



ILLINOIS ENVIRONMENTAL PROTECTION AGENCY

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JB PRITZKER, GOVERNOR

JOHN J. KIM, DIRECTOR

217/524-3301

CERTIFIED MAIL
RETURN RECEIPT REQUESTED

MAR 18 2024

Mr. Joseph J. Hoinkis
Equistar Chemicals, LP
625 East U.S. Highway 36
P.O. Box 378
Tuscola, Illinois 61953

Re: 0418080002 -- Douglas County
Equistar Chemicals, LP
ILD005078126
Log No. UIC-142R-M-2
Permit No. UIC-006-W1-US
UIC Administrative Record
Permit Draft

Dear Mr. Hoinkis:

This letter constitutes the Illinois EPA's draft permit decision to terminate Equistar Chemicals, LP's (Equistar) Class I Non-Hazardous Waste Underground Injection Control permit (UIC permit), Permit No. UIC-006-W1-US, for the injection well (Well No. 1) located at the above-referenced facility. The permit termination modification request was given log number UIC-142R-M-2 by the Illinois EPA. This draft permit decision is being made available for public comment. At the end of the public comment period, the Illinois EPA will issue a final permit decision on the request to terminate the subject permit.

This draft permit decision is in response to Equistar's request, dated December 17, 2023, and received on December 18, 2023, to terminate the facility's UIC permit due to Equistar's Well No. 1 being plugged, abandoned, and closed permanently. The subject injection well was inspected by a representative of the Illinois EPA on March 5, 2024. The inspection revealed that Well No. 1 has been properly plugged and abandoned. In addition, a review of the closure certification, plugging affidavit, and closure report also indicates that Well No. 1 was closed in accordance with the approved plugging and abandonment plan.

Based on the information provided, the Illinois EPA has determined that the plugging and abandonment of Well No. 1 at the above-referenced facility, met the requirements of Title 35 Illinois Administrative Code (35 Ill. Adm. Code) 730.110. Therefore, the Illinois EPA made a draft decision that Well No. 1 is closed permanently and the UIC permit may be terminated.

2125 S. First Street, Champaign, IL 61820 (217) 278-5800
115 S. LaSalle Street, Suite 2203, Chicago, IL 60603
1101 Eastport Plaza Dr., Suite 100, Collinsville, IL 62234 (618) 346-5120
9511 Harrison Street, Des Plaines, IL 60016 (847) 294-4000

595 S. State Street, Elgin, IL 60123 (847) 608-3131
2309 W. Main Street, Suite 116, Marion, IL 62959 (618) 993-7200
412 SW Washington Street, Suite D, Peoria, IL 61602 (309) 671-3022
4302 N. Main Street, Rockford, IL 61103 (815) 987-7760

Under the provisions of 35 Ill. Adm. Code 705.141(d), the draft permit decision, and administrative record must be publicly noticed and made available for public comment. Copies of the draft permit decision, fact sheet, and application are available for review at the City of Tuscola Public Library, 112 East Sale, Tuscola, Illinois 61953-1496. The Illinois EPA has not scheduled a public hearing at the current time. However, any interested party may request a public hearing. The public comment period will close on April 22, 2024.

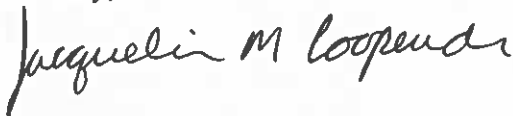
During the comment period, the applicant or any interested party may submit comments to the Illinois EPA on the draft permit decision. At the close of the comment period, the Illinois EPA will prepare a response to significant comments. Comments on the draft permit decision may be submitted to:

Sarah Brubaker, Public Involvement Coordinator (#5)
Illinois Environmental Protection Agency
1021 North Grand Avenue East
P.O. Box 19276
Springfield, IL 62794-9276

The Illinois EPA will issue a final permit decision after the close of the public comment period unless the Illinois EPA decides to reverse the tentative decision. The appeal process and limitations are addressed in 35 Ill. Adm. Code 705.212.

