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RE: Windfall Oil & Gas, Inc.
Permit# PAS2D020BCLE
PERMITTED FACILITY: Class II-D injection well, Zelman #1

November 12, 2014

Clerk of the Board
U.S. Environmental Protection Agency
Environmental Appeals Board
1201 Constitution Avenue, NW
WJC East, Room 3334
Washington, DC 20004
PHONE NUMBER -202-233-0122

Dear Environmental Appeals Board (EAB),

This petition for review will comply with word limitations and I did participate in public hearings regarding this matter.

This is a petition for review of this UIC permit decision and a request to initiate an appeal to "deny this permit" based on the following evidence. Many commenters presented information and the EPA has stated over 2,600 comments were received and around 300 residents attended the meeting. Local residents found permit details to be inaccurate as presented to residents and local governing bodies in the area, which five governing bodies were represented at the meeting (Clearfield County Commissioners, Brady Township, Sandy Township, City of DuBois, DuBois School Board along with local State & Federal Representatives). Residents currently haven't received a transcript of the comments although we would appreciate a copy, so we are writing this from comments we provided, heard at the hearing or know residents submitted. For ease of filing this appeal we will mostly cite the binder submitted by Darlene Marshall on behalf of all concerned citizens.

This appeal will demonstrate many concerns for two regulations that will give basis to deny the permit. 40 C.F.R. §146.22 (a) All new Class II wells shall be sited in such a fashion that they inject into a formation which is separated from any USDW by a confining zone that is free of known open faults or fractures within the area of review. 40 C.F.R. §146.22 (c) (2) & (d) (2) Well injection will not result in the movement of fluids into an underground source of drinking water so as to create a significant risk to the health of persons.

Many residents have private water wells throughout the area of review and just outside the area of review near old deep gas wells (in the same formation as the injection zone) a map was provided showing 16+ water sources on the edge of the 1/4 mile. This is in addition to the 17 water sources identified in the 1/4 mile area of review. It was stated that area residents depend on private water sources. Additionally, a list of all water well sources in a one mile area radius were provided in the binder to demonstrate the need for protecting our Underground Sources of Drinking Water (USDWs).

The new report findings from the Government Accountability Office from June 2014 on the "EPA Program to Protect Underground Sources from Injection of Fluids Associated With Oil and Gas Production Needs Improvement leading to pollution of underground sources of drinking water (USDWs)" demonstrates our concerns. No risk will be acceptable in this residential area that depends on private water wells.

The EPA Response Summary stated in #13 p. 15 a 1/4 mile area of review was used for the permit. The binder on page 2 (#2) submitted by Darlene Marshall stated a request, "to extend the area of review outside the 1/4 mile." At the public hearing, Rick Atkinson, provided a zone of endangering influence calculation that demonstrated at the December public hearing that assumed non-transmissive faults would change the zone of endangering influence making it larger so that the area of review should be extended. Both commenters stated the Carlson gas well should be considered as it is in the same formation as the injection zone and the Carlson gas well is a source of concern for neighbors as mentioned in testimony because the casing is suspect due to fumes it emits. (See binder from Darlene Marshall comment #8 & #13)

It is also known and was stated by commenters that gas wells are in the same formation as the injection zone. These gas wells are all right on the edge of the 1/4 mile area of review. This was another incorrect statement in the EPA Response Summary #12 p. 13 that these gas wells are over half a mile or a mile away. Plus information was provided that the well logs that are plugged aren't sufficient to believe they are plugged correctly. (See binder from Darlene Marshall comment #7, #8 & #13) Residents request this permit be denied on these inaccuracies because of the proximity of so many other Oriskany wells that penetrate the injection zone of the proposed injection well site. These wells would have been fractured and these fractures would have went into the 1/4 mile area of review. (See binder from Darlene Marshall #57). This means that this permit would violate the regulations previously cited in 40 C.F.R. §146.22. So many geological inaccuracies were found by commenters & the one mile topographic map was never provided to residents for review even though the permit required it be submitted and the one mile extend from the boundaries of the proposed site. We also requested a comprehensive monitoring plan. Based on these facts presented the permit should be denied.

This issue has been followed by our entire community through the news media coverage for over three years now and our community is opposed to this disposal injection well. The December 2012 public hearing had full newspaper coverage and explained in-depth most of the concerns presented by residents. These residents worked hard to review the permit application and research the local facts to present a

valid case at the public hearing as it related to the underground sources of drinking water (USDWs).

Sufficient evidence has been presented and made available by residents that the confining zone has faults and fractures and the confining layers of Oriskany above is unable to protect residents' water supplies due to all the fractures from prior deep and shallow gas drilling. We request the testimony provided in the binder at the public hearing be entered into evidence that is reviewed by the Environmental Appeals Board. Residents showed how hard they worked and felt the EPA Response Summary was lacking in responding to comments. So many inaccuracies were found. Residents reviewed EAB cases and specifically looked at two more recent cases of Class II disposal injection wells that have been remanded back to the EPA. One was in Michigan and one was in Pennsylvania, these cases were remanded back to the EPA for further study. What we did find is that the confining layer must not have any chance of faults or fractures. This is what our residents have been concerned about for the last three years. Many locals have worked in the drilling industry and actually have some of the biggest concerns for our area and they provide a wealth of information. These real life experiences from the actual work done on these wells speaks volumes about the concerns being demonstrated. Residents have stated old deep gas wells have affected their water wells, so casings already have been faulty in the past. Plus old deep gas wells improperly plugged have been mentioned repeatedly with concerns for the endangerment of USDWs.

A map included in the permit mentions that it is based on a 10 foot +/- accuracy. Permit figures being off could change the 1/4 mile radius of review by feet for each item listed on the map. Give or take 100 feet you would have the old deep gas wells inside the 1/4 mile area of review. Comments were provided with information on the Oriskany gas wells being just on the line of the 1/4 mile area of review & residents requested that the area of review be extended to take these old gas wells into consideration. They range in feet from the 1/4 mile line based on the permit application if the map provided is found to be accurate. We would request these details be reviewed by a third party because we want another provider to verify the information, especially since we weren't given the one mile topographic map originally or even after we provided the information that it was lacking in the permit application. Residents request further study.

Permit shows on page 2 that the effect of the permit shall not allow movement of fluid to contaminant USDWs. Concerns were raised during the public comment period numerous times that this is a very real possibility and needs further research with so many unknowns like a) faults, b) fractures, c) old deep gas wells, d) confining layer thickness, e) confining layers ability to confine disposal fluid, f) zone of endangering influence needs extended further, and g) many more concerns exist like the future of seismic activity. The "effect of the permit" is also not to affect the property of others or invade others rights yet a real estate evaluation showed an appraisal addendum that was submitted in the binder by residents demonstrating concern of their property values. Residents request further study.

Permit shows on page 7 the "monitoring requirements" yet it doesn't provide a comprehensive monitoring plan yet residents provided comment on page 12 #23 of the

binder specifically requesting a full monitoring plan. Residents know other area wells are able to be used to monitor the fluid in the Oriskany. It is known that the increase in brine found on the monitoring gas wells would be a sign of concern. Residents want more protections put into place if the EAB doesn't deny the permit.

Permit shows page 13 the financial responsibility and it has already been stated by residents that \$30,000 is insufficient to plug & abandon this injection well. Yet this didn't even seem to address residents concerns and ignored studies on the cost. Further research by residents found that it would cost between \$100,000 to \$120,000, which is three to four times what the EPA is requesting. Even using their own equipment this company would have more cost to plug the well than \$30,000 & engineers think this is a ridiculously low figure. Please note that residents provided information on plugging of old abandoned gas wells and not Marcellus wells, which is inaccurate in the response summary. Residents request further study & the permit be denied.

Permit page 13 on financial responsibility ignores the concerns of residents on additional financial responsibilities & requested the EPA also protect their property & water with other means through a bond or insurance.

Response Summary #1 p. 2 we realize the EPA only oversees the protection of USDWs yet spills would have the potential to affect our USDWs so as residents commented we expect you to work to protect us from above ground spills in the future, too. Representative Gabler commented about the proximity of homes with water wells to this site, which needs further study.

