

## Appendix 1

### Documentation of Consultation



**Upper Peninsula Power Company**  
500 North Washington Street  
Ishpeming, MI 49849  
[www.UPPCO.com](http://www.UPPCO.com)

January 23, 2015

FERC Project No. 01864  
NATDAM Nos. M100203, M100153,  
M100028 & M100064

Mr. Burr Fisher - USFWS  
Mr. Stephen Gilbert - WDNR  
Mr. Kyle Kruger - MDNR  
Mr. Gene Mensch - KBIC  
Mr. Norm Nass -USFS  
Mr. James Schramm - MHRC

Dear Agency Representative:

Bond Falls Hydroelectric Project - Bond Falls, Victoria,  
Lake Gogebic/Bergland, and Cisco Developments  
Annual Report of Deviations Less Than Sixty Minutes

According to the Order dated August 18, 2011, Upper Peninsula Power Company (UPPCO) is submitting a report containing all 2014 deviations less than 60 minutes that did not result in the observation or reporting of any negative environmental effects. UPPCO is to provide the annual report for agency comment by January 31 of each year.

The report, to the extent possible, identifies the cause, severity, and duration of the incidents, and any observed or reported adverse environmental impacts resulting from the incidents.

The report also includes: 1) operational data necessary to determine compliance with the operating range requirement; 2) a description of any corrective measures implemented at the time of the occurrences and the measures implemented or proposed to ensure that similar incidents do not recur; and 3) comments or correspondence, if any, received from the resource agencies or other interested parties regarding the incidents.

A summary for each deviation and the required information for each have been enclosed. All deviations included in this report did not result in the observation or reporting of any negative environmental effects.

Please provide your comments on the annual report no later than February 23, 2015. UPPCO is required to forward the annual report with stakeholder comments to the Commission no later than February 27, 2015. Should you have any question, please do not hesitate to contact me at (906) 553-2186.

Sincerely,

Jim R. Melchiori  
Supervisor – Regional Generation West



**Upper Peninsula Power Company**  
500 North Washington Street  
Ishpeming, MI 49849  
[www.UPPCO.com](http://www.UPPCO.com)

January 23, 2015

FERC Project No. 02506

Mr. Burr Fisher - FWS  
Mr. Kyle Kruger - MDNR

Dear Agency Representative:

Escanaba River Hydroelectric Project  
Annual Report of Deviations Less Than Sixty Minutes

According to the Order dated September 1, 2011, Upper Peninsula Power Company (UPPCO) is submitting a report containing all 2014 deviations less than 60 minutes, that did not result in the observation or reporting of any negative environmental effects. UPPCO is to provide the annual report for agency comment by January 31 of each year.

The report shall, to the extent possible, identify the cause, severity, and duration of the incident, and any observed or reported adverse environmental impacts resulting from the incident.

The report also includes: 1) operational data necessary to determine compliance with the operating range requirement; 2) a description of any corrective measures implemented at the time of the occurrence and the measures implemented or proposed to ensure that similar incidents do not recur; and 3) comments or correspondence, if any, received from the resource agencies or other interested parties regarding the incident.

A summary of each deviation and the required information for each deviation has been enclosed. All deviations included in this report did not result in the observation or reporting of any negative environmental effects.

Please provide your comments on the annual report no later than February 23, 2015. UPPCO is required to forward the annual report with stakeholder comments to the Commission no later than February 27, 2015. Should you have any questions, please do not hesitate to contact me at (906) 485-2419.

Sincerely,

Bob Meyers  
Project Manager - Regional Generation MI



**Upper Peninsula Power Company**  
500 North Washington Street  
Ishpeming, MI 49849  
[www.UPPCO.com](http://www.UPPCO.com)

January 23, 2015

FERC Project No. 02402  
NATDAM No. MI00193

Mr. Kyle Kruger – MDNR  
Mr. Burr Fisher – USFWS  
Mr. Norm Nass – USFS  
Mr. Gene Mensch – KBIC

Dear Agency Representative:

Prickett Hydroelectric Project  
Annual Report of Deviations Less Than Sixty Minutes

According to the Order dated August 12, 2011, Upper Peninsula Power Company (UPPCO) is submitting a report containing all 2014 deviations less than 60 minutes that did not result in the observation or reporting of any negative environmental effects. UPPCO is to provide the annual report for agency comment by January 31 of each year.

The report, to the extent possible, identifies the cause, severity, and duration of the incidents, and any observed or reported adverse environmental impacts resulting from the incidents.

The report also includes: 1) operational data necessary to determine compliance with the operating range requirement; 2) a description of any corrective measures implemented at the time of the occurrences and the measures implemented or proposed to ensure that similar incidents do not recur; and 3) comments or correspondence, if any, received from the resource agencies or other interested parties regarding the incidents.

A summary for each deviation and the required information for each have been enclosed. All deviations included in this report did not result in the observation or reporting of any negative environmental effects.

Please provide your comments on the annual report no later than February 23, 2015. UPPCO is required to forward the annual report with stakeholder comments to the Commission no later than February 27, 2015. Should you have any question, please do not hesitate to contact me at (906) 553-2186.

Sincerely,

Jim R. Melchiori  
Supervisor – Regional Generation West Michigan

## Appendix 2

### Annual Report

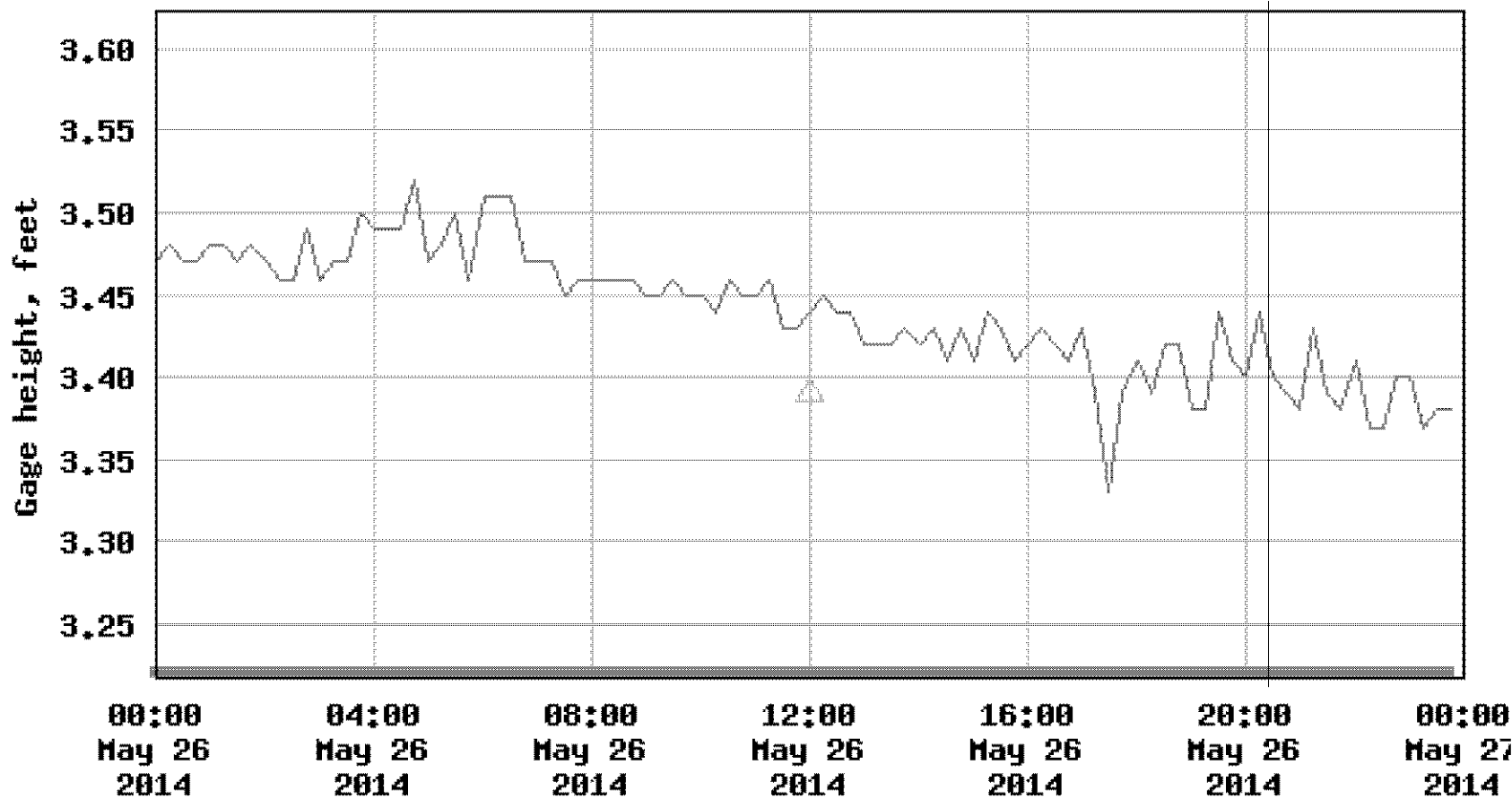
# Non-Conformance Event Record Detail



<b>NC Record Number:</b> NCREG6198		<b>Entity:</b> Regional Generation	
<b>Company - Level 1 - Level 2:</b> UPP-Lake Gogebic			
<b>Event Date:</b>	05/26/2014	<b>Discovery Date/Time:</b>	5/26/14 7:30
<b>Event Title:</b>	Lake Gogebic Maximum Headwater Deviation 5/26/14 15 minute interval		
<b>Event Details:</b>	On Monday may 26, 2015 the Lake gogebic headwater level slightly exceeded the maximum License limit of 3.50' local, bu .02' for approximately 15 minutes. The reservoir was operating very close to License limit due to spring runoff, and was in process of declining. the exceedance was most likley caused by wind seiche.		
<b>Immediate Action:</b>	None. All flashboards were removed, suspect deviation was caused by wind seiche.		
<b>Recommendations:</b>	Continue to operate slightly lower than License parameters to minimize sieche related deviations.		
<b>Potential Causes/Contributors to incident</b>	High inflovs, wind.		
<b>Entered By Name:</b>	James R Melchiori	<b>Creation Date/Time:</b>	6/10/14 14:36
<b>Entered By Department:</b>	Western Hydros	<b>Status:</b>	Approved
<b>Reportable to External Agency:</b>	no	<b>Basis for Reportability:</b>	Deviation was reported to FERC as part of April 28 to May 25, 2014 deviation on June 9, 2014 but also being included in less than 60 minute deviations for recrds.
<b>Additional Followup Required:</b>	no		
<b>Category:</b>	Regulatory	<b>Type:</b>	FERC Deviation
<b>Sub Type:</b>	River cond. (drought, highflows, etc)	<b>Description:</b>	Article 401 Headwater Maximum Deviation
<b>Causal Analysis Level:</b>	Apparent cause evaluation	<b>Causal Analysis Basis:</b>	Lake Gogebic reservoir was operating very close to license limit, with all flashboards removed, elevation rose slightly (3.52' local) above license limit (3.50' local) for approximately 15 minutes. Local observations by Kevin Poissant indicated high winds in the area around the time of the deviation.
<b>Event Start:</b>	5/26/2014 4:30 AM	<b>Event End:</b>	5/26/2014 5:00 AM
<b>Event Duration (HH:MM):</b>	00:30		
<b>Evaluator Name:</b>	Melchiori, James R	<b>Evaluator Dept:</b>	Western Hydros
<b>Evaluation Accepted:</b>	yes	<b>Acceptance Comments</b>	Automatically Approved
<b>Eval Due Date:</b>	6/10/2014	<b>Eval Completion Date:</b>	
<b>Approver Name:</b>	Melchiori, James R	<b>Corrective Action Approver Name</b>	Melchiori, James R
<b>Analysis Description:</b>	Lake Gogebic reservoir elevation slightly exceeded the License maximum at 0445 est on May 26, 2014. The reservoir was operating very close to the License limit due to high inflows, and a wind seiche is assumed to have caused the deviation.		
<b>Causes:</b>	High inflows, operations close to License limits and wind.		
<b>Primary Causes:</b>	Weather		
<b>Does Eval Require Sceening Committee Approval upon Completion</b>	no		
<b>Evaluation Reviewed/Approved by Screening Committee</b>			



### USGS 04035995 LAKE GOGEBIC NEAR BERGLAND, MI



△ Median daily statistic (37 years)    ■ Period of approved data  
 — Gage height

