STATE OF ILLINOIS
CMS BUREAU OF ADMINISTRATIVE HEARINGS FOR
DEPARTMENT OF NATURAL RESOURCES
OFFICE OF MINES AND MINERALS

IN THE MATTER OF THE APPLICATION OF)
WOOLSEY OPERATING COMPANY, LLC)

HVHHF-000001

OATH

I hereby swear, or affirm, that the testimony I will give at the Public Hearing in the matter of the application of Woolsey Operating Company, IDNR Number HVHHF-000001 is truthful and is the truth with respect to those matters I testify to as of the time of my testimony. My testimony is voluntary and has not been obtained by promise, coercion, threat or force from any person or entity.

I acknowledge that knowingly false testimony may subject me to a charge of Perjury pursuant to Section 32-2 of the Criminal Code of 2012 (720 ILCS 5/32-2).

SUBSCRIBED and SWORN TO this 2nd of ~~August~~ August, 2017.

Sign: [redacted]

Print the following

Name: Karen Fiorino

Address: [redacted]

WITNESS: [redacted]

OPEN MEETINGS ACT

You are advised that a witness at a "public meeting" such as this Public Hearing may elect to prevent video recording of testimony. The choice is for the witness or person to make. If you elect to prevent video recording of your testimony, the Hearing Officer will instruct that non-official video recorders, including recording made on a smart phone device must be stopped during your testimony.

☒ My testimony MAY be recorded on video.

☐ My testimony MAY NOT be recorded on video.

Initial: [redacted]

EXHIBIT
Oath - 1
JC 8-2-17
PENGAD 800-631-6989

STATE OF ILLINOIS
CMS BUREAU OF ADMINISTRATIVE HEARINGS FOR
DEPARTMENT OF NATURAL RESOURCES
OFFICE OF MINES AND MINERALS

IN THE MATTER OF THE APPLICATION OF)
WOOLSEY OPERATING COMPANY, LLC) HVHHF-000001

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I acknowledge that knowingly false testimony may subject me to a charge of Perjury pursuant to Section 32-2 of the Criminal Code of 2012 (720 ILCS 5/32-2).

SUBSCRIBED and SWORN TO this 2nd of August, 2017.

Sign: [redacted]

Print the following

Name: Barbara L. McKasson

Address: [redacted]

WITNESS: [redacted]

OPEN MEETINGS ACT

You are advised that a witness at a "public meeting" such as this Public Hearing may elect to prevent video recording of testimony. The choice is for the witness or person to make. If you elect to prevent video recording of your testimony, the Hearing Officer will instruct that non-official video recorders, including recording made on a smart phone device must be stopped during your testimony.

☐ My testimony MAY be recorded on video.

☒ My testimony MAY NOT be recorded on video.

Initial: [redacted]

EXHIBIT
Oath-2
JC 8-2-17
PENCAD 800-631-6989

STATE OF ILLINOIS
CMS BUREAU OF ADMINISTRATIVE HEARINGS FOR DEPARTMENT OF NATURAL RESOURCES OFFICE OF MINES AND MINERALS

IN THE MATTER OF THE APPLICATION OF)
WOOLSEY OPERATING COMPANY, LLC) HVHHF-000001

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I acknowledge that knowingly false testimony may subject me to a charge of Perjury pursuant to Section 32-2 of the Criminal Code of 2012 (720 ILCS 5/32-2).

SUBSCRIBED and SWORN TO this 8-2-17 of August, 2017.

Sig[redacted]

Print the following

Name: MONA WEAVER

Address [redacted]

WITNESS: _____

OPEN MEETINGS ACT

You are advised that a witness at a "public meeting" such as this Public Hearing may elect to prevent video recording of testimony. The choice is for the witness or person to make. If you elect to prevent video recording of your testimony, the Hearing Officer will instruct that non-official video recorders, including recording made on a smart phone device must be stopped during your testimony.

☐ My testimony MAY be recorded on video.

☒ My testimony MAY NOT be recorded on video.

Initial: [redacted]

EXHIBIT
Oath-3
JC 8-2-17
PENGAD 800-631-6989

ILLINOIS
DEPARTMENT OF NATURAL RESOURCES

Illinois Department of
Natural Resources

One Natural Resources Way Springfield, Illinois 62702-1271
www.dnr.illinois.gov

Bruce Rauner, Governor
Wayne A. Rosenthal, Director

Illinois Department of Natural Resources
Office of Oil and Gas Resource Management
High Volume Horizontal Fracturing Application Notice to Applicant

On May 22, 2017, the Department of Natural Resources, Office of Oil and Gas Resource Management received an application from Woolsey Operating Company, LLC, Registration # **HVHHF-00003**, 125 N. Market St., Suite 1000, Wichita, KS 67202, woolsey@woolseyco.com for a permit under the Hydraulic Fracturing Regulatory Act. The application has been assigned a Review # of **HVHHF-000001**.

The well to be known as the Woodrow #1H-310408-193 is proposed to be permitted for the production of gas, located at Lat: 38.1343680, Lon: -88.3603830, 279' South and 643' West of the NEc SW NE, in Section 31, Township 4 South, Range 8 East, White County, Illinois.

The **Public Comment Period** shall start on **May 29, 2017**, and shall last until close of business on **June 27, 2017**.

Should a request for public hearing for the application mentioned above be filed, the hearing will be held at the **Enfield United Methodist Church Family Life Center, Corner of West Main and South Jennette St., Enfield, IL 62835.** It will start at **11:00 am and continue until 5:00 pm on July 5, 2017.** If additional time is required, it will **start at 9:00 am, July 6th, 2017, and continue until completed.** The Hearing Officer currently assigned is:

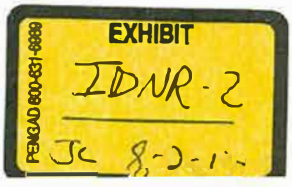
Daniel P. Schuering
Administrative Law Judge
CMS Bureau of Administrative Hearings
704 Stratton Building
401 South Spring Street
Springfield, Illinois 62706
Phone: (217) 557-8088
Fax: (217) 524-0718
Email: Daniel.Schuering@illinois.gov

For additional information about the application process, please visit:
https://www.dnr.illinois.gov/OilandGas/Pages/Hydraulicfracturing.aspx

Sincerely,

[redacted]

Douglas Shutt
Office of Oil and Gas Resource Management
Illinois Department of Natural Resources
One Natural Resources Way
Springfield, Illinois 62702



Illinois Department of Natural Resources
Office of Oil and Gas Resource Management
High Volume Horizontal Hydraulic Fracturing Application Notice

On June 26, 2017, the Department of Natural Resources, Office of Oil and Gas Resource Management (Department) received supplemental information for an application from Woolsey Operating Company, LLC, 125 N. Market St., Suite 1000, Wichita, KS 67202 and e-mail address: woolsev@woolsyco.com for a permit under the Hydraulic Fracturing Regulatory Act. The application has been assigned a review number of **HVHHF-000001**.

The well to be known as **Woodrow #1H-310408-193** is proposed be permitted for the production of gas, located at Lat: 38.1343680, Lon -88.3603830, ***1990' South and 1650' W of NEc of the NE/4 of*** Section 31, Township 4 South, Range 8 East, White County, Illinois.

The **Public Comment Period** shall be extended to the close of business of **July 28, 2017.** Written comments may be mailed to the Illinois **Department of Natural Resources, Attention: Oil and Gas Regulatory Staff, One Natural Resources Way, Springfield, IL 62702** or submitted electronically through the Departments website at: **DNR.HFPublicComments@illinois.gov**

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 **July 28, 2017** to be eligible for Department consideration during the permit review process.

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 this proposed permit may file a written request for a public hearing on the permit application. The Request shall be served by electronic Mail or certified mail, return receipt requested, upon the Hearing Officer, the Department, and the applicant.

Should a request for public hearing for the application mentioned above be filed, the hearing will be held at the **Enfield United Methodist Church Family Life Center, Corner of West Main and South Jennette St., Enfield, IL 62835**. It will start at **10:00 am and continue until 5:00 pm on August 2, 2017**. If additional time is required, it will **start at 9:00 am, August 3, 2017, and continue until completed**. **Daniel P. Schuering** will preside; the mailing addresses to file a request will be: **Illinois Department of Natural Resources, Office of Legal Counsel, Attention HF Hearing Officer, One Natural Resources Way, Springfield, IL 62702 and the Oil and Gas Regulatory Staff at: Department of Natural Resources, Attention: Oil and Gas Regulatory Staff, One Natural Resources Way, Springfield, IL 62702 or both can be filed at the following e-mail address:** DNR.HFHearingRequest@illinois.gov . **The request must also be filed at the applicant's address mentioned above.** All requests shall contain all of the elements identified in 62 Illinois Administrative Code Section 245.270(a)(3) and must be received by the Department before 5:00 p.m. on the last day of the public comment period.

Note: Due to the additional information presented to the Department in response to the deficiency letter dated June 5, 2017, the Public Comment period is being extended and the date of a possible Public Hearing is being reset to account for the new Public Comment period. All properly submitted Public Comments and Public Hearing Requests previously submitted to the Department will be retained and considered.

APARTMENTS FOR RENT

APARTMENTS FOR RENT
The White County Housing Authority is accepting application for units in Grayville, Crossville, and Norris City. Rent is based on income: utilities provided are gas, water, sewer, trash pick-up, and basic cable with new wave. Application are available at White County Authority, 500 4th Street, Crossville, IL, or you may visit our website to download applications at www.whitecountyhousing.com or phone 618-966-3868 to have one mailed to you.

APARTMENT FOR RENT - Spacious one bedroom apartment for rent. Includes fridge, stove, washer/dryer. Carmi Call (618) 925-0704 Call 618-445-7036

APARTMENTS FOR RENT
1 and 2 bedroom apartments in Carmi. Rent based on income. Free trash pick up. laundry facility on site. For additional information call Steve Heath 618-363-5295
TDD Number on is an equal opportunity provider & employer

SERVICES

SERVICES - Garden tilling and Bush hogging. Call Tommy 618-334-5940.
TF

PINEVIEW APARTMENTS
1, 2 & 3 Bedroom Units Available
Security Deposit Required
Water, Sewer, Refrigerator, Stove Included
For More Information 618-354-2420
pineview703@yahoo.com

PUBLISHER'S NOTICE All residential real estate advertised herein is subject to the Federal Fair Housing Act. The Fair Housing Act makes it illegal to advertise "any preference, limitation, discrimination because of race, color, religion, sex, handicap, familial status, or national origin, or intention to make any such preference, limitation or discrimination." We will not knowingly accept any advertising for residential real estate that appears to or violates federal law.

HELP WANTED

HELP WANTED - Grain farm seeking full time help on farm CDL required must be able to operate late model equipment. Call (618) 384-8144

Full Time Clerical
Full time clerical position in Carmi strong typing and computer skills, knowledge of word processing programs, copiers, fax machines, printers and scanners important. Must have professional telephone and reception etiquette. Postion includes vacation, sick leave and paid health insurance. Submit resume and cover letter to P.O. Box 566, Carmi, Il 62821

BUILDING MATERIAL

FOR SALE-
Built-Mor Buildings:
24x40 $5,835
30x50 $12,873
40x60 $19,472
Erected, choice of colors.
618-732-6704 or 618-237-0792
www.builtmorbuildings.com

FOR RENT

FOR RENT - Nice country house, 2 BR. 1 bath, refr., stove, washer, dryer included. $450 per month – deposit, references & lease. No smoking or pets. Springerton area. (618) 925-6410.

For Rent - 2 bedroom Mobil Home. Call (618) 387-1728

RUMMAGE SALES

ESTATE SALE - of John & Ramona Welker, 1105 Jill St. Carmi. Knick-Knacks. Furniture. Men & Women Cloths. Saturday July 22nd 7 am - ?

LEGAL NOTICE

L-1307

Illinois Department of Natural Resources
Office of Oil and Gas Resource Management
High Volume Horizontal Hydraulic Fracturing Public Hearing Notice

On June 26, 2017, the Department of Natural Resources, Office of Oil and Gas Resource Management (Department) received supplemental information for an application from Woolsey Operating Company, LLC, 125 N. Market St., Suite 1000, Wichita, KS 67202 and e-mail address: woolsey@woolsey.com for a permit under the Hydraulic Fracturing Regulatory Act. The application has been assigned a review number of HVHHF-000001.

The well to be known as Woodrow #1H-310408-193 is proposed be permitted for the production of gas, located at Lat: 38.1343680, Lon -88.3603830, *1990' South and 1650' W of NEc of the NE/4 of* Section 31, Township 4 South, Range 8 East, White County, Illinois. The Unit Area is defined as SW/4 NE/4; NW/4 SE/4; and SW/4 SE/4 in Section 30, Township 4 South, Range 8 East and NW/4 NE/4 in Section 31, Township 4 South, Range 8 East White County, Illinois.

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 this proposed permit may file a written request for a public hearing on the permit application pursuant to 62 Ill. Adm. Code 245.270. The Request shall be served by electronic Mail or certified mail, return receipt requested, upon the Hearing Officer, the Department, and the applicant.

