PSC Complaint Decision Letter - Appendix A

28 May 2022

These are additional comments **(brown font)**, after the PSC final letter (dated 13 June 2019) was sent to me.

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My original comments on this letter **(blue font)** were emailed to Dean Moos on 11 Jun 2019, before the PSC Commissioner meeting. Dean Moos forwarded this letter, with my comments, to the PSC Commissioners on 11 Jun 2019.

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One of the PSC Commissioners had this letter, with my comments, at the meeting. I could see the blue font from a distance. My comments were not mentioned during the 12 Jun 2019 PSC Commissioners Meeting.

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The comments on a **brown font** are corrections to my mistakes.

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I was not allowed to speak at the 12 Jun 2019 PSC Commission Meeting.

Contents of the Formal Citizen Complaint (FCC) are referenced below.

June XX, 2019

1) 12 Jun is tomorrow.

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2) Is tomorrow an informal review or formal review?

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3) Why am I not allowed to verbally participate in this review?

The Formal Citizen Complaint is addressed to the Commissioners. What part is unclear?

Definitions:

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NAC: North American Coal / Coteau

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PSC: ND Public Service Commission

Mr. Clyde Eisenbeis
2819 Horgan Drive
Bismarck, ND 58503

Dear Mr. Eisenbeis:

The North Dakota Public Service Commission (Commission) has reviewed your filing, dated May 15, 2019, regarding your land located in the NW¼ of Section 34, T146N, R88W.

Upon review of your filing, the requested manner to process this filing is unclear. However, based upon the Reclamation Division's July 23, 2018 response and the filing's citation (69-05.2-28-01 and 69-05.2-28-02), the Commission is administratively processing this as a request for informal review. On June 12, 2019, the Commission informally reviewed and discussed your filing during the administrative matters portion of its regular meeting and asked me to respond to you.

Why was I not asked to clarify?

Your property is located off-permit and adjacent to Surface Coal Mining Permit NACT-9501 at the Coteau Properties Freedom Mine. The E½ of Section 34 is part of Surface Coal Mining Permit NACT-9501. Portions of the permitted area in the E½ of Section 34 were mined and reclaimed. Sedimentation ponds P-H34-04 and P-H34-05 were also constructed in the NE¼ of Section 34 upstream of your property in 1999 and 2004, respectively. The purpose of sedimentation ponds is to detain surface runoff from mine disturbance areas until it meets the required effluent or discharge standards. During active mining operations, Coteau routed discharges from these ponds around your property through pipes to the main drainage channel in the NW¼ of Section 34. Sedimentation pond P-H34-04 was removed and reclaimed in 2013 and sedimentation pond P-H34-05 was removed and reclaimed in 2015.

Many of the points in your filing were previously addressed in the Reclamation Division's July 23, 2018 letter to you. A copy of that letter is attached (Attachment 1) and serves as part of our response; however, each of your specific complaints is addressed below. Also in response to your earlier concerns, we requested additional information from Coteau (see Attachment No. 2)

1) I am unaware of any pipe. Are there photos?

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2) The FCC photos show pond discharge erosions in the field and around the field (not possible with pipe).

I had never been told there was a pipe for pond water discharge.

regarding the diversion/road ditch and erosion on your property. Coteau's response is provided in Attachment No. 3.

Complaint No. 1: *Constructed a diversion ditch on farmland creating a new affected area outside the permit area without a PSC permit revision and without Landowner consent, no associated reclamation plan or performance bond, and resulted in loss of crop income.*

Reclamation Division staff noted on several occasions an existing diversion located on the east side of your property in the NW¼ of Section 34 (off-permit). We are uncertain who constructed this diversion or when it was constructed; however, it was in place well before the adjacent area was permitted, mined, and reclaimed. This diversion flowed to the north until it intercepted the south road ditch of the road between the NW¼ of Section 34 and the SW¼ of Section 27.

north

On August 28, 2007, Coteau submitted the application for Revision No. 30 to Surface Coal Mining Permit NACT-9501. This revision proposed changes to the postmine topography and watershed boundaries in the NE¼ of Section 34. The size of watershed 14-14 (most of the area controlled by sediment pond P-H34-04) decreased slightly (5 acres smaller than premine) but the size of watershed 14-15 (most of the area controlled by sediment pond P-H34-05) was increased by 132 acres. The combined area of watersheds (14-4 and 14-15) increased by a total of 127 acres. Revision No. 30 also proposed some land use changes for the NE¼ of Section 34 including changing the postmine land use of a portion of the watersheds from cropland to native grassland. Attachment 1 includes maps depicting pre- and post-mine watersheds 14-14 and 14-15.

