

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

February 26, 2015

FERC Project No. 10855 NATDAM Nos. MI00175, 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 2014 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.

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 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;

Ms. Kimberly Bose February 27, 2015 Page 2 of 2

- 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 regarding this letter, please contact Robert Meyers at (906) 485-2419 or Virgil Schlorke at (920) 485-2465.

Sincerely, nyn

Gil Snyder Manager – Regional Generation for Wisconsin Public Service

VES/ebr

- Enc: Appendix 1 UPPCO Agency Correspondence Appendix 2 - UPPCO Annual Deviation Report
- cc: Mr. James Melchiori, UPPCO UVD Mr. Robert Meyers, UPPCO - UISC Mr. Keith Moyle, UPPCO - UISC Mr. Virgil Schlorke, UPPCO - UISC Mr. David Tripp, UPPCO - UISC Mr. Shawn Puzen, IBS - D2 Mr. Ben Trotter, IBS - D2 Ms. Joan Johanek, WPS - D2

Appendix 1

Documentation of Consultation



January 23, 2014

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

FERC Project No. 10855

Mr. Koren Carpenter - MDEQ Ms. Diana Klemans - MDEQ Mr. Gary Kohlheep - MDEQ Mr. Kyle Kruger - MDNR Mr. Burr Fisher - USFWS Mr. Jim Grundstrom - DRCI

Dear Agency Representative(s):

Dead River Hydroelectric Project 2014 Annual Report - Operation Monitoring Plan & <u>Report of Deviations Less Than Sixty Minutes</u>

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.

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- 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;

January 23, 2015 Page 2 of 2

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 23, 2015. Should you have any questions, please do not hesitate to contact me at (906) 485-2419.

Sincerely,

Lobut Ttheys

Bob J. Meyers Project Manager – Regional Generation

Rushford, Emily B

From: Sent:	Carpenter, Koren (DEQ) <carpenterk5@michigan.gov> Monday, January 26, 2015 9:51 AM</carpenterk5@michigan.gov>
To:	Rushford, Emily B; Klemans, Diana (DEQ); Kohlhepp, Gary (DEQ); Kruger, Kyle (DNR);
-	Burr_Fisher@fws.gov; jimgrundstrom@freichevy.com
Cc:	Meyers, Robert J; Schlorke, Virgil E
Subject:	RE: 2014 Annual Deviation & Operation Monitoring Plan Report

The MDEQ appreciates the opportunity to review the 2014 Annual Deviation and Operation Monitoring Plan Report and have no further comments at this time.

Regards, Koren

Koren Carpenter Environmental Engineer Surface Water Assessment Section Water Resource Division Department of Environmental Quality Phone: (517) 284-5541 Fax: (517) 373-9958

From: Rushford, Emily B [mailto:EBRushford@uppco.com]
Sent: Friday, January 23, 2015 1:03 PM
To: Carpenter, Koren (DEQ); Klemans, Diana (DEQ); Kohlhepp, Gary (DEQ); Kruger, Kyle (DNR); Burr_Fisher@fws.gov; jimgrundstrom@freichevy.com
Cc: Meyers, Robert J; Schlorke, Virgil E
Subject: 2014 Annual Deviation & Operation Monitoring Plan Report
Importance: High

Good Afternoon,

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 contact Bob Meyers at (906) 485-2419.

Thank you,

Emily B. Rushford Executive Administrative Assistant

Upper Peninsula Power Company

906-485-2410 ebrushford@uppco.com

www.uppco.com

Follow **UPPCOstorm** on Twitter for timely outage updates.

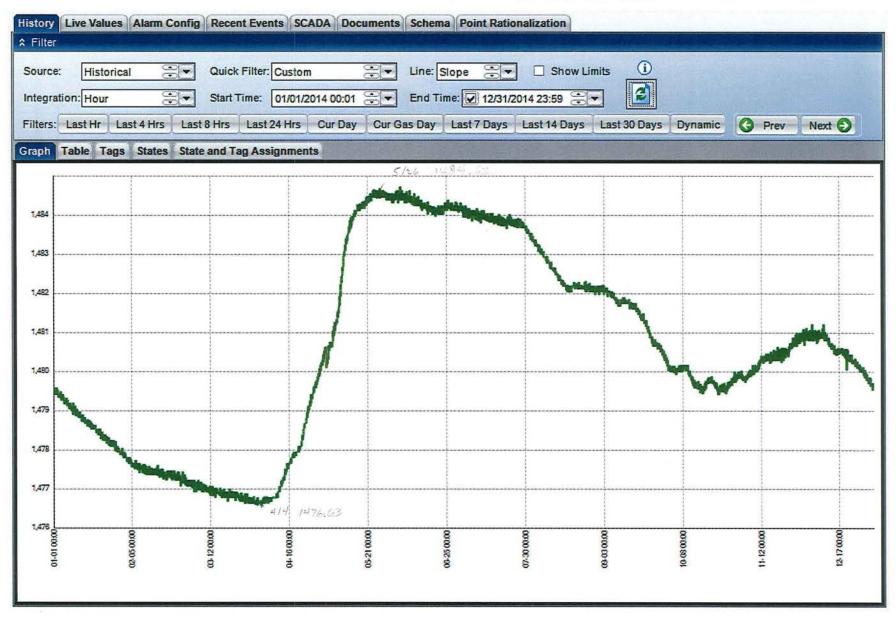
Appendix 2

Annual Report

Appendix 1

Annual Report

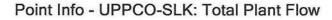
Point Info - UPPCO-SLK: Headwater Elevation

