December 29, 2015

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

RE: Clam River Hydroelectric Project
FERC Project Number 9185
Flambeau Hydro LLC
Final Report 2015 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 2015 Water Quality Monitoring Data* for the Clam River Hydroelectric Project. The Federal Energy Regulatory Commission "FERC" issued a License to Flambeau on July 24, 2006. This report is submitted as a requirement of that License pursuant to License Article 401 WQC, Condition K. 2015 was the eighth year monitoring was conducted since the license was issued, but is the 4th year of submittal by RWE on the behalf of the Licensee.

Monitoring was conducted on April 16, July 8, and August 6, 2015. Nothing out of the ordinary was experienced during the monitoring season except as noted in the report. All data has been entered into the SWIMS Data Base. The draft report was sent to the agencies by letter dated October 2, 2015 for review and comment. As of the date of this letter no comments have been received. The next scheduled monitoring event will be conducted in 2016.

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.

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

Sincerely,
Renewable World Energies, LLC
Agent for Licensee

Mr. Jason Kreuscher
Vice President, Operations

Attachment: Final Report 2015 Water Quality Monitoring Data – December 29, 2015

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

Final Report

2015 Water Quality Monitoring Data
(Per License Article 401 WQC, Condition K)

For the

Clam River Hydroelectric Project
FERC Project # 9185
Flambeau Hydro, LLC

Clam River
Burnett County, WI

Respectfully Submitted by:

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

Final – December 29, 2015

Table of Contents

Summary

2015 marked the eighth year of water quality sampling under the FERC License issued on July 24, 2006 to Flambeau Hydro, LLC for the Clam River Hydroelectric Project – FERC Project # 9185 and specifically Appendix A Section 401 K.

Ice-Out occurred on the Clam River sometime during the week beginning March 29th thru April 4th. The Ice-Out sampling event occurred on April 16, 2015. River flow, based on Clam River Hydroelectric Project records, was approximately 228 cubic feet per second. Sampling occurred between 12:30 p.m. and 1:05 p.m. Samples were taken without incident. No unusual D.O. or Temperature readings were observed. Samples for laboratory analysis were delivered to Northern Lake Service, Inc in Crandon, WI on April 17, 2015. Northern Lake Service, Inc. issued a laboratory report on April 29, 2015. No unusual levels of Chlorophyll a, or Total Phosphorus were noted in the laboratory reports. However, True Color seemed a bit lower than normal.

River flow, based on Clam River Hydroelectric Project records, was approximately 342 cubic feet per second during the July 8, 2015 sampling event. Sampling occurred between 10:00 a.m. and 10:35 a.m. Samples were taken without incident. 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 9, 2015. Northern Lake Service, Inc. issued a laboratory report on July 31, 2015. No unusual levels of True Color, or Total Phosphorus were noted in the laboratory reports

River flow, based on Clam River Hydroelectric Project records, was approximately 150 cubic feet per second during the August 6, 2015 sampling event. Sampling occurred between 10:00 a.m. and 10:25 a.m. Samples were taken without incident. No unusual Temperature readings were observed. However D.O. seemed erratic being very high thru 3 meters and then dropping off dramatically at the 4 meter level. Samples for laboratory analysis were delivered to Northern Lake Service, Inc. in Crandon, WI on August 7, 2015. Northern Lake Service, Inc. issued a laboratory report on August 11, 2015 and revised report on August 25, 2015. High levels of Chlorophyll a were noted, but no unusual levels of True Color, or Total Phosphorus were noted in the laboratory reports.

In general, the weather (temperature and rainfall) during the 2015 monitoring season appeared slightly warmer in April, May, June, July, & August, with lower than normal precipitation in the months of April, June, July, and higher than normal precipitation in May and August. **(Refer to 2015 Monthly Temp and Precipitation Table page 7)**

A summary of a comparison between the 2011 thru 2015 **(Refer to 2015 Clam River Project Sampling Comparison Table 2011-2015 page 8)** sampling results are as follows:

1. Water Clarity – Increased I Out, Ave/S Increased July, & Ave/S Decreased Aug
2. Chlorophyll a – Ave/S Decreased I Out, Decreased July, Increased Aug
3. Color – Decreased I Out, July, & Aug
4. Total Phosphorus – Decreased I Out, S Decreased July & Aug

5. Overall D.O. – Decreased I Out, Ave/S Decreased July, & Increased Aug
6. Water Temperatures – Ave/S Increased I Out, Decreased July, & Increased Aug

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 Clam River Hydroelectric Project is set to take place in 2016 beginning with the Ice-Out sampling event.

2015
Sampling Results
Table

Clam River Hydroelectric Project - FERC Project # 9185
2015 Water Quality Sampling Data

	Ice Out April 16, 2015	July 8, 2015	August 6, 2015
Project Flow (c.f.s.)	228	342	150

Dissolved Oxygen

	Ice Out April 16, 2015			July 8, 2015			August 6, 2015		
	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	12:53 PM	11.76	14.4	10:27 AM	18:14	22.9	10:17 AM	16.71	24.5
1 meter below surface	12:54 PM	11.93	13.9	10:28 AM	9.77	23.1	10:18 AM	16.91	24.7
2 meter below surface	12:55 PM	11.68	13.3	10:29 AM	9.59	23.1	10:19 AM	16.71	24.7
3 meter below surface	12:56 PM	11.24	13.0	10:30 AM	8.29	22.7	10:20 AM	16.25	24.7
4 meter below surface	12:57 PM	10.88	12.8	10:31 AM	8.01	22.5	10:21 AM	7.44	23.5
5 meter below surface	12:58 PM	10.89	12.7	10:32 AM	7.23	22.4	10:22 AM	6.65	23.2
6 meter below surface	12:59 PM	10.81	12.0	10:33 AM	7.67	22.2	10:23 AM	7.39	23.0
7 meter below surface	1:00 PM	10.08	10.8	10:34 AM	7.56	22.1	10:24 AM	6.26	22.8
.5 meter above bottom	1:05 PM	8.45	9.9	10:35 AM	7.48	22.0	10:25 AM	5.50	22.6

Secchi Disk

Meters below surface

Ice Out April 16, 2015			July 8, 2015			August 6, 2015		
Time	Depth (mtr)		Time	Depth (mtr)		Time	Depth (mtr)	
12:40 PM	1.50		10:25 AM	1.10		10:05 AM	0.50	

Chlorophyll a

1 meter below surface

Ice Out April 16, 2015			July 8, 2015			August 6, 2015		
Time	ug/L		Time	ug/L		Time	ug/L	
12:45 PM	13.00		10:15 AM	12.00		10:10 AM	120.00	

Color (True)

1 meter below surface

Ice Out April 16, 2015			July 8, 2015			August 6, 2015		
Time	C.P.U. Units	LOD	Time	C.P.U. Units	LOD	Time	C.P.U. Units	LOD
12:47 PM	25.0	5.0*	10:17 AM	35.0	5.0*	10:12 AM	40.0	5*

