[redacted]

From: Richard Schwarze ([redacted]) Sent You a Personal Message
<[redacted]>
Sent: Friday, June 23, 2017 5:08 PM
To: DNR.HFPublicComments
Subject: [External] Review Number HVHHF-000001

Dear Illinois Department of Natural Resources,

I am writing these comments in regards to the application from Woolsey Operating Company, LLC for a permit under the Hydraulic Fracturing Regulatory Act (HFRA), assigned to Review Number HVHHF-000001. The proposed well (Woodrow #1H-310408-193) in White County, Illinois would threaten public health and safety and the permit application contains a number of issues highlighted below.

The application is woefully lacking in data and information required by the Illinois legislature and Illinois DNR under the rules and regulations of the HFRA that are designed to protect public health and the environment, and so cannot be approved as submitted. For example, the permit application does not give the exact location of the two disposal wells. The locations should be given with GPS coordinates so that the public knows exactly where these wells are located.

From the information that is provided, a number of concerns arise, including but not limited to:

1. The application requests exceptionally large water withdrawals from groundwater resources that are very susceptible to depletion, and fails to include plans to recycle water or otherwise minimize water consumption.
2. The application significantly underestimates flowback volumes, and plans for inadequate containment facilities for even that amount of flowback and other chemicals/wastes that the application does estimate.
3. The application conceals information on hazardous fracking chemicals without attempting to demonstrate entitlement to trade secret protection.
4. The application includes inadequate insurance for the well, with insurance that excludes the very types of damages to private landowners' property that should be protected.
5. The operations as described in the application would fail to preserve topsoil, and the stormwater management plan is inadequate.
6. The application plans for deficient surface and groundwater sampling. Adequate sampling must be required to protect important water sources.

Thank you for your attention to my comments. Illinois DNR should reject the company's inadequate permit application that fails to protect our health and environment.

Sincerely,

Richard Schwarze
[redacted]

[redacted]

From: Food & Water Watch <act@fwwatch.org> on behalf of Richard Schwarze <act@fwwatch.org>
Sent: Friday, June 16, 2017 11:19 PM
To: DNR.HFPublicComments
Subject: [External] Public Comment regarding HVHHF Review #:000001

Jun 16, 2017

Illinois Department of Natural Resources Illinois Department of Natural Resources IL

Dear Illinois Department of Natural Resources,

I urge you to protect Illinois' natural resources and our public health and safety by denying Woolsey Operating Company LLC's well permit application (HVHHF Review #: 000001).

Hundreds of studies have shown that the practice of hydraulic fracturing pollutes our air, water and soil with toxic, carcinogenic and radioactive materials.

Even without any severe accident (such as the Woolsey well explosion in Fairfield in 2014), we know through air sampling, water testing and infrared footage that fracked wells leak. The proposed well site is within one mile of at least 5 known oil wells, and Woolsey Oil Corporation has a plan to flare excess methane, exposing the area nearby to toxins.

Do not sacrifice the health of Illinoisans and our natural resources for a toxic industry. Please deny the Woolsey Operating Company fracked well permit.

Sincerely,

Mr. Richard Schwarze

[redacted]

[redacted]

From: Roxanne Schwarz ([redacted]) Sent You a Personal Message <[redacted]>
Sent: Friday, June 23, 2017 7:45 PM
To: DNR.HFPublicComments
Subject: [External] Review Number HVHHF-000001

Dear Illinois Department of Natural Resources,

I am writing these comments in regards to the application from Woolsey Operating Company, LLC for a permit under the Hydraulic Fracturing Regulatory Act (HFRA), assigned to Review Number HVHHF-000001. The proposed well (Woodrow #1H-310408-193) in White County, Illinois would threaten public health and safety and the permit application contains a number of issues highlighted below.

The application is woefully lacking in data and information required by the Illinois legislature and Illinois DNR under the rules and regulations of the HFRA that are designed to protect public health and the environment, and so cannot be approved as submitted. For example, the permit application does not give the exact location of the two disposal wells. The locations should be given with GPS coordinates so that the public knows exactly where these wells are located.

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5. The operations as described in the application would fail to preserve topsoil, and the stormwater management plan is inadequate.
6. The application plans for deficient surface and groundwater sampling. Adequate sampling must be required to protect important water sources.

Thank you for your attention to my comments. Illinois DNR should reject the company's inadequate permit application that fails to protect our health and environment.

Sincerely,

Roxanne Schwarz

[redacted]

[redacted]

From: Ramona Schwartz-Johnston ([redacted]) Sent You a Personal Message <[redacted]>
Sent: Friday, June 23, 2017 5:08 PM
To: DNR.HFPublicComments
Subject: [External] Review Number HVHHF-000001

Dear Illinois Department of Natural Resources,

I am writing these comments in regards to the application from Woolsey Operating Company, LLC for a permit under the Hydraulic Fracturing Regulatory Act (HFRA), assigned to Review Number HVHHF-000001. The proposed well (Woodrow #1H-310408-193) in White County, Illinois would threaten public health and safety and the permit application contains a number of issues highlighted below.

The application is woefully lacking in data and information required by the Illinois legislature and Illinois DNR under the rules and regulations of the HFRA that are designed to protect public health and the environment, and so cannot be approved as submitted. For example, the permit application does not give the exact location of the two disposal wells. The locations should be given with GPS coordinates so that the public knows exactly where these wells are located.

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1. The application requests exceptionally large water withdrawals from groundwater resources that are very susceptible to depletion, and fails to include plans to recycle water or otherwise minimize water consumption.
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3. The application conceals information on hazardous fracking chemicals without attempting to demonstrate entitlement to trade secret protection.
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5. The operations as described in the application would fail to preserve topsoil, and the stormwater management plan is inadequate.
6. The application plans for deficient surface and groundwater sampling. Adequate sampling must be required to protect important water sources.

Thank you for your attention to my comments. Illinois DNR should reject the company's inadequate permit application that fails to protect our health and environment.

Sincerely,

Ramona Schwartz-Johnston

[redacted]

[redacted]

From: Rachel Schwartz <[redacted]>
Sent: Friday, July 28, 2017 11:14 AM
To: DNR.HFPublicComments
Subject: [External] HVHHF #000001

HVHHF #000001

I am writing on behalf of ONE Northside and Fair Economy Illinois regarding the The Woolsey application for a High Volume Hydraulic Fracturing Permit.

The Woolsey application is woefully inadequate. There were overarching generalities and deficiencies in the application, not to mention problems where information was actually provided.

