# Phase II+ Final Report

## Volume II

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# On-Line Monitoring of Accuracy and Reliability of Instrumentation and Health of Nuclear Power Plants

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# On-Line Monitoring of Accuracy and Reliability of Instrumentation and Health of Nuclear Power Plants

## Volume 2

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## PREFACE

This is Volume I of a two-volume report written by Analysis and Measurement Services Corporation (AMS) for the U.S. Department of Energy (DOE) to present the results of a comprehensive research and development (R&D) project aimed at development, validation and implementation of On-Line Monitoring (OLM) technologies for equipment and plant health assessment. This volume describes the project objectives and discusses the main results, and Volume II includes the supporting information and data. For simplicity, the table of contents for both Volume I and Volume II are included in each volume.

This project began in 2006 with a Phase I effort and continued on from 2007 to 2011 in Phase II and subsequently as a Phase II+ (Phase two plus). The report herein concludes the work of the Phase II+ project.

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# 1. PRESENTATION OF OLM RESULTS

## 1.1 OLM Data for the Phase II+ Project

The purpose of the Phase II+ project was to expand the OLM analysis demonstration to include data from a total of four nuclear reactors. Engineers from Southern Nuclear Operating Company (SNOC) and Dominion participated in the project by providing OLM data from the Farley nuclear power plant (Units 1 and 2) and the North Anna nuclear power plant (Units 1 and 2). The SNOC and Dominion personnel were primarily interested in applying on-line calibration monitoring for the purpose of transmitter calibration interval extension, therefore, the OLM analysis for the Phase II+ project was focused on the transmitters in each plant that would benefit the most from having their calibration intervals extended. Table 1.1 provides a listing of the services and number of transmitters in each service that were analyzed for the Farley and North Anna plants. Over the course of the project, plant personnel retrieved a 12-hour window of transmitter data each month from the plant computer and sent it to AMS via FTP for analysis. The static data for each plant was sampled at a rate of 1 sample every ten seconds. Overall, static data for 9 operating cycles were included in the analysis. In addition to the static OLM data, AMS acquired dynamic data from Farley Unit 1 and 2 transmitters to evaluate their dynamic response characteristics. Table 1.2 provides a summary of the OLM data from each reactor that was analyzed for this project.

**Table 1.1 Transmitters Analyzed in Phase II+ Project Per Reactor**

| Item | Service | Number of Transmitters |
|---|---|---|
| 1 | Steam Flow | 6 |
| 2 | Feedwater Flow | 6 |
| 3 | Steam Generator Level Narrow Range | 9 |
| | Steam Generator Level Wide Range | 3 |
| 4 | Steam Pressure | 9 |
| 5 | Pressurizer Level | 3 |
| 6 | Pressurizer Pressure[1] | 3 |
| 7 | RCS Flow | 9 |
| 8 | RCS Pressure | 2 |
| 9 | Turbine First Stage Pressure | 2 |
| 10 | RWST Level[2] | 2 |
| 11 | Containment Pressure[2] | 5 |

1 Farley Units 1 and 2 include 2 additional Pressurizer Pressure transmitters for a total of 5.

2 Only included in Farley Units 1 and 2

**Table 1.2 OLM Data Analyzed for Phase II+**

| Item | Reactor | Fuel Cycle | Date(s) | OLM Data Type |
|---|---|---|---|---|
| 1 | Farley Unit 1 | 22 | April 2008 – April 2009 | Static |
| 2 | Farley Unit 1 | 22 | March 2009 | Dynamic |
| 3 | Farley Unit 1 | 23 | April 2009 – October 2010 | Static |
| 4 | Farley Unit 1 | 23 | June 2009 | Dynamic |
| 5 | Farley Unit 1 | 24 | November 2010 – July 2011 | Static |
| 6 | Farley Unit 2 | 20 | August 2009 – April 2010 | Static |
| 7 | Farley Unit 2 | 20 | March 2010 | Dynamic |
| 8 | Farley Unit 2 | 21 | May 2010 – July 2011 | Static |
| 9 | Farley Unit 2 | 21 | July 2010 | Dynamic |
| 10 | North Anna Unit 1 | 20 | January 2008 – March 2009 | Static |
| 11 | North Anna Unit 1 | 21 | April 2009 – August 2010 | Static |
| 12 | North Anna Unit 1 | 22 | November 2010 – April 2011 | Static |
| 13 | North Anna Unit 2 | 21 | April 2010 – April 2011 | Static |

## 1.2 OLM Data Analysis Plots

A number of plots and tables are produced by the OLM system software to aid in analysis and present the results. Descriptions of these plots and tables as well as examples of each are provided below:

1. **Static Summary Table**. This table (Table 1.3) list the sensor tag name, service, the result of the steady state data analysis each month, the drift result, the final pass or fail result, and a comment for each sensor. An 'R' indicates the Redundant sensor analysis acceptance limits were exceeded. An 'M' indicates the empirical model analysis acceptance limits were exceeded. A 'D' indicates the drift limits were exceeded.
2. **Steady State Deviation Plot**. This plot (Figure 1.1) presents the average deviation of each sensor from the average of its redundant peers (excluding any outliers) for each time period (typically one month) that is provided during the steady state operation. Deviations that exceed the OLM acceptance criteria (shown in Figure 1.1 as red dashed lines), are indicative of a potential problem with the sensor.

   In the analysis performed for Phase II+, the OLM acceptance criteria for deviation, drift, and empirical modeling analysis were set to 0.75% of the sensors' calibrated ranges after discussions with plant personnel from Farley and North Anna.
3. **Steady State Drift Analysis**. This plot (Figure 1.2) provides a visualization of how the deviation for a given sensor changes over time. Drift is calculated from the steady state deviation analysis by subtracting the first month's deviation from each signal (i.e. zeroing the first month). The OLM acceptance criteria limits for drift are shown with red dashed lines.
4. **Steady State Residual Analysis (Empirical Modeling)**. This plot (Figure 1.3) presents the average difference between the model estimate and the measured data (also known as the residual) by subtracting the model process estimate from each signal for each month of steady state data. This will identify drift from the training data that is due to sensor drift, process drift, or a common mode drift. Similar to the deviation and drift plots the OLM acceptance criteria limits are shown with red dashed lines.
5. **Transient Deviation Analysis (if available)**. This plot (Figure 1.4) presents the deviation of each transmitter from the average of its peers plotted as a function of the transmitter's operating range as the process experiences a transient such as startup or shutdown. Some services do not transition through much of their range during a cycle, and in this case a transient deviation plot is not produced. On the other hand, some services experienced multiple transients during the observation period, resulting in multiple transient deviation plots for some services. Transient deviation analysis plots also incorporate OLM acceptance criteria limits that are denoted by red dashed lines.
6. **Data Quality Statistics**. Data quality statistics are presented by four plots and a table (Figure 1.5). The four plots consist of the mean, standard deviation, skewness, and kurtosis calculated for each month of steady state data. The table contains the average value of each statistic for each sensor in the four plots.

**Table 1.3 Summary Table Sample Results**

| Item | Tagname | Service | 11 Nov 2008 | 9 Dec 2008 | 13 Jan 2009 | 10 Feb 2009 | 11 Mar 2009 | 2 Apr 2009 | Drift | Final | Comment |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | FE0474B | SG A STEAM FLOW | | | | | | R | | PASS | |
| 2 | FE0475B | SG A STEAM FLOW | | | | | | R | | PASS | |
| | | | | | | | | | | | |
| 3 | FE0476B | FW FLOW TO SG A | | | | | | | | PASS | |
| 4 | FE0477B | FW FLOW TO SG A | | | | | | | | PASS | |
| | | | | | | | | | | | |
| 5 | LT0474 | SG A NR LEVEL | | | | | | R | | FAIL | |
| 6 | LT0475 | SG A NR LEVEL | R | R | R | R | R | R | | FAIL | Low bias |
| 7 | LT0476 | SG A NR LEVEL | | | | | | R | | FAIL | |
| 8 | LT0477 | SG A WR LEVEL | M | M | M | M | M | | | FAIL | Drift out (AAKR) |
| | | | | | | | | | | | |
| 9 | PT0474 | SG A PRESSURE | | | | | | | | PASS | |
| 10 | PT0475 | SG PRESSURE | | | | | | | | PASS | |
| 11 | PT0476 | SG A PRESSURE | | | | | | | | PASS | |
| | | | | | | | | | | | |
| 12 | FE0484B | SG B STEAM FLOW | | | | | | | | PASS | |
| 13 | FE0485B | SG B STEAM FLOW | | | | | | | | PASS | |
| | | | | | | | | | | | |
| 14 | FE0486B | FW FLOW TO SG B | | | | | | | | PASS | |
| 15 | FE0487B | FW FLOW TO SG B | | | | | | | | PASS | |

*R = Exceeded Redundant Sensor Analysis Limits  M = Exceeded Model Analysis Limits  D = Exceeded Drift Limits*

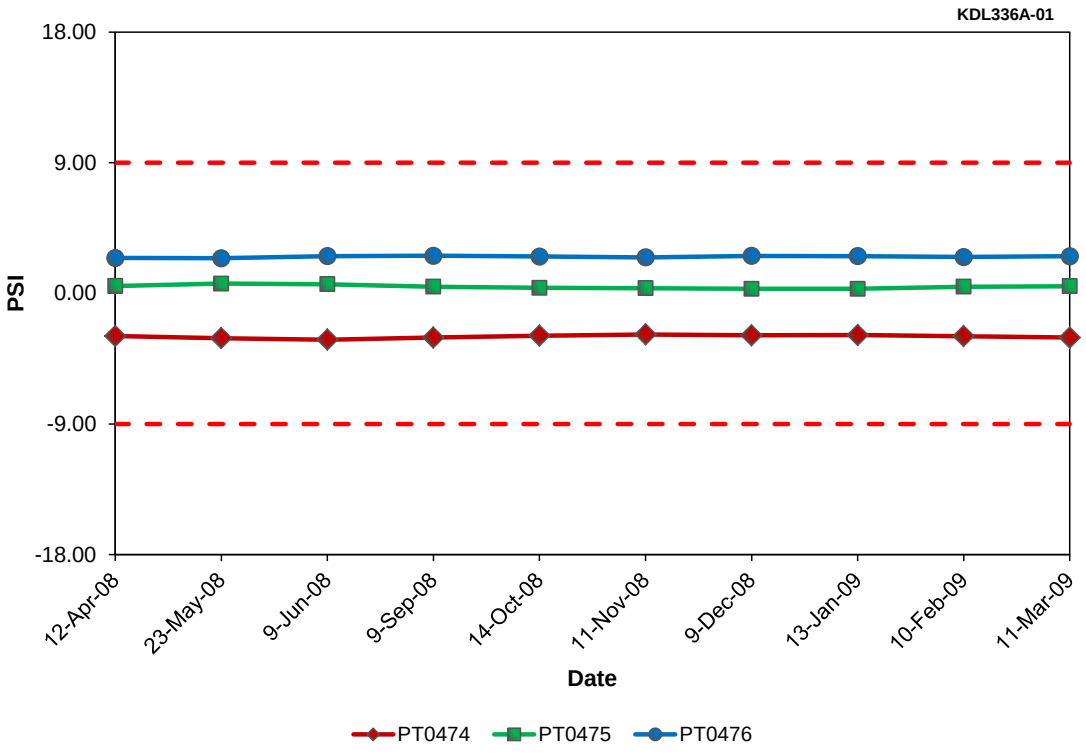



**Figure 1.1 Steady-State Deviation Example**

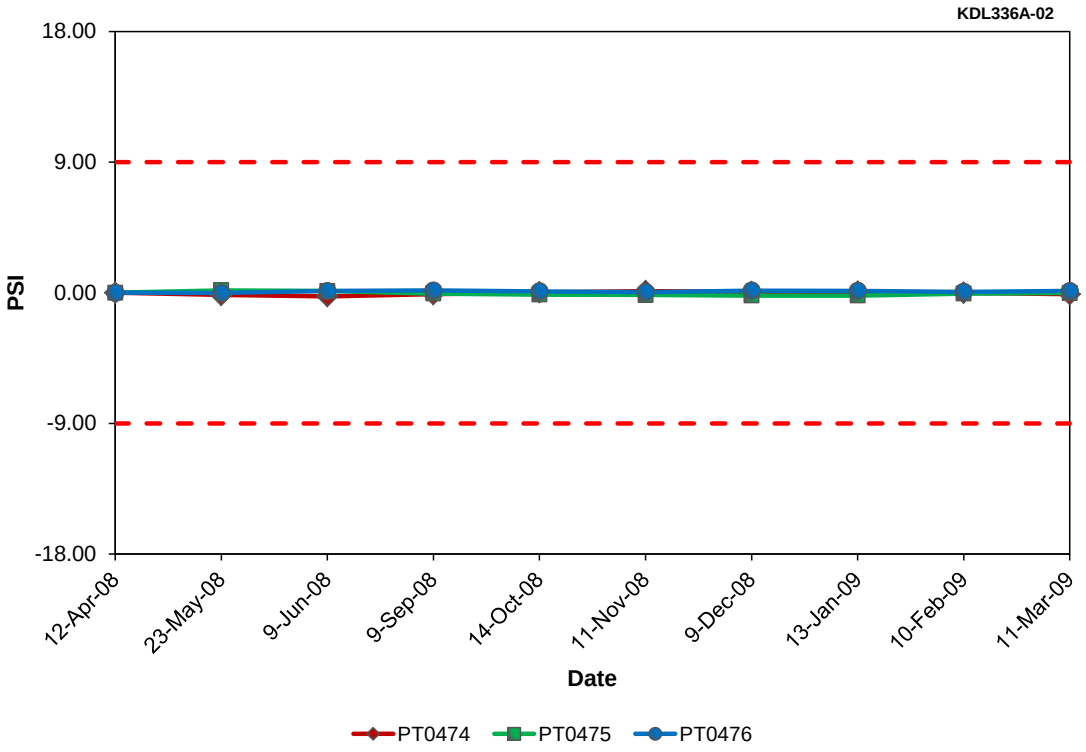



**Figure 1.2 Steady-State Drift Example**

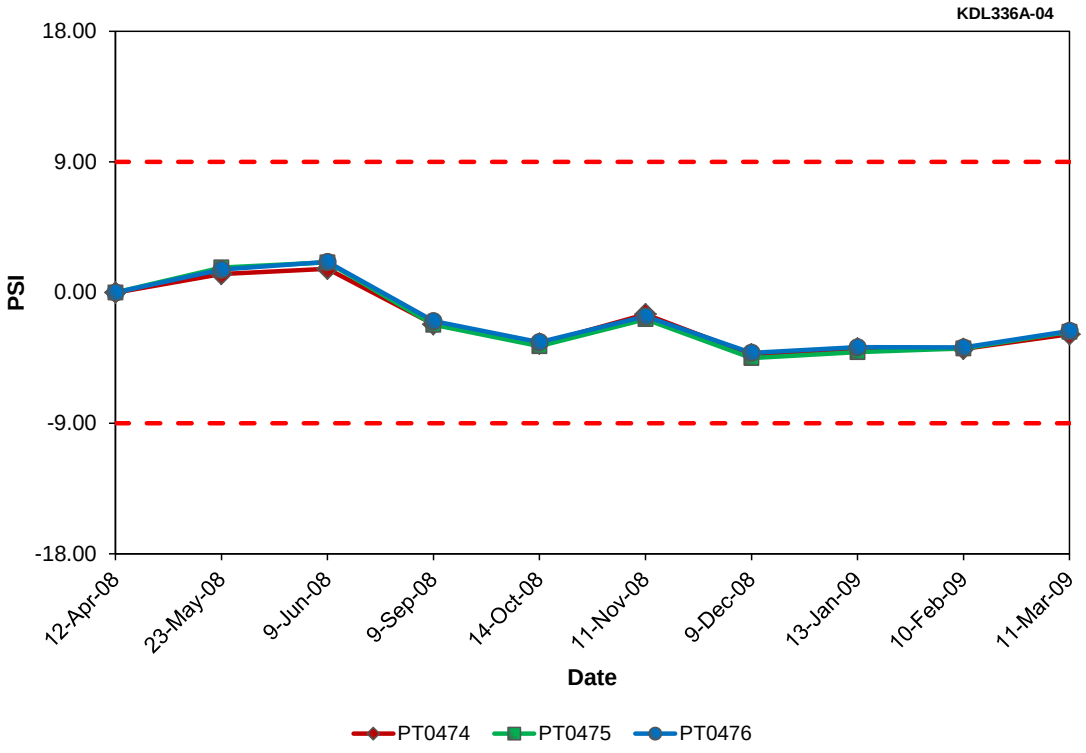



**Figure 1.3 Steady-State Residual Example**

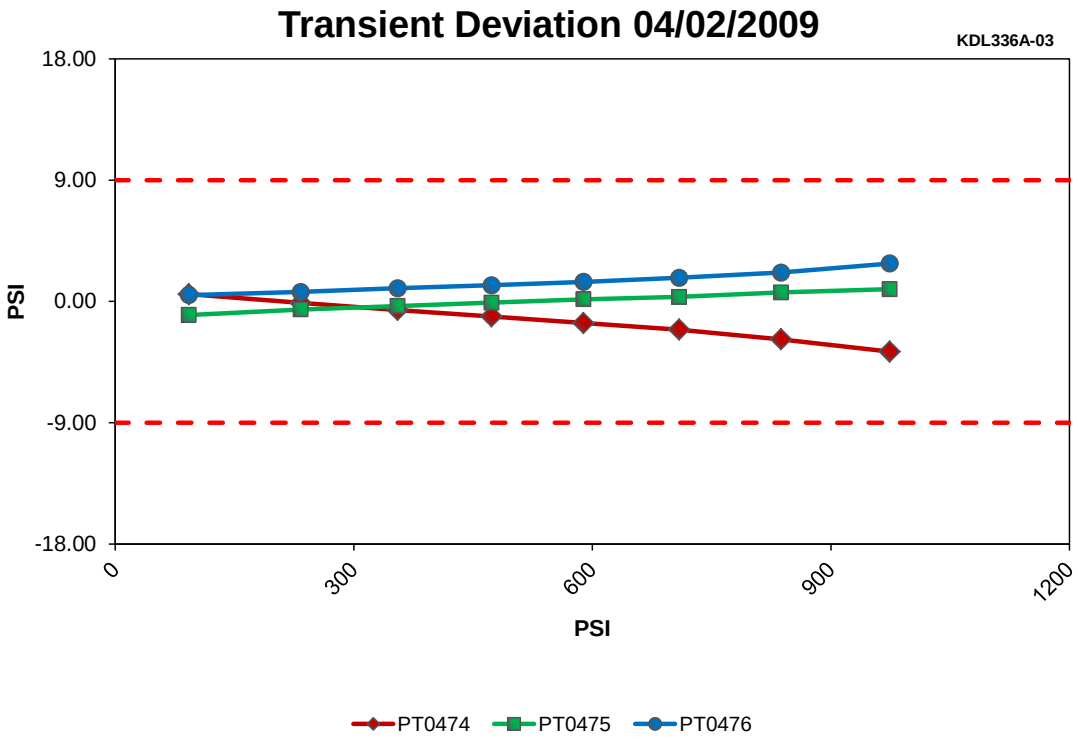
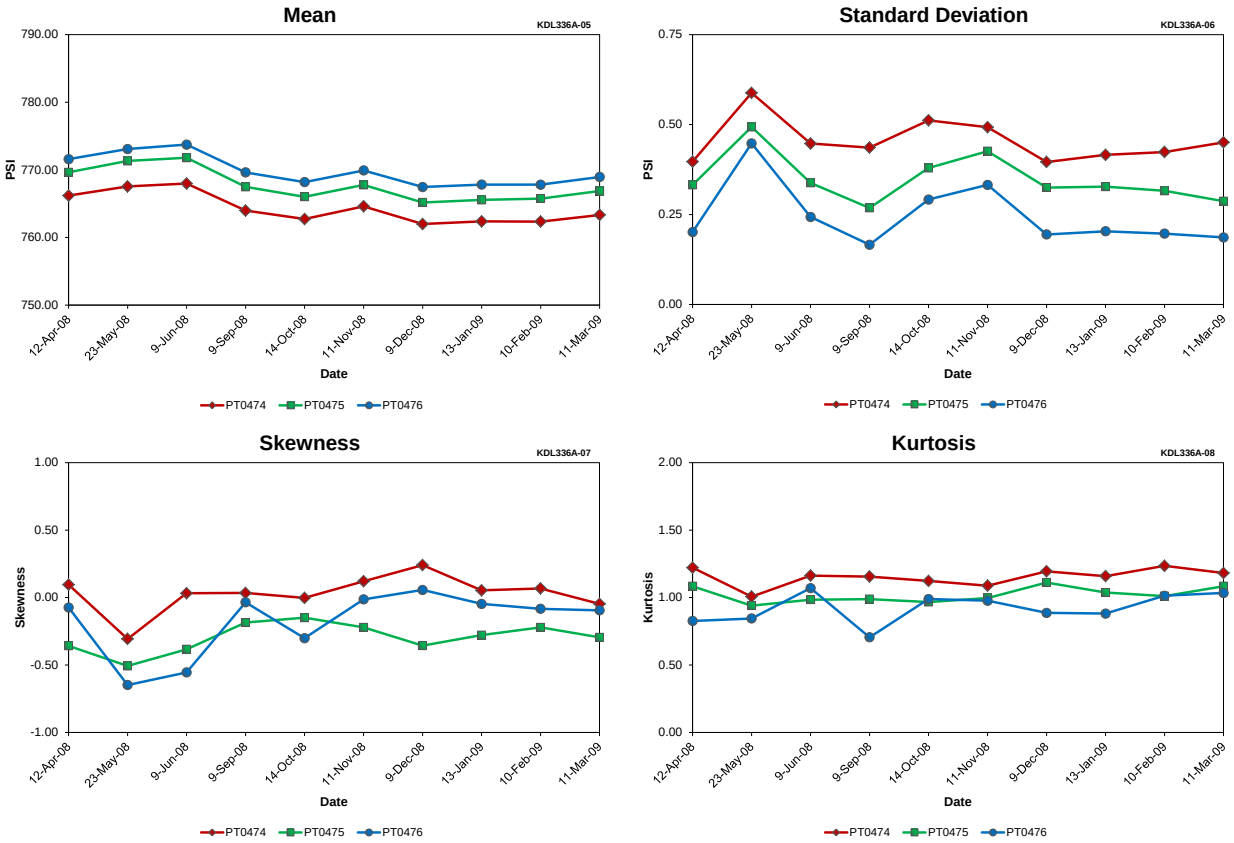



**Figure 1.4 Transient Deviation Example**




**Data Quality Statistics Plots**

## Data Quality Summary Table Example

| Result Type | Tag Names | | |
|---|---|---|---|
| | PT0474 | PT0475 | PT0476 |
| Mean | 764.31 | 767.73 | 769.82 |
| Std. Dev. | 0.46 | 0.35 | 0.25 |
| Skewness | 0.03 | -0.30 | -0.18 |
| Kurtosis | 1.15 | 1.02 | 0.92 |

**Figure 1.5 Data Quality Statistics Plots and Table**

7. **Dynamic Parameter Table.** This table (Table 1.4) presents the tag name, service, narrow band PSD window low and high frequency that was trimmed from the wide band PSD, the Auto-Regressive (AR) modeling method, and AR order. Once selected, these parameters are stored in the OLM database and become the basis for future analysis.

   The reader is referred to the Phase II report [2] for more information on AR modeling and parameter selection.

8. **Dynamic Narrow Band PSD Window Selection.** This plot (Figure 1.6) presents and wide band PSD and shows the low and high frequency selection that are used to create the narrow band PSD. The selected parameters are displayed in the table above the plot. This plot is only included if this is the first analysis for this sensor because it will be the same for subsequent analysis.

9. **Dynamic Autoregressive Fit of Narrow Band PSD.** This plot (Figure 1.7) displays the narrow band PSD and the AR PSD. The difference between the PSDs is displayed in an Error plot at the bottom with the RMS error displayed. Above the plot is a table with the AR parameters.

10. **Dynamic Comparison of Narrow Band PSDs.** This plot (Figure 1.8) presents the current narrow band PSD and the previous Narrow Band PSD for comparison. The difference between the PSDs is displayed in an Error plot at the bottom with the RMS error displayed. Above the table are the current PSD parameters. This is only included if there is a previous analysis for comparison.

The appendices of this Volume contain the OLM Results for Farley Units 1 and 2 and North Anna Units 1 and presented in these plots and tables.

## Table 1.4 Dynamic Parameter Table Example

| Item | Tag Name | Service | Filename | WB PSD Range (Hz) | Decimator | Trim Block Size | Trim Low Freq. | Trim High Freq. | AR Method | AR Order |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 | FT0476 | FW FLOW | FU2_2010-07_0004 | 0.0305 : 1000 | 364 | 512 | 0.0107 | 2.7472 | Forward-Backward | 11 |
| 2 | FT0477 | FW FLOW | FU2_2010-07_0003 | 0.0305 : 1000 | 364 | 512 | 0.0107 | 2.7472 | Least-Squares | 17 |
| 3 | FT0486 | FW FLOW | FU2_2010-07_0004 | 0.0305 : 1000 | 364 | 512 | 0.0107 | 2.7472 | Forward-Backward | 11 |
| 4 | FT0487 | FW FLOW | FU2_2010-07_0003 | 0.0305 : 1000 | 364 | 512 | 0.0107 | 2.7472 | Least-Squares | 21 |
| 5 | FT0496 | FW FLOW | FU2_2010-07_0004 | 0.0305 : 1000 | 364 | 512 | 0.0107 | 2.7474 | Forward-Backward | 11 |
| 6 | FT0497 | FW FLOW | FU2_2010-07_0003 | 0.0305 : 1000 | 364 | 512 | 0.0107 | 2.7472 | Least-Squares | 21 |
| | | | | | | | | | | |
| 7 | LT0474 | SG LEVEL | FU2_2010-07_0001 | 0.0305 : 1000 | 85 | 256 | 0.0919 | 11.7643 | Forward-Backward | 11 |
| 8 | LT0475 | SG LEVEL | FU2_2010-07_0002 | 0.0305 : 1000 | 81 | 256 | 0.0964 | 12.3453 | Least-Squares | 18 |
| 9 | LT0476 | SG LEVEL | FU2_2010-07_0003 | 0.0305 : 1000 | 81 | 256 | 0.0964 | 12.3453 | Least-Squares | 11 |
| 10 | LT0484 | SG LEVEL | FU2_2010-07_0001 | 0.0305 : 1000 | 80 | 128 | 0.1953 | 12.4996 | Forward-Backward | 11 |
| 11 | LT0485 | SG LEVEL | FU2_2010-07_0002 | 0.0305 : 1000 | 80 | 256 | 0.0977 | 12.4996 | Least-Squares | 18 |
| 12 | LT0486 | SG LEVEL | FU2_2010-07_0003 | 0.0305 : 1000 | 85 | 128 | 0.1838 | 11.7643 | Least-Squares | 20 |
| 13 | LT0494 | SG LEVEL | FU2_2010-07_0001 | 0.0305 : 1000 | 83 | 256 | 0.0941 | 12.0478 | Forward-Backward | 11 |
| 14 | LT0495 | SG LEVEL | FU2_2010-07_0002 | 0.0305 : 1000 | 78 | 256 | 0.1002 | 12.8201 | Least-Squares | 18 |
| 15 | LT0496 | SG LEVEL | FU2_2010-07_0003 | 0.0305 : 1000 | 83 | 256 | 0.0941 | 12.0478 | Least-Squares | 20 |
| | | | | | | | | | | |
| 16 | FT0474 | STM FLOW | FU2_2010-07_0003 | 0.0305 : 1000 | 29 | 128 | 0.5388 | 34.4817 | Least-Squares | 20 |
| 17 | FT0475 | STM FLOW | FU2_2010-07_0004 | 0.0305 : 1000 | 29 | 128 | 0.5388 | 34.4817 | Forward-Backward | 11 |
| 18 | FT0484 | STM FLOW | FU2_2010-07_0003 | 0.0305 : 1000 | 29 | 128 | 0.5388 | 34.4817 | Least-Squares | 18 |
| 19 | FT0485 | STM FLOW | FU2_2010-07_0004 | 0.0305 : 1000 | 29 | 128 | 0.5388 | 34.4817 | Forward-Backward | 11 |
| 20 | FT0494 | STM FLOW | FU2_2010-07_0003 | 0.0305 : 1000 | 29 | 128 | 0.5388 | 34.4817 | Least-Squares | 19 |
| 21 | FT0495 | STM FLOW | FU2_2010-07_0004 | 0.0305 : 1000 | 29 | 128 | 0.5388 | 34.4817 | Forward-Backward | 11 |

## OLM Narrow Band PSD Window Fitting

| Reactor and Unit | Tag Number | Service | Filename | Blocks : Blocksize | Trim Low Freq. (Hz) | Trim High Freq. (Hz) | Fitting Type | Test Date |
|---|---|---|---|---|---|---|---|---|
| Farley Unit 2 | FT0496 | FW FLOW | FU2_2010-07_0004.psd | 11 : 512 | 0.010731 | 2.747169 | Dynamic | 15-Jul-2010 13:36:44 |

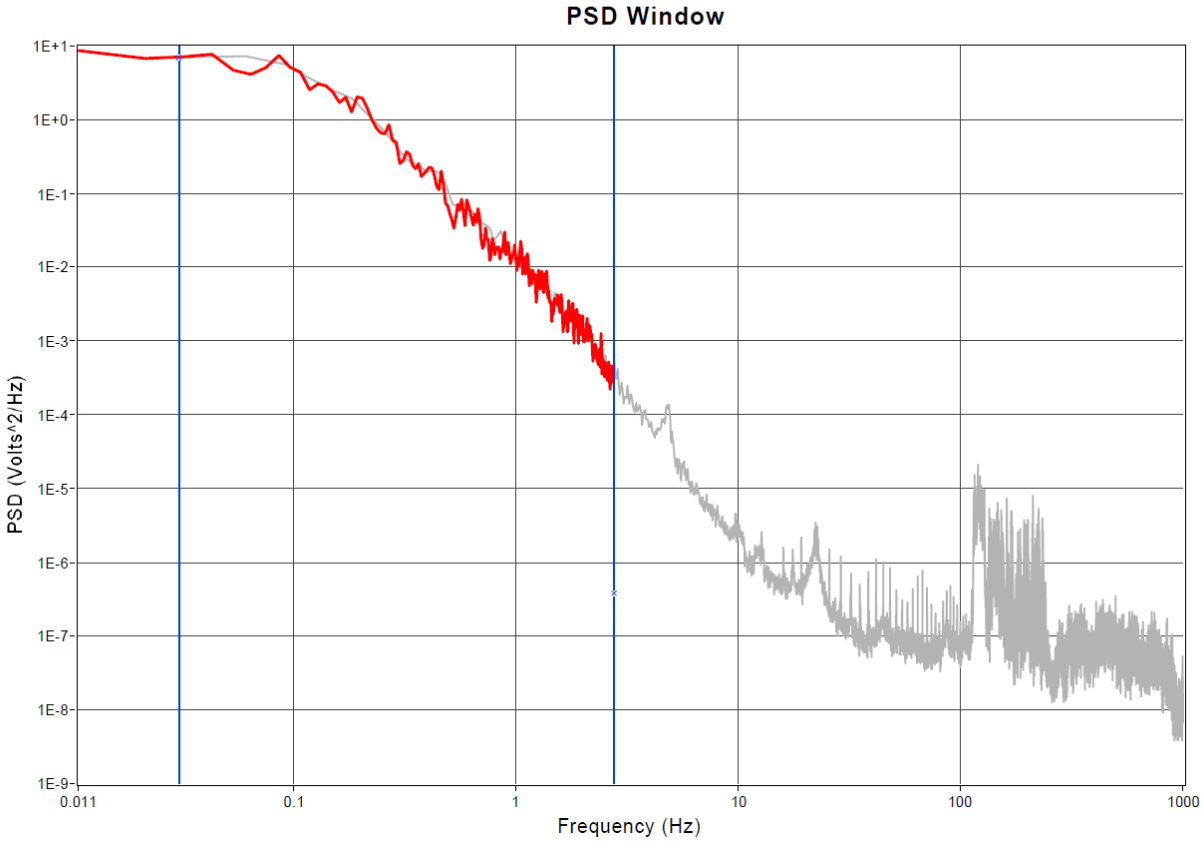



**Figure 1.6 Dynamic Narrow Band PSD Window Selection Example**

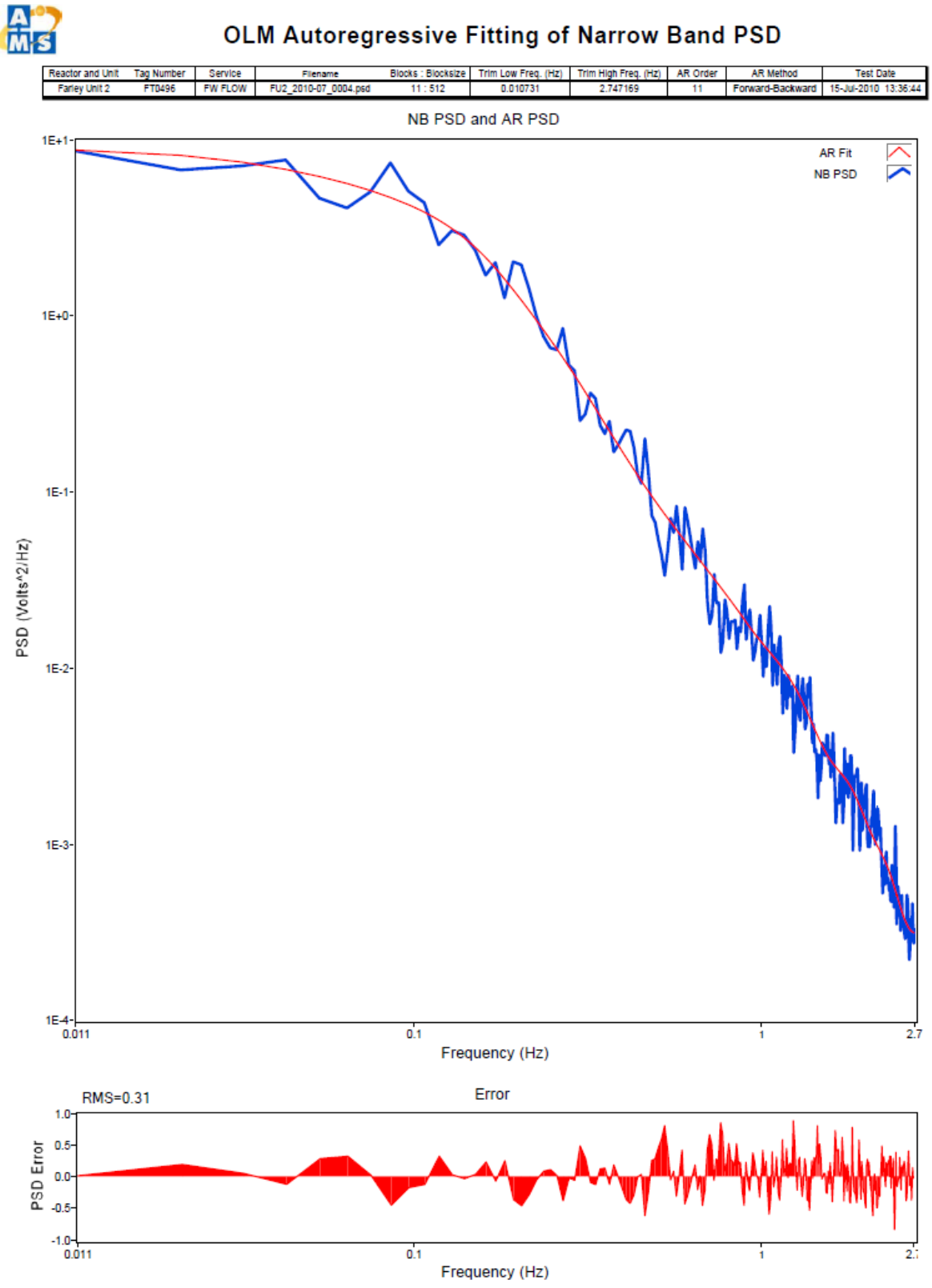



**Figure 1.7 Dynamic Autoregressive Fit of Narrow Band PSD Example**

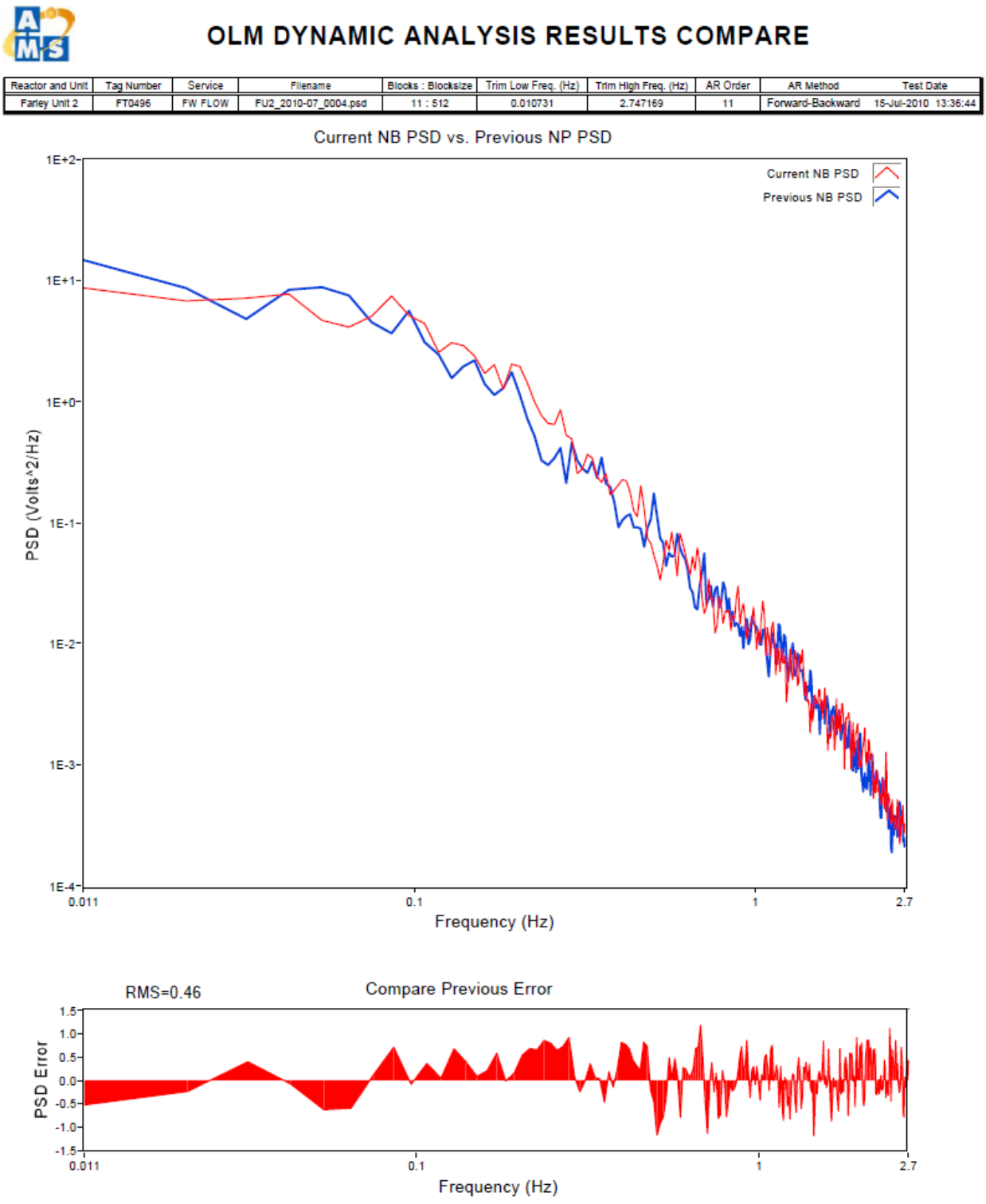



**Figure 1.8 Dynamic Comparison of Narrow Band PSDs Example**

# APPENDIX A

# Farley Unit 1 OLM Results (Cycle 22)

| Item | Tagname | Service | 12 Apr 2008 | 23 May 2008 | 9 Jun 2008 | 9 Sep 2008 | 14 Oct 2008 | 11 Nov 2008 | 9 Dec 2008 | 13 Jan 2009 | 10 Feb 2009 | 11 Mar 2009 | 2 Apr 2009 | Drift | Final | Comment |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | FE0474B | SG A STEAM FLOW | | | | | | | | | | | R | | PASS | Only out in low range transient |
| 2 | FE0475B | SG A STEAM FLOW | | | | | | | | | | | R | | PASS | Only out in low range transient |
| | | | | | | | | | | | | | | | | |
| 3 | FE0476B | FW FLOW TO SG A | | | | | | | | | | | | | PASS | |
| 4 | FE0477B | FW FLOW TO SG A | | | | | | | | | | | | | PASS | |
| | | | | | | | | | | | | | | | | |
| 5 | LT0474 | SG A NARROW RANGE LEVEL | | | | | | | | | | | R | | FAIL | Out in low and high calibrated range |
| 6 | LT0475 | SG A NARROW RANGE LEVEL | | | R | R | R | R | R | R | R | R | R | | FAIL | Low bias |
| 7 | LT0476 | SG A NARROW RANGE LEVEL | | | | | | | | | | | R | | FAIL | Out in low and high calibrated range |
| 8 | LT0477 | SG A WIDE RANGE LEVEL | | | | | M | M | M | M | M | M | | | FAIL | Drift over cycle |
| | | | | | | | | | | | | | | | | |
| 9 | PT0474 | SG A OUTLET PRESSURE | | | | | | | | | | | | | PASS | |
| 10 | PT0475 | SG A OUTLET PRESSURE | | | | | | | | | | | | | PASS | |
| 11 | PT0476 | SG A OUTLET PRESSURE | | | | | | | | | | | | | PASS | |
| | | | | | | | | | | | | | | | | |
| 12 | FE0484B | SG B STEAM FLOW | | | | | | | | | | | | | PASS | |
| 13 | FE0485B | SG B STEAM FLOW | | | | | | | | | | | | | PASS | |
| | | | | | | | | | | | | | | | | |
| 14 | FE0486B | FW FLOW TO SG B | | | | | | | | | | | | | PASS | |
| 15 | FE0487B | FW FLOW TO SG B | | | | | | | | | | | | | PASS | |
| | | | | | | | | | | | | | | | | |
| 16 | LT0484 | SG B NARROW RANGE LEVEL | | | | | | | | | | | | | PASS | |
| 17 | LT0485 | SG B NARROW RANGE LEVEL | | | | | | | | | | | | | PASS | |
| 18 | LT0486 | SG B NARROW RANGE LEVEL | | | | | | | | | | | | | PASS | |
| 19 | LT0487 | SG B WIDE RANGE LEVEL | | | | | | | | | | | | | PASS | |
| | | | | | | | | | | | | | | | | |
| 20 | PT0484 | SG B OUTLET PRESSURE | R | R | R | R | R | R | R | R | | R | | | FAIL | Low bias |
| 21 | PT0485 | SG B OUTLET PRESSURE | | | | | | | | | | | | | PASS | |
| 22 | PT0486 | SG B OUTLET PRESSURE | | | | | | | | | | | | | PASS | |
| | | | | | | | | | | | | | | | | |
| 23 | FE0494B | SG C STEAM FLOW | | | | | | | | | | | R | | PASS | Only out in low range transient |
| 24 | FE0495B | SG C STEAM FLOW | | | | | | | | | | | R | | PASS | Only out in low range transient |
| | | | | | | | | | | | | | | | | |
| 25 | FE0496B | FW FLOW TO SG C | | | | | | | | | | | | | PASS | |
| 26 | FE0497B | FW FLOW TO SG C | | | | | | | | | | | | | PASS | |
| | | | | | | | | | | | | | | | | |
| 27 | LT0494 | SG C NARROW RANGE LEVEL | | | | | | | | | | | | | PASS | |
| 28 | LT0495 | SG C NARROW RANGE LEVEL | | | | | | | | | | | | | PASS | |
| 29 | LT0496 | SG C NARROW RANGE LEVEL | | | | | | | | | | | | | PASS | |
| 30 | LT0497 | SG C WIDE RANGE LEVEL | | | | | | | | | | | | | PASS | |

*R = Exceeded Redundant Sensor Analysis Limits  M = Exceeded Model Analysis Limits  D = Exceeded Drift Limits*

**Table A.1 Farley Unit 1 OLM Results Summary (Cycle 22)**

| Item | Tagname | Service | 12 Apr 2008 | 23 May 2008 | 9 Jun 2008 | 9 Sep 2008 | 14 Oct 2008 | 11 Nov 2008 | 9 Dec 2008 | 13 Jan 2009 | 10 Feb 2009 | 11 Mar 2009 | 2 Apr 2009 | Drift | Final | Comment |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 31 | PT0494 | SG C OUTLET PRESSURE | | | | | | | | | | | | | PASS | |
| 32 | PT0495 | SG C OUTLET PRESSURE | | | | | | | | | | | | | PASS | |
| 33 | PT0496 | SG C OUTLET PRESSURE | | | | | | | | | | | | | PASS | |
| | | | | | | | | | | | | | | | | |
| 34 | LT0459 | PRESSURIZER LEVEL | | | | | | | | | | | | | PASS | |
| 35 | LT0460 | PRESSURIZER LEVEL | | | | | | R,M | | R | R,M | R,M | R | D | FAIL | High bias and drift |
| 36 | LT0461 | PRESSURIZER LEVEL | | | | | | | | | | | | | PASS | |
| | | | | | | | | | | | | | | | | |
| 37 | PT0455 | PRESSURIZER PRESSURE | | | | | | | | | | M | M | | PASS | Process change |
| 38 | PT0456 | PRESSURIZER PRESSURE | | | | | | | | | | | M | | PASS | Process change |
| 39 | PT0457 | PRESSURIZER PRESSURE | | | | | | | | | | M | | | PASS | Process change |
| 40 | PT0444A | PRESSURIZER PRESSURE | | | | | | | | | | M | M | | PASS | Process change |
| 41 | PT0445A | PRESSURIZER PRESSURE | | | | | | | | | | M | | | PASS | Process change |
| | | | | | | | | | | | | | | | | |
| 42 | FE0414 | RCS LOOP A FLOW | | | | | | | | | | | | | PASS | |
| 43 | FE0415 | RCS LOOP A FLOW | | | | | | | | | | | | | PASS | |
| 44 | FE0416 | RCS LOOP A FLOW | | | | | | | | | | | | | PASS | |
| | | | | | | | | | | | | | | | | |
| 45 | FE0424 | RCS LOOP B FLOW | | | | | | | | | | | | | PASS | |
| 46 | FE0425 | RCS LOOP B FLOW | | | | | | | | | | | | | PASS | |
| 47 | FE0426 | RCS LOOP B FLOW | | | | | | | | | | | | | PASS | |
| | | | | | | | | | | | | | | | | |
| 48 | FE0434 | RCS LOOP C FLOW | | | | | | R | | | | | | | PASS | Only low in Nov-2008 |
| 49 | FE0435 | RCS LOOP C FLOW | | | | | | | | | | | | | PASS | |
| 50 | FE0436 | RCS LOOP C FLOW | | | | | | | | | | | | | PASS | |
| | | | | | | | | | | | | | | | | |
| 51 | PT0402 | RCS WIDE RANGE PRESSURE LOOP C | | | | | | | | | | | | | PASS | |
| 52 | PT0403 | RCS WIDE RANGE PRESSURE LOOP A | | | | | | | | | | | | | PASS | |
| | | | | | | | | | | | | | | | | |
| 53 | PT0446 | TURBINE FIRST STAGE PRESSURE | | | | | | | | | | | | | PASS | |
| 54 | PT0447 | TURBINE FIRST STAGE PRESSURE | | | | | | | | | | | | | PASS | |
| | | | | | | | | | | | | | | | | |
| 55 | LT0501 | RWST LEVEL | | | | | | | | | | | | | PASS | |
| 56 | LT0502 | RWST LEVEL | | | | | | | | | | | | | PASS | |
| | | | | | | | | | | | | | | | | |
| 57 | PT0951 | CTMT PRESSURE | | | | | | | | | | | | | PASS | |
| 58 | PT0952 | CTMT PRESSURE | | R | R | | | | | | | | R | | FAIL | High bias and span shift |
| 59 | PT0953 | CTMT PRESSURE | | | | | | | | | | | | | PASS | |

*R = Exceeded Redundant Sensor Analysis Limits  M = Exceeded Model Analysis Limits  D = Exceeded Drift Limits*

**Table A.1 (continued) Farley Unit 1 OLM Results Summary (Cycle 22)**

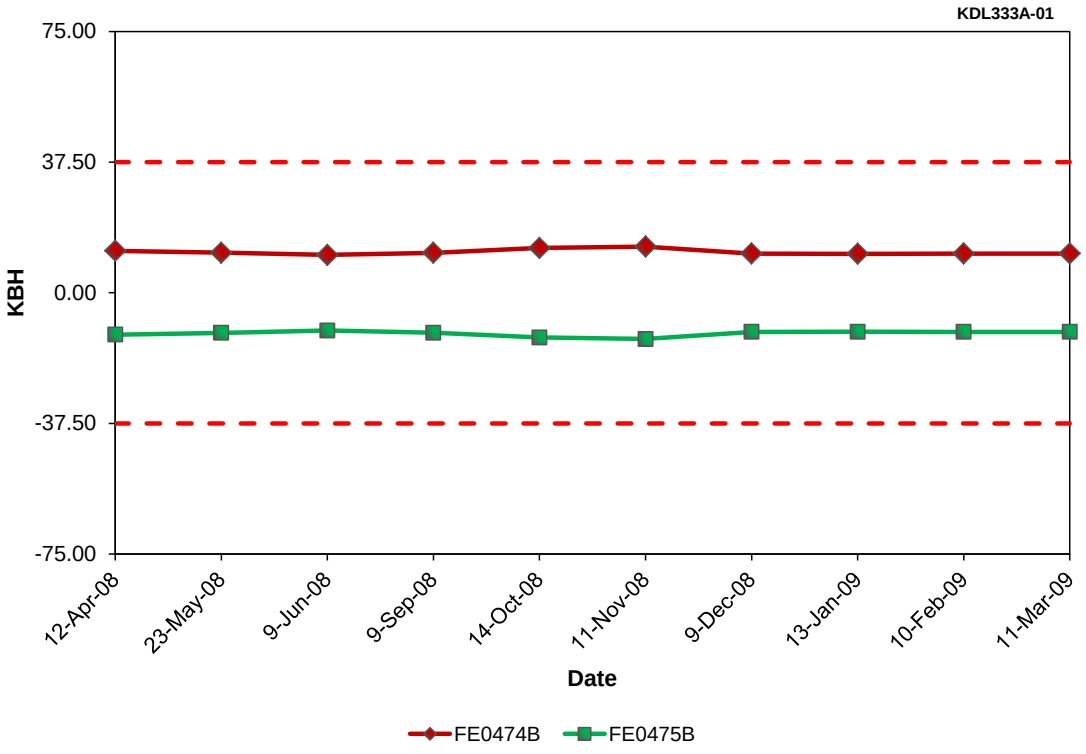



**Figure A.1 SG A STEAM FLOW Steady-State Deviation at Farley Unit 1 (Cycle 22)**

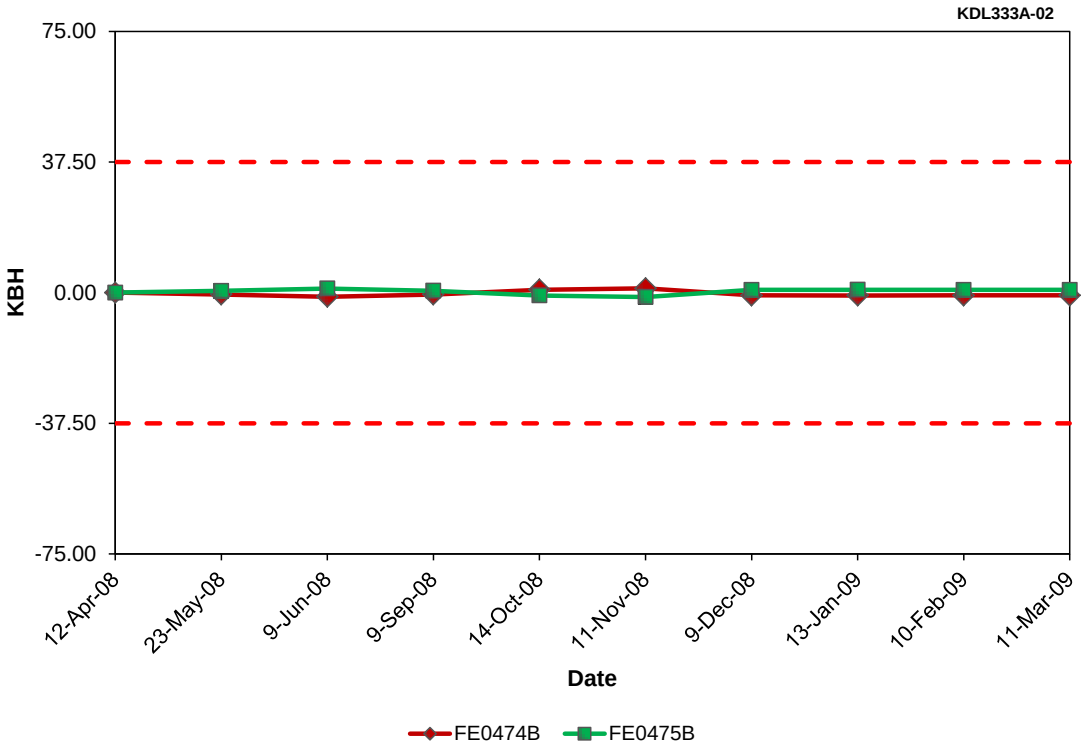



**Figure A.2 SG A STEAM FLOW Steady-State Drift at Farley Unit 1 (Cycle 22)**

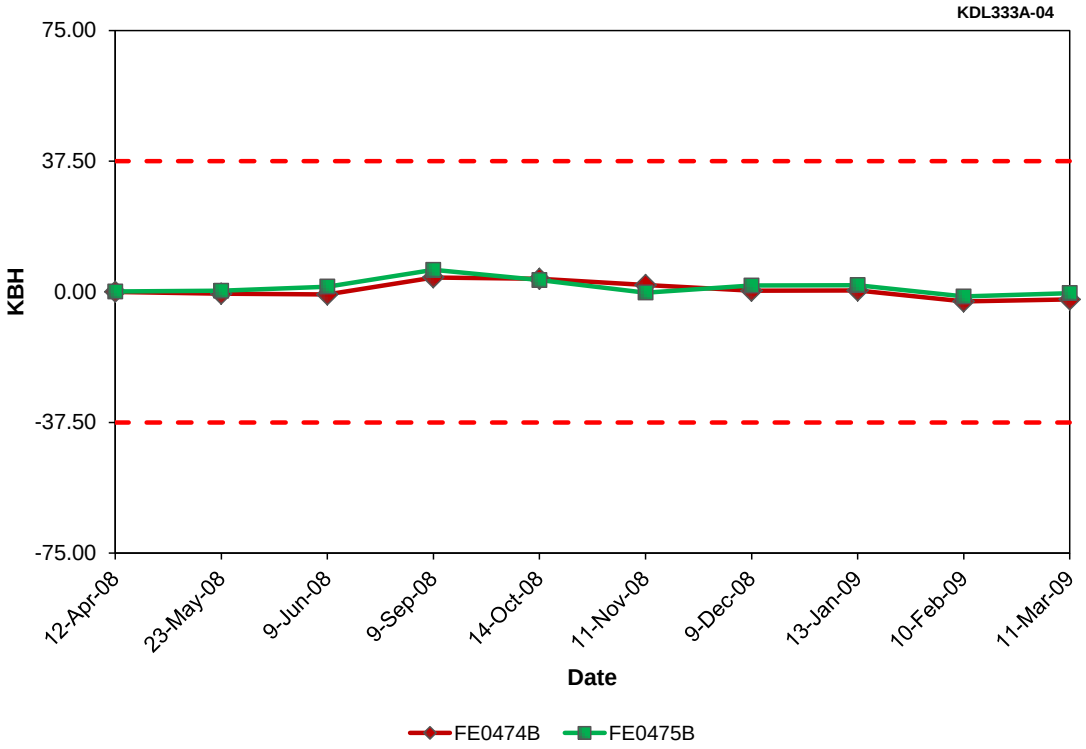



**Figure A.3 SG A STEAM FLOW Steady-State Residual AAKR at Farley Unit 1 (Cycle 22)**

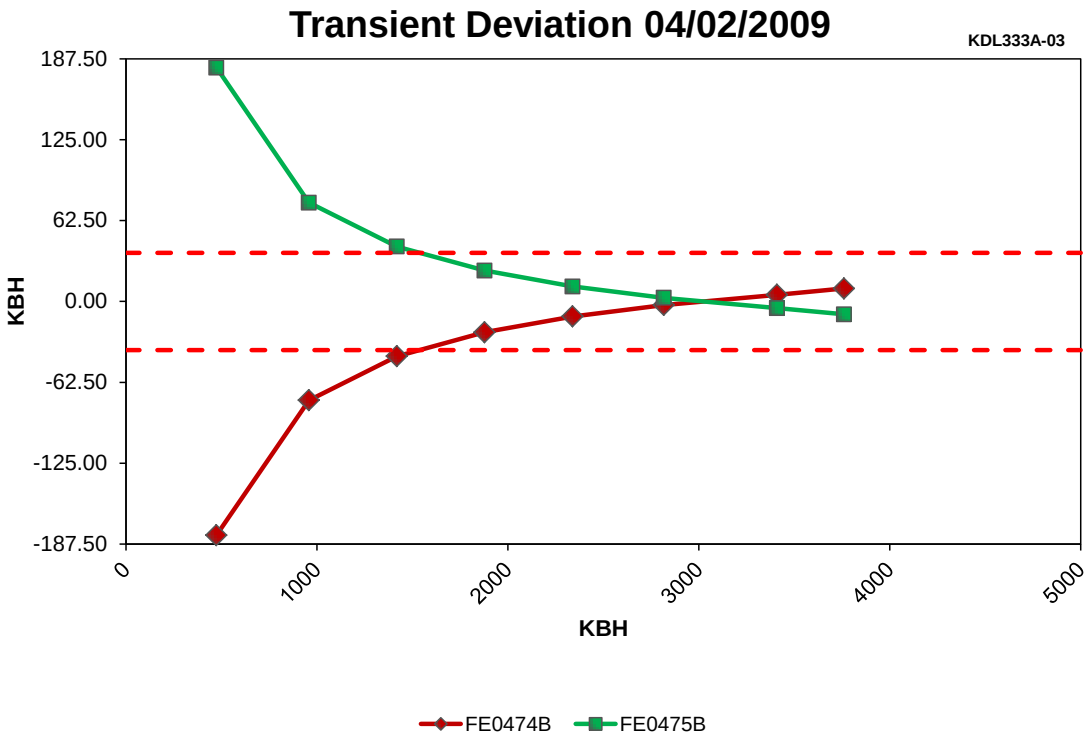



**Figure A.4 SG A STEAM FLOW Transient Deviation at Farley Unit 1 (Cycle 22)**

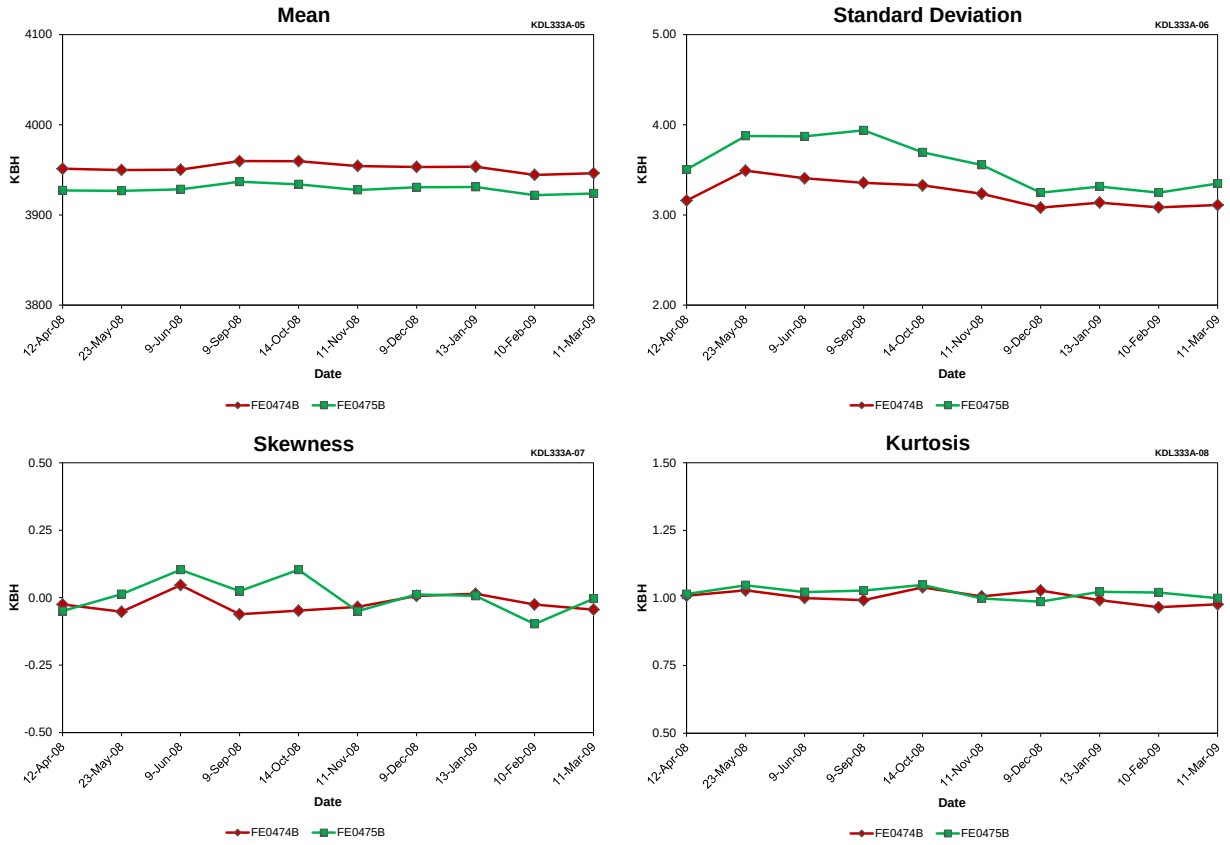



**Figure A.5 SG A STEAM FLOW Data Quality Statistics at Farley Unit 1 (Cycle 22)**

**Table A.1 SG A STEAM FLOW Data Quality for Farley Unit 1 (Cycle 22)**

| | Tag Names | |
|---|---|---|
| **Result Type** | **FE0474B** | **FE0475B** |
| Mean | 3952.19 | 3928.83 |
| Std. Dev. | 3.24 | 3.56 |
| Skewness | -0.02 | 0.01 |
| Kurtosis | 1.00 | 1.02 |

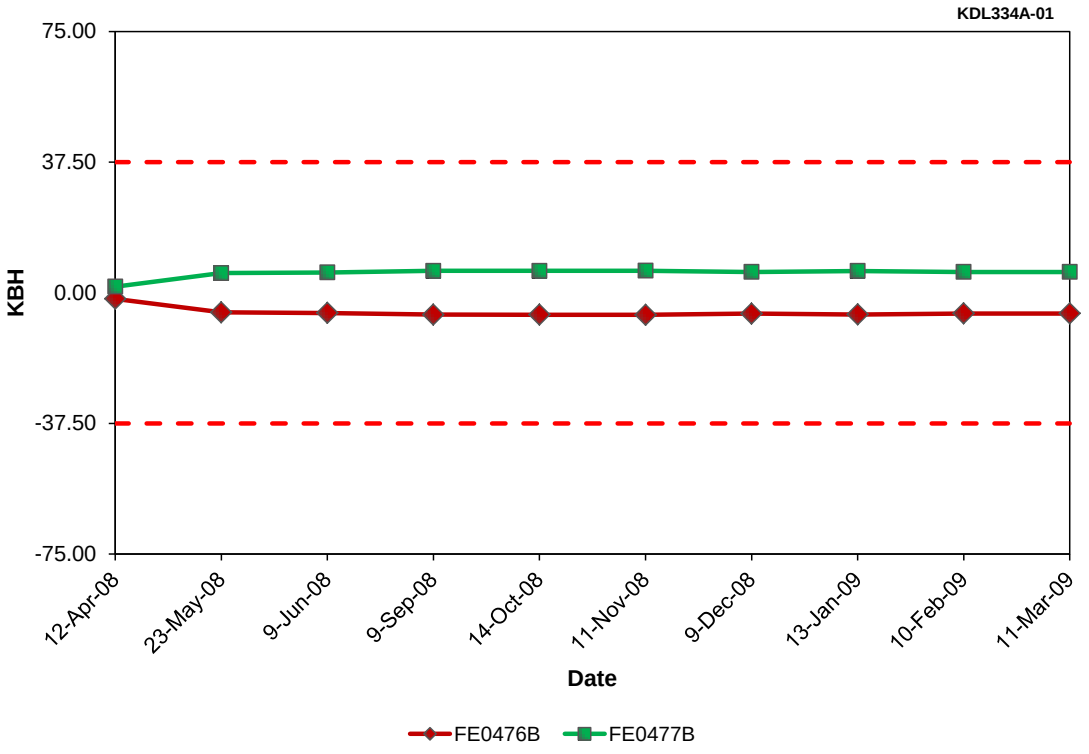



**Figure A.6 FW FLOW TO SG A Steady-State Deviation at Farley Unit 1 (Cycle 22)**

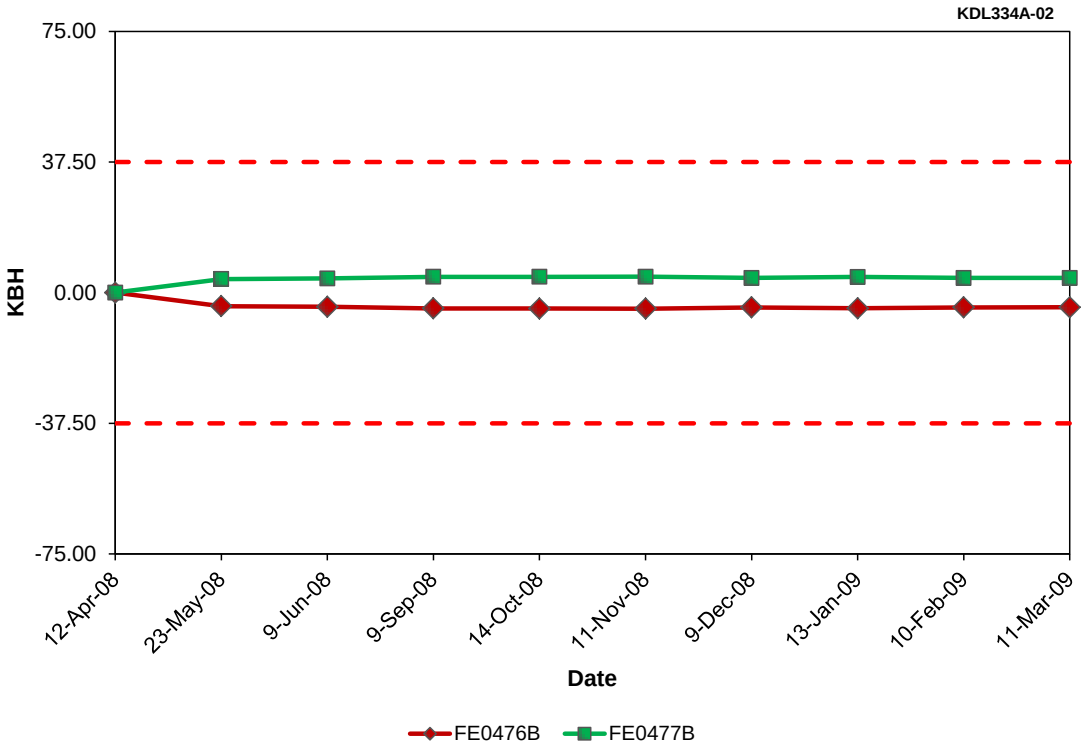



**Figure A.7 FW FLOW TO SG A Steady-State Drift at Farley Unit 1 (Cycle 22)**

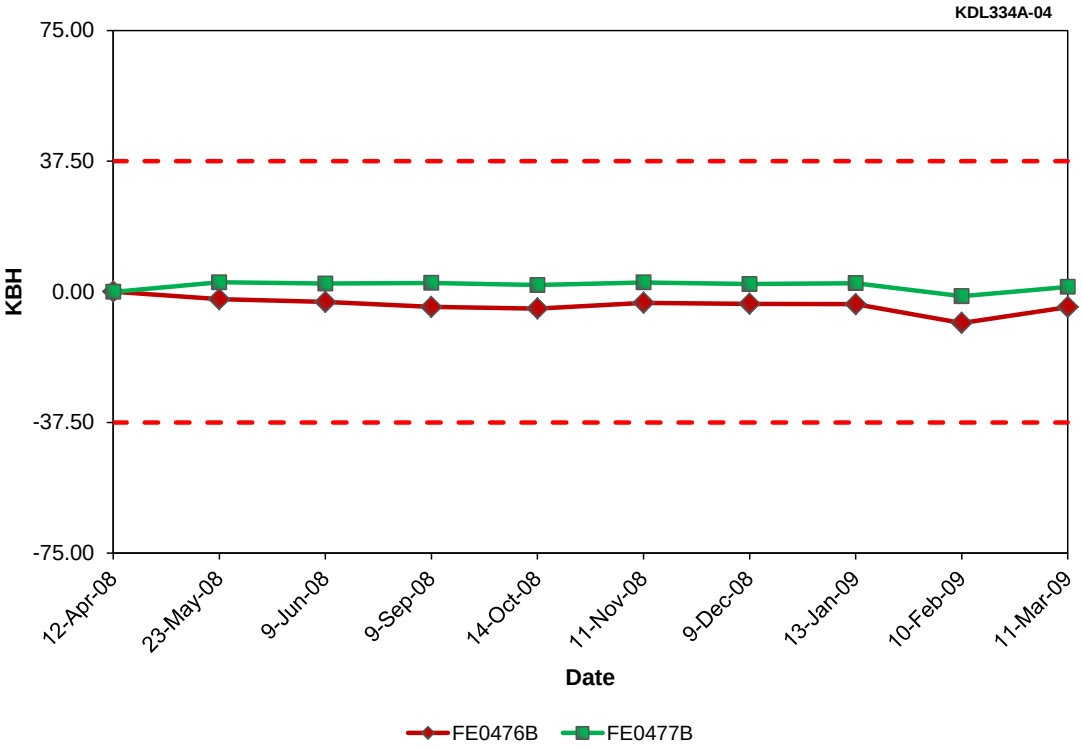



**Figure A.8 FW FLOW TO SG A Steady-State Residual AAKR at Farley Unit 1 (Cycle 22)**

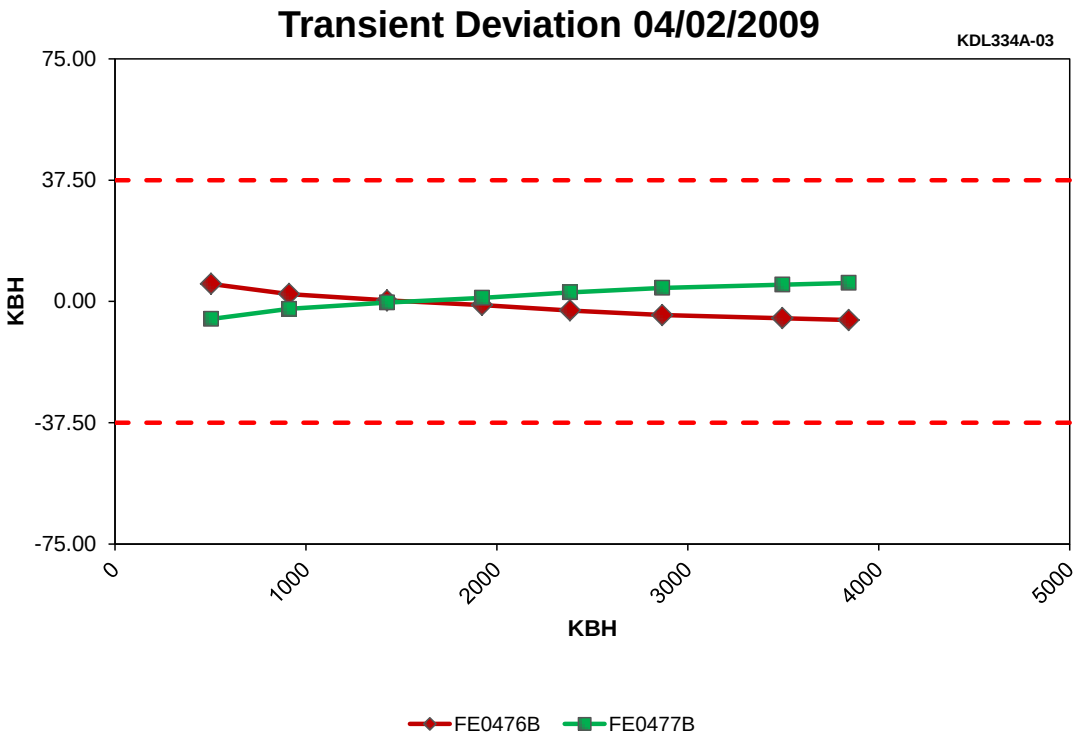



**Figure A.8 FW FLOW TO SG A Transient Deviation at Farley Unit 1 (Cycle 22)**

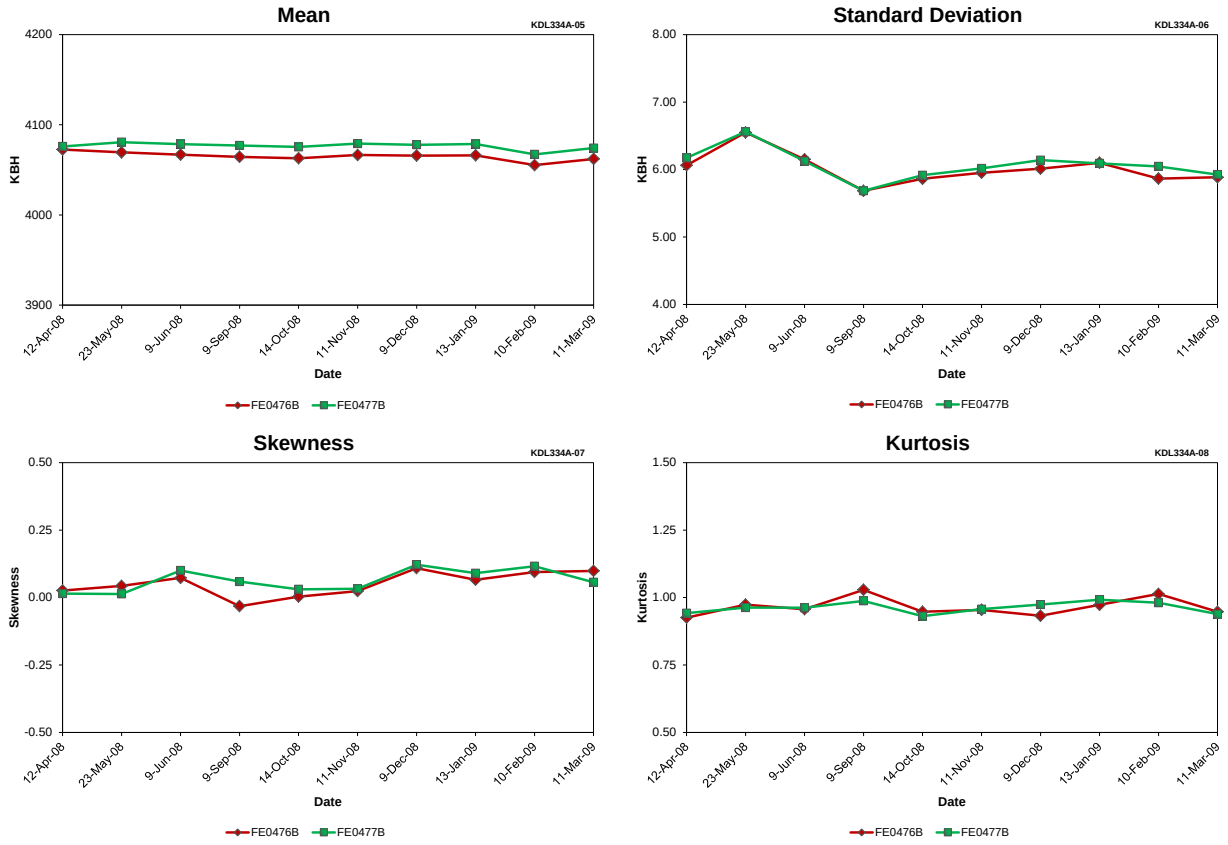



**Figure A.9 FW FLOW TO SG A Data Quality Statistics at Farley Unit 1 (Cycle 22)**

**Table A.2 FW FLOW TO SG A Data Quality for Farley Unit 1 (Cycle 22)**

| | Tag Names | |
|---|---|---|
| **Result Type** | **FE0476B** | **FE0477B** |
| Mean | 4065.16 | 4065.16 |
| Std. Dev. | 6.01 | 6.01 |
| Skewness | 0.05 | 0.05 |
| Kurtosis | 0.97 | 0.97 |

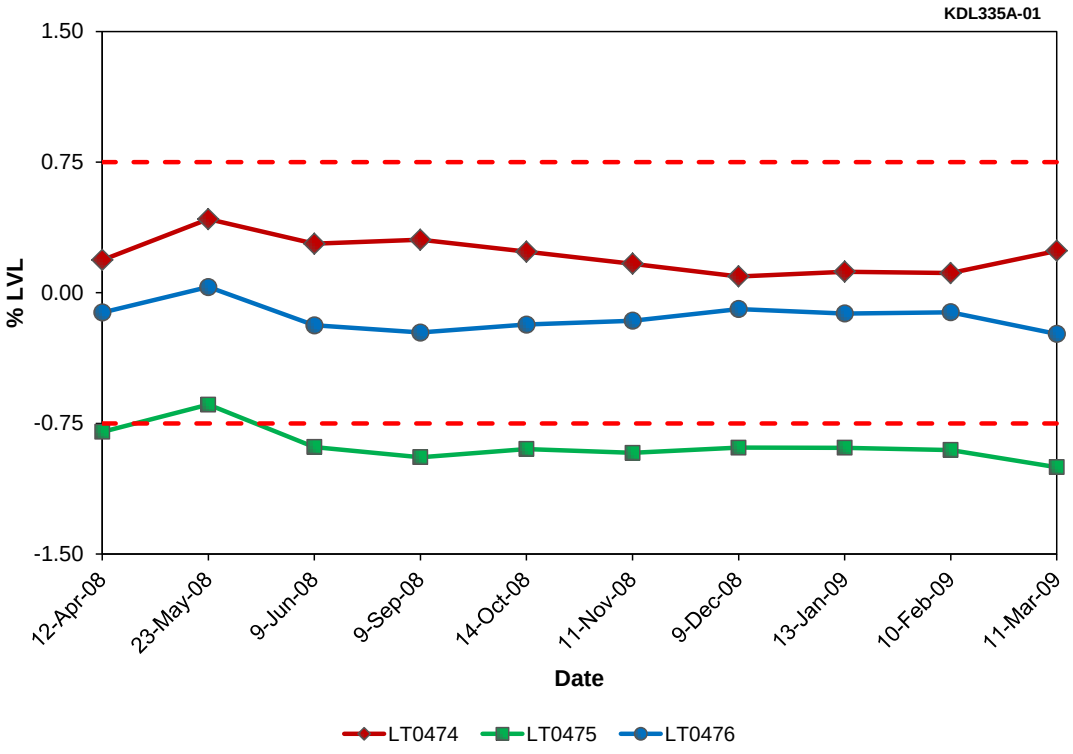



**Figure A.10 SG A LEVEL Steady-State Deviation at Farley Unit 1 (Cycle 22)**

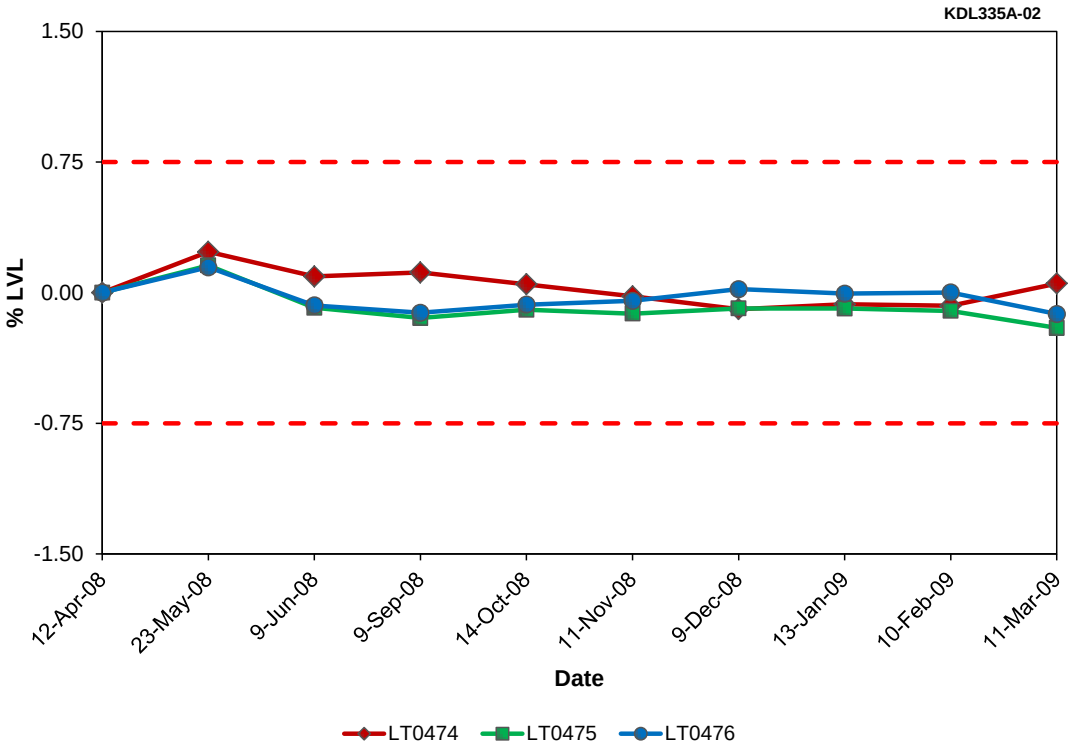



**Figure A.11 SG A LEVEL Steady-State Drift at Farley Unit 1 (Cycle 22)**

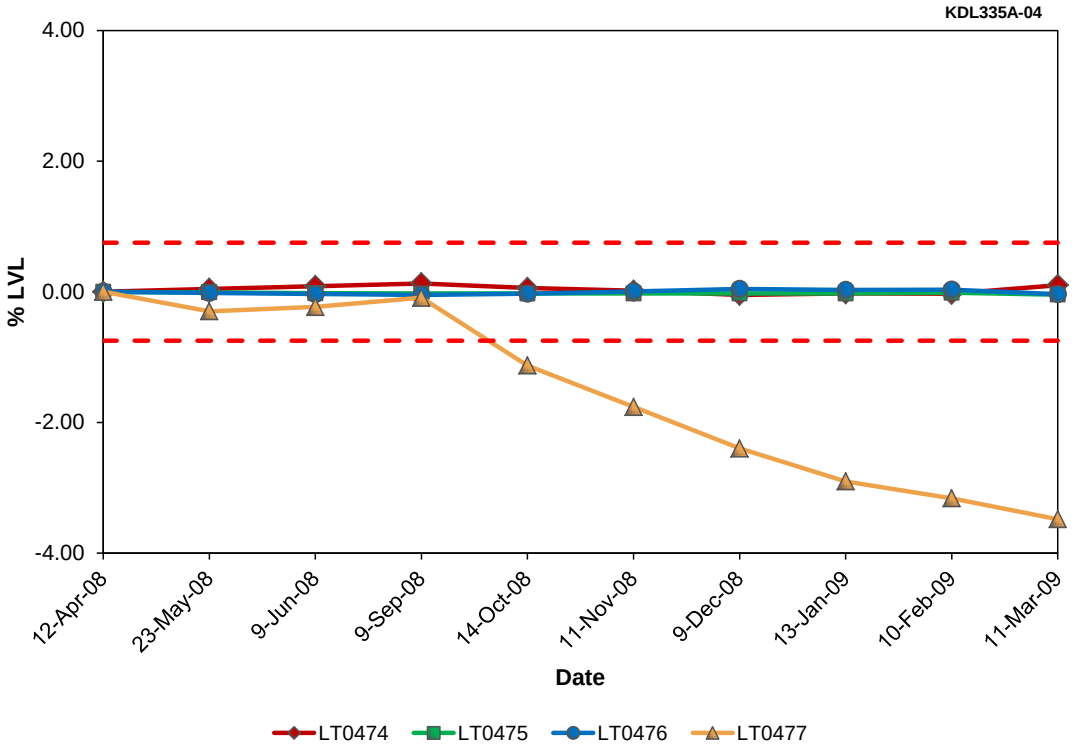



**Figure A.12 SG A LEVEL Steady-State Residual AAKR at Farley Unit 1 (Cycle 22)**

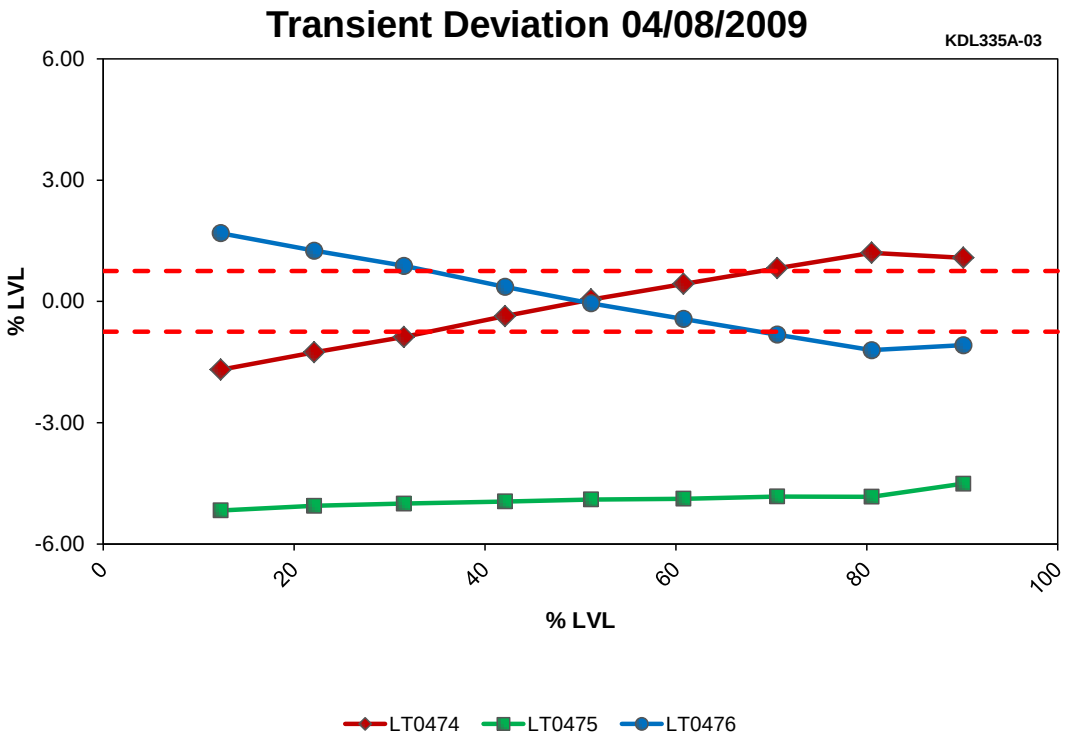



**Figure A.13 SG A LEVEL Transient Deviation at Farley Unit 1 (Cycle 22)**

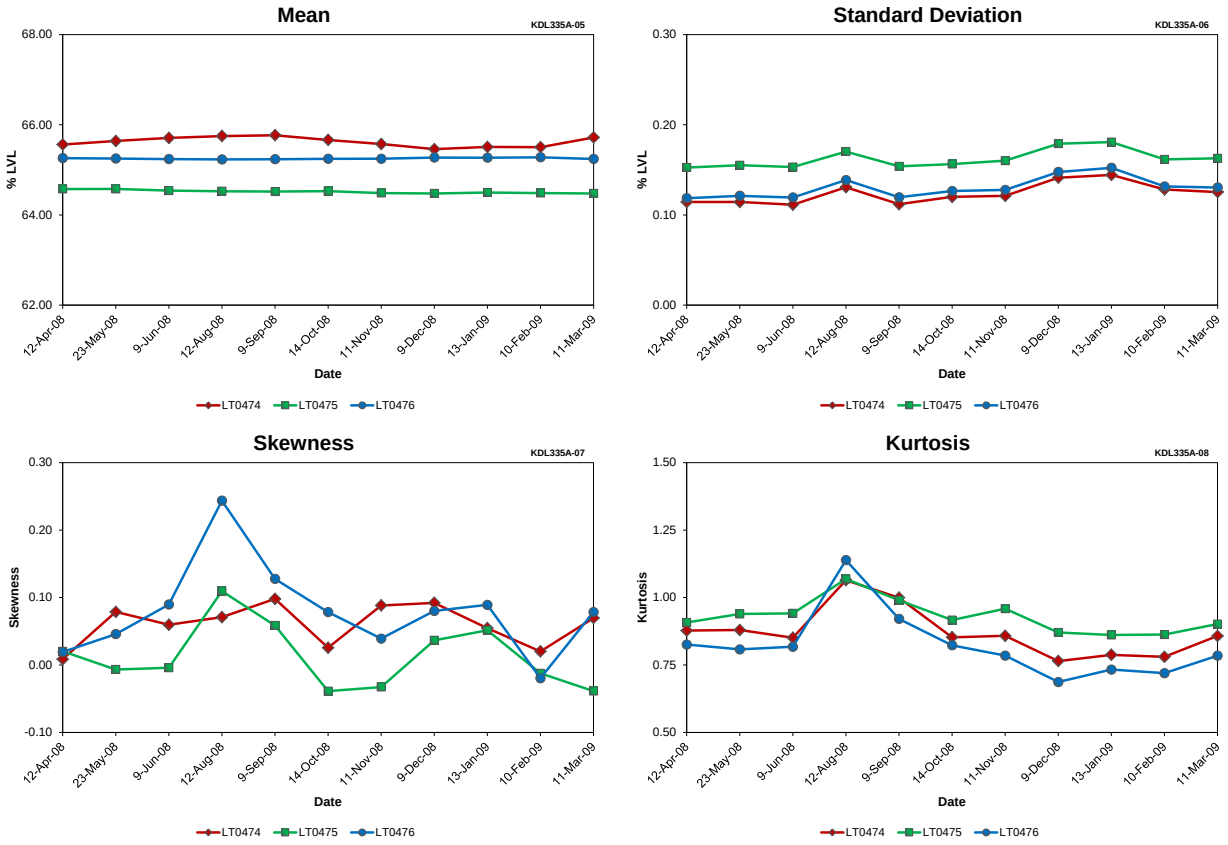



**Figure A.14 SG A LEVEL Data Quality Statistics at Farley Unit 1 (Cycle 22)**

**Table A.3 SG A LEVEL Data Quality for Farley Unit 1 (Cycle 22)**

| | Tag Names | | |
|---|---|---|---|
| **Result Type** | **LT0474** | **LT0475** | **LT0476** |
| Mean | 65.62 | 64.52 | 65.25 |
| Std. Dev. | 0.12 | 0.16 | 0.13 |
| Skewness | 0.06 | 0.01 | 0.08 |
| Kurtosis | 0.87 | 0.93 | 0.82 |

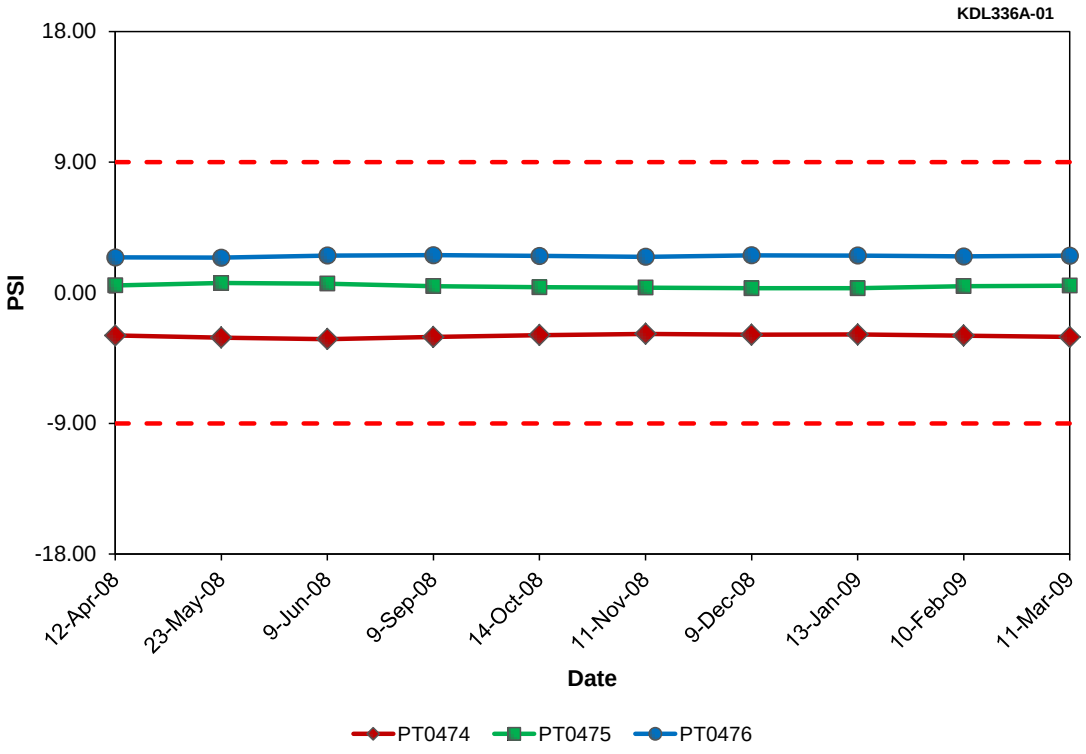



**Figure A.15 SG A OUTLET PRESSURE Steady-State Deviation at Farley Unit 1 (Cycle 22)**

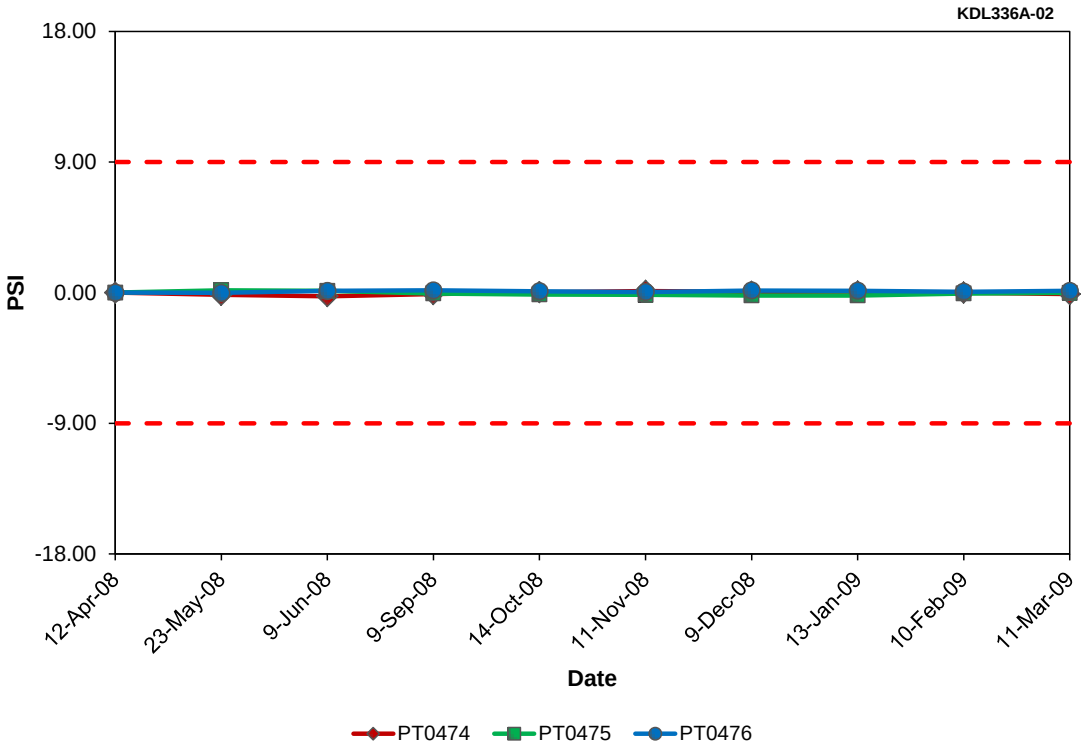



**Figure A.16 SG A OUTLET PRESSURE Steady-State Drift at Farley Unit 1 (Cycle 22)**

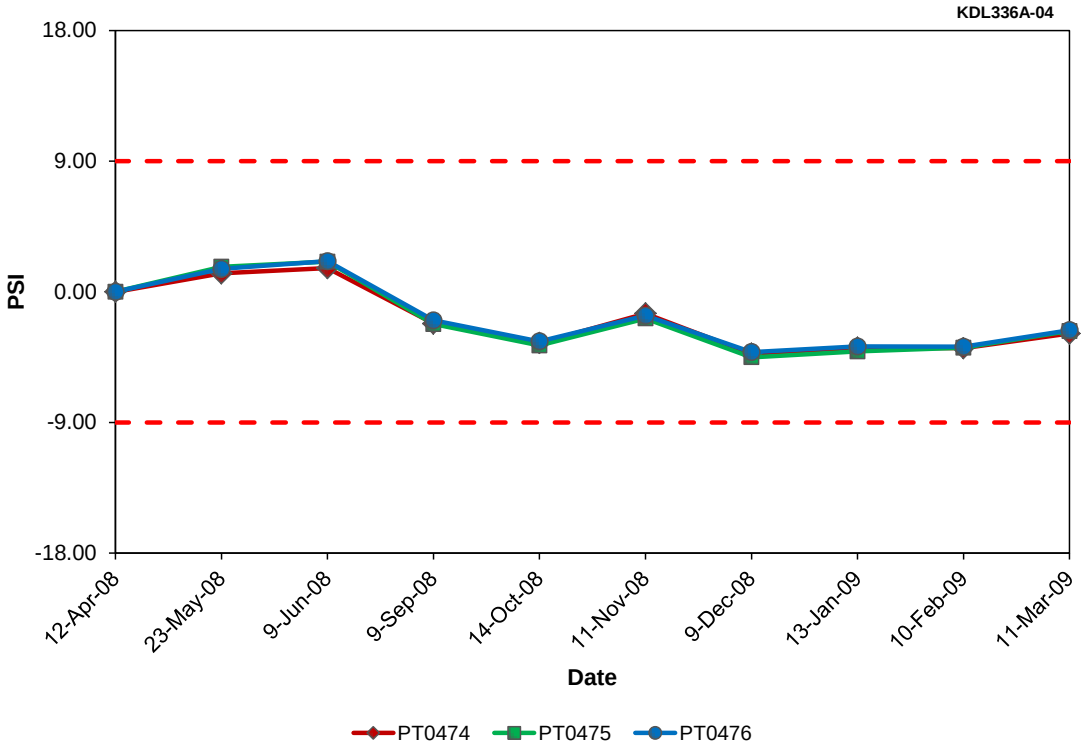



**Figure A.17 SG A OUTLET PRESSURE Steady-State Residual AAKR at Farley Unit 1 (Cycle 22)**

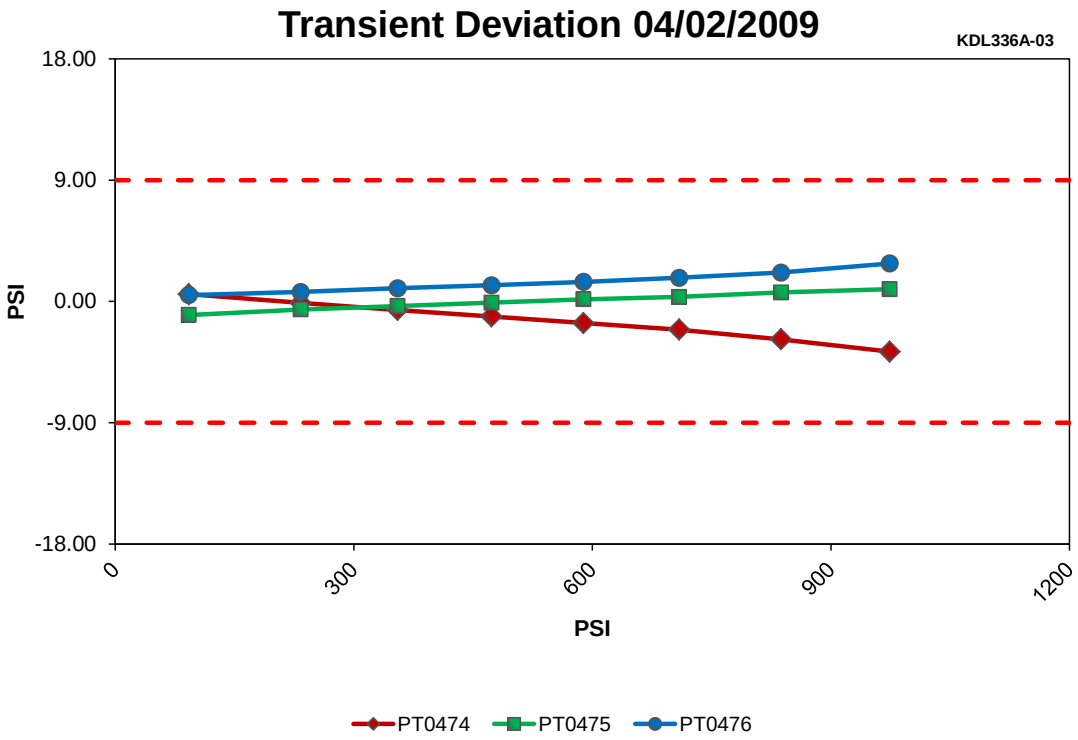



**Figure A.18 SG A OUTLET PRESSURE Transient Deviation at Farley Unit 1 (Cycle 22)**

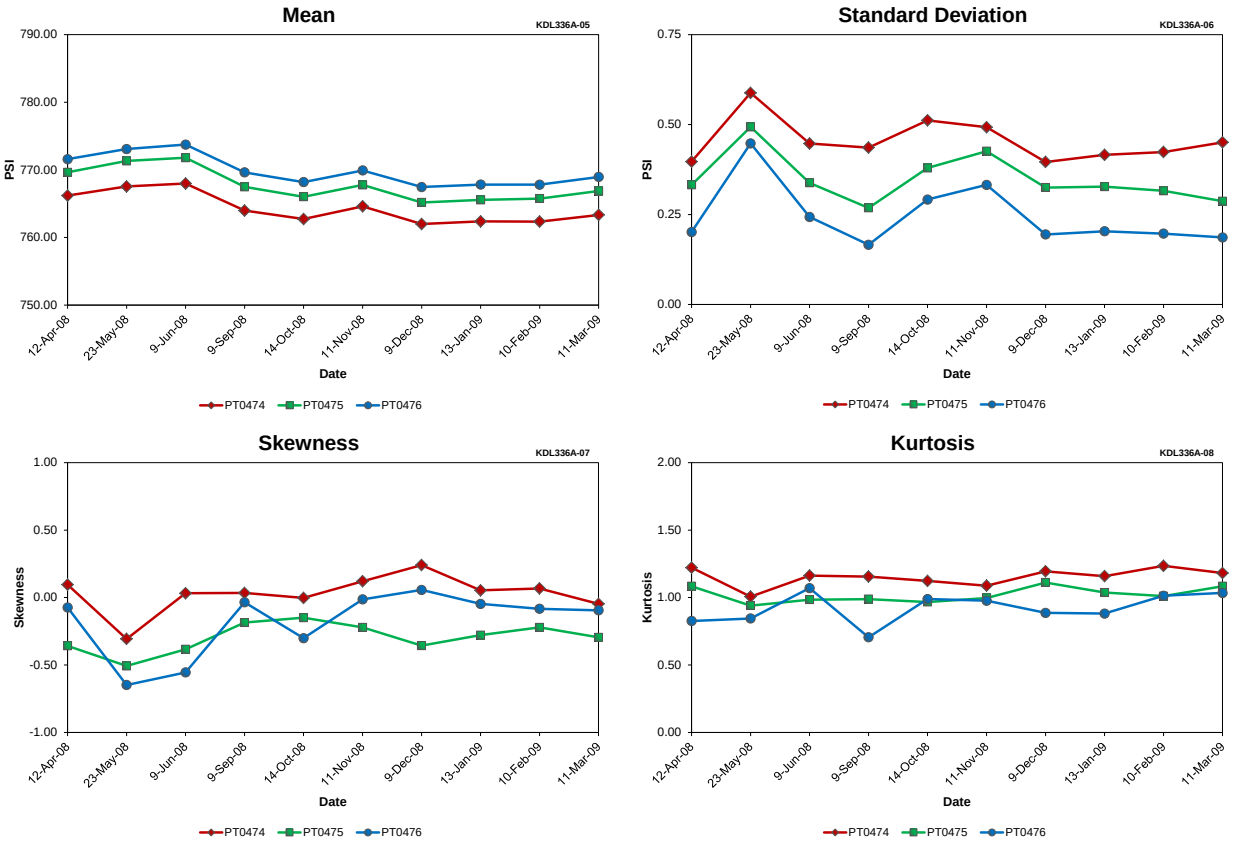



**Figure A.19 SG A OUTLET PRESSURE Data Quality Statistics at Farley Unit 1 (Cycle 22)**

**Table A.4 SG A OUTLET PRESSURE Data Quality for Farley Unit 1 (Cycle 22)**

| | Tag Names | | |
|---|---|---|---|
| **Result Type** | **PT0474** | **PT0475** | **PT0476** |
| Mean | 764.31 | 767.73 | 769.82 |
| Std. Dev. | 0.46 | 0.35 | 0.25 |
| Skewness | 0.03 | -0.30 | -0.18 |
| Kurtosis | 1.15 | 1.02 | 0.92 |

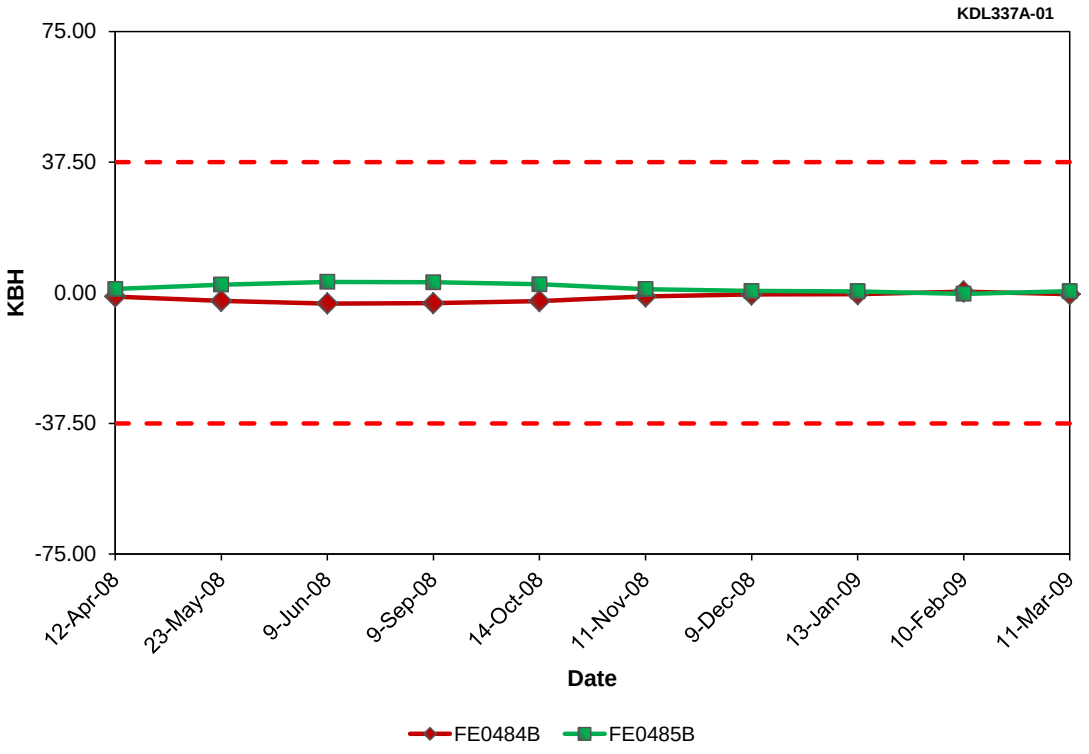



**Figure A.20 SG B STEAM FLOW Steady-State Deviation at Farley Unit 1 (Cycle 22)**

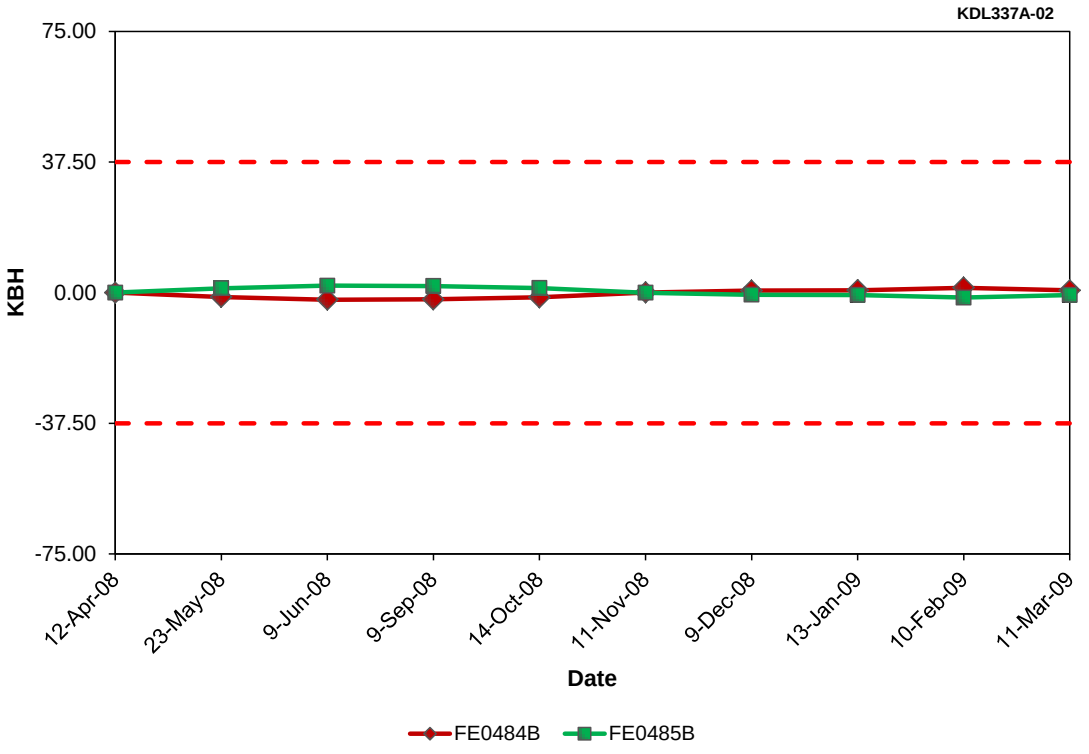



**Figure A.21 SG B STEAM FLOW Steady-State Drift at Farley Unit 1 (Cycle 22)**

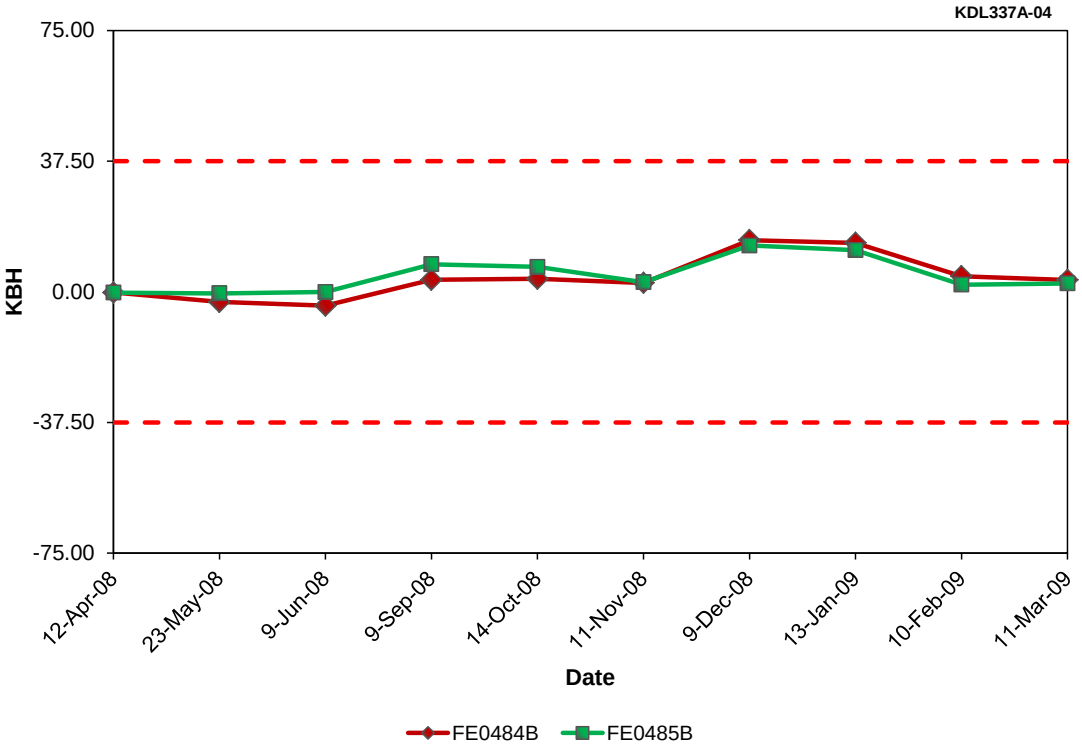



**Figure A.22 SG B STEAM FLOW Steady-State Residual AAKR at Farley Unit 1 (Cycle 22)**

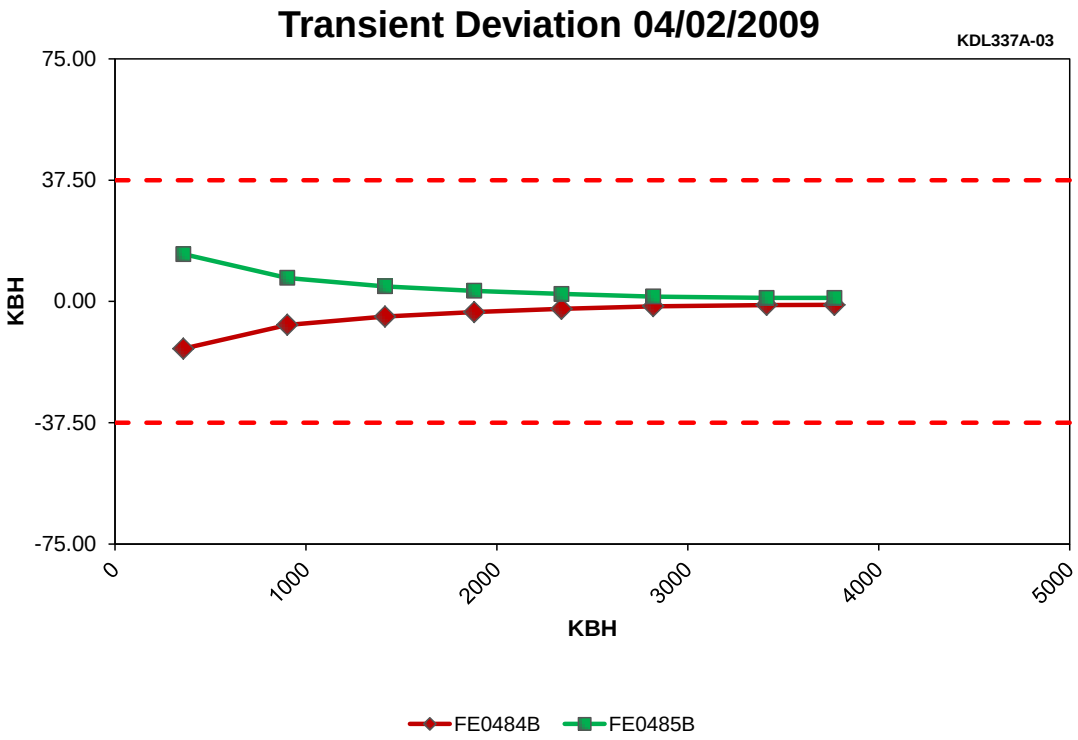



**Figure A.23 SG B STEAM FLOW Transient Deviation at Farley Unit 1 (Cycle 22)**

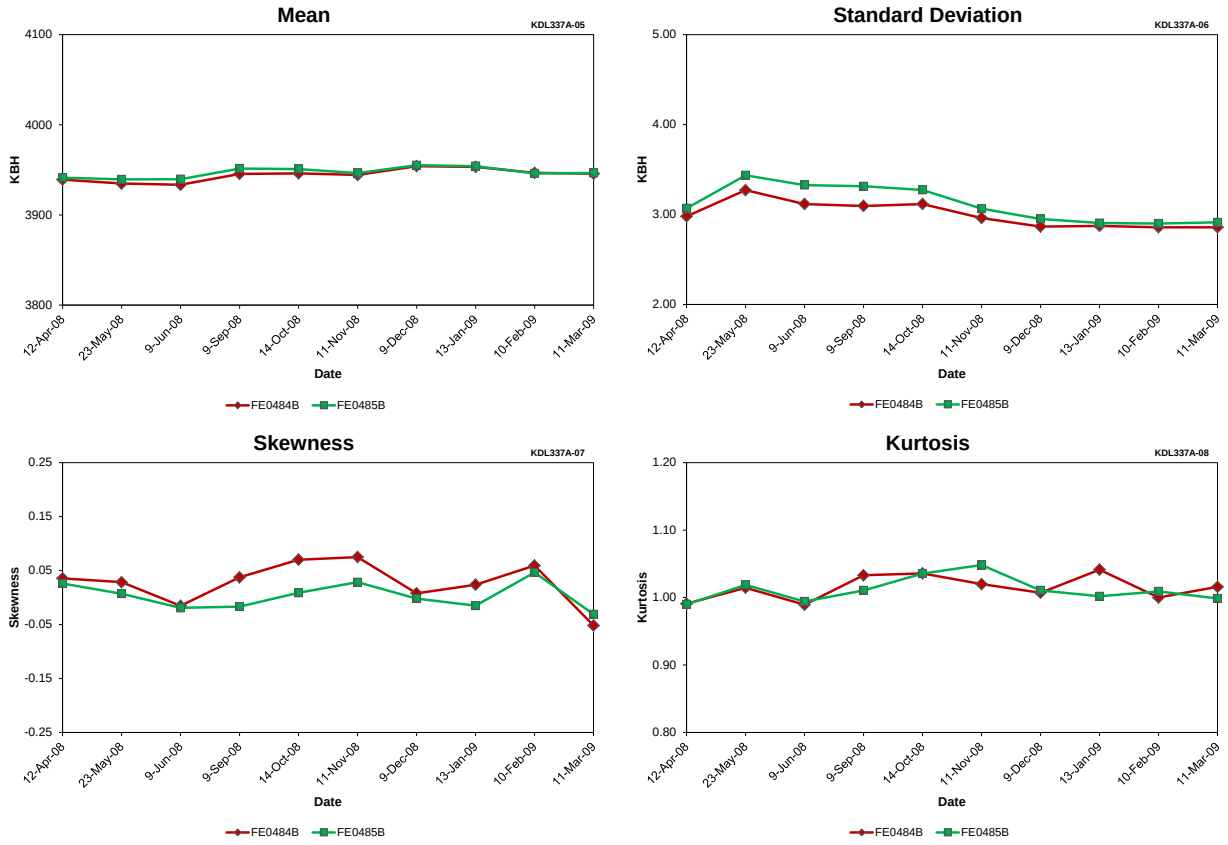



**Figure A.24 SG B STEAM FLOW Data Quality Statistics at Farley Unit 1 (Cycle 22)**

**Table A.5 SG B STEAM FLOW Data Quality for Farley Unit 1 (Cycle 22)**

| Result Type | Tag Names | |
|---|---|---|
| | FE0484B | FE0485B |
| Mean | 3944.29 | 3947.09 |
| Std. Dev. | 3.00 | 3.12 |
| Skewness | 0.03 | 0.00 |
| Kurtosis | 1.01 | 1.01 |

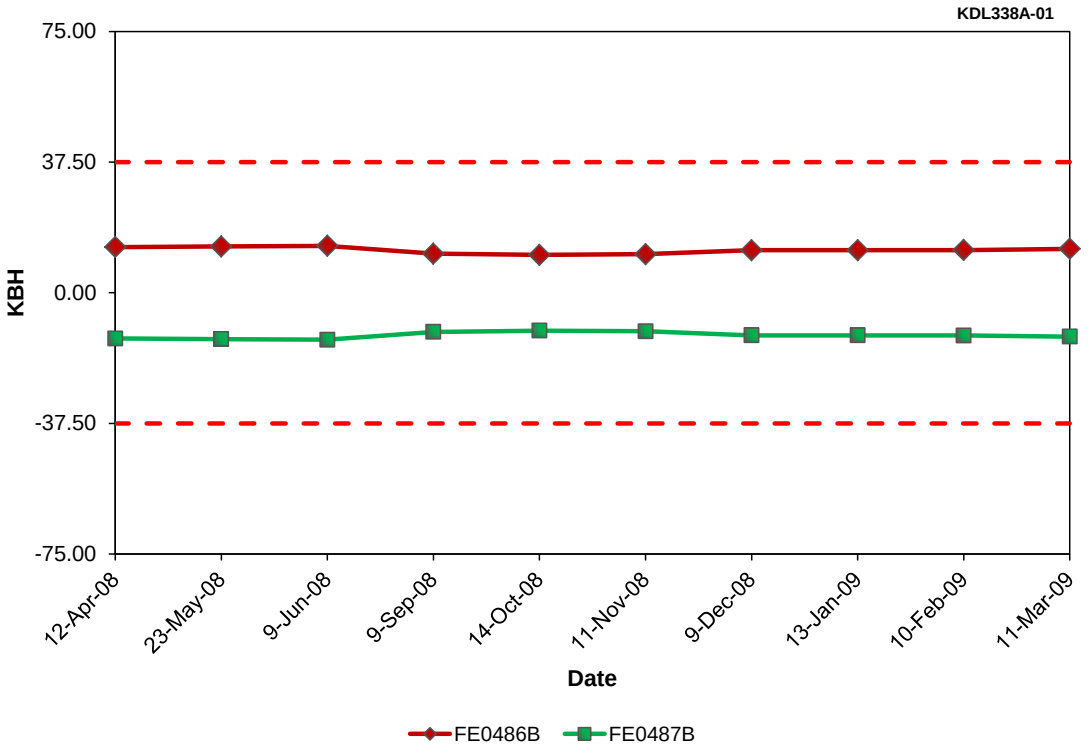



**Figure A.25 FW FLOW TO SG B Steady-State Deviation at Farley Unit 1 (Cycle 22)**

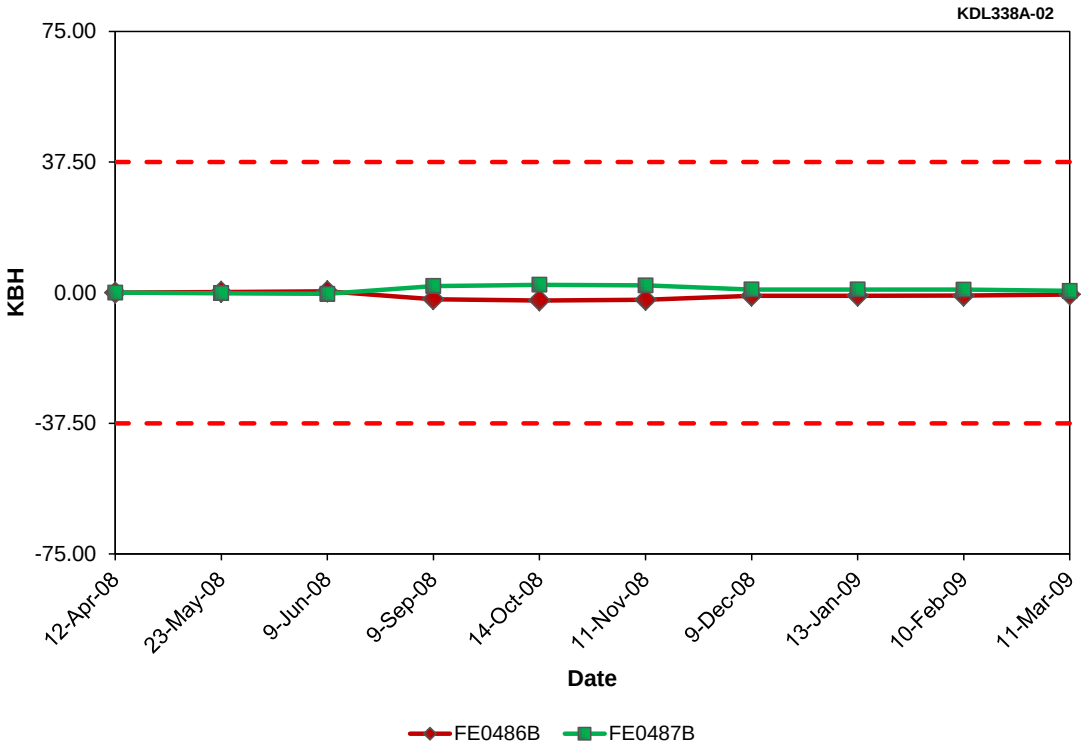



**Figure A.26 FW FLOW TO SG B Steady-State Drift at Farley Unit 1 (Cycle 22)**

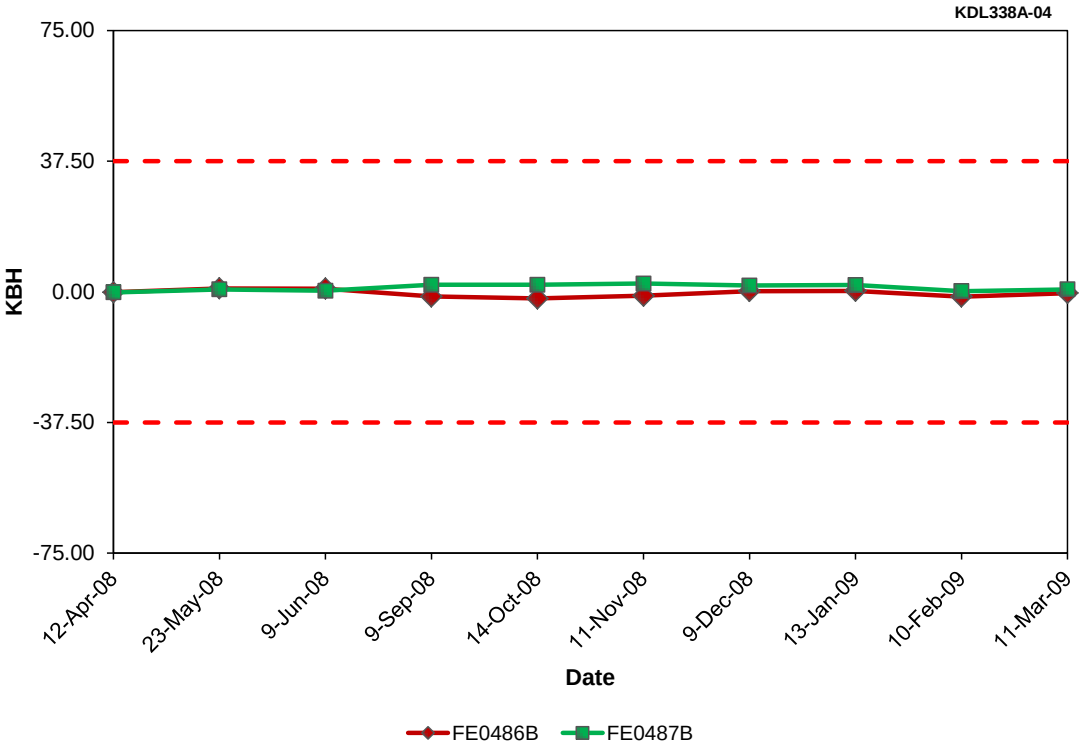



**Figure A.27 FW FLOW TO SG B Steady-State Residual AAKR at Farley Unit 1 (Cycle 22)**

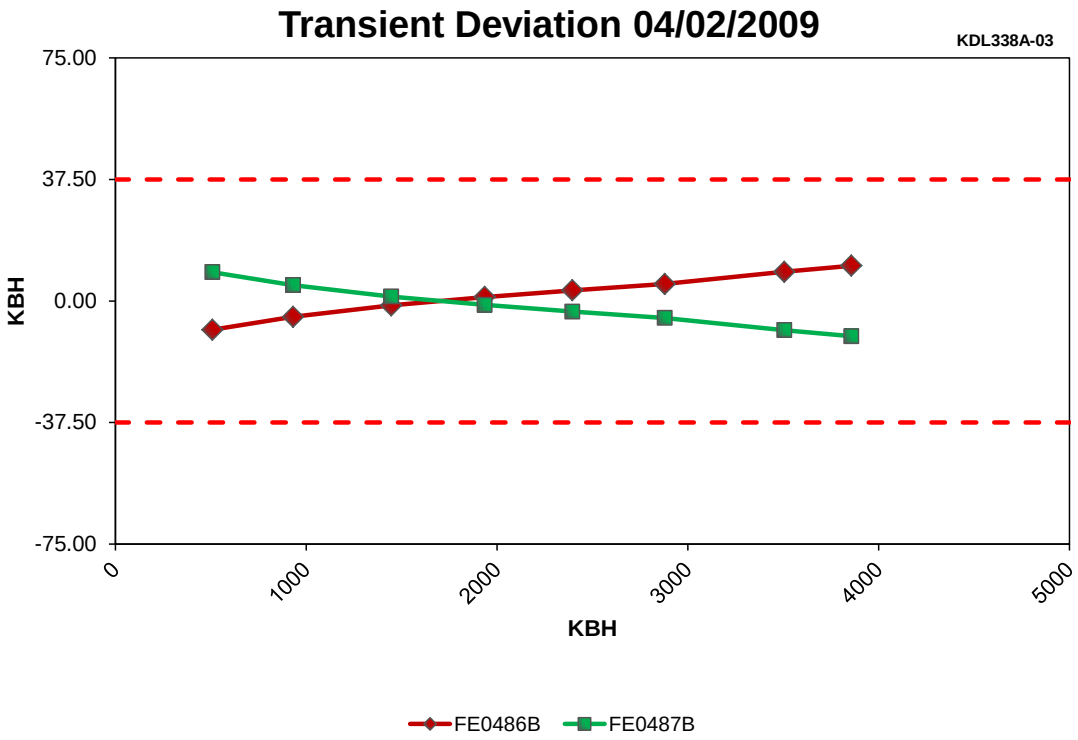



**Figure A.28 FW FLOW TO SG B Transient Deviation at Farley Unit 1 (Cycle 22)**

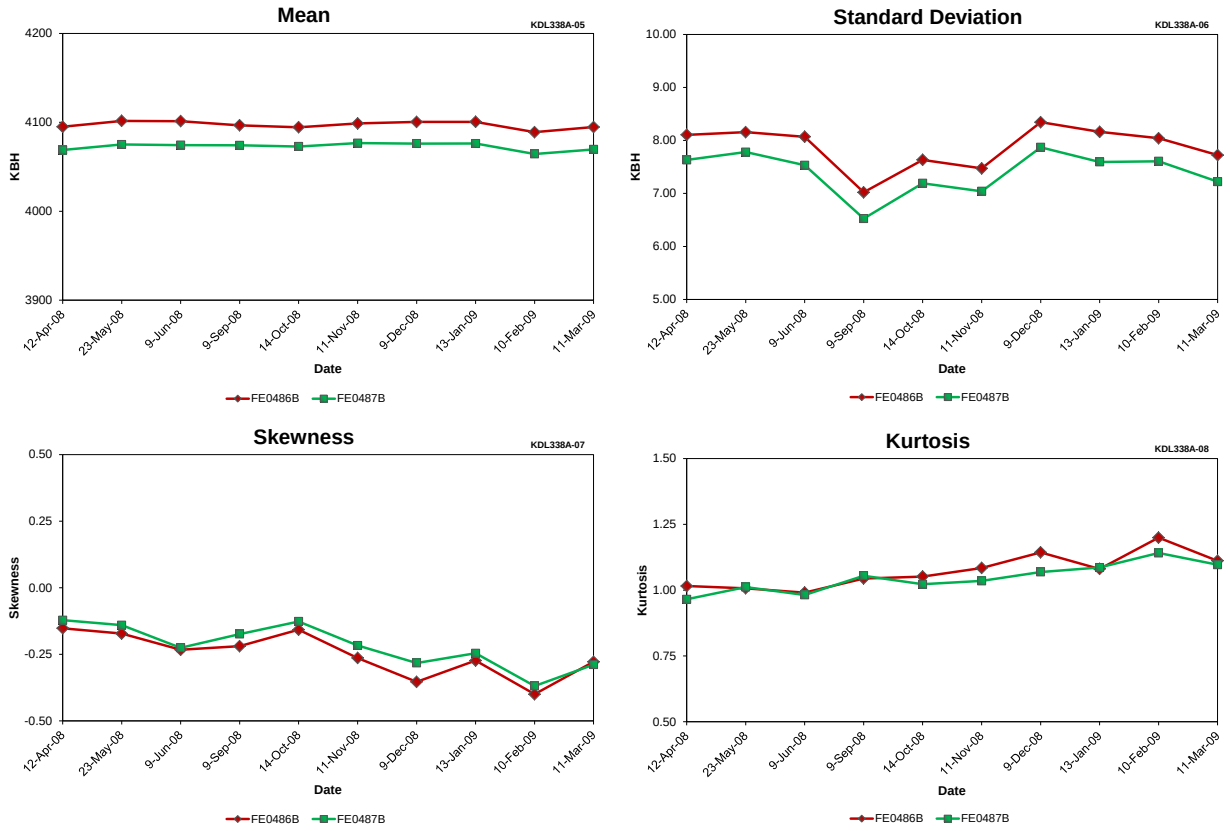



**Figure A.29 FW FLOW TO SG B Data Quality Statistics at Farley Unit 1 (Cycle 22)**

**Table A.6 FW FLOW TO SG B Data Quality for Farley Unit 1 (Cycle 22)**

| | Tag Names | |
|---|---|---|
| **Result Type** | **FE0486B** | **FE0487B** |
| Mean | 4097.27 | 4072.85 |
| Std. Dev. | 7.87 | 7.40 |
| Skewness | -0.25 | -0.22 |
| Kurtosis | 1.07 | 1.05 |

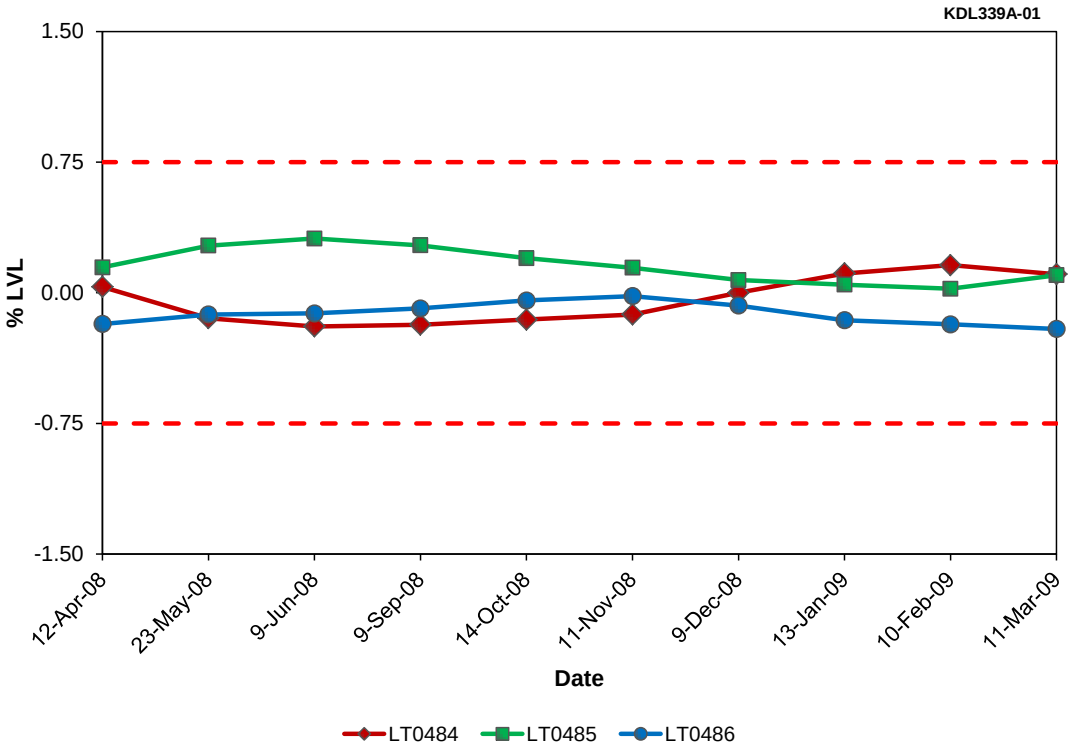



**Figure A.30 SG B LEVEL Steady-State Deviation at Farley Unit 1 (Cycle 22)**

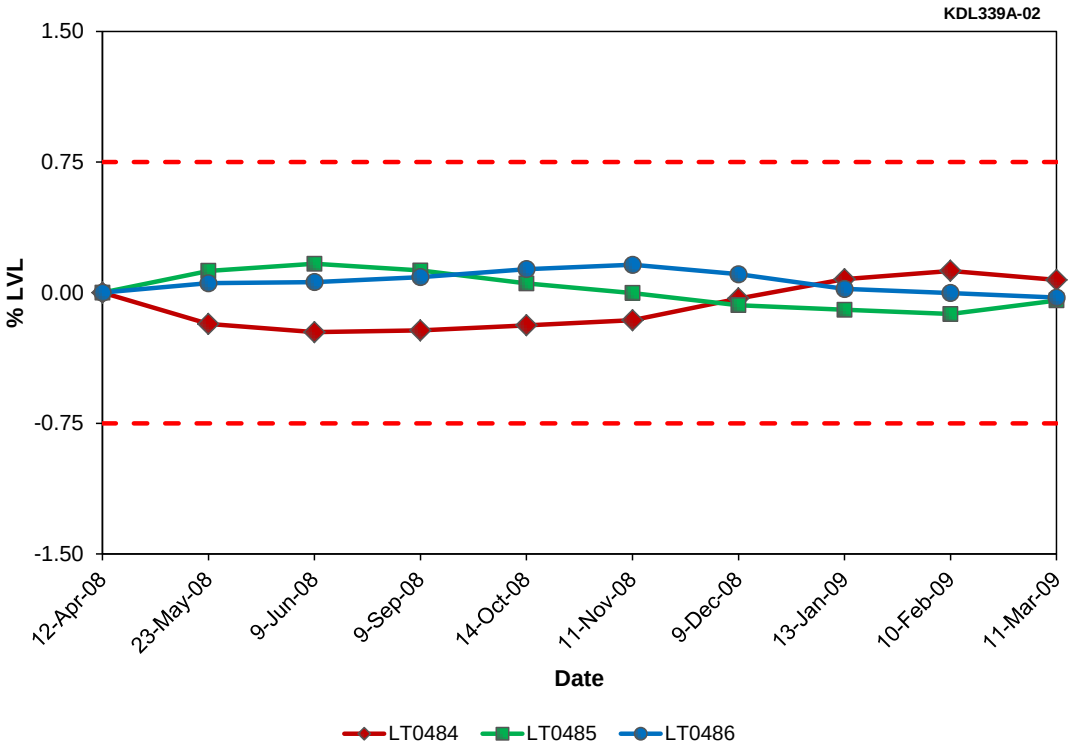



**Figure A.31 SG B LEVEL Steady-State Drift at Farley Unit 1 (Cycle 22)**

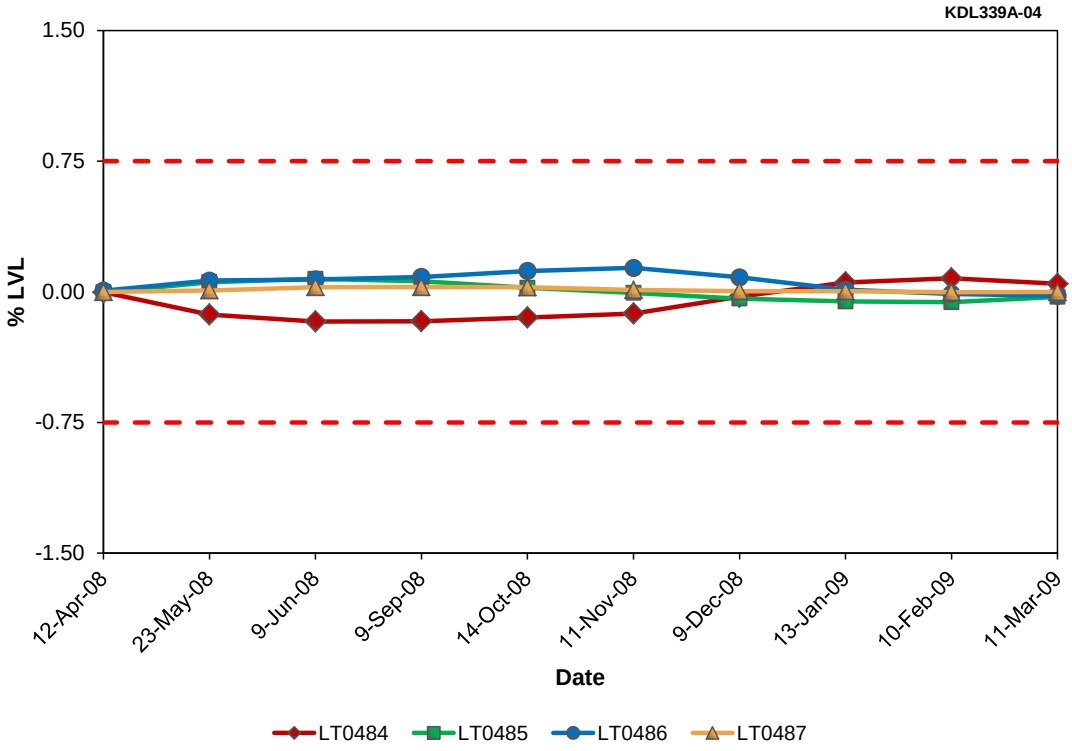



**Figure A.32 SG B LEVEL Steady-State Residual AAKR at Farley Unit 1 (Cycle 22)**

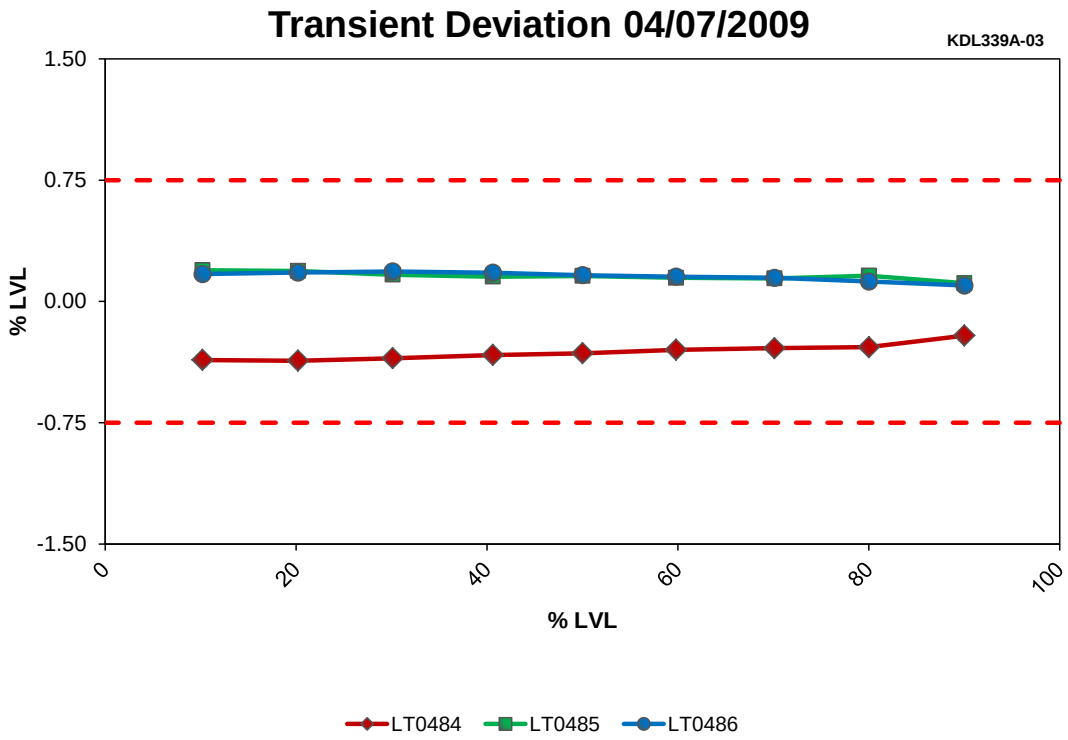



**Figure A.33 SG B LEVEL Transient Deviation at Farley Unit 1 (Cycle 22)**

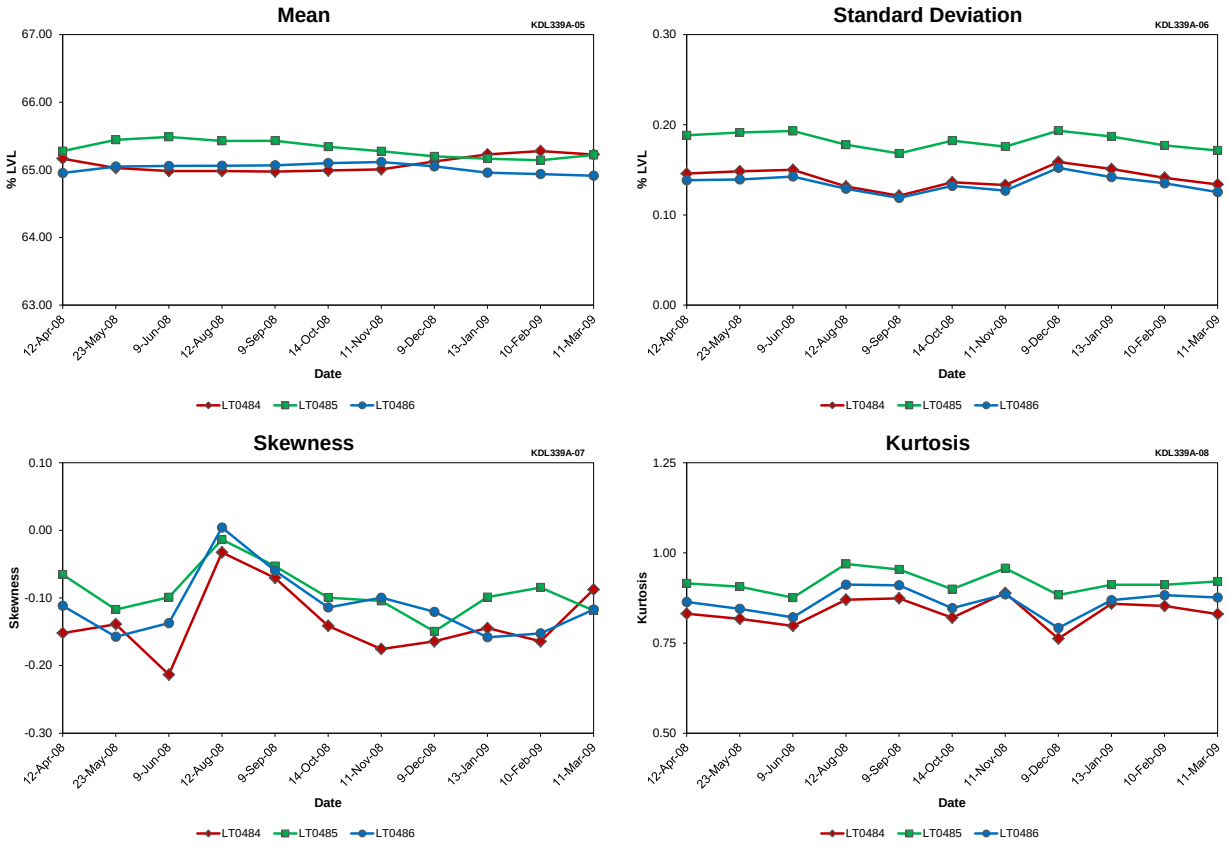



**Figure A.34 SG B LEVEL Data Quality Statistics at Farley Unit 1 (Cycle 22)**

**Table A.7 SG B LEVEL Data Quality for Farley Unit 1 (Cycle 22)**

| | Tag Names | | |
|---|---|---|---|
| **Result Type** | **LT0484** | **LT0485** | **LT0486** |
| Mean | 65.09 | 65.31 | 65.02 |
| Std. Dev. | 0.14 | 0.18 | 0.13 |
| Skewness | -0.13 | -0.09 | -0.11 |
| Kurtosis | 0.84 | 0.92 | 0.86 |

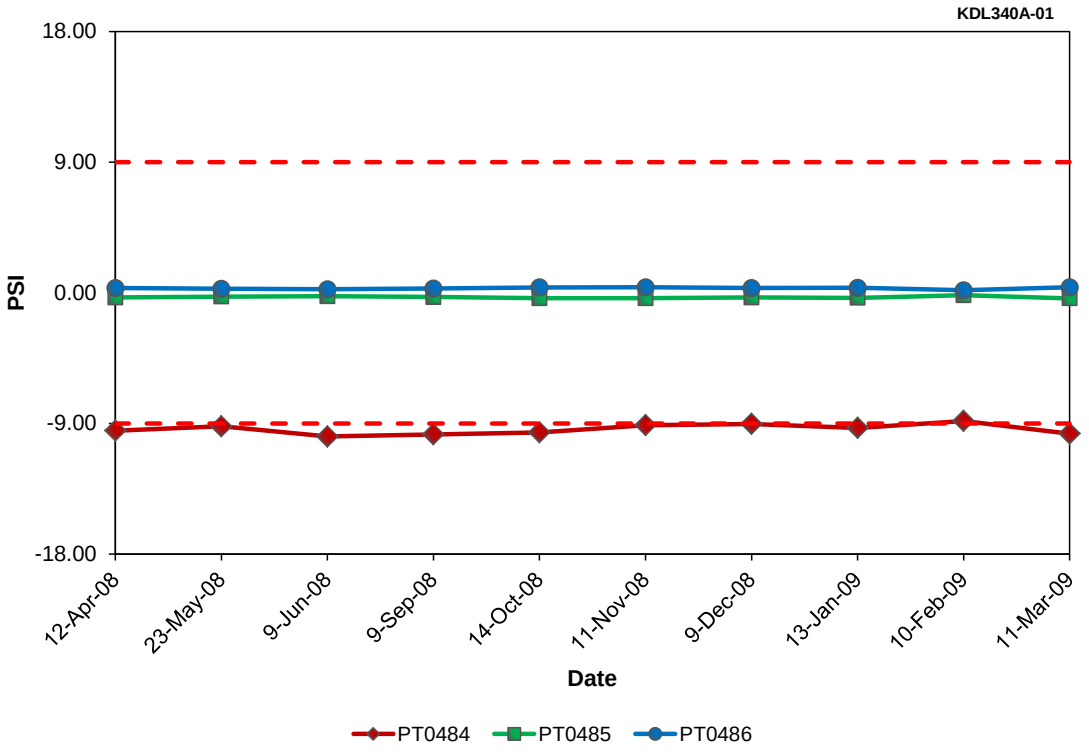



**Figure A.35 SG B OUTLET PRESSURE Steady-State Deviation at Farley Unit 1 (Cycle 22)**

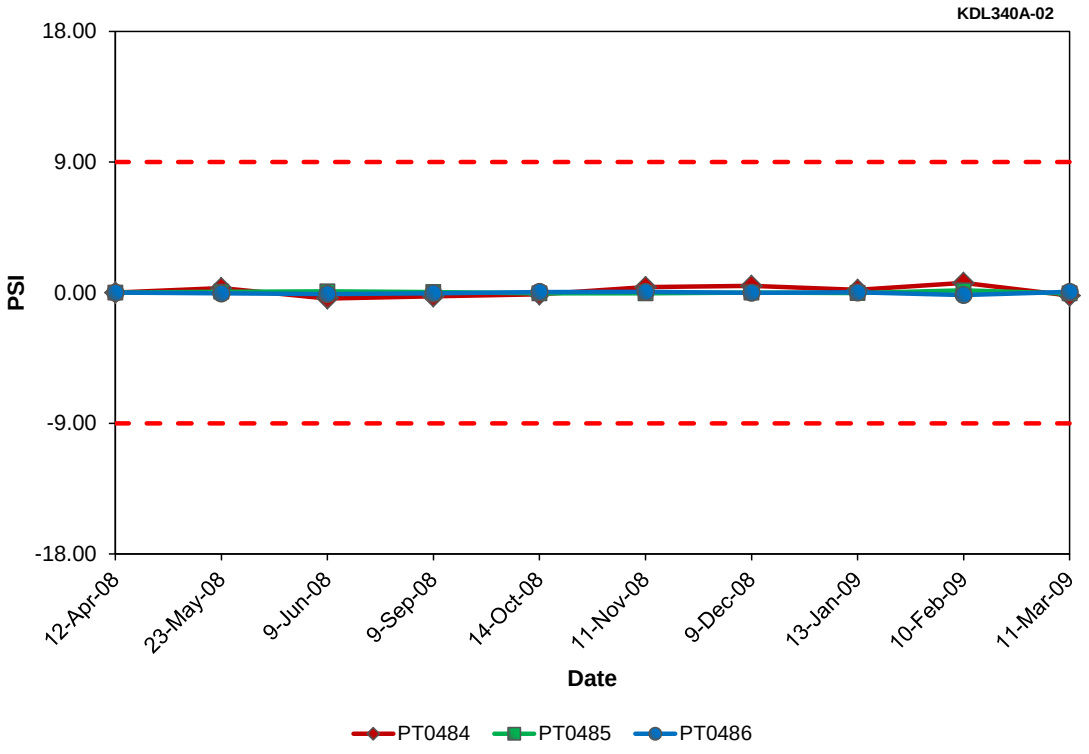



**Figure A.36 SG B OUTLET PRESSURE Steady-State Drift at Farley Unit 1 (Cycle 22)**

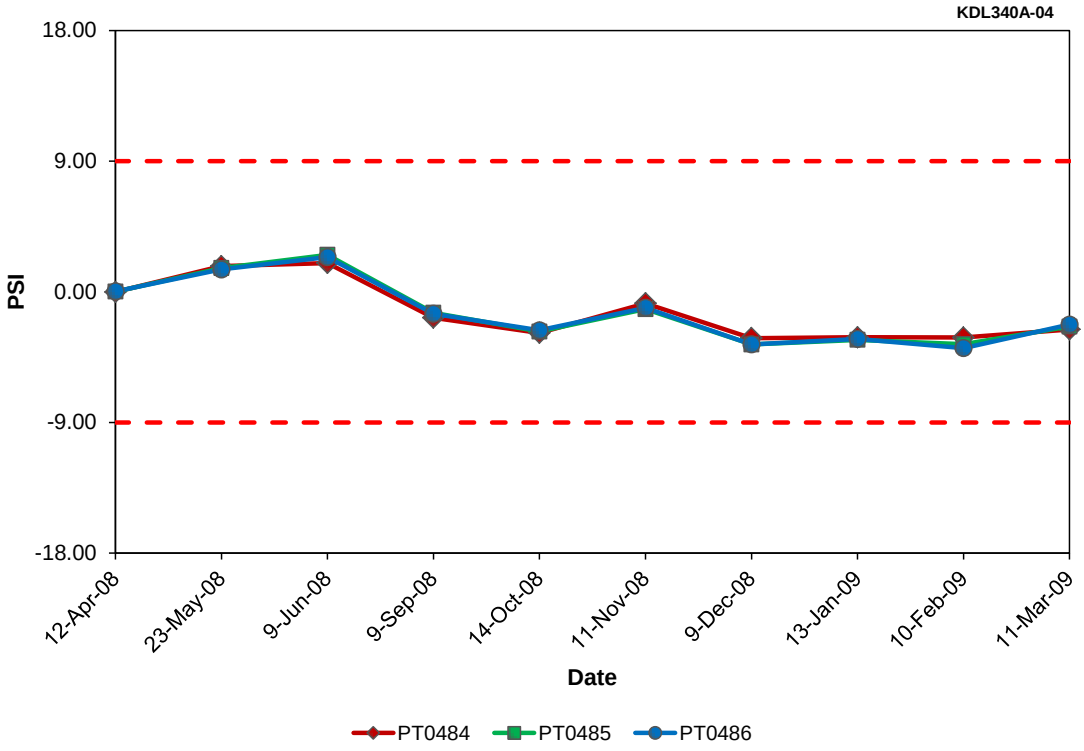



**Figure A.37 SG B OUTLET PRESSURE Steady-State Residual AAKR at Farley Unit 1 (Cycle 22)**

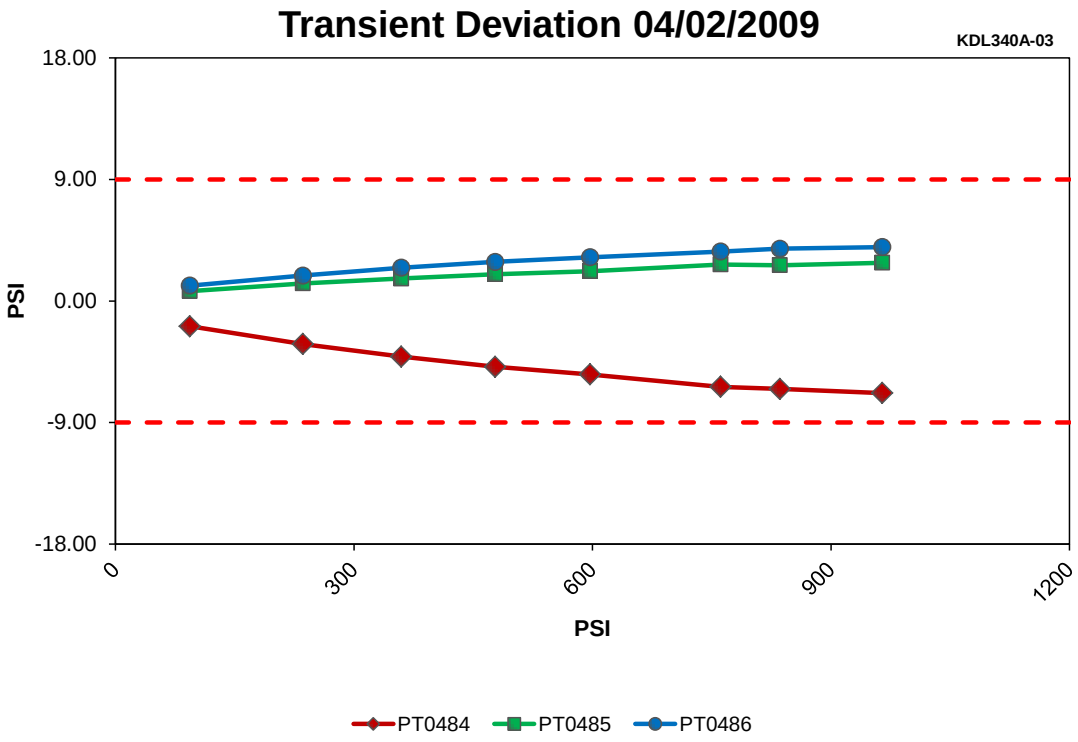



**Figure A.38 SG B OUTLET PRESSURE Transient Deviation at Farley Unit 1 (Cycle 22)**

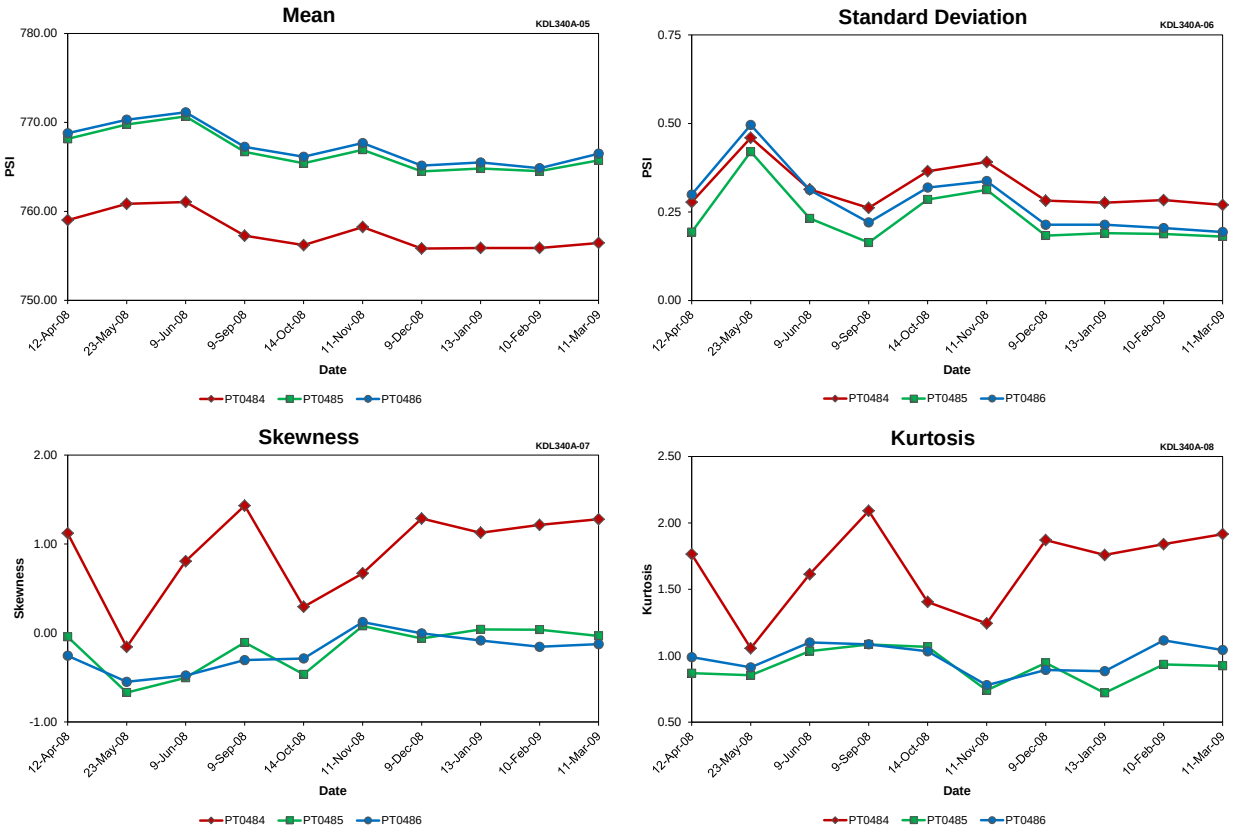



**Figure A.39 SG B OUTLET PRESSURE Data Quality Statistics at Farley Unit 1 (Cycle 22)**

**Table A.8 SG B OUTLET PRESSURE Data Quality for Farley Unit 1 (Cycle 22)**

| | Tag Names | | |
|---|---|---|---|
| **Result Type** | **PT0484** | **PT0485** | **PT0486** |
| Mean | 757.67 | 766.72 | 767.33 |
| Std. Dev. | 0.32 | 0.23 | 0.28 |
| Skewness | 0.91 | -0.17 | -0.21 |
| Kurtosis | 1.66 | 0.92 | 0.98 |

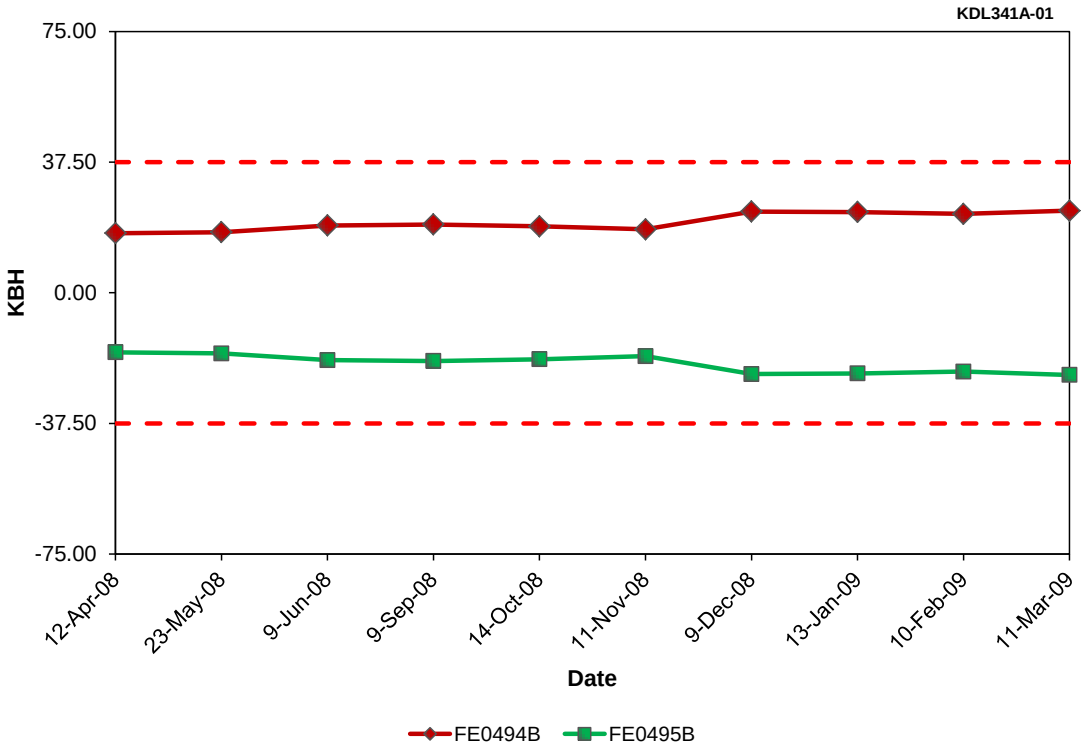



**Figure A.40 SG C STEAM FLOW Steady-State Deviation at Farley Unit 1 (Cycle 22)**

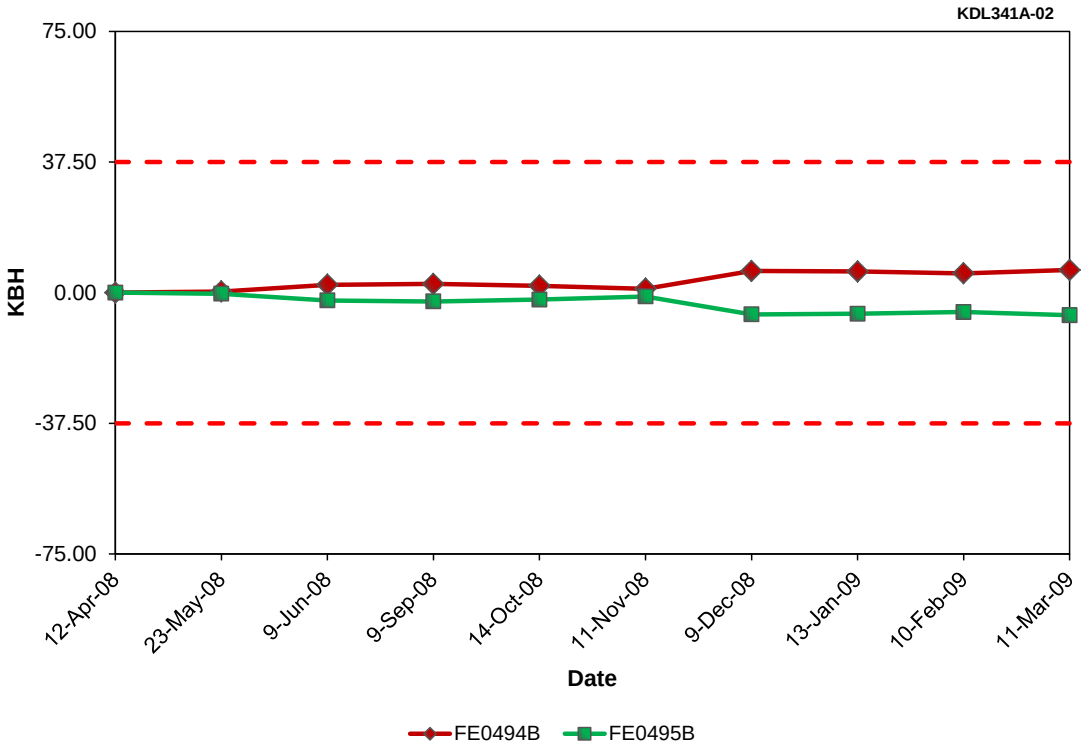



**Figure A.41 SG C STEAM FLOW Steady-State Drift at Farley Unit 1 (Cycle 22)**

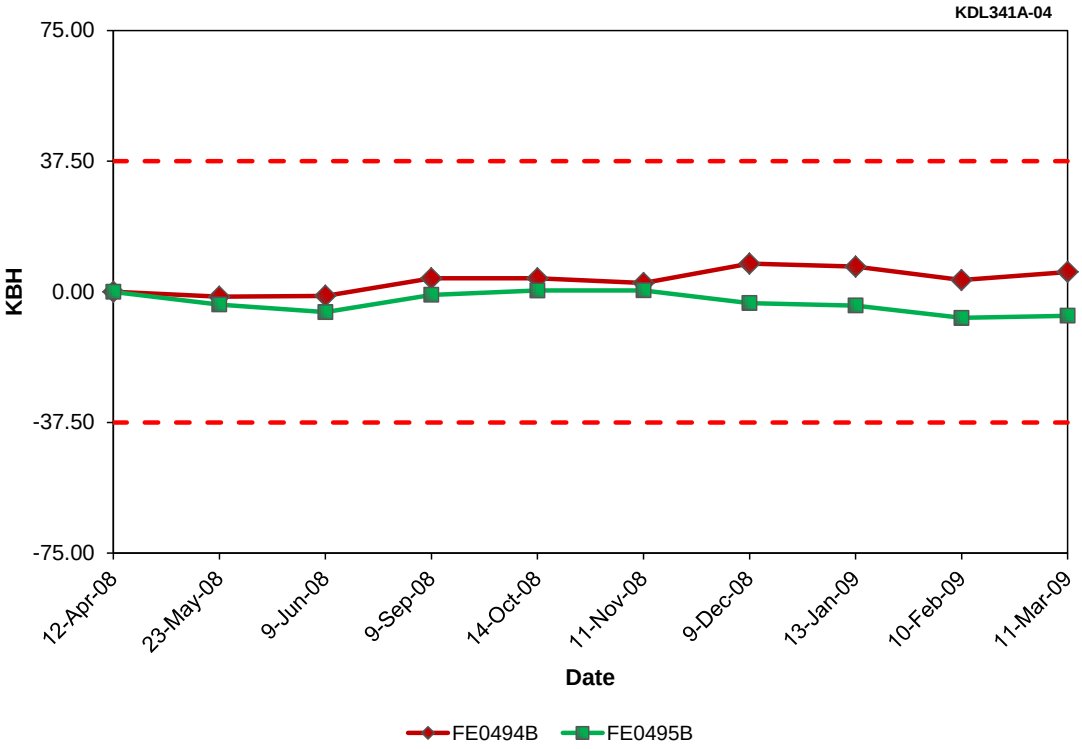



**Figure A.42 SG C STEAM FLOW Steady-State Residual AAKR at Farley Unit 1 (Cycle 22)**

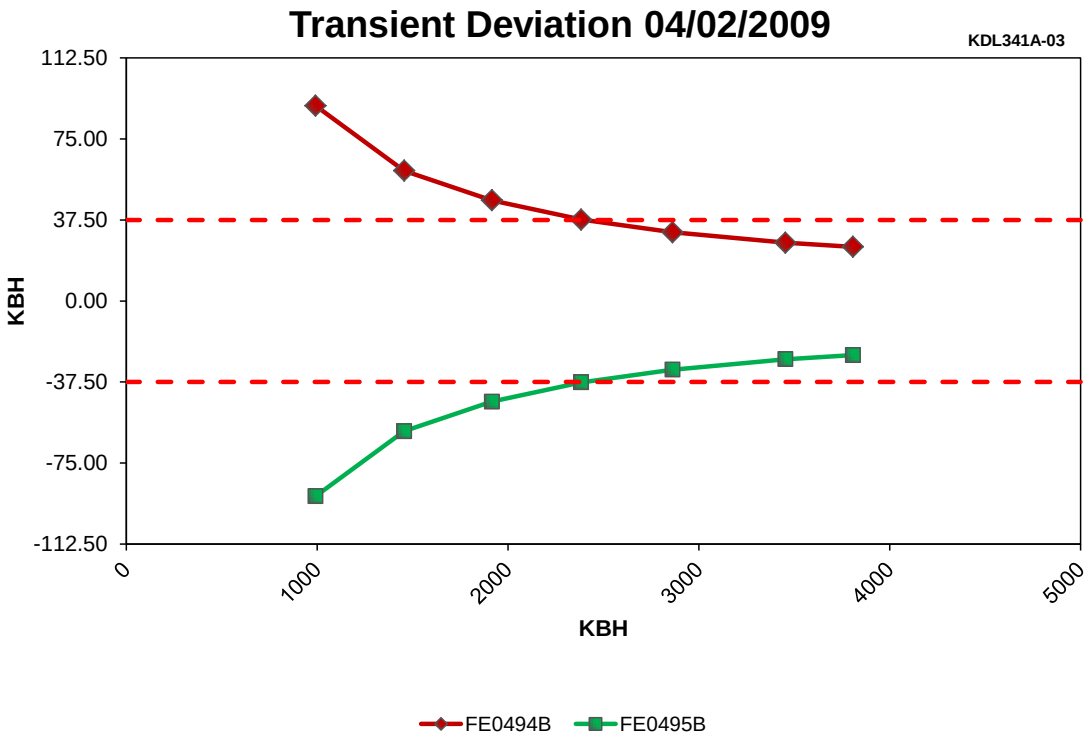



**Figure A.43 SG C STEAM FLOW Transient Deviation at Farley Unit 1 (Cycle 22)**

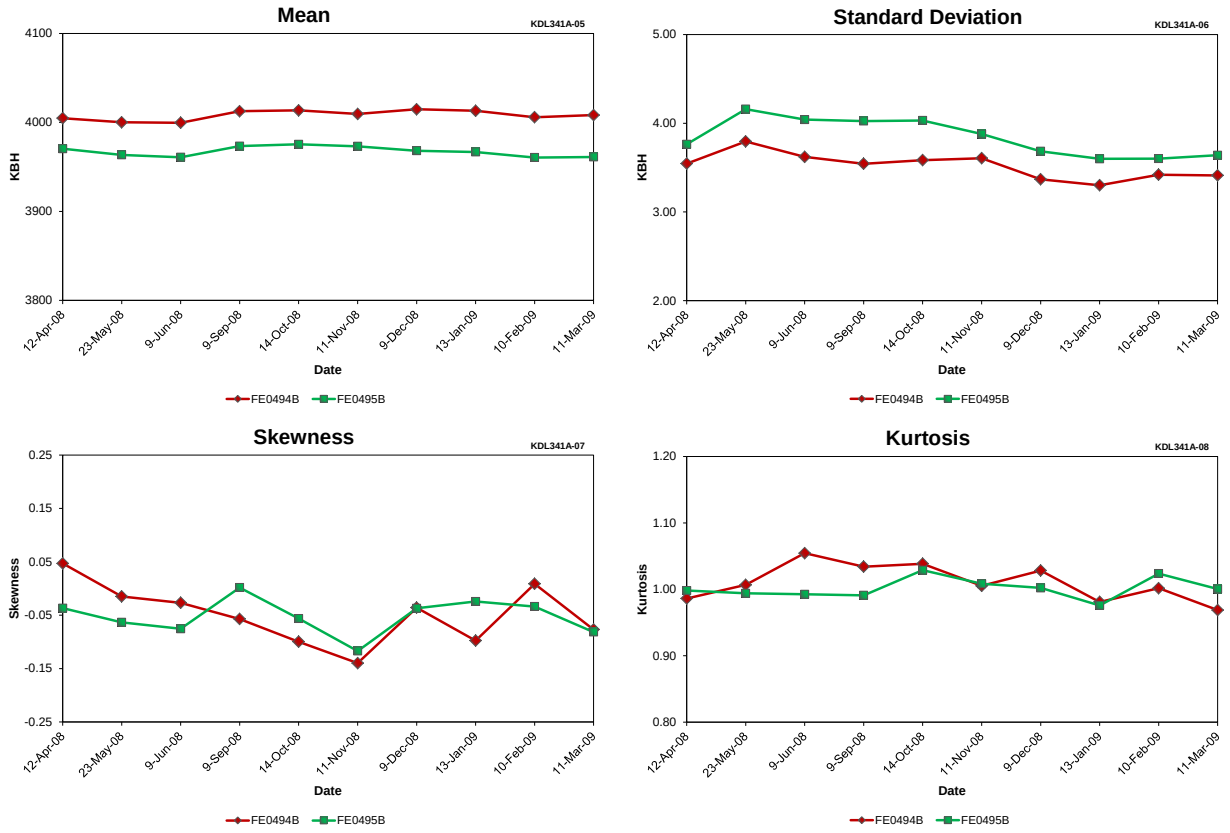



**Figure A.44 SG C STEAM FLOW Data Quality Statistics at Farley Unit 1 (Cycle 22)**

**Table A.9 SG C STEAM FLOW Data Quality for Farley Unit 1 (Cycle 22)**

| | Tag Names | |
|---|---|---|
| Result Type | FE0494B | FE0495B |
| Mean | 4008.22 | 3967.36 |
| Std. Dev. | 3.52 | 3.84 |
| Skewness | -0.05 | -0.05 |
| Kurtosis | 1.01 | 1.00 |

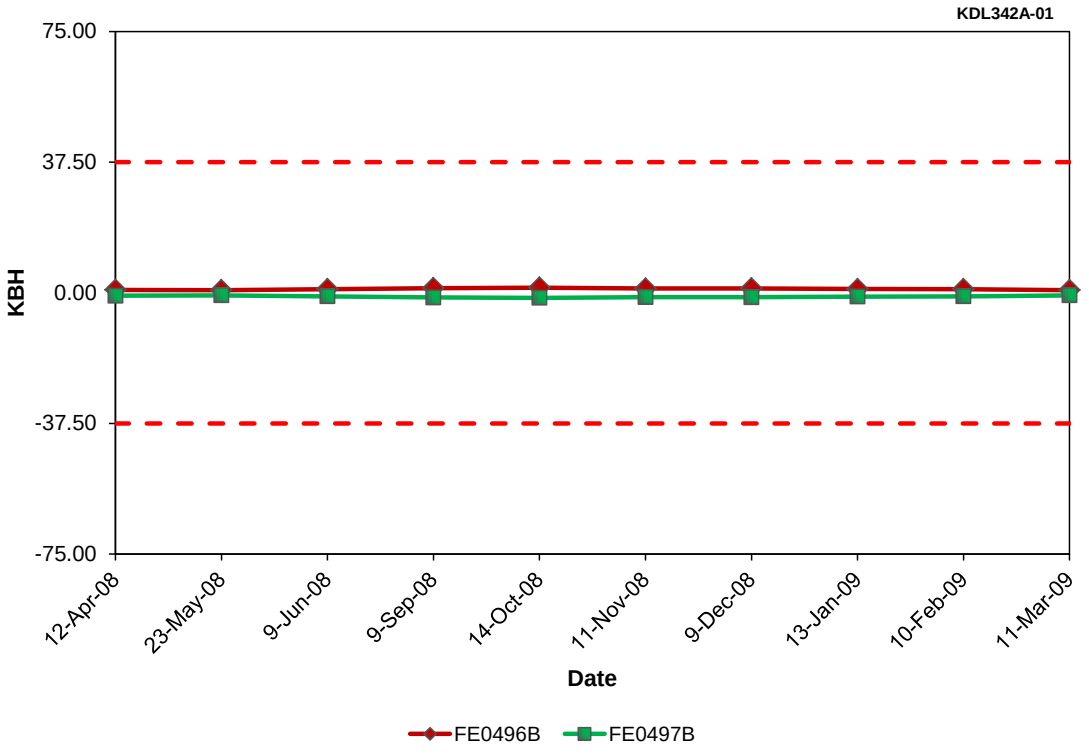



**Figure A.45 FW FLOW TO SG C Steady-State Deviation at Farley Unit 1 (Cycle 22)**

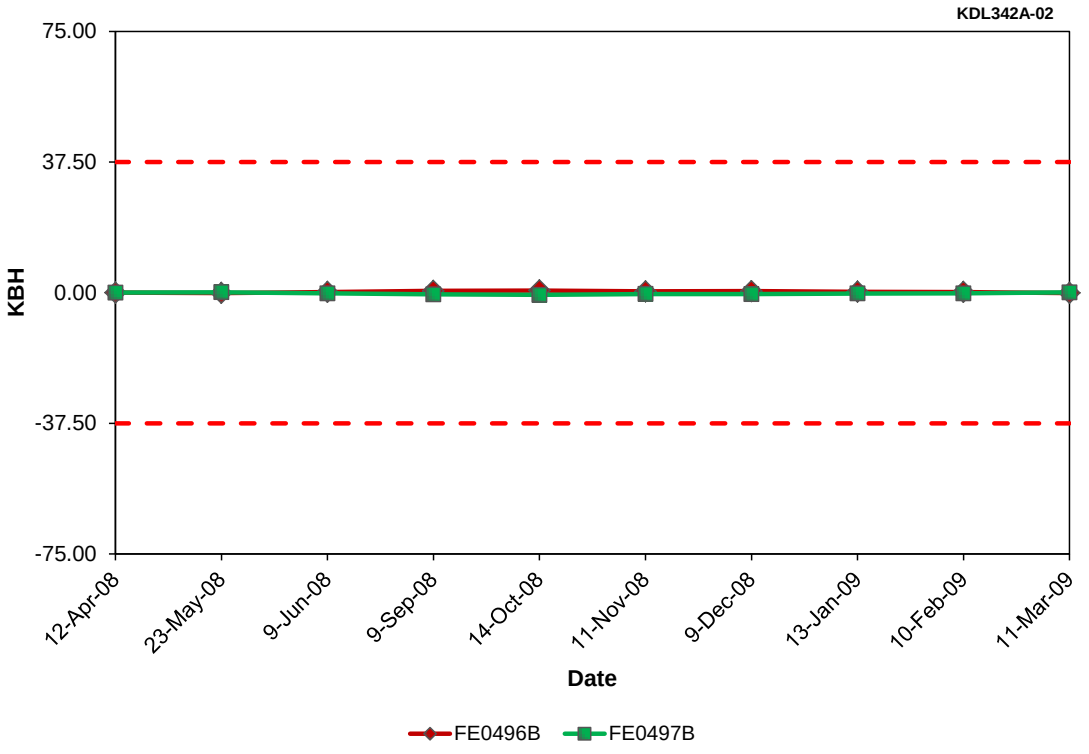



**Figure A.46 FW FLOW TO SG C Steady-State Drift at Farley Unit 1 (Cycle 22)**

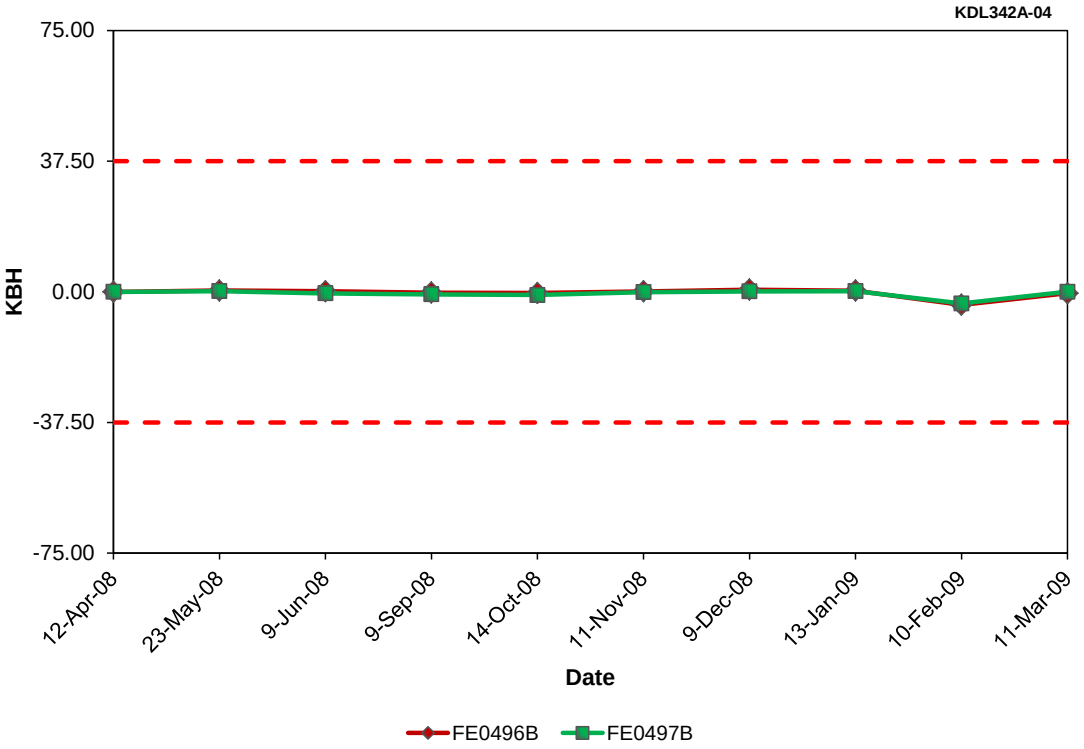



**Figure A.47 FW FLOW TO SG C Steady-State Residual AAKR at Farley Unit 1 (Cycle 22)**

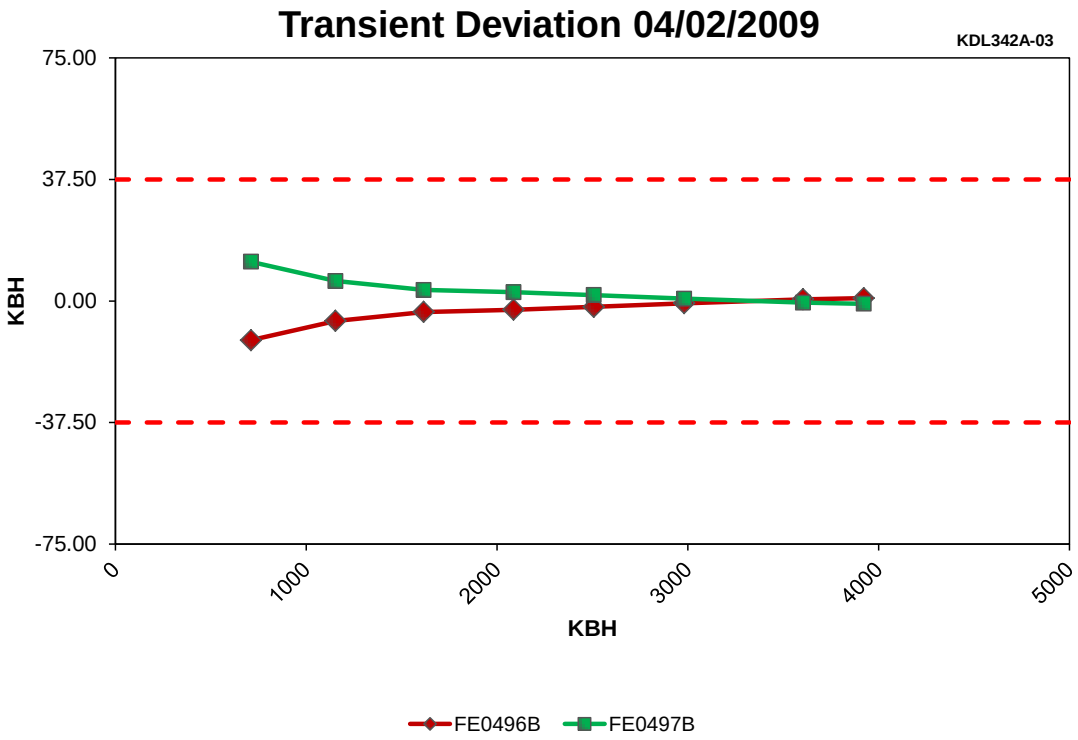



**Figure A.48 FW FLOW TO SG C Transient Deviation at Farley Unit 1 (Cycle 22)**

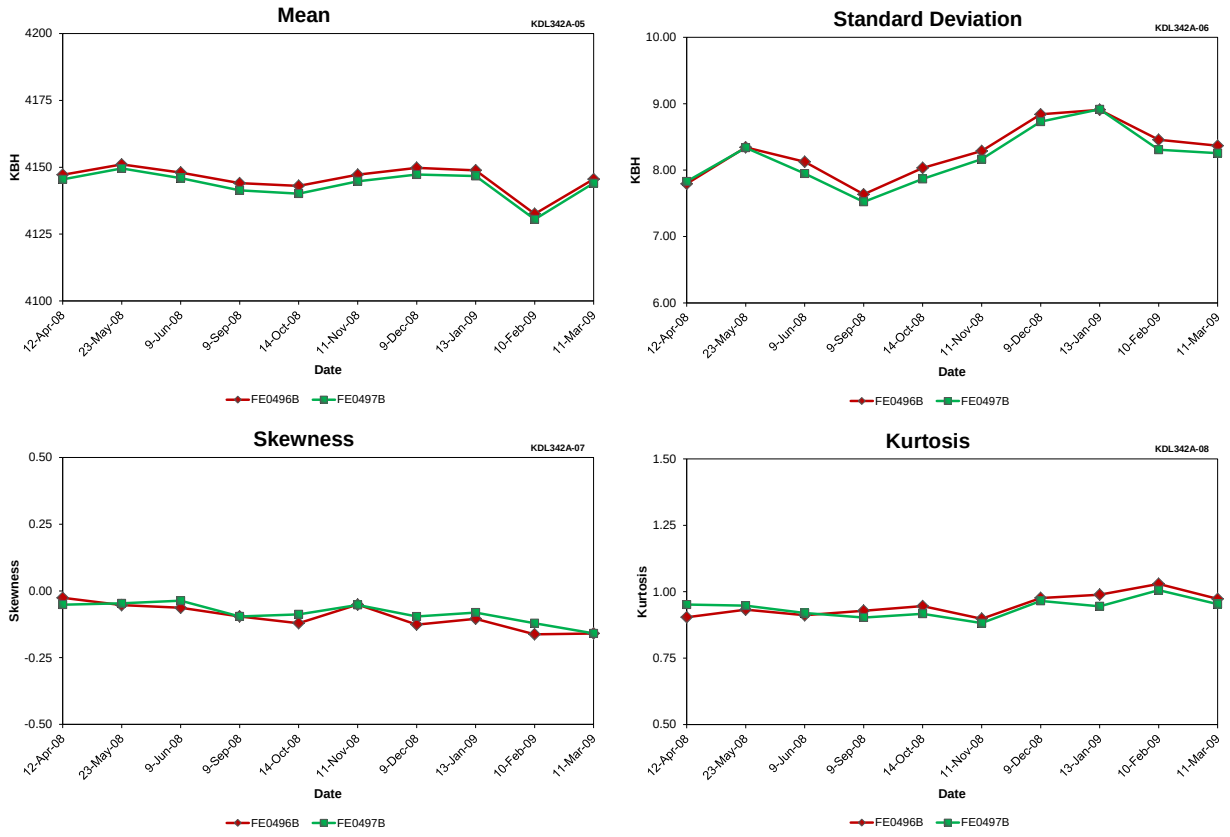



**Figure A.49 FW FLOW TO SG C Data Quality Statistics at Farley Unit 1 (Cycle 22)**

**Table A.10 FW FLOW TO SG C Data Quality for Farley Unit 1 (Cycle 22)**

| | Tag Names | |
|---|---|---|
| **Result Type** | **FE0496B** | **FE0497B** |
| Mean | 4145.73 | 4143.58 |
| Std. Dev. | 8.28 | 8.19 |
| Skewness | -0.10 | -0.08 |
| Kurtosis | 0.95 | 0.94 |

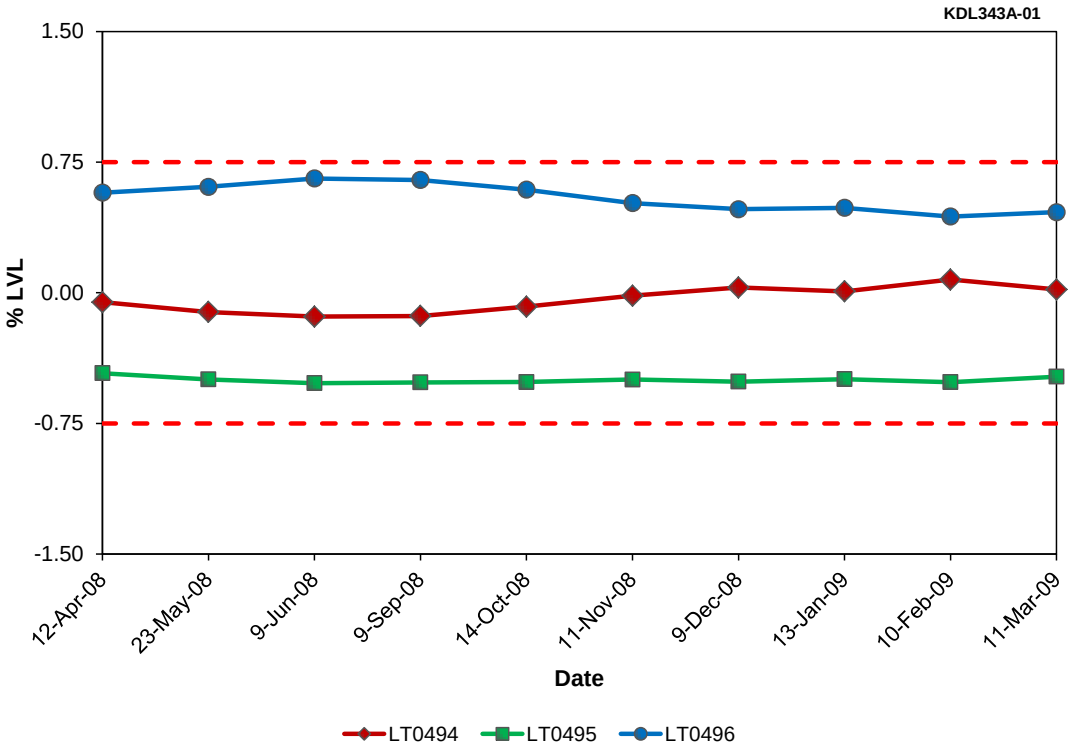



**Figure A.50 SG C LEVEL Steady-State Deviation at Farley Unit 1 (Cycle 22)**

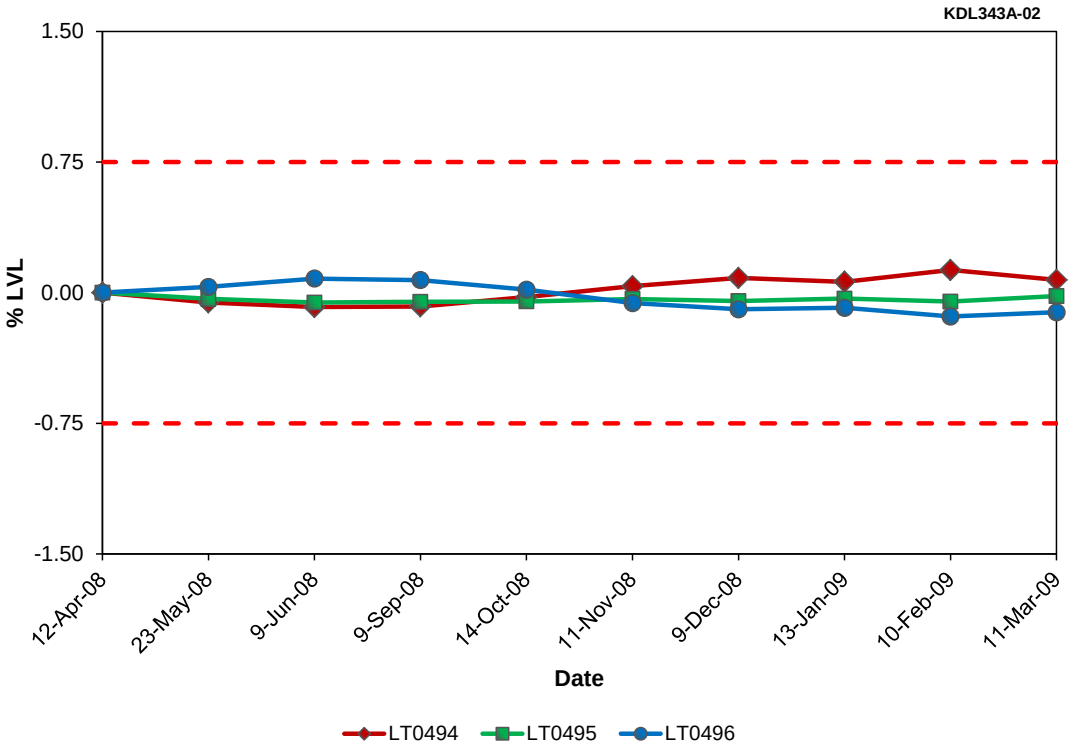



**Figure A.51 SG C LEVEL Steady-State Drift at Farley Unit 1 (Cycle 22)**

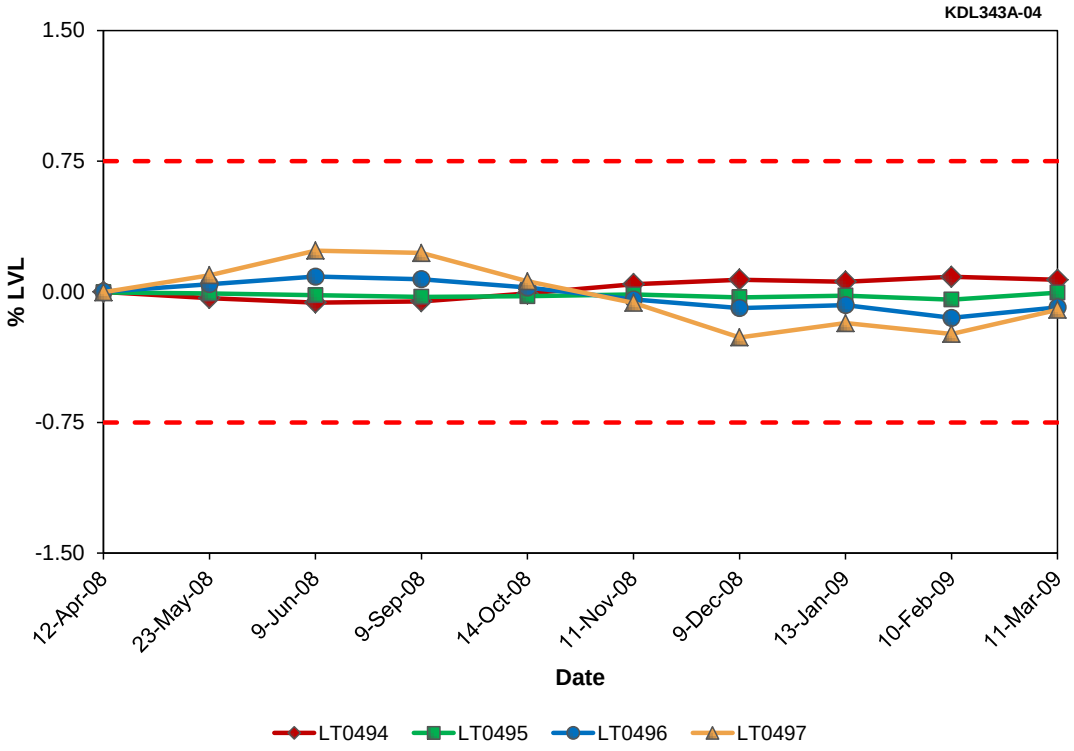



**Figure A.52 SG C LEVEL Steady-State Residual AAKR at Farley Unit 1 (Cycle 22)**

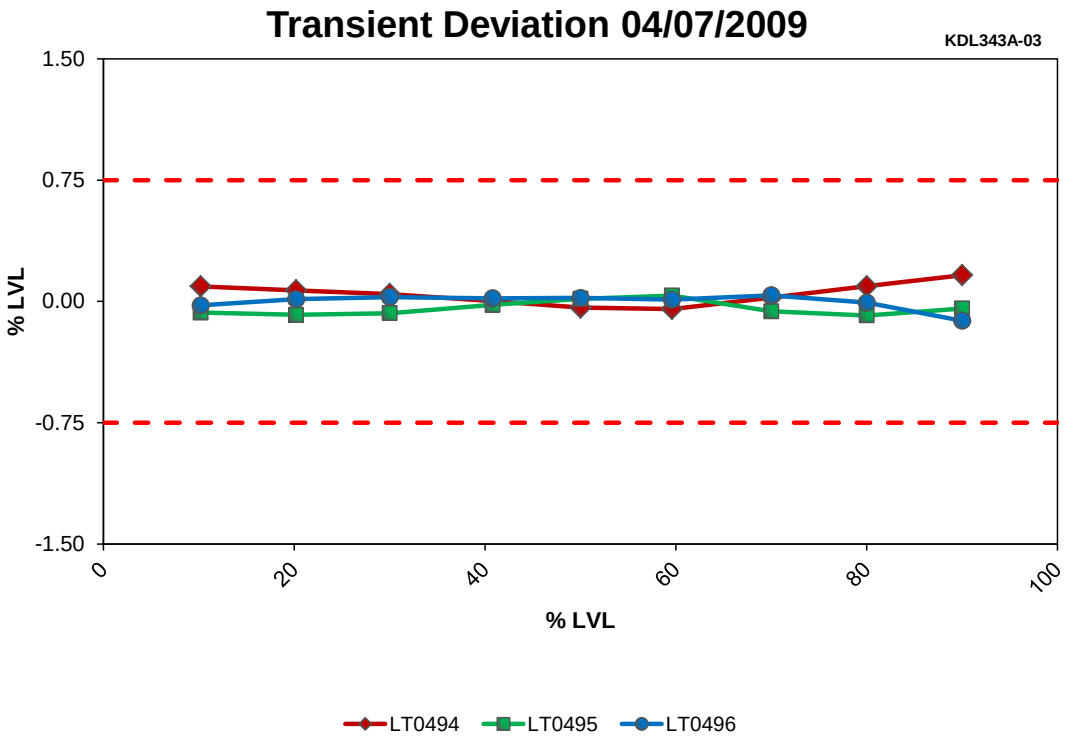



**Figure A.53 SG C LEVEL Transient Deviation at Farley Unit 1 (Cycle 22)**

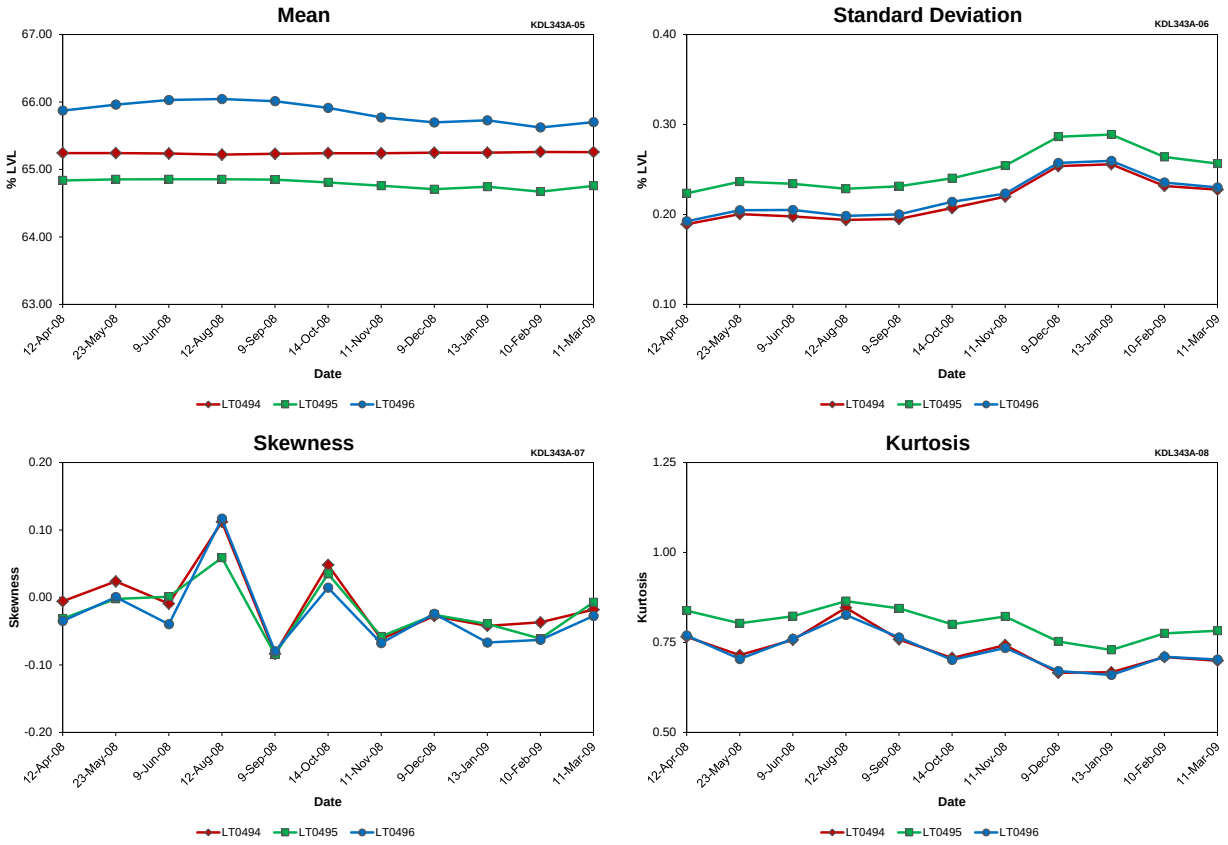



**Figure A.54 SG C LEVEL Data Quality Statistics at Farley Unit 1 (Cycle 22)**

**Table A.11 SG B LEVEL Data Quality for Farley Unit 1 (Cycle 22)**

| | Tag Names | | |
|---|---|---|---|
| **Result Type** | **LT0494** | **LT0495** | **LT0496** |
| Mean | 65.24 | 64.79 | 65.85 |
| Std. Dev. | 0.22 | 0.25 | 0.22 |
| Skewness | -0.01 | -0.02 | -0.02 |
| Kurtosis | 0.73 | 0.80 | 0.73 |

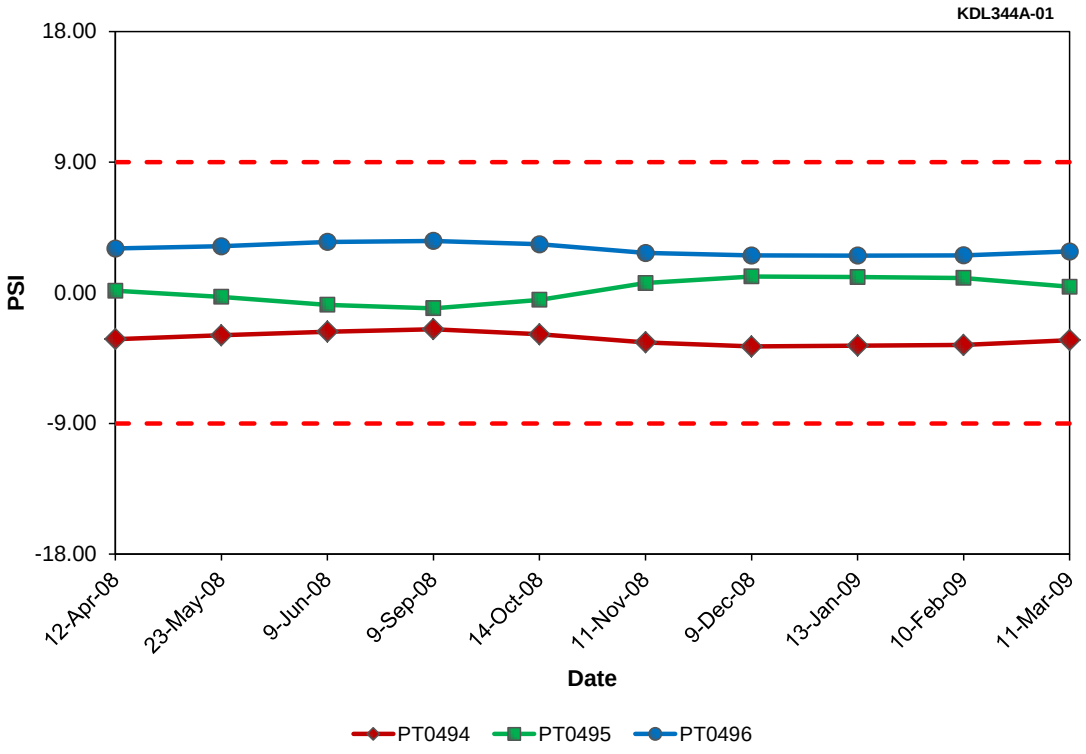



**Figure A.55 SG C OUTLET PRESSURE Steady-State Deviation at Farley Unit 1 (Cycle 22)**

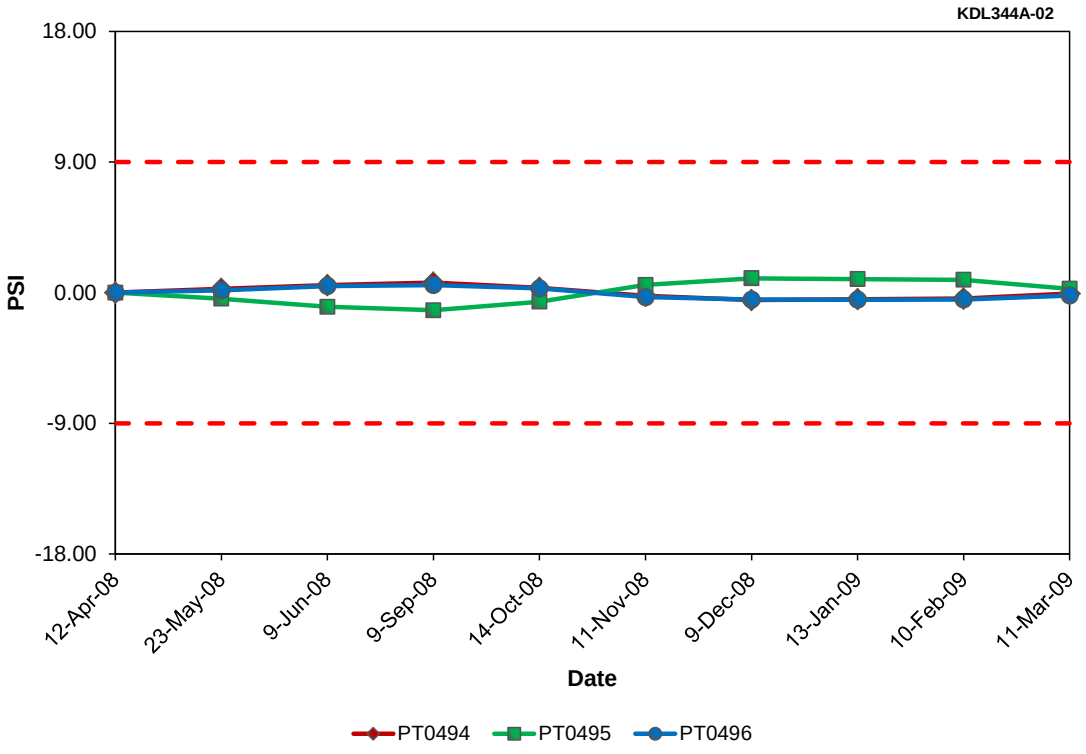



**Figure A.56 SG C OUTLET PRESSURE Steady-State Drift at Farley Unit 1 (Cycle 22)**

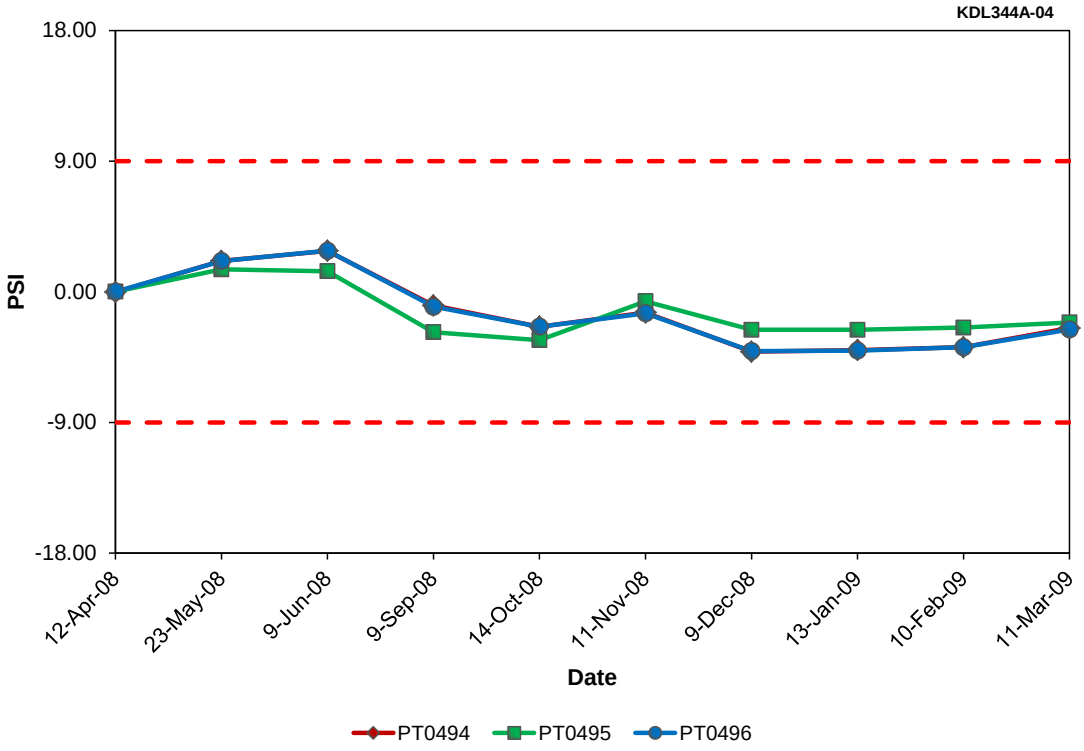



**Figure A.57 SG C OUTLET PRESSURE Steady-State Residual AAKR at Farley Unit 1 (Cycle 22)**

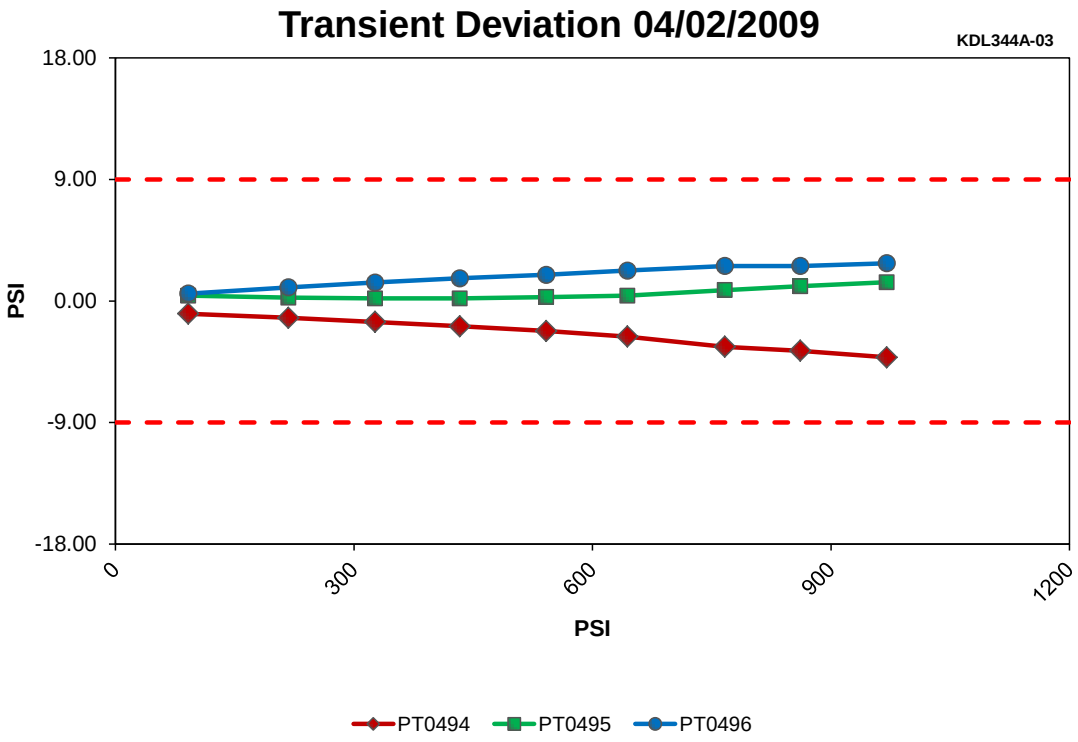



**Figure A.58 SG C OUTLET PRESSURE Transient Deviation at Farley Unit 1 (Cycle 22)**

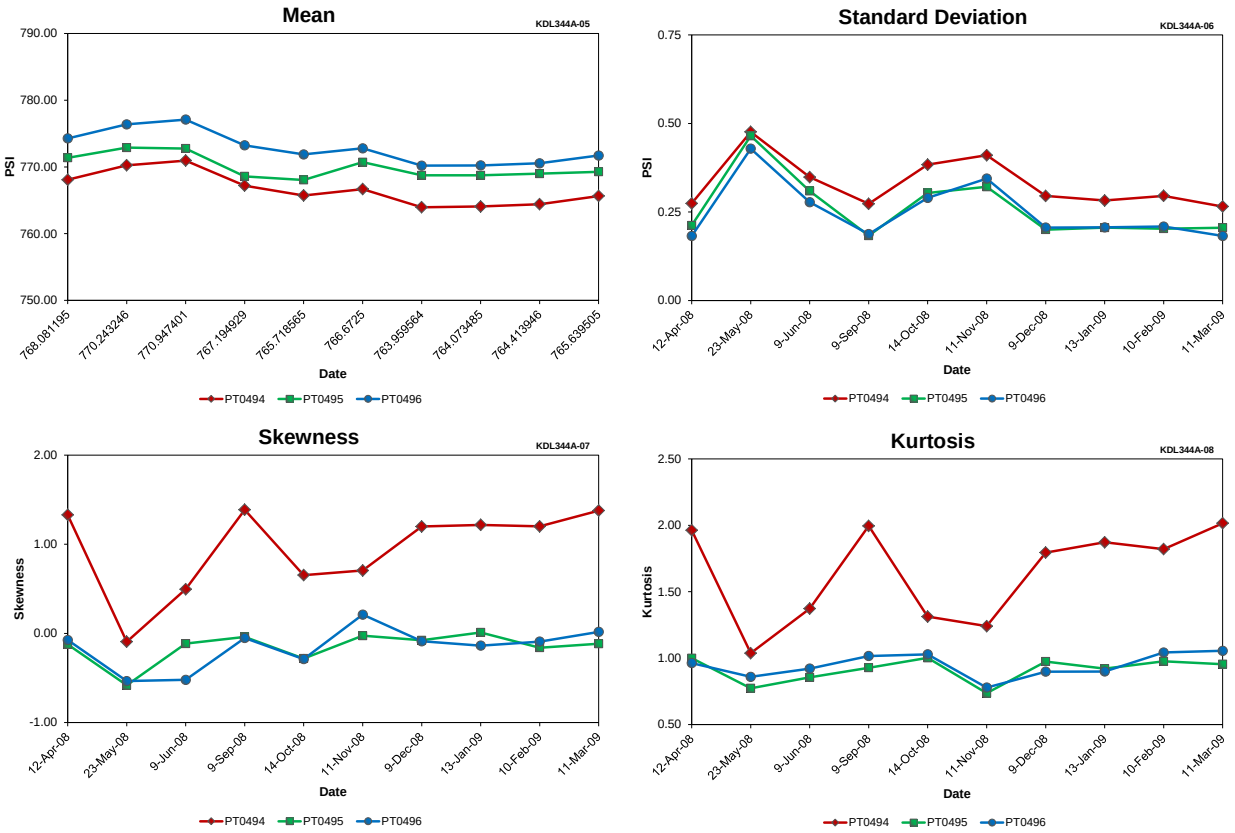



**Figure A.59 SG C OUTLET PRESSURE Data Quality Statistics at Farley Unit 1 (Cycle 22)**

**Table A.12 SG C OUTLET PRESSURE Data Quality for Farley Unit 1 (Cycle 22)**

| | Tag Names | | |
|---|---|---|---|
| **Result Type** | **PT0494** | **PT0495** | **PT0496** |
| Mean | 766.69 | 770.01 | 772.83 |
| Std. Dev. | 0.33 | 0.26 | 0.25 |
| Skewness | 0.95 | -0.15 | -0.16 |
| Kurtosis | 1.64 | 0.91 | 0.95 |

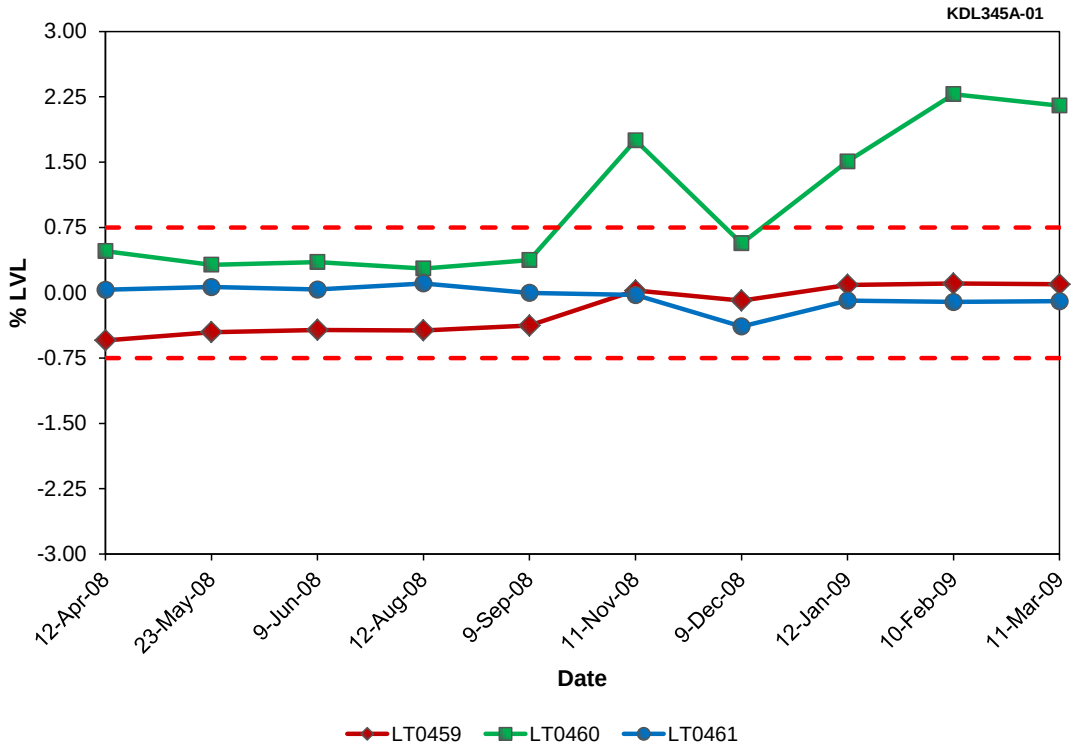



**Figure A.60 PRESSURIZER LEVEL Steady-State Deviation at Farley Unit 1 (Cycle 22)**

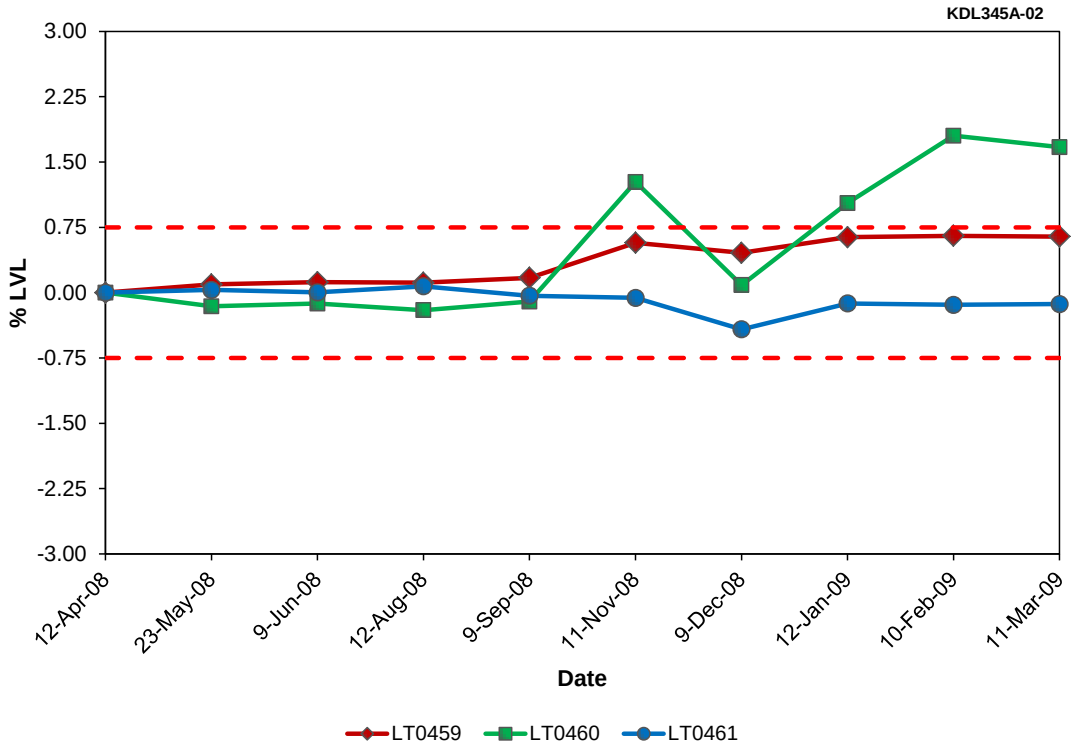



**Figure A.61 PRESSURIZER LEVEL Steady-State Drift at Farley Unit 1 (Cycle 22)**

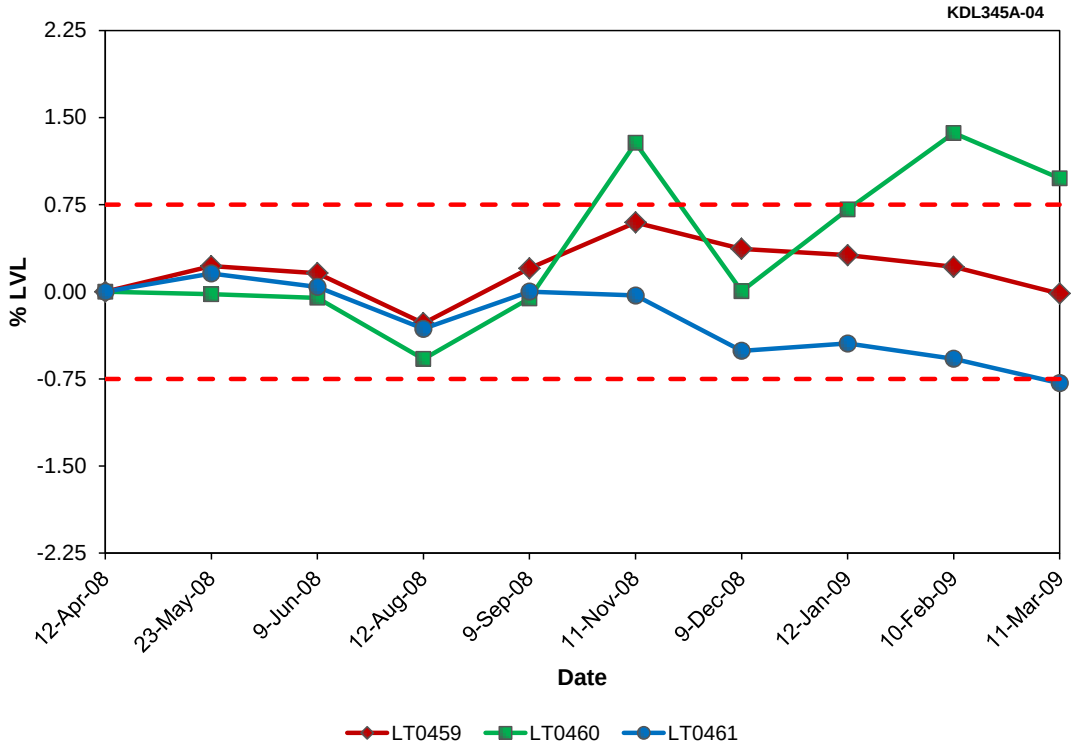



**Figure A.62 PRESSURIZER LEVEL Steady-State Residual AAKR at Farley Unit 1 (Cycle 22)**

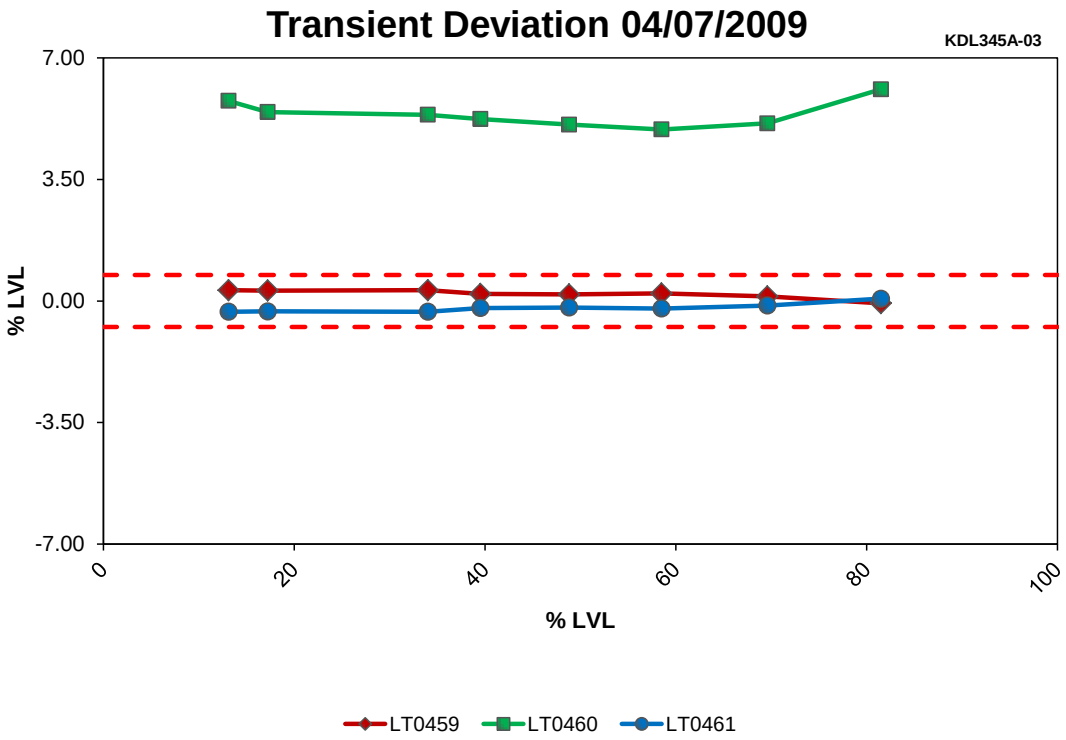



**Figure A.63 PRESSURIZER LEVEL Transient Deviation at Farley Unit 1 (Cycle 22)**

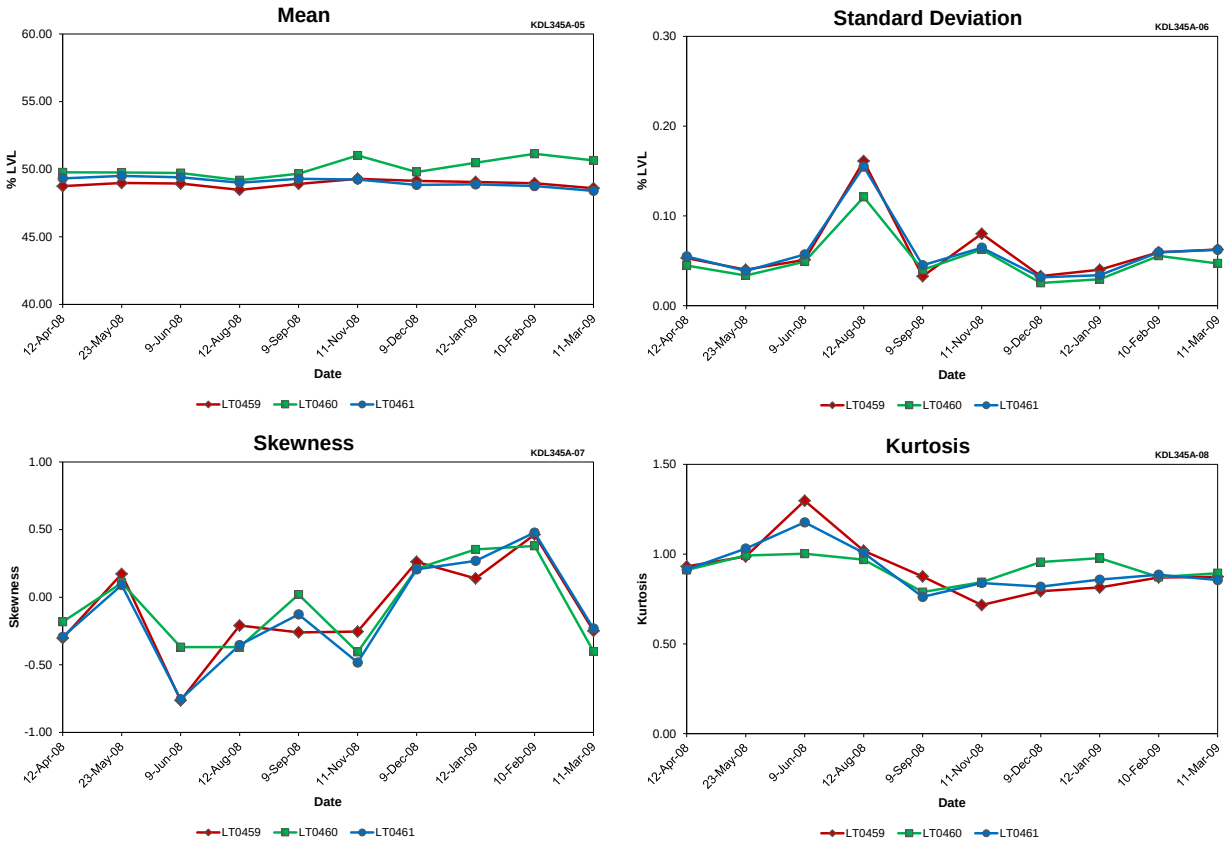



**Figure A.64 PRESSURIZER LEVEL Data Quality Statistics at Farley Unit 1 (Cycle 22)**

**Table A.13 PRESSURIZER LEVEL Data Quality for Farley Unit 1 (Cycle 22)**

| | Tag Names | | |
|---|---|---|---|
| **Result Type** | **LT0459** | **LT0460** | **LT0461** |
| Mean | 48.91 | 50.12 | 49.06 |
| Std. Dev. | 0.06 | 0.05 | 0.06 |
| Skewness | -0.10 | -0.07 | -0.12 |
| Kurtosis | 0.92 | 0.92 | 0.91 |

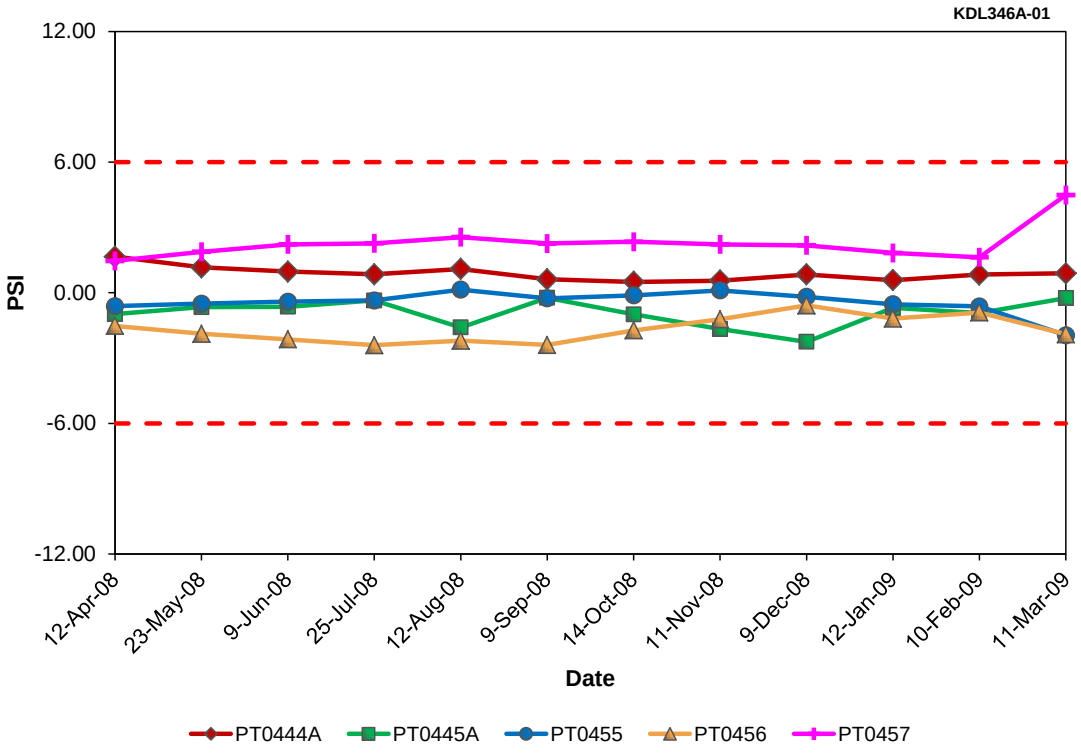



**Figure A.65 PRESSURIZER PRESSURE Steady-State Deviation at Farley Unit 1 (Cycle 22)**

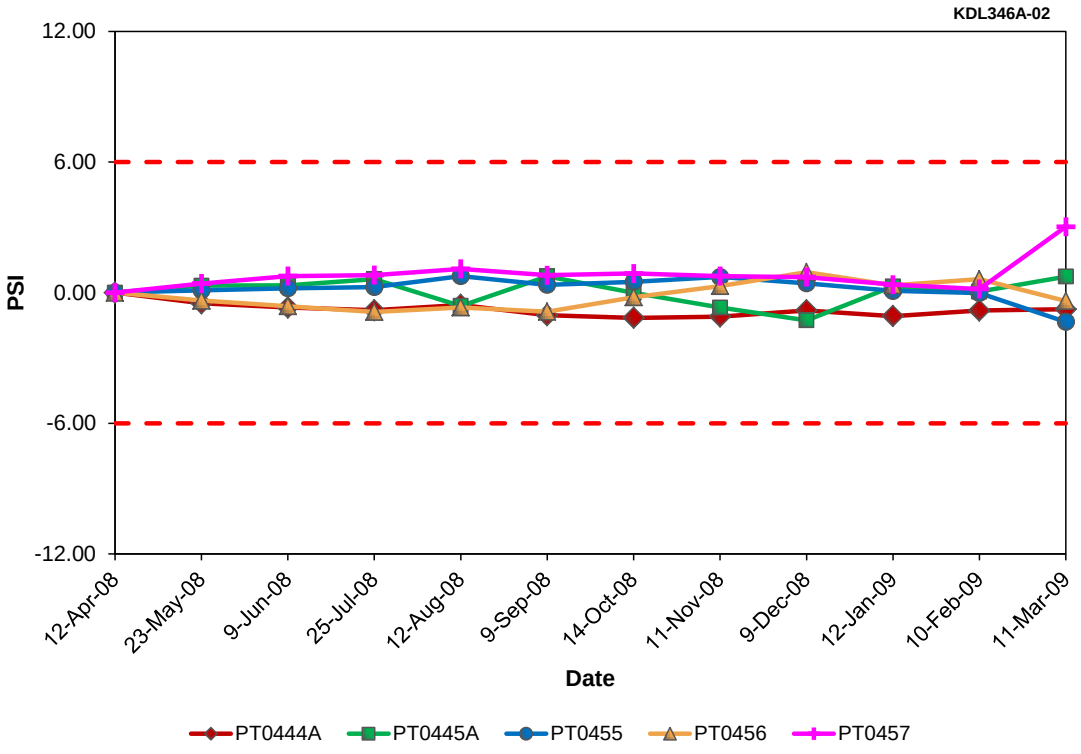



**Figure A.66 PRESSURIZER PRESSURE Steady-State Drift at Farley Unit 1 (Cycle 22)**

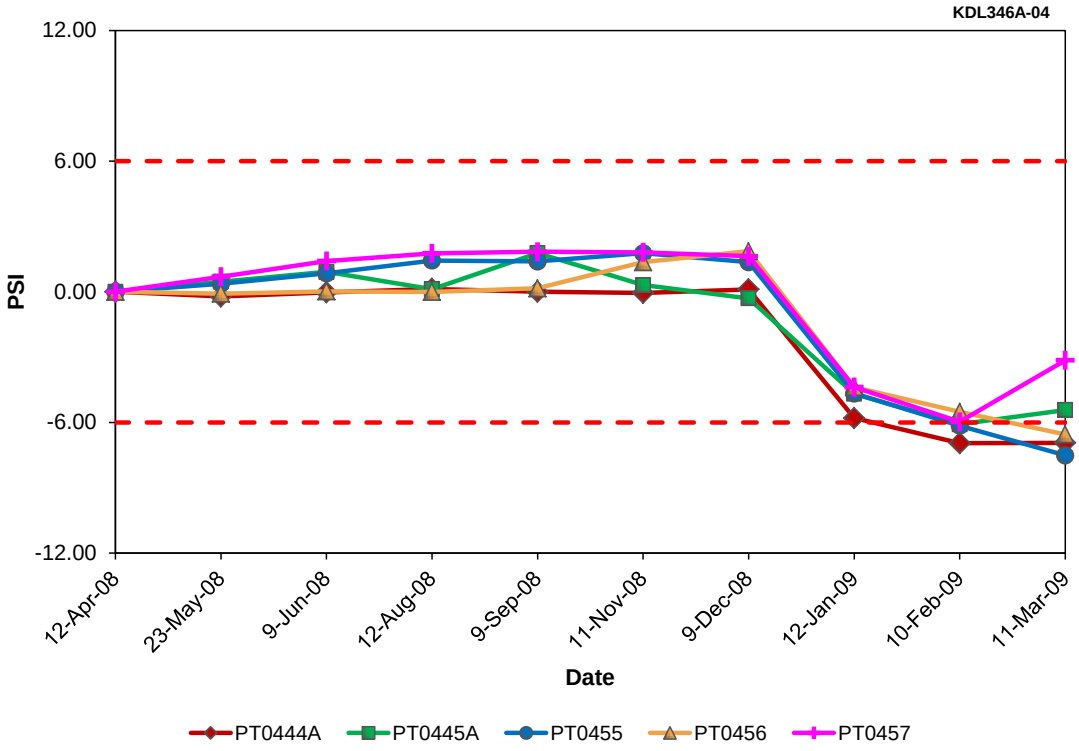



**Figure A.67 PRESSURIZER PRESSURE Steady-State Residual AAKR at Farley Unit 1 (Cycle 22)**

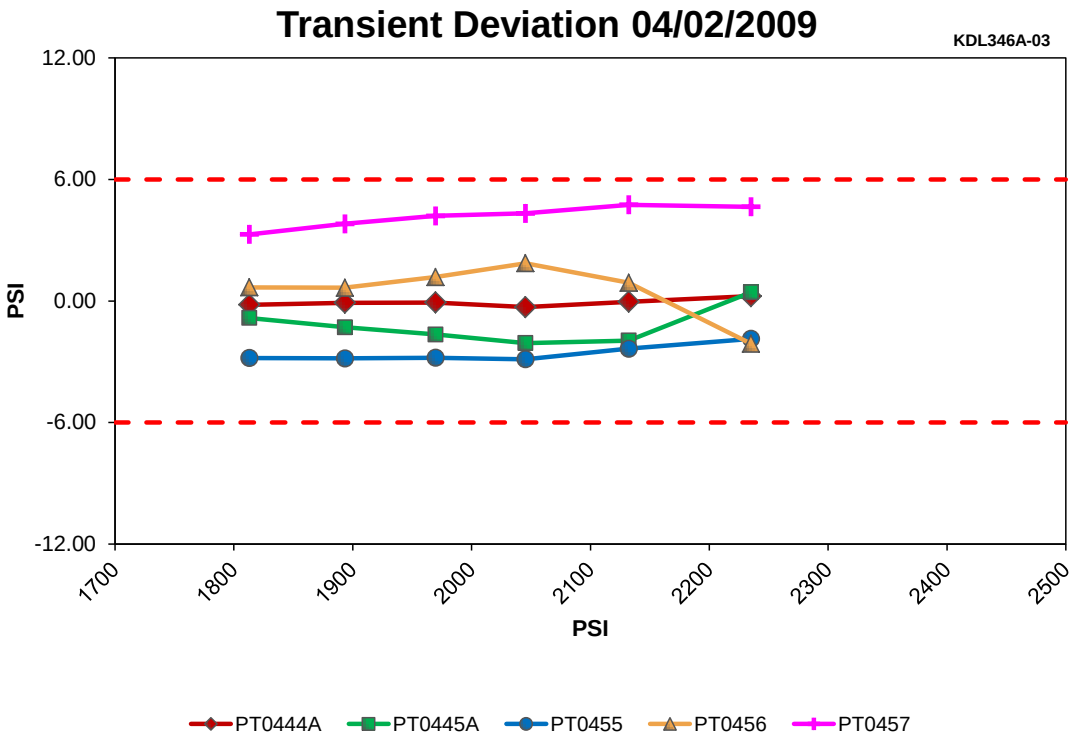



**Figure A.68 PRESSURIZER PRESSURE Transient Deviation at Farley Unit 1 (Cycle 22)**

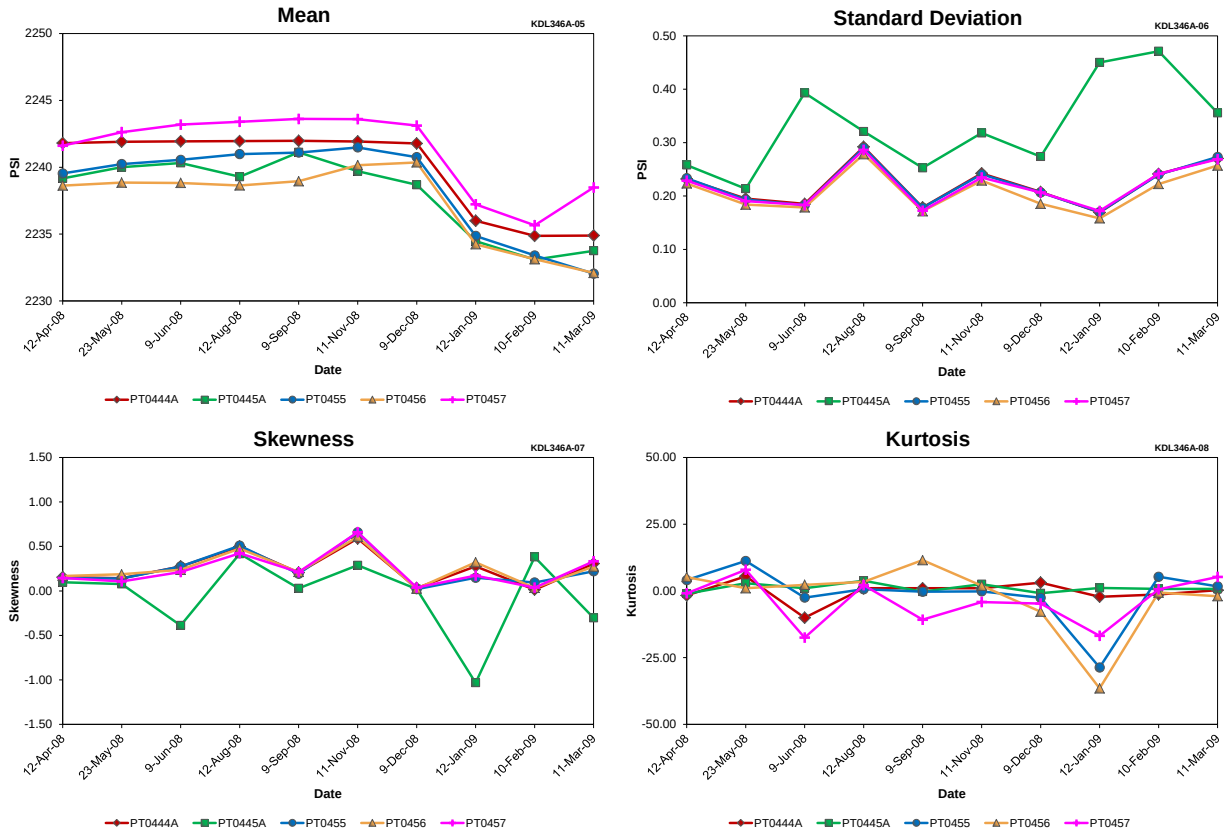



**Figure A.69 PRESSURIZER PRESSURE Data Quality Statistics at Farley Unit 1 (Cycle 22)**

**Table A.14 PRESSURIZER PRESSURE Data Quality for Farley Unit 1 (Cycle 22)**

| | Tag Names | | | | |
|---|---|---|---|---|---|
| **Result Type** | **PT0444A** | **PT0445A** | **PT0455** | **PT0456** | **PT0457** |
| Mean | 2239.90 | 2237.96 | 2238.50 | 2237.39 | 2241.25 |
| Std. Dev. | 0.22 | 0.33 | 0.22 | 0.21 | 0.22 |
| Skewness | 0.25 | -0.04 | 0.24 | 0.25 | 0.23 |
| Kurtosis | -0.34 | 1.06 | -1.12 | -2.15 | -3.89 |

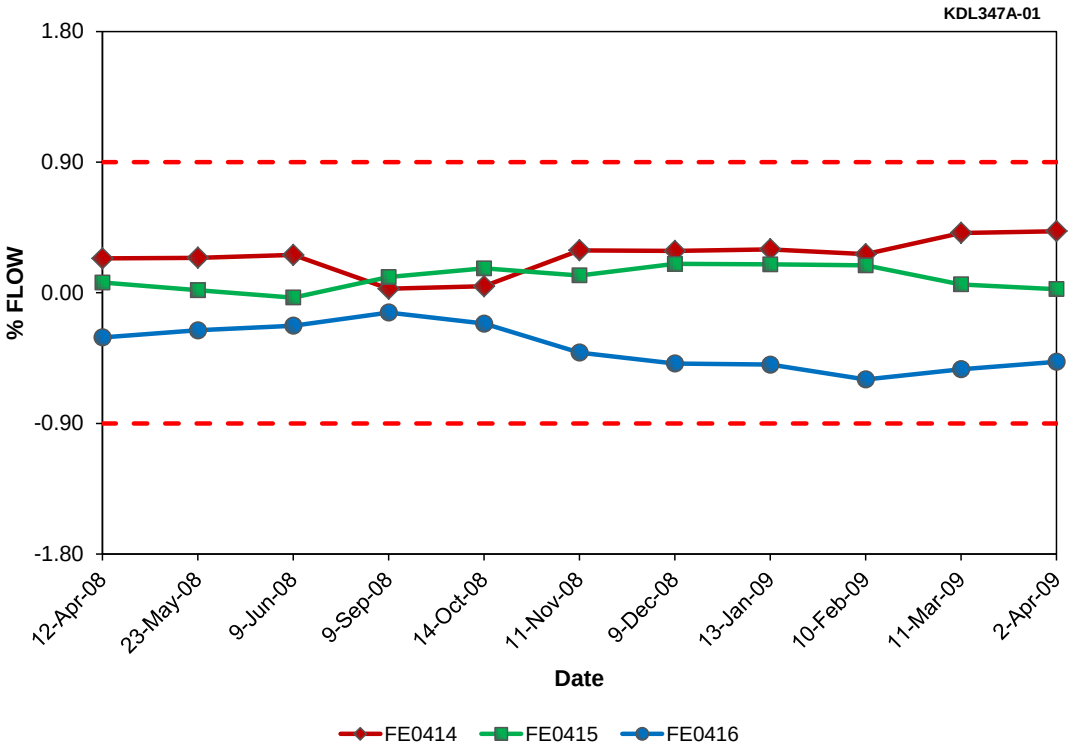



**Figure A.70 RCS LOOP A FLOW Steady-State Deviation at Farley Unit 1 (Cycle 22)**

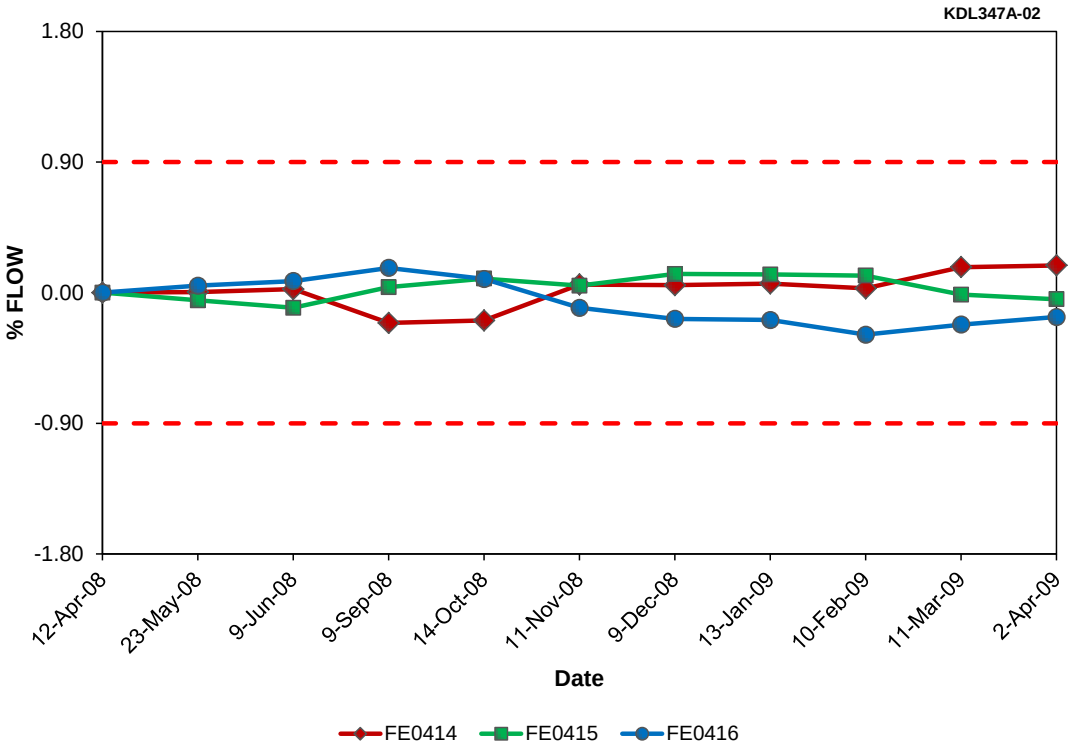



**Figure A.71 RCS LOOP A FLOW Steady-State Drift at Farley Unit 1 (Cycle 22)**

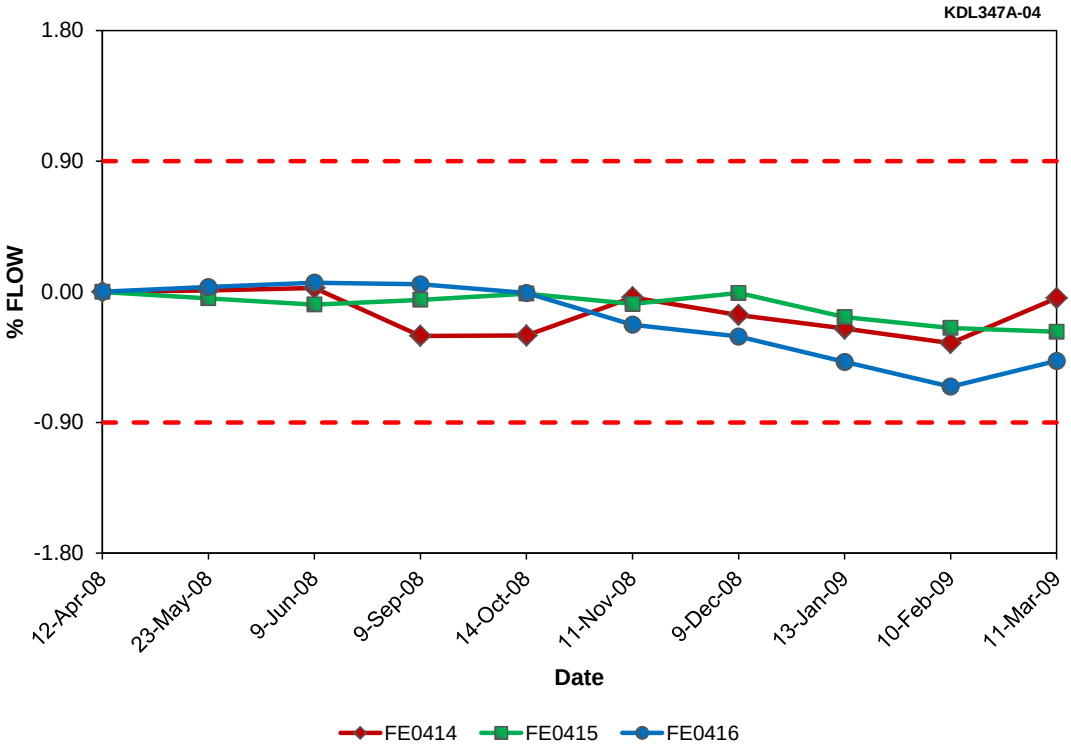



**Figure A.72 RCS LOOP A FLOW Steady-State Residual AAKR at Farley Unit 1 (Cycle 22)**

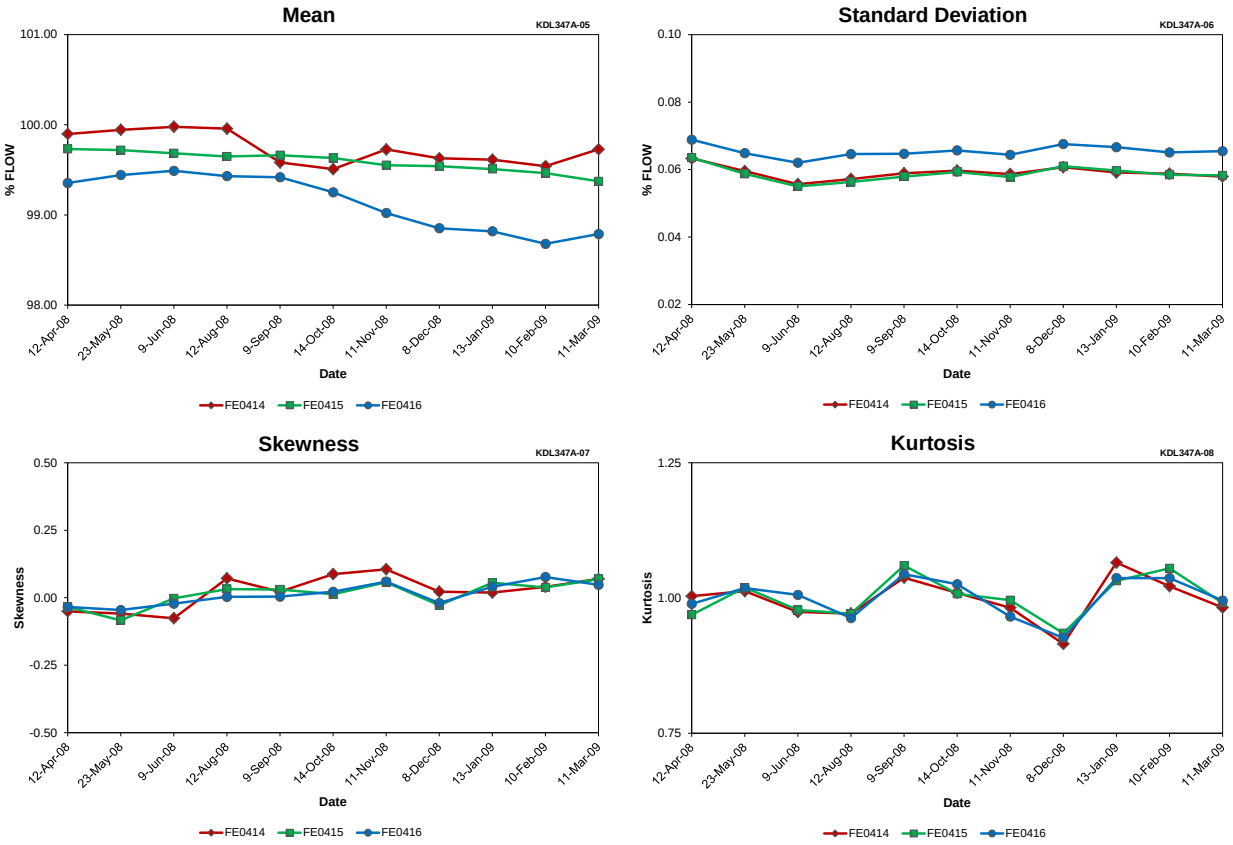



**Figure A.73 RCS LOOP A FLOW Data Quality Statistics at Farley Unit 1 (Cycle 22)**

**Table A.15 RCS LOOP A FLOW Data Quality for Farley Unit 1 (Cycle 22)**

| | Tag Names | | |
|---|---|---|---|
| **Result Type** | **FE0414** | **FE0415** | **FE0416** |
| Mean | 99.74 | 99.59 | 99.14 |
| Std. Dev. | 0.06 | 0.06 | 0.06 |
| Skewness | 0.02 | 0.01 | 0.01 |
| Kurtosis | 1.00 | 1.00 | 1.00 |

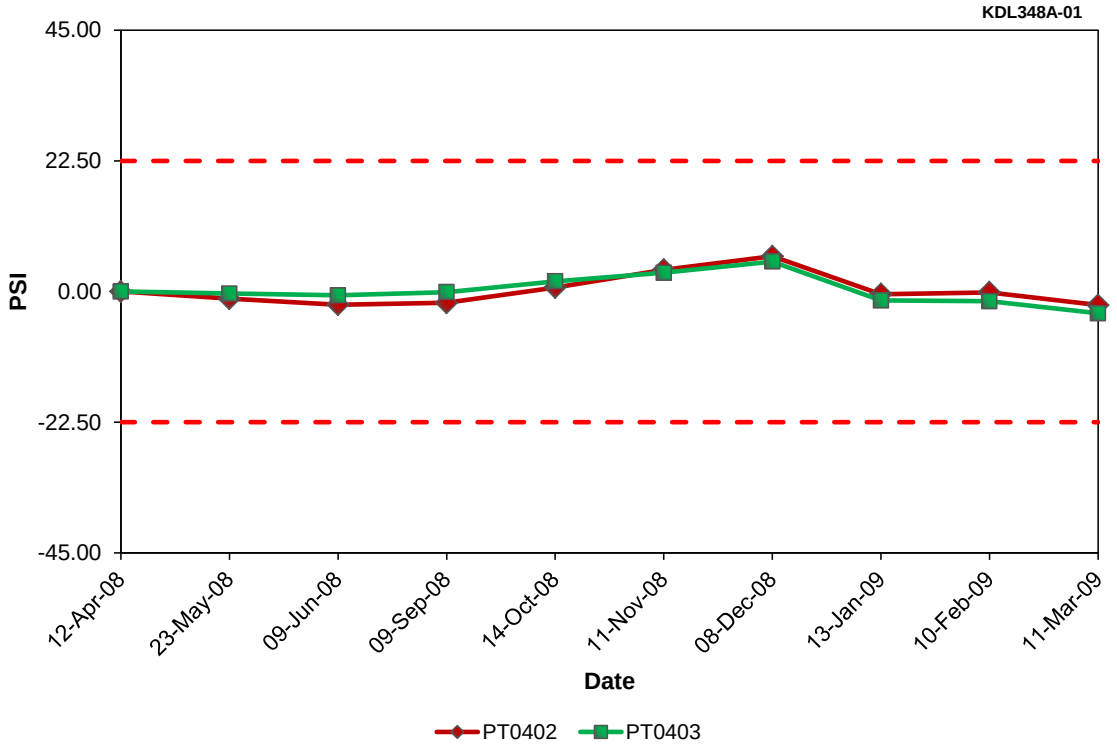



**Figure A.74 RCS WIDE RANGE PRESSURE Steady-State Residual AAKR at Farley Unit 1 (Cycle 22)**

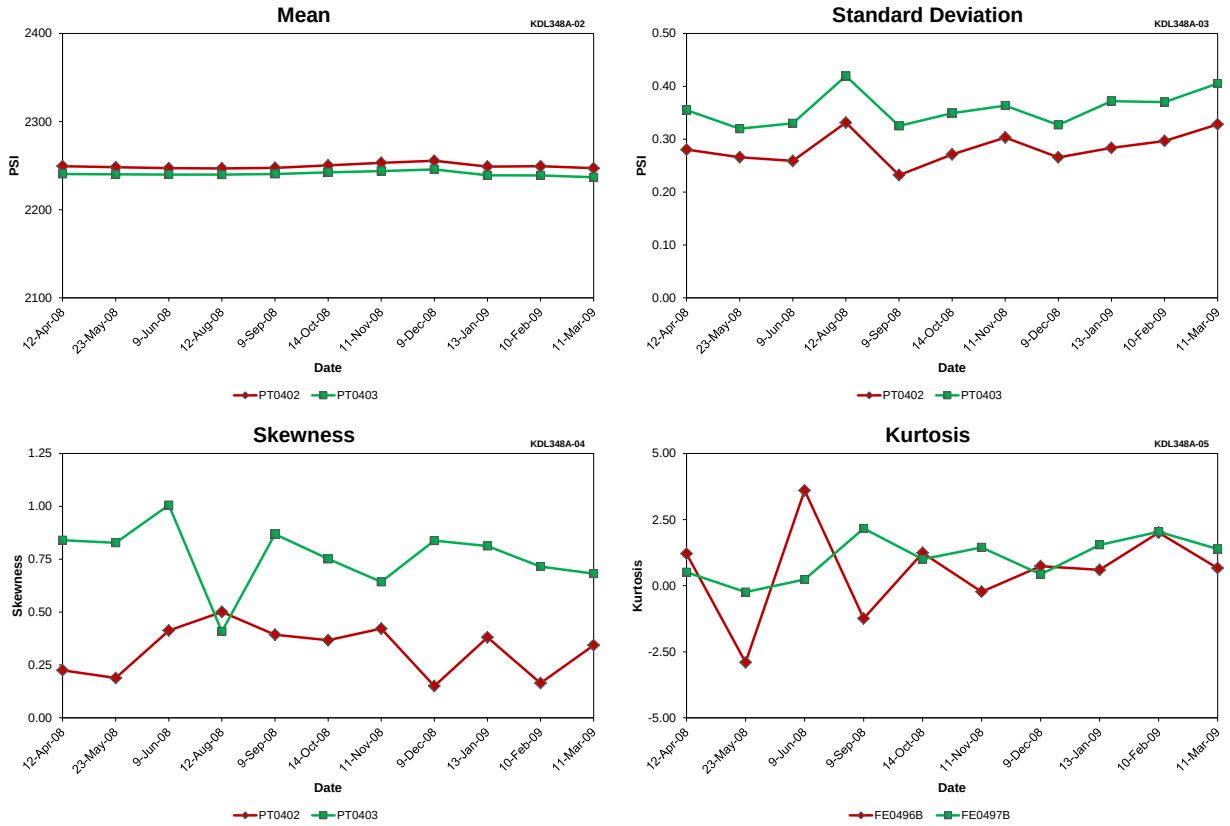



**Figure A.75 RCS WIDE RANGE PRESSURE Data Quality Statistics at Farley Unit 1 (Cycle 22)**

**Table A.16 RCS WIDE RANGE PRESSURE Data Quality for Farley Unit 1 (Cycle 22)**

| | Tag Names | |
|---|---|---|
| **Result Type** | **PT0402** | **PT0403** |
| Mean | 2249.46 | 2240.75 |
| Std. Dev. | 0.28 | 0.36 |
| Skewness | 0.32 | 0.76 |
| Kurtosis | 0.57 | 1.09 |

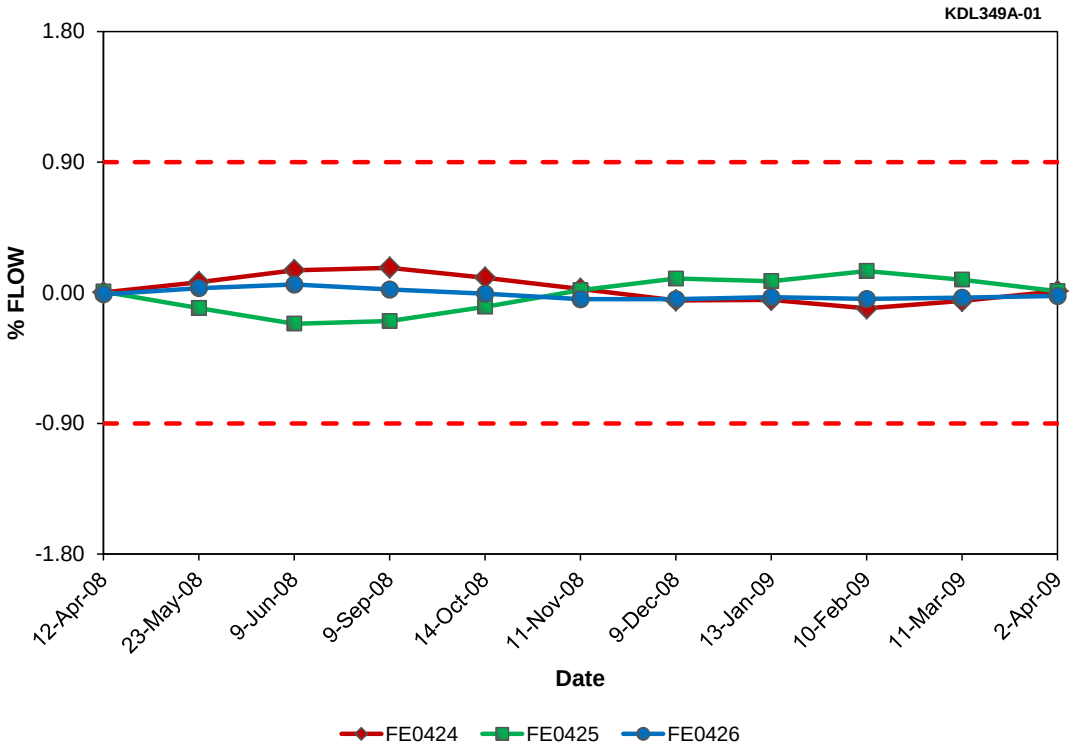



**Figure A.76 RCS LOOP B FLOW Steady-State Deviation at Farley Unit 1 (Cycle 22)**

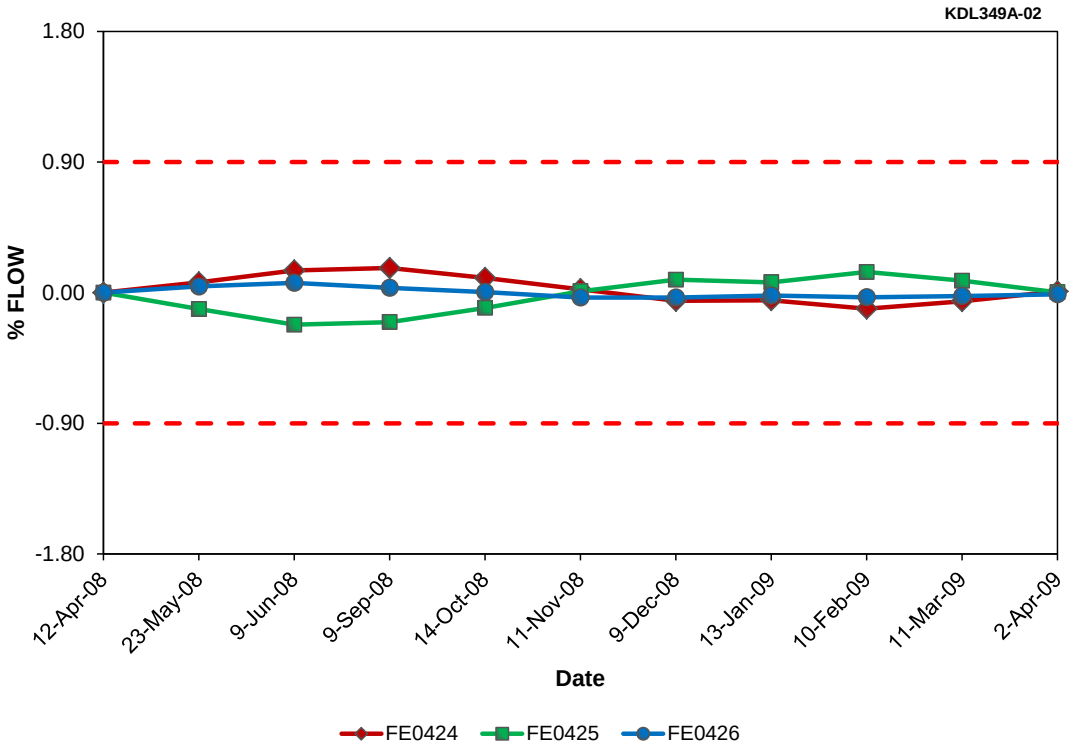



**Figure A.77 RCS LOOP B FLOW Steady-State Drift at Farley Unit 1 (Cycle 22)**

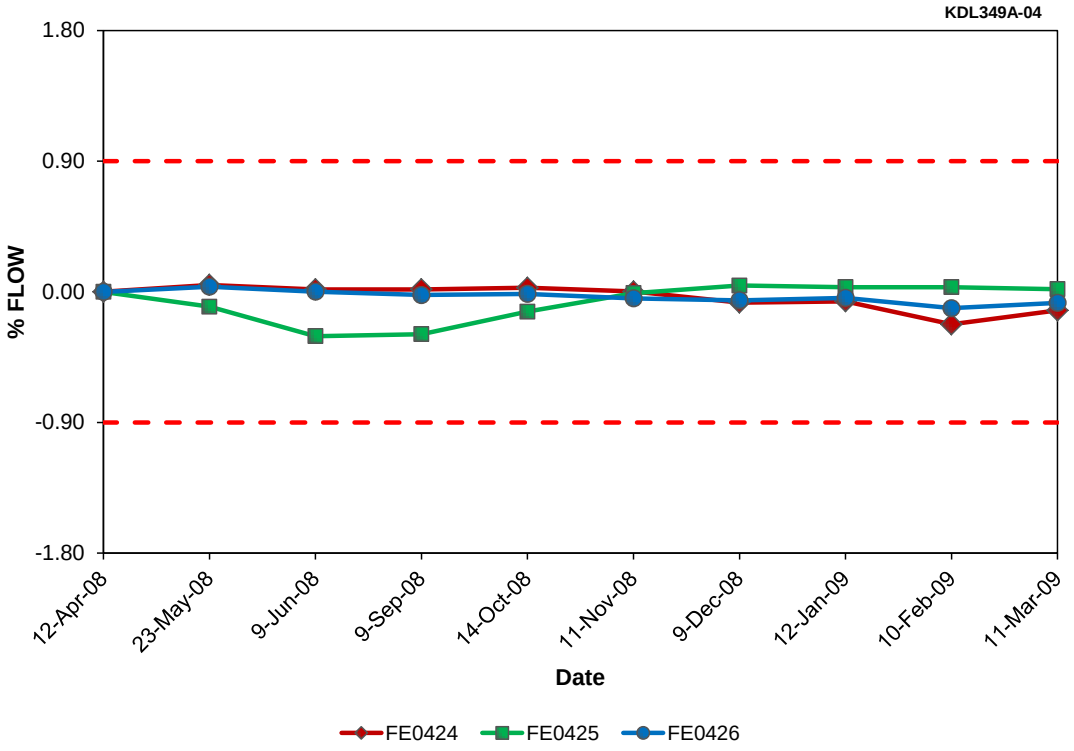



**Figure A.78 RCS LOOP B FLOW Steady-State Residual AAKR at Farley Unit 1 (Cycle 22)**

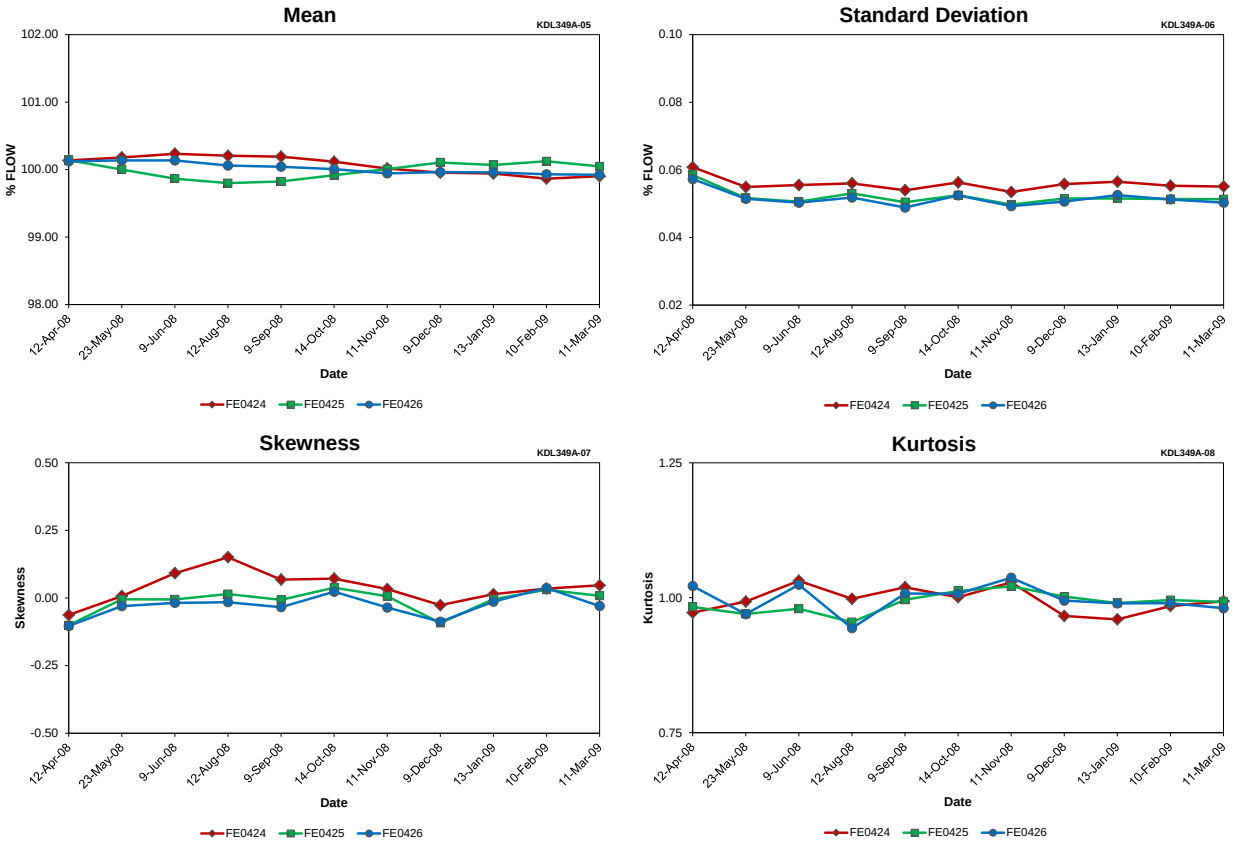



**Figure A.79 RCS LOOP B FLOW Data Quality Statistics at Farley Unit 1 (Cycle 22)**

**Table A.17 RCS LOOP B FLOW Data Quality for Farley Unit 1 (Cycle 22)**

| | Tag Names | | |
|---|---|---|---|
| **Result Type** | **FE0424** | **FE0425** | **FE0426** |
| Mean | 100.07 | 99.99 | 100.02 |
| Std. Dev. | 0.06 | 0.05 | 0.05 |
| Skewness | 0.04 | -0.01 | -0.03 |
| Kurtosis | 1.00 | 0.99 | 1.00 |

