basin fuels, limited

DIVISION

2901 EAST 20TH STREET • P.O. BOX 50 • FARMINGTON, NEW MEXICO 87499 PHONE (505) 325-1702

'91 JAN 9 AM 9 41

RECEIVED
JAN 03 1991
OIL CON. DIV.
DIST. 3

January 2, 1991

Mr. Ernie Busch
New Mexico Oil Conservation Division
1000 Rio Brazos Rd.
Aztec, New Mexico 87410

Re: Authorization to Inject
Noo Navajo #2 Well
Franciscan Lake Mesa Verde Field
McKinley County, New Mexico

Dear Mr. Busch:

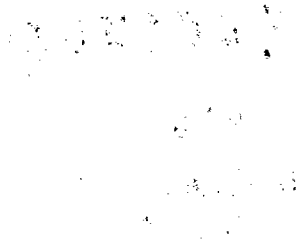
As per our letter to you December 13, 1990, enclosed is the original Affidavit of Publication with regard to the above referenced matter.

Very truly yours,

BASIN FUELS, LTD.

Micki Maben
Micki Maben
Secretary

Enc.



Affidavit of Publication

STATE OF NEW MEXICO,
) ss
COUNTY OF McKINLEY

Barbara Garrett being duly sworn upon oath, deposes and says:

As Legal Clerk of the Gallup Independent, a newspaper published in and having a general circulation in McKinley County, New Mexico, and in the City of Gallup, therein: that this affiant makes this affidavit based upon personal knowledge of the facts herein sworn to. That the publication, a copy of which is hereto attached was published in said newspaper during the period and time of publication and said notice was published in the newspaper proper, and not in a supplement thereof,

for One (1) Time, the first publication being on the 20th day of December, 19 90 the second publication being on the _____ day of _____, 19____ the third publication on the _____ day of _____, 19____

and the last publication being on the _____ day of _____, 19____.

That such newspaper, in which such notice or advertisement was published, is now and has been at all times material hereto, duly qualified for such purpose, and to publish legal notices and advertisements within the meaning of Chapter 12, of the statutes of the State of New Mexico, 1941 compilation.

Barbara Garrett
Affiant.

Sworn and subscribed to before me this 22nd day of December, A.D. 19 90

Notary Public.

My commission expires
6-22-93

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JAN 03 1991
OIL CON. DIV.
DIST. 3

LEGAL NOTICE
FARMINGTON, SAN JUAN COUNTY, NEW MEXICO

To Whom It May Concern:

Please be advised that Basin Fuels, Ltd., of 2901 East 20th Street, Farmington, New Mexico, Attn: Joel B. Burr, Jr., telephone number (505) 328-1702, has filed application with the Oil Conservation Division, Energy and Minerals Department, Santa Fe, New Mexico for authority to inject water in the Mesa Verde Formation (2704'-2746', subsurface) in the Noo Navajo #2 Well, located 330 FNL, 1750' FEL, Section 15, T20N, R6W, N.M.P.M., McKinley County, New Mexico.

The expected maximum injection rate is 700 Bbls. per day at a pressure of 541 P.S.I.

Interested parties must file objections or request for hearing with the Oil Conservation Division, P.O. Box 2088, Santa Fe, New Mexico 87501 within 15 days.

Legal #6391 published in the Independent December 20, 1990.

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION IX
75 Hawthorne Street
San Francisco, Ca. 94105
Mail Code: W-6-2

SEP 23 1991

William J. LeMay
Director
New Mexico Oil Conservation Division
P.O. Box 2088
Sante Fe, New Mexico 87504

Dear Mr. LeMay:

This is to inform you that Basin Fuels, Ltd., has applied to the Environmental Protection Agency (EPA) for an Underground Injection Control (UIC) Permit to utilize the well Noo Navajo #2 in an enhanced oil recovery project. The well is part of a waterflood project in the Franciscan Lake Mesaverde Field in McKinley County, New Mexico, and is on the Navajo Indian Reservation.

Enclosed please find copies of the Public Notice, the Statement of Basis, and the Draft Permit. Any comments or concerns that you may have regarding these documents should be sent to the EPA in writing by November 1, 1991, and should be addressed to:

Anna-Marie Cook
EPA Region IX (W-6-2)
75 Hawthorne Street
San Francisco, CA 94105

If you have any questions, please call Anna-Marie Cook at (415) 744-1832.

Sincerely,

George Kitton

for Leslie Ann Higgins
Acting Chief
Underground Injection Control Section

enclosures

UNDERGROUND INJECTION CONTROL PROGRAM

DRAFT PERMIT

Class II Water Injection Well

Permit No. NN291000003

Well Name: Noo Navajo #2

Field Name: Franciscan Lake Mesaverde Field

McKinley County, New Mexico

Navajo Nation

Issued to:

Basin Fuels, Ltd.
2901 East 20th Street
P.O. Box 50
Farmington, New Mexico 87499

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PART I. AUTHORIZATION TO CONSTRUCT AND INJECT

Pursuant to the Underground Injection Control Regulations of the U. S. Environmental Protection Agency codified at Title 40 of the Code of Federal Regulations, Parts 124, 144, 145, 146, 147 and 148,

Basin Fuels, Ltd
2901 East 20th Street
Farmington, New Mexico 87499

is hereby authorized to convert an existing oil production well, commonly known as the Noo Navajo #2 well, into service as a Class II injection well. The well is located in Section 13, T20N, R6W in McKinley County, New Mexico.

Injection shall be for the purpose of a waterflood project in the Franciscan Lake Mesaverde oilfield in accordance with the conditions set forth herein.

All conditions set forth herein refer to Title 40 Parts 124, 144, 146, 147 and 148 of the Code of Federal Regulations and are regulations that are in effect on the date that this permit becomes effective.

This permit consists of a total of 26 pages and includes all items listed in the Table of Contents. Further, it is based upon representations made by the permittee and on other information contained in the administrative record. It is the responsibility of the permittee to read and understand all provisions of this permit.

This permit and the authorization to inject are issued for a period of ten years unless terminated under the conditions set forth in Part III, Section B of this permit. The permit will expire upon delegation of primary enforcement responsibility for the UIC Class II Program to an appropriate agency of the Navajo Nation, unless the Navajo Nation agency has the appropriate authority and chooses to adopt and enforce this permit as a State permit.

Issued this _____ day of _____ DRAFT

This permit shall become effective _____

_____
Harry Seraydarian, Director
Water Management Division

PART II. SPECIFIC PERMIT CONDITIONS

A. WELL CONSTRUCTION

1. Casing and Cementing. The existing construction history and well schematic of the well to be converted, together with the proposed conversion construction details submitted with the application are hereby incorporated into this permit as Appendix A, and shall be binding on the permittee. The surface casing has been cemented to surface from 99 feet and the long string has been cemented from total depth of 2845 feet to 1152 feet, cementing across the Chacra formation. The casing and cement used in the construction of the well have been designed for the life expectancy of the well, and shall be maintained throughout the operating life of the well.