We continue to have a concern regarding Woolsey's capability to adhere to the letter or spirit of the Hydraulic Fracturing Regulatory Act (HFRA). They clearly demonstrated their inability to complete a full and complete initial application to engage in high volume horizontal fracking. They were essentially given an "open book" test with the passage of the HFRA and have demonstrated they still can't pass that test without extensive help on the part of the Department, the environmental community and the public through written comments. We believe they have demonstrated that they lack both the capacity and willingness to comply with the law. As such, **we assert that they should not be granted a permit to engage in fracking in the state of Illinois.**

Sincerely,

Rachel

ONE Northside/Fair Economy Illinois

[redacted]

COMMENTS

Specific comments included below reference the documents contained in the Woolsey Permit Application HVHHF-000001 and are in relation to the regulations outlined in the Hydraulic Fracturing Regulatory Act, 225 ILCS 732, unless otherwise indicated.

COMMENTS

Directional Drilling Plan- Document 3

1. **Directional Drilling Plan-** The drilling lengths and depths submitted in the Plan do not match the depth in the scaled cross-section. There is also a discrepancy in angle of the non-vertical portion of the wellbore. If Woolsey cannot provide accurate information in their application, how can we trust them to drill in our state?

Underground Freshwater Information- Document 4

2. **Inadequate Determination of Underground Freshwater - No Geological Survey Data submitted-** Section 245.210(a)(5) requires reference to the Illinois State Geological Survey with regard to its proposed drilling. This is critical to insure that freshwater will not be contaminated. Woolsey has failed to provide this information.

3. **Inadequate Evidence to Establish the Lowest Potential Fresh Water -** Again, Woolsey has failed to provide this information. As such a clear potential exists that fresh water could exist below the drilling depth in a lower formation.

HVHHF Operations Plan - Document 5

4. **Failure to Clearly Identify Formation to be Stimulated -** The permit fails to clearly identify the formation that will be stimulated or fracked by the operation other than to state that the "drilling objective" is the New Albany Shale but later refers to the "objective" being the "Grassy Creek" shale and, later still, describes the "reservoir zone", and the Semier Shale as the "frac barrier." These terms are not synonymous and therefore both confusing and inadequate.

5. **Failure to Clearly Identify the Confining Zone -** 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. The application fails to meet this requirement. In fact, it fails to use this term at all in its application.

6. **Missing Data -** There is no information, data, or calculations supplied on either a micro-seismic study or the "historic" use to support whether the identification of the "frac barriers" is technically sound. The application contains no information on which a reliable conclusion can be reliably drawn regarding a confining zone or "frac barrier" and the Application is therefore inadequate and must be denied.

7. **Confusing Data-** The Role of the Selmier Shale is listed as both a "drilling objective" and a "frac barrier" (confining zone?) in the application. It cannot serve two purposes. It is either a drilling objective or a confining zone.

8. **Inadequate Information-** Fracturing Pressure- The fracturing pressure of the "producing zone" is given as 2,875 psi. Yet three separate formations are mentioned as "drilling objectives." The same psi for all three would not be used.

9. **Missing Data-** Surface Training Pressure Range- This information is entirely missing.

10. **No information on the 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 Document completely fails to satisfy this safeguard. The singular sentence it does provide fails to articulate a conclusion that the well plans are adequate and effective. On this basis alone, the permit should be denied.

11. **Missing Data-**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.

12. **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. No information on the scope, lateral extent, depth or sophistication of this survey is provided.

Chemical Disclosure Report- Document 7

13. **Chemical Disclosure Plan** 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:

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."

Water Source Management Plan- Document 9

14. **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 select 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.

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."

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 (3) groundwater wells located in fairly shallow sand and gravel aquifers that can be rapidly depleted. Illinois has already had two significant droughts in the last 10 years. The Woolsey application indicates it plans on withdrawing the bulk of its water in the summer months when drought conditions and aquifer depletion are at their highest.

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."

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

basic 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 put in place. There is none.

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 business 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.

15. 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 3 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, Woolsey 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).

Hydraulic Fracturing Fluids and Flowback Plan- Document 10

16. **Inadequate information 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."

17. **Unrealistic Rate of Flowback Recovery Proposed**- The application states an anticipated 4-5,000 barrels of flowback will be recovered but fails to give information on how this number was calculated. The number proposed in the application is 2.8% of the total estimated to be utilized. This is substantially less (5.4 to 7.1 times less) than the average amount of flowback highlighted by the Ohio DNR for fracking, which is 15-20% of the total volume used. If the Ohio numbers are correct, Woolsey will have dramatically underestimated it's needs for storage capacity and transport. Woolsey must be required to quantify how it arrived at its numbers or be denied a permit on this basis.

18. **Inadequate Information on Storage Tanks**- The application states that the storage tanks will meet the qualities for the "purpose built." There is no identification as to the number of storage tanks, which will be critical in light of the above comment, nor is there information on the rate/frequency for emptying the tanks. These are all inadequate.

19. **No Testing Plan for Flowback Water**- This is required by law but missing in the application. This is such a critical feature that the permit application should be denied on this basis alone.

20. **Use of Earthen Containment Berms-** 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. Earthen berms are inadequate for site containment. And, s identified in previous comments, if the flowback calculation is closer to Ohio DNR's numbers, the storage proposed will be completely inadequate.

Wellsite Safety Plan- Document 11

21. **No Clarity for NORM Sampling to 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.

22. **Safety Considerations of the General Public**- There is virtually no consideration given to the safety of members of the general public that may be in the site's vicinity. This is unacceptable and a permit should be denied on this basis.

Containment Plan- Document 12

23. **The Containment Plan is completely inadequate.** It fails to provide specific information on capacity and design. Please see previous comments on the inadequacy of the "earthen containment berms and the lack of specificity in the number of containment tanks especially in light of the (probably) underestimated amount of flowback.

Casing and Cementing Plan- Document 13

24. **Missing Information in the Casing and Cementing Plan-** The casing and cementing plan does not address the requirements labeled in Document 13 regarding the potential for earthquakes. The application is therefore incomplete and must either be amended by the applicant or denied by IDNR. Furthermore, the casing and cementing plan is completely inadequate to meet Illinois' regulations. It does not include the detail required by the HFRA and cannot be approved without this critical information.

Traffic Management Plan- Document 14

25. **Traffic Avoidance of the Wabash River**- The application plan fails to address the need to avoid road traffic of hazardous materials in proximity to the Wabash River, a public water supply source.

Proof of Insurance- Document 18

26. **The Certificate of insurance is insufficient** to meet the requirements set by the HFRA and should be denied on that basis.

Failure to Specify Earthquake or Floodplain Hazard

27. **Specification of Earthquake area or floodplain missing or inadequate**- 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.

Topsoil Preservation Plan- Document 19

28. **Topsoil Plan Inadequate-** 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 …"). No information is provided as to the amount of soil (top or sub) that will be stockpiled. The level of negligible detail that *IS* provided, 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.

Water Quality Monitoring Plan

29. **Inadequate Water Quality Monitoring Plan**- The HFRA section governing Water Quality Monitoring is over six pages in length and is specific as to what is required in an approvable plan. The applicant plan is completely inadequate in addressing everything required for in the HFRA. For example, the applicant's monitoring plan does not identify a single specific sampling point. Similarly the groundwater section is also generic. This is unacceptable and the application should be denied on this basis.

