(18)

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION VI
ALLIED BANK TOWER AT FOUNTAIN PLACE
1445 ROSS AVENUE
DALLAS, TEXAS 75202

November 19, 1987

Certified Mail #P 661 407 526 - Return Receipt Requested

REPLY TO: 6W-SE

Mr. Gary A. Johnson
KWB Oil Property Management, Inc.
15 East 5th Street, Suite 3300
Tulsa, OK 74103

Re: Underground Injection Control Permit
Permit No. 06S1261P5258 - Osage County, Oklahoma

Dear Mr. Johnson:

Enclosed is a copy of the final permit referenced above and our response to comments received on the draft permit.

Please read the entire permit so that you can become familiar with the effective date and the conditions of the permit. In response to comments received, permit conditions I.B.2. and I.B.4. have been modified or changed. "Authorization to Inject" will not be granted until the operator has satisfactorily demonstrated compliance with special permit conditions I.A.1., I.A.2., I.A.3., and I.B.1. In accordance with Osage Underground Injection Control regulations 40 CFR §147.2929(h), the effective date of this permit is 30 days after the date of this letter. The Regional Administrator will review each issued permit at least once every five (5) years to determine whether it should be modified or terminated.

The Bureau of Indian Affairs (BIA) also requires that you apply for and receive authorization to complete the work described in the referenced permit application. Please contact the BIA office at (918) 287-2495 for further information.

If you have any questions, please call Ms. Holly Anderson in Dallas at (214) 655-7165. To schedule your well for testing, please call the Osage UIC Office in Pawhuska at (918) 287-4041.

Sincerely yours,

Myron O. Knudson

Myron O. Knudson, P.E.
Director
Water Management Division (6W)

Enclosures

cc with enclosures:
BIA, Minerals Branch
Osage UIC Office

(17)

ENVIRONMENTAL PROTECTION AGENCY
UNDERGROUND INJECTION CONTROL PERMIT

Permit No. 06S1261P5258
Well No. 15

AUTHORIZATION TO CONVERT A WELL TO
AN INJECTION WELL UNDER THE UIC PROGRAM
OSAGE MINERAL RESERVE

In compliance with the provisions of the Safe Drinking Water Act, (hereafter referred to as "the Act" or "SDWA") as amended (42 U.S.C. 300f et seq.),

KWB Oil Property Management, Inc.
15 East 5th Street, Suite 3300
Tulsa, OK 74103

is authorized to convert a well to a Class II salt water disposal injection well at:

990 feet from the North line and 990 feet from the West line, NW Quarter, Section 18, Township 27N, Range 8E into the injection interval at a depth of 2470 feet to 2960 feet below land surface in the Mississippi Limestone and the Arbuckle Dolomite in accordance with the construction and operation requirements, injection pressure limits, reporting and monitoring requirements, and other conditions set forth in Parts I and II of this permit and the Osage Class II Underground Injection Control Program and Regulations.

Authorization to inject fluids into the well described in this permit, shall be separately granted by written authorization from the EPA Water Management Division Director (WMDD). Such authorization entitled "Authorization to Inject" will not be granted until the operator has satisfactorily demonstrated compliance with special permit conditions I.A.1., I.A.2., I.A.3., and I.B.1.

This permit shall become effective on December 19, 1987 for conversion and for injection on the date specified in the "Authorization to Inject." Upon authorization to inject, this permit shall remain in effect until the well is plugged and abandoned or the permit is terminated.

Signed this 19th day of November 1987.

Myron O. Knudson, P.E.
Director, Water Management Division
Environmental Protection Agency
Region VI

Permit No. 06S1261P5258

Part I. SPECIAL PERMIT CONDITIONS

A. Construction Requirements

1. Surface casing shall be set at 80 feet below land surface and cemented back to the surface. The long string casing shall be set at 2470 feet below land surface and cemented with 100 sacks of cement. Additionally, the long string casing shall be cemented from 550 feet back to the land surface with 100 sacks of cement.

2. The well shall be equipped with standard female fittings with cut-off valves connected to the tubing and the tubing/casing annulus so that the injection pressure and annulus pressure may be measured by an EPA representative by attaching a gauge having a standard male fitting.

3. Tubing and packer must be installed. The packer must be run on the tubing and set inside the casing between 2395 and 2465 feet of depth below the land surface.

B. Operating Requirements

1. Authorization to inject will not be granted until the permittee shows to the satisfaction of the WMDD pursuant to 40 CFR §147.2920(b)(1)(i) that the well has mechanical integrity. The well's mechanical integrity must be demonstrated prior to the start of injection and at least every five years thereafter. The permittee must notify the Osage UIC office at least five (5) days prior to mechanical integrity testing so that an EPA representative can witness the test.

2. Except during well stimulation, injection pressure at the wellhead shall not exceed 0 psig.

3. The permittee is authorized to inject salt water for disposal.

4. Injection volume shall be limited to 75,000 barrels per month.

Part II. CONDITIONS APPLICABLE TO ALL PERMITS

A. Confidentiality

Any information except the permittee's name and address and information concerning the existence, absence or level of contaminants in drinking water may be claimed as confidential. Any claim of confidentiality must be asserted at the time of submission. If no claim is made, EPA may make the information available to the public without further notice.

B. Duty to Comply

1. The permittee must comply with all conditions of this permit. Any permit noncompliance constitutes a violation of the Act and is grounds for enforcement action, for permit termination, revocation and reissuance, or modification.

   Compliance with the terms of this permit does not constitute a defense to any action brought under Section 1431 of the Safe Drinking Water Act (SDWA) or any other law for any imminent or substantial endangerment to human health or the environment or for any breach of any other applicable legal duty.

