

70-0012

3883-W

NARRATIVE DESCRIPTION

FOR

CONSOLIDATED CLASS V BRINE DISPOSAL SYSTEM

Great Lakes Chemical Corporation, El Dorado, AR

GEOLOGIST: Gerald Delavan

PERMIT NO:3883-W

DATE:September 28, 1989

Great Lakes Chemical Corporation (GLCC) has been granted authority to consolidate CLASS V brine Permit No. 620-WR-2 for the Main Plant and 863-WR-2 for the South Plant into a collective system which will enhance the brine disposal capabilities for both plants.

Currently the brine production capacity for the Main plant is greater than the brine disposal capacity and the South Plant has greater brine disposal capacity than it does production capacity. Consequently, the two separate systems are being tied together to maximize the disposal capacity for both plants. A ten inch underground line is being run to allow the Main Plant to use the additional disposal capacity at the South Plant. This brine line will have a flow meter installed to regulate the flow from the tail brine at the Main Plant to the disposal wells at the South Plant, based on excess disposal capacity at any given time.

Production brine is pumped at both plants from the Smackover Formation from approximately 8,000 feet below the surface and transferred to the feed brine ponds at both facilities. The feed brine is then pumped to the bromine towers for bromine extraction. The debrominated brine is then transferred to the tail brine ponds at each plant from which it is pumped to the brine disposal system.

This system will have a total of 21 brine disposal wells with an estimated maximum disposal capacity of 300,000 barrels of saltwater per day. The estimated maximum injection pressure for the disposal wells is 500 psi. A total of 14 brine supply wells are connected to the system.

The tail brine and feed brine ponds for both the Main Plant and the South Plant are required to maintain at least a 24" freeboard and brine department personnel monitor both the feed and tail brine ponds 24 hours a day. There is no emergency storage capacity other than the tail brine pond. If the disposal capacity of the system is reduced then production will be curtailed to maintain a 24" freeboard.

PERMIT

Issued by

ARKANSAS DEPARTMENT OF POLLUTION CONTROL AND ECOLOGY

8001 National Drive
Little Rock, Arkansas 72209

Permit No. 3883-W

Effective Date 11/11/89

To: Great Lakes Chemical Corporation
P.O. Box 1878
El Dorado, AR 71730

Consulting Engineers:

This permit is your authority to construct, operate, and maintain the waste disposal system set forth in your application dated 9/25/89. This permit is issued subject to the provisions of the Arkansas Water and Air Pollution Control Act (A.C.A. Sec. 8-4-101 et seq.) and the following terms and conditions

1. The disposal system shall be constructed in accordance with the final plans and specifications as approved by the Department of Pollution Control and Ecology.
2. This permit shall automatically terminate unless construction of the disposal system has been commenced within 3 months of the date hereof and completed with all reasonable diligence. The Department shall be notified in writing when the disposal system has been completed in order that it may be inspected.
3. The disposal system shall be operated by qualified personnel and maintained in good operating condition at all times.
4. By-passing of the disposal system is prohibited and will result in revocation of this permit and/or other appropriate enforcement action by the Department.
5. There shall be no increase in the volume or strength of the waste being treated by the disposal system except within design limits covered by the plans and specifications approved by the Department. No extension or modification of the disposal system may be made without the issuance of a new permit.
6. This permit may be revoked or modified whenever it is necessary, in the opinion of the Department, to prevent or abate pollution of any waters of the State.
7. Nothing herein contained shall be construed as releasing the permittee from any liability for damage to persons or property by reason of the installation, maintenance or operation of the disposal system.
8. This permit is issued in reliance upon the statements and representations made in the application and the plans and specifications, and the Department has no responsibility for the adequacy or proper functioning of the disposal system.
9. PLEASE NOTE ADDITIONAL CONDITIONS ON ATTACHED SHEET.

ARKANSAS DEPARTMENT OF POLLUTION CONTROL AND ECOLOGY

by Randall S. Watkins
Director

Date 10/17/89

Permit No. 3883-W

Great Lakes Chemical Corp.

10. The permittee shall comply with all applicable permit fee requirements for state permits as described in ADPC&E Regulation No. 9 (Regulation for the Fee System for Environmental Permits). Failure to promptly remit all required fees shall be grounds for the Director to initiate action to terminate this permit under the provisions of ADPC&E Regulation No. 8.
11. This system is known as the Great Lakes Chemical Corporation El Dorado Brine Disposal System located in Sections 3,5,8,9,10,16,17,20,30,31, Township 18 South, Range 15 West, and Section 31, Township 17 South, Range 15 West, and Sections 1, 26, Township 18 South, Range 16 West, and Section 1, Township 19 South, Range 16 West, and Section 31, Township 18 South, Range 14 West, and Section 12, Township 19 South, Range 15 West, Catesville and So. El Dorado Fields, Union County, El Dorado, Arkansas.
12. This permit is based on a projected disposal rate of 300,000 barrels of salt water per day. An increase of 15% or more above this amount will require modification of this permit.
13. The Great Lakes Chemical Corporation El Dorado Brine Disposal System will receive salt water from the attached list of wells. The same will be injected into the Smackover Formation at a subsurface depth interval of approximately 7150' to 8160'.
14. There shall be posted at the site of the well or tank battery a permanent sign bearing the name of the operator, the permit number, the lease, and legal description of the location.
15. No salt water shall be discharged to the surface waters of the State of Arkansas.
16. As an adjunct to the above conditions, the permittee shall comply with all provisions of Arkansas Pollution Control and Ecology Commission Regulation No. 1.