2. Tubing and Packer Specifications. Two and three-eighths (2-3/8) inches diameter injection tubing will be utilized, with the end of the tubing at approximately 2700 feet and the packer set at approximately 2600 feet inside the four and one half (4-1/2) inch long string casing. The casing/tubing annulus will be filled with corrosion-inhibited fluid. Injection between the outermost casing and the wellbore is prohibited.

3. Monitoring Devices. The operator shall install and maintain in good operating condition:

   (a) A tap on the discharge line between the injection pump and the wellhead for the purpose of obtaining representative samples of the injection fluids;

   (b) Two one-half (1/2) inch FIP fittings, isolated by plug or globe valves, and positioned to provide for either (1) the permanent attachment of one-half (1/2) inch MIP gauges, or (2) the attachments for equivalent "quick-disconnect" gauges at the wellhead on the injection tubing and on the tubing/casing annulus. The gauges used shall be of a design to provide (1) a full pressure range of 100 percent greater than the anticipated operating pressure, and (2) a certified deviation accuracy of five (5) percent or less; and

   (c) A flow meter with measured cumulative volumes that are certified for a deviation accuracy of five (5) percent or less throughout the range of injection rates allowed by the permit.

4. Proposed Changes and Workovers. The permittee shall give advance notice to the Director, as soon as possible, of any planned physical alterations or additions to the permitted injection well. Any changes in the well construction will require prior approval of the EPA and a permit modification under the requirements of 40 CFR 144.39. In addition, the permittee shall provide all records of well workovers, logging, or other subsequent test data, including required mechanical integrity testing, to EPA within sixty (60) days of completion of the activity. Appendix B contains samples of the appropriate reporting forms. Demonstration of mechanical integrity shall be performed within thirty (30) days of completion of workovers or alterations and prior to resuming injection activities, in accordance with Part II, Section C.1.(a).

B. CORRECTIVE ACTION

Within the one-half-mile-radius Area of Review (AOR) there are eleven (11) oil production wells (Noo Navajo #1 and #2 [to be converted to an injection well status], Robinson Coleman #1 and #2, Easter Flats #1, Mc Collum #1, #2 and #3, Star #1 and #6, and Scooter #1), three (3) plugged and abandoned wells (Noo Navajo #5, and Robinson Coleman #3 and #4) and three (3) wells currently shut-in (Noo Navajo #3 and #4, and Easter Flats #2). No corrective action will be required on the wells within the AOR. All wells within the AOR are properly constructed or plugged and abandoned according to the provisions of 40 CFR §146.07. Furthermore, no underground sources of drinking water (USDW) exist within the AOR.

C. WELL OPERATION

1. Prior to Commencing Injection. Injection operations may not commence until the permittee has complied with items (a) and (b) as follows:

   (a) All conversion construction and testing is complete, and the permittee has submitted a completed "Well Rework Record" (EPA Form 7520-12) in Appendix B; and

      (i) The Director has inspected or otherwise reviewed the newly converted injection well and notified the operator that it is in compliance with the conditions of the permit; or

      (ii) The permittee has not received notice from the Director of his or her intent to inspect or otherwise review the injection well within

thirteen (13) days of the date of the Well Rework Record in paragraph (a) of this permit condition, in which case prior inspection or review is waived and the permittee may commence injection; and

(b) The permittee demonstrates that the well has mechanical integrity in accordance with 40 CFR 146.8 and has received written notice from the Director that such a demonstration is satisfactory. The permittee shall notify EPA of its intent to demonstrate mechanical integrity at least thirty (30) days prior to such demonstration.

2. Mechanical Integrity.

(a) Method for Demonstrating Mechanical Integrity. A demonstration of the absence of significant leaks in the casing, tubing and/or packer must be made by performing a tubing/casing annulus pressure test. This test shall be for a minimum of thirty (30) minutes at: (1) a pressure equal to the maximum allowable injection pressure, if the well is shut-in; or (2) a pressure differential of 200 psig between the tubing and the tubing/casing annulus, if injection activities are continued during the test. Injection pressure shall equal the maximum allowable injection pressure during the test. The tubing/casing annulus shall be filled with a non-corrosive fluid (either a non-toxic liquid or the injection fluid) at least twenty-four (24) hours in advance of the test. Pressure values shall be recorded at five (5) minute intervals or less. A well passes the mechanical integrity test if there is less than a five (5) percent decrease/increase in pressure over the thirty (30) minute period.

(b) Schedule for Demonstrations of Mechanical Integrity.

(i) A demonstration of mechanical integrity shall be made no less frequently than every five (5) years from the effective date of this permit, in accordance with 40 CFR 146.8 and paragraph (a) above. Mechanical integrity shall also be demonstrated any time that a workover is conducted, the construction of the well is modified or when loss of mechanical integrity becomes evident during operation.

(ii) It shall be the permittee's responsibility to

arrange and conduct the mechanical integrity demonstrations. The permittee shall notify the Director of its intent to demonstrate mechanical integrity at least thirty (30) days prior to each such demonstration. Results of the test shall be submitted to the Director as soon as possible but no later than sixty (60) days after the demonstration.

(iii) In addition to any demonstration made under paragraph (i) above, the Director may require a demonstration of mechanical integrity at any time during the life of the well.

(c) Loss of Mechanical Integrity. If (1), the well fails to demonstrate mechanical integrity during a test, or (2), a loss of mechanical integrity becomes evident during operation, or (3), a significant change in the annulus or injection pressure occurs during normal operating conditions, the permittee shall notify the Director in accordance with Part III, Section E.10 of this permit. Furthermore, injection activities shall be terminated immediately and operation shall not be resumed until the permittee has taken necessary actions to restore integrity to the well and EPA gives approval to recommence injection.

3. Injection Interval. Injection shall be permitted for the Menefee and Point Lookout Formation in the approximate subsurface interval of 2700 to 2750 feet KB depth. Injection perforations may be added or squeezed-off only within this interval. Alteration of the injection perforations and other rework operations must be properly reported (EPA Form 7520-12) and the well must demonstrate mechanical integrity before injection is resumed.

4. Injection Pressure Limitation.

(a) The injection pressure shall not exceed 540 psig measured at the wellhead.

(b) The injection pressure limitation in paragraph (a) may be increased by the Director if the fracture pressure of the injection formation will not be exceeded. This demonstration shall be made by performing a valid step-rate injection test in the respective proposed injection zone(s). The Director will determine any allowable increase based upon the step-rate test results and other parameters reflecting actual injection operations.

(c) Any approval granted by the Director for the

increased pressure limitations as stated in paragraph (b) shall be made part of this permit by minor modification without further opportunity for public comment.

5. Injection Volume (Rate) Limitation.

   (a) The maximum injection rate shall be limited to 500 bpd.

   (b) The permittee may request an increase in the maximum rate allowed in paragraph (a). Any such request shall be made in writing to the Director.

   (c) Should any increase in rate be requested, the permittee shall demonstrate to the satisfaction of the Director that the increase in volume will not cause migration of formation or injected fluids into any USDW, nor cause any injected fluids to move beyond the Area of Review boundary.

6. Injection Fluid Limitation.

   (a) The permittee shall not inject any hazardous wastes as defined by 40 CFR §261, at any time during the operation of the facility.

