November 12, 2014

Kimberly D. Bose, Secretary
Federal Energy Regulatory Commission
888 First Street, N.E.
Washington, DC 20426

RE: Danbury Hydroelectric Project
FERC Project Number 9184
Flambeau Hydro LLC
Final Report 2014 Water Quality Monitoring Data

Dear Ms. Bose:

On behalf of Flambeau Hydro LLC, "Flambeau" (Licensee), Renewable World Energies, LLC (RWE) is submitting a copy of the *Final Report 2014 Water Quality Monitoring Data* for the Danbury Hydroelectric Project. The Federal Energy Regulatory Commission "FERC" issued a License to Flambeau on September 5, 2006. This report is submitted as a requirement of that License pursuant to License Article 401 WQC, Condition K. 2014 was the seventh year monitoring was conducted since the license was issued, but is the 3rd year of submittal by RWE on the behalf of the Licensee.

Monitoring was conducted on May 6, July 16, and August 13, 2014. The only issue encountered was some below standard D O measurements taken on the August 13 date. Agencies were notified by e-mail dated August 14, 2014 of the issue. The draft report was sent to the agencies by letter dated October 2, 2014 for review and comment. It was submitted electronically as an attachment to an e-mail as requested previously. No comments were received from WDNR or USFWS. Should the agencies have any comments to offer, the Licensee suggests they be sent directly to the Commission. The next scheduled monitoring event will be conducted in 2015.

If you have any questions concerning this submittal, please contact Mr. Gary Rast at the Renewable World Energies, LLC offices @ 855-994-9376 Ext 105. He can also be reached by e-mail at grast@rwehydro.com.

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P.O. Box 264
100 S. State Street
Neshkoro, WI 54960
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(855-994-9376)
www.renewableworldenergies.com

Administrative Office
1001 Stephenson Street
Norway, MI 49870
Fax: 906-563-9344

Sincerely,
Renewable World Energies, LLC
Agent for Licensee

For Mr. Jason Kreuscher
Vice President, Operations

Attachment: Final Report 2014 Water Quality Monitoring Data – November 12, 2014

Cc: Ms. Cheryl Laatsch, WDNR
Mr. Nick Utrup, USFWS
RWE, Corporate

Final Report

2014 Water Quality Monitoring Data
(Per License Article 401 WQC, Condition K)

For the

Danbury Hydroelectric Project
FERC Project # 9184
Flambeau Hydro, LLC

Yellow River
Burnett County, WI

Respectfully Submitted by:

Renewable World Energies, LLC
100 State Street – P.O. Box 264
Neshkoro, Wisconsin 54960

Final – November 12, 2014

Table of Contents

Summary

2014 marked the seventh year of water quality sampling under the FERC License issued on September 5, 2006 to Flambeau Hydro, LLC for the Danbury Hydroelectric Project – FERC Project # 9184 and specifically License Article 401 WQC, Condition K.

Ice-Out occurred on the Yellow River sometime during the week beginning April 20, 2014. The Ice-Out sampling event occurred on May 6, 2014. River flow, based on Danbury Hydroelectric Project records, was approximately 262 cubic feet per second. Sampling occurred between 10:15 a.m. and 10:45 a.m. Samples were taken without incident. However, high flows and dangerous conditions were the norm. No unusual D.O. or Temperature readings were observed. Samples for laboratory analysis were delivered to Northern Lake Service, Inc in Crandon, WI on May 7, 2014. Northern Lake Service, Inc. issued a laboratory report on May 13, 2014. No unusual levels of Chlorophyll a, True Color, or Total Phosphorus were noted in the laboratory reports.

River flow, based on Danbury Hydroelectric Project records, was approximately 185 cubic feet per second during the July 16, 2014 sampling event. Sampling occurred between 12:30 p.m. and 1:00 p.m. Samples were taken without incident. No abnormal Temperature readings were observed. No unusual D.O. or Temperature readings were observed. Samples for laboratory analysis were delivered to Northern Lake Service, Inc. in Crandon, WI on July 17, 2014. Northern Lake Service, Inc. issued a laboratory report on July 23, 2014. No unusual levels of Chlorophyll a, True Color, or Total Phosphorus were noted in the laboratory reports.

River flow, based on Danbury Hydroelectric Project records, was approximately 160 cubic feet per second during the August 13, 2014 sampling event. Sampling occurred between 12:00 p.m. and 12:20 p.m. Samples were taken without incident. No unusual Temperature readings were observed. However, DO fell below the state minimum of 5 mg/l at 1.5 meters and continued to fall up to .5 meters above bottom. Agency notification occurred via e-mail on August 14, 2014. Samples for laboratory analysis were delivered to Northern Lake Service, Inc in Crandon, WI on August 14, 2014. Northern Lake Service, Inc. issued a laboratory report on August 19, 2014. No unusual levels of Chlorophyll a, True Color, or Total Phosphorus were noted in the laboratory reports.

In general, the weather (temperature and rainfall) during the 2014 monitoring season appeared cooler in April, slightly warmer in May, June, July, and August with higher than normal precipitation in the months of April, May, June, and August. Temperatures in May, June, July, and August were about .5 degrees warmer than normal but precipitation was slightly (11%) below normal for July. **(Refer to 2014 Monthly Temperature and Precipitation Table page 7)**

A summary of a comparison between the 2011 thru 2014 **(Refer to 2014 Danbury Project Sampling Comparison Table 2011-2014 page 8)** sampling results are as follows:

1. Water Clarity – Same Ice-Out – Increased July – Decreased August
2. Chlorophyll a – Increased Ice-Out – Decreased July/August

3. Color – Increased Ice-Out/July/August
4. Total Phosphorus – Decreased Ice-Out/July/August
5. Overall, D.O. – Increased Ice-Out/July – Normal or Decreased Slightly August
6. Water Temperatures – Increased August – Decreased Ice-Out/July

Correspondence from the agencies during 2010 indicated they would prefer that notifications of incidents be by e-mail only and that telephone contacts are not needed. All other correspondence can be found on page 13, **Appendix D**. The next scheduled Water Quality monitoring at the Danbury Hydroelectric Project is set to take place in 2015 beginning with the Ice-Out sampling event.

2014
Sampling Results
Table

Danbury Hydroelectric Project - FERC Project # 9184
2014 Water Quality Sampling Data