30. **Data Analysis Procedure Plan Inadequate-** 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*** (emphasis added) U.S. EPA methodology established for the assessment of contaminants in environmental samples, and is described in Chapter 9 of U.S. EPA publication 846. We plan to use a data analysis plan based on that methodology." 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. Without it, the application must be denied.

31. **Water Quality Monitoring Work Plan is not "independent"-** The "Water Quality Monitoring Work Plan" calls for an "independent third party" to collect and sample water to establish baseline measurements of water quality and quantity. The Water Quality Monitoring Work Plan also tasks an "independent third party" to collect and sample water for years into the future. The Water Quality Monitoring Work Plan application states Shawnee Professional Services will collect water samples to establish baseline measurements. The Water Quality Monitoring Work Plan application also states Shawnee Professional Services will collect water samples for years into the future. There can be no greater public interest than the monitoring of water quality & quantity. The public must depend on IDNR to protect its interests. Shawnee Professional Services has a conflict of interest. Mitch Garret owner of Shawnee Professional Services was a founder of a pro fracking group formed in Johnson County to fight the non - binding resolution "A Community Bill of Rights" in the spring of 2014. The pro fracking group felt so threatened by the non - binding "A Community Bill of Rights" resolution that one of its first acts was to "convince" The Vienna Times newspaper, three weeks prior to the vote, to refuse all anti fracking advertisement, articles and letters to the editor. To leave the ultimate "public interest" in the hands of a company owned by Mitch Garret is to not understand the meaning of independent third party.

Radioactive Materials Management- Document 25

32. **Lack of Clarification on "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. Please confirm what geologic formations you consider to be in the "black shale" that will be tested pursuant to this requirement.

33. **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 and disposal sites. 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.

Bond- Document 27

34. **Insufficient bond**- The bond amount identified in the application is in the amount of $50,000 which is the amount for a single well, not a blanket bond. In the approximate center of the bond is a box captioned with: "ONLY COMPLETE IF BOND IS FOR INDIVIDUAL WELL OR PERMIT." The information to be entered in this box for an individual well gives locational and identifying information for the well covered, but the Applicant fails to provide any of that information. The Applicant must either provide a new Bond with this information or provide an explanation for why the Bond is incomplete and does not identify the well addressed in the Application.

Section 09 Water Source Management Plan

(f) Identify the methods to be used to minimize impact to aquatic life.

Comment: Woolsey reports that they anticipate injecting 7.5 million gallons of Frac fluid in part (d) of this section. But their onsite capacity for flowback is identified as 126,000 gallons. How can 7.5 million gallons come back as 126,000? Woolsey has no back up plan if this storage capacity proves too small.

(g) Identify the methods to be used to minimize withdrawals as much as feasible.

Comment: Woolsey states that it is "not in the interest of the applicant to overuse water in the HVHHF process" but it nowhere in their comments do they explain the methods it will use to minimize 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 select 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 and the supplemental material provided does nothing to rectify this deficiency. 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.

The Applicant proposes to utilize its own water wells and, therefore, 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."

No justification is given in either the original application or the Supplemental Data 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 (3) groundwater wells located in fairly shallow sand and gravel aquifers that can be rapidly depleted. Illinois has already had two significant droughts in the last 10 years. The Woolsey application indicates it plans on withdrawing the bulk of its water in the summer months when drought conditions and aquifer depletion are at their highest.

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.

Section 11 Well Site Safety Plan

The Schematic of Well Pad & HVHHF Flow Back Operations in Figure 2.1 shows 3 flow back fluid storage tanks. By contrast, the Water Source Management Plan lists 6 flow back fluid storage tanks, each with a 21,000 gallon capacity. If the schematic correct, on site storage for flow back fluid is reduced to 63,000 gallons.

- **Comments and Questions:**

  - Which is correct?

  - Regardless of which is correct, see the comment made in section 9(f). When Woolsey anticipates 7.5 million gallons of frac fluid, have they demonstrated that their proposed flowback storage is adequate?

  - Figure 2-4: Site Waterways Setback on Page 14 states it is 3700' to the nearest perennial stream. The original Well Site Setback plan illustrates at least 5 "non-perennial streams". Who designates these streams as "non-perennial" and what precautions is Woolsey proposing to ensure safety regarding these streams?

Page 117 of the 164 page Well Site Safety Plan has a table listing examples of "Permissible Heat Exposure TLV" (Threshold Limit Values).

- **Comment/Question:** Will adequate personnel be on duty at all appropriate times to accommodate this schedule?

Concerning Attachment E: Fugitive Dust Control Plan:

Comments/Questions:

- Note: There are multiple mentions of "observed", "substantial fugitive dust". Is there a definition of "substantial fugitive dust"?

- Section 2.7 "Dust Control On Paved Roads" – What provisions have been made to ensure the "Wheel Wash" they describe will be installed and monitored at the location named?

Section 2.10 "Control of Other Air Emissions": Under the heading "Appropriate emission", it states that "Low-Sulfur Diesel will be used when possible."

Comment/Question:

- Who and what determines when it is possible? IDNR should require they burn Low - Sulfur Diesel at all times. Availability is not an issue.

Section 12: The Containment Plan

Page 2 of this section states: "During flow back operations the tanks located within the area of the wellsite will also be surrounded by a dike capable of holding 150% of the total volume of the single largest container or tank within a common secondary containment area. The secondary containment will be inspected as required by 245.820."

Comment:

- The potential volume of flow back fluid should be the determinate of dyke size, not the volume of any single container on site to temporarily hold flow back fluids.

Section 12: Casing & Cementing Plan

Page 2 of this section states: "Prior to setting and cementing of the casing the IDNR's District Office will be contacted by phone and electronic mail of the planned operation to enable an inspector to be present."

Comments/Questions

- Will IDNR have an inspector present?
- How will this be documented?

The Woolsey addendum goes on to state: “Pursuant to 245.550, prior to drilling out the casing shoe, a Blow Out Preventer (BOP) shall be installed on the well by certified personal” (sic). “Prior to testing the BOP, IDNR’s District Office will be contacted by phone and electronic mail of the planned operation to enable an inspector to be present when the tests are performed.

Comments/Questions

- Will IDNR have an inspector present?
- How will this be documented?

On the bottom of page 2 and continuing onto page 3 of this section, the addendum states: “Prior to setting and cementing of the casing the IDNR’s District Office will be contacted by phone and electronic mail of the planned operation to enable an inspector to be present.”

Comments/Questions

- Will IDNR have an inspector present?
- How will this be documented?

On page 3 of this section, the addendum states: “Prior to testing the casing the IDNR’s District Office will be contacted by phone and electronic mail of the planned operation to enable an inspector to be present. The casing will be tested using brine to fill the casing and pressure tested to 70% of its minimum internal yield for 30 minutes.