   (b) The well shall be used only for the injection of water produced from the Mesaverde interval for the purpose of secondary oil recovery. The total dissolved solids (TDS) of the injected fluid shall not exceed 15,000 ppm.

   (c) Fluids to be injected other than those described in paragraph (b), above, shall be limited to occasional minor amounts of well treatment fluids such as dilute acids and corrosion inhibiting fluids. The injection of any fluids other than those described in paragraph (b), above, shall be reported to the Director within thirty (30) days.

D. MONITORING, RECORDKEEPING, AND REPORTING OF RESULTS

1. Injection Well Monitoring Program. Samples and measurements shall be representative of the monitored activity. The permittee shall utilize the applicable analytical methods described in Table I of 40 CFR §136.3, or in Appendix III of 40 CFR §261, or in certain circumstances, other methods that have been approved by the EPA Administrator. Monitoring shall consist of:

   (a) Analysis of the injection fluids. The analysis shall be performed:

(i) annually for total dissolved solids, major ions, pH

(ii) whenever there is a change in the source of injection fluids.

(b) Monthly recordings of injection pressure, annulus pressure, flow rate and cumulative volume.

2. Monitoring Information. Records of any monitoring activity required under this permit shall include:

(a) The date, exact place, and time of sampling or field measurements;

(b) The name of the individual(s) who performed the sampling or measurements;

(c) The exact sampling method(s) used to take samples;

(d) The date(s) laboratory analyses were performed;

(e) The name of the individual(s) who performed the analyses;

(f) The analytical techniques or methods used by laboratory personnel; and

(g) The results of such analyses.

3. Recordkeeping.

(a) The permittee shall retain records concerning:

(i) the nature and composition of all injected fluids until three (3) years after the plugging and abandonment has been carried out in accordance with the Plugging and Abandonment Plan shown in Appendix C.

(ii) all monitoring information, including all calibration and maintenance records and all original strip chart recordings for continuous monitoring instrumentation and copies of all reports required by this permit for a period of at least five (5) years from the date of the sample, measurement or report throughout the operating life of the well.

(b) The permittee shall continue to retain such records after the retention period specified in paragraphs (a) (i) and (a) (ii) unless it delivers the records to the Director or obtains written approval from the Director to discard the records.

(c) The permittee shall maintain copies (or originals) of all pertinent observation records available for inspection at the facility.

4. Reporting of Results. The permittee shall submit an Annual Report to the Director summarizing the results of the monitoring required by Part II, Sections D.1-2. of this permit. Copies of all monthly records on flow rates, volumes, pressures and injected fluids, and any major changes in characteristics or sources of injected fluid shall be included in the Annual Report.

The first Annual Report shall cover the period from the effective date of this permit through December 31. Subsequently, the Annual Report shall cover the period of January 1 through December 31, and shall be submitted by January 31 of the following year. Appendix B contains Form 7520-11 which may be copied and used to submit the annual summary of monitoring.

E. PLUGGING AND ABANDONMENT

1. Notice of Plugging and Abandonment. The permittee shall notify the Director forty-five (45) days before further conversion, workover, or abandonment of the well. The Director may require that the plugging and abandonment be witnessed by an EPA representative.

2. Plugging and Abandonment Plan. The permittee shall plug and abandon the well as provided in the Plugging and Abandonment Plan in Appendix C. The EPA reserves the right to change the manner in which the well will be plugged if the well is modified during its permitted life or if the well is not consistent with EPA requirements for construction or mechanical integrity. The Director may ask the permittee to estimate and to update the estimated plugging cost periodically. Such estimates shall be based upon costs which a third party would incur to plug the well according to the plan.

3. Cessation of Injection Activities. After a cessation of operations of two (2) years, the permittee shall plug and abandon the well in accordance with the Plugging and Abandonment Plan, unless it:

(a) has provided notice to the Director, and

(b) has demonstrated that the well will be used in the future, and

(c) has described actions or procedures, satisfactory to the Director, that will be taken to ensure that the well will not endanger underground sources of drinking water during the period of temporary

abandonment.

4. Plugging and Abandonment Report. Within sixty (60) days after plugging the well, the permittee shall submit a report on Form 7520-13 to the Director. The report shall be certified as accurate by the person who performed the plugging operation and the report shall consist of either: (1) a statement that the well was plugged in accordance with the plan, or (2) where actual plugging differed from the plan, a statement specifying the different procedures followed.

F. FINANCIAL RESPONSIBILITY

1. Demonstration of Financial Responsibility. The permittee is required to maintain financial responsibility and resources to close, plug, and abandon the injection well as provided in the plugging and abandonment plan.

   (a) The subject well is currently covered, through July 31, 1992, by a Letter of Credit, issued by the Citizens Bank of Farmington, New Mexico. The Letter of Credit reference number is 2179 and the Beneficiary is the United States Environmental Protection Agency. The Letter of Credit is automatically renewed by the Bank every year for a period of one year.

   (b) The permittee must provide proof to the EPA of the Letter of Credit renewal every year by July 15.

2. Insolvency of Financial Institution. The permittee must submit an instrument of financial responsibility acceptable to the Director within sixty (60) days after either of the following events occur:

   (a) the institution issuing the bond or financial instrument files for bankruptcy; or

   (b) the authority of the trustee institution to act as trustee, or the authority of the institution issuing the financial instrument is suspended or revoked.

PART III. GENERAL PERMIT CONDITIONS

A. EFFECT OF PERMIT

The permittee is allowed to engage in underground injection in accordance with the conditions of this permit. The permittee, as authorized by this permit, shall not

construct, operate, maintain, convert, plug, abandon, or conduct any other injection activity in a manner that allows 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 §142 or otherwise adversely affect the health of persons. Any underground injection activity not authorized in this permit or otherwise authorized by permit or rule is prohibited. Issuance of this permit does not convey property rights of any sort or any exclusive privilege; nor does it authorize any injury to persons or property, any invasion of other private rights, or any infringement of state or local law or regulations. Compliance with the terms of this permit does not constitute a defense to any enforcement action brought under the provisions of Section 1431 of the Safe Drinking Water Act (SDWA) or any other law governing protection of public health or the environment for any imminent and substantial endangerment to human health or the environment, nor does it serve as a shield to the permittee's independent obligation to comply with all UIC regulations.

B. PERMIT ACTIONS

1. Modification, Reissuance, or Termination. The Director may, for cause or upon request from the permittee, modify, revoke and reissue, or terminate this permit in accordance with 40 CFR Sections 124.5, 144.12, 144.39, and 144.40. The permit is also subject to minor modifications for cause as specified in 40 CFR §144.41. The filing of a request for a permit modification, revocation and reissuance, or termination or the notification of planned changes or anticipated noncompliance on the part of the permittee does not stay the applicability or enforceability of any permit condition.

2. Transfers. This permit is not transferable to any person except after notice is provided to the Director and the permittee complies with the requirements of 40 CFR §144.38. The Director may require modification or revocation and reissuance of the permit to change the name of the permittee and incorporate such other requirements as may be necessary under the SDWA.

