ARKANSAS REGISTER

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Effective Date _____ Code Number _____

Name of Agency Arkansas Pollution Control & Ecology Commission

Department Department of Energy and Environment

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Statutory Authority for Promulgating Rules Act 704 of the 93rd General Assembly

Rule Title: Rule 17, " Arkansas Underground Injection Control Code"

Intended Effective Date (Check One)

- ☐ Emergency (ACA 25-15-204)
- ☐ 10 Days After Filing (ACA 25-15-204)
- ☐ Other _____ (Must be more than 10 days after filing date.)

Date

- Legal Notice Published ..... _____
- Final Date for Public Comment ..... _____
- Reviewed by Legislative Council ..... _____
- Adopted by State Agency 12/03/2021

Electronic Copy of Rule e-mailed from: (Required under ACA 25-15-218)

Peter Alberg (Contact Person) Peter.Alberg@adeq.state.ar.us (E-mail Address) 12/15/2021 (Date)

CERTIFICATION OF AUTHORIZED OFFICER

I Hereby Certify That The Attached Rules Were Adopted
In Compliance with the Arkansas Administrative Act. (ACA 25-15-201 et. seq.)

Charles Moulton
Signature

501-682-7890 (**Phone Number**) moulton@adeq.state.ar.us (**E-mail Address**)

Administrative Law Judge
Title

12/3/2021
Date

Revised 7/2015 to reflect new legislation passed in the 2015 Regular Session (Act 1258). This act changed the effective date from 30 days to 10 days after filing the rule.

ARKANSAS POLLUTION CONTROL AND ECOLOGY COMMISSION

R~~EG~~UL~~ATIONE~~ NO. 17

ARKANSAS UNDERGROUND INJECTION CONTROL CODE

Approved by the Arkansas Pollution Control and Ecology Commission on January 28, 2005

TABLE OF CONTENTS

17.101. TITLE AND PURPOSE

(A) The following rules ~~and regulationes~~ of the Arkansas Pollution Control and Ecology Commission, adopted pursuant to the provisions of the Arkansas Water and Air Pollution Control Act, Ark. Code Ann. § 8-4-101 et seq., shall be known as the ARKANSAS UNDERGROUND INJECTION CONTROL CODE, hereinafter called the UIC Code.

(B) It is the purpose of this UIC Code to adopt underground injection control (UIC) r~~eg~~ul~~ation~~es necessary to qualify the State of Arkansas to retain authorization for its Underground Injection Control Program pursuant to the Safe Drinking Water Act of 1974, as amended; 42 USC 300f et seq. In order to retain program authorization, it is necessary for the Arkansas Pollution Control and Ecology Commission to have r~~eg~~ul~~ation~~es as stringent as the federal program administered by the United States Environmental Protection Agency.

17.201. DEFINITIONS

When used in this UIC Code:

Abandoned well means a well whose use has been permanently discontinued or which is in a state of disrepair such that it cannot be used for its intended purpose or for observation purposes. (see 40 CFR 146.3-Definitions)

Application means the EPA standard national forms for applying for a permit, including any additions, revisions or modifications to the forms; or forms approved by EPA for use in approved States, including any approved modifications or revisions. For RCRA, application also includes the information required by the Director under §122.25 (contents of Part B of the RCRA application). (see 40 CFR 146.3-Definitions)

Appropriate Act and regulations means the Solid Waste Disposal Act, as amended by the Resource Conservation and Recovery Act (RCRA); or Safe Drinking Water Act (SDWA), whichever is applicable; and applicable regulations promulgated under those statutes. (see 40 CFR 144.3-Definitions)

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Area of review means the area surrounding an injection well described according to the criteria set forth in §146.06, or in the case of an area permit, the project area plus a circumscribing area the width of which is either ¼ of a mile or a number calculated according to the criteria set forth in § 146.06. (see 40 CFR 144.3 & 146.3-Definitions)

Casing means a pipe or tubing of appropriate material, of varying diameter and weight, lowered into a borehole during or after drilling in order to support the sides of the hole and thus to prevent the walls from caving, to prevent loss of drilling mud into porous ground, or to prevent water, gas, or other fluid from entering or leaving the hole. (see 40 CFR 146.3-Definitions)

Catastrophic collapse means the sudden and utter failure of overlying "strata" caused by removal of underlying materials. (see 40 CFR 146.3-Definitions)

Cementing means the operation whereby a cement slurry is pumped into a drilled hole and/or forced behind the casing. (see 40 CFR 146.3-Definitions)

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Contaminant means any physical, chemical, biological, or radiological substance or matter in water. (see 40 CFR 144.3 & 146.3-Definitions)

D~~epartment~~ivision means the ~~Arkansas~~ D~~epartment~~Division of Environmental Quality.

Director means the Director of the ~~Arkansas~~ D~~epartment~~ivision of Environmental Quality.