# Non-Conformance Event Record Detail

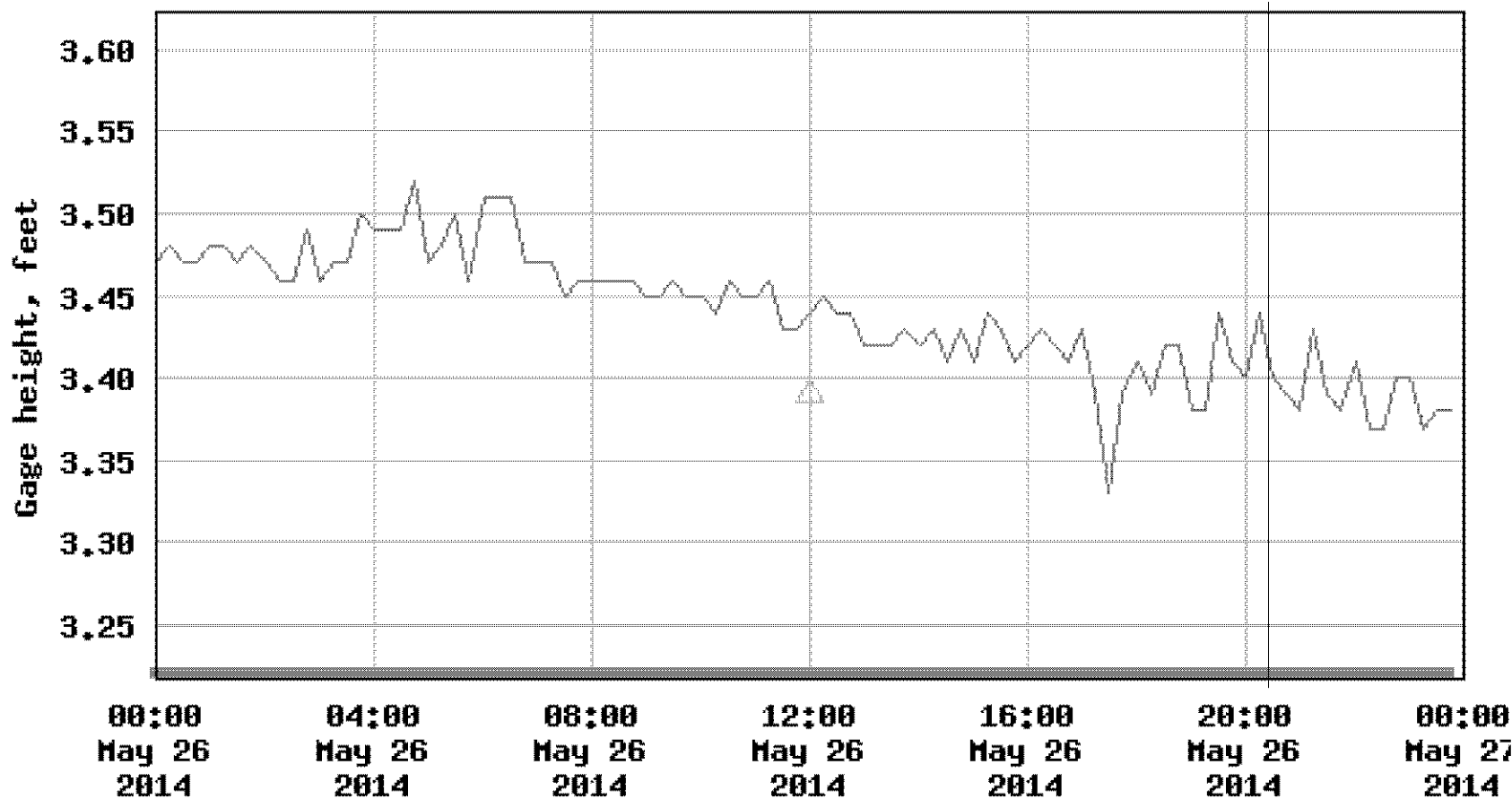


<b>NC Record Number:</b> NCREG6199		<b>Entity:</b> Regional Generation	
<b>Company - Level 1 - Level 2:</b> UPP-Lake Gogebic			
<b>Event Date:</b>	05/26/2014	<b>Discovery Date/Time:</b>	5/26/14 7:30
<b>Event Title:</b>	Lake Gogebic Maximum Headwater Elevation Deviation 5/26/14 0600-0645 EST		
<b>Event Details:</b>	On Monday May 26, 2014 the Lake Gogebic headwater elevation (3.51' local) slightly exceeded the License maximum of 3.5' local. The deviation was caused by high winds in the area, and operations close to License maximum due to high inflows.		
<b>Immediate Action:</b>	None, all flashboards had been removed for several weeks.		
<b>Recommendations:</b>	Continue to evaluate conditions and work with Agencies to delay refilling Lake Gogebic if sufficient snow pack and precip predictions warrant it.		
<b>Potential Causes/Contributors to incident</b>	High inflows form snow melt and precip, operations close to License maximum and wind seiche.		
<b>Entered By Name:</b>	James R Melchiori	<b>Creation Date/Time:</b>	6/10/14 14:51
<b>Entered By Department:</b>	Western Hydros	<b>Status:</b>	Approved
<b>Reportable to External Agency:</b>	no	<b>Basis for Reportability:</b>	Deviation was reported to FERC and Agencies as part of June 9, 2014 letter for April 28, 2014 to May 26, 2014 maximum license exceedance.
<b>Additional Followup Required:</b>	no		
<b>Category:</b>	Regulatory	<b>Type:</b>	FERC Deviation
<b>Sub Type:</b>	River cond. (drought, highflows, etc)	<b>Description:</b>	Article 401 deviation of maximum headwater elevation
<b>Causal Analysis Level:</b>	Apparent cause evaluation	<b>Causal Analysis Basis:</b>	High inflows, operations close to License limit and wind seiche resulted in slight deviation. Extensive efforts had been made to minimize the exceedance, but weather and snow pack and precipitation caused high inflows.
<b>Event Start:</b>	5/26/2014 6:00 AM	<b>Event End:</b>	5/26/2014 6:45 AM
		<b>Event Duration (HH:MM):</b>	00:45
<b>Evaluator Name:</b>	Melchiori, James R	<b>Evaluator Dept:</b>	Western Hydros
<b>Evaluation Accepted:</b>	yes	<b>Acceptance Comments</b>	Automatically Approved
<b>Eval Due Date:</b>	6/10/2014	<b>Eval Completion Date:</b>	
<b>Approver Name:</b>	Melchiori, James R	<b>Corrective Action Approver Name</b>	Melchiori, James R
<b>Analysis Description:</b>	Lake Gogebic headwater (3.51 local) slightly exceeded the license maximum limit (3.5' local) for approximately 45 minutes from 0600 to 0645 EST.		
<b>Causes:</b>	High inflows, operations close to License maximum limit and wind seiche.		
<b>Primary Causes:</b>	Weather		
<b>Does Eval Require Scening Committee Approval upon Completion</b>	no		
<b>Evaluation Reviewed/Approved by Screening Committee</b>			





### USGS 04035995 LAKE GOGEBIC NEAR BERGLAND, MI



△ Median daily statistic (37 years)    ■ Period of approved data  
 — Gage height

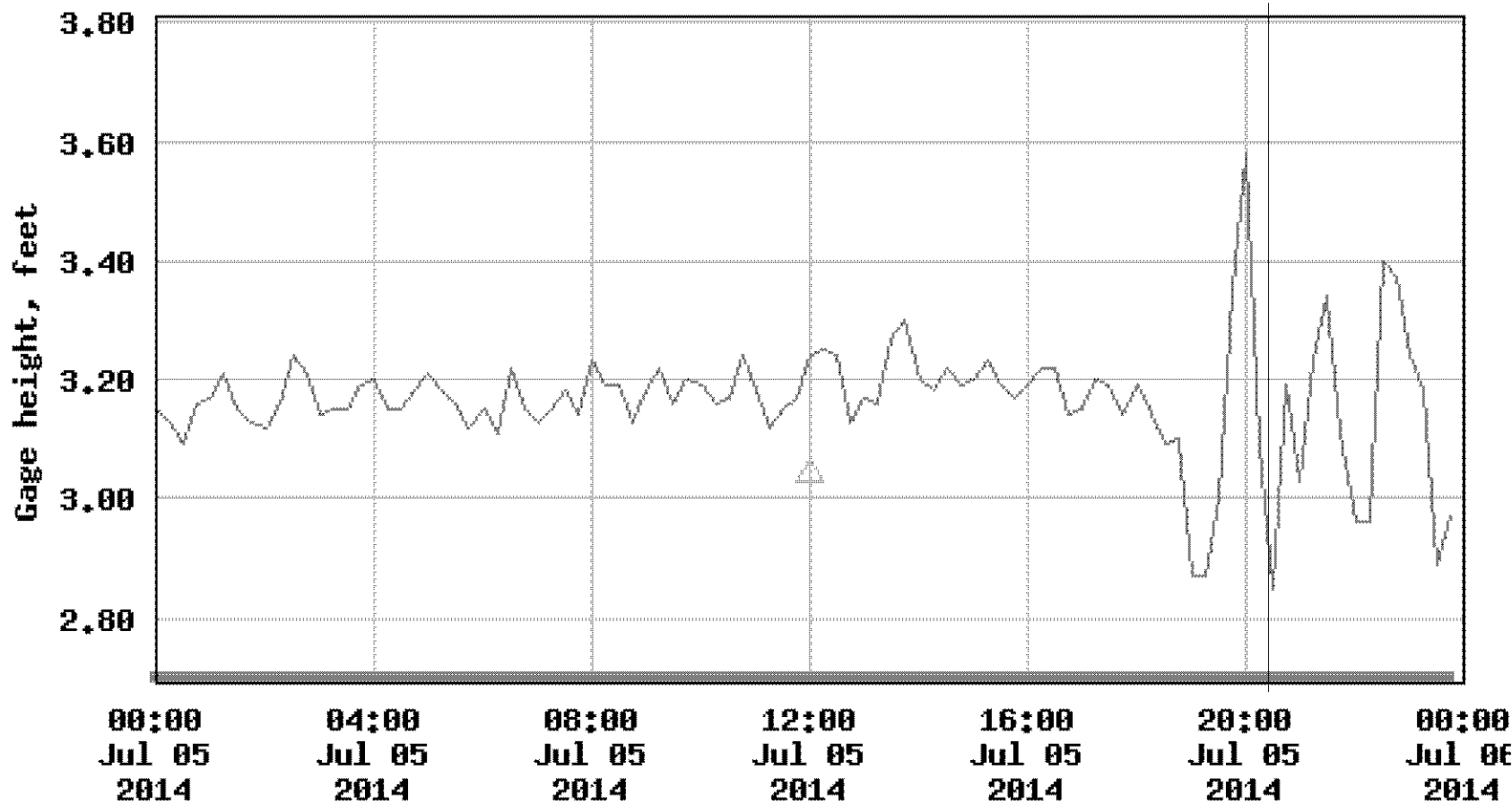
# Non-Conformance Event Record Detail



<b>NC Record Number:</b> NCREG6296		<b>Entity:</b> Regional Generation	
<b>Company - Level 1 - Level 2:</b> UPP-Lake Gogebic			
<b>Event Date:</b>	07/05/2014	<b>Discovery Date/Time:</b>	7/6/14 8:00
<b>Event Title:</b>	Lake Gogebic Article 401 Maximum Headwater Deviation 7/5/14		
<b>Event Details:</b>	On Saturday July 5, 2014 at approximately 2300 hours EST the Lake Gogebic headwater elevation exceeded the License limit for less than 30 minutes, License maximum is 3.5' local, maximum recorded level was 3.58' local, deviation result of high winds and lake seiche.		
<b>Immediate Action:</b>	None, Lake Gogebic was being operated at or slightly below License target elevation at the time of the event.		
<b>Recommendations:</b>	None, continue to operate slightly below License target.		
<b>Potential Causes/Contributors to incident</b>	Wind, Lake seiche		
<b>Entered By Name:</b>	James R Melchiori	<b>Creation Date/Time:</b>	7/8/14 9:24
<b>Entered By Department:</b>	Western Hydros	<b>Status:</b>	Approved
<b>Reportable to External Agency:</b>	no	<b>Basis for Reportability:</b>	Will be reported in 2014 Annual Report for deviations of less than 60 minutes.
<b>Additional Followup Required:</b>	no		
<b>Category:</b>	Regulatory	<b>Type:</b>	FERC Deviation
<b>Sub Type:</b>	River cond. (drought, highflows, etc)	<b>Description:</b>	Wind, Lake Seiche
<b>Causal Analysis Level:</b>	Apparent cause evaluation	<b>Causal Analysis Basis:</b>	Lake Gogebic was being operated slightly below License target elevation, high winds resulted in Lake Seiche, and slight maximum headwater License exceedance
<b>Event Start:</b>	7/5/2014 8:45 PM	<b>Event End:</b>	7/5/2014 9:15 PM
<b>Event Duration (HH:MM):</b>	00:30		
<b>Evaluator Name:</b>	Melchiori, James R	<b>Evaluator Dept:</b>	Western Hydros
<b>Evaluation Accepted:</b>	yes	<b>Acceptance Comments</b>	Automatically Approved
<b>Eval Due Date:</b>	7/8/2014	<b>Eval Completion Date:</b>	
<b>Approver Name:</b>	Melchiori, James R	<b>Corrective Action Approver Name</b>	Melchiori, James R
<b>Analysis Description:</b>	High winds and lake seiche resulted in slight Article 401 maximum headwater deviation.		
<b>Causes:</b>	Wind, Lake Seiche		
<b>Primary Causes:</b>	Weather		
<b>Does Eval Require Seening Committee Approval upon Completion</b>	no		
<b>Evaluation Reviewed/Approved by Screening Committee</b>			



### USGS 04035995 LAKE GOGEBIC NEAR BERGLAND, MI



△ Median daily statistic (37 years)    ■ Period of approved data  
 — Gage height

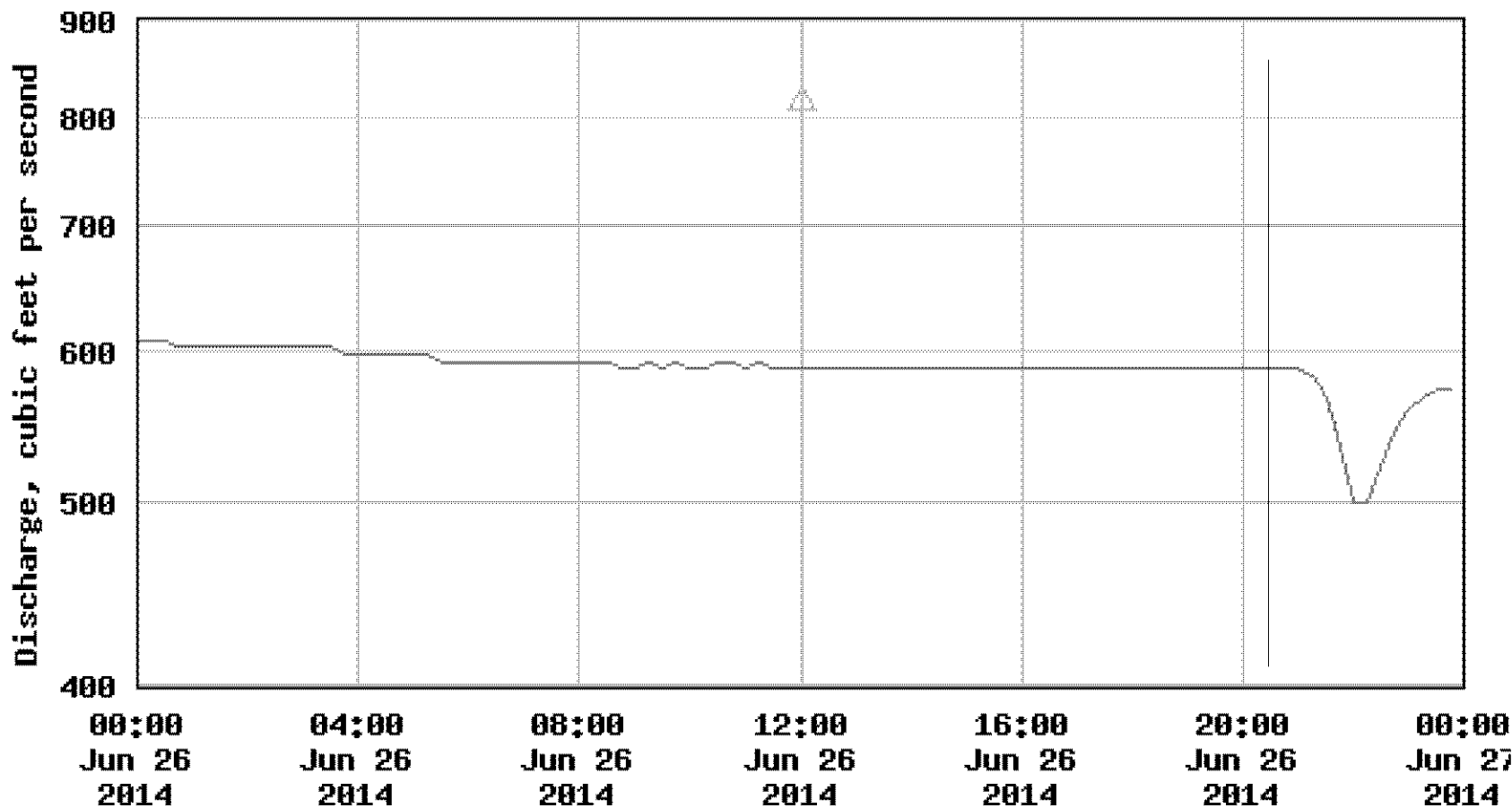
# Non-Conformance Event Record Detail



<b>NC Record Number:</b> NCREG6324		<b>Entity:</b> Regional Generation	
<b>Company - Level 1 - Level 2:</b> UPP-Victoria Hydro			
<b>Event Date:</b>	06/26/2014	<b>Discovery Date/Time:</b>	6/26/14 21:05
<b>Event Title:</b>	Victoria Unit 1 Trip Thursday June 26, 2014		
<b>Event Details:</b>	On Thursday June 26, 2014 at 2105 hours EST, Victoria Unit 1 tripped off line when all of the governor oil pump drive belts failed.		
<b>Immediate Action:</b>	ES&C Supervisor/Operator Todd Strodhoff immediately opened spillway gate 8, and called out an Operator. The Operator being called out advised Todd to start up Unit 2, which he did at 2124 hours.		
<b>Recommendations:</b>	None		
<b>Potential Causes/Contributors to incident</b>	Equipment failure, governor oil pump drive belts.		
<b>Entered By Name:</b>	James R Melchiori	<b>Creation Date/Time:</b>	7/14/14 13:02
<b>Entered By Department:</b>	Western Hydros	<b>Status:</b>	Approved
<b>Reportable to External Agency:</b>	no	<b>Basis for Reportability:</b>	Event will be reported with other less than 60 minute deviations for 2014 in 2015.
<b>Additional Followup Required:</b>	no		
<b>Category:</b>	Regulatory	<b>Type:</b>	FERC Deviation
<b>Sub Type:</b>	Plant equip. failure	<b>Description:</b>	Article 402 Minimum 200 CFS Plant Flow deviation
<b>Causal Analysis Level:</b>	Apparent cause evaluation	<b>Causal Analysis Basis:</b>	Equipment failure, governor oil pump drive belts failed.
<b>Event Start:</b>	6/26/2014 9:05 PM	<b>Event End:</b>	6/26/2014 9:24 PM
<b>Event Duration (HH:MM):</b>	00:19		
<b>Evaluator Name:</b>	Melchiori, James R	<b>Evaluator Dept:</b>	Western Hydros
<b>Evaluation Accepted:</b>	yes	<b>Acceptance Comments</b>	Automatically Approved
<b>Eval Due Date:</b>	7/14/2014	<b>Eval Completion Date:</b>	
<b>Approver Name:</b>	Melchiori, James R	<b>Corrective Action Approver Name</b>	Melchiori, James R
<b>Analysis Description:</b>	Unit 1 governor oil pump drive belts failed, resulting in Unit trip, ES&C Supervisor/Operator (Todd Strodhoff) opened spillway gate 8 and called out an operator, the operator advised Todd to startup Unit 2, which he did. Event lasted approximately 19 minutes.		
<b>Causes:</b>	Equipment failure		
<b>Primary Causes:</b>	Equipment Failures		
<b>Does Eval Require Scening Committee Approval upon Completion</b>	no		
<b>Evaluation Reviewed/Approved by Screening Committee</b>			