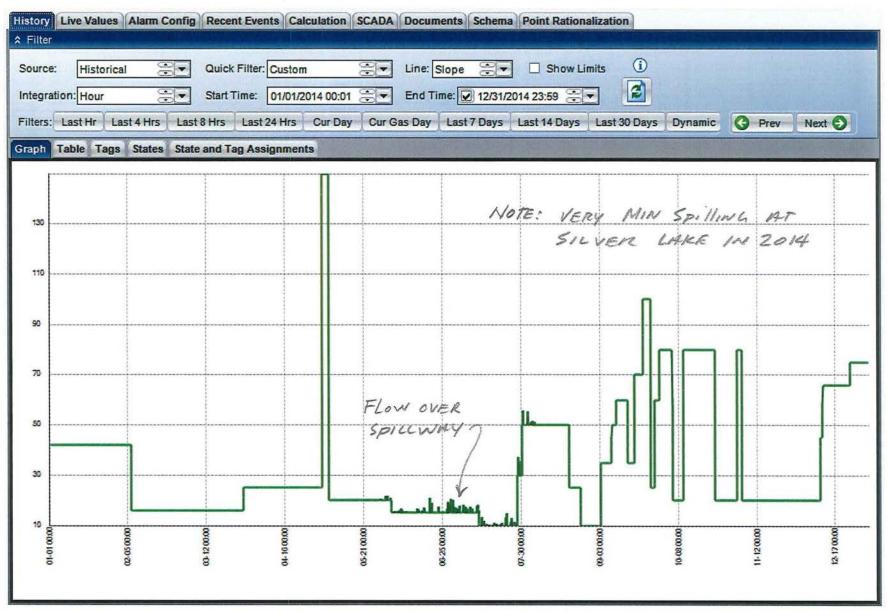


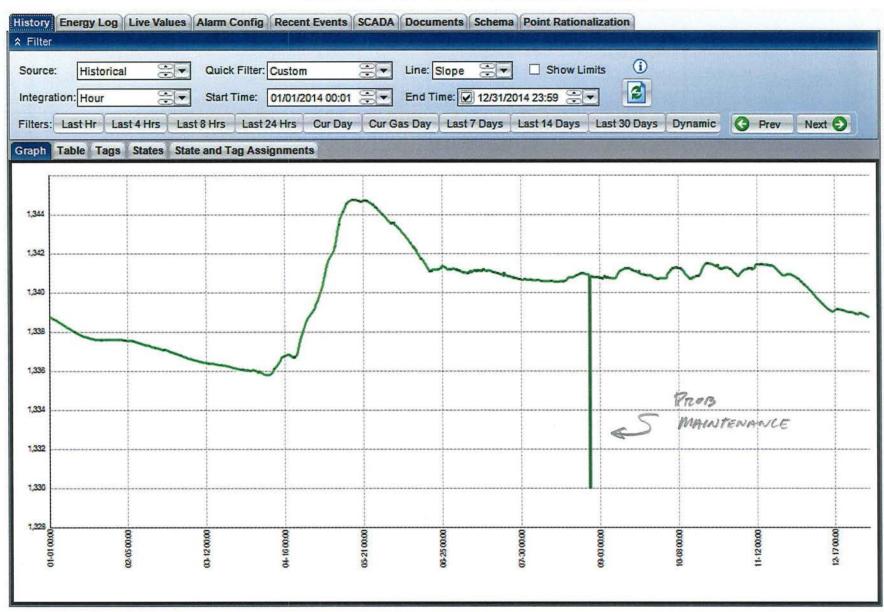
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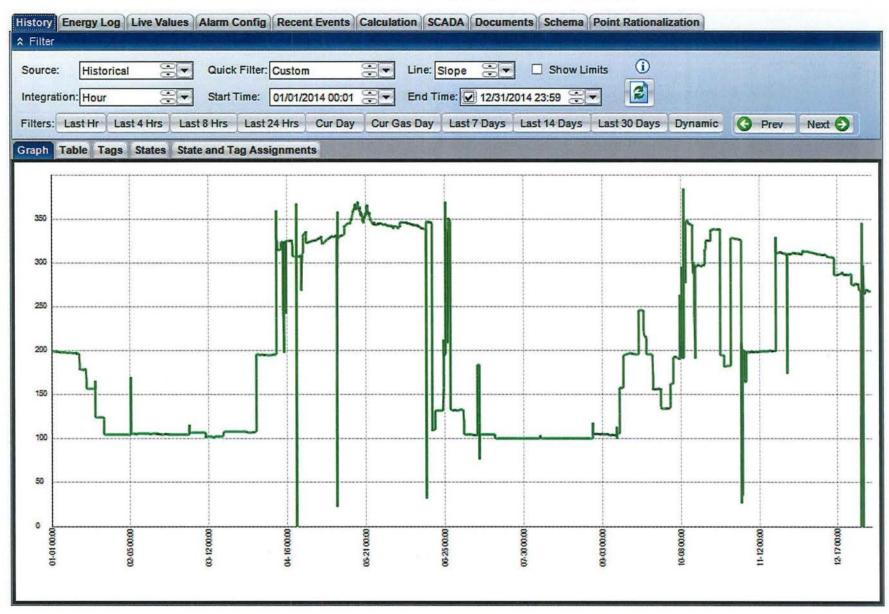