Response Summary #2 p.2 demonstrates you don't supersede state or local laws. Plans for the area to be developed continue yet this will affect our property values & tax value by ruining the rest of the potential for land development to provide new homes & businesses. Residents raised concerns about this being a village in the planning of the township.

Response Summary #3 p.2 we realize the EPA doesn't pick the site yet the EPA permits the actual site. Residents have provided so many concerns that give doubt to the site location being feasible for this industrial operation due to USDWs that don't even include all the above ground concerns of this permit.

Response Summary #7 p. 5 residents still feel casings will not be sufficient protection in an area with so many fractures due to old gas drilling and the faults. Residents request the permit be denied.

Response Summary #5 p. 3 states a one mile map was provided yet this is an incorrect statement even after reviewing the maps mentioned it still doesn't provide the information sufficient to fulfill the EPA documentation request. Residents request the permit be denied.

Response Summary #8 p. 6 we appreciate the EPA holding a second public comment period on seismic activity. Residents provided many concerns & being a closely monitored county for seismic activity makes residents wonder how much more they will need to be concerned in the future with 9 faults located in the 1/4 mile area of review.

Residents in areas with no seismic activity have experienced seismic activity due to injection wells, so all the statements provided in the response summary still don't protect residents when they believe the faults would be a path to other public water sources, which would include the City of DuBois and also Brady Township. Residents request further study since fault details need to be studied more

in-depth.

Response Summary #8 p. 7 mentions pore space yet if it is limited this will move other fluids underground as disposal fluid is injected with the potential to intersect faults or migrate fluids into fractures. This area was known for large amounts of brine coming off old deep gas wells. No matter what, residents have questioned the confining layer & still believe layers above the confining zone will not be enough to be sufficient due to all the fracturing utilized for deep & shallow gas well drilling. Residents request the permit be denied.

Response Summary #8 provides information on the differences in other seismic activity for other injection wells yet various sites were mentioned & even if geology is different so many cases demonstrate concern. The only faults in our area of review being addressed seem to be at an 18,000 foot depth yet residents see faults on maps in the permit application at shallower depths that would be close to the confining layer & Oriskany. Plus a fault block is cited as confining the disposal fluid. Things aren't presented well enough to clear up all the confusion on the details provided. Residents request the permit be denied.

Response Summary #8 p. 10 proves interesting since we are unable to compare other areas with our geology for seismic activities yet we can compare our area for the permit to all the other injection wells that seem to have never contaminated water wells. It was stated, "in some cases, these earthquakes occurred in locations where there were no known faults." Known faults are in our area of review and this proposed site has all the potential for all the unknowns mentioned that could cause earthquakes including the potential for fluid to have a path to the fault. Residents request the permit be denied.

Residents presented that Pennsylvania has a very limited number of injection wells for disposal, which the number varies depending on circumstances like the Irvin well violation & other injection wells being shut down. Yet we present evidence of 10 injection wells before 12/2012. Fluid came to the surface in some cases residents cited in the binder presented, violations occurred of injection wells being over-pressurized and an enhanced recovery well operation did contaminate private water wells in one case. Residents have proven that they believe evidence already exists to deny this permit for this location due to the geology.

Response Summary #10 p. 12 even though Clearfield has two other injection wells doesn't mean this site should be permitted since all these sites are different and a mile away would be very different than this site. Residents presented data on fractures, faults and concerns with old deep gas wells in the same formation just outside the 1/4 mile & we continue to request the 1/4 mile area of review be enlarged to include these other deep gas wells that are right on the edge of the review area and maybe inside the area of review.

Response Summary #11 p. 12 shows confining layer thickness varied & applicant stated 50 feet of thickness yet nothing in the permit application shows this figure as accurate, so what else is inaccurate. It looks to residents that this confining layer varies in thickness from 11 feet to 18 feet in thickness. This is a huge concern to peace of mind &

knowledge that fluids would be confined, especially with fracturing of old gas wells that may have actually fractured the confining layers or all surrounding layers. Residents request the permit be denied on this basis.

Response Summary #12 p. 13 fractures not compromised is based on pressures yet no one knows what will happen or what is below our ground here. This data is insufficient to protect residents from prior fracturing due to drilling in prior years. Residents request the permit be denied due to the existing fractures.