A Public Hearing on the permit listed above will be held at the Enfield United Methodist Church Family Life Center, Corner of West Main and South Jennette St., Enfield, IL 62835. It will start at 10:00 am and continue until 5:00 pm on August 2, 2017. If additional time is required, it will start at 9:00 am, August 3, 2017, and continue until completed. Daniel P. Schuering will preside; the mailing addresses to file a request will be: Illinois Department of Natural Resources, Office of Legal Counsel, Attention HF Hearing Officer, One Natural Resources Way, Springfield, IL 62702 and the Oil and Gas Regulatory Staff at: Department of Natural Resources, Attention: Oil and Gas Regulatory Staff, One Natural Resources Way, Springfield, IL 62702 or both can be filed at the following e-mail address: DNR.HFHearingRequest@illinois.gov . The request must also be filed at the applicant's address mentioned above. All requests for Public Hearing or Participation in the Public Hearing shall contain all of the elements identified in 62 Illinois Administrative Code Section 245.270(a) and must be received by the Department before 5:00 p.m. on July 28th, 2017.

L-1308
NOTICE OF SPECIAL MEETING
NOTICE IS HEREBY GIVEN that there will be a special meeting of the Board of Education of Carmi-White County Community Unit District No. 5 on Monday, July 24, 2017, at 7:00 p.m. at Jefferson Attendance Center (new building), 713 Fourth Street, Carmi, Illinois. The Agenda for the meeting follows:
1. Pledge of Allegiance
2. Call to Order and Roll Call
3. Approve Consent Agenda:
A. Surplus equipment
4. Public Communications with the Board
PLEASE NOTE: PUBLIC COMMENTS IS CONCERNS PERSONNEL OF THE DISTRICT SHOULD BE MADE IN CLOSED SESSION OF THE BOARD.
5. Closed session to consider the appointment, employment, compensation, discipline, performance or dismissal of a specific employee and hearing testimony on a complaint lodged against an employee, (5 ILCS 120/2(c)(1)
6. Action Following Closed Session
A. Consideration and action on the discipline of a licensed employee and/or the possible removal of one or more coaching assignments of a licensed employee.
7. Adjourn
BARBARA MITCHELL, SECRETARY
Board of Education
CARMI-WHITE COUNTY COMMUNITY UNIT DISTRICT NO. 5
County of White, State of Illinois

APARTMENTS FOR RENT

APARTMENTS FOR RENT
The White County Housing Authority is accepting application for units in Grayville, Crossville, and Norris City. Rent is based on income utilities provided are gas, water, sewer, trash pick-up and basic cable with new wave.
Application are available at White County Authority 500 4th Street, Crossville, IL, or you may visit our website to download applications at www.whitecountyhousing.com or phone 618-966-3668 to have one mailed to you.

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1 and 2 bedroom apartments in Carmi.
Rent based on income. Free trash pick up. laundry facility on site.
For additional Information call Steve Heath 618-363-5295
This institution is an equal opportunity provider & employer

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TF

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1, 2 & 3 Bedroom Units Available
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Water, Sewer, Refrigerator Stove Included
For More Information
618- 384- 2420
rmurph70@yahoo.com

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HELP WANTED - Grain farm seeking full time help on farm CDL required must be able to operate late model equipment. Call (618) 384-8144

BUILDING MATERIAL

FOR SALE-
Built-Mor Buildings:

24x40 $8,835
30x50 $12,873
40x60 $19,472
Erected, choice of colors.
618-732-8704 or 618-237-0792
www.builtmorbuildings.com
tf

POSITION OPENING:
Emmanuel United Methodist Church, 203 Edgewood Lane, Carmi, is in need of a part-time custodian: approximately 20 hours per week; hours are somewhat flexible. If interested, call 382-2436, 8 AM - 12 PM M-F and pick up an application.

Wabash Christian Retirement Center
We are hiring:
RN/LPN Floor Nurse
CNAs FT, PT or PRN
Please come to our business office and fill out an application today:
216 College Blvd., Carmi, IL 62821
OR Find us online at
www.wabashchristianretirementcenter.org
Attn: Human Resources
EOE

HELP WANTED

YOUTH MENTAL HEALTH THERAPIST - Egyptian Health Department is seeking a full or part time counselors/therapist to expand and provide counseling and therapeutic services with children and families from birth to 21 years old. The position will be based in the Carmi office with possibly one day in the Eldorado office. A Master's degree in a human services related field (e.g. social work, psychology or counseling) is preferred. The ideal candidate will have experience in working with children, adolescents and families, excellent communication skills and efficiency in day to day functioning. The candidate must demonstrate sensitivity to the cultural and socioeconomic characteristics of families served. For the full time position, compensation will include competitive pay, Illinois Municipal Retirement participation and a 35 hour work week. Selected candidate may also be eligible for up to $25,000 per year in loan forgiveness from the National Health Services Corps Loan Forgiveness Program. Send resume, three letters of reference, copy of diploma and transcript to Human Resources Director, Egyptian Health Department, 1412 US 45 North, Eldorado, IL 62930. Deadline for applications is August 8, 2017.

LEGAL NOTICE

L-1307

Illinois Department of Natural Resources
Office of Oil and Gas Resource Management
High Volume Horizontal Hydraulic Fracturing Public Hearing Notice

On June 26, 2017, the Department of Natural Resources, Office of Oil and Gas Resource Management (Department) received supplemental information for an application from Woolsey Operating Company, LLC, 125 N. Market St., Suite 1000, Wichita, KS 67202 and e-mail address [illegible] for a permit under the Hydraulic Fracturing Regulatory Act. The application has been assigned a review number of HVHHF-000001.

The well to be known as Woodrow #1H-310408-193 is proposed be permitted for the production of gas, located at Lat. 38.1343680, Lon -88.3603830, *1990' South and 1650' W of NEc of the NE/4 of* Section 31, Township 4 South, Range 8 East, White County, Illinois. The Unit Area is defined as SW/4 NE/4; NW/4 SE/4; and SW/4 SE/4 in Section 30, Township 4 South, Range 8 East and NW/4 NE/4 in Section 31, Township 4 South, Range 8 East White County, Illinois.

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 this proposed permit may file a written request for a public hearing on the permit application pursuant to 62 Ill. Adm. Code 245.270. The Request shall be served by electronic Mail or certified mail, return receipt requested, upon the Hearing Officer, the Department, and the applicant.

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STATE OF ILLINOIS }
WHITE COUNTY } ss.

Certificate of Publication

THIS CERTIFIES THAT the annexed is a true and exact printed copy of a Notice which was published once each week for 2 successive weeks in THE CARMI TIMES, a newspaper, published four times a week, of general circulation published in the City of Carmi, County of White and State of Illinois. The Carmi Times is a newspaper as defined in Act _____ Chapter 100, Sections 1 and 5 Illinois Revised Statues.

The first publication of the said notice appeared in the said CARMI TIMES in the issue bearing the date of 7/21, 2017; and the last publication of said notice appeared in the issued of said paper bearing the date of 7/31, 2017.

I hereby certify that I am the publisher of The Carmi Times, and that I maker this certificate on behalf of said newspaper.

Dated at Carmi, Illinois

This 2nd of August 2017

CARMI TIMES, Publisher.

Printer's Fee [redacted]

RECEIVED
DEPT. OF NATURAL RESOURCES
SPRINGFIELD
AUG 04 2017
OFFICE OF OIL & GAS
RESOURCE MANAGEMENT

PENGAD 800-631-6989
EXHIBIT
IDNR-7
SC
8-2-17

COMMENTS OF THE NATURAL RESOURCES DEFENSE COUNCIL
ON THE WOOLSEY OPERATING CO., LLC
WOODROW HVHHF PERMIT APPLICATION, AS SUPPLEMENTED

Permit Application HVHHF-000001

The Natural Resources Defense Council ("NRDC") [additional commenting organizations] submits the following comments on the High Volume Horizontal Hydraulic Fracturing ("HVHHF") permit application submitted by the Woolsey Operating Company, LLC, ("Woolsey") for review by the Illinois Department of Natural Resources' Office of Oil and Gas Resources Management ("Department") as supplemented on June 26, 2017

The NRDC is the nation's most effective environmental action group, combining the power of more than two million members and online activists with the expertise of more than 500 scientists, lawyers, policy advocates, and other professionals across the globe ensure the rights of all people to the air, the water, and the wild. NRDC was founded in 1970 and our staff helped write some of America's bedrock environmental laws, including the Clean Water Act and the Clean Air Act, and many of the implementing regulations. Today, our staff – a force for nature - work out of offices in New York, Washington DC, Chicago, Los Angeles, San Francisco, Bozeman, Montana and Beijing.

[Other organization descriptions].

INTRODUCTION

This Application presents a critical test case for the Illinois' HVHHF program, as this is the first application filed pursuant to that new authority. As the Department well recalls, the Illinois Hydraulic Fracturing Regulatory Act ("HFRA") resulted from extensive negotiations between environmental organizations, industry groups, and state agencies. After overwhelmingly passing the Illinois General Assembly (Senate 52-3, House 108-9), Governor Quinn's signing statement on June 17, 2013, declared that "The new law enacts the nation's strongest environmental protections for hydraulic fracturing . . ." and makes "Illinois a national model for transparency, environmental safety and economic

development." See https://www2.illinois.gov/pages/news-item.aspx?ReleaseID=11278 . The IEPA Director added in this statement that "This law represents an unprecedented commitment to environmental protection that will serve as a model for the rest of the country." The Act was clearly intended to set a very high bar for the Department to meet in implementing the Act's environmental protections and commitment to public participation. The Department's handling of this Application will set the benchmark for the program's foreseeable future and will be instrumental in determining whether the program is ultimately successful.

For this reason, we make these comments with a high level of concern due to the fact that the Woolsey Application is highly generic and deficient in many particulars required by the HVHHF regulations. Many key legislative policies that underpin the Hydraulic Fracturing Regulatory Act receive no meaningful consideration in the Application and a significant amount of required information is simply missing. As these Comments will establish, the Application cannot be approved as submitted and will need to be fundamentally rewritten and supplemented in many important areas. Because of the consistent lack of sufficient detail, the public's ability to comment effectively on the Application is largely defeated. Accordingly, we believe that meeting the state's standards for transparency and effective public participation in the HVHHF program will require a new round of comment after the Application is amended to address its problems as laid out in these Comments.

These Comments reference the documents contained in the Woolsey Operating Company, LLC, Permit Application HVHHF-000001, located at: https://www.dnr.illinois.gov/OilandGas/Pages/Woolsey-Operating-Company%2c-LLC.aspx. as supplemented in the documents located at: https://www.dnr.illinois.gov/OilandGas/Pages/SupplementalApplicationInformation.aspx. For the Department's convenience, these Comments are organized as they appear consecutively in the twenty-seven "Documents" required for HVHHF-10 applications, see https://www.dnr.illinois.gov/OilandGas/Pages/Documents-permit-Application-HVHHF-10.aspx. All Section references contained in these Comments are to the regulations in Title 62, ILL. ADM. CODE, Chapter I, Part 245 adopted to implement the Hydraulic Fracturing Regulatory Act., 225 ILCS 732, unless the text indicates otherwise.

COMMENTS

Document 3: Directional Drilling Plan

No. 1: Inconsistent Information

The information submitted in the Directional Drilling Plan §1-35(b)(4); 245.210(a)(4) states that the vertical depth at which the well will enter the formation that will be stimulated is 5,190'. However, the scaled cross-section shows the top of the New Albany Shale at 5,391' MD. It is unclear if the depth given in the directional drilling plan is measured depth or true vertical depth, and, if the latter, whether this is the reason for the discrepancy in the depths reported in the directional drilling plan versus the cross-section. Also, as noted below, it is unclear exactly which formation will be stimulated, given that the application refers only to the "Planned Interval of the New Albany Shale to be Completed."

Similarly, the directional drilling plan lists the estimated length of the proposed horizontal lateral or wellbore as being 4,780', while the cross-section shows the "Planned Interval of the New Albany Shale to be Completed" as 4,800'.

The directional drilling plan lists the angle of any nonvertical portion of the wellbore prior to total target depth/actual final depth as being 0° to 90° but, two questions later, the directional drilling plan lists the planned horizontal deviation of the horizontal lateral or wellbore as being 90.45°.

These discrepancies should be clarified.

Document 4: Underground Freshwater Information

No. 2. Inadequate Determination of Underground Freshwater; No Geological Survey Data Submitted.

Section 245.210(a)(5) requires that the depth and elevation of the lowest potential fresh water along the entire length of the proposed well be estimated 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. The Application contains no reference to the Illinois State Geological Survey or any of its materials. The Application also fails to provide any explanation for why it fails to cite the Illinois Geological Survey which is clearly

the preferred manner in the Department's rules for establishing the critical environmental factor of the lowest potential fresh water The Application should be amended to state whether the Applicant sought out these materials and the results of that search.

No. 3. Inadequate Evidence to Establish the Lowest Potential Fresh Water.

