



NORTH DAKOTA
DEPARTMENT of HEALTH

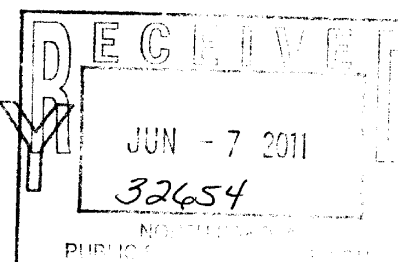
ENVIRONMENTAL HEALTH SECTION
Gold Seal Center, 918 E. Divide Ave.
Bismarck, ND 58501-1947
701.328.5200 (fax)
www.ndhealth.gov



June 6, 2011

William Kirk
Staff Mining Engineer
Coteau Properties Company
204 County Road 15
Beulah ND 58523

COPY



RE: NDPDES Permit ND0025038
Pond Overflow Discharges

Dear Mr. Kirk:

We have reviewed your June 2, 2011 email describing the spring runoff events which resulted in pond overflow discharges at the mine during May. As indicated in your letter and our previous discussions alternate limitations were considered for the following overflow samples:

Outfall	Pond ID	Sample Date	Total Iron (mg/L)	Total Suspend Solids (mg/L)	Settleable Solids (mL/L)	Alternate Limits Applied
026	P-J29-01	5/4/2011	--	42	<0.1	Yes
132	P-W03-02	5/4/2011	--	113	<0.1	Yes
081	P-H15-01	5/31/11	--	2680	0.1	Yes
061	P-H34-04	5/31/11	--	67	<0.1	Yes

Based on the information you provided the alternate limitations for precipitation related overflows would apply to the overflow discharges as indicated above. The determination made regarding the alternate limitations is supported by the information you provided on pond operation and the amount of snowfall/precipitation received at the mine leading up to the overflows. As provided, the National Weather Service records indicate the Beulah area received 108.1 inches of snowfall from October through early May. Based on the snowfall depth the water equivalent was estimated to be 7.1 inches. Also as provided, the May 31 overflows resulted from 3.3 to 3.4 inches of rain received between May 18, 2011 and May 31, 2011.

We also reviewed the information you provided on the elevated pH for a May 2nd sample from pond P-J30-02 (dp 022) and a May 4th sample from pond P-J29-01 (dp 026); with the reported pH values being 9.50 s.u. and 9.13 s.u. respectively. The pH results are not eligible for alternate limitations provided for precipitation related overflows and would be reported as exceedances in your discharge monitoring report. The department views the pH exceedances as isolated incidents and plans no further action on the matter.

Should you have any questions, please contact me at 701-328-5227.

Sincerely,

Gary Bracht
Environmental Engineer
Division of Water Quality

cc: James Deutsch, PSC
EPA

Environmental Health
Section Chief's Office
701.328.5150

Division of
Air Quality
701.328.5188

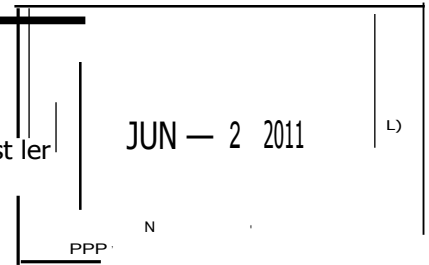
Division of
Municipal Facilities
701.328.5211

Division of
Waste Management
701.328.5166

Division of
Water Quality
701.328.5210

Jangula, Esther A.

From: Deutsch, James R.
Sent: Thursday, June 02, 2011 10:58 AM
To: Gunnerson, Bill T.; Berg, Mike D.
Cc: Beechie, Bruce E.; Welch, Guy A.; Moos, Dean K.; Jangula, Est ler
Subject: FW: May Sedimentation Pond Overflows



Esther,

Please login and save the message from Bill Kirk to the following folder: [\\Coal\mine_data\Freedom Mine\NDPDES\NDPDES Correspondence\2011.](#)

FROM DIRECTOR - RECLAMATION DIV.

Thanks —Jim

Date: _____

From: Kirk, Bill [mailto:Bill.Kirk@coteau.corn]
Sent: Thursday, June 02, 2011 9:39 AM
To: Kowalski, Randy L.
Cc: Deutsch, James R.; Moos, Dean K.; Steffen, Donn
Subject: May Sedimentation Pond Overflows

Action: _____

Info. Only: _____

Info & File: _____

Randy:

In accordance with the Freedom Mine's NDPDES permit (ND-0025038), please be informed of the following May sedimentation pond overflow sample results that exceed daily maximum and/or monthly average effluent limits. The overflows that occurred during the first week of May were the result of snowmelt and those that occurred on the last day of May were the result of rainfall. The listing includes those sample results that were previously reported as having exceeded daily maximum effluent limitations.