Total Phosphorus

	Ice Out April 16, 2015			July 8, 2015			August 6, 2015		
	Time	mg/L	LOD	Time	mg/L	LOD	Time	mg/L	LOD
1 meter below surface	12:48 PM	0.049	0.0070*	10:19 AM	0.061	0.0070*	10:14 AM	0.076	0.0070*
1 meter above bottom	12:50 PM	0.039	0.0070*	10:20 AM	0.050	0.0070*	10:15 AM	0.043	0.0070*

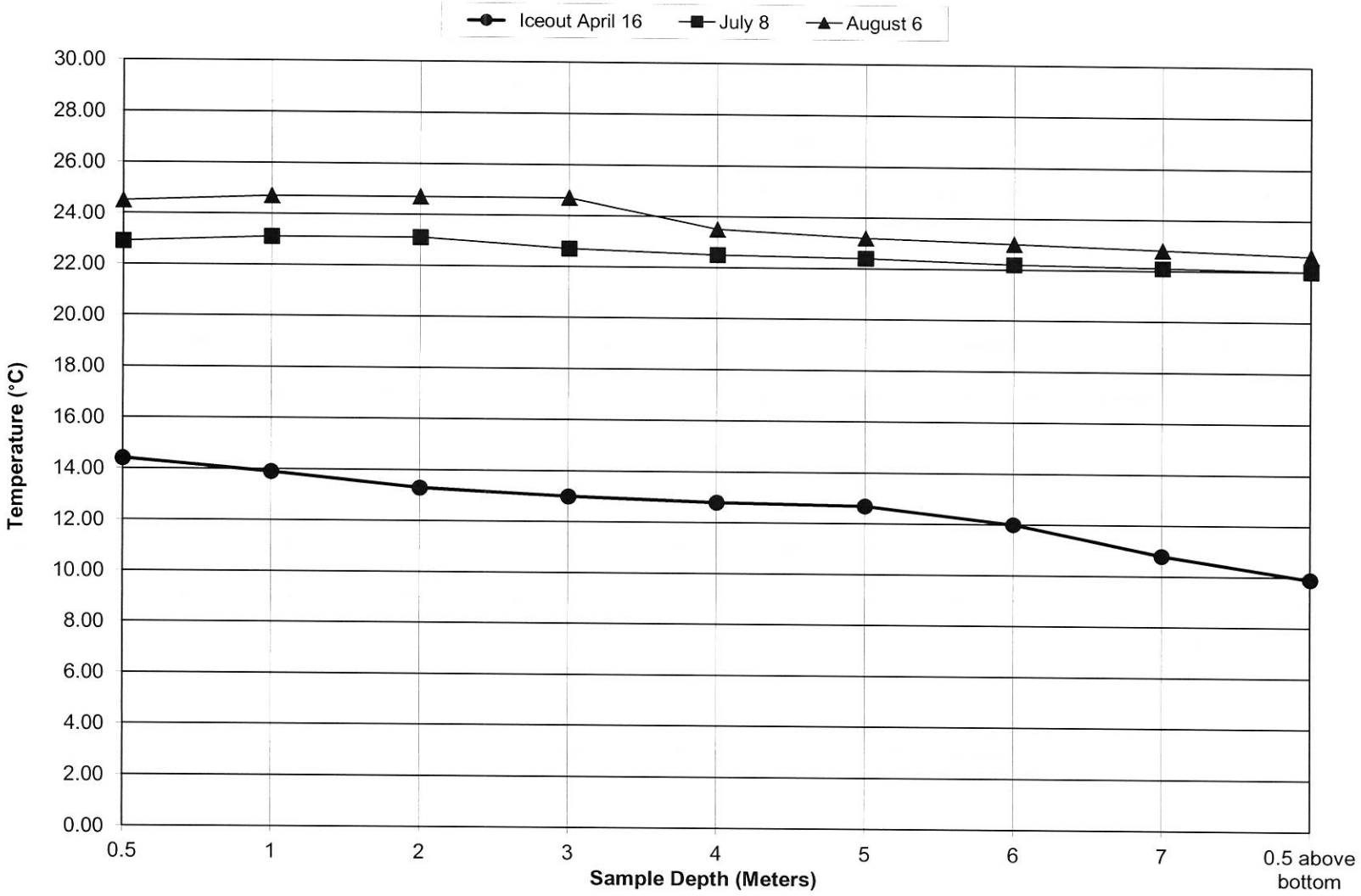
*** Considered Reporting Limits**

2015

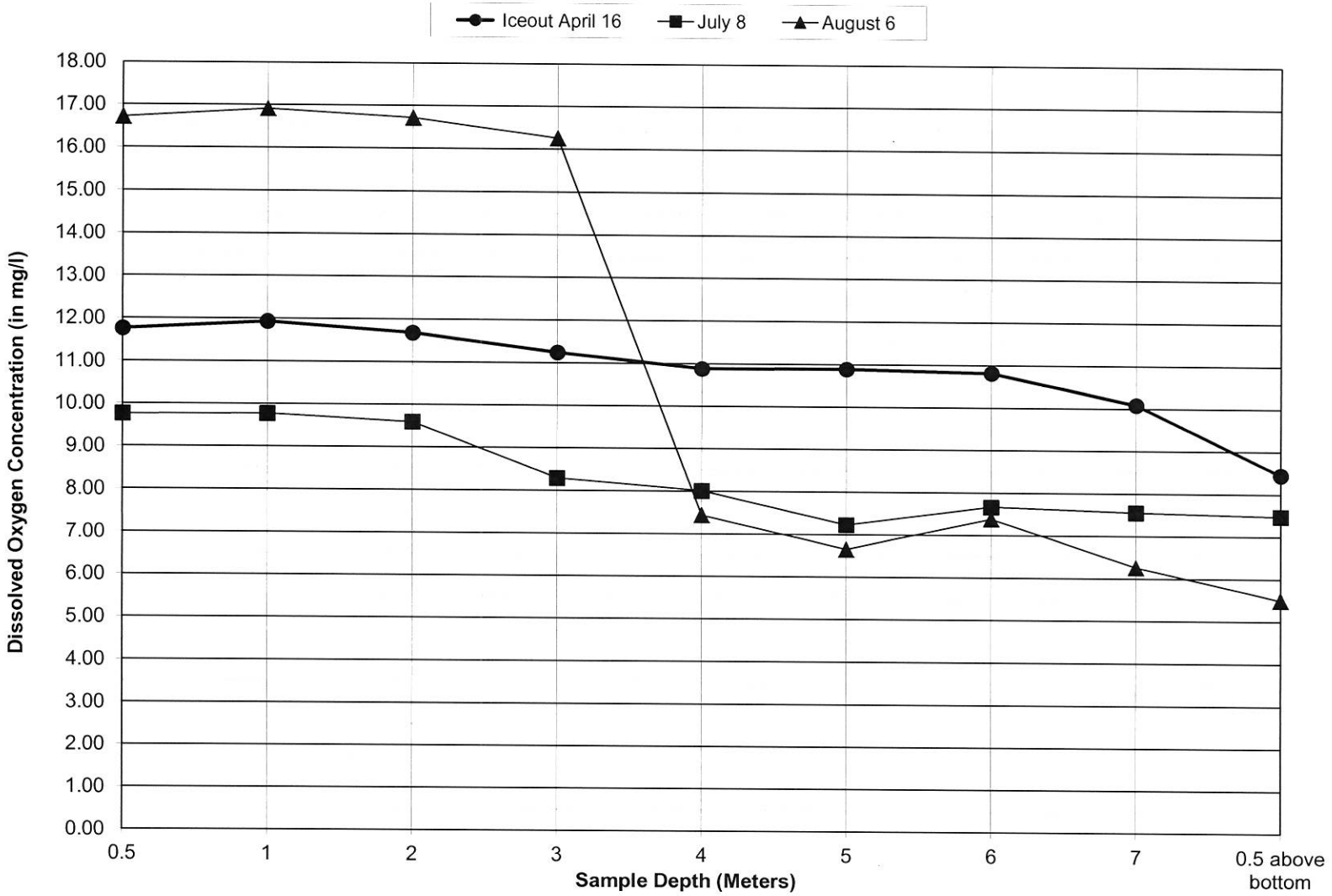
Graphed Data

Temperature and Dissolved Oxygen

Clam River Impoundment - FERC # 9185
2015 Temperature Samples



Clam River Impoundment - FERC # 9185
2015 Dissolved Oxygen Samples



2015
Monthly
Temperature and Precipitation
Table

2015 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-14	69.0	23.0	44.8	1.60	622	678	1.80	0.10	2.85	63%
November-14	51.0	-9.0	21.8	-7.00	1289	1080	0.98	16.40	2.09	47%
December-14	43.0	-10.0	21.5	6.70	1341	1556	1.26	8.60	1.21	104%
January-15	12.7	-18.0	40.0	2.50	1616	1699	0.46	6.60	0.96	48%
February-15	2.7	-19.0	5.2	-9.90	1667	1399	0.38	8.20	0.81	47%
March-15	64.0	-14.0	30.6	4.70	1059	1210	0.79	8.10	1.49	53%
April-15	76.0	22.0	42.2	2.60	675	762	1.03	1.20	2.43	42%
May-15	83.0	32.0	51.7	0.30	409	426	3.73	T	3.23	115%
June-15	84.0	36.0	61.4	1.30	121	179	3.64	T	4.23	86%
July-15	89.0	48.0	69.2	3.40	15	63	3.01	0.00	3.85	78%
August-15	93.0	42.0	65.3	1.00	81	86	4.09	0.00	3.70	111%
September-15	85.0	34.0	61.5	5.90	149	298	6.81	0.00	4.11	166%

Source: NOAA/Duluth, MN

2015
Clam River
Sampling Comparison Table
2011—2015

Clam River

