Upper Peninsula Power Company
1002 Harbor Hills Drive
Marquette, MI 49855
www.UPPCO.com

February 25, 2016

FERC Project No. 10855
NATDAM Nos. MI00178, MI00183,
& MI00197

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

Dear Secretary Bose:

Dead River Hydroelectric Project
2015 Annual Report - Operation Monitoring Plan &
Report of Deviations Less Than Sixty Minutes

The Order Amending License for the Dead River Hydroelectric Project (FERC Project No. 10855) dated September 1, 2011, and the Order Modifying and Approving Article 405 Operations Monitoring Plan dated March 11, 2010, both require Upper Peninsula Power Company (UPPCO) to submit annual Operation Monitoring Reports.

UPPCO is required by the September 1, 2011 Order to provide the annual report to the resource agencies by January 31 each year and to the Commission by February 28 of each year. UPPCO is also required by the March 11, 2010 Order to provide the annual report after a 30-day comment period and then to the Commission by February 28 of each year.

Additionally, the 2011 Order's annual report requires UPPCO to submit all deviations less than 60 minutes that did not result in the observation or reporting of any negative environmental effects. Consistent with the requirements of the 2011 and 2010 Orders, the following information has been enclosed at this time to fulfill the annual reporting requirements:

- A summary of reservoir surface elevations and flow data;
- Operational data necessary to determine compliance with the operating range requirement;

- A summary of all deviation(s) from required flows and reservoir elevations that occurred during the year (This includes the deviations less than 60 minutes as required by the 2011 Order);

- A description of any corrective measures implemented during the course of the year, and measures implemented or proposed to improve future compliance (if necessary) or 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;

- A record of flushing flows that occurred in the McClure Bypass reach indicating when and if wood debris was transported downstream during the event;
- Summary of all gate and valve openings;
- Documentation of consultation on the draft report.

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. If you have any questions on the content of this report, please do not hesitate to contact Bob Meyers at (906)485-2419 at you earliest convenience.

Sincerely,

Virgil Schlorke
Director – Generation and Environmental Services
Upper Peninsula Power Company

JFN/ebr

Enc: Appendix 1 – Annual Deviation Report
Appendix 2 - Agency Consultation

cc: Mr. Robert Meyers, UPPCO
Mr. Keith Moyle, UPPCO
Mr. John Zygaj, FERC - CRO
Mr. Jarrod Nelson, UPPCO
Mr. David Tripp, UPPCO

Appendix 1

Documentation of Consultation

Upper Peninsula Power Company
1002 Harbor Hills Drive
Marquette, MI 49855
www.UPPCO.com

January 22, 2016

FERC Project No. 10855
NATDAM Nos. MI00183, MI00175,
& MI00197

Ms. Koren Carpenter - MDEQ
Ms. Diana Klemans - MDEQ
Mr. Gary Kohlhepp - MDEQ
Mr. Kyle Kruger - MDNR
Mr. Burr Fisher - USFWS

Dear Agency Representatives:

Dead River Hydroelectric Project: Article 405
Operation Monitoring Plan Report of Deviations Less Than Sixty Minutes – 2015 Report

The Order Amending License for the Dead River Hydroelectric Project (FERC Project No. 10855) dated September 1, 2011, and the Order Modifying and Approving Article 405 Operations Monitoring Plan dated March 11, 2010, both require Upper Peninsula Power Company (UPPCO) to submit annual Operation Monitoring Reports.

UPPCO is required by the September 1, 2011; Order to provide the annual report to the resource agencies by January 31, each year and to the Commission by February 28, of each year.

UPPCO is also required by the March 11, 2010 Order to provide the annual report after a 30-day comment period and then to the Commission by February 28, of each year.

Furthermore, the 2011 Order's annual report requires UPPCO to submit all deviations less than 60 minutes that did not result in the observation or reporting of any negative environmental effects.

Consistent with the requirements of the 2011 and 2010 Orders, the following information has also been enclosed at this time to fulfill the annual reporting requirements:

- A summary of reservoir surface elevations and flow data;
- Operational data necessary to determine compliance with the operating range requirement;
- A summary of all deviation(s) from required flows and reservoir elevations that occurred during the year (This includes the deviations less than 60 minutes as required by the 2011 Order);
- A description of any corrective measures implemented during the course of the year, and measures implemented or proposed to improve future compliance (if necessary) or 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;
- A record of flushing flows that occurred in the McClure Bypass reach indicating when and if wood debris was transported downstream during the event;
- Summary of all gate and valve openings;

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,

Please provide your comments on the annual report no later than February 22, 2016. Should you have any questions, please do not hesitate to contact me at (906) 485-2419.

Sincerely,

Bob J. Meyers
Project Manager – Regional Generation

Appendix 2

Annual Report

Summary of Reservoir Surface Elevations and Flow Data

Point Info - UPPCO-SLK: Headwater Elevation

Silver Lake FERC #10855

Point Info - UPPCO-HST: Headwater Elevation

History | Energy Log | Live Values | Alarm Config | Recent Events | SCADA | Documents | Schema | Point Rationalization

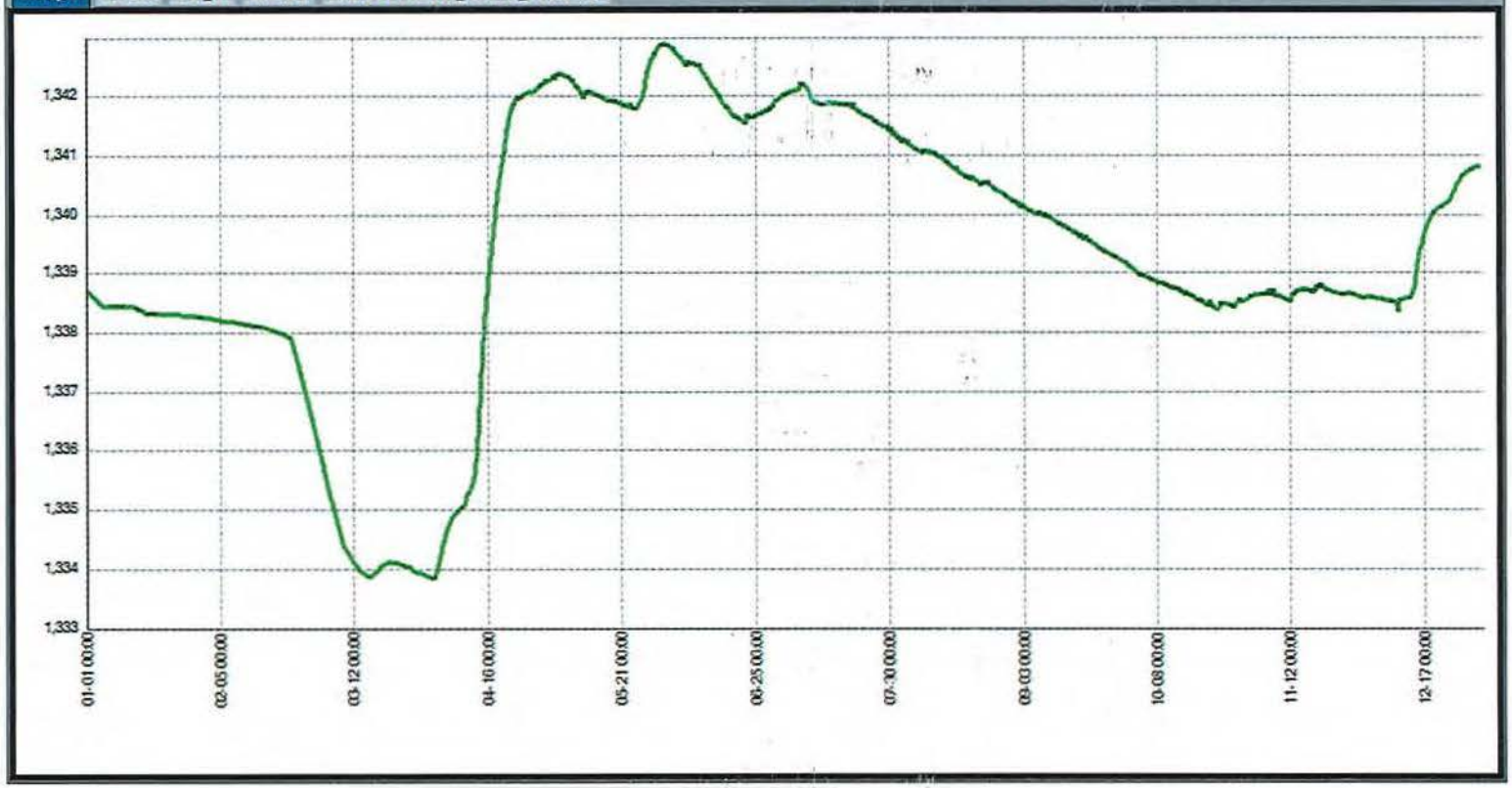
Filter

Source: Historical Quick Filter: Custom Line: Slope Show Limits

Integration: Hour Start Time: 01/01/2015 00:01 End Time: 12/31/2015 23:59

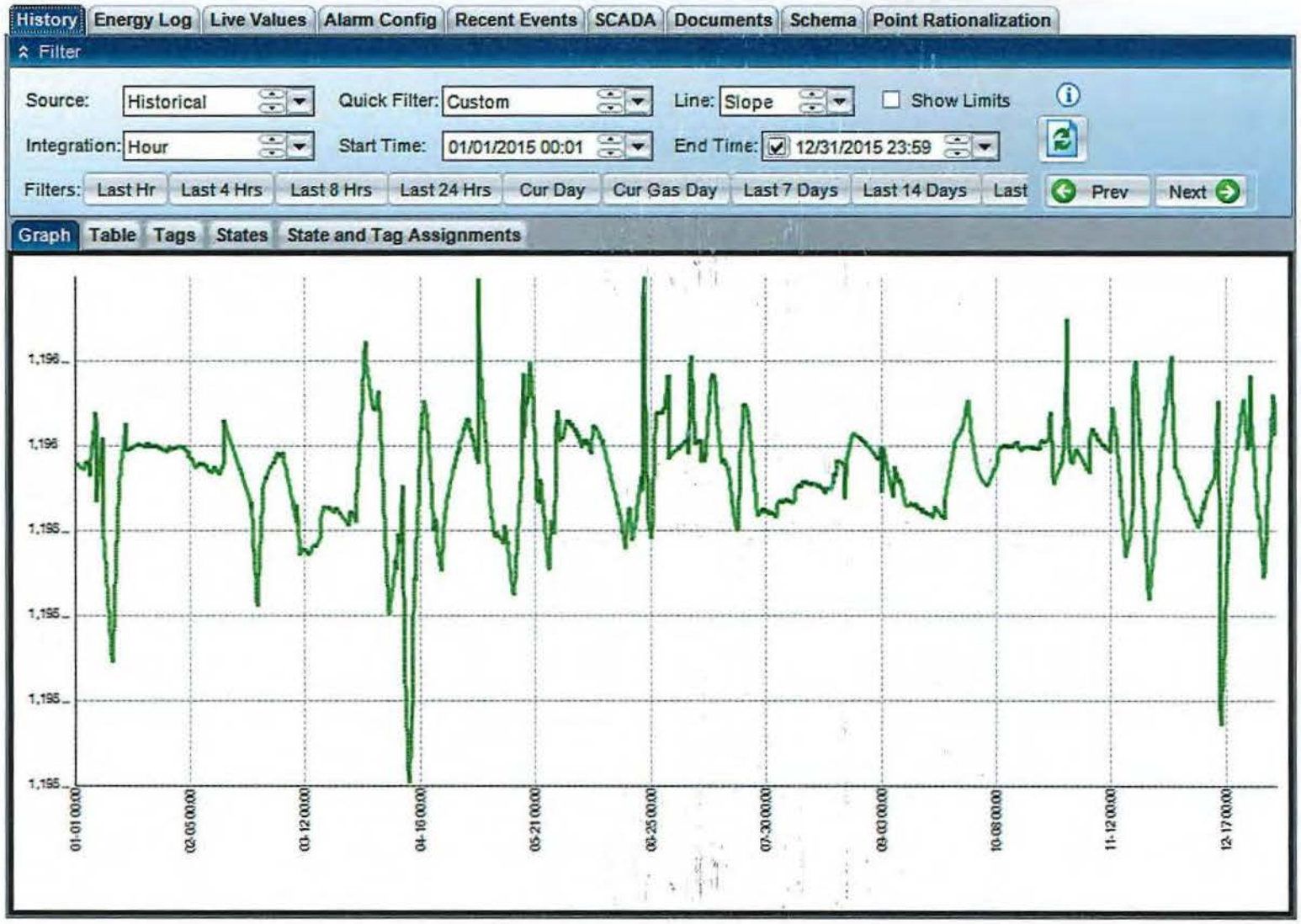
Filters: Last Hr | Last 4 Hrs | Last 8 Hrs | Last 24 Hrs | Cur Day | Cur Gas Day | Last 7 Days | Last 14 Days | Last | Prev | Next

Graph | Table | Tags | States | State and Tag Assignments



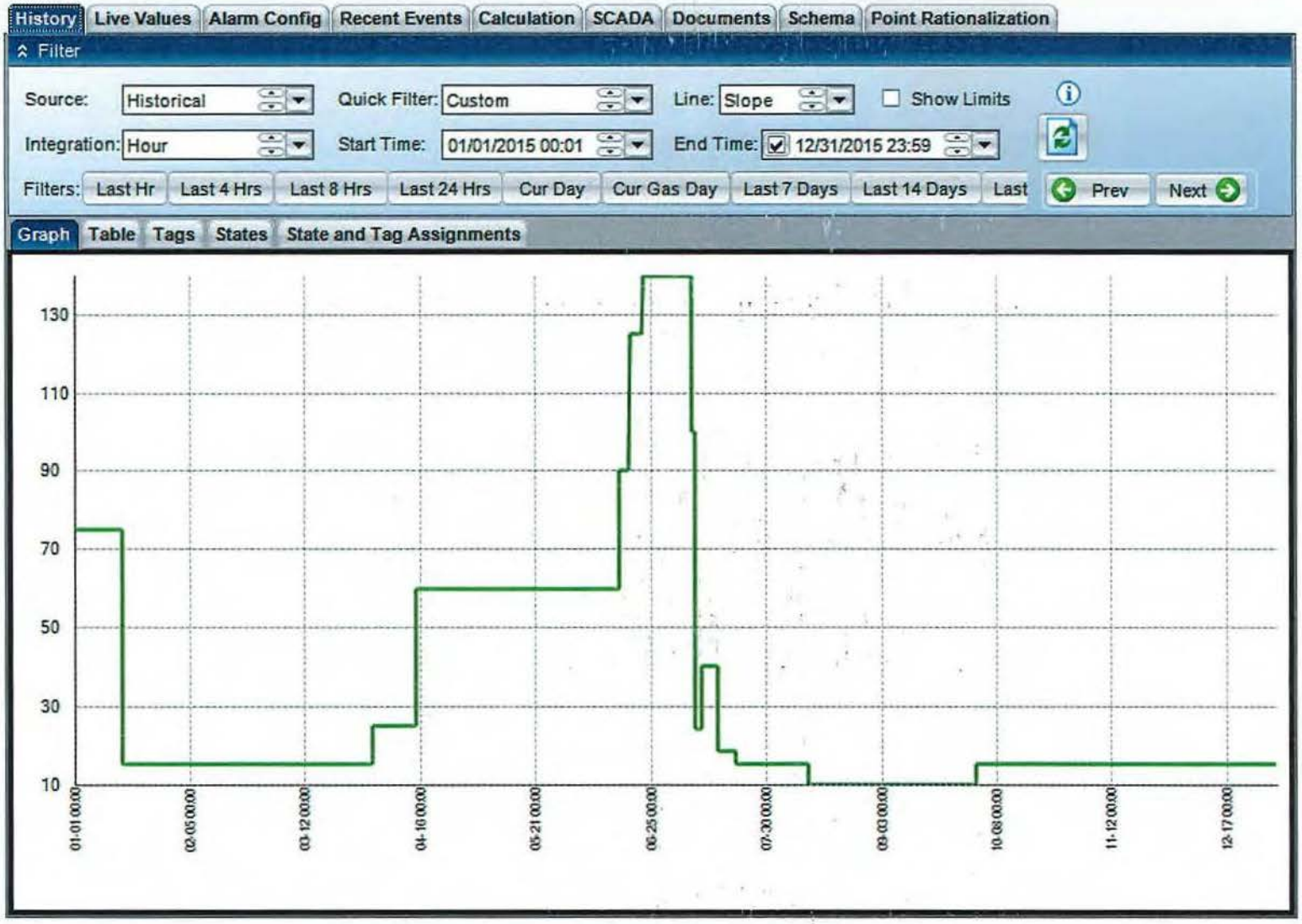
Hoist FERC #10855

Point Info - UPPCO-MCLD: Headwater Elevation



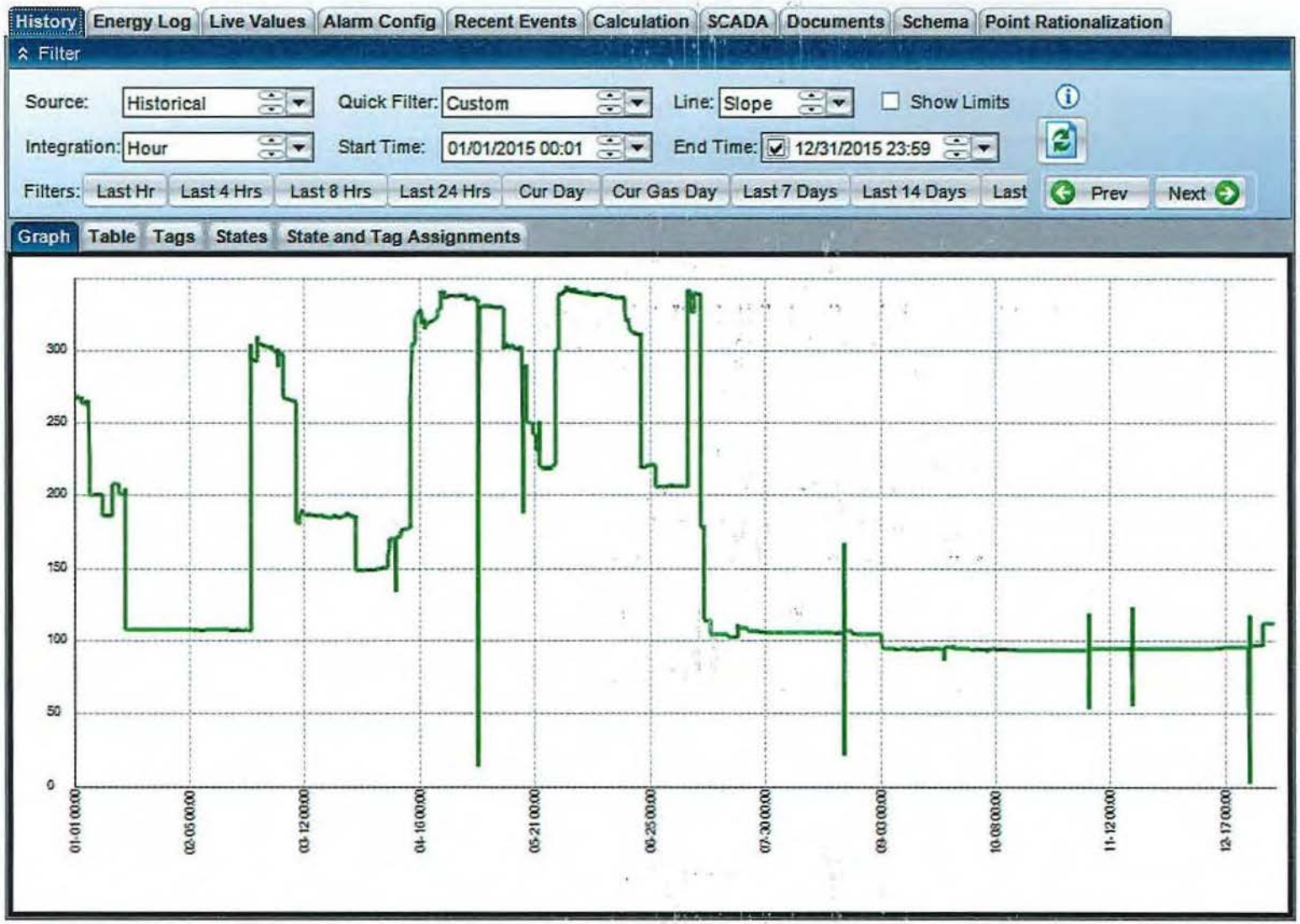
McClure FERC #10855

Point Info - UPPCO-SLK: Total Plant Flow



Silver Lake FERC #10855

Point Info - UPPCO-HST: Total Plant Flow



Hoist FERC #10855

Point Info - UPPCO-MCL: Powerhouse Penstock Flow

History | Energy Log | Live Values | Alarm Config | Recent Events | SCADA | Documents | Schema | Point Rationalization

