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MCB CAMP LEJEUNE
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LETTER REGARDING MICHAEL BAKER JR INC TEAM RESPONSE TO PARTNERING TEAM
COMMENTS ON THE DRAFT PHASE 2 INTERIM REMOVAL ACTION REPORT FOR
OPERABLE UNIT 19 SITE 84 BUILDING 45 AREA MCB CAMP LEJEUNE NC
12/8/2004
MICHAEL BAKER JR. INC TEAM

Response-to-Comments
Draft Phase II Interim Removal Action Report
Operable Unit 19
Site 84 – Building 45 Area
Camp Lejeune, North Carolina
December 8, 2004

Partnering Team comments are provided below in **bold font**, followed by the TMS/Michael Baker Jr. Inc. Team response in *italics*. Comments on the Draft Site 84 Phase II Interim Closeout Report have been provided by the USEPA, MCB Camp Lejeune, and NCDENR Groundwater and Superfund Sections, and are addressed below in that order.

USEPA COMMENTS:

I. General Comment

- 1. **The objective of this report is to summarize the "Phase II Non Time Critical Removal Action" for Site 84. It should also seek to identify, with clarity, the areas where contamination remains onsite. This report will be used as a reference for future actions at this site and therefore should clearly document the areas of concern. Below are specific comments that can aid in clarifying this general comment.**

II. Specific Comments

- 1. **ES-4, 2nd paragraph - The text states that one sample was collected from the bottom of the lagoon. It can be assumed that the sample was collected after excavation to verify clean. Is this correct? The text should identify when the sample was collected. Also the text should include the dimensions of the lagoon.**

The final report will clarify that the confirmation sample collected from the bottom of the lagoon was collected after excavation. The date of sample collection, July 19, 2004, will be added to the discussion on page ES-4. The dimensions of the lagoon were not measured during the removal action; however, from the figures the lagoon was oval-shaped with approximate dimensions of 60 feet by 85 feet.

- 2. **ES-4, 3rd paragraph - The text states that a 36" fabric was used to provide a physical marker between clean fill and the remaining PCB contamination. Does this apply to the soil/sediment areas or soil only areas?**

The 36" fabric marker was not placed in the former lagoon area. The fabric was placed only along the entire perimeter of the excavated soil area. This will be clarified in the final report.

3. **Table ES-3 and 7-2 - The table row that identifies the volume for PCBs > 50 ppm shows the work plan 200 CY, ~ 300 tons and delineation 650 CY, ~ 975 tons. The actual volume excavated was 359.99 tons. Why is there a decrease from the delineation sample volume?**

The volume of hazardous soil (PCB > 50 ppm) estimated during the delineation sampling was based on the entire gray-shaded area on Figure 2-2 being greater than 50 ppm for PCBs. However, when the soil was excavated and stockpiled, the disposal sample analyses indicated that only one soil holding cell (containing 359.99 tons of soil) had PCB concentrations exceeding the hazardous limit of 50 ppm.

4. **Page 2-5, section 2.3.1 - The text states that after the 2nd change order areas of contamination greater than the RGs were still present and marked with a physical barrier. Where are these areas located and what are the remaining concentrations? A figure should be added that just identifies the remaining soil areas along with the contaminant concentrations.**

Several small areas are still present on site with concentrations exceeding the remedial goals. An additional table and figure will be added to highlight the remaining areas with PCB contamination exceeding the remedial goals.

5. **Page 2-6, 2-7 - The text states that the sample from the bottom of the lagoon is included in table 2-6. This table is titled "Holding Cell Sampling". Which sample location is from the bottom of the lagoon? The table does not contain an area where Aroclor 1260 was detected at 20 ppm.**

The confirmation sampling analytical results for the lagoon sediment are included on Table 2-12, which has been renamed Table 2-9 in the final report. This will be corrected in the text.

6. **Table 7-1 - This table shows proposed waste quantities, however, the title suggest it is a summary of the actual cost. Which is correct?**

This table will be split into two tables. The first will include the proposed excavation quantities based on the contracts and change orders from TMS. The second table will break down the costs of the removal action based on the actual costs.