2. The permittee need not comply with the provisions of this permit to the extent and for the duration such noncompliance is authorized in a temporary emergency permit under 40 CFR §147.2906.

C. Duty to Halt or Reduce Activity

It shall not be a defense for a permittee, in an enforcement action, that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this permit.

D. Duty to Mitigate

The permittee shall take all reasonable steps to minimize or correct any adverse impact on the environment resulting from noncompliance with this permit.

E. Proper Operation and Maintenance

1. All injection wells must have and maintain mechanical integrity consistent with 40 CFR §147.2920(b). Mechanical integrity must be demonstrated initially and also any time the tubing is removed from the well, the packer is reset, or a loss of mechanical integrity becomes evident during operation. Furthermore, the Regional Administrator (RA) may by written notice require the permittee to demonstrate mechanical integrity at any time. The permittee shall notify the Osage UIC office of his intent to demonstrate mechanical integrity at least 5 days prior to such demonstration. The permittee

shall report the results of a mechanical integrity demonstration within 30 days after completion (unless the demonstration is witnessed by an EPA inspector, in which case the inspector will prepare the report).

2. If the permittee or the RA finds that the well fails to demonstrate mechanical integrity during a test, or a loss of mechanical integrity as defined by 40 CFR §147.2920(b) becomes evident during operation, the operation shall be halted immediately and shall not be resumed until the RA gives approval to recommence injection.

3. The permittee shall at all times properly operate and maintain all facilities and systems of treatment and control (and related appurtenances) which are installed or used by the permittee to achieve compliance with the conditions of this permit. Proper operation and maintenance includes effective performance, adequate engineering capability available, adequate funding, adequate operator staffing and training, and adequate laboratory and process controls, including appropriate quality assurance procedures. This provision requires the operation of back-up or auxiliary facilities or similar systems only when necessary to achieve compliance with the conditions of the permit.

F. Permit Actions

1. This permit may be modified, revoked and reissued, or terminated for the following causes (see 40 CFR §147.2927 and 40 CFR §147.2928):

   a) There are substantial changes to the facility or activity which occurred after permit issuance that justify revised or additional permit conditions.

   b) The RA has received information (e.g., from monitoring reports, inspections) which warrants a modified permit.

   c) The regulations or standards on which the permit was based have changed.

   d) The RA has received notice of a proposed permit transfer.

   e) An interested person requests in writing that a permit be modified and the RA determines that cause for modification exists.

   f) Cause exists for termination under 40 CFR §147.2928, but the RA determines that permit modification is appropriate.

   The modification procedure described in 40 CFR §147.2927(c) must be followed to accomplish the modifications described iN item "a" through "f" of this section.

2. Minor modifications do not require that the procedure listed in 40 CFR §147.2927(c) be followed.

   Minor modifications consist of:

   a) Correcting typographical errors;

   b) Requiring more frequent monitoring or reporting;

   c) Changing ownership or operational control (see 40 CFR §147.2926, Permit Transfers); or

   d) Changing quantities or types of injected fluids, provided:

      (i) The facility can operate within conditions of the permit;

      (ii) The facility classification would not change.

   The filing of a request by the permittee for a permit modification, or a notification of planned changes or anticipated noncompliance, does not stay any permit condition.

G. Property Rights

This permit does not convey any property rights of any sort, or any exclusive privilege.

H. Duty to Provide Information

The permittee shall furnish to the RA within a reasonable time any information which the RA requests to determine whether cause exists for modifying, revoking and reissuing or terminating this permit. The permittee shall also furnish to the RA, upon request, copies of records required to be kept by this permit.

I. Inspection and Entry

The permittee shall allow EPA representatives upon the presentation of credentials and other documentation to:

1. Enter upon the permittee's premises where a regulated facility or activity is located or conducted, or where records required by this permit are kept;

2. Have access to and copy, at reasonable times, any records that must be kept under the conditions of this permit;

3. Inspect, at reasonable times, any facilities, equipment (including monitoring and control equipment), practices, or operations regulated or required under this permit; and

4. Sample or monitor, at reasonable times, for the purposes of assuring permit compliance or as otherwise authorized by the SDWA, any substances or parameters at any location.

J. Monitoring and Records

1. Samples and measurements taken for the purpose of monitoring shall be representative of the injection activity. The operator shall monitor the injection pressure (psi) and rate (bbl/day) once a month. Reporting of monitoring results shall be in accordance with procedures and at intervals prescribed in condition II.L.4 of this permit.

2. The permittee shall retain records of all monitoring information, including all calibration and maintenance records and all original strip chart recordings of continuous monitoring instrumentation, copies of all reports required by this permit, and records of all data used to complete the application for this permit, for a period of at least three (3) years from the date of the sample, measurement, report or application. This period may be extended by request of the RA at any time.

   The permittee shall retain records concerning the nature and composition of all injected fluids until three (3) years after the completion of any plugging and abandonment procedures specified under 40 CFR §147.2905. The RA may require the owner or operator to deliver the records to the RA at the conclusion of the retention period.

3. Records of monitoring information shall include:

   a. The date, exact place, and time of sampling or measurements;

   b. The individuals who performed the sampling or measurements;

   c. The date(s) analyses were performed;

   d. The individual(s) who performed the analyses;

   e. The analytical techniques or methods used including quality assurance techniques employed to insure the generation of reliable data; and

   f. The results of such analyses.

4. The owner/operator shall retain all monitoring records for three years, unless an enforcement action is pending, and

then until three years after the enforcement action has been resolved.