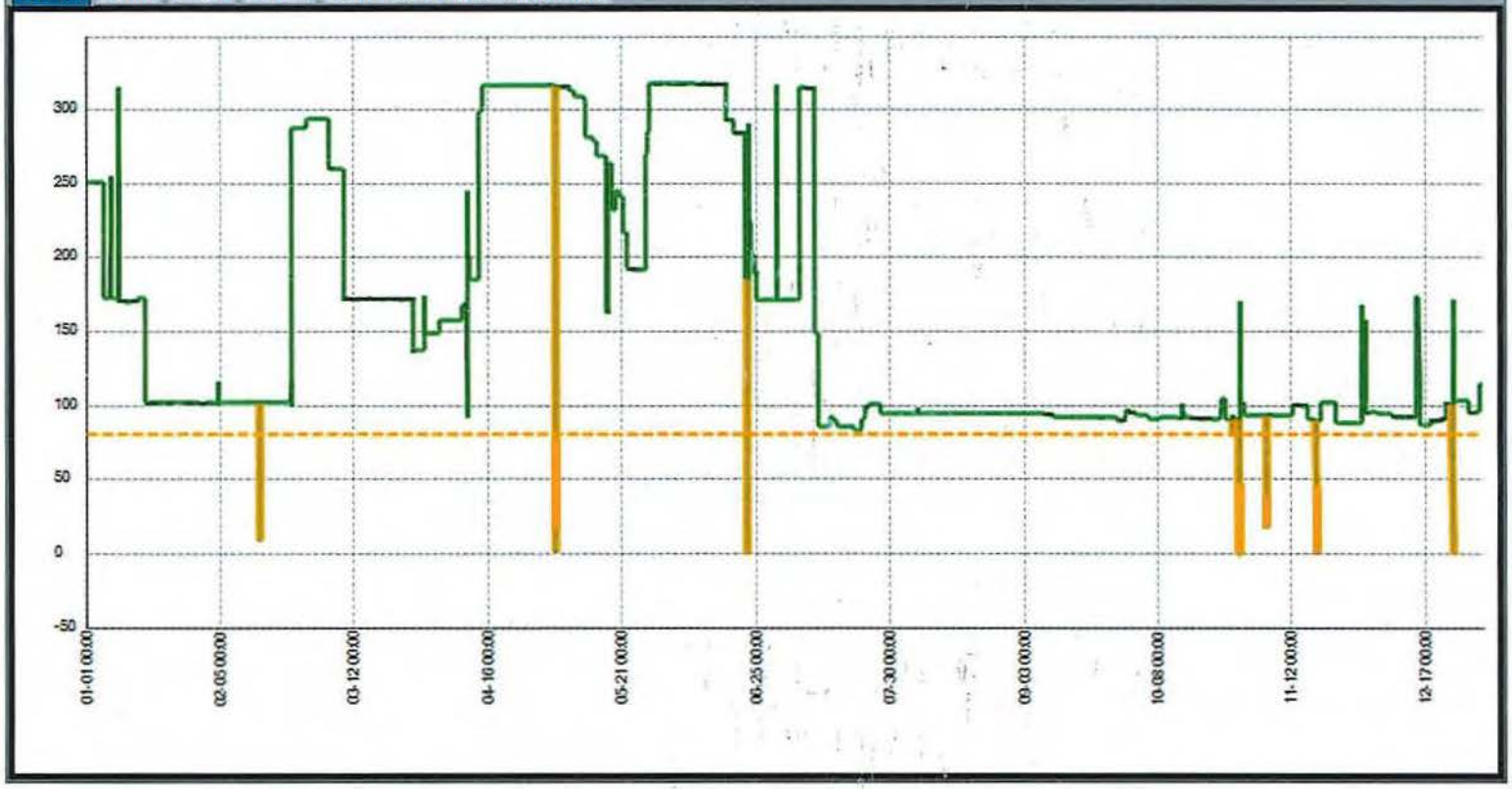
Filter

Source: Historical Quick Filter: Custom Line: Slope Show Limits

Integration: Hour Start Time: 01/01/2015 00:01 End Time: 12/31/2015 23:59

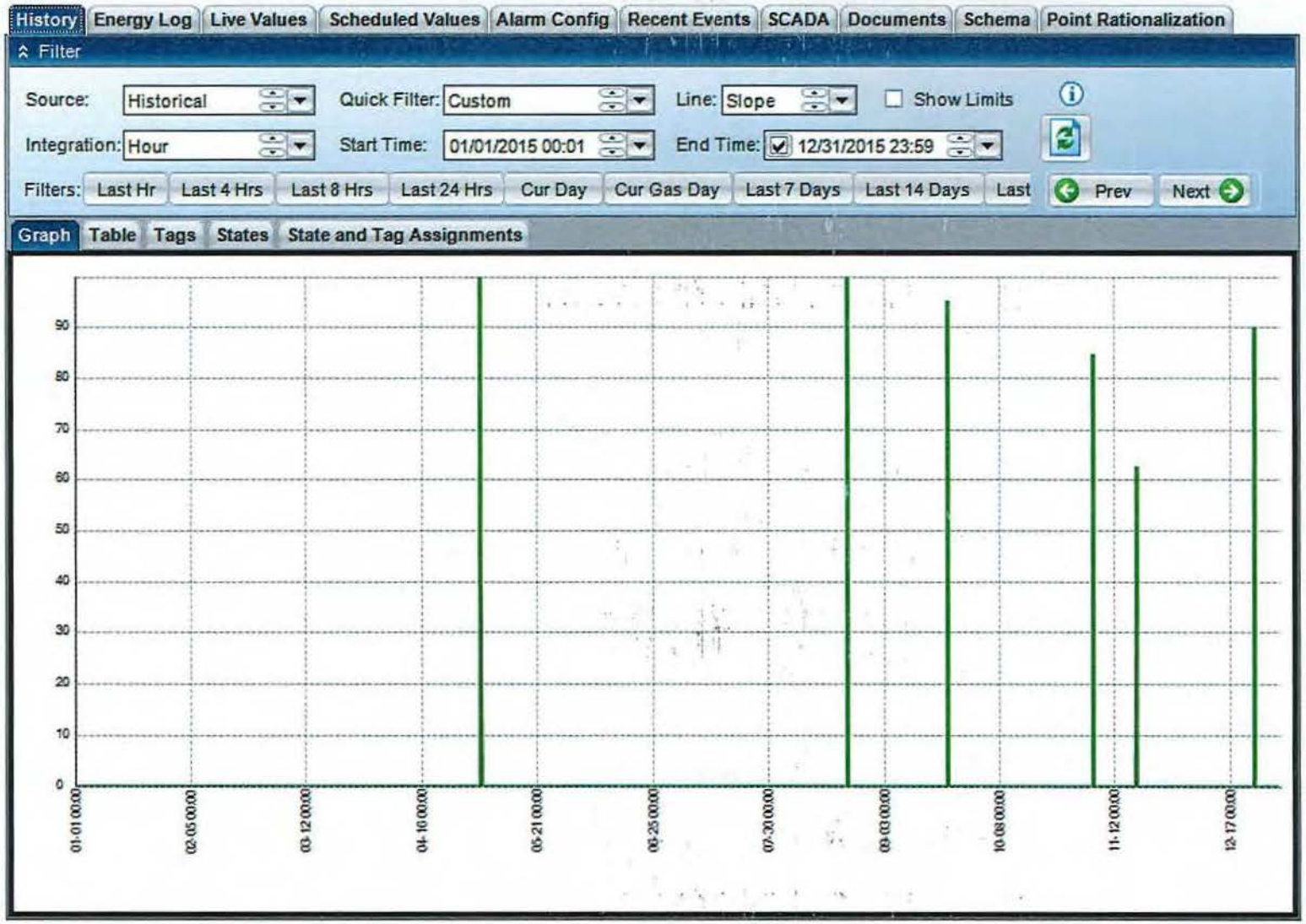
Filters: Last Hr | Last 4 Hrs | Last 8 Hrs | Last 24 Hrs | Cur Day | Cur Gas Day | Last 7 Days | Last 14 Days | Last Prev Next

Graph | Table | Tags | States | State and Tag Assignments



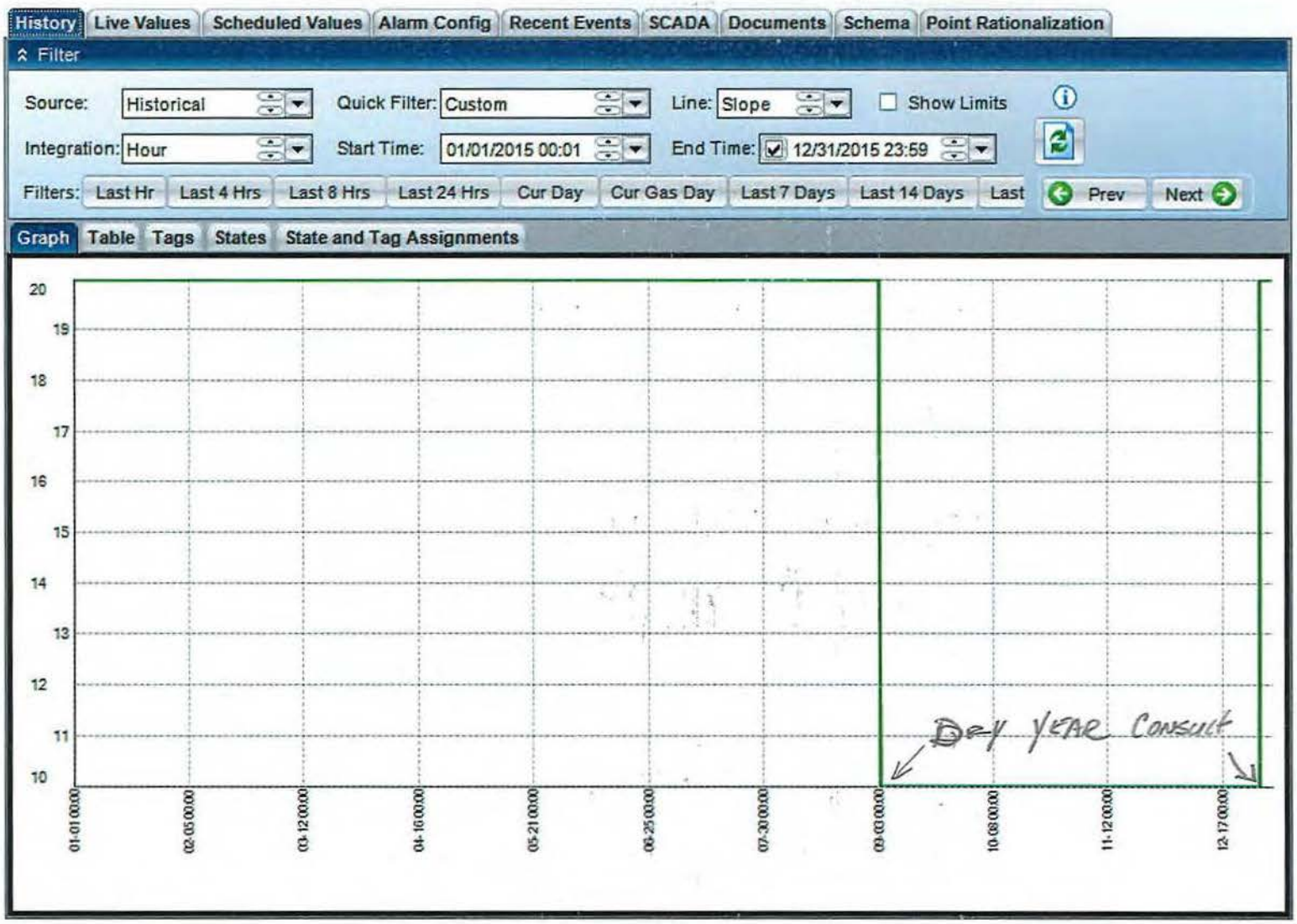
McClure FERC #10855

Point Info - UPPCO-HST: Lower Level Outlet Flow



Hoist FERC #10855

Point Info - UPPCO-MCL: Siphon Flow



McClure FERC #10855

Summary of All Deviations (s) from required flows and elevatios

< 60 Minutes

>60 Minutes

Dead River Project FERC No. 10855, Deviation Summary for 2015

Project	Date	Deviations < 60 minutes	Reason
Hoist	4/8/2015	11 Minutes - Min Flow	Electrical Ground in plant on PT removed Maint.
McClure	4/10/2015	25 Minutes - Min Flow	Maint Packing Adjustment Tripped unit
Hoist	11/18/2015	26 Minutes - Min Flow	Tree on Line cause Transmission Trip, Low Level Outlet Opened
McClure	11/30/2015	11 Minutes - Min Flow	Units were being swapped, and unit tripped
		Deviations > 60 minutes	
McClure	2/15/2015	1:44 Hours - Min Flow	Governor Oil Pump blown Fuse
Hoist/McClure	5/3/2015	1:22 Hours - Min Flow/Pond Elev	Storm/Trees taking out Transmisison system
McClure	6/22/2015	4:00 Hours - Min Flow/Pond Elev	Storm/Lighting taking out Transmission system
Hoist	8/22/2015	1:24 Hours - Min Flow	Storm/Lighting taking out Transmission system
McClure	10/29/2015	4:27 Hours - Min Flow	Insulator Failure Substation taking off Plant
Hoist/McClure	11/5/2015	1:28 Hours - Min Flow	Storm/Trees taking out Transmisison system
Hoist/McClure	11/18/2015	5:52 Hours - Min Flow	Storm/Trees taking out Transmisison system
Hoist/McClure	12/24/2015	1:33 Hours - Min Flow	Storm/Trees taking out Transmisison system

Non-Conformance Event Record Detail

Integrys Energy Group

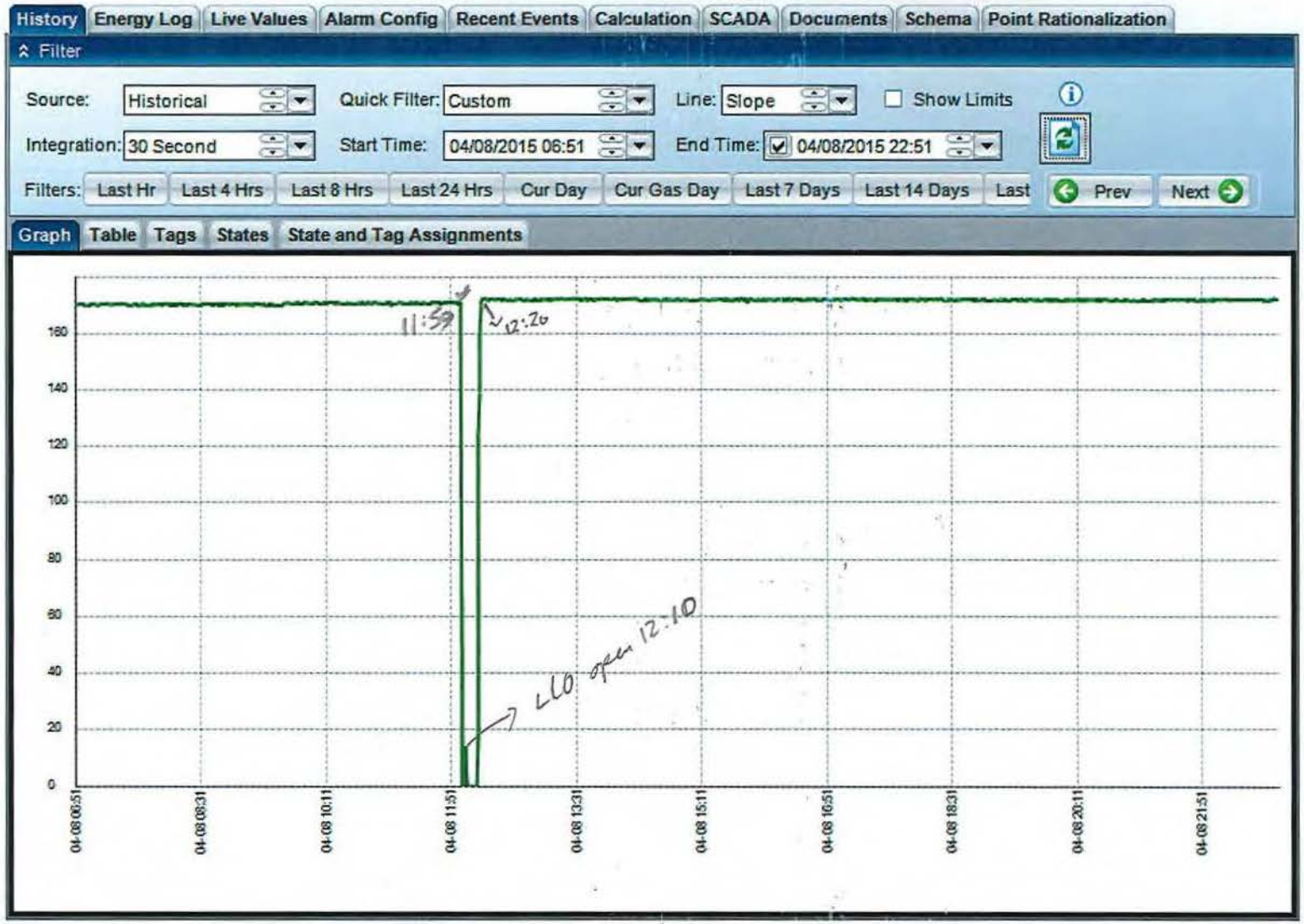
NC Record Number: NCREG7300 **Entity:** Regional Generation
Company - Level 1 - Level 2: UPP-Hoist Hydro

Event Date: 04/08/2015 **Discovery Date/Time:** 4/8/15 12:03
Event Title: Plant trip

Event Details: Plant tripped while electrical work was being performed
Immediate Action: Notified operator
Recommendations: Investigate and repair
Potential Causes/Contributors to Incident unkown
Entered By Name: Garry D Gentry **Creation Date/Time:** 4/8/15 12:04
Entered By Department: Energy Supply and Control **Status:** Closed
Reportable to External Agency: yes **Basis for Reportability:** Part of the < 60 minute requirement for FERC compliance, end of year report
Additional Followup Required: yes
Category: Regulatory **Type:** FERC Deviation
Sub Type: Plant equip. failure **Description:**
Causal Analysis Level: Closed - No further action required **Causal Analysis Basis:** Plant tripped when Maint was being done in plant, and a ground wire was removed on Unit 1 causing Unit 2 to trip. Ground was tied into the PT/CT protection circuit. Work on any further wires from Unit #1 will be stopped.
Less than 100 CFS flow was interrupted for 11 minutes

Event Start: 4/8/2015 12:03 PM **Event End:** 4/8/2015 12:14 PM **Event Duration (HH:MM):** 00:11
Evaluator Name: **Evaluator Dept:**
Evaluation Accepted: **Acceptance Comments**
Eval Due Date: **Eval Completion Date:**
Approver Name: **Corrective Action Approver Name**
Analysis Description:
Causes:
Primary Causes:
Does Eval Require Sceening Committee Approval upon Completion no
Evaluation Reviewed/Approved by Screening Committee

Point Info - UPPCO-HST: Total Plant Flow



Hoist FERC #10855

Non-Conformance Event Record Detail

Integrys Energy Group

NC Record Number: NCREG7309 **Entity:** Regional Generation

Company - Level 1 - Level 2: UPP-McClure Hydro

Event Date: 04/10/2015 **Discovery Date/Time:** 4/10/15 12:09

Event Title: Plant trip

Event Details: At 1104 central time on 4-10-2015 Unit #2 tripped offline, according to the operator they smoked a packing. They were unable to get Unit #1 online. At 1129 Central time unit #1 was online and flows were restored.