7. **Table 2-15 - There is a "P" notation used in this table. The explanation should be listed in the footnotes.**

Agreed. The definition of the "P" data qualifier is "second-column or detector confirmation exceeded method criteria. Appropriate value is reported and data is flagged/qualified as instructed by method/regulation." This definition has been added to Table 2-15, which has been renamed Table 2-16 in the final report.

8. **Figures 2-5, 2-6 - The actual concentrations should be added to the figure. One suggestion would be to include a table on the actual figure that includes the cell and concentration numbers.**

Agreed. A table will be added to Figures 2-5 and 2-6 to provide the Ensys result and actual laboratory data for each sample location.

MCB CAMP LEJEUNE COMMENTS:

1. **Section 1.1; Page 1-1**

I don't see a mention of the new concrete pipe found heading toward the river. Shouldn't we at least mention it and say that it will be addressed at a later date if needed?

The new pipe, approximately 12-inches in diameter and made of carbon steel, was discussed in Section 2.9.1. The approximate location of the pipe will be added to Figure 2-7.

2. **Section 2.1; Page 2-1**

Identify TMS as the contractor and spell out the acronym.

Agreed. In the first paragraph of Section 2.0, TMS Envirocon, Inc. will be identified as the contractor. The letters "TMS" are not an acronym, but the full name of the company will be written out.

3. **Section 2.1; Page 2-1**

In the last sentence of the second paragraph in this section, change "landfill" to "Treatment and Processing Facility."

Agreed. The suggested change has been made.

4. **Section 2.2; Page 2-2**

In the last sentence of the second paragraph in this section, you give two (2) "greater than" values (>15 and >49.95) for diesel. Is this accurate?

This is correct. The Ensys sampling for TPH can be analyzed for concentrations greater than 15 ppm and 49.95 ppm for diesel.

5. **Section 2.8; Page 2-11**

In the second paragraph in this section, identify the borrow sources. On-Base borrow pits? Off-base borrow pits?

The clean backfill was from an off-site borrow source. Morton Trucking Company provided all clean backfill for the site. This information will be added to Section 2.8.

6. Appendices
Appendices were not included

The appendices were included on a CD-format to reduce the size of the document. Hard copies can be provided upon request.

7. Figure 1-1
Isn't there an updated quad map? TII isn't even on here.

The latest topographic quadrangle map for the Camp Lejeune area available from the USGS was photo revised in 1971. TMS/Baker will look into whether a revised map from the Base's GIS is available to replace this map for the final report.

NCDENR COMMENTS:

I. General Comment

- 1. Please discuss outstanding issues that need to be resolved, such as locating the end of the steel pipe, sampling in the potential second lagoon area, etc. The Executive Summary is one location where this detail would be appropriately discussed.**

The location of the steel pipe was not surveyed prior to backfilling. The end of the pipe was unearthed during the excavation, but was not surveyed or photographed. The Contractor's on-site employees informed Baker that the northwest end of the pipe was unearthed and grouted. This information is not included in the daily reports.

Although the existence of a possible second "lagoon" was discovered during the removal action, it is not included as part of the scope of the Phase II NTCRA and therefore is not discussed in the Closeout Report. A Technical Evaluation of Site 84, as discussed at the October 2004 Partnering, will be completed in 2005 prior to the ROD to further evaluate the possible second lagoon area.

II. Specific Comments

- 1. ROICC as defined in the last sentence of the first paragraph on page ES-3 is incorrect. Resident Officer in Charge of Construction (ROICC). A military officer usually directs base work. Please make appropriate correction.**

TMS is viewed as a "construction contractor" by the government and the ROICC office has contracting authority over them. The ROICC reviewed the Work Plans, the Health and Safety Plan, and the Severe Weather Plan and approved change orders for this project. The ROICC can be either an enlisted military or civilian employee. Mr. J.C. Wade was the ROICC officer assigned to the Phase II Removal Action at Site 84.

- 2. Did the Remedial Investigation clearly define the areas of the site that exceeded the residential risk based concentrations at least in surface soil?**

The residential risk-based PRG for PCBs is 1 ppm. The residential risk-based concentration PRGs were not used as cleanup standards for this Phase II Removal Action at Site 84. The cleanup standard used, 10 ppm, is based on future industrial land use for Site 84.