K. Signatory Requirements

All applications, reports, or information submitted to the RA shall be signed and certified (see 40 CFR §147.2925(j)) by the injection facility owner/operator or his duly authorized representative.

L. Reporting Requirements

1. The owner/operator shall notify the Osage UIC office within 30 days of the date on which injection commenced.

2. Planned changes - The permittee shall give advance notice to the RA of any planned changes which may result in noncompliance.

3. Transfers - This permit is not transferable to any person except after notice to the RA.
   a) Permits may be transferred to another permittee:

      (1) If the current permittee notifies the RA by certified mail at least 10 days before the proposed transfer date; and

      (2) If the notice includes a written agreement between the existing and new permittees containing:

         (i) A specific date for transfer of permit responsibility, coverage and liability; and

         (ii) Assurance that the new permittee has a surety bond on file with BIA; and

      (3) If the RA does not respond with a notice to the existing permittee that the permit will be modified.

   b) If the conditions in paragraph (a) of this section are met, the transfer is effective on the date specified in paragraph (a)(2)(i).

4. Monitoring reports - Monitoring results shall be reported annually on the EPA Annual Disposal/Injection Well Monitoring Report form or an identical format. The report shall specify the types of methods used to generate the monitoring data.

5. Compliance schedules - Reports of compliance or noncompliance with, or any progress report on, interim and final requirements contained in any compliance schedule of this permit shall be submitted no later than 30 days following each interim date and the final date of compliance.

6. Twenty-four hour reporting - The permittee shall report to the Osage UIC office any noncompliance which may endanger an underground source of drinking water. The report shall be provided orally within 24 hours from the time the permittee becomes aware of the circumstances. A written submission shall also be provided within five (5) days of the time the permittee becomes aware of the circumstances. The written submission shall contain a description of the noncompliance and its cause; the period of noncompliance including exact dates and times; if the noncompliance has not been corrected, the anticipated time it is expected to continue; and steps taken or planned to reduce, eliminate, and prevent reoccurrence of the noncompliance.

7. The following shall be reported within 30 days of occurrence:

   1) Any monitoring reports or other information required under paragraph 6 that is not available within five (5) days.

   2) Any malfunction of the injection system including any mechanical failure or downhole problem involving well integrity, well workovers, or any noncompliance (Ref. 40 CFR §147.2922).

8. Other noncompliance - The permittee shall report all instances of noncompliance not reported under paragraphs 6 and 7 of this section at the time monitoring reports are submitted. The reports shall contain the information listed in paragraph L.6 of this section.

9. The permittee shall notify the Osage UIC office within 30 days of the date injection has terminated.

10. Other information. When the permittee becomes aware that he failed to submit any relevant facts in a permit application, or submitted incorrect information in a permit application or in any report to the RA, the permittee shall promptly submit such facts or information.

M. Additional Conditions

1. The operator of a well shall not allow the movement of fluid containing any contaminant into underground sources of drinking water if the presence of that contaminant may cause a violation of any primary drinking water regulation under 40 CFR Part 142 or may otherwise adversely affect human health.

2. The owner/operator shall notify the Osage UIC office within 30 days of the date injection has terminated. The well must be plugged within one year after termination of injection. The

Regional Administrator may extend the time to plug, but only if no fluid movement into a USDW will occur, and the operator has presented a viable plan for utilizing the well within a reasonable time.

3. The permittee shall notify the Osage County UIC office by certified mail at least five (5) days prior to the commencement of plugging operations. The notice must include that information prescribed at 40 CFR §147.2905(c).

4. Plugging and Abandonment - The well shall be plugged in a manner which will not allow the movement of fluids either into or between underground sources of drinking water. Placement of cement plugs shall be accomplished by one of the methods described in 40 CFR §147.2905 or some other method approved by the RA.

   The well to be abandoned shall be in a state of static equilibrium with the mud weight equalized top to bottom, either by circulating the mud in the well at least once or by a comparable method prescribed by the RA, prior to the placement of the cement plug(s).

N. Financial Responsibility

The permittee must demonstrate and maintain financial responsibility and resources to close, plug, and abandon the underground injection well. This shall be demonstrated by submission of a surety bond to the Osage Agency Bureau of Indian Affairs.

O. Civil and Criminal Liability

Nothing in this permit shall be construed to relieve the permittee from civil or criminal penalties for noncompliance.

P. Severability

The provisions of this permit are severable, and if any provision of this permit, or the application of any provision of this permit to any circumstance, is held invalid, the application of such provisions to other circumstances, and the remainder of this permit, shall not be affected thereby.

Q. Explanation of Terms

Terms used in this permit are defined as follows:

"RA" - the EPA Regional Administrator

"UIC" - Underground Injection Control Program

"SDWA"/"the Act" - The Safe Drinking Water Act

"Osage UIC Office" - 707 Grandview Avenue, Osage Agency Campus, P.O. Box 1495, Pawhuska, OK 74056.

Well stimulation - means several processes used to clean the wellbore, enlarge channels, and increase pore space in the interval to be injected thus making it possible for wastewater to move more readily into the formation, and includes (1) surging, (2) jetting, (3) blasting, (4) acidizing, (5) hydraulic fracturing.

Other references to program-specific terms, acronyms and abbreviations shall mean those terms as defined by the Osage UIC program regulations, 40 CFR Part 147 and the Safe Drinking Water Act.

Underground Injection Control Program
Draft Permit
Response to Comments

This is our response to comments received on the subject draft Underground Injection Control (UIC) permit in accordance with Osage UIC program regulations [40 CFR §147.2929(e)].

