



STORM WATER POLLUTION PREVENTION PLAN (SWPPP)

**Coyote Creek Mining Company, L.L.C.
6502 17th St SW
Zap, ND 58580
701-873-7800**

In compliance with:

**North Dakota Pollutant Discharge Elimination System
General Permit for Stormwater Discharges from Mining, Extraction or Paving
General Permit Number NDR32-0000**

SWPP Plan Preparation Date:

March 15, 2015

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STORM WATER POLLUTION PREVENTION PLAN

Coyote Creek Mine
Facility NDPDES Number NDR32-0772

1. Site Description

The Coyote Creek Mine is a surface lignite mine located in Mercer County, North Dakota. The mine is permitted to operate through a surface coal mining permit NACC-1302 issued by the North Dakota Public Service Commission and encompasses approximately 8,400 acres. A composite United States Geological Survey (USGS) quadrangle map is presented in Exhibit 1 for reference and it includes the permit area boundary. Lignite deposits supply a commercial electric generating station.

Surface runoff from the majority of lands disturbed by surface coal mining facilities and activities are controlled by sedimentation ponds. Discharges from these impoundments are regulated under an individual NDPDES permit, Permit Number ND-0026697, issued by the North Dakota Department of Health. The mine office and shop facility, including outlying storage buildings, the bulk petroleum product storage tanks and large equipment parts, are located in a single watershed that is controlled by a sedimentation pond. Surface coal mining regulations allow an exemption from point source controls where the surface mining activity is small in comparison to the drainage area. Also specifically exempted are diversion ditches, sedimentation ponds, and roads where upstream areas are not disturbed. The only facility/activity related to surface coal mining located outside of those watersheds controlled by impoundments are haulroads that provide equipment and vehicle access between blocks of mining and the coal handling facility, and the topsoil and subsoil stockpiles associated with haulroad construction. Therefore, it is only those segments of haulroad that lie outside of controlled watersheds that are subject to the stormwater permitting requirements.

Major land uses found within the boundaries of the permitted area consist of undisturbed hayland, cropland, and rangeland, public roads, a farmstead and lands disturbed by surface coal mining facilities and activities. The Coyote Creek Mine permit boundary will encompass three major watersheds, Coyote Creek, Brush Creek and Mud Creek. All three of the watersheds outlet into the Knife River southwest of the City of Beulah. At this time, it is presumed that all mining activities in the Mud Creek watershed will be controlled by sedimentation ponds and discharged accordingly. However in portions of both the Coyote Creek watershed and the Brush Creek watershed, a haul road will cross lands which are not controlled by sedimentation ponds. These areas are identified as Outfall 1 through Outfall 22 in Exhibit 1. The amount of disturbance in these watersheds is relatively small compared to the size of the entire watershed.

Both Coyote Creek and Brush Creek have been listed in North Dakota's Section 303(d) Total Maximum Daily Load (TMDL) Waterbody List as impaired water bodies due to Total Fecal Coliform. A Fecal Coliform Bacteria TMDL was prepared in September 2010 by the North Dakota Department of Health for Brush Creek, Coyote Creek, Elm Creek and Willow Creek, all tributaries of the Knife River. The results of that TMDL indicate the creeks are fully supported-but threatened

when recreation was considered it designated use. Therefore no waste load was allocated for fecal coliform. Currently no point sources were identified in the reaches of the tributaries studied, leaving only nonpoint discharges as the contributing factor. Even though CCMC will be adding point source discharges, in the form of sediment pond discharges, to these tributaries, surface mining activities should not increase or affect the fecal coliform levels in the creeks. The nature of the non-point source discharges will be runoff from disturbed areas which are not contained by a sedimentation pond. Human waste will be contained within a zero discharge lagoon or other treatment system and will be applied as fertilizer at agronomical rates if so required.

2. Stormwater Pollution Prevention Team

The following is a listing of the individuals who are responsible for the implementation and maintenance of the Storm Water Pollution Prevention plan and conducting the required stormwater outfall inspections:

| <u>Name</u> | <u>Title</u> | <u>Responsibilities</u> |
|--------------|-----------------------------------|-------------------------|
| Donn Steffen | Engineering/Environmental Manager | |
| Sarah Flath | Environmental Specialist | |

3. Description of Potential Pollutant Sources

As mentioned in the narrative under Site Description, the only facilities/activities associated with surface coal mining that are subject to the stormwater permit program are segments of haulroad that are used for equipment or vehicle access between blocks of mining and the soil stockpiles associated with their construction. Exhibit 1 shows the location of haulroads and associated stockpiles and also identifies the storm water outfalls associated with these features. In addition, the watershed for each storm water outfall has been delineated and the drainage area listed.