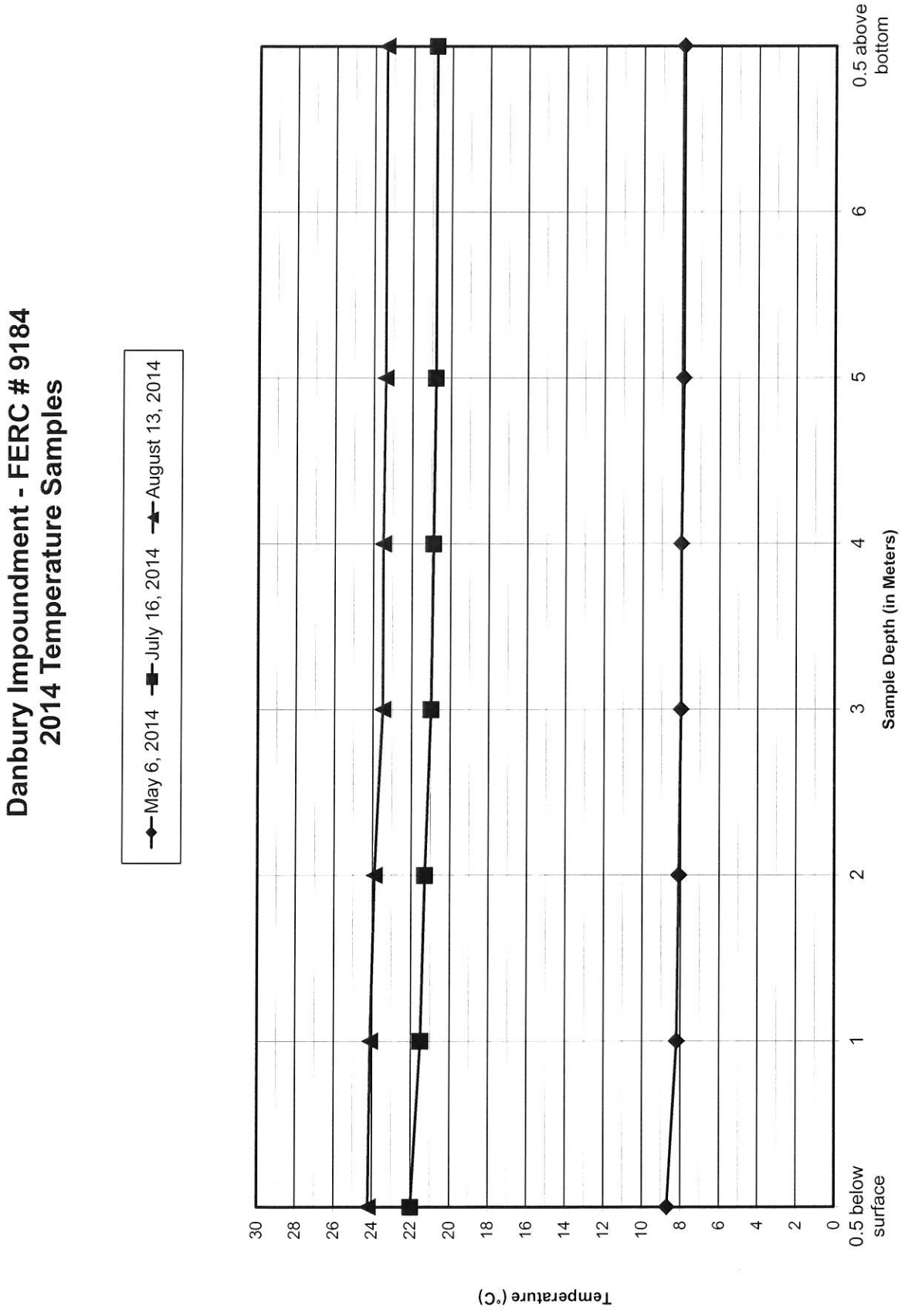
	May 6, 2014			July 16, 2014			August 13, 2014		
Project Flow (c.f.s.)	262			185			160		
Dissolved Oxygen	**Time**	**D.O. (mg/L)**	**Water Temp. (°C)**	**Time**	**D.O. (mg/L)**	**Water Temp. (°C)**	**Time**	**D.O. (mg/L)**	**Water Temp. (°C)**
0.5 meter below surface	10:38 AM	10.42	8.7	12:54 PM	7.86	22.0	12:12 PM	5.18	24.2
1 meter below surface	10:39 AM	10.58	8.2	12:55 PM	7.54	21.5	12:13 PM	5.11	24.1
2 meter below surface	10:40 AM	10.62	8.1	12:56 PM	7.51	21.3	12:14 PM	4.81	23.9
3 meter below surface	10:41 AM	10.62	8.0	12:57 PM	7.41	21.0	12:15 PM	4.44	23.5
4 meter below surface	10:42 AM	10.60	8.0	12:58 PM	7.30	20.9	12:16 PM	4.34	23.5
5 meter below surface	10:44 AM	10.62	7.9	12:59 PM	7.18	20.8	12:17 PM	4.16	23.4
6 meter below surface	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A
.5 meter above bottom	10:45 AM	10.60	7.90	1:00 PM	6.85	20.8	12:20 PM	4.20	23.4
Secchi Disk	**Time**	**Depth (mtr)**		**Time**	**Depth (mtr)**		**Time**	**Depth (mtr)**	
Meters below surface	10:20 AM	2.00		12:40 PM	2.20		12:05 PM	1.60	
Chlorophyll a	**Time**	**ug/L**		**Time**	**ug/L**		**Time**	**ug/L**	
1 meter below surface	10:25 AM	5.50		12:50 PM	3.30		12:06 PM	4.50	
Color (True)	**Time**	**C.P.U. Units**	**LOD**	**Time**	**C.P.U. Units**	**LOD**	**Time**	**C.P.U. Units**	**LOD**
1 meter below surface	10:27 AM	30.0	5.0*	12:51 PM	50.0	5.0*	12:07 PM	50.0	25*
Total Phosphorus	**Time**	**mg/L**	**LOD**	**Time**	**mg/L**	**LOD**	**Time**	**mg/L**	**LOD**
1 meter below surface	10:29 AM	0.026	0.0070*	12:52 PM	0.044	0.0070*	12:08 PM	0.063	0.0070*
1 meter above bottom	10:35 AM	0.026	0.0070*	12:53 PM	0.044	0.0070*	12:09 PM	0.052	0.0070*

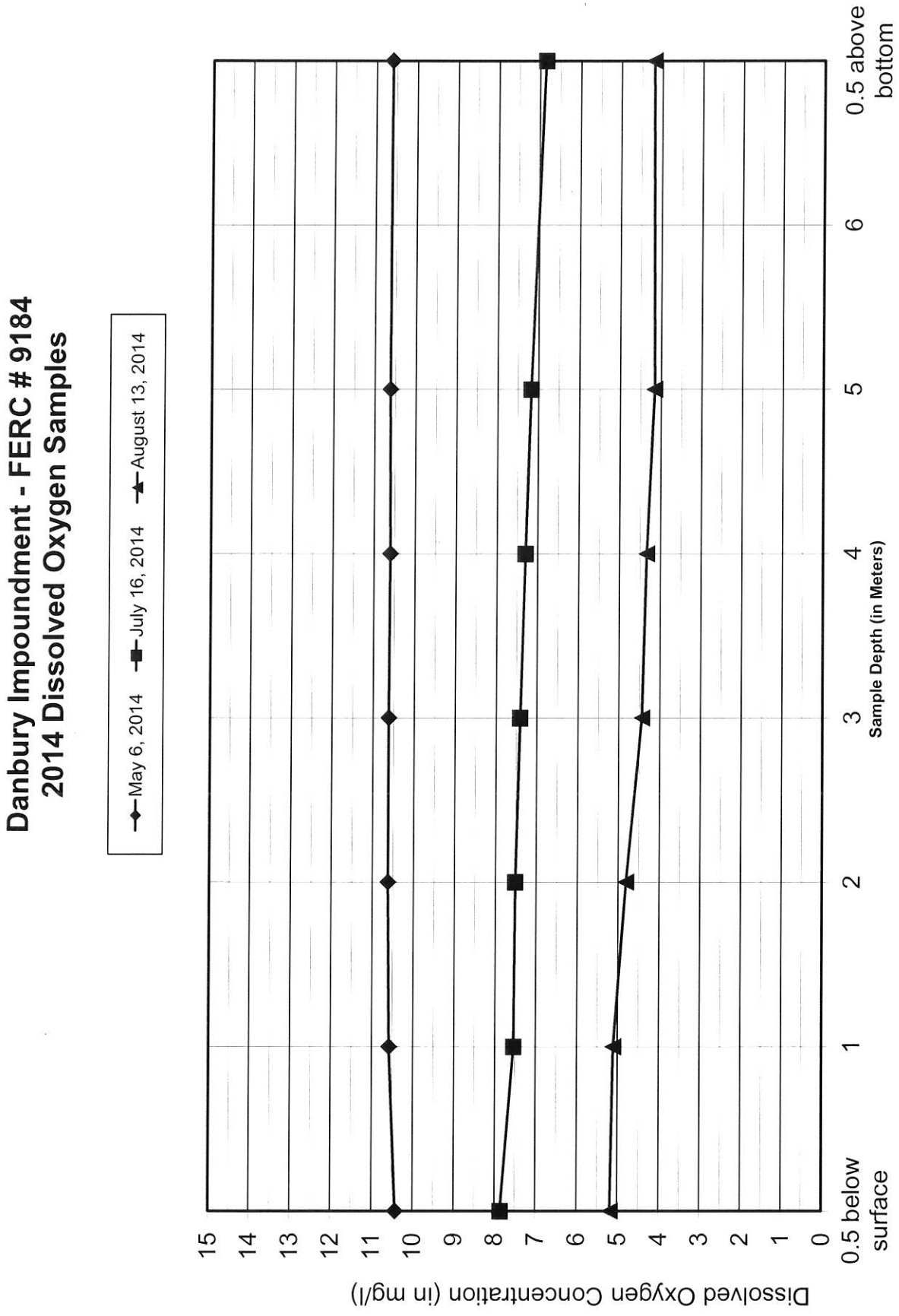
*** Considered Reporting Limits**

2014

Graphed Data

Temperature and Dissolved Oxygen





2014
Monthly
Temperature and Precipitation
Table

2014 Water Year Monthly Temperature and Precipitation for Danbury, Wisconsin

Month	Highest Temp.	Lowest Temp.	Average Temp.	Departure From Normal	Heating Degree Days	Normal Degree Days	Total Precip.	Total Snowfall	Normal Precip.	% of Normal Precipitation
October-13	74	21	45.0	1.8	610	678	3.93	0.3	5.01	78%
November-13	50	-3	27.9	-0.9	1105	1088	0.82	4.7	2.09	39%
December-13	35	-21	4.6	-10.2	1866	1556	2.88	39.9	1.21	238%
January-14	34	-28	1.6	-8.6	1955	1699	0.73	9.4	0.96	76%
February-14	41	-22	5.3	-9.8	1663	1399	2.12	29.5	0.81	262%
March-14	52	-23	18.4	-7.5	1439	1210	1.91	20.9	1.49	128%
April-14	66	11	35.1	-4.5	886	762	3.30	26.3	2.43	136%
May-14	85	31	51.9	0.5	414	426	4.37	T	3.23	135%
June-14	82	42	60.3	0.2	162	179	4.47	T	4.23	106%
July-14	88	45	66.3	0.5	40	63	3.42	0.0	3.85	89%
August-14	83	48	64.7	0.4	37	86	4.63	0.0	3.70	125%
September-14	81	34	57.4	1.8	227	298	1.64	0.0	4.11	40%

