

TITLE 62: MINING
CHAPTER I: DEPARTMENT OF NATURAL RESOURCES

PART 245
HYDRAULIC FRACTURING REGULATORY ACT

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AUTHORITY: Implementing and authorized by the Hydraulic Fracturing Regulatory Act [225 ILCS 732].

SOURCE: Adopted at 38 Ill. Reg. _____, effective _____.

SUBPART A: GENERAL PROVISIONS

Section 245.100 Applicability

- a) **High Volume Horizontal Hydraulic Fracturing Operations**
This Part applies to all horizontal wells in which any single stage of a stimulation treatment using more than 80,000 gallons, or in which the total amount of all stages of stimulation treatment using more than 300,000 gallons, in the pressurized application of hydraulic fracturing fluid to initiate or propagate fractures in a geologic formation to enhance extraction or production of oil or gas *are planned, have occurred or are occurring in this State* (Section 1-20 of the Act).
- b) **Medium Volume Horizontal Hydraulic Fracturing Operations**
Subpart L applies to all *horizontal wells* in which the total amount of *all stages of stimulation treatment using more than 80,000 gallons but less than 300,001 gallons* in the pressurized application of hydraulic fracturing fluid to initiate or propagate fractures in a geologic formation to enhance extraction or production of oil or gas are planned, have occurred or are occurring in this State (Section 1-98 of the Act).
- c) *The provisions of this Part shall be in addition to the provisions of the Illinois Oil and Gas Act [225 ILCS 725] and the rules adopted under that Act (62 Ill. Adm. Code 240). However, if there is a conflict between the provisions of the Illinois Oil and Gas Act and the rules enacted pursuant thereto, the provisions of the Act and this Part shall prevail. (Section 1-20 of the Act)*

Section 245.110 Definitions

For the purposes of this Part, unless the context otherwise requires:

"Act" means the Hydraulic Fracturing Regulatory Act [225 ILCS 732].

"Agency" means the Illinois Environmental Protection Agency. (Section 1-5 of the Act)

"ANSI" means the American National Standards Institute.

"API" means the American Petroleum Institute.

"Applicant" means any person registered with the Department pursuant to Section 245.200 of this Part that has filed an application in accordance with this Part.

"Application" means a filing by an applicant to the Department seeking a high volume horizontal hydraulic fracturing permit pursuant to Section 245.210 or a modification pursuant to Section 245.330 of this Part.

"Aquatic life" means all fish, reptiles, amphibians, crayfish, and mussels. (Section 1-5 of the Act)

"Aquifer" means saturated (with groundwater) soils and geologic materials that are sufficiently permeable to readily yield economically useful quantities (at least 70 gallons per minute) of fresh water to wells, springs, or streams under ordinary hydraulic gradients. "Aquifer" is limited to aquifers identified as major sand and gravel aquifers in the Illinois State Water Survey's Illinois Community Water Supply Wells map (Map Series 2006-01). (Section 1-5 of the Act)

"Base fluid" means the continuous phase fluid type, including, but not limited to, water or nitrogen or other gas used in a high volume horizontal hydraulic fracturing operation. (Section 1-5 of the Act) "Base fluid" shall also include both hydrocarbon and non-hydrocarbon fluids in gas and/or liquid form used in high volume horizontal hydraulic fracturing operations. Calculation and reporting of volumes for all base fluid shall be for the normal volume that the base fluid would occupy at 20°C and one atmosphere (National Institute of Standards and Technology Standard Temperature and Pressure, or "STP"). If part or all of the base fluid will contain any component that at STP would exist in a gaseous state, regardless of whether the component is transported or injected or combined in any other form or at any other temperature or pressure, or whether, when mixed with other substances the component forms a foam or gel or other dispersion, the

volume of that component shall be calculated and reported as the uncompressed volume at STP for all purposes under this Part.

"BTEX" means benzene, toluene, ethylbenzene, and xylene. (Section 1-5 of the Act)

"By-product materials" has the same meaning as in the Illinois Radiation Protection Act of 1990 [420 ILCS 40].

"Certified local health department" means a local governmental agency that has been certified by the Illinois Department of Public Health to meet the requirements set forth in Subparts C and D of this Part and 77 Ill. Adm. Code 600.210.

"Chemical" means any element, chemical compound, or mixture of elements or compounds that has its own specific name or identity, such as a Chemical Abstracts Service number, regardless of whether the chemical is subject to the requirements of 29 CFR 1910.1200(g)(2). (Section 1-5 of the Act)

"Chemical Abstracts Service" means the division of the American Chemical Society that is the globally recognized authority for information on chemical substances. (Section 1-5 of the Act)

"Chemical Abstracts Service number" or "CAS number" means the unique identification number assigned to a chemical by the Chemical Abstracts Service. (Section 1-5 of the Act)

"Class II UIC well" shall have the same meaning as in 62 Ill. Adm. Code 240.

"Completion combustion device" means any ignition device, installed horizontally or vertically, used in exploration and production operations to combust otherwise vented emissions. (Section 1-5 of the Act)

"Delineation well" means a well drilled in order to determine the boundary of a field or producing reservoir. (Section 1-5 of the Act)

"Department" or "IDNR" means the Illinois Department of Natural Resources. (Section 1-5 of the Act)

"Diesel" means a substance having any one of the following Chemical Abstracts Service numbers: 68334-30-5; 68476-34-6; 68476-30-2; 68476-31-3; 8008-20-6; or 68410-00-4. "Diesel" includes any additional substances regulated by the United States Environmental Protection Agency as diesel fuel used in hydraulic

fracturing activities under the federal Safe Drinking Water Act (42 USC 300f et seq.). (Section 1-5 of the Act)

"Director" means the Director of the Illinois Department of Natural Resources or his or her designee. (Section 1-5 of the Act)

"Enhanced oil recovery operation" means any secondary or tertiary recovery method used in an effort to recover hydrocarbons from a pool by injection of fluids, gases or other substances to maintain, restore, or augment natural reservoir energy, or by introducing gases, chemicals, other substances, or heat, or by in-situ combustion, or by any combination thereof. (Section 1-5 of the Act)

"Flare" means a thermal oxidation system using an open, enclosed, or semi-enclosed flame. "Flare" does not include completion combustion devices as defined in this Section. (Section 1-5 of the Act)

"Flowback period" means the period of time when hydraulic fracturing fluid flows back to the surface from a well following a stimulation treatment, either in preparation for a subsequent phase of stimulation treatment or in preparation for cleanup and placing the well into production. "Flowback period" begins when the hydraulic fracturing fluid returns to the surface following a stimulation treatment. "Flowback period" ends with either the well shut in, or when the well is producing continuously to the flow line or to a storage vessel for collection, whichever occurs first. (Section 1-5 of the Act)

"Fresh water" means surface and subsurface water in its natural state that is suitable for drinking water for human consumption, domestic livestock, irrigation, industrial, municipal and recreational purposes, that is capable of supporting aquatic life, and contains less than 10,000 ppm total dissolved solids. (Section 1-5 of the Act)

"Gas" means all natural gas, including casinghead gas, and all other natural hydrocarbons not defined as oil. (Section 1-5 of the Act)

"GPS" means Global Positioning System.

"Groundwater" means any water below the land surface that is within the saturated zone or geologic materials where the fluid pressure in the pore space is equal to or greater than atmospheric pressure. (Section 1-5 of the Act)

"Hazardous material" has the same meaning as ascribed in Section 3 of the Illinois Hazardous Material Transportation Act [430 ILCS 30].

"Health care services" means any services included in the furnishing to any individual of medical care, or the hospitalization incident to the furnishing of such care, as well as the furnishing to any person of any and all other services for the purpose of preventing, alleviating, curing or healing human illness or injury, including home health and pharmaceutical services and products. [215 ILCS 134/10]

"Health professional" means a physician, physician assistant, nurse practitioner, registered professional nurse, emergency medical technician, or other individual appropriately licensed or registered to provide health care services. (Section 1-5 of the Act)

"Hearing Officer" means the presiding officer at the public hearing and other hearings referenced in this Part. The term also includes administrative law judge.

"High volume horizontal hydraulic fracturing operations" or "HVHHF operations" means all stages of a stimulation treatment of a horizontal well by the pressurized application of more than 80,000 gallons in any single stage or more than 300,000 gallons in total of hydraulic fracturing fluid to initiate or propagate fractures in a geologic formation to enhance extraction or production of oil or gas. (Section 1-5 of the Act)

"High volume horizontal hydraulic fracturing permit" means the permit issued by the Department allowing high volume horizontal hydraulic fracturing operations to occur at a well site. (Section 1-5 of the Act)

"High volume horizontal hydraulic fracturing treatment" shall have the same definition as "High volume horizontal hydraulic fracturing operations".

"Horizontal well" means a well with a wellbore drilled laterally at an angle of at least 80 degrees to the vertical and with a horizontal projection exceeding 100 feet measured from the initial point of penetration into the potential productive formation through the terminus of the lateral in the same common source of hydrocarbon supply. (Section 1-5 of the Act)

"Hydraulic fracturing" means the pressurized application of hydraulic fracturing fluid to initiate or propagate fractures in a geologic formation to enhance extraction or production of oil or gas.

"Hydraulic fracturing additive" means any chemical substance or combination of chemicals, including, but not limited to, any chemical or proppant that is added to a base fluid for the purposes of preparing a hydraulic fracturing fluid for a high volume horizontal hydraulic fracturing operation. (Section 1-5 of the Act)

"Hydraulic fracturing flowback" or "Flowback" means all hydraulic fracturing fluid and other fluids or materials that return to the surface after a stage of hydraulic fracturing has been completed and prior to the well being placed in production. (Section 1-5 of the Act)

"Hydraulic fracturing fluid" means the mixture of the base fluid and all the hydraulic fracturing additives, used to perform hydraulic fracturing. (Section 1-5 of the Act)

"Hydraulic fracturing string" means any pipe or casing string used for the transport of hydraulic fracturing fluids during high volume horizontal hydraulic fracturing operations. (Section 1-5 of the Act)

"IEMA" means the Illinois Emergency Management Agency.

"Inspector" means a well inspector from the Department's Office of Oil and Gas Resource Management.

"Intake" means a pipe or other means to withdraw raw water from a water source. (Section 1-5 of the Act)

"Landowner" means the legal title holder or owner of real property and includes an owner of an undivided interest, a life tenant, a remainderman, a public or private corporation, a trustee under an active trust, and the holder of the beneficial interest under a land trust. "Landowner" does not include a mortgagee, a trustee under a trust deed in the nature of a mortgage, a lien holder, or a lessee. (Section 1-5 of the Act)

"Low-level radioactive waste" or "LLRW" shall have the same meaning as ascribed in Section 3 of the Illinois Low-Level Radioactive Waste Management Act [420 ILCS 20/3].

"Low pressure well" means a well with reservoir pressure and vertical well depth such that 0.445 times the reservoir pressure (in psia) minus 0.038 times the vertical well depth (in feet) minus 67.578 psia is less than the flow line pressure at the sales meter. (Section 1-5 of the Act)

"Material Safety Data Sheet" or "MSDS" means a document provided by chemical or industrial manufacturers that contains information on chemicals. An MSDS includes: nature of the chemical, precautions to take in using the chemical, conditions of safe use, clean-up procedure for a release, and recommended disposal procedures.

"Medium volume hydraulic fracturing operations" means a stimulation treatment of a horizontal well by the pressurized application of more than 80,000 gallons but less than 300,001 gallons in total of hydraulic fracturing fluid to initiate or propagate fractures in a geologic formation to enhance extraction or production of oil or gas.

"Naturally Occurring Radioactive Materials" or "NORM" means materials that may contain any of the primordial radionuclides or radioactive elements as they occur in nature, such as radium, uranium, thorium or potassium, and their radioactive decay products such as radium and radon that are undisturbed as a result of human activities. (See USEPA/Office of Radiation and Air, Radiation Protection Division – Technical Report on TENORM from Uranium Mining, vol. 1 and 2 (2006)).

"Nature preserve" shall have the same meaning as provided in Section 3.11 of the Illinois Natural Areas Preservation Act [525 ILCS 30/3.11]. (Section 1-5 of the Act)

"Oil" means natural crude oil or petroleum and other hydrocarbons, regardless of specific gravity, which are produced at the well in liquid form by ordinary production methods or by the use of an oil and gas separator and which are not the result of condensation of gas after it leaves the underground reservoir. (Section 1-5 of the Act)

"Operator" means the individual or entity controlling the right to drill or produce a horizontal well in accordance with the requirements of the Illinois Oil and Gas Act. (Section 1-5 of the Act)

"Ordinary high water mark" means the boundary of a water source delineated by the highest water level that has been maintained for a sufficient period of time to leave evidence upon the landscape. For:

rivers, the ordinary high water mark is the elevation of the top of the bank of the channel; and

natural or artificial lakes, ponds or reservoirs, the ordinary high water mark is the operating elevation of the normal operating pool.

"OSHA" means the Occupational Safety and Health Administration, an agency of the federal Department of Labor.

"Owner" when used with reference to oil and/or gas rights, shall have the same meaning as provided in Section 1 of the Illinois Oil and Gas Act, but when used with a modifying prepositional clause or, in the context of ownership of anything other than oil and gas drilling rights, shall have its plain and ordinary meaning. (Section 1-5 of the Act)

"Perennial stream" means a stream that has continuous flow in its stream bed during all of the calendar year. (Section 1-5 of the Act)

"Permit" means a high volume horizontal hydraulic fracturing permit issued under the Act and this Part. (Section 1-5 of the Act)

"Permittee" means a person holding a high volume horizontal hydraulic fracturing permit under the Act and this Part. (Section 1-5 of the Act)

"Person" means any individual, partnership, co-partnership, firm, company, limited liability company, corporation, association, joint stock company, trust, estate, political subdivision, State agency, or any other legal entity or its legal representative, agent, or assigns. (Section 1-5 of the Act)

"Pollution or diminution" means:

in groundwater, any of the following:

detection of benzene or any other carcinogen in any Class I, Class II, or Class III groundwater;

detection of any constituent in 35 Ill. Adm. Code 620.310(a)(3)(A)(i) equal to or above the listed preventive response criteria in any Class I, Class II, or Class III groundwater;

detection of any constituent in 35 Ill. Adm. Code 620.410(a), (b), (c), (d), (e), or (f) equal to or above the listed standard in any Class I, Class II, or Class III groundwater;

detection of any constituent in Class III groundwater equal to or above a standard established under 35 Ill. Adm. Code 620.260; or

detection of any constituent in Class I, Class II, or Class III groundwater equal to or above a cleanup objective listed in 35 Ill. Adm. Code 742.

in surface water, exceeding any applicable numeric or narrative standard in 35 Ill. Adm. Code 302 or 304. (Section 1-5 of the Act)

"Produced water" means water, regardless of chloride and total dissolved solids content, that is produced from a well in conjunction with oil or natural gas production or natural gas storage operations, but does not include hydraulic fracturing flowback. (Section 1-5 of the Act)

"Proppant" means sand or any natural or man-made material that is used during high volume horizontal hydraulic fracturing operations to prop open the artificially created or enhanced fractures. (Section 1-5 of the Act)

"Public water supply" means all mains, pipes, and structures through which water is obtained and distributed to the public, including wells and well structures, intakes and cribs, pumping stations, treatment plants, reservoirs, and storage tanks and appurtenances, collectively or severally, actually used or intended for use for the purpose of furnishing water for drinking or general domestic use, and which serves at least 15 service connections or which regularly serves at least 25 persons at least 60 days per year. (Section 1-5 of the Act)

"Radiation" has the same meaning as ascribed in Section 4(f) of the Illinois Radiation Protection Act of 1990 [420 ILCS 40/4(f)].

"Radioactive material" has the same meaning as ascribed in Section 4(i) of the Illinois Radiation Protection Act of 1990 [420 ILCS 40/4(i)].

"Real property" means the surface, subsurface or mineral rights of land.

"Real property interest" means ownership in the surface, subsurface or mineral rights of land.

"Real property surface interest" means ownership in only the surface rights of land.

"Recycled water" means water in hydraulic fracturing flow back from a hydraulic fracturing operation or produced water that is physically or chemically treated for use as the base fluid or a component of hydraulic fracturing fluid.

"Register of Land and Water Reserves" means the list of areas registered in accordance with Section 16 of the Illinois Natural Areas Preservation Act and 17 Ill. Adm. Code 4010. (Section 1-5 of the Act)

"Registrant" means any person that registers with the Department to apply for high volume horizontal hydraulic fracturing permits pursuant to Section 245.200 of this Part.

"Release" means any spilling, leaking, pumping, pouring, emitting, emptying, discharging, injecting, escaping, leaching, dumping, or disposing into the environment. (Section 1-5 of the Act)

"Serious violation" means any violation set forth in 62 Ill. Adm. Code 240.140(c). (Section 1-5 of the Act)

"Service connection" means the opening, including all fittings and appurtenances, at the water main through which water is supplied to the user. (Section 1-5 of the Act)

"Stimulation treatment" has the same meaning given to "hydraulic fracturing" in this Section.

"Surface water" means all water that is open to the atmosphere and subject to surface runoff. (Section 1-5 of the Act)

"Technically enhanced naturally occurring radioactive materials" or "TENORM" means naturally occurring radioactive materials that have been concentrated or exposed to the accessible environment as a result of human activities such as manufacturing, mineral extraction or water processing. (See USEPA/Office of Radiation and Air, Radiation Protection Division – 2006, Technical Report on TENORM from Uranium Mining, vol. 1 and 2.)

"Total water volume" means the total quantity of water from all sources used in the high volume horizontal hydraulic fracturing operations, including surface water, groundwater, produced water, or recycled water. (Section 1-5 of the Act)

"True vertical depth" means the vertical distance from a depth in a planned or existing wellbore or well to a point at the surface. (Section 1-5 of the Act)

"Water pollution" means any alteration of the physical, thermal, chemical, biological, or radioactive properties of any waters of the State, or the discharge of any contaminant into any water of the State, as will or is likely to create a nuisance or render the waters harmful, detrimental, or injurious to public health, safety, or welfare, or to domestic, commercial, industrial, agricultural, recreational, or other legitimate uses, or to livestock, wild animals, birds, or fish or other aquatic life. (Section 1-5 of the Act)

"Water source" means:

any existing water well or developed spring used for human or domestic animal consumption; or

any river, perennial stream, aquifer, natural or artificial lake, pond, wetland listed on the Register of Land and Water Reserves, or reservoir.
(Section 1-5 of the Act)

"Well" means the entire length of any drill hole, including all horizontal well bores, required to be permitted under the Illinois Oil and Gas Act. (Section 1-5 of the Act)

"Well site" means surface areas, including the surface location of the well, occupied by all equipment or facilities necessary for, or incidental to, high volume horizontal hydraulic fracturing operations, construction, drilling, production, or plugging a well. (Section 1-5 of the Act)

"Wholly contained" or "Wholly within" means a pond or lake, regardless of its hydrological source or connection, where the boundary of the pond or lake is completely contained within a landowner's property.

"Wildcat well" means a well outside known fields or the first well drilled in an oil or gas field where no other oil and gas production exists. (Section 1-5 of the Act)

"Wildlife" means any bird or mammal that is by nature wild by way of distinction from those that are naturally tame and are ordinarily living unconfined in a state of nature without the care of man. (Section 1-5 of the Act)

Section 245.115 Incorporated Materials

- a) The following documents are incorporated or referenced in various Sections of this Part:
 - 1) ANSI/API Specification 10A, Specification for Cements and Materials for Well Cementing, December 2010 (API Spec 10A)
 - 2) API Specification 5CT, Specification for Casing and Tubing, July 2011 (API Spec 5CT)
 - 3) ANSI/API Recommended Practice 5A3, Recommended Practice on Thread Compounds for Casing, Tubing, Line Pipe, and Drill Stem Elements, November 2009 (API RP 5A3)
 - 4) ANSI/API Specification 10D, Specification for Bow-String Casing Centralizers (alternatively: Specification for Bow-Spring Casing Centralizers), September 2002, Reaffirmed August 2010 (API Spec 10D)
 - 5) API Technical Report 10TR4, Selection of Centralizers for Primary Cementing Operations, May 2008 (API Spec 10TR4)
 - 6) ANSI/API Recommended Practice 10D-2, Recommended Practice for Centralizer Placement and Stop-collar Testing, August 2004, Reaffirmed July 2010 (API RP 10D-2)
 - 7) API Specification 16D, Specification for Control Systems for Drilling Well Control Equipment and Control Systems for Diverter Equipment, July 2004, 2-Year Extension May 2010 (API Spec 16D)
- b) All incorporations by reference in this Part refer to the standards on the date specified and do not include any additions or deletions subsequent to the date specified.
- c) All materials incorporated by reference are available for inspection and copying at the Illinois Department of Natural Resources, One Natural Resources Way, Springfield IL 62702-1271.

Section 245.120 Permit Requirements

- a) *A person may not conduct high volume horizontal hydraulic fracturing operations, drill, deepen, convert a horizontal well in this State where high volume horizontal hydraulic fracturing operations are planned or occurring, or convert a vertical well into a horizontal well where high volume horizontal hydraulic fracturing operations are planned in this State, unless the person is registered with the Department, has been issued a permit by the Department under this Part, and has obtained all applicable authorizations required by the Illinois Oil and Gas Act (Section 1-30(a) of the Act).*
- b) *If multiple wells are to be stimulated using high volume horizontal hydraulic fracturing operations from a single well site, then a separate permit shall be obtained for each well at the well site. (Section 1-30(b) of the Act)*
- c) A permittee may not conduct HVHHF operations that deviate from the terms of the permit, unless the permittee obtains a modification of the permit under Section 245.330.
- d) A person may not operate a well where HVHHF operations were previously permitted or conducted pursuant to a permit issued to another, unless the person is registered with the Department and obtains a transfer of the permit under Section 245.350.

SUBPART B: REGISTRATION AND PERMITTING PROCEDURES

Section 245.200 Registration Procedures

- a) *Every applicant for a permit under this Part shall first register with the Department at least 30 days before applying for a permit, using a registration form provided by the Department. (Section 1-35(a) of the Act)*
- b) *The registration form:*
 - 1) *shall require the following information (Section 1-35(a) of the Act):*
 - A) *the name and address of the registrant, the registrant's legal status (individual, partnership, corporation or other), and the name, address and legal status of any parent, subsidiary, or affiliate of the registrant (Section 1-35(a)(1) of the Act);*
 - B) *disclosure of all findings of a serious violation or an equivalent violation as defined in Section 245.110, or all findings under federal, Illinois or other state laws or regulations in the development or operation of an oil or gas exploration or production site via hydraulic fracturing by the registrant or any parent, subsidiary, or affiliate of the registrant within the previous 5 years (Section 1-35(a)(2) of the Act);*
 - C) *proof of insurance to cover injuries, damages, or loss related to pollution or diminution in the amount of at least \$5,000,000 per occurrence, from an insurance carrier authorized, licensed, or permitted to do this insurance business in this State that holds at least an A- rating by A.M. Best & Co. or any comparable rating service (Section 1-35(a)(3) of the Act).*
 - 2) *shall be signed by the registrant or the registrant's designee who has been vested with the authority to act on behalf of the registrant. The signature of the registrant or the registrant's designee constitutes a certificate that the registrant has read the registration form and that, to the best of the registrant's knowledge, information and belief, the information set forth in the form is true and accurate.*
- c) *The registration form shall be submitted to the Department electronically via the Department's website or mailed to Office of Oil and Gas Resource Management, at One Natural Resources Way, Springfield IL 62702.*

- d) Within 21 days after the receipt of a registration form, if the Department determines that the registration form is compliant with the requirements of subsection (b) and the person submitting the registration form is properly registered as a permittee under the Illinois Oil and Gas Act, then the registration form shall be accepted and the Department will provide the registrant with:
 - 1) a statement that the registrant is registered with the Department for purposes of applying for high volume horizontal hydraulic fracturing permits pursuant to this Part;
 - 2) the date the registration was accepted; and
 - 3) a high volume horizontal hydraulic fracturing registration number to be used when applying for high volume horizontal hydraulic fracturing permits pursuant to this Part.
- e) Within 21 days after receipt of a registration form, if the Department determines that the registration form is deficient relative to the requirements of subsection (b), or the person submitting the registration form is not properly registered as a permittee under the Illinois Oil and Gas Act, then the registration shall not be accepted and the Department will notify the registrant with a statement of the deficiencies. The registrant shall not be considered registered for purposes of applying for high volume horizontal hydraulic fracturing permits pursuant to this Section until the deficiencies have been cured, the registration form resubmitted and a Department determination pursuant to subsection (d) has been made.
- f) *A registrant must keep its registration current at all times while it holds a permit issued under this Part by notifying the Department of any change in the information identified in subsection (b). Any change in the information required by subsection (b)(2)(A) or (C) shall be reported within 30 days after the change occurs. Any change in the information required by subsection (b)(1)(B) shall be reported at least quarterly. (Section 1-35(a) of the Act)*
- g) All registrants shall resubmit the registration form pursuant to subsections (b) and (c) beginning September 1, 2016 and by September 1 of every even numbered year thereafter.