There are no outdoor storage areas, industrial machinery, industrial production or processing activities, or disposal areas located in the vicinity of the storm water outfalls identified in Exhibit 1. Also, no coal loading or unloading occurs near these outfalls. The only exposure of storm water to potential pollutants occurs where haulroads cross stream channels. At these crossings, culvert installations are placed underneath the roadways. Storm water can carry sediment and coal fines washed from the surface or side slopes of the haulroads and from the bottom and back slopes of adjacent haulroad ditches during precipitation events to the culvert installations and into receiving waters.

Fuel and hydraulic fluid spills may also occur on the haulroads. However, such incidents are rare and typically involve small quantities of fluids. Should a spill occur, there is little potential for downstream pollution. If a major spill occurs, the Spill Prevention, Control, and Countermeasure (SPCC) plan is activated. A major fuel or hydraulic fluid spill should be contained prior to reaching downstream receiving waters. Contaminated road material would also be collected and removed to a controlled treatment site.

4. Stormwater Controls

Past experience with stormwater runoff that collects and discharges at haulroad outfalls at similar mines in the area indicates that sediment is the primary pollutant of concern. Various management practices and structural controls will be utilized at the mine site to reduce pollutants in storm water runoff. During the construction stage of activities, silt fences will be installed at any location where runoff from a disturbed area will leave the site. In small watersheds, a silt fence alone may be sufficient, but in areas anticipated to yield runoff with a larger sediment load, a sump will also be installed upstream from the silt fence. Berms, diversions, and stripping edges may be used to divert runoff to control measures. Because vegetation is a highly effective means to control erosion, efforts will be made to delay disturbance of vegetation for topsoil and subsoil salvage until necessary for construction. This minimizes the period of time that exists between disturbance of existing vegetation and the armoring or revegetation activities that are conducted when construction is complete, which is when an area is especially susceptible to erosion. ✓

Another management practice which is very effective in reducing sediment in storm runoff is the disking, seeding, and mulching of disturbed areas as soon as practical. The disking and mulching of a disturbed area provides immediate protection from erosion, both from water and wind. Establishing good vegetative cover, however, is the most important practice in limiting erosion and the generation of sediment. Coyote Creek Mine strives to establish vegetation as soon as possible in the highly erodible areas of haulroad construction, such as ditch bottoms, fill slopes, and backslopes of cuts. In areas where material quality may limit vegetation establishment, where practical, subsoil or subsoil-quality material is also respread on haulroad fill slopes, through ditch bottoms, and on backslopes of ditch cuts to provide improved soil quality for the successful establishment of vegetation.

In some cases, such as a long slope susceptible to significant sheet flow, high velocity or concentrated flows, CCMC may utilize various products or combinations of products to minimize erosion. These products include erosion control blanket, engineering fabric, articulated concrete mats, and rock riprap. The erosion control blanket enhances the growth of vegetation by limiting the potential for erosion and retaining moisture for emerging seedlings. Engineering fabric is normally used in conjunction with articulated concrete mats or rock riprap as a means for controlling highly erodible sites. Installation of rock check dams, riprapped plunge pools and articulated concrete mats will follow the plans provided in NACC-1302.

Additional structural controls may include the installation of silt fences, vegetative filter strips, and shallow sumps. The type of installation used will vary depending upon which structural control seems most appropriate for the expected volume of sediment. In some instances, more than one structural control may be utilized at the same outfall. For example, a shallow sump may be installed with a silt fence erected at its outfall. All of the above mentioned management practices and structural controls will serve as Best Management Practices (BMPs) for reducing suspended sediment in storm water at the Coyote Creek Mine. BMPs shall be installed according to manufacturer specifications. Should other controls not already mentioned as BMPs appear useful for a particular situation, the SWPP plan will then be amended to reflect the new BMP. Sediment and erosion controls are expected to withstand and function properly during precipitation events of less than or equal to the 2 year, 24 hour storm event. The release of sediment or other materials due

to such storm events should be minimal. If sediment escapes the site, off-site accumulations of sediment shall be removed in a manner and at a frequency sufficient to minimize off-site impacts. If inspections indicate that BMPs are not able to withstand such events, BMPs will be modified and the SWPPP updated accordingly.

Other management practices include minimizing the size of disturbance within or across a watershed, cleaning up coal, overburden and fuel spills on haul roads, and daily inspection and maintenance of haulage equipment and other mobile mining equipment. Spills and leaks are addressed in the mine's SPCC plan and any that occur will be documented as part of that plan. There will be no waste disposal sites, drums, tanks or containers in the watersheds covered by this storm water plan. Employees are trained to avoid littering and work areas are inspected to enforce this policy. Also, in order to prevent the migration of sediment from the roads into the road ditches, where the soil particles can be picked up by storm water flows, the haul roads are watered and may periodically be treated with a soil binder/dust suppressant product.