### USGS 04040000 ONTONAGON RIVER NEAR ROCKLAND, MI



---- Provisional Data Subject to Revision ----

▲ Median daily statistic (72 years) — Discharge

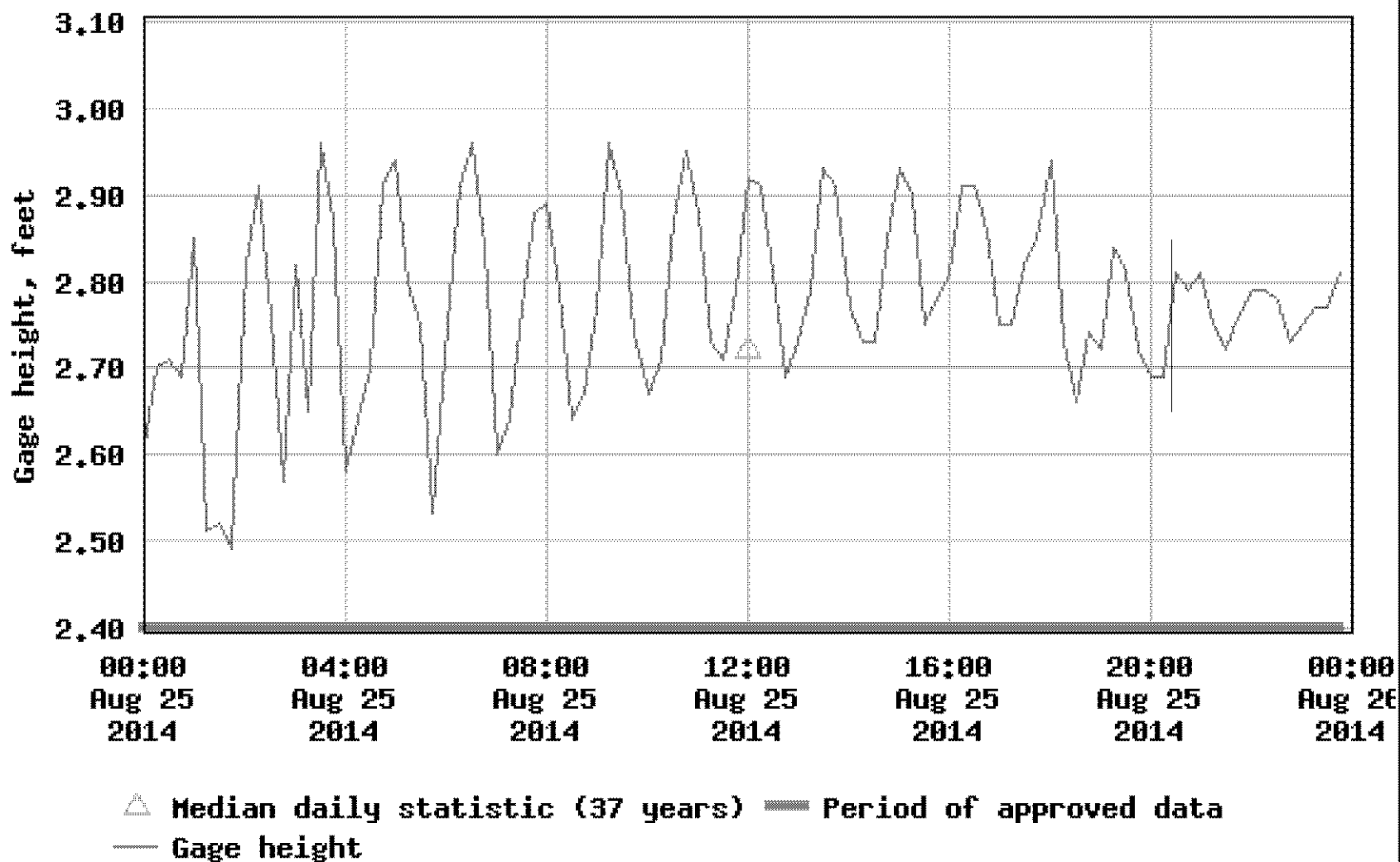
# Non-Conformance Event Record Detail



<b>NC Record Number:</b> NCREG6533		<b>Entity:</b> Regional Generation	
<b>Company - Level 1 - Level 2:</b> UPP-Lake Gogebic			
<b>Event Date:</b>	08/25/2014	<b>Discovery Date/Time:</b>	8/25/14 7:30
<b>Event Title:</b>	Lake Gogebic Article 401 Minimum Headwater Deviation August 25, 2014 (less than 60 minute)		
<b>Event Details:</b>	ON august 25, 2014 at 0145 EST, the Lake Gogebic Headwater elevation dropped down to 2.49' local for the 15 minute USGS value. The License minimum is 2.50' local. The slight deviation was result of a storm in the area, and wind seiche.		
<b>Immediate Action:</b>	None, outflows had been operating very close to License minimums, and Lake elevation was also being operated close to target elevation per the License.		
<b>Recommendations:</b>	None.		
<b>Potential Causes/Contributors to incident</b>	Weather, wind and seiche.		
<b>Entered By Name:</b>	James R Melchiori	<b>Creation Date/Time:</b>	8/29/14 8:52
<b>Entered By Department:</b>	Western Hydros	<b>Status:</b>	Approved
<b>Reportable to External Agency:</b>	no	<b>Basis for Reportability:</b>	Will be reported in annual report with other less than 60 minute deviations.
<b>Additional Followup Required:</b>	no		
<b>Category:</b>	Regulatory	<b>Type:</b>	FERC Deviation
<b>Sub Type:</b>	River cond. (drought, highflows, etc)	<b>Description:</b>	Storm, wind and seiche
<b>Causal Analysis Level:</b>	Apparent cause evaluation	<b>Causal Analysis Basis:</b>	Headwater elevation varied throughout night, confirmed storm in area, histoical and known for wind seiches. Facility being operated very close to License targets and minimum outflows.
<b>Event Start:</b>	8/25/2014 1:30 AM	<b>Event End:</b>	8/25/2014 2:00 AM
<b>Event Duration (HH:MM):</b>	00:30		
<b>Evaluator Name:</b>	Melchiori, James R	<b>Evaluator Dept:</b>	Western Hydros
<b>Evaluation Accepted:</b>	yes	<b>Acceptance Comments</b>	Automatically Approved
<b>Eval Due Date:</b>	8/29/2014	<b>Eval Completion Date:</b>	
<b>Approver Name:</b>	Melchiori, James R	<b>Corrective Action Approver Name</b>	Melchiori, James R
<b>Analysis Description:</b>	On Monday August 25, 2014 at 0145 EST the Lake Gogebic headwater was 2.49' local according to the USGS gauging station. The 15 minute stamp indicated the headwater dropped down during the 15 minutes, but was above that level on the previous and post 15 minute intervals. Lake Gogebic was being operated close to License target and outflows were close to License minimums. The USGS graph indicates wind was cycling the headwater during this period.		
<b>Causes:</b>	Weather, wind, seiche and operations close to License targets.		
<b>Primary Causes:</b>	Weather		
<b>Does Eval Require Seencing Committee Approval upon Completion</b>	no		
<b>Evaluation Reviewed/Approved by Screening Committee</b>			



## USGS 04035995 LAKE GOGEBIC NEAR BERGLAND, MI



# Non-Conformance Event Record Detail

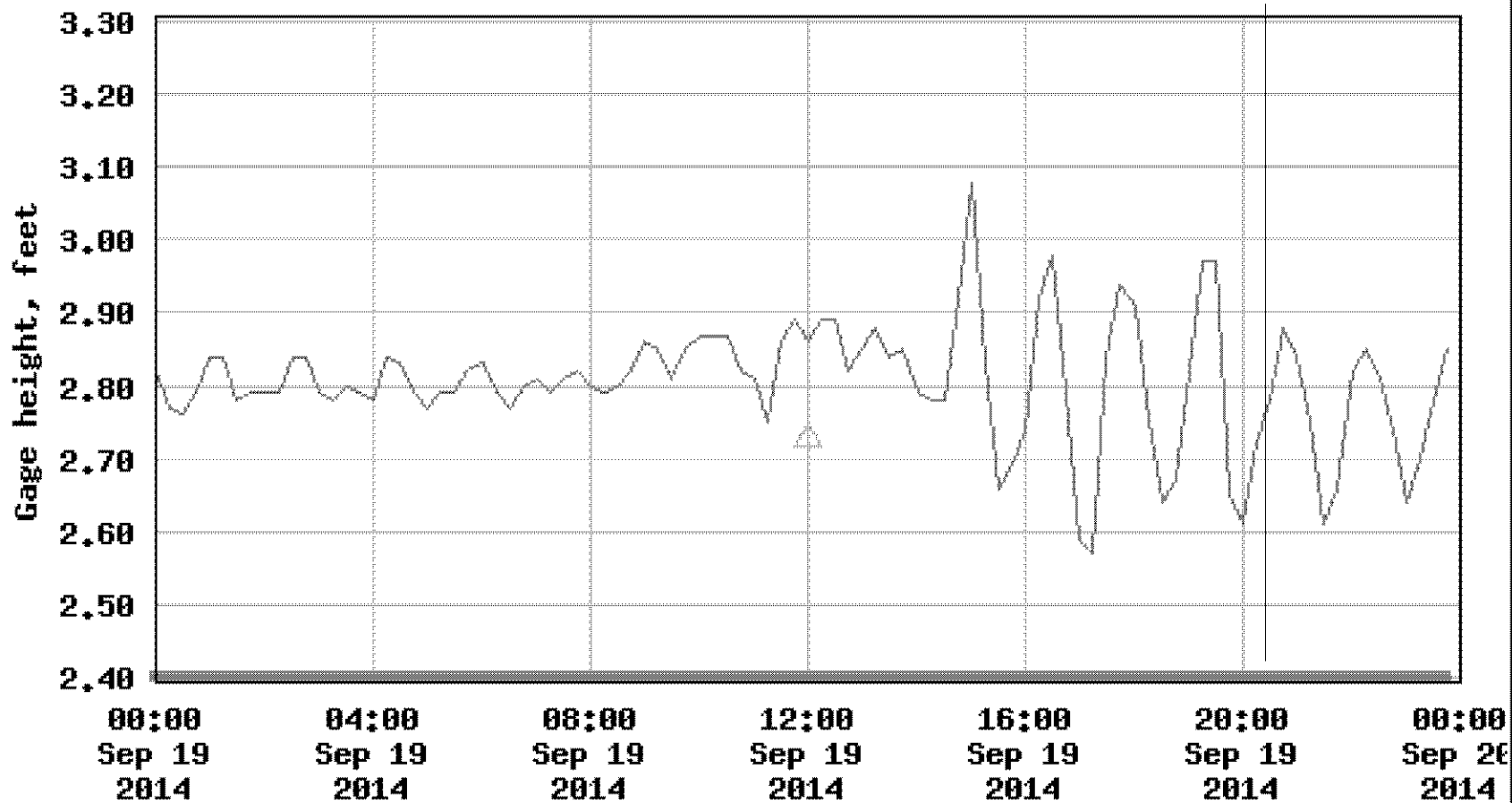


<b>NC Record Number:</b> NCREG6609		<b>Entity:</b> Regional Generation	
<b>Company - Level 1 - Level 2:</b> UPP-Lake Gogebic			
<b>Event Date:</b>	09/19/2014	<b>Discovery Date/Time:</b>	9/20/14 8:00
<b>Event Title:</b>	Lake Gogebic Article 401 Maximum Headwater Deviation 9/19/2014		
<b>Event Details:</b>	On Friday September 19, 2014 at approximately 1500 hours EDT, the Lake Gogebic headwater slightly exceeded the License maximum. The headwater was at 3.08' msl for 15 minute measurement at 1500 hours, but below 3.00' (which is maximum License limit) 15 minutes before and after. The headwater was being operated very close to the License end of month target prior to the event. High winds in the area resulted in Lake seiche.		
<b>Immediate Action:</b>	None. Headwater was being operated very close to License end of month target and Lake returned to normal levels once winds had subsided.		
<b>Recommendations:</b>	None.		
<b>Potential Causes/Contributors to incident</b>	High winds when operating headwater close to end of month targets, and slim operating band between end of month target and License limit.		
<b>Entered By Name:</b>	James R Melchiori	<b>Creation Date/Time:</b>	9/22/14 9:53
<b>Entered By Department:</b>	Western Hydros	<b>Status:</b>	Approved
<b>Reportable to External Agency:</b>	no	<b>Basis for Reportability:</b>	Event will be reported with other less than 60 minute deviations in annual submittal in 2015.
<b>Additional Followup Required:</b>	no		
<b>Category:</b>	Regulatory	<b>Type:</b>	FERC Deviation
<b>Sub Type:</b>	River cond. (drought, highflows, etc)	<b>Description:</b>	Article 401 Maximum Headwater Deviation caused by high winds while operating close to License end of month target.
<b>Causal Analysis Level:</b>	Apparent cause evaluation	<b>Causal Analysis Basis:</b>	Headwater was being operated very close to end of month target, high winds resulted in Lake seiche and slight exceedence of maximum headwater elevation for approximately 30 minutes or less.
<b>Event Start:</b>	9/19/2014 2:45 PM	<b>Event End:</b>	9/19/2014 3:15 PM
<b>Event Duration (HH:MM):</b>	00:30		
<b>Evaluator Name:</b>	Melchiori, James R	<b>Evaluator Dept:</b>	Western Hydros
<b>Evaluation Accepted:</b>	yes	<b>Acceptance Comments</b>	Automatically Approved
<b>Eval Due Date:</b>	9/22/2014	<b>Eval Completion Date:</b>	
<b>Approver Name:</b>	Melchiori, James R	<b>Corrective Action Approver Name</b>	Melchiori, James R
<b>Analysis Description:</b>	Lake Gogebic headwater slightly exceeded the Article 401 maximum for approximately 15 minutes and reached a maximum level of 3.08' (3.00' is License max) on Friday September 19, 2014 at approximately 1500 hours EDT. High winds in area resulted in a Lake seiche and slight deviation, while operating very close to the end of month target. The differential between the end of month target and Article 401 maximum headwater elevation is .2' for this time period.		
<b>Causes:</b>	High winds while operating close to License end of month target.		
<b>Primary Causes:</b>	Weather		
<b>Does Eval Require Seening Committee Approval upon Completion</b>	no		
<b>Evaluation Reviewed/Approved by Screening Committee</b>			





### USGS 04035995 LAKE GOGEBIC NEAR BERGLAND, MI



△ Median daily statistic (36 years)    ■ Period of approved data  
 — Gage height

## Escanaba River Hydroelectric Project #2506 Annual Report - 2014

Exhibit 402 - Incident Report of Deviation From Article 401 and 402

Article 401 - Run of River Article 402 - Reservoir Target Elevations -

Deviations less than 60 Minutes				
Project	Date	Type of Deviation	Duration	Reason
Dam No. 3	8/19/2014	Run - of - River	14 Mins	Lightning Strike - triped plant
Boney Falls	9/4/2014	Run - of - River	19 Mins	Storm/high winds caused a fault
Dam No. 3	11/12/2014	Run - of - River	25 Mins	Elec Jumper failure - tripped plant
Boney Falls	11/21/2014	Run - of - River	47 Mins	Car/Pole accident - tripped plant
Deviations greater than 60 Minutes				
Boney Falls	4/23/2014	Run - of - River	274 Mins	Storm/high winds caused a fault

### Augmentation Events that meet criteria for 2014

7/22, 7/25, 7/26, 7/27, 8/2, 8/3, 8/4, 8/6, 8/9, 8/16, 8/22

### Augmentation Events that meet trigger criteria but could not be completed

None

### Divergence Events for 2014

8/8 to 8/21

# Non-Conformance Event Record Detail



<b>NC Record Number:</b>	NCREG6443	<b>Entity:</b>	Regional Generation
<b>Company - Level 1 - Level 2:</b>	UPP-Escanaba Hydro-Boney Falls (Escanaba #4 Hydro)		
<b>Event Date:</b>	08/08/2014	<b>Discovery Date/Time:</b>	8/8/14 16:09
<b>Event Title:</b>	Low Dissolved Oxygen Alarm		
<b>Event Details:</b>	We received an alarm for the Dissolved Oxygen hitting the low limit. No corrective action is being taken at this time. According to our Boney Falls procedure no corrective action for low D.O. will be necessary until after augmentation/refill is complete and we are currently in an Augmentation refill.		
<b>Immediate Action:</b>	Reviewed procedure.		
<b>Recommendations:</b>	None.		
<b>Potential Causes/Contributors to incident</b>	Low Flows.		
<b>Entered By Name:</b>	Stephen M Beirne	<b>Creation Date/Time:</b>	8/8/14 16:12
<b>Entered By Department:</b>	Energy Supply and Control	<b>Status:</b>	Closed
<b>Reportable to External Agency:</b>	no	<b>Basis for Reportability:</b>	
<b>Additional Followup Required:</b>	no		
<b>Category:</b>	Environmental	<b>Type:</b>	Water
<b>Sub Type:</b>	Other	<b>Description:</b>	not a deviation
<b>Causal Analysis Level:</b>	Closed - No further action required	<b>Causal Analysis Basis:</b>	Not a deviation, augmentation process/refill at the time of alarm
<b>Event Start:</b>	8/8/2014 12:53 PM	<b>Event End:</b>	8/8/2014 12:53 PM
<b>Event Duration (HH:MM):</b>	00:00		
<b>Evaluator Name:</b>		<b>Evaluator Dept:</b>	
<b>Evaluation Accepted:</b>		<b>Acceptance Comments:</b>	
<b>Eval Due Date:</b>		<b>Eval Completion Date:</b>	
<b>Approver Name:</b>		<b>Corrective Action Approver Name:</b>	
<b>Analysis Description:</b>			
<b>Causes:</b>			
<b>Primary Causes:</b>			
<b>Does Eval Require Scening Committee Approval upon Completion</b>	no		
<b>Evaluation Reviewed/Approved by Screening Committee</b>			