The only information in the Application for establishing the lowest potential fresh water is a diagram displaying what is labelled as "shallow water sources" in the area of the wellsite. This information appears likely to be based on well drilling log information, primarily for local water wells and oil wells, but the source is not stated. The only information provided in the diagram is depth information and no actual well logs or water analyses are provided that would establish whether the diagram accurately corresponds to the lowest potential fresh water or whether an additional aquifer might be present in one or more deeper formations. While the shallow aquifer indicated on the diagram appears to serve as the regional source of ground water, that may be primarily due to the fact that it is the easiest aquifer to access. Accordingly, based on the limited information provided, a clear potential remains that fresh water could exist in a lower formation. Additional information, including copies of all well logs represented on the diagram, and all available water analyses, should be provided to support the Applicant's conclusions and demonstrate that there is not a lower source of fresh water.

Document 5: HVHHF Operations Plan

No. 4. Failure to Clearly Identify Formation to be Stimulated.

The Comments on this Document are generally based on the overriding problem that the Application does not provide a specific model of the wellsite geology and the role of the various stratigraphic formations in that model, with adequate technical basis to support that model. Such a geologic model is the first step in the public's understanding of whether the Application is adequate and effective -- but the Applicant has failed to satisfy this basic need.

The initial problem is that the Document does not clearly identify what the regulations refers to as the "formation that will be stimulated by the operation," Section 245.210(a)(6)(A), or what is described in the Department's form as the "producing zone." The Document does not even use either term. Instead, the Document:

1) first states that the "drilling objective" is the New Albany Shale ("NAS") consisting of three separate formations, the Blocher Shale, the Selmier Shale, and the Grassy Creek Shale,

2) later refers to "completion" occurring both in the NAS and in one of its constituents, the Grassy Creek Formation,

3) in a third iteration, refers to the Grassy Creek as the "objective,"

4) in a fourth iteration, refers to the Grassy Creek as the "horizontal target formation," and

5) finally provides a fifth description as the NAS being the "reservoir zone."

Further compounding this confusion is the reference to a term not identified in the regulations or the Department forms, "frac barrier," as pertaining to the Semier Shale, which is also part of the "drilling objective," the "NAS."

The Document should use terminology employed in either the regulation or the Department's forms; as such the well's critical features and the Document must be amended to clearly identify the "formation that will be stimulated" or the "producing zone."

No. 5. Failure to Clearly Identify the Confining Zone

Similarly, Section 245.210(a)(6) requires the Applicant to specifically identify and describe the formation or formations that constitute the "confining zone" for the proposed well. This document fails to meet this requirement; it does not even use that term. There is a reference to a term "frac barrier" in relation to the Fort Payne Limestone and the Selmier Shale without indicating whether this serves the same role as a "confining zone." The application should specifically refer to the regulatory term "confining zone" and specifically identify which formation(s) satisfy that requirement and why.

No. 6. Missing Data on the So-Called "Frac Barriers."

The "frac barriers" are indicated as having been identified "historically" and as "the result of microseismic study in the basin." No information, data or calculations are supplied on either a microseismic study or the "historic" use to support whether the identification of the "frac barriers" is technically sound. Both claims on which this critical identification is made should be provided in adequate detail to justify the Applicant's conclusion. At present, the Document contains no

information whatsoever on which a reliable conclusion as to any confining zone or "frac barrier" can be drawn and the Application is therefore inadequate and must be denied. Once the confining zone is specifically identified and information supporting this conclusion is provided, there should be an additional opportunity for public comment on this most critical ground water protection feature.

No. 7. Missing Identification of a Confining Zone Fracture Pressure

Item (d) in Document 5 provides the unsupported conclusion that the fracture pressure for the unspecified "confining zone" is 4,000 psi. Previously, two "frac barriers" were identified but, if one of these "barriers" has this fracture pressure, it is unclear which of the two formations (or some other formation) has this value. This formation must be specifically identified.

No. 8. Missing Data on Confining Zone Fracture Pressure

No basis is given for the fracture pressure of 4,000 psi on the unspecified confining formation. The specific test or methodology used to make this determination should be provided with supporting information sufficiently detailed to support that result.

No. 9. Complete Confusion over Role of the Selmier Shale.

Completely confounding the idea of a basic geologic model, the Selmier Shale serves two different and conflicting purposes in the Document. First, it is part of the NAS, the "drilling objective," while second, it is also a "frac barrier." The Selmier cannot serve both of these disparate functions and, being part of the "drilling objective," cannot be relied upon as also confining that zone. The specific role of the Selmier Shale in the Applicant's geologic model must be stated with clarity and supporting information for that role provided. As currently drafted, the Application provides no information specific to the Selmier Shale.

No. 10. Fracturing Pressure of the Producing Zone Not Identified.

The fracturing pressure of the "producing zone" is given as 2,875 psi. However, as stated in a previous comment, the Document does not clearly identify the "producing zone" but identifies "a drilling objective" of the "New Albany Shale" composed of three separate formations (the Blocher Shale, Selmier Shale, and Glassy Creek Shale). Obviously, a single number cannot be applied to all three formations in the NAS. The Document must be amended to clearly identify the formation tested to produce the 2,875 psi reading, the methodology or testing

procedure used, and sufficient detail on the data and calculation on which this reading is based.

No. 11. Missing Supporting Data

Even after the Department's Deficiency Letter identified the Applicant's failure to provide the requisite evidence on fracture formation and propagation, the resulting Supplement nonetheless also fails to provide such evidence. The revised application contains values for fracture pressure of the producing and confining zones and various inputs to the calculation used to determine the treating pressures. However, no information is provided describing the technical basis for these numbers or how they were determined or derived. The Applicant must provide the source of these numbers so that the Department can assess their accuracy and adequacy. Knowing the source of these numbers and determining if they were derived correctly is critical to determining if fractures will propagate through the confining zones, which in turn is critical to protecting groundwater. It is also critical in assessing whether well materials can withstand the anticipated fracturing pressures. Further, no technical basis in the form of references or citations is provided to support the Applicant's method of calculation.

The revised application incorrectly refers to the value of 2875 psi as the "Frac *Gradient* of the NAS/G.C. Formation" (emphasis added). A fracture gradient is a measure of the rate of change of formation fracturing pressure with depth, commonly expressed in units of psi/ft. The value provided in the application is a fracture pressure, not a fracture gradient. The Applicant should provide both and, as noted above, should explain how those values were determined.

No. 12. No Reliable Information on the Potential for Vertical Propagation of Fractures. One of the most important safety features established in the Hydraulic Fracturing Regulatory Act is the requirement that the susceptibility for vertical propagation of fractures in the confining zone and the formations contributing to that zone, are accurately determined and stated in the application, Section 245.210(a)(6)(A). The initial Document completely failed to satisfy this safeguard and the Supplemented Document provides no reliable information in this regard

The initial Document had only a single, utterly unsupported sentence on the subject:

> "Based on the lithology and gross petrophysics of the under and overlying units, it is not anticipated that the aforementioned units will be susceptible to

vertical fracture propagation during completion of the NAS, Grassy Creek Shale Formation."

This sentence articulated no basis for its critical conclusion and therefore, gave no basis for concluding that the well plans are adequate and effective. The utter vagueness of the term "gross petrophysics" supplies no weight to this determination. The applicant provides only a single measure regarding the stress state of the formation that will be stimulated (the minimum horizontal stress) but does not provide the values of maximum horizontal stress and vertical stress, which are necessary to determine whether fractures are expected to open horizontally or vertically. Contrary to the unsupported statement provided by the applicant, given the depth of the well, it is highly likely that fractures will be oriented vertically. In wells deeper than approximately 2000 feet, the maximum stress is in the vertical direction (overburden stress) and the least stress is in the horizontal direction. Induced fractures propagate perpendicular to least stress, meaning that they will be oriented vertically. If lithology is being relied upon for this fundamental conclusion, then some specific basis for that finding must be provided. The Application cannot be approved on this illusory and insubstantial basis.

The revised application appears to address this issue tangentially by stating that, "Therefore, there will be no resultant contamination upward of surface aquifers or sources of drinking water (USDWs). To do so would, literally, defy the laws of physics. From an operations standpoint, it would be an engineering impossibility." This hyperbolic statement is utterly unsupported. The Document does not contain any analysis of anticipated fracture length, height, or orientation or an analysis of hydraulic gradient, which would be needed to substantiate this statement.

In short, there is no reliable evidence on fracture formation and propagation and nothing on which informed comment can be premised. Even as supplemented, the Application cannot be approved as it fails to establish that the HFRA's safeguards on vertical fracture susceptibility have been reliably satisfied.

No. 13. Missing Data on Geological Formations

For all the formations contributing to the production and confining zones, a specific listing of information is required in Section 245.210(a)(6)(A) 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.*" No information on extent,

water or water source, is provided for any formation and no thickness information is provided for the three formations constituting the New Albany Shale.

The Department's directions on applying for HVHHF permits include the instruction that: "*If a detail is not known at this time, please respond to that question with unknown {reason information is not available and when such information will be available}.*" See https://www.dnr.illinois.gov/OilandGas/Pages/ApplicationforPermit(s).aspx . The Applicant has consistently failed to follow this instruction throughout the Application, see all the references to "Missing Data" in these Comments. The Application should be amended to include as much of the required information on these formations as is available with full explanation and supplementation of any information not supplied.

No, 14. Data on Transmissive Faults Lacking.

The potential for transmissive faults contiguous to HVHHF wells is a major public health and safety concern and is therefore a specific requirement for analysis in Section 245.210(a)(6)(A). However, no specific information or reliable analysis on this important feature is provided in the Document. Instead, only the following grossly conclusory statement is provided:

> "In regard to transmissive faults and large through-going fractures, it can be stated that according to a 3-D seismic survey collected over the proposed location/ prospect area, there are none that exist anywhere near the proposed wellbore, and specifically that part of the well bore that will be in the reservoir zone, the New Albany Shale (herein referenced as 'NAS')."

No information on the scope, lateral extent, depth or sophistication of this survey is provided. Accordingly, there is no reason given as to why this purported study should be considered reliable, adequate or effective. The Application thus is incomplete until full information on this study is incorporated.

Document 7: Chemical Disclosure Plan

No. 15. Existence of Unacknowledged Trade Secrecy Claim; Cronox AK-50.

The Document explicitly states that no trade secrecy claim will be made in connection with the chemicals proposed for use in the Application. That assertion is untrue. The Chemical and Proppant List includes the Corrosion Inhibitor Cronox AK-50 and six of its constituent chemicals supplied by vendor Baker Hughes. However, Section 3 of the Safety Data Sheet for Cronox AK-50 on "Composition/Information on Ingredients" lists ten constituent chemicals. The four chemicals in Cronox AK-50 that Applicant fails to identify in its Chemical and Proppant List are:

1) Oxyalkylated alkylphenol (10-20% of total mixture),

2) Fatty acids (5-10% of total mixture),

3) Complex alkylaryl polyo-ester (5-10% of total mixture) and

4) Acetylenic alcohol (1-5% of total mixture).

All four of these constituent chemicals have their Chemical Abstract Service Number concealed on the Safety Data Sheet for the stated reason of "Trade Secret."

The CAS numbers for these chemicals should be provided by the Applicant or it should make an adequately supported trade secrecy claim as required under the Hydraulic Fracturing Regulatory Act to keep this information concealed.

It is further noted that Cronox AK-50 has multiple hazardous properties including being flammable, acutely toxic, carcinogenic, an acute and long-term aquatic hazard, and a skin and eye irritant, see Section 2 of the Safety Data Sheet. The contribution of the concealed chemicals to these serious health and safety issues are currently unknowable under this incomplete Application.

No. 16. Improper Chemical Disclosure/Existence of Unacknowledged Trade Secrecy Claim; Plexbreak 134.

As noted in the preceding comment, the Document states that no trade secrecy claims will be made in connection with the chemicals identified in the Application. That assertion is untrue for a second reason. The Applicant's additive listing in section (d) of the Department's form lists two separate chemical mixtures in a single line, i.e., "Plexgel Breaker XPA/Plexbreak 134." Both compounds are from vendor Chemplex and both evidently serve the same function which is given as "Slickwater Gel Breaker." The Document fails to address either chemical consistent with the Act.

First, the Applicant's Chemical and Proppant List only lists Plexgel Breaker XPA and provides no Safety Data Sheet for this chemical. If available, the Safety Data Sheet should be included in the Application.

The Safety Data Sheet for "Plexbreak 134" discloses four constituent chemicals, one of which, Quaternary Ammonium Chloride, has no CAS number listed for the stated reason "Proprietary," i.e., trade secret. Quaternary Ammonium Chloride is listed as constituting 5-10% of Plexbreak 134 and is identified as being "hazardous."

Accordingly, the Application is incomplete as a Safety Data Sheet is necessary for Plexgel Breaker XPA (if available); Plexbreak 134 must be added to the Chemical and Proppant List; and, also for Plexbreak 134, either the CAS number for Quaternary Ammonium Chloride should be provided by the Applicant or the Applicant should make an adequately supported trade secrecy claim to keep this information concealed as required under the Hydraulic Fracturing Regulatory Act.