Training of the stormwater pollution prevention team on the content and requirements of the SWPP plan is also an important aspect of controlling pollution from stormwater on the mine site. The aforementioned team will receive training on an annual frequency. Evidence of training will be recorded and maintained at the mine site for regulatory review. Personnel will receive training in the following areas:

- An overview of the contents of the SWPP plan;
- Spill response procedures and spilled material management practices;
- The location of storm water outfalls, the on-site controls installed at the outfalls and the maintenance of those controls;
- Operating procedures for preventing pollution; and
- Inspection procedures including review of inspection forms, proper documentation of findings, initiating corrective actions and documenting completion of repairs.

5. Maintenance

All sediment control measures installed at stormwater outfalls will be maintained to insure their effectiveness. During inspection of stormwater outfalls, required maintenance items will be noted on the outfall inspection reports. Noted maintenance activities shall be arranged and accomplished as soon as practicable.

Sediment and vegetative debris that is removed from sediment control structures will be hauled to active mining areas and placed in mine pits from which coal has been removed, within spoil areas or in areas of regraded overburden. Any sediment control materials that are damaged or ineffective, such as torn silt fence or sediment clogged fabric rolls, will be removed from the outfall and placed in a solid waste container for disposal.

6. Inspections

In accordance with the general stormwater permit, personnel belonging to the stormwater pollution prevention team will inspect the stormwater outfalls identified in Exhibit 1 and associated

BMPs for structural integrity, effectiveness, visible evidence of sediment accumulation or erosion, and required maintenance. The stormwater outfall field inspection form, shown in Exhibit 2, will be used to record the results of the inspections. The stormwater outfalls will be inspected at least:

- Once per quarter (based on a calendar year), with (a) one of the inspections conducted within 48 hours of a precipitation event resulting in a stormwater discharge and (b) one inspection conducted during a 3 month period when no discharge events occur.

The personnel who conduct the stormwater outfall inspections will be familiar with the general permit conditions, the SWPP plan and the proper installation and operation of sediment control measures.

7. Sampling

The general stormwater permit requires coal mines and coal mining related facilities (SIC 1221-1241) to conduct, at a minimum, annual sampling of discharges from stormwater outfalls. There are no discharge limits associated with coal mine stormwater outfalls; however, there are benchmark values that require sampling to document the effectiveness of stormwater controls. The required sampling parameters and benchmark values are as follows:

| <u>Required Sampling Parameter</u> | <u>Benchmark Value</u> |
|------------------------------------|------------------------|
| ▪ Total Suspended Solids | 100 mg/l |
| ▪ Iron, Total | 1.0 mg/l |
| ▪ Aluminum, Total | 0.75 mg/l |

Procedures, testing and documentation associated with the stormwater sampling plan are as follows:

A. Sample procedures.

- i. All samples and measurements taken shall be representative of the discharge. Samples shall be collected from discharges resulting from a storm event that is greater than 0.1 inches in magnitude and that has occurred at least 72 hours from the last 0.1 inch or greater storm event which generated runoff. Snowmelt which generates runoff considered being equivalent to or greater than a 0.1 inch precipitation event qualifies for sampling purposes. However, no more than one sample per year for each sampling site can be from a snowmelt event.
- ii. For discharges from impoundments with a 24-hour or greater retention capability, grab samples of the discharge may be obtained at any time. For all other discharges, grab samples shall be taken during the first 30 minutes of the discharge. If the collection of a grab sample during the first 30 minutes is impracticable, a sample may be taken as soon as practicable, provided a description of why the grab sample could not be obtained during the first 30 minutes is submitted with the DMR.
- iii. For runoff events sampled, the date, duration (in hours) and amount (in inches) of rainfall shall be recorded. In addition, the approximate duration (in days) since the end of the last 0.1 inch or greater storm event which generated runoff and the size of the drainage area shall be recorded. Coyote Creek Mine will maintain a network of

rain gauges to document rainfall events and will utilize the Community Collaborative Rain, Hail and Snow Network (CoCoRaHS) for snowfall measurements.

B. Impractical or adverse conditions for sampling.

When impractical or adverse climatic conditions prevent collection of discharge samples from stormwater outfalls, in lieu of sampling data a description of why samples could not be collected will be submitted. Impractical or adverse climatic conditions which may prohibit the collection of samples include: normal non-working hours, nightfall, or weather conditions that create dangerous conditions for personnel, such as local flooding, high winds, tornadoes, large hail and electrical storms, or otherwise make the collection of a sample impractical, such as drought or extended frozen periods.

