



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
REGION III  
1650 Arch Street  
Philadelphia, Pennsylvania 19103-2029

MAY 09 2011

Mr. George Jugovic, Jr.  
Regional Director  
Pennsylvania Department of Environmental Protection  
Southwest Regional Office  
400 Waterfront Drive  
Pittsburgh, Pennsylvania 15222-4745

Re: Tunnelton Liquids Company: NPDES Permit #PA 0091472  
Conemaugh Township, Indiana County, Pennsylvania

Dear Mr. Jugovic:

Thank you for making time to discuss the history of the Tunnelton Liquids Company (TLC) with Karen Johnson and David Rectenwald of the US Environmental Protection Agency's (EPA) Underground Injection Control (UIC) Program on April 15, 2011. Since that call, Karen and her staff have reviewed the file documents copied from your offices, including the August 21, 1997 Consent Order and Agreement, the 2002 National Pollutant Discharge Elimination System (NPDES) permit and the 2006 NPDES permit renewal submission from TLC, as well as numerous inspections and monitoring reports. It is our understanding that the TLC facility treats acid mine drainage leachate generated from the coal refuse disposal area associated with the Marion deep mine, in combination with 100,000 gallons per day of oil field waste including: drilling fluids, and produced fluids (brine and frac flowback) from oil and gas production, generating both a treated wastewater discharge and clarifier sludge. While our discussion with you raised the question of whether there is currently injection taking place of the clarifier sludge, information from the operator, and the NPDES permit issued by the Pennsylvania Department of Environmental Protection (PADEP) in December 2002, which is currently administratively extended beyond its expiration date in December 2007, identifies this method as the means of approved disposal. Such injection requires a UIC permit from EPA.

The EPA has implemented the UIC Program for the Commonwealth of Pennsylvania since June 25, 1984, as the state elected not to apply for primacy for the program. We have worked closely with many of the Southwest Regional Office staff on numerous permits and cases over the years and it is a concern to us that we have just recently learned of the operation of this disposal well, which we understand has been operated under a PADEP Consent Order and Agreement since 1997.

The primary concern of the UIC program is the protection of underground sources of drinking water (USDW's) for current and future uses. While the disposal of acid mine drainage (AMD) sludge, generated by AMD leachate treatment and mixed with lime, by injection back into existing mine voids is accepted as a beneficial practice to improve impaired mine pool water



quality, the injection operation must be identified to EPA, and properly authorized in advance by rule or by permit (See 40 CFR §§144.24 and 144.84.). However, injection of sludge from treatment of AMD leachate combined with oil field brine is not authorized. This would be considered an industrial waste and be operated under the requirements for a Class I injection well (40 CFR §§144.5 and 146.11) for proper disposal. A Class I well must inject below the lowermost USDW. The TLC well disposes of the industrial waste above or into a USDW, at a depth between 200 and 600 feet below the surface, and could potentially endanger USDW's.


Pennsylvania 26R forms submitted under the Commonwealth's residual waste program, from several drillers that took their brine and other drilling fluids to the TLC facility during 2009 and 2010, indicate the presence of gross alpha, gross beta, radium 226, and radium 228, in addition to bromide and other constituents in waste provided for treatment. The NPDES permit has not required monitoring or reporting for these constituents in the effluent discharged to the Conemaugh River. Thus, the effectiveness of the facility's treatment has not been demonstrated, and we must assume that at least some of these constituents were disposed with the clarifier sludge into the shallow injection well.

For all of these reasons, the injection into the mine void must cease immediately and an alternate means of disposal must be found for the clarifier sludge. We realize that this might cause the facility to cease treating the AMD leachate, but the continued injection is unauthorized. We plan to take samples at the facility in the near future and take appropriate action with TLC to cease the unauthorized injection and/or cease handling any oil field wastes.

In addition, we ask that you identify to EPA any additional operations where injection is used within your Region, including AMD slurry wells, which PADEP may have authorized through a permit or agreement or of which you are otherwise aware. Please provide this information by June 5, 2011.

If you have any questions, or suggestions for alternate resolution of this situation, please contact me at 215-814-5422 or Karen Johnson at 215-814-5445.

Sincerely,



Jon M. Capacasa, Director  
Water Protection Division

cc: Dana Aunkst, Deputy Secretary for Field Operations.  
Scott Perry, Bureau Director, Bureau of Oil and Gas Management