Document 9: Water Source Management Plan

No. 16. Failure to Propose Methods to Minimize Water Withdrawals

One of the most important public safeguards of the Hydraulic Fracturing Regulatory Act is the mandate in Section 1-35(b)(10)(C) that an applicant must specify in the Application's Water Source Management Plan: "the methods to be used to minimize water withdrawals as much as feasible." This requirement is carried over directly into Section 245.210(a)(10)(A)(iv). To meet the literal wording of this statement requires that the Applicant consider a reasonable range of methods to reduce its water consumption and incorporate those withdrawal minimization methods and alternatives that are appropriate to its proposed operation. Not only do the rules specifically require consideration of minimization alternatives, but an Application should also satisfy the "reasonable use" doctrine of groundwater use adopted in the Illinois Water Use Act of 1983 at 525 ILCS 45/6 ("The rule of "reasonable use" shall apply to groundwater withdrawals in the State.") that reasonable use does not include water used "wastefully," 525 ILCS 45/4.

The Applicant's Water Source Management Plan completely ignores these requirements. It fails to indicate a reasonable set of methods that it will employ to minimize groundwater withdrawals and, even worse, fails to indicate that the

applicant undertook any effort at all to consider minimizing its water use in designing its operations.

Rather, the Applicant only makes the content-free representation that it is not in its interest to overuse water. It further states that its water usage is "dictate[d]" by "the design of hydraulic fracturing stages and the chemistry of the fluids used." What is not addressed is whether the Applicant will use the most water conservative design and chemicals available or whether there are legitimate technical reasons to use a fluid system that requires more water.

This is a special concern in this Application where the Applicant proposes to utilize its own water wells and does not have the disincentive of paying on a per-gallon basis or having transportation costs to limit over-consumption. Further supporting this concern is the fact that the Applicant's proposed operations appear to be especially wasteful in its proposed water use. The Water Source Management Plan proposes to use a total of 7,500,000 gallons of local groundwater in its treatment operations. This quantity is a full 50% greater than what the Department itself considers to be the "most commonly reliable figure" for a HVHHF of from "4.4 to 5 million gallons per well." See Department's Response to Comments in adopting its HVHHF rules, p. 62, at *https://www.dnr.illinois.gov/OilandGas/Documents/IDNR%20Response%20Document.pdf.* This finding is consistent with Pennsylvania regulators who found the average horizontal fractured well there uses 4.4 million gallons, *https://stateimpact.npr.org/pennsylvania/2013/03/12/how-much-water-it-takes-to-frack-a-well/.*

No justification is given by the Applicant for this exceptionally large water use or why it should not be deemed wasteful in violation of Illinois' reasonable use doctrine for groundwater withdrawals. Such exceptionally large water consumption is particularly significant in White County, as this water will be removed from three groundwater wells located in fairly shallow regional sand and gravel aquifers that can be rapidly depleted, especially in drought conditions. Illinois has already had two serious droughts in the past decade, in 2007 and 2012. As the Applicant's planned method of flowback management is disposal through Class II injection wells, see Hydraulic Fluids and Flowback Plan, this remarkably high quantity of water will be lost permanently from the hydrologic cycle.

The Applicant's failure to address its minimization duty is further compounded by its apparent failure to consider use of recycled water for its operation. Its only consideration of recycled water use is a single sentence in its Water Source

Management Plan that *"Backflow will not commence until injection in all frac stages has been completed, thus there will be no opportunity for use of recycled water in the hydraulic fracture completion."* However, the applicant gives no consideration to other potential sources of recycled water, for example treated produced water from existing oil and gas wells.

Finally, our concern about the inadequacy of Applicant's efforts to minimize water use is further reinforced by Plan's only stated "method" for avoiding the wasting of water, i.e., that it will limit the potential for leakage on-site through the use of piping rather than trucking and keeping the piping limited in length. This claim is far too insubstantial to meet the General Assembly's intention for an effective effort at water minimization; this is a rudimentary design consideration that is only being puffed up to masquerade as genuine water conservation efforts. Indeed, if leak management was seriously intended, there would be a leak prevention and management plan incorporated into this Plan, but such a well-established method of water minimization in not even mentioned; the Department should require such a basic safeguard in every HVHHF operation that it permits.

The only way that the Applicant can satisfy its duty of "reasonable use" of the state's groundwater and the regulatory requirement to "minimize water withdrawals as much as feasible" is to undertake a review of alternatives and to use the one that utilizes the least water, provided there is no adequately supported technical reason to use a more wasteful alternative. Nothing in the Document indicates that such an effort has been undertaken. The Application therefore cannot be approved because the Applicant has not shown that its efforts at minimizing water use are adequate and effective.

Because of the failure to address any methods or alternatives to minimize its water usage, the application must be denied for the failure to meet the requirements for Water Source Management Plans. If the Plan would be approved on this basis, the practical result would be to write the minimization requirement of Section 1-35(b)(10(C) of the Act out of the state's statutes and to lose all its intended benefits for the people of Illinois, especially the farmers of White County.

No. 17. Will There Be a Fourth Well Drilled by the Applicant on Site?

The Applicant's Water Source Management Plan explicitly provides that it will involve three water wells to supply 7,500,000 gallons of water for the base fluid of

the hydraulic fracturing operation. However, the Applicant's Water Quality Monitoring Plan (Document 21) contains the following statement on page 7:

> *The water sources included under this plan include both underground aquifers (one existing, and three proposed HVHHF water supply wells) and a surface water body (a stock pond). A fourth potentially required water supply well may be drilled, and, if completed, will be included in this monitoring program.* (emphasis added)

Apparently, Applicant does not intend to be bound by its Water Source Management Plan and reserves discretion to modify it for its own undisclosed purposes in a manner that might increase its already high levels of water consumption. However, the clear intent of the Hydraulic Fracturing Regulatory Act is to make these plans binding. Accordingly, the Department should require that the reference highlighted above to a possible fourth well be deleted from the Water Quality Monitoring Plan and the Applicant expressly limited to the three wells proposed in the Water Source Management Plan, provided a valid consideration of minimization methods and alternatives does not reduce that number even further, see previous comment.

Document 10: Hydraulic Fracturing Fluids and Flowback Plan

No. 18. No Information provided on Fracturing Fluids.

The Applicant's Hydraulic Fracturing Fluids and Flowback Plan contains barely a full page of information and either completely neglects or is patently vague on numerous items of required information. Equally unacceptable, it contains no supporting information for the conclusory statements it does make. Specifically, none of the information required by paragraph (b) of the Department's form regarding fracturing fluid is provided as the only information stated in the Applicant's plan is on flowback. Accordingly, the Application is incomplete and must be returned to the Applicant to provide the paragraph (b) required information on "injection schedule, flow rate, reuse volume, storage, any treatment and total volume in detail."

No. 19. Unrealistic Rate of Flowback Recovery Proposed.

The Hydraulic Fracturing Fluids and Flowback Plan states that "It is anticipated that between 4,000 and 5,000 barrels of flow back will be recovered." The Application gives no information on how this estimate was calculated. Assuming the Applicant is using a barrel of 42 gallons, the maximum flowback anticipated is 210,000 gallons, or just 2.8% of the 7.500,000 gallons of water utilized in the hydraulic fracturing operation.

The State of Ohio, which has gained substantial experience in hydraulic fracturing regulation, has determined that the average amount of flowback is from 15 to 20% of the total volume injected, see *http://oilandgas.ohiodnr.gov/portals/oilgas/pdf/EPA-fact-sheets/DrillingforNaturalGasintheMarcellusandUticaShales_EnvironmentalRegulatorvBasics.pdf.* Based on this average, the amount of flowback to be anticipated from the Woolsey well is from 5.4 to 7.1 times greater in quantity than what is stated in the Application, rendering the Application's unsupported prediction entirely unrealistic. As the amount of flowback is dramatically underestimated, the Application's projected flow rate, amount of storage capacity and transport needs are also incorrect. Accordingly, the Hydraulic Fracturing Fluids and Flowback Plan must be withdrawn and amended with the basis for the final calculations of flowback rate specifically provided.

No. 20. Missing Information on Flowback FluidsAs to the flowback information in paragraph (c) of the Department's form, ther information provided on the qualities of the storage tanks remains inadequate, despite the Department's identifying this lack of detail in the Deficiency Letter. Necessary information remains lacking on the tanks' pressure rating and how it compares to the anticipated pressure during flowback, identification of the tanks' liner material, and the compatibility of that material with the anticipated chemical composition of the flowback, and procedures governing how the tanks will be inspected for corrosion.

Further the capacity of the flowback storage tanks is indeterminate for the simple reason that the Applicant does not commit to any specific number of storage tanks (in addition to the flow back treatment tank), but states that there will be "up to five" additional closed storage tanks; clearly the application must commit to a specific number of storage tanks to give any meaning to the requirement to state the site's storage capacity.

Similarly, there is no meaningful information given on the requirement of "the frequency that the storage tanks will be emptied," as the only information provided is that the fluid will be hauled "as needed" with no expected frequency given, only that it will "depend on the flow rate and the size of the trucks available." This generic, vague, unquantified information is not responsive to the regulatory requirements. This lack of detail is especially serious in light of the information in the prior comment that the Applicant's stated flowback rate is grossly underestimated. This Application's combination of an inaccurate rate of flowback added to the lack of certainty in the amount and quality of the storage tanks on site and the lack of any specific commitment to regular hauling presents the ingredients for the type of cascading catastrophe at the wellsite that the Hydraulic Fracturing Regulatory Act was designed to avoid.

No. 21. No Testing Plan for Flowback Water Proposed.

Paragraph (d) of the Division's form requires a description of the Applicant's plan for testing flowback water. Nothing is supplied in the Hydraulic Fracturing Fluids and Flowback Plan that corresponds to this requirement.

No. 22. Use of Earthen Containment Berms of Undefined Capacity Inadequate for Safety of Flowback Storage.

The plan states that the flowback storage tanks will be "enclosed by earthen containment berms which will be of sufficient size to contain all of the possible flow back fluid temporary storage volume." No information is provided regarding the engineering properties or layout of these earthen berms. In addition to the previous concern that the number of such storage tanks is never specified (i.e., the Plan says only that there will be on initial treatment tank and "up to five" additional tanks), earthen berms alone are inadequate for site containment and secondary containment must be designed and constructed in accordance with good engineering practices; constructed, coated or lined with materials that are chemically compatible with the environment and the substances to be contained; provide adequate freeboard; and be protected from heavy vehicle or equipment traffic. Also, the storage capacity should be specified as an amount equal to the total storage volume plus at least a 15% additional volume as a safety factor.

Document 11: Wellsite Safety Plan

No. 23. No Clarity for NORM Sampling of Undefined "Black Shale"

Section 3.2.10 of the Wellsite Safety Plan addresses Naturally Occurring Radioactive Material ("NORM"). This section limits the drill cuttings to be tested for radioactivity to "black shale." Although this phrase is used in the regulations, it is not defined there or in the Safety Plan, nor at any other point in the Application. Accordingly, what is considered the "black shale" subject to this testing requirement is unspecified. The Plan should therefore be amended to identify the specific geologic formations that the Applicant considers to be "black shale," in the vicinity of its proposed well, including the formation depth, so the extent of sampling will be clear.

No. 24. Safety Considerations of the General Public Must Be Addressed.

The Introduction (Section 1.1) of the Safety Plan correctly observes for the Woolsey Operating Company's HVHHF operations that: "These HVHHF activities have the potential to result in employee and general public exposure to potential health and safety hazards." While the Plan provides useful detail on safeguards for employees and, to a substantially lesser degree, to visitors at the wellsite, there is virtually no consideration given to members of the general public that may be in the site's vicinity. While the well site is located in an area with few residences, there are nonetheless people residing close enough to the facility to face potential exposure while other individuals will be driving on the local roadways and walking or hunting on adjacent properties. No specific consideration appears to have been given in the Plan to these individuals and appropriate provision should be made in the Plan for these members of the general public in the event of releases or other emergencies involving the wellsite.

No. 25. Failure to Identify Counties and Fire Departments Copied on the Plan.

The supplement to this Document provides an unsupported statement on page 2 that the Safety Plan has been submitted to "all" counties and local fire departments with jurisdiction over the wellsite as required by the HFRA. The Safety Plan itself does not identify those local authorities receiving this notice. By failing to identify the local entities that received the Plan and that the Plan was submitted to them in a timely fashion, the Application, even as supplemented, fails to demonstrate compliance with this requirement. This information must be supplied to make the Application complete and approvable.

No. 26. Failure to State That the Safety Plan Complies with OSHA.

In its Deficiency Letter, the Department specifically required that the Applicant certify that the Safety Plan's provisions regarding wellsite workers was OSHA compliant. Despite this explicit reference to OSHA compliance, the supplemented language on page 4 of this Document makes no reference to OSHA whatsoever and states only that the Plan is compliant "applicable state and federal regulations." The Applicant should comply with the Department's Deficiency Letter and specifically state whether its Safety Plan for exposed workers is OSHA compliant.

Document 12: Containment Plan

No. 27. Insufficient Detail Provided on Containment of Chemical/Waste Storage.