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Draft Permit means a document prepared under §124.6 indicating the Director's tentative decision to issue or deny, modify, revoke and reissue, terminate, or reissue a "permit". A notice of intent to terminate a permit, and a notice of intent to deny a permit, as discussed in §124.5 are types of "draft permits". A denial of a request for modification, revocation and reissuance, or termination, as discussed in §124.5 is not a "draft permit". (see 40 CFR 144.3-Definitions)

Drilling mud means a heavy suspension used in drilling an "injection well", introduced down the drill pipe and through the drill bit. (see 40 CFR 144.3-Definitions)

Drywell means a well, other than an improved sinkhole or subsurface fluid distribution system, completed above the water table so that its bottom and sides are typically dry except when receiving fluids. (see 40 CFR 144.3)

Effective date of a UIC program means the date that a State UIC program is approved or established by the Administrator. (see 40 CFR 146.3-Definitions)

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Environmental Protection Agency ("EPA") means the United States Environmental Protection Agency. (see 40 CFR 144.3 & 146.3-Definitions)

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Facility or activity means any UIC "injection well", or an other facility or activity that is subject to regulation under the UIC programs. (see 40 CFR 144.3-Definitions)

Fault means a surface or zone of rock fracture along which there has been displacement. (see 40 CFR 146.3-Definitions)

Flow rate means the volume per time unit given to the flow of gases or other fluid substance which emerges from an orifice, pump, turbine or passes along a conduit or channel. (see 40 CFR 146.3-Definitions)

Fluid means any material or substance which flows or moves whether in a semisolid, liquid, sludge, gas or any other form or state. (see 40 CFR 144.3-Definitions)

Formation means a body of consolidated or unconsolidated rock characterized by a degree of lithologic homogeneity which is prevailingly, but not necessarily tabular and is mappable on the earth's surface or traceable in the subsurface. (see 40 CFR 144.3-Definitions)

Formation fluid means "fluid" present in a "formation" under natural conditions as opposed to introduced fluids, such as "drilling mud." (see 40 CFR 144.3 & 146.3- Definitions)

Generator means any person, by site location, whose act or process produces hazardous waste identified or listed in 40 CFR part 261. (see 40 CFR 144.3 & 146.3-Definitions)

Ground water means water below the land surface in a zone of saturation. (see 40 CFR 144.3 & 146.3-Definitions)

Hazardous waste means a hazardous waste as defined in 40 CFR 261.3. (see 40 CFR 144.3 & 146.3-Definitions)

Hazardous Waste Management facility ("HWM facility") means all contiguous land, and structures, other appurtenances, and improvements on the land used for treating, storing, or disposing of hazardous waste. A facility may consist of several treatment, storage, or disposal operational units (for example, one or more landfills, surface impoundments, or combination of them). (see 40 CFR 144.3 & 146.3-Definitions)

Improved sinkhole means a naturally occurring karst depression or other natural crevice found in volcanic terrain and other geological settings (such as limestone or dolomitic terrain) which have been modified by man for the purpose of directing and emplacing fluids into the subsurface. (see 40 CFR 144.3)

Injection well means a "well" into which "fluids" are being injected. (see 40 CFR 144.3 & 146.3-Definitions)

Injection zone means a geological "formation", group of formations, or part of a formation receiving fluids through a "well". (see 40 CFR 144.3 & 146.3-Definitions)

Lithology means the description of rocks on the basis of their physical and chemical characteristics. (see 40 CFR 146.3-Definitions)

Major facility means any UIC "facility or activity" classified as such by the Regional Administrator, or, in the case of approved State programs, the Regional Administrator in conjunction with the State Director. (see 40 CFR 144.3-Definitions)

New injection well means an "injection well" which began injection after a UIC program for the State applicable to the well is approved or prescribed. (see 40 CFR 144.3-Definitions)

Owner or operator means the owner or operator of any "facility or activity" subject to regulation under the UIC programs. (see 40 CFR 144.3-Definitions)

Packer means a device lowered into a well to produce a fluid-tight seal. (see 40 CFR 146.3-Definitions)

Permit means an authorization, license, or equivalent control document issued by EPA or an approved State to implement the requirements of Parts 145, 146, and 124. "Permit" includes an area permit (§144.33) and an emergency permit (§144.34). Permit does not include UIC authorization by rule (§144.21) or any permit which has not yet been the subject of final agency action, such as a "draft permit".

Person means an individual, association, partnership, corporation, municipality, State, Federal, or Tribal agency, or an agency or employee thereof. (see 40 CFR 144.3-Definitions)

Plugging means the act or process of stopping the flow of water, oil or gas into or out of a formation through a borehole or well penetrating that formation. (see 40 CFR 144.3 & 146.3-Definitions)

Plugging record means a systematic listing of permanent or temporary abandonment of water, oil, gas, test, exploration and waste injection wells, and may contain a well log, description of amounts and types of plugging material used, the method employed for plugging, a description of formations which are sealed and a graphic log of the well showing formation location, formation thickness, and location of plugging structures. (see 40 CFR 146.3-Definitions)

Point of injection means the last accessible sampling point prior to waste fluids being released into the subsurface environment through a Class V injection well. For example, the point of injection of a Class V septic system might be the distribution box-the last accessible sampling point before the waste fluids drain into the underlying soils. For a dry well, it is likely to be the well bore itself. (see 40 CFR 144.3)

Pollution means such contamination, or other alteration of the physical, chemical or biological properties of any waters of the State, or such discharge of any liquid, gaseous or solid substance in any waters of the State as will or is likely to create a nuisance or render such waters harmful or detrimental or injurious to public health, safety or welfare, or to domestic, commercial, industrial, agricultural, recreational or other legitimate beneficial uses, or to livestock, wild animals, birds, fish or other aquatic life.

