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Baker

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November 24, 1997

Commander
Atlantic Division
Naval Facilities Engineering Command
1510 Gilbert Street (Building N-26)
Norfolk, Virginia 23511-2699

Attn: Ms. Katherine Landman
Navy Technical Representative
Code 18232

Re: Contract N62470-95-D-6007
Navy CLEAN, District III
Contract Task Order (CTO) 001
MCB Camp Lejeune, North Carolina
Partnering Minutes - September 1997

Dear Ms. Landman:

Attached are the final minutes for the Partnering meeting held on September 16 and 17, 1997 in Jacksonville, North Carolina. A copy of these meeting minutes has been forwarded to all of the Team members. These meeting minutes were finalized at the Partnering meeting held on November 19 and 20, 1997 in Virginia Beach, Virginia.

If you have any questions, please do not hesitate to contact me at (412) 269-2053.

Sincerely,

BAKER ENVIRONMENTAL, INC.

Matthew D. Bartman
Activity Coordinator

MDB/lq
Attachments

cc: Ms. Linda Saksvig, P.E., Code 18231
Mr. Bob Schirmer, Code 18236
Mr. Byron Brant, Code 1832
Mr. Neal Paul, MCB Camp Lejeune
Mr. Mick Senus, MCB Camp Lejeune
Mr. Dave Lown, NC DENR
Ms. Diane Rossi, NC DENR
Ms. Gena Townsend, EPA Region IV
Mr. Jim Dunn, OHM
Mr. Brent Rowse, ROICC MCB Camp Lejeune
Ms. Lee Anne Rapp, P.E., Code 18312 (w/o attachment)
Ms. Beth Collier, Code 02115 (w/o attachment)

MEETING MINUTES
MCB CAMP LEJEUNE PARTNERING TEAM
September 16 and 17, 1997

A Partnering Meeting was conducted on September 16 and 17, 1997 between representatives from LANTDIV, MCB Camp Lejeune, USEPA Region IV, NC DENR, Baker Environmental, Inc. (Baker), and OHM Remediation Services, Inc. (OHM). The meeting was attended by the following:

- Ms. Katherine Landman, LANTDIV
- Mr. Bob Schirmer, LANTDIV
- Mr. Mick Senus, MCB Camp Lejeune
- Mr. Neal Paul, MCB Camp Lejeune
- Ms. Gena Townsend, USEPA
- Mr. Dave Lown, NC DENR
- Mr. Matt Bartman, Baker
- Mr. Tom Trebilcock, Baker
- Mr. Jim Dunn, OHM

Guests who attended the meeting included:

- Ms. Laura Yeh , NFESC
- Mr. Greg Gilles, OHM
- Ms. Diane Rossi, NC DENR
- Mr. Brian Marshburn, MCB Camp Lejeune
- Ms. Andrea Lunsford, NEHC
- Dr. Jeffrey Hyman, NEHC
- Mr. John Londergan, INTERA
- Mr. Marcus Geist, NC DENR
- Ms. Amy Axon, NC DENR
- Mr. Lee Vane, USEPA

The meeting was hosted by Mr. Mick Senus and chaired by Mr. Dave Lown. Mr. Bartman recorded the minutes.

The minutes are summarized below for each day of the meeting and by topic.

September 16, 1997

The meeting focused on the following items:

- Check In
- Review of Meeting Minutes
- ATSDR and NEHC
- Comment Update

September 17, 1997

- NC DEHNR name change
- Biocells
- Site 3 Biocell
- OU No. 15 EE/CA status
- OU No. 15 Surfactant Study
- OU No. 6 (Site 36) PCB Removal
- Monitoring Update
- Site 35 Construction
- Range Remediation

The first day of meeting began with the check in and review of the minutes from the previous meeting. During check in the following items were brought to the attention of the Team:

- Jim informed the Team that his boss, John Morton, has resigned. Jim did not provide a reason for his departure. Jim also mentioned that he will be the Technical and Administrative lead for OHM at Cherry Point.

- Gena is no longer involved in environmental issues at Fort Knox.

No other major items were discussed.

Meeting Minutes

Matt requested any modifications to the July meeting minutes. He mentioned that Kate had provided comments that will be incorporated into the final minutes. He mentioned that minutes would be submitted as final on the September 19th if no comments were received.