The Containment Plan is approximately one-half page in length. It states only that the tanks to be used at the site (no specific number or total capacity of such tanks is given) will be surrounded by a "dike" of unspecified design except for it being capable of holding 150% of the total volume of only the single largest tank within the containment area. It is unclear if the "dike" mentioned here is the same as the "earthen containment berms" mentioned in the Hydraulic Fracturing Fluids and Flowback Plan.

This comment reincorporates the previous comments on the inadequacy of the "earthen containment berms" and the lack of specificity on the number of storage tanks that will be present for flowback storage in the Comments on the Hydraulic Fracturing Fluids and Flowback Plan. It is noted that while this Plan makes the first mention of Fracturing Fluid storage, there is no information at all on the size, qualities, or capacity of such tanks as is required in the Hydraulic Fracturing Fluids and Flowback Plan.

The Containment Plan is incomplete as it fails to give any specificity on the containment "dike" that would enable the public to assess the Plan's adequacy and effectiveness. As stated above, a properly designed, site-specific containment area should be utilized with an adequate safety factor for containing the entire storage capacity within the containment area.

In addition, the Containment Plan is to address the equipment used in the containment system as well as the containment practices to be employed. Yet, the Application fails to mention any equipment such as pumps, alarm equipment, or other standard containment practices.

No. 28. Failure to Specify Compliance for Each Type of Storage Tank.

The Department's Deficiency Letter found that the Application did not meet Section 245.825(a) because it did not provide the specific requirements for "each type of tank (hf additives, hf fluids, hf flowback, and producted water)" and certify "each of these types of tanks as meeting requirements" of that Section. The Supplement does not satisfy this deficiency as it does not mention the four types of tanks identified in the Deficiency letter; instead the supplemented Document only refers to "tanks containing hydraulic fracturing fluid" and "tanks containing constituent chemicals," thus leaving the other two categories unaddressed. Further, the supplemented Document only asserts that the tanks storing the "constituent chemicals" of the fracturing fluid meet state storage tanks requirements and does not certify the compliance of the other types of tanks identified in the Deficiency Letter. The Document does not indicate which type of tank the vendor's brochure on the "steel tank" relates to while the minimal information provided in that one-page brochure gives no indication whether these tanks meet the state's requirements.

Document 13: Casing and Cementing Plan

No. 29. Missing Information in Casing and Cementing Plan

The casing and cementing plan does not address the requirements labeled (f) in Document 13, regarding potential for earthquakes. The Application is therefore incomplete and must be returned to the applicant to address this deficiency.

Moreover, the casing and cementing plan is wholly inadequate to meet Illinois's regulations. The applicant refers only to the requirements at §1-35(b)(14) and fails completely to address the much more detailed requirements at §1-70 and describe how it has considered and met those requirements. That section contains numerous and detailed requirements for well design and construction and the scant details in Document 13 provide nowhere near the level of detail necessary to evaluate whether the applicant's well design fulfils these critical safety standards. The Application cannot be approved without this crucial information.

Document 14: Traffic Management Plan

No. 30. Traffic Avoidance of Wabash River.

One of the most significant traffic features in the vicinity of the Wellsite is the Wabash River, approximately 10 miles to the east. The Traffic Management Plan does not consider the River or the need to avoid road traffic involving hazardous chemicals or waste in proximity to the Wabash River, a public water supply source, where a spill could be particularly dangerous. The Plan should be amended to specifically address the Wabash River so that such traffic can either avoid crossing it or travelling alongside it, or, if avoiding it is impossible, then specifying the safest crossing point.

Document 16: Public Notice

No. 31. The Public Notice may be in error for identifying an unknown entity called "Les Wilson, Inc." as the "Drilling Contractor." No address or other identifying information is given to describe this entity, the name of which does not appear in any other place in the application. It is further noted that the required contractor disclosure in Document 23, the "Contractor Statement," is not "Les Wilson, Inc." but "Basic Energy Services, LP" of Midland, Texas, and Pratt, Kansas. Further, the Certificate of Insurance in Document 18 makes no reference to "Les Wilson, Inc." Accordingly, this entry in the Public Notice may need to be amended to identify the appropriate entity and republished. In addition, due to the Hydraulic Fracturing Regulatory Act's clear focus on the contractor identified in Document 23 as performing HVHHF operations and its lack of any reference to a "drilling contractor," the Department is advised that the public notice form should be rewritten to add the identification of the HVHHF contractor.

Document 17: Plugging and Restoration Plan.

No. 32. Failure to Include a Strategy for Plugging the Well.

Section 245.210(a)(18) requires that the Applicant provide a "strategy" for the plugging of the well once operations have ceased. This Document contains only a single sentence regarding this "strategy" that states only that the well will be plugged in accordance with the requirements of the Oil & Gas Law rules in Sections 240.1140 and 240.1150 "as directed by the State Inspector." This generic response does not meet the requirement for a specific "strategy" and provides no basis for the public or the Department to assess the adequacy of how the Applicant actually plans to plug this well. The Plan must specify the exact steps that the

Applicant will take in plugging the well to comply with all state requirements so that it is capable of receiving meaningful public comment.

In addition, this Plan must at a minimum commit the Applicant to undertaking the "Special Plugging Requirement" for HVHHF wells in Section 245.1000(c); this important provision is simply not mentioned in the current Application.

Document 18: Proof of Insurance

No. 33. The permit application requirements in Section 245.210 (a)(19) require that the Proof of Insurance establish that 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." The first of the two Certificates of Liability Insurance in the application, consisting of three pages and apparently covering contractors performing HVHHF operations at the Woolsey site, has an extensive Exclusion clause beginning at the bottom of page 2 and continuing to the end of page 3. This Exclusion appears to make the Certificate insufficient to meet the requirements of the regulation cited above.

In particular, the Exclusion voids the policy's coverage of "liability for Bodily Injury, Property Damage or Advertising Injury directly or indirectly caused by or arising out of *seepage, pollution, or contamination however caused whenever or wherever happening"* (emphasis added) unless a series of five conditions, including subparts, are all individually met. It is initially noted that the core public benefit created by these insurance requirements is for protection from precisely the kind of pollution harms that this exclusion is clearly designed to deny. The numerous elements in the Exclusion are grossly inappropriate to the circumstances of High Volume Hydraulic Fracturing and will frustrate the legislative purpose. Specifically, for coverage from pollution harm to exist, there must be:

1) a specific "occurrence," Condition (a),

2) which can be determined to have "first commenced on an identified specific date," Condition (b), and

c) the occurrence must be "first discovered by the insured within 45 days of such first commencement, Condition (c).

However, seepage and pollution from a defective hydraulically fractured well that is a full mile underground and that is connected to the point of discovery through

extremely hard to delineate contaminant pathways renders it virtually impossible to determine any specific "occurrence" event or its initial commencement date. Also, for the contaminants to travel over a mile to their place of discovery is likely to take more than the limited 45 days for reporting the incident.

Under the unique circumstances of high volume hydraulic horizontal fracturing, this exclusion will make it all but certain that the insurance will never cover the likely harm to the public from pollution events. Indeed, this language is almost perfectly drafted to ensure that there can be no recovery under this Exclusion for leakage from deep underground. The exclusion appears written to only allow a recovery from a catastrophic event such as an on-site explosion.

These limitations are only in the first half of the Exclusion; the second part is equally bad. This part starts with the statement that "Even if the above conditions a. to e. are satisfied, this policy does not apply to any actual or alleged liability," in any of three additional circumstances, i to iii. The first such limitation is:

"i. to abate or investigate any threat of seepage or pollution or contamination of the property of a third party;"

Such a "third party" would be any member of the general public affected by releases from the wellsite. In other words, if any property owner anywhere in the vicinity is harmed by a release of chemicals or product from the well, their losses and remediation costs are *specifically excluded* from this policy and there can be no recovery for that person under any circumstances, even if it is clearly proven that the horizontal well and its HVHHF contractor was the direct cause of their loss.

Accordingly, this exclusion appears to be drafted in a manner that completely defeats the public protections behind the requirement for contractor insurance coverage in Section 245.210 (a)(19). That provision is very broadly drafted to insure comprehensive coverage to all affected members of the public. The fact that this Exclusion is so broad that it defeats the contractor insurance requirement establishes that the plan in the Application is neither adequate nor effective.

No. 34. Potential For Similar Exclusion in Owner's Policy Not Clear.

The Application has two Certificates of Insurance attached, both on similar forms prepared by the same entity ("Accord"). The first Certificate described in the previous Comment has three pages with the last two pages that includes the Exclusion described above separately identified as "Additional Remarks

Schedule." The second Certificate insuring the Woolsey Operating Company LLC is a single page that does not indicate whether there is any such "Additional Remarks Schedule" pertinent to this policy. However, this second Certificate does include a statement that it is subject to any exclusion in the underlying policy. The Applicant must confirm whether there is any exclusion to the second Certificate, including in the underlying policy, that would vitiate the liability coverage in any manner similar to the Exclusion discussed in the previous Comment. If such Exclusion exists, the Applicant must state its pertinent terms and the Department must in turn determine whether the Exclusion prevents the approval of the Application. This second Certificate also lacks a Certificate Number so its legal status is uncertain.

No. 35. Failure to Specify Earthquake or Floodplain Hazard.

The Department's form requires the applicant to identify whether the insured wellsite location is in a define earthquake area or a regulatory floodplain. The Application meets neither requirement. Although the Application states in other locations that it is not located in an earthquake area, there does not appear to be any reference to whether it is in a floodplain at any point in the Application.

Chapter 19: Topsoil Preservation Plan

No. 36. Failure to Detail Topsoil Preservation Plan and Inconsistent Use of Topsoil.

The Department's form requires that the Topsoil Preservation Plan must be provided with "detail." ("Please detail the plan to stockpile, stabilize . . . any topsoil and subsoil . . . "). The plan proposed evidently is to "stockpile" the soil by wind-rowing it "to shallowest practical depth around the perimeter of [the] well-pad" while simultaneously having these shallow mounds serve as "berms." No information is provided as to the amount of soil (top or sub) that will be stockpiled in this manner, what the design specifications are for the wind-row areas, or how this strategy can insure the apparent objective of these wind-rows surrounding the entire perimeter of the wellsite to deflect stormwater. This level of detail is necessary for even a rudimentary explanation of whether this Plan's objectives are achievable. At the level of negligible detail provided, the Plan seems more like an effort to expend the least possible effort and expense in handling the soil by just

spreading it around the site. Accordingly, it does not appear to be a "preservation" plan at all given this lack of detail.

Worse, the plan appears based on an inconsistent design that the soil be used as a stormwater "berm" while at the same time being spread to the "shallowest practical depth." If this goal of shallowness is achieved, it would apparently render the "berms" incapable of deflecting stormwater. Design specifications or engineering drawings of what precisely is being proposed for these "berms" is a necessary detail to making the proposed plan comprehensible so that its expected effectiveness can be determined.

Finally, it is unclear if the reference here to earthen berms is the same as the reference to the undefined "dikes" in the Containment Plan (Document 12) or the "earthen containment berms" in the Hydraulic Fracturing Fluids and Flowback Plan (Document 10). The relationship of these items to one another and the exact engineering specifications of each should be specified.

Chapter 20: Fugitive Dust Control

No. 37. The Plan Lacks an Objective Measure Establishing Dust Problems.

The key condition for implementing the Fugitive Dust Control Plan is stated in Section 2.5, General Requirements, as: "Dust control is required any time dust is substantially visible in the air." Similarly, site inspections will only record fugitive dust problems based on "any observation of substantial fugitive dust." Section 2.1. These high-lighted terms are entirely subjective and therefore render the Fugitive Dust Plan unreliable and unenforceable.

This equivocal standard must be replaced with objective criteria such as a specific opacity limit that must be met on-site combined with a "no visible emissions" standard for all areas outside the wellsite's property boundary. We believe the opacity limit should be no more than 10%.

Opacity standards are a well-established method of measuring air pollution and field methods for determining opacity levels have existed for decades. The Plan must also be amended to insure proper training in these methods for all inspectors responsible for determining compliance with the Fugitive Dust Control Plan. Finally, the Plan must specify that all violations of the objective standards will be

recorded and reported to the Department and that all such violations will trigger immediate remediation of the causes of the fugitive dust.

No. 38. The Plan Lacks Clarity on When Dust Control Must Be Implemented.

The Plan needs to be amended to ensure that remediation steps will be affirmatively undertaken for all exceedances of the objective standards, see previous Comment. Currently, Section 2.5, requires that "Dust control will be implemented as appropriate by" the Applicant, thus creating no enforceable commitment to take affirmative steps when violations occur. While the choice of response should be in the informed discretion of site personnel, there should be no discretion whether remedial steps shall in fact be taken. The specific response taken and its adequacy to abate the violation should be recorded.

No. 39. Failure to Address Mandatory Elements of Dust Control Plan

Section 245.410(c) contains three practices for control of fugitive dust that "shall" be included in each Plan, i.e., "the use of speed restrictions, regular road maintenance, and restrictions of construction activity during high-wind days." None of these three mandatory elements is included in the proposed Plan and the Plan therefore cannot be approved.