# Non-Conformance Event Record Detail



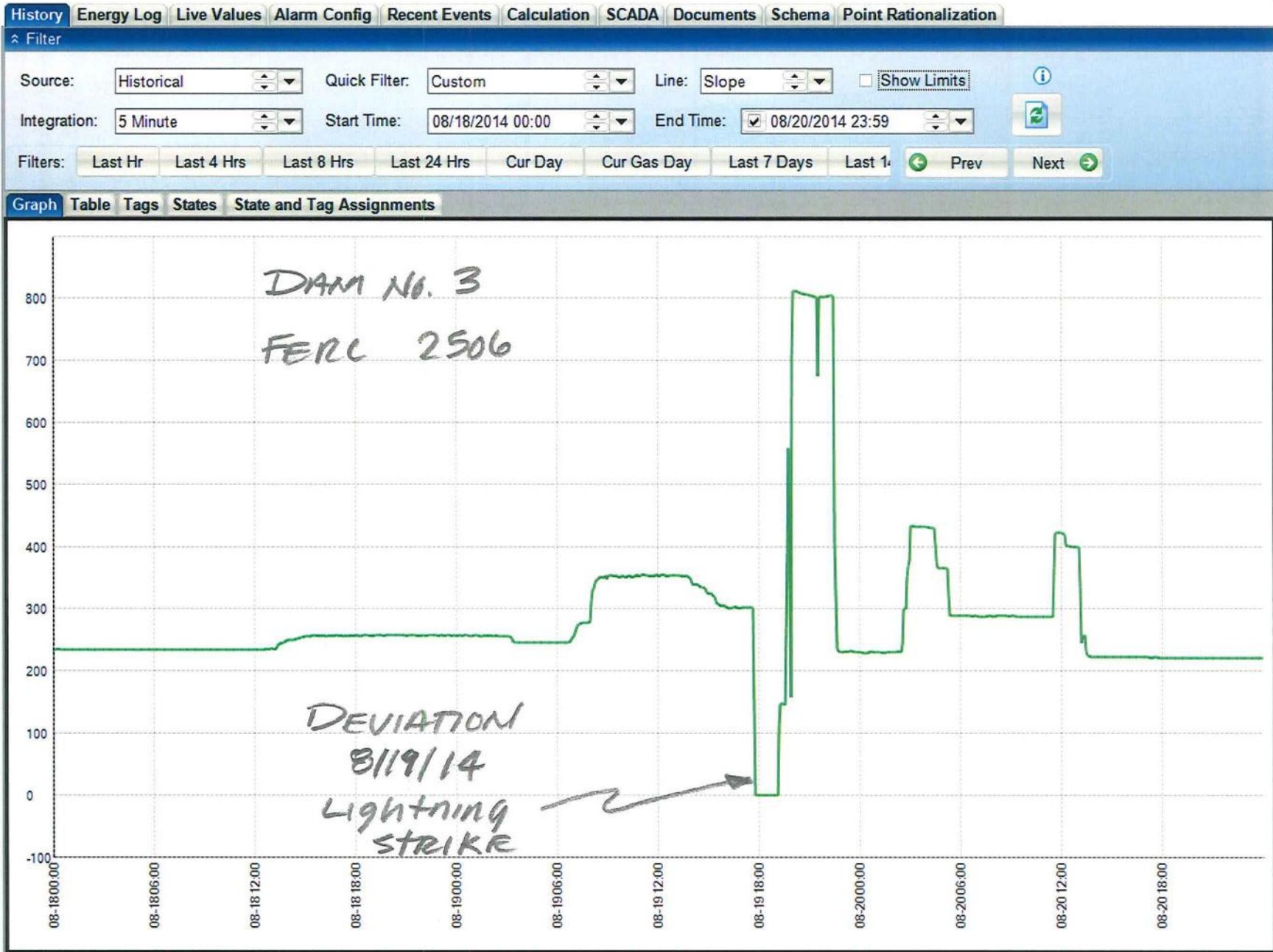
<b>NC Record Number:</b> NCREG6445		<b>Entity:</b> Regional Generation	
<b>Company - Level 1 - Level 2:</b> UPP-Escanaba Hydro-Boney Falls (Escanaba #4 Hydro)			
<b>Event Date:</b>	08/10/2014	<b>Discovery Date/Time:</b>	8/10/14 20:52
<b>Event Title:</b>	Dissolved Oxygen alarm		
<b>Event Details:</b>	The DO alarm is in, low, but a refill is in progress so no corrective action is required		
<b>Immediate Action:</b>	Initiated this CCAT		
<b>Recommendations:</b>	Investigate		
<b>Potential Causes/Contributors to incident</b>	Low flows		
<b>Entered By Name:</b>	Garry D Gentry	<b>Creation Date/Time:</b>	8/10/14 20:55
<b>Entered By Department:</b>	Energy Supply and Control	<b>Status:</b>	Closed
<b>Reportable to External Agency:</b>	no	<b>Basis for Reportability:</b>	
<b>Additional Followup Required:</b>	no		
<b>Category:</b>	Environmental	<b>Type:</b>	Water
<b>Sub Type:</b>	Other	<b>Description:</b>	not a deviation
<b>Causal Analysis Level:</b>	Closed - No further action required	<b>Causal Analysis Basis:</b>	Alarm came in, but in process of refilling, no deviation
<b>Event Start:</b>	8/10/2014 8:55 AM	<b>Event End:</b>	8/10/2014 8:55 AM
		<b>Event Duration (HH:MM):</b>	00:00
<b>Evaluator Name:</b>		<b>Evaluator Dept:</b>	
<b>Evaluation Accepted:</b>		<b>Acceptance Comments:</b>	
<b>Eval Due Date:</b>		<b>Eval Completion Date:</b>	
<b>Approver Name:</b>		<b>Corrective Action Approver Name:</b>	
<b>Analysis Description:</b>			
<b>Causes:</b>			
<b>Primary Causes:</b>			
<b>Does Eval Require Scening Committee Approval upon Completion</b>			no
<b>Evaluation Reviewed/Approved by Screening Committee</b>			

# Non-Conformance Event Record Detail



<b>NC Record Number:</b> NCREG6480		<b>Entity:</b> Regional Generation	
<b>Company - Level 1 - Level 2:</b> UPP-Escanaba Hydro-Escanaba #3 Hydro			
<b>Event Date:</b>	08/19/2014	<b>Discovery Date/Time:</b>	8/19/14 17:41
<b>Event Title:</b>	Escanaba Dam 3 lightning strike		
<b>Event Details:</b>	Many alarms. Many indications cycled or changed state. Lost plant flow indication. All gates indicate open and there are 2 battery charger related alarms. Seems that we lost power. Local operator said it looks like a lightning strike and the generator may be damaged. Gate was cracked open 2 inches.		
<b>Immediate Action:</b>	Call out		
<b>Recommendations:</b>	n/a		
<b>Potential Causes/Contributors to incident</b>	weather		
<b>Entered By Name:</b>	Jonathon J Jenkins	<b>Creation Date/Time:</b>	8/19/14 18:00
<b>Entered By Department:</b>	Energy Supply and Control	<b>Status:</b>	Closed
<b>Reportable to External Agency:</b>	no	<b>Basis for Reportability:</b>	< 60 Minute event will be done end of year
<b>Additional Followup Required:</b>	yes		
<b>Category:</b>	Regulatory	<b>Type:</b>	FERC Deviation
<b>Sub Type:</b>	Plant equip. failure	<b>Description:</b>	< 60 Minutes
<b>Causal Analysis Level:</b>	Closed - No further action required	<b>Causal Analysis Basis:</b>	Unit tripped, operator on site, had gate opened within 12 minutes of event
<b>Event Start:</b>	8/19/2014 5:36 PM	<b>Event End:</b>	8/19/2014 5:50 PM
		<b>Event Duration (HH:MM):</b>	00:14
<b>Evaluator Name:</b>		<b>Evaluator Dept:</b>	
<b>Evaluation Accepted:</b>		<b>Acceptance Comments</b>	
<b>Eval Due Date:</b>		<b>Eval Completion Date:</b>	
<b>Approver Name:</b>		<b>Corrective Action Approver Name</b>	
<b>Analysis Description:</b>			
<b>Causes:</b>			
<b>Primary Causes:</b>			
<b>Does Eval Require Scening Committee Approval upon Completion</b>	no		
<b>Evaluation Reviewed/Approved by Screening Committee</b>			

# Point Info - UPPCO-EHD3: Total Plant Flow

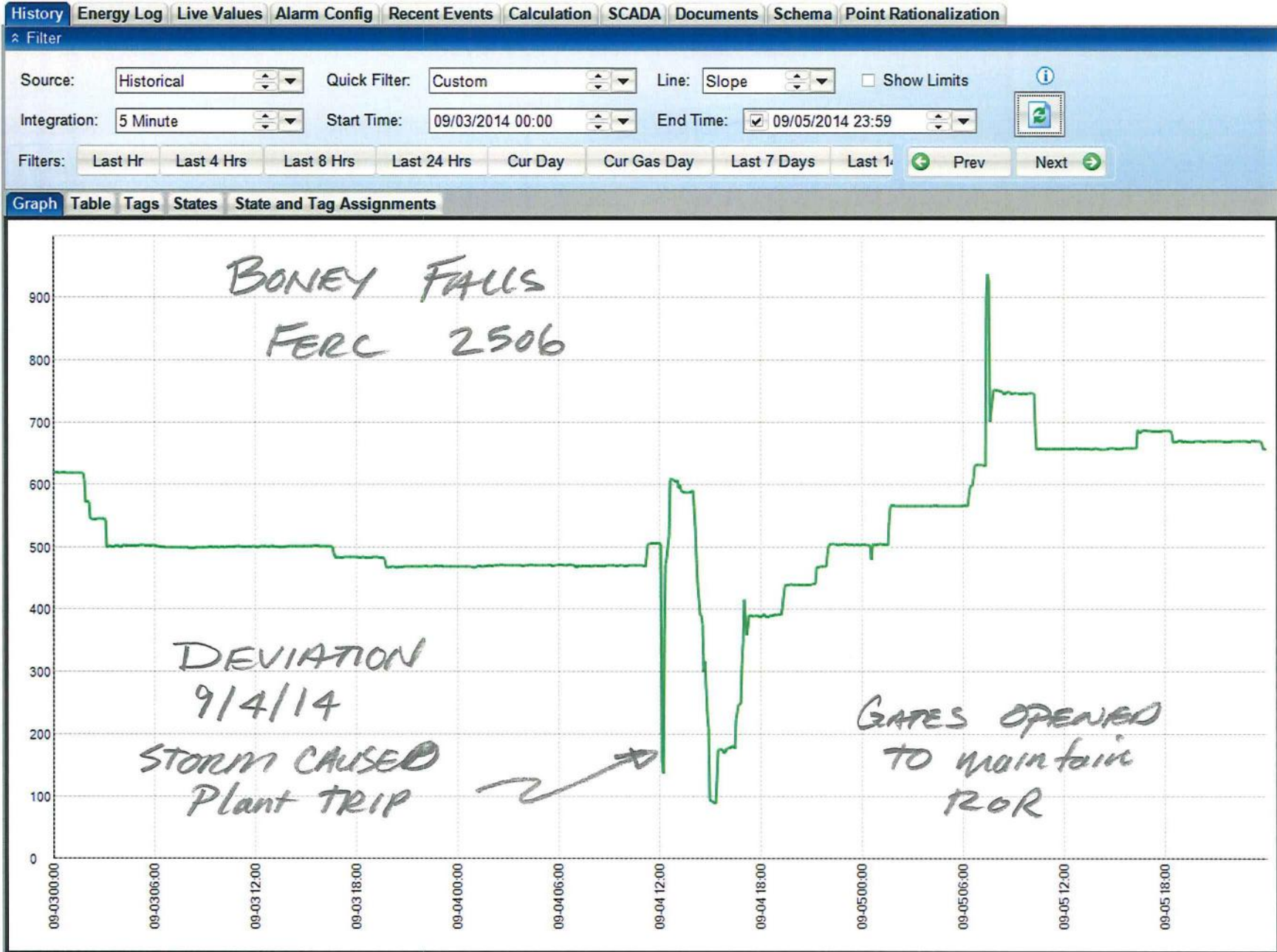


# Non-Conformance Event Record Detail



<b>NC Record Number:</b>	NCREG6562	<b>Entity:</b>	Regional Generation
<b>Company - Level 1 - Level 2:</b>	UPP-Escanaba Hydro-Boney Falls (Escanaba #4 Hydro)		
<b>Event Date:</b>	09/04/2014	<b>Discovery Date/Time:</b>	9/4/14 12:05
<b>Event Title:</b>	Run of River deviation		
<b>Event Details:</b>	Run of river was deviated due to plant trip.		
<b>Immediate Action:</b>	Plant went into isolation mode. Notified hydro operator at the plant and found that power was out to plant. Opened auto gate from ES&C		
<b>Recommendations:</b>	None		
<b>Potential Causes/Contributors to incident</b>	Power outage to plant for weather		
<b>Entered By Name:</b>	Terrie S Taylor	<b>Creation Date/Time:</b>	9/4/14 14:15
<b>Entered By Department:</b>	Energy Supply and Control	<b>Status:</b>	Closed
<b>Reportable to External Agency:</b>	no	<b>Basis for Reportability:</b>	Part of End of Year Report < 60 minute event
<b>Additional Followup Required:</b>	yes		
<b>Category:</b>	Regulatory	<b>Type:</b>	FERC Deviation
<b>Sub Type:</b>	Trans. Sys. (storm related)	<b>Description:</b>	<60 minutes
<b>Causal Analysis Level:</b>	Closed - No further action required	<b>Causal Analysis Basis:</b>	Unit tripped from Line Tripping High Wind and Weather Event, Plant went into Isolation, Auto Gate opened to restore ROR conditions
<b>Event Start:</b>	9/4/2014 12:05 PM	<b>Event End:</b>	9/4/2014 12:24 PM
<b>Event Duration (HH:MM):</b>	00:19		
<b>Evaluator Name:</b>		<b>Evaluator Dept:</b>	
<b>Evaluation Accepted:</b>		<b>Acceptance Comments</b>	
<b>Eval Due Date:</b>		<b>Eval Completion Date:</b>	
<b>Approver Name:</b>		<b>Corrective Action Approver Name</b>	
<b>Analysis Description:</b>			
<b>Causes:</b>			
<b>Primary Causes:</b>			
<b>Does Eval Require Scening Committee Approval upon Completion</b>	no		
<b>Evaluation Reviewed/Approved by Screening Committee</b>			

