



North Carolina Department of Health and Human Services  
Division of Public Health • Epidemiology Section

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Michael F. Easley, Governor

Carmen Hooker Odom, Secretary

July 5, 2007

**MEMORANDUM**

**TO:** Qu Qi  
Underground Injection Control Program  
Aquifer Protection Section

**FROM:** Luanne K. Williams, Pharm.D., Toxicologist *LKW*  
Medical Evaluation and Risk Assessment Unit  
Occupational and Environmental Epidemiology Branch  
North Carolina Department of Health and Human Services

**SUBJECT:** Use of Non-Biological Products EHC-M™ and EHC-A™ to Enhance  
Biodegradation of Contaminated Groundwater

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RECEIVED/DEMN/DPH  
AQUIFER PROTECTION SEC.

I am writing in response to a request for a health risk evaluation regarding the use of non-biological products including EHC-M™ and EHC-A™ to enhance biodegradation of contaminated groundwater. Based upon my review of the information submitted, I offer the following health risk evaluation:

1. Some effects or hazards reported to be associated with the chemicals proposed for use are as follows:
  - Exposure can cause irritation of eyes, nose, throat, lungs, and gastrointestinal tract (Micromedex TOMES Plus System CD-ROM Database, Volume 73, 2007)
2. If the products are released into the environment in a way that could result in a suspension of fine solid or liquid particles (e.g., grinding, blending, vigorous shaking or mixing), then proper personal protective equipment should be used.
3. Persons working with this product should at least wear goggles or a face shield, gloves, and protective clothing. Face and body protection should be used for anticipated splashes or sprays.
4. Eating, drinking, smoking, handling contact lenses, and applying cosmetics should never be permitted in the application area during or immediately following application. Safety controls should be in place to ensure that the check valve and the pressure delivery systems are working properly.



5. The Material Safety Data Sheets should be followed to prevent adverse reactions and injuries.
6. Access to the area of application should be limited to the workers applying the product. In order to minimize exposure to unprotected individuals, measures should be taken to prevent access to the area of application.
7. Efforts should be made to prevent contamination of existing or future wells and surface waters that may be located near the application area.

Please do not hesitate to call me if you have any questions at (919) 707-5912.

cc: Peter Pozzo  
NCDENR  
Aquifer Protection Section

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