Source: NOAA/Duluth, MN

2014
Danbury
Sampling Comparison Table
2011—2014

Danbury

Project Sampling Comparison Table

2011 Thru Current Year

Year	Month	Secchi Depth (m)	Chlorophyll a ug/l	Color (True) C.P.U. Units	Total Phosphorus Below Surface mg/l	Total Phosphorus Above Bottom mg/l	Low D.O. mg/l	High D.O. mg/l	Low Water Temp. °C	High Water Temp. °C
2011	April	1.95	4.70	20.00	0.030	0.030	12.19	11.94	7.30	7.50
2012	April	2.80	1.70	25.00	0.030		11.93	12.69	10.30	10.60
2013	May	2.00	9.60	25.00	0.036	0.034	11.05	11.19	10.20	11.60
2014	May	2.00	5.50	30.00	0.026	0.026	10.42	10.62	7.90	8.70
Minimum	April/May	1.95	1.70	20.00	0.026	0.026	10.42	10.62	7.30	7.50
Maximum	April/May	2.80	9.60	30.00	0.036	0.034	12.19	12.69	10.30	11.60
Average	April/May	2.19	5.38	25.00	0.031	0.030	11.40	11.61	8.93	9.60
2011	July	1.80	6.10	25.00	0.066	0.063	0.26	7.35	19.40	24.40
2012	July	1.90	6.90	40.00	0.062	0.061	2.96	7.04	26.10	26.70
2013	July	2.50	1.70	40.00	0.062	0.065	4.37	5.24	24.10	25.10
2014	July	2.20	3.30	50.00	0.044	0.044	6.85	20.80	7.86	22.00
Minimum	July	1.80	1.70	25.00	0.044	0.044	0.26	5.24	7.86	22.00
Maximum	July	2.50	6.90	50.00	0.066	0.065	6.85	20.80	26.10	26.70
Average	July	2.10	4.50	38.75	0.059	0.058	3.61	10.11	19.37	24.55
2011	August	1.50	16.00	50.00	0.054	0.052	1.64	6.03	22.30	23.50
2012	August	2.65	40.00	0.06	0.056	0.056	5.44	6.06	21.40	22.00
2013	August	2.80	4.80	35.00	0.060	0.120	1.90	6.33	19.60	22.70
2014	August	1.60	4.50	50.00	0.063	0.052	4.20	5.18	23.40	24.20
Minimum	August	1.50	4.50	0.06	0.054	0.052	1.64	5.18	19.60	22.00
Maximum	August	2.80	40.00	50.00	0.063	0.120	5.44	6.33	23.40	24.20
Average	August	2.14	16.33	33.76	0.058	0.070	3.30	5.90	21.68	23.10

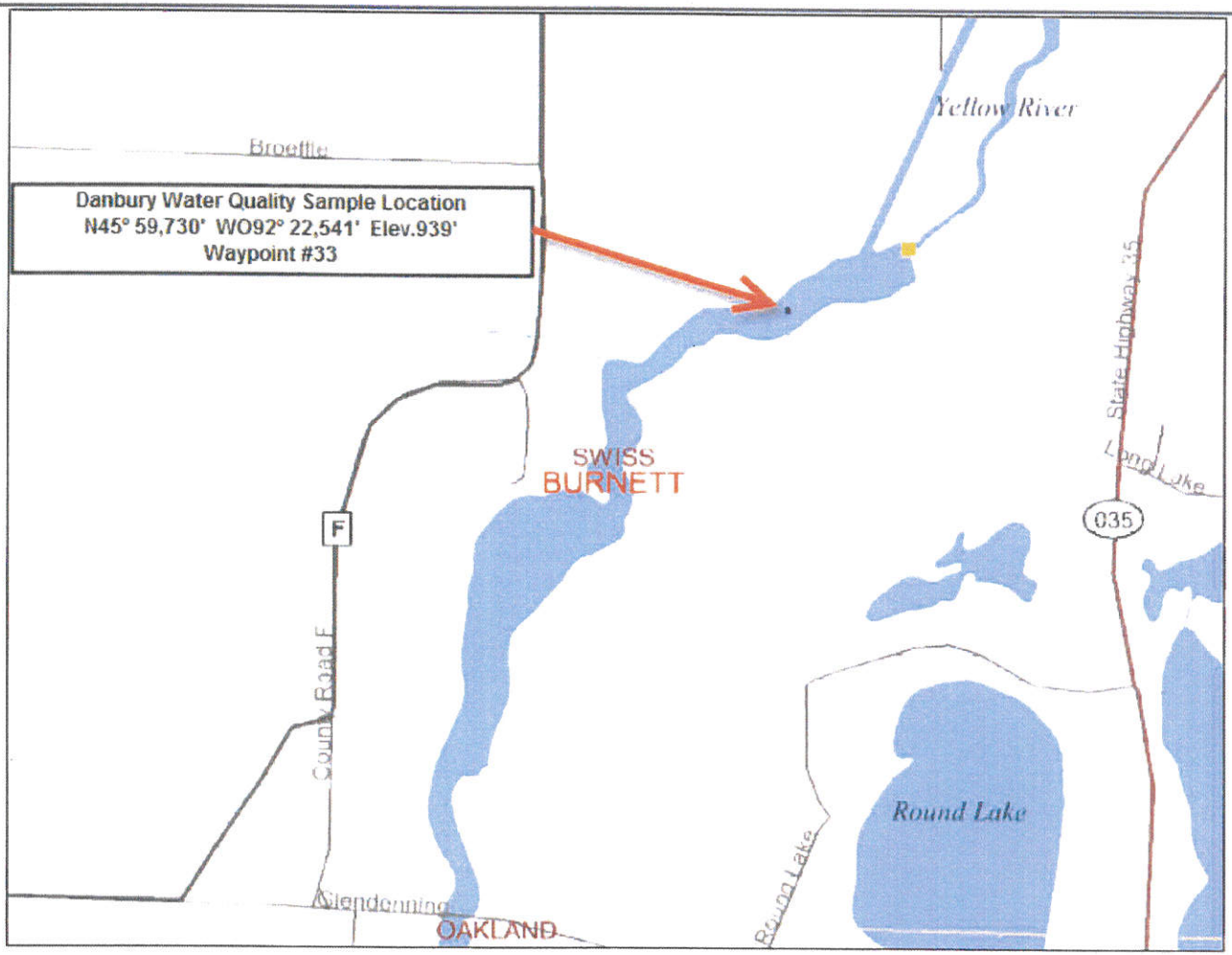
No Sample

Danbury Hydroelectric Project

Sampling Location

Map

Danbury Hydroelectric Project
Water Quality Sampling Location
FERC Project #9184



Legend

- Dams
- Major Highways
- Interstate
- State Highway
- U.S. Highways
- County Roads
- Local Roads
- 24K County Boundaries
- Civil Towns
- Civil Town
- 24K Open Water
- 24K Rivers and Shorelines
- Cities and Villages
- Village
- City

0 1400 2800 4200 ft.

Scale: 1:14,043

This map is a user generated static output from an Internet mapping site and is for general reference only. Data layers that appear on this map may or may not be accurate, current, or otherwise reliable. THIS MAP IS NOT TO BE USED FOR NAVIGATION.