C. 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 provision to other circumstances, and the remainder of this permit shall not be affected thereby.

D. CONFIDENTIALITY

In accordance with 40 CFR Part 2 and 40 CFR §144.5, any information submitted to EPA pursuant to this permit may be claimed as confidential by the submitter. Any such claim must be asserted at the time of submission by stamping the words "confidential business information" on each page containing such information. If no claim is made at the time of submission, EPA may make the information available to the public without further notice. If a claim is asserted, the validity of the claim will be assessed in accordance with the procedures in 40 CFR Part 2 (Public Information). Claims of confidentiality for the following information will be denied:

- The name and address of the permittee, and
- Information which deals with the existence, absence, or level of contaminants in drinking water.

E. GENERAL DUTIES AND REQUIREMENTS

1. Duty to Comply. The permittee shall comply with all conditions of this permit, except to the extent and for the duration such noncompliance is authorized by an emergency permit. Any permit noncompliance constitutes a violation of the SDWA and is grounds for enforcement action, permit termination, revocation and reissuance, or modification. Such noncompliance may also be grounds for enforcement action under the Resource Conservation and Recovery Act (RCRA).

2. Penalties for Violations of Permit Conditions. Any person who violates a permit requirement is subject to civil penalties, fines, and other enforcement action under the SDWA and may be subject to such actions pursuant to RCRA. Any person who willfully violates permit conditions may be subject to criminal prosecution.

3. Need to Halt or Reduce Activity not a Defense. 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.

4. 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.

5. Proper Operation and Maintenance. The permittee shall at all times properly operate and maintain all facilities and systems of treatment and control 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 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 this permit.

6. Duty to Provide Information. The permittee shall furnish the Director, within a time specified, any information which the Director may request to determine whether cause exists for modifying, revoking and reissuing, or terminating this permit, or to determine compliance with this permit. The permittee shall also furnish to the Director, upon request, copies of records required to be kept by this permit.

7. Inspection and Entry. The permittee shall allow the Director, or an authorized representative, upon the presentation of credentials and other documents as may be required by law, to:

   (a) Enter upon the permittee's premises where a regulated facility or activity is located or conducted, or where records are kept under the conditions on this permit;

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

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

   (d) 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.

8. Records of the Permit Application. The permittee shall maintain records of all data required to complete the permit application and any supplemental information submitted for a period of five (5) years from the effective date of this permit. This period may be extended by request of the Director at any time.

9. Signatory Requirements. All reports or other information requested by the Director shall be signed and certified by a responsible corporate officer or

duly authorized representative according to 40 CFR §144.32.

10. Reporting of Noncompliance.

(a) Anticipated Noncompliance. The permittee shall give advance notice to the Director of any planned changes in the permitted facility or activity which may result in noncompliance with permit requirements.

(b) Compliance Schedules. Reports of compliance or noncompliance with, or any progress reports on, interim and final requirements contained in any compliance schedule of this permit shall be submitted no later than thirty (30) days following each schedule date.

(c) Twenty-four Hour Reporting.

(i) The permittee shall report to the Director any noncompliance which may endanger health or the environment. Information shall be provided orally within twenty-four (24) hours from the time the permittee becomes aware of the circumstances by telephoning the EPA project officer. The following information shall be included in the verbal report:

(A) Any monitoring or other information which indicates that any contaminant may cause endangerment to an underground source of drinking water.

(B) Any noncompliance with a permit condition or malfunction of the injection system which may cause fluid migration into or between underground sources of drinking water.

(ii) 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, and 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 recurrence of the noncompliance.

(d) Other Noncompliance. The permittee shall report all other instances of noncompliance not otherwise reported at the time monitoring reports are submitted. The reports shall contain the information listed in Part III, Section E.10.(c)(ii) of this permit.

(e) Other Information. Where the permittee becomes aware that it failed to submit all relevant facts in the permit application, or submitted incorrect information in a permit application or in any report to the Director, the permittee shall submit such facts or information within two (2) weeks of the time such information becomes known.

APPENDIX A - CONVERSION PLAN

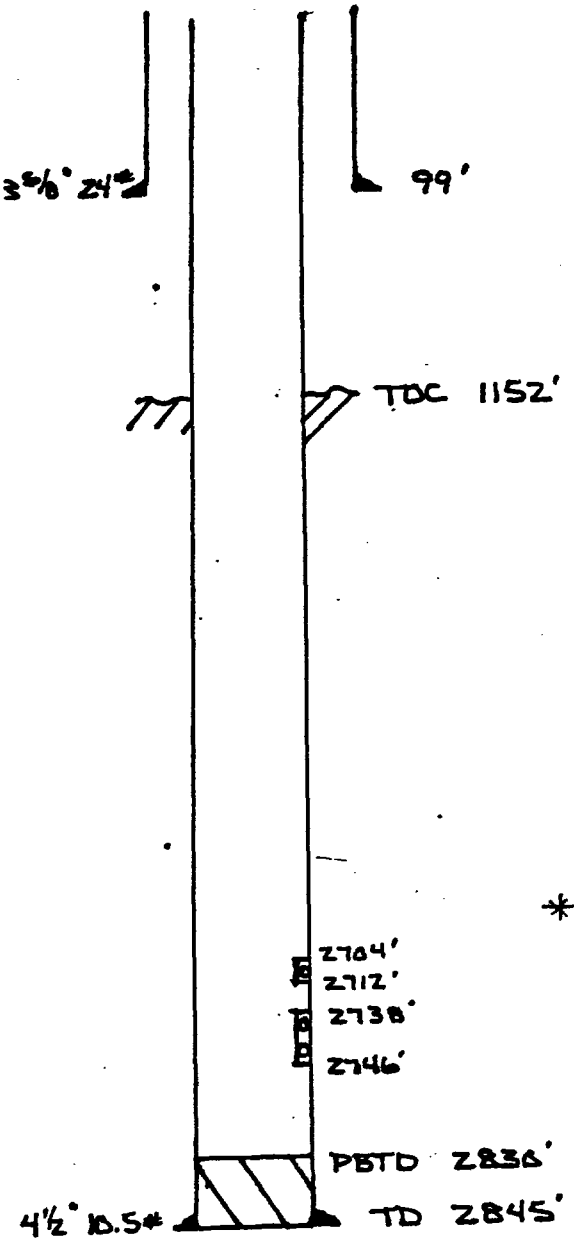
INJECTION WELL DATA SHEET

Basin Fuels, Ltd. (OPERATOR) Noo Navajo (LEASE)

2 (WELL NO.) 330' FNL-1750' FEL (FOOTAGE LOCATION) - Sec. 13 (SECTION), T20N (TOWNSHIP)-R6W (RANGE)

McKinley County, New Mexico

Schematic



Tabular Data

Surface Casing

Size 8-5/8" Cemented with 100 sx.

TOC Surface feet determined by Circ.

Hole size 12-1/4"

Intermediate Casing

Size N/A" Cemented with _____ sx.

TOC _____ feet determined by _____

Hole size _____

Long string

Size 4-1/2" Cemented with 325 sx.

