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NSA PANAMA CITY
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FINAL MINUTES FROM CONFERENCE CALL MEETING DATED 27 JULY 2007 CSS
PANAMA CITY FL
7/27/2007
TETRA TECH

Minutes of Special Meeting for the NSA Panama City Partnering Team

Subject:

Discussion of status for Naval Support Activity Panama City (NSA PC) Solid Waste Management Unit (SWMU) 2 and resolution of Florida Department of Environmental Protection Comments on the Technical Memorandum for May 2007 Sampling and Well Installation at SWMU 2

Date:

7/27/07

Attendees:

Eric Nuzie, FDEP (FDEP Federal Facilities coordinator)
Jim Crane, FDEP (FDEP Federal Programs Section Administrator)
Tracie Bolaños FDEP Remedial Project Manager for NSA PC
Mike Clayton, NSA PC Installation Environmental Program Manager
Bill Gates, NAVFAC SE Remedial Project Manager
Mike Maughon, NAVFAC SE Technical Section Head
Tom Johnston, Tetra Tech NUS, Inc., Task Order Manager

Introduction

The meeting began with introductions. At Eric's request Tom then explained that the group was meeting to discuss May 2007 data for SWMU 2. The purpose of the discussion is to come to consensus regarding status of SMWU 2 and to complete the Technical Memorandum for May 2007 Sampling. This would then be followed quickly by completion of the Corrective Measures Study and the Statement of Basis, and finally implementation of the remedy at SMWU 2 by the end of fiscal year 2007. The proposed remedy is land use controls with groundwater and surface water monitoring. Tracie added that meeting attendees should feel free to ask questions as they arise.

The group reviewed and discussed various figures and data from the subject Technical Memorandum as Tom described the data. Discussions concerning the concentrations of iron, aluminum, manganese, antimony, and benzene in groundwater and surface water ensued. The Discussion Summary below was condensed and does not necessarily present discussions in the order they occurred.

Discussion Summary

Tom described ecological risks as overestimated in the 1996 RFI report and explained that exceedances of HI=1 were slight. The overestimation of risks is supported by recent data that show the total aluminum concentrations are largely associated with non-bioavailable particulates. All agreed that ecological risks did not appear to be a concern at this point, although some question remained with respect to the impact from groundwater to surface water. These questions focused on iron and aluminum concentrations.

Tom characterized the predominant groundwater flow direction as northeastward from SMWU 2 although there is some minor radial flow from the SMWU in other directions. Global groundwater flow is toward the east with isolated locations that deviate from this flow direction. An unnamed creek exists to the north and northeast of SWMU 2. Groundwater immediately north of the creek and immediately south of the creek is intercepted by the creek and diverted as surface water to the marina located on the western edge of St. Andrew Bay.

All agreed that, based on the available data, benzene and antimony were minor concerns for human health risk but that continued monitoring for these chemicals would be required as part of the monitoring program. Manganese does not adversely affect surface water and there were few detections of manganese in excess of GCTLs. Two of the exceedances were minor (less than 25 percent of the GCTL). All agreed that continued monitoring for manganese is not necessary.

Jim Crane explained that FDEP verifies impact to surface water by collecting samples at the interface of groundwater and surface water bodies. Tom explained that only one well (PCY-2-10S) of the two new wells upgradient of the unnamed creek north of SMWU 2 could have been placed closer to the creek without destroying several trees because the area around the creek is wooded. The total iron concentration at the creek's edge would clearly exceed the marine SWCTL of 300 µg/L near surface water sampling location 02SW/SD08 because the groundwater total iron concentration 200 feet upgradient of the creek was 6,300 µg/L (well PCY-2-12S) and surface water location 02SW/SD08 had 1,950 µg/L total iron. Tom pointed out, however, that the total iron concentrations near the marina where the creek directly impacts St. Andrew Bay had non-detectable iron concentrations (detection limit = 12 µg/L). The total aluminum concentrations was non-detectable at 18 µg/L.

Tracie indicated that high aluminum and iron concentrations also were observed in the new upgradient well (PCY-2-8S), which had 18,400 µg/L total aluminum and 3,830 µg/L total iron. Furthermore, other background iron and aluminum concentrations greater than fresh water GCTLs and marine SWCTLs had been observed in other background wells. For example, the May 2007 total aluminum concentration was 4,420 µg/L and the total iron concentration was 873 µg/L in well PCY-2-2S. The group agreed that the elevated aluminum and iron concentrations might reflect natural conditions, therefore continued monitoring should include an attempt to better characterize these conditions. It was agreed that characterization of background natural conditions should include as many "background" wells from as wide an area as reasonably possible. Tom explained that previously collected samples in wells that appear to be unaffected by SWMU 2 had high metals concentrations but the turbidities were also high and the high metal concentrations were likely to be a result of high concentration of suspended particulates. Therefore, any additional sampling of these wells should be done with care to limit the turbidity as much as possible. If the observed groundwater

concentrations observed in SMWU 2 wells and surface water are within background concentrations, the conclusion would be that there is no effect from the SWMU.

