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

June 11, 2012

Mr. Michael G. Hoover
Windfall Oil and Gas
P.O. Box 738
Falls Creek, PA 15840

Re: UIC Permit Application Submission

Dear Mr. Hoover:

EPA Region III has completed their review of Windfall Oil and Gas' application to construct and operate one Underground Injection Control (UIC) Class II-D brine disposal injection well, the Zelman #1, in Clearfield County, Pennsylvania. Please find enclosed a Notice of Deficiency (NOD) for this permit application. The NOD requires the submission of additional information that will allow this office to complete its review of the application and begin the process of developing a draft permit for the facility. Your application has been assigned the following permit identification: PAS2D020BCLE. Please use this permit identification in all future correspondence. If you should have any questions please give me a call at 215-814-5464 or you may email me at platt.steve@epa.gov.

Sincerely,

S. Stephen Platt
Ground Water & Enforcement Branch (3WP22)
Office of Drinking Water & Source Water Protection

Attachment

Notice of Deficiency

Notice of Deficiency

For

Windfall Oil and Gas

Underground Injection Control (UIC) Permit Application PAS2D020BCLE

Please provide additional information on the deficiencies outlined below so that EPA Region III can take additional steps to process the UIC permit application.

Attachment A: Area of Review

Although you have selected the one-quarter mile fixed radius around the injection well as your area of review, EPA Region III traditionally calculates the zone of endangering influence to confirm that the one-quarter mile area of review is sufficient. To the extent possible, please provide the following information for the reservoir characteristics of the injection formation: permeability, porosity and current reservoir pressure. The application did indicate the permeability of the injection zone was .0061 millidarcies, but that seems extremely low. The Oriskany formation more typically exhibits a permeability range between 10 – 100 millidarcies.

Attachment B: Maps of Wells in Area of Review

Please provide information on the names and addresses of property owners that live within one-quarter mile of the proposed area of review. We need this information for purposes of public notification.

Attachment E: Name and Depth of USDWs

We need to confirm the depth to the lowermost USDW. The application referenced a drilling log for well 37-033-20597 which indicated fresh water at 750 feet below land surface (BLS). There was also a reference to fresh water at 900 feet MSL. This appears to equate to a depth of approximately 800 feet BLS at the well location. Would you please verify this information and provide the depth to the lowermost USDW in feet BLS.

Attachment G: Geologic Data

The application discusses the subsurface displacement of the Onondaga south of the facility. Gas storage in the area seems to indicate that faulting has acted as traps with definitive boundaries. Can you provide more information on the non-transmissive nature of the faulting and how the injection over time will be contained within the boundaries of the faulting. The presence of faults has become a big issue due to recent seismic events throughout the country.

We need as much information as possible to show that faulting in the area will not be influenced by injection.

Attachment K: Injection Procedures

Please submit an analysis of the total organic carbon (TOC) contained within the injection fluid.

Attachment L: Construction Procedures

The application indicates that 11 ¾ inch casing will be run to 375 feet and cemented back to the surface. This will protect the depth of the deepest ground water used in the area. A string of 8 5/8 inch casing is then proposed to be run to 1200 feet and cemented back to the surface. This casing will protect the lowermost USDW. If the lowermost USDW is at approximately 800 feet BLS, why set casing at 1200 feet BLS? Is there any possibility that a carbon bearing reservoir with high TDS exists between 800 feet and 1200 feet? We have some concern that, depending on how the well is drilled, fluids could migrate upwards from 1200 feet, into the lowermost USDW before it is cased off. Would it make sense to place the 8 5/8 inch casing at 850 feet?

Attachment O: Plans for Well Failures

Since a commercial facility is planned, we need more information on how security will be maintained at the facility. The application mentioned that a fence will surround the facility. Will it have a locking gate? What will be the hours of operation for the facility and will the facility be staffed during hours of operation? Will security cameras be installed? Will a manifest system for produced fluid delivery be required? These are all important issues that need to be addressed to prevent unauthorized access to the injection well.

Attachment P: Monitoring Program

Commercial injection wells require more frequent mechanical integrity testing; every two years, not every five.

Attachment Q: Plugging and Abandonment Plan

What kind of spacers will be provided between plugs, gel? Please provide a schematic diagram of the injection well after it has been plugged and abandoned.