

North Dakota State Water Commission

900 EAST BOULEVARD AVENUE, DEPT 770 • BISMARCK, NORTH DAKOTA 58505-0850
701-328-2750 • TDD 701-328-2750 • FAX 701-328-3696 • INTERNET: <http://swc.nd.gov>

December 15, 2008

North Dakota Department of Health
Division of Water Quality
918, East Divide Avenue
Bismarck, ND – 58501-1947

RE: North Dakota Pollutant Discharge Elimination System
Permit Number: ND-0026247

Enclosed are the Discharge Monitoring Reports (DMR) for the Devils Lake Outlet Project, permit number ND-0026247, for the month of November 2008 and the summaries of the sample results and flow data.

The days the outlet discharged are highlighted in yellow in the summaries. Attached to the summaries are the tables showing average daily outlet discharge, target and measured sulfate concentration at Bremen, water quality results of the samples collected from the upstream location, downstream location and the outlet, the average daily stream flow data and the conductivity data obtained from the USGS gaging station at the upstream and the downstream location.

Discharges for the year ended on November 9th 2008, weather conditions did not permit water quality samples collection after November 6th 2008.

If you have any questions regarding these reports, please contact me at 701-328-4958.

Sincerely,

Bruce Engelhardt P.E.
Head, Investigations Section
BE:SP:416-10
Enclosure

NORTH DAKOTA POLLUTANT DISCHARGE ELIMINATION SYSTEM (NDPDES)
DISCHARGE MONITORING REPORT (DMR)

PERMITTEE NAME/ADDRESS
 ND State Water Commission
 Bismarck ND 58506

1 / Month
 Outlet General Summary
 F- FINAL
 MINOR


ND-0026247
 PERMIT NUMBER

001 A
 OUTFALL NO.

FACILITY: Devils Lake Outlet Project
 LOCATION: Benson Co, ND

MONITORING PERIOD
 11/1/08 TO 11/30/08

NO DISCHARGE:

PARAMETER	QUANTITY OR LOADING		QUALITY OR CONCENTRATION		UNITS	NO. EX.	FREQUENCY OF ANALYSIS	SAMPLE TYPE
	AVERAGE	MAXIMUM	MINIMUM	AVERAGE				
pH	xxxxx	xxxxx	8.2		SU		Daily	Grab
EFFLUENT GROSS VALUE			7.0 (see Perm) MINIMUM	9.0 (See Perm) MAXIMUM	SU		Weekly	GRAB
SOLIDS, TOTAL SUSPENDED	xxxxx	xxxxx	xxxxx	<5	mg/L		Weekly	Grab
EFFLUENT GROSS VALUE			xxxxx	REPORT 30 DA AVG	MG/L		Weekly	GRAB
SPECIFIC CONDUCTANCE	xxxxx	xxxxx	1404.47	2069.91	umho/cm		Continuous	Recorder
EFFLUENT GROSS VALUE			REPORT MINIMUM	REPORT MAXIMUM	umho/cm		Continuous	Recorder
SULFATE	xxxxx	xxxxx	xxxxx	602.25	mg/L		5 x Week	Grab
EFFLUENT GROSS VALUE			xxxxx	REPORT 30 DA AVG	MG/L		5 x Week	GRAB
FLOW, IN CONDUIT OR THRU TREATMENT PLANT	4.99	7.68	xxxxx	xxxxx	xxx		Continuous	Recorder
EFFLUENT GROSS VALUE	REPORT 30 DA AVG	100 (see perm) DAILY MAX			xxx		Continuous	Recorder
FLOW, TOTAL	xxxxx	29.02	xxxxx	xxxxx	xxx		Continuous	Calc
EFFLUENT GROSS VALUE	xxxxx	REPORT 30 DA TOTAL			xxx		Monthly	CALC
DURATION OF DISCHARGE	xxxxx	xxxxx	xxxxx	9	Days		Monthly	Calc
EFFLUENT GROSS VALUE			REPORT MAXIMUM	REPORT MAXIMUM	DAYS		Monthly	CALC
I CERTIFY UNDER PENALTY OF LAW THAT I HAVE PERSONALLY EXAMINED AND AM FAMILIAR WITH THE INFORMATION SUBMITTED HEREIN; AND 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.					TELEPHONE 701-328-4958		DATE 12/15/08	
NAME/TITLE PRINCIPAL EXECUTIVE OFFICER Bruce Engelhardt Head, Investigations Section					SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT 		Mo - Day - Year	
COMMENT AND EXPLANATION OF ANY VIOLATIONS Attach summary individual sample results and flow data for outlet, upstream & downstream monitoring locations. Provide process control monitoring information by attachment or through electronic media.								
TYPED OR PRINTED EPA FORM 3320-1 (REV. 9-88) TEMPLATE COPY ND - Not Detected								