Pressure means the total load or force per unit area acting on a surface. (see 40 CFR 146.3-Definitions)

Radioactive Waste means any waste which contains radioactive material in concentrations which exceed those listed in 10 CFR part 20, appendix B, table II, column 2. (see 40 CFR 144.3 & 146.3-Definitions)

RCRA means the Solid Waste Disposal Act as amended by the Resource Conservation and Recovery Act of 1976 (Pub. L. 94-580, as amended, 42 U.S.C. 6901 et seq.). (see 40 CFR 144.3 & 146.3-Definitions)

Regional Administrator means The Regional Administrator of the appropriate Regional Office of the Environmental Protection Agency or the authorized representative of the Regional Administrator. (see 40 CFR 144.3-Definitions)

Sanitary waste means liquid or solid wastes originating solely from humans and human activities, such as wastes collected from toilets, showers, wash basins, sinks used for cleaning domestic areas, sinks used for food preparation, clothes washing operations, and sinks or washing machines where food and beverage serving dishes, glasses and utensils are cleaned. Sources of these wastes may include single or multiple residences, hotels and motels, restaurants, bunkhouses, schools, ranger stations, crew quarters, guard stations, campgrounds, picnic grounds, day-use recreation areas, other commercial facilities, and industrial facilities provided the waste is not mixed with industrial waste. (see 40 CFR 144.3)

Schedule of compliance means a schedule of remedial measures included in a "permit", including an enforceable sequence of interim requirements (for example, actions, operations, or milestone events) leading to compliance with the "appropriate Act and regulations". (see 40 CFR 144.3-Definitions)

SDWA means the Safe Drinking Water Act (Pub. L. 95-523, as amended; 42 U.S.C. 300(f) et seq.). (see 40 CFR 144.3 & 146.3-Definitions)

Septic system means a "well" that is used to emplace sanitary waste below the surface and is typically comprised of a septic tank and subsurface fluid distribution system or disposal system. (see 40 CFR 144.3-Definitions)

Site means the land or water area where any "facility or activity" is physically located or conducted, including adjacent land used in connection with the facility or activity. (see 40 CFR 144.3 & 146.3-Definitions)

Sole or principal source aquifer means an aquifer which has been designated by the Administrator pursuant to section 1424(a) or (e) of the SDWA. (see 40 CFR 146.3-Definitions)

State Director means the Director of the ~~Arkansas~~ D~~epartment~~ivision of Environmental Quality.

State/EPA agreement means an agreement between the Regional Administrator and the State which coordinates EPA and State activities, responsibilities and programs. (see 40 CFR 144.3-Definitions)

Stratum (plural strata) means a single sedimentary bed or layer, regardless of thickness, that consists of generally the same kind of rock material. (see 40 CFR 144.3 & 146.3-Definitions)

Subsidence means the lowering of the natural land surface in response to: Earth movements; lowering of fluid pressure; removal of underlying supporting material by mining or solution of solids, either artificially or from natural causes; compaction due to wetting (Hydrocompaction); oxidation of organic matter in soils; or added load on the land surface. (see 40 CFR 146.3-Definitions)

Subsurface fluid distribution system means an assemblage of perforated pipes, drain tiles, or other similar mechanisms intended to distribute fluids below the surface of the ground. (see 40 CFR 144.3)

Surface casing means the first string of well casing to be installed in the well. (see 40 CFR 146.3-Definitions)

Total dissolved solids (TDS) means the total dissolved (filterable) solids as determined by use of the method specified in 40 CFR part 136. (see 40 CFR 144.3 & 146.3-Definitions)

UIC means the Underground Injection Control program under Part C of the Safe Drinking Water Act, including an "approved State program." (see 40 CFR 144.3 & 146.3-Definitions)

Underground injection means a "well injection." (see 40 CFR 144.3 & 146.3-Definitions)

Underground source of drinking water (USDW) means an aquifer or its portion:

(a) (1) Which supplies any public water system; or

(2) Which contains a sufficient quantity of groundwater to supply a public water system; and
(i) Currently supplies drinking water for human consumption; or
(ii) Contains fewer than 10,000 mg/l total dissolved solids; and

(b) Which is not an exempted aquifer. (see 40 CFR 144.3 & 146.3-Definitions)

Well means a bored, drilled, or driven shaft whose depth is greater than the largest surface dimension; or a dug hole whose depth is greater than the largest surface dimension; or, an improved sinkhole; or, a subsurface fluid distribution system. (see 40 CFR 144.3-Definitions)

Well injection means the subsurface emplacement of fluids through a well. (see 40 CFR 144.3 & 146.3-Definitions)

Well plug means a watertight and gastight seal installed in a borehole or well to prevent movement of fluids. (see 40 CFR 146.3-Definitions)

Well stimulation means several processes used to clean the well bore, enlarge channels, and increase pore space in the interval to be injected thus making it possible for wastewater to move more readily into the formation, and includes (1) surging, (2) jetting, (3) blasting, (4) acidizing, (5) hydraulic fracturing. (see 40 CFR 146.3-Definitions)

Well monitoring means the measurement, by on-site instruments or laboratory methods, of the quality of water in a well. (see 40 CFR 146.3-Definitions)

