

STATE OF MINNESOTA

BEFORE THE MINNESOTA PUBLIC UTILITIES COMMISSION

**Beverly Jones Heydinger
David C. Boyd
Nancy Lange
Dan Lipschultz
Betsy Wergin**

**Chair
Commissioner
Commissioner
Commissioner
Commissioner**

**IN THE MATTER OF INTERSTATE
POWER AND LIGHT COMPANY'S
ELECTRIC ANNUAL ADJUSTMENT
CHARGE**

DOCKET NO. E999/AA-13-599

**INTERSTATE POWER AND LIGHT COMPANY'S
REPLY COMMENTS**

COMES NOW, Interstate Power and Light Company (IPL or Company), and respectfully submits to the Minnesota Public Utilities Commission (Commission) its Reply Comments in response to the Review of the 2012-2013 Annual Automatic Adjustment Reports for rate-regulated electric utilities in Minnesota (FY113 AAA), filed on September 16, 2014, by the Minnesota Department of Commerce, Division of Energy Resources (Department), in the above-referenced docket.

I. INTRODUCTION

The Department filed Comments on September 16, 2014, recommending the Commission request that IPL provide the following in Reply Comments:

For Section III, Compliances, the Department recommends that the Commission accept the compliance filings A to N, and requests information in Reply Comments from IPL for compliance filing N regarding quarterly filings of accounting costs for Auction Revenue Rights (ARR). Specifically, the Department requests that IPL provide clarification regarding whether the

approximately \$1.9 million in low-load ARR proceeds, which were not properly credited back through the Fuel Cost Adjustment (FCA) as noted in IPL's erratum filing of the quarterly report for the 2012/2013 planning year, are related to the costs described in IPL's response to Department Information Request No. 4 in which the Company notes the accidental omission of revenues from quarterly reports for the period between June 2012 and May 2013, or if they are separate issues. Further, the Department requests that IPL show that these refund amounts have been correctly calculated and refunded to customers.

The Department also requests that all Minnesota utilities provide Reply Comments to identify solutions to issues regarding forced outages.

IPL provides the following Reply Comments in response to the Review of the 2012-2013 Annual Automatic Adjustment Reports for rate-regulated electric utilities in Minnesota (FY13 AAA), filed by the Department on September 16, 2014.

II. IPL REPLY COMMENTS

A. Quarterly Filings of Accounting Costs for Auction Revenue Rights

The approximately \$1.9 million in low-load ARR proceeds, which were not properly credited back through the FCA as noted in IPL's erratum filing of the quarterly report for the 2012/2013 planning year, are the same costs as described in IPL's response to Department Information Request No. 4 in which the Company notes the accidental omission of revenues from quarterly reports for the period between June 2012 and May 2013. Approximately \$3.5 million of ARR revenue, which was inadvertently omitted from the quarterly reports for the 2012/2013 planning year, did flow to Minnesota customers through the monthly

MISO statements. IPL had a revenue sharing mechanism in Iowa for which it charged back approximately \$1.9 million against the approximately \$5.4 million of total ARR revenues in the FCA. IPL inadvertently did not credit back the approximately \$1.9 million in revenue sharing charges in the monthly FCA factors as required by the Commission order in Docket No. E-001/M-09-455, which states that all ARR revenues are to flow back to Minnesota customers. Attachments A through C show the revenue verification and supporting documents of how the approximately \$1.9 million of ARR revenues was calculated and refunded to Minnesota customers in the September 2014.

B. Identify Solutions to Issues Regarding Forced Outages

1) How Minnesota and other utilities can share best practices across utilities in a timely manner (e.g., videos as Xcel describes, electronic bulletins of best practices) to ensure that as many generation plants as possible maximize the days of operation and minimize the number of forced outages.

To effectively share best practices with the intention of minimizing forced outages requires the sharing and analysis of detailed information concerning the incident, such as operational parameters, original equipment manufacturer (OEM) details, maintenance logs, and performance data preceding an event. It is difficult to convey sufficient information in a printed report that would aid other utilities in reducing forced outages. With that, sharing of lessons learned with forced outages is usually most efficient and best conducted in open dialogues such as user groups. For example, the Electric Power Research Institute (EPRI) has several programs that provide forums for sharing best practices. Many equipment manufacturers host user groups and distribute information regarding best practices and guidance for improving the reliability of their designs. There

are also independently organized user groups that provide forums for sharing issues and best practices for improving reliability and effectiveness of specific types of equipment or systems. Examples of independent user groups include GE7FA Users Group (<http://ge7fa.users-groups.com>) and the Dry Scrubber User's group (www.dryscrubberusers.org).

IPL is currently an active member of several user groups that focus on improving the reliability of key plant equipment, such as turbines, generators and boilers. The EPRI programs that IPL belongs to include the following:

- Boiler Life and Availability Improvement Program – focuses on analysis and prevention of boiler tube leaks; includes the Boiler Reliability Interest Group, a regularly scheduled forum to share best practices concerning boiler reliability.
- Steam Turbines-Generators and Auxiliary Systems program – provides an information exchange on operation and maintenance issues for steam turbines, generators and associated equipment; includes the Turbine – Generator User Group, a regularly scheduled forum to share best practices concerning turbine and generator reliability and maintenance.
- Generation Maintenance Applications Center – focuses on predictive and preventive maintenance strategies for all plant equipment.
- Combined Cycle Turbo-machinery – provides information on operations and maintenance improvements of combustion and steam turbines used in combined cycle operation.

- Combined Cycle Heat Recovery Steam Generators (HRSG) and Balance of Plant – provides forum and information on operations and maintenance improvements for HRSG's and balance of plant equipment associated with combined cycle plants.
- Boiler and Turbine Steam and Cycle Chemistry – provides a forum and information related to maintaining water chemistry parameters crucial to preventing degradation of boiler and turbine components.

IPL is also a member of the GE7FA users group referenced above and the Powder River Basin Coal (PRB) Users Group. IPL will also consider membership the dry scrubber user's group after the Ottumwa Generating Station commissions its scrubber in late 2014.

IPL also has limited access to the Fossil Operations and Maintenance Information Service (FOMIS), sponsored by Sciencetech Corp., but is not a subscribing member. IPL has also accessed the Combustion Turbine Operations Technical Forum as a non-member, but does not have a full membership.

The above mentioned organizations as well as additional organizations and resources IPL uses are included in Attachment D summarizing memberships by IPL and other Minnesota utilities.

2) Utilities should discuss any electronic databases that have been developed to share best practices in plant maintenance and repair.

IPL does not know of any electronic databases available for the purpose of sharing best practices in plant maintenance and repair among utilities. Many of the programs listed in the response to the preceding question maintain discussion forums with searchable archives on various best practices and issues

related to reliability. IPL's computerized maintenance management system contains information about maintenance practices and activities that can be accessed by other IPL plants, but the information is not in a format that would be appropriate for sharing outside of IPL or its affiliates.

3) Utilities should discuss their efforts to obtain Business Interruption Insurance due to any factor that causes an unplanned outage or longer than expected planned outages.

IPL annually reviews the state of the market for Business Interruption Insurance with the Company's insurance broker. The market does not support economical rates for the coverage based on IPL's exposures.

4) If utilities have not obtained Business Interruption Insurance, they should provide a full explanation as to why not.

It is more economical for IPL to utilize the other resources within the Company's fleet, or purchase power in the market, than to pay the premiums that the market dictates. IPL understands that market conditions have also led other utilities to the same conclusion.

5) Utilities should discuss any revisions of language in contracts with contractors working on plants to increase the contractor's accountability in minimizing the length of the outage and ensuring that the plant runs smoothly.

IPL seeks strong project controls within its contracts, including seeking to place the contractor in a position to meet or exceed outage schedules. IPL seeks these terms to place risk on the contractor for schedule and scope compliance. IPL seeks such terms so as to limit the Company's and, in turn, its customers' risk for extended outages. These rigorous project control provisions accompanied by liquidated damage provisions place the contractor in a position to meet or exceed their schedule and scope obligation. While there is a potential

cost increase for this, it mitigates the risk for the owner in lieu of consequential damages for schedule and scope adherence.

6) Utilities should discuss any efforts to recoup replacement power costs from contractors that worked on plants that subsequently had outages or any other source of reimbursement for replacement power costs.

It is IPL's experience that construction contractors do not agree to include replacement power costs as a remedy for a project of any size. However, for large capital construction contracts, IPL transfers the risk of achieving a schedule milestone to a contractor. If the contractor fails to achieve that milestone then a liquidated damage is assessed against the contractor for each day of delay up to a cap which is often a percentage of the overall contract price.

7) If utilities did not pursue any reimbursement for replacement power costs, utilities should provide a full explanation as to why not.

Please see IPL's response to Question No. 6 above.

8) Utilities should provide the dates and duration of their scheduled and forced outages by plant since 2001.

The dates and duration of scheduled and forced outages for operating IPL coal units is given in the Attachment E entitled IPL Outages 2001 - 2013.

9) Utilities should discuss the general factors utilities consider in scheduling planned outages.

IPL considers multiple factors when scheduling planned outages, such as: the scope of work, the total duration of outage time required to complete the work, material lead times, vendor availability, and regulatory compliance deadlines. Once this type of information is known, potential windows for the outage(s) are determined based upon publicly known transmission work, timing of other plant outages, projected market prices, and plant preferences.

III. CONCLUSION

WHEREFORE, IPL respectfully requests the Commission give IPL's reply comments due consideration.

DATED this 10th day of November, 2014.

Respectfully submitted,

Interstate Power and Light Company

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Interstate Power and Light Company

| <u>Date</u> | <u>Total ARR Revenue *</u> | <u>IA Revenue Sharing Deducted from FCA</u> | <u>ARR Revenue in the MN FCA</u> |
|--------------|--------------------------------|---|--------------------------------------|
| Jun-12 | \$ 317,464.16 | \$ 113,398.20 | \$ 204,065.96 |
| Jul-12 | \$ 317,464.16 | \$ 113,398.20 | \$ 204,065.96 |
| Aug-12 | \$ 317,464.16 | \$ 113,398.20 | \$ 204,065.96 |
| Sep-12 | \$ 108,088.18 | \$ 38,609.10 | \$ 69,479.08 |
| Oct-12 | \$ 108,088.18 | \$ 38,609.10 | \$ 69,479.08 |
| Nov-12 | \$ 108,088.18 | \$ 38,609.10 | \$ 69,479.08 |
| Dec-12 | \$ 640,526.73 | \$ 228,796.15 | \$ 411,730.58 |
| Jan-13 | \$ 640,526.73 | \$ 228,796.15 | \$ 411,730.58 |
| Feb-13 | \$ 640,526.73 | \$ 228,796.15 | \$ 411,730.58 |
| Mar-13 | \$ 718,225.23 | \$ 256,521.14 | \$ 461,704.09 |
| Apr-13 | \$ 718,225.23 | \$ 256,521.14 | \$ 461,704.09 |
| May-13 | \$ 718,225.23 | \$ 256,521.14 | \$ 461,704.09 |
| Total | \$ 5,352,912.90 | \$ 1,911,973.77 | \$ 3,440,939.13 |

* Amount Inadvertantly omitted from original ARR quarterly reporting.

ARR Refund Verification

| | | |
|--|--------------------------|--------------|
| FTR Transaction Amount from MISO in July 2014 | \$ (1,584,349.54) | Attachment B |
| Credit for ARR Revenue Sharing in July 2014 | \$ (304,468.82) | |
| Credit for ARR Revenue Sharing in June 2012 - May 2013 | <u>\$ (1,911,973.77)</u> | |
| FTR Transaction Amount on July 2014 MISO Charges | | |
| Exhibit B page 3 of 6 in Sept. 2014 FCA | \$ (3,800,792.13) | Attachment C |

| MISO 2 Charge Type | July 2014 | | Amounts Recorded In The Current Month Relating to These Months | | | | | Total MISO 2 Purchases |
|--|-----------------|--------------|--|----------------|---------------|--------------|-----------------|------------------------|
| | Company Account | FERC Account | Mar-14 | Apr-14 | May-14 | Jun-14 | Jul-14 | |
| 1 Day Ahead Asset Energy | | | - | - | 9,337,910 | - | 172,455,400 | 181,793,310 |
| 2 Day Ahead Financial Bilateral Transaction Congestion | | | - | - | - | - | - | - |
| 3 Day Ahead Financial Bilateral Transaction | | | - | - | - | - | - | - |
| 5 Day Ahead Non Asset Energy | | | - | - | - | - | - | - |
| 18 Real Time Asset Energy | | | - | - | - | (1,465,080) | 48,275,550 | 46,810,470 |
| 20 Real Time Financial Bilateral Transaction Congestion | | | - | - | - | - | - | - |
| 21 Real Time Financial Bilateral Transaction Loss | | | - | - | - | - | - | - |
| 27 Real Time Non Asset Energy | | | - | - | - | - | - | - |
| TOTAL KHW | | | - | - | 9,337,910 | (1,465,080) | 220,730,950 | 228,603,780 |
| 1 Day Ahead Asset Energy | | | (361.16) | (41,480.62) | 333,726.38 | 0.03 | 7,854,671.70 | \$ 8,146,556.33 |
| 2 Day Ahead Financial Bilateral Transaction Congestion | | | - | - | - | 0.03 | 2,160,473.20 | \$ 2,160,473.23 |
| 3 Day Ahead Financial Bilateral Transaction | | | - | - | - | 0.02 | 700,344.58 | \$ 700,344.60 |
| 4 Day Ahead Market Administration | 616018 | 575 | - | - | - | 0.06 | 178,432.81 | \$ 178,432.87 |
| 5 Day Ahead Non Asset Energy | | | - | - | - | 105,150.20 | (334,099.43) | \$ (228,949.23) |
| 6 Day Ahead Congestion Rebate on Carve Out Grandfathered Agreements | 606001 | 555 | - | - | - | - | (1,667,850.47) | \$ (1,667,850.47) |
| 7 Day Ahead Losses Rebate on Carve Out Grandfathered Agreements | 606001 | 555 | - | - | - | - | (550,863.82) | \$ (550,863.82) |
| 8 Day Ahead Congestion Rebate on Option B Grandfathered Agreements | | | - | - | - | - | - | \$ - |
| 9 Day Ahead Losses Rebate on Option B Grandfathered Agreements | | | - | - | - | - | - | \$ - |
| 10 Day Ahead Revenue Sufficiency Gaurantee Distribution | 606001 | 555 | (16,961.91) | (19,877.82) | (71,003.89) | (25,129.33) | 36,912.18 | \$ (96,060.77) |
| 11 Day Ahead Revenue Sufficiency Gaurantee Make Whole Payment | 606001 | 555 | 18,192.50 | 20,413.86 | 76,657.51 | (0.03) | (23,374.23) | \$ 91,889.61 |
| 12 Day Ahead Virtual Energy Amount | 606001 | 555 | - | - | - | - | - | \$ - |
| 13 Financial Transmission Rights Hourly Allocation | 606001 | 555 | - | - | (732.90) | (83,128.52) | (3,978,322.48) | \$ (4,062,183.90) |
| 14B Financial Transmission Rights Market Administration | 616018 | 575 | - | - | - | - | 9,314.96 | \$ 9,314.96 |
| 15 Financial Transmission Rights Monthly Allocation | 606001 | 555 | - | - | (194.81) | 68,925.11 | (107,253.55) | \$ (38,523.25) |
| 16 Financial Transmission Rights Transaction | 606001 | 555 | - | - | (533.18) | 2,144.82 | (1,585,961.18) | \$ (1,584,349.54) |
| 17 Financial Transmission Rights Yearly Allocation | 606001 | 555 | - | - | - | - | - | \$ - |
| 18 Real Time Asset Energy | | | - | - | - | (102,719.86) | 686,599.21 | \$ 583,879.35 |
| 19 Real Time Distribution of Losses | 606001 | 555 | (17.13) | 700.10 | (10,874.29) | 22,791.05 | (536,745.71) | \$ (524,145.98) |
| 20 Real Time Financial Bilateral Transaction Congestion | | | - | - | - | - | - | \$ - |
| 21 Real Time Financial Bilateral Transaction Loss | | | - | - | - | - | - | \$ - |
| 22 Real Time Congestion Rebate On Carve Out Grandfathered Agreements | 606001 | 555 | - | - | - | - | - | \$ - |
| 23 Real Time Losses Rebate On Carve Out Grandfathered Agreements | 606001 | 555 | - | - | - | - | - | \$ - |
| 24 Real Time Market Administration | 616018 | 575 | 3.51 | (14.50) | 553.60 | (24.98) | 16,600.44 | \$ 17,118.07 |
| 25 Real Time Miscellaneous | 606001 | 555 | (0.03) | (9,655.15) | (1,048.37) | - | - | \$ (10,703.55) |
| 26 Real Time Net Inadvertant Distribution | 606001 | 555 | 0.58 | 1.48 | (5,050.64) | 47,882.44 | (25,818.21) | \$ 17,015.65 |
| 27 Real Time Non Asset Energy | | | - | - | - | - | - | \$ - |
| 28 Real Time Revenue Neutrality | 606001 | 555 | 1,186.66 | 670.92 | 24,053.16 | (66,840.27) | 224,380.89 | \$ 183,451.36 |
| 29 Real Time Revenue Sufficiency Gaurantee First Pass Distribution | 606001 | 555 | 10.18 | (97.43) | 2,167.72 | 9,876.02 | 25,933.90 | \$ 37,890.39 |
| 30 Real Time Revenue Sufficiency Gaurantee Make Whole Payment | 606001 | 555 | - | - | - | (4,878.84) | (11,198.93) | \$ (16,077.77) |
| 31 Real Time Uninstructed Deviation | 606001 | 555 | - | - | - | - | - | \$ - |
| 32 Real Time Vitual Energy Amount | 606001 | 555 | - | - | - | - | - | \$ - |
| 88 MISO Excess Congestion Fund | 606001 | 555 | - | - | - | - | - | \$ - |
| 98 RSG Resettlement Alloc | 606001 | 555 | - | - | - | - | - | \$ - |
| 99 Price Volatility Make Whole Pmt | 606001 | 555 | - | - | 35.47 | 40,527.63 | (302,869.32) | \$ (262,306.22) |
| TOTAL DOLLARS | | | \$ 2,053.20 | \$ (49,339.16) | \$ 347,755.76 | \$ 14,575.58 | \$ 2,769,306.54 | \$ 3,084,351.92 |

Interstate Power and Light Company
Miso Charges - July 2014

| Posting Account Description | RETAIL | | | | NON ASSET BASED WHOLESALE | | | | ASSET BASED WHOLESALE | | | | TOTALS |
|--|--------------------|------------------------|---------------------|--------------------------|---------------------------|-------------|-----|---------|-----------------------|---------------------|--------------------|-----------------------|----------------------|
| | kWh | Cost | kWh | Revenue | kWh | Cost | kWh | Revenue | kWh | Cost | kWh | Revenue | |
| Day Ahead & Real Time Energy | | | | | | | | | | | | | |
| 1 Day Ahead Asset Energy | 176,205,372 | \$ 6,117,820.43 | (12,924,994) | \$ 213,278.20 | \$ - | \$ - | | | 5,587,938 | \$ 194,012.25 | (409,886) | \$ 6,763.62 | \$ 6,531,874.50 |
| 5 Day Ahead Non-Asset Energy | - | \$ (221,911.82) | | \$ (19,365.76) | \$ - | \$ - | | | - | \$ (7,037.41) | - | \$ (614.14) | \$ (248,929.13) |
| 18 Real Time Asset Energy | 45,371,616 | \$ (126,996.88) | (62,840,589) | \$ (101,364.80) | \$ - | \$ - | | | 1,438,854 | \$ (4,027.41) | (1,992,841) | \$ (3,214.55) | \$ (235,603.64) |
| Real Time Excessive Energy Amount | - | \$ (1,088.80) | - | \$ 3,084.27 | \$ - | \$ - | | | - | \$ (34.53) | - | \$ 97.81 | \$ 2,058.75 |
| Real Time Non-Excessive Energy Amount | - | \$ 869,225.58 | - | \$ (1,145,576.46) | \$ - | \$ - | | | - | \$ 27,565.44 | - | \$ (36,329.26) | \$ (285,114.70) |
| 27 Real Time Non-Asset Energy | - | \$ - | - | \$ - | \$ - | \$ - | | | - | \$ - | - | \$ - | \$ - |
| Subtotal | 221,576,988 | \$ 6,637,046.51 | (75,765,583) | \$ (1,049,944.55) | \$ - | \$ - | | | 7,026,792 | \$ 210,478.34 | (2,402,727) | \$ (33,296.52) | \$ 5,764,285.78 |
| Day Ahead & Real Time Energy Loss | | | | | | | | | | | | | |
| 1 Day Ahead Loss * | | \$ 285,843.39 | | \$ - | \$ - | \$ - | | | \$ 9,064.85 | | \$ - | | \$ 294,908.24 |
| 3 Day Ahead Financial Bilateral Transaction Loss | | \$ 678,817.50 | | \$ - | \$ - | \$ - | | | \$ 21,527.10 | | \$ - | | \$ 700,344.60 |
| 18 Real Time Loss * | | \$ 107,242.74 | | \$ - | \$ - | \$ - | | | \$ 3,400.95 | | \$ - | | \$ 110,643.69 |
| 19 Real Time Distribution Transaction Loss | | \$ (508,034.85) | | \$ - | \$ - | \$ - | | | \$ (16,111.13) | | \$ - | | \$ (524,145.98) |
| 21 Real Time Financial Bilateral Loss | | \$ - | | \$ - | \$ - | \$ - | | | \$ - | | \$ - | | \$ - |
| Subtotal | | \$ 563,868.78 | | \$ - | \$ - | \$ - | | | \$ 17,881.77 | | \$ - | | \$ 581,750.55 |
| Virtual Energy | | | | | | | | | | | | | |
| 12 Day Ahead Virtual Energy Amount | | \$ - | | \$ - | \$ - | \$ - | | | \$ - | | \$ - | | \$ - |
| 32 Real Time Virtual Energy Amount | | \$ - | | \$ - | \$ - | \$ - | | | \$ - | | \$ - | | \$ - |
| Subtotal | | \$ - | | \$ - | \$ - | \$ - | | | \$ - | | \$ - | | \$ - |
| Schedules 16 & 17 | | | | | | | | | | | | | |
| 4 Day Ahead Market Administration | | \$ 172,948.22 | | \$ - | \$ - | \$ - | | | \$ 5,484.65 | | \$ - | | \$ 178,432.87 |
| 24 Real Time Market Administration | | \$ 16,591.90 | | \$ - | \$ - | \$ - | | | \$ 526.17 | | \$ - | | \$ 17,118.07 |
| 14 Financial Transmission Rights Market Administration | | \$ 9,028.84 | | \$ - | \$ - | \$ - | | | \$ 286.32 | | \$ - | | \$ 9,314.96 |
| Subtotal | | \$ 198,568.76 | | \$ - | \$ - | \$ - | | | \$ 6,297.14 | | \$ - | | \$ 204,865.90 |
| Congestion and FTRs | | | | | | | | | | | | | |
| 1 Day Ahead Congestion * | | \$ 1,492,484.78 | | \$ - | \$ - | \$ - | | | \$ 47,330.63 | | \$ - | | \$ 1,539,815.41 |
| 18 Real Time Congestion * | | \$ 585,686.29 | | \$ - | \$ - | \$ - | | | \$ 18,573.66 | | \$ - | | \$ 604,259.95 |
| 2 Day Ahead Financial Bilateral Transaction Congestion | | \$ 2,094,064.90 | | \$ - | \$ - | \$ - | | | \$ 66,408.33 | | \$ - | | \$ 2,160,473.23 |
| 20 Real Time Financial Bilateral Congestion | | \$ - | | \$ - | \$ - | \$ - | | | \$ - | | \$ - | | \$ - |
| 13 Financial Transmission Rights Hourly Allocation | | \$ (3,937,321.05) | | \$ - | \$ - | \$ - | | | \$ (124,862.85) | | \$ - | | \$ (4,062,183.90) |
| 15 Financial Transmission Rights Monthly Allocation | | \$ (37,339.13) | | \$ - | \$ - | \$ - | | | \$ (1,184.12) | | \$ - | | \$ (38,523.25) |
| 17 Financial Transmission Rights Yearly Allocation | | \$ - | | \$ - | \$ - | \$ - | | | \$ - | | \$ - | | \$ - |
| 16 Financial Transmission Rights Transaction | | \$ (3,683,963.88) | | \$ - | \$ - | \$ - | | | \$ (116,828.23) | | \$ - | | \$ (3,800,792.11) |
| MISO Excess Congestion Fund | | \$ - | | \$ - | \$ - | \$ - | | | \$ - | | \$ - | | \$ - |
| Subtotal | | \$ (3,486,388.09) | | \$ - | \$ - | \$ - | | | \$ (110,562.58) | | \$ - | | \$ (3,596,950.67) |
| RSG & Make Whole Payments | | | | | | | | | | | | | |
| 10 Day Ahead Revenue Sufficiency Guarantee Distribution | | \$ (93,108.07) | | \$ - | \$ - | \$ - | | | \$ (2,952.70) | | \$ - | | \$ (96,060.77) |
| 11 Day Ahead Revenue Sufficiency Guarantee Make Whole Payment | | \$ 89,065.12 | | \$ - | \$ - | \$ - | | | \$ 2,824.49 | | \$ - | | \$ 91,889.61 |
| 29 Real Time Revenue Sufficiency Guarantee First Pass Distribution | | \$ 36,725.72 | | \$ - | \$ - | \$ - | | | \$ 1,164.67 | | \$ - | | \$ 37,890.39 |
| 30 Real Time Revenue Sufficiency Guarantee Make Whole Payment | | \$ (15,583.57) | | \$ - | \$ - | \$ - | | | \$ (494.20) | | \$ - | | \$ (16,077.77) |
| RSG Resettlement Allocation | | \$ - | | \$ - | \$ - | \$ - | | | \$ - | | \$ - | | \$ - |
| Price Volatility Make Whole Payment | | \$ (254,243.49) | | \$ - | \$ - | \$ - | | | \$ (8,062.73) | | \$ - | | \$ (262,306.22) |
| Subtotal | | \$ (237,144.29) | | \$ - | \$ - | \$ - | | | \$ (7,520.47) | | \$ - | | \$ (244,664.76) |
| RNU & Misc. Charges | | | | | | | | | | | | | |
| 25 Real Time Miscellaneous | | \$ (10,374.65) | | \$ - | \$ - | \$ - | | | \$ (329.00) | | \$ - | | \$ (10,703.55) |
| 26 Real Time Net Inadvertent Distribution | | \$ 16,492.63 | | \$ - | \$ - | \$ - | | | \$ 523.02 | | \$ - | | \$ 17,015.65 |
| 28 Real Time Revenue Neutrality | | \$ 177,812.46 | | \$ - | \$ - | \$ - | | | \$ 5,638.90 | | \$ - | | \$ 183,451.36 |
| 31 Real Time Uninstructed Deviation | | \$ - | | \$ - | \$ - | \$ - | | | \$ - | | \$ - | | \$ - |
| Subtotal | | \$ 183,930.54 | | \$ - | \$ - | \$ - | | | \$ 5,832.92 | | \$ - | | \$ 189,763.46 |
| Grandfathered Charge Types | | | | | | | | | | | | | |
| 6 Day Ahead Congestion Rebate on Carve Out Grandfathered Agreements | | \$ (1,616,584.31) | | \$ - | \$ - | \$ - | | | \$ (51,266.16) | | \$ - | | \$ (1,667,850.47) |
| 7 Day Ahead Losses Rebate on Carve Out Grandfathered Agreements | | \$ (533,931.44) | | \$ - | \$ - | \$ - | | | \$ (16,932.38) | | \$ - | | \$ (550,863.82) |
| 8 Day Ahead Congestion Rebate on Option B Grandfathered Agreements | | \$ - | | \$ - | \$ - | \$ - | | | \$ - | | \$ - | | \$ - |
| 9 Day Ahead Losses Rebate on Option B Grandfathered Agreements | | \$ - | | \$ - | \$ - | \$ - | | | \$ - | | \$ - | | \$ - |
| 22 Real Time Congestion Rebate on Carve Out Grandfathered Agreements | | \$ - | | \$ - | \$ - | \$ - | | | \$ - | | \$ - | | \$ - |
| 23 Real Time Losses Rebate on Carve Out Grandfathered Agreements | | \$ - | | \$ - | \$ - | \$ - | | | \$ - | | \$ - | | \$ - |
| Subtotal | | \$ (2,150,515.75) | | \$ - | \$ - | \$ - | | | \$ (68,198.54) | | \$ - | | \$ (2,218,714.29) |
| ASM Charges | | | | | | | | | | | | | |
| Day Ahead Regulation Amount | | \$ - | | \$ (118,082.38) | \$ - | \$ - | | | \$ - | | \$ (3,744.70) | | \$ (121,827.08) |
| Day Ahead Spinning Reserve Amount | | \$ - | | \$ (23,992.39) | \$ - | \$ - | | | \$ - | | \$ (760.88) | | \$ (24,753.25) |
| Day Ahead Supplemental Reserve Amount | | \$ - | | \$ (46,343.78) | \$ - | \$ - | | | \$ - | | \$ (1,469.68) | | \$ (47,813.46) |
| Real Time Regulation Amount | | \$ - | | \$ 34,739.60 | \$ - | \$ - | | | \$ - | | \$ 1,101.68 | | \$ 35,841.28 |
| Regulation Cost Distribution Amount | | \$ 41,960.16 | | \$ - | \$ - | \$ - | | | \$ 1,330.67 | | \$ - | | \$ 43,290.83 |
| Real Time Spinning Reserve Amount | | \$ 35,125.13 | | \$ (718.50) | \$ - | \$ - | | | \$ 1,113.91 | | \$ (22.79) | | \$ 35,497.75 |
| Spinning Reserve Cost Distribution Amount | | \$ - | | \$ - | \$ - | \$ - | | | \$ - | | \$ - | | \$ - |
| Real Time Supplemental Reserve Amount | | \$ 19,138.02 | | \$ 13,204.07 | \$ - | \$ - | | | \$ 606.92 | | \$ 418.74 | | \$ 33,367.75 |
| Supplemental Reserve Cost Distribution Amount | | \$ - | | \$ - | \$ - | \$ - | | | \$ - | | \$ - | | \$ - |
| Contingency Reserve Deployment Failure Amount | | \$ 1,341.78 | | \$ - | \$ - | \$ - | | | \$ 42.55 | | \$ - | | \$ 1,384.33 |
| Real Time Excessive Deficient Energy Deployment Amount | | \$ 68,218.87 | | \$ - | \$ - | \$ - | | | \$ 2,163.40 | | \$ - | | \$ 70,382.27 |
| Net Regulation Adjustment Amount | | \$ 3,277.59 | | \$ - | \$ - | \$ - | | | \$ 103.94 | | \$ - | | \$ 3,381.53 |
| Subtotal | | \$ 169,061.55 | | \$ (141,193.38) | \$ - | \$ - | | | \$ 5,361.39 | | \$ (4,477.61) | | \$ 28,751.95 |
| Total MISO Charges | 221,576,988 | \$ 1,878,430.00 | (75,765,583) | \$ (1,191,137.93) | \$ - | \$ - | | | 7,026,792 | \$ 59,569.98 | (2,402,727) | \$ (37,774.13) | \$ 709,087.92 |

Note: * IPL is not able to allocate this MISO charge between cost and revenue.

Outage Lessons Learned Utility Comparison

| | Xcel Energy | MP | OTP | IPL |
|---|--------------------------------|----|-----|--------------------------------|
| CONFERENCES | | | | |
| B&W Cyclone Users Group | X | | X | |
| Bentley-Nevada Vibration Monitoring training | X | | X | X |
| CEMs User Conference (EPRI) | X | | X | |
| Electric Power Conference | X | | | X |
| Energy Generation Conference, Bismarck, ND | X | | X | |
| Energy, Utility & Environment Conference (EUEC) | | X | | X |
| ESC Users Conference (CEMS Software) | X | | X | |
| GADS Data Reporting Workshop | X | X | X | |
| Honeywell Control System Users Group | | | X | |
| HydroVision | | X | | |
| Hydrovision Internaional | | X | | |
| InterTek (AWARE) Users Group | | | | X |
| Lignite Energy Council | | | X | |
| National Coal Trnspartation Association (NTCA) | | | X | X |
| Ovation Control System Users | X | | X | X |
| Power Gen Conference (Orlando, FL) | X | | X | X |
| Power Plant Managers Summit | X | | X | |
| Siemens Steam Turbine Users Group | X | | X | |
| Tripartite Meetings (Union Labor for outages) | | | X | |
| Turbine Generator Inspection Training | | | X | X |
| Xcel Energy Boiler Conference | X | | | X |
| TRADE ORGANIZATIONS | | | | |
| American Wind Energy Association (AWEA) | | X | X | |
| Assoc. of Edison Illuminating Companies (AEIC) | | X | | |
| American Coal Council | | | | X |
| Boiler and Turbine Steam and Cycle Chemistry (EPRI) | | | | X |
| Boiler Life and Availability Improvement Program (EPRI) | | | | X |
| Combined Cycle HRSG and Balance of Plant (EPRI) | | | | X |
| Combined Cycle Turbomachinery (EPRI) | | | | X |
| Combustion Turbine Operations Technical Forum | X | | | X not a member - has access |
| Contractor Safety Summit | X | | | |
| Dry Scrubber Users Association (DSUA) | X | X | | X not a member - has access |
| Edison Electric Institute (EEI) | | X | X | X |
| Electric Power Research Institute (EPRI) | | X | | X |
| Fossil Operations and Maintenance Info Service (FOMIS) | X not a member - has access | X | | X not a member - has access |
| GE7FA User's Group | X | | | X |
| Generation Maintenance Applications Center (EPRI) | | | | X |
| Heat Recovery Steam Generator User Group (HRSG) | X | | | |
| Maximo Utility Working Group (MUWG) | | X | | periodically |
| Midwest Hydro Users Group (MHUG) | | X | | |
| Mitsubishi Combustion Turbine Group | X | | | |

Outage Lessons Learned Utility Comparison

| | Xcel Energy | MP | OTP | IPL |
|--|-------------|----|-----|-----|
| MN Resource Recovery Assoc (MRRRA, Refuse Derived Fuel Plants) | X | | | |
| MN Safety Council | X | | | |
| National Hydropower Association (NHA) | | X | | |
| National Safety Council | X | | | |
| Power-Gen International | | X | | |
| Power Plant Director & Manager Group (EPRI) | X | | | |
| Predictive Maintenance | X | | | |
| PRB Coal Users' Group (Power River Basin) | X | X | | X |
| Selective Catalytic Reduction (SCR) User Group | X | | | |
| Steam Turbines-Generators and Auxiliary Systems (EPRI) | | | | X |
| Utility Variable Integration Group (UVIG) | | X | | |
| Western Coal Traffic League (WCTL) | | X | | |
| Western Turbine User's Group | | | X | |
| Mid-western Turbine User's Group | | | X | |
| | | | | |
| CONSULTANTS / VENDORS / CONTRACTORS | | | | |
| AAB Group | X | X | | |
| Acuren | X | X | | |
| Alstom | X | X | X | X |
| Babcock Power | X | X | X | X |
| BARR Engineering | | X | X | |
| BHA Claror | | X | X | |
| Black & Veatch | X | X | X | |
| Burns & McDonnell | X | X | X | X |
| Cylde Bergemann Power Group | X | X | X | |
| FB Global | | X | | |
| GE | X | X | | |
| Hamon Corporation | | X | X | |
| Honeywell | X | X | X | |
| Hunt Electric | X | X | | |
| Invensys-Foxboro | X | X | | |
| Lakehead Constructors | | X | | |
| Leidos Engineering | | X | | |
| Mitsubishi Hitachi Power Systems | X | X | | |
| Moorhead Machinery & Boiler Co. | X | X | X | |
| Reliability Solutions | | X | | |
| Sheppard T. Power Associates | | X | | |
| Siemens Power Generation | X | X | X | X |
| Sargent & Lundy | | | X | X |
| The Boldt Company | X | X | X | |
| The Jamar Company | X | X | X | X |
| Thielsch Engineering | X | X | X | X |
| United Dynamics Corporation (UDC) | | | | X |
| Wisconsin School of Business (Project Management Process) | | | | X |
| | | | | |
| PUBLICATIONS | | | | |
| Chemical Engineering | | | | X |

Outage Lessons Learned Utility Comparison

| | <i>Xcel Energy</i> | <i>MP</i> | <i>OTP</i> | <i>IPL</i> |
|-------------------------|--------------------|-----------|------------|------------|
| Energy & Mining | | X | | |
| Energy Technology | | X | | |
| OEM Technical Bulletins | X | | X | |
| Power Engineering | X | X | X | X |
| Power Magazine | X | X | X | X |
| Underground Focus | | X | | |
| Wind Systems | | X | | |
| Windpower Monthly | | X | | |



Event Summary Report

IPL Baseload Outage Report; Outage Information for Forced and Planned Outages of Duration Greater than 24 Hrs.

Report Period: 2001 - 6/2013

PO=Planned Outage

FO=Forced Outage

| Burlington - Burlington - NERC 1 | | | | | | |
|----------------------------------|------------------|------------------|---|----------|--|--|
| Type | Start | End | Description | Eq. Hrs. | | |
| PO | 2/16/2001 2:56 | 3/1/2001 0:00 | PLANNED OUTAGE | 309.07 | | |
| PO | 3/1/2001 0:00 | 4/1/2001 0:00 | PLANNED OUTAGE | 744.00 | | |
| PO | 4/1/2001 0:00 | 4/12/2001 14:35 | PLANNED OUTAGE | 277.58 | | |
| PO | 4/25/2001 19:20 | 5/1/2001 0:00 | CONTROL VALVES AND HYDROGEN LEAK | 124.67 | | |
| PO | 5/1/2001 0:00 | 5/6/2001 8:30 | REPAIR AND MODIFICATION TO CONTROLS | 128.50 | | |
| FO | 5/6/2001 8:30 | 5/9/2001 16:32 | FURNACE WALL TUBE LEAK | 80.03 | | |
| PO | 5/29/2001 7:33 | 5/30/2001 14:10 | SYSTEM SOFTWARE REPAIR AND MODIFICATION | 30.62 | | |
| PO | 6/18/2001 23:37 | 6/21/2001 0:22 | REPAIRS TO BOILER CONTROL SYSTEM | 48.75 | | |
| FO | 8/11/2001 3:00 | 8/12/2001 4:00 | FURNACE WALL TUBE LEAK | 25.00 | | |
| PO | 11/27/2001 18:00 | 12/1/2001 0:00 | PLANNED OUTAGE | 78.00 | | |
| PO | 12/1/2001 0:00 | 12/5/2001 17:25 | PLANNED OUTAGE | 113.42 | | |
| FO | 12/8/2001 17:18 | 12/11/2001 19:20 | FALSE INDICATION ON STATOR TEMPS | 74.03 | | |
| PO | 2/2/2002 1:43 | 3/1/2002 0:00 | PLANNED OUTAGE | 646.28 | | |
| PO | 3/1/2002 0:00 | 3/3/2002 12:59 | PLANNED OUTAGE AIR HEAT REPLACED | 60.98 | | |
| FO | 4/1/2002 5:15 | 4/3/2002 10:30 | PLATEN SUPERHEAT LEAK | 53.25 | | |
| PO | 4/26/2002 17:15 | 4/28/2002 11:00 | HP VENT VALVE WELD FAILURE | 41.75 | | |
| PO | 5/28/2002 15:40 | 6/1/2002 0:00 | FW HEATER EXTRACTION VALVE CRACKED | 80.33 | | |
| FO | 6/1/2002 0:00 | 6/2/2002 17:24 | FURNACE WALL TUBE LEAK | 41.40 | | |
| PO | 10/25/2002 23:00 | 11/1/2002 0:00 | PLANNED OUTAGE REPAIRS AS NEEDED | 146.00 | | |
| PO | 11/1/2002 0:00 | 11/2/2002 8:38 | PLANNED OUTAGE | 32.63 | | |
| PO | 11/22/2002 21:45 | 11/26/2002 19:24 | STEAM LEAK OUTER CASING RH | 93.65 | | |

| | | | | | |
|--|----|------------------|------------------|---|--------|
| | FO | 1/19/2003 7:43 | 1/21/2003 1:00 | FURNACE WALL TUBE LEAK | 41.28 |
| | PO | 2/7/2003 22:42 | 2/22/2003 15:45 | STEAM LEAK HIGH PRESSURE SECTION TURBINE | 353.05 |
| | PO | 4/21/2003 22:50 | 4/30/2003 12:09 | BOILER CHEM CLEAN AND CLEAN SLAG FROM SH & RH SECTIONS | 205.32 |
| | FO | 6/24/2003 7:58 | 6/27/2003 10:07 | HEATER BYPASS VALVE FAILURE | 74.15 |
| | FO | 7/10/2003 7:45 | 7/12/2003 3:45 | AUTO VOLTAGE REG TRIP DUE TO STEAM LEAK | 44.00 |
| | PO | 10/12/2003 22:45 | 10/18/2003 12:14 | PLANNED OUTAGE PLANT REPAIRS | 133.48 |
| | FO | 1/19/2004 14:41 | 1/21/2004 7:43 | CONTROL VALVES LOWER RACK STUCK REPLACED BUSHINGS | 41.03 |
| | PO | 2/18/2004 22:39 | 2/22/2004 21:35 | #16 HP FW HEATER LEAK | 94.93 |
| | FO | 3/16/2004 10:55 | 3/17/2004 19:34 | ELECTRICAL COMPONENTS SHORTED OUT CAUSING FSSS / TSS TRIP | 32.65 |
| | PO | 3/18/2004 20:34 | 4/1/2004 0:00 | PLANNED OUTAGE NEW DCS/ LOW NOX UPGRADES | 315.43 |
| | PO | 4/1/2004 0:00 | 4/17/2004 20:54 | PLANNED OUTAGE / NEW DCS SYSTEM | 403.90 |
| | PO | 6/13/2004 21:37 | 6/16/2004 21:00 | OFF LINE TO CLEAN TOP HALF OF CONDENSER TUBES \CALCIUM CARBONATE | 71.38 |
| | PO | 7/2/2004 22:00 | 7/6/2004 20:18 | TUBE CLEANING TO REDUCE BACKPRESSURE | 94.30 |
| | FO | 10/20/2004 2:33 | 10/25/2004 16:28 | TUBE LEAK BETWEEN REHEAT SECTIONS | 133.92 |
| | FO | 12/16/2004 16:58 | 12/17/2004 19:36 | PACKING BLOWN OUT OF EXTRACTION VALVE | 26.63 |
| | PO | 2/25/2005 18:24 | 3/1/2005 0:00 | ECONOMIZER CHECK VALVE REPAIR | 77.60 |
| | PO | 3/1/2005 0:00 | 3/2/2005 11:35 | ECONOMIZER CK VALVE REPAIR AND OTHER MISC PLANT WORK | 35.58 |
| | FO | 3/18/2005 15:04 | 3/19/2005 21:24 | CB8510 FAILED CAUSING PLANT TRIP | 30.33 |
| | PO | 5/13/2005 13:45 | 6/1/2005 0:00 | SPRING OUTAGE BOILER TUBE REPAIR AND #15 FW HEATER REPAIR | 442.25 |
| | PO | 6/1/2005 0:00 | 6/2/2005 17:38 | OUTAGE WORK AND #15 FW HEATER REPAIR | 41.63 |
| | PO | 8/28/2005 16:48 | 8/30/2005 16:45 | TUBE LEAKS | 47.95 |
| | FO | 9/19/2005 2:47 | 9/25/2005 5:40 | RECTIFIER PHASE B FAULT ID FAN VFD | 146.88 |
| | PO | 10/21/2005 14:45 | 10/29/2005 8:00 | PO FOR NEW ID FAN DIGITAL CONTROLS INSTALL | 185.25 |
| | FO | 10/29/2005 16:05 | 10/31/2005 21:33 | NEW DIGITAL CONTROLS PROBLEM | 54.47 |
| | PO | 11/8/2005 22:48 | 11/12/2005 15:39 | MAINT. OUTAGE TO REPAIR DA CRACKS | 88.85 |
| | PO | 4/1/2006 1:35 | 4/22/2006 2:04 | PLANNED OUTAGE SUBSTATION UPGRADE | 503.48 |
| | PO | 5/21/2006 21:43 | 5/24/2006 0:50 | TURBINE CONTROL VALVES STICKING / REPAIR | 51.12 |
| | FO | 5/25/2006 14:03 | 5/28/2006 2:24 | ID FAN CONTROL FAILURE | 60.35 |
| | FO | 7/6/2006 13:34 | 7/9/2006 22:06 | SUPPORT ATTACHMENT B CORNER | 80.53 |
| | PO | 8/21/2006 13:29 | 8/23/2006 16:45 | CONTROL VALVES STICKING OFF LINE REPAIRS | 51.27 |
| | PO | 10/26/2006 14:38 | 11/8/2006 13:13 | | 311.58 |
| | FO | 1/5/2007 11:07 | 1/10/2007 9:38 | Generator relay failure | 118.52 |
| | PO | 3/21/2007 11:12 | 4/8/2007 7:15 | Boiler and Turbin repairs / spring outage misc other repairs | 428.05 |
| | FO | 5/1/2007 15:15 | 5/3/2007 20:01 | ID Fan trip power failure | 52.77 |
| | FO | 7/7/2007 21:16 | 7/13/2007 14:33 | Gen Transformer insulators blown/ voltage spike | 137.28 |
| | FO | 10/5/2007 4:03 | 10/8/2007 13:07 | Waterwall tube leak tripped unit found PORE leaks with hydro test | 81.07 |

| | | | | | |
|--|----|------------------|-----------------|--|---------|
| | FO | 10/30/2007 5:58 | 11/2/2007 13:00 | ID fan trip due to tuning problems at high loads | 79.03 |
| | FO | 1/14/2008 6:45 | 1/16/2008 4:33 | Variable Speed Drive on ID Fan Tripped | 45.80 |
| | FO | 1/26/2008 22:47 | 2/22/2008 21:57 | All bearings sent in for repair or insp but #1 bearing | 647.17 |
| | FO | 4/10/2008 13:13 | 4/12/2008 1:09 | 13.8 Kv CB shorted out forcing the unit off line | 35.93 |
| | FO | 4/23/2008 15:22 | 4/24/2008 23:03 | 13.8 KV Transformer shorted out causing plant trip | 31.68 |
| | FO | 4/27/2008 20:47 | 5/1/2008 8:49 | waterwall tube failed causing plant trip / four POre found and repaired | 84.03 |
| | FO | 5/11/2008 7:54 | 5/13/2008 23:52 | Waterwall tube leak | 63.97 |
| | PO | 11/14/2008 14:45 | 11/21/2008 0:23 | Superheater slag fouling | 153.63 |
| | FO | 1/12/2009 20:15 | 1/15/2009 23:03 | Waterwall tube leaks | 74.80 |
| | PO | 5/1/2009 22:45 | 5/23/2009 18:00 | Planned Boiler / Turbine and misc plant outage repairs | 523.25 |
| | PO | 9/1/2009 23:22 | 9/5/2009 12:00 | Tube leak | 84.63 |
| | FO | 9/8/2009 11:58 | 9/11/2009 12:41 | economizer tube leak | 72.72 |
| | FO | 2/21/2010 21:23 | 2/25/2010 0:30 | Turbine Control Computer Hardware Card Failure | 75.12 |
| | FO | 3/6/2010 3:08 | 3/8/2010 0:00 | Steam turbine control system hardware failure | 44.87 |
| | PO | 3/8/2010 0:00 | 5/17/2010 9:51 | Major Turbine and Plant overhaul | 1688.85 |
| | FO | 5/23/2010 1:47 | 5/25/2010 20:57 | Hydrogen leak forced unit off line for repairs | 67.17 |
| | FO | 6/3/2010 1:39 | 7/15/2010 8:37 | GSU failed | 1014.97 |
| | FO | 8/14/2010 12:38 | 8/16/2010 14:44 | ID Fan Potential Trans fuse blown | 50.10 |
| | FO | 9/20/2010 21:39 | 9/22/2010 21:49 | ID Fan Control Failure | 48.17 |
| | PO | 11/28/2010 21:24 | 12/9/2010 19:22 | Replacing GSU Rental with new permanent GSU | 261.97 |
| | FO | 12/9/2010 20:05 | 12/13/2010 5:59 | hydrogen leak rePOved unit from service to repair. | 81.90 |
| | FO | 12/27/2010 0:11 | 1/1/2011 0:00 | Hydrogen leak rePOved unit from service to repair | 119.82 |
| | FO | 1/1/2011 0:00 | 1/5/2011 19:01 | Hydrogen System Leak | 115.02 |
| | PO | 4/29/2011 15:00 | 5/23/2011 4:27 | Planned outage | 565.45 |
| | FO | 7/5/2011 9:07 | 7/7/2011 17:00 | Economizer tube leak off line to repair. | 55.88 |
| | FO | 7/7/2011 17:00 | 7/17/2011 16:11 | Ash Hopper broke away from the stack and fell partially off cleanup and inspection req | 239.18 |
| | FO | 7/24/2011 0:52 | 7/27/2011 19:56 | Gen Trip water in the generator /off line to rePOve POisture | 91.07 |
| | FO | 8/31/2011 18:53 | 9/2/2011 13:03 | Superheat Desuperheat external line failed from excessive vibration | 42.17 |
| | FO | 9/21/2011 11:58 | 9/25/2011 19:58 | Reheat and screen tube leaks | 104.00 |
| | FO | 12/30/2011 8:23 | 1/1/2012 0:00 | Tube leak superheater platen pendant. | 39.62 |
| | FO | 1/1/2012 0:00 | 1/5/2012 20:35 | Superheat spray line serious vibration causing line to break inside penthouse | 116.58 |
| | FO | 1/24/2012 22:43 | 2/2/2012 18:26 | Desuperheater/attemperator broke away from superheater header | 211.72 |
| | FO | 2/8/2012 1:20 | 2/14/2012 18:32 | Superheat desuperheat spray vibration issue | 161.20 |
| | FO | 2/22/2012 3:16 | 2/24/2012 8:58 | Reheat Screen tube leak | 53.70 |
| | PO | 3/16/2012 18:08 | 4/13/2012 17:10 | Boiler and turbine repairs/Spring outage Misc repairs | 671.03 |
| | FO | 4/24/2012 11:27 | 4/26/2012 6:25 | Reheat tube leaks three fixed / Reheat Front Pendant loops | 42.97 |

| | | | | | |
|--|----|-----------------|-----------------|---|--------|
| | PO | 2/1/2013 23:37 | 2/9/2013 0:00 | Waterwall tube leak caused outage/ SH leak found while off line | 168.38 |
| | PO | 4/1/2013 0:10 | 4/23/2013 10:40 | Boiler and turbine work scheduled for overhaul | 538.50 |
| | FO | 4/23/2013 10:40 | 4/25/2013 4:10 | Before seat line leak on #1 Main Steam Stop | 41.50 |
| | FO | 5/28/2013 23:59 | 5/31/2013 6:29 | SuperHeat Tube Leak | 54.50 |

| Dubuque - Dubuque - Boiler 1 /Turb. Gen. 4 | | | | | |
|--|------------------|------------------|--|----------|--|
| Type | Start | End | Description | Eq. Hrs. | |
| PO | 2/16/2001 16:00 | 3/1/2001 0:00 | ANNUAL INSPECTION | 296.00 | |
| PO | 10/28/2001 9:00 | 10/31/2001 21:30 | INSTALL FREQ DRIVE ON #1 ID FAN | 84.50 | |
| PO | 10/11/2002 22:00 | 10/26/2002 7:00 | ANNUAL PLANNED OUTAGE WORK | 345.00 | |
| FO | 10/26/2002 7:30 | 10/30/2002 21:30 | BEARING ALIGNMENT PROBLEM ON REBUILT PUMP | 111.00 | |
| FO | 2/20/2003 17:20 | 2/22/2003 0:00 | HEATING DUCT DAMPER FROM BOILER STUCK OPEN CAUSING HIGH TEMP IN 1C MILL AND FIRE | 30.67 | |
| PO | 2/22/2003 0:00 | 2/23/2003 1:05 | STATE INSPECTION REQUIREMENT | 25.08 | |
| PO | 4/9/2003 13:30 | 4/11/2003 17:20 | CRACKS WHERE ATTACHED TO BUCKSTAY | 51.83 | |
| FO | 5/8/2003 15:47 | 5/11/2003 22:30 | GENERATING TUBE LEAK | 78.72 | |
| FO | 6/28/2003 11:35 | 6/30/2003 11:25 | FRONT WATERWALL LEAKS (3) | 47.83 | |
| FO | 7/6/2003 1:10 | 7/7/2003 18:20 | F000CIRC WATER PUMP SUCTION BELL RETRIEVAL | 41.17 | |
| FO | 8/17/2003 16:15 | 8/19/2003 6:15 | VFD FAILED | 38.00 | |
| PO | 10/11/2003 0:30 | 10/24/2003 19:05 | PLANNED OUTAGE | 330.58 | |
| PO | 11/11/2003 18:07 | 11/13/2003 21:55 | AIR HEATER DRIVE GEARBOX BEARING REPLACEMENT | 51.80 | |
| PO | 4/26/2004 10:35 | 4/28/2004 5:25 | CLEANING PRECIPITATOR DUE TO HIGH OPACITY. FOUND SIGNIFICANT BUILD-UP ON WIRES | 42.83 | |
| FO | 5/10/2004 8:50 | 5/12/2004 0:05 | GENERATING TUBE LEAK | 39.25 | |
| FO | 5/13/2004 20:30 | 5/15/2004 5:50 | GENERATING TUBE LEAK | 33.33 | |
| FO | 6/8/2004 16:20 | 6/9/2004 21:03 | VFD SHUTOFF DUE TO ANOTHER POWER SUPPLY FAILURE. REPLACED PARTS AND RESTARTED OK | 28.72 | |
| FO | 6/22/2004 13:52 | 6/24/2004 6:15 | VFD SHUTOFF DUE TO BLOWN CAPACITOR. REPL ALL 6 CAPS & PROCESSOR. RESTARTED OK | 40.38 | |
| PO | 10/15/2004 15:30 | 11/1/2004 13:05 | ANNUAL PLANNED MAINTENANCE OUTAGE | 406.58 | |
| FO | 2/28/2005 20:30 | 3/4/2005 3:50 | SOOTBLOWER EROSION NEAR IK 4 | 79.33 | |
| PO | 3/24/2005 22:10 | 3/26/2005 2:20 | INSTALL RAPPER SHAFT IN #1 PRECIP FIELD | 28.17 | |
| PO | 5/18/2005 17:20 | 5/20/2005 2:10 | UPPER EAST AND WEST BURNER AIR VANES NOT POVING. DAMAGED FROM HEAT/FIRE | 32.83 | |
| FO | 7/5/2005 12:10 | 7/7/2005 6:35 | PRIMARY SH LEAKS. PAD-WELDED TWO TUBES | 42.42 | |
| FO | 10/26/2005 13:10 | 10/28/2005 7:00 | WATER WALL TUBE LEAK ON NORTH WALL DUE TO SB EROSION | 41.83 | |
| PO | 10/28/2005 7:00 | 11/17/2005 11:05 | ANNUAL PLANNED OUTAGE | 485.08 | |
| FO | 12/15/2005 14:40 | 12/18/2005 9:15 | WATERWALL LEAKS AT SOUTHWEST CORNER UPPER BURNER LEVEL AND THE FRONT WALL SLOPE | 66.58 | |
| FO | 12/20/2005 23:50 | 12/23/2005 0:00 | TUBE LEAKS ON WEST WING WALL | 48.17 | |
| FO | 1/17/2006 16:30 | 1/19/2006 16:00 | EXCITER THRUST BRG FAILURE - ROTOR POVEMENT CAUSE FIXED & ROTATING RUBBING | 47.50 | |
| FO | 5/26/2006 13:30 | 6/3/2006 21:15 | GENERATING TUBE LEAKS | 199.75 | |
| FO | 7/9/2006 23:30 | 7/11/2006 17:30 | CORNER WALL LEAK - WELD REPAIRED | 42.00 | |
| FO | 9/18/2006 18:00 | 9/22/2006 15:00 | HAND HOLE LEAK | 93.00 | |
| FO | 9/24/2006 7:00 | 9/25/2006 20:00 | HAND HOLE LEAK | 37.00 | |
| PO | 10/27/2006 13:00 | 11/10/2006 0:00 | general maint | 324.00 | |
| PO | 3/3/2007 23:00 | 3/6/2007 19:00 | Hand hole leak on the boiler. | 68.00 | |

| | | | | |
|----|------------------|------------------|--|---------|
| FO | 5/18/2007 9:00 | 5/24/2007 4:45 | Cracks were by a buckstay | 139.75 |
| FO | 5/30/2007 11:15 | 6/6/2007 8:00 | Leak on rear waterwall | 164.75 |
| FO | 8/1/2007 17:55 | 8/2/2007 18:30 | Failure of ID Fan | 24.58 |
| PO | 9/7/2007 15:00 | 9/30/2007 15:40 | Misc work on boiler. | 552.67 |
| FO | 10/24/2007 6:50 | 10/28/2007 5:15 | Replaced 3 back wall waterwall tubes | 94.42 |
| FO | 12/1/2007 6:30 | 12/11/2007 3:52 | Many tube leaks through out the boiler. | 237.37 |
| FO | 12/25/2007 0:20 | 12/27/2007 5:55 | Leaks on the front wall | 53.58 |
| PO | 2/1/2008 0:50 | 2/4/2008 3:20 | Changed out the inlet and outlet valves to #3 Condenser. | 74.50 |
| PO | 3/9/2008 0:05 | 3/15/2008 6:30 | boiler tube waterwall leaks | 149.42 |
| FO | 4/27/2008 11:25 | 5/6/2008 4:15 | tube leaks | 208.83 |
| FO | 5/6/2008 5:15 | 5/9/2008 17:00 | Forced off | 83.75 |
| PO | 6/28/2008 17:00 | 7/4/2008 7:30 | Leak on the front wall in basement, and on the 5th floor in front. | 134.50 |
| FO | 7/27/2008 12:50 | 8/16/2008 2:30 | Many leaks all over the boiler. | 469.67 |
| FO | 8/20/2008 9:15 | 8/22/2008 13:55 | At least 4 leaks on the front wall | 52.67 |
| FO | 9/1/2008 15:20 | 9/3/2008 19:50 | Fan again stopped working | 52.50 |
| PO | 9/5/2008 10:10 | 9/26/2008 8:37 | Planned Outage | 502.45 |
| FO | 9/29/2008 5:05 | 9/30/2008 9:45 | Leak on the rear waterwall | 28.67 |
| PO | 1/22/2009 17:30 | 2/26/2009 17:13 | Planned Outage | 839.72 |
| FO | 7/23/2009 8:30 | 8/6/2009 11:30 | Had at least nine tube leaks in various locations. | 339.00 |
| FO | 9/27/2009 5:30 | 10/8/2009 12:00 | OTHER MISCELLANEOUS BOILER TUBE PROBLEMS... | 270.50 |
| FO | 11/6/2009 22:10 | 11/18/2009 16:15 | Leaks on various places | 282.08 |
| PO | 4/1/2010 7:00 | 4/21/2010 17:00 | Annual Boiler Outage | 490.00 |
| FO | 6/28/2010 23:25 | 7/1/2010 17:00 | UPS caused the Turbine to trip while going down to 1 Mill. | 65.58 |
| FO | 7/5/2010 6:30 | 7/6/2010 9:10 | Could not get the Turbine past 3200 rpm. | 26.67 |
| FO | 7/17/2010 18:05 | 7/20/2010 19:10 | Forced Draft had failed | 73.08 |
| FO | 7/24/2010 9:00 | 7/27/2010 13:30 | Many tube leaks inside of the Boiler | 76.50 |
| FO | 8/10/2010 19:10 | 8/12/2010 13:30 | Problem with the frequency drive | 42.33 |
| FO | 8/15/2010 0:20 | 8/19/2010 13:15 | At least three leaks | 108.92 |
| FO | 11/6/2010 12:40 | 11/23/2010 14:00 | 11 leaks all over the boiler | 410.33 |
| FO | 12/24/2010 2:45 | 12/29/2010 11:45 | Tube leaks | 129.00 |
| FO | 3/29/2011 12:00 | 4/1/2011 18:00 | Three different tube leaks. | 78.00 |
| PO | 4/1/2011 18:00 | 4/29/2011 15:00 | All work required on the Boiler and Turbine will be completed. | 669.00 |
| FO | 10/18/2011 14:30 | 10/25/2011 15:30 | Leak on the lower back wall | 169.00 |
| FO | 11/9/2011 8:00 | 12/22/2011 10:00 | Misc tube leaks | 1034.00 |
| FO | 5/26/2012 18:00 | 5/31/2012 9:00 | Various tube leaks | 111.00 |
| FO | 7/12/2012 21:30 | 7/17/2012 20:55 | Many tube leaks | 119.42 |

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| FO | 7/29/2012 19:00 | 7/30/2012 19:35 | Repack was needed on the non-return valve | 24.58 |
| FO | 1/23/2013 3:20 | 2/9/2013 9:00 | Tube leaks | 413.67 |
| FO | 2/12/2013 14:00 | 2/14/2013 13:35 | RPO noticed water in the bearing so it was LOTO to make sure things were ok to operate | 47.58 |
| FO | 4/18/2013 7:00 | 4/24/2013 13:00 | Inspected by the State Boiler Inspector | 150.00 |
| FO | 5/26/2013 21:20 | 5/29/2013 8:00 | The turning gear would not engage on its gear due to the internal gear being lose | 58.67 |

| Dubuque - Dubuque - Turbine Generator 3 | | | | | |
|---|------------------|------------------|--|----------|--|
| Type | Start | End | Description | Eq. Hrs. | |
| PO | 3/16/2001 18:00 | 3/30/2001 8:00 | ANNUAL BOILER INSPECTION | 326.00 | |
| PO | 7/13/2001 9:00 | 7/15/2001 6:15 | PREC. CLEANING | 45.25 | |
| PO | 2/2/2002 0:30 | 2/15/2002 16:00 | ANNUAL INSPECTION | 327.50 | |
| FO | 6/16/2002 17:50 | 6/17/2002 19:30 | HAND HOLE LEAK | 25.67 | |
| FO | 10/28/2002 10:00 | 10/31/2002 20:25 | LINE LEAK GOING INTO 3B FWH | 82.42 | |
| PO | 12/19/2002 20:59 | 12/20/2002 21:05 | INSPECT REGULATING AND BYPASS VALVES FOR LEAKTHROUGH | 24.10 | |
| PO | 1/3/2003 8:00 | 1/4/2003 20:45 | FEEDWATER REGULATOR BYPASS VALVE REPLACEMENT. VALVE LEAKS THROUGH 180K LBS/HR | 36.75 | |
| PO | 1/10/2003 13:15 | 1/11/2003 14:45 | PIPING TO STEAM SOOT BLOWING SYSTEM JUST ABOVE STEAM DRUM LEAK AT VALVE | 25.50 | |
| PO | 2/28/2003 13:30 | 3/2/2003 20:00 | GRIT BLASTING OF #5 PRECIPITATOR | 54.50 | |
| FO | 3/18/2003 12:45 | 3/19/2003 23:22 | SUPERHEAT TUBE LEAK | 34.62 | |
| PO | 4/18/2003 17:15 | 5/2/2003 18:20 | PLANNED OUTAGE | 337.08 | |
| FO | 7/5/2003 23:25 | 7/8/2003 1:40 | CIRC WATER PUMP SUCTION BELL RETRIEVAL | 50.25 | |
| FO | 7/21/2003 7:55 | 7/23/2003 11:03 | SUPERHEATER TUBE LEAKS | 51.13 | |
| FO | 10/17/2003 18:40 | 10/20/2003 2:30 | TUBE LEAK | 55.83 | |
| FO | 1/7/2004 13:43 | 1/9/2004 5:03 | PRIMARY SUPERHEATER TUBE LEAK | 39.33 | |
| PO | 1/23/2004 19:50 | 2/5/2004 15:26 | ANNUAL PLANNED OUTAGE | 307.60 | |
| FO | 4/9/2004 16:53 | 4/10/2004 21:43 | HOTWELL PUMPS TRIPPED OFF DUE TO LEVELINDICATION FAILURE | 28.83 | |
| FO | 8/16/2004 7:05 | 8/18/2004 5:35 | SUPERHEATER TUBE LEAK | 46.50 | |
| FO | 1/29/2005 10:45 | 1/31/2005 7:39 | PRIMARY SH TUBE LEAK, ALSO CREATED LEAK ON ADJACENT WATERWALL TUBE | 44.90 | |
| PO | 3/18/2005 11:55 | 4/3/2005 13:50 | PLANNED OUTAGE | 384.92 | |
| FO | 4/5/2005 14:50 | 4/9/2005 0:35 | PRECIPITATOR REPAIRS TO CORRECT CLEARANCE PROBLEMS DUE TO SHORT TERM OVERHEATING | 81.75 | |
| PO | 10/29/2005 22:30 | 11/1/2005 10:25 | CLEANING #5 & #6 PRECIPITATORS IN PREPARATION FOR COMPLIANCE TESTING | 60.92 | |
| PO | 12/1/2005 5:45 | 12/1/2005 16:30 | LEAK ON EQUALIZING LINE TRANSFER WATER250/650 REGULATING STATION | 10.75 | |
| PO | 3/10/2006 20:05 | 3/26/2006 15:10 | PLANNED OUTAGE | 379.08 | |
| PO | 3/26/2006 18:15 | 3/27/2006 19:20 | TESTING OF NEW GOVERNOR PROTECTIVE RELAY SYSTEM | 25.08 | |
| FO | 7/2/2006 13:00 | 7/5/2006 18:00 | PLUGGED GENERATING TUBE | 77.00 | |
| FO | 8/13/2006 11:00 | 8/14/2006 20:15 | COAL FEEDER WOULD NOT TURN | 33.25 | |
| FO | 9/2/2006 21:00 | 9/6/2006 2:00 | HOSE LEAKING INTO THE BOILER CAUSED BOTTOM ASH DAMAGE | 77.00 | |
| PO | 10/28/2006 21:00 | 11/1/2006 4:00 | Precip problems on Boiler | 80.00 | |
| PO | 1/12/2007 20:00 | 2/5/2007 12:00 | Normal Overhaul | 568.00 | |
| PO | 2/5/2007 13:00 | 2/9/2007 12:00 | normal overhaul | 95.00 | |
| PO | 2/9/2007 16:00 | 2/10/2007 19:00 | normal overhaul | 27.00 | |
| FO | 4/9/2007 10:00 | 4/13/2007 0:00 | leaks | 86.00 | |
| PO | 1/25/2008 23:35 | 2/9/2008 22:20 | miscellaneous | 358.75 | |

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| | FO | 11/18/2008 16:55 | 11/21/2008 13:30 | Cracks on two tubes | 68.58 |
| | FO | 9/30/2009 13:30 | 10/1/2009 15:30 | The plant had a loss of all circulating water. | 26.00 |
| | PO | 10/1/2009 15:30 | 10/29/2009 17:30 | Scheduled Maintenance Outage | 674.00 |
| | FO | 1/5/2010 15:20 | 1/6/2010 16:35 | Broken coal belt and unable to get coal into the Plant. | 25.25 |
| | FO | 2/14/2010 13:00 | 3/2/2010 2:45 | Both Feedwater Pumps have been sent out for repair. Will send back as soon as possibl | 373.75 |
| | FO | 5/6/2010 7:40 | 5/21/2010 17:30 | Pump sent in for rebuild. | 369.83 |
| | PO | 10/4/2010 7:00 | 10/15/2010 15:30 | Planned outage work | 272.50 |
| | PO | 2/19/2011 0:00 | 3/15/2011 21:15 | All work required by Boiler and Turbine | 596.25 |
| | FO | 3/30/2011 6:10 | 3/31/2011 13:55 | Wired CT's incorrectly | 31.75 |
| | FO | 11/7/2011 5:00 | 12/1/2011 15:30 | Misc tube leaks on the supply of steam from both #5 and #6 Boilers | 586.50 |
| | FO | 10/1/2012 4:00 | 10/8/2012 15:30 | Many Boiler tube leaks | 179.50 |
| | FO | 2/26/2013 15:40 | 3/8/2013 13:00 | DA removed from service for testing | 237.33 |
| | FO | 3/12/2013 15:00 | 3/22/2013 10:00 | Turning Gear had a bad oil leak | 235.00 |

| Lansing - Lansing - Unit 4 | | | | | |
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| Type | Start | End | Description | Eq. Hrs. | |
| FO | 1/19/2001 14:04 | 1/23/2001 11:55 | TUBE LEAKS/S.H. SECTION | 93.85 | |
| FO | 2/17/2001 0:20 | 2/20/2001 1:17 | TUBE LEAK | 72.95 | |
| FO | 3/7/2001 10:17 | 3/9/2001 4:12 | FEEDPUMP TURBINE DRIVE CONTROL PROBLEM | 41.92 | |
| PO | 3/29/2001 22:50 | 4/14/2001 17:33 | PLANNED MAINTENANCE OUTAGE | 377.72 | |
| FO | 4/22/2001 8:47 | 4/25/2001 11:10 | OFF LINE - SCREEN TUBE LEAK | 74.38 | |
| FO | 4/26/2001 8:14 | 4/28/2001 14:01 | OFF LINE - SCREEN TUBE LEAK | 53.78 | |
| FO | 5/22/2001 16:30 | 5/24/2001 11:25 | LEAK G HEATER REPAIR | 42.92 | |
| PO | 6/20/2001 23:44 | 6/24/2001 10:24 | PRECIP & RH CLEANING | 82.67 | |
| FO | 7/29/2001 2:22 | 7/31/2001 2:16 | #4 OFF-COMPRESSOR WIRE FAILURE-MILL EXPLOSION | 47.90 | |
| FO | 8/2/2001 19:32 | 8/6/2001 5:05 | BOILER TUBE LEAK | 81.55 | |
| FO | 8/6/2001 13:12 | 8/11/2001 22:27 | BOILER TUBE LEAK | 129.25 | |
| FO | 8/21/2001 22:03 | 8/24/2001 17:30 | OFF LINE TUBE LEAK | 67.45 | |
| FO | 10/5/2001 17:16 | 10/8/2001 11:11 | PRECIP PROBLEMS - OFF LINE | 65.92 | |
| PO | 11/2/2001 19:24 | 11/17/2001 0:45 | PLANNED OUTAGE | 341.35 | |
| FO | 12/11/2001 0:21 | 12/13/2001 22:16 | G HEATER LEAK - OFF LINE | 69.92 | |
| PO | 1/11/2002 12:54 | 1/18/2002 3:02 | THROTTLE VALVE PROBLEMS | 158.13 | |
| FO | 2/27/2002 22:29 | 3/2/2002 10:10 | OFF LINE - G HEATER LEAK | 59.68 | |
| FO | 3/11/2002 23:03 | 3/15/2002 10:26 | TUBE LEAK | 83.38 | |
| PO | 4/8/2002 9:20 | 4/26/2002 2:50 | OFF LINE - TUBE LEAK | 425.50 | |
| FO | 5/23/2002 21:19 | 5/25/2002 11:38 | G HEATER 13 TUBES | 38.32 | |
| FO | 6/6/2002 13:06 | 6/10/2002 7:03 | FURNACE WALL LEAKS | 89.95 | |
| FO | 6/20/2002 22:08 | 6/23/2002 2:10 | OFFLINE - TUBE LEAK | 52.03 | |
| FO | 6/30/2002 16:30 | 7/3/2002 2:21 | OFF LINE - TUBE LEAK | 57.85 | |
| FO | 7/12/2002 8:49 | 7/14/2002 10:38 | WATERWALL TUBE LEAK - 3 LEAKS | 49.82 | |
| FO | 8/12/2002 23:51 | 8/22/2002 11:58 | OFF LINE FOR CHEMICAL CLEAN | 228.12 | |
| FO | 8/26/2002 5:31 | 8/31/2002 18:57 | OFF - TUBE BLEW SUPERHEAT PENDENT | 133.43 | |
| FO | 11/10/2002 23:00 | 11/11/2002 23:48 | OFFLINE FOR TURBINE CONTROL PROBLEMS. | 24.80 | |
| PO | 11/29/2002 14:59 | 12/13/2002 12:40 | OFF LINE FOR MAINTENANCE OUTAGE, PRECIP WORK | 333.68 | |
| FO | 1/27/2003 19:45 | 1/29/2003 0:58 | OFF LINE - G HEATER LEAK REPAIR | 29.22 | |
| PO | 3/21/2003 10:20 | 5/19/2003 9:20 | PLANNED OUTAGE | 1414.00 | |
| FO | 6/20/2003 19:30 | 6/22/2003 2:26 | LOW HTR IN LEFT OUTLET VALVES CLOSED- BYPASS DID NOT OPEN - NO WATER TO DA | 30.93 | |
| PO | 9/12/2003 16:07 | 9/19/2003 15:47 | OUTAGE FOR BOILER | 167.67 | |
| FO | 10/10/2003 15:35 | 10/13/2003 22:40 | OFFLINE - PRIMARY REHEAT TUBE REPAIR | 79.08 | |
| PO | 12/14/2003 10:42 | 12/19/2003 7:50 | PLANNED OUTAGE - CLEAN BOILER ECONOMIZER SECTION | 117.13 | |

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| FO | 1/17/2004 18:26 | 1/20/2004 7:34 | OFFLINE - BOILER TUBE LEAK | 61.13 |
| FO | 3/5/2004 10:02 | 3/7/2004 17:32 | OPACITY PROBLEMS (PRECIP FOULING) | 55.50 |
| PO | 4/29/2004 22:22 | 5/13/2004 22:44 | PO (AIR HEATER BASKET REPL. PRECIP WORK, TDBFP CONTROLS) | 336.37 |
| FO | 5/17/2004 15:30 | 5/18/2004 21:58 | UNEXPLAINED TRIP DUE TO NEW TURBINE CONTROLS | 30.47 |
| PO | 6/27/2004 20:26 | 6/29/2004 0:00 | PRECIP GRIT BLAST | 27.57 |
| FO | 7/9/2004 19:15 | 7/11/2004 23:15 | STEAM LEAK LEFT HAND THROTTLE VALVE | 52.00 |
| FO | 7/17/2004 7:00 | 7/18/2004 14:34 | EXTRACTION CHECK TO F HEATER COVER GASKET LEAK | 31.57 |
| PO | 10/19/2004 20:57 | 10/21/2004 2:04 | PULL WIRES FROM PRECIP | 29.12 |
| PO | 10/29/2004 21:17 | 11/8/2004 4:56 | PLANNED OUTAGE | 224.65 |
| FO | 12/3/2004 22:15 | 12/5/2004 5:50 | REHEATER TUBE LEAK | 31.58 |
| FO | 12/6/2004 22:46 | 12/9/2004 2:38 | REHEAT TUBE LEAK REPAIR | 51.87 |
| FO | 12/19/2004 22:19 | 12/23/2004 14:23 | OFF LINE FOR ECONOMIZER PLUGGAGE | 88.07 |
| PO | 12/26/2004 23:11 | 12/30/2004 21:04 | REPAIR REHEATER TUBE LEAKS | 93.88 |
| FO | 1/12/2005 11:03 | 1/15/2005 12:40 | HT SUPERHEAT TUBE LEAKS | 73.62 |
| FO | 1/31/2005 22:49 | 2/1/2005 23:32 | PRECIP WIRES | 24.72 |
| PO | 2/23/2005 21:08 | 3/24/2005 0:30 | RH REPLACEMENT | 675.37 |
| PO | 5/10/2005 22:00 | 5/13/2005 0:30 | OFF LINE REPAIR OF AIR HEATER DRIVES | 50.50 |
| PO | 7/18/2005 21:35 | 7/21/2005 5:04 | OFF LINE FOR PRECIP CLEANING | 55.48 |
| PO | 10/28/2005 22:04 | 11/7/2005 0:00 | PLANNED OUTAGE - GRIT BLAST PRECIP | 218.93 |
| PO | 11/7/2005 0:00 | 11/10/2005 19:57 | PRECIP MAINT | 91.95 |
| PO | 3/3/2006 21:42 | 3/29/2006 12:37 | PLANNED OUTAGE | 614.92 |
| PO | 5/21/2006 15:35 | 5/24/2006 23:26 | MAINT HYDROGEN LEAK | 79.85 |
| FO | 6/16/2006 15:10 | 6/18/2006 20:40 | TUBE LEAK (WATERWALL) | 53.50 |
| PO | 10/15/2006 23:10 | 10/30/2006 20:14 | Planned outage | 358.07 |
| PO | 12/5/2006 22:04 | 12/9/2006 1:09 | A.H. Binding - broken bolts on bearing | 75.08 |
| FO | 1/31/2007 15:51 | 2/2/2007 9:25 | Boiler tube repair | 41.57 |
| FO | 2/2/2007 13:04 | 2/6/2007 7:40 | Left side throttle valve problems | 90.60 |
| FO | 3/25/2007 14:05 | 3/26/2007 22:02 | HB Forced draft fan vibration 2.4" | 31.95 |
| FO | 4/24/2007 22:28 | 4/26/2007 12:53 | tube leak | 38.42 |
| PO | 5/4/2007 20:36 | 6/2/2007 10:11 | Outage | 685.58 |
| FO | 6/12/2007 10:34 | 6/17/2007 0:00 | SH tube leak | 109.43 |
| FO | 9/13/2007 22:49 | 9/18/2007 8:55 | Tube repair | 106.10 |
| FO | 10/31/2007 10:51 | 11/4/2007 11:25 | Broken right throttle stop valve | 97.57 |
| FO | 11/4/2007 11:50 | 11/6/2007 18:41 | Blew water wall tube | 54.85 |
| FO | 11/8/2007 21:33 | 11/10/2007 12:00 | SH Pendent leak repair | 38.45 |
| PO | 1/25/2008 21:55 | 1/30/2008 20:15 | Grit blast precip - explosion blast economizer | 118.33 |

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| | PO | 5/27/2008 22:32 | 5/29/2008 8:00 | Precip grit blast | 33.47 |
| | PO | 5/30/2008 0:00 | 6/1/2008 13:00 | wash air heater | 61.00 |
| | PO | 6/1/2008 13:00 | 6/2/2008 18:20 | Replace ash sluice pump valve | 29.33 |
| | PO | 9/26/2008 22:40 | 9/28/2008 0:00 | Planned outage - stop valve install, grit blast precip, boiler clean reheat and econ | 25.33 |
| | PO | 9/28/2008 0:00 | 9/29/2008 0:00 | grit blast precip | 24.00 |
| | PO | 9/29/2008 0:00 | 10/4/2008 10:00 | grit blast economizer and rod slag out | 130.00 |
| | FO | 10/4/2008 10:00 | 10/6/2008 11:29 | Unit unable to start up ovation upgrade problems | 49.48 |
| | FO | 12/18/2008 14:28 | 12/22/2008 22:00 | supeheat leak repair | 103.53 |
| | PO | 3/13/2009 22:10 | 3/17/2009 0:00 | boiler cleaning - back pass | 73.83 |
| | PO | 3/17/2009 0:00 | 3/21/2009 0:00 | new soot blowers | 96.00 |
| | PO | 3/21/2009 0:00 | 3/22/2009 20:00 | plant blowdown | 44.00 |
| | FO | 4/25/2009 15:50 | 5/1/2009 16:00 | turbine control problem | 144.17 |
| | FO | 6/2/2009 9:57 | 6/6/2009 16:00 | Blown Tube | 102.05 |
| | PO | 9/26/2009 23:47 | 10/1/2009 8:00 | OTHER PULVERIZER PROBLEMS... | 104.22 |
| | PO | 10/1/2009 8:00 | 10/2/2009 16:00 | Clean precip | 32.00 |
| | PO | 3/12/2010 11:36 | 3/14/2010 8:05 | 69 KV Res Tie in for SCR Baghouse | 43.48 |
| | PO | 3/26/2010 10:36 | 5/31/2010 0:00 | SCR Tie in | 1573.40 |
| | PE | 5/31/2010 0:00 | 6/5/2010 10:57 | SH Sidewall burners, ash pit, baghouse, SCR | 130.95 |
| | FO | 6/10/2010 7:23 | 6/14/2010 7:00 | PRIMARY AIR DUCT REPAIR | 95.62 |
| | FO | 6/14/2010 20:44 | 6/16/2010 7:56 | MILL CONTROL PROBLEMS | 35.20 |
| | PO | 7/7/2010 10:00 | 7/10/2010 20:56 | maint outage to rePOve screen in turb throttle valve (pulled ahead) | 82.93 |
| | FO | 7/30/2010 21:45 | 8/2/2010 23:57 | SCR Entrance screen plugged | 74.20 |
| | FO | 8/20/2010 22:07 | 8/22/2010 22:45 | CLEAN AND REPOVE SCREENS FROM SCR | 48.63 |
| | FO | 9/3/2010 21:58 | 9/7/2010 4:30 | reheat tube leak | 78.53 |
| | FO | 9/26/2010 5:32 | 9/29/2010 23:54 | Mill loss runback resulting in dust explosion | 90.37 |
| | PO | 10/8/2010 18:05 | 10/16/2010 5:32 | CLEAN SCR, PRECIP, A.H. SEAL ADJUSTMENT, COND PUMP POTOR OVERHAUL | 179.45 |
| | PO | 12/17/2010 21:55 | 12/19/2010 0:00 | Clean SCR & Air Slides | 26.08 |
| | FO | 1/25/2011 18:48 | 1/29/2011 3:04 | water wall tube leak at slope tube southeast lower corner of boiler | 80.27 |
| | FO | 3/7/2011 23:55 | 3/9/2011 14:37 | HIGH TEMPERATURE VERTICAL REHEAT TUBE LEAKS - 3 ABOVE 6TH FLOOR | 38.70 |
| | PO | 4/16/2011 0:00 | 5/22/2011 0:00 | Planned outage - reheat replace/slope tube replace/mill liners/balls A & B turbine/gen | 864.00 |
| | PE | 5/22/2011 0:00 | 6/6/2011 18:54 | Planned outage extension to complete turbine work that was found. Valve work, etc. | 378.90 |
| | FO | 6/9/2011 23:20 | 6/11/2011 6:59 | inerting steam control valve repair | 31.65 |
| | PO | 9/28/2011 22:07 | 10/1/2011 20:00 | Repair Gov valve actuator, tdbfp control actuator, clean/change EHC fluid, SCR, card | 69.88 |
| | PO | 1/3/2012 19:45 | 1/6/2012 2:14 | EHC Control fluid leak/blow down SCR/tube leak/coal leaks | 54.48 |
| | FO | 3/6/2012 9:51 | 3/9/2012 15:50 | left hand throttle valve linkage broke | 77.98 |
| | FO | 3/20/2012 8:15 | 3/22/2012 7:00 | Voltage control problems | 46.75 |

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|--|----|-----------------|------------------|---|--------|
| | PO | 4/27/2012 19:40 | 5/11/2012 17:30 | planned outage, gritblast, clean SCR, etc | 333.83 |
| | FO | 7/6/2012 15:08 | 7/7/2012 19:13 | EHC fluid leak at right hand governor valve actuator. Cleaned SCR and install mill seal | 28.08 |
| | FO | 8/28/2012 15:33 | 9/1/2012 21:00 | 4B Forced Draft Fan Outboard Bearing Failure | 101.45 |
| | PO | 10/3/2012 0:00 | 10/7/2012 0:00 | PLANNED OUTAGE PULLED FORWARD. | 96.00 |
| | PO | 10/7/2012 0:00 | 10/11/2012 12:00 | PLANNED OUTAGE PULLED FORWARD. | 108.00 |
| | FO | 2/14/2013 19:00 | 2/16/2013 0:00 | Leak at pressure vent valve and seal | 29.00 |
| | PO | 2/16/2013 0:00 | 3/16/2013 23:55 | Lower slop north tube replacment, superheat pendant addition ash sluice strainer 4b | 694.92 |

| ML Kapp - ML Kapp Unit 2 | | | | | |
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| Type | Start | End | Description | Eq. Hrs. | |
| FO | 1/17/2001 20:31 | 1/19/2001 9:12 | BLOWN WATER WALL TUBE | 36.68 | |
| PO | 1/20/2001 6:40 | 2/1/2001 0:00 | PLANNED OUTAGE | 281.33 | |
| PO | 2/1/2001 0:00 | 2/10/2001 2:47 | PLANNED OUTAGE | 218.78 | |
| FO | 3/24/2001 0:43 | 3/25/2001 2:11 | WATERWALL TUBE LEAK - CORNER 3, 3 LEAKS | 25.47 | |
| FO | 4/1/2001 0:00 | 4/2/2001 7:48 | WATERWALL TUBE LEAK | 30.80 | |
| PO | 5/11/2001 23:32 | 5/22/2001 14:56 | CHEMICAL CLEAN BOILER AND CONDENSER SEAL | 255.40 | |
| FO | 6/5/2001 6:00 | 6/9/2001 0:26 | HORIZONTAL SUPERHEAT TUBE LEAK | 90.43 | |
| PO | 9/19/2001 0:30 | 9/21/2001 16:04 | CONDENSER CLEANING | 63.57 | |
| PO | 11/8/2001 21:35 | 11/15/2001 14:20 | PLANNED OUTAGE | 160.75 | |
| PO | 3/22/2002 23:15 | 4/14/2002 12:08 | PERFORMED TRADITIONAL WORK DONE DURING OUTAGES | 539.88 | |
| FO | 4/23/2002 0:07 | 4/24/2002 12:23 | OIL LEAKS ON INTERCEPT VALVES | 36.27 | |
| FO | 4/27/2002 23:10 | 5/3/2002 8:41 | STEAM LEAK ON THROTTLE VALVE FLANGE | 129.52 | |
| FO | 7/10/2002 14:28 | 7/14/2002 0:02 | REMOVING SLAG FROM CLOGGED PASSES | 81.57 | |
| FO | 7/19/2002 9:50 | 7/22/2002 0:37 | TUBE LEAK IN REHEAT SECTION OF BOILER | 62.78 | |
| FO | 8/19/2002 12:03 | 8/22/2002 6:17 | REHEATER TUBE LEAKS | 66.23 | |
| FO | 10/4/2002 0:10 | 10/5/2002 18:13 | EXCITER CIRCUITRY MALFUNCTION | 42.05 | |
| FO | 12/12/2002 22:50 | 12/15/2002 0:30 | WATER WALL TUBE LEAK | 49.67 | |
| PO | 2/21/2003 22:29 | 3/21/2003 14:41 | ANNUAL PLANNED OUTAGE | 664.20 | |
| PO | 2/27/2004 23:42 | 3/21/2004 12:21 | SPRING OUTAGE | 540.65 | |
| FO | 9/21/2004 16:30 | 9/22/2004 20:35 | UNIT TRIP - SUSPECTED TUBE LEAK | 28.08 | |
| PO | 1/2/2005 22:02 | 1/5/2005 1:58 | 2E FEEDWATER HEAD LEAK | 51.93 | |
| PO | 1/27/2005 22:47 | 1/31/2005 7:12 | HORIZONTAL SUPERHEAT SLAGGING | 80.42 | |
| PO | 3/11/2005 23:01 | 3/20/2005 5:30 | PLANNED OUTAGE | 198.48 | |
| PO | 10/1/2005 0:00 | 10/14/2005 16:25 | PLANNED OUTAGE | 328.42 | |
| FO | 1/3/2006 19:00 | 1/5/2006 20:52 | BULL NOSE TUBE LEAK | 49.87 | |
| FO | 1/9/2006 9:25 | 1/11/2006 0:00 | BULL NOSE TUBE LEAK | 38.58 | |
| FO | 1/26/2006 18:45 | 1/28/2006 16:22 | BULL NOSE TUBE LEAK | 45.62 | |
| FO | 1/30/2006 10:22 | 2/1/2006 5:00 | BULL NOSE TUBE LEAK | 42.63 | |
| FO | 2/18/2006 1:05 | 2/19/2006 1:10 | BLOWER FAILED | 24.08 | |
| PO | 2/24/2006 22:07 | 3/18/2006 16:55 | SPRING MAINTENANCE OUTAGE | 522.80 | |
| PO | 5/5/2006 21:25 | 5/8/2006 2:05 | HIGH SILICA | 52.67 | |
| PO | 6/9/2006 23:27 | 6/12/2006 23:09 | AIR HEATER CLEANING | 71.70 | |
| FO | 6/17/2006 1:20 | 6/18/2006 16:53 | BUNDLE SLIPPED IMPACT DAMAGE FROM SOOTBLOWER | 39.55 | |
| FO | 7/29/2006 16:02 | 7/31/2006 5:29 | HORIZONTAL SUPERHEAT LEAK | 37.45 | |

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|----|------------------|-----------------|--|---------|
| FO | 8/28/2006 10:20 | 8/30/2006 0:17 | UNIT DAMAGED BY LIGHTENING STRIKE | 37.95 |
| PO | 3/2/2007 20:45 | 3/17/2007 12:25 | Spring Outage | 350.67 |
| PO | 6/22/2007 19:30 | 6/24/2007 4:48 | failed strainer | 33.30 |
| FO | 7/30/2007 16:38 | 8/1/2007 21:45 | Sootblower erosion failure corner 3 bottom slope | 53.12 |
| PO | 8/10/2007 22:14 | 8/16/2007 20:44 | tube repair bottom slope | 142.50 |
| FO | 9/22/2007 23:12 | 9/24/2007 5:58 | sootblower damage to horizontal superheater | 30.77 |
| FO | 10/7/2007 15:03 | 10/11/2007 0:50 | Unit off - suspected boiler leak main steam stop delayed startup | 81.78 |
| PO | 1/24/2008 23:57 | 1/29/2008 2:02 | fouling in superheater and economizer | 98.08 |
| FO | 2/2/2008 1:06 | 2/3/2008 23:37 | sootblower damage to horizontal superheater | 46.52 |
| FO | 2/27/2008 19:59 | 3/3/2008 18:03 | rupture on upper slope tube | 118.07 |
| FO | 3/7/2008 2:54 | 3/12/2008 11:17 | Roof tube slope leak | 127.38 |
| PO | 3/21/2008 6:14 | 5/24/2008 14:20 | 2008 major outage | 1544.10 |
| PE | 5/24/2008 14:20 | 5/25/2008 15:33 | Vibration | 25.22 |
| PO | 5/27/2008 5:50 | 5/30/2008 5:31 | Gland Steam Seal Line Repair | 71.68 |
| FO | 5/30/2008 8:25 | 5/31/2008 15:13 | low boiler pH upset | 30.80 |
| FO | 6/8/2008 22:17 | 6/11/2008 0:04 | opacity | 49.78 |
| FO | 6/13/2008 21:00 | 6/17/2008 8:43 | small leak in reheater pendent | 83.72 |
| FO | 6/17/2008 14:34 | 6/25/2008 11:47 | small leaks in reheat pendent | 189.22 |
| FO | 7/18/2008 21:41 | 7/21/2008 3:10 | leaks in lower bends | 53.48 |
| FO | 9/18/2008 9:20 | 9/22/2008 14:27 | Hydrogen damage upper slope tubes | 101.12 |
| PO | 10/31/2008 22:10 | 12/4/2008 0:58 | outage to replace roof slope tubes | 795.80 |
| FO | 1/29/2009 7:57 | 2/2/2009 10:00 | Tube rupture #3 corner burner area - March outage pulled ahead | 98.05 |
| PO | 2/2/2009 10:00 | 2/8/2009 7:30 | 2009 spring mtc outage | 141.50 |
| FO | 3/10/2009 9:30 | 3/13/2009 7:40 | extreme fuel issues forced unit off line | 70.17 |
| PO | 3/31/2009 22:32 | 4/8/2009 10:00 | High unit opacity | 179.47 |
| PO | 5/22/2009 15:40 | 5/24/2009 2:00 | superheater damaged by sootblower impact | 34.33 |
| PO | 6/11/2009 13:53 | 6/17/2009 16:00 | precip grounding problems | 146.12 |
| PO | 7/19/2009 10:35 | 7/23/2009 21:00 | maintenance outage for balancing | 106.42 |
| PO | 8/30/2009 7:00 | 9/1/2009 16:30 | maintenance outage for balancing | 57.50 |
| PO | 9/18/2009 3:28 | 12/12/2009 9:37 | stator restack project | 2047.15 |
| FO | 1/10/2010 18:20 | 1/14/2010 0:52 | Economizer Tube Leak | 78.53 |
| FO | 1/14/2010 15:30 | 2/11/2010 17:00 | exciter failure | 673.50 |
| FO | 3/18/2010 15:26 | 3/20/2010 0:44 | Controls Trip | 33.30 |
| PO | 3/31/2010 22:23 | 4/14/2010 20:00 | Exciter Change | 333.62 |
| PO | 5/1/2010 1:06 | 5/5/2010 2:28 | placed balance shot in #7 bearing | 97.37 |
| FO | 6/14/2010 13:54 | 6/18/2010 16:30 | Waterwall leak - H2 damage 6-1/2 floor corner 1 | 98.60 |

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|--|----|-----------------|------------------|--|--------|
| | FO | 6/26/2010 21:25 | 7/2/2010 13:47 | waterwall leak - sootblower erosion 6 1/2 floor corner 1 | 136.37 |
| | FO | 7/10/2010 0:54 | 7/14/2010 2:03 | sootblower damage to primary superheater | 97.15 |
| | FO | 7/22/2010 13:32 | 7/26/2010 20:16 | hydrogen damage to bull nose | 102.73 |
| | PO | 9/24/2010 20:13 | 11/4/2010 7:45 | unit condition evaluation | 971.53 |
| | FO | 11/9/2010 1:55 | 11/23/2010 0:39 | unable to maintain sootblowing | 334.73 |
| | FO | 12/9/2010 14:15 | 12/13/2010 6:07 | Waterwall leak - sootblower erosion lower slope | 87.87 |
| | FO | 1/4/2011 7:30 | 1/8/2011 14:36 | Tube leak - water wall | 103.10 |
| | FO | 1/17/2011 12:54 | 1/22/2011 17:48 | Tube Leak - water wall | 124.90 |
| | PO | 2/12/2011 3:30 | 2/15/2011 2:18 | Replace boiler feed pump packing | 70.80 |
| | PO | 3/4/2011 23:36 | 4/6/2011 19:59 | Scheduled Maintenance outage | 787.38 |
| | PO | 9/30/2011 16:00 | 11/7/2011 10:00 | Scheduled Maintenance outage | 907.00 |
| | FO | 12/5/2011 17:00 | 12/9/2011 9:00 | Air Heater Drive Failure | 88.00 |
| | FO | 12/12/2011 5:30 | 12/13/2011 13:48 | Main Auxiliary Breaker issue | 32.30 |
| | PO | 1/27/2012 13:15 | 2/14/2012 10:00 | 18" expansion joint failed | 428.75 |
| | PO | 3/3/2012 1:00 | 3/22/2012 15:30 | Scheduled Mtc Outage | 469.50 |
| | PO | 5/23/2012 2:42 | 6/4/2012 8:00 | Boiler casing failure at OFA dampers | 293.30 |
| | PO | 6/30/2012 1:00 | 7/3/2012 13:30 | Boiler Tube Leak | 84.50 |
| | PO | 8/25/2012 0:00 | 10/5/2012 15:00 | Upgrade of fuel gas supply piping | 999.00 |
| | PO | 3/1/2013 23:00 | 3/25/2013 15:00 | scheduled maintenance outage | 567.00 |

| Ottumwa - Ottumwa - Unit 1 | | | | |
|----------------------------|------------------|------------------|--|--------|
| Type | Start | | | Eq Hrs |
| PO | 2/2/2001 22:22 | 2/18/2001 18:04 | UNIT OFF LINE FOR CLEANING PRECIP | 379.70 |
| FO | 2/19/2001 13:27 | 2/21/2001 20:06 | OFF LINE TO REPAIR FIRST REHEATER TUBELEAK | 54.65 |
| FO | 4/6/2001 2:40 | 4/8/2001 7:57 | OFF LINE TO REPAIR INTERMEDIATE REHEATTUBE LEAKS | 53.28 |
| FO | 5/13/2001 15:46 | 5/18/2001 20:50 | BOILER WATERWALL TUBE REPAIR | 125.07 |
| PO | 6/1/2001 19:11 | 6/10/2001 12:43 | OFF LINE FOR SPRING OUTAGE | 209.53 |
| FO | 9/24/2001 23:11 | 9/27/2001 1:00 | OFF LINE FOR RH TUBE REPAIR | 49.82 |
| PO | 10/5/2001 22:35 | 10/20/2001 15:00 | OFF LINE FOR FALL OUTAGE | 352.42 |
| PO | 1/14/2002 22:25 | 1/25/2002 23:16 | UNIT OFF LINE FOR TUBE REPAIR AND PRECIP CLEAN | 264.85 |
| FO | 4/12/2002 10:37 | 4/15/2002 19:20 | REHEATER TUBE LEAK REPAIR - OFF LINE | 80.72 |
| PO | 4/26/2002 21:48 | 5/1/2002 0:00 | OFF LINE - SPRING OUTAGE | 98.20 |
| PO | 5/1/2002 0:00 | 5/17/2002 19:02 | OFF LINE - SPRING OUTAGE | 403.03 |
| PO | 8/9/2002 20:09 | 8/11/2002 7:29 | UNIT OFF LINE FOR PRECIP REPAIR | 35.33 |
| PO | 9/20/2002 22:23 | 9/28/2002 6:41 | FALL OUTAGE - OFF LINE | 176.30 |
| PO | 1/18/2003 0:42 | 1/26/2003 9:08 | UNIT OFF LINE FOR PRECIP CLEAN | 200.43 |
| PO | 4/11/2003 22:58 | 4/12/2003 23:00 | OFF LINE - WATERWALL LEAK REPAIR | 24.03 |
| PO | 5/16/2003 22:29 | 5/31/2003 19:38 | UNIT OFF LINE SPRING OUTAGE | 357.15 |
| PO | 9/26/2003 22:09 | 10/1/2003 0:00 | OFF LINE FOR FALL OUTAGE | 97.85 |
| PO | 10/1/2003 0:00 | 10/4/2003 8:59 | OFF LINE - FALL OUTAGE - PRECIP CLEAN | 80.98 |
| PO | 1/2/2004 22:32 | 1/10/2004 11:13 | OFF LINE - TUBE REPAIR / PRECIP CLEAN | 180.68 |
| FO | 1/28/2004 15:04 | 1/30/2004 9:41 | GROSS CONTAMINATION ALL WATER/STEAM SYSTEMS WHILE ASSOCIATED WITH LOSS OF VACUUM | 42.62 |
| FO | 3/26/2004 22:49 | 3/29/2004 0:13 | SH PLATEN TUBE LEAK REPAIR | 49.40 |
| FO | 4/8/2004 21:30 | 4/10/2004 5:01 | OFFLINE TUBE REPAIR | 31.52 |
| PO | 5/16/2004 22:21 | 6/1/2004 0:00 | OFF LINE FOR SPRING OUTAGE | 361.65 |
| PO | 6/1/2004 0:00 | 6/8/2004 21:36 | SPRING OUTAGE | 189.60 |
| FO | 7/29/2004 12:36 | 8/1/2004 0:00 | OFF LINE FOR REHEAT TUBE LEAK REPAIR | 59.40 |
| FO | 8/1/2004 0:00 | 8/6/2004 15:30 | OFF LINE FOR SUPERHEATER REPAIRS | 135.50 |
| FO | 9/10/2004 2:09 | 9/13/2004 2:19 | UNIT OFF LINE REPAIR LOWER SLOPE TUBE | 72.17 |
| FO | 9/28/2004 21:58 | 10/1/2004 0:00 | UNIT OFF LINE FOR ISOLATED PHASE BUSS | 50.03 |
| PO | 10/1/2004 0:00 | 10/8/2004 19:17 | OFF LINE FALL OUTAGE | 187.28 |
| FO | 10/30/2004 18:00 | 11/1/2004 0:00 | UNIT OFF LINE REPAIR SUPERHEAT TUBE LEAK | 31.00 |
| FO | 11/1/2004 0:00 | 11/2/2004 10:15 | REPAIR SH TUBE LEAK | 34.25 |
| PO | 1/7/2005 21:38 | 1/16/2005 2:47 | UNIT OFF LINE FOR PRECIP CLEAN | 197.15 |
| FO | 2/17/2005 23:58 | 2/19/2005 16:44 | UNIT OFF LINE FOR REHEAT DSM REPAIRS | 40.77 |
| FO | 2/19/2005 22:32 | 3/1/2005 0:00 | INTERNAL FAILURE MGSUT | 217.47 |

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|--|----|------------------|------------------|--|---------|
| | FO | 3/1/2005 0:00 | 4/1/2005 0:00 | MAIN STEP UP TRANSFORMER INTERNAL FAILURE | 744.00 |
| | FO | 4/1/2005 0:00 | 5/1/2005 0:00 | MAIN STEPUP TRANSFORMER INTERNAL FAILURE | 719.00 |
| | FO | 5/1/2005 0:00 | 5/2/2005 9:32 | MAIN STEPUP TRANSFORMER INTERNAL FAILURE | 33.53 |
| | FO | 7/26/2005 22:01 | 7/29/2005 2:50 | UNIT OFF LINE FOR PRECIP CLEAN | 52.82 |
| | PO | 9/9/2005 22:05 | 9/18/2005 21:01 | UNIT OFF LINE FALL OUTAGE | 214.93 |
| | FO | 9/25/2005 6:55 | 9/27/2005 6:21 | UNIT OFF LINE REPAIR SH PLATEN REPAIR | 47.43 |
| | FO | 9/27/2005 13:00 | 9/30/2005 12:17 | UNIT OFF LINE REPAIR SH PLATEN | 71.28 |
| | FO | 11/20/2005 0:00 | 11/21/2005 11:58 | UNIT OFF LINE REPAIR WATERWALL TUBE LEAK | 35.97 |
| | FO | 11/27/2005 19:05 | 12/1/2005 0:00 | UNIT OFF LINE EXPANSION JOINT REPAIR AND PRECIP WORK | 76.92 |
| | FO | 12/8/2005 4:30 | 12/9/2005 23:15 | UNIT TRIP DCS FAILURE | 42.75 |
| | PO | 1/13/2006 22:26 | 1/22/2006 18:30 | OFF LINE, PRECIP GRIT BLAST AND SH PLATEN TUBE REPAIR | 212.07 |
| | FO | 1/22/2006 18:30 | 1/24/2006 13:41 | LOWER SLOPE TUBE LEAK | 43.18 |
| | PO | 2/1/2006 0:00 | 2/4/2006 17:55 | OFF LINE REPLACE BCWP 101 | 89.92 |
| | PO | 5/12/2006 22:46 | 6/1/2006 0:00 | OFF LINE, SPRING OUTAGE, PRECIP CLEAN,TURB FOAM CLEAN | 457.23 |
| | PO | 6/1/2006 0:00 | 6/4/2006 16:30 | OFF LINE SPRING OUTAGE | 88.50 |
| | FO | 6/11/2006 2:26 | 6/12/2006 23:47 | UNIT OFF LINE TO REPAIR WATER WALL TUBE LEAK | 45.35 |
| | FO | 9/4/2006 12:37 | 9/7/2006 20:30 | OFF LINE FOR REPAIR | 79.88 |
| | FO | 9/11/2006 4:51 | 9/13/2006 4:15 | OFF LINE FOR REPAIR | 47.40 |
| | PO | 9/23/2006 0:14 | 10/1/2006 0:00 | OFF LINE FOR FALL OUTAGE | 191.77 |
| | FO | 10/14/2006 8:44 | 10/17/2006 10:00 | Off line for river makeup repair | 73.27 |
| | FO | 10/17/2006 10:00 | 10/18/2006 20:20 | South lower slope tube leak | 34.33 |
| | FO | 11/2/2006 23:15 | 11/4/2006 16:02 | off line for SH repair | 40.78 |
| | FO | 11/10/2006 0:24 | 11/12/2006 2:13 | off line - RH tube repair | 49.82 |
| | PO | 1/6/2007 0:58 | 1/12/2007 13:55 | Off line for precip clean | 156.95 |
| | FO | 1/15/2007 10:19 | 1/17/2007 6:01 | Off line for SH tube repair | 43.70 |
| | FO | 2/22/2007 23:39 | 3/1/2007 3:56 | Off line to clean RH | 148.28 |
| | FO | 3/9/2007 1:21 | 3/10/2007 4:37 | Off line for RH tube repair | 27.27 |
| | FO | 3/28/2007 2:42 | 3/30/2007 14:35 | Off line for lower slope tube repair | 59.88 |
| | FO | 4/3/2007 8:57 | 4/4/2007 15:30 | Off Line Repair SH Tube Leak | 30.55 |
| | PO | 4/13/2007 18:32 | 6/4/2007 0:00 | Off Line scheduled outage | 1229.47 |
| | PE | 6/4/2007 0:00 | 6/14/2007 6:29 | overhaul, boiler SH replaced, DCS install | 246.48 |
| | FO | 6/14/2007 20:37 | 6/15/2007 23:04 | high vibration | 26.45 |
| | FO | 6/27/2007 20:33 | 6/30/2007 19:52 | off line, boiler leak repair, turbine screens rePOval + balance shot | 71.32 |
| | PO | 8/16/2007 22:01 | 8/19/2007 4:55 | Off line. Precip clean, GSU gasket repair, Blr ww leak repair | 54.90 |
| | PO | 10/5/2007 22:39 | 10/13/2007 4:26 | Off line for fall outage | 173.78 |
| | PO | 1/4/2008 22:00 | 1/11/2008 0:00 | Unit off line for precip grit blast | 146.00 |

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|--|----|------------------|------------------|--|--------|
| | PO | 3/14/2008 22:12 | 3/28/2008 0:24 | Off Line - Spring Outage | 314.20 |
| | PO | 6/5/2008 22:15 | 6/8/2008 17:28 | Unit off line for precip cleaning | 67.22 |
| | PO | 8/7/2008 21:59 | 8/11/2008 6:09 | Off line for precip clean and SH tube repair | 80.17 |
| | FO | 8/19/2008 23:23 | 8/22/2008 20:16 | Off line MSUT repair | 68.88 |
| | FO | 10/17/2008 22:07 | 10/20/2008 11:25 | Off line repair SH tube leak | 61.30 |
| | PO | 10/31/2008 23:13 | 11/11/2008 6:11 | Off line for fall outage | 247.97 |
| | PO | 3/27/2009 22:00 | 4/12/2009 12:00 | Unit off line spring outage | 374.00 |
| | PE | 4/12/2009 12:00 | 4/15/2009 12:16 | Extension of spring outage | 72.27 |
| | PO | 5/22/2009 22:01 | 5/26/2009 4:27 | Off line water wall tube leak repair | 78.43 |
| | FO | 8/11/2009 21:53 | 8/14/2009 9:05 | Off line repair condenser tube leak | 59.20 |
| | FO | 10/15/2009 17:34 | 10/20/2009 11:37 | Off line repair SH tube leak | 114.05 |
| | FO | 12/20/2009 14:11 | 12/21/2009 18:02 | BFP valve position feedback fail | 27.85 |
| | PO | 2/5/2010 23:06 | 3/1/2010 0:00 | Unit off line planned outage | 552.90 |
| | FO | 3/1/2010 0:00 | 3/3/2010 21:06 | Extension of PO but unit would not start so required to be UI RH drain line repair | 69.10 |
| | PO | 4/16/2010 8:00 | 4/22/2010 8:40 | CRH 101 blow off connection leak repair | 144.67 |
| | PO | 6/18/2010 21:27 | 6/20/2010 6:20 | Inspect Condenser | 32.88 |
| | PO | 6/23/2010 23:11 | 6/29/2010 15:57 | Condenser Cleaning - Off Line | 136.77 |
| | FO | 9/9/2010 18:42 | 9/17/2010 22:00 | Unit off line repair tube leak | 195.30 |
| | PO | 9/17/2010 22:00 | 9/22/2010 18:10 | Unit off line fall outage | 116.17 |
| | FO | 12/4/2010 0:03 | 12/6/2010 5:48 | Boiler tube leak lower slope | 53.75 |
| | FO | 2/26/2011 23:38 | 2/28/2011 22:25 | Finishing SH tube leak | 46.78 |
| | PO | 3/18/2011 22:00 | 4/6/2011 18:40 | Unit off line planned outage | 452.67 |
| | FO | 6/14/2011 2:00 | 6/16/2011 2:49 | Transmission system line fault | 48.82 |
| | PO | 6/24/2011 21:53 | 6/29/2011 23:12 | Off line replace BCWP 103 | 121.32 |
| | PO | 8/26/2011 22:06 | 8/30/2011 0:58 | Unit off line clean precip | 74.87 |
| | PO | 10/21/2011 21:06 | 10/30/2011 12:00 | Unit off line planned outage | 206.90 |
| | PE | 10/30/2011 12:00 | 11/4/2011 19:00 | Extend outage install BCWP 102 | 127.00 |
| | PO | 11/18/2011 22:43 | 11/22/2011 11:00 | Off line replace BCWP 103 | 84.28 |
| | FO | 2/14/2012 8:38 | 2/20/2012 20:59 | Off line due to boiler water chemistry | 156.35 |
| | PO | 4/27/2012 22:00 | 6/3/2012 22:08 | Replace reheat headers, lower slope, turbine work, clean precip | 888.13 |
| | FO | 6/4/2012 4:48 | 6/6/2012 15:28 | False operation of G2 relay | 58.67 |
| | FO | 6/9/2012 14:39 | 6/11/2012 6:25 | Off line balance shot LP B | 39.77 |
| | PO | 6/12/2012 1:52 | 6/16/2012 23:46 | Off line exciter alignment Brg 11 vibration | 117.90 |
| | FO | 7/16/2012 1:47 | 7/17/2012 18:18 | Condenser tube leak | 40.52 |
| | PO | 10/26/2012 22:00 | 11/3/2012 14:30 | Unit off line planned outage | 184.50 |
| | FO | 11/3/2012 14:30 | 11/6/2012 22:41 | BCWP 103 fail | 81.18 |

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|--|----|-----------------|------------------|--------------------------------------|--------|
| | FO | 11/9/2012 12:07 | 11/15/2012 12:23 | Disimilar metal weld failure | 144.27 |
| | FO | 12/4/2012 7:00 | 12/6/2012 18:27 | Boiler waterwall tube leak | 59.45 |
| | PO | 1/8/2013 15:44 | 1/15/2013 8:40 | Off line clean precip | 160.93 |
| | FO | 2/2/2013 13:56 | 2/4/2013 11:32 | Secondary SH tube leak DSM weld fail | 45.60 |
| | FO | 2/6/2013 12:48 | 2/7/2013 21:30 | Secondary SH tube leak DSM weld fail | 32.70 |
| | PO | 3/15/2013 17:35 | 3/31/2013 16:00 | Off line spring outage | 382.42 |
| | PO | 6/13/2013 21:40 | 6/17/2013 4:02 | Off line clean precip | 78.37 |

Prairie Creek - Prairie Creek - Unit 3

| Type | Start | End | Description | Eq. Hrs. |
|------|-----------------|------------------|---|----------|
| PO | 4/13/2001 20:10 | 4/21/2001 0:21 | SPRING OUTAGE | 172.18 |
| PO | 9/14/2001 11:43 | 10/5/2001 18:23 | FALL MAINTENANCE OUTAGE | 510.67 |
| FO | 1/1/2002 17:05 | 1/3/2002 17:10 | EXCITER TROUBLE AFTER UNIT TRIP | 48.08 |
| FO | 4/10/2002 14:17 | 4/12/2002 22:17 | BURNED BUS BAR ON TRANSFORMER | 56.00 |
| PO | 4/12/2002 22:17 | 4/30/2002 18:12 | REPLACE COLLECTOR RINGS ON GENERATOR | 427.92 |
| PO | 12/8/2002 20:40 | 12/10/2002 0:14 | RING HEADER DRAIN HAND HOLE LEAK, MERLI VALVE REPACK | 27.57 |
| FO | 1/13/2003 20:32 | 1/15/2003 22:42 | REPAIRS TO PRECIPITATOR | 50.17 |
| PO | 4/18/2003 20:49 | 4/22/2003 5:51 | MAINTENANCE OUTAGE TO REPAIR LEAKING HANDWELL GASKET AND REPLACE VALVES | 81.03 |
| FO | 6/28/2003 20:57 | 6/30/2003 13:18 | EXCITER MAIN BOARD FAULT | 40.35 |
| FO | 8/14/2003 9:51 | 8/16/2003 19:20 | BOILER TUBE LEAK | 57.48 |
| PO | 9/5/2003 0:08 | 9/25/2003 7:05 | SCHEDULED 3 WEEK OUTAGE FOR ROUTINE BOILER MAINTENANCE | 486.95 |
| PO | 5/8/2004 17:41 | 5/12/2004 1:14 | PLANNED OUTAGE | 79.55 |
| FO | 7/8/2004 17:25 | 7/12/2004 0:25 | WATER WALL TUBE LEAK | 79.00 |
| PO | 9/10/2004 21:50 | 10/2/2004 13:02 | PLANNED BOILER OUTAGE | 519.20 |
| FO | 10/2/2004 13:02 | 1/1/2005 0:00 | BEARING FAILURE | 2171.97 |
| FO | 1/1/2005 0:00 | 2/18/2005 13:52 | BEARING FAILURE | 1165.87 |
| PO | 2/20/2005 8:37 | 2/21/2005 18:41 | BALANCE SHOT | 34.07 |
| FO | 7/2/2005 5:02 | 7/5/2005 23:29 | WATER WALL LEAK | 90.45 |
| PO | 11/4/2005 20:10 | 11/21/2005 11:38 | PLANNED OUTAGE | 399.47 |
| FO | 12/7/2005 5:27 | 12/10/2005 19:47 | WATER WALL TUBE LEAK | 86.33 |
| FO | 1/9/2006 22:28 | 1/11/2006 20:44 | 3A CIRC PUMP SHAFT BROKE | 46.27 |
| PO | 1/20/2006 18:28 | 2/20/2006 0:00 | PLANNED BOILER OVERHAUL | 725.53 |
| PE | 2/20/2006 0:00 | 2/24/2006 3:02 | UNKNOWN VIBRATION IN TURBINE | 99.03 |
| FO | 2/24/2006 3:02 | 2/25/2006 10:30 | ECONOMIZER TUBE LEAK | 31.47 |
| PO | 2/25/2006 10:30 | 3/14/2006 14:07 | UNKNOWN VIBRATION | 411.62 |
| FO | 3/14/2006 16:14 | 3/16/2006 9:26 | CIRC PUMP LIMITATION | 41.20 |
| PO | 9/8/2006 20:20 | 9/15/2006 17:02 | HIGH OPACITY PROBLEM INVESTIGATE AND CLEAN BOILER AND PRECIPITATOR | 164.70 |
| PO | 11/4/2006 23:03 | 11/11/2006 3:13 | STATION SERVICE STARTUP TRANSFORMER | 148.17 |
| FO | 12/7/2006 23:09 | 12/13/2006 10:32 | Loss of station power | 131.38 |
| FO | 3/15/2007 2:53 | 3/17/2007 11:08 | OTHER MISCELLANEOUS STEAM TURBINE PROBLEMS | 56.25 |
| PO | 7/15/2007 5:37 | 7/19/2007 7:46 | | 98.15 |
| PO | 10/5/2007 21:28 | 11/3/2007 8:12 | Down for planned outage on boiler #3. | 682.73 |
| FO | 11/4/2007 4:21 | 11/6/2007 0:44 | F540 | 44.38 |
| FO | 11/23/2007 9:58 | 11/30/2007 14:18 | F370 | 172.33 |

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|----|------------------|------------------|--|---------|
| FO | 12/14/2007 14:39 | 12/17/2007 17:19 | F420, Low vacuum trip, turbine. | 74.67 |
| PO | 1/13/2008 0:11 | 1/19/2008 3:20 | LEAK IN FEEDWATER HEATER | 147.15 |
| FO | 4/3/2008 23:05 | 4/8/2008 21:14 | BOILER TUBE LEAK | 118.15 |
| FO | 4/17/2008 11:12 | 4/27/2008 13:25 | GOVERNOR CONTROL VALVES | 242.22 |
| FO | 5/10/2008 14:32 | 5/19/2008 13:31 | TROUBLE SHOOTING OPACITY EXCEEDANCES | 214.98 |
| FO | 6/12/2008 13:11 | 1/1/2009 0:00 | FLOOD | 4859.82 |
| FO | 1/1/2009 0:00 | 9/10/2009 20:00 | FLOOD | 6067.00 |
| PO | 9/17/2009 12:46 | 10/5/2009 8:08 | Post-Flood Balance Shot & Misc Punchlist Items | 427.37 |
| FO | 11/9/2009 0:06 | 11/19/2009 16:00 | Sootblower erosion & collateral damage in middle of bundles | 255.90 |
| FO | 11/21/2009 9:05 | 12/1/2009 12:00 | Overheated feeder/support tube upper bundle | 242.92 |
| FO | 12/10/2009 11:54 | 12/14/2009 7:07 | Circulating water tunnel hatch lifted resulting in wet switchgear and protective relay | 91.22 |
| FO | 2/11/2010 3:59 | 2/17/2010 20:41 | Secondary SH Plugged Due to IK4 OOS | 160.70 |
| FO | 4/2/2010 17:00 | 4/10/2010 14:00 | Trip Coil Burned Up | 189.00 |
| PO | 5/9/2010 12:00 | 5/13/2010 17:00 | Clean Air Heater and ESP, Install Burner Restrictor Plates for OFA System | 101.00 |
| PO | 6/12/2010 9:22 | 6/17/2010 8:00 | Clean ESP, patch furnace tramp air leakage | 118.63 |
| FO | 7/26/2010 8:00 | 7/28/2010 18:05 | Turbine Trip Coil Shorted - Install New Coil, valve, and Linkage Assembly | 58.08 |
| FO | 11/13/2010 4:58 | 11/17/2010 2:08 | Leak first SH on 6th floor - turbine not on when leak found - only boiler | 93.17 |
| FO | 11/18/2010 6:31 | 11/21/2010 0:54 | SH leak on 6th floor | 66.38 |
| PO | 12/28/2010 22:40 | 12/30/2010 9:11 | gland seal steam iso valve and main steam stop valve needs repacked | 34.52 |
| FO | 1/21/2011 21:15 | 2/10/2011 13:09 | Neutral winding in GSU tripped 86 lockout | 471.90 |
| PO | 3/4/2011 21:28 | 4/25/2011 21:38 | outage to replace primary SH | 1247.17 |
| PO | 5/2/2011 9:01 | 5/8/2011 5:30 | economizer tube leak | 140.48 |
| PO | 5/12/2011 15:20 | 5/13/2011 19:06 | 3A FD Fan vibration | 27.77 |
| FO | 9/5/2011 12:20 | 9/14/2011 18:00 | 9 intermediate SH leaks (inner nested tubes in pendant) | 221.67 |
| FO | 10/11/2011 21:18 | 10/13/2011 8:47 | economizer tube leak | 35.48 |
| FO | 11/3/2011 0:31 | 11/5/2011 17:00 | 5th floor tube leak SH section "nested loop" | 64.48 |
| FO | 11/5/2011 18:00 | 11/23/2011 14:27 | 3A ID Fan Speed coupling failure fluid drive pump | 429.45 |
| PO | 12/13/2011 19:50 | 12/16/2011 4:52 | stack inspection | 57.03 |
| FO | 1/15/2012 17:41 | 1/18/2012 11:31 | SH pendant tube leak | 65.83 |
| FO | 1/31/2012 12:41 | 2/2/2012 22:00 | SH Pendant leak | 57.32 |
| PO | 3/28/2012 21:58 | 4/14/2012 15:00 | SH Pendant hangers broken, rebuilding support structure in penthouse | 401.03 |
| PO | 4/30/2012 6:00 | 5/9/2012 16:00 | ITC isolating 115kV bus K1 for transmission system maint/outage | 226.00 |
| PO | 5/27/2012 22:38 | 5/31/2012 15:00 | cracked steam chest pressure impulse line | 88.37 |
| PO | 7/20/2012 23:38 | 7/23/2012 7:52 | SH pendant leak - 6th floor pad welded | 56.23 |
| PO | 8/4/2012 21:33 | 8/8/2012 18:45 | precip inspect, blew out economizer, leak on SH Drain in econ area prior repairs made | 93.20 |
| PO | 9/14/2012 1:58 | 10/5/2012 17:00 | precip repairs plus turbine worm gear replacement | 519.03 |

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|--|----|-----------------|------------------|---|--------|
| | PO | 10/15/2012 6:27 | 10/19/2012 19:00 | 3C field alignment and clearance issues | 108.55 |
| | FO | 12/10/2012 0:05 | 12/12/2012 18:00 | tube leak in second superheater | 65.92 |
| | FO | 1/19/2013 15:39 | 1/20/2013 17:15 | leaking hand hold on ring header | 25.60 |
| | FO | 2/10/2013 11:27 | 2/21/2013 13:35 | MSVBV dump valve leaking not allow turbine MSV to develop oil pressure and open | 266.13 |
| | PO | 2/21/2013 13:35 | 3/7/2013 18:00 | take measurements for high freq TR upgrade | 340.42 |
| | FO | 5/30/2013 15:43 | 6/3/2013 4:05 | Cedar River reached a level where the unit needed to be shut down | 84.37 |

Prairie Creek - Prairie Creek - Unit 4

| Type | Start | End | Description | Eq. Hrs. |
|------|------------------|------------------|---|----------|
| FO | 2/11/2001 19:05 | 2/15/2001 15:34 | ECONOMIZER TUBE LEAK DUE TO SOOTBLOWEREROSION | 92.48 |
| PO | 2/22/2001 23:51 | 3/23/2001 20:53 | SCHEDULED SPRING OUTAGE | 693.03 |
| FO | 5/22/2001 18:26 | 5/23/2001 20:07 | CONTROL OIL PIPING CRACKED CAUSING TURBINE OIL FIRE | 25.68 |
| PO | 1/18/2002 6:44 | 2/1/2002 0:00 | SCHEDULED BOILER OUTAGE (ANNUAL) | 329.27 |
| PO | 2/1/2002 0:00 | 3/1/2002 0:00 | SCHEDULED BOILER OUTAGE | 672.00 |
| PO | 3/1/2002 0:00 | 4/1/2002 0:00 | MAJOR BOILER OUTAGE | 744.00 |
| PO | 4/1/2002 0:00 | 4/3/2002 10:23 | MAJOR BOILER OUTAGE | 58.38 |
| PO | 5/29/2002 9:08 | 5/31/2002 19:53 | #7 BEARING EXCITER WORK | 58.75 |
| PO | 9/13/2002 1:07 | 9/22/2002 22:13 | SCHEDULED UNIT OUTAGE | 237.10 |
| PO | 1/18/2003 0:36 | 2/11/2003 22:43 | CONDENSER RETUBE | 598.12 |
| FO | 2/20/2003 2:58 | 2/22/2003 22:56 | PA DUCTWORK FAILURE | 67.97 |
| FO | 9/9/2003 11:57 | 9/12/2003 8:29 | BOILER TUBE LEAK IN THE ECONOMIZER SECTION | 68.53 |
| FO | 9/30/2003 12:37 | 10/2/2003 6:10 | BOILER TUBE LEAK IN PRIMARY SUPERHEAT REGION | 41.55 |
| FO | 11/11/2003 6:55 | 11/17/2003 8:45 | SECONDARY SUPERHEAT BOILER TUBE LEAK | 145.83 |
| FO | 1/5/2004 23:42 | 1/11/2004 10:42 | 2ND SUPERHEATER BOILER TUBE LEAK | 131.00 |
| FO | 1/14/2004 9:37 | 1/16/2004 0:27 | RING HEADER LEAK | 38.83 |
| PO | 5/7/2004 21:37 | 5/29/2004 5:10 | PLANNED OUTAGE | 511.55 |
| FO | 5/31/2004 0:48 | 6/3/2004 10:28 | FIRST REHEAT BOILER TUBE LEAK | 81.67 |
| FO | 6/3/2004 17:15 | 6/6/2004 20:46 | FIRST REHEAT BOILER TUBE LEAK | 75.52 |
| FO | 9/20/2004 17:48 | 9/23/2004 7:43 | FIRST SUPER HEATER TUBE LEAK | 61.92 |
| FO | 12/1/2004 19:02 | 12/3/2004 14:35 | SUPERHEATER BOILER TUBE LEAK | 43.55 |
| FO | 12/23/2004 12:12 | 12/25/2004 14:40 | ECONOMIZER BOILER TUBE LEAK | 50.47 |
| FO | 2/17/2005 13:03 | 2/20/2005 1:12 | LEAK IN SECOND REHEATER TUBE | 60.15 |
| PO | 2/25/2005 21:55 | 3/6/2005 11:16 | BOILER OVERHAUL | 205.35 |
| FO | 3/22/2005 0:01 | 3/23/2005 21:11 | AIR DAMPER | 45.17 |
| FO | 5/1/2005 0:04 | 5/2/2005 18:30 | ECONOMIZER BOILER TUBE LEAK | 42.43 |
| FO | 5/27/2005 19:58 | 6/6/2005 0:48 | FAN MOTOR WENT OUT | 220.83 |
| FO | 6/16/2005 7:40 | 6/19/2005 4:29 | SUPERHEATER TUBE LEAK | 68.82 |
| FO | 7/3/2005 11:00 | 7/5/2005 16:29 | ECONOMIZER TUBE LEAK | 53.48 |
| FO | 7/18/2005 13:29 | 7/22/2005 10:29 | REHEAT TUBE LEAK | 93.00 |
| FO | 2/14/2006 2:39 | 2/15/2006 4:00 | ECONOMIZER TUBE LEAK | 25.35 |
| FO | 2/15/2006 4:00 | 3/1/2006 16:33 | 4C EXTRACTION PIPING STRESSED - REQUIRED ENGINEERING ASSESSMENT | 348.55 |
| PO | 4/19/2006 14:40 | 5/21/2006 14:29 | PLANNED SPRING OUTAGE | 767.82 |
| FO | 6/11/2006 18:14 | 6/16/2006 11:18 | TUBE LEAK & OPACITY | 113.07 |

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|--|----|------------------|------------------|--|---------|
| | PO | 6/23/2006 20:32 | 6/26/2006 11:25 | OPACITY PROBLEMS | 62.88 |
| | FO | 10/17/2006 23:19 | 10/21/2006 14:32 | First Reheat Tube leak | 87.22 |
| | FO | 12/7/2006 22:52 | 12/31/2006 23:59 | Backup system failed | 577.12 |
| | PO | 1/1/2007 0:00 | 2/19/2007 15:32 | Backup System Failed | 1191.53 |
| | FO | 4/15/2007 6:47 | 4/18/2007 0:19 | First Superheat tube leak | 65.53 |
| | PO | 7/9/2007 20:38 | 7/14/2007 9:28 | | 108.83 |
| | PO | 2/8/2008 22:12 | 3/13/2008 18:24 | ANNUAL OUTAGE | 811.20 |
| | FO | 6/12/2008 12:15 | 1/1/2009 0:00 | FLOOD | 4860.75 |
| | FO | 1/1/2009 0:00 | 6/11/2009 20:23 | FLOOD | 3883.38 |
| | FO | 6/11/2009 22:42 | 6/19/2009 13:55 | Balancing after flood | 183.22 |
| | FO | 6/22/2009 10:35 | 6/25/2009 11:12 | balancing after flood | 72.62 |
| | FO | 6/25/2009 18:15 | 6/29/2009 23:37 | balancing after flood | 101.37 |
| | FO | 7/3/2009 9:03 | 7/7/2009 14:34 | Turbine/Generator Vibration Balance Shot | 101.52 |
| | FO | 7/10/2009 11:42 | 7/12/2009 18:01 | pH excursion - boiler flush | 54.32 |
| | FO | 7/13/2009 15:17 | 7/24/2009 14:52 | Superheater Tube Leaks | 263.58 |
| | FO | 7/25/2009 3:52 | 8/3/2009 12:57 | Pulverizer Trunnion Seals Leaking | 225.08 |
| | PO | 8/3/2009 19:42 | 8/5/2009 5:40 | pulverizer seal air control | 33.97 |
| | FO | 8/5/2009 22:45 | 8/9/2009 3:55 | Mill tripped | 77.17 |
| | FO | 8/11/2009 0:16 | 12/10/2009 14:28 | Generator high vibration | 2919.20 |
| | FO | 12/21/2009 11:01 | 1/1/2010 0:00 | 4B PA Fan Bearing Failure | 252.98 |
| | FO | 1/1/2010 0:00 | 1/11/2010 8:09 | 4B PA Fan Bearing Failure | 248.15 |
| | FO | 1/11/2010 19:00 | 1/15/2010 12:28 | Secondary SH TubeXXXX MaxiPO WOXXXXXXX | 89.47 |
| | FO | 2/5/2010 12:57 | 2/11/2010 6:05 | Oil Leak from Oil cooler O Ring | 137.13 |
| | FO | 3/11/2010 10:55 | 3/15/2010 19:00 | Tube XX Upper Bundle WO XXXXXXXX | 103.08 |
| | FO | 3/15/2010 19:00 | 3/17/2010 5:00 | Upper Bundle 3 ductment & 7 pads | 34.00 |
| | FO | 3/17/2010 16:00 | 3/18/2010 17:21 | Turbine Trip Coil Not Functioning | 25.35 |
| | FO | 7/18/2010 1:22 | 7/21/2010 10:04 | 4A HP FWH Tube leak. | 80.70 |
| | PO | 9/1/2010 0:36 | 9/5/2010 5:08 | Precip field out of service (grounds) and cleaning - also fixed 4 RH leaks found | 100.53 |
| | FO | 9/27/2010 19:50 | 9/29/2010 10:36 | #7 bearing high vibration trip | 38.77 |
| | FO | 9/29/2010 21:42 | 10/1/2010 7:00 | #7 high vibration - swept out mills and off before planned outage | 33.30 |
| | PO | 10/1/2010 7:00 | 10/15/2010 17:00 | Installation of TWIP system | 346.00 |
| | PO | 5/14/2011 2:12 | 6/1/2011 17:39 | clean air heaters and plug 4A FWH | 447.45 |
| | FO | 6/8/2011 16:33 | 6/15/2011 13:00 | Fire in 4B PA fan & out of spec drum valve | 164.45 |
| | PO | 7/5/2011 7:00 | 7/11/2011 7:37 | repair 4B PA from fire and fix oil seal on 4A Mill | 144.62 |
| | PO | 9/25/2011 14:00 | 9/28/2011 15:30 | 4b2 cd coal leak and mill lube oil leaks | 73.50 |
| | PO | 12/10/2011 7:29 | 12/14/2011 16:00 | stack inspection | 104.52 |

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|--|----|------------------|------------------|--|--------|
| | PO | 12/14/2011 16:00 | 12/16/2011 7:00 | replace chemical feed valve to drum | 39.00 |
| | FO | 2/7/2012 1:59 | 2/12/2012 11:30 | SW corner ring header tube leak | 129.52 |
| | PO | 4/15/2012 0:47 | 5/26/2012 15:00 | Replace 2nd Radiant SH | 998.22 |
| | FO | 5/26/2012 15:00 | 6/4/2012 9:05 | air heater would not turn, ash crusher stuck too | 210.08 |
| | PO | 6/13/2012 0:40 | 6/15/2012 4:19 | repair old failed welds on duct work above crusher dryers | 51.65 |
| | PO | 11/12/2012 11:33 | 11/13/2012 13:16 | 4B PA Duct work cracked from mill puff | 25.72 |
| | FO | 12/22/2012 15:22 | 1/1/2013 0:00 | leak in RH caused collateral leaks in RH and water wall too | 224.63 |
| | FO | 1/1/2013 0:00 | 1/5/2013 9:10 | RH leak caused collateral damage to RH and waterwall | 105.17 |
| | PO | 2/3/2013 0:00 | 2/9/2013 10:44 | investigate RS GV actuator and valves, also inspect precip a/c low KVA | 154.73 |
| | PO | 3/24/2013 15:44 | 4/12/2013 7:00 | take measurements for high freq TR upgrade | 447.27 |
| | PE | 4/12/2013 7:00 | 4/19/2013 6:53 | repair winter gate frame and timber gate | 167.88 |
| | FO | 5/4/2013 8:52 | 5/10/2013 5:34 | water wall leak a/c sootblower erosion | 140.70 |
| | FO | 5/30/2013 15:49 | 6/3/2013 7:51 | Cedar River reached a level where the plant needed to be shut down | 88.03 |

Sutherland - Sutherland - NERC 1

| Type | Start | End | Description | Eq. Hrs. |
|------|------------------|------------------|--|----------|
| FO | 1/1/2001 0:00 | 1/6/2001 20:27 | FLAME SAFETY | 140.45 |
| PO | 3/23/2001 22:55 | 3/27/2001 17:05 | STATE SAFETY INSPECTION | 90.17 |
| PO | 4/19/2001 21:05 | 5/14/2001 18:00 | PLANNED OUTAGE | 596.92 |
| FO | 5/14/2001 21:55 | 5/20/2001 14:12 | SUPERHEATER TUBE RUPTURE | 136.28 |
| FO | 10/2/2001 15:27 | 10/7/2001 3:38 | GENERATING TUBE LEAK | 108.18 |
| FO | 10/7/2001 11:29 | 10/9/2001 13:18 | SUPERHEATER TUBE LEAK | 49.82 |
| FO | 1/28/2002 3:40 | 1/30/2002 1:56 | COAL FIRE IN MAGNETIC SEPERATOR CAUSED BELT TO CRUSHER TO BURN COULD NOT FUEL UNIT | 46.27 |
| PO | 3/22/2002 19:38 | 4/7/2002 10:40 | PLANNED OUTAGE | 374.03 |
| PO | 3/28/2003 14:48 | 5/30/2003 14:37 | MAJOR BOILER OVERHAUL | 1510.82 |
| FO | 9/17/2003 18:05 | 9/21/2003 3:16 | WATER WALL LEAK | 81.18 |
| PO | 3/26/2004 14:57 | 4/9/2004 5:55 | PLANNED OUTAGE | 325.97 |
| FO | 5/14/2004 18:25 | 5/19/2004 14:25 | ROOF TUBE LEAK | 116.00 |
| PO | 3/18/2005 13:35 | 3/21/2005 3:39 | PLANNED OUTAGE | 62.07 |
| PO | 6/15/2005 20:14 | 6/17/2005 20:08 | PLANNED OUTAGE | 47.90 |
| PO | 10/23/2005 19:51 | 11/12/2005 11:45 | PLANNED OUTAGE | 472.90 |
| FO | 3/3/2006 14:38 | 3/7/2006 11:31 | SUBSTATION MOTORIZED DISCONNECT RAN OPEN UNDER LOAD | 92.88 |
| PO | 3/10/2006 21:49 | 3/26/2006 20:10 | PLANNED OUTAGE | 382.35 |
| FO | 5/27/2006 1:51 | 5/30/2006 11:56 | BOILER TUBE LEAK - WATER WALL | 82.08 |
| FO | 6/7/2006 3:37 | 6/10/2006 4:22 | TUBE LEAK - WATER WALL | 72.75 |
| FO | 7/25/2006 17:44 | 7/29/2006 19:45 | TUBE LEAK (SUPERHEAT LEAK) | 98.02 |
| FO | 3/20/2007 14:54 | 3/22/2007 10:34 | OCB Hotspot | 43.67 |
| PO | 4/13/2007 23:19 | 4/29/2007 20:45 | Planned outage | 381.43 |
| FO | 4/6/2008 8:00 | 4/8/2008 5:14 | Tube leak | 45.23 |
| PO | 4/18/2008 22:18 | 5/30/2008 15:46 | Planned Outage | 1001.47 |
| FO | 6/2/2008 23:30 | 6/4/2008 21:25 | Turbine vibrations | 45.92 |
| PO | 6/8/2008 0:12 | 6/9/2008 19:00 | PRECIP REPAIRS | 42.80 |
| FO | 6/9/2008 19:01 | 6/23/2008 2:15 | FLOODING | 319.23 |
| PO | 4/16/2009 7:06 | 5/7/2009 19:00 | Planned outage | 515.90 |
| FO | 5/30/2009 6:15 | 6/4/2009 17:00 | Boiler tube leak | 130.75 |
| FO | 8/28/2009 23:45 | 9/9/2009 15:44 | Boiler tube leak in water walls | 279.98 |
| PO | 4/16/2010 12:13 | 5/12/2010 8:42 | Planned outage | 620.48 |
| FO | 7/2/2010 0:14 | 7/3/2010 11:20 | Condenser tube leak | 35.10 |
| FO | 9/22/2010 22:58 | 9/27/2010 15:00 | Waterwall tube leak | 112.03 |
| FO | 11/2/2010 9:29 | 11/8/2010 3:04 | Generating Tube leak | 138.58 |

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|--|----|-----------------|------------------|------------------------------------|---------|
| | FO | 1/15/2011 23:30 | 1/18/2011 21:31 | Tube leak | 70.02 |
| | FO | 3/8/2011 12:00 | 3/9/2011 21:10 | Water wall boiler tube leak | 33.17 |
| | FO | 3/30/2011 11:36 | 4/1/2011 0:00 | Boiler tube leak water wall | 36.40 |
| | PO | 4/1/2011 0:00 | 5/1/2011 0:00 | Planned outage | 720.00 |
| | FO | 5/3/2011 9:24 | 5/13/2011 14:00 | Tube leak waterwall | 244.60 |
| | FO | 6/3/2011 19:55 | 6/15/2011 14:30 | Boiler tube leak | 282.58 |
| | FO | 6/30/2011 9:28 | 7/13/2011 4:42 | Boiler tube leak | 307.23 |
| | FO | 8/14/2011 8:39 | 8/18/2011 14:30 | Boiler tube leak | 101.85 |
| | FO | 3/14/2012 16:49 | 3/19/2012 2:03 | Water wall tube leak | 105.23 |
| | PO | 4/11/2012 11:36 | 6/26/2012 8:09 | Planned outage convert unit to gas | 1820.55 |
| | PO | 10/7/2012 8:41 | 10/10/2012 16:00 | Water Wall Tube Leak | 79.32 |
| | PO | 1/20/2013 12:01 | 2/9/2013 0:01 | lack of natural gas | 468.00 |
| | PO | 2/9/2013 0:01 | 3/17/2013 0:00 | Schedule Outage | 862.98 |
| | FO | 3/17/2013 0:00 | 6/21/2013 14:36 | Structure failure | 2318.60 |

Sutherland - Sutherland - NERC 3

| Type | Start | End | Description | Eq. Hrs. |
|------|------------------|------------------|---|----------|
| FO | 2/3/2001 0:20 | 2/4/2001 15:16 | SKIN LEAK | 38.93 |
| PO | 3/9/2001 16:03 | 3/25/2001 14:59 | PLANNED OUTAGE | 382.93 |
| FO | 4/2/2001 2:45 | 4/4/2001 8:08 | CYCLONE PLUGGED | 53.38 |
| FO | 4/10/2001 18:37 | 4/13/2001 3:56 | CYCLONE PLUGGED | 57.32 |
| FO | 4/22/2001 3:55 | 4/25/2001 17:13 | TUBE LEAK | 85.30 |
| FO | 4/25/2001 20:01 | 4/27/2001 2:02 | CASING LEAK (FLUE GAS AND DUST) | 30.02 |
| FO | 8/22/2001 19:25 | 8/26/2001 11:20 | AIR HEATER DETERIORATION/FAILURE | 87.92 |
| PO | 9/14/2001 18:14 | 9/23/2001 7:47 | AIR HEATER SEAL DETERIORATION AND FAILURE | 205.55 |
| FO | 10/8/2001 18:54 | 10/20/2001 8:25 | SWITCHING POWER, RELAYS TRIPPED FD FAN, FAN POTOR FAILED ON RESTART | 277.52 |
| PO | 4/19/2002 19:25 | 5/6/2002 16:32 | PLANNED OUTAGE | 405.12 |
| FO | 7/20/2002 2:00 | 7/22/2002 10:30 | FORCED DRAFT FAN POTOR FAILURE | 56.50 |
| FO | 7/25/2002 23:01 | 7/28/2002 9:00 | FORCED DRAFT FAN POTOR FAILURE | 57.98 |
| FO | 8/20/2002 15:29 | 8/27/2002 6:49 | PRIMARY SUPERHEATER TUBE LEAK | 159.33 |
| FO | 8/31/2002 8:32 | 9/4/2002 9:09 | TUBE LEAK | 96.62 |
| PO | 11/15/2002 23:37 | 11/24/2002 17:08 | PLANNED OUTAGE | 209.52 |
| FO | 12/16/2002 15:08 | 12/20/2002 2:53 | REHEATER TUBE LEAK | 83.75 |
| PO | 2/21/2003 19:50 | 3/2/2003 17:09 | PLANNED OUTAGE | 213.32 |
| FO | 4/30/2003 9:02 | 5/3/2003 7:36 | SCREEN TUBE LEAK | 70.57 |
| FO | 5/3/2003 12:30 | 7/15/2003 23:09 | GENERATOR WINDINGS OVERHEATED/NEEDS REWINDING | 1762.65 |
| FO | 7/16/2003 9:37 | 7/17/2003 10:53 | GENERATOR VIBRATION, ADDED BALANCE WEIGHT | 25.27 |
| FO | 7/26/2003 0:13 | 7/28/2003 1:24 | BOILER MAIN STEAM OUTLET VALVE PACKING | 49.18 |
| FO | 8/17/2003 0:25 | 8/21/2003 0:51 | TUBE LEAK | 96.43 |
| FO | 9/24/2003 1:22 | 9/26/2003 9:29 | SCREEN TUBE LEAK | 56.12 |
| FO | 9/26/2003 11:59 | 10/1/2003 4:20 | CASING LEAK | 112.35 |
| PO | 10/18/2003 13:09 | 10/23/2003 18:03 | SUPERHEATER SCREEN TUBE | 124.90 |
| FO | 11/23/2003 9:39 | 11/27/2003 13:15 | ROOF TUBE | 99.60 |
| FO | 12/12/2003 3:40 | 12/20/2003 3:33 | ROOF TUBE LEAK | 191.88 |
| FO | 12/28/2003 6:05 | 1/1/2004 0:00 | ROOF TUBE LEAK | 89.92 |
| FO | 1/1/2004 0:00 | 1/4/2004 2:43 | ROOF TUBE LEAK | 74.72 |
| FO | 2/18/2004 7:52 | 2/23/2004 16:35 | LOWER SCREEN TUBE LEAK | 128.72 |
| FO | 2/24/2004 20:42 | 2/28/2004 4:14 | ROOF TUBE LEAK | 79.53 |
| FO | 3/25/2004 17:53 | 3/27/2004 0:51 | SLAG MONKEY TAP FROZEN | 30.97 |
| FO | 3/27/2004 1:49 | 4/2/2004 10:28 | ROOF TUBE LEAK | 152.65 |
| PO | 4/15/2004 5:51 | 5/16/2004 18:48 | PLANNED OUTAGE | 756.95 |

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| FO | 5/24/2004 2:21 | 5/27/2004 20:38 | REHEATER TUBE LEAKS (5) | 90.28 |
| FO | 7/4/2004 18:56 | 7/7/2004 11:35 | CYCLONE TUBE LEAK | 64.65 |
| FO | 10/18/2004 15:56 | 10/20/2004 13:41 | B CYCLONE PLUGGED | 45.75 |
| FO | 11/5/2004 12:00 | 11/6/2004 17:20 | BOILER CASING LEAK AT B CYCLONE | 29.33 |
| FO | 11/24/2004 18:58 | 11/28/2004 14:36 | REHEAT TUBE LEAK | 91.63 |
| FO | 1/18/2005 19:05 | 1/20/2005 17:47 | LEAK ON THE FEEDWATER PUMP SUCTION HEADER | 46.70 |
| FO | 1/23/2005 23:22 | 1/27/2005 9:01 | REHEATER TUBE LEAKS (4) | 81.65 |
| FO | 3/14/2005 20:14 | 3/16/2005 3:04 | CASING LEAK | 30.83 |
| PO | 4/28/2005 18:40 | 5/1/2005 5:00 | PLANNED OUTAGE | 58.33 |
| PO | 5/30/2005 23:00 | 6/5/2005 11:14 | PLANNED OUTAGE | 132.23 |
| FO | 7/4/2005 10:06 | 7/10/2005 13:23 | SECOND SUPERHEATER TUBE LEAK | 147.28 |
| FO | 7/21/2005 0:07 | 7/24/2005 10:58 | SCREEN TUBE LEAK | 82.85 |
| FO | 7/27/2005 11:09 | 7/30/2005 11:33 | BOILER TUBE LEAK | 72.40 |
| FO | 8/31/2005 17:06 | 9/6/2005 2:34 | MAIN STEAM ISO VLV PACKING BLEW OUT | 129.47 |
| PO | 9/16/2005 19:06 | 10/13/2005 11:53 | PLANNED OUTAGE | 640.78 |
| FO | 10/23/2005 11:55 | 10/26/2005 12:15 | MAIN STEAM ISO VLV PACKING BLEW OUT | 72.33 |
| FO | 10/28/2005 8:39 | 10/31/2005 23:36 | MAIN STEAM ISO VLV PACKING BLEW OUT | 87.95 |
| FO | 1/28/2006 15:18 | 1/31/2006 5:12 | CYCLONE PLUGGED | 61.90 |
| PO | 4/15/2006 22:09 | 5/1/2006 1:37 | PLANNED OUTAGE | 363.47 |
| FO | 7/23/2006 23:02 | 7/25/2006 9:13 | LEAK - DA HEATER | 34.18 |
| FO | 8/3/2006 0:47 | 8/5/2006 23:31 | VIBRATION TURBINE | 70.73 |
| FO | 11/25/2006 0:39 | 11/28/2006 16:13 | Scanner ignitor failure | 87.57 |
| PO | 1/12/2007 2:14 | 1/28/2007 12:09 | Planned Outage | 393.92 |
| FO | 1/31/2007 22:54 | 2/2/2007 23:09 | (A) Cyclone Tube Leak | 48.25 |
| FO | 3/13/2007 0:36 | 3/16/2007 4:06 | Skni Leaks | 75.50 |
| FO | 3/20/2007 20:04 | 3/22/2007 1:58 | Hole in Cyclone | 29.90 |
| PO | 9/14/2007 21:18 | 9/23/2007 9:13 | Planned Outage | 203.92 |
| FO | 10/18/2007 14:39 | 10/19/2007 17:00 | Main steamm Isolation Valve packing Failure | 26.35 |
| FO | 10/19/2007 17:00 | 10/21/2007 3:11 | #4 Well 16" water main failure | 34.18 |
| FO | 12/9/2007 23:33 | 12/12/2007 5:42 | cyclone plugging | 54.15 |
| FO | 1/20/2008 1:35 | 1/23/2008 8:20 | Boiler Tube Leak | 78.75 |
| FO | 2/27/2008 23:20 | 3/1/2008 0:00 | Tube Leaks | 48.67 |
| PO | 3/1/2008 0:00 | 3/16/2008 11:20 | planned Outage | 370.33 |
| FO | 3/18/2008 7:19 | 3/21/2008 2:00 | Cyclone Tube Leak | 66.68 |
| PO | 4/25/2008 22:48 | 4/30/2008 7:36 | planned outage | 104.80 |
| FO | 6/9/2008 4:29 | 6/25/2008 23:52 | FLOODING | 403.38 |

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| FO | 7/3/2008 23:59 | 7/7/2008 3:11 | Reheat tube leak | 75.20 |
| PO | 9/5/2008 8:10 | 11/24/2008 14:30 | planned outage boiler overhaul | 1927.33 |
| PO | 11/24/2008 17:55 | 1/1/2009 0:00 | Planned outage boiler overhaul | 894.08 |
| PO | 1/1/2009 0:00 | 1/28/2009 12:04 | Planned outage | 660.07 |
| FO | 2/1/2009 0:00 | 2/2/2009 12:48 | Slag up boiler | 36.80 |
| FO | 2/2/2009 15:50 | 2/5/2009 13:04 | casing leaks | 69.23 |
| FO | 2/5/2009 18:33 | 2/7/2009 11:42 | slagging up of boiler | 41.15 |
| FO | 2/10/2009 2:08 | 2/13/2009 9:40 | Vulcanized repair of hot air expansion joints | 79.53 |
| FO | 2/15/2009 21:28 | 2/24/2009 11:41 | Hot air expansion joint replacement | 206.22 |
| FO | 3/1/2009 13:01 | 3/5/2009 17:12 | frozen cyclone | 100.18 |
| FO | 3/9/2009 8:46 | 3/14/2009 7:58 | frozen cylcone and POnkey | 119.20 |
| FO | 3/19/2009 23:21 | 3/23/2009 13:09 | B cyclone fouling and slagging | 85.80 |
| PO | 4/9/2009 12:31 | 5/11/2009 0:00 | planned outage | 755.48 |
| FO | 5/11/2009 0:00 | 5/19/2009 11:07 | Turbine vibration | 203.12 |
| FO | 5/19/2009 17:28 | 5/21/2009 7:53 | Tubine balance shot | 38.42 |
| FO | 5/29/2009 22:56 | 6/4/2009 9:53 | Collector ring fan came apart | 130.95 |
| FO | 6/8/2009 17:52 | 6/16/2009 8:33 | Cyclone plugging up | 182.68 |
| FO | 6/24/2009 14:32 | 6/29/2009 9:16 | Slag tap froze over | 114.73 |
| FO | 7/13/2009 10:36 | 7/16/2009 9:01 | exciter hot spot | 70.42 |
| FO | 8/6/2009 14:00 | 8/18/2009 19:52 | miscellaneous problems with boiler | 293.87 |
| FO | 8/26/2009 23:18 | 9/14/2009 7:55 | replace superheat vent valve | 440.62 |
| FO | 9/14/2009 15:13 | 9/21/2009 14:11 | Cyclone feeders could not start | 166.97 |
| FO | 10/7/2009 8:23 | 10/27/2009 8:15 | Plugged cyclones | 479.87 |
| FO | 10/31/2009 9:47 | 12/8/2009 8:44 | cyclones plugged | 911.95 |
| FO | 3/4/2010 18:02 | 3/9/2010 9:21 | Gasket failure on turbine Throttle | 111.32 |
| FO | 3/11/2010 13:04 | 3/18/2010 13:04 | Cyclone plugging | 167.00 |
| PO | 4/16/2010 5:32 | 5/12/2010 8:12 | Planned outage | 626.67 |
| FO | 5/12/2010 13:29 | 5/13/2010 14:38 | Skinneled leak | 25.15 |
| PO | 6/18/2010 22:43 | 6/25/2010 11:52 | Mechanical precip hopper dust leak | 157.15 |
| FO | 6/28/2010 0:40 | 7/1/2010 0:00 | Steam valve leakage for vacuum system (hogger) | 71.33 |
| FO | 7/7/2010 1:33 | 7/11/2010 13:34 | SVCR cooling water lance leak | 108.02 |
| FO | 8/13/2010 23:05 | 8/19/2010 13:34 | Cyclone pluggage due to due slag buildup | 134.48 |
| FO | 8/23/2010 9:39 | 8/27/2010 15:48 | 3b fd Fan thrusting | 102.15 |
| FO | 9/7/2010 0:33 | 9/15/2010 11:00 | Cyclone pluggage due to slag buildup | 202.45 |
| FO | 9/28/2010 1:51 | 10/12/2010 5:51 | Cyclone pluggage due to slag buildup | 340.00 |
| FO | 10/20/2010 22:34 | 11/5/2010 11:36 | Cyclone pluggage | 373.03 |

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| FO | 11/7/2010 8:42 | 12/6/2010 8:10 | Leaking Bottom Ash Tank | 695.47 |
| FO | 12/27/2010 23:57 | 1/1/2011 0:00 | Cooling water leak from boiler scroll - heat exchanger | 96.05 |
| FO | 1/1/2011 0:00 | 1/2/2011 10:31 | Cooling water leak from boiler Scroll - heat exchanger | 34.52 |
| PO | 4/1/2011 10:25 | 5/1/2011 0:00 | Planned outage | 709.58 |
| FO | 9/27/2011 0:32 | 1/1/2012 0:00 | Generator | 2304.47 |
| FO | 1/1/2012 0:00 | 1/25/2012 13:08 | Generator | 589.13 |
| PO | 1/26/2012 12:37 | 2/1/2012 8:30 | Install balance shot on the generator | 139.88 |
| FO | 3/14/2012 12:30 | 3/19/2012 9:45 | Reheat tube leak | 117.25 |
| PO | 4/13/2012 12:33 | 6/7/2012 12:09 | Planned outage converting unit to gas | 1319.60 |
| PO | 8/2/2012 0:00 | 8/17/2012 11:00 | Hydrogen Generator Seal leaking cause unknown until unit can be dismantled | 371.00 |
| PO | 12/3/2012 8:00 | 12/8/2012 9:53 | ITC switching outage | 121.88 |
| PO | 12/8/2012 9:53 | 1/1/2013 0:00 | Lack of natural gas | 566.12 |
| PO | 1/1/2013 0:00 | 2/9/2013 0:01 | Lack of natural gas | 936.02 |
| PO | 2/9/2013 0:01 | 3/1/2013 14:30 | Schedule outage | 494.48 |
| FO | 5/26/2013 21:30 | 5/29/2013 16:00 | Flooding of the plant | 66.50 |
| FO | 5/30/2013 23:40 | 6/6/2013 11:45 | flooding of the plant | 156.08 |