Permit No.:	06S1261P5258
Permittee Name:	KWB Oil Property Management, Inc.
Well Location:	NW Quarter, Sec. 18, Twp. 27N, Rnge. 8E
Draft Permit Public Comment Period:	October 27, 1987, through November 10, 1987
Prepared by:	Carolyn J. Ritchie

Issue

1. The permittee brought to the attention of the EPA the issue that the injected volume was reduced in the draft permit because of a high fluid level in the referenced well. The permittee stated that the referenced well will be deepened and that water will be injected into the new injection interval under a vacuum.

Response

1. The EPA recognizes that the current fluid level in the referenced well is not representative of the formation to be used for injection. Special permit condition I.B.2. shall be changed to restrict the injection pressure to 0 psig and special permit condition I.B.4. shall be changed to limit the injected volume to 75,000 barrels per month.

Appeal of Final Permit Decision

The final permit may be appealed by any person who filed comments on the draft permit. Persons who did not comment on the draft permit may appeal only those changes made to the final permit subsequent to draft permit issuance. Appeals must be submitted in writing to the Regional Administrator within 30 days of the date the Water Management Division Director signs the permit. Such requests must include that information required in 40 CFR §147.2929(j)(3).

(12)

Y E L L O W F I L E C O P Y

NOTICE OF UIC PERMIT MODIFICATION

The Environmental Protection Agency (EPA) has drafted a modification of Underground Injection Control (UIC) permit application number 06S1261P5258, issued to KWB Oil Property Management, Incorporated. The permit allowed the conversion of a well to a salt water disposal injection well located in Osage County, Oklahoma, NW Quarter, Section 18, Township 27N, Range 8E. The proposed modification will authorize the permittee to inject a maximum of 3,000 barrels per day at a maximum pressure of 0 psig into the Arbuckle Dolomite Formation.

The permit application, supporting data submitted by the applicant, the EPA draft permit modification and statement of basis are available for public review Monday through Friday from 8:00 a.m. to 4:00 p.m. at the Osage UIC Office, 627 Grandview Avenue, Osage Agency Campus, P.O. Box 1495, Pawhuska, OK 74056 or at the Environmental Protection Agency, 1445 Ross Avenue, Dallas, TX 75202-2733. Comments on the permit application and draft permit modification should be submitted to the Dallas office within 15 days of the date of this notice.

Appeals to the final permit modification decision must be made in writing to the Administrator of the EPA within 30 days of issuance of the final permit. An appeal must contain the information set out in 40 C.F.R. 124.19 and 147.2929(j).

Any interested person may request a public hearing on the draft permit modification. The request must be in writing and must include the requestor's statement of the issues cited for discussion at the hearing. The request for public hearing must also be submitted to the Dallas office. EPA will give at least 30 days notice of the public hearing, if a hearing is to be held.

To obtain copies of the draft permit modification, application, or other documents, contact the Osage UIC office at the above address or by telephoning (918) 287-4041.

Billing Instructions:

The publisher's affidavit of publication along with a copy of the published notice should be forwarded to the U. S. Environmental Protection Agency office for payment at the address shown in the notice.

6W-SE:VALENTI:sm:11/04/92;DISK:PMT-OSA#8:5258.36M

R. M. Valenti 11-12-92

Modificati to Environmental Protecti Agency
Osage County Underground Injection Control Program

Permit No. 06S1261P5258
Dated: November 19, 1987

Permit condition I.B.4. described by Permit No. 06S1261P5258 has been revised to read as follows:

I.B.4.

Injection volume shall be limited to 90,000 barrels per month.

In addition, permit condition I.B.5. shall be included in permit no. 06S1261P5258.

I.B.5.

The permittee shall measure the static fluid level in the well annually. The monitoring results shall be reported to the Regional Administrator with the annual operating report required in condition II.L.4. The permittee shall report monitoring results to the Osage UIC office if the static fluid rises above 590 feet below the land surface (e.g., 50 feet below the base of the underground source of drinking water). The report shall be provided orally within 24 hours of the time the permittee becomes aware of the circumstances. The written report must include proposed actions to protect underground sources of drinking water (USDW's) and a schedule to complete those actions. The permittee shall take any corrective action necessary to protect USDW's.

This modification is part of the permit and shall be attached thereto.

APPROVED, ISSUED, and EFFECTIVE this ____ day of _____ _____, in accordance with 40 CFR Subpart GGG, §147.2927.

Myron O. Knudson

Myron O. Knudson, P.E.
Director
Water Management Division
Environmental Protection Agency
Region 6

DRAFT

(22)

YELLOW FILE COPY

Modification to Environmental Protection Agency
Osage County Underground Injection Control Program

Permit No. 06S1261P5258
Dated: November 19, 1987

Permit condition I.B.4. described by Permit No. 06S1261P5258 has been revised to read as follows:

Modified 4/30/97 to 200,000 BPM

I.B.4.

Injection volume shall be limited to 90,000 barrels per month.

In addition, permit condition I.B.5. shall be included in permit no. 06S1261P5258.

I.B.5.

The permittee shall measure the static fluid level in the well annually. The monitoring results shall be reported to the Regional Administrator with the annual operating report required in condition II.L.4. The permittee shall report monitoring results to the Osage UIC office if the static fluid rises above 590 feet below the land surface (e.g., 50 feet below the base of the underground source of drinking water). The report shall be provided orally within 24 hours of the time the permittee becomes aware of the circumstances. The written report must include proposed actions to protect underground sources of drinking water (USDW's) and a schedule to complete those actions. The permittee shall take any corrective action necessary to protect USDW's.

