage channel even though the entire width of the drainage channel is designated for excavation. The pink line has been widened on Figure 2-8 to span the entire width of the excavation segment in Ditch 3 – Segment 1. The rest of the IMWP has also been reviewed and revised as necessary to ensure that the width of excavations in water conveyances is accurately depicted.

Regarding extension of the excavation extending to 17SW/SD123, additional sampling will occur between the current downstream end of the designated excavation segment and 17SW/SD123 to bound the contamination. This additional sampling is described in a new paragraph added to the end of Section 3.2.2, and is cross-referenced in earlier portions of Section 3.2.2 to ensure it is not overlooked. The new paragraph is as follows:

**“Additional sampling between locations 17SW/SD033 and 17SW/SD123 will occur near the start date of excavation to more precisely establish the extent of contamination in Boggs Creek Stream Segment 1 (see Figures 2-8 and 3-3). The downstream excavation boundary of Ditch 3 Segment 1 will be extended downstream to include all samples upstream of 17SW/SD123 with >1mg/kg total PCBs based on 3-day turnaround analysis for PCBs. At least two sediment samples will be collected, each representing the surface-to-bedrock interval which is about 0.5 to 1 ft deep. The additional samples will be sequentially analyzed from upstream to downstream, as needed, to bound the contamination.”**

*Comment 12:*

Section 3.2 should be broken out into each respective excavation section and rationale provided for extent of excavation depth and width of ditches, stream segments, and floodplain areas.

**Response 12:**

All contamination greater than 1 mg/kg total PCBs is being excavated, regardless of area, so all areas effectively have the same general base rationale. In some floodplain areas, topography was also used as an indication of whether contamination could have been carried by water to certain elevations/areas. A new paragraph has been added at the beginning of Section 3.2 to clarify this. The new paragraph is:

"In general, performance standards are based on a need to remove PCB contamination in excess of 1 mg/kg from all SWMU 17 areas. Most excavation areas are completely bounded by "clean" sampling points that were demonstrated to have less than 1 mg/kg contamination. For excavation areas not completely bounded by clean sampling points, topography was inspected to determine whether contamination could logically have migrated beyond the excavation boundary. If it was believed that topography confidently bounded the contaminant migration, the boundary was left as is. If, however, contaminant migration beyond the designated excavation boundary seemed plausible, the boundary was revised or additional sampling was prescribed to ensure that the excavations will remove all contamination greater than 1 mg/kg total PCBs. For areas where topography or other factors played a significant role in establishing the excavation boundary, details are provided below."

For some specific excavation areas additional descriptions were added to further clarify the rationale for where the excavation boundaries were set.

*Comment 13:*

For each proposed excavation area identified in Section 2.5, the Navy should fortify the rationale for the proposed lateral and vertical boundaries of the excavations and how these would be sufficient in the absence of verification sampling.

**Response 13:**

In Section 2.5., the paragraph after the set of bullets has been revised as follows:

"Figures 2-6 through 2-17 show the proposed limits of excavation for these areas. More detail is provided in Section 3 and on Section 3 figures. As explained in Section 3, there are some excavation areas that are not completely bounded by sampled locations with <1 mg/kg total PCBs. In those cases, excavation boundaries were developed based on local topographic controls or provisions have been made for additional delineation sampling. More detail is provided in Section 3 and for individual excavation areas, as appropriate. Table ES-1 is a summary of excavation volumes that also links the estimated volumes to text, figures, and calculation sheets supporting the estimated volumes."

**Additional EPA Comments:**

The items below are for discussion purposes with the Navy specific to the individual areas. Responses are in bold text following the underlined comment from EPA.

**Response to Additional Comments:** Resolution of the discussion items was reached during a teleconference among EPA, NSA Crane, NAVFAC, and Tetra Tech on 2/22/2013. The comment resolutions are shown after each item in bold text.