Comments/Questions:

- Will IDNR have an inspector present?
- How will this be documented?

Section 16: Public Notice

Page 1 of this section states: “If necessary, a public hearing is scheduled for the 02 day of August, 2017….”

Comments/Questions:

- Who determines if it is “necessary”?
- Who will be allowed to testify? What type of testimony will be allowed?

Are there parameters in place for such a hearing? If yes, What are they?

--
Rachel Schwartz
[redacted]

[redacted]

From: LaVerne Schwartz ([redacted]) Sent You a Personal Message <[redacted]>
Sent: Wednesday, June 28, 2017 2:39 AM
To: DNR.HFPublicComments
Subject: [External] Review Number HVHHF-000001

Follow Up Flag: Follow up
Flag Status: Flagged

Dear Illinois Department of Natural Resources,

I am writing these comments in regards to the application from Woolsey Operating Company, LLC for a permit under the Hydraulic Fracturing Regulatory Act (HFRA), assigned to Review Number HVHHF-000001. The proposed well (Woodrow #1H-310408-193) in White County, Illinois would threaten public health and safety and the permit application contains a number of issues highlighted below.

The application is woefully lacking in data and information required by the Illinois legislature and Illinois DNR under the rules and regulations of the HFRA that are designed to protect public health and the environment, and so cannot be approved as submitted. For example, the permit application does not give the exact location of the two disposal wells. The locations should be given with GPS coordinates so that the public knows exactly where these wells are located.

From the information that is provided, a number of concerns arise, including but not limited to:

1. The application requests exceptionally large water withdrawals from groundwater resources that are very susceptible to depletion, and fails to include plans to recycle water or otherwise minimize water consumption.
2. The application significantly underestimates flowback volumes, and plans for inadequate containment facilities for even that amount of flowback and other chemicals/wastes that the application does estimate.
3. The application conceals information on hazardous fracking chemicals without attempting to demonstrate entitlement to trade secret protection.
4. The application includes inadequate insurance for the well, with insurance that excludes the very types of damages to private landowners' property that should be protected.
5. The operations as described in the application would fail to preserve topsoil, and the stormwater management plan is inadequate.
6. The application plans for deficient surface and groundwater sampling. Adequate sampling must be required to protect important water sources.

Thank you for your attention to my comments. Illinois DNR should reject the company's inadequate permit application that fails to protect our health and environment.

Sincerely,

LaVerne Schwartz

[redacted]

[redacted]

From: Jay Schwartz [redacted] >
Sent: Friday, July 28, 2017 11:59 AM
To: DNR.HFPublicComments
Subject: [External] HVHHF #000001

HVHHF #000001

I am writing on behalf of ONE Northside and Fair Economy Illinois regarding the The Woolsey application for a High Volume Hydraulic Fracturing Permit.

The Woolsey application is woefully inadequate. There were overarching generalities and deficiencies in the application, not to mention problems where information was actually provided.

We continue to have a concern regarding Woolsey's capability to adhere to the letter or spirit of the Hydraulic Fracturing Regulatory Act (HFRA). They clearly demonstrated their inability to complete a full and complete initial application to engage in high volume horizontal fracking. They were essentially given an "open book" test with the passage of the HFRA and have demonstrated they still can't pass that test without extensive help on the part of the Department, the environmental community and the public through written comments. We believe they have demonstrated that they lack both the capacity and willingness to comply with the law. As such, **we assert that they should not be granted a permit to engage in fracking in the state of Illinois.**

Sincerely,

Jay Schwartz

ONE Northside/Fair Economy Illinois

[redacted]

COMMENTS

Specific comments included below reference the documents contained in the Woolsey Permit Application HVHHF-000001 and are in relation to the regulations outlined in the Hydraulic Fracturing Regulatory Act, 225 ILCS 732, unless otherwise indicated.

COMMENTS

Directional Drilling Plan- Document 3

1. **Directional Drilling Plan-** The drilling lengths and depths submitted in the Plan do not match the depth in the scaled cross-section. There is also a discrepancy in angle of the non-vertical portion of the wellbore. If Woolsey cannot provide accurate information in their application, how can we trust them to drill in our state?

Underground Freshwater Information- Document 4

1. **Inadequate Determination of Underground Freshwater - No Geological Survey Data submitted-** Section 245.210(a)(5) requires reference to the Illinois State Geological Survey with regard to its proposed drilling. This is critical to insure that freshwater will not be contaminated. Woolsey has failed to provide this information.
2. **Inadequate Evidence to Establish the Lowest Potential Fresh Water -** Again, Woolsey has failed to provide this information. As such a clear potential exists that fresh water could exist below the drilling depth in a lower formation.

HVHHF Operations Plan - Document 5

1. **Failure to Clearly Identify Formation to be Stimulated -** The permit fails to clearly identify the formation that will be stimulated or fracked by the operation other than to state that the "drilling objective" is the New Albany Shale but later refers to the "objective" being the "Grassy Creek" shale and, later still, describes the "reservoir zone", and the Semier Shale as the "frac barrier." These terms are not synonymous and therefore both confusing and inadequate.
2. **Failure to Clearly Identify the Confining Zone -** 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. The application fails to meet this requirement. In fact, it fails to use this term at all in its application.
3. **Missing Data -** There is no information, data, or calculations supplied on either a micro-seismic study or the "historic" use to support whether the identification of the "frac barriers" is technically sound. The application contains no information on which a reliable conclusion can be reliably drawn regarding a confining zone or "frac barrier" and the Application is therefore inadequate and must be denied.
4. **Confusing Data-** The Role of the Selmier Shale is listed as both a "drilling objective" and a "frac barrier" (confining zone?) in the application. It cannot serve two purposes. It is either a drilling objective or a confining zone.

5. **Inadequate Information-** Fracturing Pressure- The fracturing pressure of the "producing zone" is given as 2,875 psi. Yet three separate formations are mentioned as "drilling objectives." The same psi for all three would not be used.
6. **Missing Data-** Surface Training Pressure Range- This information is entirely missing.
7. **No information on the 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 Document completely fails to satisfy this safeguard. The singular sentence it does provide fails to articulate a conclusion that the well plans are adequate and effective. On this basis alone, the permit should be denied.
8. **Missing Data-**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.
9. **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. No information on the scope, lateral extent, depth or sophistication of this survey is provided.

Chemical Disclosure Report- Document 7

1. **Chemical Disclosure Plan** 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:

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."

Water Source Management Plan- Document 9

1. **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 select 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.

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."

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 (3) groundwater wells located in fairly shallow sand and gravel aquifers that can be rapidly depleted. Illinois has already had two significant droughts in the last 10 years. The Woolsey application indicates it plans on withdrawing the bulk of its water in the summer months when drought conditions and aquifer depletion are at their highest.

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."

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 basic 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 put in place. There is none.

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 business 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.

1. 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 3 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, Woolsey 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).