* TOC 1152' KB feet determined by CBL

Hole size 7-7/8"

Total depth 2845' KB

Injection interval

2746' feet to 2704' feet

(perforated or open-hole, indicate which)

* INDICATED ON COMPLETION REPORT.
CBL NOT FOUND IN BASIN FUELS WELLFILE

Tubing size 2-3/8" lined with Spinkote 850 (material) set in a

Baker Model "D" (brand and model) packer at 2600' feet

(or describe any other casing-tubing seal).

APPENDIX B - REPORTING FORMS

1. EPA Form 7520-7: Application to Transfer Permit
2. EPA Form 7520-8: Injection Well Monitoring Report
3. EPA Form 7520-12: Well Rework Record
4. EPA Form 7520-13: Plugging Record

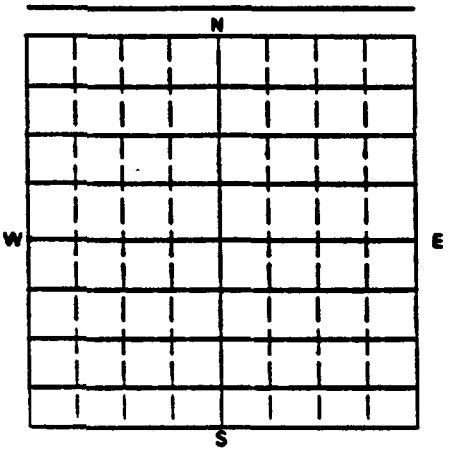
Form Approved. OMB No. 2040-0042. Expires 9-30-91

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, DC 20460

EPA APPLICATION TO TRANSFER PERMIT

NAME AND ADDRESS OF EXISTING PERMITTEE	NAME AND ADDRESS OF SURFACE OWNER

LOCATE WELL AND OUTLINE UNIT ON SECTION PLAT — 640 ACRES



STATE	COUNTY	PERMIT NUMBER

SURFACE LOCATION DESCRIPTION

¼ OF ¼ OF ¼ SECTION TOWNSHIP RANGE

LOCATE WELL IN TWO DIRECTIONS FROM NEAREST LINES OF QUARTER SECTION AND DRILLING UNIT

Surface Location _____ ft. from (N/S) _____ Line of quarter section

and _____ ft. from (E/W) _____ Line of quarter section

WELL ACTIVITY	WELL STATUS	TYPE OF PERMIT
☐ Class I	☐ Operating	☐ Individual
☐ Class II	☐ Modification/Conversion	☐ Area
☐ Brine Disposal	☐ Proposed	Number of Wells _____
☐ Enhanced Recovery		
☐ Hydrocarbon Storage		
☐ Class III		
☐ Other		

Lease Name Well Number

NAME(S) AND ADDRESS(ES) OF NEW OWNER(S)	NAME AND ADDRESS OF NEW OPERATOR

Attach to this application a written agreement between the existing and new permittee containing a specific date for transfer of permit responsibility, coverage, and liability between them.

The new permittee must show evidence of financial responsibility by the submission of surety bond, or other adequate assurance, such as financial statements or other materials acceptable to the director.

CERTIFICATION

I certify under the penalty of law that I have personally examined and am familiar with the information submitted in this document and all attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment. (Ref. 40 CFR 144.32)

NAME AND OFFICIAL TITLE *(Please type or print)*	SIGNATURE	DATE SIGNED

Well Class and Type Codes

Class I	Wells used to inject waste below the deepest underground source of drinking water.
Type "I"	Nonhazardous industrial disposal well
"M"	Nonhazardous municipal disposal well
"W"	Hazardous waste disposal well injecting below USDW's
"X"	Other Class I wells (not included in Type "I," "M," or "W")
Class II	Oil and gas production and storage related injection wells.
Type "D"	Produced fluid disposal well
"R"	Enhanced recovery well
"H"	Hydrocarbonn storage well (excluding natural gas)
"X"	Other Class II wells (not included in Type "D," "R," or "H")
Class III	Special process injection wells.
Type "G"	Solution mining well
"S"	Sulfur mining well by Frasch process
"U"	Uranium mining well
"X"	Other Class III wells (not included in Type "G," "S," or "U")
Other Classes	Wells not included in classes above.
	Class V wells which may be permitted under §144.12
	Wells not currently classified as Class I, II, III, or V.

EPA Form 7520-7 (2-84) Reverse

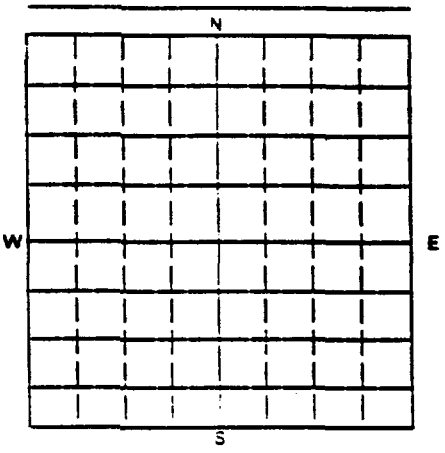
Form Approved. CMB No. 2040-0042. Expires 9-30-91

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, DC 20460

EPA ANNUAL DISPOSAL/INJECTION WELL MONITORING REPORT

NAME AND ADDRESS OF EXISTING PERMITTEE	NAME AND ADDRESS OF SURFACE OWNER

LOCATE WELL AND OUTLINE UNIT ON SECTION PLAT — 640 ACRES



STATE	COUNTY	PERMIT NUMBER

SURFACE LOCATION DESCRIPTION

¼ OF ¼ OF ¼ SECTION TOWNSHIP RANGE

LOCATE WELL IN TWO DIRECTIONS FROM NEAREST LINES OF QUARTER SECTION AND DRILLING UNIT

Surface Location _____ ft. from (N/S) _____ Line of quarter section

and _____ ft. from (E/W) _____ Line of quarter section

WELL ACTIVITY

- ☐ Brine Disposal
- ☐ Enhanced Recovery
- ☐ Hydrocarbon Storage

TYPE OF PERMIT

- ☐ Individual
- ☐ Area

Number of Wells _____

Lease Name Well Number

	INJECTION PRESSURE		TOTAL VOLUME INJECTED		TUBING — CASING ANNULUS PRESSURE (OPTIONAL MONITORING)	
MONTH YEAR	AVERAGE PSIG	MAXIMUM PSIG	BBL	MCF	MINIMUM PSIG	MAXIMUM PSIG

CERTIFICATION

I certify under the penalty of law that I have personally examined and am familiar with the information submitted in this document and all attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment. (Ref. 40 CFR 144.32).

NAME AND OFFICIAL TITLE *(Please type or print)*	SIGNATURE	DATE SIGNED

PAPERWORK REDUCTION ACT NOTICE

Public reporting burden for this collection of information is estimated at an average of 16 hours per operator, including time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding the burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden, to Chief, Information Policy Branch, PM-223, U.S. Environmental Protection Agency 401 M Street, SW, Washington, DC 20460, and to the Office of Management and Budget, Paperwork Reduction Project, Washington, DC 20503.

