



STATE OF ARKANSAS
DEPARTMENT OF ENVIRONMENTAL QUALITY
STATE PERMITS BRANCH, OFFICE OF WATER QUALITY
5301 NORTHSHORE DRIVE
NORTH LITTLE ROCK, ARKANSAS 72118-5317
PHONE: (501) 682-0648



APPLICATION PROCEDURES AND REQUIREMENTS
FOR AN UNDERGROUND INJECTION CONTROL PERMIT

PART I
GENERAL INSTRUCTIONS

Please read the following prior to completing the application:

1. The applicant is advised to review all applicable state and/or federal regulations, including, but not limited to: Arkansas Water and Air Pollution Control Act (Act 472 of 1949, as amended, A. C. A. § 8-4-101, *et seq.*), APC&EC Regulations 8, 9, and 17 (Arkansas Underground Injection Control Code) and Title 40 of the Code of Federal Regulations (40 CFR) §§ 144, 146, and 148.
2. All of the following submittals will become a part of the permit file:
 - All construction and operating information contained in the permit application,
 - any change, modification, or alteration of the permit application submitted to the Department in writing and approved by the Department in writing

All information supplied to this Department shall be available for public inspection unless the information is of a proprietary nature and clearly marked confidential as listed in 40 CFR § 2.201. Laboratory analysis data cannot be considered confidential.

3. Two (2) copies of the application: one hard copy and one electronic copy, should be mailed to:

UIC Program Coordinator
Permits Branch, Office of Water Quality
Arkansas Department of Environmental Quality
5301 Northshore Drive
North Little Rock, AR 72218-5317

For telephone inquiries, call (501) 682-0650.

4. All applications, reports, or information submitted to the Director shall be signed and certified as required by State and Federal requirements. All permit applications shall be signed as follows:
 - A. For a corporation: by a responsible corporate officer. For the purpose of this section, a responsible corporate officer means:
 - i. A president, secretary, treasurer, or vice-president of the corporation in charge of a principal business function, or any other person who performs similar policy or decision-making functions for the corporation: or

- ii. For a partnership or sole proprietorship: by a general partner or proprietor, respectively; or
 - iii. The manager of one or more manufacturing, production, or operation facilities, provided, the manager is authorized to make management decisions which govern the operation of the regulated facility including having the explicit or implicit duty of making major capital investment recommendations, and initiating and directing other comprehensive measures to assure long term environmental compliance with environmental laws and regulations; the manager can ensure that the necessary systems are established or actions taken to gather complete and accurate information for permit application requirements; and where authority to sign documents has been assigned or delegated to the manager in accordance with corporate procedures.
- B. All reports required by the permit and other information requested by the Director shall be signed by a person described above or by a duly authorized representative of that person. A person is a duly authorized representative only if:
- i. The authorization is made in writing by a person described above;
 - ii. The authorization specified either an individual or a position having responsibility for the overall operation of the regulated facility or activity, such as the position of plant manager, operator of a well or a well field, superintendent, or position of equivalent responsibility. (A duly authorized representative may thus be either a named individual or any individual occupying a named position); and
 - iii. The written authorization is submitted to the Director.
- C. Any person signing a document under this section shall make the following certification in the application:

“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 imprisonment for knowing violations.”

5. Act 817 of 1983 and the Arkansas Pollution Control and Ecology Commission (APCEC) Regulation No. 9 (Permit Fees) promulgated thereto requires that, if applicable, a fee be paid by the applicant prior to the issuance of a permit, a permit modification, or a renewal of a permit. Permit fees are payable by check or money order or online at the following link:

<https://www.adeg.state.ar.us/fiscal/>

and must be received before the permit can be issued.

6. Act 165 of 1993 and APC&EC Regulation No. 8 (Administrative Procedures) dictate the following public notice requirements for permit applicants:

A. A first public notice must be published for all permit applications submitted to the Department

(new, renewal, or major modifications). Upon receiving a complete application, the Department will prepare a public notice of application and return it to the applicant for publication in a newspaper having general circulation in the county or counties in which the facility is or will be located. An affidavit and proof of payment for the notice publication must be submitted to the Department.