This modification is part of the permit and shall be attached thereto.

APPROVED, ISSUED, and EFFECTIVE this DEC 4 1992 day of _____ _____, in accordance with 40 CFR Subpart GGG, §147.2927.

_____
Myron O. Knudson, P.E.
Director
Water Management Division
Environmental Protection Agency
Region 6

6W-SE:VALENTI:sm:11/04/92:DISK:PMT-OSA#8:5258.33M

Kim Valenti 11-12-92 11/23

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 6
1445 ROSS AVENUE, SUITE 1200
DALLAS, TX 75202-2733

December 23, 1992

REPLY TO: 6W-SE

Certified Mail #P 373 360 285 - Return Receipt Requested

Mr. Ashley M. Houghton
KWB Oil Property Management, Incorporated
15 East 5th Street, Suite 3300
Tulsa, Oklahoma 74103

Re: Underground Injection Control Permit
Permit No. 06S1261P5258 - Osage County, Oklahoma

Dear Mr. Houghton:

Enclosed is a copy of the final permit modification referenced above. Final permit conditions, including the modification, shall remain in effect until the well is plugged and abandoned or the permit is terminated.

If you have any questions, please contact Ms. Donna Bunn in Dallas at (214) 655-8093.

Sincerely yours,

F. Warren Morris

for O. Thomas Love, Jr.
Chief
Water Supply Branch (6W-S)

Enclosures

cc: w/enclosures:
BIA, Minerals Branch
Osage UIC Office

Printed on Recycled Paper

Modificati to Environmental Protecti Agency
Osage County underground Injection Control Program

Permit No. 06S1261P5258
Dated: November 19, 1987

Permit condition I.B.4. described by Permit No. 06S1261P5258 has been revised to read as follows:

I.B.4.

Injection volume shall be limited to 90,000 barrels per month.

In addition, permit condition I.B.5. shall be included in permit no. 06S1261P5258.

I.B.5.

The permittee shall measure the static fluid level in the well annually. The monitoring results shall be reported to the Regional Administrator with the annual operating report required in condition II.L.4. The permittee shall report monitoring results to the Osage UIC office if the static fluid rises above 590 feet below the land surface (e.g., 50 feet below the base of the underground source of drinking water). The report shall be provided orally within 24 hours of the time the permittee becomes aware of the circumstances. The written report must include proposed actions to protect underground sources of drinking water (USDW's) and a schedule to complete those actions. The permittee shall take any corrective action necessary to protect USDW's.

This modification is part of the permit and shall be attached thereto.

APPROVED, ISSUED, and EFFECTIVE this 23rd day of December 1992, in accordance with 40 CFR Subpart GGG, §147.2927.

Myron O. Knudson

Myron O. Knudson, P.E.
Director
Water Management Division
Environmental Protection Agency
Region 6

5258 (10)

(Published in the Pawhuska Journal-Capital, December 5, 1992, 1T.)

NOTICE OF UIC PERMIT MODIFICATION

The Environmental Protection Agency (EPA) has drafted a modification of Underground Injection Control (UIC) permit application number 06S1261P5258, issued to KWB Oil Property Management, Incorporated. The permit allowed the conversion of a well to a salt water disposal injection well located in Osage County, Oklahoma, NW Quarter, Section 18, Township 27N, Range 8E. The proposed modification will authorize the permittee to inject a maximum of 3,000 barrels per day at a maximum pressure of 0 psig into the Arbuckle Dolomite Formation.

The permit application, supporting data submitted by the applicant, the EPA draft permit modification and statement of basis are available for public review Monday through Friday from 8:00 a.m. to 4:00 p.m. at the Osage UIC Office, 627 Grandview Avenue, Osage Agency Campus, P. O. Box 1495, Pawhuska, Oklahoma 74056 or at the Environmental Protection Agency, 1445 Ross Avenue, Dallas, Texas 75202-2733. Comments on the permit application and draft permit modification should be submitted to the Dallas office within 15 days of the date of this notice.

Appeals to the final permit modification decision must be made in writing to the Administrator of the EPA within 30 days of issuance of the final permit. An appeal must contain the information set out in 40 C.F.R. 124.19 and 147.2929(j).

Any interested person may request a public hearing on the draft permit modification. The request must be in writing and must include the requestor's statement of the issues cited for discussion at the hearing. The request for public hearing must also be submitted to the Dallas office. EPA will give at least 30 days notice of the public hearing, if a hearing is to be held.

To obtain copies of the draft permit modification, application, or other documents, contact the Osage UIC office at the above address or by telephoning (918) 287-4041.

PROOF OF PUBLICATION

STATE OF OKLAHOMA, OSAGE COUNTY, SS:

I, Brenda Gates of lawful age being first duly sworn, hereby certify that I am agent of publisher of the Pawhuska Journal-Capital, a bi-weekly newspaper printed and published in Pawhuska, Oklahoma, for more than 104 consecutive weeks, and that a notice, of which a true and correct copy is hereto attached and made a part hereof, was published in the regular and entire issue of each number of the Pawhuska Journal-Capital.

"Affiant further states that said newspaper meets all the requirements of the laws of the state of Oklahoma with reference to legal publications."

one (1) consecutive issues, the first publication being

made on the 5th day of December A.D., 1992

and the last on the ..... day of ..... A.D., 19.....