Section 245.210 Permit Application Requirements

- a) *Every applicant for a permit under this Part must submit the following information to the Department on an application form provided by the Department* (Section 1-35(b) of the Act). The plans required under subsections (a)(3), (a)(4), (a)(6), (a)(10), (a)(11), (a)(12), (a)(13), (a)(14), (a)(15) and (a)(20) are, pursuant to Section 1-55(a) of the Act, conditions of any permit issued under the Act. Pursuant to Section 1-35(b)(20) of the Act, the Department may request additional information from the applicant (see the other subsections of this subsection (a), requirements labeled as Additional Information within this subsection (a), and the information listed in subsection (b)).
- 1) **Applicant Information**
The name, email address, and address of the applicant, the name and address of any parent, subsidiary, or affiliate (Section 1-35(b)(1) of the Act) of the applicant, and the applicant's HVHHF registration number;
 - 2) **Well Location**
The proposed well name, well location, and legal description per the Public Land Survey System of the well, well site, and its unit area (Section 1-35(b)(2) of the Act). The well location shall be surveyed by an Illinois licensed land surveyor or Illinois registered professional engineer and the description of the surveyed well location shall also include the legal description, the GPS latitude and longitude location, and ground elevation of the well. The GPS location shall be recorded as degrees and decimal degrees recorded to 6 decimal places in the North American Datum 1983 projection and shall be accurate to within 3 feet. The reported GPS location is required to be an actual GPS field measurement and not a calculated or conversion measurement;
 - 3) **Well Site Setback Plan**
A statement whether the proposed location of the well site is in compliance with the setback requirements of Section 245.400 and a plat map, which shows the proposed surface location of the well site, providing the distance in feet from the surface location of the well site to the features described in Section 245.400(a) (Section 1-35(b)(3) of the Act) and a statement explaining how the size of the well site is sufficient to conduct all aspects of HVHHF operations within its boundaries;
 - 4) **Directional Drilling Plan**
A detailed description of the directional drilling plan for the proposed well to be used for the high volume horizontal hydraulic fracturing operations,

including, but not limited to, the following information (Section 1-35(b)(4) of the Act):

- A) *the approximate total true vertical and measured depth to which the well is to be drilled or deepened* (Section 1-35(b)(4)(A) of the Act);
- B) *the proposed angle and direction (heading) of the well* (Section 1-35(b)(4)(B) of the Act);
- C) *the actual depth or the approximate depth at which the well to be drilled deviates from vertical* (Section 1-35(b)(4)(C) of the Act);
- D) the planned depth at which the well enters the formation that will be stimulated as part of the HVHHF operations;
- E) *the angle and direction of any nonvertical portion of the well until the well reaches its total target depth or its actual final depth* (Section 1-35(b)(4)(D) of the Act);
- F) *the planned horizontal deviation and direction (heading) of the proposed horizontal portion of the well* (Section 1-35(b)(4)(E) of the Act); and
- G) the planned bottom hole location of the well;

- 5) **Underground Fresh Water Information**
The estimated depth and elevation, according to the most recent publication of the Illinois State Geological Survey of Groundwater for the location of the well or any other relevant information known to the applicant, of the lowest potential fresh water along the entire length of the proposed well (Section 1-35(b)(5) of the Act);

- 6) **High Volume Horizontal Hydraulic Fracturing Operations Plan**
A detailed description of the proposed high volume horizontal hydraulic fracturing operations, including, but not limited to, the following (Section 1-35(b)(6) of the Act):

- A) *the formations affected by the high volume horizontal hydraulic fracturing operations, including, but not limited to, geologic name and geologic description of the formations that will be stimulated by the operation* (Section 1-35(b)(6)(A) of the Act), and a description of the confining zone and the formations constituting

or contributing to that zone, including, but not limited to, a description of the lithology, extent, thickness, permeability, porosity, transmissive faults, fractures, water or water source content, and susceptibility to vertical propagation of fractures, of the confining formations; if any of the features of the confining zone and overburden described in this subsection (a)(6)(A) are unknown, the applicant should so state;

- B) *the anticipated surface treating pressure range* (Section 1-35(b)(6)(B) of the Act);
- C) *the maximum anticipated injection treating pressure* (Section 1-35(b)(6)(C) of the Act);
- D) *the estimated or calculated fracture pressure of the producing and confining zones* (Section 1-35(b)(6)(D) of the Act);
- E) *the planned depth of all proposed perforations or depth to the top of the open hole section* (Section 1-35(b)(6)(E) of the Act); and
- F) the anticipated type, source and volume of the base fluid anticipated to be used in the high volume horizontal hydraulic fracturing treatment;

7) Scaled Plat Maps, Diagrams or Cross-sections

- A) A scaled *plat* map showing the well location and *all known previous well bores within 750 feet of any part of the horizontal well bore that penetrated within 400 vertical feet of the formation that will be stimulated as part of the high volume horizontal hydraulic fracturing operations* (Section 1-35(b)(7) of the Act). If the well bores are present, then also include the following information for each well bore: well name, location and permit number;
- B) a scaled map showing the proposed unit, including the unit boundaries and the location of the proposed well, well pad, well site, access road and any other operating facilities;
- C) a scaled top-view diagram showing the well location, direction of drilling below the surface entry point to the intersection with the formation to be stimulated, and the horizontal leg to its total length. Also indicate the location at the surface of all known

previous well bores within 750 feet of any part of the horizontal well bore that penetrated within 400 vertical feet of the formation that will be stimulated as part of the HVVHF operations; and

- D) a scaled cross-section of the well bore from the surface through the horizontal leg's total length, providing the information required in subsections (a)(4) and (a)(5), and showing the formations to be stimulated as described in subsection (a)(6)(A);

8) Chemical Disclosure Report

Unless the applicant documents to the Department's satisfaction why the information is not available at the time the application is submitted (in which case the applicant shall comply with Sections 245.700 and 245.720), a chemical disclosure report identifying each chemical and proppant anticipated to be used in hydraulic fracturing fluid for each stage of the high volume horizontal hydraulic fracturing operations (Section 1-35(b)(8) of the Act). If this information is not available pursuant to a trade secret claim under Sections 245.700 and 245.720, the permittee shall submit redacted and un-redacted copies of the documents identifying the specific information on the master list of chemicals claimed to be protected as trade secrets. The Department shall use the redacted copies when posting the master list of chemicals on its website. The redacted copy must also be submitted to the certified local public health department. The report must contain the following:

- A) *for each stage, the total volume of water anticipated to be used in the high volume horizontal hydraulic fracturing treatment of the well or the type and total volume of the base fluid anticipated to be used in the high volume horizontal hydraulic fracturing treatment, if something other than water (Section 1-35(b)(8)(A) of the Act). If the total volume has not been determined at the time of the application, the permittee shall submit an estimate for the maximum volume of water or base fluid anticipated to be used;*
- B) *each hydraulic fracturing additive anticipated to be used in the hydraulic fracturing fluid, including the trade name, vendor, a brief descriptor of the intended use or function of each hydraulic fracturing additive, and the MSDS if applicable (Section 1-35(b)(8)(B) of the Act). If this information is not available under Sections 245.700 and 245.720, the chemical family and chemical effects of each additive must be disclosed. If the additives have not been determined at the time of the application, the permittee must submit all possible additives that could be used;*

- C) *each chemical anticipated to be intentionally added to the base fluid, including, for each chemical, the CAS number, if applicable* (Section 1-35(b)(8)(C) of the Act). If this information is not available under Sections 245.700 and 245.720, the chemical family and chemical effects of each chemical must be disclosed. If the chemicals have not been determined at the time of the application, the permittee must submit all possible chemicals that could be used;
 - D) *the anticipated concentration in the base fluid, in percent by mass, of each chemical to be intentionally added to the base fluid* (Section 1-35(b)(8)(D) of the Act) as calculated by the equation $\text{Mass Percent} = \text{g solute/g solution} \times 100$. If the concentration has not been determined at the time of the application, the permittee shall submit an estimate and identify such as an estimate; and
 - E) at or before the time of the applicant's filing of its first application under the Act, the applicant must have on file with the Department a master list of chemicals, as required in Section 1-77 of the Act;
- 9) **Water Use Self-Certification**
A self-certification explaining the applicant's compliance with the Water Use Act of 1983 [525 ILCS 45] and applicable regional water supply plans (Section 1-35(b)(9) of the Act), and including receipt or other proof of the applicant's delivery of the plan to the applicable Soil and Water Conservation District and any community water supply, as defined in Section 5 of the Public Water Supply Operations Act [415 ILCS 45/5], within 20 miles of the proposed water source;
- 10) **Water Source Management Plan**
- A) If fresh water is anticipated to be used in the high volume horizontal hydraulic fracturing treatment, *a water source management plan that shall include the following information* (Section 1-35(b)(10) of the Act):
 - i) *the name and location (county, latitude, longitude) of the source of the fresh water, such as surface or groundwater, anticipated to be used for water withdrawals, and the anticipated withdrawal location* (Section 1-35(b)(10)(A) of the Act);

- ii) *the anticipated volume and rate of each fresh water withdrawal from each withdrawal location* (Section 1-35(b)(10)(B) of the Act);
 - iii) *the anticipated months when fresh water withdrawals shall be made from each withdrawal location* (Section 1-35(b)(10)(C) of the Act);
 - iv) *the methods to be used to minimize fresh water withdrawals as much as feasible* (Section 1-35(b)(10)(D) of the Act);
and
 - v) *the methods to be used for surface water withdrawals to minimize adverse impact to aquatic life* (Section 1-35(b)(10)(E) of the Act);
- B) Additional Information. Pursuant to Section 1-35(b)(20) of the Act, with its Water Source Management Plan, the applicant shall:
- i) specify the methods to be utilized for accurately monitoring the amount of water from each source and how that data will be recorded and maintained;
 - ii) specify the methods of transportation and/or delivery of withdrawn surface water to the well site;
 - iii) if recycled water is anticipated to be used in the HVHHF treatment, describe the source of the recycled water and the anticipated water to be used; and
 - iv) if water other than fresh water or recycled water is anticipated to be used in the HVHHF treatment:
 - describe the source of that other water and the anticipated volume to be used; and
 - if the water derives from a river, lake, stream, other surface water or groundwater and, but for the total dissolved solids (TDS) levels, would be considered fresh water, provide the information required by subsection (a)(10)(A);

- C) *Where a surface water source is wholly contained within a single property, and the landowner of the property expressly agrees in writing to its use for fresh water withdrawals, the applicant is not required to include this surface water source in the fresh water withdrawal and management plan (Section 1-35(b)(10) of the Act). For this exception to apply, the water use agreement with the landowner of the property must be provided with the permit application. Any confidential provisions of a water use agreement may be redacted by the applicant;*

11) Hydraulic Fracturing Fluids and Flowback Plan

- A) *A hydraulic fracturing fluids and flowback plan for the handling, storage, transportation, and disposal, recycling, or reuse of hydraulic fracturing fluids and hydraulic fracturing flowback consistent with the requirements of Subpart H. The plan shall identify the specific Class II injection well or wells that will be used to dispose of the hydraulic fracturing flowback or the facilities where the hydraulic fracturing flowback will be reused or recycled. The plan shall describe the capacity of the tanks to be used for the capture and storage of flowback and of the lined reserve pit to be used, if necessary, to temporarily store any flowback in excess of the capacity of the tanks. Identification of the Class II injection well or wells shall be by name, identification number, and specific location and shall include the date of the most recent mechanical integrity test for each Class II injection well (Section 1-35(b)(11) of the Act);*
- B) Additional Information. Pursuant to Section 1-35(b)(20) of the Act, the applicant shall also describe the anticipated hydraulic fracturing flowback, the expected flowback rate and amount, and the frequency at which the storage tanks will be emptied;

12) Well Site Safety Plan

- A) *A well site safety plan to:*
 - i) *address proper safety measures to be employed during high volume horizontal hydraulic fracturing operations for the protection of persons on the well site (Section 1-35(b)(12) of the Act) that complies with federal and State law, including applicable OSHA regulations; and*

- ii) *address proper safety measures to be employed during high volume horizontal hydraulic fracturing operations for the protection of the general public* (Section 1-35(b)(12) of the Act) that complies with federal and State law;
 - B) Additional Information. Pursuant to Section 1-35(b)(20) of the Act, the applicant shall also address proper safety measures to be employed during an emergency, such as whether local responders have appropriate equipment and training to respond to an emergency at a well site, identify the presence of any hazardous materials used or stored at the well site, and ensure the applicant has contact information for all appropriate emergency responders and that the applicant's contact information is made available to emergency responders;
- 13) Containment Plan
A containment plan describing the containment practices and equipment to be used and the area of the well site where containment systems will be employed (Section 1-35(b)(13) of the Act) to be compliant with Sections 245.820, 245.825 and 245.830;
- 14) Casing and Cementing Plan
A casing and cementing plan that describes the casing and cementing practices to be employed, including the size of each string of pipe, the starting point, and depth to which each string is to be set and the extent to which each string is to be cemented (Section 1-35(b)(14) of the Act) to be compliant with Sections 245.530, 245.560 and 245.570;
- 15) Traffic Management Plan
- A) *A traffic management plan that is developed by the applicant, identifying the impacted highway authorities (county, township, road district system, and municipal street system, as applicable), to identify the anticipated roads, streets, and highways that will be used* (Section 1-35(b)(15) of the Act) to facilitate the well site construction, drilling operations, HVHFF operations, production, and continued operations of the well site. The applicant shall include contact information for the applicant's representative with knowledge of the traffic management plan and contact information for a representative of each impacted highway authority. The applicant shall submit copies of the traffic management plan to the impacted highway authority, when the applicant submits the

application to the Department, to provide the highway authority time to submit comments to the Department, if desired.

- B) Additional Information. Pursuant to Section 1-35(b)(20) of the Act, the applicant shall also include:
 - i) a scaled map of the proposed routes, including but not limited to any access roads, that the applicant intends to use to construct the well site or to perform HVHHF operations, production and continued operations, for at least a 10 mile radius around the well site, identifying all the different highway jurisdictions, as well as any structures or property lines relevant to demonstrating compliance with Section 245.410 and 765 ILCS 530;
 - ii) anticipated start and end dates for well site construction and drilling operations, HVHHF operations, and other high traffic operations; and
 - iii) any management measures that will be used to minimize stress to local roads and/or impact on regular traffic flow;
- 16) Owner Information
The names and addresses of all owners of any real property surface interest within 1,500 feet of the proposed well site as disclosed by the records in the office of the recorder of the county or counties (Section 1-35(b)(16) of the Act);
- 17) Public Notice Drafts
Drafts of the specific public notice and general public notice as required by Section 245.250 using the forms provided by the Department (Section 1-35(b)(17) of the Act);
- 18) Restoration Statement
 - A) *A statement that the well site at which the HVHHF operation will be conducted will be restored in compliance with 62 Ill. Adm. Code 240.1181 and Section 1-95 of the Act (Section 1-35(b)(18) of the Act).*
 - B) Additional Information. Pursuant to Section 1-35(b)(20) of the Act, the applicant shall provide:

- i) Its proposed strategy for the pre-HVHHF operations plugging of previously abandoned unplugged or insufficiently plugged wells identified in subsection (a)(7)(A). For any well bores identified in subsection (a)(7)(A), this strategy shall demonstrate that the well bores are sufficiently plugged as described in Section 245.815(b) or that the well bores will be plugged pursuant to Section 245.1010;
 - ii) A strategy for restoration of lands used by the permittee other than the well site and production facility pursuant to Section 245.1020; and
 - iii) A strategy for the plugging of the well and the restoration of the well site to be in compliance with 62 Ill. Adm. Code 240.Subpart K and Sections 245.1000 and 245.1030 of this Part;
- 19) Proof of Insurance
Proof of insurance indicating that the applicant/operator performing, itself or through a contractor, HVHHF operations at the proposed well is insured to cover injuries, damages, or loss related to pollution in the amount of at least \$5,000,000 per occurrence (Section 1-35(b)(19) of the Act);
- 20) Water Quality Monitoring Work Plan
The work plan to ensure accurate and complete water quality sampling and testing (Section 1-80(a) of the Act) as set forth in Section 245.600(a), reviewed and certified by a professional engineer or professional geologist;
- 21) Applicant Disclosure
Disclosure of and a written explanation for the following, which must be supplemented if any changes occur after the application is submitted:
 - A) Any conviction, adjudication or finding of *fraudulent, coercive, or dishonest practices, or demonstrating incompetence, untrustworthiness, or financial irresponsibility in the conduct of business in this State or elsewhere* (Section 1-60(a)(4) of the Act);
 - B) Any revocation of a *high volume horizontal hydraulic fracturing permit, or its equivalent, in any other state, province, district, or territory for incurring a material or major violation or using fraudulent or dishonest practices* (Section 1-60(a)(5) of the Act).

- b) Additional Information. Pursuant to Section 1-35(b)(20) of the Act, the Department may request additional information from the applicant. This information is not automatically incorporated in the permit as a permit condition (see Section 1-55(a) of the Act), as are the plans described in the subsections specified in subsection (a). The applicant shall submit the following information:
- 1) Registration Certification
Certification that the applicant's registration information provided pursuant to Section 245.200 is accurate and up to date;
 - 2) Topsoil Preservation
A strategy for compliance with the requirement to preserve topsoil as required by Section 245.410;
 - 3) Fugitive Dust Control
A strategy for compliance with the requirement to implement practices to control fugitive dust as required by Section 245.410;
 - 4) Contractor Information
A statement indicating whether the applicant or a contractor will be performing the HVHHF operations. If a contractor will be performing the HVHHF operations, provide the contractor's name, address and telephone number, and the direct telephone number of the person responsible for HVHHF operations at the well site for the contractor. If any information is not known about the contractor at this time, the application shall be supplemented as soon as possible and in all events before the HVHHF operations begin;
 - 5) Violations Report
A violations report indicating whether the applicant or any parent, subsidiary or affiliate of the applicant has pending Notices of Violations or Director's Decisions under the Act, this Part, the Illinois Oil and Gas Act, or the administrative rules promulgated under that Act;
 - 6) Emissions Management
A statement of which of the methods for managing natural gas and hydrocarbon fluids produced during the flowback period and production period the applicant will use, as required by Sections 245.845(a) and (b) and 245.900(a) through (c). If the applicant indicates in this statement that it intends to request an exemption or waiver under Section 245.845(c) or (f), 245.900(d) or (i), or 245.920, it must include that fact in the statement

and attach the substantiation for the request that is required by Section 245.845, 245.900 or 245.920, as applicable;

- 7) The applicant shall submit a radioactive materials management strategy to test for and identify, manage, transport and dispose of any radioactive materials utilized or generated during the course of HVHHF operations. The proposed strategy shall ensure that any wastes generated that are low-level radioactive waste comply with the waste management requirements specified in the strategy. The radioactive materials management strategy shall include:
 - A) An initial site sampling plan that will determine the concentrations of total dissolved solids, gross alpha, gross beta, radium-226, radium-228 and potassium-40 of the soil, private wells and surface water within 1500 feet of the well site;
 - B) A strategy for radiation testing of the drill cuttings from the black shale, the hydraulic fracturing flowback, and the well site as part of the site restoration, including reserve pits and any surface waters within 1500 feet of the well site. The strategy shall include surveys, of a specified frequency, of equipment and waste streams prior to disposal, maintenance or recycling.
- c) *When an application is made to conduct high volume horizontal hydraulic fracturing operations at a well site located within the limits of any city, village, or incorporated town, the application shall state the name of the city, village, or incorporated town and be accompanied with a certified copy of the official consent for the high volume horizontal hydraulic fracturing operations to occur from the municipal authorities where the well site is proposed to be located. No permit shall be issued unless consent is secured and filed with the permit application. In the event that a modification to the permit is subsequently sought for an amended location or any other significant permit deviation, a new certified consent is required for the amended location. (Section 1-35(c) of the Act)*
- d) If any part of the well or well site identified in subsection (a)(2) is in an area identified by the U.S. Geological Service as having a 2% or more probability of exceedance (in 50 years) of peak ground acceleration of 0.4 standard gravity (g) or more, then the plans submitted per subsections (a)(11) (Hydraulic Fracturing Fluids and Flowback Plan), (a)(12) (Well Site Safety Plan), (a)(13) (Containment Plan) and (a)(14) (Casing and Cementing Plan) shall identify measures the applicant will take to protect the components in those plans against an earthquake

of M 4.5 or more, and the insurance policy identified in subsection (a)(19) shall have a rider providing coverage against loss or claims resulting from impacts from any aspect of the permitted operations following earthquakes of M 4.5 or more.

- e) If any part of the well or well site identified in subsection (a)(2) is in an area identified as a floodplain under 17 Ill. Adm. Code 3700 or 3706, it shall be considered a construction under either or both of those Parts and the applicant shall be responsible for obtaining all permits under Part 3700 or 3706, whichever is applicable, and the insurance policy identified in subsection (a)(19) shall have a rider providing coverage against loss or claims resulting from impacts from any aspect of the permitted operations following floods.
- f) *The permit application shall be accompanied by a bond or equivalent financial instrument as required by Section 245.220(a) (Section 1-35(d) of the Act).*
- g) *Each application for a permit under this Part shall include payment of a non-refundable fee of \$13,500 (Section 1-35(e) of the Act). Checks shall be made payable to the Illinois Department of Natural Resources.*
- h) *Each application submitted under this Part shall be signed, under the penalty of perjury, by the applicant or the applicant's designee who has been vested with the authority to act on behalf of the applicant and has direct knowledge of the information contained in the application and its attachments. Any person signing an application shall also sign an affidavit with the following certification:*

"I certify, under penalty of perjury as provided by law and under penalty of refusal, suspension, or revocation of a high volume horizontal hydraulic fracturing permit, that this application and all attachments are true, accurate, and complete to the best of my knowledge." (Section 1-35(f) of the Act)
- i) *The permit application shall be submitted to the Department in both electronic and hard copy format at the same time. One hard copy of the permit application and all documents attached to the application shall be provided. The electronic format shall be searchable (Section 1-35(g) of the Act) and provided to the Department on compact disc, DVD or Universal Serial Bus (USB) compatible storage devices. Permittee shall also provide the Department, in electronic and hard copy format, a duplicate set of any pages containing names or addresses of individuals in which the names and addresses, except those provided pursuant to subsections (a)(1) and (b)(4), are redacted for purposes of confidentiality. Review of the permit application shall not be considered for the purposes of Section 245.230 if the Department is unable to access the submitted electronic format.*

- j) *The application for a high volume horizontal hydraulic fracturing permit may be submitted as a combined permit application with the permittee's application to drill on a form as the Department shall prescribe. The combined application must include the information required in this Section. The submission of a combined permit application under this subsection shall not be interpreted to relieve the applicant or the Department from complying with the requirements of this Part, the Act, the Illinois Oil and Gas Act and the rules adopted under that Act. (Section 1-35(h) of the Act)*

Section 245.220 Permit Bonds or Other Collateral Securities

- a) No person shall be allowed to construct, drill, operate, perform HVHHF operations, or produce from a well for which a permit is necessary under this Part if that well is not covered and protected by a bond or other collateral securities as required by this Section.
- b) All applicants *for a permit under this Part*, and persons requesting permit transfers, *shall provide a bond* at the time of filing an application for permit pursuant to Section 245.210 or at the time of filing a request for transfer of permit pursuant to Section 245.340. *The bond shall be in the amount of \$50,000 per permit or a blanket bond of \$500,000 for all permits.* (Section 1-65(a) of the Act) All bonds must meet the following requirements during the permit application process and through the entire term of an issued permit until the bond is released as provided by subsection (d):
 - 1) Bonds shall be signed by the permittee as principal and by a good and sufficient corporate surety legally authorized to transact business as a surety in Illinois.
 - 2) Each bond shall provide that the bond shall not be cancelled by the surety without at least 90 days' notice to the Department. Notice shall be served upon the Department in writing by registered or certified mail to the Illinois Department of Natural Resources, Attention: Office of Oil and Gas Resource Management, One Natural Resources Way, Springfield IL 62702.
 - 3) Within the 90-day notice period and before the bond is cancelled the permittee shall deliver to the Department a replacement bond. If the replacement bond is not delivered, all activities covered by the bond shall cease at the expiration of the 90-day notice period.
 - 4) If the authority to transact business in Illinois of any surety upon which a bond is filed with the Department is suspended or revoked, the permittee, within 30 days after receiving notice of the suspension/revocation, shall notify the Department and shall make substitution by providing a bond or other security as required by this Section. Upon the failure of the permittee to make the substitution of bond or other security, all activities covered by the bond shall cease until substitution has been made.

- c) *In lieu of a bond, other collateral securities such as cash, certificates of deposit, or irrevocable letters of credit under the following terms and conditions may be provided by a permittee (Section 1-65(a) of the Act):*
- 1) Cash: Cash shall be placed in the Department's possession.
 - 2) Certificates of Deposit
 - A) Certificates of deposit shall be payable to the permittee and assigned to the Department, both in writing submitted to the Department and upon the records of the bank issuing the certificates. If assigned, the Department will require the banks issuing these certificates to waive all rights of setoff or liens against the certificates.
 - B) The Department will not accept an individual certificate of deposit in an amount in excess of the maximum insurable amount determined by the Federal Deposit Insurance Corporation.
 - C) Any interest accruing on a certificate of deposit shall be for the benefit of the permittee except that accrued interest shall first be applied to any prepayment penalty when a certificate of deposit is forfeited by the Department.
 - D) The certificate of deposit, if a negotiable instrument, shall be placed in the Department's possession. If the certificate of deposit is not a negotiable instrument, a withdrawal receipt, endorsed by the permittee, shall be placed in the Department's possession.
 - 3) Letters of Credit
 - A) The letter may only be issued by a bank organized or authorized to do business in the United States (issuing bank). If the issuing bank does not have an office for collection in Illinois, there shall be a confirming bank designated that is authorized to accept, negotiate and pay the letter upon presentment in Illinois.
 - B) Letters of credit shall be irrevocable during their terms. A letter of credit shall be forfeited and shall be collected by the Department if not replaced by other suitable bond or other collateral securities at least 30 days before its expiration date.

- C) The letter of credit shall be payable to the Department upon demand, in part or in full, upon receipt from the Department of a notice of forfeiture issued in accordance with subsection (e).
 - D) The Department will not accept a letter of credit in excess of 10% of the issuing bank's total capital and surplus accounts, as certified by the President of the bank providing the letter of credit and as evidenced by the most recent quarterly Call Report provided to the Federal Deposit Insurance Corporation.
 - E) The letter of credit shall provide on its face that the Department, its lawful assigns, or the attorneys for the Department or its assigns may sue, waive notice and process, appear on behalf of, and confess judgment against the issuing bank (and any confirming bank) in the event that the letter of credit is dishonored. The letter of credit shall be deemed to be made in Sangamon County, Illinois, for the purpose of enforcement and any actions thereon shall be enforceable in the Courts of Illinois, and shall be construed under Illinois law.
- d) *The bond or other collateral securities shall remain in force until the well is plugged, abandoned and restored, or transferred. Upon plugging, abandoning and restoring, or transferring a well to the satisfaction of the Department and in accordance with the Illinois Oil and Gas Act, the bond or other collateral securities shall be promptly released by the Department. Upon the release by the Department of the bond or other collateral securities, any cash or collateral securities deposited shall be returned by the Department to the applicant or permittee who deposited it. (Section 1-65(b) of the Act)*
- e) *If, after notice and the opportunity for hearing, the Department determines that any of the requirements of the Act or this Part or the orders of the Department have not been complied with within the time limit set by any notice of violation issued thereunder, the permittee's bond or other collateral securities shall be subject to forfeiture pursuant to the following procedure (Section 1-65(c) of the Act):*
- 1) A permittee's failure to comply with the Department's order finding a violation of the Act or this Part constitutes grounds for bond forfeiture.
 - 2) The Department will send written notification by certified mail, return receipt requested, to the permittee and the surety on the

bond, if any, informing them of the determination to forfeit the bond pursuant to subsection (e)(1).

- 3) The Department may allow a surety to correct the violation if the surety can demonstrate an ability to complete the corrective work in accordance with the requirements of the Act and this Part. No surety liability shall be released until the successful correction of the violation ordered by the Department.
- 4) In the event forfeiture of the bond or other collateral securities is warranted by subsection (e)(1), the Department will afford the permittee the right to a hearing, if the hearing is requested in writing by the permittee within 30 days after the bond forfeiture notification is received in accordance with subsection (e)(2). If the permittee does not request a hearing within the 30-day period, the determination to forfeit the bond shall be a final administrative decision. If a hearing is requested by the permittee, the hearing shall be scheduled within 30 days after the receipt of the request for hearing, and shall be conducted by a Hearing Officer.
- 5) At the bond forfeiture hearing, the Department will present evidence and has the burden of proof to support its determination to forfeit the bond under subsection (e)(1). The permittee may present evidence contesting the Department's determination. The Hearing Officer may administer oaths and affirmations, subpoena witnesses and written or printed materials, compel attendance of witnesses or production of those materials, compel discovery, and take evidence.
- 6) Within 30 days after the close of the record for the bond forfeiture hearing, the Hearing Officer shall issue recommended findings of fact, recommended conclusions of law and recommendations as to the disposition of the case.
- 7) The Director or his or her designee shall review the administrative record in a contested case, in conjunction with the Hearing Officer's recommended findings of fact, recommended conclusions of law and recommendations as to the disposition of the case. The Director or designee, shall then issue the Department's final administrative decision affirming, vacating or modifying the Hearing Officer's decision.