Due to the changes proposed by Revision No. 30 (increased watershed size and changes to the post mine topography), Coteau was asked to provide additional documentation that downstream areas would not be adversely affected by the increased watershed size of watershed 14-15. Coteau updated the Probable Hydrologic Consequences (PHC) section of the permit to address these concerns. Their analysis compared the premine watershed characteristics to those proposed in Revision 30. A standard and commonly accepted watershed flow model was used to predict runoff velocity and volumes from the revised watershed areas and these values were compared to the premine conditions using the same models. Attachment 1 includes the results of that modeling (Table 3 of Section 2.2.5 of Permit NACT-9501).

The model predicted the peak discharge rate (velocity measured in cubic feet per second or cfs) and total runoff volume measured in acre-feet (ac-ft). Three different rainfall events were modeled: a 2-year, 24 hour rainfall event (1.93"), a 10-year, 24 hour rainfall event (3.12"), and a 25-year, 24 hour rainfall event (3.63"). Peak discharge and total runoff volumes were calculated at the control point (the point where the sedimentation ponds would have discharged) for each watershed and then for the combined flow of both watersheds. The combined total discharge rate and flow volume is simply the sum of the two watersheds. While the calculated peak

If it rained 100,000 gallons of water, the rain water would soak into the ground. If a 100,000 gallon tank were discharged through one valve in the tank (over the same time span), it would result in erosion.

discharge and total runoff volume of watershed 14-15 increased over premine conditions, the peak discharge and total runoff volume of watershed 14-14 decreased, and the sum total peak discharge and total runoff volume for both watersheds (or that which would flow in the diversion) actually decreased.

As part of our review of Revision No. 30, Reclamation Division staff have reviewed the flow modeling provided by Coteau and have determined the parameters and assumptions used were appropriate and reflected the actual conditions. In response to your concerns, staff again modeled both watersheds and the results of our independent modeling are similar to those provided by Coteau in Revision 30. The results of our modeling are also included in Attachment 1.

Photos are more accurate than models.

Water table elevation measurements are more accurate than models.

Our analysis shows that even though the total combined watershed size increased after reclamation, the expected total flow rates and volumes are less than the premine condition. This is due to a number of reasons but is primarily due to the reclaimed or postmine watersheds being less steep than the premine watersheds. The premine average slope of watershed 14-15 was 12.7% and the postmine average slope is 4.4%. In addition, the soils with a higher runoff potential (shallow and claypan soils) that were common in the premine watershed were replaced with deeper, loamy soils with higher infiltration rates and lower runoff potential. In addition, there is less cropland and more native grassland in the reclaimed watershed than in the premine watershed. The perennial native grassland vegetation generally has a lower runoff potential than cropland.

North Dakota Century Code 38-14.1-24(8) requires that mining companies "minimize disturbances to the prevailing hydrologic balance at the mine site and in associated offsite areas and to the quality and quantity of water in surface and ground water systems both during and after surface coal mining operations and during reclamation." As part of Revision No. 30, the Reclamation Division determined that although the combined watershed size increased following mining and reclamation, the combined peak discharges and total runoff volume decreased or was near premine conditions. Therefore, there would be no adverse effects to the downstream areas as a result of the changes proposed in Revision No. 30. Revision No. 30 was approved on January 9, 2009.

As previously stated, the original diversion was constructed many years prior to mining and reclamation. At the time that Revision No. 30 to Permit NACT-9501 was approved, Coteau demonstrated that the changes proposed by Revision No. 30 would not have adverse effects on downstream areas and the Reclamation Division concurred. The condition or the functionality of the existing diversion on your property was not evaluated at that time since the Reclamation Division found that the actions proposed by Revision 30 would not result in adverse effects to downstream areas, i.e., the calculated combined flows of reclaimed watersheds 14-14 and 14-15

NAC deepened the original diversion ditch. PSC Memorandum 6 to Mine Operators, March 8, 1995: "Listed below are specific activities and types of disturbances which are included under the scope of 'Surface Coal Mining Operations,' as defined in NDCC Section 38-14.1-02(33). These activities and disturbances must be conducted within the boundaries of a surface coal mining permit."

NDCC Chapter 38-14.1-01 (1) ... disturbances of surface areas ... by damaging the property of citizens --- NDCC 38-14.1-02 (35 b) includes adjacent land.

NAC deepened the diversion ditch because the mining pond water overflowed onto the Esther Eisenbeis farmland. The mining pond is mining related. Pond netting was found in numerous places on the farmland.

