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NCBC GULFPORT
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RESTORATION ADVISORY BOARD MEETING MINUTES 12 APRIL 2005 NCBC GULFPORT MS

4/12/2005

NCBC GULFPORT

Gulfport, Mississippi

Minutes
NCBC Gulfport RAB Meeting
Naval Construction Battalion Center
Gulfport, Mississippi
April 12, 2005

The following members of the Restoration Advisory Board (RAB) met at Isiah Fredericks Community Center on April 12, 2005:

Gordon Crane
Marie Hansen
Belinda Head
David Marshall
Skip McDaniel
Bob Merrill
Joseph Mitchell
Cherie Schulz
Ron Schmidtling
Joyce Shaw
Phillip Shaw

Administrative and technical support for the meeting were provided by:

Art Conrad, Naval Facilities Engineering Command
Bob Fisher, Tetra Tech NUS
Kevin McCaslin, Environmental Chemical Corporation (ECC)
Nancy Rouse, EnviroComs
Jason Bourgeois, Tetra Tech NUS

Other attendees included:

Marie Erickson
David Hadden (AF)
Howard Page
Glen Sandberg
Patricia Spinks

Welcome

Skip McDaniel, the Community RAB Co-Chair, opened the meeting at 6:50 pm.

Administrative Order/Installation Restoration Program Update

Art Conrad provided the following overview of activities currently underway at NCBC Gulfport:

Remediation of Site 8

- A Remedial Design for Site 8 plans the excavation of contaminated material from the ditches both on and off base, landfills and mixes the contaminated material with concrete on Site 8 (on base), and covers the 13 acre site with a concrete cap.
- Environmental Chemical Corporation (ECC) has been contracted to accomplish the remedial work.
- Pre excavation fieldwork is complete and the excavation of the privately owned properties north of the base has begun.
- Pilot testing to prove that dioxin will not leach out from the site is complete. Testing to prove that the solidified contaminants can be used as a foundation to support heavy equipment is also complete.
- Planning for additional sampling off-site to characterize the Canal Road mounds and to investigate outfalls 4 and 5 is underway. Planning of sampling at Site 8B and 8C is also underway. Fieldwork for both tasks should begin by the end of April.

Site 10

- Remedial actions were taken at Site 10 in 1999 to remove the source of PCB contamination.
- A Remedial Investigation and Feasibility Study are in review prior to submission to MDEQ.

Site 6

- An enhanced bio-slurper system is still in operation.
- Site evaluation/closure report is underway.

Site 5

- A Remedial Investigation of the site is complete and a draft report is in review.
- A Feasibility Study is underway.

Site 4

- A Remedial Investigation is in progress.

Canal Road Update

Jason Bourgeois presented the results of the first two phases of sampling of the Canal Road dirt piles. Phases I and II sampling were completed in late 2004. Samples were analyzed using the field test kit, Method 4025 (14 samples for Phase I and 5 samples for Phase II) and laboratory analysis, Method 8290 (7 samples for Phase I and 3 samples for Phase II). Results are reported in Table 1 shown to the right. All sample results were higher than the MDEQ Tier 1 Unrestricted TRG of 4.26 ppt.

Table 1: Phase I and II Sample Results

SAMPLE	4025 (ppt)	8290 (ppt)
CR01	17	11.00
CR02	11	37.26
CR03	25	
CR04	16	10.57
CR05	19	
CR06	9	7.508
CR07	19	
CR08	23	13.33
CR09	15	
CR10	17	
CR11	16	
CR12	28	19.50
CR13	10	
CR14	20	6.925
CR15	32	25.45
CR16	21	7.640
CR17	15	
CR18	19	3.112
CR19	10	
95% UCL	20.43	20.25

Q: How many samples will be collected to characterize Outfalls 4 and 5?
A: We will be collecting five thoroughly mixed composite samples.

Q: What steps do you take to determine that the samples are analyzed accurately?
A: Laboratories that analyze for dioxin using Method 8290 are certified by EPA. This certification includes rigorous quality assurance processes to insure that the best analytical practices are used. In addition, the scientists who collect the samples follow rigorous protocols for collecting and handling the samples to insure the most accurate results. These protocols include the collection of duplicate and split samples, plus the inclusion of samples spiked with known quantities of the analyte. Method 4025 also includes the analysis of spikes and internal duplicates as quality assurance measures.

Q: When will the sampling be completed?
A: The samples will be collected by the end of April.

Site 4 Findings

Bob Fisher reported the findings from the Site 4 Remedial Investigation. Site 4 was operated as a landfill from 1966 to 1972. Evidence of a cleaning solvent plume containing TCE, dichloroethylene(DCE) and it's final breakdown product, vinyl chloride, was first detected in 1995. Groundwater sampling that

occurred during the 2004 Remedial Investigation field program showed that the vinyl chloride had not degraded over time, and therefore, the natural degradation process (called "natural attenuation"), is no longer occurring.

Natural attenuation is the process of replacing the chlorine molecule on some contaminants, such as trichloroethylene (TCE), with a hydrogen molecule, (also referred to as "reduction"). If conditions are right in the environment, microscopic organisms (microbes) feed on chlorinated solvents, such as DCE, and vinyl chloride causing them to be reduced in substances that are ultimately less harmful. Also, if conditions are not optimal for natural attenuation they can be altered to boost the degradation process.