The last requirement needs to be implemented with a definition for "high-wind days" to make it clear that construction activities shall be prohibited once wind speed meets a defined threshold, e.g., 15 mph. Complying with this need to define "high-wind days" will also give content to currently vague and unenforceable provisions of the Plan such as those on sandblasting which, according to Plan Section 2.10, will not "be conducted on days when the wind will not transport the material off-site"

No. 40. Locating Access Roads

Section 245.410(a) contains a requirement that "The access road to the Well site must be located" . . . "as far as practical from occupied structures, places of assembly, and property lines of unleased property." There is no indication in the Application that this mandatory requirement has been addressed in selecting the location of the wellsite's access road

No. 41. Water Usable for Dust Control Should Not Include Stormwater Until the Application Contains an Effective Stormwater Management Plan.

Applicant's proposed Plan allows "stormwater" to be utilized to suppress fugitive dust, see Section2.5, 2.6. However, as stated in previous comments, there is no specific stormwater management plan proposed except for use of "earthen berms" that are completely without detail and are therefore inadequate to ensure that any stormwater collected on-site would be free of chemical wastes, including from chemicals that may have been spilled at the wellsite. Use of this potentially contaminated stormwater for dust control should not be authorized by the Department unless there is a full stormwater management plan proposed that is sufficient to prevent such contamination.

The Plan must also provide for rapid and complete remediation of any spills that may contaminate any stormwater collected at the site. Any spill, its sampling and its remediation should also be required to be documented.

No. 42. Vehicle Wheel Washing Must Be Mandatory, Not Optional.

Section 2.7 of the Fugitive Dust Control Plan provides that trucks exiting the site will have a wheel wash available "if necessary." Stated in this vague manner, this provision is unenforceable. Wheel wash is a well-established means to prevent fugitive dust and should be mandatory for all trucks exiting the site.

No. 43: Use of Paved Roadways Not Addressed.

Section 245.410(c) provides that additional management practices, including road surfacing, may be required by the Department. The Fugitive Dust Plan makes no statement whether the roads will be paved and it appears that they will not be. Because paving the access road and parking area is an effective means of fugitive dust control, it should be explicitly addressed in the plan and utilized if it can be reasonably implemented.

Such explicit consideration of paving the roadways would also clarify the currently vague provision in Plan Section 2.7 that "Construction entrances and exits will be established" to prevent tracking of mud. As presently stated, the nature of these protective entrances and exits and whether they will be paved is simply unknown. Due to their importance in fugitive dust control and roadway safety, the entrances/exits, at a minimum, should be paved.

No. 44. Wind Breaks/Barriers and Well Automation Not Addressed.

Section 245.410(c) also provides that the Department may require wind breaks or barriers or well automation that reduce reliance on vehicles. Neither of these

methods of fugitive dust management are mentioned in the proposed Plan. Wind barriers can be very cost effective in preventing the escape of fugitive dust from the property or in protecting areas where workers are frequently located. Similarly, any automation that reduces vehicle traffic will have immediate and permanent benefits in reducing fugitive dust. The Applicant should be required to address these options and identify cost effective means to implement them so that the Department can exercise it authority to require such controls in an informed manner.

No. 45. Section 2.10 Requirements Should All Be Mandatory.

Section 2.10 on "Control of Other Air Emissions" is consistently unenforceable through the repeated use of phrases such as "when possible" or "when feasible" even though the air pollution control methods it includes are industry standard, very practical, and will often directly assist in fugitive dust control, e.g., the limitations on sandblasting. For example, the use of low-sulfur diesel fuel is only noted as being used "when possible" thus rendering this sensible control illusive; there is no reason that low-sulfur diesel should not be mandatory so that particulate emissions will be consistently reduced. Similarly, the restriction on sandblasting to "days when the wind will not transport the material off-site" is unenforceable due to vagueness and should have an objective standard, see Comment 39. The Applicant must amend the Plan to remove these clearly equivocal standards and insure that these protections will be routinely utilized at the wellsite.

Document 21: Water Quality Monitoring Plan

No. 46. Sampling Plan Wholly Generic and Lacks Required Specificity on Sampling Locations.

Section 245.600 of the Department's rules governing Water Quality Monitoring is over six pages in length and is specific as to what is required in an approvable plan. The sampling plan and protocol is especially detailed in subsections (b), (c) and (d). These rules are clear that sampling locations are required to be precisely identified, see e.g., (b)(4)(B) that sampling sites must be identified by GPS coordinates accurate to within 3 feet determined by actual field measurement.

Despite the explicit nature of these requirements, the Monitoring Plan does not identify a single specific sampling point. This lack of specificity is entirely unnecessary as only five water sources are candidates to be sampled, namely the

three future wells to supply the base fluid water of 7,500,000 gallons and an existing stock pond and the water well that supplies this pond.

The brief section on surface water is entirely generic and states only that "the sample location shall be located such that the water is representative of the overall water body being sampled." It appears that the owner(s) of the stock pond has not consented to allow sampling., The Plan does not state whether or not the stock pond will in fact be sampled or how that will be accomplished. It should explicitly address the applicant's intentions regarding sampling the stock pond, the only candidate identified in the Application for required surface water sampling.

Similarly, the groundwater section is also entirely generic and says only that "Groundwater shall be sampled at a point as close to the source as is feasible." It gives alternative methods for well sampling based on the physical characteristics of the well. Rather than being generic and stated in the alternative, the Plan should provide specific information regarding the type of wells to be employed by Applicant and the sampling procedure relevant to that design; there is no reason why this information cannot be presented during the public comment period.

As to the required sampling of the aquifer supplying the stock pond, the Plan should specifically identify the sampling location based on the criteria established in (b)(1) that it be "at the next closest groundwater well that the permittee has permission to access." There is no reason that this location cannot be determined now so the public has an opportunity to assess its suitability upfront, rather than obstructing public input and only identifying the sampling locations when they are permanently established in the laboratory report required in (d) long after the public comment process is concluded.

No. 47. Data Analysis Procedure Plan Also Wholly Generic and Lacks Required Specificity on Protocols Used to Analyze Significance of Sampling Results.

The laboratory tests require an interpretation of the test results and for that purpose, the Applicant concludes its Water Quality Monitoring Plan with a section titled "Data Analysis Procedures." The Section is completely generic and does not actually provide such analytic procedures, thus rendering the Application incomplete.

Instead of supplying an actual data analysis plan, the Applicant merely states that "the method to be used under this plan is based on U.S. EPA methodology established for the assessment of contaminants in environmental samples, and is

described in Chapter 9 of USEPA publication 846. We plan to use a data analysis plan based on that methodology." (emphasis added). Accordingly, no plan is proposed that can be evaluated during the public comment period and the Application is incomplete. There is no valid reason why such a plan cannot be presented for comment now.

Not only is there no data analysis plan, but the Applicant's reference to US EPA publication 846 does not appear to be appropriate. Chapter 9 of this publication can be found at: *https://www.epa.gov/sites/production/files/2015-10/documents/chap9_0.pdf.* Chapter 9 is a 79 page document that is 31 years old (dated September, 1986). Most important, it was specifically designed for sampling programs "to evaluate the physical and chemical properties of solid waste." Section 9.1.

The Applicant provides no justification for using this particular reference material and due to its high relative age and facial irrelevancy, that choice should be viewed as inappropriate unless specifically justified in the Plan with proper comparison to other potential sources, especially those dealing with water sources, e.g., US EPA's Clean Water Act Analytical Methods at *https://www.epa.gov/cwa-methods* or those under the Safe Drinking Water Act, *https://www.epa.gov/dwanalyticalmethods.*

Further, Chapter 9 provides many options for sampling methodologies and systems from which choices must be made considering overall design needs. If the Applicant can support the appropriateness of this source material, it must also specifically state its selections among those options in its Water Quality Monitoring Plan so that its choices can be considered and made the subject of properly developed comments. As it stands now, the Application's refusal to reveal its future analytic protocols defeats meaningful public comment and raises the unacceptable potential that the eventual Plan may be inadequate and ineffective.

Document 24: Emissions Management Statement

No. 48. Basis for Claiming Wildcat Well Status Not Provided.

The Applicant is not complying with the important air emissions restrictions in the Hydraulic Fracturing Regulatory Act based on its unsupported assertion that its well will be a "wildcat well." The Applicant must state and support the specific

reasons why it is entitled to this special status and the resulting emissions exemptions. This status is based on historic uses of the oil or gas "field" involved and no information of any kind on such historic use has been provided.

Document 25: Radioactive Materials Management

No. 49. Need to Clarify the "Black Shale" Subject to Sampling.

As stated in the previous comments under Document 11, the Wellsite Safety Plan, the phrase "black shale" is not defined in the regulations and the extent of sampling thereof is uncertain. The Application must state the specific geologic formations considered to be in the "black shale" that will be tested pursuant to this requirement.

No. 50. Need to Clarify If Filters Will Be Used and Tested for Radioactivity.

One of the most serious sources for radioactive contamination is from filters used at hydraulic fracturing sites that concentrate radioactivity. No mention is made of filters in the Application or of the specific type of equipment to be used on-site. The Applicant must state whether any filters will be utilized on-site and if so, how they will be managed.

Other Issues:

No. 51. Failure to make Oil & Gas Application, Form OG-10, and the Drilling Permit Available to the Public for Comment.

It is legally required that all HVHHF wells comply with the Illinois Oil & Gas Act as well as the Hydraulic Fracturing Regulatory Act. However, the relevant Application Form and, if available, Drilling Permit is not made part of the HVHHF application so compliance with these requirements cannot be readily determined during the brief Comment period. We recommend that the Department include this information with the HVHHF application to insure a complete and transparent opportunity for Public Comment on the entire well proposal consistent with the intent of the Hydraulic Fracturing Regulatory Act.

Thank you for your consideration of these Comments. Because of the many required areas that are not addressed, or not meaningfully addressed, in the Application that have been identified in these Comments, we respectfully ask that the Department deny the Application. If the Application is re-submitted to address these many deficiencies, we ask that you provide an additional opportunity for full public participation, including additional public comment, on the revised Application.

Respectfully Submitted,

A personal concern of mine in regards to permitting Woosley Operating Company, LLC to drill a High Volume Hydraulic Fracturing well, along with the accompanying Class 2 injection wells is the increased risk of induced earthquakes in the southern Illinois region.

Earthquakes have risen sharply in the Midwest in the last decade, a rise that corresponds to the rise in fracturing operations in many states. This uptick in seismic events represents a more than hundred-fold increase in overall earthquakes. The states reporting unusually elevated levels of seismic activity include Arkansas, Colorado, New Mexico, Ohio, Oklahoma, Texas, and Virginia (Science, Ellsworth, 2013). Many seismologists across the country have determined that this uptick in the numbers of earthquakes represents induced seismicity from the disposal of oil, liquid natural gas and natural gas extraction waste in Class2 injection wells, and that evidence for triggered seismicity in response to injection of these waste fluids is becoming incontrovertible, (Science, Ellsworth, 2013). The disposal of 280 billion gallons a year, of toxic, chemical laden, mostly radioactive fracturing waste water, (brine) across the country is causing earthquakes.

http://www.usgs.gov/blogs/features/usgs_top_story/man-made-earthquakes/

http://fullerfuturefest.com/fracking-industrialization-and-induced-earthquakes-the-mechanisms-that-connect-the-disposal-of-fracking-wastewater-into-deep-injection-wells-to-a-significant-increase-in-midcontinent-seismic-activity/

Some of the earthquakes are barely perceptible, but some of them have been quite large, (5.7 Prague, OK, 2011), and have caused real property damage, injured residents and terrorized communities,

"Residents Baffled by Terrifying Loud Booms in Oklahoma", http://abcnews.go.com/US/residents-baffled-terrifying-loud-booms-oklahoma/story?id=22543356.

In Oklahoma, according to a joint statement by both USGS and OGS, residents have experienced more than 200 earthquakes measuring at least a magnitude 3.0 since the beginning of 2009. Recently 103 earthquakes rocked the area in a single 3 day period, from 2/14/14 – 2/17/14, many of them cracking walls and foundations.

http://www.msnbc.com/rachel-maddow-show/watch/spike-in-oklahoma-earthquake-activity-157633603521,

http://www.okgeosurvey1.gov/pages/earthquakes/recent-earthquakes.php

Another example is the Guy-Greenbrier area of Arkansas, which experienced only one earthquake of magnitude 2.5 or greater in all of 2007, the numbers grew to 10 in 2009, and in 2010 there were 54 earthquakes of magnitude 2.5 or greater (Kerr, 2012), and on February 27, 2011, a magnitude 4.7 earthquake. Many of the earthquakes were tied to Class 2 injection disposal wells in the area, which were ordered to shut down, and the earthquakes stopped.

Youngstown, Ohio experienced a series of earthquakes in 2011/2012, then a magnitude 4.0 earthquake struck. Gov. John Kasich subsequently ordered that four nearby Class 2 injection well projects shut down and the earthquakes slowed.