Area 3A-1/3A-2 (Figure 2-8)

- Excavation to bedrock and 1.5 feet acceptable (3 existing clean borings at depth for 2,012 sq. ft. area. Comment noted.
- Laterally: modify northern boundary to connect 17SB225 to 17SB133 to 17SB132 to a new verification point north of 17SB115 to 17SB131 to 17SB114. The excavation area 3A-1 and 3A-2 boundaries have been revised as requested and a requirement to collect at least one confirmation sample north of 17SB115 has been added to Section 3.2.3.
- Laterally: what is blue line feature in the lower left of figure 2-8? Extend southwest boundary to that feature? After the teleconference it was confirmed that the lines in question on Figure 2-8 are drainage features that are dry ditches. The southwestern boundary line for Area 3A-1 that connects 17SB260 with the main stream channel has been redrawn. A new boundary line has been drawn perpendicular to, and connecting 17SB280 with, the dry drainage ditch that flows into the main stream channel east of the data tag for 17SB277. The dry drainage ditch to which this segment connects is now also used as the southwestern boundary of Excavation Area 3A-1 so that area 3A-1 does not extend southwest of that ditch.

Area 3B

- 7 existing clean borings at depth for 8,122 sq.ft. area. Comment noted.
- Lateral boundary: acceptable given spacing with exception of moving the southwest boundary from 17SB256 to 12SW/SD123. The general strategy for defining upstream (and downstream) flood plain contamination lateral boundaries was to connect the most upstream (and downstream) clean soil sampling locations of the floodplain (i.e., < 1mg/kg total PCBs) to the nearest stream channel point with a line segment perpendicular to the stream. This approach facilitates excavation. Soil sampling points were not placed along stream banks because the stream bank positions change. Given that 17SW/SD123 is a sediment sampling location rather than a soil sampling location, the Area 3B boundary line will be left as is with no change.

Area 3C

- Given 2,144 square foot area, existing borings clean at 0.5 foot depth could be sufficient. Comment noted.
- Laterally: Tetra-Tech should define road as westernmost boundary and make the case for topography in south and east directions. Or collect one composite verification sample at south boundary. The road elevation is estimated to be 8 to 10 feet higher than the floodplain. Because of this, it is very unlikely to be contaminated all the way to the road as a result of stream flow. Clarification has been added to IMWP Section 2.5.3.2 to explain that excavation will stop at an elevation near the road (as shown in the IMWP) because topography limits the vertical elevation to which PCBs can be transported. In addition, an explanation has been provided for where the southern boundary of this excavation area was drawn. The explanation is based on flow directions, topography, and available data patterns.

### Area 3D

- Proposed 1 foot excavation depth, yet unbounded at 17SB101 and 17SB104. An excavation radius of 10 ft has been established around soil borings 17SB101 and 17SB104. In these circular excavation features, soil will be removed to bedrock depth and disposed as non-TSCA level waste.
- Laterally: fix boundary west of 17SB314 based on topography or connect with 17SB315? No boundary change is necessary. The channel here (Northwest Ditch) is deeply incised north of soil boring 17SB135. The boundary currently shown is based on topography and consideration of the depth of the channel. The topography in this area limits the vertical upward spread of PCB contamination. An explanation of this logic has been added to IMWP Section 2.5.3.2 to clarify the rationale for the excavation limits.
- Composite verification sample outside of 17SB139? Navy will collect a composite verification sample south of location 17SB139. This composite sample will be collected in a manner similar to composites described for Areas 3O and 3P. If total PCB concentrations exceed 1 mg/kg the excavation will be extended and confirmation sampling will continue until total PCB concentrations are  $\leq 1$  mg/kg.
- Figure 2-9 – what about 17SB251 to east at 1.49 ppm and not proposed for removal? An excavation radius of 10 ft has been established around soil boring 17SB251. In this circular excavation feature, soil will be removed to bedrock depth and disposed as non-TSCA level waste.