17.301. ADOPTION OF FEDERAL REGULATIONS

(A) The Director is responsible for implementing the UIC program in the State of Arkansas. The regulations listed below are hereby adopted and made part of this UIC Code as though set forth herein word for word. These regulations shall apply to all persons and activities subject to regulation under the provisions of the Safe Drinking Water Act and/or the Arkansas Water and Air Pollution Control Act, relating to underground injection control within the State of Arkansas:

40 CFR Part 144; as amended to the date hereof; and

40 CFR Part 145; as amended to the date hereof; and

40 CFR Part 124, Subpart A; as amended to the date hereof; and

40 CFR Part 146, Subparts A, B, D, E, F, and G, as amended to the date hereof.

(B) The ~~Arkansas~~ Oil and Gas Commission (~~A~~OGC) has authority over Class II and Class V bromine related wells, and shares enforcement authority with ~~A~~DEQ of the Class V bromine wells as recognized in the Memorandum of Understanding (MOU) between the D~~epartment~~ivision, the ~~A~~OGC and the EPA.

17.401. VIOLATIONS

(A) No person shall construct, install, alter, modify, or operate any underground injection facility without a permit from the D~~epartment~~ivision or, as to Class II and Class V bromine-related brine disposal wells, from the ~~Arkansas~~ Oil and Gas Commission.

(B) No person shall construct, install, or operate a Class IV well as defined in ~~Reg.~~Rule17.501 hereof, and no permit for a Class IV well shall be issued by the D~~epartment~~ivision.

(C) No person shall construct, install, alter, modify or operate any underground injection facility contrary to the terms and conditions of a permit or of any provision of this UIC Code or the Arkansas Water and Air Pollution Control Act, as amended (the Act).

(D) No person shall violate any other provision of this UIC Code or of the Act.

(E) Any person who violates any provision of this UIC Code shall be subject to the penalties as provided in the Arkansas Water and Air Pollution Control Act, Ark. Code Ann. § 8-4-103.

17.501. CLASSIFICATION OF INJECTION WELLS

Injection wells are classified (see 40 CFR 144.80) as follows:

(A) Class I

(1) Wells used by generators of hazardous wastes or owners or operators of hazardous waste management facilities to inject hazardous waste beneath the lowermost formation containing, within one-quarter mile of the well bore, an underground source of drinking water.

(2) Other industrial and municipal disposal wells which inject fluids beneath the lowermost formation containing, within one-quarter mile of the well bore, an underground source of drinking water;

(3) Radioactive waste disposal wells which inject fluids below the lowermost formation containing an underground source of drinking water within one quarter mile of the well bore.

(B) Class II

Wells which inject fluids:

(1) Which are brought to the surface in connection with natural gas storage operations, or conventional 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.

(2) For enhanced recovery of oil and natural gas; and

(3) For storage of hydrocarbons which are liquid at standard temperature and pressure.

(C) Class III

Wells which inject fluids for extraction of minerals including:

(1) Mining of sulfur by the Frasch process;

(2) In situ production of uranium or other metals; this category includes only in situ production from ore bodies which have not been conventionally mined. Solution mining of conventional mines such as stopes leaching is included in Class V.

(3) Solution mining of salts or potash.

(D) Class IV

(1) Wells used by generators of hazardous waste or of radioactive waste, by owners and operators of hazardous waste management facilities, or by owners or operators of radioactive waste disposal sites to dispose of hazardous waste or radioactive waste into a formation which within one-quarter (1/4) mile of the well contains an underground source of drinking water.

(2) Wells used by generators of hazardous waste or of radioactive waste, by owners and operators of hazardous waste management facilities, or by owners and operators of radioactive waste disposal sites to dispose of hazardous waste or radioactive waste above a formation which within one-quarter (1/4) mile of the well contains an underground source of drinking water.

(3) Wells used by generators of hazardous waste or owners or operators of hazardous waste management facilities to dispose of hazardous waste, which cannot be classified under paragraph (A)(1) or (D) (1) and (2) of this section (e.g., wells used to dispose of hazardous waste into or above a formation which contains an aquifer which has been exempted pursuant to 40 CFR 146.04).

(E) Class V

Injection wells not included in Classes I, II, III, or IV. Examples of Class V wells are described in 40 CFR 144.81 and in Rulegs.17.601 of this UIC Code.

17.601. EXAMPLES OF CLASS V INJECTION WELLS

Typically, Class V wells are shallow wells used to place a variety of fluids directly below the land surface. However, if the fluids placed in the ground qualify as a hazardous waste under the RCRA, the well is either a Class I or a Class IV, not a Class V. (see 40 CFR 144.80(e))

Examples of Class V wells include:

(1) Air conditioning return flow wells used to return to the supply aquifer the water used for heating or cooling in a heat pump;

(2) Large capacity cesspools including multiple dwelling, community or regional cesspools, or other devices that receive sanitary wastes, containing human excreta, which have an open bottom and sometimes perforated sides. The UIC requirements do not apply to single family residential cesspools nor to non-residential cesspools which receive solely sanitary waste and have the capacity to serve fewer than 20 persons a day.