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	0.87	17.00	40.00	0.073	0.066	11.58	11.88	9.30	9.40
2012	April	0.80	13.00	55.00	0.031		11.72	15.68	9.60	10.90
2013	May	1.00	17.00	70.00	0.069	0.069	10.91	12.16	10.10	14.20
2014	May	1.10	8.60	70.00	0.041	0.042	9.14	9.40	11.50	12.70
2015	April	1.50	13.00	25.00	0.049	0.039	8.45	11.93	9.90	14.40
Minimum	April/May	0.80	8.60	25.00	0.031	0.039	8.45	9.40	9.30	9.40
Maximum	April/May	1.50	17.00	70.00	0.073	0.069	11.72	15.68	11.50	14.40
Average	April/May	1.05	13.72	52.00	0.053	0.054	10.36	12.21	10.08	12.32
2011	July	0.70	62.00	80.00	0.110	0.083	5.11	14.32	25.20	27.10
2012	July	1.10	13.00	50.00	0.042	0.050	0.04	12.33	24.80	28.70
2013	July	1.20	23.00	70.00	0.064	0.067	0.97	7.22	23.70	24.10
2014	July	0.80	18.00	50.00	0.056	0.055	7.06	12.44	20.40	22.50
2015	July	1.10	12.00	35.00	0.061	0.043	7.48	9.77	22.00	23.10
Minimum	July	0.70	12.00	35.00	0.042	0.043	0.04	7.22	20.40	22.50
Maximum	July	1.20	62.00	80.00	0.110	0.083	7.48	14.32	25.20	28.70
Average	July	0.98	25.60	57.00	0.067	0.060	4.13	11.22	23.22	25.10
2011	August	0.90	34.00	100.00	0.061	0.066	2.13	10.35	21.60	22.90
2012	August	0.70	43.00	70.00	0.067	0.066	5.01	12.77	21.20	22.40
2013	August	0.50	48.00	100.00	0.110	0.098	3.78	12.47	20.40	21.90
2014	August	0.60	34.00	50.00	0.081	0.075	4.91	10.13	22.70	24.20
2015	August	0.50	120.00	40.00	0.076	0.043	5.50	16.91	22.60	24.70
Minimum	August	0.50	34.00	40.00	0.061	0.043	2.13	10.13	20.40	21.90
Maximum	August	0.90	120.00	100.00	0.110	0.098	5.50	16.91	22.70	24.70
Average	August	0.64	55.80	72.00	0.079	0.070	4.27	12.53	21.70	23.22

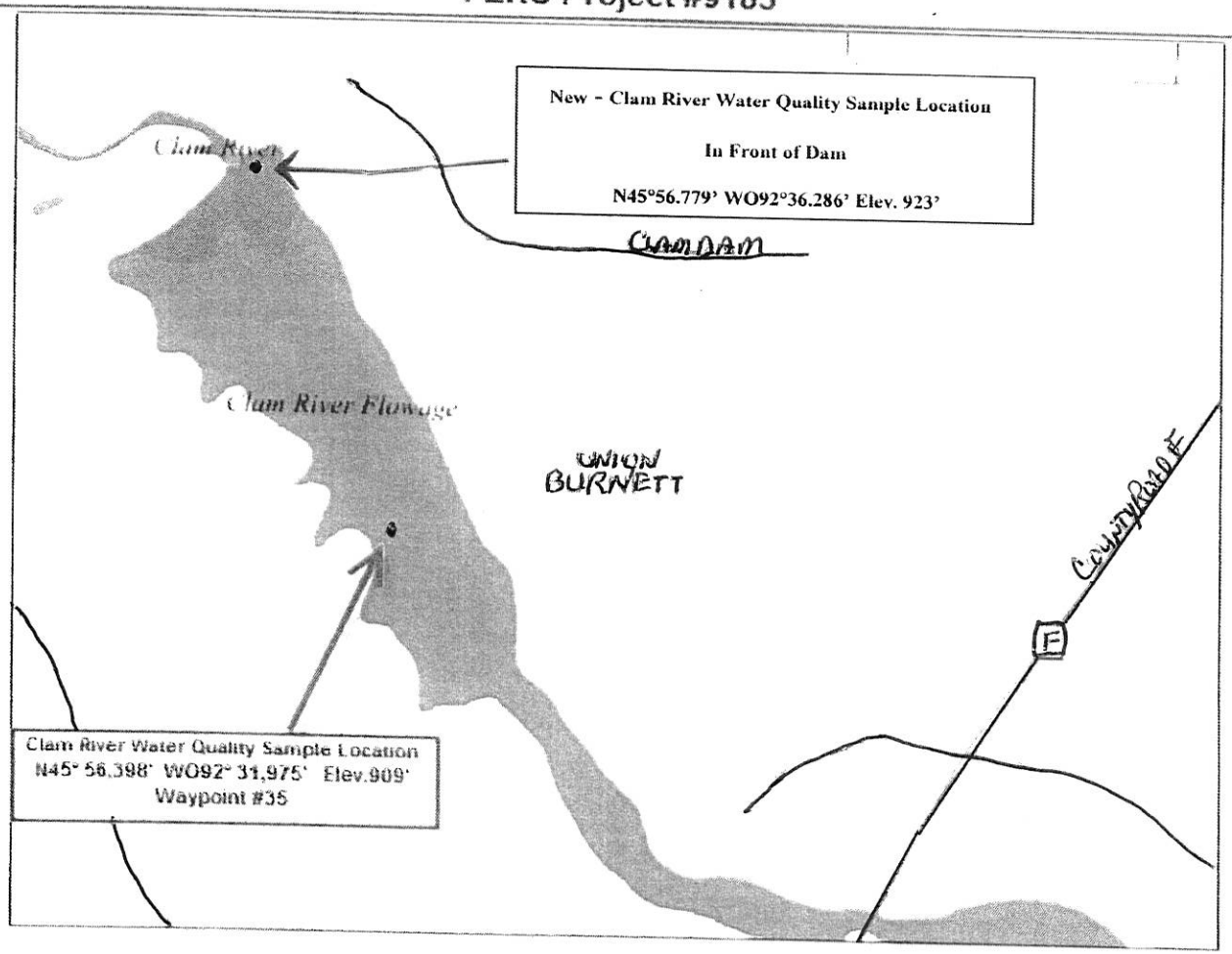
No Sample

Clam River Hydroelectric Project

Sampling Location

Map

Clam River Hydroelectric Project
Water Quality Sampling Location Map
FERC Project #9185



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

Scale: 1:8,967

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

April 16, 2015 Sampling Documents (Ice-Out)

IMPOUNDMENT SAMPLING LOG

2015 Water Quality Study - Clam River Hydroelectric Project - FERC #9185

HWL -898.88

Date: 4/16/15

~~Pre-Sampling Data~~: TWL - 863.60 228 CFS

Time: 12:30 Barometer: 30.05 Air Temp: 19.4 °C Wind Speed: SW 17 MPH

Sky Conditions: MOSTLY CLOUDY, OCCASIONAL SUN

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: 85% Charge

Calibration Time: 3/11/2015 Method: Factory

Sampling Depth Profile: Measured Depth to Bottom of the Impoundment: 8.0 Meter

Secchi Disk Depth: (E0.1 Meter) 1.5 Meter Time: 12:40

Chlorophyll a (1 Meter Below Surface)

Lab Sample I.D.# : 041615-1A		
Time	Quantity (ml)	Filtered
12:45	1000	NO

True Color (1 Meter Below Surface)

Lab Sample I.D.# : 041615-1B	
Time	Quantity (ml)
12:47	250

D.O. Sample Data

Depth	Time	D.O. (mg/l)	°C
.5 Mtr Below Surface	12:53	11.76	14.4
1 Meter	12:54	11.93	13.9
2 Meter	12:55	11.68	13.3
3 Meter	12:56	11.24	13.0
4 Meter	12:57	10.88	12.8
5 Meter	12:58	10.89	12.7
6 Meter	12:59	10.81	12.0
7 Meter	13:00	10.08	10.8
8 Meter			
.5 Mtr Above Bottom	13:05	8.45	9.9

Phosphorus

Lab Sample I.D.# : 041615-1C	
(1 Meter Below Surface)	
Time	Preserved?
12:48	H_2SO_4

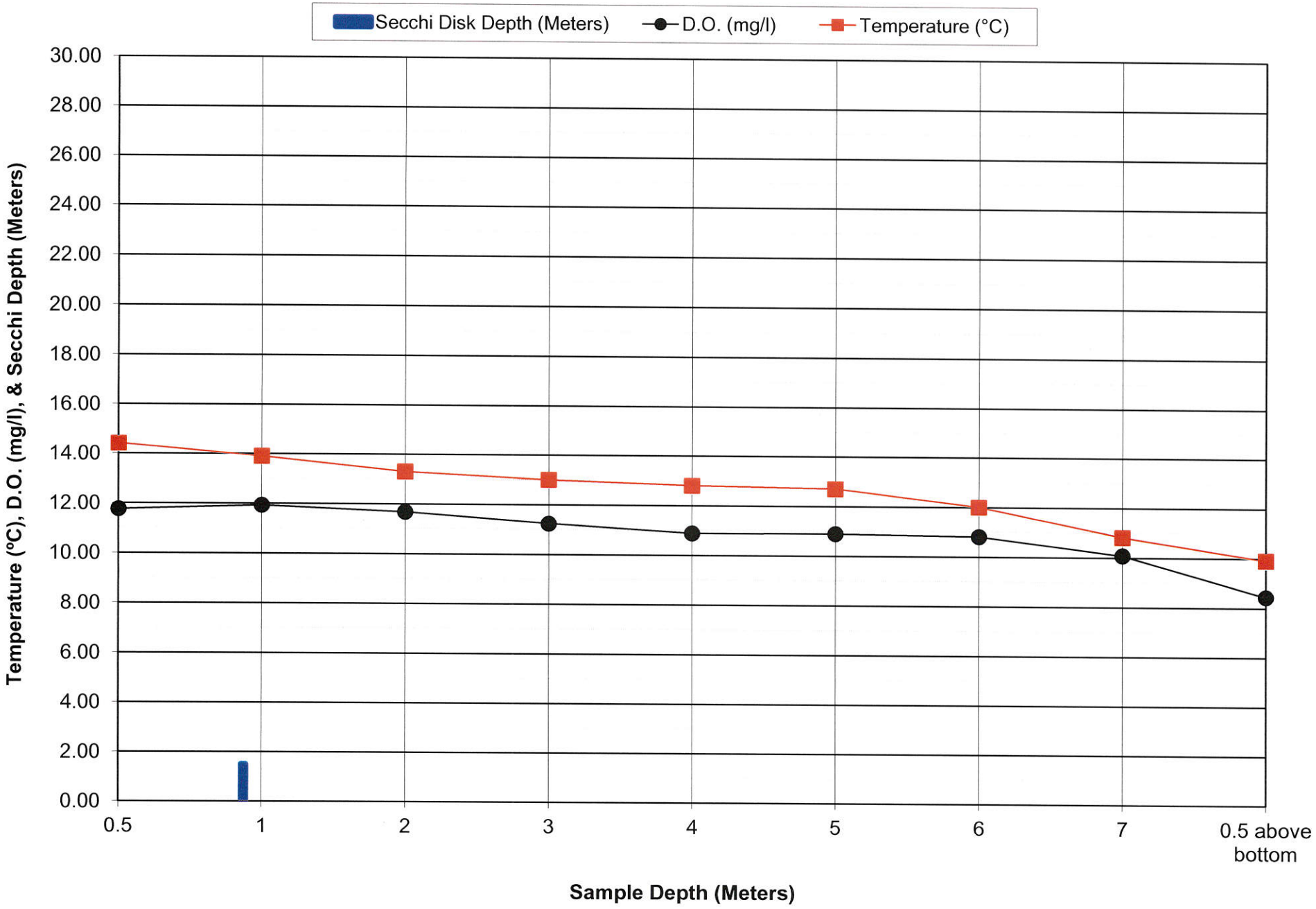
Lab Sample I.D.# : 041615-1D	
(1 Meter Above Bottom)	
Time	Preserved?
12:50	H_2SO_4

Sample Location: N45° 56.779' WO°92 36.286' Elev. 923' (New) N45° 56.398' W92° 31.975' (Old)

Comments: _____

Performed By: GARY RAST + RUSS BARRON

Clam River Impoundment - FERC # 9185
April 16, 2015 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

NLS Project: 238849
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: **Clam River**

041615-1A NLS ID: 854755
COC: 167658:1 Matrix: SW
Collected: 04/16/15 12:45 Received: 04/17/15

Parameter	Result	Units	Dilution	LOD	LOQ	Analyzed	Method	Lab
Chlorophyll, all species	see attached					04/28/15	10200-H	721026460
Lab filtration for Chlorophyll	yes					04/20/15	NA	721026460

041615-1B NLS ID: 854756
COC: 167658:2 Matrix: SW
Collected: 04/16/15 12:47 Received: 04/17/15

Parameter	Result	Units	Dilution	LOD	LOQ	Analyzed	Method	Lab
Color, APHA (true)	25	C.P.U.	1	5.0*		04/17/15	SM 2120-B 20ed	721026460
Lab filtration	yes					04/17/15	NA	721026460

041615-1C NLS ID: 854757
COC: 167658:3 Matrix: SW
Collected: 04/16/15 12:48 Received: 04/17/15

Parameter	Result	Units	Dilution	LOD	LOQ	Analyzed	Method	Lab
Phosphorus, tot. as P	0.049	mg/L	1	0.0070*		04/22/15	SM 4500P-E 20ed	721026460

041615-1D NLS ID: 854758
COC: 167658:4 Matrix: SW
Collected: 04/16/15 12:50 Received: 04/17/15

Parameter	Result	Units	Dilution	LOD	LOQ	Analyzed	Method	Lab
Phosphorus, tot. as P	0.039	mg/L	1	0.0070*		04/22/15	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 and/or solids content.

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: 238849
Clam River

Sample	Description	CC a	Pheo a	TC a	TC b	TC c
854755	041615-1A	12	0.78	13	0.3	1.8

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

CLIENT: RENEWABLE WORLD ENERGIES

ADDRESS: PO BOX 264

CITY: NESHKORO STATE: WI ZIP: 54960

PROJECT DESCRIPTION / NO.: CLAM RIVER QUOTATION NO.:

DNR FID #: DNR LICENSE #:

CONTACT: GARY RAST 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 A, TRUE COLOR, PH 25, PH 65

NO. 167658

ITEM NO.	NLS LAB NO.	SAMPLE ID	COLLECTION DATE	COLLECTION TIME	MATRIX (See above)														COLLECTION REMARKS (i.e. DNR Well ID #)
1.	854755	04/16/15-1A	4/16/15	12:45	RIVER WATER		X												
2.	756	04/16/15-1B	"	12:47	"			X											
3.	757	04/16/15-1C	"	12:48	"				X										
4.	758	04/16/15-1D	4/16/15	12:50	"					X									
5.																			
6.																			
7.																			
8.																			
9.																			
10.																			

COLLECTED BY (signature): [signature]

CUSTODY SEAL NO. (IF ANY):

DATE/TIME: 4/16/15 12:45-12:50

RELINQUISHED BY (signature):

RECEIVED BY (signature):

DATE/TIME:

DISPATCHED BY (signature): [signature]

METHOD OF TRANSPORT: UPS

DATE/TIME: 4/16/15 3:00

RECEIVED AT NLS BY (signature): [signature]

DATE/TIME: 4/17/15 10

CONDITION: Cool

TEMP.:

COOLER #:

REMARKS & OTHER INFORMATION:

WDNR FACILITY NUMBER:

E-MAIL ADDRESS:

REPORT TO: SAME AS ABOVE

ATTN GARY

INVOICE TO: RWE (SAME NAME AS ABOVE)

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.

ORIGINAL COPY

Appendix B

July 8, 2015 Sampling Documents

IMPOUNDMENT SAMPLING LOG

2015 Water Quality Study - Clam River Hydroelectric Project - FERC #9185

CFS = 342 HWL = 898.91 Date: 7/8/15

Pre-Sampling Data: TWL = 864.20

Time: 10:00 Barometer: 30.09 Air Temp: 19.4 °C Wind Speed: SW 3MPH

Sky Conditions: FAIR, CLEAR, & BRIGHT 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: 60% Charge

Calibration Time: 3/11/2015 Method: Factory

Sampling Depth Profile: Measured Depth to Bottom of the Impoundment: 8.0 Meter

Secchi Disk Depth: (E0.1 Meter) 1.1 Meter Time: 10:25

Chlorophyll a (1 Meter Below Surface)

Lab Sample I.D.# : 150708-1A		
Time	Quantity (ml)	Filtered
10:15	1000	NO

True Color (1 Meter Below Surface)

Lab Sample I.D.# : 150708-1B	
Time	Quantity (ml)
10:17	250

D.O. Sample Data

Depth	Time	D.O. (mg/l)	°C
.5 Mtr Below Surface	10:27	9.76	22.9
1 Meter	10:28	9.77	23.1
2 Meter	10:29	9.59	23.1
3 Meter	10:30	8.29	22.7
4 Meter	10:31	8.01	22.5
5 Meter	10:32	7.23	22.4
6 Meter	10:33	7.67	22.2
7 Meter	10:34	7.56	22.1
8 Meter			
.5 Mtr Above Bottom	10:35	7.48	22.0

