

ADEQ

ARKANSAS
Department of Environmental Quality

CERTIFIED MAIL 7005 1160 0000 3833 0911
RETURN RECEIPT REQUESTED

August 31, 2007

C. T. Bounds, R.E.M.
Albemarle Corporation
P. O. Box 729
Magnolia, AR 71754-0729

**RE: AFIN: 14-00028; Permit Tracking No. 4007-WR-2
West Field Brine Disposal System, Albemarle West Plant
Section 8 - Township 17S - Range 21W, Columbia County**

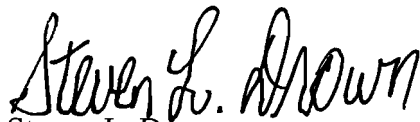
Dear Mr. Bounds:

The enclosed permit is your authority to operate and maintain the Albemarle West Plant West Field Brine Disposal System as set forth in your permit renewal request received January 31, 2007.

After considering the facts and requirements of the Arkansas Water and Air Pollution Control Act (A. C. A. § 8-4-101 et seq.) and implementing regulations, it has been determined that the Permit 4007-WR-2 be issued and effective on the date specified in this permit.

If you have any questions, please contact Linda Hanson by email at hanson@adeq.state.ar.us or by telephone at the ADEQ Little Rock office at (501)682-0646.

Sincerely,



Steven L. Drown
Chief, Water Division

cc: Joslyn Burleson, Program Coordinator
Jim Purvis, Permit Fees
John Lamb, District Inspector
File



PERMIT

ISSUED BY

STATE OF ARKANSAS
DEPARTMENT OF ENVIRONMENTAL QUALITY
5301 NORTHSORE DRIVE
NORTH LITTLE ROCK, AR 72118

AFIN: 14-00028
Permit No: 4007-WR-2

Effective Date: September 1, 2007
Expiration Date: August 31, 2012

To: Albemarle Corporation
P. O. Box 729
Magnolia, AR 71754-0729

This permit is your authority to operate and maintain the 4007-WR-2 brine disposal system at the Albemarle West Plant in Section 8, Township 7 South, Range 21 West, in Columbia County as set forth in your renewal application received January 31, 2007. 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 conditions:

1. This permit is your authority to operate and maintain the brine disposal system.
2. The brine disposal system shall be operated by qualified personnel and maintained in good operating condition at all times.
3. By-passing of the brine disposal system is prohibited and will result in revocation of this permit and/or other appropriate enforcement action by the Department.
4. No additional extension or modification of the brine disposal system may be made without modification of this permit.
5. 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.
6. 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 brine disposal system.
7. This permit is issued in reliance upon the statements and representations made in the initial application, the applications for modification, and the plans and specifications. The Department has no responsibility for the adequacy or proper functioning of the treatment system.
8. This is a No Discharge permit. No brine shall be discharged to the waters of the State. The permittee shall immediately notify the Department within twenty-four (24) hours if there is any discharge to the surface or ground waters of the State from the system.
9. The permittee shall comply with all applicable permit fee requirements for state permits as described in ADEQ Regulation No. 9. Failure to promptly remit all required fees shall be grounds for the Director to initiate enforcement action to terminate this permit under the provisions of Regulation No. 8.
10. See additional permit conditions nos. 11 - 16 attached.

ARKANSAS DEPARTMENT OF ENVIRONMENTAL QUALITY

By: Steve Drown 30 AUG 07
Steve Drown, Chief, Water Division Date

11. This system is known as the West Field Brine System in Township 18 South and Range 21 West, in Columbia County, Arkansas.
12. This permit covers the holding facilities, emergency containment facilities, pipelines, and tanks located at the West Plant and West Plant brine system. All disposal volumes, rates and pressures are regulated by the Arkansas Oil and Gas Commission (AOGC) permits.
13. This System will receive only brine from the West Plant's brine management system (Permit 0690-W). No additional, secondary, or unpermitted waste streams are to be routed to the tail brine system for storage or disposal.
14. All operation and production of the brine wells in this brine disposal system are regulated by AOGC as Class V bromine related injection well permits. Upon changes in the system, such as additions or deletions of wells or pipelines, a new map will be provided to the Department indicating the locations of the wells and pipelines.
15. If the Permittee wishes to continue the activity regulated under this permit after its expiration date, the Permittee must apply for and obtain a new permit. An administratively complete application must be submitted to the Department at least 120 days prior to the expiration date of this permit. The Director may grant permission to submit an application less than 120 days in advance, but not later than the expiration date of this permit.
16. The permit conditions of this permit will continue in effect past the expiration date pending issuance of a new permit provided that the Permittee has timely submitted a complete application as described in Condition No. 15 and the Director, through no fault of the Permittee, has not issued a new permit prior to the expiration date of this permit.