Brenda Gates

Subscribed and sworn to before me this 5th day of December, 1992

Johnna Gibson
Notary Public

My commission expires January 3, 1995

Publisher's Fee $ 32.90

To Ernie 12/13/92

(18)

YELLOW FILE COPY

NOV 25 1992

REPLY TO: 6W-SE

Certified Mail #P 399 862 188 - Return Receipt Requested

Ms. Ashley M. Houghton
KWB Oil Property Management, Incorporated
15 East 5th Street, Suite 3300
Tulsa, Oklahoma 74103

Re: Draft UIC Permit Modification and Statement of Basis
Permit No. 06S1261P5258

Dear Ms. Houghton:

Enclosed is the public notice, statement of basis and the permit modification which we drafted under the authority of the Safe Drinking Water Act. Submit your comments in writing to the office at the address shown in the notice. The enclosed public notice will be published in the Pawhuska Journal Capital.

DRB 11-30-92

If you have any questions, please call Ms. Donna Bunn in Dallas at (214) 655-7165.

Sincerely yours,

Myron O. Knudson, P.E.
Director
Water Management Division (6W)

Enclosures

cc: with enclosures:
BIA, Minerals Branch
Osage UIC Office

DRB 11-19-92

6W-SE:BUNN:sm:11/03/92:DISK:PMT-OSA#8:5258.8M

6W-SE	6W-S
CHAVARRIA	LOVE
JC 11/20/92	JY 11/20/92

11/23

(08)

Y E L L O W F I L E C O P Y

STATEMENT OF BASIS

For proposed modification to Underground Injection Control Permit No. 06S1261P5258.

Issuing office: U.S. Environmental Protection Agency
Region 6
1445 Ross Avenue
Dallas, Texas 75202-2733

Permittee: KWB Oil Property Management, Incorporated
15 East 5th Street, Suite 3300
Tulsa, Oklahoma 74103

1. As described in the permit, the well is located in Osage County, 990' FNL, 990' FWL, NW Quarter, Section 18, Township 27N, Range 8E.

2. Based on the permittee's request for modification, the Agency has drafted a permit modification.

3. The following is an explanation of the basis of the modified permit conditions as required at 40 CFR §147.2929 dated November 15, 1984:

<u>40 CFR §147.2904</u>

The area around the proposed injection well or project must be evaluated to ensure that the proposed injection well will not cause movement of fluid into a underground source of drinking water (USDW) through improperly sealed, completed, or abandoned wells. The permit applicant submitted information on all wells of public record penetrating the injection interval within 1/4 mile of the proposed injection and requested a maximum injection rate of 3,000 barrels per day (B/D). There are no improperly sealed, completed, or abandoned wells within this area.

EPA did not calculate a "zone of endangering influence" (the lateral area around the proposed injection well in which injection pressures may cause movement of fluid into a USDW) because the Arbuckle Dolomite Formation exhibits fracture flow.

6W-SE:VALENTI:sm:11/04/92:DISK:PMT-OSA#8:5258.35M

Q M Valenti 11-12-92

11/12/92

(16)

YELLOW FILE COPY

NOV 25 1992

REPLY TO: 6W-SE

Certified Mail #P 399 862 191 - Return Receipt Requested

Pawhuska Journal Capital
Post Office Box 238
Pawhuska, Oklahoma 74056

Re: Permit No: 06S1261P5258
Osage County, Oklahoma

Dear Sir:

Please publish once in your newspaper the enclosed notice of the referenced Underground Injection Control (UIC) draft permit modification as soon as possible.

The publisher's affidavit of publication along with a copy of the published notice and billing invoice should be forwarded to EPA Region 6 UIC Office at the address shown below:

U.S. Environmental Protection Agency
Attn: Donna R. Bunn (6W-SE)
1445 Ross Avenue
Dallas, Texas 75202-2733

Please call me at (214) 655-7165 if you have any questions. Your cooperation is appreciated.

Sincerely yours,

Donna Bunn
Program Manager
UIC Permits and Enforcement Section (6W-SE)

Enclosure

cc: Osage UIC Office

6W-SE:BUNN:sm:11/04/92:DISK:PMT-OSA#8:5258.2M

Permit No.: 06S1261 P5258
Scan Code: 21

REPLY TO: 6WQ-SG

Certified Mail P 004 765 082 - Return Receipt Requested

KWB Oil Property Management, Inc.
20 East 5th Street, Suite 1100
Tulsa, OK 74103-4439

Re: Draft UIC Permit Modification and Statement of Basis
No. 06S1261P5258 - Osage County, Oklahoma

Dear Ms. Houghton:

Enclosed are the public notice, statement of basis and the permit modification which have been drafted by this Agency under the authority of the Safe Drinking Water Act. Any comments you wish to make may be submitted in writing by the due date stated in the public notice to Ms. Ellen Caldwell at the above address.

If you have any questions or would like to discuss this permit modification, please contact the permit writer, Mr. Bill Hurlbut at (214) 665-8305.

Sincerely yours,

Larry D. Wright
Chief
Source Water Protection Branch

Enclosures

cc: with enclosures:
BIA, Minerals Branch
Osage UIC Office

BH-1-17-97

6WQ-SG: Bill Hurlbut: 1/7/96: 06S1261P5258.3M
6WQ-SG
WRIGHT

for Ken W. 1/21/97

Advertising Order No. 7T-3074-NNLX
U.S. Environmental Protection Agency
Public Notice of Draft UIC Permit(s)

FEBRUARY 12, 1997

This is to give notice that the U.S. Environmental Protection Agency, Region 6, has formulated a Draft Permit for the following facility (facilities) under the Osage Mineral Reserve, Osage County, Oklahoma, Underground Injection Control (UIC) Program of the Safe Drinking Water Act. Development of the draft permit(s) was based on a preliminary staff review by EPA. The permit(s) will become effective within 15 days after the close of the comment period unless:

A. Comments received by FEBRUARY 27, 1997, in accordance with §124.20, warrant a public notice of EPA's final permit decision.