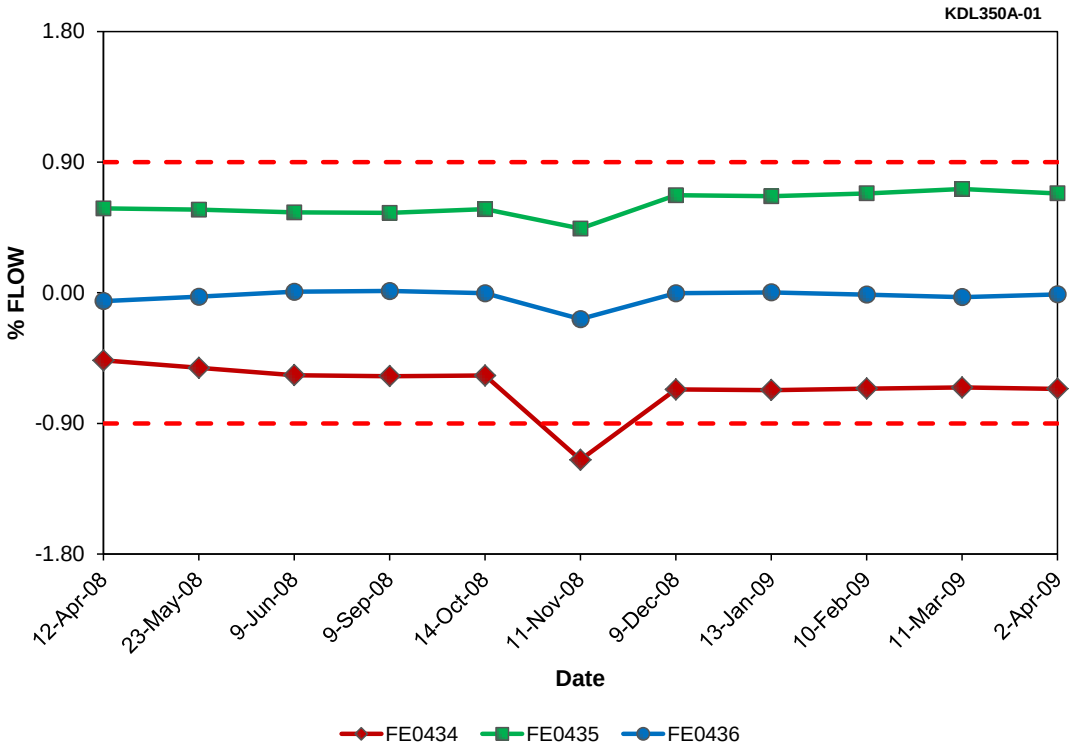



**Figure A.80 RCS LOOP C FLOW Steady-State Deviation at Farley Unit 1 (Cycle 22)**

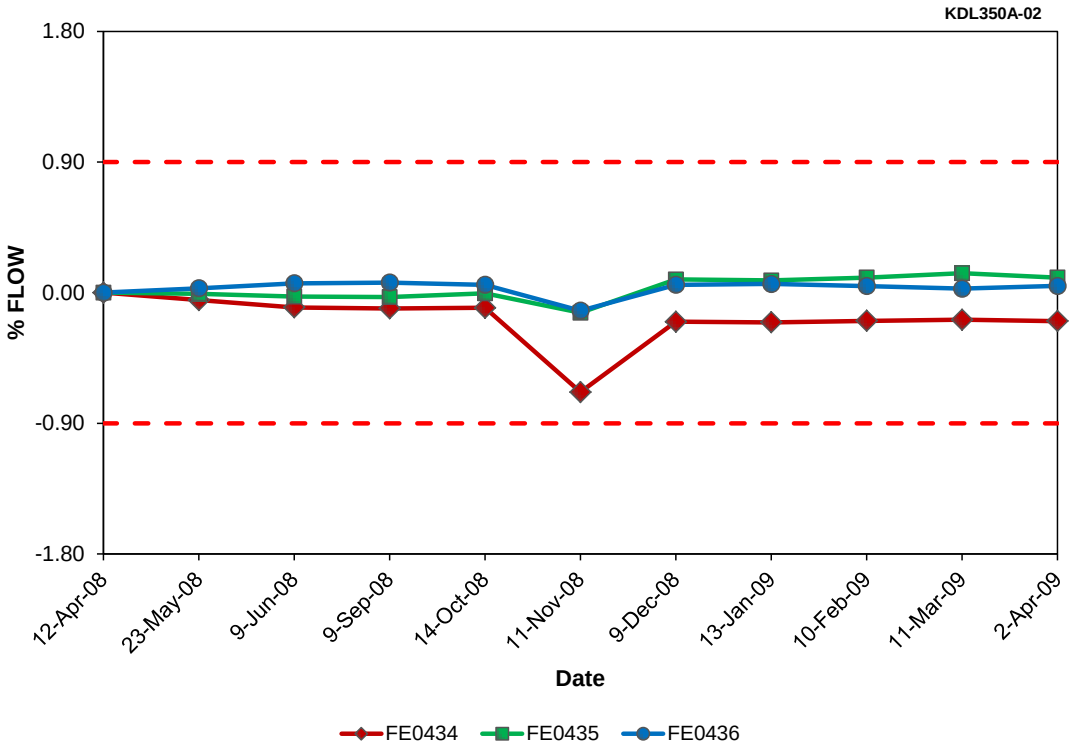



**Figure A.81 RCS LOOP C FLOW Steady-State Drift at Farley Unit 1 (Cycle 22)**

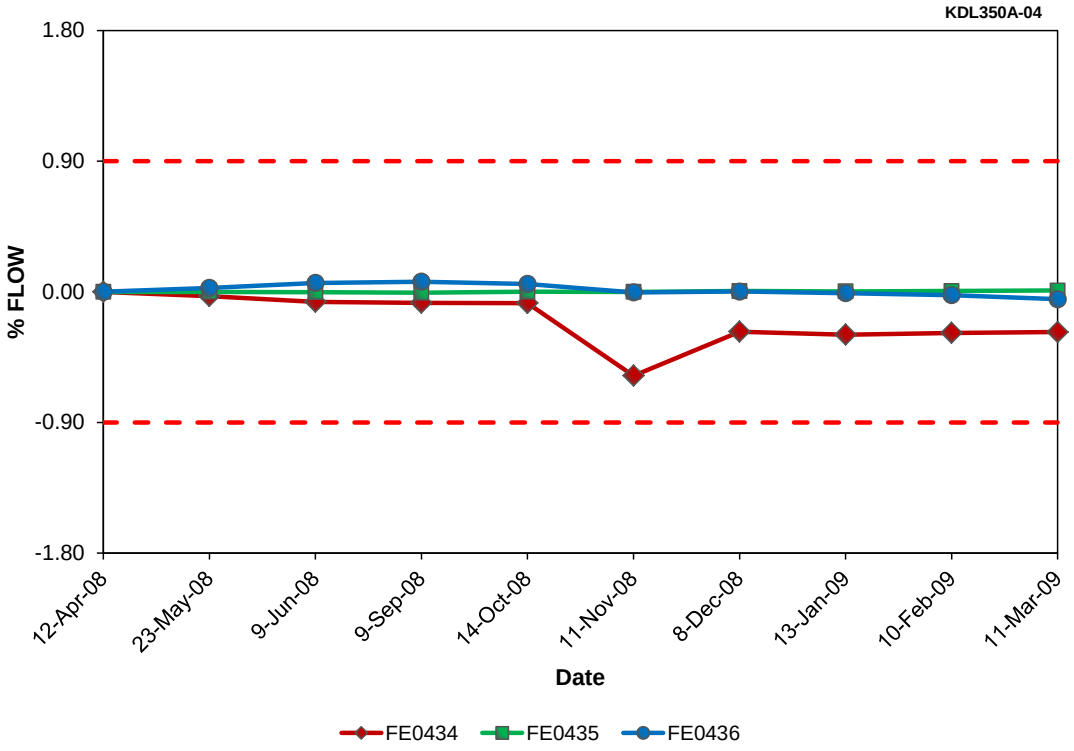



**Figure A.82 RCS LOOP C FLOW Steady-State Residual AAKR at Farley Unit 1 (Cycle 22)**

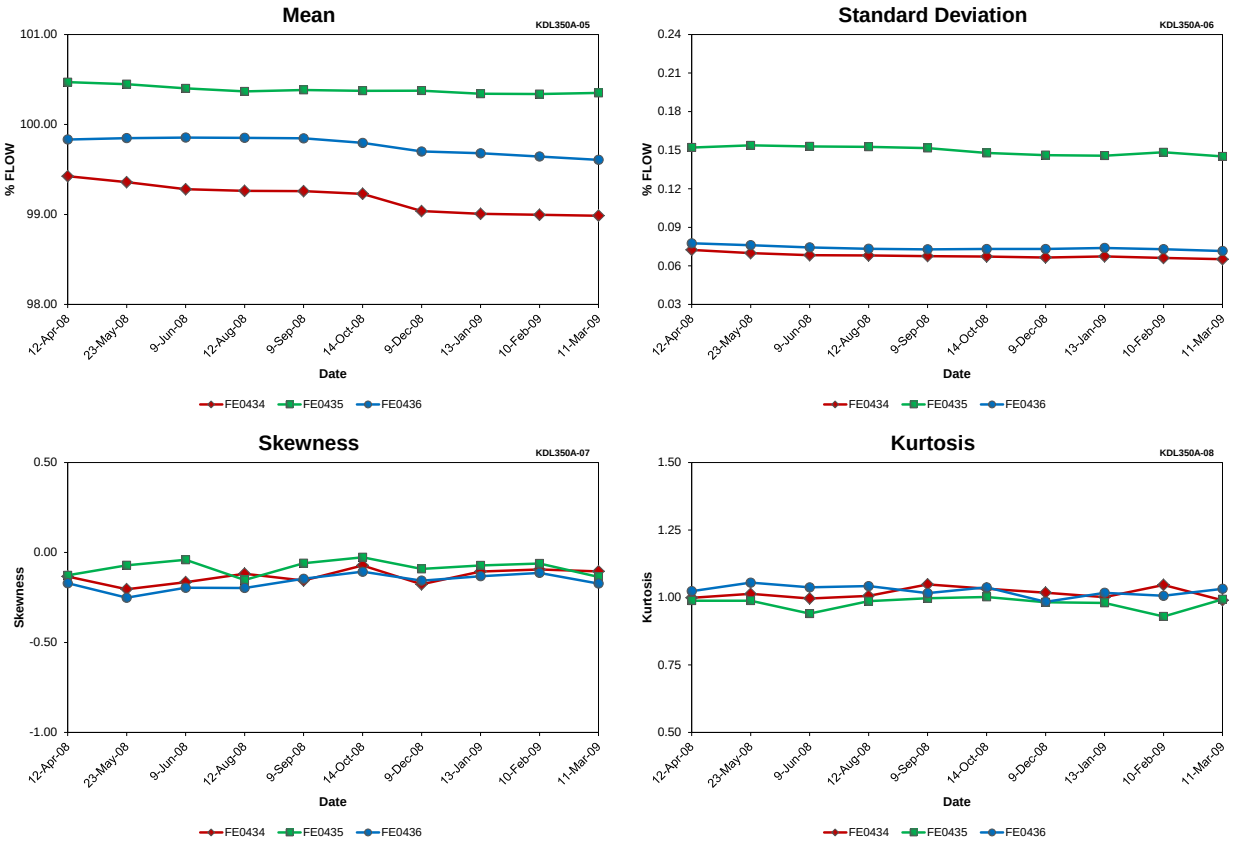



**Figure A.83 RCS LOOP C FLOW Data Quality Statistics at Farley Unit 1 (Cycle 22)**

**Table A.18 RCS LOOP C FLOW Data Quality for Farley Unit 1 (Cycle 22)**

| | Tag Names | | |
|---|---|---|---|
| **Result Type** | **FE0434** | **FE0435** | **FE0436** |
| Mean | 99.18 | 100.38 | 99.77 |
| Std. Dev. | 0.07 | 0.07 | 0.07 |
| Skewness | -0.13 | -0.08 | -0.16 |
| Kurtosis | 1.02 | 0.98 | 1.03 |

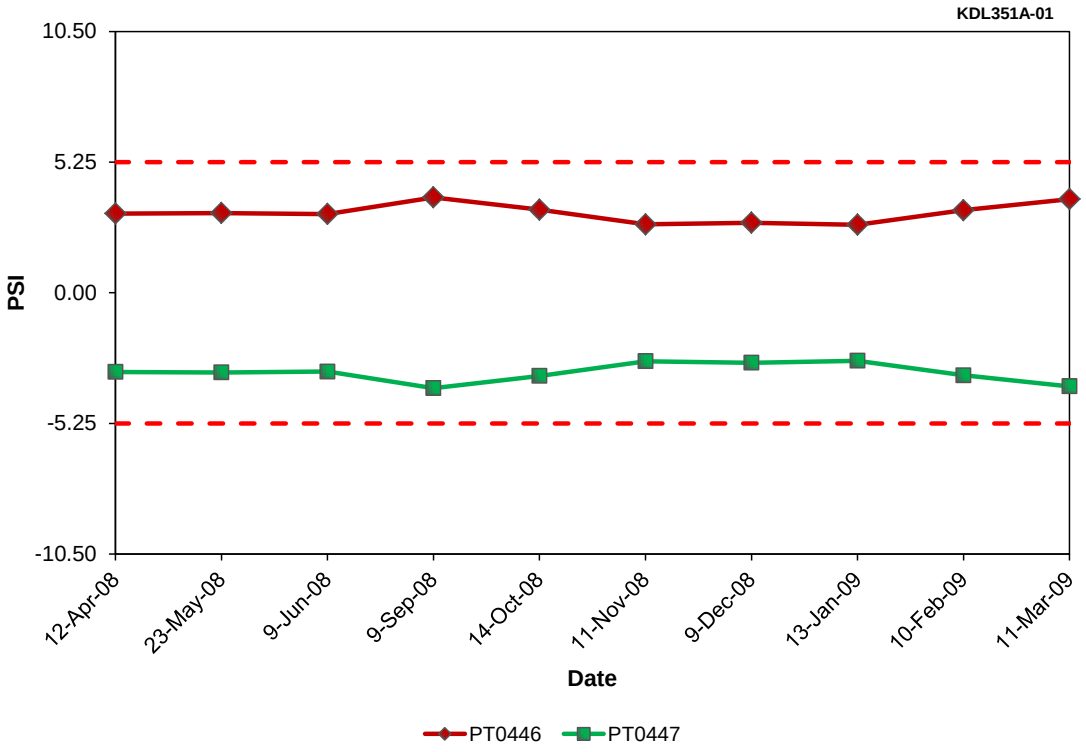



**Figure A.84 TBIN FIRST STAGE PRESSURE Steady-State Deviation at Farley Unit 1 (Cycle 22)**

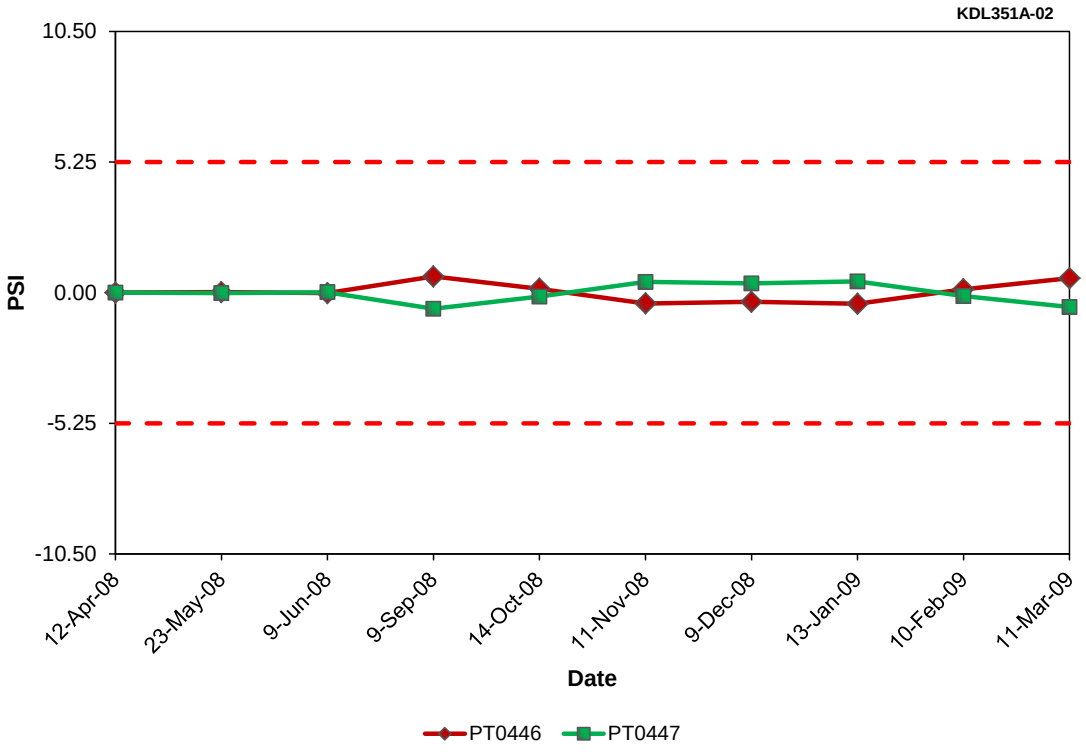



**Figure A.85 TBIN FIRST STAGE PRESSURE Steady-State Drift at Farley Unit 1 (Cycle 22)**

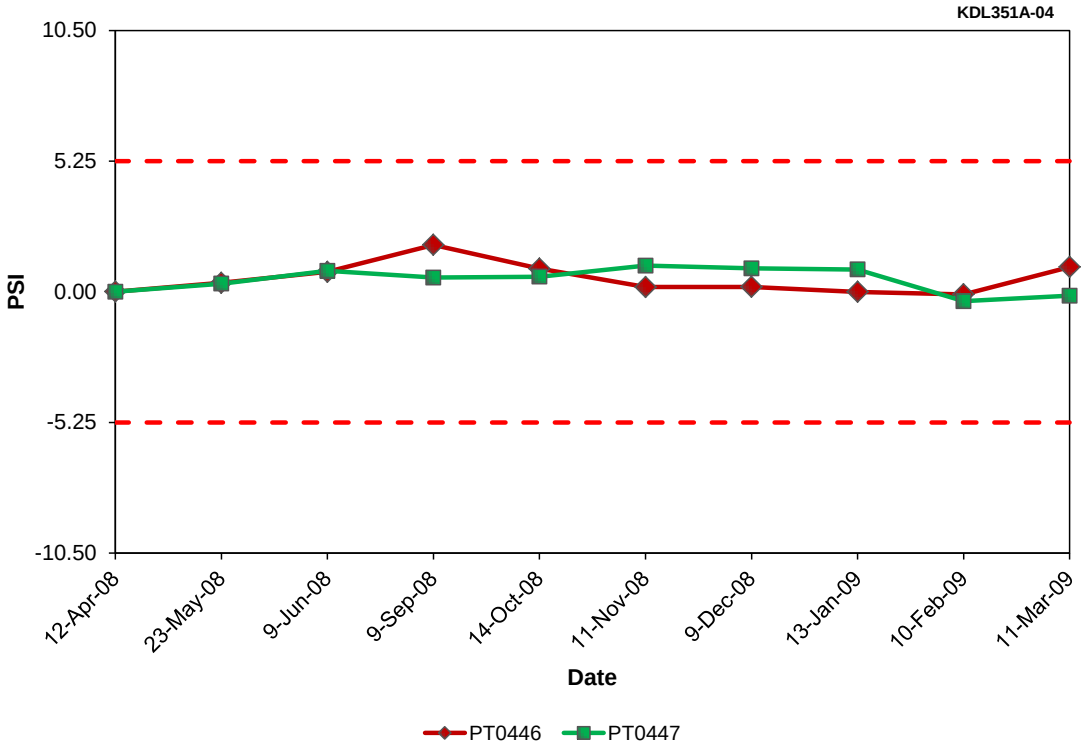



**Figure A.86 TBIN FIRST STAGE PRESSURE Steady-State Residual AAKR at Farley Unit 1 (Cycle 22)**

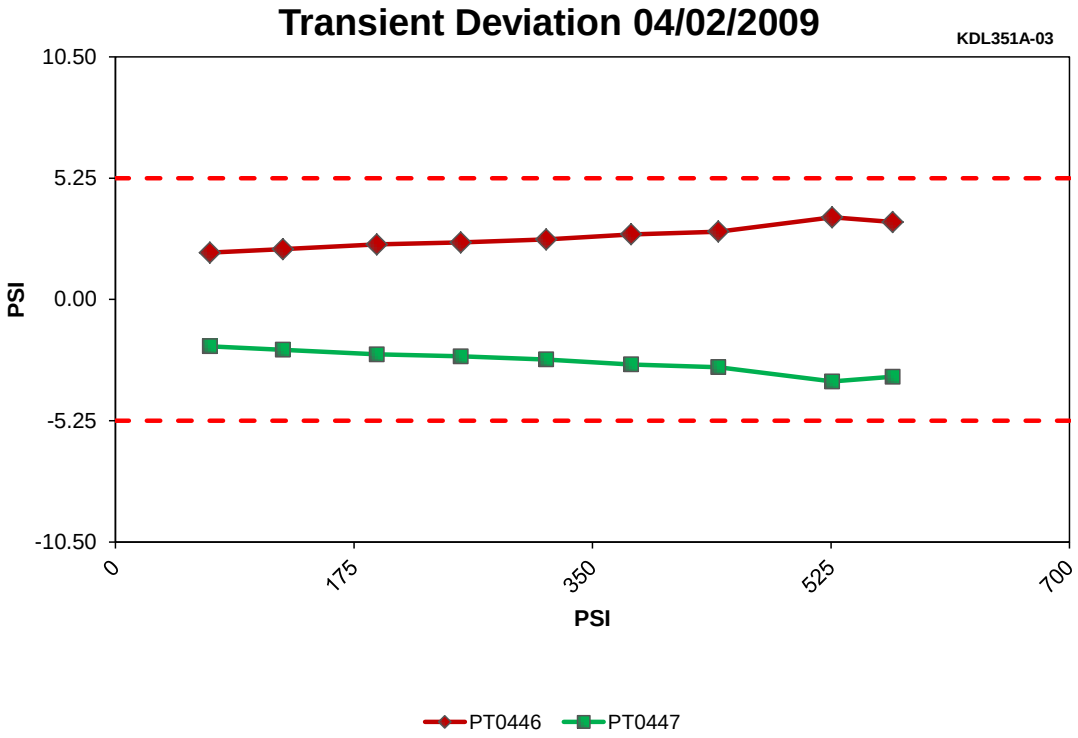



**Figure A.87 TBIN FIRST STAGE PRESSURE Transient Deviation at Farley Unit 1 (Cycle 22)**

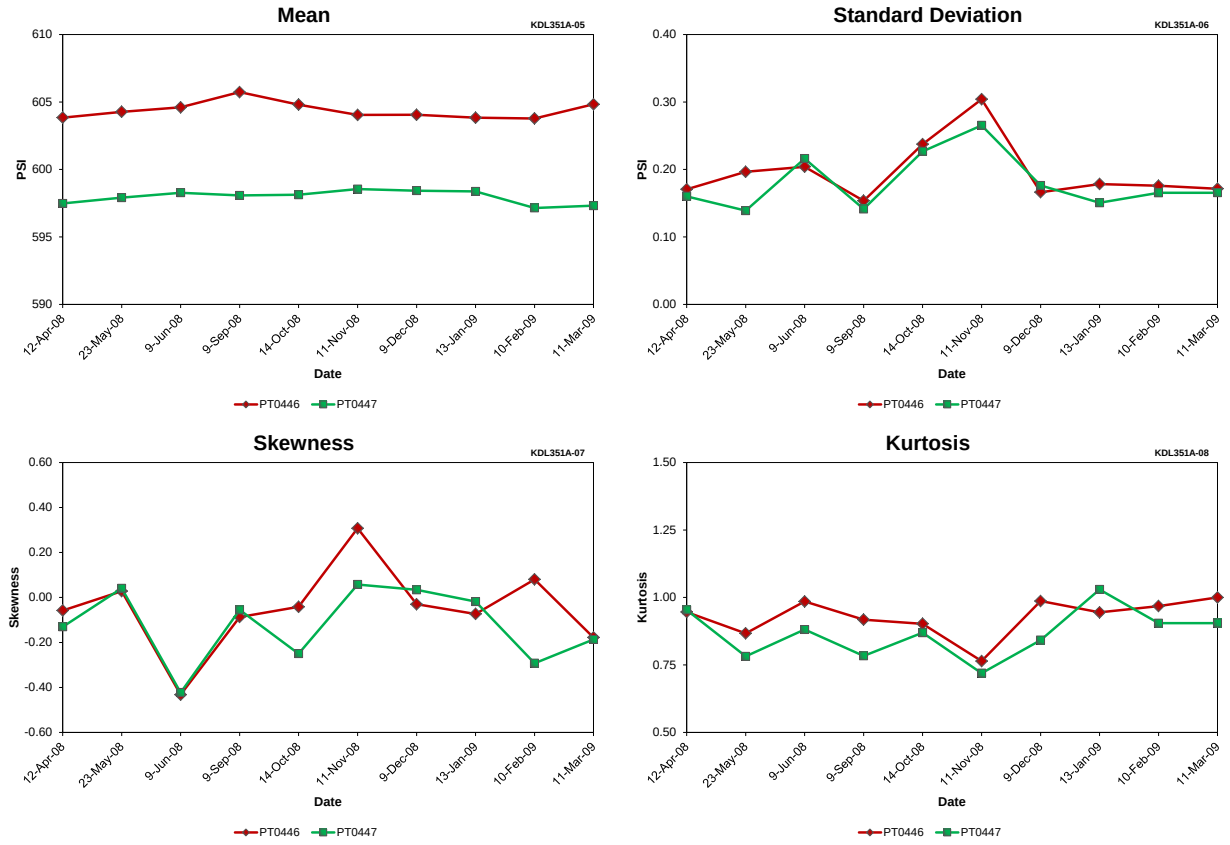



**Figure A.88 TBIN FIRST STAGE PRESSURE Data Quality Statistics at Farley Unit 1 (Cycle 22)**

**Table A.19 TBIN FIRST STAGE PRESSURE Data Quality for Farley Unit 1 (Cycle 22)**

| | Tag Names | |
|---|---|---|
| Result Type | PT0446 | PT0447 |
| Mean | 604.38 | 597.97 |
| Std. Dev. | 0.20 | 0.20 |
| Skewness | -0.05 | -0.05 |
| Kurtosis | 0.93 | 0.87 |

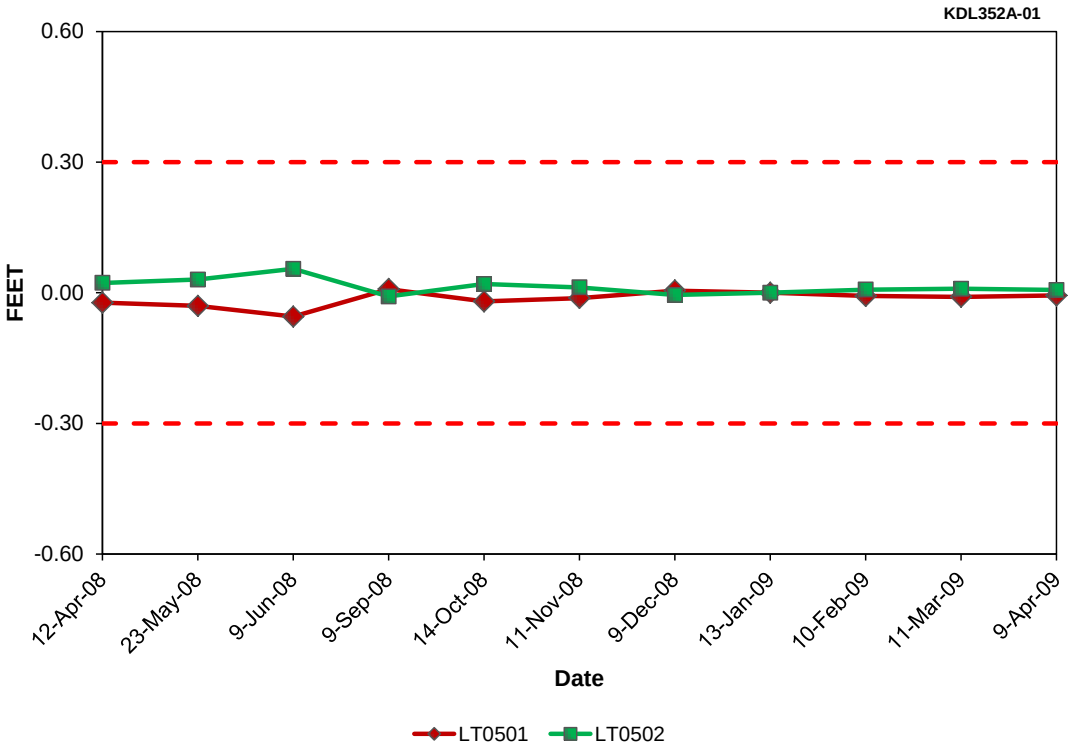



**Figure A.89 RWST LVL Steady-State Deviation at Farley Unit 1 (Cycle 22)**

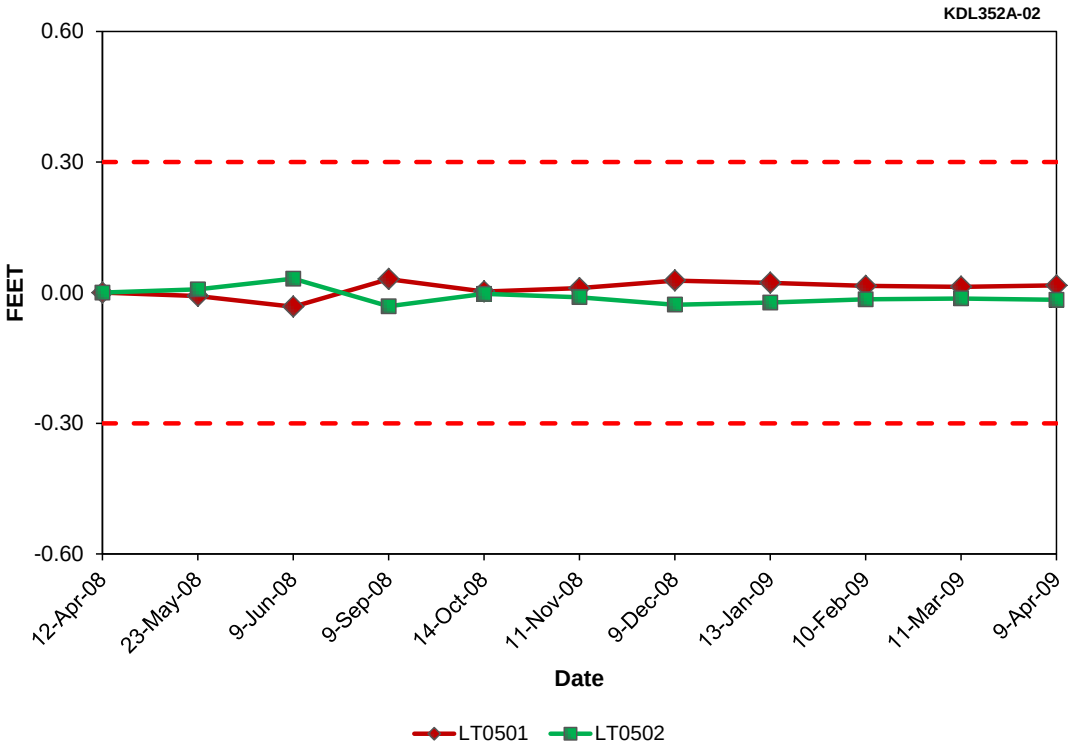



**Figure A.90 RWST LVL Steady-State Drift at Farley Unit 1 (Cycle 22)**

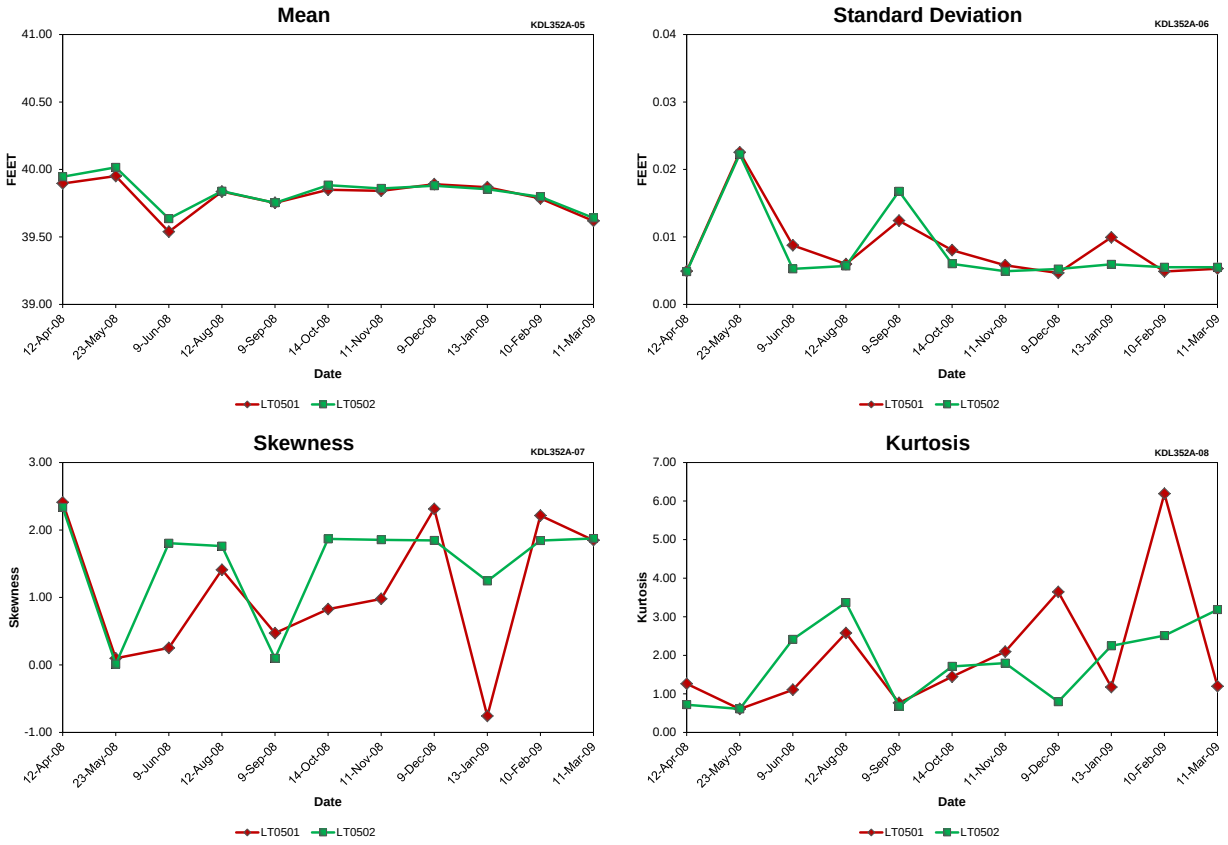



**Figure A.91 RWST LVL Data Quality Statistics at Farley Unit 1 (Cycle 22)**

**Table A.20 RWST LVL Data Quality for Farley Unit 1 (Cycle 22)**

| Result Type | Tag Names | |
|---|---|---|
| | LT0501 | LT0502 |
| Mean | 39.80 | 39.83 |
| Std. Dev. | 0.01 | 0.01 |
| Skewness | 1.10 | 1.50 |
| Kurtosis | 2.01 | 1.82 |

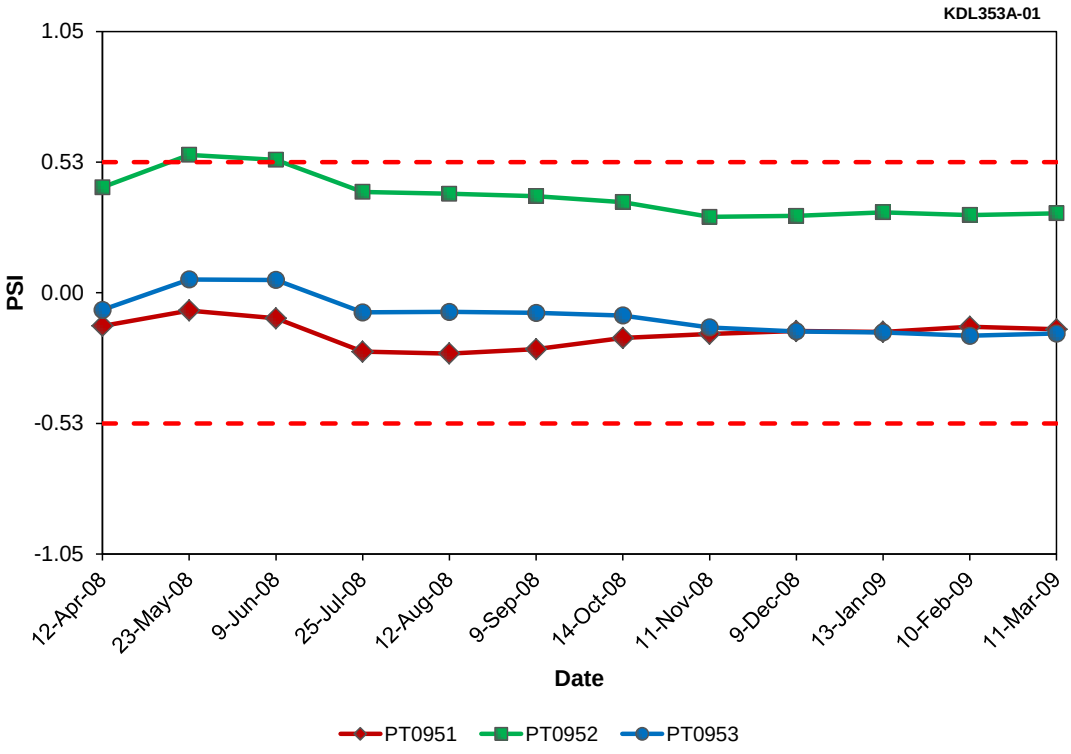



**Figure A.92 CTMT PSR Steady-State Deviation at Farley Unit 1 (Cycle 22)**

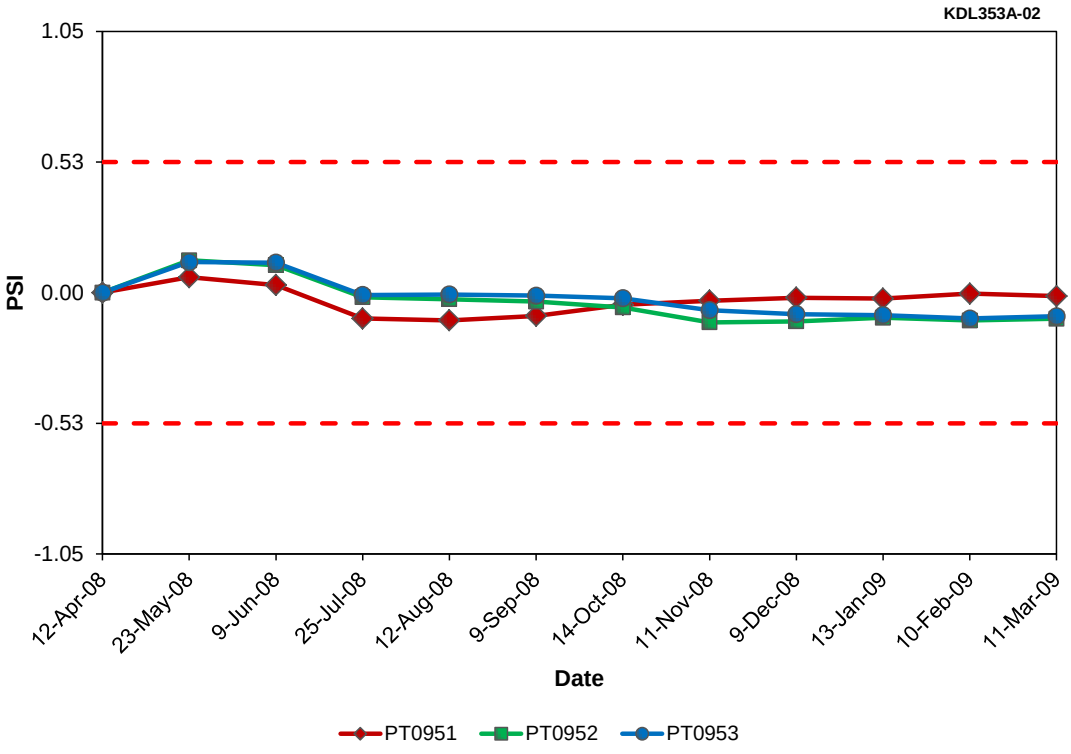



**Figure A.93 CTMT PSR Steady-State Drift at Farley Unit 1 (Cycle 22)**

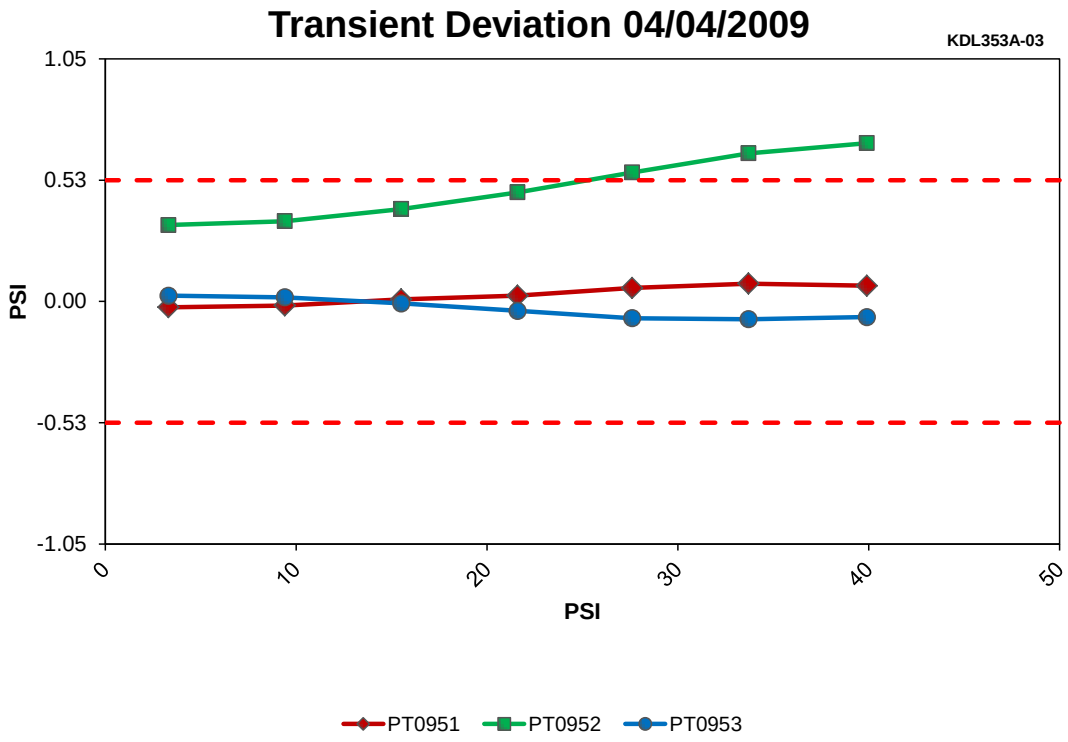



**Figure A.94 CTMT PSR Transient Deviation at Farley Unit 1 (Cycle 22)**

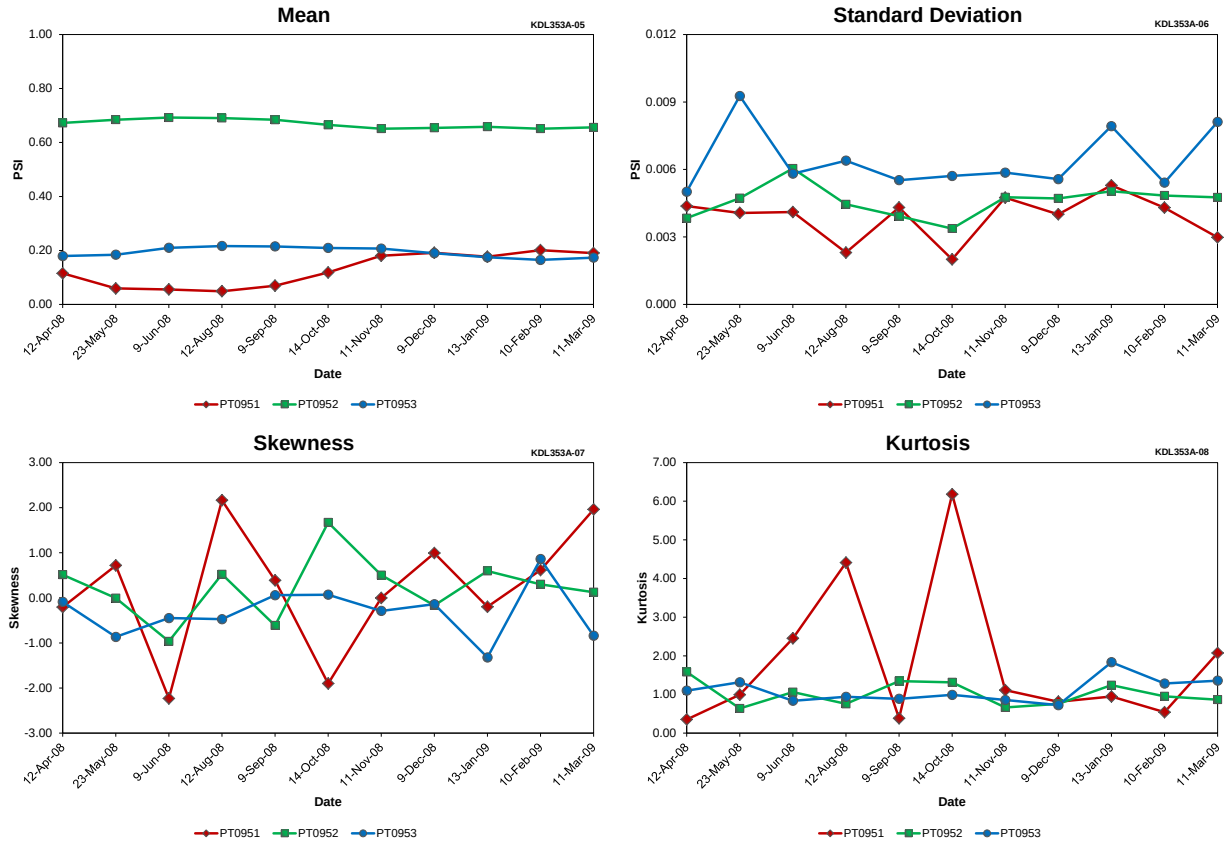



**Figure A.95 CTMT PSR Data Quality Statistics at Farley Unit 1 (Cycle 22)**

**Table A.21 CTMT PSR Data Quality for Farley Unit 1 (Cycle 22)**

| | Tag Names | | |
|---|---|---|---|
| **Result Type** | **PT0951** | **PT0952** | **PT0953** |
| Mean | 0.13 | 0.67 | 0.19 |
| Std. Dev. | 0.00 | 0.00 | 0.01 |
| Skewness | 0.21 | 0.23 | -0.32 |
| Kurtosis | 1.84 | 1.02 | 1.10 |

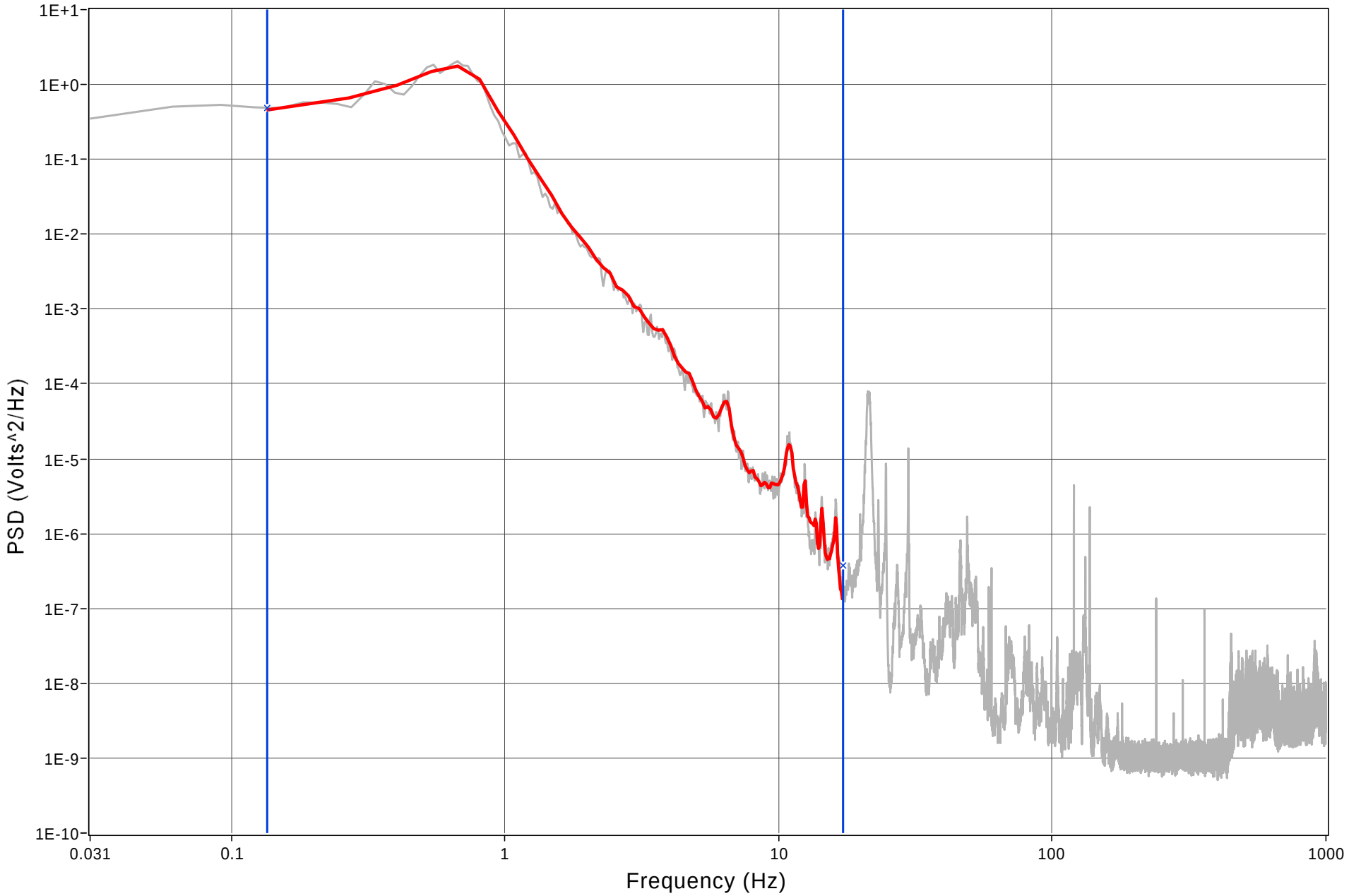
Table A.22 OLM-NA Results

| Item | Tag Name | Service | Filename | WB PSD Range (Hz) | Decimator | Trim Block Size | Trim Low Freq. | Trim High Freq. | AR Method | AR Order |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 | FT476 | FW FLOW | FNP10004 | 0.0305 : 1000 | 364 | 256 | 0.0215 | 2.7472 | Forward-Backward | 22 |
| 2 | FT477 | FW FLOW | FNP10003 | 0.0305 : 1000 | 364 | 512 | 0.0107 | 2.7472 | Least-Squares | 23 |
| 3 | FT486 | FW FLOW | FNP10004 | 0.0305 : 1000 | 364 | 256 | 0.0215 | 2.7472 | Forward-Backward | 11 |
| 4 | FT487 | FW FLOW | FNP10003 | 0.0305 : 1000 | 364 | 512 | 0.0107 | 2.7472 | Least-Squares | 21 |
| 5 | FT496 | FW FLOW | FNP10004 | 0.0305 : 1000 | 364 | 512 | 0.0107 | 2.7472 | Forward-Backward | 11 |
| 6 | FT497 | FW FLOW | FNP10003 | 0.0305 : 1000 | 364 | 512 | 0.0107 | 2.7472 | Least-Squares | 24 |
| | | | | | | | | | | |
| 10 | LT474 | SG LEVEL | FNP10001 | 0.0305 : 1000 | 58 | 256 | 0.1347 | 17.2409 | Forward-Backward | 11 |
| 11 | LT475 | SG LEVEL | FNP10002 | 0.0305 : 1000 | 58 | 256 | 0.1347 | 17.2409 | Forward-Backward | 11 |
| 12 | LT476 | SG LEVEL | FNP10003 | 0.0305 : 1000 | 58 | 256 | 0.1347 | 17.2409 | Forward-Backward | 11 |
| 13 | LT484 | SG LEVEL | FNP10001 | 0.0305 : 1000 | 58 | 256 | 0.1347 | 17.2409 | Forward-Backward | 11 |
| 14 | LT485 | SG LEVEL | FNP10002 | 0.0305 : 1000 | 58 | 256 | 0.1347 | 17.2409 | Forward-Backward | 11 |
| 15 | LT486 | SG LEVEL | FNP10003 | 0.0305 : 1000 | 58 | 256 | 0.1347 | 17.2409 | Forward-Backward | 11 |
| 16 | LT494 | SG LEVEL | FNP10001 | 0.0305 : 1000 | 58 | 256 | 0.1347 | 17.2409 | Forward-Backward | 11 |
| 17 | LT495 | SG LEVEL | FNP10002 | 0.0305 : 1000 | 58 | 256 | 0.1347 | 17.2409 | Forward-Backward | 11 |
| 18 | LT496 | SG LEVEL | FNP10003 | 0.0305 : 1000 | 58 | 256 | 0.1347 | 17.2409 | Forward-Backward | 11 |
| | | | | | | | | | | |
| 19 | FT474 | STM FLOW | FNP10003 | 0.0305 : 1000 | 46 | 128 | 0.3397 | 21.7384 | Forward-Backward | 11 |
| 20 | FT475 | STM FLOW | FNP10004 | 0.0305 : 1000 | 29 | 128 | 0.5388 | 34.4817 | Least-Squares | 18 |
| 21 | FT484 | STM FLOW | FNP10003 | 0.0305 : 1000 | 29 | 128 | 0.5388 | 34.4817 | Forward-Backward | 11 |
| 22 | FT485 | STM FLOW | FNP10004 | 0.0305 : 1000 | 29 | 128 | 0.5388 | 34.4817 | Forward-Backward | 18 |
| 23 | FT494 | STM FLOW | FNP10003 | 0.0305 : 1000 | 29 | 128 | 0.5388 | 34.4817 | Forward-Backward | 11 |
| 24 | FT495 | STM FLOW | FNP10004 | 0.0305 : 1000 | 29 | 128 | 0.5388 | 34.4817 | Least-Squares | 18 |

# OLM Narrow Band PSD Window Fitting

| Reactor and Unit | Tag Number | Service | Filename | Blocks : Blocksize | Trim Low Freq. (Hz) | Trim High Freq. (Hz) | Fitting Type | Test Date |
|---|---|---|---|---|---|---|---|---|
| Farley Unit 1 | LT474 | SG LVL | FNP10001.psd | 11 : 256 | 0.134694 | 17.240854 | Baseline | 12-Mar-2009 12:21:02 |

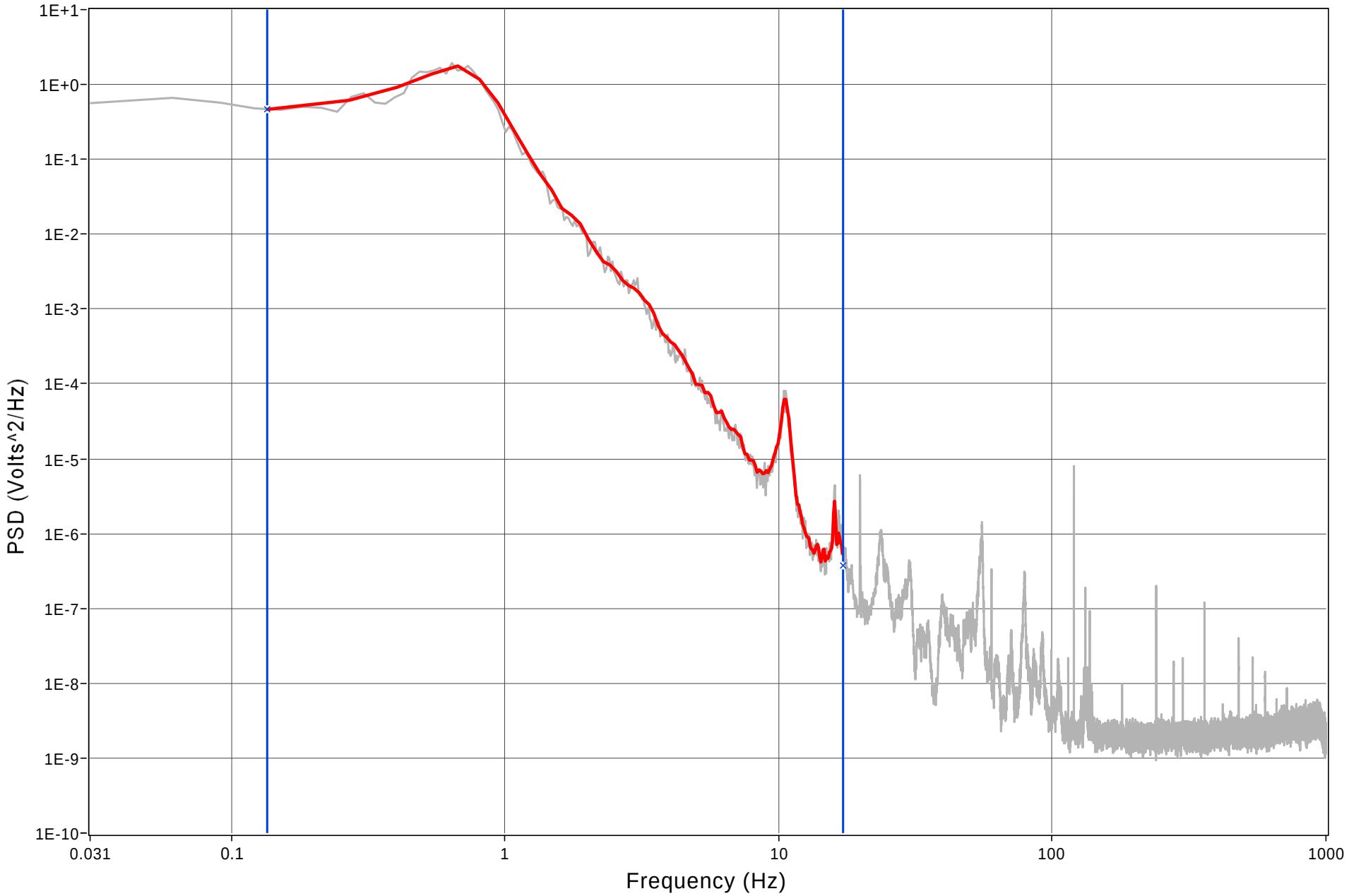
## PSD Window



# OLM Narrow Band PSD Window Fitting

| Reactor and Unit | Tag Number | Service | Filename | Blocks : Blocksize | Trim Low Freq. (Hz) | Trim High Freq. (Hz) | Fitting Type | Test Date |
|---|---|---|---|---|---|---|---|---|
| Farley Unit 1 | LT484 | SG LVL | FNP10001.psd | 11 : 256 | 0.134694 | 17.240854 | Baseline | 12-Mar-2009 12:21:02 |

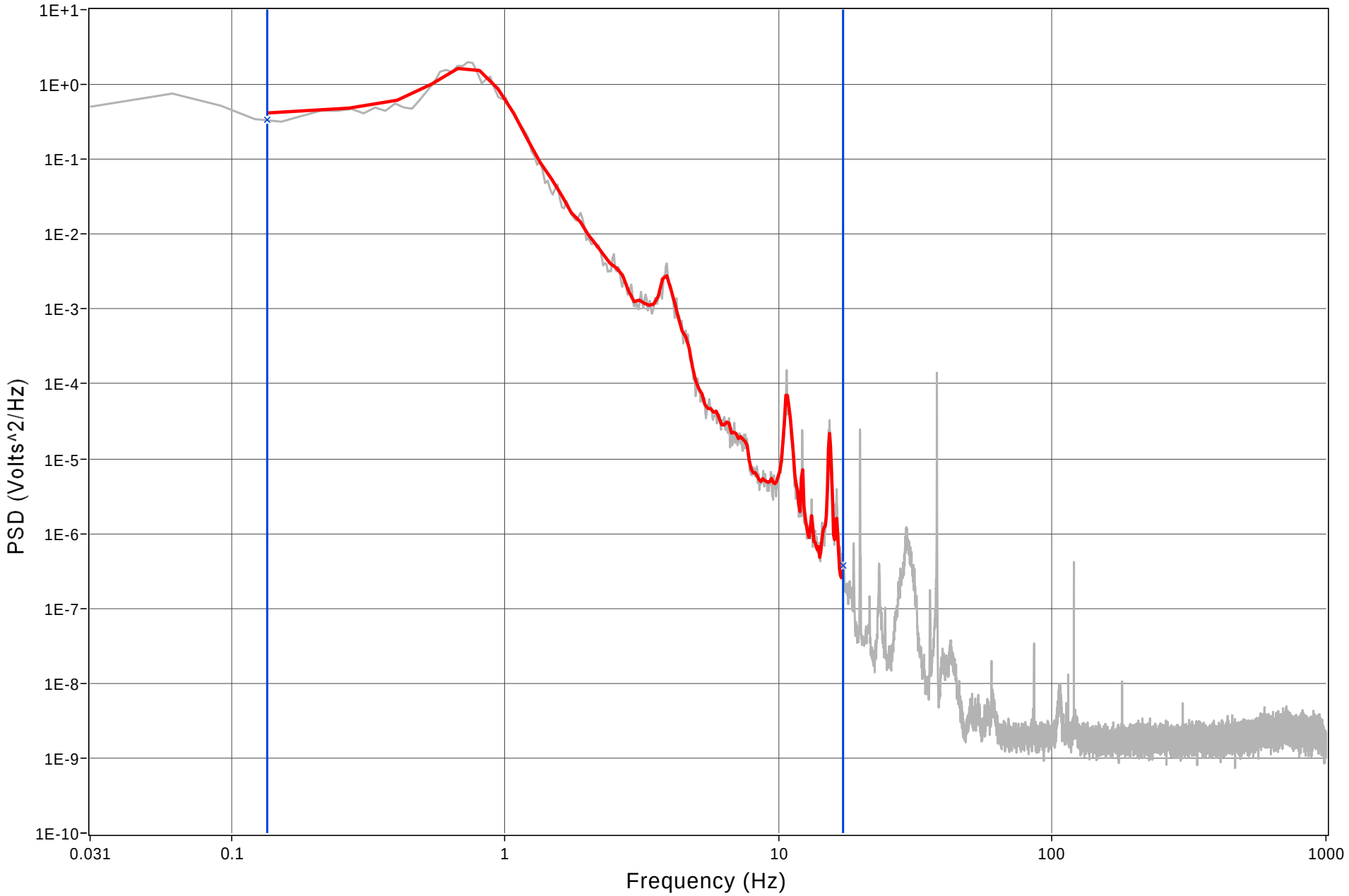
## PSD Window



# OLM Narrow Band PSD Window Fitting

| Reactor and Unit | Tag Number | Service | Filename | Blocks : Blocksize | Trim Low Freq. (Hz) | Trim High Freq. (Hz) | Fitting Type | Test Date |
|---|---|---|---|---|---|---|---|---|
| Farley Unit 1 | LT494 | SG LVL | FNP10001.psd | 11 : 256 | 0.134694 | 17.240854 | Baseline | 12-Mar-2009 12:21:02 |

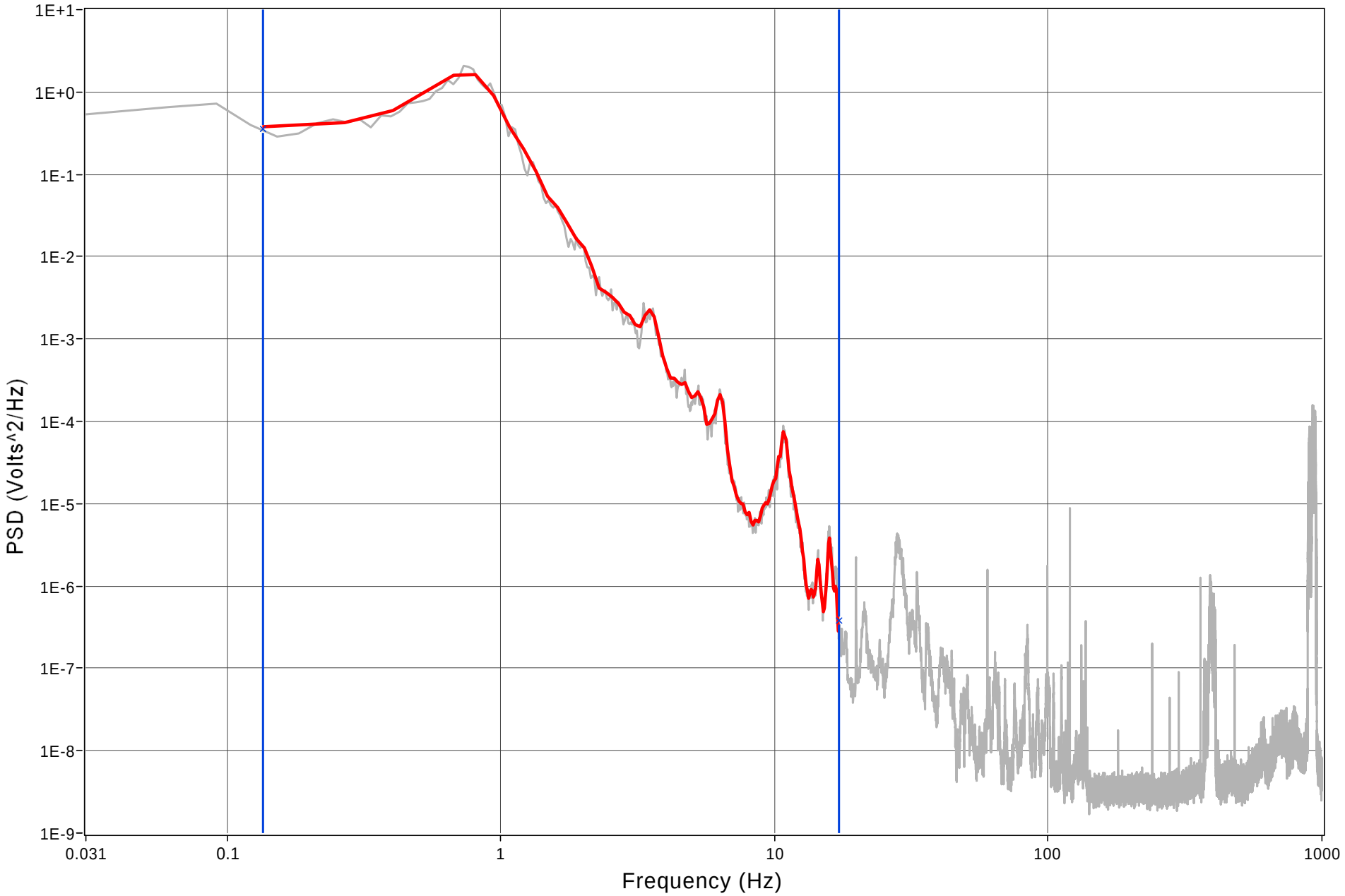
## PSD Window



# OLM Narrow Band PSD Window Fitting

| Reactor and Unit | Tag Number | Service | Filename | Blocks : Blocksize | Trim Low Freq. (Hz) | Trim High Freq. (Hz) | Fitting Type | Test Date |
|---|---|---|---|---|---|---|---|---|
| Farley Unit 1 | LT475 | SG LVL | FNP10002.psd | 11 : 256 | 0.134694 | 17.240854 | Baseline | 12-Mar-2009 12:21:02 |

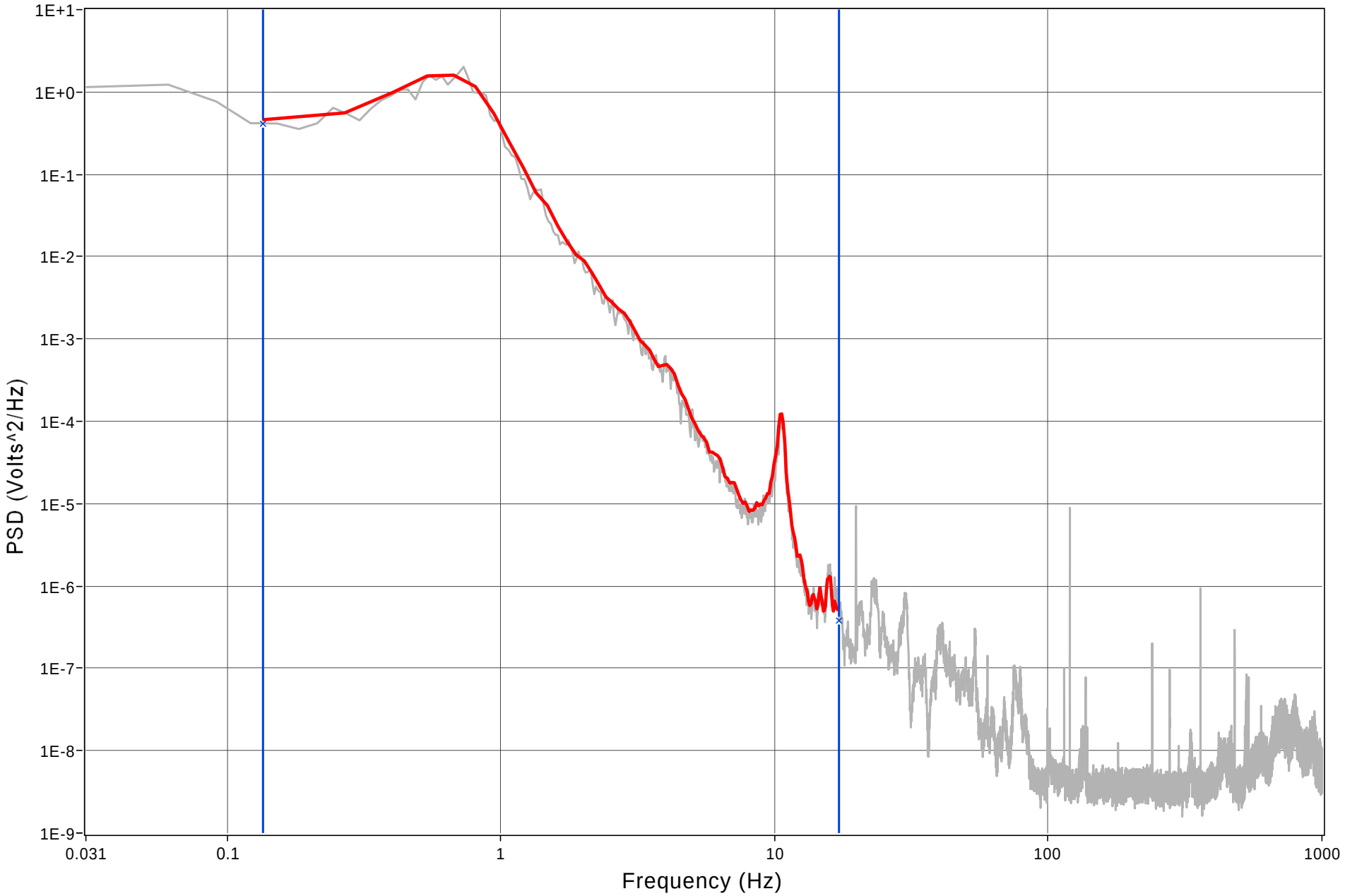
## PSD Window



# OLM Narrow Band PSD Window Fitting

| Reactor and Unit | Tag Number | Service | Filename | Blocks : Blocksize | Trim Low Freq. (Hz) | Trim High Freq. (Hz) | Fitting Type | Test Date |
|---|---|---|---|---|---|---|---|---|
| Farley Unit 1 | LT485 | SG LVL | FNP10002.psd | 11 : 256 | 0.134694 | 17.240854 | Baseline | 12-Mar-2009 12:21:02 |

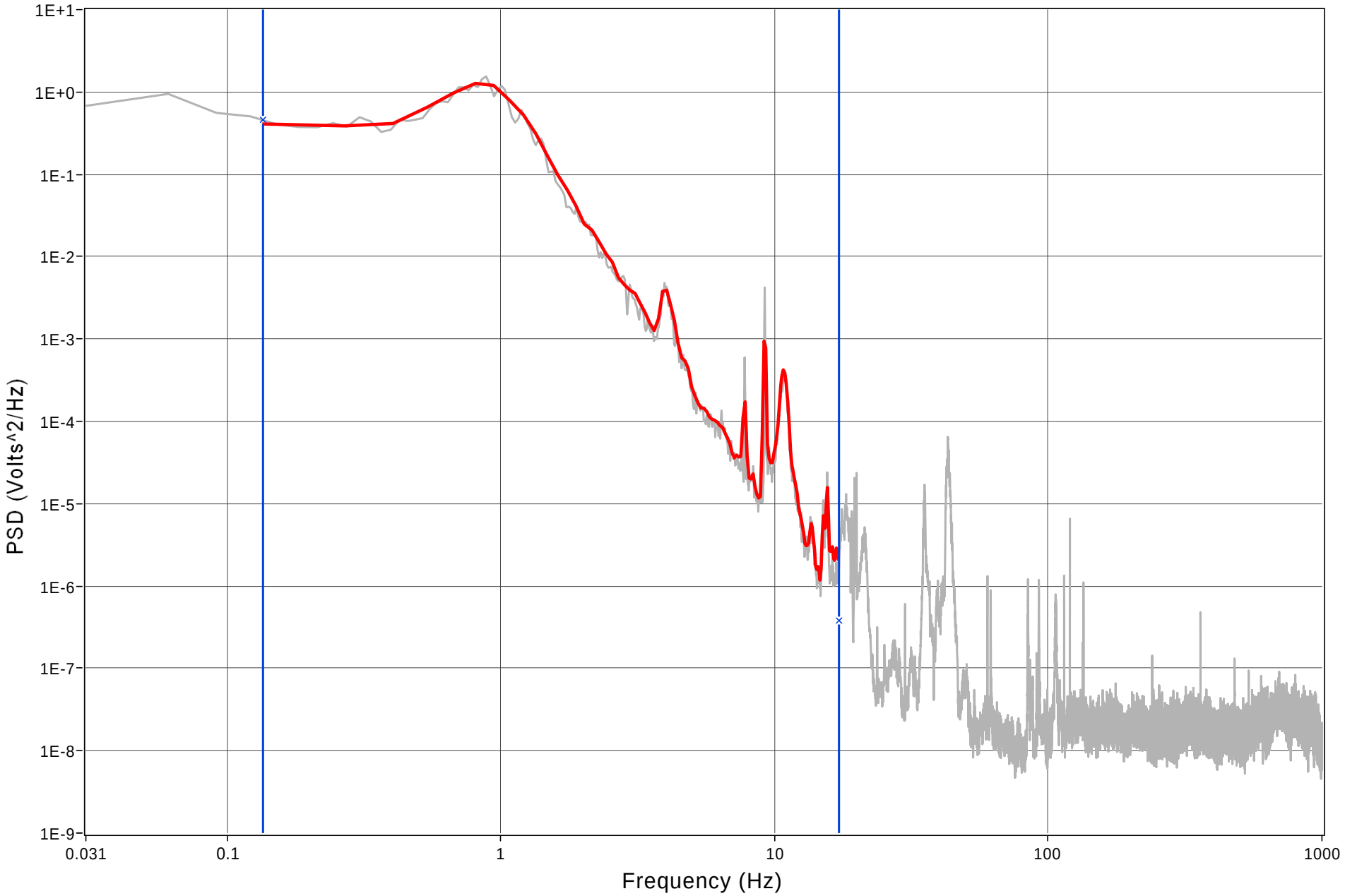
## PSD Window



# OLM Narrow Band PSD Window Fitting

| Reactor and Unit | Tag Number | Service | Filename | Blocks : Blocksize | Trim Low Freq. (Hz) | Trim High Freq. (Hz) | Fitting Type | Test Date |
|---|---|---|---|---|---|---|---|---|
| Farley Unit 1 | LT495 | SG LVL | FNP10002.psd | 11 : 256 | 0.134694 | 17.240854 | Baseline | 12-Mar-2009 12:21:02 |

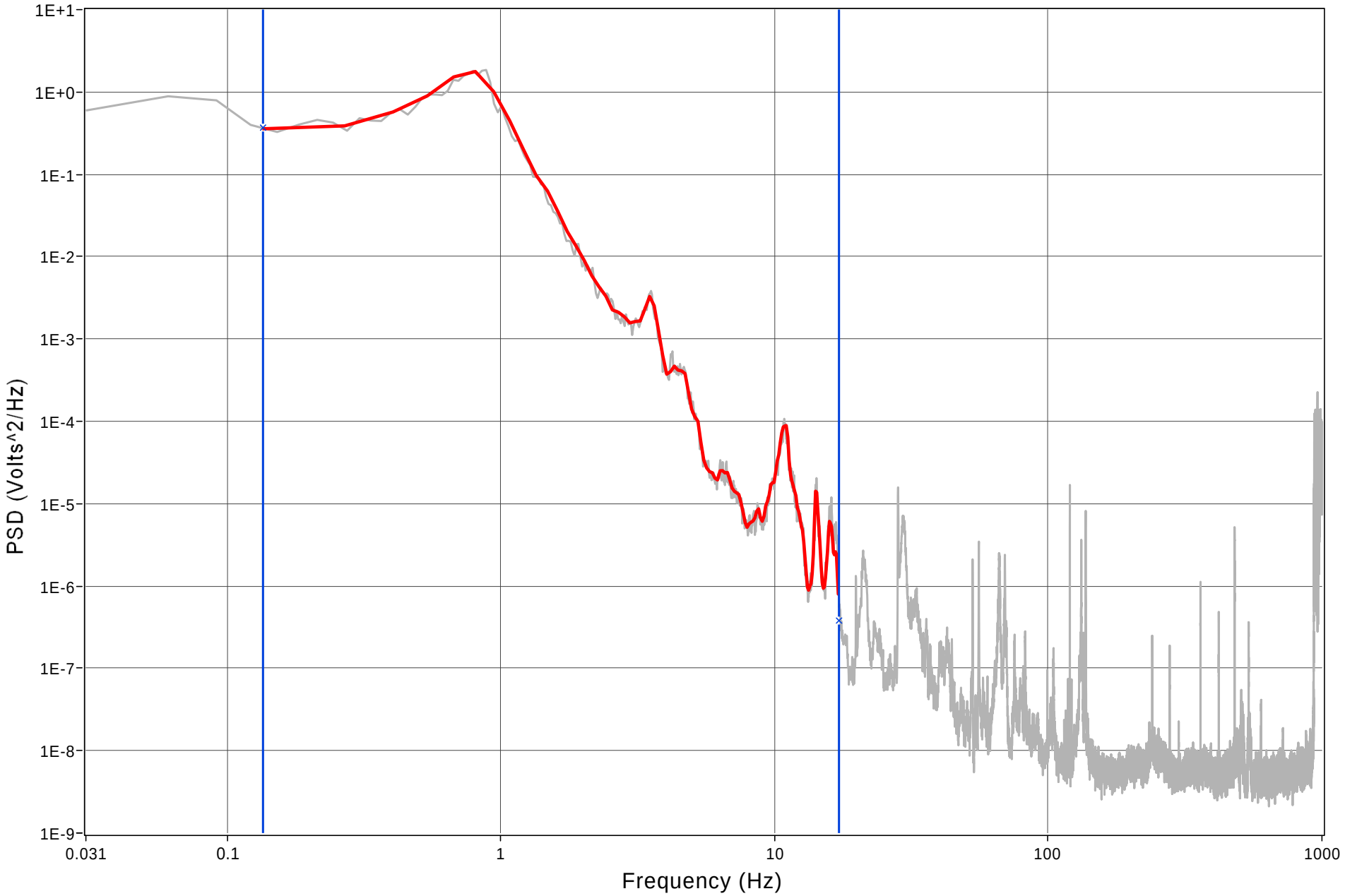
## PSD Window



# OLM Narrow Band PSD Window Fitting

| Reactor and Unit | Tag Number | Service | Filename | Blocks : Blocksize | Trim Low Freq. (Hz) | Trim High Freq. (Hz) | Fitting Type | Test Date |
|---|---|---|---|---|---|---|---|---|
| Farley Unit 1 | LT476 | SG LVL | FNP10003.psd | 11 : 256 | 0.134694 | 17.240854 | Baseline | 12-Mar-2009 12:21:02 |

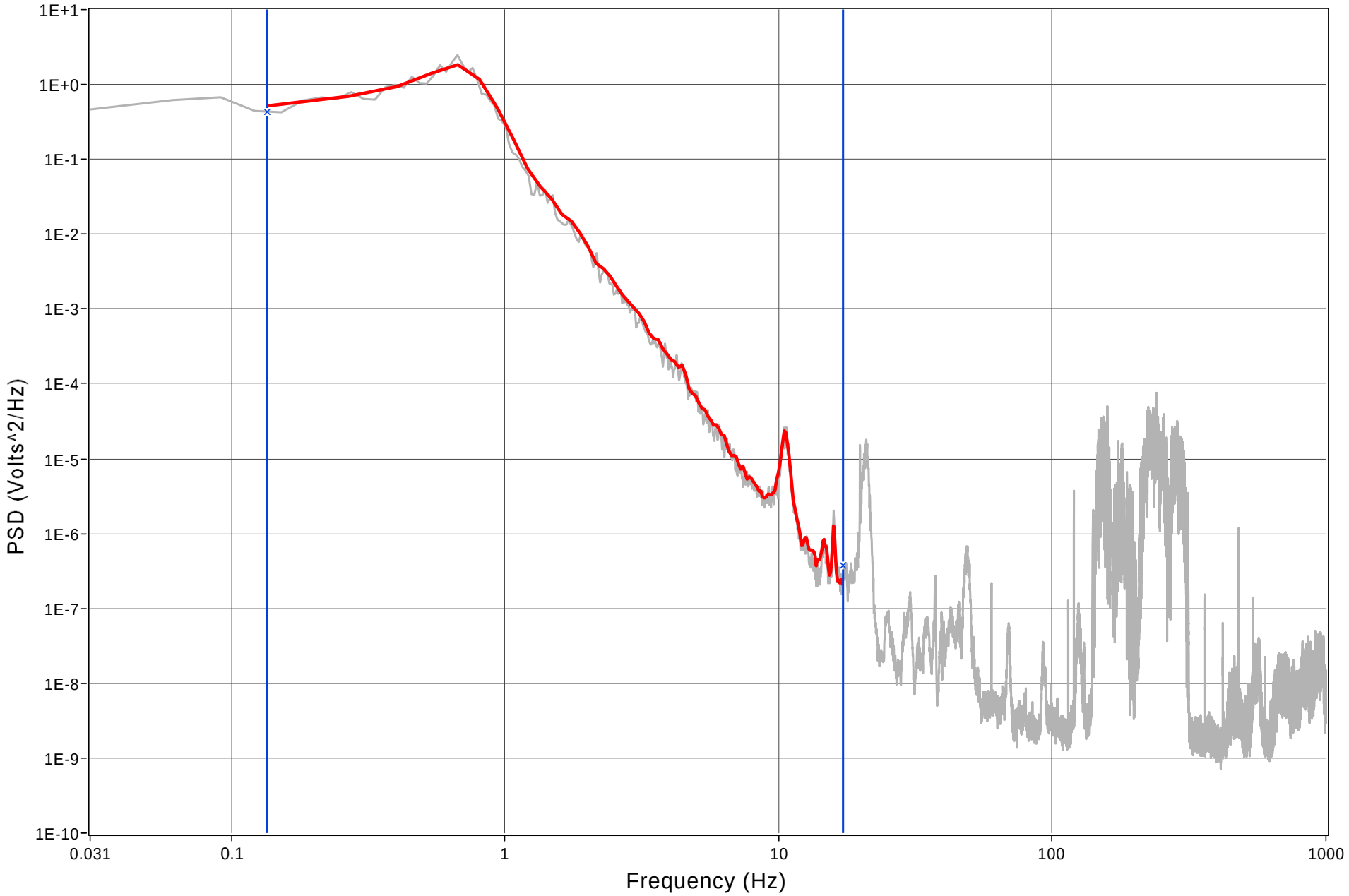
## PSD Window



# OLM Narrow Band PSD Window Fitting

| Reactor and Unit | Tag Number | Service | Filename | Blocks : Blocksize | Trim Low Freq. (Hz) | Trim High Freq. (Hz) | Fitting Type | Test Date |
|---|---|---|---|---|---|---|---|---|
| Farley Unit 1 | LT486 | SG LVL | FNP10003.psd | 11 : 256 | 0.134694 | 17.240854 | Baseline | 12-Mar-2009 12:21:02 |

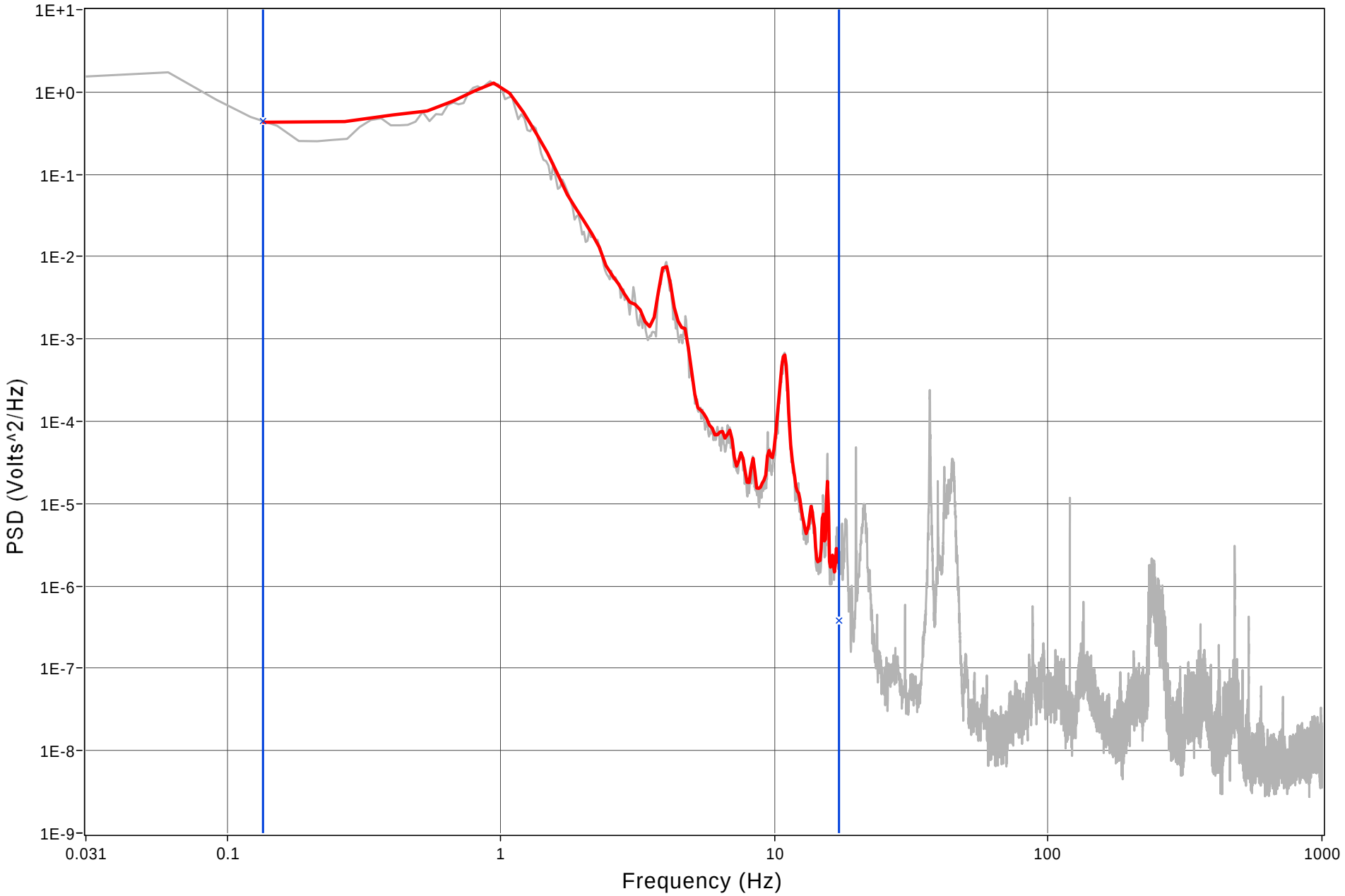
## PSD Window



# OLM Narrow Band PSD Window Fitting

| Reactor and Unit | Tag Number | Service | Filename | Blocks : Blocksize | Trim Low Freq. (Hz) | Trim High Freq. (Hz) | Fitting Type | Test Date |
|---|---|---|---|---|---|---|---|---|
| Farley Unit 1 | LT496 | SG LVL | FNP10003.psd | 11 : 256 | 0.134694 | 17.240854 | Baseline | 12-Mar-2009 12:21:02 |

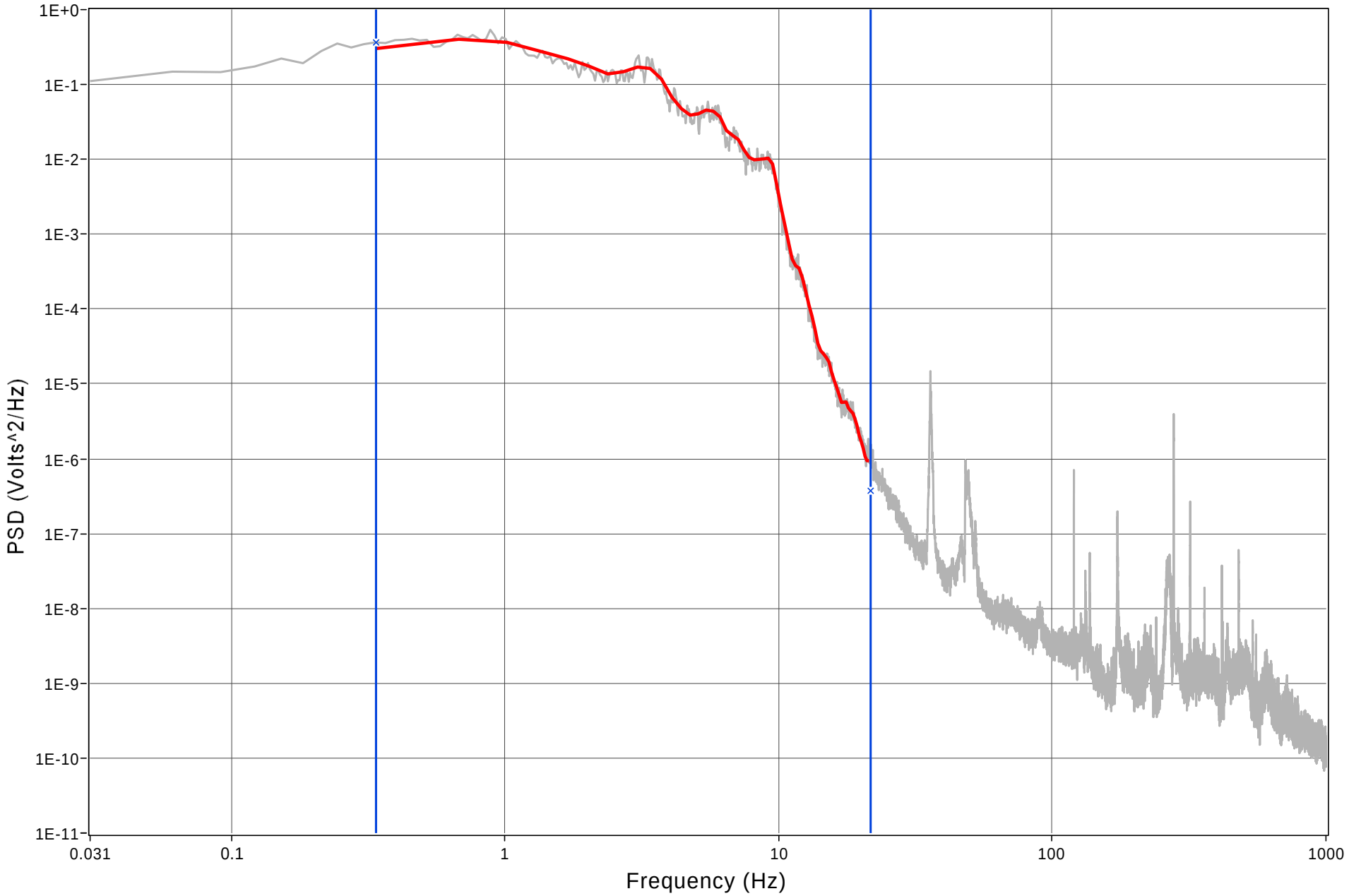
## PSD Window



# OLM Narrow Band PSD Window Fitting

| Reactor and Unit | Tag Number | Service | Filename | Blocks : Blocksize | Trim Low Freq. (Hz) | Trim High Freq. (Hz) | Fitting Type | Test Date |
|---|---|---|---|---|---|---|---|---|
| Farley Unit 1 | FT474 | STM FLOW | FNP10003.psd | 11 : 128 | 0.339664 | 21.738468 | Baseline | 12-Mar-2009 12:21:02 |

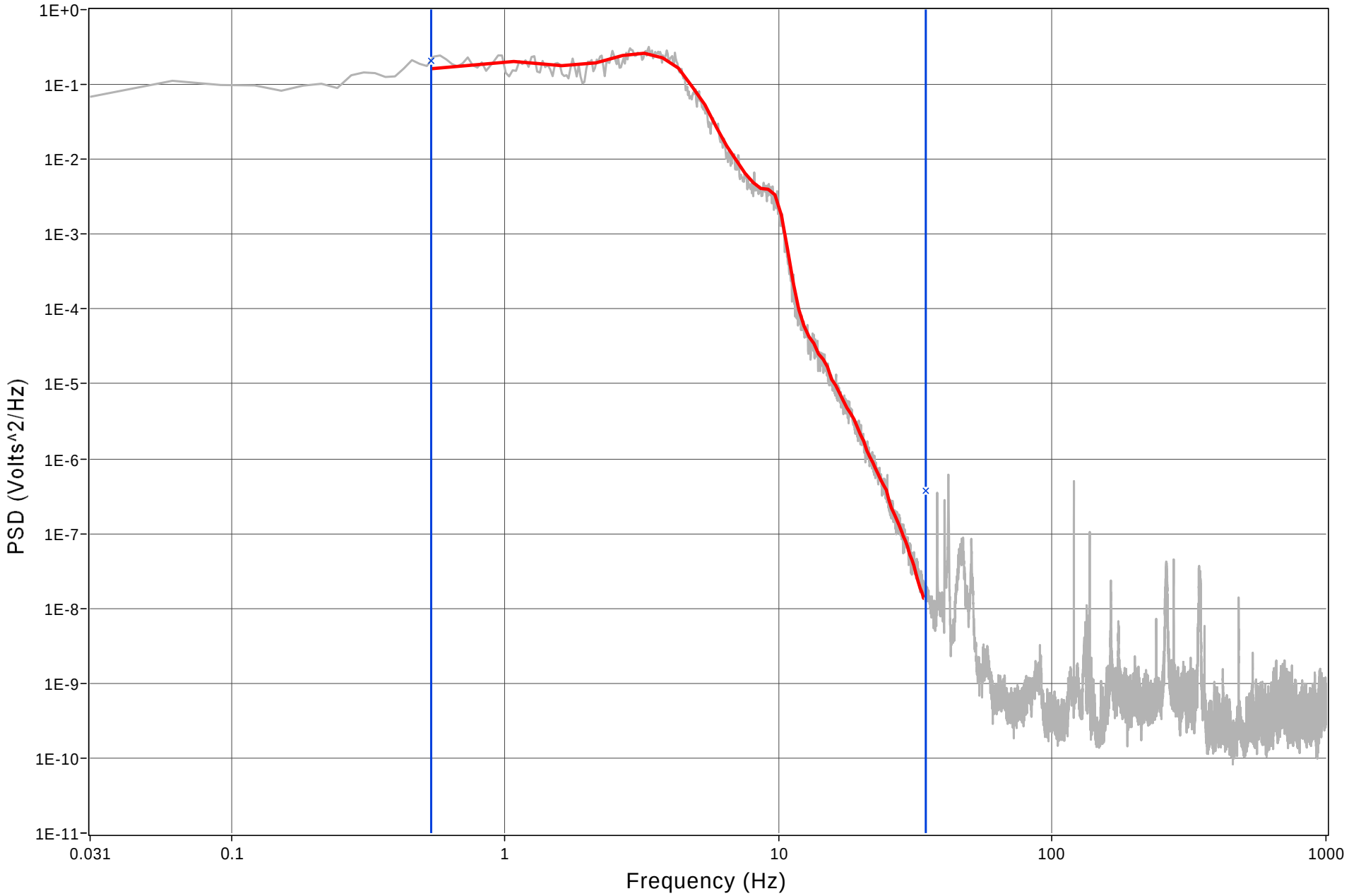
## PSD Window



# OLM Narrow Band PSD Window Fitting

| Reactor and Unit | Tag Number | Service | Filename | Blocks : Blocksize | Trim Low Freq. (Hz) | Trim High Freq. (Hz) | Fitting Type | Test Date |
|---|---|---|---|---|---|---|---|---|
| Farley Unit 1 | FT484 | STM FLOW | FNP10003.psd | 11 : 128 | 0.538777 | 34.481708 | Baseline | 12-Mar-2009 12:21:02 |

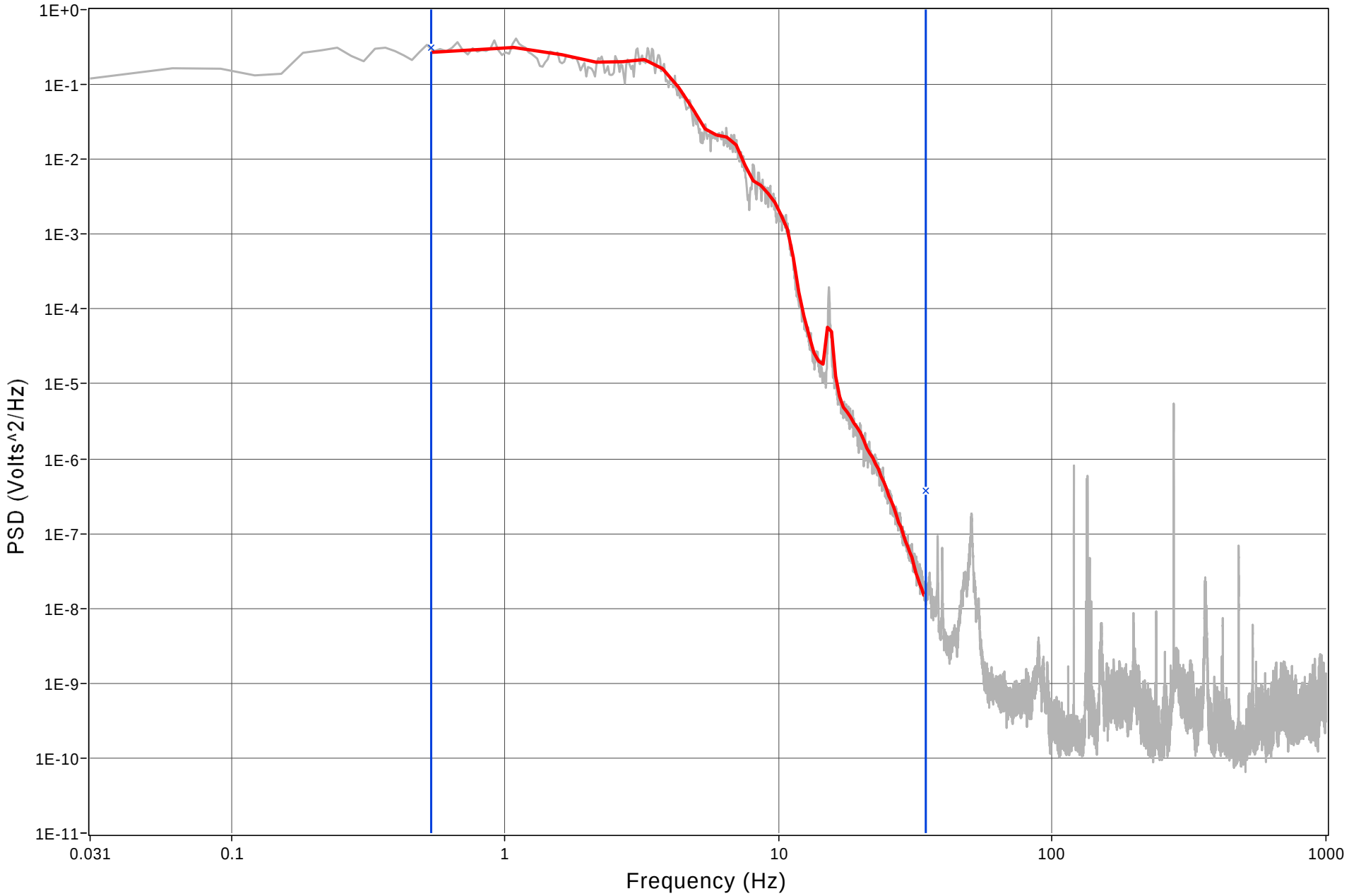
## PSD Window



# OLM Narrow Band PSD Window Fitting

| Reactor and Unit | Tag Number | Service | Filename | Blocks : Blocksize | Trim Low Freq. (Hz) | Trim High Freq. (Hz) | Fitting Type | Test Date |
|---|---|---|---|---|---|---|---|---|
| Farley Unit 1 | FT494 | STM FLOW | FNP10003.psd | 11 : 128 | 0.538777 | 34.481708 | Baseline | 12-Mar-2009 12:21:02 |

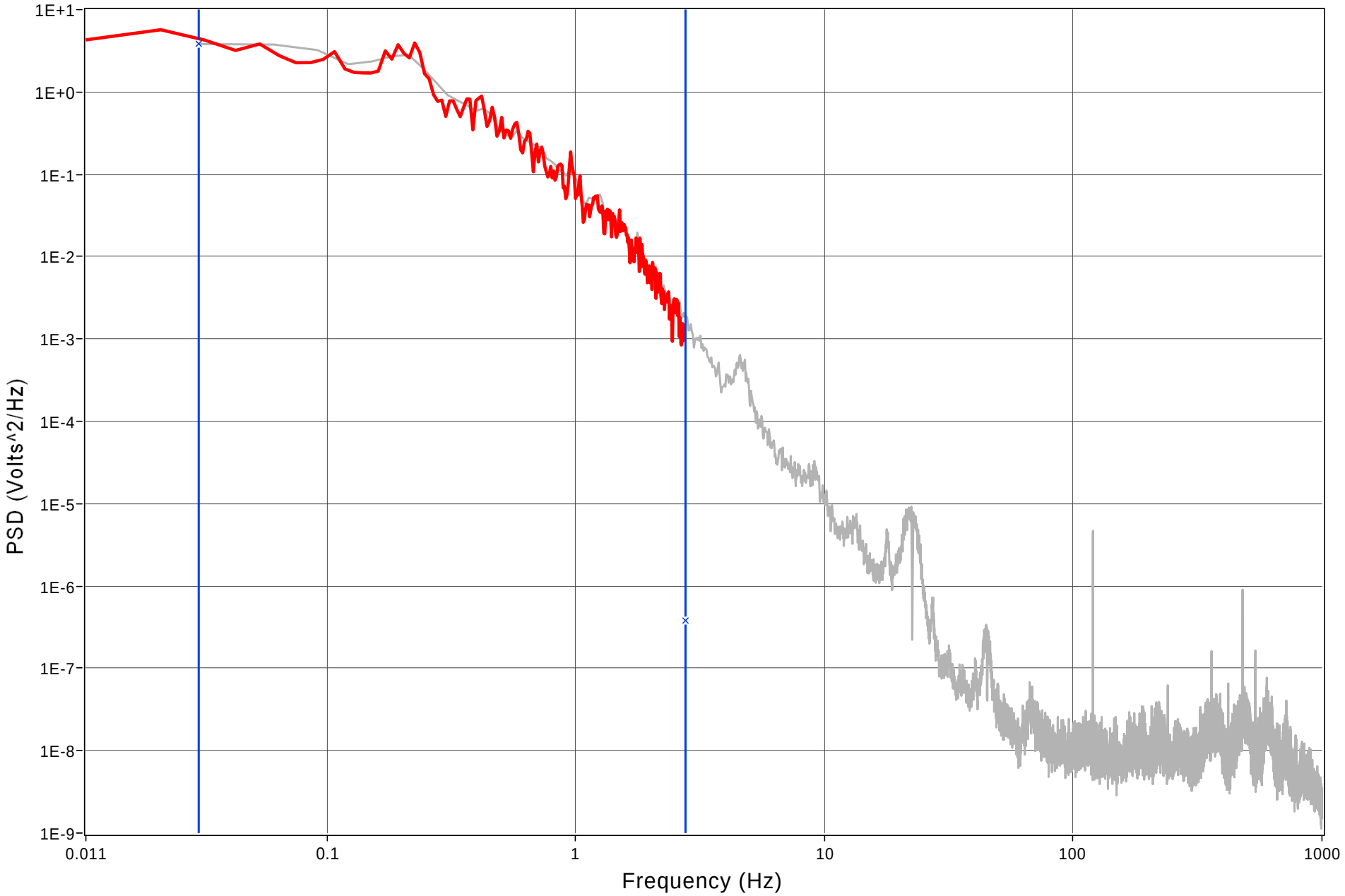
## PSD Window



# OLM Narrow Band PSD Window Fitting

| Reactor and Unit | Tag Number | Service | Filename | Blocks : Blocksize | Trim Low Freq. (Hz) | Trim High Freq. (Hz) | Fitting Type | Test Date |
|---|---|---|---|---|---|---|---|---|
| Farley Unit 1 | FT477 | FW FLOW | FNP10003.psd | 11 : 512 | 0.010731 | 2.747169 | Baseline | 12-Mar-2009 12:21:02 |

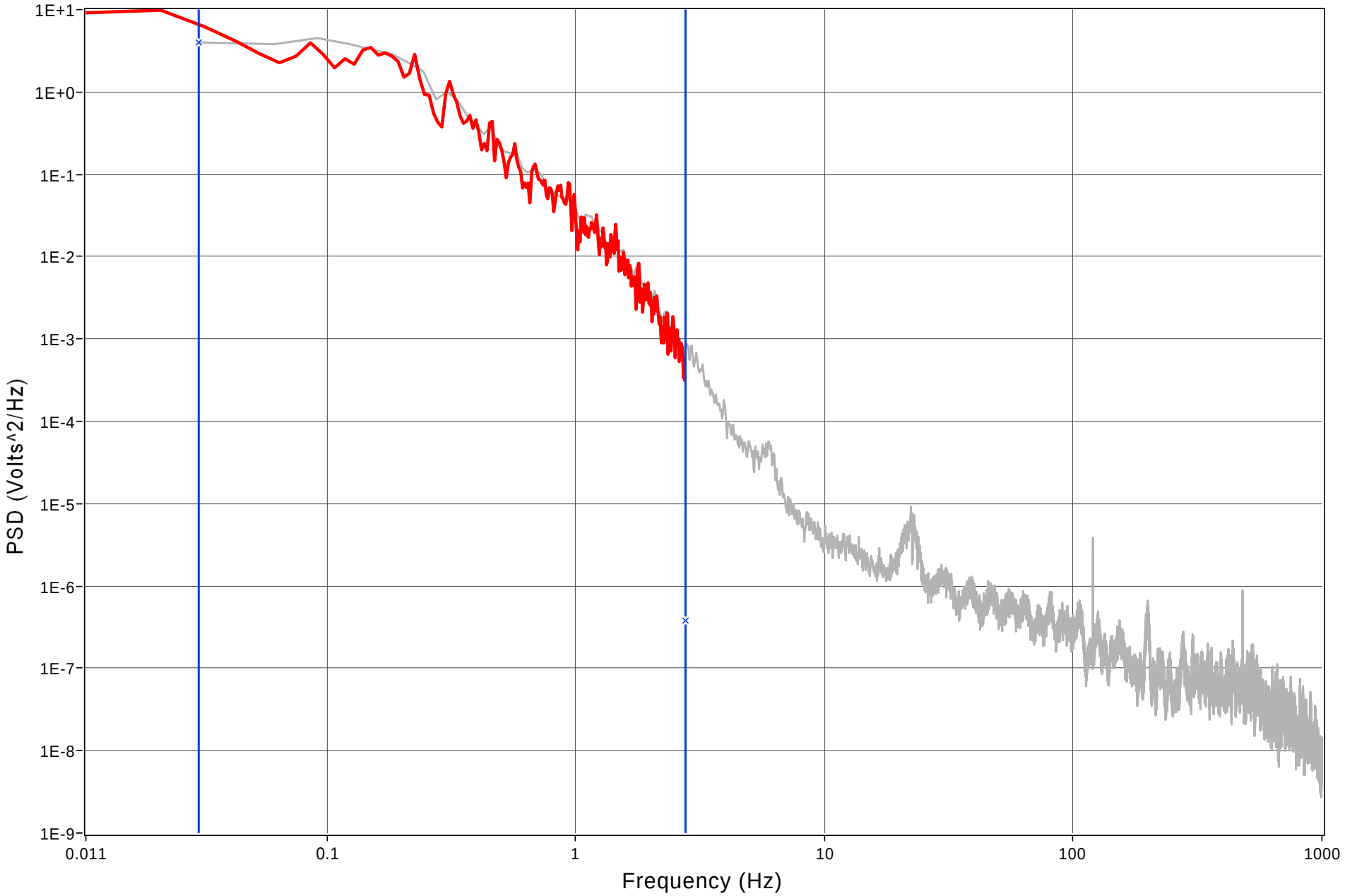
## PSD Window



# OLM Narrow Band PSD Window Fitting

| Reactor and Unit | Tag Number | Service | Filename | Blocks : Blocksize | Trim Low Freq. (Hz) | Trim High Freq. (Hz) | Fitting Type | Test Date |
|---|---|---|---|---|---|---|---|---|
| Farley Unit 1 | FT487 | FW FLOW | FNP10003.psd | 11 : 512 | 0.010731 | 2.747169 | Baseline | 12-Mar-2009 12:21:02 |

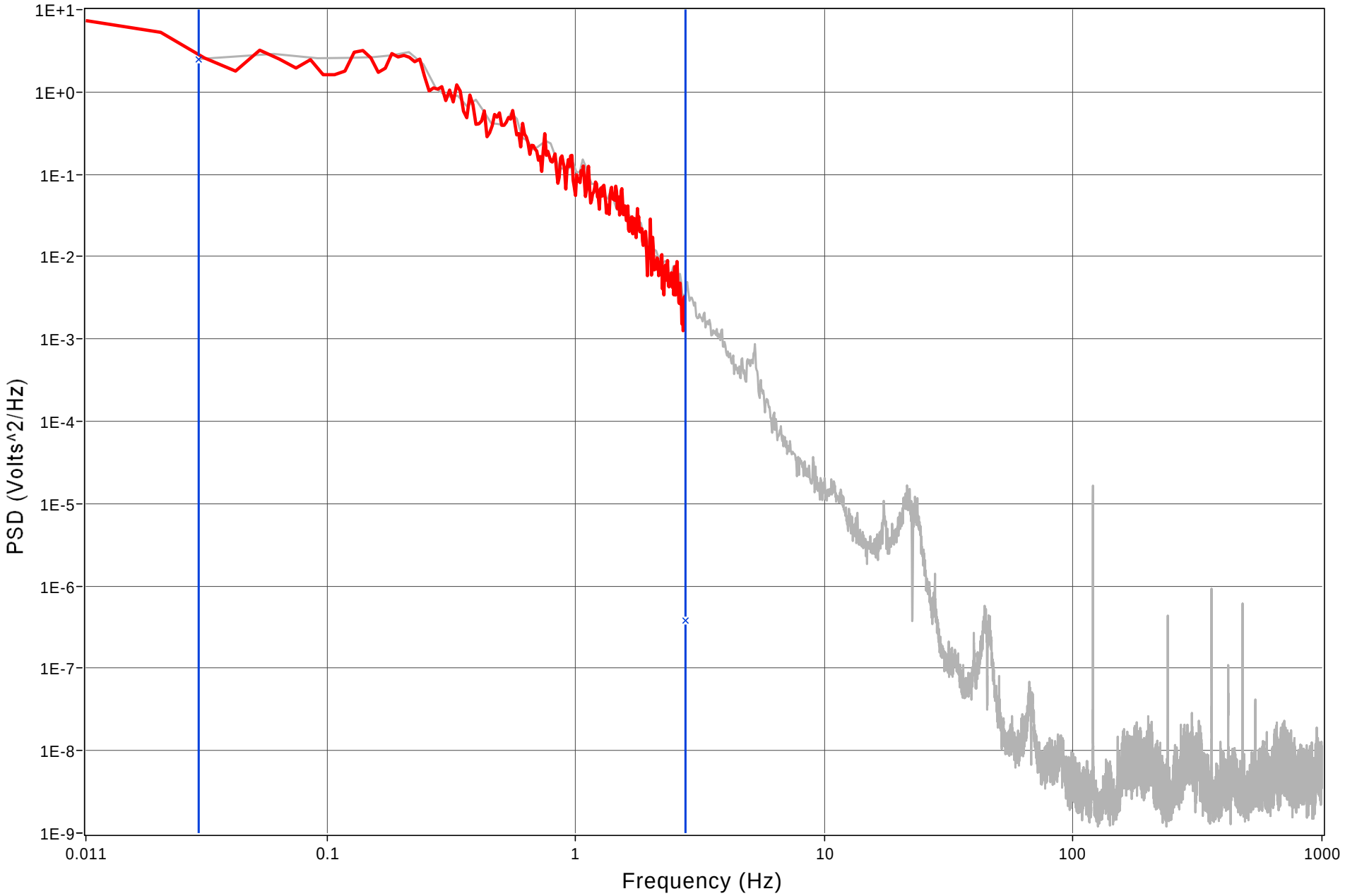
## PSD Window



# OLM Narrow Band PSD Window Fitting

| Reactor and Unit | Tag Number | Service | Filename | Blocks : Blocksize | Trim Low Freq. (Hz) | Trim High Freq. (Hz) | Fitting Type | Test Date |
|---|---|---|---|---|---|---|---|---|
| Farley Unit 1 | FT497 | FW FLOW | FNP10003.psd | 11 : 512 | 0.010731 | 2.747169 | Baseline | 12-Mar-2009 12:21:02 |

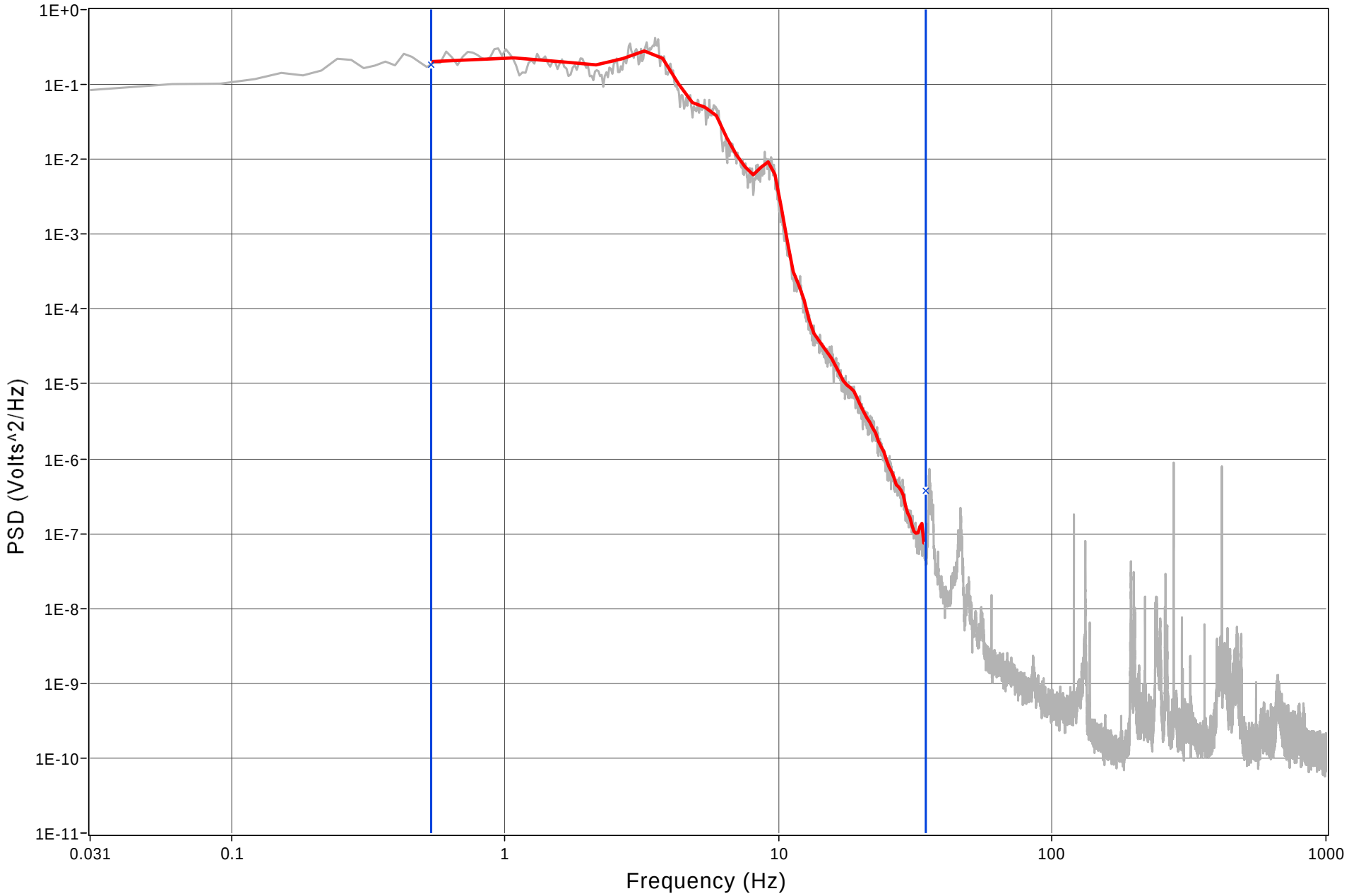
## PSD Window



# OLM Narrow Band PSD Window Fitting

| Reactor and Unit | Tag Number | Service | Filename | Blocks : Blocksize | Trim Low Freq. (Hz) | Trim High Freq. (Hz) | Fitting Type | Test Date |
|---|---|---|---|---|---|---|---|---|
| Farley Unit 1 | FT475 | STM FLOW | FNP10004.psd | 11 : 128 | 0.538777 | 34.481708 | Baseline | 12-Mar-2009 12:21:02 |

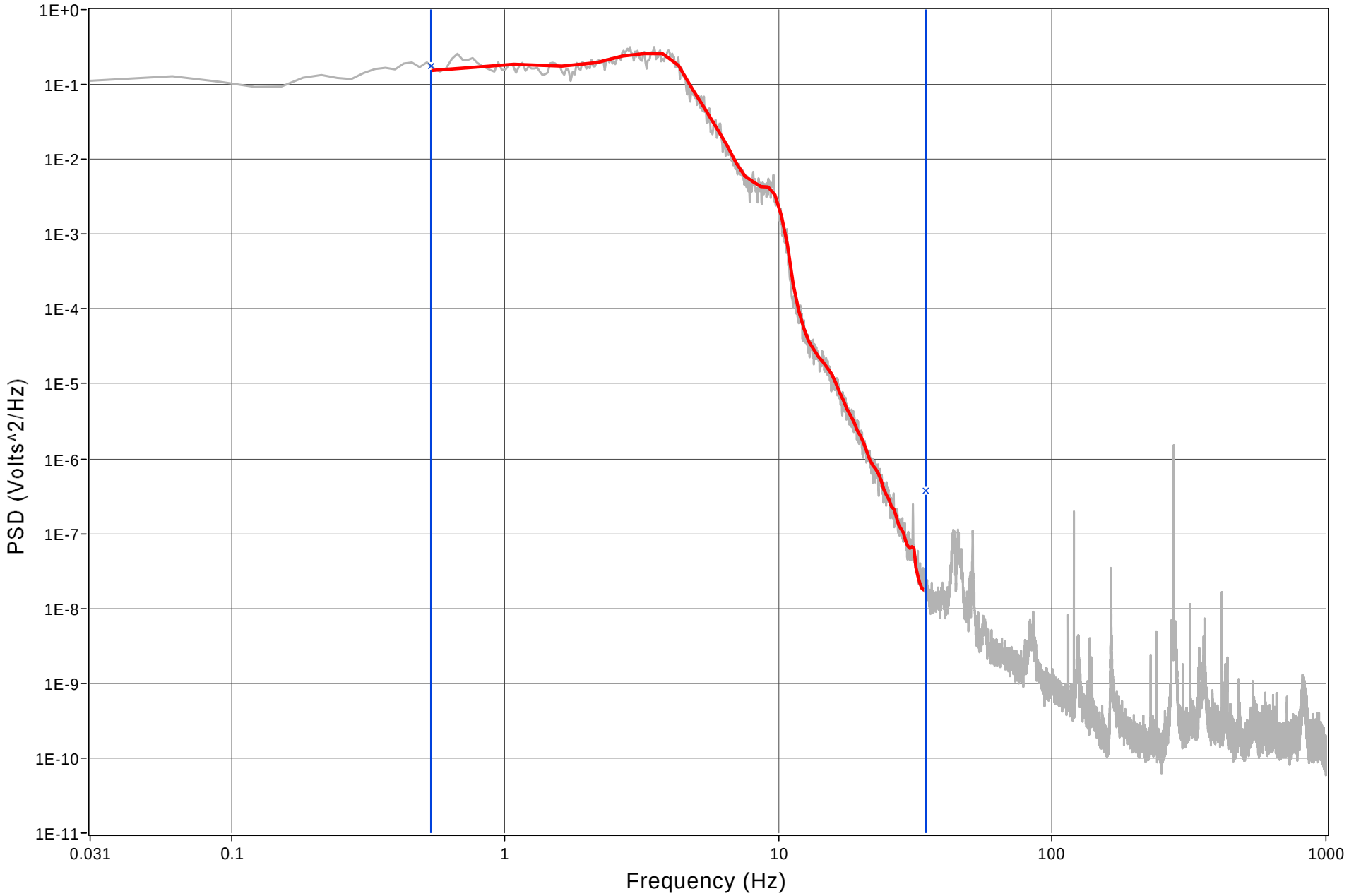
## PSD Window



# OLM Narrow Band PSD Window Fitting

| Reactor and Unit | Tag Number | Service | Filename | Blocks : Blocksize | Trim Low Freq. (Hz) | Trim High Freq. (Hz) | Fitting Type | Test Date |
|---|---|---|---|---|---|---|---|---|
| Farley Unit 1 | FT485 | STM FLOW | FNP10004.psd | 11 : 128 | 0.538777 | 34.481708 | Baseline | 12-Mar-2009 12:21:02 |

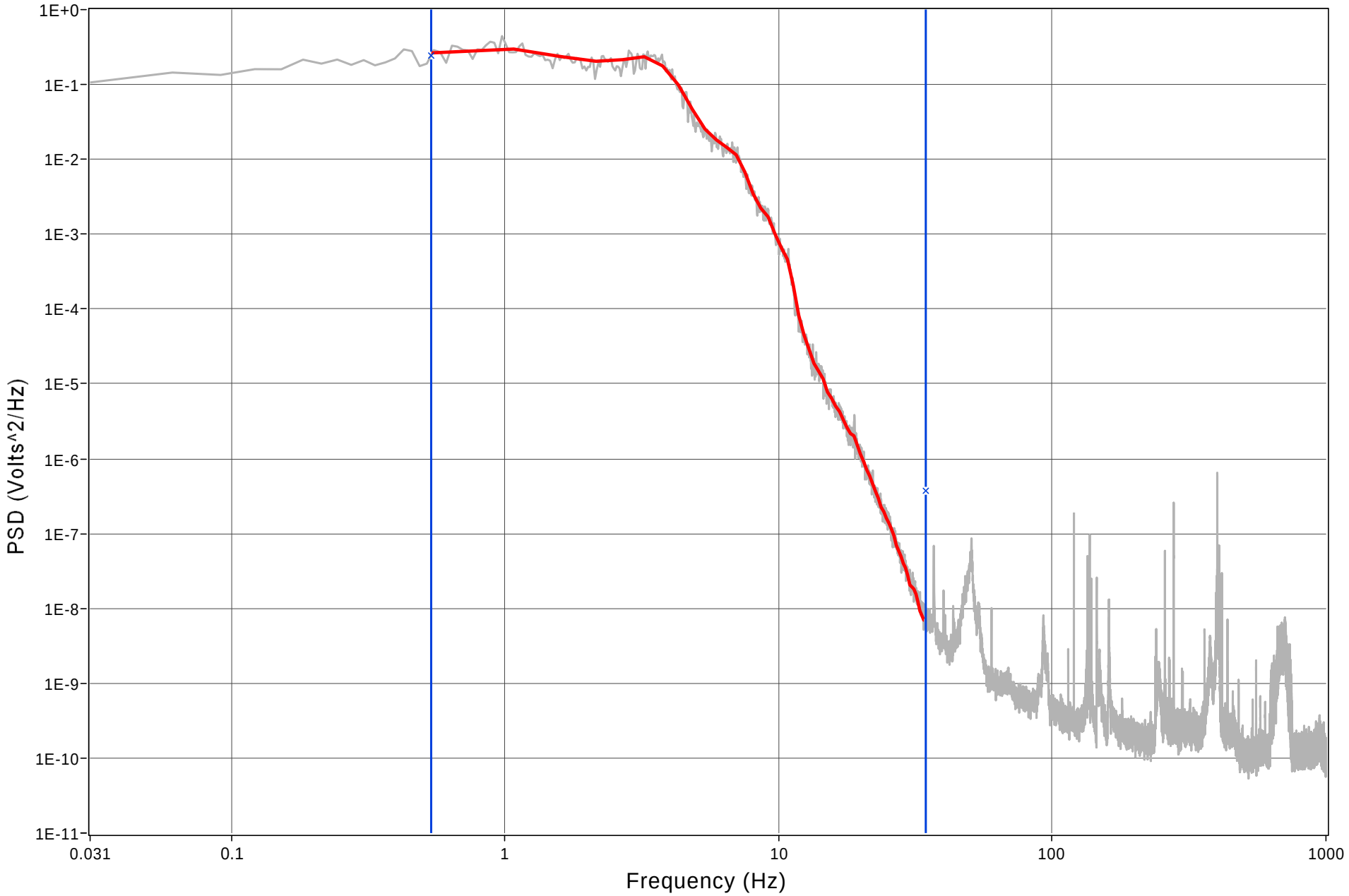
## PSD Window



# OLM Narrow Band PSD Window Fitting

| Reactor and Unit | Tag Number | Service | Filename | Blocks : Blocksize | Trim Low Freq. (Hz) | Trim High Freq. (Hz) | Fitting Type | Test Date |
|---|---|---|---|---|---|---|---|---|
| Farley Unit 1 | FT495 | STM FLOW | FNP10004.psd | 11 : 128 | 0.538777 | 34.481708 | Baseline | 12-Mar-2009 12:21:02 |

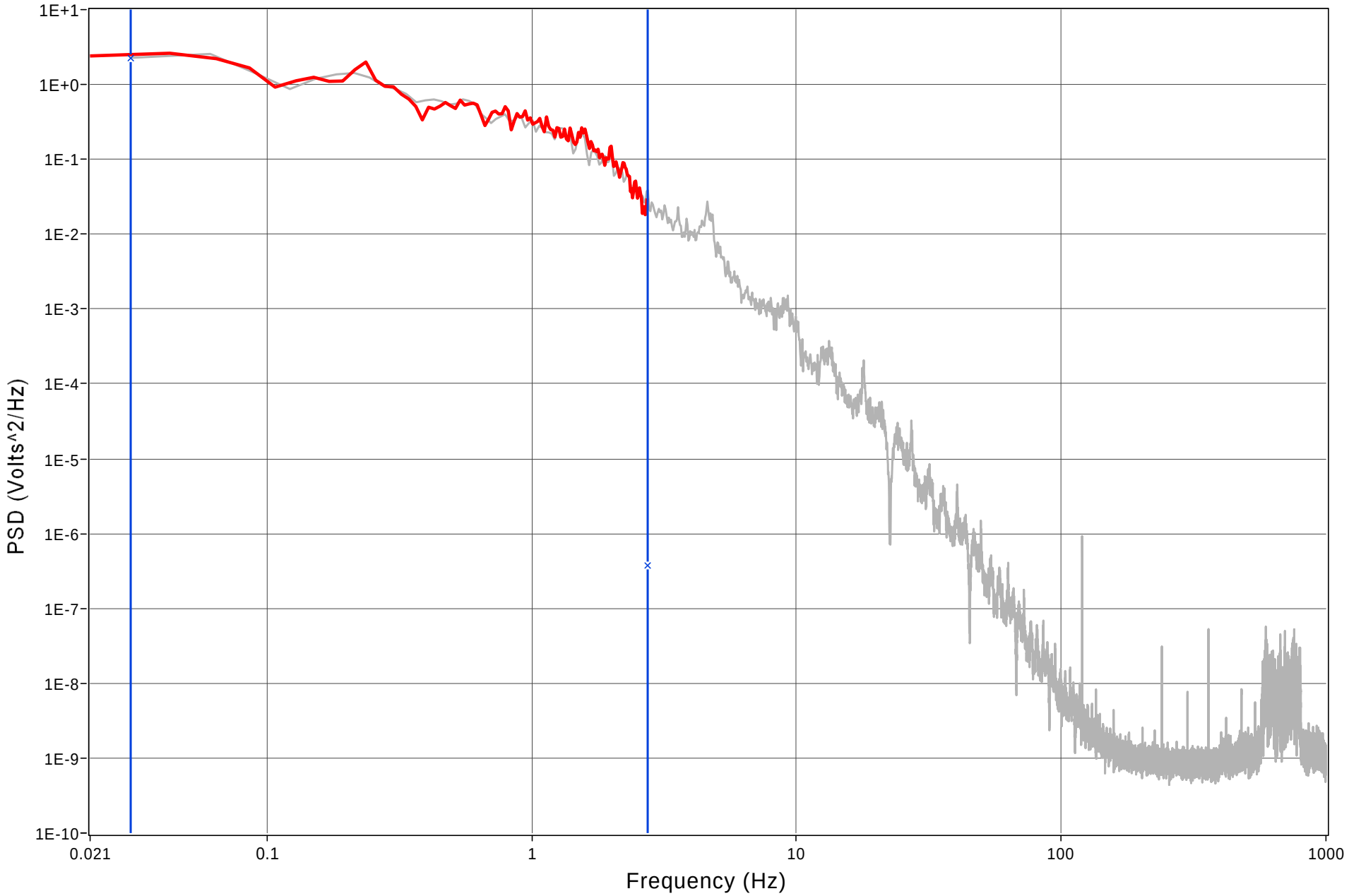
## PSD Window



# OLM Narrow Band PSD Window Fitting

| Reactor and Unit | Tag Number | Service | Filename | Blocks : Blocksize | Trim Low Freq. (Hz) | Trim High Freq. (Hz) | Fitting Type | Test Date |
|---|---|---|---|---|---|---|---|---|
| Farley Unit 1 | FT476 | FW FLOW | FNP10004.psd | 11 : 256 | 0.021462 | 2.747169 | Baseline | 12-Mar-2009 12:21:02 |

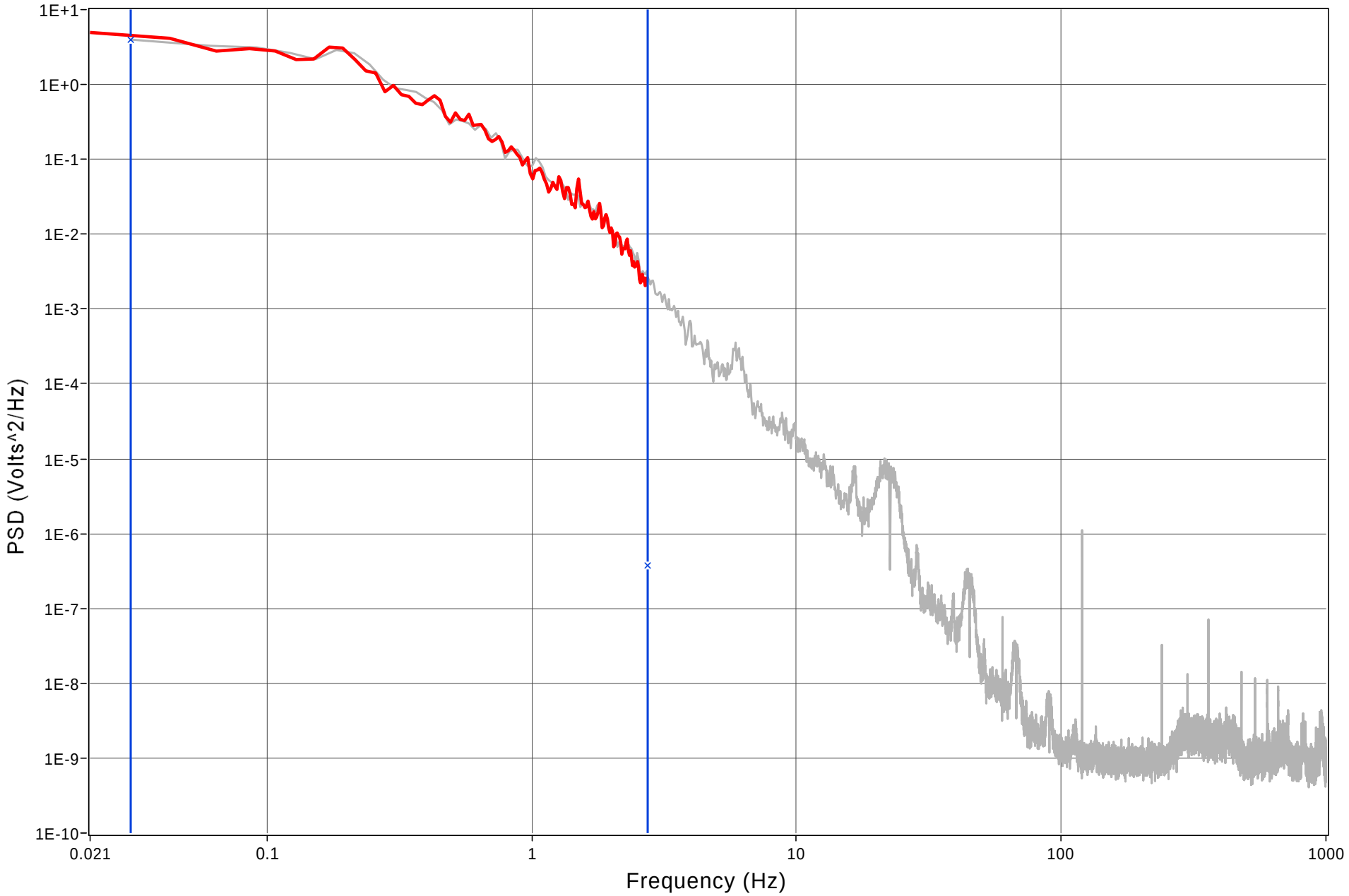
## PSD Window



# OLM Narrow Band PSD Window Fitting

| Reactor and Unit | Tag Number | Service | Filename | Blocks : Blocksize | Trim Low Freq. (Hz) | Trim High Freq. (Hz) | Fitting Type | Test Date |
|---|---|---|---|---|---|---|---|---|
| Farley Unit 1 | FT486 | FW FLOW | FNP10004.psd | 11 : 256 | 0.021462 | 2.747169 | Baseline | 12-Mar-2009 12:21:02 |

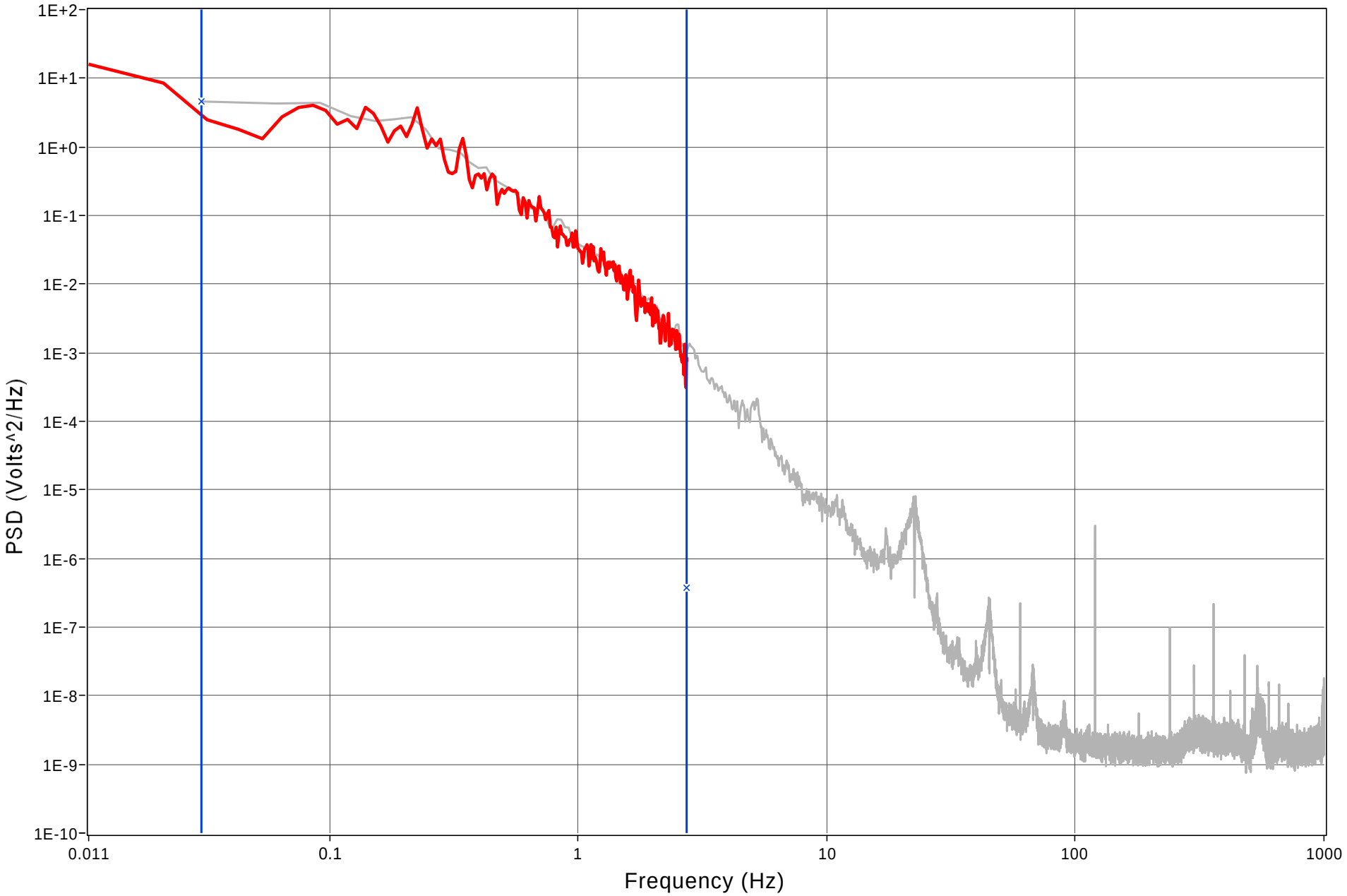
## PSD Window



# OLM Narrow Band PSD Window Fitting

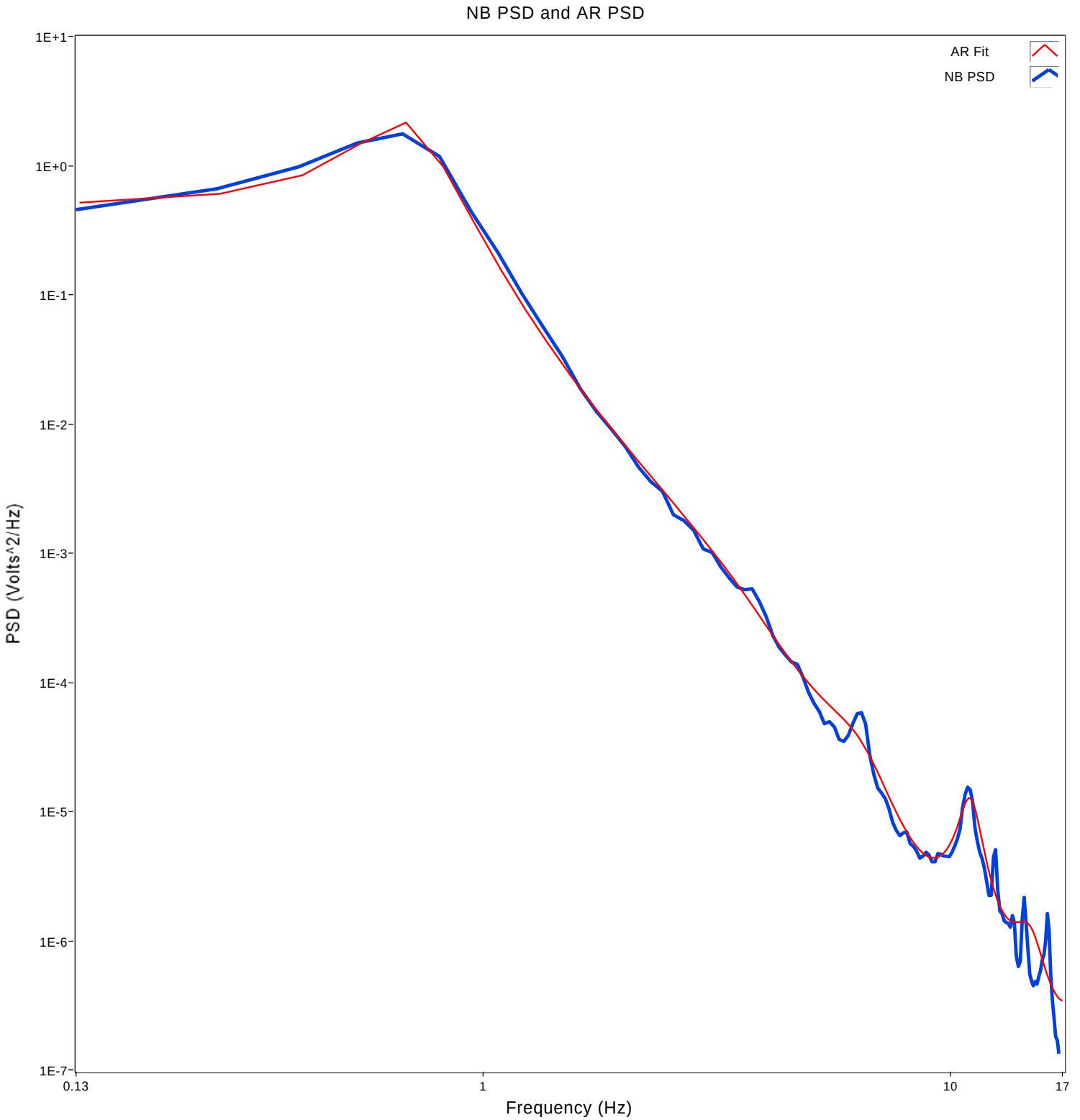
| Reactor and Unit | Tag Number | Service | Filename | Blocks : Blocksize | Trim Low Freq. (Hz) | Trim High Freq. (Hz) | Fitting Type | Test Date |
|---|---|---|---|---|---|---|---|---|
| Farley Unit 1 | FT496 | FW FLOW | FNP10004.psd | 11 : 512 | 0.010731 | 2.747169 | Baseline | 12-Mar-2009 12:21:02 |

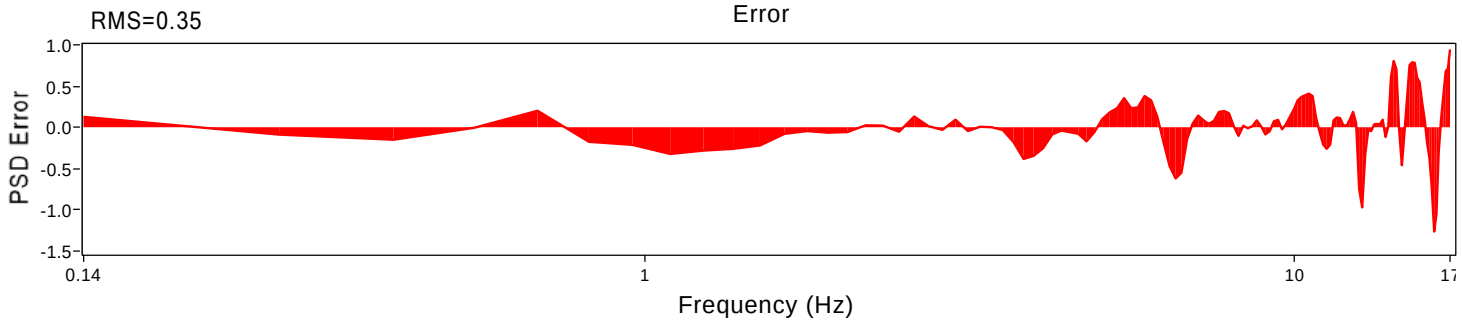
## PSD Window



# OLM Autoregressive Fitting of Narrow Band PSD

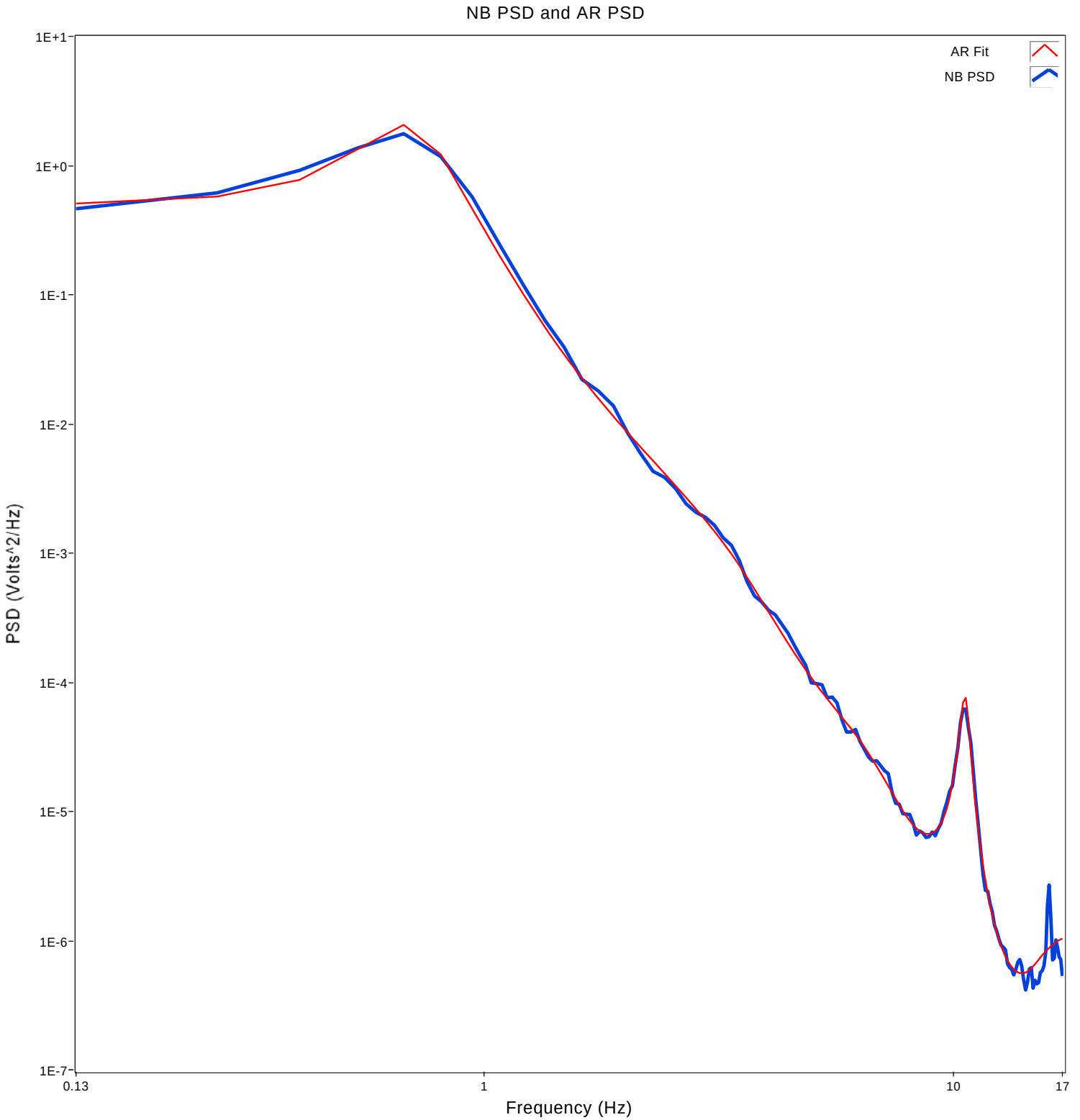
| Reactor and Unit | Tag Number | Service | Filename | Blocks : Blocksize | Trim Low Freq. (Hz) | Trim High Freq. (Hz) | AR Order | AR Method | Test Date |
|---|---|---|---|---|---|---|---|---|---|
| Farley Unit 1 | LT474 | SG LVL | FNP10001.psd | 143 : 512 | 0.134694 | 17.240854 | 11 | Forward-Backward | 12-Mar-2009 12:21:02 |

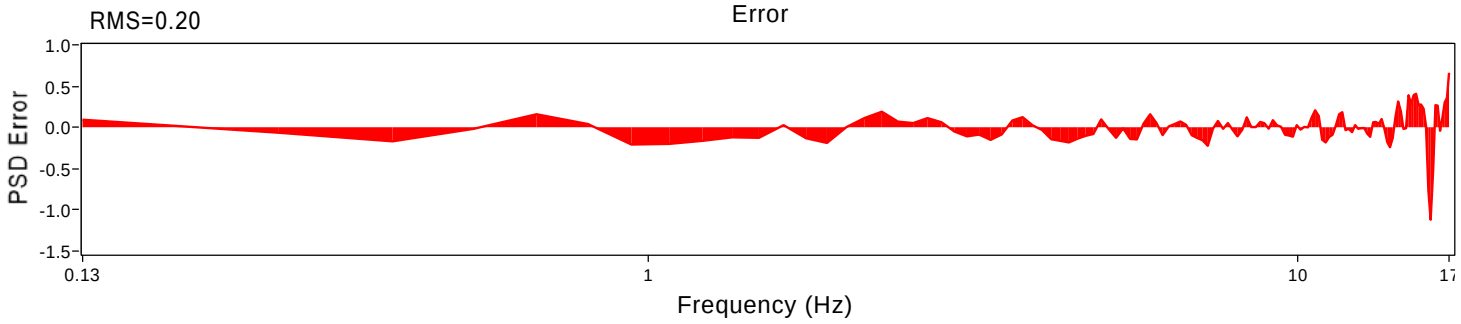


# OLM Autoregressive Fitting of Narrow Band PSD

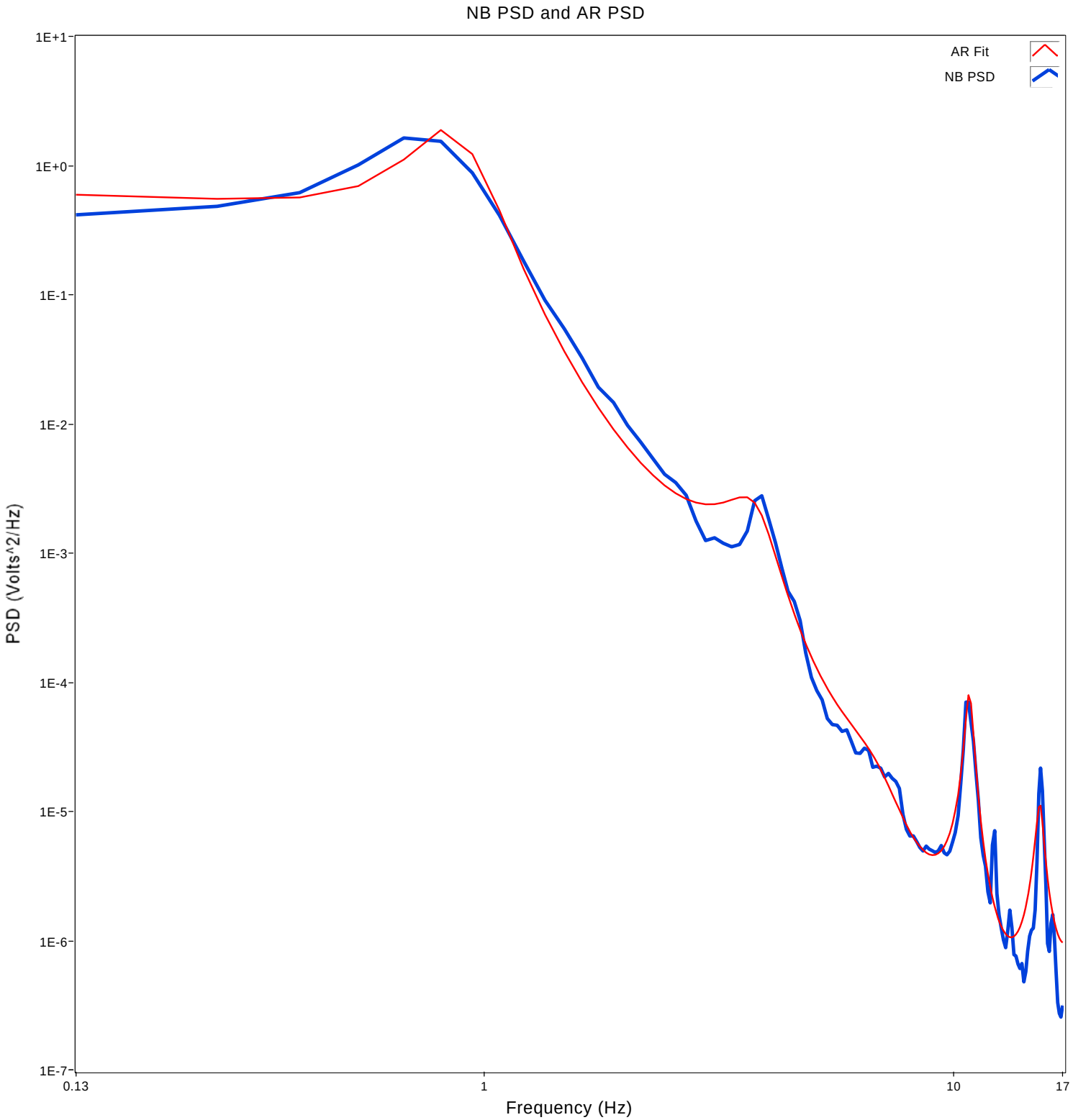
| Reactor and Unit | Tag Number | Service | Filename | Blocks : Blocksize | Trim Low Freq. (Hz) | Trim High Freq. (Hz) | AR Order | AR Method | Test Date |
|---|---|---|---|---|---|---|---|---|---|
| Farley Unit 1 | LT484 | SG LVL | FNP10001.psd | 141 : 512 | 0.134694 | 17.240854 | 11 | Forward-Backward | 12-Mar-2009 12:21:02 |

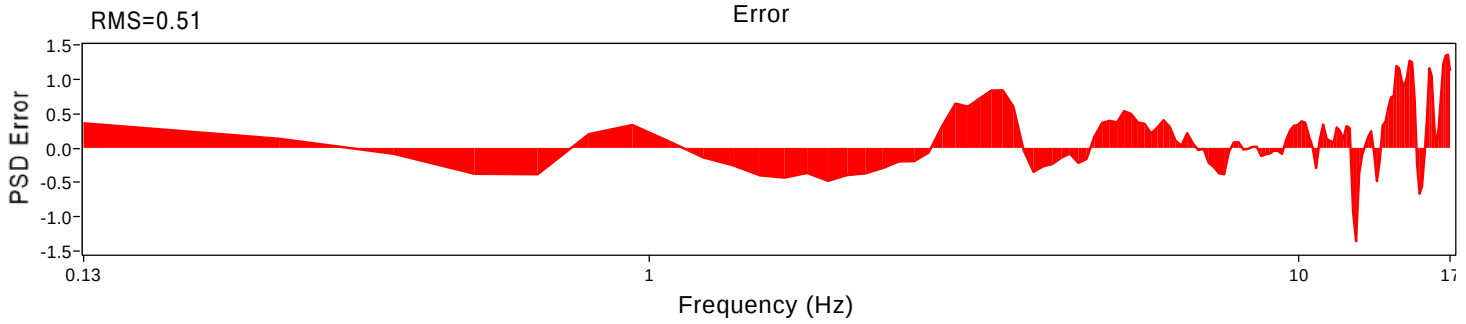


# OLM Autoregressive Fitting of Narrow Band PSD

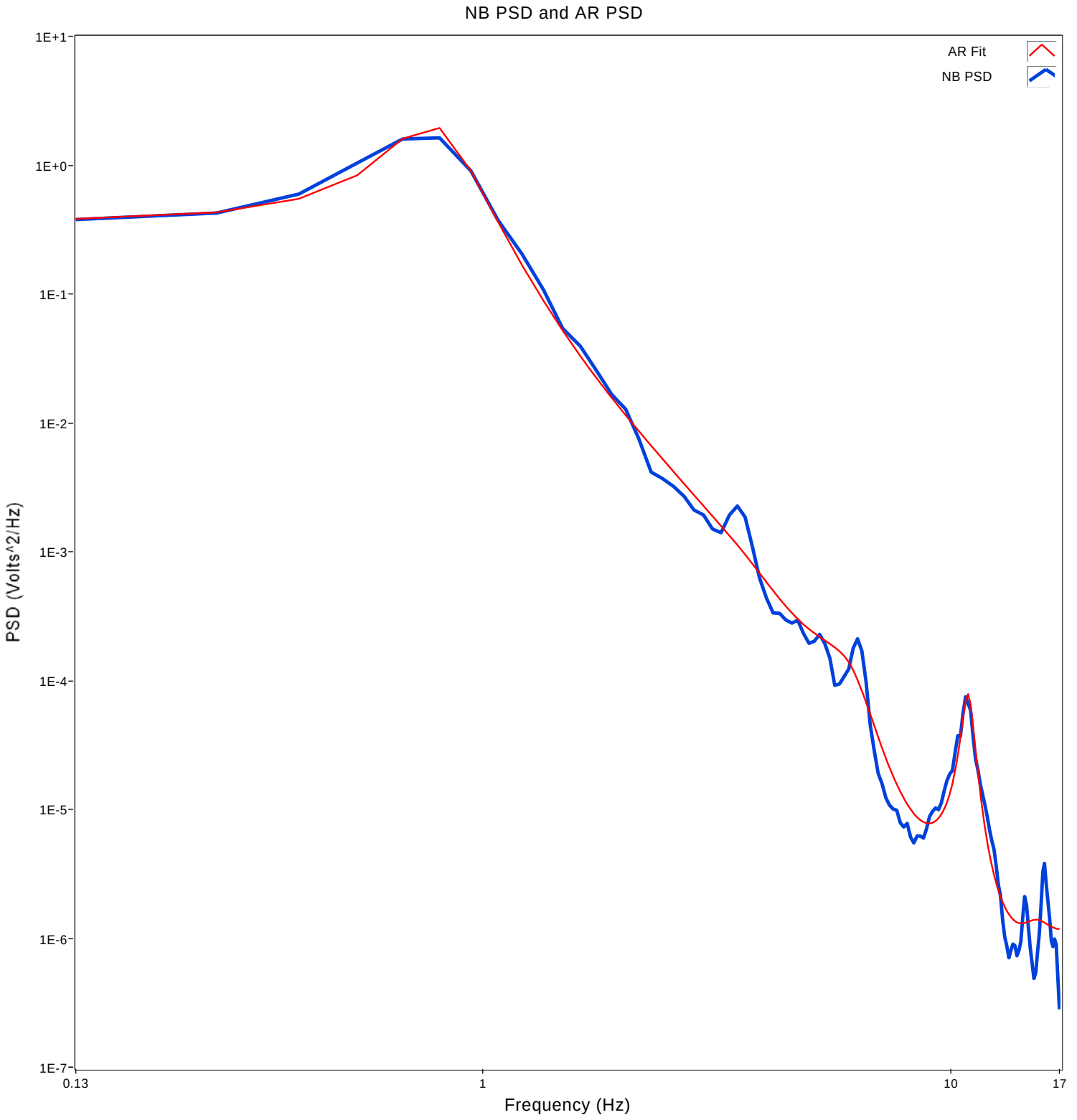
| Reactor and Unit | Tag Number | Service | Filename | Blocks : Blocksize | Trim Low Freq. (Hz) | Trim High Freq. (Hz) | AR Order | AR Method | Test Date |
|---|---|---|---|---|---|---|---|---|---|
| Farley Unit 1 | LT494 | SG LVL | FNP10001.psd | 141 : 512 | 0.134694 | 17.240854 | 11 | Forward-Backward | 12-Mar-2009 12:21:02 |

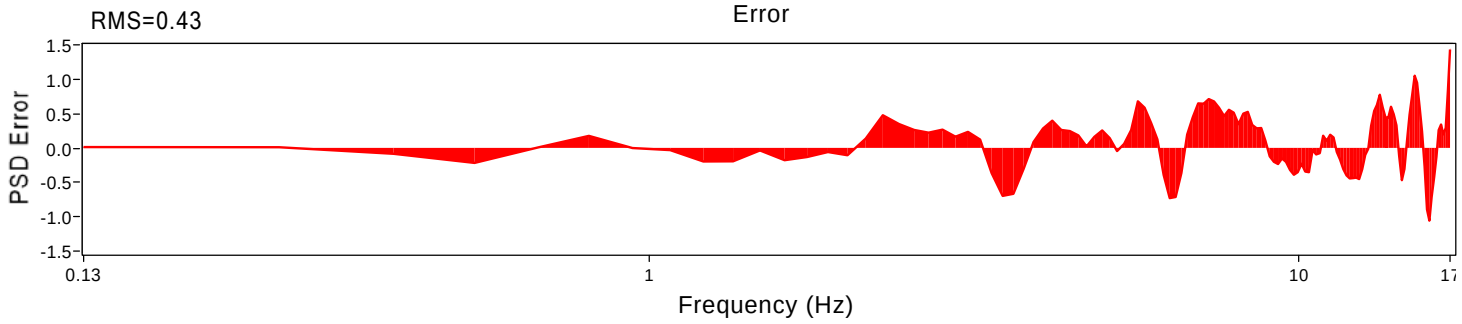


# OLM Autoregressive Fitting of Narrow Band PSD

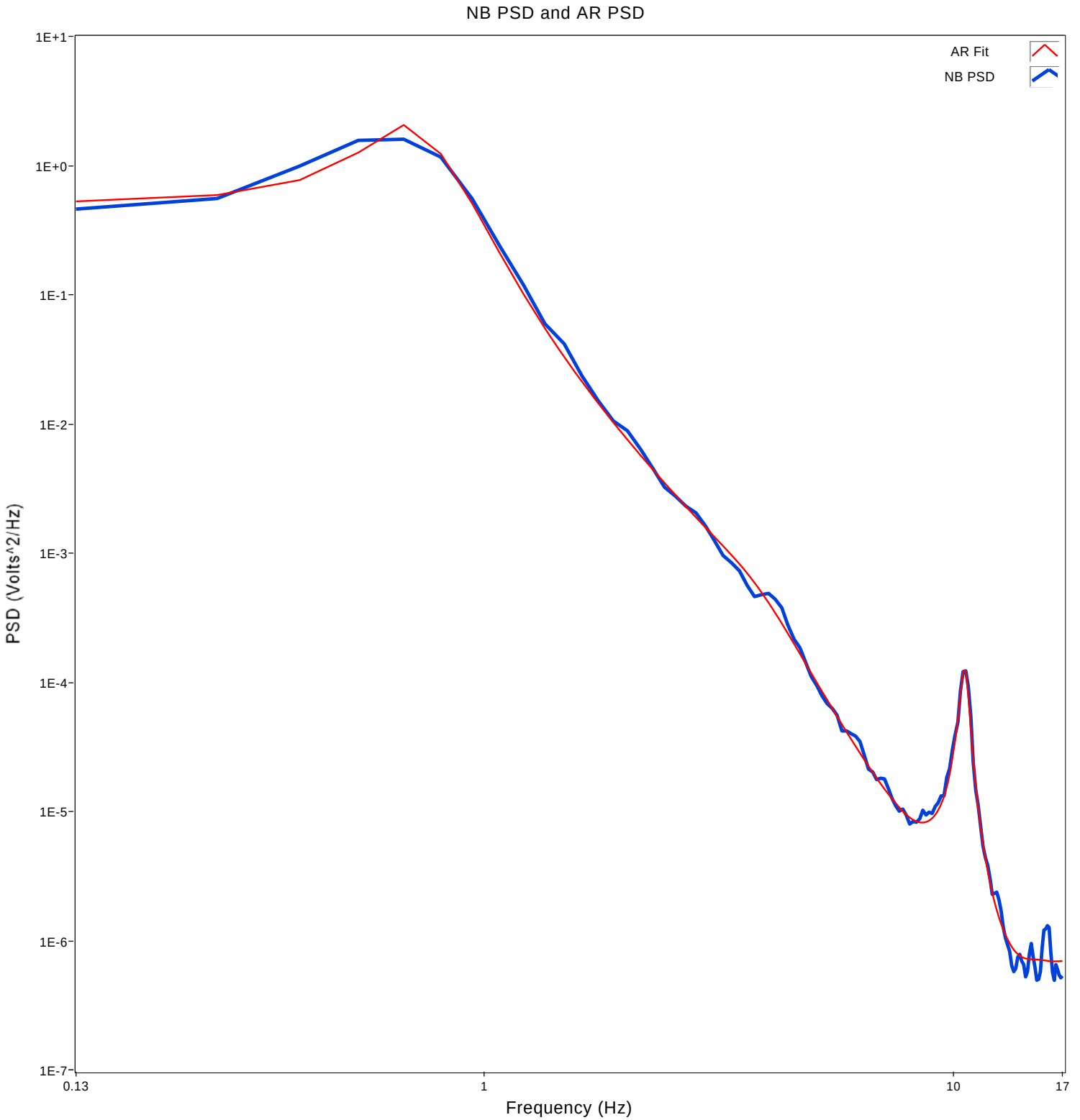
| Reactor and Unit | Tag Number | Service | Filename | Blocks : Blocksize | Trim Low Freq. (Hz) | Trim High Freq. (Hz) | AR Order | AR Method | Test Date |
|---|---|---|---|---|---|---|---|---|---|
| Farley Unit 1 | LT475 | SG LVL | FNP10002.psd | 141 : 512 | 0.134694 | 17.240854 | 11 | Forward-Backward | 12-Mar-2009 12:21:02 |

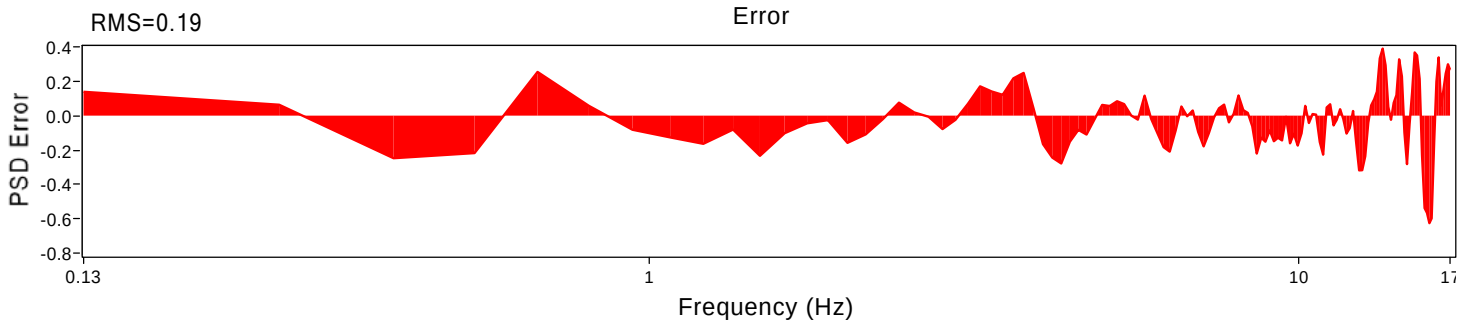


# OLM Autoregressive Fitting of Narrow Band PSD

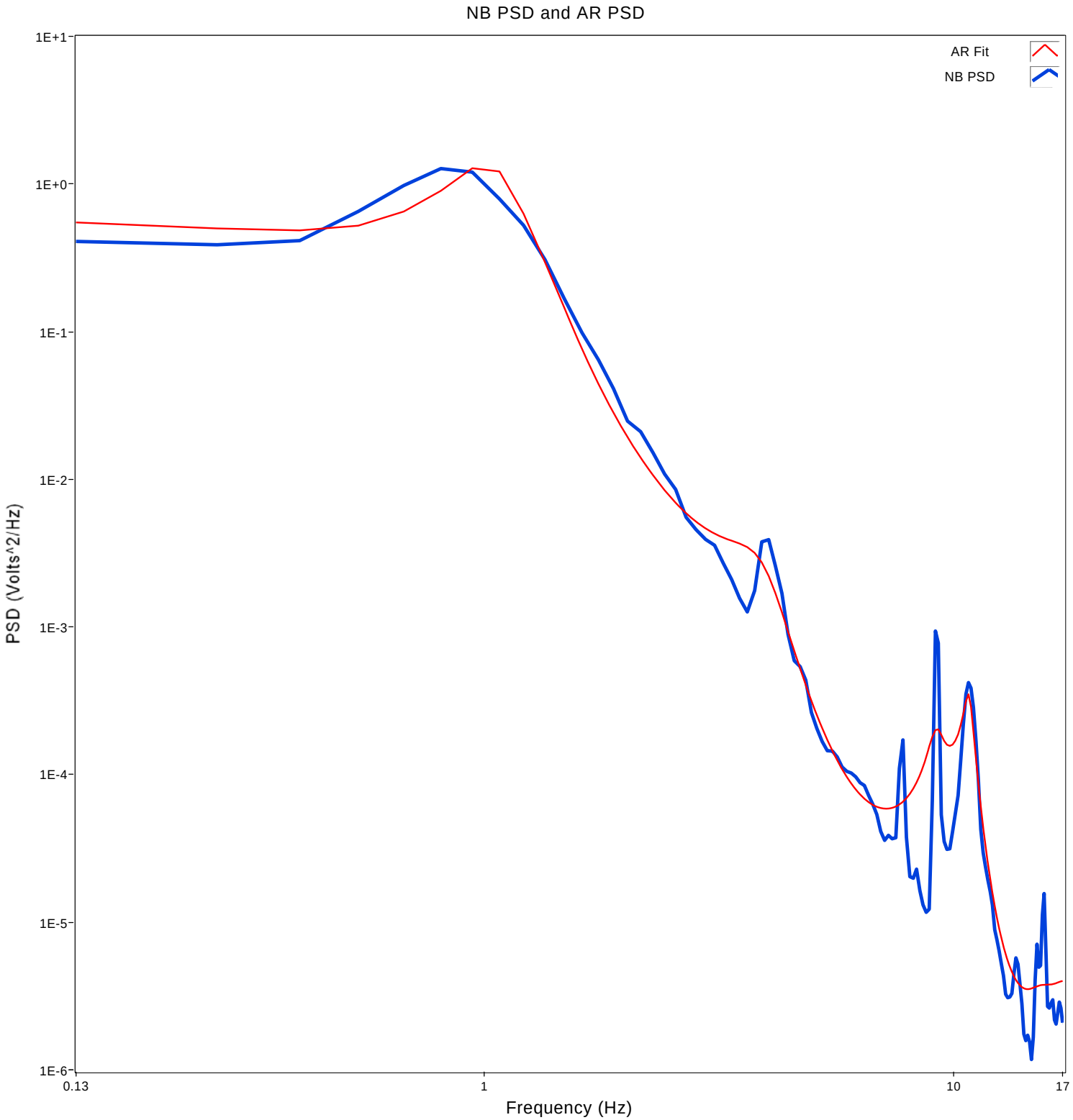
| Reactor and Unit | Tag Number | Service | Filename | Blocks : Blocksize | Trim Low Freq. (Hz) | Trim High Freq. (Hz) | AR Order | AR Method | Test Date |
|---|---|---|---|---|---|---|---|---|---|
| Farley Unit 1 | LT485 | SG LVL | FNP10002.psd | 141 : 512 | 0.134694 | 17.240854 | 11 | Forward-Backward | 12-Mar-2009 12:21:02 |

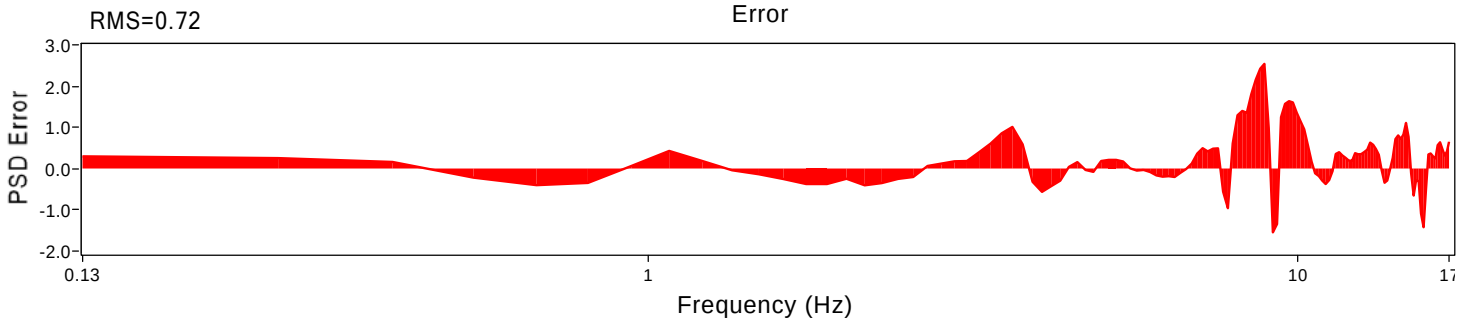


# OLM Autoregressive Fitting of Narrow Band PSD

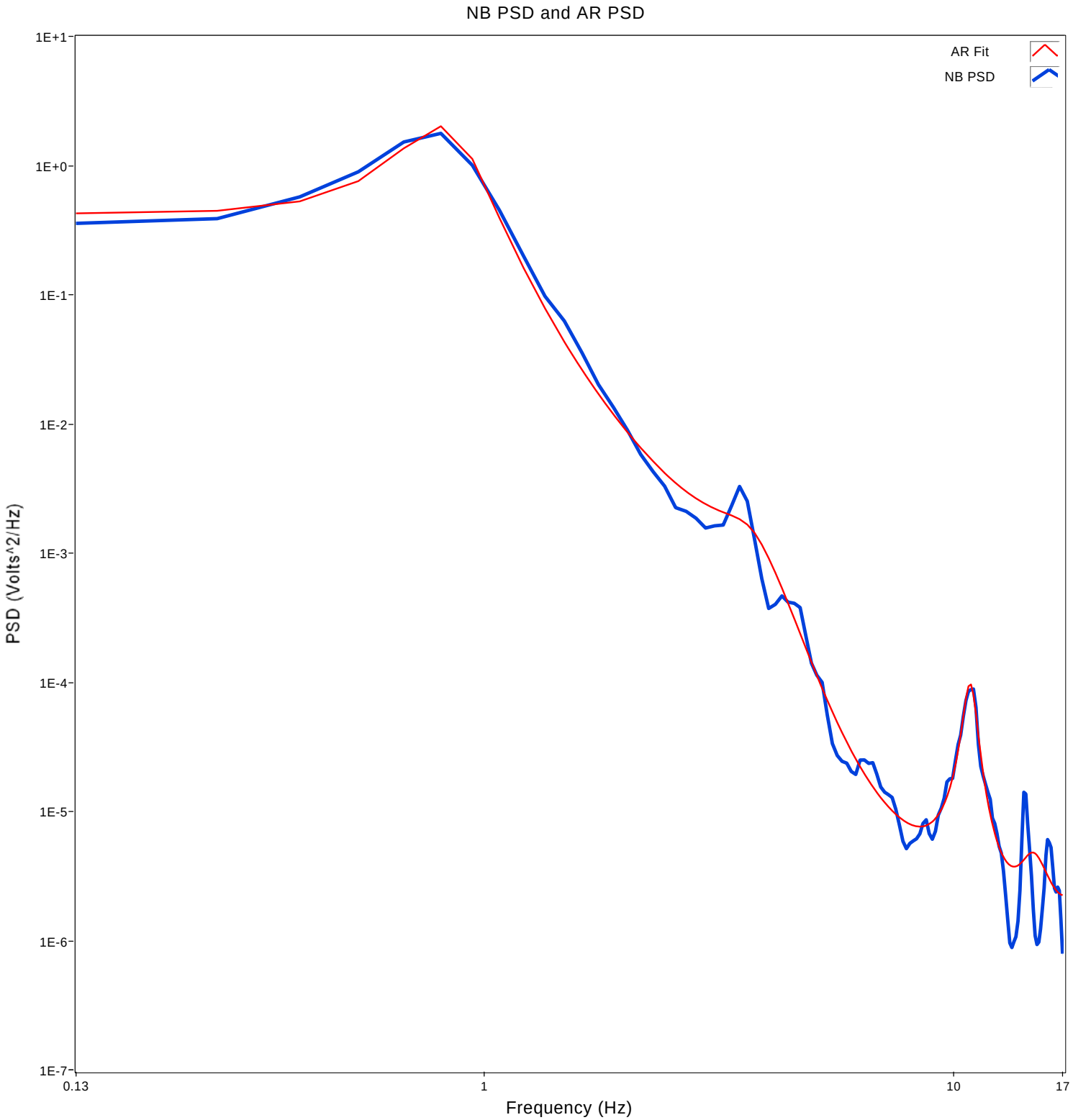
| Reactor and Unit | Tag Number | Service | Filename | Blocks : Blocksize | Trim Low Freq. (Hz) | Trim High Freq. (Hz) | AR Order | AR Method | Test Date |
|---|---|---|---|---|---|---|---|---|---|
| Farley Unit 1 | LT495 | SG LVL | FNP10002.psd | 141 : 512 | 0.134694 | 17.240854 | 11 | Forward-Backward | 12-Mar-2009 12:21:02 |

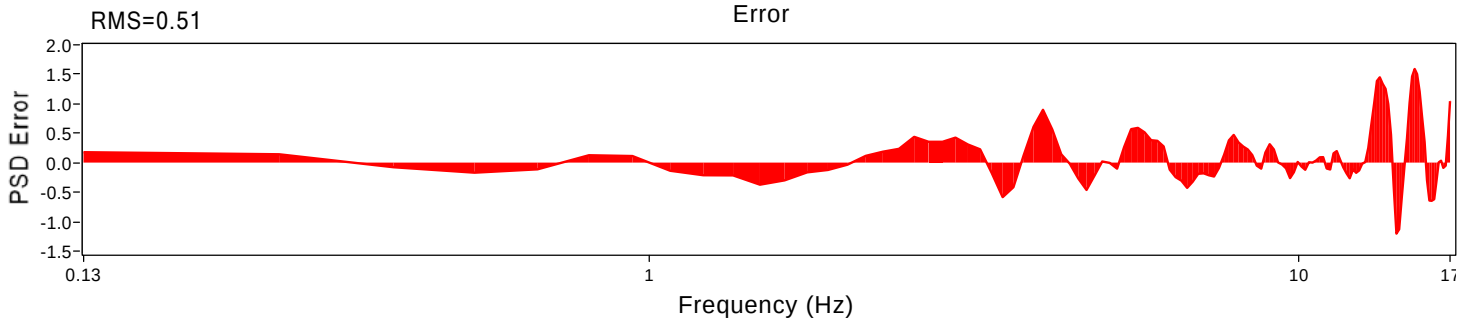


# OLM Autoregressive Fitting of Narrow Band PSD

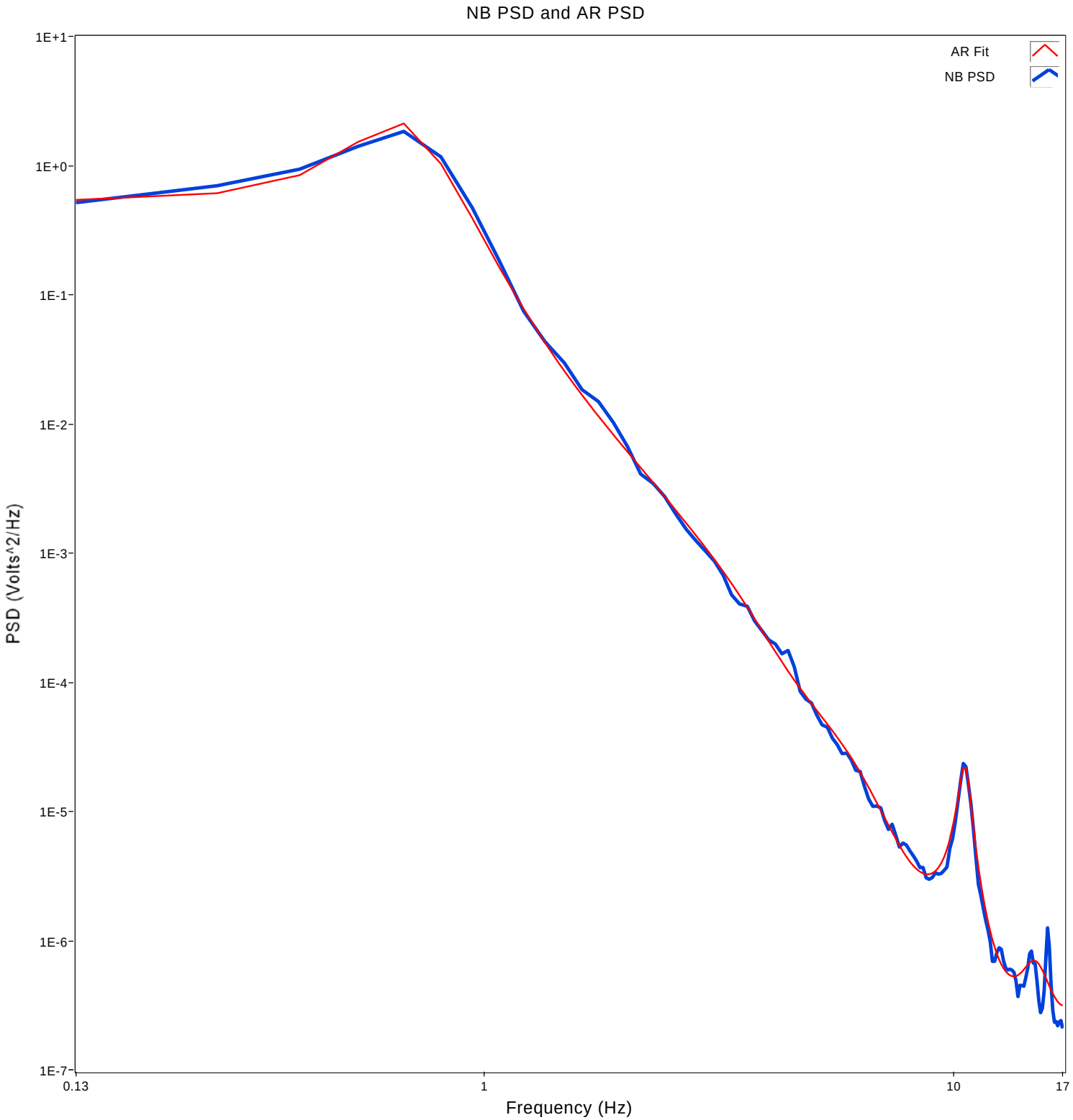
| Reactor and Unit | Tag Number | Service | Filename | Blocks : Blocksize | Trim Low Freq. (Hz) | Trim High Freq. (Hz) | AR Order | AR Method | Test Date |
|---|---|---|---|---|---|---|---|---|---|
| Farley Unit 1 | LT476 | SG LVL | FNP10003.psd | 141 : 512 | 0.134694 | 17.240854 | 11 | Forward-Backward | 12-Mar-2009 12:21:02 |

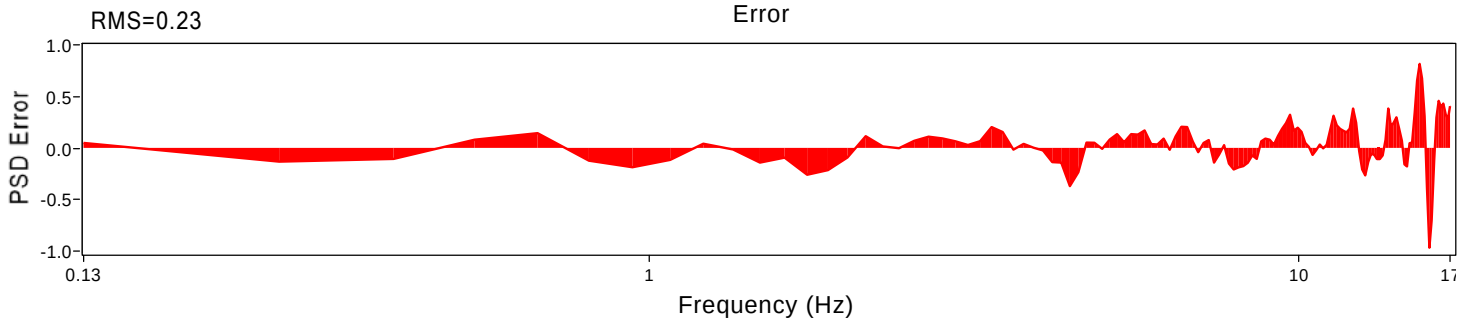


# OLM Autoregressive Fitting of Narrow Band PSD

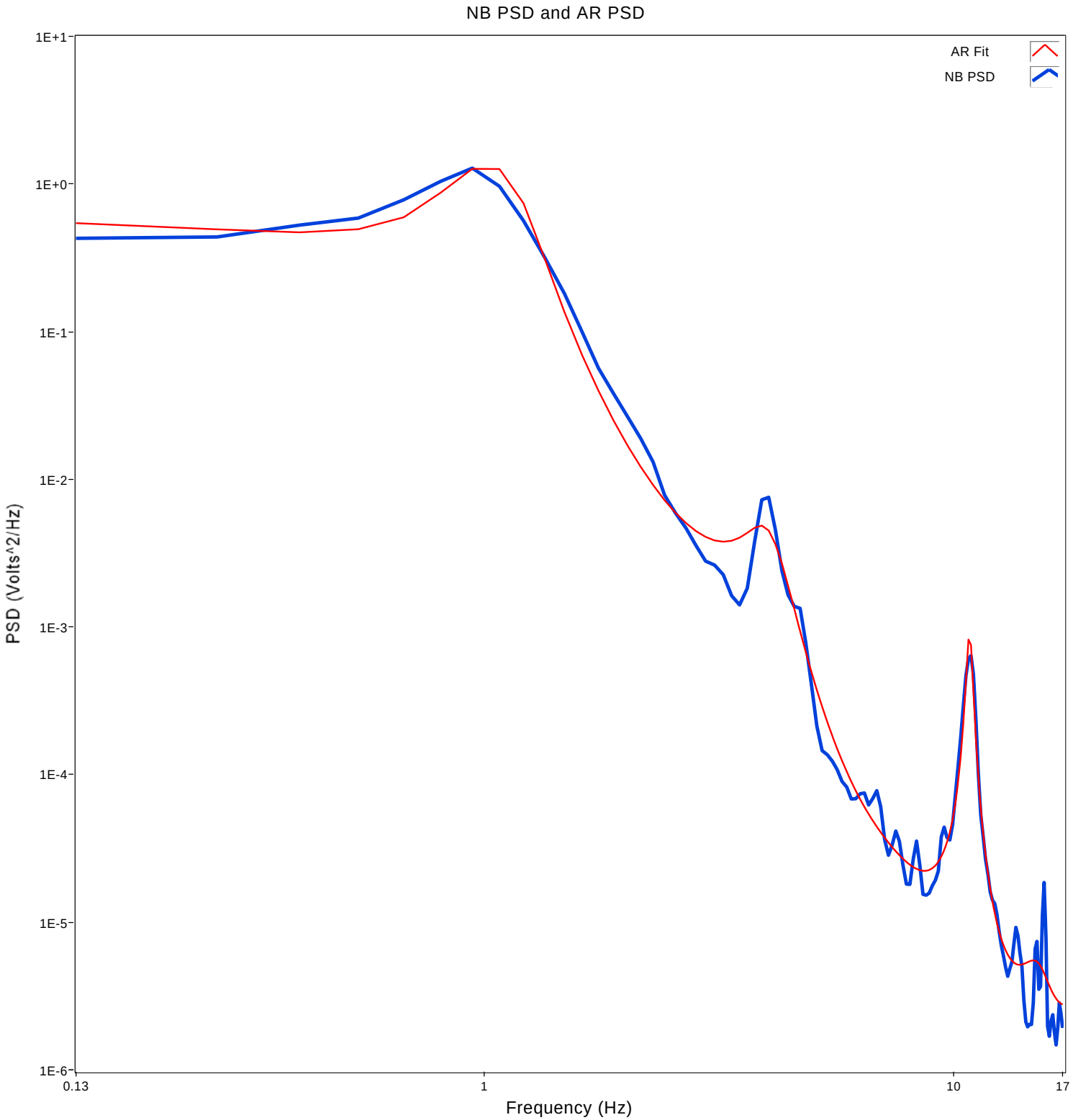
| Reactor and Unit | Tag Number | Service | Filename | Blocks : Blocksize | Trim Low Freq. (Hz) | Trim High Freq. (Hz) | AR Order | AR Method | Test Date |
|---|---|---|---|---|---|---|---|---|---|
| Farley Unit 1 | LT486 | SG LVL | FNP10003.psd | 141 : 512 | 0.134694 | 17.240854 | 11 | Forward-Backward | 12-Mar-2009 12:21:02 |

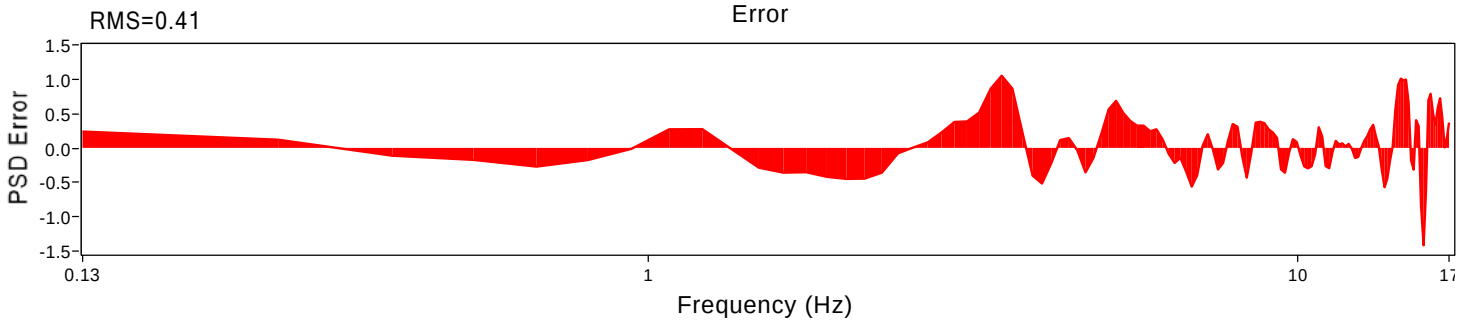


# OLM Autoregressive Fitting of Narrow Band PSD

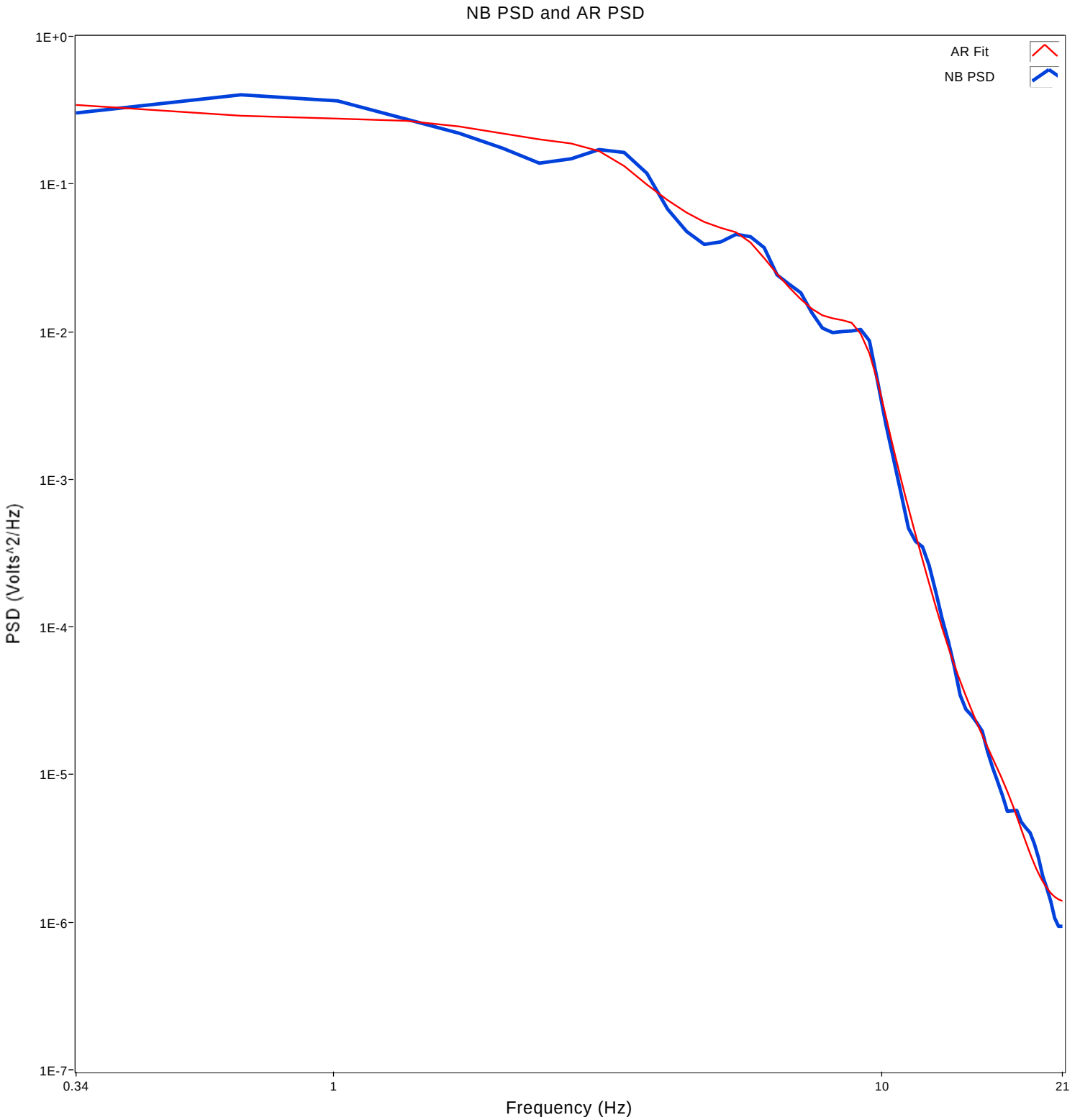
| Reactor and Unit | Tag Number | Service | Filename | Blocks : Blocksize | Trim Low Freq. (Hz) | Trim High Freq. (Hz) | AR Order | AR Method | Test Date |
|---|---|---|---|---|---|---|---|---|---|
| Farley Unit 1 | LT496 | SG LVL | FNP10003.psd | 141 : 512 | 0.134694 | 17.240854 | 11 | Forward-Backward | 12-Mar-2009 12:21:02 |

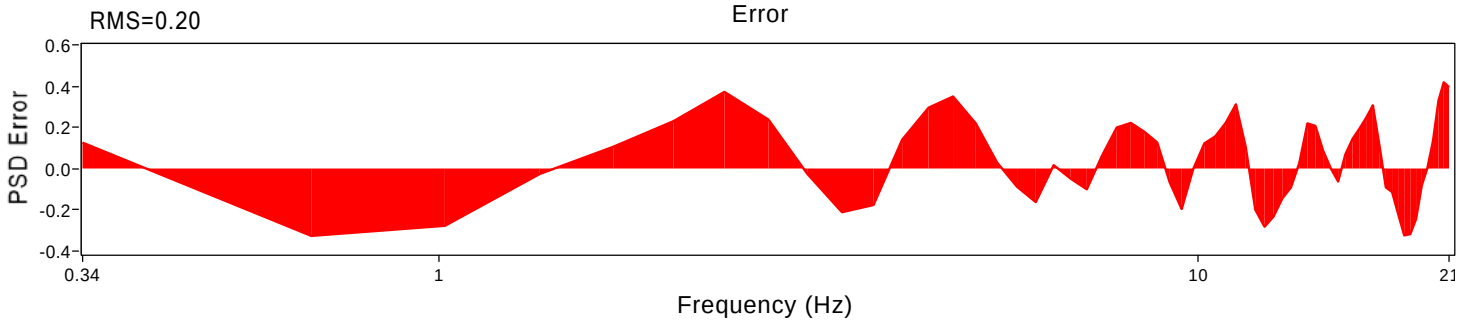


# OLM Autoregressive Fitting of Narrow Band PSD

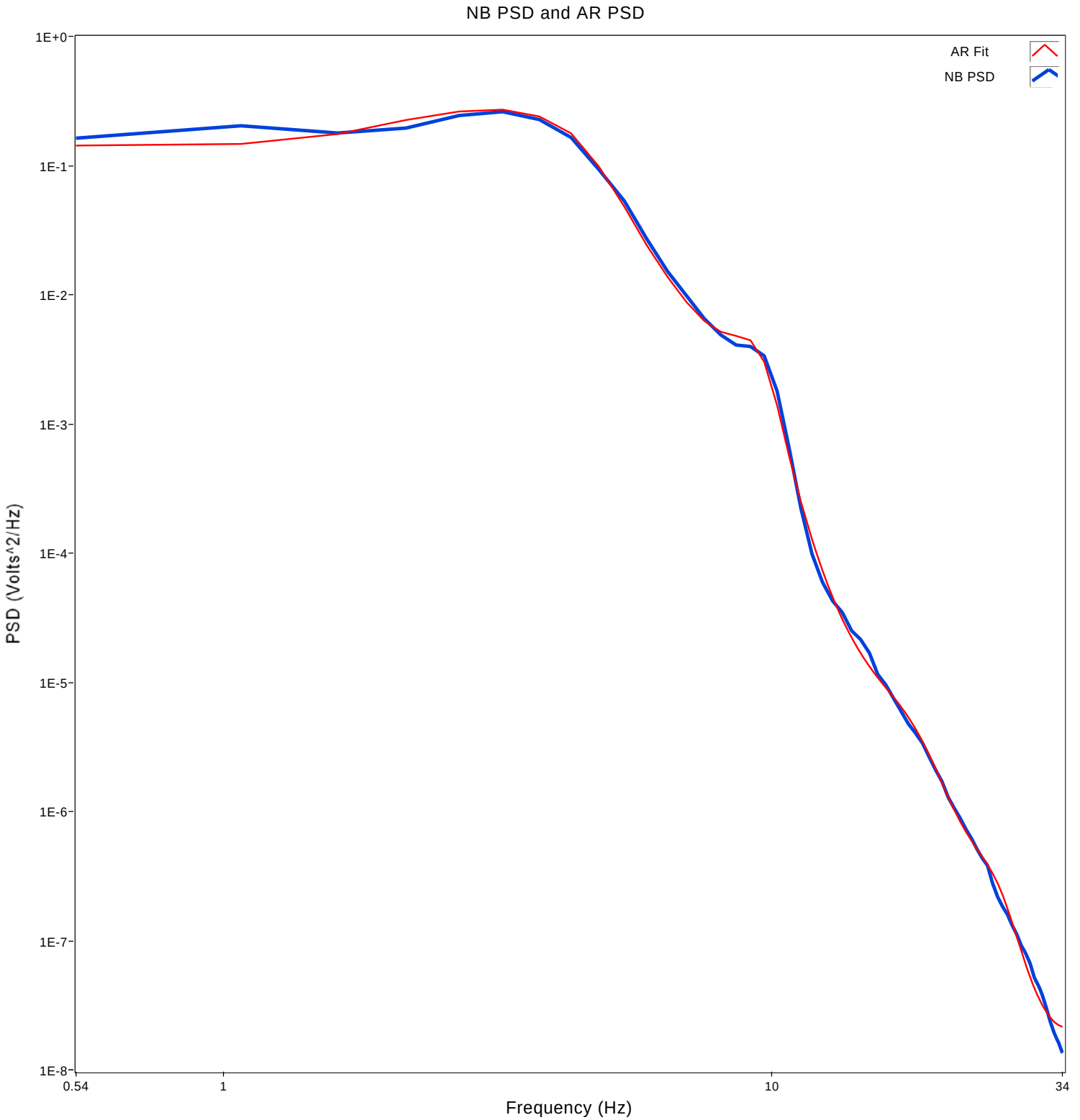
| Reactor and Unit | Tag Number | Service | Filename | Blocks : Blocksize | Trim Low Freq. (Hz) | Trim High Freq. (Hz) | AR Order | AR Method | Test Date |
|---|---|---|---|---|---|---|---|---|---|
| Farley Unit 1 | FT474 | STM FLOW | FNP10003.psd | 355 : 512 | 0.339664 | 21.738468 | 11 | Forward-Backward | 12-Mar-2009 12:21:02 |

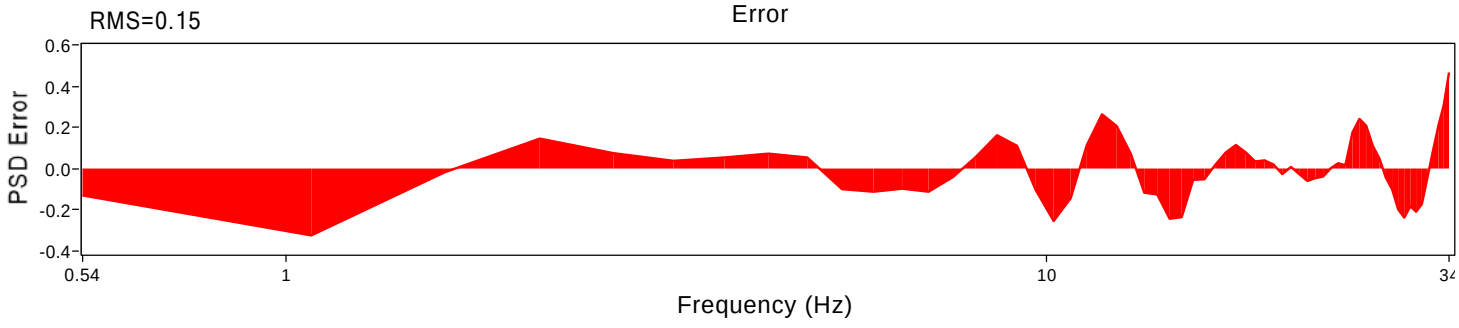


# OLM Autoregressive Fitting of Narrow Band PSD

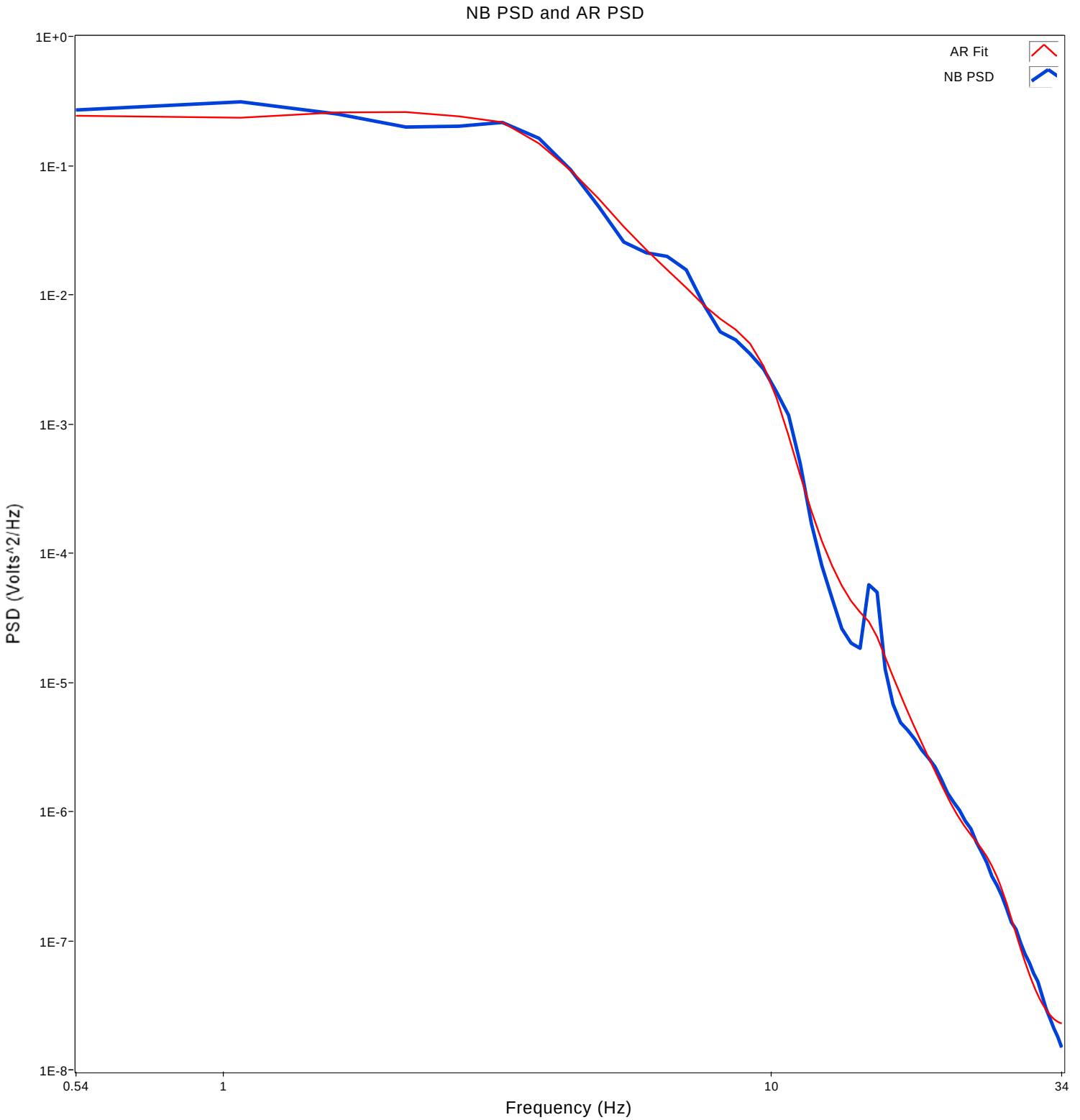
| Reactor and Unit | Tag Number | Service | Filename | Blocks : Blocksize | Trim Low Freq. (Hz) | Trim High Freq. (Hz) | AR Order | AR Method | Test Date |
|---|---|---|---|---|---|---|---|---|---|
| Farley Unit 1 | FT484 | STM FLOW | FNP10003.psd | 564 : 512 | 0.538777 | 34.481708 | 11 | Forward-Backward | 12-Mar-2009 12:21:02 |

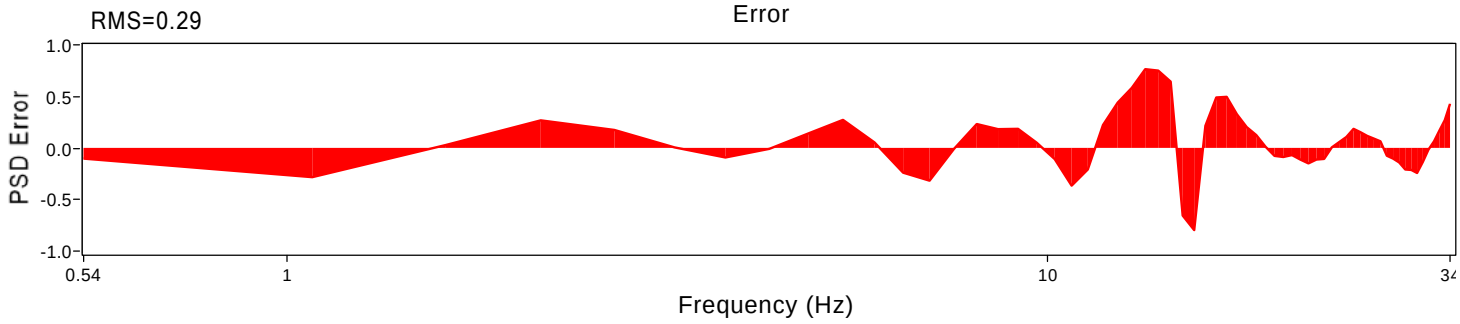


# OLM Autoregressive Fitting of Narrow Band PSD

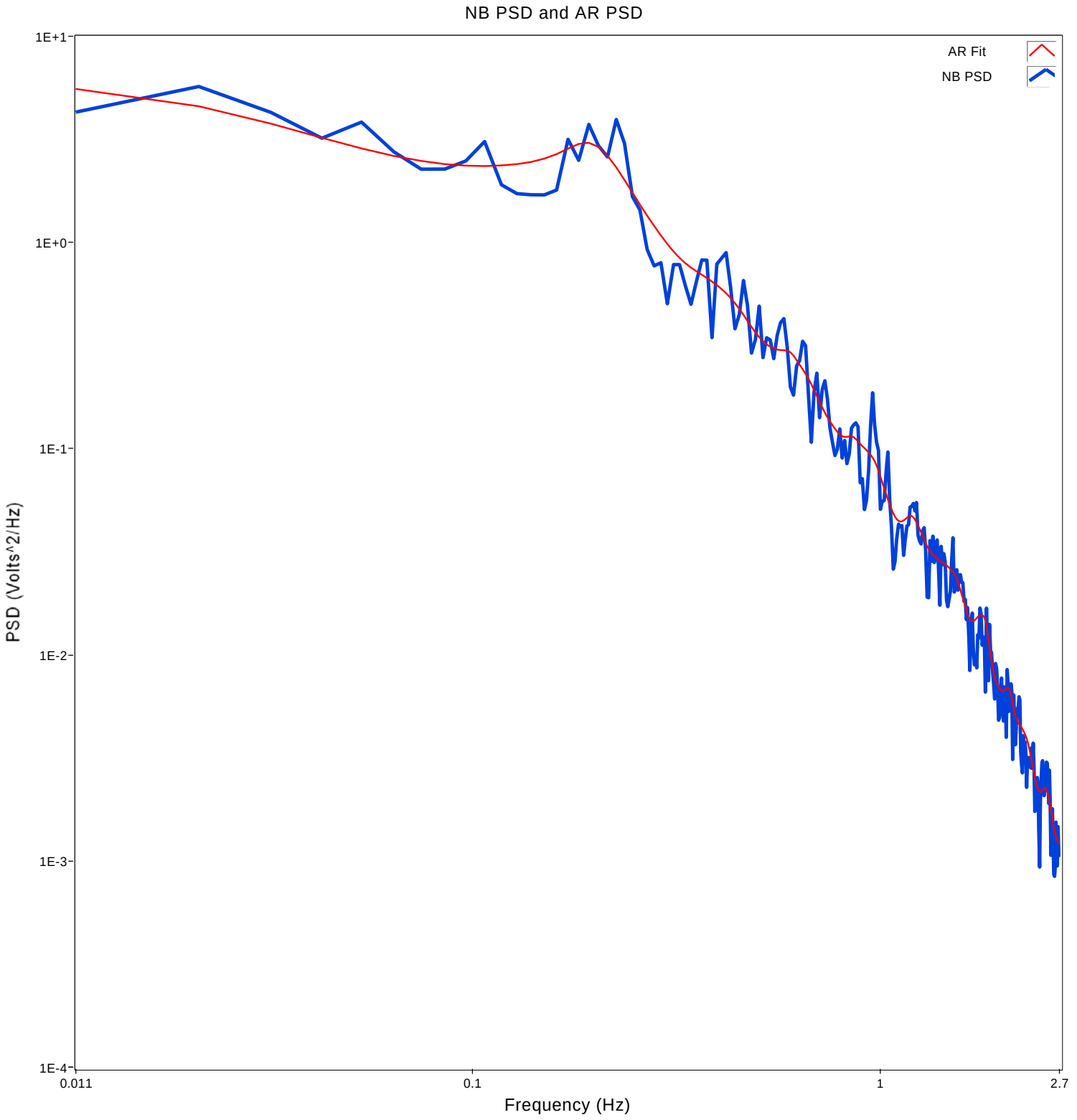
| Reactor and Unit | Tag Number | Service | Filename | Blocks : Blocksize | Trim Low Freq. (Hz) | Trim High Freq. (Hz) | AR Order | AR Method | Test Date |
|---|---|---|---|---|---|---|---|---|---|
| Farley Unit 1 | FT494 | STM FLOW | FNP10003.psd | 564 : 512 | 0.538777 | 34.481708 | 11 | Forward-Backward | 12-Mar-2009 12:21:02 |

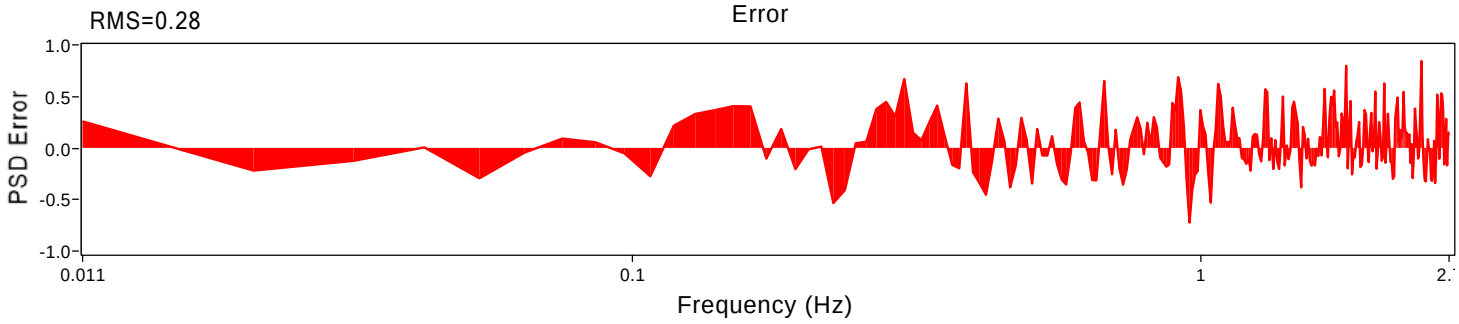


# OLM Autoregressive Fitting of Narrow Band PSD

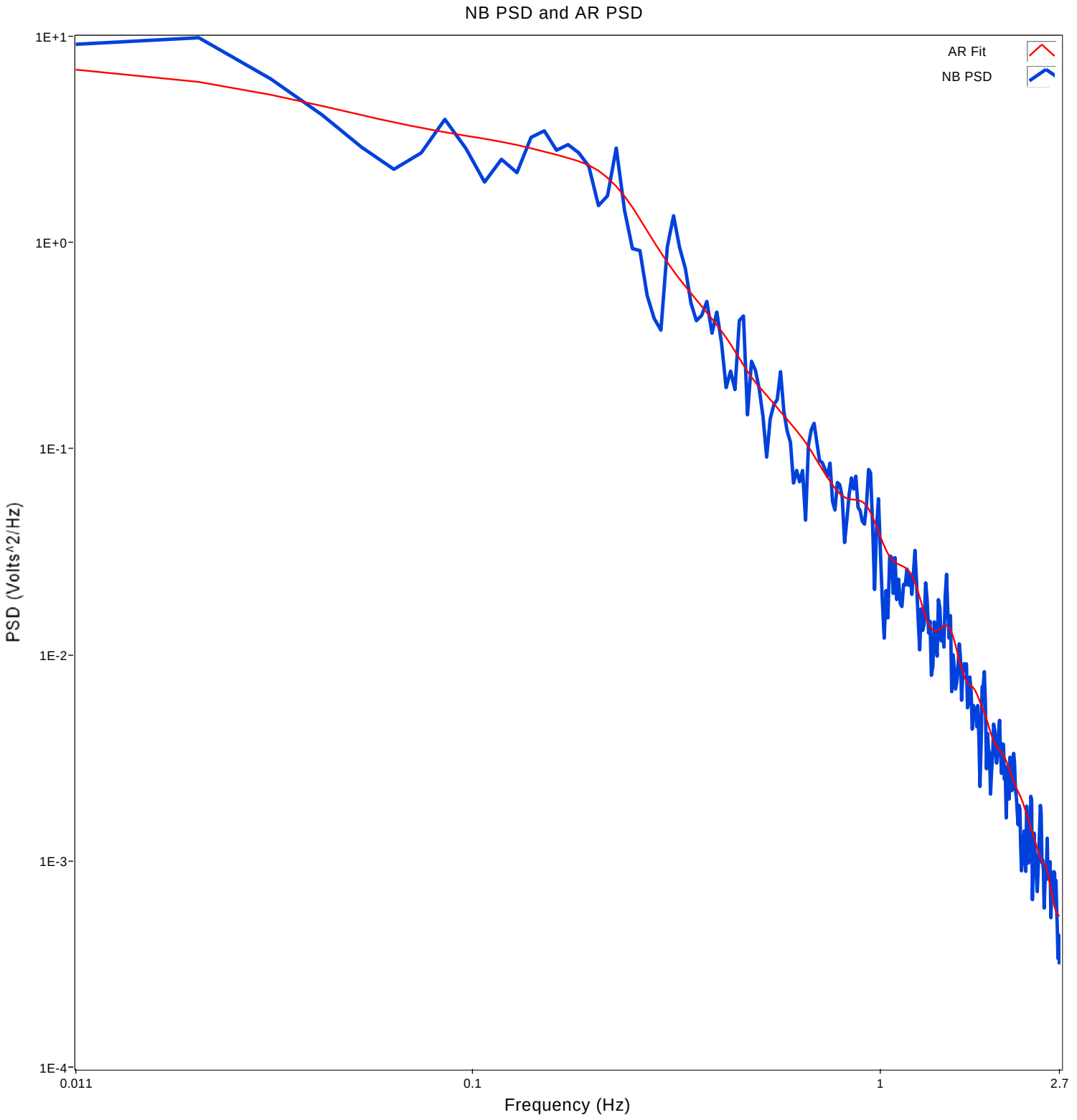
| Reactor and Unit | Tag Number | Service | Filename | Blocks : Blocksize | Trim Low Freq. (Hz) | Trim High Freq. (Hz) | AR Order | AR Method | Test Date |
|---|---|---|---|---|---|---|---|---|---|
| Farley Unit 1 | FT477 | FW FLOW | FNP10003.psd | 11 : 512 | 0.010731 | 2.747169 | 23 | Least-Squares | 12-Mar-2009 12:21:02 |

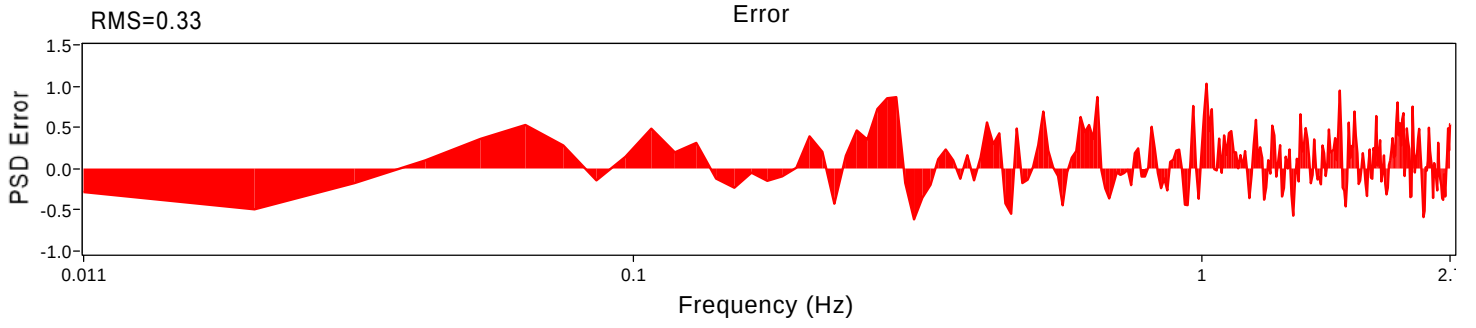


# OLM Autoregressive Fitting of Narrow Band PSD

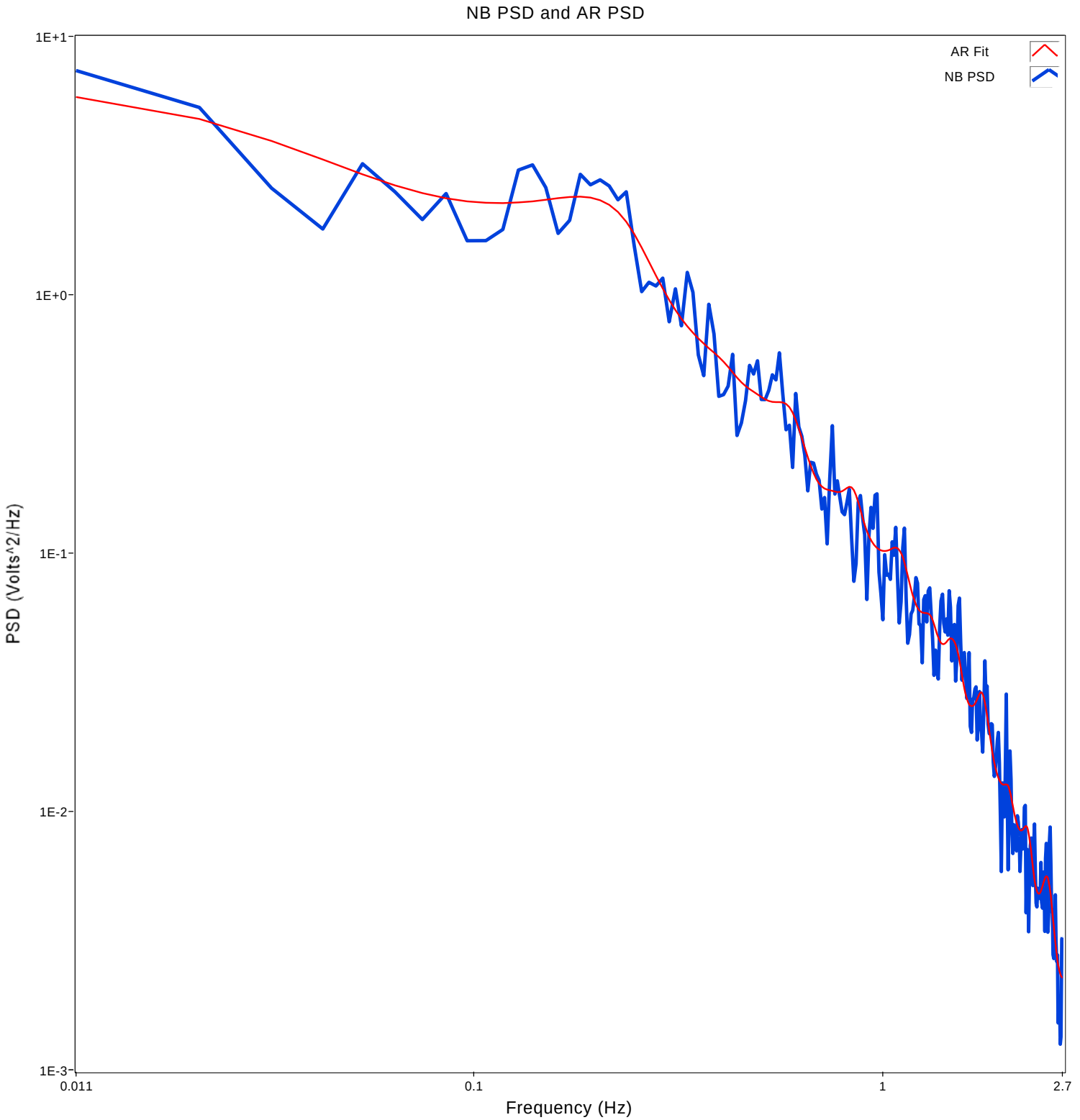
| Reactor and Unit | Tag Number | Service | Filename | Blocks : Blocksize | Trim Low Freq. (Hz) | Trim High Freq. (Hz) | AR Order | AR Method | Test Date |
|---|---|---|---|---|---|---|---|---|---|
| Farley Unit 1 | FT487 | FW FLOW | FNP10003.psd | 11 : 512 | 0.010731 | 2.747169 | 21 | Least-Squares | 12-Mar-2009 12:21:02 |

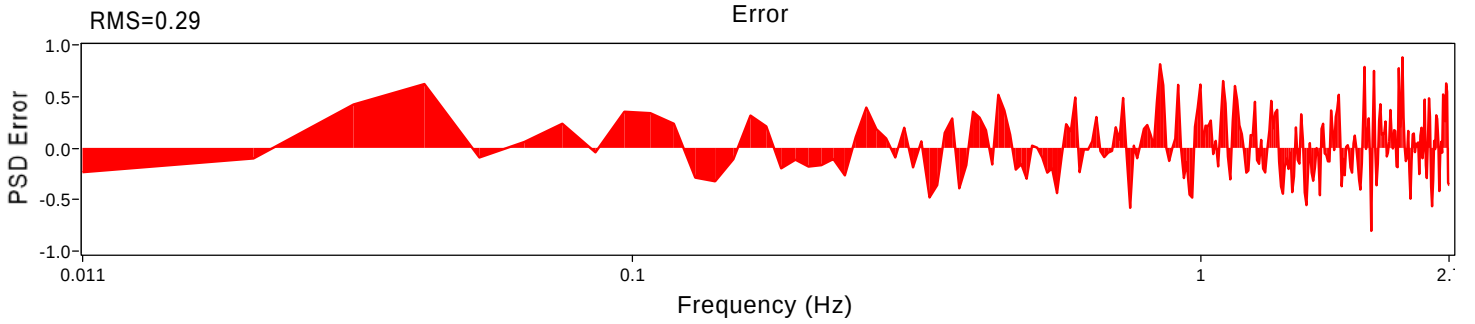


# OLM Autoregressive Fitting of Narrow Band PSD

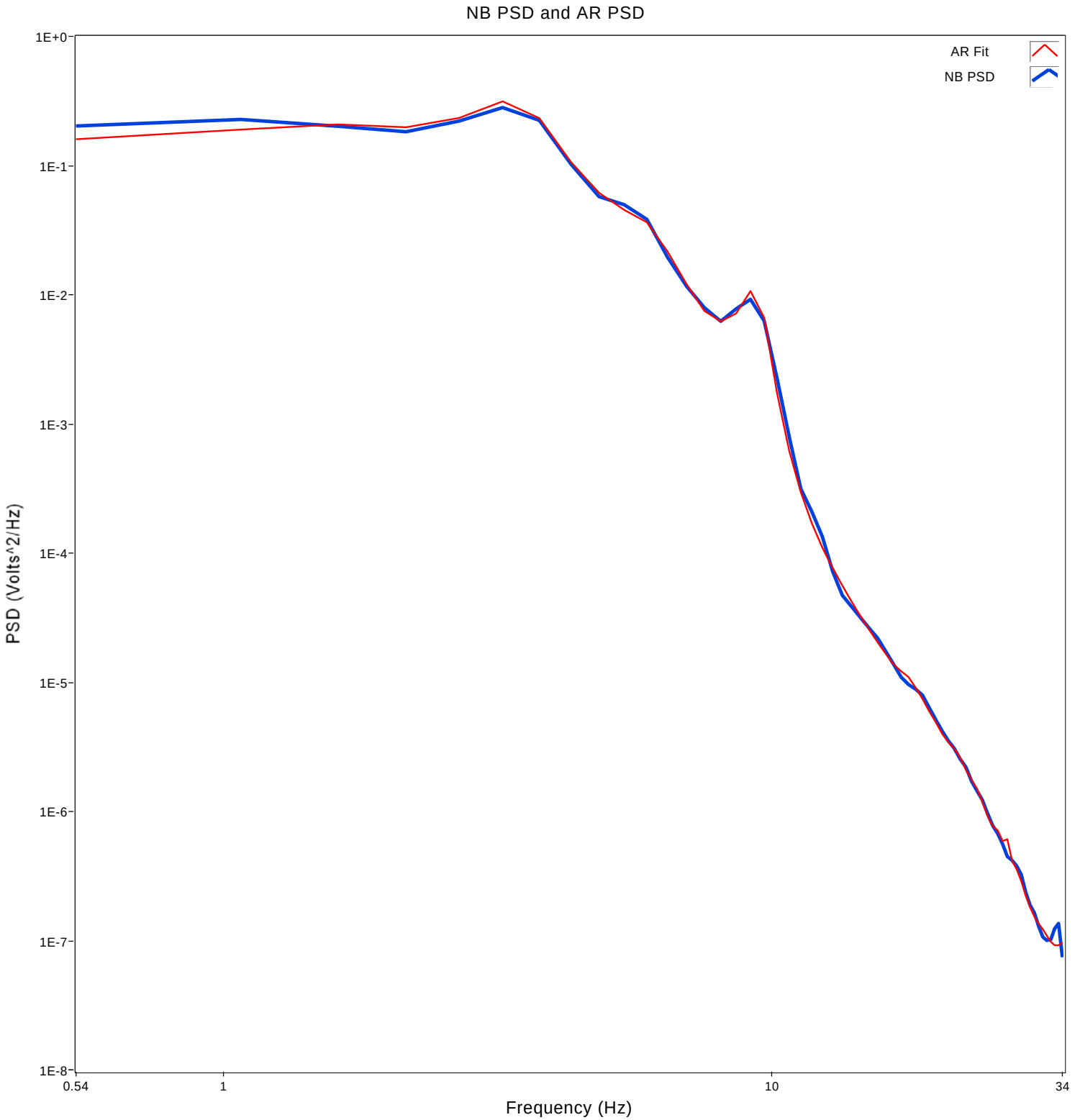
| Reactor and Unit | Tag Number | Service | Filename | Blocks : Blocksize | Trim Low Freq. (Hz) | Trim High Freq. (Hz) | AR Order | AR Method | Test Date |
|---|---|---|---|---|---|---|---|---|---|
| Farley Unit 1 | FT497 | FW FLOW | FNP10003.psd | 11 : 512 | 0.010731 | 2.747169 | 24 | Least-Squares | 12-Mar-2009 12:21:02 |

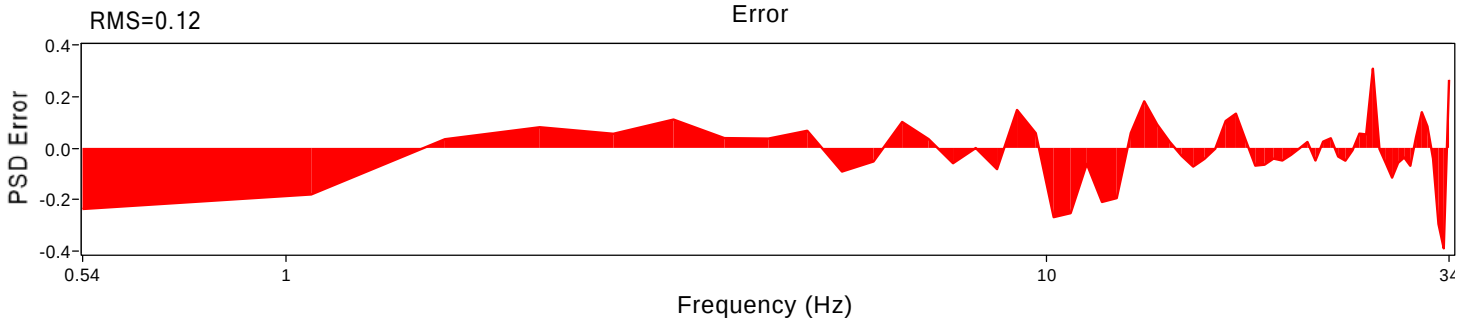


# OLM Autoregressive Fitting of Narrow Band PSD

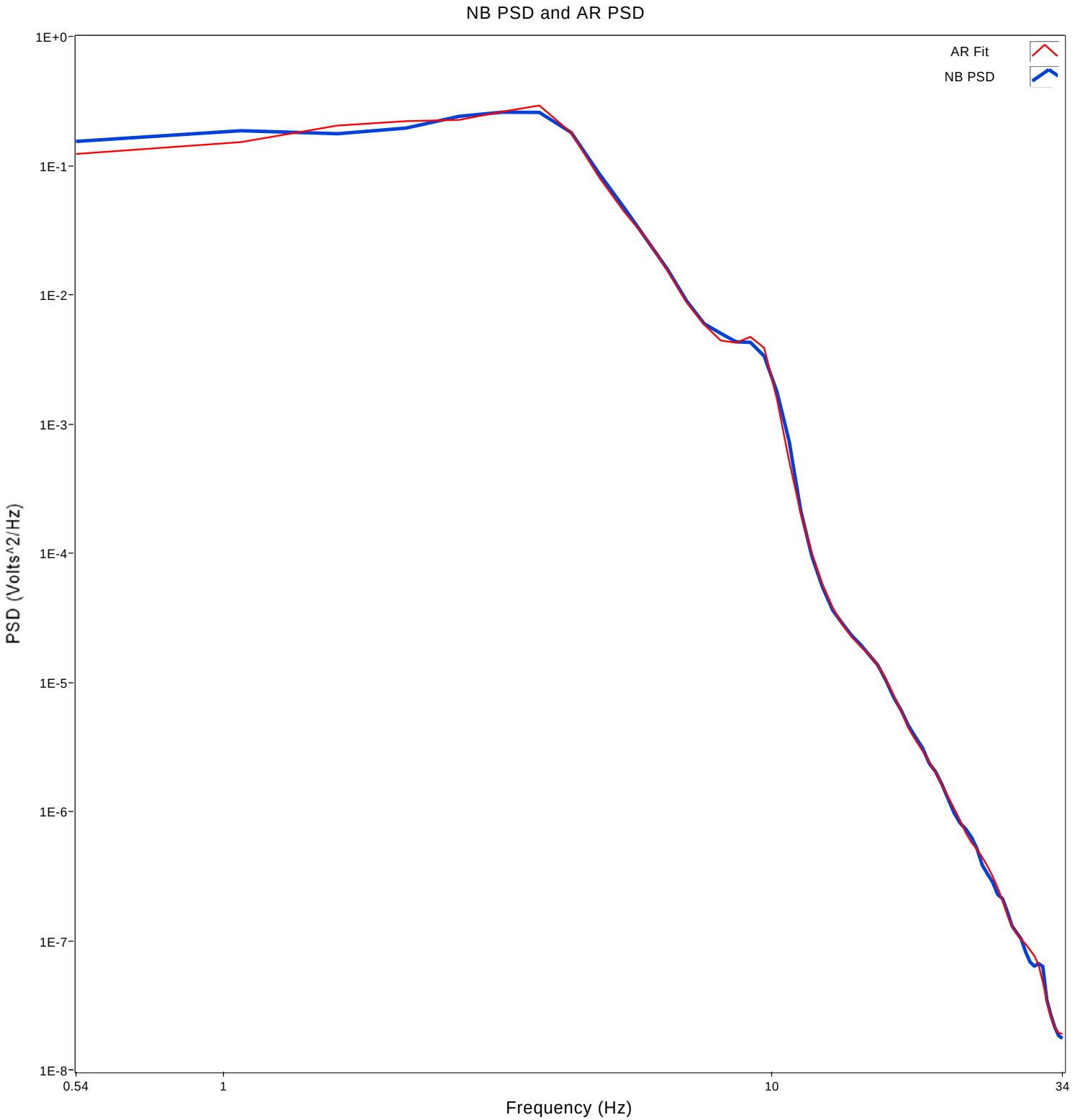
| Reactor and Unit | Tag Number | Service | Filename | Blocks : Blocksize | Trim Low Freq. (Hz) | Trim High Freq. (Hz) | AR Order | AR Method | Test Date |
|---|---|---|---|---|---|---|---|---|---|
| Farley Unit 1 | FT475 | STM FLOW | FNP10004.psd | 564 : 512 | 0.538777 | 34.481708 | 18 | Least-Squares | 12-Mar-2009 12:21:02 |

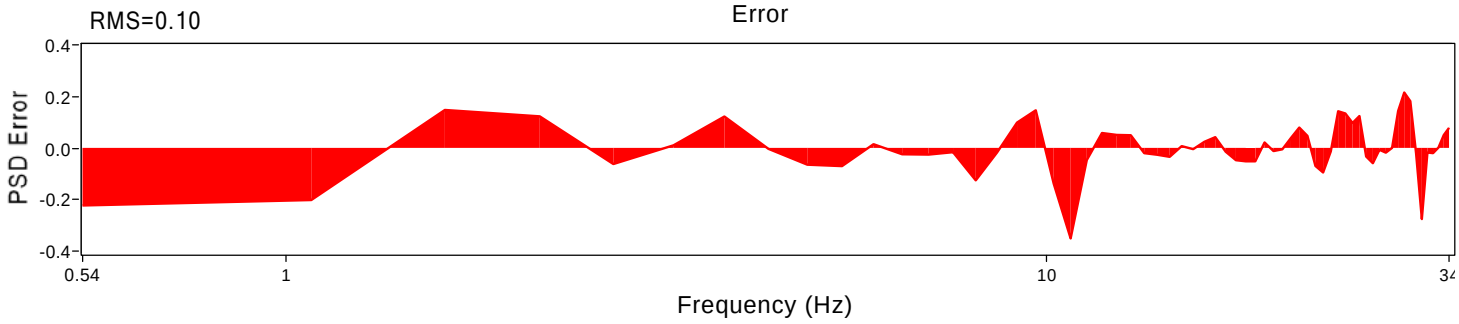


# OLM Autoregressive Fitting of Narrow Band PSD

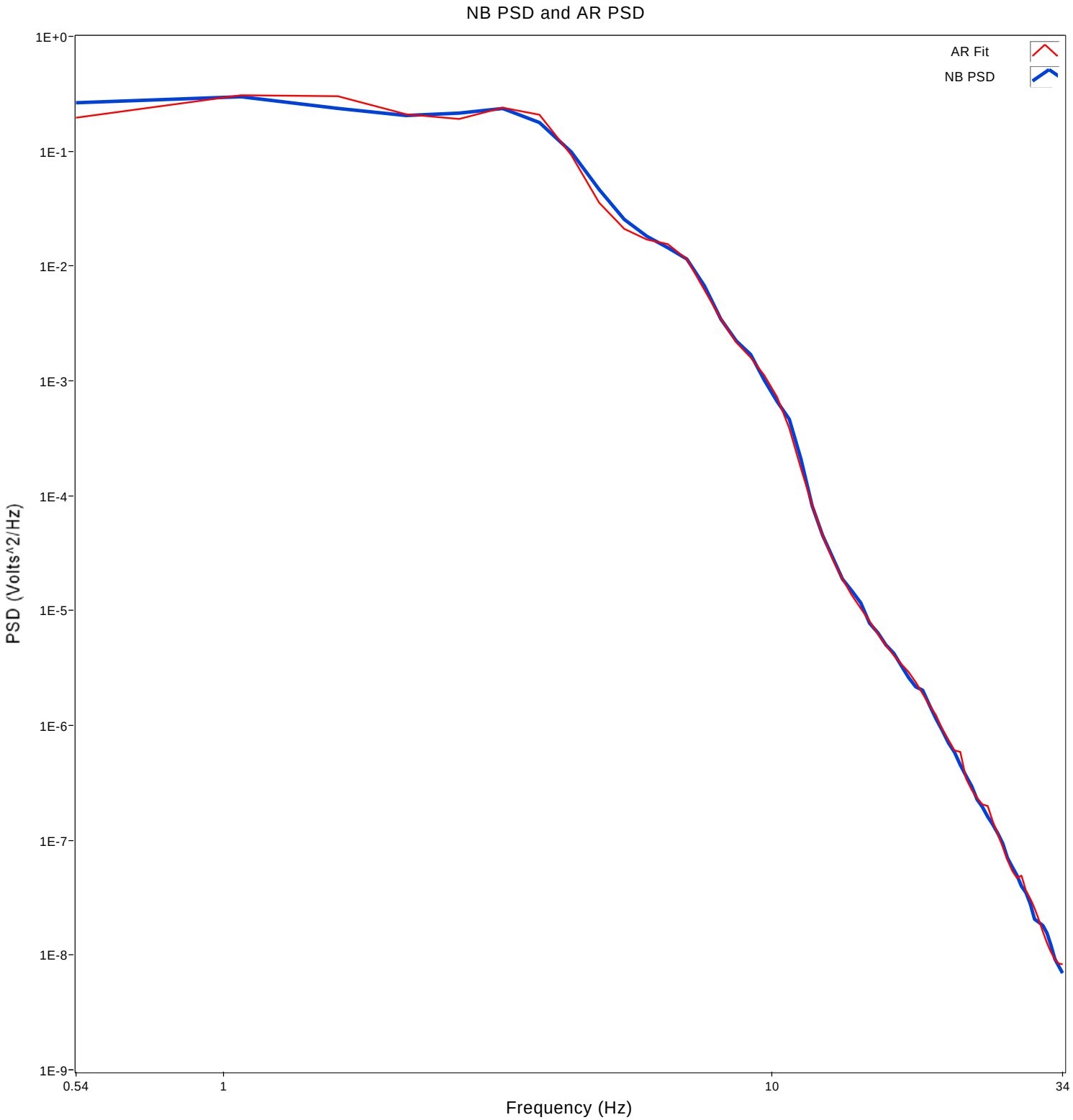
| Reactor and Unit | Tag Number | Service | Filename | Blocks : Blocksize | Trim Low Freq. (Hz) | Trim High Freq. (Hz) | AR Order | AR Method | Test Date |
|---|---|---|---|---|---|---|---|---|---|
| Farley Unit 1 | FT485 | STM FLOW | FNP10004.psd | 564 : 512 | 0.538777 | 34.481708 | 18 | Forward-Backward | 12-Mar-2009 12:21:02 |

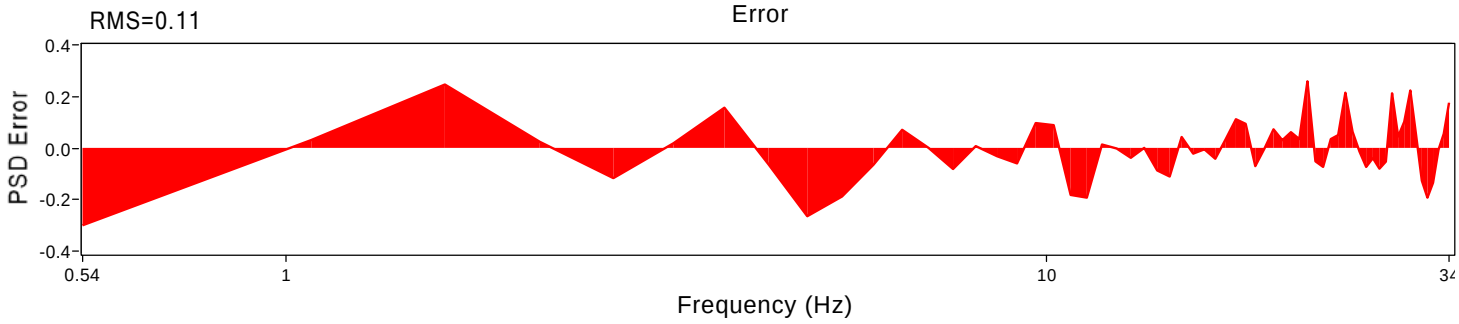


# OLM Autoregressive Fitting of Narrow Band PSD

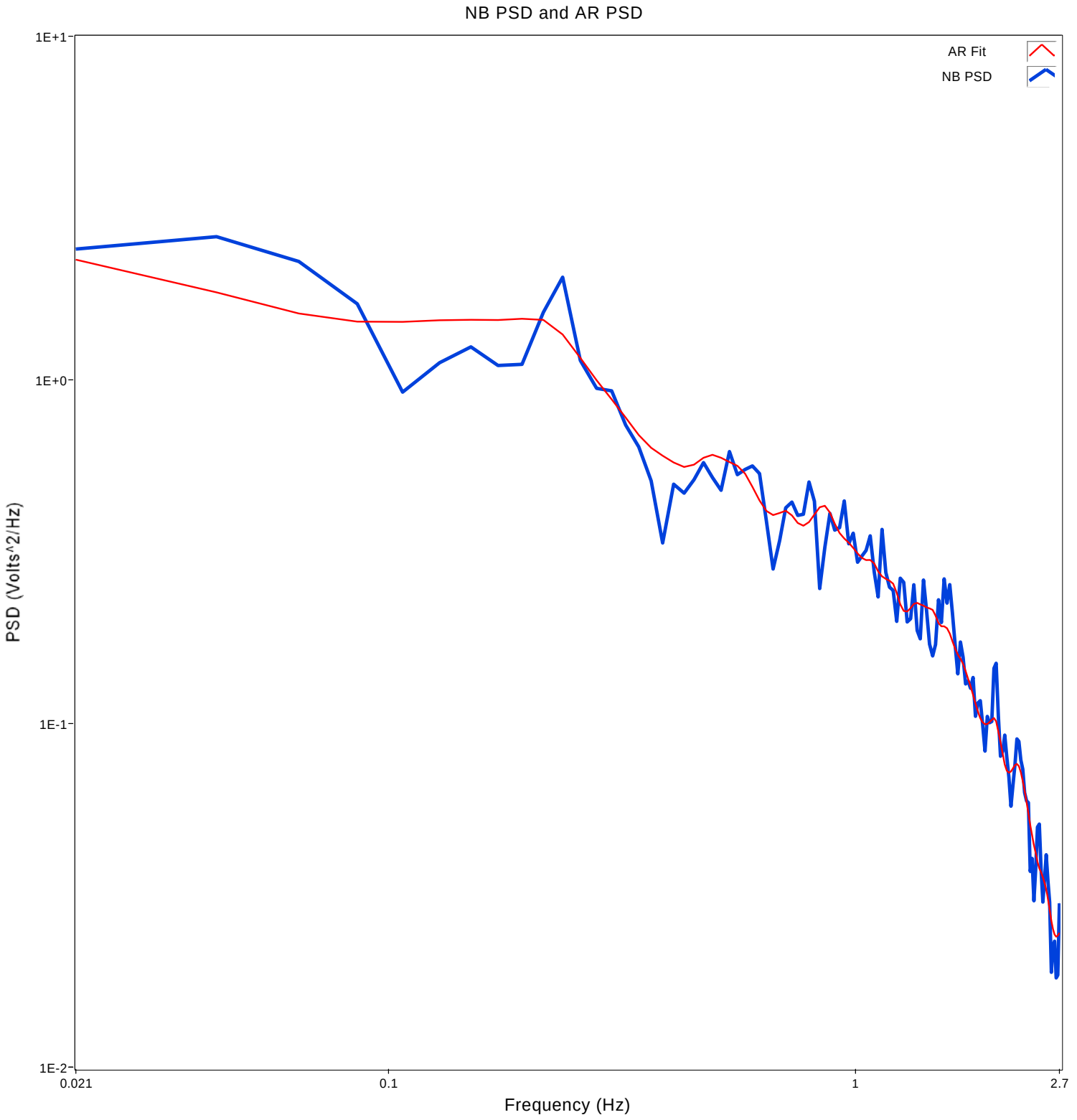
| Reactor and Unit | Tag Number | Service | Filename | Blocks : Blocksize | Trim Low Freq. (Hz) | Trim High Freq. (Hz) | AR Order | AR Method | Test Date |
|---|---|---|---|---|---|---|---|---|---|
| Farley Unit 1 | FT495 | STM FLOW | FNP10004.psd | 564 : 512 | 0.538777 | 34.481708 | 18 | Least-Squares | 12-Mar-2009 12:21:02 |

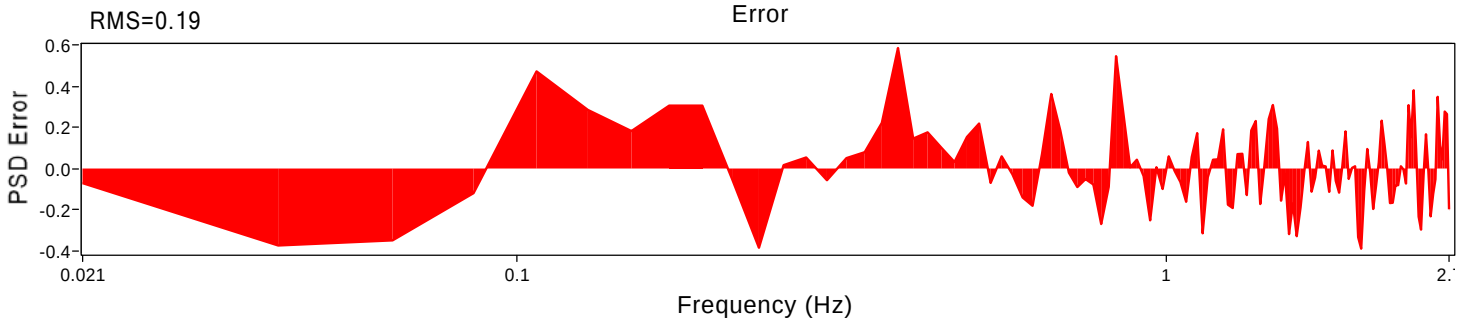


# OLM Autoregressive Fitting of Narrow Band PSD

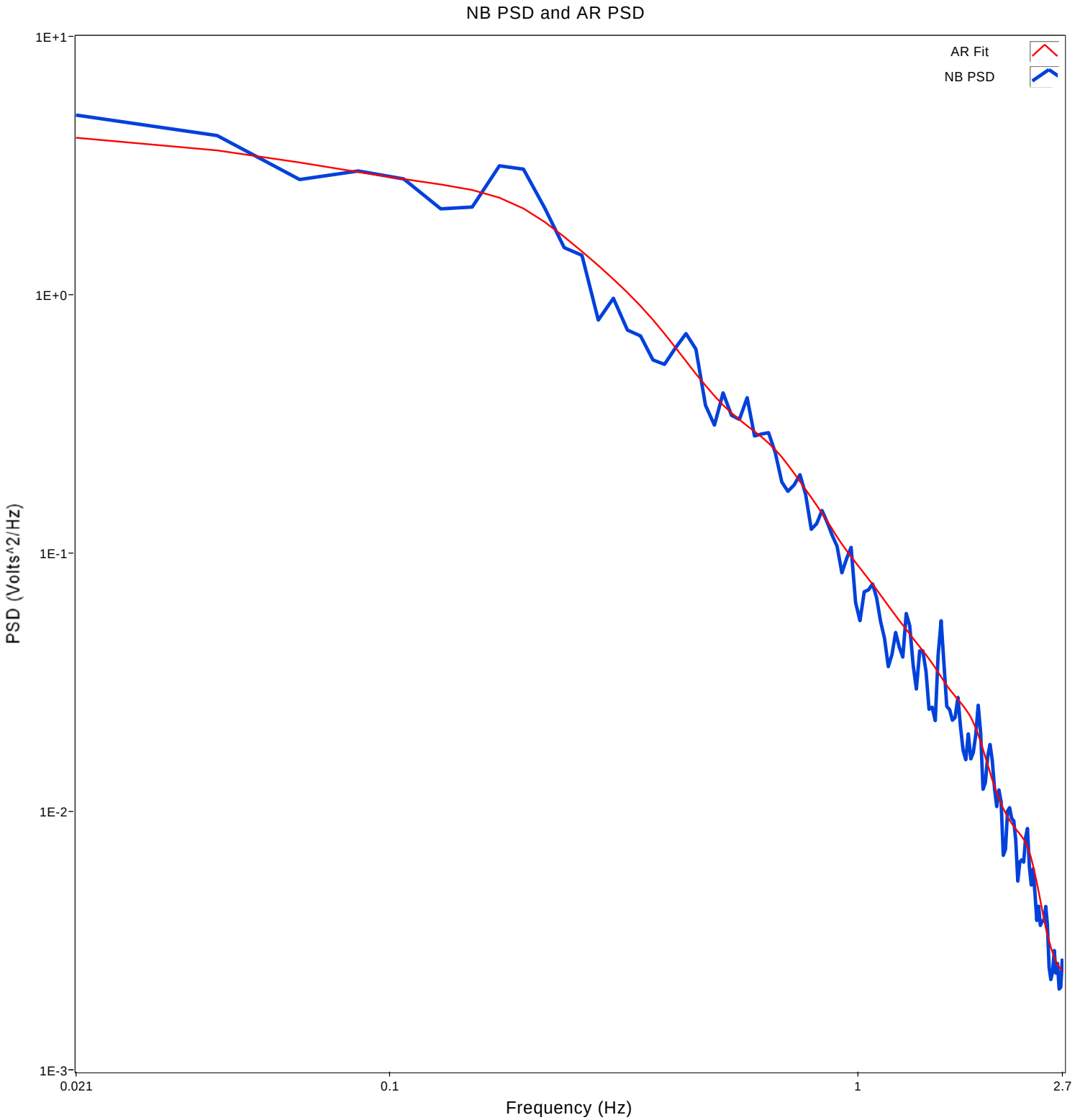
| Reactor and Unit | Tag Number | Service | Filename | Blocks : Blocksize | Trim Low Freq. (Hz) | Trim High Freq. (Hz) | AR Order | AR Method | Test Date |
|---|---|---|---|---|---|---|---|---|---|
| Farley Unit 1 | FT476 | FW FLOW | FNP10004.psd | 22 : 512 | 0.021462 | 2.747169 | 22 | Least-Squares | 12-Mar-2009 12:21:02 |

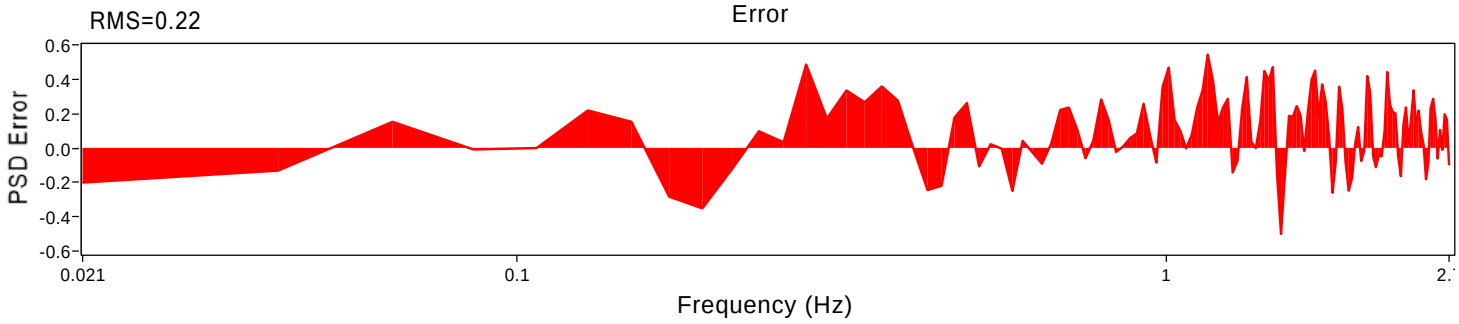


# OLM Autoregressive Fitting of Narrow Band PSD

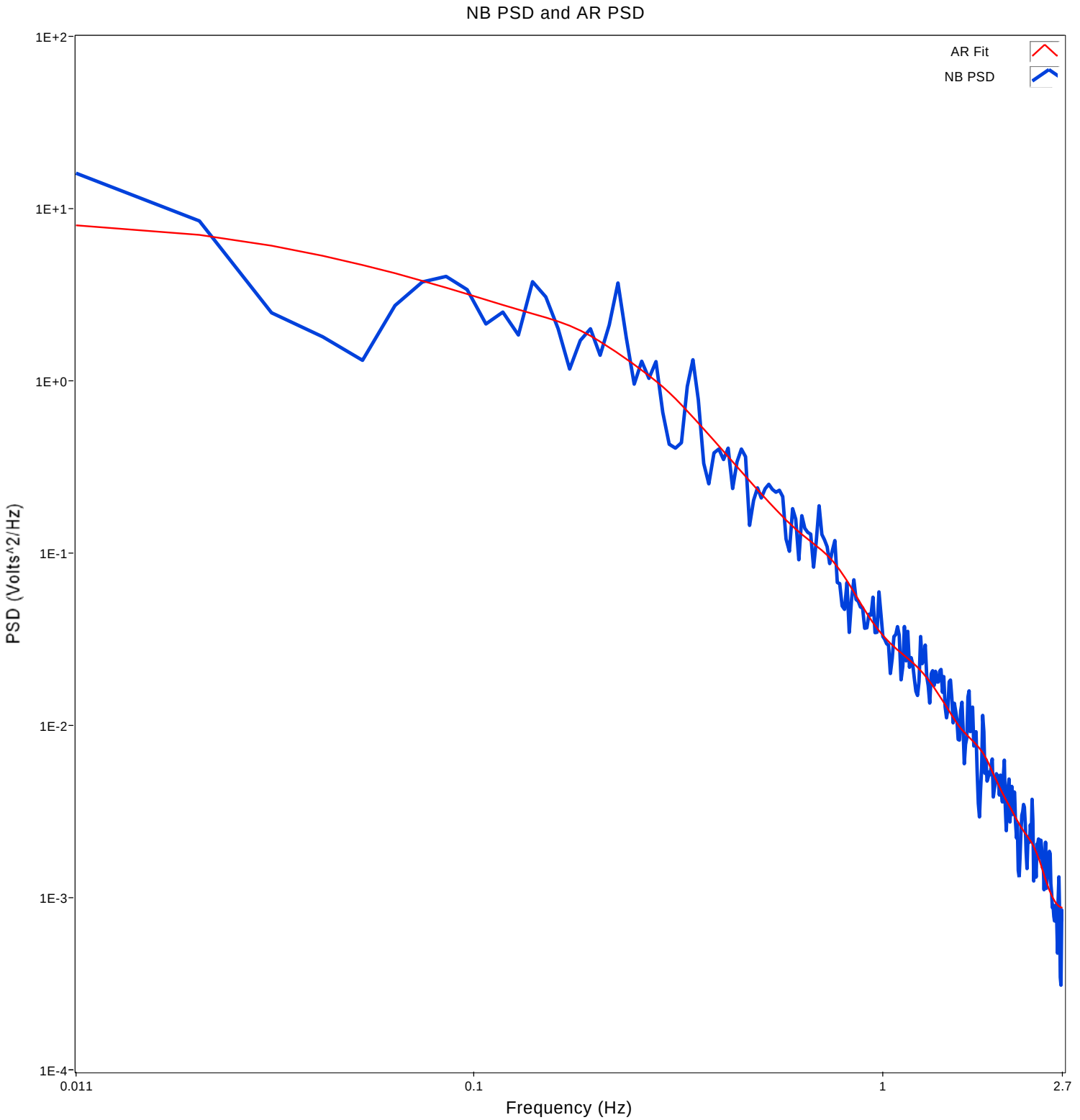
| Reactor and Unit | Tag Number | Service | Filename | Blocks : Blocksize | Trim Low Freq. (Hz) | Trim High Freq. (Hz) | AR Order | AR Method | Test Date |
|---|---|---|---|---|---|---|---|---|---|
| Farley Unit 1 | FT486 | FW FLOW | FNP10004.psd | 22 : 512 | 0.021462 | 2.747169 | 11 | Forward-Backward | 12-Mar-2009 12:21:02 |

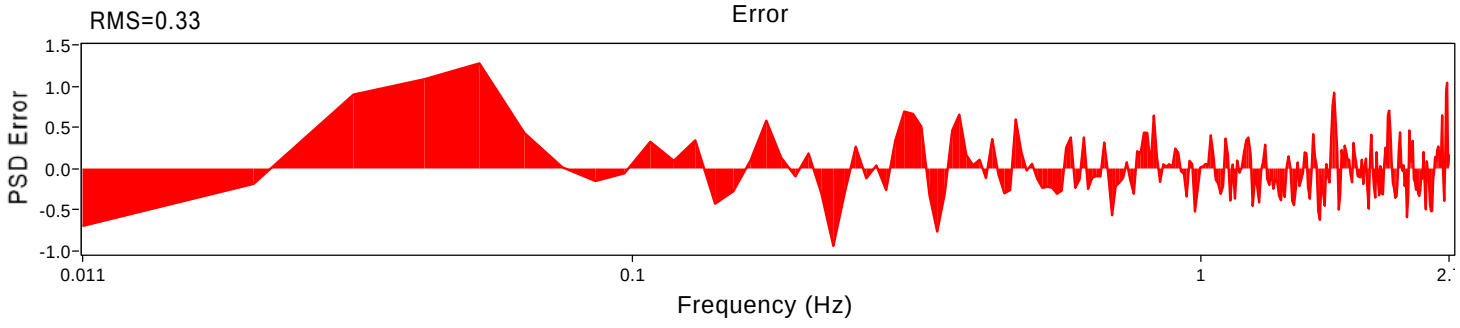


# OLM Autoregressive Fitting of Narrow Band PSD

| Reactor and Unit | Tag Number | Service | Filename | Blocks : Blocksize | Trim Low Freq. (Hz) | Trim High Freq. (Hz) | AR Order | AR Method | Test Date |
|---|---|---|---|---|---|---|---|---|---|
| Farley Unit 1 | FT496 | FW FLOW | FNP10004.psd | 11 : 512 | 0.010731 | 2.747169 | 11 | Forward-Backward | 12-Mar-2009 12:21:02 |



# APPENDIX B

# Farley Unit 1 OLM Results (Cycle 23)

| Item | Tagname | Service | 9 Apr 2009 | 13 May 2009 | 28 Jun 2009 | 16 Jul 2009 | 21 Aug 2009 | 23 Sep 2009 | 26 Oct 2009 | 24 Nov 2009 | 29 Dec 2009 | 20 Jan 2010 | 27 Feb 2010 | 26 Mar 2010 | 26 Apr 2010 | 24 May 2010 | 2 Jul 2010 | 26 Jul 2010 | 22 Aug 2010 | 13 Sep 2010 | 10 Oct 2010 | Drift | Final | Comment |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | FE0474B | SG A STEAM FLOW | | | | | | | | | | | | | | | | | | | | | PASS | |
| 2 | FE0475B | SG A STEAM FLOW | | | | | | | | | | | | | | | | | | | | | PASS | |
| | | | | | | | | | | | | | | | | | | | | | | | | |
| 3 | FE0476B | FW FLOW TO SG A | | | | | | | | | | | | | | | | | | | | | PASS | |
| 4 | FE0477B | FW FLOW TO SG A | | | | | | | | | | | | | | | | | | | | | PASS | |
| | | | | | | | | | | | | | | | | | | | | | | | | |
| 5 | LT0474 | SG A NARROW RANGE LEVEL | | R | | | | | | | | | | | | | | | | | R | | FAIL | Significant dev. between transmitters |
| 6 | LT0475 | SG A NARROW RANGE LEVEL | | R | | | | | | | | | | | | | | | R | R | R | | FAIL | Significant dev. between transmitters |
| 7 | LT0476 | SG A NARROW RANGE LEVEL | | R | | | | | | | | | | | | | | | | | | | FAIL | Significant dev. between transmitters |
| 8 | LT0477 | SG A WIDE RANGE LEVEL | | | | | | | | | | M | M | M | M | M | M | M | M | M | | | FAIL | Drift over cycle (AAKR) |
| | | | | | | | | | | | | | | | | | | | | | | | | |
| 9 | PT0474 | SG A OUTLET PRESSURE | | | | | | | | | | | | | | | | | | | | | PASS | |
| 10 | PT0475 | SG A OUTLET PRESSURE | | | | | | | | | | | | | | | | | | | | | PASS | |
| 11 | PT0476 | SG A OUTLET PRESSURE | | | | | | | | | | | | | | | | | | | | | PASS | |
| | | | | | | | | | | | | | | | | | | | | | | | | |
| 12 | FE0484B | SG B STEAM FLOW | | | | | | | M | | M | M | M | M | | M | | | M | | R | | PASS | Out in low range transient |
| 13 | FE0485B | SG B STEAM FLOW | | | | | | | | | | | | | | | | | | | R | | PASS | Out in low range transient |
| | | | | | | | | | | | | | | | | | | | | | | | | |
| 14 | FE0486B | FW FLOW TO SG B | | | | | | | | | | | | | | | | | | | | | PASS | |
| 15 | FE0487B | FW FLOW TO SG B | | | | | | | | | | | | | | | | | | | | | PASS | |
| | | | | | | | | | | | | | | | | | | | | | | | | |
| 16 | LT0484 | SG B NARROW RANGE LEVEL | | | | | | | | | | | | | | | | | | | | | PASS | |
| 17 | LT0485 | SG B NARROW RANGE LEVEL | | | | | | | | | | | | | | | | | | | | | PASS | |
| 18 | LT0486 | SG B NARROW RANGE LEVEL | | | | | | | | | | | | | | | | | | | | | PASS | |
| 19 | LT0487 | SG B WIDE RANGE LEVEL | | | | | | | | | | | | | | | | | | | | | PASS | |
| | | | | | | | | | | | | | | | | | | | | | | | | |
| 20 | PT0484 | SG B OUTLET PRESSURE | | | | | | | | | | | | | | | | | | | | | PASS | |
| 21 | PT0485 | SG B OUTLET PRESSURE | | | | | | | | | | | | | | | | | | | | | PASS | |
| 22 | PT0486 | SG B OUTLET PRESSURE | | | | | | | | | | | | | | | | | | | | | PASS | |
| | | | | | | | | | | | | | | | | | | | | | | | | |
| 23 | FE0494B | SG C STEAM FLOW | | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | |
| 24 | FE0495B | SG C STEAM FLOW | | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | Bad data starting in Sep-2009 |
| | | | | | | | | | | | | | | | | | | | | | | | | |
| 25 | FE0496B | FW FLOW TO SG C | | | | | | | | | | | | | | | | | | | | | PASS | |
| 26 | FE0497B | FW FLOW TO SG C | | | | | | | | | | | | | | | | | | | | | PASS | |
| | | | | | | | | | | | | | | | | | | | | | | | | |
| 27 | LT0494 | SG C NARROW RANGE LEVEL | | | | | | | | | | | | | | | | | | | | | PASS | |
| 28 | LT0495 | SG C NARROW RANGE LEVEL | | | | | | | | | | | | | | | | | | | | | PASS | |
| 29 | LT0496 | SG C NARROW RANGE LEVEL | | | | | | | | | | | | | | | | | | | | | PASS | |
| 30 | LT0497 | SG C WIDE RANGE LEVEL | | | | | | | | | | | | | | | | | | | | | PASS | |

*R = Exceeded Redundant Sensor Analysis Limits  M = Exceeded Model Analysis Limits  D = Exceeded Drift Limits*

**Table B.1 Farley Unit 1 OLM Results Summary (Cycle 23)**

| Item | Tagname | Service | 9 Apr 2009 | 13 May 2009 | 28 Jun 2009 | 16 Jul 2009 | 21 Aug 2009 | 23 Sep 2009 | 26 Oct 2009 | 24 Nov 2009 | 29 Dec 2009 | 20 Jan 2010 | 27 Feb 2010 | 26 Mar 2010 | 26 Apr 2010 | 24 May 2010 | 2 Jul 2010 | 26 Jul 2010 | 22 Aug 2010 | 13 Sep 2010 | 10 Oct 2010 | Drift | Final | Comment |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 31 | PT0494 | SG C OUTLET PRESSURE | | | | | | | | | | | | | | | | | | | | | PASS | |
| 32 | PT0495 | SG C OUTLET PRESSURE | | | | | | | | | | | | | | | | | | | | | PASS | |
| 33 | PT0496 | SG C OUTLET PRESSURE | | | | | | | | | | | | | | | | | | | | | PASS | |
| | | | | | | | | | | | | | | | | | | | | | | | | |
| 34 | LT0459 | PRESSURIZER LEVEL | | | | | | | | | | | | | | | | | | | | | PASS | |
| 35 | LT0460 | PRESSURIZER LEVEL | R | | | | | | | | | | | | | | | | | | | | PASS | Only out in startup. Good in shutdown. |
| 36 | LT0461 | PRESSURIZER LEVEL | | | | | | | | | | | | | | | | | | | | | PASS | |
| | | | | | | | | | | | | | | | | | | | | | | | | |
| 37 | PT0455 | PRESSURIZER PRESSURE | | R | R | R | R | R | R | R | R | R | R | R | R | R | R | R | R | R | R | | FAIL | Low bias |
| 38 | PT0456 | PRESSURIZER PRESSURE | | | | | | | | | | | | | | | | | | | | | PASS | |
| 39 | PT0457 | PRESSURIZER PRESSURE | | | | | | | | | | | | | | | | | | | | | PASS | |
| 40 | PT0444A | PRESSURIZER PRESSURE | | | | | | | | | | | | | | | | | | | | | PASS | |
| 41 | PT0445A | PRESSURIZER PRESSURE | | R | | | | | | | | | | | | | | | | | | | PASS | Out in startup but good in shutdown. |
| | | | | | | | | | | | | | | | | | | | | | | | | |
| 42 | FE0414 | RCS LOOP A FLOW | | | | | | | | | | | | | | | | | | | | | PASS | |
| 43 | FE0415 | RCS LOOP A FLOW | | | | | | | | | | | | | | | | | | | | | PASS | |
| 44 | FE0416 | RCS LOOP A FLOW | | | | | | | | | | | | | | | | | | | | | PASS | |
| | | | | | | | | | | | | | | | | | | | | | | | | |
| 45 | FE0424 | RCS LOOP B FLOW | | | | | | | | | | | | | | | | | | | | | PASS | |
| 46 | FE0425 | RCS LOOP B FLOW | | | | | | | | | | | | | | | | | | | | | PASS | |
| 47 | FE0426 | RCS LOOP B FLOW | | | | | | | | | | | | | | | | | | | | | PASS | |
| | | | | | | | | | | | | | | | | | | | | | | | | |
| 48 | FE0434 | RCS LOOP C FLOW | | R | R | R | R | R | R | R | R | R | R | R | R | R | R | R | R | R | R | | FAIL | Low bias |
| 49 | FE0435 | RCS LOOP C FLOW | | | | | | | | | | | | | | | | | | | | | PASS | |
| 50 | FE0436 | RCS LOOP C FLOW | | | | | | | | | | | | | | | | | | | | | PASS | |
| | | | | | | | | | | | | | | | | | | | | | | | | |
| 51 | PT0402 | RCS WIDE RANGE PRESSURE LOOP C | | | | | | | | | | | | | | | | | | | | | PASS | |
| 52 | PT0403 | RCS WIDE RANGE PRESSURE LOOP A | | | | | | | | | | | | | | | | | | | | | PASS | |
| | | | | | | | | | | | | | | | | | | | | | | | | |
| 53 | PT0446 | TURBINE FIRST STAGE PRESSURE | | | | | | | | | | | | | | | | | | | | | PASS | |
| 54 | PT0447 | TURBINE FIRST STAGE PRESSURE | | | | | | | | | | | | | | | | | | | | | PASS | |
| | | | | | | | | | | | | | | | | | | | | | | | | |
| 55 | LT0501 | RWST LEVEL | | | | | | | | | | | | | | | | | | | | | PASS | |
| 56 | LT0502 | RWST LEVEL | | | | | | | | | | | | | | | | | | | | | PASS | |
| | | | | | | | | | | | | | | | | | | | | | | | | |
| 57 | PT0951 | CTMT PRESSURE | | | | | | | | | | | | | | | | | | | | | PASS | |
| 58 | PT0952 | CTMT PRESSURE | | | | | | | | | | | | | | | | | | | | | PASS | |
| 59 | PT0953 | CTMT PRESSURE | | | | | | | | | | | | | | | | | | | | | PASS | |

*R = Exceeded Redundant Sensor Analysis Limits  M = Exceeded Model Analysis Limits  D = Exceeded Drift Limits*

**Table B.1 (continued) Farley Unit 1 OLM Results Summary (Cycle 23)**

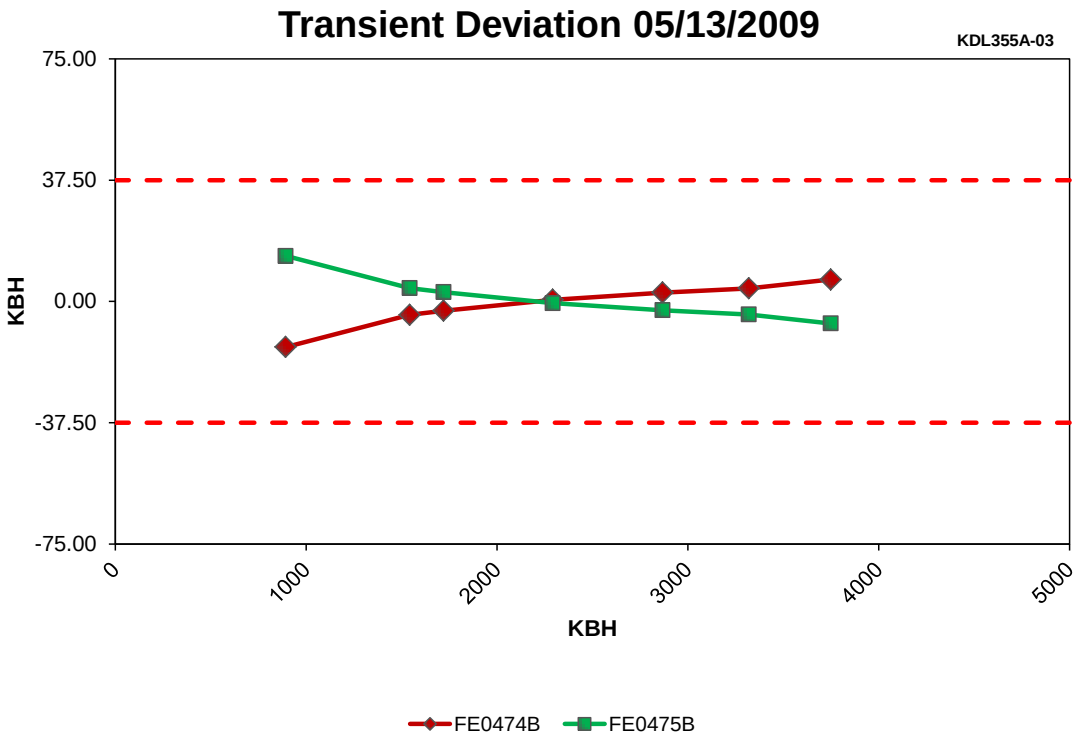



**Figure B.1 SG A STEAM FLOW Transient Deviation at Farley Unit 1 (Cycle 23)**

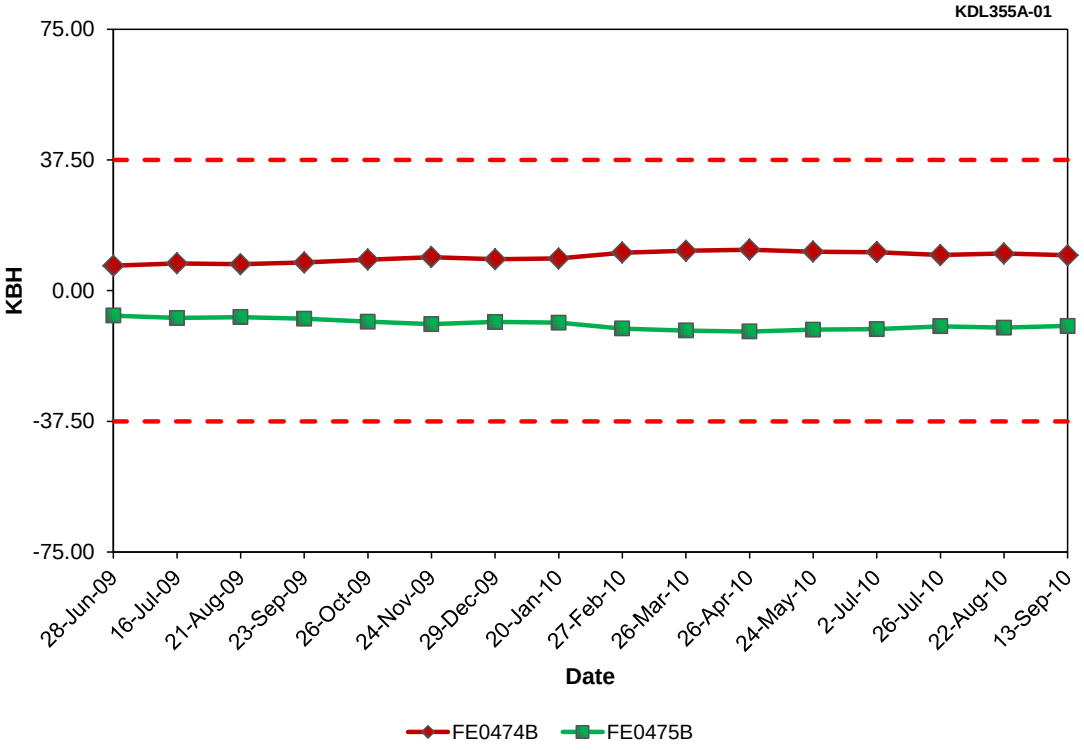



**Figure B.2 SG A STEAM FLOW Steady-State Deviation at Farley Unit 1 (Cycle 23)**

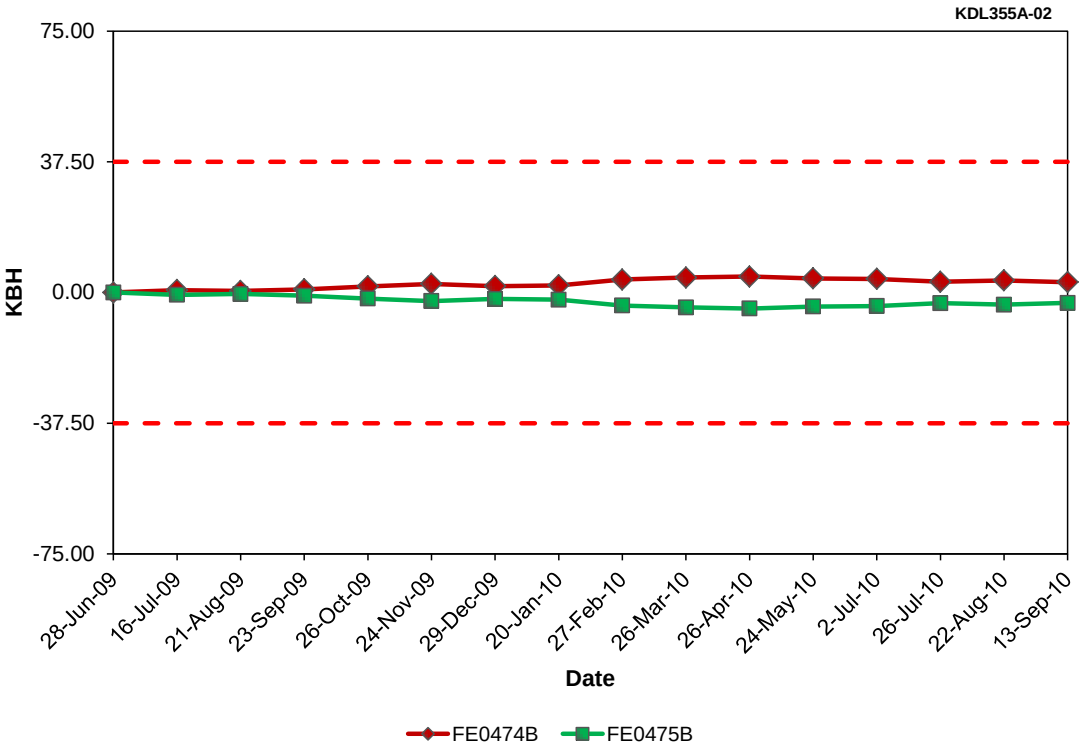



**Figure B.3 SG A STEAM FLOW Steady-State Drift at Farley Unit 1 (Cycle 23)**

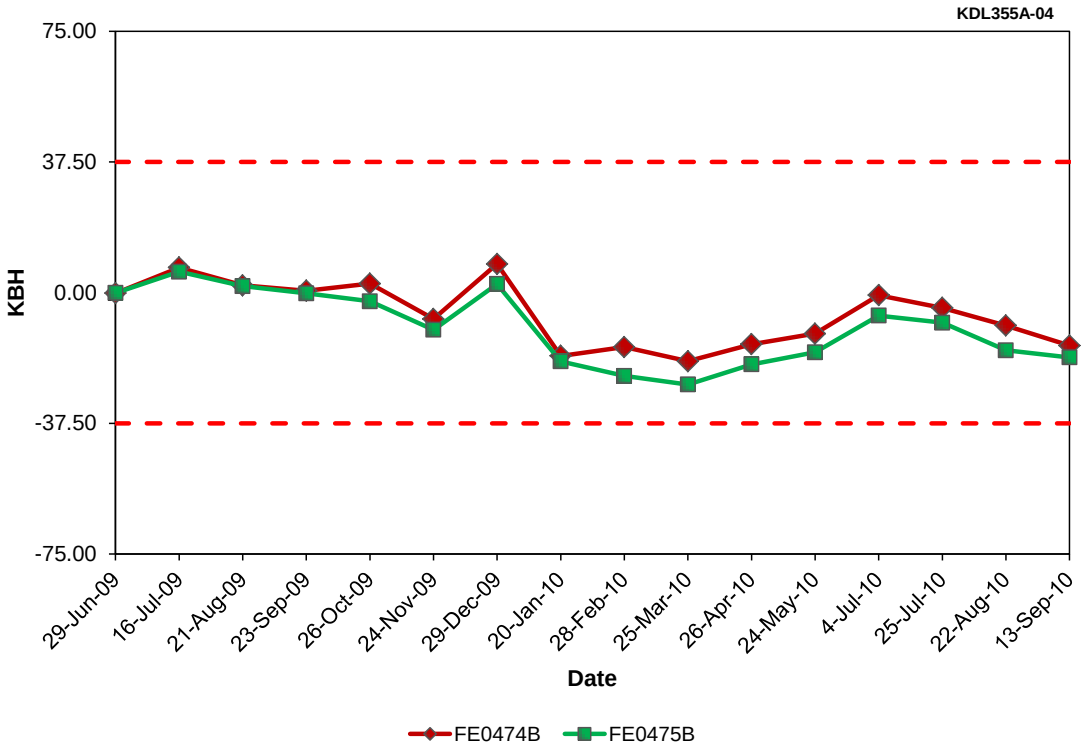



**Figure B.4 SG A STEAM FLOW Steady-State Residual AAKR at Farley Unit 1 (Cycle 23)**

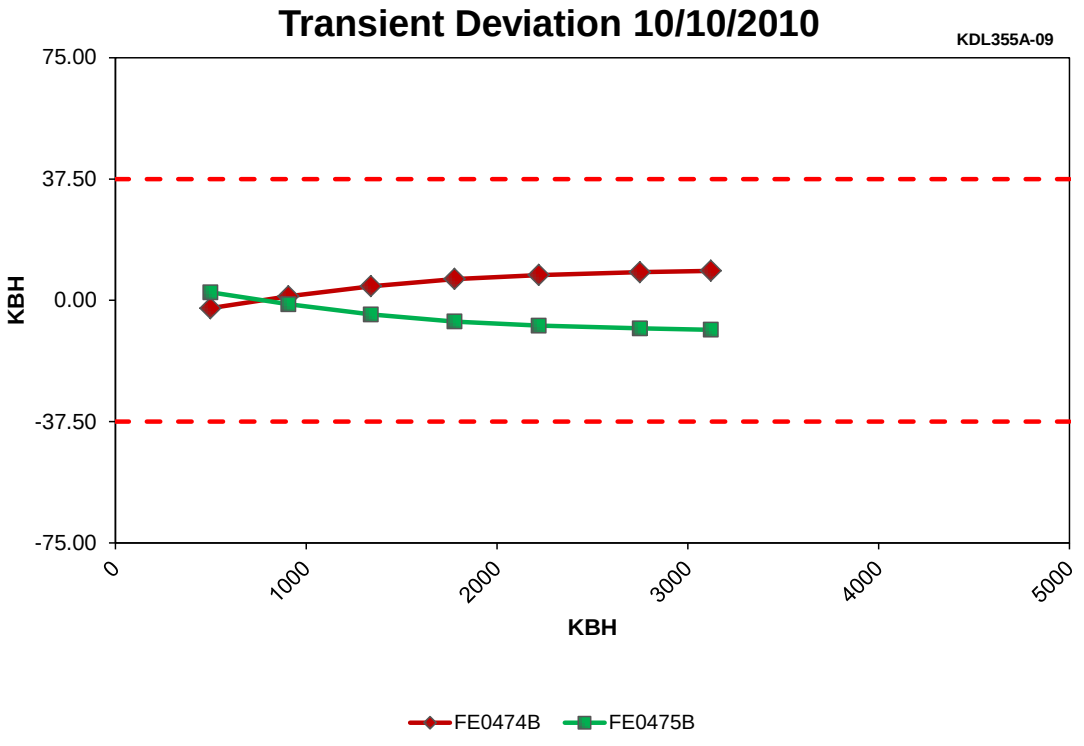



**Figure B.5 SG A STEAM FLOW Transient Deviation at Farley Unit 1 (Cycle 23)**

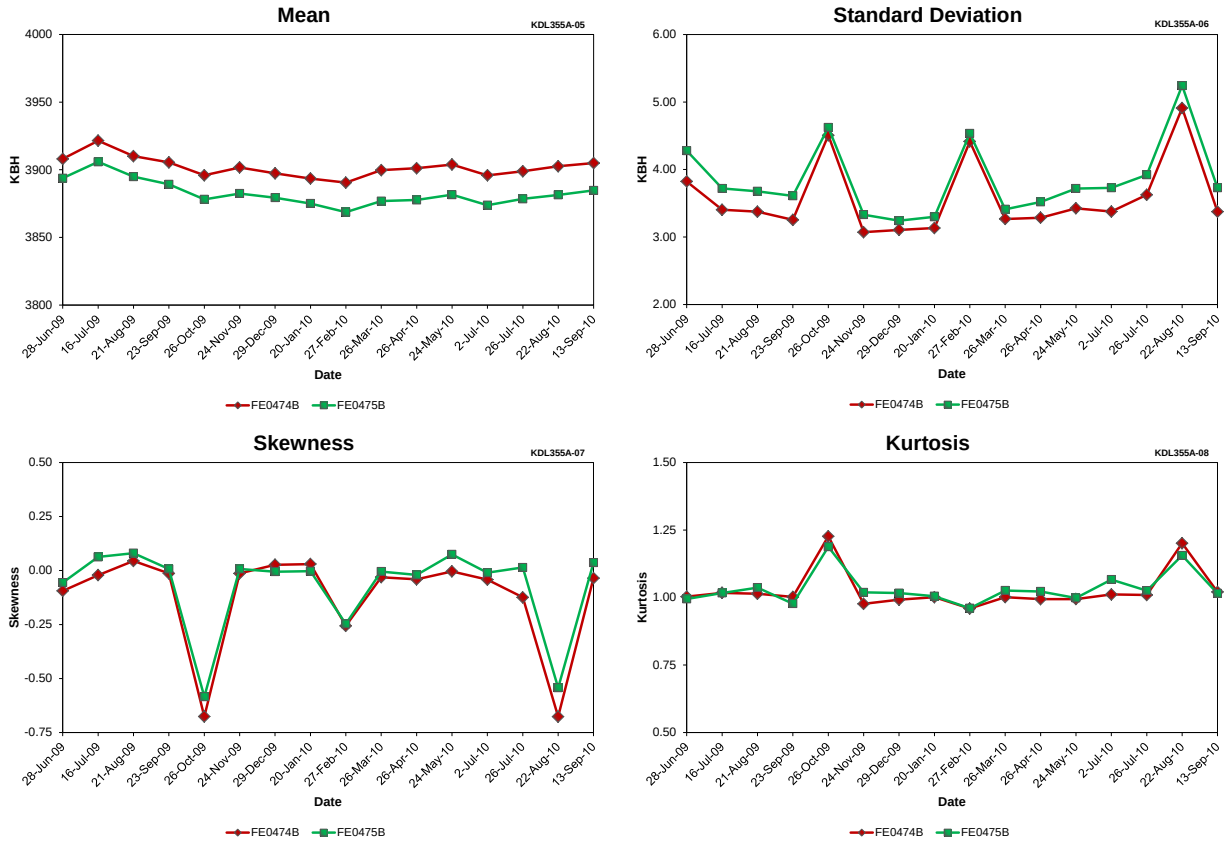



**Figure B.6 SG A STEAM FLOW Data Quality Statistics at Farley Unit 1 (Cycle 23)**

**Table B.1 SG A STEAM FLOW Data Quality for Farley Unit 1 (Cycle 23)**

| | Tag Names | |
|---|---|---|
| **Result Type** | **FE0474B** | **FE0475B** |
| Mean | 3901.93 | 3882.62 |
| Std. Dev. | 3.58 | 3.85 |
| Skewness | -0.12 | -0.07 |
| Kurtosis | 1.03 | 1.03 |