NAC modified the diversion ditch. NAC is not allowed to disturb land outside the permit area.
1) NDCC 38-14.1-02 (35 b) includes adjacent land.
2) NDCC 38-14.1-24 (8 g) requires avoiding natural channel deepening.

are less than the premine condition. Our re-analysis of this finding in response to your concerns reaffirms our original finding made in 2009 when Revision No. 30 was approved.

The Reclamation Division was not involved in the reconstruction of this diversion and continues to view this issue as a matter between Coteau and the landowner. We do not view reconstruction of the diversion as a mining related matter and therefore, it is not subject to our jurisdiction nor was it an activity that required to be permitted.

Complaint No. 2: *Discharged more than 7 billion gallons of surface coal mine disturbed area pond water from within the permit area onto the adjacent farmland which resulted in gullies, loss of topsoil, and loss of crop income from the farmland without a PSC permit revision and Landowner consent.*

This is my mistake, based on my misunderstanding of information from the ND Water Board.
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The PSC never informed me of any mistakes I had made in the Complaint

I was told by the ND Dept of Health this was from the ponds P-H34-04 and PS-H34-05. What are the correct numbers and dates?

It appears that the pond discharges listed on Appendix F of your complaint are **all** of the pond discharges from the Freedom Mine for the time period of January 1, 2011 through June 25, 2018. Currently there are 68 active discharge points (sediment ponds) at the Freedom Mine and only a small portion of the discharge points drain to your property. A total of eight discharge points, discharge points no. 38 (Sump S-I02-01), 47 (Pond P-I02-02), 50 (Pond P-I03-01), 59 (Pond P-H34-01), 61 (Pond P-34-04), 85 (Pond P-H34-05), 148 (Pond P-W11-01), and 155 (Pond P-W03-04), are the only discharge points/ponds that could have discharged to your property, all of the other discharge points/ponds discharged to other watersheds. Of the 8 discharge points/ponds, all have been reclaimed with the exception of Ponds P-W11-01 and P-W03-04. As previously stated, pond discharges from sedimentation ponds P-H34-04 and P-H34-05 were routed around your property via a pipe discharge during mining and reclamation. Only when these ponds overflowed, did they flow through the old field-engineered diversion and/or across your property.

This is incorrect. When the farmland creek is filled, water flows north and south. The land elevation is almost level.
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For proof, look at the increase in water table elevation increases a half mile south of the farmland (the opposite direction of Lake Sakakawea) beginning in 2011.
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Coal mining pond water is coal mining related.

It should be noted any pit water (i.e., groundwater) encountered in the west mine area of the Freedom Mine is pumped to the legal drain/Antelope Creek which flows to the south, away from your property. It should also be noted that sedimentation ponds only detain surface runoff that would otherwise have flowed down the natural drainages had the ponds not been in place. Generally, the water in the sedimentation ponds is eventually discharged when it meets the required North Dakota Department of Environmental Quality discharge standards. So the effect of the sedimentation ponds on hydrologic balance is to delay the timing of the flow event to the downstream drainage. Sedimentation ponds do not necessarily increase the volume of water that flows through a drainage system, it only affects the timing of the flow event.

There is evidence that there has been a long-term erosion problem in the NW¼ of Section 34. Historical aerial photographs provide evidence of erosion prior to mining and reclamation. Google Earth contains aerial photos dating back to 1995, prior to any mining having taken place in the watersheds above your property. The 1995 aerial photo shows the same erosion and

Coal mining pond water discharge into the farmland creek spans two miles of flooding from from Wayne Eisenbeis farmland (south of the Esther Eisenbeis farmland) to Lucille Sailer farmland (north of the Esther Eisenbeis farmland). Over a span of more than 100 years, this had never happened before.
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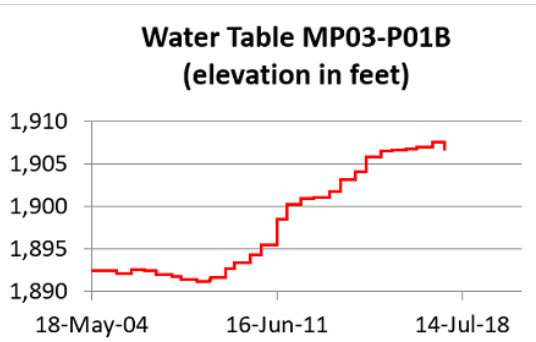
This happened because NAC discharged water from coal mining ponds into the farmland creek.