Immediate Action: Called the plant and spoke to the operator.

Recommendations: None.

Potential Causes/Contributors to Incident Packing failure.

Entered By Name: Stephen M Beirne **Creation Date/Time:** 4/10/15 12:12

Entered By Department: Energy Supply and Control **Status:** Closed

Reportable to External Agency: no **Basis for Reportability:** < 60 minutes event, will be end of year report to FERC

Additional Followup Required: yes

Category: Regulatory **Type:** FERC Deviation

Sub Type: Plant equip. failure **Description:**

Causal Analysis Level: Closed - No further action required **Causal Analysis Basis:** When adjusting unit for Operation, packing burned, and unit was tripped off line. Other unit was started and flow restored.

Event Start: 4/10/2015 11:04 AM **Event End:** 4/10/2015 11:29 AM **Event Duration (HH:MM):** 00:25

Evaluator Name: **Evaluator Dept:**

Evaluation Accepted: **Acceptance Comments**

Eval Due Date: **Eval Completion Date:**

Approver Name: **Corrective Action Approver Name**

Analysis Description:

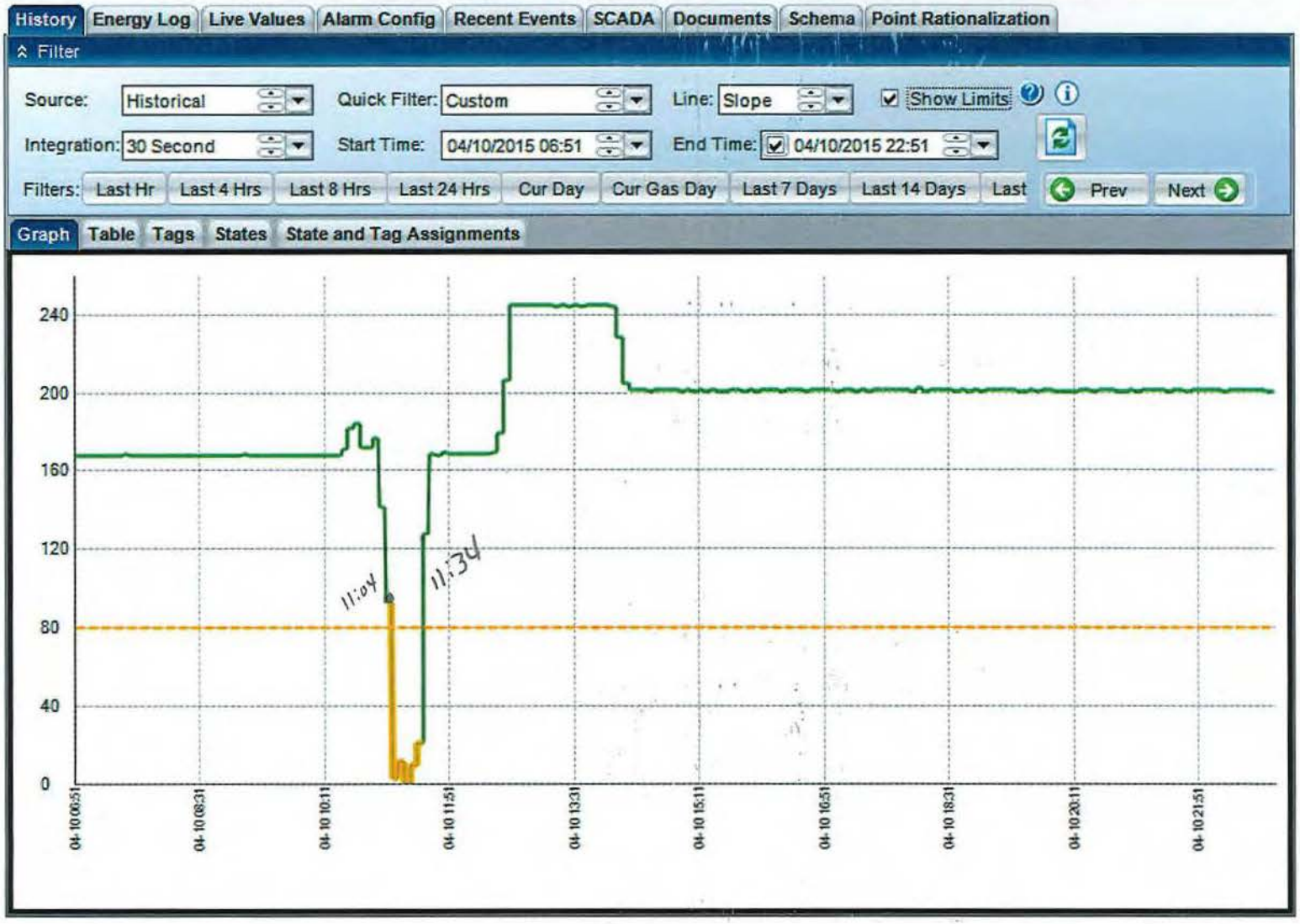
Causes:

Primary Causes:

Does Eval Require Sceening Committee Approval upon Completion no

Evaluation Reviewed/Approved by Screening Committee

Point Info - UPPCO-MCL: Powerhouse Penstock Flow



McClure FERC #10855

Non-Conformance Event Record Detail

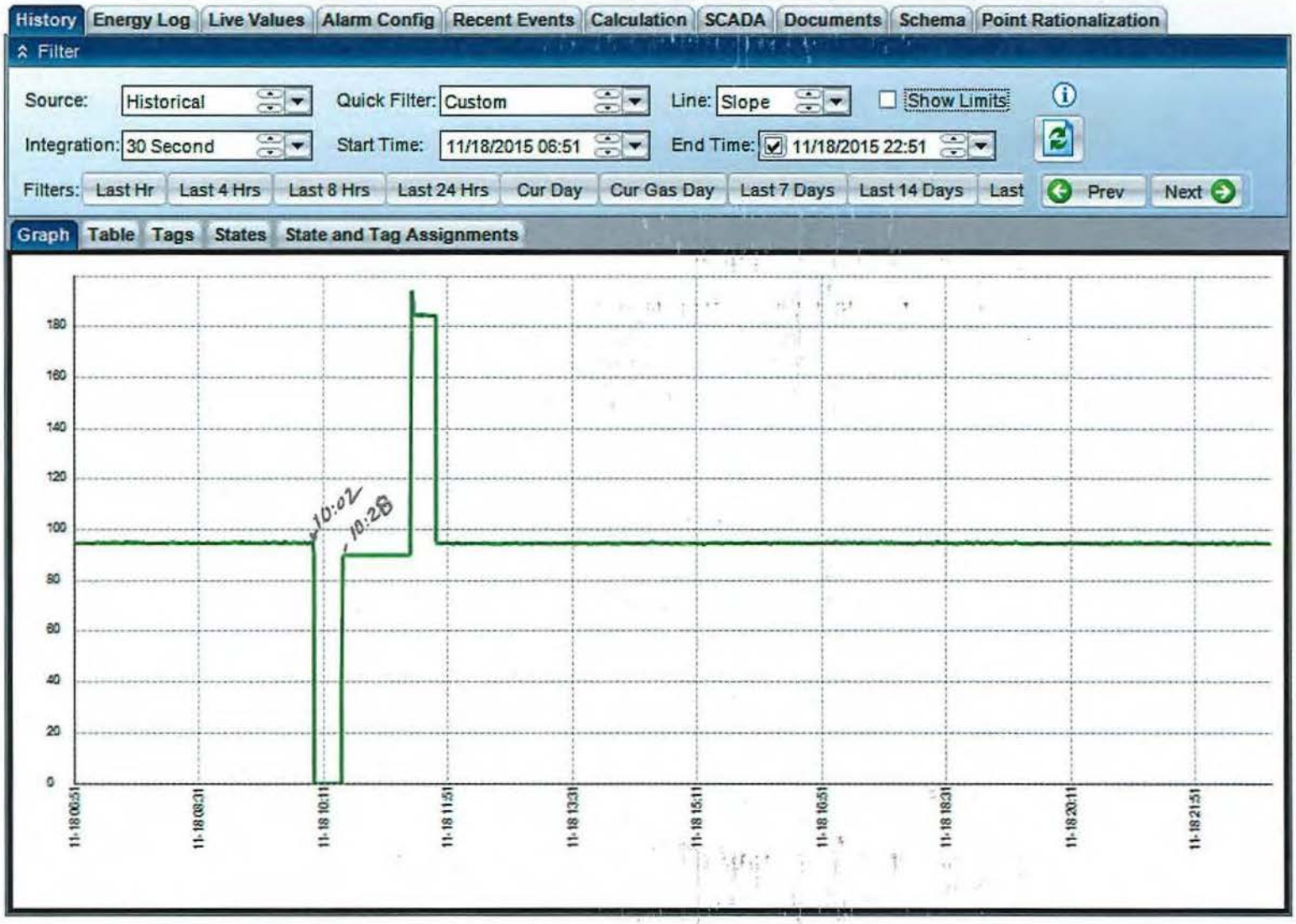
Integrys Energy Group

NC Record Number: NCREG8233 **Entity:** Regional Generation
Company - Level 1 - Level 2: UPP-Hoist Hydro

Event Date:	11/18/2015	**Discovery Date/Time:**	11/18/15 10:03
Event Title:	Hoist Plant Trip		
Event Details:	Plant tripped at 1003CST Loss of power. Paged local operator. He went to plant and opened LLO to 90CFS. Power returned to the plant at 1113CST. Unit #2 back online at 1121CST		
Immediate Action:	Paged local operator		
Recommendations:	None		
Potential Causes/Contributors to incident	Weather		
Entered By Name:	Brian K Ellison	**Creation Date/Time:**	11/18/15 13:39
Entered By Department:	Energy Supply and Control	**Status:**	Closed
Reportable to External Agency:	no	**Basis for Reportability:**	Will be sent to FERC as part of overall outage
Additional Followup Required:	yes		
Category:	Regulatory	**Type:**	FERC Deviation
Sub Type:	Trans. Sys. (storm related)	**Description:**	tree
Causal Analysis Level:	Closed - No further action required	**Causal Analysis Basis:**	Unit tripped, after tree was cleared, unit went back into service, LLO was opened wtihin 26 minutes, but since McClure was taken off also, it will be reported as the same event.

Event Start:	11/18/2015 10:02 AM	**Event End:**	11/18/2015 10:28 AM	**Event Duration (HH:MM):**	00:26
Evaluator Name:		**Evaluator Dept:**			
Evaluation Accepted:		**Acceptance Comments**			
Eval Due Date:		**Eval Completion Date:**			
Approver Name:		**Corrective Action Approver Name**			
Analysis Description:					
Causes:					
Primary Causes:					
Does Eval Require Sceening Committee Approval upon Completion	no				
Evaluation Reviewed/Approved by Screening Committee					

Point Info - UPPCO-HST: Total Plant Flow



Hoist FERC #10855

Non-Conformance Event Record Detail

Integrys Energy Group

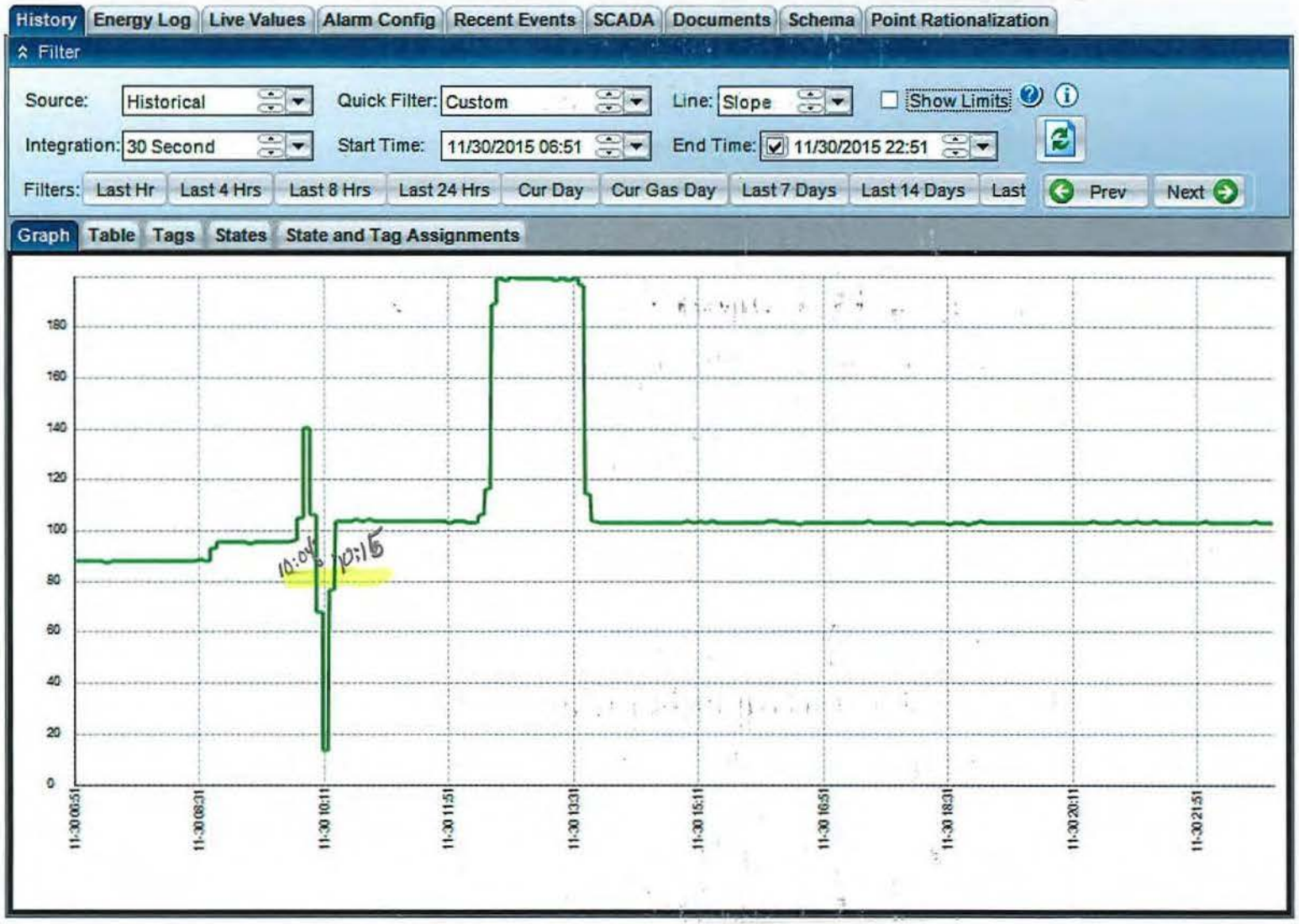
NC Record Number: NCREG8282 **Entity:** Regional Generation
Company - Level 1 - Level 2: UPP-McClure Hydro

Event Date: 11/30/2015 **Discovery Date/Time:** 11/30/15 10:08
Event Title: Minimum flow deviation

Event Details: After swapping units, unit 1 placed online and unit 2 taken offline, unit 1 tripped due to packing problems and flow decreased to 0 cfs which deviated from the minimum flow of 80 cfs.
Immediate Action: Flow was restored whe local hydro operator placed unit 2 back online at 10:16 CST
Recommendations: None
Potential Causes/Contributors to incident Unit 1 packing problems
Entered By Name: Terrie S Taylor **Creation Date/Time:** 11/30/15 10:18
Entered By Department: Energy Supply and Control **Status:** Closed
Reportable to External Agency: no **Basis for Reportability:** Need to go in as a <60 minute event end of the year
Additional Followup Required: yes
Category: Regulatory **Type:** FERC Deviation
Sub Type: Plant equip. failure **Description:** packing
Causal Analysis Level: Closed - No further action required **Causal Analysis Basis:** When units were swapped, unit one was stopped and other unit had a packing issue when it was on line on its own.

Event Start: 11/30/2015 10:06 AM **Event End:** 11/30/2015 10:17 AM **Event Duration (HH:MM):** 00:11
Evaluator Name: **Evaluator Dept:**
Evaluation Accepted: **Acceptance Comments**
Eval Due Date: **Eval Completion Date:**
Approver Name: **Corrective Action Approver Name**
Analysis Description:
Causes:
Primary Causes:
Does Eval Require Sceening Committee Approval upon Completion no
Evaluation Reviewed/Approved by Screening Committee

Point Info - UPPCO-MCL: Powerhouse Penstock Flow



McClure FERC #10855

Non-Conformance Event Record Detail

Integrys Energy Group

NC Record Number: NCREG7108 **Entity:** Regional Generation

Company - Level 1 - Level 2: UPP-McClure Hydro

Event Date: 02/15/2015 **Discovery Date/Time:** 2/15/15 3:23

Event Title: Unplanned loss of generation / Minimum flow deviation

Event Details: At 03:23 CST on 2/15/15, McClure unit #1 tripped offline with low governor oil pressure, resulting in total plant flow dropping to 20 CFS (siphon flow). A local operator was dispatched. Unit #2 was synced online at 04:53, with minimum flow being reestablished at 04:57.

Immediate Action: A local operator was dispatched to investigate the problem and restart generation.

Recommendations:

Potential Causes/Contributors to incident Potential issue with unit #1's governor oil pump.

Entered By Name: Kevin S Willey **Creation Date/Time:** 2/15/15 5:05

Entered By Department: Energy Supply and Control **Status:** Closed

Reportable to External Agency: yes **Basis for Reportability:** FERC reportable incident

Additional Followup Required: yes

Category: Regulatory **Type:** FERC Deviation

Sub Type: Plant equip. failure **Description:**

Causal Analysis Level: Closed - No further action required **Causal Analysis Basis:** Blown fuse for Gov. Oil Pump, started other unit to re-establish flow >80 cfs

Event Start: 2/15/2015 3:24 AM **Event End:** 2/15/2015 5:08 AM **Event Duration (HH:MM):** 01:44

Evaluator Name: **Evaluator Dept:**

Evaluation Accepted: **Acceptance Comments**

Eval Due Date: **Eval Completion Date:**

Approver Name: **Corrective Action Approver Name**

Analysis Description:

Causes:

Primary Causes:

Does Eval Require Sceening Committee Approval upon Completion no

Evaluation Reviewed/Approved by Screening Committee

Upper Peninsula Power Company
500 North Washington Street
Ishpeming, MI 49849
www.UPPCO.com

March 16, 2015

FERC Project No. 10855
NATDAM No. MI00183

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

Dear Secretary Bose:

Dead River Hydroelectric Project – McClure Development
Article 403 Deviation of Minimum Flows

In accordance with Article 403 of the Order Issuing License for the Dead River Hydroelectric Project dated October 4, 2002 and as amended on September 1, 2011, the licensee is required to report to the Federal Energy Regulatory Commission (FERC) any deviations associated with flows and the steps used to mitigate them. Please consider this letter as fulfillment of the notification requirement of deviations.

The McClure plant tripped at 03:24 CST, Sunday, February 15, 2015, due to an electrical problem at the plant. An operator was dispatched to the plant and re-established minimum flows by bringing the second unit on line at 05:06 CST. Investigation into the problem identified a blown fuse on the governer oil pump. It was further identified that a servor motor, associated with the governer oil pump, had a bearing issue which resulted in the blown fuse. The servor motor is being rebuilt and the fuse replaced.

