UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION II

DATE: APR 2 6 1995

SUBJECT: Biological Technical Assistance Group Meeting
Tutu Wells Site

FROM: Shari Stevens, Coordinator
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TO: Caroline Kwan, Remedial Project Manager
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The following comments represent the consensus of the Region II Biological Technical Assistance Group (BTAG) review as discussed during the BTAG meeting of April 20, 1995. The documents reviewed by the group were the "Draft Feasibility Study," dated March 1995 and the "Phase II Remedial Investigation," dated April 1995 both prepared by Geraghty and Miller, Incorporated, and the "Final Endangerment Assessment," dated March 24, 1995 and prepared by CDM Corporation for the Tutu Wells site in St. Thomas, U.S. Virgin Islands.

Final Endangerment Assessment

The BTAG had previously reviewed the draft version of this document dated August 26, 1994. The concerns expressed in the November 1, 1994 BTAG have not been addressed. Our past comments regarding the selection of chemicals of concern (COC) and reference toxicity values are still valid. For more detailed information please refer to the November 1, 1994 memo.

Phase II Remedial Investigation

The BTAG had previously reviewed the draft version of this document dated August 1994. One of our main concerns was the potential for groundwater plumes to discharge into the forested wetland system in the southeastern portion of the site. According to Section 6.2 "Mechanisms of Migration," groundwater discharge into Turpentine Run may occur at Four Winds Plaza where the storm sewer is below the water table. Organic COCs have been detected in this storm water sewer (page 6-10). However, storm water sanitary sewer and sediment sampling results (Figure 5-33) further downstream (in the enclosed Turpentine Run) indicate that organic COCs are non detectable. Due to the fact that groundwater samples had elevated levels of metals, sediment and storm water analysis should include TAL inorganics. Sampling downgradient of this enclosed area where sediments might tend to settle out is needed to properly evaluate the potential for off-site migration of site-related contaminants.

Observations at the Mount Zion stream gauging location indicate that the Turpentine run may behave as a gaining or losing stream. In Section 6.2.3 "Migration in Surface Water" the document states that "...surface-water drainage provides most, if not all, of the input to Turpentine Run in the southeast portion of the study

area" (page 6-11). Therefore, the document concludes that since the majority of the water reaching the wetland systems will be from surface water runoff, and the groundwater that is entering Turpentine Run is so minimal, any contaminants present would be too diluted to be of concern to the wetland areas. Due to the fact that no samples were taken in this area, and potential groundwater discharge points in the wetlands have not been identified, the BTAG is still recommending that this work be conducted. A characterization of the wetland, including a description of the type of wetland present, species use, and sediment and surface water sampling should be completed. Sediment and surface water analysis should include TCL organics and TAL inorganics.

Furthermore, Turpentine Run also discharges into Mangrove Lagoon and thus has the potential to transport contaminants into this habitat. Information regarding the link between the wetlands and Mangrove Lagoon should be included. A map indicating the location of the wetland area and Mangrove Lagoon in respect to the Tutu wells site should also be provided. Additional concerns regarding the use of a multiplier for screening contaminants, and the lack of ecological toxicity values for addressing surface soil remediation have still not been addressed.

Draft Feasibility Study

Our main concern with this document is the groundwater remedial alternatives. Due to the lack of sufficient data regarding the relationship of the groundwater with the wetland areas, there is concern that pumping water will lead to a drawdown in the aquifer and subsequently a reduction in the wetland areas. In addition, if treated water is discharged to surface water, as opposed to beneficial use, the affect of this volume of water on Turpentine Run and in-turn the wetland areas should be reviewed. In Table 3-2, "Summary of Potential Federal Location-Specific Applicable or Relevant and Appropriate Requirements (ARAR)," the document states that "no designated wetland areas have been identified on and adjacent to the Tutu Wells Site." Due to the fact that wetlands have been identified to the south of this site, this ARAR should be included. In order to comply with federal wetland ARARs, the three parameter method should be used to delineate wetlands. Also note that a wetlands assessment and restoration plan will be needed for any wetlands impacted or disturbed by contamination or remedial activities. Should you require additional information regarding wetland issues, the BTAG and/or John Cantilli (212-637-3810) of the Marine and Wetlands Protection Branch are available for assistance.

In Section 3.1.1 "Remedial Action Objectives" the document states that "No RAOs are needed for environmental settings or ecosystems. Based on the findings of the Draft Final RI, no ecosystems are potential receptors of COCs through the

groundwater or soil pathways" (page 3-3). In light of our previous comments regarding the lack of information on groundwater discharge points and the potential effects of Turpentine Run on the wetland areas and Mangrove Lagoon, this conclusion is not supportable.

The BTAG is interested in reviewing any future documents pertaining to this site. We are also interested in obtaining feedback regarding the usefulness of our comments. If you have any questions, comments, or require further information, please contact Mindy Pensak at (908) 321-6705.

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