REFERENCE TO ATTACHMENTS (here)

Daily Outlet Discharge for the Month of November 2008

Date	Average Daily Outlet Discharge (cfs)	Total Daily Volume (cu-ft)
11/1/08	7.68	663,866
11/2/08	6.85	591,448
11/3/08	5.74	495,796
11/4/08	7.05	608,955
11/5/08	3.63	313,918
11/6/08	1.13	97,466
11/7/08	7.66	661,764
11/8/08	4.48	386,678
11/9/08	0.70	60,434
11/10/08	0.00	0
11/11/08	0.00	0
11/12/08	0.00	0
11/13/08	0.00	0
11/14/08	0.00	0
11/15/08	0.00	0
11/16/08	0.00	0
11/17/08	0.00	0
11/18/08	0.00	0
11/19/08	0.00	0
11/20/08	0.00	0
11/21/08	0.00	0
11/22/08	0.00	0
11/23/08	0.00	0
11/24/08	0.00	0
11/25/08	0.00	0
11/26/08	0.00	0
11/27/08	0.00	0
11/28/08	0.00	0
11/29/08	0.00	0
11/30/08	0.00	0
Total		3,880,327
Total		29.02
Total		89.08
Average Flow	4.99	cfs

cu-ft

Mgal

Ac-ft

PERMITTEE NAME/ADDRESS
 ND State Water Commission
 Bismarck ND 58506

DISCHARGE MONITORING REPORT (DMR)

Upstream General Summary
 F- FINAL
 MINOR

001 A
OUTFALL NO.

ND-0026247	PERMIT NUMBER
11/1/08	TO 11/30/08

FACILITY: Devils Lake Outlet Project
 LOCATION: Benson Co, ND

NO DISCHARGE:

PARAMETER	SAMPLE MEASUREMENT PERMIT REQUIREMENT	QUANTITY OR LOADING			QUALITY OR CONCENTRATION			NO. EX.	FREQUENCY OF ANALYSIS	SAMPLE TYPE
		AVERAGE	MAXIMUM	UNITS	MINIMUM	AVERAGE	MAXIMUM			
pH	SAMPLE MEASUREMENT PERMIT REQUIREMENT	xxxxx	xxxxx	xxx	8.3	8.5	SU		Daily	Grab
UPSTREAM					REPORT MINIMUM	REPORT MAXIMUM			Weekly	GRAB
SOLIDS, TOTAL SUSPENDED	SAMPLE MEASUREMENT PERMIT REQUIREMENT	xxxxx	xxxxx	xxx	12.0	12.0	mg/L		Weekly	Grab
UPSTREAM					REPORT MINIMUM	REPORT DAILY MAX	MG/L		Weekly	GRAB
SPECIFIC CONDUCTANCE	SAMPLE MEASUREMENT PERMIT REQUIREMENT	xxxxx	xxxxx	xxx	1300	1510	umho/cm		Continuous	Recorder
UPSTREAM					REPORT MINIMUM	REPORT MAXIMUM	umho/cm		Continuous	Recorder
SULFATE	SAMPLE MEASUREMENT PERMIT REQUIREMENT	xxxxx	xxxxx	xxx	388.5	389	mg/L		5 x Week	Grab
UPSTREAM					REPORT MAXIMUM	REPORT MAX 7 DAY AVG	MG/L		5 x Week	GRAB
FLOW, INSTREAM	SAMPLE MEASUREMENT PERMIT REQUIREMENT	63.13	115	cfs	xxxxx	xxxxx	xxx		Continuous	Recorder
UPSTREAM		REPORT 30 DA AVG	REPORT DAILY MAX	cfs					Continuous	Recorder
	SAMPLE MEASUREMENT PERMIT REQUIREMENT									
	SAMPLE MEASUREMENT PERMIT REQUIREMENT									
	SAMPLE MEASUREMENT PERMIT REQUIREMENT									
NAME/TITLE PRINCIPAL EXECUTIVE OFFICER								TELEPHONE		DATE
Bruce Engelhardt								701-328-4958		12/15/08
Head, Investigations Section								Number		Mo - Day - Year
TYPED OR PRINTED								SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT		
COMMENT AND EXPLANATION OF ANY VIOLATIONS										

I CERTIFY UNDER PENALTY OF LAW THAT I HAVE PERSONALLY EXAMINED AND AM FAMILIAR WITH THE INFORMATION SUBMITTED HEREIN; AND 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.