Hydraulic Fracturing Fluids and Flowback Plan- Document 10

1. **Inadequate information 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."
2. **Unrealistic Rate of Flowback Recovery Proposed**- The application states an anticipated 4-5,000 barrels of flowback will be recovered but fails to give information on how this number was calculated. The number proposed in the application is 2.8% of the total estimated to be utilized. This is substantially less (5.4 to 7.1 times less) than the average amount of flowback highlighted by the Ohio DNR for fracking, which is 15-20% of the total volume used. If the Ohio numbers are correct, Woolsey will have dramatically underestimated it's needs for storage capacity and transport. Woolsey must be required to quantify how it arrived at its numbers or be denied a permit on this basis.

3. **Inadequate Information on Storage Tanks**- The application states that the storage tanks will meet the qualities for the "purpose built." There is no identification as to the number of storage tanks, which will be critical in light of the above comment, nor is there information on the rate/frequency for emptying the tanks. These are all inadequate.
4. **No Testing Plan for Flowback Water**- This is required by law but missing in the application. This is such a critical feature that the permit application should be denied on this basis alone.
5. **Use of Earthen Containment Berms-** 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. Earthen berms are inadequate for site containment. And, s identified in previous comments, if the flowback calculation is closer to Ohio DNR's numbers, the storage proposed will be completely inadequate.

Wellsite Safety Plan- Document 11

1. **No Clarity for NORM Sampling to 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.
2. **Safety Considerations of the General Public**- There is virtually no consideration given to the safety of members of the general public that may be in the site's vicinity. This is unacceptable and a permit should be denied on this basis.

Containment Plan- Document 12

1. **The Containment Plan is completely inadequate.** It fails to provide specific information on capacity and design. Please see previous comments on the inadequacy of the "earthen containment berms and the lack of specificity in the number of containment tanks especially in light of the (probably) underestimated amount of flowback.

Casing and Cementing Plan- Document 13

1. **Missing Information in the Casing and Cementing Plan**- The casing and cementing plan does not address the requirements labeled in Document 13 regarding the potential for earthquakes. The application is therefore incomplete and must either be amended by the applicant or denied by IDNR. Furthermore, the casing and cementing plan is completely inadequate to meet Illinois' regulations. It does not include the detail required by the HFRA and cannot be approved without this critical information.

Traffic Management Plan- Document 14

1. **Traffic Avoidance of the Wabash River**- The application plan fails to address the need to avoid road traffic of hazardous materials in proximity to the Wabash River, a public water supply source.

Proof of Insurance- Document 18

1. **The Certificate of insurance is insufficient** to meet the requirements set by the HFRA and should be denied on that basis.

Failure to Specify Earthquake or Floodplain Hazard

1. **Specification of Earthquake area or floodplain missing or inadequate**- 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.

Topsoil Preservation Plan- Document 19

1. **Topsoil Plan Inadequate**- 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 …"). No information is provided as to the amount of soil (top or sub) that will be stockpiled. The level of negligible detail that *IS* provided, 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.

Water Quality Monitoring Plan

1. **Inadequate Water Quality Monitoring Plan**- The HFRA section governing Water Quality Monitoring is over six pages in length and is specific as to what is required in an approvable plan. The applicant plan is completely inadequate in addressing everything required for in the HFRA. For example, the applicant's monitoring plan does not identify a single specific sampling point. Similarly the groundwater section is also generic. This is unacceptable and the application should be denied on this basis.
2. **Data Analysis Procedure Plan Inadequate**- 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* (emphasis added) U.S. EPA methodology established for the assessment of contaminants in environmental samples, and is described in Chapter 9 of U.S. EPA publication 846. We plan to use a data analysis plan based on that methodology." 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. Without it, the application must be denied.

3. **Water Quality Monitoring Work Plan is not "independent"-** The "Water Quality Monitoring Work Plan" calls for an "independent third party" to collect and sample water to establish baseline measurements of water quality and quantity. The Water Quality Monitoring Work Plan also tasks an "independent third party" to collect and sample water for years into the future. The Water Quality Monitoring Work Plan application states Shawnee Professional Services will collect water samples to establish baseline measurements. The Water Quality Monitoring Work Plan application also states Shawnee Professional Services will collect water samples for years into the future. There can be no greater public interest than the monitoring of water quality & quantity. The public must depend on IDNR to protect its interests. Shawnee Professional Services has a conflict of interest. Mitch Garret owner of Shawnee Professional Services was a founder of a pro fracking group formed in Johnson County to fight the non - binding resolution "A Community Bill of Rights" in the spring of 2014. The pro fracking group felt so threatened by the non - binding "A Community Bill of Rights" resolution that one of its first acts was to "convince" The Vienna Times newspaper, three weeks prior to the vote, to refuse all anti fracking advertisement, articles and letters to the editor. To leave the ultimate "public interest" in the hands of a company owned by Mitch Garret is to not understand the meaning of independent third party.

Radioactive Materials Management- Document 25

1. **Lack of Clarification on "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. Please confirm what geologic formations you consider to be in the "black shale" that will be tested pursuant to this requirement.
2. **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 and disposal sites. 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.

Bond- Document 27

1. **Insufficient bond**- The bond amount identified in the application is in the amount of $50,000 which is the amount for a single well, not a blanket bond. In the approximate center of the bond is a box captioned with: "ONLY COMPLETE IF BOND IS FOR INDIVIDUAL WELL OR PERMIT." The information to be entered in this box for an individual well gives locational and identifying information for the well covered, but the Applicant fails to provide any of that information. The Applicant must either provide a new Bond with this information or provide an explanation for why the Bond is incomplete and does not identify the well addressed in the Application.

Section 09 Water Source Management Plan

(f) Identify the methods to be used to minimize impact to aquatic life.

Comment: Woolsey reports that they anticipate injecting 7.5 million gallons of Frac fluid in part (d) of this section. But their onsite capacity for flowback is identified as 126,000 gallons. How can 7.5 million gallons come back as 126,000? Woolsey has no back up plan if this storage capacity proves too small.

(g) Identify the methods to be used to minimize withdrawals as much as feasible.

Comment: Woolsey states that it is "not in the interest of the applicant to overuse water in the HVHHF process" but it nowhere in their comments do they explain the methods it will use to minimize 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 select 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 and the supplemental material provided does nothing to rectify this deficiency. 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.

The Applicant proposes to utilize its own water wells and, therefore, 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."

No justification is given in either the original application or the Supplemental Data 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 (3) groundwater wells located in fairly shallow sand and gravel aquifers that can be rapidly depleted. Illinois has already had two significant droughts in the last 10 years. The Woolsey application indicates it plans on withdrawing the bulk of its water in the summer months when drought conditions and aquifer depletion are at their highest.

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.

Section 11 Well Site Safety Plan

The Schematic of Well Pad & HVHHF Flow Back Operations in Figure 2.1 shows 3 flow back fluid storage tanks. By contrast, the Water Source Management Plan lists 6 flow back fluid storage tanks, each with a 21,000 gallon capacity. If the schematic correct, on site storage for flow back fluid is reduced to 63,000 gallons.

