

DEPARTMENT OF ENVIRONMENTAL QUALITY

OIL, GAS, AND MINERALS DIVISION

OIL AND GAS OPERATIONS

Filed with the secretary of state on

These rules become effective immediately upon filing with the secretary of state unless adopted under section 33, 44, or 45a (6) of the 1969 PA 306. Rules adopted under these sections become effective 7 days after filing with the secretary of state.

(By authority conferred on the supervisor of wells and the director of the department of environmental quality by section 61506 of **the natural resources and environmental protection act**, 1994 PA 451, MCL 324.61506, sections 9 and 251 of **the executive organization act of 1965**, 1965 PA 380, MCL 16.109 and 16.2351, and Executive Reorganization Order No. 1991-22, MCL 299.13).

R 324.102, R 324.403, R 324.405, and R 324.801 of the Michigan Administrative Code are amended to read as follows:

PART 1. GENERAL PROVISIONS

R 324.102 Definitions; A to M.

Rule 102. As used in these rules:

- (a) "Act" means 1994 PA 451, MCL 324.101 to 324.90106.
- (b) "ANSI" means the American national standards institute.
- (c) "API" means the American petroleum institute.
- (d) Aquifer means a geological formation, group of formations, or part of a formation that is capable of yielding a significant amount of water to a well or spring.
- (e) "Authorized representative of the supervisor" means a department of environmental quality employee who is charged with the responsibility for implementation of the act or these rules.
- (f) "Blowout prevention equipment" means a casinghead control device designed to control the flow of fluids from the well bore by closing around the drill pipe or production tubing or completely sealing the hole in the absence of drill pipe or production tubing.
- (g) "Bottom hole" means the terminus of a wellbore.
- (h) "Brine" means all nonpotable water resulting, obtained, or produced from the exploration, drilling, or production of oil or gas, or both.
- (i) "Central production facility" means production equipment that has been consolidated at a central location that provides for the commingling of oil or gas production, or both, from 2 or more wells or production units of diverse ownership or from 2 or more prorated wells or production units.
- (j) "Conformance bond" means a surety bond that has been executed by a surety company authorized to do business in this state, cash, certificates of deposit, letters of credit, or other securities that are filed by a person and accepted by the supervisor to ensure compliance with

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the act, these rules, permit conditions, instructions, orders of the supervisor, or an order of the department of environmental quality.

(k) “Directionally drilled well,” means a well purposely deviated from the vertical using controlled angles to reach an objective location.

(l) “Drilling completion” means the time when a well has reached its permitted depth or the supervisor has determined drilling has ceased.

(m) “Drilling operations” means all of the physical and mechanical aspects of constructing a well for the exploration or production of oil or gas, or both, for injection of fluids associated with the production of oil or gas, or both, or the storage of natural hydrocarbons or liquefied petroleum gas derived from oil or gas, and includes all of the following:

- (i) Moving drilling equipment onto the drill site.
- (ii) Penetration of the ground by the drill bit and drilling of the well bore.
- (iii) Casing and sealing of the well bore.
- (iv) Construction of well sites and access roads.

(n) “Drilling unit” means the area prescribed by an applicable well spacing rule or order for the granting of a permit for the drilling and operation of an oil or gas well, or both.

(o) “Facility piping” means piping that connects any of the following:

- (i) Compressors.
- (ii) Flares.
- (iii) Loadouts.
- (iv) Separators.
- (v) Storage tanks.
- (vi) Transfer pumps.
- (vii) Treatment equipment.
- (viii) Vents.

(p) “Fence” means a structure that is designed to deter access and consists of not less than 2 strands of barbed wire, 1 strand being approximately 18 inches above the ground and the other strand being approximately 42 inches above the ground, secured to supporting posts or means an equivalent structure that deters access.

(q) “Final completion” means the time when locating, drilling, deepening, converting, operating, producing, reworking, plugging, and proper site restoration have been performed on a well in a manner approved by the supervisor, including the filing of the mandatory records, and when the conformance bond has been released.