Attach summary individual sample results and flow data for outlet, upstream & downstream monitoring locations.

Provide process control monitoring information by attachment or through electronic media.

Instream samples and measurements for this summary pertain only to time periods when outlet is actually operated.

EPA FORM 3320-1 (REV. 9-88) TEMPLATE COPY
 ND - Not Detected

Average daily streamflow and conductivity data at the upstream location near Flora

USGS Gaging Station Data		
Sheyenne River Above Devils Lake Outlet Near Flora		
Date	Streamflow (cfs)	EC (μS/cm)
11/1/08	41	1450
11/2/08	43	1460
11/3/08	40	1480
11/4/08	35	1500
11/5/08	31	1500
11/6/08	86	1390
11/7/08	114	1400
11/8/08	115	1420
11/9/08	-	1500
11/10/08	-	1540
11/11/08	-	1510
11/12/08	-	1540
11/13/08	157	1550
11/14/08	175	1560
11/15/08	197	1550
11/16/08	-	1590
11/17/08	201	1600
11/18/08	173	1640
11/19/08	181	1640
11/20/08	-	1660
11/21/08	151	1700
11/22/08	142	1740
11/23/08	-	1780
11/24/08	101	1790
11/25/08		1820
11/26/08	Ice	1850
11/27/08	Ice	1820
11/28/08	-	1830
11/29/08	-	1860
11/30/08	-	1880
Average	63.13	1455.56
Maximum	115.00	1500.00
Minimum	31.00	1390.00

NORTH DAKOTA POLLUTANT DISCHARGE ELIMINATION SYSTEM (NDPDES)
DISCHARGE MONITORING REPORT (DMR)

1 / Month
Downstream General Summary
F- FINAL
MINOR

001-A
OUTFALL NO.


ND-0026247
PERMIT NUMBER

MONITORING PERIOD
11/1/08 TO 11/30/08

NO DISCHARGE:

PERMITTEE NAME/ADDRESS
ND State Water Commission
Bismarck ND 58506

FACILITY: Devils Lake Outlet Project
LOCATION: Benson Co, ND

PARAMETER	QUANTITY OR LOADING		QUALITY OR CONCENTRATION		NO. EX.	FREQUENCY OF ANALYSIS	SAMPLE TYPE	
	AVERAGE	MAXIMUM	UNITS	MINIMUM				AVERAGE
pH	SAMPLE MEASUREMENT	XXXXX	XXX	8.4		Daily	Grab	
	PERMIT REQUIREMENT			REPORT MINIMUM	8.5			
SOLIDS, TOTAL SUSPENDED	SAMPLE MEASUREMENT	XXXXX	XXX	11.0		Weekly	GRAB	
	PERMIT REQUIREMENT			REPORT MINIMUM	REPORT MAXIMUM			
DOWNSTREAM	SAMPLE MEASUREMENT	XXXXX	XXX	1420		Continuous	Recorder	
	PERMIT REQUIREMENT			REPORT MINIMUM	REPORT DAILY MAX			
SPECIFIC CONDUCTANCE	SAMPLE MEASUREMENT	XXXXX	XXX	426.75		5 x Week	Grab	
	PERMIT REQUIREMENT			REPORT MINIMUM	REPORT MAXIMUM			
SULFATE	SAMPLE MEASUREMENT	XXXXX	XXX	440.8		5 x Week	Grab	
	PERMIT REQUIREMENT			REPORT MINIMUM	450 mg/l MAX 7 DAY AVG			
DOWNSTREAM	SAMPLE MEASUREMENT	95.22	168	XXXXX		Continuous	Recorder	
	PERMIT REQUIREMENT	REPORT 30 DA AVG	600 (see perm) DAILY MAX	XXXXX				
FLOW, INSTREAM	SAMPLE MEASUREMENT							
	PERMIT REQUIREMENT							
DOWNSTREAM	SAMPLE MEASUREMENT							
	PERMIT REQUIREMENT							
NAME/TITLE PRINCIPAL EXECUTIVE OFFICER Bruce Engelhardt Head, Investigations Section							TELEPHONE	DATE
TYPED OR PRINTED COMMENT AND EXPLANATION OF ANY VIOLATIONS Attach summary individual sample results and flow data for outlet, upstream & downstream monitoring locations. Provide process control monitoring information by attachment or through electronic media. Instream samples and measurements for this summary pertain only to time periods when outlet is actually operated.							701-328-4958	12/15/08
SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT 							Number	Mo - Day - Year

