

STATE OF  
COLORADO

Treitz - DNR, Rebecca &lt;rebecca.treitz@state.co.us&gt;

**Red Hawk L.E. Gerkin (doc no 401069459)**

6 messages

**Treitz - DNR, Rebecca** <rebecca.treitz@state.co.us>  
To: Angie Galvan <Angie.Galvan@stxra.com>

Wed, Aug 3, 2016 at 2:55 PM

Angie,

COGCC is in the process of reviewing the Form 2A for the Red Hawk L.E. Gerkin 9H pad (doc no 401069459). In order to complete our review, please address the following:

1. By Rule 318A.i requires a waste management plan for the GWA area. In the BMP section is reference to spread fields, please provide a waste management plan indicating which spread field or waste disposal facility will be used.
2. Please provide a comment explaining why a hydrology map was not included.
3. Under the cultural distance information section, the nearest building and building unit appear to be the same. With your concurrence I will update the distance to the nearest building unit from a well to 4,059 feet and production to 3993 feet.
4. Under facilities, a special purpose pit is indicated and in the BMP section, there is reference that the pit is a fresh water storage pit. By definition, a fresh water pit is not a special use. With your concurrence, I will remove the special use pit and under additional facilities add the fresh water pit and will add one multi-well pit.
5. How long will the fresh water pit be used and will there be any netting?
6. Please provide a location drawing indicating where the fresh water pit will be located.
7. In the water resource section, the distance to surface water and water well appears to be from the reference point and not the edge of disturbance. Please provide distances from the edge of disturbance.
8. While the nearest water well is drilled into the KLF, there is a water well approximately 3,500 feet to the south with a depth to water at 4 feet. With your concurrence, I will change the depth to 4 feet and check sensitive area. Please provide a BMP on how shallow groundwater will be protected.

Please let me know if you have any questions.

Thank you,

Rebecca Treitz

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Rebecca Treitz  
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**Angie Galvan** <Angie.Galvan@stxra.com>  
To: "Treitz - DNR, Rebecca" <rebecca.treitz@state.co.us>

Thu, Aug 4, 2016 at 10:16 AM

Rebecca,

Please find my responses below. Please feel free to let me know if you need additional information or if I did not address one of your questions correctly.

1. An offsite commercial Disposal facility will be used. Likely Buffalo Ridge Waste Management.
2. On the copy of the Form 2A for the LE Gerkin 9H I note that a hydrology map is listed in the "attachment check list." I apologize if it did not come through or was not correct. Please see the attached hydrology map.
3. That is fine, I approve of this update. Please make the change.
4. I am fine with this change, please make the corrections.
5. The fresh water pit will be reclaimed 180 days after stimulation is complete. There will not be netting.
6. The Location Drawing, attached to the permit application, depicts the fresh water pit. I have attached the location drawing for reference. Please let me know if you require anything in addition on this.
7. The distances specified in the water resource section were taken directly from the hydrology map provided by the surveyor. I will check with them to see if they used the edge of disturbance when they did their measurement. I should have an answer on this shortly.
8. Red Hawk has already performed water sampling on three (3) near-by water wells. One in the SW/4SW/4 of Section 12 with a water level of 290, one in the NW/4SW/4 of Section 13 with a water level of 242, and one in the NE/4SE/4 of Section 14 with a water level of 305. Also, located in the south of Section 13 to the easterly side of the section there are two (2) Gerkin water wells with water levels at 260. I am unable to locate the water well which you reference that has a level at 4'. The water wells that are in immediate the area seem to show that they all share levels at 200' or below. As a result I do not believe that the depth should be changed to 4 feet. Is the water well radius of investigation greater than 0.25 mile (1320') from oil and gas surface locations?

