UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION II

DATE: NOV 0 1 1994

SUBJECT: Biological Technical Assistance Group Meeting
Endangerment Assessment for Tutu Wells

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 October 20, 1994. The document reviewed by the group was the "Endangerment Assessment," dated August 26, 1994 and prepared by CDM Corporation, for the Tutu Wells site in St. Thomas, U.S. Virgin Islands.

The terrestrial Ecological Risk Assessment (ERA) for this site was conducted utilizing results of soil samples collected from the top two feet of soil. Without a map of the soil sample and background sample locations, it is difficult to assess the appropriateness of the sampling locations in defining the extent of contamination. However, when conducting a terrestrial ERA, soil samples should be collected from the top one foot of soil, as this is the zone in which ecological receptors will most likely come in contact with soil contamination. Any future soil samples should be collected from the top twelve inches of the soil.

When choosing the Chemicals of Concern (COCs) for the site, inorganic soil concentrations were compared to twice the background concentrations. This use of a multiplier is inappropriate when screening for ecological contaminants of concern. Maximum site contaminant levels should instead be compared to the average detected background concentrations. This is a more conservative approach for the initial screening of site contamination.

The assessment of terrestrial risk was conducted using the anole and the red-tailed hawk. There are some concerns regarding the "safety factors" used to derive reference toxicity values (RTVs) utilized in this ERA (Table 4-1). First, it may be inappropriate to use the conversion factor of 0.2 when converting an acute LD_{50} to an acute LOAEL, since this conversion is based on a USEPA pesticide reference developed for permitting purposes. Because the applications differ between programs, use of these factors as a standard may not be appropriate. Rather than relying solely on reference to use in another program, justification for the use of particular conversion/safety factors should be provided. Second, since there were no RTVs available for the anole, available RTVs for different species (e.g., mouse) were converted by using a different safety factor. Converting RTVs for one species based

on a known RTV for a completely different species significantly increases the uncertainty associated with the analysis. Instead of the arboreal anole, it may have been more appropriate to select a small rodent species for the ecological receptor in the terrestrial ERA, since; there are available RTVs for these species, they comprise a much larger component of the red-tailed hawk's diet (70% compared to 6%), and they are expected to occur on the site (page 13). This could significantly reduce the uncertainty associated with the ERA. Lastly, this ERA did not differentiate acute and chronic risk. All acute RTVs were converted to chronic RTVs. Both acute and chronic risk should be calculated separately.

Both 2-hexanone and 2-methylnaphthalene were removed from consideration as potential COCs "due to the lack of ecotoxicity data for these chemicals, and thus their expected lack of contribution to the risk at this site..." (page 29). It is inappropriate to exclude potential COCs on this basis since a lack of available toxicity information does not preclude the associated risk. Although there are no soil guidance for these contaminants, available sediment guidelines show effects at much lower levels than the reported concentrations of these contaminants in site soils. Therefore, further investigation of these two compounds is warranted. Further information is necessary to determine whether these two contaminants are located in areas of "hot spot" contamination, such that remediation for other contaminants at this site may in addition remove 2-hexanone and 2-methylnaphthalene from the site. This information should be included in the RI.

There are some concerns regarding the habitat description, location of background sample collection, size of the groundwater plume, location of wastewater discharge, and soil sampling locations which have not been included with this document. However, since the Remedial Investigation (RI) may address these concerns, these comments will not be elaborated upon until review of the RI is completed.

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 me at (908) 906-6994.

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