- 8) *In no way will payment under this bond exceed the aggregate administrative penalty as specified in the Notice of Violation or Director's Decision. (Section 1-65(c) of the Act)*
- 9) *Forfeiture under this subsection (e) shall not limit any duty of the permittee to mitigate or remediate harms or foreclose enforcement by the Department or the Agency. (Section 1-65(c) of the Act)*
- f) *When any bond or other collateral security is forfeited under the provisions of the Act or this Part, the Department shall collect the forfeiture without delay. The surety shall have 30 days to submit payment for the bond after receipt of notice by the permittee or the Department of the forfeiture. (Section 1-65(d) of the Act)*
- g) If the permittee's bond is subject to forfeiture and used for anything other than plugging and restoration of the well and well site, the permittee shall have 30 days from the date of the Department's determination to forfeit the bond to replace the bond. Failure to replace the bond within this time shall result in the immediate cessation of activities covered by the bond and permit.
- h) *All forfeitures shall be deposited in the Mines and Minerals Regulatory Fund to be used, as necessary, to mitigate or remediate violations of the Act or this Part. (Section 1-65(e) of the Act)*

Section 245.230 Permit Application Receipt and Department Review

- a) All registrants who anticipate filing a permit application with the Department shall notify the Office of Oil and Gas Resource Management at least 5 business days before the anticipated date of filing by both email at DNR.HFApplication@partner.illinois.gov and by telephone at 217-782-7756 to advise the Office of the anticipated permit filing. The registrant shall provide the name of the applicant and the name and telephone number of an applicant contact person in case the Office has any questions.
- b) In no event will a permit application be considered received until after one full business day following the delivery to the Department of all the materials required by Section 245.210. When the Department has in its possession all of the required materials, the Department will promptly check the materials to see that all of the components listed in Section 245.210 are present and are in such format and detail that the Department will be able to review the proposed plans and activities. The Department, before the end of the first full business day following delivery, will determine whether the components are present and can be subject to permit review. If the Department so determines, the application will be considered received effective start of business the first full business day following the completeness check, and the applicant will be so notified. The determination and notification will in no way signify any Department approval of the adequacy of any component of the application, or all of it, only its submission and susceptibility to review. If the Department, however, determines that the application has any patently or facially incomplete or deficient parts or components, the Department will promptly notify the applicant that it does not consider the application properly submitted or received.
- c) Upon receipt of a permit application, the Department shall provide *notice to the applicant that the permit application was received* (Section 1-40(b) of the Act) and of the following:
 - 1) the review number assigned by the Department to the permit application;
 - 2) the date of receipt of the permit application;
 - 3) the dates of the public comment period on the permit application; and
 - 4) the date, time and address of the public hearing and the name of the Hearing Officer scheduled to preside over the public hearing for the permit application that will apply should a request for public hearing be filed.

- d) Any application received by the Office after 12:00 p.m. (Central Standard Time) will be considered received on the following business day.
- e) *Upon receipt of a permit application, the Department shall have no more than 60 calendar days from the date it receives the permit application to approve, with any conditions the Department may find necessary, or reject the application for the high volume horizontal hydraulic fracturing permit. The applicant may waive, in writing, the 60-day deadline upon its own initiative or in response to a request by the Department. (Section 1-35(i) of the Act)*
- f) *If, during the review period, the Department determines that the permit application is not complete under the Act, does not meet the requirements of Section 245.210, or requires additional information, the Department shall notify the applicant in writing of the application's deficiencies and allow the applicant to correct the deficiencies and provide the Department any information requested to complete the application. If the applicant fails to provide adequate supplemental information, the Department may reject the application. (Section 1-35(j) of the Act)*

Section 245.240 Public and Governmental Notice by the Department

- a) *Within 5 calendar days after the Department's receipt of the high volume horizontal hydraulic fracturing permit application, the Department shall post notice of its receipt and a copy of the permit application on its website. Except for the names and addresses provided in the permit application pursuant to Section 245.210(a)(1) and (b)(4), all other names and addresses of individuals provided in the permit application shall be considered confidential and shall not be posted on the Department's website. The notice shall include (Section 1-40(a) of the Act):*
- 1) the date the application was received by the Department;
 - 2) *the dates of the public comment period* (Section 1-40(a) of the Act) for the permit application;
 - 3) *directions for interested parties to submit comments* (Section 1-40(a) of the Act) or *objections* (Section 1-50(a) of the Act);
 - 4) the review numbers assigned by the Department to the permit application;
 - 5) the date, time and address of the public hearing and the name and mailing address of the Hearing Officer scheduled to preside over the public hearing on the permit application should a request for public hearing be filed; and
 - 6) *directions for any person having an interest that is or may be adversely affected, any government agency that is or may be affected, or the county board of a county to be affected under a proposed permit on how and when to request a public hearing on the permit application* (Section 1-50(a) of the Act).
- b) *Within 5 calendar days after the Department's receipt of the permit application, the Department shall provide the Agency, the Office of the State Fire Marshal, Illinois State Water Survey, Illinois State Geological Survey, and the certified local public health department where the well site is located with notice of the application* (Section 1-40(b) of the Act).
- c) *Within 5 calendar days after the Department's receipt of the permit application, the Department shall provide a copy of the permit application's well site safety plan to the Office of the State Fire Marshal* (Section 1-35(b)(12) of the Act).

- d) *Within 5 calendar days after the Department's receipt of the permit application, the Department shall provide a copy of the permit application's containment plan to the Office of the State Fire Marshal (Section 1-35(b)(13) of the Act).*
- e) *Within 5 calendar days after the Department's receipt of the permit application, the Department shall provide a copy of the permit application's traffic management plan to the Office of the State Fire Marshal (Section 1-35(b)(15) of the Act).*
- f) *Public Hearing Notice: At least 10 calendar days before the date of the public hearing, the Department shall publish notice of the public hearing in a newspaper of general circulation published in, or as near possible to, the county where the proposed well site will be located (Section 1-50(d) of the Act). The notice shall include:*
 - 1) the date, time and place of the public hearing;
 - 2) the name and mailing address of the Hearing Officer scheduled to preside over the public hearing;
 - 3) the purpose of the public hearing and the name of the applicant;
 - 4) the legal description, per the Public Land Survey System, of the proposed well site and unit area;
 - 5) the review number for the permit application; and
 - 6) *a statement that any person having an interest that is or may be adversely affected, any government agency that is or may be affected, or the county board of a county to be affected under a proposed permit may file (Section 1-40(c)(3)(G) of the Act) a request for public hearing on the permit application pursuant to Section 245.270.*

Section 245.250 Public and Governmental Notice by the Permit Applicant

- a) *The applicant shall provide the following public and governmental notice (Section 1-40(c) of the Act):*
 - 1) *Applicants shall mail specific public notice by U.S. Postal Service certified mail, return receipt requested, within 3 calendar days after submittal of the high volume horizontal hydraulic fracturing permit application to the Department to:*
 - A) *all persons identified in Section 245.210(a)(16) as owners of any real property surface interest within 1,500 feet of the proposed well site as disclosed by the records in the office of the recorder of the county or counties;*
 - B) *the governing body of each municipality in which the well is proposed to be located; and*
 - C) *the county board of each county in which the well is proposed to be located. (Section 1-40(c)(1) of the Act)*
 - 2) *Except as otherwise provided in this subsection (a)(2), applicants shall provide general public notice by publication, once each week for 2 consecutive weeks, beginning no later than 3 calendar days after submittal of the high volume horizontal hydraulic fracturing permit application to the Department, in a newspaper of general circulation published in or, if necessary, as near possible to each county where the well proposed for high volume horizontal hydraulic fracturing operations is proposed to be located. If a well is proposed for high volume horizontal hydraulic fracturing operations in a county where there is no daily newspaper of general circulation, applicant shall provide general public notice, by publication, once each week for 2 consecutive weeks, in a weekly newspaper of general circulation in that county beginning as soon as the publication schedule of the weekly newspaper permits, but in no case later than 10 days after submittal of the high volume horizontal hydraulic fracturing permit application to the Department. (Section 1-40(c)(2) of the Act)*
 - 3) *Within 15 calendar days after submitting the permit application to the Department, the applicant must provide a copy of the permit application's well site safety plan to the county or counties and all local fire departments with jurisdictions covering the well site in which high volume horizontal*

hydraulic fracturing operations will occur. (Section 1-35(b)(12) of the Act)

- 4) *Within 15 calendar days after submitting the permit application to the Department, the applicant must provide a copy of the permit application's traffic management plan to the county or counties in which the well site is located and any impacted highway authorities identified in the traffic management plan pursuant to Section 245.210(a)(15) (Section 1-35(b)(15) of the Act).*
- 5) *The specific and general public notices required under subsections (a)(1) and (a)(2) shall be on forms provided by the Department and shall contain the following information (Section 1-40(c)(3) of the Act):*
 - A) *the name and address of the applicant (Section 1-40(c)(3)(A) of the Act);*
 - B) *the date the application for a high volume horizontal hydraulic fracturing permit was received by the Department (Section 1-40(c)(3)(B) of the Act);*
 - C) *the dates for the public comment period and a statement that anyone may file written comments, objections and recommendations about any portion of the applicant's submitted high volume horizontal hydraulic fracturing permit application with the Department during the public comment period (Section 1-40(c)(3)(C) of the Act);*
 - D) *the proposed well name, review number assigned by the Department, well location, and legal description per the Public Land Survey System of the well, well site, and its unit area (Section 1-40(c)(3)(D) of the Act). The well location shall be surveyed by an Illinois licensed land surveyor and the description of the surveyed well location shall also include the legal description, the GPS latitude and longitude location, and ground elevation of the well. The GPS location shall be recorded as degrees and decimal degrees recorded to 6 decimal places in the North American Datum 1983 projection and shall be accurate to within 3 feet. The reported GPS location is required to be an actual GPS field measurement and not a calculated or conversion measurement;*

- E) *a statement that the information filed by the applicant in its application for a high volume horizontal hydraulic fracturing permit is available from the Department through its website (Section 1-40(c)(3)(E) of the Act);*
 - F) *the Department's website and the address and telephone number for the Department's Office of Oil and Gas Resource Management (Section 1-40(c)(3)(F) of the Act);*
 - G) *a statement that any person having an interest that is or may be adversely affected, any government agency that is or may be affected, or the county board of a county to be affected under a proposed permit, may file written objections to a permit application and may request a public hearing pursuant to Section 245.270 (Section 1-40(c)(3)(G) of the Act); and*
 - H) *the date, time and address of the public hearing and the name and address of the Hearing Officer scheduled to preside over the public hearing for the permit application should a request for public hearing be filed.*
- b) *After providing the public notice as required under subsection (a), the applicant shall supplement its permit application by providing the Department with a certification and documentation that the applicant fulfilled the public notice requirements of this Section no later than 35 days after the Department's receipt of the permit application (Section 1-40(d) of the Act).*
- c) *If multiple applications are submitted at the same time for wells located on the same well site, the applicant may use one public notice for all applications provided the notice is clear that it pertains to multiple well applications and conforms to the requirements of this Section (Section 1-40(e) of the Act).*

Section 245.260 Public Comment Periods

- a) *The initial public comment period shall begin 7 calendar days after the Department's receipt of the permit application and last for 30 calendar days (Section 1-45(a) of the Act). During the initial public comment period, any person may file written comments to the Department concerning any portion of the permit application and any issue relating to the applicant's compliance with the requirements of the Act (Section 1-45(c) of the Act), this Part, the Illinois Oil and Gas Act and the administrative rules promulgated under that Act.*
- b) *When a public hearing is conducted under Section 245.270, the Department shall provide for an additional public comment period to allow for comments in response only to evidence and testimony presented at the hearing. The additional public comment period shall begin on the day after the close of the evidence at the public hearing and last for not more than 15 days, taking into consideration that the Department shall have no more than 60 days from the date it receives the permit application to approve or reject the permit application. (Sections 1-45(b) and 1-35(i) of the Act)*
- c) Written public comments may be filed via mail or electronically.
 - 1) Written public comments may be mailed to the Department at Illinois Department of Natural Resources, Attention: Oil and Gas Regulatory Staff, One Natural Resources Way, Springfield IL 62702.
 - 2) Written public comments may be sent electronically to the Department based on the information provided in the Department's notice posted on its website.
- d) All public comments must include the review number assigned by the Department to the permit application and be received by the Office of Oil and Gas Resource Management by 5:00 p.m. on the last day of the applicable public comment period to be eligible for Department consideration during the permit review process set forth in this Part.
- e) *The Department may request that the applicant respond to any substantive public comments, objections and recommendations obtained during the public comment periods (Section 1-45(d) of the Act).*
- f) If, during the review period, the Department allows the applicant to correct deficiencies pursuant to Section 245.230(f), the Department may require an additional public comment period or hearing related specifically to those changes

made in the application. If there is not sufficient time to hold an additional comment period or hearing within the 60 calendar days to make a permit decision, the applicant must waive the 60-day deadline or the Department may reject the application.

Section 245.270 Public Hearingsa) *Participation*

- 1) *When a permit application to conduct high volume horizontal hydraulic fracturing operations for the first time at a particular well site is received by the Department, any person having an interest that is or may be adversely affected, any government agency that is or may be affected, or the county board of a county to be affected under a proposed permit, may file a written request for public hearing (Section 1-50(a) of the Act).*
- 2) The request for hearing shall be served by electronic mail or certified mail, return receipt requested, upon the Hearing Officer, the Department, and the applicant. All requests for hearing shall be received by the Department before 5 p.m. on the last day of the initial public comment period established under Section 245.260(a).
- 3) *The request for hearing shall contain a short and plain statement:*
 - A) stating the permit review number and acknowledging the date, time and location of the hearing;
 - B) *identifying the person, government agency or county and:*
 - i) if a person, *stating facts demonstrating that the person has an interest that is or may be adversely affected (Section 1-50(a) of the Act);*
 - ii) if a government agency, stating facts demonstrating that the government agency is or may be affected by the proposed permit; and
 - iii) if a county, stating facts demonstrating that it will be affected by the proposed permit;
 - C) identifying each objection to, or concern with, the permit application and, to the extent possible, explaining the specific fact or facts upon which each objection or concern is based;
 - D) referencing any statute, Section and/or regulation upon which each objection or concern is based;

- E) hearing requestors are encouraged, in addition, to list:
 - i) known witnesses that will or may be called at the hearing, including, if possible, their name, address and phone number, and a summary of their expected testimony and, if any witness will be used as an expert, documentation (e.g., a curriculum vitae) or statement of that witness' relevant qualifications; and
 - ii) if known at the time of the request for hearing, any documents supporting any objection or concern. The disclosure of witnesses and documents is not required to request a hearing, but the Department, to facilitate the orderly presentation of facts, will provide optional space for that information on the Department prescribed hearing request form.
- 4) All requests for hearing should include copies of any documents referenced in subsection (a)(3)(E)(ii).
- 5) *The Department shall hold a public hearing upon a request for hearing under this subsection (a), unless the request is determined by the Hearing Officer to:*
 - A) *lack an adequate factual statement for finding that the person is or may be adversely affected, that the government agency is or may be affected, or that the county is affected by the proposed permit; or*
 - B) *be frivolous by presenting grounds that are readily recognizable as devoid in merit. (Section 1-50(a) of the Act)*
- 6) *Prior to, but not less than 2 business days before, the commencement of a public hearing under this Section, any person who could have requested the hearing under subsection (a)(1) may petition the Department to participate in the hearing in the same manner as the party requesting the hearing. The petition shall be in writing and meet the requirements for requests for hearing set forth in subsection (a)(3). The petitioner shall serve the petition by electronic mail or certified mail, return receipt requested, upon the Department, the Hearing Officer, and the applicant. The petitioner shall be allowed to participate in the hearing in the same manner as the party requesting the hearing if the petition meets the requirements set forth in subsection (a)(3). (Section 1-50(b) of the Act)*

b) Public Hearing Procedures and Location

- 1) *The public hearing to be conducted under this Section shall comply with the contested case requirements of the Illinois Administrative Procedure Act [5 ILCS 100] and this Section. (Section 1-50(c) of the Act)*
- 2) All public hearings under this Part will be held in the county where the well site is located or such other local venue as the Department deems necessary and available, but in no event more than 30 miles outside the county where the proposed well site is to be located.

c) Hearing Officer

- 1) All public hearings shall be conducted by a Hearing Officer designated by the Director. Hearing Officers shall be licensed to practice law in the State of Illinois with at least 5 years' experience. Hearing Officers may be employees of the Department or work for the Department pursuant to contract.
- 2) The Hearing Officer shall take all necessary action and shall have all powers necessary to render a decision on requests for public hearings and on petitions for participation, to avoid delay, to maintain order, to develop a clear and complete record, and to conduct a fair hearing, including the following:
 - A) To administer oaths and affirmations;
 - B) To receive relevant evidence;
 - C) To regulate the course of the hearing and the conduct of the parties and their counsel;
 - D) To consider and rule upon procedural requests;
 - E) To examine witnesses and direct witnesses to testify, limit the number of times any witness may testify, limit repetitive or cumulative testimony, and set reasonable limits on the amount of time each witness may testify; and
 - F) To require the production of documents or subpoena the appearance of witnesses, either on the Hearing Officer's own motion or for good cause shown on motion of any party of record.

The Hearing Officer may require that relevant documents be provided to any party of record on his or her own motion or for good cause shown on motion of any party of record.

- 3) Ex parte contacts between the parties and the Hearing Officer concerning the merits of a proceeding are prohibited except upon notice and opportunity for all parties to participate. This Section does not prohibit communications concerning case status or advice concerning compliance with procedural requirements unless the area of inquiry is an area of controversy in the proceeding.
- d) Disqualification of Hearing Officer
 - 1) A Hearing Officer, on his or her own motion or that of a party, may be disqualified in a proceeding due to bias or conflict of interest. However, the fact that a Hearing Officer is an employee of or under contract with the Department does not alone serve as a basis for conflict of interest.
 - 2) A motion for disqualification filed pursuant to this Section shall:
 - A) be in writing;
 - B) contain a statement of supporting grounds;
 - C) be filed with the Director and served upon all parties and the Hearing Officer; and
 - D) be filed not less than 2 business days before the scheduled date of the public hearing.
 - 3) Unless the Director orders otherwise, the Hearing Officer and any party to a proceeding in which a motion is filed under this Section may file a response.
 - 4) The Director shall rule on all motions filed pursuant to this Section immediately or as expeditiously as possible. If a motion filed under this Section is granted, the Director shall appoint a new Hearing Officer for the proceeding.
- e) Postponement or Continuance of Hearing

A hearing may be postponed or continued for due cause by the Hearing Officer upon his or her own motion or upon the motion of a party to the hearing. A motion filed by a party to the hearing shall set forth facts justifying the request

and attesting that the request for continuance is not for the purpose of delay. Except in the case of an emergency, motions requesting postponement or continuance shall be made in writing and shall be received by all parties to the hearing at least 2 business days prior to the scheduled hearing date. The Hearing Officer shall grant a motion requesting postponement or continuance only upon the most substantial of grounds and the public hearing is to be rescheduled as quickly as possible, taking into consideration that the Department shall have no more than 60 days from the date it receives the permit application to approve or reject the permit application.

f) Failure to Appear at Hearing

If any party, after making a proper request for public hearing, fails to appear at the hearing, absent an emergency situation beyond the party's control, that party's request for public hearing shall be dismissed. If other proper requests for public hearing remain, the public hearing will proceed with any remaining parties. If the party failing to appear is the applicant, the hearing may proceed, at the election of the requestors, for the testimony, evidence or statements that persons present wish to adduce, but absent an emergency situation beyond the applicant's control, the Department will reject the permit application. If the applicant fails to appear but sends a satisfactory written explanation to the Hearing Officer explaining why emergency circumstances out of the applicant's control existed, and the applicant waives the 60 day deadline set forth in Section 245.230(e), the Hearing Officer shall reschedule the public hearing. In such an event, the applicant shall be responsible for payment of all the costs associated with the first hearing.

g) Conduct of Hearing

- 1) Taking into consideration that the Department shall have no more than 60 days from the date it receives the permit application to approve or reject the permit application, pre-hearing conferences are not expected and will only be scheduled on request of a party if the Hearing Officer determines that good cause is provided to do so and delay of the public hearing will not result. Any pre-hearing conference may be conducted via telephone.
- 2) Taking into consideration that the Department shall have no more than 60 days from the date it receives the permit application to approve or reject the permit application based upon the information required to be supplied with permit applications, requests for hearing and petitions for participation, discovery will only be allowed for good cause shown after a motion is served on all parties, shall be at the discretion of the Hearing Officer, and shall be limited to requests for production of documents and the presence of witnesses at the public hearing. All motions for discovery are required to be made as early as possible, but in no event less than 2

business days before the scheduled date for the public hearing, and in a manner to avoid delay of the public hearing.

- 3) Every person, government agency or county filing a request for hearing or petition to participate at the public hearing shall enter an appearance in writing.
- 4) All parties in the hearing shall have the right to be represented by an attorney. Parties that are individuals do not need to be represented by an attorney. Parties required by Illinois law to be represented by an attorney in the courts of this State must be represented by an attorney at the public hearing.
- 5) The Hearing Officer shall allow all parties to present statements, testimony, evidence and argument as may be relevant to the proceeding.
- 6) The Department shall appear at any hearing held under this Section and shall be given the opportunity to question parties or to provide evidence necessary to reach a decision on the request for hearing or petition to participate. The Department's role shall be to assist in creating a complete and accurate record at the public hearing.
- 7) **Ruling on Participation**
The Hearing Officer shall first determine and rule on whether each request for hearing satisfies the requirements of subsection (a)(5), giving due consideration to the sophistication of the petitioner and whether the petitioner is represented by counsel. If there are also petitions to participate, the Hearing Officer shall determine whether each petition to participate satisfies the requirements of subsection (a)(5). *Notice* provided to any person, government agency, or county pursuant to 245.240 or Section 245.250 *shall not constitute standing for purposes of requesting a public hearing* (Section 1-40(e) of the Act). The Hearing Officer shall base this ruling on the standards set forth in subsection (a)(5). Any Hearing Officer decision denying participation to any party under this subsection (g)(7) shall be a final administrative decision by the Department and subject to judicial review under the Administrative Review Law and rules promulgated under that Law.
- 8) **Preliminary Matters**
After ruling on participation, the following shall be addressed prior to receiving evidence at the discretion of the Hearing Officer:

- A) Parties may offer preliminary exhibits, including documents necessary to present the issues to be heard, notices, proof of the notice of hearing, proof of publication and the application at issue.
 - B) Ruling may be made on any pending motions.
 - C) Any other preliminary matters appropriate for disposition prior to presentation of evidence may be addressed.
- h) Evidence
 - 1) Admissibility

The Illinois Rules of Evidence shall generally apply to these proceedings. However, evidence not admissible under those rules of evidence may be admitted, except when precluded by statute, if it is of a type commonly relied upon by reasonable, prudent persons in the conduct of their affairs. The Hearing Officer shall rule on the admissibility of evidence.
 - 2) Official Notice

Official notice may be taken of any material fact not appearing in evidence in the record if the circuit courts of this State could take judicial notice of that fact. In addition, notice may be taken of generally recognized technical or scientific facts within the Department's specialized knowledge.
 - 3) Case Presentation

The parties requesting the public hearing shall present their case first. If there are parties that petitioned to participate in the hearing, they will then present their case. The Hearing Officer will determine whether the Department or the applicant presents additional evidence and in what order. The Hearing Officer will determine whether to allow rebuttal evidence. All witnesses are subject to cross-examination. The Hearing Officer may allow opening statements and closing arguments.
 - 4) Briefs

The Hearing Officer may require or allow parties to submit written briefs to the Hearing Officer within such time as the Hearing Officer shall determine, taking into consideration that the Department shall have no more than 60 days from the date it receives the permit application to approve or reject the permit application.
- i) Record of Proceedings; Testimony

A complete record of the public hearings and all testimony shall be made by the Department and recorded stenographically or electronically (Section 1-50(c) of the Act). Any person testifying shall be required to do so under oath.

j) Recommended Findings

- 1) After the close of evidence at any public hearing held under this Section, the Hearing Officer shall prepare recommended findings regarding the objections and concerns raised by the parties at the public hearing, and identifying any potential impact on the pending permit application based on the evidence and testimony presented at the hearing.
- 2) The Hearing Officer shall issue and serve on all parties the recommended findings within 7 days after the close of evidence.
- 3) The Department shall take into consideration the recommended findings when making a permit decision consistent with Section 245.300.