ATSDR and NEHC

Ms. Andrea Lunsford and Dr. Jeffrey Hyman from NEHC provided the group with information relating to the Public Health Assessment (PHA) prepared by ATSDR on Camp Lejeune. Ms. Lunsford provided a history of the development of the information used in this report. The history includes:

- Site Scoping meeting 1991
- Follow Up Visit 1992
- Fish Consumption Report 1993
- Lead in Drinking Water Report 1994
- Draft Public Health Assessment 1994
- Adverse Birth Study 1994

ATSDR's involvement came about due to the discovery of TCE in the groundwater in the Tarawa Terrace and Hadnot Point areas. ATSDR conducted a health study to look at birth rates, mean birth rates, fetal death, and maternal complications.

In November 1996 ATSDR stated that this report was under peer review and would be separate from the Public Health Assessment. In January 1997 the PHA was published with the birth study included. The Draft PHA, published in December 1994, did not mention the birth study. The birth study was provided in the PHA without formal review and comment. Review of the birth study has found problems in how the conclusions were developed. A few of these problems are:

- Measurements made in 1982-1985 are not the same as exposures in 1968
- Supply well production schedule was not addressed
- No records were maintained on water usage
- Number of known factors that cause problem other than drinking water (confounders) were not assumed

Based on the conclusions that were drawn from the birth study ATSDR has proposed conducting a childhood leukemia study. This study would be done through phone interviews of people who were at Camp Lejeune for a portion of their pregnancy and those who were there for the full term. ATSDR wants to advertise nationally for these individuals.

A long discussion regarding the findings of the health study was held by the Team members. Brian mentioned that the release of this information to the public didn't create the amount of concern that the Activity thought it would. The Team discussed several problems with this type of study and it the usefulness of any findings. Future discussion on this matter and on the release of the health study will be had between LANTDIV, Camp Lejeune, NEHC, and ATSDR. This information was to be reviewed by NAVFAC, NEHC, LANTDIV, and the Activity prior to release.

Comment Update

Matt passed out, to members of the team, forms used to track document submittals and the comment responses. Matt explained to Diane Rossi that because WiRO has not submitted comments on Lejeune documents on a consistent basis we are no longer tracking their responses. Diane informed the Team that unless a formal request is submitted to Arthur Mouberry to review the documents they are archived but not reviewed by the WiRO. Dave stated that he was unaware of this policy and when it may have been put into effect. Diane stated that the WiRO will review documents if there is groundwater concern. Matt suggested that from now on he contact Dave two weeks prior to the document submittal so that he is able to prepare a letter requesting review to Arthur Mouberry. Matt stated that he would notify Baker project managers of this change.

NC DEHNR Name Change

Dave informed the Team that NC DEHNR has been changed to NC DENR. The Health group has been broken out into their own section. Additionally, the name of Dave's division has been changed from Waste Management to Solid Waste Management. Remediation for CERCLA and UST sites will be handled under one division.

Biocells

Due to some concerns the Activity had regarding the current biocells at Lot 203 and Camp Geiger Jim and Greg provided some information on the performance of the cells. This biocell at Lot 203 was constructed to handle TPH soil generated from trenching activities. The soils that were placed in the biocell were a mixed waste of TPH and pesticides. During construction of the biocell the Activity wanted to permit the cell. Jim explained that by permitting the cell the levels that had to be obtained to demonstrate that the waste was clean to a lower level than what the design of the cell was intended. Under the permit requirements the DRO has to be 40 and the GRO has to be 10. The soils have been in the cell for 13 months and the DRO is 150 and the GRO is ND. Jim indicated that this could be due to the characteristics of the contamination (long chained hydrocarbons). Jim stated that they have spent $80-$90 yd in treatment (just operation sample, tilling, chemicals). Jim mentioned that two additional batches totaling 112 yards from the Campbell Street Fuel Farm were placed into the cell. The DRO level was 450, the GRO was ND, and the O/G level was greater than 576. After two months the DRO level is 14 and the O/G is less than 125. The cost for per yard is roughly $13. A third batch, from grid pits, separators, was collected by EMD dried and brought to the biocell in April. DRO levels have dropped from 3600 to 1700, GRO levels from 6 to ND, and O/G from 18,900 to 3000. Treatment costs are roughly $33 yard.

Jim explained the options for the biocell at Lot 203 are:

- continue to treat soil, add bugs manure now to the end of the growing season
- sample every two weeks for DRO/GRO
- tilling (twice week) reduces moisture/helps mixing
- sample every month for nutrients
- field measurements for pH

By completing these measures Jim estimated a cost of $66 yard for treatment.