Appendix A

May 6, 2014 Sampling Documents (Ice-Out)

IMPOUNDMENT SAMPLING LOG

2014 Water Quality Study - Danbury Hydroelectric Project - FERC #9184

Pre-Sampling Data: TWL 900.10 HWL 928.80 Date: 5/6/14 CFS - 262 UPPER 180 LOWER

Time: 10:15 Barometer: 30.01 Air Temp: 13.88 °C Wind Speed: SE 9MPH

Sky Conditions: CLEAR, FAIR, + SUNSHINE

Precipitation within Last 24 Hours: NO

D.O. Meter Calibration: Instrument Model Used: Hach HQ40d

Were The Batterys Changed? ☐ Yes ☒ No If Yes, When Changed: _____

Battery Status: 80% Charge

Calibration Time: FEB. 2014 Method: Factory

Sampling Depth Profile: Measured Depth to Bottom of the Impoundment: 5.6 Meter

Secchi Disk Depth: (E0.1 Meter) 2.0 Meter Time: 10:20

Chlorophyll a (1 Meter Below Surface)

Lab Sample I.D.# : 20140506-1A		
Time	Quantity (ml)	Filtered
10:25	1000	NO

True Color (1 Meter Below Surface)

Lab Sample I.D.# : 20140506-1B	
Time	Quantity (ml)
10:27	250

D.O. Sample Data

Depth	Time	D.O. (mg/l)	°C
.5 Mtr Below Surface	10:38	10.42	8.7
1 Meter	10:39	10.58	8.2
2 Meter	10:40	10.62	8.1
3 Meter	10:41	10.62	8.0
4 Meter	10:42	10.60	8.0
5 Meter	10:44	10.62	7.9
6 Meter			
7 Meter			
8 Meter			
.5 Mtr Above Bottom	10:45	10.60	7.9

Phosphorus

Lab Sample I.D.# : 20140506-1C	
(1 Meter Below Surface)	
Time	Preserved?
10:29	H_2SO_4

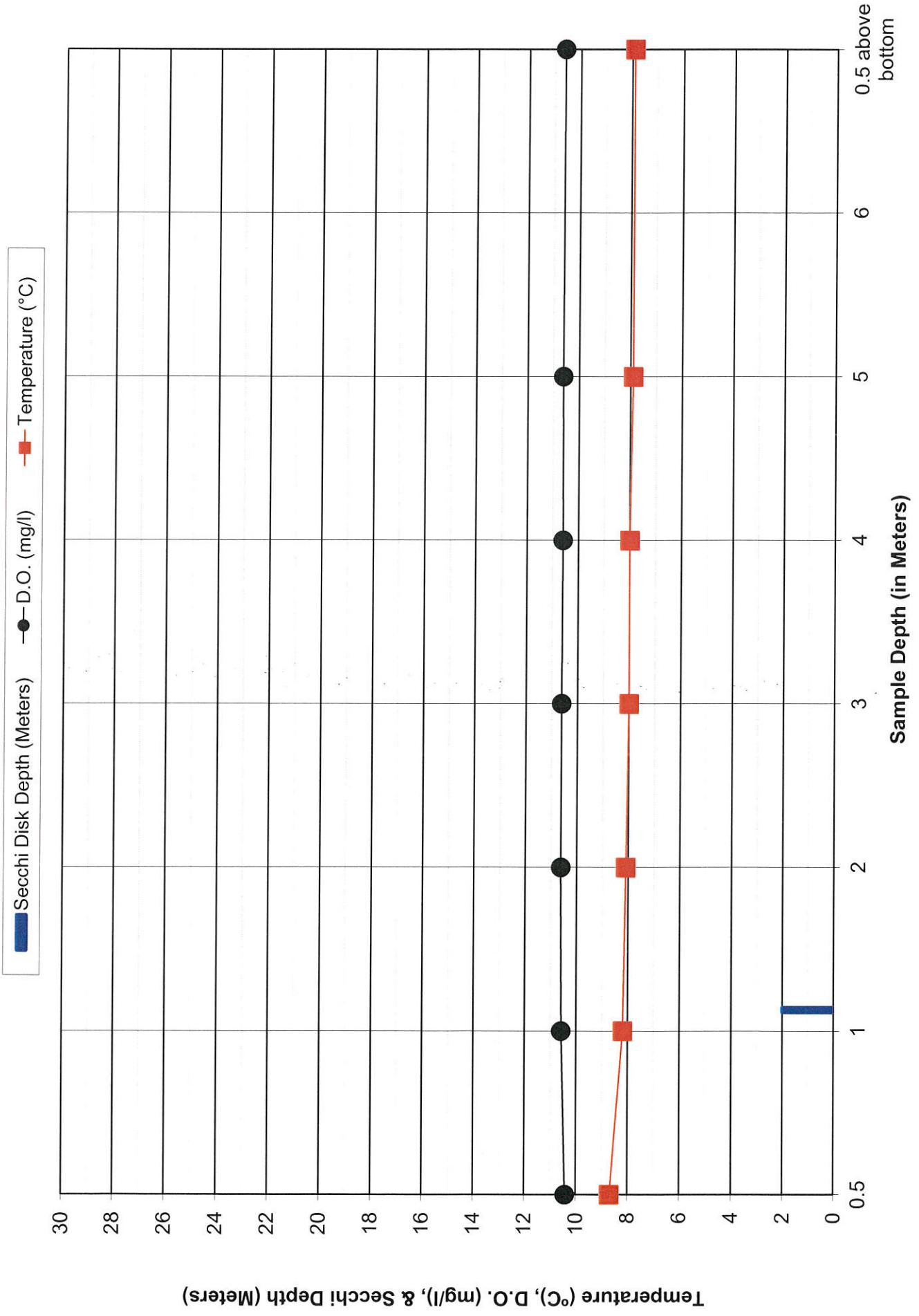
Lab Sample I.D.# : 20140506-1D	
(1 Meter Above Bottom)	
Time	Preserved?
10:35	H_2SO_4

Sample Location: N45° 59.730' W92° 22.541'

Comments: _____

Performed By: GARY RAST + NORB RENDER Gary Rast

Danbury Impoundment - FERC # 9184
May 6, 2014 Iceout Sampling Event



NORTHERN LAKE SERVICE, INC.
Analytical Laboratory and Environmental Services
400 North Lake Avenue - Crandon, WI 54520
Ph: (715)-478-2777 Fax: (715)-478-3060

ANALYTICAL REPORT

WDNR Laboratory ID No. 721026460
WDATCP Laboratory Certification No. 105-330
EPA Laboratory ID No. WI00034

Printed: 05/13/14 Code: NNNN-S

NLS Project: 217367
NLS Customer: 102823
Phone: 855 994 9376

Client: Renewable World Energies
Attn: Gary Rast
100 State Street
P.O. Box 264
Neshkoro, WI 54960

Project: Danbury

20140507-1A NLS ID: 784153
COC: 174088:1 Matrix: SW
Collected: 05/06/14 10:25 Received: 05/07/14

Parameter	Result	Units	Dilution	LOD	LOQ	Analyzed	Method	Lab
Chlorophyll, all species	see attached					05/12/14	10200-H	721026460
Lab filtration for Chlorophyll	yes					05/08/14	NA	721026460

20140507-1B NLS ID: 784154
COC: 174088:2 Matrix: SW
Collected: 05/06/14 10:27 Received: 05/07/14

Parameter	Result	Units	Dilution	LOD	LOQ	Analyzed	Method	Lab
Color, APHA (true)	30	C.P.U.	1	5.0*		05/07/14	SM 2120-B 20ed	721026460
Lab filtration	yes					05/07/14	NA	721026460

20140507-1C NLS ID: 784155
COC: 174088:3 Matrix: SW
Collected: 05/06/14 10:29 Received: 05/07/14

Parameter	Result	Units	Dilution	LOD	LOQ	Analyzed	Method	Lab
Phosphorus, tot. as P	0.026	mg/L	1	0.0070*		05/09/14	SM 4500P-E 20ed	721026460

20140507-1D NLS ID: 784156
COC: 174088:4 Matrix: SW
Collected: 05/06/14 10:35 Received: 05/07/14

Parameter	Result	Units	Dilution	LOD	LOQ	Analyzed	Method	Lab
Phosphorus, tot. as P	0.026	mg/L	1	0.0070*		05/09/14	SM 4500P-E 20ed	721026460

Values in brackets represent results greater than or equal to the LOD but less than the LOQ and are within a region of "Less-Certain Quantitation". Results greater than or equal to the LOQ are considered to be in the region of "Certain Quantitation". LOD and/or LOQ tagged with an asterisk(*) are considered Reporting Limits. All LOD/LOQs adjusted to reflect dilution.

LOD = Limit of Detection LOQ = Limit of Quantitation ND = Not Detected (< LOD) 1000 ug/L = 1 mg/L
DWB = Dry Weight Basis NA = Not Applicable %DWB = (mg/kg DWB) / 10000
MCL = Maximum Contaminant Levels for Drinking Water Samples. Shaded results indicate >MCL.

Reviewed by:

Authorized by:
R. T. Krueger
President

Northern Lake Service, Inc.
Chlorophyll Results

Customer: Renewable World Energies
Project: 217367
Danbury

Sample	Description	CC a	Pheo a	TC a	TC b	TC c
784153	20140507-1A	5.2	0.2	5.5	0.012	0.6

CC a = Corrected Chlorophyll a
Pheo a = Pheophytin a
TC a = Trichromatic Chlorophyll a
TC b = Trichromatic Chlorophyll b
TC c = Trichromatic Chlorophyll c
Units = ug/L for Water, ug/cm^2 for periphyton samplers

*: The complex calculations used to differentiate the various chlorophyll species magnify error at low concentrations and sometimes produce negative values, which are reported as 0.0 on this report.