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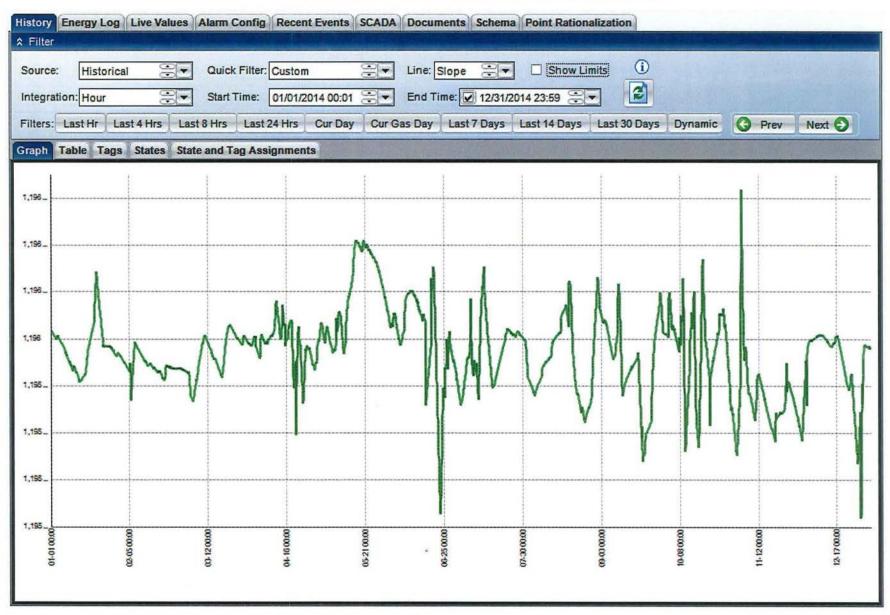
Point Info - UPPCO-HST: Headwater Elevation



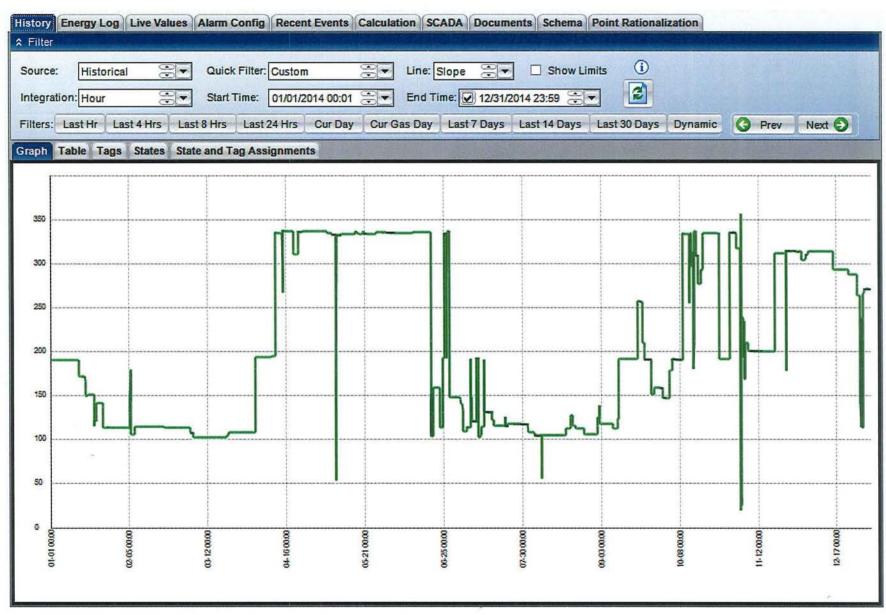
Point Info - UPPCO-HST: Total Plant Flow