SUBPART C: PERMIT DECISIONS

Section 245.300 Permit Decision

- a) *The Department shall have no more than 60 calendar days from the date it receives the permit application to approve, with any conditions the Department may find necessary, or reject the application for the high volume horizontal hydraulic fracturing permit. The applicant may waive, in writing, the 60-day deadline upon its own initiative or in response to a request by the Department. (Section 1-35(i) of the Act)*
- b) *For the purpose of determining whether to issue a permit, the Department shall consider and the Department's record of decision shall include (Section 1-53(b) of the Act):*
 - 1) *the application for the high volume horizontal hydraulic fracturing permit, including all documentation required by Section 245.210 (Section 1-53(b)(1) of the Act);*
 - 2) *all written comments received during the public comment periods and, if applicable, the complete record from the public hearing held under Section 245.270 (Section 1-53(b)(2) of the Act), and specifically including the recommended findings;*
 - 3) *all supplemental information provided by the applicant in response to:*
 - A) *any public comments (Section 1-53(b)(3) of the Act);*
 - B) *recommended findings of the Hearing Officer if a public hearing was held;*
 - C) *the requirements of this Part; and*
 - D) *Department requests for information, including any information required or requested to demonstrate preparation against the risk of earthquake, flood or other natural disaster;*
 - 4) *any information known to the Department as the public entity responsible for regulating high volume horizontal hydraulic fracturing operations and oil and gas operations, including, but not limited to, inspections of the proposed well site as necessary to ensure adequate review of the application (Section 1-53(b)(4) of the Act).*

- c) *The Department shall issue a high volume horizontal hydraulic fracturing permit, with any conditions the Department may find necessary, only if the record of decision demonstrates that* (Section 1-53(a) of the Act):
- 1) *the well site location restrictions of Section 245.400 have been satisfied* (Section 1-53(a)(1) of the Act);
 - 2) *the application meets the requirements of Section 245.210* (Section 1-53(a)(2) of the Act);
 - 3) *the plans required to be submitted with the application under Section 245.210 are adequate and effective* (Section 1-53(a)(3) of the Act) to comply with the Act, this Part, the Illinois Oil and Gas Act, and the administrative rules promulgated under that Act;
 - 4) *the high volume horizontal hydraulic fracturing operations will be conducted in a manner that will protect the public health, public safety, property, wildlife, aquatic life and environment, and will prevent pollution or diminution of any water source* (Section 1-53(a)(4) of the Act);
 - 5) *the water quality monitoring work plan required under Section 245.600 has been submitted to and approved by the Department* (Section 1-53(a)(5) of the Act);
 - 6) *the applicant or any parent, subsidiary, or affiliate of the applicant has not failed to abate a violation of the Act, this Part, the Illinois Oil and Gas Act* (Section 1-53(a)(6) of the Act), or the administrative rules promulgated under that Act specified in a final administrative decision of the Department or any court decisions related to that decision;
 - 7) *the Class II injection wells to be used for disposal of hydraulic fracturing flowback comply with all applicable requirements for internal and external mechanical integrity testing as required in 62 Ill. Adm. Code 240.760 and 240.770, including that the well has been tested within the previous 5 years.* (Section 1-53(a)(7) of the Act) The Class II injection wells to be used for disposal of hydraulic fracturing flowback must be shown to be in compliance with 62 Ill. Adm. Code 240.360 at the time of the issuance of the high volume horizontal hydraulic fracturing permit;
 - 8) *there is no good cause to deny the permit under Section 245.310* (Section 1-53(a)(8) of the Act); and

- 9) The registration and permitting procedures set forth in Subpart B have been satisfied.
- d) *The Department shall, by U.S. Mail and electronic transmission, provide the applicant with a copy of the high volume horizontal hydraulic fracturing permit as issued or its final administrative decision denying the permit to the applicant and shall, by U.S. Mail or electronic transmission, provide a copy of the permit as issued or the final administrative decision denying the permit to any person or unit of local government who received specific public notice under Section 245.240 or 245.250 or participated in any public hearing under Section 245.270. (Section 1-53(c) of the Act)*
- e) *The Department's decision to approve or deny a high volume horizontal hydraulic fracturing permit shall be considered a final administrative decision subject to judicial review under the Administrative Review Law [735 ILCS 5/Art. III] and the rules adopted under that Law (Section 1-53(d) of the Act).*
- f) *Following completion of the Department's review process, the Department's website shall indicate whether an individual high volume horizontal hydraulic fracturing permit was approved or denied and provide a copy of the approval or denial (Section 1-53(e) of the Act).*
- g) *The complete administrative record of the permit decision shall be maintained and shall be accessible to the public on the Department's website until final release of the applicant's bond pursuant to Section 245.220(d) (Section 1-50(c) of the Act).*

Section 245.310 Permit Denial

In addition to failing to meet the requirements of Section 245.300(c)(1) through (c)(7), *the Department may also refuse to issue a high volume horizontal hydraulic fracturing permit for one or more of the following causes* (Section 1-60(a) of the Act):

- a) *providing incorrect, misleading, incomplete, or materially untrue information in a permit application or any document required to be filed with the Department during the permit application process* (Section 1-60(a)(1) of the Act);
- b) *using fraudulent, coercive, or dishonest practices, or demonstrating incompetence, untrustworthiness, or financial irresponsibility in the conduct of business in this State or elsewhere* (Section 1-60(a)(4) of the Act);
- c) *having a high volume horizontal hydraulic fracturing permit, or its equivalent, revoked in any other state, province, district, or territory for incurring a material or major violation or using fraudulent or dishonest practices* (Section 1-60(a)(5) of the Act); or
- d) *an emergency condition exists under which conduct of the high volume horizontal hydraulic fracturing operations would pose a significant hazard to public health, public safety, property, aquatic life, wildlife, or the environment* (Section 1-60(a)(6) of the Act).

Section 245.320 Permit Conditions

- a) *Each permit issued by the Department shall require the permittee to comply with all provisions of the Act, this Part, the Illinois Oil and Gas Act, the administrative rules promulgated under that Act, and all other applicable local, State, and federal laws, rules, and regulations in effect at the time the permit is issued (Section 1-55(a) of the Act).*
- b) *The permit application and all plans, maps, and diagrams submitted with the application shall be incorporated into and be conditions of the permit (Section 1-55(a) of the Act).*
- c) *The Department shall include any additional terms or conditions on the permit that, based on its review of the permit application, the Department determines to be necessary to ensure the goals and requirements of the Act and this Part.*
- d) *A permit, and all conditions to the permit, issued under this Part shall last until plugging and restoration in compliance with this Part, the Act, the Illinois Oil and Gas Act, and the administrative rules promulgated under that Act are completed to the Department's satisfaction (Section 1-55(b) of the Act).*
- e) *The permittee shall also be responsible for adjusting to field conditions as necessary during well drilling and construction (see Subpart F), HVHHF operations, and hydraulic fracturing flowback periods (see Subpart H), to ensure protection of public health, public safety, property, wildlife, aquatic life, and the environment as long as the actions are adequate and effective to comply with the Act, this Part, the Illinois Oil and Gas Act, and the administrative rules promulgated under that Act. The actions shall be reported to the Department's District Office within 72 hours for the Department's determination whether the actions require the filing of an application for permit modification pursuant to Section 245.330.*
- f) *A permit and all conditions thereto shall continue in full force and effect until the permit is released by the Department pursuant to Section 245.350.*

Section 245.330 Permit Modifications

- a) Except for the actions allowed pursuant to Section 245.320(e), actions that materially deviate from the original permit require the permit to be modified prior to being conducted. *No permit issued under this Part may be modified without approval of the Department pursuant to this Section (Section 1-55(c) of the Act).*
- b) Applications for permit modification shall be made on a Department permit application form and shall specifically identify the applicant, the well, and each proposed deviation to the original permit.
 - 1) Sections of a permit modification application that do not affect or change terms or conditions of, or information on, the original permit are not required to be completed, other than that information necessary to identify the applicant, operator, well site and well. All sections of a permit modification application that are not completed will be considered to incorporate the original permit (and original permit application) as the content of the permit modification application for those sections.
 - 2) *Each permit modification application submitted under this Part shall be signed, under the penalty of perjury, by the applicant or the applicant's designee who has been vested with the authority to act on behalf of the applicant and has direct knowledge of the information contained in the permit modification application and its attachments. Any person signing a permit modification application shall also sign an affidavit with the following certification:*

"I certify, under penalty of perjury as provided by law and under penalty of refusal, suspension, or revocation of a high volume horizontal hydraulic fracturing permit, that this application and all attachments are true, accurate, and complete to the best of my knowledge." (Section 1-35(f) of the Act)
- c) The permit modification application for a significant deviation shall be accompanied by a non-refundable fee of \$13,500 as set forth in Section 245.210, and shall be reviewed and approved or rejected with all the opportunities for notice, comment and hearing required under Sections 1-45 and 1-50 of the Act and Sections 245.240 through 245.270 of this Part as if it were a completely new permit application under the permit application procedures set forth in this Part. The applicant shall confer with the Department prior to filing the application for

modification so as to coordinate scheduling. Examples of permit modifications that are considered significant deviations are those that propose to:

- 1) move the horizontal well bore more than 50 feet in any direction or extend or add to any dimension of the horizontal well bore;
 - 2) add a new horizontal well bore or bores;
 - 3) make any change such that any person or entity who did not receive specific notice of the original application would receive notice if the proposed modification application were a new permit application;
 - 4) materially alter any part of any plan submitted to the Department with the original application, including but not limited to:
 - A) moving the vertical part of the well more than 50 feet;
 - B) substantially moving, extending or adding to the well site;
 - C) any material alteration of plans for containment or storage, transportation of materials (including produced hydrocarbons) to or from the well site, or management of emissions if the alteration results in an increase in emissions, venting or flaring; or
 - 5) request relief from any condition imposed upon or attached to the original permit.
- d) *If the Department, after receipt of an application for modification, determines that a permit modification presents a possible serious risk to public safety, public health, life, property, aquatic life, wildlife, or the environment (Section 1-55(c) of the Act), and the application is not already being treated as one for modification representing a significant deviation, the Department shall inform the applicant. The applicant, if it wishes to proceed with the application for modification, shall pay a non-refundable fee totaling \$13,500 (after credit for any payment for insignificant modification already tendered) as set forth in Section 245.210. The application shall be reviewed and approved or rejected with all the opportunities for notice, comment and hearing required under Sections 1-45 and 1-50 of the Act and Sections 245.240 through 245.270 of this Part as if it were a completely new permit application under the permit application procedures set forth in this Part. The applicant shall confer with the Department after notification of this procedure so as to coordinate scheduling.*

- e) All other permit modification applications may be filed as an insignificant permit deviation and accompanied by a non-refundable \$5,000 permit modification fee. However, the Department has the discretion to determine that the permit modification is a significant deviation based on the content of the application. The permit modification application for insignificant permit deviation shall be reviewed and approved or rejected under the following procedures:
- 1) The Department's record of decision shall include the original permit record of decision, information provided by the application for permit modification pursuant to subsection (b), and any other additional information provided by the permittee in response to requests by the Department. The Department shall provide a copy of the modification application to any of the entities entitled to receive notice in Section 245.240 (the Agency, the Office of the State Fire Marshal, Illinois State Water Survey, and Illinois State Geological Survey) if it proposes to modify a plan they received under Section 245.240.
 - 2) The Department shall approve or reject the proposed insignificant permit modifications within 30 days after receipt of the permit modification application based on the requirements of Section 245.300(c). The Department's decision to approve or reject the proposed insignificant permit modifications shall be considered a final administrative decision subject to judicial review under the Administrative Review Law and the rules adopted under that Law.
 - 3) Approval of an insignificant permit modification shall result in a modified permit that shall be considered a permit under this Part and, therefore, subject to all conditions and requirements for permits under the Act and this Part.
 - 4) The Department shall, by U.S. Mail and electronic transmission, provide the applicant with a copy of the modified permit as issued or its final administrative decision rejecting the modification request.
 - 5) The applicant shall, by U.S. Mail or electronic transmission, provide a copy of the modified permit as issued to any person or unit of local government who received specific public notice under Section 245.250 or participated in any public hearing under Section 245.270 for the original permit or any significant modifications of that permit. The applicant shall notify the Department within 30 days after receipt of the modified permit that it has complied with this subsection (e)(5).

- 6) Following completion of the Department's review and approval process, the Department's website shall indicate whether an individual high volume horizontal hydraulic fracturing permit modification was approved or denied and provide a copy of the approval or denial.
 - 7) The complete record shall be maintained and shall be accessible to the public on the Department's website at least until final release of the applicant's bond.
- f) If the Department determines that an application for an insignificant deviation in subsection (e) is a significant deviation based on the content of the application, the Department shall notify the applicant and the applicant shall be required to increase the non-refundable application fee to \$13,500 as set forth in Section 245.210. Once the full application fee is received, the permit modification application shall be reviewed and approved or rejected as if it were a completely new permit application under the permit application procedures set forth in this Part.

Section 245.340 Permit Transfers

- a) *No permit may be transferred to another person without approval of the Department* (Section 1-55(b) of the Act).
- b) A request for permit transfer shall be made on a Department form and be signed by the current permittee and the proposed new permittee or by individuals authorized to sign for them.
- c) Each request for permit transfer shall include a \$2,000 non-refundable fee. The check shall be made payable to the Department.
- d) The Department shall approve a permit transfer, with any conditions the Department may find necessary, only if:
 - 1) the proposed new permittee certifies that its registration information provided pursuant to Section 245.200 is accurate and up to date;
 - 2) the permit for the well issued pursuant to the Illinois Oil and Gas Act is approved for transfer to the proposed new permittee under the requirements for permit transfers under the Illinois Oil and Gas Act administrative rules;
 - 3) the proposed new permittee provides proof of insurance that it is insured *to cover injuries, damages or loss related to pollution in the amount of at least \$5,000,000* (Section 1-35(b)(19) of the Act);
 - 4) there is no good cause to deny the permit transfer under Section 245.310;
 - 5) the request for permit transfer is accompanied by a bond as required by Section 245.220; and
 - 6) there are no outstanding unabated violations by either the current or proposed new permittee of this Part, the Act, the Illinois Oil and Gas Act, or the administrative rules promulgated under that Act, as specified in a final administrative decision by the Department.
- e) The Department shall approve or deny a request for permit transfer in writing within 30 days after receiving the request for permit transfer.
 - 1) If the request for permit transfer is approved, the current permittee shall transfer a copy of the well file to the new permittee, the new permittee will

be the permittee of record for the permit, and the bond of the current permittee will be released by the Department pursuant to Section 245.220(d).

- 2) If the request for permit transfer is denied, then the current permittee will continue to be the permittee of record for the permit.
- f) A current or proposed new permittee may request a hearing to challenge the Department's decision if a hearing is requested in writing within 30 days after the date of the transfer or denial notice. All requests for hearing shall be mailed to the Department at Illinois Department of Natural Resources, Attention: Office of Oil and Gas Resource Management, One Natural Resources Way, Springfield IL 62702. All requests for hearing must be accompanied by documents evidencing the basis for objection. If no hearing is requested in this time period, the permit transfer decision shall be a final administrative decision of the Department. If a hearing is requested by the current or new permittee:
- 1) A pre-hearing conference may be held within 60 days after the receipt of the request for hearing.
 - A) A pre-hearing conference shall be scheduled in order to:
 - i) Simplify the factual and legal issues presented by the hearing request;
 - ii) Receive stipulations and admissions of fact and of the contents and authenticity of documents;
 - iii) Exchange lists of witnesses the parties intend to have testify and copies of all documents the parties intend to introduce into evidence at the hearing;
 - iv) Set a hearing date; and
 - v) Discuss and resolve such other matters as may tend to expedite the disposition of the hearing request and to assure a just conclusion.
 - B) Pre-hearing conferences may be held by telephone conference if that procedure is acceptable to all parties.

- 2) All hearings under this Section shall be conducted by a Hearing Officer and shall be held in the Department's offices located in Springfield, Illinois.
- 3) At the permit transfer hearing, the Department shall present evidence in support of its determination under subsection (e). Both the current and the new permittee may present evidence contesting the Department's determination under subsection (e). The Hearing Officer may administer oaths and affirmations, subpoena witnesses and written or printed materials, compel attendance of witnesses or production of those materials, compel discovery, and take evidence.
- 4) Within 30 days after the close of the record for the permit transfer hearing, the Hearing Officer shall issue findings of fact, conclusions of law and recommendations as to the disposition of the case.
- 5) The Director or his or her designee shall review the administrative record in conjunction with the Hearing Officer's findings of fact, conclusions of law and recommendations as to the disposition of the case. The Director or designee shall then issue the Department's final administrative decision affirming, vacating or modifying the Hearing Officer's decision, which shall be subject to judicial review under the Administrative Review Law and the rules adopted under that Law.
- 6) Failure to request a hearing in accordance with this subsection (f) shall constitute a waiver of all legal rights to contest the permit transfer decision.

Section 245.350 Permit Release

A permit issued under this Part shall be released by the Department upon the Department's satisfaction that the plugging of the well and restoration of the well site is completed in compliance with the permittee's Plugging and Restoration Plan pursuant to Sections 245.210(a)(18) and 245.1030, the Act, the Illinois Oil and Gas Act, and the administrative rules promulgated under that Act. (Section 1-55(b) of the Act).

Section 245.360 Judicial Review

All final administrative decisions, including issuance or denial of a permit, made by the Department under this Part are subject to judicial review under the Administrative Review Law and rules adopted under that Law (Section 1-125 of the Act).

SUBPART D: WELL SITE PREPARATION

Section 245.400 Setback Requirements

- a) *Except as otherwise provided in this Section, no well site may be located as follows (Section 1-25(a) of the Act):*
- 1) *within 500 feet measured horizontally from any residence or place of worship unless the landowner of the residence or the governing body of the place of worship otherwise expressly agrees in writing to a closer well site location (Section 1-25(a)(1) of the Act). This agreement shall be signed and dated by the landowner of the residence or an authorized representative of the governing body of the place of worship. A copy of the agreement shall be submitted to the Department as part of the permit application;*
 - 2) *within 500 feet measured horizontally from the edge of the property line from any school, hospital, or licensed nursing home facility (Section 1-25(a)(2) of the Act);*
 - 3) *within 500 feet measured horizontally from the surface location of any existing water well or developed spring used for human or domestic animal consumption, unless the landowner or landowners of the well or developed spring otherwise expressly agrees or agree in writing to a closer well site location (Section 1-25(a)(3) of the Act). This agreement shall be signed and dated by the landowner. A copy of the agreement shall be submitted to the Department as part of the permit application;*
 - 4) *within 300 feet measured horizontally from the center of a perennial stream or from the ordinary high water mark of any river, natural or artificial lake, pond, or reservoir (Section 1-25(a)(4) of the Act), unless the landowner of a water source that is wholly contained within the landowner's property expressly, in writing, waives the setback requirements and agrees to a closer well site location (Section 1-25(b) of the Act). This agreement shall be signed and dated by the landowner. A copy of the agreement shall be submitted to the Department as part of the permit application.*
 - 5) *within 750 feet of a nature preserve or a site on the Register of Land and Water Reserves (Section 1-25(a)(5) of the Act); or*

- 6) *within 1,500 feet of a surface water or groundwater intake of a public water supply; the distance from the public water supply as identified by the Department shall be measured as follows (Section 1-25(a)(6) of the Act):*
- A) *For a surface water intake on a lake or reservoir, the distance shall be measured from the intake point on the lake or reservoir (Section 1-25(a)(6)(A) of the Act).*
 - B) *For a surface water intake on a flowing stream, the distance shall be measured from a semicircular radius extending upstream of the surface water intake (Section 1-25(a)(6)(B) of the Act).*
 - C) *For a groundwater source, the distance shall be measured from the surface location of the groundwater wellhead or the ordinary high water mark of the spring. The distance restrictions under this subsection (a) shall be determined as conditions exist at the time of the submission of the permit application pursuant to Section 245.210 (Section 1-25(a)(6)(C) of the Act).*
- b) *Unless specified otherwise, all distances shall be measured to the closest edge of the well site. (Section 1-25(a) of the Act)*

Section 245.410 Access Roads, Public Roads and Topsoil Conditions

- a) *The access road to the well site must be located in accordance with access rights either obtained by agreement with the surface landowner or pursuant to the Drilling Operations Act [765 ILCS 530] and located as far as practical from occupied structures, places of assembly, and property lines of unleased property (Section 1-70(b)(1) of the Act).*
- b) *The improvement, construction, or repair of a publicly owned highway or roadway, if undertaken by the owner, operator, permittee, or any other private entity, shall be performed using bidding procedures outlined in the Illinois Department of Transportation rules governing local roads and streets or applicable bidding requirements outlined in the Illinois Procurement Code [30 ILCS 500] as though the project were publicly funded (Section 1-70(b)(4) of the Act).*
- c) *Permittees shall employ practices for control of fugitive dust related to their operations. These practices shall include, but are not limited to, the use of speed restrictions, regular road maintenance, and restriction of construction activity during high-wind days. Additional management practices such as road surfacing, wind breaks and barriers, or automation of wells to reduce truck traffic may also be required by the Department, in consultation with the Agency as the Department deems appropriate, if technologically feasible and economically reasonable to minimize fugitive dust emissions. (Section 1-75(e)(10) of the Act)*
- d) *Unless otherwise approved or directed by the Department, all topsoil and subsoil stripped to facilitate the construction of the well pad, well site, and access roads must be stockpiled, stabilized to prevent erosion, and remain on site. Topsoil is the uppermost layer of soil with the darkest color or the highest content of organic matter. The topsoil shall be segregated from the subsoil. All soils shall remain on site for use in either partial or final restoration and reclamation pursuant to Subpart J. In the event it is anticipated that the final reclamation shall take place in excess of one year from drilling the well, the topsoil may be disposed of in any lawful manner provided the permittee reclaims the site with topsoil of similar characteristics of the topsoil removed. (Section 1-70(b)(2) of the Act)*

SUBPART E: WELL CONSTRUCTION

Section 245.500 General Conditions and Requirements

- a) *All wells shall be constructed, and casing and cementing activities shall be conducted, in a manner that shall provide for control of the well at all times, prevent the migration of oil, gas, and other fluids into the fresh water and coal seams, and prevent pollution or diminution of fresh water. (Section 1-70(d) of the Act)*
- b) *At any time, the Department, as it deems necessary, may require construction activities in addition to those required by this Part, including but not limited to, the installation of an additional cemented casing string or strings in the well. (Section 1-70(d)(15) of the Act)*

Section 245.510 Well Drilling, Storage and Disposal of Drilling Waste

Drill cuttings, drilling fluids and drilling wastes must be stored and disposed of pursuant to the requirements of this Section and the requirements of the rules promulgated under the Illinois Oil and Gas Act when not in conflict with this Section.

- a) *Drill cuttings, drilling fluids, and drilling wastes not containing oil-based mud or polymer-based mud may be stored in tanks or pits* (Section 1-75(c)(11) of the Act).
- b) *Pits used to store drill cuttings, drilling fluids, and drilling wastes from wells not using fresh water mud shall be subject to the construction standards identified in Section 245.830 (Reserve Pits)* (Section 1-75(c)(11) of the Act).
- c) *Drill cuttings not contaminated with oil-based mud or polymer-based mud may be disposed of on property subject to the written approval of the Department and the surface landowner* (Section 1-75(c)(11) of the Act).
- d) *Drill cuttings contaminated with oil-based mud or polymer-based mud shall be disposed of in an Agency permitted special waste landfill or other offsite location in accordance with applicable law.* (Section 1-75(c)(11) of the Act). (See 62 Ill. Adm. Code 240.540(a).)
- e) *Disposal of drill cuttings or fluid down the annulus of any well is prohibited* (Section 1-75(c)(11) of the Act).
- f) Anything in subsections (a) through (e) notwithstanding, the drilling fluid, drilling cuttings and drilling waste from any black shale zones shall be tested for radioactivity, and if above the levels identified in this Part, disposed of in accordance with the radioactive materials management strategy set forth in Section 245.210(b)(7). Drilling fluid, drilling cuttings and drilling waste from any black shale zones that test positive for levels of radioactive contamination shall not be stored in open pits.

Section 245.520 Cement Requirements

All cementing activities for well construction shall meet the requirements of this Section.

- a) *Cement must conform to the industry standards set forth in the document referenced in Section 245.115(a)(1). (Section 1-70(d)(4) of the Act)*
- b) *Cement slurry must be prepared to minimize its free water content in accordance with the industry standards set forth in the document referenced in Section 245.115(a)(1). (Section 1-70(d)(4) of the Act)*
- c) Cement activities shall be designed and constructed in a manner to:
 - 1) *secure the casing in the wellbore (Section 1-70(d)(4)(A) of the Act);*
 - 2) *isolate and protect fresh groundwater (Section 1-70(d)(4)(B) of the Act);*
 - 3) *isolate abnormally pressured zones, lost circulation zones, and any potential flow zones, including hydrocarbon and fluid-bearing zones (Section 1-70(d)(4)(C) of the Act);*
 - 4) *properly control formation pressure and any pressure from drilling, completion and production (Section 1-70(d)(4)(D) of the Act);*
 - 5) *protect the casing from corrosion and degradation (Section 1-70(d)(4)(E) of the Act); and*
 - 6) *prevent gas flow in the annulus (Section 1-70(d)(4)(F) of the Act).*
- d) *For all cementing activities, the cement must be pumped at a rate and in a flow regime that inhibits channeling of the cement in the annulus (Section 1-70(d)(7) of the Act).*
- e) *Cement must be placed behind all surface, intermediate and production casing pursuant to the requirements of Sections 245.530, 245.560 and 245.570, respectively.*
- f) *After the cement is placed behind the casing, the permittee shall wait on cement to set until the cement achieves a calculated compressive strength of at least 500 pounds per square inch, and a minimum of 8 hours before the casing is disturbed in any way, including installation of a blowout preventer (Section 1-70(d)(8) of the Act).*

- g) *Cement compressive strength tests must be performed on all cemented surface, intermediate, and production casing strings in accordance with the industry standards set forth in the document referenced in Section 245.115(a)(1):*
 - 1) *the cement shall have a 72-hour compressive strength of at least 1,200 psi; and*
 - 2) *the free water separation shall be no more than 6 milliliters per 250 milliliters of cement. (Section 1-70(d)(8) of the Act)*
- h) Cement job logs must be kept for all cementing activities pursuant to the following requirements:
 - 1) Cement job logs shall provide information about the cementing activities as specified on a form to be prescribed by the Department, including, but not limited to:
 - A) dates of cementing;
 - B) source of the cement;
 - C) type of cement; and
 - D) amount used;
 - 2) *A copy of the cement job logs and cement compressive strength test results for all cemented surface, intermediate, and production casing strings in the well shall be maintained in the well file and, upon notice by the Department, be made available to Department inspectors at the well site during drilling and HVHHF operations and shall be made available to the Department upon request (Section 1-70(d)(9) of the Act);*
 - 3) Permittee shall provide the Department with a copy of all cement job logs and cement compressive strength test results 30 days after completion of cementing activities; and
 - 4) Permittee shall retain these records for the life of the well until the well is plugged, abandoned and restored in accordance with the Illinois Oil and Gas Act, the administrative rules promulgated under that Act, and Subpart J of this Part.

Section 245.530 Surface Casing Requirements

Surface casing shall be used in the construction of all wells regulated by this Part and shall be set and cemented pursuant to the requirements of this Section.