ATTACHMENT A

SALT WATER DISPOSAL WELLS
EL DORADO AREA

<u>Well</u>	<u>Injection interval</u>	<u>Location</u>
SWD-1	7179-7305	136' N & 542.8' E of SW/c SW1/4 NE1/4 SEC. 5, T18S, R15W
SWD-2	7190-7330	500' S & 330' W of NE/c of NW1/4 SE1/4 SEC. 5, T18S, R15W
SWD-3A	7430-7530	280' FNL & 280' FWL SW1/4 SE1/4 SEC. 8, T18S, R15W
SWD-4A	7486-7625	989' FNL 563' FLW SW1/4 NE1/4 SEC. 17, T18S, R15W
SWD-5	7148-7310	160' N & 230' E of SW/c NW1/4 SE1/4 SEC. 31, T17S, R15W
SWD-6	7405-7592	Center NW1/4 SW1/4 SEC. 16, T18S, R15W
SWD-7	7800-7996	208' FSL & 417' FWL NE1/4 NE1/4. SEC. 9, T18S, R15W
SWD-8	7544-7440	1050' FNL & 325' FWL NW1/4 SW1/4 SEC. 3, T18S, R15W
SWD-10	7370-7503	514' N & 280' W of SE/c of W1/2 NW1/4 SE1/4 SEC. 1, T18S, R16W
SWD-11	7321-7438	300' N & 280' E of SW/c of W1/2 NE1/4 SW1/4 SEC. 1, T18S, R16W
SWD-12	7404-7424	330' FNL & 330' FWL NW1/4 SE1/4 SEC. 8, T18S, R15W

SEPTEMBER 22, 1989

ATTACHMENT A

<u>WELL</u>	<u>INJECTION INTERNAL</u>	<u>LOCATION</u>
SWD-13	7242-7458	280' FNL 500' FEL NE1/4 SW1/4 SEC. 10, T18S, R15W
SWD-14	7900-8071	280' N & 280' W of SE/c of NE1/4 SW/14 SEC. 26, T18S, R16W
SWD-15	7850-8101	280' N & 280' E of SW/c of NW1/4 NE1/4 SEC. 26, T18S, R16W
ANTHONY SWD-1(S)	7811-7960	Center NE1/4 NE1/4 NW1/4 SEC. 30, T18S, R15W
DRAPER SWD-2(S)	7591-7766	Center NW1/4 NE1/4 NW1/4 SEC. 20, T18S, R15W
BARDIN SWD-7(S)	7841-8062	280' FWL & 280' FSL NW1/4 NW1/4 NW1/4 SEC. 31, T18S, R15W
TRIMBLE SWD-9(S)	7919-8160	300' FEL & 360' FNL NE1/4 NE1/4 NW1/4 SEC. 1, T19S, R16W
LOUTRE SWD-14(S)	7767-7981	280' FSL & 330' FEL S1/2 SE1/4 SE1/4 SW1/4 SEC. 31, T18S, R14W
TEMPLETON SWD-17(S)	7852-8070	331' W & 230' N of SE/c NW1/4 SE1/4 SEC. 12, T19S, R15W
PENDLETON SWD-1(S)	7698-7808	1600' FSL & 1600' FEL SEC. 20, T18S, R15W

SEPTEMBER 22, 1989



STATE OF ARKANSAS
DEPARTMENT OF POLLUTION CONTROL AND ECOLOGY

8001 NATIONAL DRIVE, P.O. BOX 9583
LITTLE ROCK, ARKANSAS 72209

PHONE: (501) 562-7444

CERTIFIED MAIL: P 844 038 943
RETURN RECEIPT REQUESTED

October 11, 1989

Great Lakes Chemical Corporation
P.O. Box 1878
El Dorado, AR 71730

Gentlemen:

The enclosed permit (No. 3883-W) is your authority to construct, operate and maintain the Great Lakes Chemical Corp. El Dorado Brine Disposal System as set forth in your application dated Sept. 25, 1989.

This permit is issued subject to the provisions of the Arkansas Water and Air Pollution Control Act (A.C.A. Sec. 8-4-101 et seq) and the terms and conditions stated therein. Approval for underground injection is also required from the Arkansas Oil and Gas Commission.

After considering the facts and requirements of the aforementioned Act and implementing regulations, I have determined that Permit No. 3883-W for the construction, operation and maintenance of a water pollution control system for the Great Lakes Chemical Corp. Brine Disposal System be issued and effective on the date specified in the permit, unless a Commission review has been properly requested under Section 4, Part III, of Regulation No. 8, Arkansas Department of Pollution Control and Ecology Administrative Procedures, within 30 days after service of this decision.

All persons submitting written comments during this 30 day period, and all other persons entitled to do so, may request an adjudicatory hearing and Commission review on whether the decision of the Director should be reversed or modified. Such a request shall be in the form and manner required by Section 4, Part III of Regulation No. 8.

Sincerely,

Randall Mathis
Randall Mathis
Director

RM:kc

Enclosure

cc: Arkansas Dept. of Health - Division of Engineering