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,

Gil Snyder
Manager – Regional Generation
for Wisconsin Public Service

RJM/ebr

Enc. Operational data

cc:
Mr. James Melchiori, UPPCO - UVD
Mr. Robert Meyers, UPPCO - UISC
Mr. Keith Moyle, UPPCO - UISC
Mr. Jarrod Nelson, UPPCO - UISC
Mr. Virgil Schlorke, UPPCO - UISC
Mr. David Tripp, UPPCO - UISC
Mr. James Melchiori, UPPCO - UVD
Mr. Robert Meyers, UPPCO - UISC
Mr. John Myers, IBS - D2
Mr. Shawn Puzen, IBS - D2
Mr. Ben Trotter, IBS - D2
Ms. Joan Johanek, WPS - D2
Mr. John Zygaj, FERC - CRO
Ms. Patricia Grant, FERC - CRO
Mr. Burr Fisher, FWS
Mr. Koren Carpenter, MDEQ
Ms. Diana Klemans, MDEQ
Mr. Gary Kohlhepp, MDEQ
Mr. Kyle Kruger, MDNR
Mr. James Grundstrom, DRCI

Point Info - UPPCO-MCL: Total Plant Flow

History | Energy Log | Live Values | Alarm Config | Recent Events | Calculation | SCADA | Documents | Schema | Point Rationalization

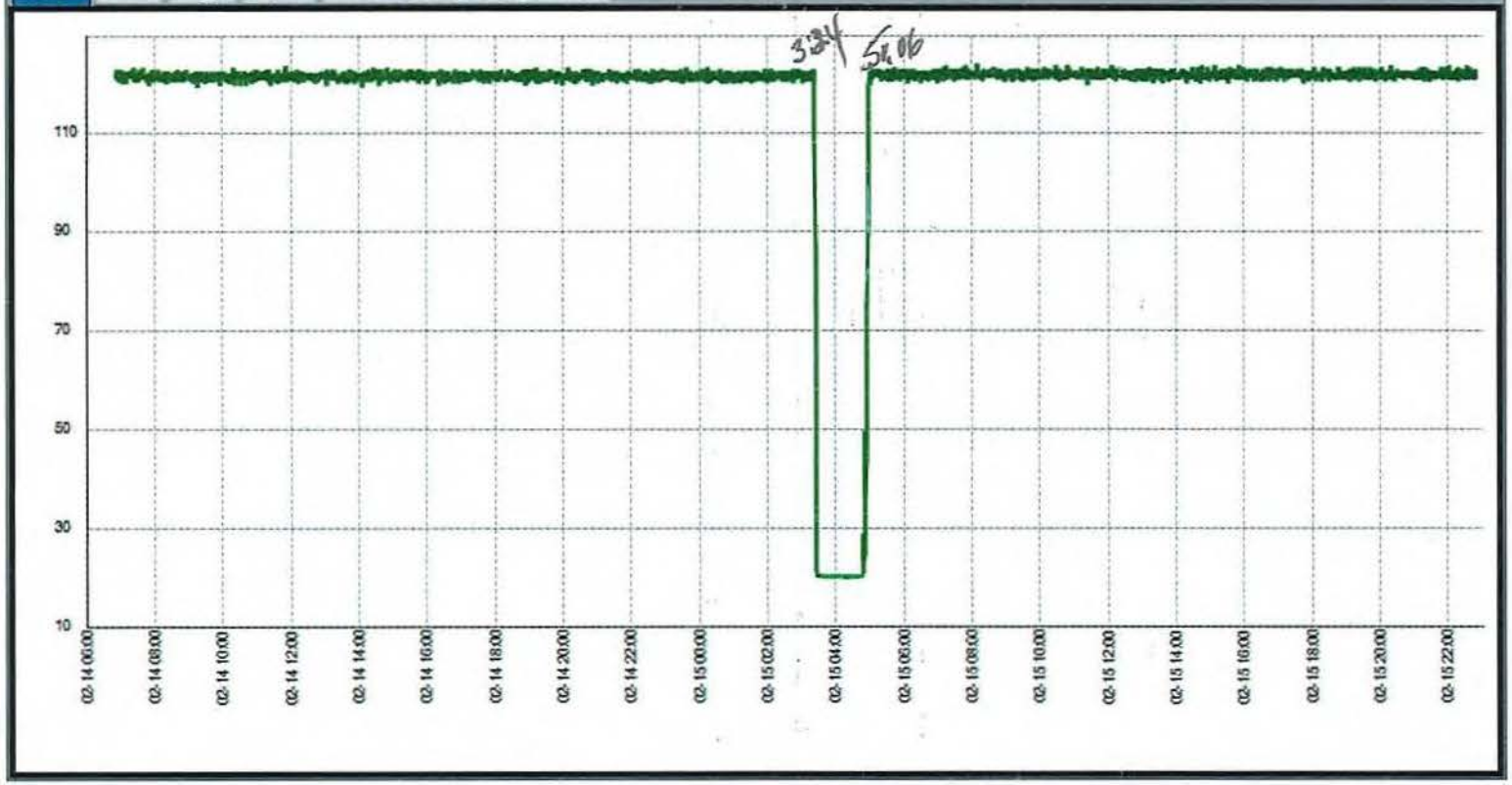
Filter

Source: Historical Quick Filter: Custom Line: Slope Show Limits

Integration: 30 Second Start Time: 02/14/2015 06:51 End Time: 02/15/2015 22:51

Filters: Last Hr | Last 4 Hrs | Last 8 Hrs | Last 24 Hrs | Cur Day | Cur Gas Day | Last 7 Days | Last 14 Days | Last Prev Next

Graph | Table | Tags | States | State and Tag Assignments



Non-Conformance Event Record Detail

Integrys Energy Group

NC Record Number: NCREG7376 **Entity:** Regional Generation
Company - Level 1 - Level 2: UPP-McClure Hydro

Event Date: 05/03/2015 **Discovery Date/Time:** 5/3/15 18:02
Event Title: Units #1 and #2 Tripped Offline at McClure

Event Details: at 1802 (CPT) both units #1 and #2 tripped offline. There were some relatively heavy localized storms in the area that could be viewed on the radar. ARCOS was initiated and a local operator was dispatched to the site. The DOC was able to energize the substation and get power to the plant and the operator placed units #1 and #2 back online..
Immediate Action: Initiated an ARCOS call to get an operator to the site
Recommendations: n/a
Potential Causes/Contributors to incident There were relatively heavy, localized storms in the area so a lightning strike is a possibility. In talking with the operator he indicated that the unit tripped on undervoltage which is indicative of a line being lost...

Entered By Name: David C Paananen **Creation Date/Time:** 5/3/15 19:58
Entered By Department: Energy Supply and Control **Status:** Closed
Reportable to External Agency: yes **Basis for Reportability:** Need to include FERC and others in Report Due out by 6/2/2015
Additional Followup Required: yes
Category: Regulatory **Type:** FERC Deviation
Sub Type: Trans. Sys. (storm related) **Description:**
Causal Analysis Level: Closed - No further action required **Causal Analysis Basis:** Units tripped when lighting took out an insulator on the Transmission line.

Event Start: 5/3/2015 6:02 PM **Event End:** 5/3/2015 7:24 PM **Event Duration (HH:MM):** 01:22
Evaluator Name: **Evaluator Dept:**
Evaluation Accepted: **Acceptance Comments**
Eval Due Date: **Eval Completion Date:**
Approver Name: **Corrective Action Approver Name**
Analysis Description:
Causes:
Primary Causes:
Does Eval Require Sceening Committee Approval upon Completion no
Evaluation Reviewed/Approved by Screening Committee

Non-Conformance Event Record Detail

Integrys Energy Group

NC Record Number: NCREG7378 **Entity:** Regional Generation
Company - Level 1 - Level 2: UPP-McClure Hydro

Event Date: 05/03/2015 **Discovery Date/Time:** 5/3/15 18:02
Event Title: Units #1 and 2 Tripped offline

Event Details: at 1802 (CPT) both units 1 and 2 tripped offline at the plant. ARCOS was initiated and an operator was dispatched to the site. Local storms coud be seen on the RADAR system. The DOC was able to energize the line to the station and the operator was able to get the units on briefly until the next event took them offline as well a few minutes later
Immediate Action: ARCOS initiated to get an operator. spoke to the DOC to see the extent of the problems. Operator dispatched to site
Recommendations: n/a
Potential Causes/Contributors to incident operator indicated that the station tripped offline due to low voltage which is indicative of a loss of a line nearby. Also there was some local storms in the area and that may have contributed...

Entered By Name: David C Paananen **Creation Date/Time:** 5/3/15 21:40
Entered By Department: Energy Supply and Control **Status:** Closed
Reportable to External Agency: no **Basis for Reportability:** duplicate CCAT
Additional Followup Required: yes
Category: Regulatory **Type:** FERC Deviation
Sub Type: Trans. Sys. (storm related) **Description:**
Causal Analysis Level: Closed - No further action required **Causal Analysis Basis:** duplicate CCAT

Event Start: 5/3/2015 6:02 PM **Event End:** 5/3/2015 7:24 PM **Event Duration (HH:MM):** 01:22
Evaluator Name: **Evaluator Dept:**
Evaluation Accepted: **Acceptance Comments**
Eval Due Date: **Eval Completion Date:**
Approver Name: **Corrective Action Approver Name**
Analysis Description:
Causes:
Primary Causes:
Does Eval Require Sceening Committee Approval upon Completion no
Evaluation Reviewed/Approved by Screening Committee

Non-Conformance Event Record Detail

Integrys Energy Group

NC Record Number: NCREG7380 **Entity:** Regional Generation
Company - Level 1 - Level 2: UPP-Hoist Hydro

Event Date: 05/03/2015 **Discovery Date/Time:** 5/3/15 19:50
Event Title: Hoist Units 2 & 3 tripped

Event Details: Hoist Units 2 & 3 tripped and power was lost to the station.
Immediate Action: Called out local Operator
Recommendations: none
Potential Causes/Contributors to incident Severe storm in the area.
Entered By Name: Thomas R Grow **Creation Date/Time:** 5/3/15 23:50
Entered By Department: Energy Supply and Control **Status:** Closed
Reportable to External Agency: no **Basis for Reportability:** Will get reported with the McClure outage with outages longer than 60 minutes by 6/2/2015
Additional Followup Required: yes
Category: Regulatory **Type:** FERC Deviation
Sub Type: Trans. Sys. (storm related) **Description:**
Causal Analysis Level: Closed - No further action required **Causal Analysis Basis:** Units tripped with 2nd trip of McClure Plant, lost 100 cfs minimum flow, got operator out and had LLO opened

Event Start: 5/3/2015 7:51 PM **Event End:** 5/3/2015 8:53 PM **Event Duration (HH:MM):** 01:02
Evaluator Name: **Evaluator Dept:**
Evaluation Accepted: **Acceptance Comments**
Eval Due Date: **Eval Completion Date:**
Approver Name: **Corrective Action Approver Name**
Analysis Description:
Causes:
Primary Causes:
Does Eval Require Sceening Committee Approval upon Completion no
Evaluation Reviewed/Approved by Screening Committee

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

June 2, 2015

FERC Project No. 10855
NATDAM No. MI00183, MI00175

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

Dear Secretary Bose:

Dead River Hydroelectric Project – Hoist and McClure Development
Article 402 & 403 Deviation Minimum Flows and Head Water

In accordance with Article 403 & 402 of the Order Issuing License for the Dead River Hydroelectric Project dated October 4, 2002 and as amended on September 1, 2011, the licensee is required to report to the Federal Energy Regulatory Commission (FERC) any deviations associated with flows and/or elevations and the steps they used to mitigate them. Please consider this letter as fulfillment of the notification requirement of deviations.

The McClure plant tripped at 18:01 CDT, Sunday, May 3, 2015, due to a storm which caused an electrical fault on the transmission system. An operator was dispatched to the plant. The operator re-established the 80 cfs minimum flow at 19:24 CDT but the flow was again interrupted by additional faults on the transmission system at 19:48 CDT, which at the same time tripped the Hoist plant. To re-establish the minimum flow at the Hoist a second operator was dispatched and at 20:59 CDT the Low Level Outlet (LLO) was opened. After the electrical problems with the transmission system were resolved the units at Hoist and McClure were returned to normal operation at 21:35 CDT.

As a result of the transmission fault the headwater (pond) elevation at McClure exceeded the limit of 1196.4 at 21:22 CDT, and peaked at 21:28 CDT at 1196.42 and returned to normal range at 21:41CDT.

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 (storm causing faults on the transmission system) 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,

Gil Snyder
Manager – Regional Generation
for Wisconsin Public Service

RJM/wmp

Enc. Operational data

cc:
Mr. James Melchiori, UPPCO - UVD
Mr. Robert Meyers, UPPCO - UISC
Mr. Keith Moyle, UPPCO - UISC
Mr. Jarrod Nelson, UPPCO - UISC
Mr. Virgil Schlorke, UPPCO - UISC
Mr. David Tripp, UPPCO - UISC
Mr. Kyle Kruger, MDNR
Mr. Koren Carpenter, MDEQ
Mr. James Grundstrom, DRCI
Mr. John Myers, IBS - D2
Mr. Shawn Puzen, IBS - D2
Mr. Ben Trotter, IBS - D2
Ms. Joan Johanek, WPS - D2
Mr. John Zygaj, FERC - CRO
Ms. Diana Klemans, MDEQ
Mr. Burr Fisher, USFWS
Mr. Gary Kohlhepp, MDEQ

Hoist

FERC Project 10855

Point Info - UPPCO-HST: Total Plant Flow

History | Energy Log | Live Values | Alarm Config | Recent Events | Calculation | SCADA | Documents | Schema | Point Rationalization

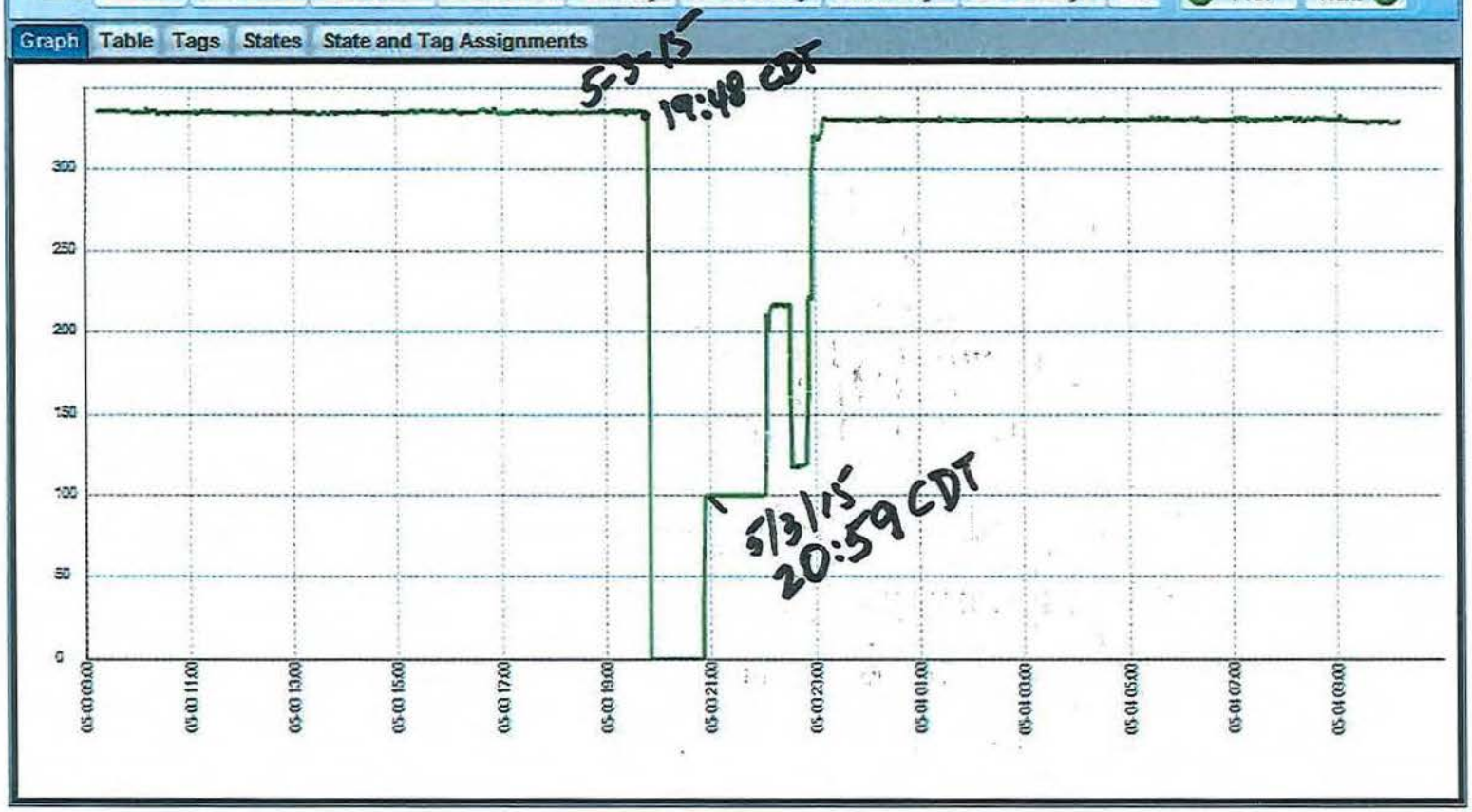
Filter

Source: Historical | Quick Filter: Custom | Line: Slope | Show Limits

Integration: 1 Minute | Start Time: 05/03/2015 09:14 | End Time: 05/04/2015 10:14

Filters: Last Hr | Last 4 Hrs | Last 8 Hrs | Last 24 Hrs | Cur Day | Cur Gas Day | Last 7 Days | Last 14 Days | Last | Prev | Next

Graph | Table | Tags | States | State and Tag Assignments



McClure 2

Point Info - UPPCO-MCLD: Headwater Elevation

Project 10855

History | Energy Log | Live Values | Alarm Config | Recent Events | SCADA | Documents | Schema | Point Rationalization

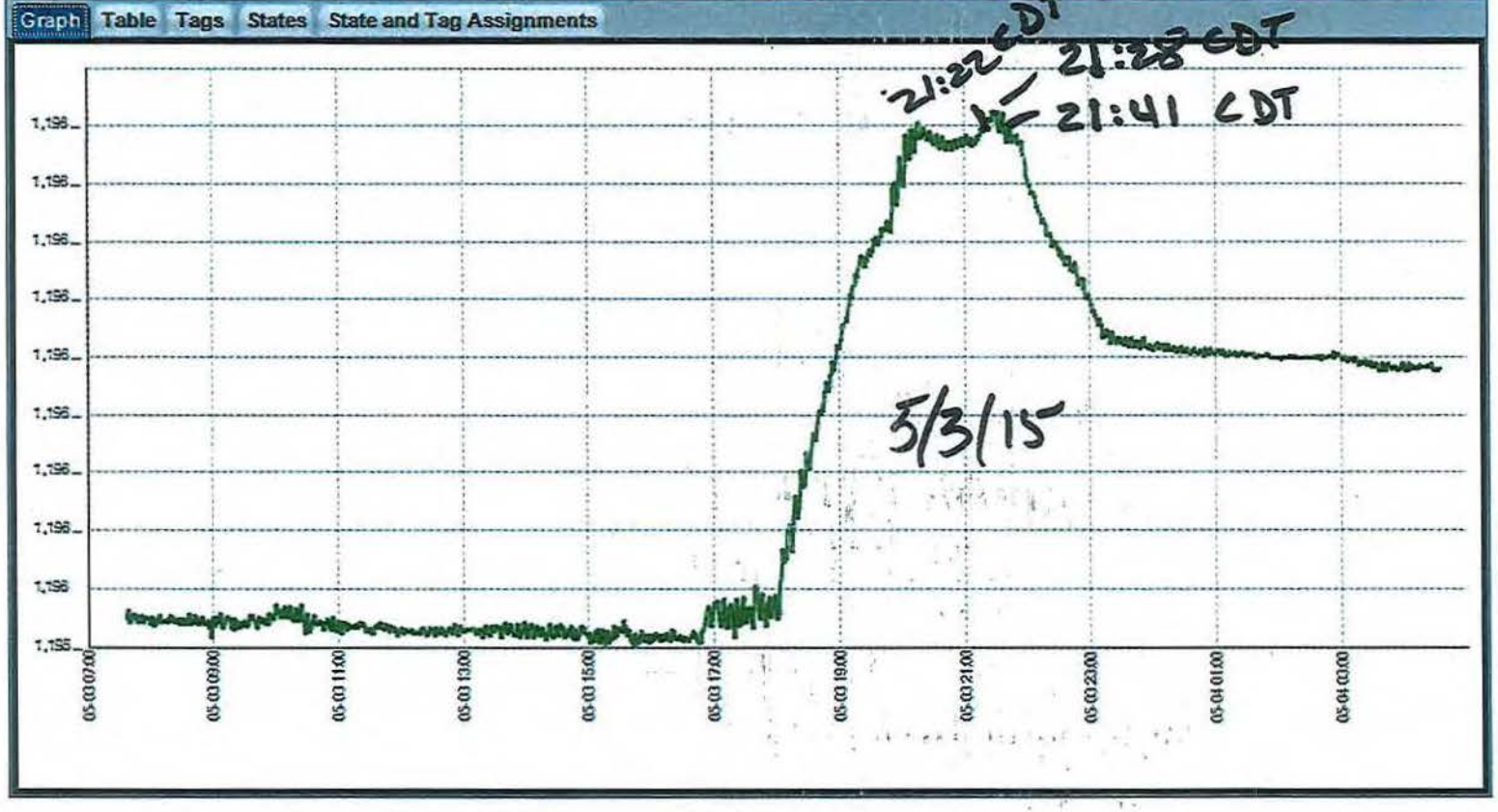
Filter

Source: Historical Quick Filter: Custom Line: Slope Show Limits

Integration: 1 Minute Start Time: 05/03/2015 07:36 End Time: 05/04/2015 04:36

Filters: Last Hr | Last 4 Hrs | Last 8 Hrs | Last 24 Hrs | Cur Day | Cur Gas Day | Last 7 Days | Last 14 Days | Last | Prev | Next