- a) *Surface casing shall be used and set to a depth of at least 200 feet, or 100 feet below the base of the deepest fresh water, whichever is deeper. Surface casing must stop before reaching any hydrocarbon-bearing zones. (Section 1-70(d)(10) of the Act) If the surface casing does not protect all of the fresh water, intermediate casing shall be required.*
- b) *Surface casing must be made of steel and conform to the industry standards set forth in the document referenced in Section 245.115(a)(2). Additionally, the use of surface casing in the well construction must be in a manner consistent with the industry standards set forth in the document referenced in Section 245.115(a)(2). (Section 1-70(d)(1) of the Act)*
- c) *Casing thread compound must conform to and meet all manufacturing and material requirements of the industry standards set forth in the document referenced in Section 245.115(a)(3) (Section 1-70(d)(2) of the Act). Additionally, the uses of casing thread compound in the well construction must be in a manner consistent with the industry standards set forth in the document referenced in Section 245.115(a)(3).*
- d) *The borehole must be circulated and conditioned before surface casing setting and cementing to ensure an adequate cement bond (Section 1-70(d)(5) of the Act).*
- e) The permittee shall notify the Department's District Office by phone and electronic mail *at least 24 hours* (Section 1-70(d)(11) of the Act) before setting and cementing surface casing to enable an inspector to be present.
- f) When setting surface casing, centralizers are required to be used as follows to keep the casing in the center of the wellbore before and during cement operations:
 - 1) A centralizer shall be placed at the bottom of the surface casing string or shoe;
 - 2) Centralizers shall be placed *above and below a stage collar or diverting tool, if run;*
 - 3) Centralizers shall be placed *through usable-quality water zones;*

- 4) Centralizers shall be placed on *every fourth joint from the cement shoe to the ground surface or to the bottom of the cellar*;
- 5) *The Department may require additional centralization as necessary to ensure the integrity of the well design is adequate; and*
- 6) *All centralizers must conform to and shall meet specifications in, or equivalent to, the industry standards set forth in the documents referenced in Section 245.115(a)(4) through (a)(6).*
- g) *A pre-flush or spacer must be pumped ahead of the cement.* (Section 1-70(d)(6) of the Act)
- h) Surface casing cement must:
 - 1) be Class A cement or, alternatively, if the applicant requests before the pour in writing with sufficient proof of need as determined by the Department, and the Department approves the use in writing before the pour, Class B Cement. Class A and Class B cement means Class A and Class B cement as described in the document incorporated by reference in Section 245.115(a)(1);
 - 2) meet the cement requirements of Section 245.520(a) and (b), including but not limited to being poured with the ratio of water to cement mix and density desired in the document incorporated by reference in Section 245.115(a)(1); and
 - 3) be applied behind the casing according to the requirements of Section 245.520(c) and (d).
- i) *Surface casing must be fully cemented to the surface with excess cements. Cementing must be by the pump and plug method with a minimum of 25% excess cement with appropriate lost circulation material, unless another amount of excess cement is approved by the Department. If cement returns are not observed at the surface, the permittee must perform remedial actions as appropriate.* (Section 1-70(d)(11) of the Act)
- j) *After the cement is placed behind the surface casing* (Section 1-70(d)(8) of the Act), the cement must be tested (compressive strength test) and cement job logs maintained pursuant to the requirements of Section 245.520(f) through (h).

- k) *After the surface casing cement operation is completed to the surface, the permittee shall notify the Department's District Office by phone and electronic mail to enable an inspector to be present for the following:*
- 1) testing the internal mechanical integrity of the surface casing pursuant to Section 245.540; and
 - 2) installation and testing of the blowout prevention equipment pursuant to Section 245.550.

Section 245.540 Establishment of Internal Mechanical Integrity

An internal mechanical integrity test shall be performed on each cemented casing string after installation for all wells regulated by this Part.

- a) *The permittee shall contact the Department's District Office by phone and electronic mail at least 24 hours before conducting an internal mechanical integrity pressure test to enable an inspector to be present when the test is performed (Section 1-70(d)(16) of the Act).*
- b) Mechanical Integrity
 - 1) *The internal mechanical integrity of surface and intermediate casing strings shall be tested:*
 - A) *with fresh water, mud or brine. If mud is used, the mud cannot be so viscous or contain so much particulate that it blocks, plugs or obscures the presence of any potential leaks in the casing string;*
 - B) *to no less than 0.22 psi per foot of casing string length or 1,500 psi, whichever is greater, but not to exceed 70% of the minimum internal yield; and*
 - C) *for at least 30 minutes with less than a 5% pressure loss.*
 - 2) *If the pressure declines more than 5% or if there are other indications of a leak, corrective action shall be taken before conducting further drilling operations. (Section 1-70(d)(16) of the Act)*
- c) *The internal mechanical integrity of the production casing string or any casing string that will have pressure exerted on it during stimulation of the well shall be tested:*
 - 1) *with fresh water, mud or brine. If mud is used, the mud cannot be so viscous or contain so much particulate that it blocks, plugs or obscures the presence of any potential leaks in the casing string;*
 - 2) *to at least the maximum anticipated treatment pressure or 1,500 psi, whichever is greater, but not to exceed 70% of the minimum internal yield;*
 - 3) *for at least 30 minutes with less than a 5% pressure loss; and*

- 4) *if the pressure declines more than 5% or if there are other indications of a leak, corrective action shall be taken before conducting further drilling operations.* (Section 1-70(d)(16) of the Act)
- d) Records of internal mechanical integrity pressure tests for all casing strings must be kept pursuant to the following requirements:
 - 1) *A record of the internal mechanical integrity pressure test for each casing string must be maintained by the permittee in the well file and must be submitted to the Department on a form prescribed by the Department before conducting high volume horizontal hydraulic fracturing operations* (Section 1-70(d)(16) of the Act).
 - 2) Permittee shall provide the Department with a copy of all internal mechanical integrity pressure test results for all casing strings within 30 days after completion of well construction; and
 - 3) Permittee shall retain these records for the life of the well until the well is plugged, abandoned and restored in accordance with the Illinois Oil and Gas Act, the administrative rules promulgated under that Act, and Subpart J of this Part.

Section 245.550 Installation and Testing of Blowout Prevention Equipment

After the surface casing has been set and cemented pursuant to Section 245.530, *the permittee shall install and test blowout prevention equipment* pursuant to the requirements of this Section (Section 1-70(e)(1) of the Act).

- a) The permittee shall contact the Department's District Office by phone and electronic mail at least 24 hours before conducting pressure tests on the blowout prevention equipment to enable an inspector to be present when the tests are performed.
- b) The permittee or permittee's designated representative shall be present at the well site *when the blowout preventer is installed, tested, and in use.*
 - 1) *That person or personnel shall have a current well control certification from an accredited training program that is acceptable to the Department; and*
 - 2) *The certification shall be available at the well site and provided to the Department upon request.* (Section 1-70(e)(3) of the Act)
- c) *The permittee shall install all blowout prevention equipment using pipe fittings, valves, and unions placed on or connected to the blow-out prevention systems that have a working pressure capability that exceeds the anticipated pressures.* (Section 1-70(e)(2) of the Act)
- d) *A remote blowout preventer actuator that is powered by a source other than rig hydraulics shall be located at least 50 feet from the wellhead and have an appropriate rated working pressure* (Section 1-70(e)(6) of the Act).
- e) *Pressure testing of all pressure control equipment, including the blowout preventer and related equipment for any drilling or completion operation must be performed.*
 - 1) *Testing must be conducted in accordance with the industry standards set forth in the document referenced in Section 245.115(a)(7). A record of the pressure tests must be made on a form prescribed by the Department.*
 - 2) *Testing of the blowout preventer shall include testing after the blowout preventer is installed on the well but prior to drilling below the last cemented casing seat.*

- 3) *Pressure control equipment, including the blowout preventer, that fails any pressure test shall not be used until it is repaired, or replaced, and passes the pressure test.* (Section 1-70(e)(5) of the Act)
- 4) Records of all pressure tests and repair work on blowout prevention equipment shall be maintained by the permittee in the well file at the well site and made available to the Department upon request.
- f) After installation and testing, the blowout prevention equipment must be in use *during all drilling and completion operations* and shall be maintained *in good working condition at all times* (Section 1-70(e)(1) and (3) of the Act).
- g) *Appropriate pressure control procedures* must be properly employed and *equipment* must be installed and maintained *in proper working order while conducting drilling and completion operations, including tripping, logging, running casing into the well, and drilling out solid-core stage plugs* (Section 1-70(e)(4) of the Act).

Section 245.560 Intermediate Casing Requirements

When intermediate casing is required by subsection (a), intermediate casing used in the construction of wells must be set and cemented pursuant to the requirements of subsections (b) through (m). *Intermediate casing used to isolate fresh water must not be used as the production string in the well in which it is installed, and may not be perforated for purposes of conducting a hydraulic fracture treatment through it.*

- a) Cemented intermediate casing must be installed under the following conditions:
 - 1) *when necessary to isolate fresh water not isolated by surface casing; or*
 - 2) *to seal off potential flow zones, anomalous pressure zones, lost circulation zones and other drilling hazards. (Section 1-70(d)(12) of the Act)*
- b) Intermediate casing shall be set and cemented to one of the standards below:
 - 1) *When intermediate casing is installed to protect fresh water, the permittee shall set a full string of new intermediate casing at least 100 feet below the base of the deepest fresh water and bring cement to the surface;*
 - 2) *In instances in which intermediate casing was set solely to protect fresh water encountered below the surface casing shoe, and cementing to the surface is technically infeasible, would result in lost circulation, or both, cement must be brought to a minimum of 600 feet above the shallowest fresh water zone encountered below the surface casing shoe or to the surface if the fresh water zone is less than 600 feet from the surface;*
 - 3) *In the case that intermediate casing was set for a reason other than to protect fresh water, the intermediate casing string shall be cemented from the shoe to a point at least 600 true vertical feet above the shoe; or*
 - 4) *If there is a hydrocarbon bearing zone that is capable of producing and that is exposed above the intermediate casing shoe, then the casing shall be cemented from the shoe:*
 - A) *to a point at least 600 true vertical feet above the shallowest hydrocarbon bearing zone; or*
 - B) *to a point at least 200 feet above the shoe of the next shallower casing string that was set and cemented in the well; or*

- C) *to the surface if less than 200 feet.* (Section 1-70(d)(12) of the Act)
- c) *The location and depths of any hydrocarbon-bearing zones or fresh water zones requiring intermediate casing or that are open to the wellbore above the casing shoe must be confirmed by coring, electric logs, or testing and must be reported to the Department.* (Section 1-70(d)(12) of the Act)
- d) Intermediate casing must conform to the industry standards set forth in the document referenced in Section 245.115(a)(2). Additionally, the use of intermediate casing in the well construction must be in a manner consistent with the industry standards set forth in the document referenced in Section 245.115(a)(2).
- e) *Casing thread compound must conform to* and meet all manufacturing and material requirements of the industry standards set forth in the document referenced in Section 245.115(a)(3) (Section 1-70(d)(2) of the Act). Additionally, the uses of casing thread compound in the well construction must be in a manner consistent with the industry standards set forth in the document referenced in Section 245.115(a)(3).
- f) *The borehole must be circulated and conditioned before intermediate casing setting and cementing to ensure an adequate cement bond* (Section 1-70(d)(5) of the Act).
- g) The permittee shall notify the Department's District Office by phone and electronic mail at least 24 hours before setting and cementing intermediate casing cementing operations to enable an inspector to be present.
- h) When setting intermediate casing in non-deviated holes, centralizers are required to be used as follows to keep the casing in the center of the wellbore before and during cementing operations:
- 1) *Centralizers shall be placed on every fourth joint from the cement shoe to the ground surface or to the bottom of the cellar;*
 - 2) *The Department may require additional centralizers as necessary to ensure the integrity of the well design; and*
 - 3) *All centralizers must conform to and shall meet specifications in, or equivalent to, the industry standards set forth in the documents referenced in Section 245.115(a)(4) through (a)(6).* (Section 1-70(d)(3) of the Act)

- i) *A pre-flush or spacer must be pumped ahead of the cement* (Section 1-70(d)(6) of the Act).
- j) Intermediate casing cement must:
 - 1) meet the cement requirements of Section 245.520(a) and (b); and
 - 2) be applied behind the casing according to the requirements of Section 245.520(c) and (d).
- k) A radial cement bond evaluation log, or other evaluation approved by the Department, such as, but not limited to, temperature surveys, must be run to verify the cement bond on the intermediate casing. Remedial cementing is required if the cement bond is not adequate for drilling ahead. (Section 1-70(d)(13) of the Act)
- l) The cementing and testing requirements of subsections (b)(2), (b)(3), (b)(4) and (c) may be waived if all intermediate casing strings are cemented to surface.
- m) After the cement is placed behind the intermediate casing (Section 1-70(d)(8) of the Act), the cement must be tested and cement job logs maintained pursuant to the requirements of Section 245.520(f) through (h).
- n) After the intermediate casing cement operation is completed, the permittee shall notify the Department's District Office by phone and electronic mail to enable an inspector to be present for testing the internal mechanical integrity of the intermediate casing pursuant to Section 245.540.
- o) If the annulus between the production casing and the surface of intermediate casing has not been cemented to the surface, the intermediate casing annulus shall be equipped with an appropriately sized and tested relief valve. The flow line from the relief valve should be secured and diverted to a lined pit or tank. (See API HF1 – Hydraulic Fracturing Operations – Well Construction and Integrity Guidelines, 1st Edition, October 2009, Section 10.4.2, Pressure Monitoring.)

Section 245.570 Production Casing Requirements

Production casing shall be used in the construction of all wells regulated by this Part and shall be set and cemented pursuant to the requirements of this Section.

- a) *Production casing must be fully cemented from the production casing shoe to 500 feet above the top perforated formation, if possible* (Section 1-70(d)(14) of the Act). However, if that cementing requirement will inhibit the production of oil or gas from the targeted formation, the operator must make a written or electronic mail request to the Department for an alternate cementing plan, and in no event shall the cementing of the production casing be completed from less than just above the top of the perforated formation to 500 feet above the top of the perforated formation.
- b) Production casing must conform to the industry standards set forth in the document referenced in Section 245.115(a)(2). Additionally, the use of production casing in the well construction must be in a manner consistent with the industry standards set forth in the document referenced in Section 245.115(a)(2).
- c) *Casing thread compound must conform to* and meet all manufacturing and material requirements of *the industry standards* set forth in the document referenced in Section 245.115(a)(3) (Section 1-70(d)(2) of the Act). Additionally, the uses of casing thread compound in the well construction must be in a manner consistent with the industry standards set forth in the document referenced in Section 245.115(a)(3).
- d) *The borehole must be circulated and conditioned* before production casing setting and cementing *to ensure an adequate cement bond* (Section 1-70(d)(5) of the Act).
- e) The permittee shall notify the Department's District Office by phone and electronic mail before setting and cementing production casing to enable an inspector to be present.
- f) When setting production casing, centralizers are required to be used as follows to keep the casing in the center of the wellbore prior to and during cement operations:
 - 1) In the vertical portion of the well, *a centralizer shall be placed on every fourth joint from the kickoff point to the ground surface or to the bottom of the cellar;*

- 2) In the horizontal portion of the well, rigid centralizers shall be used and placed accordingly to ensure at least 80% standoff;
- 3) *The Department may require additional centralizers as necessary to ensure the integrity of the well design; and*
- 4) *All centralizers used in the vertical portion of the well must conform to and shall meet specifications in, or equivalent to, the industry standards set forth in the documents referenced in Section 245.115(a)(4) through (a)(6). (Section 1-70(d)(3) of the Act)*
- g) *A pre-flush or spacer must be pumped ahead of the cement (Section 1-70(d)(6) of the Act).*
- h) Production casing cement must:
 - 1) meet the cement requirements of Section 245.520(a) and (b); and
 - 2) be applied behind the casing according to the requirements of Section 245.520(c) and (d).
- i) *After the cement is placed behind the production casing (Section 1-70(d)(8) of the Act), the cement must be tested and cement job logs maintained pursuant to the requirements of Section 245.520(f) through (h).*
- j) After the production casing cement operation is completed, the permittee shall notify the Department's District Office by phone or electronic mail to enable an inspector to be present for testing the internal mechanical integrity of the production casing pursuant to Section 245.540.

Section 245.580 Establishment of Formation Integrity

- a) *A formation pressure integrity test shall be conducted below the surface casing and below all intermediate casing in order to demonstrate:*
 - 1) that the integrity of the casing shoe is sufficient to contain the wellbore pressures anticipated in the permit application;
 - 2) that no flow path exists to formations above the casing shoe; and
 - 3) that the casing shoe is competent to handle an influx of formation fluid or gas without breaking down.
- b) *The permittee shall notify the Department's District Office by phone and electronic mail at least 24 hours before conducting a formation pressure integrity test to enable an inspector to be present when the test is performed.*
- c) *The actual hydraulic fracturing treatment pressure must not exceed the mechanical integrity test pressure of the casing tested pursuant to Section 245.540 at any time during high volume horizontal hydraulic fracturing operations.*
- d) Records of all formation integrity tests must be kept pursuant to the following requirements:
 - 1) *A record of the formation integrity test must be maintained by the permittee in the well file and must be submitted to the Department on a form prescribed by the Department before conducting high volume horizontal hydraulic fracturing operations. (Section 1-70(d)(18) of the Act)*
 - 2) Permittee shall provide the Department with a copy of all formation integrity test results 30 days after completion of well construction.
 - 3) Permittee shall retain these records for the life of the well until the well is plugged, abandoned and restored in accordance with the Illinois Oil and Gas Act, the administrative rules promulgated under that Act, and Subpart J of this Part.

SUBPART F: WATER QUALITY

Section 245.600 Water Quality Monitoring

Water quality monitoring shall be conducted pursuant to the requirements of this Section and in accordance with the water quality monitoring work plan submitted pursuant to Section 245.210(a)(20). Unless specified otherwise, all distances are measured horizontally from the closest edge of the well site.

- a) **Water Quality Monitoring Work Plan**
Each applicant for a high volume horizontal hydraulic fracturing permit shall provide the Department with a water quality monitoring work plan to ensure accurate and complete sampling and testing as required under this Section. A water quality monitoring work plan shall include, at a minimum, the following (Section 1-80(a) of the Act):
 - 1) *information identifying all water sources within the range of testing under this Section (Section 1-80(a)(1) of the Act);*
 - 2) *a sampling plan and protocol consistent with the requirements of subsections (b), (c) and (d), including notification to the Department at least 7 calendar days prior to sample collection (Section 1-80(a)(2) of the Act);*
 - 3) *the name and contact information of an independent third party under the supervision of a professional engineer or professional geologist that shall be designated to conduct sampling to establish a baseline as provided for under subsection (b) (Section 1-80(a)(3) of the Act);*
 - 4) *the name and contact information of an independent third party under the supervision of a professional engineer or professional geologist that shall be designated to conduct sampling to establish compliance with monitoring as provided within subsection (c) (Section 1-80(a)(4) of the Act);*
 - 5) *the name and contact information of an independent testing laboratory accredited or certified by the Agency to perform the required laboratory method and to conduct the analysis required under subsections (b) and (c) (Section 1-80(a)(5) of the Act). When no laboratory has been accredited or certified by the Agency to analyze a particular substance requested in subsection (d), results will be considered only if they have been analyzed by a laboratory accredited or certified by another State agency or an*

agency of the federal government, if the standards used for the accreditation or certification of that laboratory are substantially equivalent to the accreditation standard under Section 4(o) of the Illinois Environmental Protection Act [415 ILCS 5];

- 6) proof that the applicant provided each landowner referenced in subsections (a)(7) through (a)(10) with a notice of water sampling rights under the Act pursuant to a form prescribed by the Department and prior to the landowner's execution of any document regarding water sampling.
- 7) *proof of access and the right to test within the area for testing prescribed within subsections (b) and (c) (Section 1-80(a)(6) of the Act);*
- 8) *copies of any non-disclosure agreements made with landowners, if applicable (Section 1-80(a)(6) of the Act). Landowners of private property may condition access or permission for sampling of private water wells or ponds wholly within their property or a portion of any perennial stream or river that flows through their property under a non-disclosure agreement that includes the following terms and conditions (Section 1-80(d) of the Act):*
 - A) *the permittee shall provide the results of the water quality testing to the private property landowners (Section 1-80(d)(1) of the Act);*
 - B) *the permittee shall retain the results of all water quality testing conducted pursuant subsections (b) and (c) until at least 1 year after completion of all water quality monitoring for review by the Department upon request (Section 1-80(d)(2) of the Act);*
 - C) *the permittee shall not file with the Department the results of the water quality testing, except that under subsection (a)(7)(D) (Section 1-80(d)(3) of the Act); and*
 - D) *the permittee shall notify and provide to the Department and the Agency within 7 calendar days of its receipt of the water quality data any testing under subsection (c) indicating concentrations that exceed the standards or criteria referenced in the definition of "pollution or diminution" under Section 245.110 (Section 1-80(d)(4) of the Act);*
- 9) documentation that *the landowner of the private property declines, expressly and in writing, to provide access or permission for sampling, if applicable. Under these conditions, sampling of private water wells or*

ponds wholly contained within private property shall not be required (Section 1-80(d) of the Act);

- 10) *evidence as to the good faith efforts* (for example, logs of oral communications and copies of written communication) *that were made to secure documentation that the landowner of the private property declines to provide proof of his or her refusal to allow access for the purposes of conducting sampling in writing, if applicable. Permits issued under this Part cannot be denied if the landowner of the private property declines to provide proof of his or her refusal to allow access in writing and the permittee provides evidence that good faith efforts were made to gain access for the purposes of conducting sampling* (Section 1-80(d) of the Act); and
- 11) *identification of practicable contingency measures, including provision for alternative drinking water supplies, which could be implemented in the event of pollution or diminution of a water source as provided for in Section 245.610* (Section 1-80(a)(7) of the Act).

b) Baseline Testing

Before conducting high volume horizontal hydraulic fracturing operations on a well, a permittee shall retain an independent third party, as identified pursuant to subsection (a)(3). The permittee, through its independent third party, shall, after giving the Department 7 calendar days' notice, conduct baseline water quality sampling of all water sources within 1,500 feet of the well site (Section 1-80(b) of the Act) pursuant to the laboratory analysis procedures of subsection (d) and as follows:

- 1) *If an aquifer to be sampled is inaccessible through groundwater wells within 1,500 feet of the well site, the permittee shall conduct groundwater well sampling of that aquifer at the next closest groundwater well that the permittee has permission to access.*
- 2) *Installation of a groundwater monitoring well is not required to satisfy the sampling requirements of this Section.*
- 3) Baseline testing results shall be submitted to the Department no later than 3 calendar days before commencing HVHHF operations, unless there are non-disclosure agreements with the applicable private property landowners. In the case of non-disclosure agreements, the permittee shall provide a certification to the Department that the baseline testing results have been provided to the applicable private property landowners no later than 3 calendar days before commencing HVHHF operations.

- 4) *The Department shall post the results of the baseline sampling and analysis conducted under this subsection (b) on its website within 7 calendar days after receipt. The posted results shall, at a minimum, include the following:*
 - A) the well name, well site location and permit number;
 - B) the sampling site GPS latitude and longitude location, and ground elevation of the well. The GPS location shall be recorded as degrees and decimal degrees recorded to 6 decimal places in the North American Datum 1983 projection and shall be accurate to within 3 feet. The reported GPS location is required to be an actual GPS field measurement and not a calculated or conversion measurement;
 - C) *a detailed description of the sampling and testing conducted under this subsection (b), including the results of the sampling and testing;*
 - D) *the chain of custody of the samples;*
 - E) *quality control of the testing. (Section 1-80(b) of the Act)*
- c) Follow-up Monitoring
After baseline tests are conducted under subsection (b) and following the completion of HVHHF operations, the permittee, through its independent third party, shall perform the following:
 - 1) *Notify the Department at least 7 calendar days prior to taking the samples; and*
 - 2) *Sample and test all water sources that were subjected to sampling under subsection (b) in the same manner following the procedures under subsection (d) 6 months, 18 months, and 30 months after the high volume horizontal hydraulic fracturing operations have been completed, unless the water source was sampled under this subsection (c) or subsection (b) within the previous month. (Section 1-80(c) of the Act)*
- d) Laboratory Analysis Procedures
 - 1) *Sampling shall, at a minimum, be consistent with the water quality monitoring work plan as approved by the Department and allow for a*

determination of whether any hydraulic fracturing additive or other oil or gas well contaminant has caused pollution or diminution (Section 1-80(e) of the Act). For each water source required to be sampled and tested under subsections (b) and (c):

- A) *a minimum of 3 separate samples*, or as many as required by the work plan and any conditions placed on the permit, *shall be collected by the independent third party, under the supervision of a licensed professional engineer or professional geologist* (Section 1-80(b) of the Act) consistent with the approved water quality monitoring work plan; and
- B) each sample collected *shall be submitted to and analyzed by an Agency-accredited or -certified independent testing laboratory* (Section 1-80(b) of the Act) for the following:
 - i) *pH* (Section 1-80(e)(1) of the Act);
 - ii) *total dissolved solids, dissolved methane, dissolved propane, dissolved ethane, alkalinity, and specific conductance* (Section 1-80(e)(2) of the Act);
 - iii) *chloride, sulfate, arsenic, barium, calcium, chromium, iron, magnesium, selenium, cadmium, lead, manganese, mercury, and silver* (Section 1-80(e)(3) of the Act);
 - iv) *BTEX* (Section 1-80(e)(4) of the Act);
 - v) *gross alpha and beta particles to determine the presence of any naturally occurring radioactive materials* (Section 1-80(e)(5) of the Act);
- 2) The independent third party's laboratory request submitted to the Agency-accredited or -certified independent testing laboratory shall include:
 - A) the applicant's name, well name, well location and permit number;
 - B) a detailed description of the sampling methods used to collect the samples, the date and time of the sampling collections, the location where each sample was collected and by whom, and the specific testing requested;

- C) the chain of custody for the samples up to the point when the samples are relinquished to the laboratory; and
 - D) a specific request to the laboratory that the laboratory's report also include:
 - i) the name and address of the laboratory;
 - ii) the sampling method and testing requested in subsection (d);
 - iii) the analyses being performed;
 - iv) the test methods used to perform the analyses;
 - v) the date and time of the analyses;
 - vi) the identification of any test results performed by a subcontracted laboratory;
 - vii) the name of any subcontracted laboratory used and the applicable accreditation that the subcontracted laboratory holds and maintains for the analyses performed;
 - viii) the complete chain of custody through all the analyses in the laboratory and any subcontracted laboratory used;
 - ix) the test results with the units of measurements used, when appropriate;
 - x) an interpretation of the test results, including the definitions for any data qualifiers applied to the test results;
 - xi) the name, title and signature of the person authorizing the test results; and
 - xii) a summary of the laboratory's quality control results for the analyses performed;
- 3) *The permittee shall, within 7 calendar days after receipt of results of baseline or follow-up monitoring tests conducted under this Section, submit the independent third party's lab request under subsection (d)(2) and the results to the Department for a water source not subject to a non-*

disclosure agreement *or*, except as provided by subsection (d)(5), only *to the landowner of the water source pursuant to a non-disclosure agreement under subsection (a)(7)* (Section 1-80(b) and (c) of the Act);

- 4) For a water source subject to a non-disclosure agreement, if the independent third party follow-up monitoring test results indicate that concentrations exceed the standards or criteria referenced in the definition of "pollution or diminution" in Section 245.110, the permittee shall submit the independent third party lab requests and the results of those tests to the Department and the Agency within 7 calendar days after its receipt of the follow-up monitoring test results. The permittee must identify which specific standards or criteria are exceeded.
- e) Upon receipt of the independent third party's lab requests and the results of the laboratory analyses for follow-up monitoring under subsection (c), the Department shall, in consultation with the Agency as the Department deems appropriate, determine *whether any hydraulic fracturing additive or other oil or gas well contaminant has caused pollution or diminution for purposes of Sections 245.610 and 245.620* (Section 1-80(e) of the Act).
- f) If the Department makes a determination of pollution or diminution under subsection (e), the procedures set forth in Section 245.615 shall be followed.

