



ILLINOIS DEPARTMENT OF NATURAL RESOURCES

Office of Oil and Gas Resource Management
One Natural Resources Way Springfield, Illinois 62702-1271



HIGH VOLUME HORIZONTAL HYDRAULIC FRACTURING PERMIT APPLICATION HVHFF-10

References to "1-xx" or "§1-xx" are to the Hydraulic Fracturing Regulatory Act., 225 ILCS 732/1-1 et seq. References to "240.xxx" and "245.xxx" are to 62 Ill. Admin. Code 240 and 245, respectively.

Attachment: HVHFFOperationsPlan

Please save attachment and use the file name above.

High Volume Horizontal Hydraulic Fracturing Operations Plan §1-35(b)(6), 245.210(a)(6).

Geological description.

Please list and describe in this attachment all formation(s) affected by the high volume horizontal hydraulic fracturing operation, including (but not limited to) the formation(s) to be stimulated and the formations constituting or contributing to the confining zone. For each such formation, please describe the lithology, extent, thickness, permeability, porosity, transmissive faults, fractures, water or water source content, and susceptibility to vertical propagation of fractures. For each formation, state if any of these features are unknown.

- a) what is the anticipated surface treating pressure range?
- b) what is the maximum anticipated injection treating pressure?
- c) what is the estimated or calculated fracture pressure of the producing zone?
- d) what is the estimated or calculated fracture pressure of the confining zones?
- e) what is the planned depth of all proposed perforations?
- f) what is the planned depth to the top of the open hole section?
- g) what is the type, source and volume of base fluid anticipated to be used?