(Reference all attachments here)

EPA FORM 3320-1 (REV. 9-88) TEMPLATE COPY

Target and measured sulfate at downstream location (Bremen)

Date	Average Daily Outlet Flow (cfs)	Gaged flow at Bremen (cfs)	Sulfate at the Outlet (mg/L)	Sulfate at Bremen (mg/L)	Baseflow at Bremen (cfs)	Background Concentration (mg/L)	Target sulfate at Bremen based on the permit (mg/L)	7 Day Rolling Average of target sulfate at Bremen during the operating period (mg/L)	7 Day Rolling Average of actual sulfate at Bremen during the operating period (mg/L)	No. of days included in the 7 day Rolling average
11/1/08	7.68	68	-	-	60.32	-	-	450.00	435.80	7
11/2/08	6.85	66	-	-	59.15	-	-	450.00	435.80	7
11/3/08	5.74	64	669	442	58.26	419.64	450.00	450.00	437.40	7
11/4/08	7.05	61	668	443	53.95	413.61	450.00	450.00	440.80	7
11/5/08	3.63	63	671	429	59.37	414.19	450.00	450.00	439.60	7
11/6/08	1.13	100	401	393	98.87	392.91	450.00	450.00	429.60	7
11/7/08	7.66	128	-	-	120.34	-	-	450.00	426.75	7
11/8/08	4.48	139	-	-	134.52	-	-	450.00	426.75	7
11/9/08	0.70	168	-	-	167.30	-	-	450.00	426.75	7
11/10/08	0.00	185	-	-	185.00	-	-	-	-	-
11/11/08	0.00	191	-	-	191.00	-	-	-	-	-
11/12/08	0.00	188	-	-	188.00	-	-	-	-	-
11/13/08	0.00	181	-	-	181.00	-	-	-	-	-
11/14/08	0.00	186	-	-	186.00	-	-	-	-	-
11/15/08	0.00	201	-	-	201.00	-	-	-	-	-
11/16/08	0.00	212	-	-	212.00	-	-	-	-	-
11/17/08	0.00	217	-	-	217.00	-	-	-	-	-
11/18/08	0.00	213	-	-	213.00	-	-	-	-	-
11/19/08	0.00	188	-	-	188.00	-	-	-	-	-
11/20/08	0.00	179	-	-	179.00	-	-	-	-	-
11/21/08	0.00	162	-	-	162.00	-	-	-	-	-
11/22/08	0.00	148	-	-	148.00	-	-	-	-	-
11/23/08	0.00	130	-	-	130.00	-	-	-	-	-
11/24/08	0.00	116	-	-	116.00	-	-	-	-	-
11/25/08	0.00	103	-	-	103.00	-	-	-	-	-
11/26/08	0.00	93	-	-	93.00	-	-	-	-	-
11/27/08	0.00	85	-	-	85.00	-	-	-	-	-
11/28/08	0.00	78	-	-	78.00	-	-	-	-	-
11/29/08	0.00	70	-	-	70.00	-	-	-	-	-
11/30/08	0.00	64	-	-	64.00	-	-	-	-	-

Average daily streamflow and conductivity data at the downstream location near Bremen

USGS Gaging Station Data		
Sheyenne River Below Devils Lake Outlet near Bremen		
Date	Streamflow (cfs)	EC (μS/cm)
11/1/08	68	1590
11/2/08	66	1600
11/3/08	64	1600
11/4/08	61	1600
11/5/08	63	1580
11/6/08	100	1470
11/7/08	128	1490
11/8/08	139	1450
11/9/08	168	1510
11/10/08	185	1550
11/11/08	191	1600
11/12/08	188	1580
11/13/08	181	1550
11/14/08	186	1560
11/15/08	201	1580
11/16/08	212	1600
11/17/08	217	1610
11/18/08	213	1600
11/19/08	188	1670
11/20/08	179	1670
11/21/08	162	1710
11/22/08	148	1760
11/23/08	130	1780
11/24/08	116	1800
11/25/08	103	1840
11/26/08	93	1850
11/27/08	85	1860
11/28/08	78	1890
11/29/08	70	1910
11/30/08	64	1890
Average	95.22	1543.33
Maximum	168	1600
Minimum	61	1450