Graph | Table | Tags | States | State and Tag Assignments



McClure

FERC Project 10855

Point Info - UPPCO-MCL: Total Plant Flow

History | Energy Log | Live Values | Alarm Config | Recent Events | Calculation | SCADA | Documents | Schema | Point Rationalization

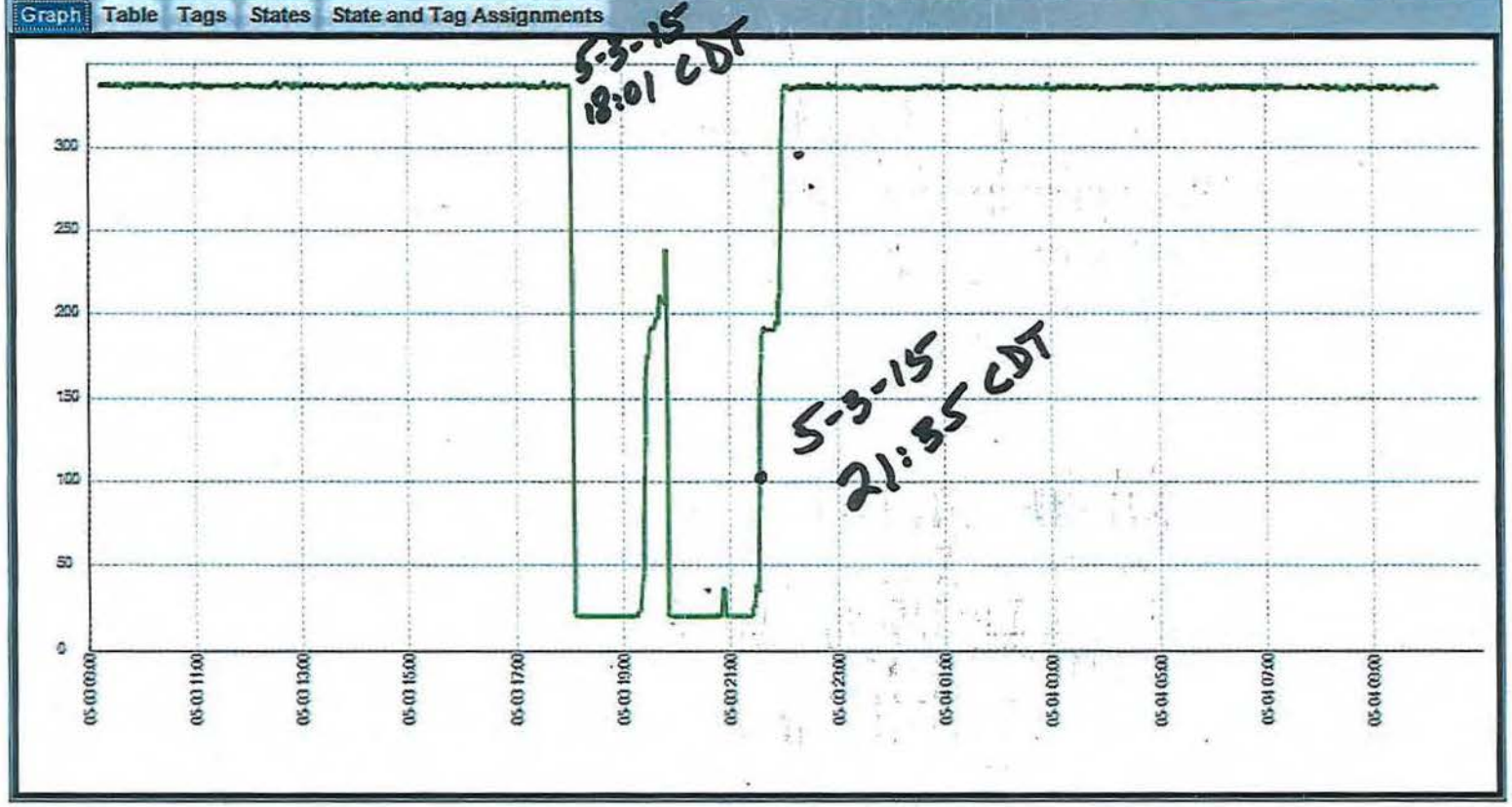
Filter

Source: Historical Quick Filter: Custom Line: Slope Show Limits

Integration: 1 Minute Start Time: 05/03/2015 09:14 End Time: 05/04/2015 10:14

Filters: Last Hr | Last 4 Hrs | Last 8 Hrs | Last 24 Hrs | Cur Day | Cur Gas Day | Last 7 Days | Last 14 Days | Last Prev Next

Graph | Table | Tags | States | State and Tag Assignments



Non-Conformance Event Record Detail

Integrys Energy Group

NC Record Number: NCREG7555 **Entity:** Regional Generation
Company - Level 1 - Level 2: UPP-McClure Hydro

Event Date:	06/22/2015	**Discovery Date/Time:**	6/22/15 19:21
Event Title:	Plant Trip due to breaker		
Event Details:	The plant tripped due to a line breaker issue		
Immediate Action:	Dispatched an operator to investigate and restore generation		
Recommendations:	Investigate reason for breaker actuation		
Potential Causes/Contributors to incident	Weather		
Entered By Name:	Garry D Gentry	**Creation Date/Time:**	6/22/15 19:24
Entered By Department:	Energy Supply and Control	**Status:**	Closed
Reportable to External Agency:	no	**Basis for Reportability:**	FERC 30 day notice
Additional Followup Required:	yes		
Category:	Regulatory	**Type:**	FERC Deviation
Sub Type:	Trans. Sys. (storm related)	**Description:**	
Causal Analysis Level:	Closed - No further action required	**Causal Analysis Basis:**	Units tripped when Breaker opened from a fault on the transmisison line, causing low flow and high pond

Event Start:	6/22/2015 7:10 PM	**Event End:**	6/22/2015 11:10 PM	**Event Duration (HH:MM):**	04:00
Evaluator Name:		**Evaluator Dept:**			
Evaluation Accepted:		**Acceptance Comments**			
Eval Due Date:		**Eval Completion Date:**			
Approver Name:		**Corrective Action Approver Name**			
Analysis Description:					
Causes:					
Primary Causes:					
Does Eval Require Sceening Committee Approval upon Completion	no				
Evaluation Reviewed/Approved by Screening Committee					

Upper Peninsula Power Company
1002 Harbor Hills Drive
Marquette, MI 49855
www.UPPCO.com

July 22, 2015

FERC Project No. 10855
NATDAM No. MI00183

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

Dear Secretary Bose:

Dead River Hydroelectric Project – McClure Development
Article 402 & 403 Deviation Minimum Flows and Head Water Elevation

In accordance with Article 403 & 402 of the Order Issuing License for the Dead River Hydroelectric Project dated October 4, 2002, and as amended on September 1, 2011, the licensee is required to report to the Federal Energy Regulatory Commission (FERC) any deviations associated with flows and/or elevations and the steps they used to mitigate them. Please consider this letter as fulfillment of the notification requirement of deviations.

On Monday, June 22, 2015, at 19:10 CDT, the McClure Plant tripped offline. Storms in the area produced lightning, which struck an insulator causing an electrical fault. This incident caused an electrical outage on the transmission system. An operator was dispatched to the plant, and following restoration of the transmission system, restored the minimum flow at 23:10 CDT.

While the McClure Plant was offline, the headwater (pond) elevation exceeded the license elevation limit of 1196.4 feet NGVD at 22:50 CDT, peaking at elevation 1196.42 feet NGVD at 23:15 CDT. Following restoration of minimum flow, pond elevations returned to normal range at 23:45 CDT.

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 resource agencies after the deviation. 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 Mr. Robert Meyers at (906) 485-2419 or Mr. Virgil Schlorke at (906) 232-1431.

Sincerely,

Virgil Schlorke
Director - Energy Supply & Resource Planning
Upper Peninsula Power Company

RJM/wmp

Enc: Operational data

cc: Mr. Koren Carpenter, MDEQ
Mr. Burr Fisher, USFWS
Mr. Jim Grundstrom, DRCI
Mr. Gary Kohlhepp, MDEQ
Mr. Kyle Kruger, MDNR
Mr. Robert Meyers, UPPCO
Mr. Keith Moyle, UPPCO
Mr. John Myers, WEC
Mr. Jarrod Nelson, UPPCO
Mr. David Tripp, UPPCO
Ms. Diana Klemans, MDEQ

FERC Project 10855 McCloud Hydro

Point Info - UPPCO-MCL: Powerhouse Penstock Flow

History | Energy Log | Live Values | Alarm Config | Recent Events | SCADA | Documents | Schema | Point Rationalization

Filter

Source: Historical Quick Filter: Custom Line: Slope Show Limits

Integration: All Changes Start Time: 06/22/2015 12:07 End Time: 06/23/2015 12:07

Filters: Last Hr | Last 4 Hrs | Last 8 Hrs | Last 24 Hrs | Cur Day | Cur Gas Day | Last 7 Days | Last 14 Days | Last 30 Days | Dynamic Prev Next

Graph | Table | Tags | States | State and Tag Assignments

FERC Project 10855
McClure Hydro

Point Info - UPPCO-MCLD: Headwater Elevation

History | Energy Log | Live Values | Alarm Config | Recent Events | SCADA | Documents | Schema | Point Rationalization

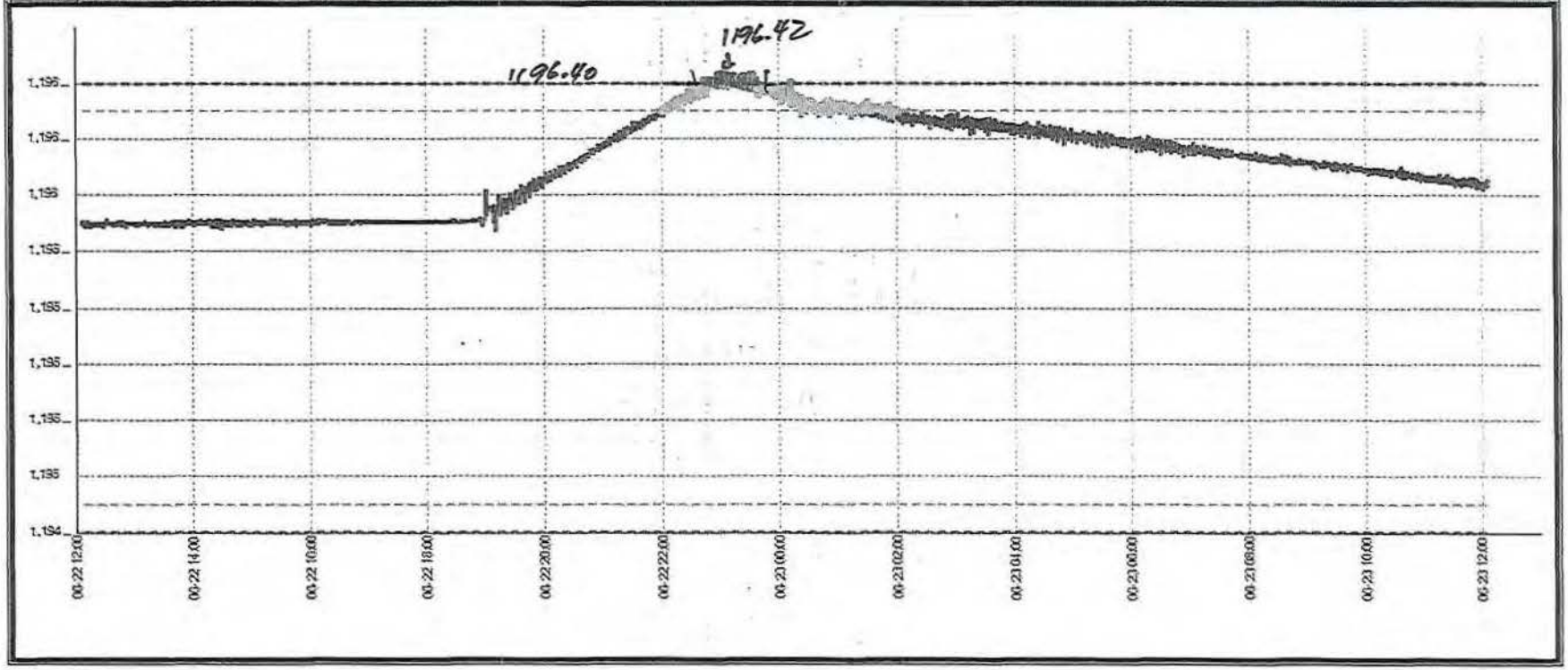
Filter

Source: Historical Quick Filter: Custom Line: Slope Show Limits

Integration: All Changes Start Time: 06/22/2015 12:07 End Time: 06/23/2015 12:07

Filters: Last Hr | Last 4 Hrs | Last 8 Hrs | Last 24 Hrs | Cur Day | Cur Gas Day | Last 7 Days | Last 14 Days | Last 30 Days | Dynamic Prev Next

Graph | Table | Tags | States | State and Tag Assignments



Non-Conformance Event Record Detail

Integrys Energy Group

NC Record Number: NCREG7863 **Entity:** Regional Generation
Company - Level 1 - Level 2: UPP-Hoist Hydro

Event Date: 08/22/2015 **Discovery Date/Time:** 8/22/15 22:11
Event Title: Unit 2 trip.

Event Details: At 2211 Unit 2 tripped. At 2335 the LLO was open to 100CFS.
Immediate Action: LLO was open to 100CFS.
Recommendations: None
Potential Causes/Contributors to incident Line to the hydro tripped. This caused the unit to trip.
Entered By Name: Todd L Strodthoff **Creation Date/Time:** 8/23/15 0:10
Entered By Department: Energy Supply and Control **Status:** Closed
Reportable to External Agency: no **Basis for Reportability:** 30 day window to report, no environmental issues seen
Additional Followup Required: yes
Category: Regulatory **Type:** FERC Deviation
Sub Type: Trans. Sys. (storm related) **Description:**
Causal Analysis Level: Closed - No further action required **Causal Analysis Basis:** Unit tripped from Storm, LLO was opened, system was repaired and units put back into service

Event Start: 8/22/2015 10:11 PM **Event End:** 8/22/2015 11:35 PM **Event Duration (HH:MM):** 01:24
Evaluator Name: **Evaluator Dept:**
Evaluation Accepted: **Acceptance Comments**
Eval Due Date: **Eval Completion Date:**
Approver Name: **Corrective Action Approver Name**
Analysis Description:
Causes:
Primary Causes:
Does Eval Require Sceening Committee Approval upon Completion no
Evaluation Reviewed/Approved by Screening Committee

Upper Peninsula Power Company
1002 Harbor Hills Drive
Marquette, MI 49855
www.UPPCO.com

September 18, 2015

FERC Project No. P-10855
NATDAM No. MI00175

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

Dear Secretary Bose:

Dead River Hydroelectric Project – Hoist Development
Article 403 Deviation of Minimum Flows

In accordance with Article 403 of the Order Issuing License for the Dead River Hydroelectric Project dated October 4, 2002, and as amended on September 1, 2011, the licensee is required to report to the Federal Energy Regulatory Commission (FERC) any deviations associated with flows and/or elevations and the steps they used to mitigate them. Please consider this letter as fulfillment of the notification requirement of deviations.

The Hoist plant tripped at 22:11 CDT, Saturday, August 22, 2015, due to an electrical fault of an insulator that was struck by lightning, which caused an electrical outage on the transmission system. An operator was dispatched to the plant and re-established the minimum flow at 23:35 CDT. The plant was returned to normal operation with the return of the transmission system on Sunday, August 23, at 1:08 CDT.

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. Due to the nature of the event (lightning strike) UPPCO is not proposing any corrective actions at this time.

If you have any questions regarding this letter, please contact Mr. Robert Meyers at (906) 485-2419 or Mr. Jarrod Nelson at (906) 232-1433.

Sincerely,

Virgil Schlorke
Director – Energy Supply & Resource Planning
Upper Peninsula Power Company

RJM/wmp

Enc. Operational data

cc: Mr. Koren Carpenter, MDEQ
Mr. Burr Fisher, USFWS
Ms. Diana Klemans, MDEQ
Mr. Gary Kohlhepp, MDEQ
Mr. Kyle Kruger, MDNR
Mr. Jim Grundstrom, DRCI
Mr. Keith Moyle, UPPCO
Mr. Jarrod Nelson, UPPCO
Mr. David Tripp, UPPCO
Mr. John Zygaj, FERC (CRO)
Mr. Robert Meyers, UPPCO

FERC #10855

Point Info - UPPCO-HST: Total Plant Flow

History | Energy Log | Live Values | Alarm Config | Recent Events | Calculation | SCADA | Documents | Schema | Point Rationalization

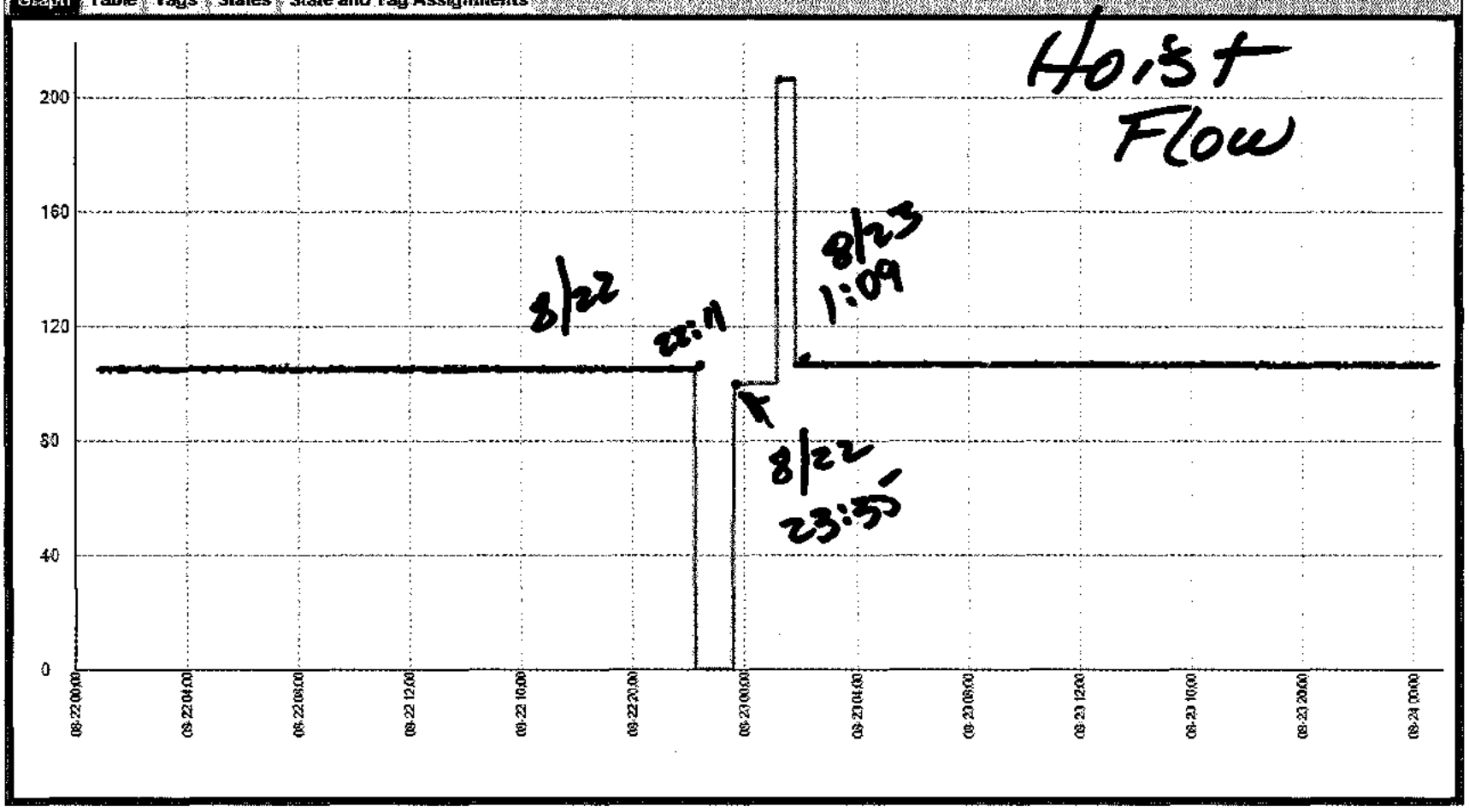
Filter

Source: Historical Quick Filter: Custom Line: Slope Show Limits

Integration: 4 Second Start Time: 08/22/2015 00:52 End Time: 08/24/2015 00:51

Filters: Last Hr | Last 4 Hrs | Last 8 Hrs | Last 24 Hrs | Cur Day | Cur Gas Day | Last 7 Days | Last 14 Days | Last 30 Days | Dynar | Prev | Next