Any questions regarding this draft permit decision, please contact Kelly Huser at 217/524-3867 or kelly.huser@illinois.gov.

Sincerely,



Jacqueline M. Cooperider, P.E.
Permit Section Manager
Bureau of Land

JMC: KDH:0418080002-UIC-UIC142RM2-Draft.docx

KDH

Attachment: Fact Sheet

cc: Kristin Reynolds, Equistar Chemicals, LP.

FACT SHEET
DRAFT CLASS I NON-HAZARDOUS UNDERGROUND INJECTION
CONTROL PERMIT

0418080002 – Douglas County
Equistar Chemicals, LP
Permit No. UIC-006-W1-US
Log No. UIC-142R-M-2

This fact sheet has been prepared pursuant to the requirements of Title 35 Illinois Administrative Code (35 Ill. Adm. Code) 705.143. This fact sheet is intended to be a brief summary of the principal facts and significant factual, legal, methodological, and policy questions considered in preparing a draft permit decision regarding Equistar Chemicals, LP's (Equistar) Class I Non-Hazardous Underground Injection Control (UIC) permit (UIC permit) for its facility in Tuscola, Illinois.

This draft permit decision is based on Equistar's plugging and abandonment of the UIC well (Well No. 1) at the facility and Equistar's request to terminate the UIC permit.

Pursuant to 35 Ill. Adm. Code 705.143(a), this fact sheet is sent to the applicant, the information repository, and to any other person who requests it.

I. INTRODUCTION

Equistar is located at 625 East U.S. Highway 36, Tuscola, Illinois. Equistar's Tuscola plant manufactured ethanol, ethyl ether, and Microthene F (a polyethylene powder), which were used in the cosmetics and health care markets, as laboratory reagents, and in the automotive and plastics industries. Since 1970 Equistar disposed of a number of non-hazardous wastes from their manufacturing processes utilizing a waste disposal injection well, known as Well No. 1.

Equistar announced the Tuscola plant's closure on August 13, 2021. The final production process ceased operation on October 23, 2022. Equistar completed closure activities (plugging and abandonment) for Well No. 1 from September 25, 2023 to October 9, 2023.

The Illinois EPA issued this draft permit decision in response to Equistar's December 17, 2023 request to terminate the facility's UIC permit due to the plant ceasing operations and the completion of plugging and abandonment of Well No. 1 in accordance with the requirements of Equistar's UIC permit. Equistar's request to terminate the facility's UIC permit is considered to be a major modification.

II. UIC PERMIT HISTORY FOR WELL NO. 1

The Illinois EPA first issued a UIC permit for Well No. 1 on May 29, 1992 (Permit No. UIC-006-W1-US). The Illinois EPA issued a renewed UIC permit on November 18, 2005 (Log No. UIC-142). The Illinois EPA issued a second renewed UIC permit on March 21, 2015 (Log No. UIC-142R). Equistar's UIC permit allowed for the injection of non-hazardous wastes into Well No. 1. The primary wastes permitted for injection included the following:

- non-hazardous groundwater, rainwater, or leachate from closed, on-site non-hazardous waste landfills
- non-hazardous process wastewater from the production of ethyl alcohol
- non-hazardous process wastewater from the production of isopropanol
- non-hazardous process wastewater from the production of specialty polymers
- non-hazardous process wastewater from the denaturing of ethyl alcohol
- non-hazardous process wastewater from their water treatment unit

These wastes were injected into the Oneota, Eminence, Potosi, and Franconia geological formations as allowed by previous permits issued by the Illinois EPA. Above the formations where injection occurred is the Shakopee formation. The Shakopee formation is made up of dolomite, sand, and shale, and is approximately 330 feet thick. The Shakopee formation serves as the confining zone, confining the wastewater to the formations into which they were injected. In addition, there are approximately 2,100 feet of geologic strata that separate the base of the lowermost groundwater aquifer from the top of the injection interval.