SAMPLE COLLECTION AND CHAIN OF CUSTODY RECORD

NORTHERN LAKE SERVICE, INC.
Analytical Laboratory and Environmental Services
400 North Lake Avenue • Crandon, WI 54520-1298
Tel: (715) 478-2777 • Fax: (715) 478-3060

Wisconsin Lab Cert. No. 721026460
WI DATCP 105-000330

NO. 174088

CLIENT	RENEWABLE WORLD ENERGIES
ADDRESS	POBOX 264 100 S STREET
CITY / STATE / ZIP	NESHKORO / WI / 54960
PROJECT DESCRIPTION / NO.	DANBURY
QUOTATION NO.	
DNR FID #	
DNR LICENSE #	
CONTACT	GARY
PHONE	855-994-9376
PURCHASE ORDER NO.	VERBAL
FAX	920 293-4100

MATRIX:
SW = surface water
WW = waste water
GW = groundwater
DW = drinking water
TIS = tissue
AIR = air
SOIL = soil
SED = sediment
PROD = product
SL = sludge
OTHER

USE BOXES BELOW: Indicate Y or N if GW Sample is field filtered.
Indicate G or C if WW Sample is Grab or Composite.

ANALYZE PER ORDER OF ANALYSIS: CHLOROPHYLL; TRUE COLOR; PHOS; PHOS

ITEM NO.	LAB No.	SAMPLE ID	COLLECTION DATE	COLLECTION TIME	MATRIX (See above)																COLLECTION REMARKS (i.e. DNR Well ID #)
1.	184153	20140507-1A	5/6/14	10:25	RIVER WATER		X														
2.	154	" 1B	5/6/14	10:27	"			X													
3.	155	" 1C	5/6/14	10:29	"				X												
4.	156	" 1D	5/6/14	10:35	"					X											
5.																					
6.																					
7.																					
8.																					
9.																					
10.																					

pink SAMPLE RECEIPT

COLLECTED BY (signature): [signature]
CUSTODY SEAL NO. (IF ANY)
DATE/TIME: 10:25-10:35

RELINQUISHED BY (signature)
RECEIVED BY (signature)
DATE/TIME

DISPATCHED BY (signature): [signature]
METHOD OF TRANSPORT: UPS
DATE/TIME: 5/6/14 3:00

RECEIVED AT NLS BY (signature): Pam Rose
DATE/TIME: 5-7-14 10:00
CONDITION: ok/ice
TEMP.

COOLER #
REMARKS & OTHER INFORMATION

WDNR FACILITY NUMBER
E-MAIL ADDRESS

REPORT TO: SEE ABOVE

INVOICE TO: RENEWABLE WORLD ENERGIES
1001 STEPHENSON STREET
NORWAY, MI 49870

PRESERVATIVE:
NP = no preservative
S = sulfuric acid
N = nitric acid
Z = zinc acetate
M = methanol
OH = sodium hydroxide
HA = hydrochloric & ascorbic acid
H = hydrochloric acid

IMPORTANT:
1. TO MEET REGULATORY REQUIREMENTS, THIS FORM **MUST** BE COMPLETED IN DETAIL AND INCLUDED IN THE COOLER CONTAINING THE SAMPLES DESCRIBED.
2. PLEASE USE ONE LINE PER SAMPLE, **NOT** PER BOTTLE.
3. RETURN THIS FORM WITH SAMPLES - CLIENT MAY KEEP PINK COPY.
4. PARTIES COLLECTING SAMPLE, LISTED AS **REPORT TO** AND LISTED AS **INVOICE TO** AGREE TO STANDARD TERMS & CONDITIONS ON REVERSE.

Appendix B

July 16, 2014 Sampling Documents

IMPOUNDMENT SAMPLING LOG

2014 Water Quality Study - Danbury Hydroelectric Project - FERC #9184

HWL - 929.30 Date: 7/16/14

Pre-Sampling Data: TWL - 899.50 CFS - 185

Time: 12:30 Barometer: 30.05 Air Temp: 22.2 °C Wind Speed: NE 6MPH

Sky Conditions: BRIGHT SUN, PARTLY CLOUDY, MID 70's

Precipitation within Last 24 Hours: NO

D.O. Meter Calibration: Instrument Model Used: Hach HQ40d

Were The Batterys Changed? ☐ Yes ☒ No If Yes, When Changed: _____

Battery Status: 70% Charge

Calibration Time: FEB. 2014 Method: Factory

Sampling Depth Profile: Measured Depth to Bottom of the Impoundment: 6.1 Meter

Secchi Disk Depth: (E0.1 Meter) 2.2 Meter Time: 12:40

Chlorophyll a (1 Meter Below Surface)

Lab Sample I.D.# : 07162014-1A

Time	Quantity (ml)	Filtered
12:50	1000	NO

True Color (1 Meter Below Surface)

Lab Sample I.D.# : 07162014-1B

Time	Quantity (ml)
12:51	250

D.O. Sample Data

Depth	Time	D.O. (mg/l)	°C
.5 Mtr Below Surface	12:54	7.86	22
1 Meter	12:55	7.54	21.5
2 Meter	12:56	7.51	21.3
3 Meter	12:57	7.41	21.0
4 Meter	12:58	7.30	20.9
5 Meter	12:59	7.18	20.8
6 Meter			
7 Meter			
8 Meter			
.5 Mtr Above Bottom	1:00	6.85	20.8

Phosphorus

Lab Sample I.D.# : 07162014-1C

(1 Meter Below Surface)

Time	Preserved?
12:52	H_2SO_4

Lab Sample I.D.# : 07162014-1D

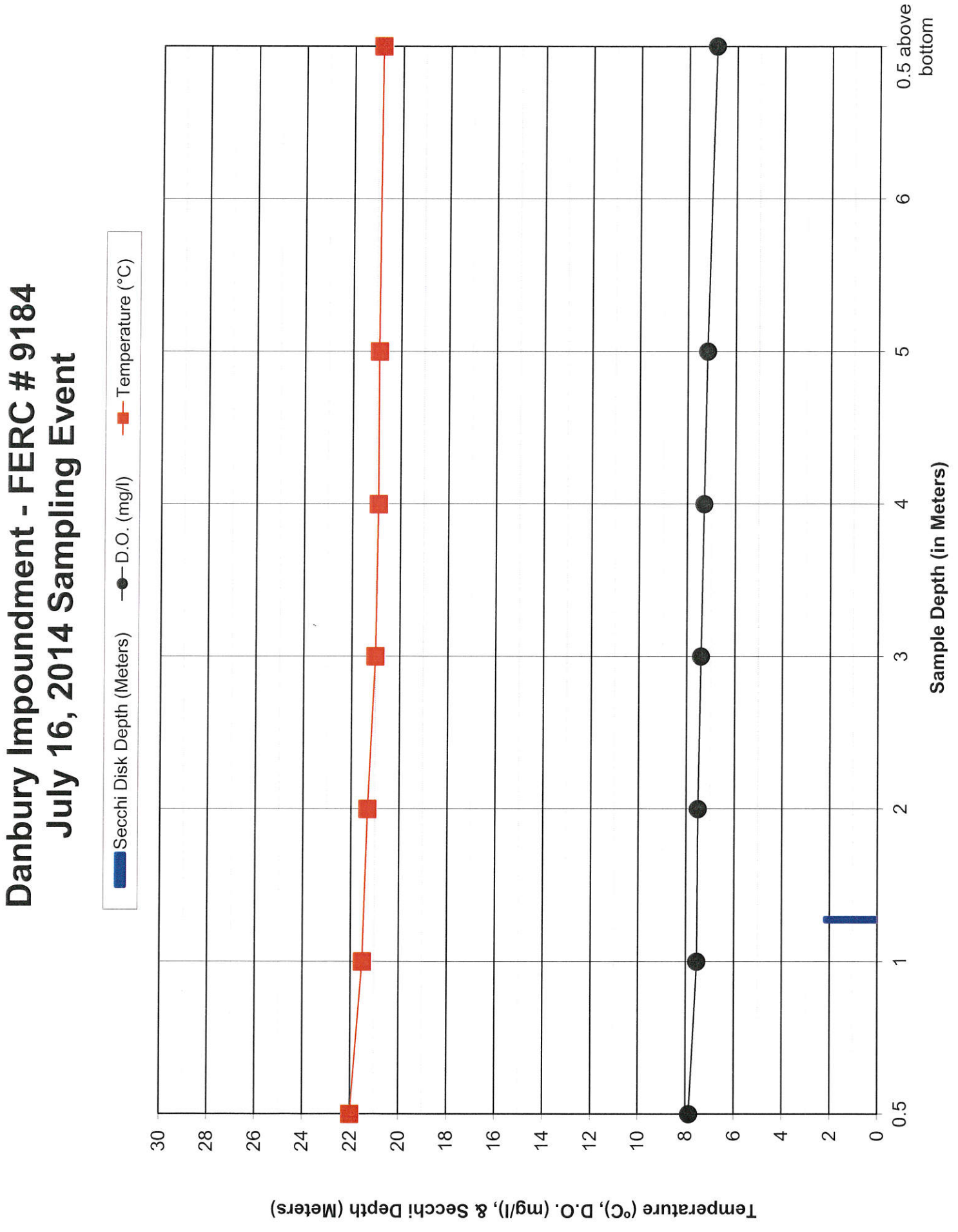
(1 Meter Above Bottom)