Graph | Table | Tags | States | State and Tag Assignments



Non-Conformance Event Record Detail

Integrys Energy Group

NC Record Number: NCREG8144 **Entity:** Regional Generation
Company - Level 1 - Level 2: UPP-McClure Hydro

Event Date: 10/29/2015 **Discovery Date/Time:** 10/29/15 5:13
Event Title: Unit 1 trip, interruption of ROR

Event Details: Unit 1 tripped off line unknown reason
Immediate Action: called out operator
Recommendations: none
Potential Causes/Contributors to incident unknown
Entered By Name: Kenneth C Luckeroth **Creation Date/Time:** 10/29/15 5:25
Entered By Department: Energy Supply and Control **Status:** Closed
Reportable to External Agency: no **Basis for Reportability:** FERC DEVIATION, > 60 MINUTES WILL BE SENT TO FERC
Additional Followup Required: yes
Category: Regulatory **Type:** FERC Deviation
Sub Type: Trans. Sys. (non-storm related) **Description:**
Causal Analysis Level: Closed - No further action required **Causal Analysis Basis:** PT INSULATOR IN THE SUBSTATION FAILED TAKING OFF THE PLANT

Event Start: 10/29/2015 5:17 AM **Event End:** 10/29/2015 9:44 AM **Event Duration (HH:MM):** 04:27
Evaluator Name: **Evaluator Dept:**
Evaluation Accepted: **Acceptance Comments**
Eval Due Date: **Eval Completion Date:**
Approver Name: **Corrective Action Approver Name**
Analysis Description:
Causes:
Primary Causes:
Does Eval Require Sceening Committee Approval upon Completion no
Evaluation Reviewed/Approved by Screening Committee

Upper Peninsula Power Company
1002 Harbor Hills Drive
Marquette, MI 49855
www.UPPCO.com

November 25, 2015

FERC Project No. 10855
NATDAM No. MI00183

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

Dear Secretary Bose:

Dead River Hydroelectric Project – McClure Development
Article 403 - Deviation of Minimum Flows

In accordance with Article 403 of the Order Issuing License for the Dead River Hydroelectric Project dated October 4, 2002, and as amended on September 1, 2011, the licensee is required to report to the Federal Energy Regulatory Commission (FERC) any deviations associated with flows and/or elevations and the steps they used to mitigate them. Please consider this letter as fulfillment of the notification requirement of deviations.

The McClure Development tripped offline at 05:17 CDT, Thursday October 29, 2015, due to an electrical problem in the substation. An operator was dispatched, and flows at the McClure Development were re-established at 09:44 CDT, Thursday October 29, 2015, when the issue with the substation was isolated and the other unit was put into service. The substation issue was determined to be caused by a blown insulator. The insulator was replaced and the McClure Development returned to normal operation at 09:44 CDT October 29, 2015.

No adverse environmental impacts have been observed as a result of this deviations 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 Jarrod Nelson (906) 232-1433.

Sincerely,

Virgil Schlorke
Director - Energy Supply & Resource Planning
Upper Peninsula Power Company

RJM/wmp

Enc. Operational data

cc: Ms. Koran Carpenter, MDEQ
Mr. Burr Fisher, USFWS
Mr. Jim Grundstrom, DRCI
Mr. Gary Kohlhepp, MDEQ
Mr. Kyle Kruger, MDNR
Mr. Robert Meyers, UPPCO
Mr. Keith Moyle, UPPCO
Mr. Jarrod Nelson , UPPCO
Mr. David Tripp, UPPCO
Mr. John Zygaj, FERC

Point Info - UPPCO-MCL: Powerhouse Penstock Flow

History | Energy Log | Live Values | Alarm Config | Recent Events | SCADA | Documents | Schema | Point Rationalization

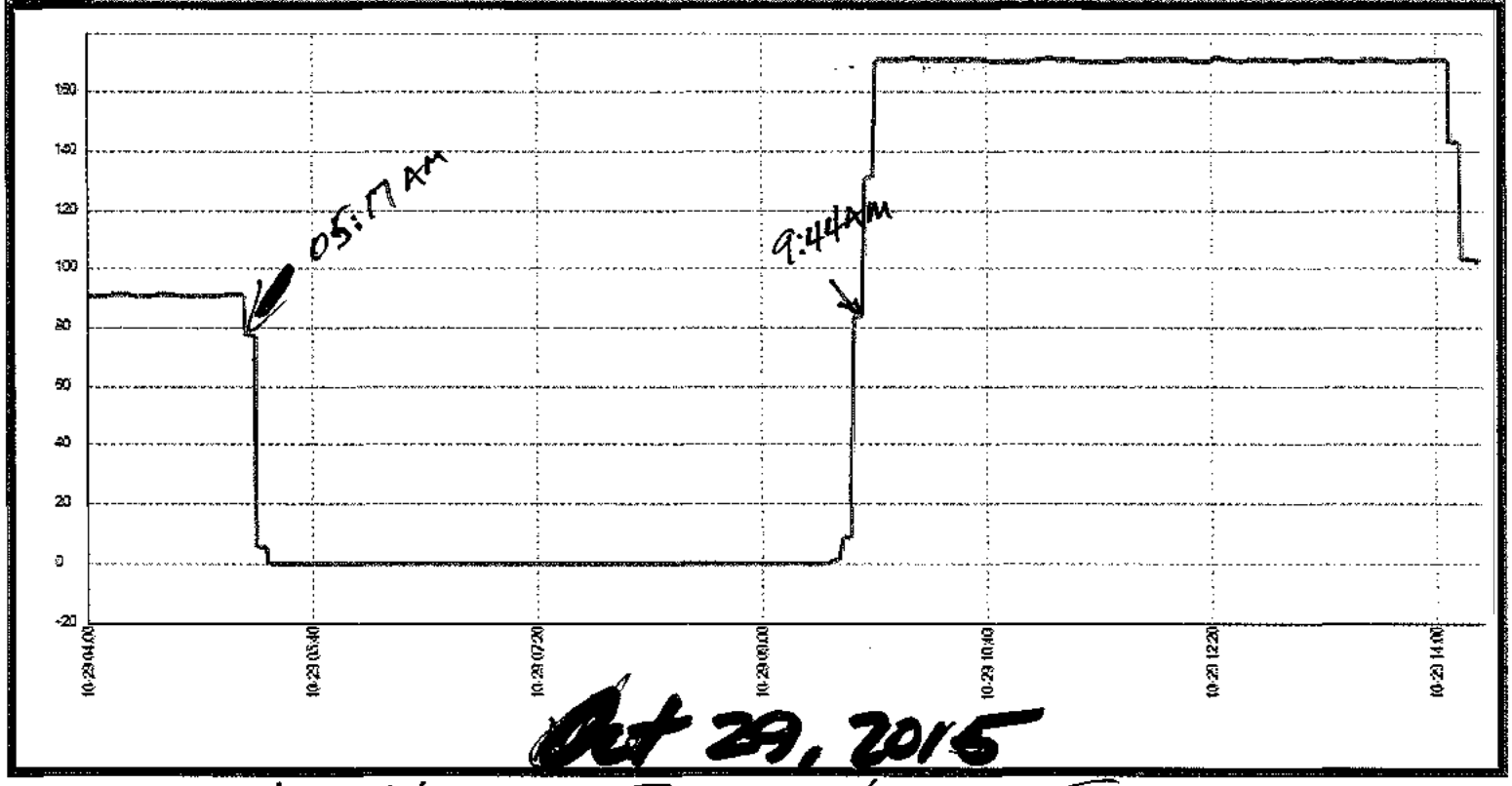
Filter

Source: Historical Quick Filter: Custom Line: Slope Show Limits

Integration: 1 Minute Start Time: 10/29/2015 04:00 End Time: 10/29/2015 14:19

Filters: Last Hr | Last 4 Hrs | Last 8 Hrs | Last 24 Hrs | Cur Day | Cur Gas Day | Last 7 Days | Last 14 Days | Last | Prev | Next

Graph | Table | Tags | States | State and Tag Assignments



Oct 29, 2015

McCLURE Power House Flow
FERC Project No. 10855

Non-Conformance Event Record Detail

Integrys Energy Group

NC Record Number: NCREG8185 **Entity:** Regional Generation
Company - Level 1 - Level 2: UPP-Hoist Hydro; UPP-McClure Hydro

Event Date:	11/05/2015	**Discovery Date/Time:**	11/5/15 12:38
Event Title:	Plants tripped off line.		
Event Details:	plant trips		
Immediate Action:	2 operators were at each plant. LLO opened at about 1136 to 90 cfs Both plants back online at 1237		
Recommendations:	none		
Potential Causes/Contributors to incident	Wind		
Entered By Name:	Jeffrey S Greaves	**Creation Date/Time:**	11/5/15 12:39
Entered By Department:	Energy Supply and Control	**Status:**	Closed
Reportable to External Agency:	no	**Basis for Reportability:**	>60 minutes needs a letter to FERC
Additional Followup Required:	yes		
Category:	Regulatory	**Type:**	FERC Deviation
Sub Type:	Trans. Sys. (storm related)	**Description:**	
Causal Analysis Level:	Closed - No further action required	**Causal Analysis Basis:**	Tree from off the rightaway took fell, took off the McClure and Hoist plants
Event Start:	11/5/2015 11:13 AM	**Event End:**	11/5/2015 12:41 PM
Event Duration (HH:MM):	01:28		
Evaluator Name:		**Evaluator Dept:**	
Evaluation Accepted:		**Acceptance Comments**	
Eval Due Date:		**Eval Completion Date:**	
Approver Name:		**Corrective Action Approver Name**	
Analysis Description:			
Causes:			
Primary Causes:			
Does Eval Require Sceening Committee Approval upon Completion	no		
Evaluation Reviewed/Approved by Screening Committee			

Upper Peninsula Power Company
1002 Harbor Hills Drive
Marquette, MI 49855
www.UPPCO.com

November 25, 2015

FERC Project No. 10855
NATDAM No. MI00183,
MI00175

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

Dear Secretary Bose:

Dead River Hydroelectric Project: McClure and Hoist Developments
Article 403 - Deviation of Minimum Flows

In accordance with Article 403 of the Order Issuing License for the Dead River Hydroelectric Project dated October 4, 2002, and amended on September 1, 2011, UPPCO is required to report to the Federal Energy Regulatory Commission (FERC) any deviations associated with flows and/or elevations and the steps used to mitigate potential impacts that may have been caused as a result of the deviations. Please consider this letter as fulfillment of the notification requirement of these deviations.

Both the Hoist and McClure Developments tripped offline at 11:13 CDT, Thursday, November 5, 2015, due to an electrical fault caused by trees from off the right away falling onto the line, which caused an electrical outage on the transmission system. Operators were able to re-establish the minimum flows for the Hoist Development through the low level outlet November 5, 2015 11:40 CDT. Minimum flows at the McClure Development were re-established on November 5, 2015 12:41 CDT, when the Development came back online. Both the Hoist and McClure Developments were returned to normal operation with the return of the transmission system at 12:41 CDT.

No adverse environmental impacts have been observed as a result of these deviations 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 Jarrod Nelson (906) 232-1433.

Sincerely,

Virgil Schlorke
Director - Energy Supply & Resource Planning
Upper Peninsula Power Company

RJM/wmp

Enc. Operational data

cc: Ms. Koran Carpenter, MDEQ
Mr. Burr Fisher, USFWS
Mr. Jim Grundstrom, DRCI
Mr. Gary Kohlhepp, MDEQ
Mr. Kyle Kruger, MDNR
Mr. Robert Meyers, UPPCO
Mr. Keith Moyle, UPPCO
Mr. Jarrod Nelson, UPPCO
Mr. David Tripp, UPPCO
Mr. John Zygaj, FERC

Point Info - UPPCO-MCL: Total Plant Flow

History | Energy Log | Live Values | Alarm Config | Recent Events | Calculation | SCADA | Documents | Schema | Point Rationalization

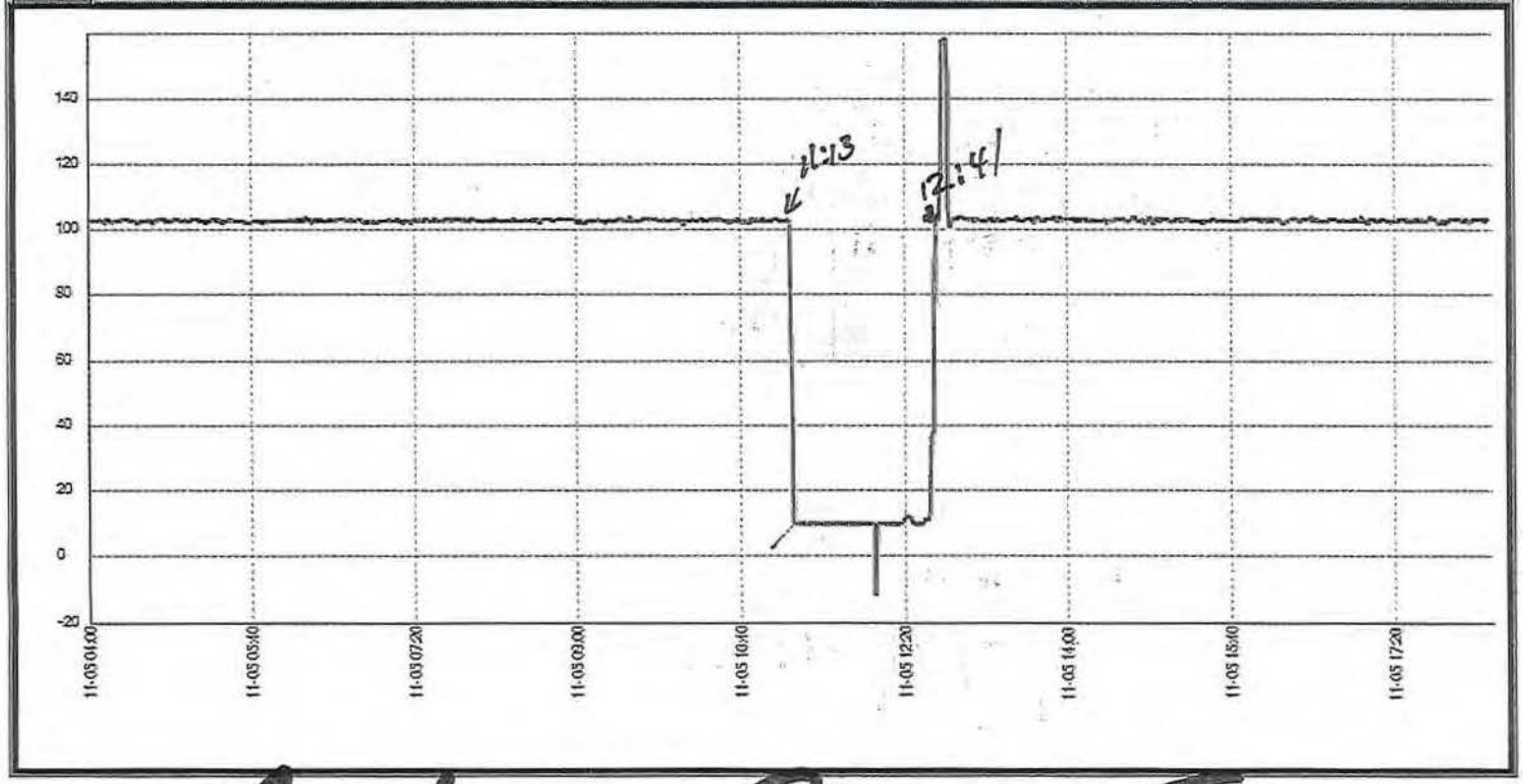
Filter

Source: Historical Quick Filter: Custom Line: Slope Show Limits

Integration: 1 Minute Start Time: 11/05/2015 04:00 End Time: 11/05/2015 18:19

Filters: Last Hr | Last 4 Hrs | Last 8 Hrs | Last 24 Hrs | Cur Day | Cur Gas Day | Last 7 Days | Last 14 Days | Last | Prev | Next

Graph | Table | Tags | States | State and Tag Assignments



McClure Plant Flow
11/5/2015
FERC #10855

Point Info - UPPCO-HST: Total Plant Flow

History | Energy Log | Live Values | Alarm Config | Recent Events | Calculation | SCADA | Documents | Schema | Point Rationalization

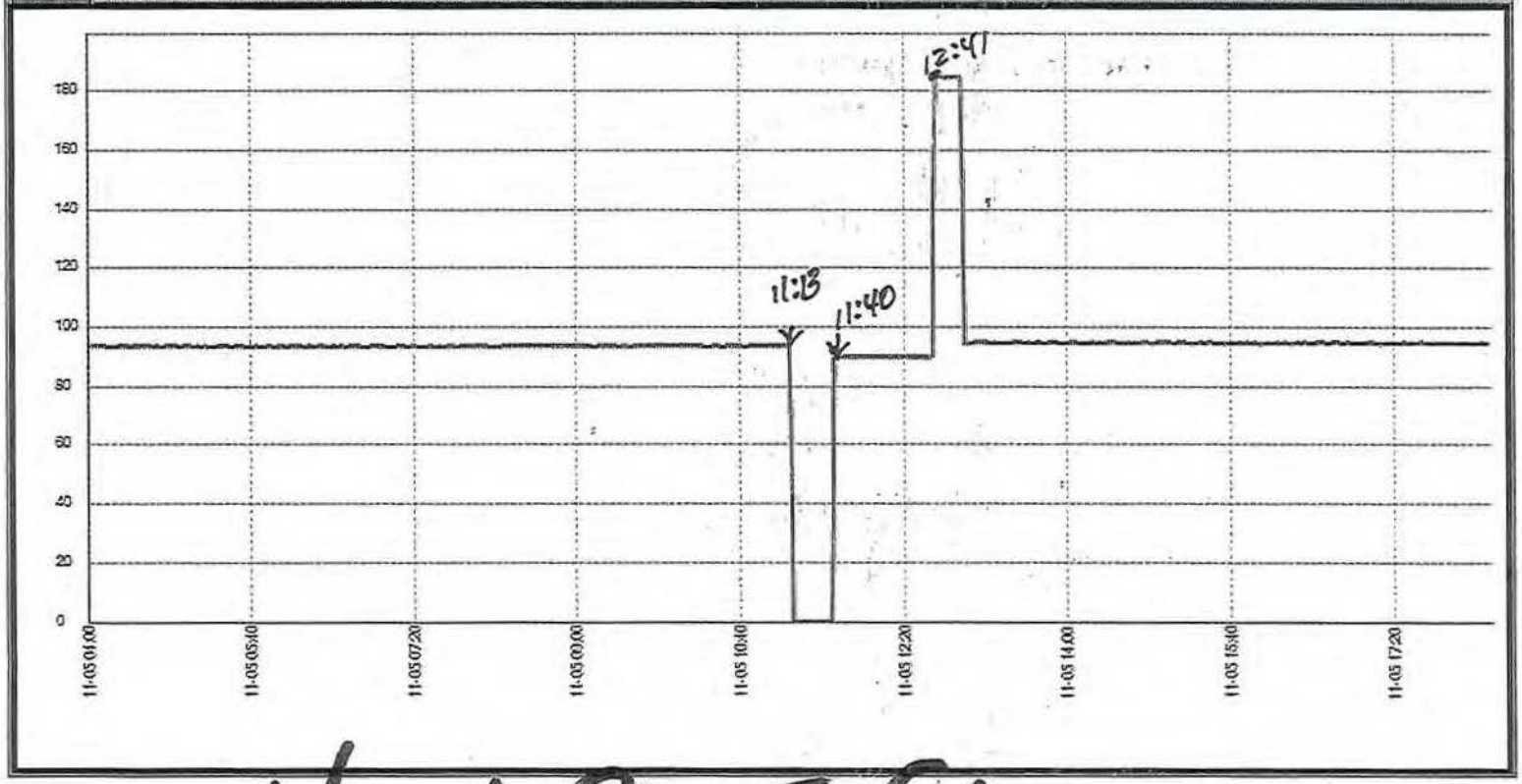
Filter

Source: Historical Quick Filter: Custom Line: Slope Show Limits

Integration: 1 Minute Start Time: 11/05/2015 04:00 End Time: 11/05/2015 18:19

Filters: Last Hr | Last 4 Hrs | Last 8 Hrs | Last 24 Hrs | Cur Day | Cur Gas Day | Last 7 Days | Last 14 Days | Last | Prev | Next

