UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 5
77 WEST JACKSON BOULEVARD
CHICAGO, IL 60604-3590

FACSIMILE TRANSMITTAL FORM

Date: December 10, 2007

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Clerk of the Board

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Subject: *Core Energy, LLC (State Charlton #4-30)*
Appeal No. UIC 07-02
Permit Fact Sheet

Number of Pages (including cover sheet): 4

Dear Ms. Durr:

The following fax is the fact sheet for the Core Energy, LLC UIC permit, which was challenged in Appeal No. UIC 07-02. David Heckler contacted me this morning and requested that I fax you a copy of this document. The fact sheet is listed at number 22 on the administrative record index submitted as attachment 6 to the Region's Response to Petition.

Regards,

Erik Olson

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UNDERGROUND INJECTION CONTROL (UIC) PROGRAM
PERMIT MI-137-5X25-0001

FACT SHEET: Core Energy, LLC Class 5X25 Well State-Charlton #4-30 in Otsego County, Michigan

Introduction

Core Energy, LLC of Traverse City, Michigan has applied to the United States Environmental Protection Agency (USEPA) for a permit to convert and operate a Class V injection well located in Otsego County, for the permanent storage of carbon dioxide (CO_2) as a supercritical fluid.

Review of the permit application indicates that no significant environmental impact should result from the injection operation. The USEPA therefore intends to issue a permit for this well. Under the authority of Title 40 of the Code of Federal Regulations (40 CFR) Parts 144 and 146, USEPA permits must specify conditions for construction, operation, monitoring, reporting, and plugging and abandonment of injection wells so as to prevent the movement of fluid into any underground source of drinking water (USDW). In accordance with 40 CFR §124.8, general information and highlighted permit conditions specific to this well are as follows:

Facility Background

This well is an experimental technology well (subtype 5X25) which will inject CO_2 into deep underground rock formations for permanent storage. The injection of CO_2 is one step in Carbon Capture and Storage, an experimental technology being developed as a method to stabilize levels of greenhouse gases in the atmosphere and mitigate climate change.

Core Energy, LLC will own and operate the proposed well for a limited test of CO_2 injection into the Bass Island Formation at proposed depths between 3442 and 3515 feet below the surface. The CO_2 will be stored in the Bois Blanc Formation and the Bass Island Dolomite, below 3190 feet beneath the surface. Core Energy is working with the Midwest Regional Carbon Sequestration Partnership (MRCSP) to complete a research project aimed at observing the behavior of CO_2 injected into these rock formations.

Construction Requirements

The construction of the injection well meets the regulatory criteria of 40 CFR §144.52(a)(1). The injection well is cased and cemented to prevent the movement of fluids into or between USDWs.

Site Geology

The injection zone is the Bois Blanc Formation and Bass Islands Dolomite from 3190 feet to 3515 feet below the surface. The immediate overlying confining zone is the Amherstberg-Lucas Formation which is composed of limestone, dolomite, and anhydrite. Adequate confining layers exist between the Bois Blanc Formation formation and the base of the lowermost Underground Source of Drinking Water.

Underground Sources of Drinking Water (USDW)

A USDW is defined as any aquifer or portion thereof which contains less than 10,000 milligrams per liter of total dissolved solids and which is being or can be used as a source of drinking water. The base of the lowermost USDW has been identified at a depth of 665 feet below the surface. This water-bearing formation is the Glacial Drift.

Operational Parameters

Area of review (AOR)

The AOR is defined as the area within a 1/4-mile radius of the injection well. It has been determined that there are 0 producing, 1 injection, 0 temporarily abandoned, 1 plugged and abandoned, and 1 monitoring wells that penetrate the confining zone within the AOR. The construction and plugging details have been reviewed and determined to be adequate to prevent the upward movement of fluids or gases.

Maximum Injection Pressure

The proposed permitted maximum injection pressure shall be limited to 1197 pounds per square inch gauge (psig).

Financial Assurance

Core Energy, LLC has demonstrated adequate financial resources to close, plug and abandon this underground injection operation. A bond in the amount of $250,000 has been established for this purpose with Chase Bank.

Intent to Issue a Permit

Review of the permit application indicates that no significant environmental impact should result from the issuance of this permit. In accordance with the provisions of the Safe Drinking Water Act, as amended (42 U.S.C. 300f et seq., commonly known as the SDWA) and attendant regulations incorporated by the USEPA under Title 40 of the Code of Federal Regulations at Parts 124, 144, 146, and 147, the USEPA intends to issue a permit for the injection well.

Public Comments

Copies of the draft permit and administrative record for this permit action are available for public review between 9 a.m. and 4 p.m. at the address listed below. It is recommended that you telephone Leslie Patterson at (312) 886-4904 before visiting the Region 5 office:

U.S. Environmental Protection Agency (WU-16J)
Direct Implementation Section (Attn: Lisa Perenchio, Chief)
77 West Jackson Blvd.
Chicago, Illinois 60604-3590

The dates of the public comment period for the draft permit will be published in the Gaylord Herald Times. The location, date, and time of any public hearing or informational meeting will also be published in the Gaylord Herald Times.

Part C of the SDWA specifically mandates regulation of the underground injection of fluids through wells to assure that the quality of the underground sources of drinking water is protected. Section 1421 of the SDWA requires the USEPA to administer underground injection control (UIC) programs in the states which do not have approved UIC programs. Michigan has not acquired primacy over the UIC program for Class V injection wells, therefore USEPA is administering the permit program pursuant to regulations at 40 CFR Part 147.