Time	Preserved?
12:53	H_2SO_4

Sample Location: N45° 59.730' W92° 22.541'

Comments:

Performed By: Gary Rost


Danbury Impoundment - FERC # 9184
July 16, 2014 Sampling Event
Secchi Disk Depth (Meters)
D.O. (mg/l)
Temperature (°C)
Temperature (°C), D.O. (mg/l), & Secchi Depth (Meters)
Sample Depth (in Meters)
0.5
1
2
3
4
5
6
0.5 above bottom
0
2
4
6
8
10
12
14
16
18
20
22
24
26
28
30

NORTHERN LAKE SERVICE, INC.
Analytical Laboratory and Environmental Services
400 North Lake Avenue - Crandon, WI 54520
Ph: (715)-478-2777 Fax: (715)-478-3060

ANALYTICAL REPORT

WDNR Laboratory ID No. 721026460
WDATCP Laboratory Certification No. 105-330
EPA Laboratory ID No. WI00034

NLS Project: 222999
NLS Customer: 102823
Phone: 855 994 9376

Client: Renewable World Energies
Attn: Gary Rast
100 State Street
P.O. Box 264
Neshkoro, WI 54960

Project: Danbury

07162014-1A NLS ID: 803416
COC: 155000:1 Matrix: SW
Collected: 07/16/14 12:50 Received: 07/17/14

Parameter	Result	Units	Dilution	LOD	LOQ	Analyzed	Method	Lab
Chlorophyll, all species	see attached					07/21/14	10200-H	721026460
Lab filtration for Chlorophyll	yes					07/17/14	NA	721026460

07162014-1B NLS ID: 803417
COC: 155000:2 Matrix: SW
Collected: 07/16/14 12:51 Received: 07/17/14

Parameter	Result	Units	Dilution	LOD	LOQ	Analyzed	Method	Lab
Color, APHA (true)	50	C.P.U.	1	5.0*		07/17/14	SM 2120-B 20ed	721026460
Lab filtration	yes					07/17/14	NA	721026460

07162014-1C NLS ID: 803418
COC: 155000:3 Matrix: SW
Collected: 07/16/14 12:52 Received: 07/17/14

Parameter	Result	Units	Dilution	LOD	LOQ	Analyzed	Method	Lab
Phosphorus, tot. as P	0.044	mg/L	1	0.0070*		07/23/14	SM 4500P-E 20ed	721026460

07162014-1D NLS ID: 803419
COC: 155000:4 Matrix: SW
Collected: 07/16/14 12:53 Received: 07/17/14

Parameter	Result	Units	Dilution	LOD	LOQ	Analyzed	Method	Lab
Phosphorus, tot. as P	0.044	mg/L	1	0.0070*		07/23/14	SM 4500P-E 20ed	721026460

Values in brackets represent results greater than or equal to the LOD but less than the LOQ and are within a region of "Less-Certain Quantitation". Results greater than or equal to the LOQ are considered to be in the region of "Certain Quantitation". LOD and/or LOQ tagged with an asterisk(*) are considered Reporting Limits. All LOD/LOQs adjusted to reflect dilution.

LOD = Limit of Detection LOQ = Limit of Quantitation ND = Not Detected (< LOD) 1000 ug/L = 1 mg/L
DWB = Dry Weight Basis NA = Not Applicable %DWB = (mg/kg DWB) / 10000
MCL = Maximum Contaminant Levels for Drinking Water Samples. Shaded results indicate >MCL.

Reviewed by:

Authorized by:
R. T. Krueger
President

Northern Lake Service, Inc.
Chlorophyll Results

Customer: Renewable World Energies
Project: 222999
Danbury

Sample	Description	CC a	Pheo a	TC a	TC b	TC c
803416	07162014-1A	2.9	0.55	3.3	0.09	0.18

CC a = Corrected Chlorophyll a
Pheo a = Pheophytin a
TC a = Trichromatic Chlorophyll a
TC b = Trichromatic Chlorophyll b
TC c = Trichromatic Chlorophyll c
Units = ug/L for Water, ug/cm² for periphyton samplers

*: The complex calculations used to differentiate the various chlorophyll species magnify error at low concentrations and sometimes produce negative values, which are reported as 0.0 on this report.

SAMPLE COLLECTION AND CHAIN OF CUSTODY RECORD

NORTHERN LAKE SERVICE, INC.
Analytical Laboratory and Environmental Services
400 North Lake Avenue • Crandon, WI 54520-1298
Tel: (715) 478-2777 • Fax: (715) 478-3060
Wisconsin Lab Cert. No. 721026460
WI DATCP 105-000330

NO. 155000

CLIENT	RENEWABLE WORLD ENERGIES LLC
ADDRESS	PO BOX 264 1005. STATE STREET
CITY / STATE / ZIP	NESHKORO / WI / 54960
PROJECT DESCRIPTION / NO.	DANBURY
QUOTATION NO.	
DNR FID #	
DNR LICENSE #	
CONTACT	GARY
PHONE	855-994-9376
PURCHASE ORDER NO.	VERBAL
FAX	920-293-4100

MATRIX:
SW = surface water
WW = waste water
GW = groundwater
DW = drinking water
TIS = tissue
AIR = air
SOIL = soil
SED = sediment
PROD = product
SL = sludge
OTHER

USE BOXES BELOW: Indicate Y or N if GW Sample is field filtered.
Indicate G or C if WW Sample is Grab or Composite.

ANALYZE PER ORDER OF ANALYSIS: Chloride, Hard, T Color, PH05, PH05

ITEM NO.	NLS LAB NO.	SAMPLE ID	COLLECTION DATE	COLLECTION TIME	MATRIX (See above)													COLLECTION REMARKS (i.e. DNR Well ID #)
1.	503416	07162014-1A	7/16/14	12:50	RIVER WATER		X											
2.	417	" -1B	"	12:51	"			X										
3.	418	" -1C	"	12:52	"				X									
4.	419	" -1D	"	12:53	"					X								
5.																		
6.																		
7.																		
8.																		
9.																		
10.																		

COLLECTED BY (signature): [signature]
CUSTODY SEAL NO. (IF ANY)
DATE/TIME: 7/16/14 12:50-12:53

RELINQUISHED BY (signature): [signature]
RECEIVED BY (signature)
DATE/TIME

DISPATCHED BY (signature): [signature]
METHOD OF TRANSPORT: UPS
DATE/TIME: 7/16/14 3:00

RECEIVED AT NLS BY (signature): [signature]
DATE/TIME: 7/17/14 10:10
CONDITION: on ice
TEMP.

COOLER #
REMARKS & OTHER INFORMATION

WDNR FACILITY NUMBER
E-MAIL ADDRESS

REPORT TO: SAME AS ABOVE ATTN: GARY

INVOICE TO: RENEWABLE WORLD OPERATIONS
1001 STEPHENSON ST
NORWAY MI 49870

PRESERVATIVE:
NP = no preservative
S = sulfuric acid
N = nitric acid
Z = zinc acetate
M = methanol
OH = sodium hydroxide
HA = hydrochloric & ascorbic acid
H = hydrochloric acid

IMPORTANT
1. TO MEET REGULATORY REQUIREMENTS, THIS FORM **MUST** BE COMPLETED IN DETAIL AND INCLUDED IN THE COOLER CONTAINING THE SAMPLES DESCRIBED.
2. PLEASE USE ONE LINE PER SAMPLE, **NOT** PER BOTTLE.
3. RETURN THIS FORM WITH SAMPLES - CLIENT MAY KEEP PINK COPY.
4. PARTIES COLLECTING SAMPLE, LISTED AS **REPORT TO** AND LISTED AS **INVOICE TO** AGREE TO STANDARD TERMS & CONDITIONS ON REVERSE.