Section 245.610 Water Pollution Investigations

- a) *Any person who has reason to believe he or she has incurred pollution or diminution of a water source as a result of a high volume horizontal hydraulic fracturing treatment of a well may request that an investigation be conducted (Section 1-83(a) of the Act) by:*
 - 1) notifying the Department either in writing or electronically through its website; and
 - 2) providing the following information:
 - A) his or her name, address and contact information; and
 - B) a detailed description of the suspected contamination, including but not limited to, identifying:
 - i) the water source being affected;
 - ii) the suspected source of contamination;
 - iii) dates and times related to observations of the suspected contamination;
 - iv) the names of potential witnesses and their contact information; and
 - v) any documents or photographs in his or her possession that may be useful as evidence of pollution or diminution.
- b) *Within 30 calendar days after the notification required by subsection (a), the Department will notify the Agency and initiate an investigation of the claim. The Department will make a reasonable effort to reach a determination within 180 calendar days after receiving the notification. (Section 1-83(b) of the Act)*
- c) *If necessary, the Agency shall conduct water quality sampling (Section 1-83(b) of the Act) and the Department shall provide to the Agency all available permit information and other relevant data.*
- d) *Any person conducting or who has conducted high volume horizontal hydraulic fracturing operations suspected to be the source of pollution or diminution complained of shall supply any information requested by the Department or*

Agency to assist with the investigation. *The Department, in consultation with the Agency as the Department deems appropriate, shall give due consideration to any information submitted during the course of the investigation.* (Section 1-83(c) of the Act) The requested information may include additional water quality monitoring sampling in accordance with Section 245.600.

- e) The Department, in consultation with the Agency as the Department deems appropriate, shall make a determination of pollution or diminution if *sampling results or other information obtained as part of the investigation or the results of tests conducted under Section 245.600 indicate that* hydraulic fracturing additive or other oil or gas well contaminant *concentrations* in the water are found to *exceed the following standards or criteria* (Section 1-83(d) of the Act) and are statistically significantly higher than the base line sampling results obtained under Section 245.600(b):
 - 1) in groundwater, any of the following:
 - A) *detection of benzene or any other carcinogen in any Class I, Class II, or Class III groundwater;*
 - B) *detection of any constituent in 35 Ill. Adm. Code 620.310(a)(3)(A)(i) equal to or above the listed preventive response criteria in any Class I, Class II, or Class III groundwater;*
 - C) *detection of any constituent in 35 Ill. Adm. Code 620.410(a), (b), (c), (d) or (e) equal to or above the listed standard in any Class I, Class II, or Class III groundwater;*
 - D) *detection of any constituent in Class III groundwater equal to or above a standard established under 35 Ill. Adm. Code 620.260; or*
 - E) *detection of any constituent in Class I, Class II, or Class III groundwater equal to or above a cleanup objective listed in 35 Ill. Adm. Code 742.*
 - 2) *in surface water, exceeding any applicable numeric or narrative standard in 35 Ill. Adm. Code 302 or 304.* (Section 1-5 of the Act)
- f) If the Department makes a determination of pollution or diminution under subsection (e), the procedures set forth in Section 245.615 shall be followed.

Section 245.615 Procedures

- a) Upon a determination of pollution or diminution by the Department, the Department shall issue a Notice of Violation and proceed with appropriate enforcement pursuant to Subpart K. The enforcement shall, *in addition to any other penalty available under the law*, require the permittee to complete remedial action to temporarily or permanently *restore or replace the affected water supply with an alternative source of water adequate in quantity and quality for the purposes served by the water source. The quality of a restored or replaced water source shall meet or exceed the quality of the original water source based upon the results of the baseline test results under Section 245.600(b) for that water source, or other available information.* Further, as appropriate, the Department may require the permittee to take immediate action, including, but not limited to, repair, replacement, alteration, or prohibition of operation of equipment permitted by the Department. The Department, in consultation with the Agency and/or the Illinois Department of Public Health, may also *issue conditions and orders to protect the public health, public safety, property, wildlife, aquatic life or environment.* (Section 1-83(d) of the Act)
- b) *Within 15 calendar days after a determination of pollution or diminution, the Department shall, with assistance from other State and local agencies, provide notice of its Notice of Violation and determination on the Department's website and to all persons that use the water source for domestic, agricultural, industrial, or any other legitimate beneficial uses, as well as any certified local public health departments that serve those persons* (Section 1-83(e) of the Act).
- c) *Upon issuance of a Notice of Violation pursuant to subsection (b), the Department shall contact the Agency and forward all information to the Agency. The Agency shall investigate the potential for violations as designated within Section 1-87 of the Act.* (Section 1-83(f) of the Act)
- d) *The Department shall publish, on its website, lists of confirmed determinations of pollution or diminution that result from high volume horizontal hydraulic fracturing operations and are final administrative decisions. This information shall be searchable by county.* (Section 1-83(h) of the Act)
- e) *The Agency shall have the duty to investigate complaints that activities under the Act or this Part have caused a violation of Section 12 of the Illinois Environmental Protection Act or surface or groundwater rules adopted under the Illinois Environmental Protection Act. Any action taken by the Agency in enforcing these violations shall be taken under and consistent with the Illinois Environmental*

Protection Act, including, but not limited to, the Agency's authority to seek a civil or criminal cause of action under that Act. (Section 1-87(b) of the Act)

Section 245.620 Rebuttable Presumption of Pollution or Diminution

- a) *This Section establishes a rebuttable presumption for use in determining the cause of water pollution or diminution, as defined by Section 1-5 of the Act, under Subpart K (Section 1-85(a) of the Act).*
- b) *Unless rebutted by a defense established in subsection (c), it shall be presumed that any person conducting or who has conducted high volume horizontal hydraulic fracturing operations shall be liable for pollution or diminution of a water supply if (Section 1-85(b) of the Act):*
 - 1) *the water source is within 1,500 feet of the well site (Section 1-85(b)(1) of the Act) where the HVHHF operations occurred;*
 - 2) *water quality data showed no pollution or diminution before the start of high volume horizontal hydraulic fracturing operations (Section 1-85(b)(2) of the Act); and*
 - 3) *the pollution or diminution occurred during high volume horizontal hydraulic fracturing operations or no more than 30 months after the completion of the high volume horizontal hydraulic fracturing operations (Section 1-85(b)(3) of the Act).*
- c) *To rebut the presumption established under this Section, a person presumed responsible must affirmatively prove by clear and convincing evidence any of the following (Section 1-85(c) of the Act):*
 - 1) *the water source is not within 1,500 feet of the well site (Section 1-85(c)(1) of the Act);*
 - 2) *the pollution or diminution occurred before the high volume horizontal hydraulic fracturing operations or more than 30 months after the completion of the high volume horizontal hydraulic fracturing operations (Section 1-85(c)(2) of the Act); and*
 - 3) *the pollution or diminution occurred as the result of an identifiable cause other than the high volume horizontal hydraulic fracturing operations (Section 1-85(c)(3) of the Act).*

Section 245.630 Prohibitions

It is unlawful to inject or discharge hydraulic fracturing fluid, produced water, BTEX, diesel, or petroleum distillates into fresh water (Section 1-25(c) of the Act).

SUBPART G: CHEMICAL DISCLOSURE; TRADE SECRETS

Section 245.700 Chemical Disclosure by Permittee

- a) *If the chemical disclosure information required by Section 245.210(a)(8) is not submitted at the time of permit application, then the permittee shall submit this information to the Department in electronic format no less than 21 calendar days before performing the high volume horizontal hydraulic fracturing operations (Section 1-77(a) of the Act).*
- b) *Nothing in this Section shall prohibit the permittee from adjusting or altering the contents of the fluid during the treatment process to respond to unexpected conditions, as long as the permittee notifies the Department by electronic mail within 24 hours of the departure from the initial treatment design and includes a brief explanation detailing the reason for the departure (Section 1-77(a) of the Act).*
- c) *No less than 21 calendar days before performing the first stimulation treatment of HVHFF operations, the permittee shall maintain and disclose to the Department separate and up-to-date master lists of (Section 1-77(c)(2) of the Act):*
 - 1) *the base fluid to be used during any high volume horizontal hydraulic fracturing operations within this State (Section 1-77(c)(2)(A) of the Act);*
 - 2) *all hydraulic fracturing additives to be used during any high volume horizontal hydraulic fracturing operations within this State (Section 1-77(c)(2)(B) of the Act); and*
 - 3) *all chemicals and associated Chemical Abstract Service numbers to be used in any high volume horizontal hydraulic fracturing operations within this State (Section 1-77(c)(2)(C) of the Act).*
- d) *If a permittee uses the services of another person to perform high volume horizontal hydraulic fracturing operations, that person shall comply with Section 245.710 (Section 1-77(b) of the Act).*

Section 245.710 Chemical Disclosure by Contractor

- a) A permittee shall be responsible to ensure that any contractor *performing high volume horizontal hydraulic fracturing operations within this State* on behalf of the permittee *shall* (Section 1-77(c) of the Act):
 - 1) *be authorized to do business in this State* (Section 1-77(c)(1) of the Act);
 - 2) provide the Department with the following information:
 - A) the contractor's business name, address, email address and telephone number;
 - B) the well name, permit number and permittee name for the well on which HVHHF operations will be conducted; and
 - C) the name, email address and telephone number of the person at the well site responsible for the HVHHF operations.
- b) No less than 21 calendar days before performing the first stimulation treatment of HVHHF operations, the contractor performing HVHHF operations on behalf of the permittee shall *maintain and disclose to the Department separate and up-to-date master lists of* (Section 1-77(c)(2) of the Act):
 - 1) *the base fluid to be used during any high volume horizontal hydraulic fracturing operations within this State* (Section 1-77(c)(2)(A) of the Act);
 - 2) *all hydraulic fracturing additives to be used during any high volume horizontal hydraulic fracturing operations within this State* (Section 1-77(c)(2)(B) of the Act); and
 - 3) *all chemicals and associated Chemical Abstract Service numbers to be used in any high volume horizontal hydraulic fracturing operations within this State* (Section 1-77(c)(2)(C) of the Act).
- c) *Nothing in this Section shall prohibit the contractor performing high volume horizontal hydraulic fracturing operations on behalf of the permittee from adjusting or altering the contents of the fluid during the treatment process to respond to unexpected conditions, as long as all other requirements of the Act and this Part are met and the contractor notifies the Department by electronic mail within 24 hours of the specific details of departure from the initial treatment*

design and includes a brief explanation detailing the reason for the departure
(Section 1-77(a) of the Act).

Section 245.715 Chemical Use Prohibitions

- a) The permittee performing HVHHF operations is *prohibited from using any base fluid, hydraulic fracturing additive, or chemical not listed on their master lists disclosed under Section 245.700.*
- b) Contractors *performing high volume horizontal hydraulic fracturing operations are prohibited from using any base fluid, hydraulic fracturing additive, or chemical not listed on their master lists disclosed under Section 245.710.* (Section 1-77(d) of the Act)

Section 245.720 Department Publication of Chemical Disclosures and Claims of Trade Secret

- a) *The Department shall assemble and post up-to-date copies of the master lists of chemicals it receives under Sections 245.700 and 245.710 on its website within 14 calendar days after receipt (Section 1-77(e) of the Act).*
- b) *When an applicant, permittee, or person performing high volume horizontal hydraulic fracturing operations furnishes chemical disclosure information to the Department under Section 245.210, 245.700, 245.710 or 245.860 under a claim of trade secret, the applicant, permittee, or person performing high volume horizontal hydraulic fracturing operations shall submit redacted and un-redacted copies of the documents identifying the specific information on the master list of chemicals claimed to be protected as trade secret. The redacted copy shall provide a description of the chemical family or other similar descriptor associated with that chemical. The Department shall use the redacted copies when posting the master list of chemicals on its website. (Section 1-77(f) of the Act)*
- c) *Upon submission or within 5 calendar days after submission of the master list of chemicals with chemical disclosure information to the Department under Section 245.210, 245.700, 245.710 or 245.860 under a claim of trade secret, the person that claimed trade secret protection ("claimant") shall provide a justification of the claim containing an affidavit swearing or affirming under penalty of perjury, that the information is a bona fide trade secret. The affidavit shall include:*
 - 1) *a detailed description of the procedures used by the claimant to safeguard that portion of the information on the master list of chemicals for which trade secret is claimed from becoming available to persons other than those selected by the claimant to have access to the information for limited purposes;*
 - 2) *a certification that the person has no knowledge that the portion of the information on the master list of chemicals for which trade secret is claimed has ever been published or disseminated or has otherwise become a matter of general public knowledge;*
 - 3) *identification of the claimant's specific use of the chemicals claimed as trade secret and explanation of why it is a secret of interest to competitors, including the following:*
 - A) *description of the specific use of the chemicals claimed as trade secret, identifying the product or process in which it is used. If the*

- claimant uses the chemicals other than as a component of a product or in a manufacturing process, this description must identify the activity in which the chemical is used;
- B) whether the claimant's company or facility identity has been linked to the specific identity claimed as trade secret in a patent or in publications or other information sources available to the public or the claimant's competitors. If so, include an explanation of why this knowledge does not eliminate the justification for trade secrecy;
- 4) *a detailed discussion of why the person believes* that the portion of *the information* on the master list of chemicals for which trade secret is claimed is *of competitive value* and an explanation of why the information has general competitive value, not just competitive value at the permittee's specific work site;
- 5) that the information being sought to be exempted is a "trade secret" as defined in Section 2(d) of the Illinois Trade Secrets Act [765 ILCS 1065];
- 6) the identity of each individual or entity to whom that portion of the information on the master list of chemicals for which trade secret is claimed has been disclosed, including all local, State and federal government entities to which the claimant has disclosed the information. For each such individual or entity, the claimant shall indicate what confidentiality claim was made and whether the individual or entity denied that claim; and
- 7) *any other information that shall support the claim* of trade secret (Section 1-77(g) of the Act).
- d) *Chemical disclosure information furnished under Section 245.210, 245.700, 245.710 or 245.860 under a claim of trade secret shall be protected from disclosure as a trade secret if the Department determines that the statement of justification demonstrates that* (Section 1-77(h) of the Act):
- 1) *the information has not been published, disseminated, or otherwise become a matter of general public knowledge* (Section 1-77(h)(1) of the Act). *There is a rebuttable presumption that the information has not been published, disseminated, or otherwise become a matter of general public knowledge if the person has taken reasonable measures to prevent the information from becoming available to persons other than those selected by the person to have access to the information for limited purposes and*

the statement of justification contains a certification that the person has no knowledge that the information has ever been published, disseminated, or otherwise become a matter of general public knowledge (Section 1-77(h) of the Act); and

- 2) *the information has competitive value (Section 1-77(h)(2) of the Act).*
- e) *Denial of a trade secret request under this Section shall be appealable under the Administrative Review Law (Section 1-77(i) of the Act) and the rules adopted under that Law.*
- f) *A person whose request to inspect or copy a public record is denied, in whole or in part, because of a grant of trade secret protection may file a request for review with the Public Access Counselor under Section 9.5 of the Freedom of Information Act [5 ILCS 140] or for injunctive or declaratory relief under Section 11 of the Freedom of Information Act for the purpose of reviewing whether the Department properly determined that the trade secret protection should be granted (Section 1-77(j) of the Act).*
- g) *Except as otherwise provided in Section 245.730 of this Part and Section 1-77(m) of the Act, the Department must maintain the confidentiality of chemical disclosure information furnished under Section 245.210, 245.700, 245.710 or 245.860 under a claim of trade secret, until the Department receives official notification of a final order by a reviewing body with proper jurisdiction that is not subject to further appeal rejecting a grant of trade secret protection for that information (Section 1-77(k) of the Act).*

Section 245.730 Trade Secret Disclosure to Health Professional

- a) Information *furnished under a claim of trade secret* will be provided by the Department to a health professional who:
 - 1) *states a need for the information and articulate why the information is needed;*
 - 2) states whether the affected patient requires *emergency or non-emergency* (Section 1-77(1) of the Act) health care services; and
 - 3) identifies the name and profession of the health professional and the name and location of the facility where the affected patient is being treated.
- b) A person furnishing information to the Department under a claim of trade secret shall:
 - 1) provide the Department with a telephone number and e-mail where the trade secret holder may be reached at any time (24 hours/day, 7 days/week), and the Department shall post on its website, by county, a list of operators and well sites, showing or linking to the telephone and e-mail information of the trade secret claimant; and
 - 2) post in a conspicuous place at the well site, available 24 hours/day, 7 days/week, the name, telephone number and address of an employee, agent or contractor of the permittee having knowledge of the specific chemicals being used in the HVHHF operation at any given time.
- c) In an emergency health care situation, a health professional:
 - 1) shall call the Department's Office of Oil and Gas Resource Management and the Department shall provide any properly-requested information to the health professional as quickly as possible by telephone, fax or other means of communication requested or agreed upon; or
 - 2) may call the trade secret holder at any time (24 hours/day, 7 days/week) and request the information from the trade secret holder directly. The trade secret holder shall provide any properly-requested information to the health professional as quickly as possible, but at least within 2 hours, by telephone, fax or other means of communication requested or agreed upon.
- d) In a non-emergency health care situation, a health professional shall:

- 1) call or email the Department's Office of Oil and Gas Resource Management. The Department shall provide any properly-requested information to the health professional within one business day by telephone, fax or other means of communication requested or agreed upon; or
 - 2) call the trade secret holder at any time (24 hours/7 days a week) and submit a completed request for information to the trade secret holder directly by fax or email. The trade secret holder shall respond to the health professional within the same business day by fax or other methods determined by the trade secret holder to be a secure means of disclosure.
- e) *The health professional may share information disclosed pursuant to this Section with other persons as may be professionally necessary* in accordance (and only in accordance) with the provisions of Section 1-77 of the Act.
- f) If, pursuant to this Section, the Department releases any trade secret information to a health professional, it will notify the trade secret holder of that release.

SUBPART H: HIGH VOLUME HORIZONTAL HYDRAULIC
FRACTURING PREPARATIONS AND OPERATIONS

Section 245.800 General Conditions and Requirements

- a) *During all phases of high volume horizontal hydraulic fracturing operations, the permittee shall comply with all terms of the permit, the Act and this Part (Section 1-75(a)(1) of the Act).*
- b) *All phases of high volume horizontal hydraulic fracturing operations shall be conducted in a manner that shall not pose a significant risk to public health, life, property, aquatic life, wildlife or the environment (Section 1-75(a)(2) of the Act).*

Section 245.805 Hydraulic Fracturing String Requirements and Pressure Testing

Hydraulic fracturing strings, if used in any wells regulated by this Part, shall be set or reset pursuant to the requirements of this Section.

- a) *Hydraulic fracturing strings must be either strung into a production liner or run with a packer set at least 100 feet below the deepest cement top.*
- b) *A function-tested relief valve and diversion line must be installed and used to divert flow from the hydraulic fracturing string-casing annulus to a covered watertight steel tank in case of hydraulic fracturing string failure.*
 - 1) *The relief valve must be set to limit the annular pressure to no more than 95% of the working pressure rating of the weakest casings forming the annulus.*
 - 2) *The annulus between the hydraulic fracturing string and the production or immediate casing must be pressurized to at least 250 psi and monitored.*
- c) *Hydraulic fracturing strings must be tested to not less than the maximum anticipated treating pressure minus the annulus pressure applied between the fracturing string and the production or immediate casing. The pressure test shall be considered successful if the pressure applied has been held for 30 minutes with no more than 5% pressure loss. (Section 1-70(d)(17) of the Act)*
- d) *The permittee shall notify the Department's District Office by phone and electronic mail at least 24 hours before conducting a pressure test of the hydraulic fracturing string to enable an inspector to be present when the test is performed.*
- e) *A record of the pressure test shall be made on a form prescribed by the Department, maintained by the permittee in the well file, and made available at the well site to the Department upon request and included in the HVHHF operations completion report pursuant to Section 245.860(d).*
- f) *If any change to the well involving resetting, repositioning, reconnecting or breaking any pressure connection of the hydraulic fracturing string occurs after a stage of high volume horizontal hydraulic treatment, the pressure test requirements of subsections (c) through (e) must be successfully repeated before initiating any subsequent stage of HVHHF treatment.*

Section 245.810 Surface Equipment Pressure Testing

For all wells regulated by this Part, the final configuration of surface equipment associated with the HVHHF treatment, including *the injection lines and manifold, associated valves, fracture head or tree and any other wellhead components or connections*, must be pressure tested pursuant to the requirements of this Section *before any pumping of hydraulic fracturing fluid*.

- a) The permittee shall notify the Department's District Office by phone and electronic mail at least 24 hours before conducting a pressure test of the final configuration of the surface equipment used for the HVHHF treatment to enable an inspector to be present when the test is performed.
- b) The final configuration of the surface equipment used for the HVHHF treatment *must be pressure tested with fresh water or brine to at least the maximum anticipated treatment pressure for at least 30 minutes with less than a 5% pressure loss*.
- c) *A record of the pressure test must be made on a form prescribed by the Department, maintained by the permittee in the well file, and made available at the well site to the Department upon request.* (Section 1-75(b)(2) of the Act)
- d) If the configuration of surface equipment used for the HVHHF treatment has been reconfigured or changed in any manner that breaks any pressure connection after a stage of HVHHF operations treatment, the pressure test requirements of subsections (a) through (c) must be successfully repeated before initiating any subsequent stage of HVHHF operations.

Section 245.815 Notice and Approval Before Commencement of High Volume Horizontal Hydraulic Fracturing Operations

Before commencement of HVHHF operations, the permittee must notify and receive written approval from the Department by U.S. mail or electronic mail. Department approval for HVHHF operations shall be based on the permittee's compliance with the following:

- a) *The permittee shall notify the Department's District Office by phone and electronic mail or letter at least 48 hours before the commencement of high volume horizontal hydraulic fracturing operations to enable an inspector to be present (Section 1-75(a)(3) of the Act). The notification under this subsection shall be notice for all stages of a multiple-stage HVHHF treatment.*
- b) *Prior to conducting high volume horizontal hydraulic fracturing operations at a well site, the permittee shall cause to be plugged all previously abandoned unplugged or insufficiently plugged well bores within 750 feet of any part of the horizontal well bore that penetrated within 400 vertical feet of the geologic formation that will be stimulated as part of the high volume horizontal hydraulic fracturing operations (Section 1-95(b) of the Act). In determining whether a well has been sufficiently plugged, the Department will consider, but is not limited to, well completion reports, cementing records, well construction records, cement bond logs, tracer surveys, oxygen activation logs and plugging records. Plugging under this subsection shall be performed as required by Section 245.1010.*
- c) Baseline water quality sampling of all water sources within 1,500 feet of the well site must be completed pursuant to Section 245.600(b).
- d) All tests required by the following Sections shall be conducted:
 - 1) Section 245.540: well casing internal mechanical integrity tests (see Sections 1-75(b)(1) and 1-70(d)(16) of the Act);
 - 2) Section 245.580: formation integrity tests (see Sections 1-75(b)(1) and 1-70(d)(18) of the Act);
 - 3) Section 245.805: hydraulic fracturing string pressure tests, if required (see Sections 1-75(b)(1) and 1-70(d)(17) of the Act);
 - 4) Section 245.810: surface equipment pressure tests (see Section 1-75(b)(2) of the Act); and

- 5) All information previously requested by the Department shall be supplied to the Department, and any information that was accurate at the time of submission but no longer accurate shall be updated.

Section 245.820 Secondary Containment Inspections

No more than one hour before initiating any stage of the high volume horizontal hydraulic fracturing operations, all secondary containment required pursuant to Section 245.825(b) must be visually inspected by the permittee or the contractor performing the HVHHF operations on behalf of the permittee to ensure that all structures and equipment are in place and in proper working order. The results of this inspection must be recorded and documented by the permittee or the contractor performing the HVHHF operations on behalf of the permittee on a form prescribed by the Department, maintained in the well file, and made available at the well site to the Department upon request. (Section 1-75(c)(13) of the Act)

Section 245.825 General Fluid Storage

In accordance with the approved hydraulic fracturing fluid and flowback plan required by Section 245.210(a)(11) and the approved containment plan required by Section 245.210(a)(13), and *except as provided in Section 245.830, hydraulic fracturing additives, hydraulic fracturing fluid, hydraulic fracturing flowback, and produced water shall be stored in above-ground tanks pursuant to the requirements of this Section at all times until removed for proper disposal or recycling (Section 1-75(c)(1) and (c)(2) of the Act).*

- a) *Above-ground tanks must be:*
 - 1) *closed, watertight, vented in compliance with Section 245.910, and corrosion-resistant (Section 1-75(c)(4) of the Act);*
 - 2) *constructed of materials compatible with the composition of the hydraulic fracturing fluid, hydraulic fracturing flowback, and produced water (Section 1-70(b)(3) of the Act). For purposes of this Section, for the materials of a containing mechanism or device to be "compatible" means that the materials are resistant to corrosion, erosion, swelling, deterioration or other damage as a result of normal exposure to whatever substances it is intended to contain, as well as exposure to weather and natural hazards;*
 - 3) *of sufficient pressure rating (Section 1-75(c)(6) of the Act);*
 - 4) *maintained in a leak-free condition (Section 1-75(c)(6) of the Act); and*
 - 5) *routinely inspected for corrosion, at least semiannually (Section 1-75(c)(4) of the Act). Permittees shall maintain records of these periodic inspections.*
- b) *Secondary containment is required for all above-ground tanks and additive staging areas.*
 - 1) *Secondary containment measures may include one or a combination of the following: dikes, liners, pads, impoundments, curbs, sumps, or other structures or equipment capable of containing the substance within the well site.*
 - 2) *Any secondary containment must be sufficient to contain 150% of the total capacity of the single largest container or tank within a common containment area (Section 1-75(c)(13) of the Act), be compatible with the environment and the substances to be contained, and be protected from*

heavy vehicle or equipment traffic.

- c) *Piping, conveyances, valves in contact with hydraulic fracturing fluid, hydraulic fracturing flowback, or produced water must be* (Section 1-70(b)(3) of the Act):
 - 1) *constructed of materials compatible with the expected composition of the hydraulic fracturing fluid, hydraulic fracturing flowback, and produced water* (Section 1-70(b)(3) of the Act);
 - 2) *of sufficient pressure rating* (Section 1-75(c)(6) of the Act);
 - 3) *able to resist corrosion* (Section 1-75(c)(6) of the Act); and
 - 4) *maintained in a leak-free condition.* (Section 1-75(c)(6) of the Act)
- d) Stationary fueling tanks shall meet the requirements of this subsection (d).
 - 1) Stationary *fueling tanks* shall have *secondary containment* in accordance with subsection (b) (Section 1-70(c)(2) of the Act);
 - 2) Stationary *fueling tanks* shall be subject to the setback requirements of Section 245.400 (Section 1-70(c)(2) of the Act);
 - 3) Stationary *fueling tank filling operations* shall be supervised at the *fueling truck and at the tank if the tank is not visible to the fueling operator from the truck* (Section 1-70(c)(3) of the Act); and
 - 4) *Troughs, drip pads, or drip pans are required beneath the fill port of a stationary fueling tank during filling operations if the fill port is not within the secondary containment required by subsection (b)* (Section 1-70(c)(4) of the Act).
- e) *Fresh water may be stored in tanks or pits at the election of the permittee* (Section 1-75(c)(3) of the Act).
- f) Any tank, structure, measure or device intended or used for storage of hydraulic fracturing fluid, hydraulic fracturing flowback, or produced water, unless demonstrated to be outside the regulatory floodplain, shall be considered a construction subject to 17 Ill. Adm. Code 3706.240 and 3706.630 and constructed to the standards set forth in 17 Ill. Adm. 3706.530(b) or (c), as applicable. No above-ground tanks or secondary containment structure, measure or device containing or intended to contain hydraulic fracturing fluid, hydraulic fracturing flowback, or produced water, whether for storage or otherwise, may be located in

the regulatory floodway (17 Ill. Adm. Code 3706.420) unless the applicant first secures the necessary permits and completes any mitigation measures required by any permitting agency.

