ALABAMA STATE OIL AND GAS BOARD
GOVERNING THE UNDERGROUND STORATE OF GAS IN RESERVOIRS
ADMINISTRATIVE CODE

CHAPTER 400-5-2
PERMITTING OF WELLS

TABLE OF CONTENTS

400-5-2-.01 Well Permit.

(1) **Activities requiring Permits.** A permit for the drilling, development and operation of a facility for underground storage of gas may be issued only after notice and hearing by the State Oil and Gas Board.

(2) **Permit Requirements.** Application for permits for underground storage wells shall be considered as a two-step process. All wells drilled or recompleted for the purpose of underground storage shall comply with the following permitting requirements:

(a) **Step 1.**

1. Well permit requirements as set forth in Rules 400-1-2-.01 or 400-2-2-.01, whichever is applicable for the drilling, conversion, or reentry of a plugged and abandoned well for underground storage purposes;

2. A plat, in triplicate, prepared by a licensed land surveyor showing the location of the proposed underground storage well. The plat shall be drawn to the scale of one (1) inch equals one thousand (1,000) feet, unless otherwise stipulated by the Supervisor and shall show distances from the proposed well to the nearest governmental section lines. The plat shall show the direction of north, and the latitude and longitude in decimal degrees to five (5) significant digits and state plane coordinates of the proposed well. The plat shall also show the location and status of all other wells that have been drilled within one-fourth (1/4) mile of the proposed underground storage well;

3. A prognosis specifying the drilling, completion, or conversion procedures for the proposed underground storage well;

4. A well bore sketch showing the name, description, and depth of the proposed underground reservoir and the depth of the deepest underground source of drinking water (USDW); a description of the casing in the underground storage well, or the proposed casing program, including a full description of cement already in place or as proposed; and the proposed method of testing casing before use of the underground storage well;

5. A complete log through the underground reservoir of the storage well or if an underground storage well is to be drilled, a complete log through the underground reservoir from a nearby well. Such log shall be annotated to identify the estimated location of the base of the deepest USDW, significant aquicludes, and the underground reservoir; and

6. The known or calculated fracturing pressure of the underground reservoir. All determinations included in this application shall be supported by basic data and calculations.

(b) **Step 2.**

1. Permit application, Form OGB-1D, Application for Permit to Inject Storage Gas;

2. A schematic diagram of the surface injection system and its appurtenances;

3. A well bore sketch showing the name, description, and depths of the underground reservoir and the base of the deepest USDW; a schematic of the underground storage well depicting the casing, cementing, perforation, tubing, and plug and packer records associated with the construction of the underground storage well; and the method and results of casing tests reported on Form OGB-7, Well Record and Completion or Recompletion Report, before use of the underground storage well;

4. A complete dual induction or equivalent log through the underground reservoir of the underground storage well. Such log for wells drilled for underground storage operations shall be run prior to the setting of casing through the underground reservoir. Logs shall be annotated to identify the estimated location of the base of the deepest USDW, significant aquicludes, and the underground reservoir unless previously submitted in Step 1. When approved in advance by the Supervisor, depth to the base of the USDW and confirmation that significant aquicludes exist between the underground reservoir and the base of the USDW can be demonstrated with a dual

induction or equivalent log run in a nearby well or by such other method acceptable to the Supervisor;

5. An affidavit specifying that the source of injected gas will be of pipeline quality;

6. Proof that the long string of casing of the underground storage well is cemented adequately so that injected gas cannot migrate along the annular space to any USDW. Such proof shall be provided in the form of a cement bond log or the results of a fluid movement study or such other method specified by the Supervisor;

7. The results of a mechanical-integrity test of the casing in accordance with the pressure test requirements in Rule 400-5-7.01;

8. A certificate, entitled "Certificate of Effectiveness", which shall contain a statement that the storage operator has acquired by eminent domain or otherwise all necessary ownership rights with respect to the storage facility, and the date upon which the storage facility shall be effective;

9. Forms OGB-6 (if applicable), OGB-7, and OGB-8; and

10. Two (2) copies of all electrical, mechanical, radioactive, and dipmeter logs or such other surveys performed as a part of drilling, completing, or converting the underground storage well unless previously submitted to the Board.

(3) **Permit Approval Procedures.**

(a) Applications for underground storage well permits shall be submitted in writing to the Supervisor in accordance with section (2). Approval to inject gas may be granted by the Supervisor after submittal and consideration of the information required under section (2)(b).

(b) The operator may apply for a field-wide permit for underground storage wells. Such field-wide application shall include all of the information required by section

(2) If a permit has been issued for a field-wide underground storage well program, the operator will be required on each underground storage well, whether it be drilled or converted, to submit in an application the information required under Step 1 section (2)(a)1, (2)(a)2, (2)(a)3, and (2)(a)4, and Step 2 section (2)(b)1, (2)(b)2, (2)(b)3, (2)(b)5, (2)(b)6, (2)(b)7, (2)(b)8, and (2)(b)9.

(c) Applications for permits to inject gas (Step 2) shall be approved or rejected by the Supervisor on the basis of the information provided in accordance with section (2) in conjunction with a thorough evaluation of the endangering influence posed by any defective wells that may exist within the area of review, which is within a minimum radius of one-fourth (1/4) mile of the proposed underground storage well. In the event a defective well is determined to exist within the area of review, the Supervisor may order corrective action to be taken on the defective well by the applicant prior to approving the permit to inject (Step 2). If corrective action is determined to be unfeasible, the Supervisor may reject the application or conditionally approve the application subject to stated constraints, which will minimize the risk of gas migration from the underground reservoir. In all cases, injection of gas shall not begin until approval is obtained.

(4) **Expiration of a Permit.** A permit shall expire six (6) months from the date of issuance if the permitted well has not been spudded.

Author: State Oil And Gas Board
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