- B. A second public notice must be published concerning the Director's tentative decision to approve or deny the proposed permit. The Department will prepare this notice and submit it for publication in a newspaper having general circulation in the county or counties in which the facility is or will be located. An affidavit and proof of payment for the notice publication must be submitted by the permittee to the Department.
- C. Act 165 of 1993 requires the applicant to bear the expense of all the public notices. Proof of payment for the public notices must be submitted to the Department with the affidavit of publication.
- D. The Director may not require public notices under authority of 40 CFR part 124 and Regulation No. 8, provided the permit application meets the definitions of a minor modification under the provisions of 40 CFR §144.41 .

PART II
PROCEDURAL INFORMATION

1. After receipt, the application materials will be reviewed for administrative completeness. The Department will not process any application or begin technical review until all information required to properly classify the application as complete has been received. During the review, the Department may contact the applicant for clarification or to request additional information. If an application is severely lacking in detail or requested information is not submitted in a timely manner, the application may be returned to the applicant.
2. After determining that an application is administratively complete, the Department will prepare a public notice of application and submit it to the applicant for publication in a local newspaper (See Application Procedures, Part I.6.A). A 10-day comment period must follow publication of this notice.
3. Upon receiving the proof of publication and payment for the public notice of the application, the Department will review the application and all attached documentation for technical accuracy and completeness. During the review, the Department may contact the applicant to request additional information.
4. Following the technical review, the Director will make a tentative decision to issue or deny a draft permit. A second public notice will be prepared and forwarded directly to a local newspaper for publication by the Department regarding the Director's decision. A 30-day comment period must follow publication of this notice.
5. Upon receipt of the proof of publication and payment for the public notice of the draft permit and after the expiration of the 30-day comment period, the Director will make a final decision to issue or deny the permit. In instances where significant public interest has been expressed, the Director may decide to hold a hearing to obtain public comments. If public comments are received during the comment period, the Department will generate a Response to Comments document and may revise the draft permit if deemed appropriate. If this occurs, the final permit will be issued 30 days after the end of the comment period.
6. For a new facility, if the Director makes a final decision to issue the permit, the applicant may commence construction once the permit becomes effective. The facility must be constructed, modified, and/or operated in accordance with the final design plans and specifications approved by the Department. After construction is complete, the permittee must submit a Completion Report for each well to the Department. The permittee must submit justification for any modifications made to the facility during construction.
7. After review of the completion report, the Department will issue a letter of authorization to commence operation of the facility, also known as an "*authorization to inject*". If the plan does not include any type of construction, the authorization to commence operation will be issued in conjunction with the Director's final permit decision. **Operation of the facility shall not commence until the Department has issued a letter of authorization to operate.**
8. Prior to implementation of any changes in operational procedures of a permitted facility, the operator must request Department approval, in writing, describing the proposed changes.
9. Permits are issued with a 10-year expiration date. An application to renew an existing permit must

be submitted no less than 180 days prior to the expiration date for continued operation of the permitted facility. Operators applying for a renewal must go through the same process as obtaining a new permit as listed in Items 1-8 above, including fee and public notice requirements. All information listed in Part III is required for submittal for renewal consideration.

10. If a change of ownership or control of a permitted facility occurs, the permit may be transferred to the new owner(s) by notifying the Department thirty (30) days in advance of the proposed transfer date in accordance with 40 CR 144.38 and submits a Permit Transfer Form available at the following link:

<https://www.adeg.state.ar.us/water/permits/pdfs/water-permit-transfer-form.pdf>

and either a completed “Disclosure Statement” form for privately owned companies or a link to the most recent copy of the Securities and Exchange Commission (SEC) Annual Report for publicly traded companies. Disclosure statement forms are available on the Department webpage at the following link:

https://www.adeg.state.ar.us/ADEQ_Disclosure_Statement.pdf

PART III
TECHNICAL REQUIREMENTS

Please note that additional information may be required during review of the application.