Neal asked the question if Jim was to receive this same soil today what would he do with it? Jim stated that he would review the landfill permit to see if this soil could be used for cover. Neal said he didn't believe that the state would allow POL contaminated soil to be used for cover. Neal was curious as to what are the options other than the biocell. Jim said it could be taken offsite for about $52 yard. Neal is concerned about continuing to fund this soil cleanup. Jim stated that cleanup of TPH contaminated soil is easy but heavy hydrocarbons are more difficult and take more time. Neal stated that if cost for treatment in the biocell would be more than $52 yard than offsite disposal should be considered. Jim said that if DRO/GRO levels are known before batch goes in it can be determined.

Jim wanted to know what the opening date for the new Subtitle D landfill. Neal said it should be operational on November 15. Dave suggested that OHM or the Activity contact Bill Holcutt with the State Solid Waste Division to inform him that TPH contaminated soil may be used as cover. Jim stated that the soil will probably have to be treated for O/G to less than 18,900 for use as cover.

Neal stated that the EMD SOP for sample collection and analysis of DRO/GRO and O/G will be modified to compare with OHMs. The soils at Lot 203 will remain in place for treatment for the time being. Approximately 300 yards of additional soil from John Riggs will be placed in the Camp Geiger biocell. John Riggs estimates that 1,000 cubic yards of soil will be generated per year.

Site 3 Biocell

Jim has a concerns regarding the remediation levels presented in the draft 60% Design for Site 3. Some of the levels presented in this document are unable to be detected, therefore, Jim stated there is no way of telling if the remediation is complete. If we were to use the 50-100 ppm level for the 7 PAH carcinogens and consider this a listed waste then we could obtain this level.

Gena and Kate both agreed that we do not know what the source of the contamination was, therefore, this could not be a listed waste. Jim went on to mention that if the levels that we have measured do not make this soil hazardous by characteristic than this soil can be taken to a subtitle D landfill and construction of a biocell is not required.

Matt stated that he would obtain information to determine if the maximum levels in the soil made the soil hazardous by characteristic. Jim stated that if the soil is not hazardous by characteristic then the soil could be excavated, removed from the site, and disposed in a Subpart D landfill.

Jim stated that he will put plans on hold until Baker is able to determine removal levels. Matt said he would check into this and report back to the Team.

OU No. 15 EE/CA

Prior to the presentation by NFESC, Matt wanted to discuss the report requirements for this OU. Initially this report was to be prepared as an EE/CA. Although EE/CAs can be prepared for groundwater they are usually associated with soil removal. Matt noted that the contamination at this site is much greater than we all initially thought. Consequently the remedial alternative may be more complex than initially thought. Submitting an EE/CA prior to the completion of the Surfactant Test being completed by NFESC may not be appropriate. Matt suggested that the submittals for this OU fall in line with the CERCLA process (RI, FS, PAP, ROD). This method would at least provide everyone with the extent of contamination and begin the process of selecting a remedial alternative. Matt stated the only problem is that because the type and source of the contamination was known the investigation was limited to determining the extent of volatile contamination. Gena concurred that an EE/CA may not be the best approach at this stage and suggested that a Focused RI be prepared. Matt proposed that the submittal the FS be discussed after the Surfactant Study results are obtained. The draft Focused RI will be submitted in mid-November, the original date for the EE/CA, and the FS will be completed after the completion of the surfactant test in November.

OU No. 15 Surfactant Study

Laura Yeh, from NFESC, along with John Londergan from INTERA were present at this meeting to discuss the surfactant technology and tracer study planned for November 1997. Also present were Marcus Geist and Amy Axon from NC DENR who will determine if the use of the tracers will be allowed for this study. Laura presented information on how the surfactant technology is going to be implemented and how this test would be conducted. This information was also discussed at the July Partnering Meeting and is included in those minutes. Marcus stated that in order to perform this test the state requires to know the chemical composition of the tracers, concentration of the tracers per weight, and how the tracers will be recovered. Laura stated that a pilot scale test is currently being performed to select the tracers and this information will be presented in a work plan. This work plan will be submitted to the state and a meeting will be scheduled to resolve questions. John Londergan stated that the work plan will include information on what tracers will be used, what concentrations, what flow rates, and break through curves for alcohols.