The next steps at the Site 4 investigation are to first more completely delineate the vertical and horizontal extent of the plume. Then the soil will be assessed to determine if: 1) the contaminant reducing microbes are present in the soil; 2) if enough organic carbon is present in the soil to support the microbes; and 3) if there are inorganic elements such as iron or sulfur what are working against the microbes. Once this assessment is complete, scientists will conduct studies to determine the best way to remediate the site. Possible remedies to study include:

- Biostimulation – Add electron donors to fuel reduction reactions.
- Bioaugmentation – Introduce strains of contaminant reducing microbes to the site.
- Bio-oxidation – Add oxygen to groundwater to promote growth of aerobic microbes.
- Chemical Oxidation – Add oxidizing chemicals to groundwater to react with contaminants.

Mr. Fisher added that there are no other contaminants of concern at the site.

Q: Does the plume run into Canal One?
A: No. The plume is located several feet below Canal One and extends on both sides of it.

Q: What direction is the plume moving?
A: The plume is moving very slowly towards the west.

Q: Is DCE heavier than groundwater?
A: It is slightly heavier and it sinks slowly over time.

Q: Do we see PCE associated with this?
A: No, we have not found PCE at this site.

Q: What kind of concentrations of TCE and DCE are we seeing?
A: About 100 pp of TCE and DCE.

Remedial Action Update

Kevin McCaslin of ECC provided an update on remedial activities associated with Site 8. The following progress was noted:

- Workplans have been completed and approved.
- Trees were cleared in wetlands north of the base and on Site 8A.
- A treatability test of the sub-base stabilized layer was completed.
- Trees were cleared in the wetlands and on Site 8A.
- The access road at the wetlands area is completed.
- A field demonstration of the stabilization of sub-base layer was successfully completed.

- Finger roads are being built into the wetlands to support excavation of wetlands sediments.
- Drainage channels at Site 8A were excavated and backfilled.
- Grids were constructed on Site 8A and the first lift of sub-base layers for three grids was stabilized.

Kevin noted that the progress was challenged by the severe rain and lightning during the months of February, March and April. Approximately 6.4 inches of rain fell in February, 7.5 inches in March and approximately 9 inches (to date) in April. The average for the month of April is 5.06 inches at Gulfport.

Kevin summarized the upcoming activities as follows:

- Continue/Finish transportation of on-base drainage channels and wetlands sediments to Site 8A.
- Conduct verification sampling of wetlands excavated areas and on-base drainage channels.
- Conduct a Bench Scale study of the base course layer to ensure that it meets the 500 PSI requirement.
- Conduct a field demonstration of 500 PSI base course layer
- Backfill excavation areas at wetlands and on-base channels.
- Complete stabilization of soil with ash located in Site 8A.
- Conduct analytical and geotechnical testing of stabilized soil
- Characterize Sites 8B, 8C, outfalls and Canal Road dirt piles for contamination.
- Construct RCC cap after completion of stabilization at 8A.
- Restore wetlands.

Bob Fisher added that long channels have been created on Site 8 to add as long retention ponds to minimize additional runoff to Turkey Creek and reiterated that there will be no additional runoff into Turkey Creek.

Q: What will the roller compacted concrete be like after time?
A: The surface will be very solid.

Q: What trees are you planting in the wetland?
A: The plan for restoration of the wetlands is to first plant a short-lived rye grass to stabilize the soil, followed by wetlands plants identified in the Remedial Design. Bob Fisher offered to bring a list of the plants to the next meeting.

Q: Where will you get the fill material for the wetlands?
A: The fill materials is specified in the Remedial Design as well. We have not yet identified the source.

Q: Who is doing the wetlands restoration?
A: TtNUS developed the plan and ECC will implement.

Q: Who maintains the wetlands when the planting is completed?
A: ECC will maintain the site until plant growth is established. The wetlands will eventually be turned over to the owners.

Q: Where does the drainage from Site 8 go?
A: The water leaves the site in a on-base drainage system equipped with a series of sediment filters.

Q: Is the water currently leaving the site re-contaminating the on-base ditches?
A: The ditches on base have not yet been cleaned out.

Q: When will the soil restoration begin?
A: The restoration will begin after all of the contaminated material has been excavated and the samples show that the site is clean. We are currently scheduled to complete sampling in August 2005.

Comment: A representative from the Sierra Club noted that the success rate for wetland restoration is very low. Their concern is that a degraded wetland may be more vulnerable to future development.

Comment: A community member expressed concern about planting trees in August.
Response: Gordon Crane suggested putting together a partnering team to review plans for the wetlands restoration.

Q: What is the budget to complete the Site 8 project?
A: The current excavation and capping project is budgeted at $7- 10 M. The entire project, including the Air Force's earlier remediation, is in the $40 million dollar range.

Q: What level of habitation will off-site location support after cleanup?
A: The site is defined as wetlands, therefore prohibiting development.

July Meeting

The next meeting will be held on Tuesday, July 12, 2005. Suggested topics include Sampling of Outfalls 4 and 5 and Canal Road Sampling.

Conclusion

The meeting closed at 8:00.