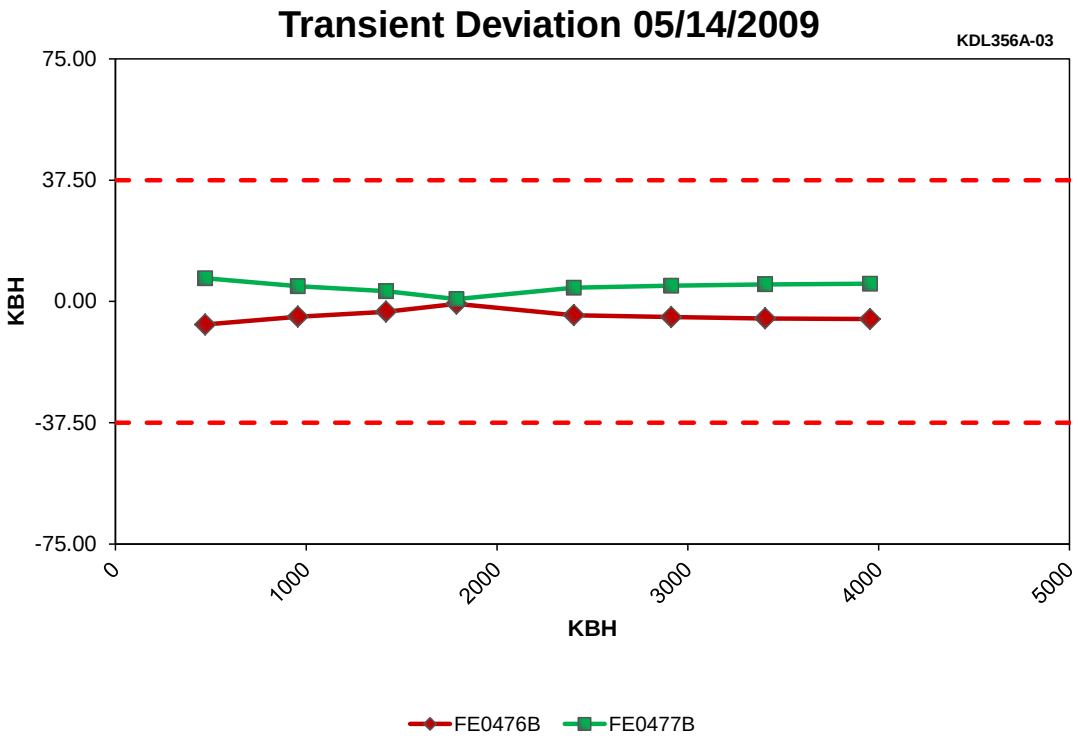



**Figure B.7 FW FLOW TO SG A Transient Deviation at Farley Unit 1 (Cycle 23)**

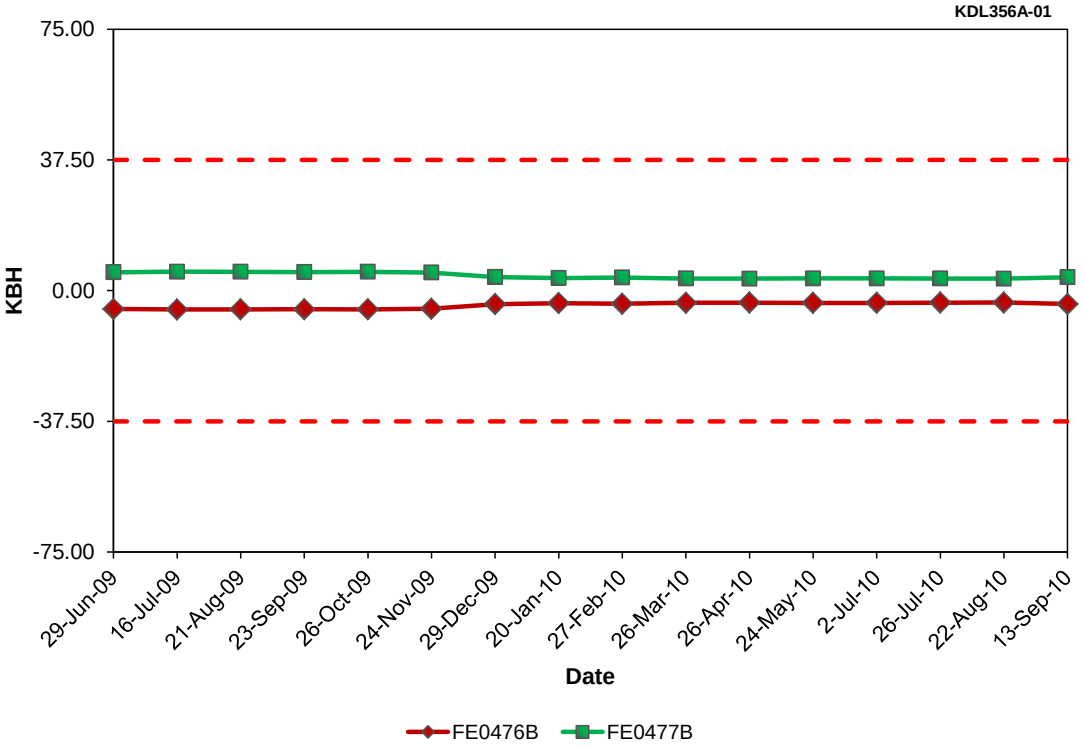



**Figure B.8 FW FLOW TO SG A Steady-State Deviation at Farley Unit 1 (Cycle 23)**

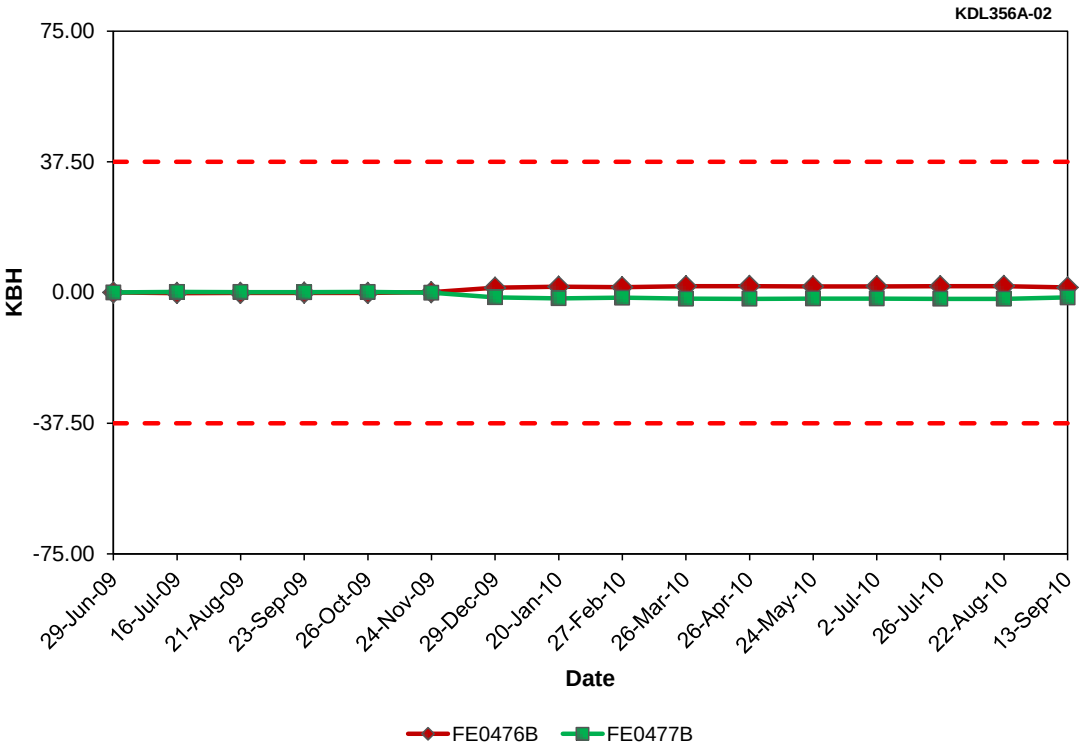



**Figure B.9 FW FLOW TO SG A Steady-State Drift at Farley Unit 1 (Cycle 23)**

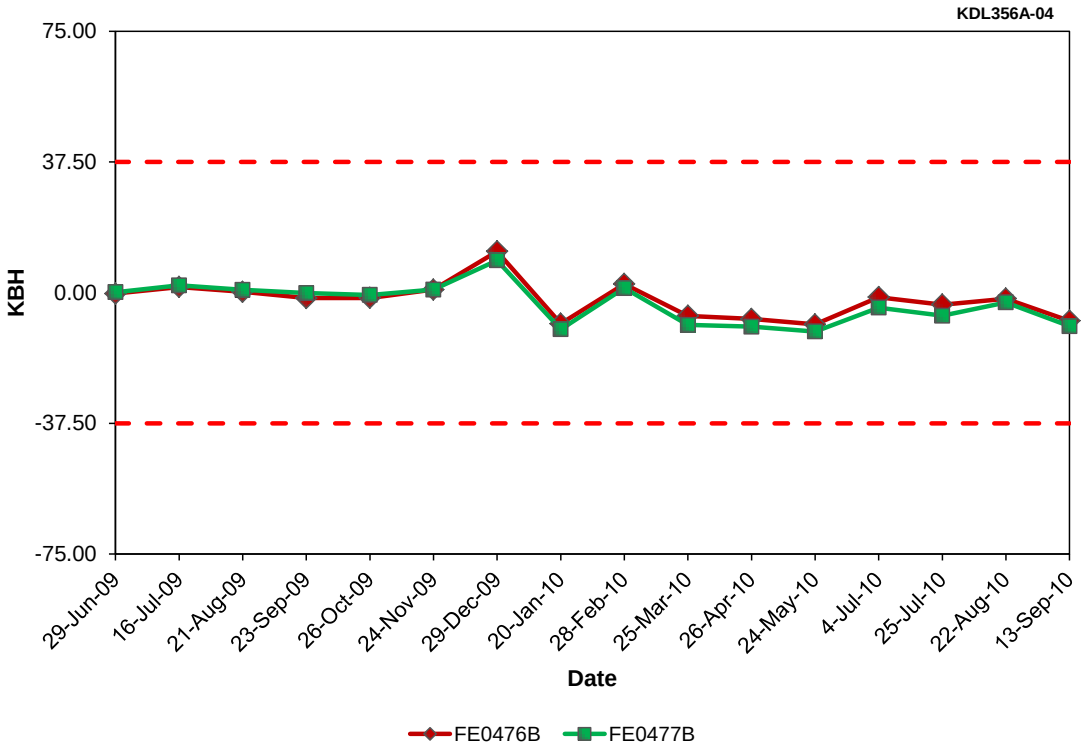



**Figure B.10 FW FLOW TO SG A Steady-State Residual AAKR at Farley Unit 1 (Cycle 23)**

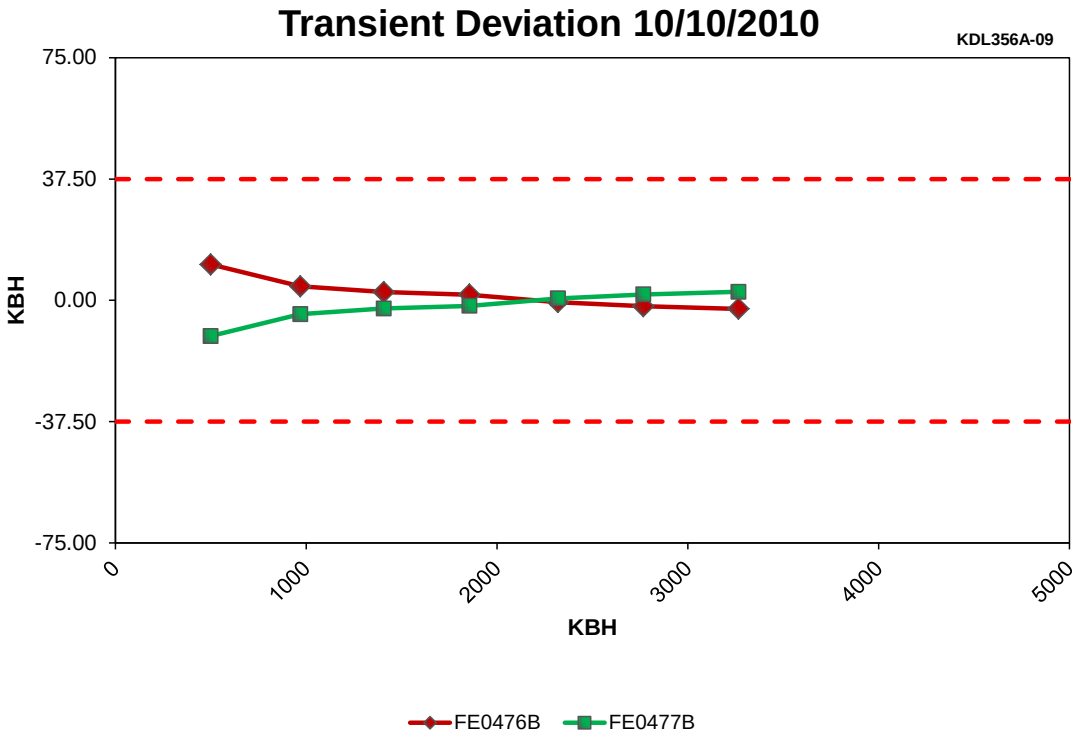



**Figure B.11 FW FLOW TO SG A Transient Deviation at Farley Unit 1 (Cycle 23)**

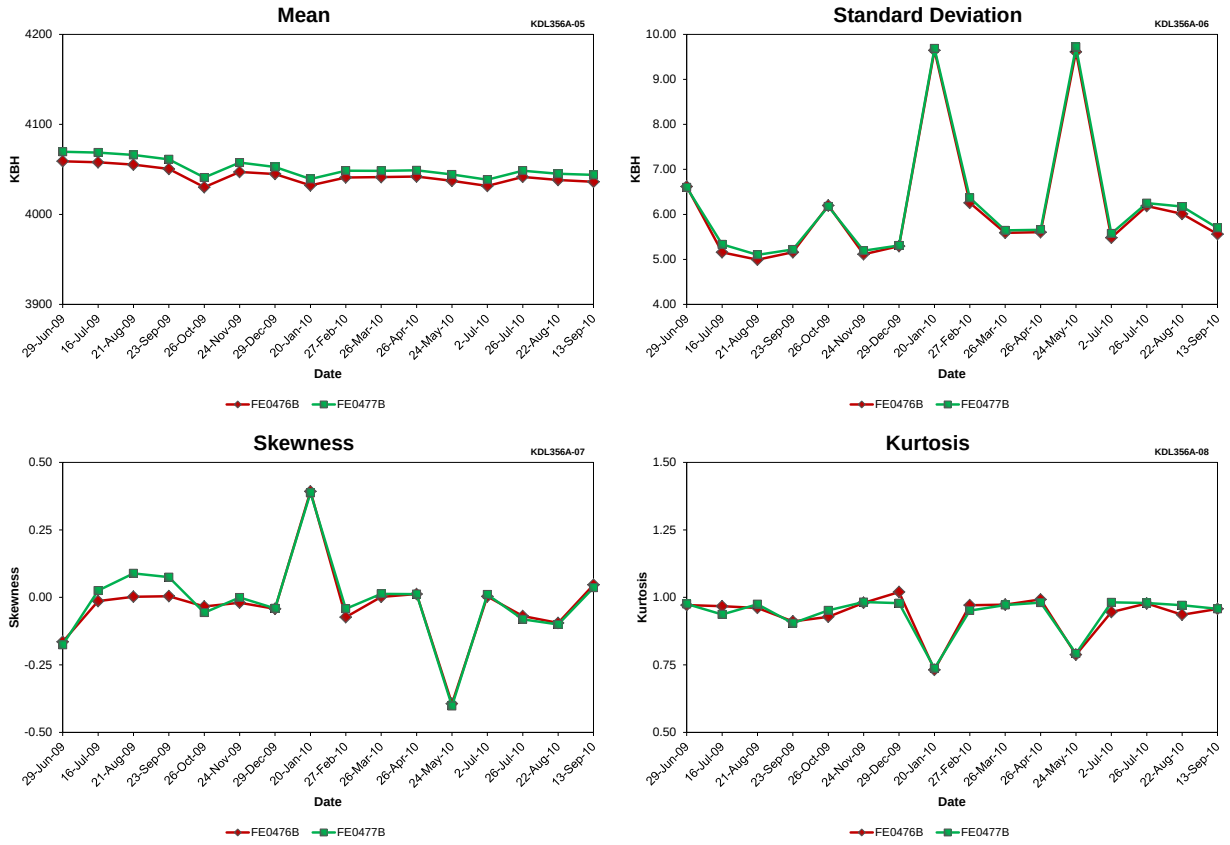



**Figure B.12 FW FLOW TO SG A Data Quality Statistics at Farley Unit 1 (Cycle 23)**

**Table B.2 FW FLOW TO SG A Data Quality for Farley Unit 1 (Cycle 23)**

| | Tag Names | |
|---|---|---|
| **Result Type** | **FE0476B** | **FE0477B** |
| Mean | 4042.89 | 4051.38 |
| Std. Dev. | 6.15 | 6.23 |
| Skewness | -0.03 | -0.02 |
| Kurtosis | 0.94 | 0.94 |

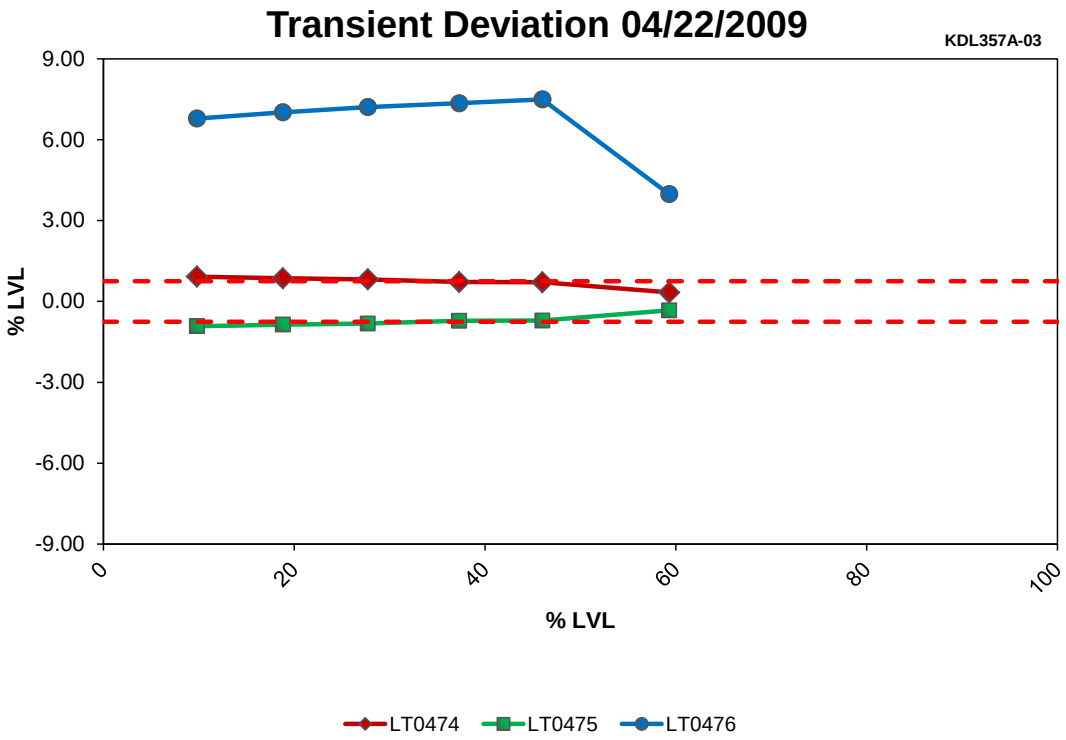



**Figure B.13 SG A LEVEL Transient Deviation at Farley Unit 1 (Cycle 23)**

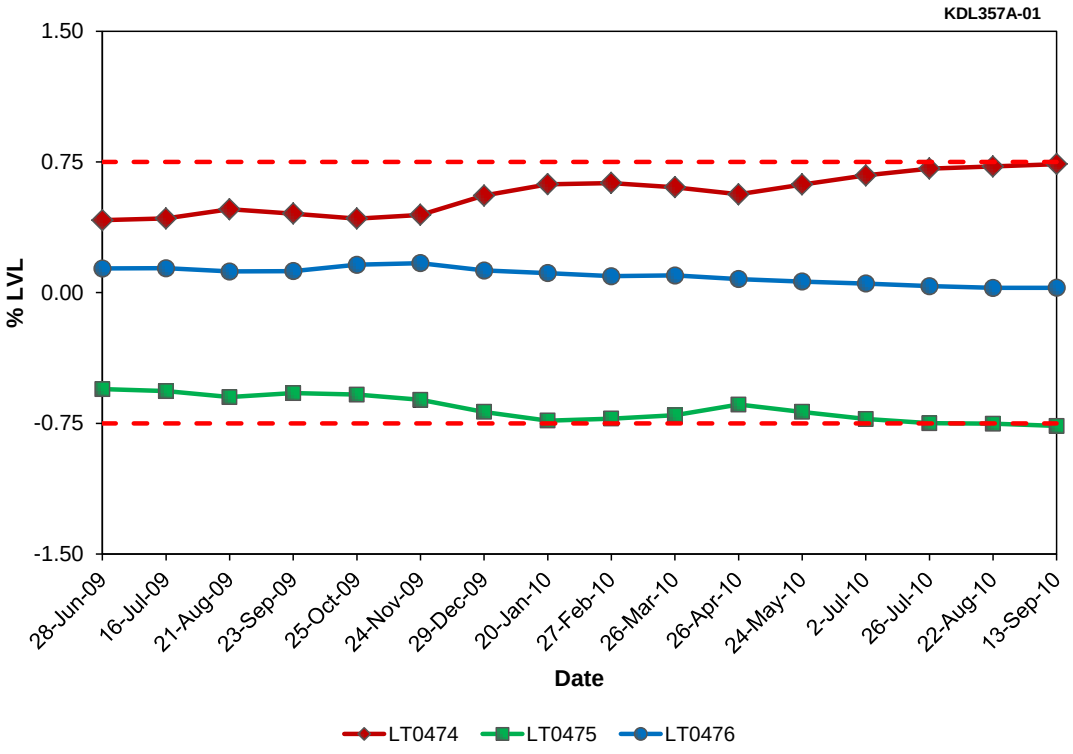



**Figure B.14 SG A LEVEL Steady-State Deviation at Farley Unit 1 (Cycle 23)**

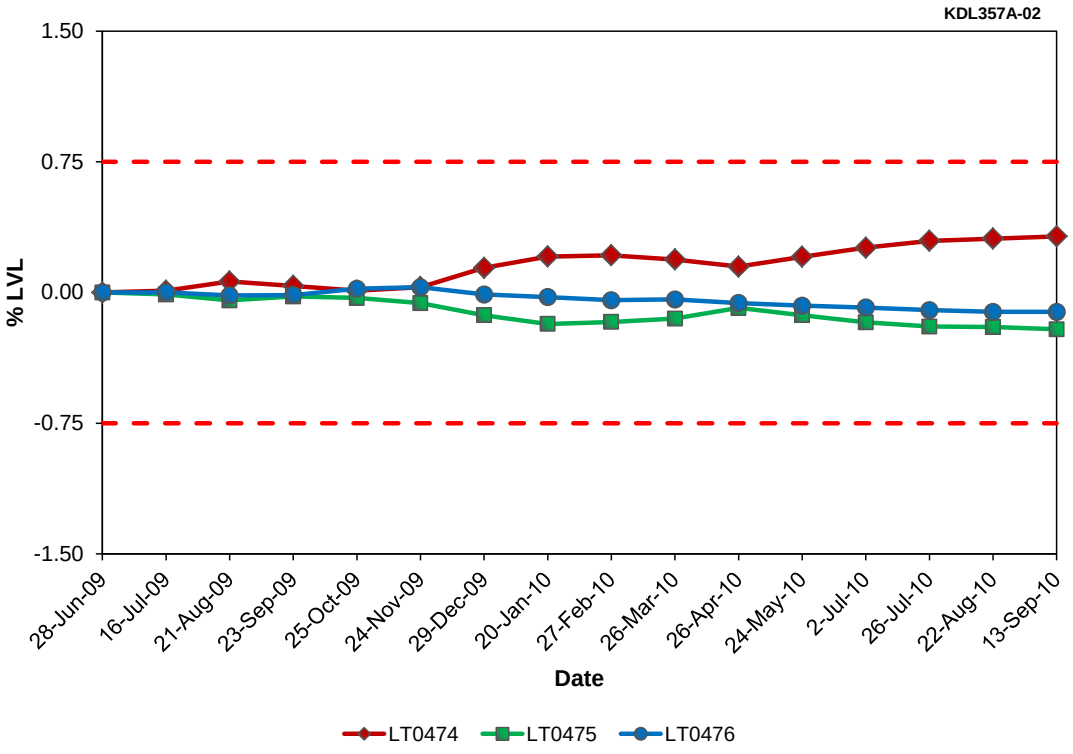



**Figure B.15 SG A LEVEL Steady-State Drift at Farley Unit 1 (Cycle 23)**

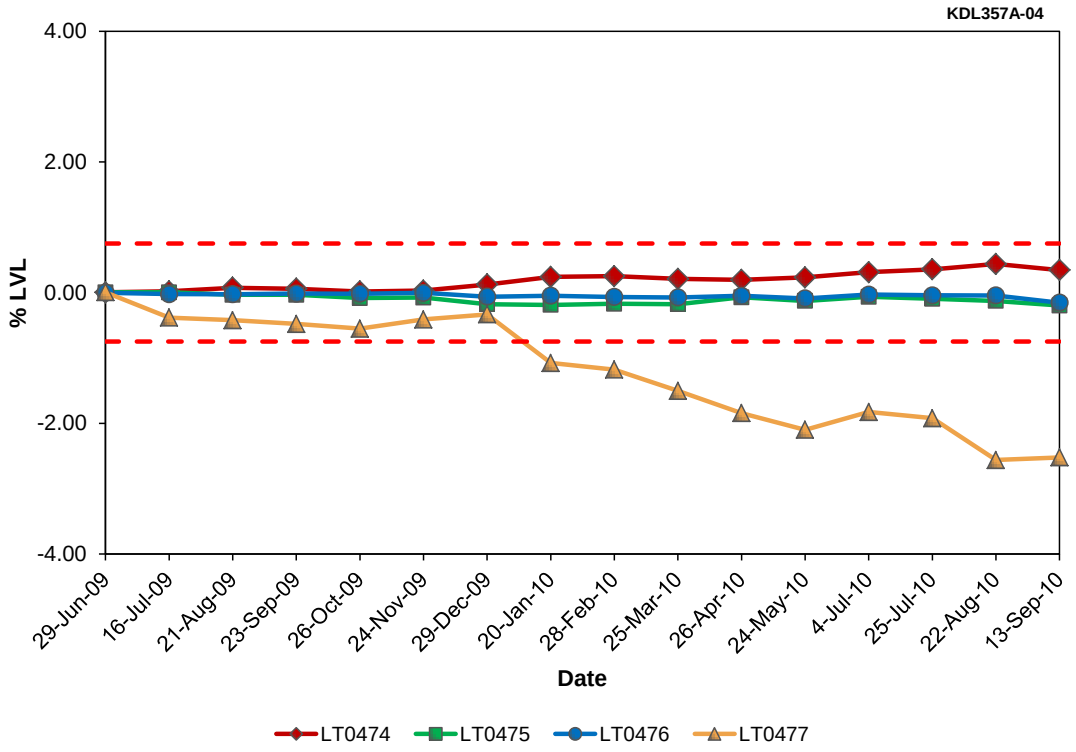



**Figure B.16 SG A LEVEL Steady-State Residual AAKR at Farley Unit 1 (Cycle 23)**

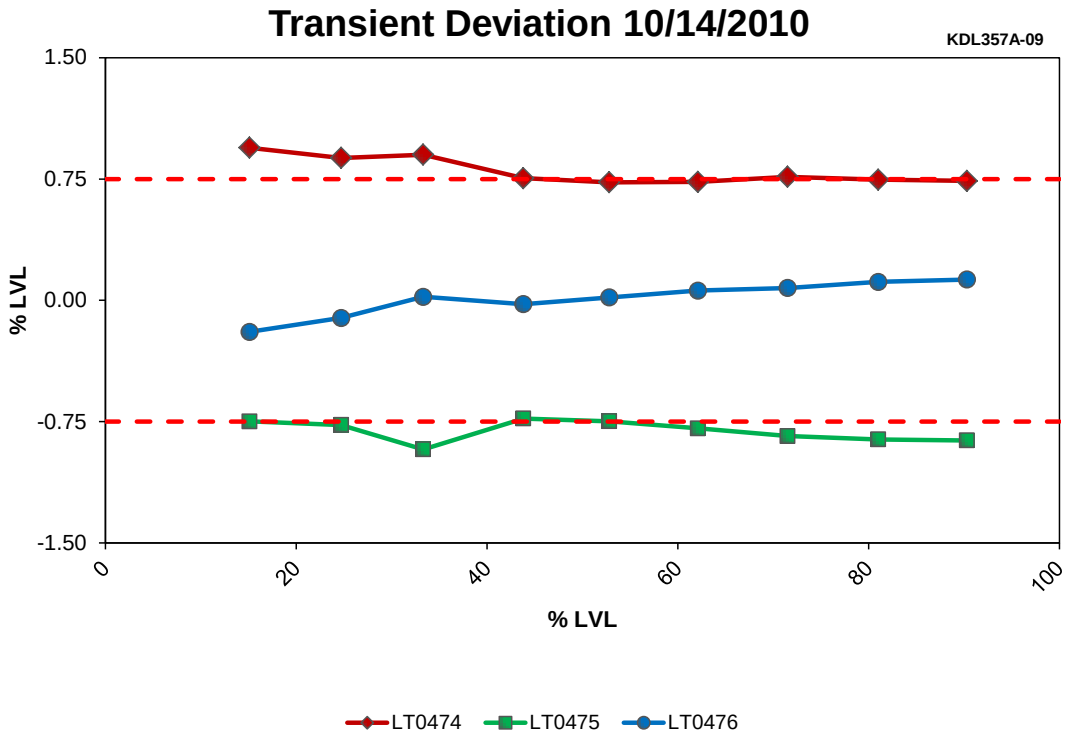



**Figure B.17 SG A LEVEL Transient Deviation at Farley Unit 1 (Cycle 23)**

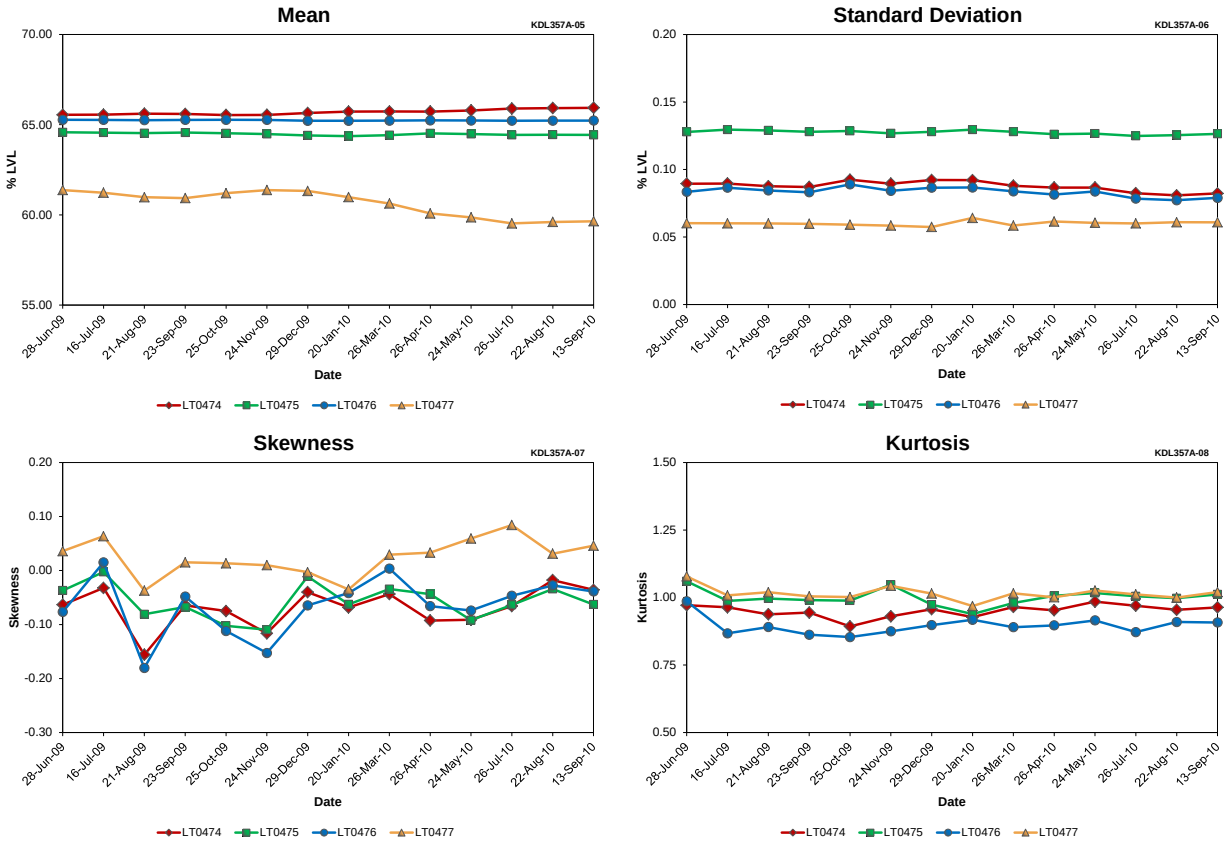



**Figure B.18 SG A LEVEL Data Quality Statistics at Farley Unit 1 (Cycle 23)**

**Table B.3 SG A LEVEL Data Quality for Farley Unit 1 (Cycle 23)**

| | Tag Names | | | |
|---|---|---|---|---|
| **Result Type** | **LT0474** | **LT0475** | **LT0476** | **LT0477** |
| Mean | 65.69 | 64.48 | 65.24 | 60.62 |
| Std. Dev. | 0.09 | 0.13 | 0.08 | 0.06 |
| Skewness | -0.07 | -0.06 | -0.07 | 0.02 |
| Kurtosis | 0.95 | 1.00 | 0.90 | 1.02 |

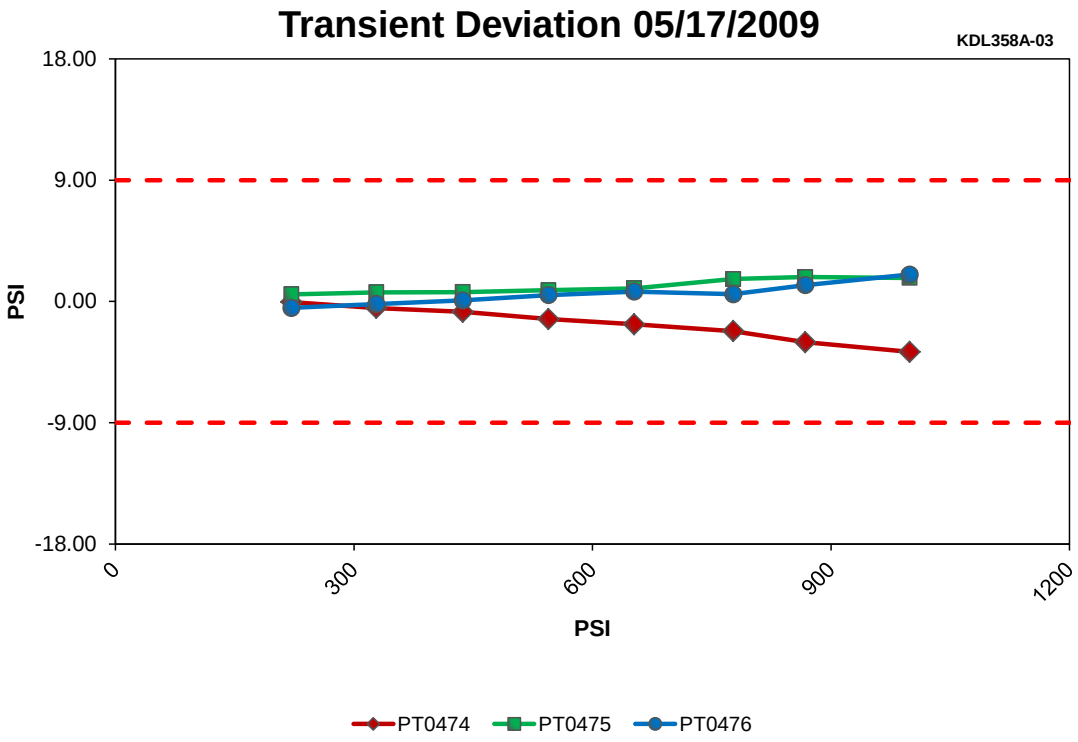



**Figure B.19 SG A OUTLET PRESSURE Transient Deviation at Farley Unit 1 (Cycle 23)**

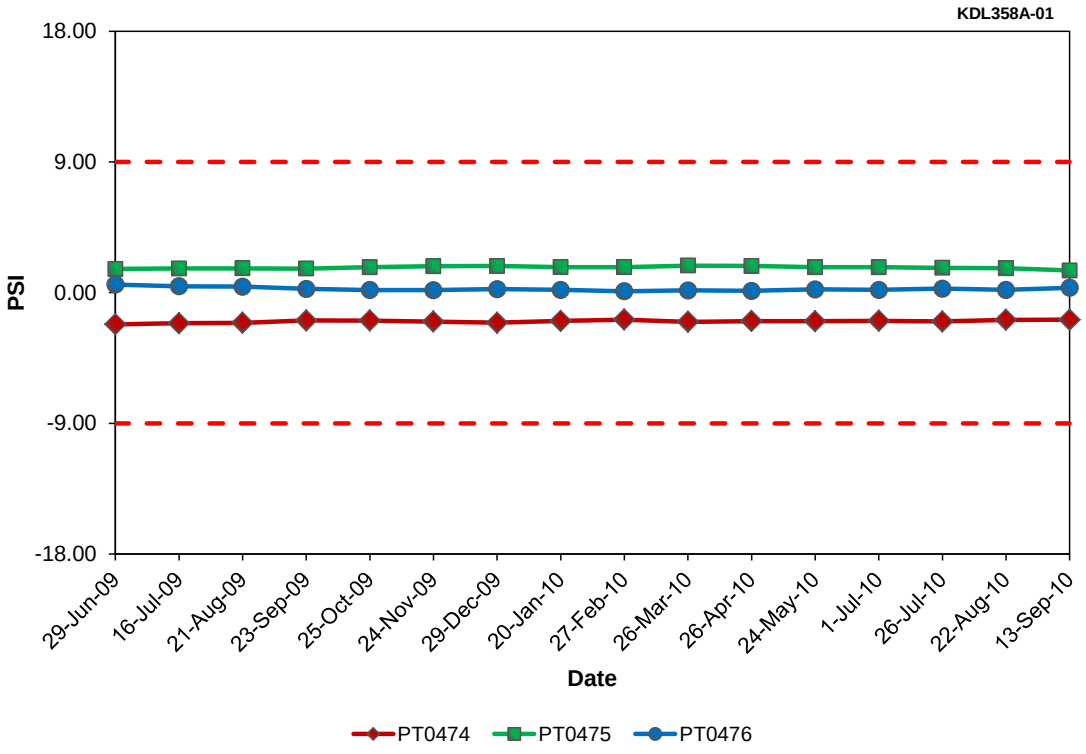



**Figure B.20 SG A OUTLET PRESSURE Steady-State Deviation at Farley Unit 1 (Cycle 23)**

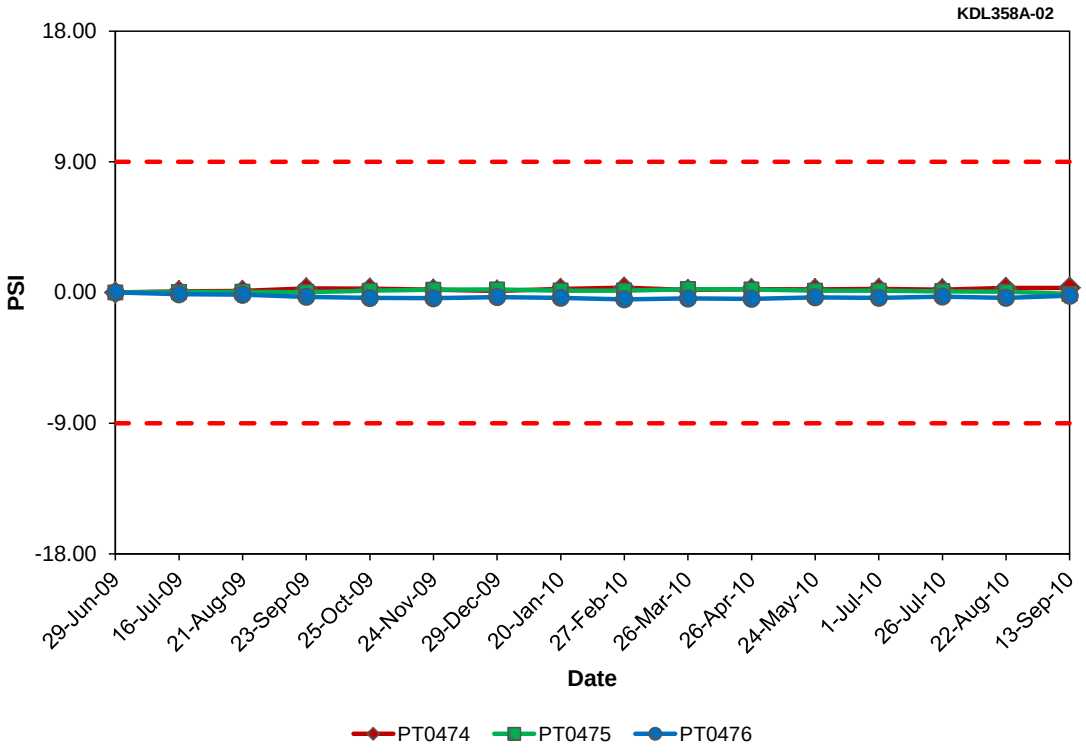



**Figure B.21 SG A OUTLET PRESSURE Steady-State Drift at Farley Unit 1 (Cycle 23)**

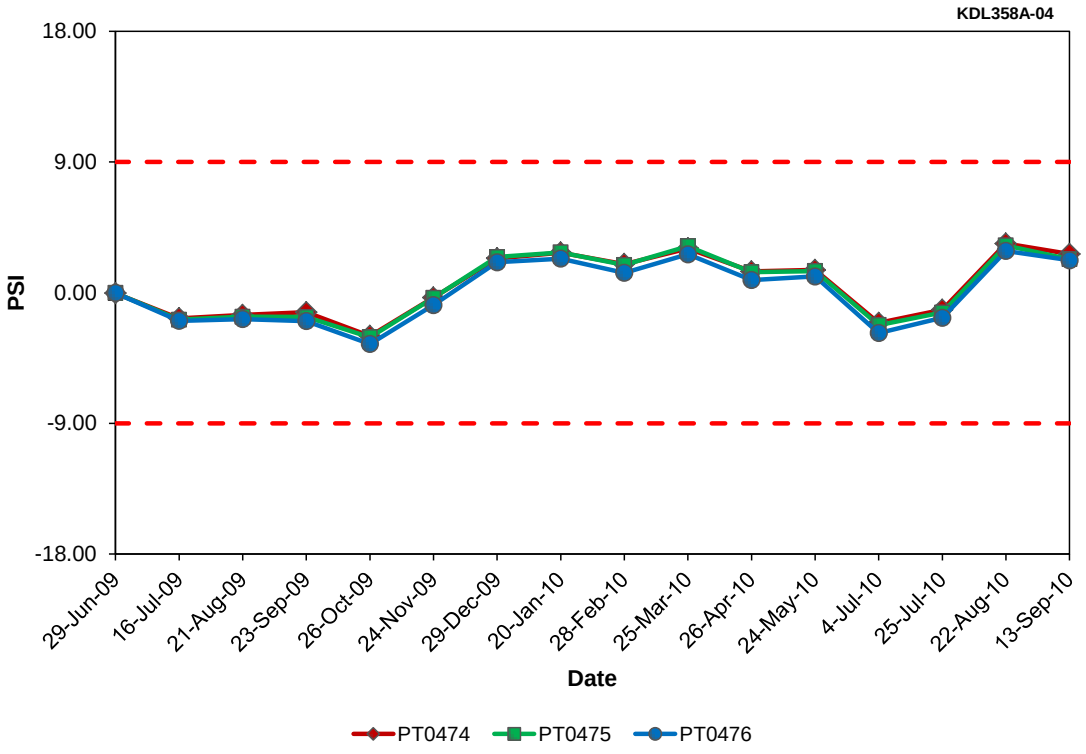



**Figure B.22 SG A OUTLET PRESSURE Steady-State Residual AAKR at Farley Unit 1 (Cycle 23)**

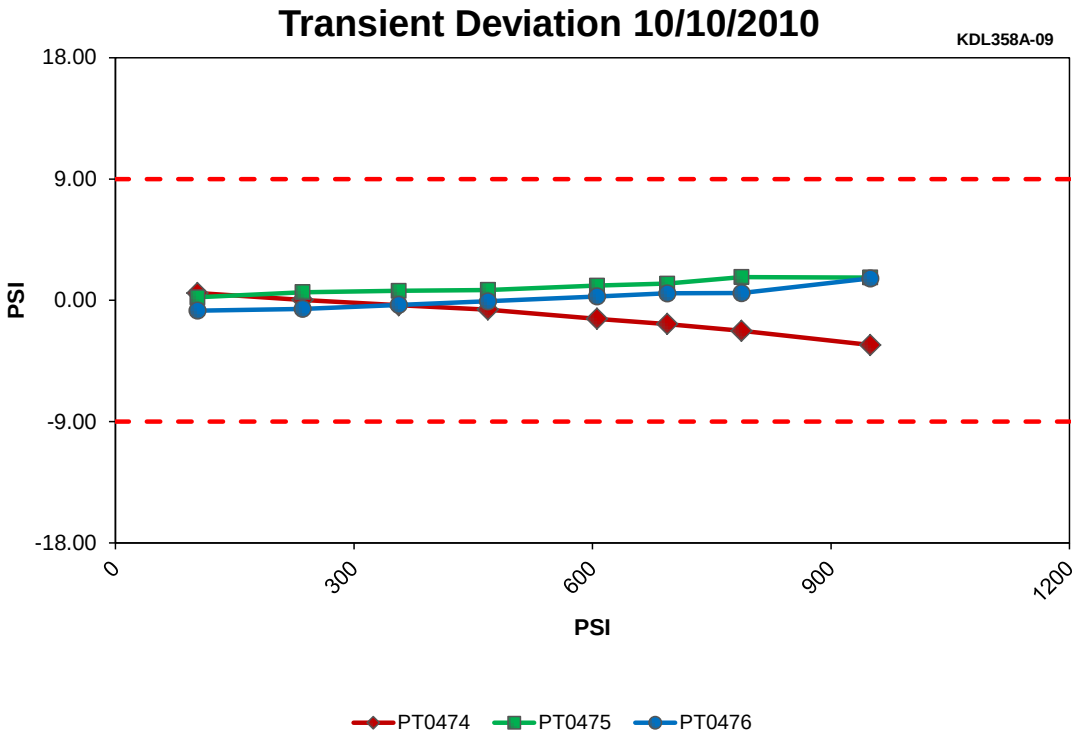



**Figure B.23 SG A OUTLET PRESSURE Transient Deviation at Farley Unit 1 (Cycle 23)**

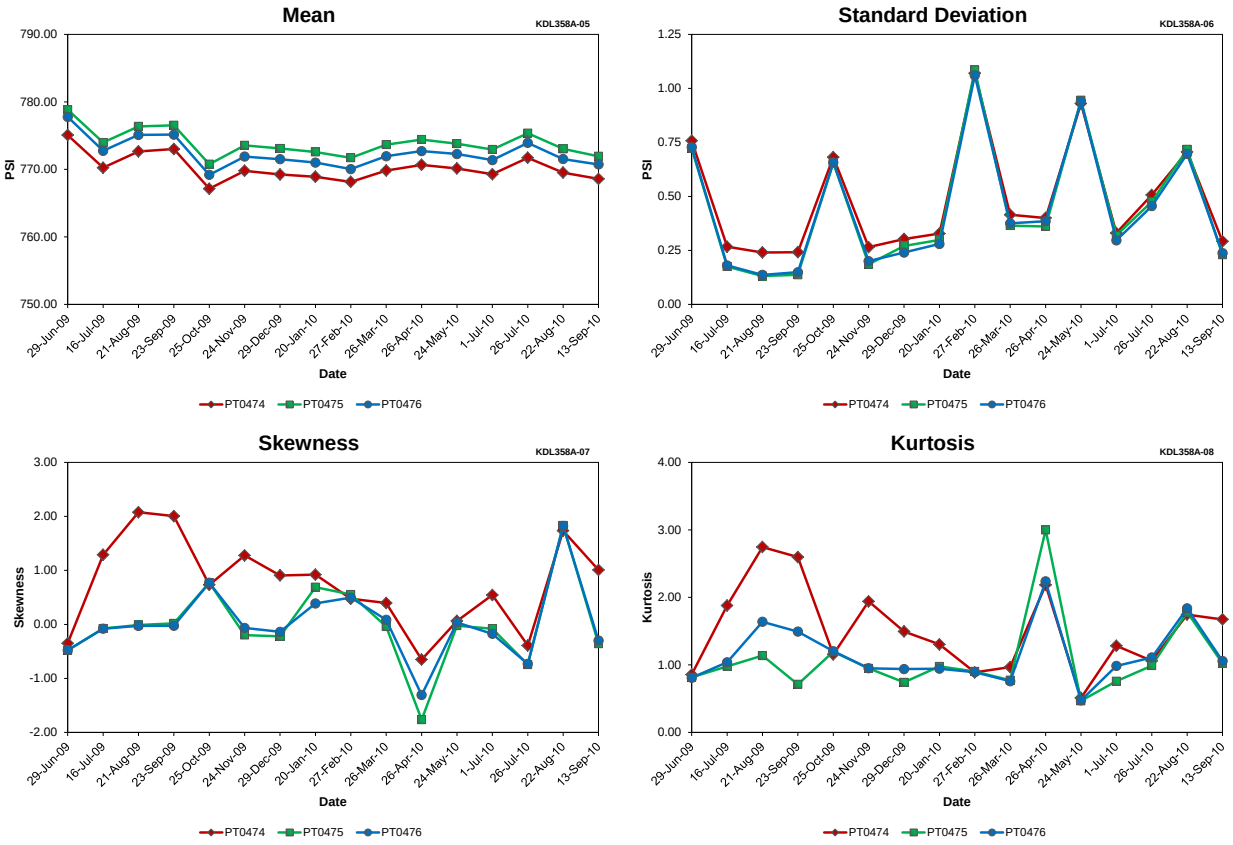



**Figure B.24 SG A OUTLET PRESSURE Data Quality Statistics at Farley Unit 1 (Cycle 23)**

**Table B.4 SG A OUTLET PRESSURE Data Quality for Farley Unit 1 (Cycle 23)**

| | Tag Names | | |
|---|---|---|---|
| **Result Type** | **PT0474** | **PT0475** | **PT0476** |
| Mean | 770.25 | 773.91 | 772.43 |
| Std. Dev. | 0.48 | 0.44 | 0.44 |
| Skewness | 0.75 | -0.01 | 0.02 |
| Kurtosis | 1.52 | 1.07 | 1.15 |

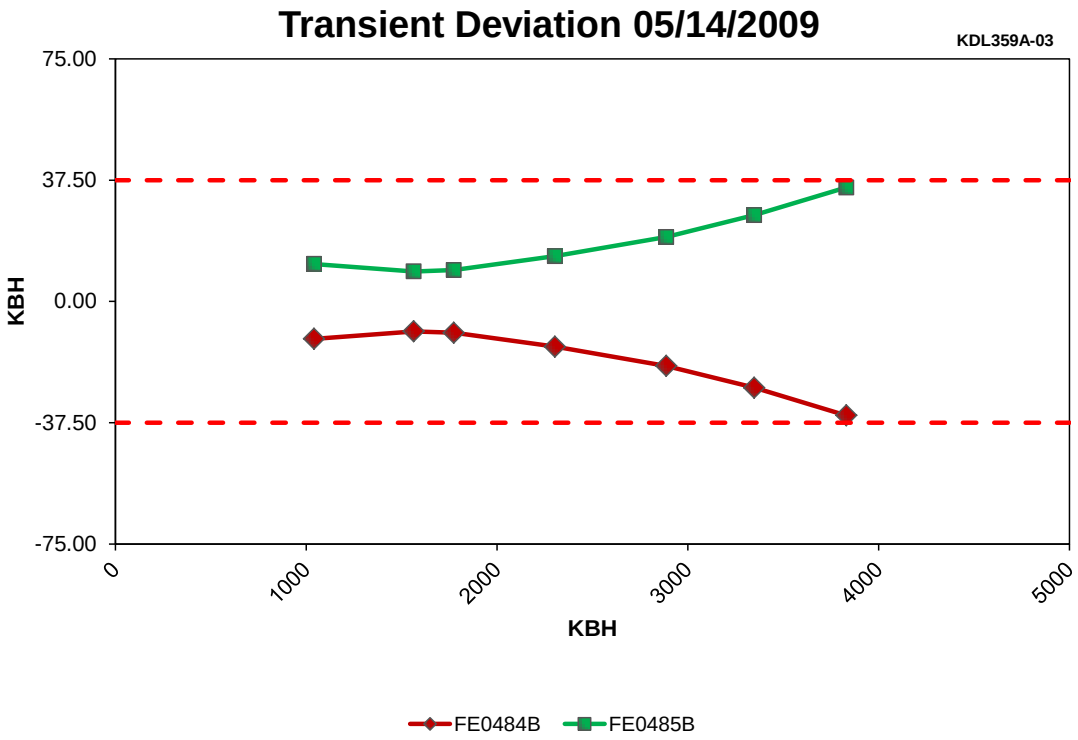



**Figure B.25 SG B STEAM FLOW Transient Deviation at Farley Unit 1 (Cycle 23)**

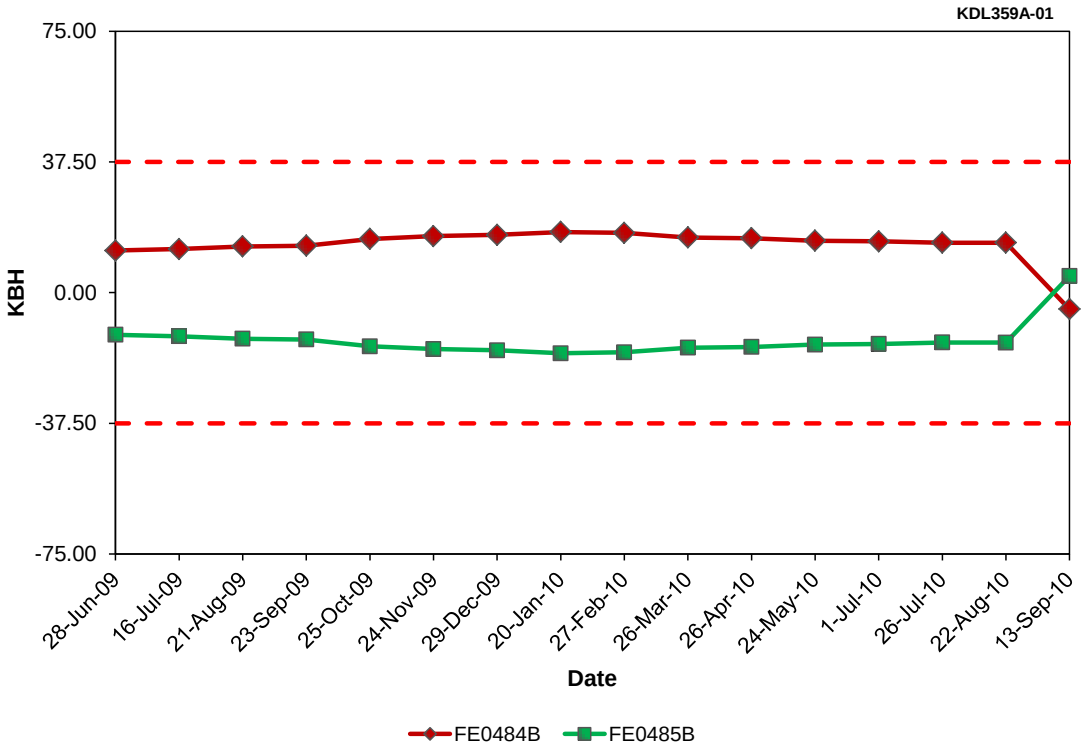



**Figure B.26 SG B STEAM FLOW Steady-State Deviation at Farley Unit 1 (Cycle 23)**

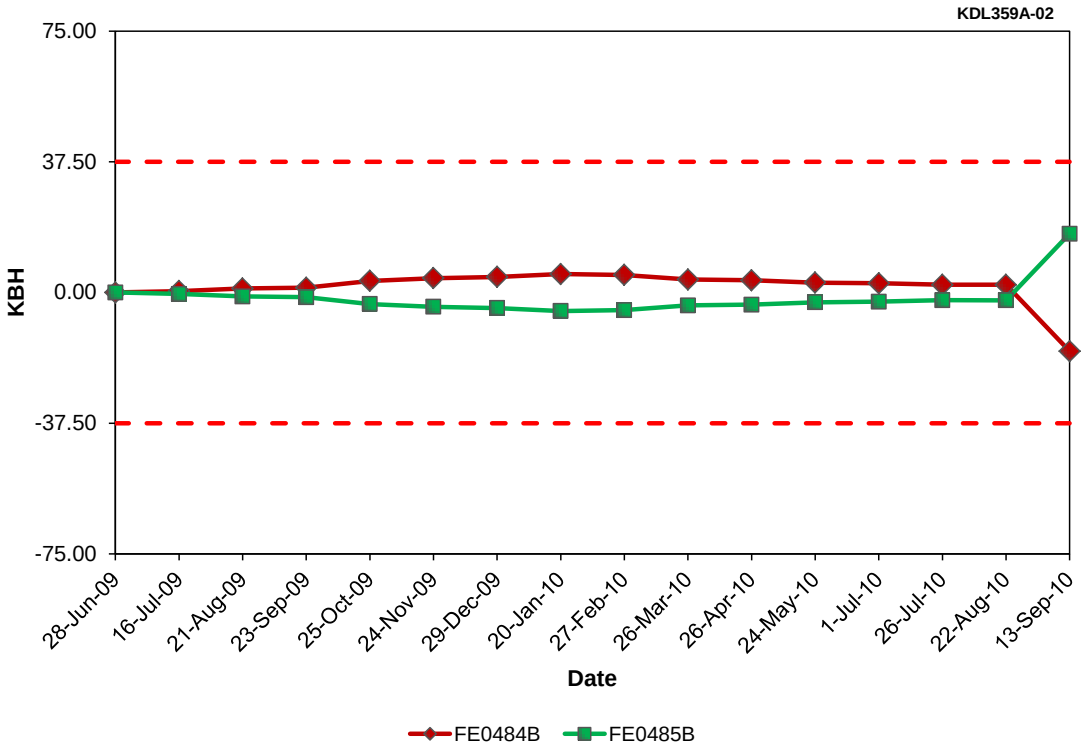



**Figure B.27 SG B STEAM FLOW Steady-State Drift at Farley Unit 1 (Cycle 23)**

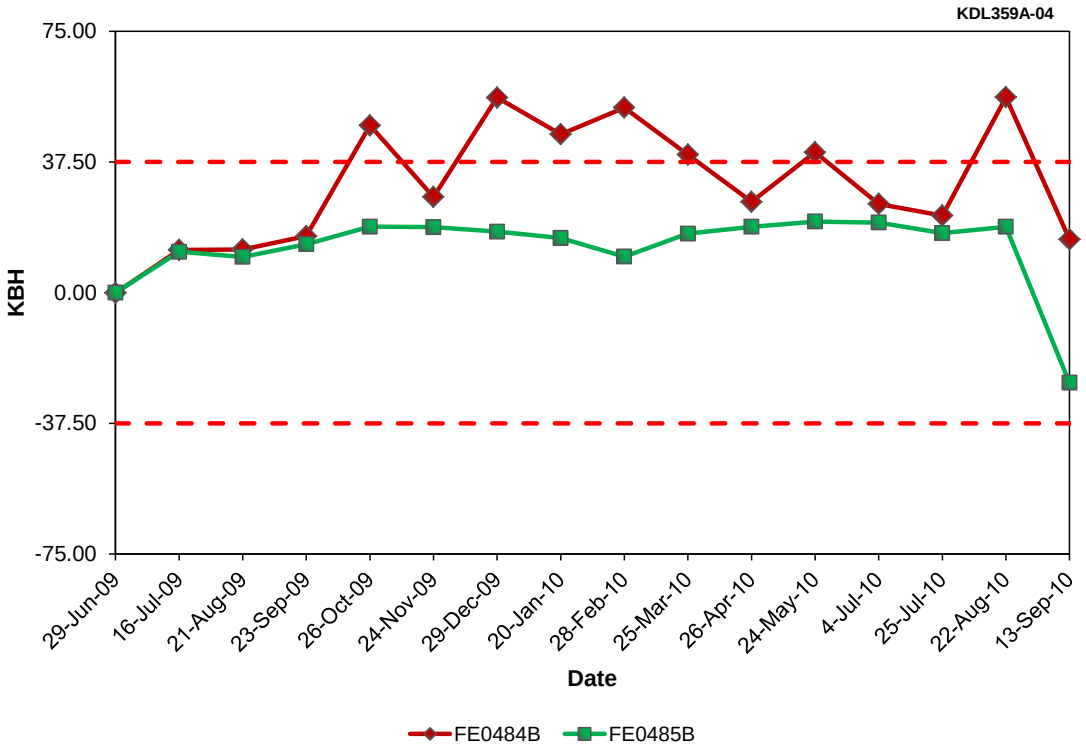



**Figure B.28 SG B STEAM FLOW Steady-State Residual AAKR at Farley Unit 1 (Cycle 23)**

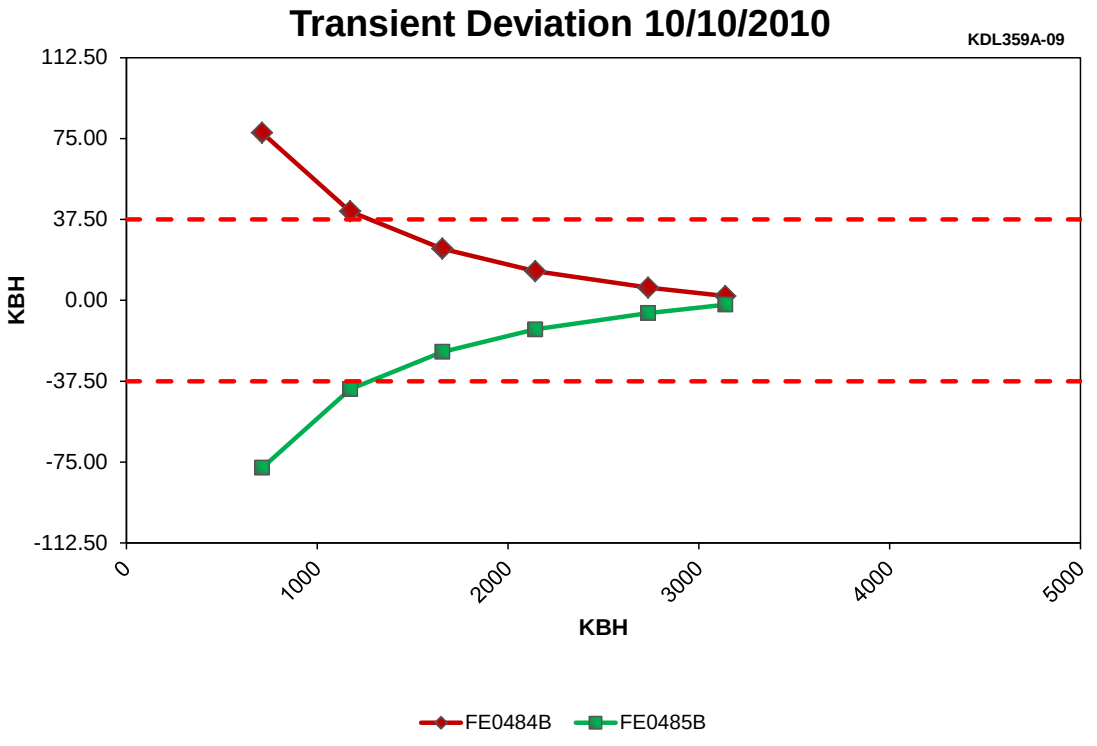



**Figure B.29 SG B STEAM FLOW Transient Deviation at Farley Unit 1 (Cycle 23)**

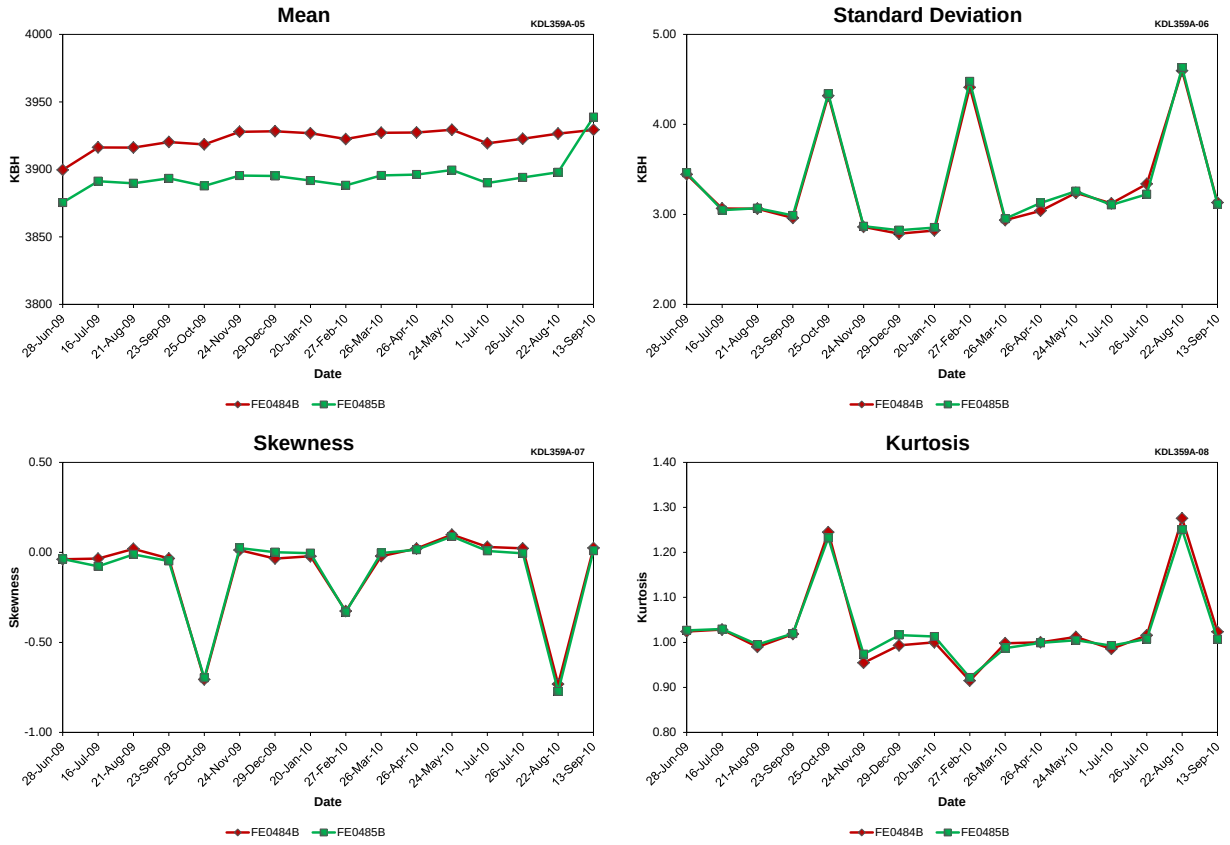



**Figure B.30 SG B STEAM FLOW Data Quality Statistics at Farley Unit 1 (Cycle 23)**

**Table B.5 SG B STEAM FLOW Data Quality for Farley Unit 1 (Cycle 23)**

| | Tag Names | |
|---|---|---|
| Result Type | FE0484B | FE0485B |
| Mean | 3922.35 | 3894.97 |
| Std. Dev. | 3.32 | 3.33 |
| Skewness | -0.11 | -0.12 |
| Kurtosis | 1.03 | 1.03 |

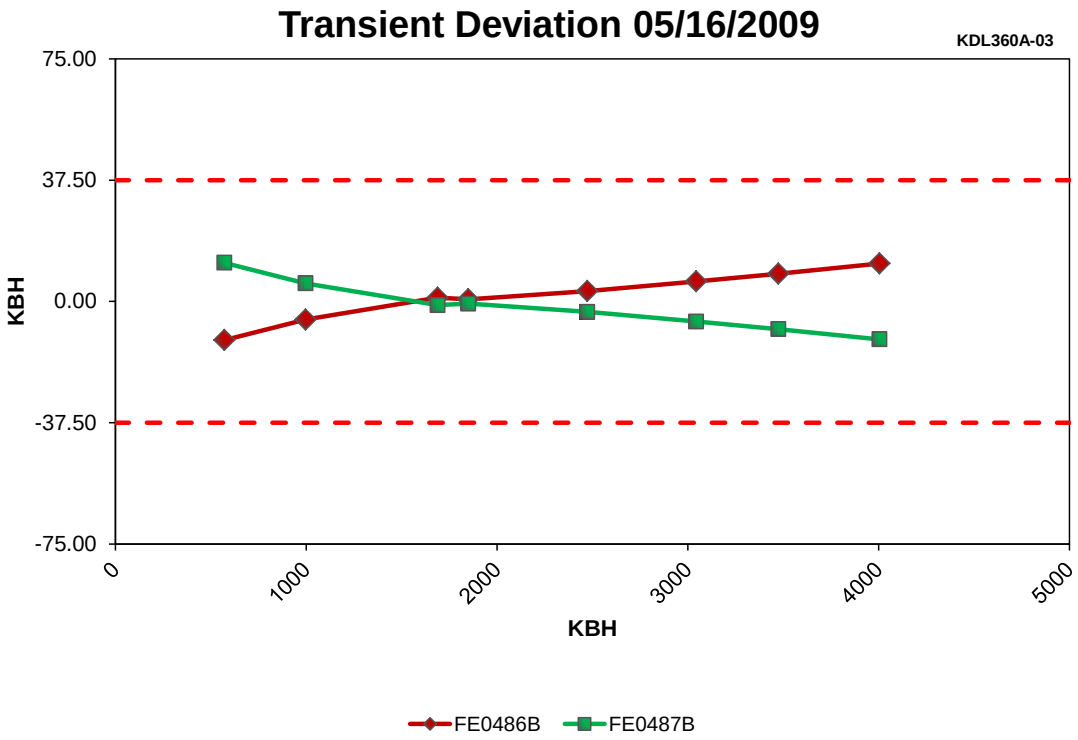



**Figure B.31 FW FLOW TO SG B Transient Deviation at Farley Unit 1 (Cycle 23)**

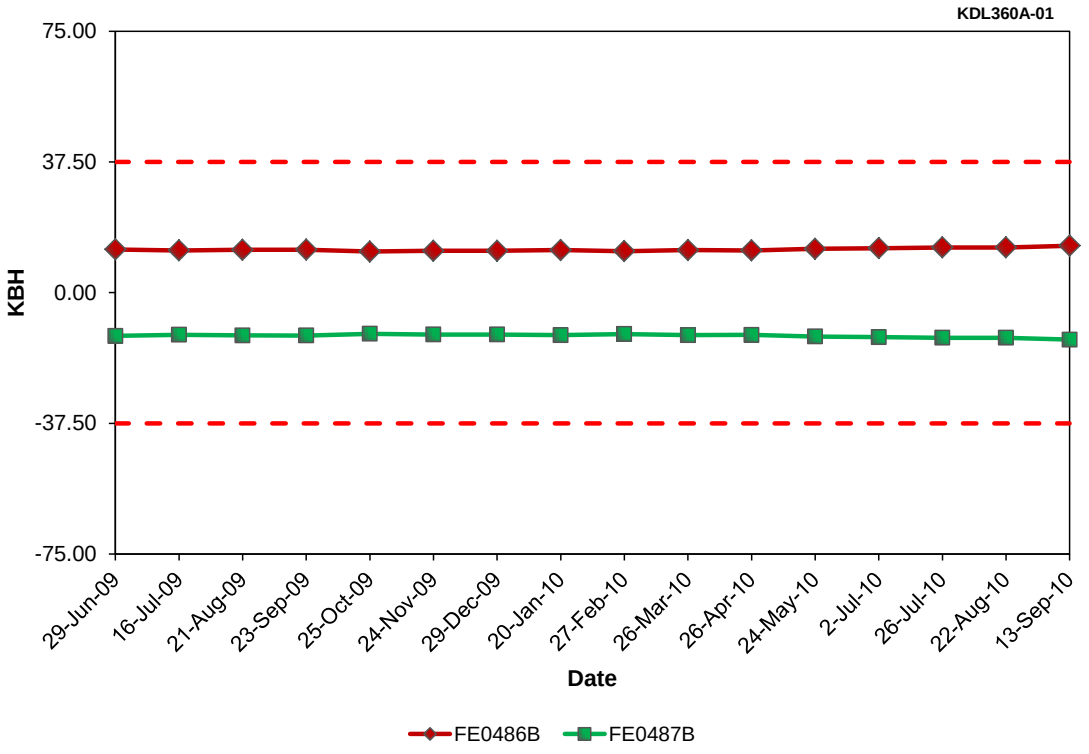



**Figure B.32 FW FLOW TO SG B Steady-State Deviation at Farley Unit 1 (Cycle 23)**

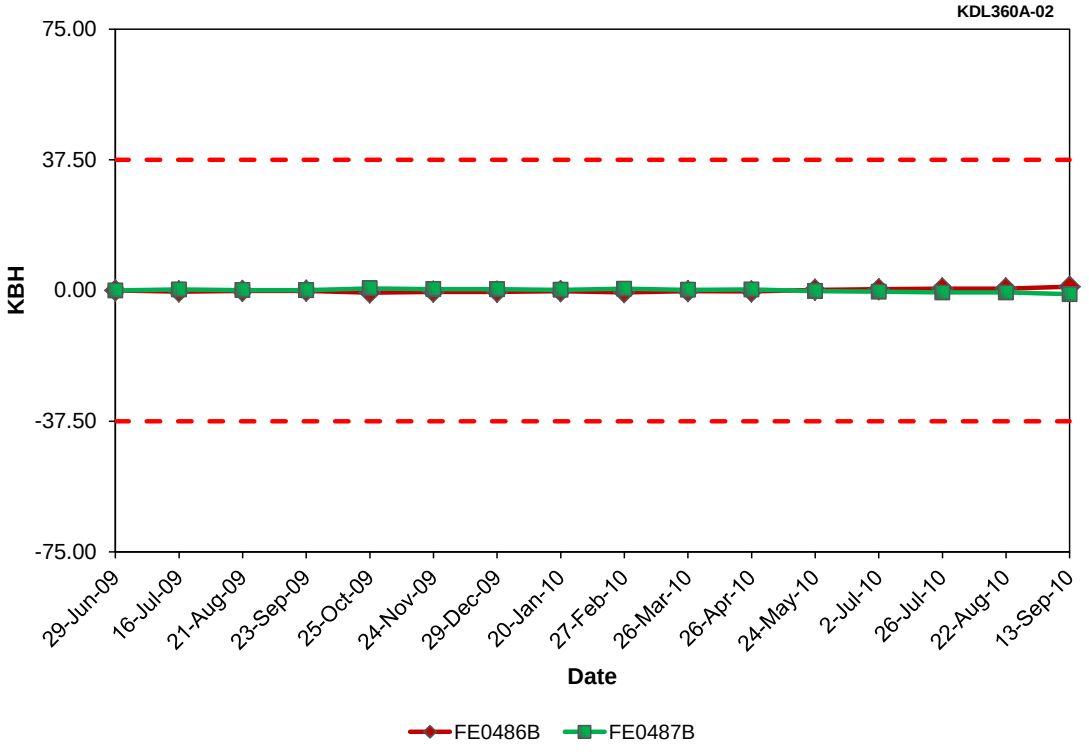



**Figure B.33 FW FLOW TO SG B Steady-State Drift at Farley Unit 1 (Cycle 23)**

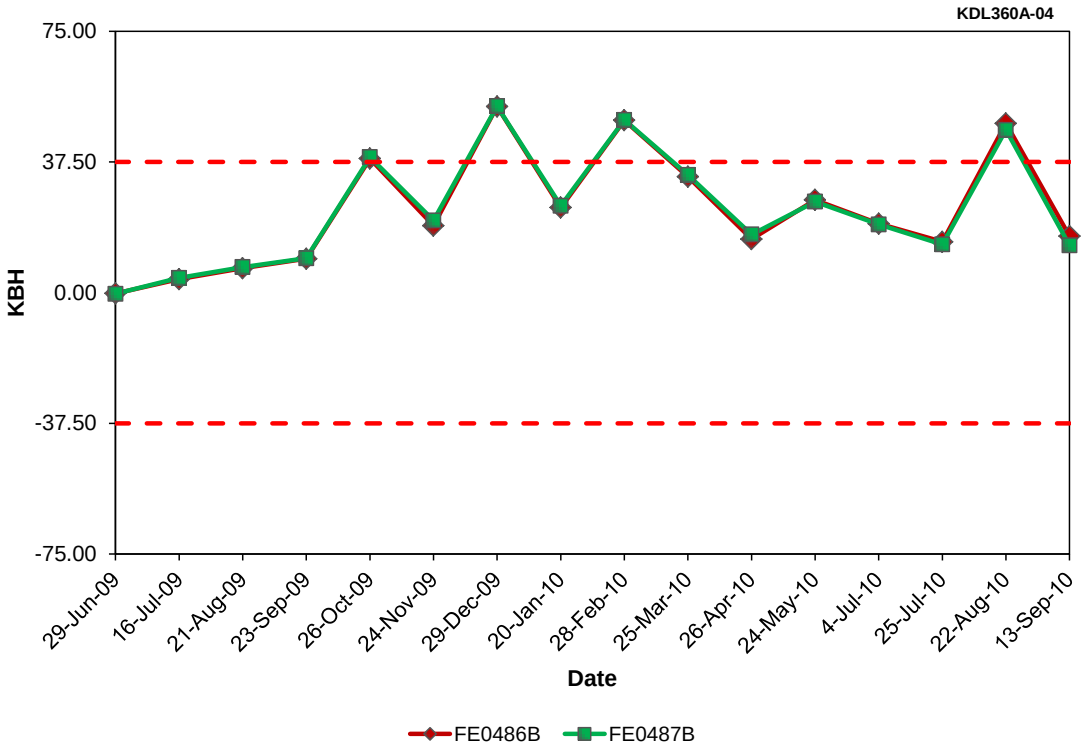



**Figure B.34 FW FLOW TO SG B Steady-State Residual AAKR at Farley Unit 1 (Cycle 23)**

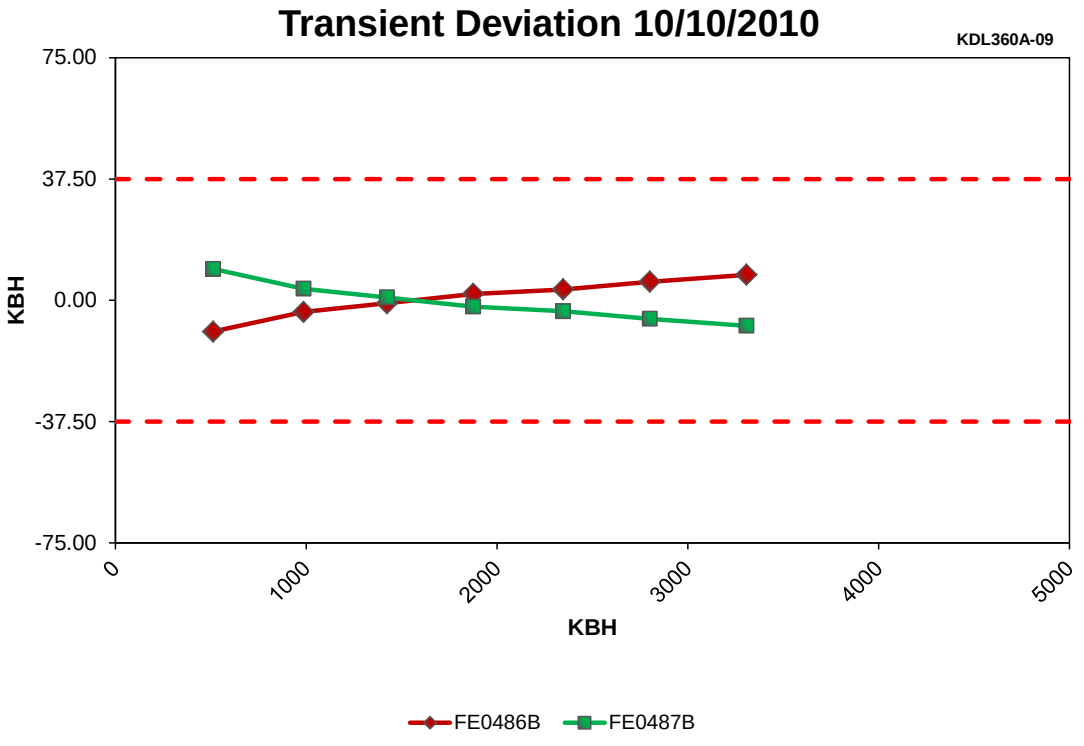



**Figure B.35 FW FLOW TO SG B Transient Deviation at Farley Unit 1 (Cycle 23)**

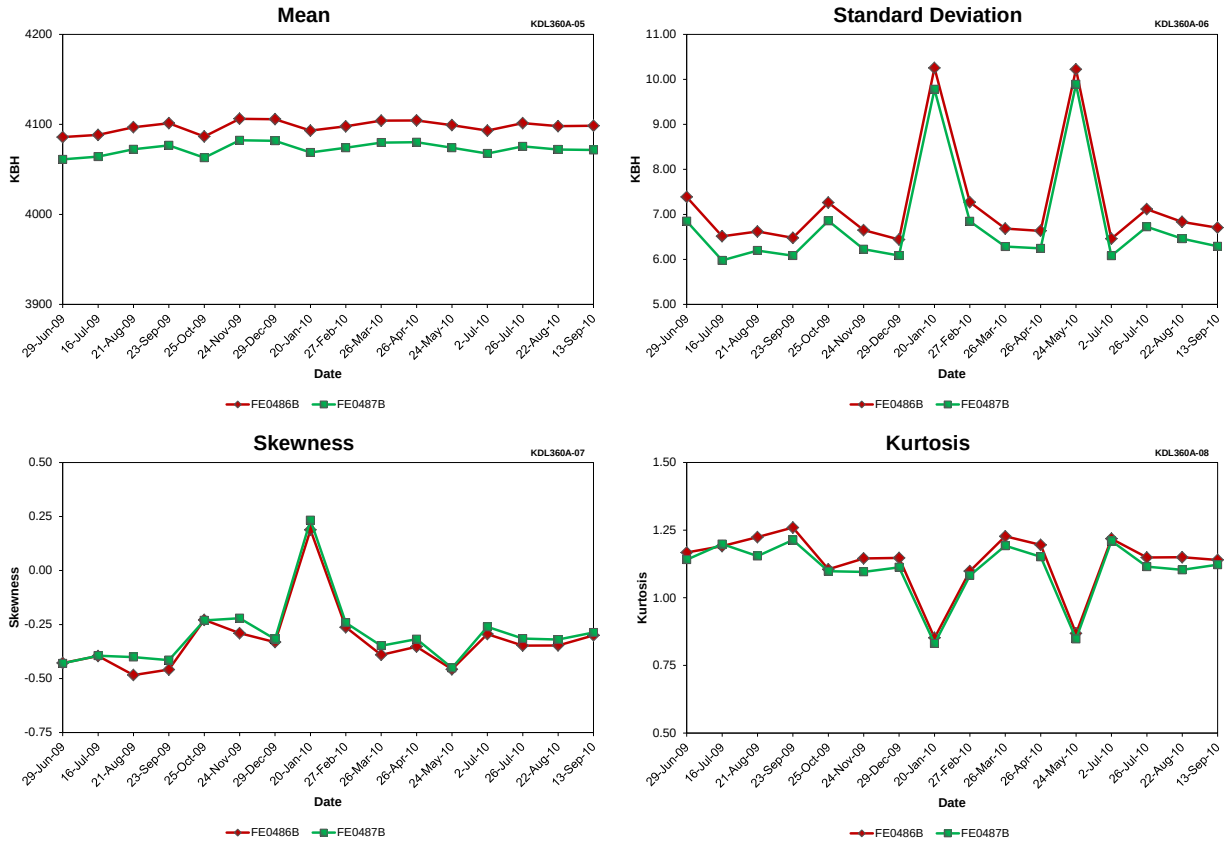



**Figure B.36 FW FLOW TO SG B Data Quality Statistics at Farley Unit 1 (Cycle 23)**

**Table B.6 FW FLOW TO SG B Data Quality for Farley Unit 1 (Cycle 23)**

| | Tag Names | |
|---|---|---|
| **Result Type** | **FE0486B** | **FE0487B** |
| Mean | 4097.52 | 4072.79 |
| Std. Dev. | 7.22 | 6.80 |
| Skewness | -0.32 | -0.29 |
| Kurtosis | 1.13 | 1.10 |

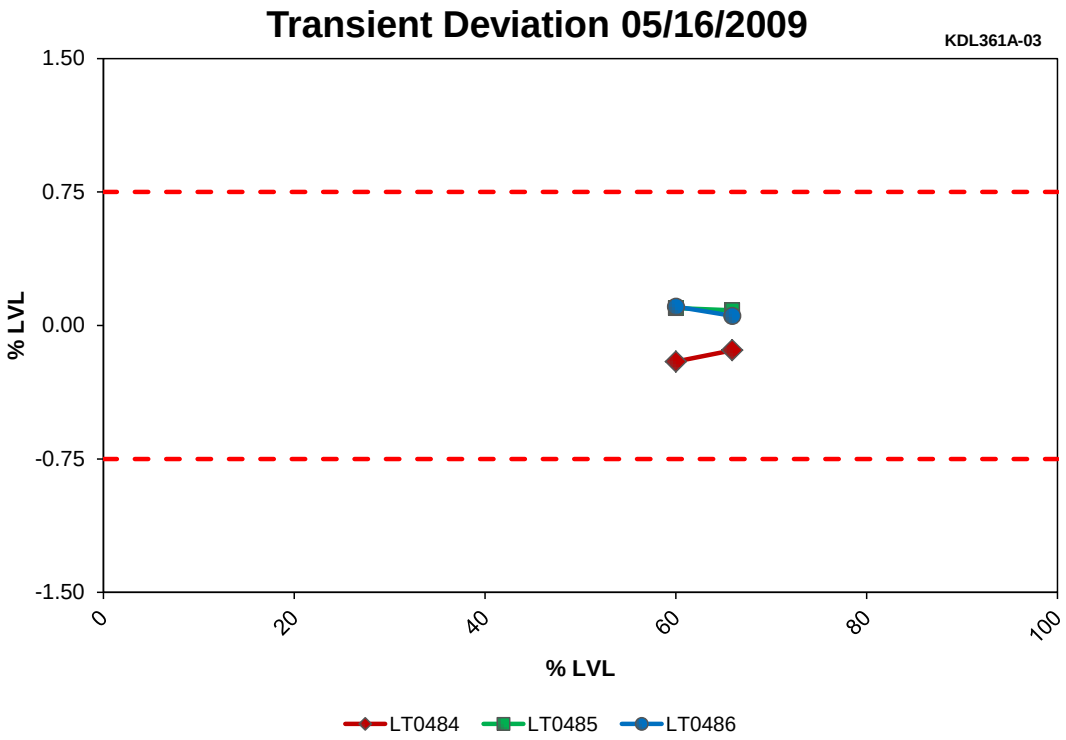



**Figure B.37 SG B LEVEL Transient Deviation at Farley Unit 1 (Cycle 23)**

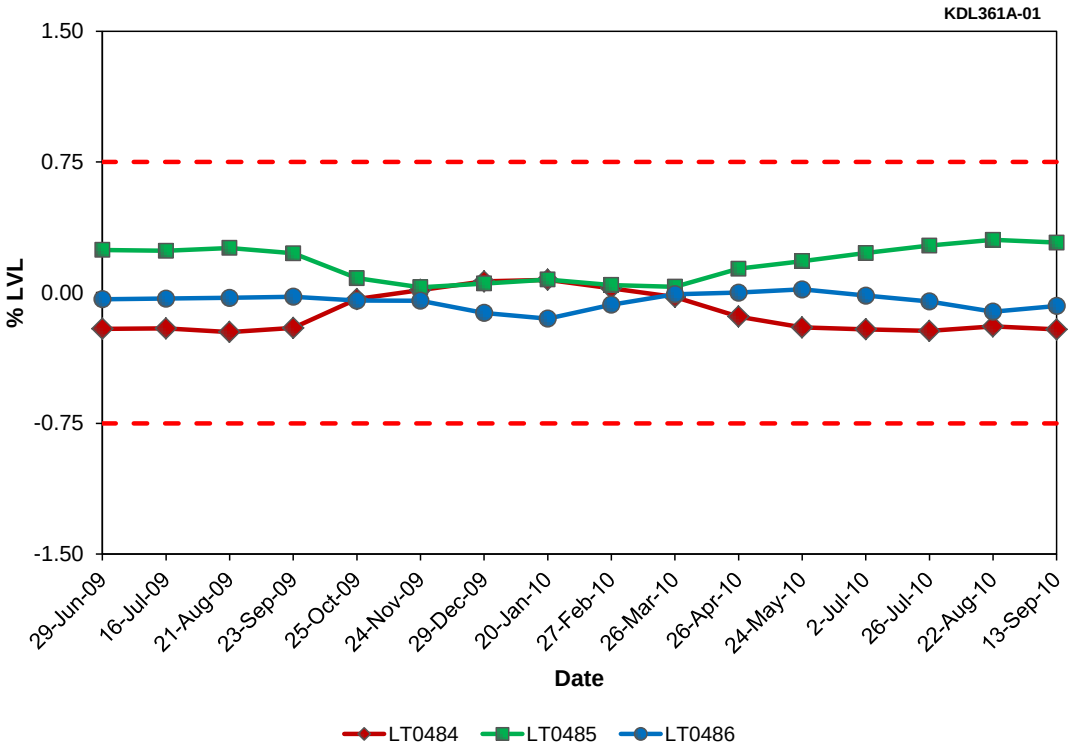



**Figure B.38 SG B LEVEL Steady-State Deviation at Farley Unit 1 (Cycle 23)**

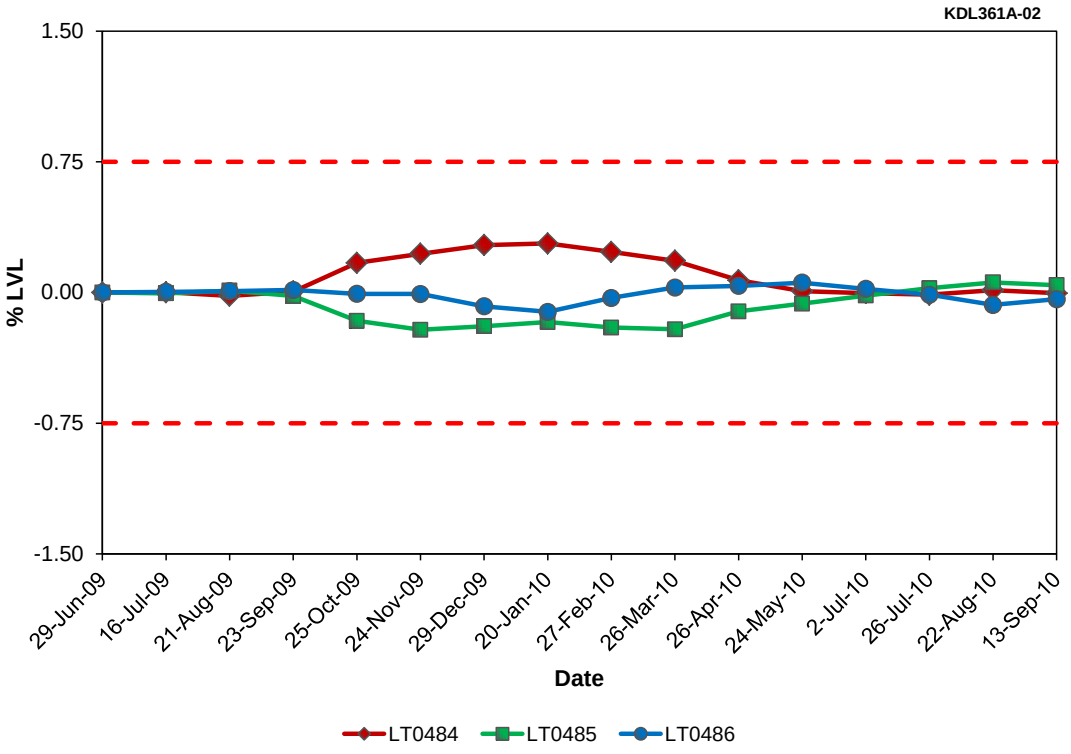



**Figure B.39 SG B LEVEL Steady-State Drift at Farley Unit 1 (Cycle 23)**

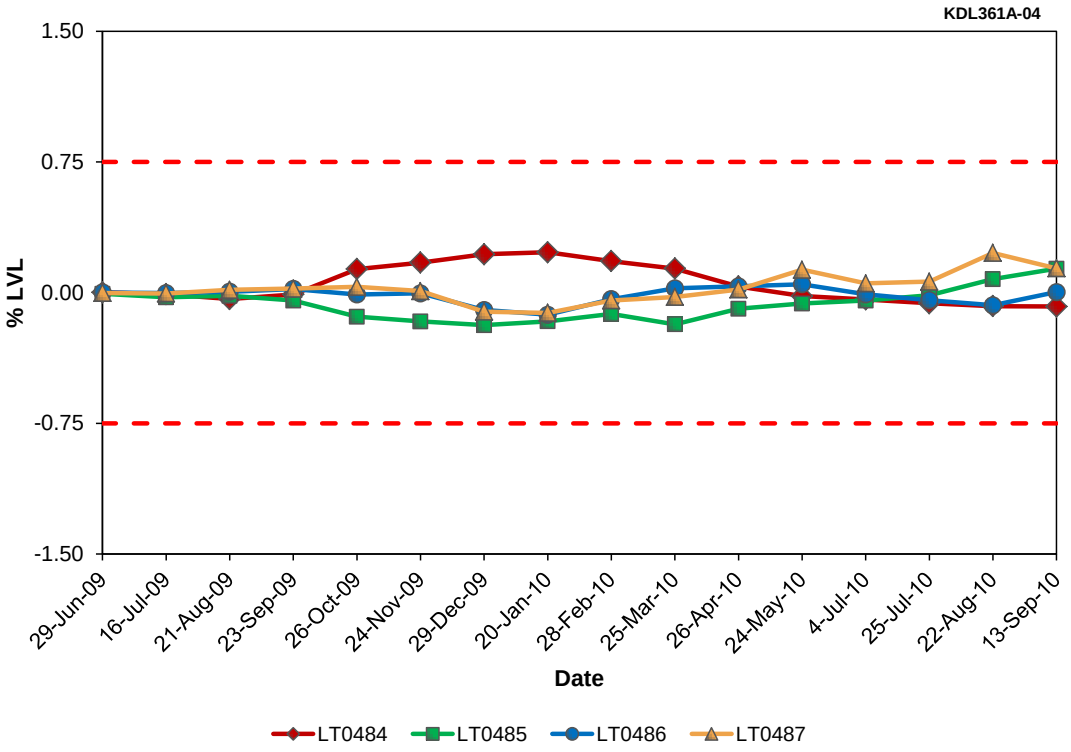



**Figure B.40 SG B LEVEL Steady-State Residual AAKR at Farley Unit 1 (Cycle 23)**

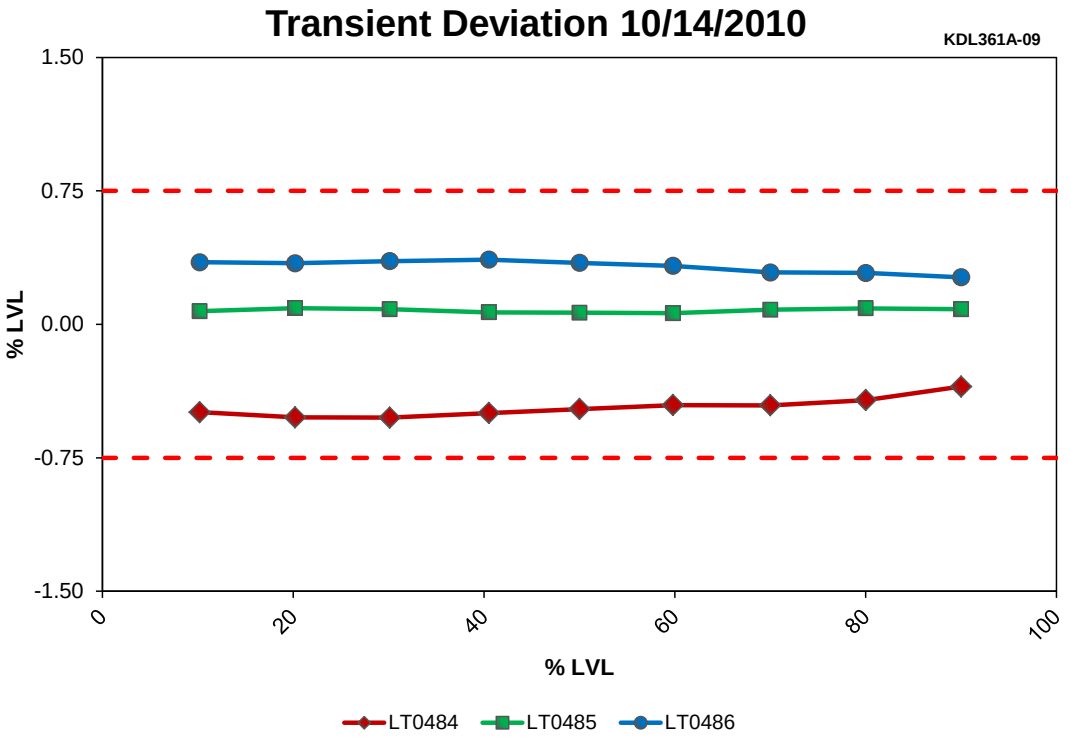



**Figure B.41 SG B LEVEL Transient Deviation at Farley Unit 1 (Cycle 23)**

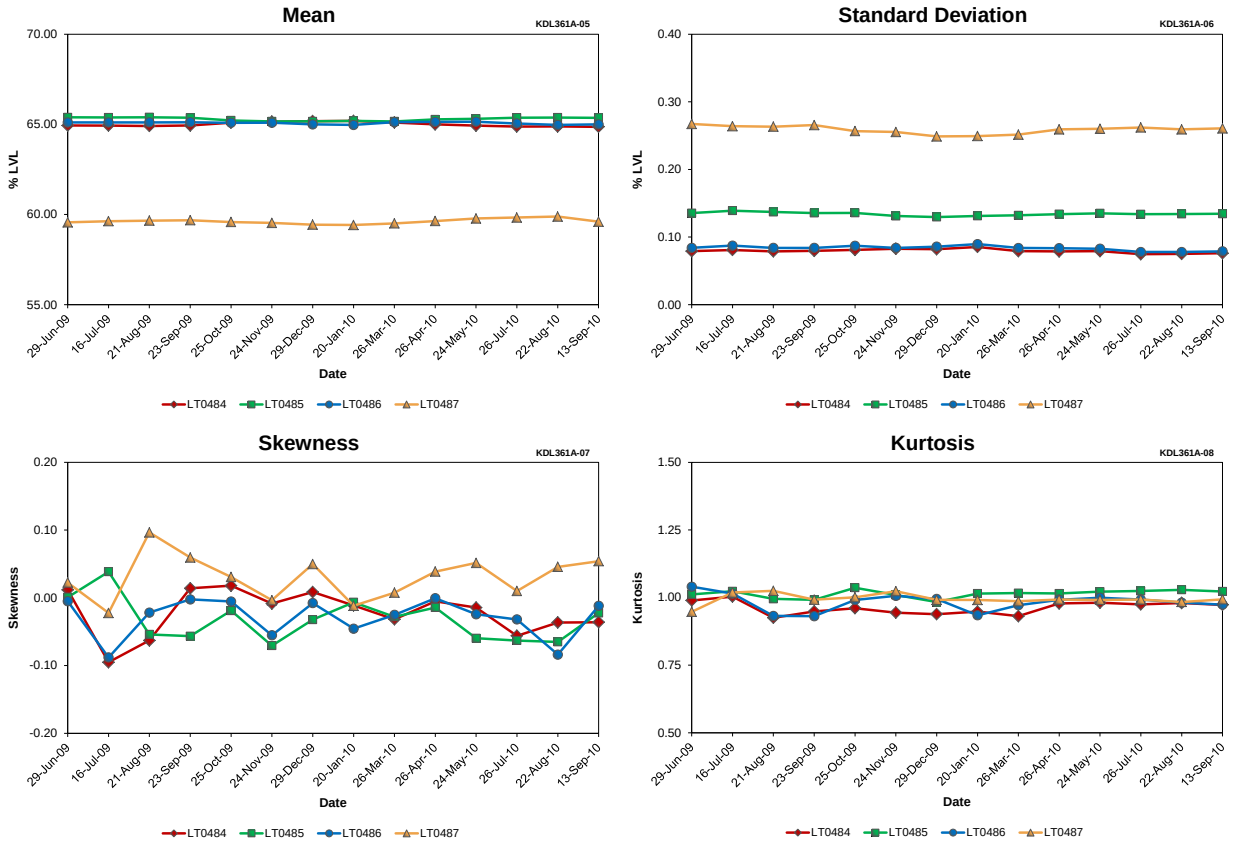



**Figure B.42 SG B LEVEL Data Quality Statistics at Farley Unit 1 (Cycle 23)**

**Table B.7 SG B LEVEL Data Quality for Farley Unit 1 (Cycle 23)**

| Result Type | Tag Names | | | |
|---|---|---|---|---|
| | LT0484 | LT0485 | LT0486 | LT0487 |
| Mean | 65.00 | 65.29 | 65.07 | 59.62 |
| Std. Dev. | 0.08 | 0.13 | 0.08 | 0.26 |
| Skewness | -0.02 | -0.03 | -0.03 | 0.03 |
| Kurtosis | 0.96 | 1.01 | 0.98 | 0.99 |

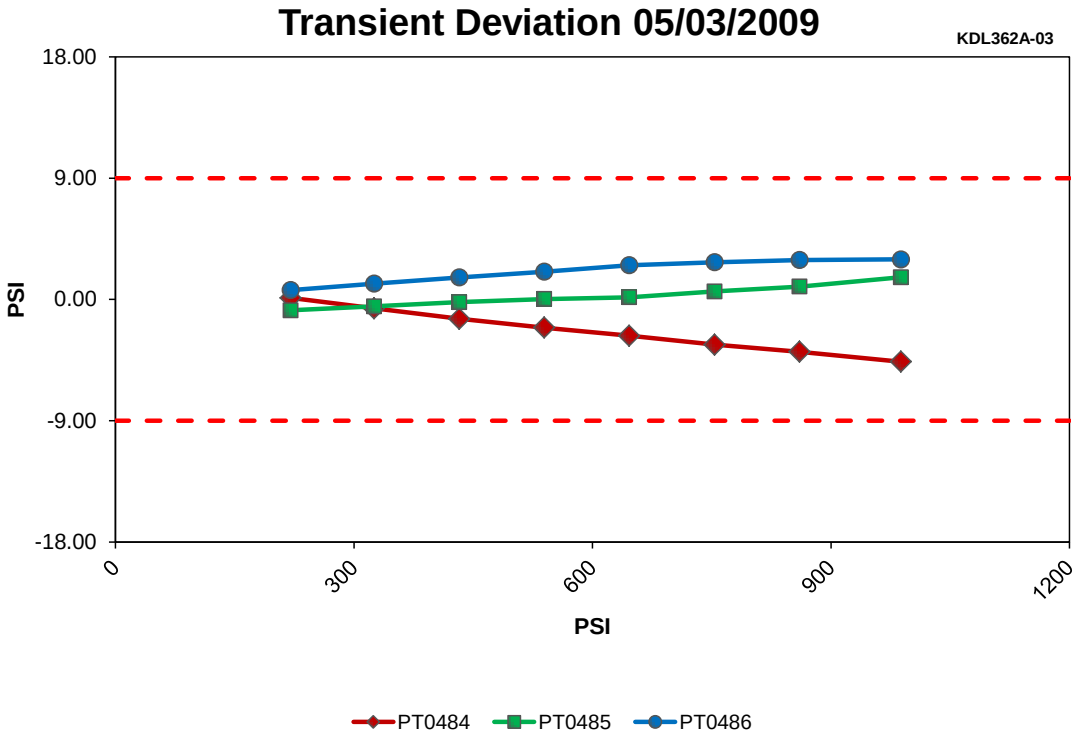



**Figure B.43 SG B OUTLET PRESSURE Transient Deviation at Farley Unit 1 (Cycle 23)**

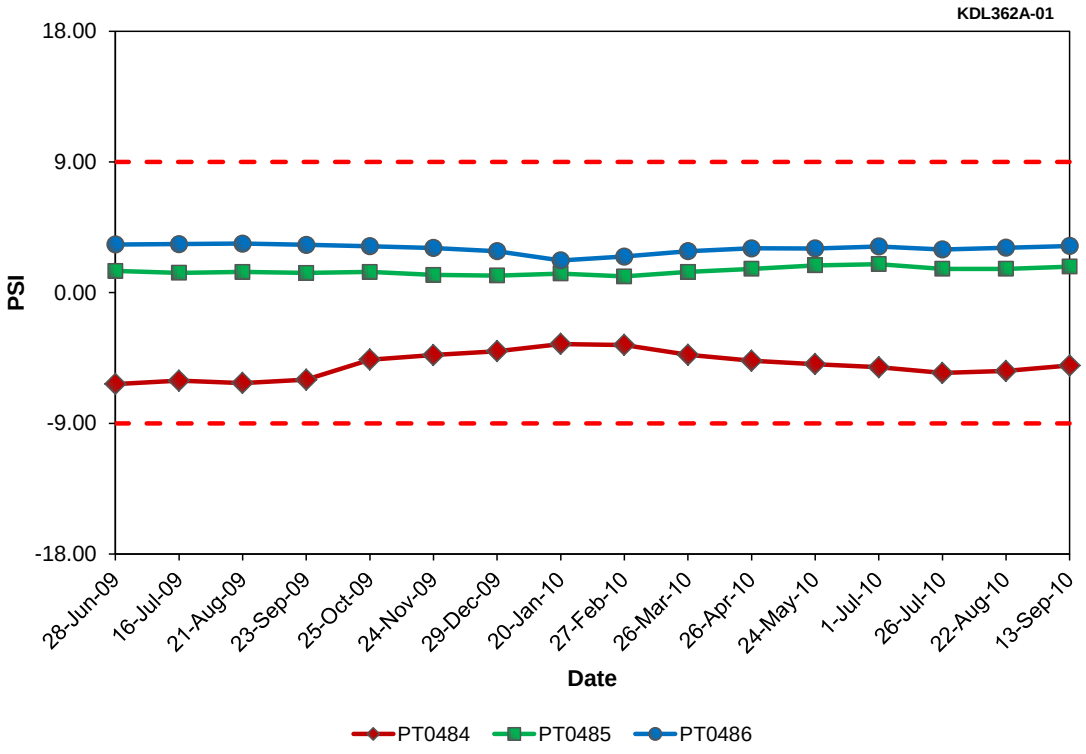



**Figure B.44 SG B OUTLET PRESSURE Steady-State Deviation at Farley Unit 1 (Cycle 23)**

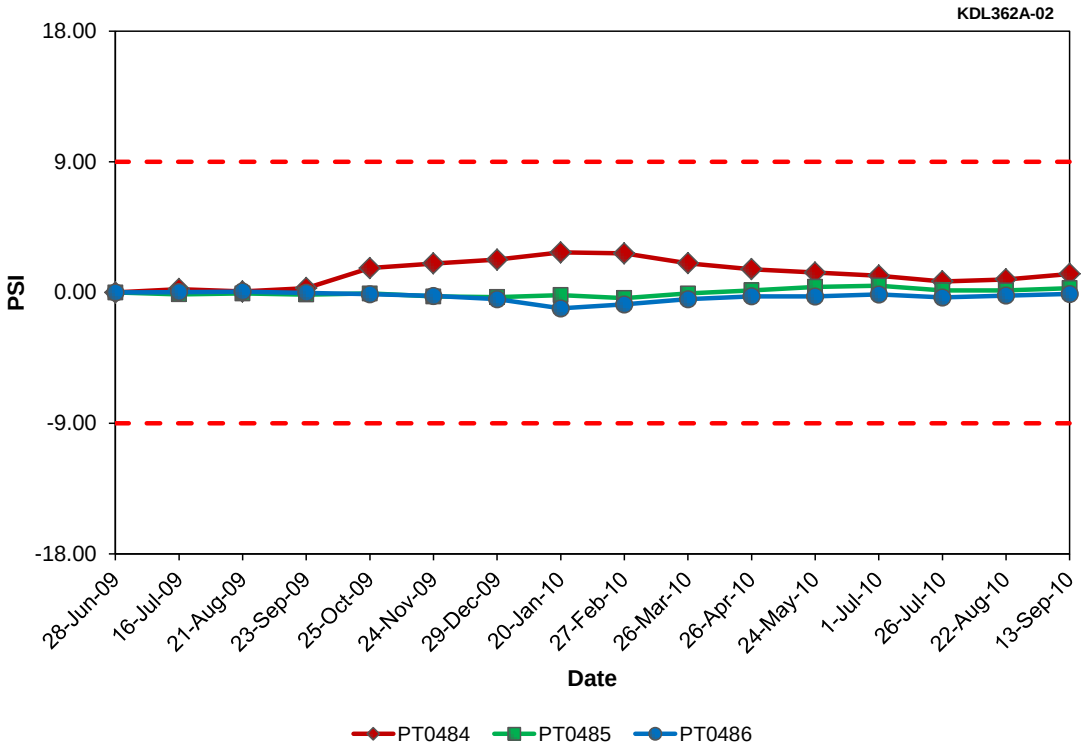



**Figure B.45 SG B OUTLET PRESSURE Steady-State Drift at Farley Unit 1 (Cycle 23)**

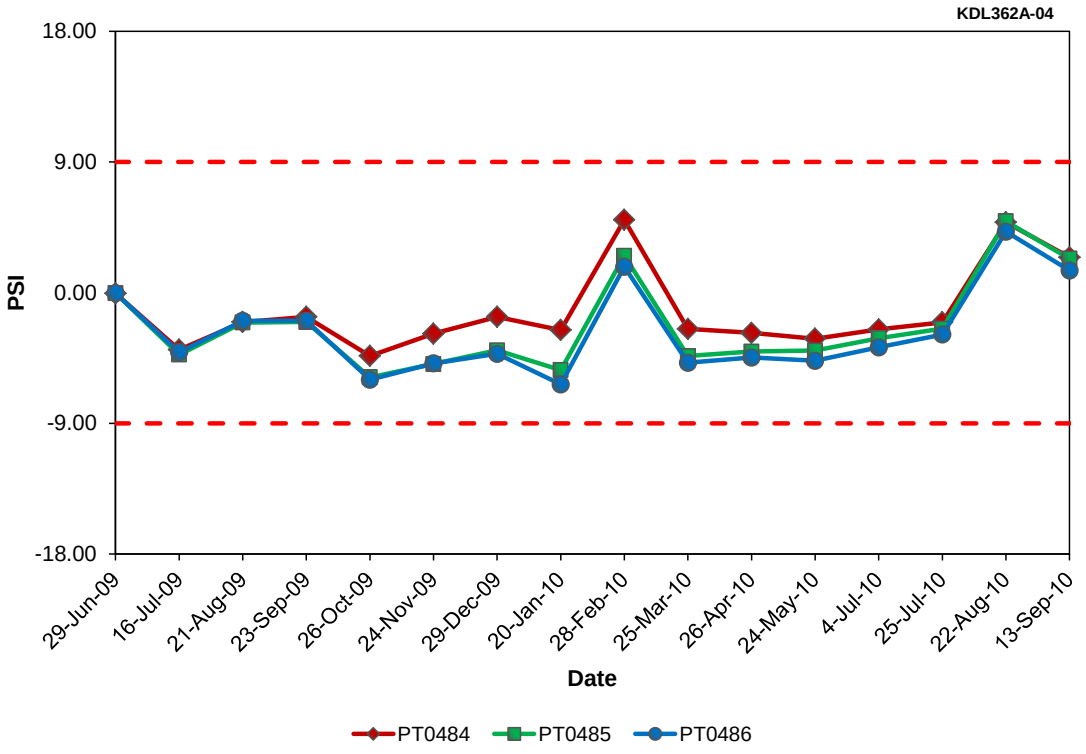



**Figure B.46 SG B OUTLET PRESSURE Steady-State Residual AAKR at Farley Unit 1 (Cycle 23)**

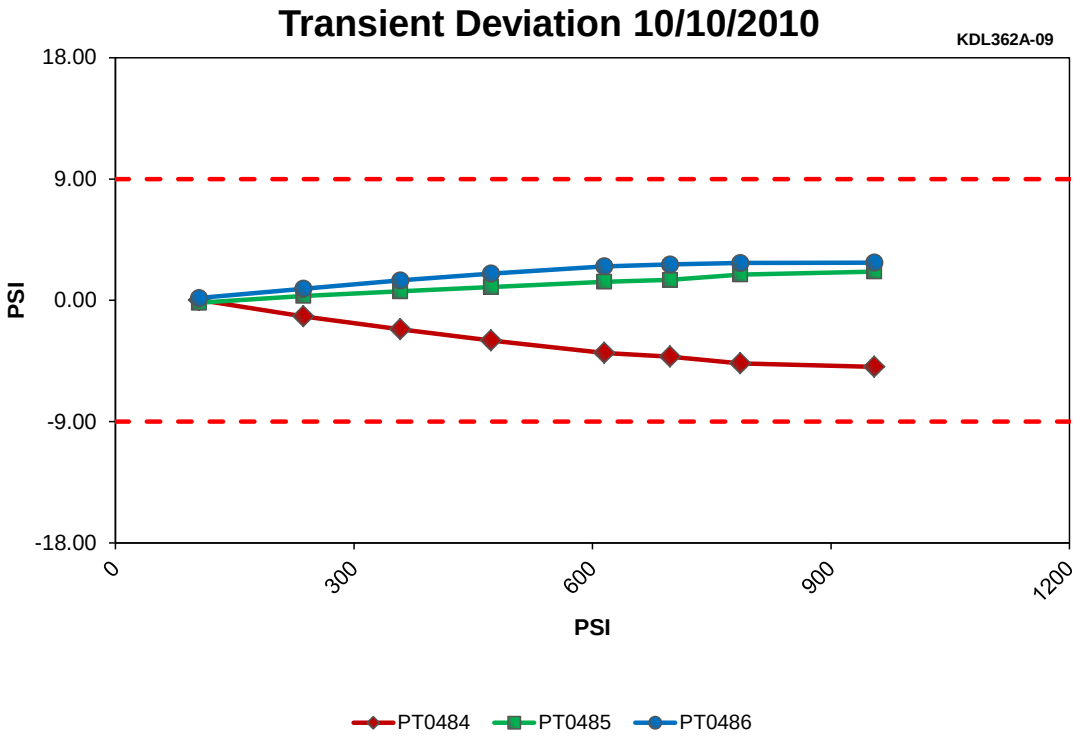



**Figure B.47 SG B OUTLET PRESSURE Transient Deviation at Farley Unit 1 (Cycle 23)**

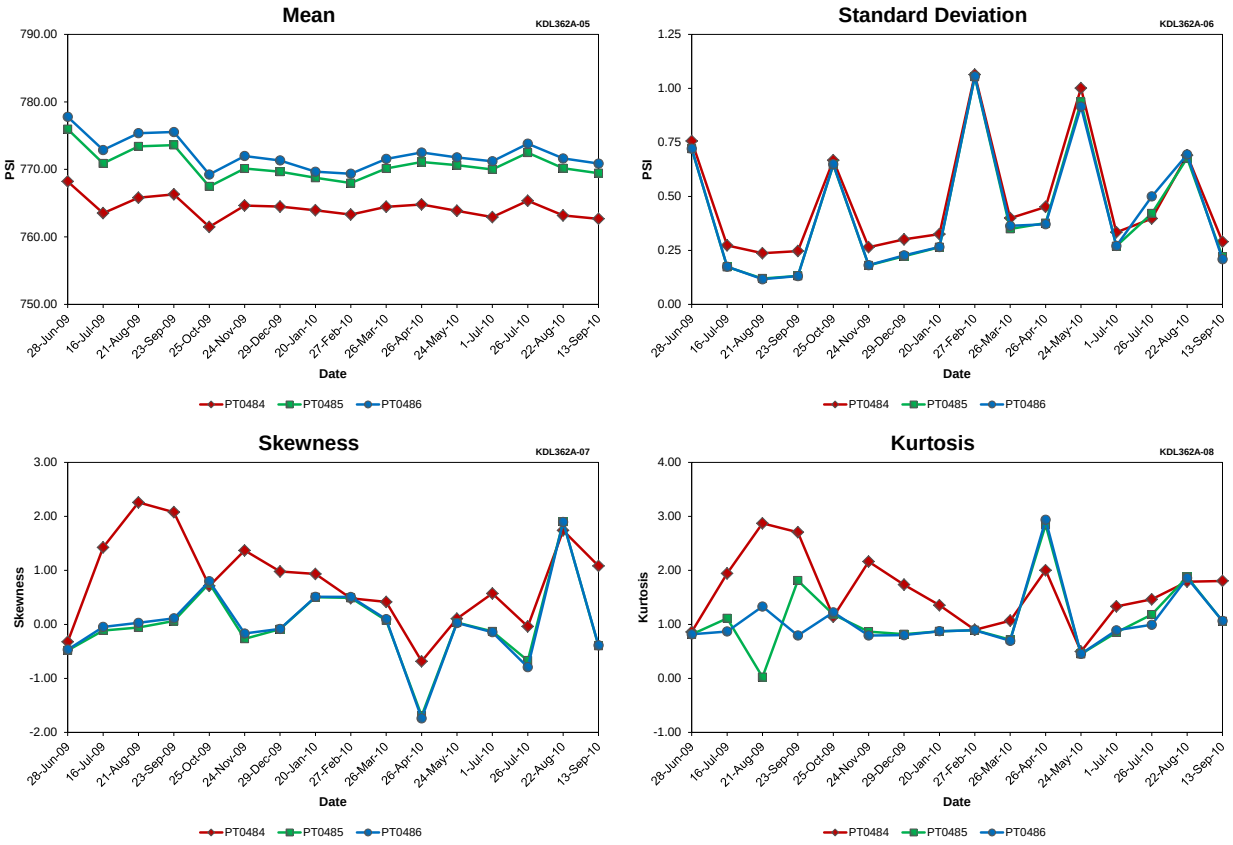



**Figure B.48 SG B OUTLET PRESSURE Data Quality Statistics at Farley Unit 1 (Cycle 23)**

**Table B.8 SG B OUTLET PRESSURE Data Quality for Farley Unit 1 (Cycle 23)**

| | Tag Names | | |
|---|---|---|---|
| **Result Type** | **PT0484** | **PT0485** | **PT0486** |
| Mean | 764.31 | 770.73 | 772.28 |
| Std. Dev. | 0.48 | 0.42 | 0.43 |
| Skewness | 0.82 | 0.00 | 0.01 |
| Kurtosis | 1.60 | 1.09 | 1.08 |

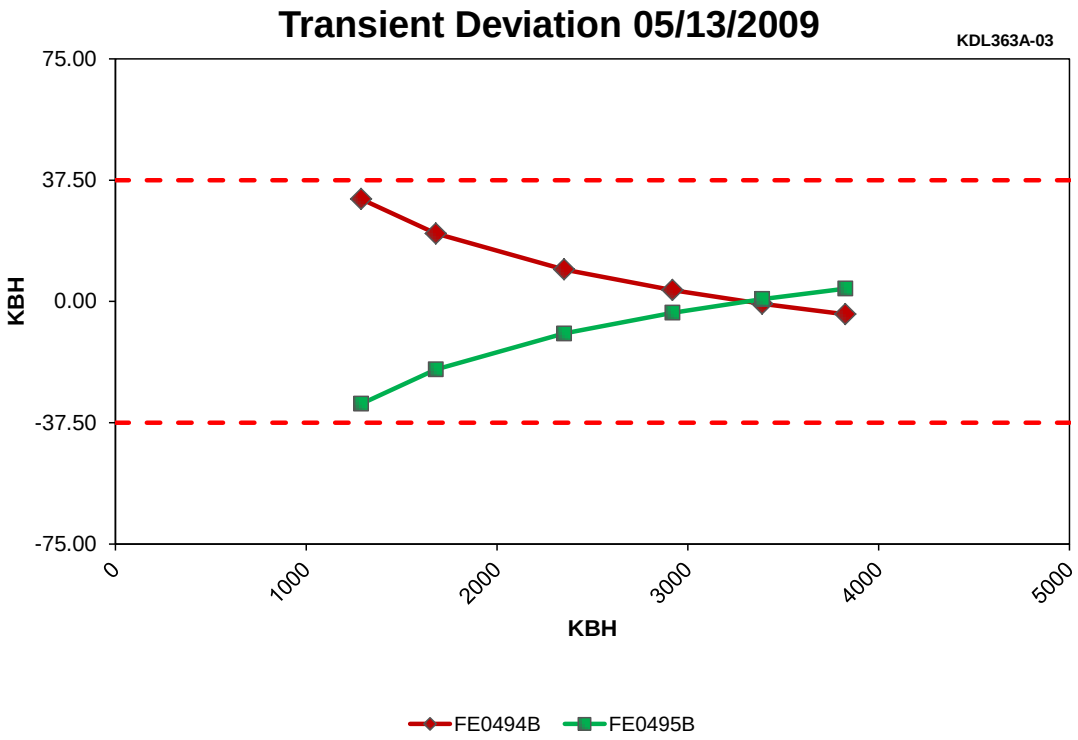



**Figure B.49 SG C STEAM FLOW Transient Deviation at Farley Unit 1 (Cycle 23)**

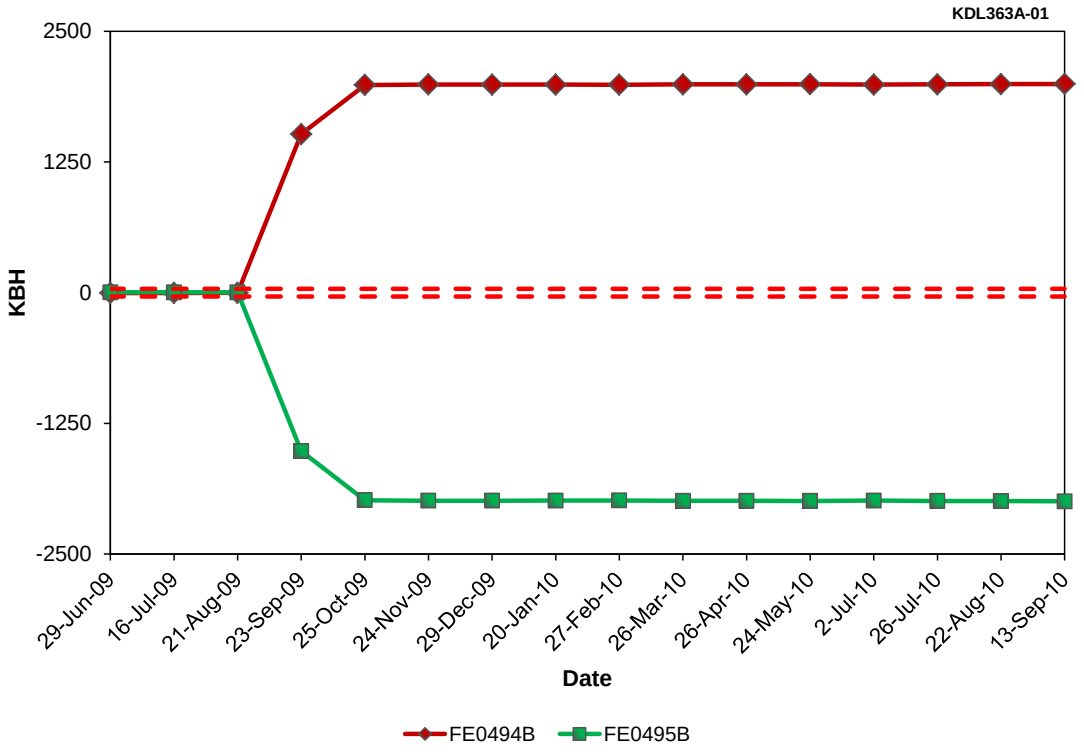



**Figure B.50 SG C STEAM FLOW Steady-State Deviation at Farley Unit 1 (Cycle 23)**

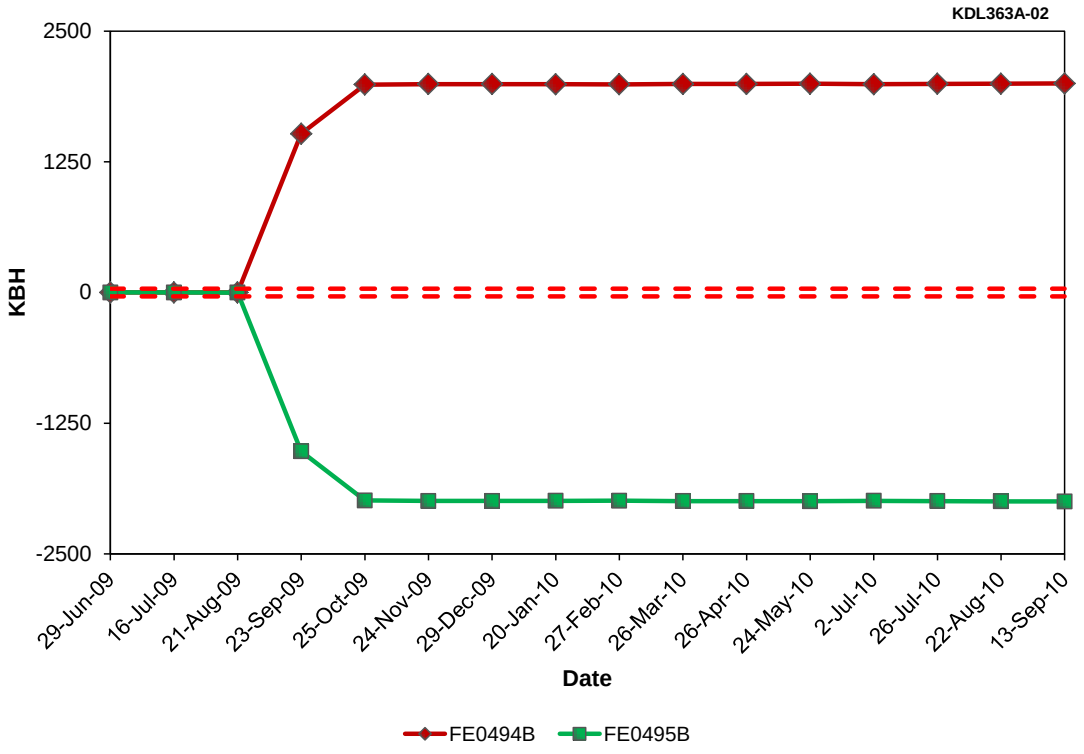



**Figure B.51 SG C STEAM FLOW Steady-State Drift at Farley Unit 1 (Cycle 23)**

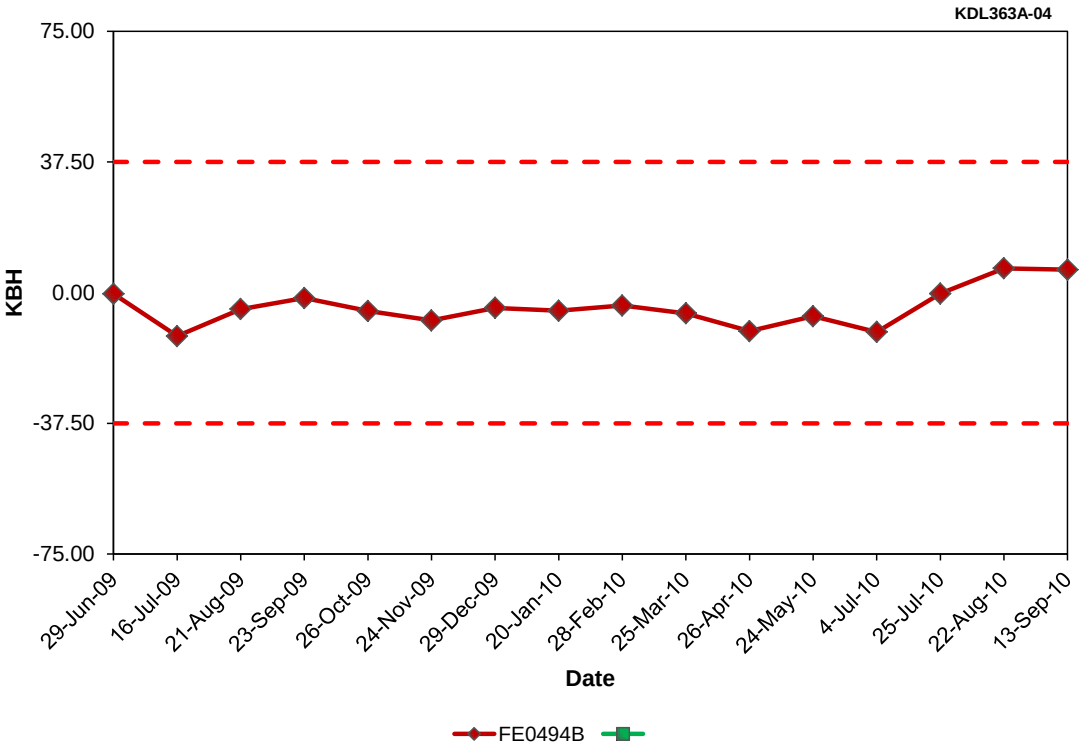



**Figure B.52 SG C STEAM FLOW Steady-State Residual AAKR at Farley Unit 1 (Cycle 23)**

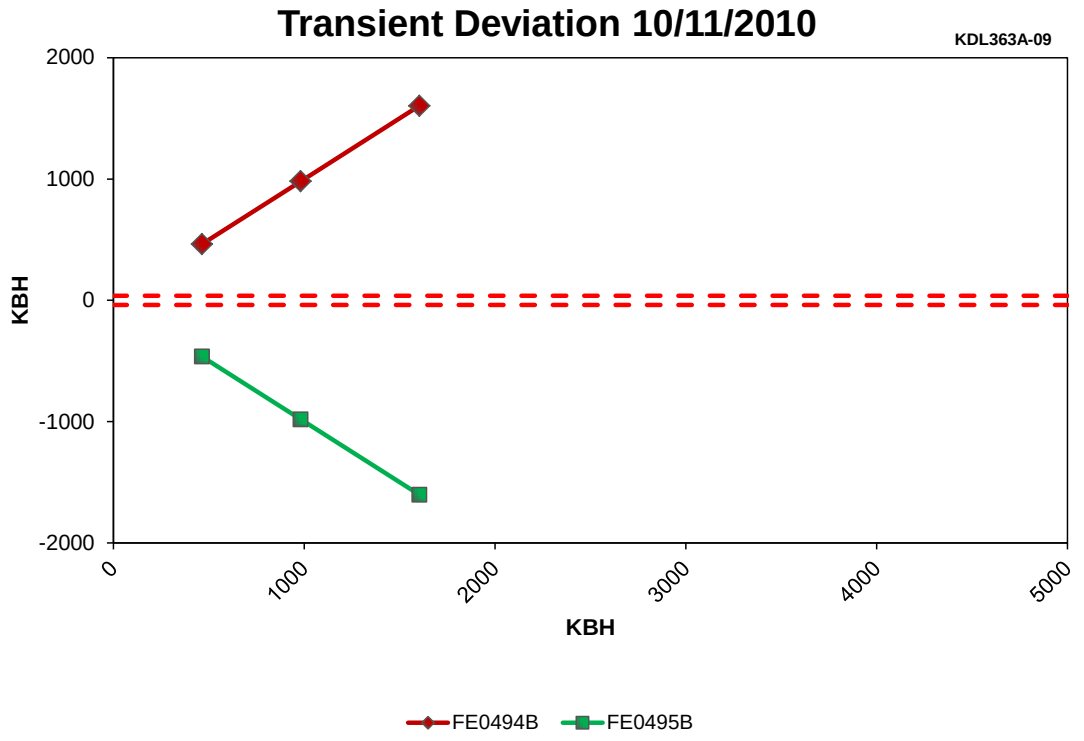



**Figure B.53 SG C STEAM FLOW Transient Deviation at Farley Unit 1 (Cycle 23)**

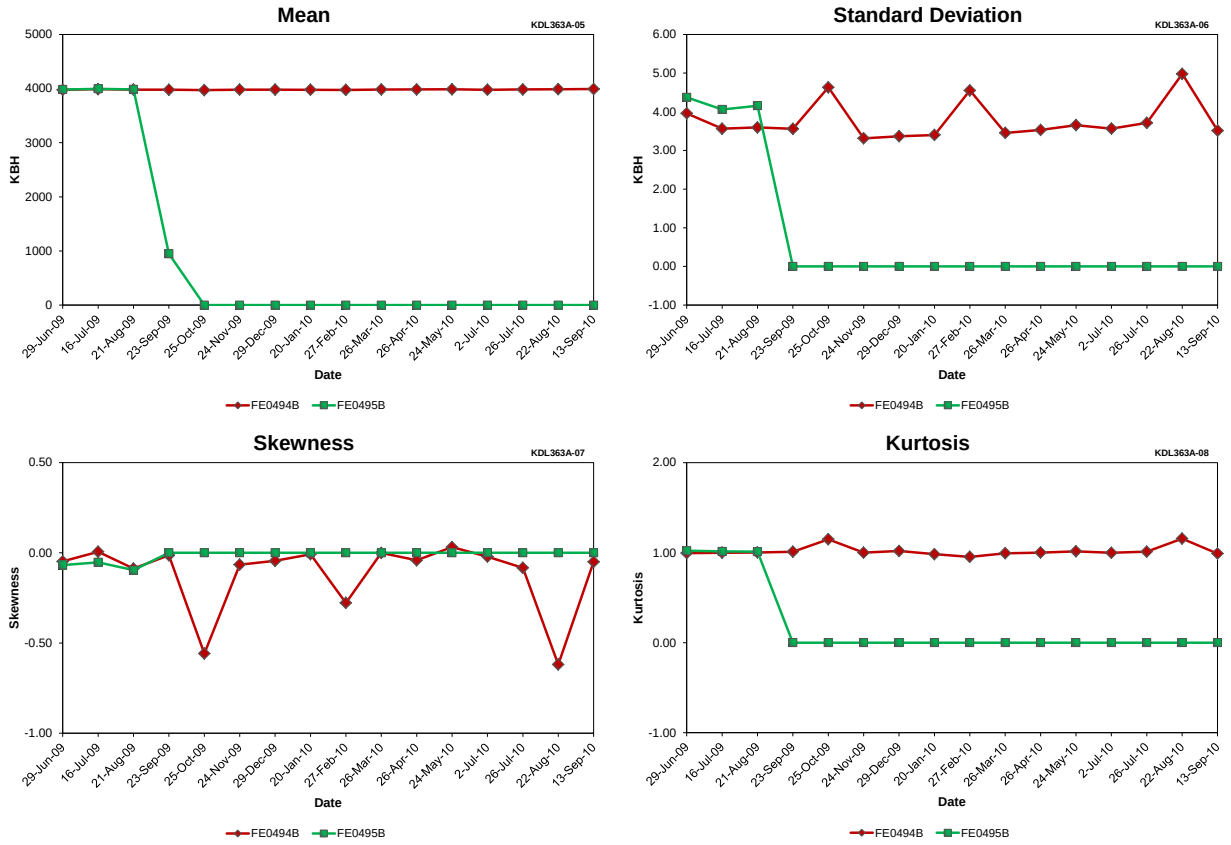



**Figure B.54 SG C STEAM FLOW Data Quality Statistics at Farley Unit 1 (Cycle 23)**

**Table B.9 SG C STEAM FLOW Data Quality for Farley Unit 1 (Cycle 23)**

| | Tag Names | |
|---|---|---|
| **Result Type** | **FE0494B** | **FE0495B** |
| Mean | 3981.28 | 806.81 |
| Std. Dev. | 3.77 | 0.79 |
| Skewness | -0.12 | -0.01 |
| Kurtosis | 1.02 | 0.19 |

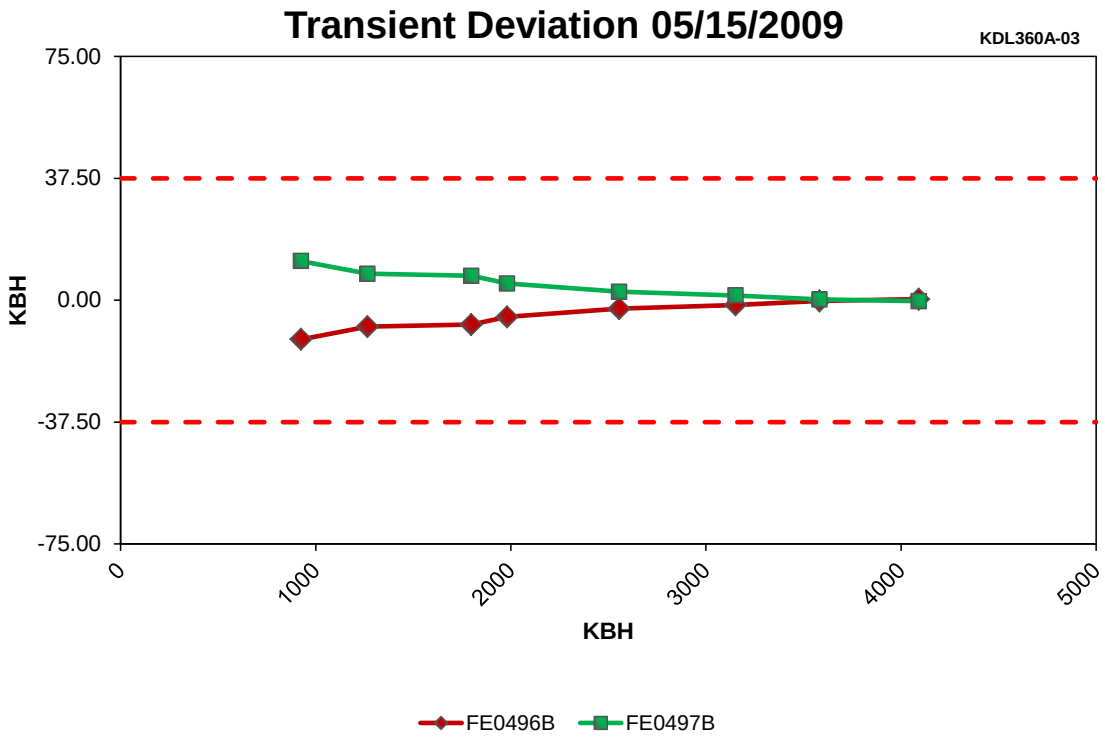



**Figure B.55 FW FLOW TO SG C Transient Deviation at Farley Unit 1 (Cycle 23)**

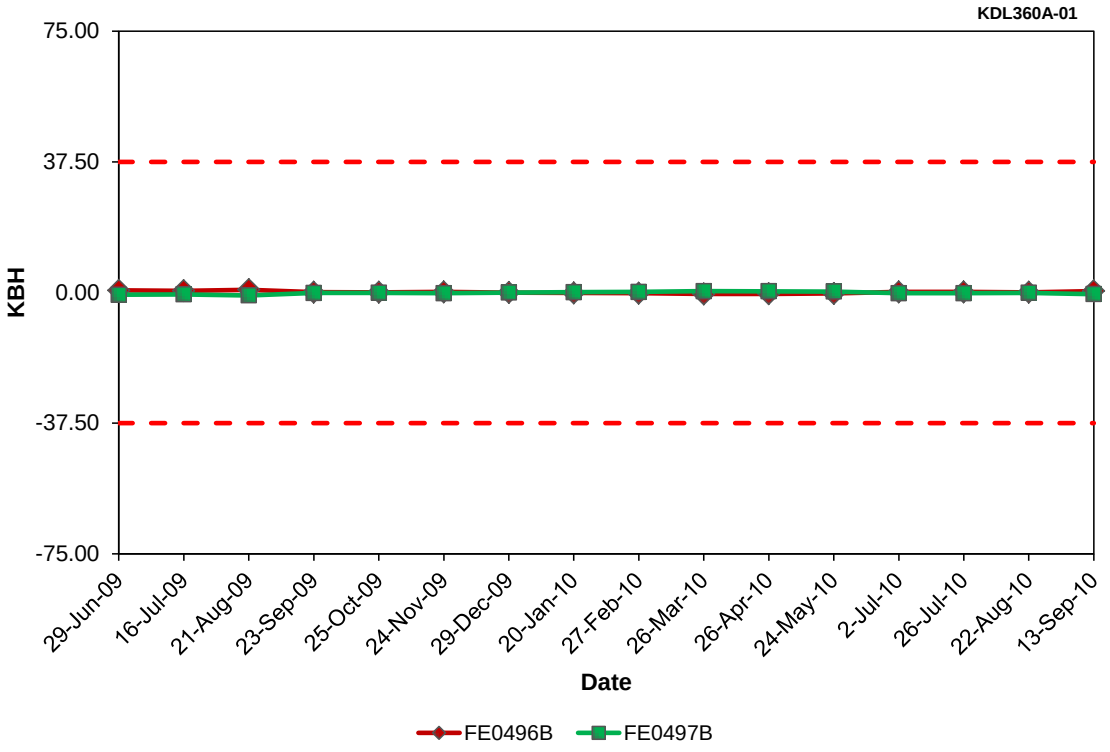



**Figure B.56 FW FLOW TO SG C Steady-State Deviation at Farley Unit 1 (Cycle 23)**

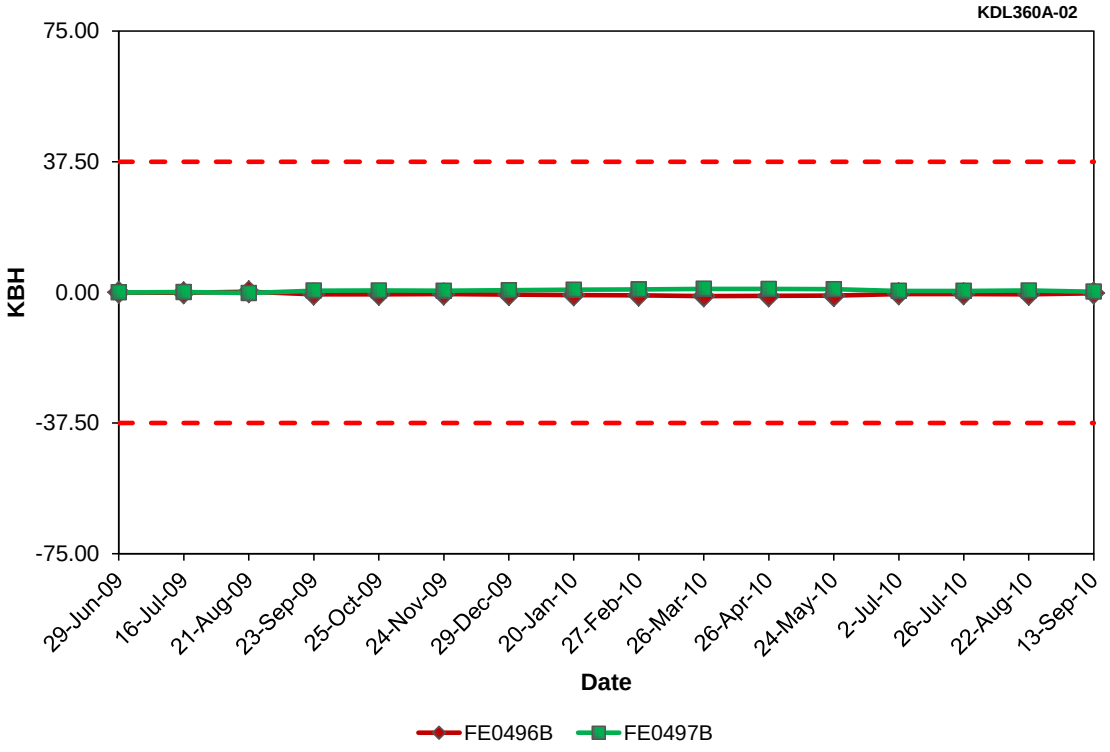



**Figure B.57 FW FLOW TO SG C Steady-State Drift at Farley Unit 1 (Cycle 23)**

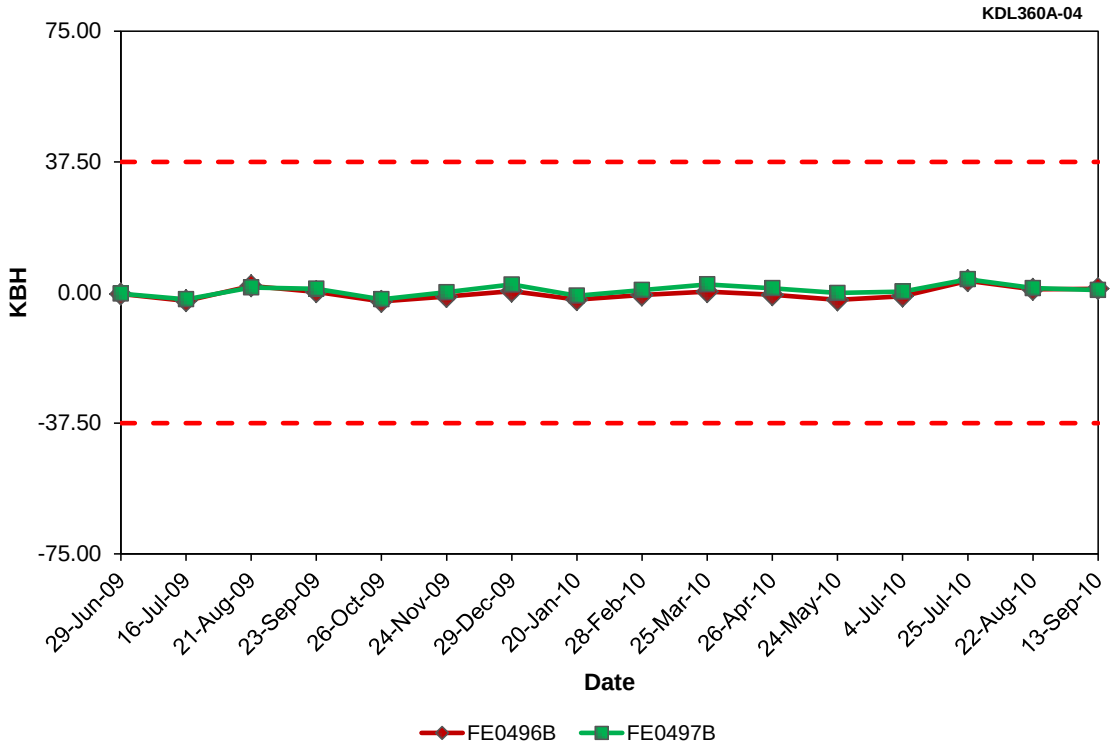



**Figure B.58 FW FLOW TO SG C Steady-State Residual AAKR at Farley Unit 1 (Cycle 23)**

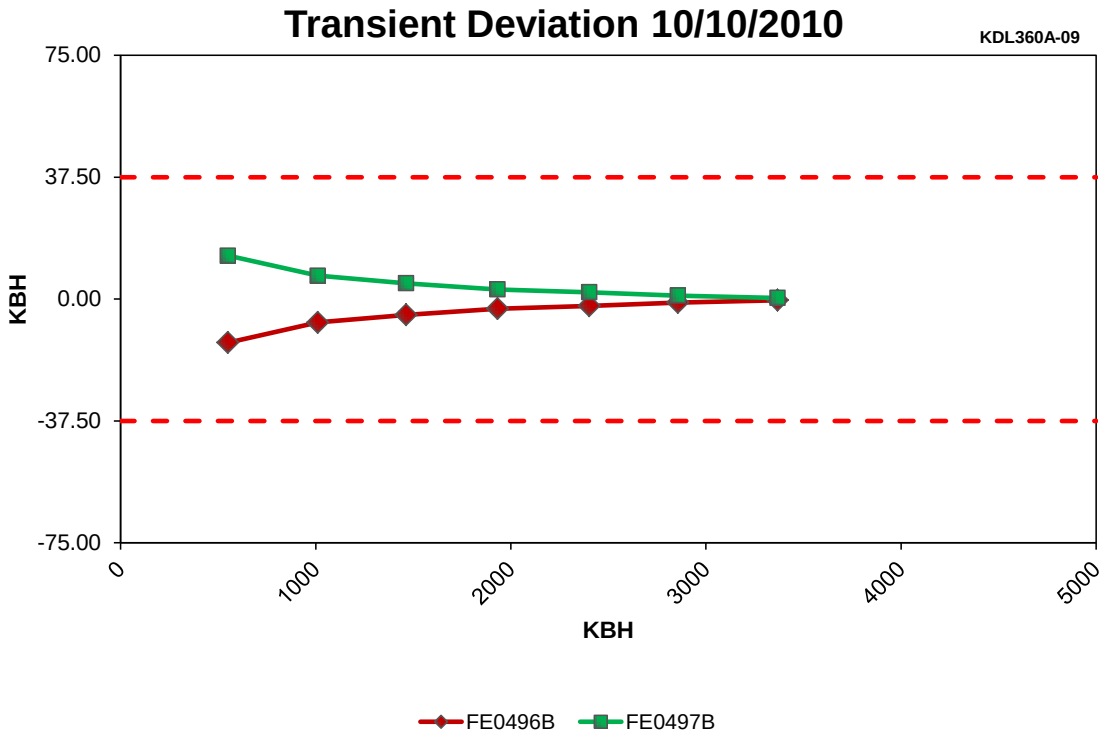



**Figure B.59 FW FLOW TO SG C Transient Deviation at Farley Unit 1 (Cycle 23)**

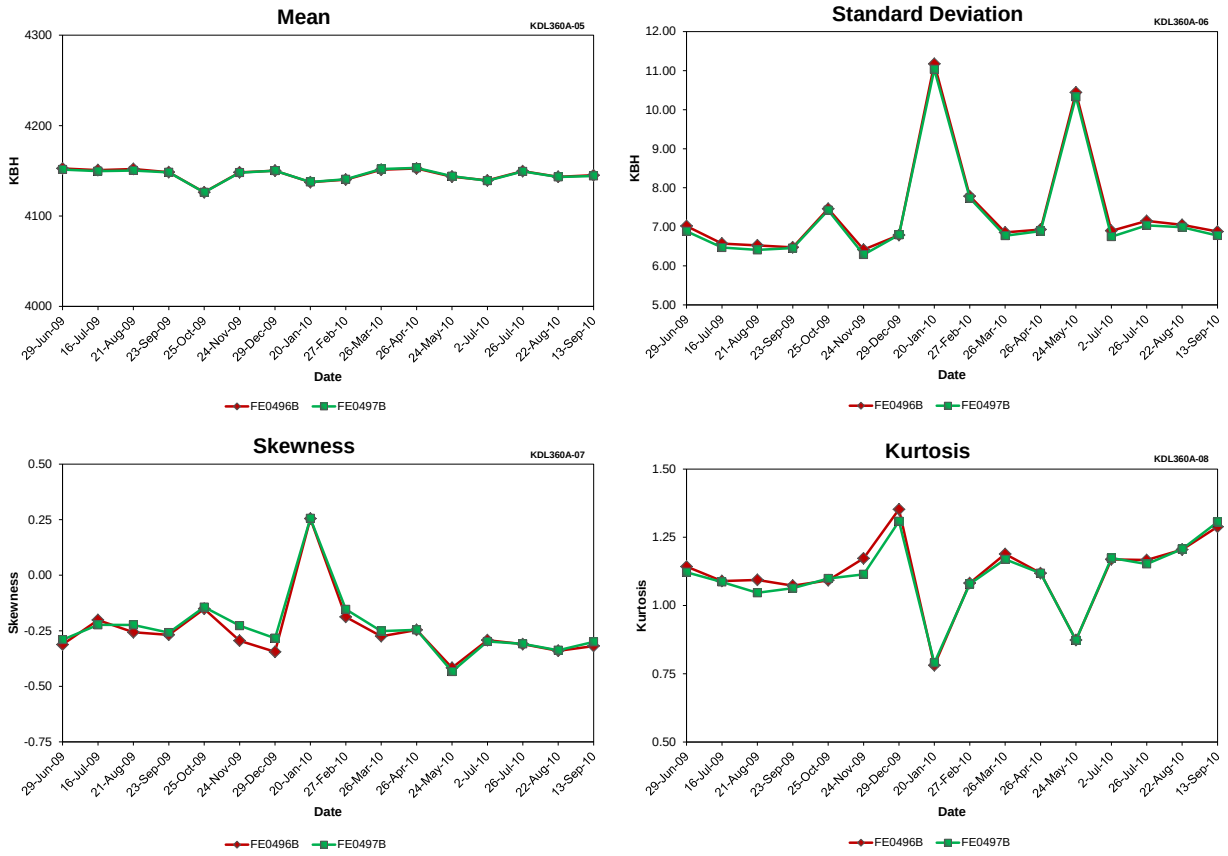



**Figure B.60 FW FLOW TO SG C Data Quality Statistics at Farley Unit 1 (Cycle 23)**

**Table B.10 FW FLOW TO SG C Data Quality for Farley Unit 1 (Cycle 23)**

| | Tag Names | |
|---|---|---|
| **Result Type** | **FE0496B** | **FE0497B** |
| Mean | 4145.70 | 4145.46 |
| Std. Dev. | 7.40 | 7.31 |
| Skewness | -0.25 | -0.23 |
| Kurtosis | 1.12 | 1.11 |

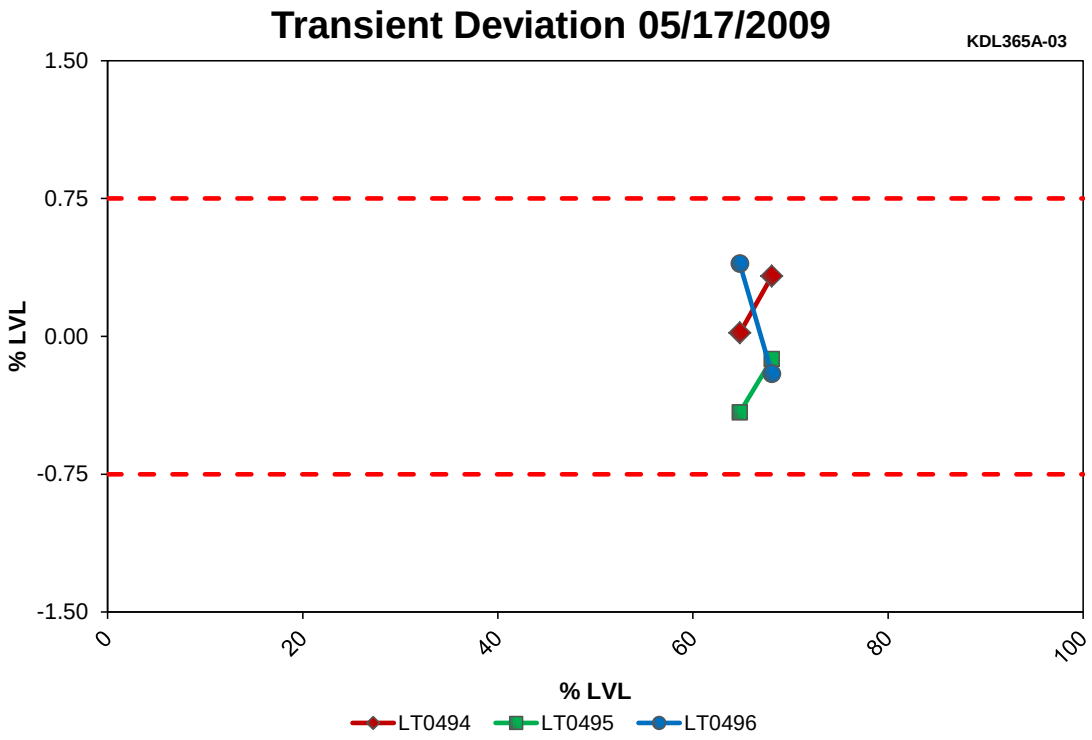



**Figure B.61 SG C LEVEL Transient Deviation at Farley Unit 1 (Cycle 23)**

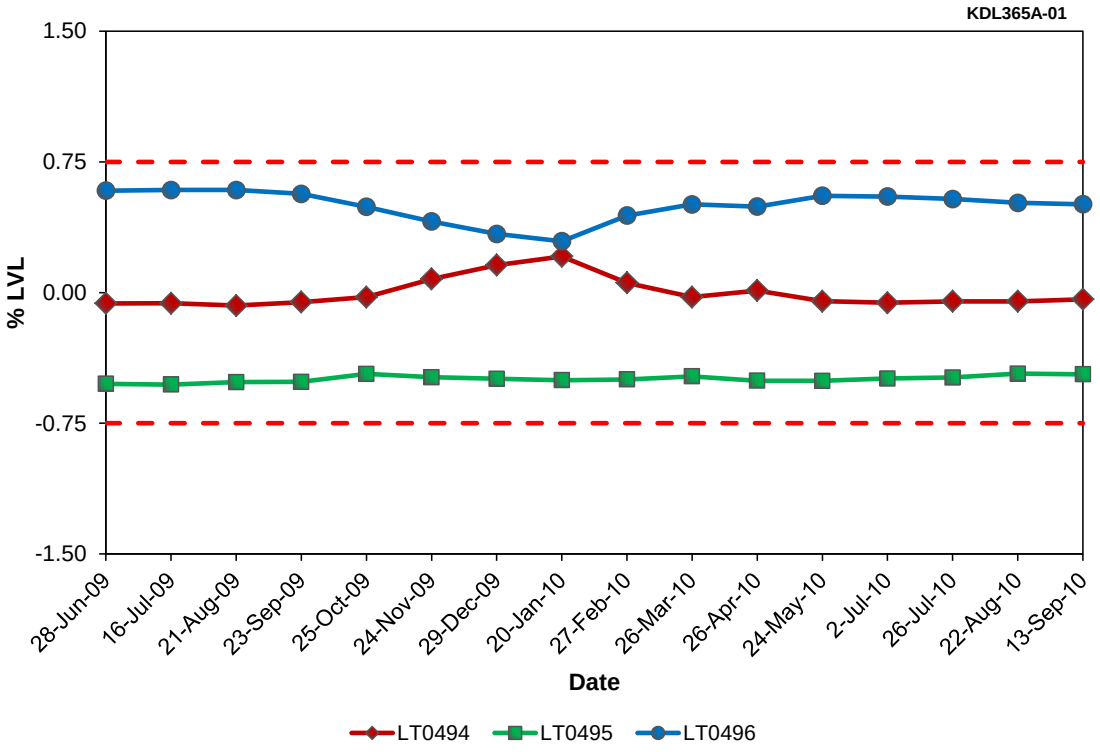



**Figure B.62 SG C LEVEL Steady-State Deviation at Farley Unit 1 (Cycle 23)**

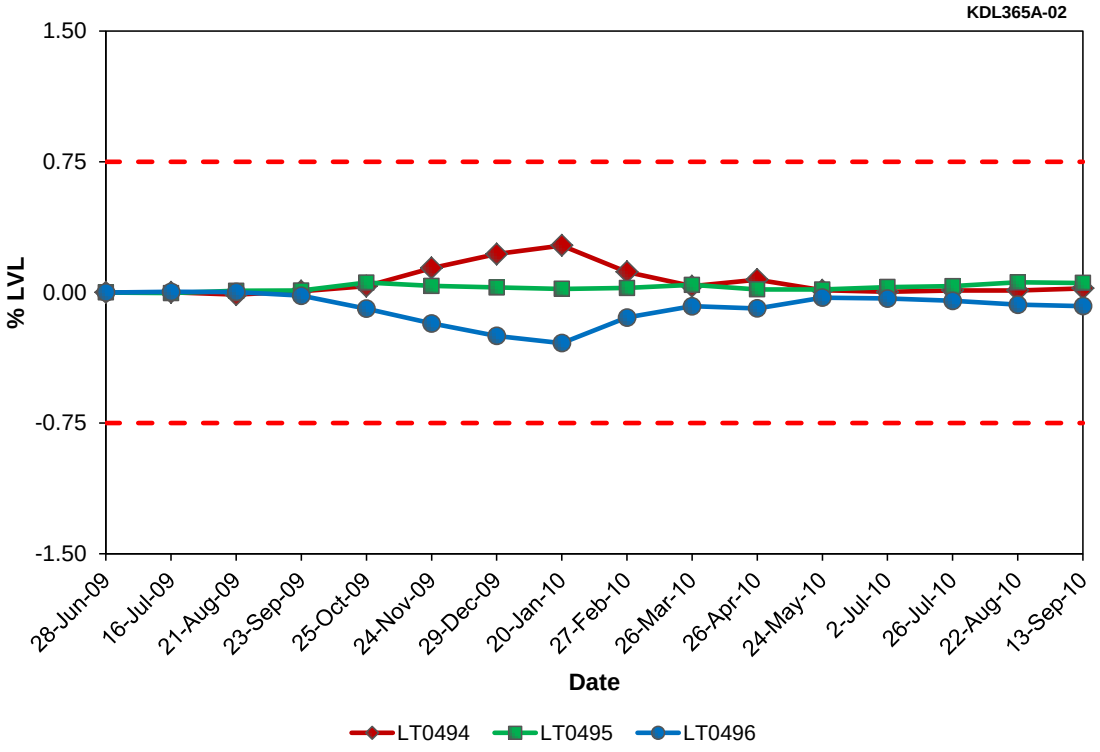



**Figure B.63 SG C LEVEL Steady-State Drift at Farley Unit 1 (Cycle 23)**

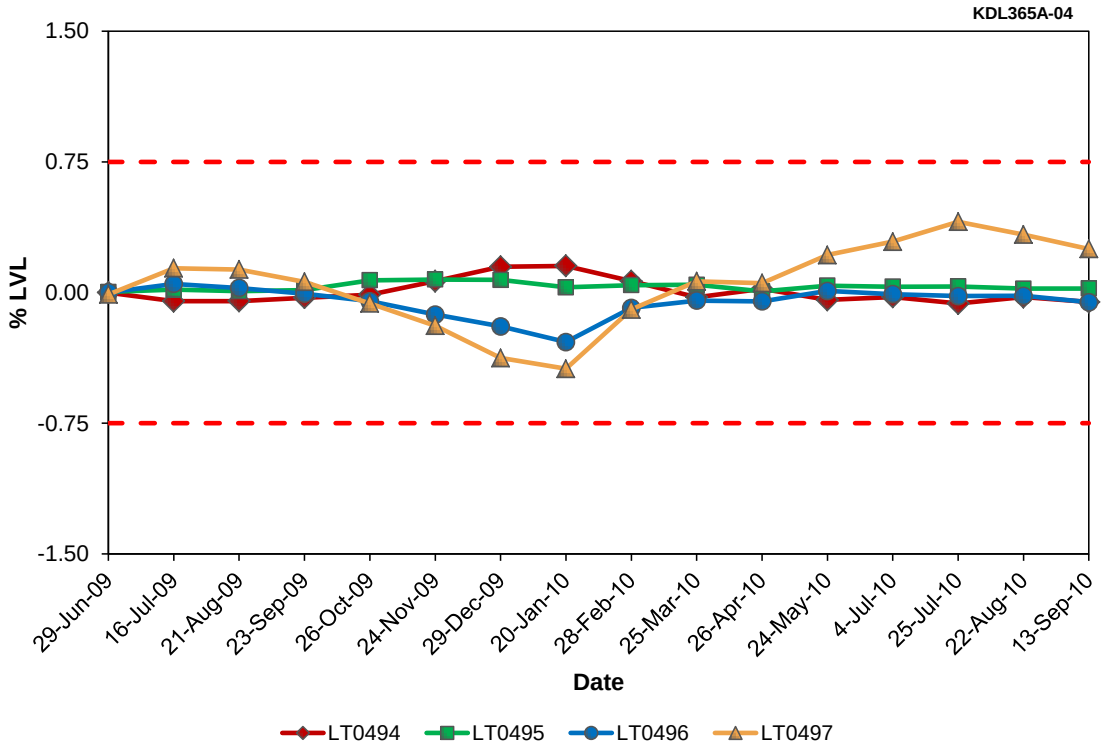



**Figure B.64 SG C LEVEL Steady-State Residual AAKR at Farley Unit 1 (Cycle 23)**

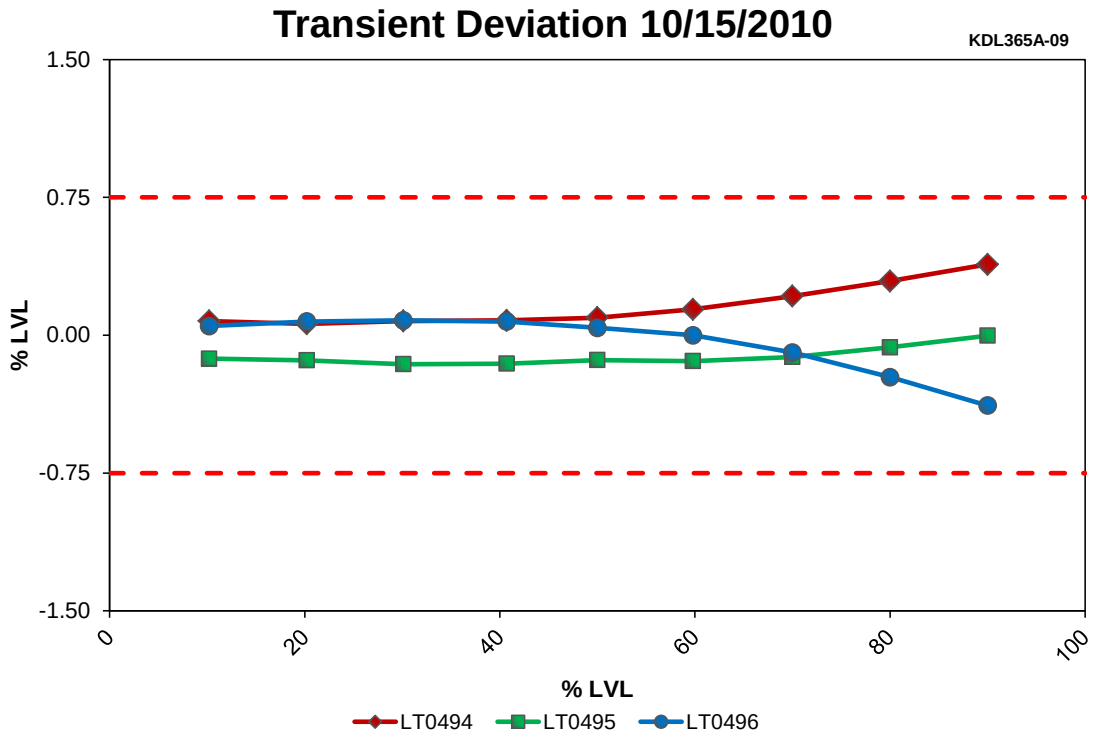



**Figure B.65 SG C LEVEL Transient Deviation at Farley Unit 1 (Cycle 23)**

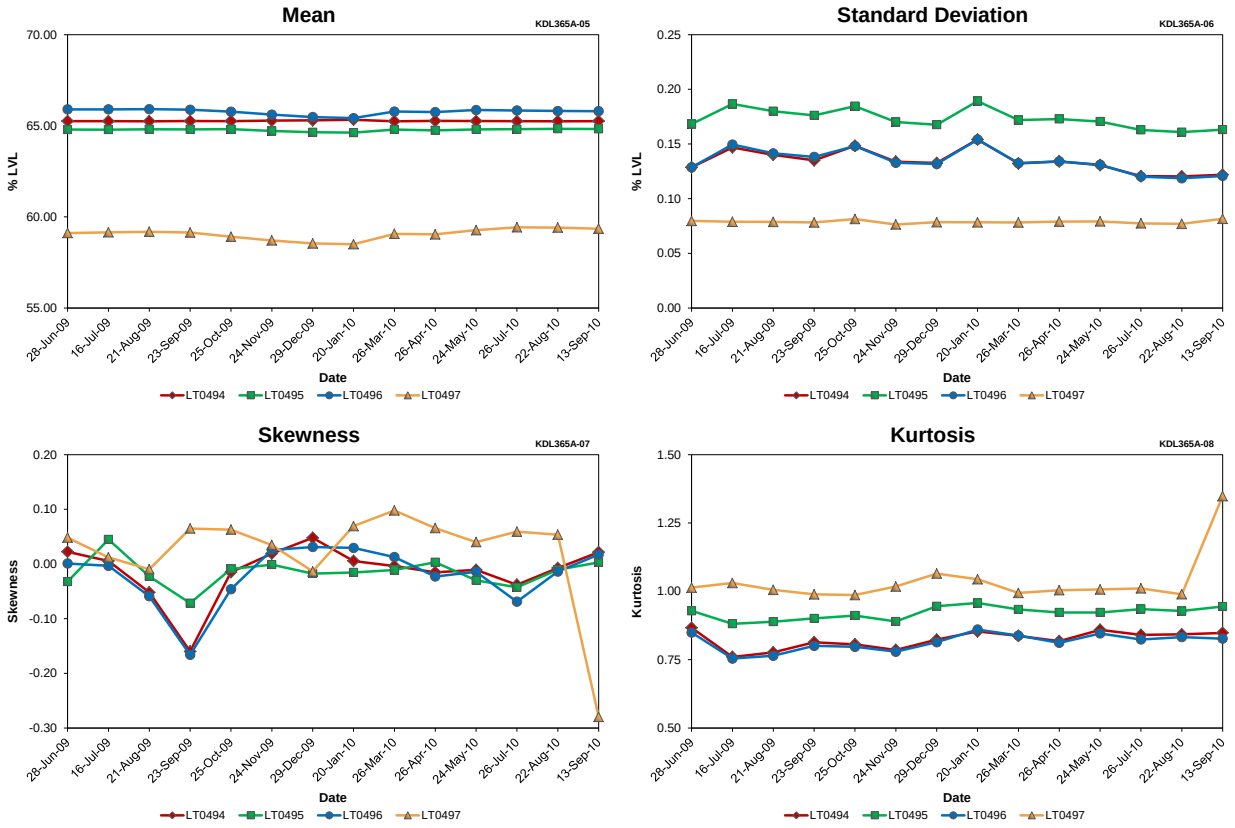



**Figure B.66 SG C LEVEL Data Quality Statistics at Farley Unit 1 (Cycle 23)**

**Table B.11 SG C LEVEL Data Quality for Farley Unit 1 (Cycle 23)**

| | Tag Names | | | |
|---|---|---|---|---|
| **Result Type** | **LT0494** | **LT0495** | **LT0496** | **LT0497** |
| Mean | 65.26 | 64.77 | 65.77 | 59.06 |
| Std. Dev. | 0.13 | 0.17 | 0.13 | 0.08 |
| Skewness | -0.01 | -0.02 | -0.02 | 0.02 |
| Kurtosis | 0.82 | 0.92 | 0.81 | 1.04 |

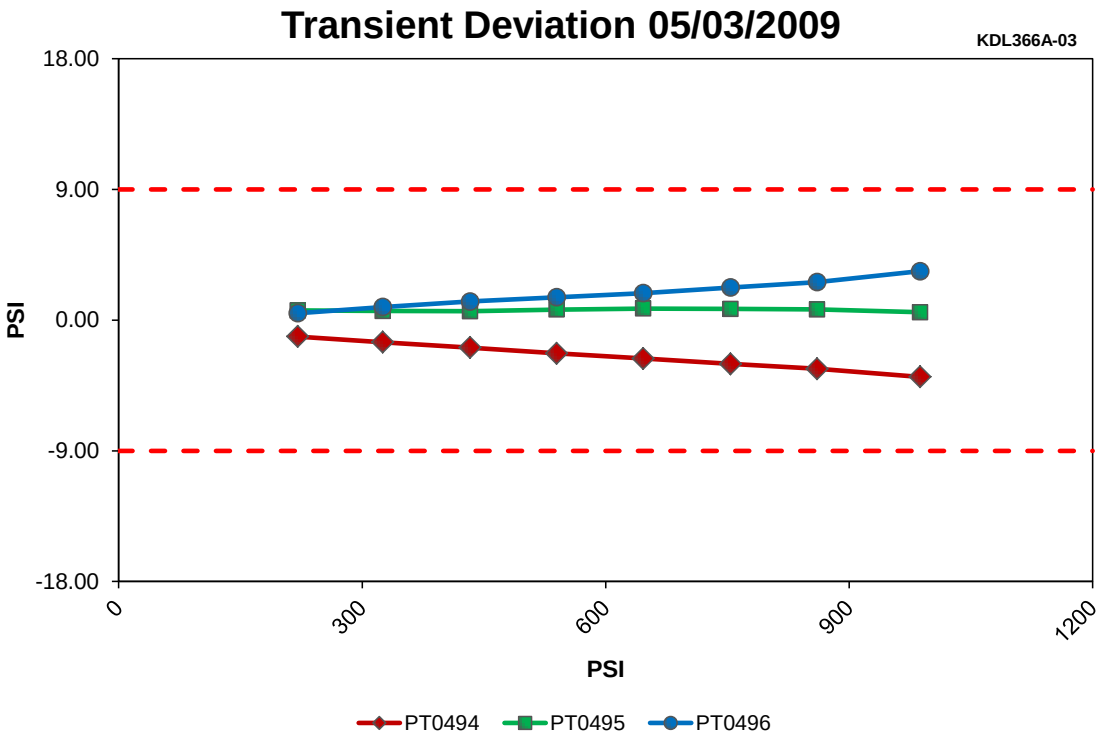



**Figure B.67 SG C OUTLET PRESSURE Transient Deviation at Farley Unit 1 (Cycle 23)**

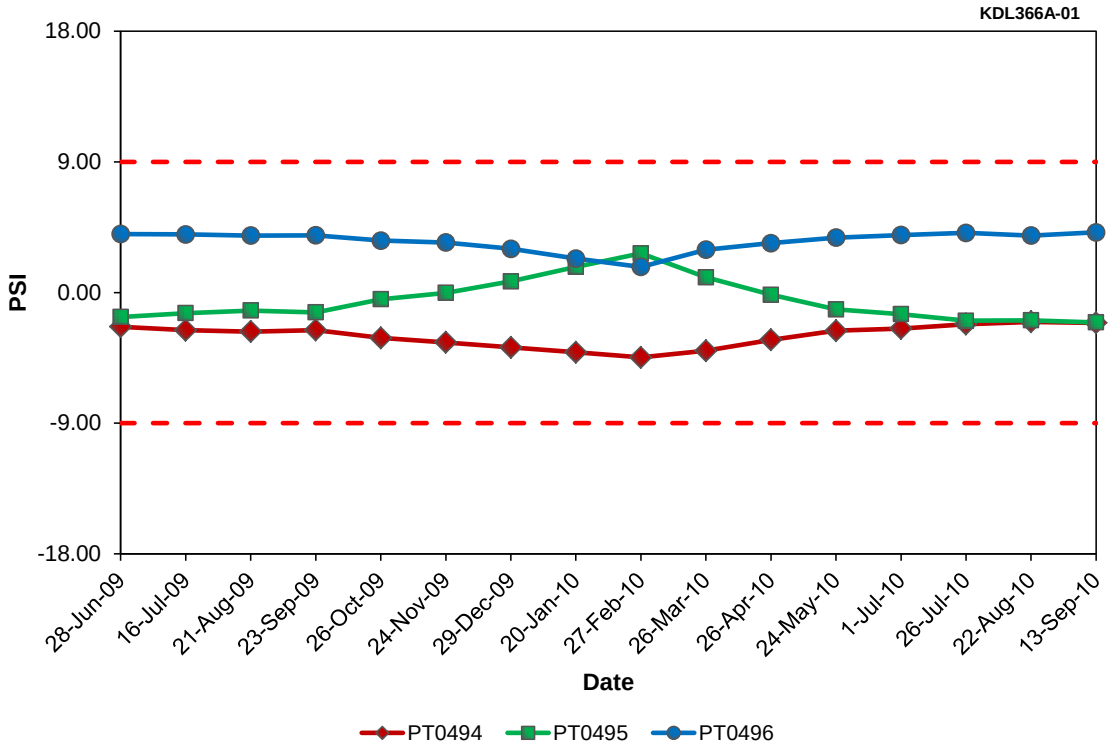



**Figure B.68 SG C OUTLET PRESSURE Steady-State Deviation at Farley Unit 1 (Cycle 23)**

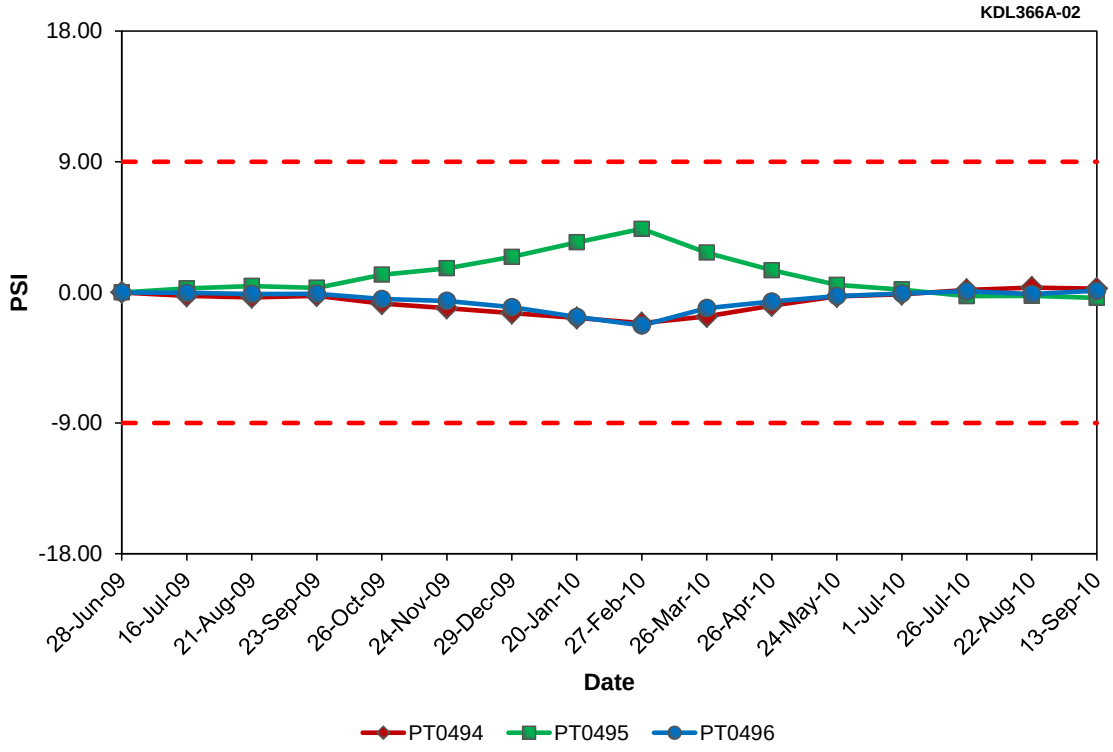



**Figure B.69 SG C OUTLET PRESSURE Steady-State Drift at Farley Unit 1 (Cycle 23)**

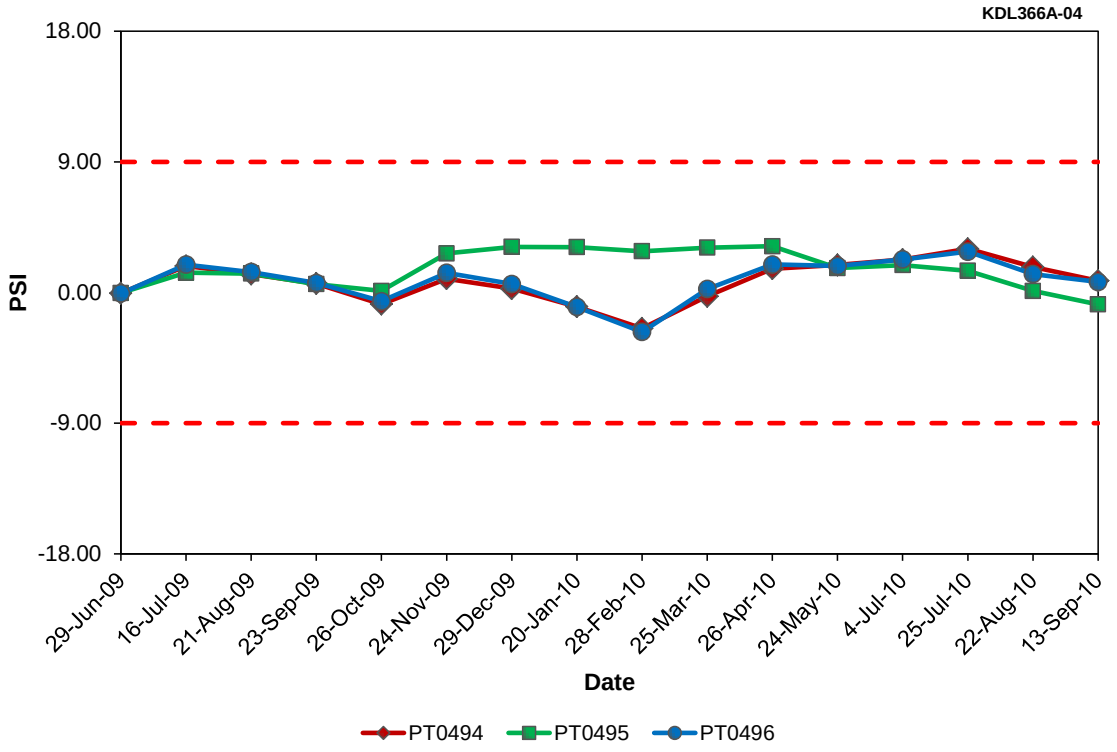



**Figure B.70 SG C OUTLET PRESSURE Steady-State Residual AAKR at Farley Unit 1 (Cycle 23)**

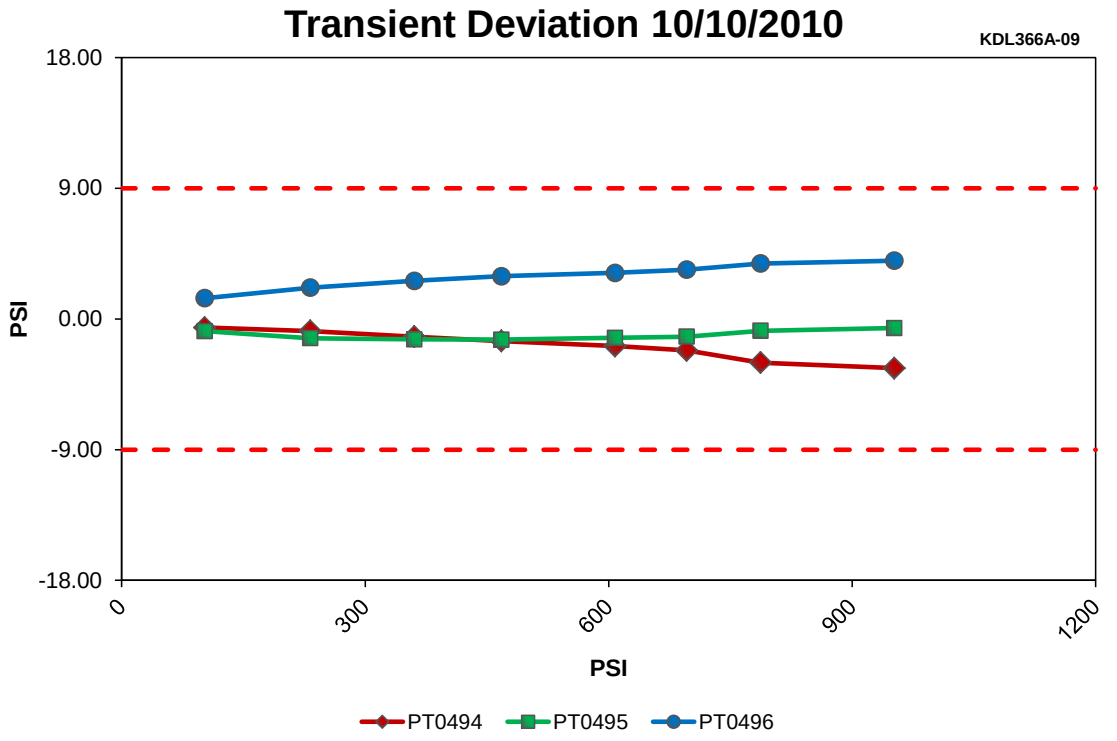



**Figure B.71 SG C OUTLET PRESSURE Transient Deviation at Farley Unit 1 (Cycle 23)**

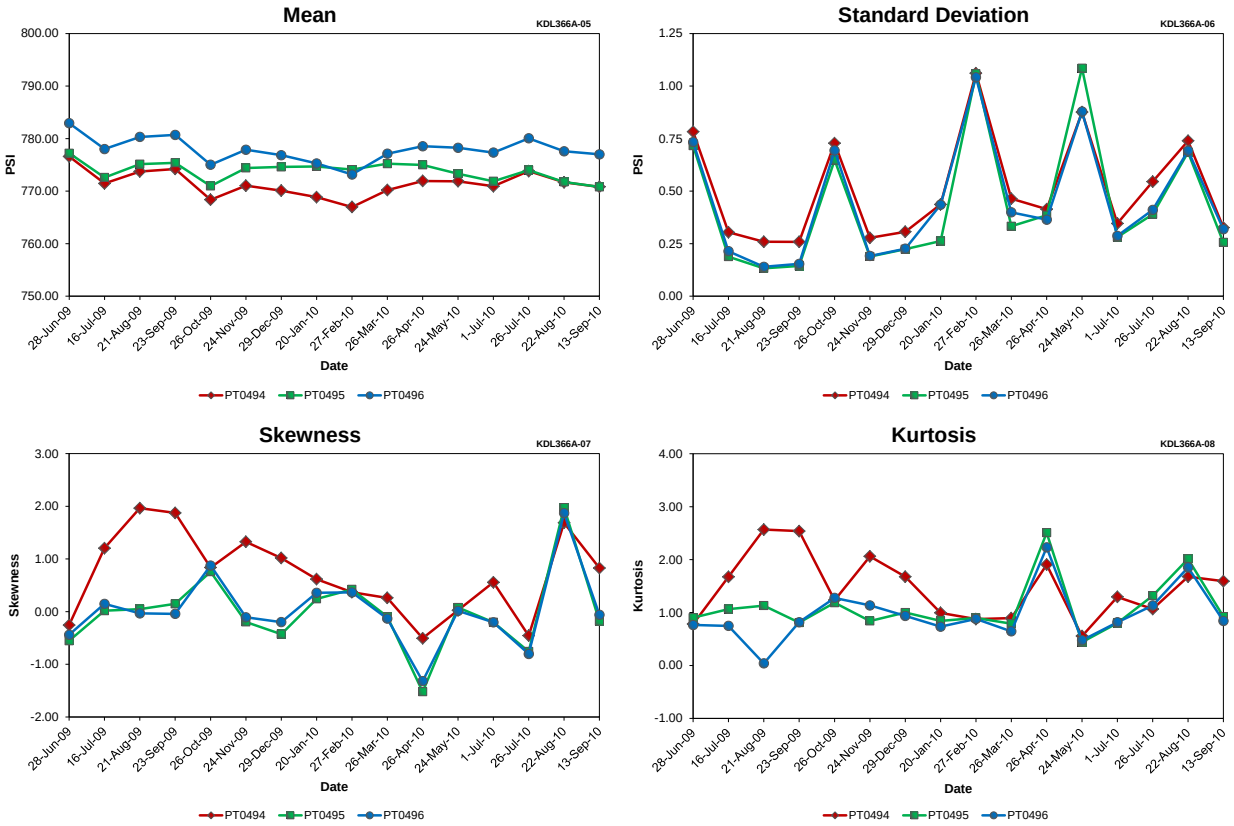



**Figure B.72 SG C OUTLET PRESSURE Data Quality Statistics at Farley Unit 1 (Cycle 23)**

**Table B.12 SG C OUTLET PRESSURE Data Quality for Farley Unit 1 (Cycle 23)**

| Result Type | Tag Names | | |
|---|---|---|---|
| | PT0494 | PT0495 | PT0496 |
| Mean | 771.42 | 773.82 | 777.88 |
| Std. Dev. | 0.51 | 0.44 | 0.45 |
| Skewness | 0.71 | -0.02 | 0.02 |
| Kurtosis | 1.46 | 1.09 | 0.96 |

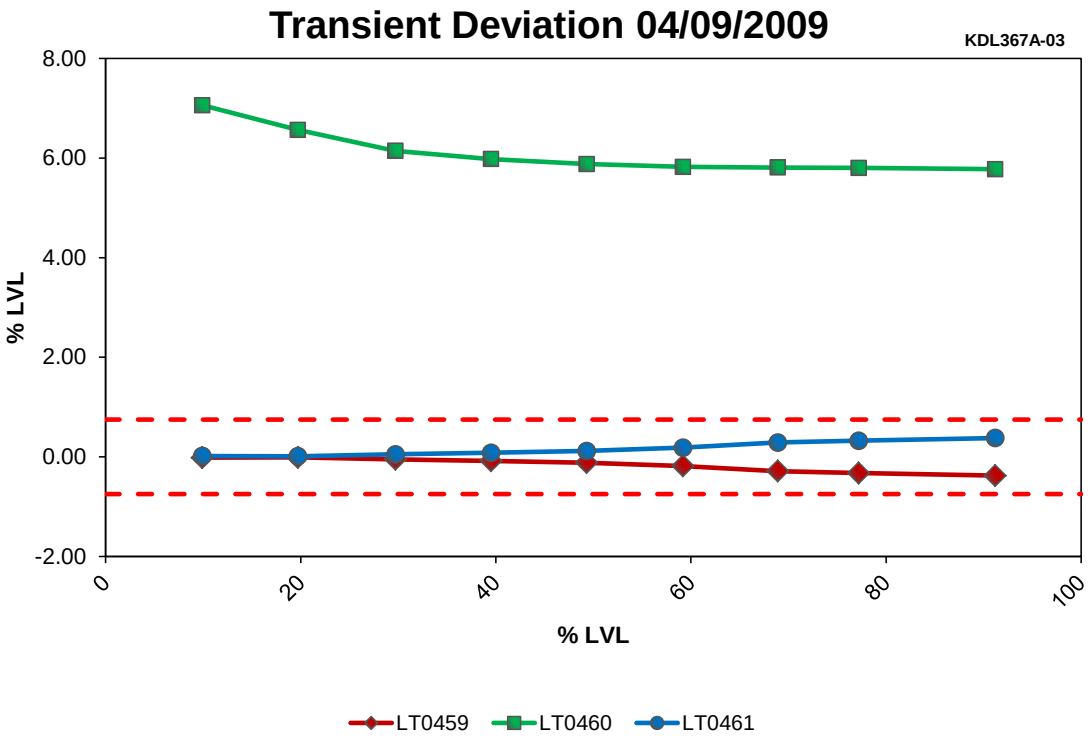



**Figure B.73 PRESSURIZER LEVEL Transient Deviation at Farley Unit 1 (Cycle 23)**

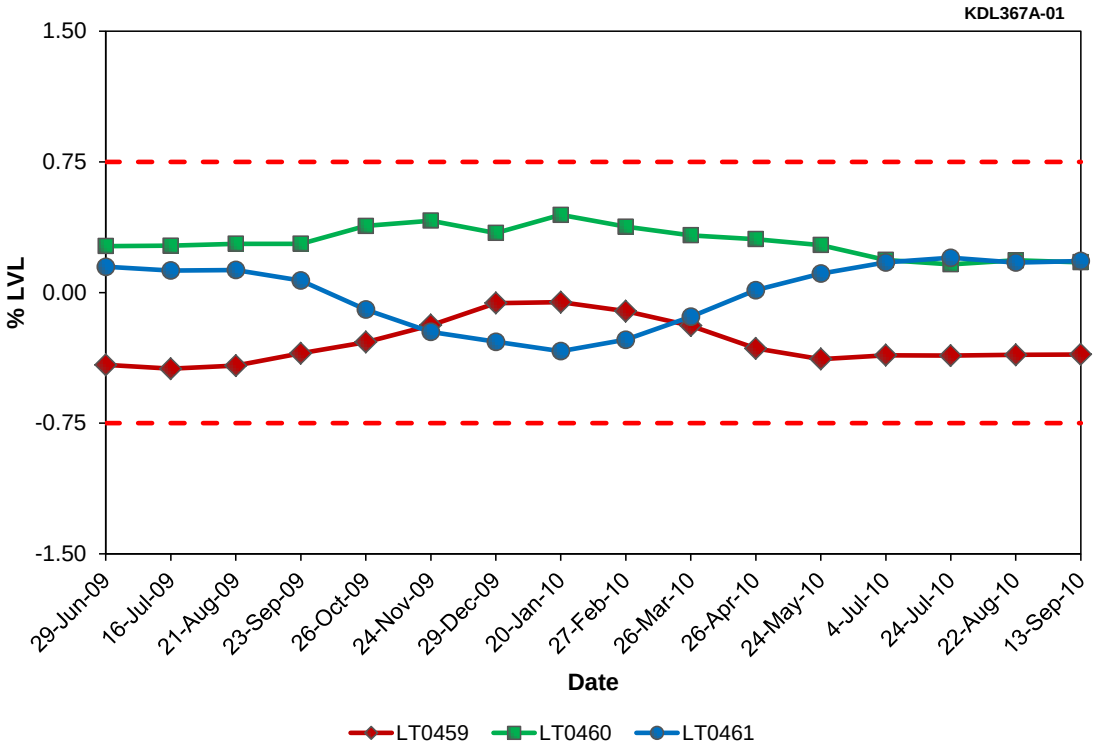



**Figure B.74 PRESSURIZER LEVEL Steady-State Deviation at Farley Unit 1 (Cycle 23)**

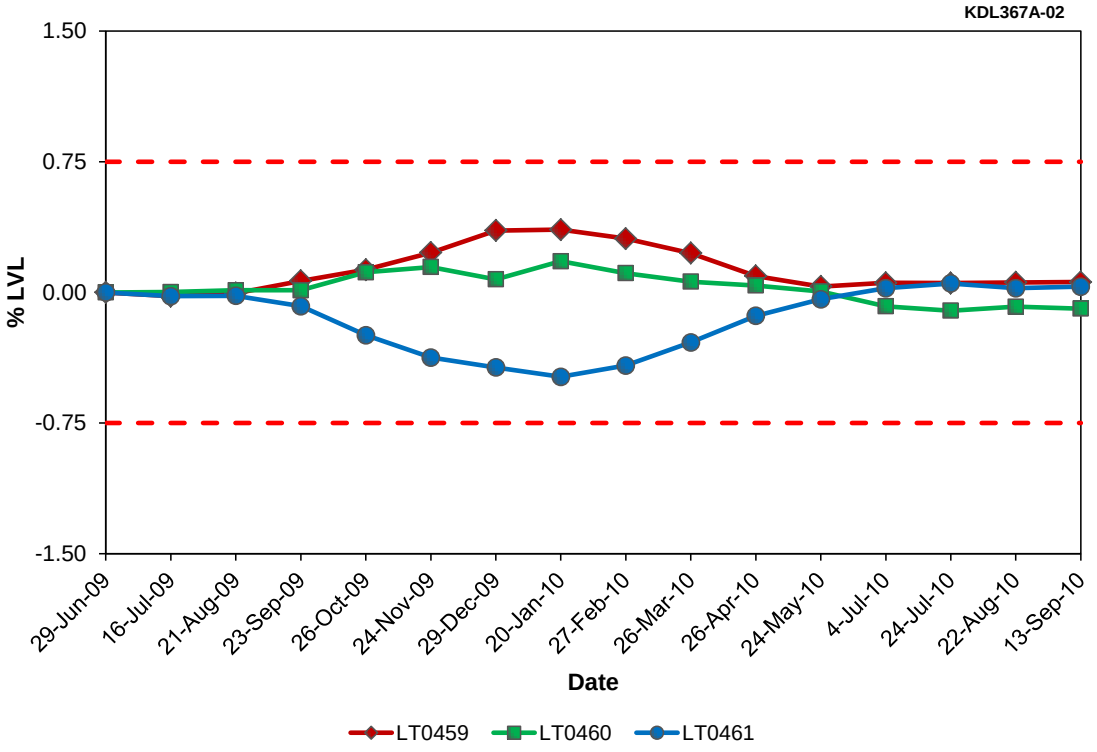



**Figure B.75 PRESSURIZER LEVEL Steady-State Drift at Farley Unit 1 (Cycle 23)**

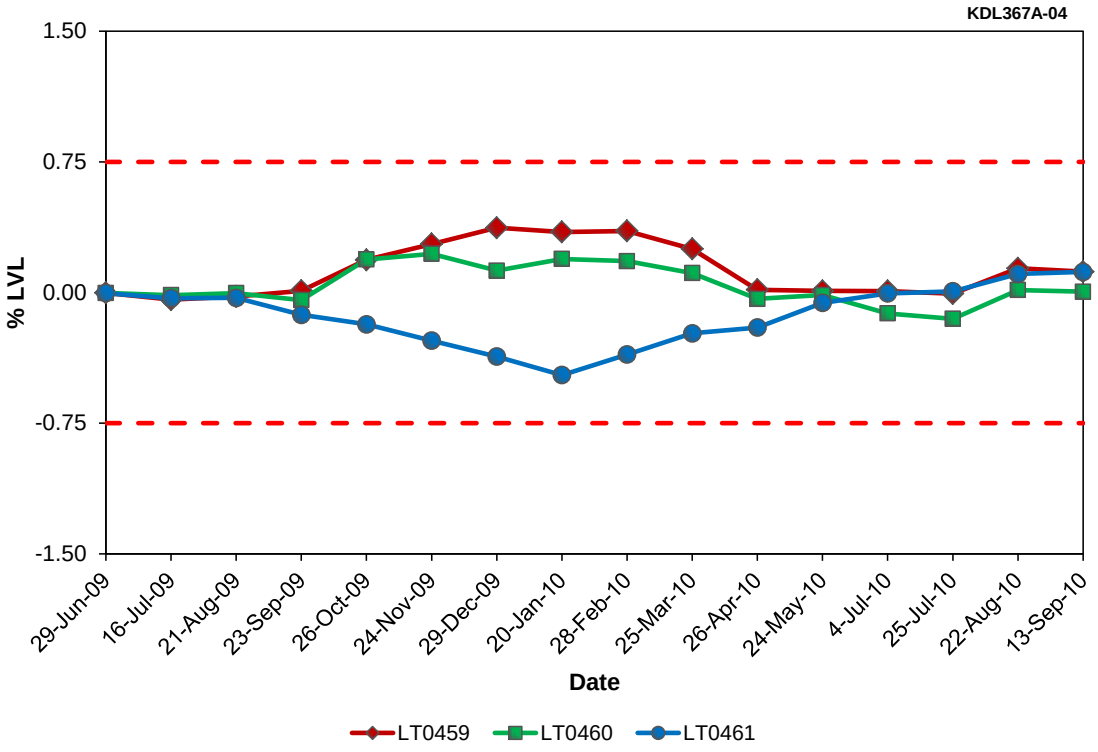



**Figure B.76 PRESSURIZER LEVEL Steady-State Residual AAKR at Farley Unit 1 (Cycle 23)**

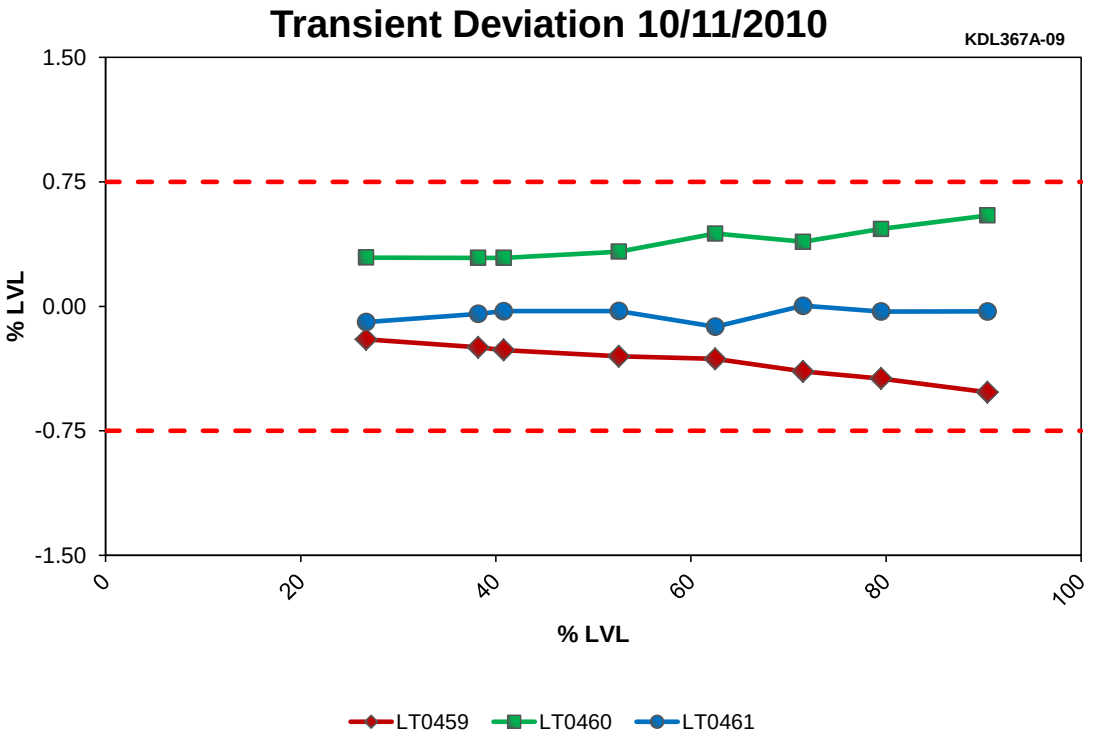



**Figure B.77 PRESSURIZER LEVEL Transient Deviation at Farley Unit 1 (Cycle 23)**

**Figure B.78 PRESSURIZER LEVEL Data Quality Statistics at Farley Unit 1 (Cycle 23)**

**Table B.13 PRESSURIZER LEVEL Data Quality for Farley Unit 1 (Cycle 23)**

| | Tag Names | | |
|---|---|---|---|
| **Result Type** | **LT0459** | **LT0460** | **LT0461** |
| Mean | 49.11 | 49.70 | 49.40 |
| Std. Dev. | 0.18 | 0.18 | 0.18 |
| Skewness | -0.45 | -0.58 | -0.44 |
| Kurtosis | 1.60 | 1.61 | 1.53 |

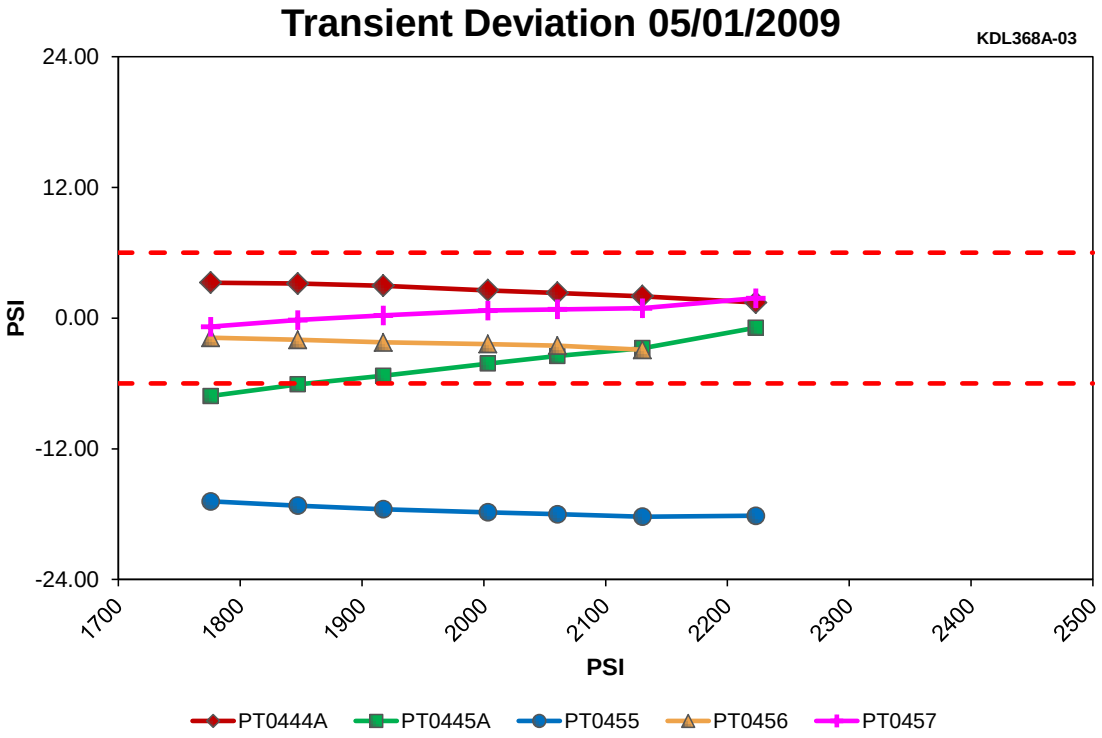



**Figure B.79 PRESSURIZER PRESSURE Transient Deviation at Farley Unit 1 (Cycle 23)**

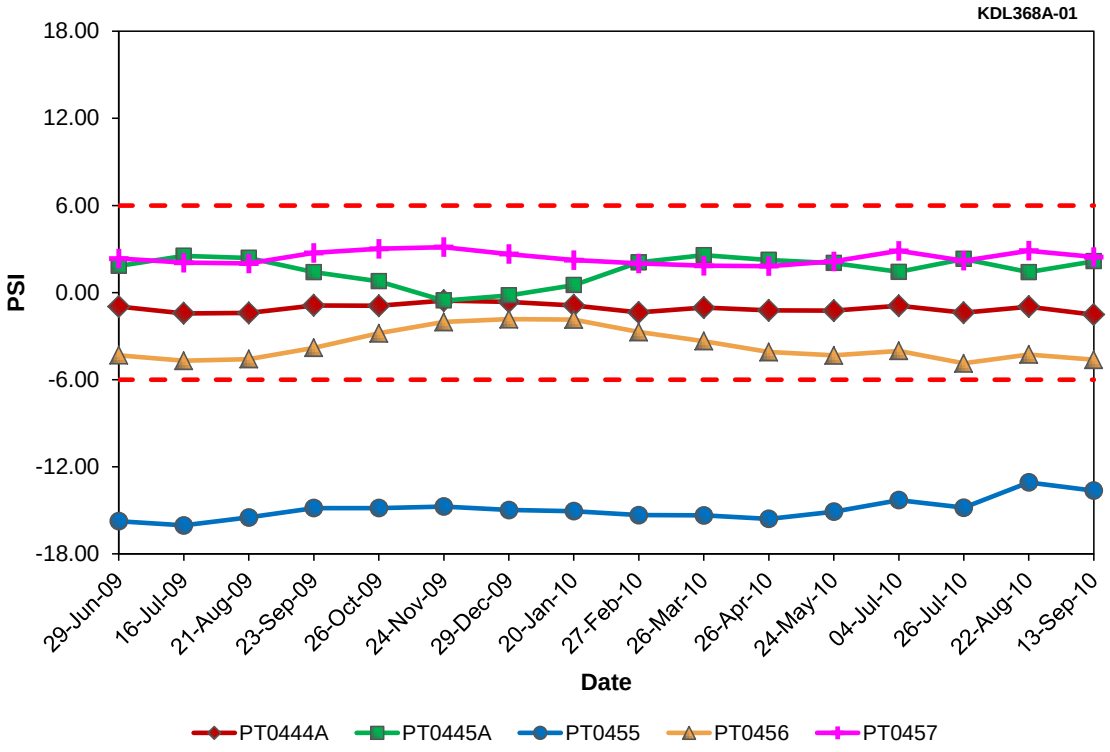



**Figure B.80 PRESSURIZER PRESSURE Steady-State Deviation at Farley Unit 1 (Cycle 23)**

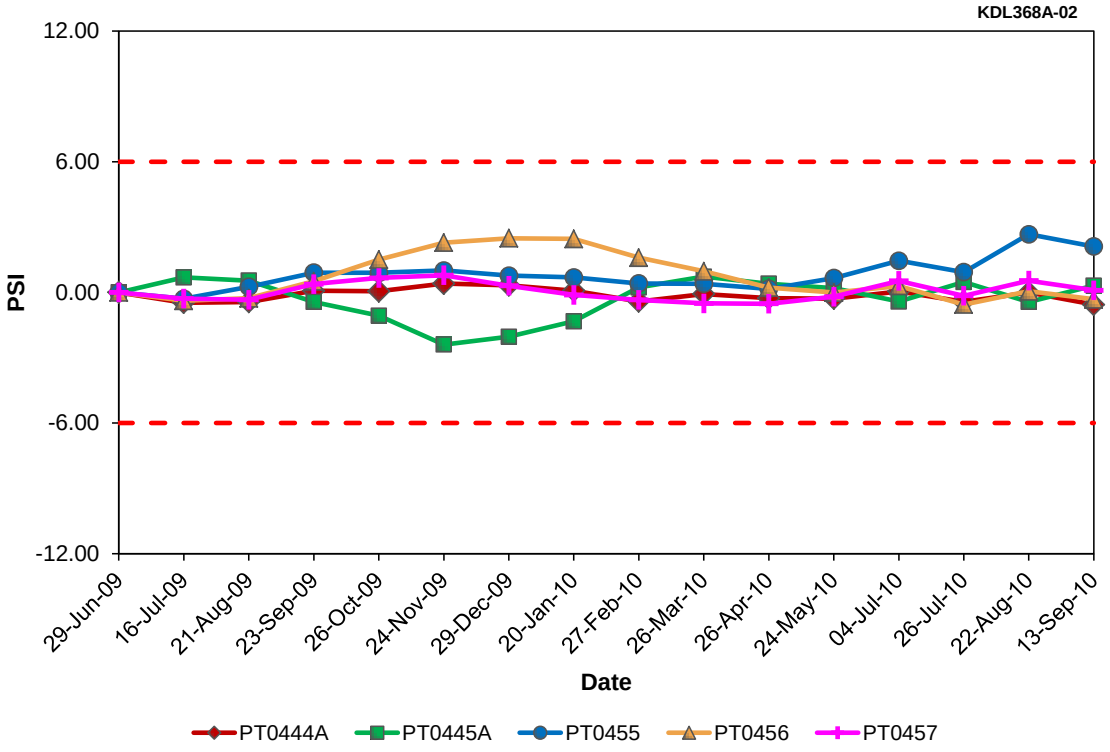



**Figure B.81 PRESSURIZER PRESSURE Steady-State Drift at Farley Unit 1 (Cycle 23)**

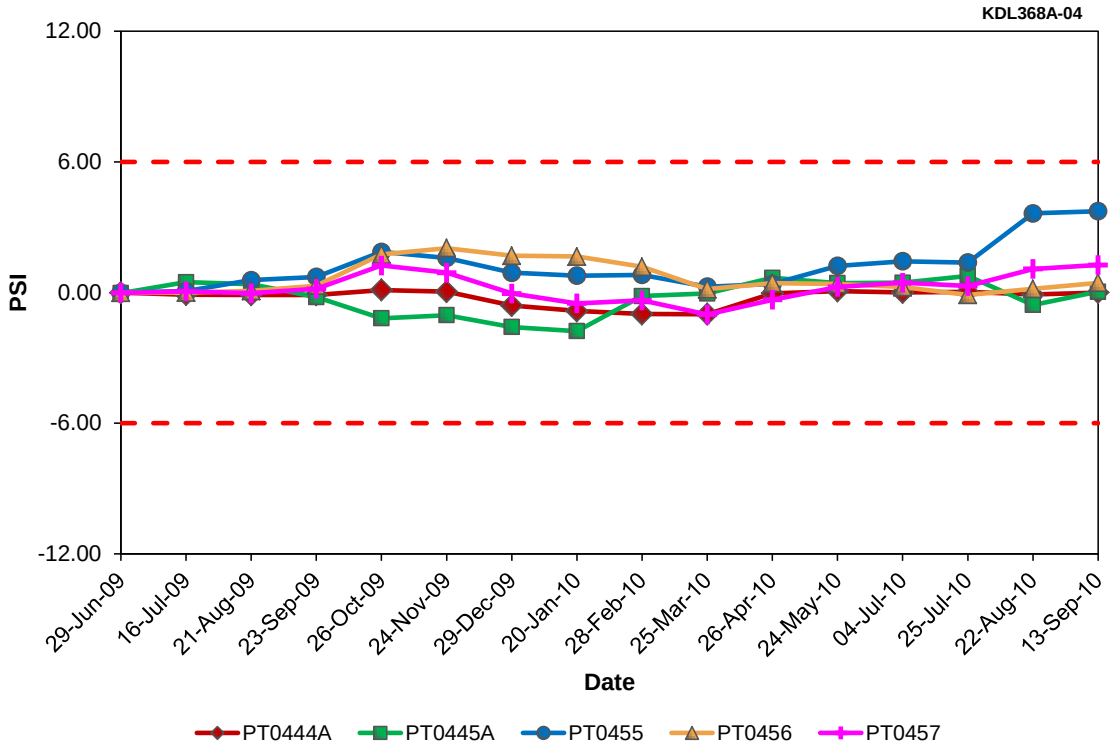



**Figure B.82 PRESSURIZER PRESSURE Steady-State Residual AAKR at Farley Unit 1 (Cycle 23)**

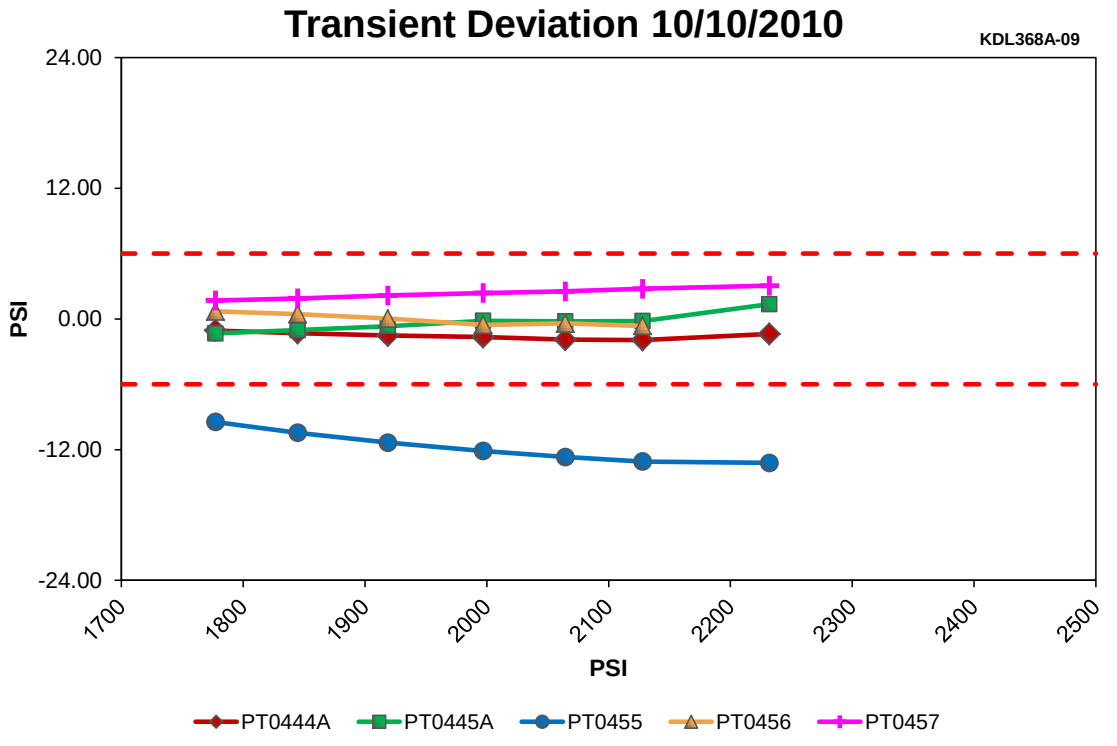



**Figure B.83 PRESSURIZER PRESSURE Transient Deviation at Farley Unit 1 (Cycle 23)**

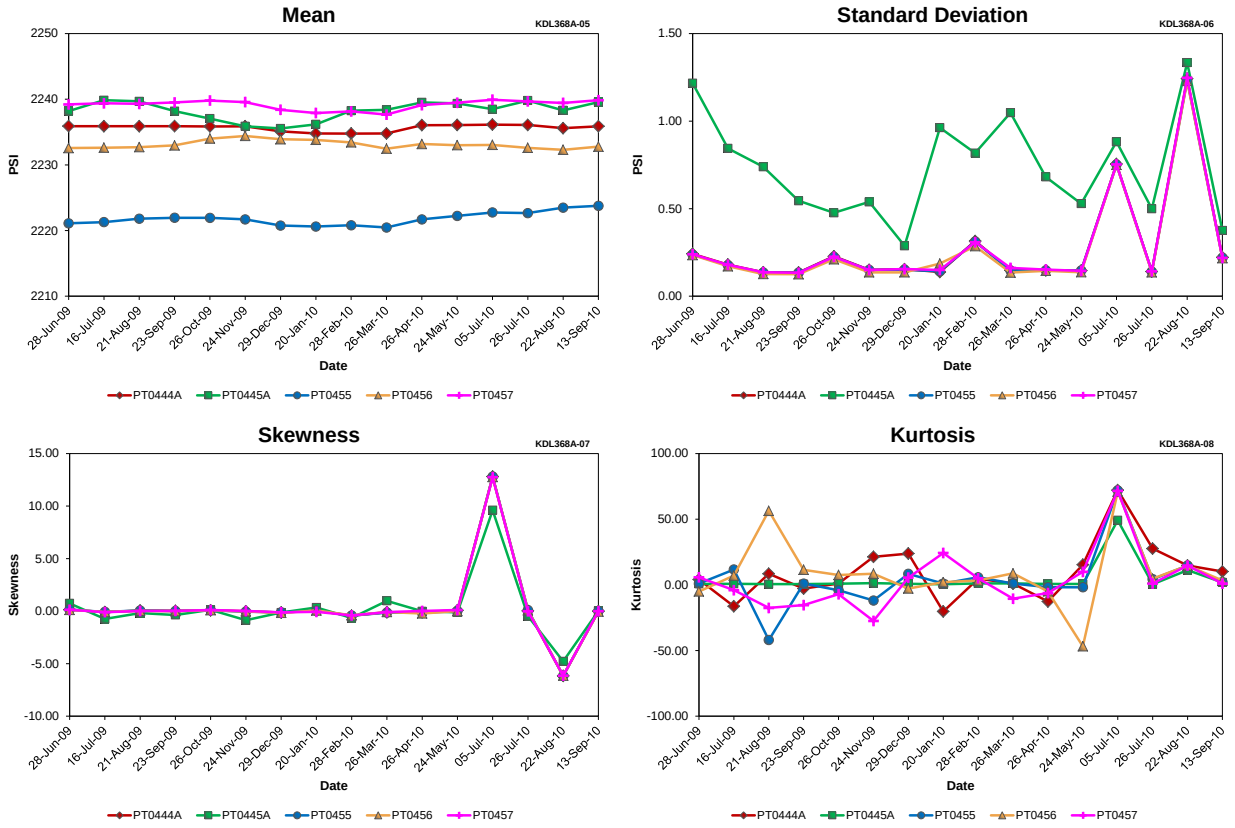



**Figure B.84 PRESSURIZER PRESSURE Data Quality Statistics at Farley Unit 1 (Cycle 23)**

**Table B.14 PRESSURIZER PRESSURE Data Quality for Farley Unit 1 (Cycle 23)**

| Result Type | Tag Names | | | | |
|---|---|---|---|---|---|
| | PT0444A | PT0445A | PT0455 | PT0456 | PT0457 |
| Mean | 2235.66 | 2238.26 | 2221.81 | 2233.11 | 2239.15 |
| Std. Dev. | 0.28 | 0.74 | 0.28 | 0.27 | 0.28 |
| Skewness | 0.39 | 0.22 | 0.39 | 0.38 | 0.39 |
| Kurtosis | 9.53 | 4.55 | 3.84 | 8.73 | 3.17 |

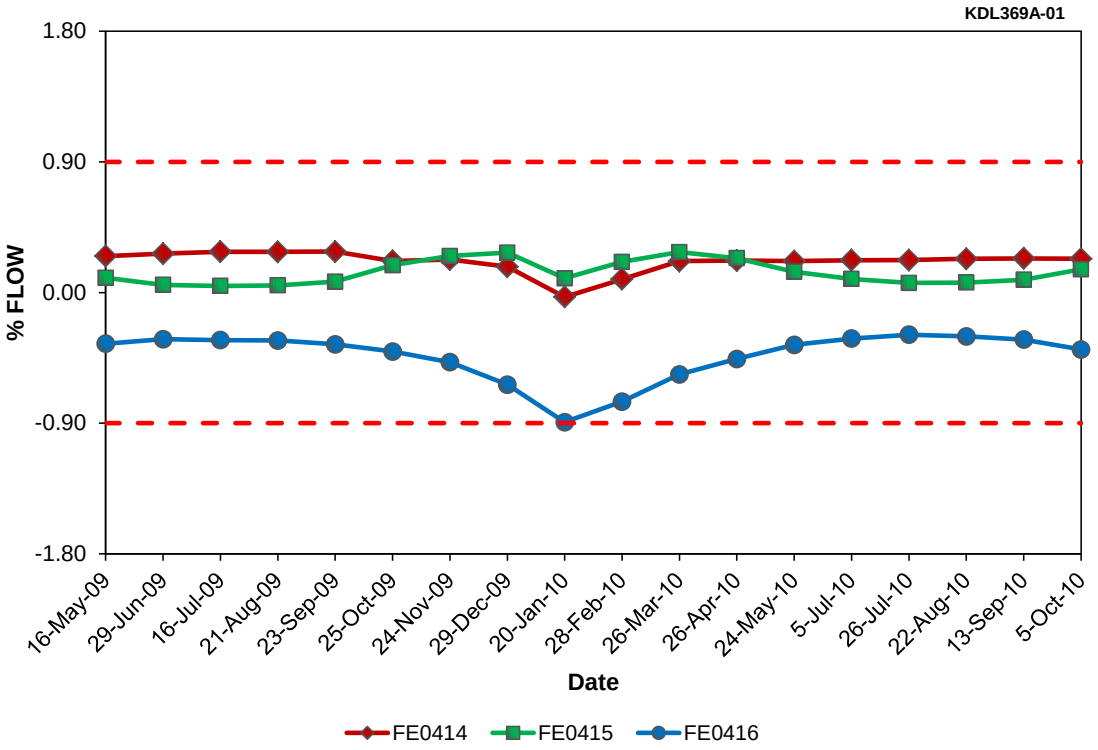



**Figure B.85 RCS LOOP A FLOW Steady-State Deviation at Farley Unit 1 (Cycle 23)**

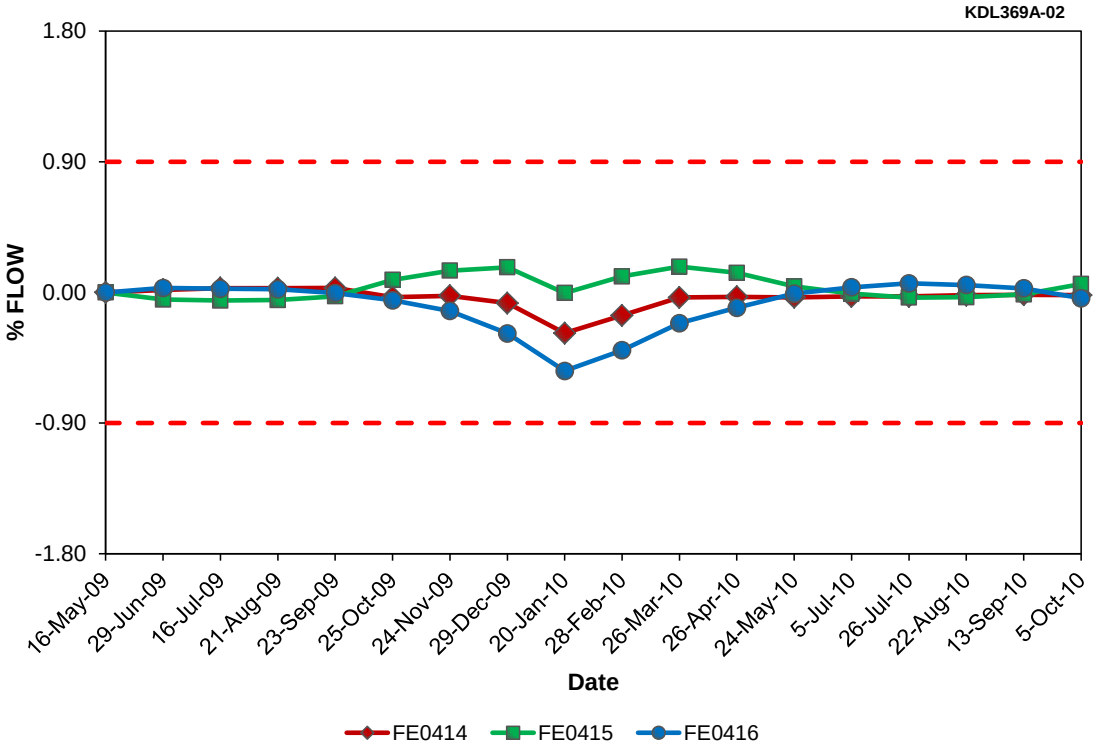



**Figure B.86 RCS LOOP A FLOW Steady-State Drift at Farley Unit 1 (Cycle 23)**

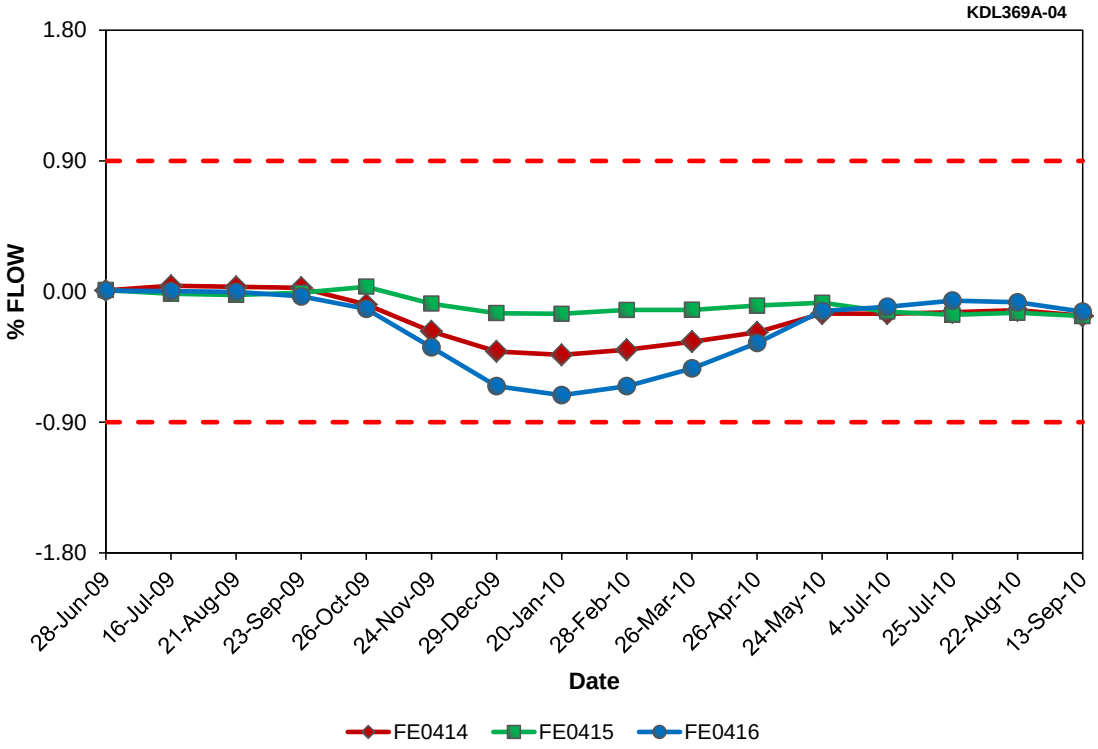



**Figure B.87 RCS LOOP A FLOW Steady-State Residual AAKR at Farley Unit 1 (Cycle 23)**

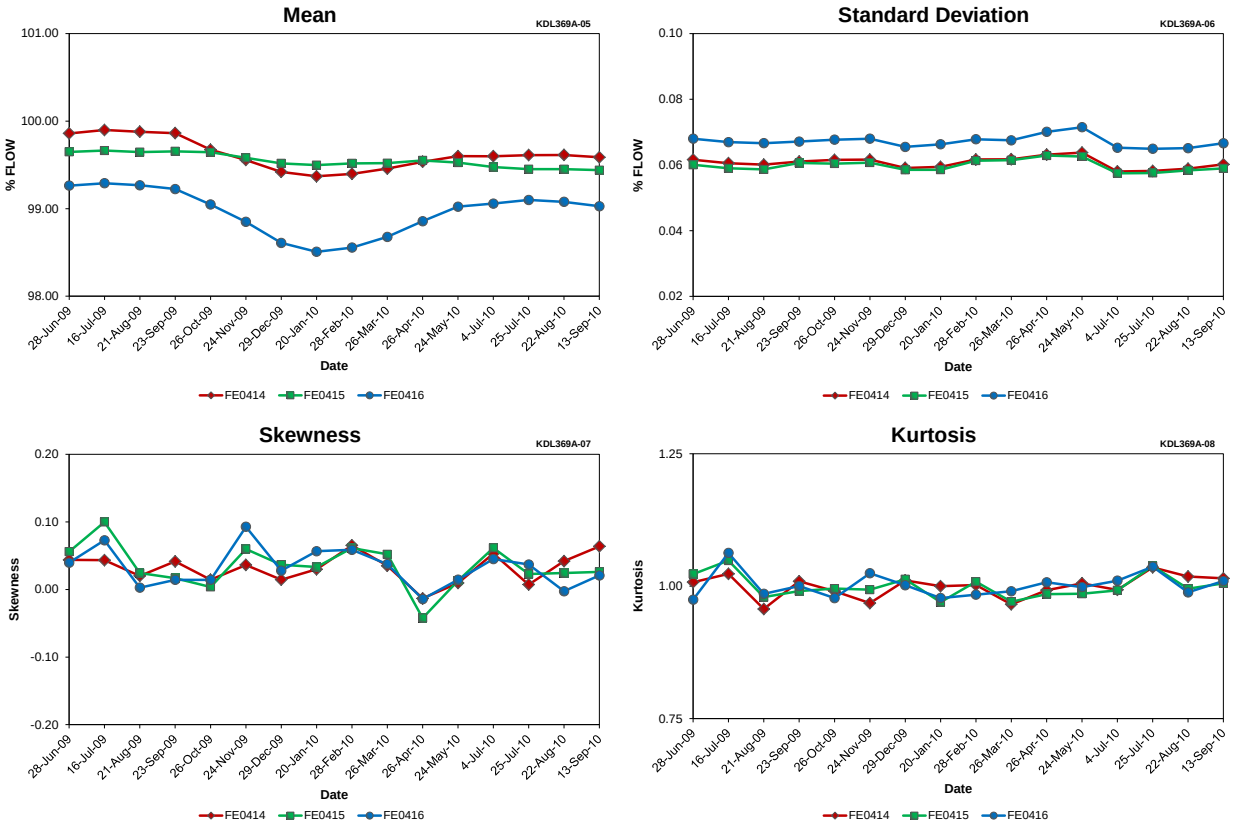



**Figure B.88 RCS LOOP A FLOW Data Quality Statistics at Farley Unit 1 (Cycle 23)**

**Table B.15 RCS LOOP A FLOW Data Quality for Farley Unit 1 (Cycle 23)**

| | Tag Names | | |
|---|---|---|---|
| **Result Type** | **FE0414** | **FE0415** | **FE0416** |
| Mean | 99.62 | 99.55 | 98.96 |
| Std. Dev. | 0.06 | 0.06 | 0.07 |
| Skewness | 0.03 | 0.03 | 0.03 |
| Kurtosis | 1.00 | 1.00 | 1.00 |

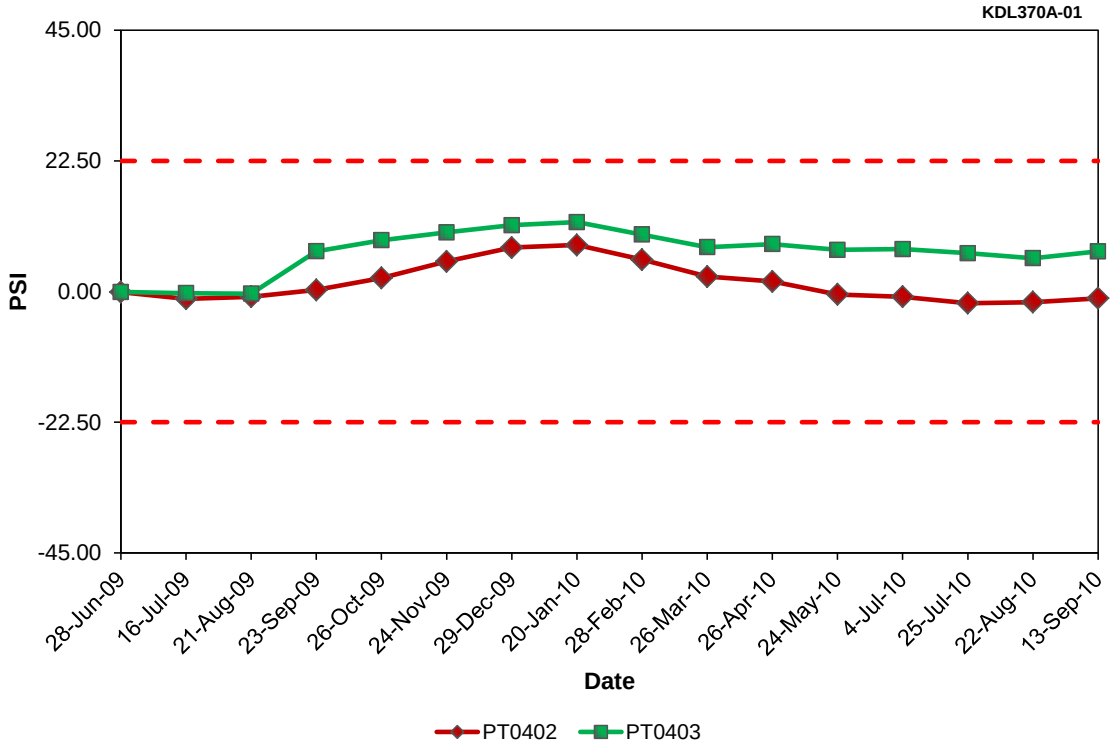



**Figure B.89 RCS WIDE RANGE PRESSURE Steady-State Residual AAKR at Farley Unit 1 (Cycle 23)**

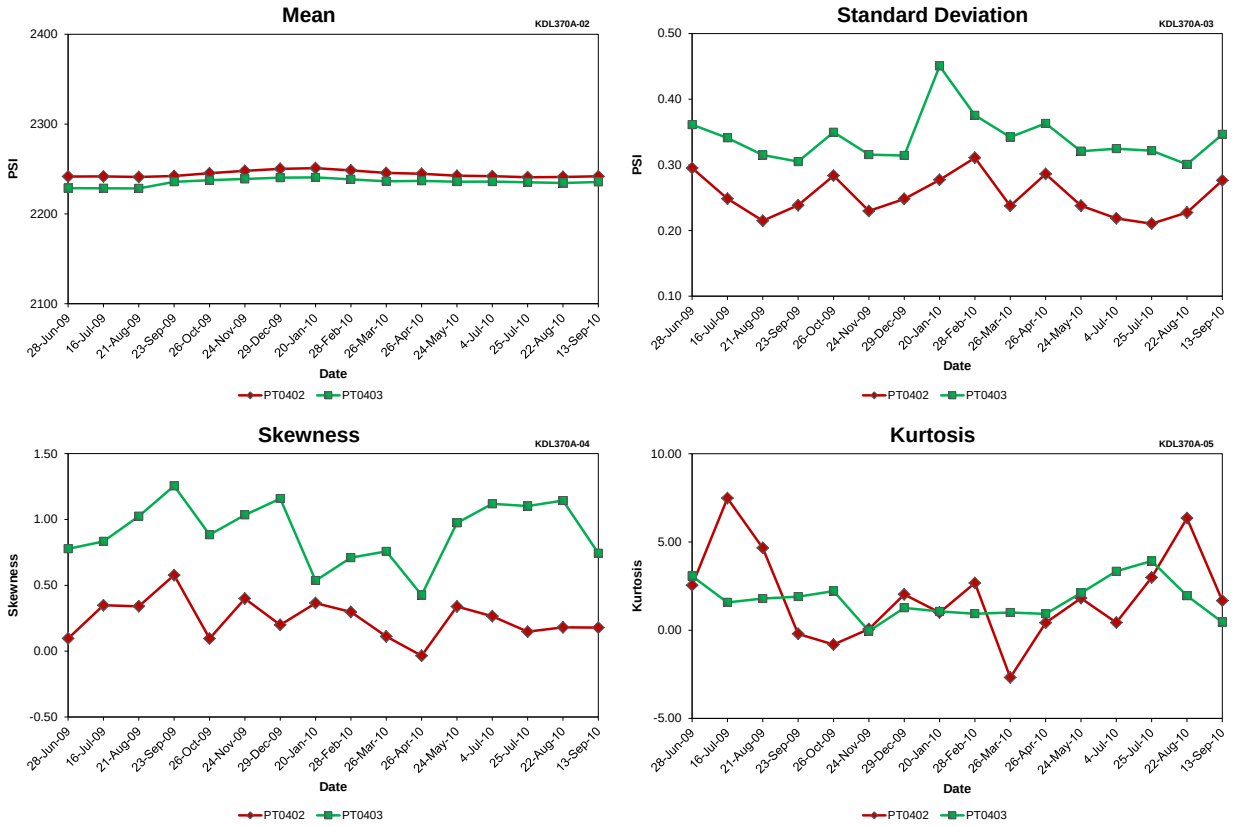



**Figure B.90 RCS WIDE RANGE PRESSURE Data Quality Statistics at Farley Unit 1 (Cycle 23)**

**Table B.16 RCS WIDE RANGE PRESSURE Data Quality for Farley Unit 1 (Cycle 23)**

| Result Type | Tag Names | |
|---|---|---|
| | PT0402 | PT0403 |
| Mean | 2244.22 | 2235.42 |
| Std. Dev. | 0.25 | 0.34 |
| Skewness | 0.24 | 0.90 |
| Kurtosis | 1.90 | 1.72 |

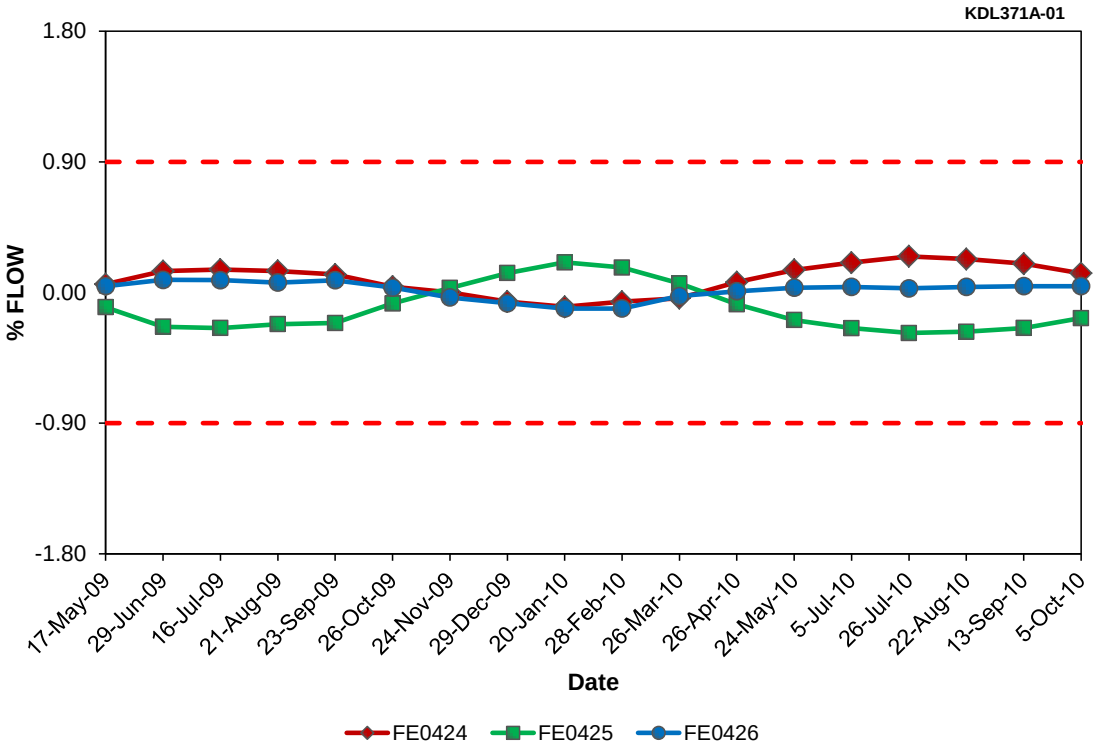



**Figure B.91 RCS LOOP B FLOW Steady-State Deviation at Farley Unit 1 (Cycle 23)**

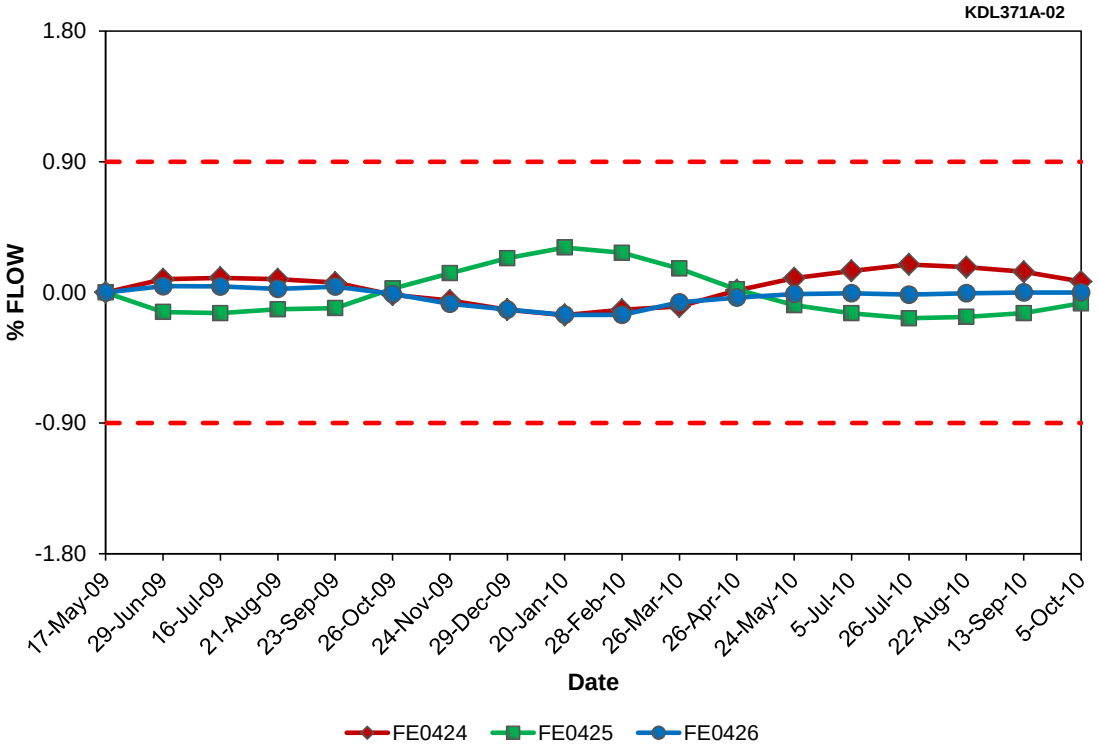



**Figure B.92 RCS LOOP B FLOW Steady-State Drift at Farley Unit 1 (Cycle 23)**

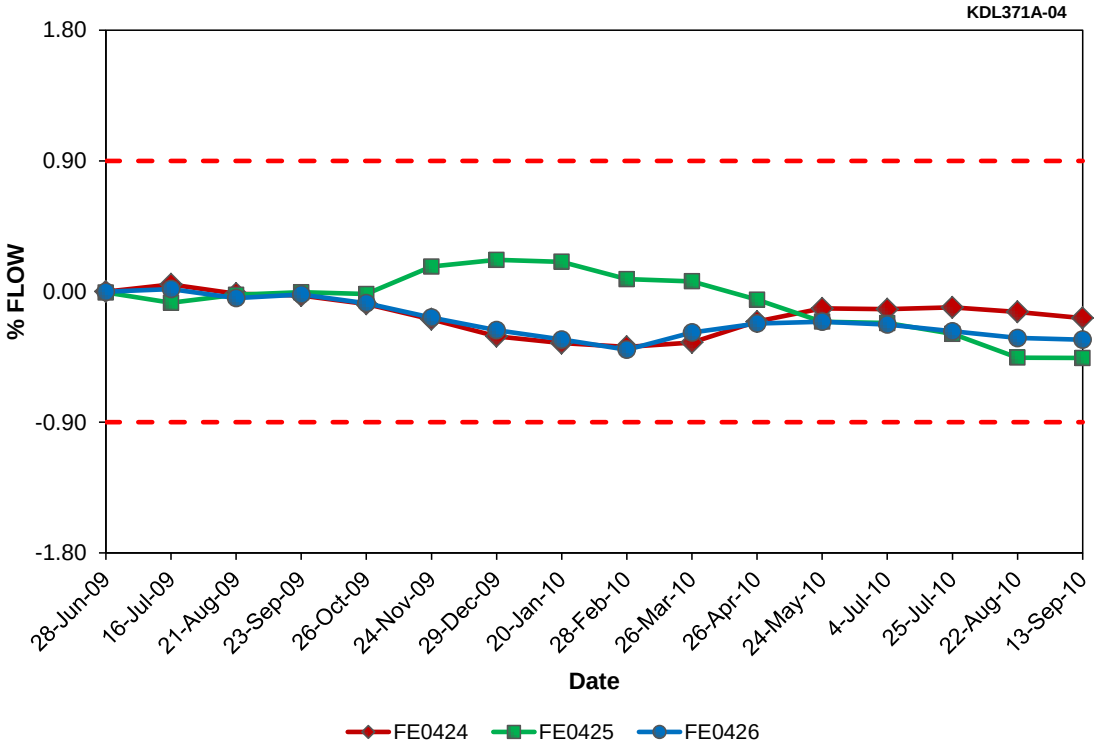



**Figure B.93 RCS LOOP B FLOW Steady-State Residual AAKR at Farley Unit 1 (Cycle 23)**

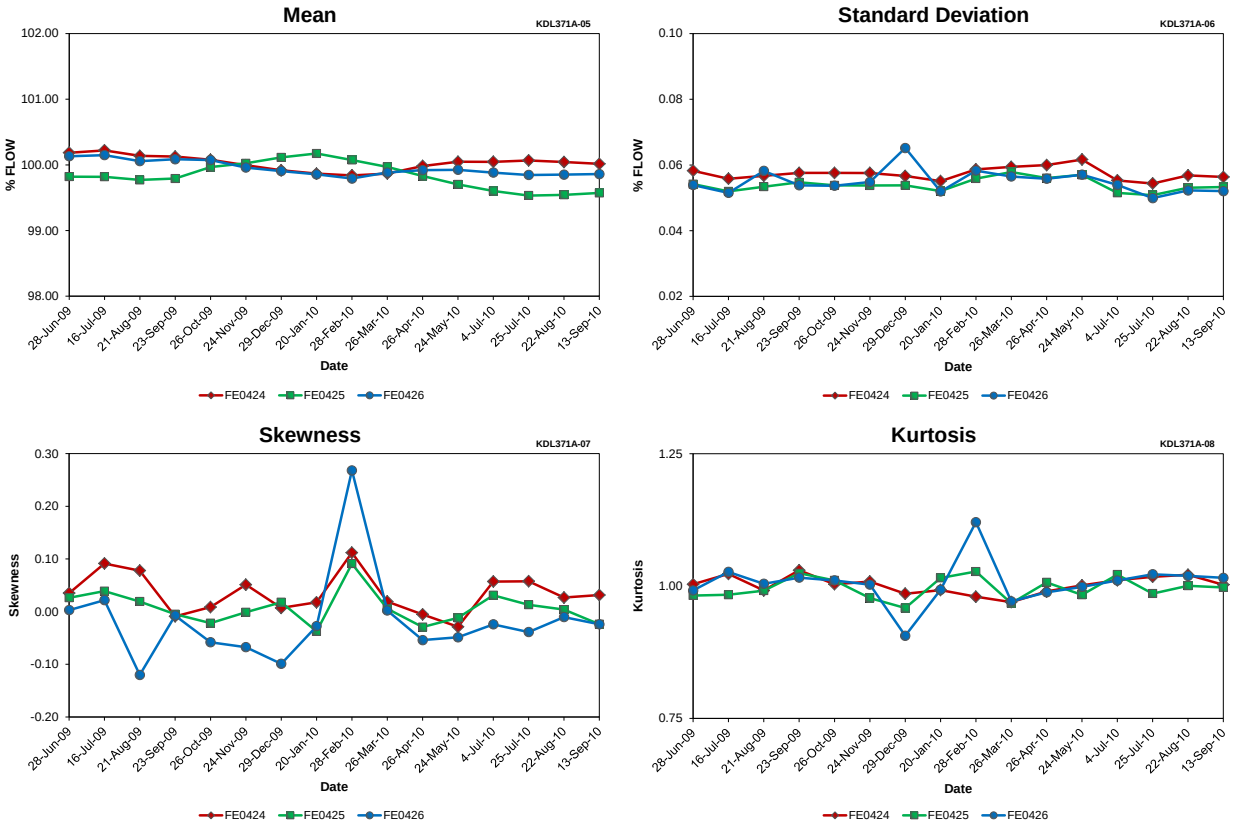



**Figure B.94 RCS LOOP B FLOW Data Quality Statistics at Farley Unit 1 (Cycle 23)**

**Table B.17 RCS LOOP B FLOW Data Quality for Farley Unit 1 (Cycle 23)**

| | Tag Names | | |
|---|---|---|---|
| **Result Type** | **FE0424** | **FE0425** | **FE0426** |
| Mean | 100.03 | 99.83 | 99.95 |
| Std. Dev. | 0.06 | 0.05 | 0.05 |
| Skewness | 0.03 | 0.01 | -0.02 |
| Kurtosis | 1.00 | 1.00 | 1.01 |

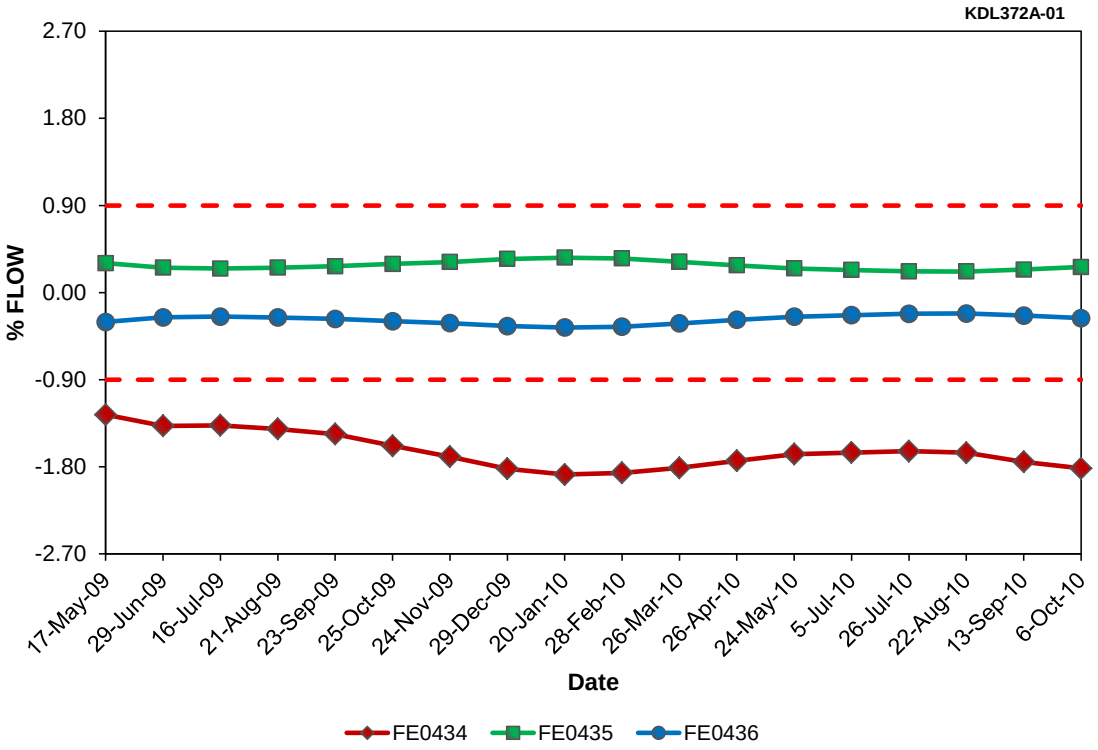



**Figure B.95 RCS LOOP C FLOW Steady-State Deviation at Farley Unit 1 (Cycle 23)**

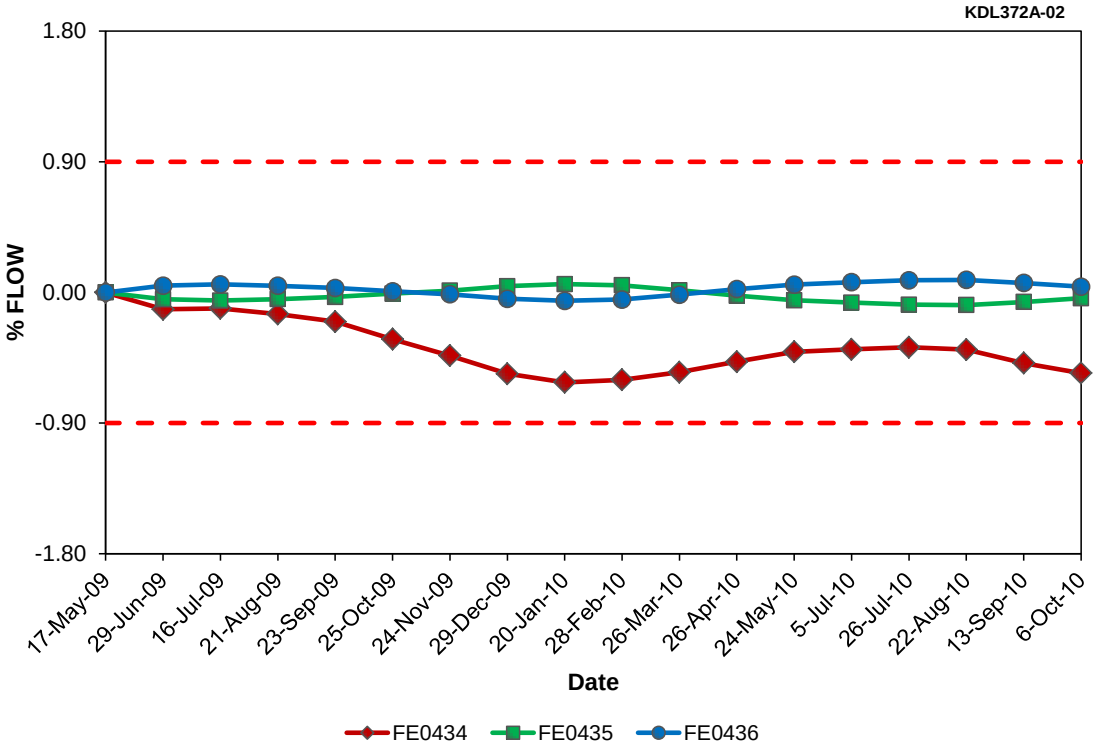



**Figure B.96 RCS LOOP C FLOW Steady-State Drift at Farley Unit 1 (Cycle 23)**

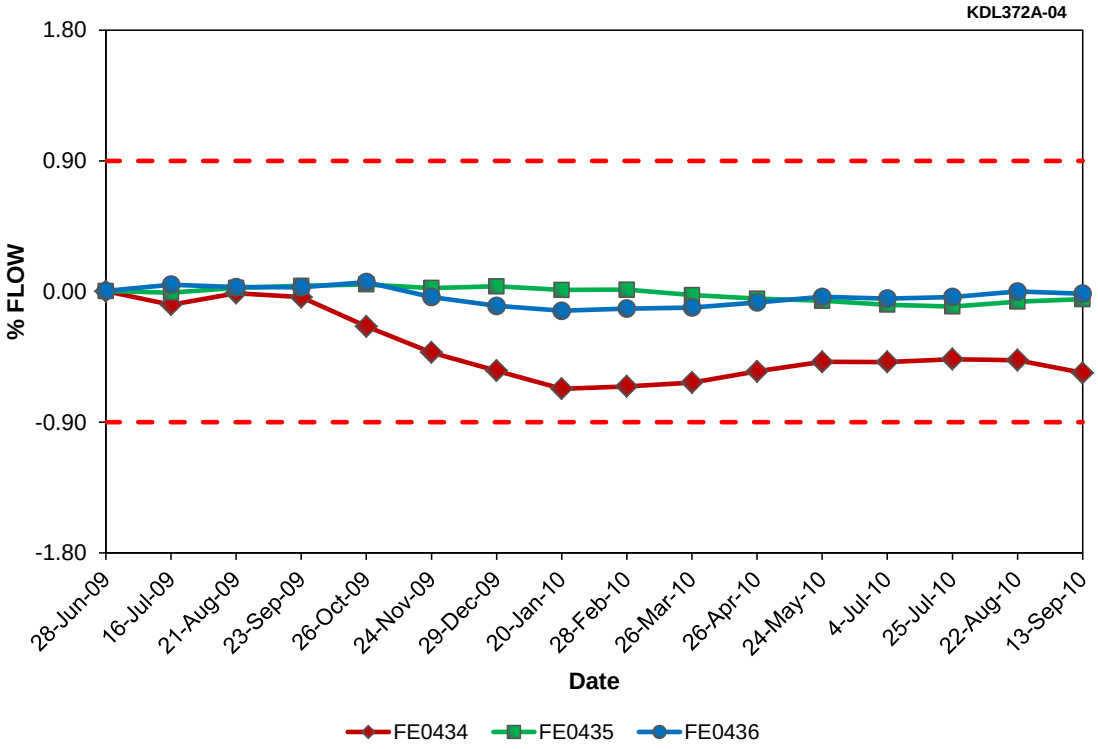



**Figure B.97 RCS LOOP C FLOW Steady-State Residual AAKR at Farley Unit 1 (Cycle 23)**

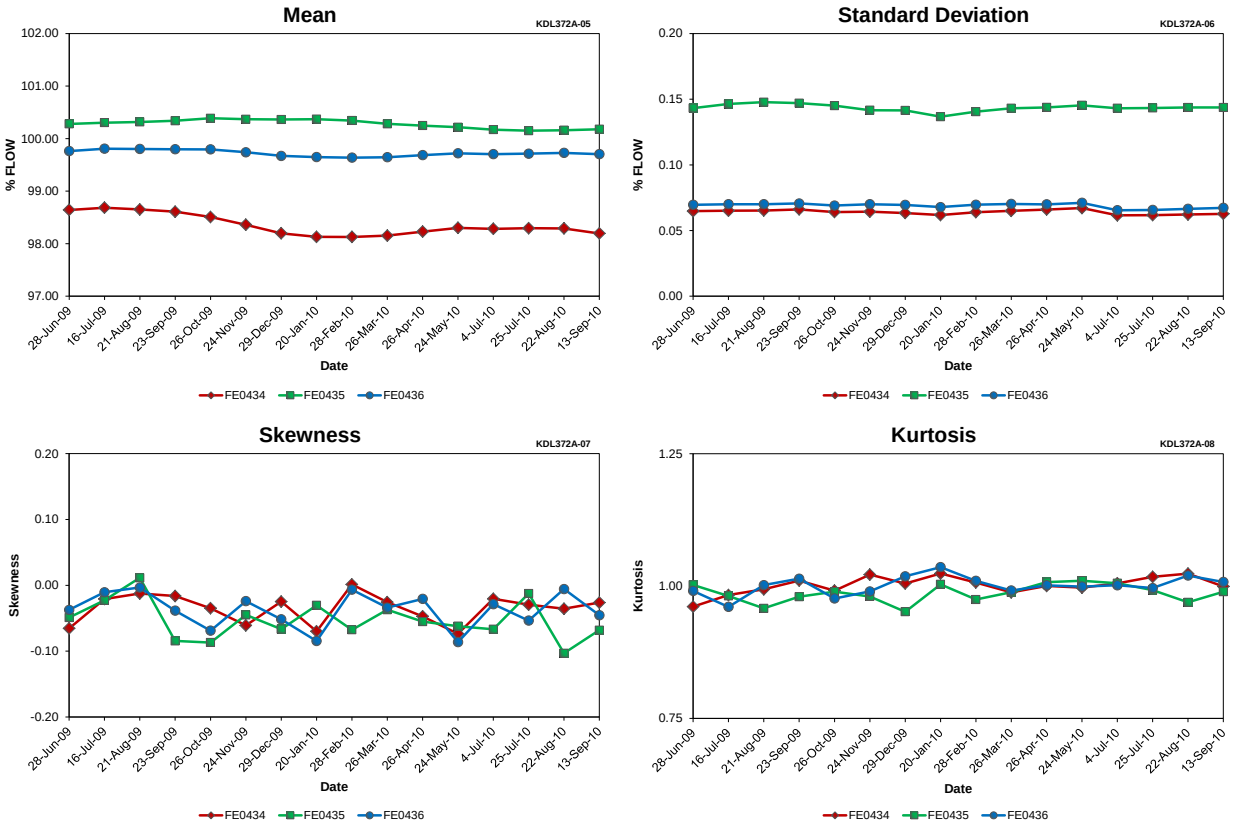



**Figure B.98 RCS LOOP C FLOW Data Quality Statistics at Farley Unit 1 (Cycle 23)**

**Table B.18 RCS LOOP C FLOW Data Quality for Farley Unit 1 (Cycle 23)**

| | Tag Names | | |
|---|---|---|---|
| **Result Type** | **FE0434** | **FE0435** | **FE0436** |
| Mean | 98.35 | 100.28 | 99.72 |
| Std. Dev. | 0.06 | 0.14 | 0.07 |
| Skewness | -0.04 | -0.05 | -0.04 |
| Kurtosis | 1.00 | 0.99 | 1.00 |

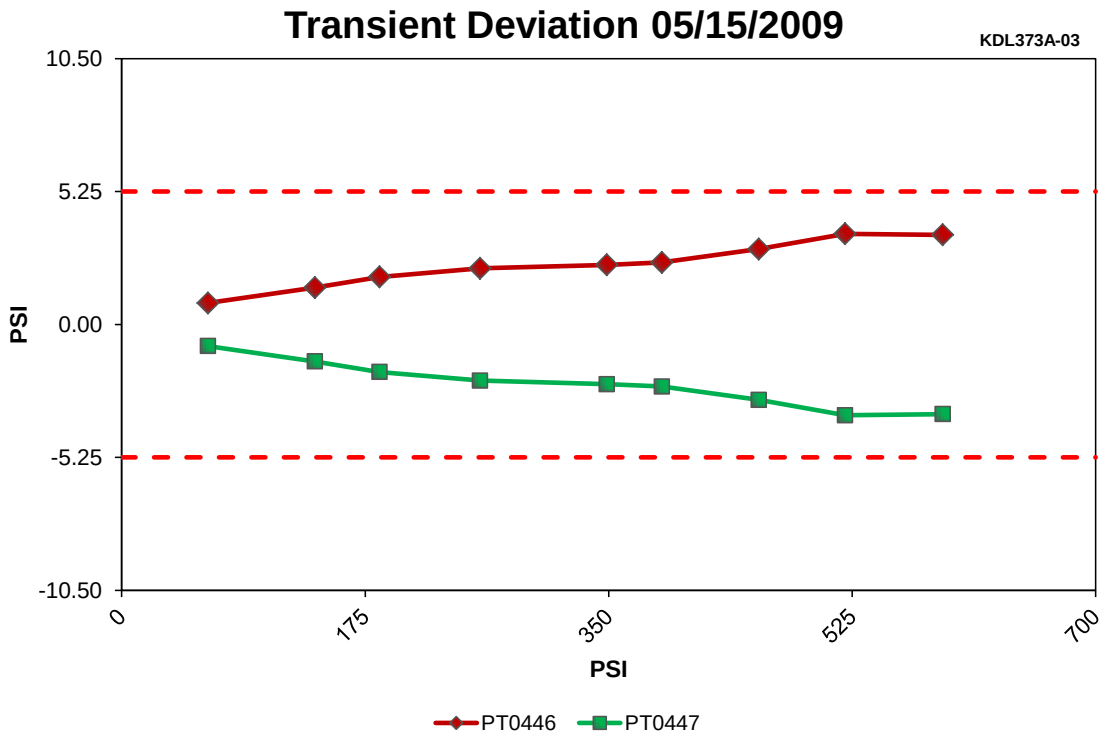



**Figure B.99 TBIN FIRST STAGE PRESSURE Transient Deviation at Farley Unit 1 (Cycle 23)**

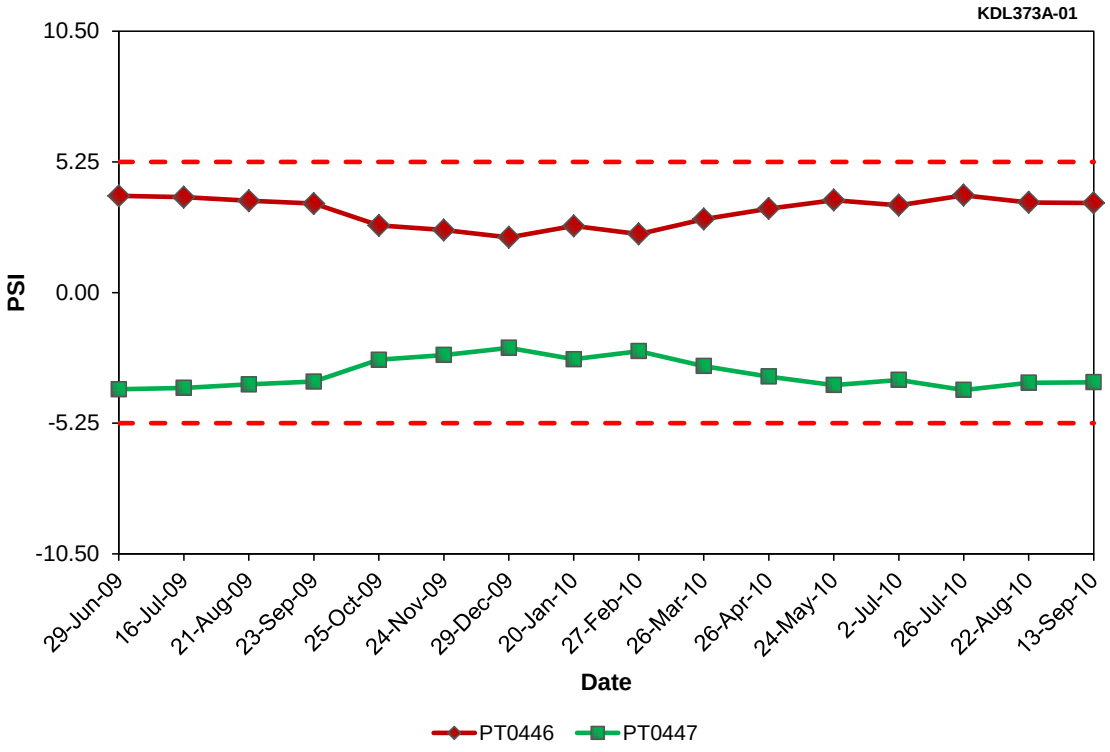



**Figure B.100 TBIN FIRST STAGE PRESSURE Steady-State Deviation at Farley Unit 1 (Cycle 23)**

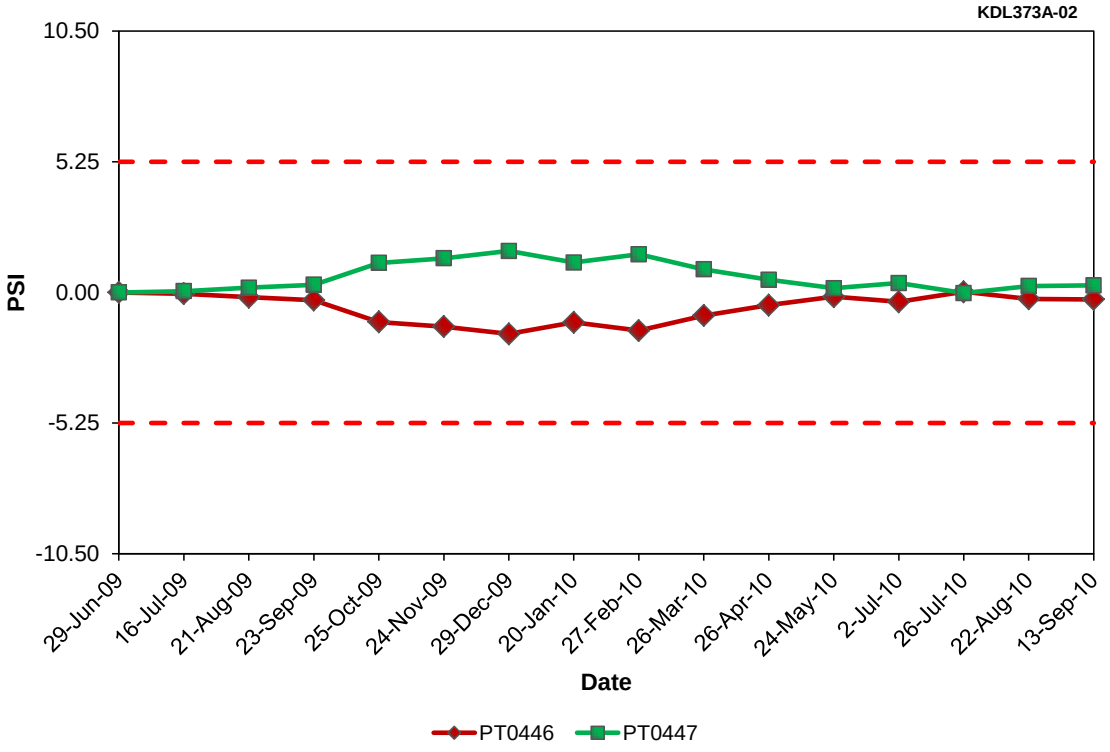



**Figure B.101 TBIN FIRST STAGE PRESSURE Steady-State Drift at Farley Unit 1 (Cycle 23)**

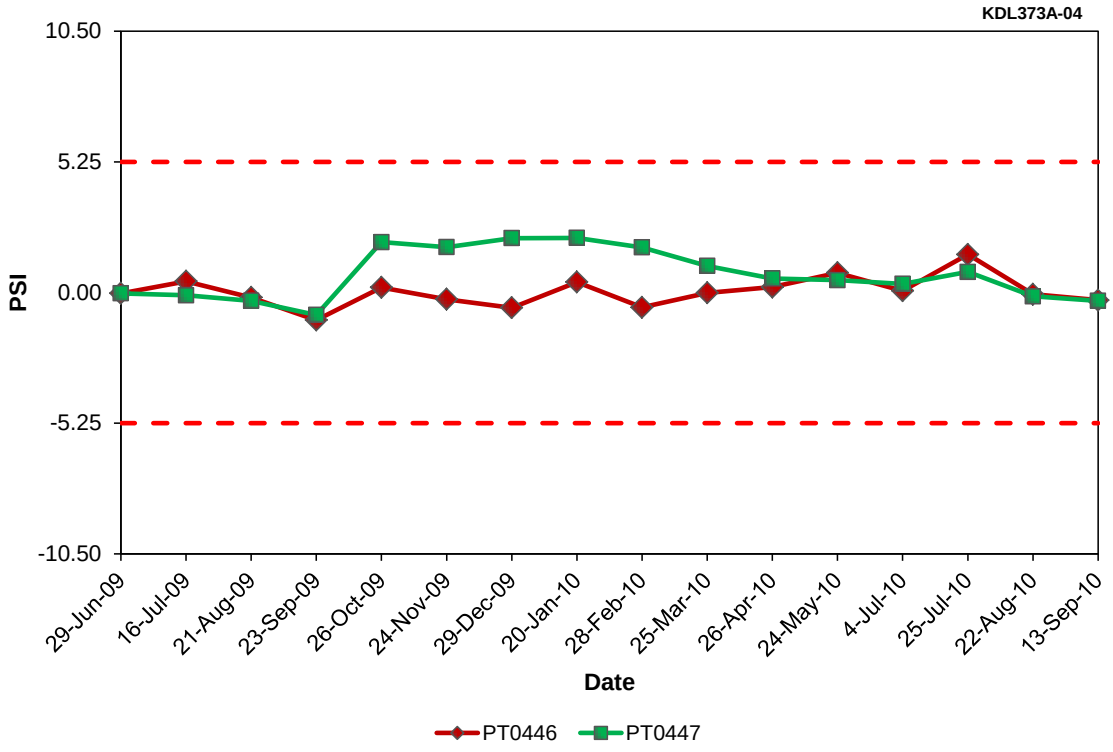



**Figure B.102 TBIN FIRST STAGE PRESSURE Steady-State Residual AAKR at Farley Unit 1 (Cycle 23)**

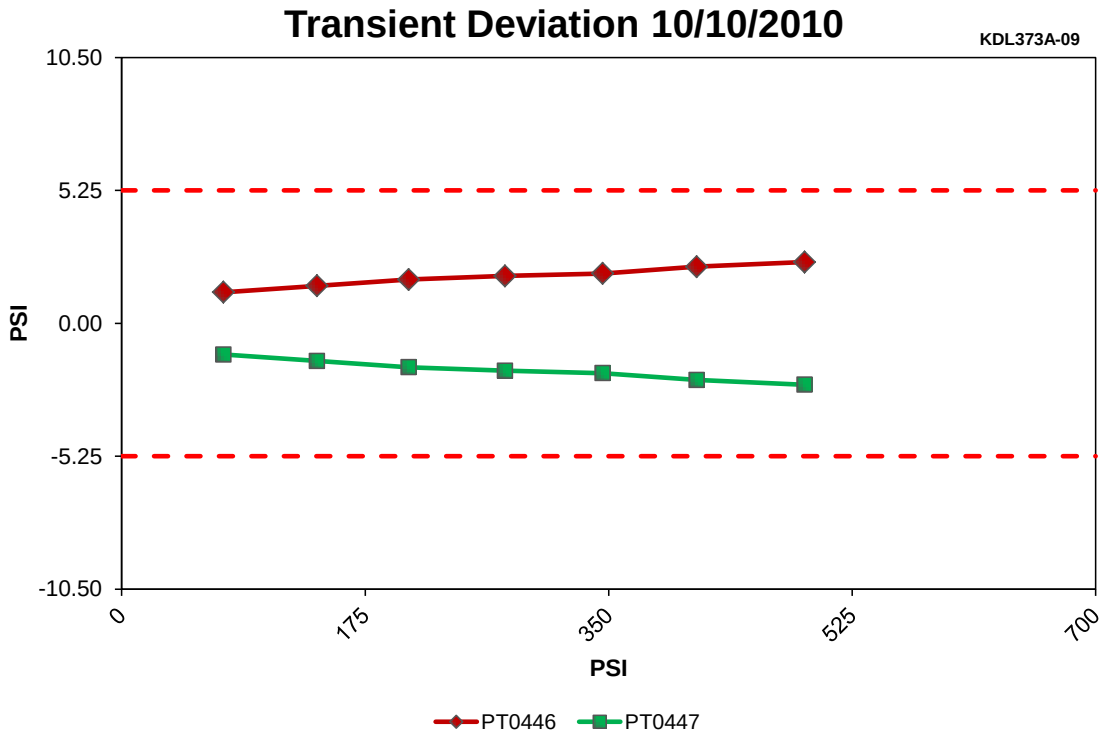



**Figure B.103 TBIN FIRST STAGE PRESSURE Transient Deviation at Farley Unit 1 (Cycle 23)**

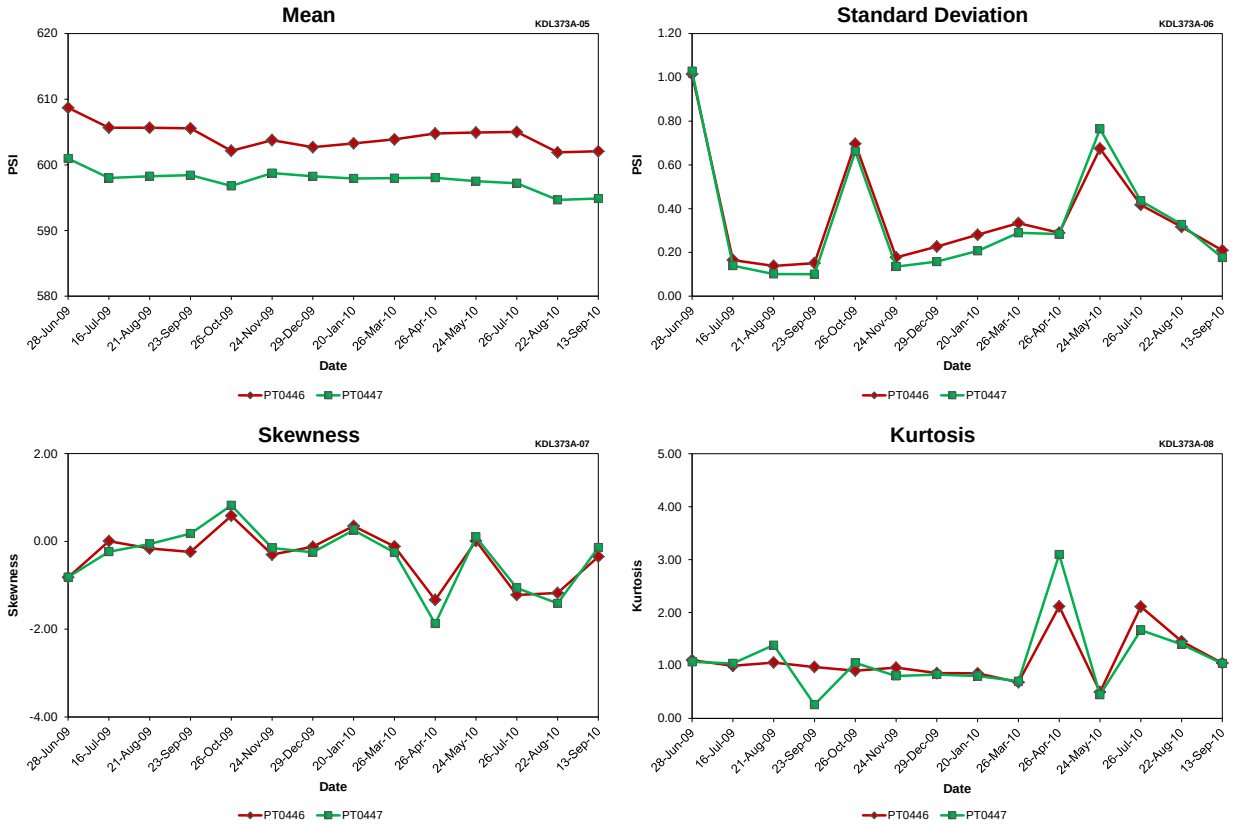



**Figure B.104 TBIN FIRST STAGE PRESSURE Data Quality Statistics at Farley Unit 1 (Cycle 23)**

**Table B.19 TBIN FIRST STAGE PRESSURE Data Quality for Farley Unit 1 (Cycle 23)**

| | Tag Names | |
|---|---|---|
| **Result Type** | **PT0446** | **PT0447** |
| Mean | 604.29 | 597.69 |
| Std. Dev. | 0.36 | 0.36 |
| Skewness | -0.35 | -0.35 |
| Kurtosis | 1.11 | 1.11 |