### Area 3E

- Proposed 1 foot excavation depth, yet depth unbounded at 17SB082 and 17SB090. After discussing the level of contamination at each of these points (17SB082 and 17SB090) with EPA Region 5, the boundary near 17SB082 will remain unchanged. Around soil boring 17SB090, however, an excavation radius of 10 ft has been established. In this circular excavation feature, soil will be removed to 2 ft bgs and disposed as non-TSCA level waste.
- 17SB146 not included within excavation (1.08 ppm). The boundary near location 17SB146 has been redrawn by connecting 17SB147 to 17SB096 then drawing a perpendicular line segment from 17SB096 the stream.
- Laterally boundary acceptable given spacing with exception of moving northernmost boundary to connect 17SB283 to 17SB091 to 17SB093. Explain topographic rationale for area south of 17SB145. The lateral northern boundary of Area 3E has been redrawn to connect 17SB283, 17SB091, and 17SB093. Regarding 17SB145, the rationale for drawing the original excavation boundary was to use a line segment that connected 17SB147 and 17SB145 and extend it to the main stream channel. By redrawing the excavation are boundary to include 17SB096 (described in the response for the previous subtopic), even more area will now be excavated. The topography and data patterns show that contamination should not extend east of 17SB145 based on the preponderance of clean points to the east. In addition, the flood plain is narrow east of where the new boundary will intersect the main stream channel so the potential for any significant PCB contamination to be present in the narrow floodplain southeast of 17SB145 is minimal.

### Area 3F

- Excavation to bedrock acceptable. Comment noted.
- Laterally: present rationale for extent in east-west direction? Topography? A rationale for this excavation boundary is now presented in the IMWP. In brief, the delineation depicted on Figure 2-10 is based not only on topography but the preponderance of data on both sides of the stream channel that indicate

contamination is isolated around location 17SB250. This is one area where the delineation data are rather limited. Therefore, confirmation samples will be collected from the western and eastern sidewalls of area 3F to verify whether PCB contamination greater than 1 mg/kg extends further in those directions than indicated by the current excavation boundaries. These composite samples will be collected in a manner similar to composites described for Areas 3O and 3P. If total PCB concentrations exceed 1 mg/kg the excavation will be extended and confirmation sampling will continue until total PCB concentrations are  $\leq 1$  mg/kg.

#### Area 3G/3H/3I

- Just excavate to bedrock in these locations? Excavation depths have been extended to bedrock in areas 3H, 3G, and 3I.
- 3H: lateral west boundary – base on topography to creek. The current boundary of area 3H essentially follows topography and overall concentration patterns that indicate the contamination is bounded. No change is necessary.
- 3G: lateral – follow western topography to creek. The western boundary of area 3G has been redrawn as a straight line segment connecting boring 17SB290 with the point on the stream channel located directly north of “/S” in the data tag for 17SW/SD045.
- 3I: OK. Comment Noted.

#### Area 3J

- Excavation depth should be extended in floodplain (see borings 17SB303 and 17SB239). The Oxbow boundary north of boring 17SB241 has been extended eastward along a straight line segment through boring 17SB302 to the stream channel. Excavation depth is designated to be 1.5 ft (as opposed to the previous 1 ft).
- Laterally westernmost boundary should connect 17SB243 to 17SB242 or follow topography and explain rationale. The western boundary of area 3J has been redrawn from boring 17SB243 through location 17SB242 to the stream.
- Verification sample of floor here: 4 composites (50x50). Upon discussion with EPA it was determined that no confirmation sample is necessary.
- Verification lateral north wall. The requested verification sampling is not necessary but a more complete explanation of the reason for drawing the current northern boundary where it is has been provided in IMWP Section 2.5.3.5.

#### Area 3K

- Just go to bedrock here. Area 3K is now designated for excavation to bedrock as requested.
- Explain topographic lateral boundaries or extend to 17SB295. The following explanation has been added to IMWP Section 2.5.3.5: “The lateral western boundary of Area 3K was terminated along a line perpendicular to the stream channel and included boring 17SB296 because that boring had  $<1$  mg/kg total PCBs. Topography and spatial contamination patterns were considered. These factors indicated that the contaminated area had been delineated west of 17SB297. For example, no total PCB concentration greater than 1 mg/kg was detected south of this stream segment at an elevation greater than about 703 ft amsl. Extension to boring 17SB295 is not necessary based on the overall contamination pattern. The lateral eastern boundary was terminated along a line that connects boring 17SB296 and the stream. This line, which is perpendicular to the stream, separates a non-TSCA and TSCA excavation areas.”
- Take one sidewall verification composite along south wall. Verification sampling of the southern wall of Area 3K is not necessary based on topography and the relatively

low PCB concentration in Area 3K. However, confirmation sampling for Area 3L is warranted and will be conducted as described in the next topic, 3L.