Appendix C

August 13, 2014 Sampling Documents

IMPOUNDMENT SAMPLING LOG

2014 Water Quality Study - Danbury Hydroelectric Project - FERC #9184

HWL- 929.10

Pre-Sampling Data: TWL-899.50

Date: 8/13/14

PROJECT FLOW - 1600 CFS

Time: 12:00 Barometer: 30.10 Air Temp: 22.77 °C Wind Speed: NW 5mPH

Sky Conditions: BRIGHT SUN, BREEZY, FAIR, CLEAR

Precipitation within Last 24 Hours: NO

D.O. Meter Calibration: Instrument Model Used: Hach HQ40d

Were The Batterys Changed? ☐ Yes ☒ No If Yes, When Changed: _____

Battery Status: 50% Charge

Calibration Time: FEB. 2014 Method: Factory

Sampling Depth Profile: Measured Depth to Bottom of the Impoundment: 6.3 Meter

Secchi Disk Depth: (±0.1 Meter) 1.6 Meter Time: 12:05

Chlorophyll a (1 Meter Below Surface)

Lab Sample I.D.#: 20140813-1A

Time	Quantity (ml)	Filtered
12:06	1000	NO

True Color (1 Meter Below Surface)

Lab Sample I.D.#: 20140813-1B

Time	Quantity (ml)
12:07	250

D.O. Sample Data

Depth	Time	D.O. (mg/l)	°C
.5 Mtr Below Surface	12:12	5.18	24.2
1 Meter	12:13	5.11	24.1
2 Meter	12:14	4.81	23.9
3 Meter	12:15	4.44	23.5
4 Meter	12:16	4.34	23.5
5 Meter	12:17	4.16	23.4
6 Meter			
7 Meter			
8 Meter			
.5 Mtr Above Bottom	12:20	4.20	23.4

Phosphorus

Lab Sample I.D.#: 20140813-1C

(1 Meter Below Surface)

Time	Preserved?
12:08	H_2SO_4

Lab Sample I.D.#: 20140813-1D

(1 Meter Above Bottom)

Time	Preserved?
12:09	H_2SO_4

Sample Location: N45° 59.730' W92° 22.541'

Comments: LOTS OF DUCKWEED + ALGAE ON WATER

1.5M - 4.39 23.50

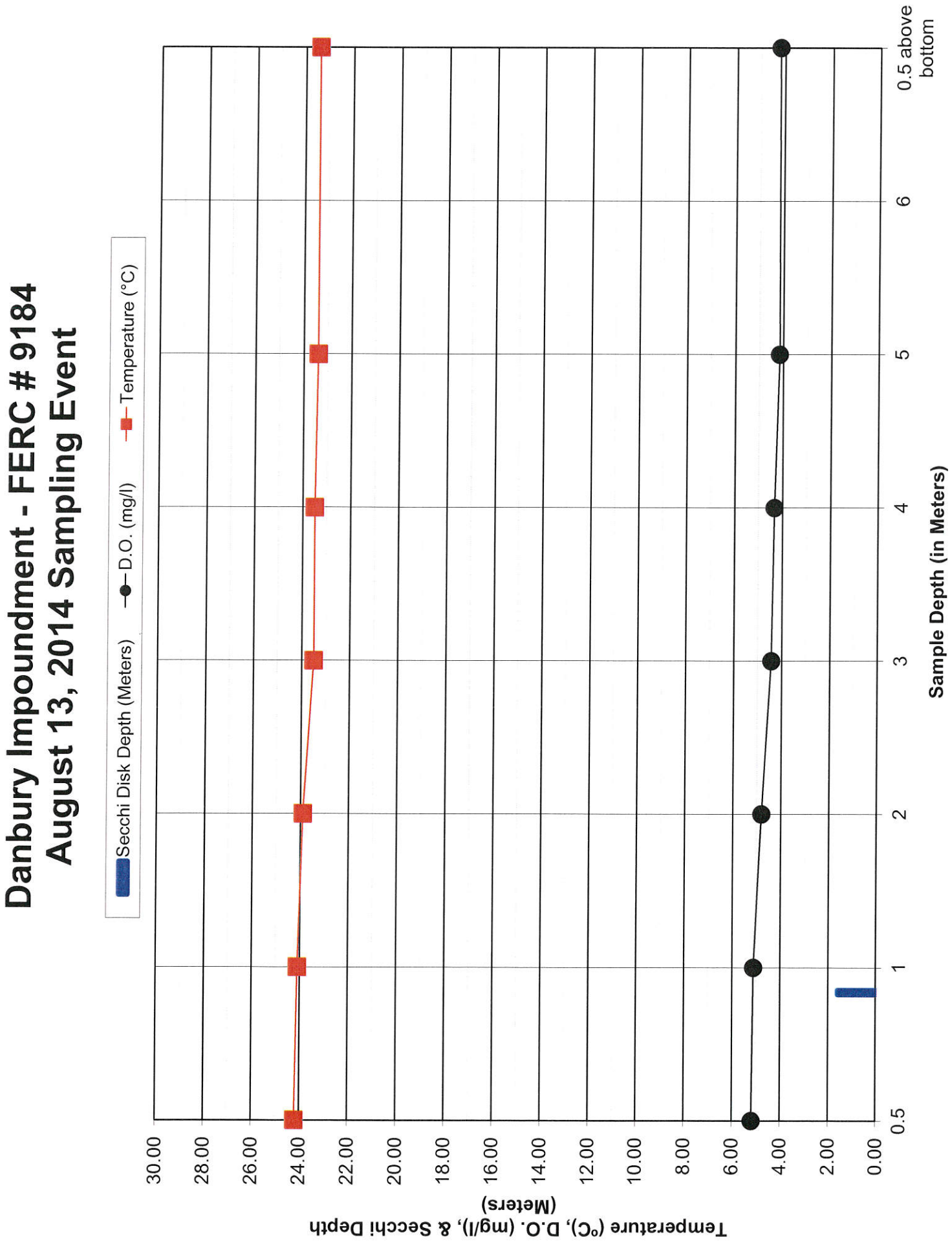
2.5M - 4.73 23.80

3.5M - 4.35 23.5°

4.5M - 4.30 23.4°

5.5M - 4.26 23.4

Performed By: GARY RAST & RUSS BARRON


Danbury Impoundment - FERC # 9184
August 13, 2014 Sampling Event
Secchi Disk Depth (Meters)
D.O. (mg/l)
Temperature (°C)
Temperature (°C), D.O. (mg/l), & Secchi Depth (Meters)
30.00
28.00
26.00
24.00
22.00
20.00
18.00
16.00
14.00
12.00
10.00
8.00
6.00
4.00
2.00
0.00
0.5
1
2
3
4
5
6
0.5 above bottom
Sample Depth (in Meters)

NORTHERN LAKE SERVICE, INC.
Analytical Laboratory and Environmental Services
400 North Lake Avenue - Crandon, WI 54520
Ph: (715)-478-2777 Fax: (715)-478-3060

ANALYTICAL REPORT

WDNR Laboratory ID No. 721026460
WDATCP Laboratory Certification No. 105-330
EPA Laboratory ID No. WI00034

Printed: 08/19/14 Code: NNNN-S

NLS Project: 225020
NLS Customer: 102823
Phone: 855 994 9376

Client: Renewable World Energies
Attn: Gary Rast
100 State Street
P.O. Box 264
Neshkoro, WI 54960

Project: Danbury

20140813-1A NLS ID: 810359
COC: 160939:1 Matrix: SW
Collected: 08/13/14 12:06 Received: 08/14/14

Parameter	Result	Units	Dilution	LOD	LOQ	Analyzed	Method	Lab
Chlorophyll, all species	see attached					08/14/14	10200-H	721026460
Lab filtration for Chlorophyll	yes					08/14/14	NA	721026460

20140813-1B NLS ID: 810360
COC: 160939:2 Matrix: SW
Collected: 08/13/14 12:07 Received: 08/14/14

Parameter	Result	Units	Dilution	LOD	LOQ	Analyzed	Method	Lab
Color, APHA (true)	50	C.P.U.	5	25*		08/14/14	SM 2120-B 20ed	721026460
Lab filtration	yes					08/14/14	NA	721026460

20140813-1C NLS ID: 810361
COC: 160939:3 Matrix: SW
Collected: 08/13/14 12:08 Received: 08/14/14

Parameter	Result	Units	Dilution	LOD	LOQ	Analyzed	Method	Lab
Phosphorus, tot. as P	0.063	mg/L	1	0.0070*		08/19/14	SM 4500P-E 20ed	721026460

20140813-1D NLS ID: 810362
COC: 160939:4 Matrix: SW
Collected: 08/13/14 12:09 Received: 08/14/14

Parameter	Result	Units	Dilution	LOD	LOQ	Analyzed	Method	Lab
Phosphorus, tot. as P	0.052	mg/L	1	0.0070*		08/19/14	SM 4500P-E 20ed	721026460

Values in brackets represent results greater than or equal to the LOD but less than the LOQ and are within a region of "Less-Certain Quantitation". Results greater than or equal to the LOQ are considered to be in the region of "Certain Quantitation". LOD and/or LOQ tagged with an asterisk(*) are considered Reporting Limits. All LOD/LOQs adjusted to reflect dilution

LOD = Limit of Detection LOQ = Limit of Quantitation ND = Not Detected (< LOD) 1000 ug/L = 1 mg/L
DWB = Dry Weight Basis NA = Not Applicable %DWB = (mg/kg DWB) / 10000
MCL = Maximum Contaminant Levels for Drinking Water Samples. Shaded results indicate >MCL.