(3) Cooling water return flow wells used to inject water previously used for cooling;

(4) Drainage wells used to drain surface fluids, primarily storm runoff, into a subsurface formation;

(5) Dry wells used for the injection of wastes into a subsurface formation;

(6) Recharge wells used to replenish the water in an aquifer;

(7) Salt water intrusion barrier wells used to inject water into a fresh aquifer to prevent the intrusion of salt water into the fresh water;

(8) Sand backfill and other backfill wells used to inject a mixture of water and sand, mill tailings or other solids into mined out portions of subsurface mines whether what is injected is a radioactive waste or not.

(9) Septic system wells used to inject the waste or effluent from a multiple dwelling, business establishment, community or regional business establishment septic tank. The UIC requirements do not apply to single family residential septic system wells, nor to non-residential septic system wells which are used solely for the disposal of sanitary waste and have the capacity to serve fewer than 20 persons a day.

(10) Subsidence control wells (not used for the purpose of oil or natural gas production) used to inject fluids into a non-oil or gas producing zone to reduce or eliminate subsidence associated with the overdraft of fresh water;

(11) Injection wells associated with the recovery of geothermal energy for heating, aquaculture and production of electric power;

(12) Wells used for solution mining of conventional mines such as stopes leaching;

(13) Wells used to inject spent brine into the same formation from which it was withdrawn after extraction of halogens or their salts;

(14) Injection wells used in experimental technologies.

(15) Injection wells used for in situ recovery of lignite, coal, tar sands, and oil shale.

(16) Motor vehicle waste disposal wells that receive or have received fluids from vehicular repair or maintenance activities, such as an auto body repair shop, automotive repair shop, new and used car dealership, specialty repair shop (e.g., transmission and muffler repair shop), or any facility that does any vehicular repair work. Fluids disposed in these wells may contain organic and inorganic chemicals in concentrations that exceed the maximum contaminant levels (MCLs) established by the primary drinking water regulations (see 40 CFR part 141). These fluids also may include waste petroleum products and may contain contaminants, such as heavy metals and volatile organic compounds, which pose risks to human health.

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17.701. SEVERABILITY

If any provision of this UIC Code or the application thereof to any person or circumstance is held invalid, such invalidity shall not affect other provisions or applications of this UIC Code which can be given effect without the invalid provision or application, and to this end provisions of this UIC Code are declared to be severable.

17.801. EFFECTIVE DATE

This UIC Code is effective ten (10) days after filing with the Secretary of State, State Library, and Bureau of Legislative Research.

ARKANSAS POLLUTION CONTROL AND ECOLOGY COMMISSION

RULE NO. 17

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Fault means a surface or zone of rock fracture along which there has been displacement. (see 40 CFR 146.3-Definitions)

Flow rate means the volume per time unit given to the flow of gases or other fluid substance which emerges from an orifice, pump, turbine or passes along a conduit or channel. (see 40 CFR 146.3-Definitions)

Fluid means any material or substance which flows or moves whether in a semisolid, liquid, sludge, gas or any other form or state. (see 40 CFR 144.3-Definitions)

Formation means a body of consolidated or unconsolidated rock characterized by a degree of lithologic homogeneity which is prevailingly, but not necessarily tabular and is mappable on the earth's surface or traceable in the subsurface. (see 40 CFR 144.3-Definitions)

Formation fluid means "fluid" present in a "formation" under natural conditions as opposed to introduced fluids, such as “drilling mud.” (see 40 CFR 144.3 & 146.3- Definitions)

Generator means any person, by site location, whose act or process produces hazardous waste identified or listed in 40 CFR part 261. (see 40 CFR 144.3 & 146.3-Definitions)

Ground water means water below the land surface in a zone of saturation. (see 40 CFR 144.3 & 146.3-Definitions)

Hazardous waste means a hazardous waste as defined in 40 CFR 261.3. (see 40 CFR 144.3 & 146.3-Definitions)

Hazardous Waste Management facility ("HWM facility") means all contiguous land, and structures, other appurtenances, and improvements on the land used for treating, storing, or disposing of hazardous waste. A facility may consist of several treatment, storage, or disposal operational units (for example, one or more landfills, surface impoundments, or combination of them). (see 40 CFR 144.3 & 146.3-Definitions)

Improved sinkhole means a naturally occurring karst depression or other natural crevice found in volcanic terrain and other geological settings (such as limestone or dolomitic terrain) which have been modified by man for the purpose of directing and emplacing fluids into the subsurface. (see 40 CFR 144.3)

Injection well means a "well" into which "fluids" are being injected. (see 40 CFR 144.3 & 146.3-Definitions)

Injection zone means a geological "formation", group of formations, or part of a formation receiving fluids through a “well”. (see 40 CFR 144.3 & 146.3-Definitions)

Lithology means the description of rocks on the basis of their physical and chemical characteristics. (see 40 CFR 146.3-Definitions)

Major facility means any UIC "facility or activity" classified as such by the Regional Administrator, or, in the case of approved State programs, the Regional Administrator in conjunction with the State Director. (see 40 CFR 144.3-Definitions)

New injection well means an “injection well” which began injection after a UIC program for the State applicable to the well is approved or prescribed. (see 40 CFR 144.3-Definitions)

Owner or operator means the owner or operator of any “facility or activity” subject to regulation under the UIC programs. (see 40 CFR 144.3-Definitions)

Packer means a device lowered into a well to produce a fluid-tight seal. (see 40 CFR 146.3-Definitions)

Permit means an authorization, license, or equivalent control document issued by EPA or an approved State to implement the requirements of Parts 145, 146, and 124. "Permit" includes an area permit (§144.33) and an emergency permit (§144.34). Permit does not include UIC authorization by rule (§144.21) or any permit which has not yet been the subject of final agency action, such as a "draft permit".