B. A public hearing is held requiring delay of the effective date.

EPA's contact person for submitting written comments, requesting information regarding the draft permit, and/or obtaining copies of the permit and the Statement of Basis is:

Ms. Ellen Caldwell
Customer Service Branch (6WQ-CA)
U.S. Environmental Protection Agency
1445 Ross Avenue
Dallas, Texas 75202-2733
(214) 665-7513

EPA's comments and public hearing procedures may be found at 40 CFR 124.10 and 124.12 (48 Federal Register 14264, April 1, 1983, as amended at 49 Federal Register 38051, September 26, 1984). Additional procedures pertaining to Osage County may be found at 40 CFR 147.2929(d), Subpart GGG. The comment period during which written comments on the draft permit may be submitted extends 15 days from the date of this Notice. During the comment period, any interested person may request a Public Hearing by filing a written request which must state the issues to be raised. A public hearing will be held when EPA finds a significant degree of public interest.

EPA will consider all comments submitted either in writing or at a public hearing when making its final permit decision. Any person that files comments on the draft permit may appeal the final permit decision. Persons who did not comment on the draft permit may appeal only those changes made to the final permit subsequent to draft permit issuance. Appeals to the final permit decision must be submitted in writing to the Administrator within 30 days after a final permit decision has been issued. An appeal must contain the information set out in 40 CFR 124.19 and

Permit No.: 06S126 P5
Scan Code: 11

The Environmental Protection Agency (EPA) has received a complete Underground Injection Control (UIC) permit modification number 06S1261P5258 from

KWB Oil Property Management, Inc.
20 East 5th Street, Suite 1100
Tulsa, OK 74103-4439

The permittee proposes to change well number "B" 15 to an enhanced oil recovery injection well located in the NW Quarter, Section 18, Township 27N, Range 8E, Osage County, Oklahoma. The modification requests authorization to inject salt water into the Mississippian Limestone/Arbuckle Dolomite formation at an injection interval depth of 2470 to 2960 feet for enhanced recovery. The base of the Underground Source of Drinking Water is at a depth of 540 feet below land surface.

1. The permit modification will enable the permittee to increase the injection volume to 200,000 barrels per month.

BH-1-17-97

6WQ-SG Bill Hurlbut: 1/17/97: 06S1261P5258.5
6WQ-SG
WRIGHT
for Ken W. 1/21/97

Permit No.: 06S1261P5258
Scan Code: 08

January 7, 1996
STATEMENT OF BASIS

For proposed modification to Underground Injection Control Permit No. 06S1261P5258.

Issuing office: U.S. Environmental Protection Agency
Region 6
1445 Ross Avenue
Dallas, Texas 75202-2733

Applicant: KWB Oil Property Management, Inc.
20 East 5th Street, Suite 1100
Tulsa, OK 74103-4439

1. As described in the permit, the well is located in Osage County, 990' FNL, 990' FWL, NW Quarter, Section 18, Township 27N, Range 8E.

2. Based on the permittee's request for modification, the Agency has drafted a permit modification.

3. The following is an explanation of the basis of the modified permit conditions as required at 40 CFR §147.2929 dated November 15, 1984:

BH-1-15-97

6WQ-SG: Bill Hurlbut: 1/7/96: 06S1261P5258.2M
6WQ-SG 6WQ-S
WRIGHT CABRA

for Kaiser 1/17/97

40 CFR §147.2904

The area around the proposed injection well or project must be evaluated to ensure that the proposed injection will not cause movement of fluid into an Underground Source of Drinking Water (USDW) through improperly sealed, completed, or abandoned wells. The permit applicant submitted information on all wells of public record penetrating the injection interval within 1/4 mile of the proposed injection and requested an injection rate not to exceed 200,000 barrels per month (B/M).

EPA did not calculate a "zone of endangering influence" (the lateral area around the proposed injection in which injection pressures may cause movement of fluid into a USDW) because the Arbuckle Dolomite Formation exhibits fracture flow.

40 CFR §147.2919(a)

The well must be sited so that injection is into a formation which is separated from USDWs by a confining zone free of known open faults or fractures within the area of review. The proposed injection interval in the Arbuckle Dolomite is at a depth of 2470 feet to 2960 feet below land surface and is approximately 1930 feet below the base of fresh water. A review of available data has shown no evidence of faults or fractures in the confining zone within the area of review.

40 CFR §147.2919(b)

The well must be cased and cemented to prevent fluid movement into or between USDWs. The base of fresh water occurs at 540 feet below land surface. The surface casing has already been set at 80 feet below land surface and cemented to the surface with 30 sacks of cement and the intermediate casing has already been set at 550 feet below land surface and cemented to the surface with 100 sacks of cement. Also, since the long string casing has been set at 2470 feet below the land surface and cemented with 100 sacks of cement, this is adequate in this case.

40 CFR §147.2920

To assure the protection of USDWs adjacent the well bore, injection must be through an adequate tubing and packer. The packer must be set within 75 feet of the top of the injection interval. Since the top of the injection interval is 2470 feet, the packer in this well must be set inside the casing between 2395 and 2465 feet of depth below land surface [40 CFR §147.2920(a)]. Injection pressure at the wellhead shall be limited so that it does not initiate new

fractures or propagate existing fractures in the confining zone adjacent to any USDW [40 CFR §147.2920(c)].

In this well, the maximum injection pressure at the wellhead shall not exceed 0 psig.

To assure that USDWs are protected from injection fluids, the well must maintain mechanical integrity.