Graph | Table | Tags | States | State and Tag Assignments



Hoist Plant Flow
11/5/2015 - FERC Project # 10855

Non-Conformance Event Record Detail

Integrys Energy Group

NC Record Number: NCREG8234 **Entity:** Regional Generation
Company - Level 1 - Level 2: UPP-McClure Hydro

Event Date: 11/18/2015 **Discovery Date/Time:** 11/18/15 10:11
Event Title: McClure Plant Trip

Event Details: Plant tripped at 1011CST. Loss of power. Paged local operator to man the plant.
Immediate Action: Paged local operator to man the plant
Recommendations: None
Potential Causes/Contributors to incident Weather
Entered By Name: Brian K Ellison **Creation Date/Time:** 11/18/15 13:44
Entered By Department: Energy Supply and Control **Status:** Closed
Reportable to External Agency: no **Basis for Reportability:** Will be submitted to FERC
Additional Followup Required: yes
Category: Regulatory **Type:** FERC Deviation
Sub Type: Trans. Sys. (storm related) **Description:** tree
Causal Analysis Level: Closed - No further action required **Causal Analysis Basis:** After tree was cleared, unit went back into service

Event Start: 11/18/2015 10:02 AM **Event End:** 11/18/2015 3:34 PM **Event Duration (HH:MM):** 05:32
Evaluator Name: **Evaluator Dept:**
Evaluation Accepted: **Acceptance Comments**
Eval Due Date: **Eval Completion Date:**
Approver Name: **Corrective Action Approver Name**
Analysis Description:
Causes:
Primary Causes:
Does Eval Require Screening Committee Approval upon Completion no
Evaluation Reviewed/Approved by Screening Committee

Upper Peninsula Power Company
1002 Harbor Hills Drive
Marquette, MI 49855
www.UPPCO.com

December 15, 2015

FERC Project No. 10855
NATDAM No. MI00183,
MI00175

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

Dear Secretary Bose:

Dead River Hydroelectric Project: McClure and Hoist Developments
Article 403 - Deviation of Minimum Flows

In accordance with Article 403 of the Order Issuing License for the Dead River Hydroelectric Project dated October 4, 2002, and amended on September 1, 2011, UPPCO is required to report to the Federal Energy Regulatory Commission (FERC) any deviations associated with flows and/or elevations and the steps used to mitigate potential impacts that may have been caused as a result of the deviations. Please consider this letter as fulfillment of the notification requirement of these deviations.

Both the Hoist and McClure Developments tripped offline at 10:02 CDT, Wednesday, November 18, 2015, due to an electrical fault, caused by high winds and falling trees. As a result of the weather conditions, a tree from off of the right of way fell onto the transmission line, causing an electrical outage. Operators were able to reestablish the minimum flow for the Hoist Development at 10:28 CDT, through the Low Level Outlet (LLO). The line was cleared and the Hoist Development returned to normal operations at 11:45 CDT, November 18, 2015. The McClure Development returned to normal operations at 15:34 CDT on November 18, 2015.

No adverse environmental impacts have been observed as a result of these deviations 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 Jarrod Nelson (906) 232-1433.

Sincerely,

Virgil Schlorke
Director - Energy Supply & Resource Planning
Upper Peninsula Power Company

RJM/wmp

Enc. Operational data

cc: Ms. Koran Carpenter, MDEQ
Mr. Burr Fisher, USFWS
Mr. Jim Grundstrom, DRCI
Mr. Gary Kohlhepp, MDEQ
Mr. Kyle Kruger, MDNR
Mr. Robert Meyers, UPPCO
Mr. Keith Moyle, UPPCO
Mr. Jarrod Nelson, UPPCO
Mr. David Tripp, UPPCO
Mr. John Zygaj, FERC

FERC Project No 10855 Hoist Flow

Point Info - UPPCO-HST: Total Plant Flow

History | Energy Log | Live Values | Alarm Config | Recent Events | Calculation | SCADA | Documents | Schema | Point Rationalization

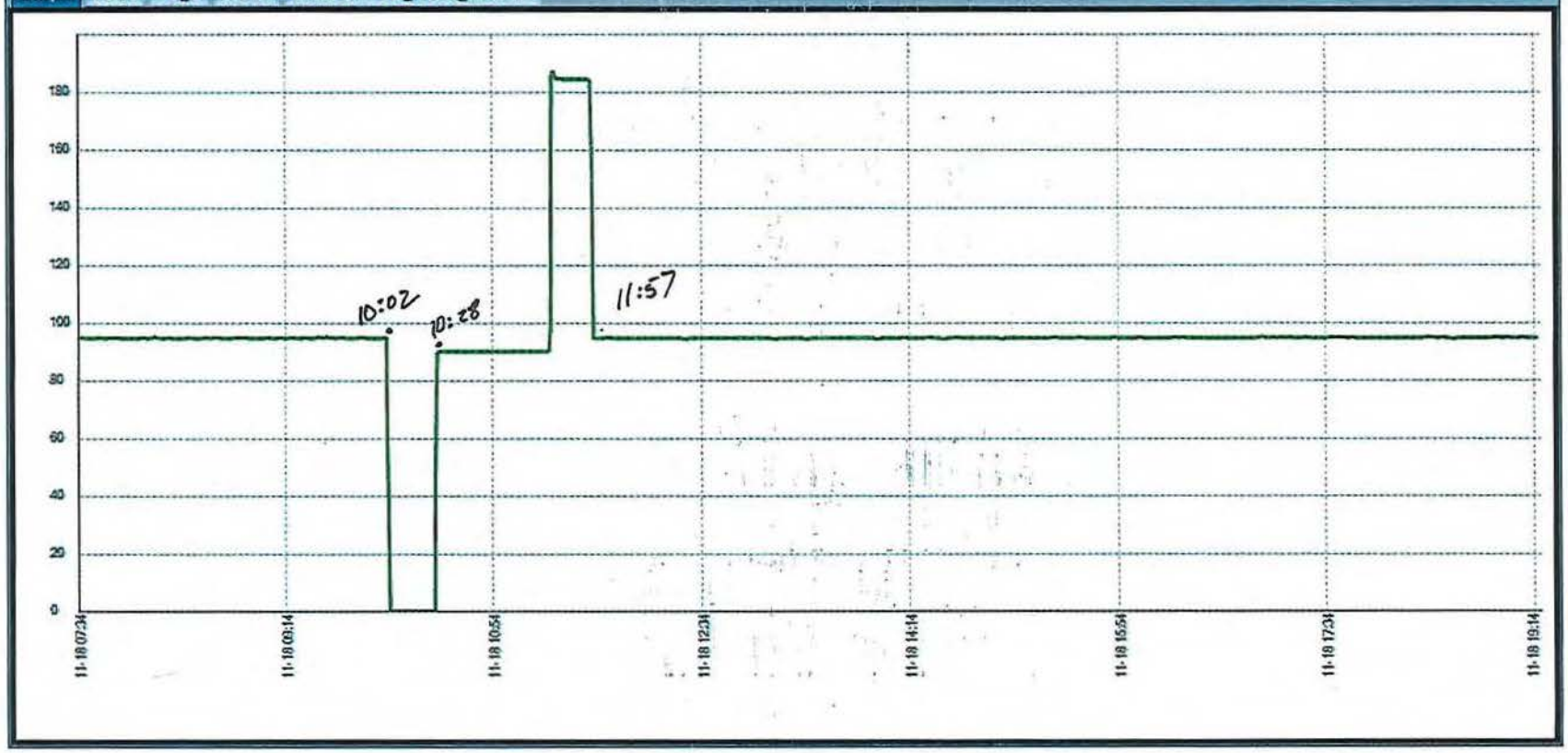
Filter

Source: Historical Quick Filter: Custom Line: Slope Show Limits

Integration: 1 Minute Start Time: 11/18/2015 07:34 End Time: 11/18/2015 19:16

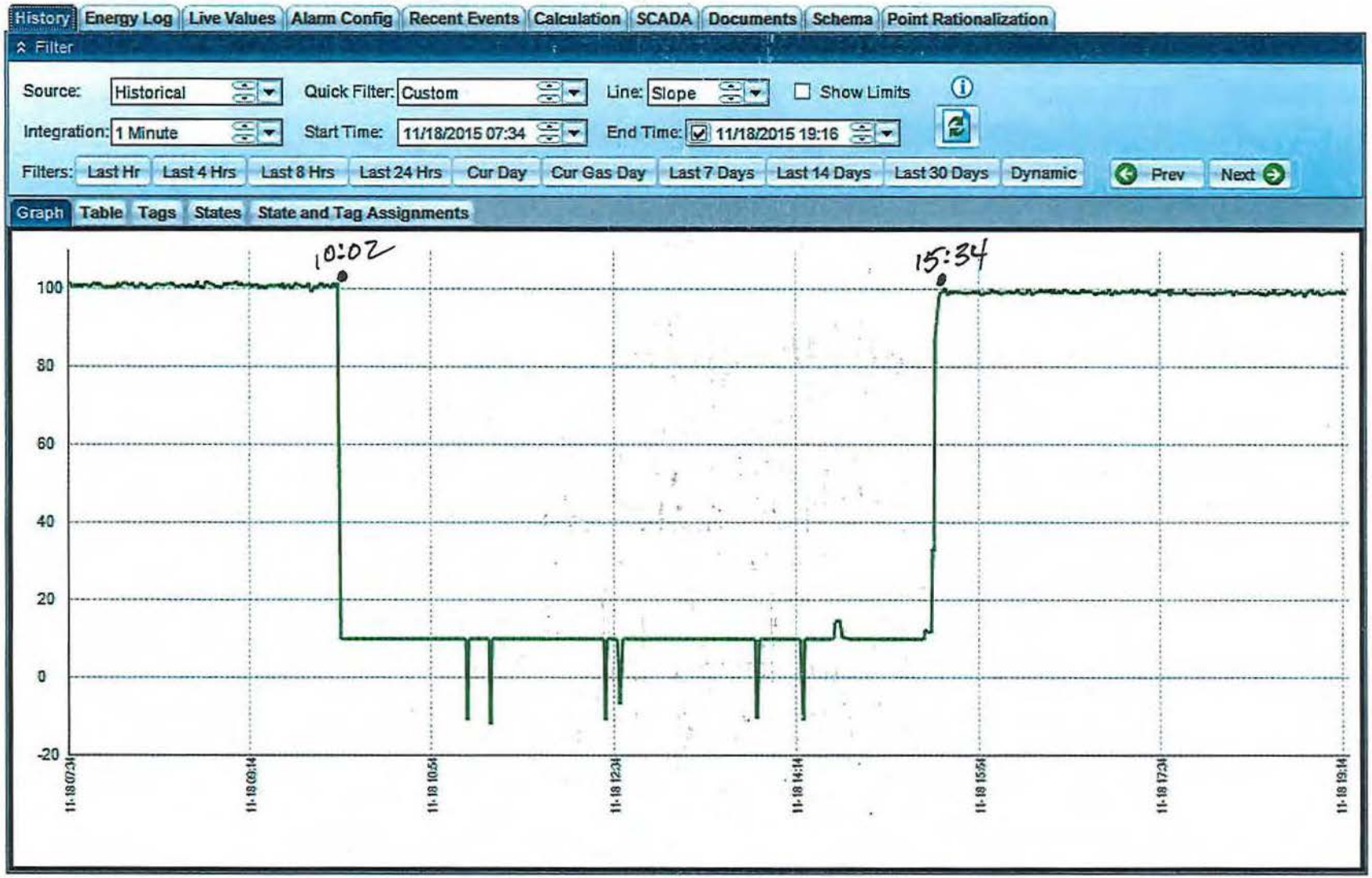
Filters: Last Hr | Last 4 Hrs | Last 8 Hrs | Last 24 Hrs | Cur Day | Cur Gas Day | Last 7 Days | Last 14 Days | Last 30 Days | Dynamic | Prev | Next

Graph | Table | Tags | States | State and Tag Assignments



FERC Project No. 10855 McClure Flow

Point Info - UPPCO-MCL: Total Plant Flow



Non-Conformance Event Record Detail

Integrys Energy Group

NC Record Number: NCREG8393 **Entity:** Regional Generation
Company - Level 1 - Level 2: UPP-Hoist Hydro

Event Date: 12/24/2015 **Discovery Date/Time:** 12/24/15 3:49
Event Title: Hoist Plant Trip

Event Details: Entire plant went offline, loss of power at 0349. Dispatched local operator to the plant
Immediate Action: Paged local operator
Recommendations: None
Potential Causes/Contributors to incident Power lines down due to strong winds
Entered By Name: Brian K Ellison **Creation Date/Time:** 12/24/15 4:10
Entered By Department: Energy Supply and Control **Status:** Closed
Reportable to External Agency: yes **Basis for Reportability:** Letter sent to JN on 1/8 for review
Additional Followup Required: yes
Category: Regulatory **Type:** FERC Deviation
Sub Type: Trans. Sys. (storm related) **Description:**
Causal Analysis Level: Closed - No further action required **Causal Analysis Basis:** After trip, LLO opened to maintain flow, then closed when units could return to service

Event Start: 12/24/2015 3:39 AM **Event End:** 12/24/2015 5:12 AM **Event Duration (HH:MM):** 01:33
Evaluator Name: **Evaluator Dept:**
Evaluation Accepted: **Acceptance Comments**
Eval Due Date: **Eval Completion Date:**
Approver Name: **Corrective Action Approver Name**
Analysis Description:
Causes:
Primary Causes:
Does Eval Require Sceening Committee Approval upon Completion no
Evaluation Reviewed/Approved by Screening Committee

Non-Conformance Event Record Detail

Integrys Energy Group

NC Record Number: NCREG8394 **Entity:** Regional Generation
Company - Level 1 - Level 2: UPP-McClure Hydro

Event Date: 12/24/2015 **Discovery Date/Time:** 12/24/15 3:39
Event Title: McClure Plant Trip

Event Details: Entire plant went offline at 0339. Paged local operator for assistance
Immediate Action: Paged local operator
Recommendations: None
Potential Causes/Contributors to Incident Power lines down due to strong winds
Entered By Name: Brian K Ellison **Creation Date/Time:** 12/24/15 4:16
Entered By Department: Energy Supply and Control **Status:** Closed
Reportable to External Agency: yes **Basis for Reportability:** Draft letter and data sent to JN 1/8
Additional Followup Required: yes
Category: Regulatory **Type:** FERC Deviation
Sub Type: Trans. Sys. (storm related) **Description:**
Causal Analysis Level: Closed - No further action required **Causal Analysis Basis:** Unit tripped with storn, when transmission line was ready to be returned, units put back in service

Event Start: 12/24/2015 3:39 AM **Event End:** 12/24/2015 7:29 AM **Event Duration (HH:MM):** 03:50
Evaluator Name: **Evaluator Dept:**
Evaluation Accepted: **Acceptance Comments**
Eval Due Date: **Eval Completion Date:**
Approver Name: **Corrective Action Approver Name**
Analysis Description:
Causes:
Primary Causes:
Does Eval Require Sceening Committee Approval upon Completion no
Evaluation Reviewed/Approved by Screening Committee

Upper Peninsula Power Company
1002 Harbor Hills Drive
Marquette, MI 49855
www.UPPCO.com

January 20, 2016

FERC Project No. 10855
NATDAM No. MI00183,
MI00175

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

Dear Secretary Bose:

Dead River Hydroelectric Project: McClure and Hoist Developments
Article 403 - Deviation of Minimum Flows

In accordance with Article 403 of the Order Issuing License for the Dead River Hydroelectric Project dated October 4, 2002, and amended on September 1, 2011, UPPCO is required to report to the Federal Energy Regulatory Commission (FERC) any deviations associated with flows and/or elevations and the steps used to mitigate potential impacts that may have been caused as a result of the deviations. Please consider this letter as fulfillment of the notification requirement for these deviations.

Both the Hoist and McClure Developments tripped offline at 03:39 CST, Wednesday, December 24, 2015, due to an electrical fault. As a result of the weather conditions, a tree from off of the right of way fell onto the transmission line, causing an electrical fault, which tripped the units. Operators were dispatched to both developments. Minimum flows for the Hoist Development were re-established at 5:12 CST, via the Low Level Outlet (LLO). The fault was cleared and the McClure Development returned to normal operation at 7:29 CST with the re-establishment of the required minimum flows through the powerhouse. The Hoist Development was also returned to normal operation at 08:24 CST and the LLO was closed.

No adverse environmental impacts have been observed as a result of these deviations 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 Jarrod Nelson (906) 232-1433.