- **Comments and Questions:**
  - Which is correct?
  - Regardless of which is correct, see the comment made in section 9(f). When Woolsey anticipates 7.5 million gallons of frac fluid, have they demonstrated that their proposed flowback storage is adequate?
  - Figure 2-4: Site Waterways Setback on Page 14 states it is 3700' to the nearest perennial stream. The original Well Site Setback plan illustrates at least 5 "non-perennial streams". Who designates these streams as "non-perennial" and what precautions is Woolsey proposing to ensure safety regarding these streams?

Page 117 of the 164 page Well Site Safety Plan has a table listing examples of "Permissible Heat Exposure TLV" (Threshold Limit Values).

- **Comment/Question:** Will adequate personnel be on duty at all appropriate times to accommodate this schedule?

Concerning Attachment E: Fugitive Dust Control Plan:

Comments/Questions:

- Note: There are multiple mentions of "observed", "substantial fugitive dust". Is there a definition of "substantial fugitive dust"?
- Section 2.7 "Dust Control On Paved Roads" – What provisions have been made to ensure the "Wheel Wash" they describe will be installed and monitored at the location named?

Section 2.10 “Control of Other Air Emissions”: Under the heading “Appropriate emission”, it states that "Low-Sulfur Diesel will be used when possible."

Comment/Question:

- Who and what determines when it is possible? IDNR should require they burn Low - Sulfur Diesel at all times. Availability is not an issue.

Section 12: The Containment Plan

Page 2 of this section states: “During flow back operations the tanks located within the area of the wellsite will also be surrounded by a dike capable of holding 150% of the total volume of the single largest container or tank within a common secondary containment area. The secondary containment will be inspected as required by 245.820.”

Comment:

- The potential volume of flow back fluid should be the determinate of dyke size, not the volume of any single container on site to temporarily hold flow back fluids.

Section 12: Casing & Cementing Plan

Page 2 of this section states: “Prior to setting and cementing of the casing the IDNR’s District Office will be contacted by phone and electronic mail of the planned operation to enable an inspector to be present.”

Comments/Questions

- Will IDNR have an inspector present?
- How will this be documented?

The Woolsey addendum goes on to state: “Pursuant to 245.550, prior to drilling out the casing shoe, a Blow Out Preventer (BOP) shall be installed on the well by certified personal” (sic). “Prior to testing the BOP, IDNR’s District Office will be contacted by phone and electronic mail of the planned operation to enable an inspector to be present when the tests are performed.

Comments/Questions

- Will IDNR have an inspector present?
- How will this be documented?

On the bottom of page 2 and continuing onto page 3 of this section, the addendum states: “Prior to setting and cementing of the casing the IDNR’s District Office will be contacted by phone and electronic mail of the planned operation to enable an inspector to be present.”

Comments/Questions

- Will IDNR have an inspector present?
- How will this be documented?

On page 3 of this section, the addendum states: “Prior to testing the casing the IDNR’s District Office will be contacted by phone and electronic mail of the planned operation to enable an inspector to be present. The casing will be tested using brine to fill the casing and pressure tested to 70% of its minimum internal yield for 30 minutes.

Comments/Questions:

- Will IDNR have an inspector present?
- How will this be documented?

Section 16: Public Notice

Page 1 of this section states: “If necessary, a public hearing is scheduled for the 02 day of August, 2017….”

Comments/Questions:

- Who determines if it is “necessary”?
- Who will be allowed to testify? What type of testimony will be allowed?
- Are there parameters in place for such a hearing? If yes, What are they?

--

Jay Schwartz

[redacted]

From: James Schwartz ([redacted]) Sent You a Personal Message <[redacted]>
Sent: Tuesday, June 27, 2017 4:04 PM
To: DNR.HFPublicComments
Subject: [External] Review Number HVHHF-000001

Dear Illinois Department of Natural Resources,

I am writing these comments in regards to the application from Woolsey Operating Company, LLC for a permit under the Hydraulic Fracturing Regulatory Act (HFRA), assigned to Review Number HVHHF-000001. The proposed well (Woodrow #1H-310408-193) in White County, Illinois would threaten public health and safety and the permit application contains a number of issues highlighted below.

The application is woefully lacking in data and information required by the Illinois legislature and Illinois DNR under the rules and regulations of the HFRA that are designed to protect public health and the environment, and so cannot be approved as submitted. For example, the permit application does not give the exact location of the two disposal wells. The locations should be given with GPS coordinates so that the public knows exactly where these wells are located.

From the information that is provided, a number of concerns arise, including but not limited to:

1. The application requests exceptionally large water withdrawals from groundwater resources that are very susceptible to depletion, and fails to include plans to recycle water or otherwise minimize water consumption.
2. The application significantly underestimates flowback volumes, and plans for inadequate containment facilities for even that amount of flowback and other chemicals/wastes that the application does estimate.
3. The application conceals information on hazardous fracking chemicals without attempting to demonstrate entitlement to trade secret protection.
4. The application includes inadequate insurance for the well, with insurance that excludes the very types of damages to private landowners' property that should be protected.
5. The operations as described in the application would fail to preserve topsoil, and the stormwater management plan is inadequate.
6. The application plans for deficient surface and groundwater sampling. Adequate sampling must be required to protect important water sources.

Thank you for your attention to my comments. Illinois DNR should reject the company's inadequate permit application that fails to protect our health and environment.

Sincerely,

James Schwartz
[redacted]

[redacted]

From: James Schwartz [redacted] >
Sent: Friday, July 28, 2017 9:44 AM
To: DNR.HFPublicComments
Subject: [External] I oppose HVHHF-000001

I am writing to ask you not to approve the permit application submitted by Woolsey Operating Company under review number HVHHF-000001. Hydraulic fracturing has been shown to cause air pollution and water pollution and some links have been demonstrated to an increase in seismic events. In addition, Illinois should be focused on transitioning to a green energy economy focused on solar and wind power, not on creating new sources of fossil fuels. Again, please say no to this application.

Sincerely,

[redacted]

[redacted]

From: Regina Schurman ([redacted] Sent You a Personal Message <[redacted]>
Sent: Friday, June 23, 2017 2:37 PM
To: DNR.HFPublicComments
Subject: [External] Review Number HVHHF-000001

Dear Illinois Department of Natural Resources,

I am writing these comments in regards to the application from Woolsey Operating Company, LLC for a permit under the Hydraulic Fracturing Regulatory Act (HFRA), assigned to Review Number HVHHF-000001. The proposed well (Woodrow #1H-310408-193) in White County, Illinois would threaten public health and safety and the permit application contains a number of issues highlighted below.