Concern was raised during Laura's presentation about the presence and possible reinjection of Varsol. Varsol is a petroleum distallette that was used in the dry cleaning process prior to PCE. Varsol has been found in the soil as an LNAPL. Laura stated that the surfactants will remove the Varsol and because this study involves the

reinjection of the surfactant there is the possibility that Varsol will be reintroduced into the groundwater. This is not an acceptable practice. Gena stated that the varsol must be treated once it is removed. John Londergan stated that the Varsol was measured at a depth of around eight feet bgs. Matt stated that it may be possible to investigate the extent of the varsol contamination during the tracer study, prior to full scale implementation, in November and begin product recovery. Kate felt this was a possible solution that needed to be looked into. Funding may be remaining and dollars saved if the tracer study and varsol study were conducted at this same time. Matt and Kate will have continuing discussion regarding this matter.

OU No. 6 (Site 36) PCB removal

Jim provided an update on the PCB removal being conducted at Site 36. Jim stated that the excavation will be completed by next week. There appears to be seven loads of nonhazardous and 3 loads of hazardous soil being removed. This is less than originally anticipated. Due to the lower amount of hazardous soil being removed cost savings on this project are expected to be around 60K. Jim mentioned that more sampling was required than anticipated but this sampling allowed for the reduction in the amount of soil being disposed as hazardous.

Monitoring Update

Mick began the discussion with questioning whether the monitoring reports could be submitted in a more expedited manner. Matt, Tom, and Jim explained the process of obtaining the data, analytical turnaround time, and report preparation. Matt stated that the analytical turnaround time is the element that is the longest part of the process. Matt said that this process could be expedited but the additional cost may not be beneficial. Matt explained that if Baker does their sampling at the beginning of the period, OHM still has to wait until the end of the period to grab there samples and then have them analyzed. Jim and Matt questioned what benefit would be gained from submitting the reports earlier. The changes in the system do not occur so rapidly that they will be noticed from one period to the next. Several monitoring periods and possibly years will be required to notice if the system is having an effect on the contamination.

Mick brought up the question of establishing site boundaries when institutional controls are set. Mick wanted to know how we could set boundaries for sites. These boundaries would be maintained in the Base's GIS system to be viewed for planning. Kate stated that to date our RODs have not specified any site boundaries to be used for the institutional controls and that if boundaries are established they need to be for soil and groundwater. Kate mentioned that the site boundary and it's impact on construction may vary based on the type of construction (i.e., housing vs a highway). Because contaminant migration may occur, Jim mentioned that we will need to address the site boundary as part of the 5 year review process. Mick will need to look into the specifics of what is needed by the Lejeune GIS system and how and can be shown in the system.

Site 35 Construction

Jim provided the Team with an update on the construction. The work plan preparation will be completed the first week of October. OHM will complete a pilot scale section, approximately 100 feet of construction, they will evaluate trench vs horizontal drilling. Whichever system they use in the pilot it must be expandable. Jim feels that the trenching is the way to go due to the clay lenses. They will use a slurry wall of a bipolymer mixture to keep the walls of the excavation open. Jim stated that a 100 foot trench is needed to get the piping to the bottom.

Range Remediation

OHM has received and negotiated the Dos for these projects. The projects involve Ranges A1 and D29. Range D29 is an area with about 14 firing lanes. The process of cleanup will involve soil screens and the recycling of the lead, treat soil with TSP, and return soil to rebuild the burm. The A1 small arms range is 10 lanes, OHM will excavate Pb rounds, install a bullet trap, stabilize soil, and rebuild the berm for overshoot.

Action Items

Matt

From September 1997
- Review the RI, FS, and Design for OU No. 12 (Site 3) to determine if the selected COCs would classify would be classified as hazardous waste.
- Discuss Varsol investigation with Kate
- Send schedule for SBP to be at Site 69 to Jim
- Send copy of ATSDR study to Team members

Mick

From July 1997
- Check to see if letter notifying WiRO of changes to monitoring program for Site 2 was submitted .

From September 1997
- Find out if old base landfill will accept approximately 200 tons of soil with lead concentrations at 0.5 ppm
- Talk with GIS group at Camp Lejeune regarding the coverages for site boundaries
- Ensure that data for incoming biocell soil has been obtained by the same method that OHM uses
- Check permit requirement for Montford Point lead sampling

Kate

From July 1997
- Prepare letter for EMD to submit to WiRO notifying them of modifications to the monitoring program for the HPIA.

Dave

From July 1997
- Look into what actions need to be taken for site closeout
- Look into NC DEHNR NFRAP guidance document
- Provide Laura Yeh with well construction regulations for monitoring and injection wells.

Jim

- Ask Randy to check on Site 69 electricity at times when SBP will not be there

Next Meeting

Date:	November 19 and 20, 1997
Location:	Norfolk or Virginia Beach
Chair:	Bob
Host:	Bob and Kate
Time:	1300 hours