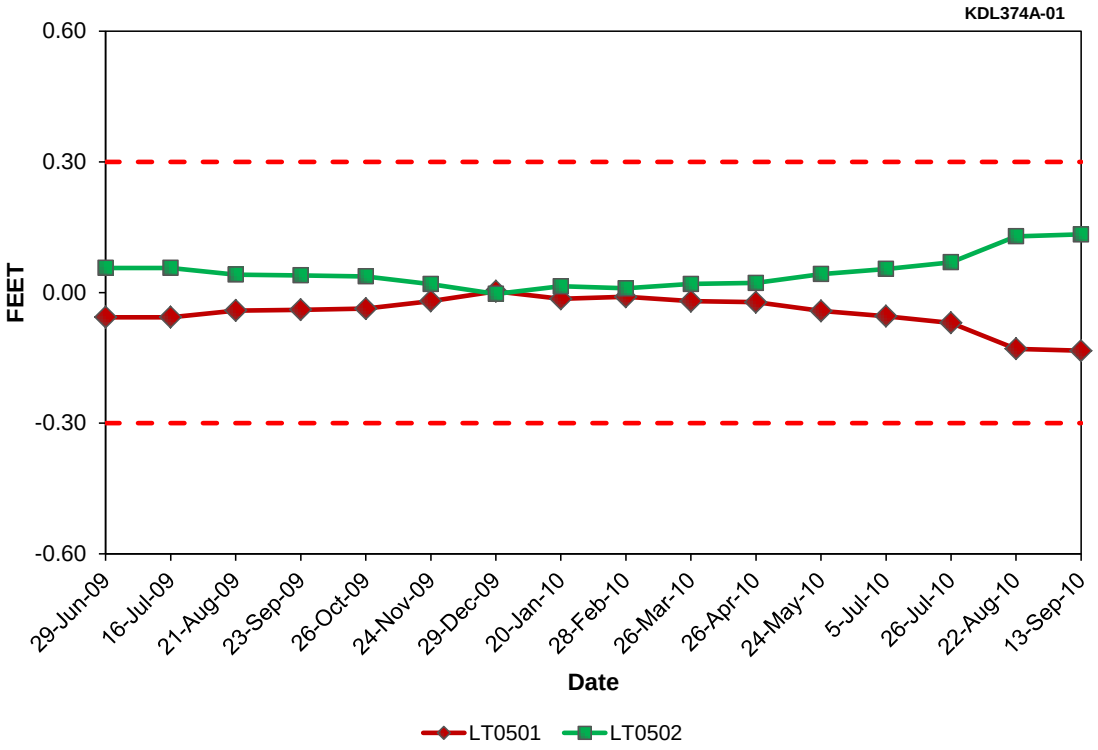



**Figure B.105 RWST LVL Steady-State Deviation at Farley Unit 1 (Cycle 23)**

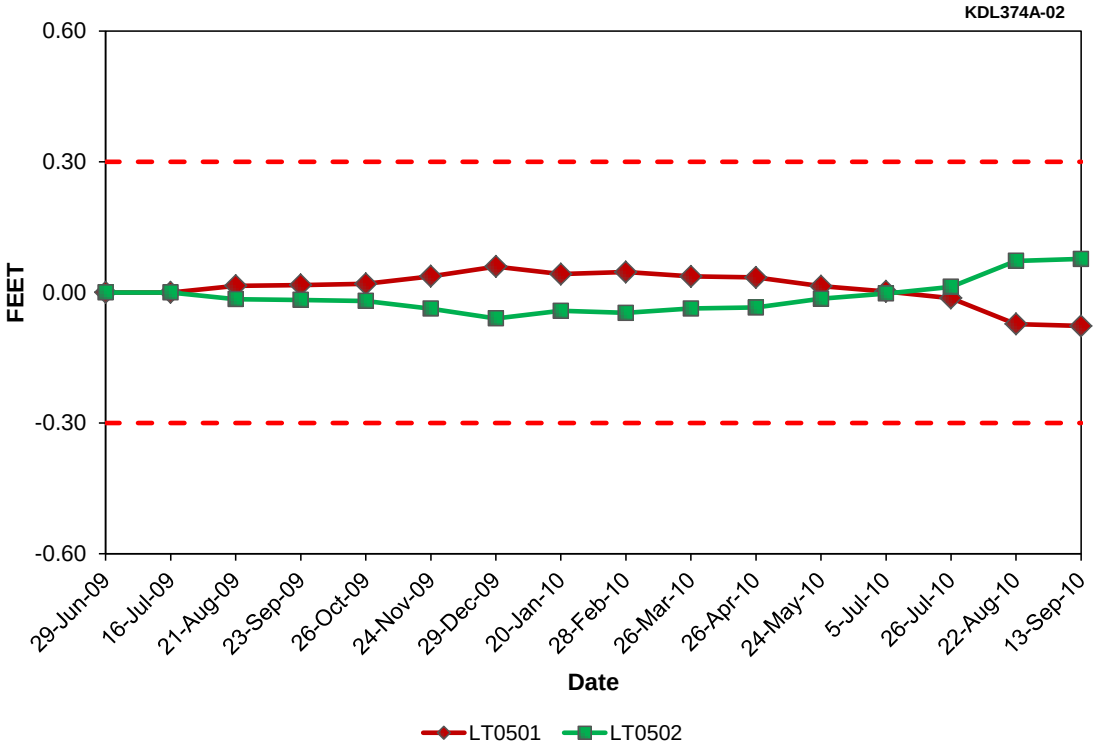



**Figure B.106 RWST LVL Steady-State Drift at Farley Unit 1 (Cycle 23)**

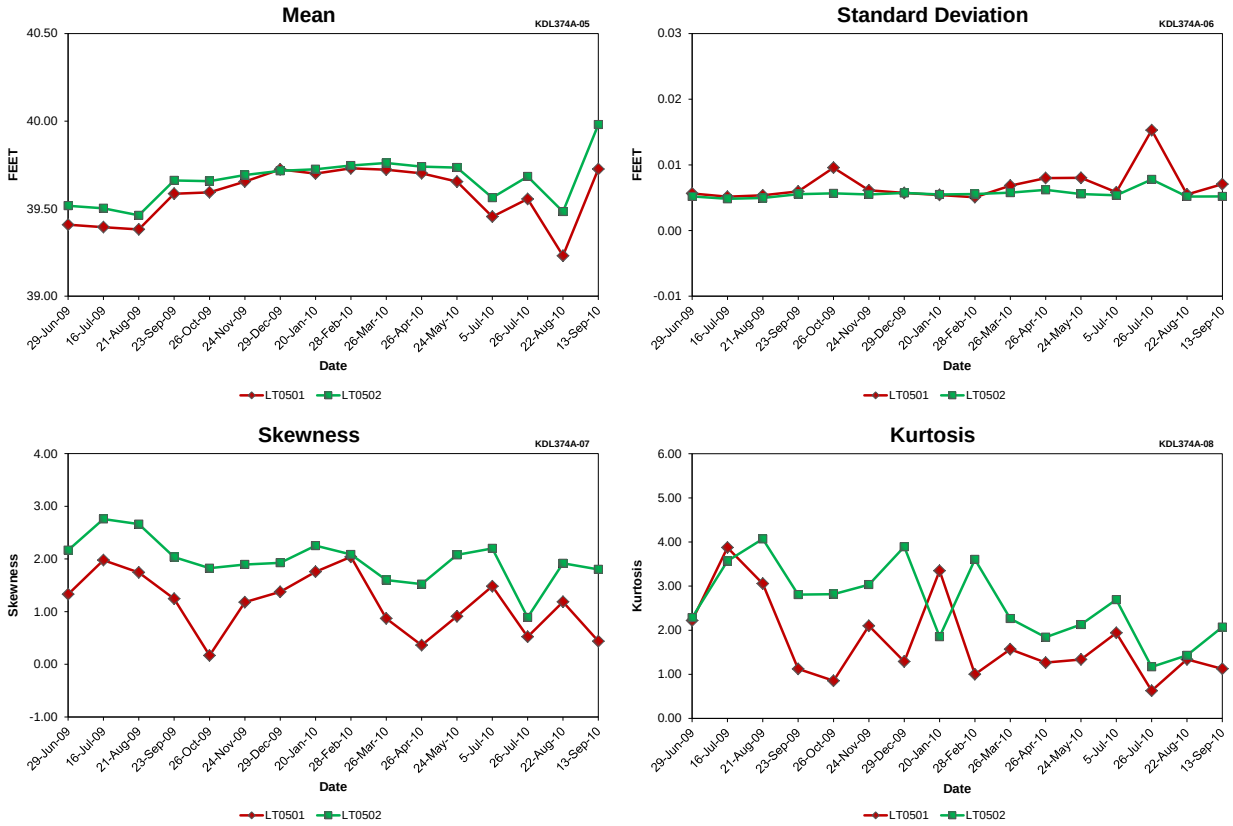



**Figure B.107 RWST LVL Data Quality Statistics at Farley Unit 1 (Cycle 23)**

**Table B.20 RWST LVL Data Quality for Farley Unit 1 (Cycle 23)**

| | Tag Names | |
|---|---|---|
| **Result Type** | **LT0501** | **LT0502** |
| Mean | 39.58 | 39.66 |
| Std. Dev. | 0.01 | 0.01 |
| Skewness | 1.16 | 1.98 |
| Kurtosis | 1.75 | 2.59 |

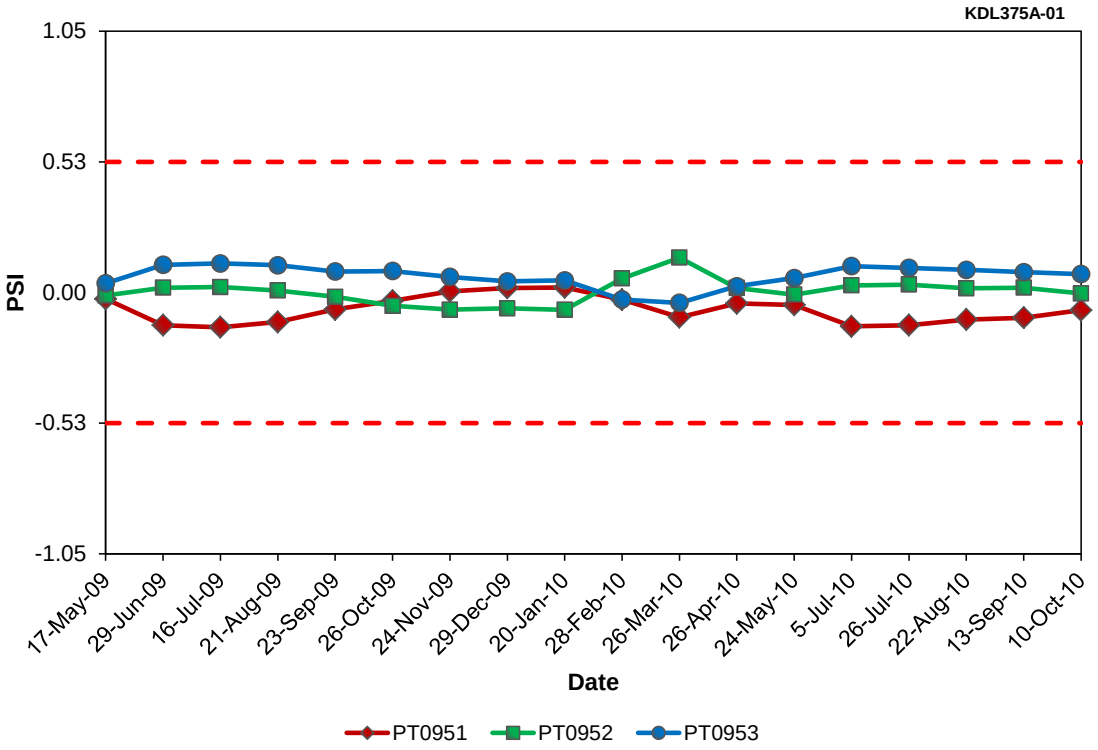



**Figure B.108 CTMT PSR Steady-State Deviation at Farley Unit 1 (Cycle 23)**

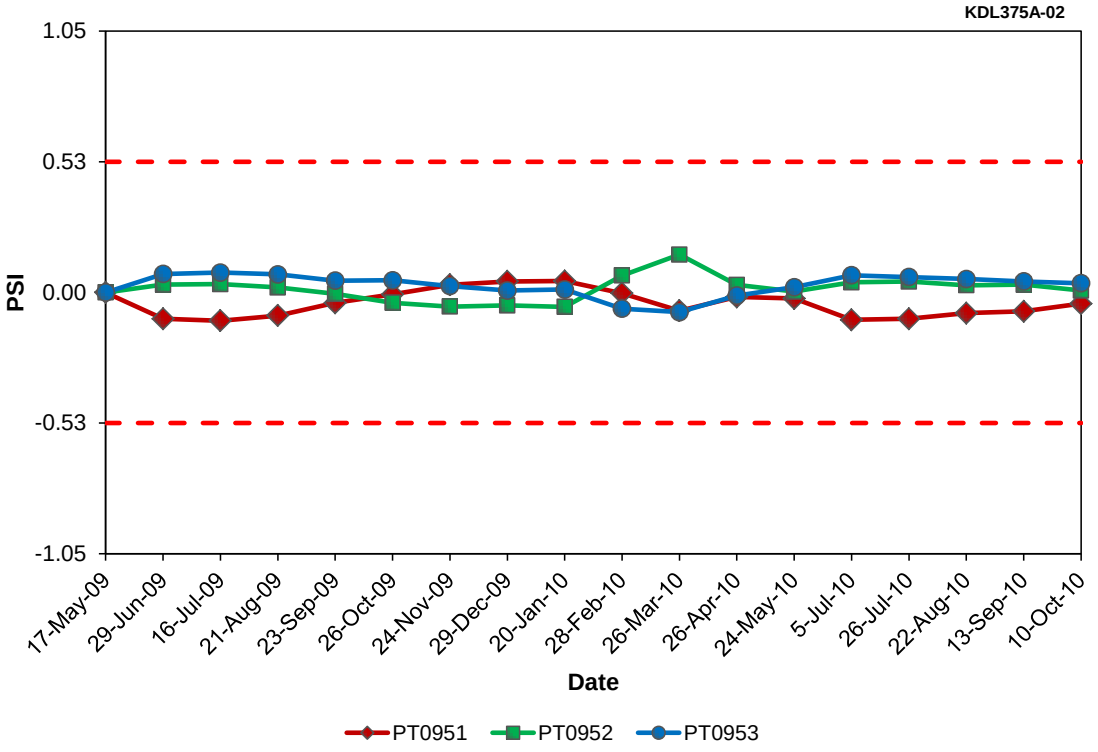



**Figure B.109 CTMT PSR Steady-State Drift at Farley Unit 1 (Cycle 23)**

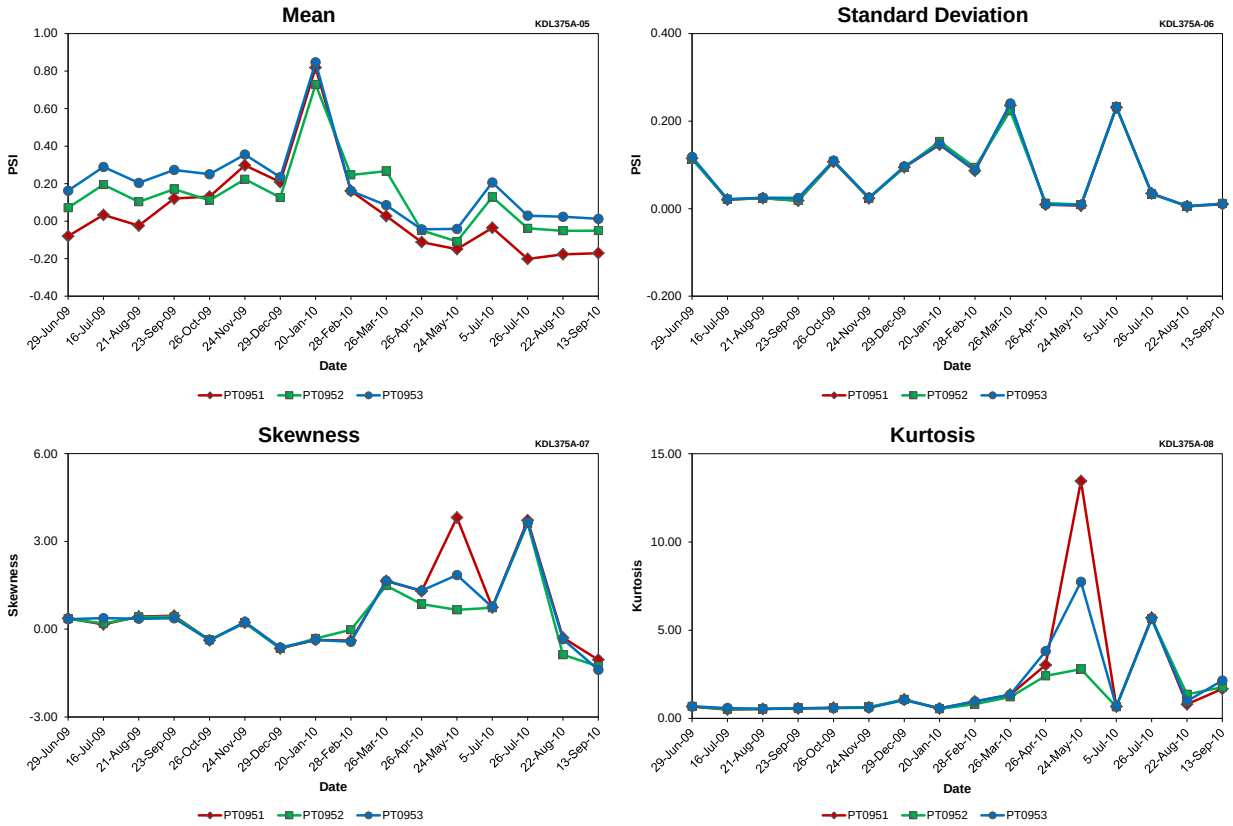



**Figure B.110 CTMT PSR Data Quality Statistics at Farley Unit 1 (Cycle 23)**

**Table B.21 CTMT PSR Data Quality for Farley Unit 1 (Cycle 23)**

| | Tag Names | | |
|---|---|---|---|
| **Result Type** | **PT0951** | **PT0952** | **PT0953** |
| Mean | 0.05 | 0.13 | 0.19 |
| Std. Dev. | 0.07 | 0.07 | 0.07 |
| Skewness | 0.61 | 0.34 | 0.46 |
| Kurtosis | 2.05 | 1.37 | 1.78 |

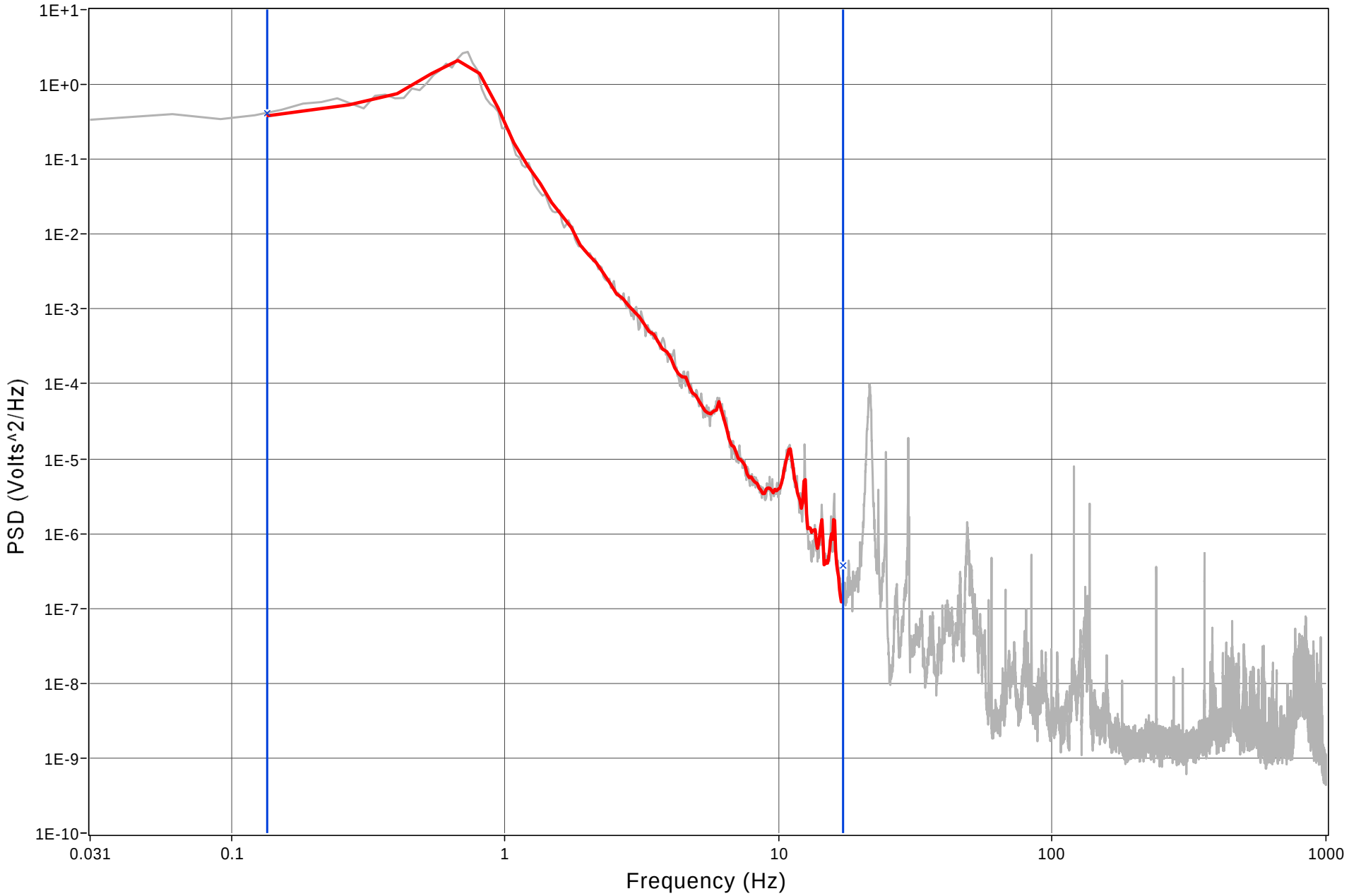
Table B.22 OLM-NA Results

| Item | Tag Name | Service | Filename | WB PSD Range (Hz) | Decimator | Trim Block Size | Trim Low Freq. | Trim High Freq. | AR Method | AR Order |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 | FT476 | FW FLOW | FNP1060004 | 0.0305 : 1000 | 364 | 256 | 0.0215 | 2.7472 | Least-Squares | 22 |
| 2 | FT477 | FW FLOW | FNP1060003 | 0.0305 : 1000 | 364 | 512 | 0.0107 | 2.7472 | Least-Squares | 23 |
| 3 | FT486 | FW FLOW | FNP1060004 | 0.0305 : 1000 | 364 | 256 | 0.0215 | 2.7472 | Forward-Backward | 11 |
| 4 | FT487 | FW FLOW | FNP1060003 | 0.0305 : 1000 | 364 | 512 | 0.0107 | 2.7472 | Least-Squares | 21 |
| 5 | FT496 | FW FLOW | FNP1060004 | 0.0305 : 1000 | 366 | 512 | 0.0107 | 2.7322 | Forward-Backward | 11 |
| 6 | FT497 | FW FLOW | FNP1060003 | 0.0305 : 1000 | 364 | 512 | 0.0107 | 2.7472 | Least-Squares | 24 |
| | | | | | | | | | | |
| 7 | LT474 | SG LEVEL | FNP1060001 | 0.0305 : 1000 | 58 | 256 | 0.1347 | 17.2409 | Forward-Backward | 11 |
| 8 | LT475 | SG LEVEL | FNP1060002 | 0.0305 : 1000 | 58 | 256 | 0.1347 | 17.2409 | Forward-Backward | 11 |
| 9 | LT476 | SG LEVEL | FNP1060003 | 0.0305 : 1000 | 58 | 256 | 0.1347 | 17.2409 | Forward-Backward | 11 |
| 10 | LT484 | SG LEVEL | FNP1060001 | 0.0305 : 1000 | 58 | 256 | 0.1347 | 17.2409 | Forward-Backward | 11 |
| 11 | LT485 | SG LEVEL | FNP1060002 | 0.0305 : 1000 | 58 | 256 | 0.1347 | 17.2409 | Forward-Backward | 11 |
| 12 | LT486 | SG LEVEL | FNP1060003 | 0.0305 : 1000 | 58 | 256 | 0.1347 | 17.2409 | Forward-Backward | 11 |
| 13 | LT494 | SG LEVEL | FNP1060001 | 0.0305 : 1000 | 58 | 256 | 0.1347 | 17.2409 | Forward-Backward | 11 |
| 14 | LT495 | SG LEVEL | FNP1060002 | 0.0305 : 1000 | 58 | 256 | 0.1347 | 17.2409 | Forward-Backward | 11 |
| 15 | LT496 | SG LEVEL | FNP1060003 | 0.0305 : 1000 | 58 | 256 | 0.1347 | 17.2409 | Forward-Backward | 11 |
| | | | | | | | | | | |
| 16 | FT474 | STM FLOW | FNP1060003 | 0.0305 : 1000 | 46 | 128 | 0.3397 | 21.7384 | Least-Squares | 18 |
| 17 | FT475 | STM FLOW | FNP1060004 | 0.0305 : 1000 | 29 | 128 | 0.5388 | 34.4817 | Least-Squares | 18 |
| 18 | FT484 | STM FLOW | FNP1060003 | 0.0305 : 1000 | 29 | 128 | 0.5388 | 34.4817 | Forward-Backward | 17 |
| 19 | FT485 | STM FLOW | FNP1060004 | 0.0305 : 1000 | 29 | 128 | 0.5388 | 34.4817 | Forward-Backward | 18 |
| 20 | FT494 | STM FLOW | FNP1060003 | 0.0305 : 1000 | 29 | 128 | 0.5388 | 34.4817 | Forward-Backward | 17 |
| 21 | FT495 | STM FLOW | FNP1060004 | 0.0305 : 1000 | 29 | 128 | 0.5388 | 34.4817 | Forward-Backward | 18 |

# OLM Narrow Band PSD Window Fitting

| Reactor and Unit | Tag Number | Service | Filename | Blocks : Blocksize | Trim Low Freq. (Hz) | Trim High Freq. (Hz) | Fitting Type | Test Date |
|---|---|---|---|---|---|---|---|---|
| Farley Unit 1 | LT474 | SG LVL | FNP1060001.psd | 11 : 256 | 0.134694 | 17.240854 | Dynamic | 23-Jun-2009 12:04:01 |

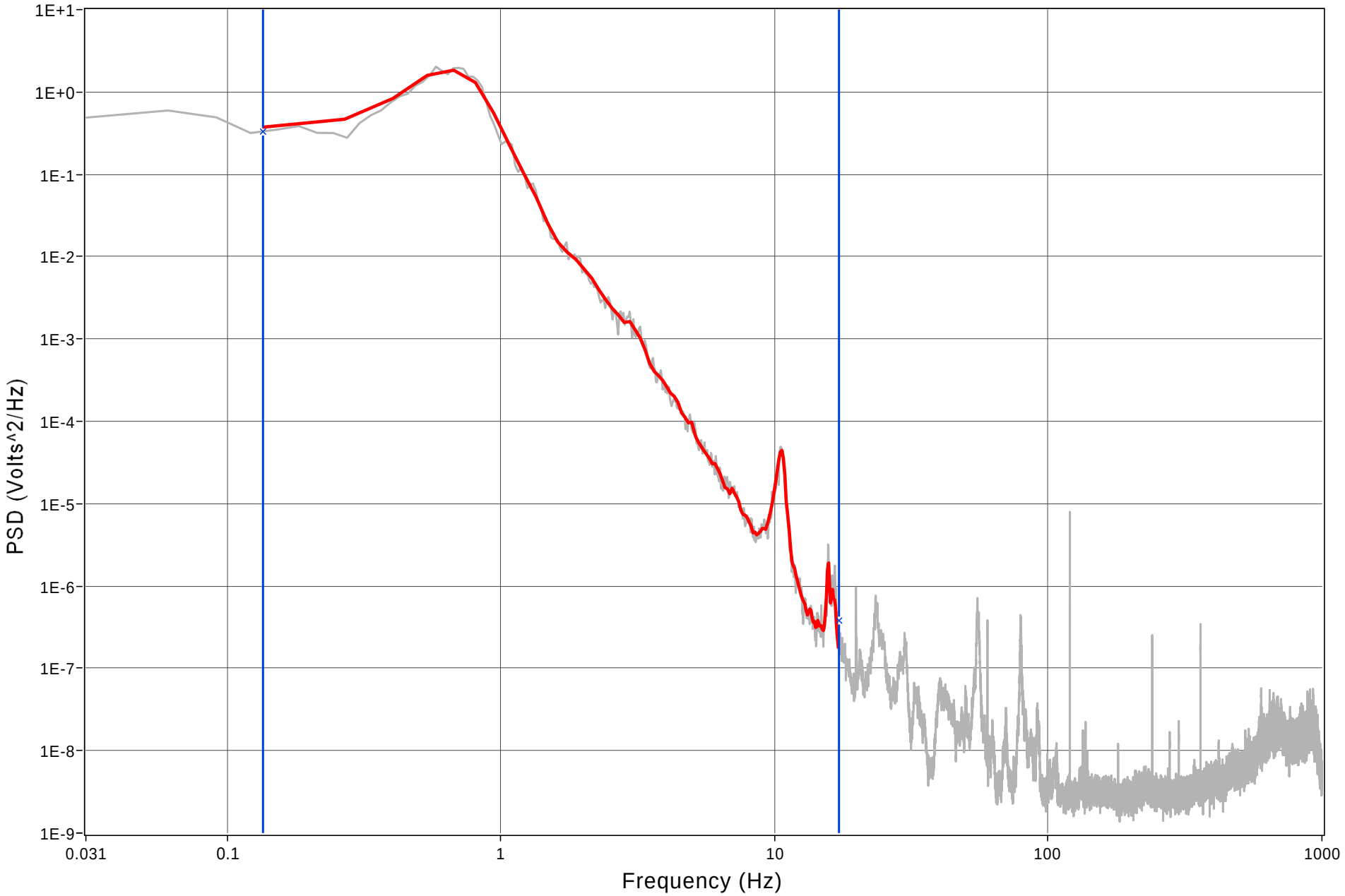
## PSD Window



# OLM Narrow Band PSD Window Fitting

| Reactor and Unit | Tag Number | Service | Filename | Blocks : Blocksize | Trim Low Freq. (Hz) | Trim High Freq. (Hz) | Fitting Type | Test Date |
|---|---|---|---|---|---|---|---|---|
| Farley Unit 1 | LT484 | SG LVL | FNP1060001.psd | 11 : 256 | 0.134694 | 17.240854 | Dynamic | 23-Jun-2009 12:04:01 |

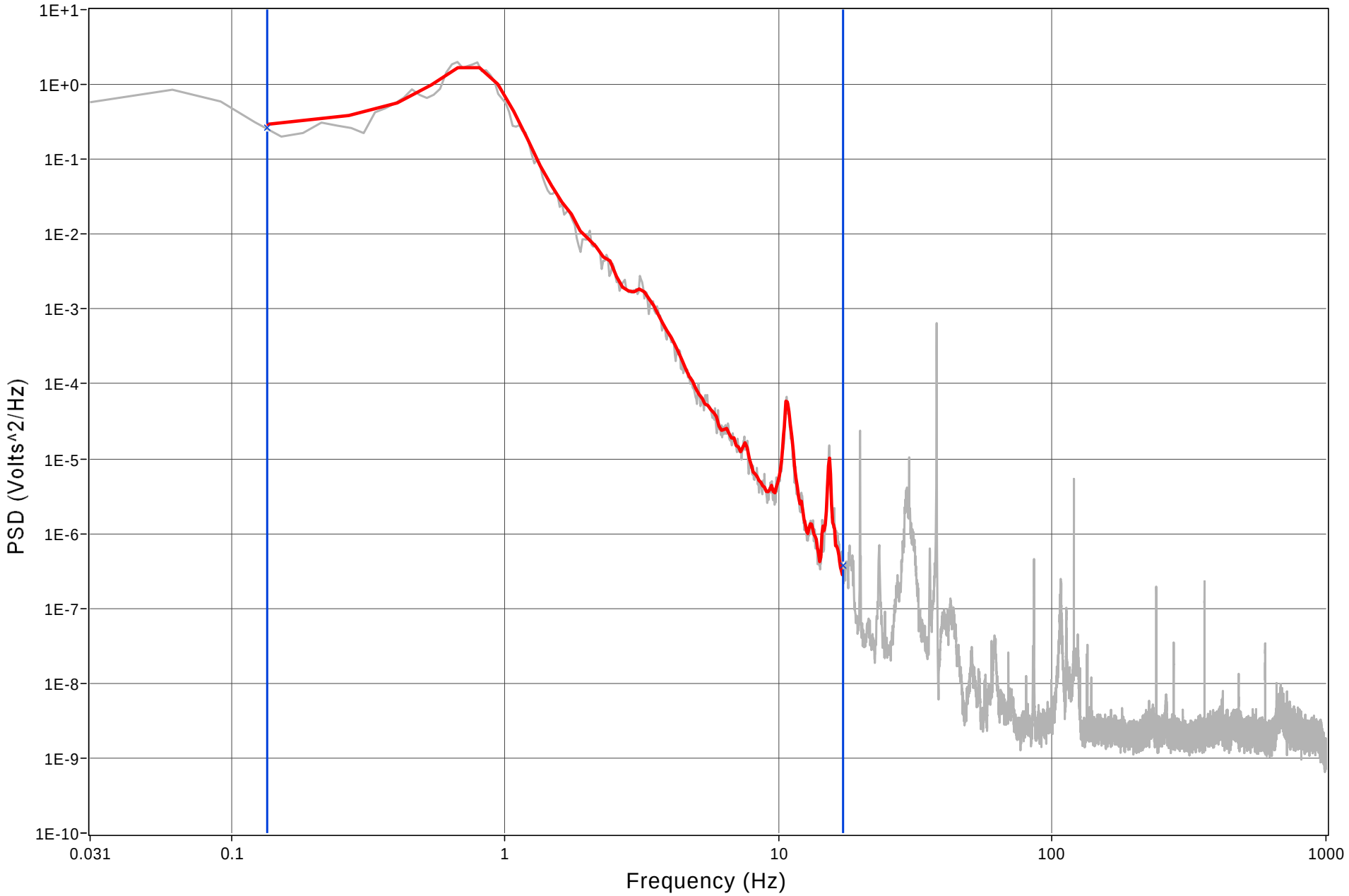
## PSD Window



# OLM Narrow Band PSD Window Fitting

| Reactor and Unit | Tag Number | Service | Filename | Blocks : Blocksize | Trim Low Freq. (Hz) | Trim High Freq. (Hz) | Fitting Type | Test Date |
|---|---|---|---|---|---|---|---|---|
| Farley Unit 1 | LT494 | SG LVL | FNP1060001.psd | 11 : 256 | 0.134694 | 17.240854 | Dynamic | 23-Jun-2009 12:04:01 |

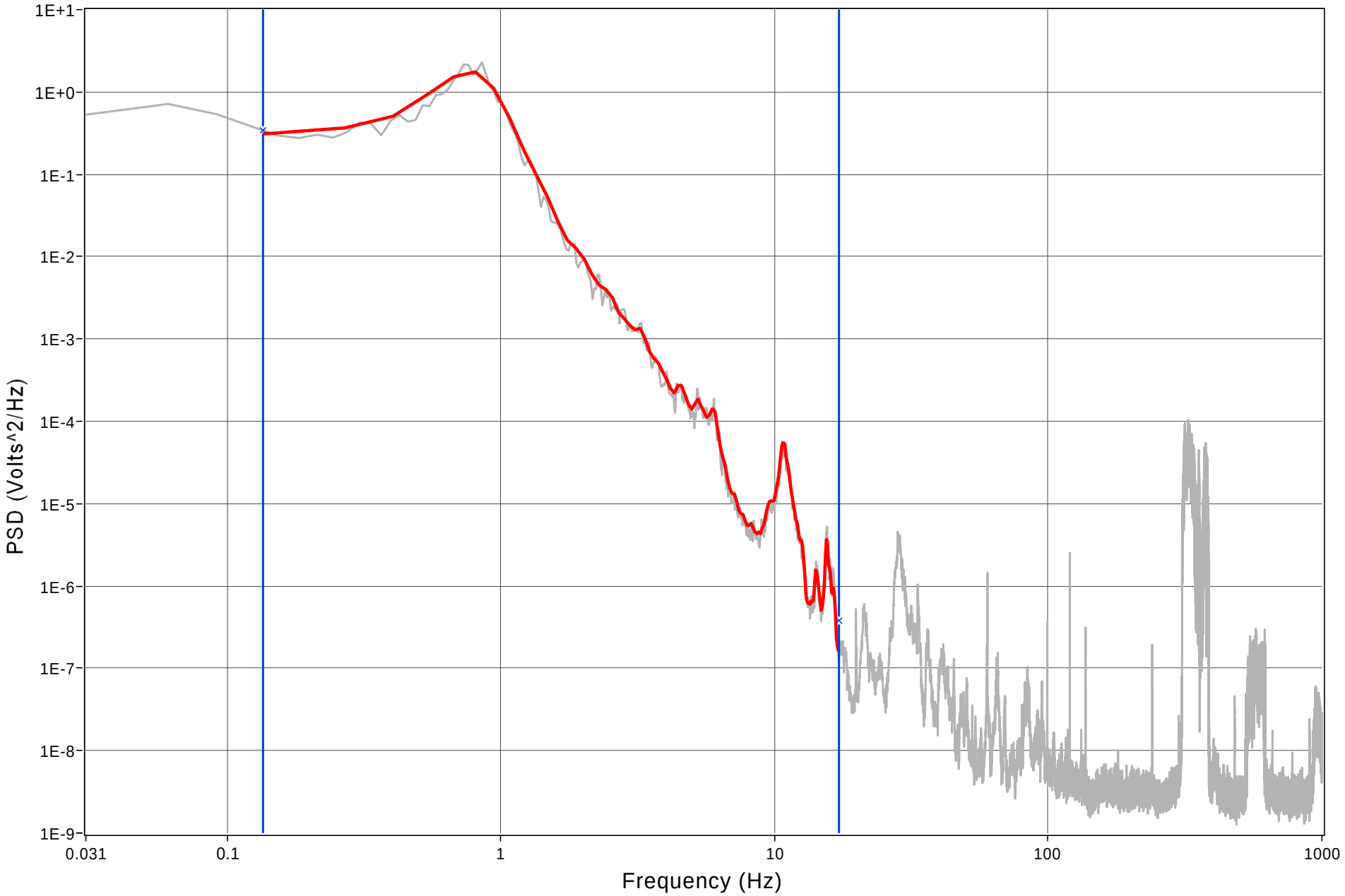
## PSD Window



# OLM Narrow Band PSD Window Fitting

| Reactor and Unit | Tag Number | Service | Filename | Blocks : Blocksize | Trim Low Freq. (Hz) | Trim High Freq. (Hz) | Fitting Type | Test Date |
|---|---|---|---|---|---|---|---|---|
| Farley Unit 1 | LT475 | SG LVL | FNP1060002.psd | 11 : 256 | 0.134694 | 17.240854 | Dynamic | 23-Jun-2009 12:04:01 |

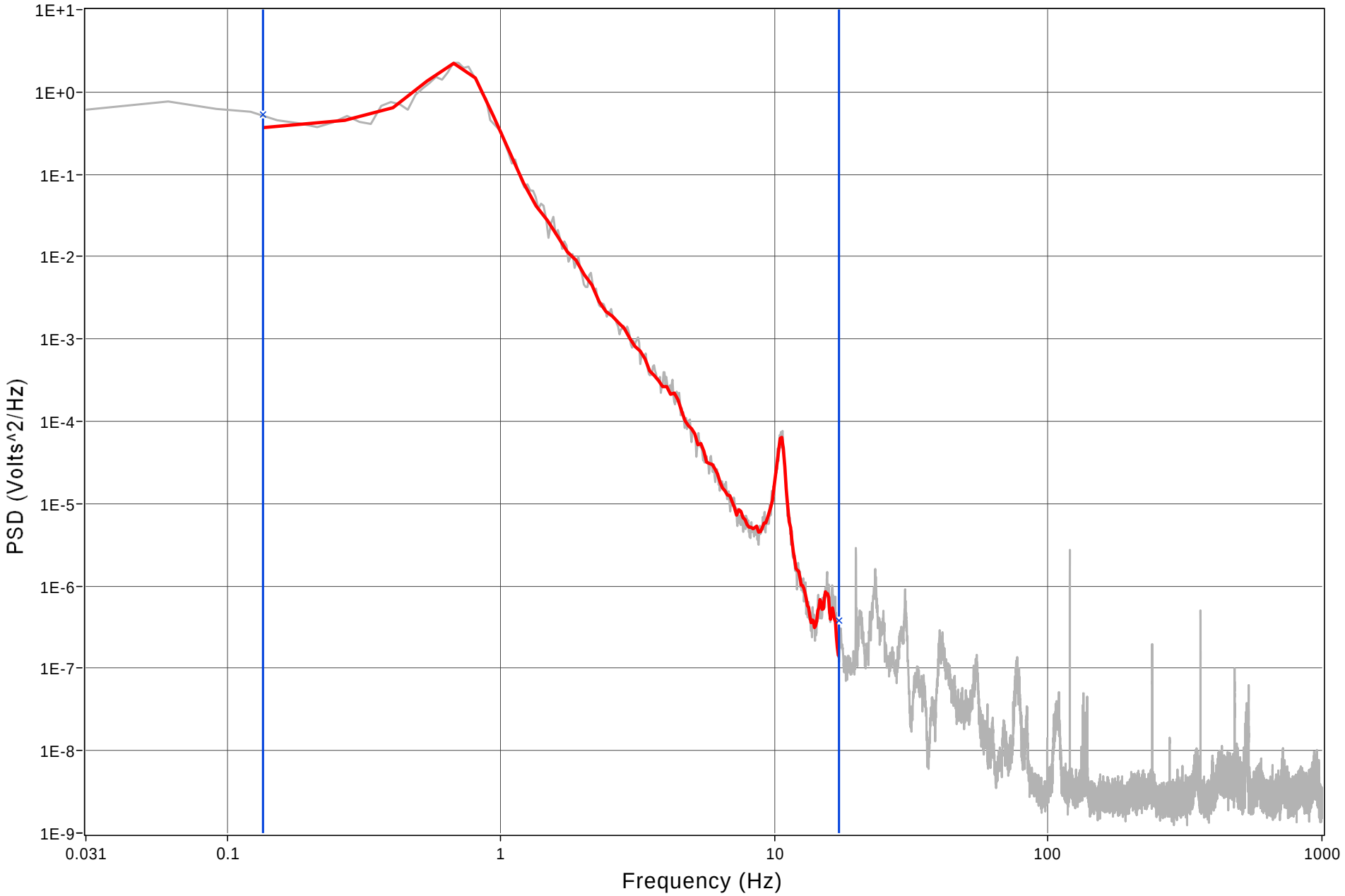
## PSD Window



# OLM Narrow Band PSD Window Fitting

| Reactor and Unit | Tag Number | Service | Filename | Blocks : Blocksize | Trim Low Freq. (Hz) | Trim High Freq. (Hz) | Fitting Type | Test Date |
|---|---|---|---|---|---|---|---|---|
| Farley Unit 1 | LT485 | SG LVL | FNP1060002.psd | 11 : 256 | 0.134694 | 17.240854 | Dynamic | 23-Jun-2009 12:04:01 |

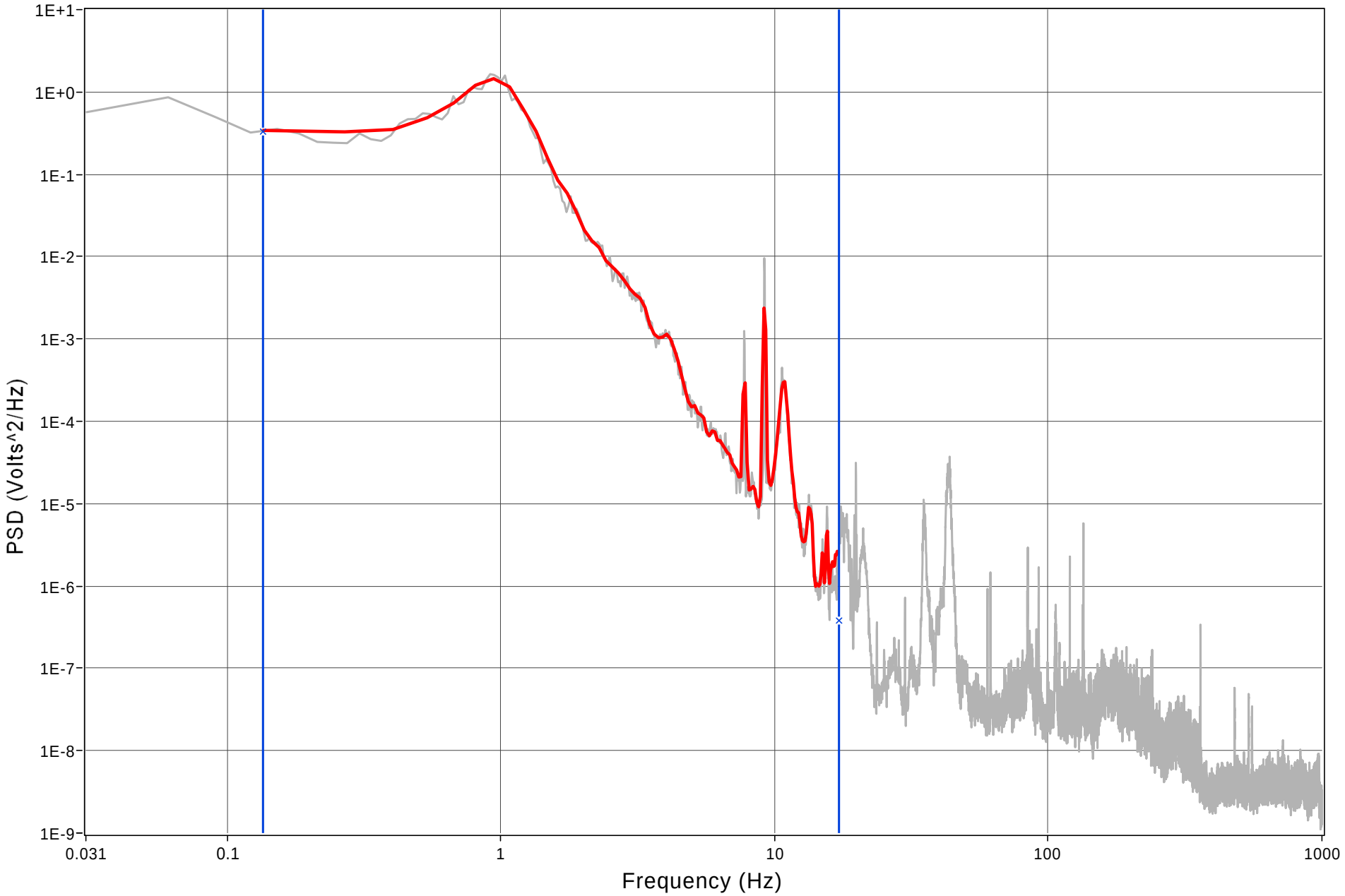
## PSD Window



# OLM Narrow Band PSD Window Fitting

| Reactor and Unit | Tag Number | Service | Filename | Blocks : Blocksize | Trim Low Freq. (Hz) | Trim High Freq. (Hz) | Fitting Type | Test Date |
|---|---|---|---|---|---|---|---|---|
| Farley Unit 1 | LT495 | SG LVL | FNP1060002.psd | 11 : 256 | 0.134694 | 17.240854 | Dynamic | 23-Jun-2009 12:04:01 |

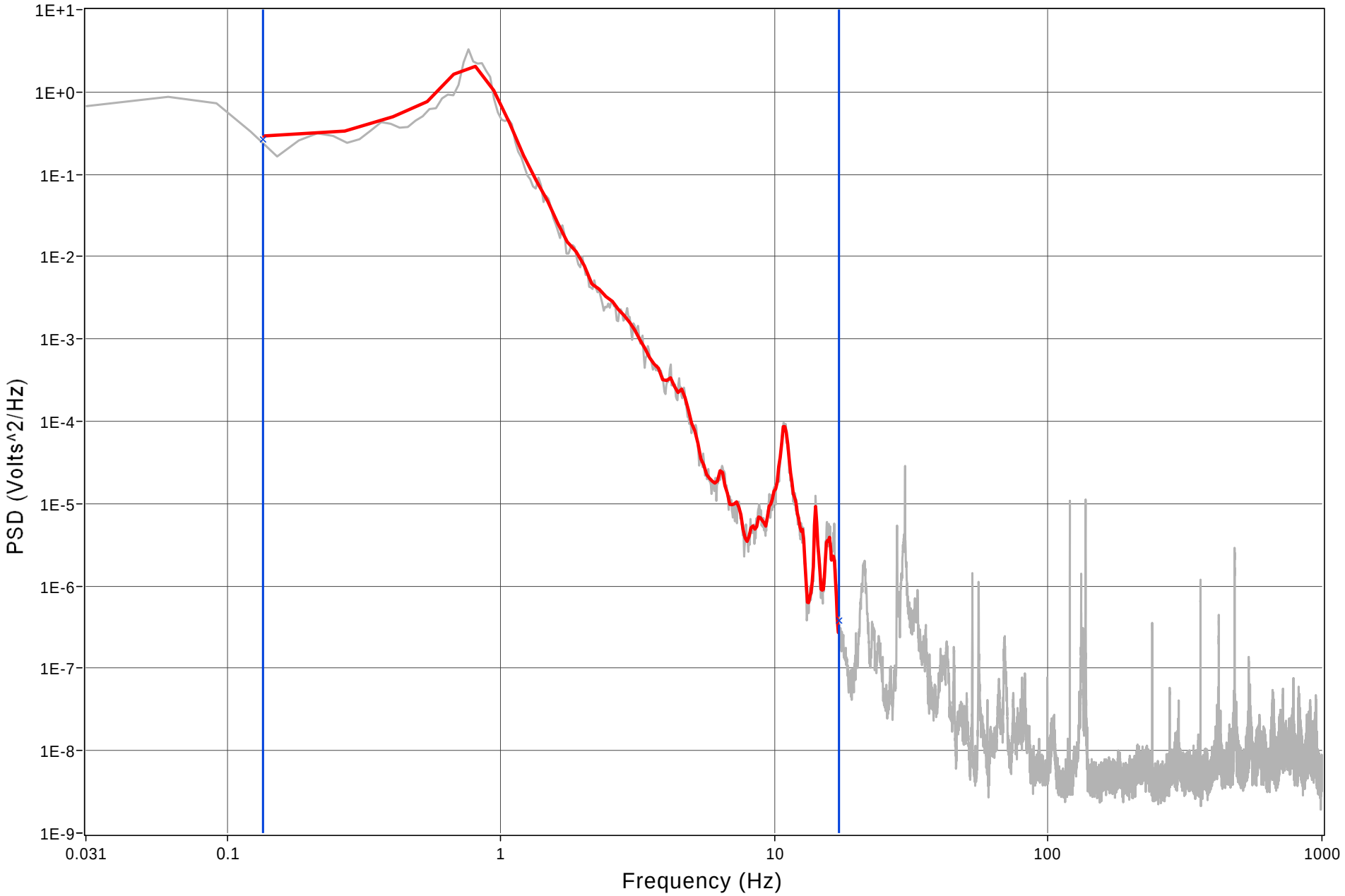
## PSD Window



# OLM Narrow Band PSD Window Fitting

| Reactor and Unit | Tag Number | Service | Filename | Blocks : Blocksize | Trim Low Freq. (Hz) | Trim High Freq. (Hz) | Fitting Type | Test Date |
|---|---|---|---|---|---|---|---|---|
| Farley Unit 1 | LT476 | SG LVL | FNP1060003.psd | 11 : 256 | 0.134694 | 17.240854 | Dynamic | 23-Jun-2009 12:04:01 |

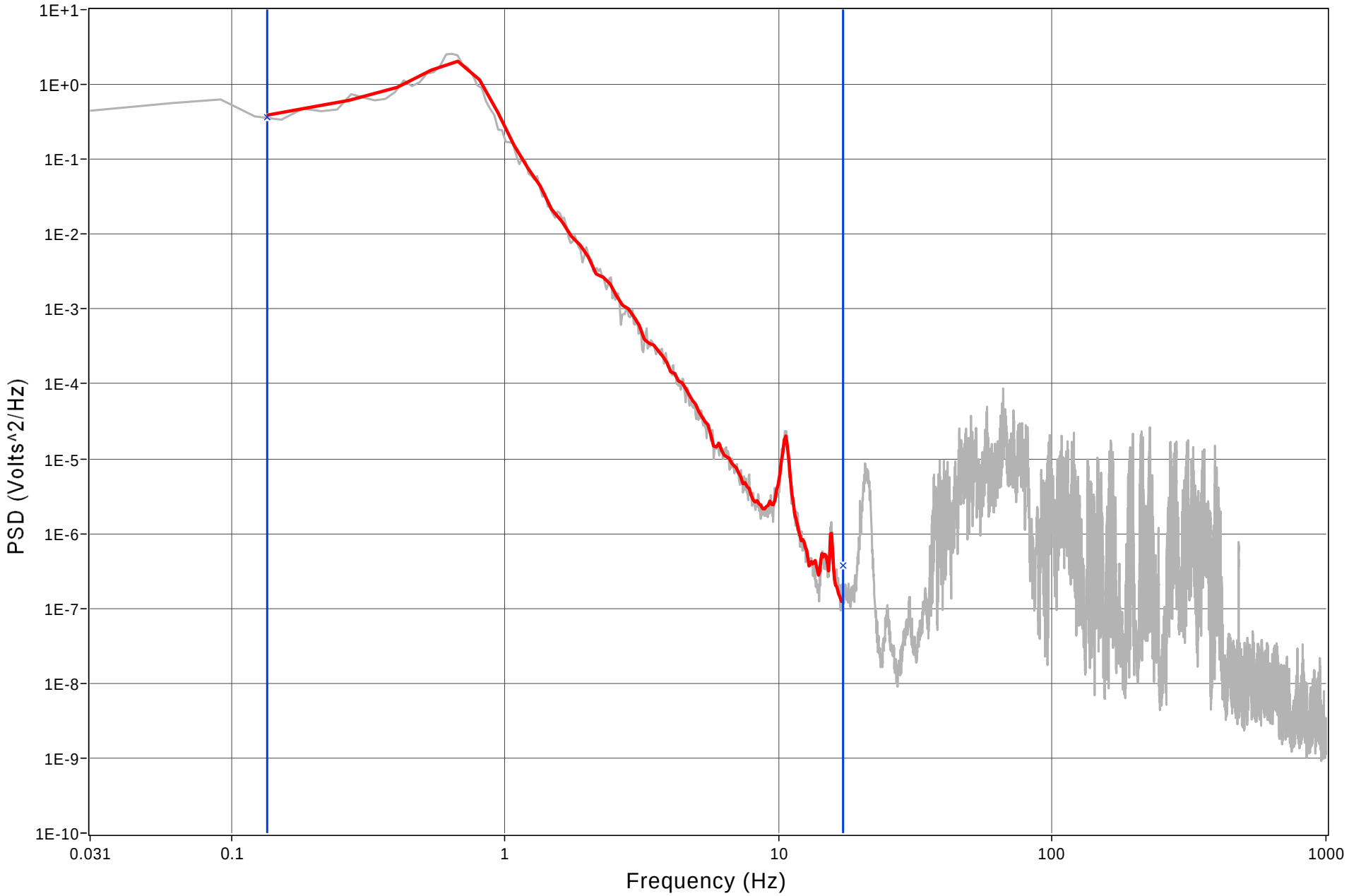
## PSD Window



# OLM Narrow Band PSD Window Fitting

| Reactor and Unit | Tag Number | Service | Filename | Blocks : Blocksize | Trim Low Freq. (Hz) | Trim High Freq. (Hz) | Fitting Type | Test Date |
|---|---|---|---|---|---|---|---|---|
| Farley Unit 1 | LT486 | SG LVL | FNP1060003.psd | 11 : 256 | 0.134694 | 17.240854 | Dynamic | 23-Jun-2009 12:04:01 |

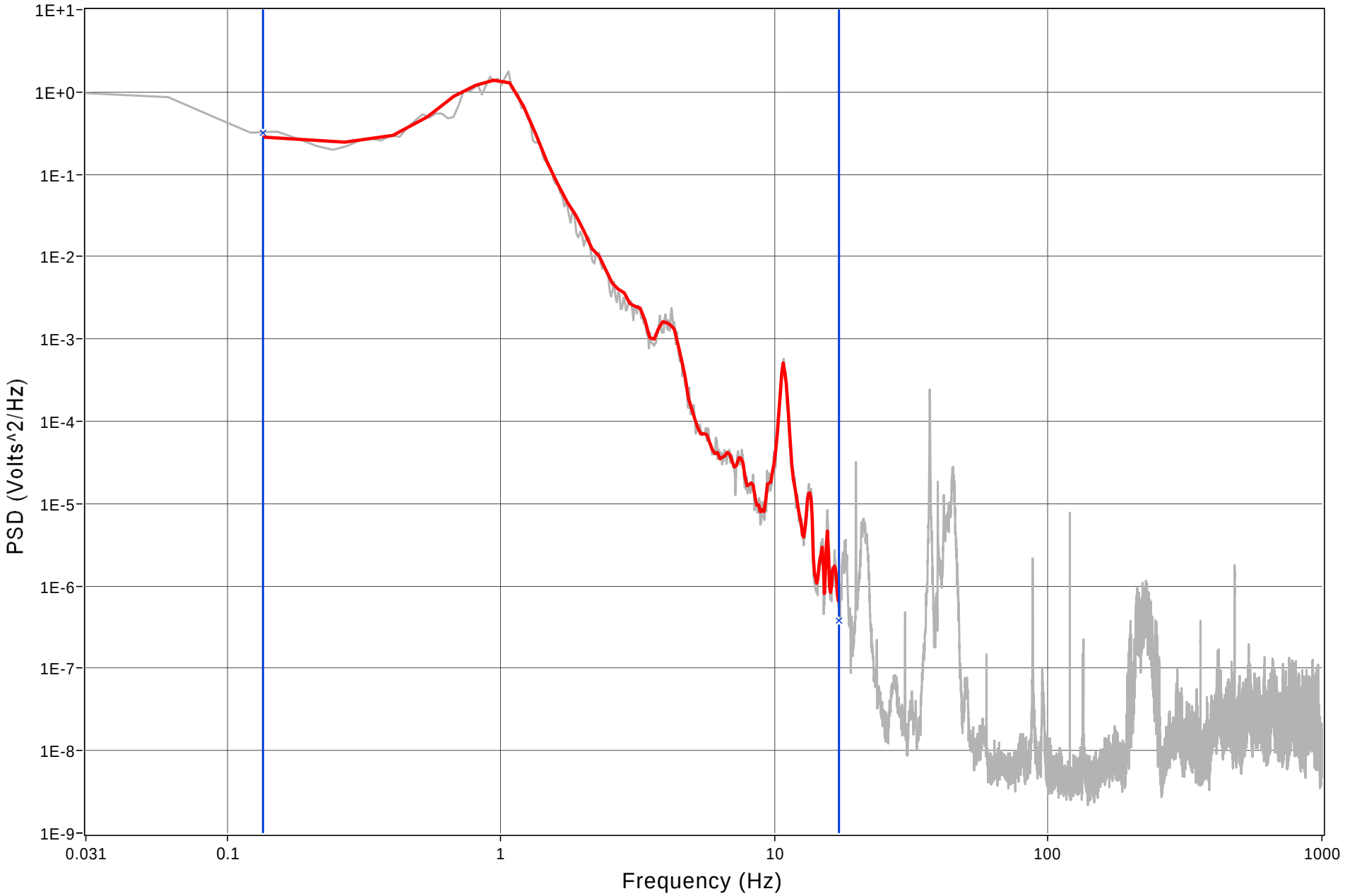
## PSD Window



# OLM Narrow Band PSD Window Fitting

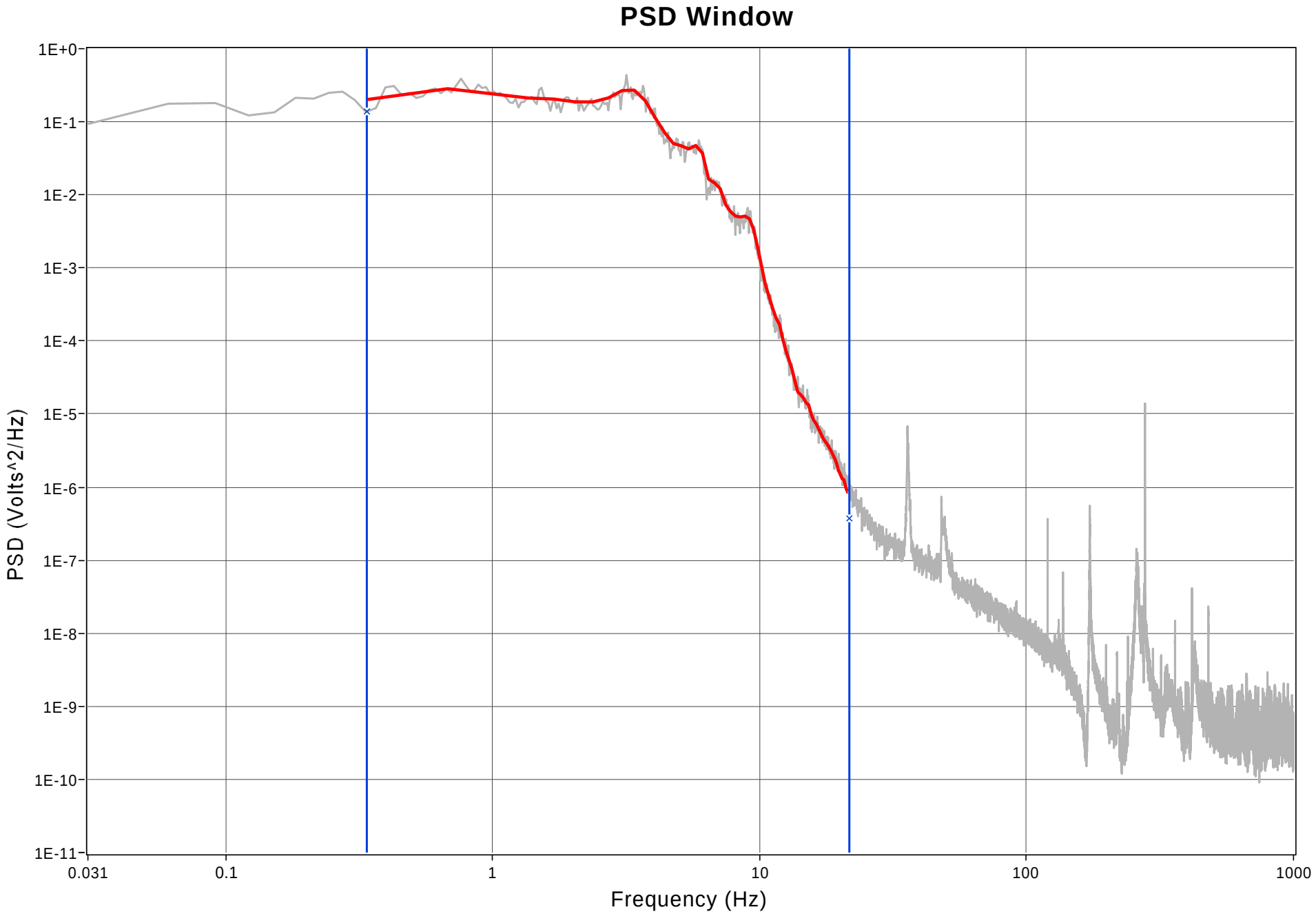
| Reactor and Unit | Tag Number | Service | Filename | Blocks : Blocksize | Trim Low Freq. (Hz) | Trim High Freq. (Hz) | Fitting Type | Test Date |
|---|---|---|---|---|---|---|---|---|
| Farley Unit 1 | LT496 | SG LVL | FNP1060003.psd | 11 : 256 | 0.134694 | 17.240854 | Dynamic | 23-Jun-2009 12:04:01 |

## PSD Window



# OLM Narrow Band PSD Window Fitting

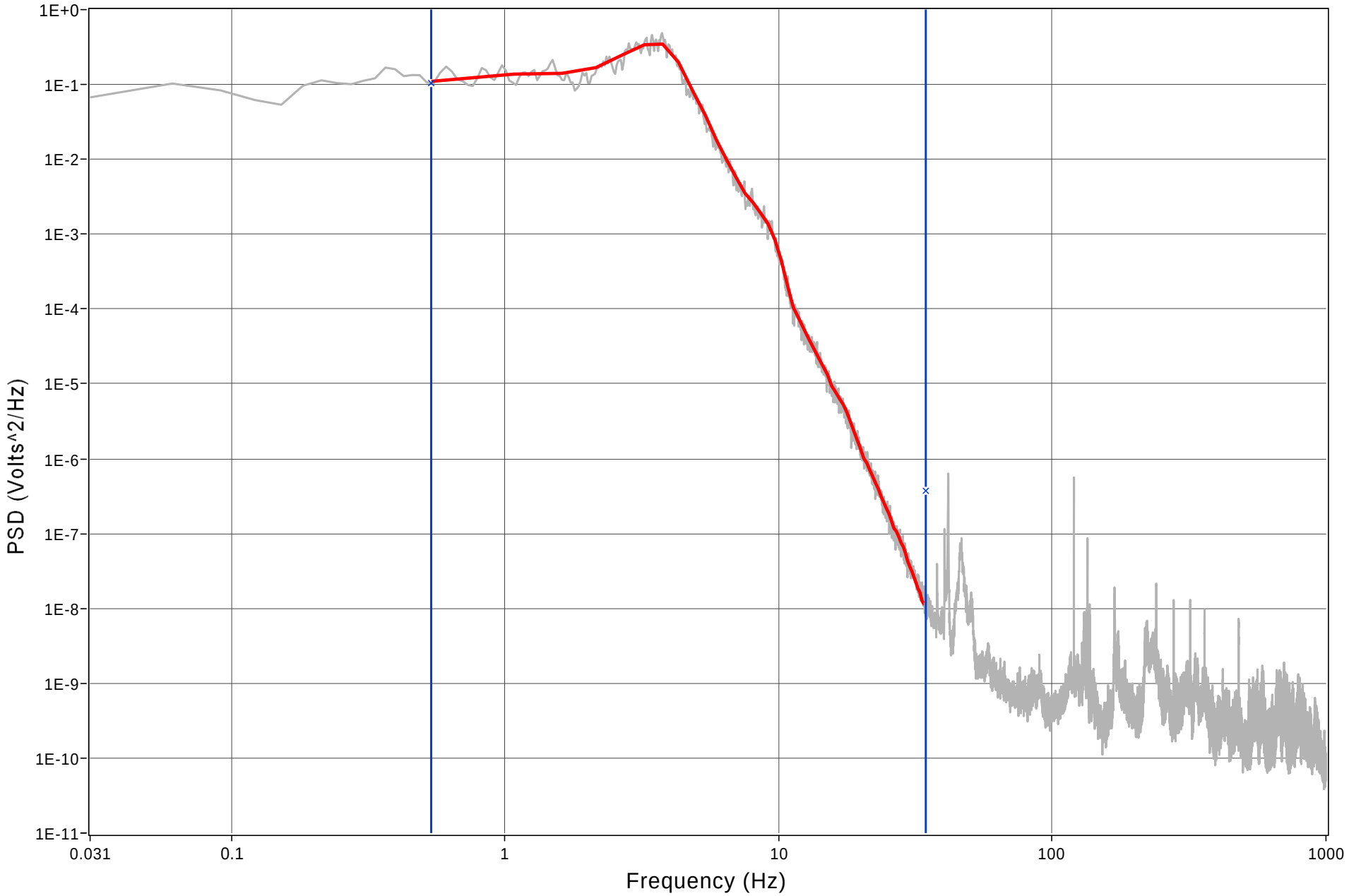
| Reactor and Unit | Tag Number | Service | Filename | Blocks : Blocksize | Trim Low Freq. (Hz) | Trim High Freq. (Hz) | Fitting Type | Test Date |
|---|---|---|---|---|---|---|---|---|
| Farley Unit 1 | FT474 | STM FLOW | FNP1060003.psd | 11 : 128 | 0.339664 | 21.738468 | Dynamic | 23-Jun-2009 12:04:01 |



# OLM Narrow Band PSD Window Fitting

| Reactor and Unit | Tag Number | Service | Filename | Blocks : Blocksize | Trim Low Freq. (Hz) | Trim High Freq. (Hz) | Fitting Type | Test Date |
|---|---|---|---|---|---|---|---|---|
| Farley Unit 1 | FT484 | STM FLOW | FNP1060003.psd | 11 : 128 | 0.538777 | 34.481708 | Dynamic | 23-Jun-2009 12:04:01 |

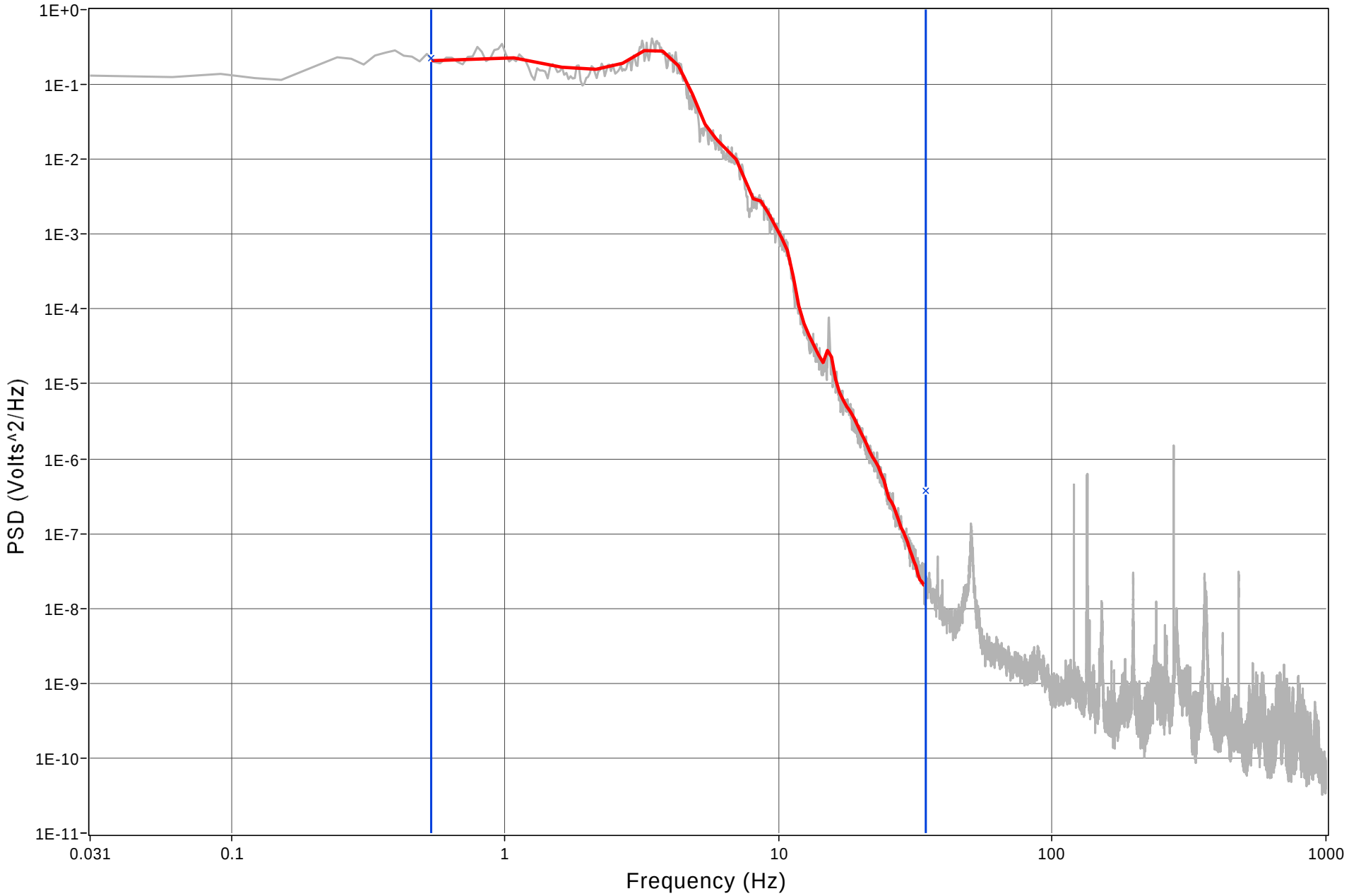
## PSD Window



# OLM Narrow Band PSD Window Fitting

| Reactor and Unit | Tag Number | Service | Filename | Blocks : Blocksize | Trim Low Freq. (Hz) | Trim High Freq. (Hz) | Fitting Type | Test Date |
|---|---|---|---|---|---|---|---|---|
| Farley Unit 1 | FT494 | STM FLOW | FNP1060003.psd | 11 : 128 | 0.538777 | 34.481708 | Dynamic | 23-Jun-2009 12:04:01 |

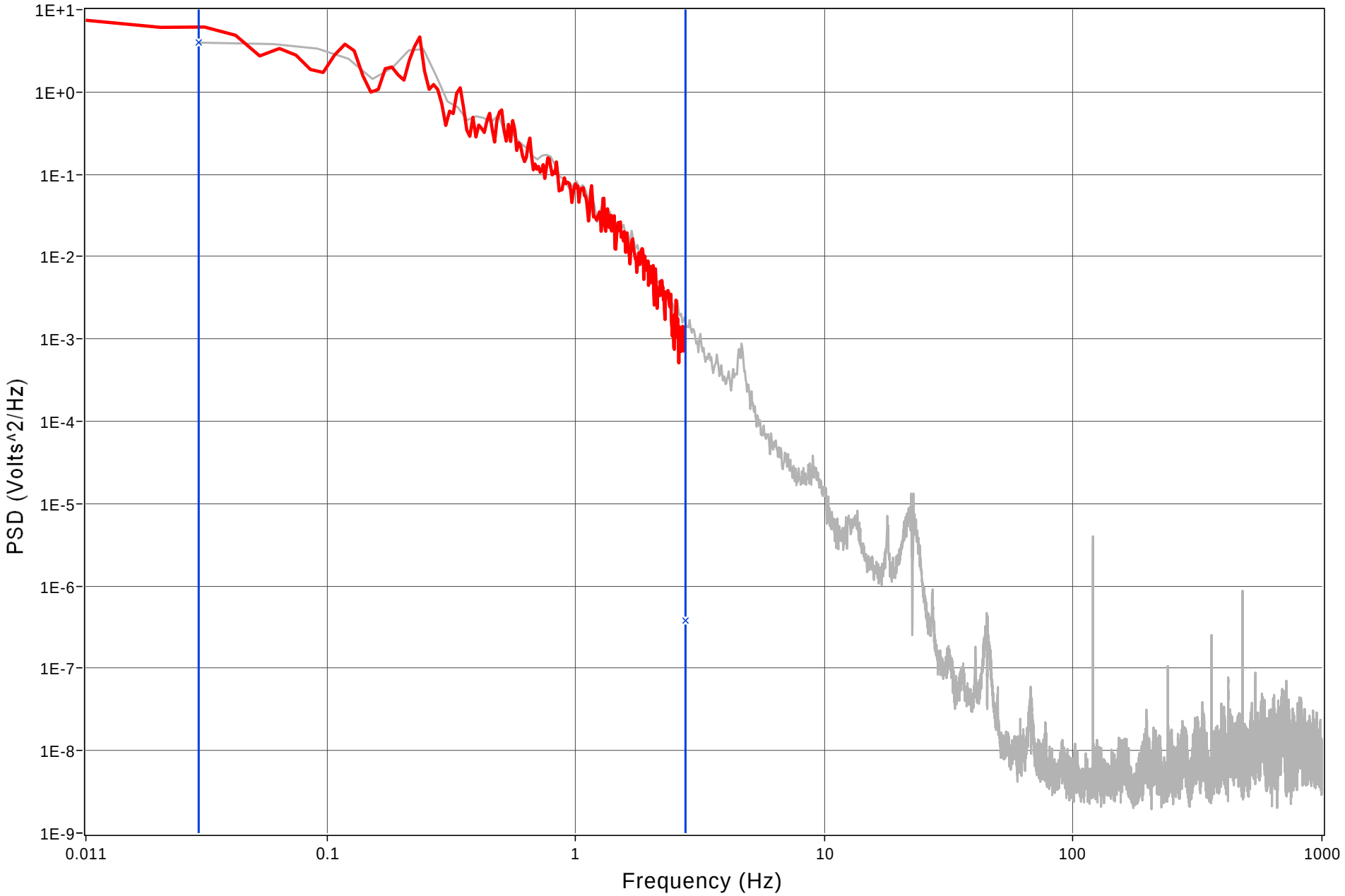
## PSD Window



# OLM Narrow Band PSD Window Fitting

| Reactor and Unit | Tag Number | Service | Filename | Blocks : Blocksize | Trim Low Freq. (Hz) | Trim High Freq. (Hz) | Fitting Type | Test Date |
|---|---|---|---|---|---|---|---|---|
| Farley Unit 1 | FT477 | FW FLOW | FNP1060003.psd | 11 : 512 | 0.010731 | 2.747169 | Dynamic | 23-Jun-2009 12:04:01 |

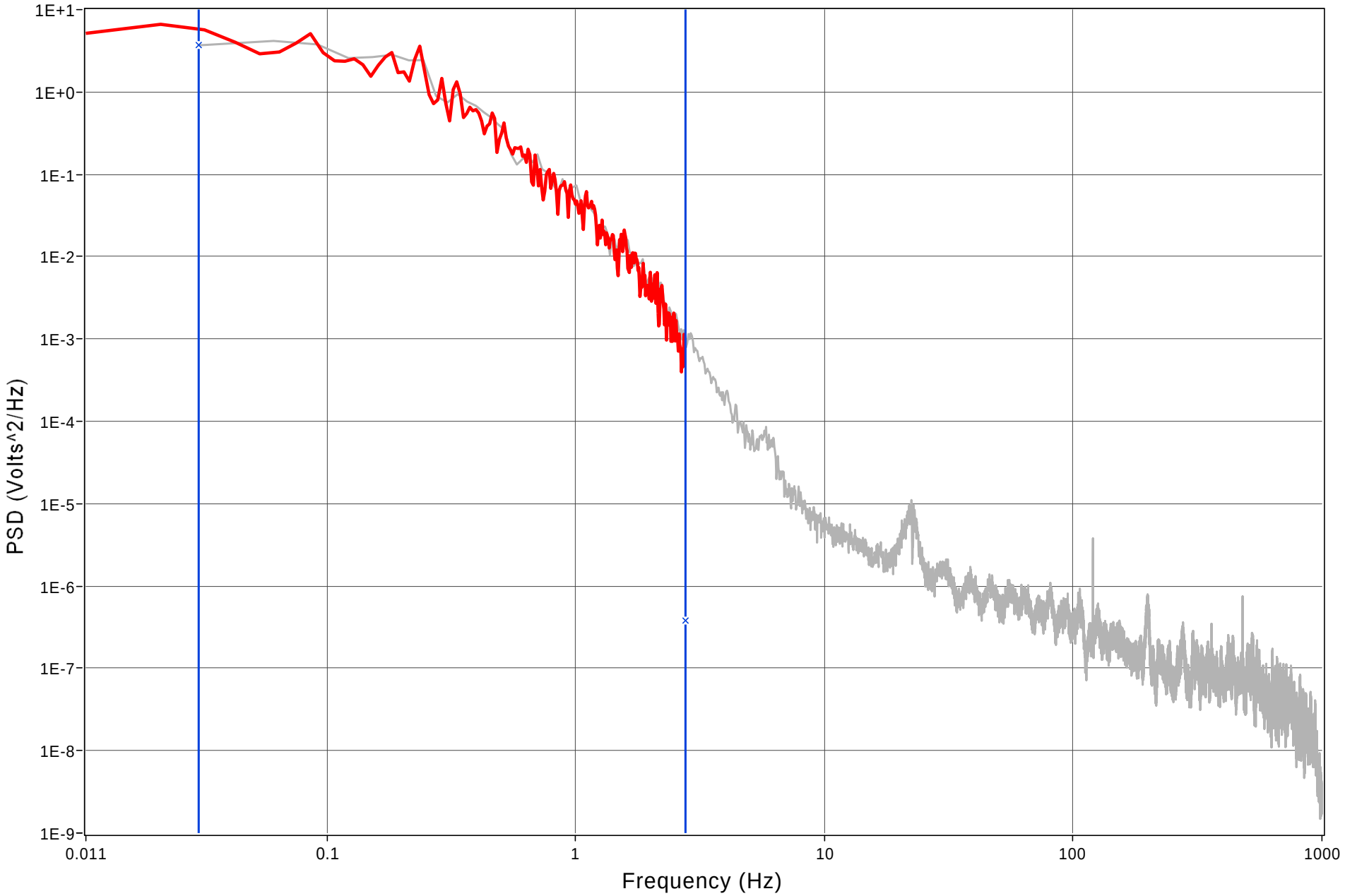
## PSD Window



# OLM Narrow Band PSD Window Fitting

| Reactor and Unit | Tag Number | Service | Filename | Blocks : Blocksize | Trim Low Freq. (Hz) | Trim High Freq. (Hz) | Fitting Type | Test Date |
|---|---|---|---|---|---|---|---|---|
| Farley Unit 1 | FT487 | FW FLOW | FNP1060003.psd | 11 : 512 | 0.010731 | 2.747169 | Dynamic | 23-Jun-2009 12:04:01 |

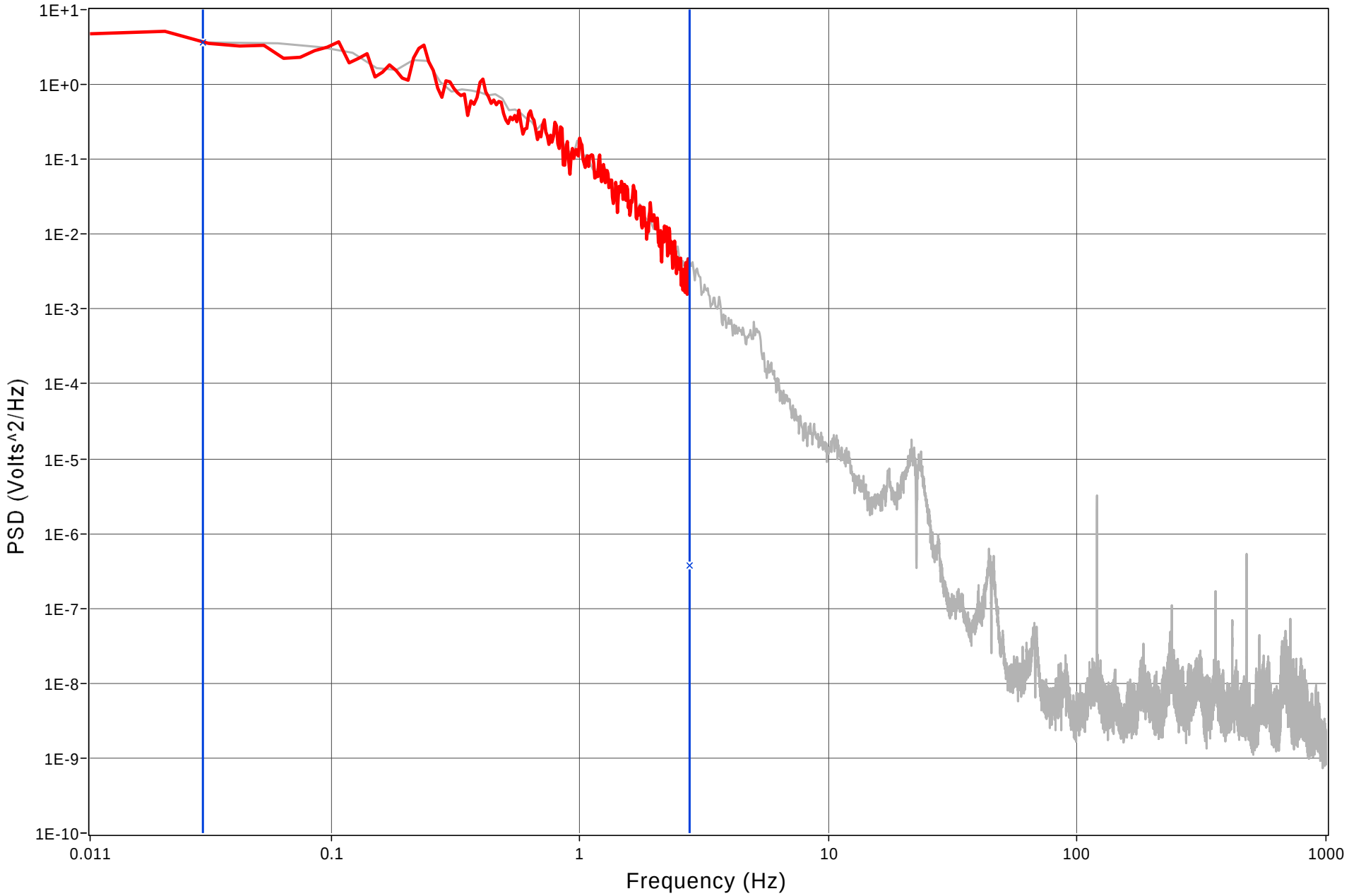
## PSD Window



# OLM Narrow Band PSD Window Fitting

| Reactor and Unit | Tag Number | Service | Filename | Blocks : Blocksize | Trim Low Freq. (Hz) | Trim High Freq. (Hz) | Fitting Type | Test Date |
|---|---|---|---|---|---|---|---|---|
| Farley Unit 1 | FT497 | FW FLOW | FNP1060003.psd | 11 : 512 | 0.010731 | 2.747169 | Dynamic | 23-Jun-2009 12:04:01 |

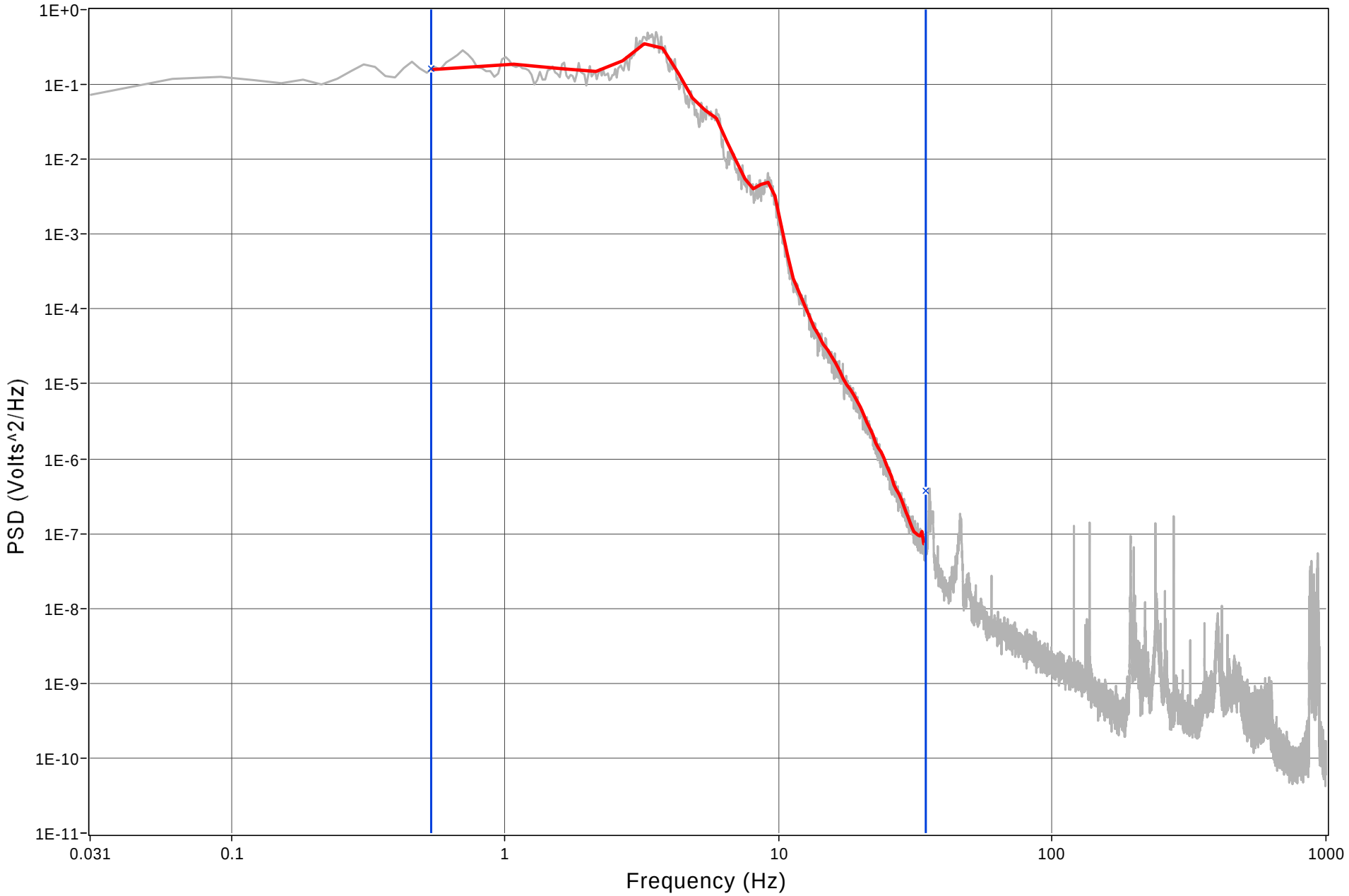
## PSD Window



# OLM Narrow Band PSD Window Fitting

| Reactor and Unit | Tag Number | Service | Filename | Blocks : Blocksize | Trim Low Freq. (Hz) | Trim High Freq. (Hz) | Fitting Type | Test Date |
|---|---|---|---|---|---|---|---|---|
| Farley Unit 1 | FT475 | STM FLOW | FNP1060004.psd | 11 : 128 | 0.538777 | 34.481708 | Dynamic | 23-Jun-2009 12:04:01 |

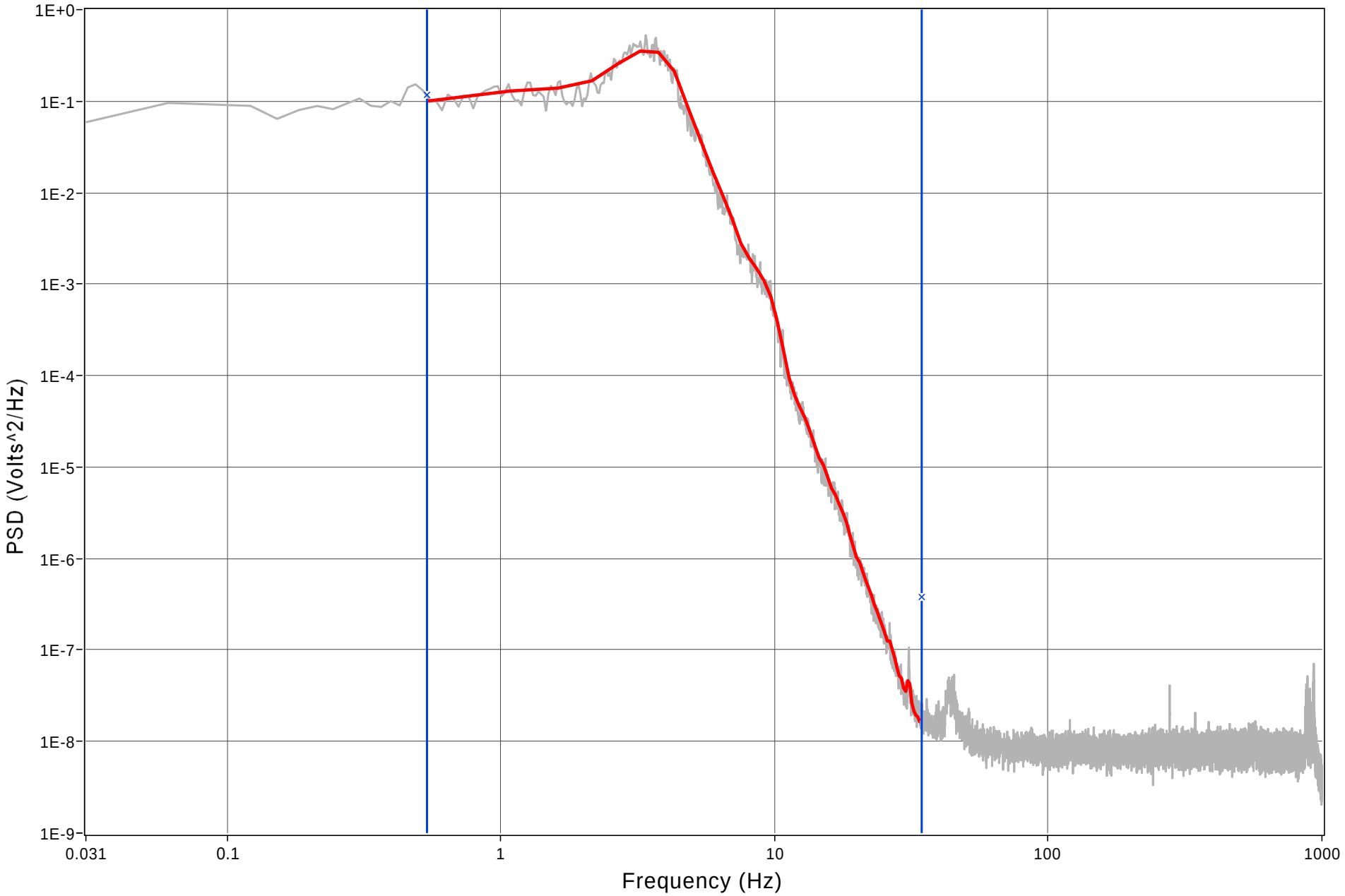
## PSD Window



# OLM Narrow Band PSD Window Fitting

| Reactor and Unit | Tag Number | Service | Filename | Blocks : Blocksize | Trim Low Freq. (Hz) | Trim High Freq. (Hz) | Fitting Type | Test Date |
|---|---|---|---|---|---|---|---|---|
| Farley Unit 1 | FT485 | STM FLOW | FNP1060004.psd | 11 : 128 | 0.538777 | 34.481708 | Dynamic | 23-Jun-2009 12:04:01 |

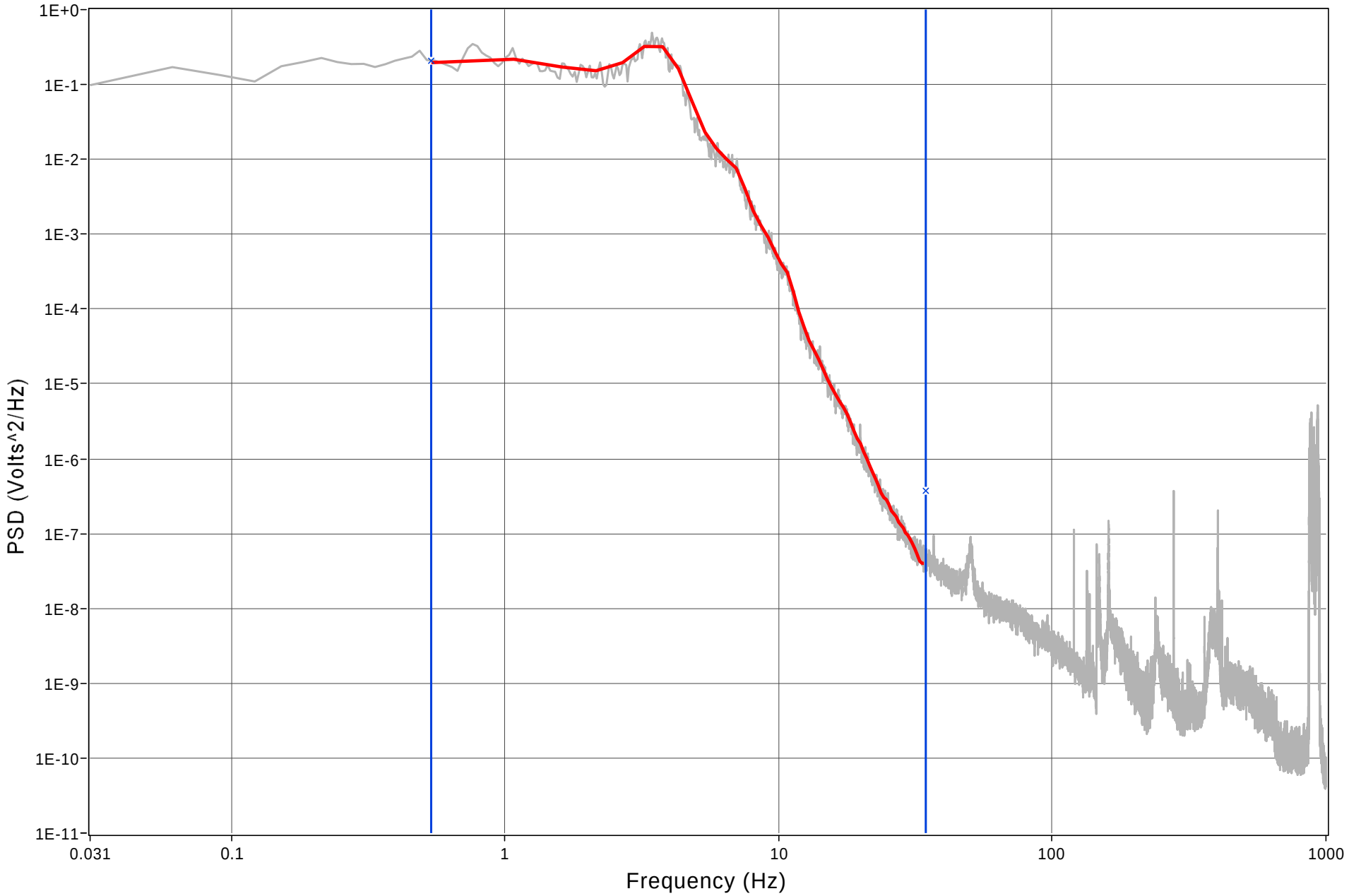
## PSD Window



# OLM Narrow Band PSD Window Fitting

| Reactor and Unit | Tag Number | Service | Filename | Blocks : Blocksize | Trim Low Freq. (Hz) | Trim High Freq. (Hz) | Fitting Type | Test Date |
|---|---|---|---|---|---|---|---|---|
| Farley Unit 1 | FT495 | STM FLOW | FNP1060004.psd | 11 : 128 | 0.538777 | 34.481708 | Dynamic | 23-Jun-2009 12:04:01 |

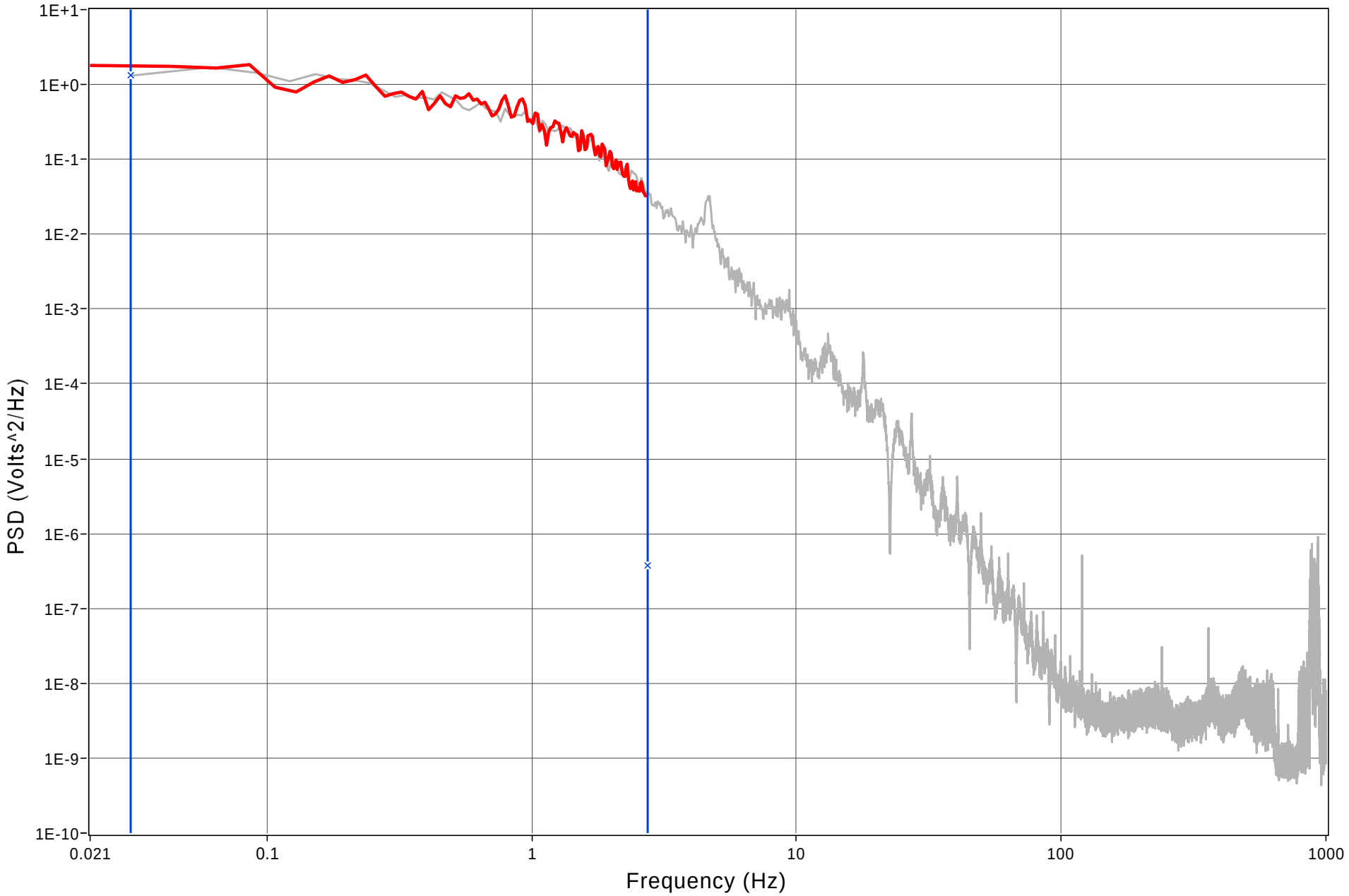
## PSD Window



# OLM Narrow Band PSD Window Fitting

| Reactor and Unit | Tag Number | Service | Filename | Blocks : Blocksize | Trim Low Freq. (Hz) | Trim High Freq. (Hz) | Fitting Type | Test Date |
|---|---|---|---|---|---|---|---|---|
| Farley Unit 1 | FT476 | FW FLOW | FNP1060004.psd | 11 : 256 | 0.021462 | 2.747169 | Dynamic | 23-Jun-2009 12:04:01 |

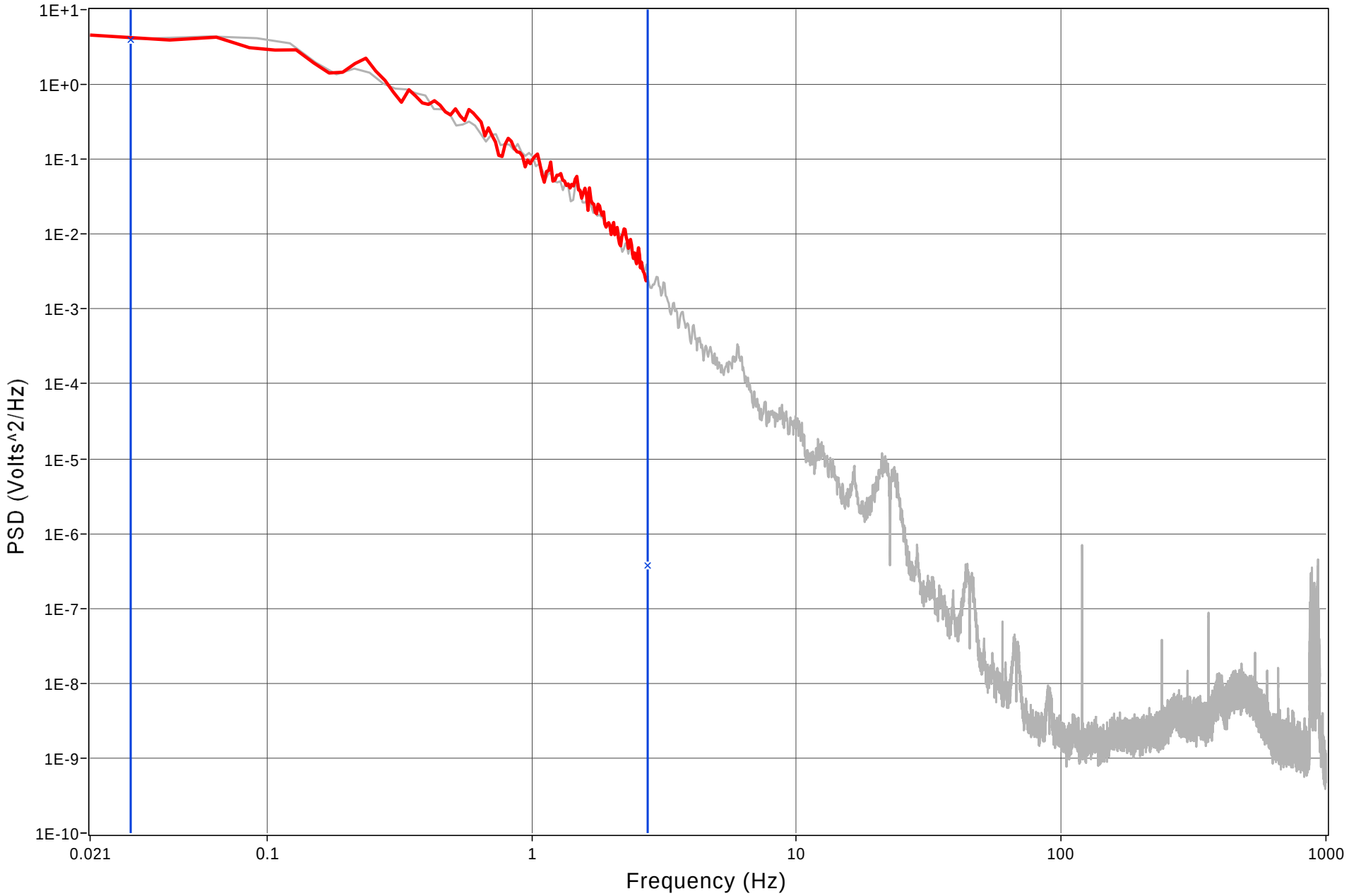
## PSD Window



# OLM Narrow Band PSD Window Fitting

| Reactor and Unit | Tag Number | Service | Filename | Blocks : Blocksize | Trim Low Freq. (Hz) | Trim High Freq. (Hz) | Fitting Type | Test Date |
|---|---|---|---|---|---|---|---|---|
| Farley Unit 1 | FT486 | FW FLOW | FNP1060004.psd | 11 : 256 | 0.021462 | 2.747169 | Dynamic | 23-Jun-2009 12:04:01 |

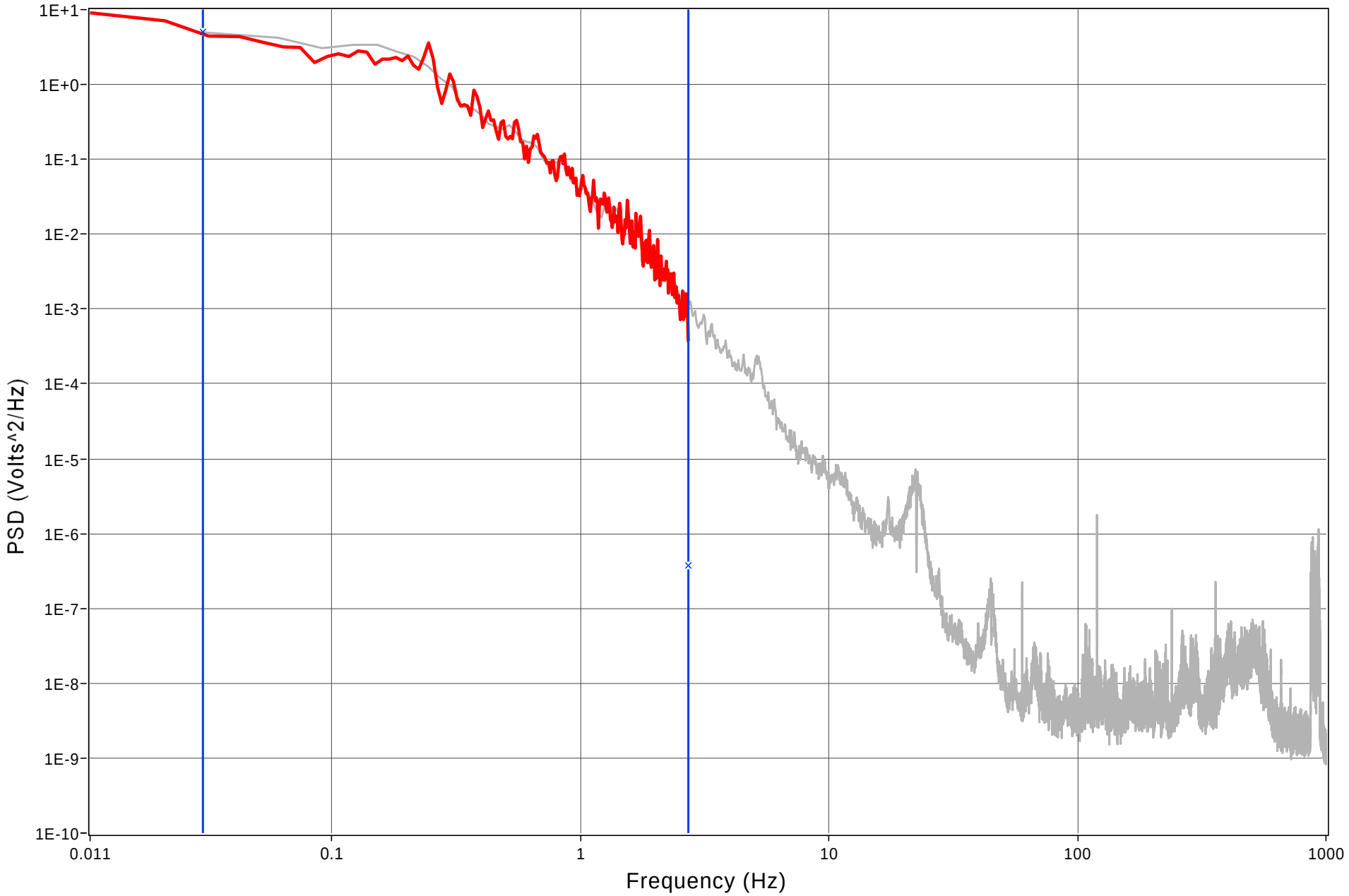
## PSD Window



# OLM Narrow Band PSD Window Fitting

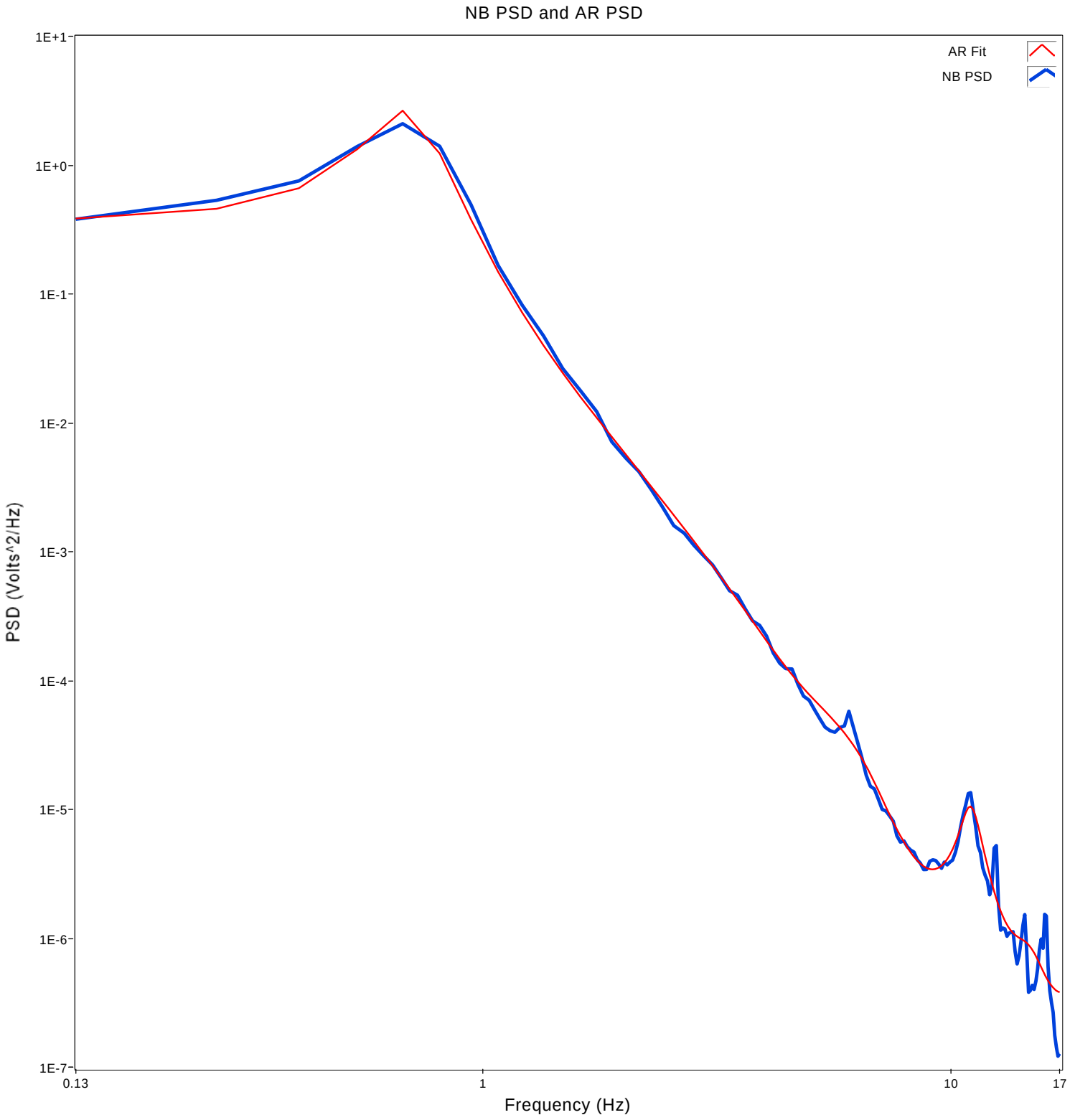
| Reactor and Unit | Tag Number | Service | Filename | Blocks : Blocksize | Trim Low Freq. (Hz) | Trim High Freq. (Hz) | Fitting Type | Test Date |
|---|---|---|---|---|---|---|---|---|
| Farley Unit 1 | FT496 | FW FLOW | FNP1060004.psd | 11 : 512 | 0.010672 | 2.732157 | Dynamic | 23-Jun-2009 12:04:01 |

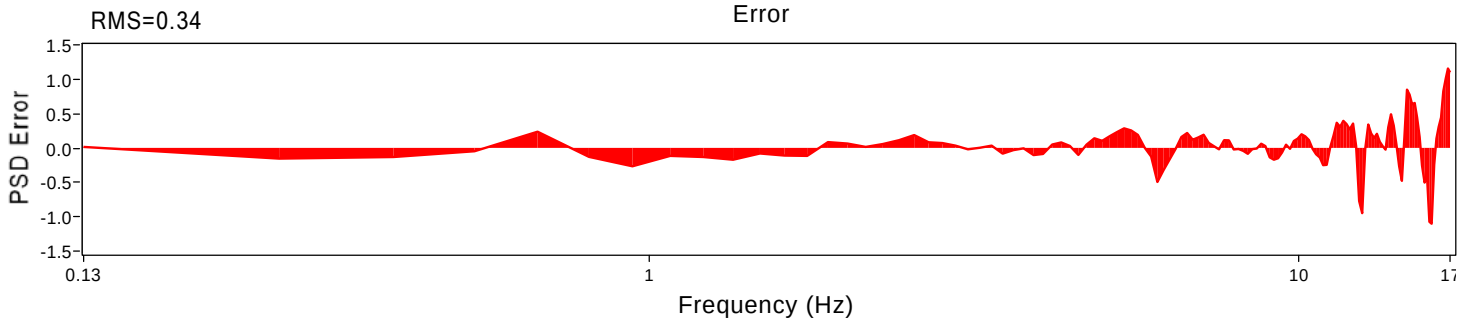
## PSD Window



# OLM Autoregressive Fitting of Narrow Band PSD

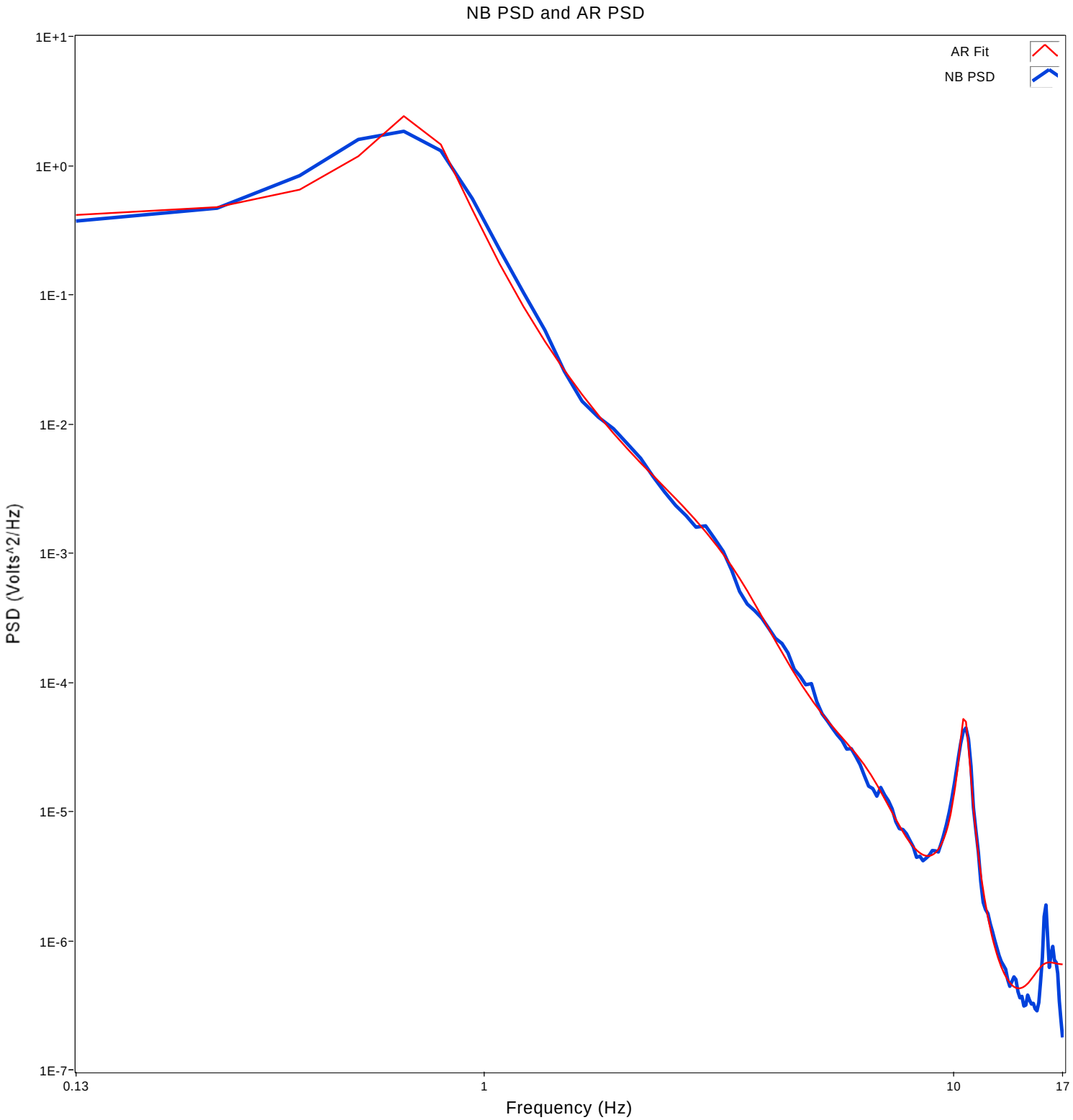
| Reactor and Unit | Tag Number | Service | Filename | Blocks : Blocksize | Trim Low Freq. (Hz) | Trim High Freq. (Hz) | AR Order | AR Method | Test Date |
|---|---|---|---|---|---|---|---|---|---|
| Farley Unit 1 | LT474 | SG LVL | FNP1060001.psd | 141 : 256 | 0.134694 | 17.240854 | 11 | Forward-Backward | 23-Jun-2009 12:04:01 |

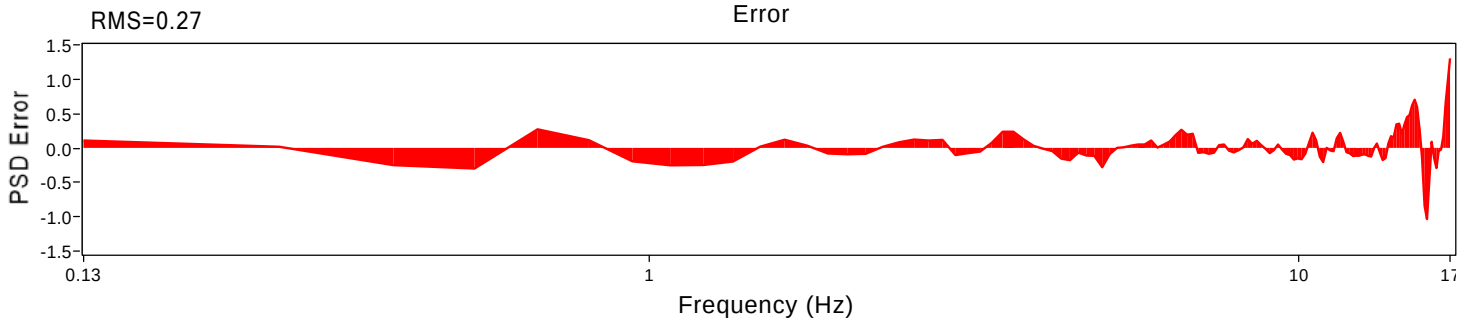


# OLM Autoregressive Fitting of Narrow Band PSD

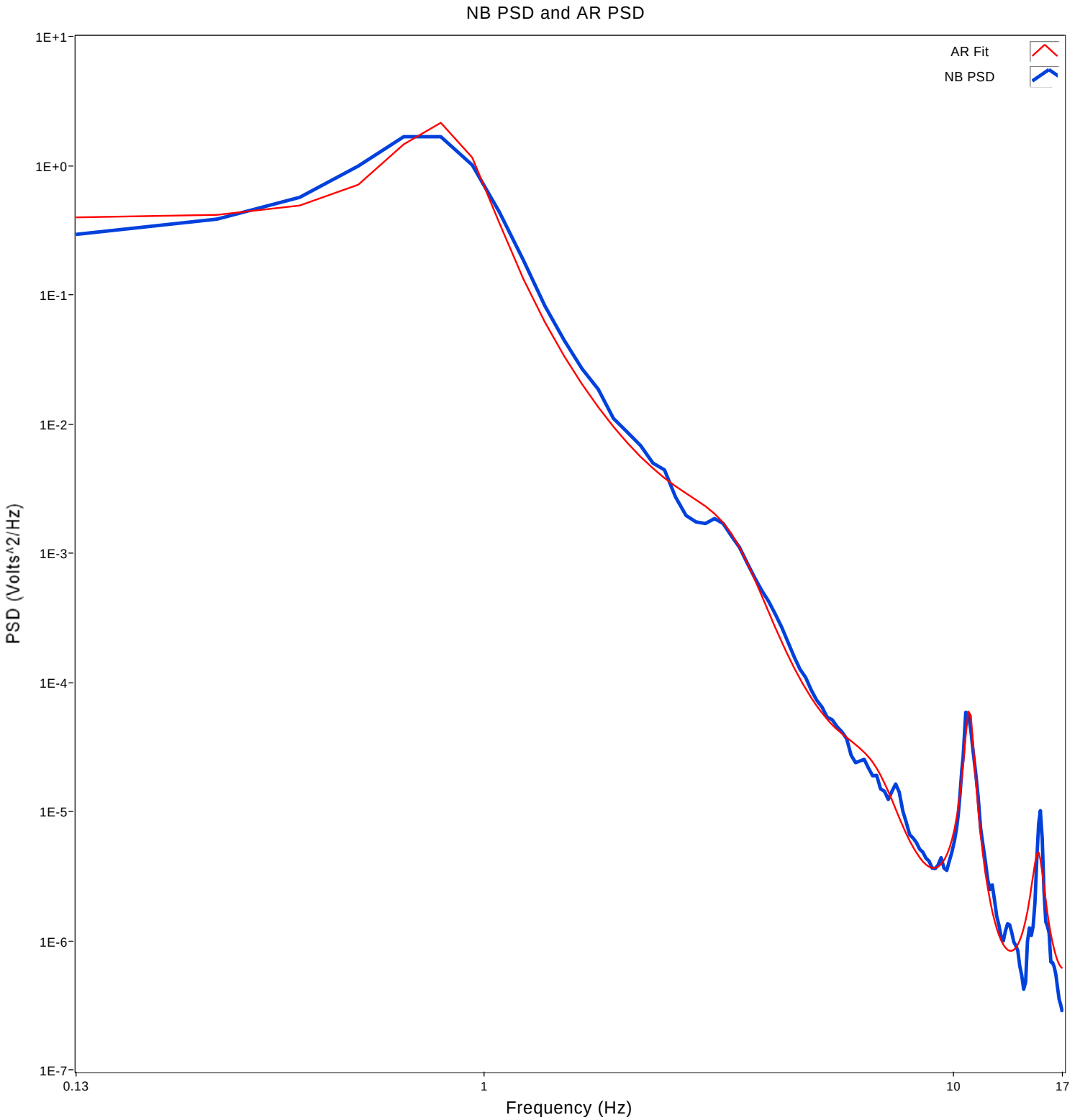
| Reactor and Unit | Tag Number | Service | Filename | Blocks : Blocksize | Trim Low Freq. (Hz) | Trim High Freq. (Hz) | AR Order | AR Method | Test Date |
|---|---|---|---|---|---|---|---|---|---|
| Farley Unit 1 | LT484 | SG LVL | FNP1060001.psd | 141 : 256 | 0.134694 | 17.240854 | 11 | Forward-Backward | 23-Jun-2009 12:04:01 |

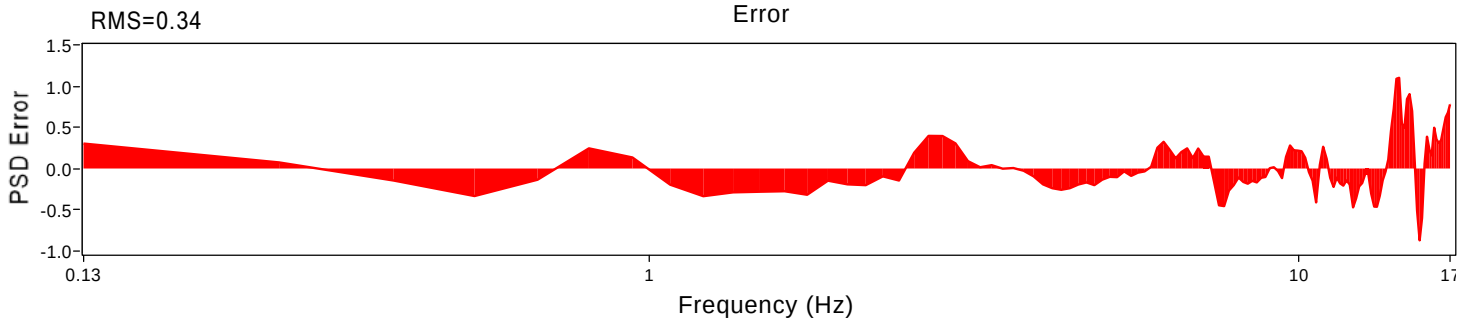


# OLM Autoregressive Fitting of Narrow Band PSD

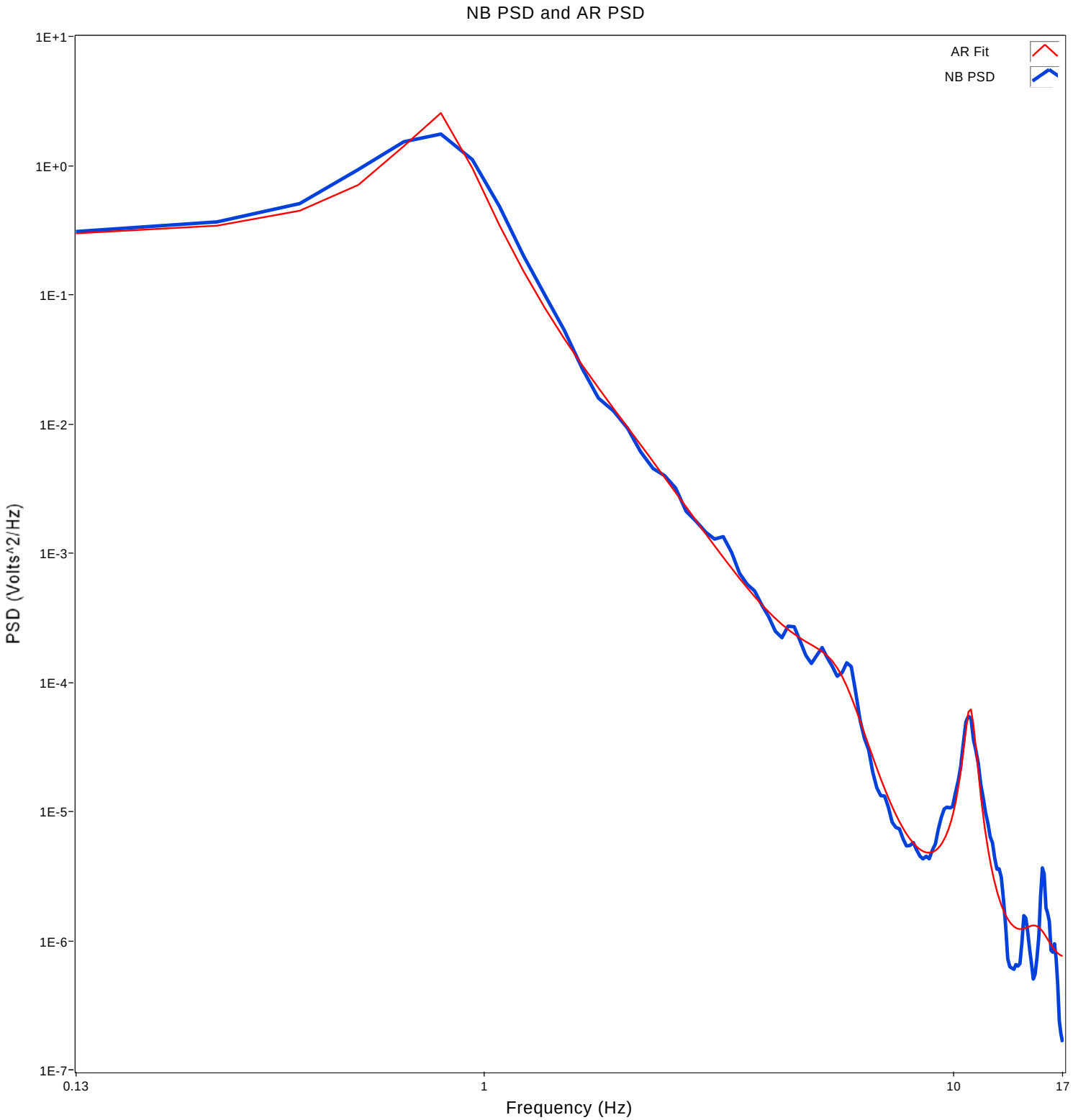
| Reactor and Unit | Tag Number | Service | Filename | Blocks : Blocksize | Trim Low Freq. (Hz) | Trim High Freq. (Hz) | AR Order | AR Method | Test Date |
|---|---|---|---|---|---|---|---|---|---|
| Farley Unit 1 | LT494 | SG LVL | FNP1060001.psd | 141 : 256 | 0.134694 | 17.240854 | 11 | Forward-Backward | 23-Jun-2009 12:04:01 |

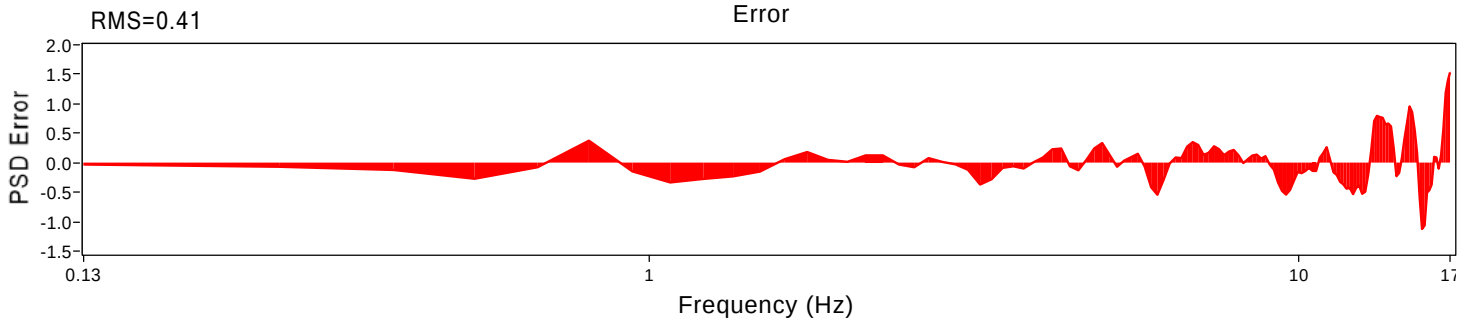


# OLM Autoregressive Fitting of Narrow Band PSD

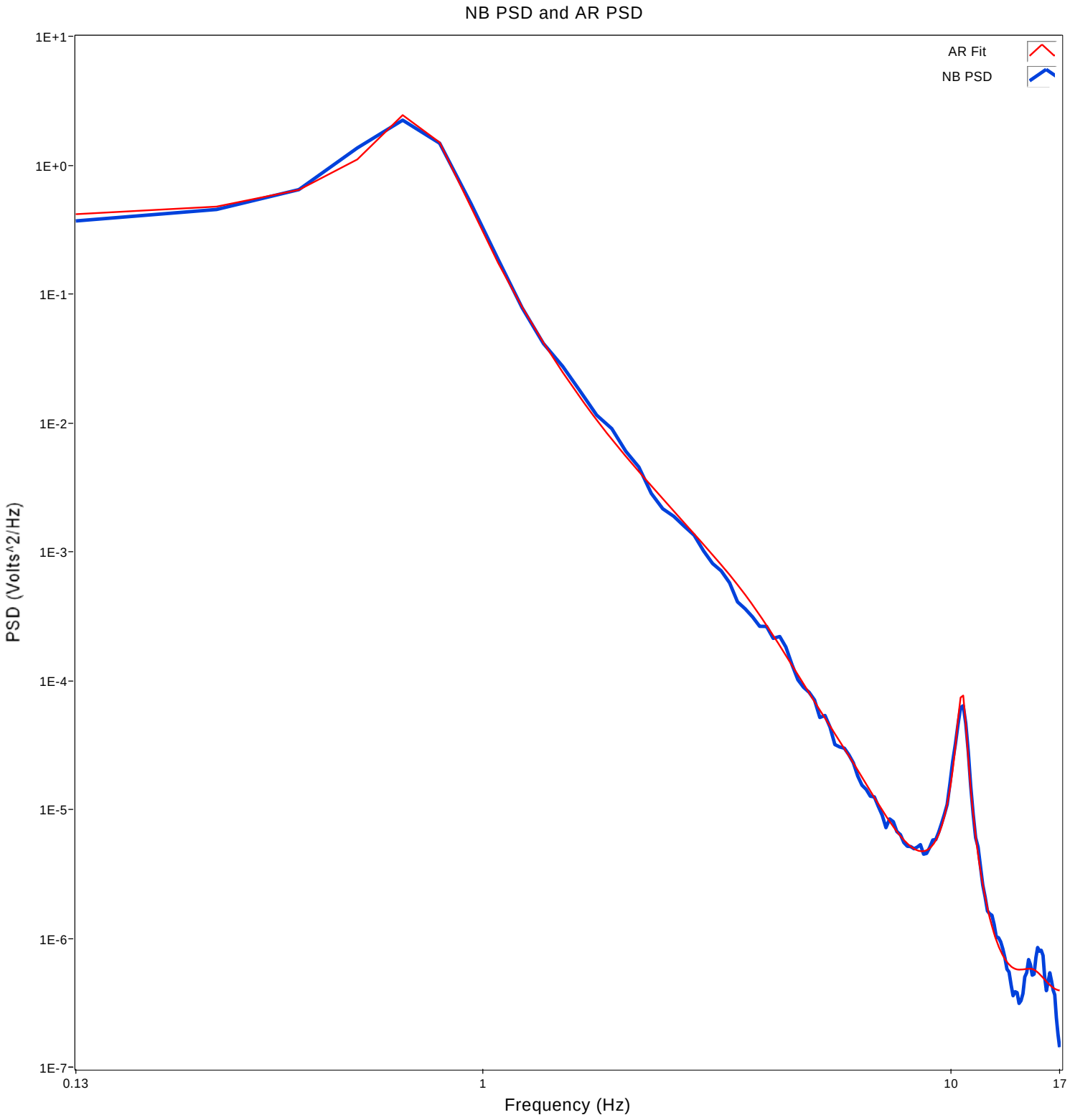
| Reactor and Unit | Tag Number | Service | Filename | Blocks : Blocksize | Trim Low Freq. (Hz) | Trim High Freq. (Hz) | AR Order | AR Method | Test Date |
|---|---|---|---|---|---|---|---|---|---|
| Farley Unit 1 | LT475 | SG LVL | FNP1060002.psd | 141 : 256 | 0.134694 | 17.240854 | 11 | Forward-Backward | 23-Jun-2009 12:04:01 |

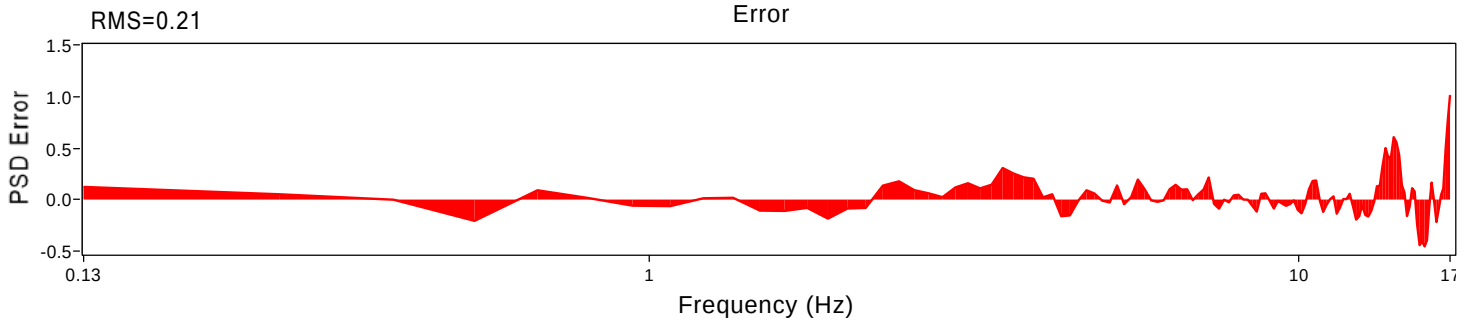


# OLM Autoregressive Fitting of Narrow Band PSD

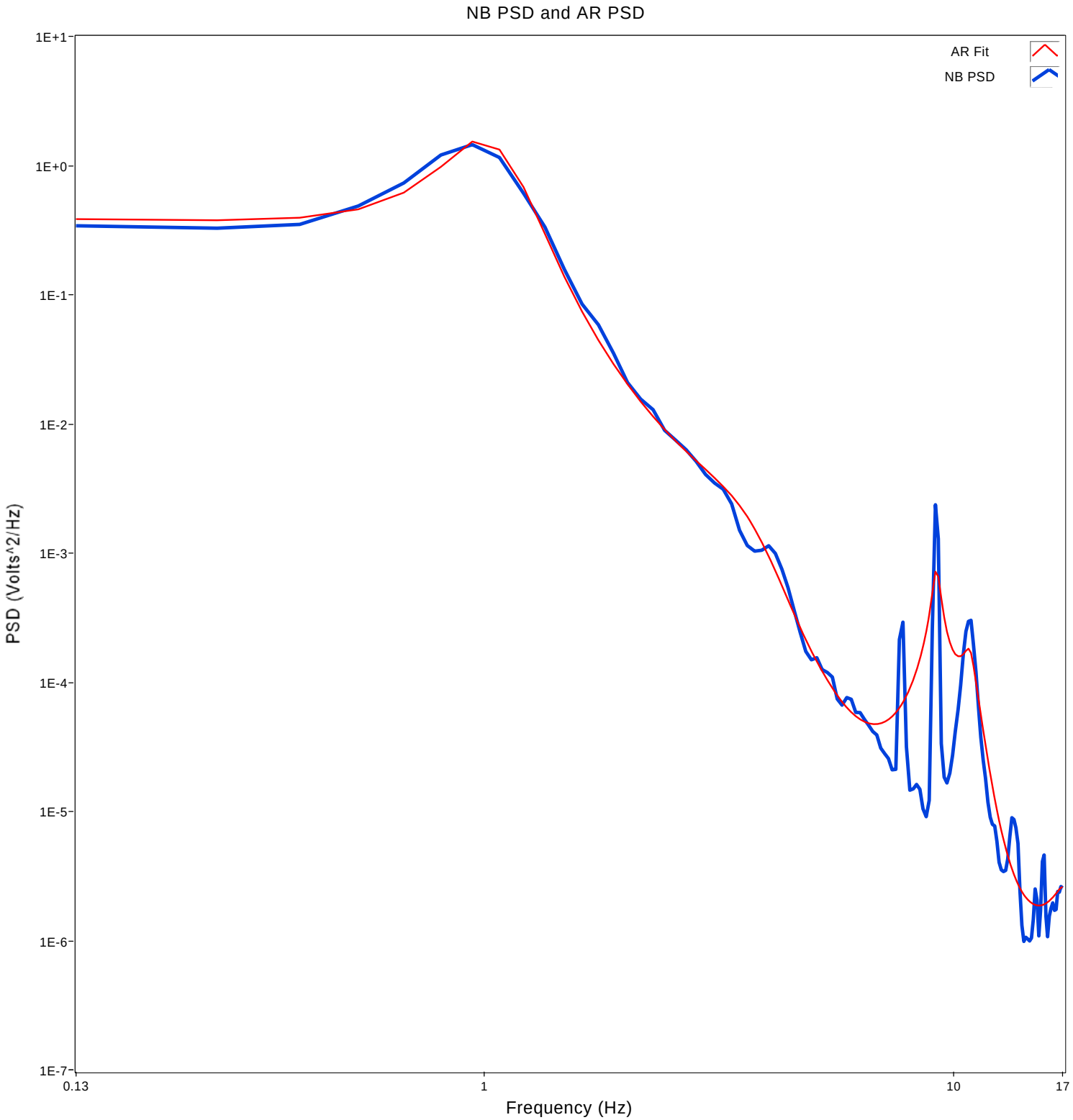
| Reactor and Unit | Tag Number | Service | Filename | Blocks : Blocksize | Trim Low Freq. (Hz) | Trim High Freq. (Hz) | AR Order | AR Method | Test Date |
|---|---|---|---|---|---|---|---|---|---|
| Farley Unit 1 | LT485 | SG LVL | FNP1060002.psd | 141 : 256 | 0.134694 | 17.240854 | 11 | Forward-Backward | 23-Jun-2009 12:04:01 |

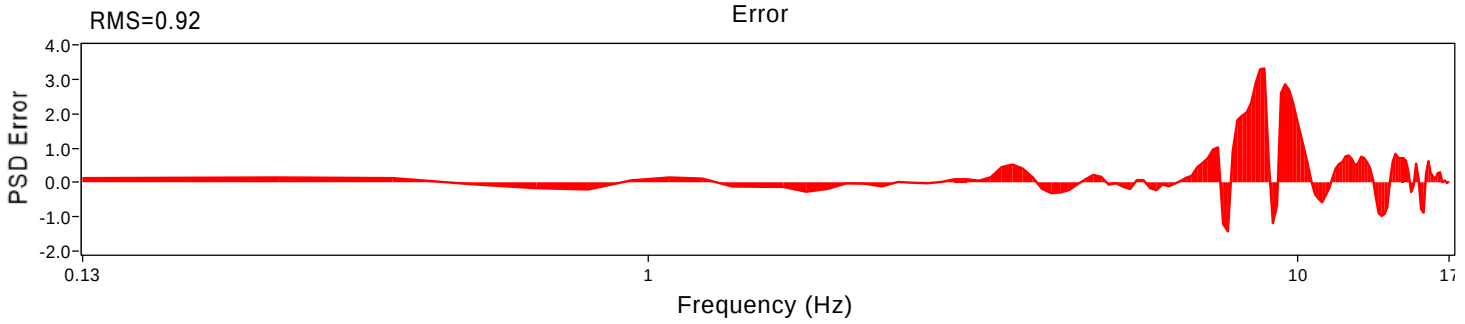


# OLM Autoregressive Fitting of Narrow Band PSD

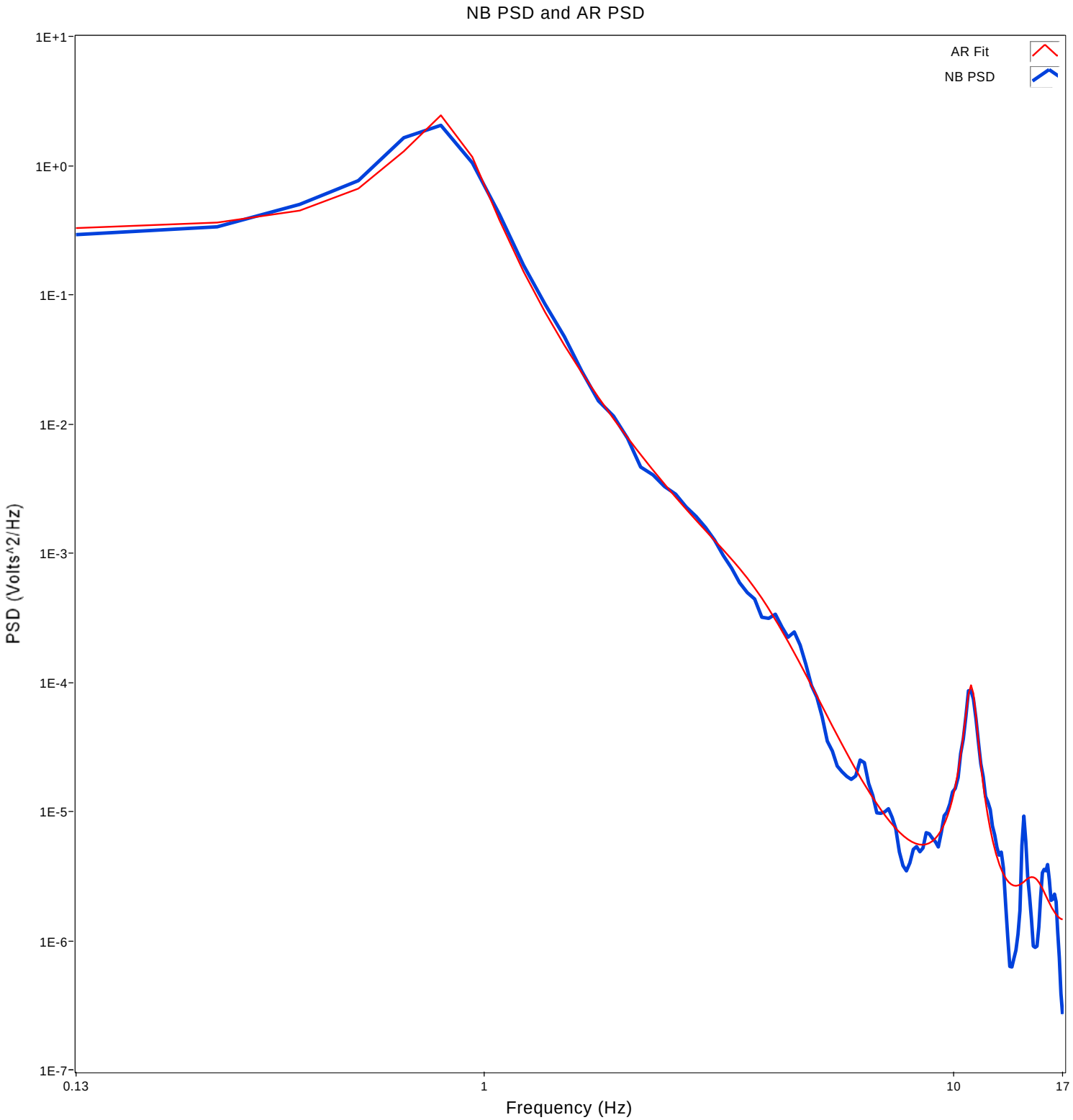
| Reactor and Unit | Tag Number | Service | Filename | Blocks : Blocksize | Trim Low Freq. (Hz) | Trim High Freq. (Hz) | AR Order | AR Method | Test Date |
|---|---|---|---|---|---|---|---|---|---|
| Farley Unit 1 | LT495 | SG LVL | FNP1060002.psd | 141 : 256 | 0.134694 | 17.240854 | 11 | Forward-Backward | 23-Jun-2009 12:04:01 |

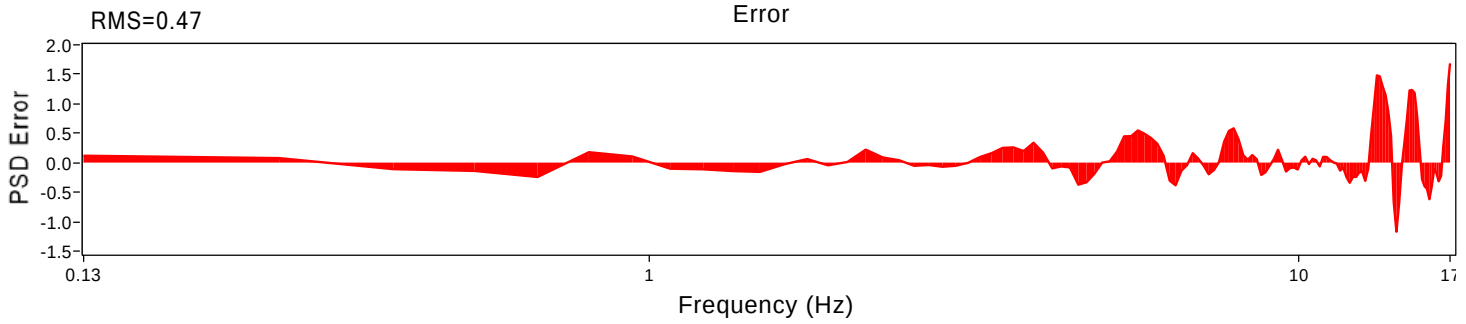


# OLM Autoregressive Fitting of Narrow Band PSD

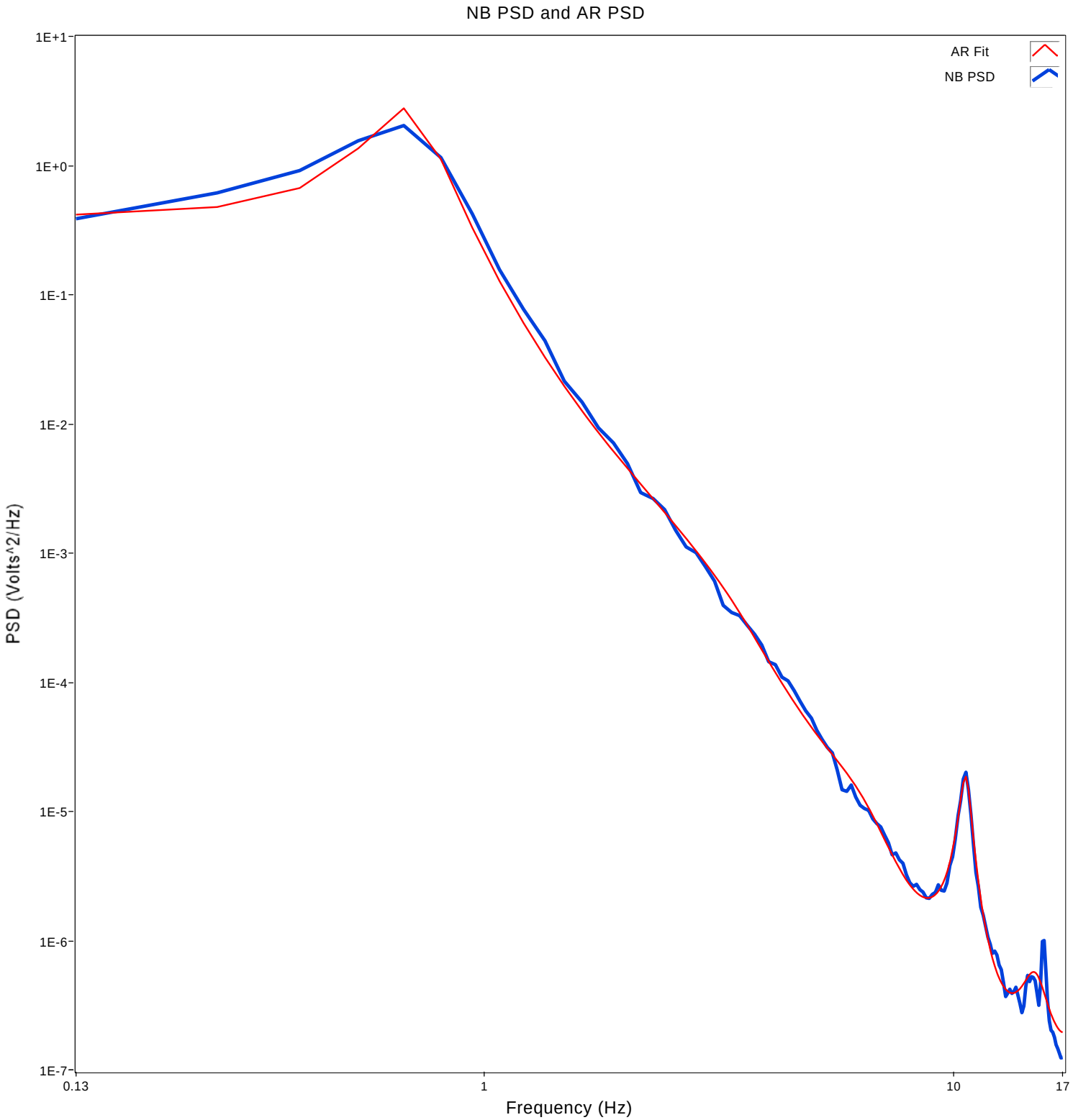
| Reactor and Unit | Tag Number | Service | Filename | Blocks : Blocksize | Trim Low Freq. (Hz) | Trim High Freq. (Hz) | AR Order | AR Method | Test Date |
|---|---|---|---|---|---|---|---|---|---|
| Farley Unit 1 | LT476 | SG LVL | FNP1060003.psd | 141 : 256 | 0.134694 | 17.240854 | 11 | Forward-Backward | 23-Jun-2009 12:04:01 |

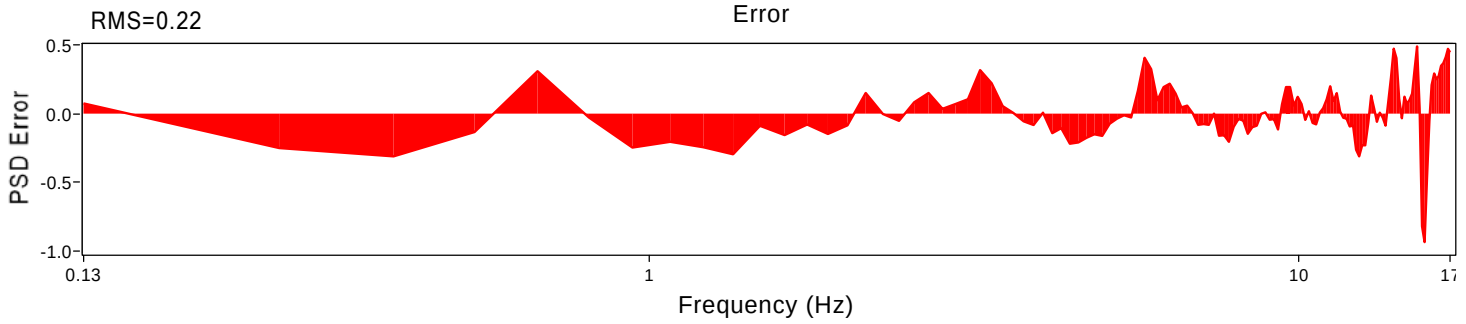


# OLM Autoregressive Fitting of Narrow Band PSD

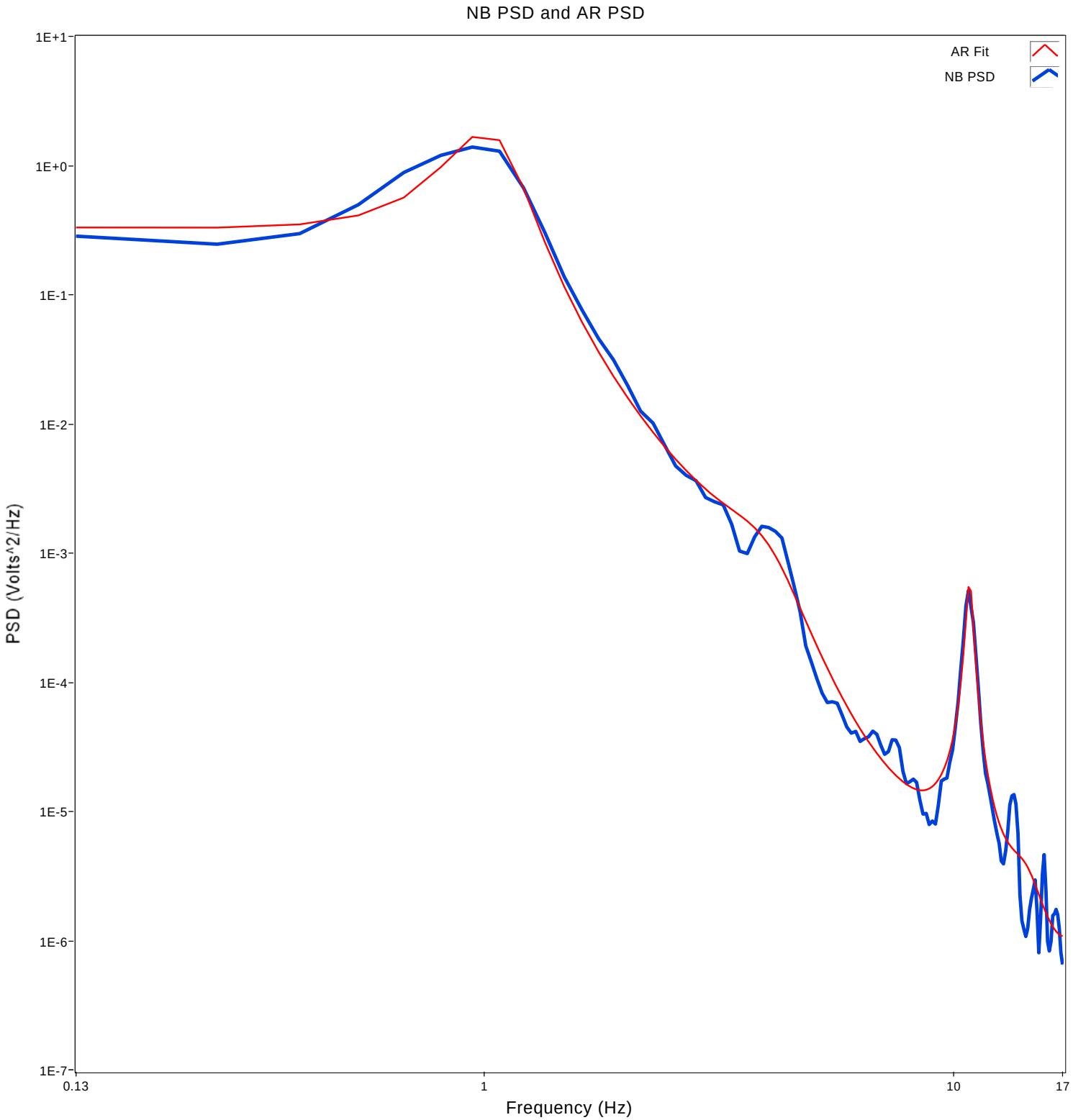
| Reactor and Unit | Tag Number | Service | Filename | Blocks : Blocksize | Trim Low Freq. (Hz) | Trim High Freq. (Hz) | AR Order | AR Method | Test Date |
|---|---|---|---|---|---|---|---|---|---|
| Farley Unit 1 | LT486 | SG LVL | FNP1060003.psd | 141 : 256 | 0.134694 | 17.240854 | 11 | Forward-Backward | 23-Jun-2009 12:04:01 |

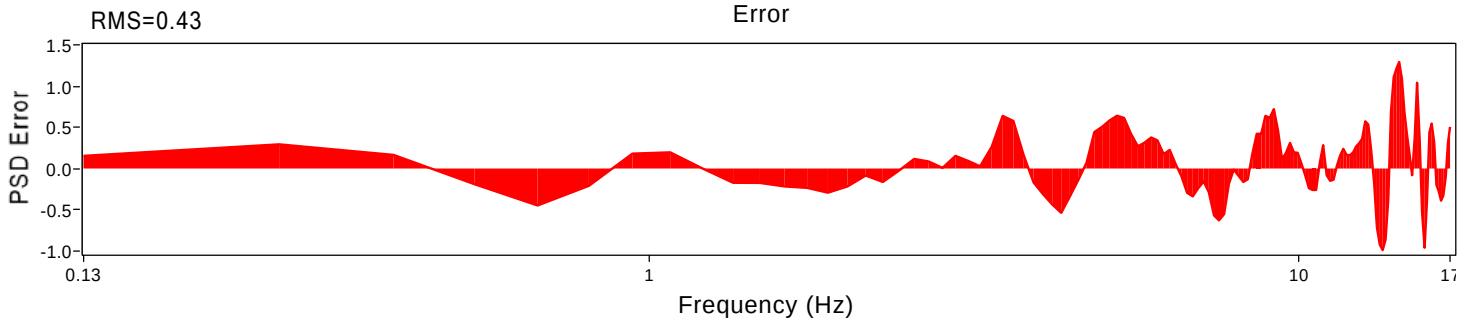


# OLM Autoregressive Fitting of Narrow Band PSD

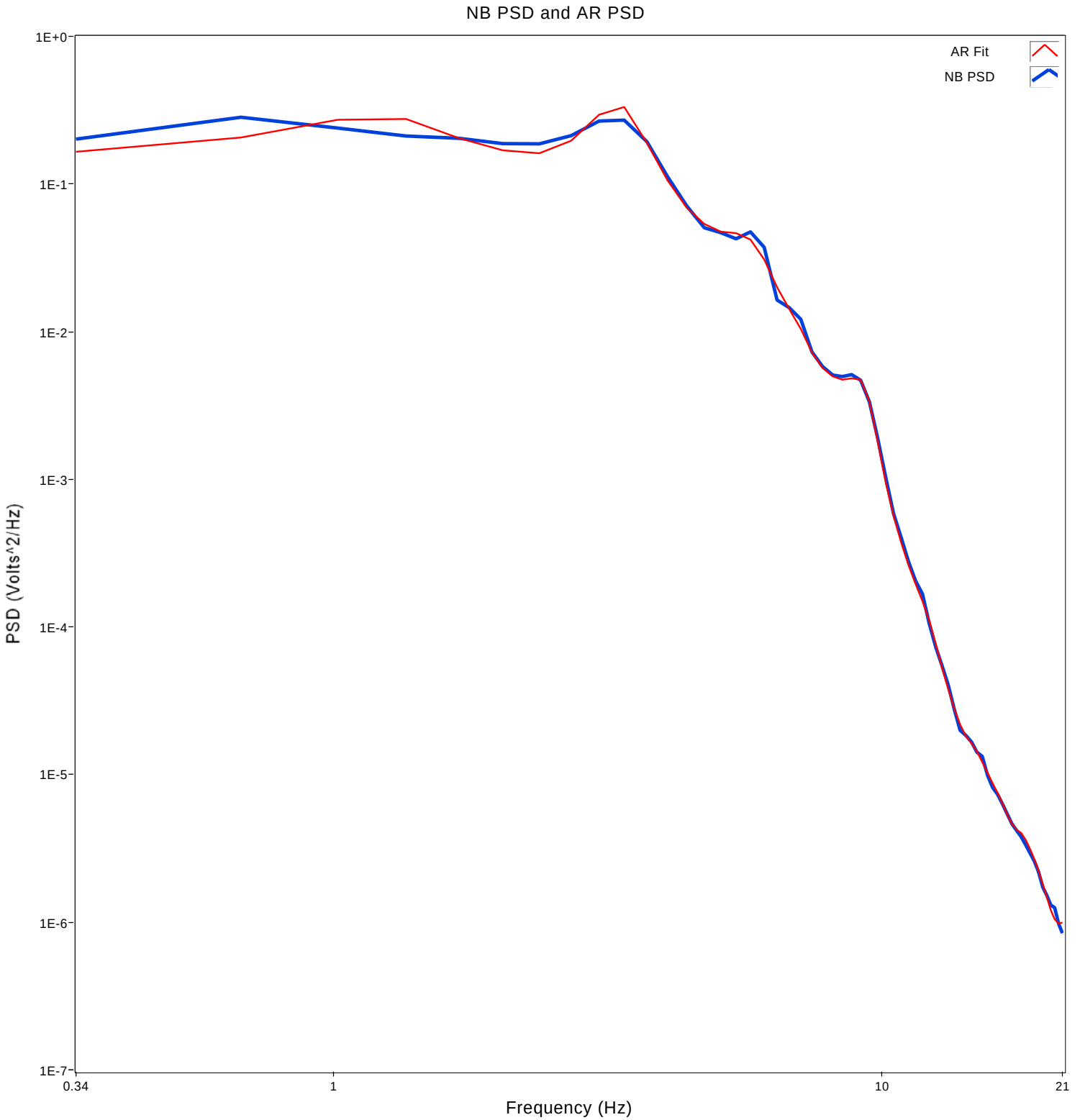
| Reactor and Unit | Tag Number | Service | Filename | Blocks : Blocksize | Trim Low Freq. (Hz) | Trim High Freq. (Hz) | AR Order | AR Method | Test Date |
|---|---|---|---|---|---|---|---|---|---|
| Farley Unit 1 | LT496 | SG LVL | FNP1060003.psd | 141 : 256 | 0.134694 | 17.240854 | 11 | Forward-Backward | 23-Jun-2009 12:04:01 |

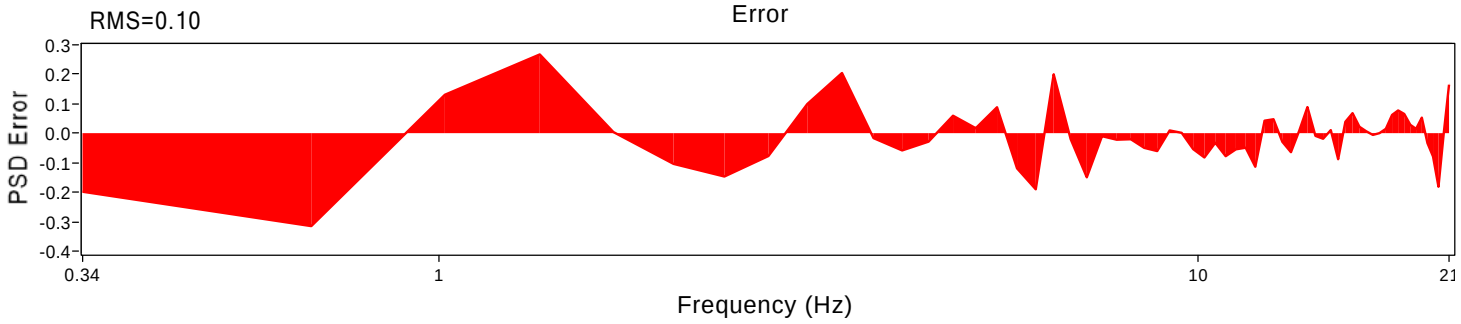


# OLM Autoregressive Fitting of Narrow Band PSD

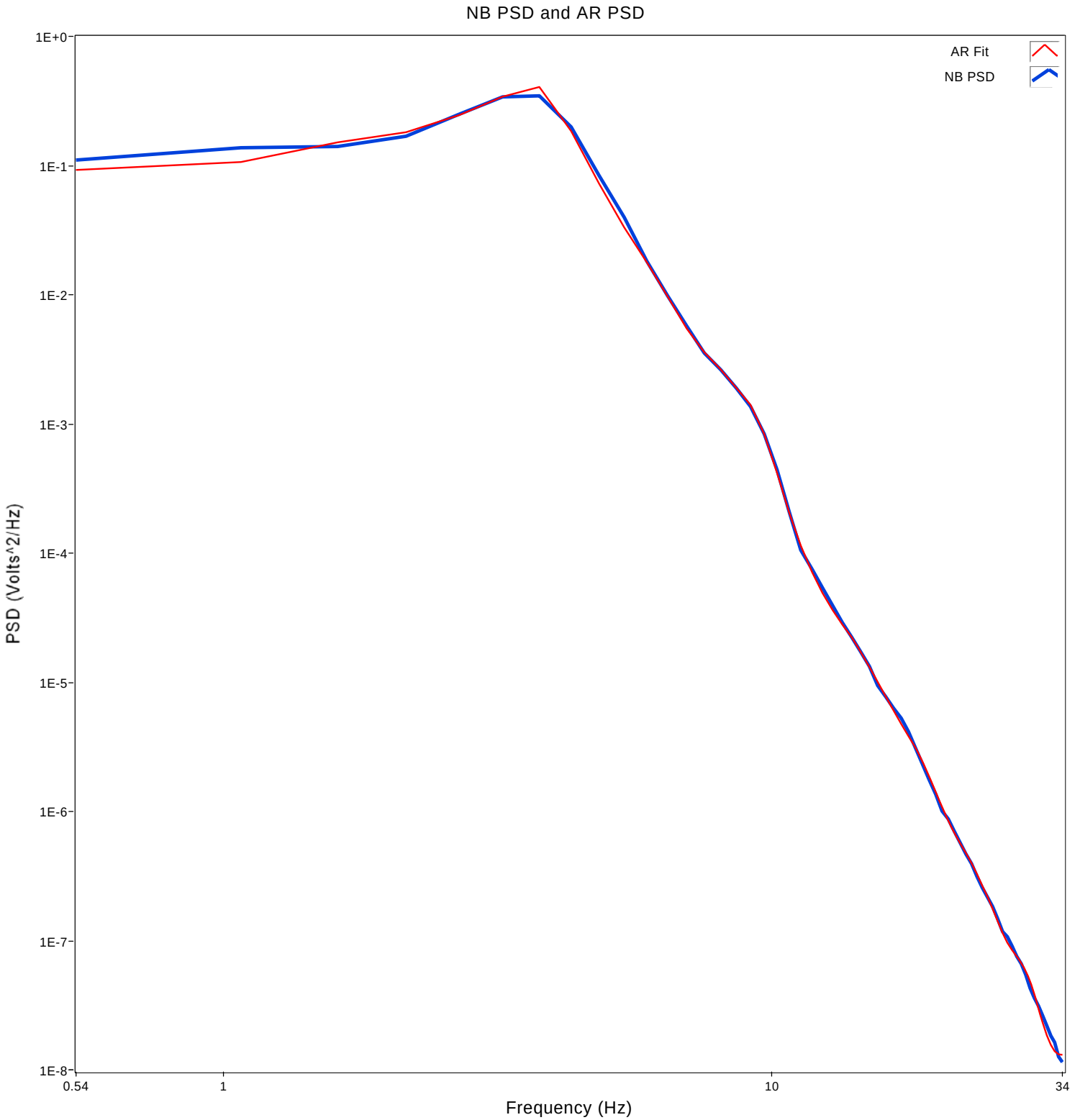
| Reactor and Unit | Tag Number | Service | Filename | Blocks : Blocksize | Trim Low Freq. (Hz) | Trim High Freq. (Hz) | AR Order | AR Method | Test Date |
|---|---|---|---|---|---|---|---|---|---|
| Farley Unit 1 | FT474 | STM FLOW | FNP1060003.psd | 355 : 256 | 0.339664 | 21.738468 | 18 | Least-Squares | 23-Jun-2009 12:04:01 |

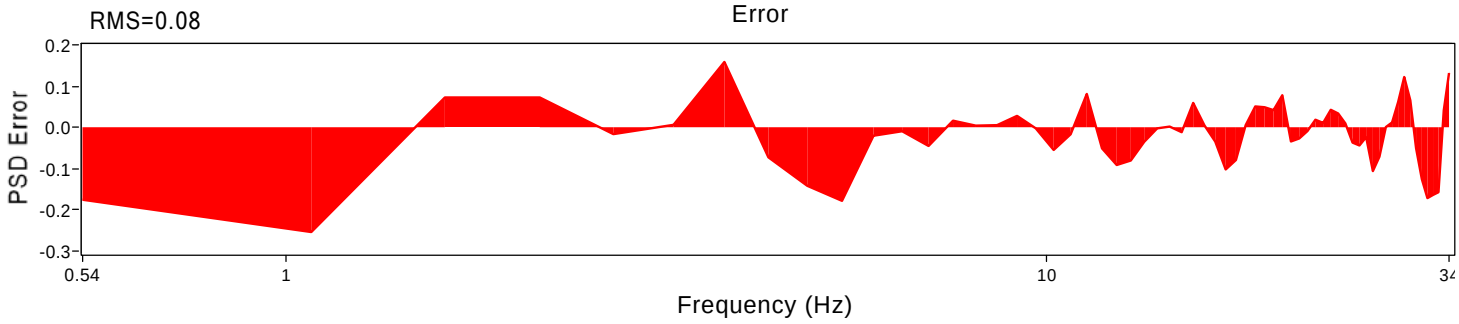


# OLM Autoregressive Fitting of Narrow Band PSD

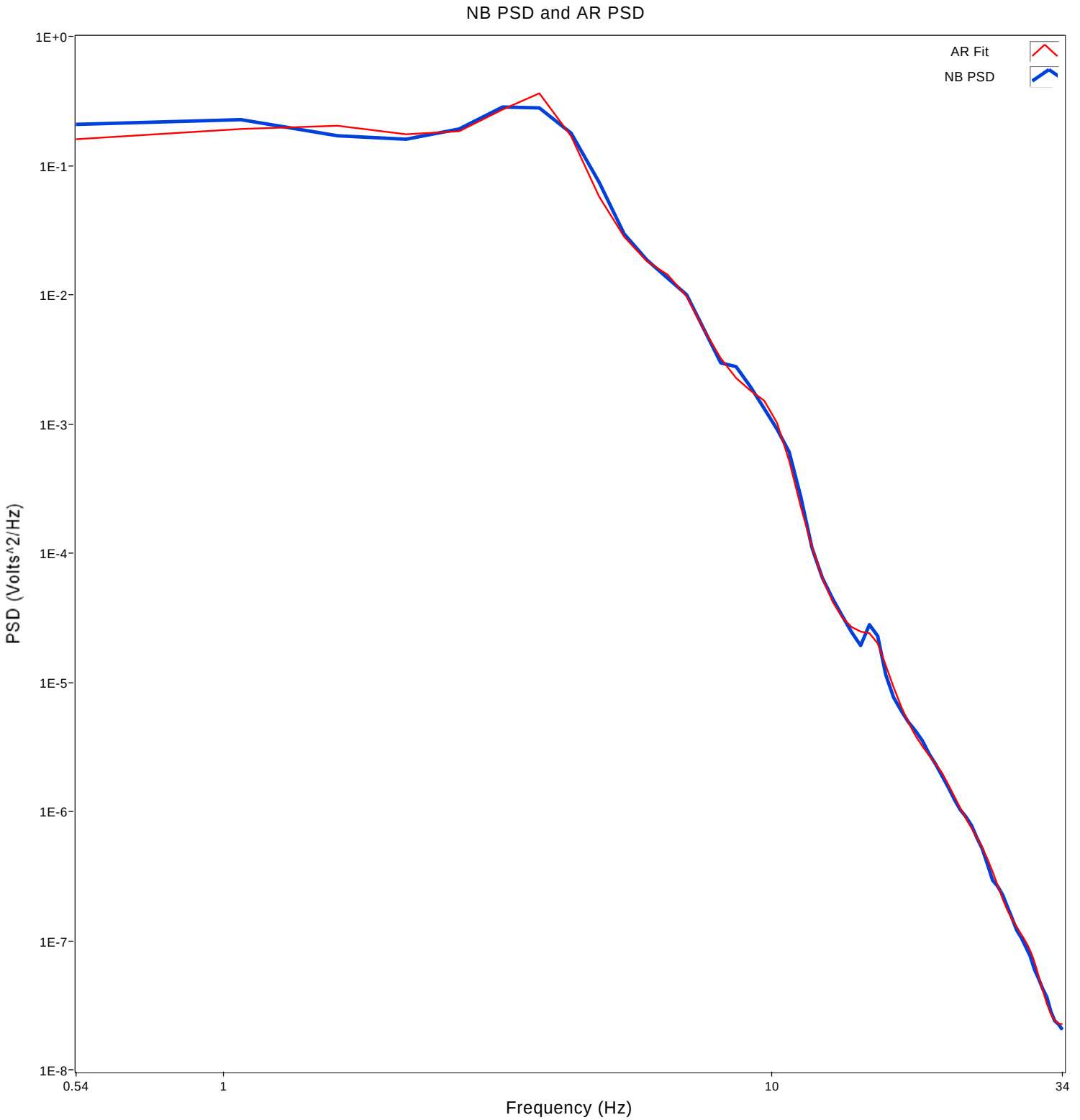
| Reactor and Unit | Tag Number | Service | Filename | Blocks : Blocksize | Trim Low Freq. (Hz) | Trim High Freq. (Hz) | AR Order | AR Method | Test Date |
|---|---|---|---|---|---|---|---|---|---|
| Farley Unit 1 | FT484 | STM FLOW | FNP1060003.psd | 564 : 256 | 0.538777 | 34.481708 | 17 | Forward-Backward | 23-Jun-2009 12:04:01 |

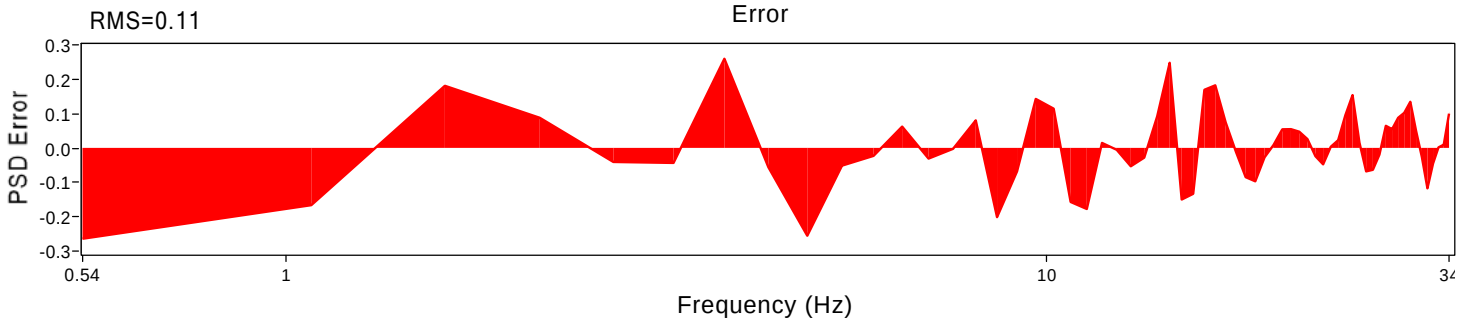


# OLM Autoregressive Fitting of Narrow Band PSD

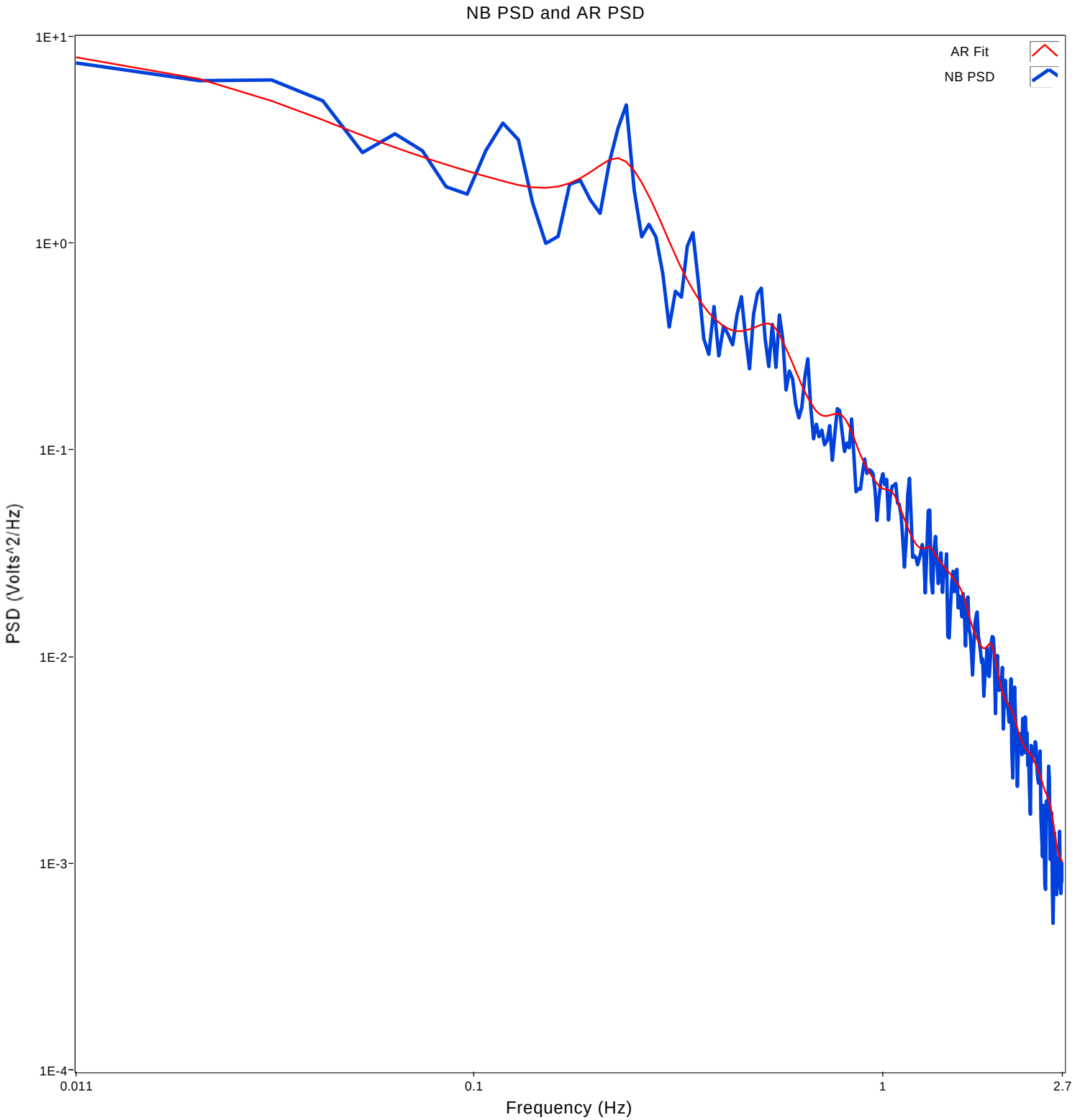
| Reactor and Unit | Tag Number | Service | Filename | Blocks : Blocksize | Trim Low Freq. (Hz) | Trim High Freq. (Hz) | AR Order | AR Method | Test Date |
|---|---|---|---|---|---|---|---|---|---|
| Farley Unit 1 | FT494 | STM FLOW | FNP1060003.psd | 564 : 256 | 0.538777 | 34.481708 | 17 | Forward-Backward | 23-Jun-2009 12:04:01 |

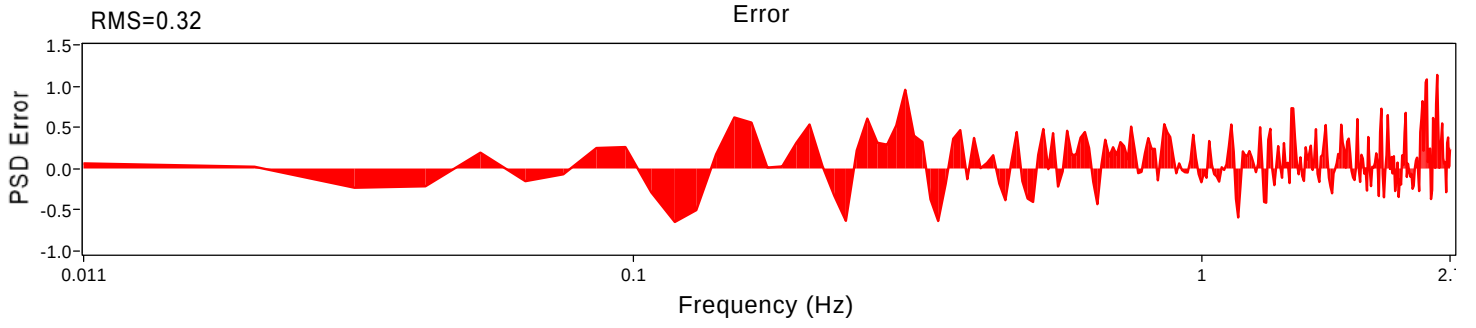


# OLM Autoregressive Fitting of Narrow Band PSD

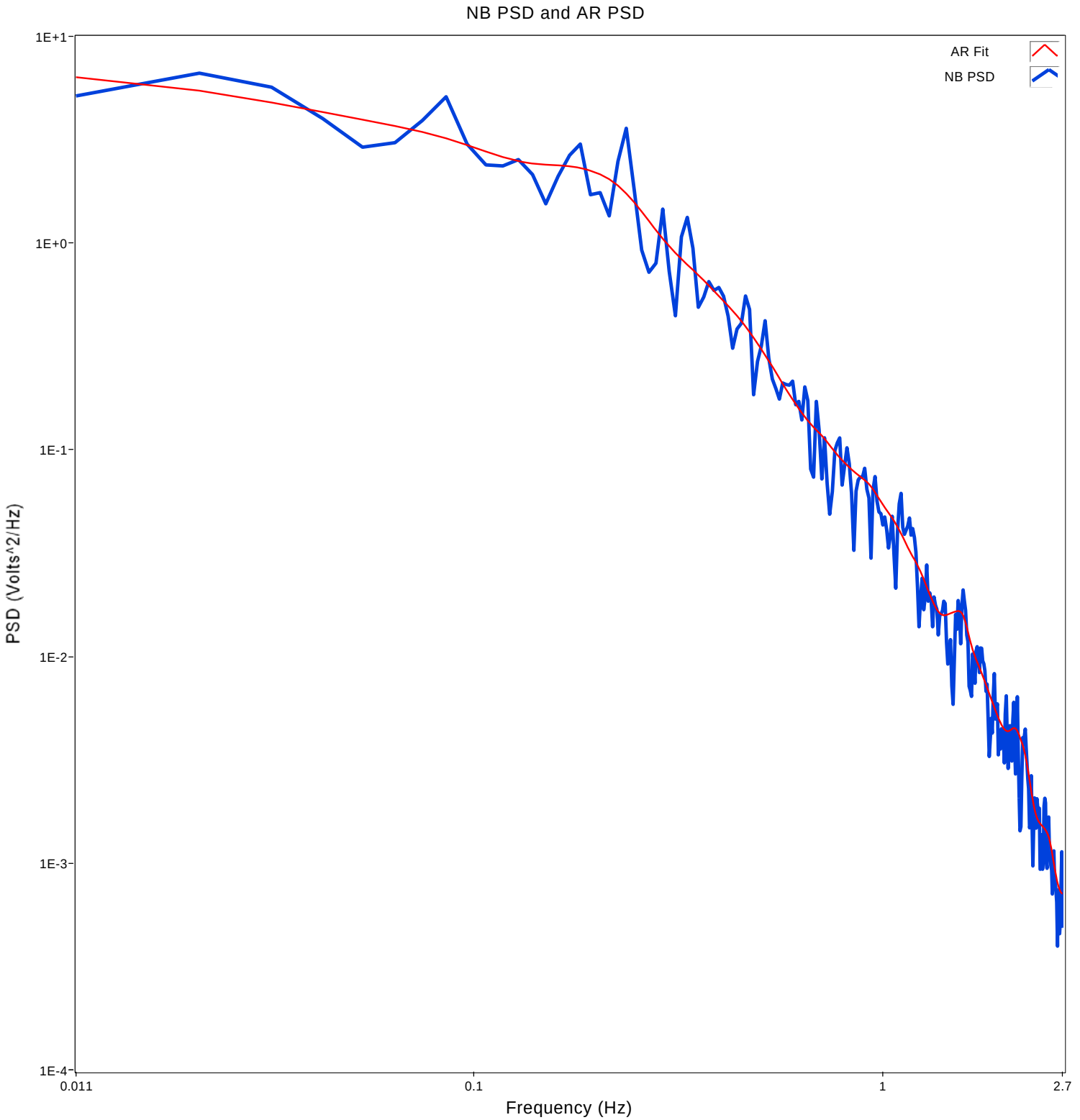
| Reactor and Unit | Tag Number | Service | Filename | Blocks : Blocksize | Trim Low Freq. (Hz) | Trim High Freq. (Hz) | AR Order | AR Method | Test Date |
|---|---|---|---|---|---|---|---|---|---|
| Farley Unit 1 | FT477 | FW FLOW | FNP1060003.psd | 11 : 256 | 0.010731 | 2.747169 | 23 | Least-Squares | 23-Jun-2009 12:04:01 |

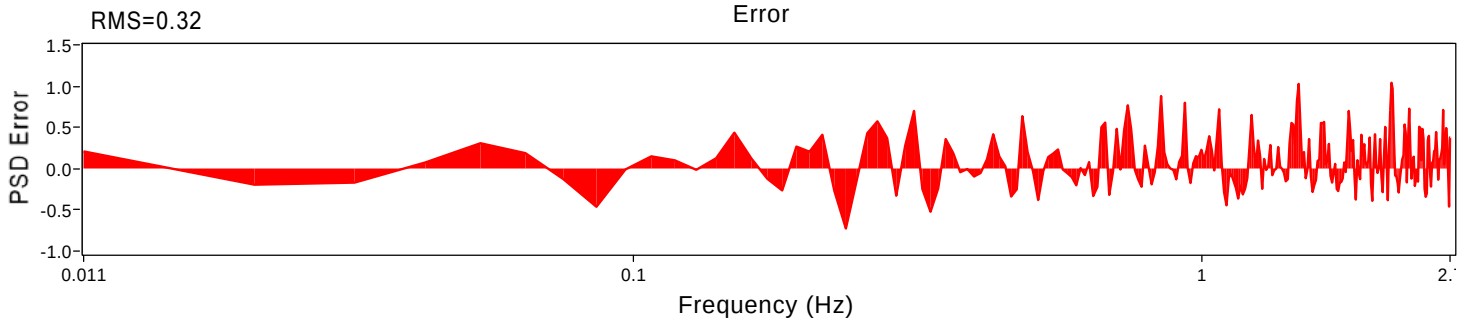


# OLM Autoregressive Fitting of Narrow Band PSD

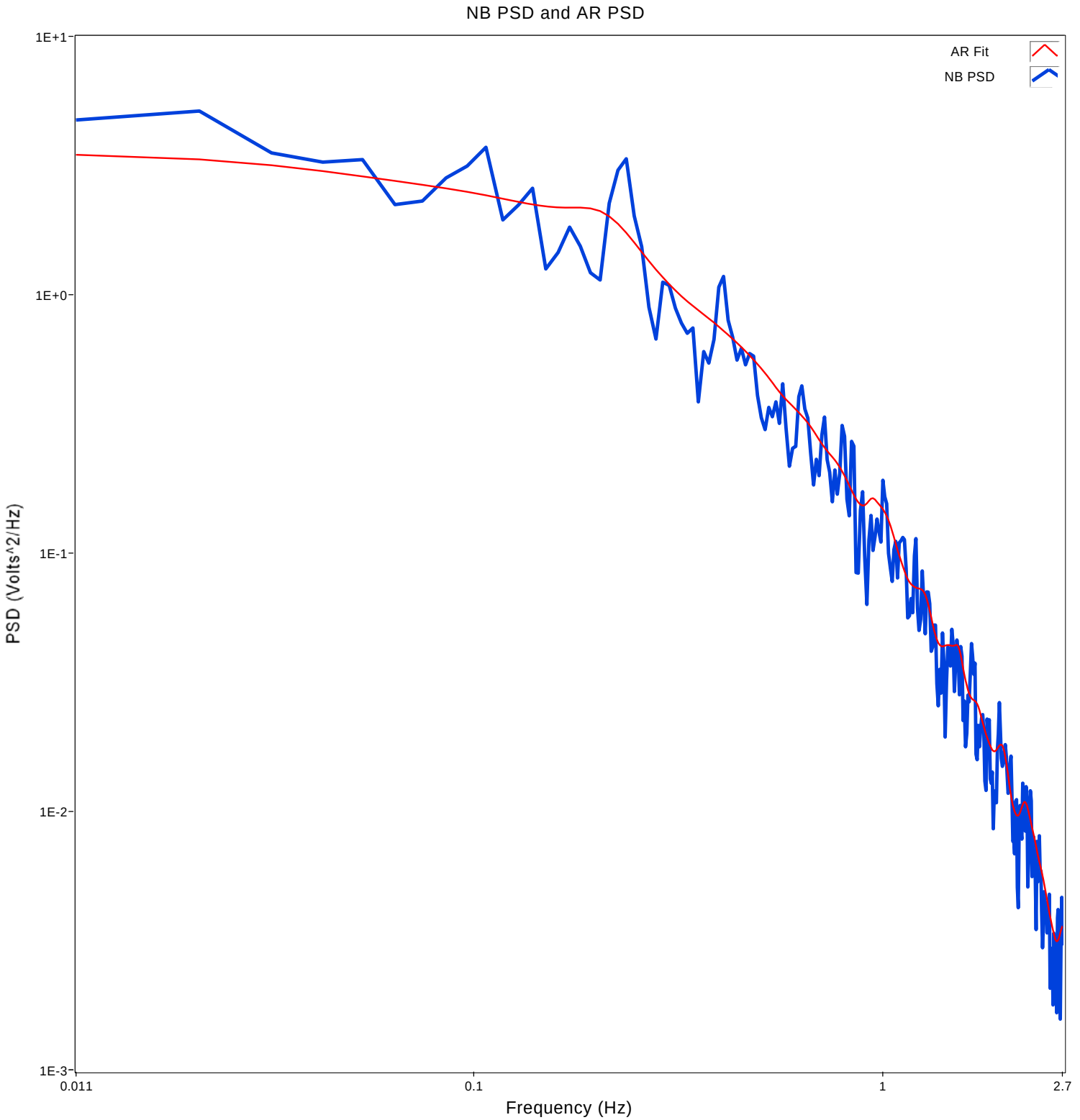
| Reactor and Unit | Tag Number | Service | Filename | Blocks : Blocksize | Trim Low Freq. (Hz) | Trim High Freq. (Hz) | AR Order | AR Method | Test Date |
|---|---|---|---|---|---|---|---|---|---|
| Farley Unit 1 | FT487 | FW FLOW | FNP1060003.psd | 11 : 256 | 0.010731 | 2.747169 | 21 | Least-Squares | 23-Jun-2009 12:04:01 |

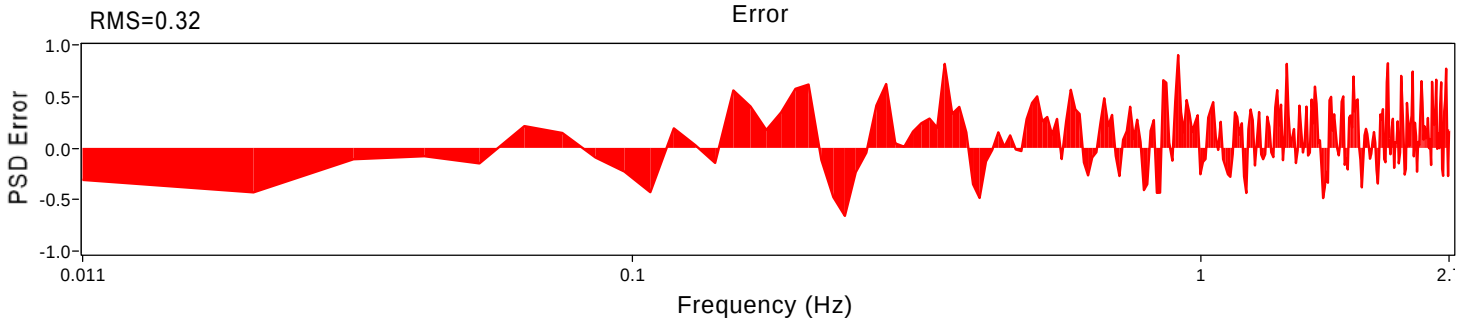


# OLM Autoregressive Fitting of Narrow Band PSD

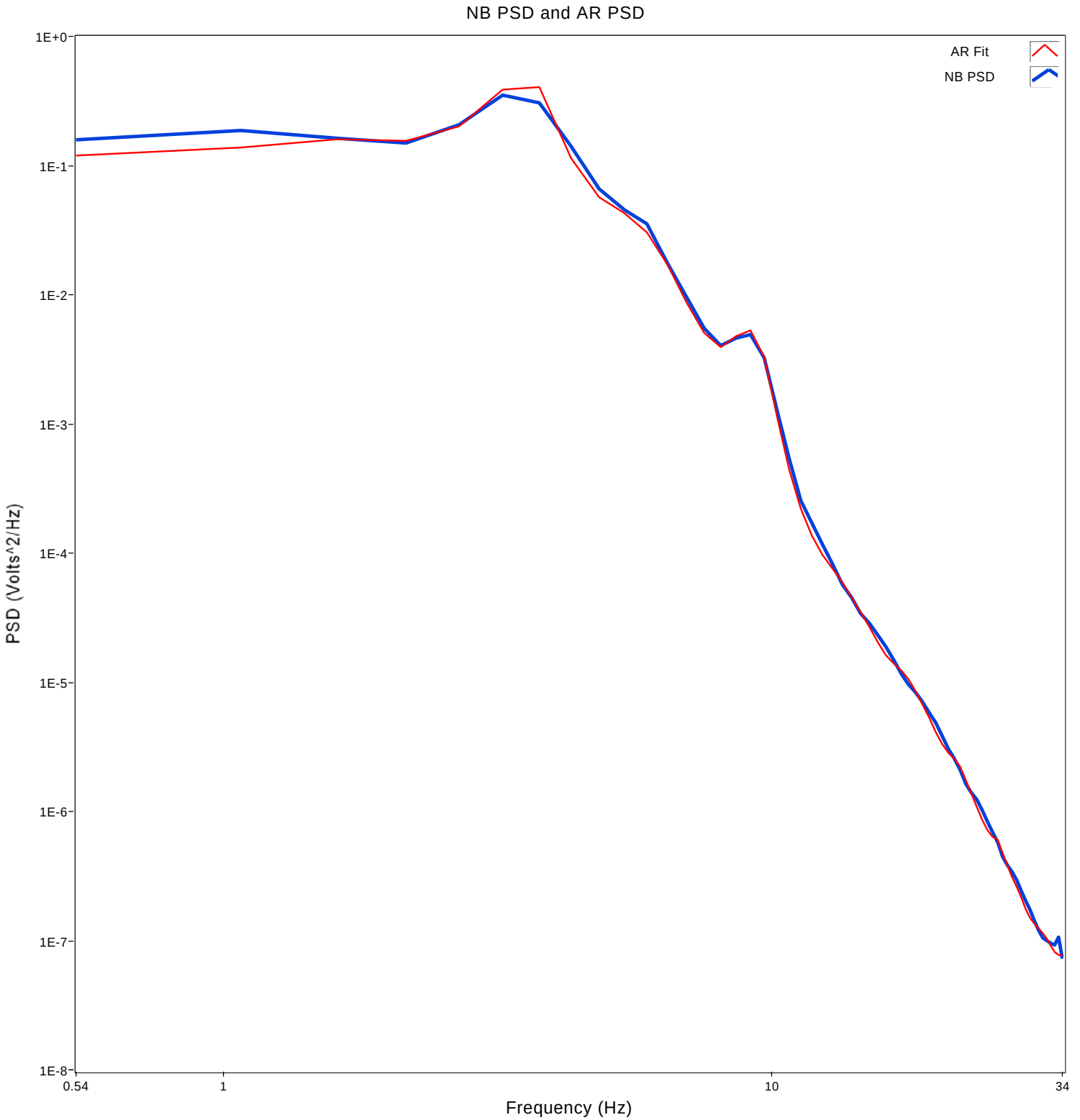
| Reactor and Unit | Tag Number | Service | Filename | Blocks : Blocksize | Trim Low Freq. (Hz) | Trim High Freq. (Hz) | AR Order | AR Method | Test Date |
|---|---|---|---|---|---|---|---|---|---|
| Farley Unit 1 | FT497 | FW FLOW | FNP1060003.psd | 11 : 256 | 0.010731 | 2.747169 | 24 | Least-Squares | 23-Jun-2009 12:04:01 |

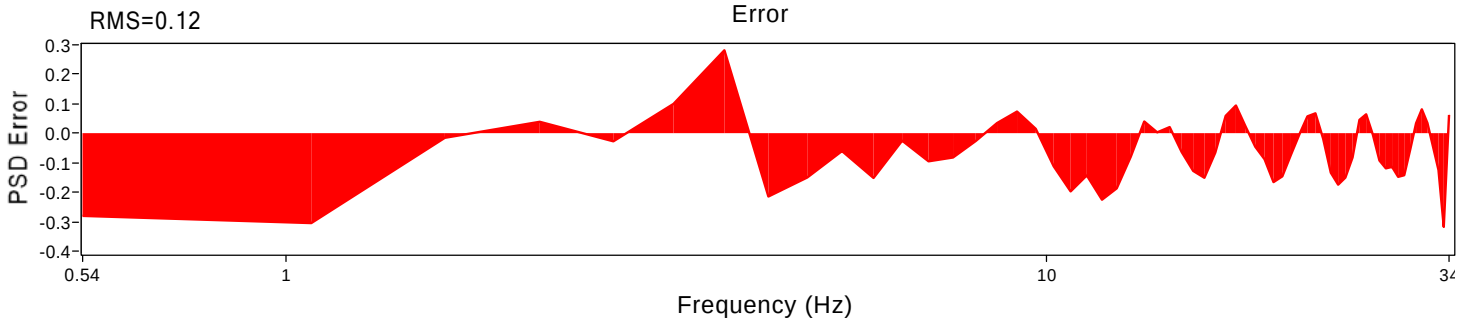


# OLM Autoregressive Fitting of Narrow Band PSD

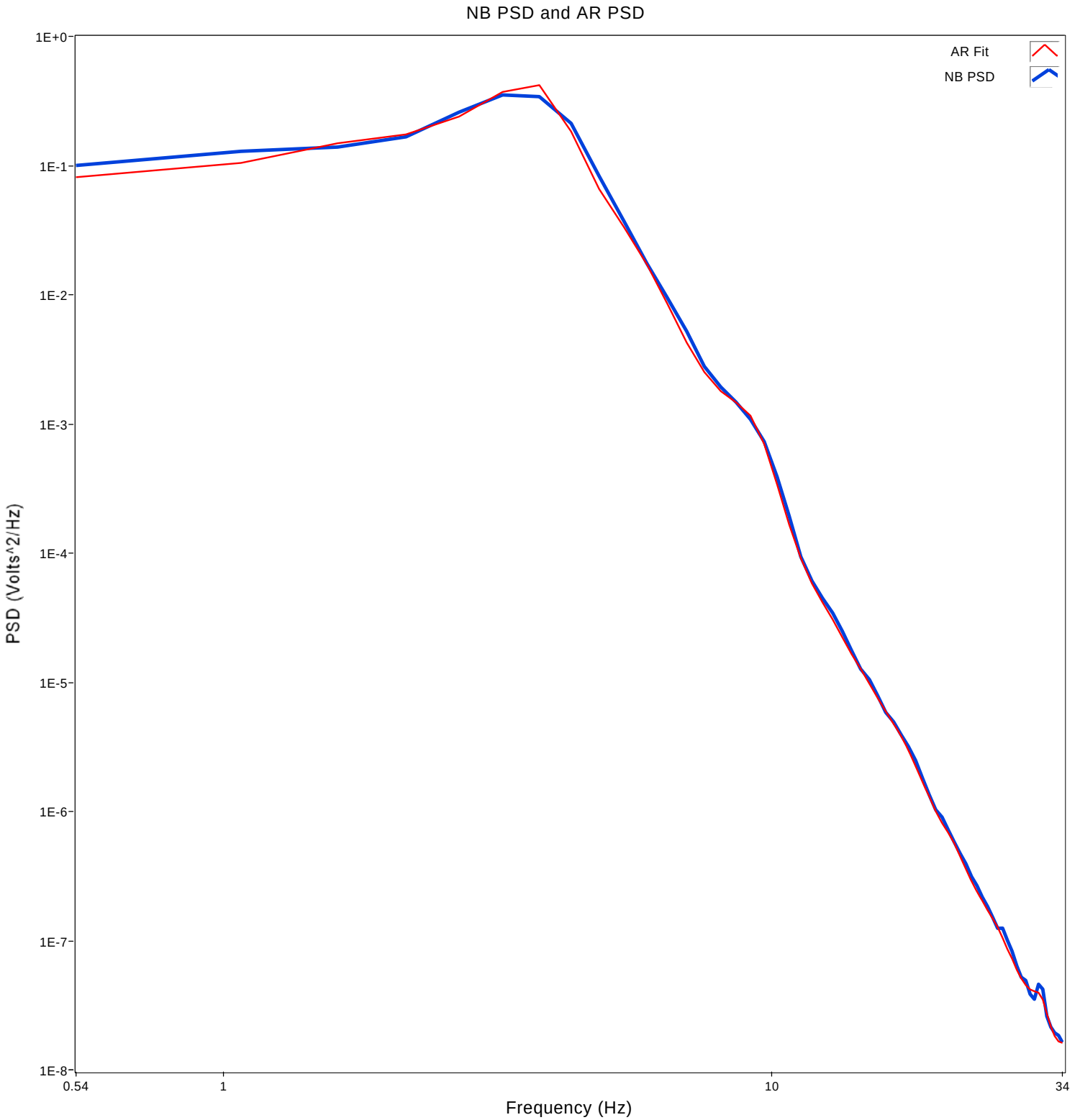
| Reactor and Unit | Tag Number | Service | Filename | Blocks : Blocksize | Trim Low Freq. (Hz) | Trim High Freq. (Hz) | AR Order | AR Method | Test Date |
|---|---|---|---|---|---|---|---|---|---|
| Farley Unit 1 | FT475 | STM FLOW | FNP1060004.psd | 564 : 256 | 0.538777 | 34.481708 | 18 | Least-Squares | 23-Jun-2009 12:04:01 |

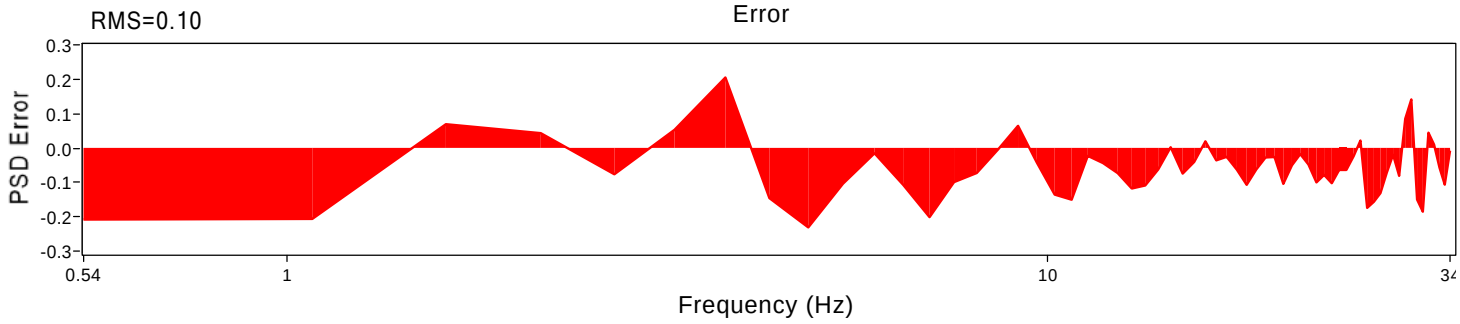


# OLM Autoregressive Fitting of Narrow Band PSD

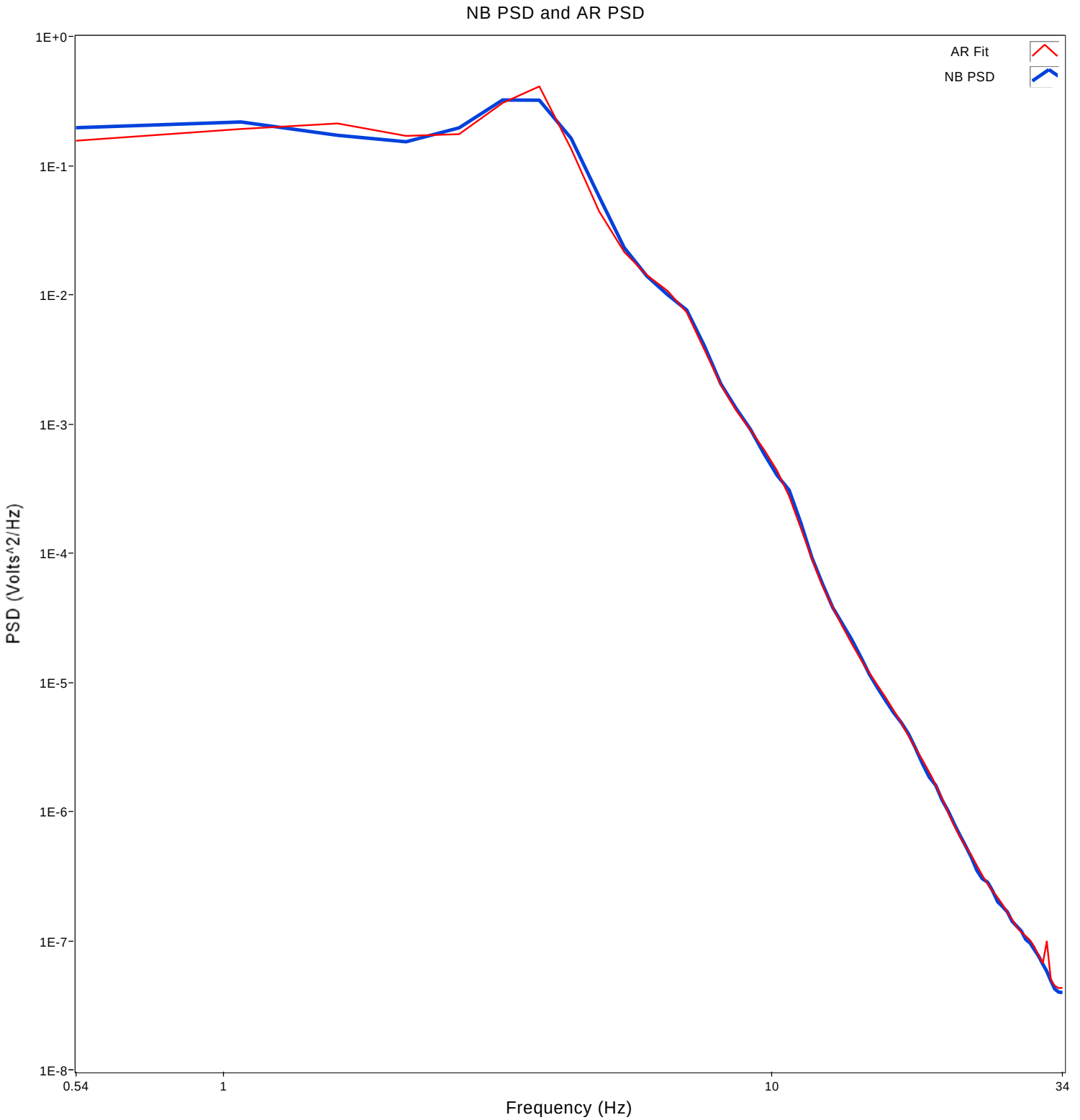
| Reactor and Unit | Tag Number | Service | Filename | Blocks : Blocksize | Trim Low Freq. (Hz) | Trim High Freq. (Hz) | AR Order | AR Method | Test Date |
|---|---|---|---|---|---|---|---|---|---|
| Farley Unit 1 | FT485 | STM FLOW | FNP1060004.psd | 564 : 256 | 0.538777 | 34.481708 | 18 | Forward-Backward | 23-Jun-2009 12:04:01 |

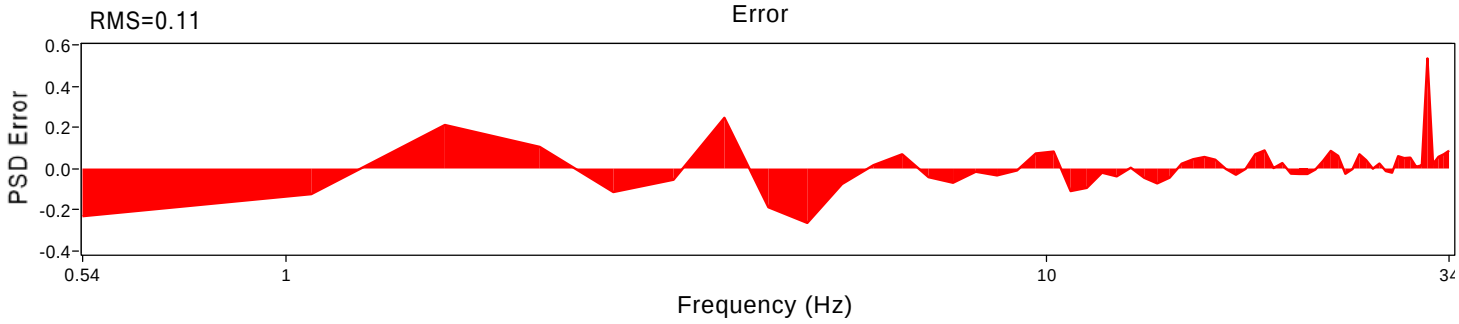


# OLM Autoregressive Fitting of Narrow Band PSD

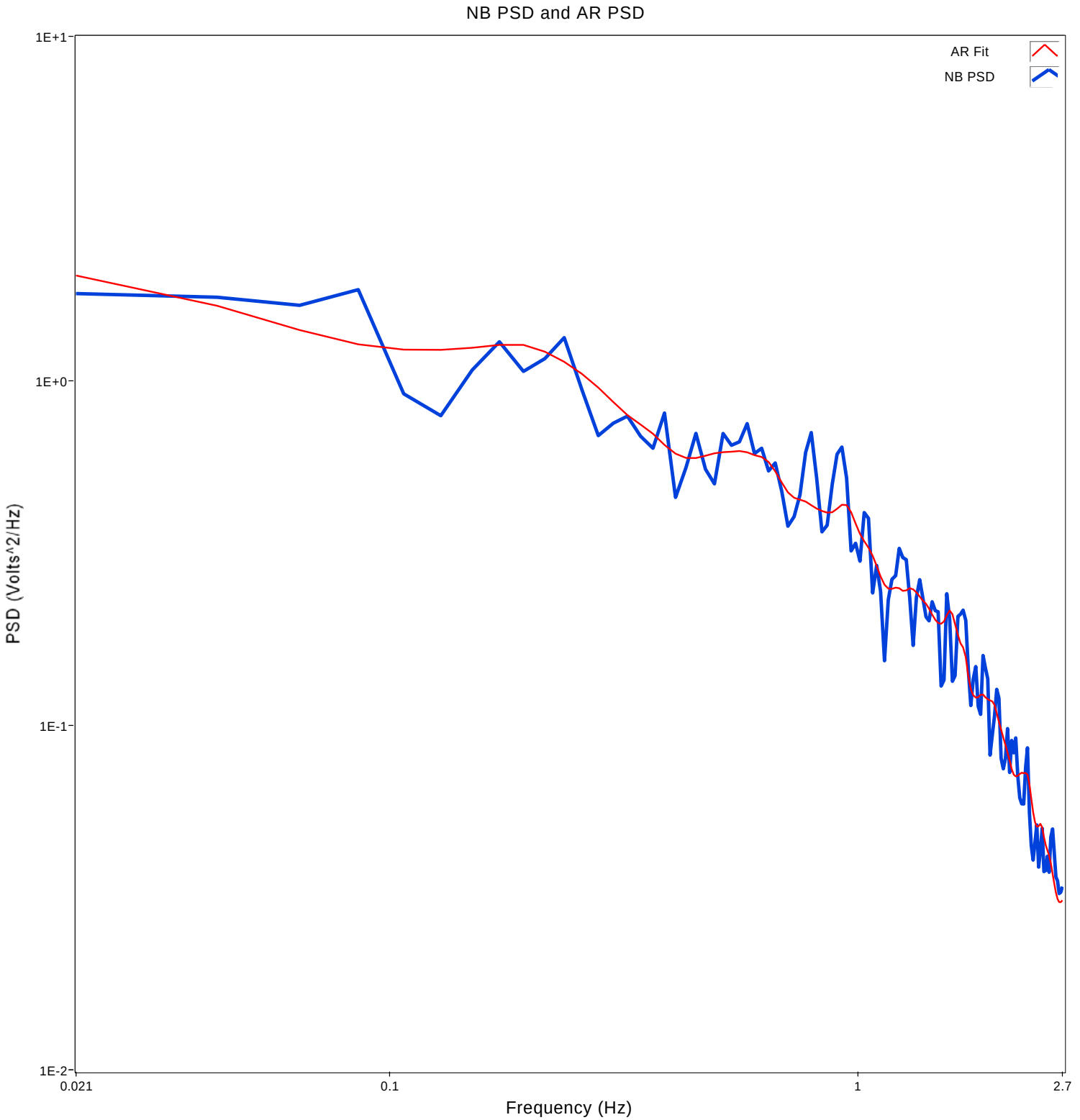
| Reactor and Unit | Tag Number | Service | Filename | Blocks : Blocksize | Trim Low Freq. (Hz) | Trim High Freq. (Hz) | AR Order | AR Method | Test Date |
|---|---|---|---|---|---|---|---|---|---|
| Farley Unit 1 | FT495 | STM FLOW | FNP1060004.psd | 564 : 256 | 0.538777 | 34.481708 | 18 | Forward-Backward | 23-Jun-2009 12:04:01 |

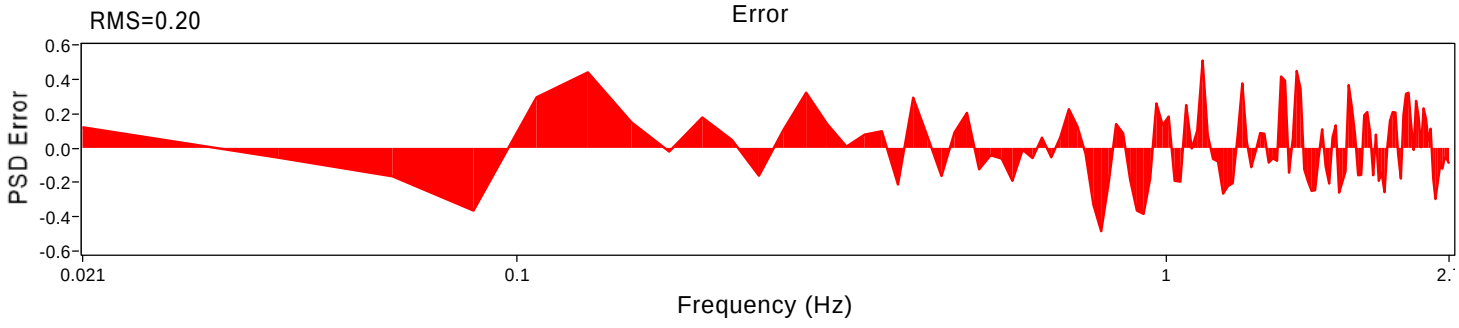


# OLM Autoregressive Fitting of Narrow Band PSD

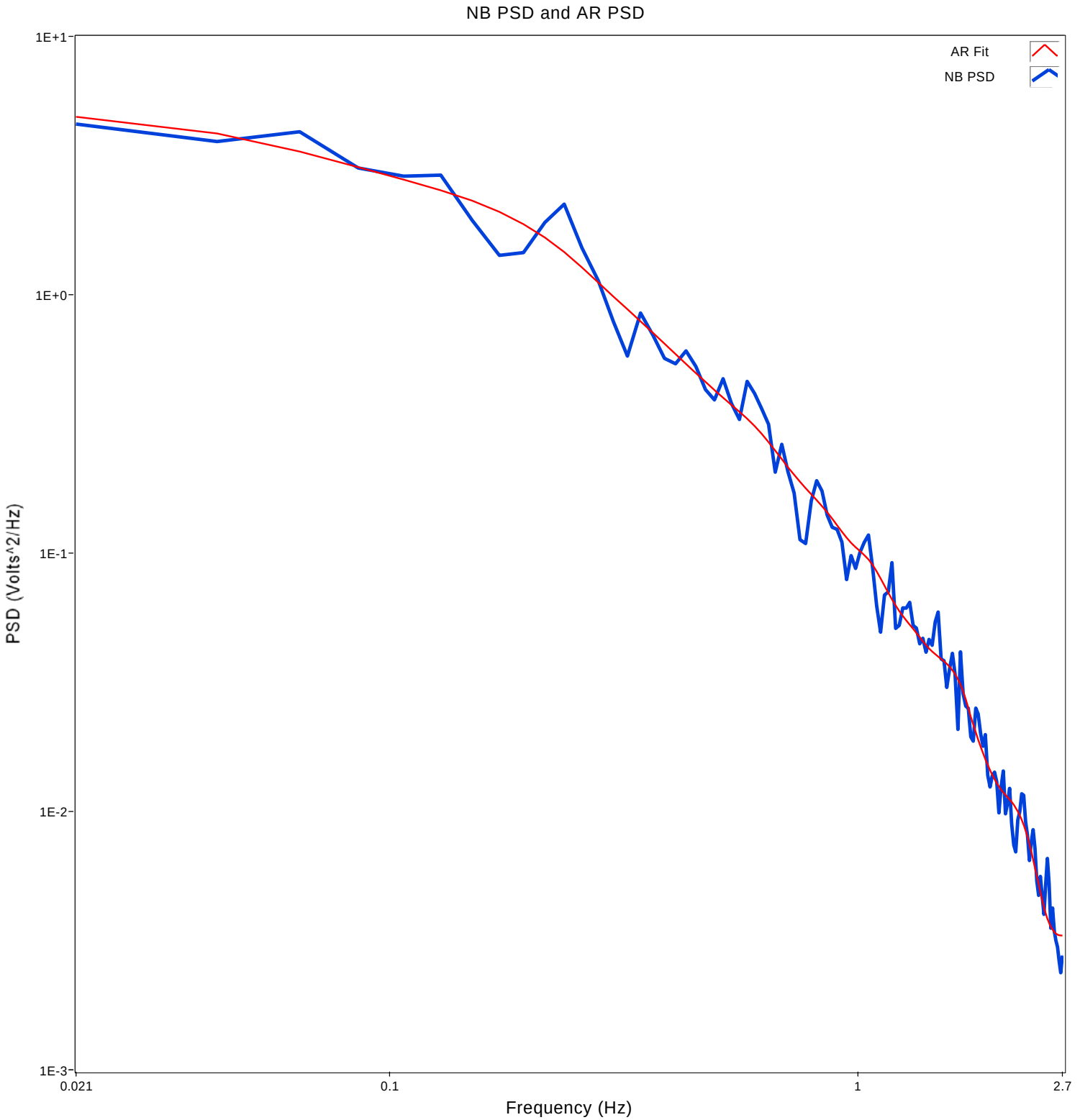
| Reactor and Unit | Tag Number | Service | Filename | Blocks : Blocksize | Trim Low Freq. (Hz) | Trim High Freq. (Hz) | AR Order | AR Method | Test Date |
|---|---|---|---|---|---|---|---|---|---|
| Farley Unit 1 | FT476 | FW FLOW | FNP1060004.psd | 22 : 256 | 0.021462 | 2.747169 | 22 | Least-Squares | 23-Jun-2009 12:04:01 |

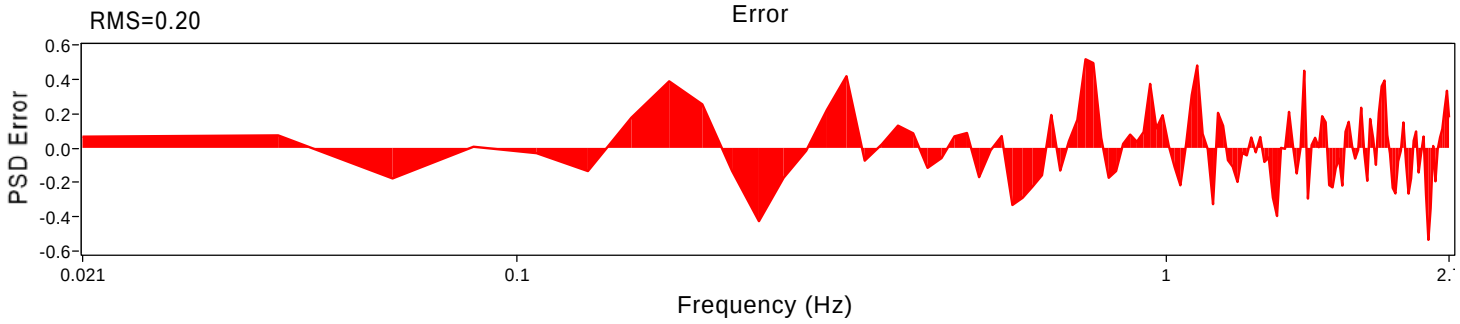


# OLM Autoregressive Fitting of Narrow Band PSD

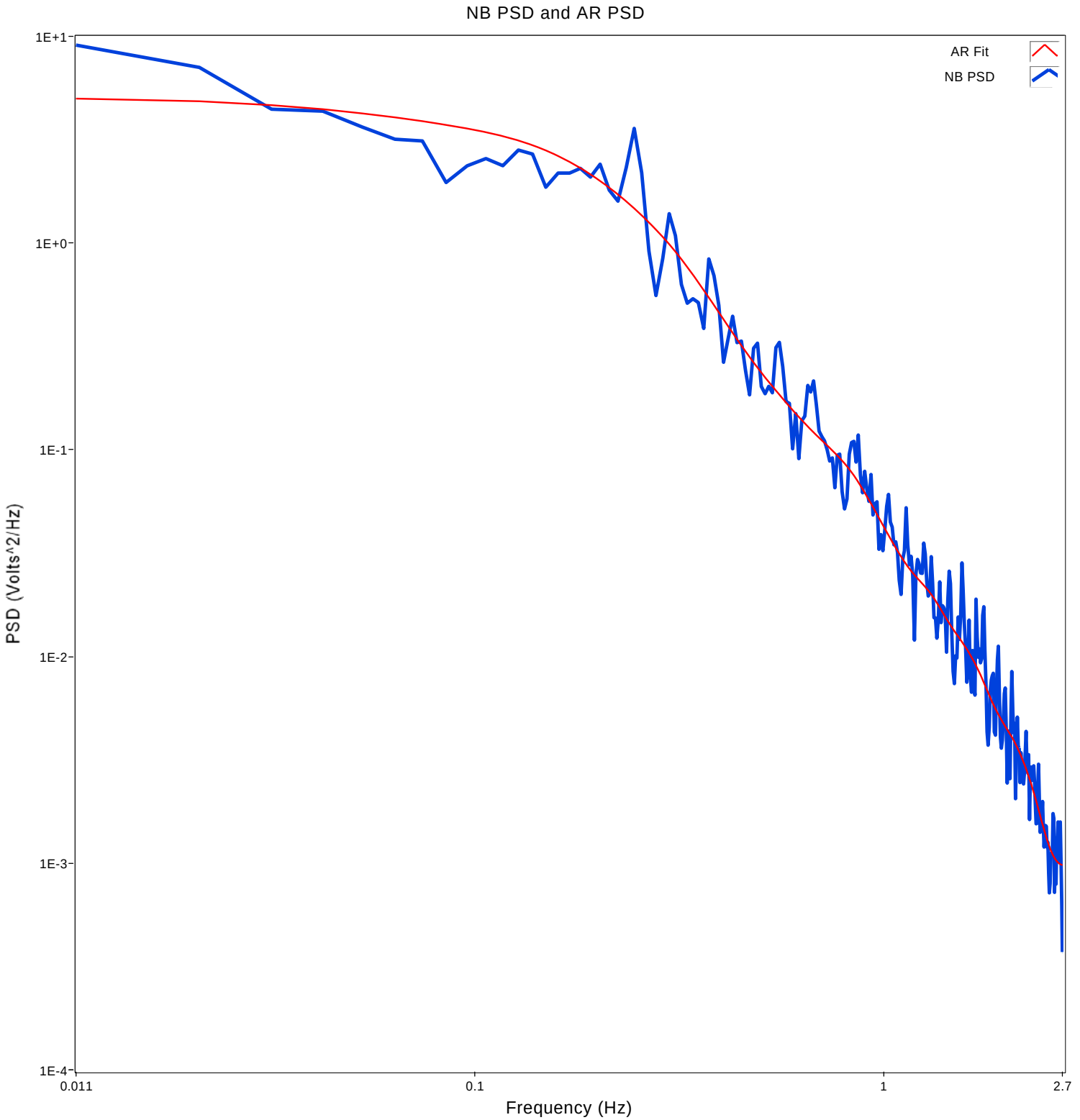
| Reactor and Unit | Tag Number | Service | Filename | Blocks : Blocksize | Trim Low Freq. (Hz) | Trim High Freq. (Hz) | AR Order | AR Method | Test Date |
|---|---|---|---|---|---|---|---|---|---|
| Farley Unit 1 | FT486 | FW FLOW | FNP1060004.psd | 22 : 256 | 0.021462 | 2.747169 | 11 | Forward-Backward | 23-Jun-2009 12:04:01 |

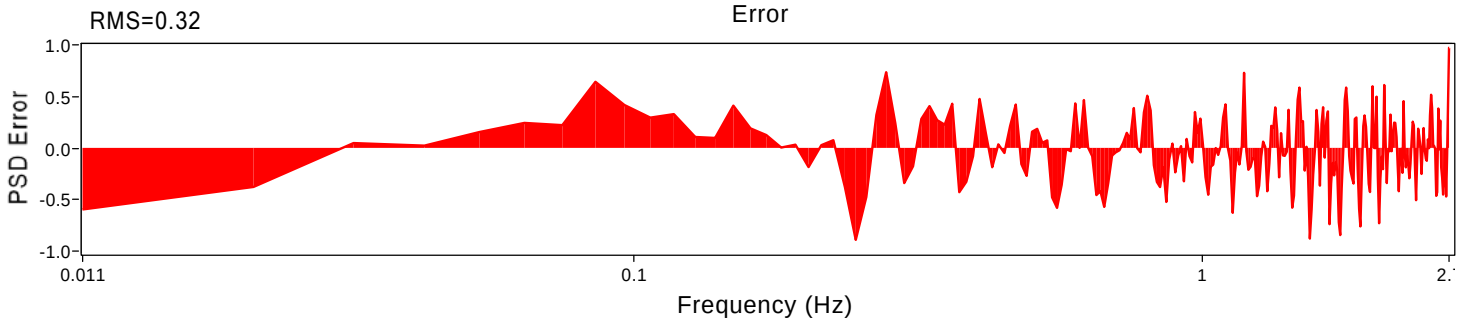


# OLM Autoregressive Fitting of Narrow Band PSD

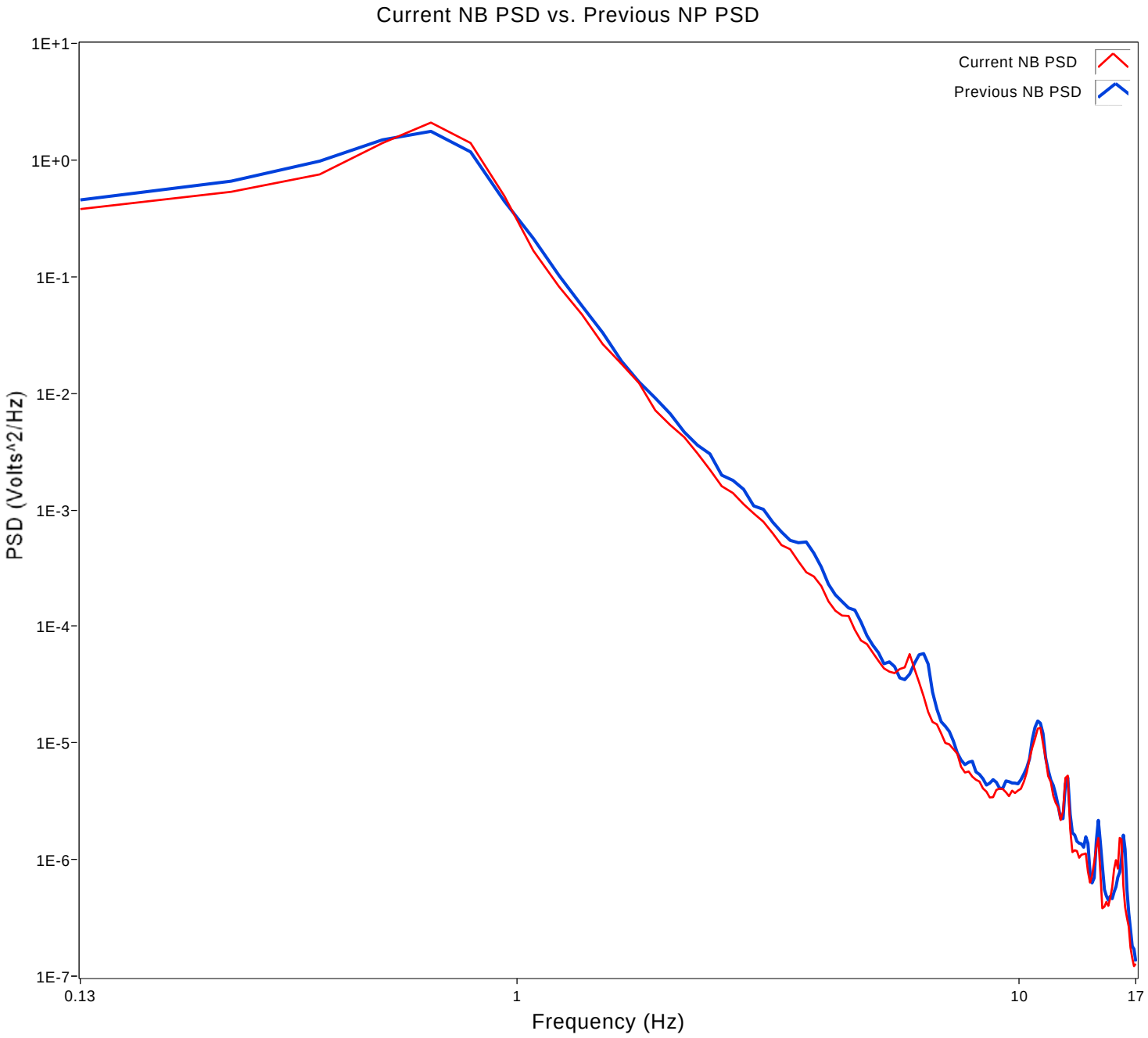
| Reactor and Unit | Tag Number | Service | Filename | Blocks : Blocksize | Trim Low Freq. (Hz) | Trim High Freq. (Hz) | AR Order | AR Method | Test Date |
|---|---|---|---|---|---|---|---|---|---|
| Farley Unit 1 | FT496 | FW FLOW | FNP1060004.psd | 11 : 256 | 0.010672 | 2.732157 | 11 | Forward-Backward | 23-Jun-2009 12:04:01 |

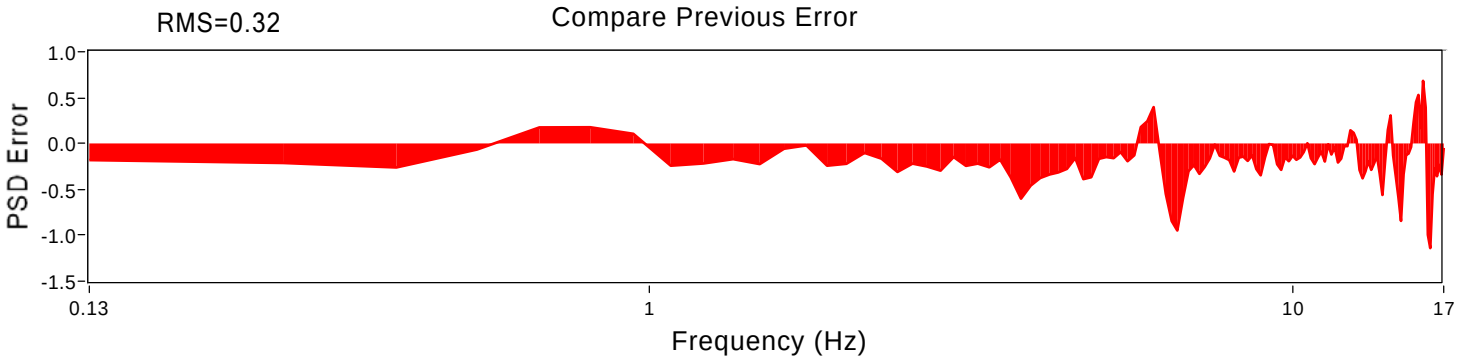


# OLM DYNAMIC ANALYSIS RESULTS COMPARE

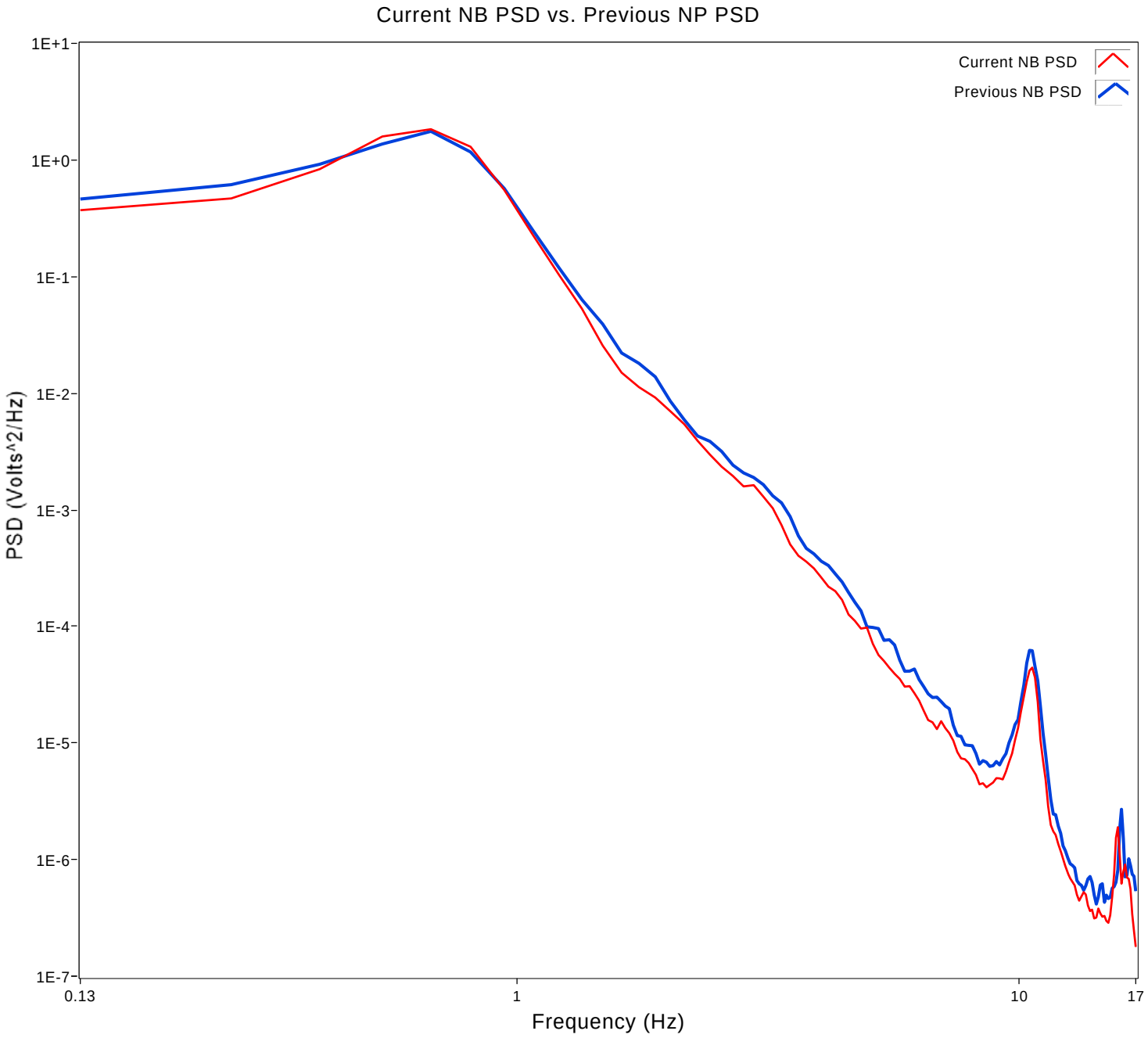
| Reactor and Unit | Tag Number | Service | Filename | Blocks : Blocksize | Trim Low Freq. (Hz) | Trim High Freq. (Hz) | AR Order | AR Method | Test Date |
|---|---|---|---|---|---|---|---|---|---|
| Farley Unit 1 | LT474 | SG LVL | FNP1060001.psd | 11 : 256 | 0.134694 | 17.240854 | 11 | Forward-Backward | 23-Jun-2009 12:04:01 |

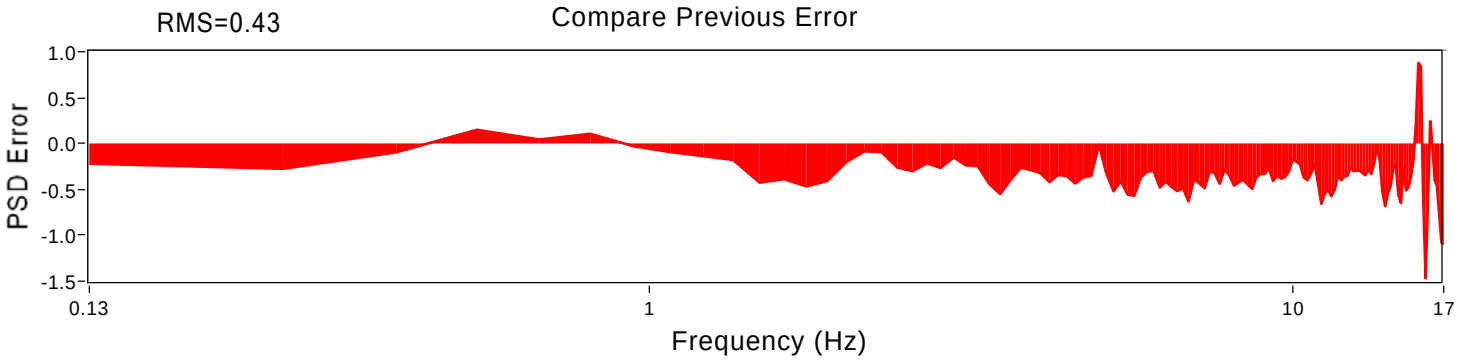


# OLM DYNAMIC ANALYSIS RESULTS COMPARE

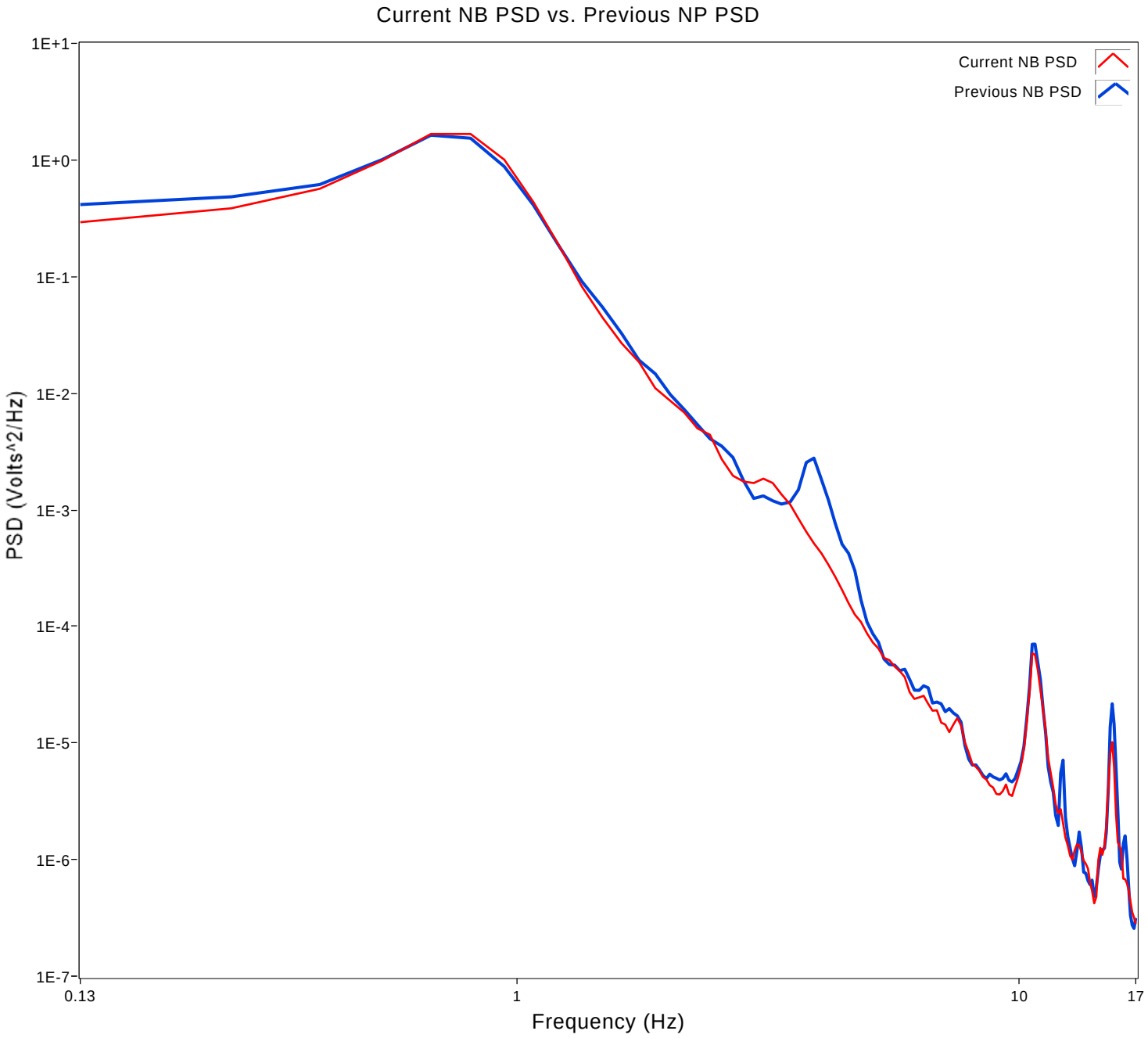
| Reactor and Unit | Tag Number | Service | Filename | Blocks : Blocksize | Trim Low Freq. (Hz) | Trim High Freq. (Hz) | AR Order | AR Method | Test Date |
|---|---|---|---|---|---|---|---|---|---|
| Farley Unit 1 | LT484 | SG LVL | FNP1060001.psd | 11 : 256 | 0.134694 | 17.240854 | 11 | Forward-Backward | 23-Jun-2009 12:04:01 |

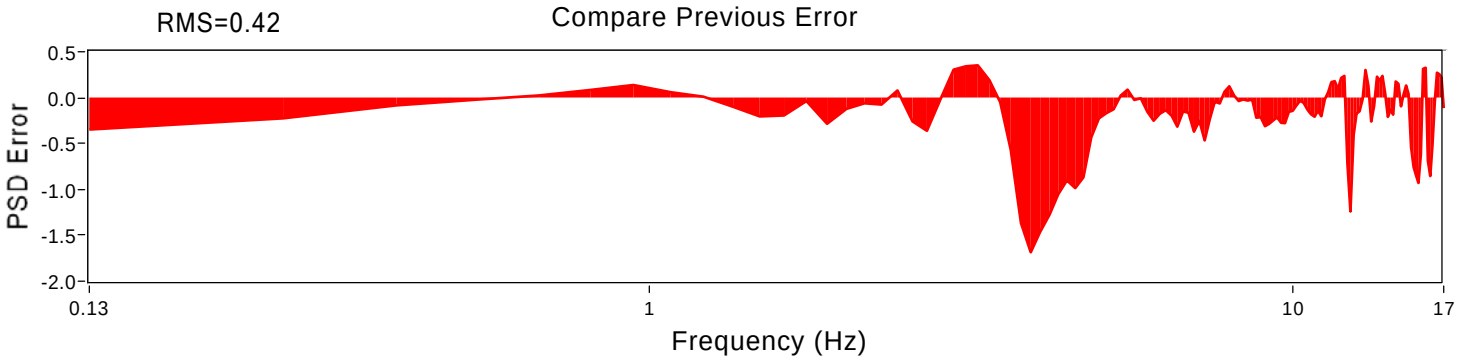


# OLM DYNAMIC ANALYSIS RESULTS COMPARE

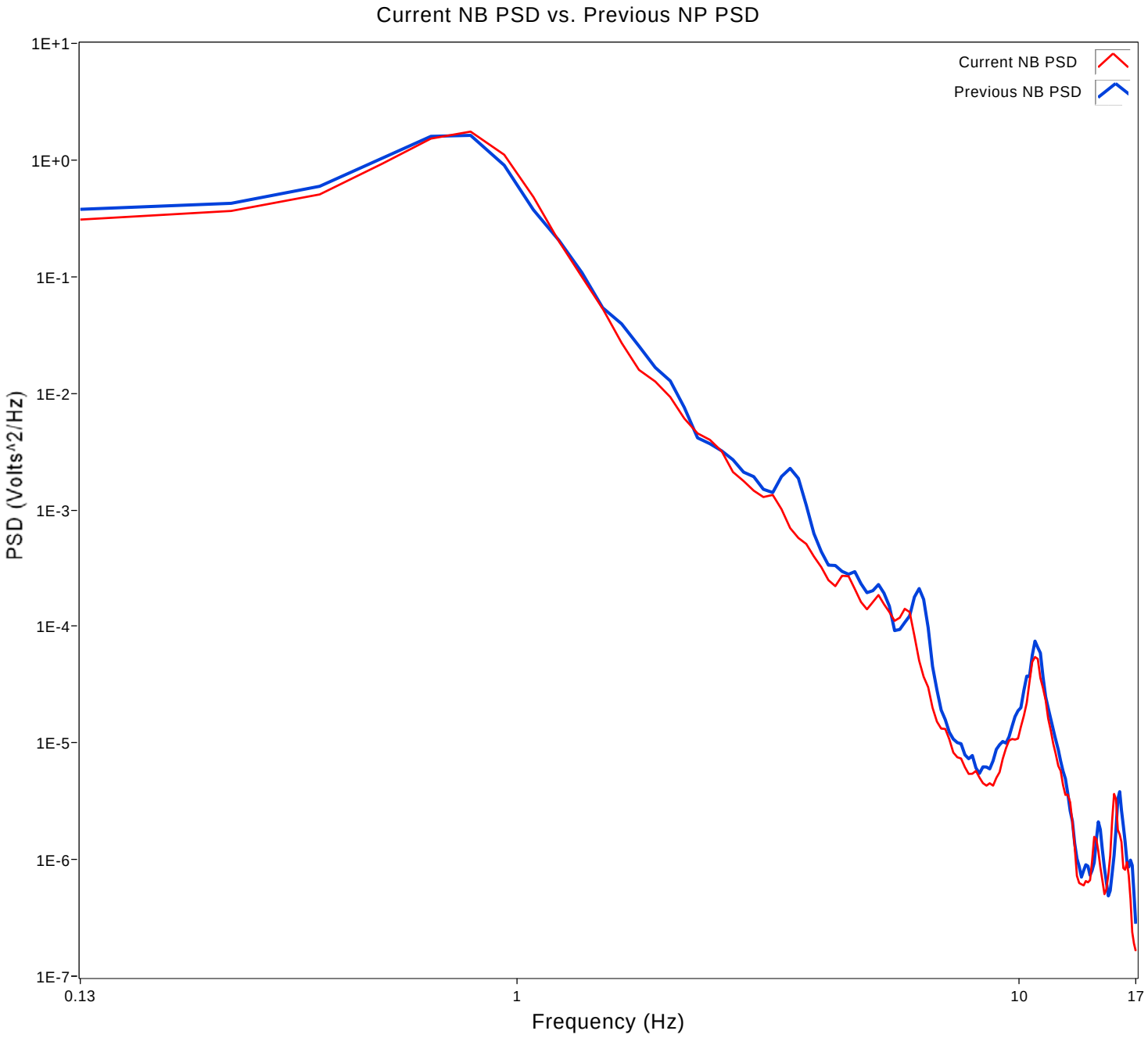
| Reactor and Unit | Tag Number | Service | Filename | Blocks : Blocksize | Trim Low Freq. (Hz) | Trim High Freq. (Hz) | AR Order | AR Method | Test Date |
|---|---|---|---|---|---|---|---|---|---|
| Farley Unit 1 | LT494 | SG LVL | FNP1060001.psd | 11 : 256 | 0.134694 | 17.240854 | 11 | Forward-Backward | 23-Jun-2009 12:04:01 |

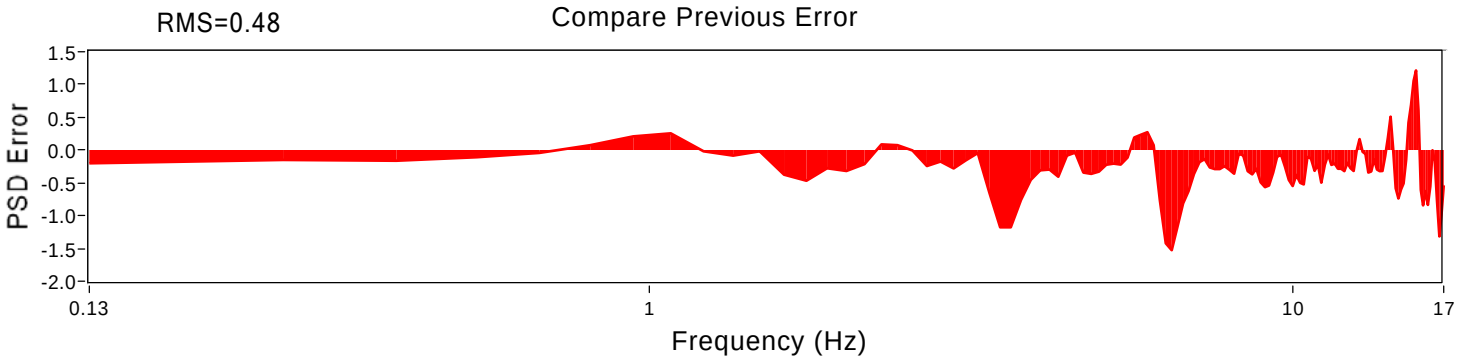


# OLM DYNAMIC ANALYSIS RESULTS COMPARE

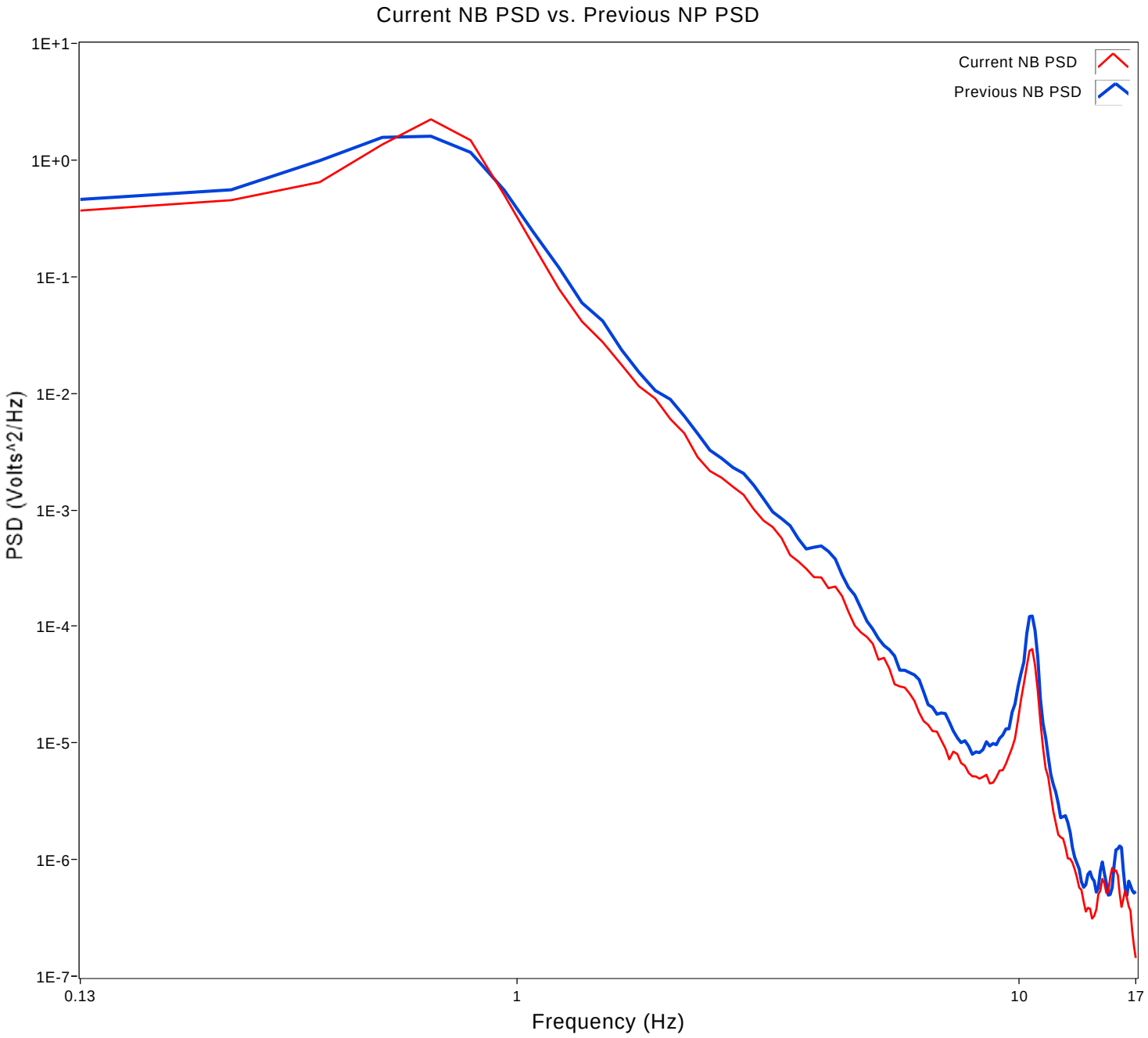
| Reactor and Unit | Tag Number | Service | Filename | Blocks : Blocksize | Trim Low Freq. (Hz) | Trim High Freq. (Hz) | AR Order | AR Method | Test Date |
|---|---|---|---|---|---|---|---|---|---|
| Farley Unit 1 | LT475 | SG LVL | FNP1060002.psd | 11 : 256 | 0.134694 | 17.240854 | 11 | Forward-Backward | 23-Jun-2009 12:04:01 |

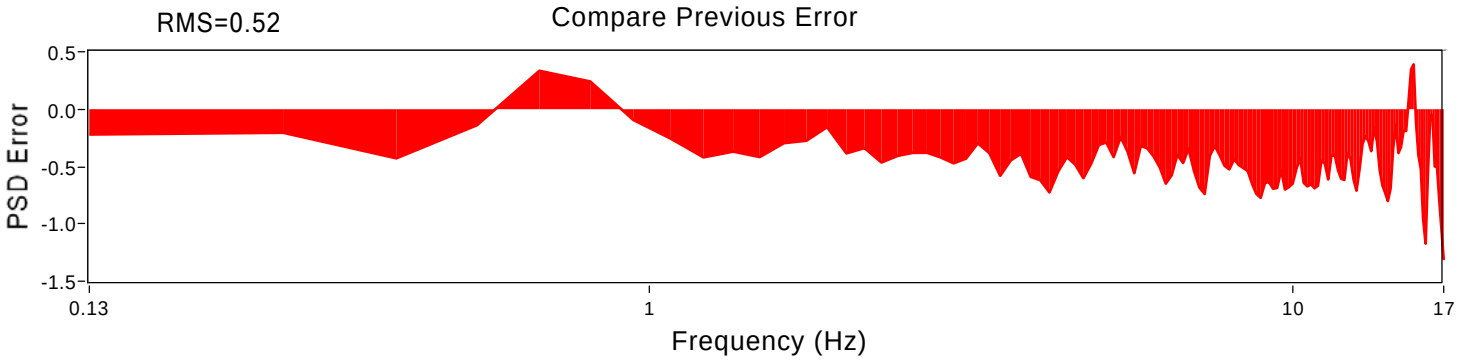


# OLM DYNAMIC ANALYSIS RESULTS COMPARE

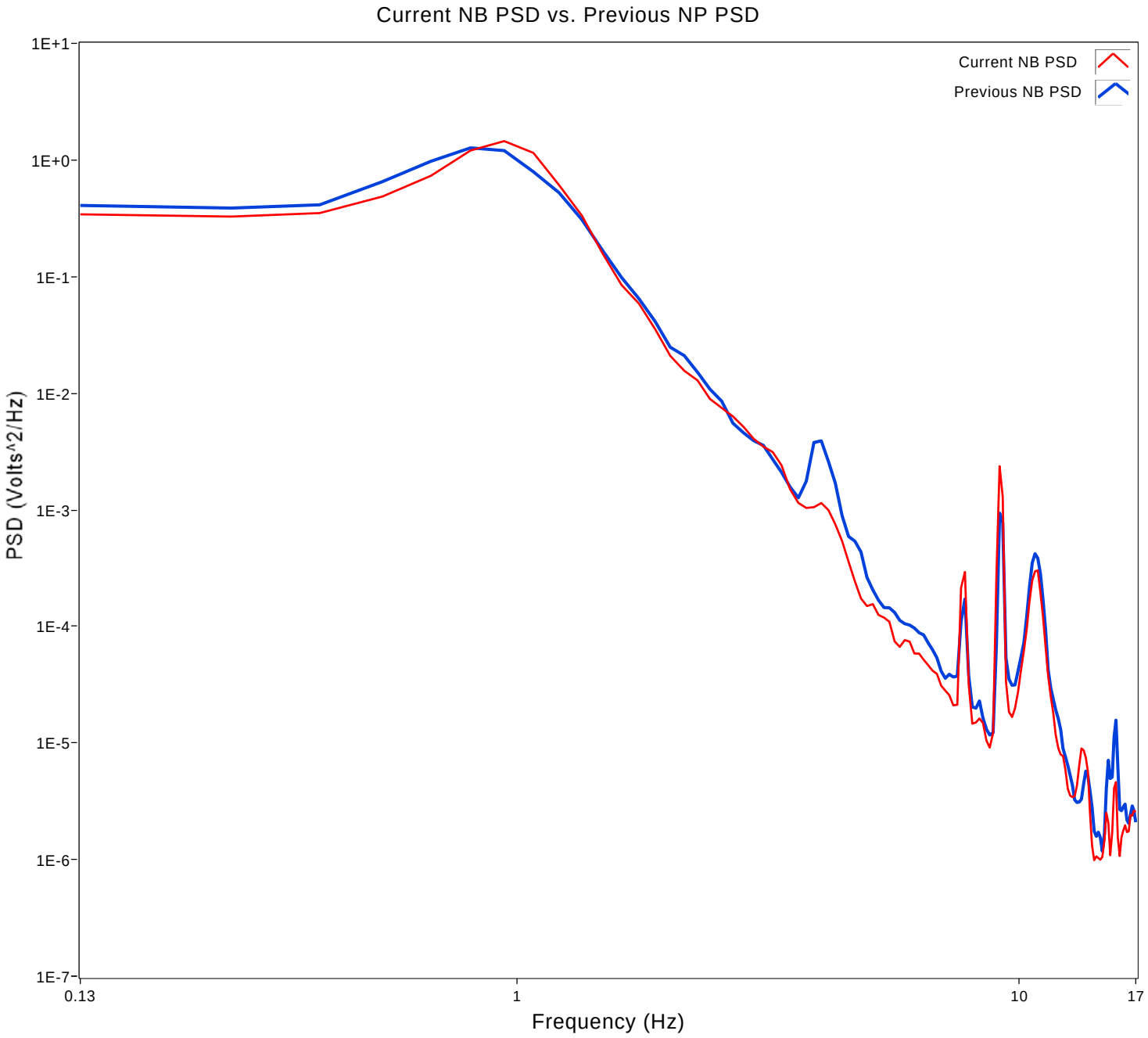
| Reactor and Unit | Tag Number | Service | Filename | Blocks : Blocksize | Trim Low Freq. (Hz) | Trim High Freq. (Hz) | AR Order | AR Method | Test Date |
|---|---|---|---|---|---|---|---|---|---|
| Farley Unit 1 | LT485 | SG LVL | FNP1060002.psd | 11 : 256 | 0.134694 | 17.240854 | 11 | Forward-Backward | 23-Jun-2009 12:04:01 |

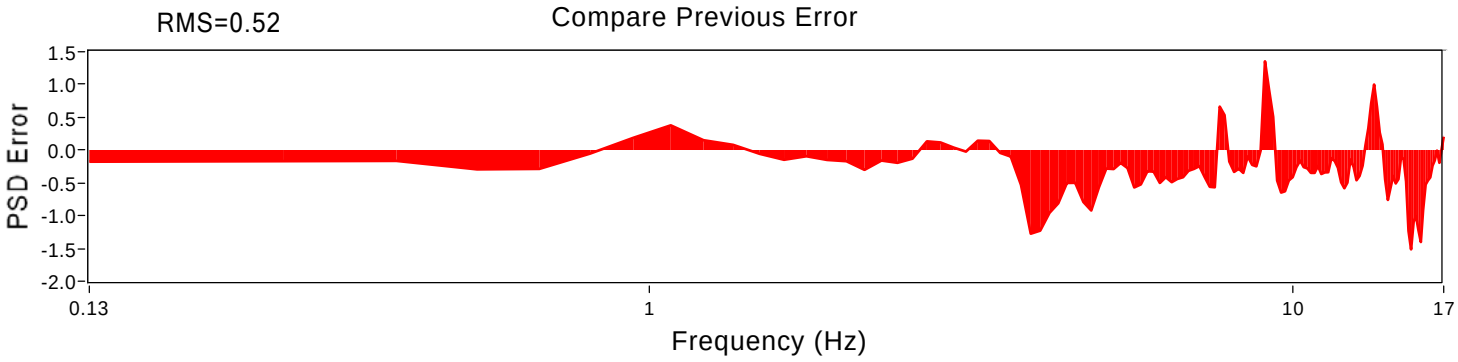


# OLM DYNAMIC ANALYSIS RESULTS COMPARE

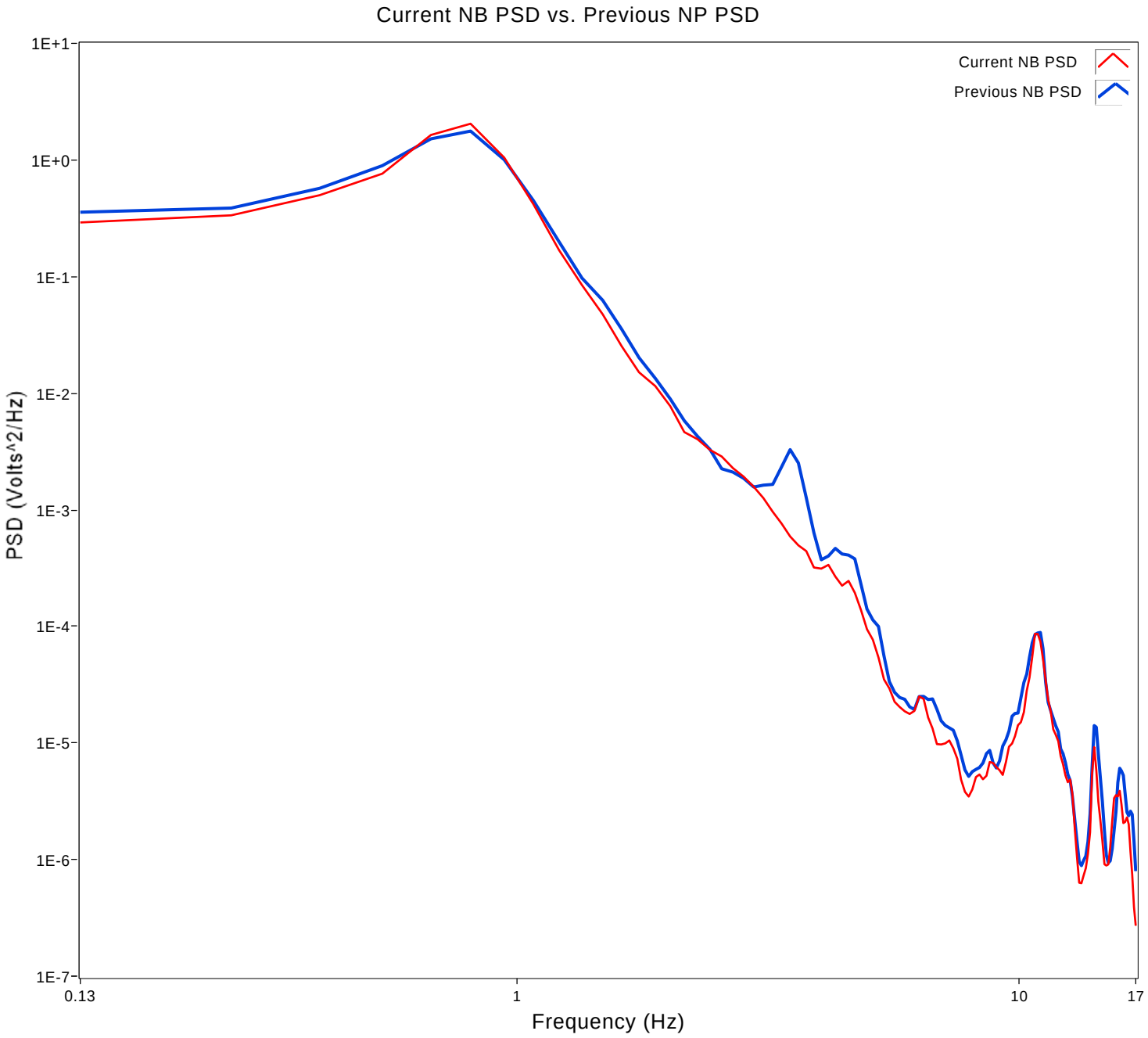
| Reactor and Unit | Tag Number | Service | Filename | Blocks : Blocksize | Trim Low Freq. (Hz) | Trim High Freq. (Hz) | AR Order | AR Method | Test Date |
|---|---|---|---|---|---|---|---|---|---|
| Farley Unit 1 | LT495 | SG LVL | FNP1060002.psd | 11 : 256 | 0.134694 | 17.240854 | 11 | Forward-Backward | 23-Jun-2009 12:04:01 |

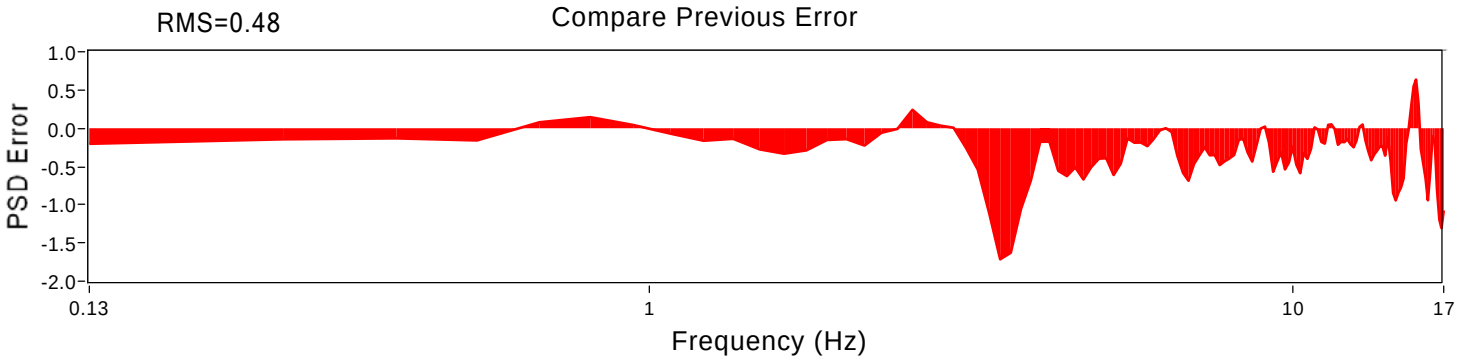


# OLM DYNAMIC ANALYSIS RESULTS COMPARE

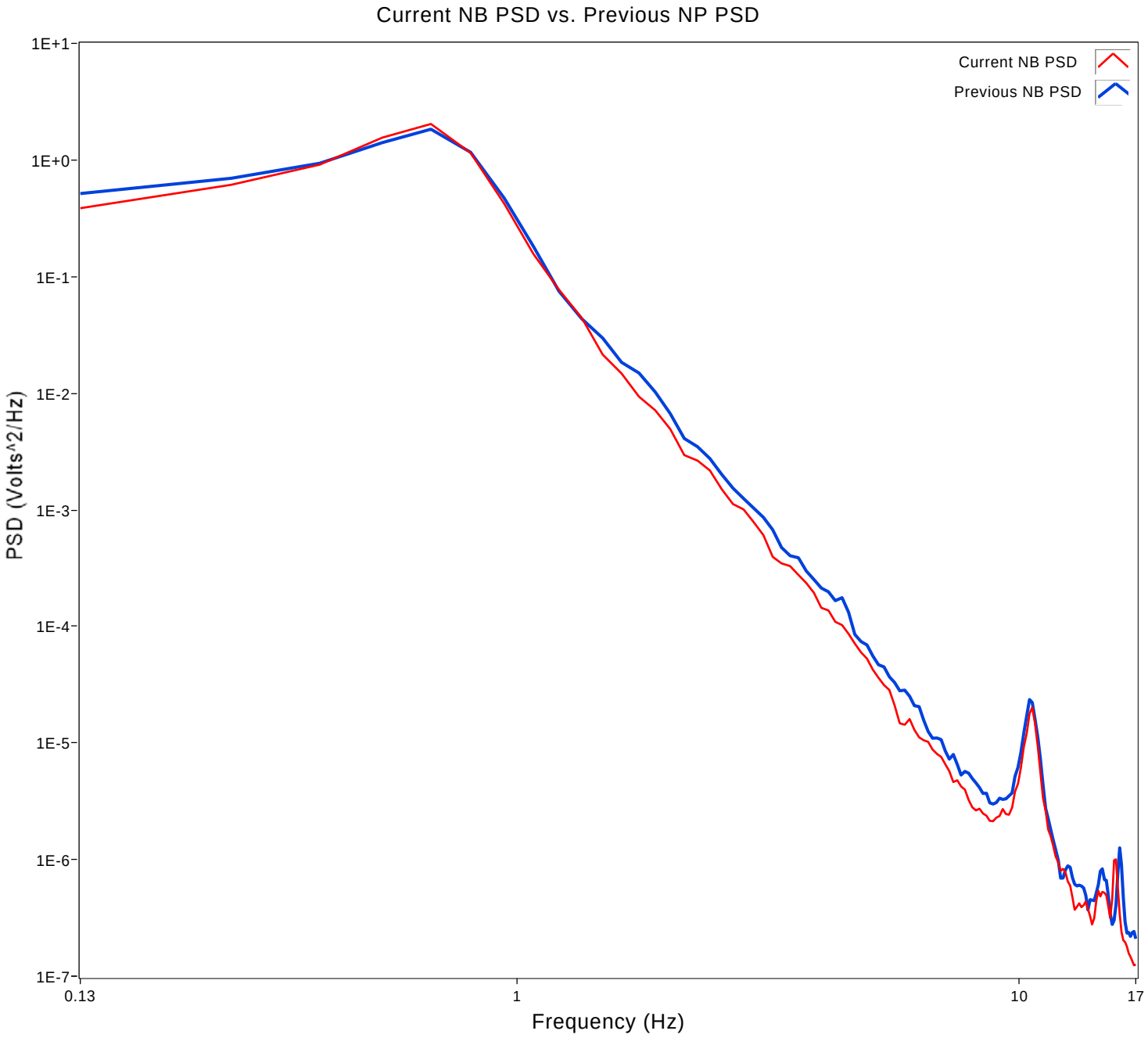
| Reactor and Unit | Tag Number | Service | Filename | Blocks : Blocksize | Trim Low Freq. (Hz) | Trim High Freq. (Hz) | AR Order | AR Method | Test Date |
|---|---|---|---|---|---|---|---|---|---|
| Farley Unit 1 | LT476 | SG LVL | FNP1060003.psd | 11 : 256 | 0.134694 | 17.240854 | 11 | Forward-Backward | 23-Jun-2009 12:04:01 |

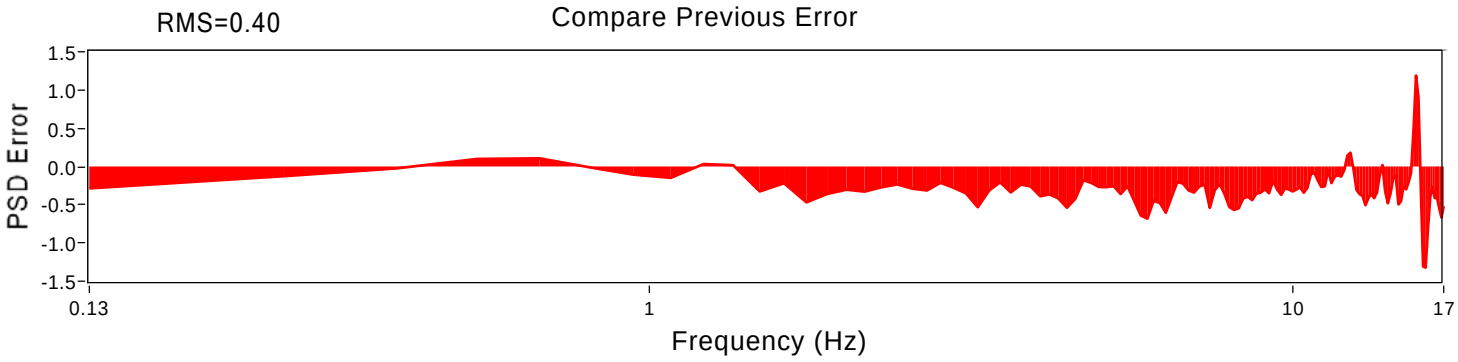


# OLM DYNAMIC ANALYSIS RESULTS COMPARE

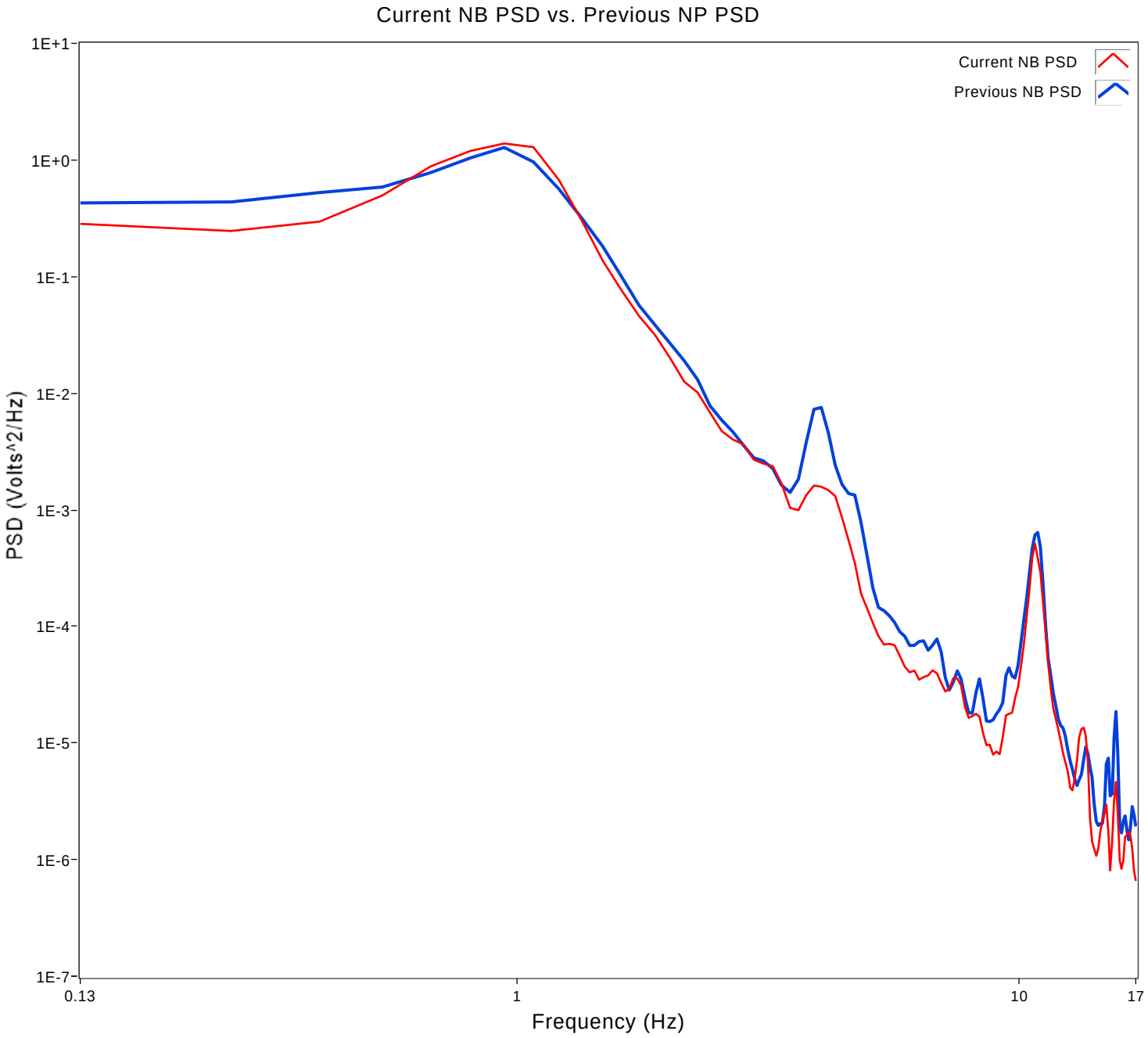
| Reactor and Unit | Tag Number | Service | Filename | Blocks : Blocksize | Trim Low Freq. (Hz) | Trim High Freq. (Hz) | AR Order | AR Method | Test Date |
|---|---|---|---|---|---|---|---|---|---|
| Farley Unit 1 | LT486 | SG LVL | FNP1060003.psd | 11 : 256 | 0.134694 | 17.240854 | 11 | Forward-Backward | 23-Jun-2009 12:04:01 |