# Point Info - UPPCO-BNYH: Total Plant Flow





# Non-Conformance Event Record Detail



<b>NC Record Number:</b> NCREG6800		<b>Entity:</b> Regional Generation	
<b>Company - Level 1 - Level 2:</b> UPP-Escanaba Hydro-Escanaba #3 Hydro			
<b>Event Date:</b>	11/12/2014	<b>Discovery Date/Time:</b>	11/12/14 9:48
<b>Event Title:</b>	Esc #3 Hydro - Plant Trip		
<b>Event Details:</b>	Power failure at the plant caused units to trip. Unable to open gate.		
<b>Immediate Action:</b>	Called local operator. Operator had to run backup generator in order to open gate.		
<b>Recommendations:</b>	None		
<b>Potential Causes/Contributors to incident</b>	Unknown		
<b>Entered By Name:</b>	Brian K Ellison	<b>Creation Date/Time:</b>	11/12/14 10:54
<b>Entered By Department:</b>	Energy Supply and Control	<b>Status:</b>	Closed
<b>Reportable to External Agency:</b>	no	<b>Basis for Reportability:</b>	< 60 minute deviation - End of Year report
<b>Additional Followup Required:</b>	yes		
<b>Category:</b>	Regulatory	<b>Type:</b>	FERC Deviation
<b>Sub Type:</b>	Trans. Sys. (non-storm related)	<b>Description:</b>	
<b>Causal Analysis Level:</b>	Closed - No further action required	<b>Causal Analysis Basis:</b>	Plant house power tripped from a jumper connection on the house power burned thru. Gate was already open because flow in river was higer than unit capacity. House power started and gate adjusted to river flow.
<b>Event Start:</b>	11/12/2014 9:55 AM	<b>Event End:</b>	11/12/2014 10:20 AM
		<b>Event Duration (HH:MM):</b>	00:25
<b>Evaluator Name:</b>		<b>Evaluator Dept:</b>	
<b>Evaluation Accepted:</b>		<b>Acceptance Comments</b>	
<b>Eval Due Date:</b>		<b>Eval Completion Date:</b>	
<b>Approver Name:</b>		<b>Corrective Action Approver Name</b>	
<b>Analysis Description:</b>			
<b>Causes:</b>			
<b>Primary Causes:</b>			
<b>Does Eval Require Sceening Committee Approval upon Completion</b>	no		
<b>Evaluation Reviewed/Approved by Screening Committee</b>			

# Point Info - UPPCO-EHD3: Total Plant Flow

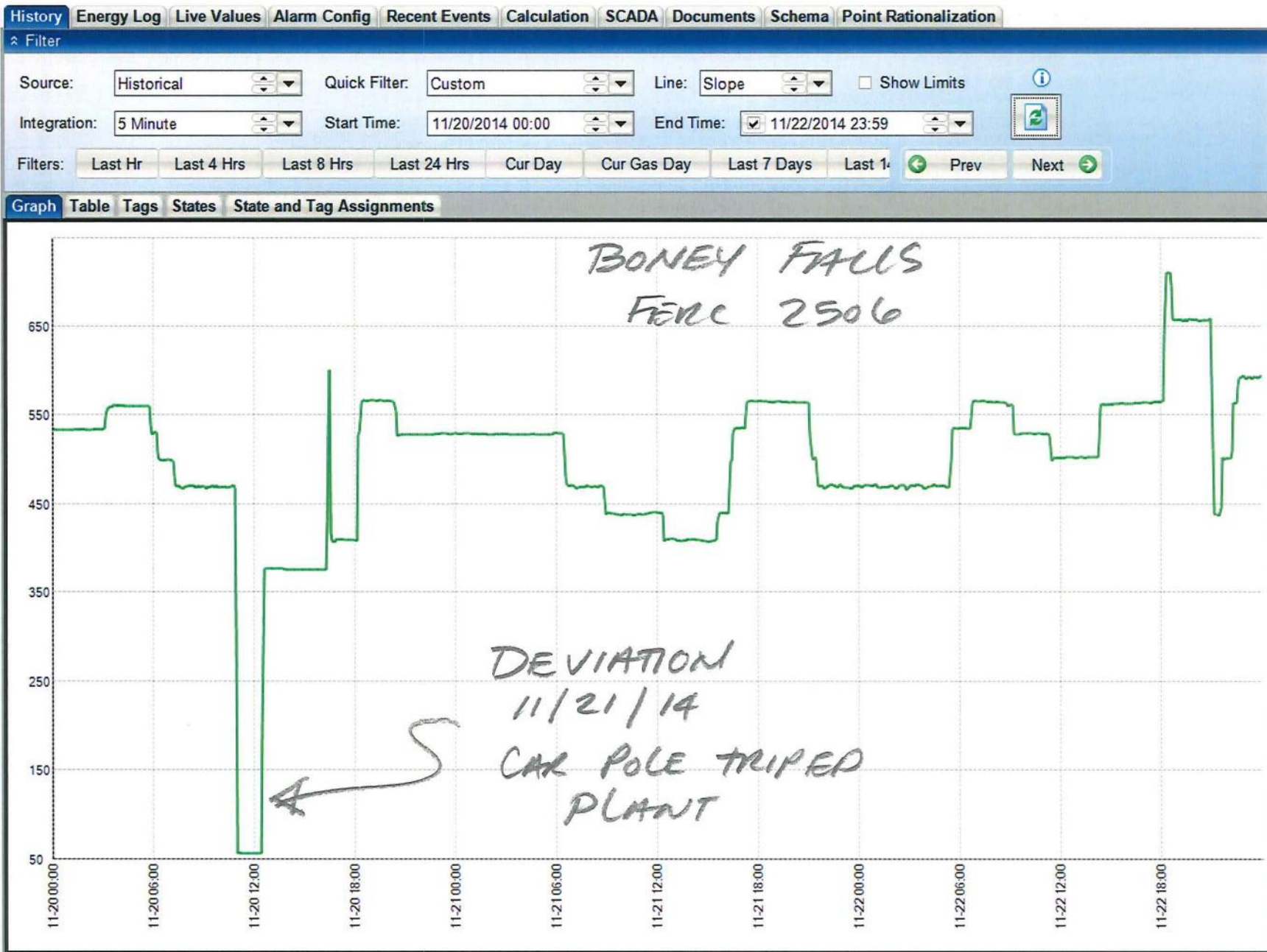


# Non-Conformance Event Record Detail



<b>NC Record Number:</b> NCREG6843		<b>Entity:</b> Regional Generation	
<b>Company - Level 1 - Level 2:</b> UPP-Escanaba Hydro-Boney Falls (Escanaba #4 Hydro)			
<b>Event Date:</b>	11/21/2014	<b>Discovery Date/Time:</b>	11/21/14 14:33
<b>Event Title:</b>	Boney Falls - Interruption of Run of River		
<b>Event Details:</b>	At 1102cst a battery failure alarm sounded, then the plant went into isolation mode. Dispatched local operator to the plant to investigate. Notified local operator that attempts to open gate 6 were unsuccessful. After arriving, local operator confirmed that gate 6 was frozen. He then was able to open gate 2 prior to any license deviations. At 1635cst, plant returned to normal operations. Gate 2 was closed and isolation mode disabled.		
<b>Immediate Action:</b>	Called out local operator. Attempted to open gate 6, but it was frozen.		
<b>Recommendations:</b>	None		
<b>Potential Causes/Contributors to incident</b>	Mike M. mentioned that he had heard on the radio that a car had hit a pole in the area that may have caused the line fault.		
<b>Entered By Name:</b>	Brian K Ellison	<b>Creation Date/Time:</b>	11/21/14 14:33
<b>Entered By Department:</b>	Energy Supply and Control	<b>Status:</b>	Closed
<b>Reportable to External Agency:</b>	no	<b>Basis for Reportability:</b>	Less than 60 minute event
<b>Additional Followup Required:</b>	yes	<b>Type:</b>	Other
<b>Category:</b>	Regulatory	<b>Description:</b>	Not a Deviation
<b>Sub Type:</b>		<b>Causal Analysis Basis:</b>	Plant went into Isolation mode, and since flow was low, it was only about a 40 cfs difference for about 45 minutes when a call hit a pole on the Boney Falls transmission line
<b>Causal Analysis Level:</b>	Closed - No further action required		
<b>Event Start:</b>	11/21/2014 12:58 PM	<b>Event End:</b>	11/21/2014 1:45 PM
		<b>Event Duration (HH:MM):</b>	00:47
<b>Evaluator Name:</b>		<b>Evaluator Dept:</b>	
<b>Evaluation Accepted:</b>		<b>Acceptance Comments</b>	
<b>Eval Due Date:</b>		<b>Eval Completion Date:</b>	
<b>Approver Name:</b>		<b>Corrective Action Approver Name</b>	
<b>Analysis Description:</b>			
<b>Causes:</b>			
<b>Primary Causes:</b>			
<b>Does Eval Require Scening Committee Approval upon Completion</b>	no		
<b>Evaluation Reviewed/Approved by Screening Committee</b>			

# Point Info - UPPCO-BNYH: Total Plant Flow





Upper Peninsula Power Company

700 North Adams Street  
P.O. Box 19001  
Green Bay, WI 54307-9001  
www.uppco.com

April 23, 2014

FERC Project No. 02506  
NATDAM No. MI00167

Ms. Kimberly D. Bose, Secretary  
The Federal Energy Regulatory Commission  
888 First Street NE  
Washington, DC 20426

Dear Secretary Bose:

Escanaba Hydroelectric Project - Boney Falls Development  
Article 401 Minimum Flows

In accordance with Article 401 of the Order Issuing New License dated July 13, 1995, and the Orders Amending Article 401 dated November 12, 1996, October 1, 1997, and August 16, 2011, for the Escanaba Hydroelectric Project (FERC Project No. 02506); Upper Peninsula Power Company (UPPCO) is required to file a deviation report with the Federal Energy Regulatory Commission (FERC), the Michigan Department of Natural Resources (MDNR), and the U.S. Fish & Wildlife Service when the operation deviates from the conditions of Article 401.

On Thursday, March 27, 2014, at 23:11 CDT, run-of-river was interrupted when generation tripped off-line. A transmission line fault occurred due to a severe storm in the area with heavy wet snow and high winds causing a tree to fall on the line. An operator was dispatched at 23:16 CDT to check the plant and to re-establish flow. The line was cleared and the plant returned to normal operation on Friday, March 28, 2014, at 03:45 CDT, re-establishing run of river.

No adverse environmental impacts have been observed as a result of this deviation and Upper Peninsula Power Company did not receive any comments from the resources agencies after the deviation incident. Due to the nature of the event UPPCO is not proposing any corrective actions at this time.

If you have any questions regarding this letter, please contact Robert Meyers at (906) 485-2419 or Virgil Schlorke at (906) 485-2465.

Sincerely,

A handwritten signature in black ink, appearing to read "Gil Snyder", with a long horizontal flourish extending to the right.

Gil Snyder  
Manager - Regional Generation  
for Wisconsin Public Service

RJM/ebr

Enc: Operational data

cc: Mr. John Myers, IBS - D2  
Mr. Shawn Puzen, IBS - D2  
Mr. Ben Trotter, IBS - D2  
Ms. Joan Johaneck, WPS - D2  
Mr. Robert Meyers, UPPCO - UISC  
Mr. Keith Moyle, UPPCO - UISC  
Mr. Virgil Schlorke, UPPCO - UISC  
Mr. John Zygaj, FERC - CRO  
Ms. Patricia Grant, FERC - CRO  
Mr. Kyle Kruger, MDNR  
Mr. Burr Fisher, USFWS

## Boney Falls – Escanaba Dam #4 FERC Project 2506 -04 Record of Augmentation Event

### Window Criteria – May 15<sup>th</sup> through September 15<sup>th</sup>

Date:	7/22/14	Time:	11:00 EDT
Flow at Cornell Gauge:	327	150 cfs ≤ Cornell flow ≤ 400 cfs	
Water Temperature - Boney Falls Tailrace:	21.2	≥ 16 °C	
Pond Elevation:	906.16	> 905.59 ft	

### Trigger Criteria

Previous Day Max Water Temperature at Cornell:	26.6	≥ 26°C if no augmentation on previous day, ≥ 24°C if augmentation was done on previous day
Previous Day Augmentation:	No	Yes/No

### Augmentation Record

Base Flow (Flow at Cornell Gauge):	327	Augmented Flow (150% of base):	491	cfs
Start Time:	1100 EDT	Impoundment Water Level:	906.16	ft
End Time:	1800 EDT	Impoundment Water Level:	905.60	ft

### Refill

Base Flow (Flow at Cornell Gauge):	327	Refill Flow (75% of base):	245	cfs
Start Time:	1800 EDT	Impoundment Water Level:	905.60	ft
End Time:	11:00 EDT	Impoundment Water Level:	905.75	ft
End Date:	7/23/14	CCAT No.:	NCREG6358	

When completed, fax to Bob Meyers at 9-1-906-485-2424.

**Boney Falls – Escanaba Dam #4 FERC Project 2506 -04  
Record of Augmentation Event**

**Window Criteria – May 15<sup>th</sup> through September 15<sup>th</sup>**

Date:	7/25/14	Time:	11:00 EDT
Flow at Cornell Gauge:	265	150 cfs ≤ Cornell flow ≤ 400 cfs	
Water Temperature - Boney Falls Tailrace:	20.6	≥ 16 °C	
Pond Elevation:	906.28	> 905.59 ft	

**Trigger Criteria**

Previous Day Max Water Temperature at Cornell:	27.4	≥ 26°C if no augmentation on previous day, ≥ 24°C if augmentation was done on previous day
Previous Day Augmentation:	NO	Yes/No

**Augmentation Record**

Base Flow (Flow at Cornell Gauge):	265	Augmented Flow (150% of base):	398	cfs
Start Time:	1100 EDT	Impoundment Water Level:	906.28	ft
End Time:	1800 EDT	Impoundment Water Level:	905.9	ft

**Refill**

Base Flow (Flow at Cornell Gauge):	265	Refill Flow (75% of base):	199	cfs
Start Time:	1800 EDT	Impoundment Water Level:	905.93	ft
End Time:	1100 EDT	Impoundment Water Level:	905.98	ft
End Date:	7/26/14	CCAT No.:	NCRE66377	

When completed, fax to Bob Meyers at 9-1-906-485-2424.

**Boney Falls – Escanaba Dam #4 FERC Project 2506 -04  
Record of Augmentation Event**

**Window Criteria – May 15<sup>th</sup> through September 15<sup>th</sup>**

Date:	7/26/14	Time:	11:00 EDT
Flow at Cornell Gauge:	272	150 cfs ≤ Cornell flow ≤ 400 cfs	
Water Temperature - Boney Falls Tailrace:	20.8	≥ 16 °C	
Pond Elevation:	905.98	> 905.59 ft	

**Trigger Criteria**

Previous Day Max Water Temperature at Cornell:	24.9	≥ 26°C if no augmentation on previous day, ≥ 24°C if augmentation was done on previous day
Previous Day Augmentation:	Yes	Yes/No

**Augmentation Record**

Base Flow (Flow at Cornell Gauge):	272	Augmented Flow (150% of base):	408	cfs
Start Time:	1100 EDT	Impoundment Water Level:	905.98	ft
End Time:	1800 EDT	Impoundment Water Level:	905.64	ft

**Refill**

Base Flow (Flow at Cornell Gauge):	272	Refill Flow (75% of base):	204	cfs
Start Time:	1800 EDT	Impoundment Water Level:	905.64	ft
End Time:	1100 EDT	Impoundment Water Level:	905.95	ft
End Date:	7/27/14	CCAT No.:	NCREG6383	

**When completed, fax to Bob Meyers at 9-1-906-485-2424.**



## Boney Falls – Escanaba Dam #4 FERC Project 2506 -04 Record of Augmentation Event

### Window Criteria – May 15<sup>th</sup> through September 15<sup>th</sup>

Date:	07/27/14	Time:	11:00 EDT
Flow at Cornell Gauge:	250	150 cfs ≤ Cornell flow ≤ 400 cfs	
Water Temperature - Boney Falls Tailrace:	21.5	≥ 16 °C	
Pond Elevation:	905.95	> 905.59 ft	

### Trigger Criteria

Previous Day Max Water Temperature at Cornell:	25.2	≥ 26°C if no augmentation on previous day, ≥ 24°C if augmentation was done on previous day
Previous Day Augmentation:	YES	Yes/No

### Augmentation Record

Base Flow (Flow at Cornell Gauge):	250	Augmented Flow (150% of base):	375	cfs
Start Time:	1100 EDT	Impoundment Water Level:	905.95	ft
End Time:	1800 EDT	Impoundment Water Level:	905.77	ft

### Refill

Base Flow (Flow at Cornell Gauge):	250	Refill Flow (75% of base):	188	cfs
Start Time:	1800 EDT	Impoundment Water Level:	905.77	ft
End Time:	0334 EDT	Impoundment Water Level:	906.16	ft
End Date:	7/28/14	CCAT No.:	NCRE66385	

When completed, fax to Bob Meyers at 9-1-906-485-2424.