Mechanical integrity must be demonstrated prior to operation and at least once every five years thereafter [40 CFR §147.2920(b)].

For additional information, please contact:

Ms. Ellen Caldwell
Administrative Support Team (6WQ-CA)
U.S. Environmental Protection Agency
Region 6
1445 Ross Avenue
Dallas, Texas 75202-2733
(214) 665-7513

Scan Code: 21

Region 6
1445 Ross Avenue
Dallas, Texas 75202-2733

UIC Permit No.: 06S1261P5258
Well No.: Osage "B" #15

MODIFICATION TO ENVIRONMENTAL PROTECTION AGENCY OSAGE COUNTY UIC PROGRAM

Permit No. 06S1261P5258
Dated: November 19, 1987

Permit condition I.B.4 prescribed by Permit No. 06S1261P5258 has been revised to read as follows:

Injection volume shall be limited to 200,000 barrels per month.

This modification is part of the permit and shall be attached thereto in accordance with 40 CFR Subpart GGG, §147.2927.

This permit modification shall become effective on

Prepared by

Issued on

Bill Hurlbut
Geologist
Ground Water/UIC Section
(6WQ-SG)

William B. Hathaway
Director
Water Quality Protection Division

BH-1-15-96

6WQ-SG: Bill Hurlbut: 1/7/96: 06S1261P5258.1M
6WQ-SG 6WQ-S
WRIGHT CABRA

for Kelli 1/17/97

035250

22

APR 30 1997

REPLY TO: 6WQ-CA

Certified Mail #P 885 489 741 - Return Receipt Requested

Mr. Ashley Houghton
KWB Oil Property Management, Inc.
20 East 5th Street, Suite 1100
Tulsa, Oklahoma 74103-4439

Re: Underground Injection Control Permit
Permit No. 06S1261P5258 - Osage County, Oklahoma

Dear Mr. Houghton:

Enclosed is a copy of the final permit modification referenced above. Final permit conditions, including the modification, shall remain in effect until the well is plugged and abandoned or the permit is terminated.

If you have any questions, please contact Ms. Jenaie Franke in Dallas at (214) 665-7514.

Sincerely yours,

for William B. Hathaway
Director
Water Quality Protection Division

Enclosures

cc: w/enclosures:
BIA, Minerals Branch
Osage UIC Office

Rosborough 3/25/97

Franke 3/26/97

Region 6
1445 Ross Avenue
Dallas, Texas 75202-2733

UIC Permit No.: 06S1261P5258
Well No.: Osage "B" #15

MODIFICATION TO ENVIRONMENTAL PROTECTION AGENCY OSAGE COUNTY UIC PROGRAM

Permit No. 06S1261P5258
Dated: November 19, 1987

Permit condition I.B.4 prescribed by Permit No. 06S1261P5258 has been revised to read as follows:

Injection volume shall be limited to 200,000 barrels per month.

This modification is part of the permit and shall be attached thereto in accordance with 40 CFR Subpart GGG, §147.2927.

This permit modification shall become effective on April 30, 1997

Prepared by

Bill Hurlbut

Bill Hurlbut
Geologist
Ground Water/UIC Section
(6WQ-SG)

Issued on April 30, 1997

Joan E. Brown

for William B. Hathaway
Director
Water Quality Protection
Division

Scan Code 19

September 2, 2013

REPLY TO: 6WQ-NP

CERTIFIED MAIL: RETURN RECEIPT REQUESTED (7011 3500 0000 0360 1496)

Mr. Charles A. Ellis
Grayhorse Operating, Inc.
20 East 5th Street, Ste. 320
Tulsa, OK 74103

Re: Underground Injection Control Permit No. 06S1261P5258
Authorization to Inject
Osage County, Oklahoma

Dear Mr. Ellis:

Enclosed is the Authorization to Inject into Osage B #15. This Authorization is issued under the authority of the Safe Drinking Water Act and the Osage Underground Injection Control (UIC) program regulations [40 CFR §147.2920]. The pressure test completed on this well on January 9, 2013, showed the well has mechanical integrity as required by the referenced permit and any modifications.

If you have any questions, please contact Ms. Jenaie Franke at (214) 665-7514.

Sincerely yours,

William K. Honker, P.E.
Director
Water Quality Protection Division

Enclosure

cc: with enclosure:
BIA Minerals Branch
Osage UIC Office

bcc: with enclosure:
Brown (6WQ-NP)
Reading File (6WQ-NP)

DBrown 8/28/13

6WQ-NP:DBROWN:X8141:8-27-13 ATI OS 5258

6WQ-NP
Franke JF 8/28/13

Well No.: Osage B #15
Permit No. 06S1261P5258

ENVIRONMENTAL PROTECTION AGENCY
Underground Injection Control Program

OSAGE MINERAL RESERVE
Authorization to Inject

Grayhorse Operating, Inc. is hereby authorized to begin injection and operate Osage B #15 well, located at 09990' FNL, 0990' FWL, NW/4, Section 18, T 27N, R 08E as a Class II injection well. The permittee is authorized to inject salt water for disposal.

Conversion of the well identified herein was authorized by Permit No. 06S1261P5258, dated December 19, 1987. This Authorization to Inject is hereby made a part of the referenced permit.

All requirements and conditions prescribed under Permit No. 06S1261P5258 and any modifications apply and remain in full force and effect during the effective period of this permit. This authorization is effective from the date entered below and shall remain in effect unless terminated.

Signed this 2nd day of September, 2013.

William K. Honker, P.E.
Director
Water Quality Protection Division
Environmental Protection Agency
Region 6