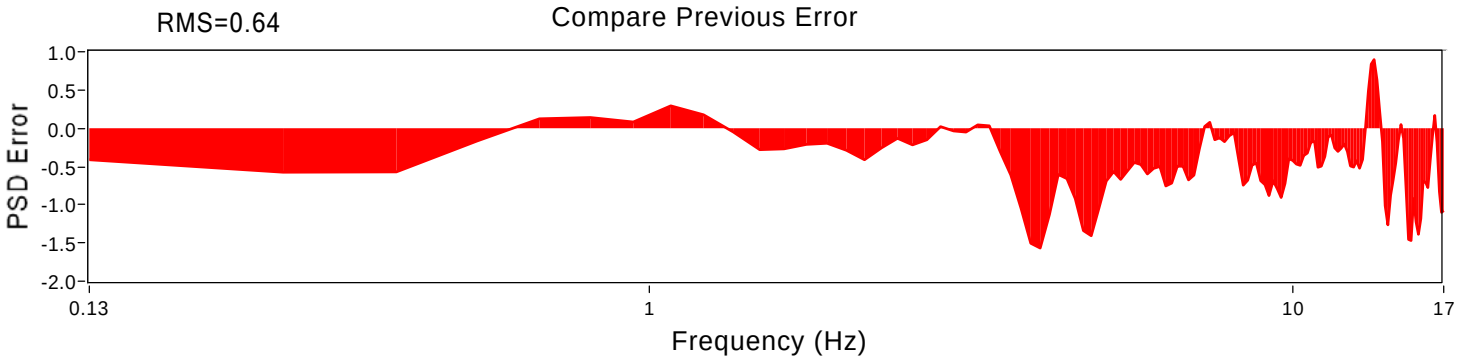


# OLM DYNAMIC ANALYSIS RESULTS COMPARE

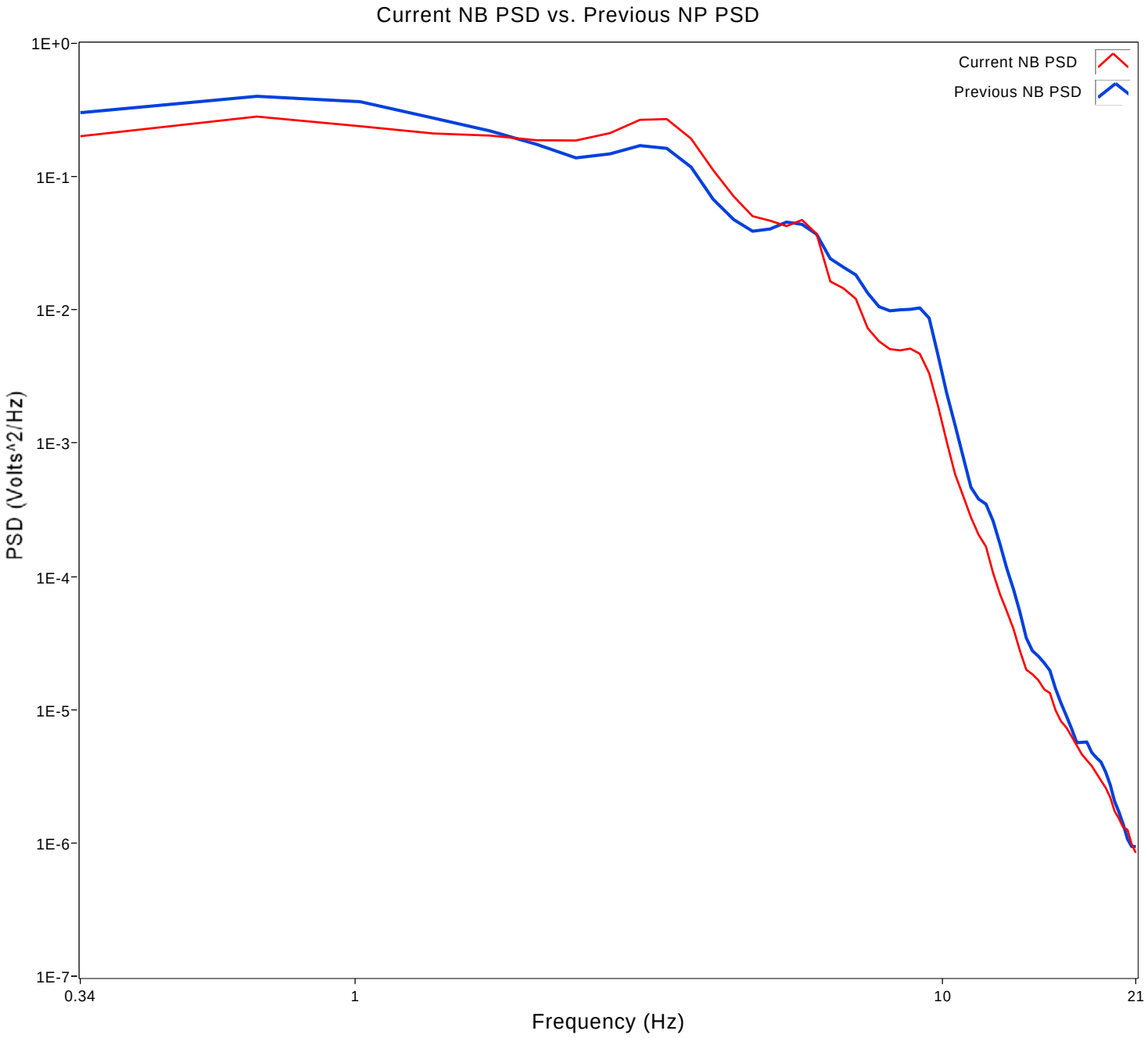
| Reactor and Unit | Tag Number | Service | Filename | Blocks : Blocksize | Trim Low Freq. (Hz) | Trim High Freq. (Hz) | AR Order | AR Method | Test Date |
|---|---|---|---|---|---|---|---|---|---|
| Farley Unit 1 | LT496 | SG LVL | FNP1060003.psd | 11 : 256 | 0.134694 | 17.240854 | 11 | Forward-Backward | 23-Jun-2009 12:04:01 |

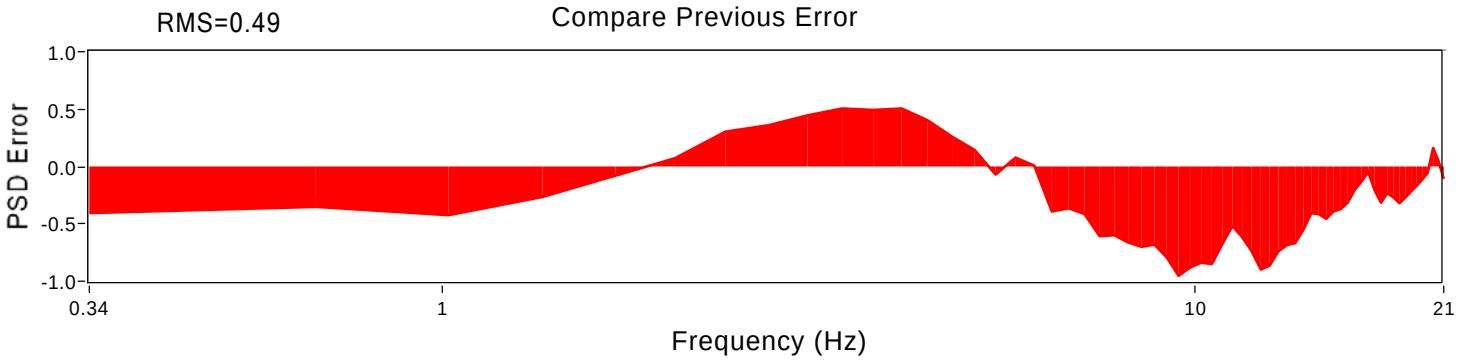


# OLM DYNAMIC ANALYSIS RESULTS COMPARE

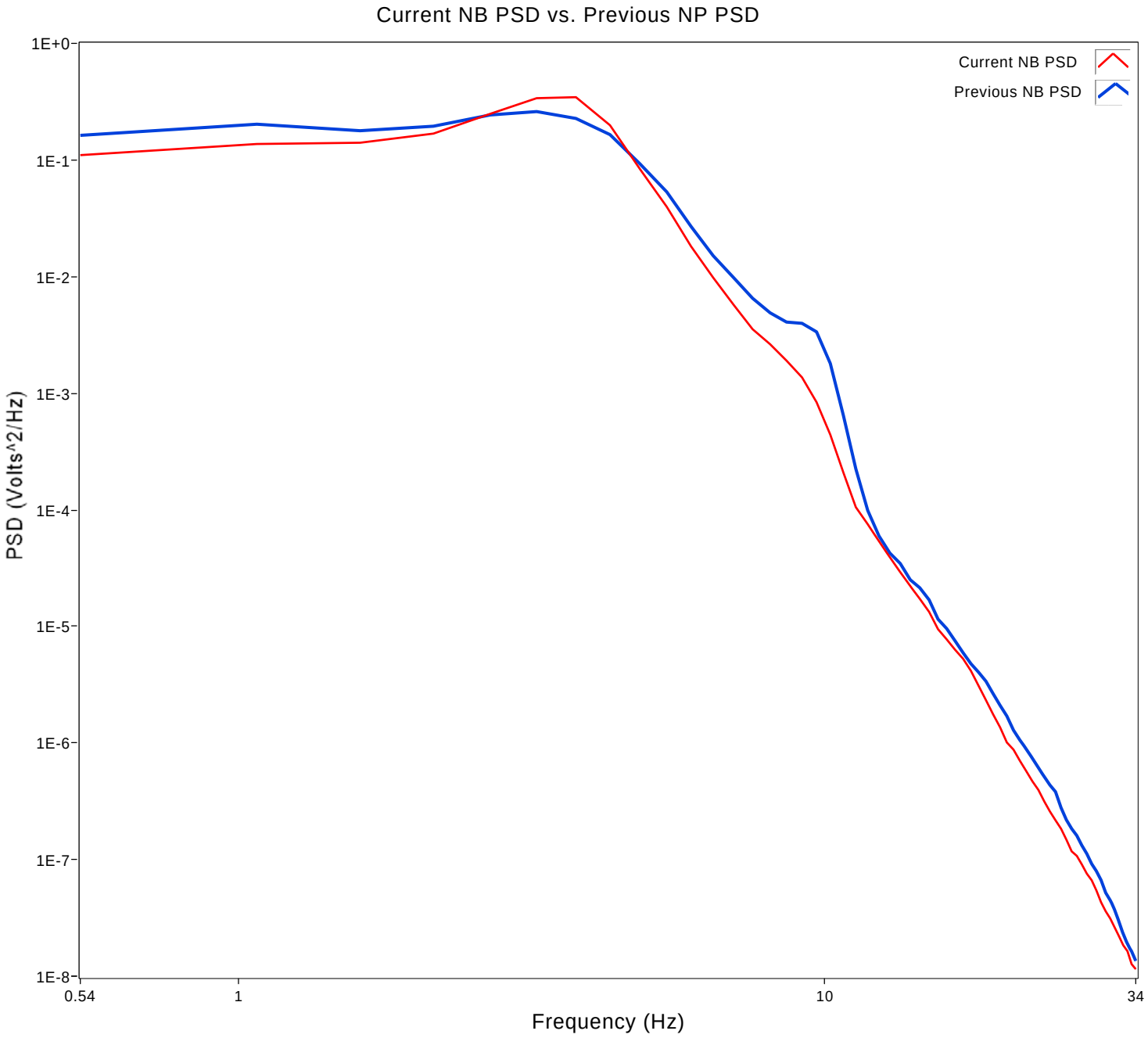
| Reactor and Unit | Tag Number | Service | Filename | Blocks : Blocksize | Trim Low Freq. (Hz) | Trim High Freq. (Hz) | AR Order | AR Method | Test Date |
|---|---|---|---|---|---|---|---|---|---|
| Farley Unit 1 | FT474 | STM FLOW | FNP1060003.psd | 11 : 128 | 0.339664 | 21.738468 | 18 | Least-Squares | 23-Jun-2009 12:04:01 |

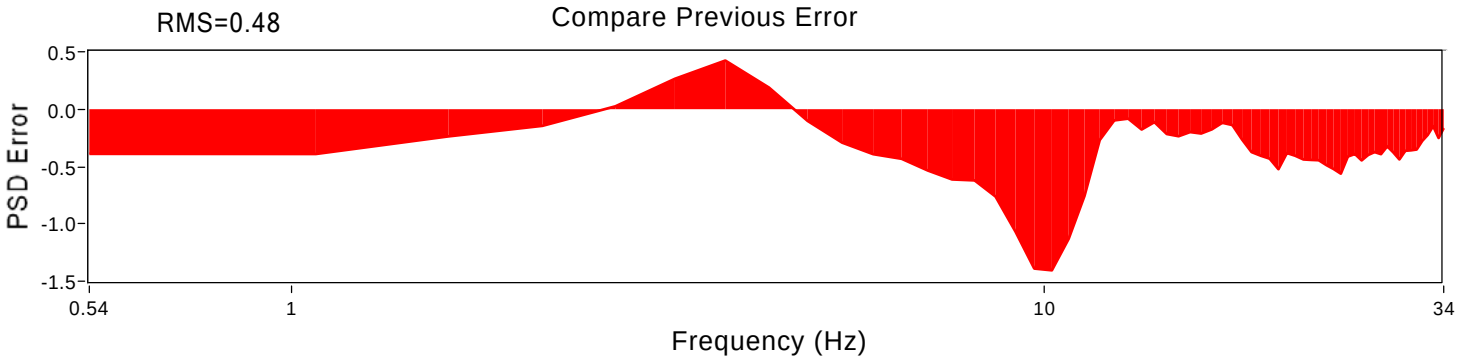


# OLM DYNAMIC ANALYSIS RESULTS COMPARE

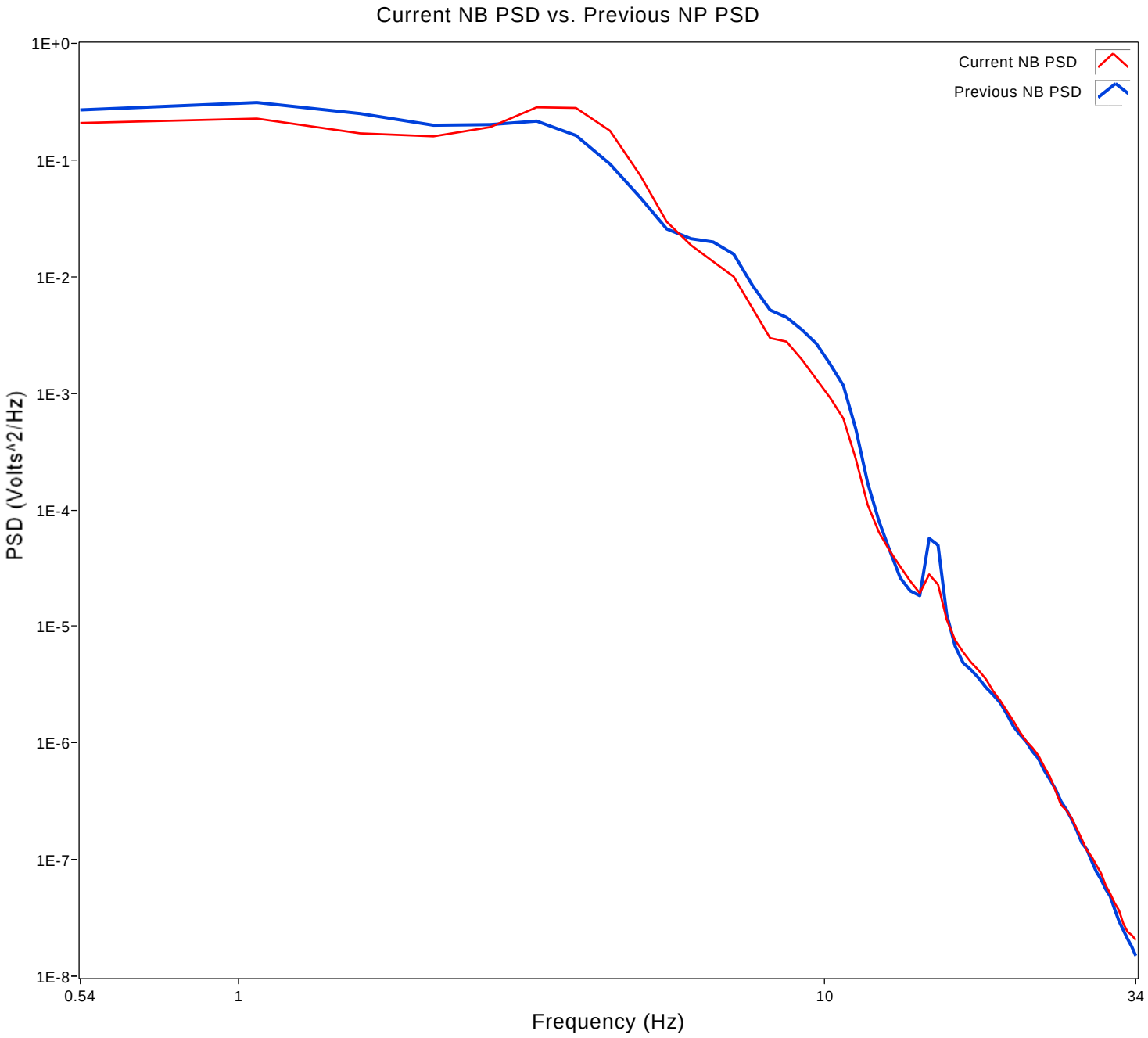
| Reactor and Unit | Tag Number | Service | Filename | Blocks : Blocksize | Trim Low Freq. (Hz) | Trim High Freq. (Hz) | AR Order | AR Method | Test Date |
|---|---|---|---|---|---|---|---|---|---|
| Farley Unit 1 | FT484 | STM FLOW | FNP1060003.psd | 11 : 128 | 0.538777 | 34.481708 | 17 | Forward-Backward | 23-Jun-2009 12:04:01 |

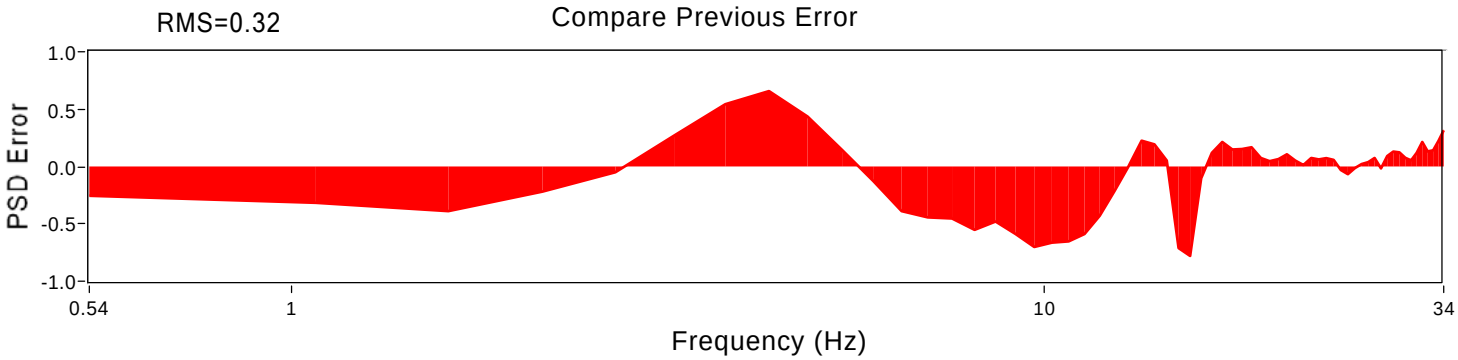


# OLM DYNAMIC ANALYSIS RESULTS COMPARE

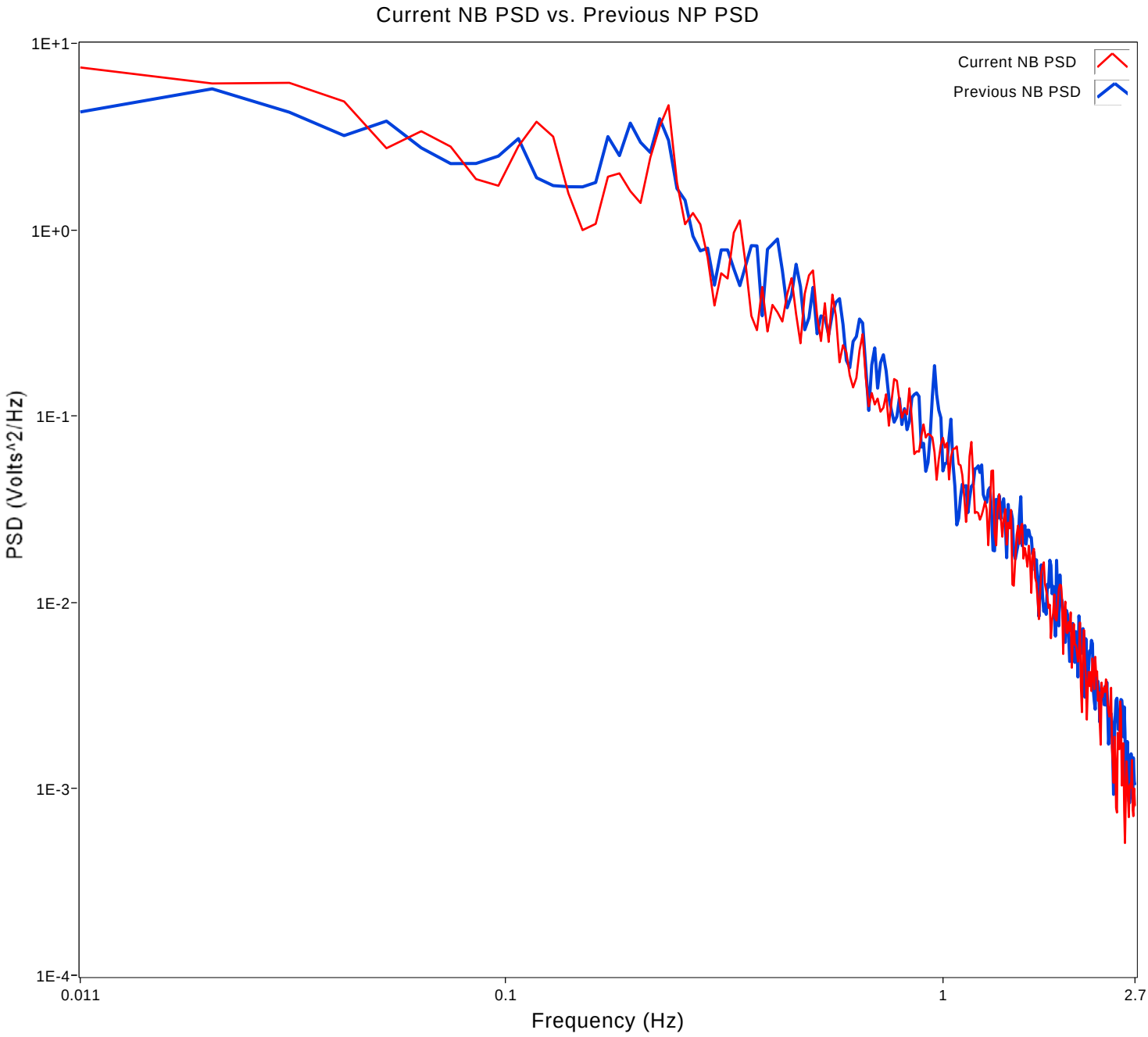
| Reactor and Unit | Tag Number | Service | Filename | Blocks : Blocksize | Trim Low Freq. (Hz) | Trim High Freq. (Hz) | AR Order | AR Method | Test Date |
|---|---|---|---|---|---|---|---|---|---|
| Farley Unit 1 | FT494 | STM FLOW | FNP1060003.psd | 11 : 128 | 0.538777 | 34.481708 | 17 | Forward-Backward | 23-Jun-2009 12:04:01 |

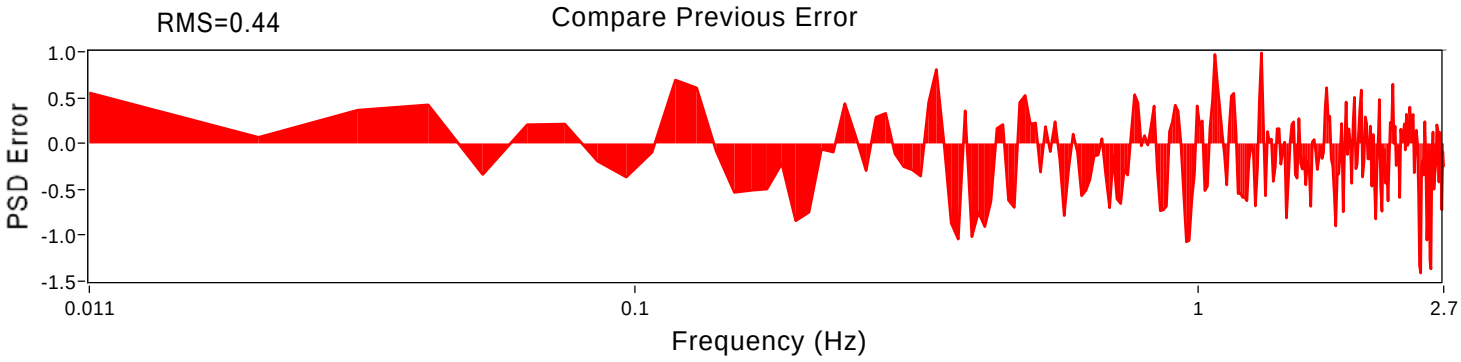


# OLM DYNAMIC ANALYSIS RESULTS COMPARE

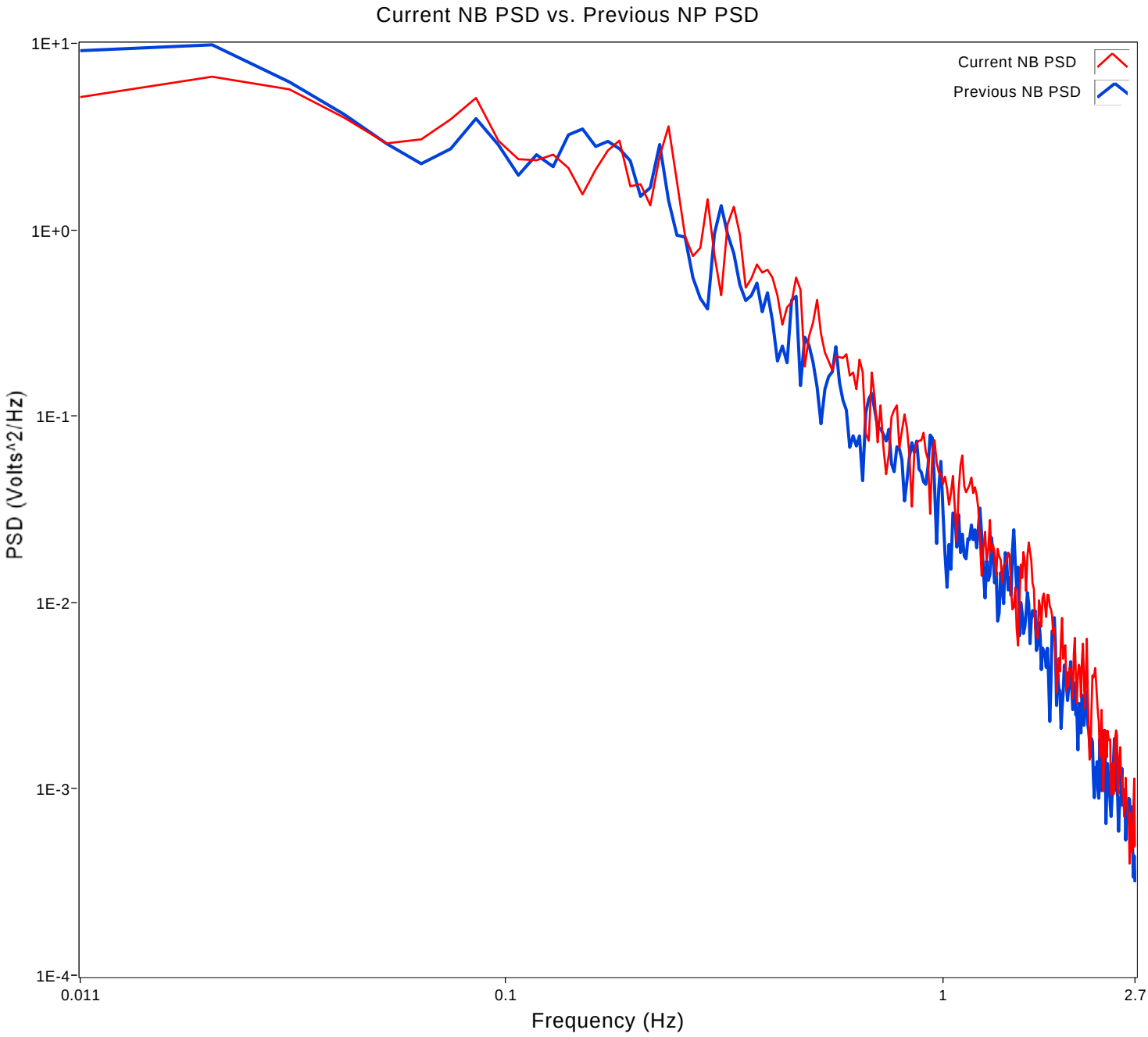
| Reactor and Unit | Tag Number | Service | Filename | Blocks : Blocksize | Trim Low Freq. (Hz) | Trim High Freq. (Hz) | AR Order | AR Method | Test Date |
|---|---|---|---|---|---|---|---|---|---|
| Farley Unit 1 | FT477 | FW FLOW | FNP1060003.psd | 11 : 512 | 0.010731 | 2.747169 | 23 | Least-Squares | 23-Jun-2009 12:04:01 |

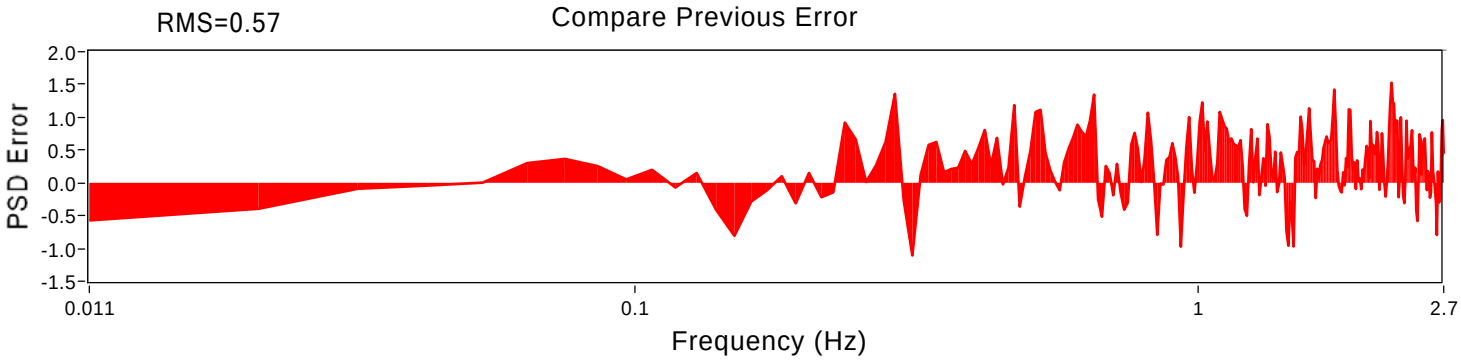


# OLM DYNAMIC ANALYSIS RESULTS COMPARE

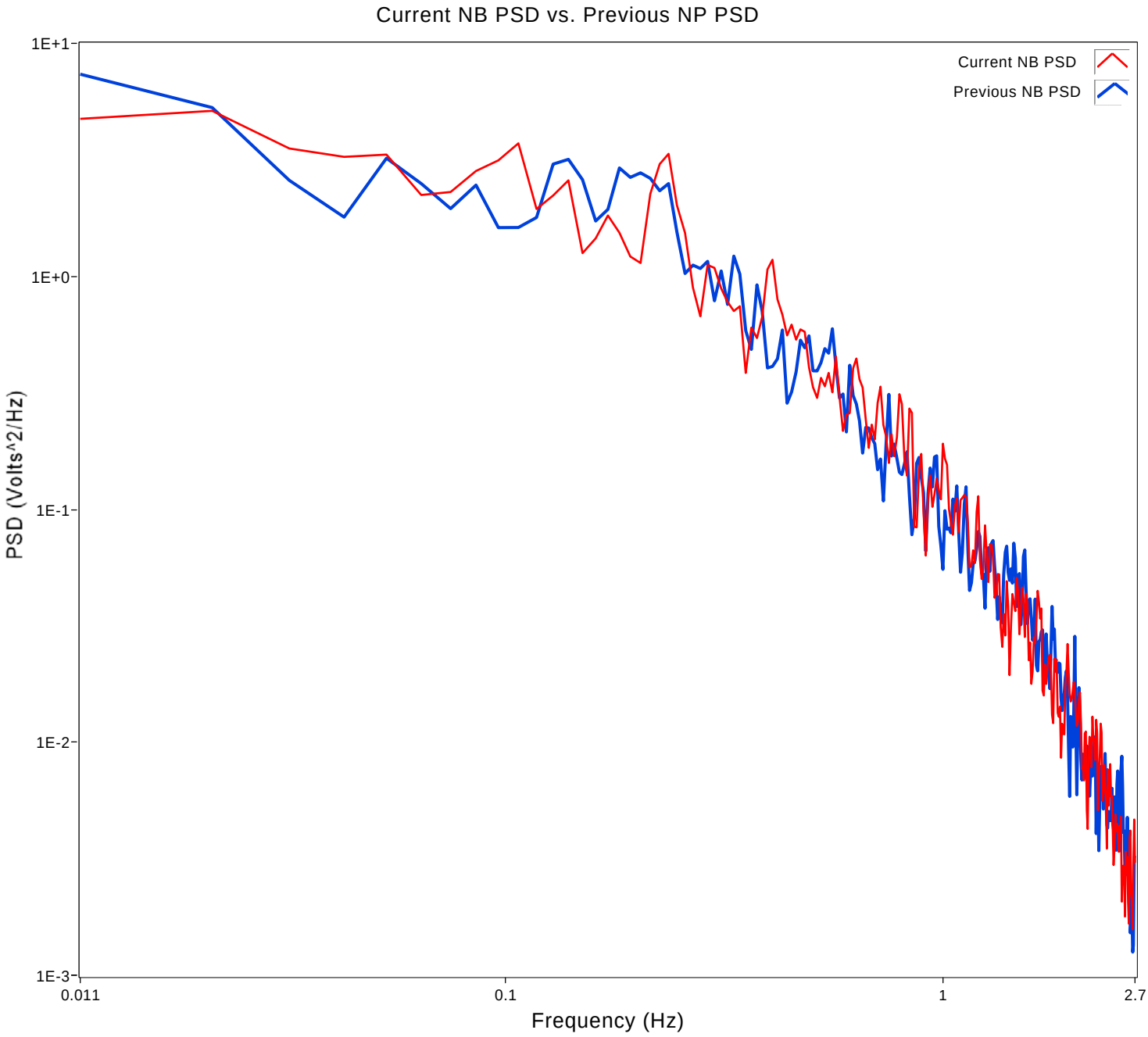
| Reactor and Unit | Tag Number | Service | Filename | Blocks : Blocksize | Trim Low Freq. (Hz) | Trim High Freq. (Hz) | AR Order | AR Method | Test Date |
|---|---|---|---|---|---|---|---|---|---|
| Farley Unit 1 | FT487 | FW FLOW | FNP1060003.psd | 11 : 512 | 0.010731 | 2.747169 | 21 | Least-Squares | 23-Jun-2009 12:04:01 |

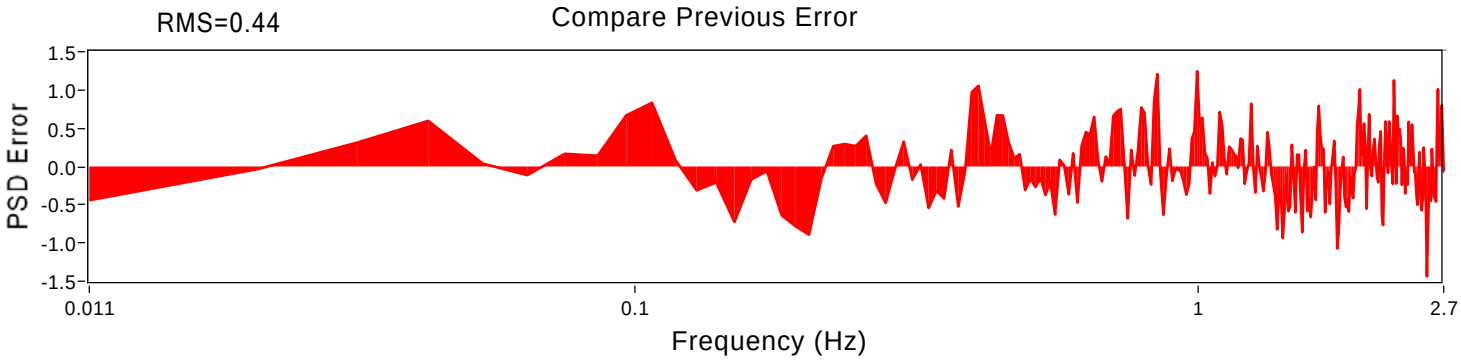


# OLM DYNAMIC ANALYSIS RESULTS COMPARE

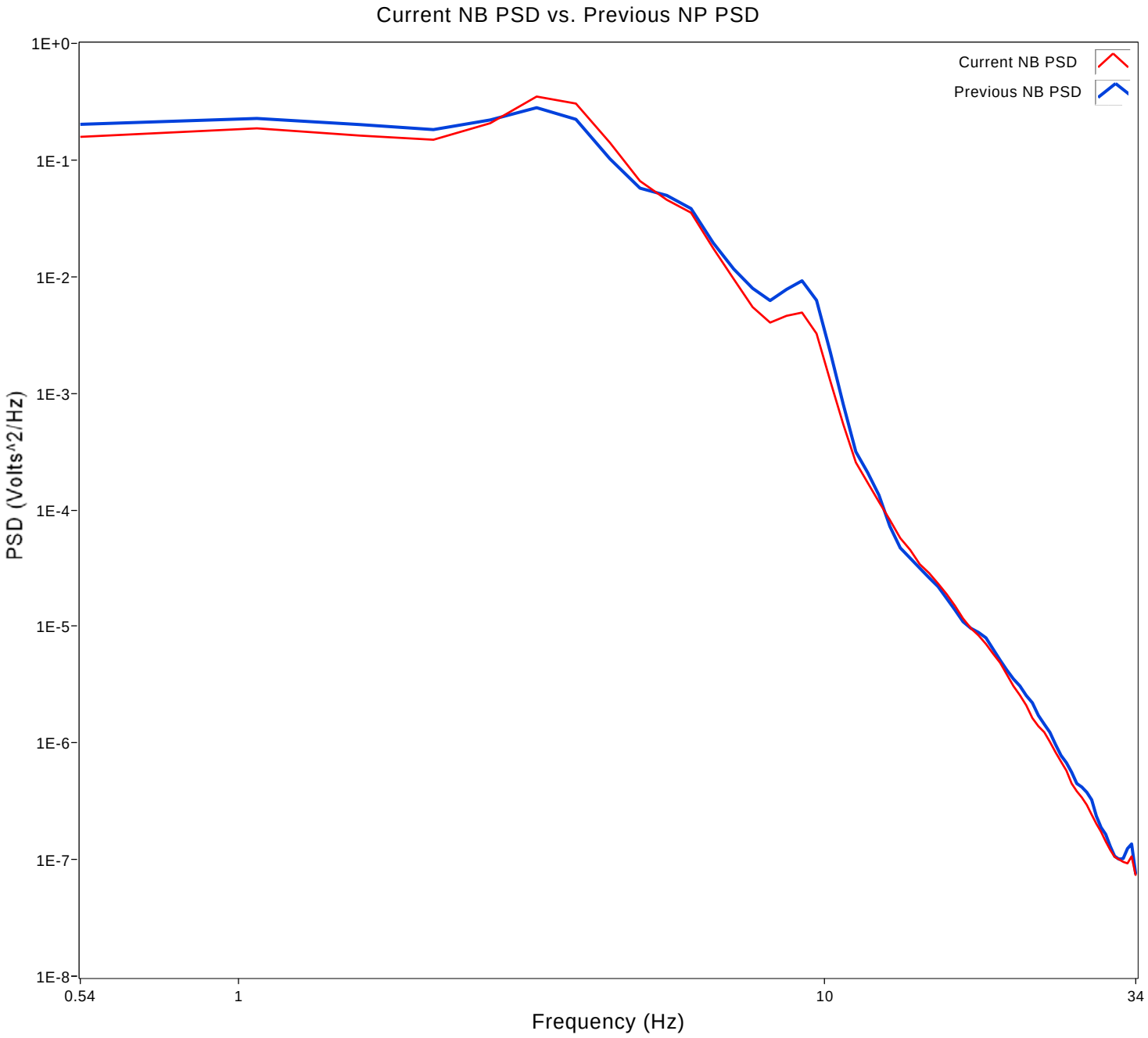
| Reactor and Unit | Tag Number | Service | Filename | Blocks : Blocksize | Trim Low Freq. (Hz) | Trim High Freq. (Hz) | AR Order | AR Method | Test Date |
|---|---|---|---|---|---|---|---|---|---|
| Farley Unit 1 | FT497 | FW FLOW | FNP1060003.psd | 11 : 512 | 0.010731 | 2.747169 | 24 | Least-Squares | 23-Jun-2009 12:04:01 |

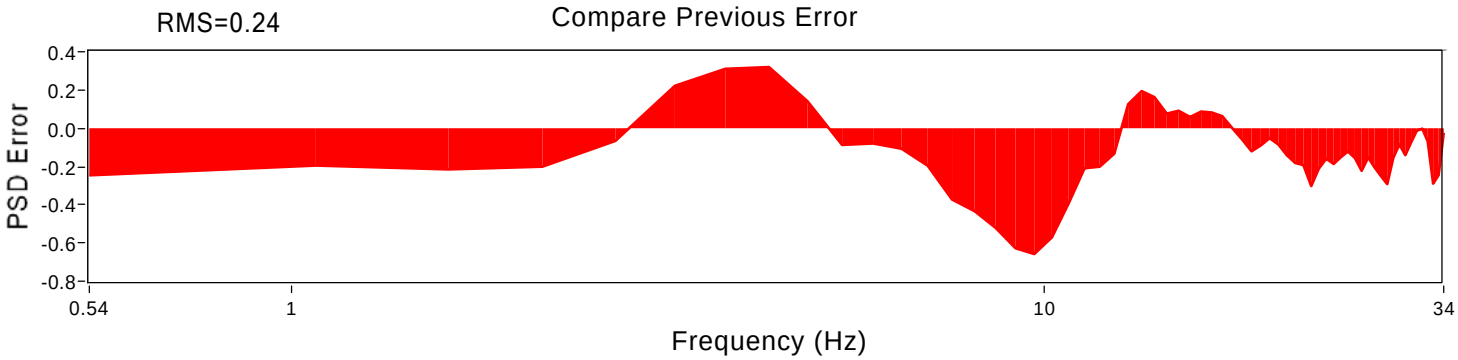


# OLM DYNAMIC ANALYSIS RESULTS COMPARE

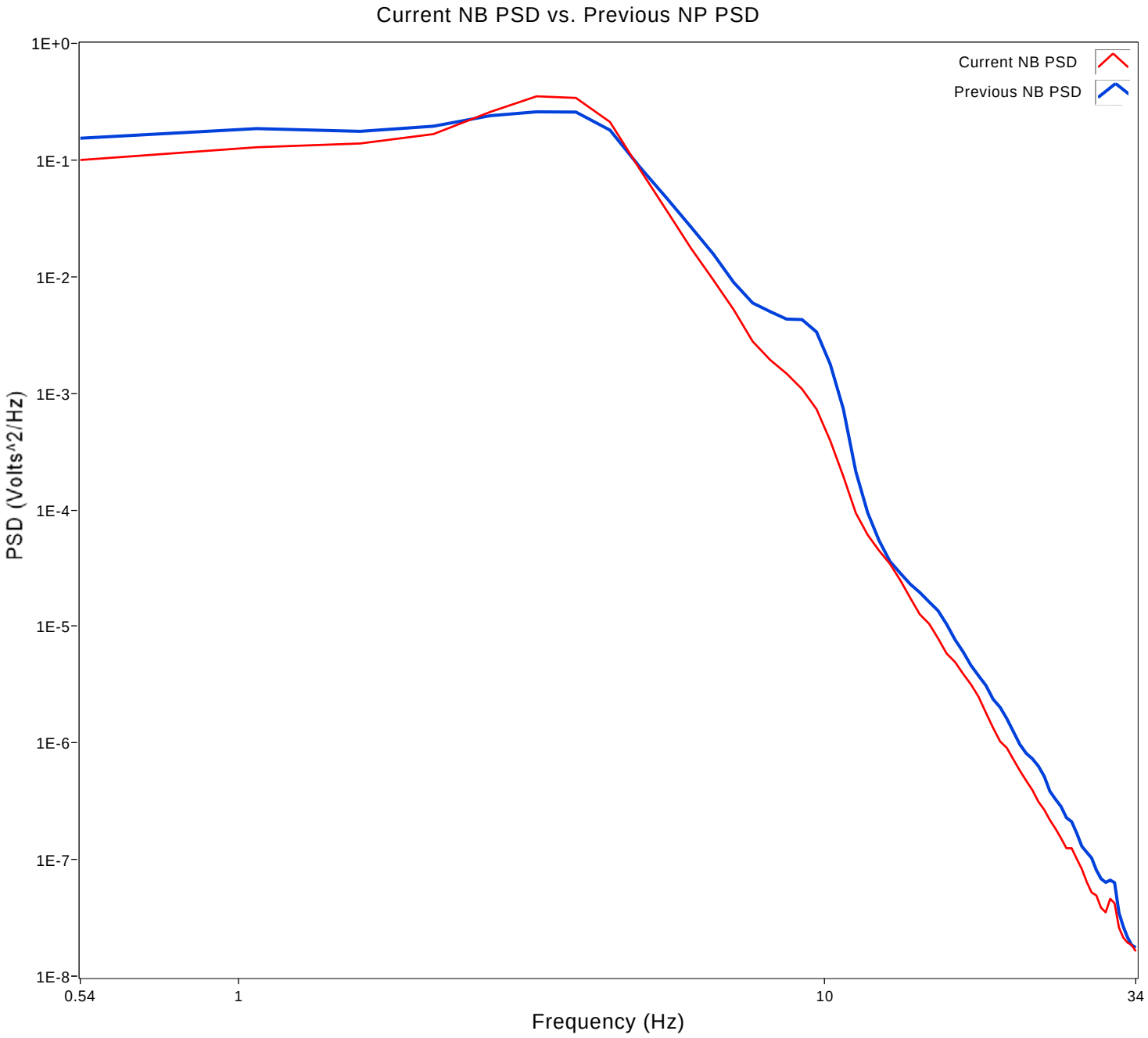
| Reactor and Unit | Tag Number | Service | Filename | Blocks : Blocksize | Trim Low Freq. (Hz) | Trim High Freq. (Hz) | AR Order | AR Method | Test Date |
|---|---|---|---|---|---|---|---|---|---|
| Farley Unit 1 | FT475 | STM FLOW | FNP1060004.psd | 11 : 128 | 0.538777 | 34.481708 | 18 | Least-Squares | 23-Jun-2009 12:04:01 |

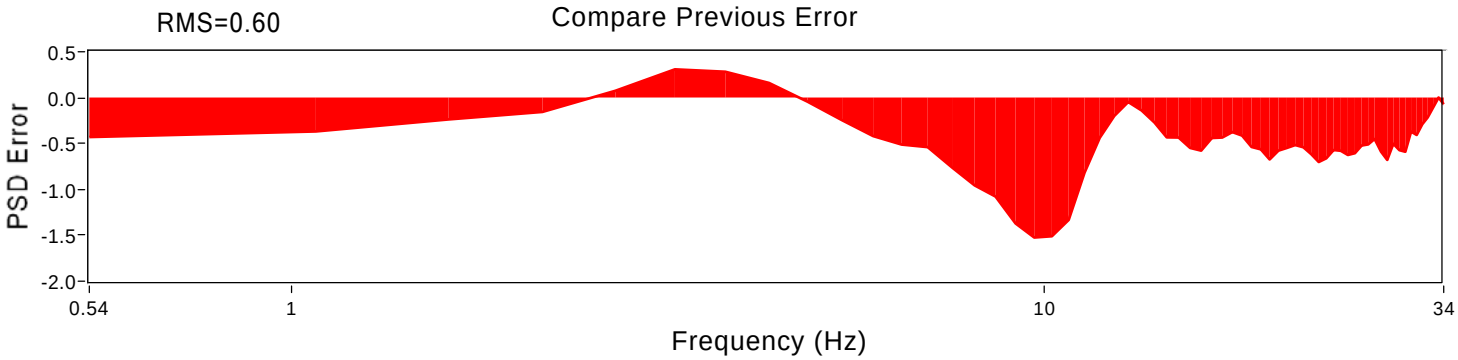


# OLM DYNAMIC ANALYSIS RESULTS COMPARE

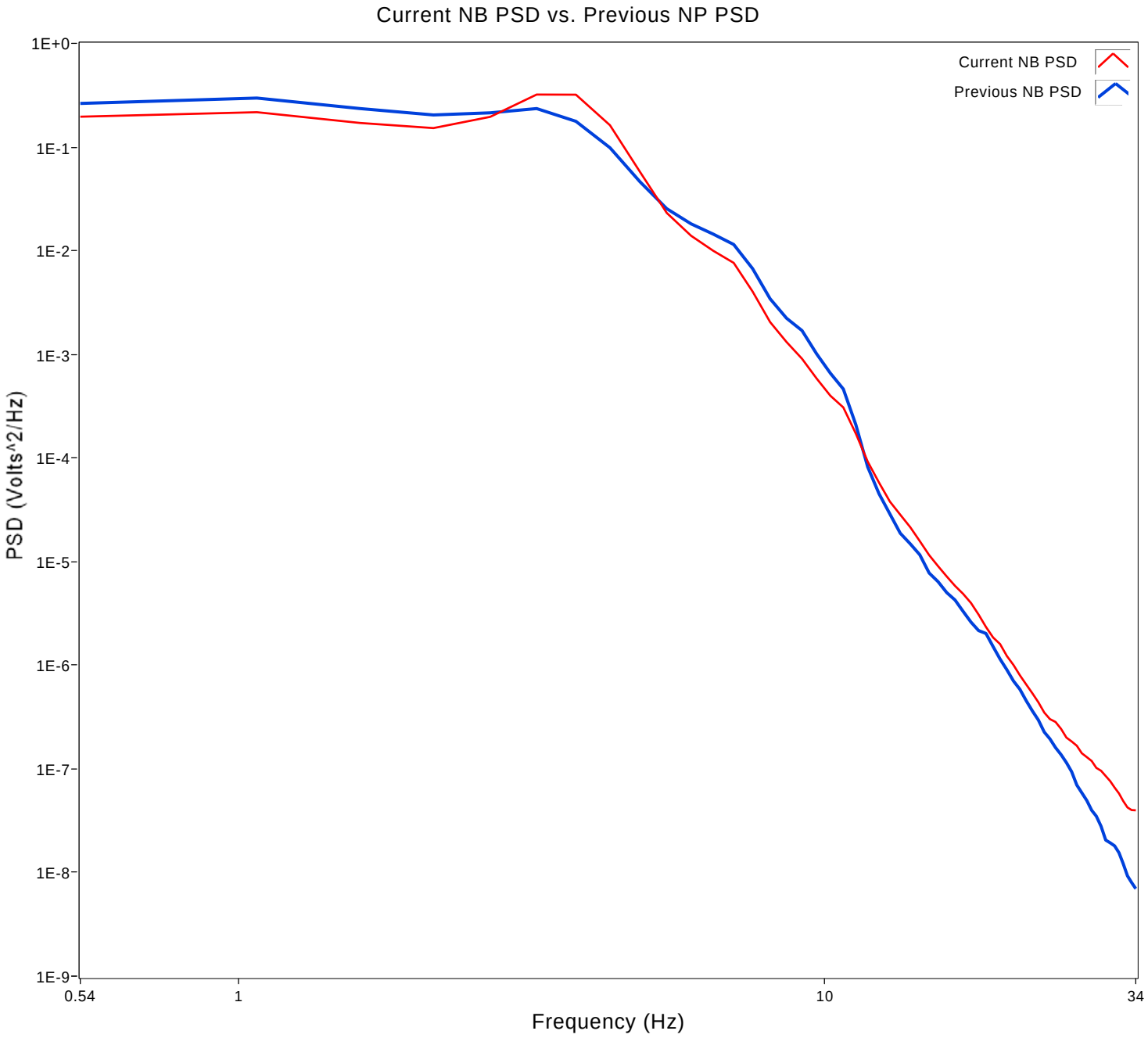
| Reactor and Unit | Tag Number | Service | Filename | Blocks : Blocksize | Trim Low Freq. (Hz) | Trim High Freq. (Hz) | AR Order | AR Method | Test Date |
|---|---|---|---|---|---|---|---|---|---|
| Farley Unit 1 | FT485 | STM FLOW | FNP1060004.psd | 11 : 128 | 0.538777 | 34.481708 | 18 | Forward-Backward | 23-Jun-2009 12:04:01 |

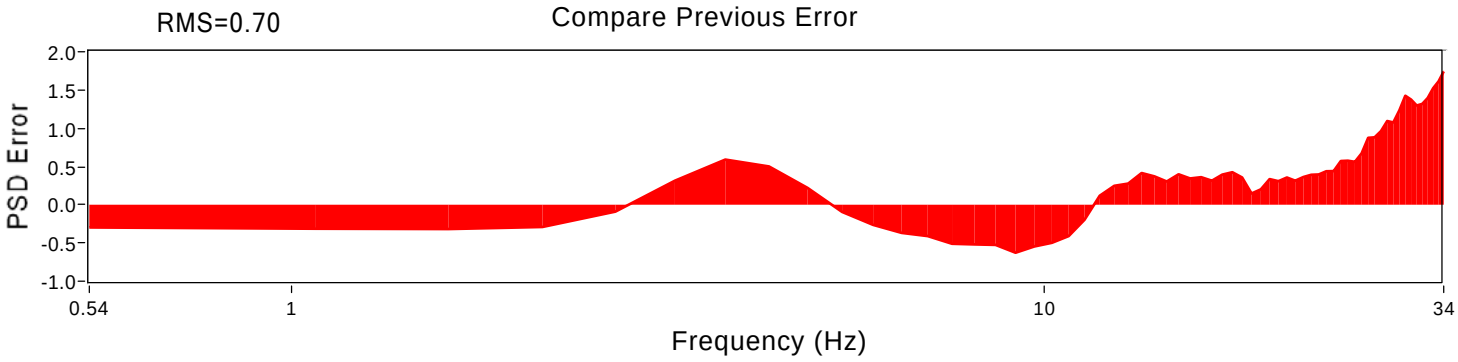


# OLM DYNAMIC ANALYSIS RESULTS COMPARE

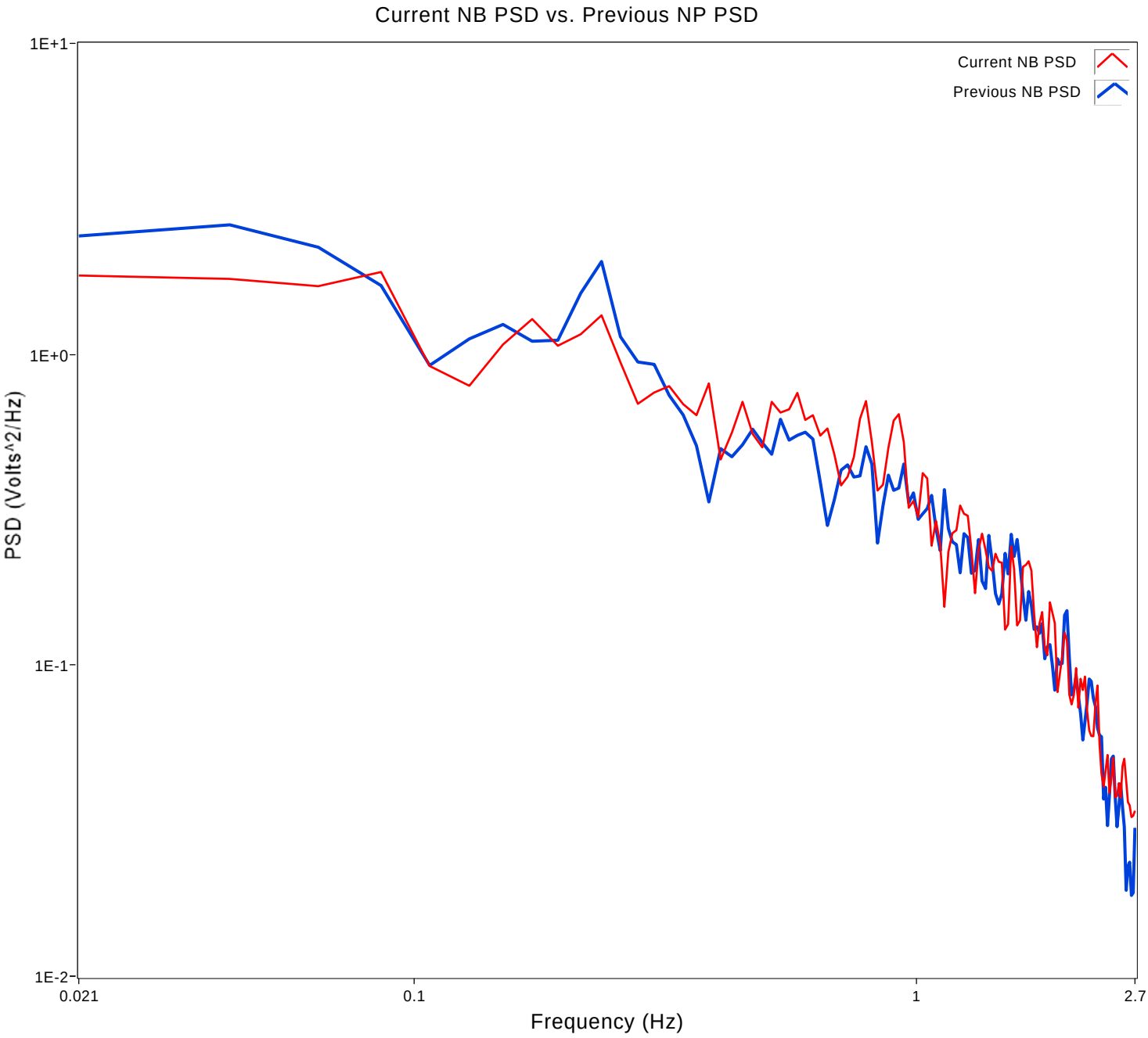
| Reactor and Unit | Tag Number | Service | Filename | Blocks : Blocksize | Trim Low Freq. (Hz) | Trim High Freq. (Hz) | AR Order | AR Method | Test Date |
|---|---|---|---|---|---|---|---|---|---|
| Farley Unit 1 | FT495 | STM FLOW | FNP1060004.psd | 11 : 128 | 0.538777 | 34.481708 | 18 | Forward-Backward | 23-Jun-2009 12:04:01 |

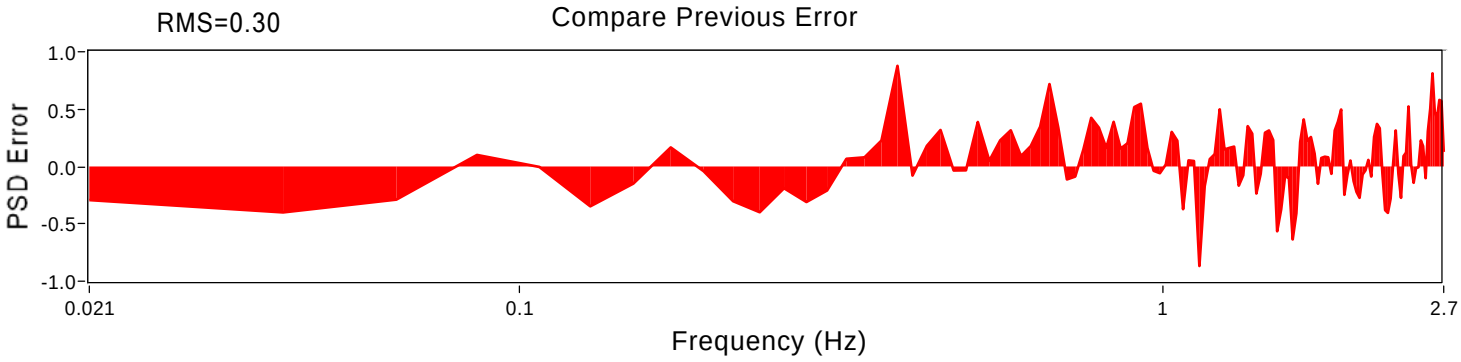


# OLM DYNAMIC ANALYSIS RESULTS COMPARE

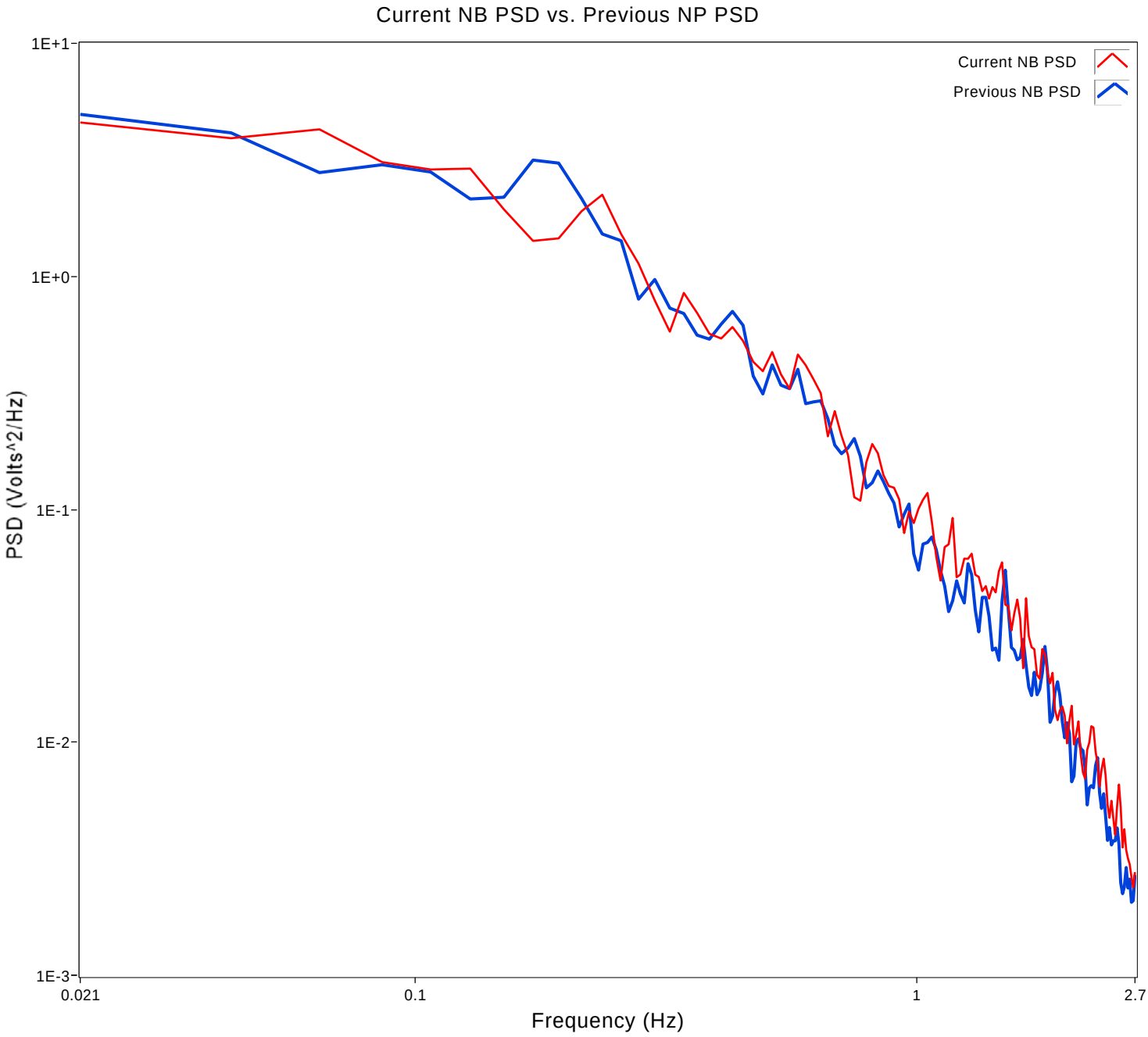
| Reactor and Unit | Tag Number | Service | Filename | Blocks : Blocksize | Trim Low Freq. (Hz) | Trim High Freq. (Hz) | AR Order | AR Method | Test Date |
|---|---|---|---|---|---|---|---|---|---|
| Farley Unit 1 | FT476 | FW FLOW | FNP1060004.psd | 11 : 256 | 0.021462 | 2.747169 | 22 | Least-Squares | 23-Jun-2009 12:04:01 |

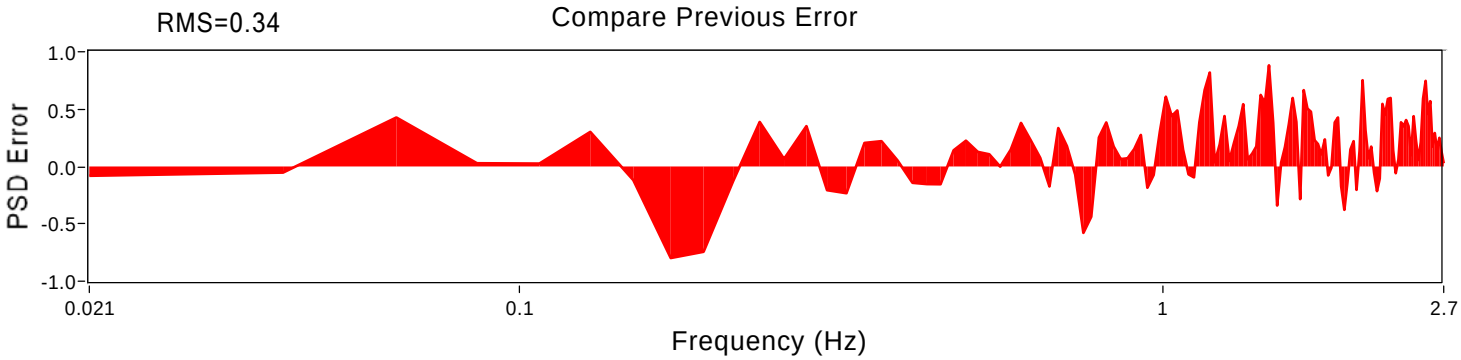


# OLM DYNAMIC ANALYSIS RESULTS COMPARE

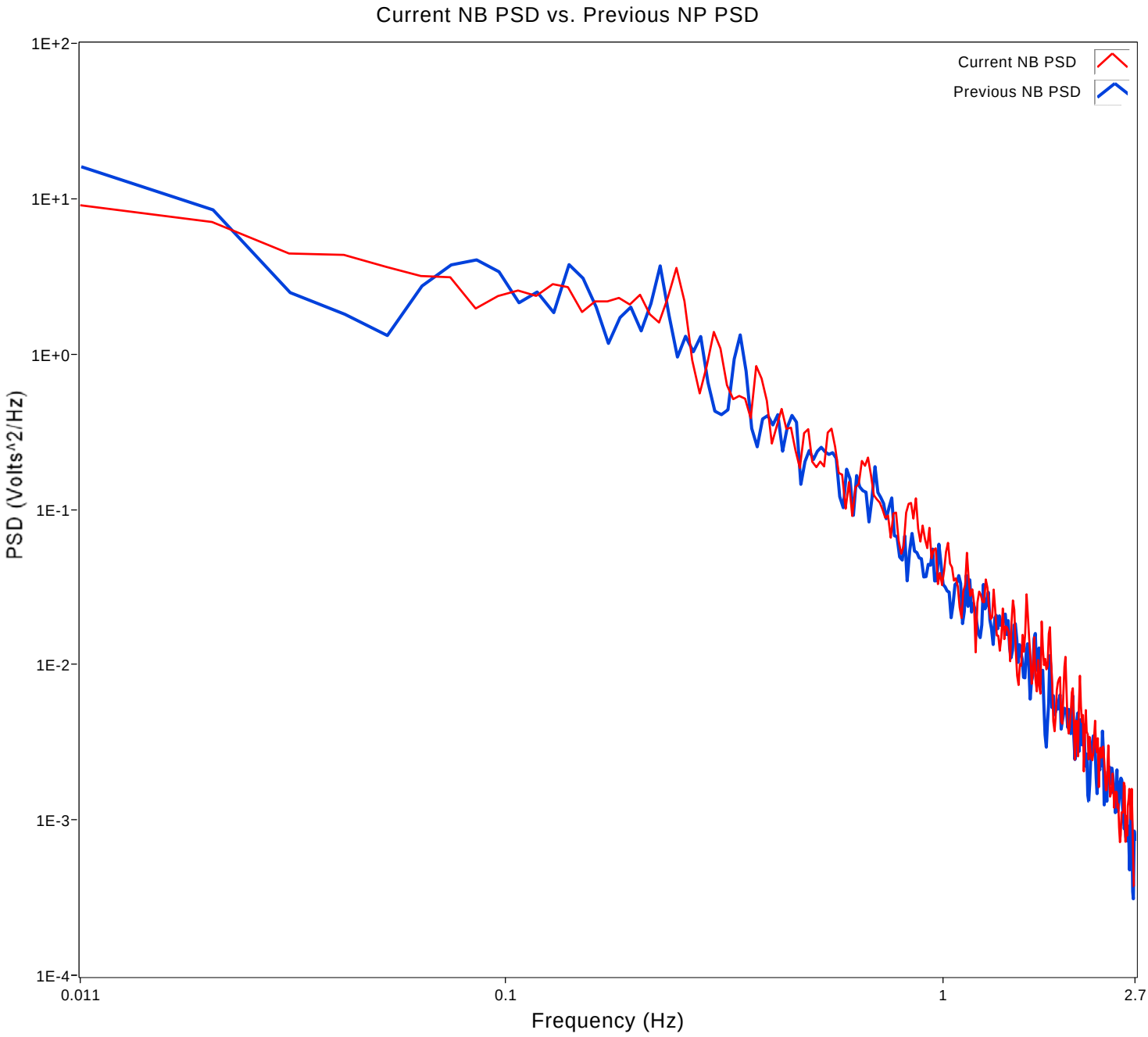
| Reactor and Unit | Tag Number | Service | Filename | Blocks : Blocksize | Trim Low Freq. (Hz) | Trim High Freq. (Hz) | AR Order | AR Method | Test Date |
|---|---|---|---|---|---|---|---|---|---|
| Farley Unit 1 | FT486 | FW FLOW | FNP1060004.psd | 11 : 256 | 0.021462 | 2.747169 | 11 | Forward-Backward | 23-Jun-2009 12:04:01 |

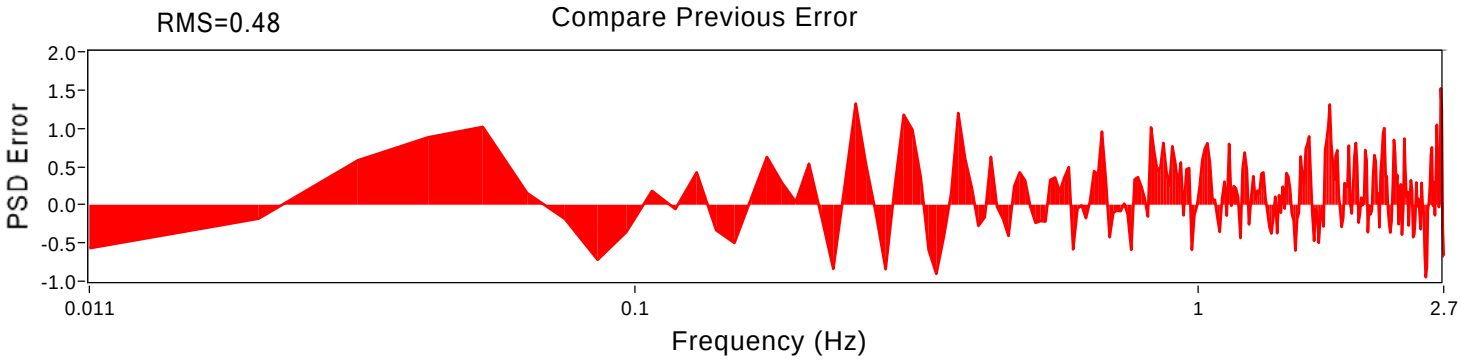


# OLM DYNAMIC ANALYSIS RESULTS COMPARE

| Reactor and Unit | Tag Number | Service | Filename | Blocks : Blocksize | Trim Low Freq. (Hz) | Trim High Freq. (Hz) | AR Order | AR Method | Test Date |
|---|---|---|---|---|---|---|---|---|---|
| Farley Unit 1 | FT496 | FW FLOW | FNP1060004.psd | 11 : 512 | 0.010672 | 2.732157 | 11 | Forward-Backward | 23-Jun-2009 12:04:01 |



# APPENDIX C

# Farley Unit 1 OLM Results (Cycle 24)

| Item | Tagname | Service | 29 Nov 2010 | 25 Dec 2010 | 23 Jan 2011 | 9 Mar 2011 | 21 Mar 2011 | 16 Apr 2011 | 28 May 2011 | 6 Jun 2011 | 17 Jul 2011 | Drift | Final | Comment |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | FE0474B | SG A STEAM FLOW | R | | | | | | | | | | PASS | Only out in low range transient |
| 2 | FE0475B | SG A STEAM FLOW | R | | | | | | | | | | PASS | Only out in low range transient |
| | | | | | | | | | | | | | | |
| 3 | FE0476B | FW FLOW TO SG A | | | | | | | | | | | PASS | |
| 4 | FE0477B | FW FLOW TO SG A | | | | | | | | | | | PASS | |
| | | | | | | | | | | | | | | |
| 5 | LT0474 | SG A NARROW RANGE LEVEL | | | | | | | | | | | PASS | |
| 6 | LT0475 | SG A NARROW RANGE LEVEL | | | | | | | | | | | PASS | |
| 7 | LT0476 | SG A NARROW RANGE LEVEL | | | | | | | | | | | PASS | |
| 8 | LT0477 | SG A WIDE RANGE LEVEL | | | M | M | M | M | M | M | M | | FAIL | Low bias |
| | | | | | | | | | | | | | | |
| 9 | PT0474 | SG A OUTLET PRESSURE | | | | | | | | | | | PASS | |
| 10 | PT0475 | SG A OUTLET PRESSURE | | | | | | | | | | | PASS | |
| 11 | PT0476 | SG A OUTLET PRESSURE | | | | | | | | | | | PASS | |
| | | | | | | | | | | | | | | |
| 12 | FE0484B | SG B STEAM FLOW | R | | | | | | | | | | PASS | Only out in low range transient |
| 13 | FE0485B | SG B STEAM FLOW | R | | | | | | | | | | PASS | Only out in low range transient |
| | | | | | | | | | | | | | | |
| 14 | FE0486B | FW FLOW TO SG B | | | | | | | | | | | PASS | |
| 15 | FE0487B | FW FLOW TO SG B | | | | | | | | | | | PASS | |
| | | | | | | | | | | | | | | |
| 16 | LT0484 | SG B NARROW RANGE LEVEL | | | | | | | | | | | PASS | |
| 17 | LT0485 | SG B NARROW RANGE LEVEL | | | | | | | | | | | PASS | |
| 18 | LT0486 | SG B NARROW RANGE LEVEL | | | | | | | | | | | PASS | |
| 19 | LT0487 | SG B WIDE RANGE LEVEL | | | | | | | | | | | PASS | |
| | | | | | | | | | | | | | | |
| 20 | PT0484 | SG B OUTLET PRESSURE | | | | | | | | | | | PASS | |
| 21 | PT0485 | SG B OUTLET PRESSURE | | | | | | | | | | | PASS | |
| 22 | PT0486 | SG B OUTLET PRESSURE | | | | | | | | | | | PASS | |
| | | | | | | | | | | | | | | |
| 23 | FE0494B | SG C STEAM FLOW | R | | | | | | | | | | PASS | Only out in low range transient |
| 24 | FE0495B | SG C STEAM FLOW | R | | | | | | | | | | PASS | Only out in low range transient |
| | | | | | | | | | | | | | | |
| 25 | FE0496B | FW FLOW TO SG C | | | | | | | | | | | PASS | |
| 26 | FE0497B | FW FLOW TO SG C | | | | | | | | | | | PASS | |
| | | | | | | | | | | | | | | |
| 27 | LT0494 | SG C NARROW RANGE LEVEL | | | | | | | | | | | PASS | |
| 28 | LT0495 | SG C NARROW RANGE LEVEL | | | | | | | | | | | PASS | |
| 29 | LT0496 | SG C NARROW RANGE LEVEL | | | | | | | | | | | PASS | |
| 30 | LT0497 | SG C WIDE RANGE LEVEL | | | | | | | | | | | PASS | |

*R = Exceeded Redundant Sensor Analysis Limits  M = Exceeded Model Analysis Limits  D = Exceeded Drift Limits*

**Table C.1 Farley Unit 1 OLM Results Summary (Cycle 24)**

| Item | Tagname | Service | 29 Nov 2010 | 25 Dec 2010 | 23 Jan 2011 | 9 Mar 2011 | 21 Mar 2011 | 16 Apr 2011 | 28 May 2011 | 6 Jun 2011 | 17 Jul 2011 | Drift | Final | Comment |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 31 | PT0494 | SG C OUTLET PRESSURE | | | | | | | | | | | PASS | |
| 32 | PT0495 | SG C OUTLET PRESSURE | | | | | | | | | | | PASS | |
| 33 | PT0496 | SG C OUTLET PRESSURE | | | | | | | | | | | PASS | |
| | | | | | | | | | | | | | | |
| 34 | LT0459 | PRESSURIZER LEVEL | R | | | R | R | R | R | R | R | D | FAIL | Low drift |
| 35 | LT0460 | PRESSURIZER LEVEL | | | | | M | M | M | M | M | | PASS | Process change |
| 36 | LT0461 | PRESSURIZER LEVEL | | | | | M | M | M | M | M | | PASS | Process change |
| | | | | | | | | | | | | | | |
| 37 | PT0455 | PRESSURIZER PRESSURE | | | | | | | | | | | PASS | |
| 38 | PT0456 | PRESSURIZER PRESSURE | R | R | R | R | R | R | R | R | R | | FAIL | High bias |
| 39 | PT0457 | PRESSURIZER PRESSURE | | | | | | | | | | | PASS | |
| 40 | PT0444A | PRESSURIZER PRESSURE | | | | | | | | | | | PASS | |
| 41 | PT0445A | PRESSURIZER PRESSURE | | | | | | | | | | | PASS | |
| | | | | | | | | | | | | | | |
| 42 | FE0414 | RCS LOOP A FLOW | | | | | | | | | | | PASS | |
| 43 | FE0415 | RCS LOOP A FLOW | | | | | | | | | | | PASS | |
| 44 | FE0416 | RCS LOOP A FLOW | | R | R | R | R | R | R | R | R | | FAIL | Low bias |
| | | | | | | | | | | | | | | |
| 45 | FE0424 | RCS LOOP B FLOW | | | | | | | | | | | PASS | |
| 46 | FE0425 | RCS LOOP B FLOW | | | | | | | | | | | PASS | |
| 47 | FE0426 | RCS LOOP B FLOW | | | | | | | | | | | PASS | |
| | | | | | | | | | | | | | | |
| 48 | FE0434 | RCS LOOP C FLOW | | | | | | | | | | | PASS | |
| 49 | FE0435 | RCS LOOP C FLOW | | | | | | | | | | | PASS | |
| 50 | FE0436 | RCS LOOP C FLOW | | | | | | | | | | | PASS | |
| | | | | | | | | | | | | | | |
| 51 | PT0402 | RCS WIDE RANGE PRESSURE LOOP C | | | | | | | | | | | PASS | |
| 52 | PT0403 | RCS WIDE RANGE PRESSURE LOOP A | | | | | | | | | | | PASS | |
| | | | | | | | | | | | | | | |
| 53 | PT0446 | TURBINE FIRST STAGE PRESSURE | | | | | | | | | | | PASS | |
| 54 | PT0447 | TURBINE FIRST STAGE PRESSURE | | | | | | | | | | | PASS | |
| | | | | | | | | | | | | | | |
| 55 | LT0501 | RWST LEVEL | | | | | | | | | | | PASS | |
| 56 | LT0502 | RWST LEVEL | | | | | | | | | | | PASS | |
| | | | | | | | | | | | | | | |
| 57 | PT0951 | CTMT PRESSURE | | | | | | | | | | | PASS | |
| 58 | PT0952 | CTMT PRESSURE | | | | | | | | | | | PASS | |
| 59 | PT0953 | CTMT PRESSURE | | | | | | | | | | | PASS | |
| | | | | | | | | | | | | | | |
| 60 | PT0950Y | CTMT PSR EXT RANGE | | | | | | | | | | | PASS | |
| 61 | PT0950Z | CTMT PSR EXT RANGE | | | | | | | | | | | PASS | |

*R = Exceeded Redundant Sensor Analysis Limits  M = Exceeded Model Analysis Limits  D = Exceeded Drift Limits*

**Table C.1 (continued) Farley Unit 1 OLM Results Summary (Cycle 24)**

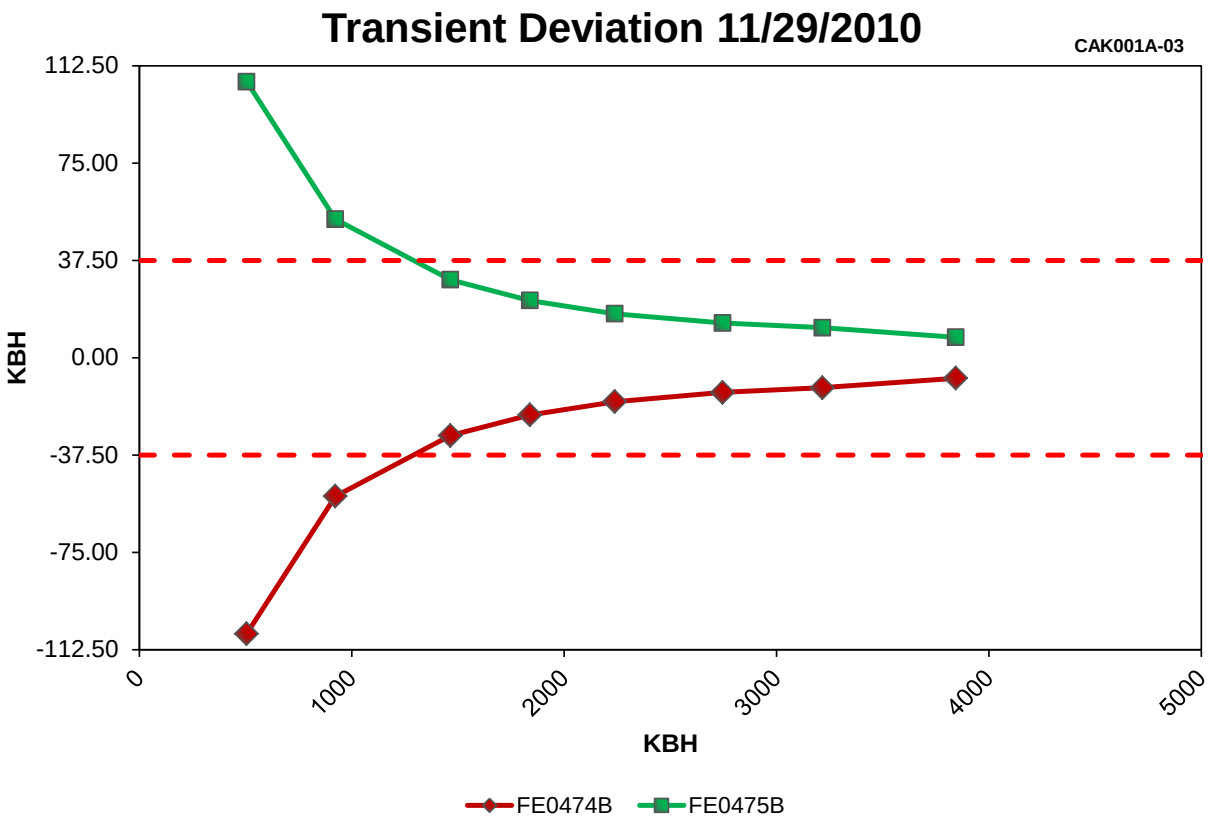



**Figure C.1 SG A STEAM FLOW Transient Deviation at Farley Unit 1 (Cycle 24)**

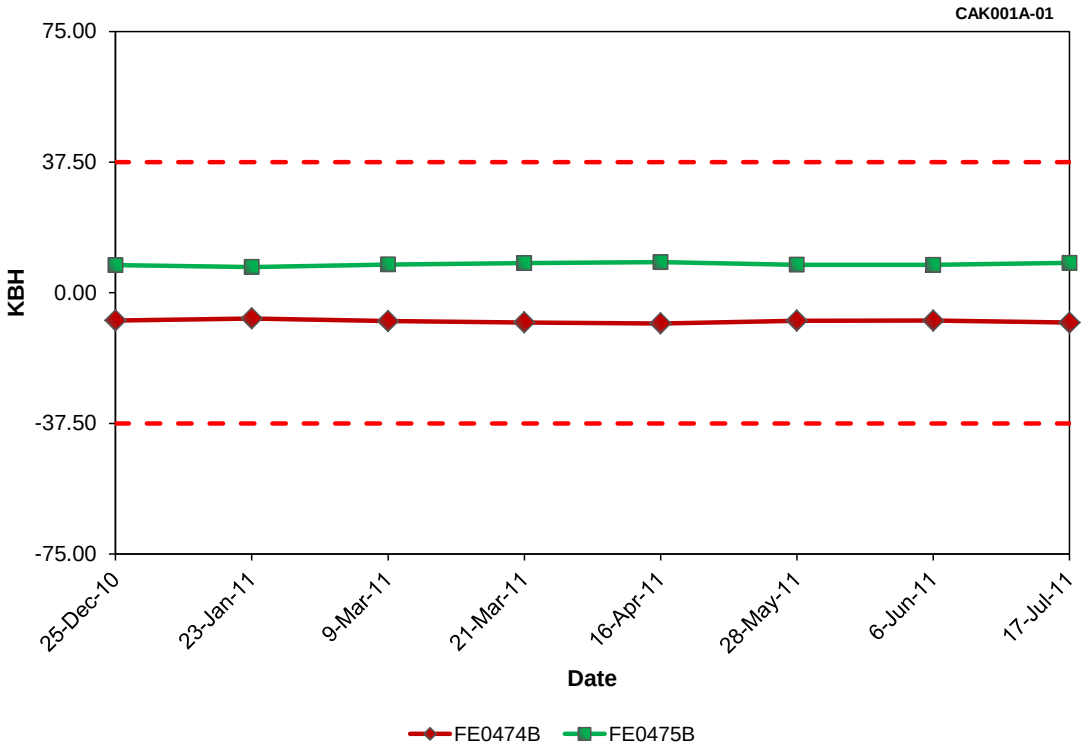



**Figure C.2 SG A STEAM FLOW Steady-State Deviation at Farley Unit 1 (Cycle 24)**

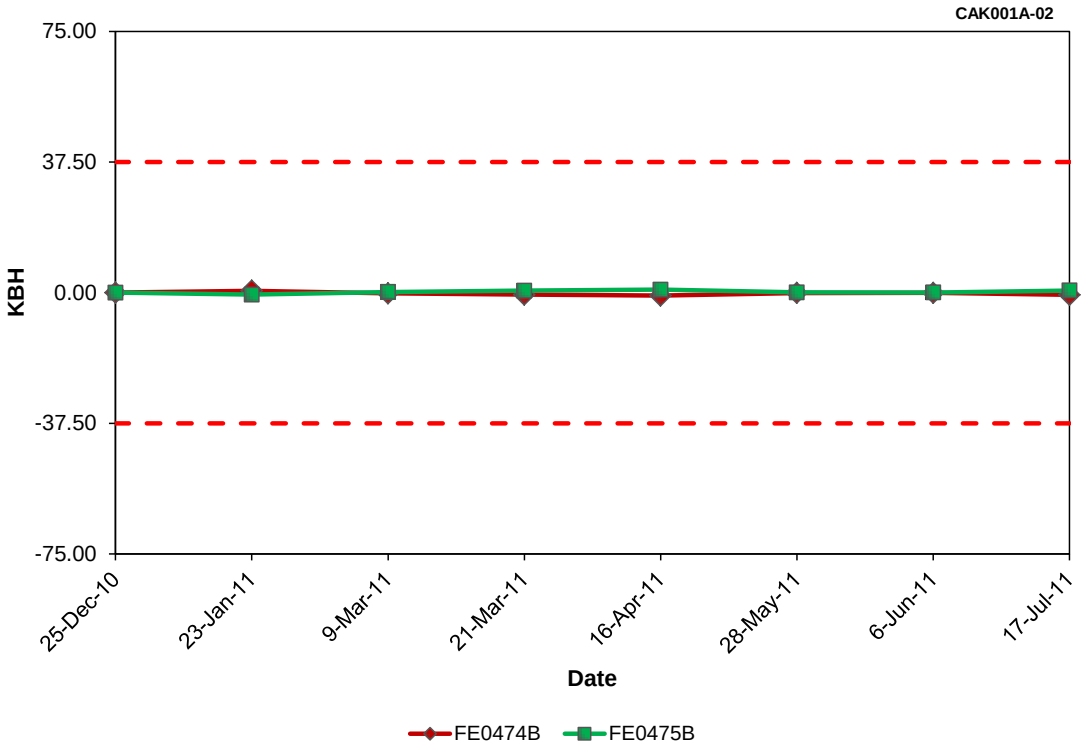



**Figure C.3 SG A STEAM FLOW Steady-State Drift at Farley Unit 1 (Cycle 24)**

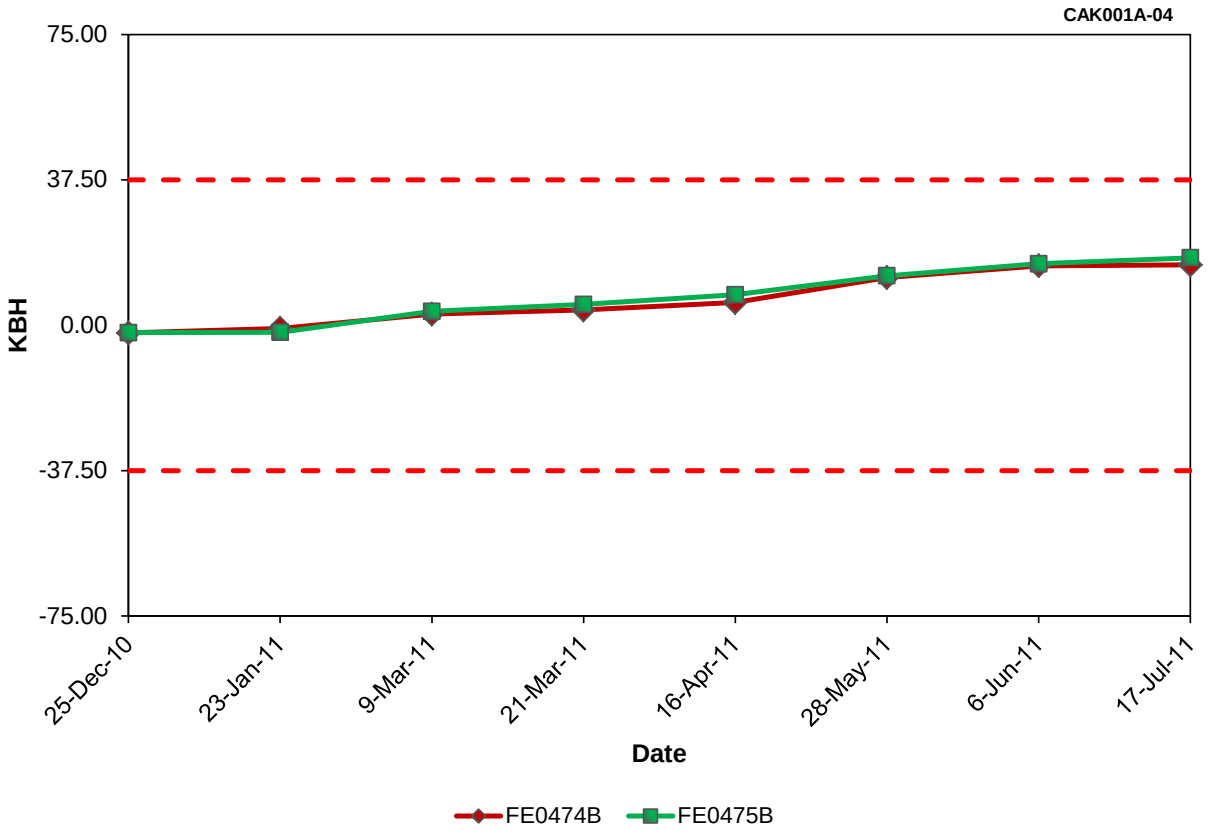



**Figure C.4 SG A STEAM FLOW Steady-State Residual AAKR at Farley Unit 1 (Cycle 24)**

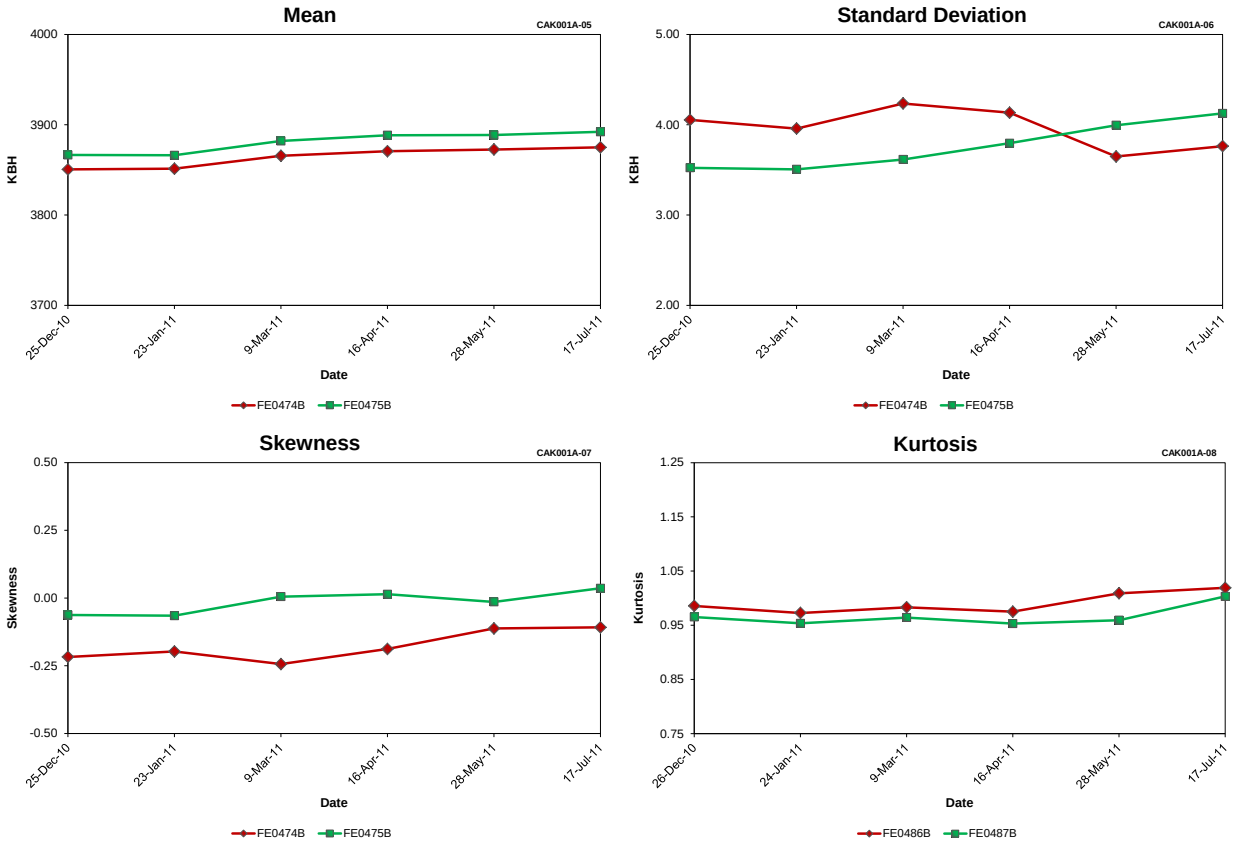



**Figure C.5 SG A STEAM FLOW Data Quality Statistics at Farley Unit 1 (Cycle 24)**

**Table C.1 SG A STEAM FLOW Data Quality for Farley Unit 1 (Cycle 24)**

| | Tag Names | |
|---|---|---|
| **Result Type** | **FE0474B** | **FE0475B** |
| Mean | 3864.25 | 3880.62 |
| Std. Dev. | 3.96 | 3.76 |
| Skewness | -0.18 | -0.01 |
| Kurtosis | 0.99 | 0.97 |

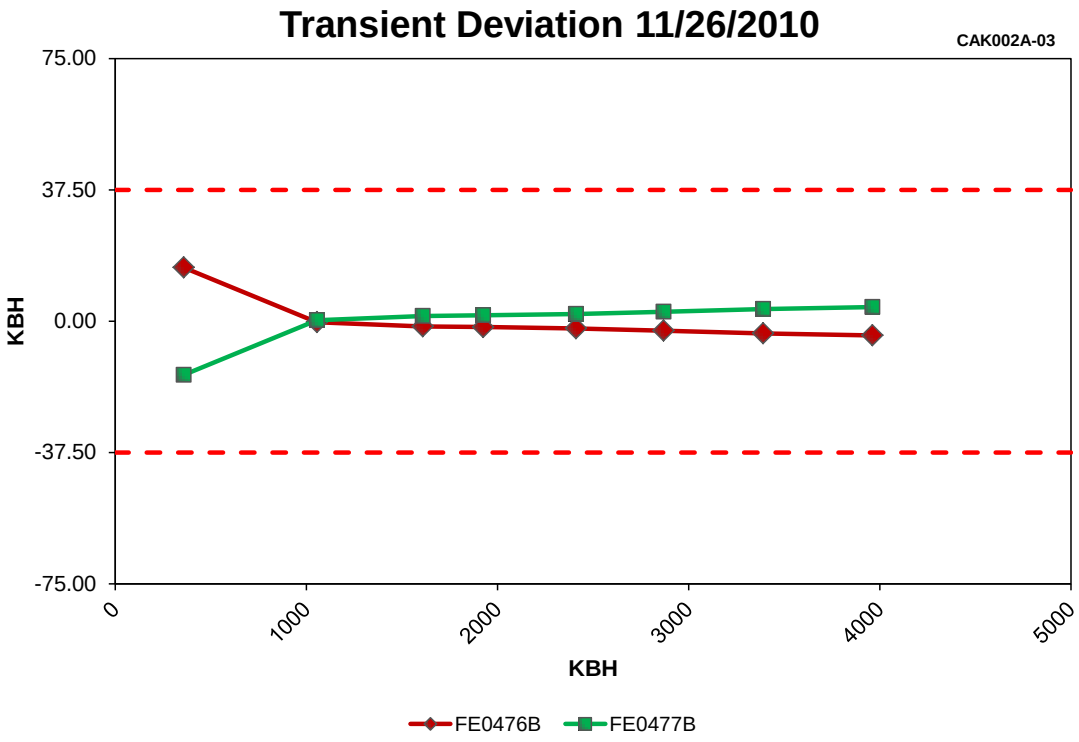



**Figure C.6 FW FLOW TO SG A Transient Deviation at Farley Unit 1 (Cycle 24)**

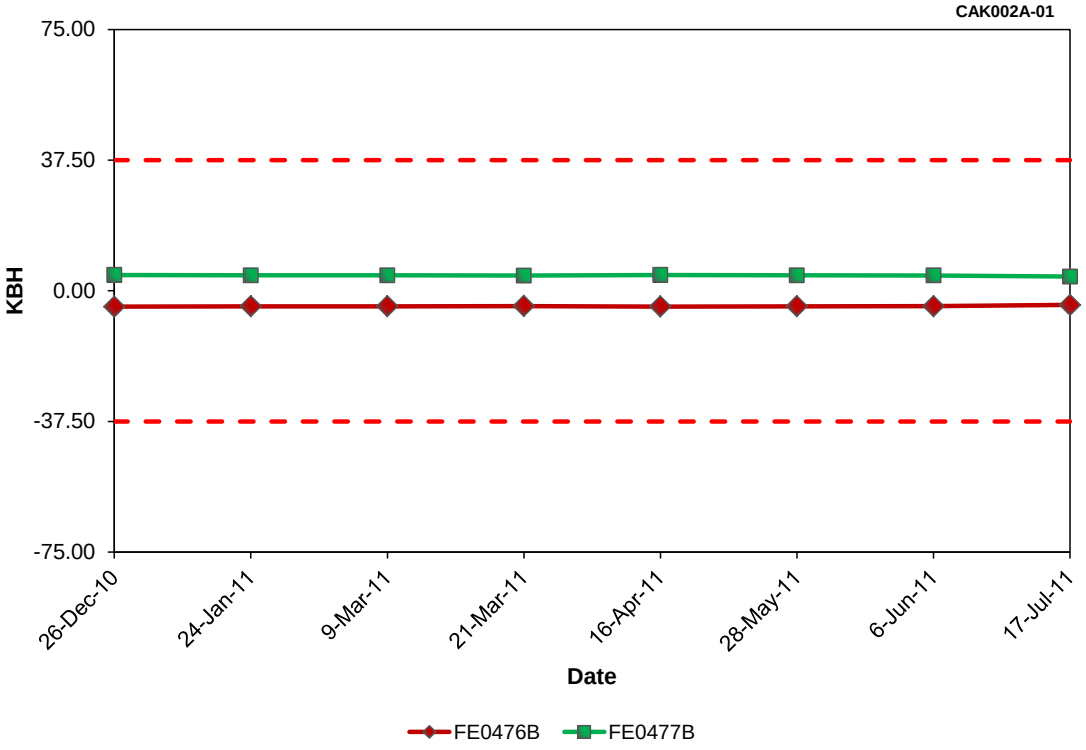



**Figure C.7 FW FLOW TO SG A Steady-State Deviation at Farley Unit 1 (Cycle 24)**

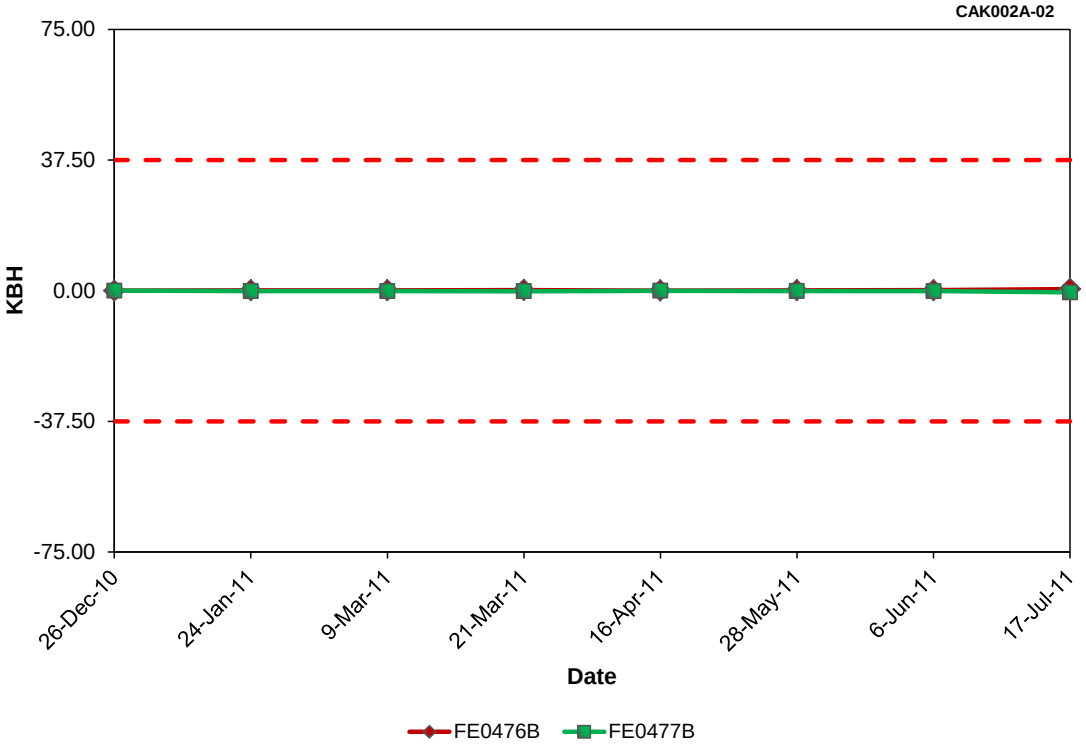



**Figure C.8 FW FLOW TO SG A Steady-State Drift at Farley Unit 1 (Cycle 24)**

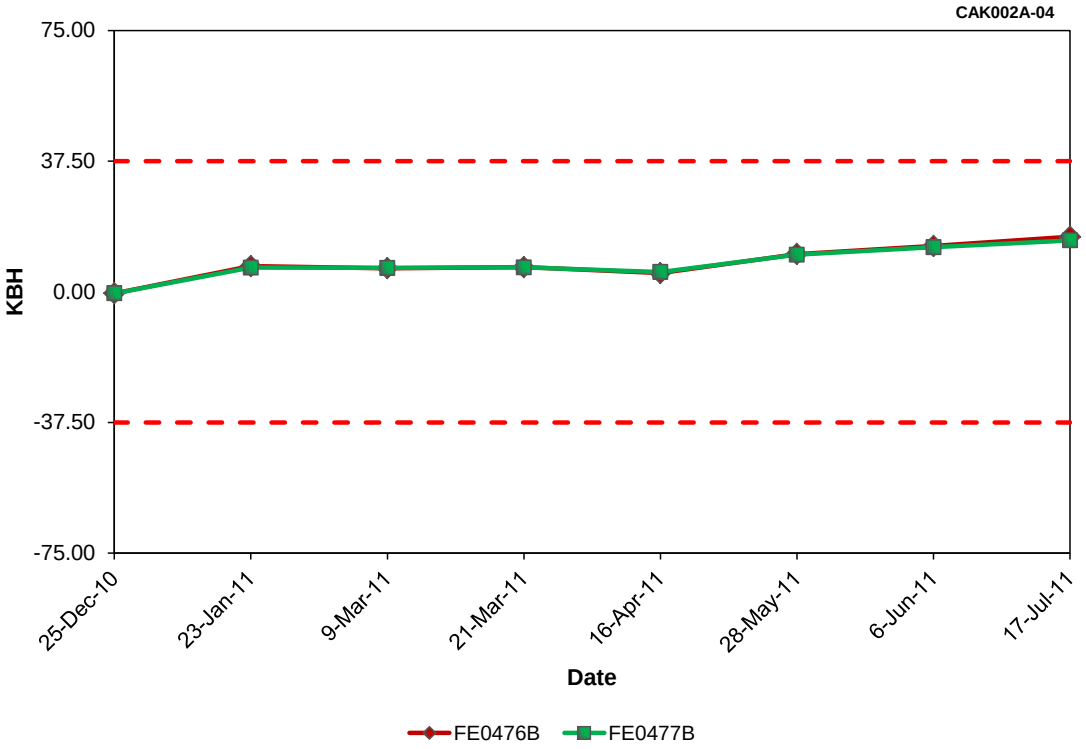



**Figure C.9 FW FLOW TO SG A Steady-State Residual AAKR at Farley Unit 1 (Cycle 24)**

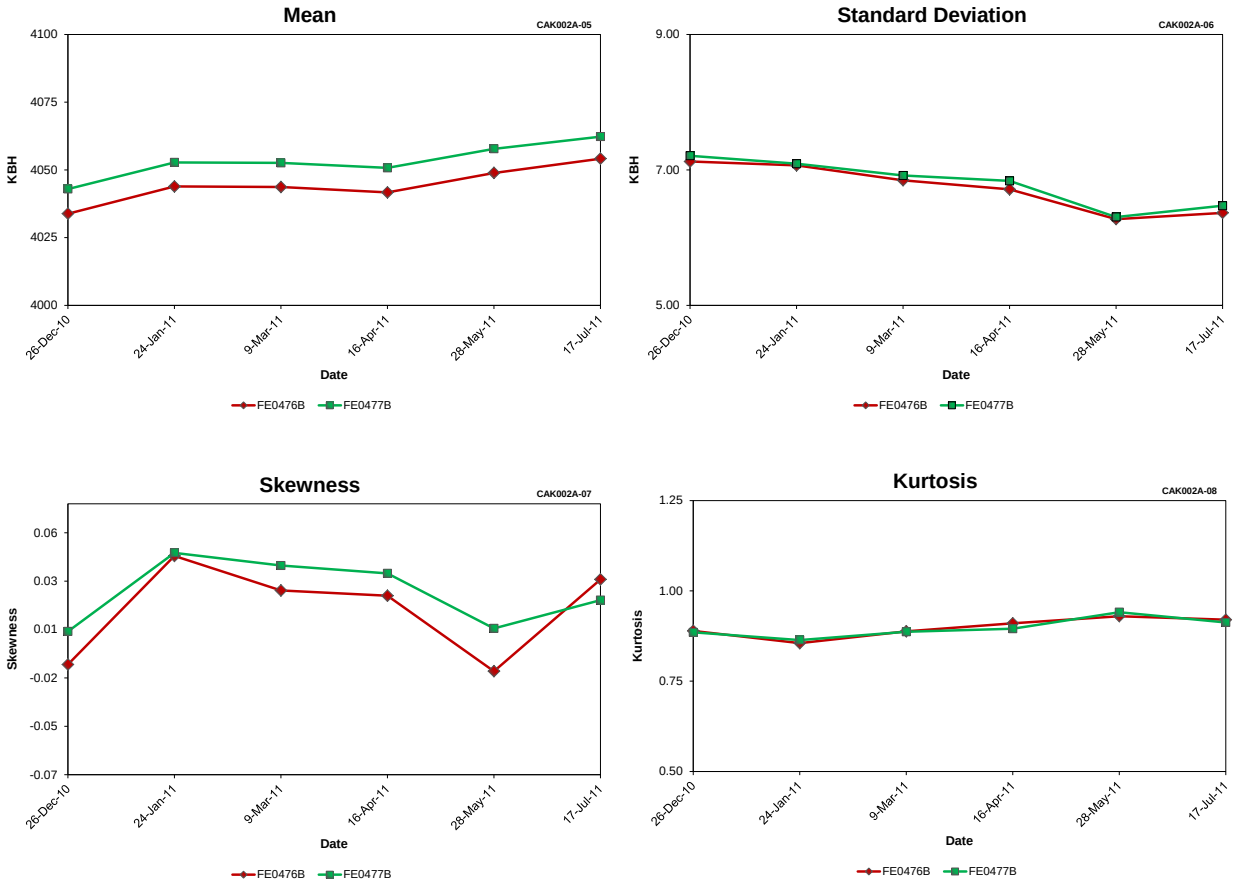



**Figure C.10 FW FLOW TO SG A Data Quality Statistics at Farley Unit 1 (Cycle 24)**

**Table C.2 FW FLOW TO SG A Data Quality for Farley Unit 1 (Cycle 24)**

| | Tag Names | |
|---|---|---|
| **Result Type** | **FE0476B** | **FE0477B** |
| Mean | 4044.35 | 4053.18 |
| Std. Dev. | 6.73 | 6.80 |
| Skewness | 0.02 | 0.02 |
| Kurtosis | 0.90 | 0.90 |

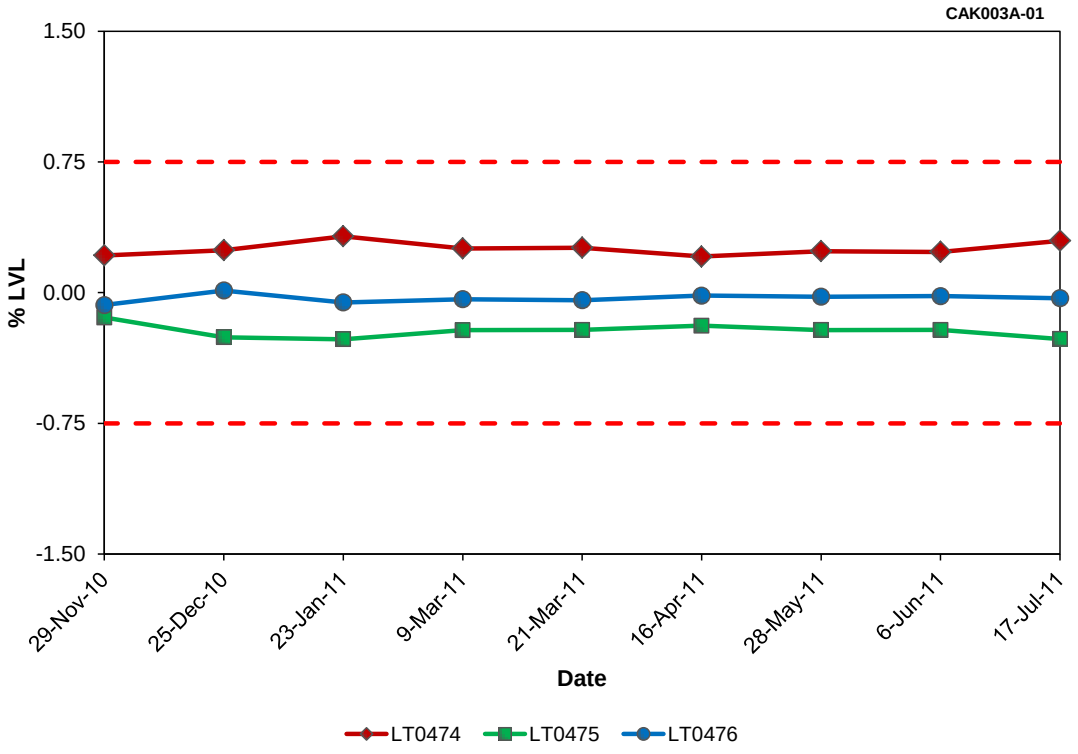



**Figure C.11 SG A LEVEL Steady-State Deviation at Farley Unit 1 (Cycle 24)**

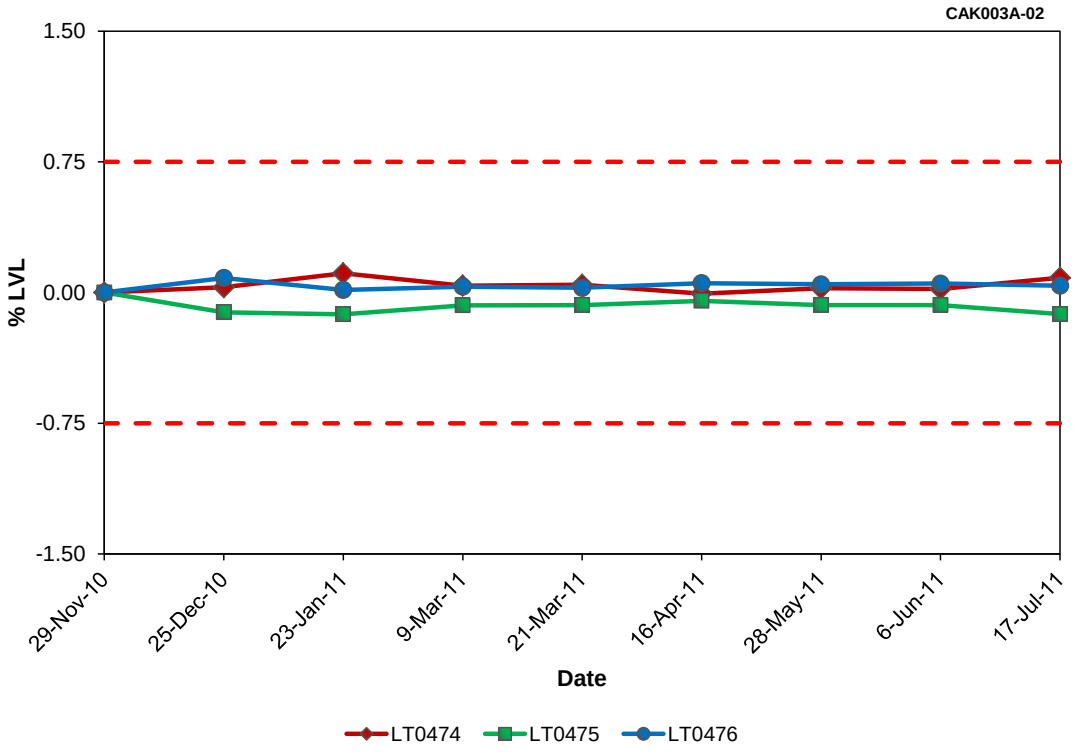



**Figure C.12 SG A LEVEL Steady-State Drift at Farley Unit 1 (Cycle 24)**

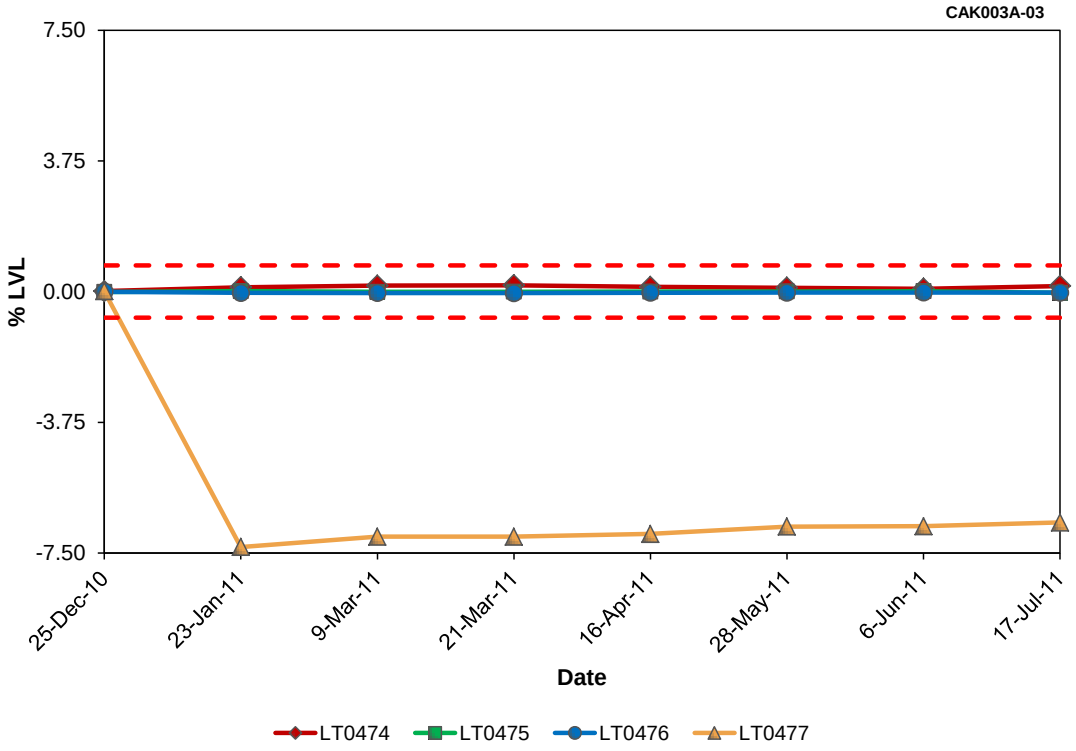



**Figure C.13 SG A LEVEL Steady-State Residual AAKR at Farley Unit 1 (Cycle 24)**

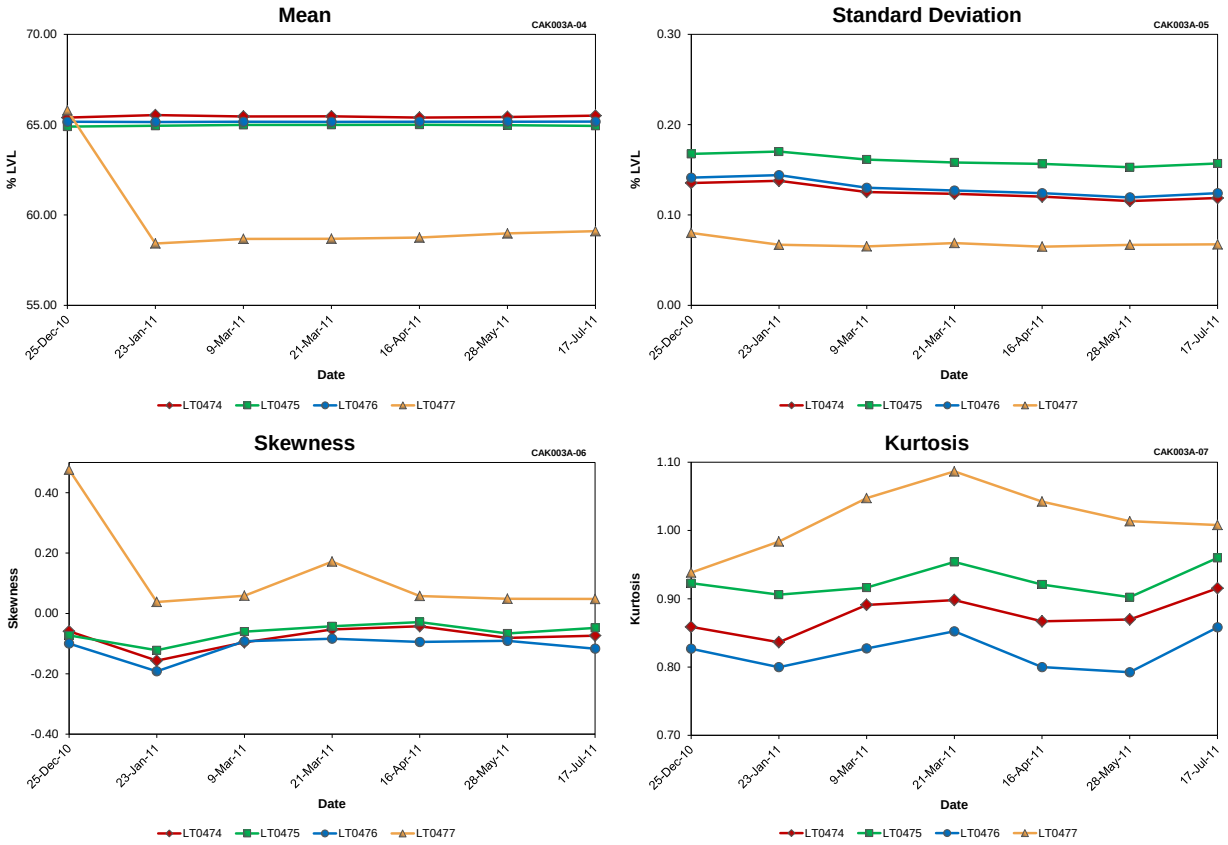



**Figure C.14 SG A LEVEL Data Quality Statistics at Farley Unit 1 (Cycle 24)**

**Table C.3 SG A LEVEL Data Quality for Farley Unit 1 (Cycle 24)**

| Result Type | Tag Names | | | |
|---|---|---|---|---|
| | LT0474 | LT0475 | LT0476 | LT0477 |
| Mean | 65.45 | 64.96 | 65.16 | 59.77 |
| Std. Dev. | 0.13 | 0.16 | 0.13 | 0.07 |
| Skewness | -0.08 | -0.06 | -0.11 | 0.13 |
| Kurtosis | 0.88 | 0.93 | 0.82 | 1.02 |

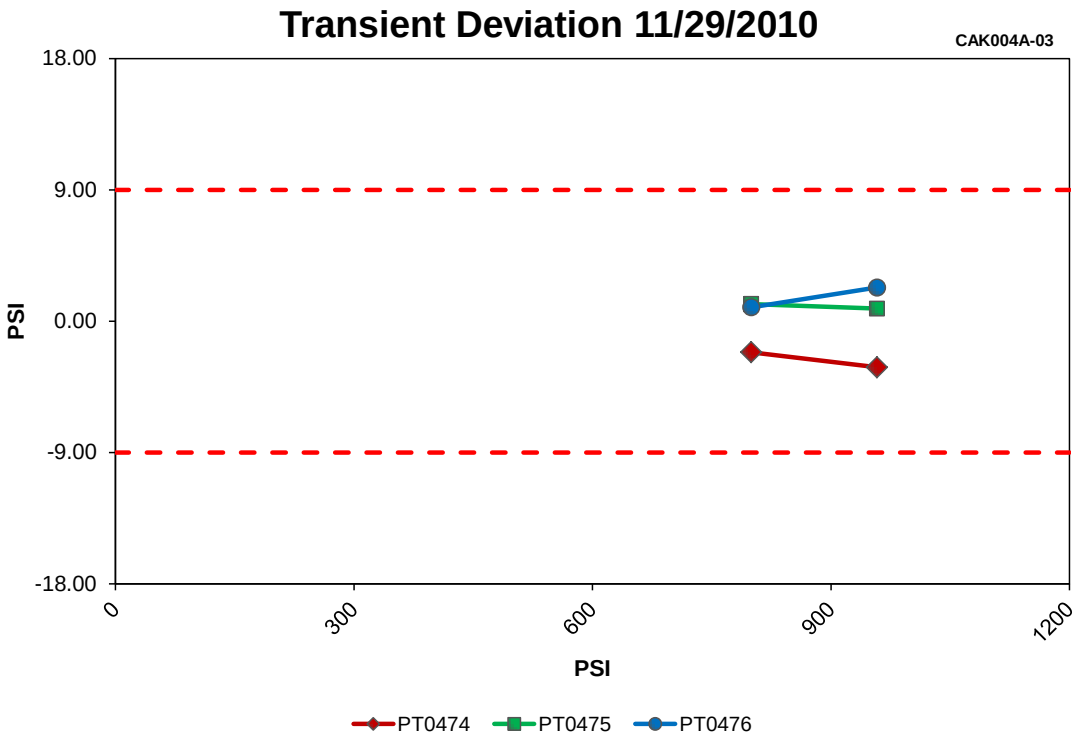



**Figure C.15 SG A OUTLET PRESSURE Transient Deviation at Farley Unit 1 (Cycle 24)**

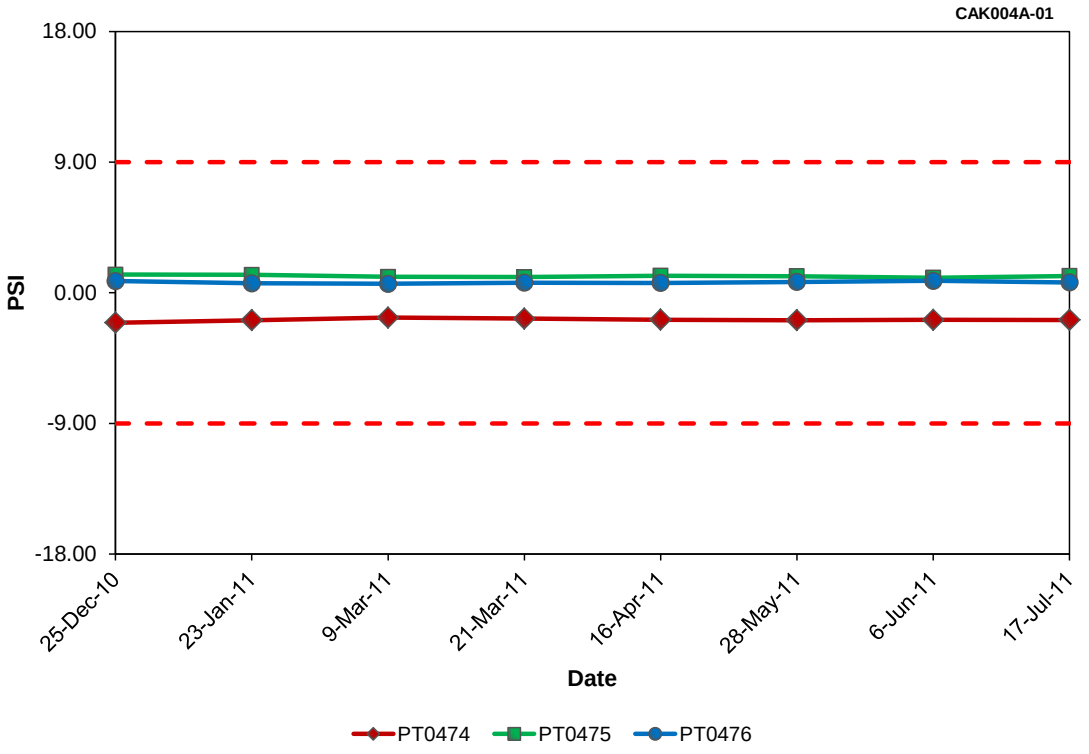



**Figure C.16 SG A OUTLET PRESSURE Steady-State Deviation at Farley Unit 1 (Cycle 24)**

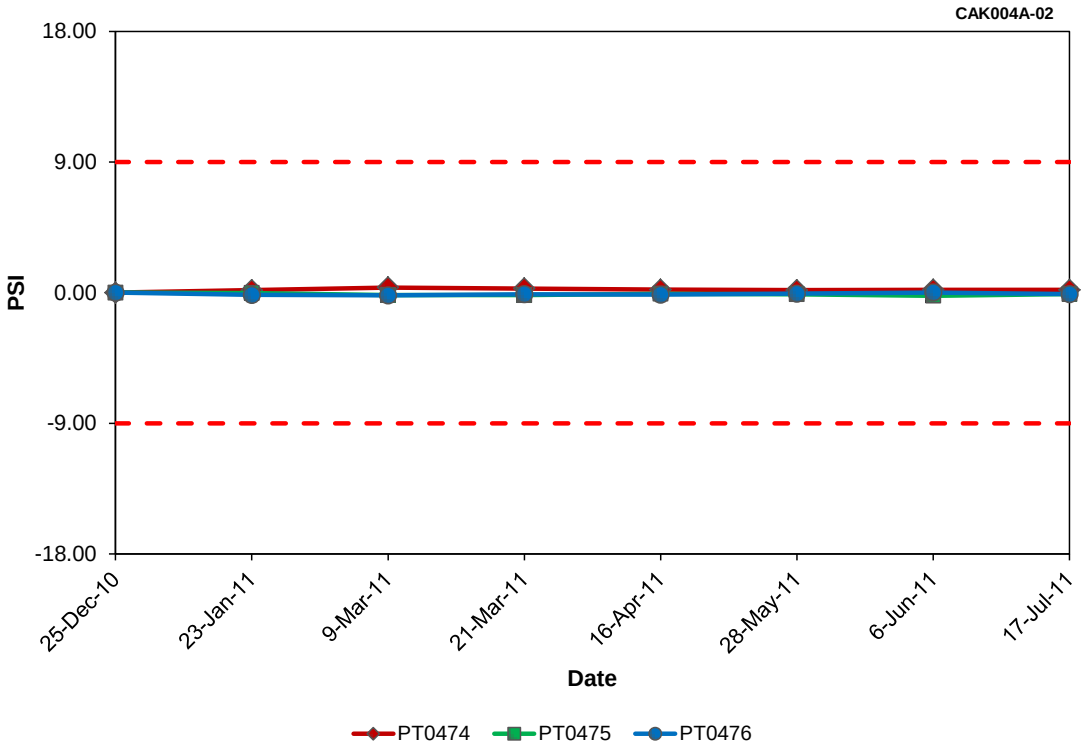



**Figure C.17 SG A OUTLET PRESSURE Steady-State Drift at Farley Unit 1 (Cycle 24)**

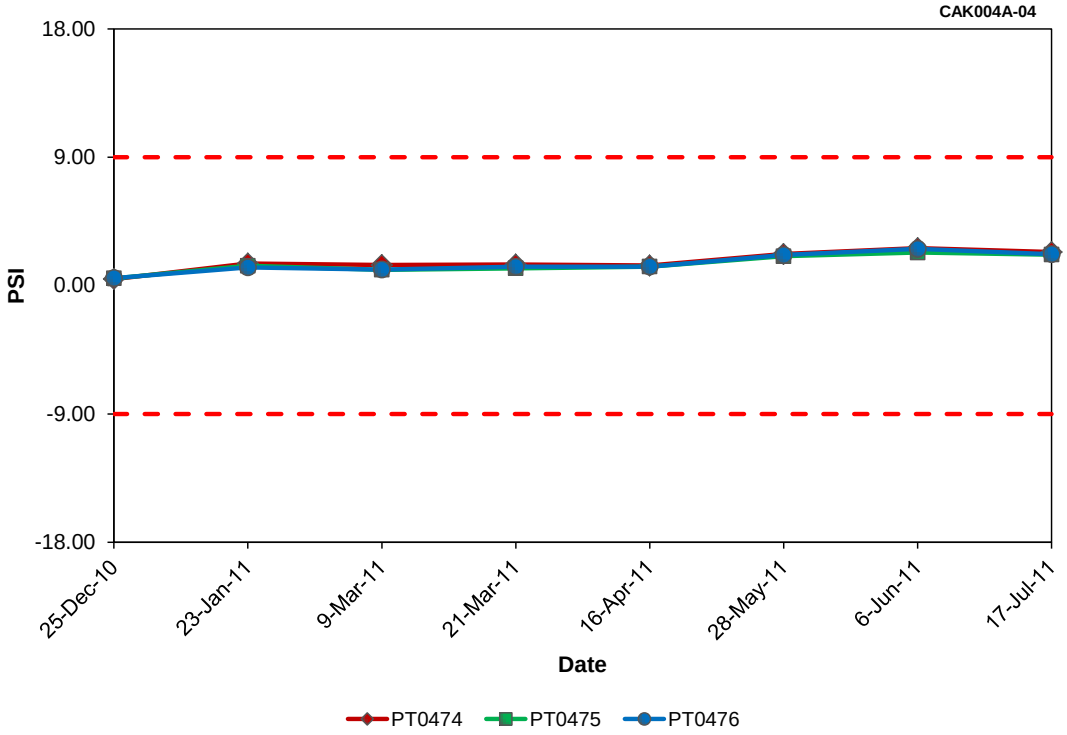



**Figure C.18 SG A OUTLET PRESSURE Steady-State Residual AAKR at Farley Unit 1 (Cycle 24)**

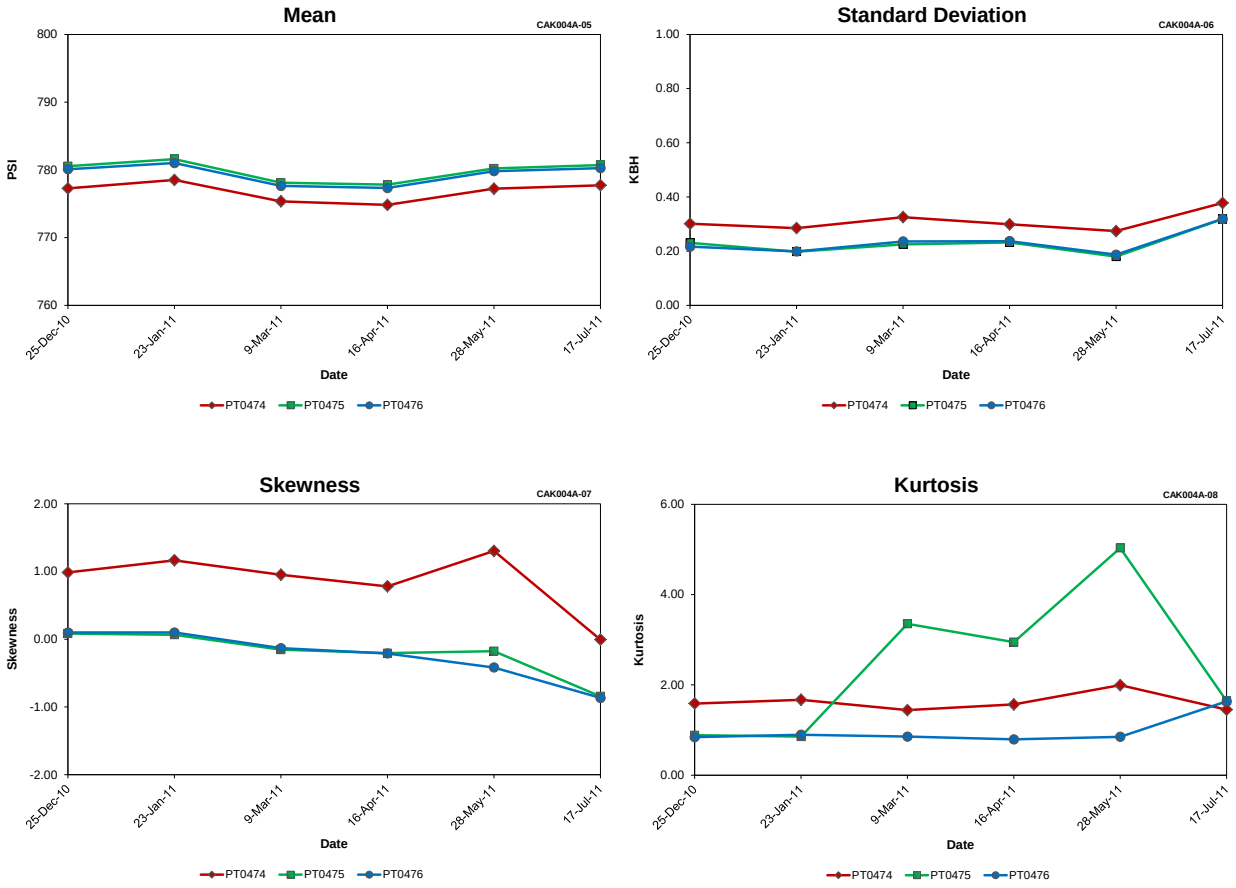



**Figure C.19 SG A OUTLET PRESSURE Data Quality Statistics at Farley Unit 1 (Cycle 24)**

**Table C.4 SG A OUTLET PRESSURE Data Quality for Farley Unit 1 (Cycle 24)**

| | Tag Names | | |
|---|---|---|---|
| **Result Type** | **PT0474** | **PT0475** | **PT0476** |
| Mean | 776.82 | 779.83 | 779.36 |
| Std. Dev. | 0.31 | 0.23 | 0.23 |
| Skewness | 0.86 | -0.21 | -0.24 |
| Kurtosis | 1.62 | 2.45 | 0.98 |

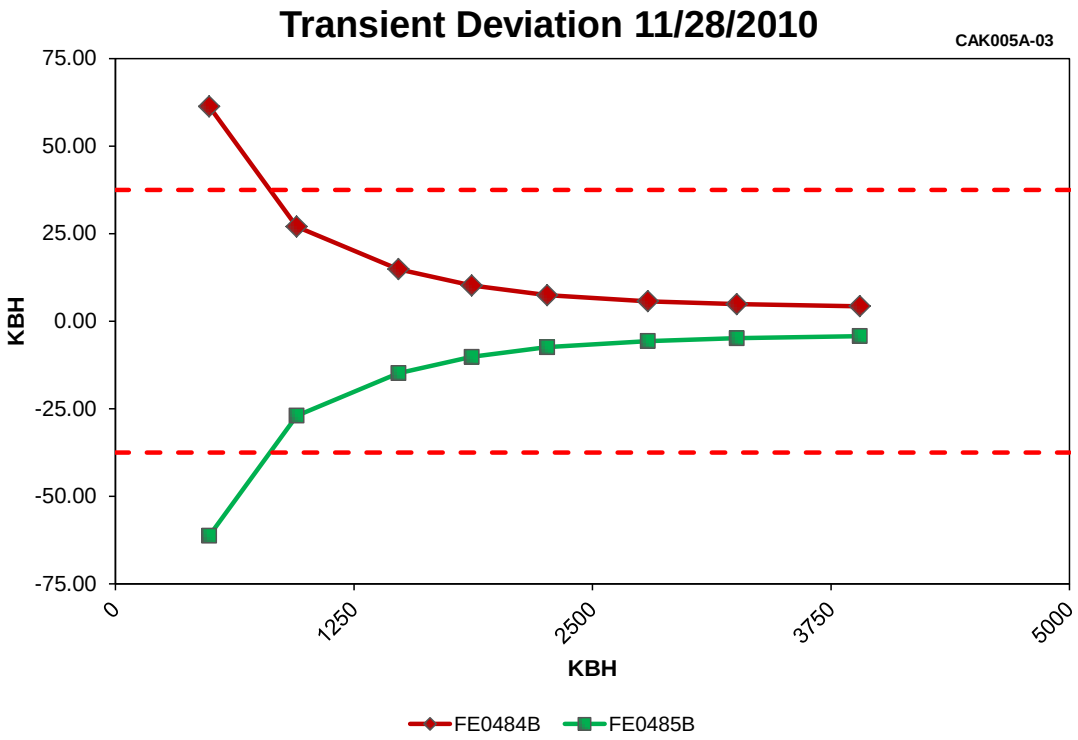



**Figure C.20 SG B STEAM FLOW Transient Deviation at Farley Unit 1 (Cycle 24)**

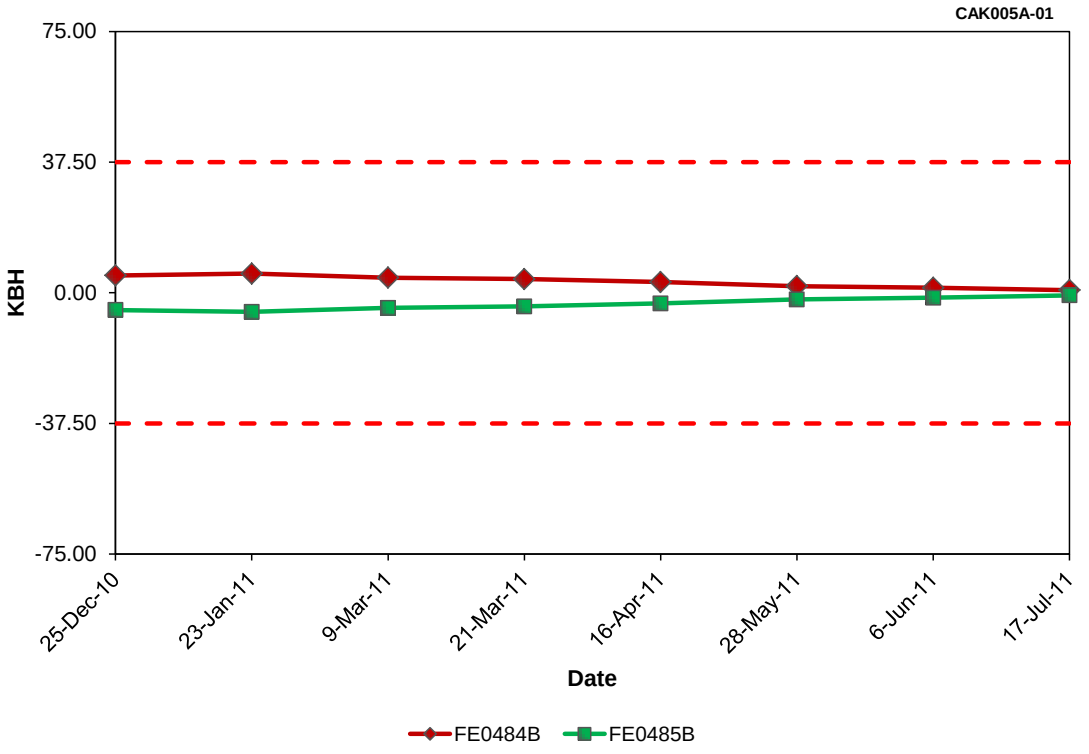



**Figure C.21 SG B STEAM FLOW Steady-State Deviation at Farley Unit 1 (Cycle 24)**

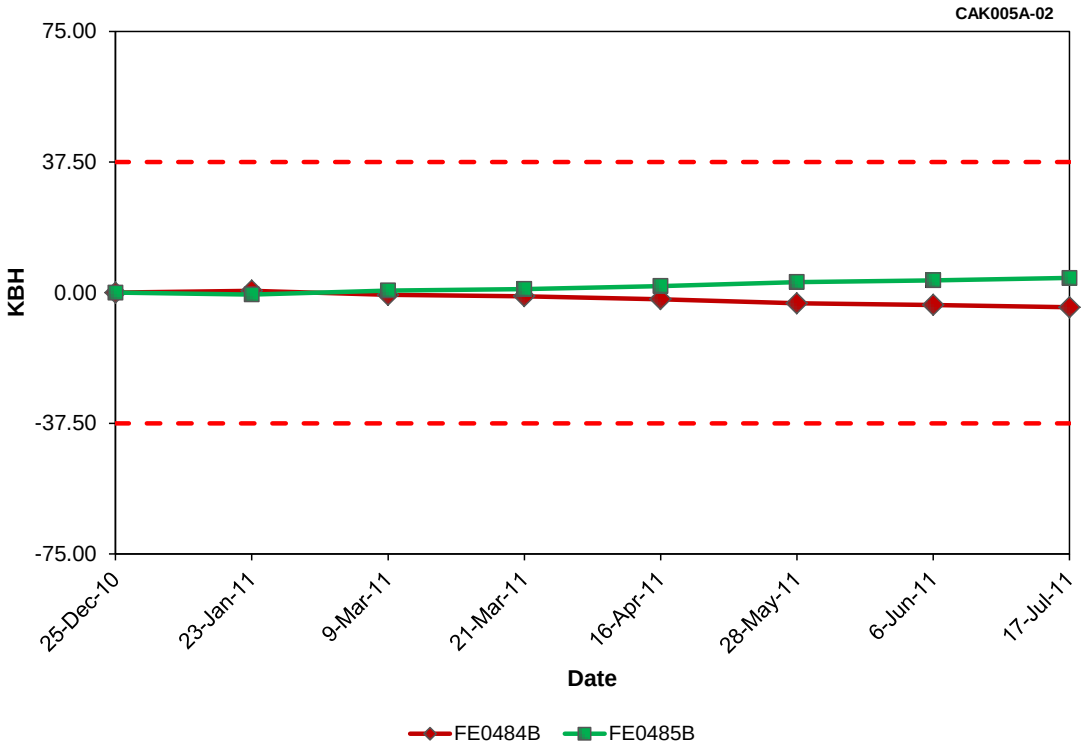



**Figure C.22 SG B STEAM FLOW Steady-State Drift at Farley Unit 1 (Cycle 24)**

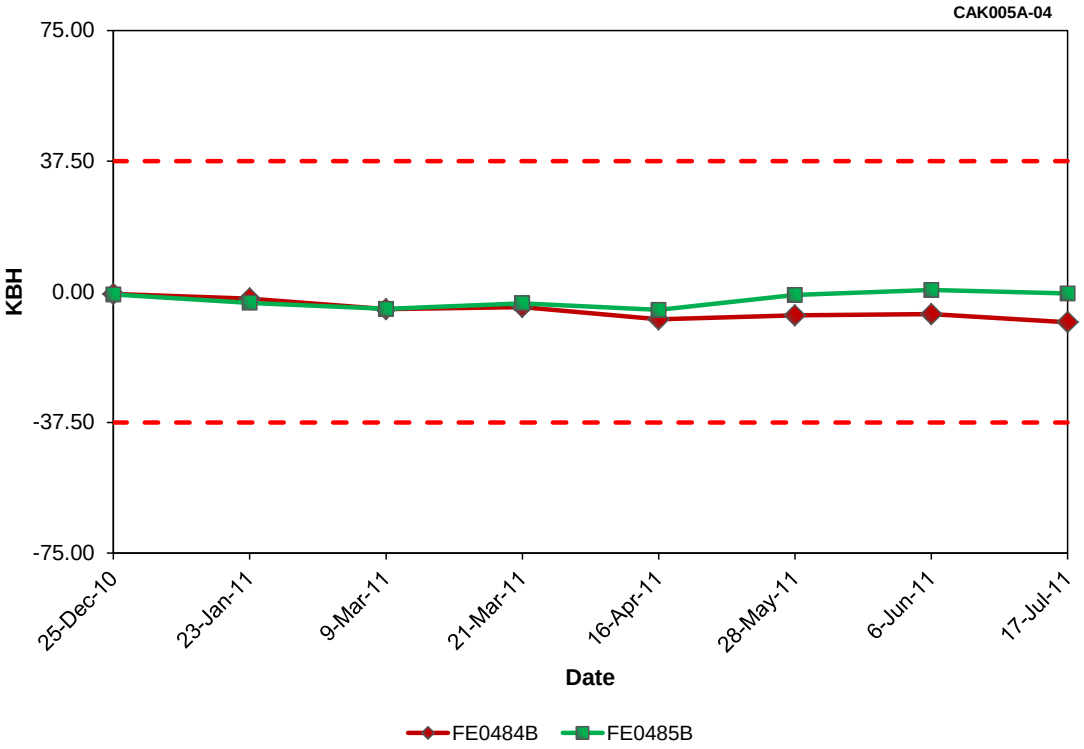



**Figure C.23 SG B STEAM FLOW Steady-State Residual AAKR at Farley Unit 1 (Cycle 24)**

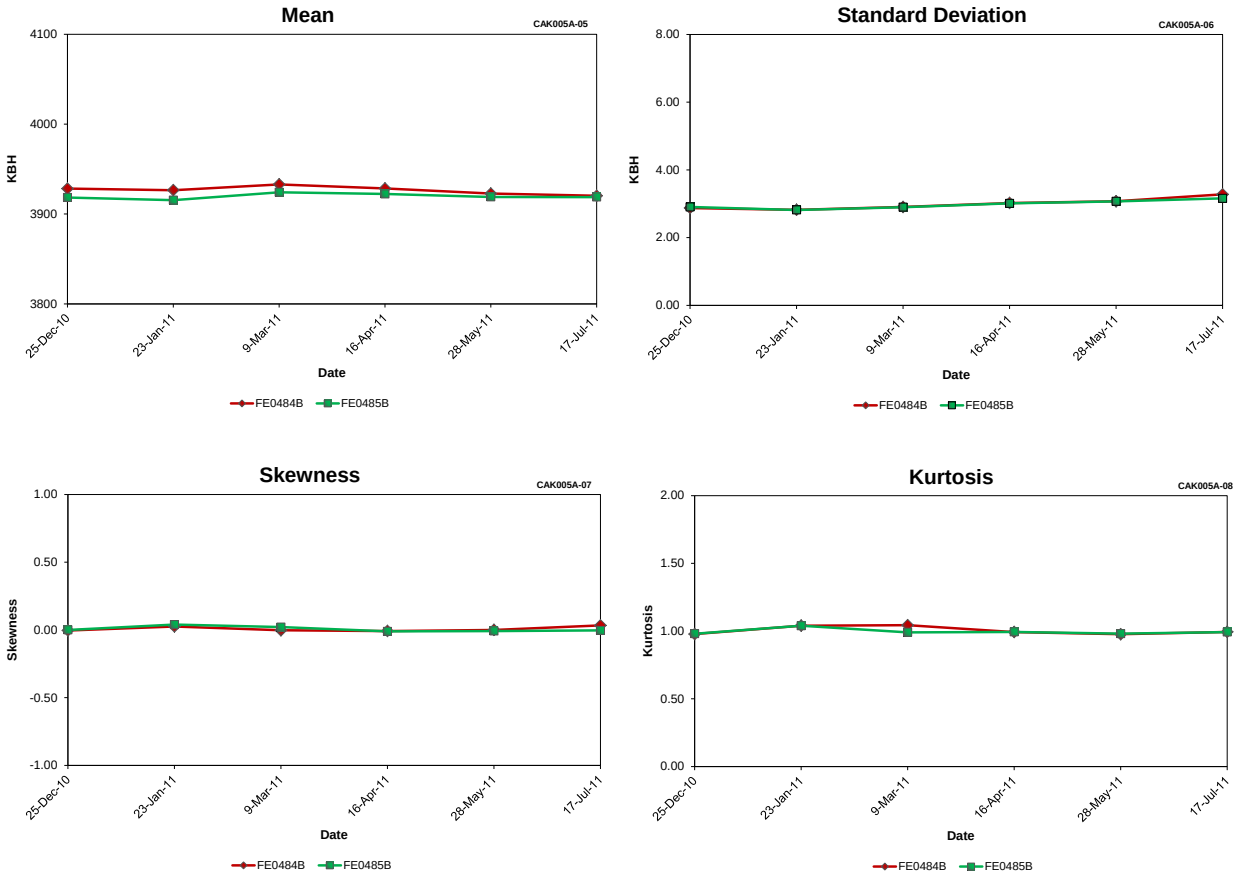



**Figure C.24 SG B STEAM FLOW Data Quality Statistics at Farley Unit 1 (Cycle 24)**

**Table C.5 SG B STEAM FLOW Data Quality for Farley Unit 1 (Cycle 24)**

| | Tag Names | |
|---|---|---|
| Result Type | FE0484B | FE0485B |
| Mean | 3926.53 | 3919.69 |
| Std. Dev. | 3.00 | 2.98 |
| Skewness | 0.01 | 0.01 |
| Kurtosis | 1.00 | 1.00 |

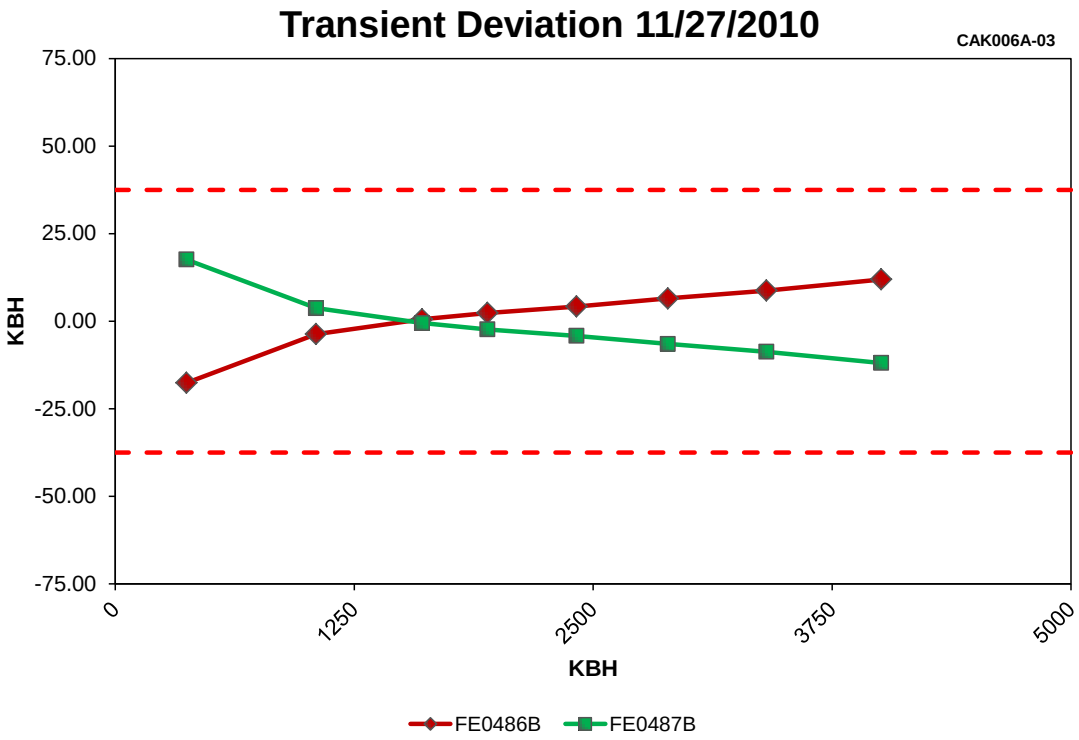



**Figure C.25 FW FLOW TO SG B Transient Deviation at Farley Unit 1 (Cycle 24)**

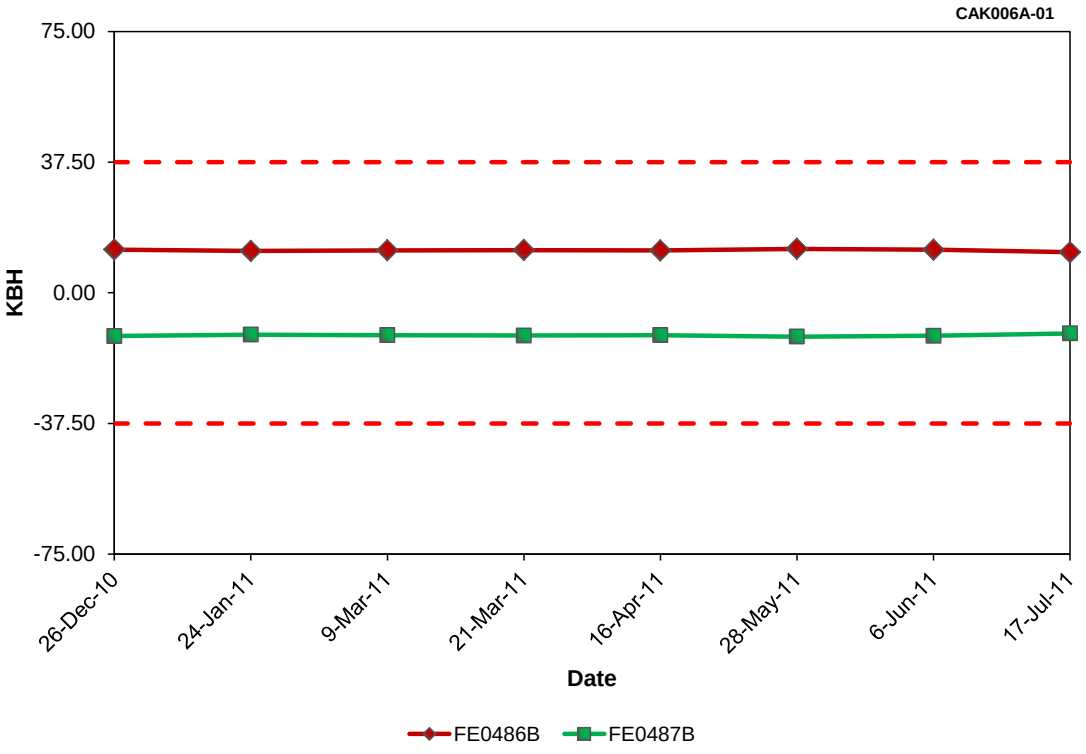



**Figure C.26 FW FLOW TO SG B Steady-State Deviation at Farley Unit 1 (Cycle 24)**

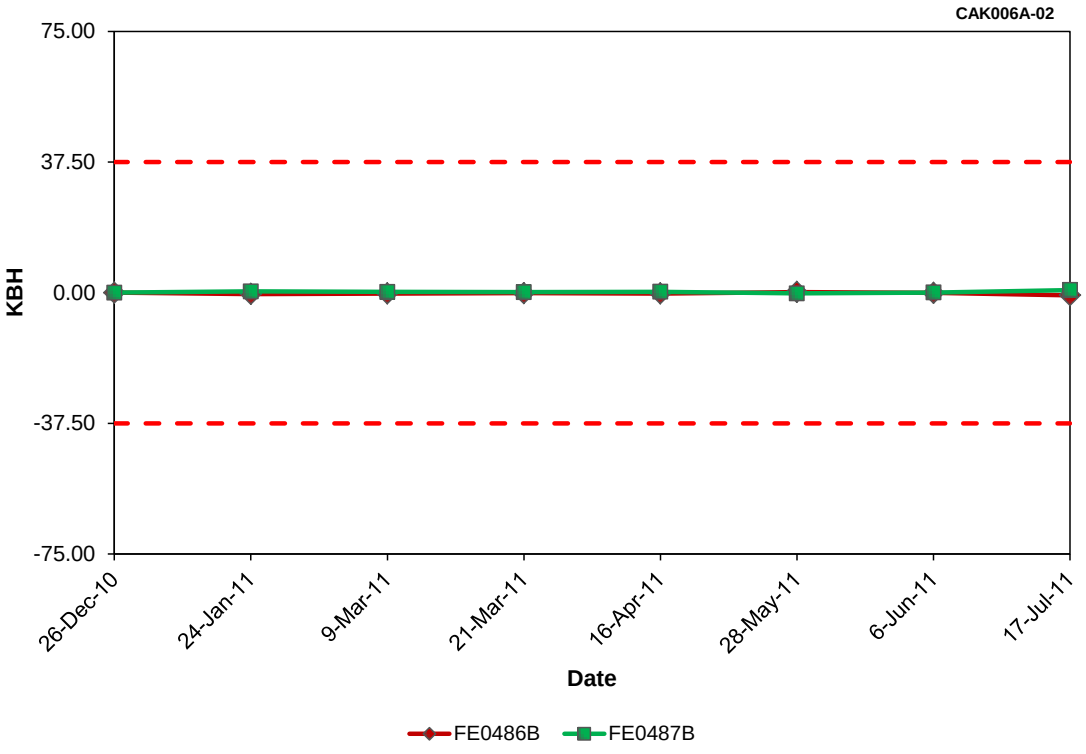



**Figure C.27 FW FLOW TO SG B Steady-State Drift at Farley Unit 1 (Cycle 24)**

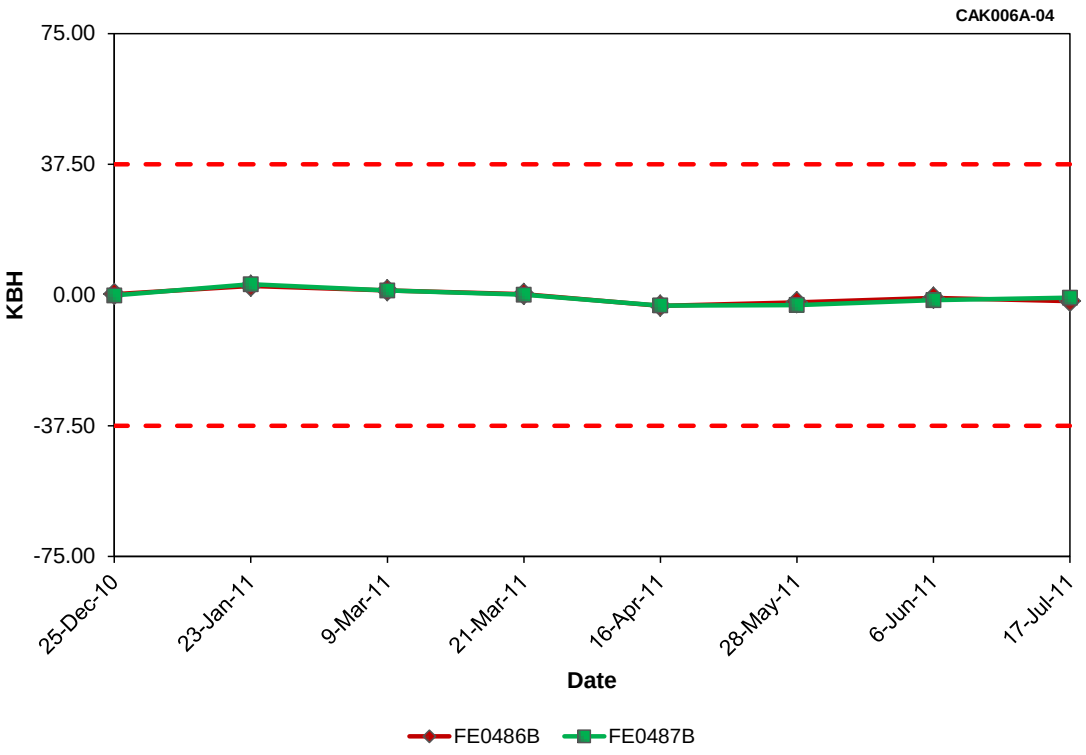



**Figure C.28 FW FLOW TO SG B Steady-State Residual AAKR at Farley Unit 1 (Cycle 24)**

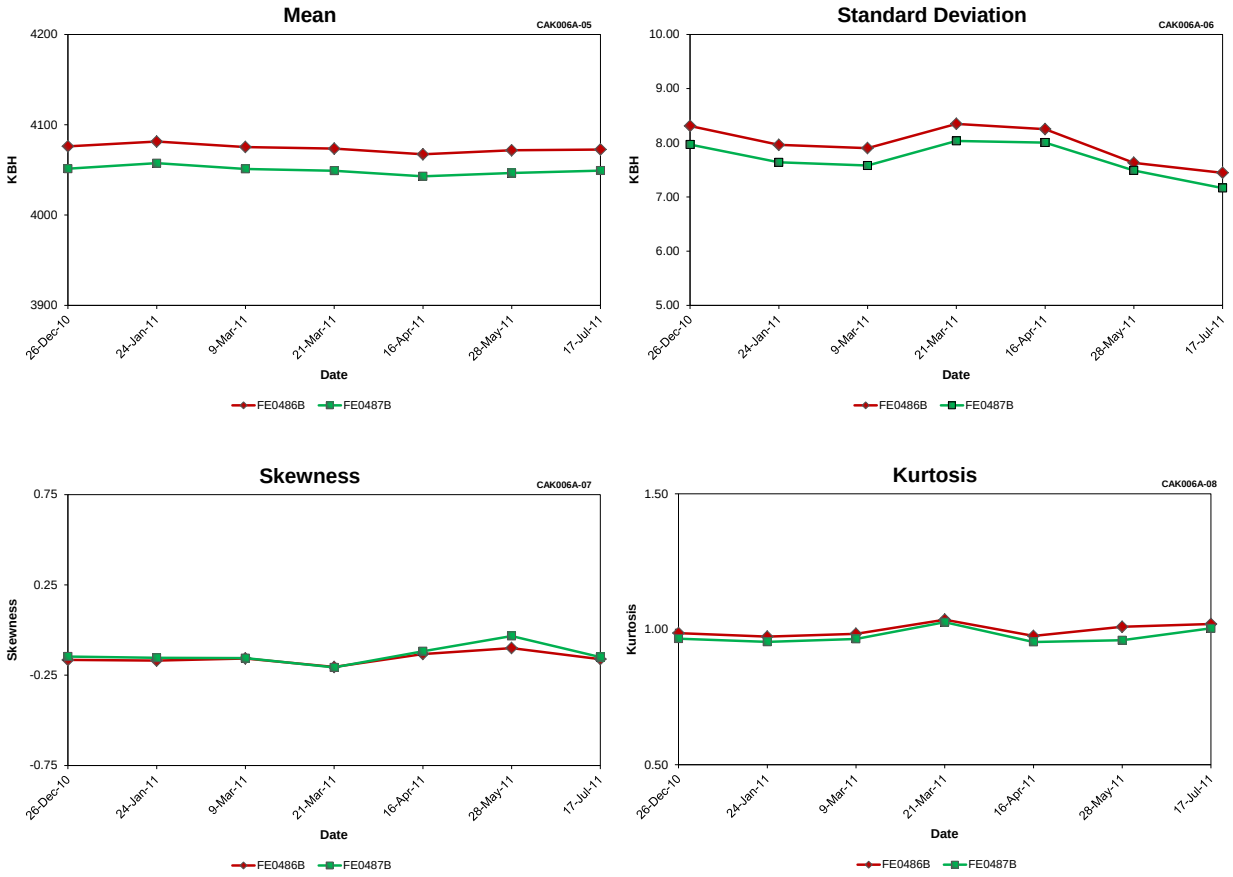



**Figure C.29 FW FLOW TO SG B Data Quality Statistics at Farley Unit 1 (Cycle 24)**

**Table C.6 FW FLOW TO SG B Data Quality for Farley Unit 1 (Cycle 24)**

| | Tag Names | |
|---|---|---|
| **Result Type** | **FE0486B** | **FE0487B** |
| Mean | 4073.98 | 4049.65 |
| Std. Dev. | 7.98 | 7.70 |
| Skewness | -0.16 | -0.14 |
| Kurtosis | 1.00 | 0.97 |

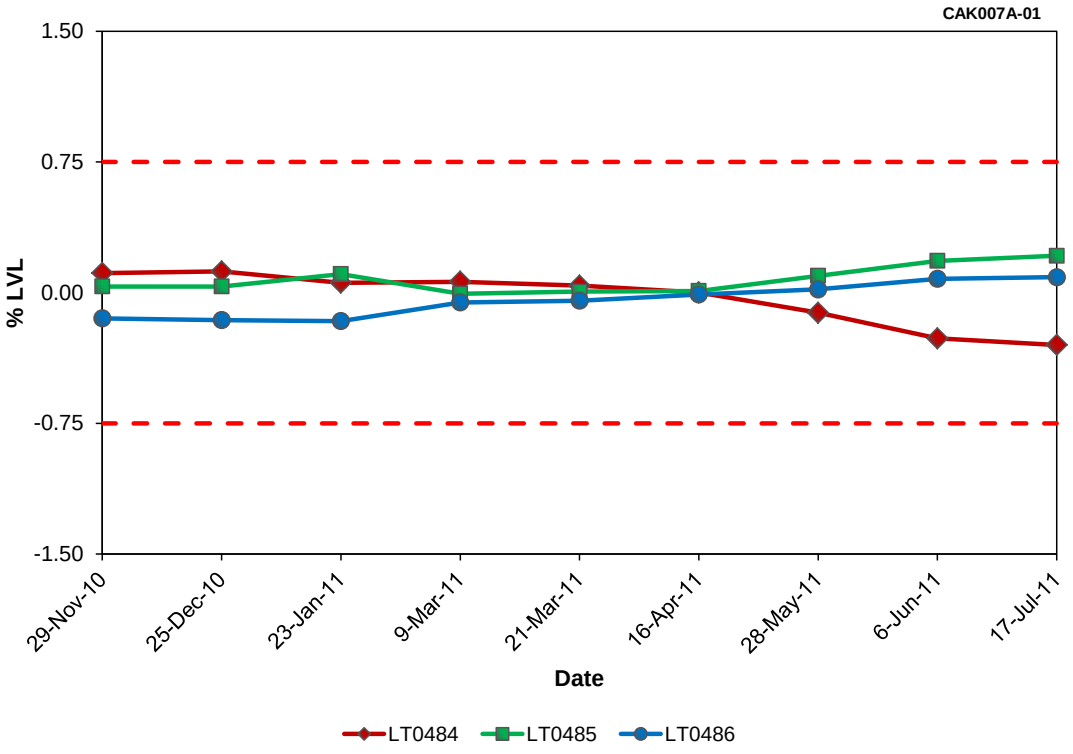



**Figure C.30 SG B LEVEL Steady-State Deviation at Farley Unit 1 (Cycle 24)**

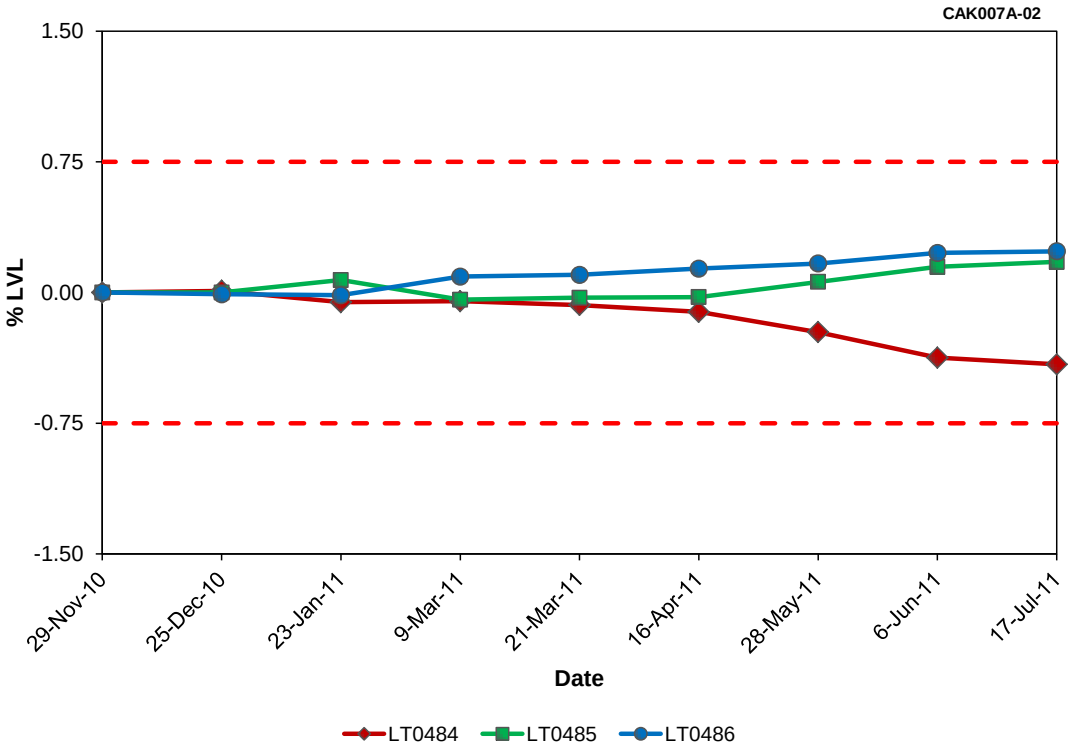



**Figure C.31 SG B LEVEL Steady-State Drift at Farley Unit 1 (Cycle 24)**

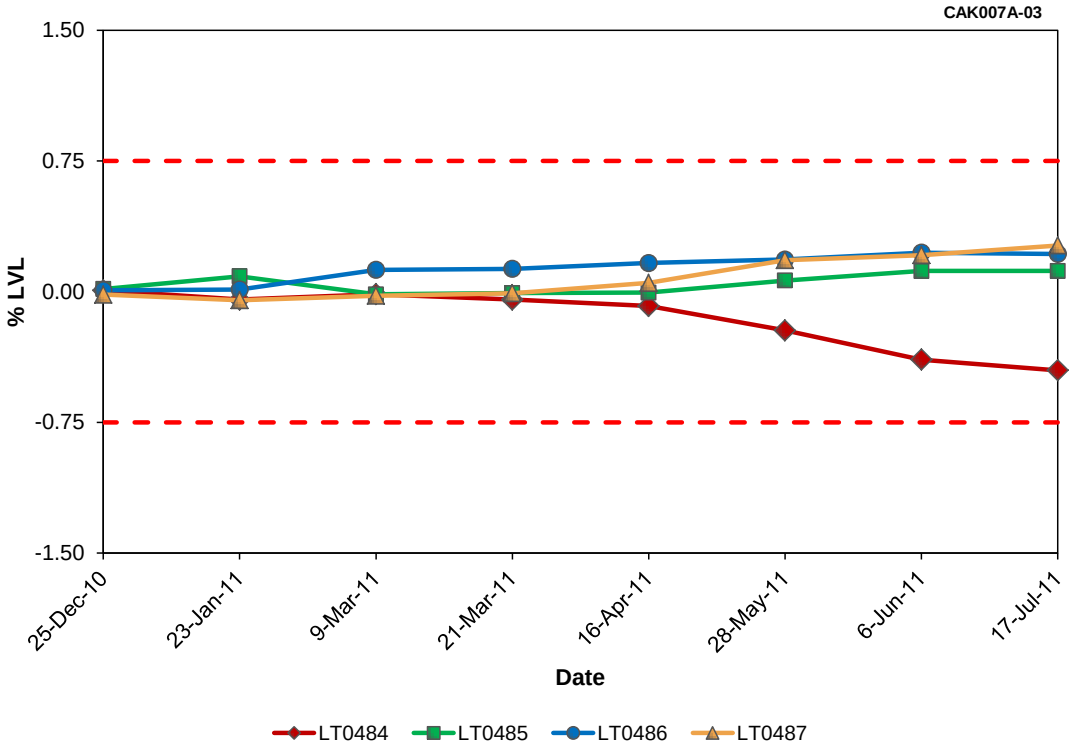



**Figure C.32 SG B LEVEL Steady-State Residual AAKR at Farley Unit 1 (Cycle 24)**

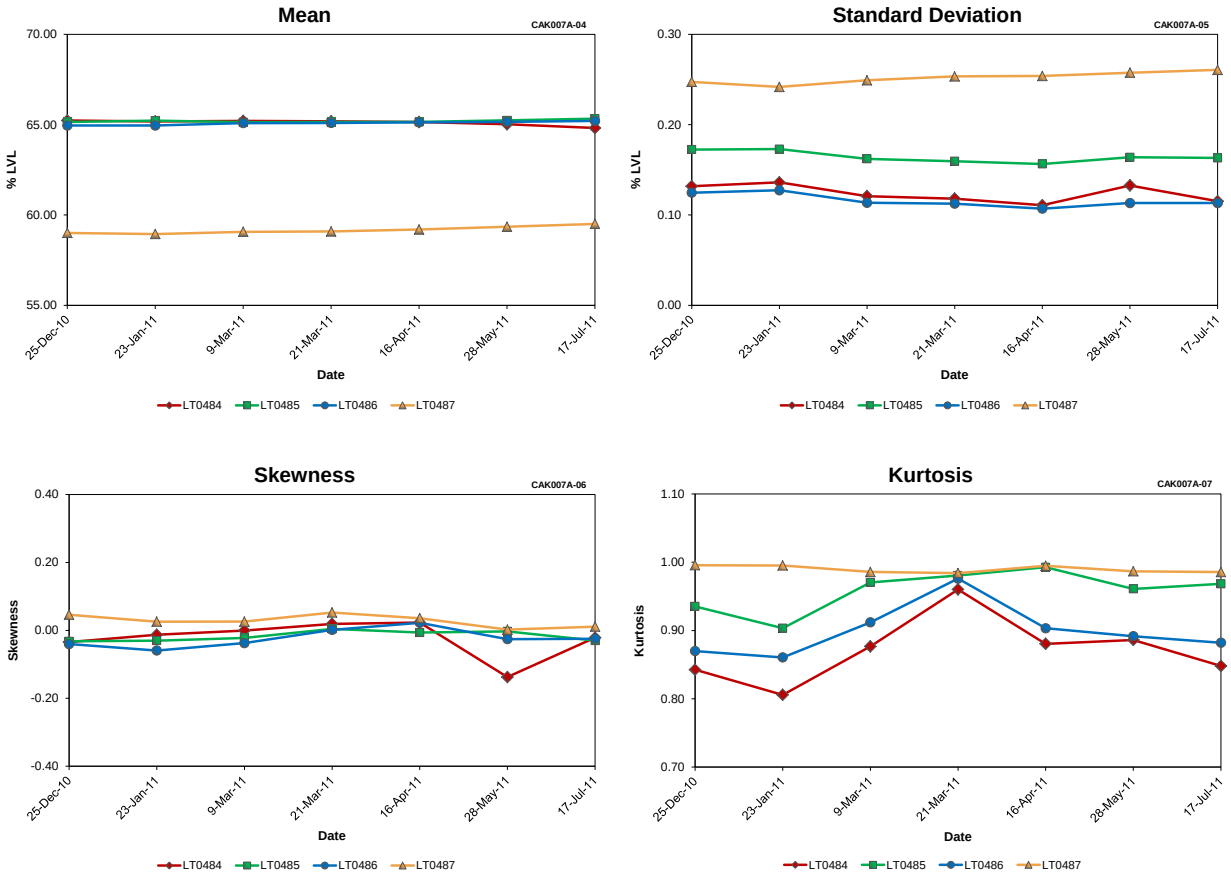



**Figure C.33 SG B LEVEL Data Quality Statistics at Farley Unit 1 (Cycle 24)**

**Table C.7 SG B LEVEL Data Quality for Farley Unit 1 (Cycle 24)**

| | Tag Names | | | |
|---|---|---|---|---|
| **Result Type** | **LT0484** | **LT0485** | **LT0486** | **LT0487** |
| Mean | 65.11 | 65.19 | 65.08 | 59.17 |
| Std. Dev. | 0.12 | 0.16 | 0.12 | 0.25 |
| Skewness | -0.02 | -0.02 | -0.02 | 0.03 |
| Kurtosis | 0.87 | 0.96 | 0.90 | 0.99 |

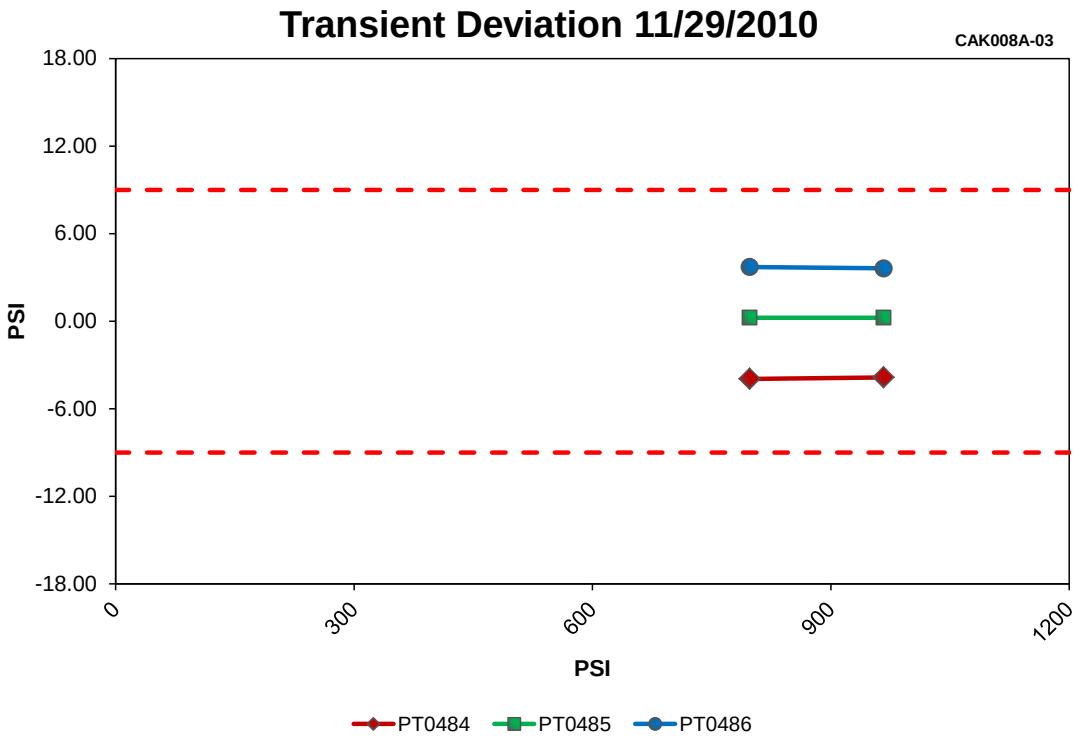



**Figure C.34 SG B OUTLET PRESSURE Transient Deviation at Farley Unit 1 (Cycle 24)**

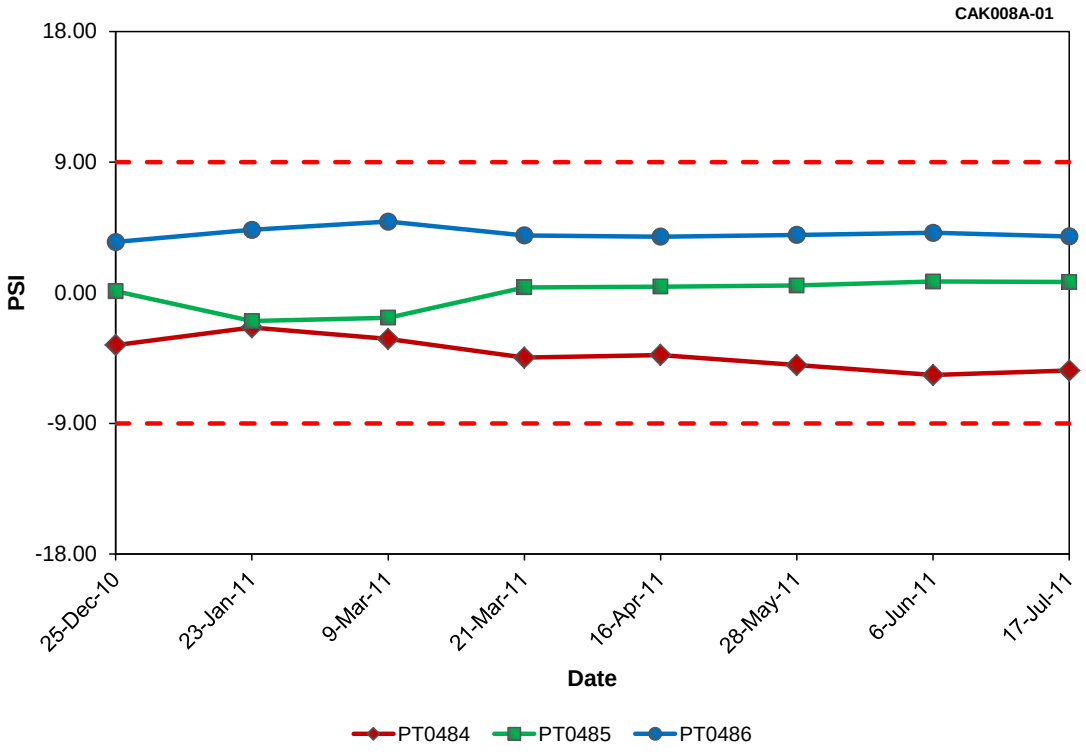



**Figure C.35 SG B OUTLET PRESSURE Steady-State Deviation at Farley Unit 1 (Cycle 24)**

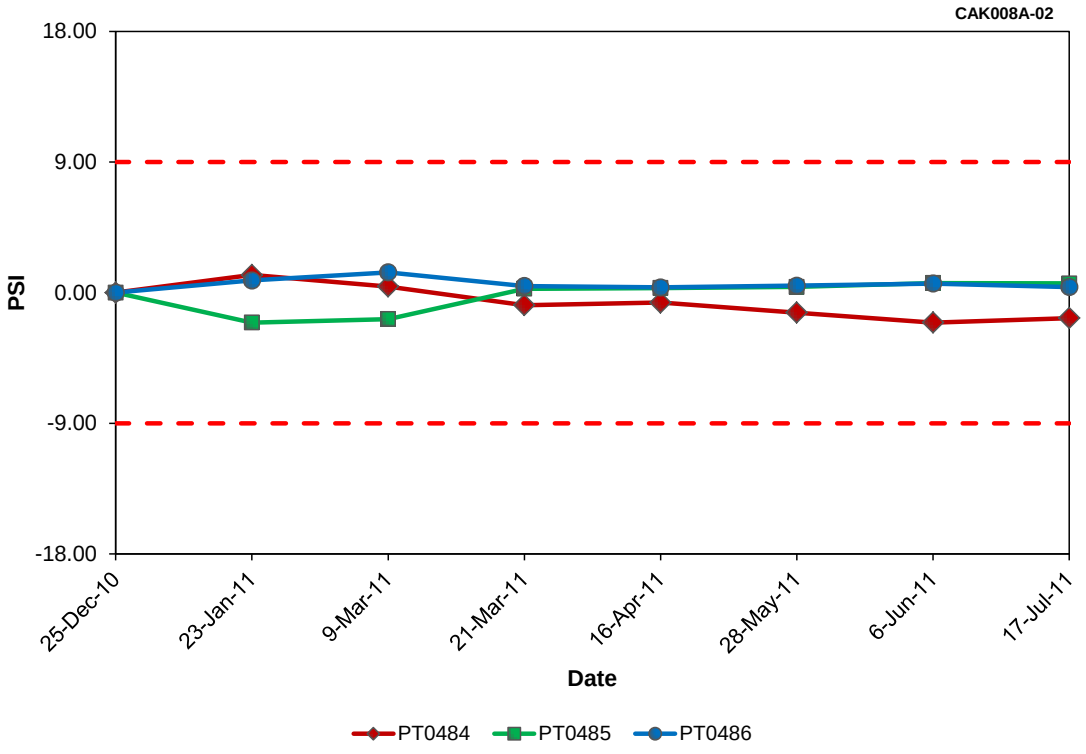



**Figure C.36 SG B OUTLET PRESSURE Steady-State Drift at Farley Unit 1 (Cycle 24)**

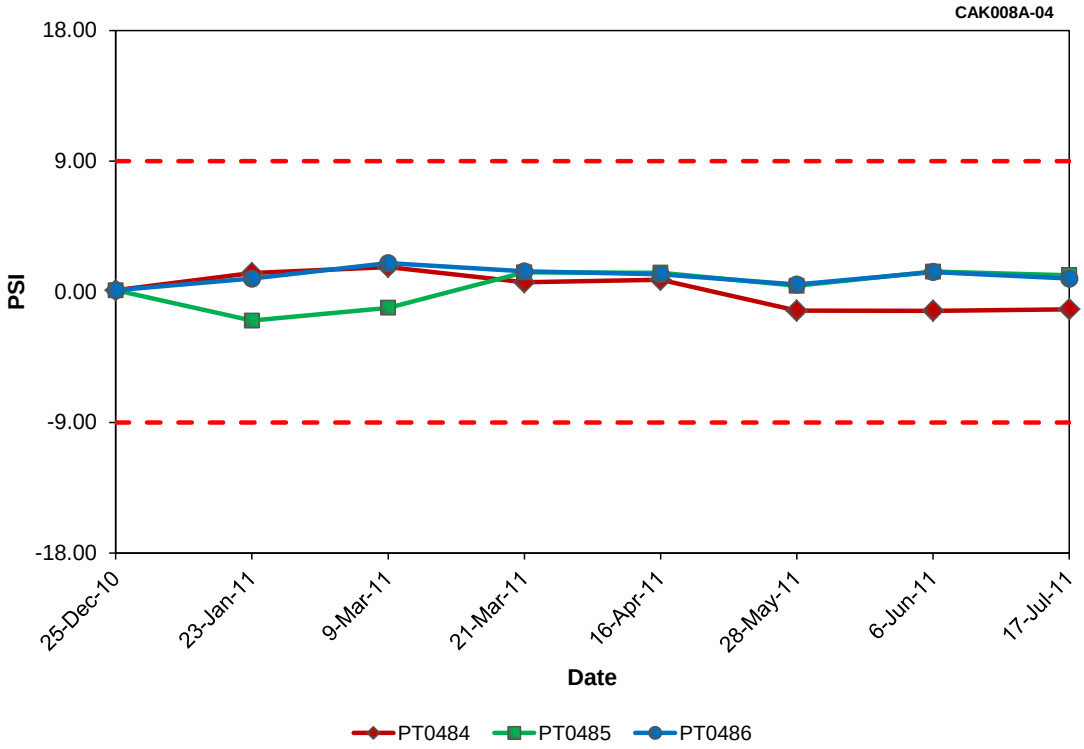



**Figure C.37 SG B OUTLET PRESSURE Steady-State Residual AAKR at Farley Unit 1 (Cycle 24)**

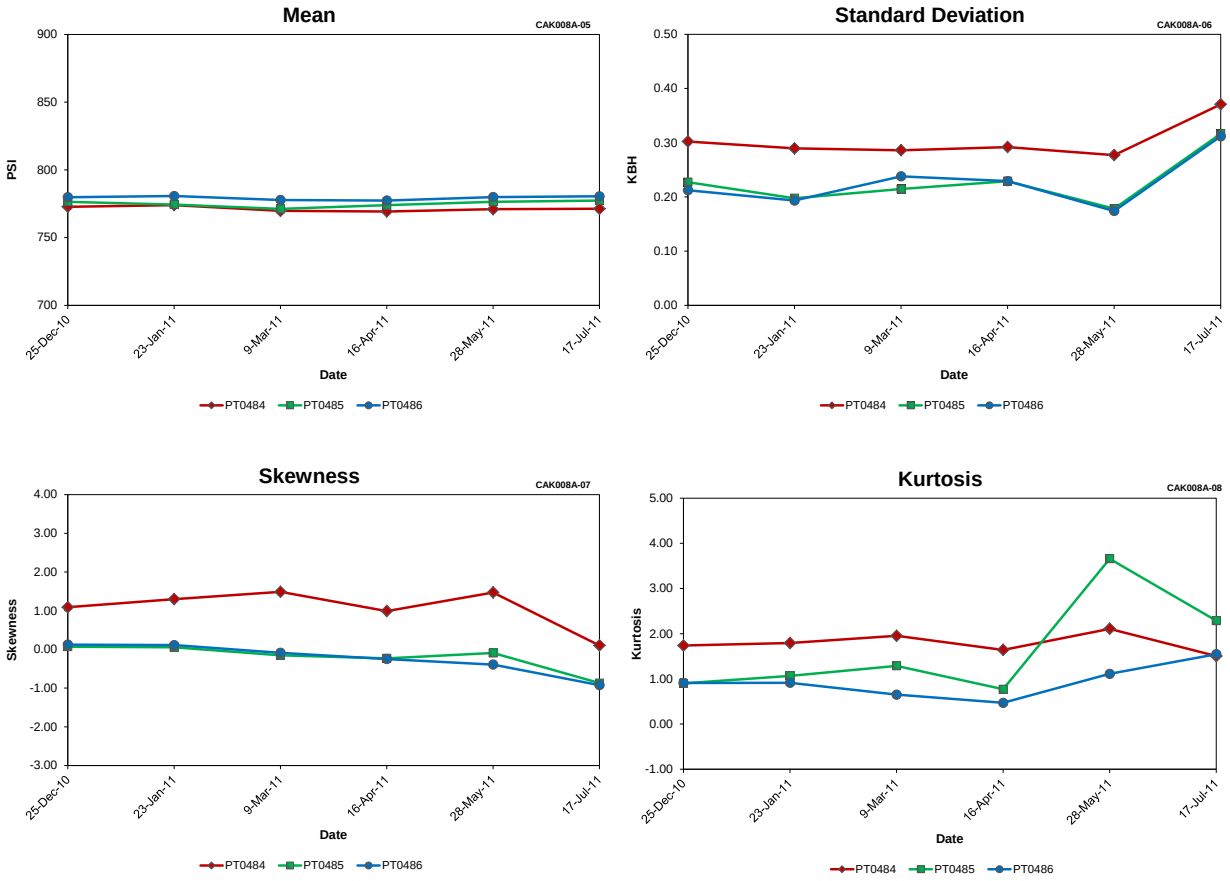



**Figure C.38 SG B OUTLET PRESSURE Data Quality Statistics at Farley Unit 1 (Cycle 24)**

**Table C.8 SG B OUTLET PRESSURE Data Quality for Farley Unit 1 (Cycle 24)**

| | Tag Names | | |
|---|---|---|---|
| **Result Type** | **PT0484** | **PT0485** | **PT0486** |
| Mean | 771.35 | 774.95 | 779.35 |
| Std. Dev. | 0.30 | 0.23 | 0.23 |
| Skewness | 1.07 | -0.20 | -0.24 |
| Kurtosis | 1.79 | 1.66 | 0.93 |

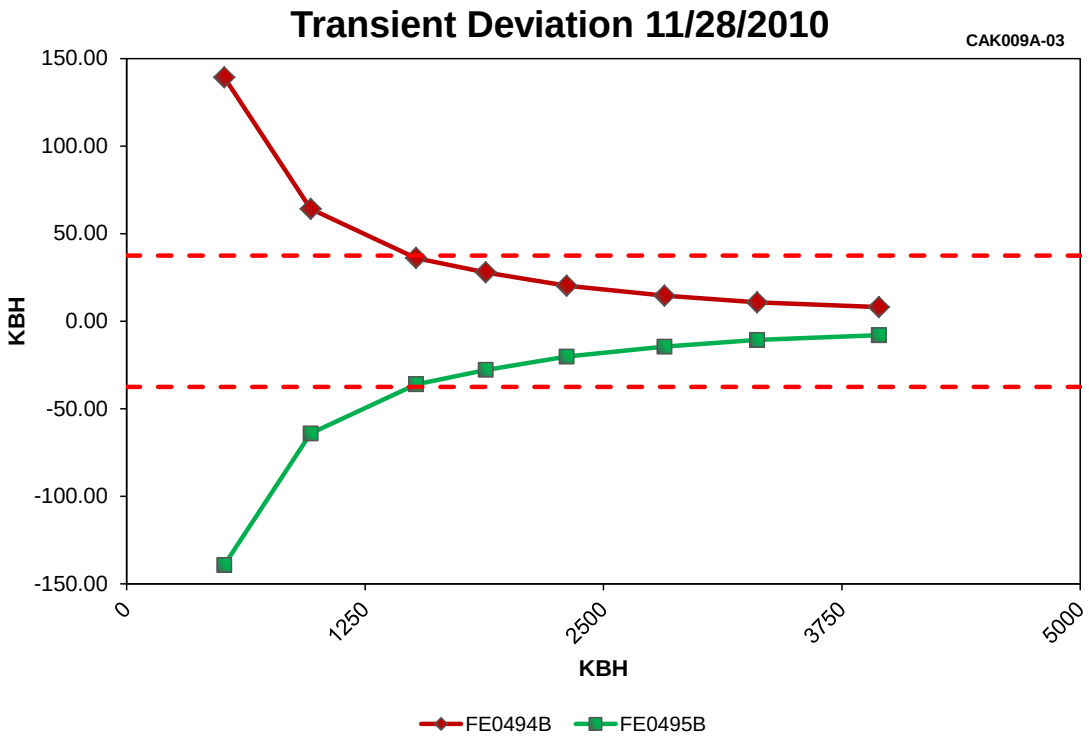



**Figure C.39 SG C STEAM FLOW Transient Deviation at Farley Unit 1 (Cycle 24)**

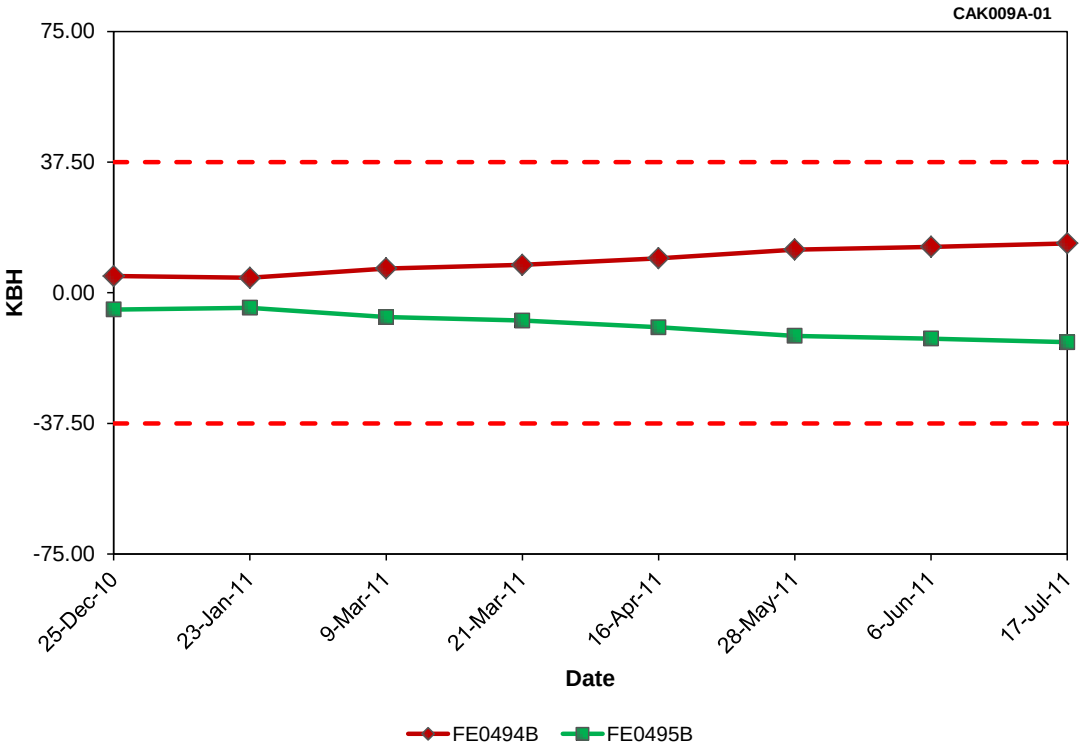



**Figure C.40 SG C STEAM FLOW Steady-State Deviation at Farley Unit 1 (Cycle 24)**

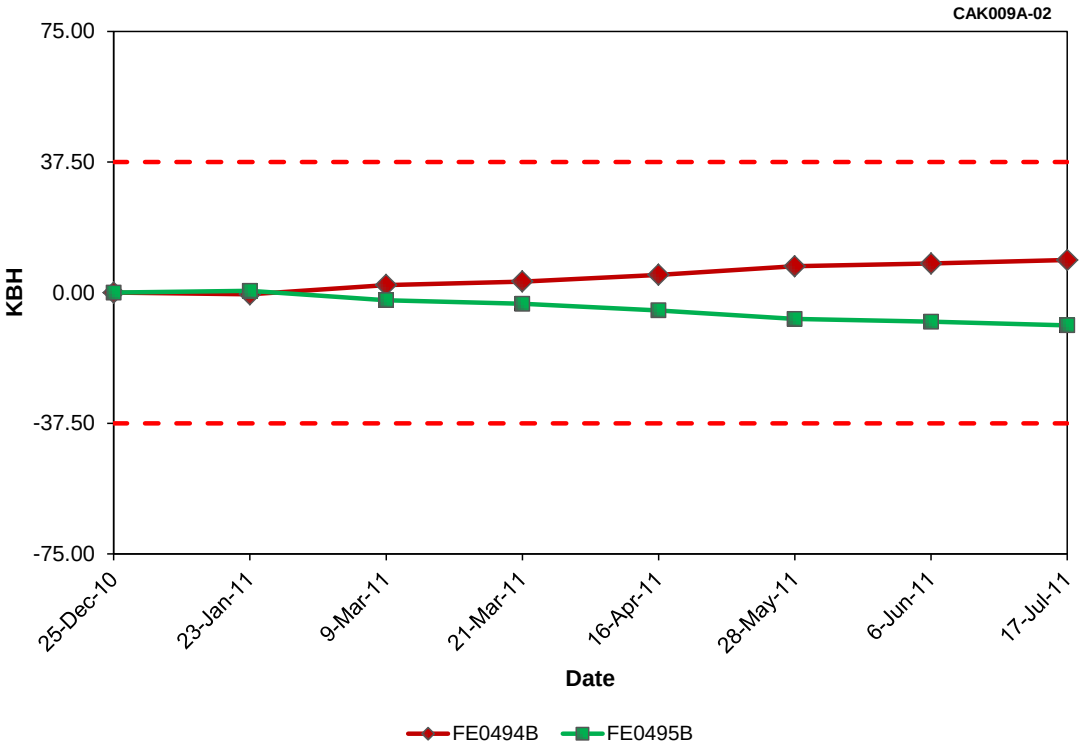



**Figure C.41 SG C STEAM FLOW Steady-State Drift at Farley Unit 1 (Cycle 24)**

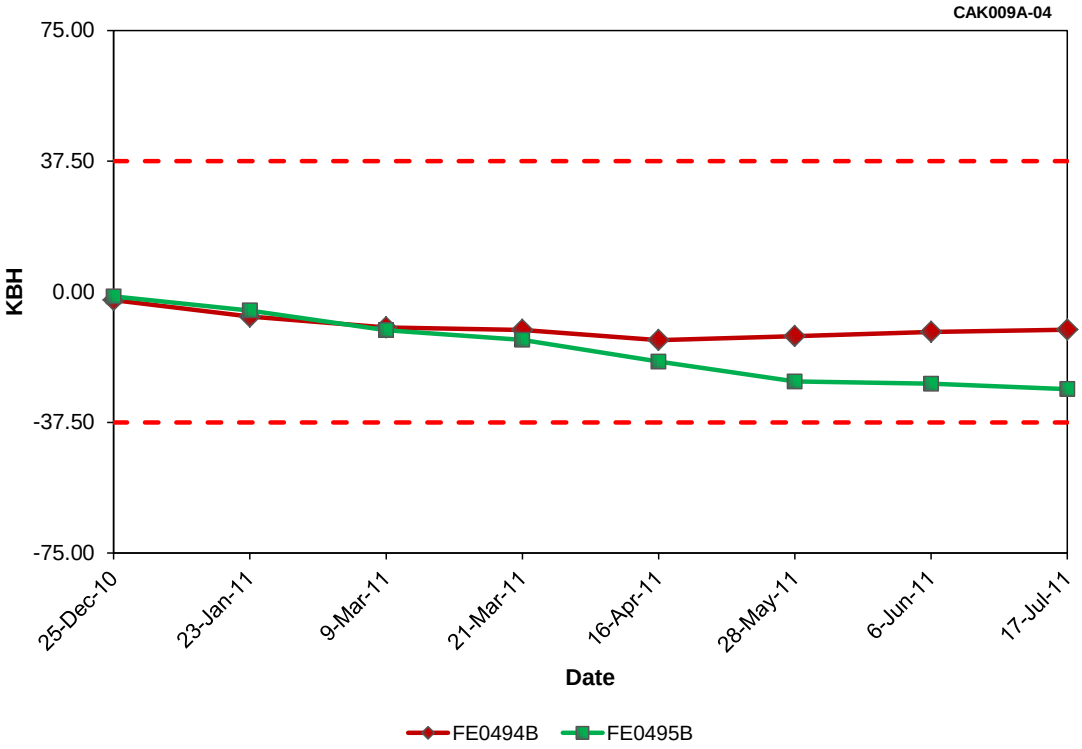



**Figure C.42 SG C STEAM FLOW Steady-State Residual AAKR at Farley Unit 1 (Cycle 24)**

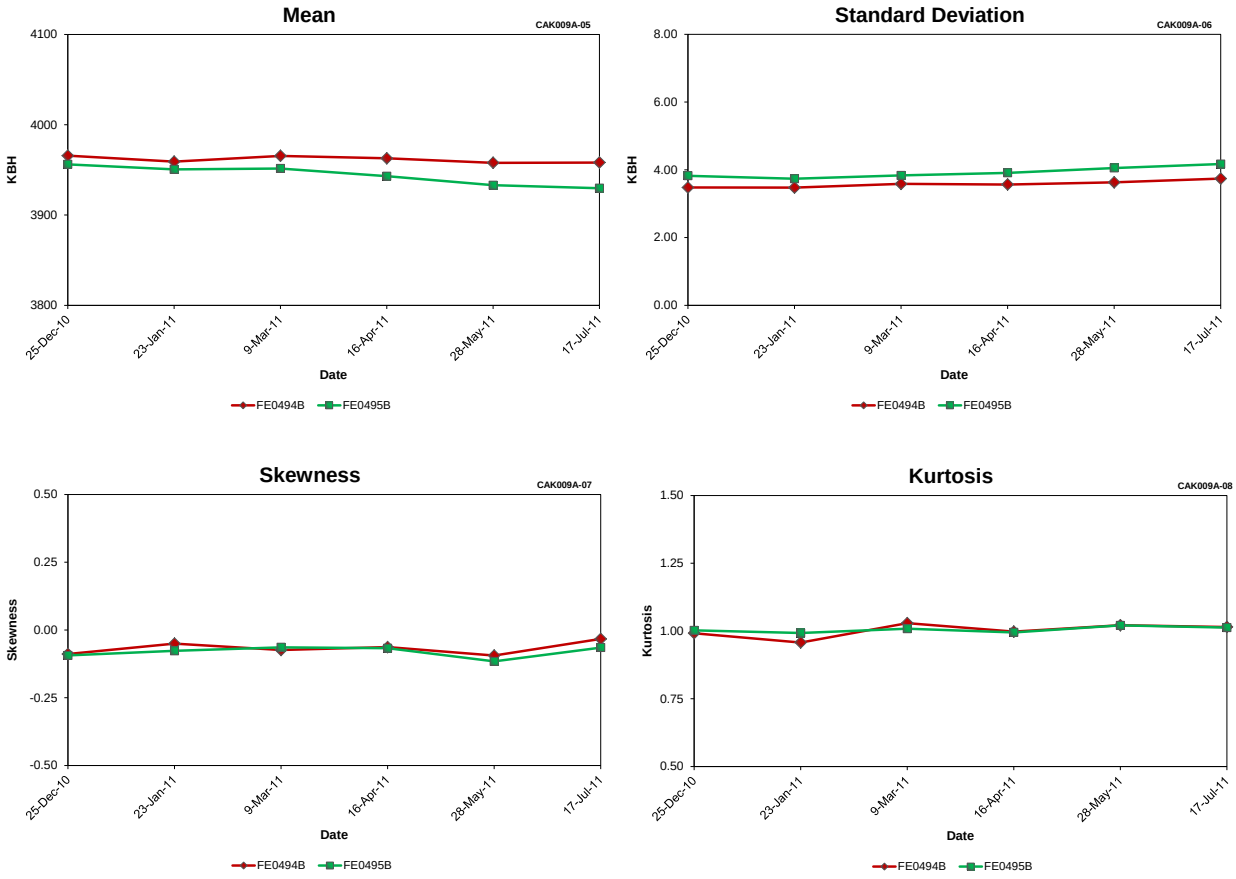



**Figure C.43 SG C STEAM FLOW Data Quality Statistics at Farley Unit 1 (Cycle 24)**

**Table C.9 SG C STEAM FLOW Data Quality for Farley Unit 1 (Cycle 24)**

| Result Type | Tag Names | |
|---|---|---|
| | FE0494B | FE0495B |
| Mean | 3961.53 | 3943.99 |
| Std. Dev. | 3.58 | 3.92 |
| Skewness | -0.07 | -0.08 |
| Kurtosis | 1.00 | 1.01 |

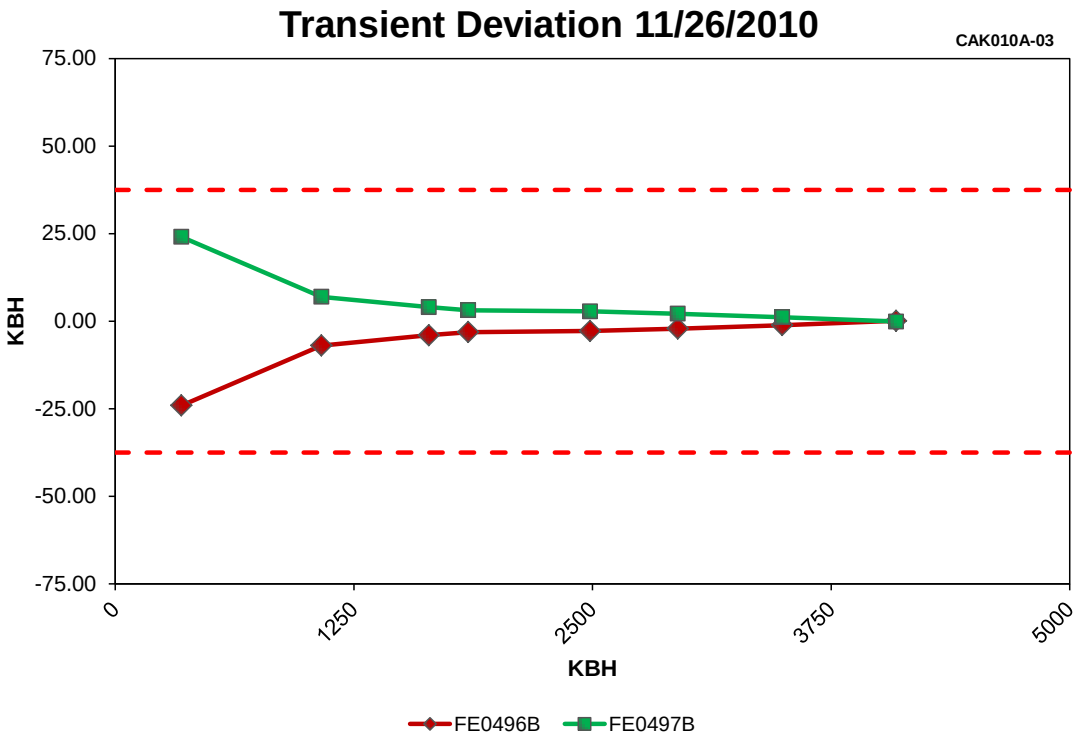



**Figure C.44 FW FLOW TO SG C Transient Deviation at Farley Unit 1 (Cycle 24)**

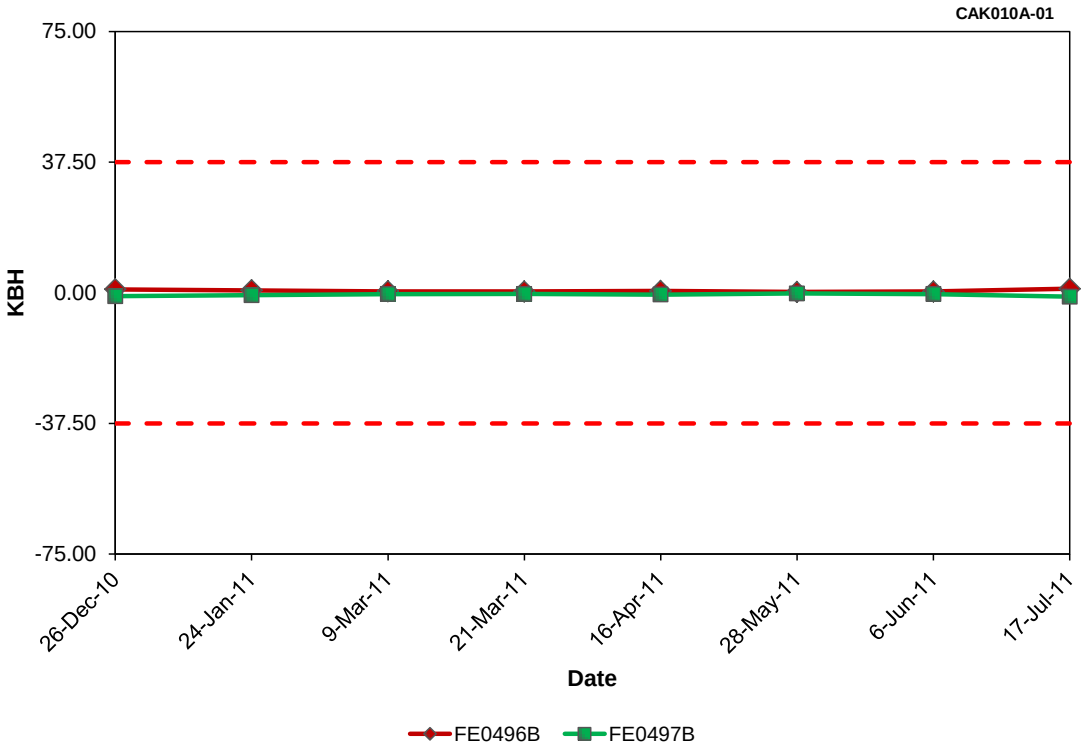



**Figure C.45 FW FLOW TO SG C Steady-State Deviation at Farley Unit 1 (Cycle 24)**

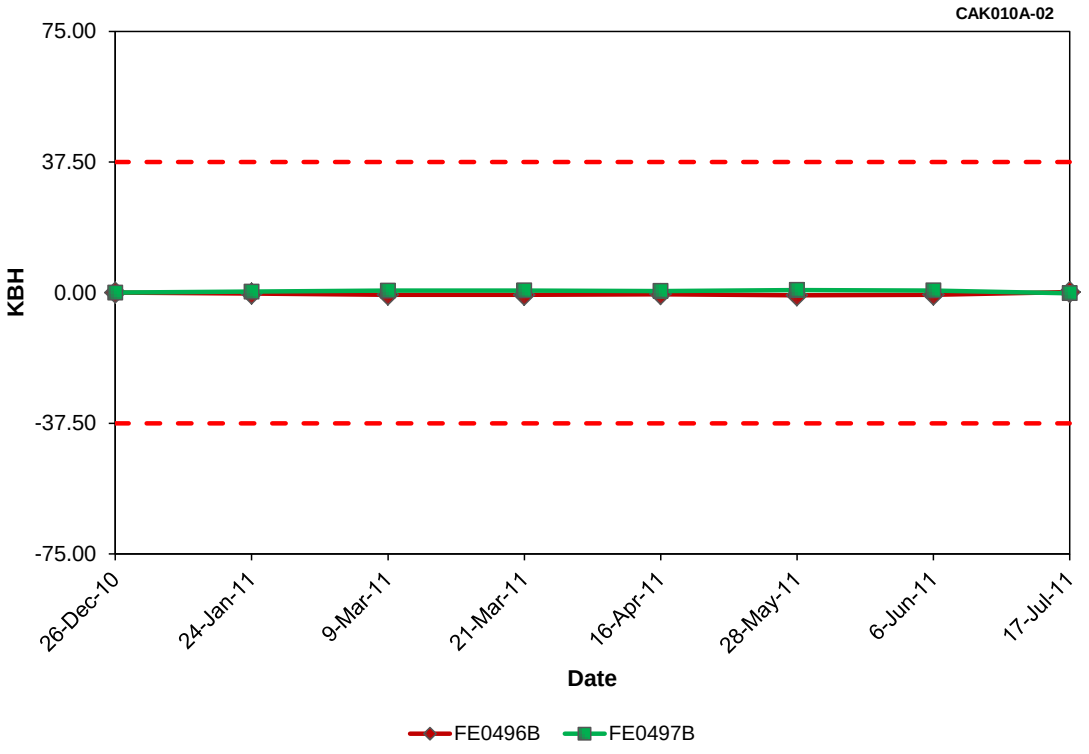



**Figure C.46 FW FLOW TO SG C Steady-State Drift at Farley Unit 1 (Cycle 24)**

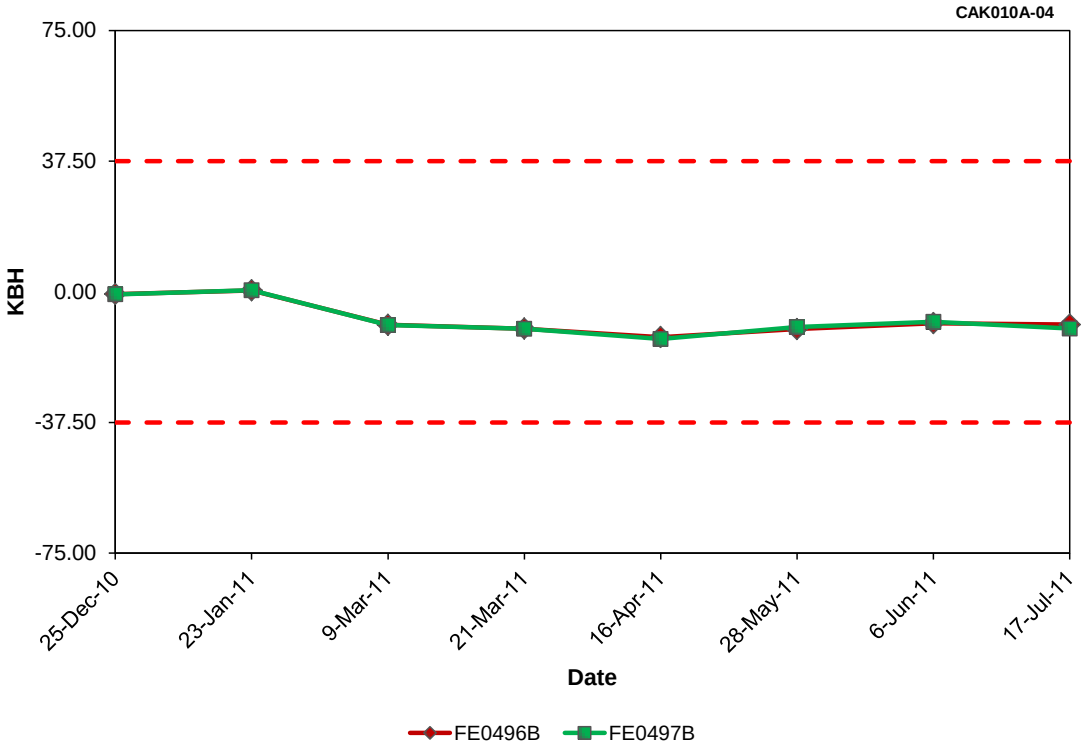



**Figure C.47 FW FLOW TO SG C Steady-State Residual AAKR at Farley Unit 1 (Cycle 24)**

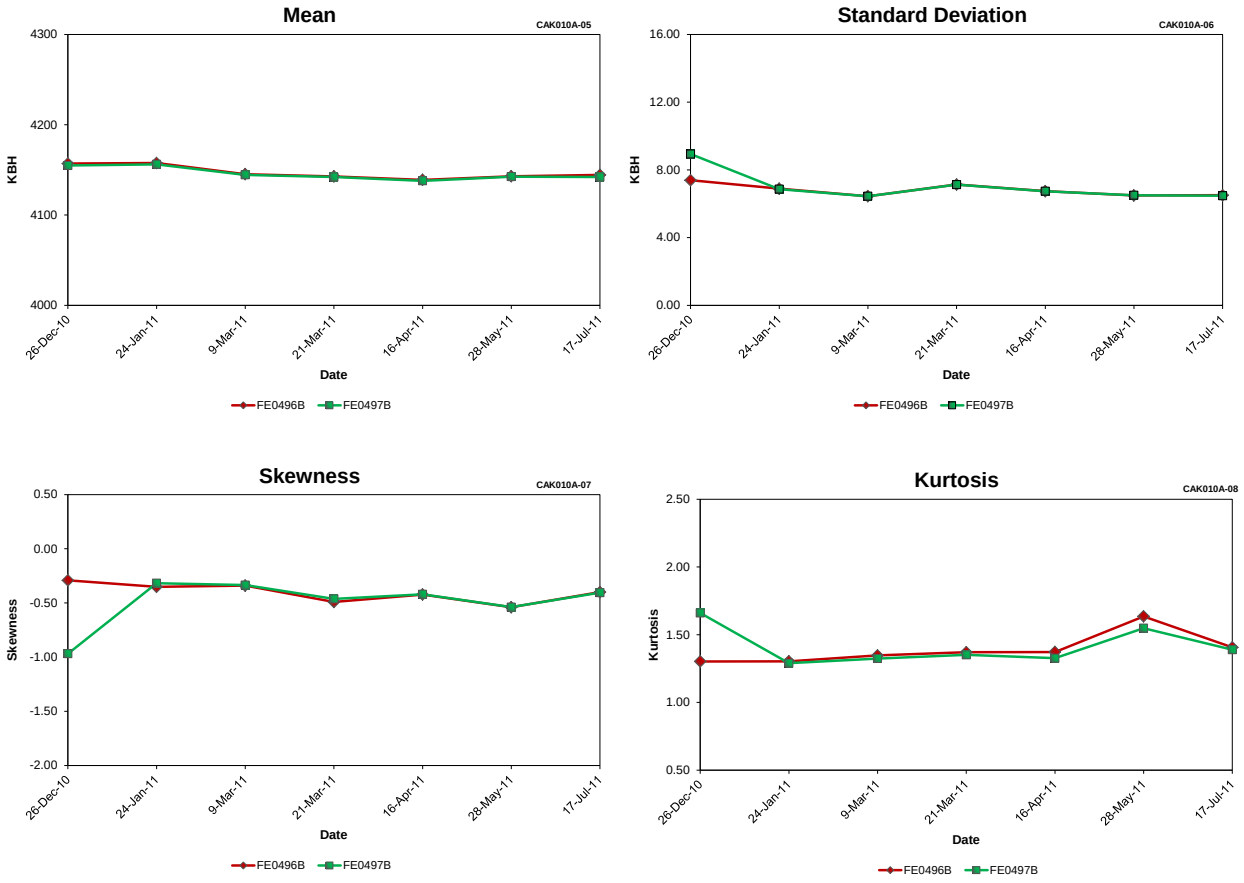



**Figure C.48 FW FLOW TO SG C Data Quality Statistics at Farley Unit 1 (Cycle 24)**

**Table C.10 FW FLOW TO SG C Data Quality for Farley Unit 1 (Cycle 24)**

| | Tag Names | |
|---|---|---|
| **Result Type** | **FE0496B** | **FE0497B** |
| Mean | 4146.96 | 4145.71 |
| Std. Dev. | 6.80 | 7.01 |
| Skewness | -0.41 | -0.49 |
| Kurtosis | 1.39 | 1.41 |

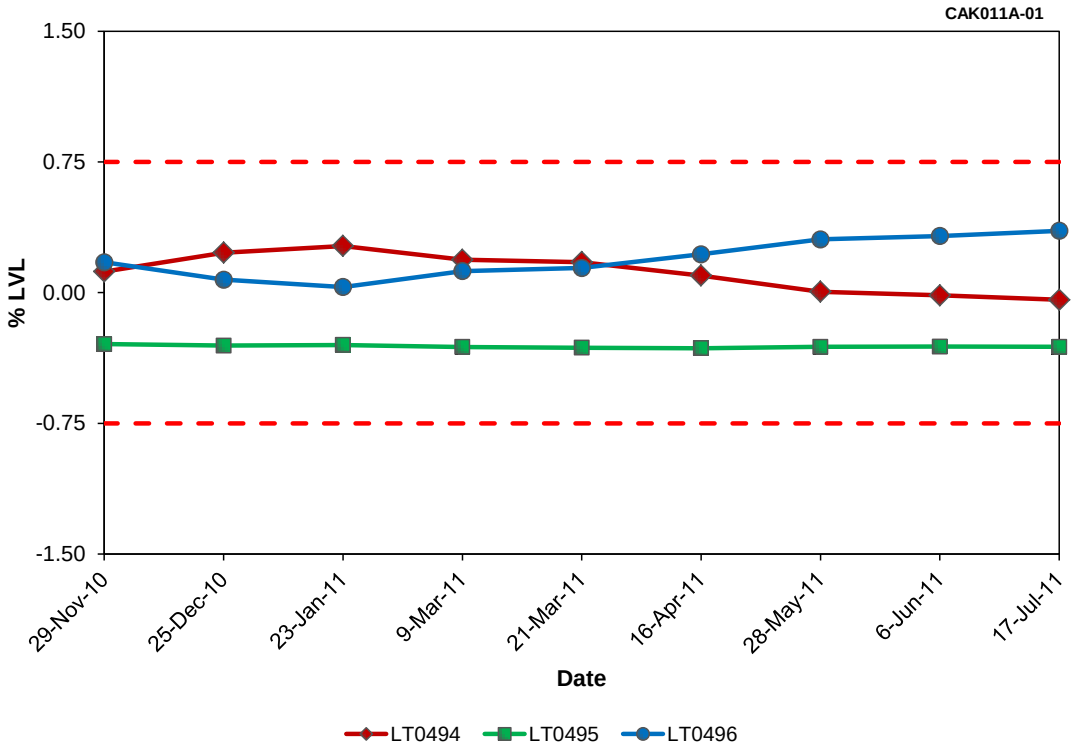



**Figure C.49 SG C LEVEL Steady-State Deviation at Farley Unit 1 (Cycle 24)**

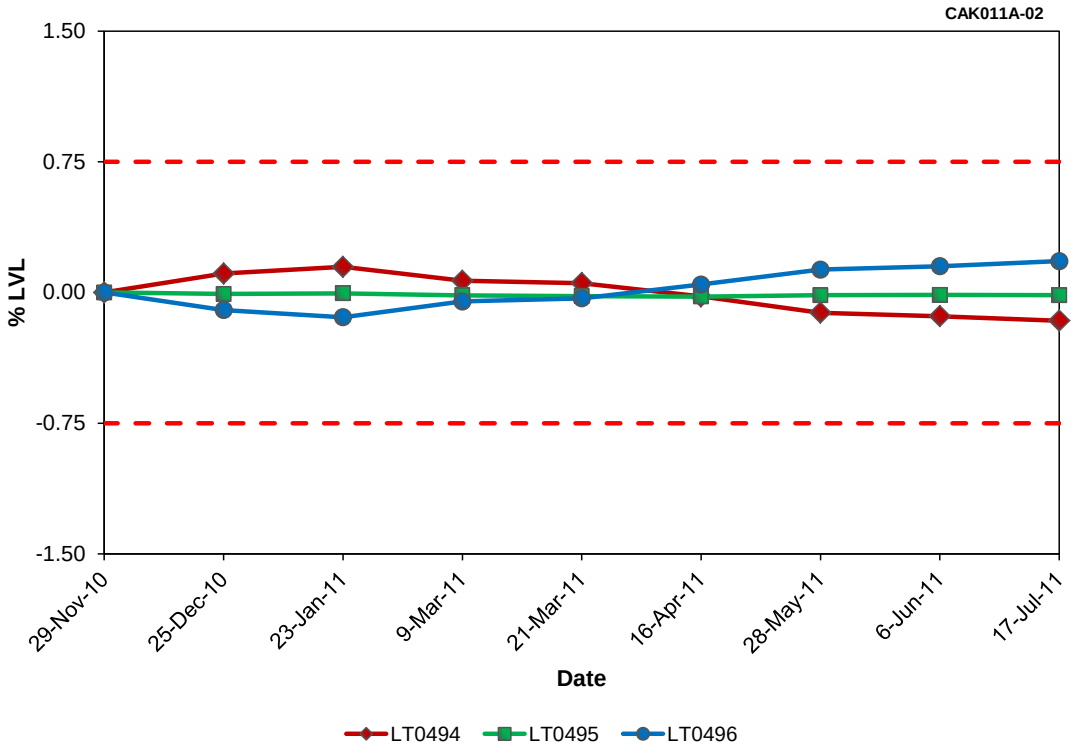



**Figure C.50 SG C LEVEL Steady-State Drift at Farley Unit 1 (Cycle 24)**

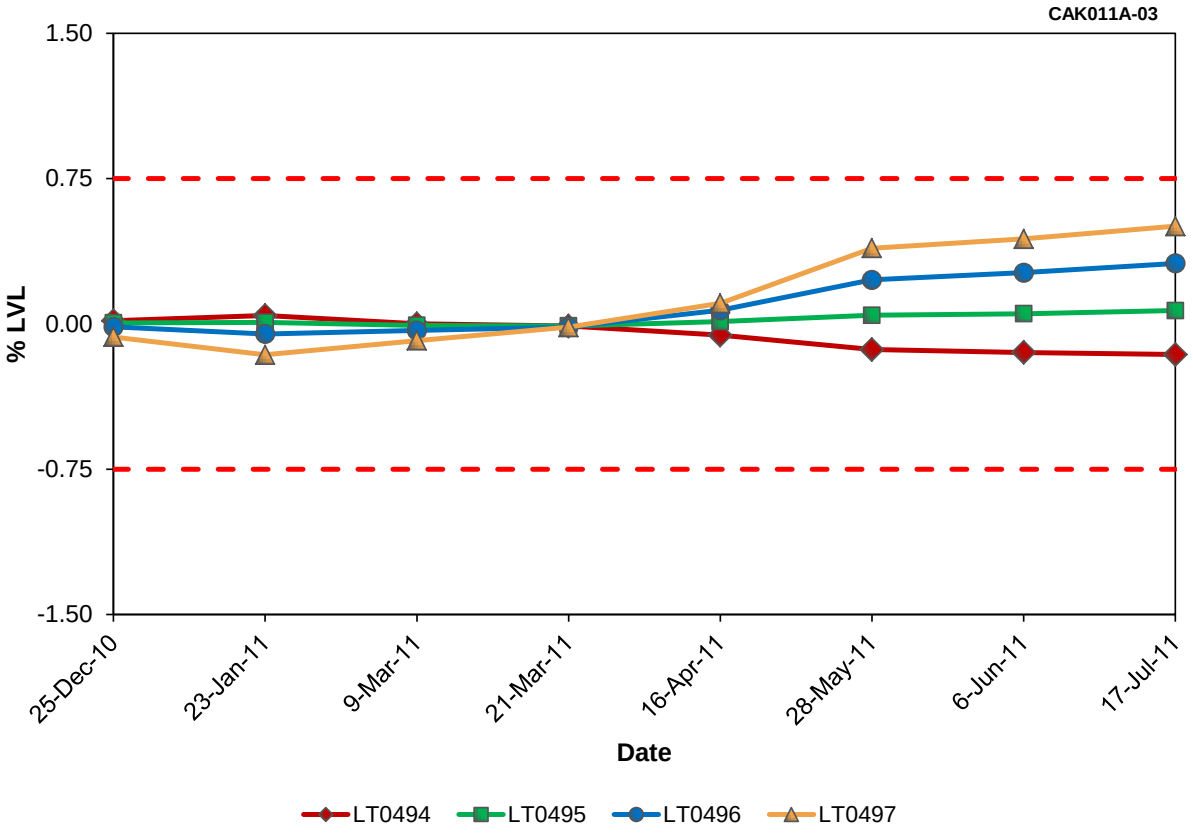



**Figure C.51 SG C LEVEL Steady-State Residual AAKR at Farley Unit 1 (Cycle 24)**

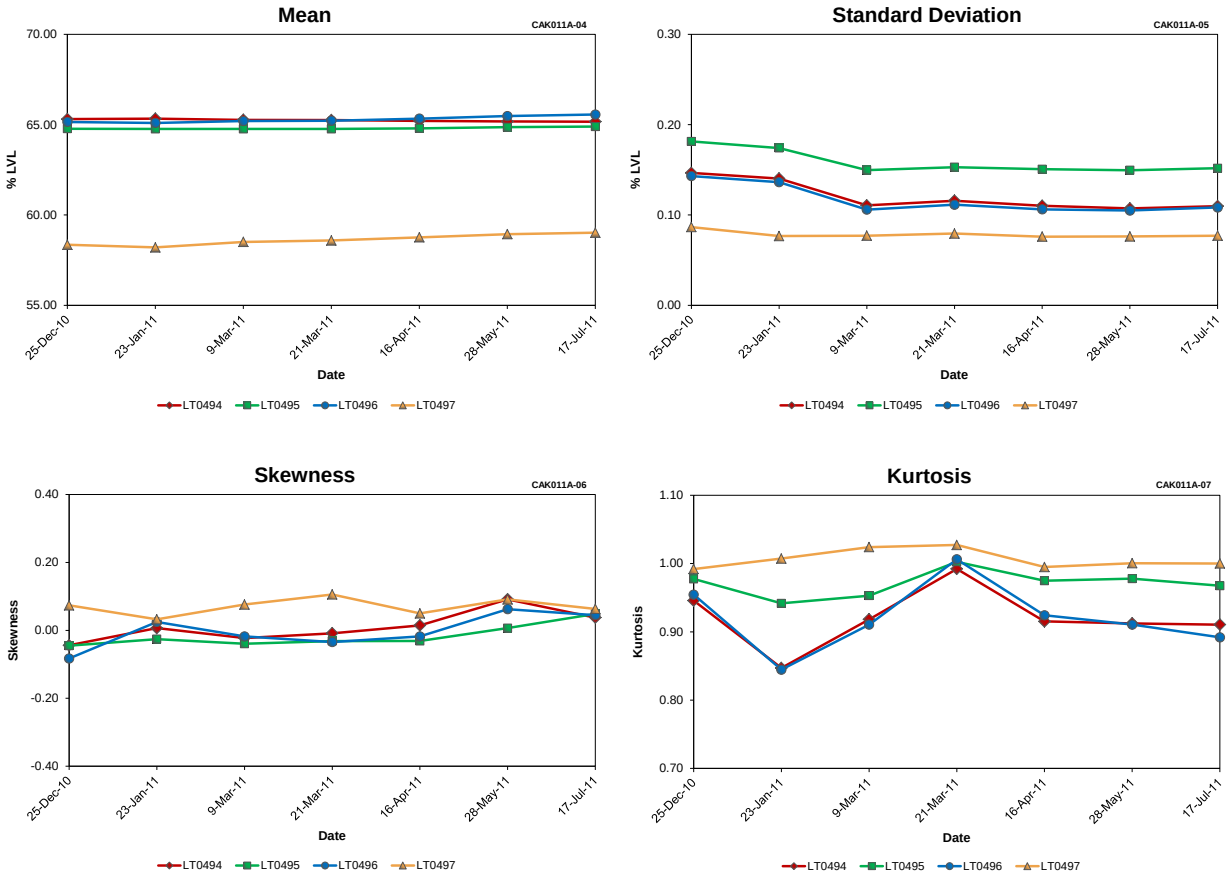



**Figure C.52 SG C LEVEL Data Quality Statistics at Farley Unit 1 (Cycle 24)**

**Table C.11 SG C LEVEL Data Quality for Farley Unit 1 (Cycle 24)**

| Result Type | Tag Names | | | |
|---|---|---|---|---|
| | LT0494 | LT0495 | LT0496 | LT0497 |
| Mean | 65.24 | 64.80 | 65.29 | 58.62 |
| Std. Dev. | 0.12 | 0.16 | 0.12 | 0.08 |
| Skewness | 0.01 | -0.02 | 0.00 | 0.07 |
| Kurtosis | 0.92 | 0.97 | 0.92 | 1.01 |

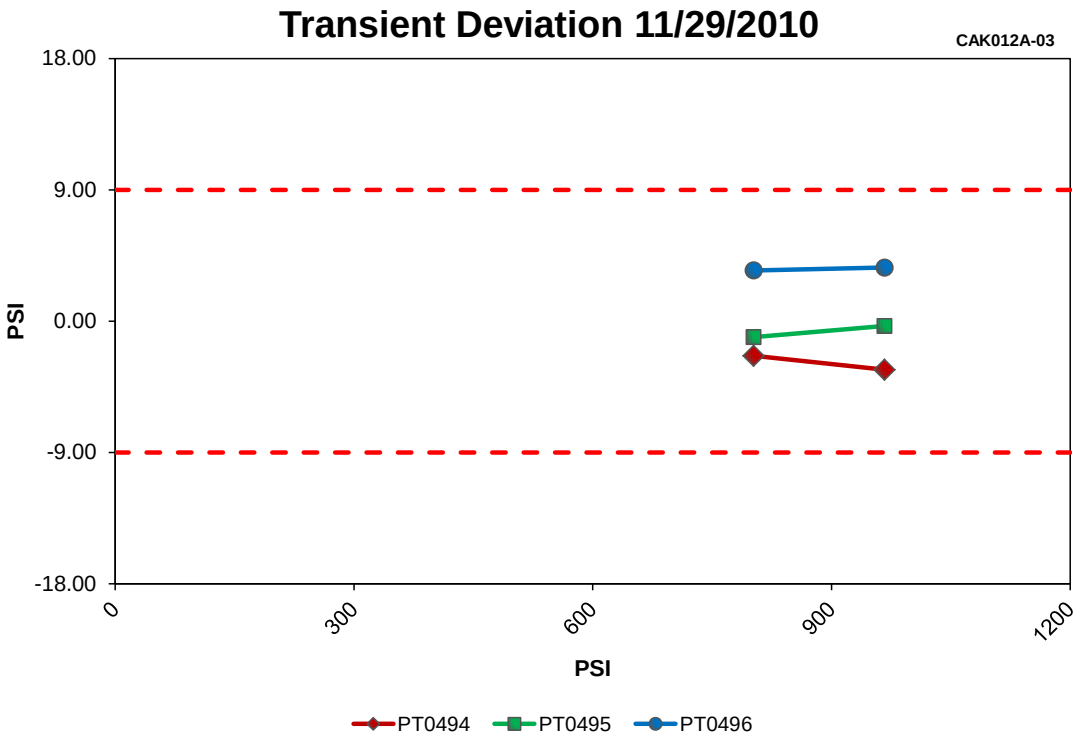



**Figure C.53 SG C OUTLET PRESSURE at Farley Unit 1 (Cycle 24)**

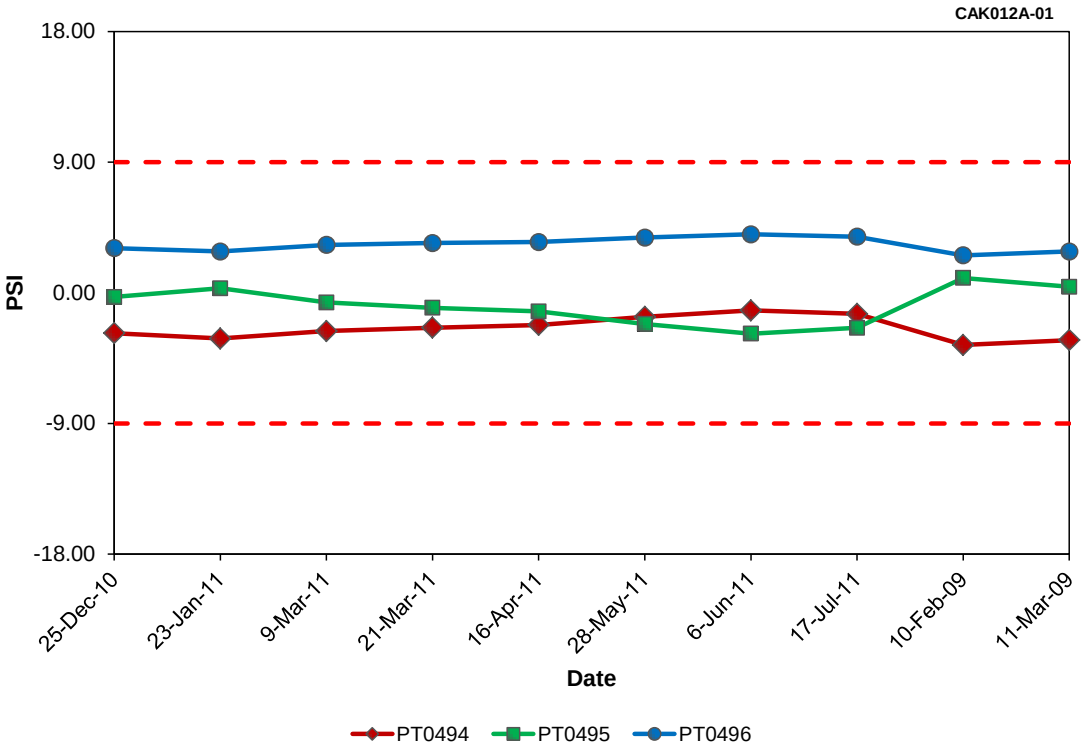



**Figure C.54 SG C OUTLET PRESSURE Steady-State Deviation at Farley Unit 1 (Cycle 24)**

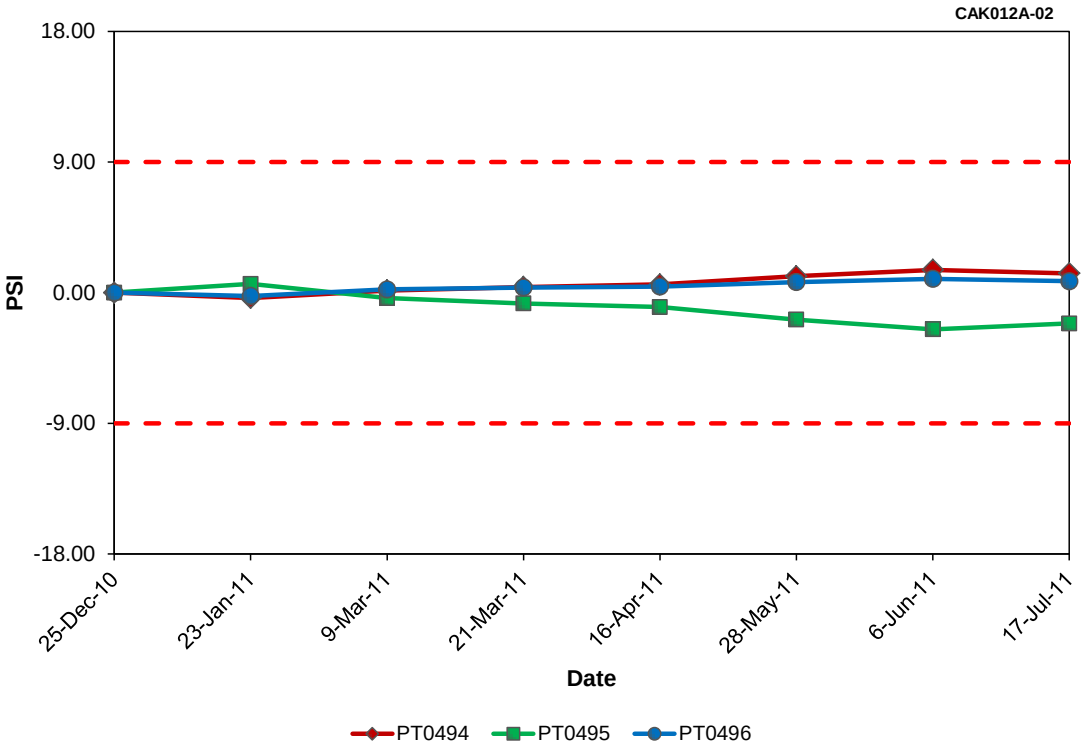



**Figure C.55 SG C OUTLET PRESSURE Steady-State Drift at Farley Unit 1 (Cycle 24)**

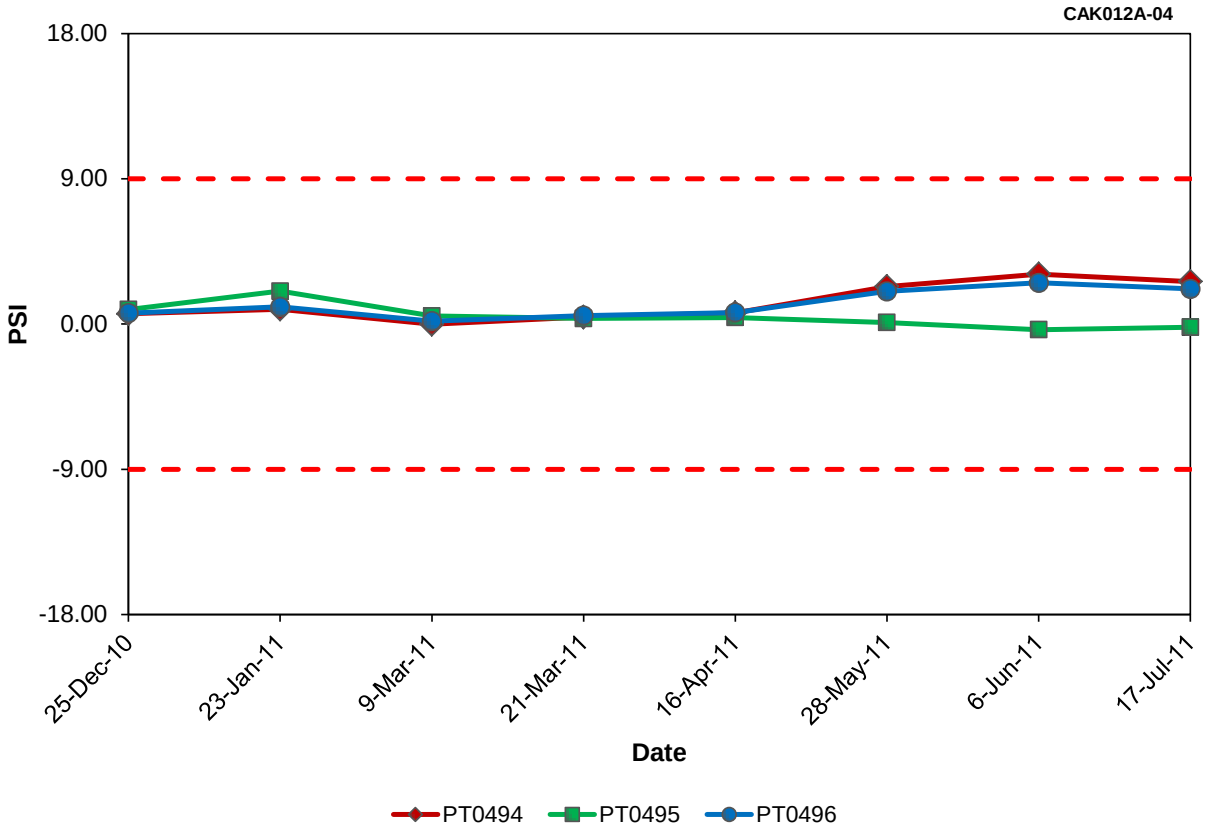



**Figure C.56 SG C OUTLET PRESSURE Steady-State Residual AAKR at Farley Unit 1 (Cycle 24)**

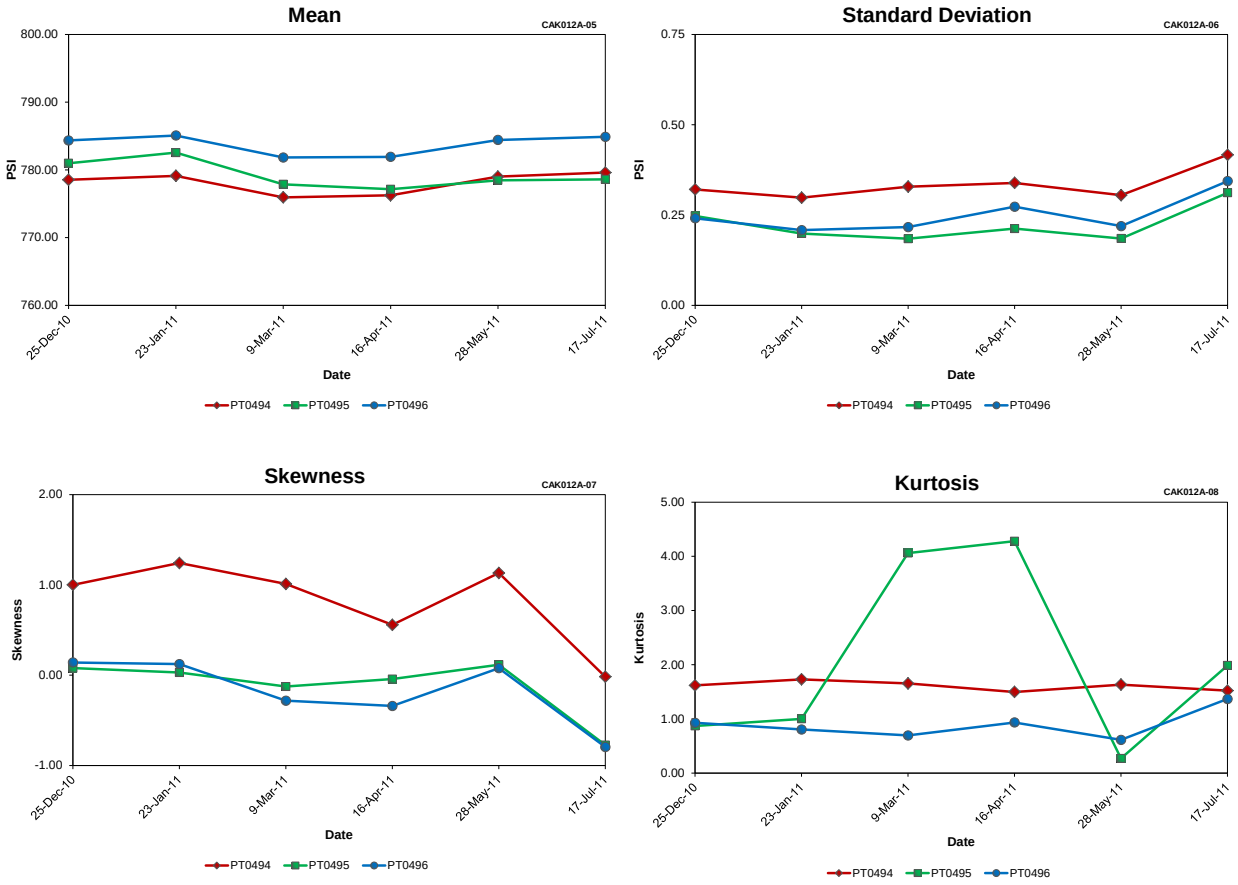



**Figure C.57 SG C OUTLET PRESSURE Data Quality Statistics at Farley Unit 1 (Cycle 24)**

**Table C.12 SG C OUTLET PRESSURE Data Quality for Farley Unit 1 (Cycle 24)**

| | Tag Names | | |
|---|---|---|---|
| **Result Type** | **PT0494** | **PT0495** | **PT0496** |
| Mean | 778.08 | 779.27 | 783.75 |
| Std. Dev. | 0.33 | 0.22 | 0.25 |
| Skewness | 0.82 | -0.12 | -0.18 |
| Kurtosis | 1.61 | 2.08 | 0.89 |

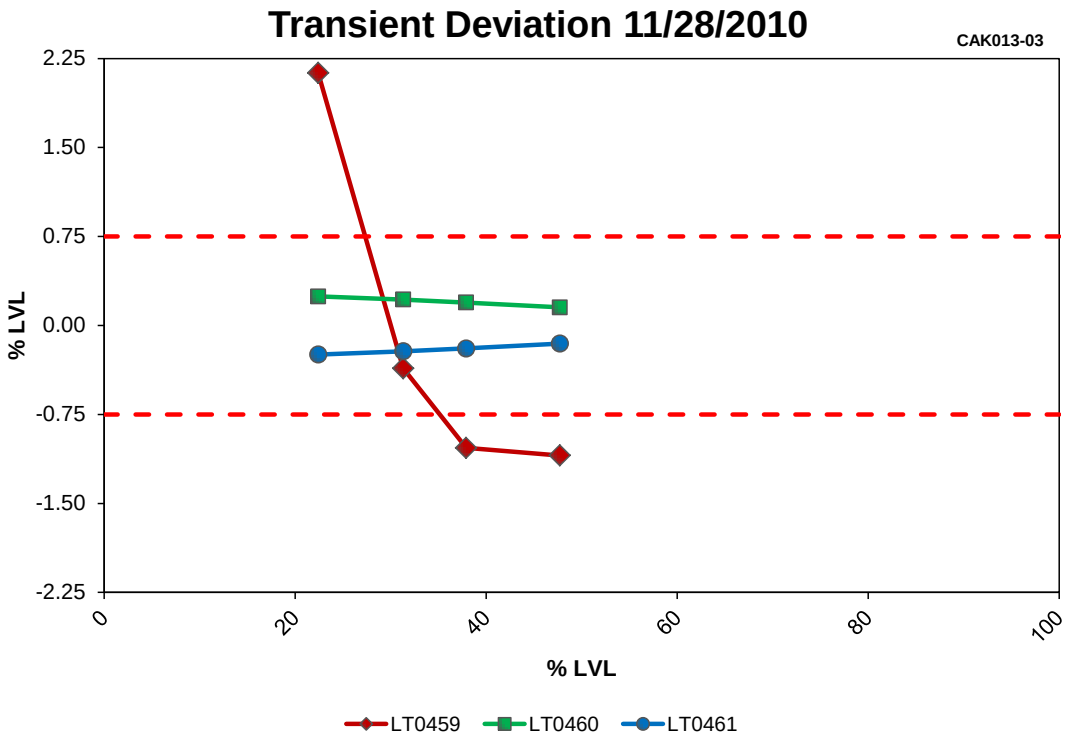



**Figure C.58 PRESSURIZER LEVEL at Farley Unit 1 (Cycle 24)**

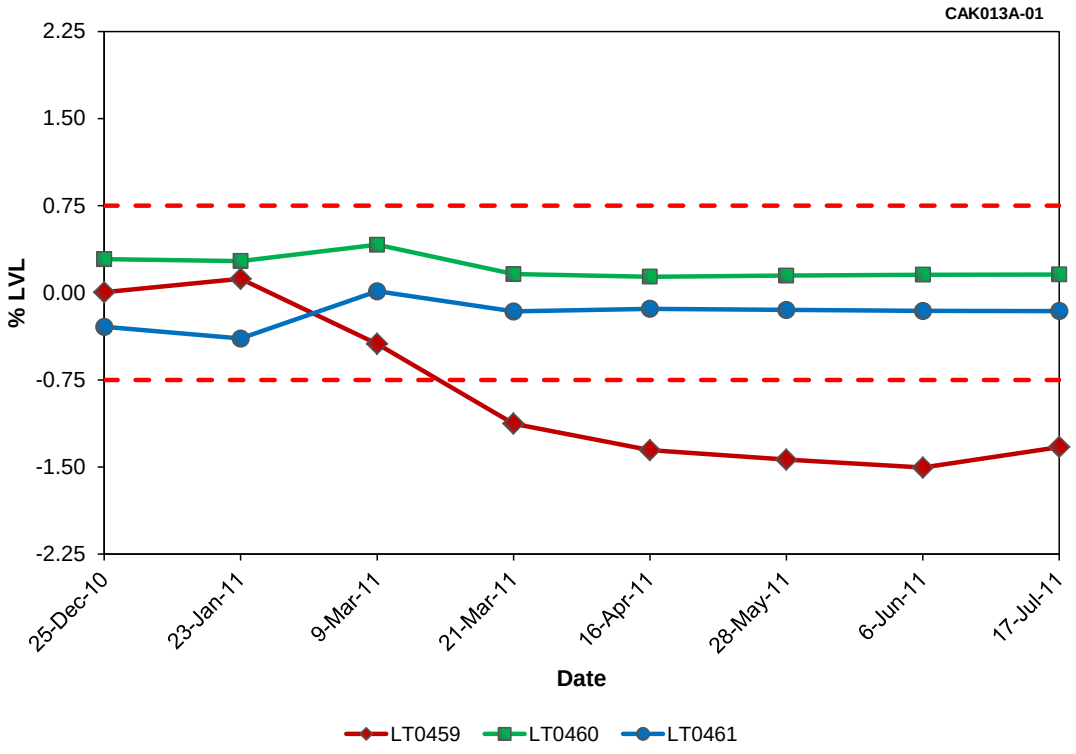



**Figure C.59 PRESSURIZER LEVEL Steady-State Deviation at Farley Unit 1 (Cycle 24)**

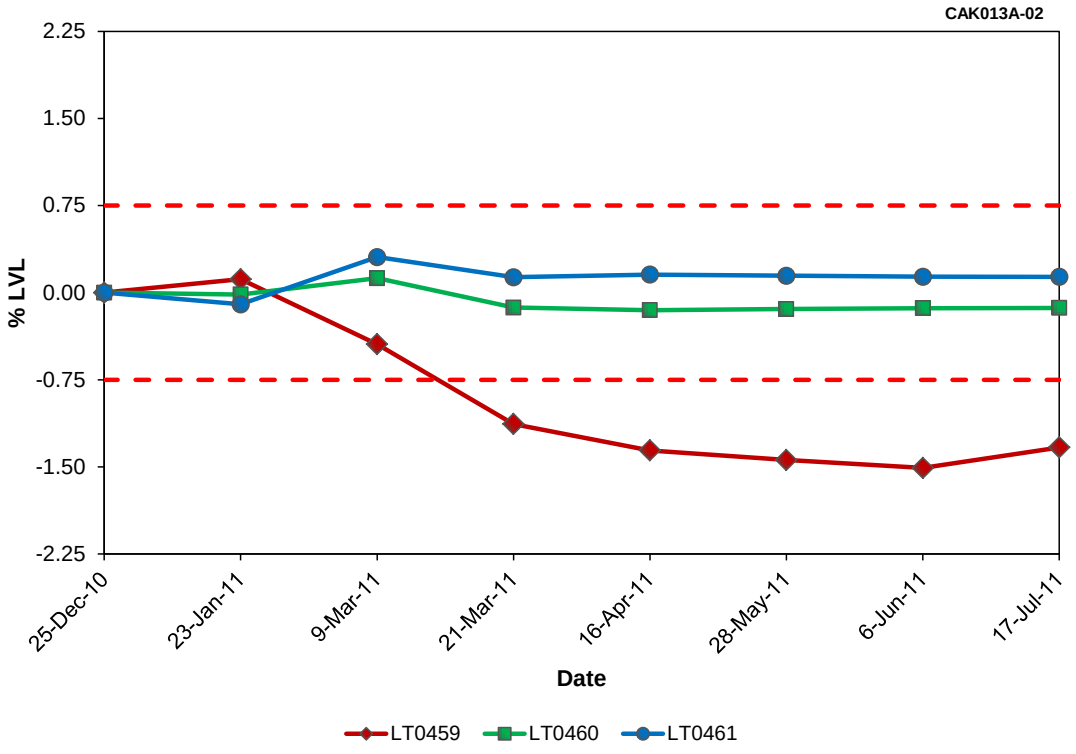



**Figure C.60 PRESSURIZER LEVEL Steady-State Drift at Farley Unit 1 (Cycle 24)**

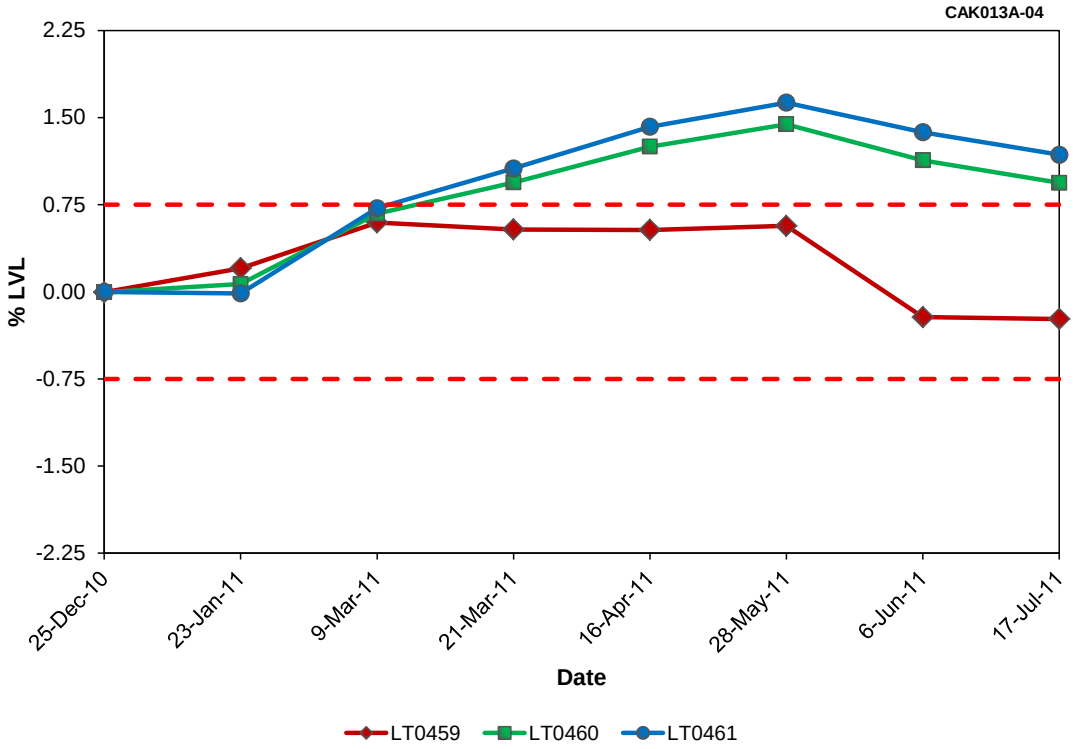



**Figure C.61 PRESSURIZER LEVEL Steady-State Residual AAKR at Farley Unit 1 (Cycle 24)**

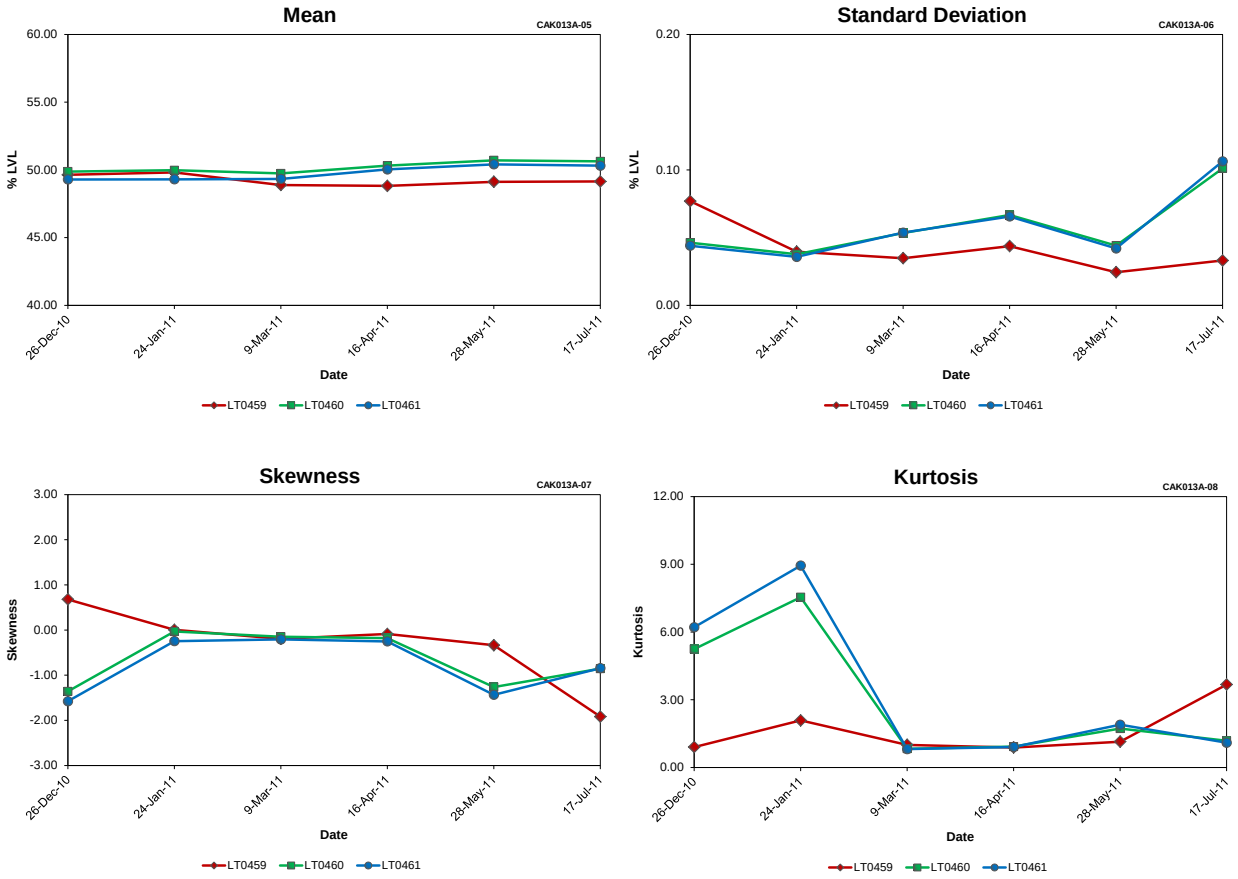



**Figure C.62 PRESSURIZER LEVEL Data Quality Statistics at Farley Unit 1 (Cycle 24)**

**Table C.13 PRESSURIZER LEVEL Data Quality for Farley Unit 1 (Cycle 24)**

| | Tag Names | | |
|---|---|---|---|
| **Result Type** | **LT0459** | **LT0460** | **LT0461** |
| Mean | 49.24 | 50.20 | 49.78 |
| Std. Dev. | 0.04 | 0.06 | 0.06 |
| Skewness | -0.31 | -0.64 | -0.76 |
| Kurtosis | 1.62 | 2.91 | 3.31 |

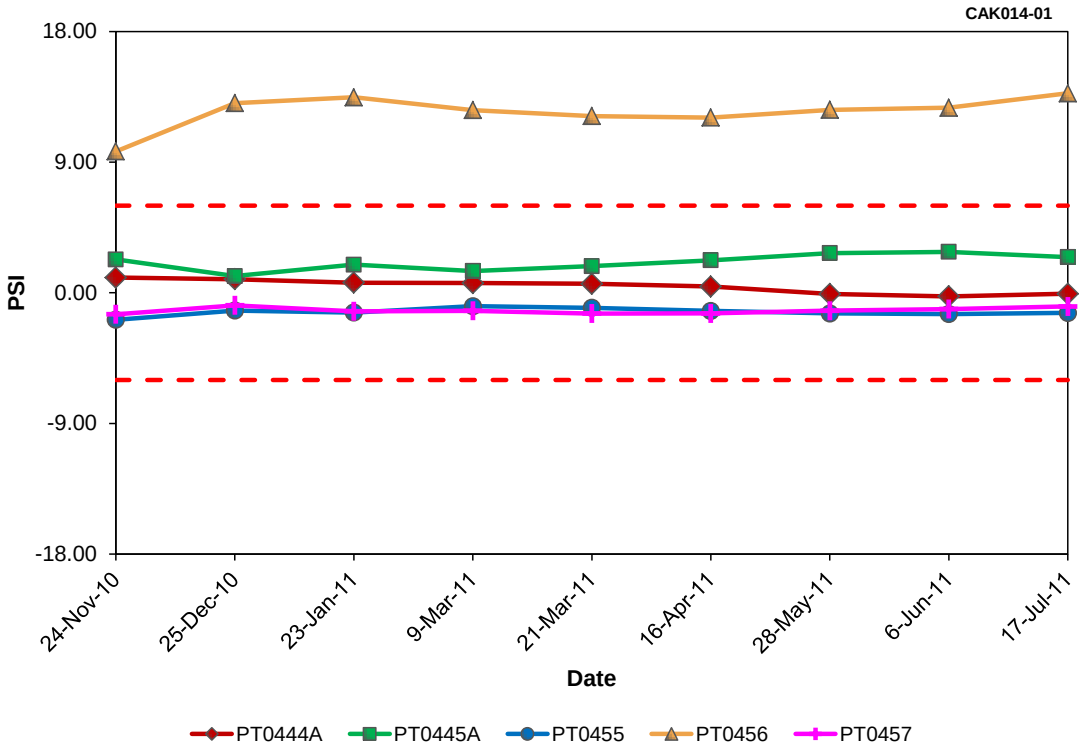



**Figure C.63 PRESSURIZER PRESSURE Steady-State Deviation at Farley Unit 1 (Cycle 24)**

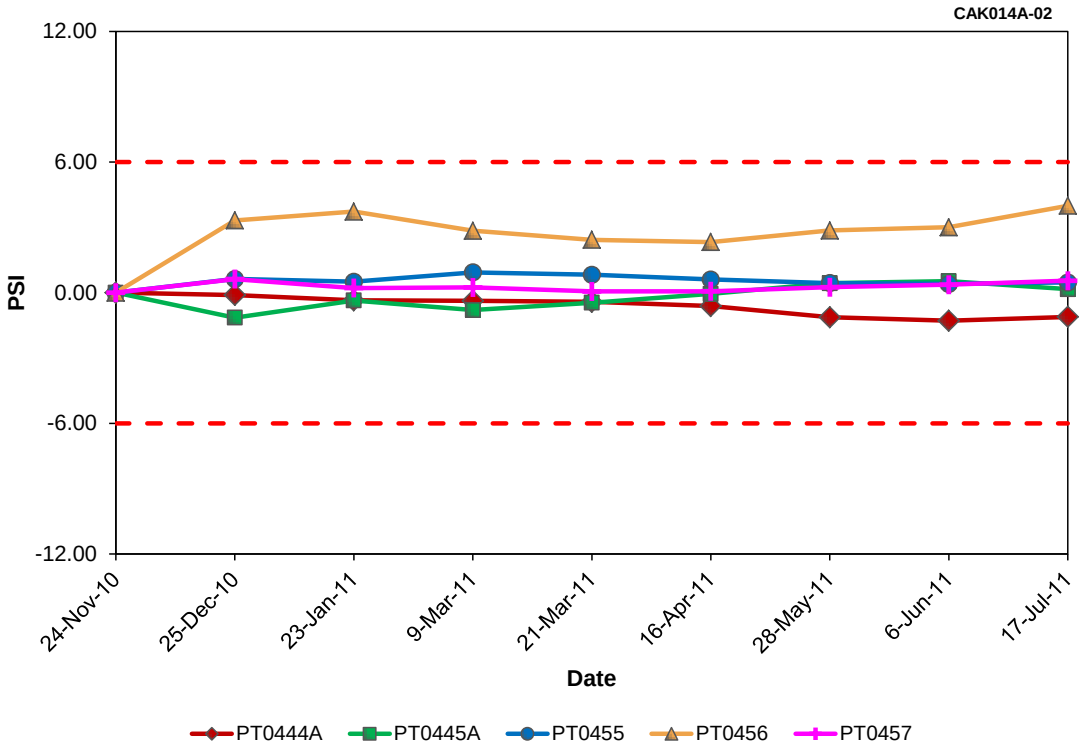



**Figure C.64 PRESSURIZER PRESSURE Steady-State Drift at Farley Unit 1 (Cycle 24)**

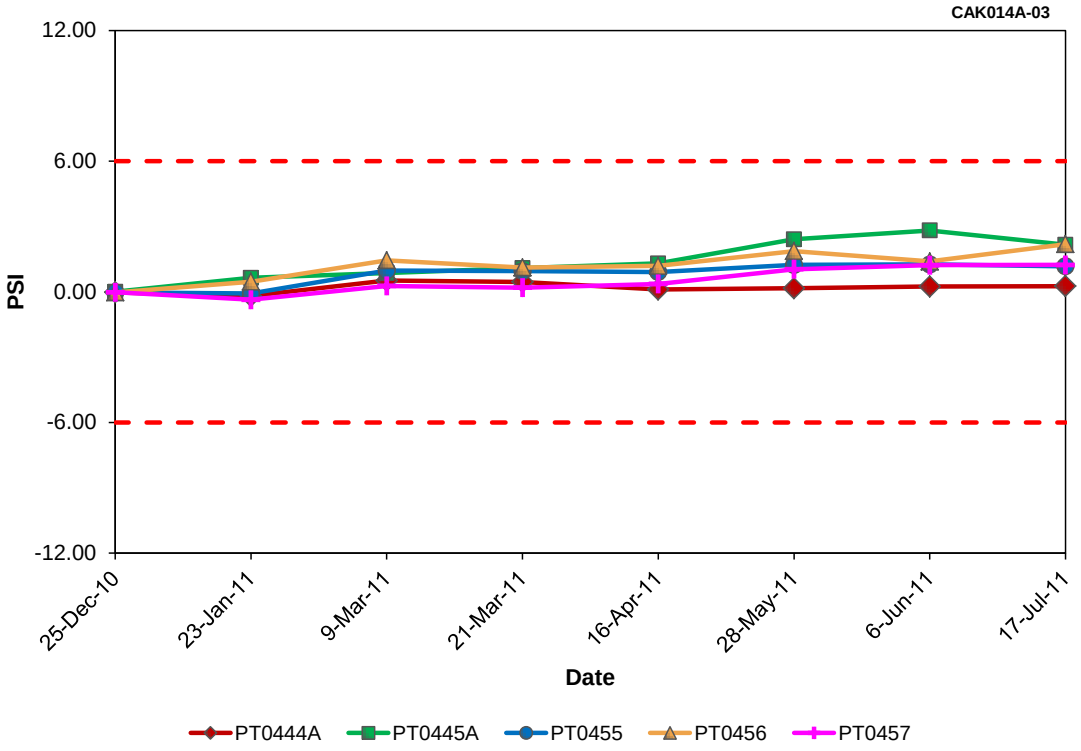



**Figure C.65 PRESSURIZER PRESSURE Steady-State Residual AAKR at Farley Unit 1 (Cycle 24)**

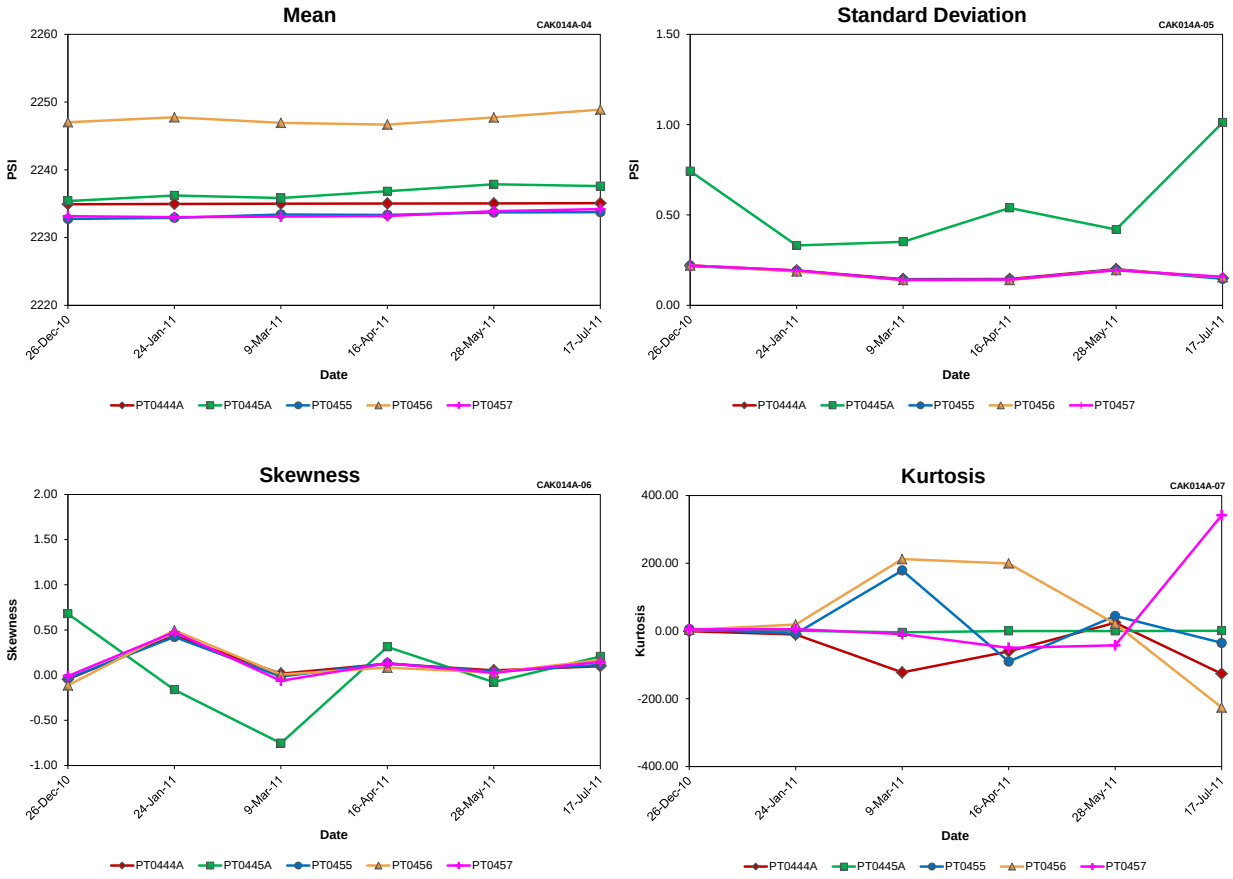



**Figure C.66 PRESSURIZER PRESSURE Data Quality Statistics at Farley Unit 1 (Cycle 24)**

**Table C.14 PRESSURIZER PRESSURE Data Quality for Farley Unit 1 (Cycle 24)**

| | Tag Names | | | | |
|---|---|---|---|---|---|
| **Result Type** | **PT0444A** | **PT0445A** | **PT0455** | **PT0456** | **PT0457** |
| Mean | 2235.01 | 2236.62 | 2233.32 | 2247.50 | 2233.42 |
| Std. Dev. | 0.18 | 0.57 | 0.17 | 0.17 | 0.17 |
| Skewness | 0.11 | 0.03 | 0.11 | 0.11 | 0.12 |
| Kurtosis | -49.14 | -0.22 | 15.98 | 38.34 | 41.94 |