#### Area 3L

- Removal to bedrock acceptable. Comment Noted.
- Take 1 composite sample along sidewall (high concentration area). A requirement to collect at least one verification sample along the southern sidewall of Area 3L has been added to IMWP Section 3.2.3 because the excavation area in question is TSCA level contamination. This level of contamination present the greatest risk of spreading to other areas at unacceptable concentrations and therefore warrants extra care in delineation. The confirmation sample(s) will be collected along the entire outer boundary of 3L (i.e., the uphill side) except on the western and eastern boundaries, which are already well defined.

#### Area 3M

- OK. Comment noted.

#### Area 3N

- No floor verification needed. Have 3 clean borings at depth for the area. Comment noted.
- Lateral: swing boundary north to 17SW/SD063. Because 17SW/SD063 is a sediment sampling location and is not physically connected to flood plain soils, there is no need to change the boundary for Area 3N.

#### Area 3O

- Excavation to bedrock acceptable. Noted.
- Take a composite along sidewall to north given high concentrations and follow topography to west. A requirement to collect a composite verification soil sample from the northern and northeastern sidewalls of Area 3O has been added to IMWP Section 3.2.3. Up to nine grab samples will be collected approximately every 10 ft along the wall beginning at 17SB272 to the stream and will be composited into a single soil sample. A vertical zig-zag grab sampling pattern will be used to ensure that the entire depth is adequately represented as described in Section 3.2.4.3. If contamination greater than 1 mg/kg is found in any composite sample, excavation will be expanded and additional confirmation sampling will be conducted until  $\leq 1$  mg/kg total PCBs is demonstrated to exist in the lateral direction in this area.

#### Area 3P

- Excavation to bedrock acceptable. Comment noted.
- Verify composite sample near 17SW/SD119 since high concentration area plus suspected source area. A requirement to collect a composite verification soil sample from the northern and northeastern sidewalls of Area 3P has been added to IMWP Section 3.2.3. Up to nine grab samples will be collected approximately every 10 ft along the wall beginning at 17SB234 to the stream and composited into a single soil sample. A vertical zig-zag grab sampling pattern will be used to ensure that the entire depth is adequately represented as described in Section 3.2.4.3. If contamination greater than 1 mg/kg is found in any composite sample, excavation will be expanded and additional confirmation sampling will be conducted until  $\leq 1$  mg/kg total PCBs is demonstrated to exist in the lateral direction in this area.

**Sample Tally**

A sample tally to indicate the estimated number of additional samples to be collected was provided in the original EPA Comments. A revised tally of the minimum number of samples anticipated is provided here:

- Ditch 8a: Two soil samples from 0-1 ft depth between 17SW/SD025 and 17SW/SD127.
- Boggs Creek Segment 1 (SW boundary): 2 sediment samples from surface to bedrock between SW end of excavation segment shown on Figure 2-8 and sampling location 17SW/SD123.
- Area 3A-2: One confirmation sample spanning from surface to 1.5 ft bgs located about 3 ft northwest of soil boring 17SB115
- Area 3D: One composite confirmation sample from surface to 1 ft bgs located between 17SB314 and 17SB140, which is south of 17SB139.
- Area 3F: One composite sample on the excavation wall between 17SB259 and the stream bank
- Area 3F: One composite sample on the excavation wall between 17SB289 and the stream bank
- Area 3L: One composite sample along the southern/eastern (i.e., the uphill) excavation wall from surface to bedrock depth.
- Area 3O: One composite sample along the northern/eastern excavation walls from surface to bedrock depth between soil boring 17SB272 and the stream bank as shown on Figure 2-13.
- Area 3P: One composite sample along the southern/eastern excavation walls from surface to bedrock depth between soil boring 17SB273 and the stream bank as shown on Figure 2-13.