The application is woefully lacking in data and information required by the Illinois legislature and Illinois DNR under the rules and regulations of the HFRA that are designed to protect public health and the environment, and so cannot be approved as submitted. For example, the permit application does not give the exact location of the two disposal wells. The locations should be given with GPS coordinates so that the public knows exactly where these wells are located.

From the information that is provided, a number of concerns arise, including but not limited to:

1. The application requests exceptionally large water withdrawals from groundwater resources that are very susceptible to depletion, and fails to include plans to recycle water or otherwise minimize water consumption.
2. The application significantly underestimates flowback volumes, and plans for inadequate containment facilities for even that amount of flowback and other chemicals/wastes that the application does estimate.
3. The application conceals information on hazardous fracking chemicals without attempting to demonstrate entitlement to trade secret protection.
4. The application includes inadequate insurance for the well, with insurance that excludes the very types of damages to private landowners' property that should be protected.
5. The operations as described in the application would fail to preserve topsoil, and the stormwater management plan is inadequate.
6. The application plans for deficient surface and groundwater sampling. Adequate sampling must be required to protect important water sources.
7. Finally, haven't we learned anything from what is occurring in Oklahoma in terms of fracking and the disposal of waste water causing a huge increase in earthquakes? Oklahoma now beats out California for number of earthquakes per year.

Thank you for your attention to my comments. Illinois DNR should reject the company's inadequate permit application that fails to protect our health and environment.

Sincerely,

Regina Schurman

[redacted]

[redacted]

From: Therese Schultz ([redacted]) Sent You a Personal Message <[redacted]>
Sent: Saturday, June 24, 2017 7:15 AM
To: DNR.HFPublicComments
Subject: [External] Review Number HVHHF-000001

Dear Illinois Department of Natural Resources,

I am writing these comments in regards to the application from Woolsey Operating Company, LLC for a permit under the Hydraulic Fracturing Regulatory Act (HFRA), assigned to Review Number HVHHF-000001. The proposed well (Woodrow #1H-310408-193) in White County, Illinois would threaten public health and safety and the permit application contains a number of issues highlighted below.

The application is woefully lacking in data and information required by the Illinois legislature and Illinois DNR under the rules and regulations of the HFRA that are designed to protect public health and the environment, and so cannot be approved as submitted. For example, the permit application does not give the exact location of the two disposal wells. The locations should be given with GPS coordinates so that the public knows exactly where these wells are located.

From the information that is provided, a number of concerns arise, including but not limited to:

1. The application requests exceptionally large water withdrawals from groundwater resources that are very susceptible to depletion, and fails to include plans to recycle water or otherwise minimize water consumption.
2. The application significantly underestimates flowback volumes, and plans for inadequate containment facilities for even that amount of flowback and other chemicals/wastes that the application does estimate.
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6. The application plans for deficient surface and groundwater sampling. Adequate sampling must be required to protect important water sources.

Thank you for your attention to my comments. Illinois DNR should reject the company's inadequate permit application that fails to protect our health and environment.

Sincerely,

Therese Schultz
[redacted]

[redacted]

From: Peter Schultz ([redacted]) Sent You a Personal Message <[redacted]>
Sent: Friday, June 23, 2017 6:28 PM
To: DNR.HFPublicComments
Subject: [External] Review Number HVHHF-000001

Dear Illinois Department of Natural Resources,

I am writing these comments in regards to the application from Woolsey Operating Company, LLC for a permit under the Hydraulic Fracturing Regulatory Act (HFRA), assigned to Review Number HVHHF-000001. The proposed well (Woodrow #1H-310408-193) in White County, Illinois would threaten public health and safety and the permit application contains a number of issues highlighted below.

The application is woefully lacking in data and information required by the Illinois legislature and Illinois DNR under the rules and regulations of the HFRA that are designed to protect public health and the environment, and so cannot be approved as submitted. For example, the permit application does not give the exact location of the two disposal wells. The locations should be given with GPS coordinates so that the public knows exactly where these wells are located.

From the information that is provided, a number of concerns arise, including but not limited to:

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5. The operations as described in the application would fail to preserve topsoil, and the stormwater management plan is inadequate.
6. The application plans for deficient surface and groundwater sampling. Adequate sampling must be required to protect important water sources.

Thank you for your attention to my comments. Illinois DNR should reject the company's inadequate permit application that fails to protect our health and environment.

Sincerely,

Peter Schultz
[redacted]

[redacted]

From: Laura Schultz ([redacted]) Sent You a Personal Message <[redacted]>
Sent: Tuesday, June 27, 2017 11:04 AM
To: DNR.HFPublicComments
Subject: [External] Review Number HVHHF-000001

Dear Illinois Department of Natural Resources,

I am writing these comments in regards to the application from Woolsey Operating Company, LLC for a permit under the Hydraulic Fracturing Regulatory Act (HFRA), assigned to Review Number HVHHF-000001. The proposed well (Woodrow #1H-310408-193) in White County, Illinois would threaten public health and safety and the permit application contains a number of issues highlighted below.

The application is woefully lacking in data and information required by the Illinois legislature and Illinois DNR under the rules and regulations of the HFRA that are designed to protect public health and the environment, and so cannot be approved as submitted. For example, the permit application does not give the exact location of the two disposal wells. The locations should be given with GPS coordinates so that the public knows exactly where these wells are located.

From the information that is provided, a number of concerns arise, including but not limited to:

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5. The operations as described in the application would fail to preserve topsoil, and the stormwater management plan is inadequate.
6. The application plans for deficient surface and groundwater sampling. Adequate sampling must be required to protect important water sources.

Thank you for your attention to my comments. Illinois DNR should reject the company's inadequate permit application that fails to protect our health and environment.

Sincerely,

Laura Schultz
[redacted]

[redacted]

From: Kristin Schultz ([redacted]) Sent You a Personal Message <[redacted]>
Sent: Thursday, June 29, 2017 7:53 AM
To: DNR.HFPublicComments
Subject: [External] Review Number HVHHF-000001

Dear Illinois Department of Natural Resources,

I am writing these comments in regards to the application from Woolsey Operating Company, LLC for a permit under the Hydraulic Fracturing Regulatory Act (HFRA), assigned to Review Number HVHHF-000001. The proposed well (Woodrow #1H-310408-193) in White County, Illinois would threaten public health and safety and the permit application contains a number of issues highlighted below.

The application is woefully lacking in data and information required by the Illinois legislature and Illinois DNR under the rules and regulations of the HFRA that are designed to protect public health and the environment, and so cannot be approved as submitted. For example, the permit application does not give the exact location of the two disposal wells. The locations should be given with GPS coordinates so that the public knows exactly where these wells are located.

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5. The operations as described in the application would fail to preserve topsoil, and the stormwater management plan is inadequate.
6. The application plans for deficient surface and groundwater sampling. Adequate sampling must be required to protect important water sources.

Thank you for your attention to my comments. Illinois DNR should reject the company's inadequate permit application that fails to protect our health and environment.

