DKM

PSC - 5

Public Service Commission
State of North Dakota

600 East Boulevard, Dept. 408
Bismarck, North Dakota 58505-0480
Web: www.psc.nd.gov
E-mail: ndpsc@nd.gov
Phone: 701-328-2400
ND Toll Free: 1-877-245-6685
Fax: 701-328-2410
TDD: 800-366-6888 or 711

INSPECTION REPORT

DATE OF INSPECTION: September 16 and 17, 2014

TYPE OF INSPECTION: Complete

PERMITTEE - MINE: Coteau Properties Company - Freedom Mine

PERMITS INSPECTED: NACT-8102, NACT-8203, NACT-8401, NACT-8503, NACT-8601, NACT- 9001, NACT-9101, NACT-9501, NACT-0201, NACT-0401

PERSONS ACCOMPANYING INSPECTORS: Terence Schmdt, Brent Flaa (16th) and Jessica Unruh (afternoon of the 17th)

INSPECTION CONDITIONS: The inspection was conducted between 9:30 a.m. and 5:00 p.m. CDT on the 16th and from 10:00 a.m. until 4:15 p.m. on the 17th. Skies were sunny. The temperature reached the low to mid 70° F both days. Access was unrestricted.

OFFICE RECORDS

Mining permits, permit revisions and other mining related information were on file and available for review. The following records were briefly reviewed.

Record/Report/License	Comments
Certificate of Liability Insurance	On file, expires February 1, 2015
Surface Water Monitoring Report	2nd Quarter 2014 report on file
Ground Water Levels Monitoring Report	3rd Quarter 2014 report on file
Annual Ground Water Monitoring Report	2013 Annual Report dated Feb. 3, 2014 on file
NDPDES Permit No. ND-0025038	Expires December 31, 2016
NDPDES Discharge Monitoring Report (Semi- Annual)	1st half 2014 report on file
Storm Water Discharge Permit	Storm Water General Permit has been extended until Jan. 2015
Annual NDPDES Storm Water Disch. Rpt	2013 report on file
Quarterly Pond Inspection Reports	2nd Quarter 2014 reports on file. Minor repair issues noted on a few ponds. Sed. Pond P-W34-01 needs to be reseeded.

Record/Report/License	Comments
Monthly MSHA Pond Inspections	August 25th inspection reports on file. Last sediment pond certified was P-W26-06, September 20, 2013.
Pond Certificates	Last sediment pond certified was P-W26-06, September 20, 2013.
Haul Road Certifications	2013 Annual Certification Map is on file
County Conditional Use Permits	On file. Most recent issued was May of 2008.
Solid Waste Disposal Permit	Permit No. 0343 expires June 16, 2019
Air Pollution Control Permit	Permit No. 085004 expires Nov. 15, 2016
Blasting Notice Affidavit of Publication	Published on July 10, 2014
Blasting Records	On file and briefly reviewed. The last blasting record indicated a coal shot was detonated on September 11, 2014 in Sections 35 and 36, T145N, R88W in Permit NACT-0201. The shot was located approximately 5500 feet southwest of DGC/AVS gas line.
Blasting seismograph records	Blasting seismograph records were on file. The last blasting seismograph record was dated September 3, 2014 at DGC/AVS gas line.
Blast Certification	Certificates were on file
Federal Coal Exploration License	Expired October 16, 2002
State Coal Exploration Permit	Expired August 6, 2011
Biennial Wildlife Report	2012/2013 report submitted Feb 2014 with Rev 26 to NACT-0401
Road Closures and Setbacks	Most recent information on file dated Feb. 16, 2011
BATF Manufacturer of High Explosives	Expires July 1, 2015
Water Use Permits	Temp. permit expires September 30, 2014
State Wetland Drainage and Army Corps of Engineers 404 Permit	Nationwide 21 Permits for mining permits NACT-0401, NACT

The information on file in the Records Room at the Freedom Mine regarding Road Closures and Setbacks appears to be outdated. Pending Revision No. 18 to Permit NACT-0201 contains Mercer County Resolutions dated June 19, 2013 to temporarily close section lines and an amended agreement regarding a road closing dated July 11, 2014.