Form Approved. OMB No. 2040-0042. Expires 9-30-91

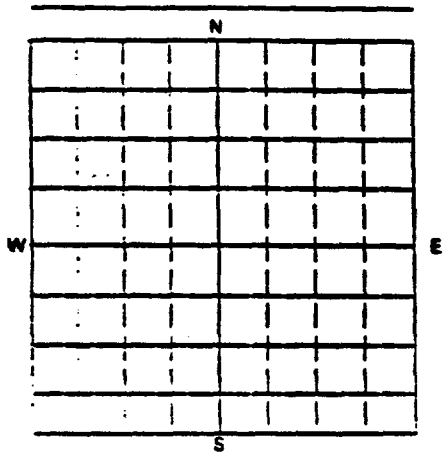
UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, DC 20460

EPA

WELL REWORK RECORD

NAME AND ADDRESS OF PERMITTEE	NAME AND ADDRESS OF CONTRACTOR

LOCATE WELL AND OUTLINE UNIT ON SECTION PLAT — 640 ACRES



STATE	COUNTY	PERMIT NUMBER

SURFACE LOCATION DESCRIPTION

¼ OF ¼ OF ¼ SECTION TOWNSHIP RANGE

LOCATE WELL IN TWO DIRECTIONS FROM NEAREST LINES OF QUARTER SECTION AND DRILLING UNIT

Surface Location ____ ft. from (N/S) ____ Line of quarter section

and ____ ft. from (E/W) ____ Line of quarter section

WELL ACTIVITY		TYPE OF PERMIT
☐ Brine Disposal ☐ Enhanced Recovery ☐ Hydrocarbon Storage	Total Depth Before Rework	☐ Individual ☐ Area Number of Wells ____
	Total Depth After Rework	
Lease Name	Date Rework Commenced	Well Number
	Date Rework Completed	

WELL CASING RECORD — BEFORE REWORK

Casing		Cement		Perforations		Acid or Fracture Treatment Record
Size	Depth	Sacks	Type	From	To	

WELL CASING RECORD — AFTER REWORK *(Indicate Additions and Changes Only)*

Casing		Cement		Perforations		Acid or Fracture Treatment Record
Size	Depth	Sacks	Type	From	To	

DESCRIBE REWORK OPERATIONS IN DETAIL USE ADDITIONAL SHEETS IF NECESSARY	WIRE LINE LOGS. LIST EACH TYPE	
	Log Types	Logged Intervals

CERTIFICATION

I certify under the penalty of law that I have personally examined and am familiar with the information submitted in this document and all attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment. (Ref. 40 CFR 144.32).

NAME AND OFFICIAL TITLE *(Please type or print)*	SIGNATURE	DATE SIGNED

Paperwork Reduction Act Notice

Public reporting burden for this collection of information is estimated at an average of 4 hours per well, including time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding the burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden, to Chief, Information Policy Branch, PM-223, U.S. Environmental Protection Agency, 401 M Street, SW, Washington, DC 20460, and the Office of Management and Budget, Paperwork Reduction Project, Washington, DC 20503.

Form Approved. OMB No. 2000-0042 Approval expires 9-30-91

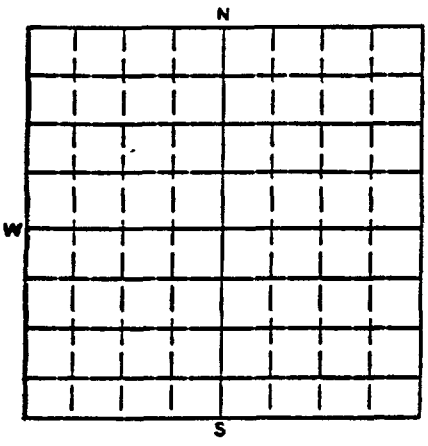
EPA

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, DC 20460

PLUGGING RECORD

NAME AND ADDRESS OF PERMITTEE	NAME AND ADDRESS OF CEMENTING COMPANY

LOCATE WELL AND OUTLINE UNIT ON SECTION PLAT — 640 ACRES



STATE	COUNTY	PERMIT NUMBER

SURFACE LOCATION DESCRIPTION

¼ OF ¼ OF ¼ SECTION TOWNSHIP RANGE

LOCATE WELL IN TWO DIRECTIONS FROM NEAREST LINES OF QUARTER SECTION AND DRILLING UNIT

Surface Location ____ ft. from (N/S) ____ Line of quarter section

and ____ ft. from (E/W) ____ Line of quarter section

TYPE OF AUTHORIZATION

- ☐ Individual Permit
- ☐ Area Permit
- ☐ Rule

Number of Wells ____

Lease Name

Describe in detail the manner in which the fluid was placed and the method used in introducing it into the hole

CASING AND TUBING RECORD AFTER PLUGGING

SIZE	WT(LB/FT)	TO BE PUT IN WELL (FT)	TO BE LEFT IN WELL (FT)	HOLE SIZE

WELL ACTIVITY

- ☐ CLASS I
- ☐ CLASS II
  - ☐ Brine Disposal
  - ☐ Enhanced Recovery
  - ☐ Hydrocarbon Storage
- ☐ CLASS III

METHOD OF EMPLACEMENT OF CEMENT PLUGS

- ☐ The Balance Method
- ☐ The Dump Bailer Method
- ☐ The Two-Plug Method
- ☐ Other

CEMENTING TO PLUG AND ABANDON DATA:	PLUG #1	PLUG #2	PLUG #3	PLUG #4	PLUG #5	PLUG #6	PLUG #7
Size of Hole or Pipe in which Plug Will Be Placed (inches)							
Depth to Bottom of Tubing or Drill Pipe (ft.)							
Sacks of Cement To Be Used (each plug)							
Slurry Volume To Be Pumped (cu. ft.)							
Calculated Top of Plug (ft.)							
Measured Top of Plug (if tagged ft.)							
Slurry Wt. (Lb./Gal.)							
Type Cement or Other Material (Class III)							

LIST ALL OPEN HOLE AND/OR PERFORATED INTERVALS

From	To	From	To

Signature of Cementer or Authorized Representative	Signature of EPA Representative

CERTIFICATION

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprinsonment for knowing violations. (REF. 40 CFR 122.22)

NAME AND OFFICIAL TITLE *(Please type or print)*	SIGNATURE	DATE SIGNED

PAPERWORK REDUCTION ACT NOTICE

Public reporting burden for this collection of information is estimated at an average of four (4) hours per well, including time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding the burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden, to Chief, Information Policy Branch, PM-223, U.S. Environmental Protection Agency, 401 M Street, SW, Washington, DC 20460, and the Office of Management and Budget, Paperwork Reduction Project, Washington, DC 20503.