Person means an individual, association, partnership, corporation, municipality, State, Federal, or Tribal agency, or an agency or employee thereof. (see 40 CFR 144.3-Definitions)

Plugging means the act or process of stopping the flow of water, oil or gas into or out of a formation through a borehole or well penetrating that formation. (see 40 CFR 144.3 & 146.3-Definitions)

Plugging record means a systematic listing of permanent or temporary abandonment of water, oil, gas, test, exploration and waste injection wells, and may contain a well log, description of amounts and types of plugging material used, the method employed for plugging, a description of formations which are sealed and a graphic log of the well showing formation location, formation thickness, and location of plugging structures. (see 40 CFR 146.3-Definitions)

Point of injection means the last accessible sampling point prior to waste fluids being released into the subsurface environment through a Class V injection well. For example, the point of injection of a Class V septic system might be the distribution box-the last accessible sampling point before the waste fluids drain into the underlying soils. For a dry well, it is likely to be the well bore itself. (see 40 CFR 144.3)

Pollution means such contamination, or other alteration of the physical, chemical or biological properties of any waters of the State, or such discharge of any liquid, gaseous or solid substance in any waters of the State as will or is likely to create a nuisance or render such waters harmful or detrimental or injurious to public health, safety or welfare, or to domestic, commercial, industrial, agricultural, recreational or other legitimate beneficial uses, or to livestock, wild animals, birds, fish or other aquatic life.

Pressure means the total load or force per unit area acting on a surface. (see 40 CFR 146.3-Definitions)

Radioactive Waste means any waste which contains radioactive material in concentrations which exceed those listed in 10 CFR part 20, appendix B, table II, column 2. (see 40 CFR 144.3 & 146.3-Definitions)

RCRA means the Solid Waste Disposal Act as amended by the Resource Conservation and Recovery Act of 1976 (Pub. L. 94-580, as amended, 42 U.S.C. 6901 et seq.). (see 40 CFR 144.3 & 146.3-Definitions)

Regional Administrator means The Regional Administrator of the appropriate Regional Office of the Environmental Protection Agency or the authorized representative of the Regional Administrator. (see 40 CFR 144.3-Definitions)

Sanitary waste means liquid or solid wastes originating solely from humans and human activities, such as wastes collected from toilets, showers, wash basins, sinks used for cleaning domestic areas, sinks used for food preparation, clothes washing operations, and sinks or washing machines where food and beverage serving dishes, glasses and utensils are cleaned. Sources of these wastes may include single or multiple residences, hotels and motels, restaurants, bunkhouses, schools, ranger stations, crew quarters, guard stations, campgrounds, picnic grounds, day-use recreation areas, other commercial facilities, and industrial facilities provided the waste is not mixed with industrial waste. (see 40 CFR 144.3)

Schedule of compliance means a schedule of remedial measures included in a "permit", including an enforceable sequence of interim requirements (for example, actions, operations, or milestone events) leading to compliance with the "appropriate Act and regulations". (see 40 CFR 144.3-Definitions)

SDWA means the Safe Drinking Water Act (Pub. L. 95-523, as amended; 42 U.S.C. 300(f) et seq.). (see 40 CFR 144.3 & 146.3-Definitions)

Septic system means a "well" that is used to emplace sanitary waste below the surface and is typically comprised of a septic tank and subsurface fluid distribution system or disposal system. (see 40 CFR 144.3-Definitions)

Site means the land or water area where any "facility or activity" is physically located or conducted, including adjacent land used in connection with the facility or activity. (see 40 CFR 144.3 & 146.3-Definitions)

Sole or principal source aquifer means an aquifer which has been designated by the Administrator pursuant to section 1424(a) or (e) of the SDWA. (see 40 CFR 146.3-Definitions)

State Director means the Director of the Division of Environmental Quality.

State/EPA agreement means an agreement between the Regional Administrator and the State which coordinates EPA and State activities, responsibilities and programs. (see 40 CFR 144.3-Definitions)

Stratum (plural strata) means a single sedimentary bed or layer, regardless of thickness, that consists of generally the same kind of rock material. (see 40 CFR 144.3 & 146.3-Definitions)

Subsidence means the lowering of the natural land surface in response to: Earth movements; lowering of fluid pressure; removal of underlying supporting material by mining or solution of solids, either artificially or from natural causes; compaction due to wetting (Hydrocompaction); oxidation of organic matter in soils; or added load on the land surface. (see 40 CFR 146.3-Definitions)

Subsurface fluid distribution system means an assemblage of perforated pipes, drain tiles, or other similar mechanisms intended to distribute fluids below the surface of the ground. (see 40 CFR 144.3)

Surface casing means the first string of well casing to be installed in the well. (see 40 CFR 146.3-Definitions)

