

006 OPERATING REQUIREMENTS FOR ENHANCED RECOVERY INJECTION AND DISPOSAL WELLS

006.01 Initial Requirements:

006.01A Each enhanced recovery injection well or disposal well shall be completed, equipped, operated and maintained in a manner that will prevent pollution of fresh water or damage to sources of oil and/or gas and will confine injected fluids to the formation or zones approved.

006.01B Injection of any substance shall be through adequate casing or casing and tubing. Annular injection is prohibited. Above ground extensions shall be installed in each annulus in the well and each injection tubing or casing. Such extensions shall be fitted with a cut-off valve and a one-fourth (1/4) inch female fitting to provide for pressure monitoring by attaching a gauge having a one-fourth (1/4) inch male fitting.

006.01B1 Each commercial facility well must be equipped with tubing and packer.

006.01C Before operating a new well drilled or converted for enhanced recovery injection or disposal, the casing shall be tested under the supervision of the Director.

006.01D For all Salt Water Disposal (SWD) wells, the operator shall monitor and record actual injection pressure and each annulus pressure at least once each week and report such monitoring monthly.

006.01E For all Enhanced Oil Recovery (EOR) wells, the operator shall monitor and record actual injection pressure and each annulus pressure at least once each month and report such monitoring monthly.

006.01F Each well or group of wells which inject fluids under pressure utilizing a positive displacement pump shall have installed both high pressure and low pressure safety switches which will shut down the pump in case of pressure increase over the authorized pressure or sudden pressure loss.

006.01G All commercial facility sites must be physically secured at all times. The Director will determine if a site is secure. The Commission recommends that sites be secured by either of the following:

- Complete enclosure of all wells, tanks/pits and wellhead assemblies within suitable fencing; and/or
- All gates and other entry points shall be locked when the facility is unattended; and/or

TITLE 267 – NEBRASKA OIL AND GAS CONSERVATION COMMISSION

CHAPTER 4 – UNDERGROUND INJECTION

- Provide tamper-proof seals or locks for the "master" valve on each well; and/or
- Install locking caps on all valves and connections on holding tanks and headers.

006.01H An operator of a Class II commercial underground injection well shall submit a copy of the fluid analysis to the Commission at least annually.

006.01I An operator of a Class II commercial underground injection well shall sample and analyze the fluid injected into each well at sufficiently frequent time intervals to yield data representative of fluid characteristics, but not less than once annually.

006.01J The packer must be set inside a cemented interval and be set less than one hundred and fifty feet (150') above the top perforated interval or open hole section.

006.02 Mechanical Integrity Pressure or Monitoring Test Requirements:

The following pressure or monitoring test must be performed on all new and existing enhanced recovery injection wells and disposal wells to periodically establish the mechanical integrity of the casing, and tubing and packer, if used.

006.02A Pressure Test: All new enhanced recovery injection wells and disposal wells authorized by the Commission after February 3, 1983, shall have the casing pressure tested prior to use and thereafter no less than once each five (5) years. Wells with tubing and packer installed shall have the tubing-casing annulus pressure tested to a pressure of three hundred (300) pounds per square inch. Wells without tubing and packer installed shall be tested to a pressure equal to one hundred twenty-five (125) percent of the maximum authorized injection pressure or at a pressure of three hundred (300) pounds per square inch, whichever is greater. Existing injection wells shall be tested not less than once each five (5) years. Casing pressure tests shall be conducted under the supervision of the Director.

006.02B On existing injection wells without tubing and packer, the operator shall demonstrate the absence of fluid movement in vertical channels adjacent to the injection well bore by the use of tracer surveys, noise logs, temperature surveys or other tests or combination of tests approved by the Director, at least once each three (3) years. Such tests shall be run under the supervision of the Director.

006.02C All commercial wells must have annual pressure tests to establish the mechanical integrity of the casing, tubing

TITLE 267 – NEBRASKA OIL AND GAS CONSERVATION COMMISSION

CHAPTER 4 – UNDERGROUND INJECTION

and packer. Casing pressure tests shall be conducted under the supervision of the Director.