**Boney Falls – Escanaba Dam #4 FERC Project 2506 -04  
Record of Augmentation Event**

**Window Criteria – May 15<sup>th</sup> through September 15<sup>th</sup>**

<b>Date:</b>	8-2-14	<b>Time:</b>	11:00 EDT
<b>Flow at Cornell Gauge:</b>	280	150 cfs ≤ Cornell flow ≤ 400 cfs	
<b>Water Temperature - Boney Falls Tailrace:</b>	19.3	≥ 16 °C	
<b>Pond Elevation:</b>	906.21	> 905.59 ft	

**Trigger Criteria**

<b>Previous Day Max Water Temperature at Cornell:</b>	26.4	≥ 26°C if no augmentation on previous day, ≥ 24°C if augmentation was done on previous day
<b>Previous Day Augmentation:</b>	No	Yes/No

**Augmentation Record**

<b>Base Flow (Flow at Cornell Gauge):</b>	280	<b>Augmented Flow (150% of base):</b>	420	cfs
<b>Start Time:</b>	11:00 EDT	<b>Impoundment Water Level:</b>	906.21	ft
<b>End Time:</b>	18:00 EDT	<b>Impoundment Water Level:</b>	905.84	ft

**Refill**

<b>Base Flow (Flow at Cornell Gauge):</b>	280	<b>Refill Flow (75% of base):</b>	210	cfs
<b>Start Time:</b>	18:00 EDT	<b>Impoundment Water Level:</b>	905.84	ft
<b>End Time:</b>	1100 EDT	<b>Impoundment Water Level:</b>	905.91	ft
<b>End Date:</b>	8/3/14	<b>CCAT No.:</b>	NCREG6407	

**When completed, fax to Bob Meyers at 9-1-906-485-2424.**

**Boney Falls – Escanaba Dam #4 FERC Project 2506 -04  
Record of Augmentation Event**

**Window Criteria – May 15<sup>th</sup> through September 15<sup>th</sup>**

Date:	8/3/14	Time:	11:00 EDT
Flow at Cornell Gauge:	272	150 cfs ≤ Cornell flow ≤ 400 cfs	
Water Temperature - Boney Falls Tailrace:	19.6	≥ 16 °C	
Pond Elevation:	905.91	> 905.59 ft	

**Trigger Criteria**

Previous Day Max Water Temperature at Cornell:	27.7	≥ 26°C if no augmentation on previous day, ≥ 24°C if augmentation was done on previous day
Previous Day Augmentation:	YES	Yes/No

**Augmentation Record**

Base Flow (Flow at Cornell Gauge):	272	Augmented Flow (150% of base):	408	cfs
Start Time:	1100 EDT	Impoundment Water Level:	905.91	ft
End Time:	1800 EDT	Impoundment Water Level:	905.54	ft

**Refill**

Base Flow (Flow at Cornell Gauge):	272	Refill Flow (75% of base):	204	cfs
Start Time:	1800 EDT	Impoundment Water Level:	905.54	ft
End Time:	1100 EDT	Impoundment Water Level:	905.66	ft
End Date:	8-4-14	CCAT No.:	NCREG6409	

When completed, fax to Bob Meyers at 9-1-906-485-2424.

## Boney Falls – Escanaba Dam #4 FERC Project 2506 -04 Record of Augmentation Event

### Window Criteria – May 15<sup>th</sup> through September 15<sup>th</sup>

Date:	8-4-14	Time:	11:00 EDT
Flow at Cornell Gauge:	280	150 cfs ≤ Cornell flow ≤ 400 cfs	
Water Temperature - Boney Falls Tailrace:	20.4	≥ 16 °C	
Pond Elevation:	905.66	> 905.59 ft	

### Trigger Criteria

Previous Day Max Water Temperature at Cornell:	26.5°	≥ 26°C if no augmentation on previous day, ≥ 24°C if augmentation was done on previous day
Previous Day Augmentation:	YES	Yes/No

### Augmentation Record

Base Flow (Flow at Cornell Gauge):	280	Augmented Flow (150% of base):	420	cfs
Start Time:	1100 EDT	Impoundment Water Level:	905.66	ft
End Time:	1800 EDT	Impoundment Water Level:	905.30	ft

### Refill

Base Flow (Flow at Cornell Gauge):	280	Refill Flow (75% of base):	210	cfs
Start Time:	1800 EDT	Impoundment Water Level:	905.30	ft
End Time:	0030 EDT	Impoundment Water Level:	905.59	ft
End Date:	8/6/14	CCAT No.:	NCREG 6413	

When completed, fax to Bob Meyers at 9-1-906-485-2424.

**Boney Falls – Escanaba Dam #4 FERC Project 2506 -04  
Record of Augmentation Event**

<b>Window Criteria – May 15<sup>th</sup> through September 15<sup>th</sup></b>				
Date:	8-6-14	Time:	11:00 EDT	
Flow at Cornell Gauge:	250	150 cfs ≤ Cornell flow ≤ 400 cfs		
Water Temperature - Boney Falls Tailrace:	20.9°	≥ 16 °C		
Pond Elevation:	905.68	> 905.59 ft		

<b>Trigger Criteria</b>		
Previous Day Max Water Temperature at Cornell:	28.6°	≥ 26°C if no augmentation on previous day, ≥ 24°C if augmentation was done on previous day
Previous Day Augmentation:	No	Yes/No

<b>Augmentation Record</b>				
Base Flow (Flow at Cornell Gauge):	250	Augmented Flow (150% of base):	375	cfs
Start Time:	1100 EDT	Impoundment Water Level:	905.68	ft
End Time:	1800 EDT	Impoundment Water Level:	905.30	ft

<b>Refill</b>				
Base Flow (Flow at Cornell Gauge):	250	Refill Flow (75% of base):	188	cfs
Start Time:	1800 EDT	Impoundment Water Level:	905.30	ft
End Time:	1100 EDT	Impoundment Water Level:	905.70	ft
End Date:	8/9/14	CCAT No.:	NCREG 6429	

When completed, fax to Bob Meyers at 9-1-906-485-2424.

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## Boney Falls – Escanaba Dam #4 FERC Project 2506 -04 Record of Augmentation Event

### Window Criteria – May 15<sup>th</sup> through September 15<sup>th</sup>

Date:	8/9/14	Time:	11:00 EDT
Flow at Cornell Gauge:	216	150 cfs ≤ Cornell flow ≤ 400 cfs	
Water Temperature - Boney Falls Tailrace:	21.5	≥ 16 °C	
Pond Elevation:	905.70	> 905.59 ft	

### Trigger Criteria

Previous Day Max Water Temperature at Cornell:	29	≥ 26°C if no augmentation on previous day, ≥ 24°C if augmentation was done on previous day
Previous Day Augmentation:	No	Yes/No

### Augmentation Record

Base Flow (Flow at Cornell Gauge):	216	Augmented Flow (150% of base):	324	cfs
Start Time:	1100 EDT	Impoundment Water Level:	905.70	ft
End Time:	1800 EDT	Impoundment Water Level:	905.23	ft

### Refill

Base Flow (Flow at Cornell Gauge):	216	Refill Flow (75% of base):	162	cfs
Start Time:	1800 EDT	Impoundment Water Level:	905.23	ft
End Time:	1402 EDT	Impoundment Water Level:	906.19	ft
End Date:	8-14-14	CCAT No.:	NCREG6444	Aug

906.19  
ft on Next Aug

When completed, fax to Bob Meyers at 9-1-906-485-2424.

## Boney Falls – Escanaba Dam #4 FERC Project 2506 -04 Record of Augmentation Event

### Window Criteria – May 15<sup>th</sup> through September 15<sup>th</sup>

Date:	8-16-14	Time:	11:00 EDT
Flow at Cornell Gauge:	236	150 cfs ≤ Cornell flow ≤ 400 cfs	
Water Temperature - Boney Falls Tailrace:	19.1°	≥ 16 °C	
Pond Elevation:	906.20	> 905.59 ft	

### Trigger Criteria

Previous Day Max Water Temperature at Cornell:	26.5°	≥ 26°C if no augmentation on previous day, ≥ 24°C if augmentation was done on previous day
Previous Day Augmentation:	No	Yes/No

### Augmentation Record

Base Flow (Flow at Cornell Gauge):	236	Augmented Flow (150% of base):	354	cfs
Start Time:	1100 EDT	Impoundment Water Level:	906.20	ft
End Time:	1800 EDT	Impoundment Water Level:	905.77	ft

### Refill

Base Flow (Flow at Cornell Gauge):	236	Refill Flow (75% of base):	177	cfs
Start Time:	1800 EDT	Impoundment Water Level:	905.77	ft
End Time:	1105 EDT	Impoundment Water Level:	906.19	ft
End Date:	8-18-14	CCAT No.:	NCREG 6470	

When completed, fax to Bob Meyers at 9-1-906-485-2424.

## Boney Falls – Escanaba Dam #4 FERC Project 2506 -04 Record of Augmentation Event

### Window Criteria – May 15<sup>th</sup> through September 15<sup>th</sup>

Date:	8/22	Time:	11:00 EDT
Flow at Cornell Gauge:	N/A gauge not working	150 cfs ≤ Cornell flow ≤ 400 cfs	
Water Temperature - Boney Falls Tailrace:	18.6	≥ 16 °C	
Pond Elevation:	906.23	> 905.59 ft	

### Trigger Criteria

Previous Day Max Water Temperature at Cornell:	N/A gauge not working	≥ 26°C if no augmentation on previous day, ≥ 24°C if augmentation was done on previous day
Previous Day Augmentation:	NO	Yes/No

### Augmentation Record

*Base at Boney Falls 270*

Base Flow (Flow at Cornell Gauge):	270	Augmented Flow (150% of base):	405	cfs
Start Time:	1100 EDT	Impoundment Water Level:	906.23	ft
End Time:	1800 EDT	Impoundment Water Level:	905.92	ft

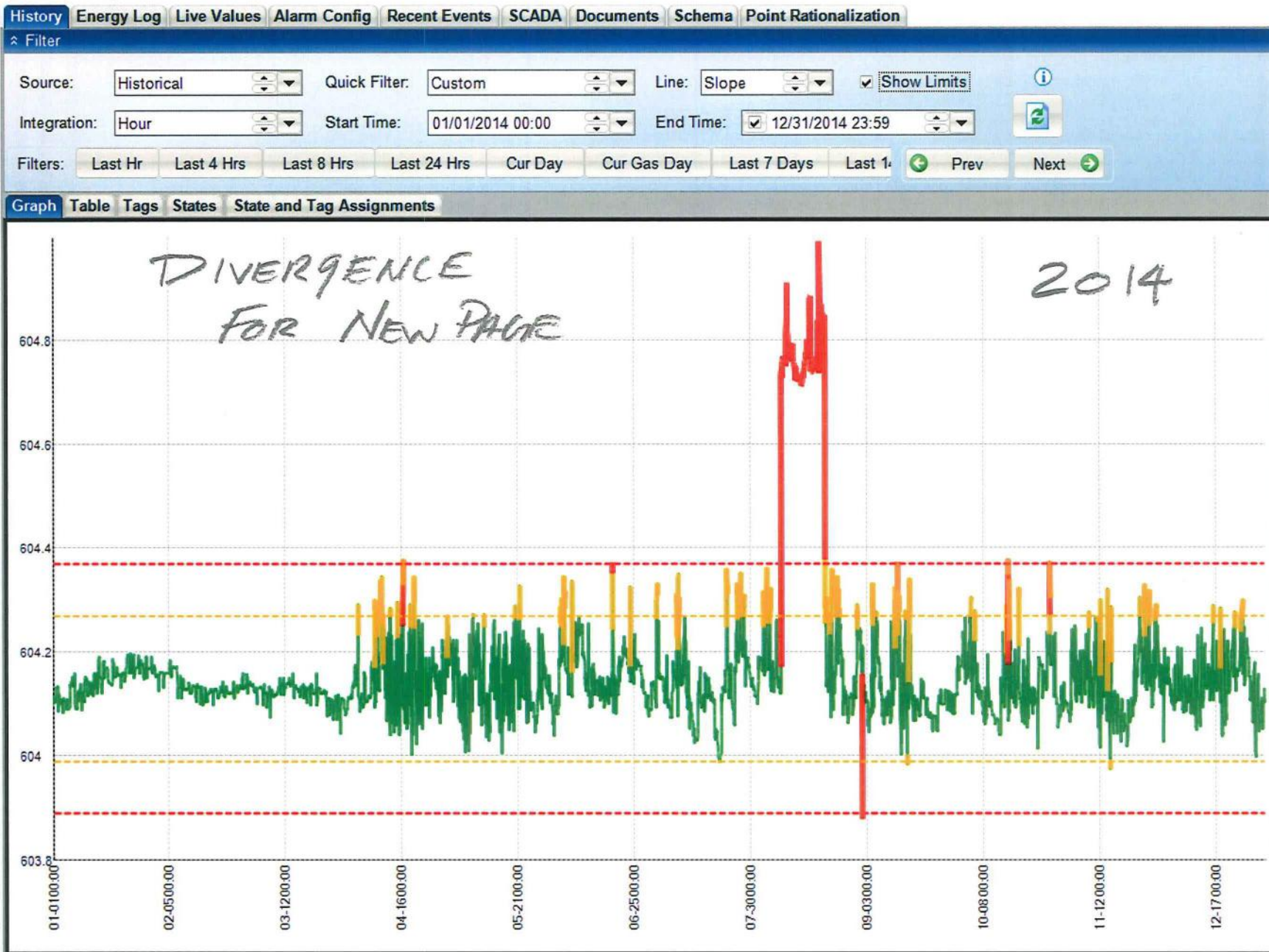
### Refill

Base Flow (Flow at Cornell Gauge):	270	Refill Flow (75% of base):	202	cfs
Start Time:	1800 EDT	Impoundment Water Level:	905.92	ft
End Time:	0355 EDT	Impoundment Water Level:	906.19	ft
End Date:	8/23/14	CCAT No.:	NCREG-6504	

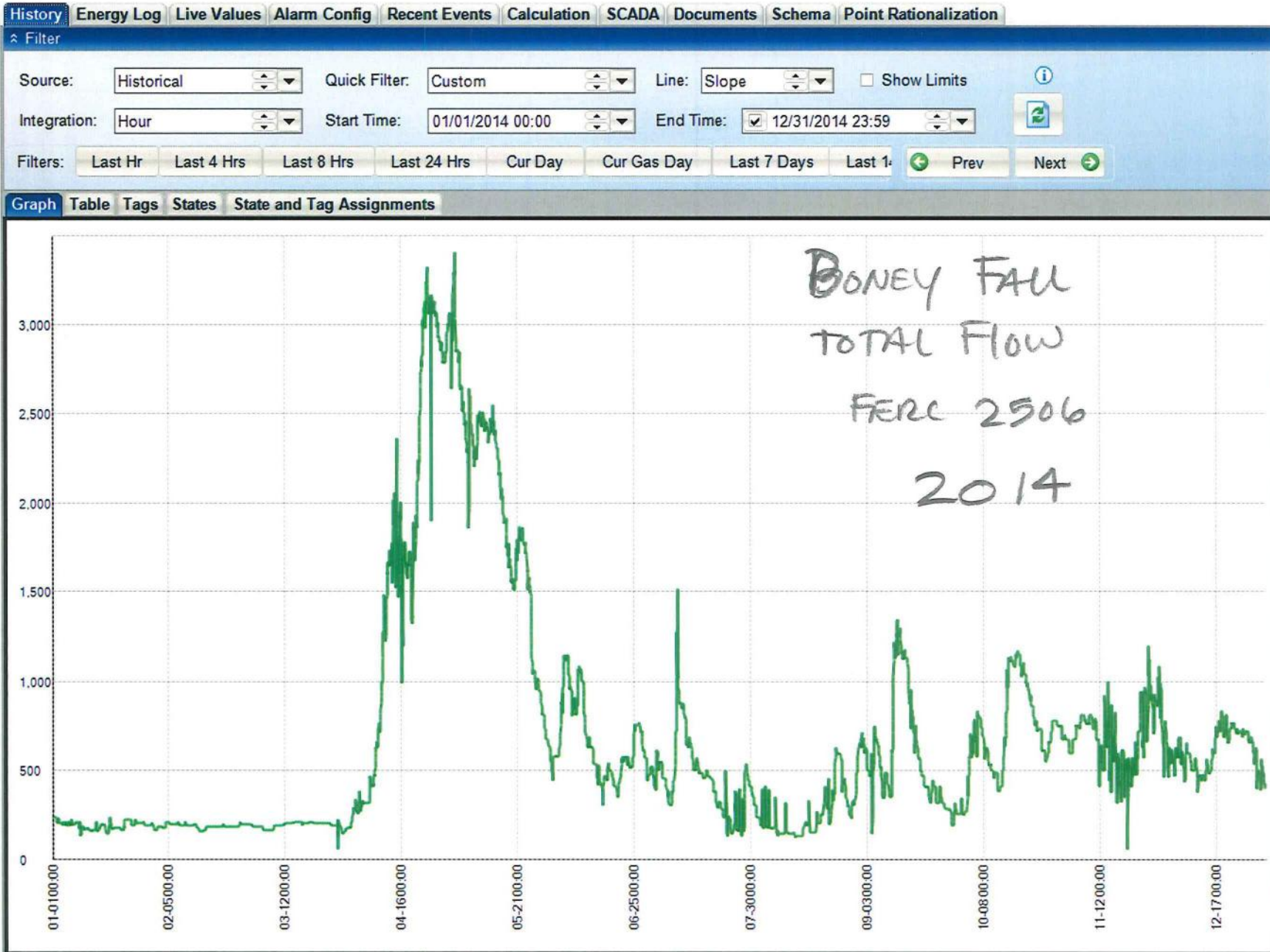
When completed, fax to Bob Meyers at 9-1-906-485-2424.