Point Info - UPPCO-HST: Lower Level Outlet Flo	Point	Info -	UPPCO	-HST:	Lower	Level	Outlet	Flow
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Point Info - UPPCO-MCLD: Headwater Elevation



Point Info - UPPCO-MCL: Total Plant Flow

Point Info -	UPPCO-MCL:	Spillway	Flow
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Appendix 2

Summary of Deviation

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Deviation Reports

Deviations less	than 60 minut	es	
Project	Date	Type of Deviation	Reason
Hoist	5/8/2014	Less than 100 CFS from Plant	Transmission Problem Tripping Plant/Storm
McClure	5/8/2014	Less than 80 CFS from Plant	Transmission Problem Tripping Plant/Storm
McClure	8/7/2014	Less than 80 CFS from Plant	Relay Testing Resulted in Tripp
Deviation great	er than 60 Mii	nutes	
Hoist	2/25/2014	Lower Target Elevation Exceedance	Dry year consulation, started 2/16/2014
Hoist	4/20/2014	Less than 100 CFS from Plant	Transmission Problem Tripping Plant/Storm
Hoist	4/26/2014	Upper Target Elevation Exceedance	Dry year consulation ended
Hoist	6/16/2014	Less than 100 CFS from Plant	Transmission Problem Tripping Plant/Storm
Hoist/McClure	11/4/2014	less than 100,80 CFS from Plants & Upper Target Elevation Exceedance	Transmission Problem Tripping Plants/Storm
Hosit	12/27/2014	Less than 100 CFS from Plant	Transmission Problem Tripping Plants/Storm
Hoist	12/28/2014	Less than 100 CFS from Plant	Transmission Problem Tripping Plants/Storm

Dead River Project FERC No. 10855, Deviation Summary for 2014

Non-Conformance Event Record Detail

NCREG6087 **Regional Generation NC Record Number:** Entity: Company - Level 1 - Level 2: **UPP-Hoist Hydro** Event Date: 5/8/14 6:03 05/08/2014 **Discovery Date/Time:** Plant tripped offline **Event Title: Event Details:** At 06:03 CDT on 5/8/14, the Hoist plant tripped offline and flow went to zero. A local operator was dispatched. The Lower Level Outlet was opened at 07:00 CDT to reestablish minimum flow. Generation was online again at 09:00 CDT (unit #3) and 09:22 CDT (unit #2), and the LLO was then closed. Local operator was dispatched. Immediate Action: **Recommendations:** Potential Causes/Contributors to incident Loss of power to plant caused by storms / lightning in the area 5/8/14 11:11 Kevin S Willey Entered By Name: **Creation Date/Time:** Status: Closed Energy Supply and Control Entered By Department: **Reportable to External Agency: Basis for Reportability:** Will be part of End of Year Report no Additional Followup Required: yes **FERC** Deviation Regulatory Category: Type: Trans. Sys. (storm related) < 60 minutes event Sub Type: **Description:** Units at plant tripped, minimum flow re-established with LLO **Causal Analysis Level:** Causal Analysis Basis: Closed - No further action required **Event Start:** 5/8/2014 7:04 AM Event End: 5/8/2014 8:00 AM Event Duration (HH:MM): 00:56 **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

Print Date: 01/21/2015

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Point Info - UPPCO-HST: Total Plant Flow

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Non-Conformance Event Record Detail

NC Record Numb Company - Level	- ALE INCOMPANY SELECTION OF A	Entity: Regional Generation e Hydro
Event Date:	05/08/2014	Discovery Date/Time: 5/8/14 6:06
Event Title:	Plant tripped offline	
Event Details:		ure plant tripped offline causing the total plant flow to drop below the minimum flow
Immediate Action:	approximately 07:04 CDT. Local operator was dispatched.	dispatched. Generation was restored and minimum flow was reestablished at
Recommendations:		
Potential Causes/Contril		ed to be storm / lightning related.
Entered By Name:	Kevin S Willey	Creation Date/Time: 5/8/14 11:16
Entered By Department:	Energy Supply and Control	Status: Closed
Reportable to External A	gency: no	Basis for Reportability: Will be part of end of year report
Additional Followup Rec	quired: yes	
Category: Regulat	ory	Type: FERC Deviation
Sub Type: Trans. S	Sys. (storm related)	Description: <60 minutes
Causal Analysis Level:	Closed - No further action required	Causal Analysis Basis: Units tripped from power outage at nearby substation, operator responded and returned unit under 60 minutes
Event Start:	5/8/2014 7:07 AM	Event End: 5/8/2014 8:04 AM Event Duration (HH:MM): 00:57
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 Scee	ning Committee Approval upon Cor	mpletion no
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Print Date: 01/21/2015

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Point Info - UPPCO-MCL: Total Pla	ant Flow
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Non-Conformance Event Record Detail

