

CSN: 14-0011. Permit No. 4007-W

Media: Water

Sort: Permit, Compliance

NARRATIVE DESCRIPTION

FOR

ETHYL CORPORATION

REVIEWER: Gerald Delavan PERMIT NO. 4007-W DATE: February 5, 1991

Ethyl Corporation operates a bromine production facility west of Magnolia, Arkansas. This plant was formerly operated by the Dow Chemical Corporation. Dow Chemicals' Permit No. 690-WR-1 which covered the tail and feed brine ponds, a pretreatment system for debrominated brine prior to disposal, monitor well sample requirements was transferred "as is" to Ethyl in July, 1987. Ethyl personnel believed that this permit also covered the brine disposal well system for this plant. A Departmental file review indicated that this system of brine disposal wells is not permitted by Dow Chemical or Ethyl Corp. The permitting discrepancy came to light when the Department was notified by Ethyl that they wanted to convert an old brine production well to a disposal well.

Ethyl, in response to the Departments request, is now proposing to permit the existing disposal well system under this new permit (4007-W). There are currently 10 active brine disposal wells in the West Field Brine Reinjection System. The McAnulty No.1 well brine supply well is to be converted to a disposal well and added to the West Field Reinjection System. Hence, there will be a total of 11 brine disposal wells permitted in this system. The maximum total daily disposal capacity for this reinjection system will be 143,000 barrels per day (see the attached list of wells for this system).

Production brine is pumped from the Smackover Formation at a depth of approximately 7000 to 8000 feet below the surface from the production wells to above ground, lined concrete "feed brine" holding basins for processing. The feed brine is pumped to the bromine towers for processing to extract the bromine. The spent brine is pumped to above ground lined concrete "tail brine" holding basins for holding prior to reinjection back into the Smackover Formation via this disposal well system.

Ethyl is required to maintain a minimum of 24" freeboard in these holding basins at all times. Brine management is to be monitored 24 hours a day by Ethyl personnel. If disposal capacity of the system is reduced an equivalent amount of production will be curtailed to maintain the required freeboard for each holding basin.

PERMIT

Issued By

STATE OF ARKANSAS
DEPARTMENT OF POLLUTION CONTROL AND ECOLOGY
8001 NATIONAL DRIVE, P.O. BOX 9583
LITTLE ROCK, ARKANSAS 72209

Permit No. 4007-W

Effective Date 7/04/91

To:

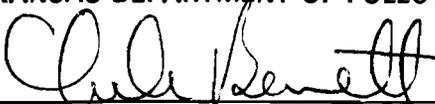
Consulting Engineer:

Ethyl Corporation
P.O. Box 729
Magnolia, AR 71753

This permit is your authority to construct, operate, and maintain the waste disposal system set forth in your application dated 12/12/90. This permit is issued subject to 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 specification 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 effective date 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 maintain 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 THE ATTACHED SHEET.

ARKANSAS DEPARTMENT OF POLLUTION CONTROL AND ECOLOGY

By: 
Chief, Water Division

6/4/91
Date

Permit No. 4007-W
Ethyl Corporation

10. The permittee shall comply with all applicable permit fee requirements for state permits as described in ADPC&E Regulations No. 9 (Regulation for 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 West Field Brine Reinjection System located in Section 8, 13, 17, 18, 20, 21, 22, 23, Township 17 South South, Range 21 West, Kilgore Lodge Field, Columbia County, Magnolia, Arkansas.
12. This permit is based on a projected disposal rate of 143,000 barrels per day. There are a total of 11 wells in the reinjection system, see attached list. An increase of 15% or more above this amount will require modification of this permit.
13. The West Field Brine Reinjection System will receive brine water from the attached list of wells. The same will be injected into the Smackover Formation at a subsurface depth interval of 7000' to 8000'.
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 brine 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.

Well Listings

Ethyl Brine Reinjection System (Permit #690-W)

West Field

Revised January 1991

Listed below are brine reinjection wells that constitute the subject Brine Reinjection System (ADPC&E Permit #4007-W, revised). These wells are being used to inject spent brine into the Smackover Lime.

<u>Well No.</u>	<u>Date of 1st Injection</u>	<u>Injection Cap. - B/D</u>	<u>Cummulative Inj. to 12-31-90 (MBBL)</u>	<u>Location</u>
Dow Fee #1	05-21-84	6,773	11,512	S18, T17S, R21W
Parham #1	03-85	12,930	14,776	S17, T17S, R21W
Souter #1	01-28-67	12,730	176,017	S20, T17S, R21W
Butler #1	02-09-67	11,540	160,911	S22, T17S, R21W
Whitehead #1	06-85	18,603	23,633	S08, T17S, R21W
Sharp #1	03-09-73	10,551	56,201	S13, T17S, R22W
Souter #2	04-04-74	10,946	86,305	S23, T17S, R22W
Lovell #1	02-03-75	10,569	90,412	S21, T17S, R22W
Souter #3	04-22-75	17,430	114,978	S21, T17S, R21W
Souter #4	05-24-76	10,558	57,595	S22, T17S, R22W
McAnulty #1	N/A	20,000	N/A	S8, T17S, R21W
Dismukes #1	03-25-75		P & A - 6,83	S18, T17S, R21W
Deloach	1970		P & A - 6/83	S24, T17S, R22W

Brine supply well list for Ethyl Corporation West Plant

Dow Fee #2	Sec. 15, T17S, R21W
Woodward #1	Sec. 11, T17W, R22W
Ford #1	Sec. 12, T17S, R22W
Jameson #1	Sec. 12, T17S, R22W
Carter #1	Sec. 18, T17S, R21W
Kitchens #1	Sec. 12, T17S, R22W
Ellison #1	Sec. 10, T17S, R22W
Holmes #1	Sec. 11, T17S, R22W
Weber #1	Sec. 8, T17S, R21W
Smith #1	Sec. 3, T17S, R21W
McCown #1	Sec. 4, T17S, R21W
Weber #2	Sec. 8, T17S, R21W

STATE OF ARKANSAS
DEPARTMENT OF POLLUTION CONTROL AND ECOLOGY
8001 NATIONAL DRIVE, P.O. BOX 9583
LITTLE ROCK, ARKANSAS 72209
PHONE: (501) 562-7444
FAX: (501) 562-4632

CERTIFIED MAIL: P 612 676 173
RETURN RECEIPT REQUESTED

June 6, 1991

Ethyl Corporation
P.O. Box 729
Magnolia, AR 71753

Gentlemen:

The enclosed permit (No. 4007-W) is your authority to construct, operate and maintain the West Field Brine ReInjection System as set forth in your application dated December 12, 1990.

This permit is issued subject to the provisions of the Arkansas Water and Air Pollution Control Act (A.C.S. 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. 4007-W for the construction, operation and maintenance of a water pollution control system for West Field Brine ReInjection 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 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,



Chuck Bennett
Chief, Water Division

CB:kc

Enclosure

cc: Arkansas Dept. of Health - Division of Engineering
Marty Perdue, Arkansas Oil & Gas Commission
Darlene Ogden, ADPC&E, El Dorado office