Sincerely,

Virgil Schlorke
Director - Energy Supply & Resource Planning
Upper Peninsula Power Company

RJM/wmp

Enc. Operational data

cc: Ms. Koren Carpenter, MDEQ
Mr. Kenneth Carruthers, UPPCO
Mr. Burr Fisher, USFWS
Mr. Jim Grundstrom, DRCI
Mr. Gary Kohlhepp, MDEQ
Mr. Kyle Kruger, MDNR
Mr. Robert Meyers, UPPCO
Mr. Keith Moyle, UPPCO
Mr. Jarrod Nelson, UPPCO
Mr. David Tripp, UPPCO
Mr. John Zygaj, FERC

FERC Project # 10855
Hoist Flow

Point Info - UPPCO-HST: Total Plant Flow

History | Energy Log | Live Values | Alarm Config | Recent Events | Calculation | SCADA | Documents | Schema | Point Rationalization

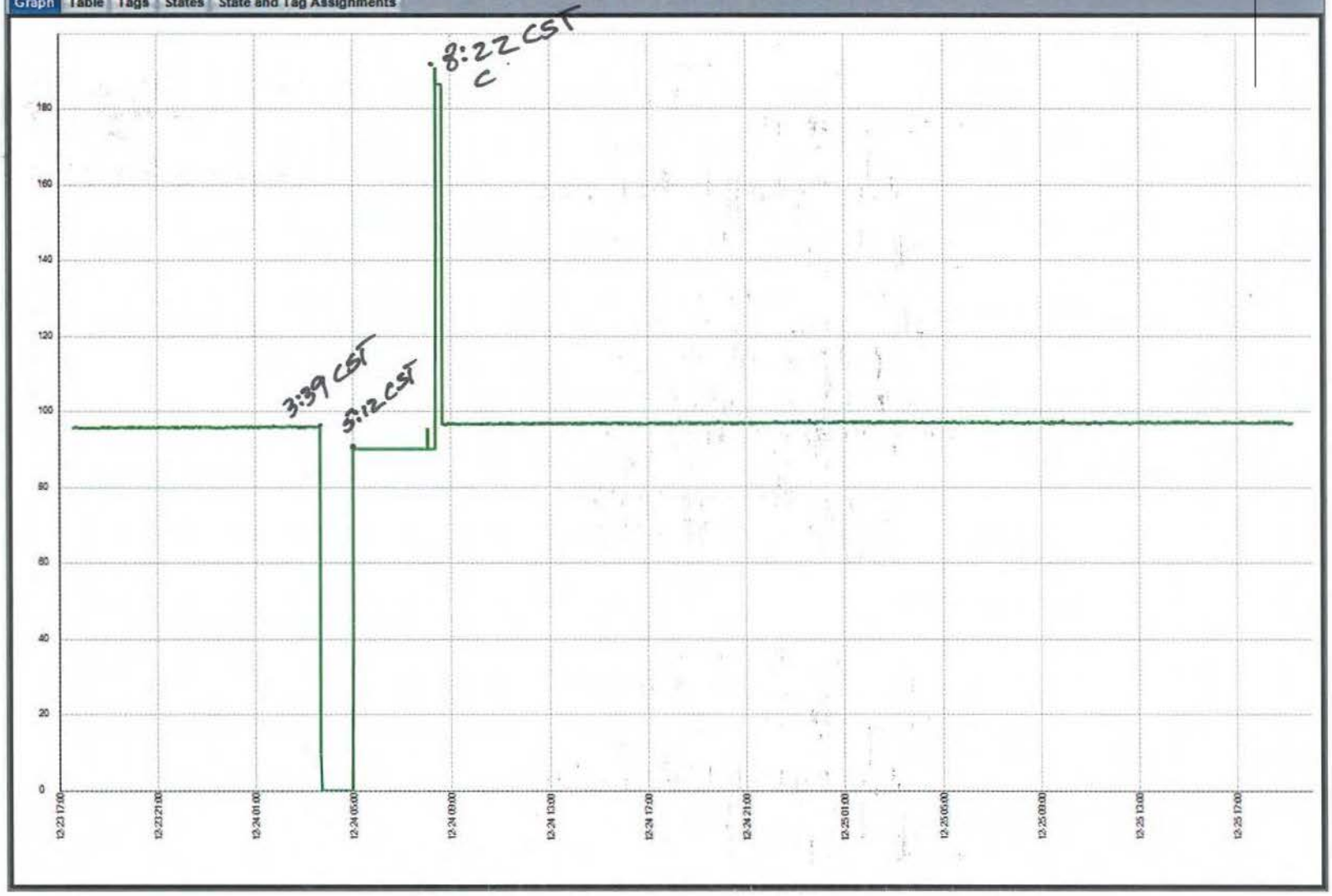
Filter

Source: Historical Quick Filter: Custom Line: Slope Show Limits

Integration: 1 Minute Start Time: 12/23/2015 17:34 End Time: 12/25/2015 19:16

Filters: Last Hr | Last 4 Hrs | Last 8 Hrs | Last 24 Hrs | Cur Day | Cur Gas Day | Last 7 Days | Last 14 Days | Last 30 Days | Dynamic | Prev | Next

Graph | Table | Tags | States | State and Tag Assignments



FERC Project No. 10855

Point Info - UPPCO-MCL: Total Plant Flow McClure Flow

History | Energy Log | Live Values | Alarm Config | Recent Events | Calculation | SCADA | Documents | Schema | Point Rationalization

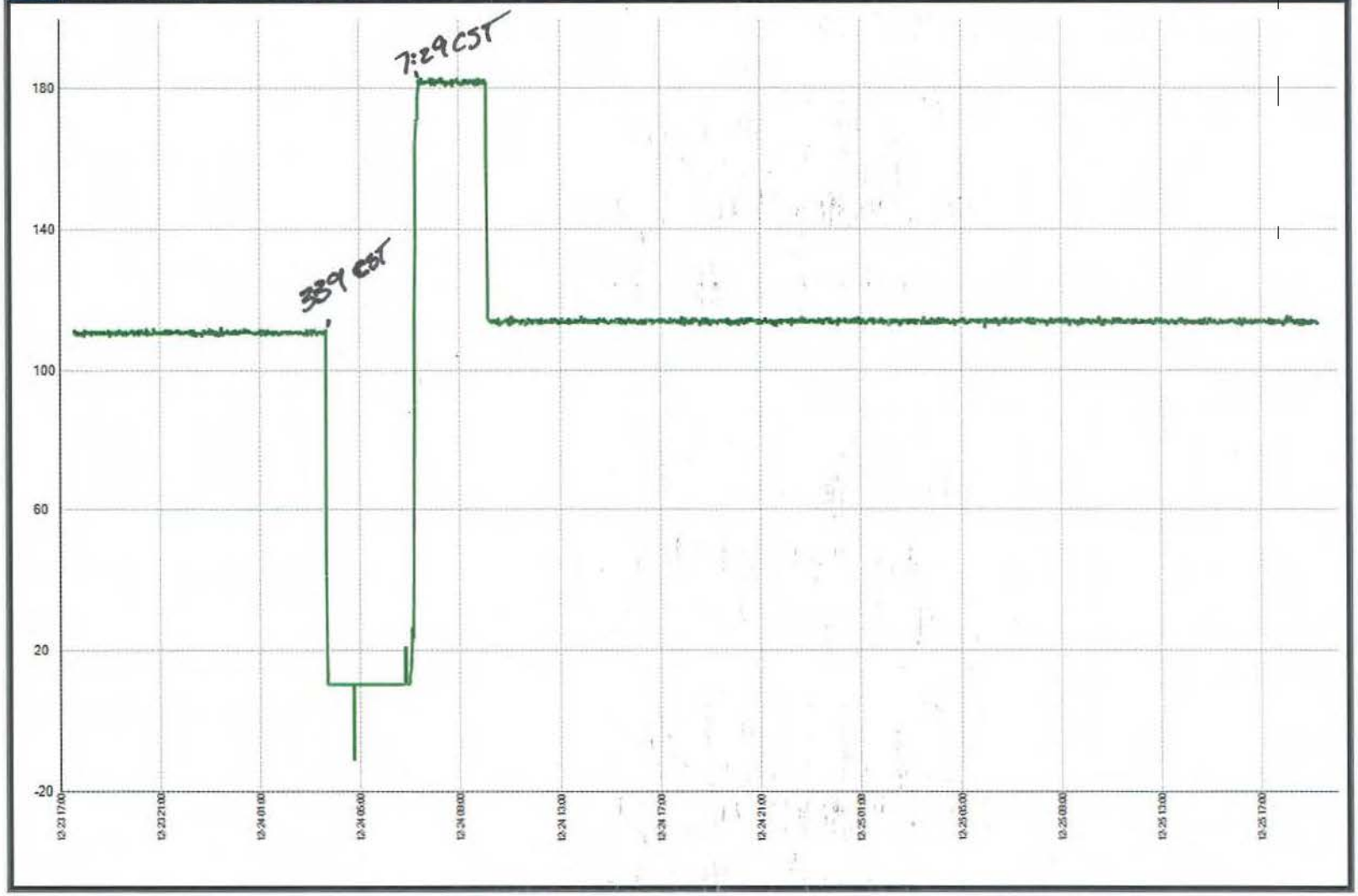
Filter

Source: Historical | Quick Filter: Custom | Line: Slope | Show Limits

Integration: 1 Minute | Start Time: 12/23/2015 17:34 | End Time: 12/25/2015 19:16

Filters: Last Hr | Last 4 Hrs | Last 8 Hrs | Last 24 Hrs | Cur Day | Cur Gas Day | Last 7 Days | Last 14 Days | Last 30 Days | Dynamic | Prev | Next

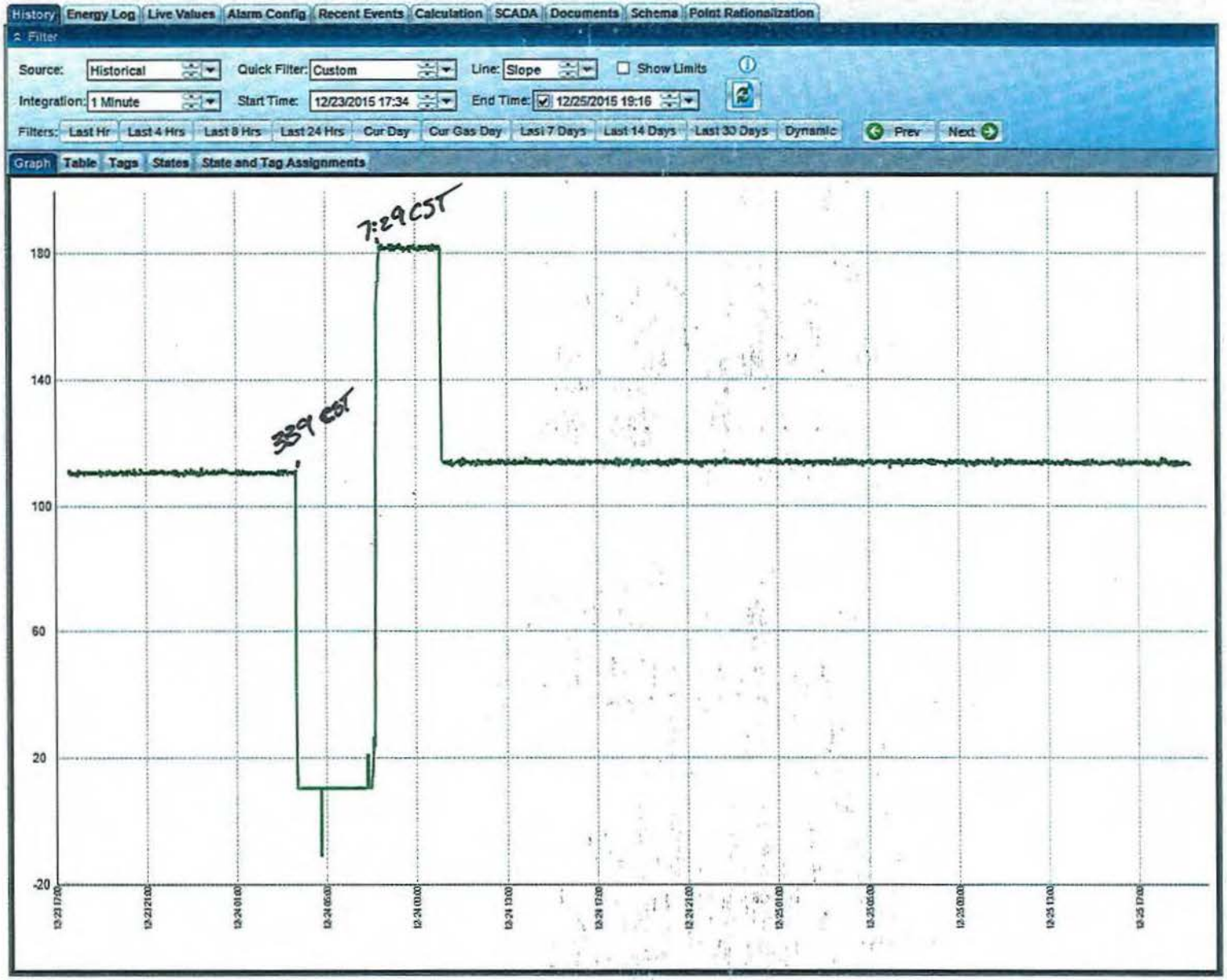
Graph | Table | Tags | States | State and Tag Assignments



1/8/2016 1:00 PM

FERC Project No. 10855

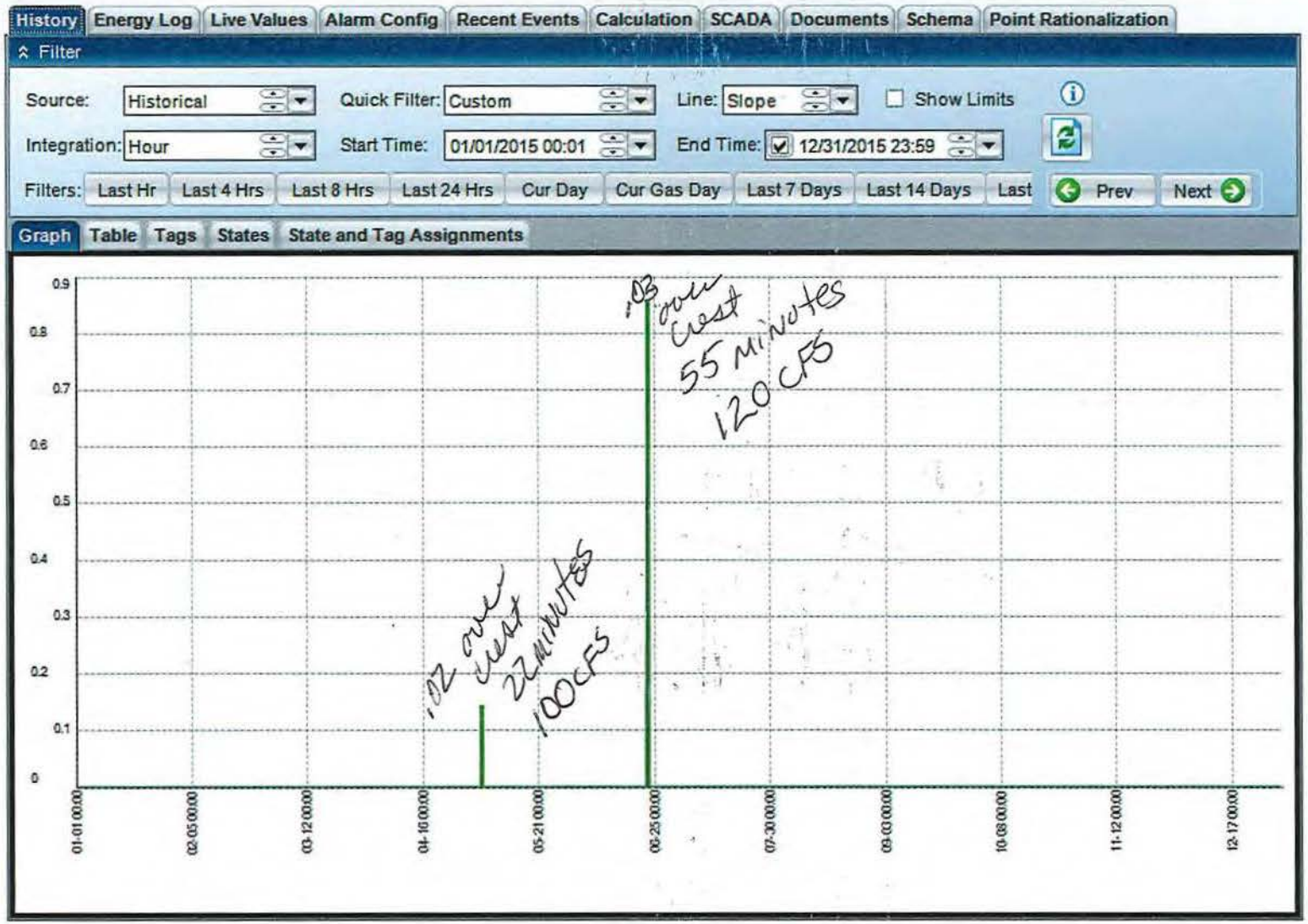
Point Info - UPPCO-MCL: Total Plant Flow McClure Flow



Record of Flushing Flows McClure

2 – Events Limited flushing, and no visible wood debris transported

Point Info - UPPCO-MCL: Spillway Flow



McClure FERC #10855

Summary of All Gate and Valve Openings

HOIST- Low Level Outlet Gate Operation Log - 2015

FERC Project - 10855

Date: & Time (Eastern)	Pond Elevation feet - NGVD	LLO Position Open - Turn	Flow - CFS
1/1/2014 -- 00:00	1338.71	Closed	
5/3/15 - 21:50	1342.38	Open - 100	100 cfs
5/3/2015 - 11:47:00 PM	1342.38	Closed	0 cfs
8/23/15 - 0032	1340.52	Open - 100	100 cfs
8/23/15 - 02:38	1340.48	Closed	0 cfs
9/22/2015 - 8:30	1339.5	Open - 95	95 cfs
9/22/2016 - 11:53	1339.48	Closed	0 cfs
11/5/15 - 12:34	1338.54	Open - 90	90 cfs
11/5/15 - 13:55	1338.54	Closed	0 cfs
11/17/15 - 11:25	1338.57	Open - 90	90 cfs
11/17/15 - 12:41	1338.57	Closed	0 cfs
11/24/15 - 05:55	1340.2	Open - 90	90 cfs
12/24/15 - 09:36	1340.2	Closed	0 cfs

Silver Lake - Low Level Outlet Gate Operation Log - 2015

FERC Project - 10855

Date: & Time	Pond Elevation feet - NGVD	LLO Position Open - Inch	Flow - CFS
01/01/15	1479.66	15	75
01/15/15	1478.26	5	15
03/31/15	1478.12	7.25	25
04/14/15	1479.85	13	60
06/15/15	1480.97	17	90
06/18/15	1480.58	22	125
06/22/15	1479.76	24.25	140
07/07/15	1476.41	20	100
07/08/15	1476.25	7	24
07/10/15	1476.16	10.25	40
07/13/15	1476.02	6	18.5
07/20/15	1475.65	5.25	15.2
08/12/15	1474.87	4	10
10/01/15	1473.66	5.5	15

GEI Consultants

Consulting Engineers and Scientists

June 29, 2015
Project No. 1407170

Mr. Robert Meyers
Upper Peninsula Power Company
500 North Washington Street
Ishpeming, MI 49849

RE: Results of 2015 Flow Assessment Study – 18-inch Bypass Pipe, McClure Hydroelectric Dam, Marquette County, Michigan

Dear Mr. Meyers:

GEI Consultants of Michigan, P.C. (GEI) is pleased to provide you with a summary of the flow measurements conducted on the 18-inch HDPE by-pass pipe at the above-referenced project. The flow measurements were performed on Friday, June 26, 2015.

Description of Work

Jeff Bal, P.E. and Thad Wojtysiak of GEI conducted flow measurements on the 18 inch HDPE bypass pipe at the McClure Dam. Jeff and Thad were assisted by UPPCO personnel. The measurements as summarized below were taken using a Dynasonics (Model TXFP) Portable Ultrasonic Transit Time Flow Meter. The meter was installed on the horizontal section of bypass pipe located at the base of the stairs located on the crest of the Dam. The meter was positioned at the same location as that used during last year's test. Measurements were recorded during varying "open" valve positions of the bypass pipe. Pertinent data taken at the time of the test is also included below:

Date Work Performed: Friday, June 26, 2015

Time of Test: Start at 11:30 a.m. (EST)

Air Temperature: 76 degrees F

Surface Water Temperature: 67 degrees F

Water Elevation: 1196.05

Equipment: Dynasonics Model TXFP Transit Time Meter

Test Location: 18" HDPE bypass pipe – horizontal run below stairs at top of dam. Meter centered on horizontal run.

Test Parameter Conditions and Results

Discharge Valve Position (inches open)	Discharge Valve Max. Open (inches)	Percent Open	Metered Flow Rates	
			cu. ft./sec	gal/min
11½" (Initial Position)	18.5	62.2%	18.92	8,491
12⅛"	18.5	65.6%	19.68	8,832
12⅝"	18.5	68.2%	20.48	9,191
13⅛"	18.5	71.0%	21.47	9,636
11"	18.5	59.5%	17.80	7,989
10½"	18.5	56.8%	17.00	7,630
8½"	18.5	46.0%	13.04	5,852
7½"	18.5	40.5%	10.42	4,676
7¼"	18.5	39.2%	10.14	4,551
7⅛"	18.5	38.5%	9.96	4,470
11⅝"	18.5	62.8%	19.24	8,635
11¾"	18.5	63.5%	19.12	8,581
12"	18.5	64.9%	19.35	8,684
12¼"	18.5	66.2%	20.00	8,976

The initial flow rate was observed to be 18.92 CFS. The valve was opened to increase flows to 21.47 CFS and then gradually closed and spot readings were taken until the flow rate had decreased to 9.96 CFS. Then the valve was opened and at the completion of the flow testing, the bypass discharge valve was positioned so that a flow rate of 20 CFS was observed.

We appreciate the opportunity to have provided these services and would like to thank your staff for assisting us during this work. If you have any questions concerning the data or results, please do not hesitate to contact Jeff Bal at (906) 214-4146.

Sincerely,

GEI CONSULTANTS OF MICHIGAN, P.C.

Jeff Bal

Jeff Bal, P.E.
Senior Project Engineer

JRB:plw

cc: Mike Carpenter, GEI

K:\Integrys\1407170-McClure Flow Metering 2015 Task 1004\Engineering\McClure_flow_data&report_062915_FINAL.docx

Document Content(s)