Tom described a plot of total iron concentrations as a function of distance from SWMU 2 that he had prepared quickly for this meeting. The plot shows that the total iron concentrations decrease to about 300 µg/L at a distance of about 1,600 feet from well PCY-2-2. In the predominant groundwater flow direction (toward the northeast) the unnamed creek is about 1,100 feet away from this well. The point of discharge from the creek to the marina on the edge of St. Andrew Bay is about 1,400 feet away from this well and the total iron concentration in the surface water near this point was non-detectable at 12 ug/L. The edge of St. Andrew Bay located directly east of well PCY-2-2 is about 1,600 feet from the well. These observations and estimations lead to the conclusion that there is no current impact to St. Andrew Bay from SMWU 2 groundwater. It was acknowledged that these are fairly crude estimates and if the groundwater concentrations increase, there may be an impact to St. Andrew Bay.

After additional discussion all attendees agreed that monitoring of groundwater and surface water should continue. Monitoring will include total aluminum, total benzene, total iron, and possibly total antimony (to be determined by Jim Crane). As part of the monitoring program, a strategy for which wells to monitor, when new wells might have to be installed, and when to stop monitoring should be described. Details of this strategy were deferred to the preparation of the Corrective Measures Implementation Plan (CMIP). The group also agreed that implementation of land use controls to prevent exposure of humans to contaminated surface soil within the SMWU boundary and to prevent use of groundwater affected by SWMU 2 is necessary. The proposed LUC boundaries were presented and the group agreed on them. The LUCs should prevent:

- Use of GW
- Well installation
- Intrusive activities in soil

The group agreed that there was no need to install a fence around the SWMU. Tom Johnston volunteered to check the HSWA permit for NSA PCA to verify whether signs must be posted at the SMWU.

The group started to discuss decision logic. The draft logic included three possibilities:

- If data show unacceptable contaminant levels: Consider toxicity testing to evaluate actual impact to surface water body.
- If data are inconclusive: Collect more data. If still inconclusive, consider toxicity testing to evaluate impact to surface water body.
- If data are acceptable (i.e., less than background, GCTL, or marine SWCTL): Continued monitoring at a frequency to be determined.

This decision logic must be refined and included in the CMIP. Installation of new wells or use of other sample collection mechanisms (e.g., Trident Probe) would be considered if the additional sampling locations will help to resolve data questions, although Tom did not think Trident Probe would provide any better samples than micro wells and he

suggested that it would be more expensive than wells. The Navy will keep an open mind on this.

All agreed that this meeting would serve as the FDEP comments on the technical memorandum. Approval of the minutes will constitute approval of changes to the Technical Memorandum.

The following action items were identified:

- Jim Crane would verify whether the unnamed creek is considered to be a water of the state. **Completed; it is a water of the state.**
- Jim Crane would verify whether antimony should be included in the monitoring program. **Completed; it should be included.**
- Tom will compile the meeting minutes. **Completed.**
- Tom will finish the Technical Memorandum, Corrective Measures Study report, and Statement of Basis as soon as possible after the meeting minutes are approved. **In progress.**
- Tracie will research when to apply fresh water *versus* marine criteria (half of the unnamed creek north of SWMU 2 is fresh water and half is marine). Based on visual observations on July 31, 2007 by Mike Clayton, the fresh water portion of the creek is intermittent.
- Tracie/Jim will decide whether the unnamed creek must be protected as well as St. Andrew Bay. To date, emphasis has been on protection of St. Andrew Bay.
- Tom will provide to Tracie the text regarding the land use controls and monitoring program for her review before we finalize the CMS report.
- Tom Johnston will check the HSWA permit for NSA PCA to verify whether signs are needed. **In progress.**

A follow-up meeting among T. Bolanos, T. Johnston, and M. Clayton resulted in the following action items:

- Tom will be sure to clean up figures in the Technical Memorandum. This will include fixing duplicate data tags and an effort to make figures scales the same from figure to figure. **Completed 7-31-07.**
- Tom will double check to determine whether any more suitable existing background wells can be identified.
- Mike was to conduct field investigation to determine if there exists any type of influences that could affect sampling upstream in the unnamed creek for background surface water. This was completed 31 July, with no influences identified, but also no water to sample. Additional wetland north of unnamed creek also found to be dry.