Phosphorus

Lab Sample I.D.# : 150708-1C	
(1 Meter Below Surface)	
Time	Preserved?
10:19	H2SO4

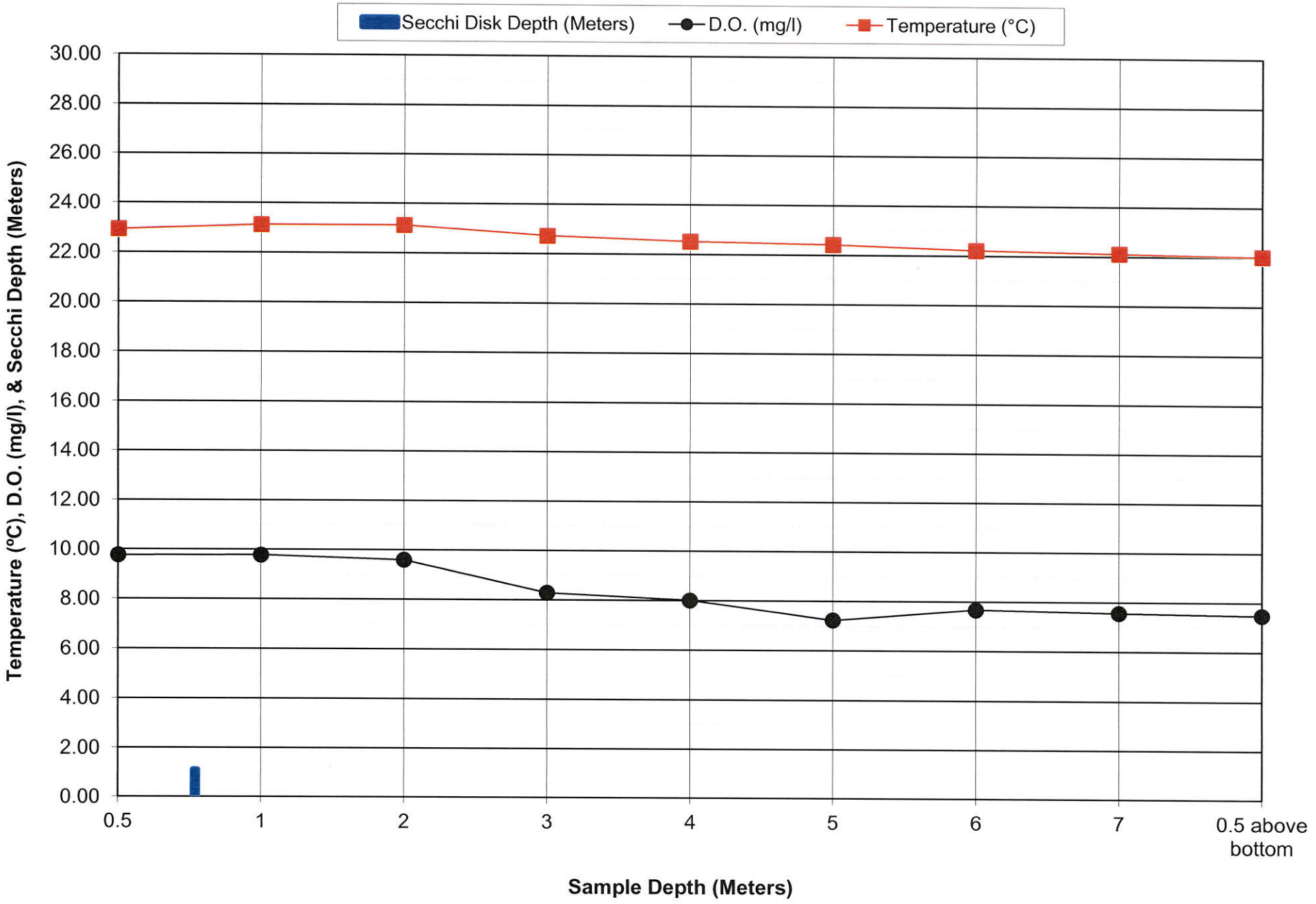
Lab Sample I.D.# : 150708-1D	
(1 Meter Above Bottom)	
Time	Preserved?
10:20	H2SO4

Sample Location: N45° 56.779' WO°92 36.286' Elev. 923' (New) N45° 56.398' W92° 31.975' (Old)

Comments: _____

Performed By: GARY RAST & RUSS BARRON

Clam River Impoundment - FERC # 9185
July 8, 2015 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: 07/31/15 Code: NNNN-S

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

NLS Project: 243476
NLS Customer: 102823
Phone: 855 994 9376

Project: Clam River

150708-1A NLS ID: 869643
COC: 179122:1 Matrix: SW
Collected: 07/08/15 10:15 Received: 07/09/15

Parameter	Result	Units	Dilution	LOD	LOQ	Analyzed	Method	Lab
Chlorophyll, all species	see attached					07/29/15	10200-H	721026460
Lab filtration for Chlorophyll	yes					07/10/15	NA	721026460

150708-1B NLS ID: 869644
COC: 179122:2 Matrix: SW
Collected: 07/08/15 10:17 Received: 07/09/15

Parameter	Result	Units	Dilution	LOD	LOQ	Analyzed	Method	Lab
Color, APHA (true)	35	C.P.U.	1	5.0*		07/09/15	SM 2120-B 20ed	721026460
Lab filtration	yes					07/09/15	NA	721026460

150708-1C NLS ID: 869645
COC: 179122:3 Matrix: SW
Collected: 07/08/15 10:19 Received: 07/09/15

Parameter	Result	Units	Dilution	LOD	LOQ	Analyzed	Method	Lab
Phosphorus, tot. as P	0.061	mg/L	1	0.0070*		07/23/15	4500-P E-1999	721026460

150708-1D NLS ID: 869646
COC: 179122:4 Matrix: SW
Collected: 07/08/15 10:20 Received: 07/09/15

Parameter	Result	Units	Dilution	LOD	LOQ	Analyzed	Method	Lab
Phosphorus, tot. as P	0.050	mg/L	1	0.0070*		07/23/15	4500-P E-1999	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 and/or solids content.

