UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 5
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REPLY TO THE ATTENTION OF:
DW-8J

March 19, 2004

Mr. Tom Brent
Naval Surface Warfare Center
Code RP3-10, B-3245
300 Highway 361
Crane, IN 47522-5001

Re: U.S. EPA Comments on SWMU#2 Dye Burial Grounds Corrective Measures Study Report dated December 2003

Dear Mr. Brent:

The United States Environmental Protection Agency (U.S. EPA) has reviewed the Corrective Measures Study report for Solid Waste Management Unit (SWMU) #2 - Dye Burial Grounds dated .

Comments on this report are attached.

If you have any questions regarding this matter, please contact me at (312) 886-7890.

Sincerely,

Peter Ramanauskas
Environmental Scientist
WMB, Corrective Action Section

Enclosures: (1)

C:\EPAWork\PRAMANAU\Crane\DBG\DBG CMS Comments.wpd

cc: Bill Gates, SOUTHDIV (w/ encl)
Doug Griffin, IDEM (w/ encl)

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COMMENTS ON THE CORRECTIVE MEASURES STUDY REPORT FOR
SWMU 2 - DYE BURIAL GROUNDS - DATED DECEMBER 2003
NAVAL SURFACE WARFARE CENTER
CRANE, INDIANA

Comment 1:

Referring to the Clean Air Act section on page 3-4, NWIRP appears to be an undefined acronym.

Comment 2:

Section 3.4.2. refers to Table 3-4, which is missing.

Comment 3:

Section 4.2.4.2. under Effectiveness refers to Table 2-1, which is missing. On page 4-9, this same part refers to treatment by-products consisting of spent solvents. Would these be water based solvents, organic solvents, or both?

Comment 4:

Section 4.2.4.3., Effectiveness, refers to Table 2-1, which is missing. The Implementability part of this section discusses ex-situ bio-slurry reactor and bio-pile technology. These technologies are said to be implementable but are later eliminated from further consideration apparently because of the need to perform treatability testing and complexities in the sequence of operations (e.g. soil staging, treatment, and disposal). However, as stated earlier in this section, the Navy has utilized bio-pile technologies for explosives contaminated soils, the infrastructure to utilize this technology already exists on the base, and this sequence of operations has been successfully performed. As such, it seems inappropriate to discount bio-pile technology based on implementability during the preliminary screening. If proving the effectiveness of such technology through treatability testing would be more expensive and/or time consuming relative to other proposed remedies, this should be stated and a detailed basis provided.

Comment 5:

Section 4.2.4.4., Effectiveness, refers to an unknown "Table 2-". The Conclusions part of this section mentions pre-treatment of Dye Burial Grounds soil with LTTD. Why would this be considered pre-treatment instead of a final remedy for DBG if LTTD would likely be effective in producing a clean soil? Furthermore, if the treated soil is clean of contaminants and meets acceptable standards, it may be returned to the DBG site as backfill thereby saving on off-site disposal cost. This technology should be further considered in the CMS and evaluated in Section 5 as Alternative 4: Excavation, LTTD Treatment, Backfilling.

Comment 6:

Section.4.3.2., Component 2, discusses groundwater flow velocity and dye transport velocities. Appendix C presents calculations for these velocities and estimates time travel for dye between the capped area and downgradient wells to be around 70 years.

The study from which the hydraulic conductivity value was obtained derived the value from slug testing. It is stated that the aquifer properties estimated from slug testing should be considered as bulk equivalent properties, appropriate for isotropic, homogeneous, fully-penetrated, and confined aquifers. The two wells for which the Appendix C calculations were done are for wells located in the Lower Pennsylvanian Sandstone aquifer which is unconfined and fractured.

Given the heterogeneous nature of the of the geology beneath the SWMU, present a discussion of the uncertainties associated with the parameters used in these calculations (e.g., hydraulic conductivities and retardation factors, etc). As contaminants frequently follow the course of least resistance, a worst-case (fracture flow, karst) scenario for water and dye transport should be prepared and travel times calculated. In addition, the Navy should re-evaluate the

groundwater monitoring plan and the associated costs based on the worst-case scenario.

Comment 7:

Section 4.3.3., Component 1: Why would cross-sectional excavation of the DBG make it more difficult to segregate the non-contaminated cap material from the contaminated soil beneath the cap? Why would only one-third of the over-excavated soil and landfill cap material be used for backfilling versus the entire volume of clean material (24,000 yd^3)? This would leave only 15,000 yd^3 for off-site disposal.

Comment 8:

There are missing remedy evaluation criteria in Section 5.0 (e.g., public acceptance, state acceptance). See MGBG CMS Addendum #1 Comment 18 sent via email November 19, 2003.

Comment 9:

The Navy should include a discussion of the time frames required to implement the remedy under the Implementability parts of Section 5.0.

Comment 10:

In order for EPA to fully evaluate the Alternative presented in Section 5.2.1, provide additional explanation of how the integrity and effectiveness of the cap will be determined and maintained along with the other inspection checks and requirements.

Comment 11:

Alternative 3 cost estimates are not provided in Appendix B as stated on page 5-7.

Comment 12:

Section 6.0 should be re-written as needed to address EPA comments on previous sections of the document.