Total dissolved solids (TDS) means the total dissolved (filterable) solids as determined by use of the method specified in 40 CFR part 136. (see 40 CFR 144.3 & 146.3-Definitions)

UIC means the Underground Injection Control program under Part C of the Safe Drinking Water Act, including an "approved State program." (see 40 CFR 144.3 & 146.3-Definitions)

Underground injection means a "well injection." (see 40 CFR 144.3 & 146.3-Definitions)

Underground source of drinking water (USDW) means an aquifer or its portion:

(a) (1) Which supplies any public water system; or

(2) Which contains a sufficient quantity of groundwater to supply a public water system; and
(i) Currently supplies drinking water for human consumption; or
(ii) Contains fewer than 10,000 mg/l total dissolved solids; and

(b) Which is not an exempted aquifer. (see 40 CFR 144.3 & 146.3-Definitions)

Well means a bored, drilled, or driven shaft whose depth is greater than the largest surface dimension; or a dug hole whose depth is greater than the largest surface dimension; or, an improved sinkhole; or, a subsurface fluid distribution system. (see 40 CFR 144.3-Definitions)

Well injection means the subsurface emplacement of fluids through a well. (see 40 CFR 144.3 & 146.3-Definitions)

Well plug means a watertight and gastight seal installed in a borehole or well to prevent movement of fluids. (see 40 CFR 146.3-Definitions)

Well stimulation means several processes used to clean the well bore, enlarge channels, and increase pore space in the interval to be injected thus making it possible for wastewater to move more readily into the formation, and includes (1) surging, (2) jetting, (3) blasting, (4) acidizing, (5) hydraulic fracturing. (see 40 CFR 146.3-Definitions)

Well monitoring means the measurement, by on-site instruments or laboratory methods, of the quality of water in a well. (see 40 CFR 146.3-Definitions)

17.301. ADOPTION OF FEDERAL REGULATIONS

(A) The Director is responsible for implementing the UIC program in the State of Arkansas. The regulations listed below are hereby adopted and made part of this UIC Code as though set forth herein word for word. These regulations shall apply to all persons and activities subject to regulation under the provisions of the Safe Drinking Water Act and/or the Arkansas Water and Air Pollution Control Act, relating to underground injection control within the State of Arkansas:

40 CFR Part 144; as amended to the date hereof; and

40 CFR Part 145; as amended to the date hereof; and

40 CFR Part 124, Subpart A; as amended to the date hereof; and

40 CFR Part 146, Subparts A, B, D, E, F, and G, as amended to the date hereof.

(B) The Oil and Gas Commission (OGC) has authority over Class II and Class V bromine related wells, and shares enforcement authority with DEQ of the Class V bromine wells as recognized in the Memorandum of Understanding (MOU) between the Division, the OGC and the EPA.

17.401. VIOLATIONS

(A) No person shall construct, install, alter, modify, or operate any underground injection facility without a permit from the Division or, as to Class II and Class V bromine-related brine disposal wells, from the Oil and Gas Commission.

(B) No person shall construct, install, or operate a Class IV well as defined in Rule17.501 hereof, and no permit for a Class IV well shall be issued by the Division.

(C) No person shall construct, install, alter, modify or operate any underground injection facility contrary to the terms and conditions of a permit or of any provision of this UIC Code or the Arkansas Water and Air Pollution Control Act, as amended (the Act).

(D) No person shall violate any other provision of this UIC Code or of the Act.

(E) Any person who violates any provision of this UIC Code shall be subject to the penalties as provided in the Arkansas Water and Air Pollution Control Act, Ark. Code Ann. § 8-4-103.

17.501. CLASSIFICATION OF INJECTION WELLS

Injection wells are classified (see 40 CFR 144.80) as follows:

(A) Class I

(1) Wells used by generators of hazardous wastes or owners or operators of hazardous waste management facilities to inject hazardous waste beneath the lowermost formation containing, within one-quarter mile of the well bore, an underground source of drinking water.

(2) Other industrial and municipal disposal wells which inject fluids beneath the lowermost formation containing, within one-quarter mile of the well bore, an underground source of drinking water;

(3) Radioactive waste disposal wells which inject fluids below the lowermost formation containing an underground source of drinking water within one quarter mile of the well bore.

(B) Class II

Wells which inject fluids:

(1) Which are brought to the surface in connection with natural gas storage operations, or conventional 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.

(2) For enhanced recovery of oil and natural gas; and

(3) For storage of hydrocarbons which are liquid at standard temperature and pressure.

(C) Class III

Wells which inject fluids for extraction of minerals including:

(1) Mining of sulfur by the Frasch process;

(2) In situ production of uranium or other metals; this category includes only in situ production from ore bodies which have not been conventionally mined. Solution mining of conventional mines such as stopes leaching is included in Class V.

(3) Solution mining of salts or potash.

(D) Class IV

(1) Wells used by generators of hazardous waste or of radioactive waste, by owners and operators of hazardous waste management facilities, or by owners or operators of radioactive waste disposal sites to dispose of hazardous waste or radioactive waste into a formation which within one-quarter (1/4) mile of the well contains an underground source of drinking water.

(2) Wells used by generators of hazardous waste or of radioactive waste, by owners and operators of hazardous waste management facilities, or by owners and operators of radioactive waste disposal sites to dispose of hazardous waste or radioactive waste above a formation which within one-quarter (1/4) mile of the well contains an underground source of drinking water.

