



## UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

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SDMS Document



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**Express Mail-**  
**Return Receipt Requested**

Hollis Griffin, Director  
Division of Environmental Protection  
Department of Planning and Natural Resources  
Division of Environmental Protection  
Bldg. 111- Apt. 14A  
Water Gut Homes-118  
Christiansted, St. Croix USVI 00820-5065

Re: **Comments on the Final Draft Feasibility Study Report, Virgin Islands Chemical Superfund Site, St. Croix, USVI**

Dear Mr. Griffin:

Enclosed for your review and comment is the draft Proposed Plan for the Virgin Islands Chemical Superfund Site. The proposed remedy for the Site is soil vapor extraction/air sparging for the tank farm area and monitored natural attenuation, with a contingency pump and treat system, for the former process pit area. This and other alternate remedies, as well as the supporting documentation, have been discussed with your staff and consultant in various meetings and conference calls.

Prior to the preparation of the Proposed Plan, several reports were submitted to your office for review and comment, including a Draft Feasibility Study in July 2000, Draft Soil Vapor Extraction/Air Sparging Pilot Study Report in October 2000, and the Final Draft Feasibility Study (FS) report in November 2000. To date, we have received comments from your office

only on the Final Draft Feasibility Study. These comments, which addressed the site hydrogeology, were discussed with your staff and consultant via teleconference on January 25, 2001 and are further addressed in the enclosed response. Should you have any further comments on these reports, please submit them with your response letter on the Proposed Plan.

Please submit your comments on the Proposed Plan by May 11, 2001.

Please call me if you have any questions.

Sincerely,



Richard Caspe, Director  
Emergency Response and Remedial Division

Enclosure

### Enclosure

1. Page 1, "Estimated Cleanup Times," general - In response to DPNR's request for further clarification, a brief discussion will be added to the FS report regarding the uncertainty associated with cleanup time estimates.

The technical basis for cleanup time estimates corresponding to various remedial alternatives is detailed in the Final Draft FS Report. Cleanup time was assessed for MNA alternatives using the EPA BIOSCREEN model; electronic files were also attached for independent evaluation. Pump-and-treat cleanup time estimates were completed using the standard pore volume flush approach. SVE/AS cleanup time estimates were based upon the results of the SVE/AS pilot study and engineering judgement corresponding to general performance of SVE/AS systems for similar applications. Overall, the cleanup time estimates are consistent with industry practice for FS evaluations and are sufficient to support remedy selection for the range of alternatives evaluated.

The FS evaluations also included conventional remedial alternatives, such as SVE/AS and groundwater extraction/treatment, which are capable of actively controlling contaminant migration and removing contaminant mass from the environment. The fundamental assumption is that these active treatment technologies will operate until: 1) the cleanup goals are achieved, or 2) their effectiveness decreases to a level that is comparable to the effectiveness of monitored natural attenuation. Standard industry practice dictates that all conclusions and decisions regarding treatment system shut down, the effectiveness of treatment system performance and natural attenuation, and achievement of cleanup goals be based upon groundwater and soil data obtained from long-term monitoring and confirmatory sampling.

2. Pages 2 and 3, "geo-hydrology" - We do not believe that the Final Draft FS Report is "flawed based upon the misinterpretation of site and area geo-hydrology," as indicated by DPNR.

The source for the background hydrogeologic information presented in the Final Draft FS Report is the Final Remedial Investigation (RI) Report (M/H 2000), which was previously reviewed and accepted by both EPA and DPNR. USGS hydrogeologic publications for St. Croix were consulted during the RI, were referenced in the Final RI Report, and are indirectly referenced in the Final Draft FS Report.

DPNR's comments are based upon information obtained from USGS publications on the regional hydrogeology. The comments do not adequately consider the accepted findings of the RI or site-specific information in general, such as boring logs, continuous and discrete rounds of water level measurements, and groundwater data. For example, the continuous water level measurements reported in the Final Draft FS Report, which were taken during the SVE/AS pilot study, clearly support that the shallowest portion of the alluvial aquifer (i.e., approximately 15 to 40 feet below ground surface (bgs)); daily water

level variations due to offsite pumping not apparent) is not in direct communication with the deeper portion of the alluvial aquifer (i.e., deeper than 40 feet bgs; daily water level variations due to offsite pumping are apparent). Hence, semi-confined conditions exist at the site on a localized scale within the subject portion of the alluvial aquifer. In addition, the historic groundwater data support that groundwater contamination exceeding MCLs remains localized, both horizontally and vertically, within the upper portion of the alluvial aquifer at the AST and FPP areas. Finally, the Kingshill formation is deeper at the site than indicated by DPNR; it is not pertinent to FS evaluations.