SIGNS & MARKERS

Permit signs and boundary markers were observed at access points and boundaries during the course of this inspection. Identification signs were observed on all inspected SPGM stockpiles and sedimentation ponds.

OVERBURDEN/COAL REMOVAL

In Permit NACT-0401: The 901 dragline was removing overburden in the SW¼ of Section 27. The 935 truck/shovel fleet was prebenching overburden in the NE¼ of Section 34 and hauling that material to a fill area to the south in the same quarter section between ramps 10 and 11. Coal was being hauled from Ramp 10. The 937 shovel was cleaning mud at the bottom of the pit near ramp 12 in Permit NACT-0401. A dozer and tree truck were part of the operation and the mud was being transported to an area in the proximity to the top of ramp 12.

In Permit NACT-0201: The 902 and 903 draglines were removing overburden in the NE¼ of Section 4 and in the NW¼ of Section 36, respectively. The 931 truck/shovel fleet was prebenching overburden in the SW¼ of Section 36 and the material was being hauled to a fill area in the N1/2 of the same section.

SURFACE WATER MANAGEMENT

The following ponds were inspected and their elevations were estimated and other conditions were noted.

Water Management Feature	Comments
P-J30-02R	6 feet below Spillway Elevation
P-W25-01	PPE marker underwater
P-W25-02	PPE marker underwater
P-W32-02	1 foot below PPE
P-W31-01	At PPE
P-W04-01	6 feet below top of embankment
P-D12-01	At PPE
P-W26-06	At PPE. Concrete mat to control erosion recently installed.
P-W35-01	2 feet above PPE. Discharging from pump at approx. 800 gpm, water was clean and quality appeared to be good.

SUITABLE PLANT GROWTH MATERIAL REMOVAL/RESPREAD

In Permit NACT-0201: Several SPGM removal areas were inspected and field approved. It appeared that all available SPGM had been removed from the inspected areas. The soil monuments were easily read and displayed the required information and field approval was granted. Mr. Flaa stated that the details of the soil removal areas would be sent to the Reclamation Division in a subsequent email.

Figure 1: SPGM removal monuments in Permit NACT-0201

BACKFILLING AND GRADING

Grade approved area WMA-016 was briefly viewed during the inspection. The area consists of 62.98 acres and was approved for respread on July 25, 2014. The SPGM respread appeared to be in good shape and consistent, no signs of erosion were noted in the respread material.

REVEGETATION

Reclaimed native grassland in Section 8 of Permit NACT-8601, Sections 1, 6 and 2 of Permit NACT-9001, Sections 16, 22, 26, 27, 31, 34, 35 and 36 of Permit NACT-9501 were inspected. All of these tracts were hayed or grazed this year with the exception of that which is located in Section 8, the NW1/4 of Section 26 and the NE1/4 of Section 34 of Permit NACT-9501. The established vegetation is generally providing excellent protection from erosion on all observed seedings that are more than two years old but a few rills and gullies were observed that will need to be repaired. Species vigor was high and the reclaimed native grasslands yielded very well this year.

The oldest reclaimed native grasslands that have been managed with prescribed grazing over the years appear to have the greatest species diversity and smooth bromegrass does not appear as prevalent on reclaimed tracts that are spring grazed simply due to the fact that the species is being utilized.

Of the areas looked at during this inspection, the N1/2 of the SW1/4 and part of the NW1/4 of Section 1 and the eastern portion of Section 2 of Permit NACT-9001 contained reclaimed native grassland that most closely resembled undisturbed native grassland. The seeded species, western wheatgrass, green needlegrass, sideoats grama, switchgrass, little bluestem and blue grama are all present in good quantities on these and smooth bromegrass was present in varying amounts. What makes these areas look especially successful is the number and relative abundance of desirable native grasses, native forbs and shrubs that were not seeded but are present on these lands. This diversity is obviously a result of direct respreading of native grassland topsoil. Grass species observed growing in Section 1 but were not seeded included porcupine grass, awned wheatgrass, priairie sandreed, big bluestem and prairie cordgrass. Native forbs observed growing included prairie coneflower, silverleaf scurfpea, Aster ericoides, fringed sagewort, wavyleaf thistle, daisy fleabane, American licorice, curleycup gumweed, Missouri goldenrod and purple coneflower. Buckbrush or western snowberry is prevalent in portions of these tracts and numerous volunteer buffalo berry shrubs have re-established on the native grassland in Section 1 and portions of Section 2. Species composition differences were observed between and within various seeding dates on these tracts and smooth brome is present in varying amounts throughout but grazing makes this species appear to be less prevalent. Plant vigor was very high this year and these reclaimed lands yielded very well this year. Figure 2 shows a volunteer buffalo berry plant on reclaimed native grassland located in the N1/2 of the SW1/4 of Section 1.