While LIDAR may not have "absolute accuracy" (not exact elevation) it does have "relative accuracy" (does have accurate elevation changes). On FCC page 10, the red lines may not be exactly at an elevation of 1890, 1900, and 1910, but the changes in elevation are accurate.

The NAC image, dated 1977, is almost identical to FCC Page 9, If the NAC photo were taken in 1977, the image would show solid prairie grass on the NAC land, not NAC changes to the land.

drainage patterns as pointed out on Page 9 of 17 of the PSC and OSMRE Complaint: Eisenbeis Farmland. In addition, Attachment No. 4 includes aerial photos from 1977 and 1996 that show similar erosion and drainage patterns. We believe the field-engineered diversion was constructed as an attempt to minimize runoff and reduce erosion well before the adjacent area was permitted, mined, and reclaimed. As previously pointed out, runoff from the upstream areas was routed around your property during mining and reclamation activities via pipe discharges to natural drainage at the north end of property. Runoff from upstream areas continues to be routed around property via the reconstructed diversion.

On page 10 of 17 of the complaint, you provide a map showing elevations of your property in 1970 and 2015. You allege that the differences between the two surveys is due to erosion on your property. Although there are some slight differences in elevation, we believe this is most likely due to differences in technology. Please note that the 1970 contours (red color) are on a ten-foot elevation contour, i.e., there is ten feet of elevation difference between elevation contours. The 2015 contours are on a 2-foot elevation contour and were most likely derived from LIDAR, a much more sophisticated and accurate method of producing surface contour maps. The index contours (elevations 1890, 1900, 1910, and 1920) for the two surveys actually align very well. We believe that the slight differences between the two surveys is the result of different survey methodologies and accuracies and not the result of erosion.

The only time when there would have been flows across your property from the upstream areas east of your property during mining and reclamation is when the ponds overflowed due to a significant runoff event in excess of the design standards. The ponds were designed to contain a 10-year/24-hour storm event. Pond overflows are acceptable provided that water levels of the ponds are maintained at a level below which an adequate amount of water storage is provided to contain a 10-year/24-hour storm event.

We are aware that the rebuilt diversion overflowed twice, both times in 2014. One overflow event took place on the south end of the reconstructed diversion and was likely due to snow blocking the diversion channel making it non-functional during a snowmelt event. The other overflow event took place in August 2014 following a significant rainfall event in excess of the design standard that caused sediment pond P-H34-05 to overflow. The watershed 14-15 outlet into the reconstructed diversion washed out causing the diversion to overtop. The pond overflow was not considered a violation since adequate storage was provided in sediment pond P-34-05 to contain a 10-year/24-hour event. We are aware that the erosion associated with these events was repaired by Coteau.

Any erosion that has taken place while the diversion has been functioning as intended (i.e., taking runoff water from upstream areas around the east side of your property), is not likely to have been caused by runoff from the upstream watersheds. Simply put, the diversion prevents runoff from the areas above the diversion from flowing across your property. Therefore, the

1) This contradicts the PSC photos and reports. The diversion overflowed in 2011, 2014, and 2017. See FCC photos on pages 8 and 9 and in the PSC Inspection Report dated 26 Apr 2018 (Appendix C at Beulah.FoxPing.com).

The PSC took photos in 2011 and 2014. If there was no pond water overflow why did the PSC take photos of the Esther Eisenbeis farmland? Where are the photos of NAC land? The PSC took photos of the adjacent, but not of NAC land?

I had never been told there was a pipe for pond water discharge.

There were many clumps of pond water netting at many locations on the farmland. Mining pond water did flow onto the farmland.

1) I am unaware of any pipe. Are there photos?

2) The FCC photos show pond discharge erosions in the field and around the field (not possible with pipe).

There is an erosion path directly to the ponds FCC pages 8 and 9.

The PSC took photos of the farmland erosion on 31.Aug.2011 and on 16.Sep.2014. This is mining related.

erosion observed on the cropland portion of your property is not caused by runoff from the upstream portions of the watershed as the runoff from the upstream areas (Coteau property) is intercepted by the diversion and does not flow across the cropland portion of your property.

The Reclamation Division has determined that Coteau conducted mining and reclamation activities in the watersheds above your property in the NW¼ of Section 34 in accordance with our surface coal mining laws and regulations. The Commission cannot require Coteau to repair erosion that is not the result of mining and reclamation activities.

This is my mistake, based on misunderstanding of info from the ND Water Board.