C. Representative sampling plan.

There are 22 stormwater outfalls as shown on Exhibit 1. A review of the watersheds contributing runoff to each stormwater outfall indicates that the various land uses consist of undisturbed native rangeland and cropland and disturbed mine areas for which sediment and runoff controls, such as impoundments and diversions, are present. The only source of runoff from disturbed lands associated with mining activity at each stormwater outfall is segments of haulroads and associated soil stockpiles. Therefore, storm runoff to each outfall should exhibit substantially identical effluents. As such, at least 20 percent of all outfalls were identified for sampling. A total of five (5) stormwater outfalls will be monitored and sampled for benchmark values, which equals 23% of the outfalls. Outfall #9 will represent the small watersheds whose only disturbance is a small soil stockpile. Outfall #20 will represent the outfalls at the perennial and intermittent stream crossings. The majority of the outfalls are ephemeral streams, so three outfalls were selected for sampling at these sites, specifically #2, #5, and #7.

D. Test procedures.

The collection and transportation of all samples shall conform to EPA preservation techniques and holding times found in 40 CFR 136. All laboratory tests shall be performed by a North Dakota certified laboratory in conformance with test procedures pursuant to 40 CFR 136.

E. Recording of results.

For each stormwater sample taken, the name of the sampler, the outfall identifier, and the date and time of sampling shall be recorded. For each sample analyzed, the name of the laboratory, the analytical techniques used, the test results, and the date and time of the analysis shall be recorded.

F. Additional sampling.

If the stormwater discharge is sampled more frequently than established by this plan, all additional results, if in compliance with item D. (Test procedures), shall be included on the DMR.

8. Documentation, Record Keeping and Annual Reporting

Whenever a stormwater outfall inspection is conducted to satisfy the requirements of this plan, the inspector will complete an inspection form for each outfall. The completed inspection form for each outfall will document pertinent information and observations, such as the date of inspection, the name of the individual conducting the inspection, evidence of sediment accumulation or erosion, evidence of damage to any structural controls, and any maintenance or repair work that should be implemented at the outfall.

Completed inspection forms will be filed with the Environmental Department at the mine site for a minimum period of three years. An annual Discharge Monitoring Report (DMR) will be provided to the North Dakota Department of Health by January 31 of each year that summarizes the sampling results obtained during the preceding calendar year.

9. Documentation of Revisions

This SWPP plan shall be retained at the mine site and filed with the records of the Environmental Department for the duration of activities associated with stormwater discharge. The plan shall be amended whenever there is a change in outfall design, construction, operation or maintenance that could have a significant effect on the potential for the discharge of pollutants to waters of the state of North Dakota.

| <u>Date of Revision</u> | <u>Items Revised</u> | <u>Initials</u> |
|-------------------------|--|-----------------|
| <u>8/15/15</u> | <u>Additional details were added throughout the plan after an internal audit was conducted</u> | <u>SJ</u> |
| _____ | _____ | _____ |
| _____ | _____ | _____ |
| _____ | _____ | _____ |
| _____ | _____ | _____ |
| _____ | _____ | _____ |
| _____ | _____ | _____ |
| _____ | _____ | _____ |

CERTIFICATION

Certification Instructions:

The Stormwater Pollution Prevention (SWPP) plan must be signed by a responsible corporate officer, a general partner, a principal executive officer or a ranking elected official of the owner(s).

The SWPP plan may be signed by a duly authorized representative of the owner described above only if:

- The authorization is made in writing by a person described above and submitted to the North Dakota Department of Health; and
- The authorization specifies either an individual or a position having responsibility for the overall operation of the regulated facility, such as the position of plant manager, superintendent, position of equivalent responsibility, or an individual or position having overall responsibility for environmental matters.

Certification

"I certify under penalty of law that I have personally examined and am familiar with the information submitted herein. Based on my inquiry of those individuals immediately responsible for obtaining the information, I believe the submitted information is true, accurate and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.

Name Sarah Flath Title Senior Environmental Specialist

Signature  Date 3/15/15

Stormwater Outfall Field Inspection Report

Coyote Creek Mine
Facility NDPDES Number NDR320772

Outfall Number: _____ Date: _____ Time: _____ AM PM

Inspector: _____ Quarterly Monitoring Period 1 2 3 4

1. Is discharge occurring at the outlet of the stormwater outfall? ___NO ___YES
2. Was a sample of the discharge collected for analysis? ___N/A ___NO ___YES
3. Is there evidence of sediment entering the drainage system? ___NO ___YES
4. Are site best management practices (BMPs) effective? ___NO ___YES

If NO, what adjustments, or what additional, BMPs could be implemented at the site:

5. Are existing BMPs in need of repair, modification or replacement? ___NO ___YES
If YES, provide details of the work items that are required at the site:

6. Are there materials or spills that need to be removed from the site? ___NO ___YES
If YES, provide a list of the materials or spills that are in need of removal:
