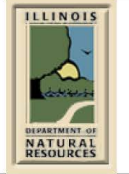




ILLINOIS DEPARTMENT OF NATURAL RESOURCES

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: WaterSourceManagementPlan

Please save attachment and use the file name above.

Water Source Management Plan §1-35(b)(10); 245.210(a)(10). Note: If recycled water is anticipated to be used in the HVHFF treatment, describe the source of the recycled water and the anticipated water to be used in (a), but skip subsections (c) through (g) below. If water other than fresh water or recycled water is anticipated to be used in the HVHFF treatment, describe the source and the anticipated volume to be used in (a); 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 all the information requested in this section.

- (a) List the source(s) of the water (surface, groundwater, etc.) that will be used in the HVHFF treatment
- (b) Identify precisely the anticipated withdrawal location(s) including county, latitude and longitude
- (c) Identify the anticipated volume and rate of each water withdrawal from each withdrawal location.
- (d) Identify the months when water withdrawals are expected to be made from each location
- (e) Identify the methods to be used to accurately monitor water withdrawals, and how the data will be recorded and maintained.
- (f)) Identify the methods to be used to minimize adverse impact to aquatic life.
- (g) Identify the methods to be used to minimize withdrawals as much as feasible.
- (h) Specify how you will transport or deliver water to the well site

Source water is subject to a Source Water Sampling Plan under §1-80 of the Act. Describe the general structure of the sampling program, including but not limited to: who will conduct the sampling, sampling protocols, and provide any relevant certifications. The required tests are marked in **bold** in the table below. You can use the table provided or insert your own table and/or text.

COMPOUND TO SAMPLE	METHOD USED (ASTM or other applicable standard method)	SAMPLE TYPE (grab, continuous, composite, etc.)
Arsenic		
Barium		
Cadmium		
Calcium		
Chromium		
Iron		
Lead		
Magnesium		
Manganese		
Selenium		
Silver		
Mercury		
VOCs		
BTEX		
Dissolved propane		
Dissolved methane		
Dissolved ethane		
Chloride		
<i>Sulfide</i>		
<i>Nitrate</i>		
<i>Nitrite</i>		
Sulfate		
Gross Alpha particles		
Gross Beta particles		
pH		
Total Dissolved Solids		
<i>Turbidity</i>		
Alkalinity		
Specific conductance		
<i>Total suspended solids</i>		
<i>Oil and grease</i>		