Additional areas of PCB contaminated soil with concentrations exceeding the remediation goals were discovered during the Phase II Interim Removal Action. Figure 2-3 illustrates the changes in the actual, surveyed limit of the excavation versus the limits of excavation from the Work Plan, which were based on the results of the RI from 2001. The area of greatest deviation is that the two separate areas defined in the Work Plan were combined following the Delineation Sampling.

- 3. Make sure and include Appendix F in the Final Closeout Report as stated in the blank Appendix F section of the attached CD.**

Appendix F will be included on the Final Closeout Report CD.

- 4. Next to the last paragraph on page 3-5 states that "Following the completion of the second change order, areas of contamination greater than the remediation goals were still present." Were any of these exceedances of the remediation goals in surface soil? Are the red and gold colored sample locations shown on Figure 2-6 a surface soil concentration? If so the remediation is not completed consistent with the Work Plan and human risk above the industrial level remains for direct exposure on the Site. Please clarify this issue in this and other sections of the report.**

Does Figure 2-6 clearly establish the locations of the confirmation zones that exceeded the remediation Goals? If so are the locations and depths of the exceedances located by a survey so they can be found in the future if necessary?

Agreed. Changes will be made to various portions of the report to reflect that PCB contamination exceeding the industrial land use (10 ppm) remains on the site in both the surface and subsurface soil samples. Four sidewall samples, SC-171A, SC-262A, SC-239, and SC-289, had remaining concentrations of PCBs exceeding the remediation goals and were collected between depths of 0-2 feet bgs.

A survey was completed for the outer perimeter of the excavation, but did not include surveyed locations of the various sections and depths throughout the excavation area. The locations of the PCB contaminated soil remaining on site that exceeds the remediation goal of 10 ppm are approximate on Figure 2-6. The exact locations were not surveyed prior to backfilling.

- 5. The abbreviation LG as used in the last paragraph on page 2-6 is not defined and is not used in Table 2-12 as stated. Please clarify and define LG or make other corrections to this section as needed to better communicate the laboratory results.**

The laboratory sample ID for the lagoon sediment disposal sample is "LG". This is not an abbreviation, but is the full name of the laboratory ID designated by the contractors on-site. The text will be edited to clarify this distinction.

- 6. The Paragraph at the top of page 2-7 states that the July 19, 2004 sample from the bottom of the lagoon exceeded Remediation Goals (RGs). Table 2-6 is referenced; however, none of the 7/19/04 samples exceed the RGs in this Table. This section should probably reference Table 2-12.**

Agreed. The reference to the confirmation laboratory result for the lagoon sediment should be to Table 2-12, which has been renamed Table 2-9 in the final report. This correction will be made to the text.

- 7. The last sentence in the second paragraph on page 2-7 references Table 2-5. This section should probably reference Table 2-6.**

Agreed. The text is referencing the laboratory results for the soil holding cells and this data are presented on Table 2-6. This correction will be made to the text.

- 8. The third paragraph on page 2-7 states that Photographs of the soil holding cells are shown in Appendix A. No photos in Appendix A are labeled "soil holding cells." The section is probably discussing and should reference the soil stockpile areas which are shown in Appendix A photos and in Figure 2-4. Consistent language should be used in discussing stockpile areas. Hay bales are not present in the area of the stockpiles in the photos of Appendix A as stated in the report. Please clarify or remove this statement. The spelling of the word bales should be corrected.**

Agreed. To be consistent with the Work Plan and other documents, the term "soil holding cell" will be used to reference all of the areas where excavated soil was stored at the site prior to off-site disposal. Figure 2-4 will be changed accordingly. Hay bales were placed around the perimeter of the soil holding cells and the soil piles were covered with 60-mil black plastic in accordance with 40 CFR Part 262.34 and the applicable North Carolina regulations. The top layer of plastic covered the hay bales and was secured with sand or sand bags.

The noted spelling change will be corrected throughout the document.