NC Record Number: NCREG6438 Entity: Regional Generation Company - Level 1 - Level 2: UPP-McClure Hydro Event Date: 0807/2014 Discovery Date/Time: 8/7/14 11:15 Event Title: unit 2 trip Fille Stripped off line while 1&C was preforming relay testing interrupting ROR Immediate Action: called out operator Recommendations: none Potential Cause/Courtibutors to incident I&C tech indicated it is probably a wiring problem with the Generator 1 Breaker Failure Relay; he is probably a wiring problem with the Generator 1 Breaker Failure Relay; he is probably a wiring problem with the Generator 1 Breaker Failure Relay; he is probably a wiring problem with the Generator 1 Breaker Failure Relay; he is probable to External Agency: no Basis for Reportability: Wiring to the failure Relay; he is for Reportability: Entered By Name: Kenneth C Luckeroth Status: Closed Status: Closed Reportable to External Agency: no Basis for Reportability: Will be reported on End of Year report to FERC for less than 60 minute events Category: Regulator yes: FERC Deviation plant.coperator was called and got unit returned to service. Gausal Analysis Level: Closed - No further action required plant.coperator was called and got unit returned to service.				5
Event Date: 08/07/2014 Discovery Date/Time: 8/7/14 11:15 Event Title: unit 2 trip Discovery Date/Time: 8/7/14 11:15 Event Title: unit 2 trip Event Details: Unit 2 tripped off line while I&C was preforming relay testing interrupting ROR Immediate Action: called out operator Recommendations: none Potential Causes: Control I&C tech indicated it is probably a wiring problem with the Generator 1 Breaker Failure Relay; he is planning to investigate further. Entered By Name: Kenneth C Luckeroth Creation Date/Time: 8/7/14 14:12 Entered By Department: <				onal Generation
Even Details: Unit 2 tripped off line while 1&C was preforming relay testing interrupting ROR Immediate Action: called out operator Recommendations: none Potential Causes/Contributors to Incident I&C teck indicated it is probably a wiring problem with the Generator 1 Breaker Failure Relay; he is planning to investigate further: Entered By Name: Kenneth C Luckeron Control Status: Closed Reportable to External Agency: no Basis for Reportability: Will be reported on End of Year report to FERC for less Additional Followup Required: yes ERC Deviation Category: Regulatory Type: FERC Deviation Status: Closed - Ferce Deviation Category: Regulatory Type: FERC Deviation Sub Type: Plant equip: failure Description: Meter Testing Causal Analysis Level: Closed - No further action Causal Analysis Basis: Unit tripped from Substation Tech working on testing relays in required Server. Regulatory Regulator				8/7/14 11:15
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Potential Causes/Contributors to incident I&C tech indicated it is probably a wining problem with the Generator 1 Breaker Failure Relay; he is planning to investigate further. Entered By Name: Kenneth C Luckeroll Greation Date/Time: 8/7/14 14:12 Entered By Department: Energy Supply and Control Status: Closed Reportable to External Agency: no Basis for Reportability: Will be reported on End of Year report to FERC for less Additional Followup Required: yes than 60 minute events Category: Regulatory Type: FERC Deviation Sub Type: Plant equip. failure Description: Meter Testing Causal Analysis Level: Closed - No further action required Required to the function of the func	Immediate Action:	called out operator	as preforming relay testing inte	rrupting ROR
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Entered By Name: Kenneth C Luckeroth Creation Date/Time: 8/7/14 14:12 Entered By Department: Energy Supply and Control Status: Closed Reportable to External Agency: no Basis for Reportability: Will be reported on End of Year report to FERC for less Additional Followup Required: yes than 60 minute events than 60 minute ovents Category: Regulatory Type: FERC Deviation Sub Type: Plant equip. failure Description: Meter Testing Causal Analysis Level: Closed - No further action required Causal Analysis Basis: Unit tripped from Substation Tech working on testing relays in plant, operator was called and got unit returned to service. Going thru the process, found that these relays have a trip built into the connection levels that was not indicated on the blue prints and/or other literature on these relays from the manufacturer and was not found during the inticial start up of these relays. Event Start: 8/7/2014 10:14 AM Event End: 8/7/2014 10:52 AM Event Duration (HH:MM): 00:38 Evaluator Name: Evaluator Dept: Evaluator Dept: Evaluator Dept: Evaluator Dept: Evaluation Accepted: Acceptance Comments Evaluator Approver Name Corrective Action Approver Name Analysis Descriptio	Potential Causes/Contr			ng problem with the Generator 1 Breaker Failure Relay; he is
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Print Date: 01/21/2015

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

March 25, 2014

FERC Project No. 10855 NATDAM Nos. MI00175 and 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 – Hoist & McClure Developments Article 402 & 403 Planned Deviation – Dry Year Consultation Starting

In accordance with Article 402 & 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 elevations and flows (planned or unplanned). Please consider this letter as fulfillment of the notification requirement of deviations.