Quote: "In regards to the geology, the 1000+ eastern Ohio earthquakes occurred on inactive faults that are over one-billion years old. These faults would not have moved, if there had been no injection or fracking. In Illinois you have two know seismic zones. The New Madrid and Wabash Valley seismic zones. Your state already has a known seismic risk. You need to write rules that are more restrictive than Ohio, not less. You also need to work with geologists and geophysicists, that have no conflicts of interest regarding oil and gas, to delineate regions of the state that are off-limits to both fracking and injection wells. Given what is already known about the historical seismicity in the region, to not do so, would be irresponsible and willfully ignorant. "Dr. Ray Beiersdorfer, Professor of Geology, Dept. of Geological & Environmental Sciences, Youngstown State University, Youngstown, Ohio

The Feb. 27, 2011, Praque, OK earthquake was studied by Columbia University geologists partnering with the USGS and produced a report. I will read you a bit from it. (March 26, 2013)

http://www.ldeo.columbia.edu/news-events/wastewater-injection-spurred-biggest-earthquake-yet-says-study

http://www.earth.columbia.edu/articles/view/3072

"Scientists have linked a rising number of quakes in normally calm parts of Arkansas, Texas, Ohio and Colorado to below-ground injection. In the last four years, the number of quakes in the middle of the United States jumped 11-fold from the three decades prior, the authors of the Geology study estimate. Last year, a group at the U.S. Geological Survey also attributed a remarkable rise in small- to mid-size quakes in the region to humans. The risk is serious enough that the National Academy of Sciences, in a report last year called for further research to "understand, limit and respond" to induced seismic events. Despite these studies, wastewater injection continues near the Oklahoma earthquakes.

The magnitude 5.7 quake near Prague was preceded by a 5.0 shock and followed by thousands of aftershocks. What made the swarm unusual is that wastewater had been pumped into abandoned oil wells nearby for 17 years without incident. In the study, researchers hypothesize that as wastewater replenished compartments once filled with oil, the pressure to keep the fluid going down had to be ratcheted up. As pressure built up, a known fault—known to geologists as the Wilzetta fault--jumped. "When you overpressure the fault, you reduce the stress that's pinning the fault into place and that's when earthquakes happen," said study coauthor Heather Savage, a geophysicist at Columbia University's Lamont-Doherty Earth Observatory.

The amount of wastewater injected into the well was relatively small, yet it triggered a cascading series of tremors that led to the main shock, said study co-author Geoffrey Abers, also a seismologist at Lamont-Doherty. "There's something important about getting unexpectedly large earthquakes out of small systems that we have discovered here," he said. The observations mean that "the risk of humans inducing large earthquakes from even small injection activities is probably higher" than previously thought, he said.

The results of the Columbia University study showed that the Class 2 injection disposal wells, suspected of causing the earthquakes, were in operation for at least 18 years indicating that there can be decades-long lags between oil, liquid natural gas, natural gas drilling wastewater injection and seismic events. It was suspected that over the years, pressure in the wells increased and may have eventually lubricated known seismic faults.

The Article: The Cardston Earthquake Swarm and Hydraulic Fracturing of the Exshaw Formation (Alberta Bakken Play) by Ryan Schultz, Shilong Mei, Dinu Pană, Virginia Stern, Yu Jeffrey Gu, Ahyi Kim, and David Eaton **in the** Bulletin of the Seismological Society of America, Vol. 105, No. 6, pp. –, December 2015, shows that

Abstract: More than 60 small earthquakes (ML 0.7–3.0) were detected from December 2011 to March 2012 north of Cardston, Alberta, an area with little evidence for previous seismic activity. The timing of these events closely correlates (>99:7% confidence) with hydraulic fracturing completions of the Devonian–Mississippian-age Exshaw Formation at a nearby horizontal well. Unanimous waveform multiplicity within the swarm suggests that the events share a similar origin and source mechanism. This observation is corroborated by the point-like collocation of hypocenters within the crystalline basement during robust, double-difference relocations. Furthermore, the presence of a pre-existing fault is confirmed via formation-top offset mapping and interpreted to be a Late Cretaceous extensional fault. The confirmation of this fault at depth provides a plausible pathway for rapid hydraulic communication from the fracturing interval into the crystalline basement. Consistent with structural interpretations and available stress information, moment tensor inversion of the largest magnitude event (Mw 3.0) indicates reactivation of a basement fault with normal slip. We conclude that the genesis of this earthquake swarm was likely caused by increased pore pressure, within the basement fault, as a result of fracturing stimulation.

In the testimony of Stanford University geophysicist Mark Zoback to the US Senate Committee on Energy and Natural Resources, June 19th, 2012, recommended an empirically derived practical framework for reducing the probability of induced seismicity – five straightforward steps:

http://www.energy.senate.gov/public/index.cfm/files/serve?File_id=4f086706-79aa-43df-a6e9-1ce1169f6312

(1) It is important to avoid injection into active faults and faults in brittle rock.

(2) Formations should be selected for injection (and injection rates should be limited) to minimize pore pressure changes.

For these two points: Deficiencies in the Permit Application Document 5 No. 4 – Failure to clearly Identify formations to be stimulated , No 7 & 8 – Missing Identification of a Confining Zone Fracture Pressure and Missing Data on confining Zone Fracture Pressure , No. 10 Fracturing Pressure of the Production Zone Not Identified and No. 13 Missing Data on Geological Formations gives pause on how much the company does not know of the region and disregarding simple guidelines.

(3) Local seismic monitoring arrays should be installed when there is a potential for injection to trigger seismicity.

(4) Protocols should be established in advance to define how operations will be modified if seismicity is triggered.

(5) Operators need to be prepared to reduce injection rates or abandon wells if triggered seismicity poses any hazard.

The active faults and active earthquake zones of the New Madrid and Wabash Valley in Southern Illinois are poorly defined and mapped out. Per the ILGS, they do not have maps of faults in the deep basement rock for the state which are responsible for Illinois earthquakes, and the Wabash Valley seismic zone is ill defined and has no specific published boundaries, (the reason for an airbrushed ellipse on some US Geological Survey maps, http://pubs.usgs.gov/fs/2006/3125/ .)

Southern Illinois is also marked by a number of other major seismically active structural features including the east-trending Cottage Grove–Rough Creek–Shawnee town fault system, the magmatic system of Hicks dome and the Fluorspar district, and the NNW-trending La Salle, Du Quoin, and Clay City fold systems (Nelson 1991; Kolata and Nelson 1991).

Induced seismicity from Class 2 injection wells in active earthquake zones carries with it real risks to the public health, safety and welfare of Illinois residents, and risks to property, businesses and the environment. These risks must be studied in more detail and communicated clearly to the residents and businesses of Southern Illinois. The risk management of induced seismicity from Class 2 well disposal of fracturing waste water has been poorly studied across the country, and poorly delineated and regulated in the Hydraulic Fracturing Regulatory Act. Emergency management plans, insurance levels, bonding and even mortgages may be affected by assigning probabilities of risk to different areas located within the active earthquake zones of Illinois.

There is one more issue with induced earthquakes not covered by HFRA - the mechanical integrity of Class 2 wells and horizontal fracturing wells, which is integral to whether water, air or soil contamination will occur close to these wells. The mechanical integrity of Class 2 wells and horizontal fracturing wells can be affected by seismic events near their locations. The effects of seismic events on the mechanical integrity of Class 2 wells and horizontal fracturing wells is not addressed in HFRA at all, and it has not been well studied by the geologic community. Document 13: Casing and Cementing Plan No. 29 Missing information in Casing and Cementing Plan – The casing and cementing plan does not address the requirement labeled (f) in Document 13, regarding potential for earthquakes. The application is therefore incomplete and must be returned to the applicant to address this deficiency.

I feel that in light of current research on the matter of injection wells being a cause of induced earthquakes, if injection wells in an inactive seismic zone, i.e. Ohio can caused earthquakes, the risk of destructive earthquakes increases greatly in the active New Madrid/Wabash Valley zones that we/I live in. The science is out there. Why risk the increased threat of induced earthquakes via drilling/injection wells in the already active high risk New Madrid and Wabash Valley Seismic Zones.

This permit should not be granted in light of the science that earthquakes can be induced via drilling/injection wells and the potential of great harm from a drilling operation in White County causing a destructive earthquake over the whole southern Illinois region including Makanda where I live, approximately 75 miles away.

- a note: 2008 Mt. Carmel earthquake (5.2 mag)
~~I felt~~ I felt - felt after shocks at a home
10 am morning - shaking

Public Hearing Comments on Woolsey Operation Co. Woodrow HVHHF Permit Application and Application Supplement

Submitted by Barbara McKasson

This permit application HVHHF # 000001 is in actuality a test case for IDNR and for the HFRA rules which will show us all whether or not IDNR is truly prepared to enforce the rules for the High Volume ~~Hydraulic~~ Horizontal Hydrofracturing Act. Whether or not IDNR makes Woolsey meet the standards of the regulations in its permit application will be a signal to other companies on what will in actuality be required of them. For that reason, I am affected by this proposed well, since a HVHHF well could be proposed on property near my home in Southern Illinois in the future.

In addition, I am in the earthquake zone for effects from the Wabash Fault. According to geological studies, the Wabash Fault has become increasingly active in the last few decades. I have experienced the effects of several earthquakes in Southern Illinois and have seen waves coming from the East and moving through the earth on our own property during an earthquake. A great increase in earthquake frequency and volume has been linked to both the HVHHF process and the related waste disposal into injection wells. This increase in earthquake activity has been documented in Oklahoma, Arkansas, Ohio and other states.

Thus, I challenge the assertion of Woolsey that I am not affected enough to testify at this permit hearing.

I am especially concerned with the handling of the flowback waste water. Besides the estimated 7.5 million gallons of water Woolsey proposes to use, there will be an unknown amount of produced water from underground – all laden with the many fracking chemicals, plus the brine, heavy metals and radioactive substances from the produced water.

EXHIBIT
Requestors 3
8-2-17
PENGAD 800-631-6989

The Woolsey flowback containment plan is not a coherent plan. The number or capacity of tanks for the flowback water is not specified, plus the size and height of the earthen containment berms is not specified. The number of trucks available to transport the flowback waste to the injection wells plus the frequency of removal of the flowback is not specified. The estimate for the flowback from the 7.5 million gallons of water is very low compared to the average percentage given in studies in other states. Woolsey is estimating that less than 3% of the injected water will flow back, while the state of Ohio estimates that 15% to 20% of the injected fluid will return as flowback. This lack of preparedness by Woolsey is a recipe for a spill of toxic liquid. This could easily reach the nearby non-perennial streams and the groundwater system, which could in turn reach my property in Southern Illinois.

In the supplemental document number 10, Woolsey has still not satisfied the requirement to describe testing procedures for the flowback waste. Will Woolsey be testing the flowback for heavy metals and naturally occurring radioactive materials? If so, how will they conduct the tests? Since Woolsey has not specifically figured out how much flowback they must prepare for and have grossly underestimated the amount of flowback, it becomes even more important for Woolsey to test for the content and levels of potentially toxic liquids in the flowback.

Information deficiencies found in Document 4 "Underground Freshwater Information" of the first Woolsey permit application evidently have not been corrected since there is no reference to Document 4 in Woolsey's Supplemental Application Information document. Thus, Woolsey has not submitted data from the Illinois Geological Survey to show determination of the "lowest potential fresh water." Therefore, Woolsey has failed to insure that underground fresh water will not be contaminated by their proposed operations. The

condition of the underground waters concerns me in that Southern Illinois is prone to drought conditions that can greatly deplete reservoirs that are already stressed by high usage, leading to conditions that threaten the quality and quantity of Southern Illinois water. I depend on a reservoir for my water usage at present, but we may have to depend on groundwater in the future, especially in the increasing extreme drought conditions that we have been experiencing more frequently.

For these reasons, IDNR should deny this permit.

Respectfully submitted by Barbara McKasson

[redacted]

Illinois Department of
Natural Resources

One Natural Resources Way Springfield, Illinois 62702-1271
www.dnr.illinois.gov

Bruce Rauner, Governor
Wayne A. Rosenthal, Director

June 5, 2017

Woolsey Operating Company, LLC
125 North Market St. Ste. 1000
Wichita, KS 62702

Re: HVHHF Application for Woodrow #1H-310408-193 (Review #HVHHF-000001)
Sec. 31, T04S, R08E, White County, Illinois

Mr. Woolsey:

Please be advised that the Department has reviewed your High Volume Horizontal Hydraulic Fracturing (HVHHF) permit application which was officially received on May 22, 2017, and issued the review number HVHHF-000001. Section 1-35(j) of the Hydraulic Fracturing Regulatory Act (HFRA), 225 ILCS 732/1-35(j) states as follows:

> *If at any time during the review period the Department determines that the permit application is not complete under this Act, does not meet the requirements of this Section, 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 within the review period, the Department may reject the application.*

Based on the Department's review of your application, and for the reasons set forth in Attachment A, the application submitted to perform HVHHF operations on the above-referenced well cannot be issued as submitted as it does not meet the requirements of the HFRA and associated rules and regulations. This letter should be considered your deficiency letter under Section 1-35(j) of the HFRA and 62 Ill. Adm. Code 245.230(b). Review of your application cannot be completed until all of the items noted in Attachment A have been submitted or are otherwise resolved. Also, be advised that 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.*" 225 ILCS 732/1-35(i), 62 Ill. Adm. Code 240.300(a).

In order for the Department to complete its review within the timeline of the HFRA, please submit a response to the deficiencies listed in Attachment A within 14 calendar days from the date of this letter. Failure to respond to this deficiency letter in a timely manner may result in your application being rejected or denied at the end of the review period as set forth in 225 ILCS 732/1-35(j), 1-60(a) and 62 Ill. Adm. Code 245.300 and 245.310(a).

In order for the Department to complete review of your HVHHF permit application, you have 2 options:

1) Within fourteen (14) calendar days, provide a formal response to this deficiency letter, in writing, addressing all items in their entirety, or request an extension of time which will still allow the Department to complete the required review of the new information within the 60 calendar day deadline mandated by the HFRA; or
2) If you cannot provide a complete response which the Department can fully review within the deadlines mandated by the HFRA, formally waive, in writing, the 60-day deadline in order to provide the Department more time to complete the review of your HVHHF permit application.

Please submit all responses and questions to Doug Shutt via mail or email at the contact information below, including the review number assigned to your permit application: **HVHHF-000001.**

Sincerely,

[redacted]

Doug Shutt
Permit Manager
Office of Oil and Gas Resource Management
One Natural Resources Way
Springfield, Illinois 62702
217-782-7756
Doug.Shutt@illinois.gov

Attachment A - 12 pages

ATTACHMENT A TO JUNE 5, 2017 DEFICIENCY LETTER FOR HVHHF-000001

The following deficiencies were noted during the review of your application:

1. HVHHF Operations Plan

According to 62 IAC Section 245.210(a)(6), High Volume Horizontal Hydraulic Fracturing Operations Plan, shall include 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.

Application Deficiencies

a) Specifically, 245.210(a)(6)(E) requests the estimated or calculated fracture pressure of the producing and confining zones. *The application identifies the calculated pressure of the producing zone as 2875 PSI, the calculated pressure of the confining zone as 4000 PSI and the maximum anticipated injection treating pressure as 7900 PSI. The application did not include evidence that the proposed maximum injection pressure of 7900 PSI will not initiate or propagate fractures in the confining zone or overlying strata.*

To resolve, submit a revised HVHHF Operations Plan including the following:

A) Provide evidence that conducting the high volume horizontal hydraulic fracturing operations on the well at the proposed maximum anticipated injection treating pressure of 7900 PSI will not:
    a) Initiate new fractures in the confining zones;
    b) Propagate existing fractures in the confining zone;
    c) Allow the transmission of fluids out of the producing zones; and
    d) Allow contamination of underground sources of drinking water (USDWs);

2. Additional Required Maps

According to 62 IAC Section 245.210(a)(7), Scaled Plat Maps, Diagrams or Cross-sections, the following items shall be addressed:

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 HVHHF 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).

Application Deficiencies

a) *Specifically, 245.210(a)(7)(C) requests 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 HVHHF operations. The diagram provided does not identify 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 HVHHF operations.*

To resolve submit a revised Additional Required Maps including the following:

A) Provide 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 HVHHF operations; or

B) If no well bores are 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 HVHHF operations, provide a statement to that effect.

3. Hydraulic Fracturing Fluids and Flowback Plan

According to 62 IAC Section 245.210(a)(11), Hydraulic Fracturing Fluids and Flowback Plan, the following items shall be addressed:

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) and

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.

Application Deficiencies

a) *245.210(a)(11)(A) requests 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. Specifically, 245.825(a) of Subpart H specifies the requirement of above ground storage tanks, the application does not adequately address these requirements only identifying the tanks as "purpose build lined and closed".*

b) *245.210(a)(11)(B) requests the applicant describe the anticipated hydraulic fracturing flowback, the expected flowback rate and amount, and the frequency at which the storage tanks will be emptied. The application describes the expected flowback rate and amout, and the frequency at which the storage tanks will be emptied, however it does not contain a description of the anticipated hydraulic fracturing flowback.*

To resolve submit a revised Hydraulic Fracturing Fluids and Flowback Plan including the following:
A) Address the specific storage tank requirements 245.825(a) and
B) Provide a description of the anticipated hydraulic fracturing flowback.

4. Well Site Safety Plan

According to 62 IAC Section 245.210(a)(12), Well Site Safety Plan, the following items shall be addressed:
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.

Application Deficiencies

a) *245.210(a)(12)(A)(i) requests a well site safety plan that complies with federal and State law, including applicable OSHA regulations for the protection of persons on the well site during high volume horizontal hydraulic fracturing operations. While the application indicates the plan will be evaluated on an annual basis to ensure compliance with local, state, and federal regulations, it does not state that it is currently compliant with federal and State law, including applicable OSHA regulations.*

b) *245.210(a)(12)(A)(ii) requests a well site safety plan that complies with federal and State laws for the protection of the general public during high volume horizontal hydraulic fracturing operations. While the application indicates the plan will be evaluated on an annual basis to ensure compliance with local, state, and federal regulations, it does not state that it is currently compliant with federal and State law.*

c) *245.210(a)(12)(B) requires that the well site safety plan address that the applicant's contact information is made available to emergency responders. Specifically, the applicant does not provide a statement indicating that within 15 calendar days after submitting the permit application*

to the Department, the applicant will 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.

To resolve submit a revised Well Site Safety Plan including the following:

A) A statement indicating that the plan is currently complaint with federal and State law, including applicable OSHA regulations for the protection of persons on the well site during high volume horizontal hydraulic fracturing operations.

B) A statement indicating that the plan is currently compliant with federal and State law regulations for the protection of the general public during high volume horizontal hydraulic fracturing operations.

C) A statement indicating that within 15 calendar days after submitting the permit application to the Department, the applicant will 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.

5. Containment Plan

According to 62 IAC Section 245.210(a)(13), Containment Plan, the following items shall be addressed: 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.

245.820 requires that 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.

245.825 requires that 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

Application Deficiencies

a) *245.820 requires that 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 containment plan does not mention the intent to inspect the containment in accordance with 845.820.*

b) *245.825(a)(1-5) require specific requirements for each type of tank (hydraulic fracturing additives, hydraulic fracturing fluid, hydraulic fracturing flowback, and produced water). The application did not identify each of these types of tanks as meeting the requirements of 245.825.*

To resolve submit a revised Containment Plan including the following:

A) A statement indicating that the secondary containment will be inspected as required by 245.820; and

B) A statement indicating that each of the types of containment tank is a tank meeting the requirements of 245.825.

6. Casing and Cementing Plan

According to 62 IAC Section 245.210(a)(13), Casing and Cementing Plan, the following items shall be addressed:
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.

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 Section 245.530.

When intermediate casing is required, Intermediate casing shall be set and cemented pursuant to the requirements of Section 245.560.

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 Section 245.570.

Application Deficiencies

a) *245.530(b) requires that 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). The casing and cementing plan does not indicate that the surface casing conforms to industry standards referenced in Section 245.115(a)(2).*
b) *245.530(k)(2) requires that 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 installation and testing of the blowout prevention equipment pursuant to Section 245.550. The casing and cementing plan does not indicate that blowout prevention equipment will be installed in the presence of an inspector or tested in the presence of an inspector.*
c) *245.570(b) requires that 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). The casing and cementing plan does not indicate that the production casing conforms to industry standards referenced in Section 245.115(a)(2).*
d) *245.570(c) requires that 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). The casing and cementing plan does not indicate that the casing thread compound conforms to industry standards referenced in Section 245.115(a)(3).*
e) *245.570(e) requires that 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. The casing and cementing plan does not indicate that the Department's District Office will be notified by phone and electronic mail before setting and cementing production casing to enable an inspector to be present.*
f) *245.570(f)(2) requires that in the horizontal portion of the well, rigid centralizers shall be used and placed accordingly to ensure at least 80% standoff. The casing and cementing plan does not*

indicate that rigid centralizers shall be used and placed accordingly to ensure at least 80% standoff.

g) *245.570(f)(4) requires that 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). The casing and cementing plan does not indicate that all centralizers used in the vertical portion of the well conform to the industry standards referenced in Section 245.115(a)(4) through (a)(6).*

h) *245.570(j) requires that 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. The application suggests that the 4-1/2" casing will be tested independently of the 7". The requirements of 245.540(c) indicate that the production casing string, in this case comprised of both the 7" and 4-1/2" casing, shall be tested as one unit after the 4-1/2" casing has been installed. Note: This requirement in no way effects the requirement to test the 7" casing prior to installing the 4-1/2" casing.*

To resolve submit a revised Casing and Cementing Plan including the following:

A) A statement indicating that the surface casing conforms to industry standards referenced in Section 245.115(a)(2);

B) A statement indicating that blowout prevention equipment will be installed and tested in accordance with 245.550;

C) A statement indicating that the production casing conforms to industry standards referenced in Section 245.115(a)(2);

D) A statement indicating that the casing thread compound conforms to industry standards referenced in Section 245.115(a)(3);

E) A statement indicating that the Department's District Office will be notified by phone and electronic mail before setting and cementing production casing to enable an inspector to be present;

F) A statement indicating that the rigid centralizers shall be used and placed accordingly to ensure at least 80% standoff;

G) A statement indicating that all centralizers used in the vertical portion of the well conforms to industry standards referenced in Section 245.115(a)(4) through (a)(6); and

H) Describing the procedure for testing of the production sting, comprised of both the 4-1/2" casing and 7" casing, once the production casing cement operation is completed.

7. Traffic Management Plan

According to 62 IAC Section 245.210(a)(15), Traffic Management Plan, the following items shall be addressed:

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, HVHHF 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;

245.410(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).
245.410(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).
245.410(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).
245.410(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).

Application Deficiencies

a) *245.210(a)(15)(A) requires 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. The application did not indicate that the applicant submitted copies of the traffic management plan to the impacted highway authority.*

To resolve submit a revised Traffic Management Plan including the following:

A) A statement indicating that the applicant has submitted copies of the traffic management plan to the impacted highway authority as required under 245.210(a)(15).

8. Restoration Statement

According to 62 IAC Section 245.210(a)(18), Restoration Statement, shall include the following;

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;

Application Deficiencies

a) Specifically, 245.210(a)(18)(A) requires 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). The application did not include this statement.

b) Specifically, 245.210(a)(18)(B)(ii) requires a strategy for restoration of lands used by the permittee other than the well site and production facility pursuant to Section 245.1020. The application did not provide a strategy for restoration fully addressing the requirements of 245.1020.

c) Specifically, 245.210(a)(18)(B)(iii) requires 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. The application did not provide a strategy for restoration fully addressing the requirements of 62 Ill. Adm. Code 240.Subpart K and Sections 245.1000 and 245.1030.

To resolve submit a revised Restoration Statement including the following:
A) A statement indicating 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) Provide a strategy for restoration of lands used by the permittee other than the well site and production facility that addresses all the requirements of 245.1020;.and
C) Provide a strategy for restoration of lands used by the permittee other than the well site and production facility that addresses all the requirements of 245.1020.

9. Topsoil Preservation

According to 62 IAC Section 245.210(b)(2), topsoil preservation, shall include the following;
A strategy for compliance with the requirement to preserve topsoil as required by Section 245.410;

245.410(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).
245.410(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).
245.410(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).
245.410(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).

Application Deficiencies

a) *Specifically, 245.410(d) requires that 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). The application did not include a statement indicating that all soil will remain on site for use in either partial or final restoration and reclamation pursuant to Subpart J.*

To resolve submit a revised Topsoil Preservation form including the following:

A) A statement indicating 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).

10. Bonds or Other Collateral Securities

According to 62 IAC Section 245.210(f), application shall be accompanied by a bond or equivalent financial instrument as required by Section 245.220(a).

62 IAC Section 245.220:

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)

Application Deficiencies

a) Specifically, 245.220(c)(2)(a) requires that 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) Specifically, 245.220(c)(2)(d) requires that 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. The original certificate of deposit or withdrawal receipt was not submitted to the Department.

To resolve submit a revised Bond Municipal Consent Registration form including the following:

A) Provide in writing and upon the records of the bank issuing the certificate(s) of deposit, a certificate(s) of deposit payable to Woolsey Operating Company, LLC and an assignment(s) to the Illinois Department of Natural Resources, Office of Oil and Gas Resource Management. This/these assignment(s) must also include in writing that the issuing bank waives all rights of setoff or liens against the certificate(s) of deposit. Note: Do not utilize the Financial Security Instrument (Bond) Certificate of Deposit or Assignment of Certificate of Deposit forms provided by the Department for conventional permitting purposes.
B) Provide the Original certificate(s) of deposit or withdrawal receipt(s) to the Department.

Please submit all responses and inquiries to Doug Shutt vial mail or email at the following address:

Doug Shutt
RE: 6/5/2017 Deficiency Letter for HVHHF-000001
Office of Oil and Gas Resource Management
One Natural Resources Way
Springfield, Illinois 62702
217-782-7756
Doug.Shutt@illinois.gov