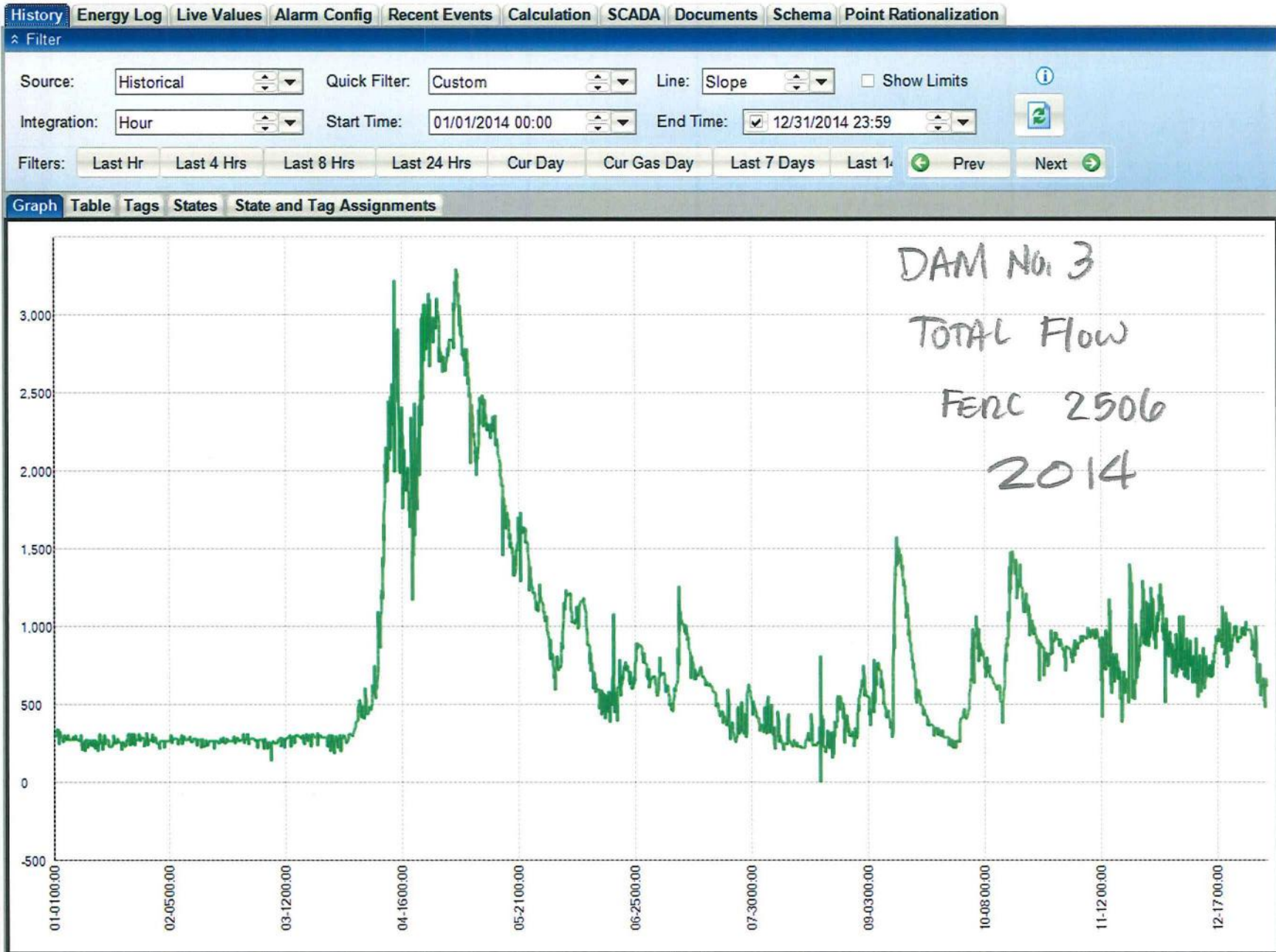
# Point Info - UPPCO-EHD1: Headwater Elevation



# Point Info - UPPCO-BNYH: Total Plant Flow



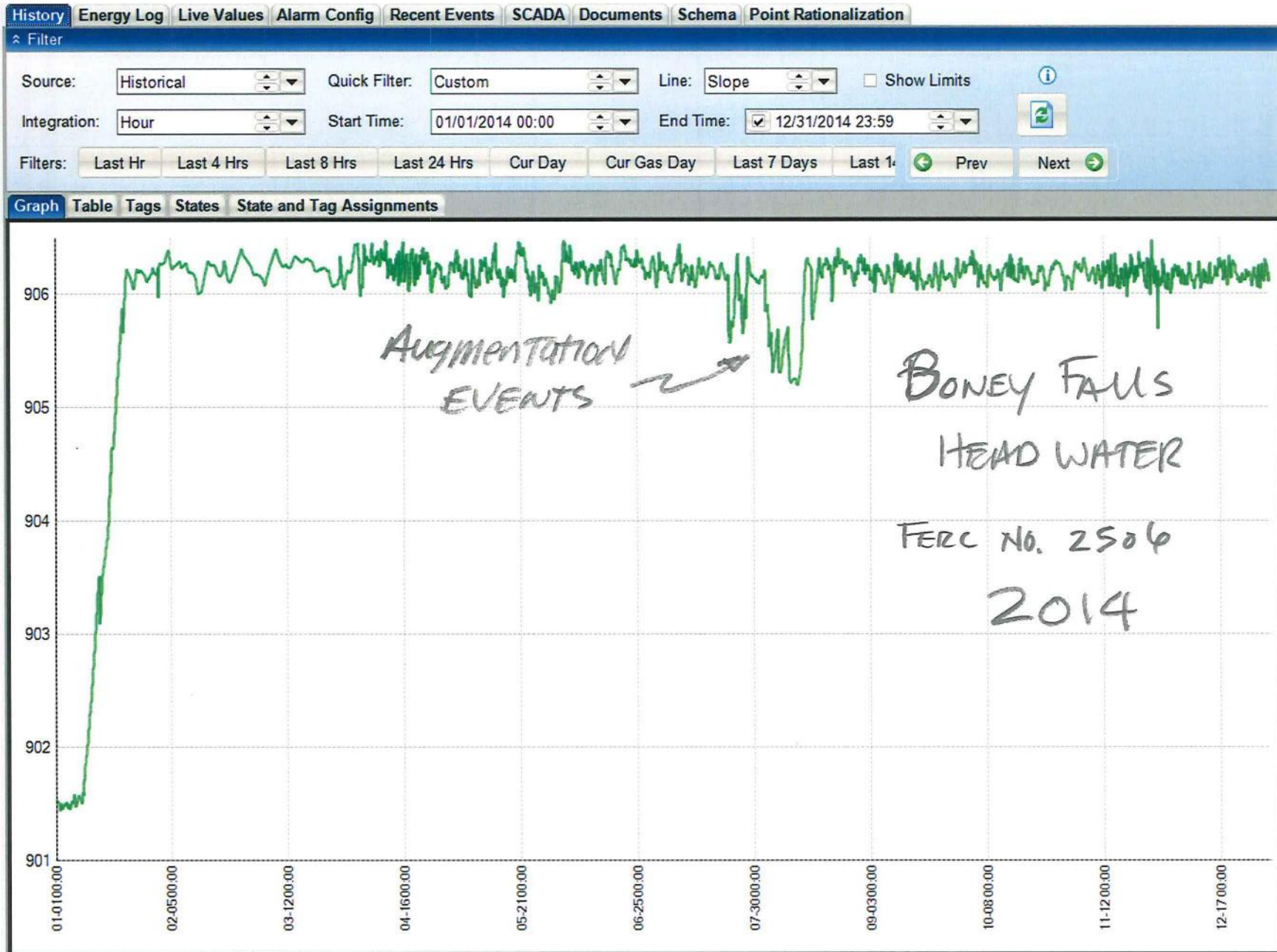
# Point Info - UPPCO-EHD3: Total Plant Flow



# Point Info - UPPCO-EHD1: Total Plant Flow



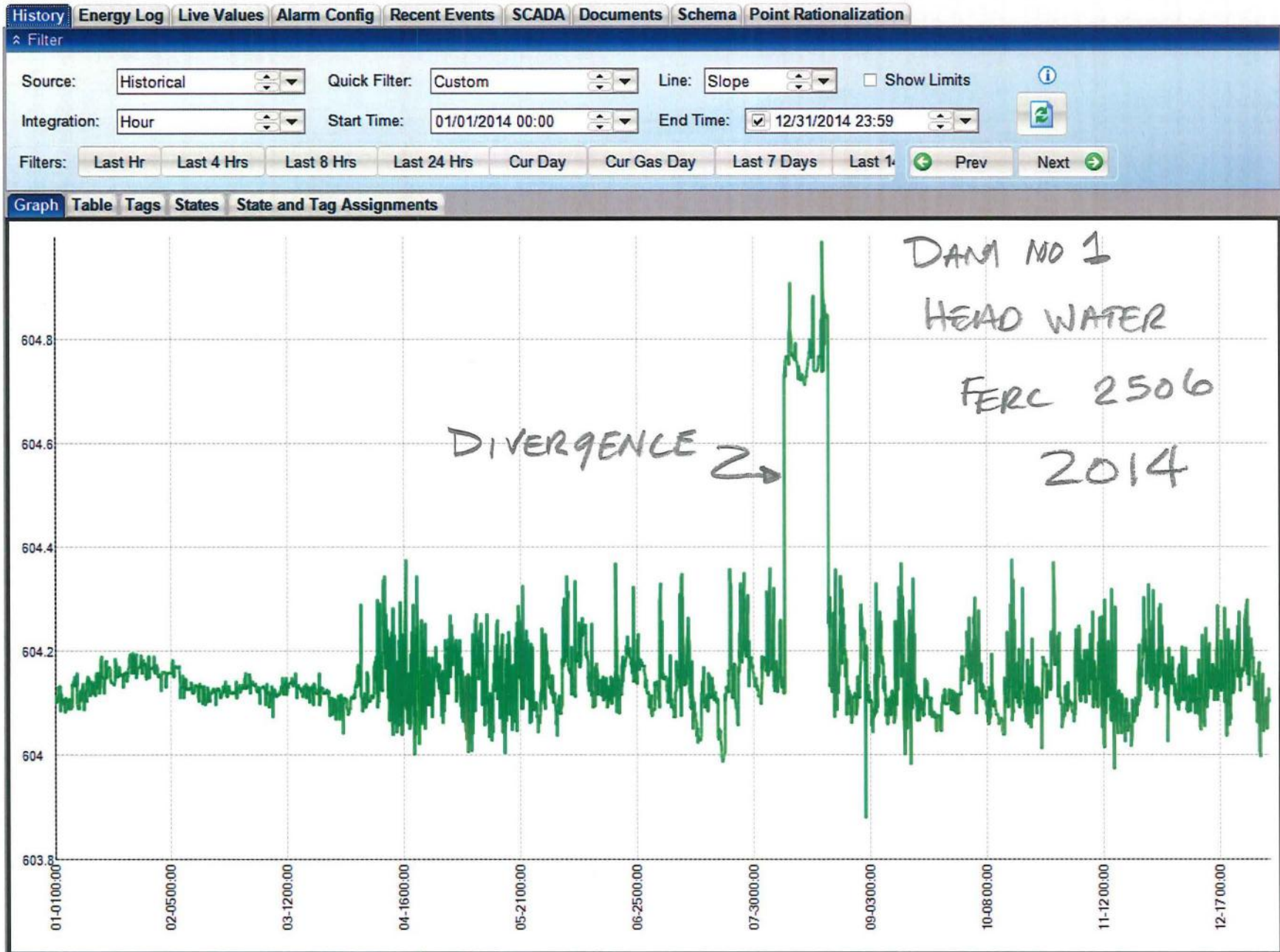
# Point Info - UPPCO-BNYH: Headwater Elevation



# Point Info - UPPCO-EHD3: Headwater Elevation



# Point Info - UPPCO-EHD1: Headwater Elevation



# Non-Conformance Event Record Detail

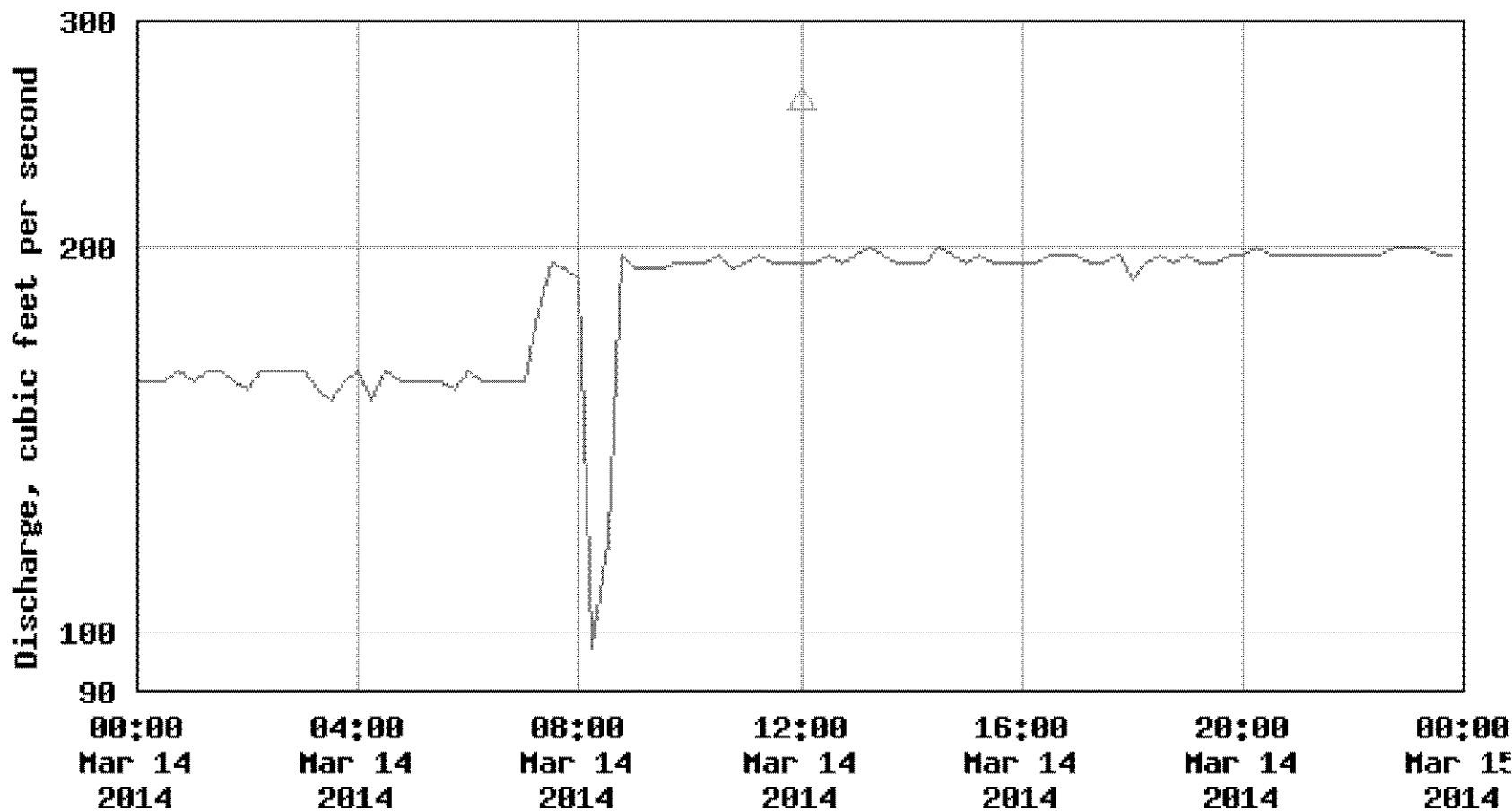


<b>NC Record Number:</b> NCREG5881		<b>Entity:</b> Regional Generation	
<b>Company - Level 1 - Level 2:</b> UPP-Prickett Hydro			
<b>Event Date:</b>	03/14/2014	<b>Discovery Date/Time:</b>	3/14/14 8:12
<b>Event Title:</b>	Run of river deviation		
<b>Event Details:</b>	Unit #2 tripped at 08:12 CPT		
<b>Immediate Action:</b>	Notified Hydro operator at plant to check.		
<b>Recommendations:</b>	None		
<b>Potential Causes/Contributors to incident</b>	None		
<b>Entered By Name:</b>	Terrie S Taylor	<b>Creation Date/Time:</b>	3/14/14 8:17
<b>Entered By Department:</b>	Energy Supply and Control	<b>Status:</b>	Approved
<b>Reportable to External Agency:</b>	no	<b>Basis for Reportability:</b>	Will be reported with 2014 less than 60 minute deviations at end of year.
<b>Additional Followup Required:</b>	no		
<b>Category:</b>	Regulatory	<b>Type:</b>	FERC Deviation
<b>Sub Type:</b>	Plant equip. failure	<b>Description:</b>	Article 401 Run of River Deviation, Unit 2 tripped offline
<b>Causal Analysis Level:</b>	Apparent cause evaluation	<b>Causal Analysis Basis:</b>	Operator reported the Unit 2 tip indicated a main bus over-current condition, possibly related to a tree or animal faulting the line.
<b>Event Start:</b>	3/14/2014 8:12 AM	<b>Event End:</b>	3/14/2014 8:26 AM
<b>Event Duration (HH:MM):</b>	00:14		
<b>Evaluator Name:</b>	Melchiori, James R	<b>Evaluator Dept:</b>	Western Hydros
<b>Evaluation Accepted:</b>	yes	<b>Acceptance Comments</b>	Automatically Approved
<b>Eval Due Date:</b>	3/14/2014	<b>Eval Completion Date:</b>	
<b>Approver Name:</b>	Melchiori, James R	<b>Corrective Action Approver Name</b>	Melchiori, James R
<b>Analysis Description:</b>	Unit 2 tripped off line at Prickett at 0812 CDT, Unit 1 was put in service at 0826 CDT, resulting in a reduced, less than run of river flow for 14 minutes.		
<b>Causes:</b>	Main bus overcurrent relay was actuated, line was patrolled but nothing obvious was found. Trees or limbs, or animals possible cause. The line right of way had been patrolled a few weeks ago, but no danger trees identified by JRMelchiori		
<b>Primary Causes:</b>	Weather		
<b>Does Eval Require Seening Committee Approval upon Completion</b>	no		
<b>Evaluation Reviewed/Approved by Screening Committee</b>			