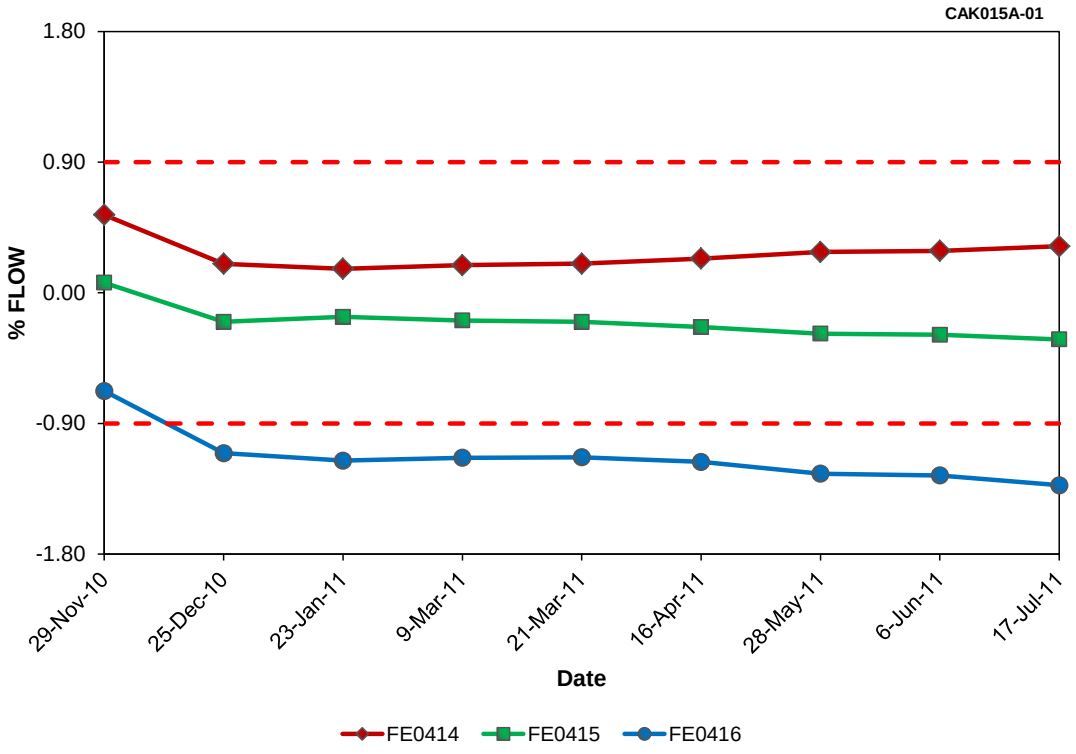



**Figure C.67 RCS LOOP A FLOW Steady-State Deviation at Farley Unit 1 (Cycle 24)**

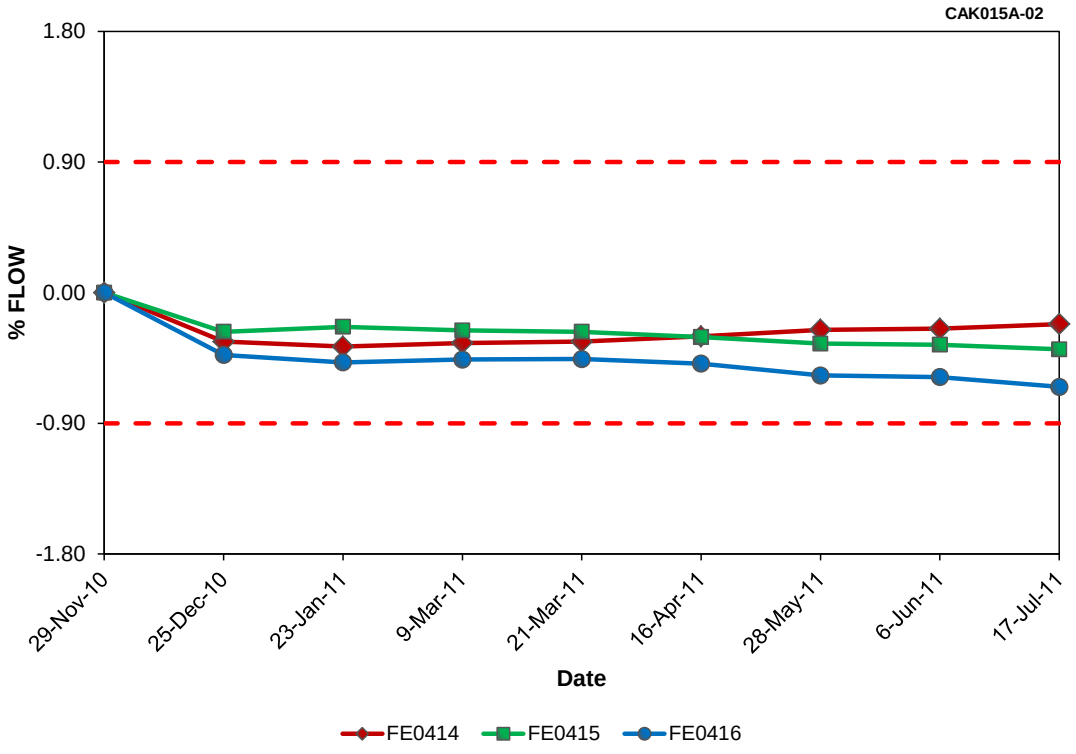



**Figure C.68 RCS LOOP A FLOW Steady-State Drift at Farley Unit 1 (Cycle 24)**

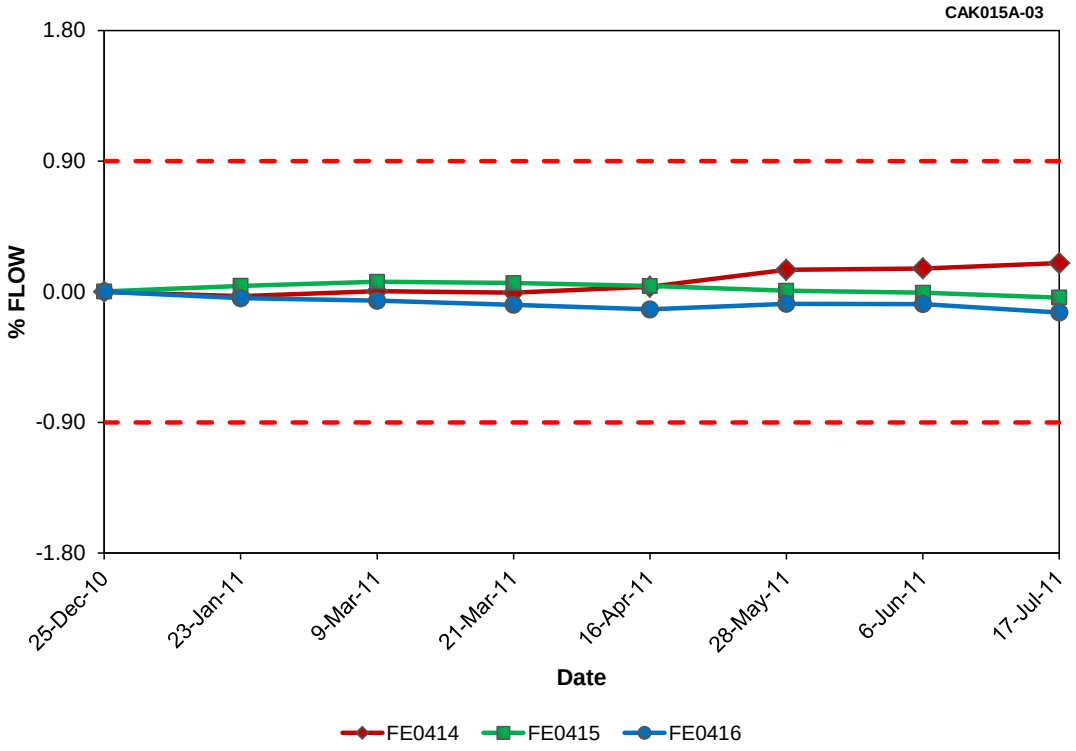



**Figure C.69 RCS LOOP A FLOW Steady-State Residual AAKR at Farley Unit 1 (Cycle 24)**

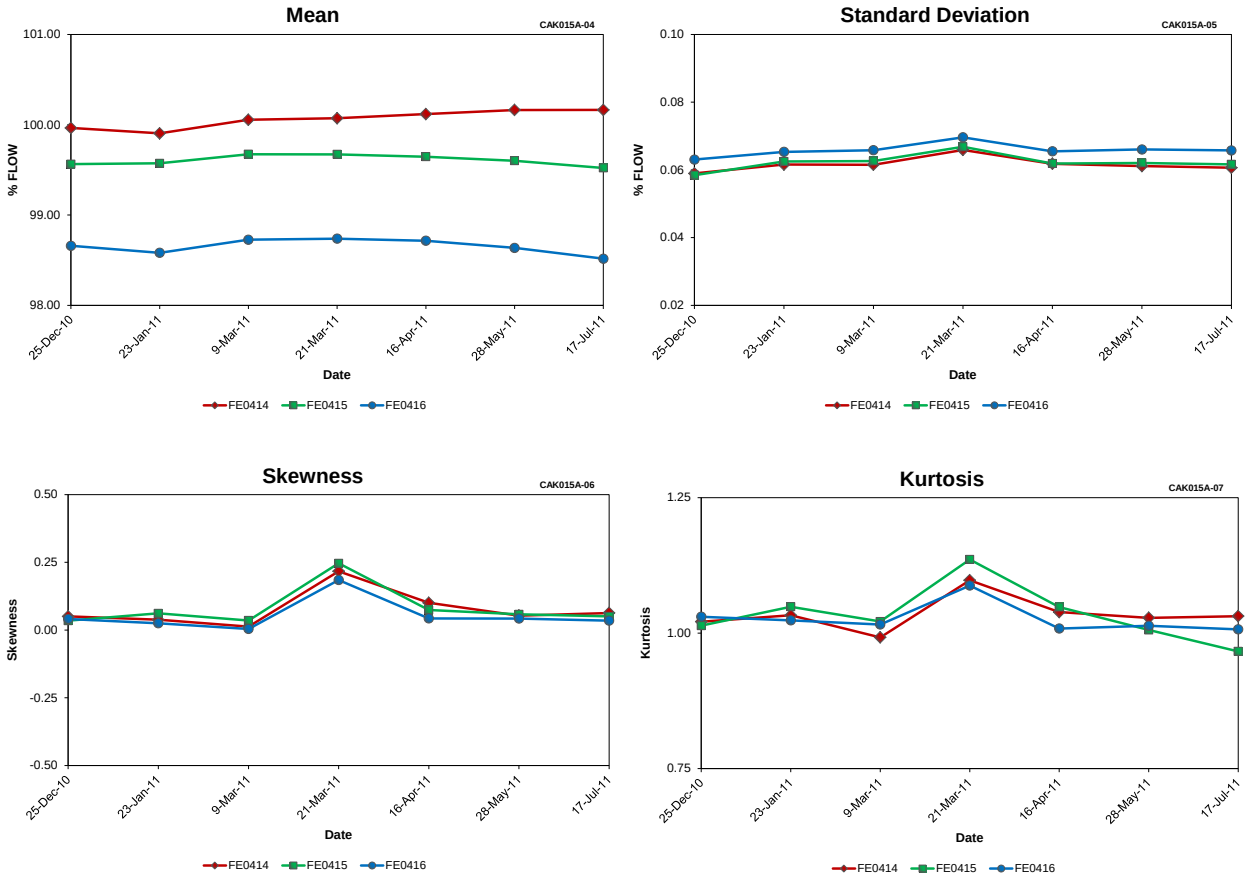



**Figure C.70 RCS LOOP A FLOW Data Quality Statistics at Farley Unit 1 (Cycle 24)**

**Table C.15 RCS LOOP A FLOW Data Quality for Farley Unit 1 (Cycle 24)**

| | Tag Names | | |
|---|---|---|---|
| **Result Type** | **FE0414** | **FE0415** | **FE0416** |
| Mean | 100.06 | 99.61 | 98.65 |
| Std. Dev. | 0.06 | 0.06 | 0.07 |
| Skewness | 0.08 | 0.08 | 0.05 |
| Kurtosis | 1.03 | 1.03 | 1.03 |

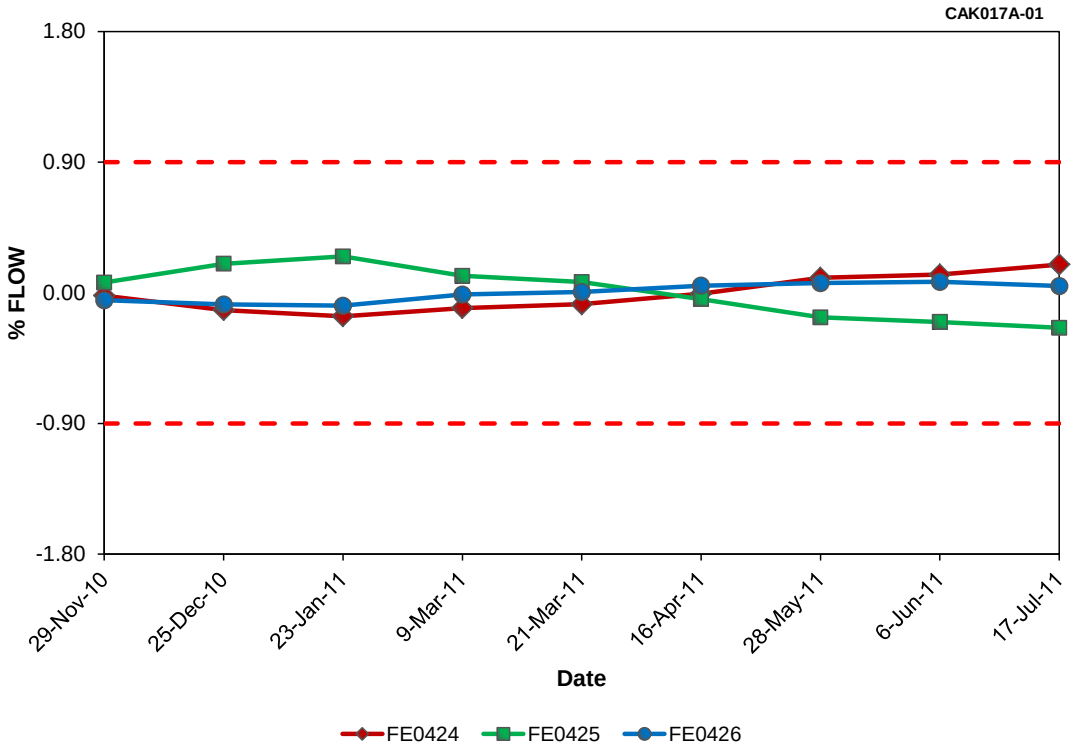



**Figure C.71 RCS LOOP B FLOW Steady-State Deviation at Farley Unit 1 (Cycle 24)**

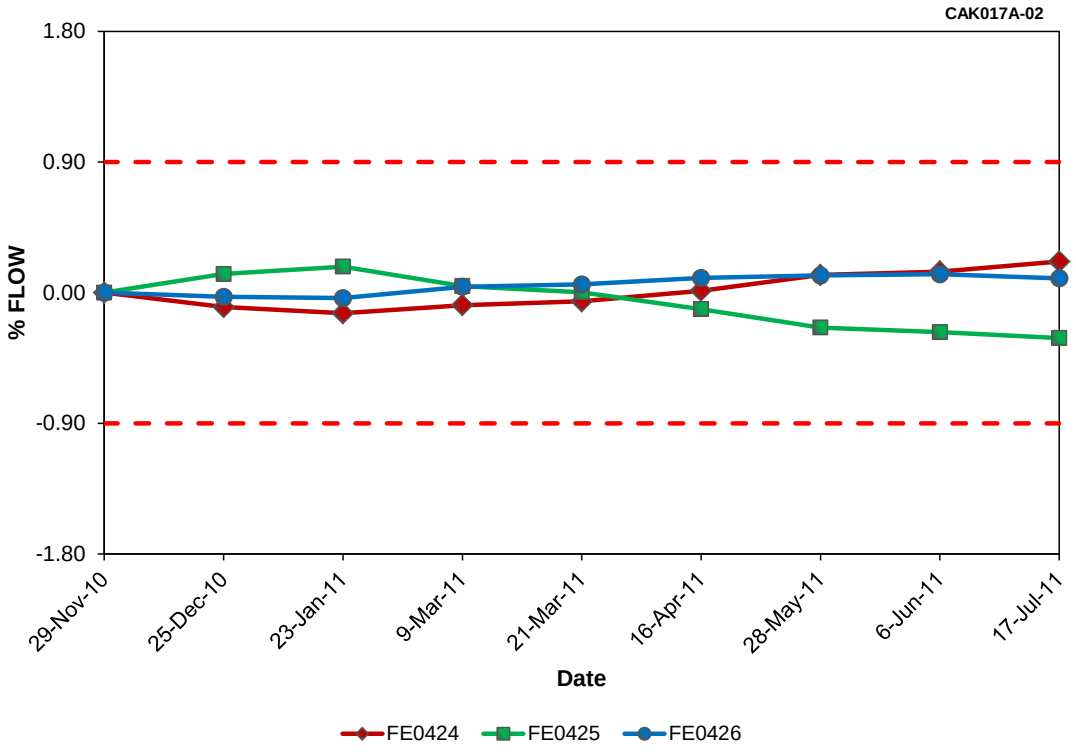



**Figure C.72 RCS LOOP B FLOW Steady-State Drift at Farley Unit 1 (Cycle 24)**

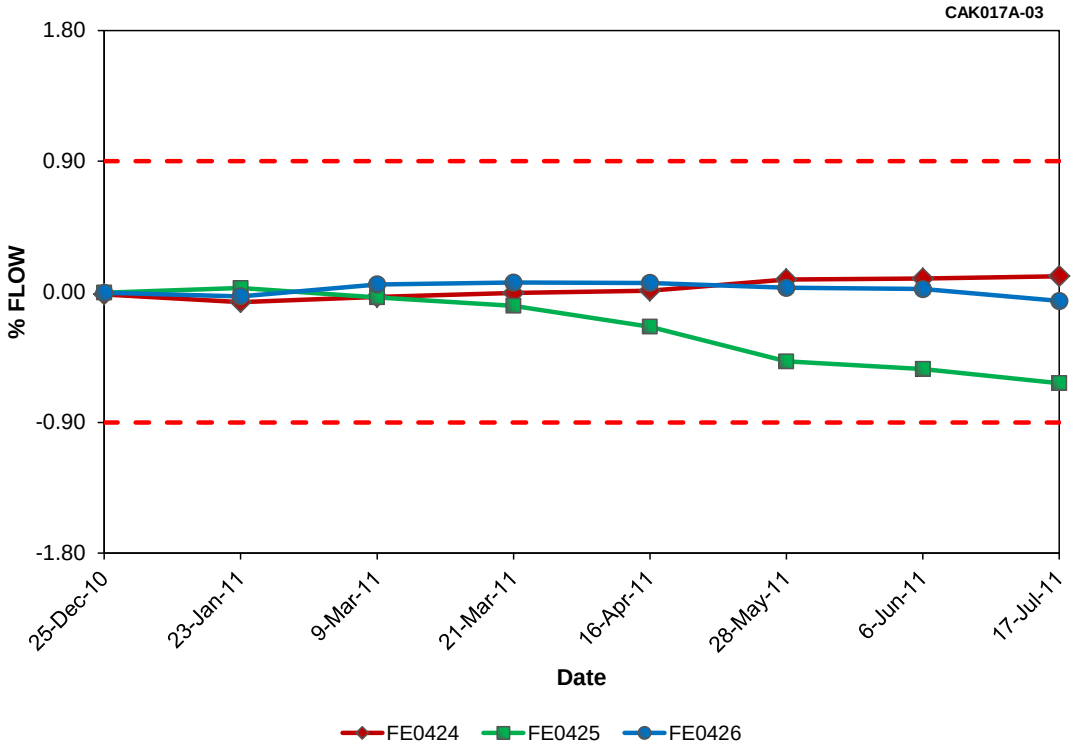



**Figure C.73 RCS LOOP B FLOW Steady-State Residual AAKR at Farley Unit 1 (Cycle 24)**

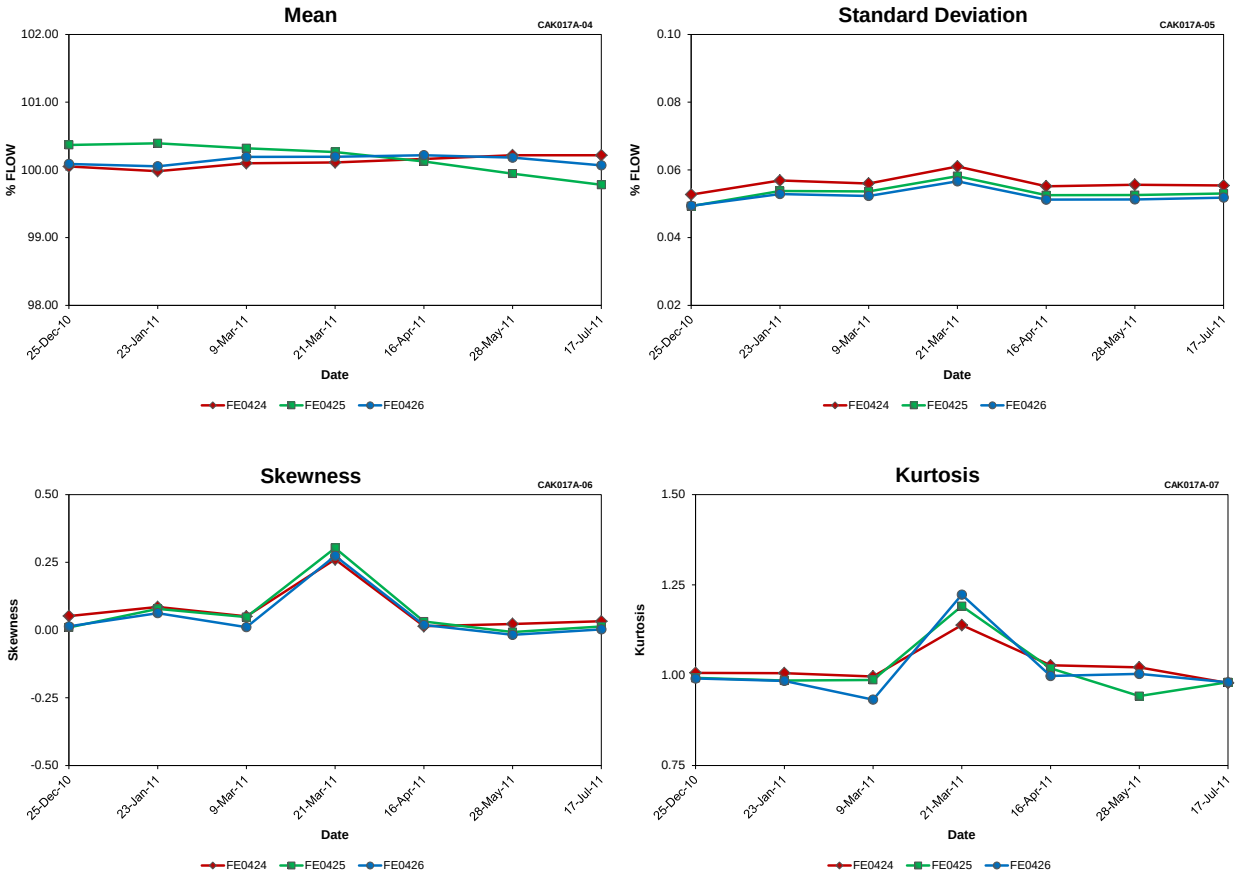



**Figure C.74 RCS LOOP B FLOW Data Quality Statistics at Farley Unit 1 (Cycle 24)**

**Table C.16 RCS LOOP B FLOW Data Quality for Farley Unit 1 (Cycle 24)**

| | Tag Names | | |
|---|---|---|---|
| **Result Type** | **FE0424** | **FE0425** | **FE0426** |
| Mean | 100.12 | 100.17 | 100.14 |
| Std. Dev. | 0.06 | 0.05 | 0.05 |
| Skewness | 0.07 | 0.07 | 0.05 |
| Kurtosis | 1.02 | 1.01 | 1.02 |

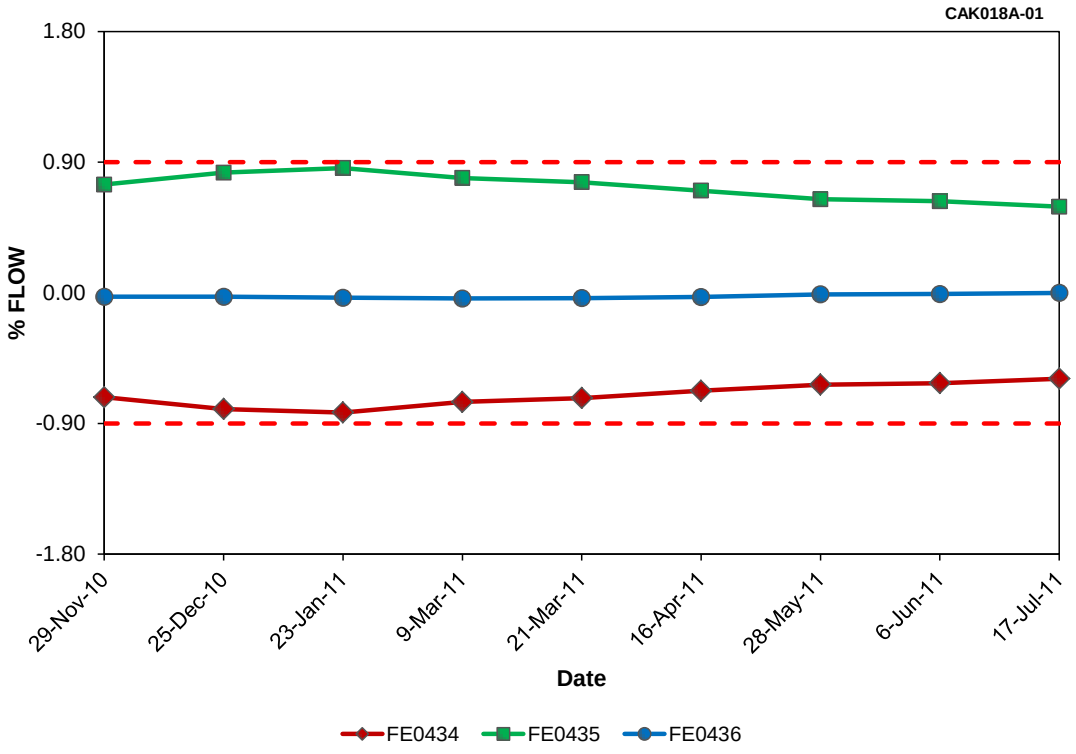



**Figure C.75 RCS LOOP C FLOW Steady-State Deviation at Farley Unit 1 (Cycle 24)**

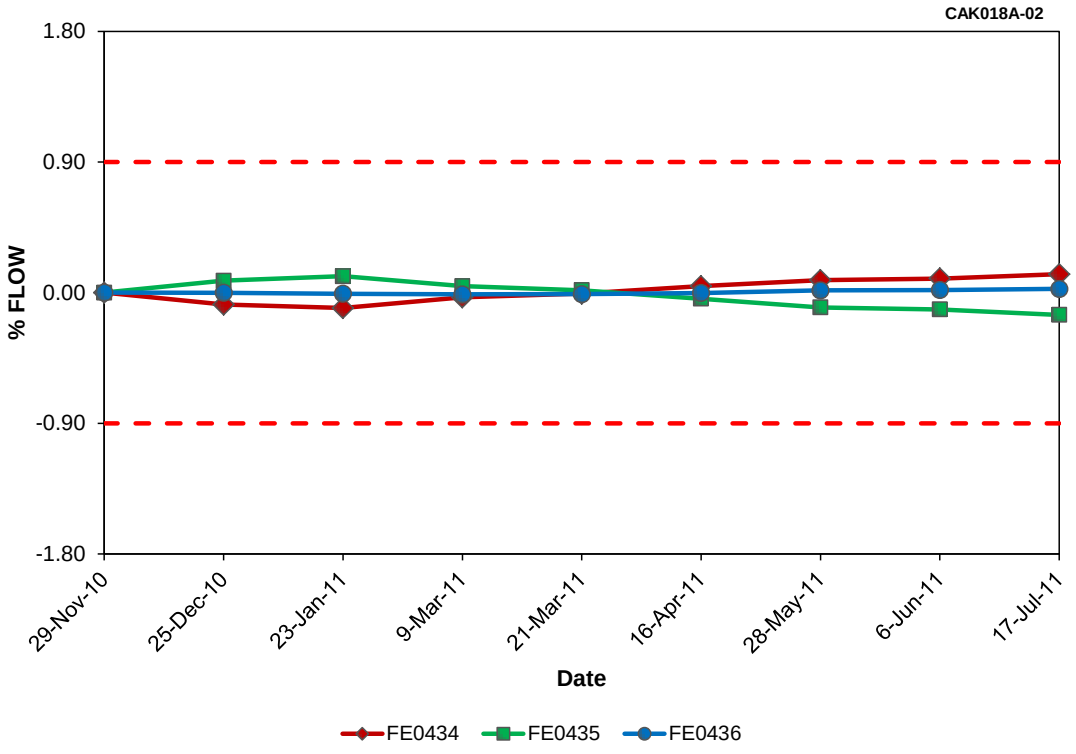



**Figure C.76 RCS LOOP C FLOW Steady-State Drift at Farley Unit 1 (Cycle 24)**

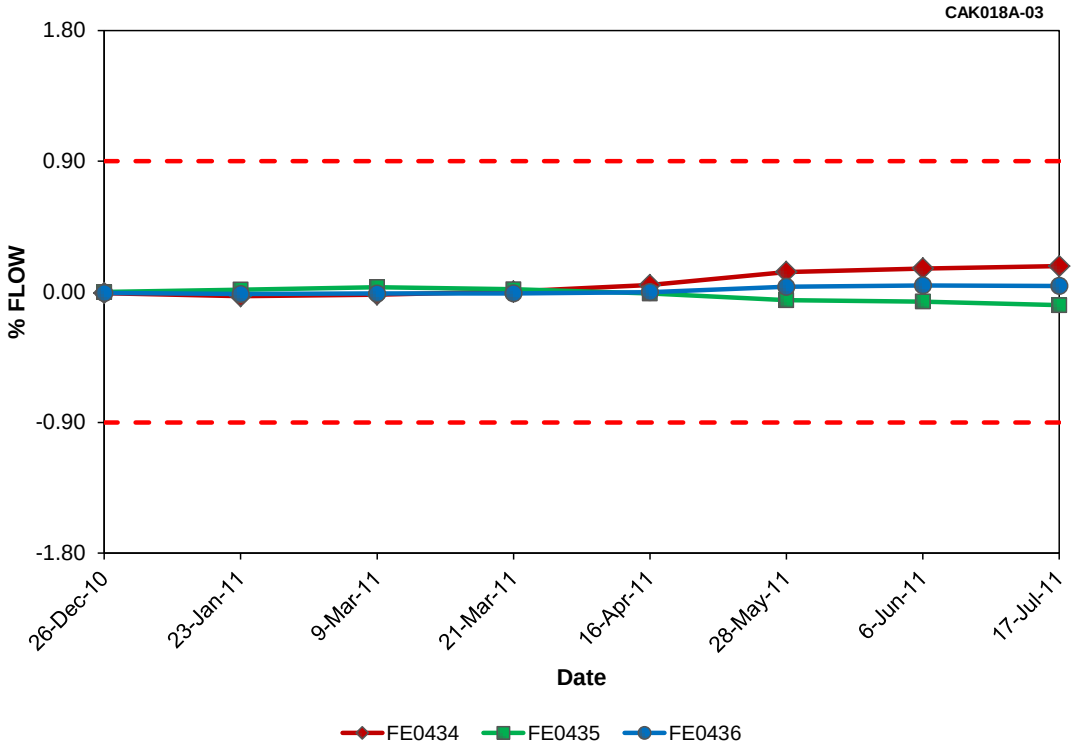



**Figure C.77 RCS LOOP C FLOW Steady-State Residual AAKR at Farley Unit 1 (Cycle 24)**

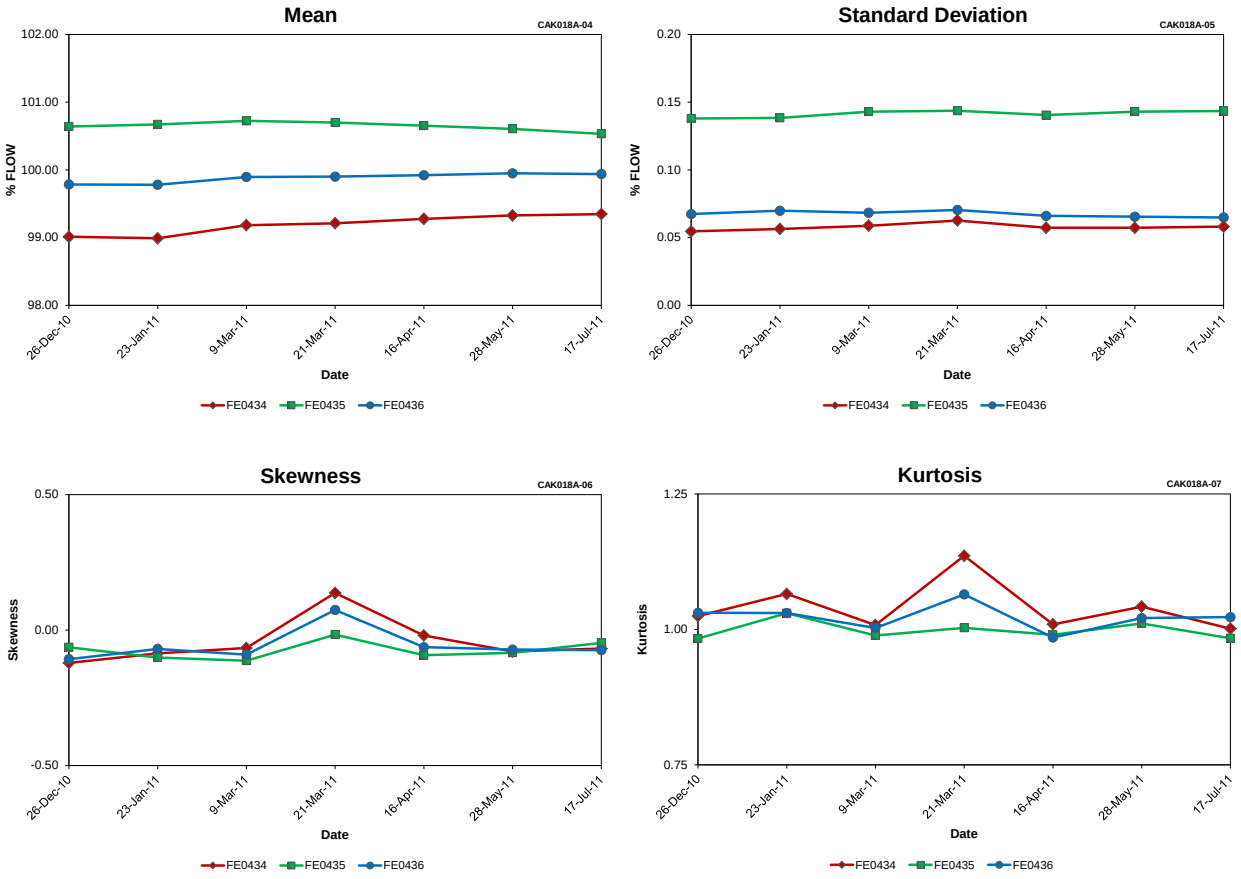



**Figure C.78 RCS LOOP C FLOW Data Quality Statistics at Farley Unit 1 (Cycle 24)**

**Table C.17 RCS LOOP C FLOW Data Quality for Farley Unit 1 (Cycle 24)**

| | Tag Names | | |
|---|---|---|---|
| **Result Type** | **FE0434** | **FE0435** | **FE0436** |
| Mean | 99.19 | 100.65 | 99.88 |
| Std. Dev. | 0.06 | 0.14 | 0.07 |
| Skewness | -0.04 | -0.07 | -0.06 |
| Kurtosis | 1.04 | 1.00 | 1.02 |

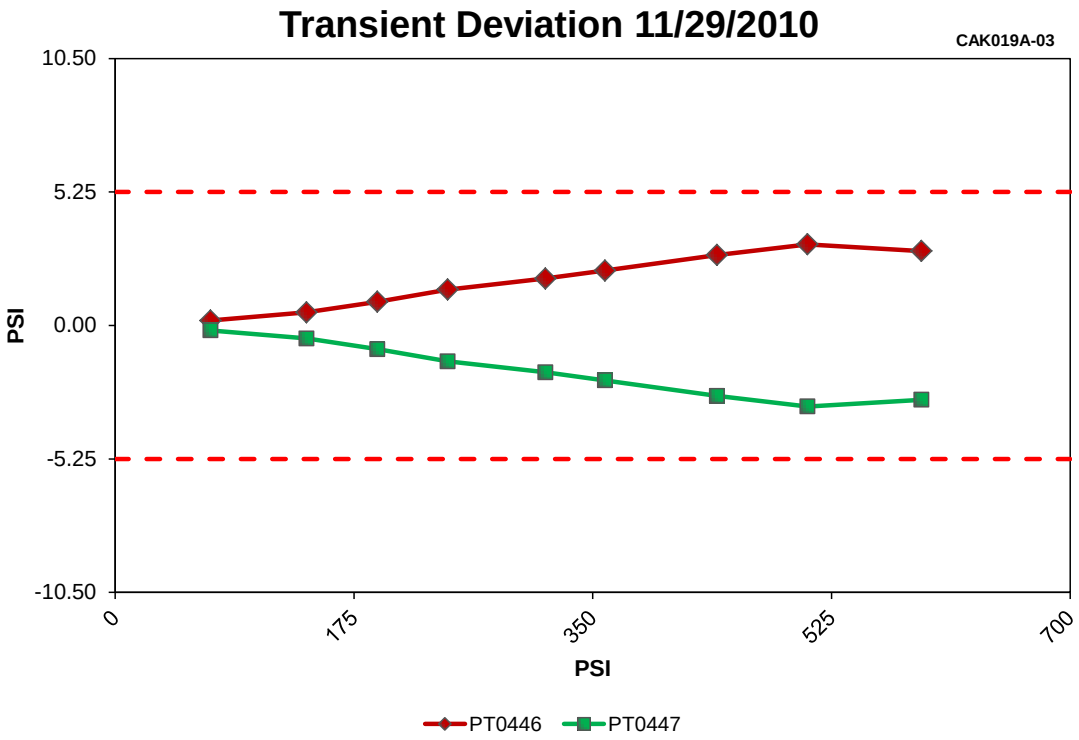



**Figure C.79 TBIN FIRST STAGE PRESSURE at Farley Unit 1 (Cycle 24)**

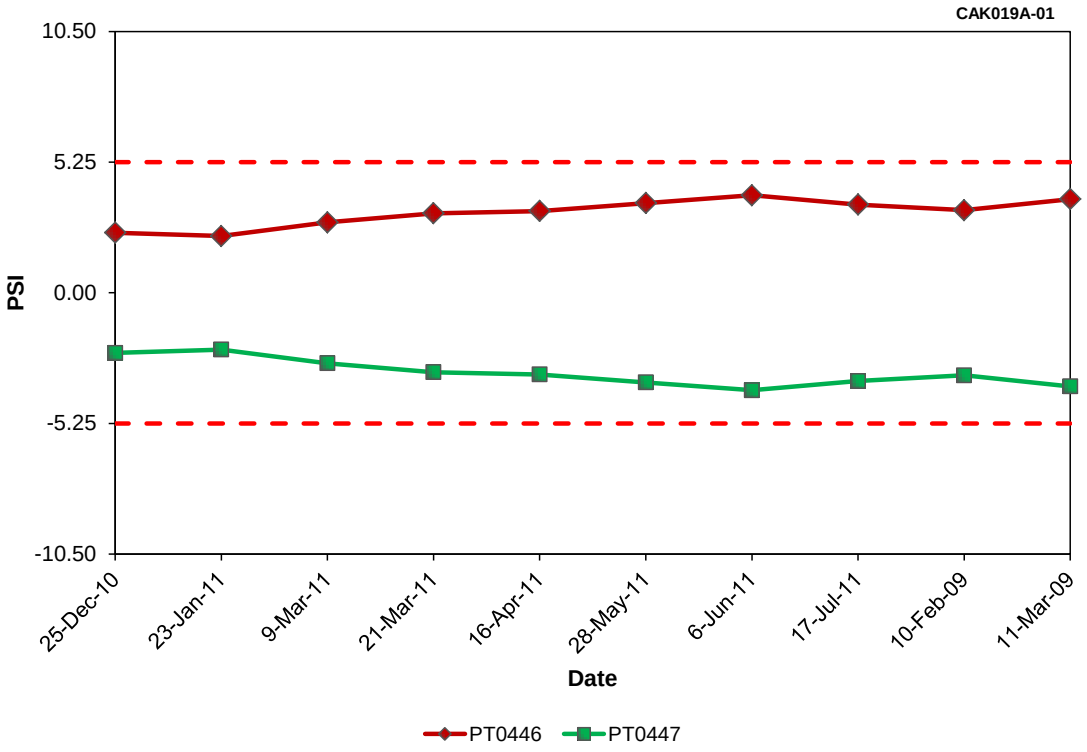



**Figure C.80 TBIN FIRST STAGE PRESSURE Steady-State Deviation at Farley Unit 1 (Cycle 24)**

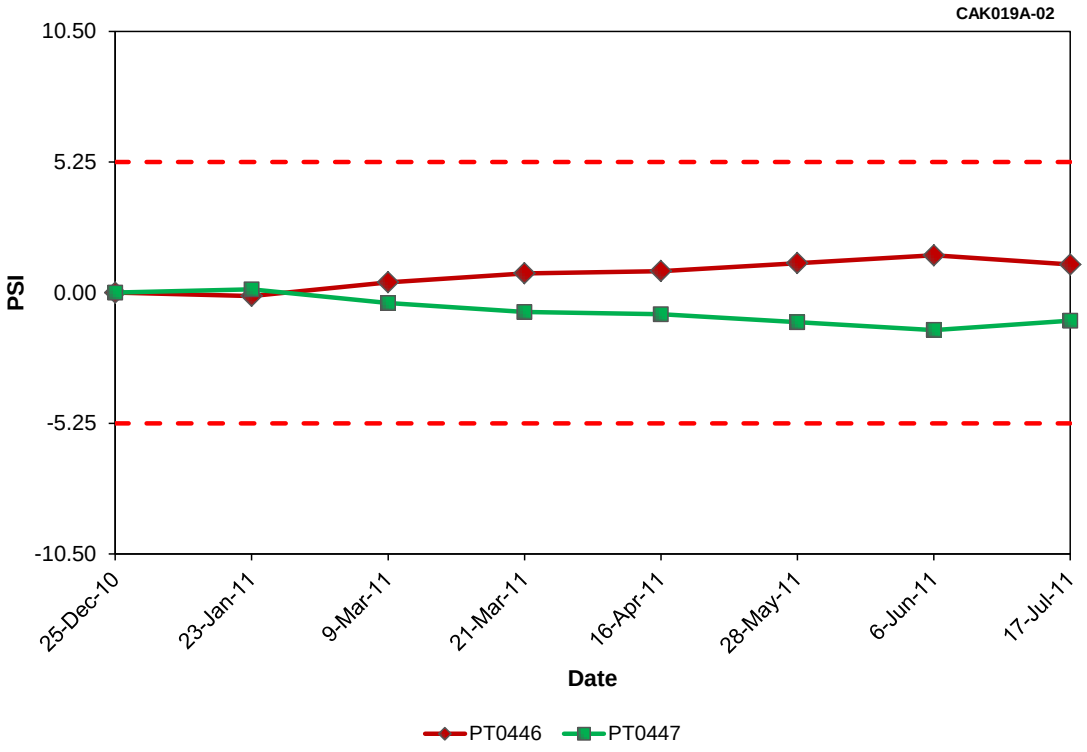



**Figure C.81 TBIN FIRST STAGE PRESSURE Steady-State Drift at Farley Unit 1 (Cycle 24)**

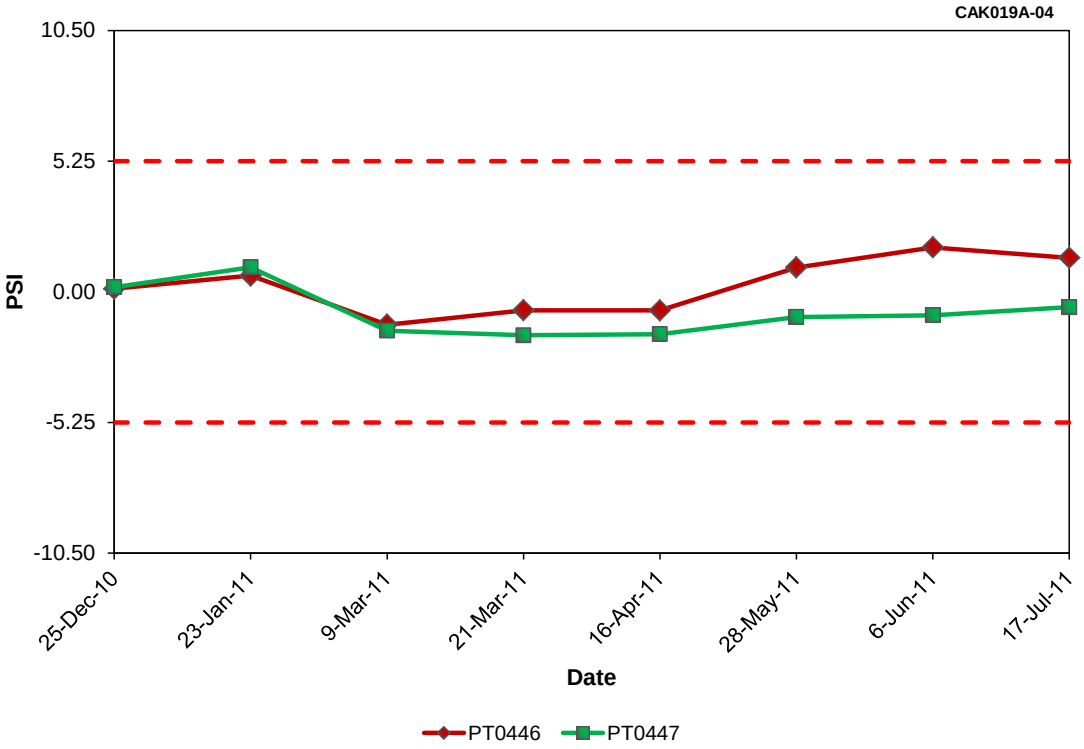



**Figure C.82 TBIN FIRST STAGE PRESSURE Steady-State Residual AAKR at Farley Unit 1 (Cycle 24)**

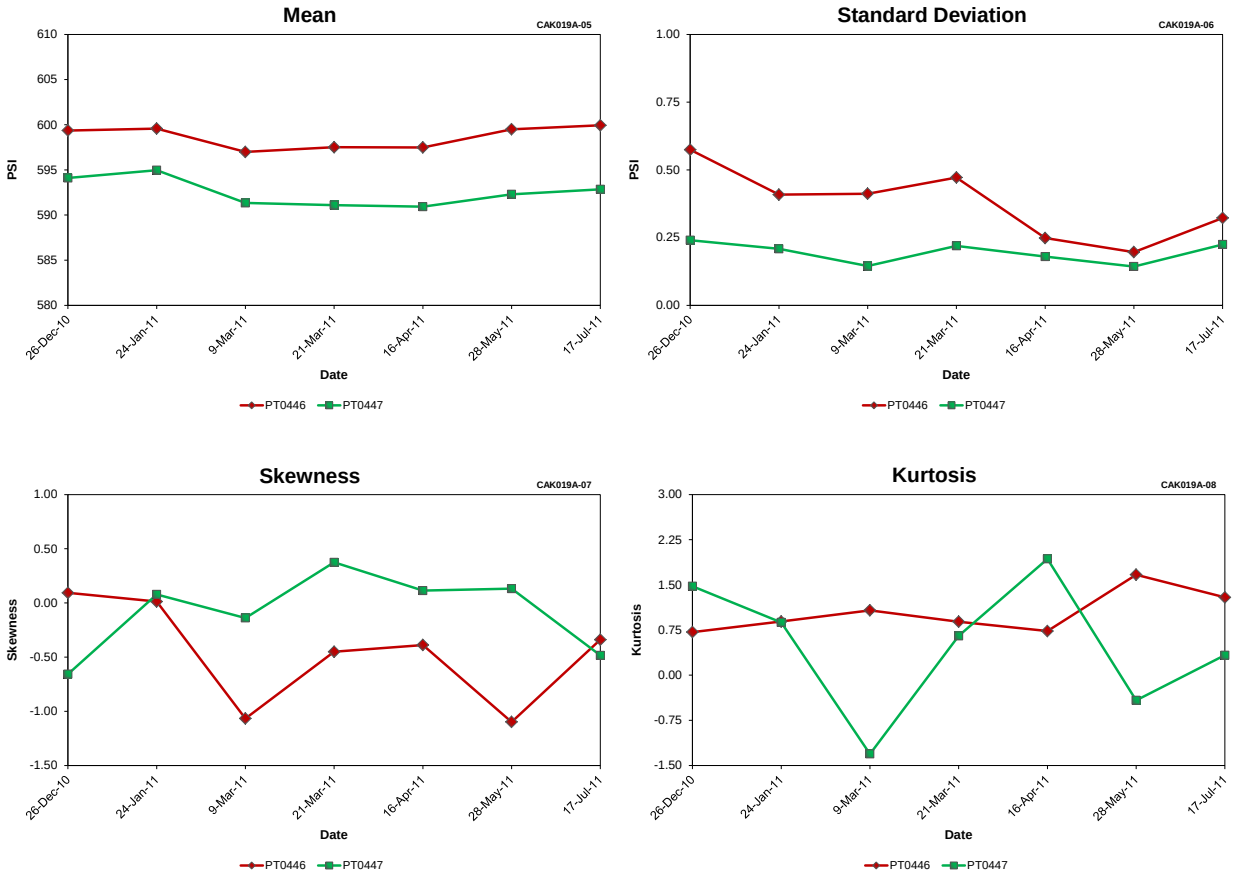



**Figure C.83 TBIN FIRST STAGE PRESSURE Data Quality Statistics at Farley Unit 1 (Cycle 24)**

**Table C.18 TBIN FIRST STAGE PRESSURE Data Quality for Farley Unit 1 (Cycle 24)**

| | Tag Names | |
|---|---|---|
| **Result Type** | **PT0446** | **PT0447** |
| Mean | 598.62 | 592.51 |
| Std. Dev. | 0.38 | 0.19 |
| Skewness | -0.46 | -0.08 |
| Kurtosis | 1.04 | 0.51 |

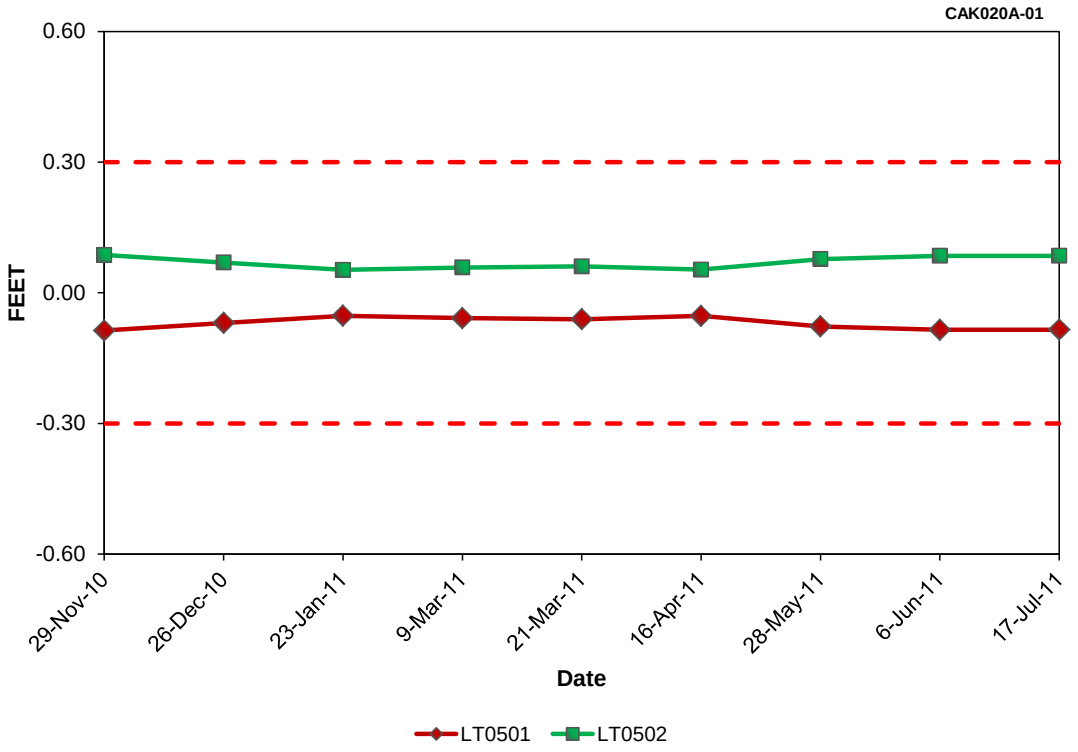



**Figure C.84 RWST LVL Steady-State Deviation at Farley Unit 1 (Cycle 24)**

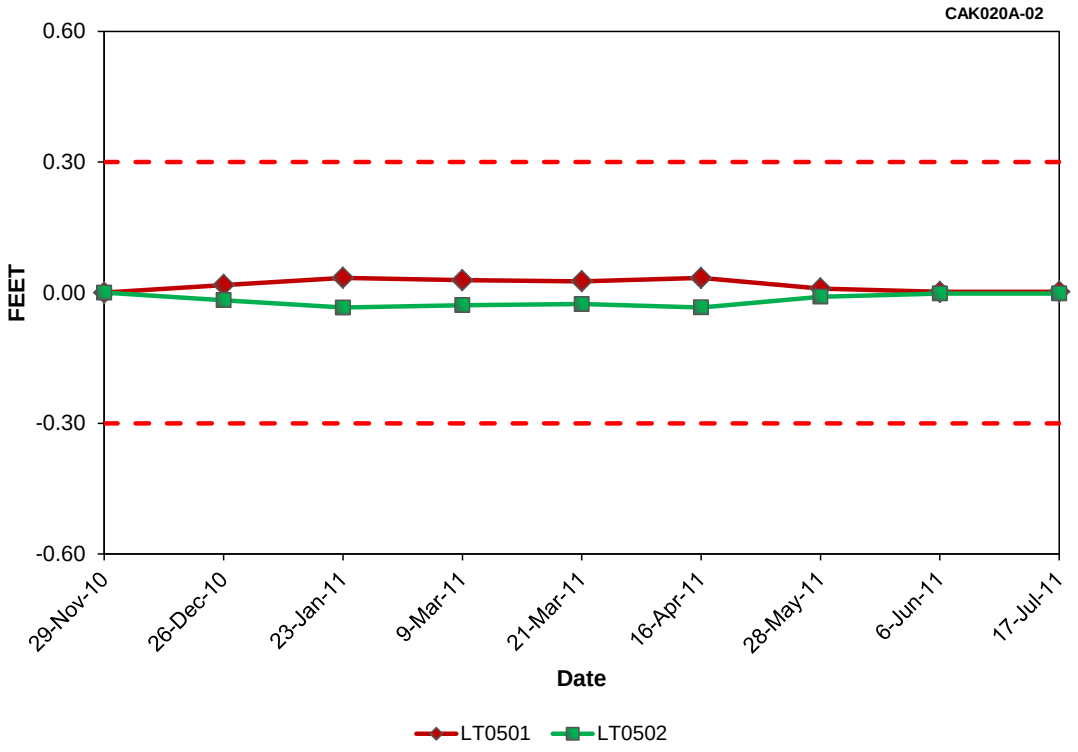



**Figure C.85 RWST LVL Steady-State Drift at Farley Unit 1 (Cycle 24)**

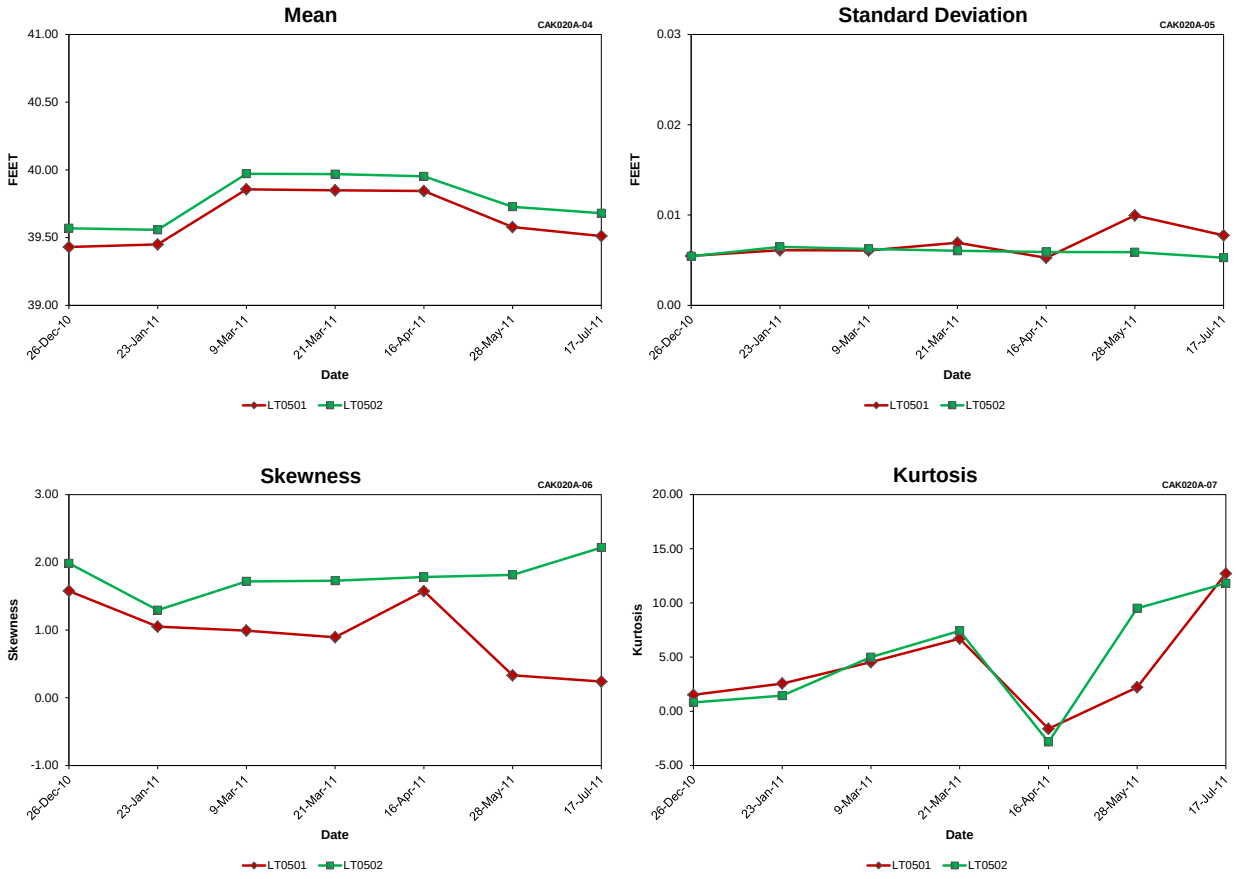



**Figure C.86 RWST LVL Data Quality Statistics at Farley Unit 1 (Cycle 24)**

**Table C.19 RWST LVL Data Quality for Farley Unit 1 (Cycle 24)**

| | Tag Names | |
|---|---|---|
| **Result Type** | **LT0501** | **LT0502** |
| Mean | 39.65 | 39.78 |
| Std. Dev. | 0.01 | 0.01 |
| Skewness | 0.95 | 1.79 |
| Kurtosis | 4.09 | 4.74 |

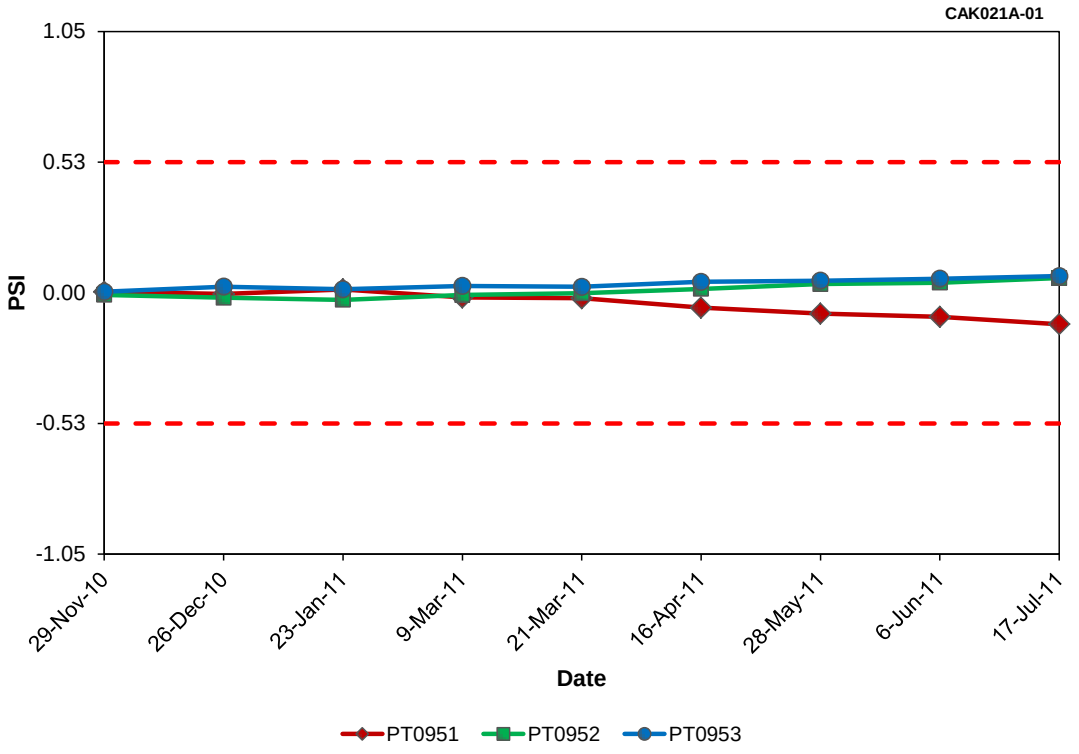



**Figure C.87 CTMT PSR Steady-State Deviation at Farley Unit 1 (Cycle 24)**

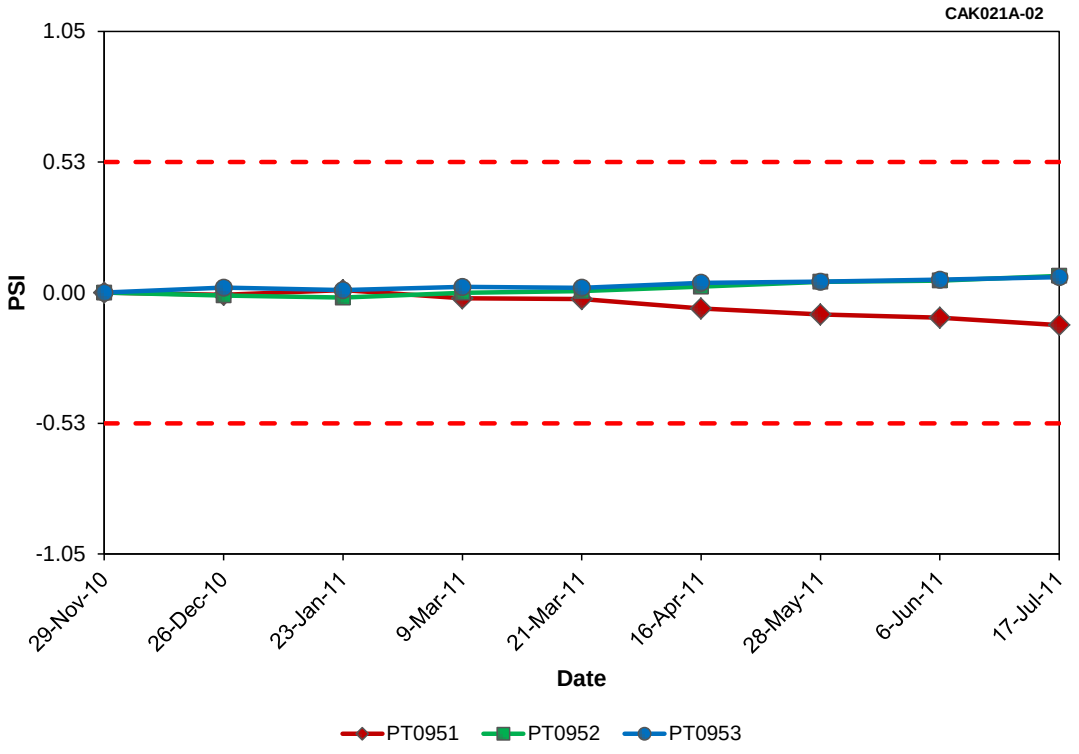



**Figure C.88 CTMT PSR Steady-State Drift at Farley Unit 1 (Cycle 24)**

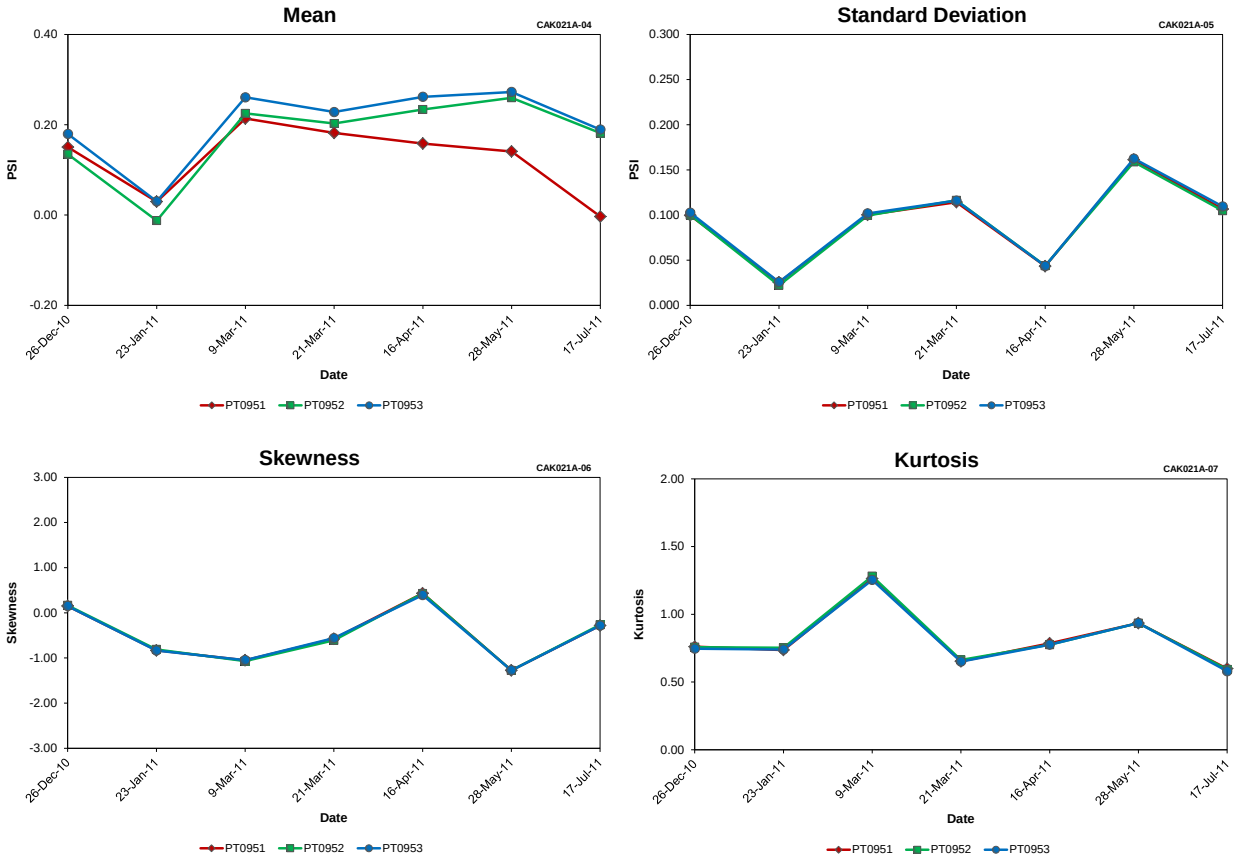



**Figure C.89 CTMT PSR Data Quality Statistics at Farley Unit 1 (Cycle 24)**

**Table C.20 CTMT PSR Data Quality for Farley Unit 1 (Cycle 24)**

| | Tag Names | | |
|---|---|---|---|
| **Result Type** | **PT0951** | **PT0952** | **PT0953** |
| Mean | 0.12 | 0.17 | 0.20 |
| Std. Dev. | 0.09 | 0.09 | 0.09 |
| Skewness | -0.49 | -0.49 | -0.49 |
| Kurtosis | 0.82 | 0.82 | 0.81 |

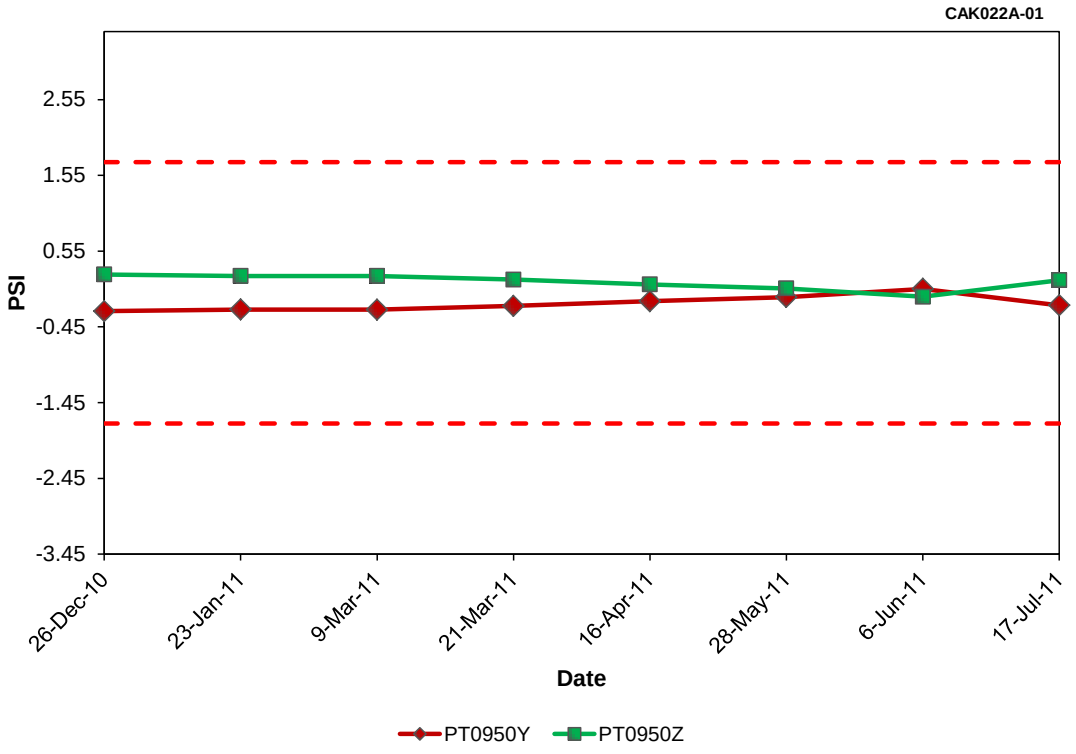



**Figure C.90 CTMT PSR EXT RANGE Steady-State Deviation at Farley Unit 1 (Cycle 24)**

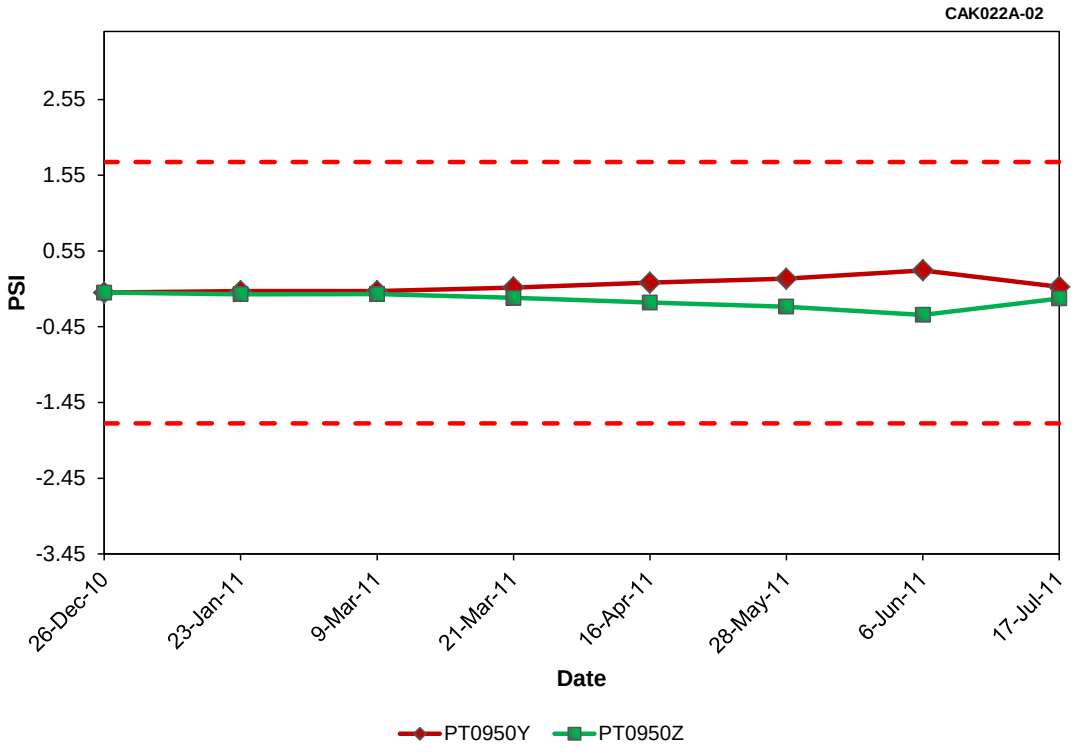



**Figure C.91 CTMT PSR EXT RANGE Steady-State Drift at Farley Unit 1 (Cycle 24)**

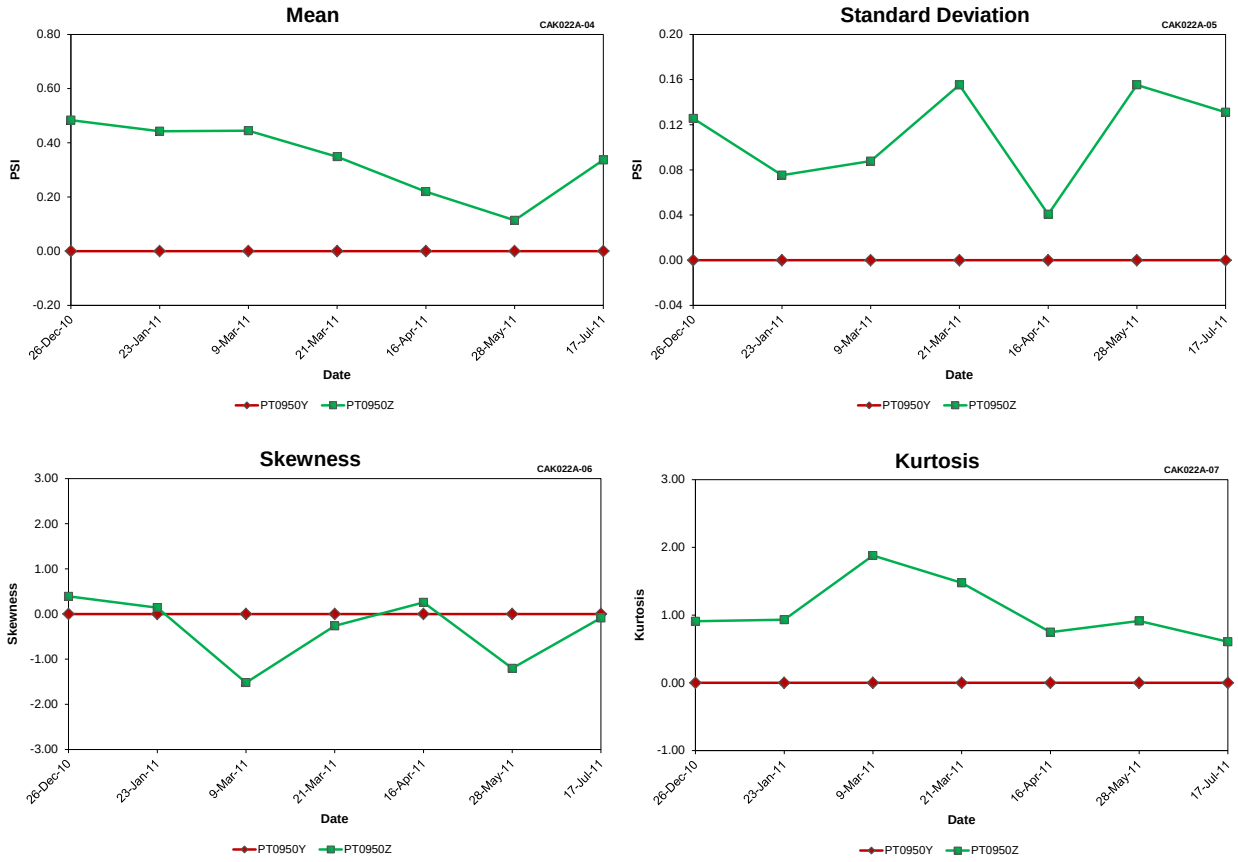



**Figure C.92 CTMT PSR EXT RANGE Data Quality Statistics at Farley Unit 1 (Cycle 24)**

**Table C.21 CTMT PSR EXT RANGE Data Quality for Farley Unit 1 (Cycle 24)**

| | Tag Names | |
|---|---|---|
| **Result Type** | **PT0950Y** | **PT0950Z** |
| Mean | 0.00 | 0.34 |
| Std. Dev. | 0.00 | 0.11 |
| Skewness | 0.00 | -0.33 |
| Kurtosis | 0.00 | 1.07 |

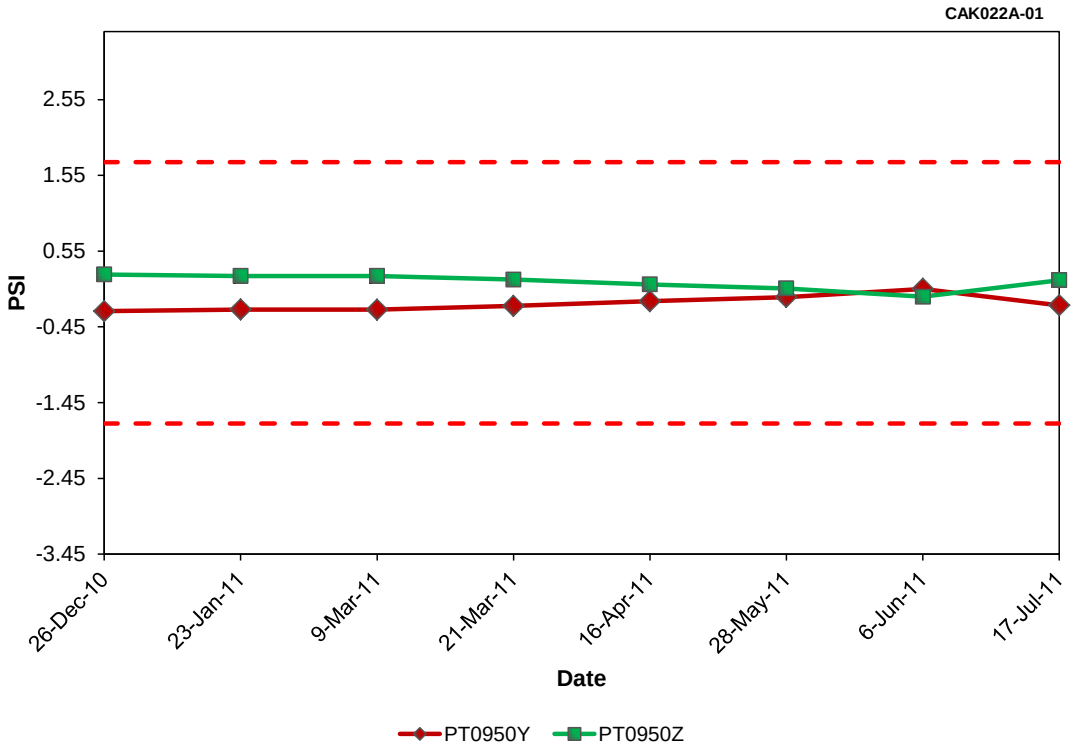



**Figure C.90 CTMT PSR EXT RANGE Steady-State Deviation at Farley Unit 1 (Cycle 24)**

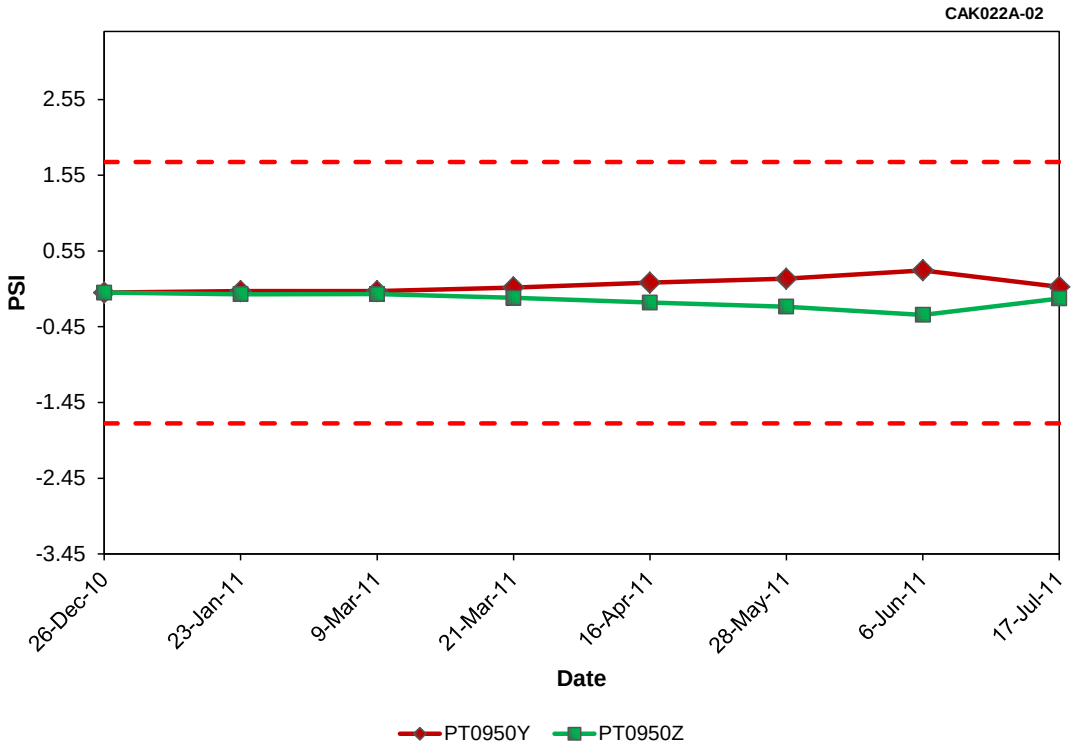



**Figure C.91 CTMT PSR EXT RANGE Steady-State Drift at Farley Unit 1 (Cycle 24)**

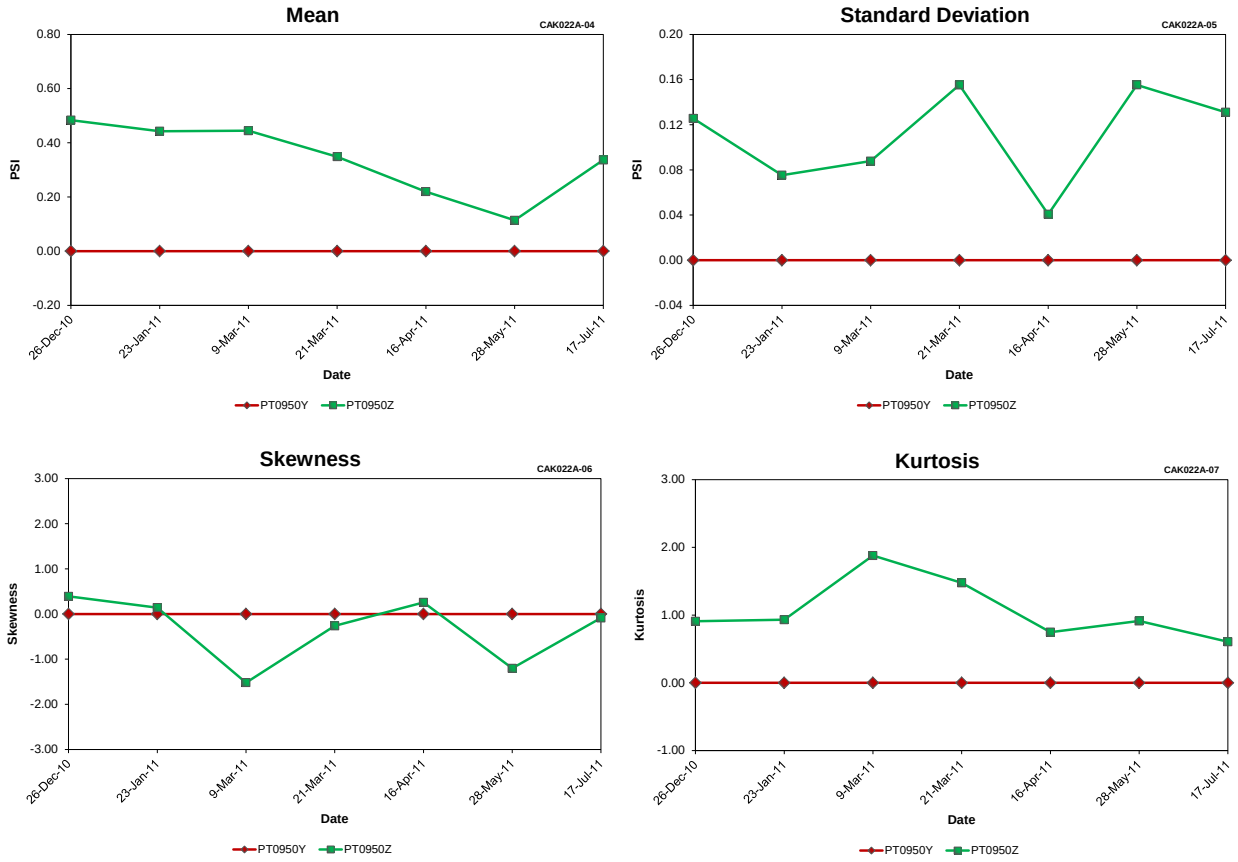



**Figure C.92 CTMT PSR EXT RANGE Data Quality Statistics at Farley Unit 1 (Cycle 24)**

| Result Type | Tag Names | |
|---|---|---|
| | PT0950Y | PT0950Z |
| Mean | 0.00 | 0.34 |
| Std. Dev. | 0.00 | 0.11 |
| Skewness | 0.00 | -0.33 |
| Kurtosis | 0.00 | 1.07 |

**Table C.21 CTMT PSR EXT RANGE Data Quality for Farley Unit 1 (Cycle 24)**

# APPENDIX D

# Farley Unit 2 OLM Results (Cycle 20)

| Item | Tagname | Service | 23 Aug 2009 | 22 Sep 2009 | 23 Oct 2009 | 23 Nov 2009 | 31 Dec 2009 | 16 Jan 2010 | 22 Feb 2010 | 22 Mar 2010 | 4 Apr 2010 | Drift | Final | Comment |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | FE0474B | SG A STEAM FLOW | | | | | | | | | | | PASS | |
| 2 | FE0475B | SG A STEAM FLOW | | | | | | | | | | | PASS | |
| | | | | | | | | | | | | | | |
| 3 | FE0476B | FW FLOW TO SG A | | | | | | | | | | | PASS | |
| 4 | FE0477B | FW FLOW TO SG A | | | | | | | | | | | PASS | |
| | | | | | | | | | | | | | | |
| 5 | LT0474 | SG A NARROW RANGE LEVEL | | | | | | | | | | | PASS | |
| 6 | LT0475 | SG A NARROW RANGE LEVEL | | | | | | | | | | | PASS | |
| 7 | LT0476 | SG A NARROW RANGE LEVEL | | | | | | | | | | | PASS | |
| 8 | LT0477 | SG A WIDE RANGE LEVEL | | | | | | M | M | | | | FAIL | Drift over cycle |
| | | | | | | | | | | | | | | |
| 9 | PT0474 | SG A OUTLET PRESSURE | | | | | | | | | | | PASS | |
| 10 | PT0475 | SG A OUTLET PRESSURE | | | | | | | | | | | PASS | |
| 11 | PT0476 | SG A OUTLET PRESSURE | | | R | R | R | R | R | R | R | | FAIL | Low bias |
| | | | | | | | | | | | | | | |
| 12 | FE0484B | SG B STEAM FLOW | | | | | | | | | R | | PASS | Only out in low range transient |
| 13 | FE0485B | SG B STEAM FLOW | | | | | | | | | R | | PASS | Only out in low range transient |
| | | | | | | | | | | | | | | |
| 14 | FE0486B | FW FLOW TO SG B | | | | | | | | | | | PASS | |
| 15 | FE0487B | FW FLOW TO SG B | | | | | | | | | | | PASS | |
| | | | | | | | | | | | | | | |
| 16 | LT0484 | SG B NARROW RANGE LEVEL | | | | | | | | | | | PASS | |
| 17 | LT0485 | SG B NARROW RANGE LEVEL | | | | | | | | | R | | FAIL | High bias in shutdown data |
| 18 | LT0486 | SG B NARROW RANGE LEVEL | | | | | | | | | | | PASS | |
| 19 | LT0487 | SG B WIDE RANGE LEVEL | | | | | | | | | | | PASS | |
| | | | | | | | | | | | | | | |
| 20 | PT0484 | SG B OUTLET PRESSURE | | | | | | | | | | | PASS | |
| 21 | PT0485 | SG B OUTLET PRESSURE | | | | | | | | | | | PASS | |
| 22 | PT0486 | SG B OUTLET PRESSURE | | | | | | | | | | | PASS | |
| | | | | | | | | | | | | | | |
| 23 | FE0494B | SG C STEAM FLOW | | | | | | | | | R | | PASS | Only out in low range transient |
| 24 | FE0495B | SG C STEAM FLOW | | | | | | | | | R | | PASS | Only out in low range transient |
| | | | | | | | | | | | | | | |
| 25 | FE0496B | FW FLOW TO SG C | | | | | | | | | | | PASS | |
| 26 | FE0497B | FW FLOW TO SG C | | | | | | | | | | | PASS | |
| | | | | | | | | | | | | | | |
| 27 | LT0494 | SG C NARROW RANGE LEVEL | | | | | | | | | | | PASS | |
| 28 | LT0495 | SG C NARROW RANGE LEVEL | | | | | | | | | | | PASS | |
| 29 | LT0496 | SG C NARROW RANGE LEVEL | | | | | | | | | | | PASS | |
| 30 | LT0497 | SG C WIDE RANGE LEVEL | | | | | | | M | | | | FAIL | Drift over cycle |

*R = Exceeded Redundant Sensor Analysis Limits  M = Exceeded Model Analysis Limits  D = Exceeded Drift Limits*

**Table D.1 Farley Unit 2 OLM Results Summary (Cycle 20)**

| Item | Tagname | Service | 23 Aug 2009 | 22 Sep 2009 | 23 Oct 2009 | 23 Nov 2009 | 31 Dec 2009 | 16 Jan 2010 | 22 Feb 2010 | 22 Mar 2010 | 4 Apr 2010 | Drift | Final | Comment |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 31 | PT0494 | SG C OUTLET PRESSURE | | | | | | | | | | | PASS | |
| 32 | PT0495 | SG C OUTLET PRESSURE | | | | | | | | | | | PASS | |
| 33 | PT0496 | SG C OUTLET PRESSURE | | | | | | | | | | | PASS | |
| | | | | | | | | | | | | | | |
| 34 | LT0459 | PRESSURIZER LEVEL | | | | | | | | | | | PASS | |
| 35 | LT0460 | PRESSURIZER LEVEL | | | | | | | | | | | PASS | |
| 36 | LT0461 | PRESSURIZER LEVEL | | | | | | | | | R | | FAIL | Low bias in shutdown data |
| | | | | | | | | | | | | | | |
| 37 | PT0455 | PRESSURIZER PRESSURE | | | M | R,M | R,M | R,M | R,M | R,M | | D | PASS | Drift during cycle. Good in shutdown. |
| 38 | PT0456 | PRESSURIZER PRESSURE | | | | | | M | M | | | | PASS | Drift during cycle. Good in shutdown. |
| 39 | PT0457 | PRESSURIZER PRESSURE | | | M | | R,M | R,M | R,M | | | D | PASS | Drift during cycle. Good in shutdown. |
| 40 | PT0444A | PRESSURIZER PRESSURE | | | | | | | | | | | PASS | |
| 41 | PT0445A | PRESSURIZER PRESSURE | | | | | | | | | | | PASS | |
| | | | | | | | | | | | | | | |
| 42 | FE0414 | RCS LOOP A FLOW | | | | | | | | | | | PASS | |
| 43 | FE0415 | RCS LOOP A FLOW | | | | | | | | | | | PASS | |
| 44 | FE0416 | RCS LOOP A FLOW | R | R | R | R | R | R | R | R | | | FAIL | Low bias |
| | | | | | | | | | | | | | | |
| 45 | FE0424 | RCS LOOP B FLOW | | | | | | | | | | | PASS | |
| 46 | FE0425 | RCS LOOP B FLOW | | | | | | M | M | | | | PASS | Process change |
| 47 | FE0426 | RCS LOOP B FLOW | | | | | | | | | | | PASS | |
| | | | | | | | | | | | | | | |
| 48 | FE0434 | RCS LOOP C FLOW | | | | | | | | | | | PASS | |
| 49 | FE0435 | RCS LOOP C FLOW | | | | | | | | | | | PASS | |
| 50 | FE0436 | RCS LOOP C FLOW | | | | | | | | | | | PASS | |
| | | | | | | | | | | | | | | |
| 51 | PT0402 | RCS WIDE RANGE PRESSURE LOOP C | | | | | | | | | | | PASS | |
| 52 | PT0403 | RCS WIDE RANGE PRESSURE LOOP A | | | | | | | | | | | PASS | |
| | | | | | | | | | | | | | | |
| 53 | PT0446 | TURBINE FIRST STAGE PRESSURE | | | | | | | | | | | PASS | |
| 54 | PT0447 | TURBINE FIRST STAGE PRESSURE | | | | | | | | | | | PASS | |
| | | | | | | | | | | | | | | |
| 55 | LT0501 | RWST LEVEL | | | | | | | | | | | PASS | |
| 56 | LT0502 | RWST LEVEL | | | | | | | | | | | PASS | |
| | | | | | | | | | | | | | | |
| 57 | PT0951 | CTMT PRESSURE | | | | | | | | | | | PASS | |
| 58 | PT0952 | CTMT PRESSURE | | | | | | | | | | | PASS | |
| 59 | PT0953 | CTMT PRESSURE | | | | | | | | | | | PASS | |
| | | | | | | | | | | | | | | |
| 60 | PT0950Y | CTMT PRESSURE EXTENDED RANGE | | | | | | | | | | | PASS | |
| 61 | PT0950Z | CTMT PRESSURE EXTENDED RANGE | | | | | | | | | | | PASS | |

*R = Exceeded Redundant Sensor Analysis Limits  M = Exceeded Model Analysis Limits  D = Exceeded Drift Limits*

**Table D.1 (continued) Farley Unit 2 OLM Results Summary (Cycle 20)**

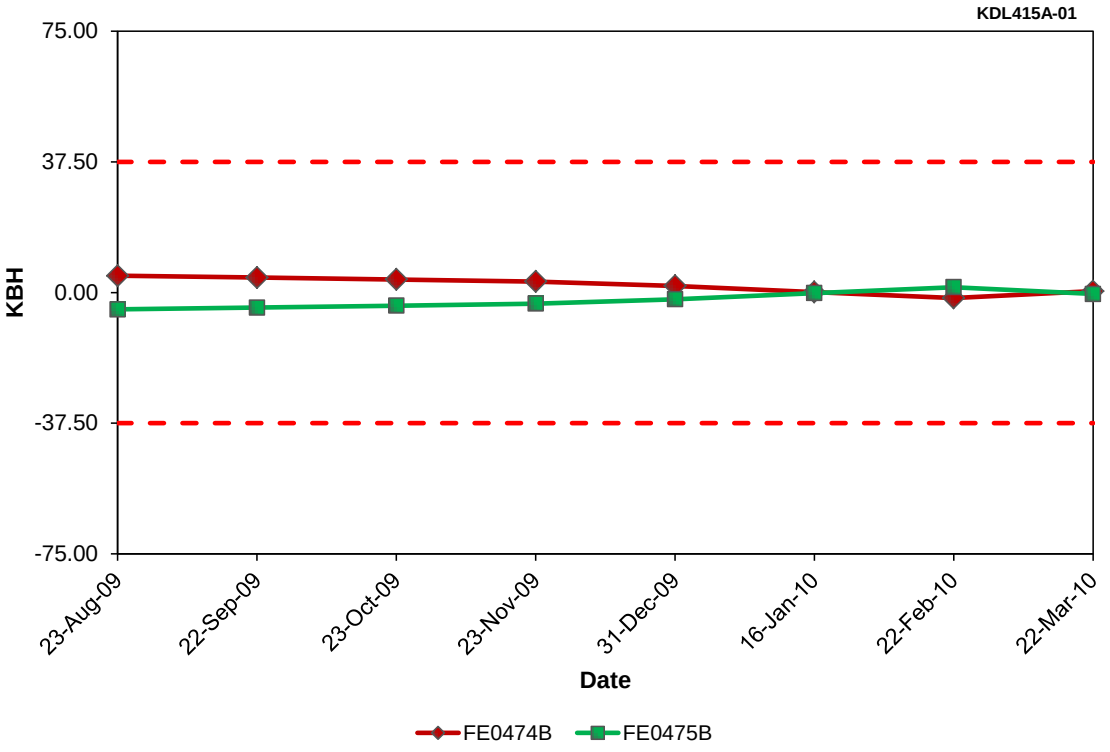



**Figure D.1 SG A STEAM FLOW Steady-State Deviation at Farley Unit 2 (Cycle 20)**

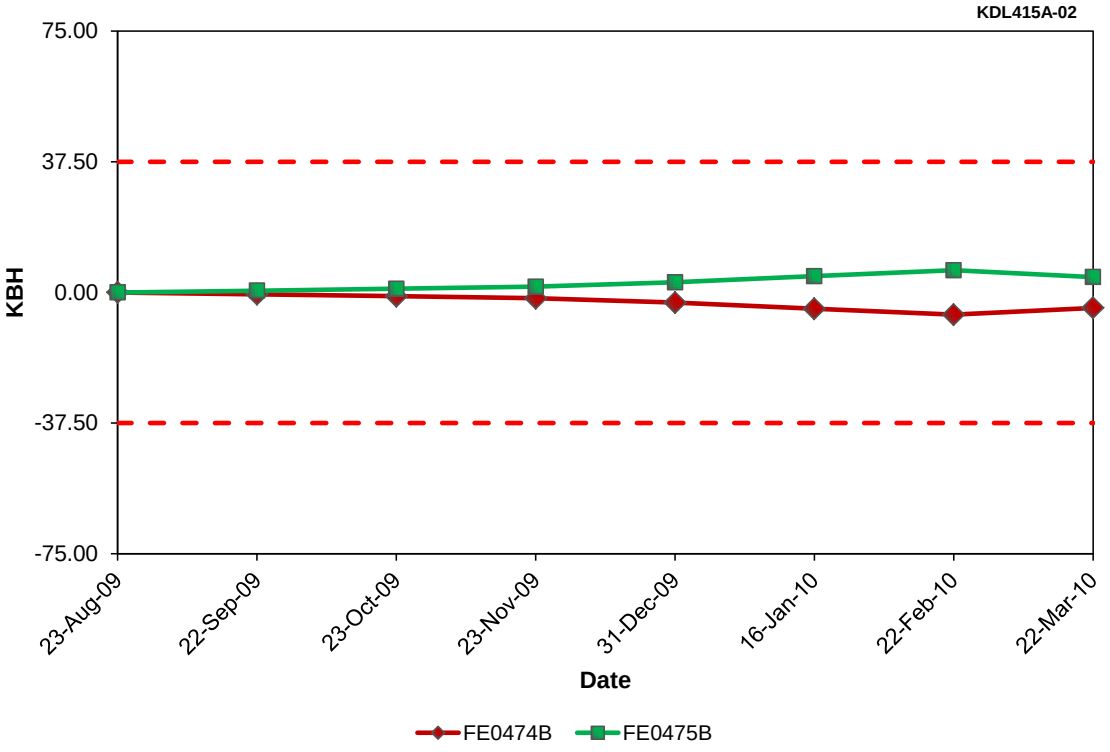



**Figure D.2 SG A STEAM FLOW Steady-State Drift at Farley Unit 2 (Cycle 20)**

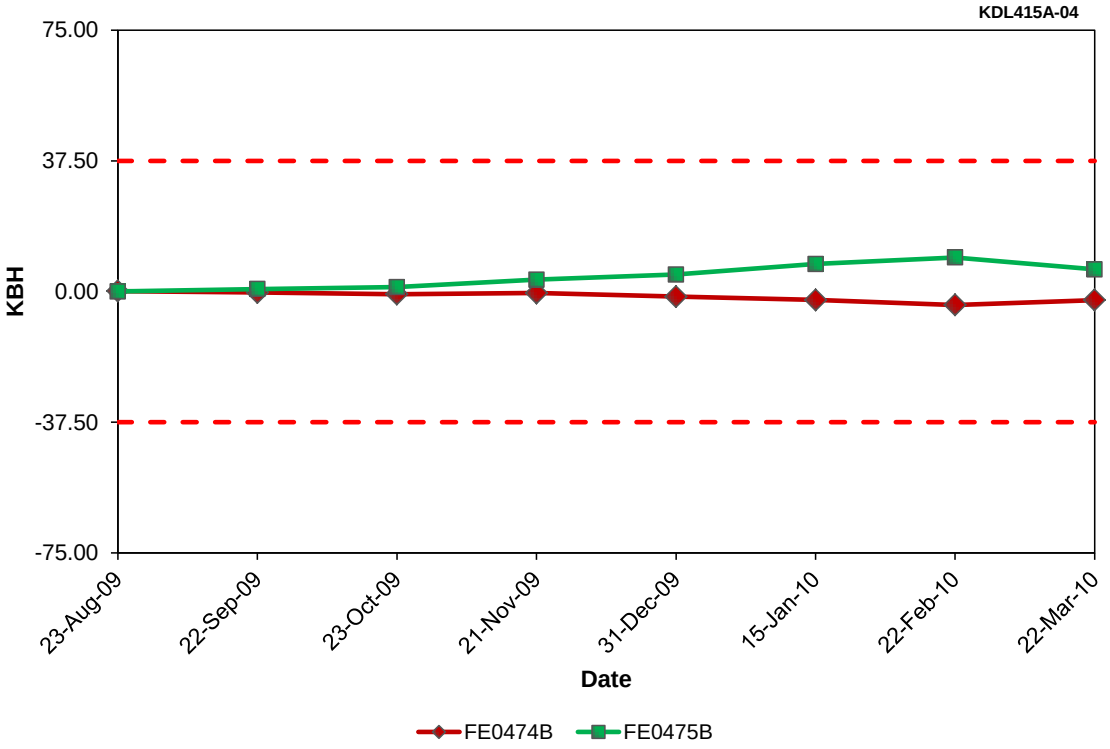



**Figure D.3 SG A STEAM FLOW Steady-State Residual AAKR at Farley Unit 2 (Cycle 20)**

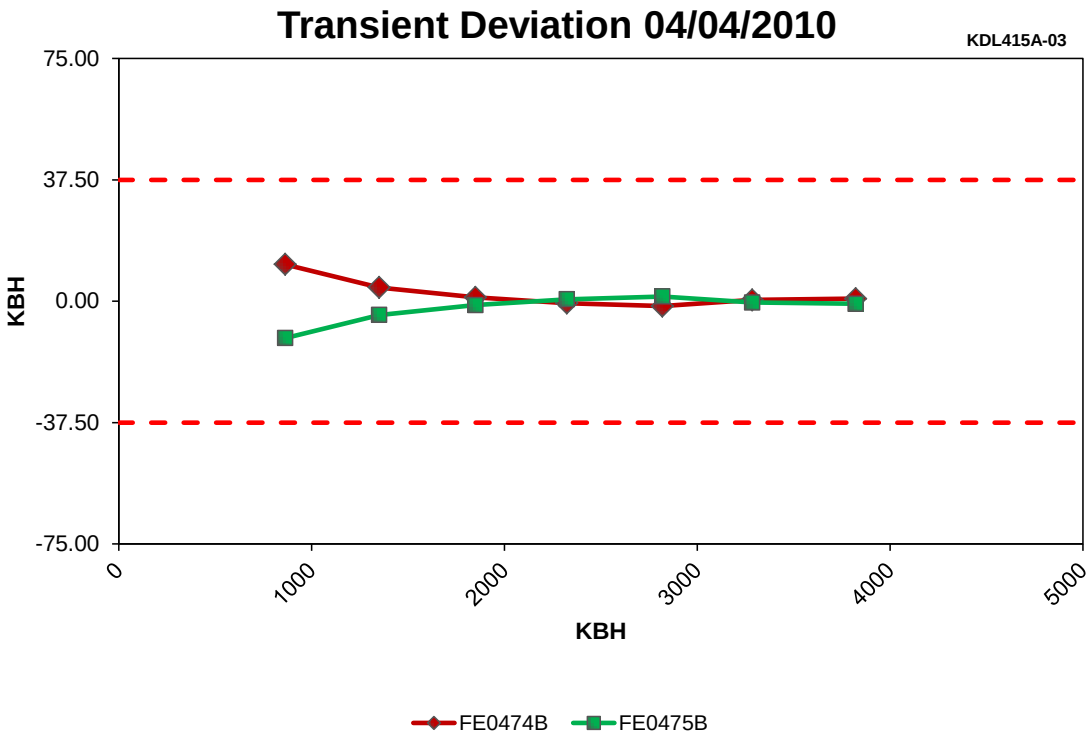



**Figure D.4 SG A STEAM FLOW Transient Deviation at Farley Unit 2 (Cycle 20)**

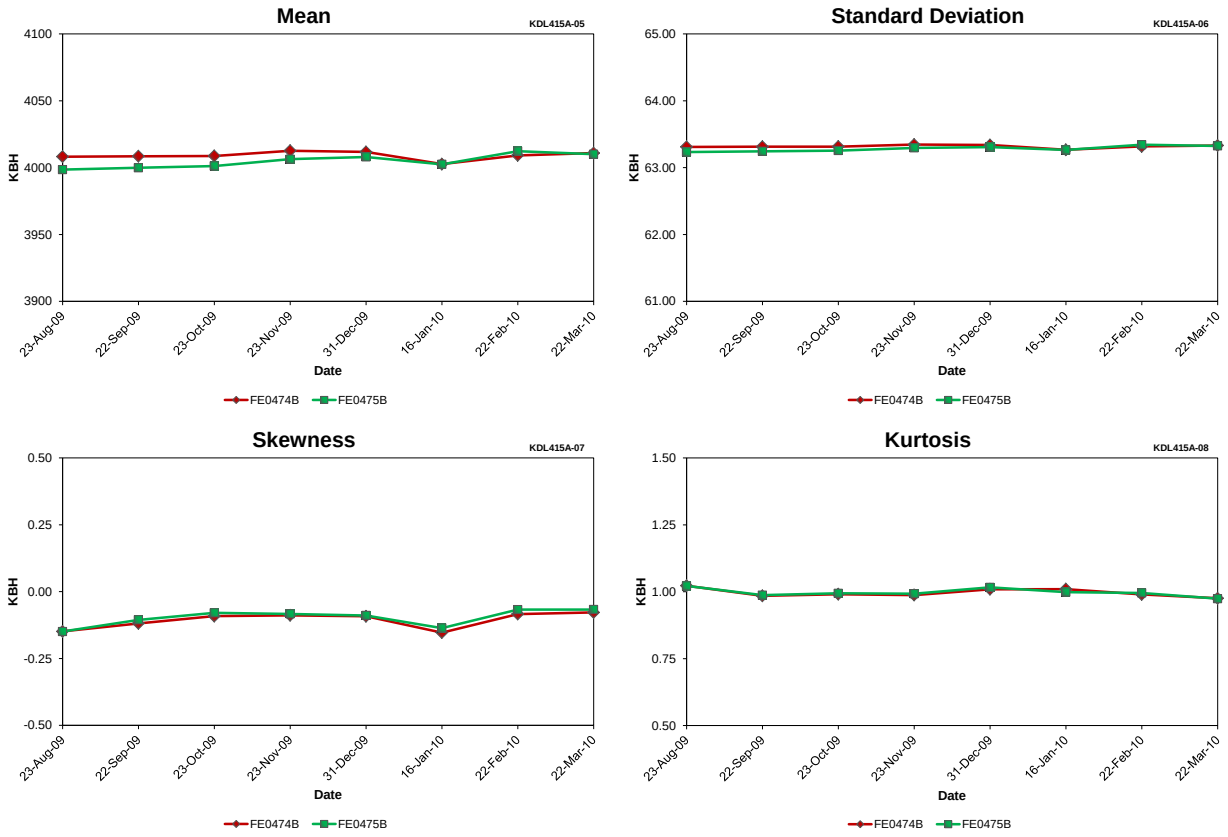



**Figure D.5 SG A STEAM FLOW Data Quality Statistics at Farley Unit 2 (Cycle 20)**

**Table D.1 SG A STEAM FLOW Data Quality for Farley Unit 2 (Cycle 20)**

| Result Type | Tag Names | |
|---|---|---|
| | FE0474B | FE0475B |
| Mean | 4009.08 | 4004.86 |
| Std. Dev. | 63.32 | 63.28 |
| Skewness | -0.11 | -0.10 |
| Kurtosis | 1.00 | 1.00 |

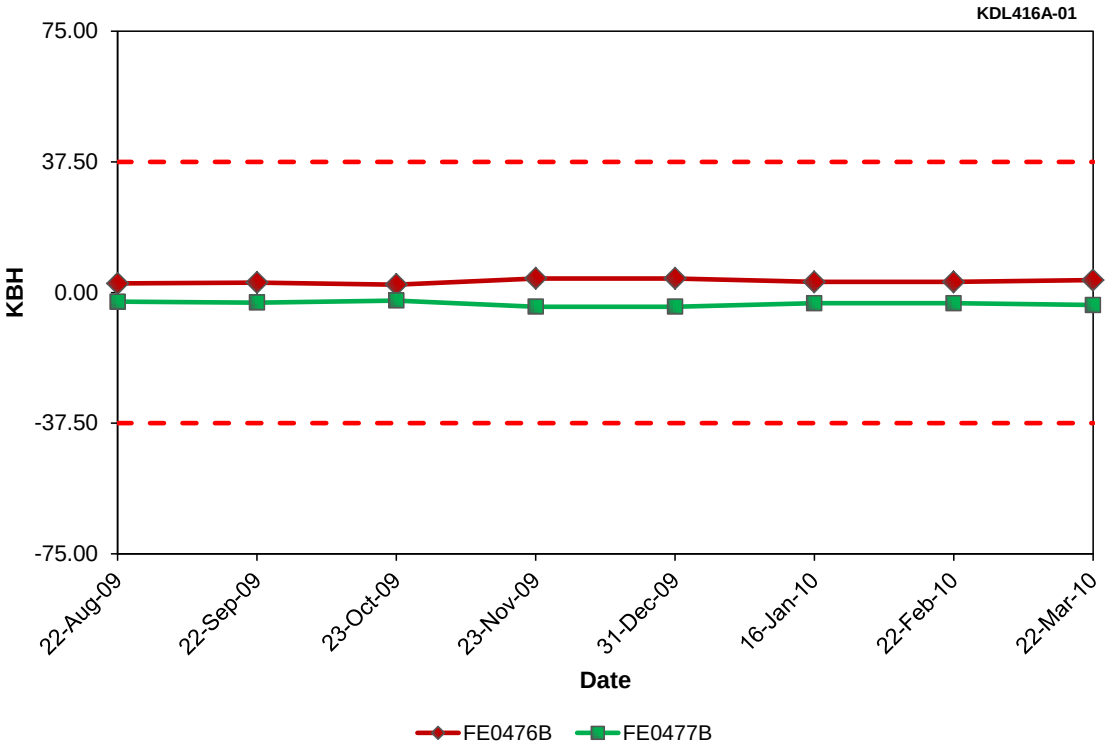



**Figure D.6 FW FLOW TO SG A Steady-State Deviation at Farley Unit 2 (Cycle 20)**

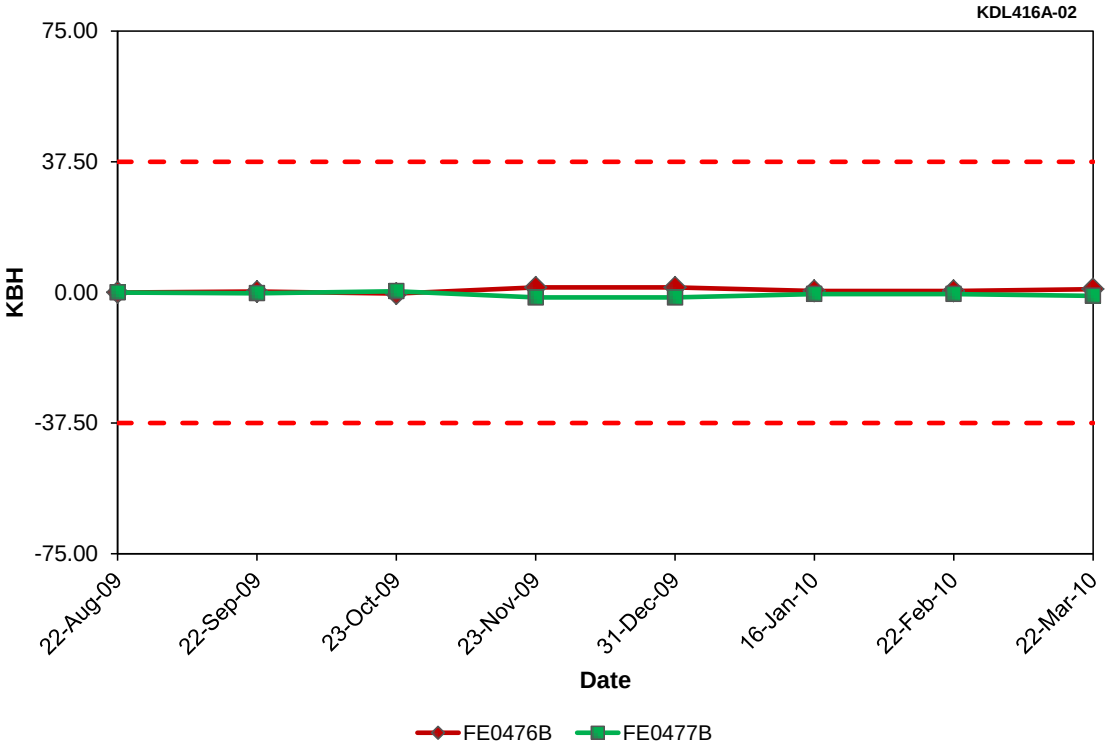



**Figure D.7 FW FLOW TO SG A Steady-State Drift at Farley Unit 2 (Cycle 20)**

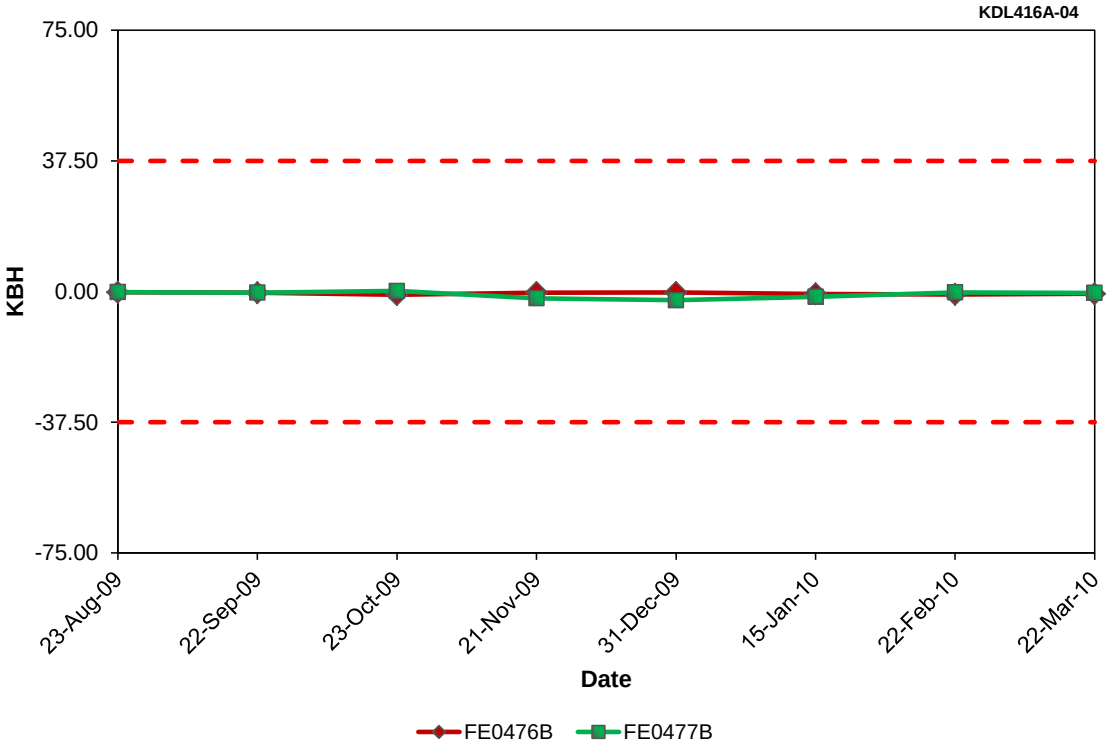



**Figure D.8 FW FLOW TO SG A Steady-State Residual AAKR at Farley Unit 2 (Cycle 20)**

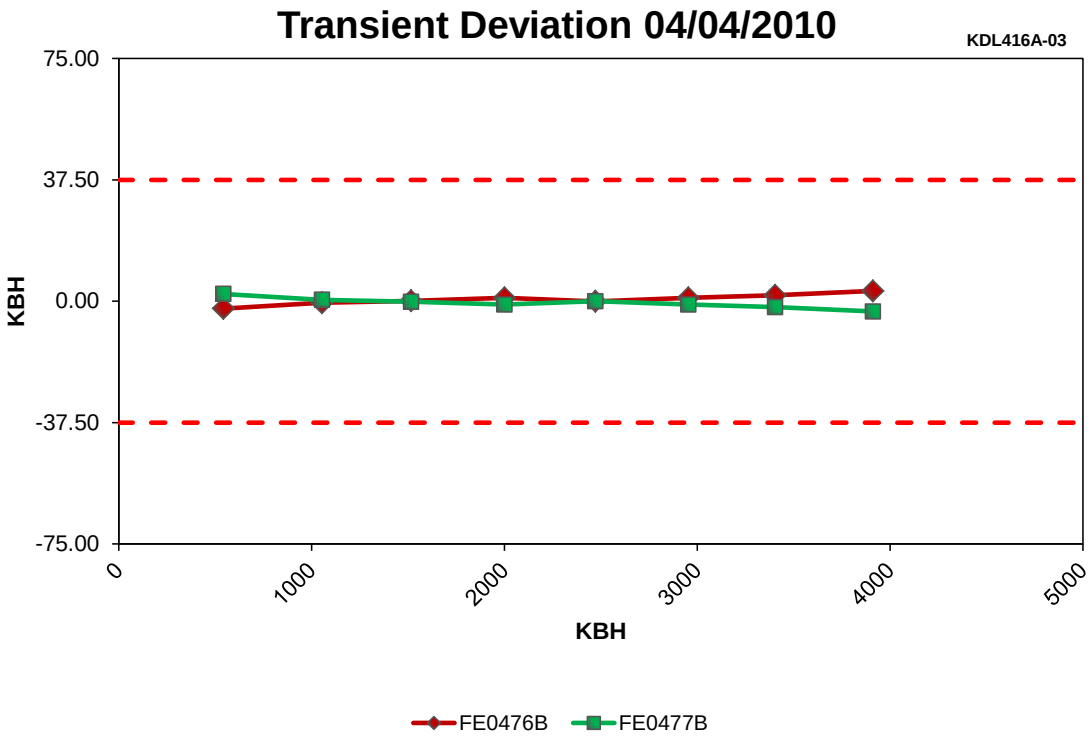



**Figure D.8 FW FLOW TO SG A Transient Deviation at Farley Unit 2 (Cycle 20)**

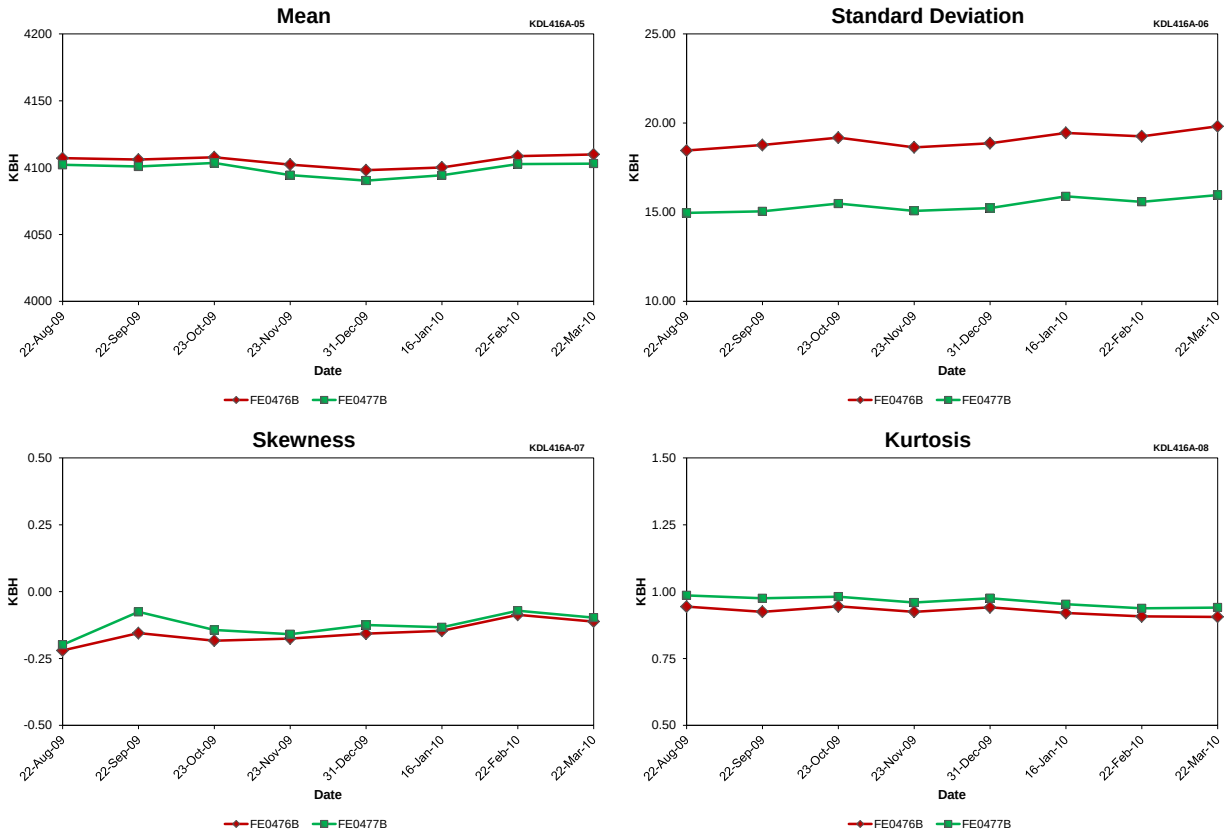



**Figure D.9 FW FLOW TO SG A Data Quality Statistics at Farley Unit 2 (Cycle 20)**

**Table D.2 FW FLOW TO SG A Data Quality for Farley Unit 2 (Cycle 20)**

| | Tag Names | |
|---|---|---|
| **Result Type** | **FE0476B** | **FE0477B** |
| Mean | 4105.00 | 4098.91 |
| Std. Dev. | 19.06 | 15.40 |
| Skewness | -0.15 | -0.13 |
| Kurtosis | 0.93 | 0.96 |

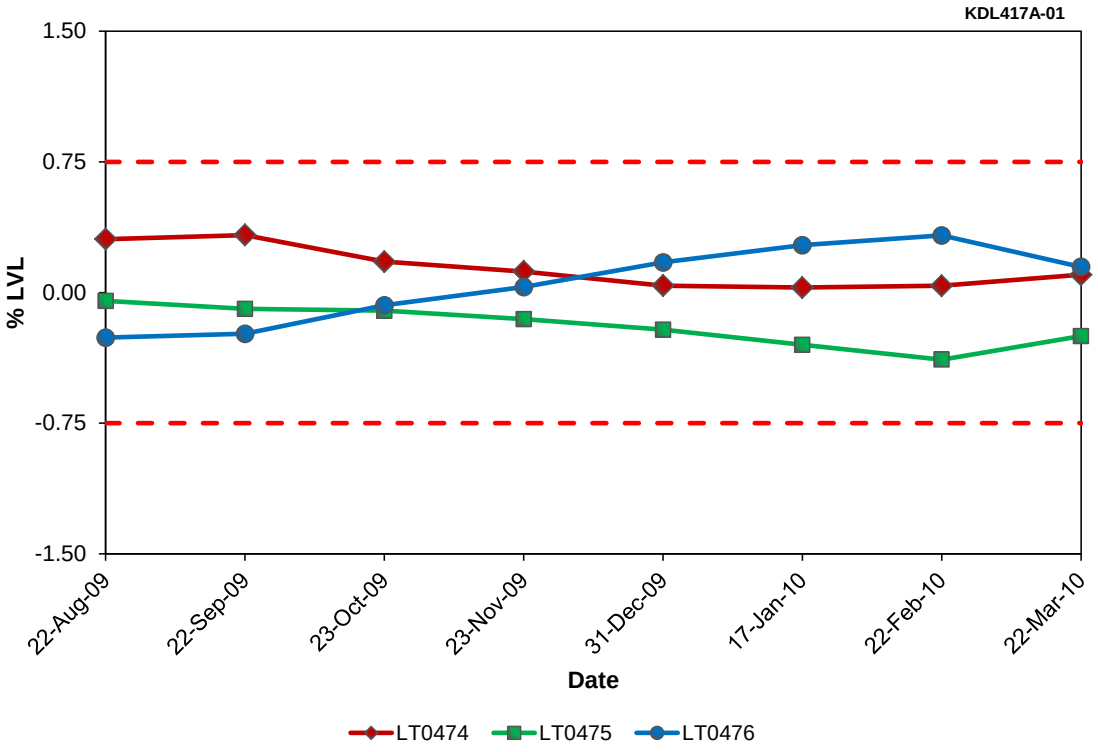



**Figure D.10 SG A LEVEL Steady-State Deviation at Farley Unit 2 (Cycle 20)**

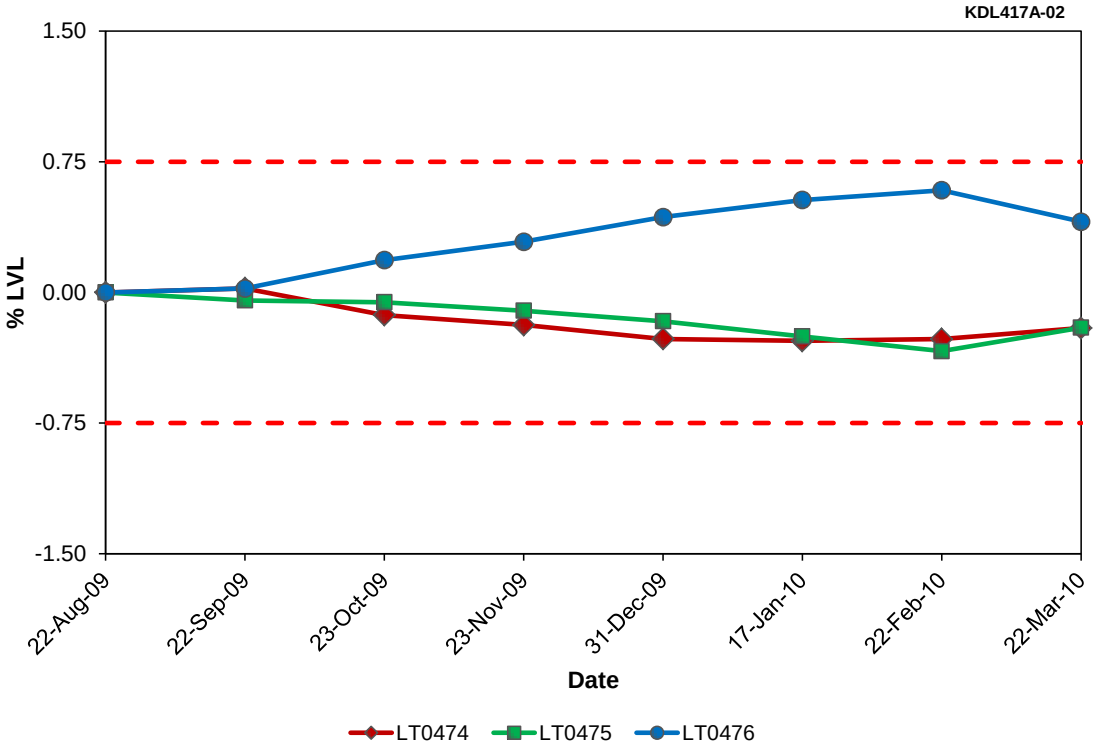



**Figure D.11 SG A LEVEL Steady-State Drift at Farley Unit 2 (Cycle 20)**

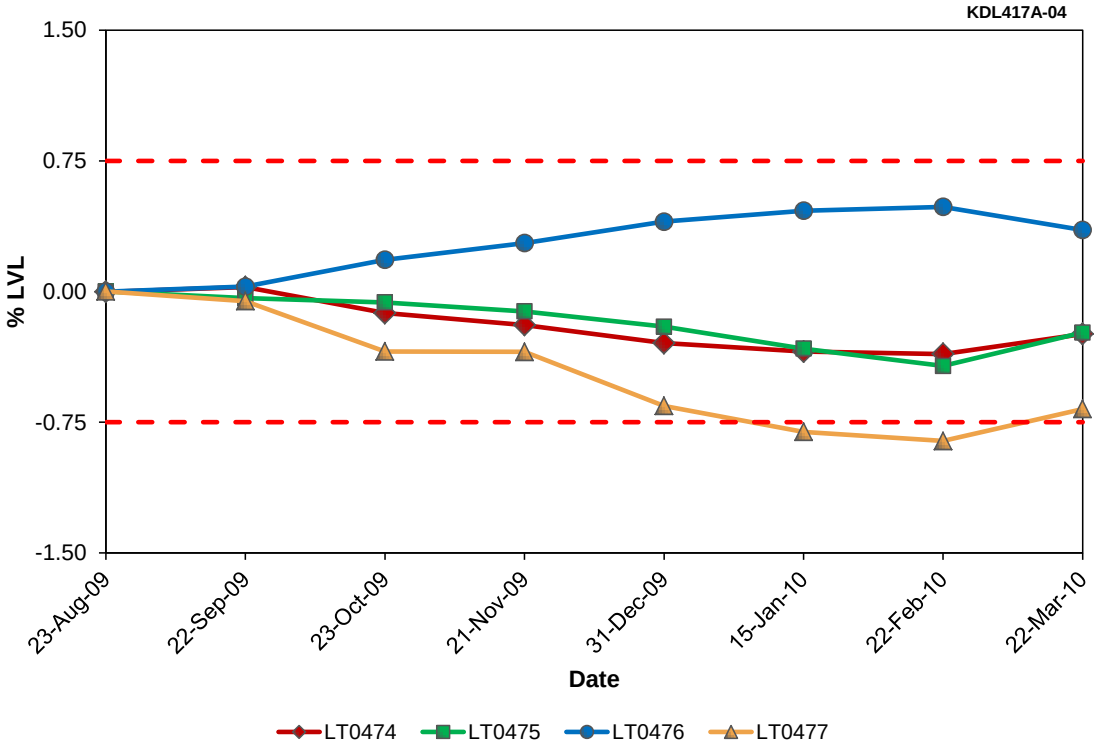



**Figure D.12 SG A LEVEL Steady-State Residual AAKR at Farley Unit 2 (Cycle 20)**

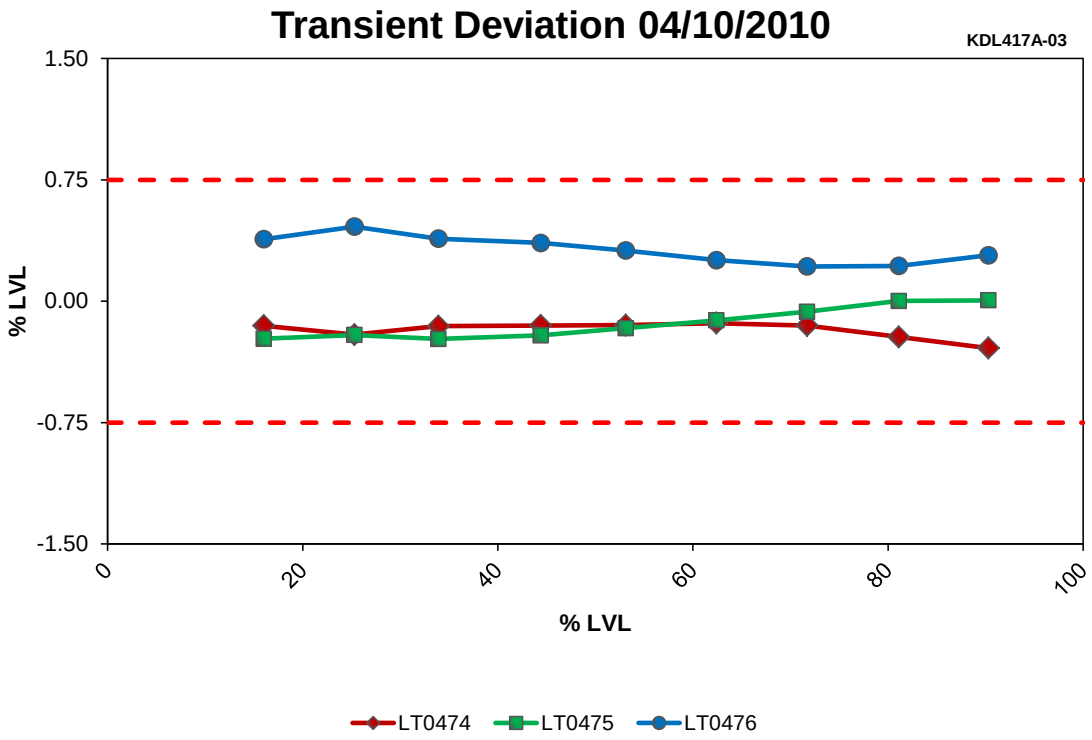



**Figure D.13 SG A LEVEL Transient Deviation at Farley Unit 2 (Cycle 20)**

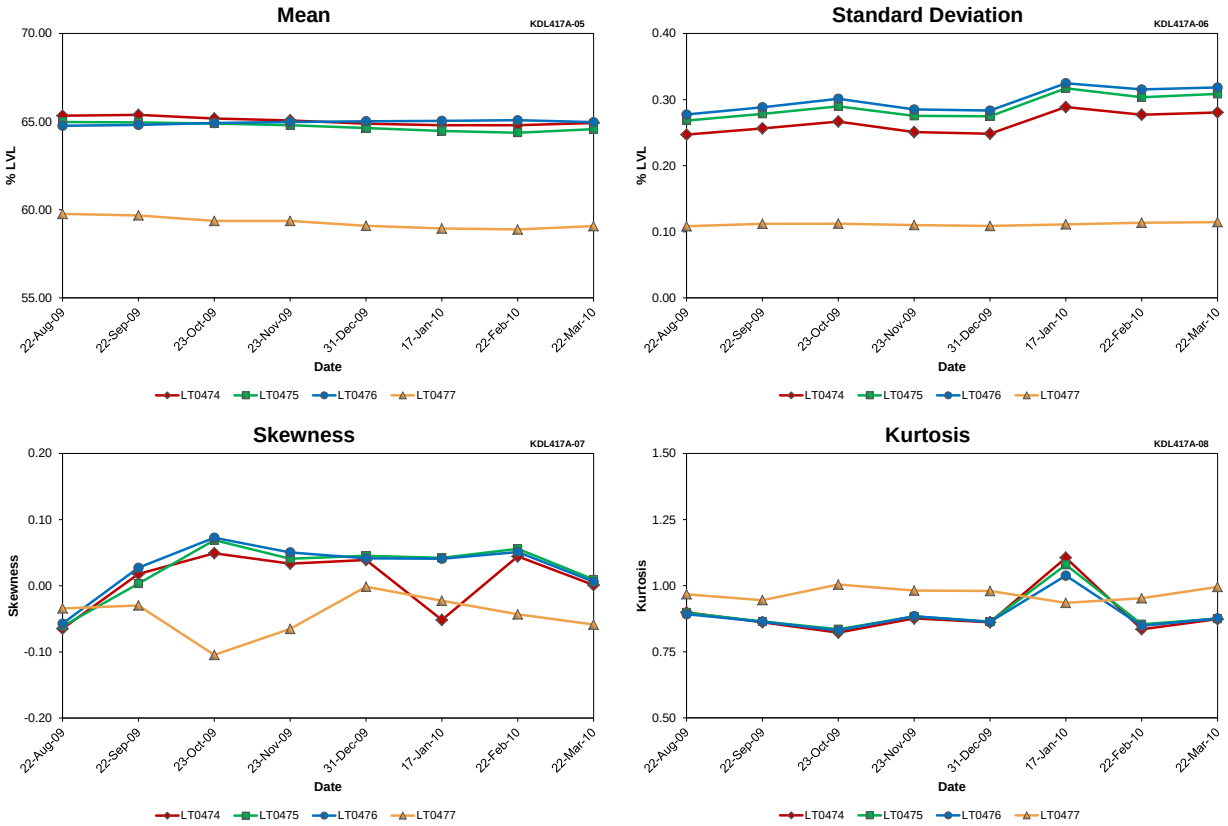



**Figure D.14 SG A LEVEL Data Quality Statistics at Farley Unit 2 (Cycle 20)**

**Table D.3 SG A LEVEL Data Quality for Farley Unit 2 (Cycle 20)**

| | Tag Names | | | |
|---|---|---|---|---|
| **Result Type** | **LT0474** | **LT0475** | **LT0476** | **LT0477** |
| Mean | 65.05 | 64.71 | 64.95 | 59.27 |
| Std. Dev. | 0.26 | 0.29 | 0.30 | 0.11 |
| Skewness | 0.01 | 0.03 | 0.03 | -0.04 |
| Kurtosis | 0.89 | 0.89 | 0.89 | 0.97 |

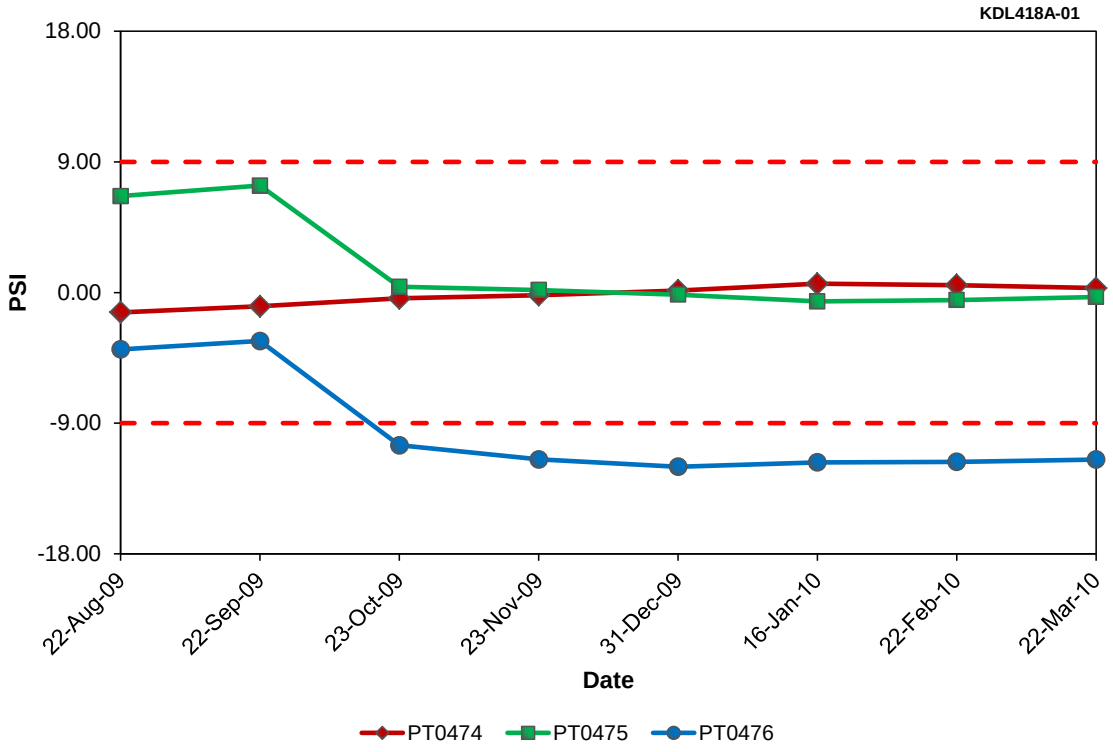



**Figure D.15 SG A OUTLET PRESSURE Steady-State Deviation at Farley Unit 2 (Cycle 20)**

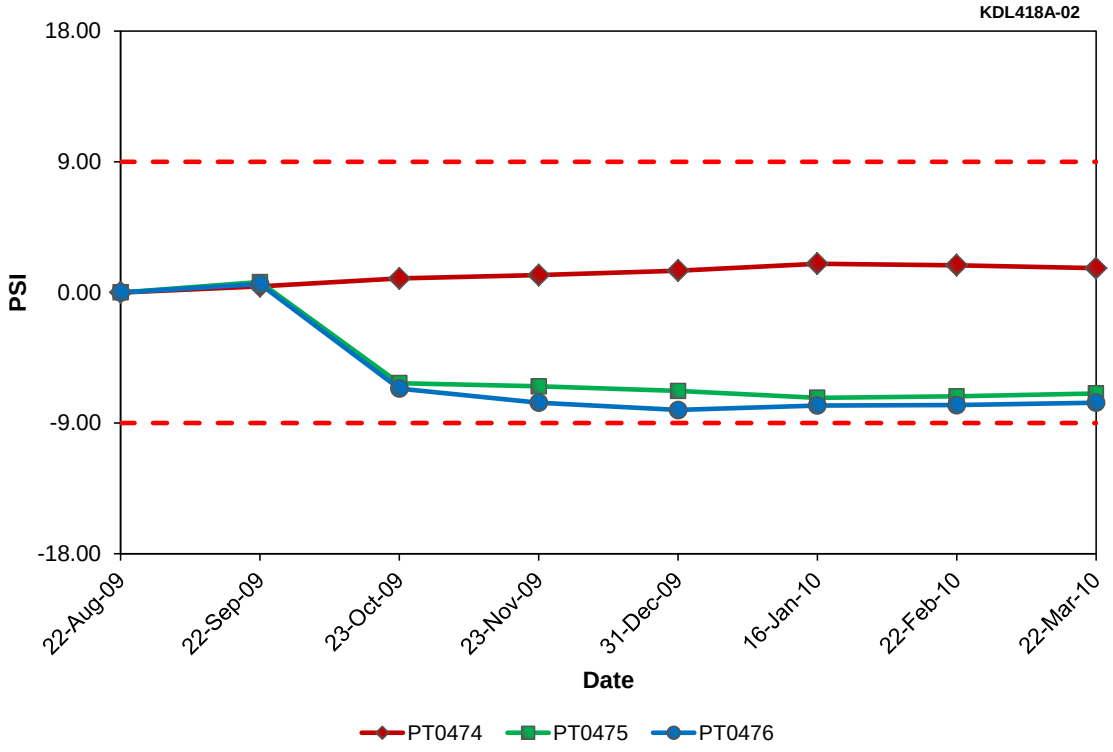



**Figure D.16 SG A OUTLET PRESSURE Steady-State Drift at Farley Unit 2 (Cycle 20)**

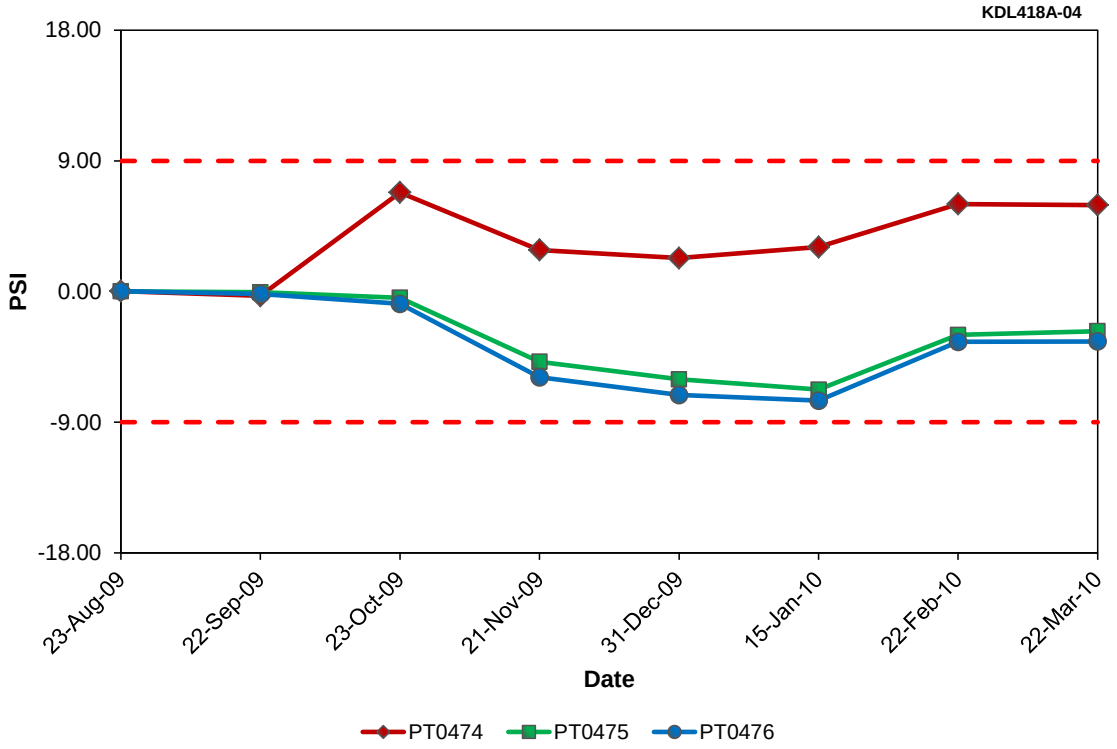



**Figure D.17 SG A OUTLET PRESSURE Steady-State Residual AAKR at Farley Unit 2 (Cycle 20)**

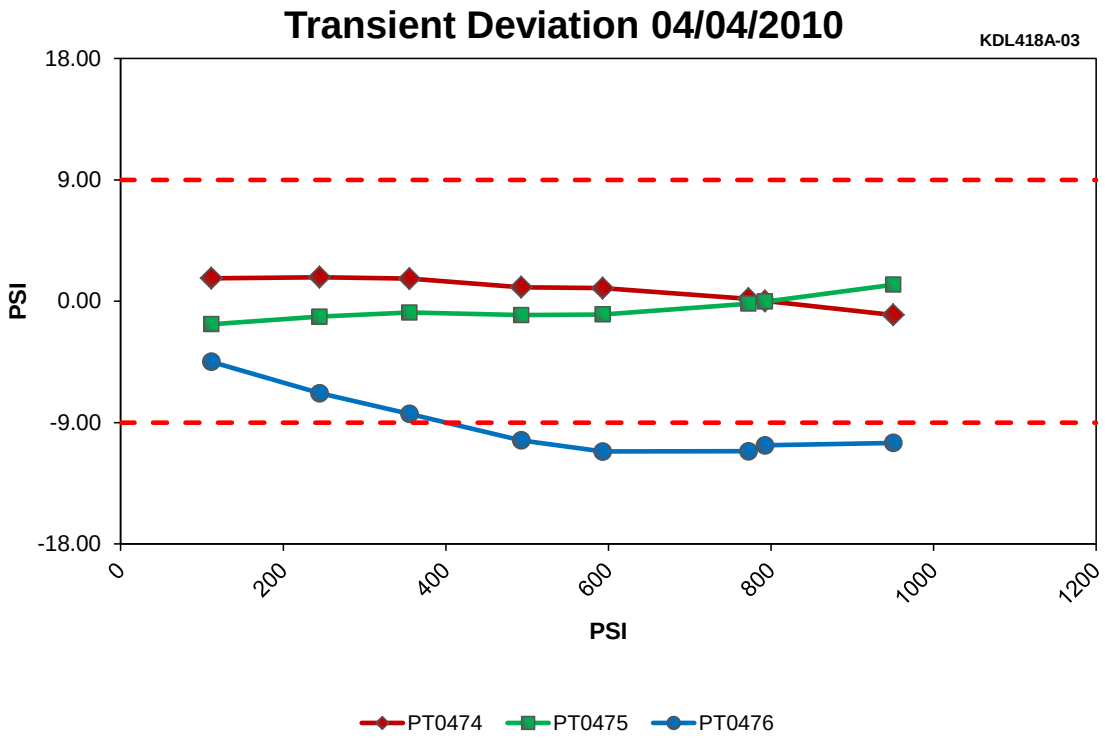



**Figure D.18 SG A OUTLET PRESSURE Transient Deviation at Farley Unit 2 (Cycle 20)**

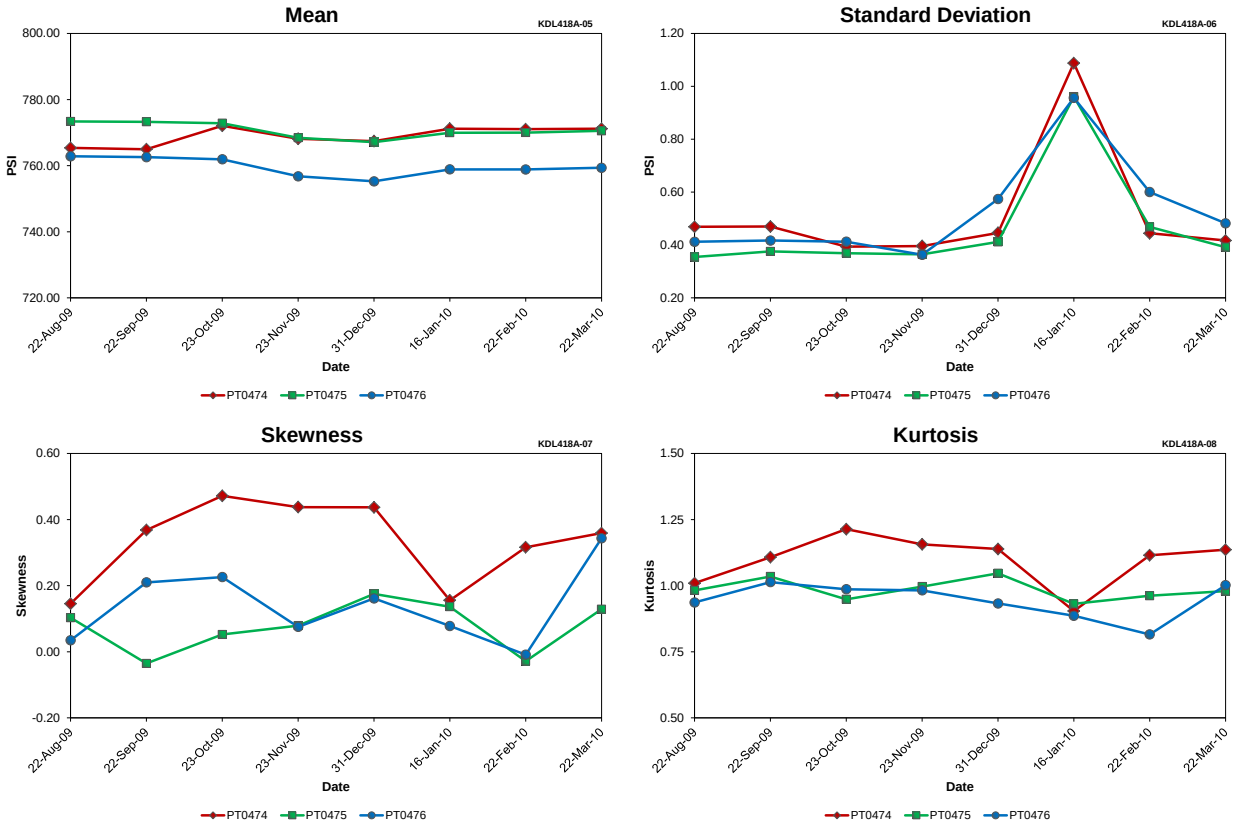



**Figure D.19 SG A OUTLET PRESSURE Data Quality Statistics at Farley Unit 2 (Cycle 20)**

**Table D.4 SG A OUTLET PRESSURE Data Quality for Farley Unit 2 (Cycle 20)**

| | Tag Names | | |
|---|---|---|---|
| **Result Type** | **PT0474** | **PT0475** | **PT0476** |
| Mean | 768.93 | 770.70 | 759.56 |
| Std. Dev. | 0.52 | 0.46 | 0.53 |
| Skewness | 0.34 | 0.08 | 0.14 |
| Kurtosis | 1.10 | 0.99 | 0.94 |

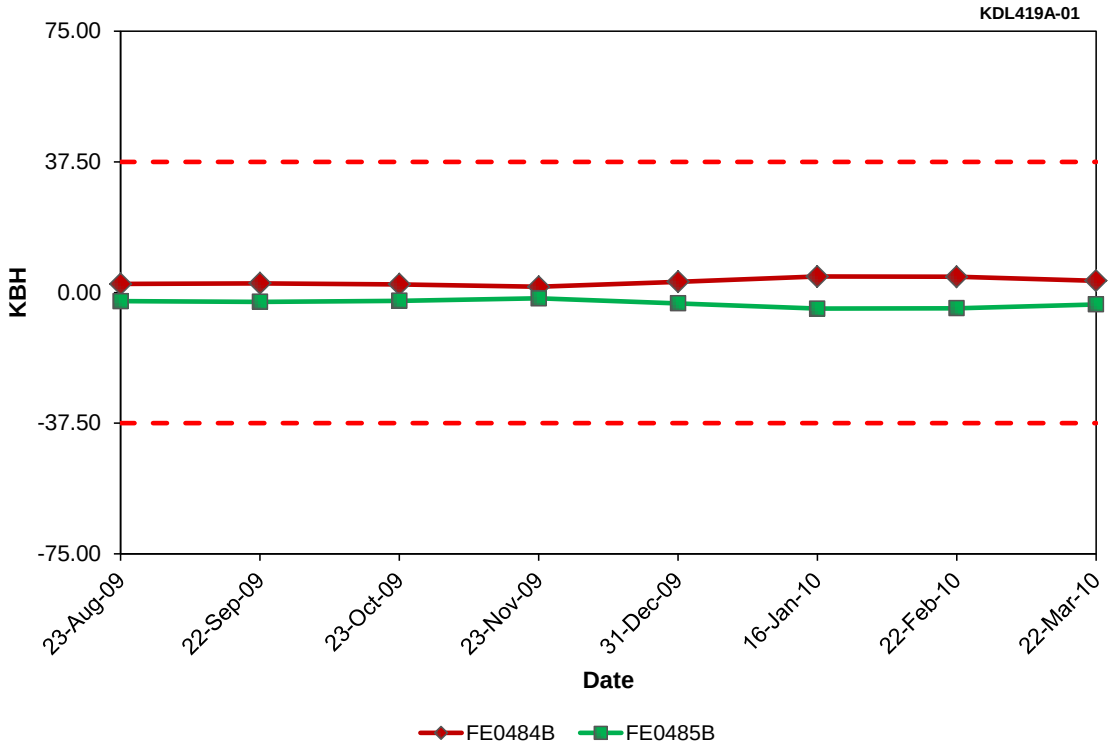



**Figure D.20 SG B STEAM FLOW Steady-State Deviation at Farley Unit 2 (Cycle 20)**

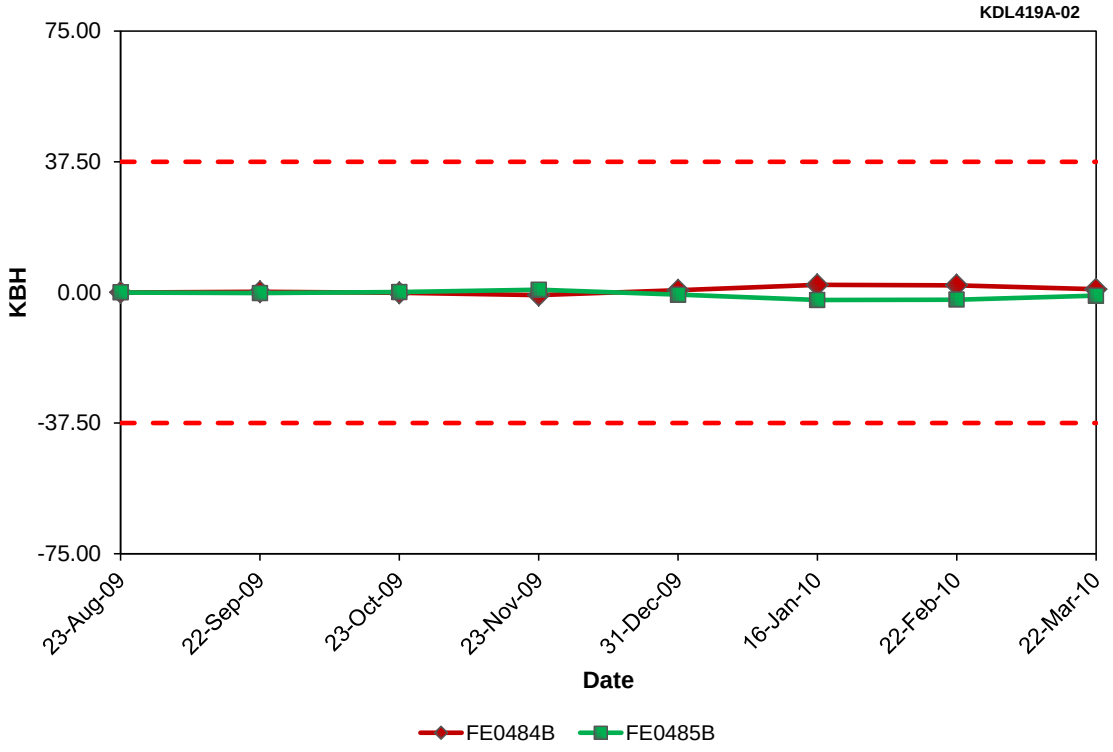



**Figure D.21 SG B STEAM FLOW Steady-State Drift at Farley Unit 2 (Cycle 20)**

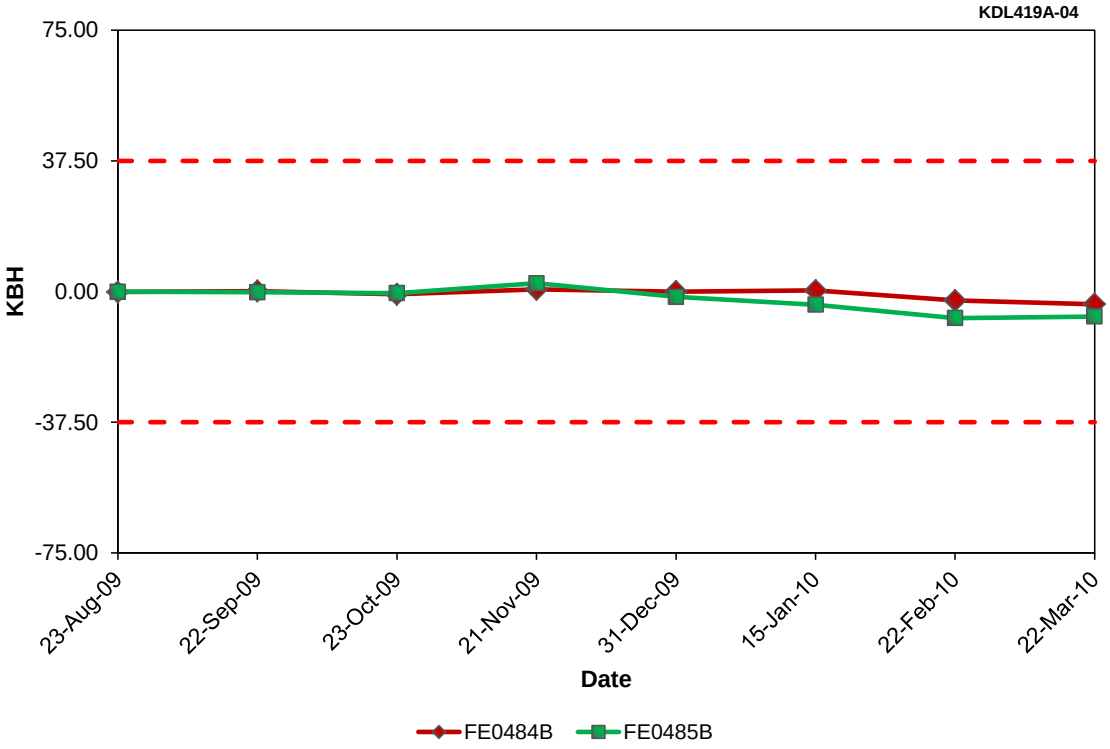



**Figure D.22 SG B STEAM FLOW Steady-State Residual AAKR at Farley Unit 2 (Cycle 20)**

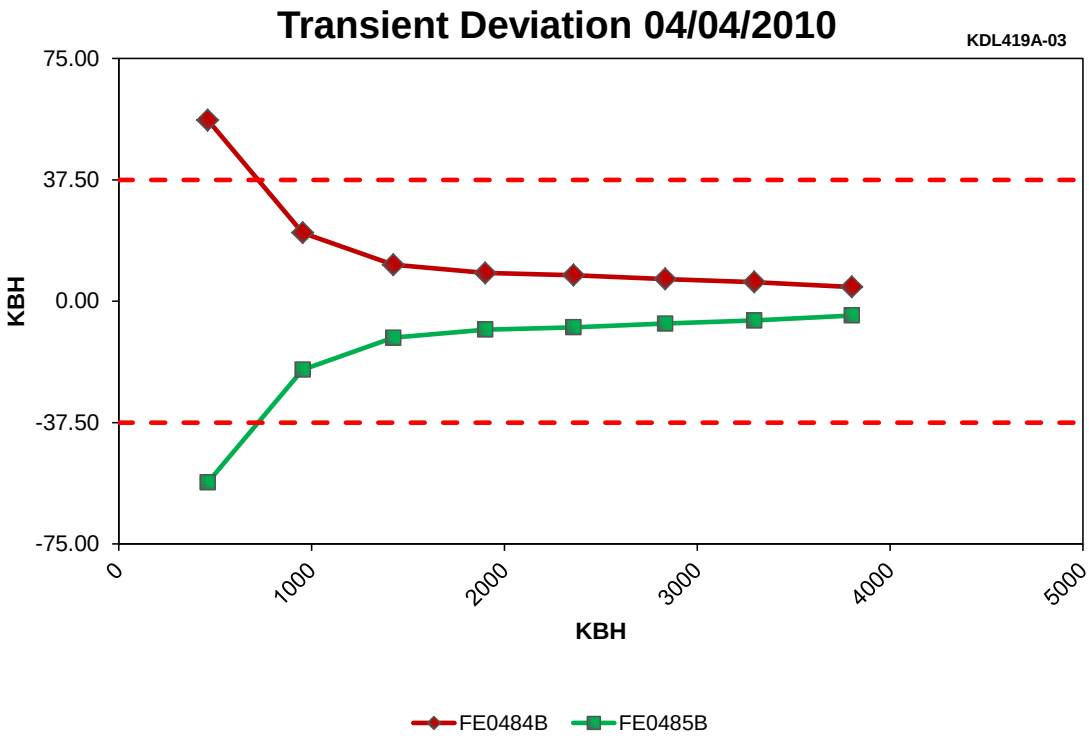



**Figure D.23 SG B STEAM FLOW Transient Deviation at Farley Unit 2 (Cycle 20)**

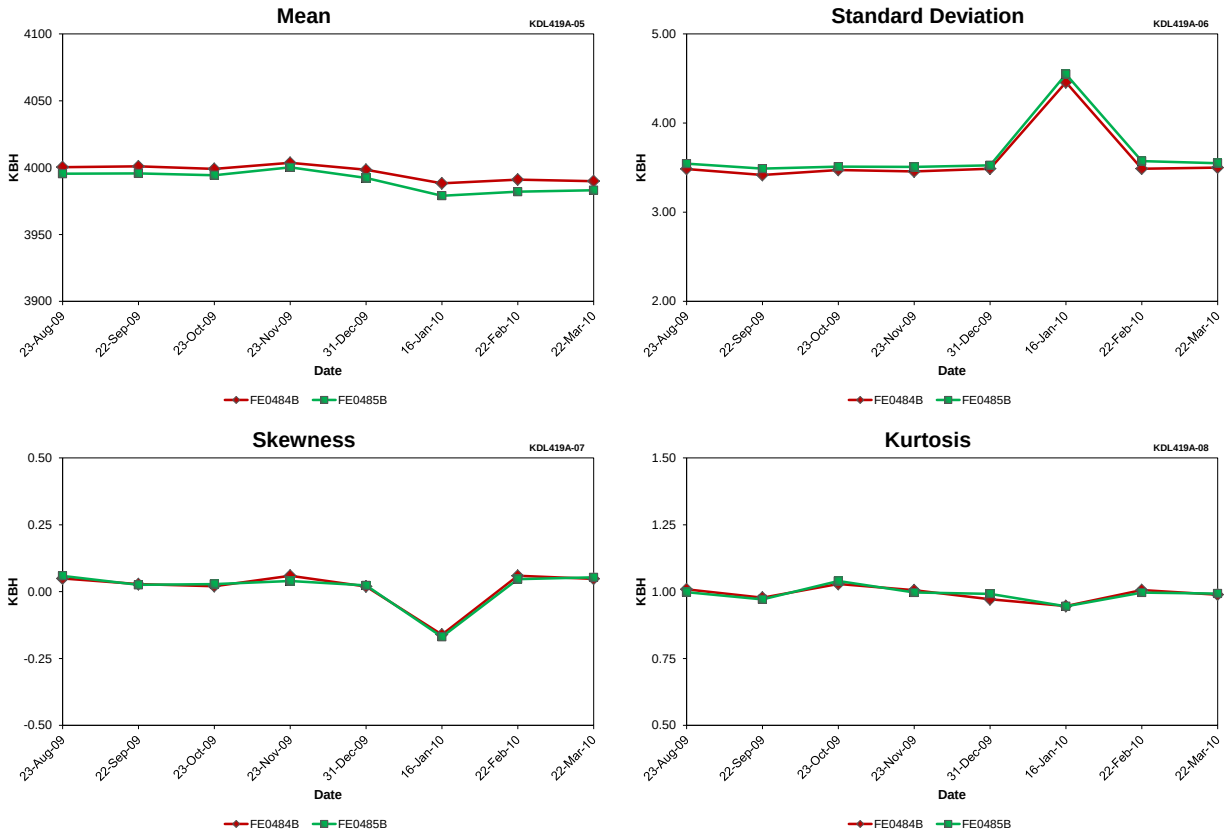



**Figure D.24 SG B STEAM FLOW Data Quality Statistics at Farley Unit 2 (Cycle 20)**

**Table D.5 SG B STEAM FLOW Data Quality for Farley Unit 2 (Cycle 20)**

| | Tag Names | |
|---|---|---|
| Result Type | FE0484B | FE0485B |
| Mean | 3996.46 | 3990.28 |
| Std. Dev. | 3.60 | 3.66 |
| Skewness | 0.02 | 0.01 |
| Kurtosis | 0.99 | 0.99 |

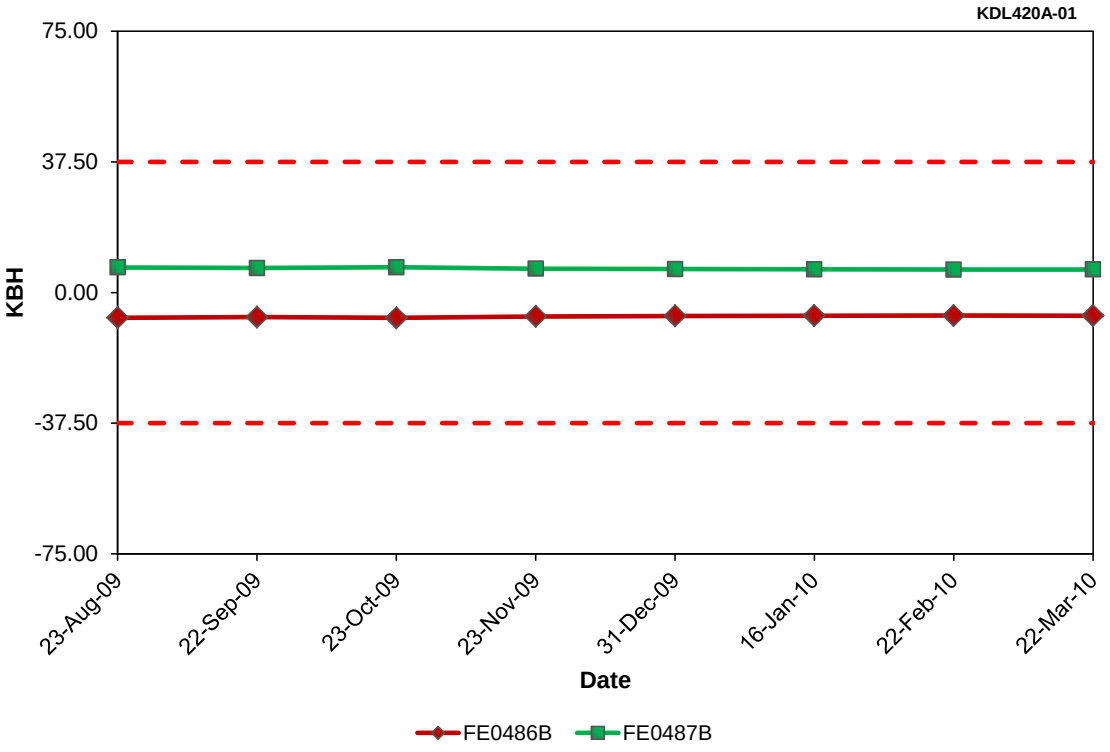



**Figure D.25 FW FLOW TO SG B Steady-State Deviation at Farley Unit 2 (Cycle 20)**

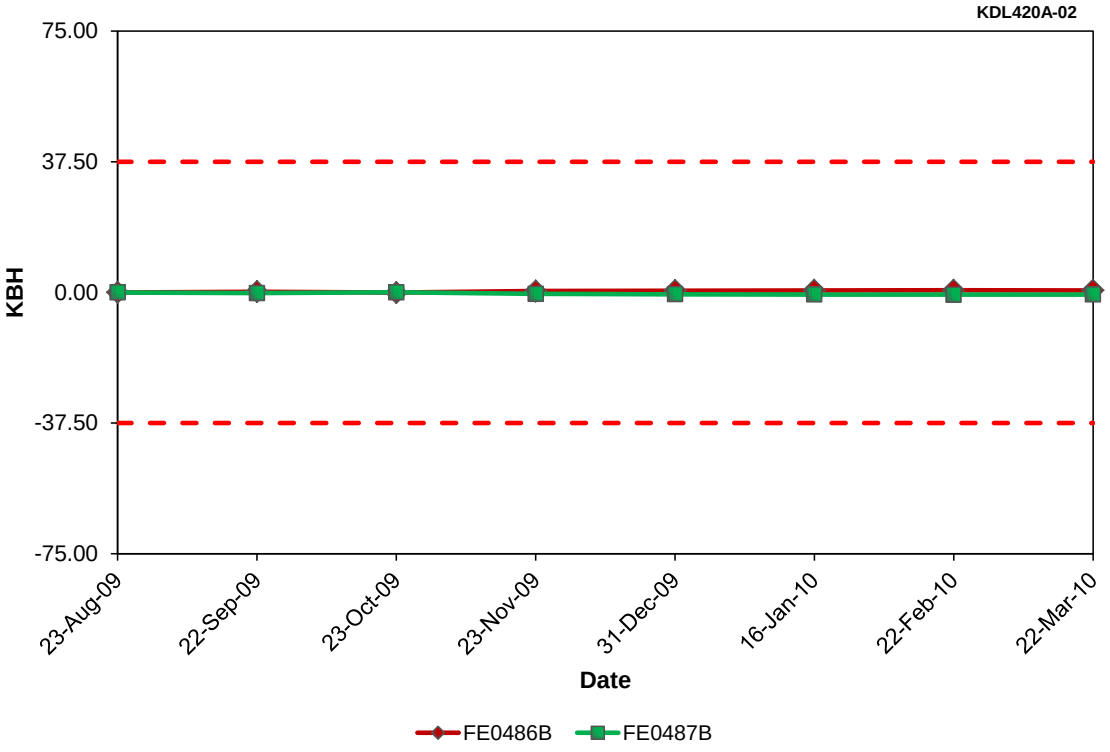



**Figure D.26 FW FLOW TO SG B Steady-State Drift at Farley Unit 2 (Cycle 20)**

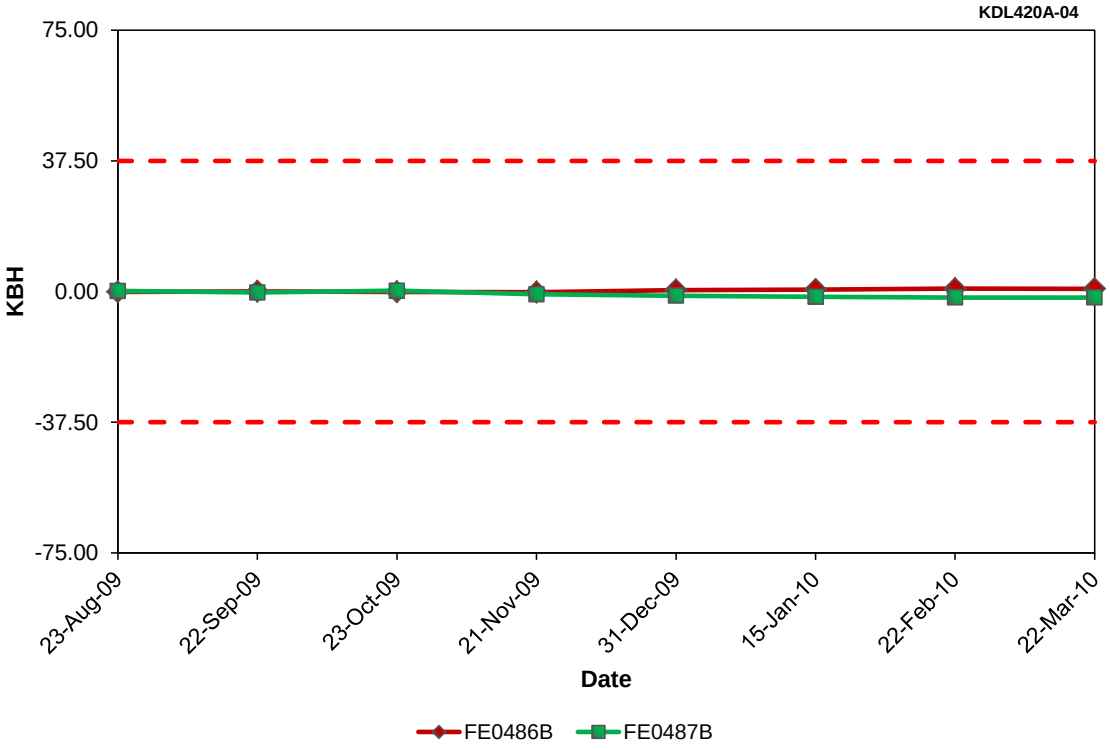



**Figure D.27 FW FLOW TO SG B Steady-State Residual AAKR at Farley Unit 2 (Cycle 20)**

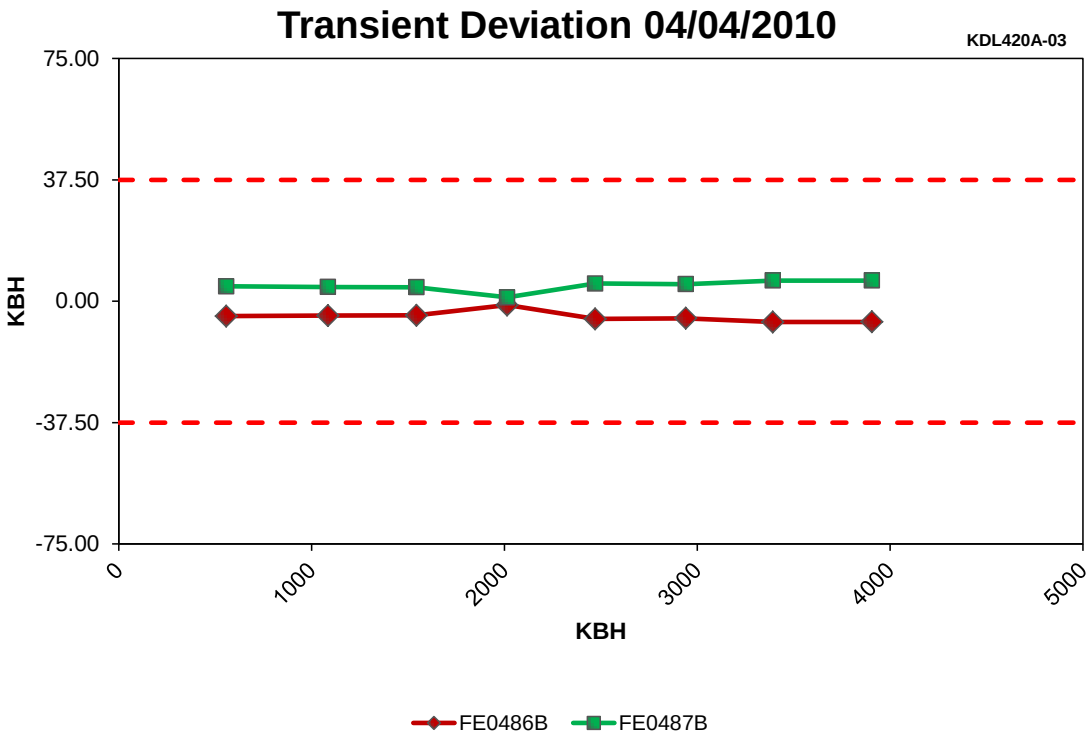



**Figure D.28 FW FLOW TO SG B Transient Deviation at Farley Unit 2 (Cycle 20)**

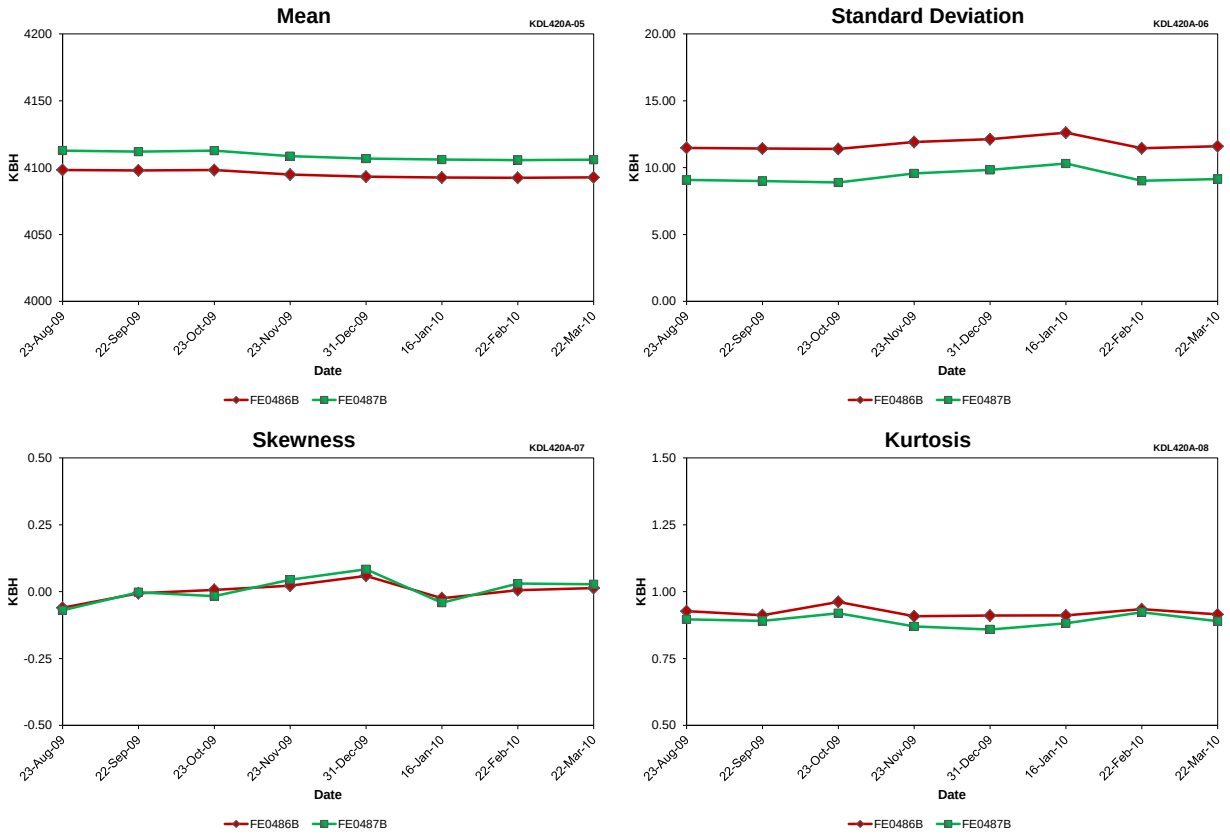



**Figure D.29 FW FLOW TO SG B Data Quality Statistics at Farley Unit 2 (Cycle 20)**

**Table D.6 FW FLOW TO SG B Data Quality for Farley Unit 2 (Cycle 20)**

| | Tag Names | |
|---|---|---|
| **Result Type** | **FE0486B** | **FE0487B** |
| Mean | 4095.02 | 4108.81 |
| Std. Dev. | 11.75 | 9.35 |
| Skewness | 0.00 | 0.01 |
| Kurtosis | 0.92 | 0.89 |

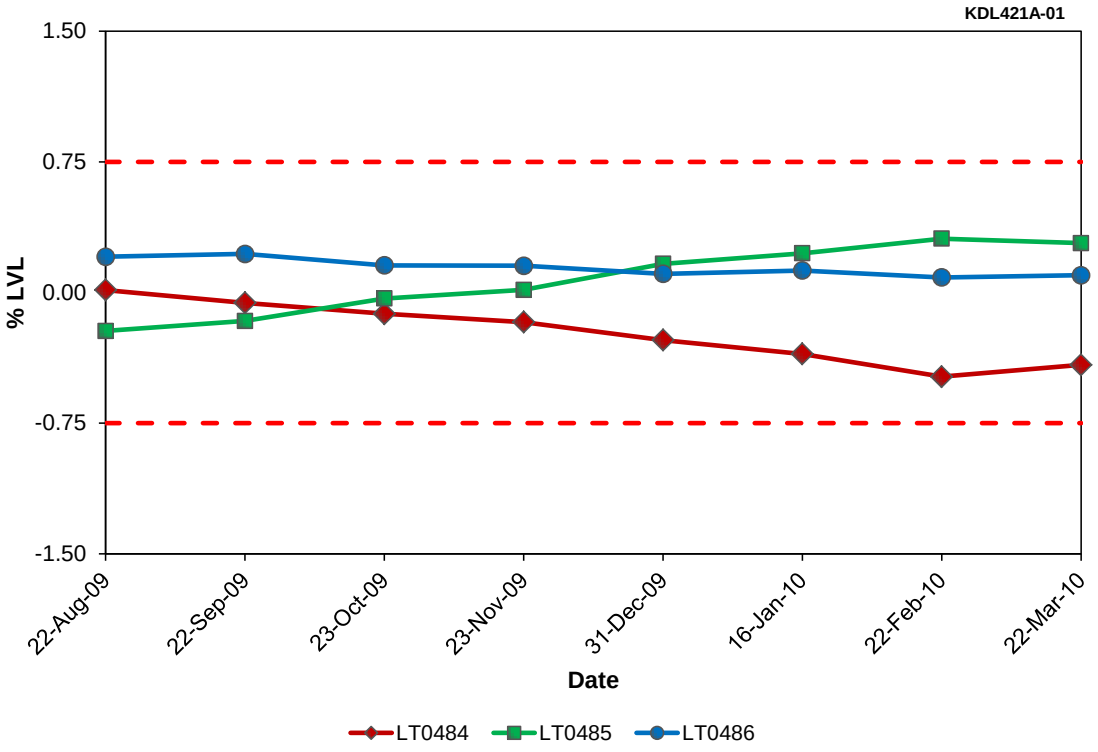



**Figure D.30 SG B LEVEL Steady-State Deviation at Farley Unit 2 (Cycle 20)**

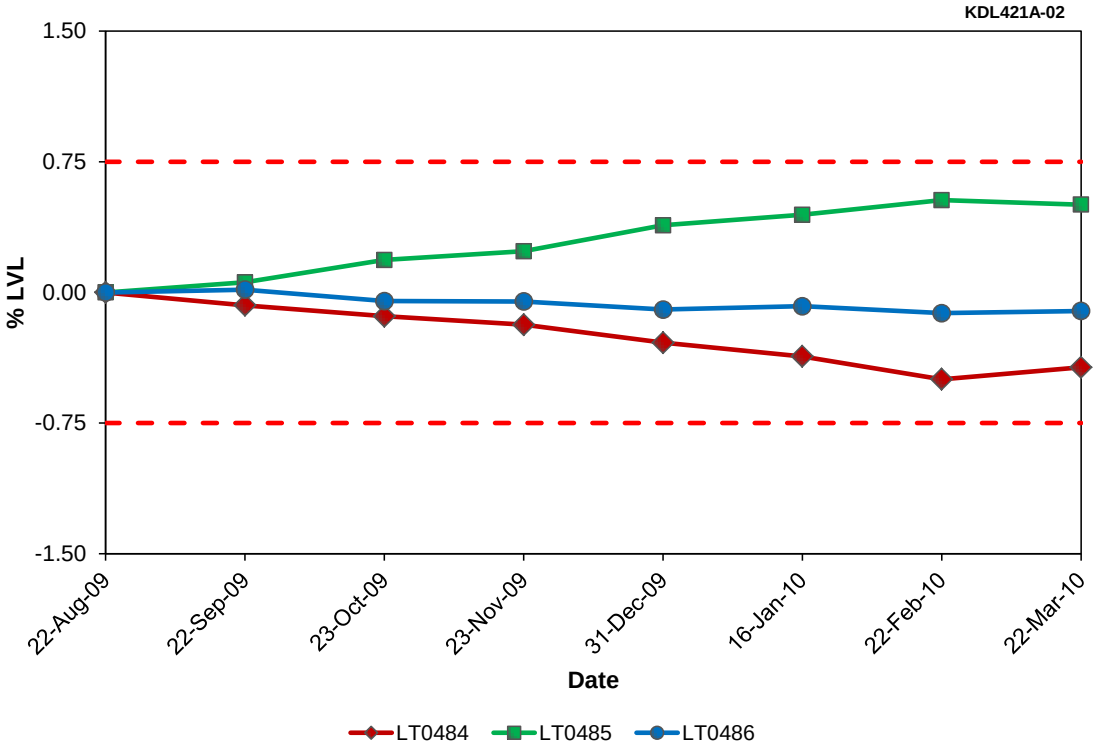



**Figure D.31 SG B LEVEL Steady-State Drift at Farley Unit 2 (Cycle 20)**

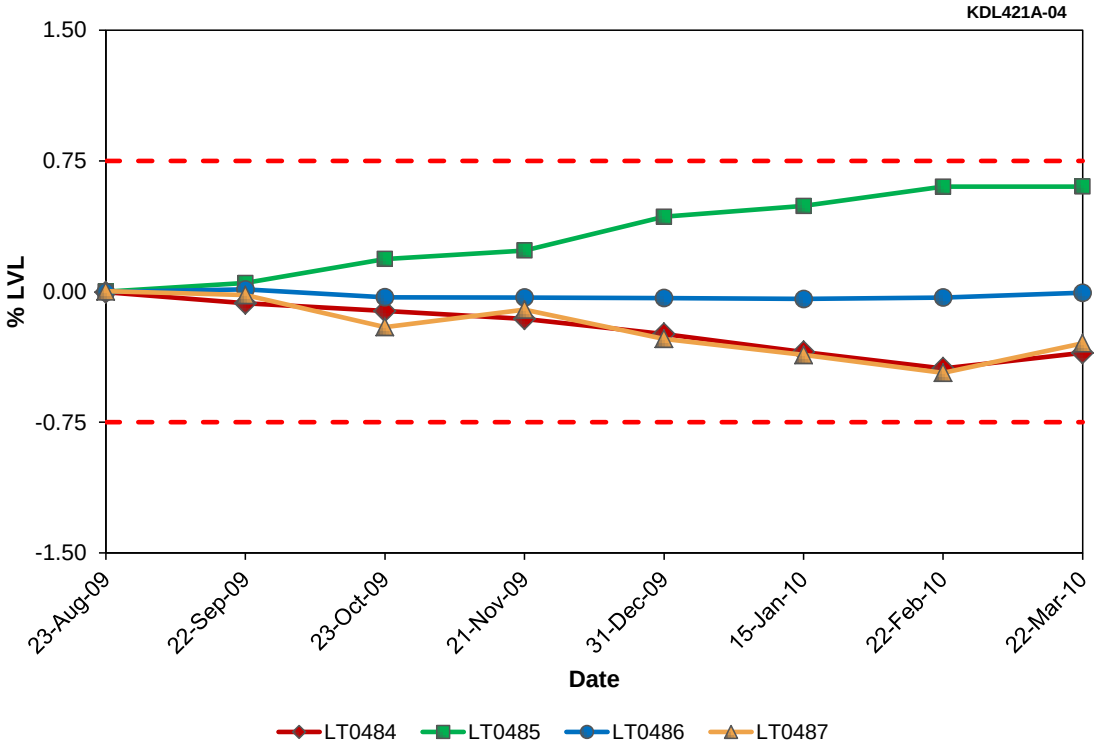



**Figure D.32 SG B LEVEL Steady-State Residual AAKR at Farley Unit 2 (Cycle 20)**

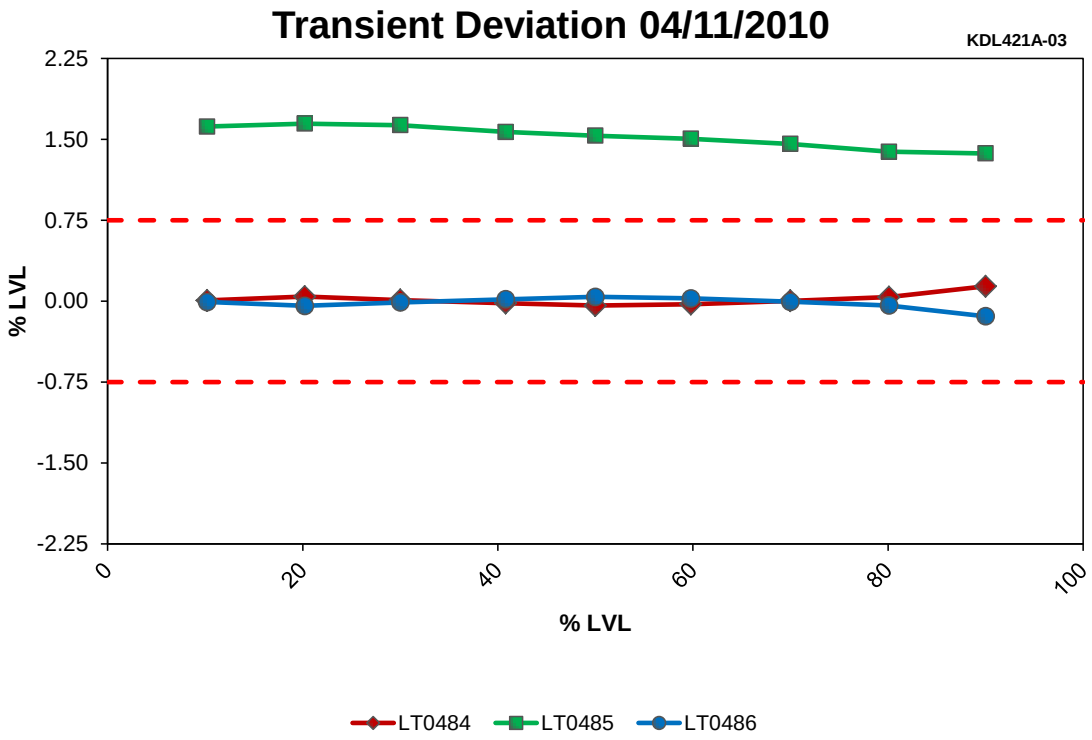



**Figure D.33 SG B LEVEL Transient Deviation at Farley Unit 2 (Cycle 20)**

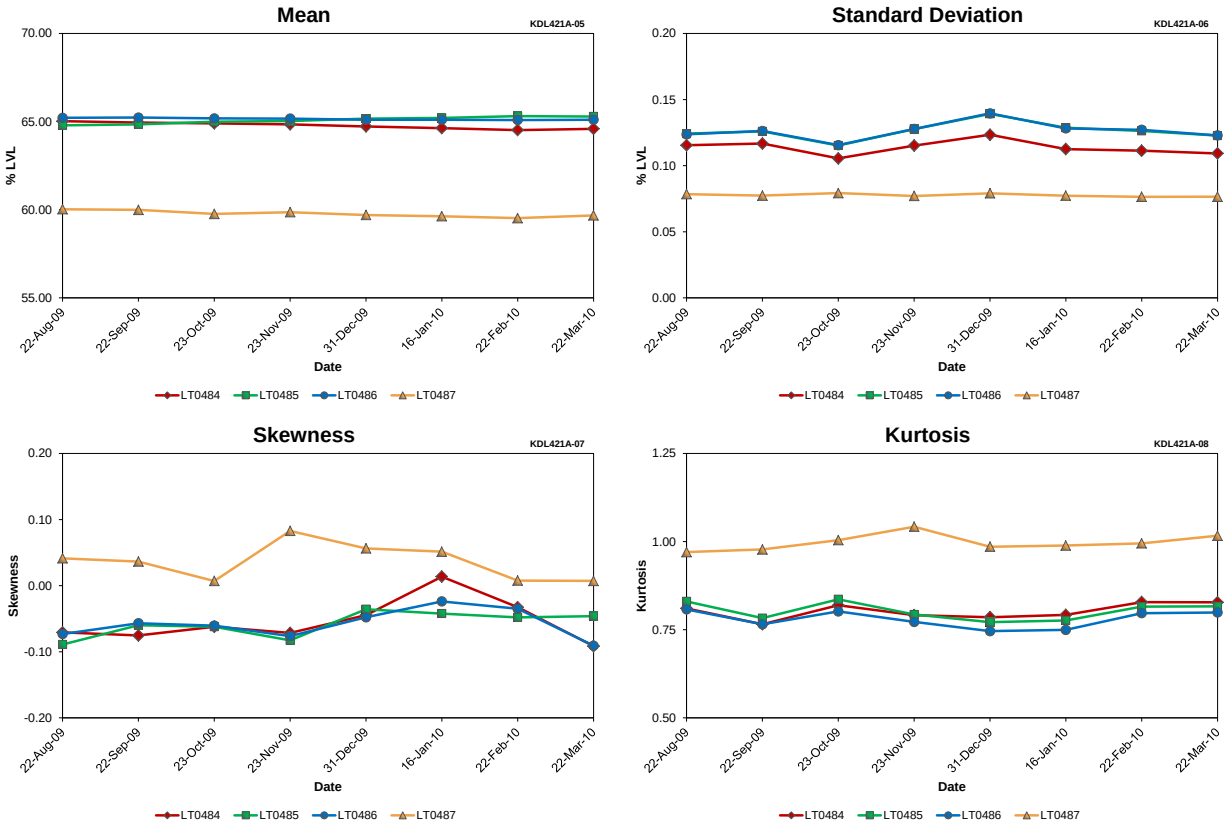



**Figure D.34 SG B LEVEL Data Quality Statistics at Farley Unit 2 (Cycle 20)**

**Table D.7 SG B LEVEL Data Quality for Farley Unit 2 (Cycle 20)**

| | Tag Names | | | |
|---|---|---|---|---|
| **Result Type** | **LT0484** | **LT0485** | **LT0486** | **LT0487** |
| Mean | 64.77 | 65.08 | 65.15 | 59.77 |
| Std. Dev. | 0.11 | 0.13 | 0.13 | 0.08 |
| Skewness | -0.05 | -0.06 | -0.06 | 0.04 |
| Kurtosis | 0.80 | 0.80 | 0.78 | 1.00 |

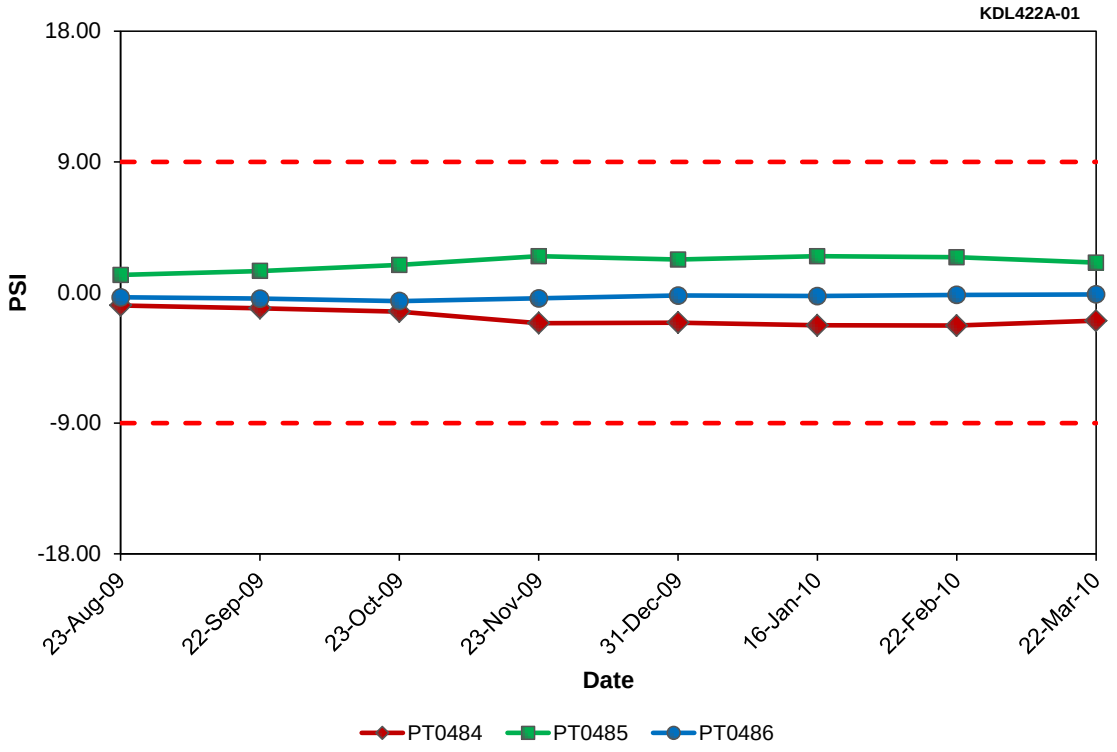



**Figure D.35 SG B OUTLET PRESSURE Steady-State Deviation at Farley Unit 2 (Cycle 20)**

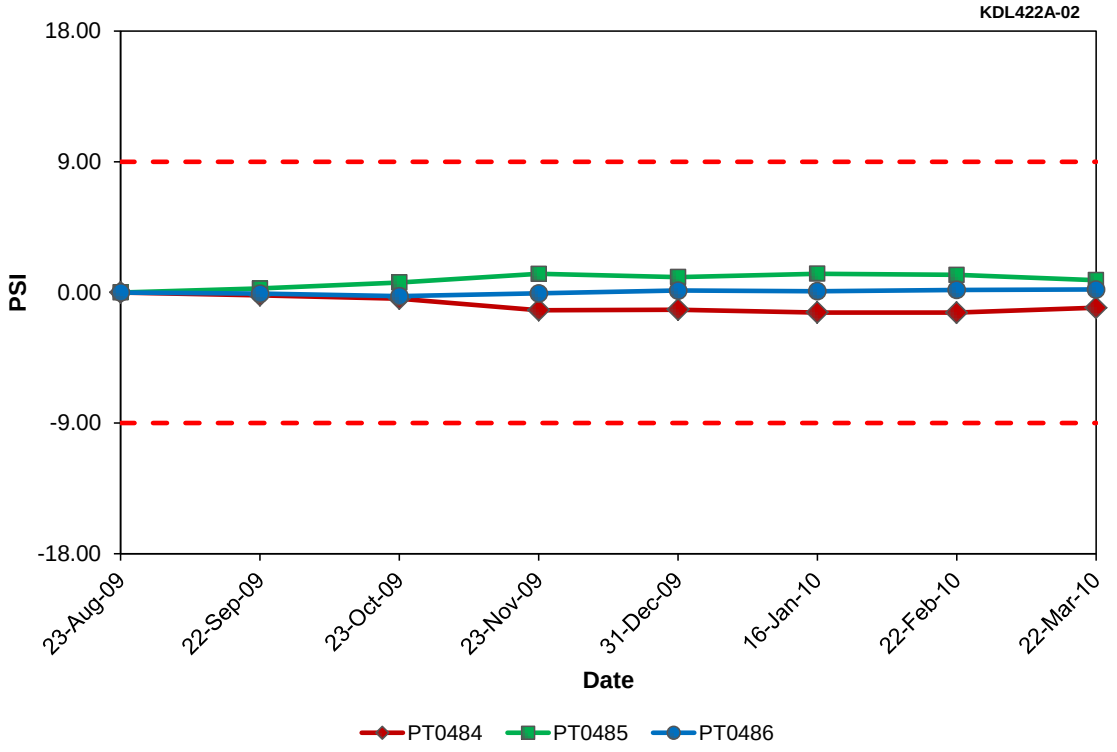



**Figure D.36 SG B OUTLET PRESSURE Steady-State Drift at Farley Unit 2 (Cycle 20)**

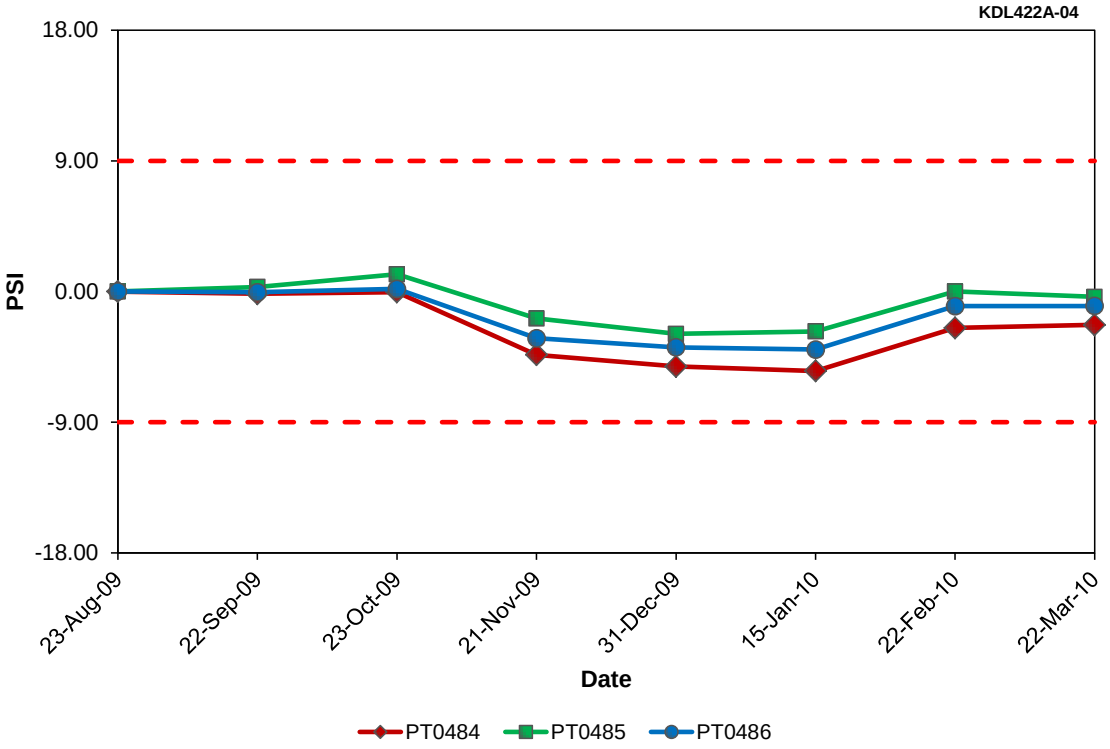



**Figure D.37 SG B OUTLET PRESSURE Steady-State Residual AAKR at Farley Unit 2 (Cycle 20)**

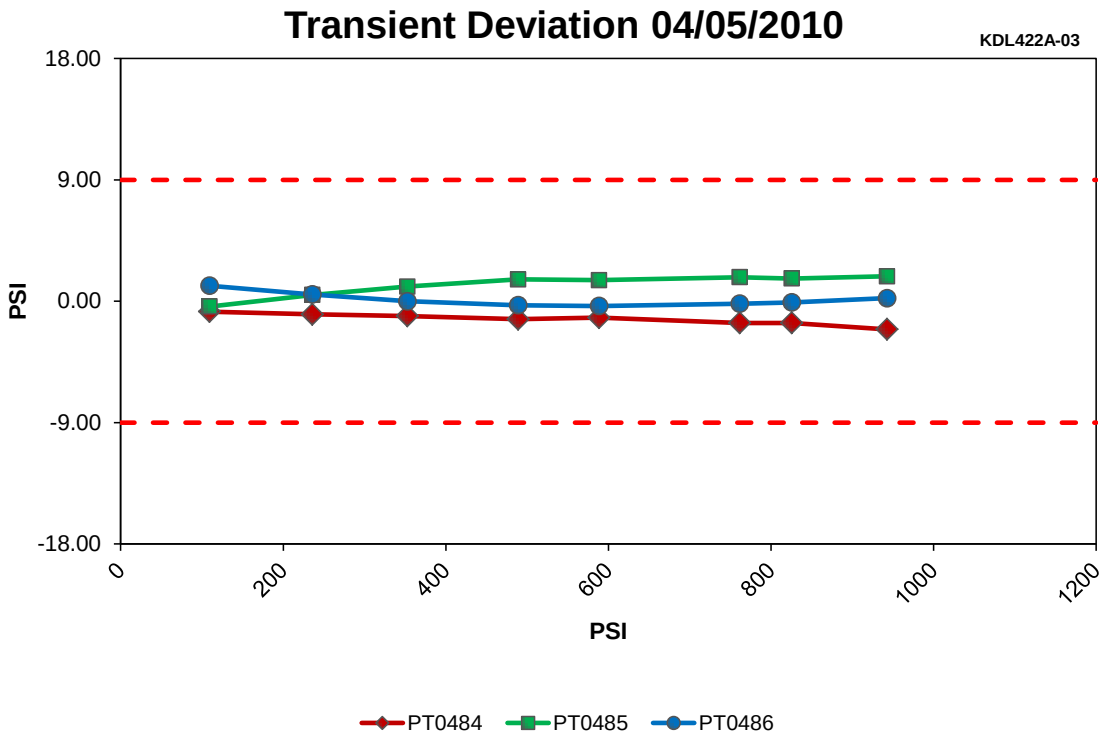



**Figure D.38 SG B OUTLET PRESSURE Transient Deviation at Farley Unit 2 (Cycle 20)**

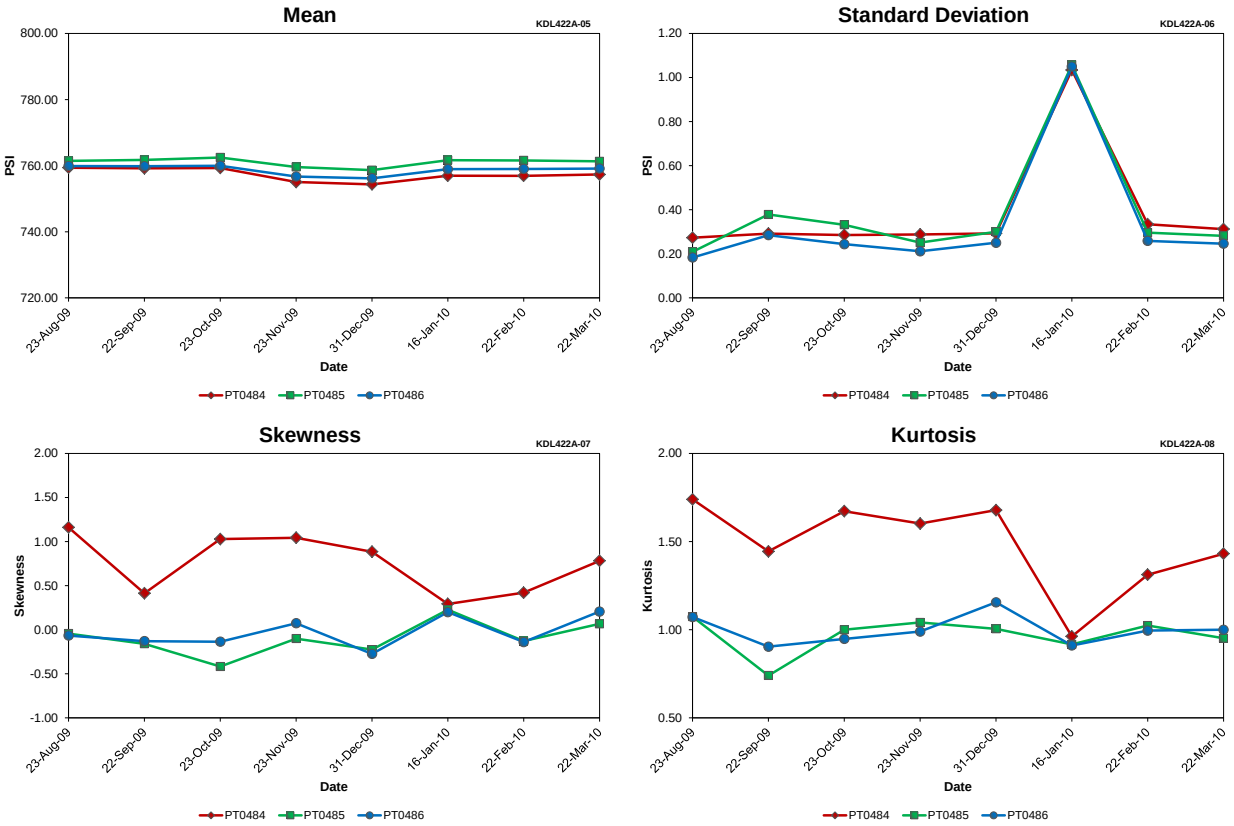



**Figure D.39 SG B OUTLET PRESSURE Data Quality Statistics at Farley Unit 2 (Cycle 20)**

**Table D.8 SG B OUTLET PRESSURE Data Quality for Farley Unit 2 (Cycle 20)**

| | Tag Names | | |
|---|---|---|---|
| **Result Type** | **PT0484** | **PT0485** | **PT0486** |
| Mean | 757.32 | 761.06 | 758.71 |
| Std. Dev. | 0.39 | 0.39 | 0.34 |
| Skewness | 0.75 | -0.10 | -0.03 |
| Kurtosis | 1.48 | 0.97 | 1.00 |

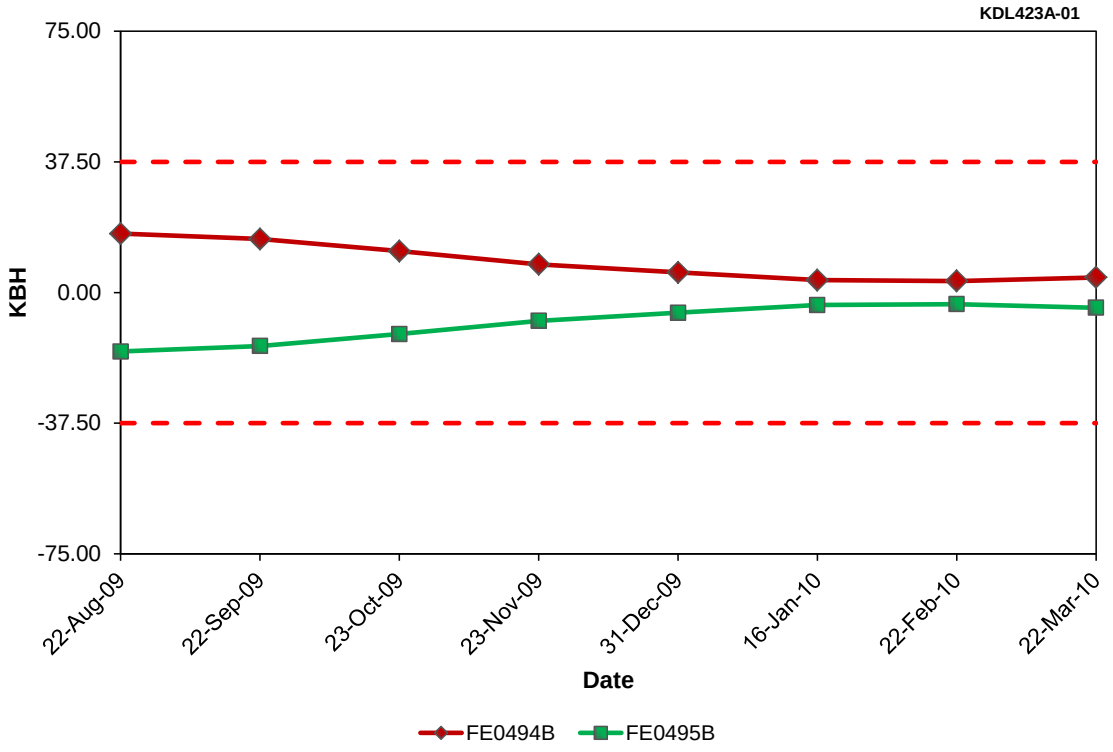



**Figure D.40 SG C STEAM FLOW Steady-State Deviation at Farley Unit 2 (Cycle 20)**

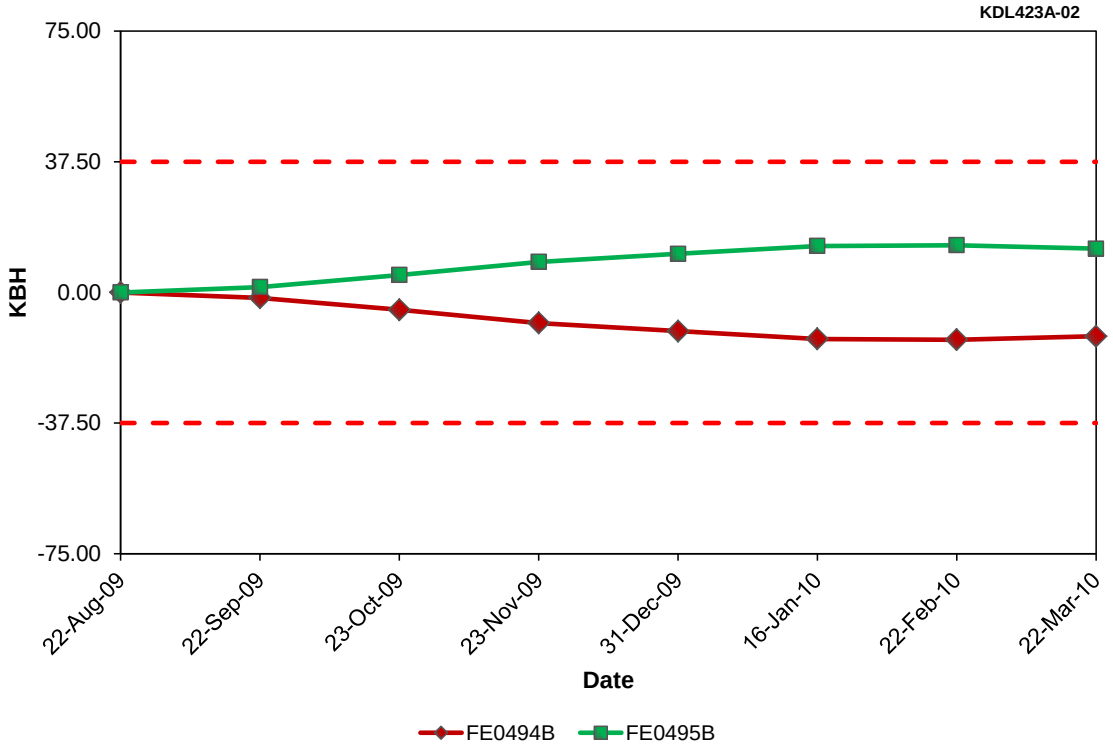



**Figure D.41 SG C STEAM FLOW Steady-State Drift at Farley Unit 2 (Cycle 20)**

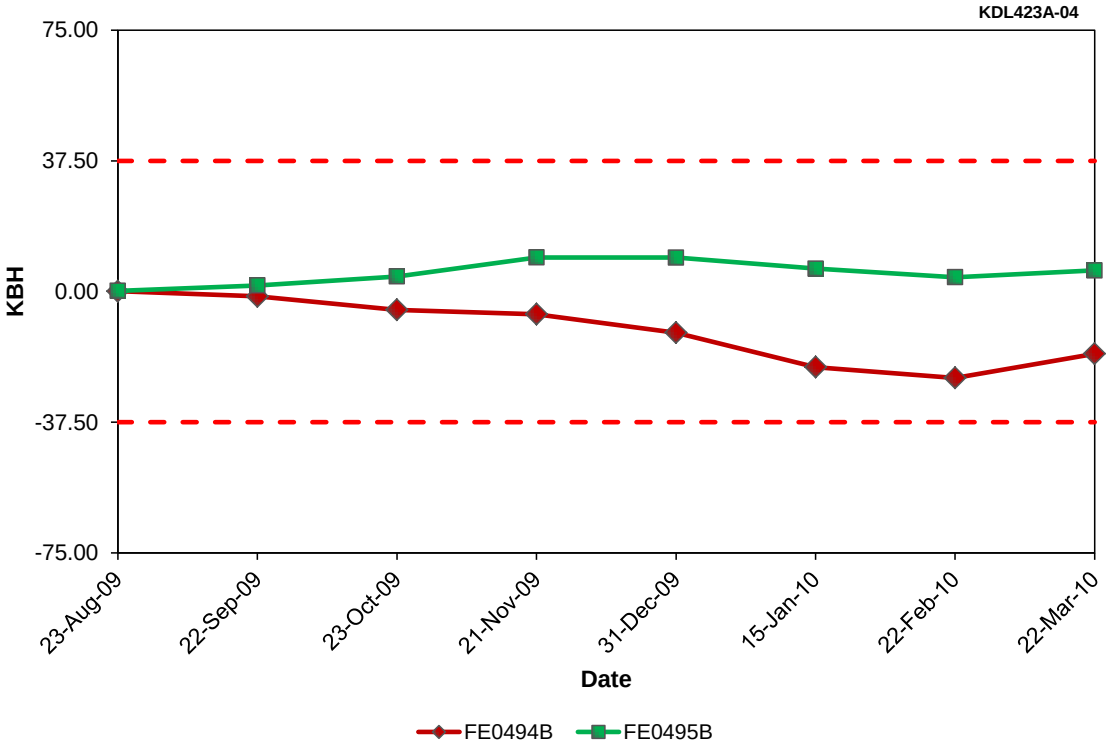



**Figure D.42 SG C STEAM FLOW Steady-State Residual AAKR at Farley Unit 2 (Cycle 20)**

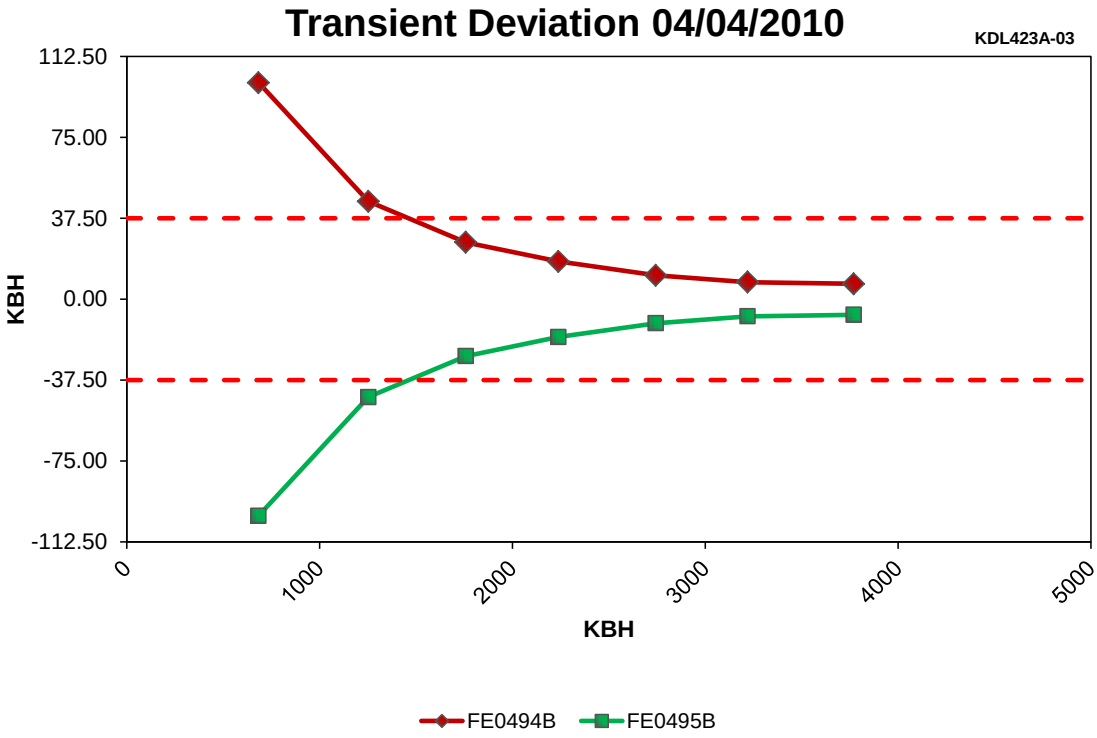



**Figure D.43 SG C STEAM FLOW Transient Deviation at Farley Unit 2 (Cycle 20)**

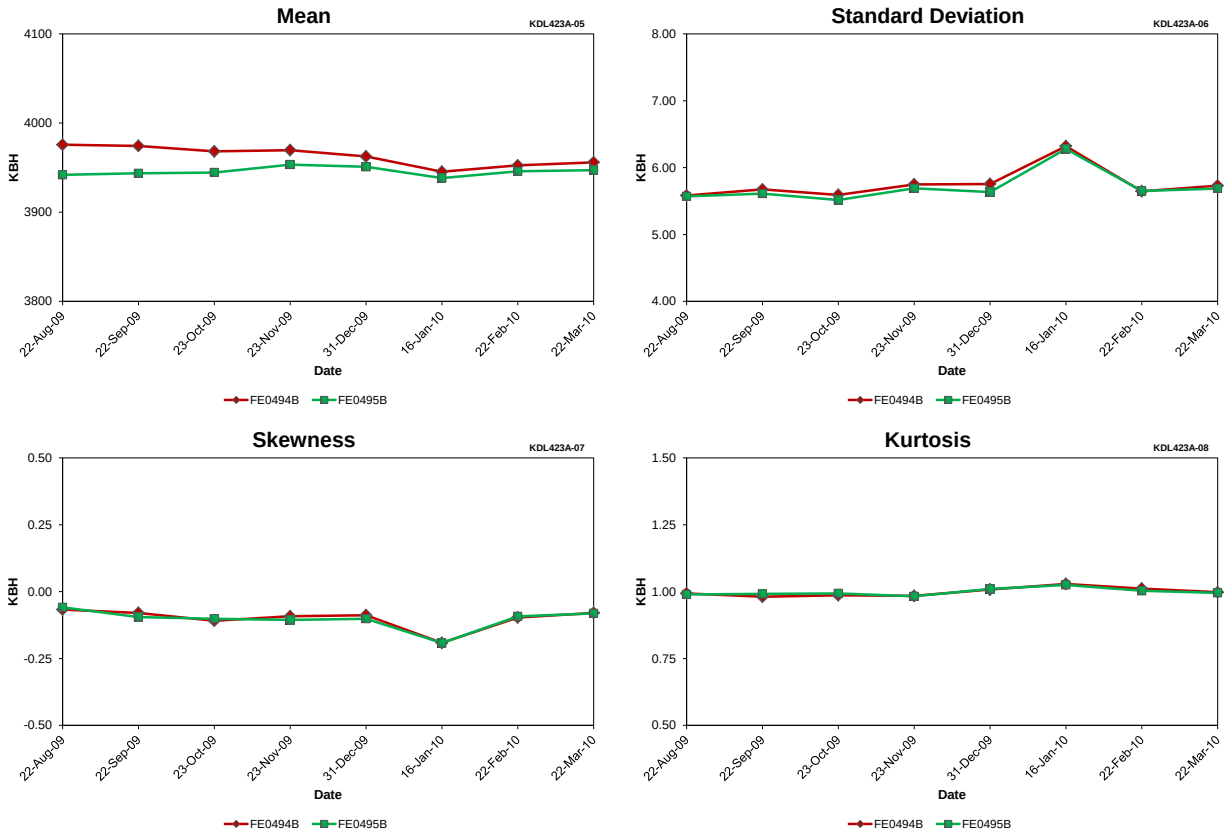



**Figure D.44 SG C STEAM FLOW Data Quality Statistics at Farley Unit 2 (Cycle 20)**

**Table D.9 SG C STEAM FLOW Data Quality for Farley Unit 2 (Cycle 20)**

| Result Type | Tag Names | |
|---|---|---|
| | FE0494B | FE0495B |
| Mean | 3963.07 | 3945.74 |
| Std. Dev. | 5.76 | 5.71 |
| Skewness | -0.10 | -0.10 |
| Kurtosis | 1.00 | 1.00 |

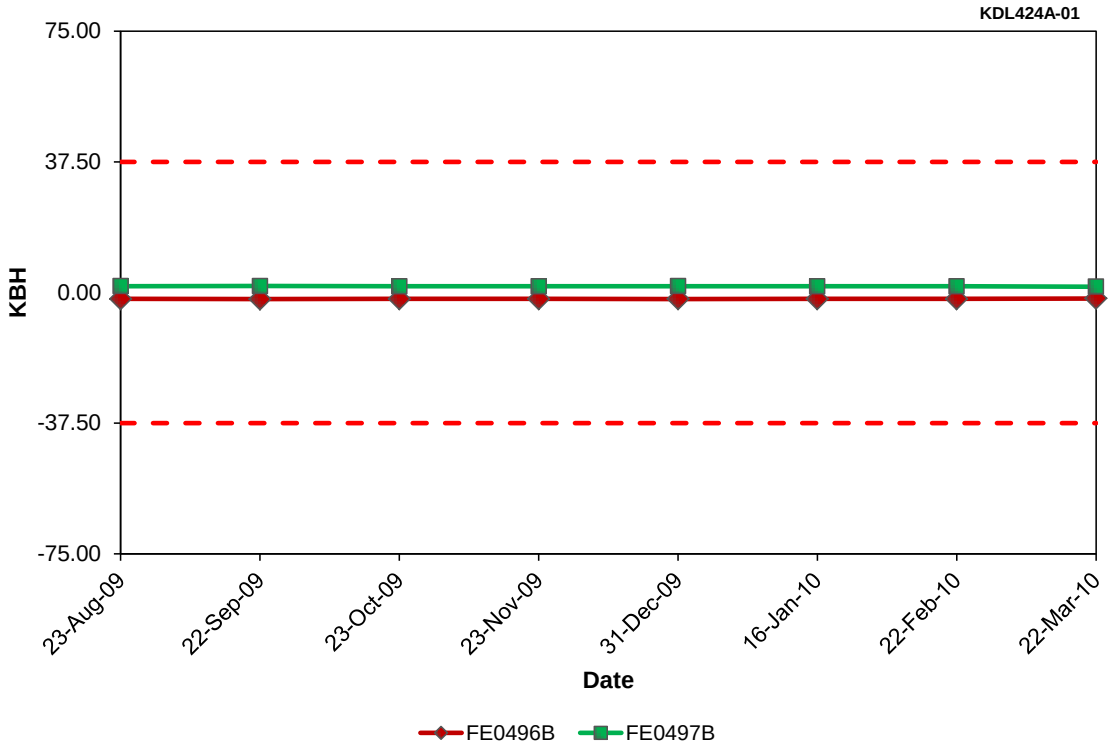



**Figure D.45 FW FLOW TO SG C Steady-State Deviation at Farley Unit 2 (Cycle 20)**

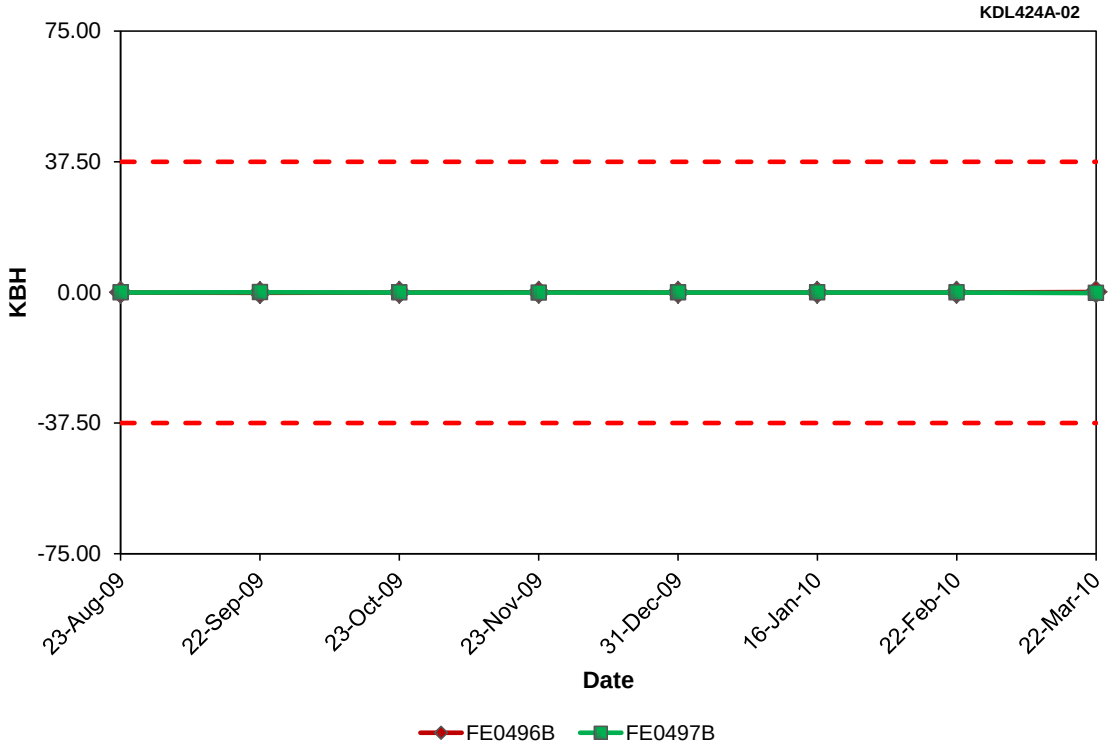



**Figure D.46 FW FLOW TO SG C Steady-State Drift at Farley Unit 2 (Cycle 20)**

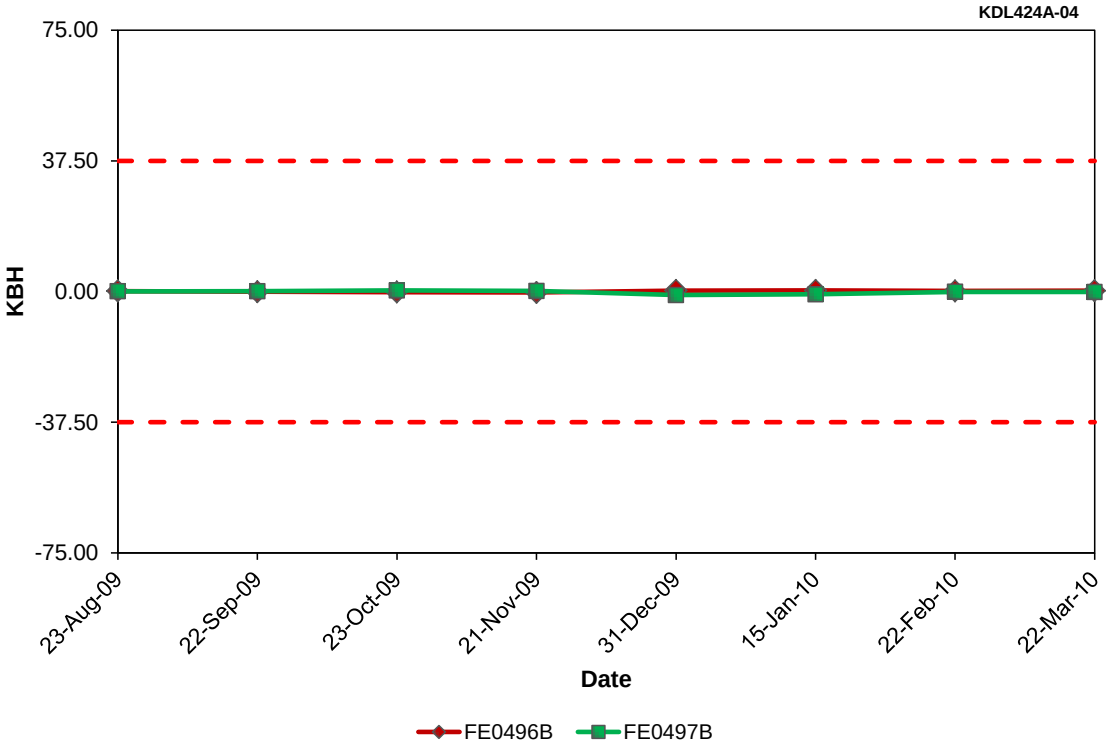



**Figure D.47 FW FLOW TO SG C Steady-State Residual AAKR at Farley Unit 2 (Cycle 20)**

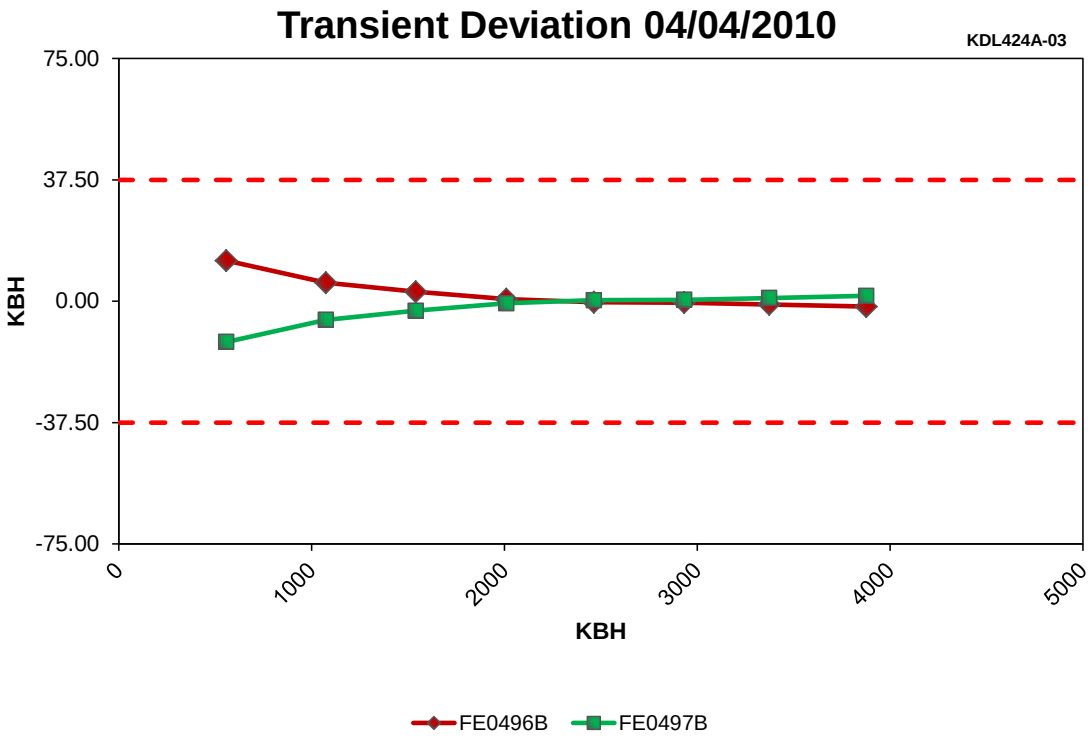



**Figure D.48 FW FLOW TO SG C Transient Deviation at Farley Unit 2 (Cycle 20)**

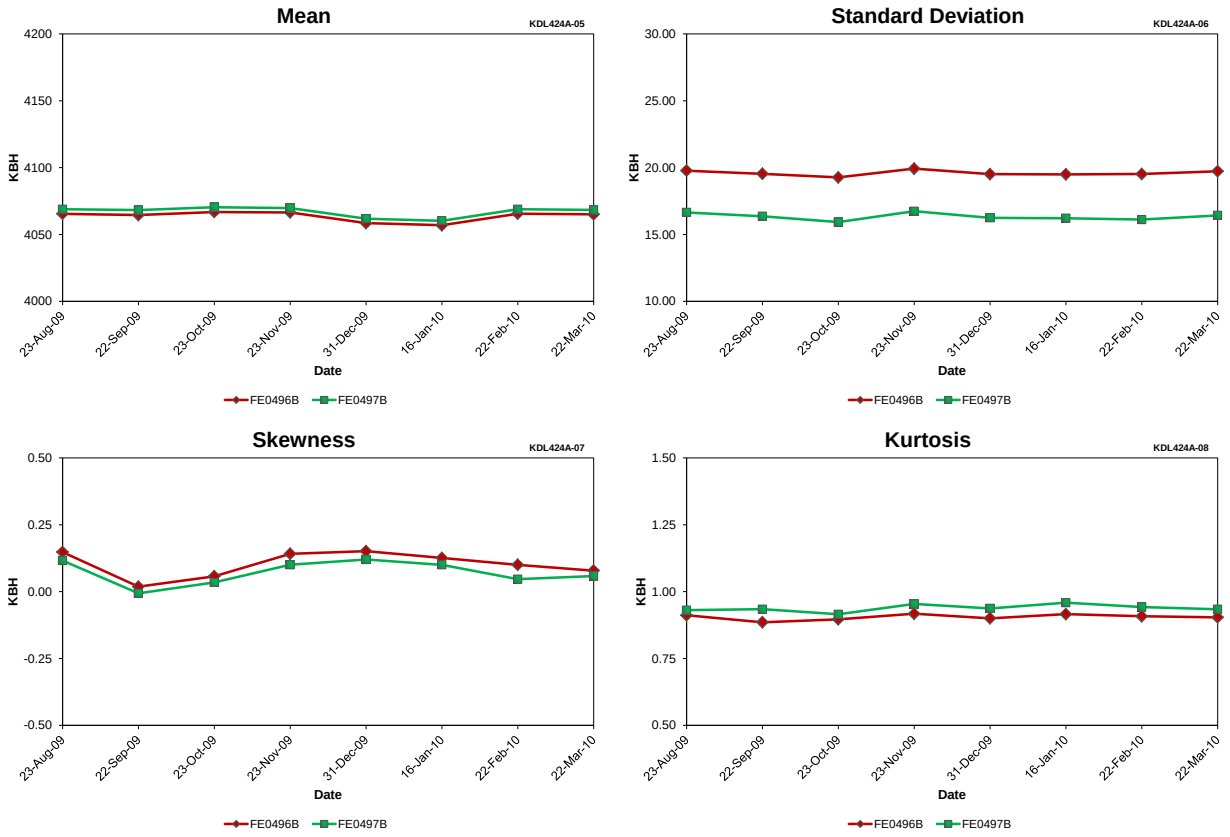



**Figure D.49 FW FLOW TO SG C Data Quality Statistics at Farley Unit 2 (Cycle 20)**

**Table D.10 FW FLOW TO SG C Data Quality for Farley Unit 2 (Cycle 20)**

| | Tag Names | |
|---|---|---|
| Result Type | FE0496B | FE0497B |
| Mean | 4063.68 | 4067.10 |
| Std. Dev. | 19.60 | 16.34 |
| Skewness | 0.10 | 0.07 |
| Kurtosis | 0.90 | 0.94 |

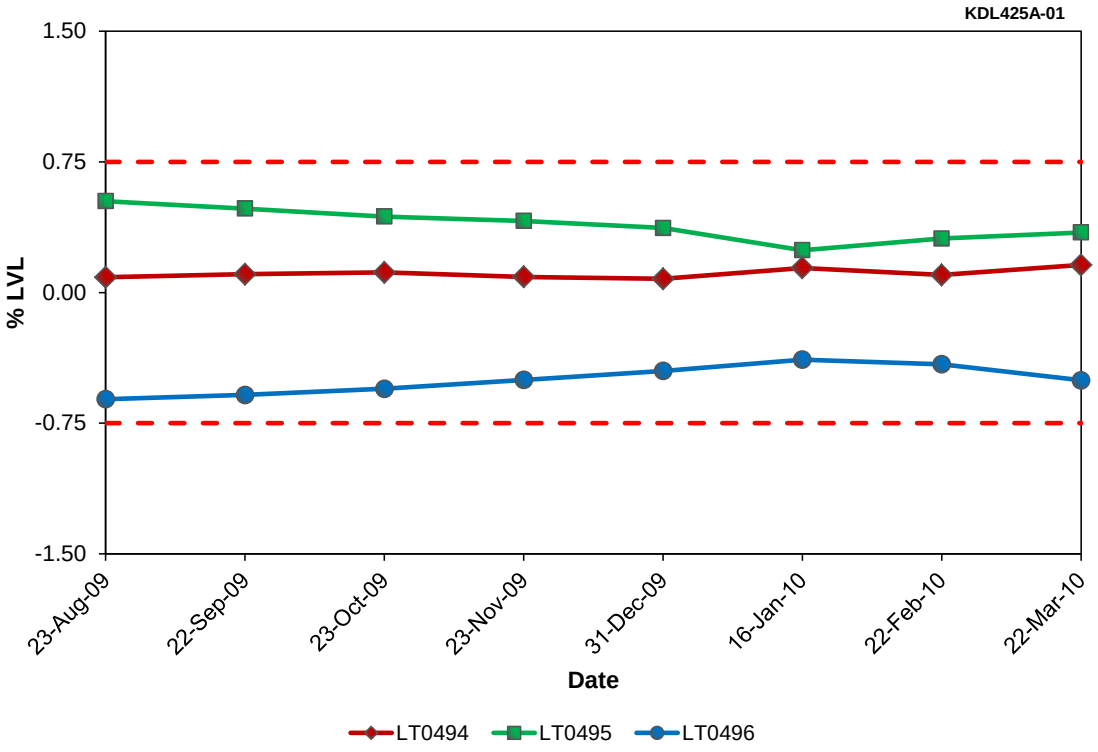



**Figure D.50 SG C LEVEL Steady-State Deviation at Farley Unit 2 (Cycle 20)**

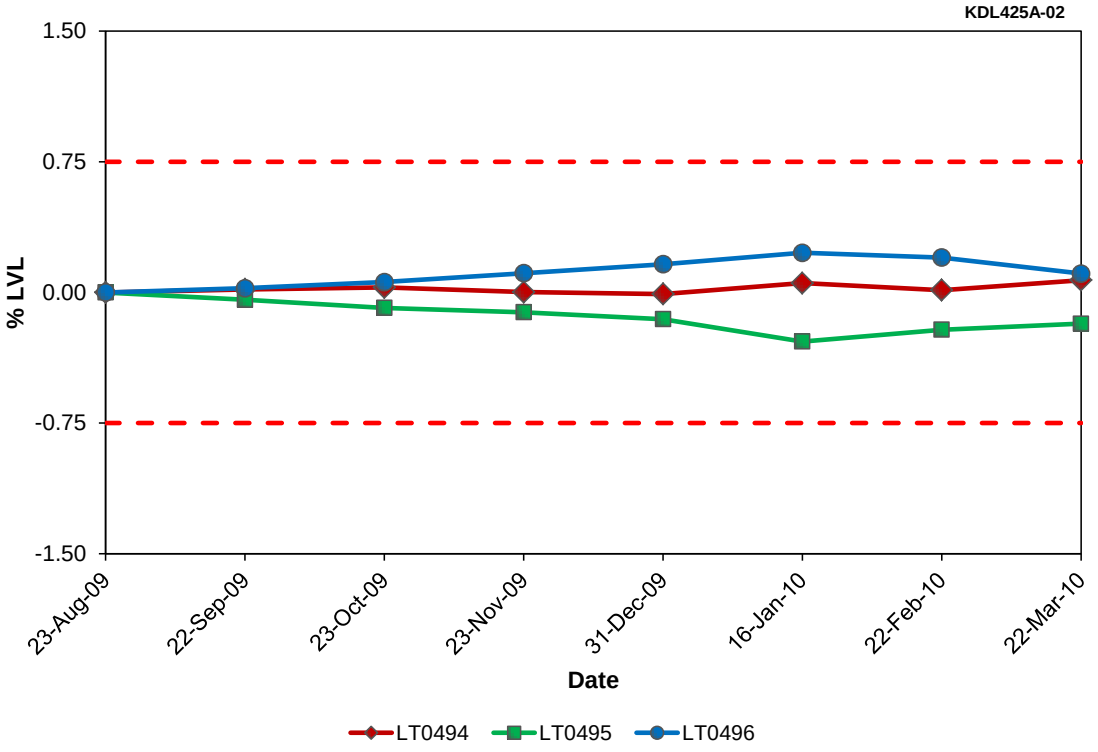



**Figure D.51 SG C LEVEL Steady-State Drift at Farley Unit 2 (Cycle 20)**

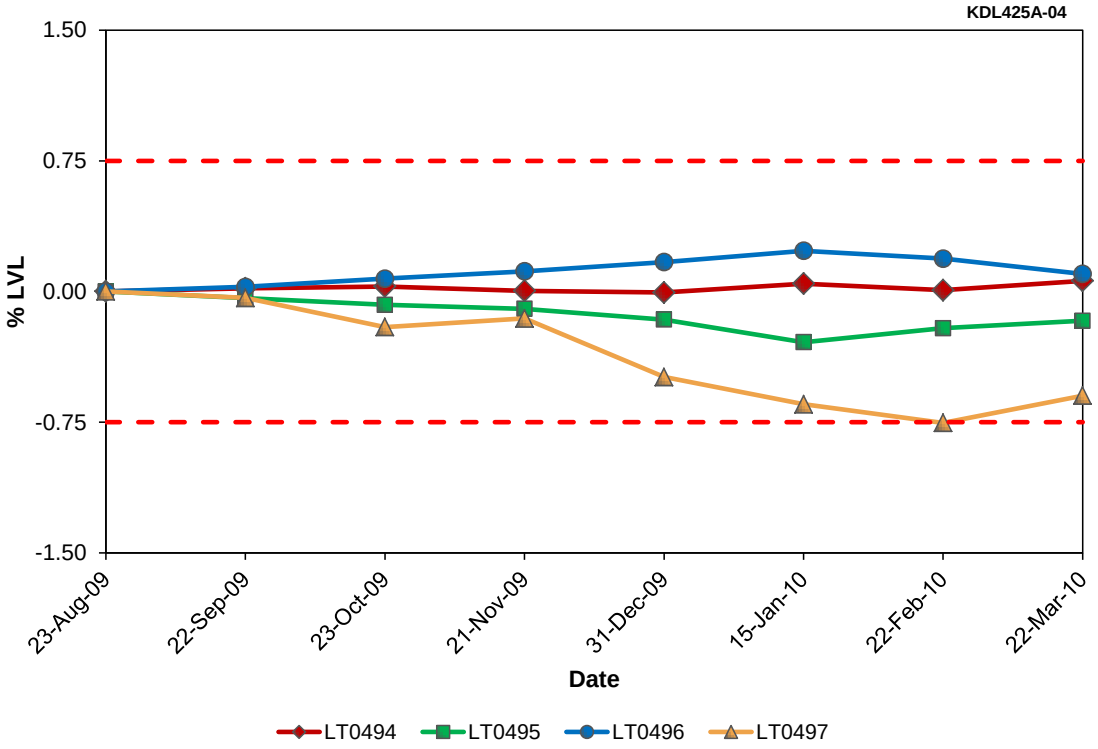



**Figure D.52 SG C LEVEL Steady-State Residual AAKR at Farley Unit 2 (Cycle 20)**

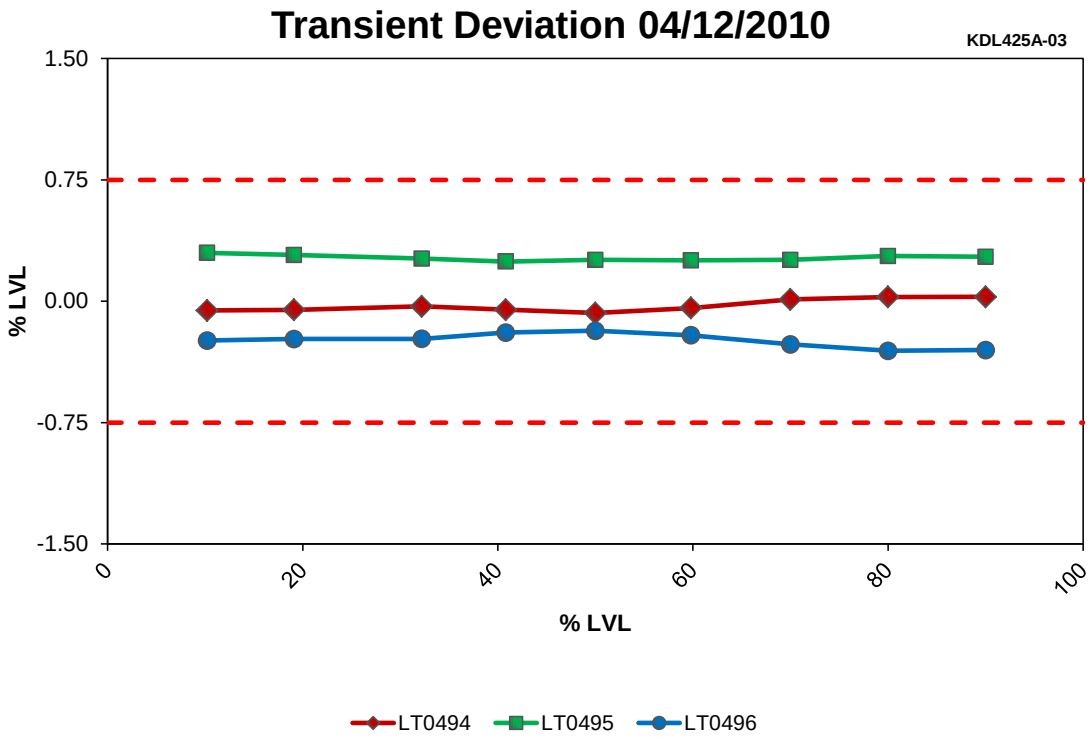



**Figure D.53 SG C LEVEL Transient Deviation at Farley Unit 2 (Cycle 20)**

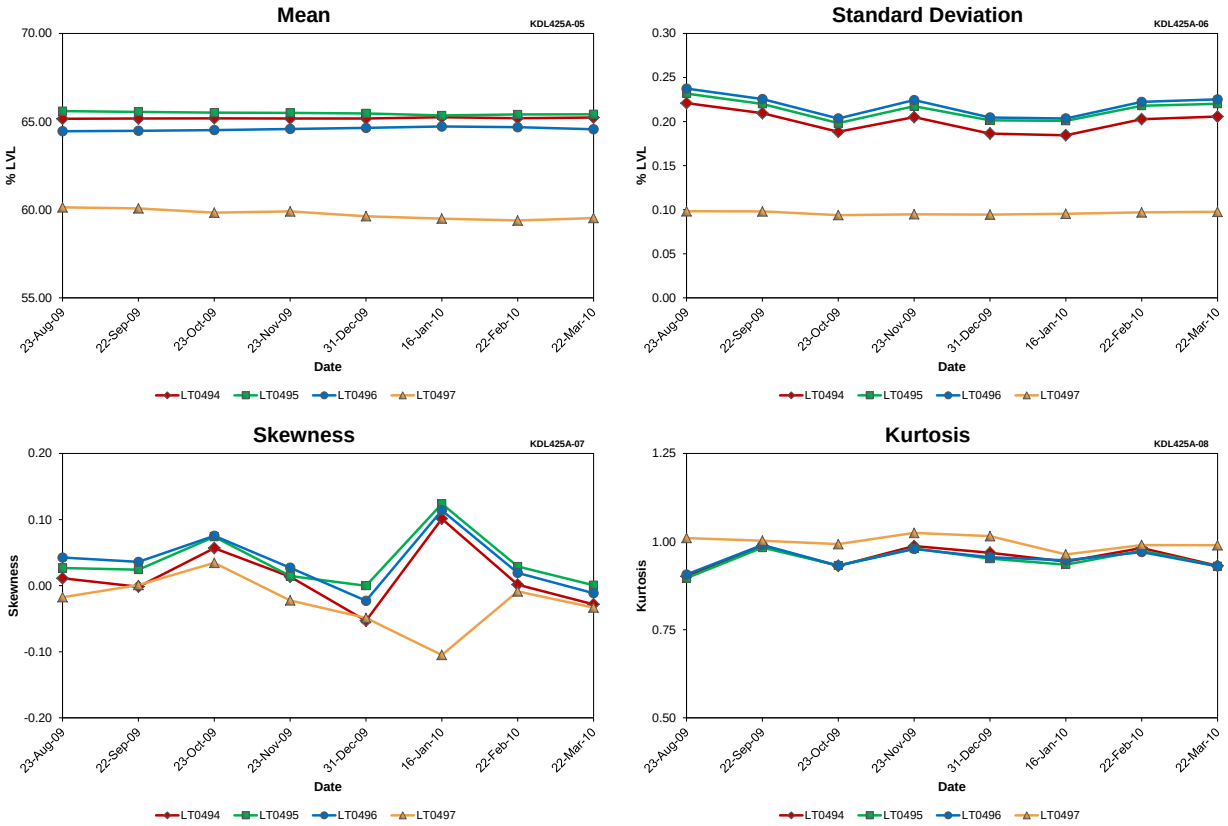



**Figure D.54 SG C LEVEL Data Quality Statistics at Farley Unit 2 (Cycle 20)**

**Table D.11 SG C LEVEL Data Quality for Farley Unit 2 (Cycle 20)**

| Result Type | Tag Names | | | |
|---|---|---|---|---|
| | LT0494 | LT0495 | LT0496 | LT0497 |
| Mean | 65.19 | 65.47 | 64.58 | 59.75 |
| Std. Dev. | 0.20 | 0.21 | 0.22 | 0.10 |
| Skewness | 0.01 | 0.04 | 0.04 | -0.02 |
| Kurtosis | 0.95 | 0.95 | 0.95 | 1.00 |

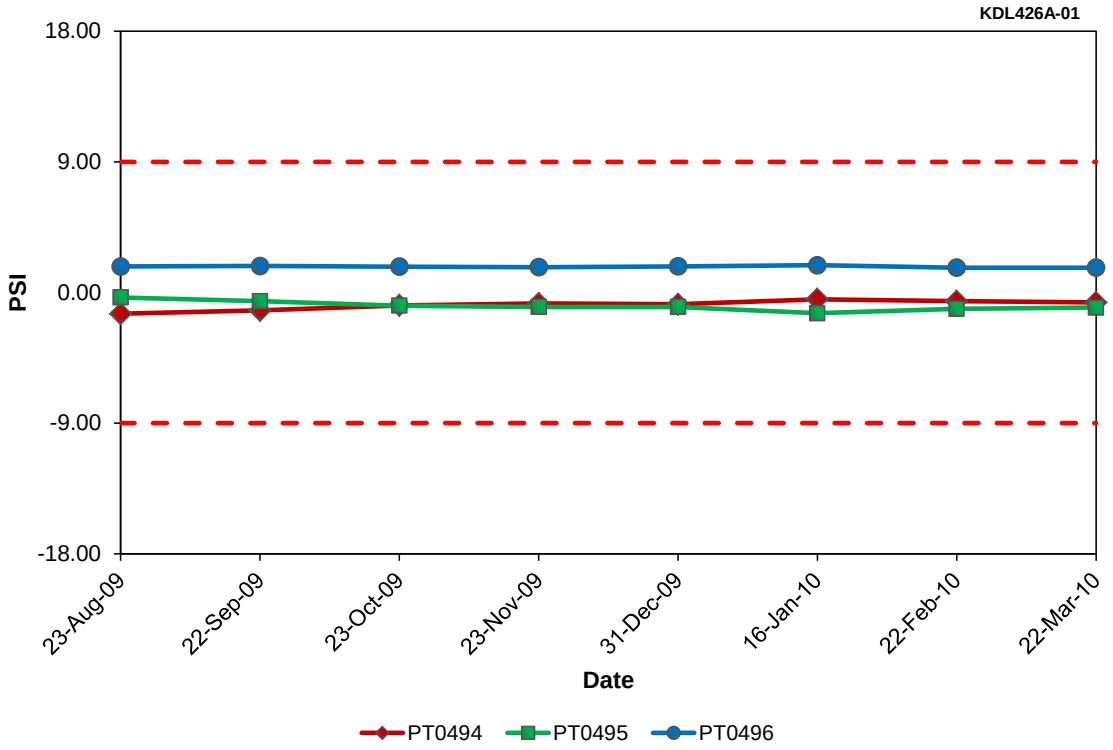



**Figure D.55 SG C OUTLET PRESSURE Steady-State Deviation at Farley Unit 2 (Cycle 20)**

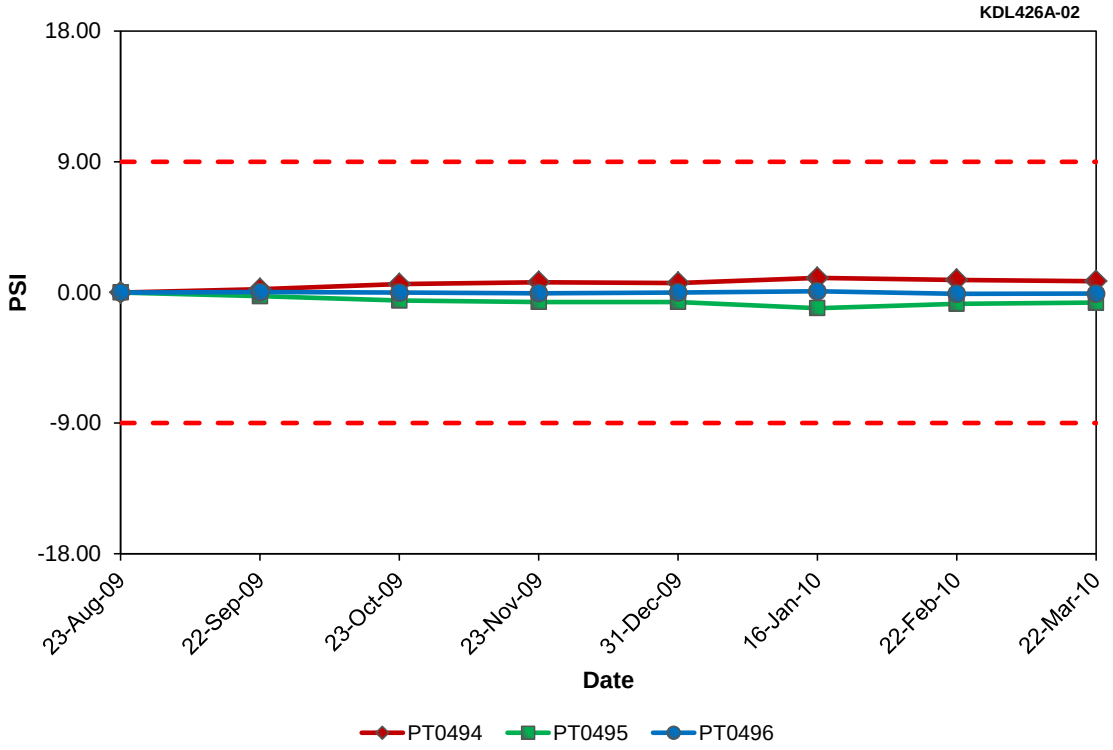



**Figure D.56 SG C OUTLET PRESSURE Steady-State Drift at Farley Unit 2 (Cycle 20)**

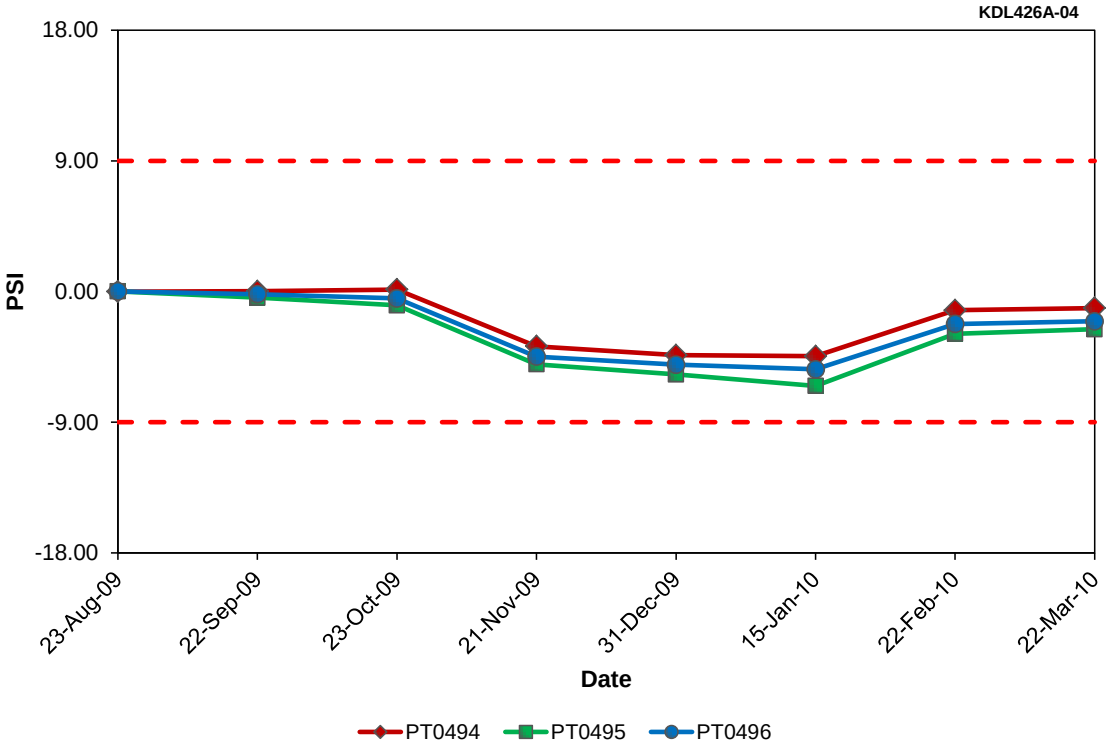



**Figure D.57 SG C OUTLET PRESSURE Steady-State Residual AAKR at Farley Unit 2 (Cycle 20)**

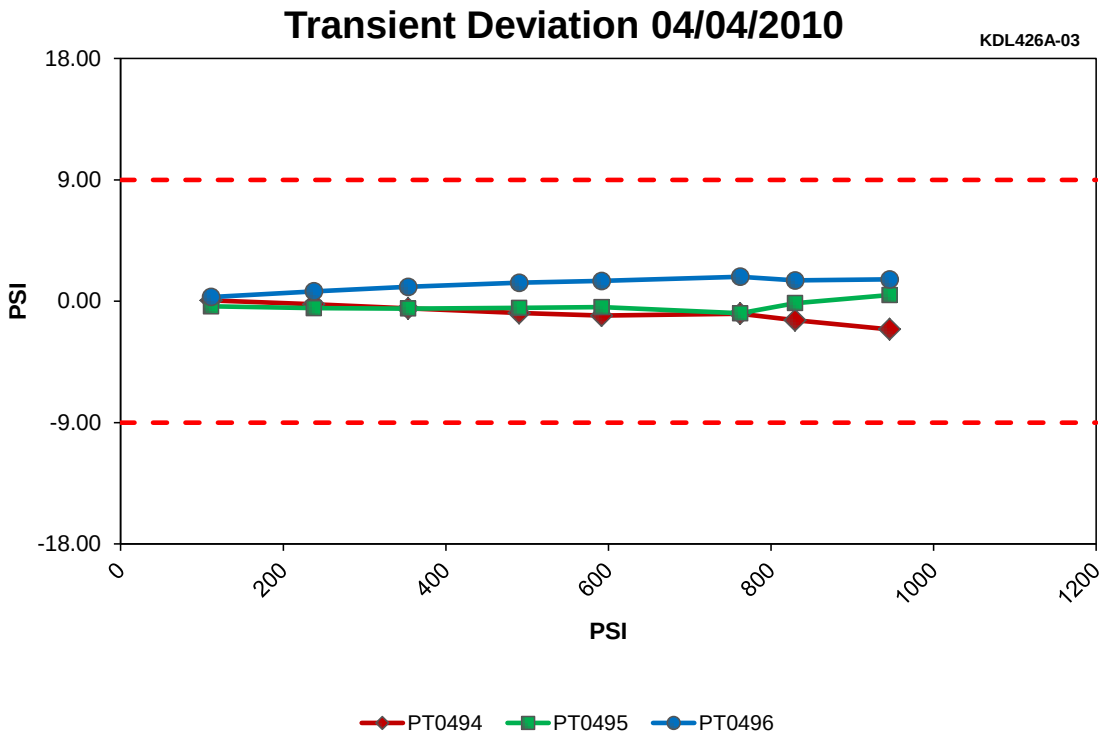



**Figure D.58 SG C OUTLET PRESSURE Transient Deviation at Farley Unit 2 (Cycle 20)**

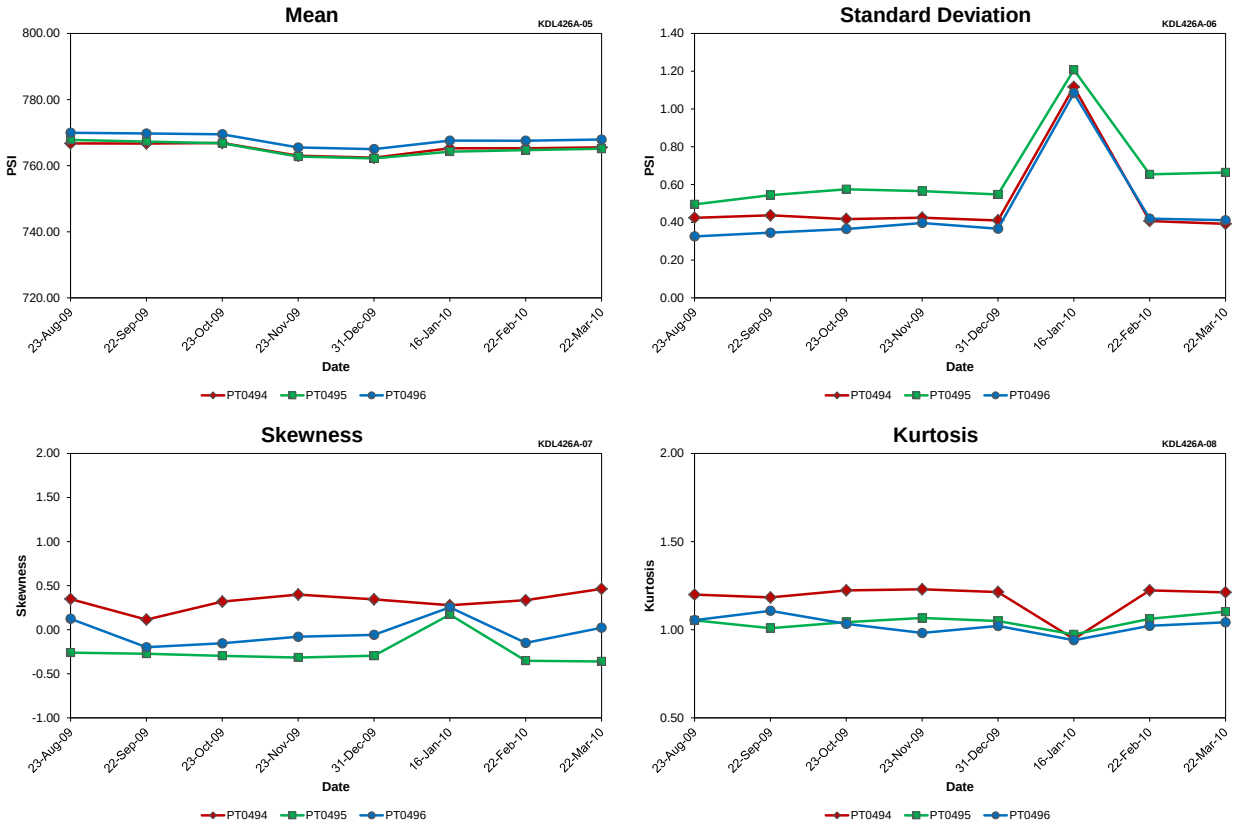



**Figure D.59 SG C OUTLET PRESSURE Data Quality Statistics at Farley Unit 2 (Cycle 20)**

**Table D.12 SG C OUTLET PRESSURE Data Quality for Farley Unit 2 (Cycle 20)**

| | Tag Names | | |
|---|---|---|---|
| **Result Type** | **PT0494** | **PT0495** | **PT0496** |
| Mean | 765.23 | 765.12 | 767.85 |
| Std. Dev. | 0.50 | 0.66 | 0.46 |
| Skewness | 0.33 | -0.25 | -0.03 |
| Kurtosis | 1.18 | 1.05 | 1.03 |

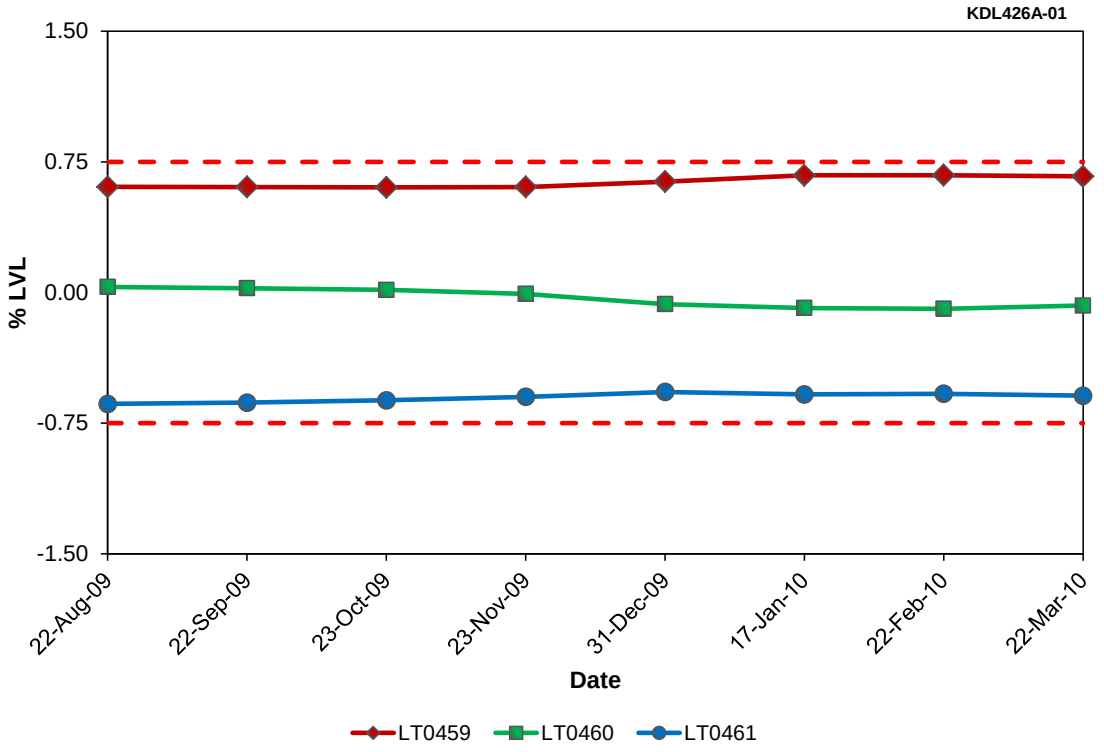



**Figure D.60 PRESSURIZER LEVEL Steady-State Deviation at Farley Unit 2 (Cycle 20)**

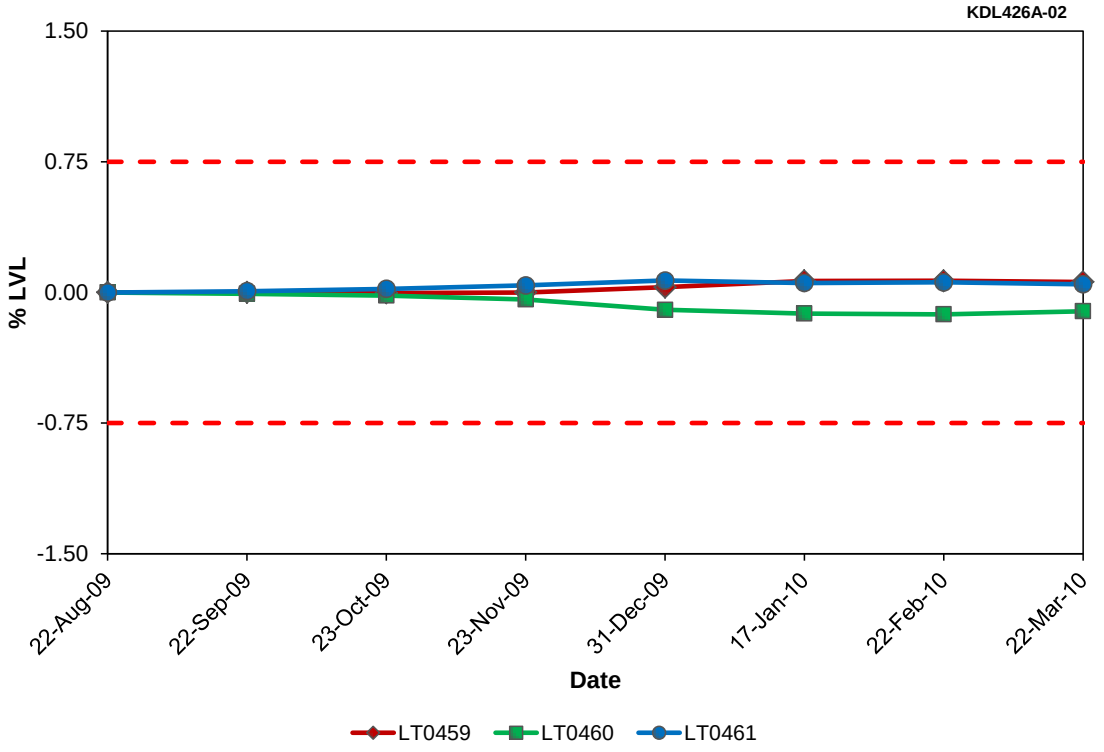



**Figure D.61 PRESSURIZER LEVEL Steady-State Drift at Farley Unit 2 (Cycle 20)**

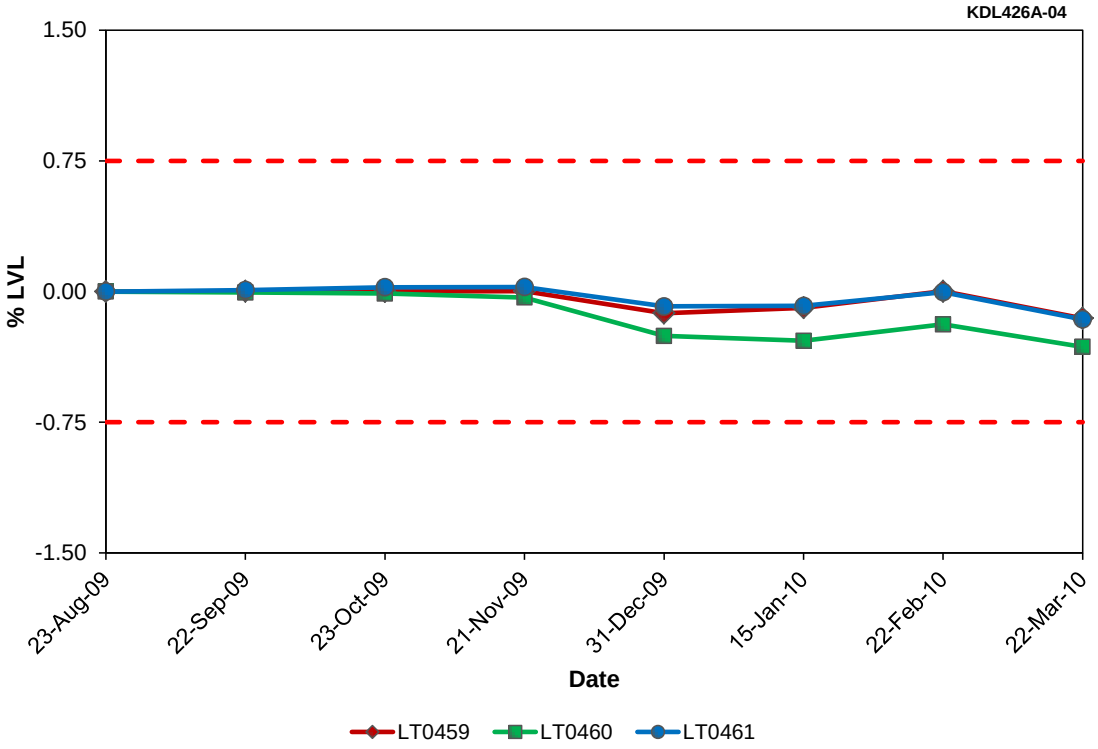



**Figure D.62 PRESSURIZER LEVEL Steady-State Residual AAKR at Farley Unit 2 (Cycle 20)**

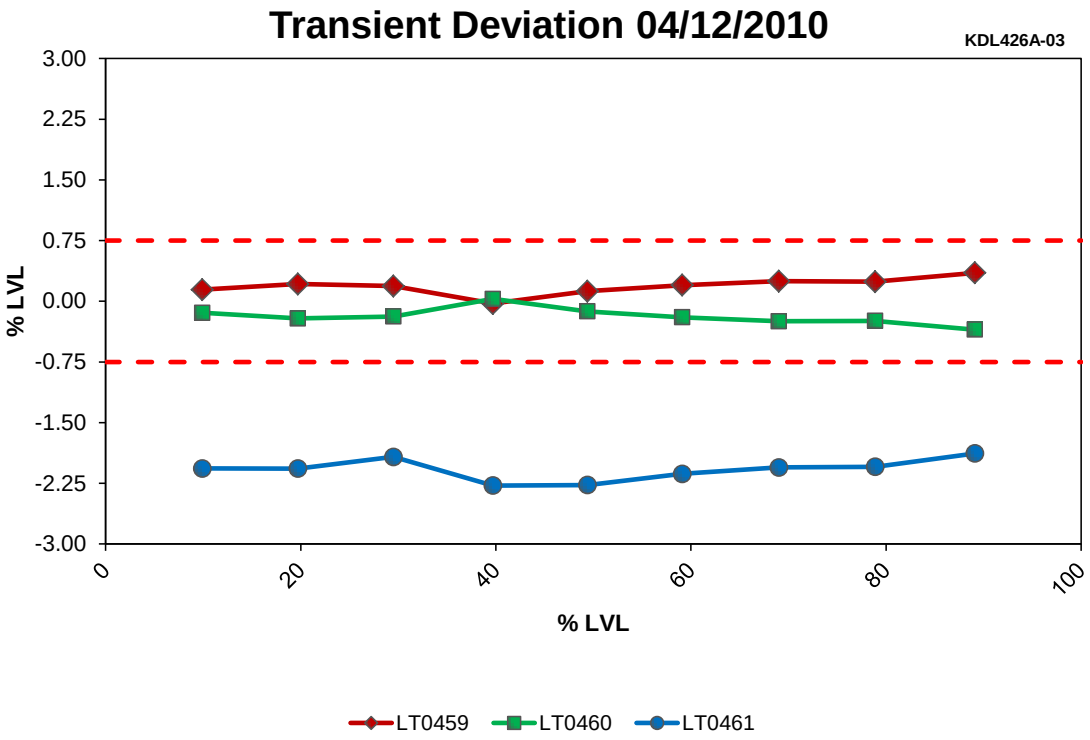



**Figure D.63 PRESSURIZER LEVEL Transient Deviation at Farley Unit 2 (Cycle 20)**

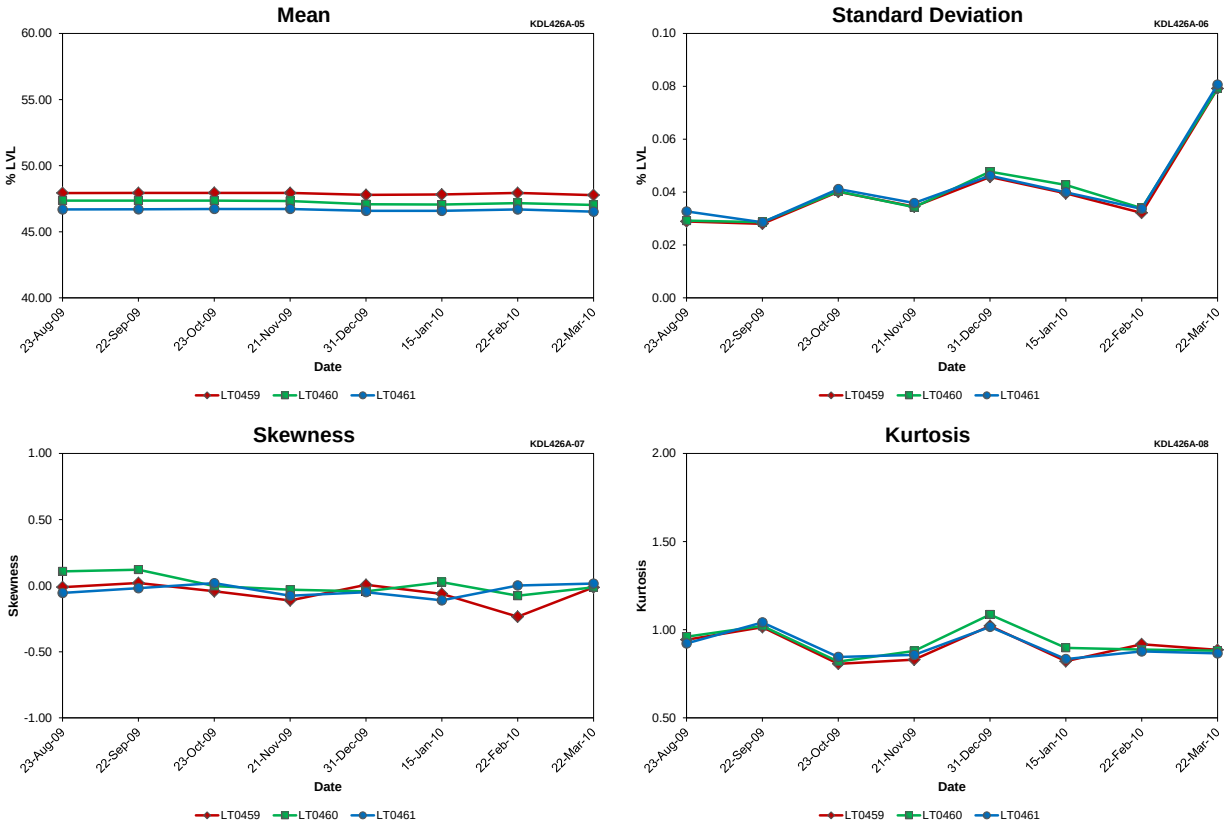



**Figure D.64 PRESSURIZER LEVEL Data Quality Statistics at Farley Unit 2 (Cycle 20)**

**Table D.13 PRESSURIZER LEVEL Data Quality for Farley Unit 2 (Cycle 20)**

| | Tag Names | | |
|---|---|---|---|
| **Result Type** | **LT0459** | **LT0460** | **LT0461** |
| Mean | 47.88 | 47.22 | 46.65 |
| Std. Dev. | 0.04 | 0.04 | 0.04 |
| Skewness | -0.06 | 0.01 | -0.03 |
| Kurtosis | 0.91 | 0.93 | 0.91 |