Thank you for your patience!,

Angie

**From:** Treitz - DNR, Rebecca [mailto:[rebecca.treitz@state.co.us](mailto:rebecca.treitz@state.co.us)]

**Sent:** Wednesday, August 03, 2016 3:56 PM

**To:** Angie Galvan

**Subject:** Red Hawk L.E. Gerkin (doc no 401069459)

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**2 attachments**



**L.E. Gerkin 9H Hydrology.pdf**  
348K



**L.E. Gerkin 9H Location Drawing R1.pdf**  
120K

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**Treitz - DNR, Rebecca** <[rebecca.treitz@state.co.us](mailto:rebecca.treitz@state.co.us)>  
To: Angie Galvan <[Angie.Galvan@stxra.com](mailto:Angie.Galvan@stxra.com)>

Fri, Aug 12, 2016 at 1:56 PM

Thanks Angie,

Per our phone conversation yesterday;

1. Please provide a revised BMP describing waste management to meet the 318A.i. and 907.a Rules.
2. Please check on the distance to surface water and groundwater features from the edge of disturbance.
3. For shallow groundwater, two water wells to the southwest - permit 19350 had a total depth of 26 feet and permit 35776 had a depth to water at 4 feet and a total depth of 52 feet. Water well permit 36519 to the southeast has a depth to water at 12 feet. Below is a map with a red X on water wells with shallow depth to water or total depth. The elevation for all of these wells is at approximately 4,900 feet.

This is a topographic map of the Enniskillen area in Northern Ireland. The map shows the Enniskillen River flowing through the center. A large blue area, likely a reservoir or a large body of water, is highlighted in the center. The map includes contour lines indicating elevation, with labels such as 4900, 4850, and 4800. A grid system is overlaid on the map, with letters and numbers marking specific locations. Various symbols are used to represent different features: blue dots for buildings, red 'X' marks for specific points of interest, and green circles for other landmarks. The map also shows roads and other geographical features. A red 'X' is marked near the bottom left, and a blue 'X' is marked near the top left. The map is titled 'Enniskillen' in the center.

Thank you,  
Rebecca  
[Quoted text hidden]

Mon, Aug 15, 2016 at 7:22 AM

Thank you for the follow-up email. I have provided my feedback below. Please let me know if you need anything in addition or if I missed something.

- <https://mail.google.com/mail/?ui=2&ik=5d53610199&view=pt&q=gerkin&qs=true&search=query&th=1565230ff80977d1&siml=1565230ff80977d1&siml=156565...> 3/4

Thank you for your patience!,  
Angie

**From:** Treitz - DNR, Rebecca [mailto:[rebecca.treitz@state.co.us](mailto:rebecca.treitz@state.co.us)]  
**Sent:** Friday, August 12, 2016 2:57 PM  
**To:** Angie Galvan  
**Subject:** Re: Red Hawk L.E. Gerkin (doc no 401069459)

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**Treitz - DNR, Rebecca** <[rebecca.treitz@state.co.us](mailto:rebecca.treitz@state.co.us)>  
To: Angie Galvan <[Angie.Galvan@stxra.com](mailto:Angie.Galvan@stxra.com)>

Mon, Aug 15, 2016 at 3:40 PM

Angie,  
Thank you for the information. Based on the distance to the surface water, is the nearest water well also a difference of approximately 450' to be approximately 1700' away?

Thank you,  
Rebecca  
[Quoted text hidden]

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**Angie Galvan** <[Angie.Galvan@stxra.com](mailto:Angie.Galvan@stxra.com)>  
To: "Treitz - DNR, Rebecca" <[rebecca.treitz@state.co.us](mailto:rebecca.treitz@state.co.us)>

Thu, Aug 18, 2016 at 1:02 PM

Rebecca,

So sorry for the late response on this. I missed the email in my inbox for some reason. Please make the update!! I agree that the water well should be approximately 1700' away from the edge of disturbance. Feel free to let me know if you need anything else.

Thank you,  
Angie

**From:** Treitz - DNR, Rebecca [mailto:[rebecca.treitz@state.co.us](mailto:rebecca.treitz@state.co.us)]  
**Sent:** Monday, August 15, 2016 4:40 PM

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