Section 245.830 Reserve Pits

- a) *In accordance with the hydraulic fracturing fluids and flowback plan required by Section 245.210(a)(11) and the containment plan required pursuant to Section 245.210(a)(13), and as approved by the Department, the use of a reserve pit is allowed for the temporary storage of hydraulic fracturing flowback. The reserve pit shall be used only in the event of a lack of capacity for tank storage due to higher than expected volume or rate of hydraulic fracturing flowback, or other unanticipated flowback occurrence. (Section 1-75(c)(2) of the Act)*
- b) *All reserve pits must comply with the following construction standards and liner specifications (Section 1-75(c)(2) of the Act):*
 - 1) *the synthetic liner material shall have a minimum thickness of 24 mils with high puncture and tear strength and be impervious and resistant to deterioration (Section 1-75(c)(2)(A) of the Act);*
 - 2) *the pit lining system shall be designed to have a capacity at least equivalent to 110% of the maximum volume of hydraulic fracturing flowback anticipated to be recovered (Section 1-75(c)(2)(B) of the Act);*
 - 3) *the lined pit shall be constructed, installed, and maintained in accordance with the manufacturers' specifications and good engineering practices to prevent overflow during any use (Section 1-75(c)(2)(C) of the Act);*
 - 4) *the liner shall have sufficient elongation to cover the bottom and interior sides of the pit with the edges secured with at least a 12 inch deep anchor trench around the pit perimeter to prevent any slippage or destruction of the liner materials (Section 1-75(c)(2)(D) of the Act);*
 - 5) *the foundation for the liner shall be free of rock and constructed with soil having a minimum thickness of 12 inches after compaction covering the entire bottom and interior sides of the pit (Section (c)(2)(E) of the Act);*
and
 - 6) *if located in the regulatory floodway, the reserve pit shall be considered a construction subject to 17 Ill. Adm. Code 3706.240 and 3706.630 and, in addition to the requirements of subsections (b)(1) through (b)(5), shall be constructed to the standards set forth in 17 Ill. Adm. Code 3706.530(b) or (c), or a successor rule, as applicable. No reserve pits may be located in the regulatory floodway or the flood fringe (17 Ill. Adm. Code 3706.420 and 3706.520(b)), unless the applicant first secures the necessary permits*

and completes any mitigation measures required by any permitting agency.

- c) Hydraulic fracturing flowback reserve pit liners shall be disposed of in an Agency-permitted special waste landfill.

Section 245.835 Mechanical Integrity Monitoring

- a) *During high volume horizontal hydraulic fracturing operations, all sealed annulus pressures, the injection pressure, and the rate of injection shall be continuously monitored and recorded. The records of the monitoring shall be maintained by the permittee in the well file and shall be provided to the Department upon request at any time during the period up to and including 5 years after the well is permanently plugged or abandoned. (Section 1-75(b)(4) of the Act)*
- b) *During high volume horizontal hydraulic fracturing operations:*
 - 1) *The pressure test values established for the internal mechanical integrities of the cemented casings pursuant to Section 245.540 and of the hydraulic fracturing string pursuant to Section 245.805 shall not be exceeded. If any of these pressures decline more than 5% or if there are other indications of a leak, including but not limited to an increase in pressure in the annulus, exceeding the minimum internal yield in the casing string, or a visible leak at the surface, corrective action shall be taken before conducting further high volume horizontal hydraulic fracturing operations. (Section 1-70(d)(16) of the Act)*
 - 2) *The pressure exerted on treating equipment, including valves (includes hydraulic fracturing string relief valve; see Section 245.805(b) of this Part and Section 1-70(d)(17) of the Act), lines, manifolds, hydraulic fracturing head or tree, casing and hydraulic fracturing string, if used, and any other wellhead component or connection, must not exceed 95% of the working pressure rating of the weakest component (Section 1-75(b)(2) and (b)(3) of the Act).*
 - 3) *The relief valve installed pursuant to Section 245.560(o) should be set so that the pressure exerted on the casing does not exceed the mechanical integrity test pressure of the casing established pursuant to Section 245.240.*
 - 4) *The actual hydraulic fracturing treatment pressure during HVHFF operations must not, at any time, exceed the mechanical integrity test pressures of the casings established pursuant to Section 245.540 (Section 1-70(d)(18) of the Act).*
- c) *High volume horizontal hydraulic fracturing operations must be immediately suspended if the permittee or Department inspector determines that any*

anomalous pressure or flow condition or any other anticipated pressure or flow condition is occurring in a way that indicates the mechanical integrity of the well has been compromised and continued operations pose a risk to public health, public safety, property, wildlife, aquatic life or the environment. Remedial action shall be immediately undertaken. (Section 1-75(b)(5) of the Act)

- d) *The permittee shall notify the Department inspector and the Department's District Office by phone and electronic mail within 1 hour after suspending operations for any matters relating to the mechanical integrity of the well or risk to the environment.* (Section 1-75(b)(5) of the Act)
- e) Operations shall not resume until the appropriate pressure tests referenced in Sections 245.805 and 245.810 have been successfully repeated.

Section 245.840 Hydraulic Fracturing Fluid and Flowback Confinement

- a) *Hydraulic fracturing fluid shall be confined to the targeted formation designated in the permit.*
- b) *If the hydraulic fracturing fluid or hydraulic fracturing flowback migrate into a fresh water zone or to the surface from the well in question or from other wells, the permittee shall immediately notify the Department and the county and certified local public health department (if any) and shut in the well until remedial action that prevents the fluid migration is completed. The permittee shall obtain the approval of the Department prior to resuming operations. (Section 1-75(d) of the Act)*
- c) Permittee shall be responsible for damages caused by the migration of hydraulic fracturing fluid or hydraulic fracturing flowback outside the targeted formation.

Section 245.845 Management of Gas and Produced Hydrocarbons During Flowback

For wells regulated by this Part, *permittees shall be responsible for managing natural gas and hydrocarbon fluids produced during the flowback period to ensure no direct release to the atmosphere or environment as follows:*

- a) Except for wells covered by subsection (f), *recovered hydrocarbon fluids* shall be:
 - 1) Routed *to one or more storage vessels*; or
 - 2) *Injected into* a permitted Class II UIC well as described in Section 245.300(c)(7); or
 - 3) Used for another lawful and useful purpose that a purchased fuel or raw material would serve, with no direct release to the environment.
- b) Except for wells covered by subsection (e), *recovered natural gas* shall be:
 - 1) Routed *into a flow line or collection system*; or
 - 2) *Injected into* a permitted Class II UIC well as described in Section 245.300(c)(7); or
 - 3) *Used as an on-site fuel source*; or
 - 4) *Used for another lawful and useful purpose that a purchased fuel or raw material would serve, with no direct release to the atmosphere.* (Section 1-75(e)(2) of the Act)
- c) *If it is technically infeasible or economically unreasonable to minimize emissions associated with the venting of hydrocarbon fluids and natural gas during the flowback period using the methods specified in subsections (a) and (b), the Department, in consultation with the Agency as the Department deems appropriate, shall require the permittee to capture and direct the emissions to a completion combustion device, except:*
 - 1) *When conditions may result in a fire hazard or explosion*; or
 - 2) *Where high heat emissions from a completion combustion device may negatively impact waterways.*

- d) In order to establish technical infeasibility under subsection (c), the permittee must demonstrate to the Department's satisfaction that the technology listed in subsections (a) and (b) does not exist, cannot be installed at the well site, will not achieve the result intended, or is otherwise unavailable or ineffective. The permittee claiming economic unreasonableness shall provide the Department with the following:
 - 1) The method the applicant used to determine it is economically unreasonable to implement the methods specified in subsection (a) or (b);
 - 2) Applicant's experience in implementing the methods specified in subsection (a) or (b);
 - 3) Estimated costs of implementing the methods specified in subsection (a) or (b), and sources for those estimates;
 - 4) Anticipated rates (by day) and amounts (total for well) of fluids and/or gas to be directed to the completion combustion device; and
 - 5) Any other information requested by the Department or that documents the economic unreasonableness claimed.
- e) *Completion combustion devices must be equipped with an auto-igniter and a reliable continuous ignition source over the duration of the flowback period. (Section 1-75(e)(3) of the Act)*
- f) *For each wildcat well, delineation well, or low pressure well, permittees shall be responsible for minimizing the emissions associated with venting of hydrocarbon fluids and natural gas during the flowback period by capturing and directing the emissions to a completion combustion device during the flowback period, except in conditions that may result in a fire hazard or explosion, or where high heat emissions from a completion combustion device may negatively impact waterways. Completion combustion devices shall be equipped with a reliable continuous ignition source over the duration of the flowback period. (Section 1-75(e)(8) of the Act)*

Section 245.850 Hydraulic Fracturing Fluid and Hydraulic Fracturing Flowback Storage, Disposal or Recycling, Transportation and Reporting Requirements

The permittee shall notify the Department of the date when HVHHF operations are completed and shall dispose of or recycle hydraulic fracturing fluids and hydraulic fracturing flowback pursuant to the requirements of this Section.

- a) Completion of HVHHF operations occurs when the flowback period begins after the last stage of HVHHF operations. The permittee shall notify the Department's District Office by phone and electronic mail within 24 hours after HVHHF operations are completed.
- b) *Hydraulic fracturing fluids and hydraulic fracturing flowback must be removed from the well site within 60 days after completion of high volume horizontal fracturing operations, except as provided in subsection (c) (Section 1-75(c)(5) of the Act).*
- c) *Any excess hydraulic fracturing flowback captured for temporary storage in a reserve pit as provided in Section 245.825 must be either removed from the well site or transferred to storage in above-ground tanks for later disposal or recycling within 7 days after the fluid is first deposited into the reserve pit (Section 1-75(c)(5) of the Act). Excess hydraulic fracturing flowback cannot be removed from the well site until the hydraulic fracturing flowback is tested and the analytical results are provided pursuant to subsection (d).*
- d) Testing of hydraulic fracturing flowback shall be completed as follows:
 - 1) *Hydraulic fracturing flowback must be tested for the presence of volatile organic chemicals, semi-volatile organic chemicals, inorganic chemicals, heavy metals, and naturally occurring radioactive material before removal from the well site, including specifically:*
 - A) pH;
 - B) total dissolved solids, dissolved methane, dissolved propane, dissolved ethane, alkalinity and specific conductance;
 - C) chloride, sulfate, arsenic, barium, calcium, chromium, iron, magnesium, selenium, cadmium, lead, manganese, mercury and silver;
 - D) BTEX; and

- E) gross alpha and beta particles to determine the presence of any naturally occurring radioactive materials.
- 2) Testing shall be completed on a composited sample of the hydraulic fracturing flowback.
- 3) *Testing shall occur once per well site at an Agency-accredited or -certified independent laboratory. When no laboratory has been accredited or certified by the Agency to analyze a particular substance requested in this subsection (d), results will be considered only if they have been analyzed by a laboratory accredited or certified by another State agency or an agency of the federal government, if the standards used for the accreditation or certification of that laboratory are substantially equivalent to the accreditation standard under Section 4(o) of the Illinois Environmental Protection Act [415 ILCS 5].*
- 4) *The analytical results shall be filed with the Department and the Agency, and provided to the liquid oilfield waste transportation and disposal operators at or before the time of pickup. (Section 1-75(c)(7) of the Act)*
- e) *Before plugging and site restoration required by Section 245.1030, the ground adjacent to the storage tanks and any hydraulic fracturing flowback reserve pit must be measured for radioactivity (Section 1-75(c)(7) of the Act).*
- f) *Surface discharge of hydraulic fracturing fluids or hydraulic fracturing flowback onto the ground or into any surface water or water drainage way at the well site or any other location is prohibited (Sections 1-75(c)(9) and 1-25(c) of the Act).*
- g) *Except for recycling allowed by subsection (i), hydraulic fracturing flowback may only be disposed of by injection into a Class II injection disposal well that is below interface between fresh water and naturally occurring Class IV groundwater (Sections 1-75(c)(8) and 1-25(c) of the Act). The Class II injection disposal well must be equipped with an electronic flowmeter and approved by the Department.*
- h) *Fluid transfer operations from tanks to tanker trucks for transportation offsite must be supervised at the truck and at the tank if the tank is not visible to the truck operator from the truck. During transfer operations, all interconnecting piping must be supervised if not visible to transfer personnel at the truck and tank. (Section 1-75(c)(6) of the Act)*

- i) *Hydraulic fracturing flowback may be treated and recycled for use in hydraulic fracturing fluid for high volume horizontal hydraulic fracturing operations. (Section 1-75(c)(8) of the Act)*
- j) *Transport of all hydraulic fracturing fluids and hydraulic fracturing flowback by vehicle for disposal or recycling must be undertaken by a liquid oilfield waste hauler permitted by the Department under Section 8c of the Illinois Oil and Gas Act. The liquid oilfield waste hauler transporting hydraulic fracturing fluids or hydraulic fracturing flowback under this Part shall comply with all laws, rules, and regulations concerning liquid oilfield waste. (Section 1-75(c)(10) of the Act)*
- k) A fluid handling report on the transportation and disposal or recycling of the hydraulic fracturing fluids and hydraulic fracturing flowback shall be prepared by the permittee on a form prescribed by the Department and included in the well file.
 - 1) Each report must include:
 - A) *the amount of hydraulic fracturing fluids or hydraulic fracturing flowback transported;*
 - B) *identification of the company that transported the hydraulic fracturing fluids or hydraulic fracturing flowback;*
 - C) the date the hydraulic fracturing fluids or hydraulic fracturing flowback were picked up from the well site (see Section 1-75(c)(14) of the Act);
 - D) *the destination of the hydraulic fracturing fluids or hydraulic fracturing flowback, including the name, address and type of facility accepting the hydraulic fracturing fluids or hydraulic fracturing flowback;*
 - E) *the method of disposal* (Section 1-75(c)(14) of the Act) or recycling; and
 - F) a copy of the analytical results of the testing required pursuant to subsection (d).
 - 2) The permittee shall prepare 4 copies of each fluid handling report for distribution as follows:
 - A) one copy for the permittee's records;

- B) two copies for the liquid oilfield waste hauler upon pick-up of the liquids as follows:
 - i) one copy for the waste hauler's records; and
 - ii) one copy to be provided to the permittee of the Class II UIC well, to the operator of the storage location where the liquids will be disposed of, or to the operator of the storage location where liquids will be recycled; and
 - C) one copy for the Department. A set of all fluid handling reports shall be submitted to the Department within 90 days after the completion of all HVHHF operations.
- 3) All copies of the fluid handling reports shall be retained for at least 5 years.

Section 245.855 Spills and Remediation

- a) *Any release of hydraulic fracturing fluid, hydraulic fracturing additive, hydraulic fracturing flowback, or produced water, used or generated during or after high volume horizontal hydraulic fracturing operation, shall be immediately cleaned up and remediated pursuant to requirements of the Illinois Oil and Gas Act and the administrative rules promulgated under the Act.*
- b) *Any release of hydraulic fracturing fluid or hydraulic fracturing flowback in excess of one barrel, shall be reported to the Department.*
- c) *Any release of produced water in excess of 5 barrels shall be cleaned up, remediated, and reported pursuant to requirements of the Illinois Oil and Gas Act and the administrative rules promulgated under that Act.*
- d) *Any release of a hydraulic fracturing additive shall be reported to IEMA in accordance with the appropriate reportable quantity thresholds established under the federal Emergency Planning and Community Right-to-Know Act as published at 40 CFR 355, 370, and 372, the federal Comprehensive Environmental Response, Compensation, and Liability Act as published in 40 CFR 302, and Section 112(r) of the Federal Clean Air Act as published at 40 CFR 68. (Section 1-75(c)(12) of the Act)*

Section 245.860 High Volume Horizontal Hydraulic Fracturing Operations Completion Report

- a) *Within 60 calendar days after the conclusion of high volume horizontal hydraulic fracturing operations, the permittee shall file a high volume horizontal hydraulic fracturing operations completion report with the Department in hard copy and electronic format (PDF).*
- b) *A copy of each completion report submitted to the Department shall be provided by the Department to the Illinois State Geological Survey in electronic format.*
- c) *Completion reports shall be made available on the Department's website no later than 30 days after receipt by the Department. (Section 1-75(f) of the Act)*
- d) *The high volume horizontal hydraulic fracturing operations completion report shall contain the following information (Section 1-75(f) of the Act):*
 - 1) *the permittee's name as listed in the permit application (Section 1-75(f)(1) of the Act);*
 - 2) *the dates of the high volume horizontal hydraulic fracturing operations (Section 1-75(f)(2) of the Act);*
 - 3) *the county where the well is located (Section 1-75(f)(3) of the Act);*
 - 4) *the well name and Department reference number (Section 1-75(f)(4) of the Act);*
 - 5) *the total water volume used in each stage and the total used in the high volume horizontal hydraulic fracturing operations of the well, and the type and total volume of the base fluid used if something other than water (Section 1-75(f)(5) of the Act);*
 - 6) *each source from which the water used in the high volume horizontal hydraulic fracturing operations was drawn, and the specific location of each source, including, but not limited to, the name of the county and latitude and longitude coordinates (Section 1-75(f)(6) of the Act);*
 - 7) *the quantity of hydraulic fracturing flowback recovered from the well and the time period for flowback recovery (Section 1-75(f)(7) of the Act);*

- 8) *a description of how hydraulic fracturing flowback recovered from the well was disposed or recycled (Section 1-75(f)(8) of the Act);*
- 9) *a chemical disclosure report identifying each chemical and proppant used in hydraulic fracturing fluid for each stage of the high volume horizontal hydraulic fracturing operations including the following (Section 1-75(f)(9) of the Act):*
 - A) *the total volume of water used in the high volume horizontal hydraulic fracturing treatment of the well or the type and total volume of the base fluid used in the high volume horizontal hydraulic fracturing treatment, if something other than water (Section 1-75(f)(9)(A) of the Act);*
 - B) *each hydraulic fracturing additive used in the hydraulic fracturing fluid, including the trade name, vendor, a brief descriptor of the intended use or function of each hydraulic fracturing additive, and the Material Safety Data Sheet (MSDS), if applicable (Section 1-75(f)(9)(B) of the Act);*
 - C) *each chemical intentionally added to the base fluid, including, for each chemical, the Chemical Abstracts Service number, if applicable (Section 1-75(f)(9)(C) of the Act); and*
 - D) *the actual concentration in the base fluid, in percent by mass, of each chemical intentionally added to the base fluid (Section 1-75(f)(9)(D) of the Act);*
- 10) a copy of the hydraulic fracturing string pressure test conducted pursuant to Section 245.805(e), if applicable;
- 11) *all pressures recorded during the high volume horizontal hydraulic fracturing operations in accordance with Section 245.835 (Section 1-75(f)(10) of the Act);*
- 12) plans for how produced water will be disposed of or recycled as required by Section 245.940 (see Section 1-75(c)(8) of the Act). If produced water is to be disposed of, the names and locations of Class II injection wells to be used. All Class II injection wells to be used for disposal of produced water must be shown to be in compliance with 62 Ill. Adm. Code 240.360 at the time of the issuance of the high volume horizontal hydraulic fracturing permit; and

- 13) *any other reasonable or pertinent information related to the conduct of the high volume horizontal hydraulic fracturing operations the Department may request or require* (Section 1-75(f)(11) of the Act).
- e) The HVHHF operations completion report must be approved and signed and certified by a licensed professional engineer, licensed profession geologist or the permittee.

Section 245.870 Use of Diesel in High Volume Horizontal Hydraulic Fracturing Operations is Prohibited

It is unlawful to perform any high volume horizontal hydraulic fracturing operations by knowingly or recklessly injecting diesel (Section 1-25(d) of the Act).

SUBPART I: HIGH VOLUME HORIZONTAL
HYDRAULIC FRACTURING PRODUCTION

Section 245.900 Managing Natural Gas and Hydrocarbon Fluids During Production

For wells regulated by this Part, *permittees shall be responsible for minimizing the emissions associated with venting of hydrocarbon fluids and natural gas during the production phase to safely maximize resource recovery and minimize releases to the environment (Section 1-75(e)(4) of the Act).*

- a) Except for wells covered by subsection (i), *sand traps, surge vessels, separators, and tanks* must be employed *as soon as practicable during cleanout operations to safely maximize resource recovery and minimize releases to the environment.* (Section 1-75(e)(4)(B) of the Act)
- b) Except for wells covered by subsection (i), *recovered hydrocarbon fluids* must be routed *into storage vessels.* (Section 1-75(e)(4)(A) of the Act)
- c) Except for wells covered by subsection (i), recovered natural gas must be:
 - 1) *routed into a gas gathering line or collection system, or to a generator for onsite energy generation;*
 - 2) *provided to the surface landowner of the well site for use for heat or energy generation; or*
 - 3) *used for a lawful and useful purpose other than venting or flaring.* (Section 1-75(e)(4)(A))
- d) *If the permittee establishes that it is technically infeasible or economically unreasonable to minimize emissions associated with the venting of hydrocarbon fluids and natural gas during production using the methods specified in subsections (b) and (c), the Department, in consultation with the Agency as the Department deems appropriate, shall require the permittee to capture and direct any natural gas produced during the production phase to a flare.*
- e) *In order to establish technical infeasibility under subsection (d), the permittee must demonstrate to the Department's satisfaction, for each well site on an annual basis, that taking the actions listed in subsections (b) and (c) are not cost effective based on a well site-specific analysis, and that the technology listed in subsections (b) and (c) does not exist, cannot be installed at the well site, will not achieve the result intended, or is otherwise unavailable or ineffective. The*

permittee claiming economic unreasonableness shall provide the Department with the following:

- 1) The method the applicant used to determine it is economically unreasonable to implement the methods specified in subsection (b) or (c);
 - 2) Applicant's experience in implementing the methods specified in subsection (b) or (c);
 - 3) Estimated costs of implementing the methods specified in subsection (b) or (c) and sources for those estimates;
 - 4) Anticipated rates (by day) and amounts (total for well) of fluids and/or gas to be directed to the flare; and
 - 5) Any other information requested by the Department or that documents the economic unreasonableness claimed.
- f) *Any flare used pursuant to this Section shall be equipped with an auto-igniter and a reliable continuous ignition source over the duration of production. The manufacturer's specifications for all flares must be provided to the Department before operation of the flare begins, and the Department shall post the specifications to its website.*
- g) *Permittees that use a flare during the production phase for operations other than emergency conditions shall visually inspect or monitor the flare on a regular basis to insure it is operating properly. The permittee shall file an updated well site-specific analysis annually with the Department on a form prescribed by the Department in consultation with the Agency. The analysis shall:*
- 1) *be due one year from the date of the previous submission;*
 - 2) *report the dates and duration of any period during which the flare is not operating properly; and*
 - 3) *detail whether any changes have occurred that alter the technical infeasibility or economic unreasonableness of the permittee to reduce emissions in accordance with subsections (b) and (c). (Section 1-75(e)(5) of the Act)*
- h) *On or after July 1, 2015, all flares used under this Section shall:*

- 1) *operate with a combustion efficiency of at least 98% and in accordance with 40 CFR 60.18;*
 - 2) *be certified by the manufacturer of the device; and*
 - 3) *be maintained and operated in accordance with manufacturer specifications. (Section 1-75(e)(9) of the Act)*
- i) *For each wildcat well, delineation well, or low pressure well, permittees shall be responsible for minimizing the emissions associated with venting of hydrocarbon fluids and natural gas during the production phase by capturing and directing the emissions to a flare during the production phase, except in conditions that may result in a fire hazard or explosion, or where high heat emissions from a flare may negatively impact waterways. Flares shall be used during the production phase. (Section 1-75(e)(8) of the Act)*

Section 245.910 Uncontrolled Emissions from Storage Tanks Containing Natural Gas and Hydrocarbon Fluids

- a) In addition to the requirements of Section 245.900, *uncontrolled emissions exceeding 6 tons per year from storage tanks containing natural gas or hydrocarbon fluids shall be recovered and routed to a flare that is designed in accordance with 40 CFR 60.18 and is certified by the manufacturer of the device.* Permittees shall calculate whether uncontrolled emissions from storage tanks exceed 6 tons per year by using a generally accepted model or calculation methodology based on the maximum average daily throughput determined for a 30 day period of production prior to the applicable emission determination deadline, pursuant to 40 CFR 60.5365(e).
- b) *The permittee shall maintain and operate the flare in accordance with the manufacturer's specifications.*
- c) *Any flare used under this Section must be equipped with an auto-igniter and a reliable continuous ignition source over the duration of production pursuant to the requirements of Section 245.900(h). (Section 1-75(e)(6) of the Act) The manufacturer's specifications for all flares must be provided to the Department before operation of the flare begins, and the Department shall post the specifications to its website.*

Section 245.920 Flaring Waiver

For wells regulated by this Part:

- a) *The Department, in consultation with the Agency as the Department deems appropriate, may approve an exemption request made in writing that waives the flaring requirements of Sections 245.900 and 245.910 only if the permittee demonstrates to the Department's satisfaction that the use of the flare will pose a significant risk of injury or property damage and that alternative methods of collection will not threaten harm to public health, public safety, property, wildlife, aquatic life or the environment (Section 1-75(e)(7) of the Act).*
- b) *In determining whether to approve a waiver, the Department, in consultation with the Agency as the Department deems appropriate, shall consider the quantity of casinghead gas produced, the topographical and climatological features at the well site, and the proximity of agricultural structures, crops, inhabited structures, public buildings, and public roads and railways (Section 1-75(e)(7) of the Act).*
- c) The Department, in consultation with the Agency as the Department deems appropriate, shall provide the permittee with a written decision.

Section 245.930 Annual Flaring Reports

Pursuant to Sections 245.900 and 245.910, *permittees shall record the amount of gas flared or vented from each high volume horizontal hydraulic fracturing well* or storage tank on at least a weekly basis (Section 1-75(e)(11) of the Act). Every 12 months from the date of permit issuance under this Part, permittees shall report the total amount of gas flared or vented from each well during the previous 12 months, by week, to the Department. The Department will post the reports on the Department's website.