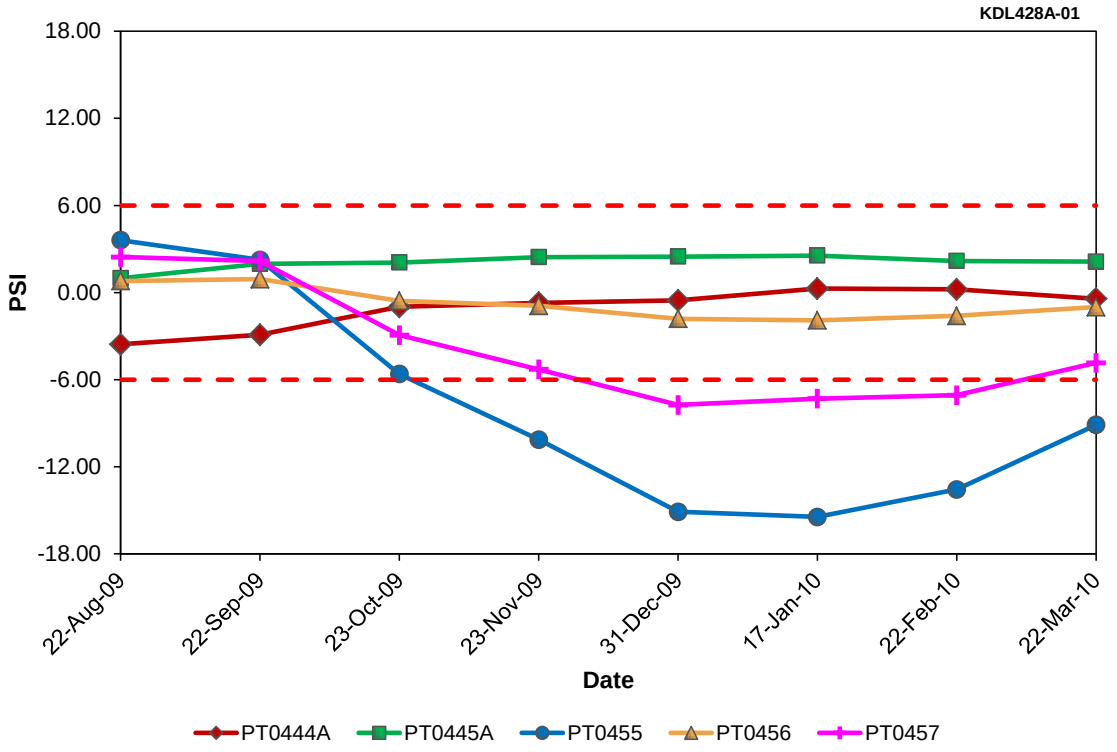



**Figure D.65 PRESSURIZER PRESSURE Steady-State Deviation at Farley Unit 2 (Cycle 20)**

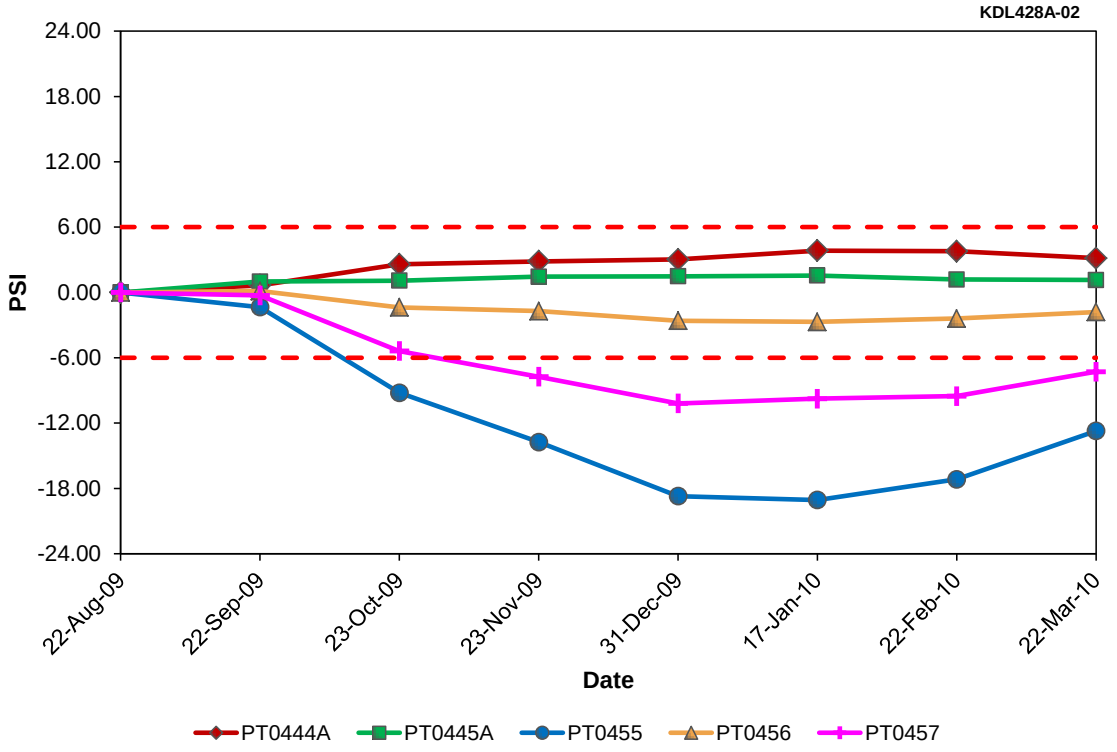



**Figure D.66 PRESSURIZER PRESSURE Steady-State Drift at Farley Unit 2 (Cycle 20)**

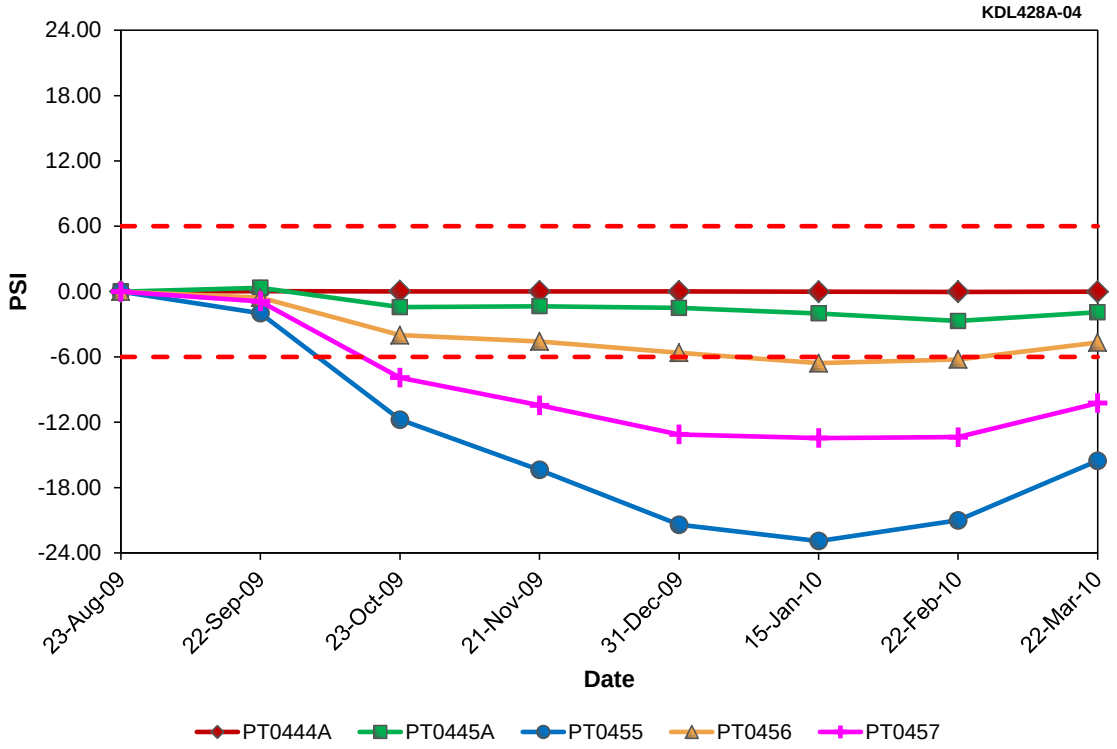



**Figure D.67 PRESSURIZER PRESSURE Steady-State Residual AAKR at Farley Unit 2 (Cycle 20)**

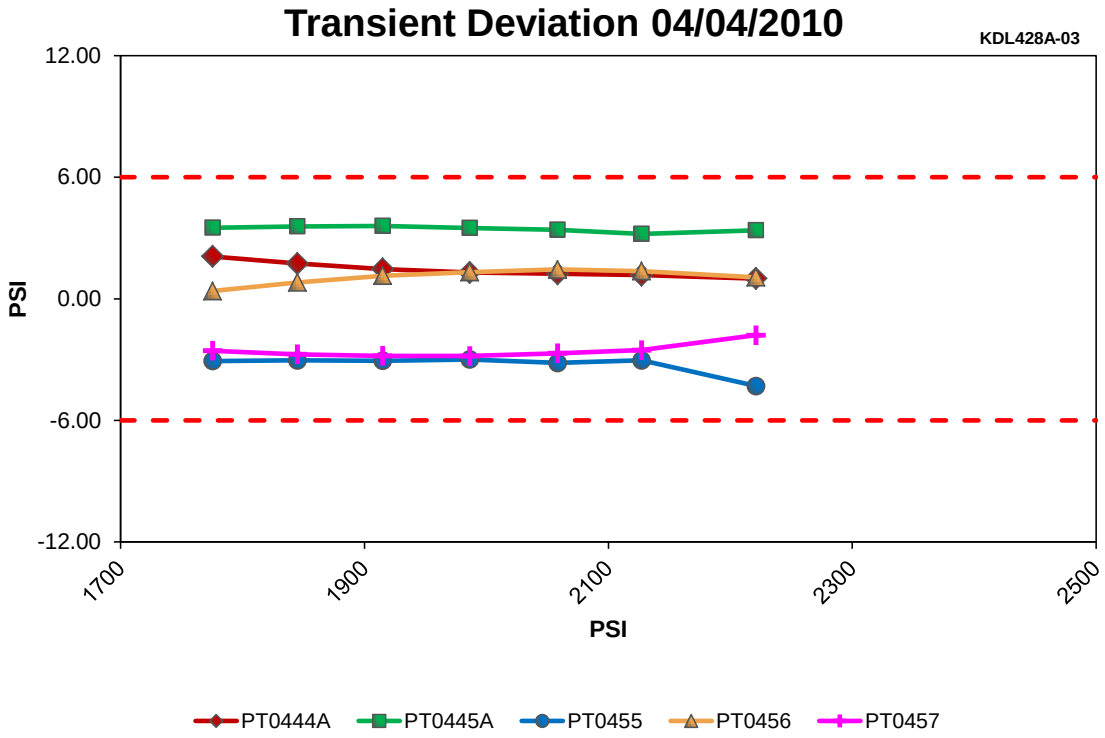



**Figure D.68 PRESSURIZER PRESSURE Transient Deviation at Farley Unit 2 (Cycle 20)**

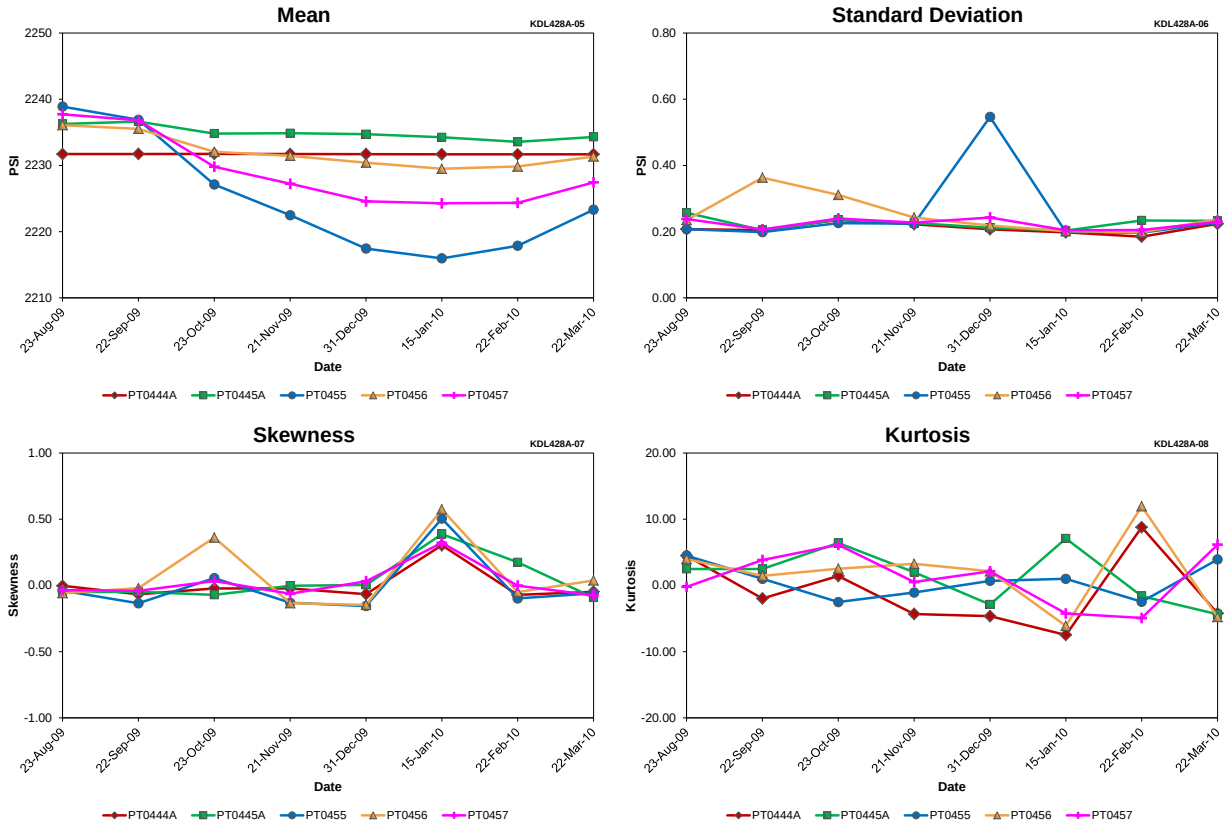



**Figure D.69 PRESSURIZER PRESSURE Data Quality Statistics at Farley Unit 2 (Cycle 20)**

**Table D.14 PRESSURIZER PRESSURE Data Quality for Farley Unit 2 (Cycle 20)**

| | Tag Names | | | | |
|---|---|---|---|---|---|
| **Result Type** | **PT0444A** | **PT0445A** | **PT0455** | **PT0456** | **PT0457** |
| Mean | 2231.71 | 2234.93 | 2225.00 | 2232.03 | 2229.03 |
| Std. Dev. | 0.21 | 0.23 | 0.25 | 0.25 | 0.22 |
| Skewness | 0.00 | 0.04 | -0.01 | 0.07 | 0.02 |
| Kurtosis | -0.99 | 1.45 | 0.64 | 1.80 | 1.18 |

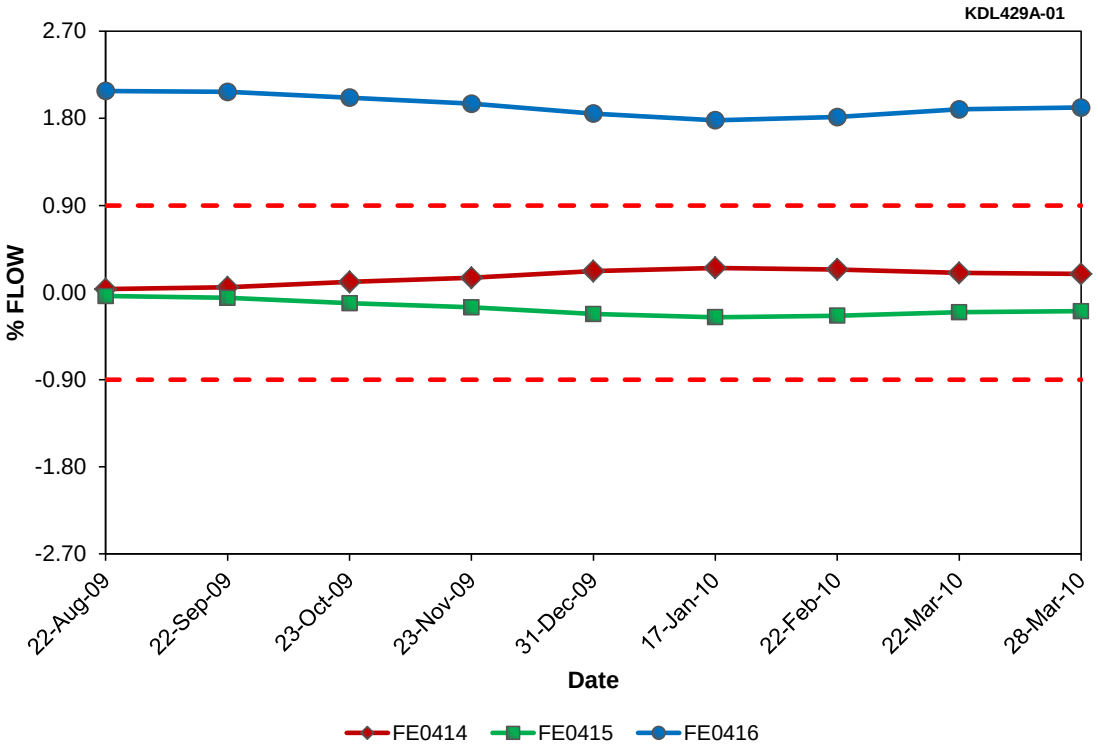



**Figure D.70 RCS LOOP A FLOW Steady-State Deviation at Farley Unit 2 (Cycle 20)**

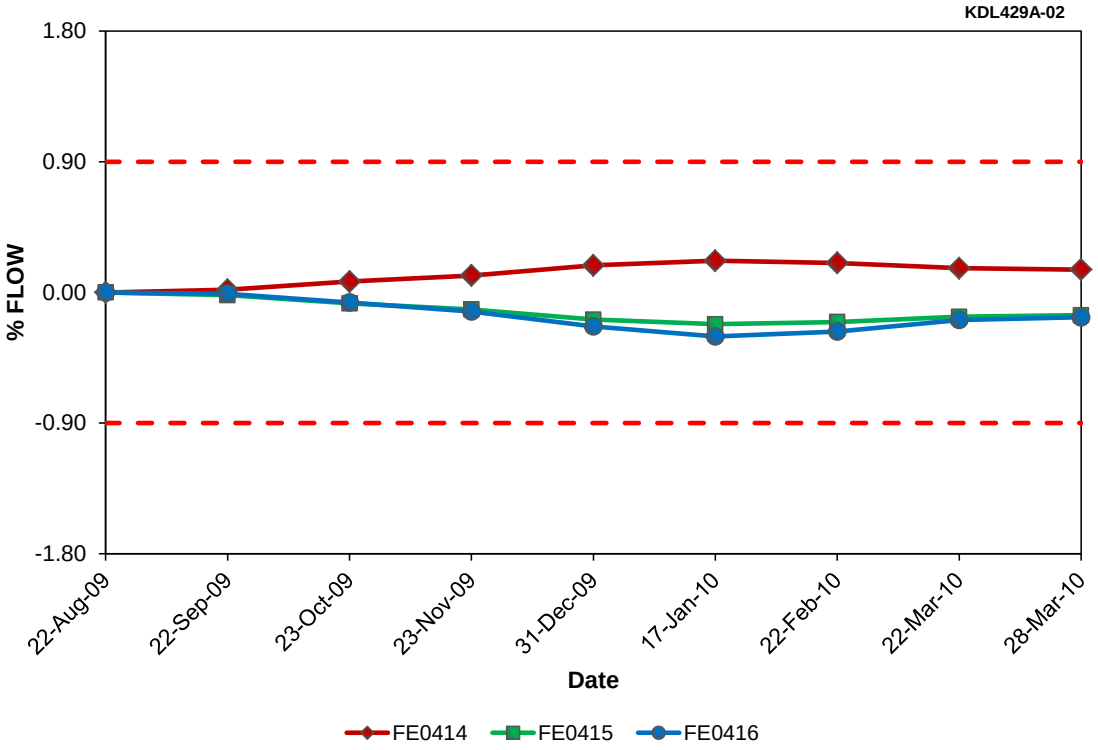



**Figure D.71 RCS LOOP A FLOW Steady-State Drift at Farley Unit 2 (Cycle 20)**

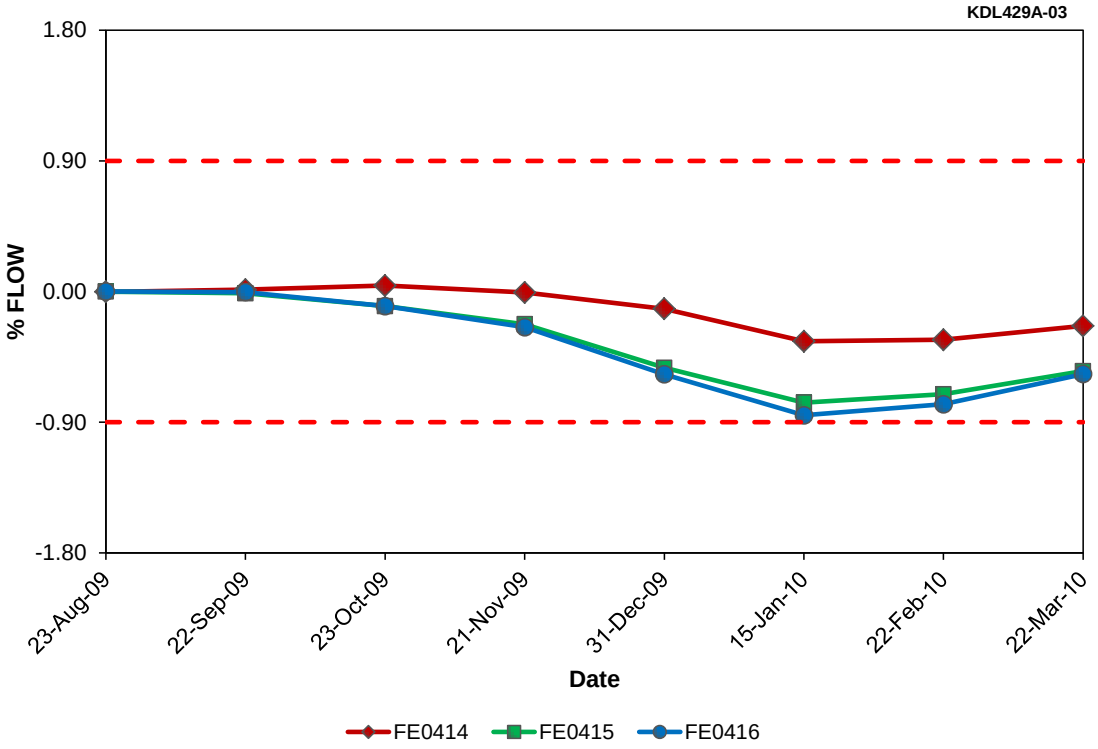



**Figure D.72 RCS LOOP A FLOW Steady-State Residual AAKR at Farley Unit 2 (Cycle 20)**

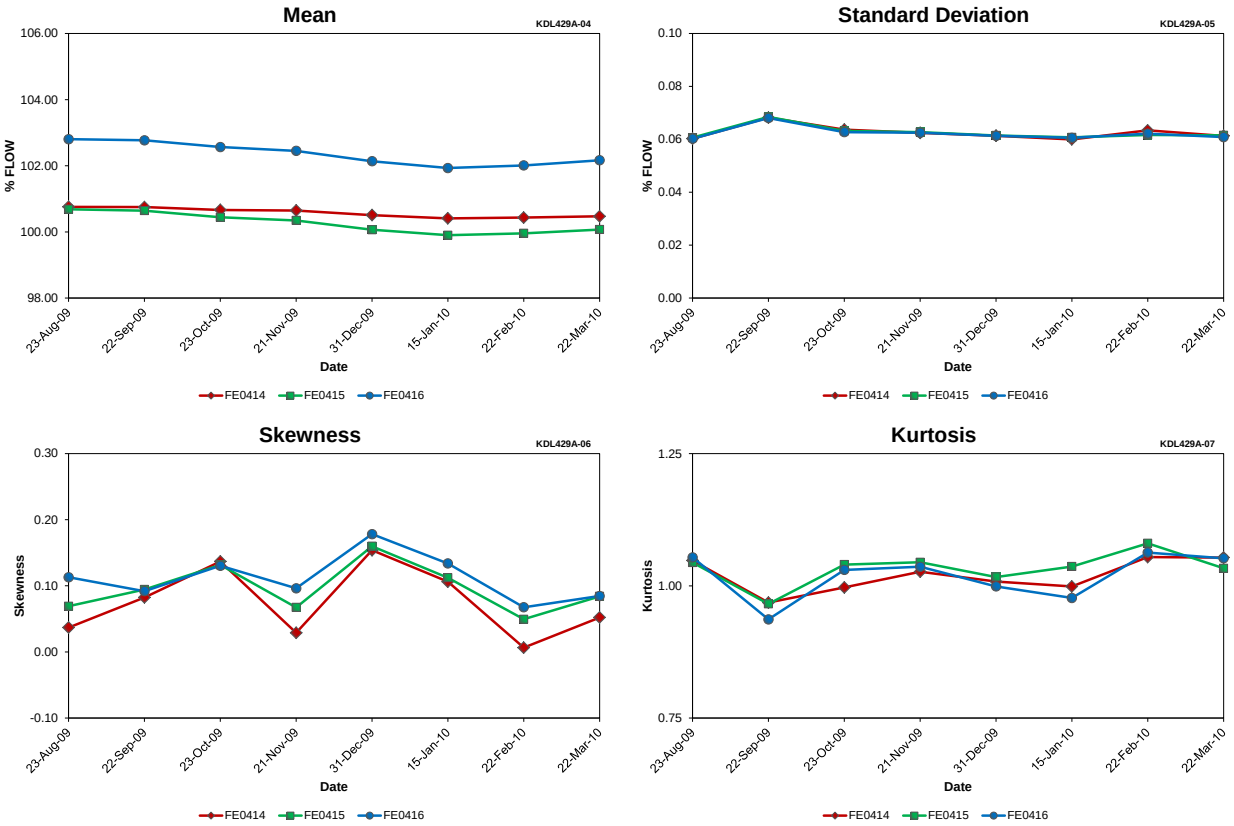



**Figure D.73 RCS LOOP A FLOW Data Quality Statistics at Farley Unit 2 (Cycle 20)**

**Table D.15 RCS LOOP A FLOW Data Quality for Farley Unit 2 (Cycle 20)**

| | Tag Names | | |
|---|---|---|---|
| **Result Type** | **FE0414** | **FE0415** | **FE0416** |
| Mean | 100.58 | 100.26 | 102.36 |
| Std. Dev. | 0.06 | 0.06 | 0.06 |
| Skewness | 0.08 | 0.10 | 0.11 |
| Kurtosis | 1.02 | 1.03 | 1.02 |

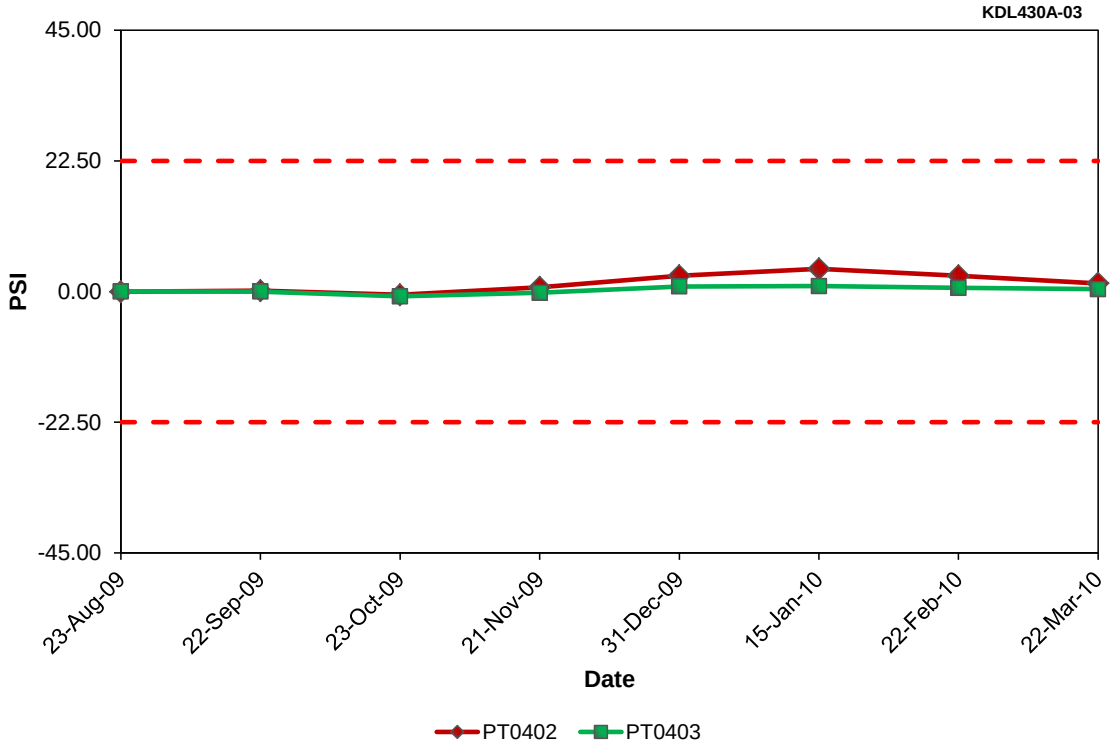



**Figure D.74 RCS WIDE RANGE PRESSURE Steady-State Residual AAKR at Farley Unit 2 (Cycle 20)**

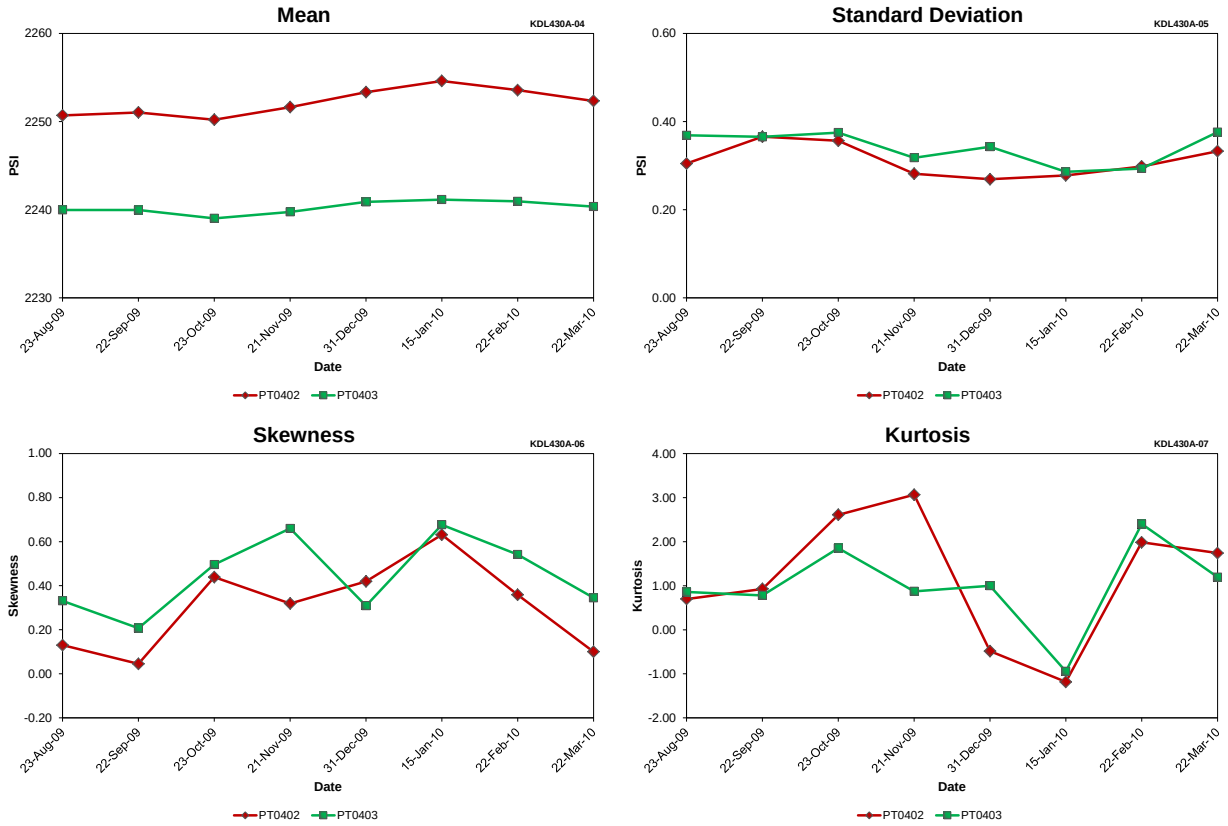



**Figure D.75 RCS WIDE RANGE PRESSURE Data Quality Statistics at Farley Unit 2 (Cycle 20)**

**Table D.16 RCS WIDE RANGE PRESSURE Data Quality for Farley Unit 2 (Cycle 20)**

| | Tag Names | |
|---|---|---|
| Result Type | PT0402 | PT0403 |
| Mean | 2252.19 | 2240.26 |
| Std. Dev. | 0.31 | 0.34 |
| Skewness | 0.31 | 0.45 |
| Kurtosis | 1.17 | 1.00 |

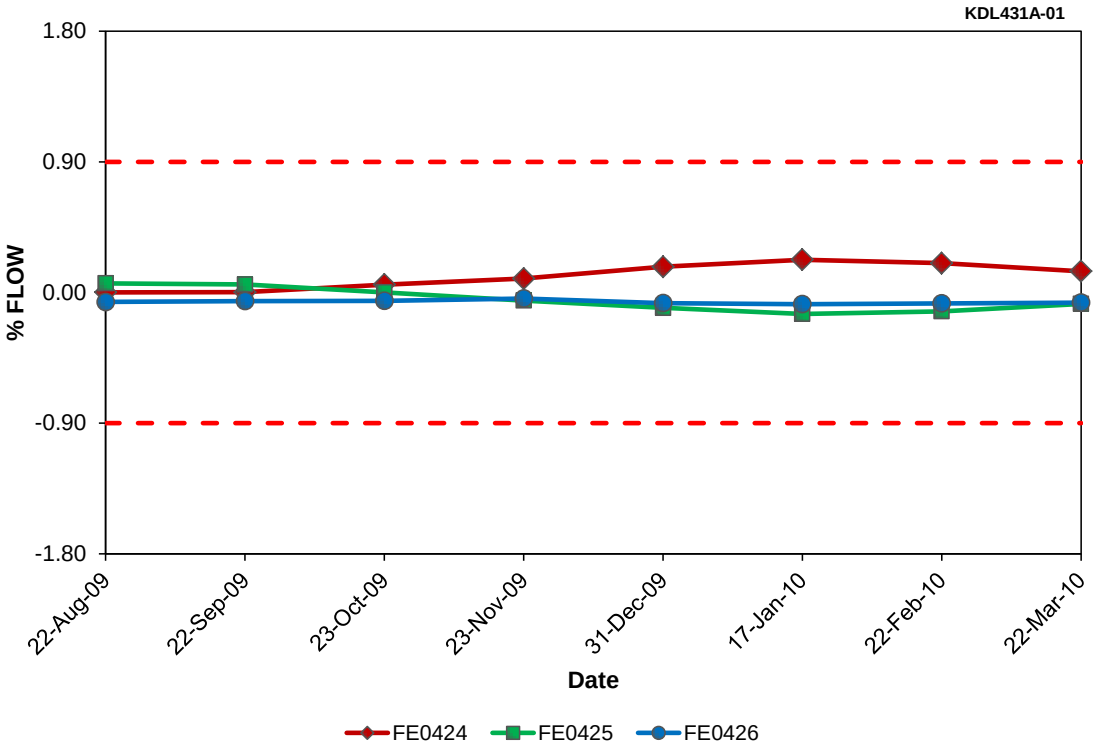



**Figure D.76 RCS LOOP B FLOW Steady-State Deviation at Farley Unit 2 (Cycle 20)**

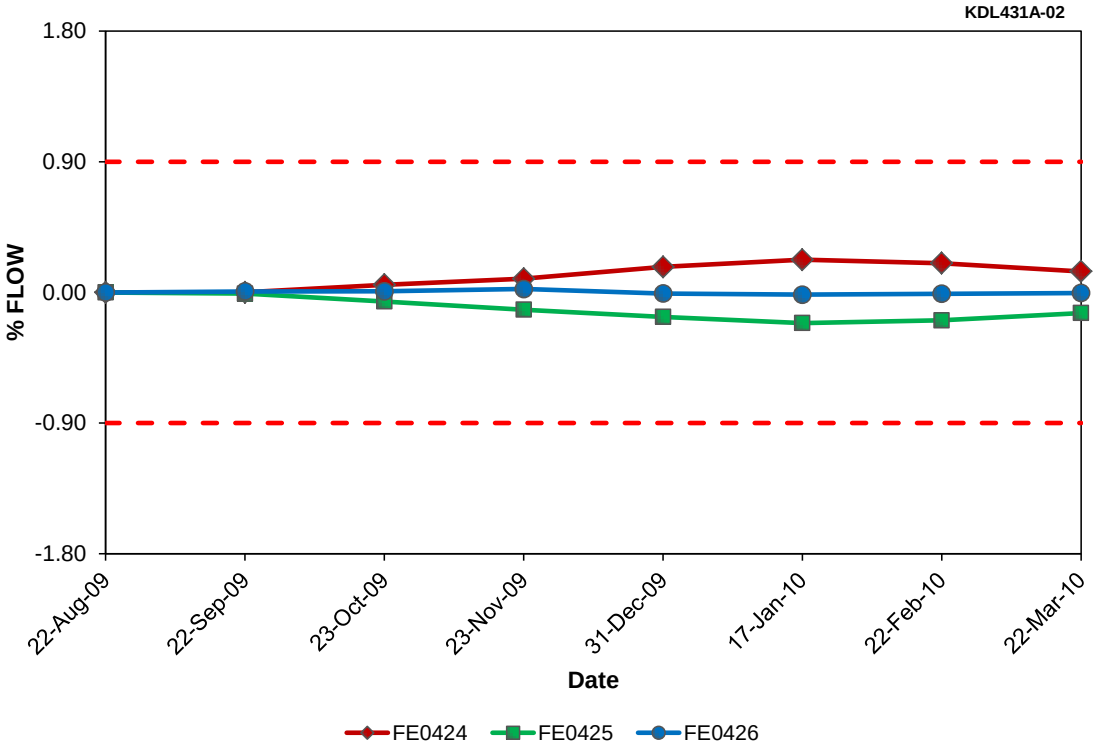



**Figure D.77 RCS LOOP B FLOW Steady-State Drift at Farley Unit 2 (Cycle 20)**

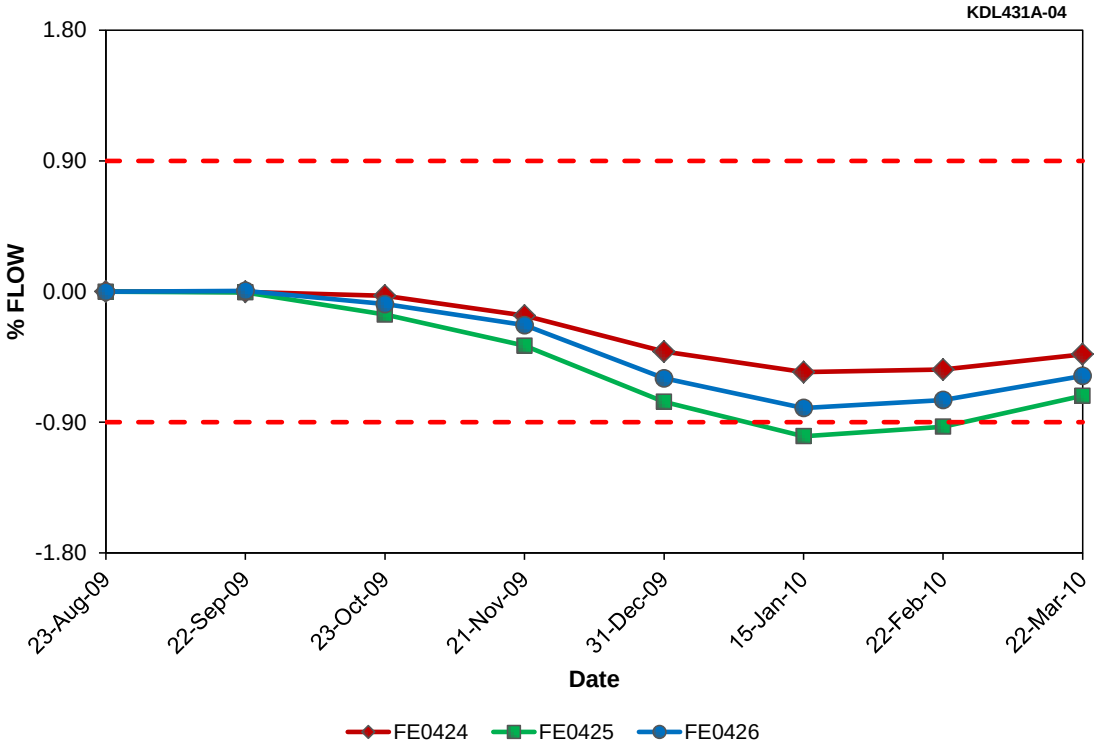



**Figure D.78 RCS LOOP B FLOW Steady-State Residual AAKR at Farley Unit 2 (Cycle 20)**

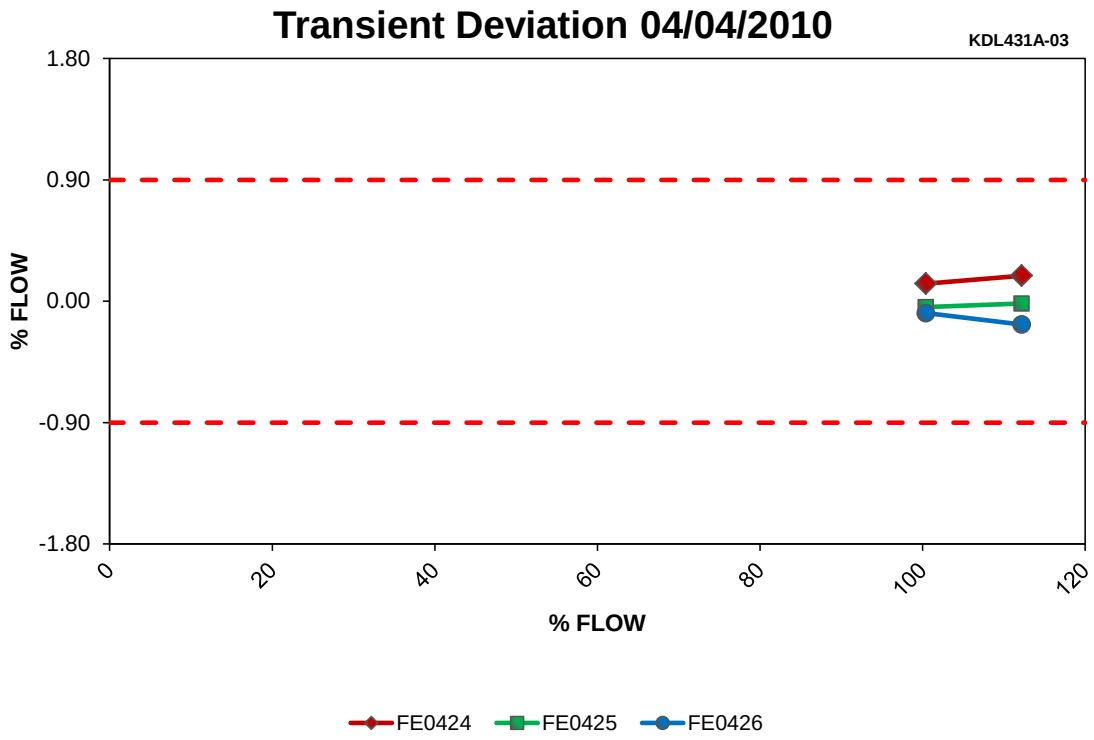



**Figure D.79 RCS LOOP B FLOW Transient Deviation at Farley Unit 2 (Cycle 20)**

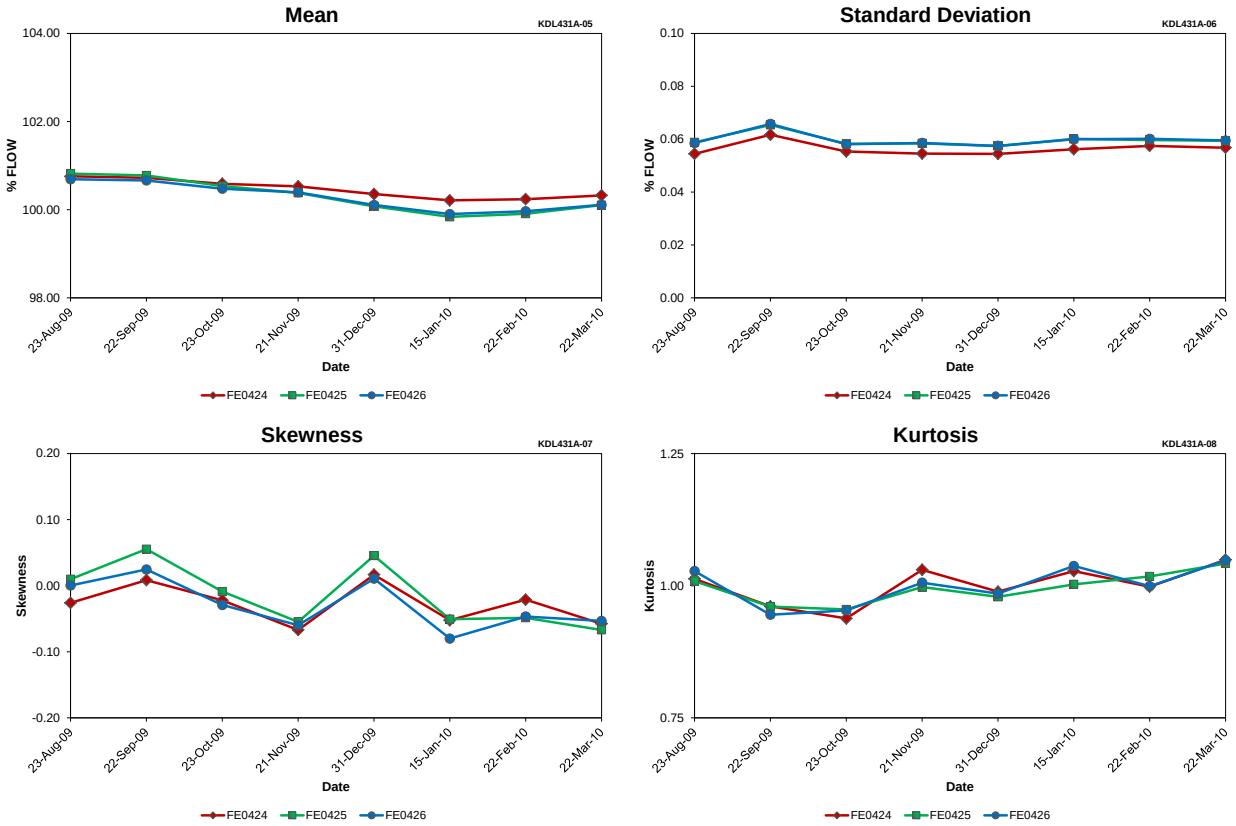



**Figure D.80 RCS LOOP B FLOW Data Quality Statistics at Farley Unit 2 (Cycle 20)**

**Table D.17 RCS LOOP B FLOW Data Quality for Farley Unit 2 (Cycle 20)**

| | Tag Names | | |
|---|---|---|---|
| **Result Type** | **FE0424** | **FE0425** | **FE0426** |
| Mean | 100.47 | 100.31 | 100.29 |
| Std. Dev. | 0.06 | 0.06 | 0.06 |
| Skewness | -0.03 | -0.01 | -0.03 |
| Kurtosis | 1.00 | 1.00 | 1.00 |

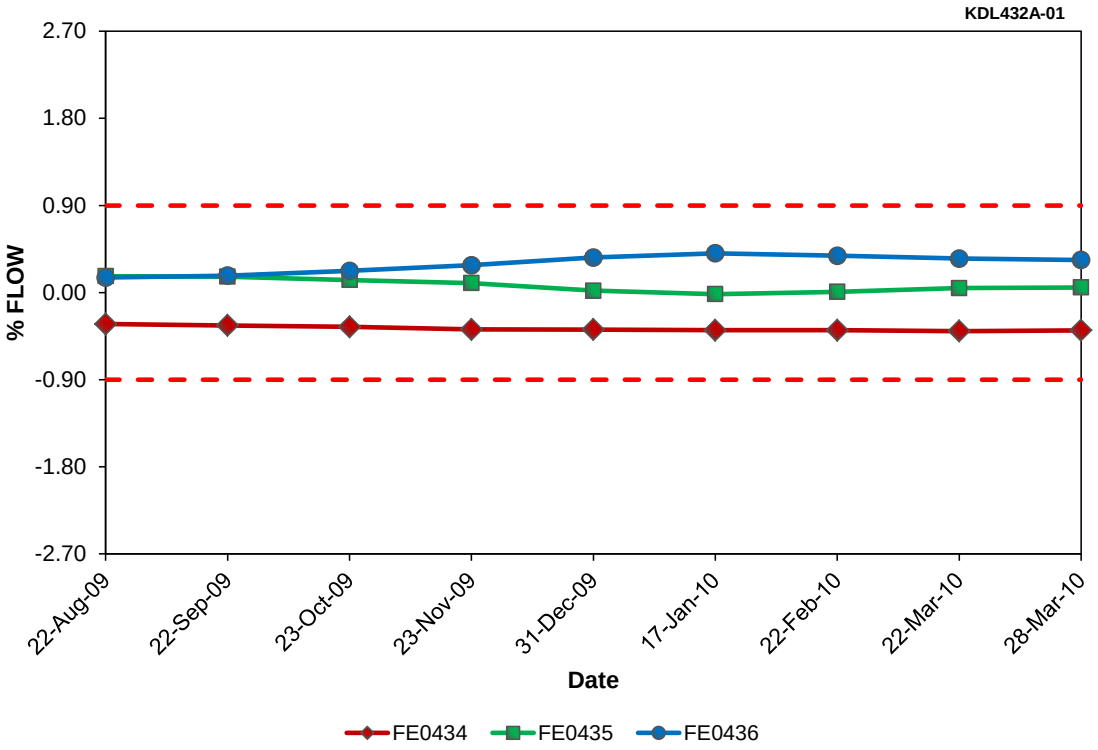



**Figure D.81 RCS LOOP C FLOW Steady-State Deviation at Farley Unit 2 (Cycle 20)**

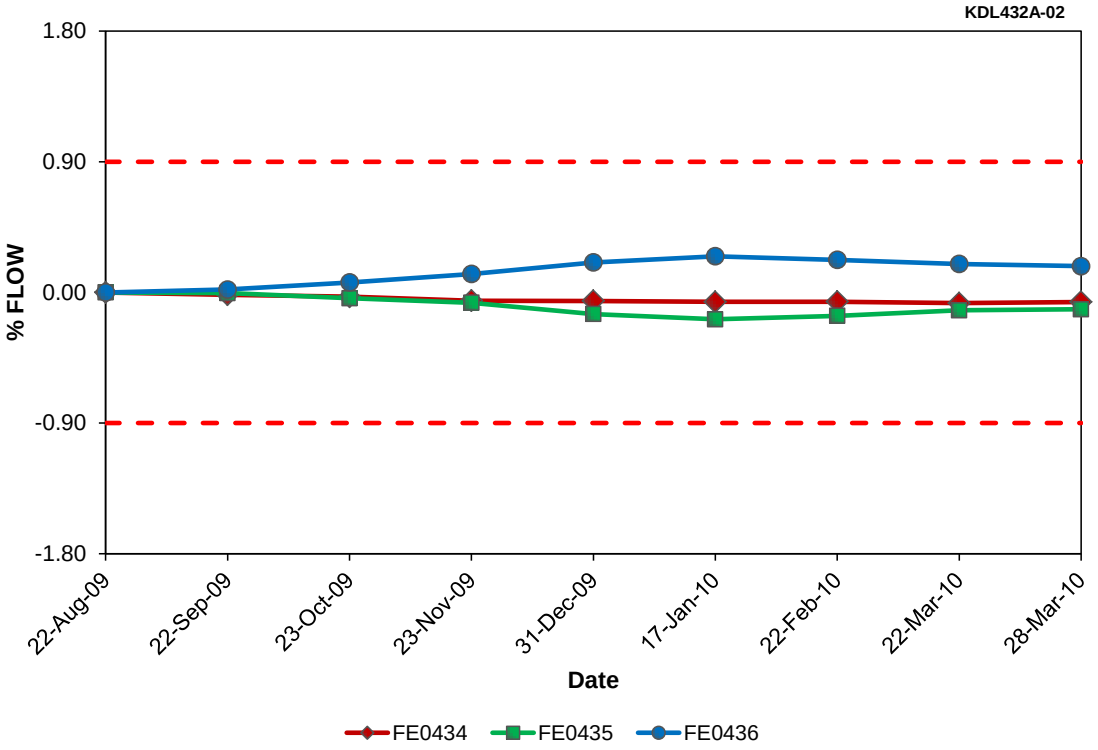



**Figure D.82 RCS LOOP C FLOW Steady-State Drift at Farley Unit 2 (Cycle 20)**

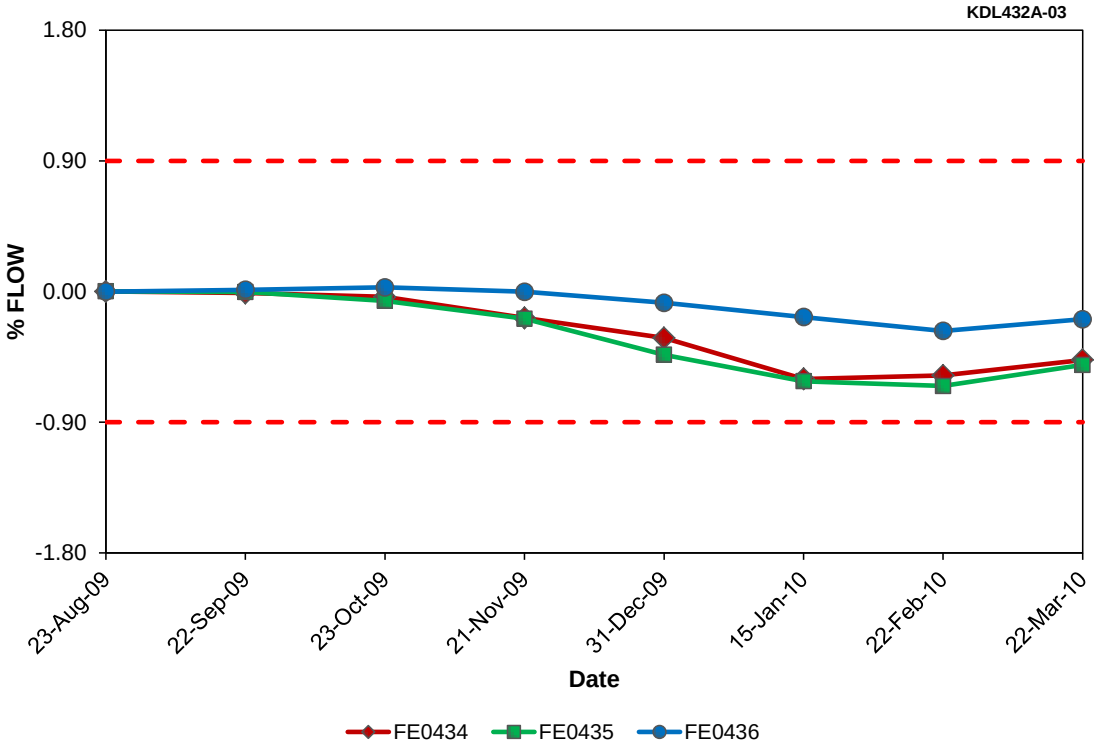



**Figure D.83 RCS LOOP C FLOW Steady-State Residual AAKR at Farley Unit 2 (Cycle 20)**

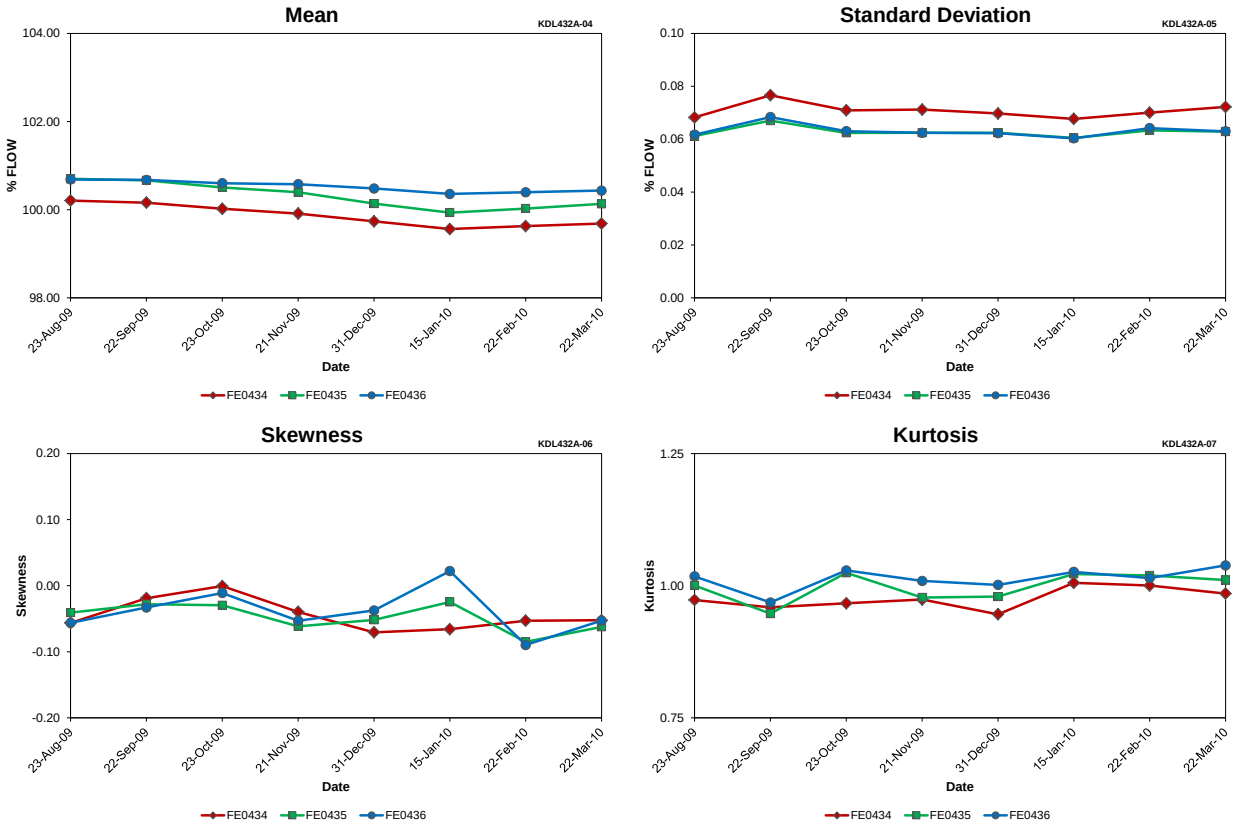



**Figure D.84 RCS LOOP C FLOW Data Quality Statistics at Farley Unit 2 (Cycle 20)**

**Table D.18 RCS LOOP C FLOW Data Quality for Farley Unit 2 (Cycle 20)**

| | Tag Names | | |
|---|---|---|---|
| **Result Type** | **FE0434** | **FE0435** | **FE0436** |
| Mean | 99.86 | 100.31 | 100.53 |
| Std. Dev. | 0.07 | 0.06 | 0.06 |
| Skewness | -0.04 | -0.05 | -0.04 |
| Kurtosis | 0.98 | 1.00 | 1.01 |

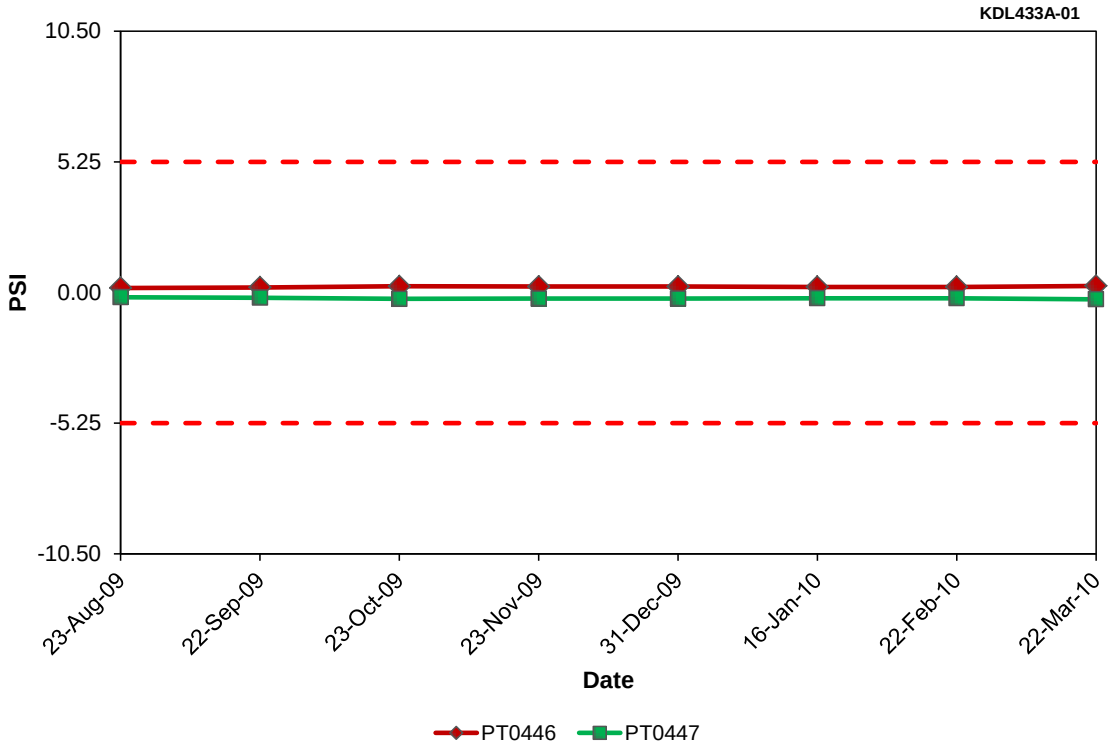



**Figure D.85 TBIN FIRST STAGE PRESSURE Steady-State Deviation at Farley Unit 2 (Cycle 20)**

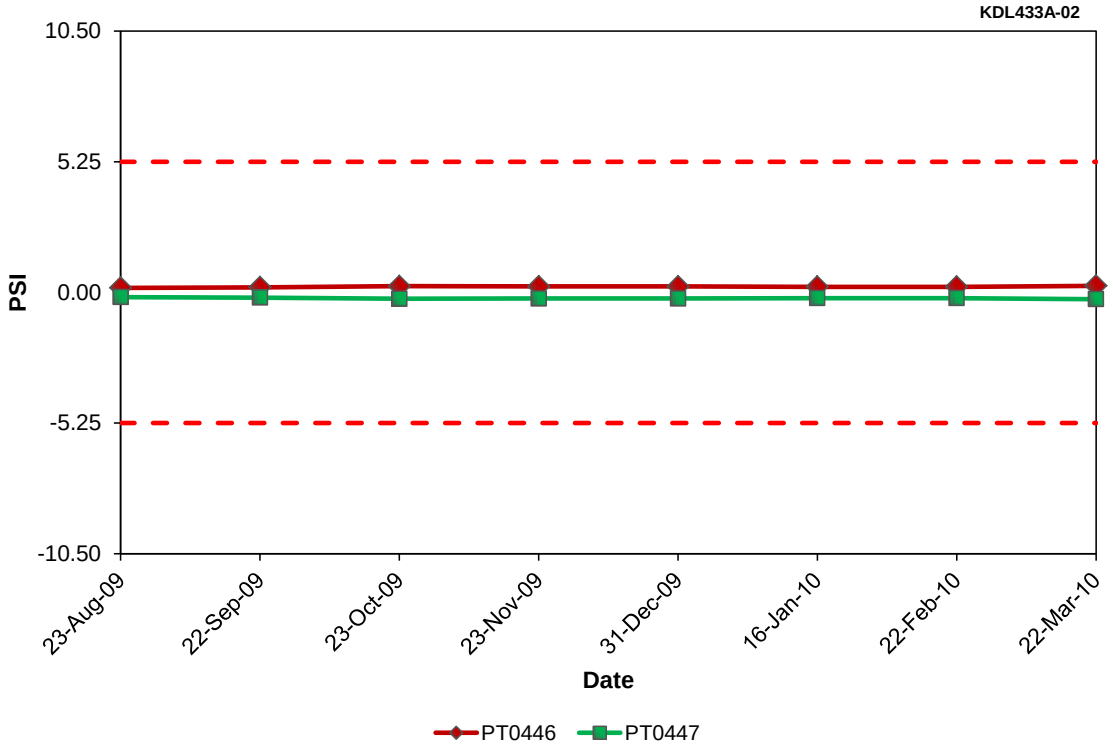



**Figure D.86 TBIN FIRST STAGE PRESSURE Steady-State Drift at Farley Unit 2 (Cycle 20)**

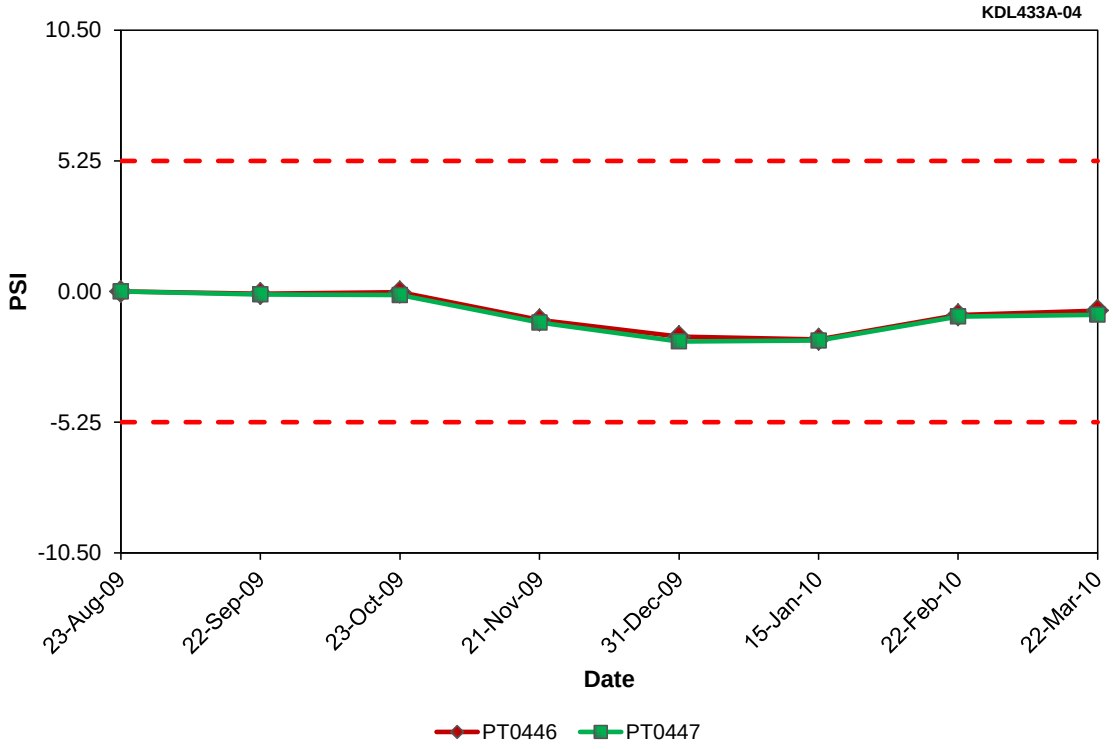



**Figure D.87 TBIN FIRST STAGE PRESSURE Steady-State Residual AAKR at Farley Unit 2 (Cycle 20)**

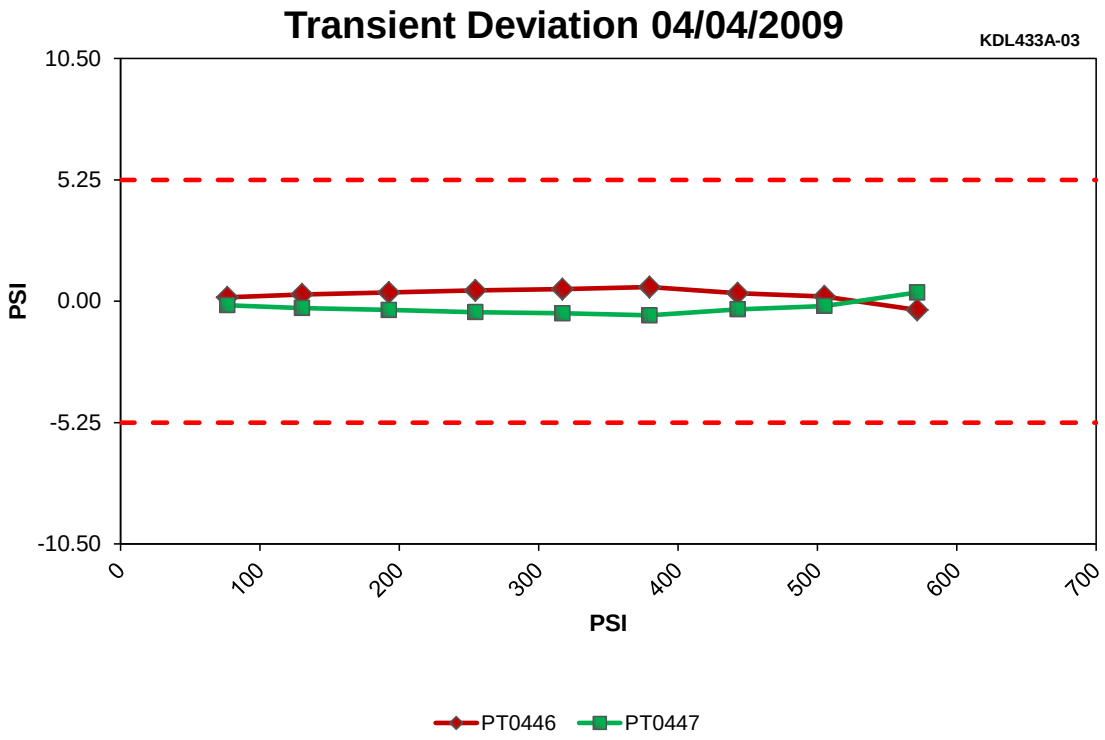



**Figure D.88 TBIN FIRST STAGE PRESSURE Transient Deviation at Farley Unit 2 (Cycle 20)**

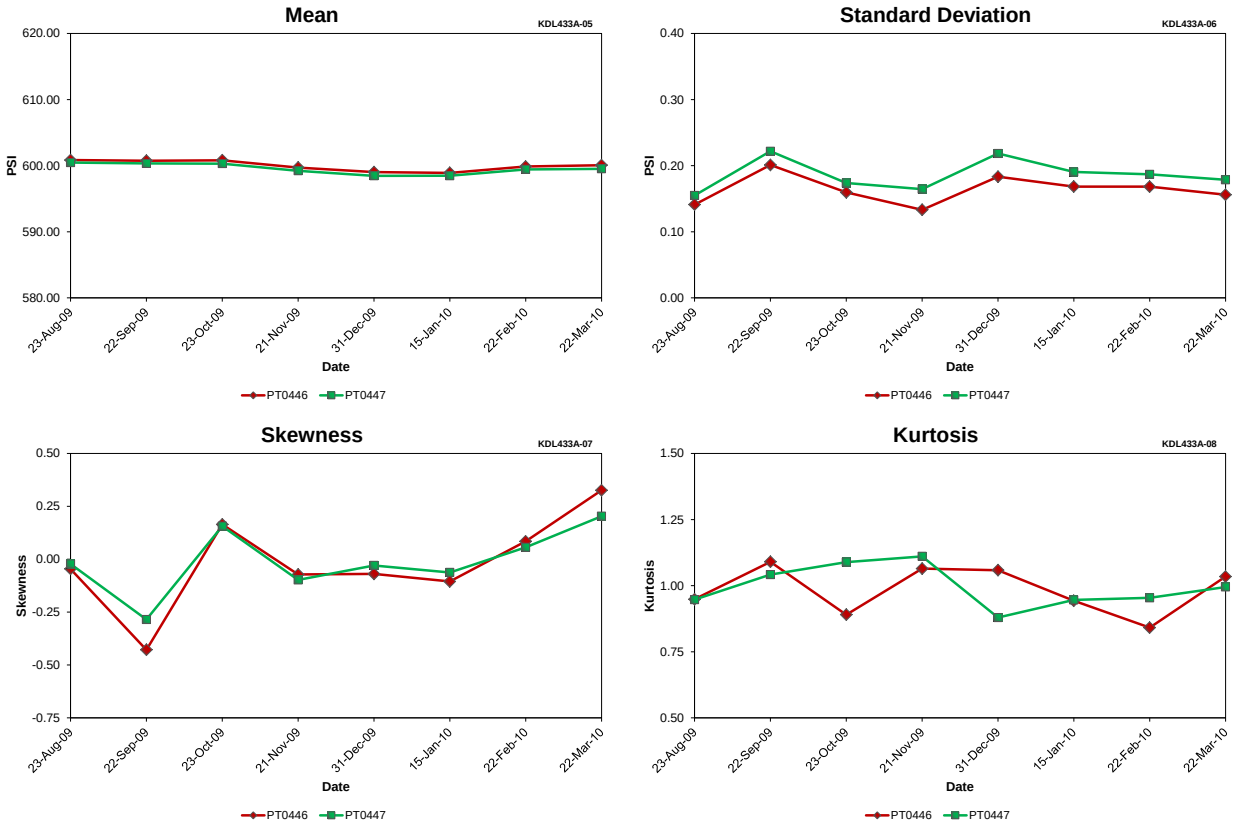



**Figure D.89 TBIN FIRST STAGE PRESSURE Data Quality Statistics at Farley Unit 2 (Cycle 20)**

**Table D.19 TBIN FIRST STAGE PRESSURE Data Quality for Farley Unit 2 (Cycle 20)**

| | Tag Names | |
|---|---|---|
| **Result Type** | **PT0446** | **PT0447** |
| Mean | 600.00 | 599.53 |
| Std. Dev. | 0.16 | 0.19 |
| Skewness | -0.02 | -0.01 |
| Kurtosis | 0.98 | 1.00 |

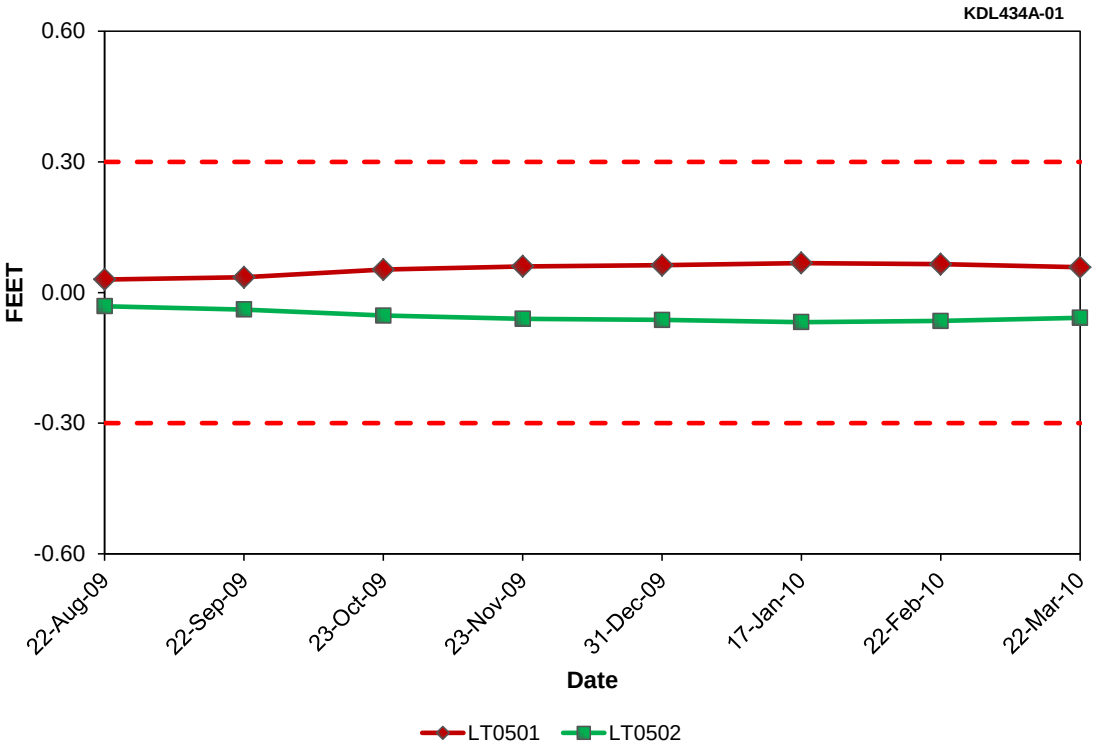



**Figure D.90 RWST LVL Steady-State Deviation at Farley Unit 2 (Cycle 20)**

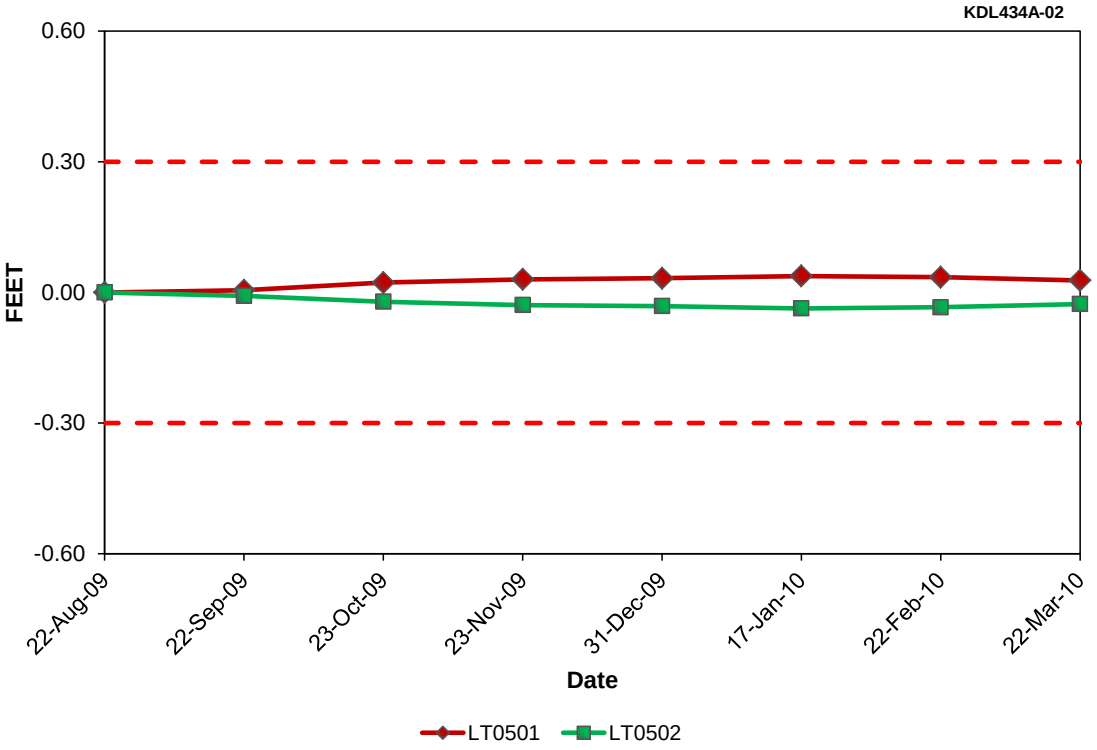



**Figure D.91 RWST LVL Steady-State Drift at Farley Unit 2 (Cycle 20)**

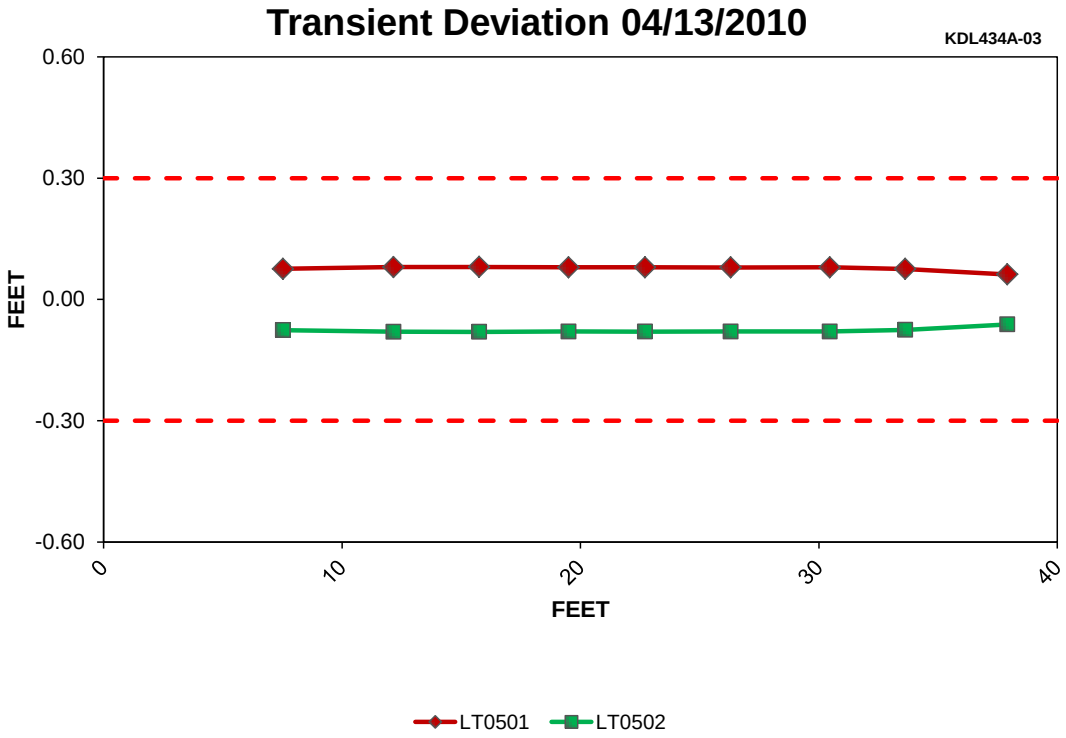



**Figure D.92 RWST LVL Transient Deviation at Farley Unit 2 (Cycle 20)**

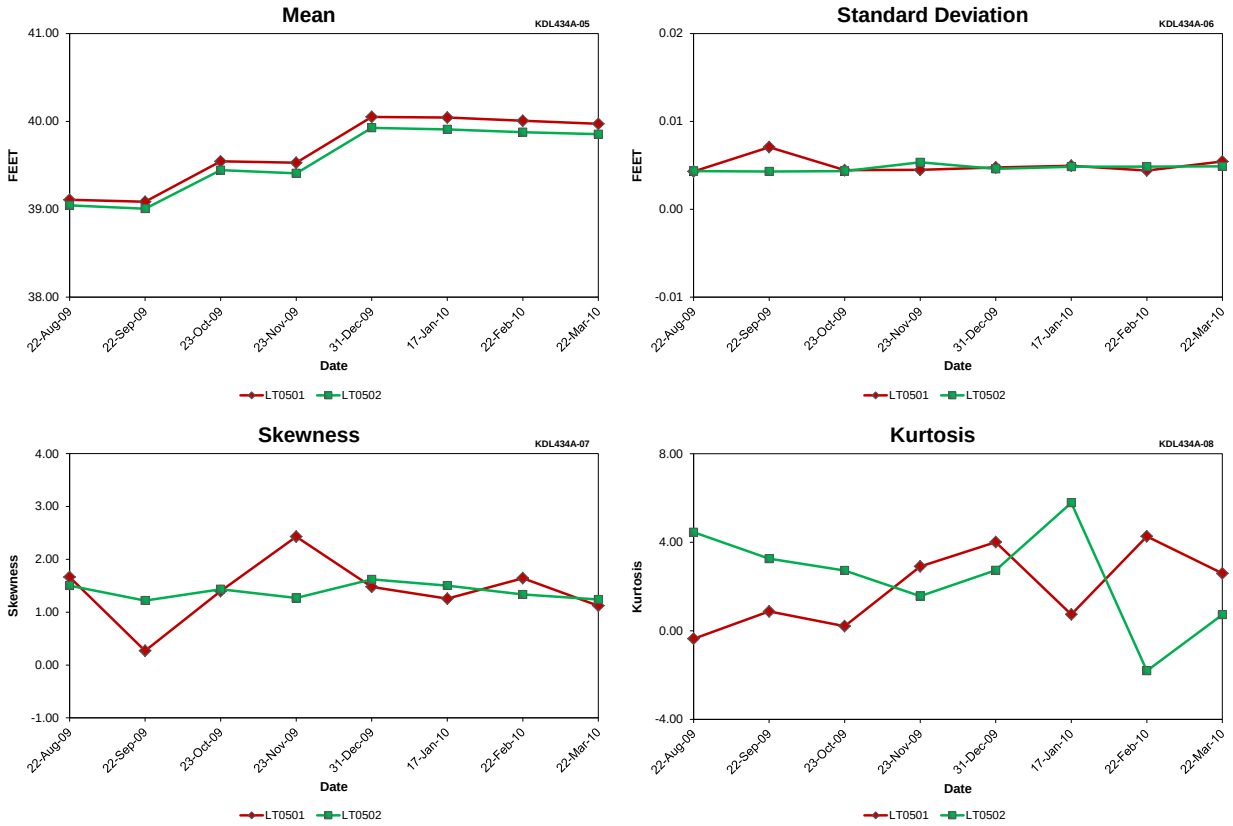



**Figure D.93 RWST LVL Data Quality Statistics at Farley Unit 2 (Cycle 20)**

**Table D.20 RWST LVL Data Quality for Farley Unit 2 (Cycle 20)**

| Result Type | Tag Names | |
|---|---|---|
| | LT0501 | LT0502 |
| Mean | 39.67 | 39.56 |
| Std. Dev. | 0.00 | 0.00 |
| Skewness | 1.41 | 1.39 |
| Kurtosis | 1.91 | 2.43 |

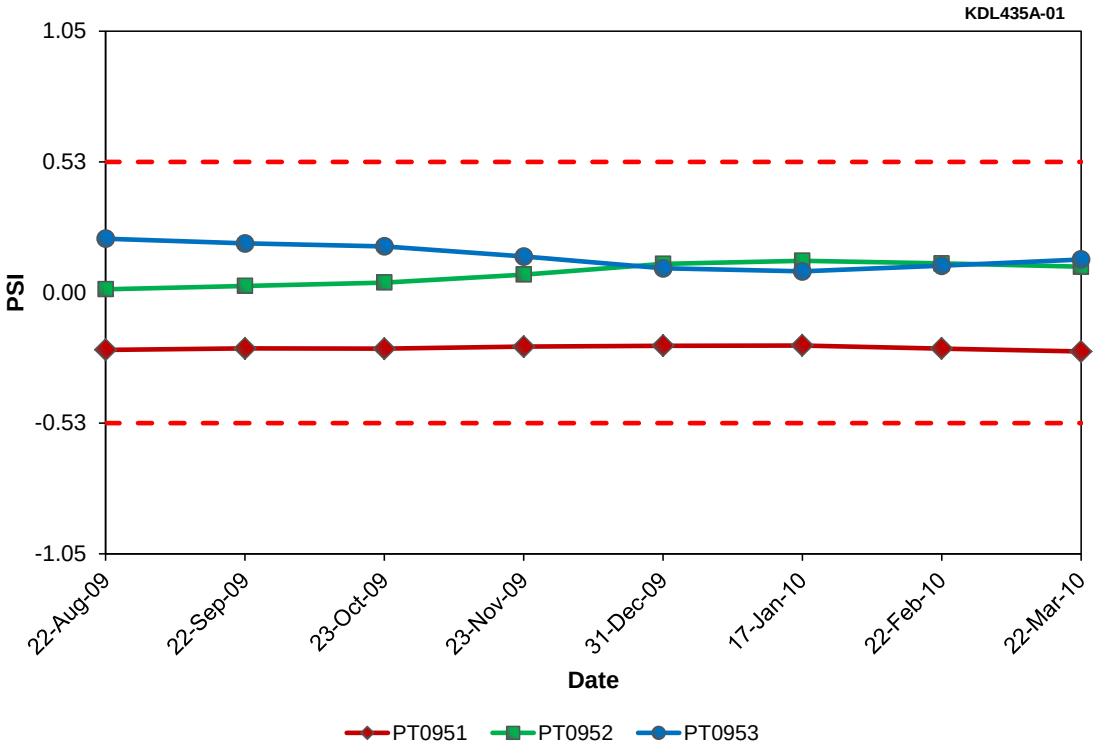



**Figure D.94 CTMT PSR Steady-State Deviation at Farley Unit 2 (Cycle 20)**

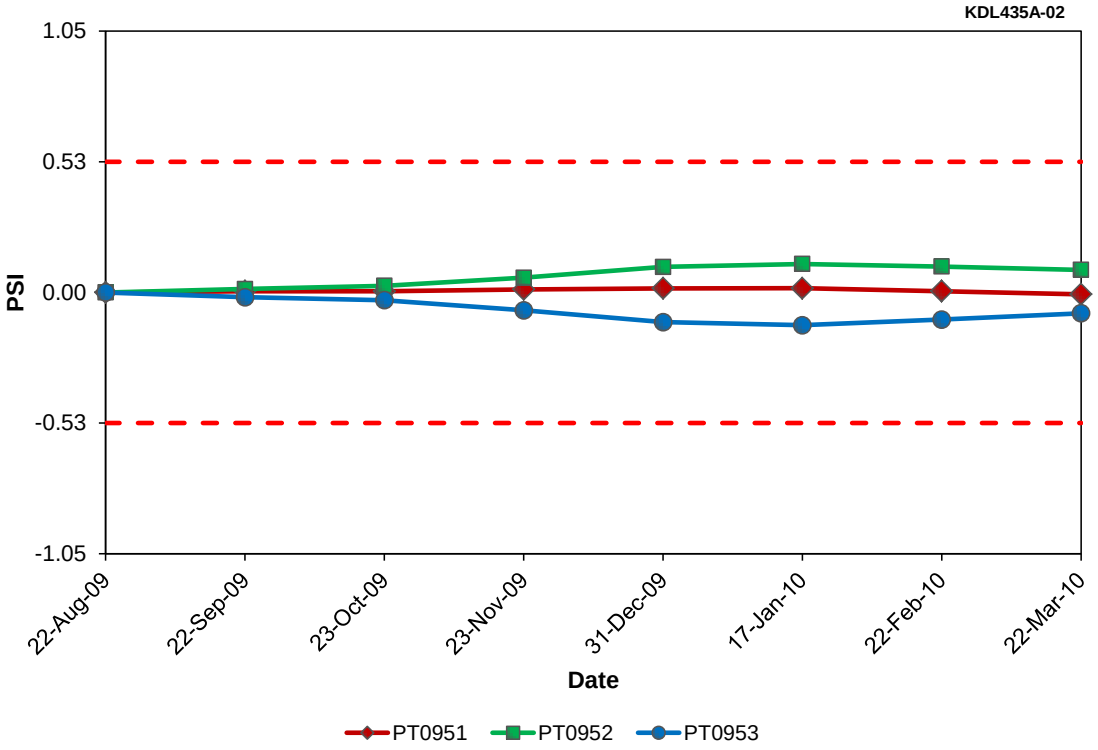



**Figure D.95 CTMT PSR Steady-State Drift at Farley Unit 2 (Cycle 20)**

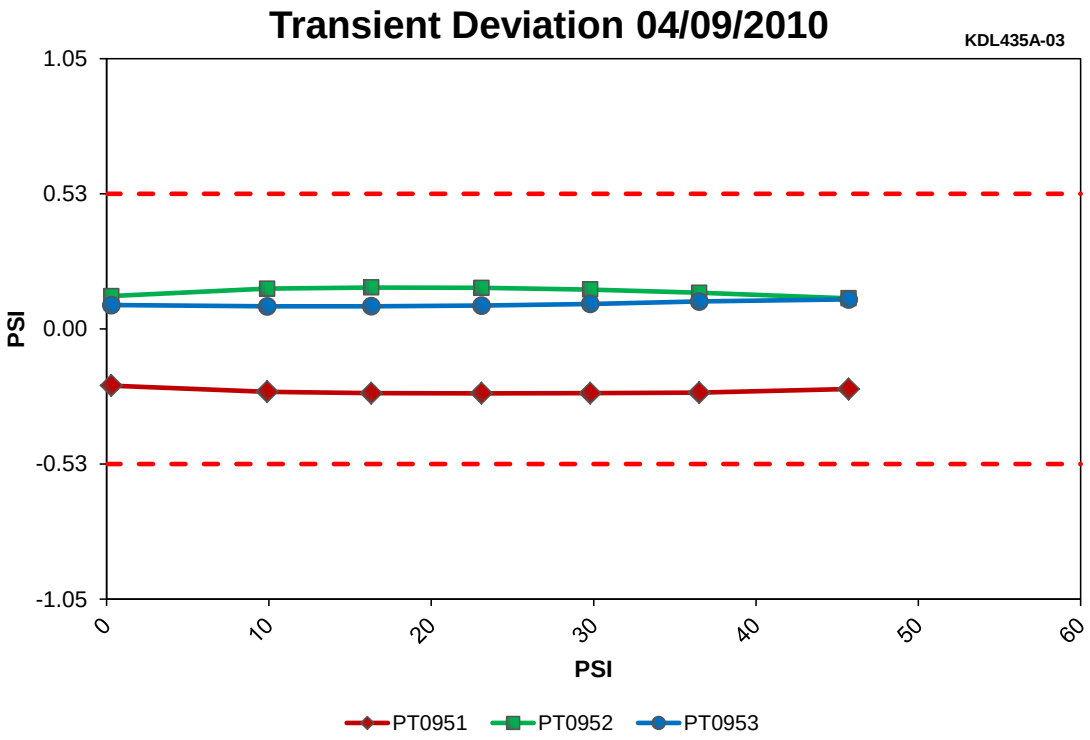



**Figure D.96 CTMT PSR Transient Deviation at Farley Unit 2 (Cycle 20)**

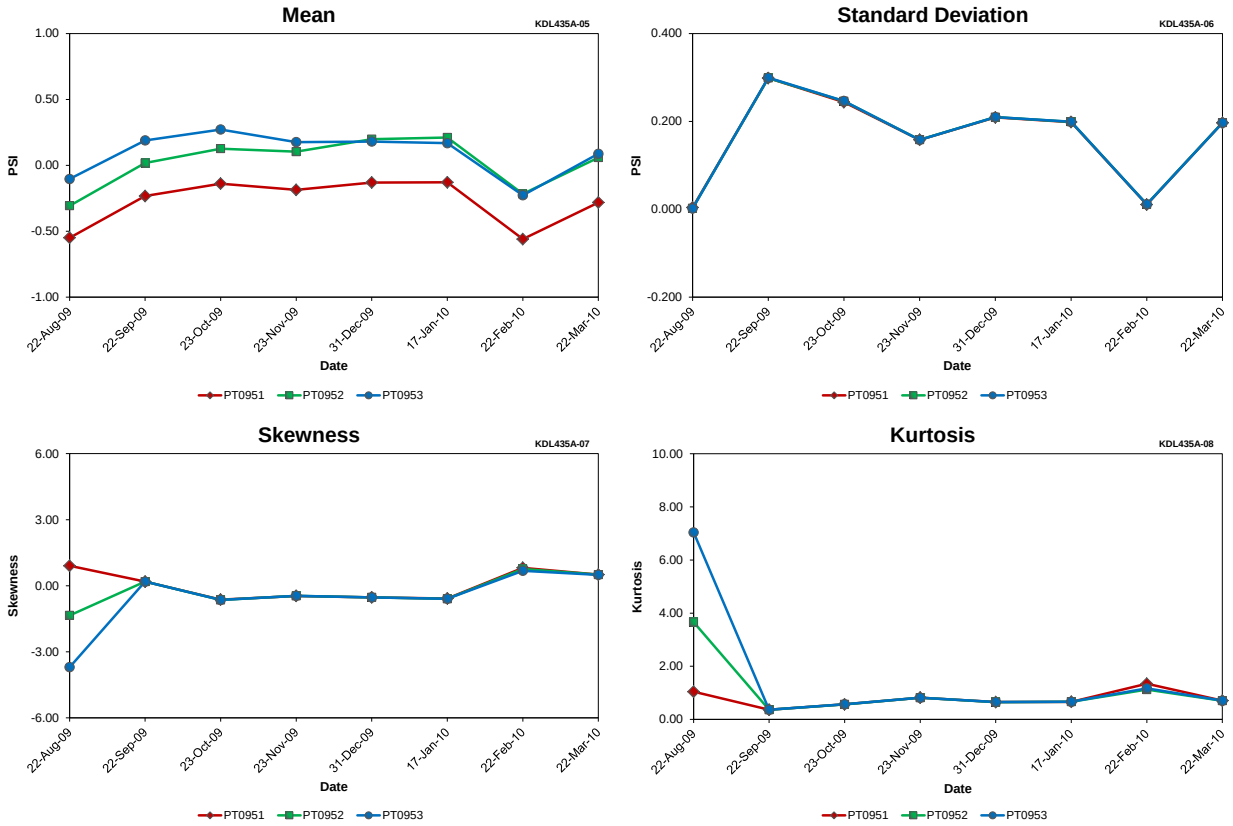



**Figure D.97 CTMT PSR Data Quality Statistics at Farley Unit 2 (Cycle 20)**

**Table D.21 CTMT PSR Data Quality for Farley Unit 2 (Cycle 20)**

| | Tag Names | | |
|---|---|---|---|
| **Result Type** | **PT0951** | **PT0952** | **PT0953** |
| Mean | -0.28 | 0.02 | 0.09 |
| Std. Dev. | 0.16 | 0.17 | 0.17 |
| Skewness | 0.03 | -0.26 | -0.57 |
| Kurtosis | 0.77 | 1.07 | 1.50 |

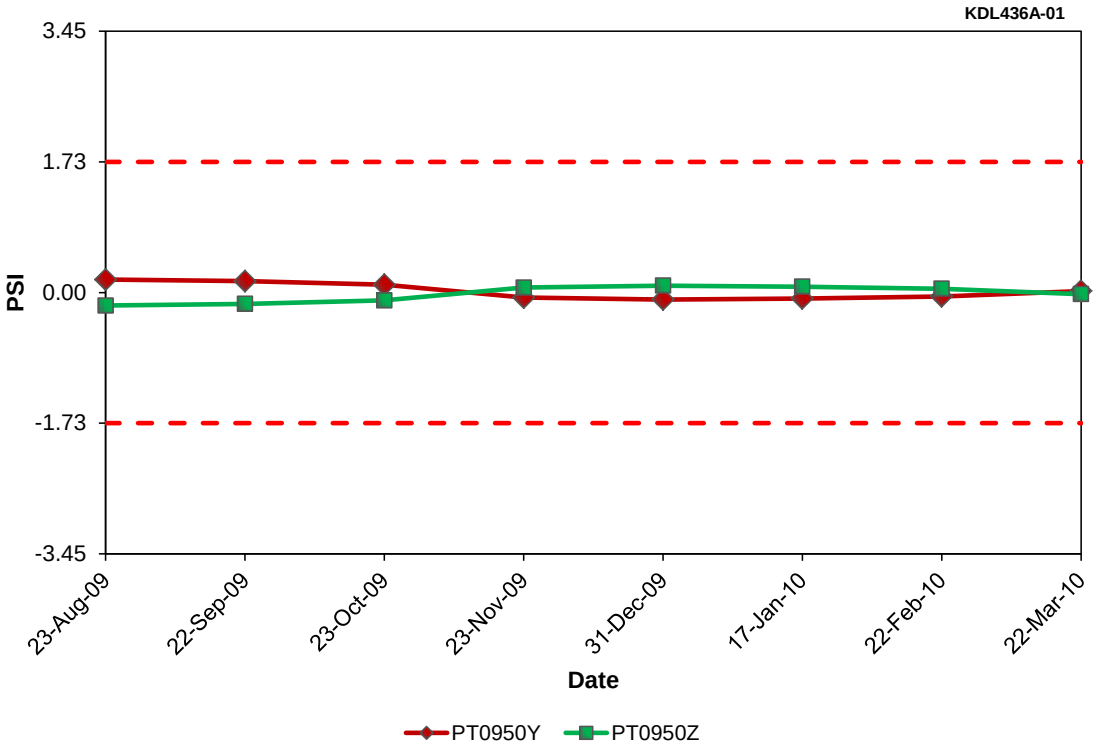



**Figure D.98 CTMT PSR EXT RANGE Steady-State Deviation at Farley Unit 2 (Cycle 20)**

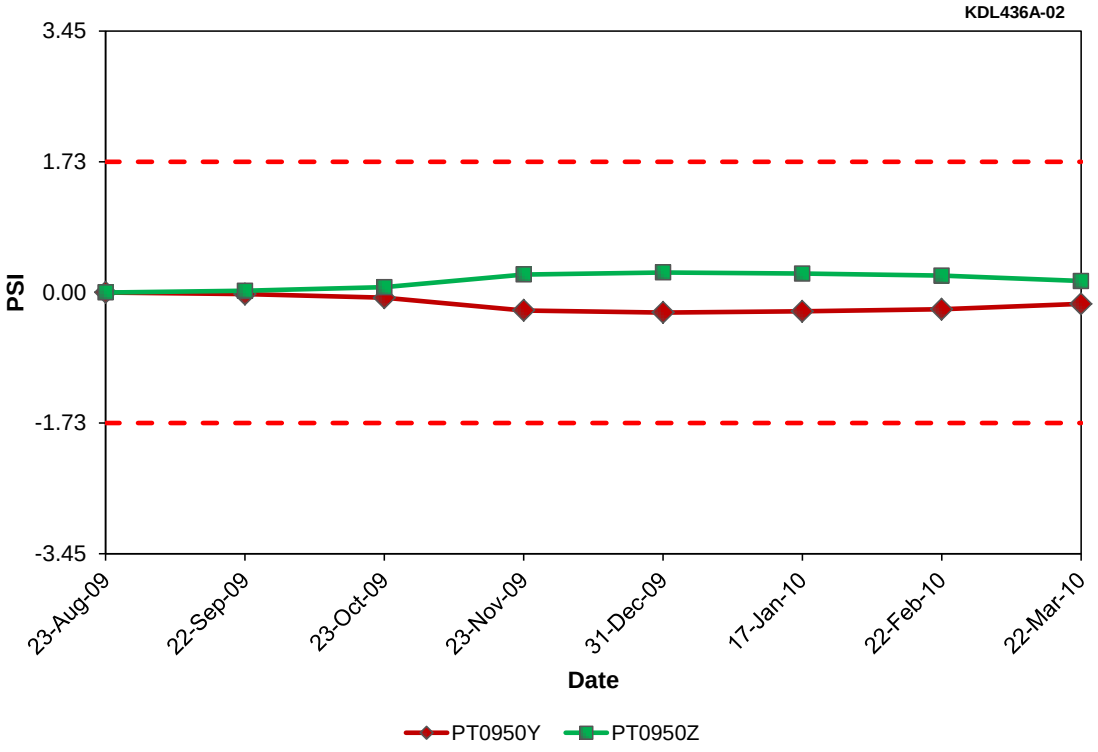



**Figure D.99 CTMT PSR EXT RANGE Steady-State Drift at Farley Unit 2 (Cycle 20)**

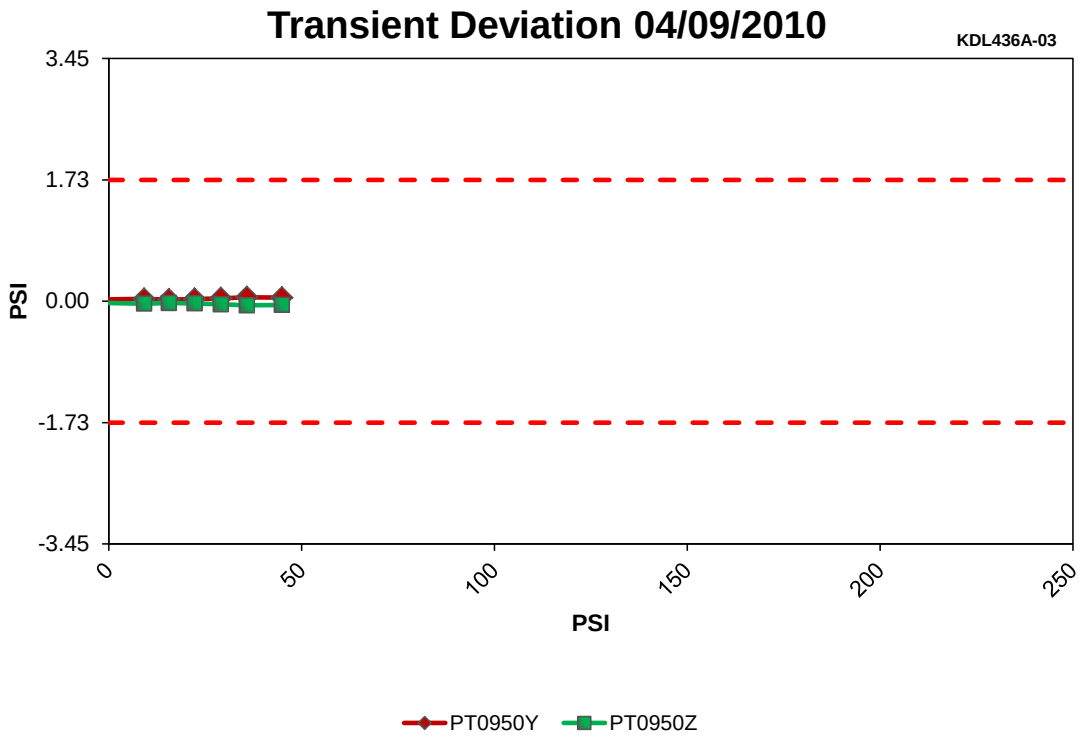



**Figure D.100 CTMT PSR EXT RANGE Transient Deviation at Farley Unit 2 (Cycle 20)**

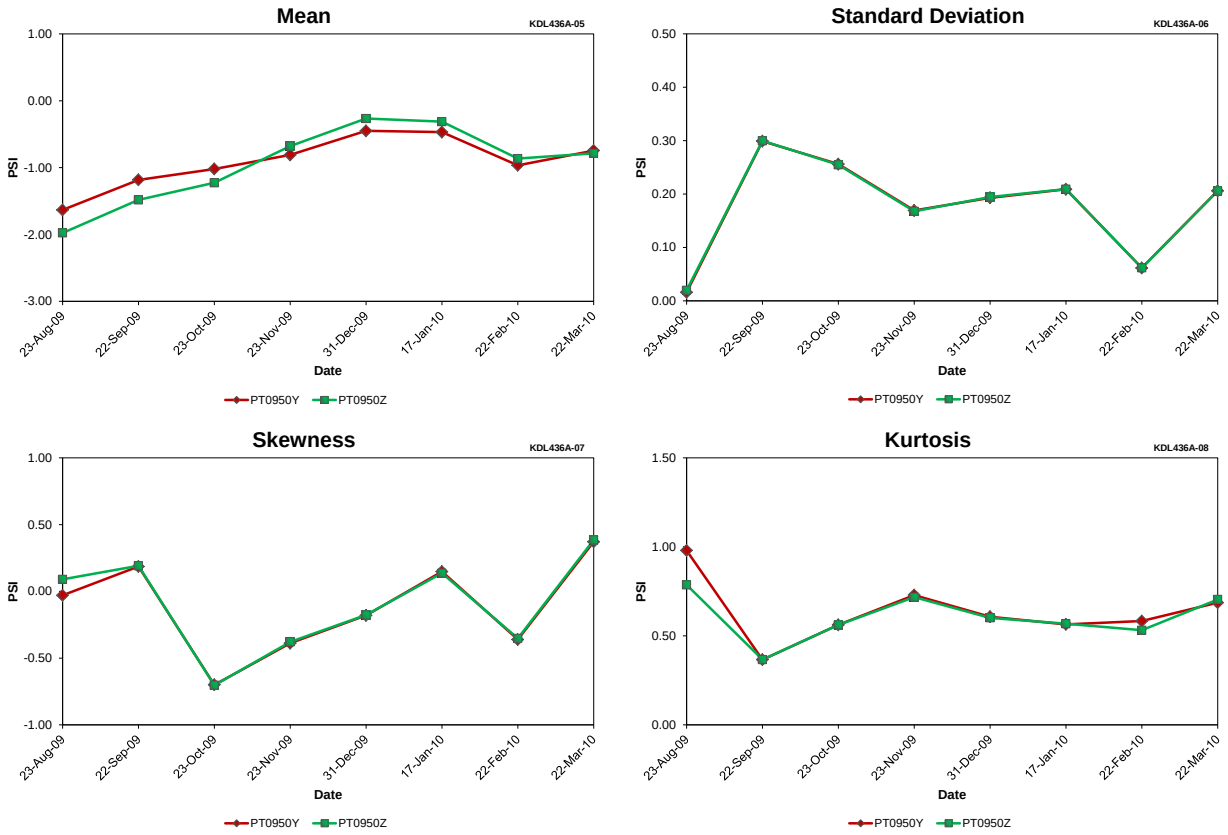



**Figure D.101 CTMT PSR EXT RANGE Data Quality Statistics at Farley Unit 2 (Cycle 20)**

**Table D.22 CTMT PSR EXT RANGE Data Quality for Farley Unit 2 (Cycle 20)**

| Result Type | Tag Names | |
|---|---|---|
| | PT0950Y | PT0950Z |
| Mean | -0.91 | -0.95 |
| Std. Dev. | 0.18 | 0.18 |
| Skewness | -0.12 | -0.10 |
| Kurtosis | 0.63 | 0.60 |

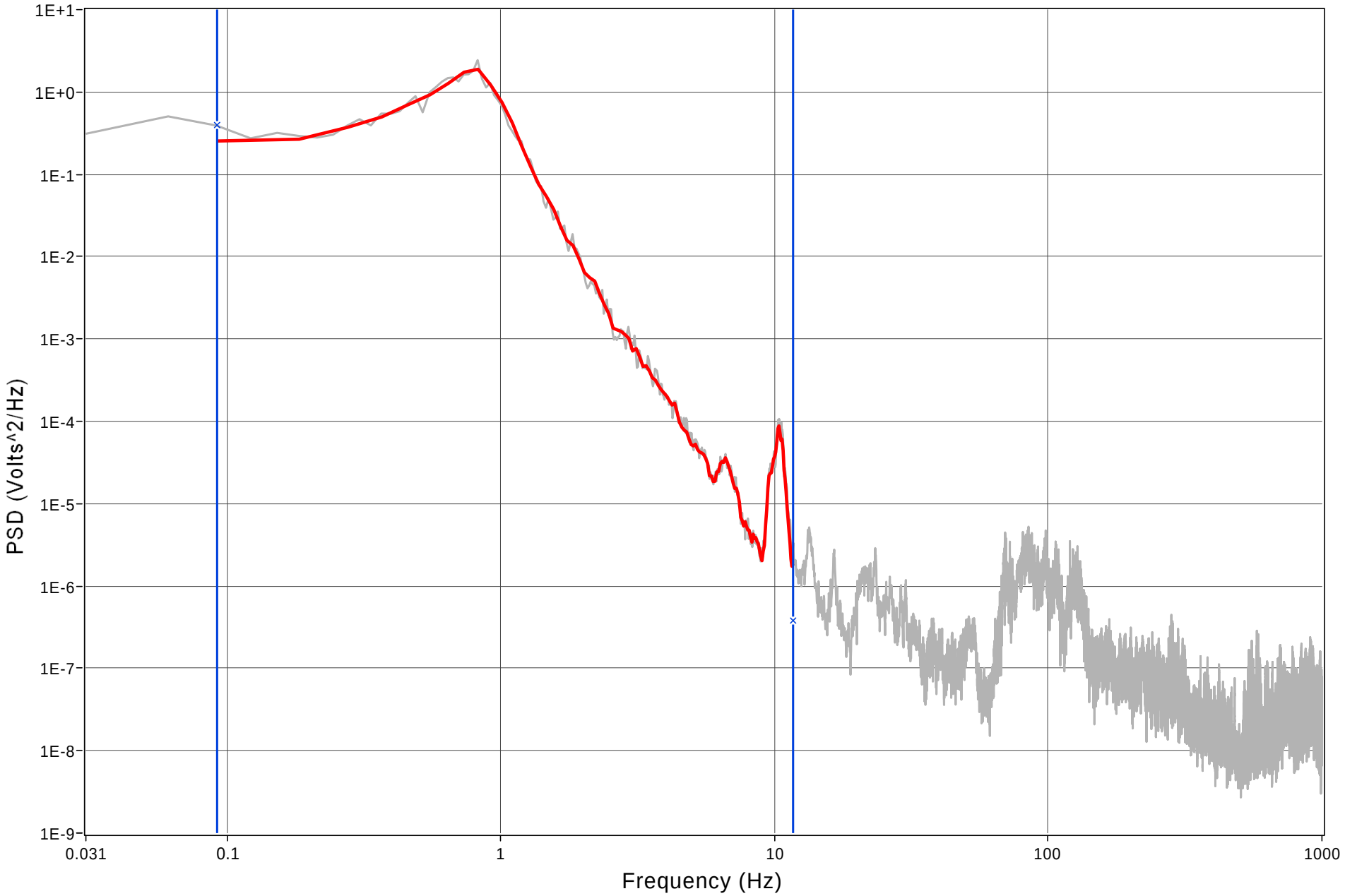
Table D.23 OLM-NA Results

| Item | Tag Name | Service | Filename | WB PSD Range (Hz) | Decimator | Trim Block Size | Trim Low Freq. | Trim High Freq. | AR Method | AR Order |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 | FT0476 | FW FLOW | FU2_2010-03_0007 | 0.0305 : 1000 | 364 | 512 | 0.0107 | 2.7472 | Least-Squares | 11 |
| 2 | FT0477 | FW FLOW | FU2_2010-03_0008 | 0.0305 : 1000 | 364 | 512 | 0.0107 | 2.7472 | Least-Squares | 17 |
| 3 | FT0486 | FW FLOW | FU2_2010-03_0007 | 0.0305 : 1000 | 364 | 512 | 0.0107 | 2.7472 | Least-Squares | 20 |
| 4 | FT0487 | FW FLOW | FU2_2010-03_0008 | 0.0305 : 1000 | 364 | 512 | 0.0107 | 2.7472 | Least-Squares | 21 |
| 5 | FT0496 | FW FLOW | FU2_2010-03_0007 | 0.0305 : 1000 | 364 | 512 | 0.0107 | 2.7474 | Least-Squares | 20 |
| 6 | FT0497 | FW FLOW | FU2_2010-03_0008 | 0.0305 : 1000 | 364 | 512 | 0.0107 | 2.7472 | Least-Squares | 20 |
| | | | | | | | | | | |
| 7 | LT0474 | SG LEVEL | FU2_2010-03_0005 | 0.0305 : 1000 | 85 | 256 | 0.0919 | 11.7643 | Forward-Backward | 11 |
| 8 | LT0475 | SG LEVEL | FU2_2010-03_0006 | 0.0305 : 1000 | 81 | 256 | 0.0964 | 12.3453 | Forward-Backward | 11 |
| 9 | LT0476 | SG LEVEL | FU2_2010-03_0008 | 0.0305 : 1000 | 81 | 256 | 0.0964 | 12.3453 | Forward-Backward | 11 |
| 10 | LT0484 | SG LEVEL | FU2_2010-03_0005 | 0.0305 : 1000 | 80 | 128 | 0.1953 | 12.4996 | Forward-Backward | 11 |
| 11 | LT0485 | SG LEVEL | FU2_2010-03_0006 | 0.0305 : 1000 | 80 | 256 | 0.0977 | 12.4996 | Forward-Backward | 11 |
| 12 | LT0486 | SG LEVEL | FU2_2010-03_0008 | 0.0305 : 1000 | 85 | 128 | 0.1838 | 11.7643 | Forward-Backward | 11 |
| 13 | LT0494 | SG LEVEL | FU2_2010-03_0005 | 0.0305 : 1000 | 83 | 256 | 0.0941 | 12.0478 | Forward-Backward | 11 |
| 14 | LT0495 | SG LEVEL | FU2_2010-03_0006 | 0.0305 : 1000 | 78 | 256 | 0.1002 | 12.8201 | Forward-Backward | 11 |
| 15 | LT0496 | SG LEVEL | FU2_2010-03_0008 | 0.0305 : 1000 | 83 | 256 | 0.0941 | 12.0478 | Forward-Backward | 11 |
| | | | | | | | | | | |
| 16 | FT0474 | STM FLOW | FU2_2010-03_0008 | 0.0305 : 1000 | 29 | 128 | 0.5388 | 34.4817 | Least-Squares | 20 |
| 17 | FT0475 | STM FLOW | FU2_2010-03_0007 | 0.0305 : 1000 | 29 | 128 | 0.5388 | 34.4817 | Least-Squares | 18 |
| 18 | FT0484 | STM FLOW | FU2_2010-03_0008 | 0.0305 : 1000 | 29 | 128 | 0.5388 | 34.4817 | Least-Squares | 18 |
| 19 | FT0485 | STM FLOW | FU2_2010-03_0007 | 0.0305 : 1000 | 29 | 128 | 0.5388 | 34.4817 | Least-Squares | 18 |
| 20 | FT0494 | STM FLOW | FU2_2010-03_0008 | 0.0305 : 1000 | 29 | 128 | 0.5388 | 34.4817 | Least-Squares | 19 |
| 21 | FT0495 | STM FLOW | FU2_2010-03_0007 | 0.0305 : 1000 | 29 | 128 | 0.5388 | 34.4817 | Least-Squares | 18 |

# OLM Narrow Band PSD Window Fitting

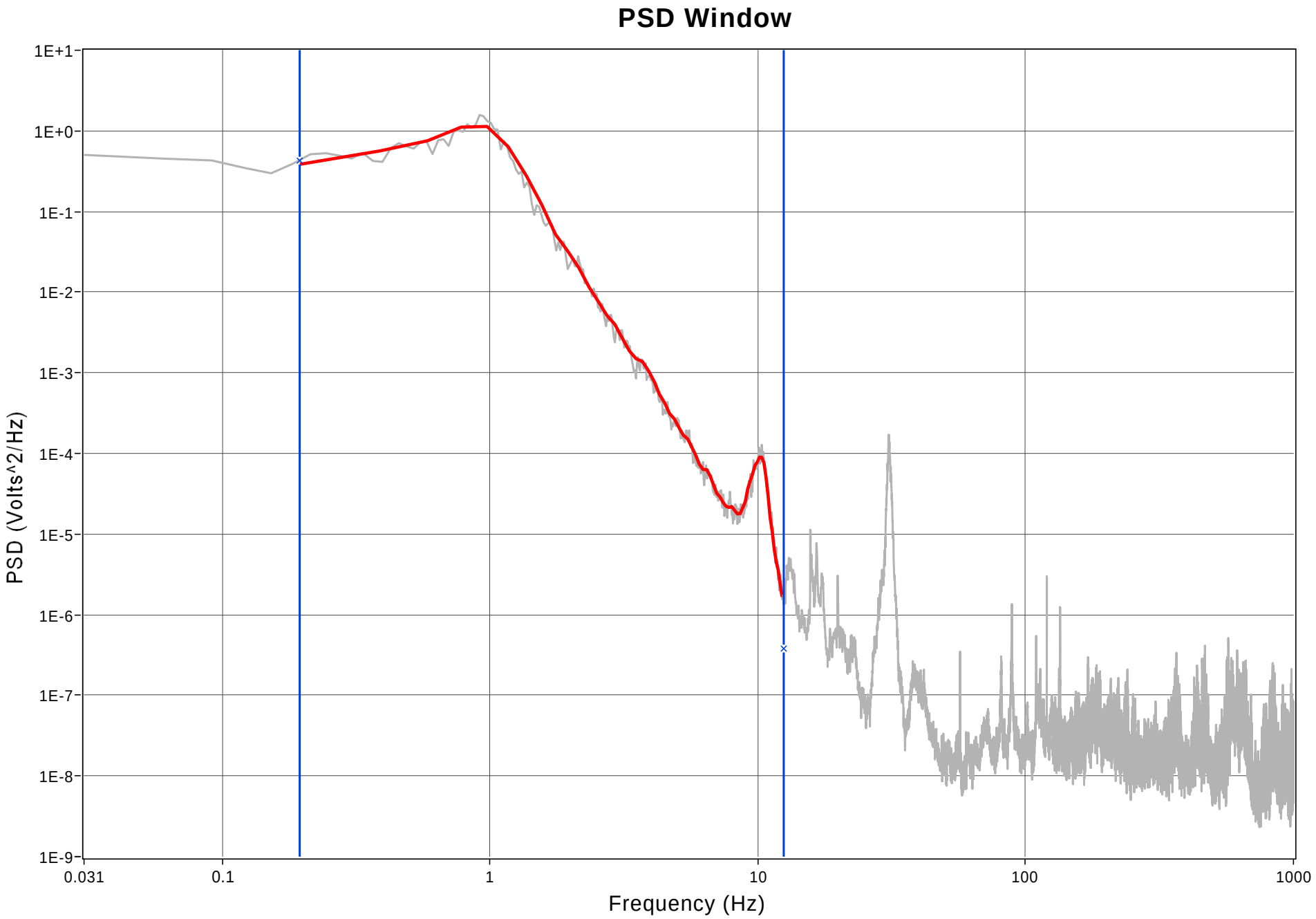
| Reactor and Unit | Tag Number | Service | Filename | Blocks : Blocksize | Trim Low Freq. (Hz) | Trim High Freq. (Hz) | Fitting Type | Test Date |
|---|---|---|---|---|---|---|---|---|
| Farley Unit 2 | LT0474 | SG LVL | FU2_2010-03_0005.psd | 0 : 256 | 0.091909 | 11.764348 | Baseline | 04-Mar-2010 14:24:12 |

## PSD Window



# OLM Narrow Band PSD Window Fitting

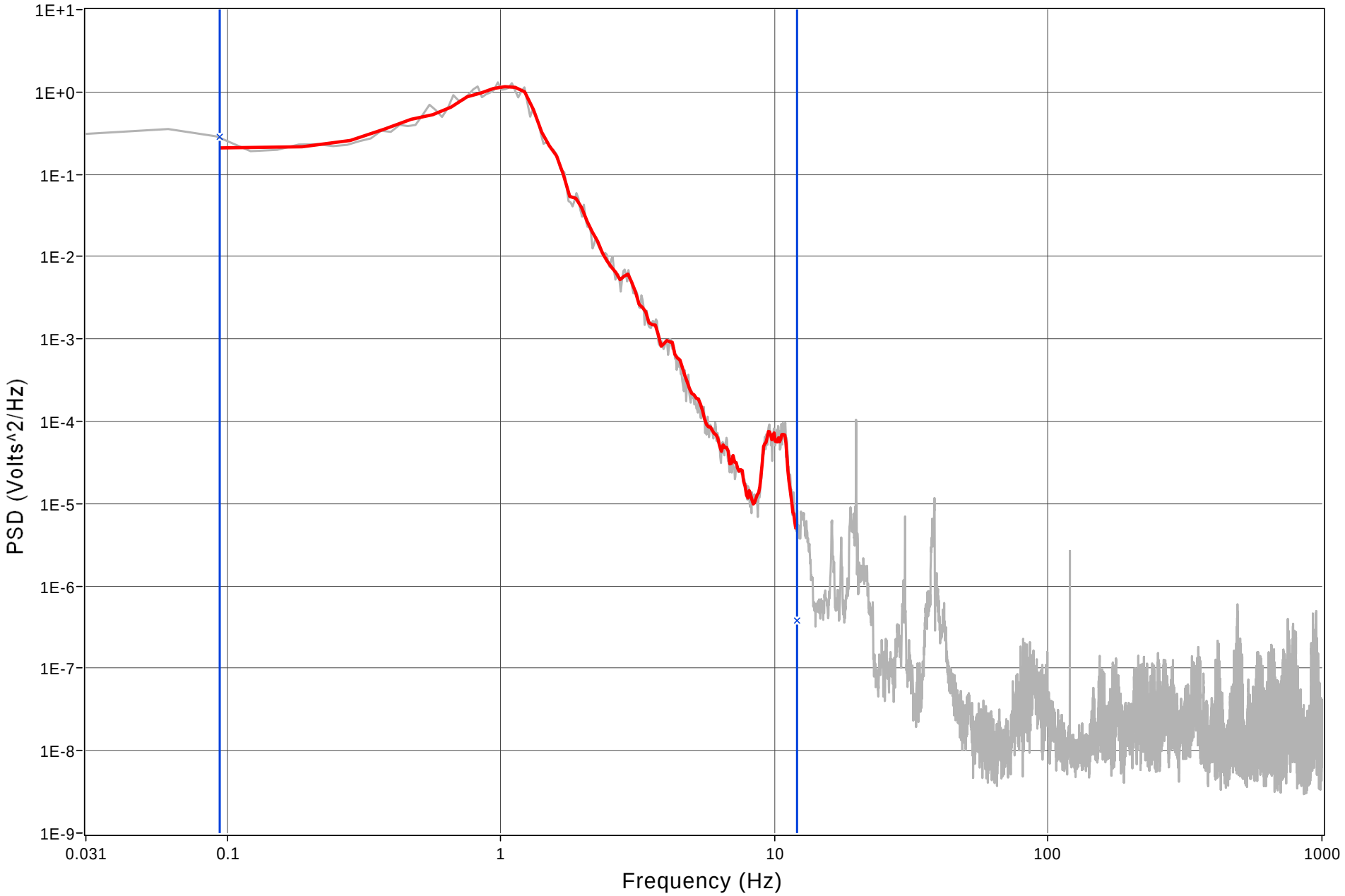
| Reactor and Unit | Tag Number | Service | Filename | Blocks : Blocksize | Trim Low Freq. (Hz) | Trim High Freq. (Hz) | Fitting Type | Test Date |
|---|---|---|---|---|---|---|---|---|
| Farley Unit 2 | LT0484 | SG LVL | FU2_2010-03_0005.psd | 0 : 128 | 0.195307 | 12.499619 | Baseline | 04-Mar-2010 14:24:12 |



# OLM Narrow Band PSD Window Fitting

| Reactor and Unit | Tag Number | Service | Filename | Blocks : Blocksize | Trim Low Freq. (Hz) | Trim High Freq. (Hz) | Fitting Type | Test Date |
|---|---|---|---|---|---|---|---|---|
| Farley Unit 2 | LT0494 | SG LVL | FU2_2010-03_0005.psd | 0 : 256 | 0.094124 | 12.047826 | Baseline | 04-Mar-2010 14:24:12 |

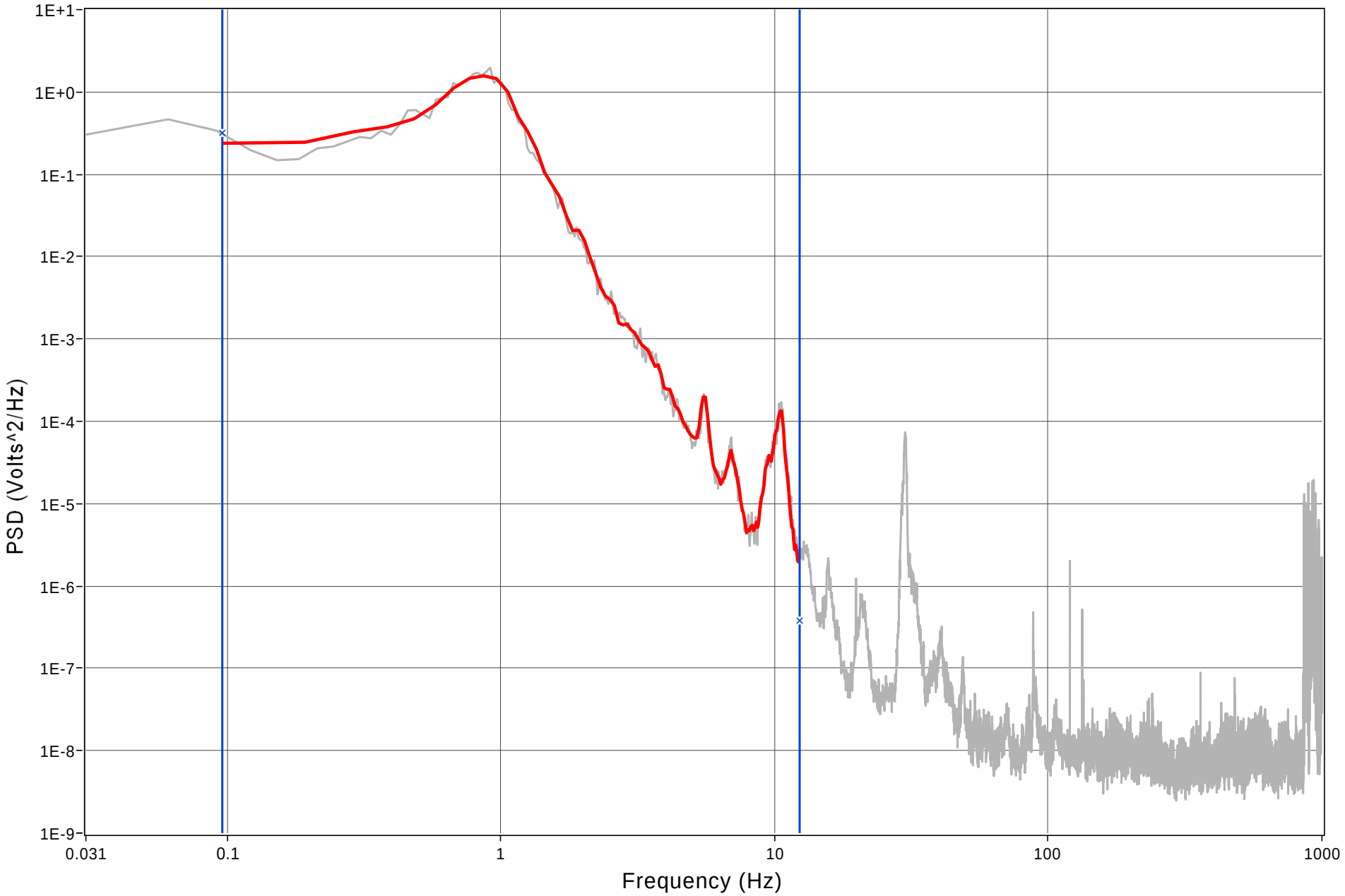
## PSD Window



# OLM Narrow Band PSD Window Fitting

| Reactor and Unit | Tag Number | Service | Filename | Blocks : Blocksize | Trim Low Freq. (Hz) | Trim High Freq. (Hz) | Fitting Type | Test Date |
|---|---|---|---|---|---|---|---|---|
| Farley Unit 2 | LT0475 | SG LVL | FU2_2010-03_0006.psd | 0 : 256 | 0.096448 | 12.345303 | Baseline | 04-Mar-2010 14:24:12 |

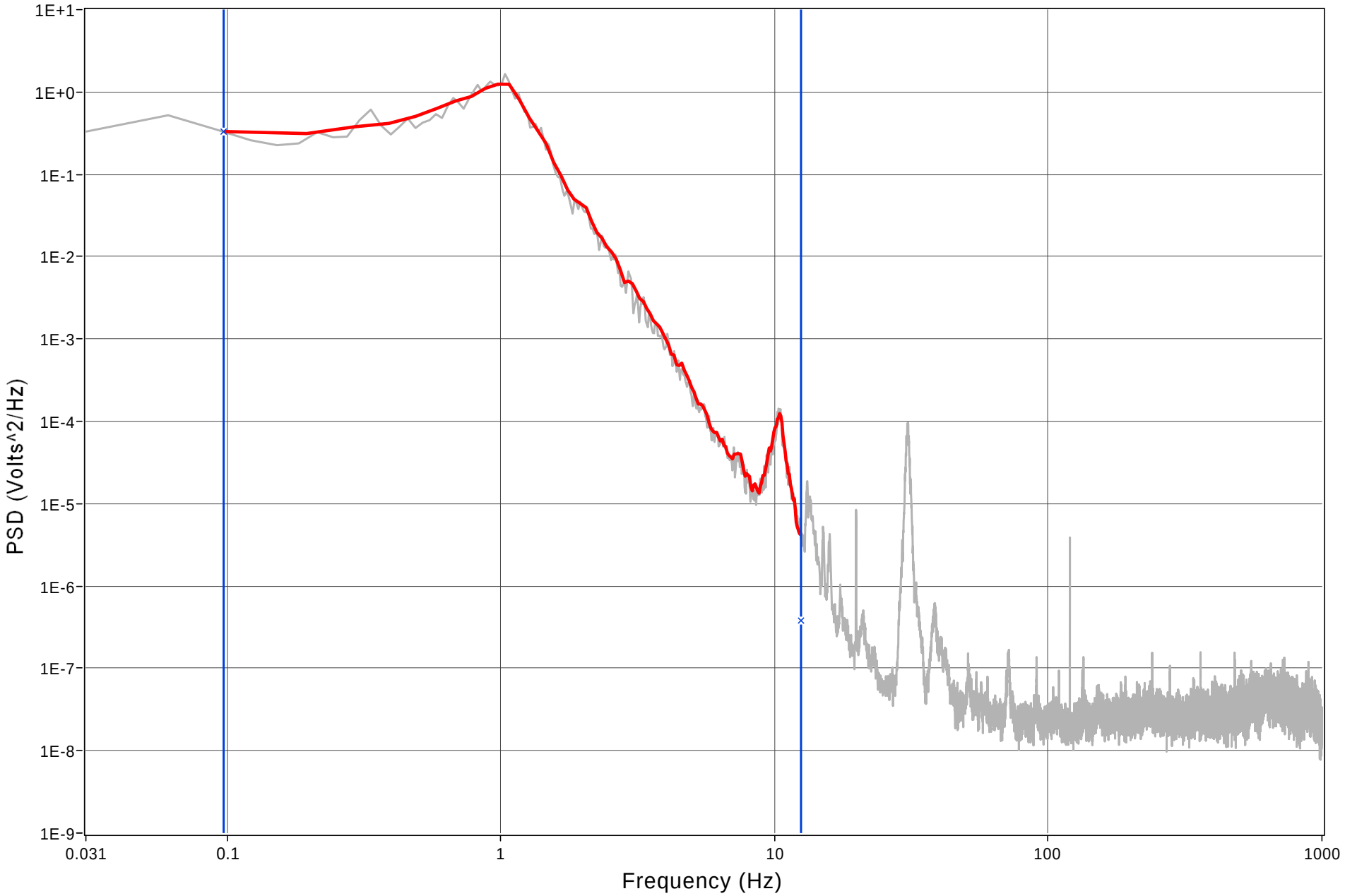
## PSD Window



# OLM Narrow Band PSD Window Fitting

| Reactor and Unit | Tag Number | Service | Filename | Blocks : Blocksize | Trim Low Freq. (Hz) | Trim High Freq. (Hz) | Fitting Type | Test Date |
|---|---|---|---|---|---|---|---|---|
| Farley Unit 2 | LT0485 | SG LVL | FU2_2010-03_0006.psd | 0 : 256 | 0.097653 | 12.499619 | Baseline | 04-Mar-2010 14:24:12 |

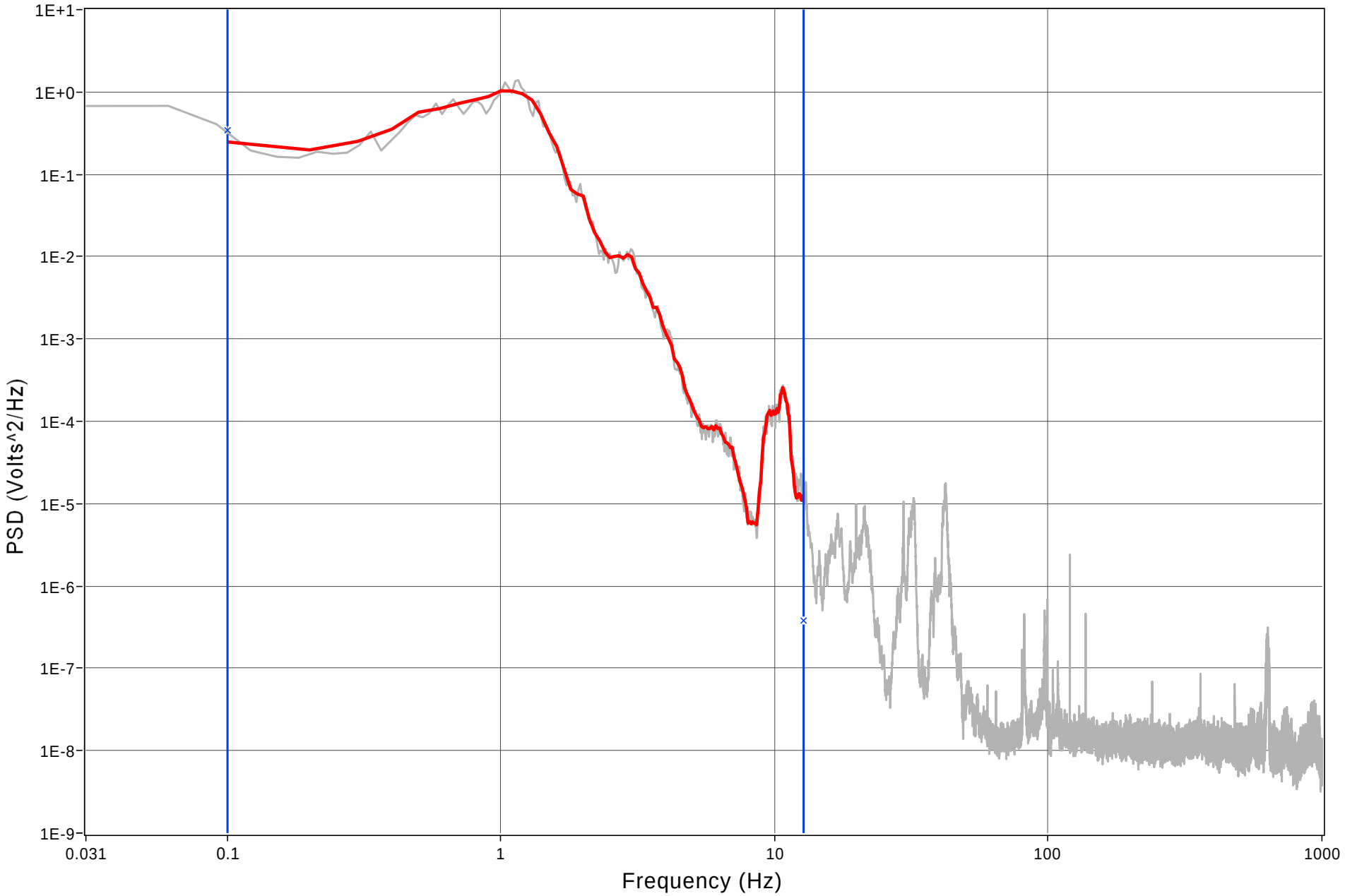
## PSD Window



# OLM Narrow Band PSD Window Fitting

| Reactor and Unit | Tag Number | Service | Filename | Blocks : Blocksize | Trim Low Freq. (Hz) | Trim High Freq. (Hz) | Fitting Type | Test Date |
|---|---|---|---|---|---|---|---|---|
| Farley Unit 2 | LT0495 | SG LVL | FU2_2010-03_0006.psd | 0 : 256 | 0.100157 | 12.820122 | Baseline | 04-Mar-2010 14:24:12 |

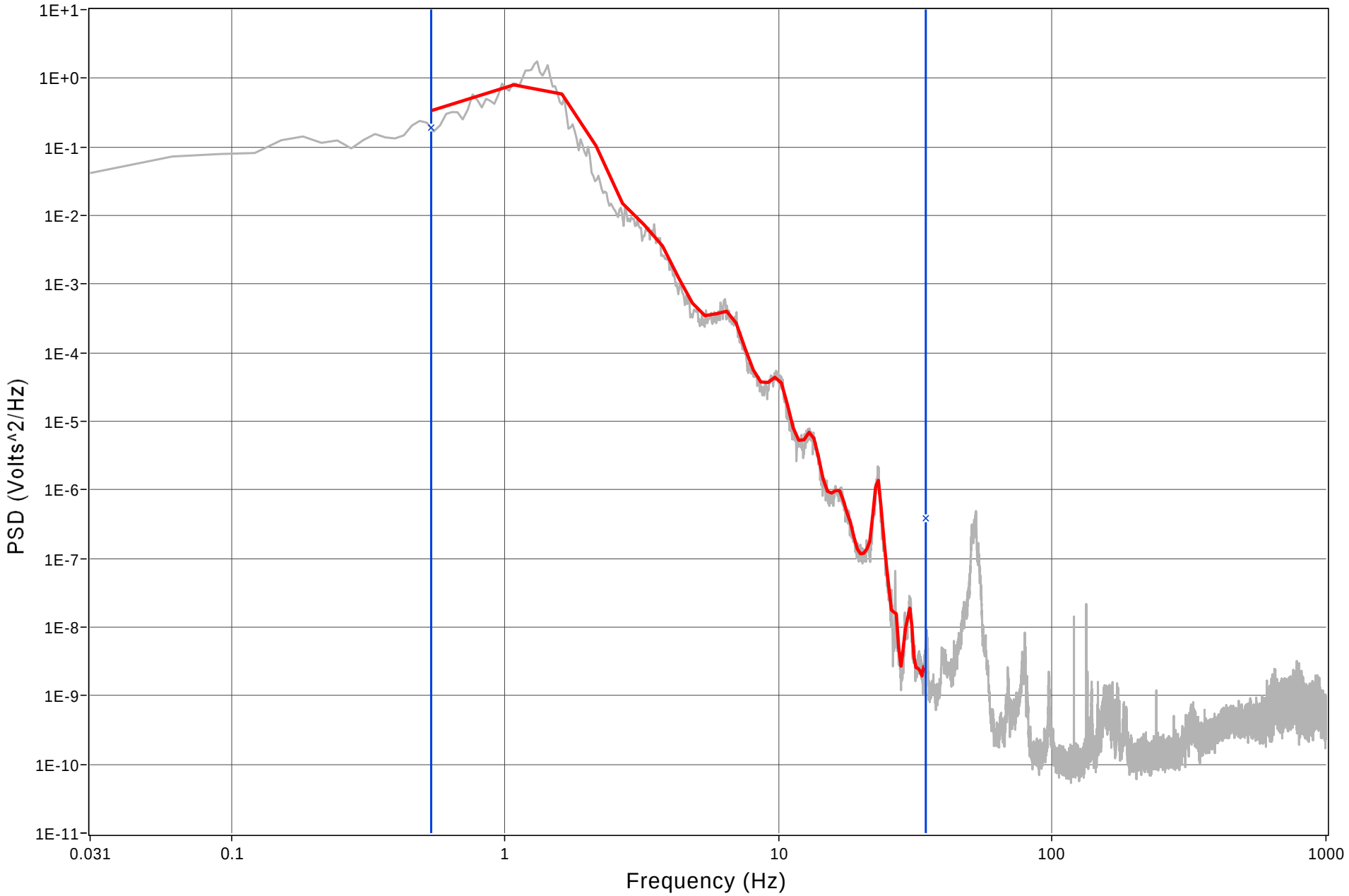
## PSD Window



# OLM Narrow Band PSD Window Fitting

| Reactor and Unit | Tag Number | Service | Filename | Blocks : Blocksize | Trim Low Freq. (Hz) | Trim High Freq. (Hz) | Fitting Type | Test Date |
|---|---|---|---|---|---|---|---|---|
| Farley Unit 2 | FT0475 | STM FLOW | FU2_2010-03_0007.psd | 0 : 128 | 0.538777 | 34.481708 | Baseline | 04-Mar-2010 14:24:12 |

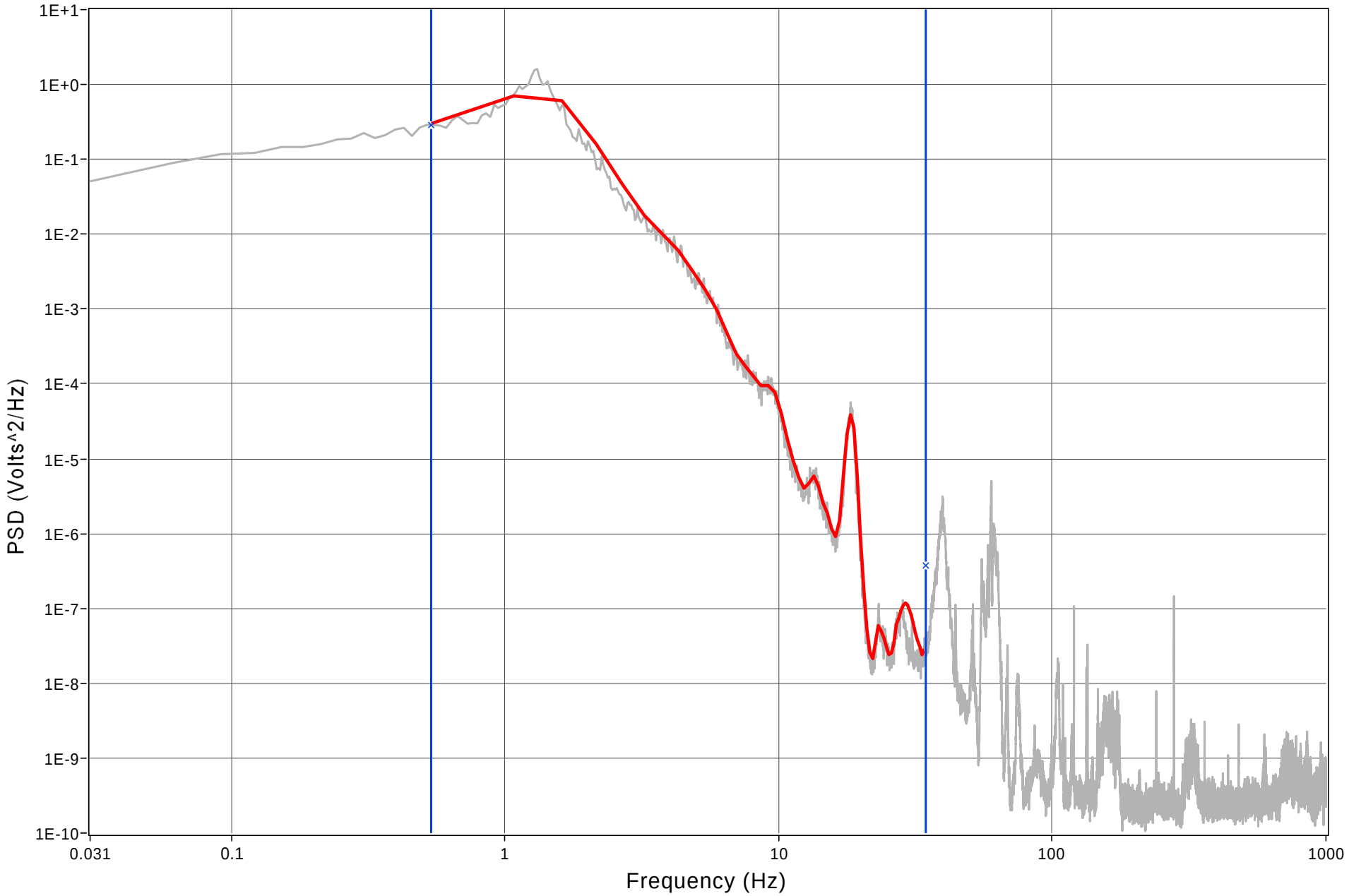
## PSD Window



# OLM Narrow Band PSD Window Fitting

| Reactor and Unit | Tag Number | Service | Filename | Blocks : Blocksize | Trim Low Freq. (Hz) | Trim High Freq. (Hz) | Fitting Type | Test Date |
|---|---|---|---|---|---|---|---|---|
| Farley Unit 2 | FT0485 | STM FLOW | FU2_2010-03_0007.psd | 0 : 128 | 0.538777 | 34.481708 | Baseline | 04-Mar-2010 14:24:12 |

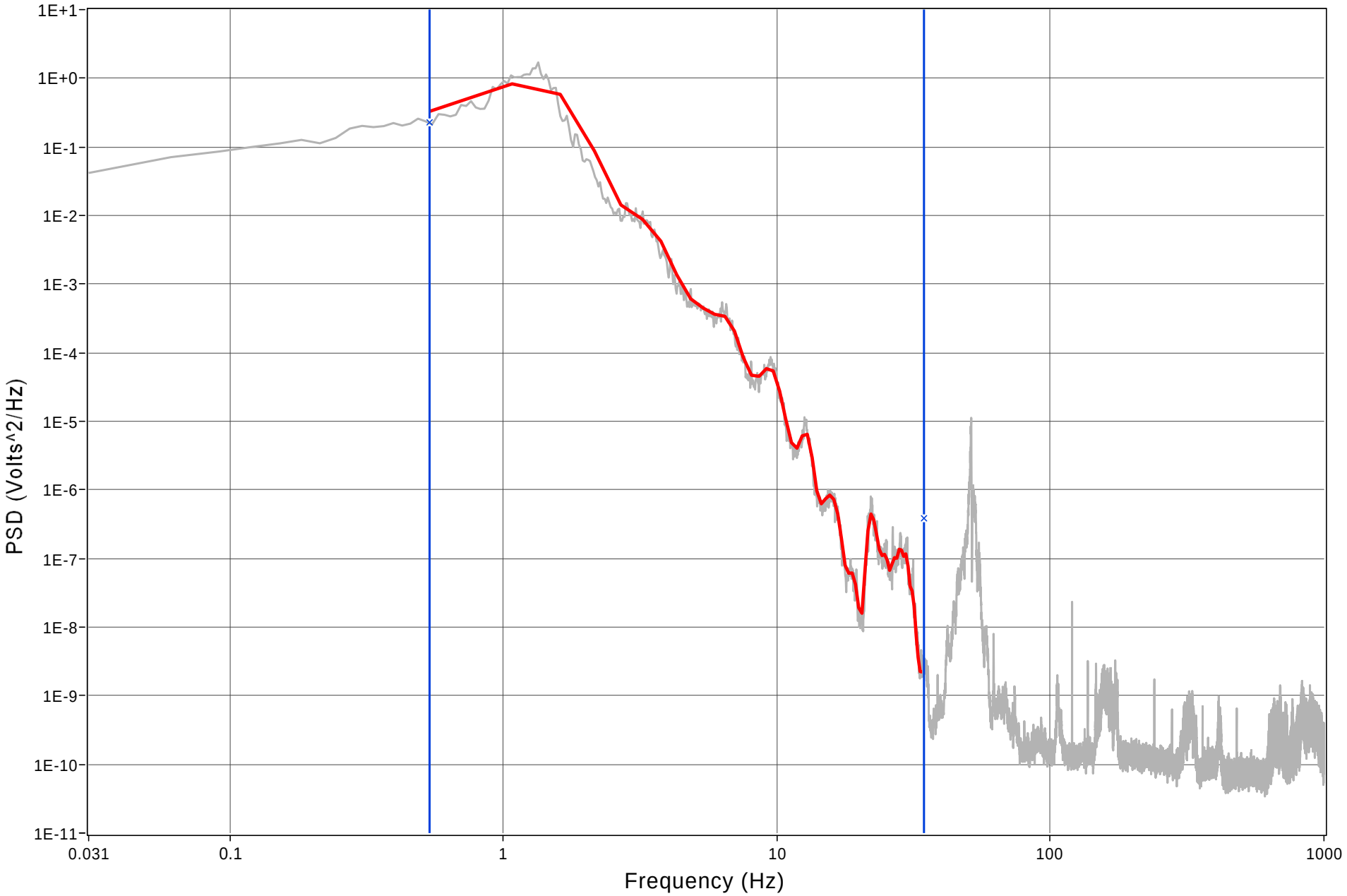
## PSD Window



# OLM Narrow Band PSD Window Fitting

| Reactor and Unit | Tag Number | Service | Filename | Blocks : Blocksize | Trim Low Freq. (Hz) | Trim High Freq. (Hz) | Fitting Type | Test Date |
|---|---|---|---|---|---|---|---|---|
| Farley Unit 2 | FT0495 | STM FLOW | FU2_2010-03_0007.psd | 0 : 128 | 0.538777 | 34.481708 | Baseline | 04-Mar-2010 14:24:12 |

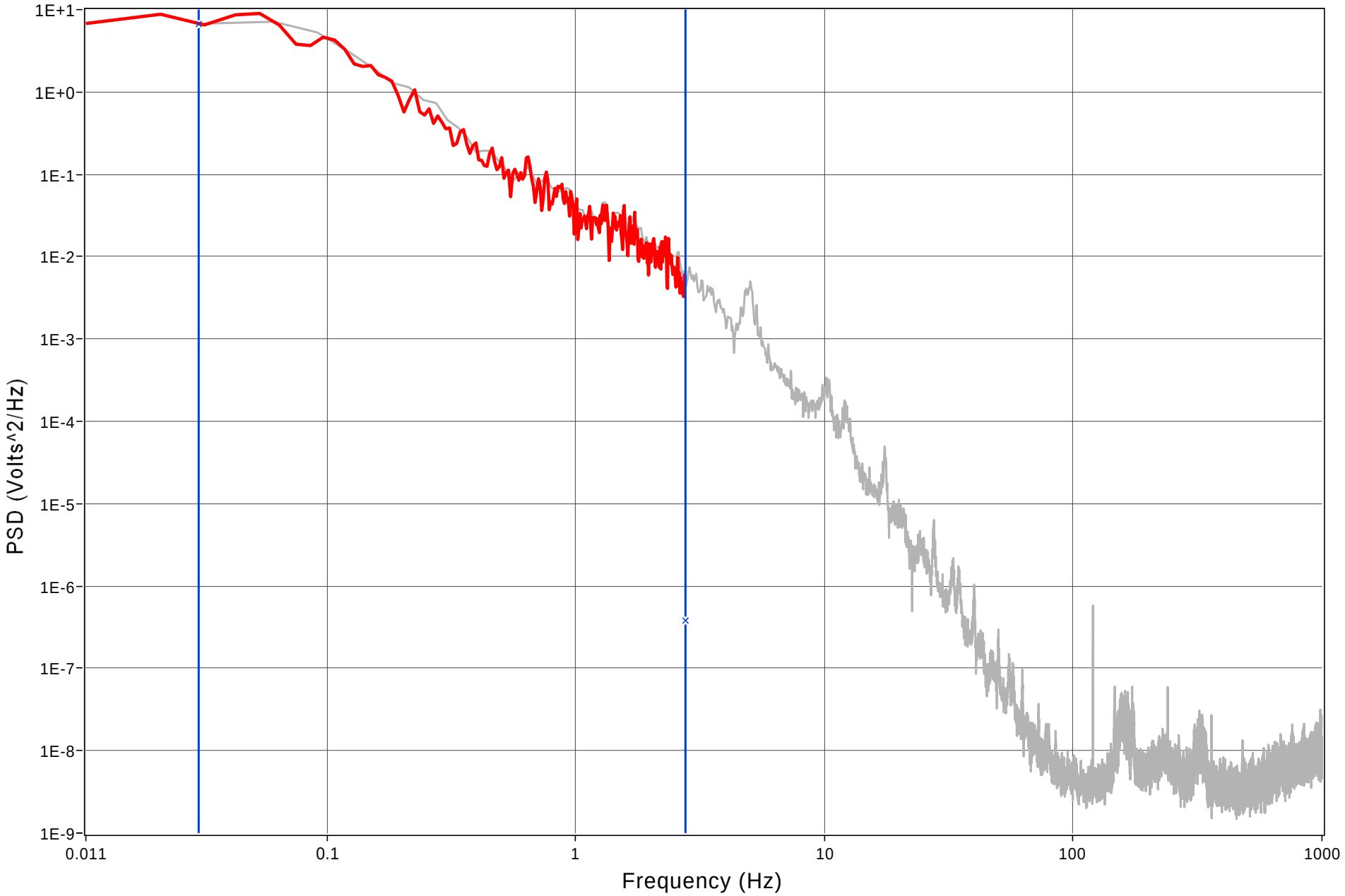
## PSD Window



# OLM Narrow Band PSD Window Fitting

| Reactor and Unit | Tag Number | Service | Filename | Blocks : Blocksize | Trim Low Freq. (Hz) | Trim High Freq. (Hz) | Fitting Type | Test Date |
|---|---|---|---|---|---|---|---|---|
| Farley Unit 2 | FT0476 | FW FLOW | FU2_2010-03_0007.psd | 0 : 512 | 0.010731 | 2.747169 | Baseline | 04-Mar-2010 14:24:12 |

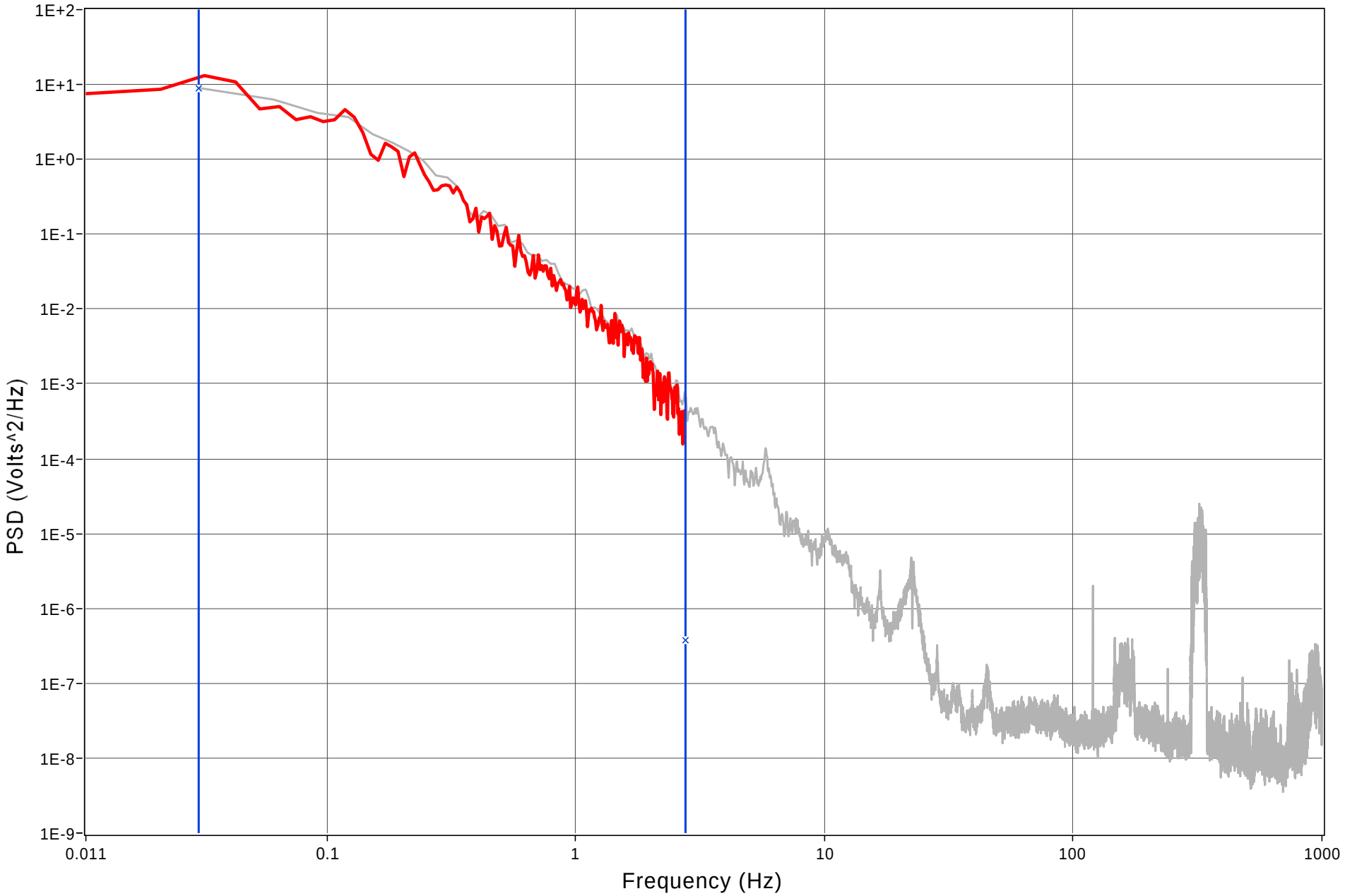
## PSD Window



# OLM Narrow Band PSD Window Fitting

| Reactor and Unit | Tag Number | Service | Filename | Blocks : Blocksize | Trim Low Freq. (Hz) | Trim High Freq. (Hz) | Fitting Type | Test Date |
|---|---|---|---|---|---|---|---|---|
| Farley Unit 2 | FT0486 | FW FLOW | FU2_2010-03_0007.psd | 0 : 512 | 0.010731 | 2.747169 | Baseline | 04-Mar-2010 14:24:12 |

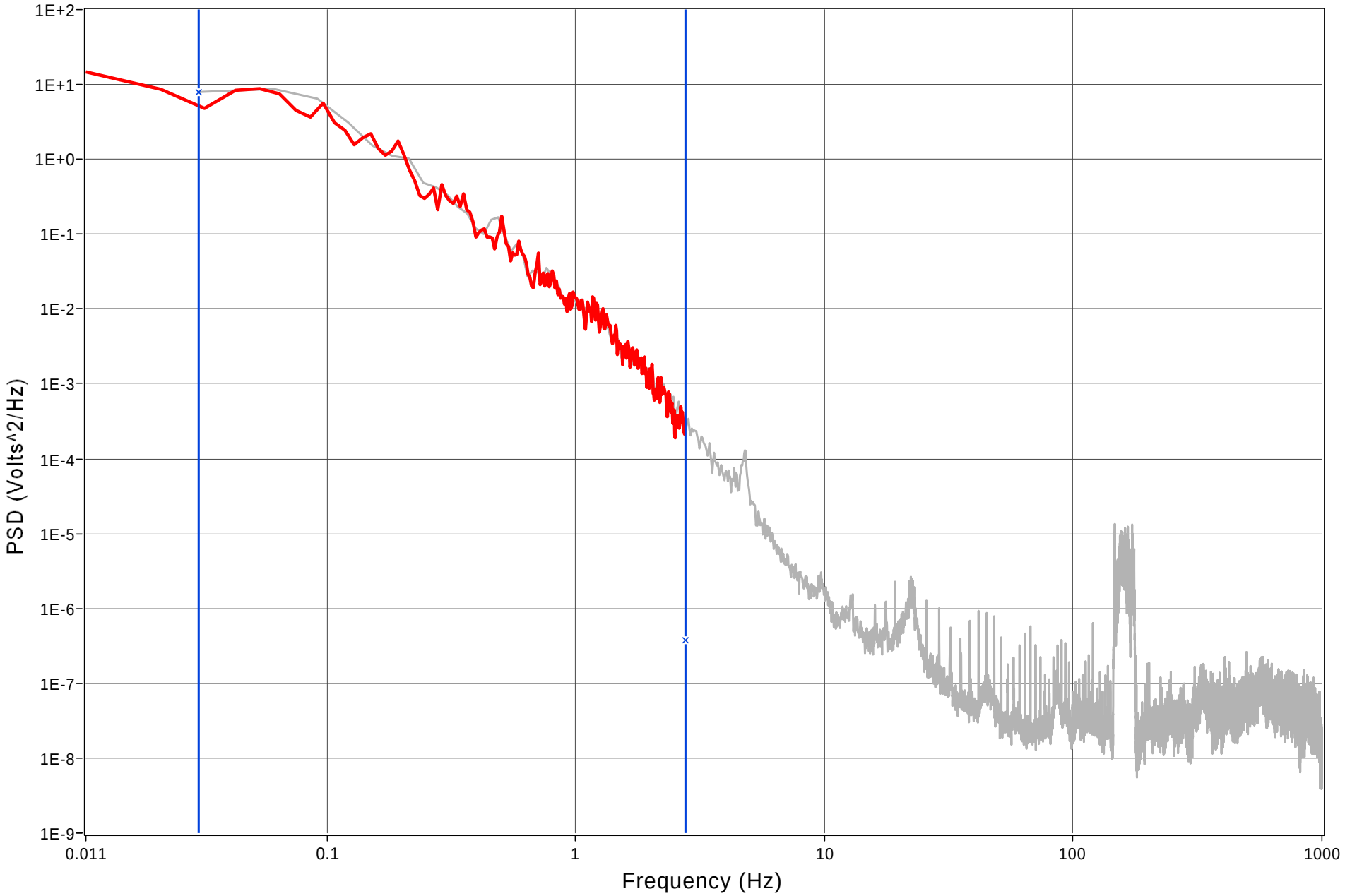
## PSD Window



# OLM Narrow Band PSD Window Fitting

| Reactor and Unit | Tag Number | Service | Filename | Blocks : Blocksize | Trim Low Freq. (Hz) | Trim High Freq. (Hz) | Fitting Type | Test Date |
|---|---|---|---|---|---|---|---|---|
| Farley Unit 2 | FT0496 | FW FLOW | FU2_2010-03_0007.psd | 0 : 512 | 0.010731 | 2.747169 | Baseline | 04-Mar-2010 14:24:12 |

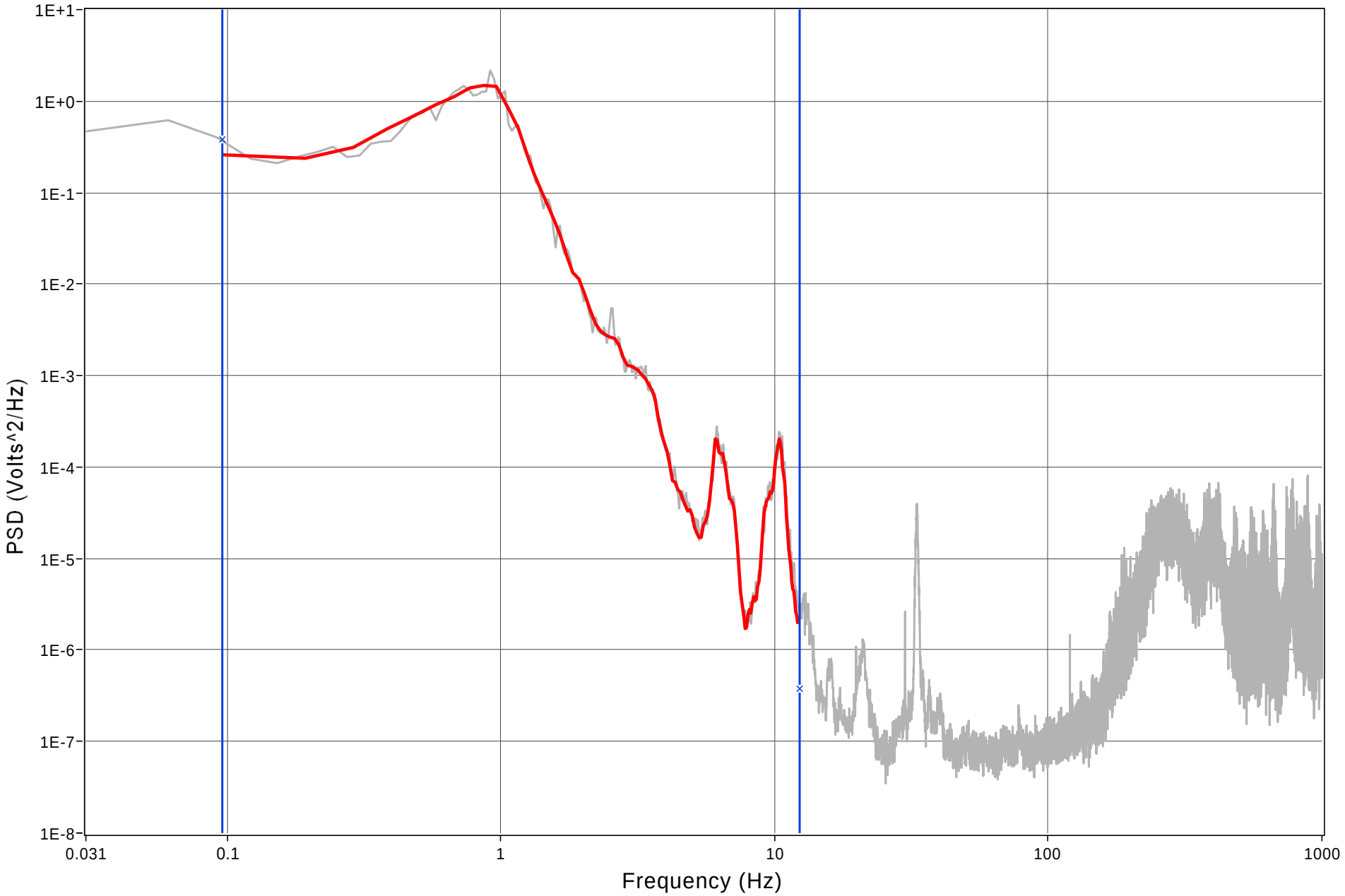
## PSD Window



# OLM Narrow Band PSD Window Fitting

| Reactor and Unit | Tag Number | Service | Filename | Blocks : Blocksize | Trim Low Freq. (Hz) | Trim High Freq. (Hz) | Fitting Type | Test Date |
|---|---|---|---|---|---|---|---|---|
| Farley Unit 2 | LT0476 | SG LVL | FU2_2010-03_0008.psd | 0 : 256 | 0.096448 | 12.345303 | Baseline | 04-Mar-2010 14:24:12 |

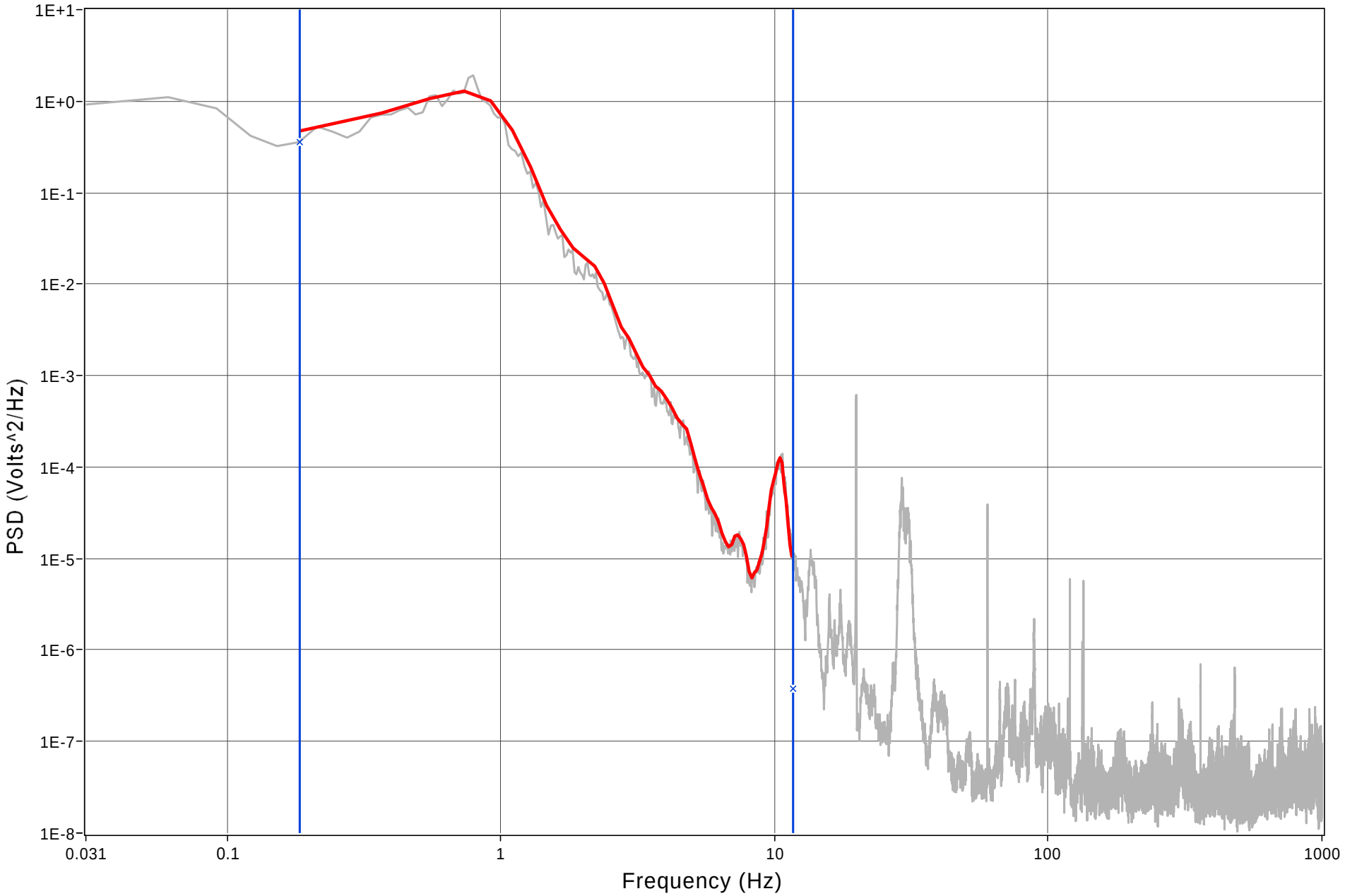
## PSD Window



# OLM Narrow Band PSD Window Fitting

| Reactor and Unit | Tag Number | Service | Filename | Blocks : Blocksize | Trim Low Freq. (Hz) | Trim High Freq. (Hz) | Fitting Type | Test Date |
|---|---|---|---|---|---|---|---|---|
| Farley Unit 2 | LT0486 | SG LVL | FU2_2010-03_0008.psd | 0 : 128 | 0.183818 | 11.764348 | Baseline | 04-Mar-2010 14:24:12 |

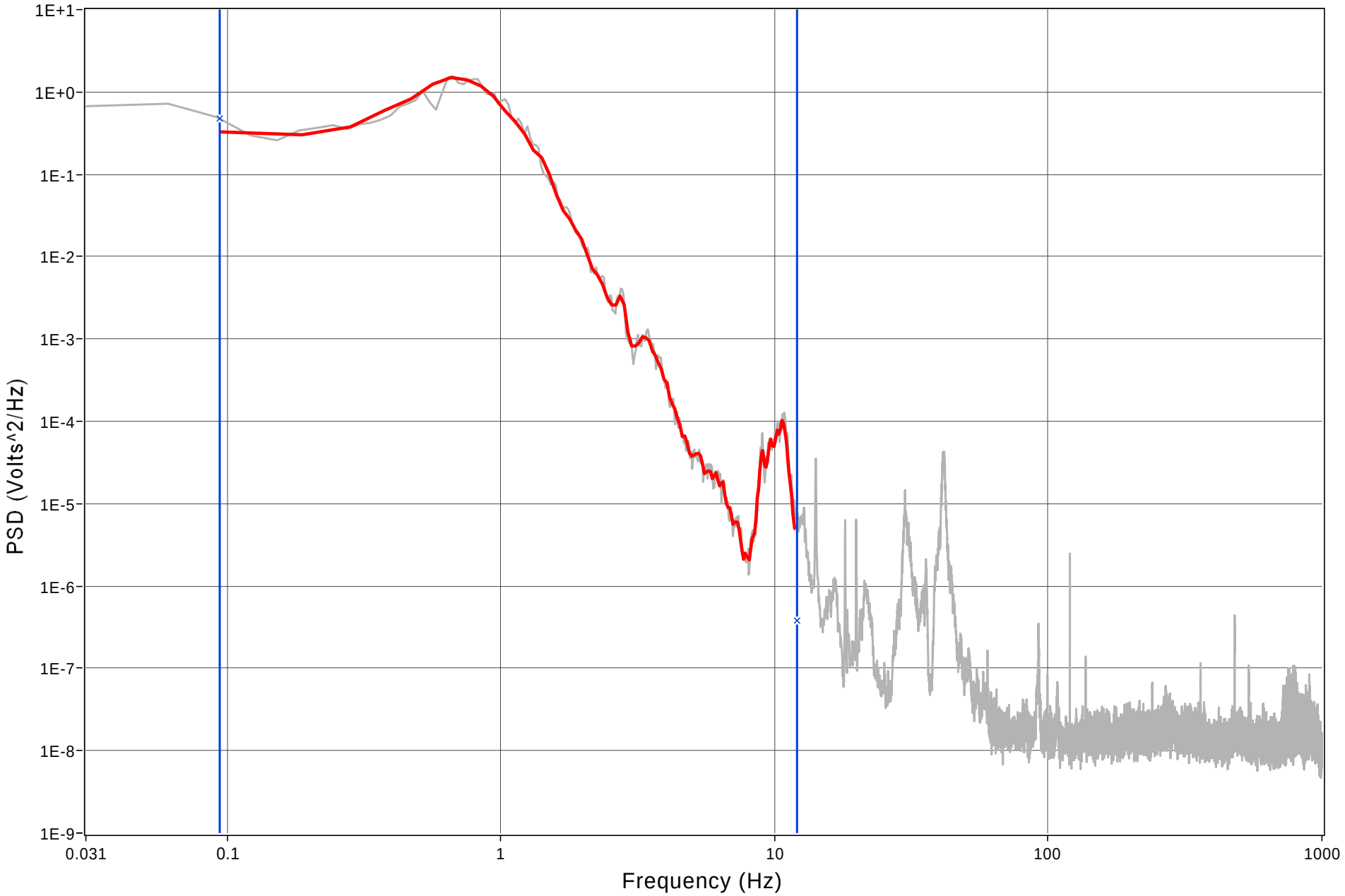
## PSD Window



# OLM Narrow Band PSD Window Fitting

| Reactor and Unit | Tag Number | Service | Filename | Blocks : Blocksize | Trim Low Freq. (Hz) | Trim High Freq. (Hz) | Fitting Type | Test Date |
|---|---|---|---|---|---|---|---|---|
| Farley Unit 2 | LT0496 | SG LVL | FU2_2010-03_0008.psd | 0 : 256 | 0.094124 | 12.047826 | Baseline | 04-Mar-2010 14:24:12 |

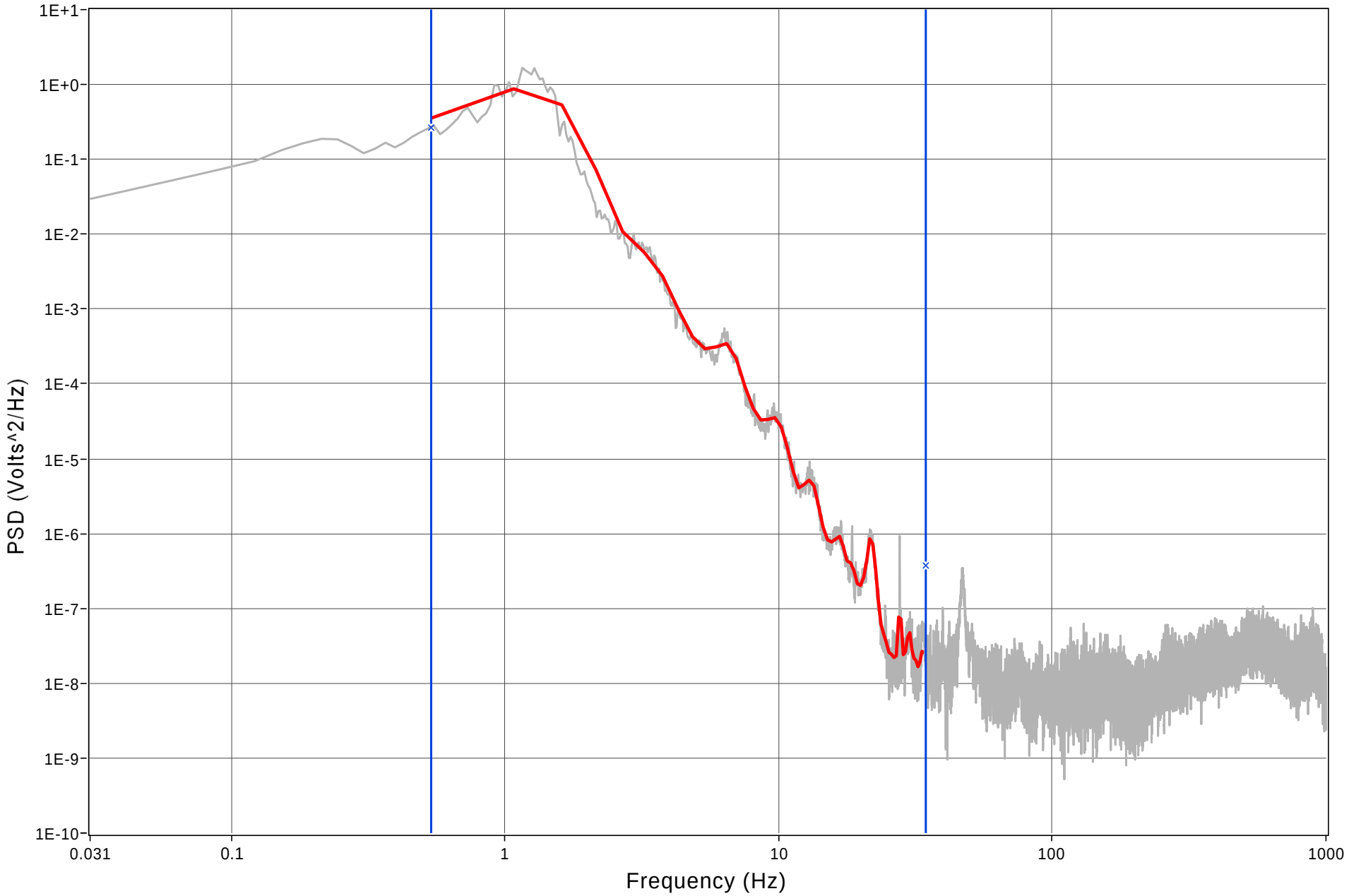
## PSD Window



# OLM Narrow Band PSD Window Fitting

| Reactor and Unit | Tag Number | Service | Filename | Blocks : Blocksize | Trim Low Freq. (Hz) | Trim High Freq. (Hz) | Fitting Type | Test Date |
|---|---|---|---|---|---|---|---|---|
| Farley Unit 2 | FT0474 | STM FLOW | FU2_2010-03_0008.psd | 0 : 128 | 0.538777 | 34.481708 | Baseline | 04-Mar-2010 14:24:12 |

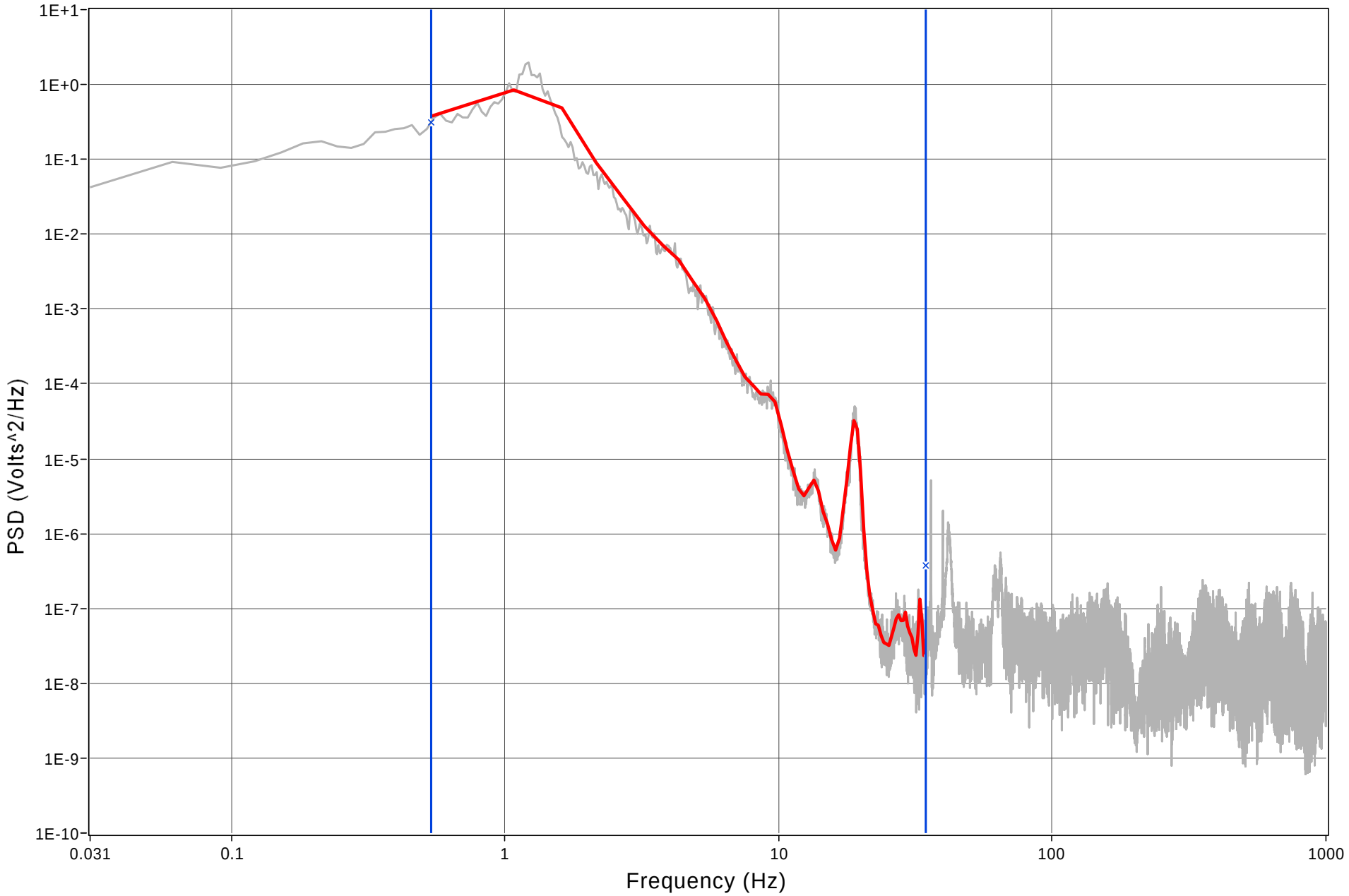
## PSD Window



# OLM Narrow Band PSD Window Fitting

| Reactor and Unit | Tag Number | Service | Filename | Blocks : Blocksize | Trim Low Freq. (Hz) | Trim High Freq. (Hz) | Fitting Type | Test Date |
|---|---|---|---|---|---|---|---|---|
| Farley Unit 2 | FT0484 | STM FLOW | FU2_2010-03_0008.psd | 0 : 128 | 0.538777 | 34.481708 | Baseline | 04-Mar-2010 14:24:12 |

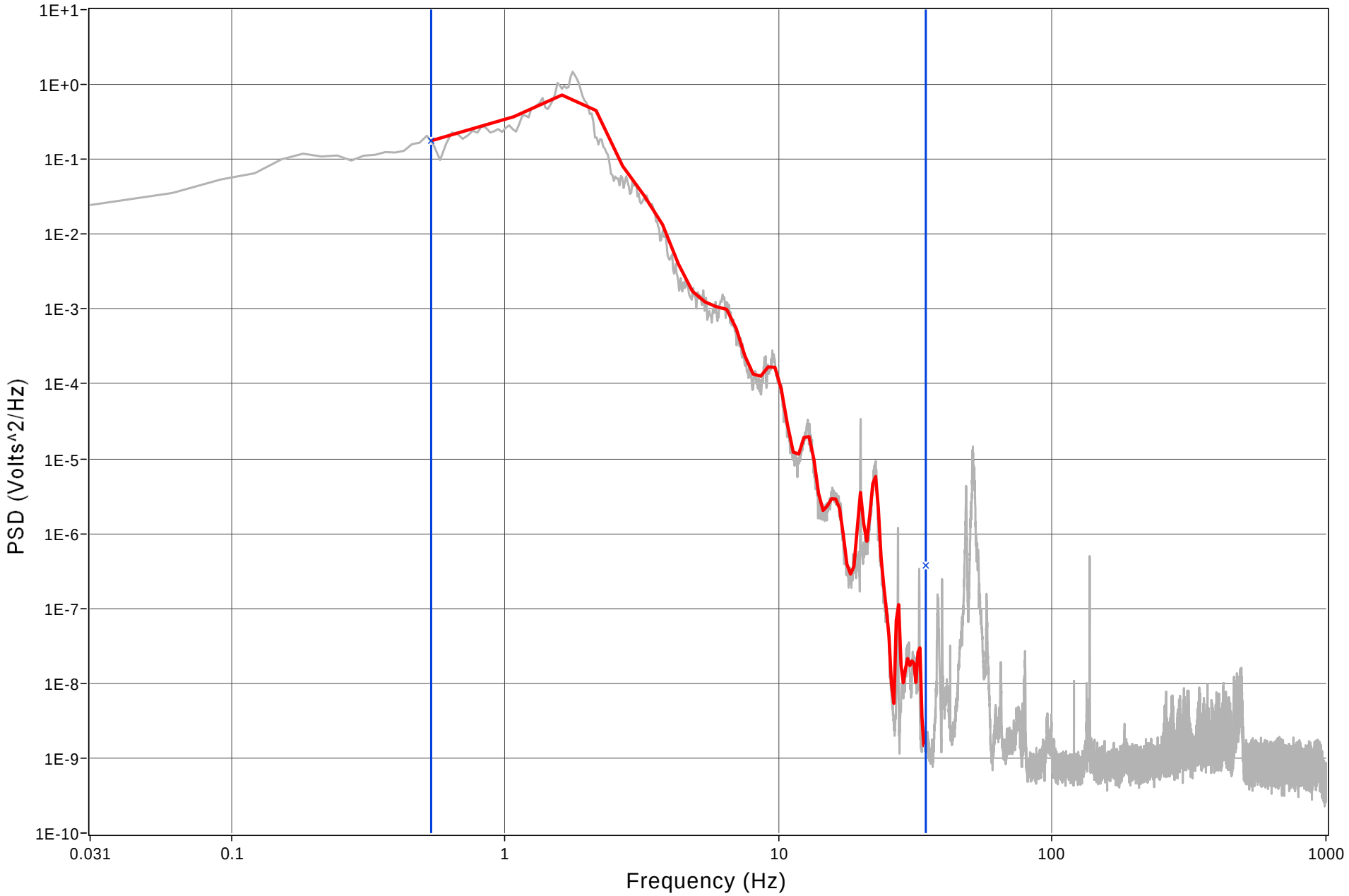
## PSD Window



# OLM Narrow Band PSD Window Fitting

| Reactor and Unit | Tag Number | Service | Filename | Blocks : Blocksize | Trim Low Freq. (Hz) | Trim High Freq. (Hz) | Fitting Type | Test Date |
|---|---|---|---|---|---|---|---|---|
| Farley Unit 2 | FT0494 | STM FLOW | FU2_2010-03_0008.psd | 0 : 128 | 0.538777 | 34.481708 | Baseline | 04-Mar-2010 14:24:12 |

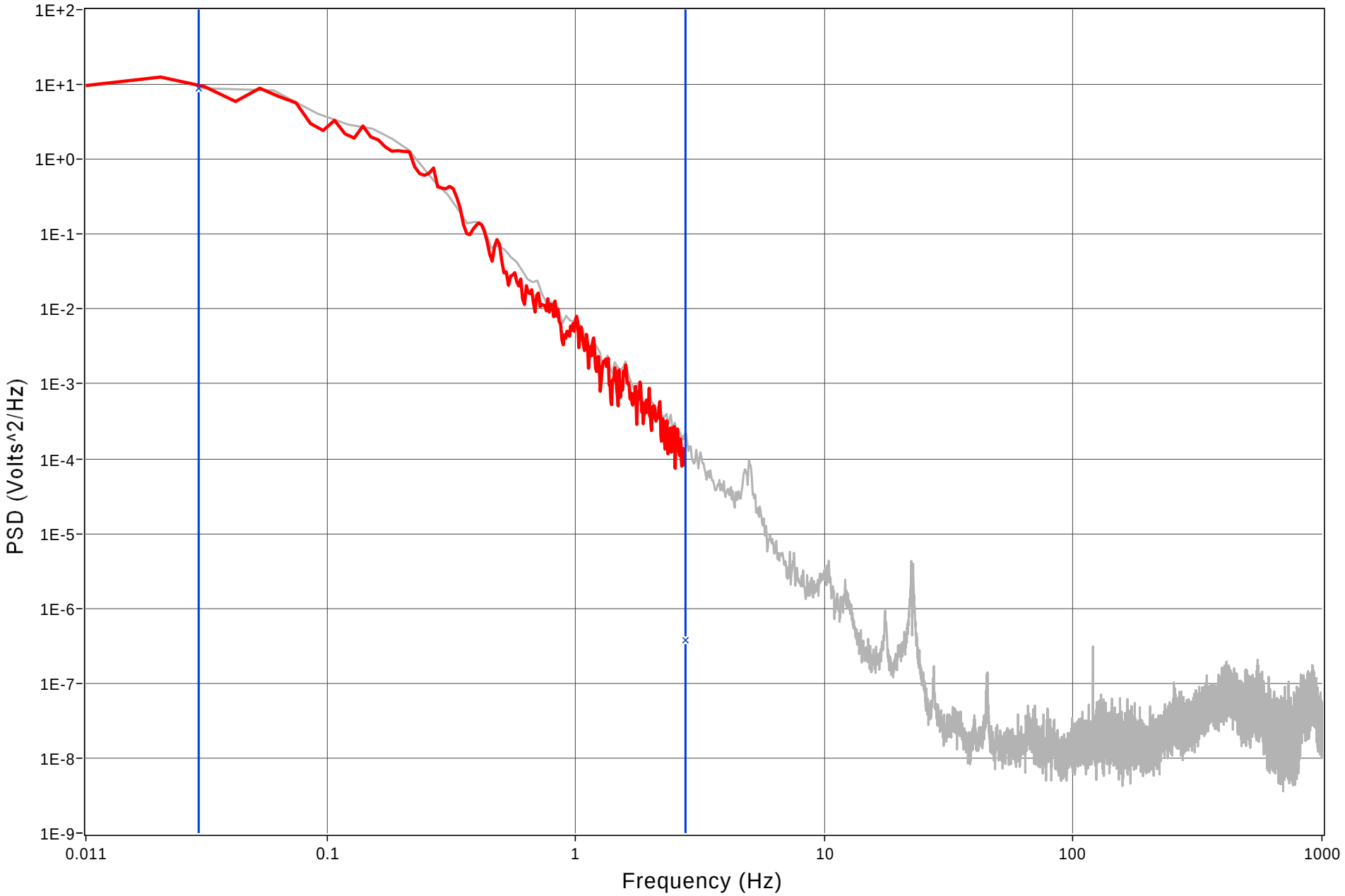
## PSD Window



# OLM Narrow Band PSD Window Fitting

| Reactor and Unit | Tag Number | Service | Filename | Blocks : Blocksize | Trim Low Freq. (Hz) | Trim High Freq. (Hz) | Fitting Type | Test Date |
|---|---|---|---|---|---|---|---|---|
| Farley Unit 2 | FT0477 | FW FLOW | FU2_2010-03_0008.psd | 0 : 512 | 0.010731 | 2.747169 | Baseline | 04-Mar-2010 14:24:12 |

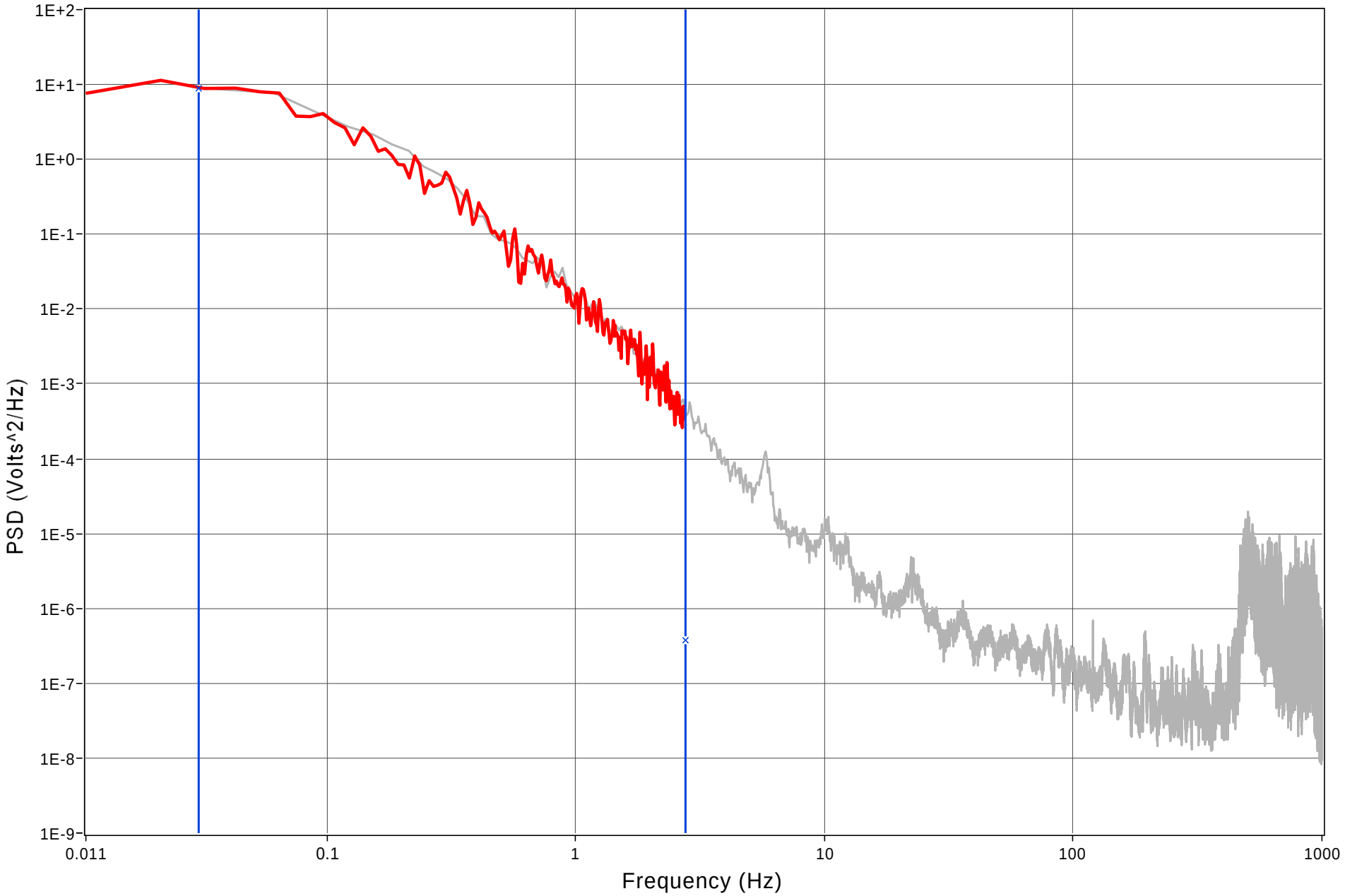
## PSD Window



# OLM Narrow Band PSD Window Fitting

| Reactor and Unit | Tag Number | Service | Filename | Blocks : Blocksize | Trim Low Freq. (Hz) | Trim High Freq. (Hz) | Fitting Type | Test Date |
|---|---|---|---|---|---|---|---|---|
| Farley Unit 2 | FT0487 | FW FLOW | FU2_2010-03_0008.psd | 0 : 512 | 0.010731 | 2.747169 | Baseline | 04-Mar-2010 14:24:12 |

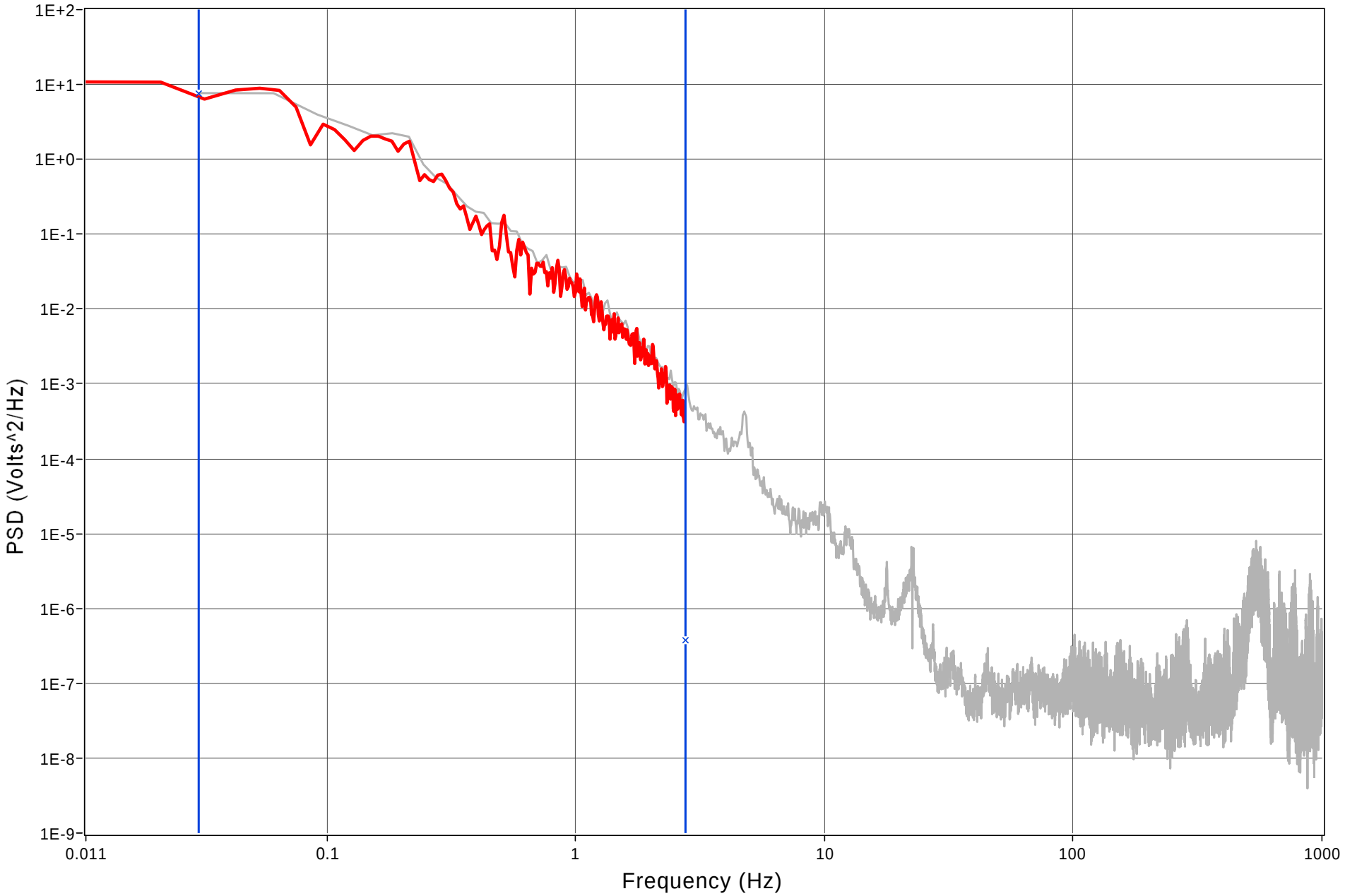
## PSD Window



# OLM Narrow Band PSD Window Fitting

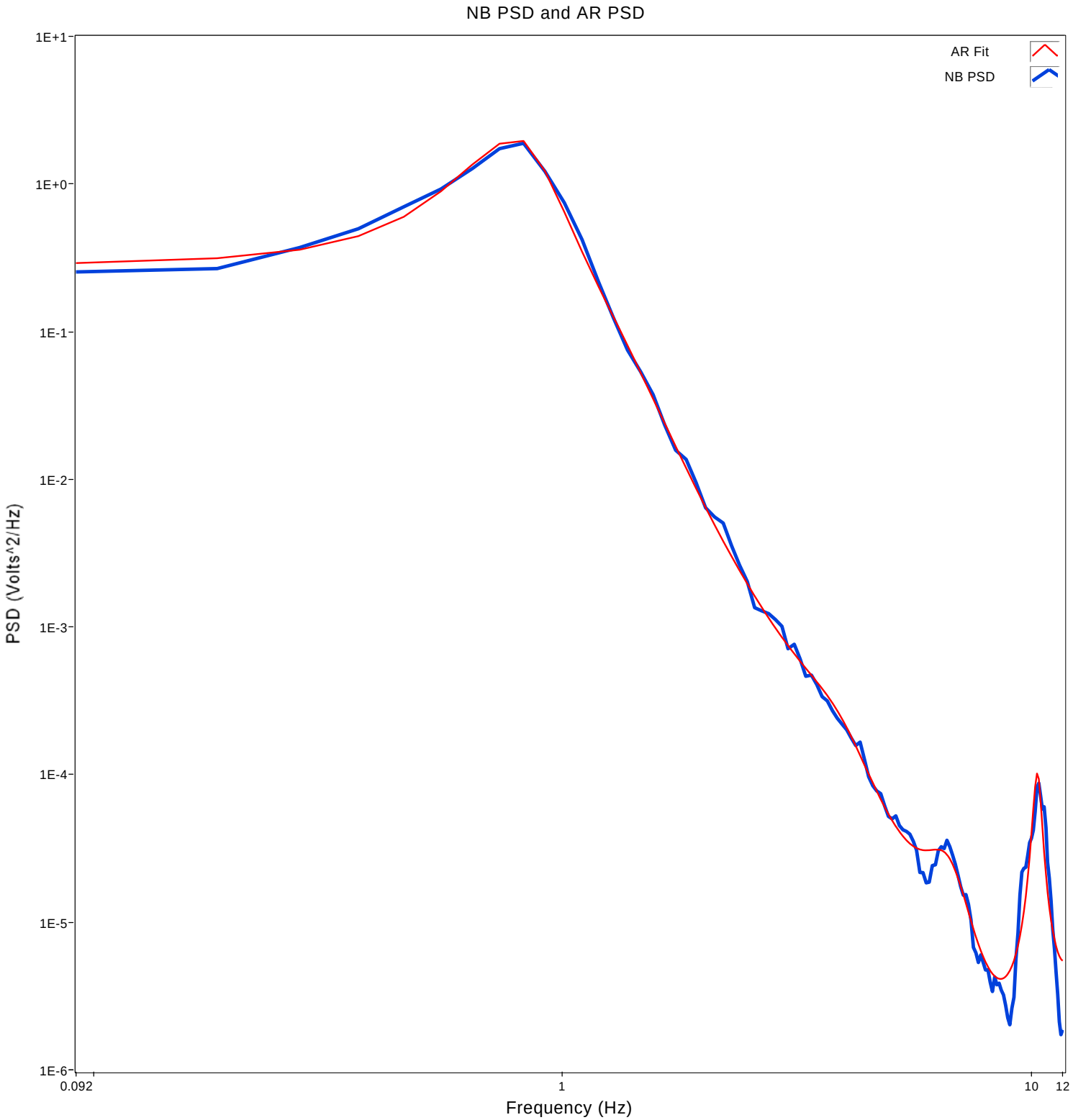
| Reactor and Unit | Tag Number | Service | Filename | Blocks : Blocksize | Trim Low Freq. (Hz) | Trim High Freq. (Hz) | Fitting Type | Test Date |
|---|---|---|---|---|---|---|---|---|
| Farley Unit 2 | FT0497 | FW FLOW | FU2_2010-03_0008.psd | 0 : 512 | 0.010731 | 2.747169 | Baseline | 04-Mar-2010 14:24:12 |

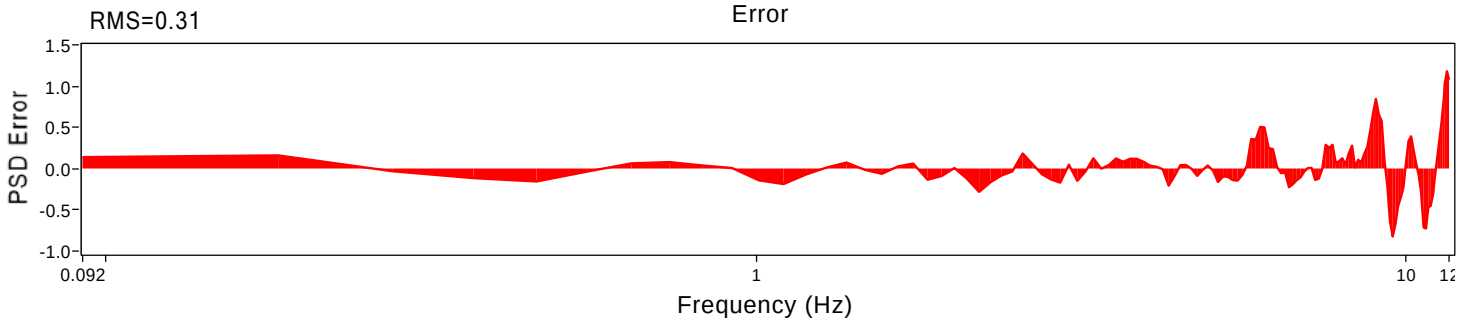
## PSD Window



# OLM Autoregressive Fitting of Narrow Band PSD

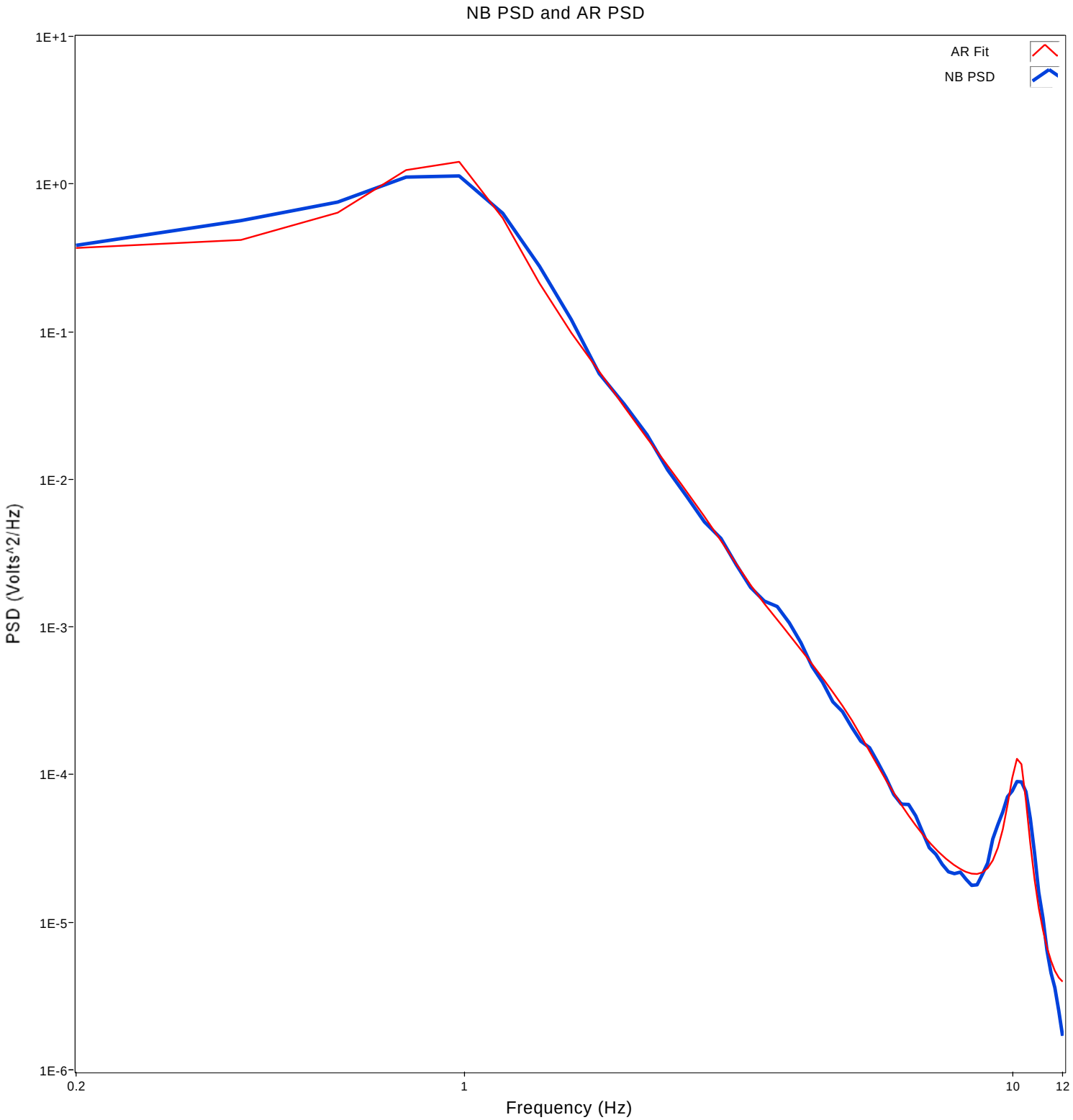
| Reactor and Unit | Tag Number | Service | Filename | Blocks : Blocksize | Trim Low Freq. (Hz) | Trim High Freq. (Hz) | AR Order | AR Method | Test Date |
|---|---|---|---|---|---|---|---|---|---|
| Farley Unit 2 | LT0474 | SG LVL | FU2_2010-03_0005.psd | 96 : 512 | 0.091909 | 11.764348 | 11 | Forward-Backward | 04-Mar-2010 14:24:12 |

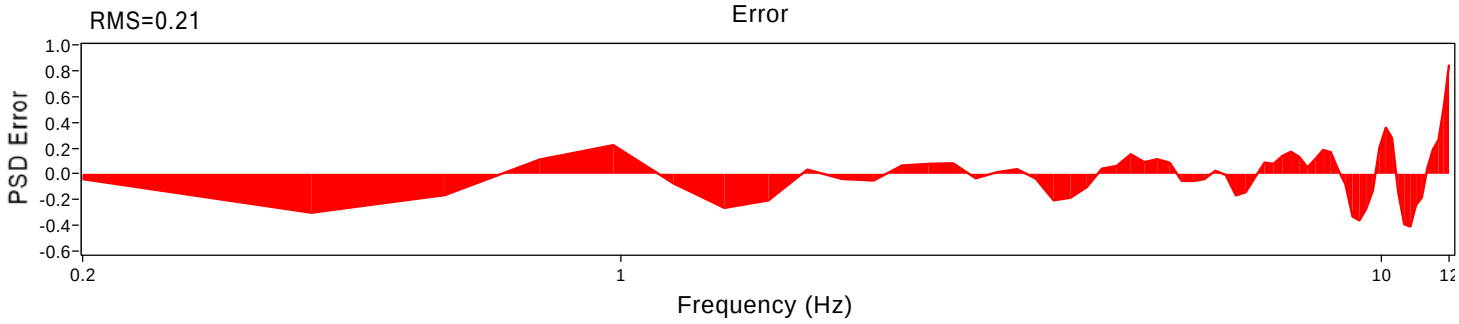


# OLM Autoregressive Fitting of Narrow Band PSD

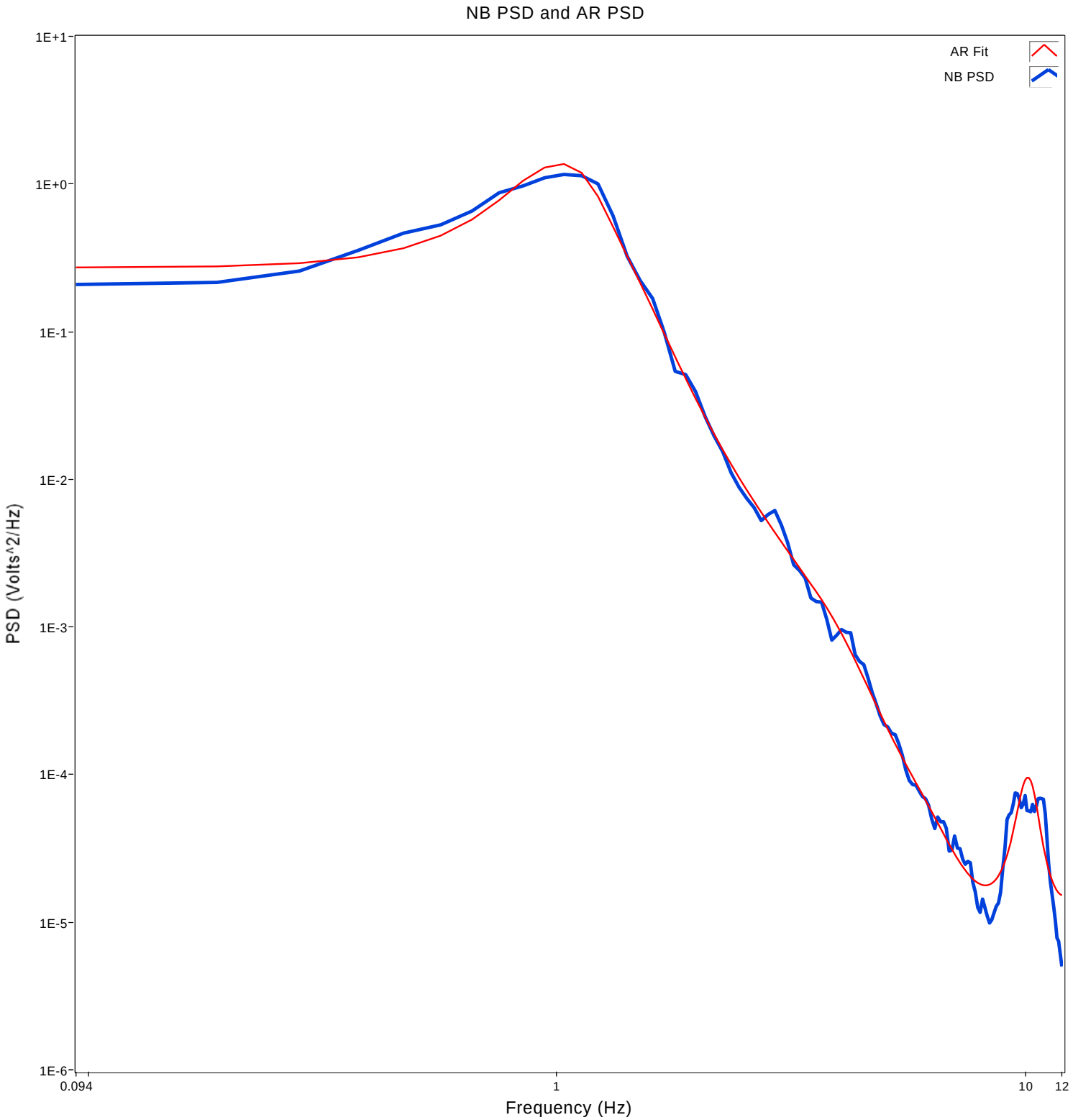
| Reactor and Unit | Tag Number | Service | Filename | Blocks : Blocksize | Trim Low Freq. (Hz) | Trim High Freq. (Hz) | AR Order | AR Method | Test Date |
|---|---|---|---|---|---|---|---|---|---|
| Farley Unit 2 | LT0484 | SG LVL | FU2_2010-03_0005.psd | 204 : 512 | 0.195307 | 12.499619 | 11 | Forward-Backward | 04-Mar-2010 14:24:12 |

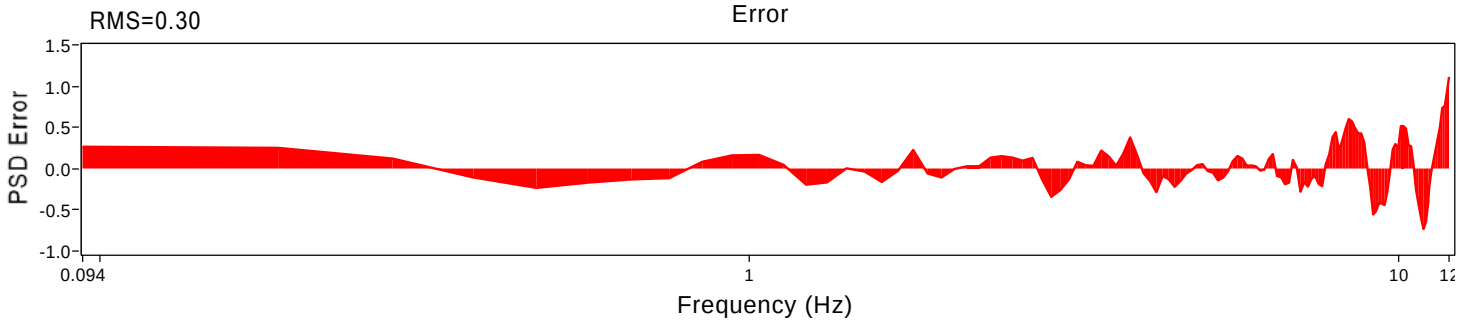


# OLM Autoregressive Fitting of Narrow Band PSD

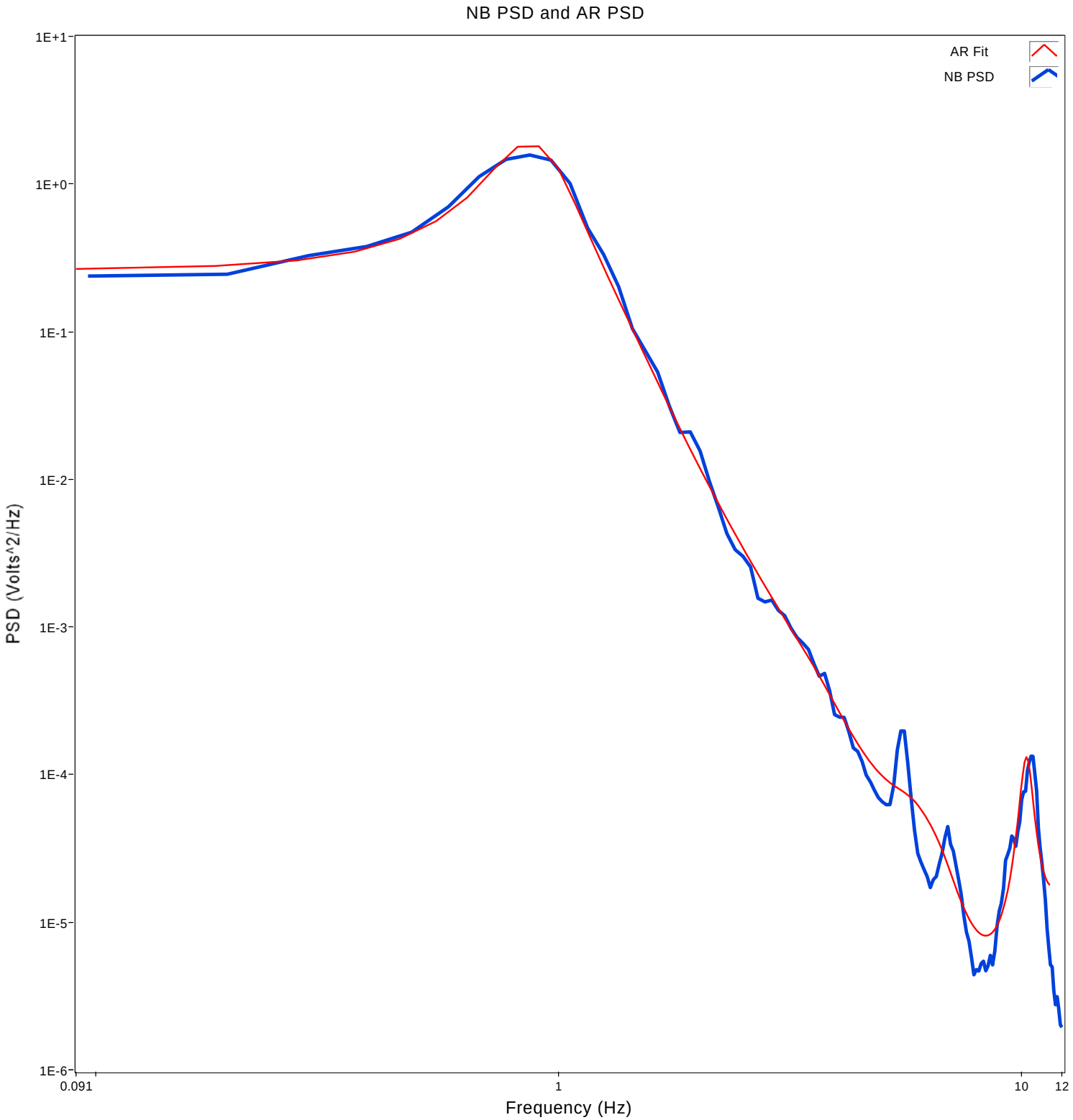
| Reactor and Unit | Tag Number | Service | Filename | Blocks : Blocksize | Trim Low Freq. (Hz) | Trim High Freq. (Hz) | AR Order | AR Method | Test Date |
|---|---|---|---|---|---|---|---|---|---|
| Farley Unit 2 | LT0494 | SG LVL | FU2_2010-03_0005.psd | 98 : 512 | 0.094124 | 12.047826 | 11 | Forward-Backward | 04-Mar-2010 14:24:12 |

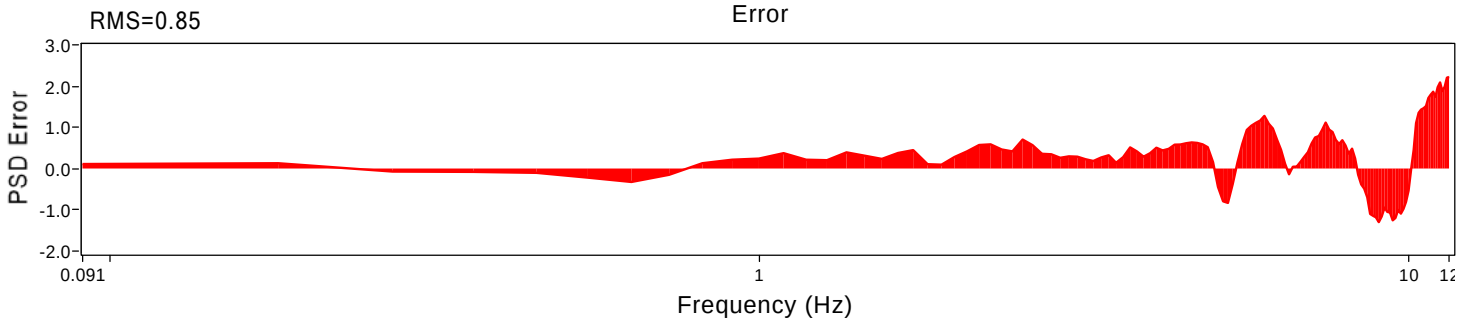


# OLM Autoregressive Fitting of Narrow Band PSD

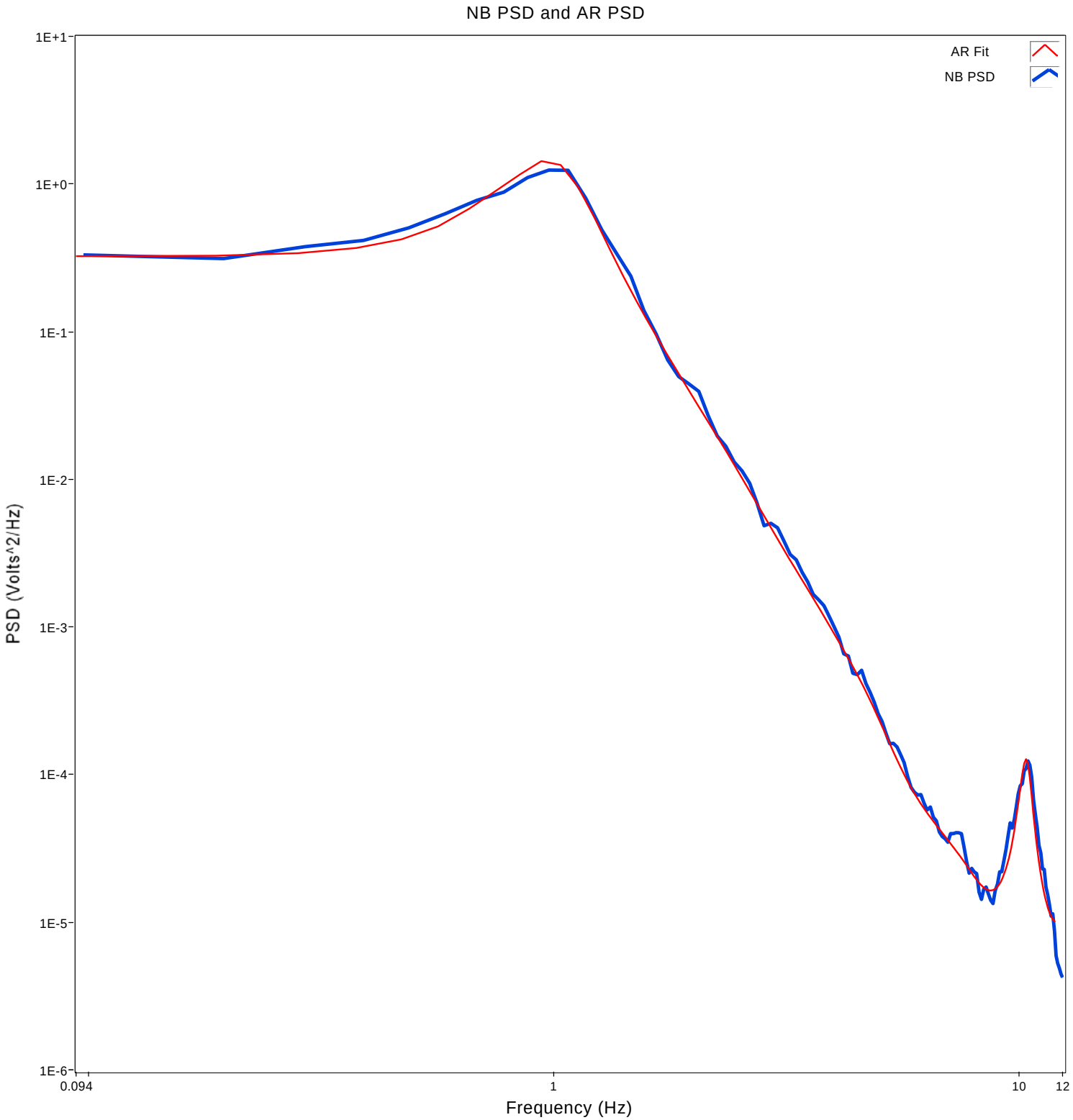
| Reactor and Unit | Tag Number | Service | Filename | Blocks : Blocksize | Trim Low Freq. (Hz) | Trim High Freq. (Hz) | AR Order | AR Method | Test Date |
|---|---|---|---|---|---|---|---|---|---|
| Farley Unit 2 | LT0475 | SG LVL | FU2_2010-03_0006.psd | 95 : 512 | 0.096448 | 12.345303 | 11 | Forward-Backward | 04-Mar-2010 14:24:12 |

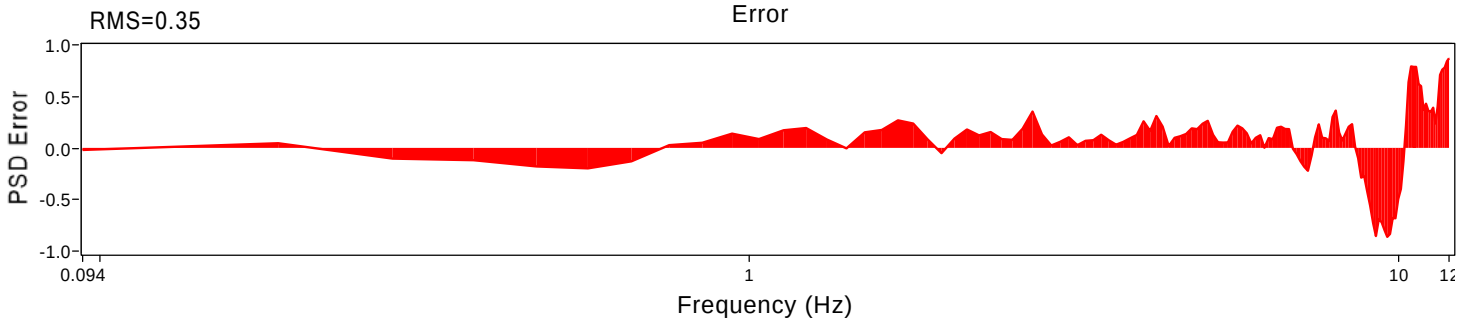


# OLM Autoregressive Fitting of Narrow Band PSD

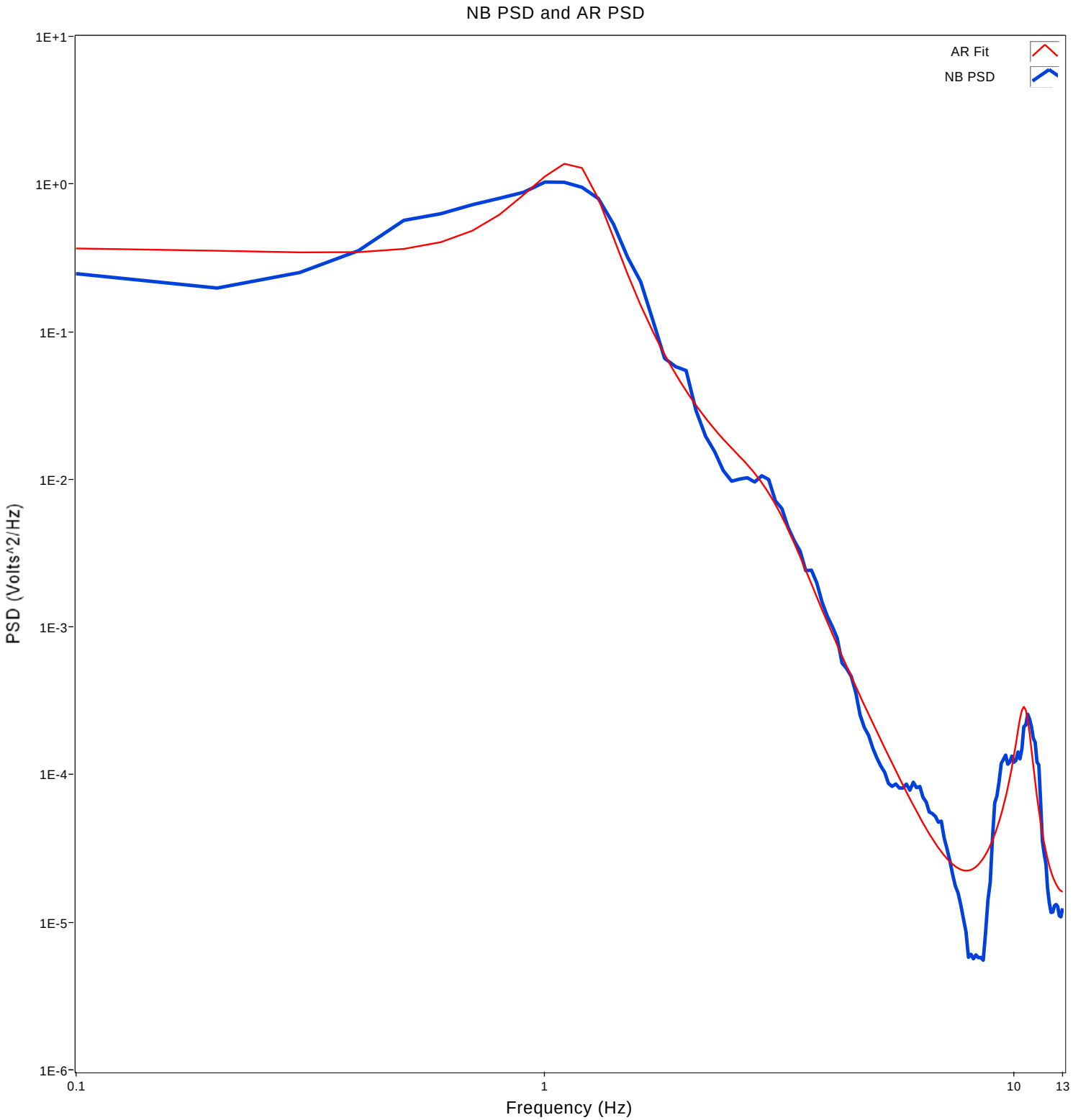
| Reactor and Unit | Tag Number | Service | Filename | Blocks : Blocksize | Trim Low Freq. (Hz) | Trim High Freq. (Hz) | AR Order | AR Method | Test Date |
|---|---|---|---|---|---|---|---|---|---|
| Farley Unit 2 | LT0485 | SG LVL | FU2_2010-03_0006.psd | 98 : 512 | 0.097653 | 12.499619 | 11 | Forward-Backward | 04-Mar-2010 14:24:12 |

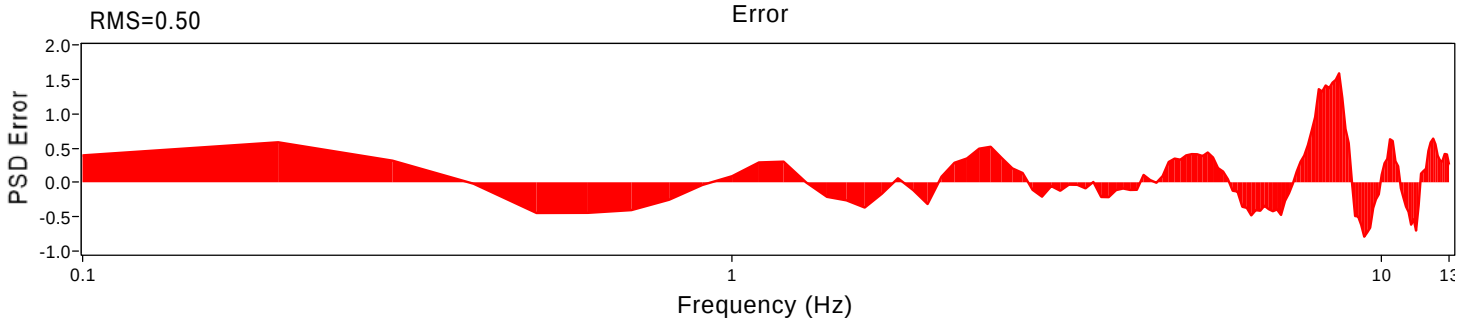


# OLM Autoregressive Fitting of Narrow Band PSD

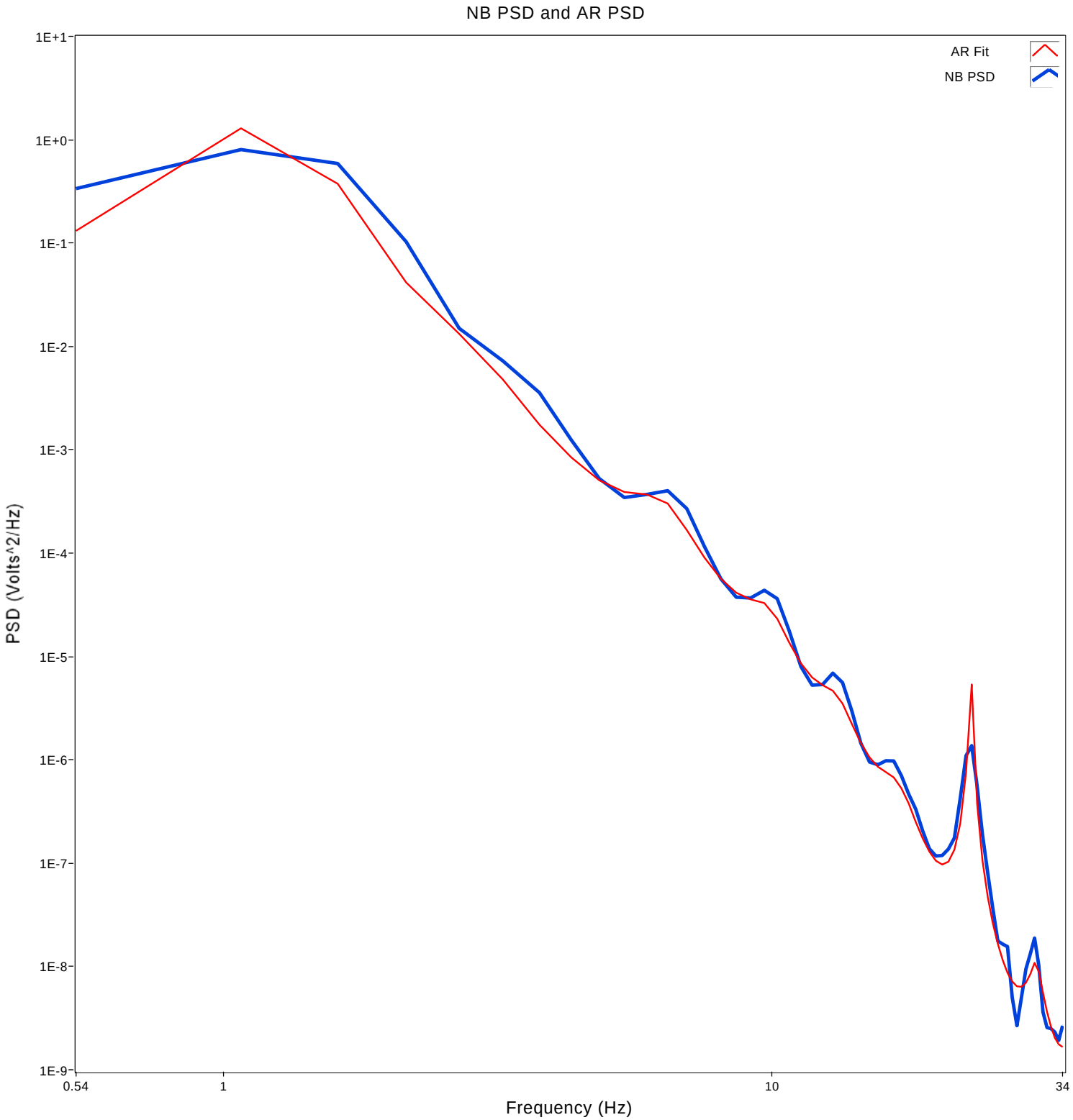
| Reactor and Unit | Tag Number | Service | Filename | Blocks : Blocksize | Trim Low Freq. (Hz) | Trim High Freq. (Hz) | AR Order | AR Method | Test Date |
|---|---|---|---|---|---|---|---|---|---|
| Farley Unit 2 | LT0495 | SG LVL | FU2_2010-03_0006.psd | 104 : 512 | 0.100157 | 12.820122 | 11 | Forward-Backward | 04-Mar-2010 14:24:12 |

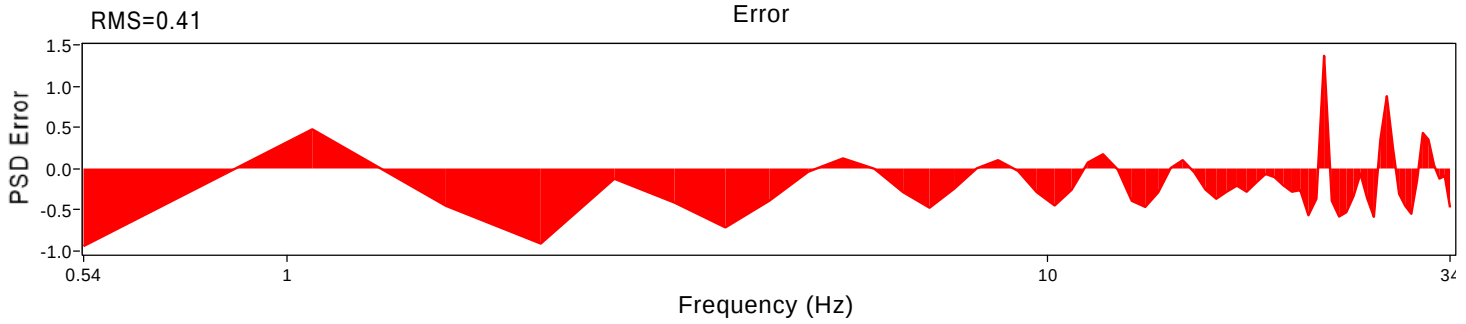


# OLM Autoregressive Fitting of Narrow Band PSD

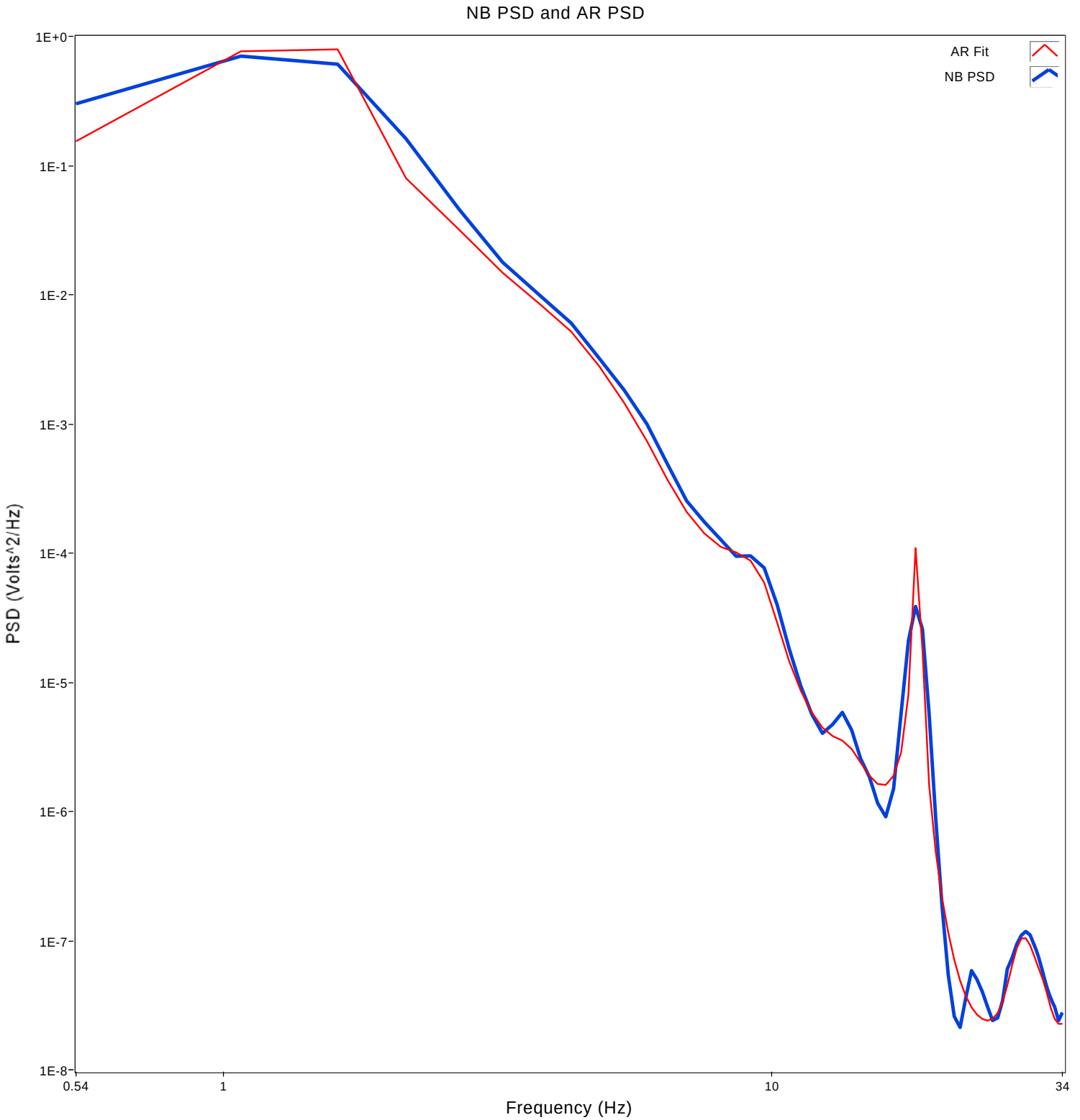
| Reactor and Unit | Tag Number | Service | Filename | Blocks : Blocksize | Trim Low Freq. (Hz) | Trim High Freq. (Hz) | AR Order | AR Method | Test Date |
|---|---|---|---|---|---|---|---|---|---|
| Farley Unit 2 | FT0475 | STM FLOW | FU2_2010-03_0007.psd | 564 : 512 | 0.538777 | 34.481708 | 18 | Least-Squares | 04-Mar-2010 14:24:12 |

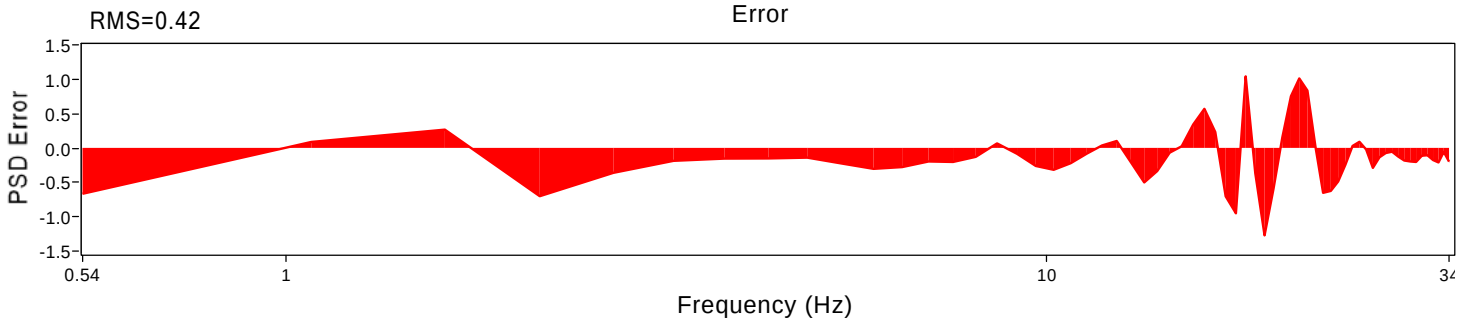


# OLM Autoregressive Fitting of Narrow Band PSD

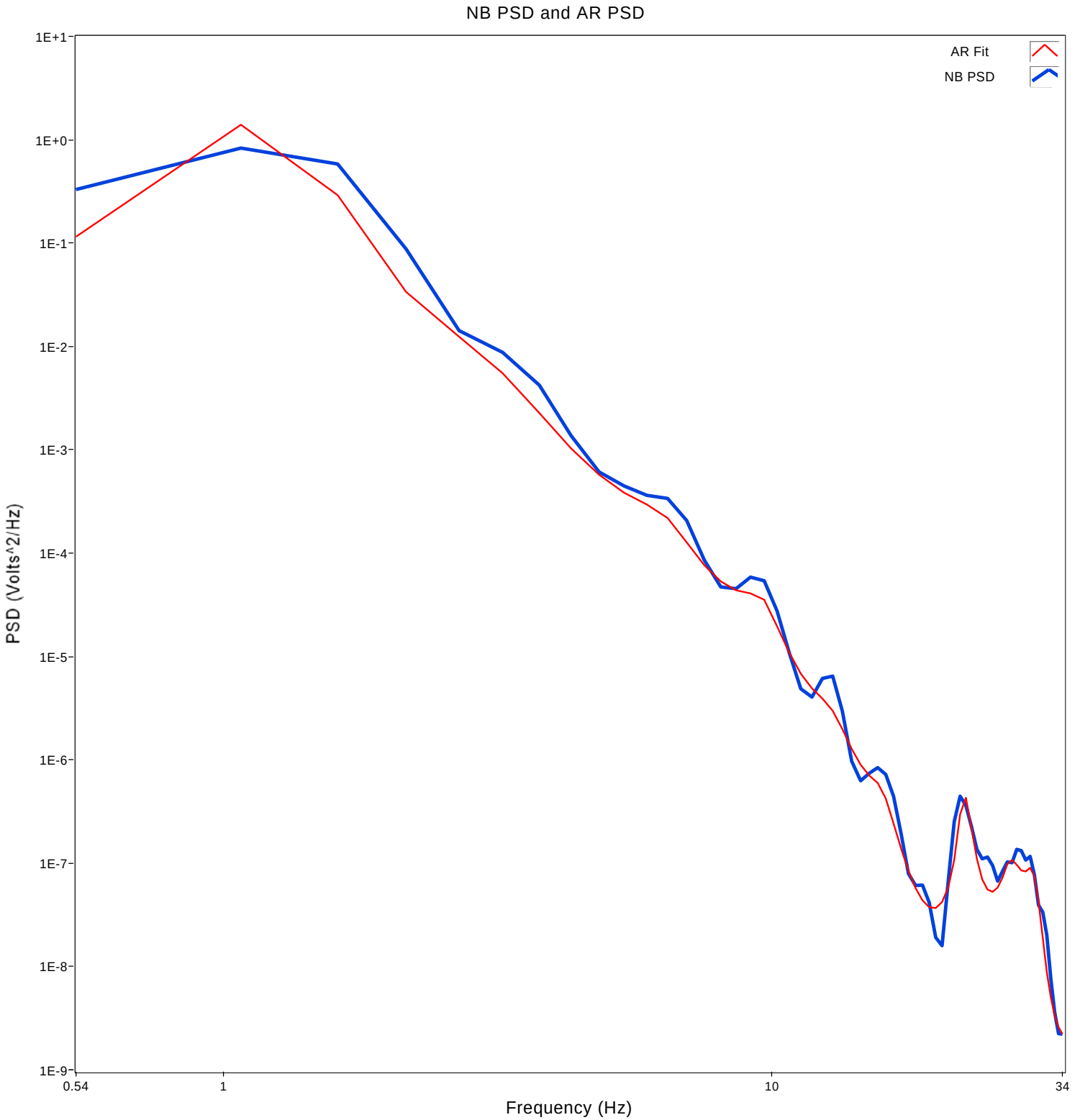
| Reactor and Unit | Tag Number | Service | Filename | Blocks : Blocksize | Trim Low Freq. (Hz) | Trim High Freq. (Hz) | AR Order | AR Method | Test Date |
|---|---|---|---|---|---|---|---|---|---|
| Farley Unit 2 | FT0485 | STM FLOW | FU2_2010-03_0007.psd | 564 : 512 | 0.538777 | 34.481708 | 18 | Least-Squares | 04-Mar-2010 14:24:12 |

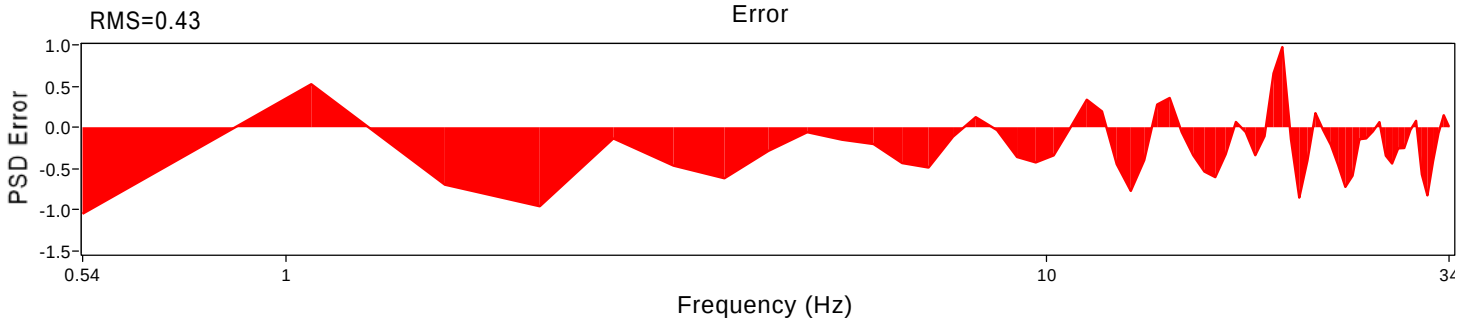


# OLM Autoregressive Fitting of Narrow Band PSD

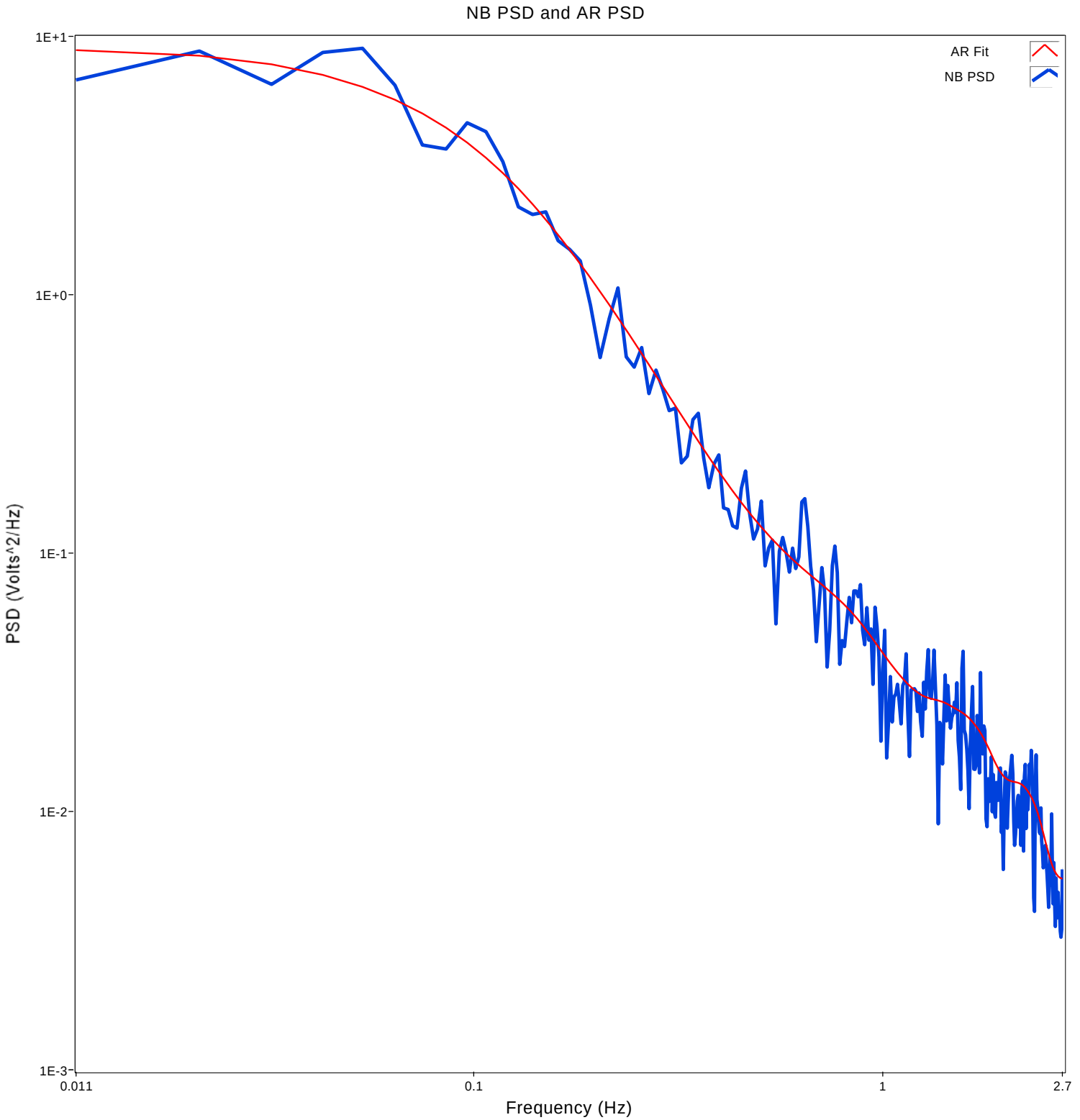
| Reactor and Unit | Tag Number | Service | Filename | Blocks : Blocksize | Trim Low Freq. (Hz) | Trim High Freq. (Hz) | AR Order | AR Method | Test Date |
|---|---|---|---|---|---|---|---|---|---|
| Farley Unit 2 | FT0495 | STM FLOW | FU2_2010-03_0007.psd | 564 : 512 | 0.538777 | 34.481708 | 18 | Least-Squares | 04-Mar-2010 14:24:12 |

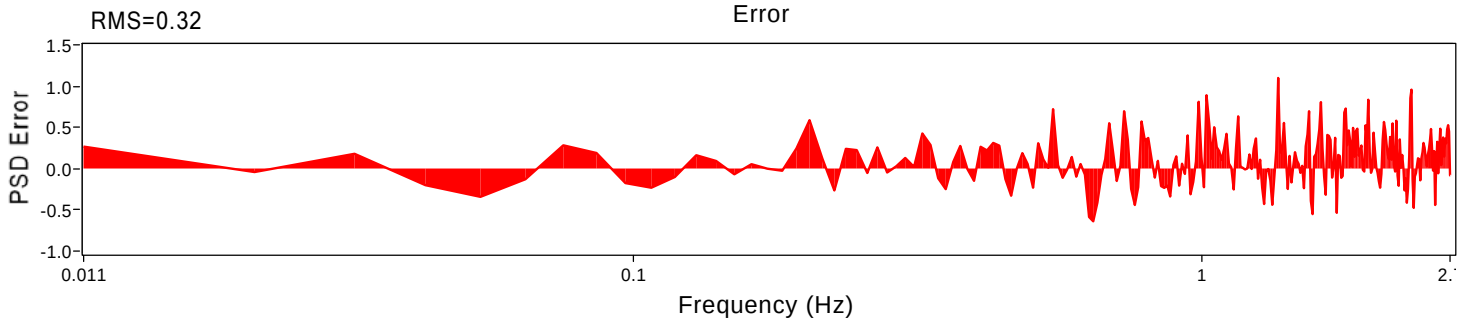


# OLM Autoregressive Fitting of Narrow Band PSD

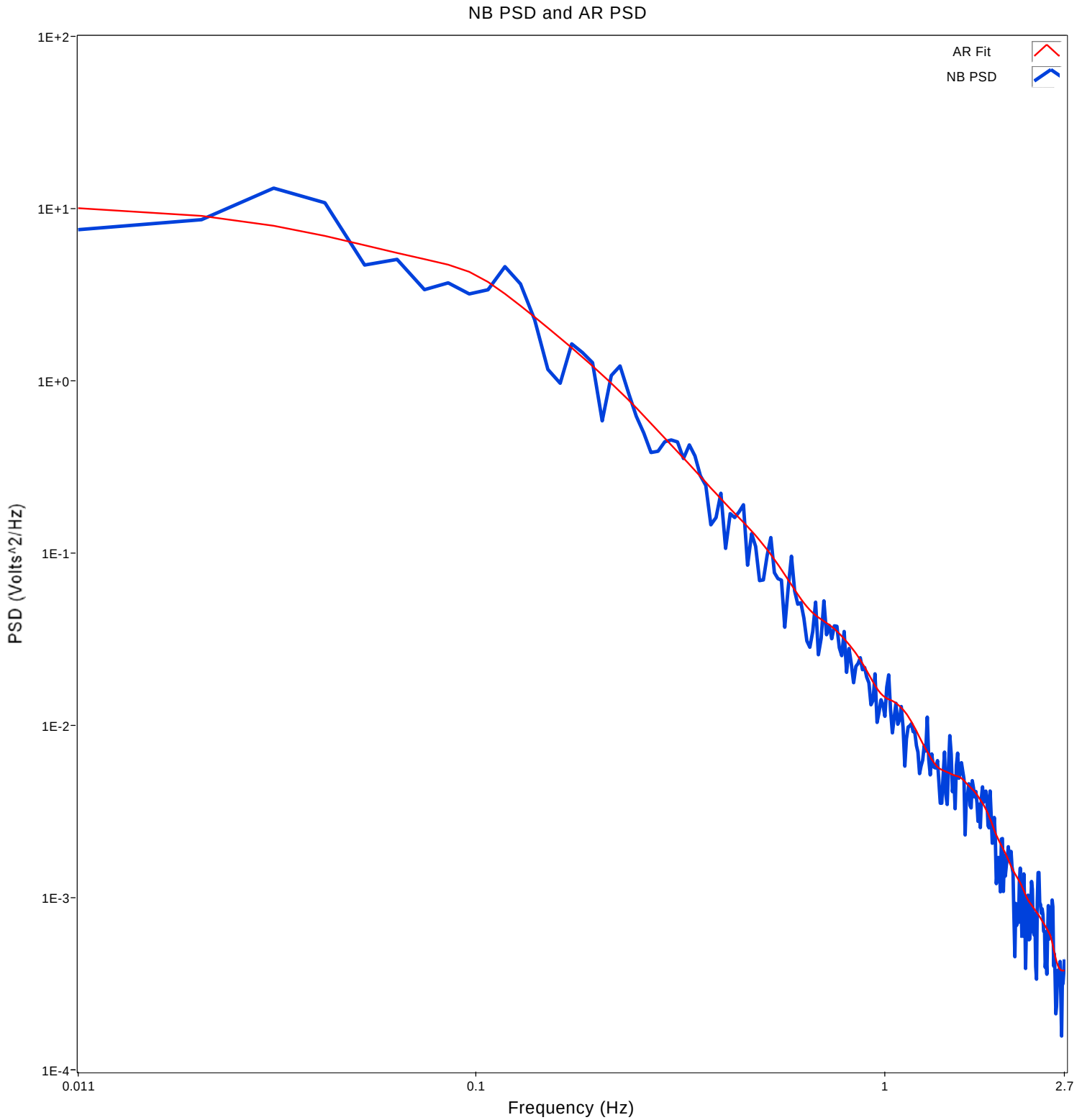
| Reactor and Unit | Tag Number | Service | Filename | Blocks : Blocksize | Trim Low Freq. (Hz) | Trim High Freq. (Hz) | AR Order | AR Method | Test Date |
|---|---|---|---|---|---|---|---|---|---|
| Farley Unit 2 | FT0476 | FW FLOW | FU2_2010-03_0007.psd | 11 : 512 | 0.010731 | 2.747169 | 11 | Least-Squares | 04-Mar-2010 14:24:12 |

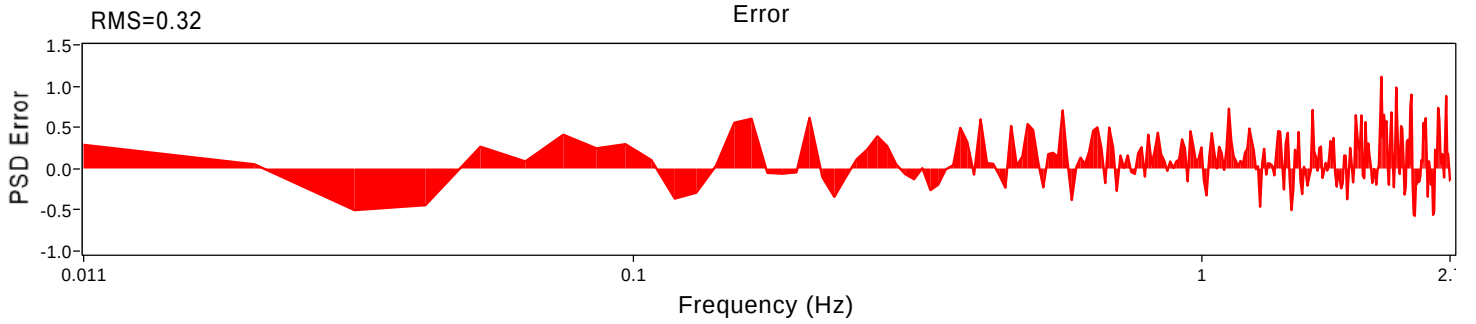


# OLM Autoregressive Fitting of Narrow Band PSD

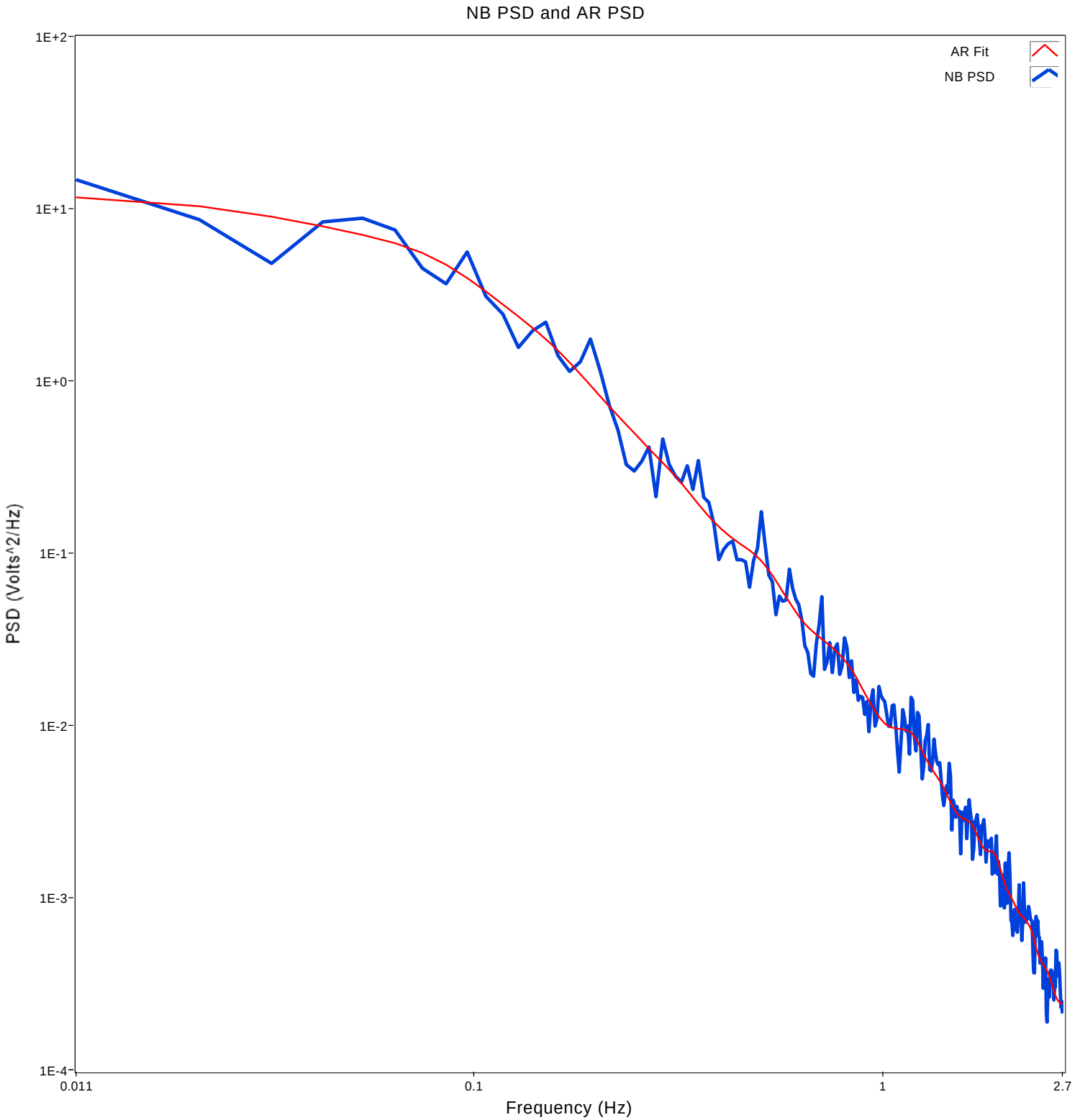
| Reactor and Unit | Tag Number | Service | Filename | Blocks : Blocksize | Trim Low Freq. (Hz) | Trim High Freq. (Hz) | AR Order | AR Method | Test Date |
|---|---|---|---|---|---|---|---|---|---|
| Farley Unit 2 | FT0486 | FW FLOW | FU2_2010-03_0007.psd | 11 : 512 | 0.010731 | 2.747169 | 20 | Least-Squares | 04-Mar-2010 14:24:12 |

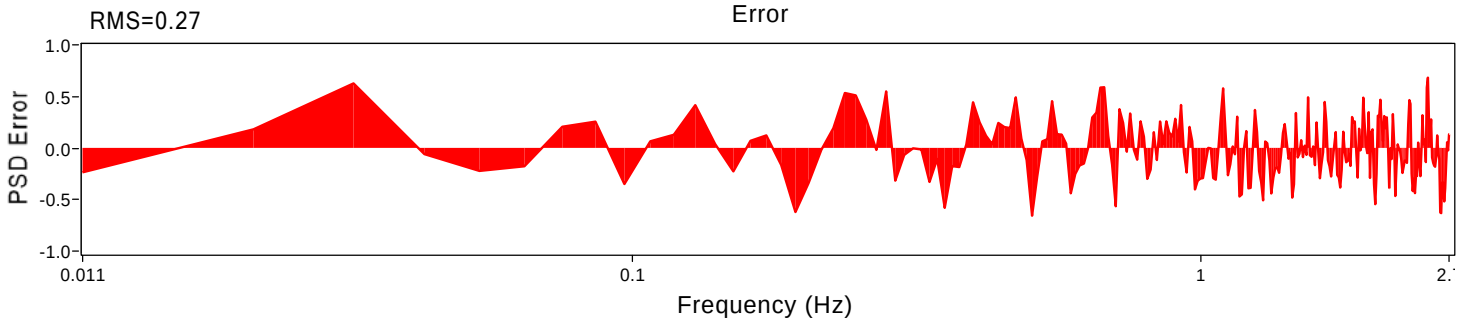


# OLM Autoregressive Fitting of Narrow Band PSD

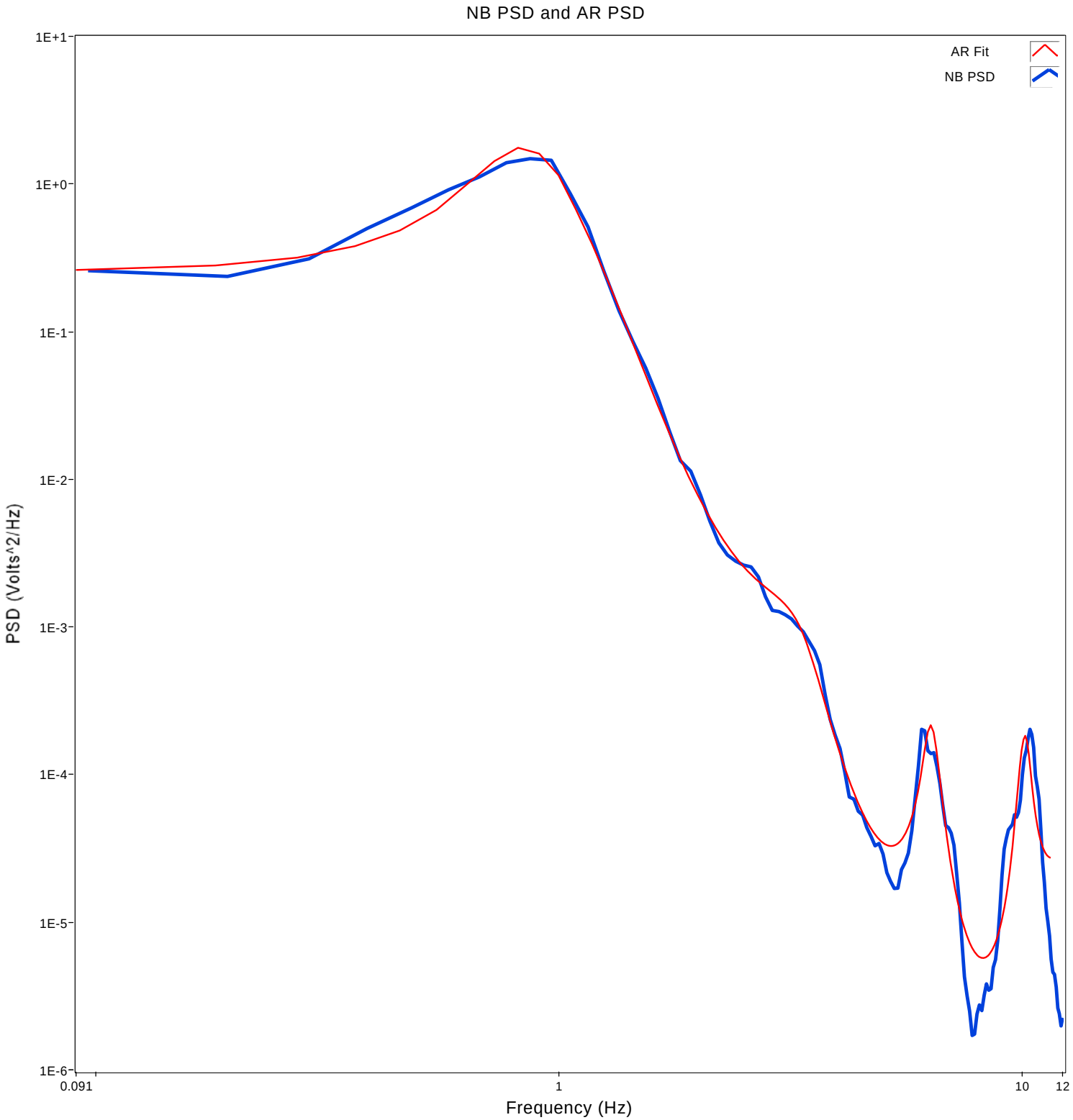
| Reactor and Unit | Tag Number | Service | Filename | Blocks : Blocksize | Trim Low Freq. (Hz) | Trim High Freq. (Hz) | AR Order | AR Method | Test Date |
|---|---|---|---|---|---|---|---|---|---|
| Farley Unit 2 | FT0496 | FW FLOW | FU2_2010-03_0007.psd | 11 : 512 | 0.010731 | 2.747169 | 20 | Least-Squares | 04-Mar-2010 14:24:12 |

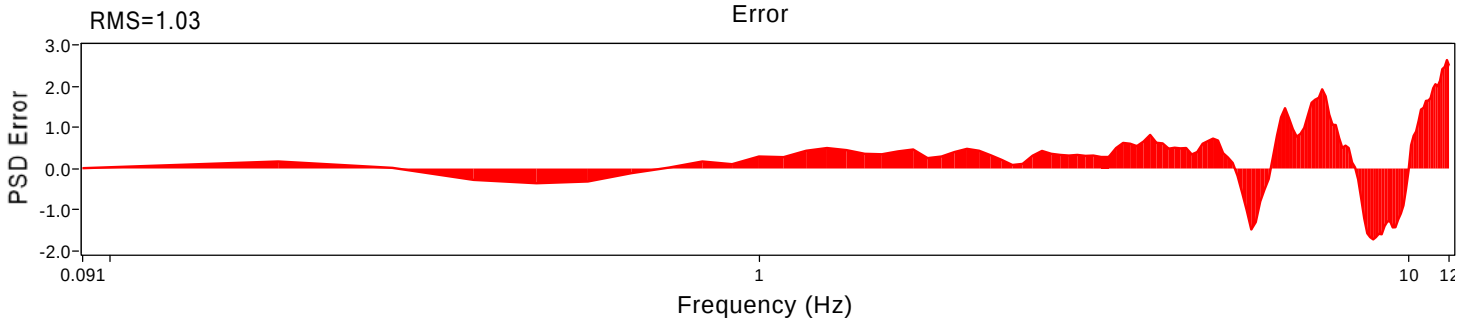


# OLM Autoregressive Fitting of Narrow Band PSD

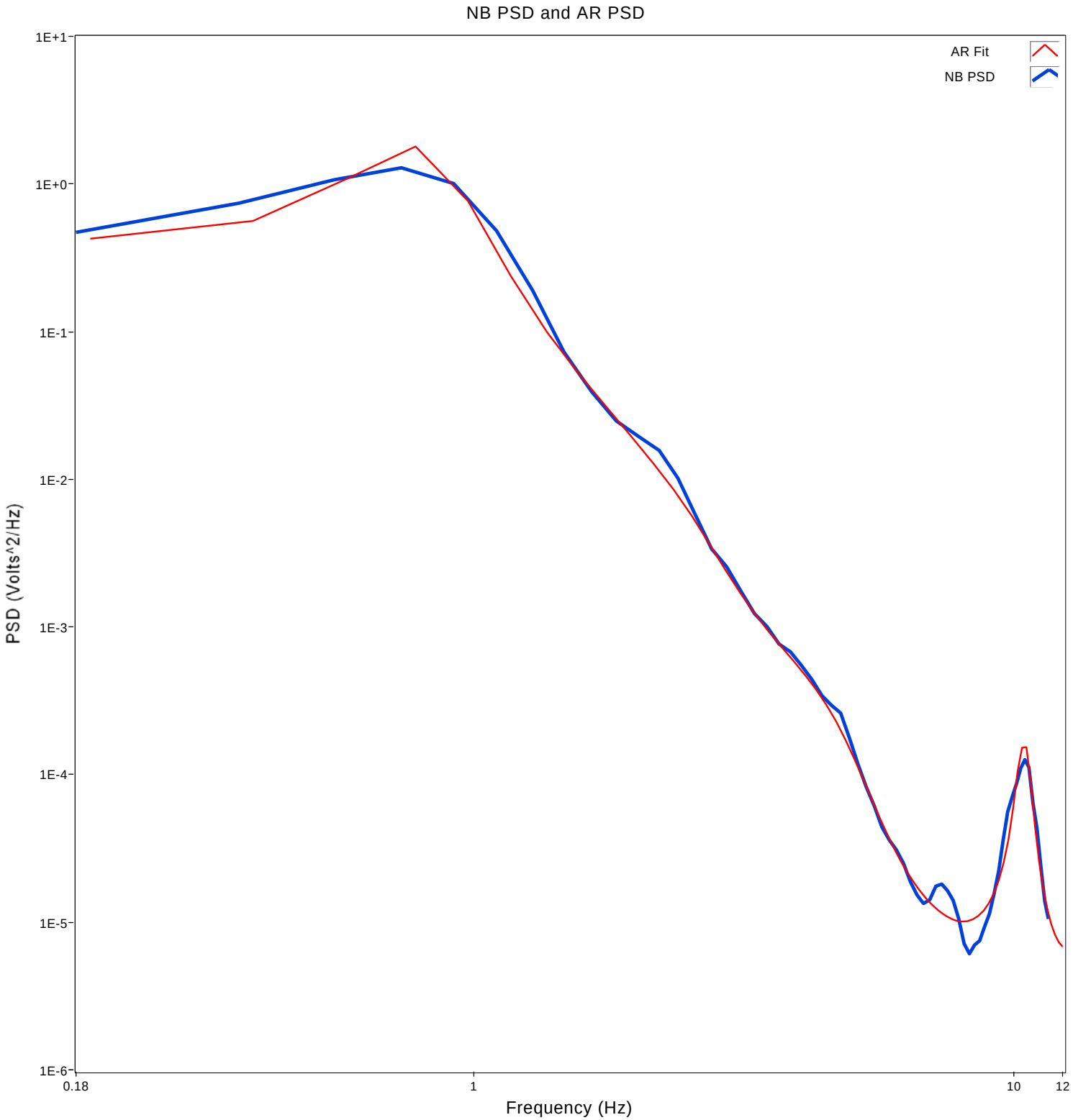
| Reactor and Unit | Tag Number | Service | Filename | Blocks : Blocksize | Trim Low Freq. (Hz) | Trim High Freq. (Hz) | AR Order | AR Method | Test Date |
|---|---|---|---|---|---|---|---|---|---|
| Farley Unit 2 | LT0476 | SG LVL | FU2_2010-03_0008.psd | 95 : 512 | 0.096448 | 12.345303 | 11 | Forward-Backward | 04-Mar-2010 14:24:12 |

