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NCBC GULFPORT
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LETTER AND COMMENTS FROM MISSISSIPPI DEPARTMENT OF ENVIRONMENTAL
QUALITY REGARDING THE WORK PLAN FOR ADDITIONAL OFF BASE AREAS OF
CONCERN DIOXIN CONTAMINATION INVESTIGATION NCBC GULFPORT MS

8/29/2008

MISSISSIPPI DEPARTMENT OF ENVIRONMENTAL QUALITY



STATE OF MISSISSIPPI
HALEY BARBOUR
GOVERNOR
MISSISSIPPI DEPARTMENT OF ENVIRONMENTAL QUALITY

TRUDY D. FISHER, EXECUTIVE DIRECTOR

August 29, 2008

Mr. Arthur Conrad
RPM NCBC Gulfport
Code OPG6
Department of the Navy
Naval Facilities Engineering Command Southeast
Jacksonville, Florida 32212-0030

RE: NCBC Dioxin Investigations
Gulfport, MS

Dear Mr. Conrad:

I and staff have reviewed the Workplan: Additional Offbase AOC Investigation dated July 24, 2008 and have the following comments referring back to my letter of July 12, 2007:

- 1) The Phase 2 off base sampling work plan for sampling of wells located along Turkey Creek on the Arndt and Bennett properties (page 1, paragraph 2) should be submitted as a separate Work Plan, as this is unrelated to our request of July 12, 2007.
- 2) The number of groundwater samples is included in the Sampling and Analysis Summary Table, indicating that total number of samples applies to the present investigation. All data/information concerning dioxin concentration is not being reported that would afford an evaluation of TCDD content and dioxin TEQ concentrations with respect to attribution to Herbicide Orange. Data for both 2,3,7,8-TCDD and total dioxin TEQ shall be reported
- 3) AOC – 1 : The MDEQ believes that the information that we have received concerning buried drums from the NCBC in this area warrant a definitive investigation. We understand your previous comments concerning this area and the intent of the original order, however, as with many such orders and subsequent investigations there are issues that arise that are not anticipated at the time an order is issued. In these cases, MDEQ often requests additional

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investigation outside the scope of the original order when we believe it is warranted and can and will issue additional exparte orders if needed to have what we believe are legitimate concerns investigated.

- 4) AOC-2: Add one additional “Dredge Pile Vertical Composite Sample Location” to the North/South Turkey Creek pile (pile designated by sample AOC2-SS-07) Add four additional “Dredge Pile Vertical Composite Sample Locations” (two additional samples each to Turkey Creek piles along North and South Sides of Turkey Creek) piles designated by samples {AOC2-SS-06 and AOC2-SS-05} and samples {AOC2-SS-02, AOC2-SS-03, and AOC2-SS-03}

The Work Plan (page 2, paragraph 3) states that samples from Turkey Creek did not contain TCDD, the next sentence states “the exception to this is sample AOC2-SS-07 from a north/south trending spoil pile north of Turkey Creek. This sample contained TCDD and exceeded screening concentrations.” The text also reports (same paragraph) that the average concentration of the spoil piles is “currently 5.2 ppt” excluding the “anomalous northern sample”. It should be pointed out that 5.2 ppt exceeds the unrestricted TRG of 4.26 ppt. Apparently the northern sample was not anomalous, as Figure 1 (the only reporting of sampling results supplied with the report) indicates several dioxin concentrations at levels exceeding the regulatory screening value (5.8 ppt in AOC2-SS-01, 4.29 in AOC2-SS-02, 14.42 ppt in AOC2-SS-03 and 17.22 ppt in AOC2-SS-07.