Section 245.940 Produced Water Disposal or Recycling, Transportation and Reporting Requirements

The permittee shall dispose of or recycle produced water in accordance with the requirements of this Section:

- a) *Surface discharge of produced water onto the ground or into any surface water or water drainage way is prohibited* (Sections 1-75(c)(9) and 1-25(c) of the Act).
- b) *Except for recycling allowed under subsection (d), produced water may only be disposed of by injection into a Class II injection well that is below interface between fresh water and naturally occurring Class IV groundwater* (Sections 1-75(c)(8) and 1-25(c) of the Act). Unless used for enhanced oil recovery, the Class II injection well must be equipped with an electronic flowmeter and approved by the Department.
- c) *Produced water transfer operations from tanks to tanker trucks for transportation offsite must be supervised at the truck and at the tank if the tank is not visible to the truck operator from the truck. During transfer operations, all interconnecting piping must be supervised if not visible to transfer personnel at the truck and tank.* (Section 1-75(c)(6) of the Act)
- d) *Produced water may be treated and recycled for use in hydraulic fracturing fluid for high volume horizontal hydraulic fracturing operations* (Section 1-75(c)(8) of the Act).
- e) *Transport of produced water by vehicle for disposal or recycling must be undertaken by a liquid oilfield waste hauler permitted by the Department under Section 8c of the Illinois Oil and Gas Act. The liquid oilfield waste hauler transporting produced water under this Part shall comply with all laws, rules, and regulations concerning liquid oilfield waste.* (Section 1-75(c)(10) of the Act)
- f) *Permittees must submit an annual produced water report to the Department detailing the management of any produced water associated with the permitted well.*
 - 1) *The produced water report shall be due to the Department no later than April 30 of each year and shall provide information on the operator's management of any produced water for the prior calendar year and the anticipated management for the next calendar year; and*

- 2) *The produced water report shall contain information relative to the amount of produced water from the well, the method by which the produced water was transported and disposed of or recycled, the destination where the produced water was disposed of (Section 1-75(c)(15) of the Act) or recycled.*

SUBPART J: PLUGGING AND RESTORATION

Section 245.1000 Plugging and Restoration Requirements

- a) *The permittee shall perform and complete plugging of the well and restoration of the well site in accordance with the Illinois Oil and Gas Act and any and all rules adopted under that Act (62 Ill. Adm. Code 240.Subpart K). The permittee shall bear all costs related to plugging of the well and reclamation of the well site.*
- b) *If the permittee fails to plug the well in accordance with this Section, the owner of the well shall be responsible for complying with this Section. (Section 1-95(a) of the Act)*
- c) **Special Plugging Requirement**
If the permittee stimulates the geologic formation in accordance with the permit using a high volume horizontal hydraulic fracturing process, then once commercial production ceases from the well and it is time to plug the well, in addition to all the other requirements, the permittee shall initiate the plugging process using a circulation method starting at the top of the geologic formation stimulated installing a cement plug at least 100 feet above the top of the geologic formation.
- d) Upon completion of the requirements of this Subpart J, the Department will release the permit in accordance with Section 245.350.

Section 245.1010 Plugging Previously Abandoned Unplugged or Insufficiently Plugged Wells

- a) The permittee shall plug any abandoned *unplugged*, or insufficiently plugged, *well bores within 750 feet of any part of the horizontal well bore that penetrated within 400 vertical feet of the geologic formation that will be stimulated as part of the permittee's proposed high volume horizontal hydraulic fracturing operations* (Section 1-95 of the Act). In determining whether a well has been sufficiently plugged, the Department will consider, but is not limited to, well completion reports, cementing records, well construction records, cement bond logs, tracer surveys, oxygen activation logs and plugging records. The permittee shall complete this plugging before the permittee conducts any HVHHF operations.
- b) This pre-HVHHF operations plugging obligation shall be performed in accordance with 62 Ill. Adm. Code 240.1110.
 - 1) If the permittee does not have authority to plug an abandoned well within the Plugging and Restoration Fund Program, the Department will give the permittee authority to enter upon the land, plug the well, and restore the well site consistent with 62 Ill. Adm. Code 240.1610(e).
 - 2) If the permittee does not have authority to plug an abandoned well that is not within the Plugging and Restoration Fund Program, either:
 - A) the Department will initiate abandoned well proceedings pursuant to Section 19.1 of the Illinois Oil and Gas Act and 62 Ill. Adm. Code 240.1610, in order to grant the permittee authority to plug the abandoned well; or
 - B) the permittee will work with the landowner and the person responsible for the abandoned well to arrange for plugging and restoration.
- c) If the permittee is unable to locate an abandoned unplugged well or insufficiently plugged well identified by the Department for plugging before HVHHF operations begin, the permittee may receive a waiver of the plugging requirement from the Department after demonstrating a diligent effort to locate the abandoned unplugged well or insufficiently plugged well in the field.
- d) Before proceeding with any HVHHF operations, the permittee shall receive written approval from the Department that all wells under the permit within 750 feet of any part of the horizontal well bore that appear to penetrate within 400

vertical feet of the formation that the permittee intends to stimulate have been plugged, or that the plugging requirements have been met.

- e) If, during or after performing HVHFF operations, there is any evidence of fluids leaking at the surface from abandoned wells, unpermitted wells, or previously plugged wells within 750 feet of any part of the horizontal well bore:
 - 1) the permittee shall immediately stop hydraulic fracturing operations, notify the Department, and shut in the well;
 - 2) the permittee shall plug those wells and restore the well sites in accordance with 62 Ill. Adm. Code 240.870, 240.875 and 240.1110; and
 - 3) the permittee shall obtain the approval of the Department prior to resuming operations.
- f) If, during or after performing HVHFF operations, there is any evidence of damage from the permittee's HVHFF operations to a producing well within 750 feet of any part of the horizontal well bore, the permittee shall be responsible for all repairs to the well construction or the costs of plugging the damaged well.

Section 245.1020 Restoration of Lands Other than the Well Site and Production Facility

The permittee shall restore any lands used by the permittee other than the well site and production facility to a condition as closely approximating the pre-drilling conditions that existed before the land was disturbed by site preparation activities, drilling, or high volume horizontal hydraulic fracturing operations.

- a) *Restoration shall be commenced within 6 months after completion of the well site and shall be completed within 12 months.*
- b) *Restoration shall include, but is not limited to:*
 - 1) *repair of tile lines to a condition as closely approximating the conditions that existed before the land was disturbed by drilling activities, with reference to the Illinois Drainage Guide, Circular 1226, Cooperative Extension Service, College of Agriculture, University of Illinois at Urbana-Champaign (1984) – drainage tile installations;*
 - 2) *repair of fences and barriers;*
 - 3) *mitigation of soil compaction and rutting;*
 - 4) *application of fertilizer or lime to restore the fertility of disturbed soil; and*
 - 5) *repair of soil conservation practices such as terraces and grassed waterways with reference to local County Soil and Water Conservation District specifications for soil restoration and conservation methods (Section 1-95(c) of the Act).*

Section 245.1030 Restoration of the Well Site and Production Facility

Unless contractually agreed to the contrary by the permittee and surface landowner, the permittee shall restore the well site and production facility to a condition as closely approximating the conditions that existed before the land was disturbed for any stage of site preparation activities, drilling and HVHFF operations.

- a) Restoration shall include:
 - 1) all of the requirements set forth in Section 245.1020(b);
 - 2) *removal of all equipment and materials involved in site preparation, drilling, and high volume horizontal hydraulic fracturing operations, including tank batteries, rock and concrete pads, oil field debris, injection and flow lines at or above the surface, electric power lines and poles extending on or above the surface, tanks, fluids, pipes at or above the surface, secondary containment measures, rock or concrete bases, drilling equipment and supplies, and any and all other equipment, facilities, or materials used during any stage of site preparation work, drilling, or high volume horizontal hydraulic fracturing operations at the well site; and*
 - 3) all of the requirements of 62 Ill. Adm. Code 240.1180 and 240.1181;
- b) *Restoration and work on the removal of equipment and materials at the well site shall begin within 6 months after plugging the final well on the well site and be completed no later than 12 months after the last producing well on the well site has been plugged; and*
- c) *Roads installed as part of the oil and gas operation may only be left in place if provided in the lease or pursuant to agreement with the landowner, as applicable.*
(Section 1-95(d) of the Act)

SUBPART K: ENFORCEMENT

Section 245.1100 Suspension, Revocation, Remediation and Administrative Penalties

The Department may, through the enforcement process set forth in this Subpart, suspend or revoke a high volume horizontal hydraulic fracturing permit, order actions to remediate, or issue administrative penalties for one or more of the following causes:

- a) *providing misleading, or materially untrue information in a permit application process or in any document or information provided to the Department* (Section 1-60(a)(1) of the Act);
- b) *violating any condition of the permit* (Section 1-60(a)(2) of the Act);
- c) *violating any provision of or any regulation adopted under the Act or the Illinois Oil and Gas Act* (Section 1-60(a)(3) of the Act);
- d) *using fraudulent, coercive, or dishonest practices, or demonstrating incompetence, untrustworthiness, or financial irresponsibility in the conduct of business in this State or elsewhere* (Section 1-60(a)(4) of the Act);
- e) *having a high volume horizontal hydraulic fracturing permit, or its equivalent, revoked in any other state, province, district, or territory for incurring a material or major violation or using fraudulent or dishonest practices* (Section 1-60(a)(5) of the Act);
- f) *the existence of an emergency condition under which the conduct of high volume horizontal hydraulic fracturing operations would pose a significant hazard to public health, aquatic life, wildlife, or the environment* (Section 1-60(a)(6) of the Act); *or*
- g) *a determination of pollution or diminution made pursuant to an investigation under Section 245.610* (Section 1-83(d) of the Act).

Section 245.1110 Notice of Violation

- a) When the Department determines to suspend or revoke a permit issued pursuant to this Part, orders actions to remediate, or issues administrative penalties under this Subpart, a Notice of Violation shall be completed and delivered to the Permittee and to the Director or the Director's designee.
- b) The Notice of Violation shall contain:
 - 1) The name and permit number for the well at issue;
 - 2) The provision of Section 245.1100 that applies, a statement specifying the factual nature of the violation, the action the Department will be taking and, as applicable, a citation to the specific permit condition alleged to have been violated or to the specific Section of this Part, the Act, the Illinois Oil and Gas Act or the administrative rules promulgated under that Act alleged to have been violated;
 - 3) A statement as to whether a remedial action is needed to address the violation and, if so, identification of the remedial action and the time within which the remedial action is required to be completed;
 - 4) A statement as to whether probationary or permanent modification or conditions on the permit will be recommended and, if so, the substance of the recommended probationary or permanent modification or conditions; and
 - 5) Any factors known to the person completing the Notice of Violation in aggravation or mitigation of the violation and the existence of any factors indicating that the permit should be conditioned or modified.
- c) The permittee charged with the Notice of Violation may provide the Department, in writing, any information in mitigation of the Notice of Violation within 14 days after the date of receiving the Notice of Violation. The written information may include a proposed alternative to the Department's suggested remedial action needed to address the violation.
- d) If a Notice of Violation includes an immediate permit suspension, the suspension *may be stayed*, at any time, by the Department, *if requested by the permittee and evidence is submitted demonstrating that there is no significant threat to the public health, aquatic life, wildlife, or the environment if the operation is allowed to continue* (Section 1-60(d) of the Act). Requests for stay must be made in

writing to the Department and shall provide the basis for the requested stay and be accompanied by any supporting documents. All requests for stay shall be delivered to the Department's Office of Oil and Gas Resource Management located in Springfield, Illinois or mailed to the Department at Illinois Department of Natural Resources, Attention: Office of Oil and Gas Resource Management, One Natural Resources Way, Springfield IL 62702. A request for stay shall be decided by the Director or the Director's designee within 5 business days after its receipt.

Section 245.1120 Director's Decision

- a) Upon receipt of a Notice of Violation, the Director or Director's designee shall conduct an investigation and may affirm, vacate or modify the Notice of Violation. In determining whether to affirm, vacate or modify the Notice of Violation, the Director shall consider:
 - 1) whether the facts support the violation set forth in the Notice of Violation;
 - 2) the seriousness of the violation, including any harm to public health, public safety, aquatic life, wildlife or the environment or damage to property;
 - 3) the permittee's history of previous violations, including violations at other locations and under other permits.
 - A) A violation shall not be counted if the Notice of Violation or Director's Decision is the subject of pending administrative review by the Department under Section 245.1130, or judicial review under the Administrative Review Law and the rules adopted under that Law, or if the time to request a review has not expired, and thereafter it shall be counted for only 5 years after the date of the Department's final administrative decision or a final judicial decision affirming the Department's decision.
 - B) No violation for which the Notice of Violation or Director's Decision has been vacated shall be counted;
 - 4) the degree of culpability of the permittee;
 - 5) whether the remedial action to address the violation set forth in the Notice of Violation is completed within the time set forth in the Notice of Violation; and
 - 6) the existence of any additional conditions or factors in aggravation or mitigation of the violation, including information provided by any person or by the permittee.
- b) Modification to the Notice of Violation may include:
 - 1) any different or additional remedial actions required to address the violation and the time within which the remedial actions must be

- completed;
- 2) assessment of administrative penalties not to exceed \$5,000 a day for each and every act of violation, not to exceed \$50,000;
 - 3) probationary or permanent modification or conditions on the permit, which may include special monitoring or reporting requirements;
 - 4) suspension of the permit; and
 - 5) revocation of the permit.
- c) The Director shall determine whether to assess administrative penalties based on the factors set forth in subsection (a). If an administrative penalty is assessed by the Department, the administrative penalty shall be computed as follows, but shall not exceed \$5,000 per day for each and every act of violation:
- 1) Administrative violations are violations of any submission, reporting or notification requirements of this Part, including, but not limited to, providing incorrect, misleading, incomplete or materially untrue information regarding permittee registration, permit application, permit modification, permit transfer, or permit bonding, and failing to properly comply with the reporting and Department notification requirements set forth in the construction, operation, monitoring, disclosure or production requirements of this Part or of the permit, and shall be assessed on a permittee-specific basis. The Department may assess a penalty for an administrative violation as follows:
 - A) No previous violation of the same rule: \$500.
 - B) One previous violation of the same rule: \$1,000.
 - C) Two previous violations of the same rule: \$1,500.
 - D) Three previous violations of the same rule: \$2,000.
 - E) Four or more previous violations of the same rule: \$5,000.
 - 2) Operating violations are violations of all other requirements of this Part not covered by subsection (c)(1), including, but not limited to, operating a well required to be permitted under the Act without first obtaining a proper permit from the Department, constructing or operating a well in violation of the construction, operation, monitoring, disclosure or

production requirements of this Part or of the permit. The Department may assess a penalty for an operating violation by considering elements of subsections (c)(2)(A), (B) and (C) as follows:

A) History of Violations:

- i) No previous violation of the same rule: \$1,000.
- ii) One previous violation of the same rule: \$2,500.
- iii) Two previous violations of the same rule: \$5,000.
- iv) Three previous violations of the same rule: \$7,500.
- v) Four previous violations of the same rule: \$10,000.
- vi) Five or more previous violations of the same rule: \$25,000.

B) Seriousness:

- i) If the violation had a high degree of probability to cause environmental damage to soil and/or land surface, vegetation or crops, surface water, groundwater, livestock or wildlife: add \$2,500; or, if the violation caused environmental damage to soil and/or land surface, vegetation or crops, surface water, groundwater, livestock or wildlife: add \$10,000.
- ii) If the violation created a hazard to the safety of any person: add \$20,000.

C) Permittee's Actions:

- i) If the permittee was previously notified of the violation using a routine inspection report (Form OG-22) in accordance with Section 245.1110 or correspondence from the Department and failed to comply: add \$5,000.
- ii) If the violation occurred as a result of the permittee's deliberate conduct, including lack of reasonable maintenance of equipment: add \$5,000.
- iii) If the violation involves a failure of surface casing or

cement of surface casing: add up to \$50,000, but no less than \$5,000.

- d) The Director or Director's designee shall serve the permittee with his or her decision at the conclusion of the investigation. The Director's Decision shall be served either *personally or by certified mail, receipt return requested, to the permittee* (Section 1-60(b) of the Act). The Director's Decision shall provide that the permittee has the right to request a hearing to contest the Director's Decision in accordance with Section 245.1130.
- e) The Director's Decision shall take effect upon issuance.
- f) The permittee may contest the Director's Decision by submitting *a request, in writing, within 30 days after the date of receiving the Director's Decision, for a hearing in accordance with Section 245.1130. Except as provided under Section 245.1130(d)(2), in the event a hearing is requested, the Director's Decision shall remain in effect until a final order is entered pursuant to the hearing.* (Section 1-60(c) of the Act)
- g) Failure of the permittee to timely request a hearing, or if a civil penalty has been assessed, to timely tender the assessed civil penalty, shall constitute a failure to exhaust all administrative remedies and a waiver of all legal rights to contest the Director's Decision, including the amount of the civil penalty.
- h) The permittee may, within 30 days from the date of receiving the Director's Decision, submit to the Department, in writing, any mitigating factors that permittee believes to be relevant to the violation cited in the Director's Decision.
- i) Upon further investigation, the Director may enter into a settlement agreement, issue an amended Director's Decision, or issue a replacement Director's Decision.
 - 1) A settlement agreement shall be issued to:
 - A) extend the amount of time provided to complete remedial action necessary to address a violation set forth in the Director's Decision; or
 - B) increase or reduce the civil penalty assessed in the Director's Decision; or
 - C) allow new permits or the transfer of existing permits to be issued during the term of the settlement agreement.

- 2) An amended Director's Decision shall be issued to:
 - A) extend the amount of time provided to complete remedial action necessary to address a violation set forth in the Director's Decision;
or
 - B) reduce the civil penalty assessed in the Director's Decision.
- 3) A replacement Director's Decision shall be issued to correct an administrative error contained in the Director's Decision or the Notice of Violation.
- 4) The permittee shall have no right to administrative hearing associated with the issuance of a settlement agreement or an amended Director's Decision.
- j) If the Director's Decision includes the assessment of an administrative penalty and the permittee named in the Director's Decision does not request a hearing in accordance with Section 245.1130, the administrative penalty assessed shall be paid to the Department in full within 30 days after receiving the Director's Decision.
- k) *All administrative penalties assessed and paid to the Department shall be deposited in the Mines and Minerals Regulatory Fund (Section 1-35(e) of the Act).*

Section 245.1130 Director's Decision Hearings

- a) A permittee shall have 30 days from the date of receiving the Director's Decision to submit a written request for hearing to contest the Director's Decision. The written request for hearing shall provide the basis for contesting the Director's Decision and be accompanied by any documents evidencing the basis for contesting the Director's Decision. A permittee seeking to contest any Director's Decision in which a civil penalty has been assessed shall submit the assessed amount to the Department, by cashier's check or money order, together with a timely written request for hearing. The assessed amount shall be deposited by the Department pending the outcome of the hearing. The assessed amount, or applicable portion thereof, shall be ordered refunded to the permittee at the conclusion of the hearing if the Department does not prevail. All requests for hearing shall be delivered to the Department's Office of Oil and Gas Resource Management located in Springfield, Illinois or mailed to the Department at Illinois Department of Natural Resources, Attention: Office of Oil and Gas Resource Management, One Natural Resources Way, Springfield IL 62702.
- b) Upon receipt of a request for hearing submitted in accordance with all requirements of subsection (a), the Department shall provide an opportunity for a formal hearing upon not less than 5 days' written notice mailed to the permittee or person submitting the hearing request. All hearings under this Section shall be conducted in the Department's offices located in Springfield, Illinois.
- c) The hearing shall be conducted by a Hearing Officer designated by the Director. The Hearing Officer shall have all powers necessary to conduct the hearing, including, but not limited to, *the power to administer oaths and affirmations, subpoena witnesses and compel their attendance, take evidence, and require the production of books, papers, correspondence, and other records or information that he or she considers relevant or material* (Section 1-60(e) of the Act).
- d) The hearing shall be conducted in accordance with the following procedures:
 - 1) Pre-Hearing Conference
 - A) A pre-hearing conference shall be scheduled within 60 days after the request for hearing:
 - i) to define the factual and legal issues to be litigated at the administrative hearing;
 - ii) to determine the timing and scope of discovery available to

the parties;

- iii) to set a date for the parties to exchange all documents they intend to introduce into evidence during the hearing, a list of all witnesses the parties intend to have testify and a summary of the testimony of each witness;
 - iv) to schedule a date for the administrative hearing; and
 - v) to arrive at an equitable settlement of the hearing request, if possible.
- B) Pre-hearing conferences under this Section may be conducted via telephone conference if that procedure is acceptable to all parties to the hearing. In the event that a telephone conference is not acceptable to all parties, the pre-hearing conference shall be conducted at the Department's offices located in Springfield, Illinois, or a place designated by the Hearing Officer.
- 2) Stays of Suspension or Revocation. *The order of suspension or revocation of a permit based on Section 245.1000(f) may be stayed*, at any time, by the Hearing Officer, *if requested by the permittee by appropriate motion and evidence is submitted demonstrating that there is no significant threat to the public health, public safety, property, aquatic life, wildlife, or the environment if the operation is allowed to continue* (Section 1-60(d) of the Act). The Hearing Officer shall issue an order granting or denying a motion to stay within 5 business days after it is heard.
- 3) Either party may file motions for default judgment, motions for summary judgment, motions for protective orders and motions for orders compelling discovery. The Hearing Officer shall issue an order granting or denying motions filed within 15 days after service or, if applicable, after hearing. Any order granting a motion for default judgment or a motion for summary judgment shall constitute the Department's final administrative decision as to the matter being contested.
- 4) If a settlement agreement is entered into at any stage of the hearing process, the person to whom the notice of violation or cessation order was issued will be deemed to have waived all right to further review of the violation or administrative penalty in question, except as otherwise expressly provided for in the settlement agreement. The settlement agreement shall contain a waiver clause to this effect. All settlement agreements shall be executed by the Hearing Officer and shall constitute

the Department's final administrative decision as to the matter being contested.

- 5) All hearings, under this Section shall be conducted in accordance with Article 10 of the Illinois Administrative Procedure Act [5 ILCS 100/Art. 10].
 - 6) At the hearing, the Department shall have the burden of proving the facts of the violation alleged in the notice of violation at issue. The amount of any administrative penalty assessed shall be presumed to be proper; however, the permittee may offer evidence to rebut this presumption. The standard of proof shall be a preponderance of the evidence. The permittee shall have the right to challenge the Hearing Officer if the person or permittee believes the Hearing Officer is prejudiced against him or her or has a conflict of interest. If the Hearing Officer disqualifies himself or herself, the Director shall designate a new Hearing Officer. The Hearing Officer shall conduct the hearing and hear the evidence. The Hearing Officer, at the conclusion of the hearing, shall have 30 days to issue recommended findings of fact, recommended conclusions of law and recommendations as to the disposition of the case.
 - 7) The Director or the Director's designee shall review the administrative record in conjunction with the Hearing Officer's recommended findings of fact, recommended conclusions of law and recommendations as to the disposition of the case. Within 15 days after receiving the Hearing Officer's recommendations, the Department shall issue a final administrative decision.
- e) All Department final administrative decisions set forth in this Section are subject to judicial review under the Administrative Review Law and the rules adopted under that Law.
 - f) *The costs associated with the administrative hearing shall be borne by the permittee* (Section 1-60(f) of the Act), except that all parties shall be responsible for their own attorneys' fees.

Section 245.1140 Alternative Enforcement

- a) All persons, owners and permittees regulated under the Act and this Part are also subject to, and required to comply with, the Illinois Oil and Gas Act and 62 Ill. Adm. Code 240.
- b) Any violation of this Part may also include violations of the permittee's Oil and Gas permit related to the same well, the Illinois Oil and Gas Act, and regulations adopted under that Act.
- c) All violations related to the same well may be brought as one case at the discretion of the Department.
- d) Failure to meet the burden of proof required for revocation or suspension of a permit under the Act, this Part, the Illinois Oil and Gas Act, or the regulations promulgated under that Act, does not mean that the Department necessarily failed to prove other violations under the Act, this Part, the Illinois Oil and Gas Act, or the regulations promulgated under that Act.
- e) Knowing violations of this Part may be a criminal offense as defined in Section 1-100 of the Act, which will be, in addition to any administrative action taken by the Department, referred to the State's Attorney in the county where the violation occurred or the Attorney General's Office.
- f) Regulatory enforcement under this Part does not preclude the recovery of civil penalties by civil action before a circuit court pursuant to Section 1-101 of the Act, which will be in addition to any administrative action taken by the Department.

SUBPART L: MEDIUM VOLUME HORIZONTAL HYDRAULIC FRACTURING
OPERATIONS COMPLETION REPORTS

Section 245.1200 Medium Volume Horizontal Hydraulic Fracturing Completion Reports

- a) *For any horizontal hydraulic fracturing operations where all combined stages of a stimulation treatment of a horizontal well are by the pressurized application of more than 80,000 gallons but less than 300,001 gallons of hydraulic fracturing fluid and proppant to initiate or propagate fractures in a geologic formation to enhance extraction or production of oil or gas, reporting under subsection (c) is required (Section 1-98(a) of the Act).*
- b) Permittees with a high volume horizontal hydraulic fracturing permit are not required to report under subsection (c).
- c) *Within 60 calendar days after the conclusion of horizontal hydraulic fracturing operations identified in subsection (a), the permittee shall file a medium volume horizontal hydraulic fracturing operations completion report with the Department. The medium volume horizontal hydraulic fracturing operations completion report shall contain the following information (Section 1-98(b) of the Act):*
 - 1) *the name and location of the well* (Section 1-98(b)(1) of the Act). The well location shall be surveyed by an Illinois licensed land surveyor or Illinois registered professional engineer and the description of the surveyed well location shall also include the legal description, the GPS latitude and longitude location, and ground elevation of the well. The GPS location shall be recorded as degrees and decimal degrees recorded to 6 decimal places in the North American Datum 1983 projection and shall be accurate to within 3 feet. The reported GPS location is required to be an actual GPS field measurement and not a calculated or conversion measurement;
 - 2) the permittee number and well reference number issued pursuant to the Illinois Oil and Gas Act;
 - 3) *the total and per-stage gallons of hydraulic fracturing fluid used at the well* (Section 1-98(b)(2) of the Act), the quantity recovered during the flowback period, and what the permittee did to dispose of, reuse or recycle the flowback;
 - 4) *depth of the wellbore (including both total vertical depth and total measured depth)* (Section 1-98(b)(3) of the Act);

- 5) *length of horizontal wellbore* (Section 1-98(b)(4) of the Act);
- 6) *the maximum surface treating pressure used* (Section 1-98(b)(5) of the Act);
- 7) *the formation targeted* (Section 1-98(b)(6) of the Act);
- 8) *the number of hydraulic fracturing stages* (Section 1-98(b)(7) of the Act);
and
- 9) *total perforated interval and individual perforation intervals* (Section 1-98(b)(8) of the Act).