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: 243476
Clam River

Sample	Description	CC a	Pheo a	TC a	TC b	TC c
869643	150708-1A	11	0.42	12	0.041	0.96

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. 179122

CLIENT	RENEWABLE WORLD ENERGIES
ADDRESS	1005 STATE ST PO BOX 264
CITY / STATE / ZIP	NESHKORO / WI / 54960
PROJECT DESCRIPTION / NO.	CLAM RIVER / QUOTATION NO.
DNR FID # / DNR LICENSE #	
CONTACT / PHONE	GARY RAST / 855-994-9376
PURCHASE ORDER NO. / FAX	VERBAL / 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; COLOR; PH; 1605; 1610

ITEM NO.	NLS LAB NO.	SAMPLE ID	COLLECTION DATE	COLLECTION TIME	MATRIX (See above)	Chloride	Color	pH	1605	1610	COLLECTION REMARKS (i.e. DNR Well ID #)
1.	586643	150708-1A	7/8	10:15	RIVER WATER	X					
2.	644	" 1B	7/8	10:17			X				
3.	645	" 1C	7/8	10:19				X			
4.	646	" 1D	7/8	10:20					X		
5.											
6.											
7.											
8.											
9.											
10.											

ONE SAMPLE PER LINE

COLLECTED BY (signature)	CUSTODY SEAL NO. (IF ANY)	DATE/TIME 7/8/15 10:15-10:20
RELINQUISHED BY (signature)	RECEIVED BY (signature)	DATE/TIME
DISPATCHED BY (signature)	METHOD OF TRANSPORT: UPS	DATE/TIME 7/8/15 3:00

REPORT TO: SAME AS ABOVE ATTN GARY

RECEIVED AT NLS BY (signature): Marian Pease	DATE/TIME 7-9-15 9:45	CONDITION ONICE	TEMP.
COOLER #	REMARKS & OTHER INFORMATION		
	WDNR FACILITY NUMBER	E-MAIL ADDRESS	

INVOICE TO: 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.

ORIGINAL COPY

Appendix C

August 6, 2015 Sampling Documents

IMPOUNDMENT SAMPLING LOG

2015 Water Quality Study - Clam River Hydroelectric Project - FERC #9185

HWL - 898.72

Date: 8/6/15

~~Pre-Sampling Data~~: TWL - 863.10 150 CFS

Time: 10:00 Barometer: 29.95 Air Temp: 22.2 °C Wind Speed: 5 10 MPH

Sky Conditions: FAIR, CLEAR, PERIODS OF 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: 75% Charge

Calibration Time: 3/11/2015 Method: Factory

Sampling Depth Profile: Measured Depth to Bottom of the Impoundment: 8.0 Meter

Secchi Disk Depth: (E0.1 Meter) .5 Meter Time: 10:05

Chlorophyll a (1 Meter Below Surface)

Lab Sample I.D.# : 080615-1A		
Time	Quantity (ml)	Filtered
10:10	1000	NO

True Color (1 Meter Below Surface)

Lab Sample I.D.# : 080615-1B	
Time	Quantity (ml)
10:12	250

D.O. Sample Data

Depth	Time	D.O. (mg/l)	°C
.5 Mtr Below Surface	10:17	16.71	24.5
1 Meter	10:18	16.41	24.7
2 Meter	10:19	16.71	24.7
3 Meter	10:20	16.25	24.7
4 Meter	10:21	9.74	23.5
5 Meter	10:22	6.65	23.2
6 Meter	10:23	4.39	23.0
7 Meter	10:24	6.20	22.8
8 Meter			
.5 Mtr Above Bottom	10:25	5.50	22.6

Phosphorus

Lab Sample I.D.# : 080615-1C	
(1 Meter Below Surface)	
Time	Preserved?
10:14	H_2SO_4

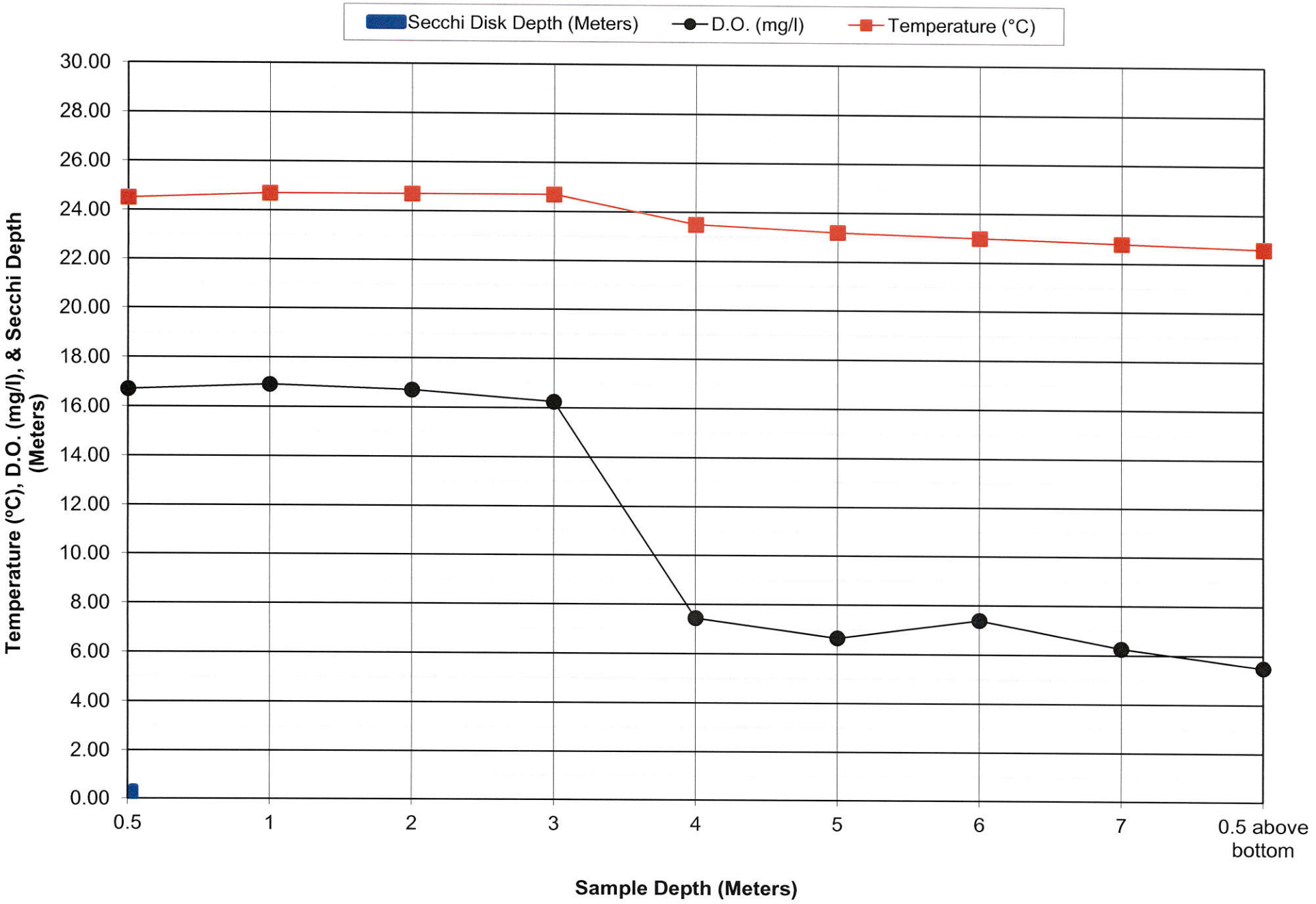
Lab Sample I.D.# : 080615-1D	
(1 Meter Above Bottom)	
Time	Preserved?
10:15	H_2SO_4