On Wednesday, February 26, 2013, Dry Year Consultation began with the Michigan Department of Natural Resources (MDNR), Michigan Department of Environmental Quality (MDEQ), U.S. Fish and Wildlife Services (USFWS) and the Dead River Campers Inc. (DRCI) when the Hoist Reservoir elevation dropped below the required minimum of 1337.0 feet NGVD on Tuesday, February 25, 2013. The Keweenaw Bay Indian Community (KBIC) was invited, but did not participate.

Based on the Dry Year Consultation discussion, no adjustments were made and the Hoist Reservoir Elevation would be allowed to continue to decline. No adverse environmental impacts were observed as a result of the Hoist Reservoir elevation dropping below the required minimum elevation. UPPCO will notify the Commission when the current dry-year consultation has ended.

During the consultation, UPPCO also proposed an early spring/late winter drawdown to accommodate spring runoff. The projections of snow pack at the time of the meeting indicate at least a drawdown to a minimum elevation of 1334.0 feet NGVD would be necessary to attempt to restrict the maximum elevation during spring runoff to 1342.0 feet NGVD. The necessary consulting agencies agreed with the planned deviation. No adverse environmental impacts are anticipated as a result of the planned drawdown for spring runoff.

Ms. Kimberly D. Bose March 25, 2014 Page 2 of 2

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 Corporation

RJM/ebr

Enc. E-mail correspondence

- cc: Mr. John Myers, IBS D2 Mr. Shawn Puzen, IBS - D2 Mr. Ben Trotter, IBS - D2 Ms. Joan Johanek, WPSC - D2 Mr. Robert Meyers, UPPCO - UISC Mr. Keith Moyle, UPPCO - UISC Mr. Virgil Schlorke, UPPCO - UISC Mr. John Zygaj, FERC (CRO)
- Mr. Burr Fisher, FWS Mr. Koren Carpenter, MDEQ Ms. Diana Klemans, MDEQ Mr. Gary Kohlhepp, MDEQ Mr. Kyle Kruger, MDNR Mr. Jim Grundstrom, DRCI Mr. Gene Mensch, KBIC



**Upper Peninsula Power Company** 

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

May 19, 2014

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 - 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 the steps used to mitigate them. Please consider this letter as fulfillment of the notification requirement of deviations.

The Hoist plant tripped at 02:56 EDT, Sunday, April 20, 2014, due to transmission system fault. Poor weather conditions (rain/snow) resulted in an insulator failing causing a system fault. The insulator was replaced and the transmission system returned to service. An operator was called onsite and returned a unit to service at 04:37 EDT, re-establishing minimum flow.

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 incident. Due to the nature of the event UPPCO is not proposing any corrective actions at this time. Ms. Kimberly D. Bose May 19, 2014 Page 2 of 2

If you have any questions regarding this letter, please contact Robert Meyers at (906)485-2419 or Virgil Schlorke at (920)485-2465.

Sincerely,

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 Johanek, WPS - D2 Mr. Jim Melchiori, UPPCO - UVD 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. James Grundstrom, DRCI Mr. Burr Fisher, FWS Mr. Koren Carpenter, MDEQ Ms. Diana Klemans, MDEQ Mr. Gary Kohlhepp, MDEQ Mr. Kyle Kruger, MDNR



**Upper Peninsula Power Company** 

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

June 3, 2014

FERC Project No. 10855 NATDAM No. MI00175

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

**Dear Secretary Bose:** 

Dead River Hydroelectric Project - Hoist Development Articles 402 & 403 Planned Deviation - Dry Year Consultation Ending

In accordance with Articles 402 & 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 strive to operate the existing project facilities to achieve the start of month target elevations while also maintaining established minimum flows. The licensee is also required to report to the Federal Energy Regulatory Commission (FERC) any deviations associated with elevations and flows and the steps they used to mitigate them. Please consider this letter as fulfillment of the notification requirement of deviations.

Through the Dry Year Consultation process, Upper Peninsula Power Company (UPPCO) obtained mutual agreement among the Michigan Department of Natural Resources (MDNR), Michigan Department of Environmental Quality (MDEQ), Dead River Campers, Inc. (DRCI), and the U.S. Fish and Wildlife Services (USFWS) with respect to planned deviations on the Dead River. The planned deviations started February 26, 2014 when the Hoist Reservoir Elevation dropped below the End of Month required minimum elevation of 1337.0 feet NGVD. It was agreed to monitor the reservoir elevations and bring down the Hoist to a low of 1334.0 feet NGVD to accommodate spring runoff and to change the target elevations for Silver Lake to 1485.2 feet NGVD for May and June. The start of Dry Year Consultation letter was sent March 25, 2014 informing the commission of the conditions of the elevations and flows.