(3) Wells used by generators of hazardous waste or owners or operators of hazardous waste management facilities to dispose of hazardous waste, which cannot be classified under paragraph (A)(1) or (D) (1) and (2) of this section (e.g., wells used to dispose of hazardous waste into or above a formation which contains an aquifer which has been exempted pursuant to 40 CFR 146.04).

(E) Class V

Injection wells not included in Classes I, II, III, or IV. Examples of Class V wells are described in 40 CFR 144.81 and in Rule17.601 of this UIC Code.

17.601. EXAMPLES OF CLASS V INJECTION WELLS

Typically, Class V wells are shallow wells used to place a variety of fluids directly below the land surface. However, if the fluids placed in the ground qualify as a hazardous waste under the RCRA, the well is either a Class I or a Class IV, not a Class V. (see 40 CFR 144.80(e))

Examples of Class V wells include:

(1) Air conditioning return flow wells used to return to the supply aquifer the water used for heating or cooling in a heat pump;

(2) Large capacity cesspools including multiple dwelling, community or regional cesspools, or other devices that receive sanitary wastes, containing human excreta, which have an open bottom and sometimes perforated sides. The UIC requirements do not apply to single family residential cesspools nor to non-residential cesspools which receive solely sanitary waste and have the capacity to serve fewer than 20 persons a day.

(3) Cooling water return flow wells used to inject water previously used for cooling;

(4) Drainage wells used to drain surface fluids, primarily storm runoff, into a subsurface formation;

(5) Dry wells used for the injection of wastes into a subsurface formation;

(6) Recharge wells used to replenish the water in an aquifer;

(7) Salt water intrusion barrier wells used to inject water into a fresh aquifer to prevent the intrusion of salt water into the fresh water;

(8) Sand backfill and other backfill wells used to inject a mixture of water and sand, mill tailings or other solids into mined out portions of subsurface mines whether what is injected is a radioactive waste or not.

(9) Septic system wells used to inject the waste or effluent from a multiple dwelling, business establishment, community or regional business establishment septic tank. The UIC requirements do not apply to single family residential septic system wells, nor to non-residential septic system wells which are used solely for the disposal of sanitary waste and have the capacity to serve fewer than 20 persons a day.

(10) Subsidence control wells (not used for the purpose of oil or natural gas production) used to inject fluids into a non-oil or gas producing zone to reduce or eliminate subsidence associated with the overdraft of fresh water;

(11) Injection wells associated with the recovery of geothermal energy for heating, aquaculture and production of electric power;

(12) Wells used for solution mining of conventional mines such as stopes leaching;

(13) Wells used to inject spent brine into the same formation from which it was withdrawn after extraction of halogens or their salts;

(14) Injection wells used in experimental technologies.

(15) Injection wells used for in situ recovery of lignite, coal, tar sands, and oil shale.

(16) Motor vehicle waste disposal wells that receive or have received fluids from vehicular repair or maintenance activities, such as an auto body repair shop, automotive repair shop, new and used car dealership, specialty repair shop (e.g., transmission and muffler repair shop), or any facility that does any vehicular repair work. Fluids disposed in these wells may contain organic and inorganic chemicals in concentrations that exceed the maximum contaminant levels (MCLs) established by the primary drinking water regulations (see 40 CFR part 141). These fluids also may include waste petroleum products and may contain contaminants, such as heavy metals and volatile organic compounds, which pose risks to human health.

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17.701. SEVERABILITY

If any provision of this UIC Code or the application thereof to any person or circumstance is held invalid, such invalidity shall not affect other provisions or applications of this UIC Code which can be given effect without the invalid provision or application, and to this end provisions of this UIC Code are declared to be severable.

17.801. EFFECTIVE DATE

This UIC Code is effective ten (10) days after filing with the Secretary of State, State Library, and Bureau of Legislative Research.

ARKANSAS POLLUTION CONTROL AND ECOLOGY COMMISSION

SUBJECT: Approval of Amendments to APC & EC Rules

Docket No. 21-003-MISC

MINUTE ORDER NO. 21-18

Pursuant to Act 704 of the 93rd General Assembly, the Arkansas Pollution Control and Ecology Commission hereby grants and approves the Division of Environmental Quality's Motion to Approve Rule Amendments, and approves the amendments to rules which are specifically set forth and contained in the mark-up drafts of rules provided to the Commission with the above-referenced motion; that further, the Commission orders that the existing effective date of each rule shall remain the same and that no substantive changes to these rules are promulgated or intended by these amendments.

THIS 3RD DAY OF DECEMBER, 2021, BY ORDER OF THE ARKANSAS POLLUTION CONTROL AND ECOLOGY COMMISSION.

COMMISSIONERS:

SUA **S. Ausbrooks**
LB **L. Bengal**
CC **C. Colclasure**
JSF **J. Fox**
MMG **M. Goggans**
_____ **R. McMullen**
DM by CC **D. Melton**
_____ **R. Moss, Jr.**
RR **R. Reynolds**
_____ **R. Roper**
_____ **D. Vandergriff**
WWW **W. Ward**

CC by RR **SUBMITTED BY: Michael McAlister DATE PASSED: 12/03/21**
R. Roper, Chair