Sample Location: N45° 56.779' WO°92 36.286' Elev. 923' (New) N45° 56.398' W92° 31.975' (Old)

Comments: _____

Performed By: GARY RAST + RUSS BARROW

Clam River Impoundment - FERC # 9185
August 6, 2015 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

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

NLS Project: 245361
NLS Customer: 102823
Phone: 855 994 9376

Project: Clam River

080615-1A NLS ID: 875570
COC: 185814:1 Matrix: SW
Collected: 08/06/15 10:10 Received: 08/07/15

Parameter	Result	Units	Dilution	LOD	LOQ	Analyzed	Method	Lab
Chlorophyll, all species	see attached					08/07/15	10200-H	721026460
Lab filtration for Chlorophyll	yes					08/07/15	NA	721026460

080615-1B NLS ID: 875571
COC: 185814:2 Matrix: SW
Collected: 08/06/15 10:12 Received: 08/07/15

Parameter	Result	Units	Dilution	LOD	LOQ	Analyzed	Method	Lab
Color, APHA (true)	40	C.P.U.	1	5.0*		08/07/15	SM 2120-B 20ed	721026460
Lab filtration	yes					08/07/15	NA	721026460

080615-1C NLS ID: 875572
COC: 185814:3 Matrix: SW
Collected: 08/06/15 10:14 Received: 08/07/15

Parameter	Result	Units	Dilution	LOD	LOQ	Analyzed	Method	Lab
Phosphorus, tot. as P	0.076	mg/L	1	0.0070*		08/10/15	4500-P E-1999	721026460

080615-1D NLS ID: 875573
COC: 185814:4 Matrix: SW
Collected: 08/06/15 10:15 Received: 08/07/15

Parameter	Result	Units	Dilution	LOD	LOQ	Analyzed	Method	Lab
Phosphorus, tot. as P	0.043	mg/L	1	0.0070*		08/10/15	4500-P E-1999	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 and/or solids content.

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: 245361
Clam River

Sample	Description	CC a	Pheo a	TC a	TC b	TC c
875570	080615-1A	35	0.0*	34	1.1	5.2

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. 185814

CLIENT	RENEWABLE WORLD ENERGIES
ADDRESS	100 S STATE ST PO BOX 264
CITY / STATE / ZIP	NESAKORO / WI / 54960
PROJECT DESCRIPTION / NO.	CLAM RIVER
QUOTATION NO.	
DNR FID #	
DNR LICENSE #	
CONTACT	GARY
PHONE	555-994-9376
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, PH 5, PH 5

ITEM NO.	NLS LAB NO.	SAMPLE ID	COLLECTION DATE	COLLECTION TIME	MATRIX (See above)	COLLECTION REMARKS (i.e. DNR Well ID #)
1.	875570	080615-1A	8/6/15	10:10	RIVER WATER	
2.	571	" -1B		10:12		
3.	572	" -1C		10:14		
4.	573	" -1D		10:15		
5.						
6.						
7.						
8.						
9.						
10.						

ONE SAMPLE PER LINE

COLLECTED BY (signature)	CUSTODY SEAL NO. (IF ANY)	DATE/TIME 8/6/15 10:10 - 10:15
RELINQUISHED BY (signature)	RECEIVED BY (signature)	DATE/TIME
DISPATCHED BY (signature)	METHOD OF TRANSPORT: UPS	DATE/TIME 8/6/15 2:00
RECEIVED AT NLS BY (signature)	DATE/TIME 8/7/15 945	CONDITION / TEMP.
COOLER #	REMARKS & OTHER INFORMATION	
	WDNR FACILITY NUMBER	E-MAIL ADDRESS

REPORT TO: SAME ABOVE
ATTN: GARY

INVOICE TO: 100 I 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.
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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: 08/25/15 Code: NNNN-S

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

Project revised on: 08/25/2015 ** See note below **

NLS Project: 245361
NLS Customer: 102823
Phone: 855 994 9376

Project: Clam River

080615-1A NLS ID: 875570
COC: 185814:1 Matrix: SW
Collected: 08/06/15 10:10 Received: 08/07/15

Parameter	Result	Units	Dilution	LOD	LOQ	Analyzed	Method	Lab
Chlorophyll, all species	see attached					08/07/15	10200-H	721026460
Lab filtration for Chlorophyll	yes					08/07/15	NA	721026460

080615-1B NLS ID: 875571
COC: 185814:2 Matrix: SW
Collected: 08/06/15 10:12 Received: 08/07/15

Parameter	Result	Units	Dilution	LOD	LOQ	Analyzed	Method	Lab
Color, APHA (true)	40	C.P.U.	1	5.0*		08/07/15	SM 2120-B 20ed	721026460
Lab filtration	yes					08/07/15	NA	721026460

080615-1C NLS ID: 875572
COC: 185814:3 Matrix: SW
Collected: 08/06/15 10:14 Received: 08/07/15

Parameter	Result	Units	Dilution	LOD	LOQ	Analyzed	Method	Lab
Phosphorus, tot. as P	0.076	mg/L	1	0.0070*		08/10/15	4500-P E-1999	721026460

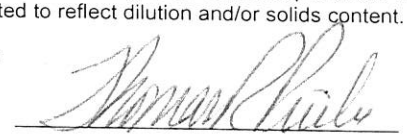
080615-1D NLS ID: 875573
COC: 185814:4 Matrix: SW
Collected: 08/06/15 10:15 Received: 08/07/15

Parameter	Result	Units	Dilution	LOD	LOQ	Analyzed	Method	Lab
Phosphorus, tot. as P	0.043	mg/L	1	0.0070*		08/10/15	4500-P E-1999	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 and/or solids content.

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

Revision note: The chlorophyll template has been modified for sample 875570.

Northern Lake Service, Inc.
Chlorophyll Results

Customer: Renewable World Energies
Project: 245361
Clam River

Sample	Description	CC a	Pheo a	TC a	TC b	TC c
875570	080615-1A	130	0.0*	120	0.0*	7.8

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.

Appendix D

Agency Correspondence

Renewable World Energies

October 2, 2015

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: Clam River Hydroelectric Project
FERC Project Number 9185
Flambeau Hydro LLC
Draft Report 2015 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 2015 Water Quality Monitoring Data* for the Clam River 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 July 24, 2006. 2015 was the eighth 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

for Gary Rast
Mr. Jason Kreuscher
Vice President, Operations

Attachment: Draft Report 2015 Water Quality Monitoring Data - October 2, 2015

Cc: RWE, Corporate