Reviewed by:

Authorized by:
R. T. Krueger
President

Northern Lake Service, Inc.
Chlorophyll Results

Customer: Renewable World Energies
Project: 225020
Danbury

Sample	Description	CC a	Pheo a	TC a	TC b	TC c
810359	20140813-1A	4.4	0.0*	4.5	0.0*	0.26

CC a = Corrected Chlorophyll a
Pheo a = Pheophytin a
TC a = Trichromatic Chlorophyll a
TC b = Trichromatic Chlorophyll b
TC c = Trichromatic Chlorophyll c
Units = ug/L for Water, ug/cm^2 for periphyton samplers

*: The complex calculations used to differentiate the various chlorophyll species magnify error at low concentrations and sometimes produce negative values, which are reported as 0.0 on this report.

SAMPLE COLLECTION AND CHAIN OF CUSTODY RECORD

NORTHERN LAKE SERVICE, INC.

Analytical Laboratory and Environmental Services

400 North Lake Avenue • Crandon, WI 54520-1298

Tel: (715) 478-2777 • Fax: (715) 478-3060

Wisconsin Lab Cert. No. 721026460

WI DATCP 105-000330

NO. 160939

CLIENT: RENEWABLE WORLD ENERGIES LLC

ADDRESS: PO BOX 264 100 S STATE ST

CITY: NESHKORO STATE: WI ZIP: 54960

PROJECT DESCRIPTION / NO.: DANBURY QUOTATION NO.:

DNR FID #: DNR LICENSE #:

CONTACT: GARY PHONE: 855 944-9376

PURCHASE ORDER NO.: VERBAL FAX: 920 293-4100

MATRIX:
SW = surface water
WW = waste water
GW = groundwater
DW = drinking water
TIS = tissue
AIR = air
SOIL = soil
SED = sediment
PROD = product
SL = sludge
OTHER

USE BOXES BELOW: Indicate Y or N if GW Sample is field filtered.
Indicate G or C if WW Sample is Grab or Composite.

ITEM NO.	NLS LAB NO.	SAMPLE ID	COLLECTION DATE	COLLECTION TIME	MATRIX (See above)	ANALYZE PER ORDER OF ANALYSIS: Chloride	Color	PRO5	PH05	COLLECTION REMARKS (i.e. DNR Well ID #)
1.	810359	20140813-1A	8/13/14	12:06	RENEWABLE WATER	X				
2.	360	" 1B	"	12:07	"		X			
3.	361	" 1C	"	12:08	"		X			
4.	362	" 1D	"	12:09	"			X		
5.										
6.										
7.										
8.										
9.										
10.										

ONE SAMPLE PER LINE

NO TEMP BLANK SENT OR ENCLOSED.

COLLECTED BY (signature): [signature] CUSTODY SEAL NO. (IF ANY) DATE/TIME: 8/13/14 12:06-12:09

RELINQUISHED BY (signature): [signature] RECEIVED BY (signature) DATE/TIME

DISPATCHED BY (signature): [signature] METHOD OF TRANSPORT: UPS DATE/TIME: 8/13/14 3:30

RECEIVED AT NLS BY (signature): [signature] DATE/TIME: 8/14/14 10 CONDITION: Nice TEMP.

COOLER #: REMARKS & OTHER INFORMATION

WDNR FACILITY NUMBER E-MAIL ADDRESS

REPORT TO: SAME AS ABOVE ATTN: GARY

INVOICE TO: RENEWABLE WORLD OPERATING 1001 STEPHENSON STREET MARINETTE WI 54143

PRESERVATIVE:
NP = no preservative
S = sulfuric acid
N = nitric acid
Z = zinc acetate
M = methanol
OH = sodium hydroxide
HA = hydrochloric & ascorbic acid
H = hydrochloric acid

IMPORTANT:

1. TO MEET REGULATORY REQUIREMENTS, THIS FORM **MUST** BE COMPLETED IN DETAIL AND INCLUDED IN THE COOLER CONTAINING THE SAMPLES DESCRIBED.
2. PLEASE USE ONE LINE PER SAMPLE, **NOT** PER BOTTLE.
3. RETURN THIS FORM WITH SAMPLES - CLIENT MAY KEEP PINK COPY.
4. PARTIES COLLECTING SAMPLE, LISTED AS **REPORT TO** AND LISTED AS **INVOICE TO** AGREE TO STANDARD TERMS & CONDITIONS ON REVERSE.

Appendix D

Agency Correspondence

Renewable World Energies

October 2, 2014

Mr. Nick Utrup
Fish and Wildlife Biologist
U.S. Fish and Wildlife Service
2661 Scott Tower Drive
New Franken, WI 54229

Ms. Cheryl Laatsch
Statewide FERC Coordinator
Wisconsin Dept. of Natural Resources
N7725 HWY 28
Horicon, WI 53032

Re: Danbury Hydroelectric Project
FERC Project Number 9184
Flambeau Hydro LLC
Draft Report 2014 Water Quality Monitoring Data

Dear Agency:

Purpose

On behalf of Flambeau Hydro LLC "Flambeau" (Licensee), Renewable World Energies, LLC is submitting a copy of the *Draft Report 2014 Water Quality Monitoring Data* for the Danbury Hydroelectric Project. Furthermore, the Licensee is requesting your comments should you have any to offer on the report. The Federal Energy Regulatory Commission "FERC" issued a License to Flambeau on September 5, 2006. 2014 was the seventh year that monitoring was conducted since the license was issued. The submitted report is a requirement of that License pursuant to License Article 401 WQC, Condition K. Nothing out of the ordinary was experienced during the monitoring season except as noted in the report.

Conclusion

The Federal Energy Regulatory Commission's regulations allow for a 30 day formal review and comment period. Thank you in advance for providing your responses in a timely manner so we can include your comments and recommendations, as appropriate, into our report.

Corporate Office
P.O. Box 264
100 S. State Street
Neshkoro, WI 54960
Fax: 920-293-4100

Phone: 855-99HYDRO
(855-994-9376)
www.renewableworldenergies.com

Administrative Office
1001 Stephenson Street
Norway, MI 49870
Fax: 906-563-9344

Renewable World Energies

If you have any questions concerning the report, please contact Mr. Gary Rast at the Renewable World Energies, LLC offices @ 855-994-9376 ext. 105, or by email at: grast@rwehydro.com.

Sincerely,
Renewable World Energies, LLC
Agent for Licensee

Gary Rast

Mr. Jason Kreuscher
Vice President, Operations

Attachment: Draft Report 2014 Water Quality Monitoring Data - October 2, 2014

Cc: RWE, Corporate

Gary Rast

From: Gary Rast
Sent: Thursday, August 14, 2014 5:38 PM
To: 'Laatsch, Cheryl - DNR'; Utrup, Nick
Cc: Aneta Rietveld; Cindy Skowronski
Subject: Danbury DO Below Std

Cheryl & nick,

Did the WQ sampling at Danbury Wed. August 13, 2014. Experienced some below standard measurements. However, not unusual for this time of year.
Depth – DO – Temp
1.5 Meter = 4.99 & 23.9
2.0 = 4.81 & 23.9
2.5 = 4.73 & 23.8
3.0 = 4.44 & 23.5
3.5 = 4.35 & 23.5
4.0 = 4.34 & 23.5
4.5 = 4.30 & 23.4
5.0 = 4.16 & 23.4
5.5 = 4.26 & 23.4
.5 From Bottom = 4.20 & 23.4

Gary

Gary Rast
Regulatory/Compliance Manager

Renewable World Energies

Renewable World Energies, LLC
100 S. State Street
P.O. Box 264
Neshkoro, WI 54960
Phone: 855-994-9376 Ext. 105
Fax: 920-293-4100
Cell: 920-570-0995
E-mail: grast@rwehydro.com

Document Content(s)