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STATE OF FLORIDA
DEPARTMENT OF HEALTH AND REHABILITATIVE SERVICES

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Mr. Richard Gillig
Technical Project Officer
Division of Health Assessment and Consultation
Agency for Toxic Substances and Disease Registry
Atlanta, GA 30333

Rick

Dear Mr. Gillig:

The purpose of this letter is to update the 1989 Preliminary Health Assessment for the Sherwood Medical Superfund site. This update is being prepared in conjunction with an interim clean-up action proposed by the Environmental Protection Agency (EPA). A full Health Assessment will be prepared following the completion of the Remedial Investigation/Feasibility Study (RI/FS), scheduled for completion in mid-1991.

Background

A Preliminary Health Assessment for the Sherwood Medical Superfund site was prepared by the Florida Department of Health and Rehabilitative Services (HRS) in April 1989. Since then, an Interim Remedial Measures (IRM) report has been prepared by Sherwood Medical. This IRM report documents volatile organic compound (VOC) contamination in both the surficial and Floridan Aquifer at the site. The predominate VOCs at this site are acetone, trichloroethene, and tetrachloroethene (also known as perchloroethylene). Additionally, VOC contamination was discovered in one off-site private well (Florist's). A new well, free of VOC contamination, was installed for this residence by Sherwood Medical. No additional VOC contamination has been discovered by semi-annual sampling of other private wells in the vicinity.

The interim clean-up action proposed by EPA involves the installation of a system of recovery wells in the surficial aquifer on the west site of the site. These wells will be pumped and the water treated with an air stripper to remove the VOCs. The purpose of pumping and treating the ground water is to prevent the spread of contamination off site. Plans for final remediation of the surficial aquifer, as well as the Floridan aquifer, will be addressed in the RI/FS, scheduled for completion in mid-1991. A full Health Assessment will be prepared by HRS following the completion of the RI/FS.

Assessment of Health Effects

Ingestion of contaminated ground water from this site has not resulted in any known adverse health effects. It is difficult to predict what health effects might be expected from past ingestion of VOC contaminated ground water at this site because the period of ingestion, and the exact concentrations ingested can only be estimated. In addition, the human health effects from long term exposure to low levels of VOCs are uncertain. However, adverse health effects at this site are unlikely because estimates of the VOC concentrations in the on-site Floridan well and the contaminated off-site private well are relatively low and the exposure period is estimated to be relatively short.

There is no known current exposure via ingestion of contaminated ground water from this site. The on-site production/drinking well has been equipped since 1985 with an air stripper to remove the VOCs. The only off-site drinking water well that was known to be contaminated (Florist's well) was replaced with a well free from contamination. The private drinking water wells in the immediate vicinity of the site have been monitored semi-annually and have not been contaminated.

It is anticipated that the proposed interim clean-up will prevent the spread of contaminated ground water off site and thus limit future exposure. Failure to remediate the contaminated ground water would eventually result in unacceptable concentrations of VOCs in the off-site ground water.

There are no known health effects from past or current exposure to VOCs from the existing air stripper. Air transport and exposure modeling by EPA indicates that air concentrations of VOCs from the existing air stripper are acceptable for human exposure.

Exposure to VOCs from an additional air stripper proposed for the interim clean-up will be dependent on how it is designed and what the VOC concentrations in the ground water are. Preliminary air transport and exposure modeling by EPA indicates that air concentrations of VOCs from this air stripper will be acceptable for human exposure.

Conclusions

1. Ingestion of contaminated ground water from the Sherwood Medical site has not resulted in any known adverse health effects. Adverse health effects could, however, be expected from lifetime consumption of the ground water at concentrations that currently

exist on site. Failure to remediate the contaminated ground water would eventually result in unacceptable concentrations of VOCs in the off-site ground water.

2. Inhalation of the VOCs from the existing air stripper has not resulted in any known adverse health effects. Air transport and exposure modeling by EPA indicates that air concentrations of VOCs from the existing air stripper are acceptable for human exposure. Preliminary air transport and exposure modeling for an additional air stripper indicates that its operation will also be acceptable.

Recommendations

1. Ground water at this site should be cleaned-up to prevent its movement off site and to reduce the potential for exposure via ingestion. The private wells around the site should continue to be sampled on a routine basis to insure they remain free of VOC contamination.

2. The proposed air stripper should be designed, tested, and operated so that the resulting VOC air concentrations are acceptable.

Please contact me at (904) 488-3385 if you have any question or need additional information.

Sincerely,



E. Randall Merchant
Biological Administrator
Toxicology and Hazard Assessment

cc: Chuck Pietrosewicz - ATSDR
David Abbott - EPA
Kelsey Helton - DER
Charles Luther - Volusia County PHU