Response Summary #13 p. 14 you cite that old gas wells pose a risk to USDWs by providing a conduit for the migration of fluid out of an injection zone. This needs to be corrected yet no further study was done of the wells we cited & the 1/4 mile needs to be extended to include the old Oriskany gas wells on the 1/4 mile line. Comments were numerous on these concerns. Residents request the permit be denied due to these old gas wells. Residents even cited problems with water wells due to the closest old Oriskany gas well to the proposed injection site.

Response Summary #13 p. 15 the zone of endangering influence even being 400 feet has potential to affect our area if anything happens or a fracture exists in the confining layer above the injection well, especially with a shallow well right near this site that had fracturing done. The entire area of review has old fractures extending throughout the area. Residents request the permit be denied based on regulations in 40 C.F.R. §146.22.

Response Summary #14 p. 17 is based on an assumption that no penetrations exist in the 1/4 mile. Residents cited repeatedly that the other deep gas wells in the area in the same formation are right on the 1/4 mile edge. This response summary assumption is flawed & causes grave concerns. Residents request the permit be denied due to other penetrations in the injection zone.

Response Summary page #16 p. 18 makes an assumption that our area is a site that would be ideal for injection of fluids that even though these fluids are exempt due to oil & gas regulations these fluids have been known to prove toxic. Taking any risk near all these homes is irresponsible & this has been stated by our Representative. We realize this may be the best way to dispose of the waste yet the EPA has control to oversee this permit & increase the review area along with the review of the zone of endangering influence. As residents stated, the confining layer has potential to allow fluid migration & this site is almost on top of the local coal mines. This area is a combination of a poor location with prior old gas drilling from shallow and deep gas wells with 26 sites in a one mile radius so fractures are all throughout the area of review and water wells that have already been affected by old deep Oriskany gas wells close to the proposed injection site; the proposed injection site located on a hill top on the recharging zone for the USDWs; near old abandoned coal mines that honeycomb throughout our region under our cities and towns with water discharge into our local streams; and faults in the area of review. This permit needs to be denied and residents question why residents need to provide any more evidence to deny the permit since the 40 C.F.R. §146.22 regulations prohibit these geology features.

Response Summary #15 p. 17 assumes that the coal mines will not be contaminated because of their depth yet we do have other deep gas wells penetrating the Oriskany able to endanger USDWs & our coal mines. Residents provided many comments & concerns about faults, fractures and known casing issues on old gas wells. Residents request the permit be denied on the basis of all the doubt to confine the wastewater disposal fluid. Disposing of fluid is not extraction of gas and disposal of fluid will take the path of least resistance over time, so at first things may work as planned although over time the chance of contamination of our USDWs, private water wells, and coal mines is a real threat in this area of review.

Response Summary #17 p. 19 assumes that the disposed waste will stay in the injection zone. Residents have questioned the old gas wells that penetrate the injection zone as casings were not all done well and leave many suspicions based on all the documentation in the permit. All these old gas wells need to be assessed and probably replugged. Residents have stated that the funds for plugging & abandonment are insufficient. This really needs further attention. Residents request the permit be denied.

Response Summary #18 p. 20 the construction of this injection well may deteriorate quickly. Residents presented facts on injection well violations, concerns & lack of oversight nationwide.

Response Summary #20 p. 21 even if injection well technology has improved it doesn't fix the problem of fluid migration underground or through existing fractures. This also backs up residents concerns that the old gas wells in the area were constructed and plugged before new design, construction and operation methods and we quote your statement, "even the injection wells that were constructed in the 1960s, and were responsible for some of the contamination incidents that have been cited across the country were inferior." Residents cited many concerns & request that the permit be denied.

Self-reporting is not enough in this permit since the residents have seen that another injection well in our county has violated EPA laws three times during operation along with over-pressurization. This permit site is not the same & residents need to be protected if the EAB doesn't deny the permit. Residents request further protections.