### USGS 04041500 STURGEON RIVER NEAR ALSTON, MI



---- Provisional Data Subject to Revision ----

▲ Median daily statistic (81 years) — Discharge

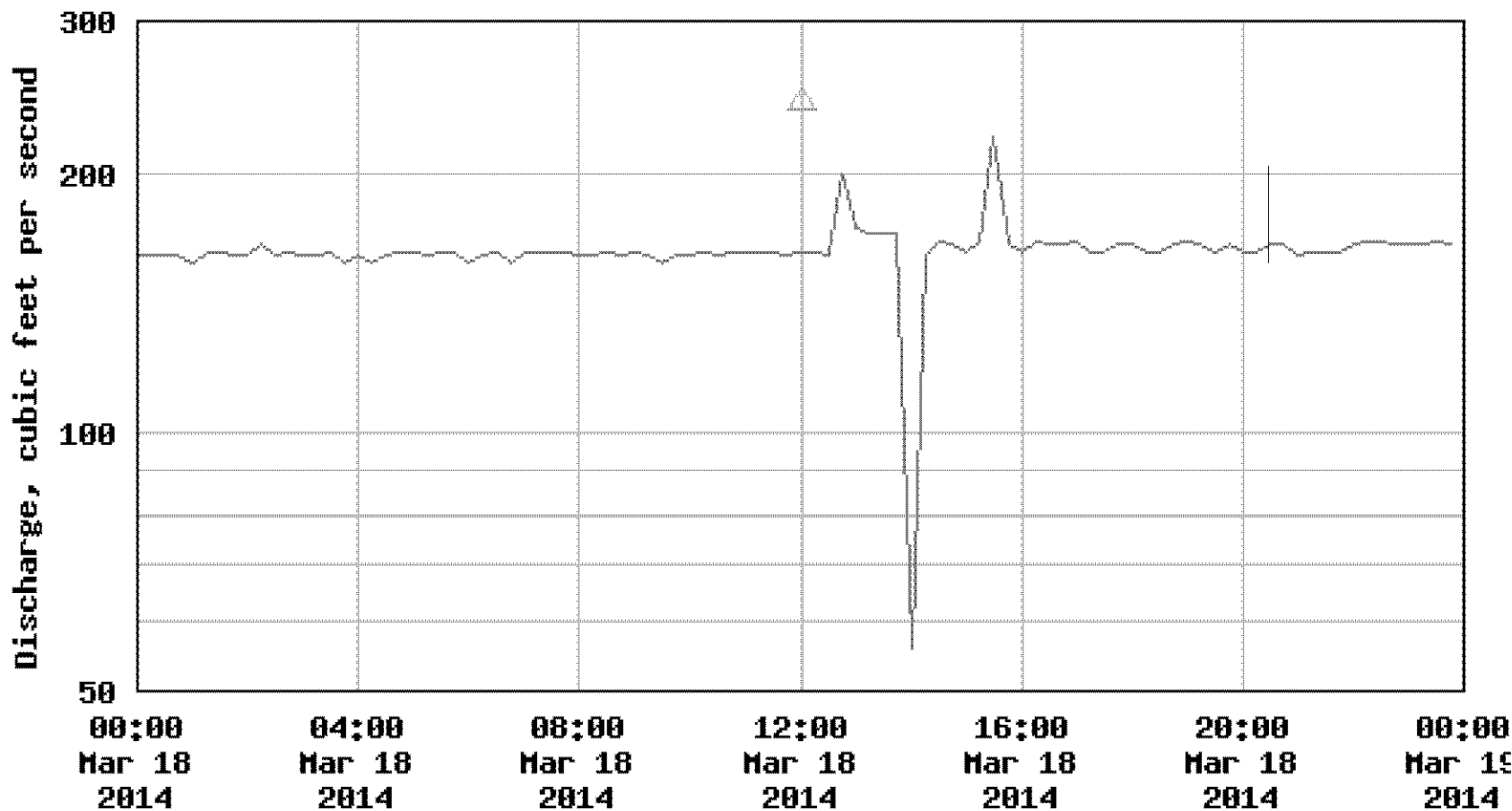
# Non-Conformance Event Record Detail



<b>NC Record Number:</b> NCREG5895		<b>Entity:</b> Regional Generation	
<b>Company - Level 1 - Level 2:</b> UPP-Prickett Hydro			
<b>Event Date:</b>	03/18/2014	<b>Discovery Date/Time:</b>	3/18/14 13:50
<b>Event Title:</b>	Unplanned generator trip resulting in disruption of run-of-river flow		
<b>Event Details:</b>	At 13:50 CDT on 3/18/2014, unit #2 tripped offline. Reason for the trip is unknown at this time. 30 cfs plant flow was maintained through the siphon tube. Local operators were on site working, and unit #2 was back online at 14:06 CDT.		
<b>Immediate Action:</b>	Contacted local operators on site, who were already looking into the unit trip.		
<b>Recommendations:</b>	n/a		
<b>Potential Causes/Contributors to incident</b>	?		
<b>Entered By Name:</b>	Kevin S Willey	<b>Creation Date/Time:</b>	3/18/14 15:48
<b>Entered By Department:</b>	Energy Supply and Control	<b>Status:</b>	Approved
<b>Reportable to External Agency:</b>	no	<b>Basis for Reportability:</b>	Will be reported in annual less than 60 minutes report.
<b>Additional Followup Required:</b>	no		
<b>Category:</b>	Regulatory	<b>Type:</b>	FERC Deviation
<b>Sub Type:</b>	Plant equip. failure	<b>Description:</b>	Article 401 run of river deviation resulting from Unit trip
<b>Causal Analysis Level:</b>	Apparent cause evaluation	<b>Causal Analysis Basis:</b>	Unit tripped out on generator overcurrent relay. Same type trip occurred on Friday March 14, 2014, and generator testing was done just prior to this trip, and indicated no problems. On March 19, 2014, WHSC S&T and West MI Reg Gen personnel completed testing on remaining system components and did not identify any problems. On Tuesday March 25, 2014 the exciter transformer was tested, with no problems found. Unit will be operated again after April 7, 2014 with some monitoring equipment on it, to better identify the cause.
<b>Event Start:</b>	3/18/2014 1:45 PM	<b>Event End:</b>	3/18/2014 2:15 PM
<b>Event Duration (HH:MM):</b>	00:30		
<b>Evaluator Name:</b>	Melchiori, James R	<b>Evaluator Dept:</b>	Western Hydros
<b>Evaluation Accepted:</b>	yes	<b>Acceptance Comments</b>	Automatically Approved
<b>Eval Due Date:</b>	3/27/2014	<b>Eval Completion Date:</b>	
<b>Approver Name:</b>	Melchiori, James R	<b>Corrective Action Approver Name</b>	Melchiori, James R
<b>Analysis Description:</b>	Unit tripped off on generator overcurrent relay after running for approximately one hour. Trip occurred within hours of having generator testing done. Followup testing on 3/19/14 and 3/25/14 did not indicate any problems. Unit will be test run again after April 7, 2014 with additional monitoring equipment installed to further trouble shoot problem and minimize any impacts of a trip.		
<b>Causes:</b>	Unknown at this time, will need to operate unit with monitoring equipment to evaluate.		
<b>Primary Causes:</b>	Equipment Failures		
<b>Does Eval Require Scening Committee Approval upon Completion</b>	no		
<b>Evaluation Reviewed/Approved by Screening Committee</b>			



### USGS 04041500 STURGEON RIVER NEAR ALSTON, MI



---- Provisional Data Subject to Revision ----

△ Median daily statistic (81 years) — Discharge

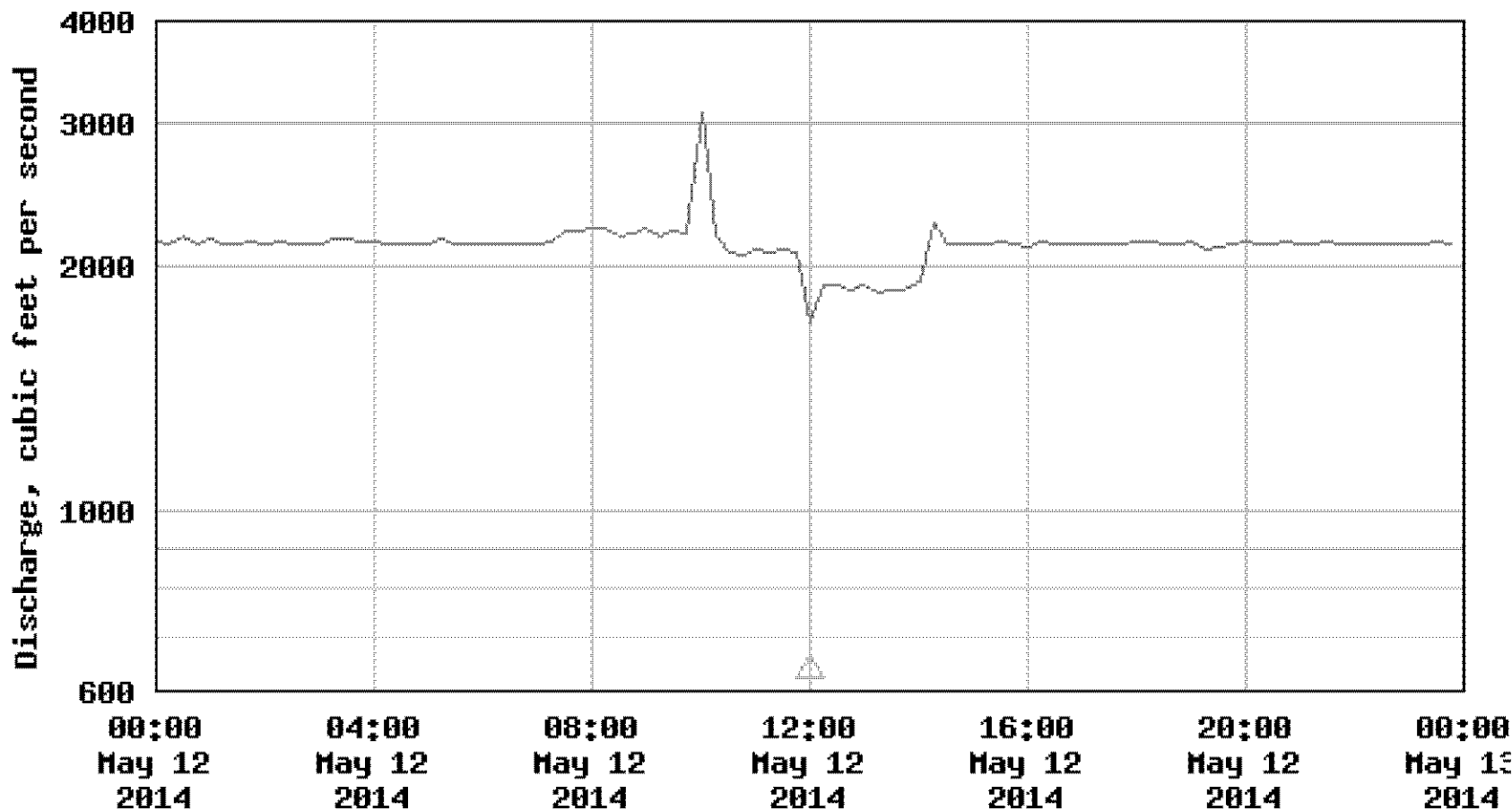
# Non-Conformance Event Record Detail



<b>NC Record Number:</b> NCREG6115		<b>Entity:</b> Regional Generation	
<b>Company - Level 1 - Level 2:</b> UPP-Prickett Hydro			
<b>Event Date:</b>	05/05/2014	<b>Discovery Date/Time:</b>	5/12/14 12:54
<b>Event Title:</b>	Prickett Unit 2 Trip - Article 401 Run of River Deviation		
<b>Event Details:</b>	On Monday May 12, 2014 at approximately 1254 EST Unit 2 tripped off line at Prickett. The trip was result of bad contacts in the governor oil pump motor starter. ES&C was able to remotely open a spillway gate to approximate flows, and an operator was dispatched to investigate the problem. The motor starter was repalced and the unit was placed back in service at 1505 EST. Outflows were maintained throughout event using spillway gates.		
<b>Immediate Action:</b>	Investigate problem and repalce motor starter. The motor starter contacts were suspect, and we had a new set at the site in case they failed.		
<b>Recommendations:</b>	Maintain spare contacts at the site in case problem develops again.		
<b>Potential Causes/Contributors to incident</b>	Equipment failure. contacts fail over time due to arcing caused by opening and closing.		
<b>Entered By Name:</b>	James R Melchiori	<b>Creation Date/Time:</b>	5/16/14 14:11
<b>Entered By Department:</b>	Western Hydros	<b>Status:</b>	Approved
<b>Reportable to External Agency:</b>	no	<b>Basis for Reportability:</b>	Will be reported with annual less than 60 minute deviations in 2014 report.
<b>Additional Followup Required:</b>	no		
<b>Category:</b>	Regulatory	<b>Type:</b>	FERC Deviation
<b>Sub Type:</b>	Plant equip. failure	<b>Description:</b>	Governor oil pump motor starter contacts
<b>Causal Analysis Level:</b>	Apparent cause evaluation	<b>Causal Analysis Basis:</b>	Inspection of contacts indicate they were in bad condition and required repalcement.
<b>Event Start:</b>	5/12/2014 12:54 PM	<b>Event End:</b>	5/12/2014 1:05 PM
<b>Evaluator Name:</b>	Melchiori, James R	<b>Evaluator Dept:</b>	Western Hydros
<b>Evaluation Accepted:</b>	yes	<b>Acceptance Comments</b>	Automatically Approved
<b>Eval Due Date:</b>	5/16/2014	<b>Eval Completion Date:</b>	
<b>Approver Name:</b>	Melchiori, James R	<b>Corrective Action Approver Name</b>	Melchiori, James R
<b>Analysis Description:</b>	Unit 2 trip at Prickett, caused by bad governor oil pump motor starter contacts.		
<b>Causes:</b>	Contacts fail periodically, over time contacts fail due to opening and closing and being subjected to electrical arcing.		
<b>Primary Causes:</b>	Equipment Failures		
<b>Does Eval Require Sceening Committee Approval upon Completion</b>	no		
<b>Evaluation Reviewed/Approved by Screening Committee</b>			



### USGS 04041500 STURGEON RIVER NEAR ALSTON, MI



---- Provisional Data Subject to Revision ----

△ Median daily statistic (81 years) — Discharge