Figure 2: N1/2 of SW1/4 of Section 1, Permit NACT-9001

The reclaimed native grassland Tracts that are being hayed and grazed in Sections 22, 26, 34, 35 and 36 are generally all well established with the previously mentioned seeded species. Utilization levels were generally moderate to light and the established vegetation on the older stands are protecting the sites from erosion. The 2014 seeded area in the NW1/4 of Section 36 is heavily grazed as depicted in Figure 3 below. The 2013 seeding in this area is dominated with slender wheatgrass and annual weeds and the other seeded species are establishing. Smooth bromegrass appeared to be quite prevalent on the 2003 seeded area in Section 36.

Figure 3: 2014 seeding in Section 36

Generally, few native forbs were observed on the areas listed in the paragraph above but Aster ericoides was generally present as scattered plants. The one exception was the SE1/4 of Section 34 where golden pea and an Astragulus species were observed growing on an area respread from stockpile and initiated in 2010.

A considerable amount of smooth brome was noted on the reclaimed land located in the SW1/4 of Section 35 that was initiated in 2010. Grazing was initiated on this tract later in the growing season so the smooth bromegrass was allowed to produce seed heads and perhaps it just seemed more prevalent than elsewhere.

Smooth brome appeared as the dominant species established on the older seeded area (1995 & 1996) in Section 6 of Permit NACT-9001. This tract is being managed as hayland and Kentucky bluegrass, and alfalfa in places, are also abundant in these older seedings. The more recent seedings on this tract (2004) continue to be dominated with the seeded native species and the invasive introduced species were present but not abundant. The west end of this tract was in the process of being hayed and was not inspected. Smooth brome was also prevalent in the native grassland tract located in the S1/2 of the SW1/4 of Section 31 but the seeded native species are prevalent throughout. This tract was grazed this year which appears to be helping maintain species composition.

The reclaimed native grassland in Section 8 of NACT-8601 consists of older seedings that have been sprayed with an herbicide and reseeded (R-2013) and areas initiated in 2012 and 2013. Warm season species are quite prevalent on the reseeded area but the seeded cool season species are not prevalent. Smooth bromegrass has re-established in these areas and is abundant. The seeded species are well established on the hilltop area of the 2012 seeded area and species composition looks good but a strip along the west edge of this seeding has an accumulation of litter and few native species were observed. Smooth bromegrass, sweet clover, and noxious weeds are abundant on this area. It was not evident in the field whether this area is part of the subsoil pile area reclaimed in 2012 or if it was part of an older seeding that was sprayed with herbicide. Perhaps it was an area initiated in 2012 that was mistakenly sprayed with a herbicide. In any event, this site needs management to help ensure revegetation success.

The reclaimed native grassland located in the NE1/4 of Section 34 that was seeded in 2012 has developed quite well and the seeded vegetation is generally providing good ground cover. This stand was quite thin last year. The grass stand on this tract is dominated with slender wheatgrass, western wheatgrass, green needlegrass and blue and sideoats grama. Gullies were noted in both drainage ways above sediment pond P-H34-05, but the drainage way moving towards the southeast has not yet been reclaimed which explains why tall wheatgrass was the dominant species established. The gully erosional feature on the reclaimed portion of this tract will need to be repaired prior to pond removal.

A few low areas, presumably differential settling, were noted on reclaimed native grassland during this inspection. This includes reclaimed native grassland located in the S1/2SW1/4 of Section 31, NE1/4 of Section 35, SE1/4 of Section 2 and SE1/4SE1/4 of Section 16. Most of these areas appear to be functioning as temporary wetlands which are not necessarily detrimental to the postmine land use and a few, such as those in Section 16, might be more similar to seasonal wetlands.

