STATE OF COLORADO

Andrews - DNR, Doug <doug.andrews@state.co.us>

COGCC Form 2A review of 8 North's Ivan 34-A Pad location - Doc #401530837

5 messages

Andrews - DNR, Doug <doug.andrews@state.co.us> Fri, Jun 1, 2018 at 1:50 PM
To: Jeff Annable <jannable@extractionog.com>, Regulatory Team <regulatory@ascentgeomatics.com>

Jeff & Justin,

I have reviewed the referenced Form 2A Oil & Gas Location Assessment and have the following comments.

1) In the Construction section, 8 North has indicates the size of the disturbed area during construction will be 22.6 acres and after interim reclamation will be 9.4 acres. This seems rather large for 6 well/9 tank/10 separator pad. A review of the Location Drawing indicates the size of the disturbed area during construction will be 11.43 acres and after interim reclamation will be 4.1 acres. These sizes seem more in line with the number of facilities planned. Please confirm the size of the disturbed area during construction and after interim reclamation.

2) In the Water Resources section 8 North has indicated the nearest water well is 2,076 feet from the proposed Oil & Gas Location. However, the Location Drawing depicts a windmill 950 feet to the northwest. Windmills in this area of Colorado are almost always the mechanism that provides the power to pump water from a water well. Unfortunately, it does not appear that a water well was ever permitted in this location with the Colorado DWR. Still, I suspect there is a water well associated with this windmill and would like to change the distance to the nearest water well to 950 feet.

3) In the Water Resources section 8 North has indicated the estimated depth to groundwater is 140 feet based on the nearest water well (Permit #20754). This water well was drilled to a depth of 350 feet and was screened from 300 to 350 feet. The next nearest water well (Permit #299263) was drilled to a depth of 290 feet and screened from 170 to 290 feet. Its reported static water level is 97 feet. I believe this is more indicative of how shallow groundwater may be in this area. Therefore, I would like to change the estimated depth to groundwater from 140 feet to 97 feet.

4) 8 North has included an Emissions mitigation BMP that states "*Operator will bring a new or expand existing gas sales lines, in a timely manner, to send salable quality gas immediately down the sales line.*" As you are aware, the phrase "*in a timely manner*" is troublesome for us. I would like to revise this Emissions mitigation BMP to match the one on the Irwin Fed 34-C Pad Form 2A as that location is immediately east of this location. That Emissions mitigation BMP states "*Operator will bring a new or expand existing gas sales lines to send salable quality gas immediately down the sales line.*" Please let me know if that is acceptable.

Please respond to this correspondence by July 1, 2018. If you have any questions, please contact me. Thank you.

Doug Andrews
Oil & Gas Location Assessment Specialist - Northeast Colorado

COLORADO
Oil & Gas Conservation Commission
Department of Natural Resources

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Justin Garrett <jgarrett@ascentgeomatics.com> Fri, Jun 1, 2018 at 2:22 PM
To: "Andrews - DNR, Doug" <doug.andrews@state.co.us>, Jeff Annable <jannable@extractionog.com>, Regulatory <regulatory@ascentgeomatics.com>

Doug –

Thank you for the review.

I have to defer to Jeff for the BMP language and to give you the OK to make those changes.

Justin Garrett

Regulatory Analyst

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From: Andrews - DNR, Doug [mailto:doug.andrews@state.co.us]
Sent: Friday, June 01, 2018 1:51 PM
To: Jeff Annable; Regulatory
Subject: COGCC Form 2A review of 8 North's Ivan 34-A Pad location - Doc #401530837

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Jeff Annable <jannable@extractionog.com> Tue, Jun 5, 2018 at 11:56 AM
To: Justin Garrett <jgarrett@ascentgeomatics.com>, "Andrews - DNR, Doug" <doug.andrews@state.co.us>, Regulatory <regulatory@ascentgeomatics.com>

I am okay with the changes to the BMP.

Jeff Annable

Regulatory Analyst

Direct: (720) 354-4590

Cell: (303) 564-4625

jannable@ExtractionOG.com

From: Justin Garrett <jgarrett@Ascentgeomatics.com>
Sent: Friday, June 1, 2018 2:23 PM
To: Andrews - DNR, Doug <doug.andrews@state.co.us>; Jeff Annable <jannable@extractionog.com>; Regulatory <regulatory@Ascentgeomatics.com>
Subject: RE: COGCC Form 2A review of 8 North's Ivan 34-A Pad location - Doc #401530837

[Quoted text hidden]

Andrews - DNR, Doug <doug.andrews@state.co.us> Tue, Jun 5, 2018 at 12:00 PM
To: Jeff Annable <jannable@extractionog.com>
Cc: Justin Garrett <jgarrett@ascentgeomatics.com>, Regulatory <regulatory@ascentgeomatics.com>

Justin/Jeff,

Thank you for the OK to change the BMP. Will one of you respond to my first three comments.

Doug Andrews
Oil & Gas Location Assessment Specialist - Northeast Colorado

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Oil & Gas Conservation Commission
Department of Natural Resources

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Justin Garrett <jgarrett@ascentgeomatics.com> Tue, Jun 5, 2018 at 1:58 PM
To: "Andrews - DNR, Doug" <doug.andrews@state.co.us>, Jeff Annable <jannable@extractionog.com>
Cc: Regulatory <regulatory@ascentgeomatics.com>

Doug –

Yes, please change the disturbance acreage, nearest water well, and depth to groundwater to what you have found.

Thank you

Justin Garrett

Regulatory Analyst

Ascent Geomatics Solutions (Formerly PFS)

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From: Andrews - DNR, Doug [mailto:doug.andrews@state.co.us]
Sent: Tuesday, June 05, 2018 12:01 PM
To: Jeff Annable
Cc: Justin Garrett; Regulatory
Subject: Re: COGCC Form 2A review of 8 North's Ivan 34-A Pad location - Doc #401530837

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