On April 26, 2014, the Hoist Reservoir elevation was at 1338.7 feet NGVD which is above the monthly target elevation of 1338.5 feet NGVD triggering the end of the Dry Year Consultation process and thus the planned deviations.

Ms. Kimberly D. Bose June 3, 2014 Page 2 of 2

If you have any questions regarding this letter, please contact Robert Meyers at (906) 485-2419 or Virgil Schlorke at (920) 485-2465.

Sincerely,

Gil Snyder Manager – Regional Generation for Wisconsin Public Service

RJM/ebr

cc: Mr. John Myers, IBS - D2 Mr. Shawn Puzen, IBS - D2 Mr. Ben Trotter, IBS - D2 Ms. Joan Johanek, WPS - D2 Mr. James Melchiori, UPPCO - UVD 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. James Grundstrom, DRCI Mr. Burr Fisher, FWS Mr. Koren Carpenter, MDEQ Ms. Diana Klemans, MDEQ Mr. Gary Kohlhepp, MDEQ Mr. Kyle Kruger, MDNR



**Upper Peninsula Power Company** 

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

July 16, 2014

FERC Project No. 10855 NATDAM No. MI00175

Ms. Kimberly D. Bose, Secretary 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 the steps they used to mitigate them. Please consider this letter as fulfillment of the notification requirement of deviations.

On Monday, June 16, 2014, at 19:20 CDT, the Hoist plant tripped as a result of a transmission system fault due to a tree on the line. An operator was dispatched to the plant and re-established minimum flows at 20:45 CDT.

The fault was attributed to poor weather conditions (strong winds and rain) which caused a tree off the right-of-way to fall on the transmission system. The line was cleared and the transmission system returned to service.

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. Ms. Kimberly D. Bose July 16, 2014 Page 2 of 2

If you have any questions regarding this letter, please contact Robert Meyers at (906) 485-2419 or Virgil Schlorke at (920) 485-2465.

Sincerely,

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 Johanek, WPS - D2 Mr. James Melchiori, UPPCO - UVD 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. Jim Grundstrom, DRCI Mr. Burr Fisher, FWS Mr. Koren Carpenter, MDEQ Ms. Diana Klemans, MDEQ Mr. Gary Kohlhepp, MDEQ Mr. Kyle Kruger, MDNR



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

December 3, 2014

FERC Project No. 10855 NATDAM Nos. MI00183 & MI00175

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

Dear Secretary Bose:

Dead River Hydroelectric Project – Hoist and McClure Developments Article 402 & 403 Deviation of Reservoir Elevation and Minimum Flows

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 Hoist and McClure plants both tripped at 01:13 EST, Tuesday, November 4, 2014, due to severe weather causing an electrical outage on the transmission system. An operator was dispatched to both plants. Flow at the Hoist was re-established at 02:40 EST by opening up the low level outlet. A line inspection was completed with no issues identified indicating the fault was caused by a tree which had cleared. Normal plant operation was re-established at 7:36 EST at the Hoist, but was again interrupted by another fault on the transmission system at 08:54 EST, and the low level outlet was opened at 09:15 EST. Inspections identified a shorted insulator lead. Switching was completed enabling normal plant operations to be re-established at the Hoist, with repairs completed at 10:02 EST. The McClure powerhouse was returned to normal operation following completion of repairs at 14:58 EST re-establishing minimum flows.

During this event the headwater (pond) elevation at McClure exceeded the limit of 1196.4 at 08:58 EST, peaked at 15:05 EST at 1196.63 and returned to normal range at 18:04 EST.

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 incident. Due to the nature of the event (severe weather causing an insulator to fail) UPPCO is not proposing any corrective actions at this time. Ms. Kimberly Bose December 4, 2014 Page 2 of 2

If you have any questions regarding this letter, please contact Robert Meyers at (906) 485-2419 or Virgil Schlorke at (920) 485-2465.

Sincerely,

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 Johanek, WPS - D2 Mr. James Melchiori, UPPCO - UVD 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. Jim Grundstrom, DRCI Mr. Burr Fisher, FWS Mr. Koren Carpenter, MDEQ Ms. Diana Klemens, MDEQ Mr. Gary Kohlhepp, MDEQ Mr. Kyle Kruger, MDNR



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

January 26, 2015

FERC Project No. 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 the steps used to mitigate them. Please consider this letter as fulfillment of the notification requirement of deviations.

The Hoist plant tripped Saturday, December 27, 2014, at 11:53 CST, due to a transmission system fault. An operator was called and after arriving at the plant the low level outlet was opened at 13:40 CST, re-establishing minimum flow. The plant tripped again on Sunday, December 28, 2014 at 10:32 CST, and an operator was called and after arriving at the plant opened the low level outlet at 12:45 CST, re-establishing minimum flow.