APPENDIX C - PLUGGING AND ABANDONMENT PLAN

Form Approved. OMB No. 2040-0042. Approval expires 9-30-91

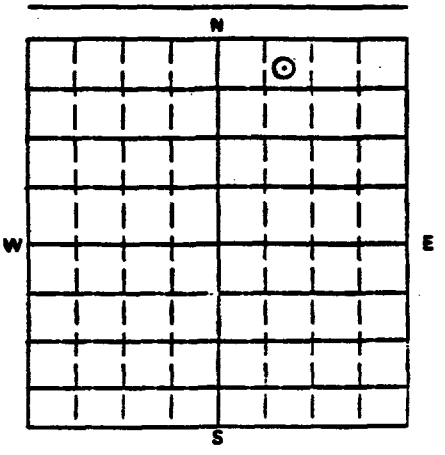
UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, DC 20460

EPA PLUGGING AND ABANDONMENT PLAN

NAME AND ADDRESS OF FACILITY
Noo Novato # 2 Injection Well
Sec. 13 T-20N R-6W
McKinley County, NM

NAME AND ADDRESS OF OWNER/OPERATOR
Basin Fuels, Ltd.
PO Box 50
Farmington NM 87499

LOCATE WELL AND OUTLINE UNIT ON SECTION PLAT — 640 ACRES



STATE	COUNTY	PERMIT NUMBER
NM	McKinley	W-6-2

SURFACE LOCATION DESCRIPTION
NE ¼ OF NW ¼ OF NE ¼ SECTION 13 TOWNSHIP 20N RANGE 6W

LOCATE WELL IN TWO DIRECTIONS FROM NEAREST LINES OF QUARTER SECTION AND DRILLING UNIT
Surface Location 550' ft. from (N/S) N Line of quarter section
and 1760' ft. from (E/W) E Line of quarter section

TYPE OF AUTHORIZATION
- ☐ Individual Permit
- ☒ Area Permit
- ☐ Rule

Number of Wells 1 - Presently
Lease Name Franciscon Lake Mesaverde Field

WELL ACTIVITY
- ☐ CLASS I
- ☒ CLASS II
  - ☐ Brine Disposal
  - ☒ Enhanced Recovery
  - ☐ Hydrocarbon Storage
- ☐ CLASS III

Well Number Noo Novato #2

CASING AND TUBING RECORD AFTER PLUGGING

SIZE	WT(LB/FT)	TO BE PUT IN WELL (FT)	TO BE LEFT IN WELL (FT)	HOLE SIZE
8 5/8"	24#		99'	12 1/4"
4½"	10.5#		2845'	7 7/8"

METHOD OF EMPLACEMENT OF CEMENT PLUGS
- ☐ The Balance Method
- ☐ The Dump Bailer Method
- ☐ The Two-Plug Method
- ☒ Other

1 - Spot Plug w/ Full Hole.

CEMENTING TO PLUG AND ABANDON DATA:	PLUG #1	PLUG #2	PLUG #3	PLUG #4	PLUG #5	PLUG #6	PLUG #7
Size of Hole or Pipe in which Plug Will Be Placed (inches)	4½	4½	4½				
Depth to Bottom of Tubing or Drill Pipe (ft.) Packer	2600	1350	100				
Sacks of Cement To Be Used (each plug)	50	7.6	7.6				
Slurry Volume To Be Pumped (cu. ft.)	59	9	9				
Calculated Top of Plug (ft.)	2600	1250	Surf.				
Measured Top of Plug (if tagged ft.)							
Slurry Wt. (Lb./Gal.)	15.2	15.2	15.2				
Type Cement or Other Material (Class III)	B-Neat	B Neat	B Neat				

LIST ALL OPEN HOLE AND/OR PERFORATED INTERVALS AND INTERVALS WHERE CASING WILL BE VARIED *(If any)*

From	To	From	To

Estimated Cost to Plug Wells
$20,000

CERTIFICATION

I certify under the penalty of law that I have personally examined and am familiar with the information submitted in this document and all attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment. (Ref. 40 CFR 144.32)

NAME AND OFFICIAL TITLE *(Please type or print)*	SIGNATURE	DATE SIGNED
Bradley W. Solzman (Agent	Bradley W Solzman	6-10-91

EPA Form 7520-14 (3-84)

PUBLIC NOTICE OF INTENT TO ISSUE AN
UNDERGROUND INJECTION CONTROL (UIC) CLASS II PERMIT TO
BASIN FUELS, LTD.

Purpose of Public Notice

The U.S. Environmental Protection Agency (EPA) is soliciting public comments on its proposal to issue a UIC permit to Basin Fuels authorizing the underground injection of fluids into the well Noo Navajo #2. The well is located in the Franciscan Lake Mesaverde Field in McKinley County, New Mexico in Section 13, Township 20N, Range 6W.

Name and address of applicant:

Basin Fuels, Ltd
2901 East 20th Street
Farmington, New Mexico 87499

Background

As proposed, the draft permit would allow the facility the use of the injection well, Noo Navajo #2, to inject formation fluid associated with oil production at a rate of no greater than 500 barrels per day. The permit does not allow the injection of hazardous wastes. No underground sources of drinking water are known to exist in this area.

Basin Fuels has submitted all the required information necessary for the issuance of this draft UIC permit. The draft permit includes construction, operation, monitoring, and closure requirements for the injection well.

The EPA has made a preliminary determination to approve this permit application. This action is being taken as provided by Part C of the Safe Drinking Water Act and attendant regulations.

Public Comments:

All non-proprietary information submitted by the applicant and the Draft Permit prepared by EPA are contained in the administrative records for the proposed injection well. This information is available for public inspection at:

Environmental Protection Agency, Region IX
Underground Injection Control Section (W-6-2)
75 Hawthorne Street
San Francisco, CA 94105
Attention: Anna-Marie Cook
Telephone: (415) 744-1832

Copies of the Draft Permit and the Statement of Basis are also available for public review at:

Farmington Public Library
Farmington, New Mexico 87401

Navajo Nation Library
Window Rock, Arizona 86515

Public comments will be accepted, in writing, at the San Francisco office until November 1, 1991. A request for a public hearing should be made in writing and should state the nature of the issues proposed to be raised at the hearing. A PUBLIC HEARING WILL BE HELD ONLY IF SIGNIFICANT INTEREST IS SHOWN.

Final Permit Decisions and Appeal Process

A final decision to issue, modify, or deny the permit will be made after all comments have been considered. Notice of the final decision will be sent to each person who has sent or delivered written comments or who requested notice of the final permit decision.

If a final permit is issued, it shall become effective immediately if no comments requested a substantial change in the Draft Permit, and no substantial changes are made from the Draft Permit to the Final Permit. If substantial changes have been requested or made in the Final Permit, the Final Permit will become effective thirty (30) days after issuance.

Within thirty (30) days from the date the final permit decision has been issued, any person who filed comments on the Draft Permit, participated in a public hearing, or takes issue with any changes in the Draft Permit, may petition the Director to review the permit decision. Persons interested in appealing the final permit decision are referred to 40 CFR Sections 124.15 to 124.20 for the procedural requirements of the appeal process.