(r) “Flow line” means piping that connects a well or wells to a surface facility.

(s) “Fresh water” means water that ~~is free of contamination in concentrations that may cause disease or harmful physiological effects and is safe for human consumption~~ **contains less than 1000 milligrams per liter of total dissolved solids.**

(t) “Gas storage” means the use of a depleted oil or gas pool, salt cavern, or other porous strata utilized for the purpose of injecting and withdrawing gas from the depleted oil or gas pool, salt cavern, or other porous strata.

(u) “Gathering line” means a pipeline that transports natural gas from a surface facility to a transmission pipeline.

(v) “Geologist” means a person who is certified as a geologist by a credible geological professional association or who, by reason of his or her knowledge of the natural sciences, mathematics, and the principles of geology acquired by professional education and practical experience, is qualified to engage in the practice of the science of geology.

(w) “Groundwater” means water below the land surface in the zone of saturation.

(x) “Injection well” means a well used to dispose of, into underground strata, waste fluids produced incidental to oil and gas operations or a well used to inject water, gas, air, brine, or other fluids for the purpose of increasing the ultimate recovery of hydrocarbons from a reservoir or for the storage of hydrocarbons.

(y) “Instruction” means a written statement of general applicability, which is issued by the supervisor, conforms with the act and rules promulgated under the act, and clarifies or explains the applicability of the act or rules to commonly recurring facts or circumstances.

(z) “**Mineral water**” means water that contains 1000 milligrams per liter or more of total dissolved solids.

(aa) “Multiple zone completion” means a well constructed and operated to separately produce oil or gas, or both, from more than 1 reservoir through 1 well bore.

#### PART 4. DRILLING AND WELL CONSTRUCTION

R 324.403 Construction of water wells used for drilling or surface facilities.

Rule 403. (1) A water well that is drilled and used for drinking water purposes during the drilling of the well or retained after drilling completion or final completion shall be drilled pursuant to rules promulgated under part 127 of Act No. 368 of the Public Acts of 1978, as amended, being §333.12701 et seq. of the Michigan Compiled Laws.

(2) A water well that is not to be retained after drilling completion or final completion shall be completed and abandoned as instructed by the supervisor and shall meet all of the following minimum requirements:

(a) ~~Be~~ **The well shall be** located not less than 50 feet from drilling mud pits, pipe racks, salt and mud mixing sites, and the wellhead.

(b) ~~Be drilled with~~ **The water used in the drilling fluid shall be** chlorinated fresh water **that is free of contamination in concentrations that may cause disease or harmful physiological effects.**

(c) ~~Be~~ **The well shall be** grouted pursuant to the well construction and grouting rules contained in the well construction code promulgated under part 127 of Act No. 368 of the Public Acts of 1978, as amended, being §333.12701 et seq. of the Michigan Compiled Laws.

(d) Geologic records shall be filed with the supervisor on a form prescribed by the supervisor.

(e) The wellhead, including annulus, shall be sealed and a check valve shall be installed in the surface discharge line to prevent contaminants from entering the well.

(f) The well shall be abandoned and plugged pursuant to the plugging and abandonment rules contained in the well construction code promulgated under part 127 of Act No. 368 of the Public Acts of 1978, as amended, being §333.12701 et seq. of the Michigan Compiled Laws.

R 324.405 Drilling fluids generally.