The topography of the reclaimed lands in Permits NACT-9001 and 9501 looks quite natural for the most part. The most unnatural features observed were the diversion-like waterways that were constructed in the S1/2 of Section 2 of NACT-9001 that move runoff diagonal along the slope to reduce slope steepness. These diversion-like waterways did pass the excessive amounts of runoff received this year and they appeared stable. The reclaimed haulroad corridor that was reclaimed last winter in Section 12 of Permit NACT-8601 was traversed and the side slopes appeared stable with only minor erosion noted for the most part.

Gully erosion was observed in the main drainage in the W1/2 of Section 36, in the drainage above reclaimed sediment pond P-H34-04 and in a less significant drainage north of a stockpond located in the SE1/4 of Section 35. Gully erosion was also observed in the main drainage way in Section 15 of Permit NACT-9501 and below the diversion located west of the permit boundary in the NW1/4 of Section 34 of Permit NACT-9501. Head cutting is occurring where runoff enters the diversion below sediment pond P-H34-05 and a portion of the diversion berm has been washed away in a low area which allowed runoff to pass over the cropland to the west.

Erosion was also observed on the steep slopes where sediment pond P-H16-05 was reclaimed. The April 22, 2014 pond removal plan states that straw/coconut fabric will be installed if determined to be needed by a post-construction field review. The steep portions of the drainages associated with this pond removal should be stabilized with fabric. Figure 4 shows this area.

Figure 4: Reclaimed pond site P-H16-05

Reclaimed woodlands located in Sections 22, 31, 1, 34 and 35 of Pemits NACT-9501 and 9001were briefly inspected. The older tree plantings in Section 1 have developed considerably over the past two years to the point where a canopy cover exists in portions of these plantings. The tree planting in Section 31 has established with variable success but has a fairly diverse mixture of trees - green ash, box elder, cottonwoods, and shrubs including American plum, chokecherry, buffalo berry, woods rose and silverberry. The newer tree plantings in Sections 34, 35 and 22 of NACT-9501 are establishing with variable success. Only about 50% of the trees and shrubs in the shelterbelt planting located in the NE1/4 of the SE1/4 of Section 34 have survived. The caragana and green ash had the highest survival rate while it appears all of the pine trees died. About half of the trees in the box elder row survived. Weed barrier was installed in this planting and the past two years have been exceptionally wet so it is not clear why survival was not better. The reclaimed woodlands in the SE1/4 of Section 34 appear to have similar survival rates but the planting density is much higher than a shelterbelt planting. The competing weed growth in these woodland plantings was clipped later in the growing season with clipping still continuing, and woodchips were still being placed in some of these plantings. In most instances it appears only an inch or two of woodchips have been scattered over the sites which may not be enough to completely suppress annual weed growth. Wood chips were in the process of being spread on a woodland site in Section 22 that was planting this past spring. Figure 5 shows this operation.

Figure 5: Woodchips being applied to a woodland planting in Section 22, NACT-9501

Water was flowing out of the large recreated wetland in Section 6 of NACT-8601. The reclaimed wetlands located in Section 31 were holding water at a high level and they are functioning as intended. Livestock effects appear minimal on these wetlands this summer, possibly due to high water levels.

ROADS

Equipment was being used to incorporate a mix of flyash, overburden and gravel into soft spots along the haulroad in the SE¼ of Section 8, Permit NACT-8401. Water trucks were observed in Permits NACT-0401 and NACT-0201 spraying the haul roads to control fugitive dust.

WILDLIFE

Ten white tail deer were observed in Section 9 of Permit NACT-9001. Several ducks and other waterfowl species were observed on ponds and wetlands during the inspection.

MISCELLANEOUS

Photographs taken are on file with the Reclamation Division. GPS tracklogs of the routes traveled to look at reclaimed lands are unavailable due to computer malfunction.

Francisco Echeverria
Environmental Engineer

Guy A. Welch
Environmental Scientist

cc: Troy Leingang
OSM Casper Field Office
Mercer County Auditor

Minedata/Freedom/InspectionReports/2014/140916-17c