General requirements:

- List all sources of the information to be provided in the permit application.
- All calculations should be shown.
- Maps, cross-sections, and diagrams should be of an adequate scale so that details may be visible.
- Information depicted on the maps should be clearly marked with an appropriate legend.
- The document must have a stamped, signed page demonstrating that the report was prepared under the direction of an Arkansas Registered Professional Geologist in good standing.

The technical report must be submitted with the application and must include the following:

1. A topographic map depicting the location of the well and plant boundaries
2. Map(s) depicting the location of the disposal well and facility water supply wells, as related to facility boundaries and adjacent survey lines
3. Map(s) of land use of areas adjacent to facility
4. Map(s) of boundaries of the tract of land in which disposal operations will be conducted
5. Map(s) depicting the ownership of property adjacent to the facility boundaries and a list containing the names and addresses of the owners:
 - a. a minimum 2 mile radius of the wellbore for hazardous wells
 - b. a minimum ½ mile radius of the wellbore for non-hazardous wells
6. Identification of the mineral ownership and the percentage for areas that might be affected by migration of injected waste over the projected life of the injection well, including the source(s) where this information was obtained
7. A map and cross sections sufficient to indicate the base of the lowermost Underground Source of Drinking Water (USDW)
8. The area of review, including, but not limited to:
 - a. locations of all artificial penetrations (including water wells, oil and gas production and disposal wells, etc.) for a minimum of:
 - i. ¼ mile radius of the wellbore of the proposed nonhazardous injection well, or
 - ii. a 2 mile radius of the wellbore of the proposed hazardous injection well,
 - b. a map of all surface water bodies (streams, lakes, springs, etc.), mines, quarries, roads, and residences within ½ mile of the proposed well,
 - c. a schematic sketch of all penetrations including:
 - i. a tabulation of data on all casings (including size),
 - ii. the setting depth and cementing data of abandoned wells,
 - iii. the distance to the proposed well and the injection interval,
 - d. other subsurface disposal operations in the area, including the potential impact to these

- operations by the proposed well,
 - e. corrective action plan for all inadequately plugged or constructed wells within the area of review, including a schedule of compliance,
 - f. calculation of the zone of endangering influence
9. Geology and Hydrogeology, both regionally and locally, including, but not limited to:
- a. structural contour, depositional, isopach, and tectonic maps of injection zone
 - b. surface geologic map, cross sections, and structural contour map at scales necessary to depict the regional geology
 - c. lithologic and hydrologic descriptions of regional and local geologic units that are penetrated by the proposed well, especially of the upper and lower confining units and the injection zone
 - d. seismic history of the area, including current data
 - e. maps indicating the general vertical and lateral limits of those aquifers that contain water with less than 10,000 mg/l total dissolved solids (TDS)
 - f. at a minimum, two cross sections of adequate scale and detail to show the structure, geologic units, and lithology from the surface to the base of the confining zone below the injection zone, or deeper if necessary
10. Reservoir Mechanics
- a. porosity, permeability, and temperature
 - b. bottom-hole pressure, fluid saturation, and chemical characteristics of the formation and formation fluids
 - c. location, extent and effects of known or suspected faulting, fracturing, and/or formation solution channels
 - d. fracture gradient calculations
 - e. potentiometric map or static fluid level map and regional gradient
11. Waste stream characteristics, including:
- a. chemical and physical characteristics of the waste to be injected
 - b. process from which the waste stream is generated
 - c. compatibility of proposed waste stream with the formation fluid and procedures for obtaining a representative sample
 - d. corrosion tests on all facilities that will be in contact with the proposed waste stream
 - e. volumes expected for disposal
 - f. description of pretreatment process and facilities
12. Construction and completion data of proposed well, including but not limited to:
- a. depth of well
 - b. type of cements, cementing procedures, techniques and equipment
 - c. type, size, weight and grade of materials for all casings
 - d. type, number and location of centralizers, etc.
 - e. size, type and proposed depth of tubing
 - f. size, type and proposed depth of packer
 - g. description of the proposed injectivity tests and logs
 - h. proposed well stimulation program
 - i. diagram sketches of the well, wellhead and related facilities
 - j. procedures for obtaining a full core of the injection and confining zones