Rule 405. The drilling fluid used for drilling wells described in R 324.201(1) shall be capable of sealing off and protecting each oil, gas, brine, or fresh water stratum above the stratigraphic or producing horizon and controlling subsurface pressures. The water or brines used in the drilling fluid shall be from a source approved by the supervisor or authorized representative of the supervisor, used pursuant to approved safe drilling practice, and

tested as instructed by the supervisor, except that **the water used in the drilling fluid for only fresh water shall be used in the drilling of the hole for the surface casing shall be fresh water that is free of contamination in concentrations that may cause disease or harmful physiological effects.**

## PART 8. INJECTION WELLS

### R 324.801 Definitions.

Rule 801. As used in these rules:

- (a) "Administrator" means the administrator of the USEPA.
- (b) "Area of review" means that area within a fixed radius of 1320 feet around an injection well.
- (c) "Class II Well" means a well that does either of the following:
  - (i) Injects fluids under any of the following conditions:
    - (A) That are brought to the surface in connection with oil or natural gas production and may be commingled with waste waters from gas plants which are an integral part of production operations, unless those waters are classified as a hazardous waste at the time of injection.
    - (B) For enhanced recovery of oil or natural gas.
    - (C) For storage of hydrocarbons that are liquid at standard temperature and pressure.
  - (ii) Utilizes diesel fuel as a component of hydraulic fracturing fluid.
- (d) "Class II well operator" means the person having secured a permit for any of the following:
  - (i) A new Class II well.
  - (ii) An existing Class II well.
  - (iii) A conversion of an existing well to a Class II well.
  - (iv) A rule authorized well in operation before the effective date of primacy.
- (e) "Commercial disposal well" means a Class II well that is permitted to accept wastes other than those generated by the owner or operator of the well.
- (f) "Confining interval" means a geological formation, group of formations, or part of a formation that is capable of limiting fluid movement above an injection interval.
- (g) "Contaminant" means any physical, chemical, biological, or radiological substance or matter in water.
- (h) "Date of primacy" means the effective date of the Administrator's approval of the Michigan underground injection control program for Class II wells pursuant to section 1425 of the federal safe drinking water act of 1974, 42 U.S.C. 300h-4.
- (i) "Diesel fuel(s)" means fluids that are associated with 5 specific Chemical Abstracts Services Registry Numbers (68334-30-5, 68476-34-6, 68476-30-2, 68476-31-3, and 8008-20-6).
- (j) "Endangerment to an underground source of drinking water" means the presence of a contaminant in an underground source of drinking water, which supplies or may reasonably be expected to supply any public water system, where both of the following apply:
  - (A) The presence of the contaminant results from an injection operation.
  - (B) The presence of that contaminant may result in violation of any national primary drinking water regulation or may otherwise adversely affect the health of persons.
- (k) "Enhanced Oil Recovery" or "Enhanced Recovery" means secondary recovery.

(l) "Existing Class II well" means a Class II well that has been approved, constructed, or converted prior to date of primacy.

(m) "Injection casing" means the long string of casing set into, through, or just above the injection interval, in which the packer and tubing may be set.

(n) "Injection interval" means the geological formation or group of formations or part of a formation receiving fluids through an injection well. There must be a confining interval above the injection interval.

(o) "Karst" means a type of topography that is formed over limestone, dolomite, or gypsum by solution of the rock and is characterized by closed depressions or sinkholes, caves, and underground drainage.

(p) "Mechanical integrity" means a well condition that exists if there is no significant leakage in the well's casing, tubing, or packer and if there is no significant fluid movement into an underground source of drinking water through vertical channels adjacent to the injection well bore.

(q) "New Class II well" means a Class II well that is constructed or converted under Part 615 after date of primacy.

(r) "Oil or Gas Field Fluid Wastes" means liquid wastes resulting, obtained, or produced from the exploration, drilling, or production of oil or gas, or both.

(s) "Part 615" means Part 615 of 1994 PA 451, MCL 324.61501 to 324.627.

(t) "Rule authorized well" means a Class II well that was classified and/or treated by the USEPA as an authorized by rule well on or after January 1, 1984.

(u) "USEPA" means the United States Environmental Protection Agency.

(v) "Waste" as defined in MCL 324.61501 (q)(i)-(iii), includes ~~unreasonable damage~~ **endangerment** to an underground source of drinking water.