The concentrations are not speciated with respect to TCDD (concentrations are reported as TEQ values) so evaluation with respect to the presence of TCDD is not possible (other than the nebulous text discussion). The statement that samples contained no TCDD (with the exception of....) need to be demonstrated by providing complete sample analysis of congeners with TEQ values if any claims are made concerning the lack of HO attribution. *No minimum percentage of TCDD has been established in order to identify (footprint) the source as Herbicide Orange (HO). It is MDEQ's assumption that the presence of TCDD in sample TEQ analyses indicates that the source is HO. This has been stated previously in comment letters, correspondence and discussions.*

MDEQ is also concerned with the presentation of data and statements regarding the presence, or not, of 2,3,7,8-TCDD and dioxin TEQs. MDEQ has always assumed that the presence of 2,3,7,8-TCDD is an indication that Herbicide Orange has been present. Both the 2,3,7,8-TCDD concentration and the dioxin TEQ should be reported for each sample and great care taken when making comments concerning the presence or absence of Herbicide Orange contamination. A sample could have no 2,3,7,8-TCDD present but still have a high dioxin TEQ as the result of other dioxin congeners.

- 5) AOC – 3 : Add two additional samples as a minimum – one each just prior to the point of discharge into Turkey Creek.

Only two samples have been collected from the spoil piles. Figure 1 reports dioxin TEQ concentration of 5.18 ppt in AOC3-SD-01, and 7.11 ppt in AOC3-SD-02, both exceeding the unrestricted TRG. The text discussion states that *"TCDD results were below the screening level", indicating that TCDD was detected at undisclosed concentrations.* This statement is irrelevant unless TCDD was not detected among the congeners, see comment above.

- 6) AOC – 4: We will await results of the additional sediment and water samples from the drainage pathway before making any final decision regarding further work in this area.
- 7) AOC - 5: We recommend two additional sample locations – one between Aoc5-SD-01 and AOC5-SD-02 and one between AOC5-SD-02 and near AOC2-SS-04 along Turkey Creek east of Canal Road
- 8) AOC – 6 : The drawing indicates six sediment samples between AOC3-SD-01 and AO6-SD-02 rather than five and six appears to be the appropriate number of sediment samples. Also, sample AOC3-SD-01 appears to be indicated as the sample point for the western most trench in AOC-3. I do not see locations on the map for the two proposed surface water samples. At least one additional water sample should be taken that is located below the southernmost extent of the City of Gulfport landfill area. This will probably require three samples instead of two for surface water and an additional sediment sample.
- 9) The work plan does not contain any information regarding long term monitoring of Canal No. 1 and Turkey Creek as requested. If the Navy wishes to roll this request into the IRP process as other base sites are reviewed and plans developed then that will be acceptable but the issue of long term monitoring will have to be addressed as it relates to dioxin and other sites on the base.
- 10) The work plan does not contain a plan or proposal for providing documentation to MDEQ that all drainage pathways that potentially carried dioxin contamination off-base have been identified, sampled, and the Navy and MDEQ have both concluded that no further action is warranted. A short definitive listing of all the potential pathways evaluated and the Navy's conclusion with subsequent documentation will allow for comment and resolution of any outstanding questions on this issue.

Off-Base Groundwater : I would suggest that NCBC consider running both filtered and unfiltered analysis on the groundwater samples to get and indication of whether or not the dioxins may be attached to the soils or dissolved in the water.

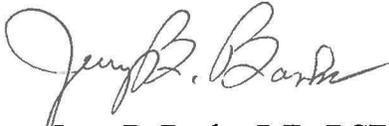
In the past we had requested sampling of wells at the following homes: Mrs. Hansen's mother and Mr. Simmons home. It is our understanding that Mrs. Hansen's mother has previously denied you access to sample her well. We request that you contact both

parties and request access to sample their wells. If they want MDEQ present during sampling as a condition for access then we will gladly do so. If NCBC contacts these parties concerning sampling of their wells and they are unwilling to allow NCBC to sample the wells then that is all you can do.

Also, we had requested that most of the samples be analyzed for constituents other than dioxins. If NCBC is unwilling or unable to do so, then the sampling must be coordinated so that MDEQ may be there to take split samples and have our laboratory run the analysis for constituents other than dioxin.

If you have further questions, please feel free to contact me by email at Jerry_Banks@deq.state.ms.us or phone at 601-961-5221.

Sincerely,

A handwritten signature in cursive script that reads "Jerry B. Banks". The signature is written in black ink and is positioned above the typed name.

Jerry B. Banks, P.E., BCE
Chief, Groundwater Assessment & Remediation Division

cc: Gordon Crane