STATEMENT OF BASIS and PERMIT NARRATIVE

DATE: February 6, 2007

ISSUING OFFICE:

Arkansas Department of Environmental Quality
Water Division, Permits Branch
5301 National Drive
North Little Rock, Arkansas 72218-5317

ADEQ EVALUATING STAFF: Laura Stuart, P.G. and Mo Shafii

PERMIT TYPE:

Permit No. 4007-WR-2
AFIN: 14-00011

APPLICANT:	CONSULTANT:
C. T. Bounds, R.E.M.	N/A
Albemarle Corporation	
P. O. Box 729	
Magnolia, AR 71754-0729	
870-235-6000	

1. **FACILITY INFORMATION:**

SYSTEM NAME: West Plant Brine Disposal System
LOCATION: S8-T17S-R21W
ZONE: 15
LATITUDE (N): 33° 15' 32"
LONGITUDE (W): 93° 18' 40"
DATUM: supplied by owner
QUADRANGLE: Waldo 7.5'
NEAREST CITY: Magnolia
COUNTY: Columbia
SIC: 2819
NAICS: 325188
PERMIT TYPE: Industrial
FACILITY TYPE: Chemical Product and Manufacturing
FEE AMOUNT: \$0-renewal
APPLICATION RECEIVED DATE: January 31, 2007
FACILITY DESCRIPTION: This permit covers the holding facilities, emergency containment facilities, pipelines and tanks located at the West Plant and West Plant brine system and will receive only brine from the West Plant's brine management system (Permit 690-W). No additional, secondary or unpermitted waste streams are to be routed to the tail brine system for storage or disposal.
DRIVING DIRECTIONS: 7 mi W of Magnolia on Hwy 82

PROCESS DESCRIPTION:	ND
NEAREST STREAM:	Dismukes Branch
STREAM SEGMENT:	1A
REVISION REASON:	permit renewal
PREVIOUS PERMIT:	4007-WR-1
PREVIOUS AFIN:	N/A
INSPECTOR:	John Lamb

2. GENERAL REQUIREMENTS

This permit covers the surface facilities, such as tanks, temporary storage ponds, transmission lines and pumps, containment structures and any related structures at the facility.

3. BASIS FOR PERMIT CONDITIONS

The Arkansas Department of Environmental Quality has made a tentative determination to issue a permit for the no-discharge facility as described in the application. Permit requirements and conditions are based on regulations pursuant to the Arkansas Water and Air Pollution Control Act (Act 472 of 1949, as amended, Ark. Code Ann. § 8-4-101 et. seq.).

4. MODIFICATIONS FROM THE PREVIOUS PERMIT

This permit decision is a renewal of 4007-WR-1. There are no major modifications to the existing permit. The permit was reissued on May 8, 2001 with the plant operations remaining essentially the same as stated in the narrative description dated February 5, 1991, except the ponds have been removed from the plant operations.

Albemarle operates a bromine production facility at the West Plant in Magnolia, Columbia County. Production brine is pumped from the Smackover Formation at depths of approximately 8000 feet below ground surface. This feed brine is transported to the plant where bromine is extracted. The spent brine that remains is transported via pipelines and reinjected back into the Smackover. This permit covers the transportation and storage facilities for the spent brine prior to reinjection, i.e., the brine field disposal system.

The following changes have been made to draft the permit as 4007-WR-2:

- (1) Language regarding reporting in Permit condition no. 13 has been moved to a separate condition no. 14, and the 24 hour reporting has been moved to condition no. 8.
- (2) Permit condition nos. 16 and 17 have been added to include standard language regarding permit renewals and expirations, plus duties of the permittee.
- (3) Language regarding annual reporting with the submission of maps as stated

in permit condition no. 14 (of 4007-WR-1) has been deleted and replace with the submission of maps when any changes occur, as the system lines and wells do not typically change from year to year.

- (4) Language regarding submission of annual volumes in permit condition no. 14 (of 4007-WR-1) has been deleted. This is not a specific requirement for our permit, but rather a permit requirement for AOGC, and there is no reason to duplicate the permittee's efforts.

5. SOURCES FOR DOCUMENT DEVELOPMENT

- (A) Regulation No. 1, Regulation for the Prevention of Pollution by Salt Water and Other Oil Field Wastes Produced by Wells in All Fields or Pools
- (B) Regulation No. 2, Water Quality Standards for Surface Waters of the State of Arkansas, as amended.
- (C) Regulation No. 8, Administrative Procedures, as amended.
- (D) Regulation No. 9, Fee System for Environmental Permits, as amended.
- (E) ACT 165 of 1993, Public Notice Requirements
- (F) ACT 472 of 1949, as amended, Arkansas Water and Air Pollution Control Act