Complaint No. 3: *This same 7 billion gallons of surface coal mine disturbed area pond from within the permit area water entered the farmland creek which resulted in flooding the southwest corner of the farmland which caused the loss of crop income (impact outside the permit area, without a PSC permit revision and without Landowner consent).*

The creek was dry most of the time for more than 100 years. There was no flooding of farmland, and there were no cattails. After the pond water discharge started, the creek was filled with water all the time, farmland was flooded, and cattails appeared.

NAC pond water discharge filled the farmland creek. This water seeped into the ground and raised the water table located 0.5 miles south of the farmland (the creek flowed north). That water table elevation increased to the same elevation as the farmland, which flooded the southwest corner of the farmland. The pond water discharge also flooded Lucille Sailer's farmhouse basement (less than 0.25 miles from the creek).

As stated in our response to Complaint No. 2, only a small fraction of the discharges from the Freedom Mine listed in Appendix F actually flowed through your property. Water discharged from ponds P-H34-04 and P-H34-05 while they were in place would not have affected the drainage channel through your property as these ponds were discharged via pipe around your property and entered the natural drainage at the very north edge of your property and continued to flow to the north through the natural drainage to Lake Sakakawea. Currently, only discharges from ponds P-W11-01 and P-W03-04 would flow through your property and those discharges flow through the natural drainage that runs through the center portion of your property.

To date, there have been no mine pond discharges to the western-most drainage channel (the cattail area is located in or near this drainage channel) through your property. Flows in the western-most drainage channel are from an entirely undisturbed watershed located south and west of your property. A significant portion of this watershed is not even within the permit area.

Complaint No. 4: *Modified a Mercer County road ditch making it deeper in order to convey the large volume of water discharge away from the coal mine that resulted in blockage of historical direct ramp access to the farmland (such construction was done outside the permit area without a PSC permit revision, without Landowner consent, and without a Mercer County permit)*

Similar to the construction of the diversion, we view the deepening of the road ditch and property access as a matter between Coteau and the landowner. We do not view it as a mining related matter and as such is not jurisdictional to the Commission.

NDCC Chapter 38-14.1-01 (1) ... disturbances of surface areas ... by damaging the property of citizens --- NDCC 38-14.1-02 (35 b) includes adjacent land --- NDCC 38-14.1-24 (8 g) requires avoiding natural channel deepening.

Although mining and reclamation activities modified the watersheds upstream of your property, we believe the demonstration has been made that Coteau has minimized disturbances to the prevailing hydrologic balance at the mine site and associated offsite areas as required by North Dakota Century Code 38-14.1-24(8). Any erosion on your property that was the result of mining

NAC modified the diversion ditch. NAC is not allowed to disturb land outside the permit area.
1) NDCC 38-14.1-02 (35 b) includes adjacent land.
2) NDCC 38-14.1-24 (8 g) requires avoiding natural channel deepening.

NAC deepened the original diversion ditch. Per PSC Policy Memorandum 6: Activities covered by coal mining => ... specific activities and types of disturbances ... as defined in NDCC 38-14.1-02(33) ... disturbances must be conducted within the boundaries of a surface coal mining permit.

or reclamation activities (overtopping of the diversion) has been repaired. Staff continues to monitor this area during routine mine inspections. At this time, we do not believe that a joint inspection is necessary.

This informal review does not affect an opportunity to request a formal review under North Dakota Century Code section 38-14.1-30, or to a citizen's suit under North Dakota Century Code section 38-14.1-40. If the intent was to file a formal complaint subject to an adjudicative process, please see the attached document, "Filing A Formal Complaint" (Attachment No. 4).

1) I am not a permitee.
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2) If allowed, I request a formal review.

Please feel free to contact our office if you have any questions.

Can NAC provide any written authorization docs?

Sincerely,

Dean K. Moos
Director, Reclamation Division

Attachments: 1) July 23, 2018 Letter to Mr. Eisenbeis w/ Attachments
2) May 14, 2018 Letter from the Reclamation Division to Coteau
3) June 19, 2018 Response Letter from Coteau to the Reclamation Division
4) Document "Filing a Formal Complaint"

cc: Jeff Fleischman
David Berry
Sarah Flath

One day has not been enough time for me to thoroughly review the docs you attached (received your docs yesterday evening). However, the two relevant docs have my initial review comments. Please forward this to the Commissioners before tomorrow's meeting.
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The 7 billion gallons of water comes from the ND Dept of Health. If this is incorrect, everything else in the Formal Citizen Complaint is correct.
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The bottom line is that NAC did disturb the land adjacent to the permit area land being mined. See https://Beulah.FoxPing.com/ for details, including links to relevant ND laws.