- 9. Next to the last paragraph on page 2-7 details the requirements for confirmation sampling areas. 5-point composite samples were to be collected from every 500 to 1000 square feet of the excavation floor area and tested. Many of the grids shown on Figure 2-6 are much larger than the 1000 square**

feet area required by the work plan for sufficient confirmation sampling of the non-hazardous excavation areas. If the scale is correct for Figure 2-6, some of the non-hazardous excavation areas where confirmation samples were collected are greater than 2000 square feet. This is a significant error for confirmation sampling. Is there an acceptable reason for this oversight? If so, it should be clearly stated and appropriate a copy of the change orders to be included in the report. If not, what will be done to correct this oversight? The 500 square foot areas for hazardous excavation areas also exceed but they are close enough to be acceptable for good confirmation of these areas.

The areas depicted on Figure 2-6 are approximate areas based on field sketches. The actual sampling area grid was not surveyed. The entire area of excavation was approximately 119,400 ft² and 106 floor samples were collected from the non-hazardous areas. Based on this, the average area per sample was calculated to be 1,126 ft². The drawing has been updated to better reflect the appropriate sizing for the non-hazardous sampling areas.

10. **The second paragraph on page 2-12 states that the end of the pipe closest to the Northeast Creek was unearthed during the course of the excavation and grouted. It was very clear to me that the ends of the steel pipe shown in photo 23 of Appendix A were never located and therefore could not have been grouted. We actually discussed this as an outstanding issue at Site 84 during the Atlanta meeting this year. Please remove this statement or make appropriate changes to this section to clarify this issue. I recall that a third, smaller pipe was excavated and grouted during the excavation work at the site. No photos appear in Appendix A showing the smaller pipe. Please include the location of the steel pipe and the smaller pipe on one of the Figures.**

The TMS personnel on site indicated that during the expansion of the excavation in northwest corner, the end of the steel pipe was unearthed and was grouted. No photographs were taken of the end of the pipe and no description of this activity is included in the daily reports. Photo 23 and 24 do show the steel pipe, but do not show either terminus of the pipe uncovered.

A third pipe was not uncovered during the excavation. The only 2 pipes that were unearthed included the concrete pipe from the lagoon to the former Building 45 and the steel pipe in the northwest portion of the site.

An approximate location of the steel pipe will be included on Figure 2-7.

11. **Figures 2-1 and 2-2 show the concrete pipe stating that the entire length of the pipe is to be removed along with the inlet. The third paragraph on page 2-12 states that it was removed and disposed at the Morton Landfill in Jacksonville, NC (45 joints were removed). Figure 2-4 shows the concrete pipe being grouted northwest of the old gravel road at the inlet. Concrete**

pipe east of the inlet is shown remaining in place. This is inconsistent with the note on Figures 2-1 and 2-2. Please clarify in section 2.9.2 how much of the pipe was removed if all was not removed and make all the Figures consistent with this section after clarification.

The entire length of the concrete pipe was removed during the Phase I and Phase II NTCRAs at Site 84. The concrete pipe was not grouted at any point during the Phase II NTCRA. Figure 2-4 will be changed to reflect this clarification.

- 12. Please clarify where on the concrete pipe, chip sample DP-78 was taken from. See the Third paragraph on page 2-12.**

A composite sample was collected from the concrete pipe including the inside and outside of the pipe. This information will be added in Section 2.9.2 of the report text.

- 13. Co-mingled is misspelled in the fifth bullet on page 3-1.**

Agreed. This correction will be made.

- 14. The last two sentences of the last paragraph on page 7-1 are confusing and need grammar corrections or clarification. Increasing what to a depth of 2 feet?**

Agreed. Clarification will be added to this paragraph in the final report.

- 15. The reason for the increase in cost was the increase in the volume of the non-hazardous PCB contaminated soil. See the first paragraph on page 7-2.**

Agreed. The referenced paragraph has been clarified in the final report. The increase in the volume of non-hazardous PCB contaminated soil contributed to the increase in the actual costs.

- 16. Photo 24 of Appendix A states that photographer is looking southeast. This photo is clearly taken looking east northeast toward highway 24. Please make appropriate corrections to this photo comment. The poly-tank as identified on Appendix A, photos 18 and 19 is a steel fractionation tank rather than a poly-tank.**

The photographer is looking east-southeast from the northeastern-most corner of the excavation in Photo 24. The exposed steel pipe is evident in the photograph along with the eastern edge of the excavated area and Highway 24.

The tank referenced in Photos 18 & 19 will be changed from a poly-tank to a steel fractionation tank. This correction will be made in the photograph comments and the text.