STATEMENT OF BASIS

CLASS II PERMIT APPLICATION

BASIN FUELS, LIMITED

NOO NAVAJO #2

Noo Navajo #2
UIC Permit NN291000003
NE/4 Sec 13, T20N, R6W
Franciscan Lake Mesaverde Field
McKinley County, New Mexico

CONTACTS:

Joel Burr
Basin Fuels, Ltd
2901 East 20th Street
P.O. Box 50
Farmington, New Mexico 87499
(505) 325-1702

Anna-Marie Cook
Underground Injection Control Section
United States Environmental Protection Agency
75 Hawthorne Street, Mail Code W-6-2
San Francisco, California 94105
(415) 744-1832

BACKGROUND INFORMATION

On March 22, 1991, Basin Fuels Ltd, Farmington, New Mexico, submitted an application for a Class II Underground Injection Control permit. On June 14, 1991, in response to the administrative review, they submitted additional material to complete the application. Basin Fuels would like to convert an oil production well to an injection well for use in a waterflooding project. The well is part of the Franciscan Lake Mesaverde Field in McKinley County, New Mexico and is located on the Navajo Indian Reservation.

The injection fluid will consist of produced water from the Menefee formation. The total dissolved solids (TDS) content of this water is 11,000 parts per million (ppm). The water will be injected into the lower Menefee and the upper Point Lookout formation at a depth of 2704 feet.

Basin Fuels has notified all interested parties within the half-mile radius area of review, including the Navajo Nation Environmental Protection Agency and the New Mexico Oil Conservation Division, of the proposed injection well. In addition, they have placed a legal advertisement in the Gallup Independent regarding the permit application. Basin Fuels states that there are no surface tenants, allottees, or permanent dwellings within the half-mile radius of review.

Basin Fuels has submitted all the required information and data necessary for an injection permit issuance in accordance with 40 CFR Parts 144, 146, and 147. The EPA has decided to approve this permit, pending public review and comment, and is now issuing a proposed permit.

The subject for this Statement of Basis is well Noo Navajo #2 and its permit number is NN291000003. The permit will be issued for the remaining operating life of the existing oil recovery operation in the Franciscan Lake Mesaverde Field unless the permit is terminated for reasonable cause (40 CFR §144.39, 144.40, and 144.41). The permit will be reviewed every five years.

This Statement of Basis provides the derivation and justification of the site specific permit conditions on the basis of the direct implementation regulations promulgated for the Indian Tribal lands on the Navajo Indian Reservation under the UIC program provisions of the Safe Drinking Water Act.

SITE SPECIFIC CONDITIONS

Section A - Well Construction

Casing and Cementing:

Construction of the casing and cementing for well Noo Navajo #2: The 8-5/8 inch surface casing is set at 99 feet and is cemented with 100 sacks circulated to the surface. The long string casing is 4-1/2 inches in diameter and is run from the surface to 2845 feet and cemented with 325 sacks over the interval 1152 feet to 2845 feet. The perforations are between 2704 feet and 2746 feet below the surface.

Tubing and Packer Specifications:

The tubing information submitted by the applicant is incorporated into the permit and shall be binding on the permittee. The 2-3/8 tubing will be run from the surface to approximately 2700 feet. The packer will be set at approximately 2600 feet.

Formation Logging and Testing:

The tubing/casing annulus will be tested for mechanical integrity before injection may commence. It will be tested at a minimum of once every five years thereafter. No additional formation logging nor testing is required.

Monitoring Devices:

The operator is required to install one-half inch FIP fittings with cut-off valves on the tubing and the tubing/casing annulus of the well to allow an inspector to take injection pressure measurements.

A flow meter will be installed for measuring flow rates and cumulative volumes. The meter will be certified for at least 95% accuracy throughout the range of injection rates used.

A sampling tap will be installed on the injection pump discharge line for the purpose of periodically obtaining representative samples of the injection fluid.

Section B - Corrective Action

The applicant submitted the required one-half mile radius Area of Review (AOR) information with the permit application. There are a total of 17 wells located within the area of review, 11 producers (one of which is Noo Navajo #2 to be converted to an injection well), 3 that have been plugged and abandoned, and 3 that are shut-in producers. The complete schematics for all of the wells within the area of review are in the permit application package on file at the EPA office in San Francisco.

No corrective action is required of the permittee because all of the wells within the area of review have been properly constructed or adequately plugged and abandoned. In addition, there are no underground sources of drinking water within the area of review.

Section C - Well Operation

Mechanical Integrity:

A mechanical integrity test (MIT) of the injection casing, tubing and packer will be conducted prior to commencement of injection operations in the proposed injection well. This test will involve increasing the pressure in the annulus to 540 psig and holding it for 30 minutes with no more than a 5% drop in pressure.

Demonstrations of mechanical integrity of the injection casing, tubing and packer will also be conducted within 30 days after any workovers or alterations and prior to recommencing injection.

An MIT pressure test of the annulus will also be conducted at least once every 5 years during the life of the permit.

The construction details and cement records satisfy the requirements of 40 CFR §146.8(a)(2) for demonstrating the absence of significant fluid movement.

Injection Interval:

The injection interval will be limited to the lower Menefee and the upper Point Lookout formation between the depths of 2700 and 2750 feet below the surface. The upper confining zone is the Lewis Shale approximately 550 to 900 feet below surface. The lower confining zone is the Mancos Shale occurring at approximately 2770 feet below surface.

Injection Pressure Limitation:

The maximum allowable injection pressure shall be 540 psig, measured at the surface.

The applicant did not submit step-rate test data, but requested an injection pressure based on an assumed 0.2 psi/ft fracture gradient. This assumption for fracture gradient is reasonable and is typically used for disposal wells on Indian lands. The maximum injection pressure was calculated as follows:

$$P_m = FG \cdot d$$
$$P_m = 0.2 \text{ psi/foot} \cdot 2704 \text{ feet}$$
$$P_m = 540 \text{ psig}$$

where: P_m = maximum pressure at the wellhead (psig)
d = depth to top perforation (feet)
FG = fracture pressure gradient (psi/foot)

The injection pressure may be increased if the applicant conducts a valid step-rate test demonstrating that the actual formation fracture pressure is higher.

Injection Volume (Rate) Limitation:

The maximum injection rate shall be 500 barrels per day (bpd), which is the rate requested by the applicant. The injection is also limited to a rate that will not cause the injection pressure to exceed 540 psig at the wellhead.

Injection Well Monitoring Program:

The permittee is required to sample and analyze the water quality of the injected fluids at annual intervals. The water samples shall be analyzed for total dissolved solids, major ions, pH, specific conductivity, and specific gravity. Similar analyses shall be conducted whenever the source of the injection fluid changes.

Measurements of the injection pressure, annulus pressure, and injection flow rate must be observed and recorded at least once per month.

Section E - Plugging and Abandonment

We have reviewed and approved the plugging and abandonment plan submitted by the applicant. The plugging and abandonment plan is incorporated into the permit as Attachment A. The estimated cost to plug and abandon Noo Navajo #2 well is $20,000.

Section F - Financial Responsibility

The permittee has a Letter of Credit issued by the Citizens Bank of Farmington, New Mexico established in favor of USEPA in the amount of $20,000. This Letter of Credit covers the cost of plugging and abandoning the Noo Navajo #2 well in the Franciscan Lake Mesaverde Field.

In addition, Basin Fuels, Ltd. has established a Standby Trust Agreement naming USEPA as beneficiary in the case of default.