Pond P-130-02	Discharge point: 022	Sampled: May 02, 2011 pH: 9.50 S.U.	
Pond P-129-01	Discharge point: 026	Sampled: May 04, 2011 pH: 9.13 S.U.	TSS: 42 mg/I SS: 0.0 mI/I
Pond P-W03-02	Discharge point: 132	Sampled: May 04, 2011 TSS: 113 mg/I	SS: 0.0 mI/I
Pond P-H15-01	Discharge point: 081	Sampled: May 31, 2011 TSS: 2680 mg/1 Fe: 90.2 mg/1	SS: 0.1 mI/I
Pond P-H34-04	Discharge point: 061	Sampled: May 31, 2011 TSS: 67 mg/I	SS: 0.0 m1/I

All of the above ponds collect and treat runoff from active mining areas.

Regarding the maximum daily and/or monthly average TSS limitations that were exceeded in early May for ponds P-129-01 and P-W03-02, the overflows were associated with snowmelt that exceeded the mine's design storm event of 3.1 inches of precipitation. Snowfall records obtained from the National Weather Service in Bismarck indicate that the Beulah area received 108.1 inches of snowfall for the period of late October 2010 through May 1, 2011. Based on conversion factors used by the National Weather Service to convert inches of snowfall to an estimated liquid water equivalent, the 108.1 inches of snowfall for the aforementioned period

of time yields an estimated water equivalent of 7.1 inches. Coteau also has documentation that demonstrates that the two impoundments were at or below permanent pool elevation prior to the onset of winter weather.

Regarding the elevated pH results for ponds P-J30-02 and P-J29-01 in early May, an explanation is difficult. Typically, snowmelt water temperatures are cold and elevated pH values associated with the growth of algae are not common. However, we have noted that pH values for water held in three reclaimed stockponds upstream of pond P-129-01 were elevated the previous summer. Reclaimed stockponds SP-J29-01, SP-J29-02 and SP-J29-03 were sampled on August 5, 2010, and the field pH values were 9.8, 9.6 and 9.6, respectively. Runoff from snowmelt in April and May of 2011 may have flushed this high pH water from the upstream stockponds into and through pond P-J29-01. Algae was also noted growing among the grasses present on the bottom of both emergency spillway channels. As both ponds held water throughout the winter months, algae production and growth may have begun as soon as pond water temperatures warmed and contributed to the elevated pH readings.

Regarding the TSS and Fe values associated with pond P-H15-01 on May 31, 2011, the overflow that produced these results occurred due to a series of precipitation events. On May 17, 2011, the water level in the pond was documented at 0.1 feet below the permanent pool elevation. From May 18 through May 31, 2011, a recording rain gauge operated by Coteau and located in the SW1/4 SW1/4 NW1/4 Section 14, T146N, R88W, recorded 3.3 inches of rainfall. During the fourteen day time period spanning May 18 through May 31, rainfall amounts were recorded on nine of these days. Again, the design storm event for the Freedom Mine is 3.1 inches of precipitation.

Finally, regarding the TSS value associated with pond P-H34-04 on May 31, 2011, the overflow that produced this result also occurred due to a series of precipitation events. Coteau had been actively discharging water from this impoundment beginning May 6 when, on May 19, a downstream landowner contacted the mine and requested that the pond discharge be terminated and the location of the outfall of the discharge pipe be relocated so that he could seed a parcel of cropland. Coteau terminated the discharge and had not relocated the discharge pipeline when the series of precipitation events caused the pond to overflow through the emergency spillway. From May 20 to May 31, a recording rain gauge operated by Coteau and located in the SE1/4 SE1/4 SW1/4 Section 34, T146N, R88W, recorded 3.4 inches of rainfall. During the twelve day time period spanning May 20 through May 31, rainfall amounts were recorded on eight of these days. As previously stated, the design storm event for the Freedom Mine is 3.1 inches of precipitation.

Based on the foregoing discussion, Coteau requests that, where applicable, alternate effluent limitations be applied to the noted sedimentation pond overflows.

If you have any questions, please contact me.

William R. Kirk, PE

Staff Mining Engineer

The Coteau Properties Company

204 County Road 15

Beulah, ND 58523

Phone: 701-873-7215

Fax: 701-873-7226

bill.kirkPcoteau.com

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