Sincerely,

Kristin Schultz
[redacted]

[redacted]

From: Food & Water Watch <act@fwwatch.org> on behalf of Joanne Schultz <act@fwwatch.org>
Sent: Friday, June 16, 2017 10:12 PM
To: DNR.HFPublicComments
Subject: [External] Public Comment regarding HVHHF Review #:000001

Jun 16, 2017

Illinois Department of Natural Resources Illinois Department of Natural Resources IL

Dear Illinois Department of Natural Resources,

I urge you to protect Illinois' natural resources and our public health and safety by denying Woolsey Operating Company LLC's well permit application (HVHHF Review #: 000001).

Hundreds of studies have shown that the practice of hydraulic fracturing pollutes our air, water and soil with toxic, carcinogenic and radioactive materials.

Even without any severe accident (such as the Woolsey well explosion in Fairfield in 2014), we know through air sampling, water testing and infrared footage that fracked wells leak. The proposed well site is within one mile of at least 5 known oil wells, and Woolsey Oil Corporation has a plan to flare excess methane, exposing the area nearby to toxins.

Do not sacrifice the health of Illinoisans and our natural resources for a toxic industry. Please deny the Woolsey Operating Company fracked well permit.

Sincerely,

Ms. Joanne Schultz
[redacted]

[redacted]

From: Ken Schulman [redacted]) Sent You a Personal Message <[redacted]>
Sent: Friday, June 23, 2017 6:34 PM
To: DNR.HFPublicComments
Subject: [External] Review Number HVHHF-000001

Dear Illinois Department of Natural Resources,

I am writing these comments in regards to the application from Woolsey Operating Company, LLC for a permit under the Hydraulic Fracturing Regulatory Act (HFRA), assigned to Review Number HVHHF-000001. The proposed well (Woodrow #1H-310408-193) in White County, Illinois would threaten public health and safety and the permit application contains a number of issues highlighted below.

The application is woefully lacking in data and information required by the Illinois legislature and Illinois DNR under the rules and regulations of the HFRA that are designed to protect public health and the environment, and so cannot be approved as submitted. For example, the permit application does not give the exact location of the two disposal wells. The locations should be given with GPS coordinates so that the public knows exactly where these wells are located.

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5. The operations as described in the application would fail to preserve topsoil, and the stormwater management plan is inadequate.
6. The application plans for deficient surface and groundwater sampling. Adequate sampling must be required to protect important water sources.

Thank you for your attention to my comments. Illinois DNR should reject the company's inadequate permit application that fails to protect our health and environment.

Sincerely,

Ken Schulman
[redacted]

[redacted]

From: JOAN M. SCHULLIAN ([redacted]) Sent You a Personal Message <[redacted]>
Sent: Monday, June 26, 2017 3:16 PM
To: DNR.HFPublicComments
Subject: [External] Review Number HVHHF-000001

Dear Illinois Department of Natural Resources,

I am writing these comments in regards to the application from Woolsey Operating Company, LLC for a permit under the Hydraulic Fracturing Regulatory Act (HFRA), assigned to Review Number HVHHF-000001. The proposed well (Woodrow #1H-310408-193) in White County, Illinois would threaten public health and safety and the permit application contains a number of issues highlighted below.

The application is woefully lacking in data and information required by the Illinois legislature and Illinois DNR under the rules and regulations of the HFRA that are designed to protect public health and the environment, and so cannot be approved as submitted. For example, the permit application does not give the exact location of the two disposal wells. The locations should be given with GPS coordinates so that the public knows exactly where these wells are located.

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5. The operations as described in the application would fail to preserve topsoil, and the stormwater management plan is inadequate.
6. The application plans for deficient surface and groundwater sampling. Adequate sampling must be required to protect important water sources.

Thank you for your attention to my comments. Illinois DNR should reject the company's inadequate permit application that fails to protect our health and environment.

Sincerely,

JOAN M. SCHULLIAN
[redacted]

[redacted]

From: James Schuetter ([redacted]) Sent You a Personal Message <[redacted]>
Sent: Friday, June 23, 2017 4:43 PM
To: DNR.HFPublicComments
Subject: [External] Review Number HVHHF-000001

Dear Illinois Department of Natural Resources,

I am writing these comments in regards to the application from Woolsey Operating Company, LLC for a permit under the Hydraulic Fracturing Regulatory Act (HFRA), assigned to Review Number HVHHF-000001. The proposed well (Woodrow #1H-310408-193) in White County, Illinois would threaten public health and safety and the permit application contains a number of issues highlighted below.

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6. The application plans for deficient surface and groundwater sampling. Adequate sampling must be required to protect important water sources.

Thank you for your attention to my comments. Illinois DNR should reject the company's inadequate permit application that fails to protect our health and environment.

Sincerely,

James Schuetter
[redacted]

[redacted]

From: Steve Schueth ([redacted]) Sent You a Personal Message <[redacted]>
Sent: Friday, June 23, 2017 2:35 PM
To: DNR.HFPublicComments
Subject: [External] Review Number HVHHF-000001

Dear Illinois Department of Natural Resources,

I am writing these comments in regards to the application from Woolsey Operating Company, LLC for a permit under the Hydraulic Fracturing Regulatory Act (HFRA), assigned to Review Number HVHHF-000001. The proposed well (Woodrow #1H-310408-193) in White County, Illinois would threaten public health and safety and the permit application contains a number of issues highlighted below.

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5. The operations as described in the application would fail to preserve topsoil, and the stormwater management plan is inadequate.
6. The application plans for deficient surface and groundwater sampling. Adequate sampling must be required to protect important water sources.

Thank you for your attention to my comments. Illinois DNR should reject the company's inadequate permit application that fails to protect our health and environment.

Sincerely,

Steve Schueth

[redacted]

[redacted]

From: Food & Water Watch <act@fwwatch.org> on behalf of Steve Schueth <act@fwwatch.org>
Sent: Friday, June 16, 2017 3:11 PM
To: DNR.HFPublicComments
Subject: [External] Public Comment regarding HVHHF Review #:000001

Jun 16, 2017

Illinois Department of Natural Resources Illinois Department of Natural Resources IL

Dear Illinois Department of Natural Resources,

I urge you to protect Illinois' natural resources and our public health and safety by denying Woolsey Operating Company LLC's well permit application (HVHHF Review #: 000001).

Hundreds of studies have shown that the practice of hydraulic fracturing pollutes our air, water and soil with toxic, carcinogenic and radioactive materials.

Even without any severe accident (such as the Woolsey well explosion in Fairfield in 2014), we know through air sampling, water testing and infrared footage that fracked wells leak. The proposed well site is within one mile of at least 5 known oil wells, and Woolsey Oil Corporation has a plan to flare excess methane, exposing the area nearby to toxins.

Do not sacrifice the health of Illinoisans and our natural resources for a toxic industry. Please deny the Woolsey Operating Company fracked well permit.

Sincerely,

Mr. Steve Schueth
[redacted]