The final cumulative total of non-hazardous wastes injected through Well No. 1 was 15,994,971,611 gallons.

Monitoring and Mechanical Integrity Tests

During operation of Well No. 1, Equistar was required to continuously monitor the injection pressure, injection rate, and annulus pressure. The purpose of this monitoring was two-fold: 1) to ensure Well No. 1 maintained mechanical integrity during operation; and 2) to ensure the injection operations did not form artificial cracks in the injection zone and did not propagate existing cracks.

To ensure Well No. 1's mechanical integrity, Equistar was required to perform various mechanical integrity testing on the well. To ensure the integrity of the injection tubing, packer, and casing, Equistar was required to perform an annulus pressure test every year. To ensure no fluid was moving upward along the well casing into an underground source of drinking water, Equistar was required to conduct temperature and radioactive tracer surveys once every twenty-four (24) months and a differential temperature survey every six (6) years.

If monitoring indicated a loss of mechanical integrity of Well No. 1, Equistar was required to shut down the well, restore the mechanical integrity and seek approval from the Illinois EPA

to restart operation of Well No. 1.

Plugging and Abandonment of Well No. 1

The plugging and abandonment of Well No. 1 was completed in accordance with Equistar's UIC permit, last modified and approved by the Illinois EPA on March 23, 2022 (Log No. UIC-142R-M-1). Equistar carried out the plugging and abandonment efforts from September 25, 2023 to October 9, 2023. A plugging and abandonment report entitled, "Closure Report, Well No. 1, Permit No. UIC-006-W1-US", was received by the Illinois EPA on December 18, 2023. This report provided documentation of the procedures and testing that were conducted to properly plug and abandon Well No. 1 in accordance with Equistar's UIC permit. In addition, a representative of the Illinois EPA inspected Well No. 1 on March 5, 2024, and confirmed Well No. 1 was plugged and abandoned.

III. PROCEDURES FOR REACHING A FINAL DECISION

Pursuant to 35 Ill. Adm. Code 705.162(a)(1), the public is given at least thirty (30) days to review the application for this major modification and comment on the draft decision prior to the Illinois EPA taking any final permitting action on the application. The comment period will begin on March 21, 2024, the date the first publication of the public notice in a newspaper of general circulation in the area. The comment period will end on April 22, 2024.

Copies of the application for the major modification, draft decision, and this fact sheet are available for review at the following location:

City of Tuscola Public Library
112 East Sale
Tuscola, IL 61953-1496
(217) 253-3812

The administrative record contains the major modification application, draft decision, fact sheet, and other supporting documents and correspondence submitted to the Illinois EPA. The administrative record can be made available for public inspection by appointment only, at the Illinois EPA's Springfield office from 9:00 a.m. to 5:00 p.m., Monday through Friday. Inspection of the administrative record must be scheduled by contacting Ms. Sarah Brubaker at the number listed below.

In response to requests received during the comment period or at the discretion of the Illinois EPA, a public hearing may be held to clarify one or more issues concerning the application for major modification. A request for a public hearing must be submitted in writing, must indicate opposition to the draft decision and must state the nature of the issues proposed to be raised at the hearing. Public notice of a public hearing will be issued at least thirty (30) days

before the hearing date.

For further information regarding the permit process, to submit written comments on the draft permit decision, or to request a public hearing, please contact:

Sarah Brubaker, Public Involvement Coordinator (#5)
Illinois Environmental Protection Agency
1021 North Grand Avenue East
P.O. Box 19276
Springfield, IL 62794-9276
Phone: 217/786-0790

When the Illinois EPA makes its final permit decision, notice will be given to the applicant and each person who has submitted written comments or requested notice of the final permit decision. The permit will become effective thirty-five (35) days after service of the notice of the decisions or at a later date if stated in the permit unless the permit decision is appealed.