



Mike DeWine, Governor
Jon Husted, Lt. Governor
Laurie A. Stevenson, Director

Ohio Environmental
Protection Agency

JAN 15 2020

Re: Guernsey Power Station, LLC
Permit – Short Term
Approval
Underground Injection Control
Guernsey County
UIC 05-30-99-PTD-V / UIC 05-30-99-PTO-V
UIC 05-30-01-PTD-V / UIC 05-30-01-PTO-V

Mitchell Garber, Vice President, Project Management
Guernsey Power Station, LLC
c/o Caithness Services LLC
565 Fifth Avenue, 29th Floor
New York, New York 10017

Subject: Minor Modifications for Ohio Permit Numbers UIC 05-30-99-PTD-V / UIC 05-30-99-PTO-V and
UIC 05-30-01-PTD-V / UIC 05-30-01-PTO-V

Dear Mr. Garber:

Ohio EPA's Division of Drinking and Ground Waters (DDAGW), Underground Injection Control (UIC) Program received your request of January 8, 2020, to Modify Guernsey Power Station LLC's and Guernsey Power Switch Yard Class V Area Permits to Drill (PTD) and Area Permits to Operate to allow the use of sand as a component in the grout mix if sufficient quantities of acceptable fly ash are not available.

Upon review of your request, it was determined that these minor modifications may be granted pursuant to Ohio Administrative Code (OAC) Rule 3745-34-25(E) which allows for a change in quantities or types of fluids injected which are within the capacity of the facility as permitted and, in the judgement of the Director, would not interfere with the operation of the facility or its ability to meet conditions described in the permit and would not change its classification.

No other changes to the permits are necessary. Please insert the enclosed revised Part II – Special Permit Conditions (page 1) in each of the Class V Area Permits to Drill and Permits to Operate No. UIC 05-30-99-PTD-V / UIC 05-30-99-PTO-V and UIC 05-30-01-PTD-V / UIC-05-30-01 PTO-V.

You are hereby notified that this action of the Director is final and may be appealed to the Environmental Review Appeals Commission pursuant to Section 3745.04 of the Ohio Revised Code. The appeal must be in writing and set forth the action complained of and the grounds upon which the appeal is based. The appeal must be filed with the Commission within thirty (30) days after notice of the Director's action. The appeal must be accompanied by a filing fee of \$70.00, made payable to "Treasurer of the State of Ohio", which the Commission, in its discretion, may reduce if by affidavit you demonstrate that payment of the full amount of the fee would cause extreme hardship. Notice of the filing of the appeal shall be filed with the Director within three (3) days of filing with the Commission. Ohio EPA requests that a copy of the appeal be served upon the Ohio Attorney General's Office, Environmental Enforcement Section. An appeal may be filed with the Environmental Review Appeals Commission at the following address:

Environmental Review Appeals Commission
30 East Broad Street, 4th Floor
Columbus, OH 43215

If you should have any questions, please do not hesitate to contact Valerie Orr at (614) 644-2752.

Sincerely,

A handwritten signature in cursive script that reads "Laurie A. Stevenson".

Laurie A. Stevenson
Director

Enclosure

cc: Hillary Cale, CTL Engineering, Inc.

PART II
SPECIAL PERMIT CONDITIONS

A. WELL CONSTRUCTION AND COMPLETION

All well construction and operations shall be conducted in accordance with the project plans submitted with the application for this permit. Activities conducted under this permit include, but are not limited to, the following:

1. Injection Borehole Drilling

- a. The injection boreholes shall be drilled to the bottom of the mine void (abandoned underground coal mine workings of the Upper Freeport Seam). The injection hole depths will vary from approximately 120 to 140 feet depending upon the vertical distance between the ground surface and the mined interval.
- b. The 10-inch diameter boreholes shall be drilled through the soil penetrating approximately two to three feet into the bedrock. Six-inch diameter casings of either steel, PVC or HDPE shall be installed and set into the bedrock surface. Then, 5-5/8 inch boreholes shall be advanced through the bedrock to the depth of the mine injection zone.
- c. A 4-inch tremie pipe shall be inserted through the casing and bedrock stratigraphy to the elevation of the mine and a concrete pump will be used to place the grout, aggregate and/or concrete into the mine workings. If grout settles after withdrawal of the tremie pipe, additional grout will be placed with the end of the tremie pipe set immediately above the surface of the existing grout.

2. Injectate/Grout Mixes

- a. Barrier grout shall be of a mix consisting of water, Type I or Type II Portland Cement, flyash and fine aggregate.
- b. Production grout
 - i. Mix A shall be a mix consisting of water, Type I or Type II Portland Cement and flyash at a 1:4 ratio of cement to flyash.
 - ii. Mix B shall be a mix consisting of water, Type I or Type II Portland Cement, fly ash and sand at a 1:4 ratio of cement to fly ash and an approximate ratio of 1:1 cement/fly ash to sand.

3. Grout Placement

Barrier grout, production grout and overburden grout shall be emplaced as described in: *Appendix F Mine Grouting Plan General Notes, Section 7.0 Construction* of the Permit to Operate Application.

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