Response Summary #23 p. 23 understands that the EPA extended comment periods. Residents showed up at the meeting & planned to give testimony yet the evening went late & they had to leave the meeting before their turn was called & being older they don't find it easy to write. These procedures aren't easy for regular citizens & require extensive research to understand the process. Even the EAB procedures are discouraging to the general citizens. Residents request further consideration be given to resident's concerns, especially since so many residents took the time to attend the public hearing.

Response Summary #24 p. 24 shows the EPA is taking some steps to improve Class II well protections for residents yet these aren't enough. Taking away peace of mind, ability to feel comfortable utilizing or drinking water sources, burdening residents with

additional costs to evaluate water and many more concerns makes this a poor decision. Residents request further study to ensure that residents have the most protection available if the EAB doesn't deny this permit.

Response Summary #25 p. 24, this permit in a residential area needs to have an environmental impact study. Residents requested this & request further study.

We note that the EPA doesn't state as much on monitoring of gas wells in the Windfall permit in Clearfield County as they do for the Seneca permit in Elk County we requested a comprehensive monitoring plan.

The old gas wells in the Oriskany formation close to this disposal injection permit are right on the 1/4 mile area of review yet the EPA cited they were ~ 1/2 mile away or 1 mile. This is totally incorrect in the EPA Response Summary & residents provided this information previously. The old plugged gas wells in the Oriskany formation may need to be replugged. Residents cited many concerns & request further study that will deny the permit. Cited in response summary #12 p. 13.

The response summary #26 p. 24 states the permit is for a five year period yet it can be extended & residents need protected now. Residents cited many concerns & request further study that will deny the permit. Burden of proof of a problem shouldn't fall on the residents to prove problems exist with this permit, the area of review and the geology. Future steps need to be taken to address issues of disposal injection well permits.

The response summary #8 p. 10 shows information on a fault block that residents find questionable & old Oriskany gas wells may be listed incorrectly in the permit application in relation to the faults. Residents cited many concerns & request the permit be denied.

The EPA ignored comments on the fractures into the 1/4 mile area of review. EPA mentions other confining zones would be above the proposed confining layer yet these layers would also have fractures from all the shallow gas drilling in the area.

The two faults on the permit map would actually block the fluid towards two old deep gas wells that are of most concern to residents plus also the coal mines. Residents cited many concerns & request further study that will deny the permit.

Another inaccurate statement seems to exist based on the map information showing faults in relation to the old gas wells that mentions plugged wells not producing outside the fault block. This is an inaccurate statement. They didn't prove a fault block exists the faults may or may not be transmissive. With no way to prove if the faults are non-transmissive or transmissive we request the permit be denied. Plus if they are using the basement fault at 18,000 feet how does that confine the fluid. Nothing provides real proof that the faults are non-transmissive although the information we have may show it is transmissive.

The response summary mentions 30,000 wastewater disposal wells & no known contamination of water wells yet we know in McKean County water wells were

contaminated by an enhanced recovery well, which is very similar to an injection well. Plus other known violations existed due to over-pressurization in our county on the Irvin well, which could cause contamination of USDWs and took a long time to enforce and our residential area doesn't have that kind of time if any incident would happen, so protection of USDWs should come first and foremost. This is why we are concerned with all our old gas wells in the area.

It is imperative to address the Irvin well violations that concern our residents due to water wells so close to this proposed disposal well. The Irvin well wasn't in a residential area near so many water wells yet it violated the EPA regulations. Please grant the request to increase the area of review be extended to a 1/2 mile radius to consider all gas wells in the area, especially since so many old gas wells exist on the edge of the 1/4 mile. The Response Summary mentions the old Oriskany gas wells were further away locating them at least 1/2 mile to one mile from the proposed disposal injection well, which is inaccurate. Local residents found permit details to be inaccurate as presented.

At least five governing bodies have demonstrated concern at the public hearing & most plan to submit comments although the 30 day period makes it hard. Clearfield County Commissioners, Brady Township, Sandy Township, City of DuBois, DuBois School Board along with local State & Federal Representatives participated. Residents need assurances of future protection like insurance & a \$1 million+ bond. We feel this disposal injection well may fail due to concerns, so we ask the EAB to give us more protection & ensure water will be provided. It should stay in place until the plugging has been completed.

Thanks for your consideration of all these concerns.

Sincerely,

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