The transmission system faults were caused by poor weather conditions; heavy amounts of snow clinging to the transmission lines causing them to sag, and high winds causing the lines to slap together, opening up the breakers and tripping the units. The transmission system was visually inspected following the faults with no obvious conditions noticed.

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 incident. Due to the nature of the event UPPCO is not proposing any corrective actions at this time. Ms. Kimberly Bose January 26, 2015 Page 2 of 2

If you have any questions regarding this letter, please contact Robert Meyers at (906)485-2419 or Virgil Schlorke at (920)485-2465.

Sincerely,

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 Johanek, WPS - D2 Mr. James Melchiori, UPPCO - UVD 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. James Grundstrom, DRCI Mr. Burr Fisher, FWS Mr. Koren Carpenter, MDEQ Ms. Diana Klemens, MDEQ Mr. Gary Kohlhepp, MDEQ Mr. Kyle Kruger, MDNR

#### Appendix 3

#### Summary of Gate

And

Valve Openings



Geotechnical Environmental and Water Resources Engineering June 23, 2014 Project No. 1325480

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

#### RE: Results of 2014 Flow Assessment Study -18-inch By-Pass Pipe, McClure Hydroelectric Dam, Marquette County, Michigan

Dear Mr. Meyers:

GEI Consultants, Inc. (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 20, 2014.

#### **Description of Work**

Jeff Bal, P.E. and Rick Sheltrow of GEI Consultants conducted flow measurements on the 18 inch HDPE bypass pipe at the McClure Dam. Jeff and Rick 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 20, 2014

Time of Test: Start at 12:45 pm. (EST)

Air Temperature: 52 degrees F

Surface Water Temperature: 68 degrees F

Water Elevation: 1196.93

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.

Mr. Robert Meyers

Discharge Valve	Discharge Valve	Percent	Metered Flow Rates		
Position (inches open)	Max. Open (inches)	Open	cu. ft./sec	gal/min	
13.75 (Initial Position)	18.5	74.32	24.34	10,924	
10.50	18.5	56.76	17.70	7,944	
11.25	18.5	60.81	19.50	8,752	
12.25	18.5	66.22	21.00	9,425	
12.75	18.5	68.92	22.25	9,986	
13.75	18.5	74.32	23.31	10,462	
7	18.5	37.84	10.00	4,488	
11.5	18.5	62.16	20.00	8,976	

#### **Test Parameter Conditions and Results**

The initial flow rate was observed to be 24.79 cubic feet per second. The valve was closed to reduce flows to 17.70 CFS and then gradually opened and spot readings were taken until the flow rate had increase up to 23.31. Then the valve was shut to the point where a flow of 10 CFS was observed and that position was recorded. At the completion of the flow testing, the bypass discharge valve was positioned so that the 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, P.E. Senior Project Engineer

JRB:plw

cc: Mike Carpenter, GEI

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		LLO Position	Flow			
Date	Pond Elev	Open-Inch	(CFS)			
01/01/14	1479.72	10.00	42			
02/16/14	1477.50	5.25	16			
03/18/14	1476.70	7.25	25			
05/02/14	1480.56	25.50	150			
05/05/14	1480.83	6.00	20			
06/02/14	1484.46	4.75	15			
07/01/14	1484.02	3.75	10			
07/28/14	1483.75	7.75	30			
07/30/14	1483.64	10.50	50	1		
08/20/14	1482.17	6.50	25			
09/03/14	1482.10	8.50	35			
09/08/14	1482.00	10.75	50			
09/10/14	1481.72	12.50	60			
09/15/14	1481.69	8.50	35			
09/18/14	1481.58	14.00	70			
09/22/14	1481.17	17.50	100			
09/25/14	1480.00	7.00	25			
09/27/14	1480.73	12.50	60			
09/29/14	1480.45	16.00	80			
10/05/14	1480.00	6.00	20			
10/10/14	1480.06	16.50	80			
10/24/14	1479.46	6.00	20			
11/03/14	1479.85	16.00	80			
11/05/14	1479.84	6.00	20			
12/09/14	1480.85	10.00	45			
12/11/14	1480.80	13.50	66			
12/23/14	1480.29	15.00	75			

DIST			2014 Low Level Outlet Gate Operation				
			LLO Position	Flow	1		
Date	Time	Pond Elev	Open/Closed-Turns	(CFS)			
01/01/14	0:00		0	0			
05/08/14	0:00	1342.35	100	100			
05/08/14	10:55	1342.36	100	0			
07/10/14	10:18	1341.07	105	105			
08/29/14	17:41	1340.78	100	0			
09/09/14	11:05	1340.69	100	100			
09/09/14	14:30	1340.69	100	0			
09/19/14	10:30	1341.05	50	50			
09/21/14	15:30	1340.89	30	20			
09/22/14	14:50	1340.89	20	0			
12/27/14	14:30	1338.88	100	100			
12/27/15	22:49	1338.92	100	0			

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