13. Proposed operating parameters
 - a. calculated injection pressures
 - b. calculated changes in reservoir pressure, formation fluid displacement, direction of injected waste plume, and waste fluid front calculations
 - c. plan for well operation, maintenance, and supervision
 - d. plan for potential well failure and/or routine maintenance, including description of holding facilities or back-up well

14. Surface facilities
 - a. description of the monitoring systems for the well
 - b. plat depicting waste lines, storage tanks, pumps, or other holding facilities
 - c. emergency holding facilities
 - d. any applicable permits necessary for operation
 - e. type, capacity, and capability of filters
 - f. description of injection pumps
 - g. tank size, capacity, and type of materials used for storage facilities

15. Plugging and abandonment procedures

16. A copy of a financial assurance mechanism. Forms for Performance and/or Surety Bonds will be sent to the applicant upon request.

8 Justification for Subsurface Disposal:

9. Injection Information:

Well Name:				Total Depth of Well: (specify reference depth)			
Elevation of Wellhead:		Ground Level:		Kelly Bushing:		Sea Level:	
Proposed Injection Zone:		Primary:			Secondary:		
Proposed Perforated Interval:							
Waste Code:	SIC code(s):		NAICS code(s):		Listed Hazardous Waste Codes(s):		
Source(s) of waste stream(s):							
Waste Volume:	Daily:		30-day month:	31-day month:	Annually:		
Waste stream characteristics	Toxicity	Corrosivity	Ignitability	Reactivity	Specific Gravity	Compressibility	Viscosity
Proposed Operational Requirements:	Maximum Injection Rate:	Maximum Daily Injection Volume:		Maximum Surface Injection Pressure:	Annular Fluid:	Minimum Annulus Pressure:	
Treatment process of waste prior to injection:							

Logs:

Date:

Resistivity Spontaneous Potential (SP) Caliper Cement Bond (CBL) Variable Density (VDL) Temperature Noise Gamma Rays Radioactive Tracer	
Estimated Costs of Construction and Operation:	

10. Construction Specifications:

	Type	Setting Depth or Spacing	Size or Volume	Grade	Weight
Bit Diameter					
Surface Casing					
Long String Casing					
Tubing					
Packer					
Cement					
Centralizers					
Annulus Monitoring Instrumentation					
Injection Pressure Monitoring Instrumentation					
Flow Monitoring Instrumentation					

11. List all Attachments included with this application on a separate, attached page:

12. SEC Annual Report/Disclosure Statement:

Is the applicant a publicly traded company? Yes No

If yes, please provide the link to the website for the most recent SEC annual report.

If the applicant is not a publicly traded company and the application is submitted for a new permit (whether for a new or existing facility), the applicant must complete and submit the "Disclosure Statement" form included with the application. A copy of the Disclosure Statement form may be obtained from the ADEQ website at:

https://www.adeg.state.ar.us/ADEQ_Disclosure_Statement.pdf

Is the applicant organized as a corporation? Yes No
If yes, is it foreign or domestic? Foreign Domestic

Is the corporation currently registered to do business with the Arkansas Secretary of State? Yes No
Please attach a copy of the the Arkansas Secretary of State registration available at the following link:

http://www.sos.arkansas.gov/corps/search_all.php

13. SIGNATORY REQUIREMENTS: Please read the following carefully and sign below.

The signature below must be in compliance with Part I, Item 4 on pages 1-2.

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 imprisonment for knowing violations.

Printed Name of Person signing
(Must be owner/operator or person authorized by the applicant)

Title

Signature of Applicant

Date