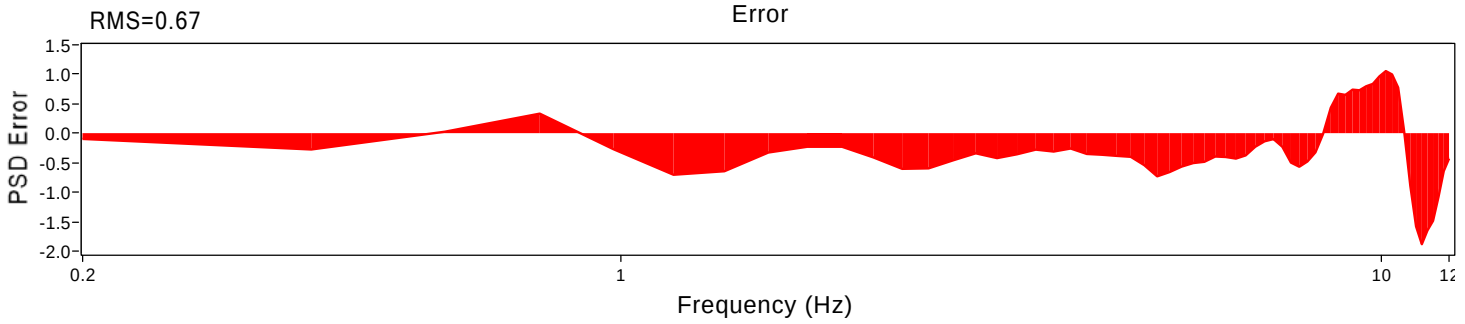


# OLM Autoregressive Fitting of Narrow Band PSD

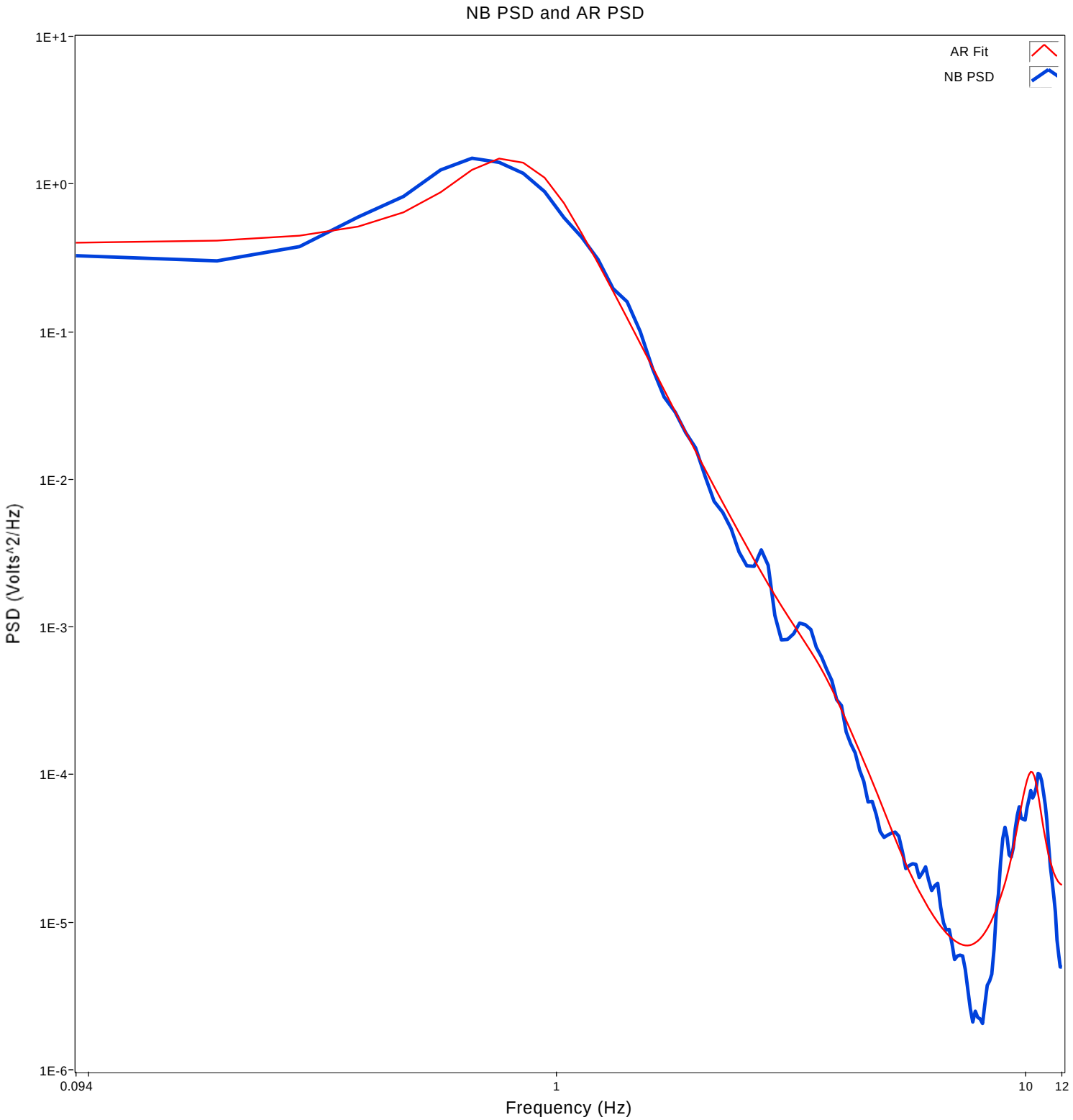
| Reactor and Unit | Tag Number | Service | Filename | Blocks : Blocksize | Trim Low Freq. (Hz) | Trim High Freq. (Hz) | AR Order | AR Method | Test Date |
|---|---|---|---|---|---|---|---|---|---|
| Farley Unit 2 | LT0486 | SG LVL | FU2_2010-03_0008.psd | 204 : 512 | 0.183818 | 11.764348 | 11 | Forward-Backward | 04-Mar-2010 14:24:12 |

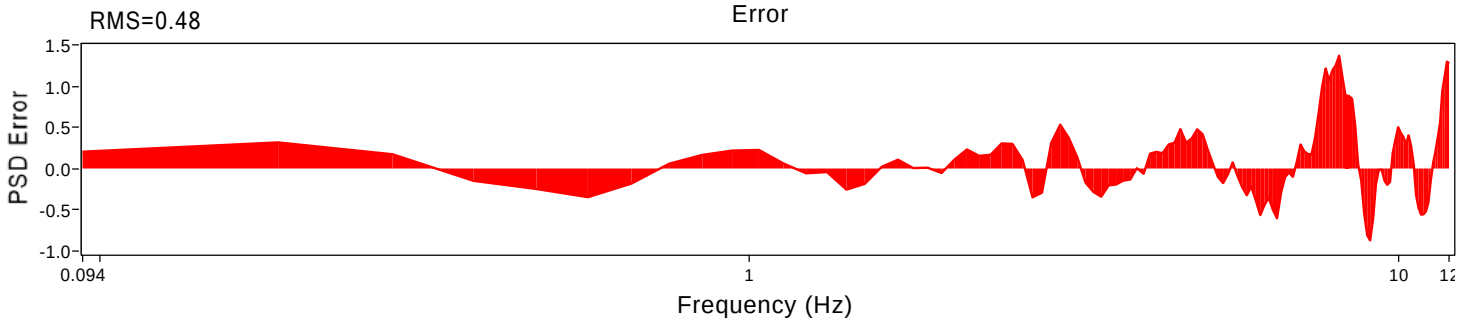


# OLM Autoregressive Fitting of Narrow Band PSD

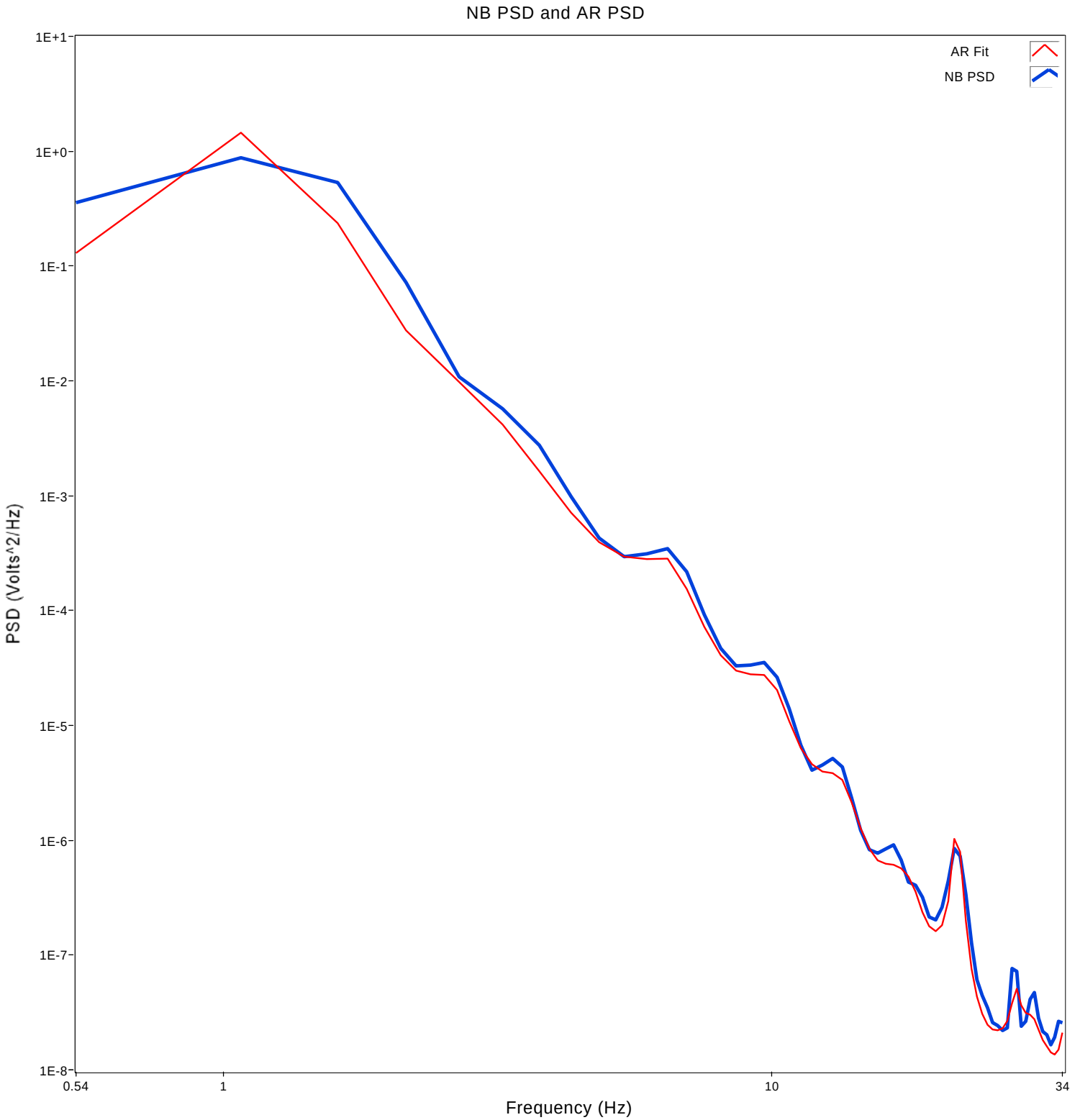
| Reactor and Unit | Tag Number | Service | Filename | Blocks : Blocksize | Trim Low Freq. (Hz) | Trim High Freq. (Hz) | AR Order | AR Method | Test Date |
|---|---|---|---|---|---|---|---|---|---|
| Farley Unit 2 | LT0496 | SG LVL | FU2_2010-03_0008.psd | 98 : 512 | 0.094124 | 12.047826 | 11 | Forward-Backward | 04-Mar-2010 14:24:12 |

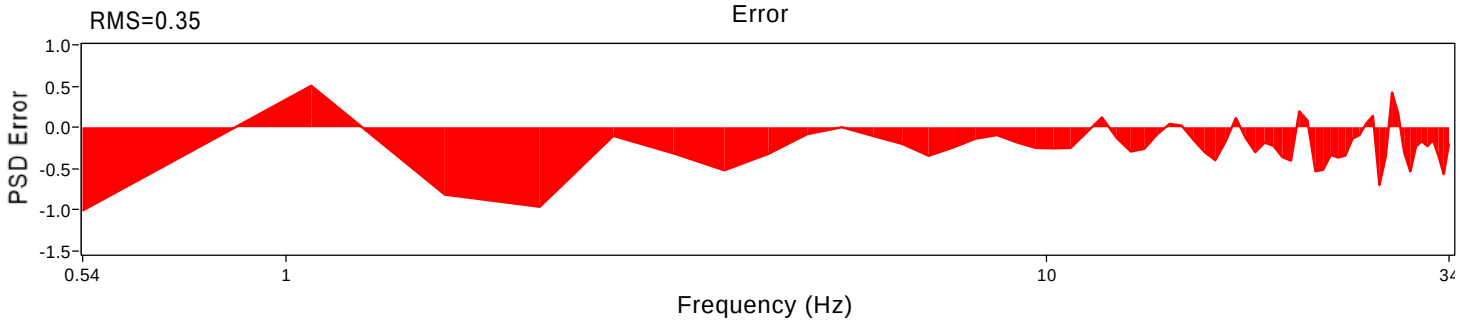


# OLM Autoregressive Fitting of Narrow Band PSD

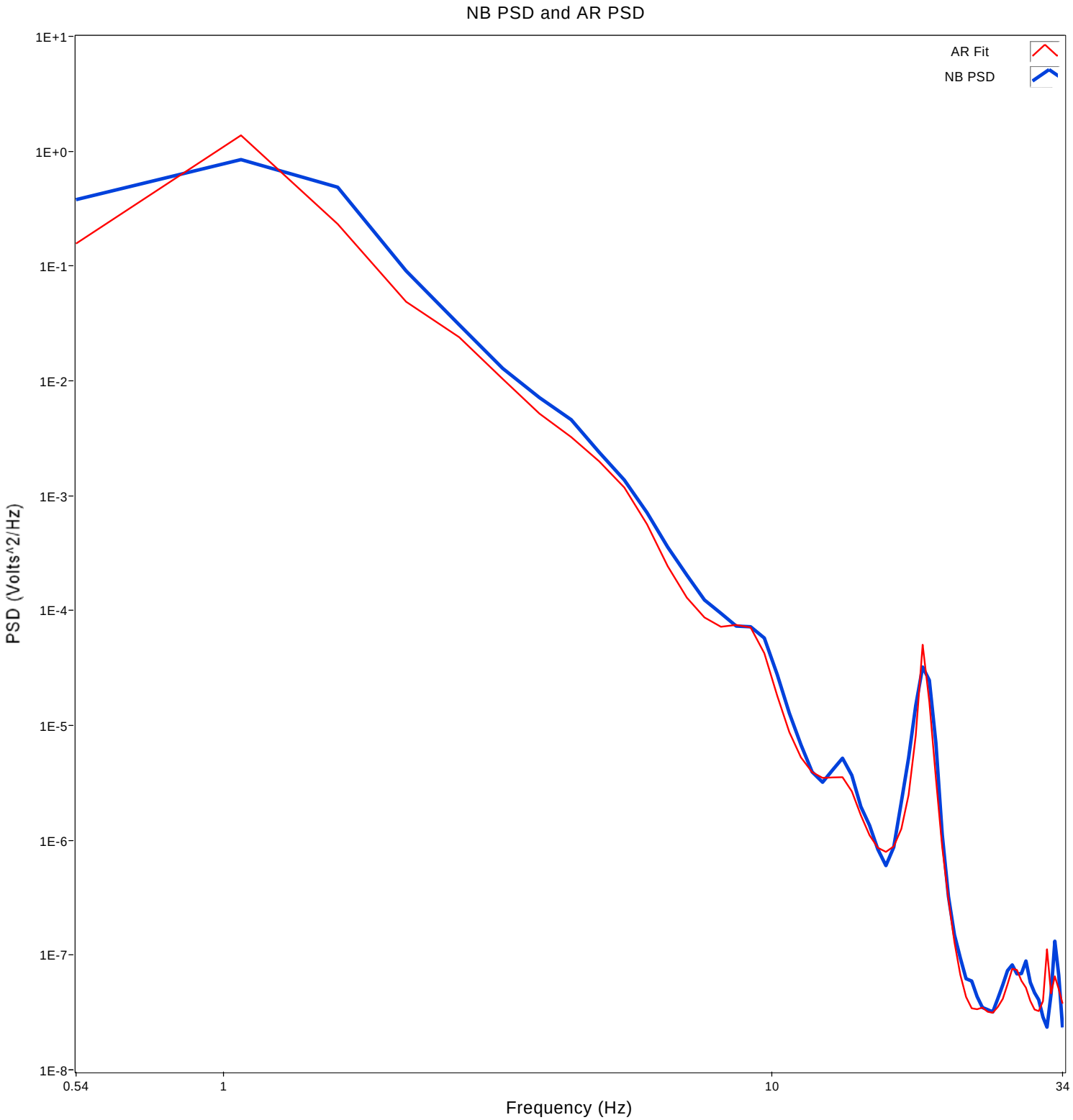
| Reactor and Unit | Tag Number | Service | Filename | Blocks : Blocksize | Trim Low Freq. (Hz) | Trim High Freq. (Hz) | AR Order | AR Method | Test Date |
|---|---|---|---|---|---|---|---|---|---|
| Farley Unit 2 | FT0474 | STM FLOW | FU2_2010-03_0008.psd | 564 : 512 | 0.538777 | 34.481708 | 20 | Least-Squares | 04-Mar-2010 14:24:12 |

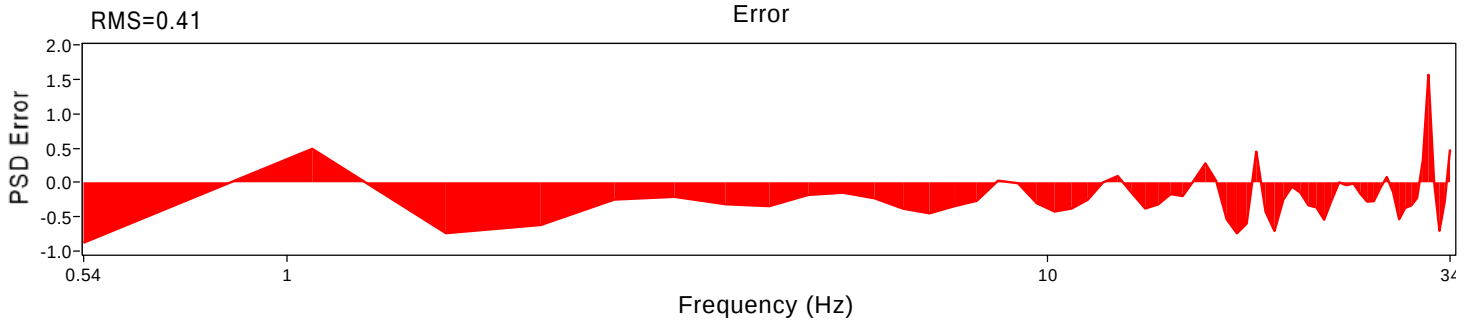


# OLM Autoregressive Fitting of Narrow Band PSD

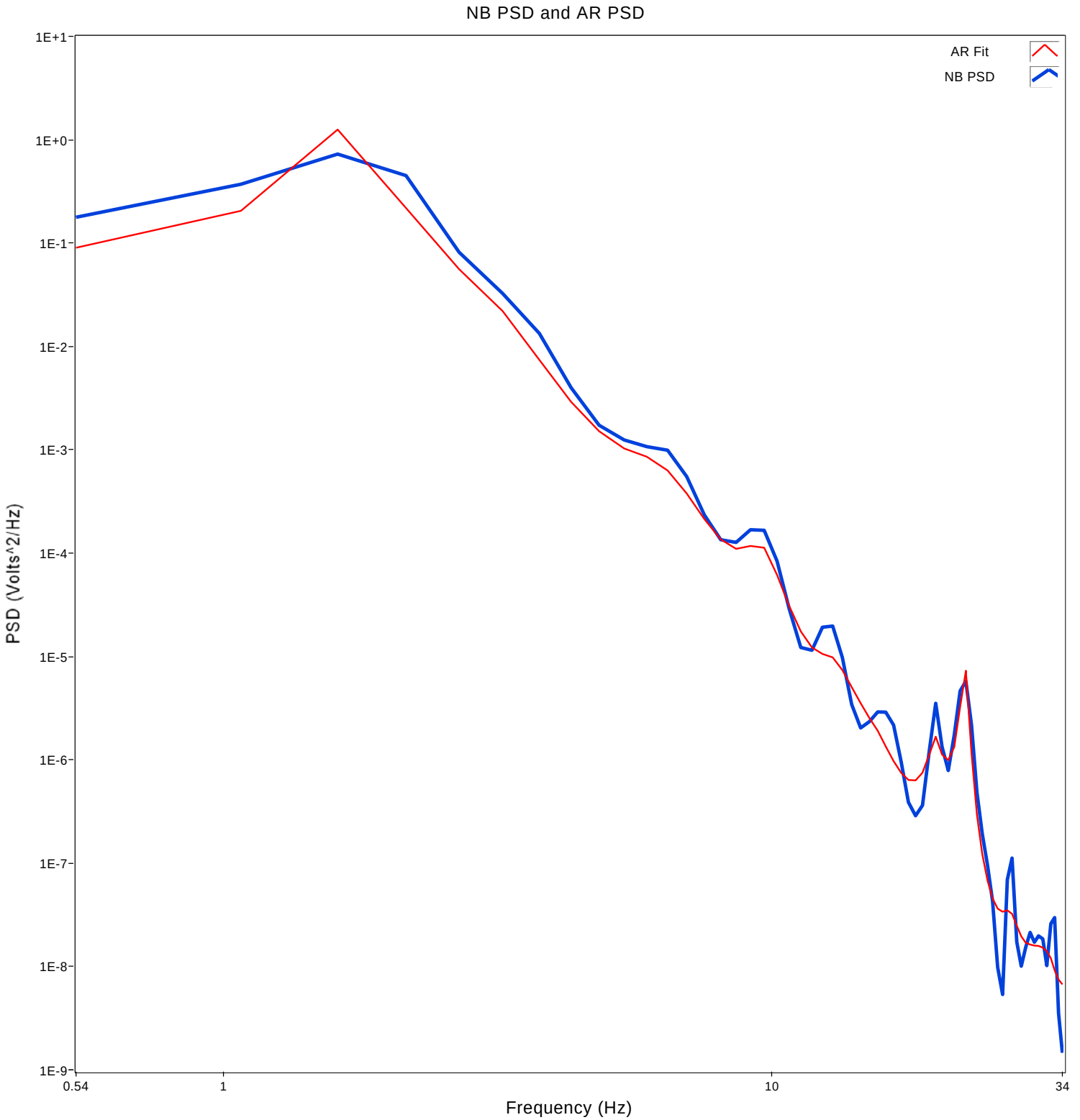
| Reactor and Unit | Tag Number | Service | Filename | Blocks : Blocksize | Trim Low Freq. (Hz) | Trim High Freq. (Hz) | AR Order | AR Method | Test Date |
|---|---|---|---|---|---|---|---|---|---|
| Farley Unit 2 | FT0484 | STM FLOW | FU2_2010-03_0008.psd | 564 : 512 | 0.538777 | 34.481708 | 18 | Least-Squares | 04-Mar-2010 14:24:12 |

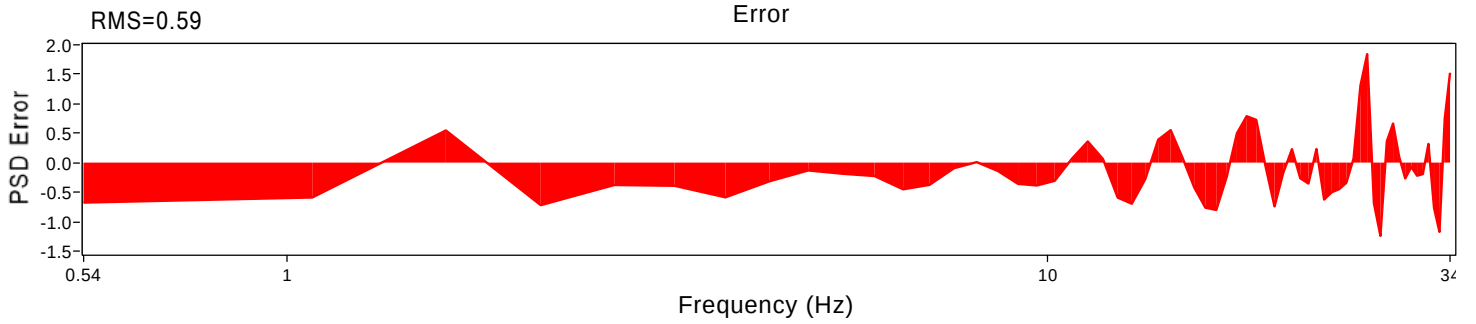


# OLM Autoregressive Fitting of Narrow Band PSD

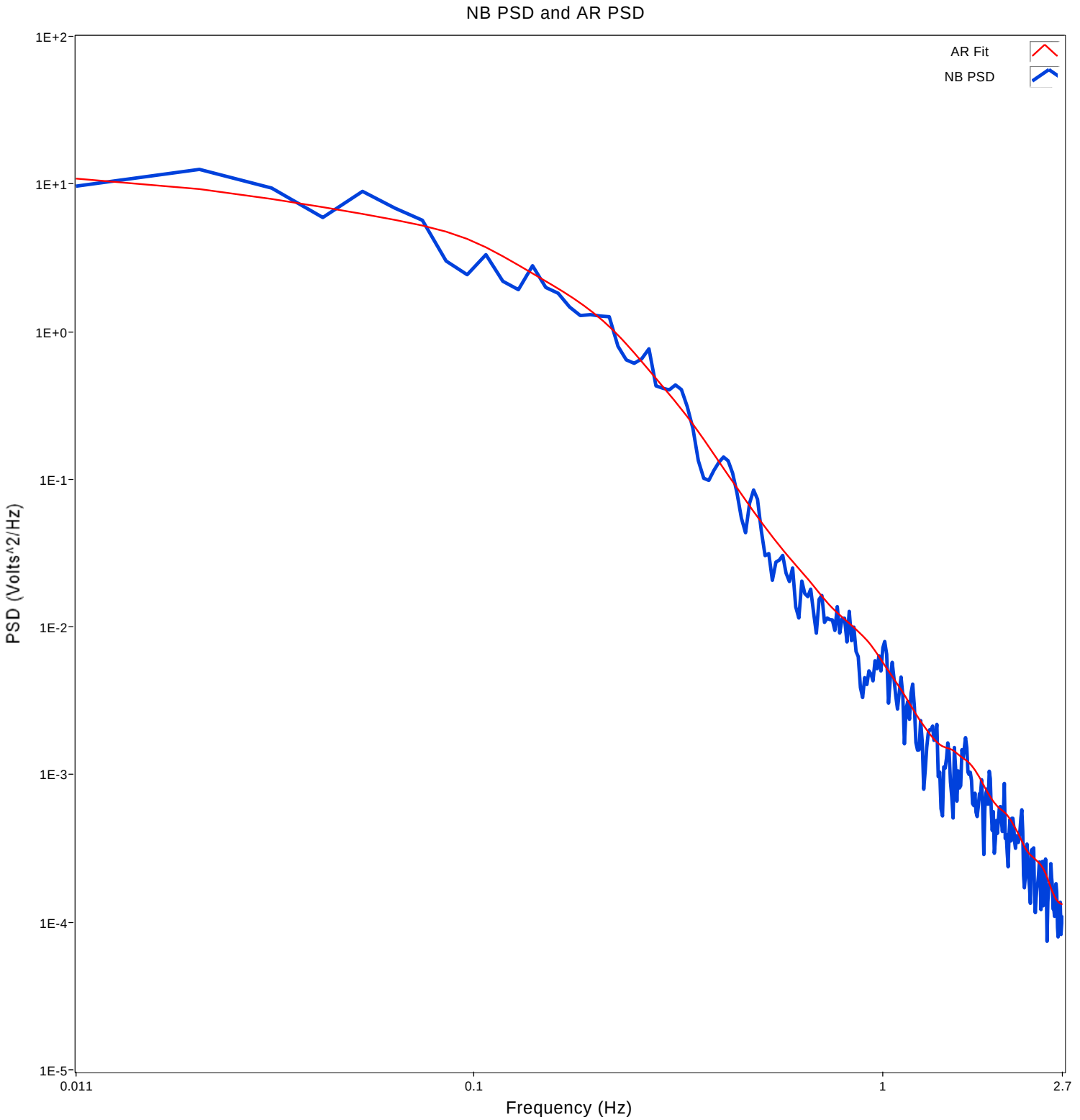
| Reactor and Unit | Tag Number | Service | Filename | Blocks : Blocksize | Trim Low Freq. (Hz) | Trim High Freq. (Hz) | AR Order | AR Method | Test Date |
|---|---|---|---|---|---|---|---|---|---|
| Farley Unit 2 | FT0494 | STM FLOW | FU2_2010-03_0008.psd | 564 : 512 | 0.538777 | 34.481708 | 19 | Least-Squares | 04-Mar-2010 14:24:12 |

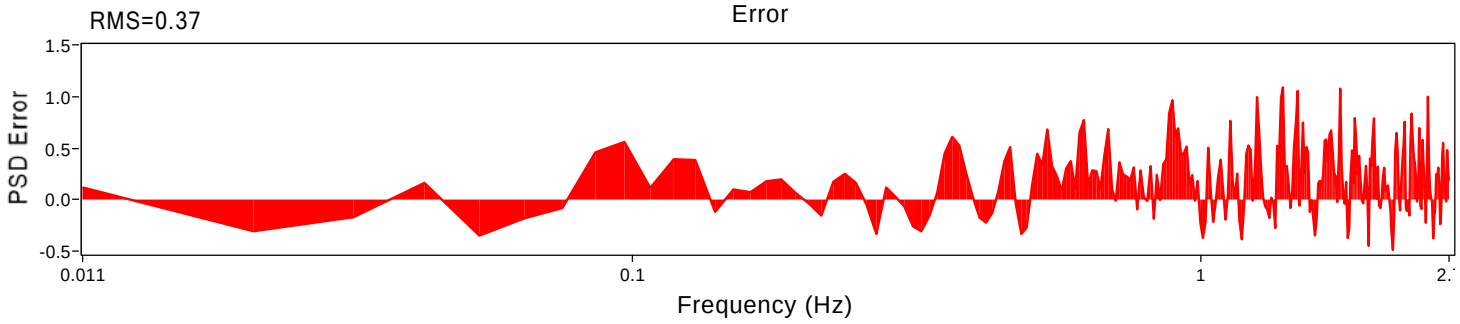


# OLM Autoregressive Fitting of Narrow Band PSD

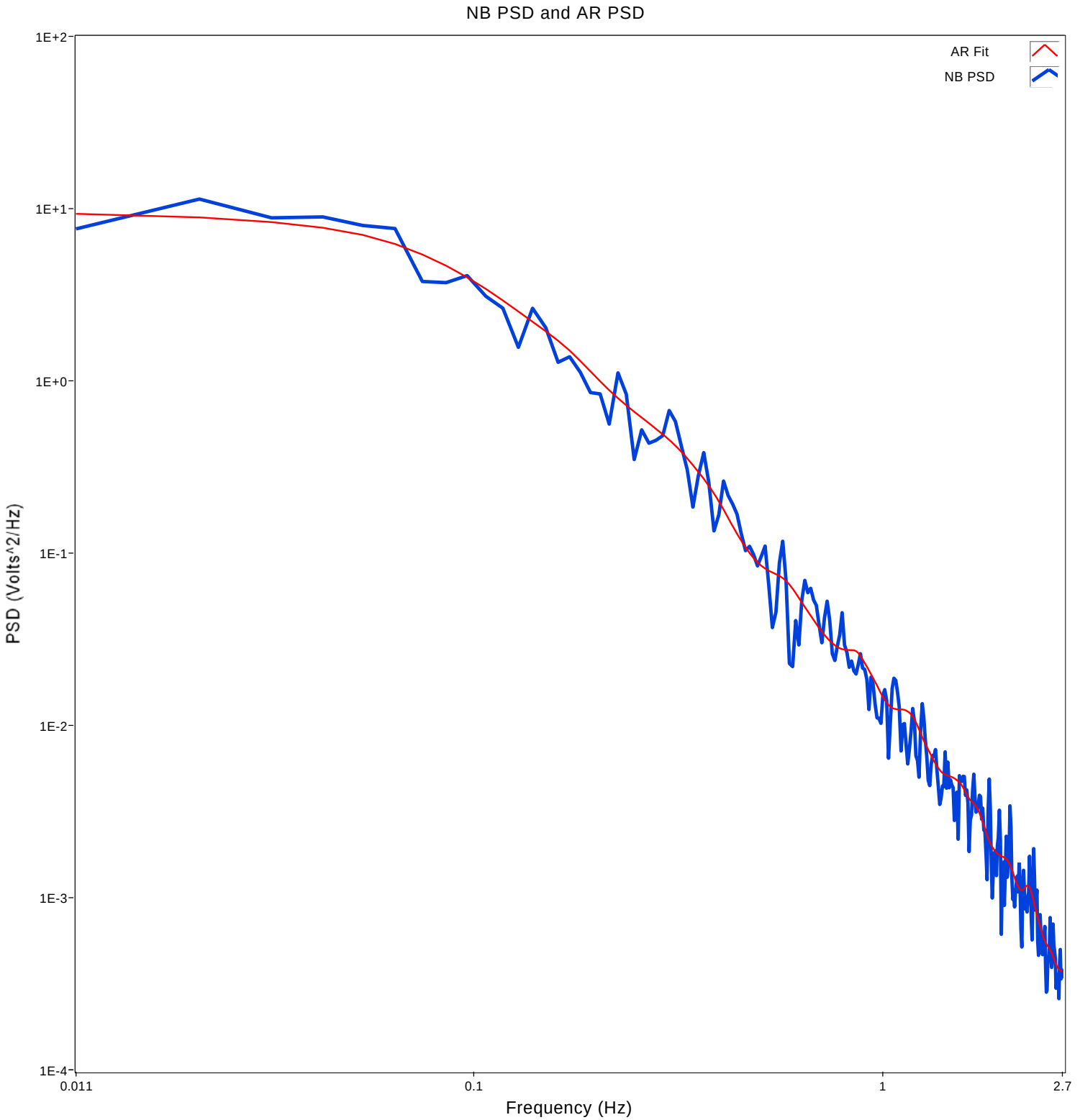
| Reactor and Unit | Tag Number | Service | Filename | Blocks : Blocksize | Trim Low Freq. (Hz) | Trim High Freq. (Hz) | AR Order | AR Method | Test Date |
|---|---|---|---|---|---|---|---|---|---|
| Farley Unit 2 | FT0477 | FW FLOW | FU2_2010-03_0008.psd | 11 : 512 | 0.010731 | 2.747169 | 17 | Least-Squares | 04-Mar-2010 14:24:12 |

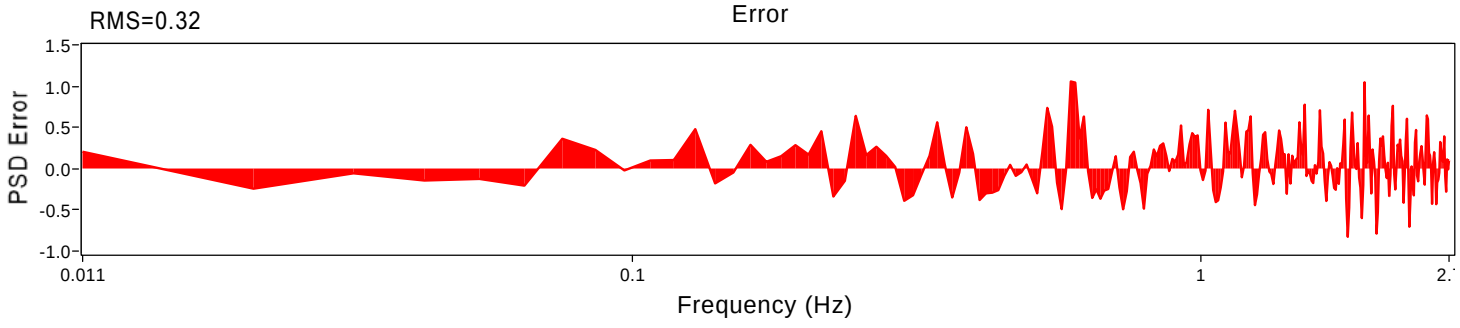


# OLM Autoregressive Fitting of Narrow Band PSD

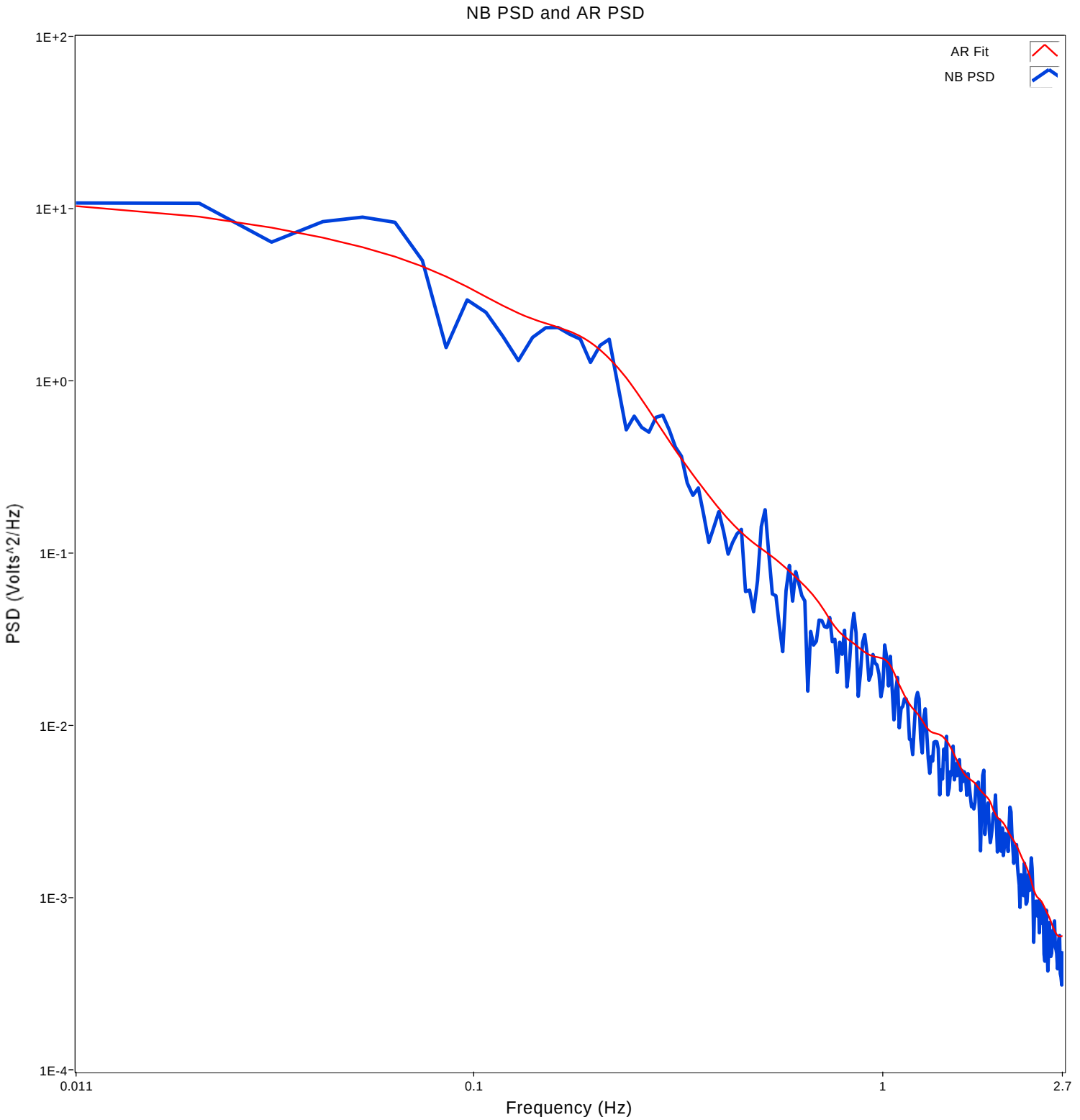
| Reactor and Unit | Tag Number | Service | Filename | Blocks : Blocksize | Trim Low Freq. (Hz) | Trim High Freq. (Hz) | AR Order | AR Method | Test Date |
|---|---|---|---|---|---|---|---|---|---|
| Farley Unit 2 | FT0487 | FW FLOW | FU2_2010-03_0008.psd | 11 : 512 | 0.010731 | 2.747169 | 21 | Least-Squares | 04-Mar-2010 14:24:12 |

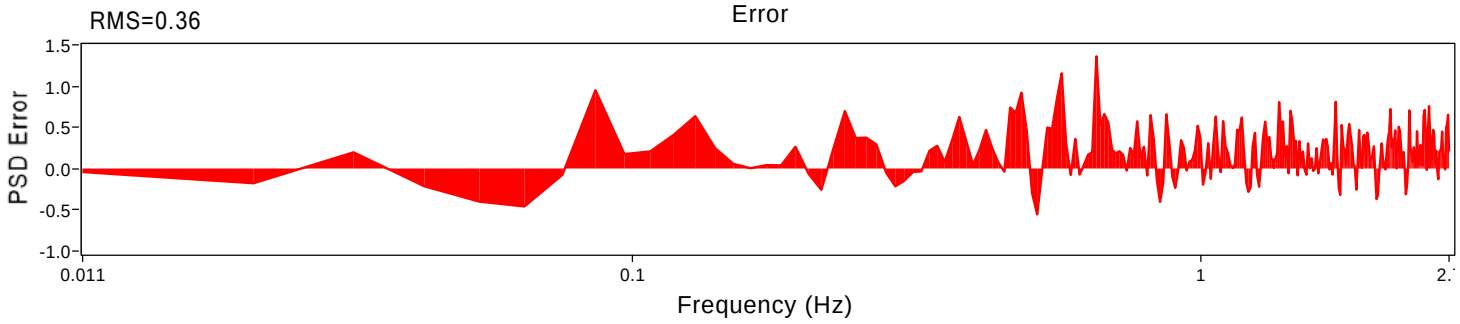


# OLM Autoregressive Fitting of Narrow Band PSD

| Reactor and Unit | Tag Number | Service | Filename | Blocks : Blocksize | Trim Low Freq. (Hz) | Trim High Freq. (Hz) | AR Order | AR Method | Test Date |
|---|---|---|---|---|---|---|---|---|---|
| Farley Unit 2 | FT0497 | FW FLOW | FU2_2010-03_0008.psd | 11 : 512 | 0.010731 | 2.747169 | 20 | Least-Squares | 04-Mar-2010 14:24:12 |



# APPENDIX E

# Farley Unit 2 OLM Results (Cycle 21)

| Item | Tagname | Service | 14 May 2010 | 21 Jun 2010 | 18 Jul 2010 | 17 Aug 2010 | 15 Sep 2010 | 1 Nov 2010 | 9 Nov 2010 | 28 Nov 2010 | 22 Dec 2010 | 1 Jan 2011 | 24 Jan 2011 | 17 Feb 2011 | 8 Mar 2011 | 10 Mar 2011 | 24 Apr 2011 | 30 May 2011 | 11 Jun 2011 | 19 Jul 2011 | 25 Jul 2011 | Drift | Final | Comment |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | FE0474B | SG A STEAM FLOW | R | | | | | | | | | | | | | | | | | | | | PASS | Only out in low range transient |
| 2 | FE0475B | SG A STEAM FLOW | R | | | | | | | | | | | | | | | | | | | | PASS | Only out in low range transient |
| | | | | | | | | | | | | | | | | | | | | | | | | |
| 3 | FE0476B | FW FLOW TO SG A | | | | | | | | | | | | | | | | | | | | | PASS | |
| 4 | FE0477B | FW FLOW TO SG A | | | | | | | | | | | | | | | | | | | | | PASS | |
| | | | | | | | | | | | | | | | | | | | | | | | | |
| 5 | LT0474 | SG A NARROW RANGE LEVEL | | | | | | | | | | | | | | | | | | | | | PASS | |
| 6 | LT0475 | SG A NARROW RANGE LEVEL | | | | | | | | | | | | | | | | | | | | | PASS | |
| 7 | LT0476 | SG A NARROW RANGE LEVEL | | | | | | | | | R | R | R,M | | | | | | | | | D | FAIL | Drift high over cycle |
| 8 | LT0477 | SG A WIDE RANGE LEVEL | | | | | | | | | | | | | | | | | | | | | PASS | |
| | | | | | | | | | | | | | | | | | | | | | | | | |
| 9 | PT0474 | SG A OUTLET PRESSURE | | | | | | | | | | | | | | | | | | | | | PASS | |
| 10 | PT0475 | SG A OUTLET PRESSURE | | | | | | | | | | | | | | | | | | | | | PASS | |
| 11 | PT0476 | SG A OUTLET PRESSURE | | | | | | | | | | | | | | | | | | | | | PASS | |
| | | | | | | | | | | | | | | | | | | | | | | | | |
| 12 | FE0484B | SG B STEAM FLOW | R | | | | | | | | | | | | | | | | | | | | PASS | Only out in low range transient |
| 13 | FE0485B | SG B STEAM FLOW | R | | | | | | | | | | | | | | | | | | | | PASS | Only out in low range transient |
| | | | | | | | | | | | | | | | | | | | | | | | | |
| 14 | FE0486B | FW FLOW TO SG B | | | | | | | | | | | | | | | | | | | | | PASS | |
| 15 | FE0487B | FW FLOW TO SG B | | | | | | | | | | | | | | | | | | | | | PASS | |
| | | | | | | | | | | | | | | | | | | | | | | | | |
| 16 | LT0484 | SG B NARROW RANGE LEVEL | | | | | | | | | | | | | | | | | | | | | PASS | |
| 17 | LT0485 | SG B NARROW RANGE LEVEL | R | | | | | | | | | | | | | | | | | | | | PASS | High bias in startup transient. |
| 18 | LT0486 | SG B NARROW RANGE LEVEL | | | | | | | | | | | | | | | | | | | | | PASS | |
| 19 | LT0487 | SG B WIDE RANGE LEVEL | | | | | | | | | | | | | | | | | | | | | PASS | |
| | | | | | | | | | | | | | | | | | | | | | | | | |
| 20 | PT0484 | SG B OUTLET PRESSURE | | | | | | | | | | | | | | | | | | | | | PASS | |
| 21 | PT0485 | SG B OUTLET PRESSURE | | | | | | | | | | | | | | | | | | | | | PASS | |
| 22 | PT0486 | SG B OUTLET PRESSURE | | | | | | | | | | | | | | | | | | | | | PASS | |
| | | | | | | | | | | | | | | | | | | | | | | | | |
| 23 | FE0494B | SG C STEAM FLOW | R | | | | | | | | | M | M | R | | | | | | | | | PASS | Out in low range transient. |
| 24 | FE0495B | SG C STEAM FLOW | R | | | | | | | M | M | M | M | R | M | M | M | M | M | M | M | | FAIL | Out in low range transient. Low drift during cycle. |
| | | | | | | | | | | | | | | | | | | | | | | | | |
| 25 | FE0496B | FW FLOW TO SG C | | | | | | | | | | | | | | | | | | | | | PASS | |
| 26 | FE0497B | FW FLOW TO SG C | | | | | | | | | | | | | | | | | | | | | PASS | |
| | | | | | | | | | | | | | | | | | | | | | | | | |
| 27 | LT0494 | SG C NARROW RANGE LEVEL | | | | | | | | | | | | | | | | | | | | | PASS | |
| 28 | LT0495 | SG C NARROW RANGE LEVEL | | | | | | | | | | | | R,M | R,M | R,M | | R | R | R | R | D | PASS | Low drift between Feb 2011 and Mar 2011. |
| 29 | LT0496 | SG C NARROW RANGE LEVEL | R | | | | | | | | | | | | | | | | | | | | FAIL | Low bias in startup transient. |
| 30 | LT0497 | SG C WIDE RANGE LEVEL | | | | | | | | | | | | | | | | | | | | | PASS | |

*R = Exceeded Redundant Sensor Analysis Limits  M = Exceeded Model Analysis Limits  D = Exceeded Drift Limits*

**Table E.1 Farley Unit 2 OLM Results Summary (Cycle 21)**

| Item | Tagname | Service | 14 May 2010 | 21 Jun 2010 | 18 Jul 2010 | 17 Aug 2010 | 15 Sep 2010 | 1 Nov 2010 | 9 Nov 2010 | 28 Nov 2010 | 22 Dec 2010 | 1 Jan 2011 | 24 Jan 2011 | 17 Feb 2011 | 8 Mar 2011 | 10 Mar 2011 | 24 Apr 2011 | 30 May 2011 | 11 Jun 2011 | 19 Jul 2011 | 25 Jul 2011 | Drift | Final | Comment |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 31 | PT0494 | SG C OUTLET PRESSURE | | | | | | | | | | | | | | | | | | | | | PASS | |
| 32 | PT0495 | SG C OUTLET PRESSURE | | | | | | | | | | | | | | | | | | | | | PASS | |
| 33 | PT0496 | SG C OUTLET PRESSURE | | | | | | | | | | | | | | | | | | | | | PASS | |
| | | | | | | | | | | | | | | | | | | | | | | | | |
| 34 | LT0459 | PRESSURIZER LEVEL | R | | | | | | | | R | R | R | R | R | R | R | R | R | R | R | | FAIL | High bias. |
| 35 | LT0460 | PRESSURIZER LEVEL | | | | | | | | | | | | | | | | | | | | | PASS | |
| 36 | LT0461 | PRESSURIZER LEVEL | | | | | | | | | | | | | | | | | | | | | PASS | |
| | | | | | | | | | | | | | | | | | | | | | | | | |
| 37 | PT0455 | PRESSURIZER PRESSURE | R | R | R | R | R | M | M | M | R,M | R,M | R,M | R | | | | R | R | R | R | D | FAIL | High bias in transient. Drift during cycle possibly environmental effect. |
| 38 | PT0456 | PRESSURIZER PRESSURE | | R | R | R | R | R | R | R | R,M | R | R,M | M | M | M | M | M | M | M | M | D | PASS | Drifts high at start of cycle, but adjusted mid-cycle. |
| 39 | PT0457 | PRESSURIZER PRESSURE | | | | | | M | M | M | R,M | R,M | R,M | | | | | | | | | D | PASS | Drift during cycle possibly environmental effect. |
| 40 | PT0444A | PRESSURIZER PRESSURE | | | | | | | | | | | | | | | | | | | | | PASS | |
| 41 | PT0445A | PRESSURIZER PRESSURE | | | | | | | | | | | | | | | | | | | | | PASS | |
| | | | | | | | | | | | | | | | | | | | | | | | | |
| 42 | FE0414 | RCS LOOP A FLOW | | | | | | | | | | | | | | | | | | | | | PASS | |
| 43 | FE0415 | RCS LOOP A FLOW | | | | | | | | | | | | | | | | | | | | | PASS | |
| 44 | FE0416 | RCS LOOP A FLOW | | | | | | | | | | | | | | | | | | | | | PASS | |
| | | | | | | | | | | | | | | | | | | | | | | | | |
| 45 | FE0424 | RCS LOOP B FLOW | | | | | | | | | | | | | | | | | | | | | PASS | |
| 46 | FE0425 | RCS LOOP B FLOW | | | | | | | | | | | | | | | | | | | | | PASS | |
| 47 | FE0426 | RCS LOOP B FLOW | | | | | | | | | | | | | | | | | | | | | PASS | |
| | | | | | | | | | | | | | | | | | | | | | | | | |
| 48 | FE0434 | RCS LOOP C FLOW | R | R | R | R | R | R | R | R | R | R | R | R | R | R | R | R | R | R | R | | PASS | Low bias. |
| 49 | FE0435 | RCS LOOP C FLOW | | | | | | | | | | | | | | | | | | | | | PASS | |
| 50 | FE0436 | RCS LOOP C FLOW | | | | | | | | | | | | | | | | | | | | | PASS | |
| | | | | | | | | | | | | | | | | | | | | | | | | |
| 51 | PT0402 | RCS WIDE RANGE PRESSURE LOOP C | | | | | | | | | | | | | | | | | | | | | PASS | |
| 52 | PT0403 | RCS WIDE RANGE PRESSURE LOOP A | | | | | | | | | | | | | | | | | | | | | PASS | |
| | | | | | | | | | | | | | | | | | | | | | | | | |
| 53 | PT0446 | TURBINE FIRST STAGE PRESSURE | | | | | | | | | | | | | | | | | | | | | PASS | |
| 54 | PT0447 | TURBINE FIRST STAGE PRESSURE | | | | | | | | | | | | | | | | | | | | | PASS | |
| | | | | | | | | | | | | | | | | | | | | | | | | |
| 55 | LT0501 | RWST LEVEL | | | | | | | | | | | | | | | | | | | | | PASS | |
| 56 | LT0502 | RWST LEVEL | | | | | | | | | | | | | | | | | | | | | PASS | |
| | | | | | | | | | | | | | | | | | | | | | | | | |
| 57 | PT0951 | CTMT PRESSURE | | | | | | | | | | | | | | | | | | | | | PASS | |
| 58 | PT0952 | CTMT PRESSURE | | | | | | | | | | | | | | | | | | | | | PASS | |
| 59 | PT0953 | CTMT PRESSURE | | | | | | | | | | | | | | | | | | | | | PASS | |
| | | | | | | | | | | | | | | | | | | | | | | | | |
| 60 | PT0950Y | CTMT PRESSURE EXTENDED RANGE | | | | | | | | | | | | | | | | | | | | | PASS | |
| 61 | PT0950Z | CTMT PRESSURE EXTENDED RANGE | | | | | | | | | | | | | | | | | | | | | PASS | |

*R = Exceeded Redundant Sensor Analysis Limits  M = Exceeded Model Analysis Limits  D = Exceeded Drift Limits*

**Table E.1 (continued) Farley Unit 2 OLM Results Summary (Cycle 21)**

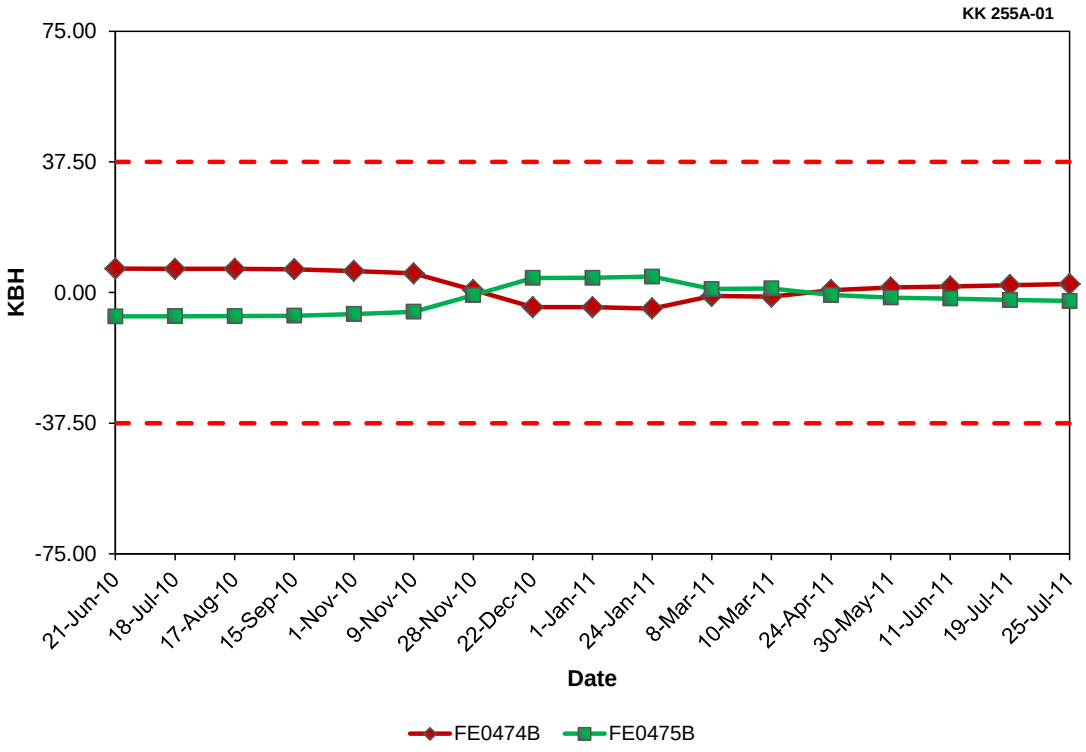



**Figure E.1 SG A STEAM FLOW Steady-State Deviation at Farley Unit 2 (Cycle 21)**

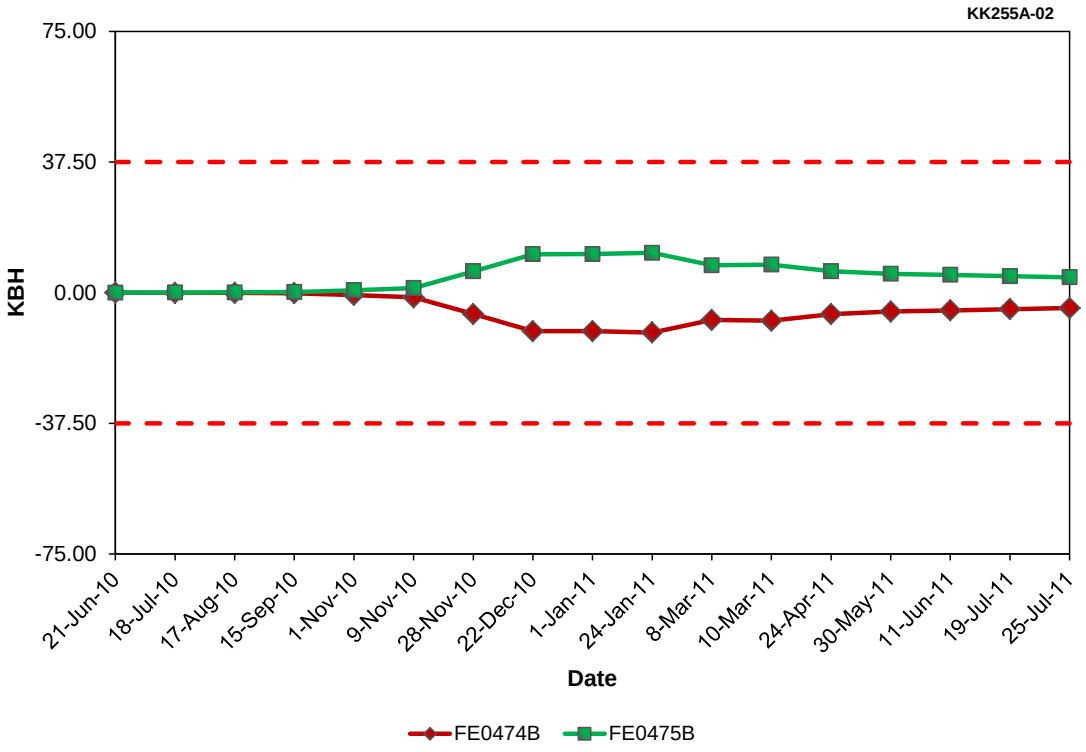



**Figure E.2 SG A STEAM FLOW Steady-State Drift at Farley Unit 2 (Cycle 21)**

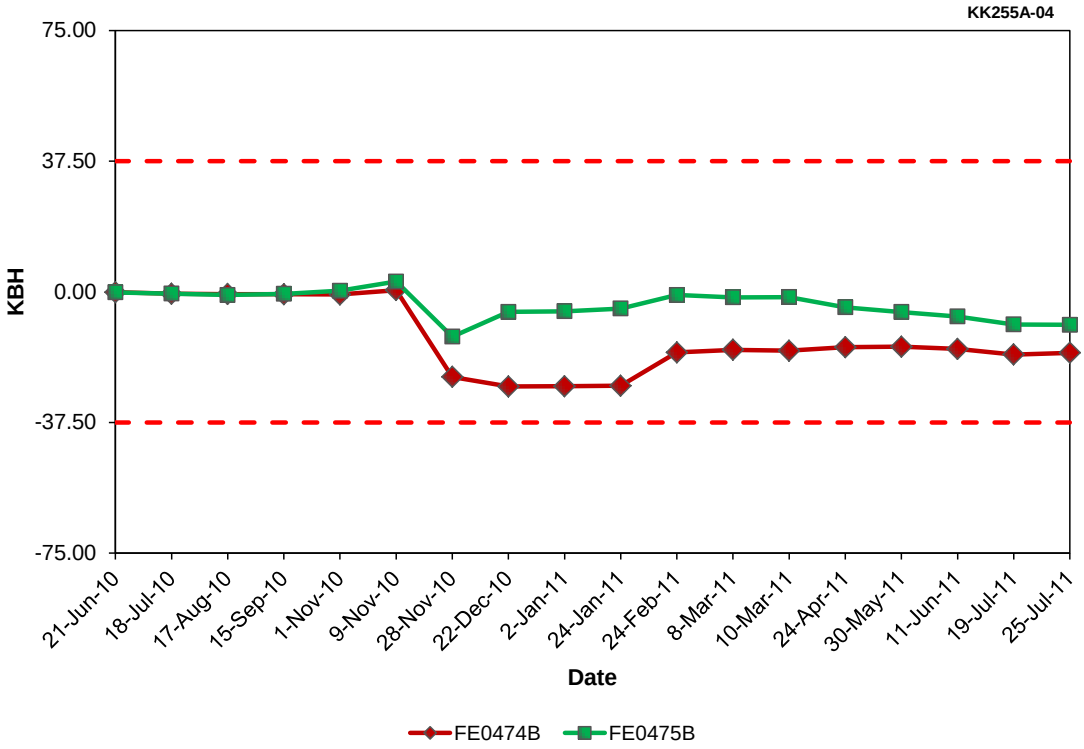



**Figure E.3 SG A STEAM FLOW Steady-State Residual AAKR at Farley Unit 2 (Cycle 21)**

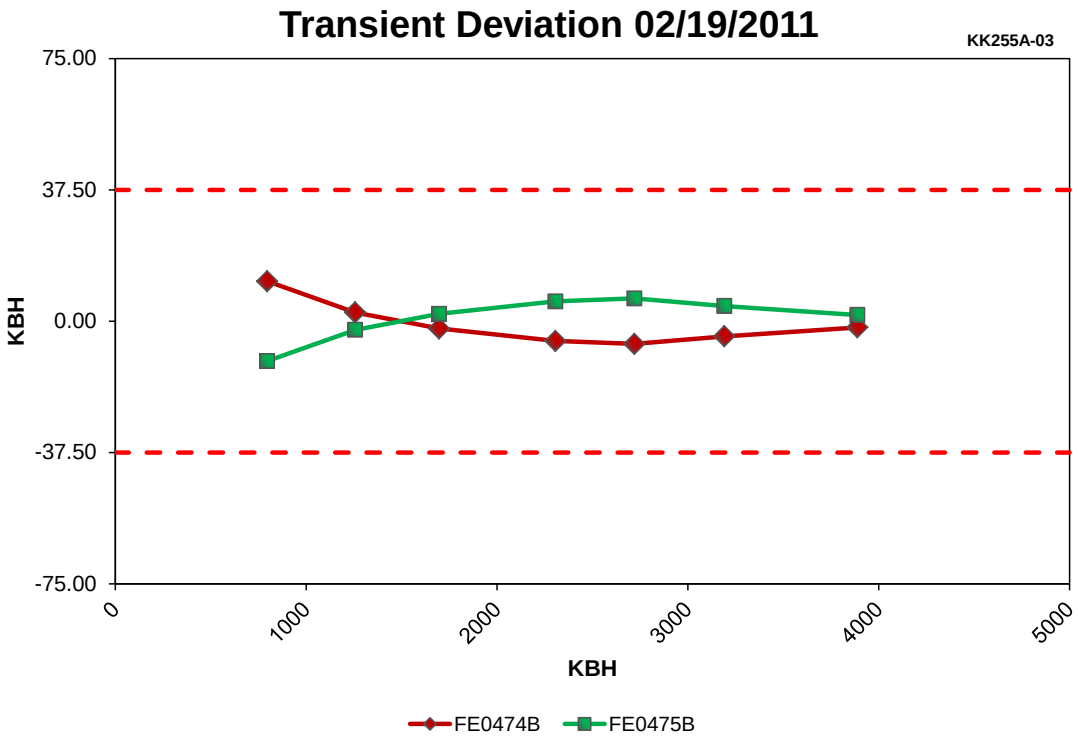



**Figure E.4 SG A STEAM FLOW Transient Deviation at Farley Unit 2 (Cycle 21)**

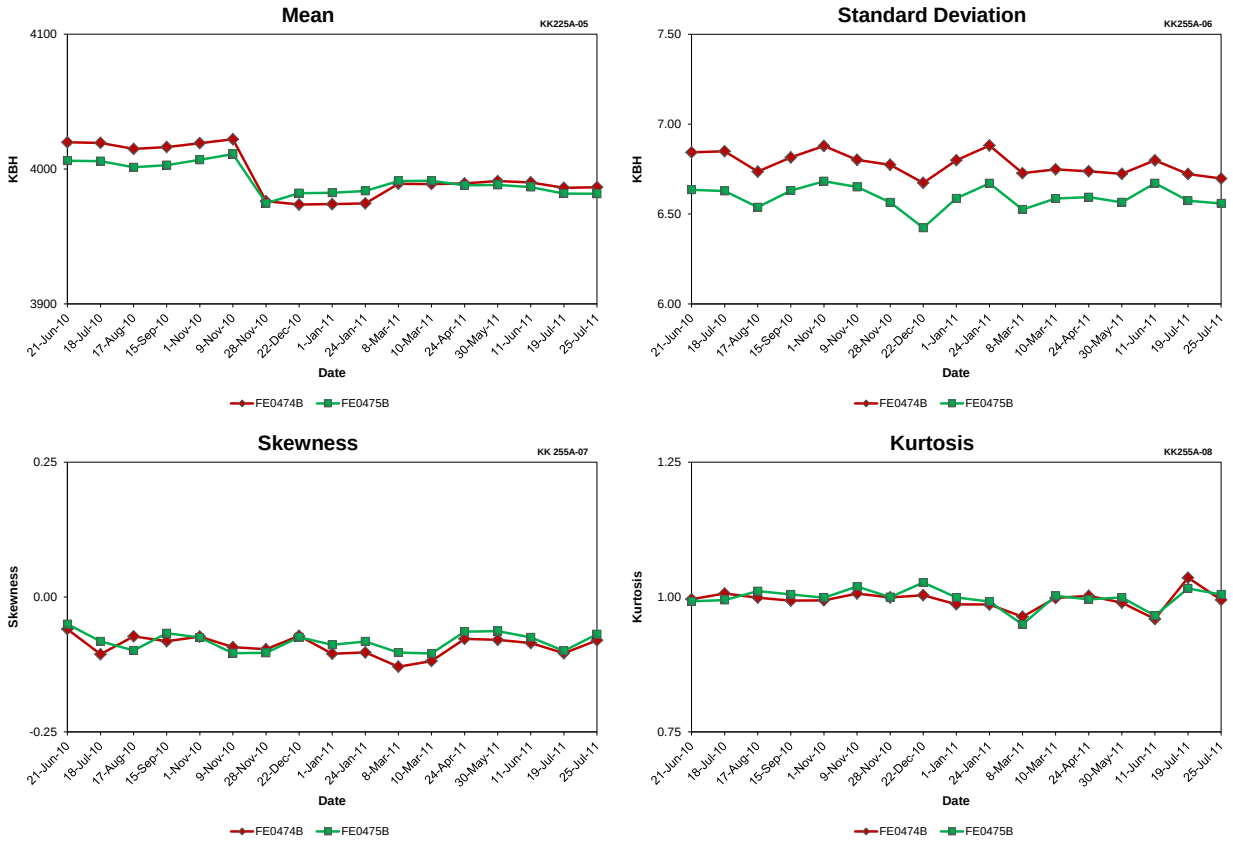



**Figure E.5 SG A STEAM FLOW Data Quality Statistics at Farley Unit 2 (Cycle 21)**

**Table E.1 SG A STEAM FLOW Data Quality for Farley Unit 2 (Cycle 21)**

| | Tag Names | |
|---|---|---|
| Result Type | FE0474B | FE0475B |
| Mean | 3995.91 | 3992.07 |
| Std. Dev. | 6.78 | 6.59 |
| Skewness | -0.09 | -0.08 |
| Kurtosis | 0.99 | 1.00 |

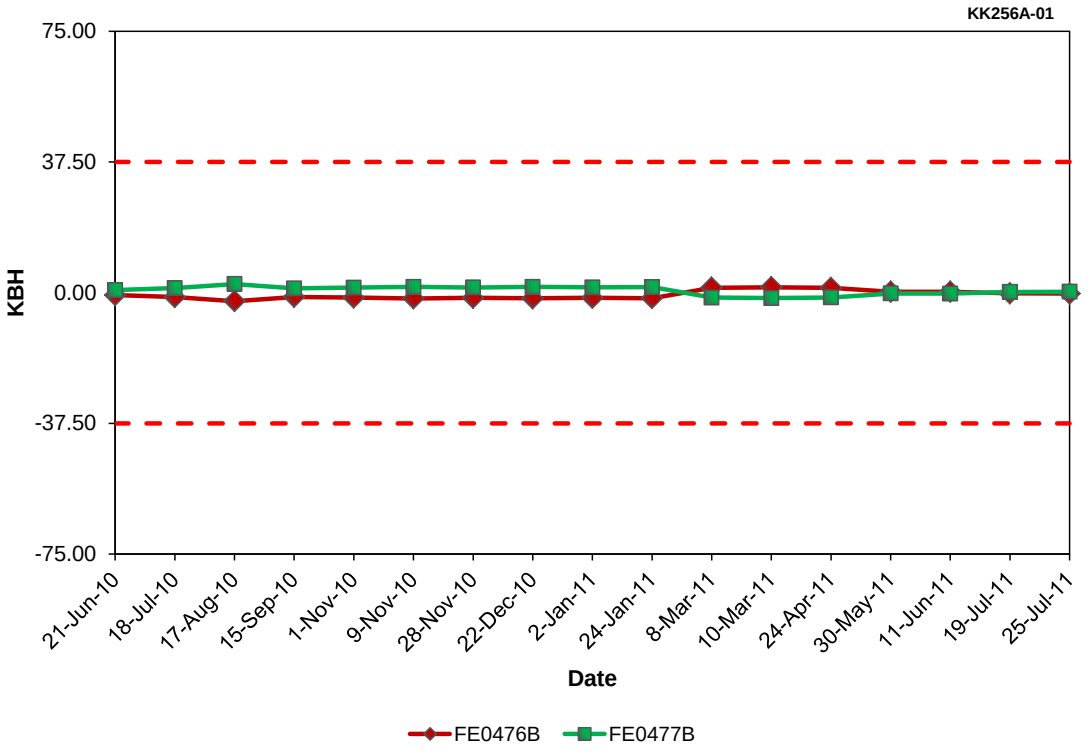



**Figure E.6 FW FLOW TO SG A Steady-State Deviation at Farley Unit 2 (Cycle 21)**

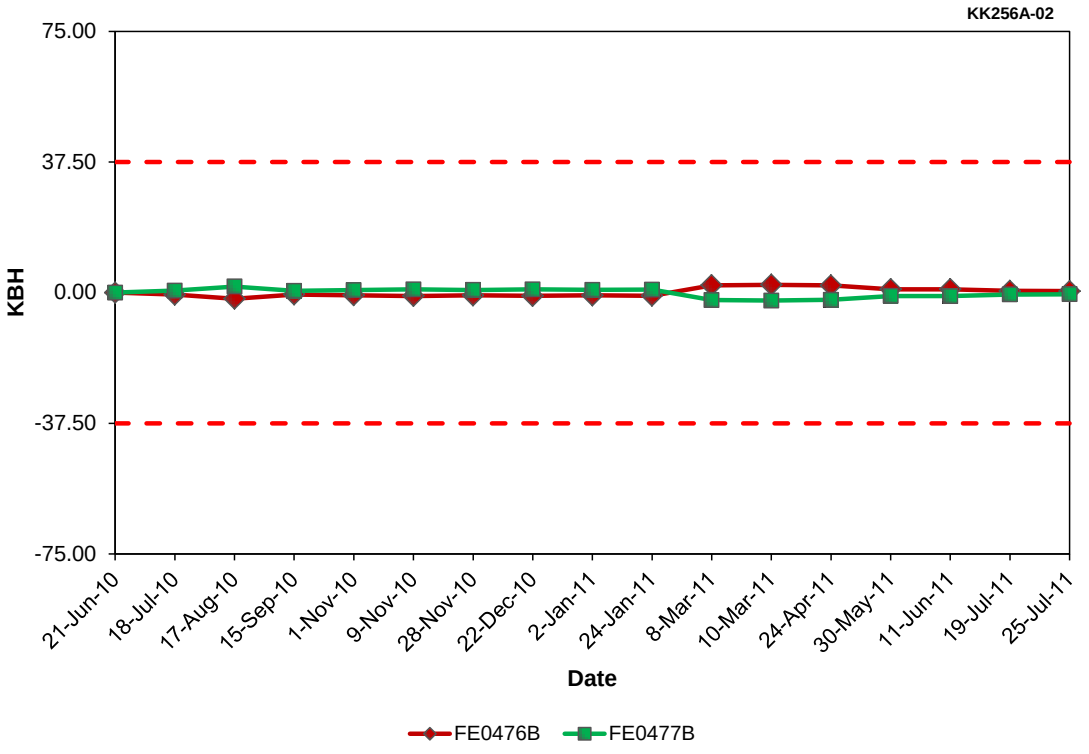



**Figure E.7 FW FLOW TO SG A Steady-State Drift at Farley Unit 2 (Cycle 21)**

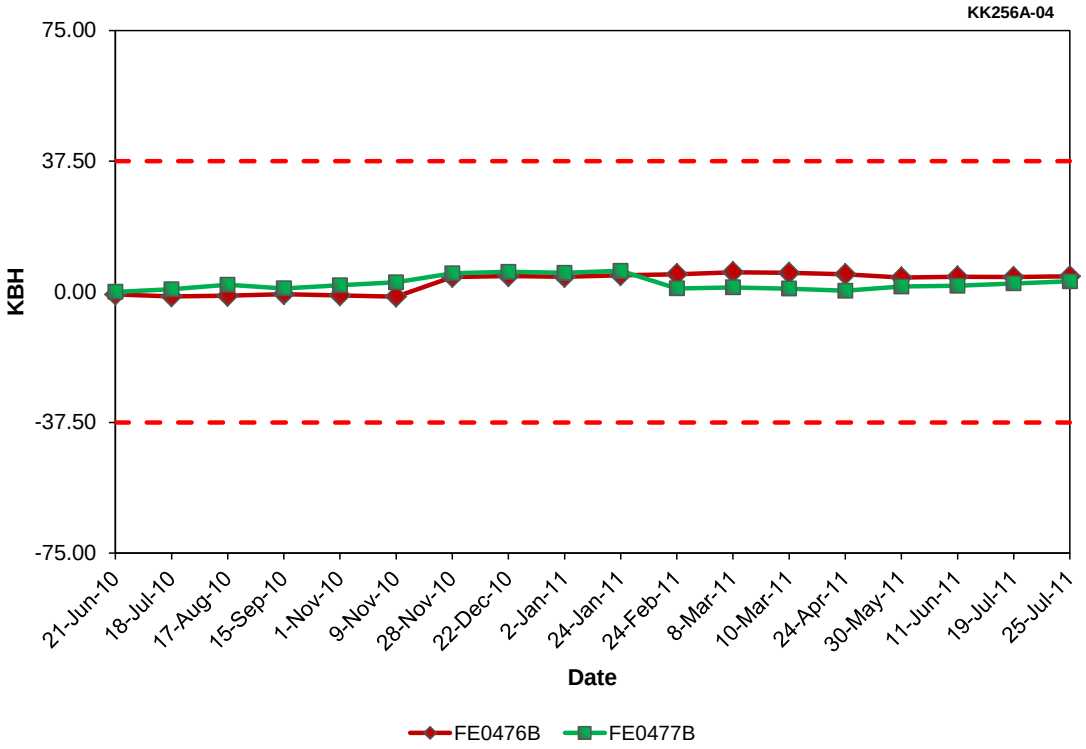



**Figure E.8 FW FLOW TO SG A Steady-State Residual AAKR at Farley Unit 2 (Cycle 21)**

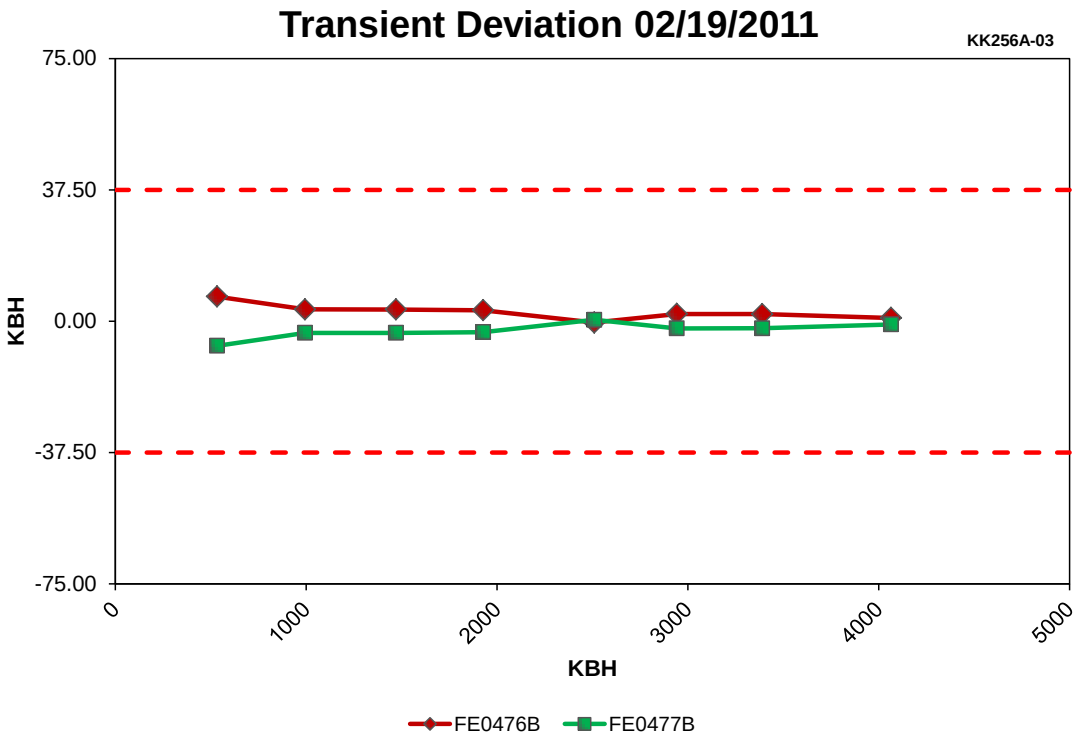



**Figure E.9 FW FLOW TO SG A Transient Deviation at Farley Unit 2 (Cycle 21)**

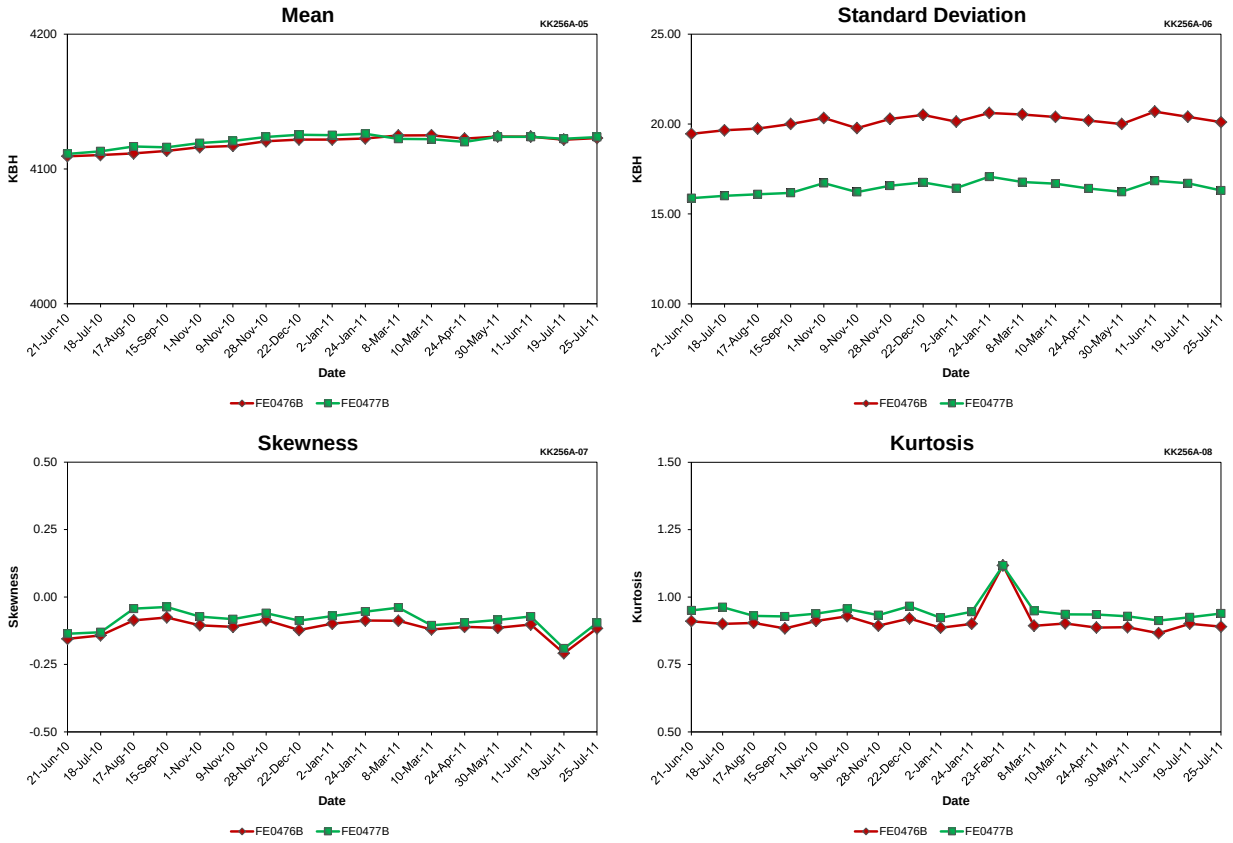



**Figure E.10 FW FLOW TO SG A Data Quality Statistics at Farley Unit 2 (Cycle 21)**

**Table E.2 FW FLOW TO SG A Data Quality for Farley Unit 2 (Cycle 21)**

| | Tag Names | |
|---|---|---|
| Result Type | FE0476B | FE0477B |
| Mean | 4119.36 | 4120.87 |
| Std. Dev. | 20.17 | 16.46 |
| Skewness | -0.11 | -0.09 |
| Kurtosis | 0.91 | 0.95 |

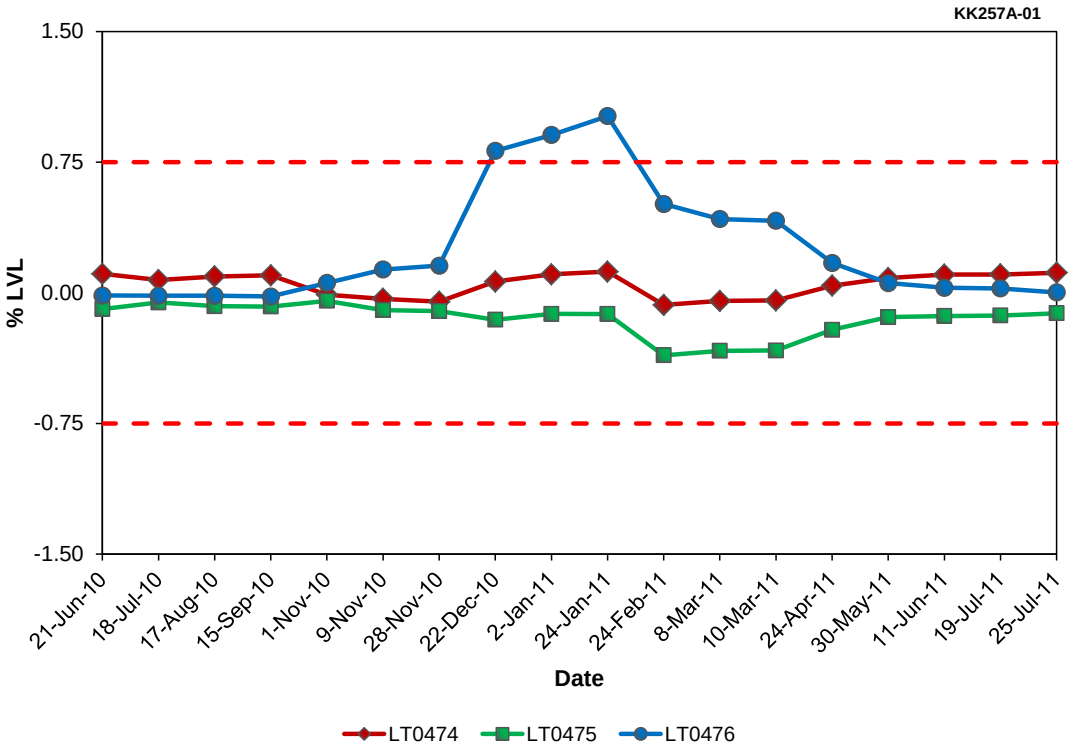



**Figure E.11 SG A LEVEL Steady-State Deviation at Farley Unit 2 (Cycle 21)**

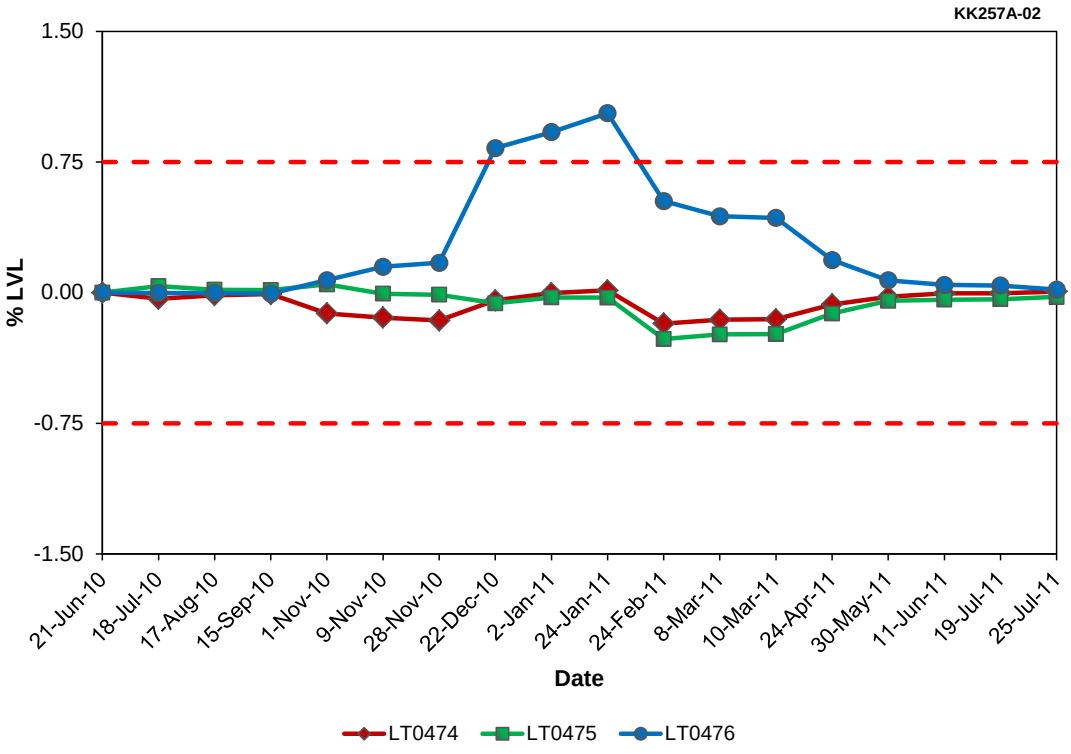



**Figure E.12 SG A LEVEL Steady-State Drift at Farley Unit 2 (Cycle 21)**

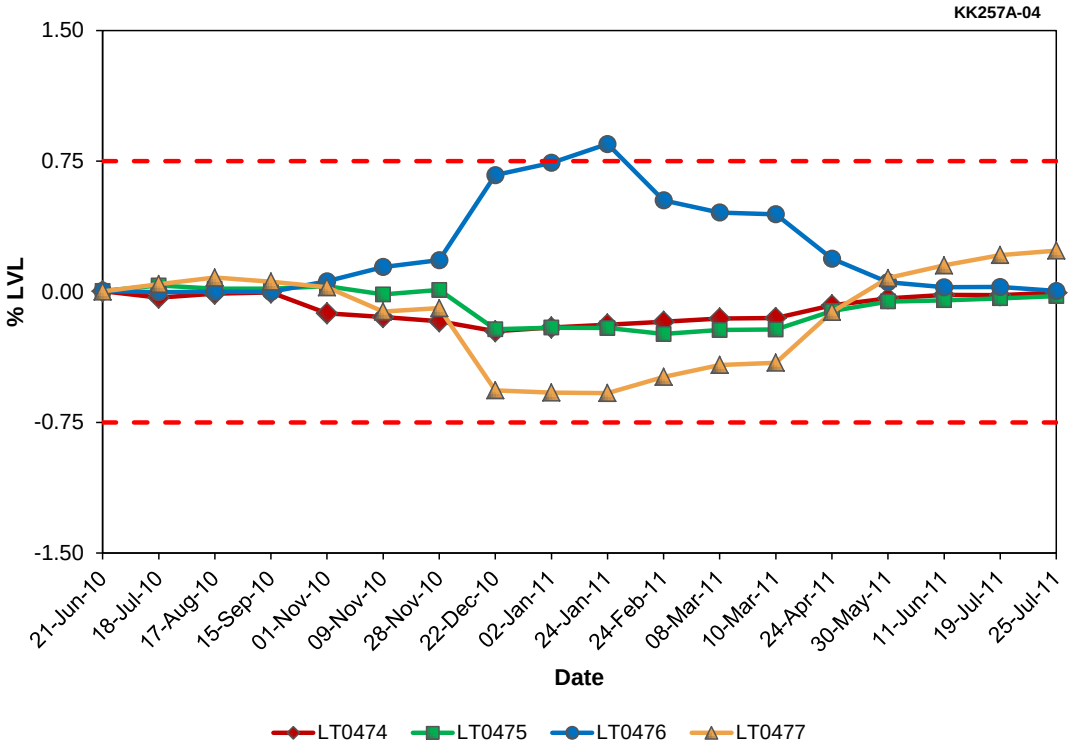



**Figure E.13 SG A LEVEL Steady-State Residual AAKR at Farley Unit 2 (Cycle 21)**

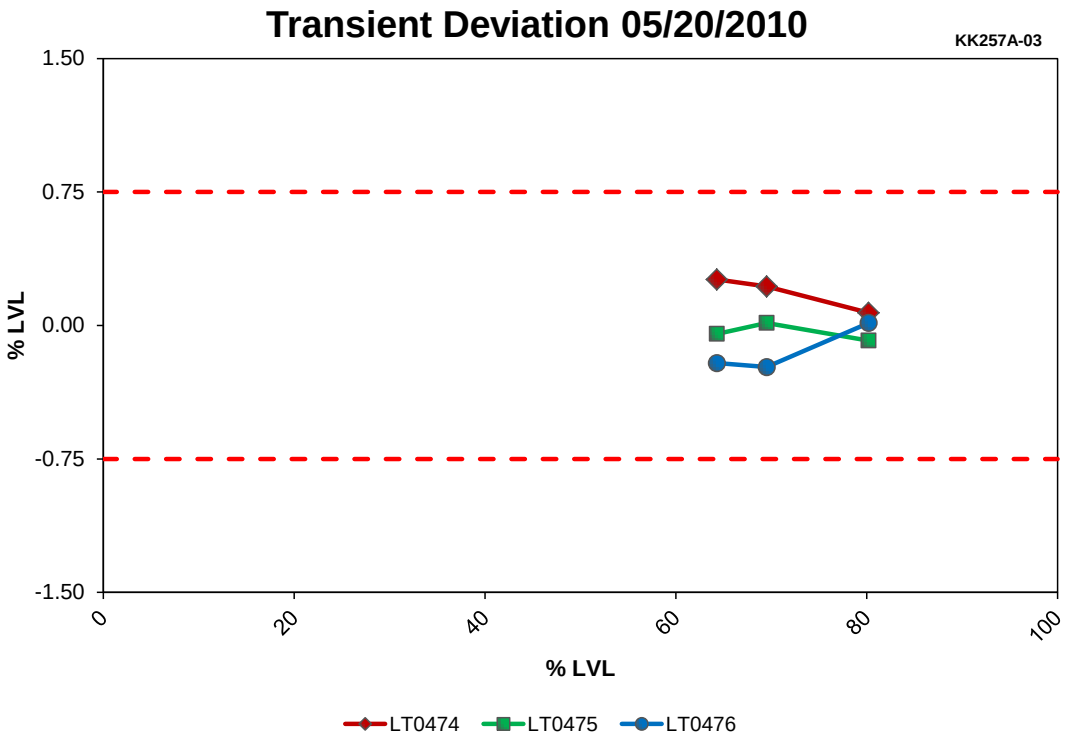



**Figure E.14 SG A LEVEL Transient Deviation at Farley Unit 2 (Cycle 21)**

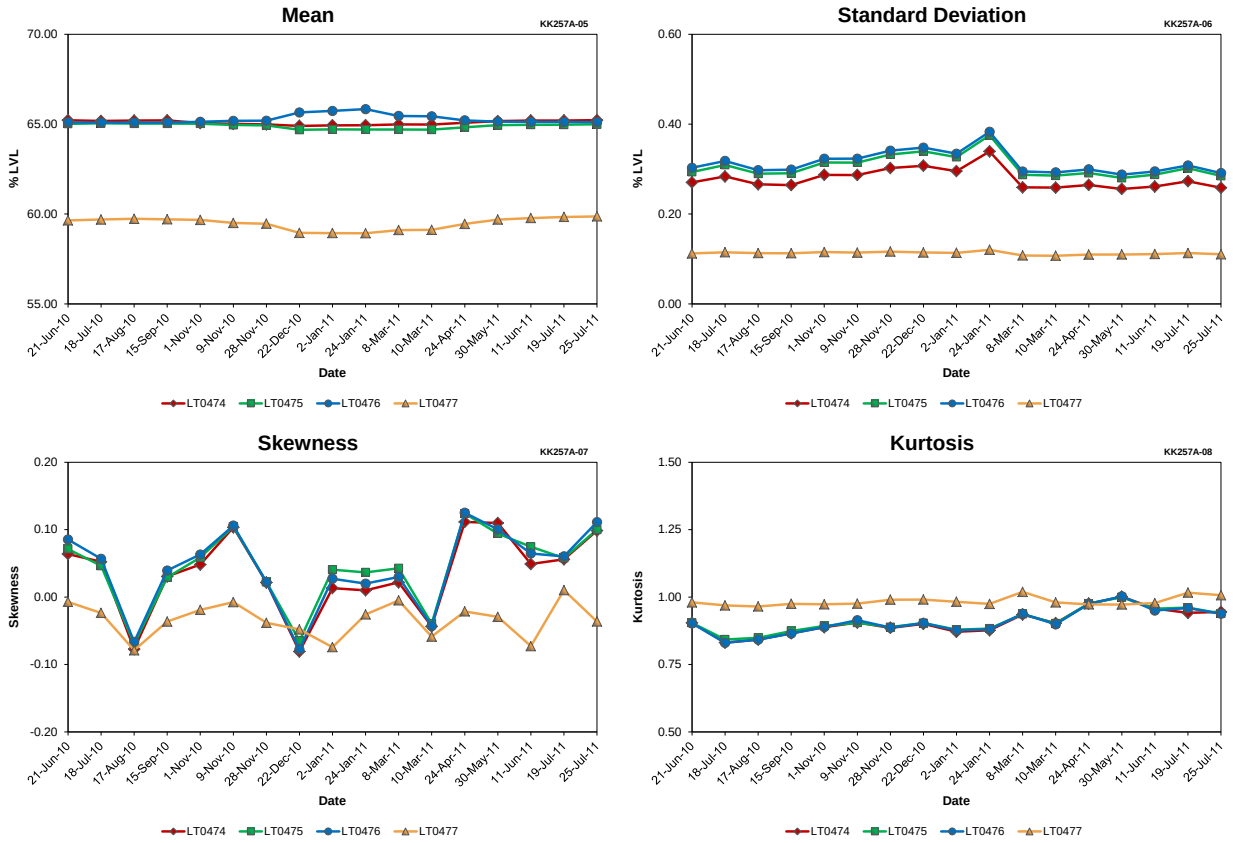



**Figure E.15 SG A LEVEL Data Quality Statistics at Farley Unit 2 (Cycle 21)**

**Table E.3 SG A LEVEL Data Quality for Farley Unit 2 (Cycle 21)**

| Result Type | Tag Names | | | |
|---|---|---|---|---|
| | LT0474 | LT0475 | LT0476 | LT0477 |
| Mean | 65.09 | 64.89 | 65.27 | 59.47 |
| Std. Dev. | 0.28 | 0.31 | 0.31 | 0.11 |
| Skewness | 0.03 | 0.04 | 0.04 | -0.03 |
| Kurtosis | 0.91 | 0.91 | 0.91 | 0.98 |

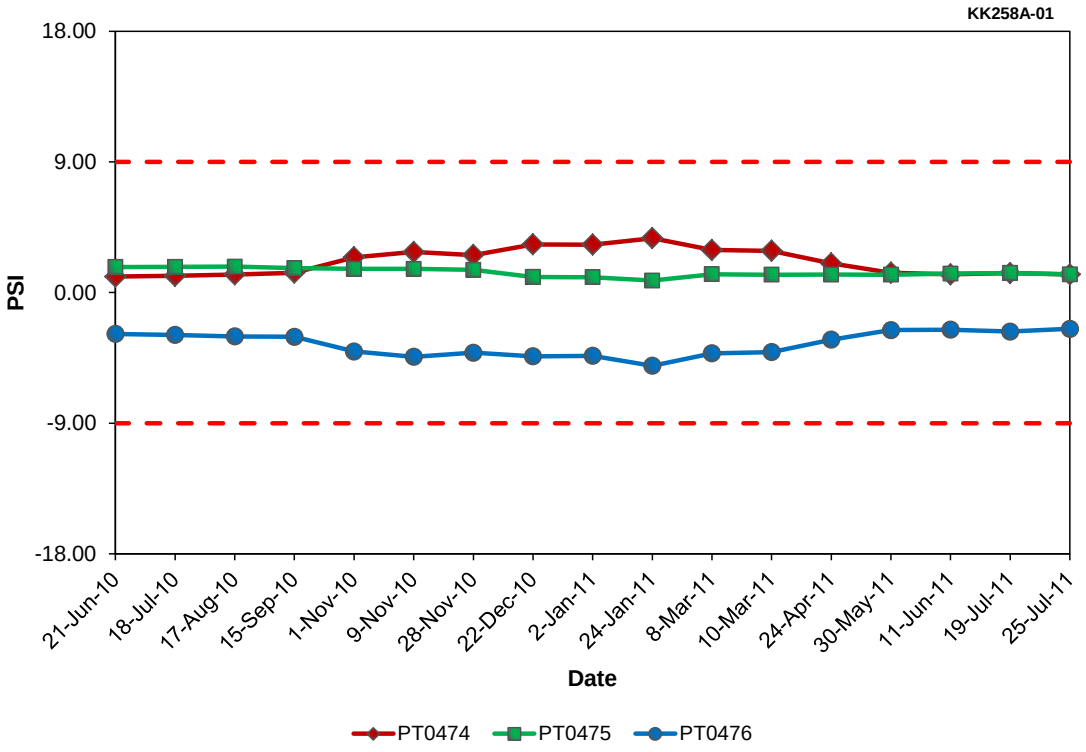



**Figure E.16 SG A OUTLET PRESSURE Steady-State Deviation at Farley Unit 2 (Cycle 21)**

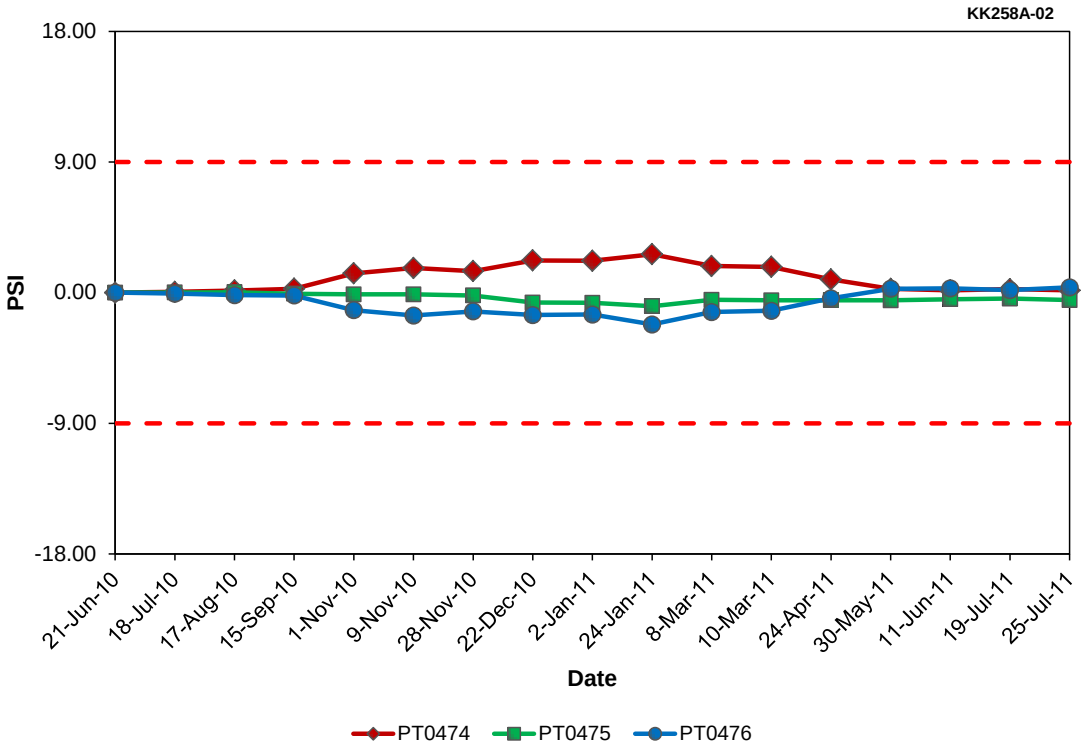



**Figure E.17 SG A OUTLET PRESSURE Steady-State Drift at Farley Unit 2 (Cycle 21)**

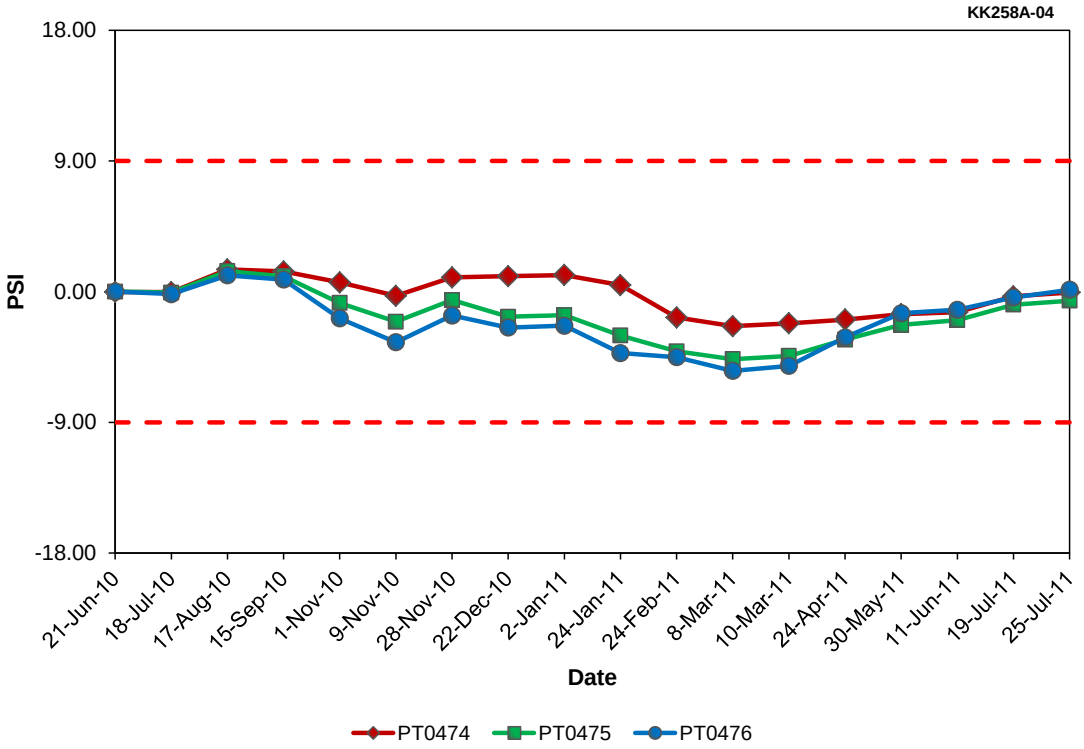



**Figure E.18 SG A OUTLET PRESSURE Steady-State Residual AAKR at Farley Unit 2 (Cycle 21)**

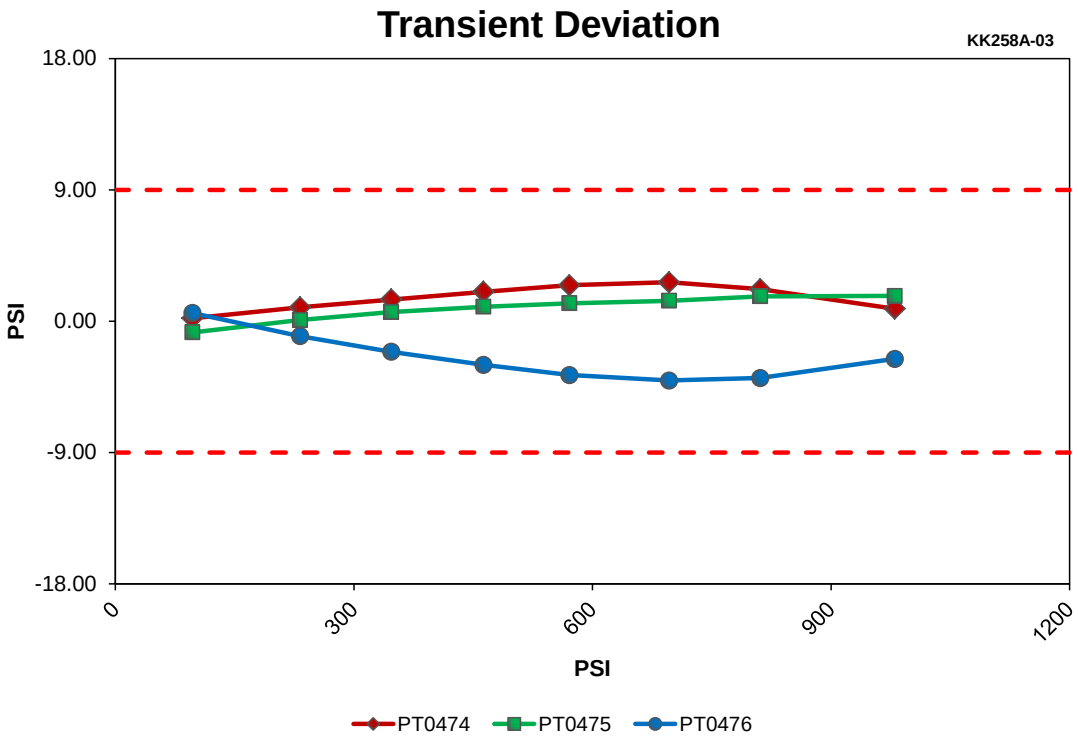



**Figure E.19 SG A OUTLET PRESSURE Transient Deviation at Farley Unit 2 (Cycle 21)**

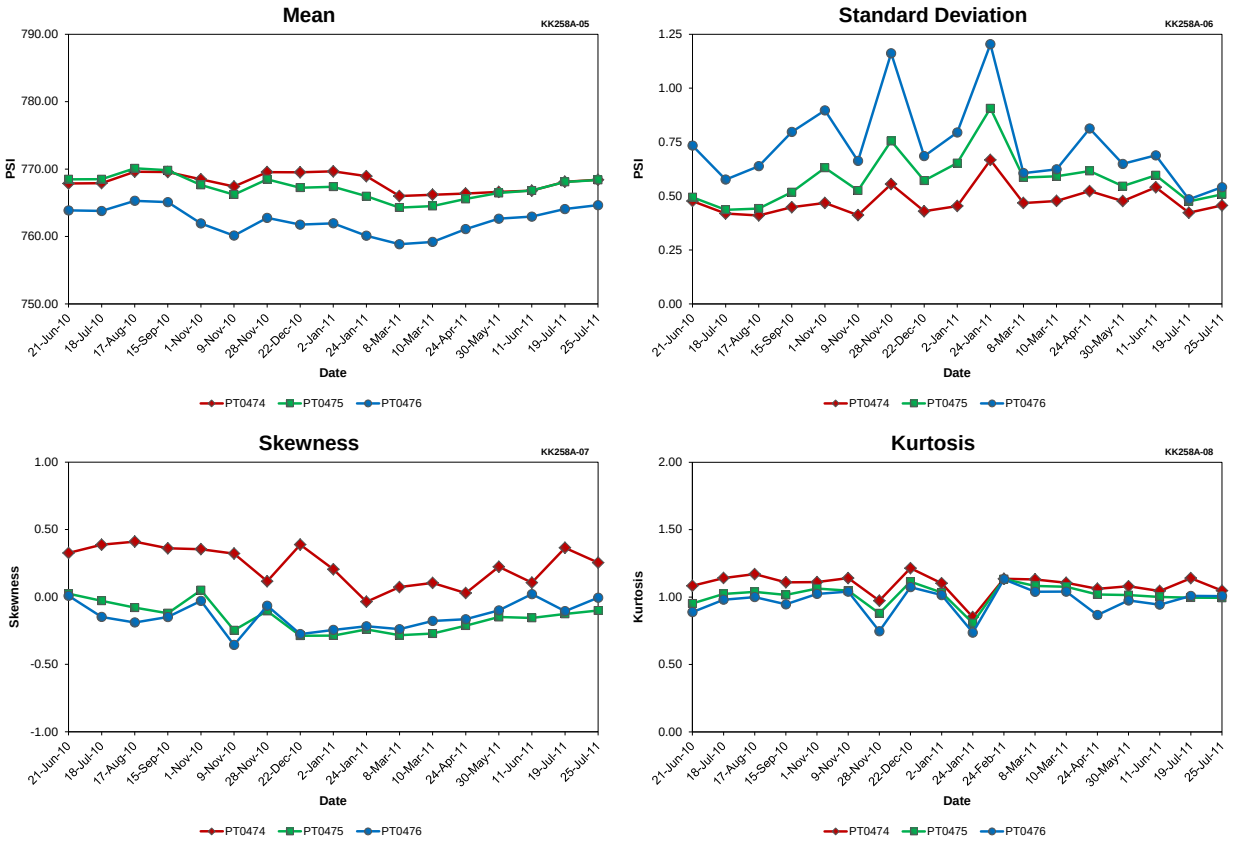



**Figure E.20 SG A OUTLET PRESSURE Data Quality Statistics at Farley Unit 2 (Cycle 21)**

**Table E.4 SG A OUTLET PRESSURE Data Quality for Farley Unit 2 (Cycle 21)**

| | Tag Names | | |
|---|---|---|---|
| **Result Type** | **PT0474** | **PT0475** | **PT0476** |
| Mean | 768.06 | 767.29 | 762.36 |
| Std. Dev. | 0.48 | 0.58 | 0.74 |
| Skewness | 0.23 | -0.15 | -0.14 |
| Kurtosis | 1.09 | 1.02 | 0.97 |

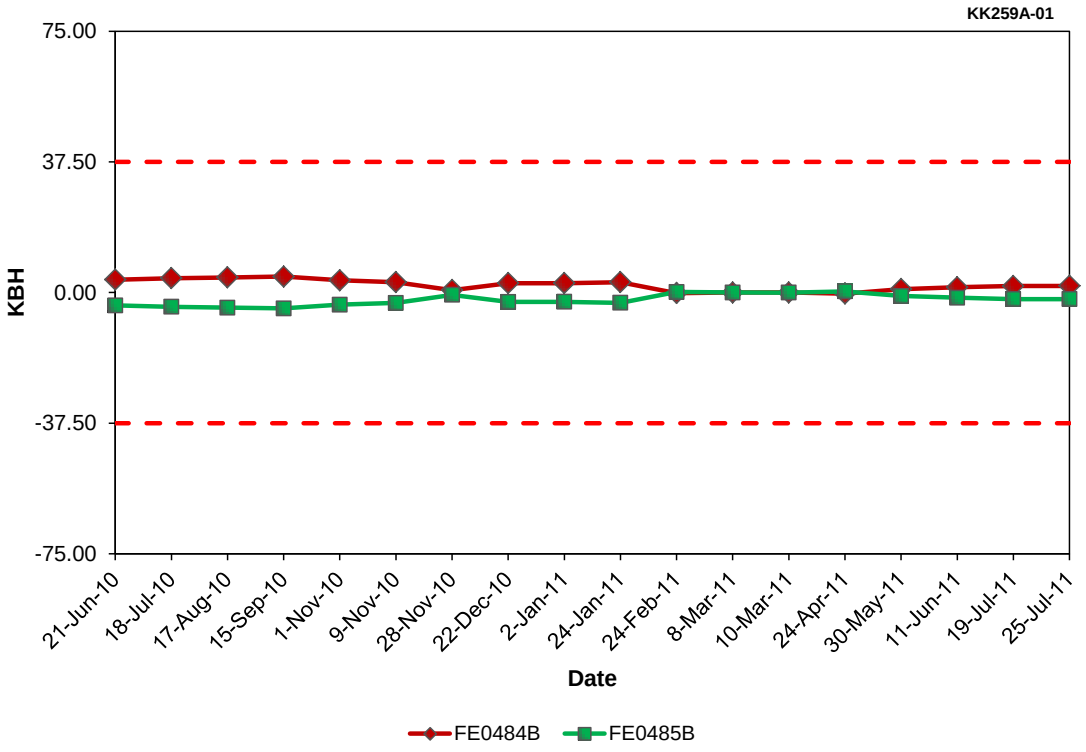



**Figure E.21 SG B STEAM FLOW Steady-State Deviation at Farley Unit 2 (Cycle 21)**

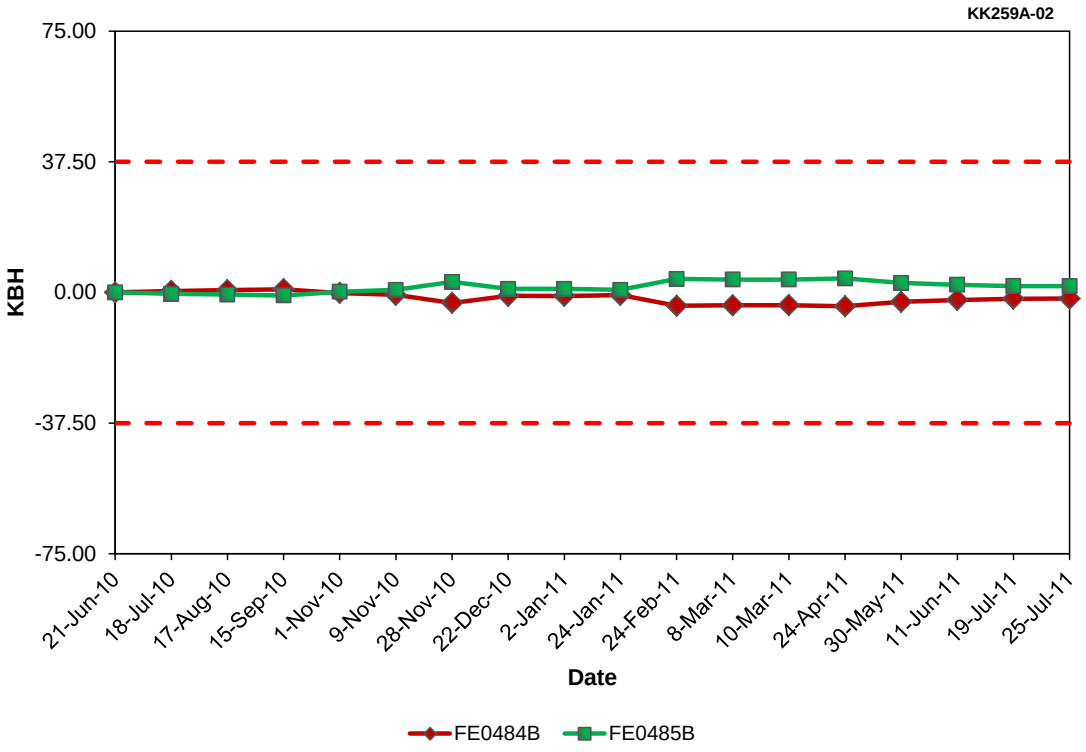



**Figure E.22 SG B STEAM FLOW Steady-State Drift at Farley Unit 2 (Cycle 21)**

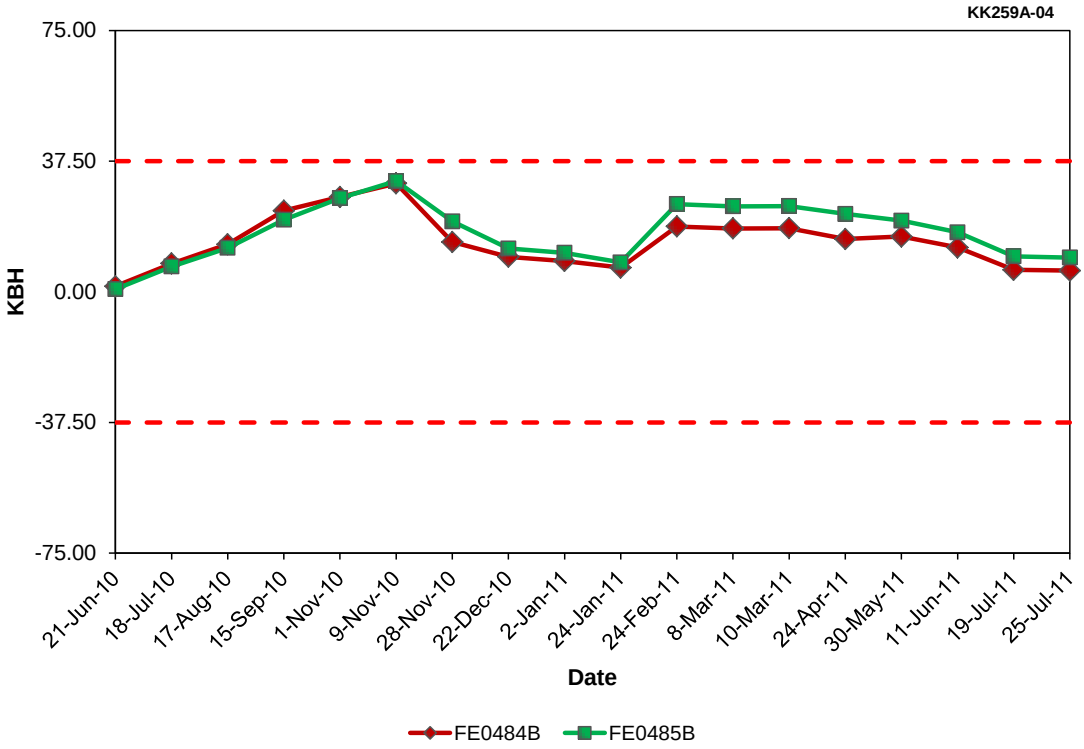



**Figure E.23 SG B STEAM FLOW Steady-State Residual AAKR at Farley Unit 2 (Cycle 21)**

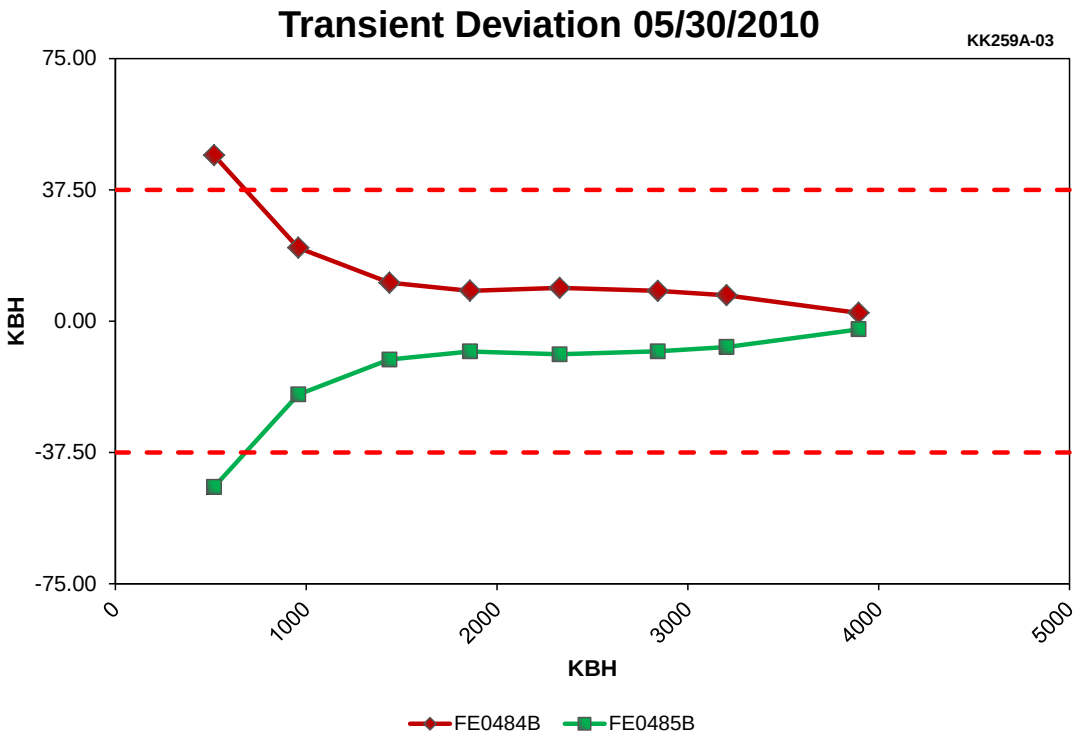



**Figure E.24 SG B STEAM FLOW Transient Deviation at Farley Unit 2 (Cycle 21)**

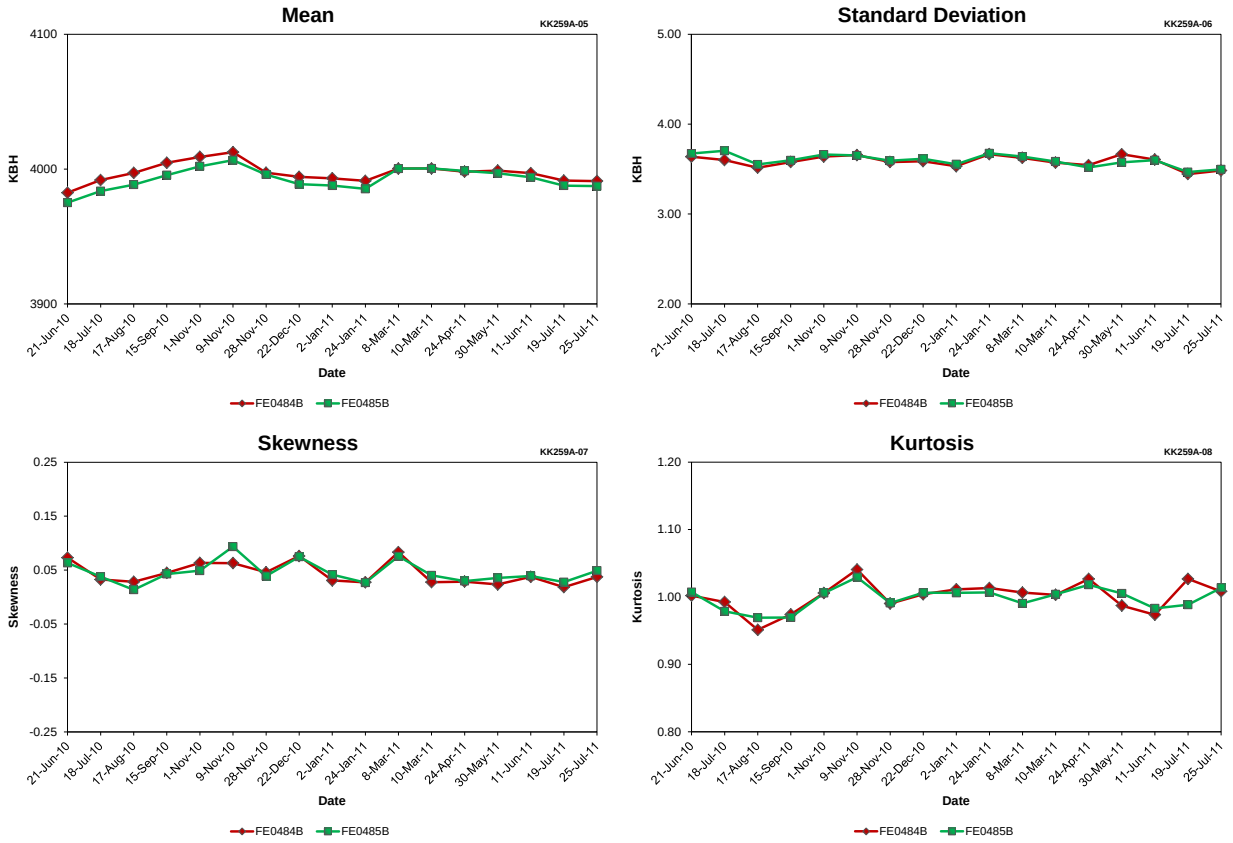



**Figure E.25 SG B STEAM FLOW Data Quality Statistics at Farley Unit 2 (Cycle 21)**

**Table E.5 SG B STEAM FLOW Data Quality for Farley Unit 2 (Cycle 21)**

| | Tag Names | |
|---|---|---|
| Result Type | FE0484B | FE0485B |
| Mean | 3997.10 | 3992.61 |
| Std. Dev. | 3.58 | 3.60 |
| Skewness | 0.04 | 0.05 |
| Kurtosis | 1.00 | 1.00 |

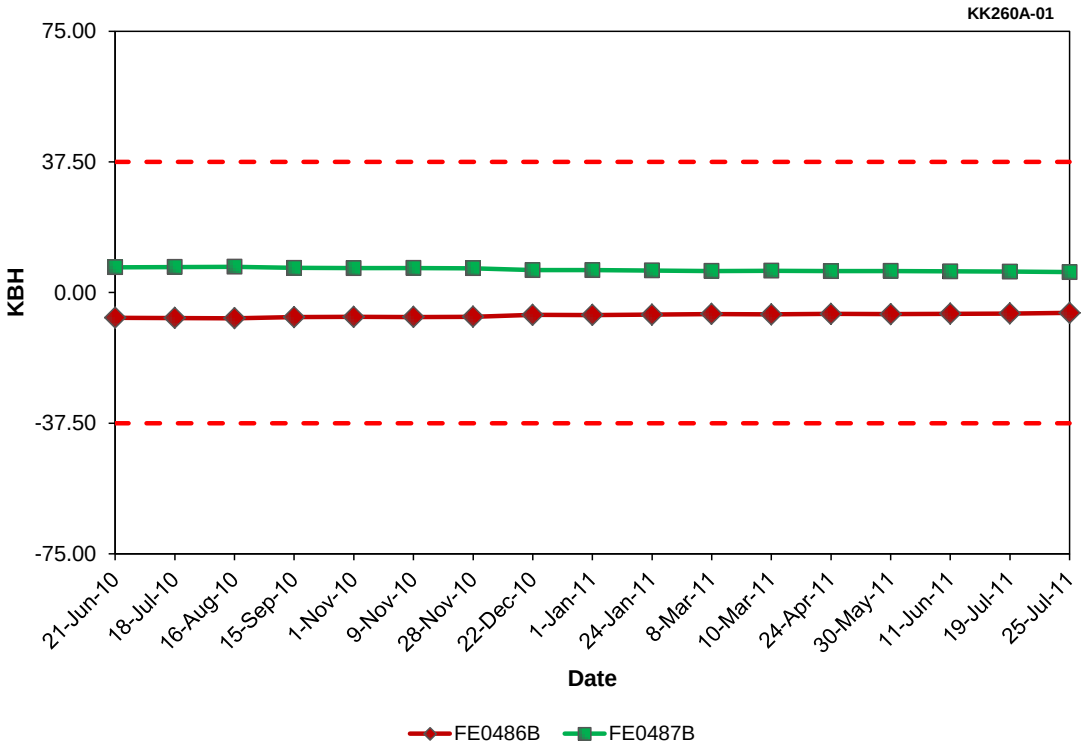



**Figure E.26 FW FLOW TO SG B Steady-State Deviation at Farley Unit 2 (Cycle 21)**

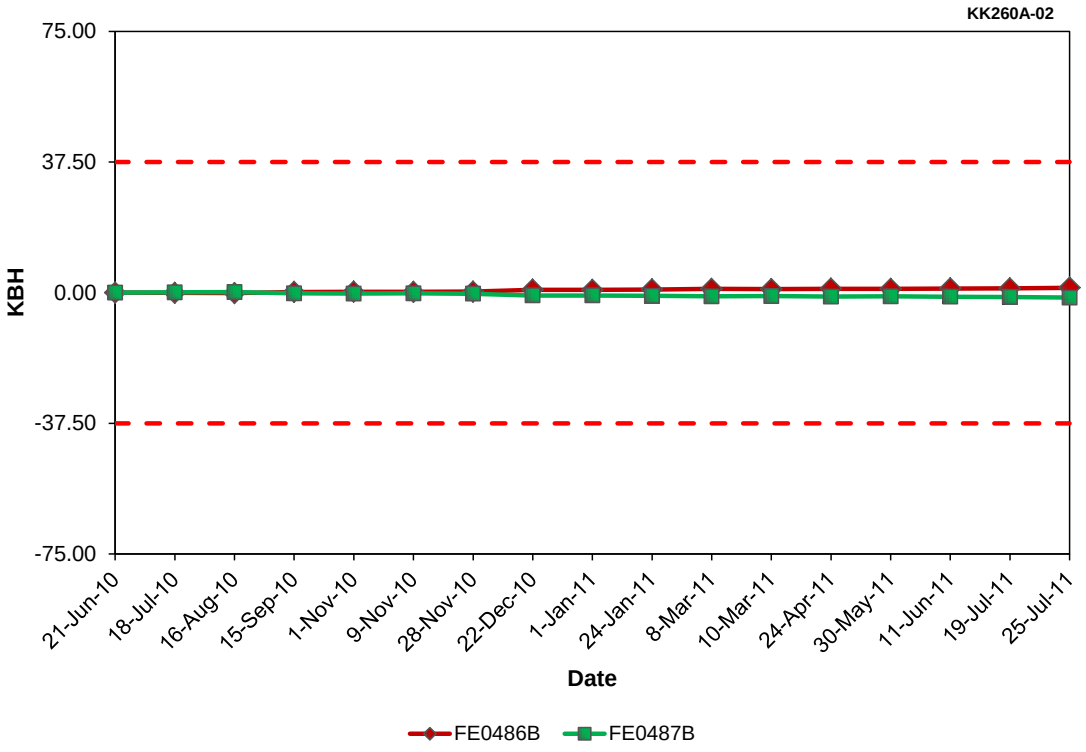



**Figure E.27 FW FLOW TO SG B Steady-State Drift at Farley Unit 2 (Cycle 21)**

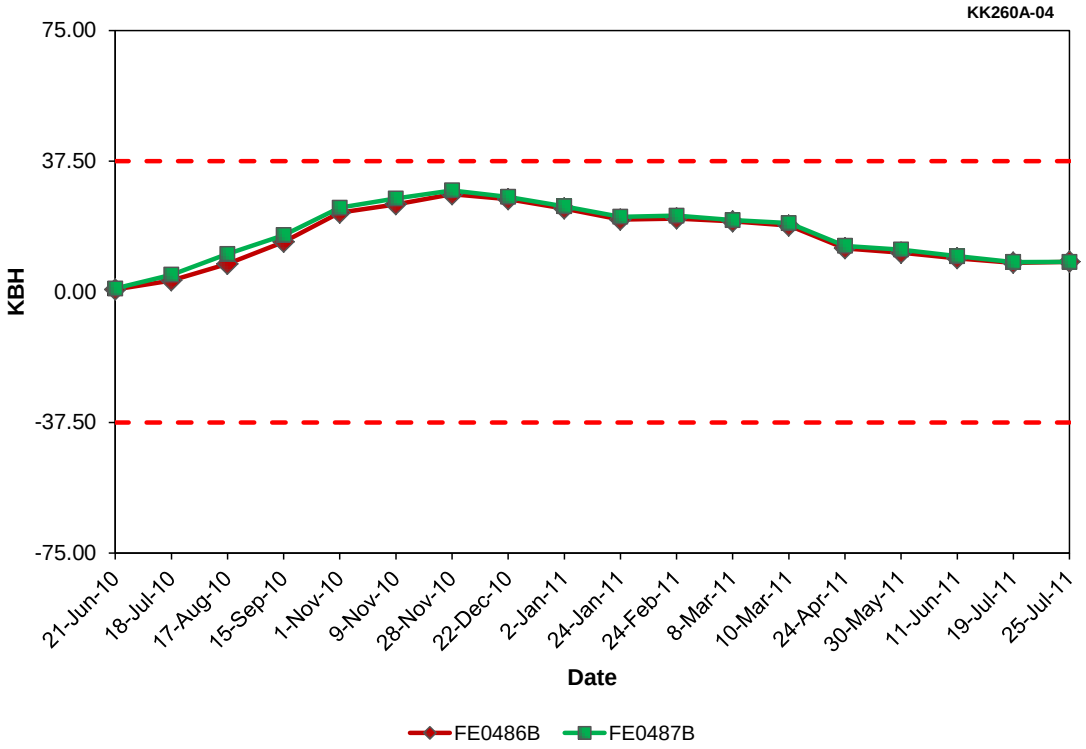



**Figure E.28 FW FLOW TO SG B Steady-State Residual AAKR at Farley Unit 2 (Cycle 21)**

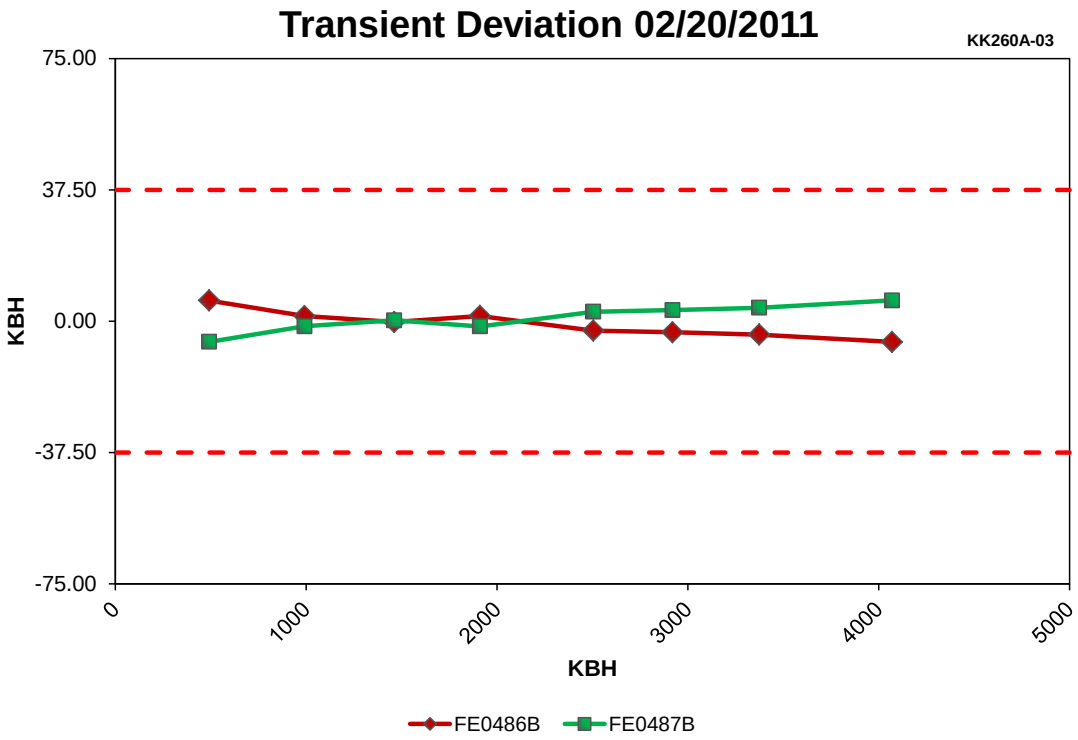



**Figure E.29 FW FLOW TO SG B Transient Deviation at Farley Unit 2 (Cycle 21)**

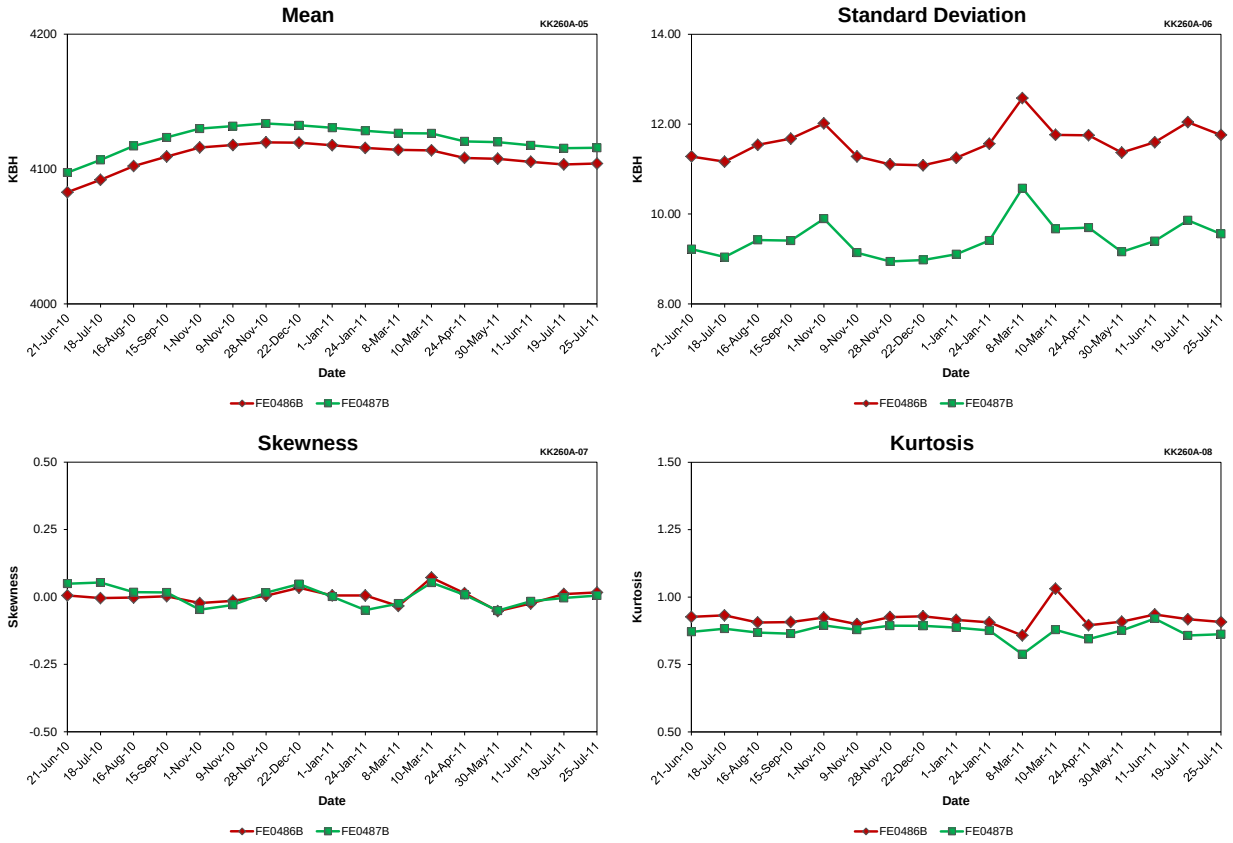



**Figure E.30 FW FLOW TO SG B Data Quality Statistics at Farley Unit 2 (Cycle 21)**

**Table E.6 FW FLOW TO SG B Data Quality for Farley Unit 2 (Cycle 21)**

| | Tag Names | |
|---|---|---|
| **Result Type** | **FE0486B** | **FE0487B** |
| Mean | 4108.75 | 4121.94 |
| Std. Dev. | 11.58 | 9.44 |
| Skewness | 0.00 | 0.00 |
| Kurtosis | 0.92 | 0.87 |

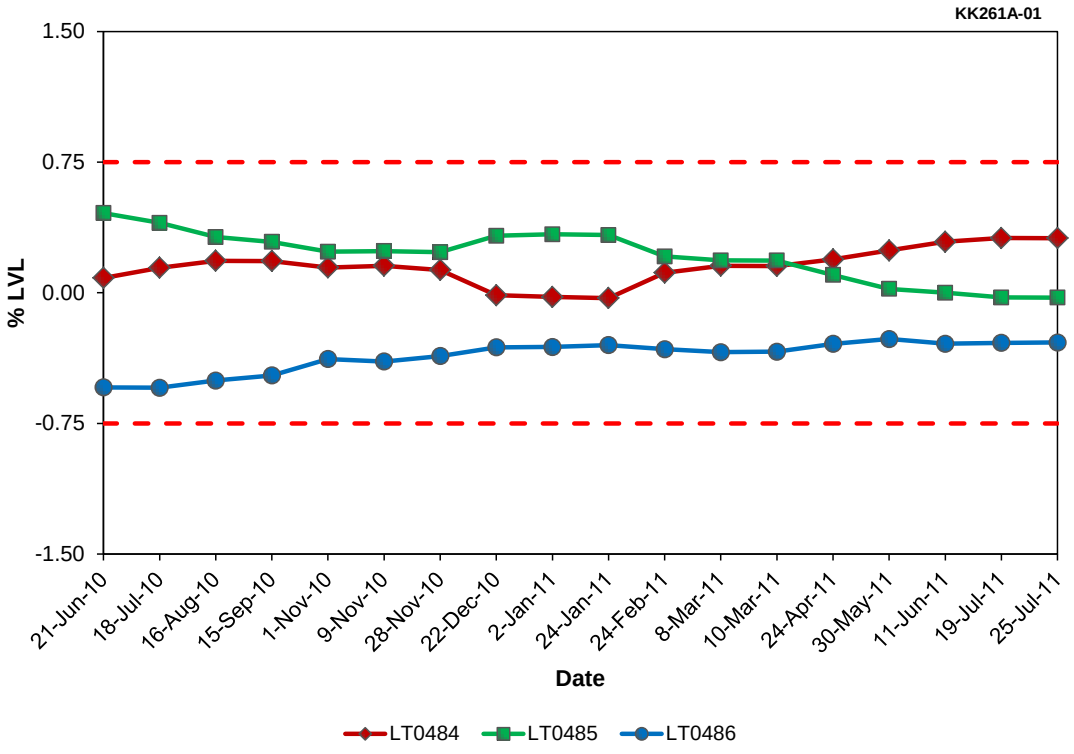



**Figure E.31 SG B LEVEL Steady-State Deviation at Farley Unit 2 (Cycle 21)**

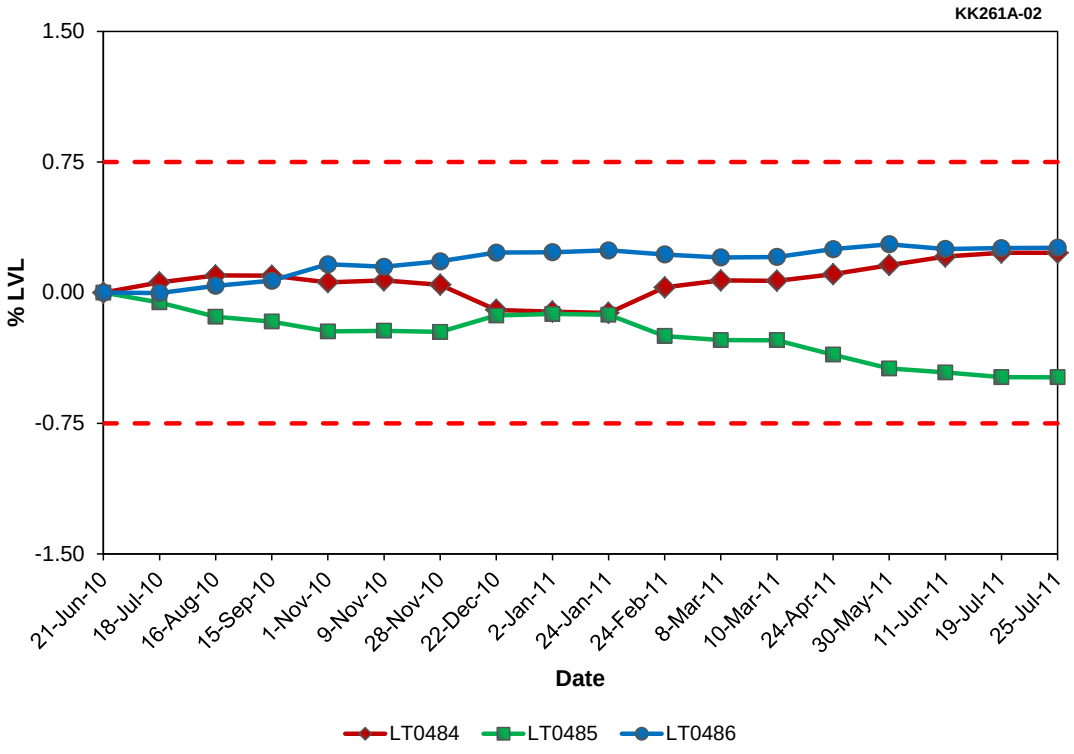



**Figure E.32 SG B LEVEL Steady-State Drift at Farley Unit 2 (Cycle 21)**

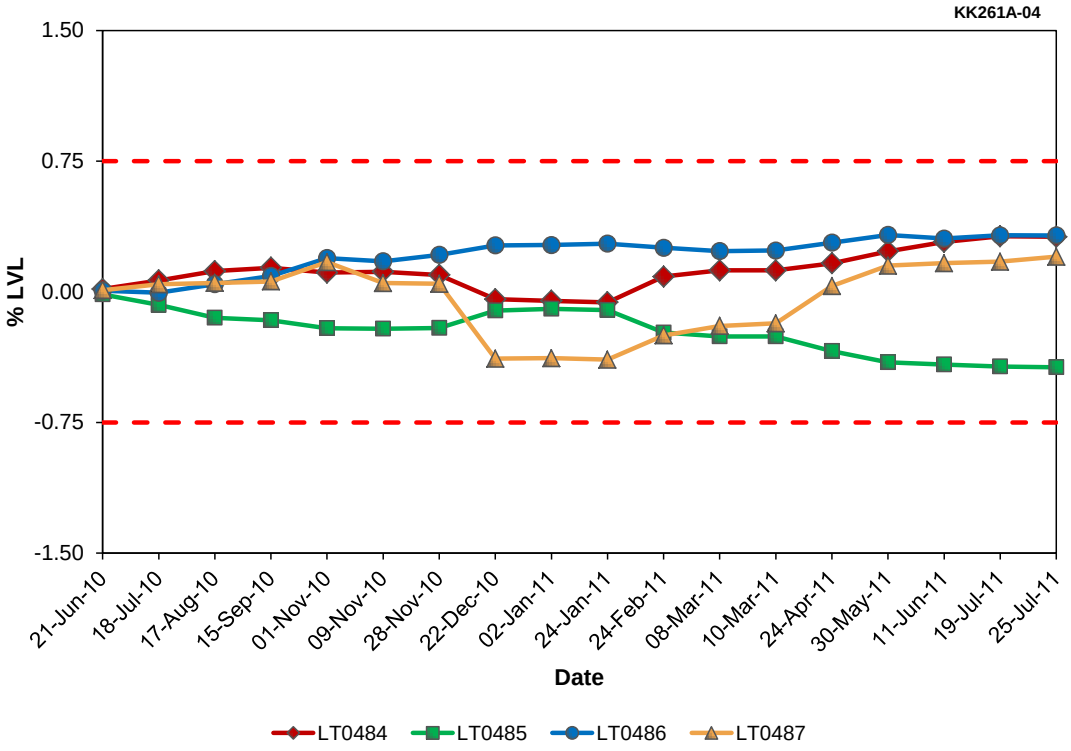



**Figure E.33 SG B LEVEL Steady-State Residual AAKR at Farley Unit 2 (Cycle 21)**

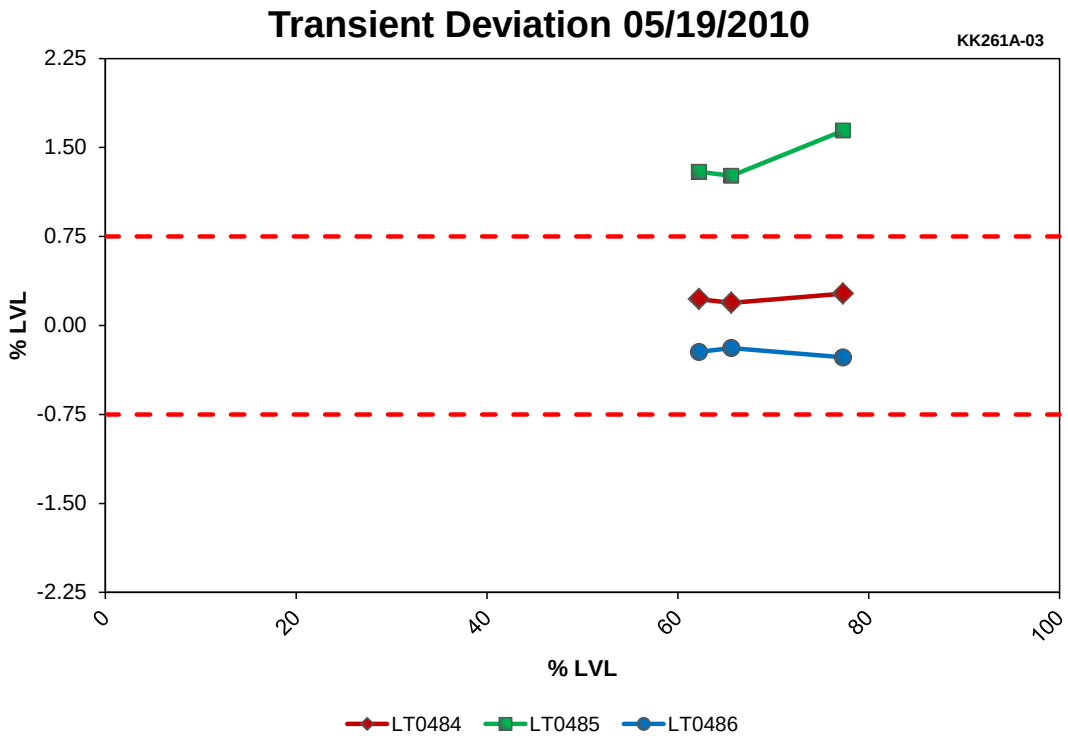



**Figure E.34 SG B LEVEL Transient Deviation at Farley Unit 2 (Cycle 21)**

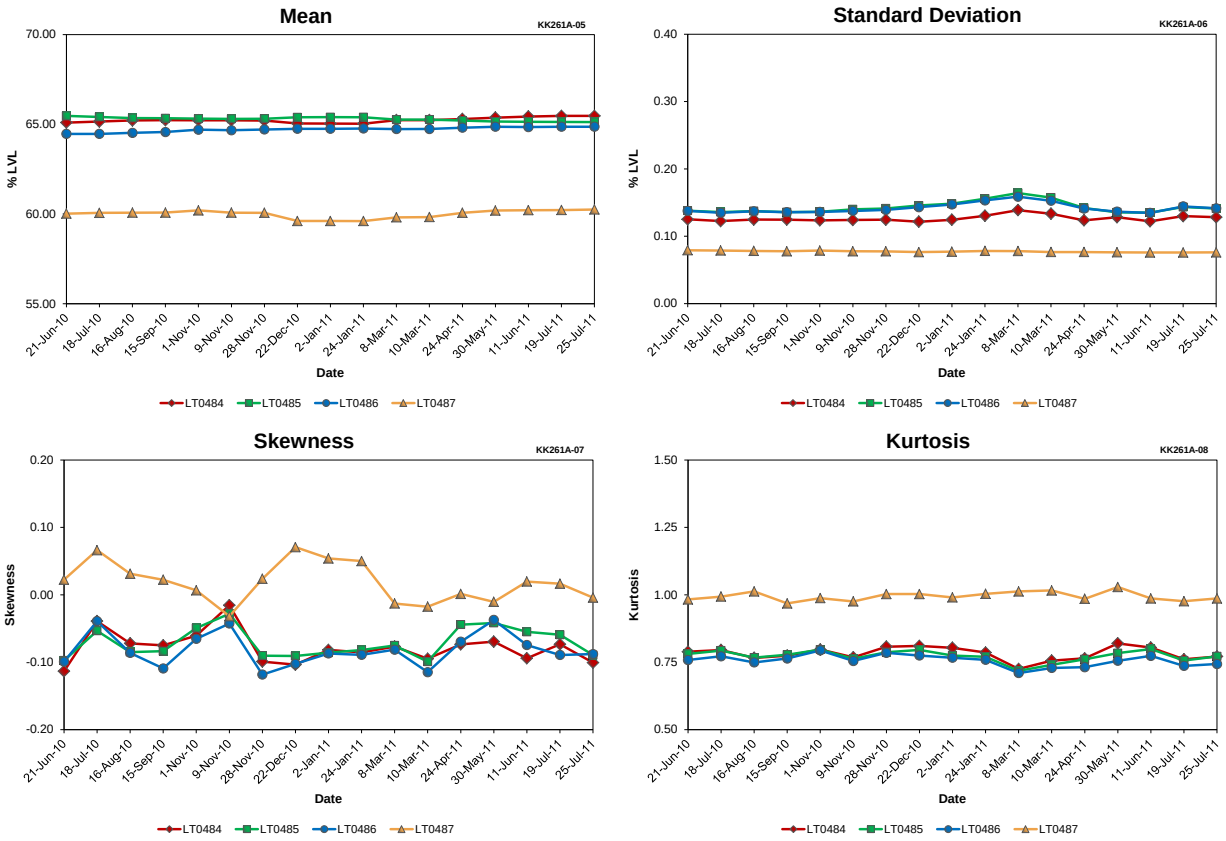



**Figure E.35 SG B LEVEL Data Quality Statistics at Farley Unit 2 (Cycle 21)**

**Table E.7 SG B LEVEL Data Quality for Farley Unit 2 (Cycle 21)**

| | Tag Names | | | |
|---|---|---|---|---|
| **Result Type** | **LT0484** | **LT0485** | **LT0486** | **LT0487** |
| Mean | 65.23 | 65.29 | 64.71 | 60.00 |
| Std. Dev. | 0.13 | 0.14 | 0.14 | 0.08 |
| Skewness | -0.08 | -0.07 | -0.08 | 0.02 |
| Kurtosis | 0.78 | 0.77 | 0.76 | 0.99 |

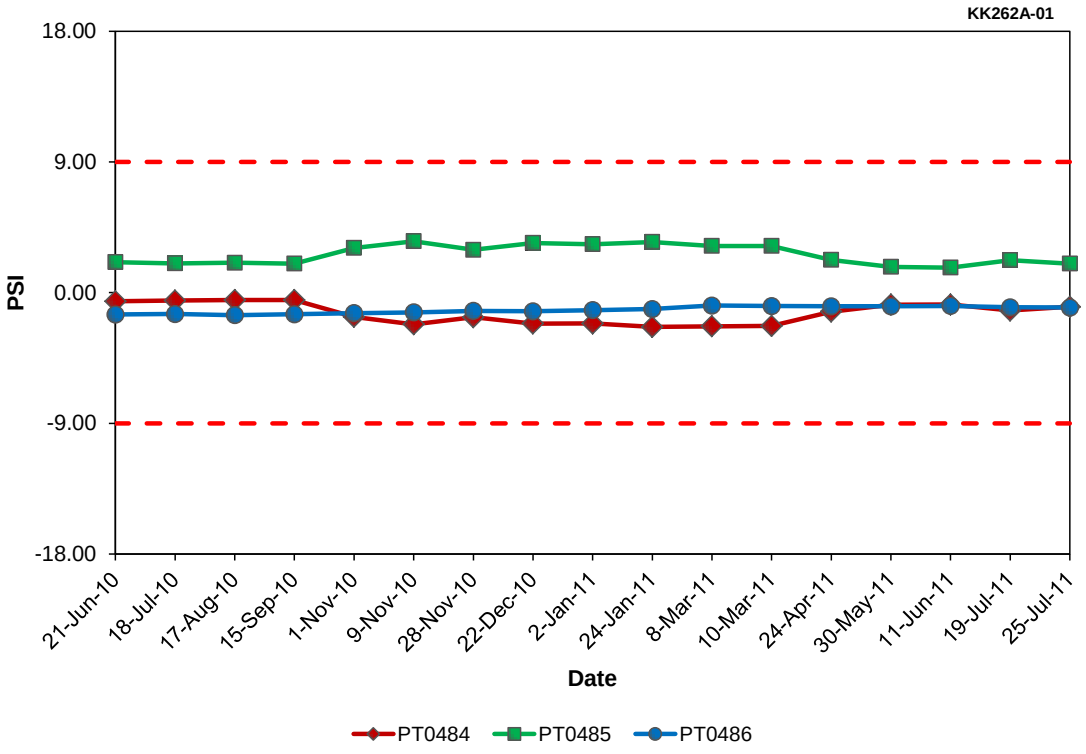



**Figure E.36 SG B OUTLET PRESSURE Steady-State Deviation at Farley Unit 2 (Cycle 21)**

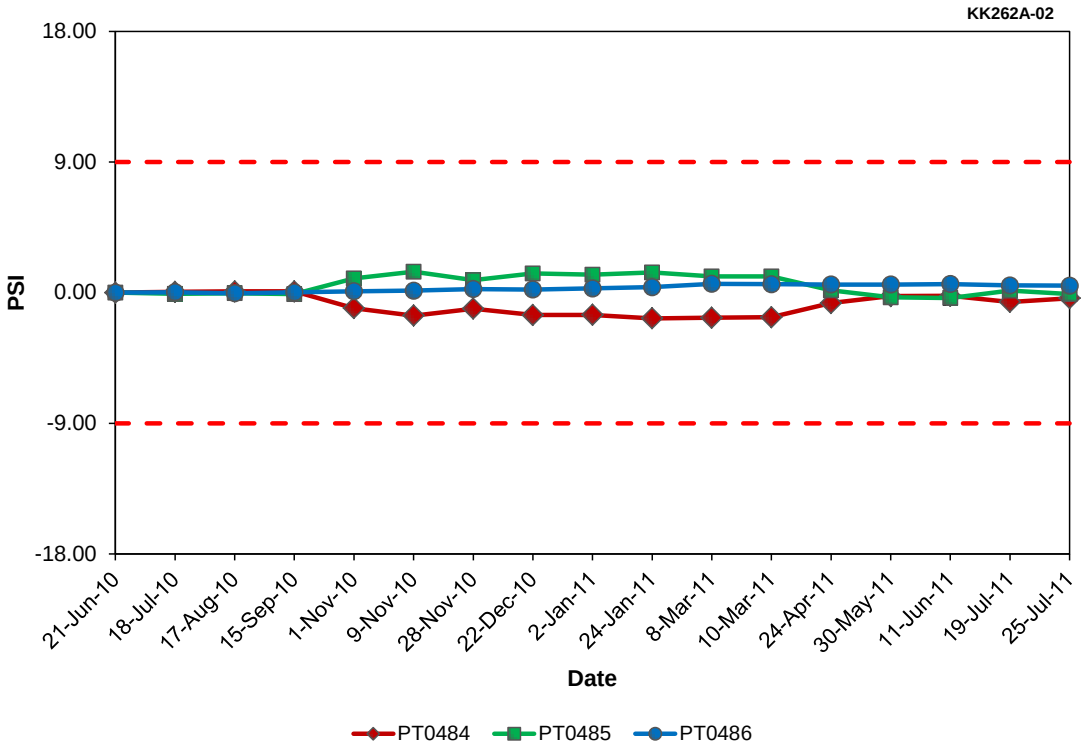



**Figure E.37 SG B OUTLET PRESSURE Steady-State Drift at Farley Unit 2 (Cycle 21)**

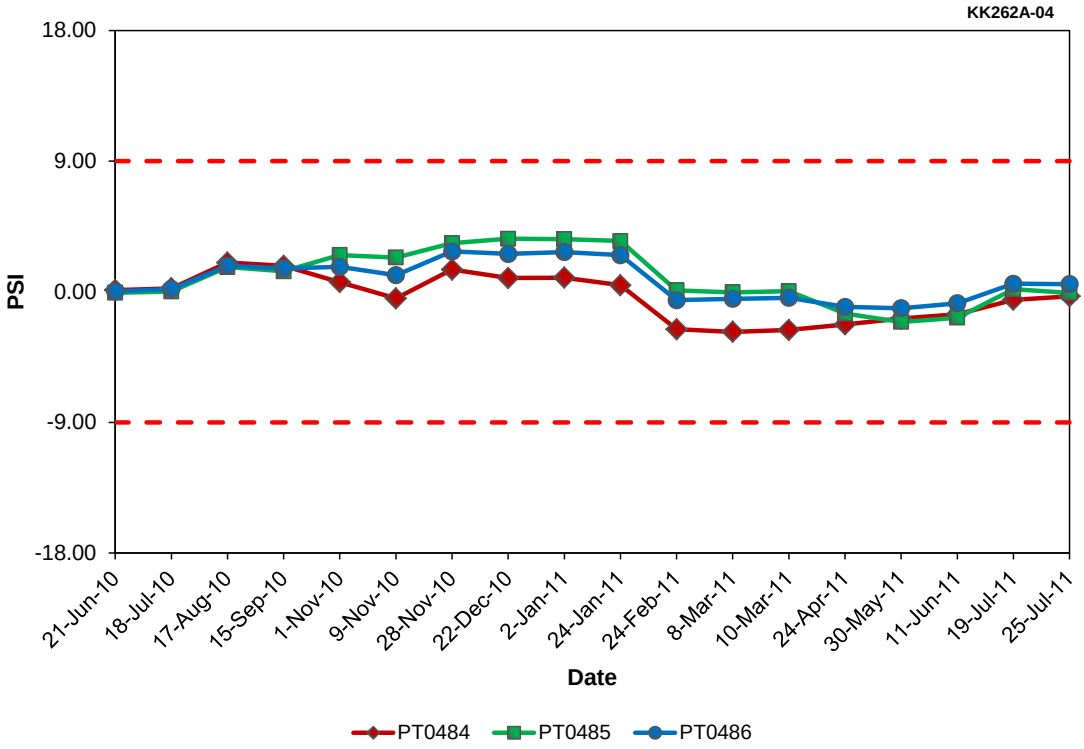



**Figure E.38 SG B OUTLET PRESSURE Steady-State Residual AAKR at Farley Unit 2 (Cycle 21)**

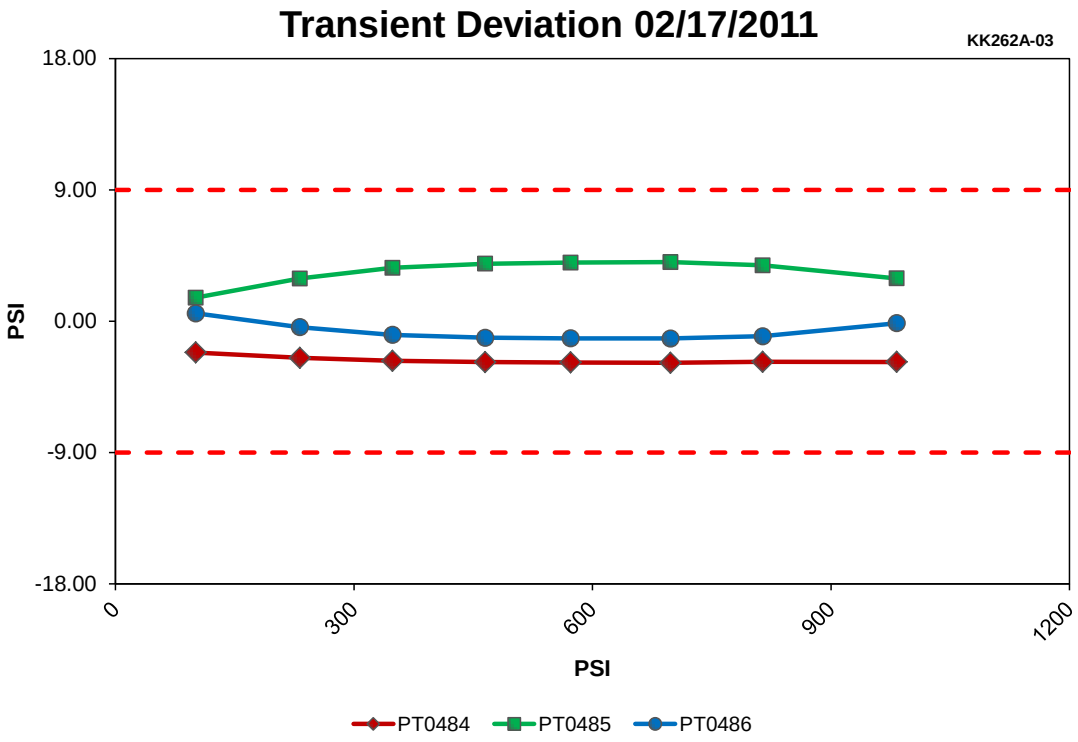



**Figure E.39 SG B OUTLET PRESSURE Transient Deviation at Farley Unit 2 (Cycle 21)**

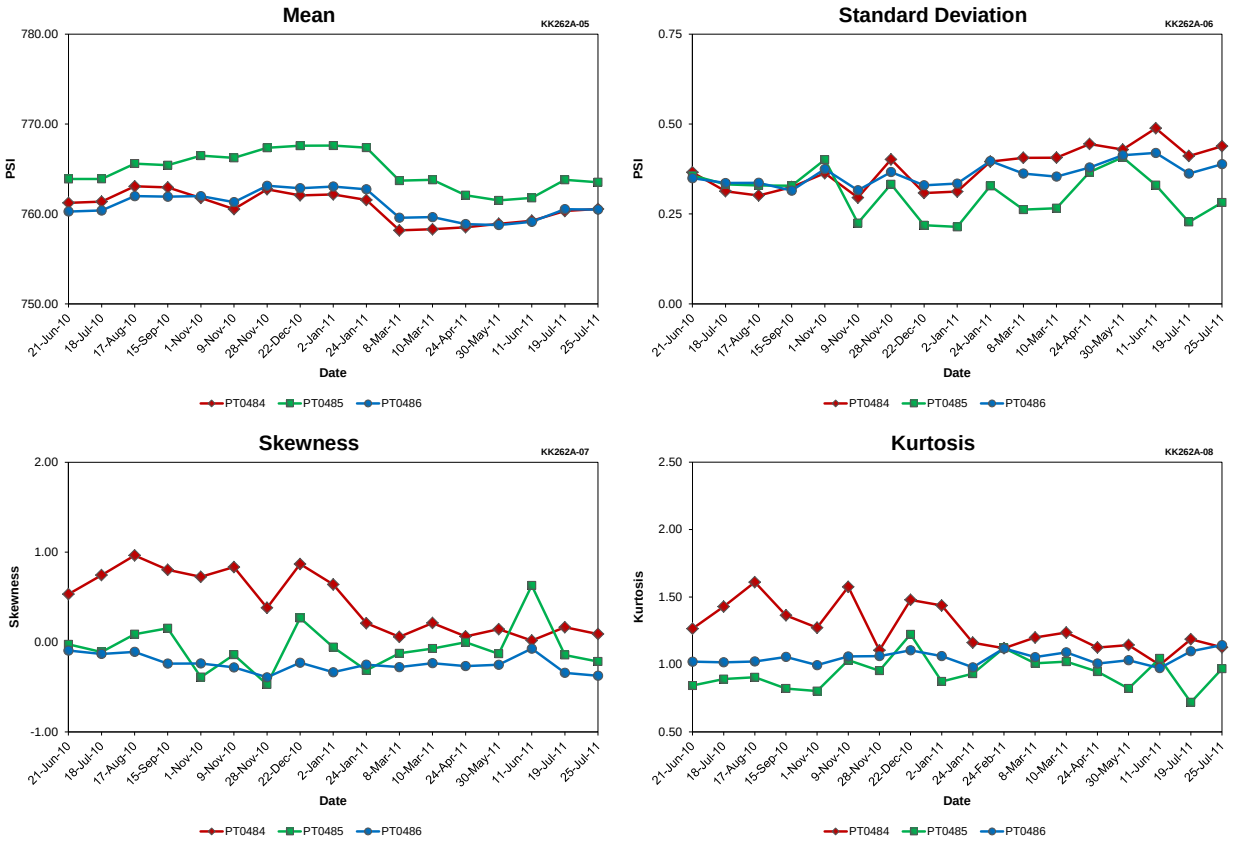



**Figure E.40 SG B OUTLET PRESSURE Data Quality Statistics at Farley Unit 2 (Cycle 21)**

**Table E.8 SG B OUTLET PRESSURE Data Quality for Farley Unit 2 (Cycle 21)**

| | Tag Names | | |
|---|---|---|---|
| **Result Type** | **PT0484** | **PT0485** | **PT0486** |
| Mean | 760.79 | 764.80 | 760.98 |
| Std. Dev. | 0.38 | 0.31 | 0.36 |
| Skewness | 0.44 | -0.06 | -0.24 |
| Kurtosis | 1.27 | 0.94 | 1.05 |

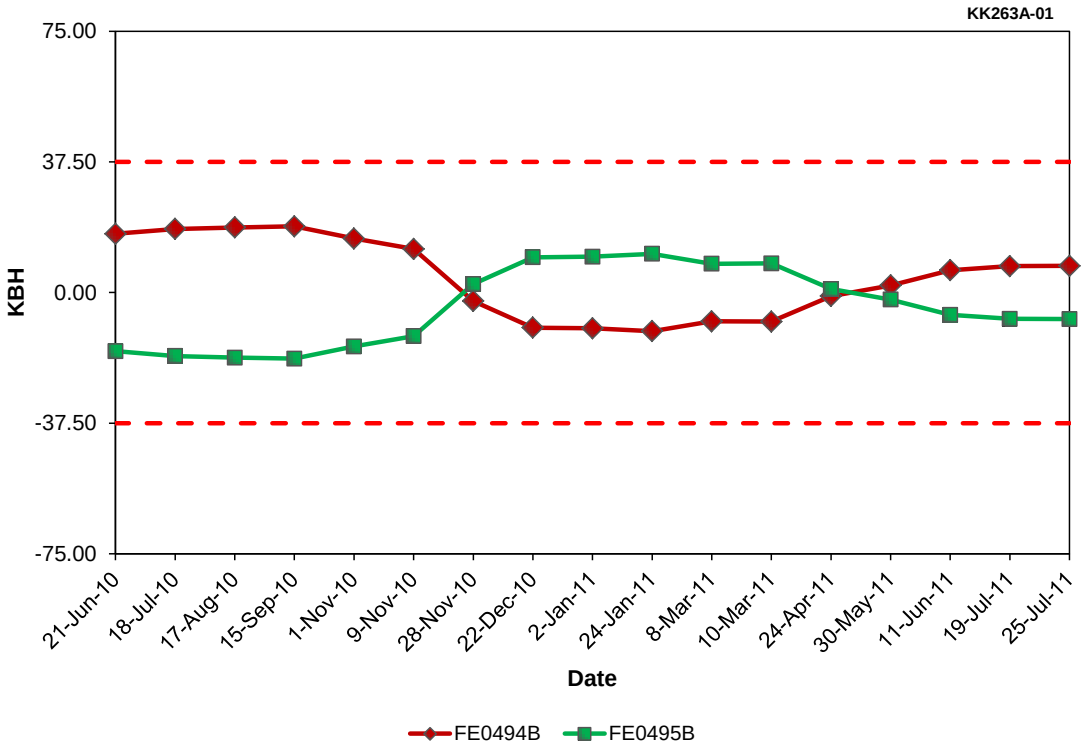



**Figure E.41 SG C STEAM FLOW Steady-State Deviation at Farley Unit 2 (Cycle 21)**

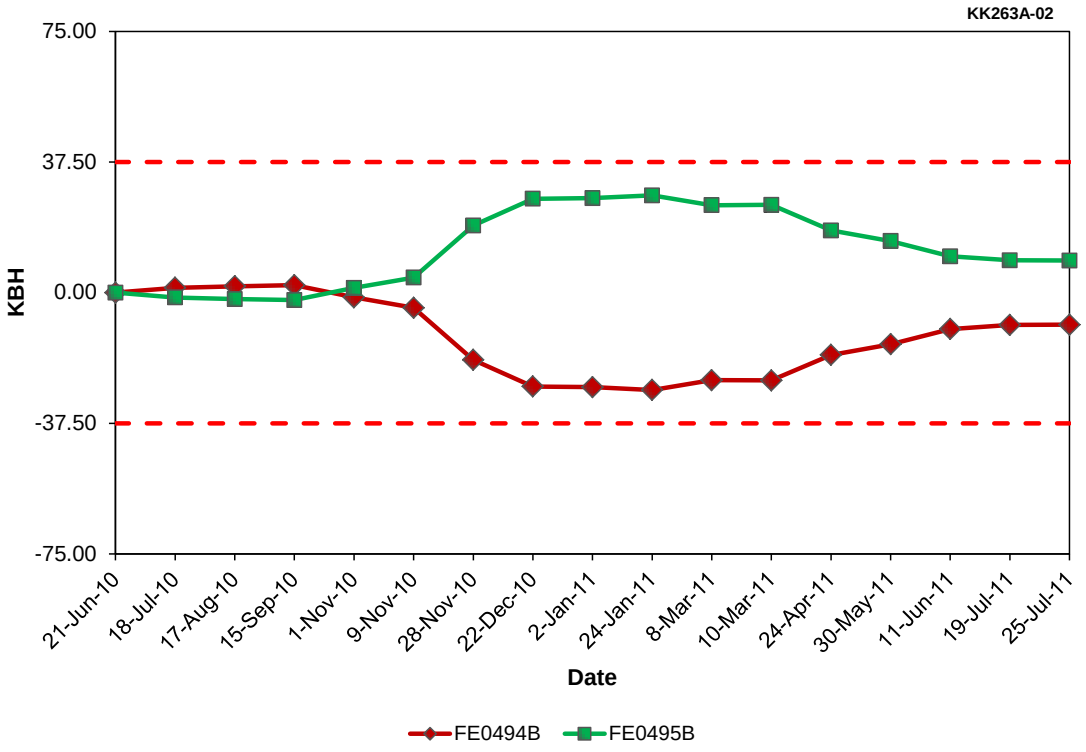



**Figure E.42 SG C STEAM FLOW Steady-State Drift at Farley Unit 2 (Cycle 21)**

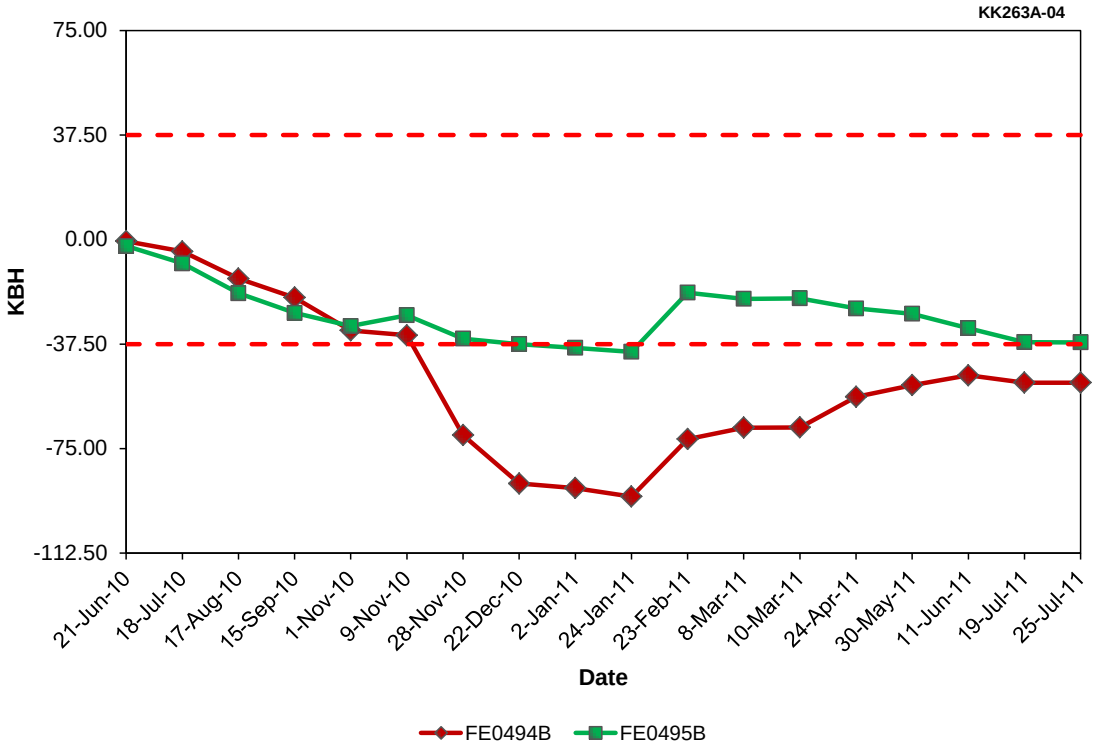



**Figure E.43 SG C STEAM FLOW Steady-State Residual AAKR at Farley Unit 2 (Cycle 21)**

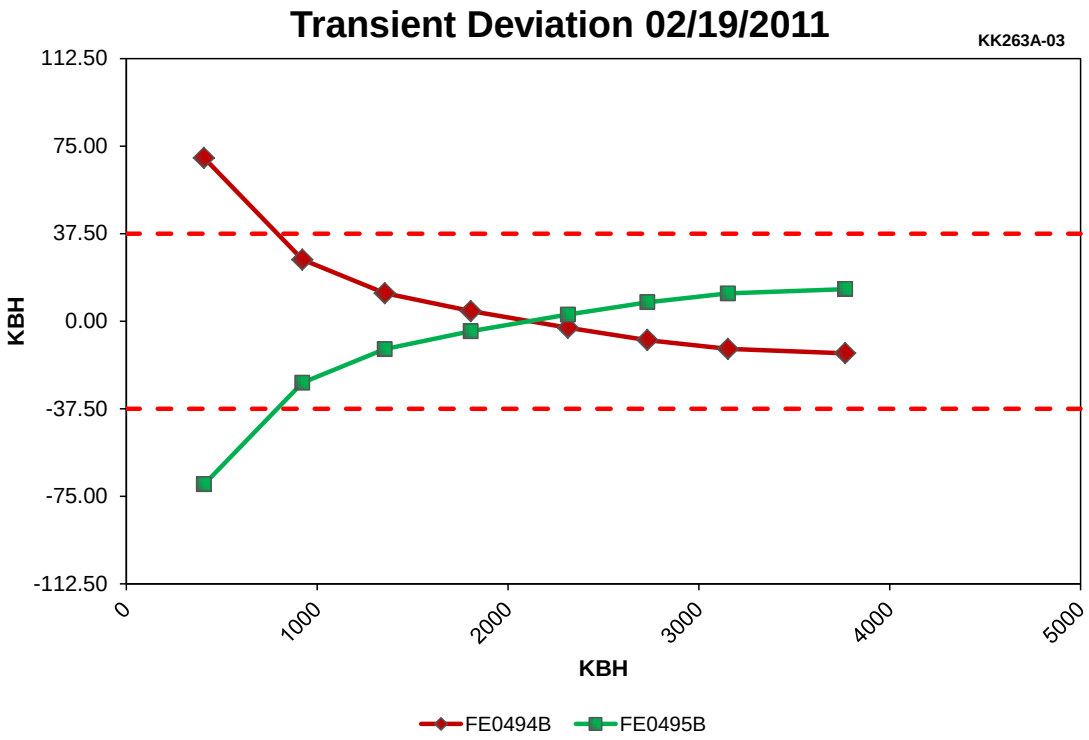



**Figure E.44 SG C STEAM FLOW Transient Deviation at Farley Unit 2 (Cycle 21)**

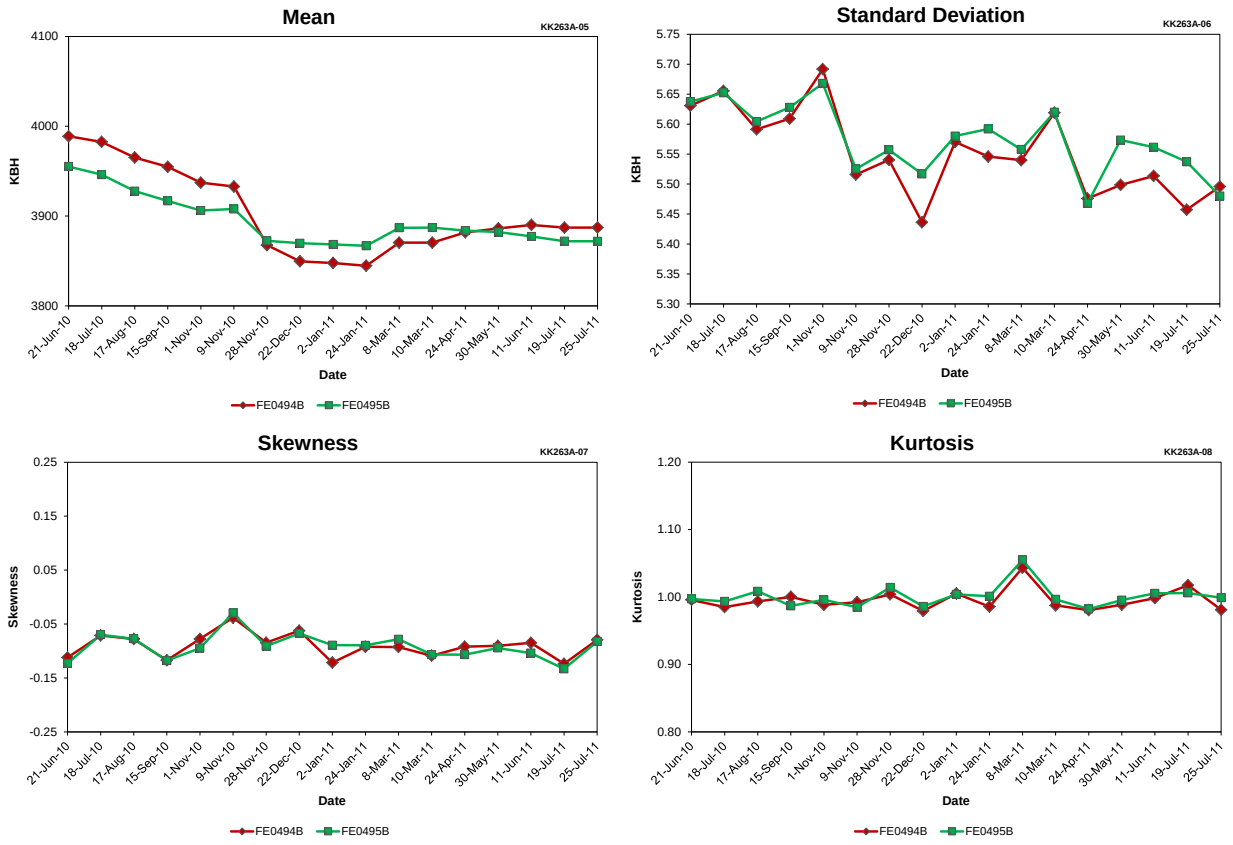



**Figure E.45 SG C STEAM FLOW Data Quality Statistics at Farley Unit 2 (Cycle 21)**

| Result Type | Tag Names | |
|---|---|---|
| | FE0494B | FE0495B |
| Mean | 3902.62 | 3894.05 |
| Std. Dev. | 5.55 | 5.57 |
| Skewness | -0.09 | -0.09 |
| Kurtosis | 1.00 | 1.00 |

**Table E.9 SG C STEAM FLOW Data Quality for Farley Unit 2 (Cycle 21)**

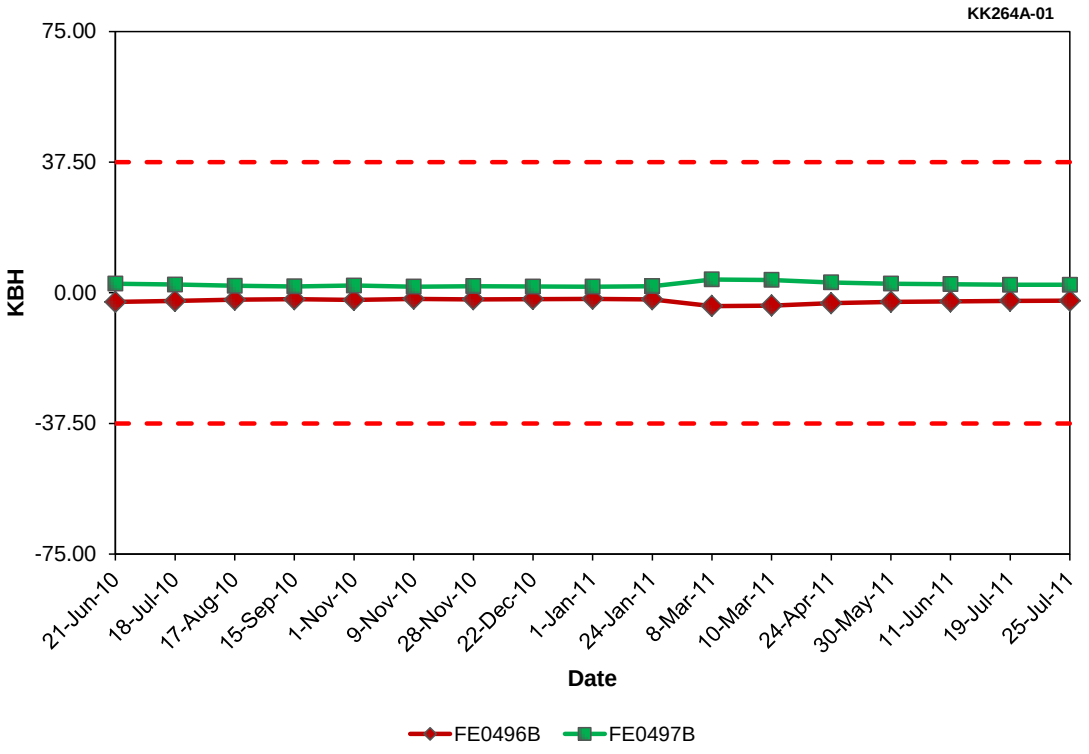



**Figure E.46 FW FLOW TO SG C Steady-State Deviation at Farley Unit 2 (Cycle 21)**

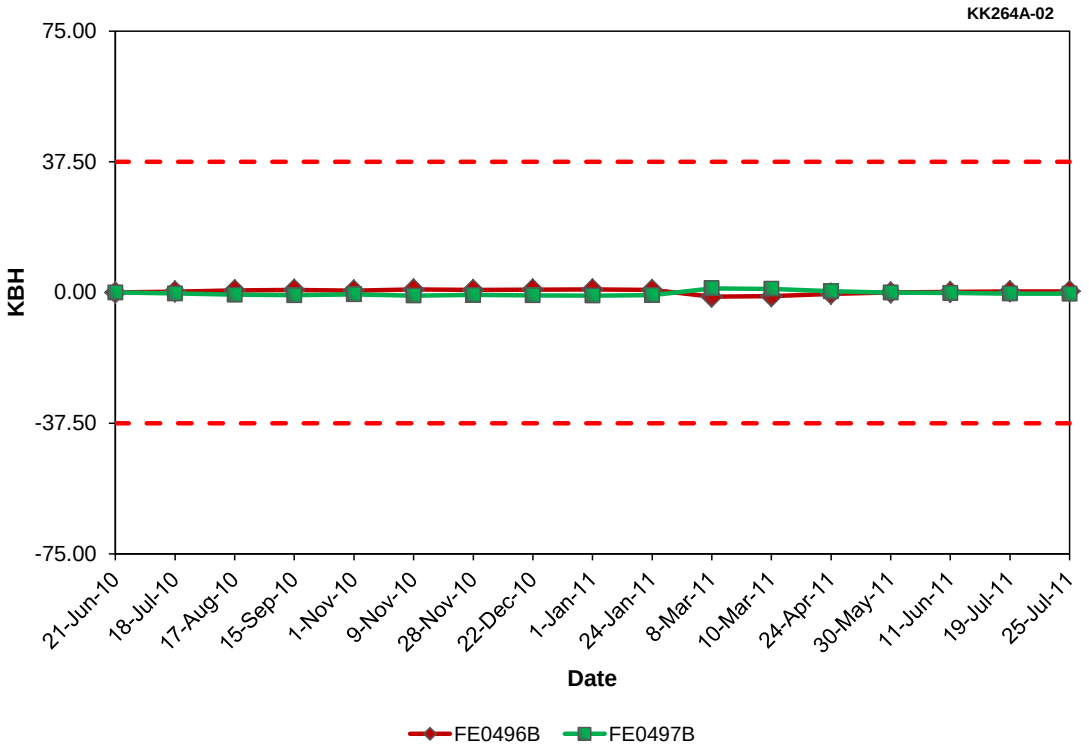



**Figure E.47 FW FLOW TO SG C Steady-State Drift at Farley Unit 2 (Cycle 21)**

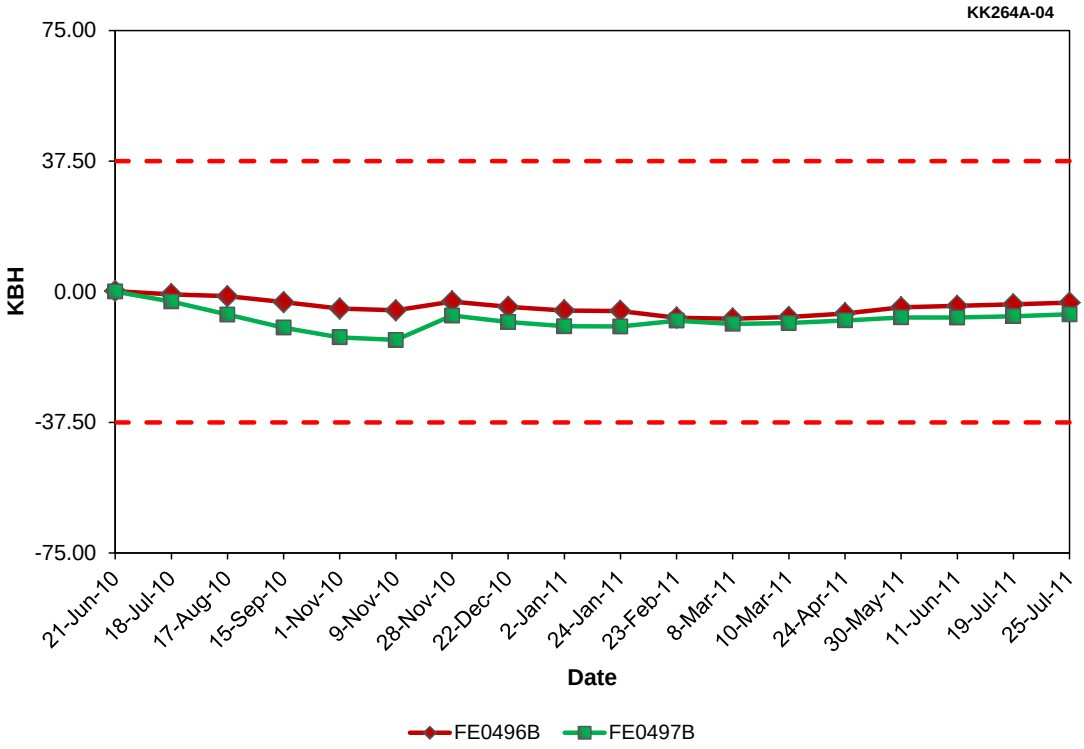



**Figure E.48 FW FLOW TO SG C Steady-State Residual AAKR at Farley Unit 2 (Cycle 21)**

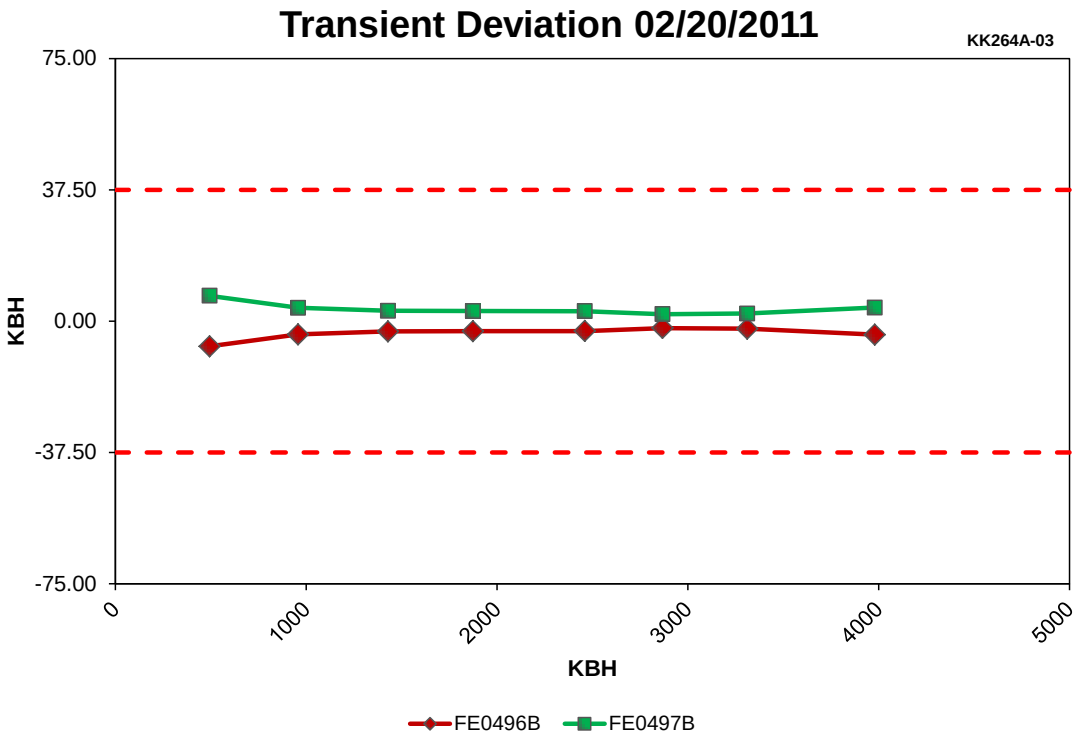



**Figure E.49 FW FLOW TO SG C Transient Deviation at Farley Unit 2 (Cycle 21)**

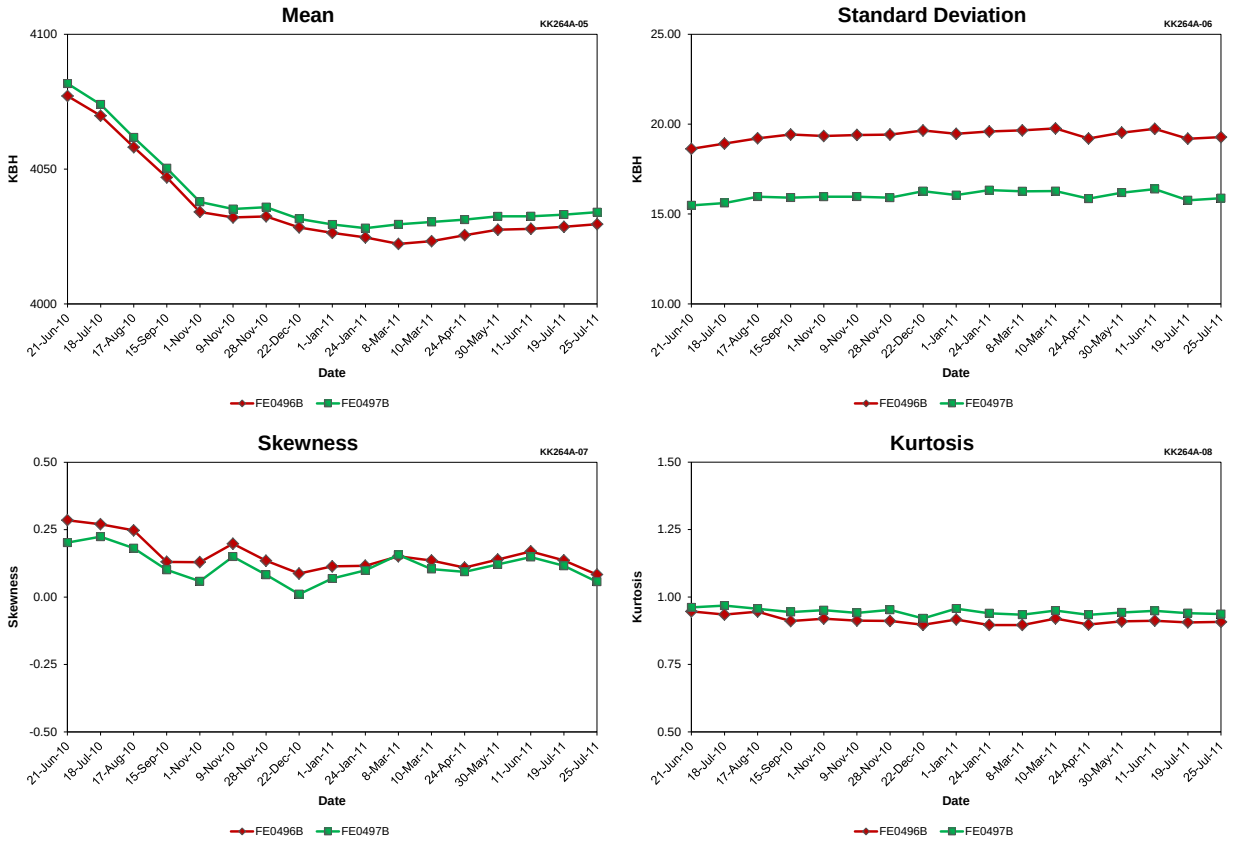



**Figure E.50 FW FLOW TO SG C Data Quality Statistics at Farley Unit 2 (Cycle 21)**

**Table E.10 FW FLOW TO SG C Data Quality for Farley Unit 2 (Cycle 21)**

| | Tag Names | |
|---|---|---|
| **Result Type** | **FE0496B** | **FE0497B** |
| Mean | 4036.13 | 4040.52 |
| Std. Dev. | 19.37 | 16.00 |
| Skewness | 0.16 | 0.12 |
| Kurtosis | 0.91 | 0.94 |

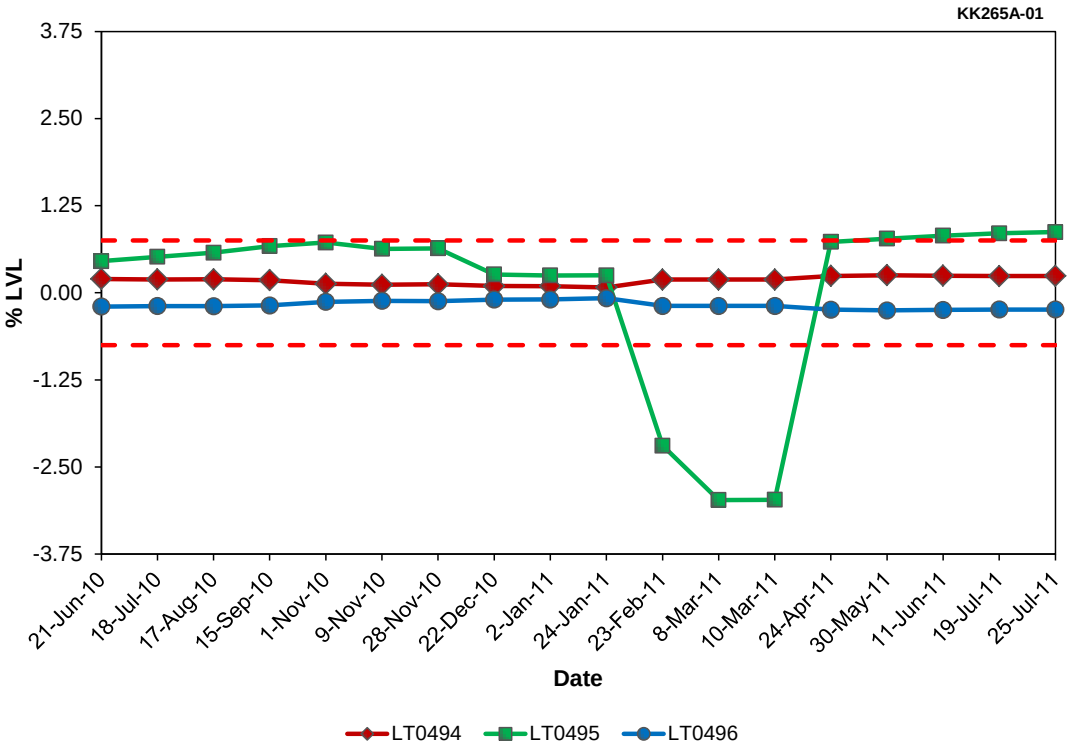



**Figure E.51 SG C LEVEL Steady-State Deviation at Farley Unit 2 (Cycle 21)**

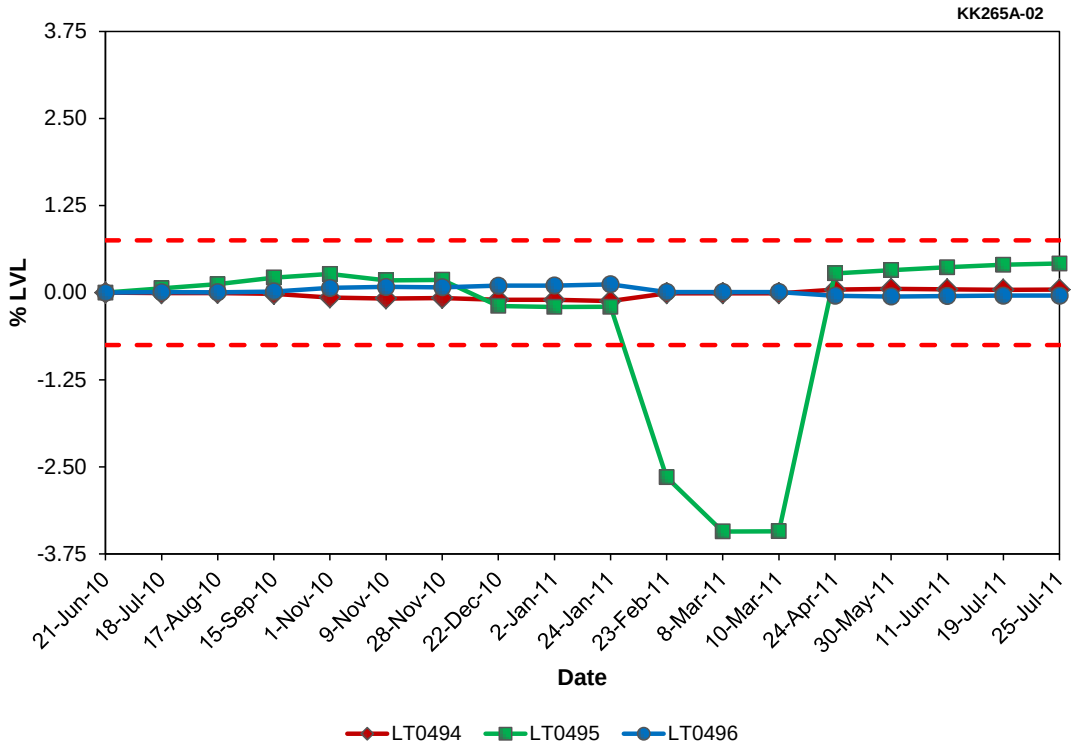



**Figure E.52 SG C LEVEL Steady-State Drift at Farley Unit 2 (Cycle 21)**

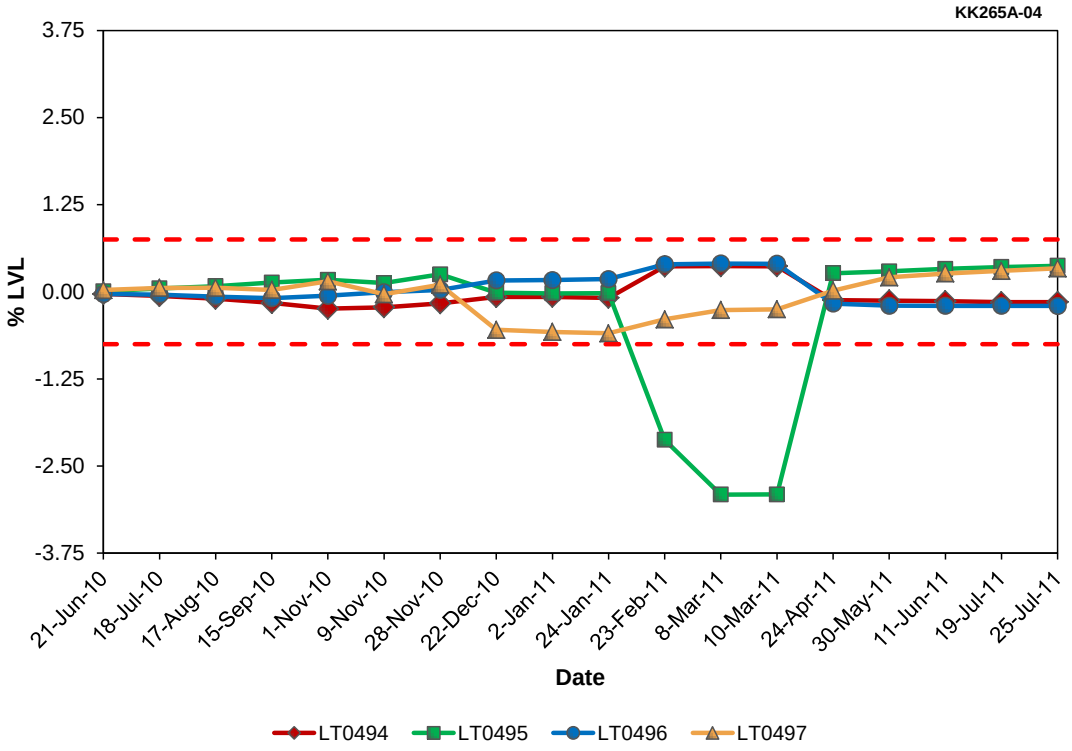



**Figure E.53 SG C LEVEL Steady-State Residual AAKR at Farley Unit 2 (Cycle 21)**

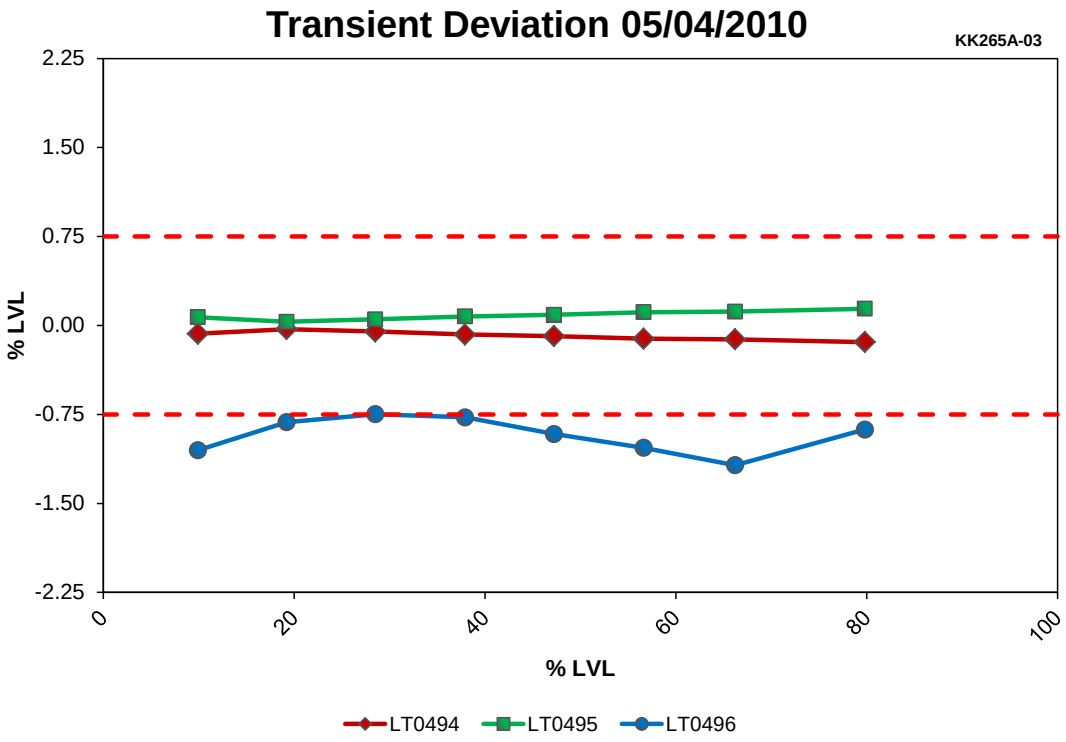



**Figure E.54 SG C LEVEL Transient Deviation at Farley Unit 2 (Cycle 21)**

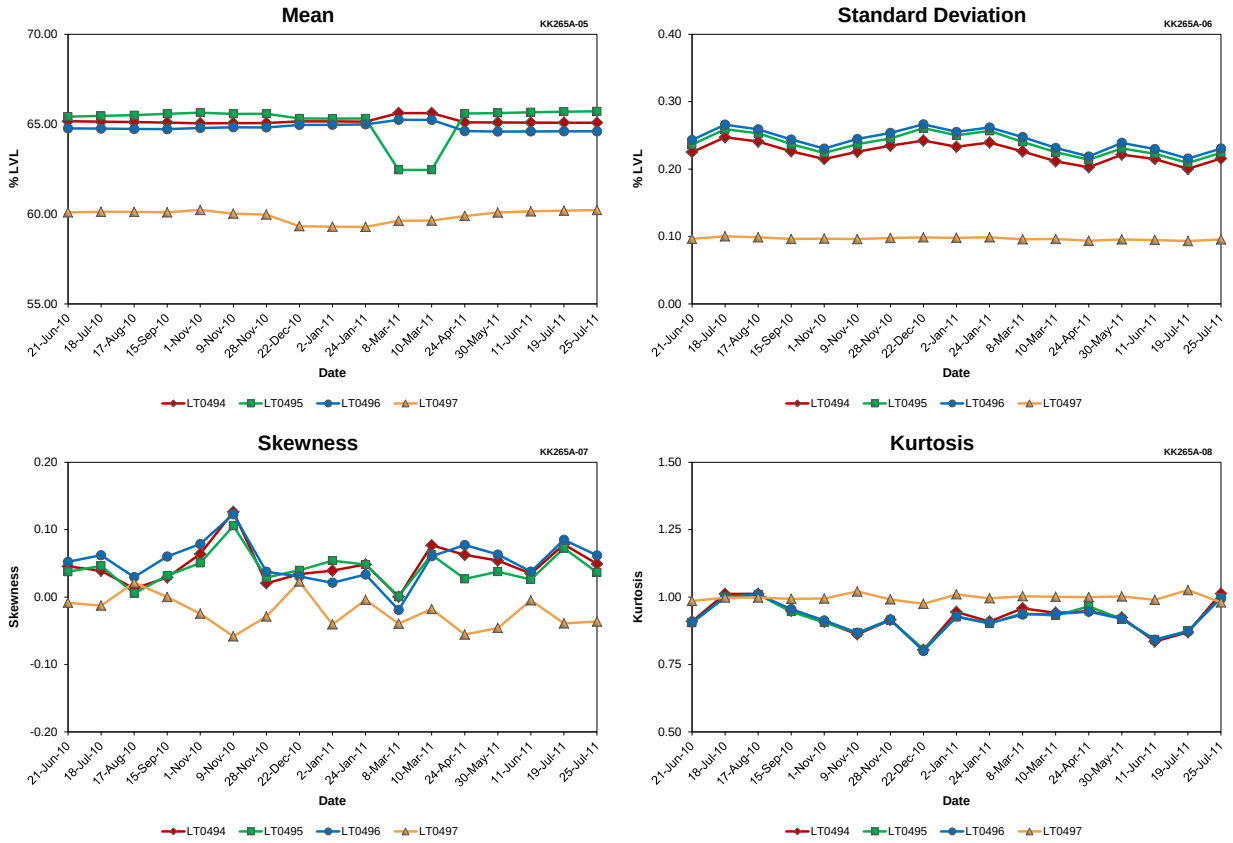



**Figure E.55 SG C LEVEL Data Quality Statistics at Farley Unit 2 (Cycle 21)**

**Table E.11 SG B LEVEL Data Quality for Farley Unit 2 (Cycle 21)**

| | Tag Names | | | |
|---|---|---|---|---|
| **Result Type** | **LT0494** | **LT0495** | **LT0496** | **LT0497** |
| Mean | 65.16 | 65.17 | 64.81 | 59.90 |
| Std. Dev. | 0.22 | 0.24 | 0.24 | 0.10 |
| Skewness | 0.05 | 0.04 | 0.05 | -0.02 |
| Kurtosis | 0.92 | 0.92 | 0.92 | 1.00 |

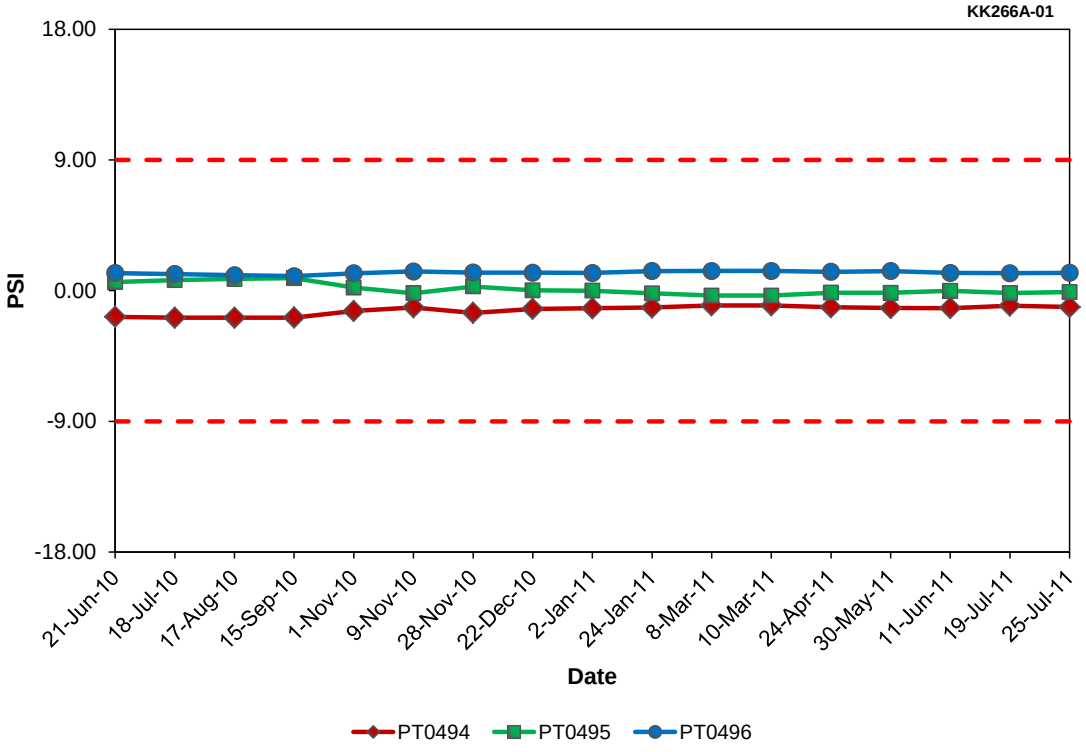



**Figure E.56 SG C OUTLET PRESSURE Steady-State Deviation at Farley Unit 2 (Cycle 21)**

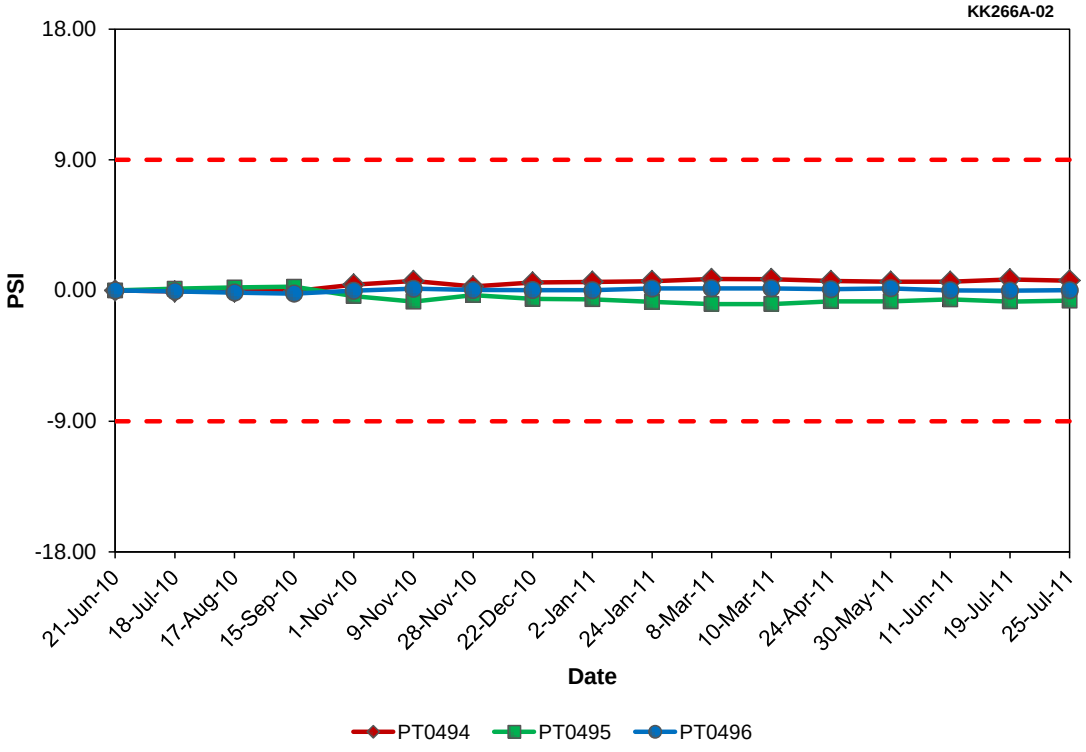



**Figure E.57 SG C OUTLET PRESSURE Steady-State Drift at Farley Unit 2 (Cycle 21)**

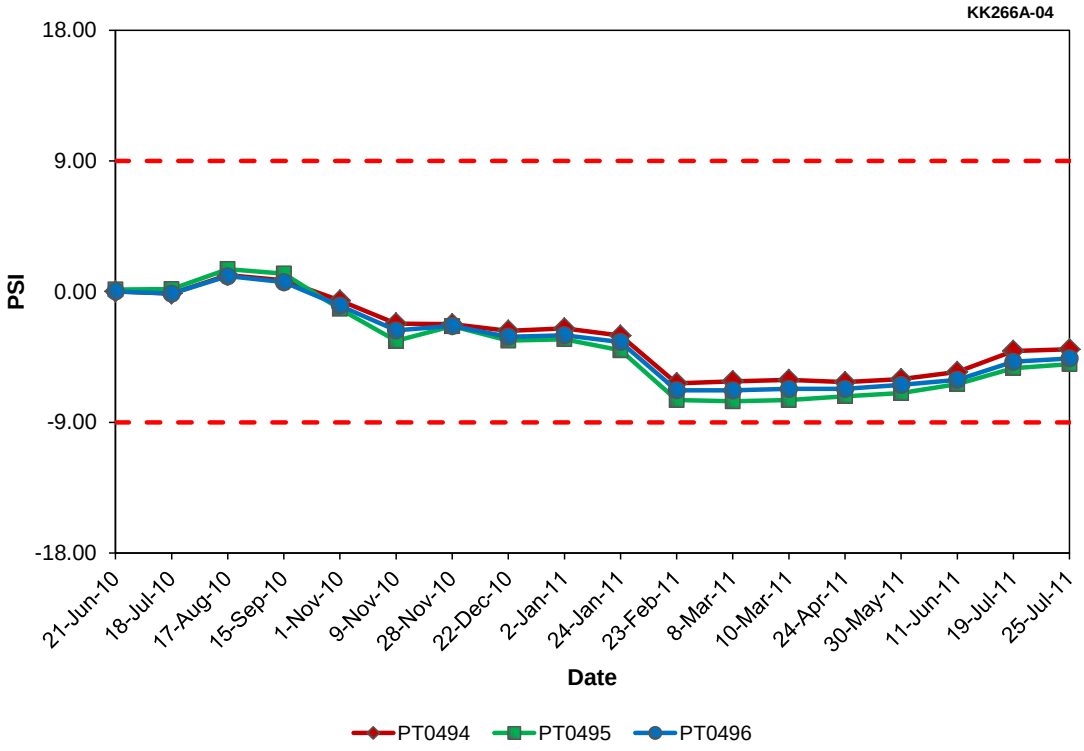



**Figure E.58 SG C OUTLET PRESSURE Steady-State Residual AAKR at Farley Unit 2 (Cycle 21)**

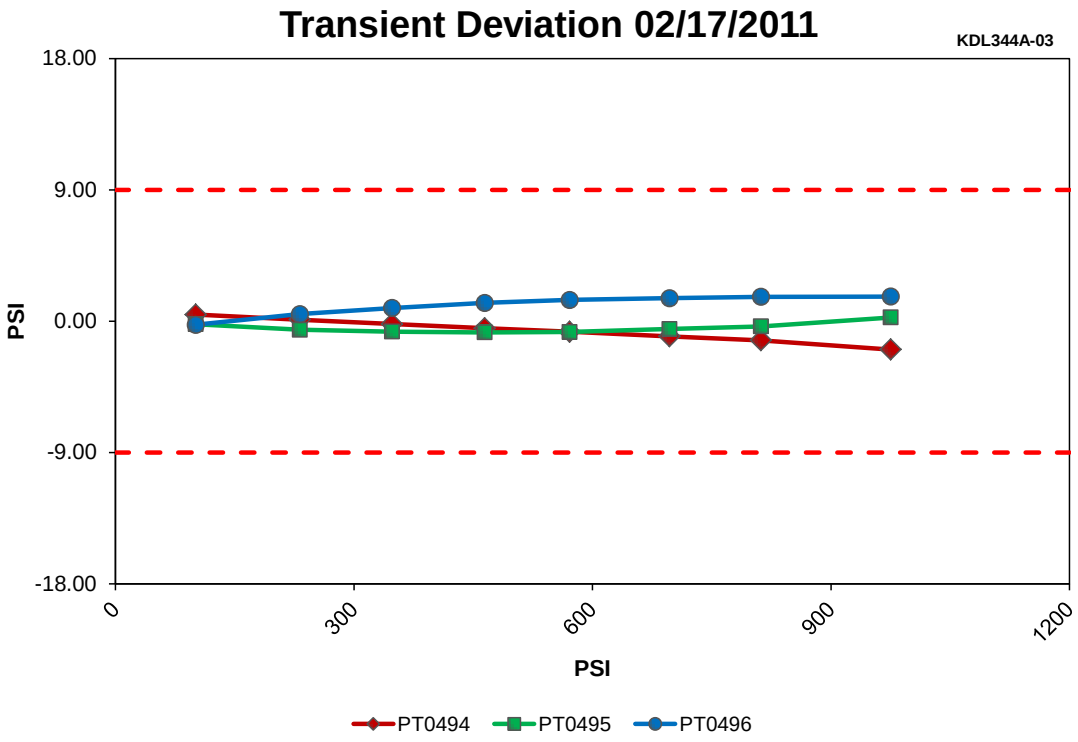



**Figure E.59 SG C OUTLET PRESSURE Transient Deviation at Farley Unit 2 (Cycle 21)**

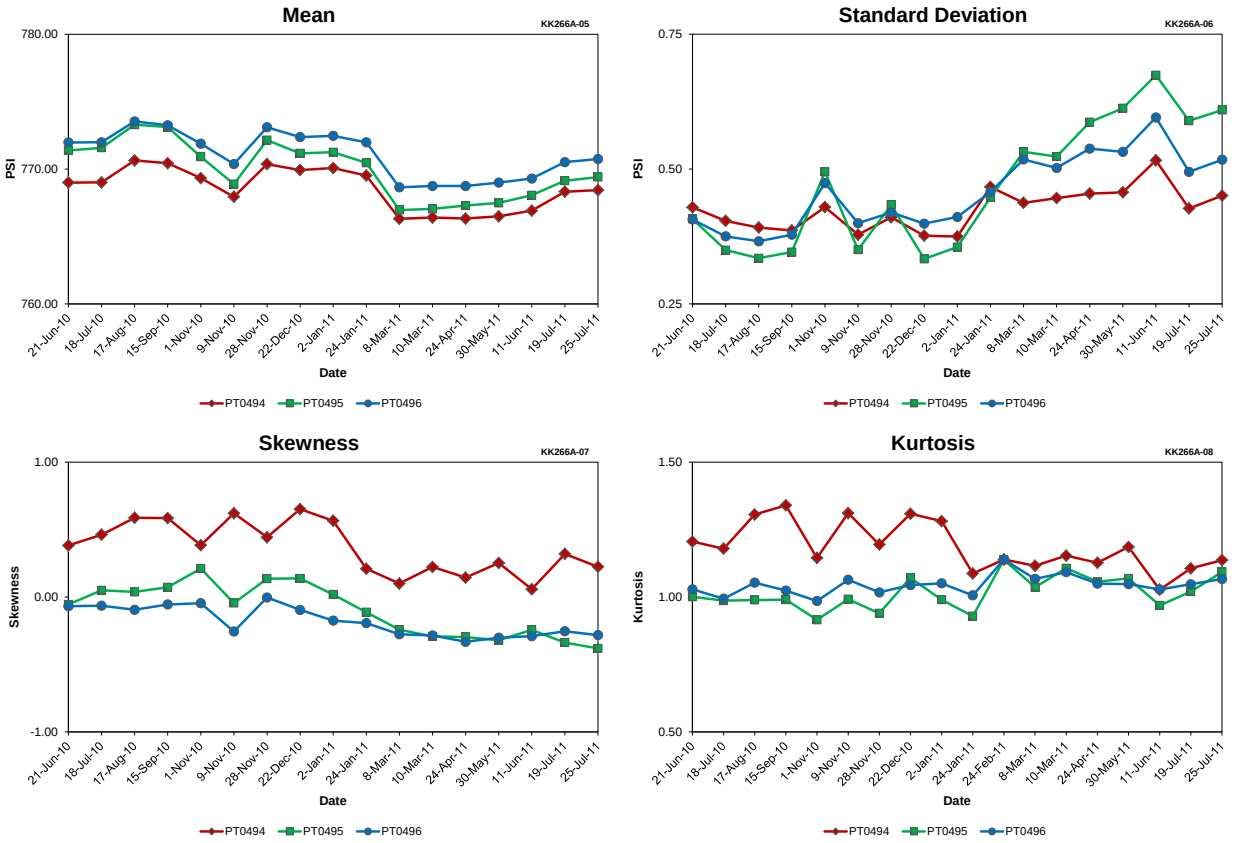



**Figure E.60 SG C OUTLET PRESSURE Data Quality Statistics at Farley Unit 2 (Cycle 21)**

**Table E.12 SG C OUTLET PRESSURE Data Quality for Farley Unit 2 (Cycle 21)**

| | Tag Names | | |
|---|---|---|---|
| **Result Type** | **PT0494** | **PT0495** | **PT0496** |
| Mean | 768.56 | 769.98 | 771.10 |
| Std. Dev. | 0.43 | 0.47 | 0.46 |
| Skewness | 0.37 | -0.10 | -0.18 |
| Kurtosis | 1.19 | 1.02 | 1.04 |

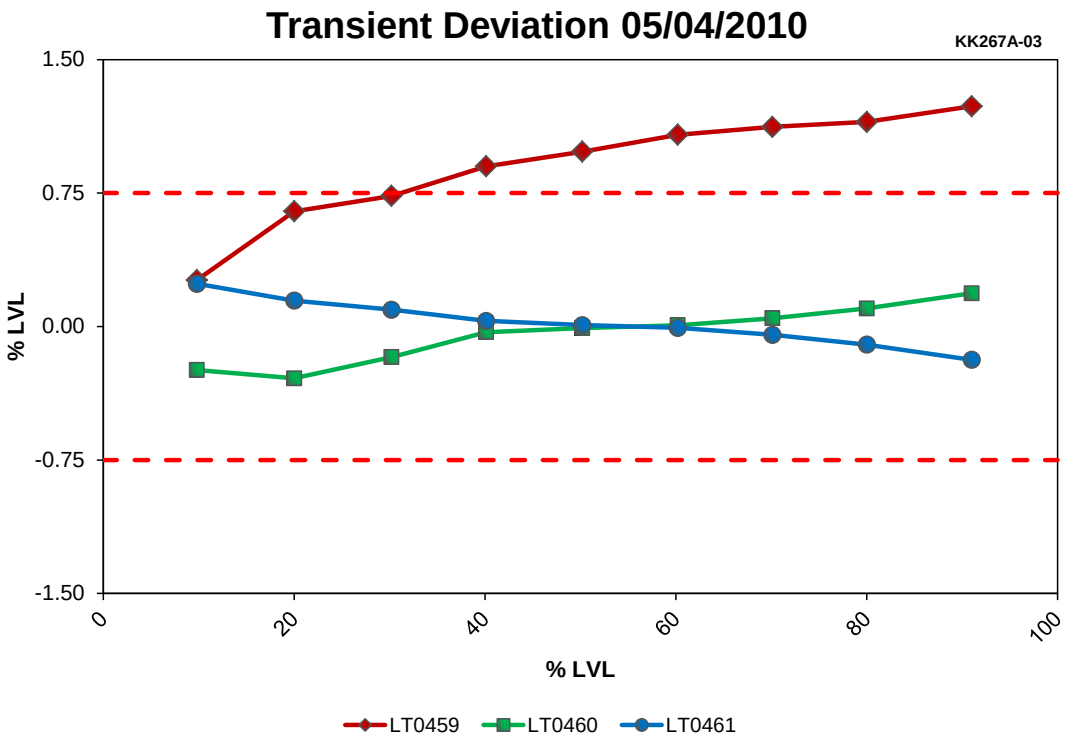



**Figure E. 61 PRESSURIZER LEVEL Transient Deviation at Farley Unit 2 (Cycle 21)**

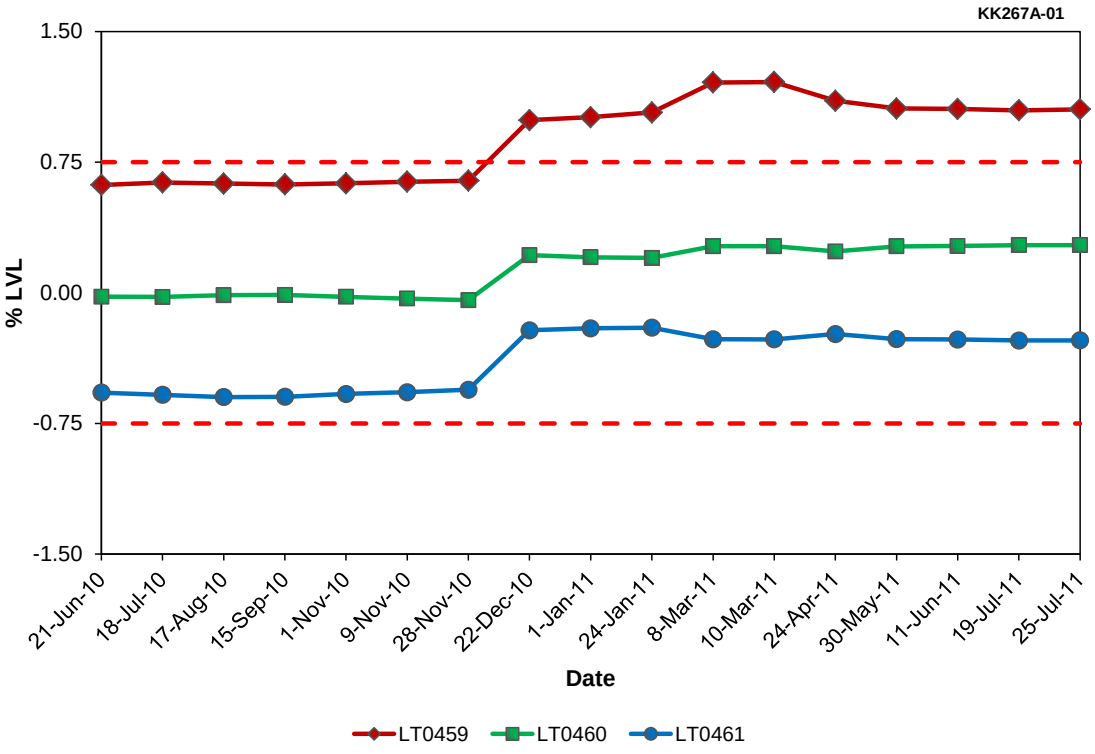



**Figure E.62 PRESSURIZER LEVEL Steady-State Deviation at Farley Unit 2 (Cycle 21)**

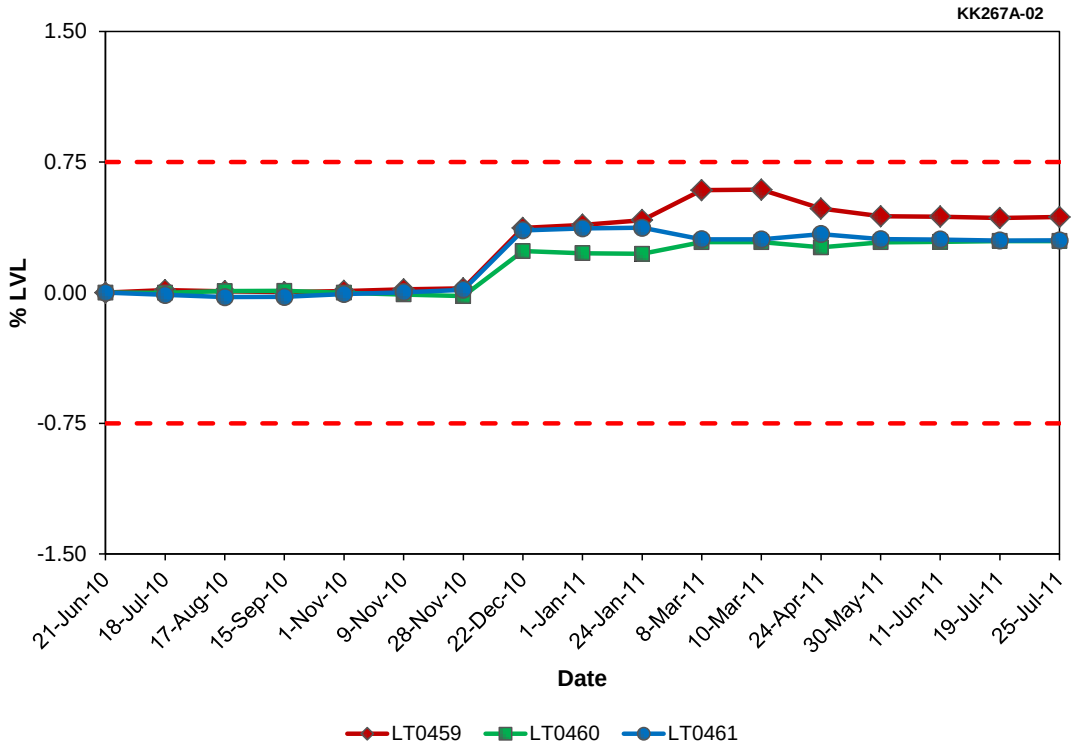



**Figure E.63 PRESSURIZER LEVEL Steady-State Drift at Farley Unit 2 (Cycle 21)**

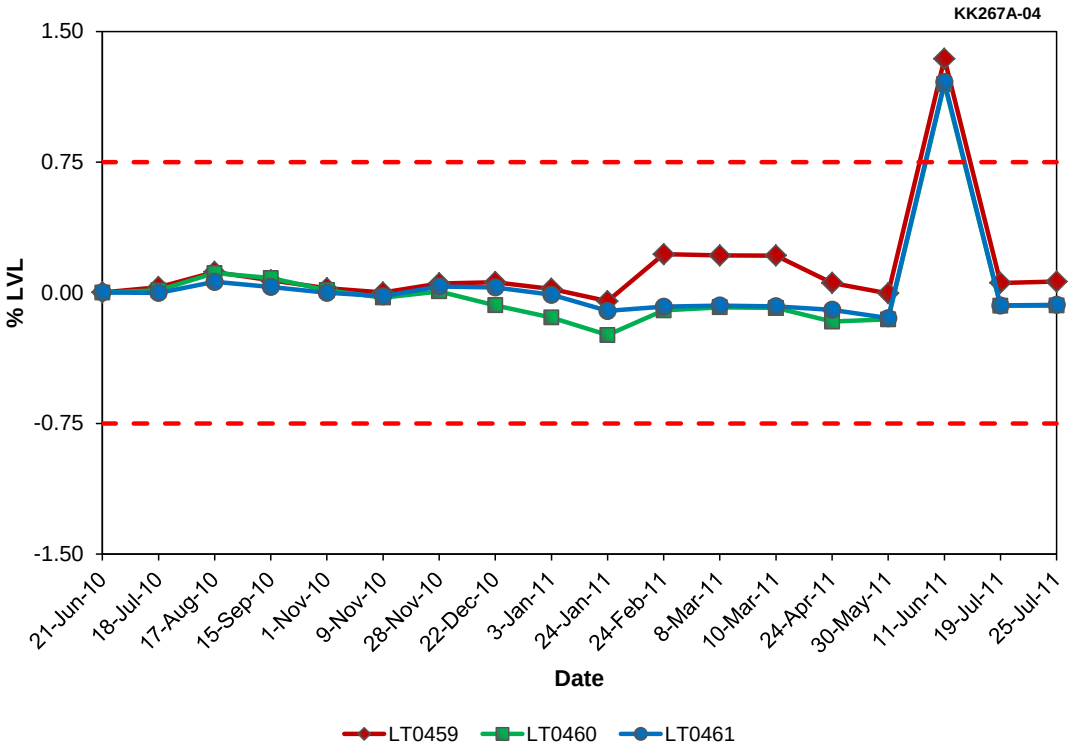



**Figure E. 64 PRESSURIZER LEVEL Steady-State Residual AAKR at Farley Unit 2 (Cycle 21)**

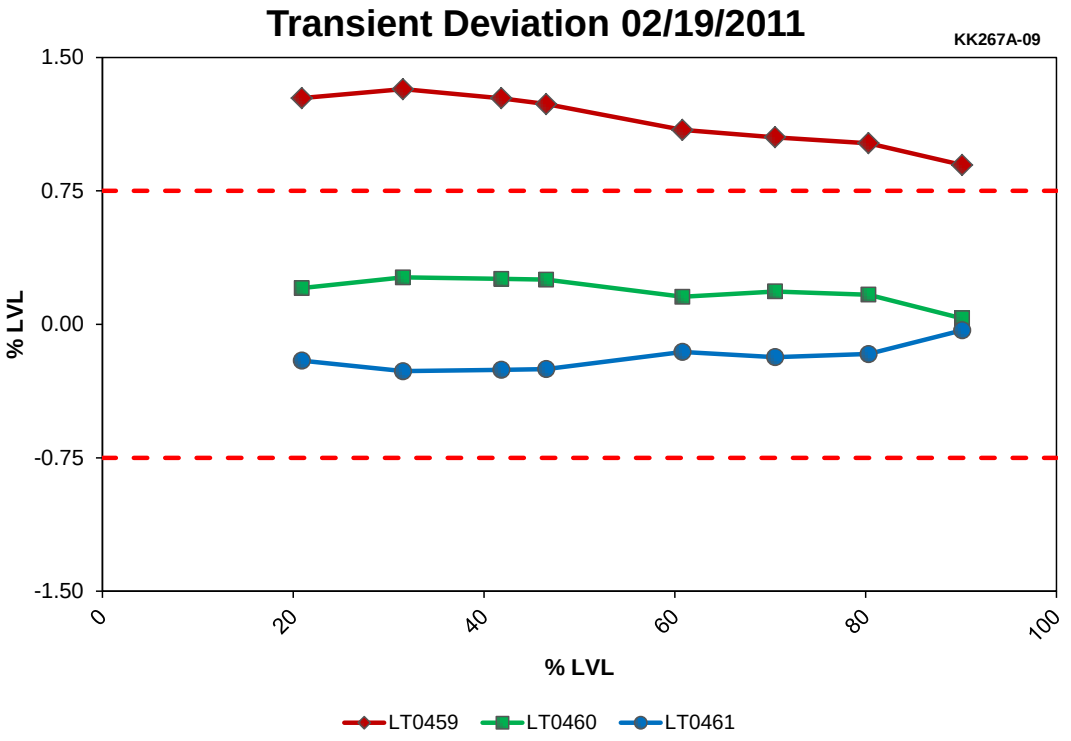



**Figure E. 65 PRESSURIZER LEVEL Transient Deviation at Farley Unit 2 (Cycle 21)**

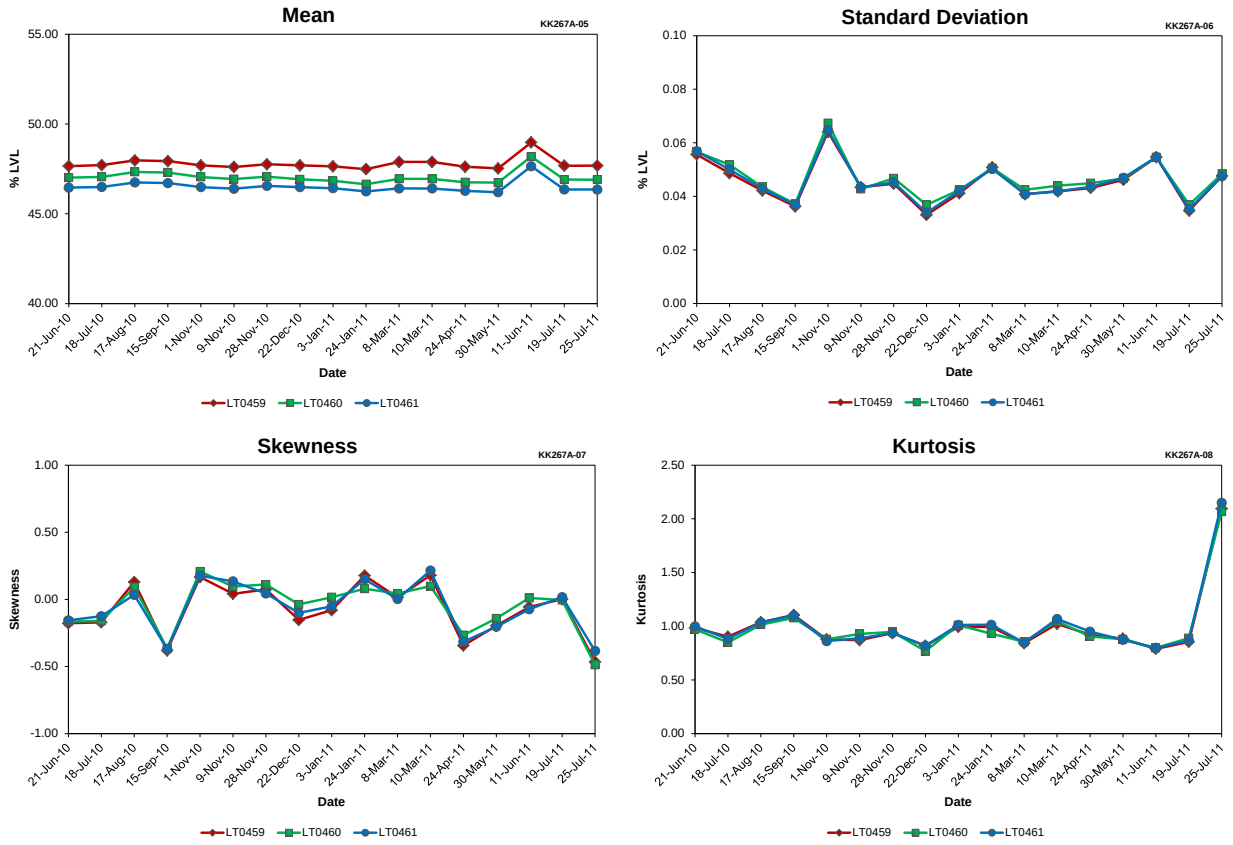



**Figure E. 66 PRESSURIZER LEVEL Data Quality Statistics at Farley Unit 2 (Cycle 21)**

**Table E.13 PRESSURIZER LEVEL Data Quality for Farley Unit 2 (Cycle 21)**

| | Tag Names | | |
|---|---|---|---|
| **Result Type** | **LT0459** | **LT0460** | **LT0461** |
| Mean | 47.79 | 47.03 | 46.51 |
| Std. Dev. | 0.05 | 0.05 | 0.05 |
| Skewness | -0.07 | -0.05 | -0.06 |
| Kurtosis | 1.00 | 0.99 | 1.01 |

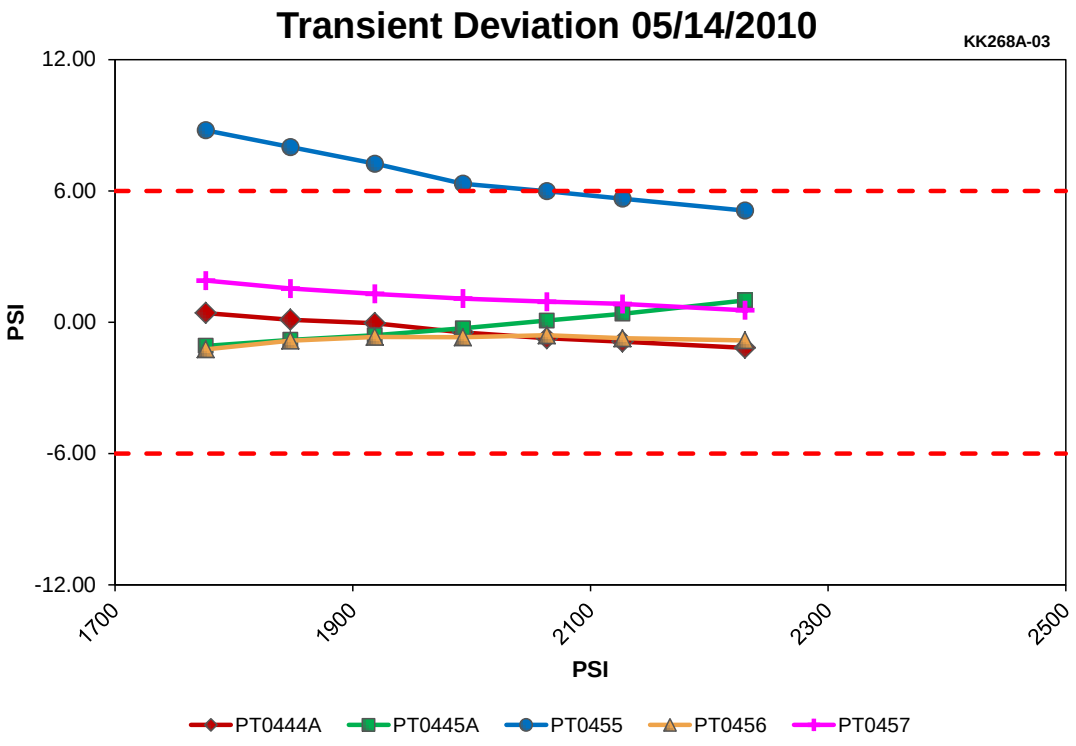



**Figure E. 67 PRESSURIZER PRESSURE Transient Deviation at Farley Unit 2 (Cycle 21)**

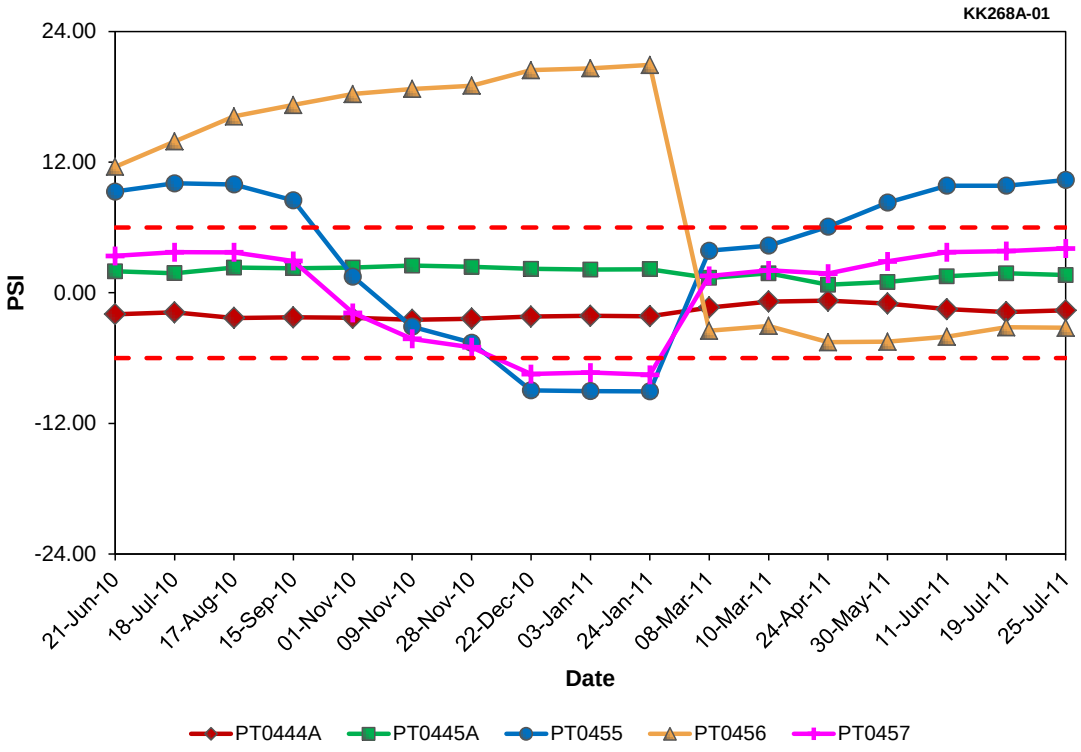



**Figure E. 68 PRESSURIZER PRESSURE Steady-State Deviation at Farley Unit 2 (Cycle 21)**

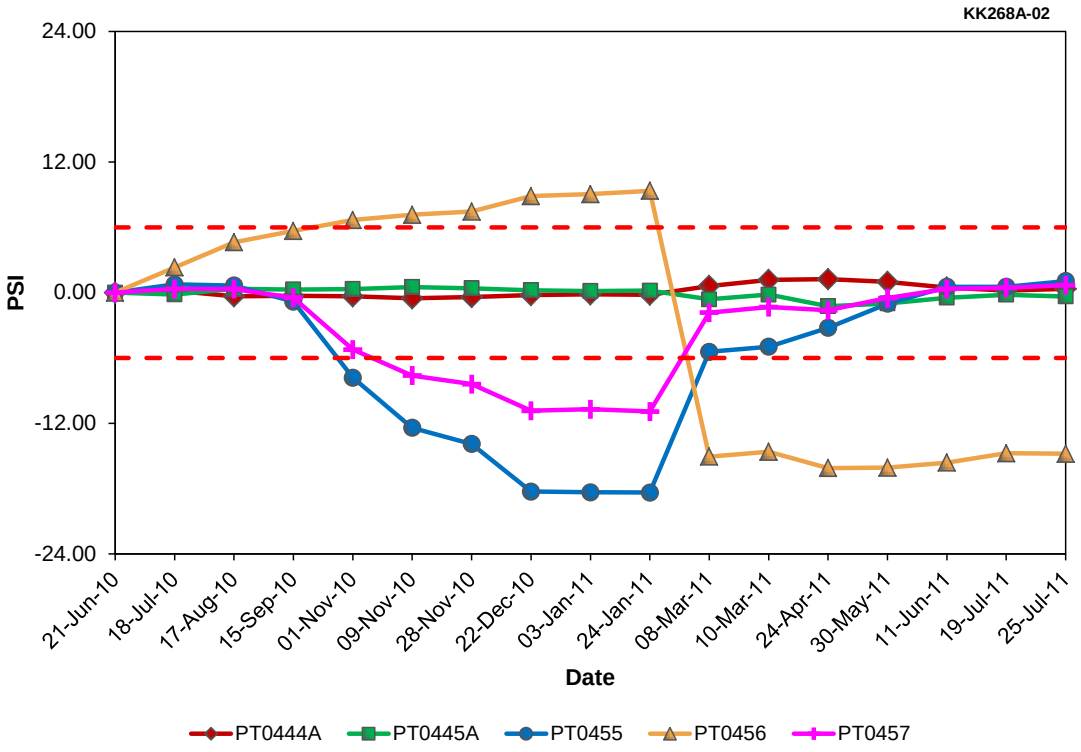



**Figure E. 69 PRESSURIZER PRESSURE Steady-State Drift at Farley Unit 2 (Cycle 21)**

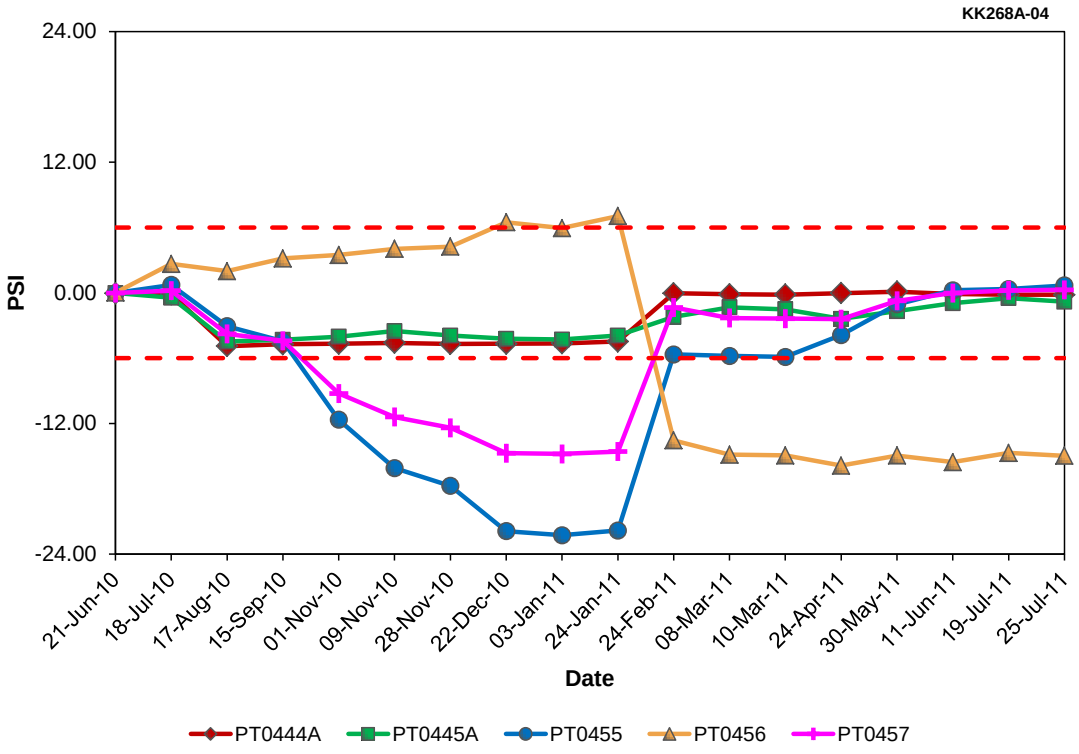



**Figure E. 70 PRESSURIZER PRESSURE Steady-State Residual AAKR at Farley Unit 2 (Cycle 21)**

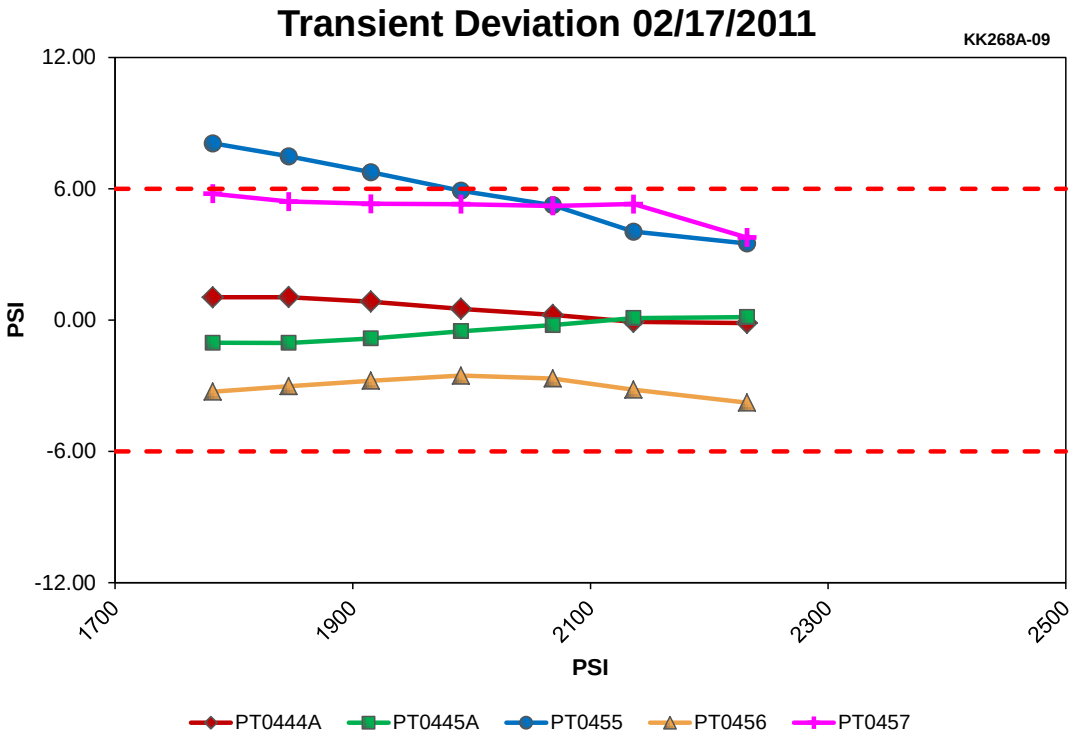



**Figure E. 71 PRESSURIZER PRESSURE Transient Deviation at Farley Unit 2 (Cycle 21)**

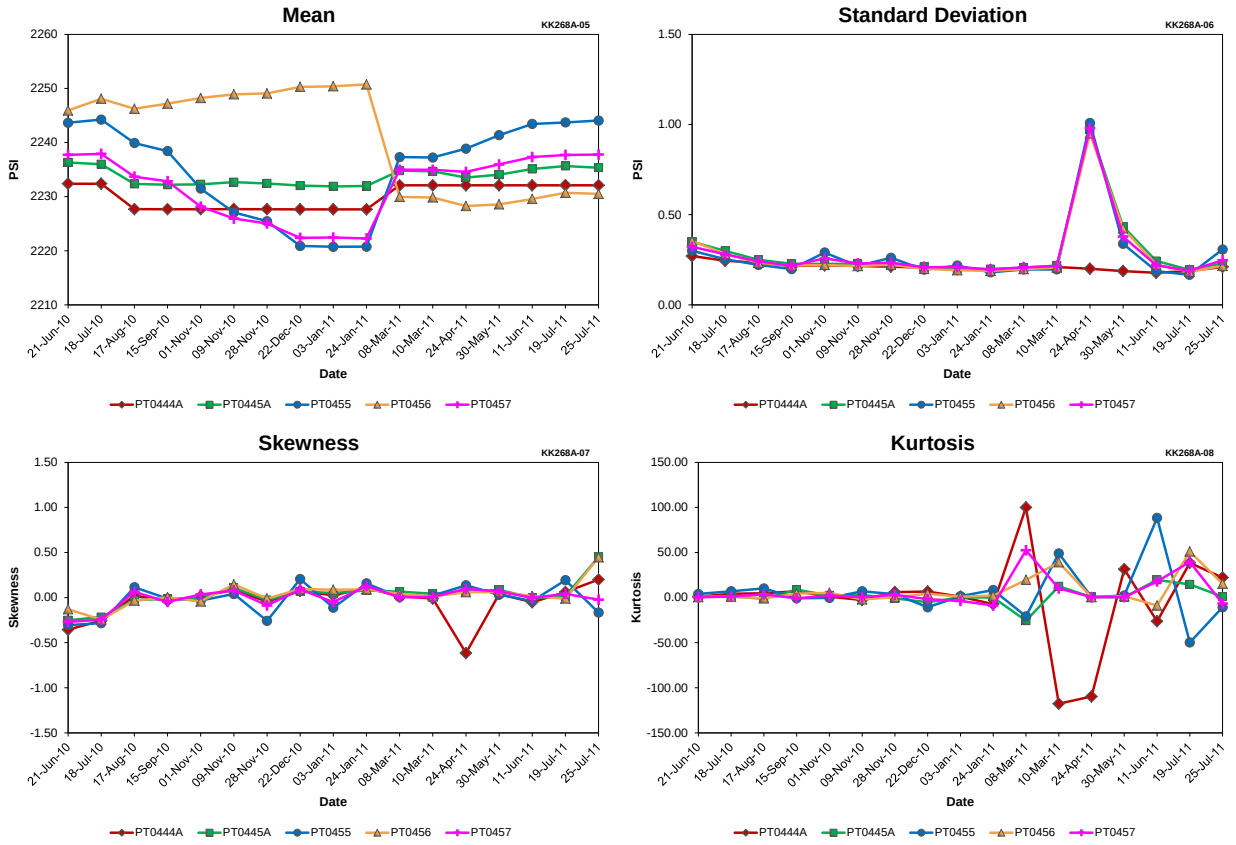



**Figure E. 72 PRESSURIZER PRESSURE Data Quality Statistics at Farley Unit 2 (Cycle 21)**

**Table E. 14 PRESSURIZER PRESSURE Data Quality for Farley Unit 2 (Cycle 21)**

| | Tag Names | | | | |
|---|---|---|---|---|---|
| **Result Type** | **PT0444A** | **PT0445A** | **PT0455** | **PT0456** | **PT0457** |
| Mean | 2230.05 | 2233.73 | 2235.22 | 2240.74 | 2231.87 |
| Std. Dev. | 0.21 | 0.29 | 0.28 | 0.28 | 0.28 |
| Skewness | -0.04 | 0.03 | -0.02 | 0.04 | -0.01 |
| Kurtosis | -2.29 | 1.98 | 5.27 | 7.93 | 6.53 |

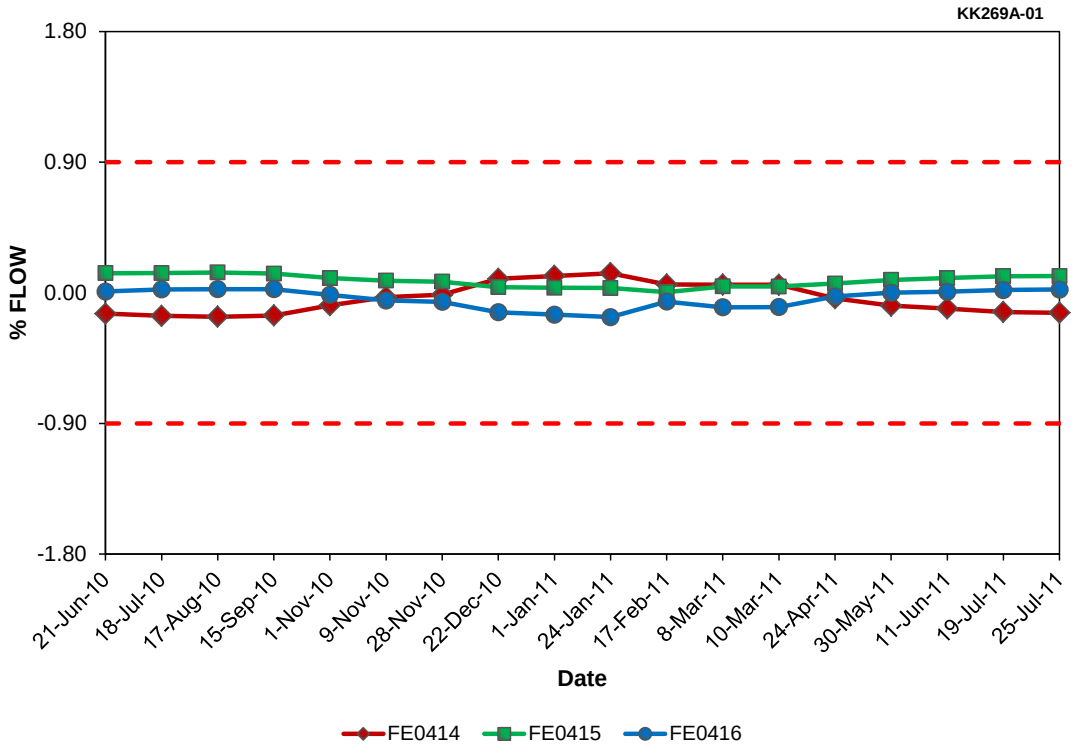



**Figure E.73 RCS LOOP A FLOW Steady-State Deviation at Farley Unit 2 (Cycle 21)**

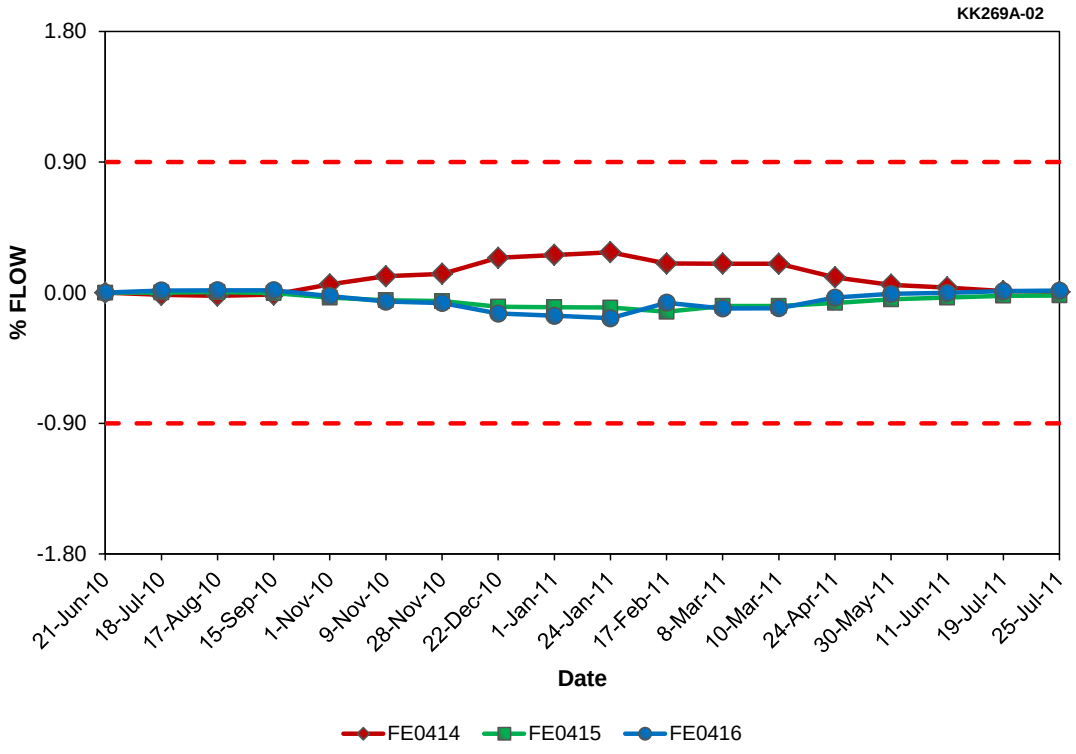



**Figure E. 74 RCS LOOP A FLOW Steady-State Drift at Farley Unit 2 (Cycle 21)**

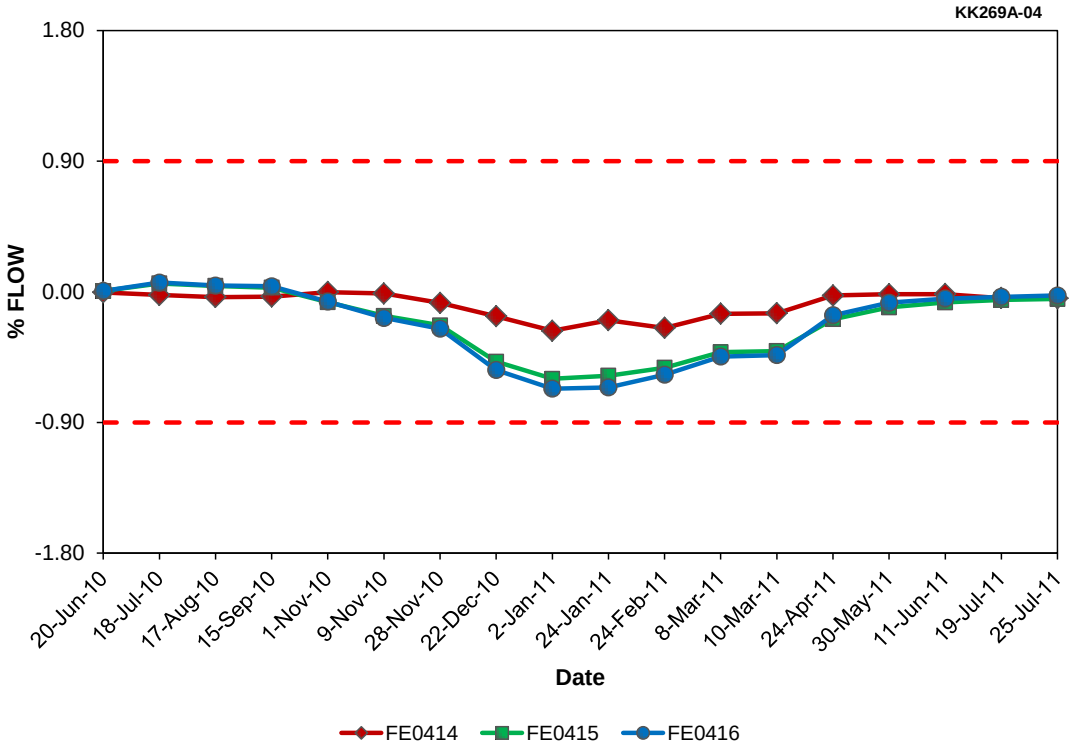



**Figure E. 75 RCS LOOP A FLOW Steady-State Residual AAKR at Farley Unit 2 (Cycle 21)**

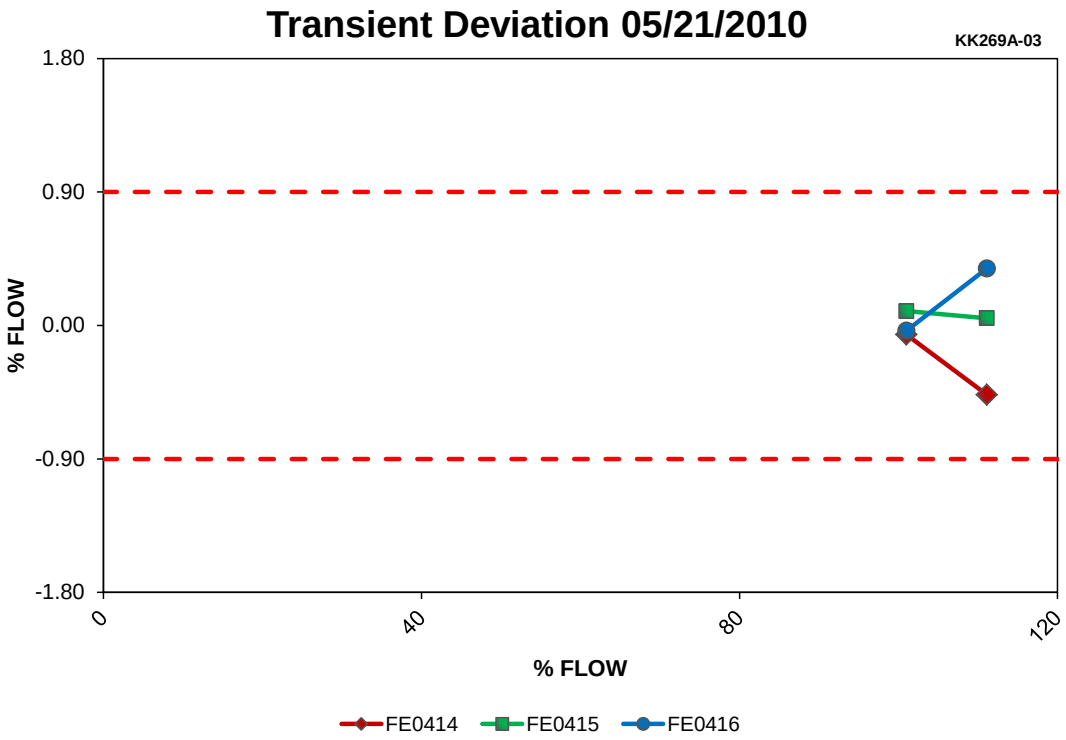



**Figure E. 76 RCS LOOP A FLOW Transient Deviation at Farley Unit 2 (Cycle 21)**

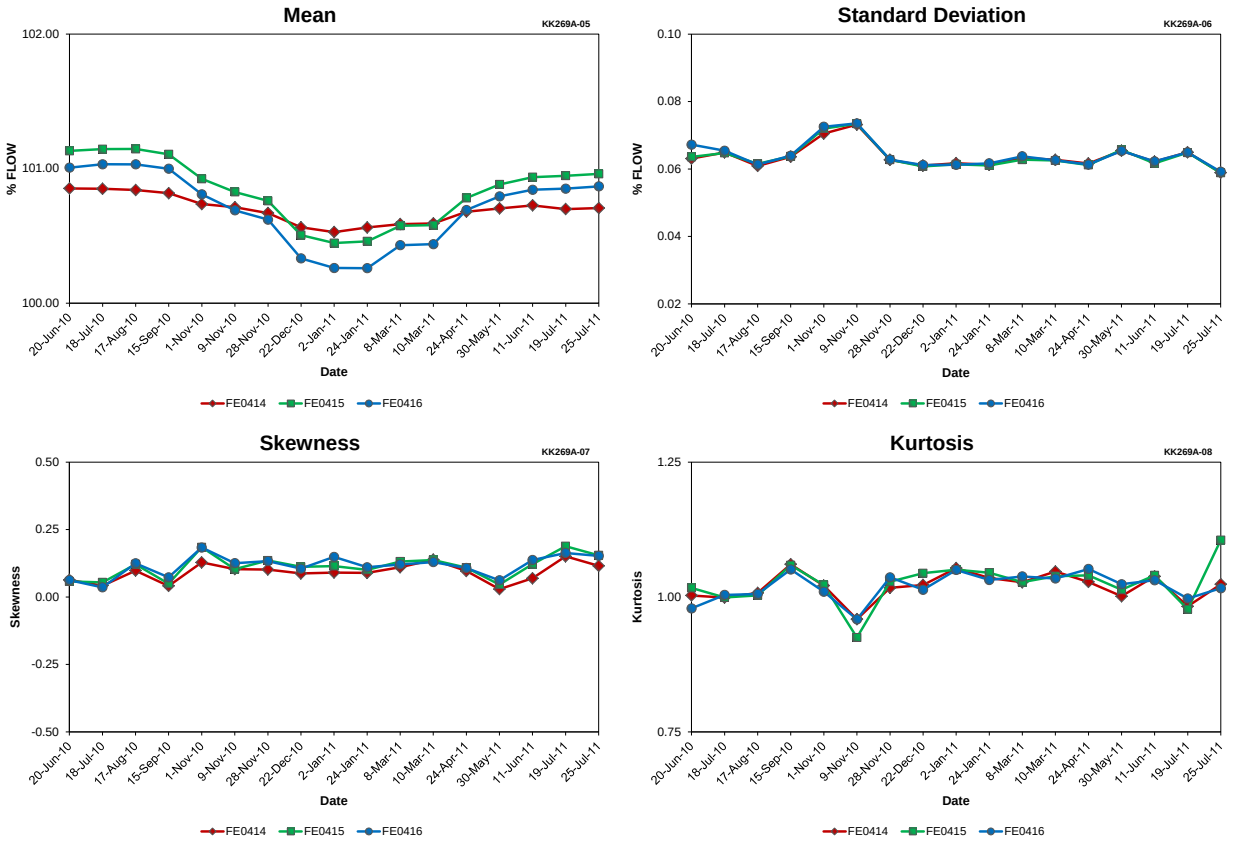



**Figure E. 77 RCS LOOP A FLOW Data Quality Statistics at Farley Unit 2 (Cycle 21)**

**Table E.15 RCS LOOP A FLOW Data Quality for Farley Unit 2 (Cycle 21)**

| | Tag Names | | |
|---|---|---|---|
| **Result Type** | **FE0414** | **FE0415** | **FE0416** |
| Mean | 100.70 | 100.83 | 100.70 |
| Std. Dev. | 0.06 | 0.06 | 0.06 |
| Skewness | 0.09 | 0.11 | 0.12 |
| Kurtosis | 1.02 | 1.03 | 1.02 |

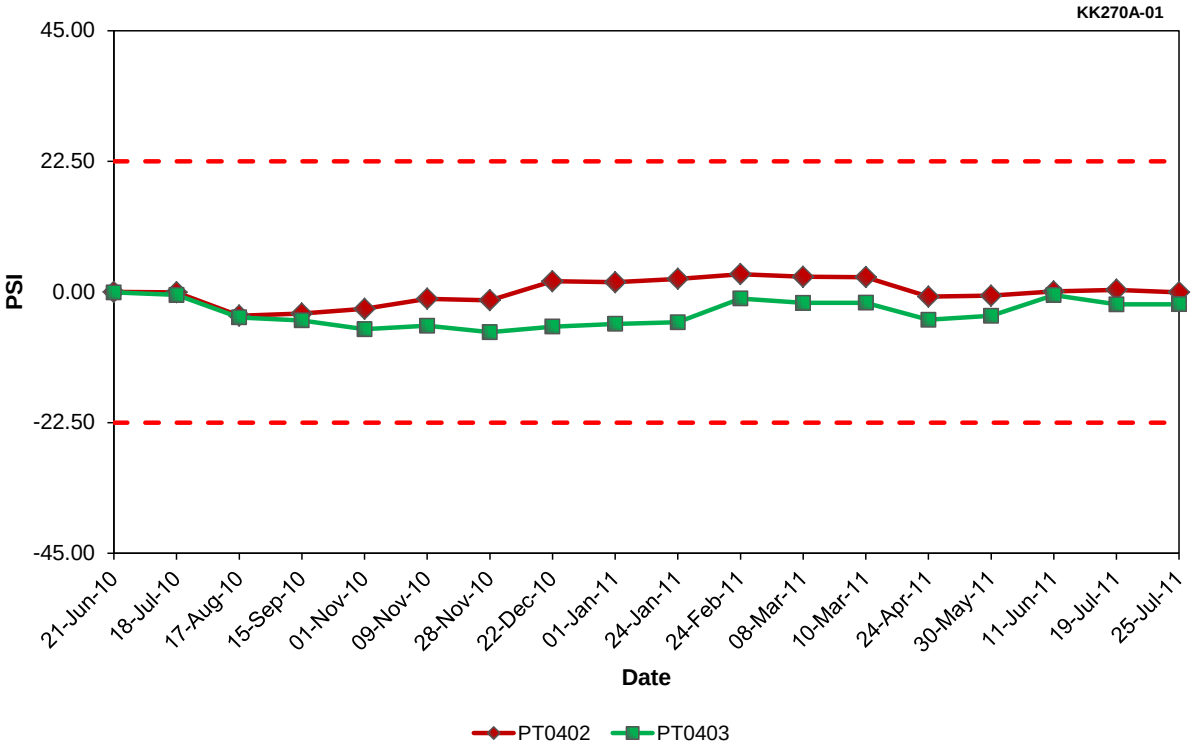



**Figure E.78 RCS WIDE RANGE PRESSURE Steady-State Residual AAKR at Farley Unit 2 (Cycle 21)**

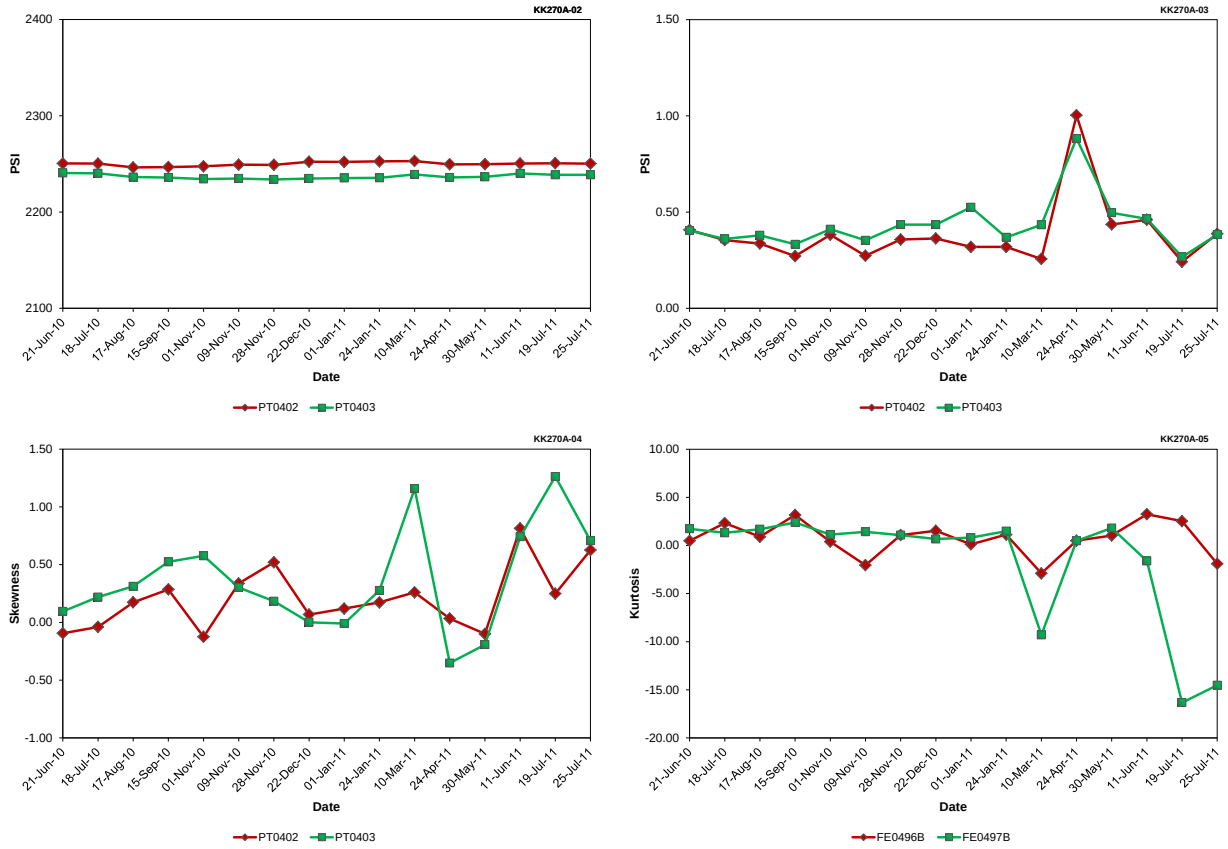



**Figure E. 79 RCS WIDE RANGE PRESSURE Data Quality Statistics at Farley Unit 2 (Cycle 21)**

**Table E.16 RCS WIDE RANGE PRESSURE Data Quality for Farley Unit 2 (Cycle 21)**

| | Tag Names | |
|---|---|---|
| **Result Type** | **PT0402** | **PT0403** |
| Mean | 2249.96 | 2249.96 |
| Std. Dev. | 0.39 | 0.39 |
| Skewness | 0.21 | 0.21 |
| Kurtosis | 0.72 | 0.72 |

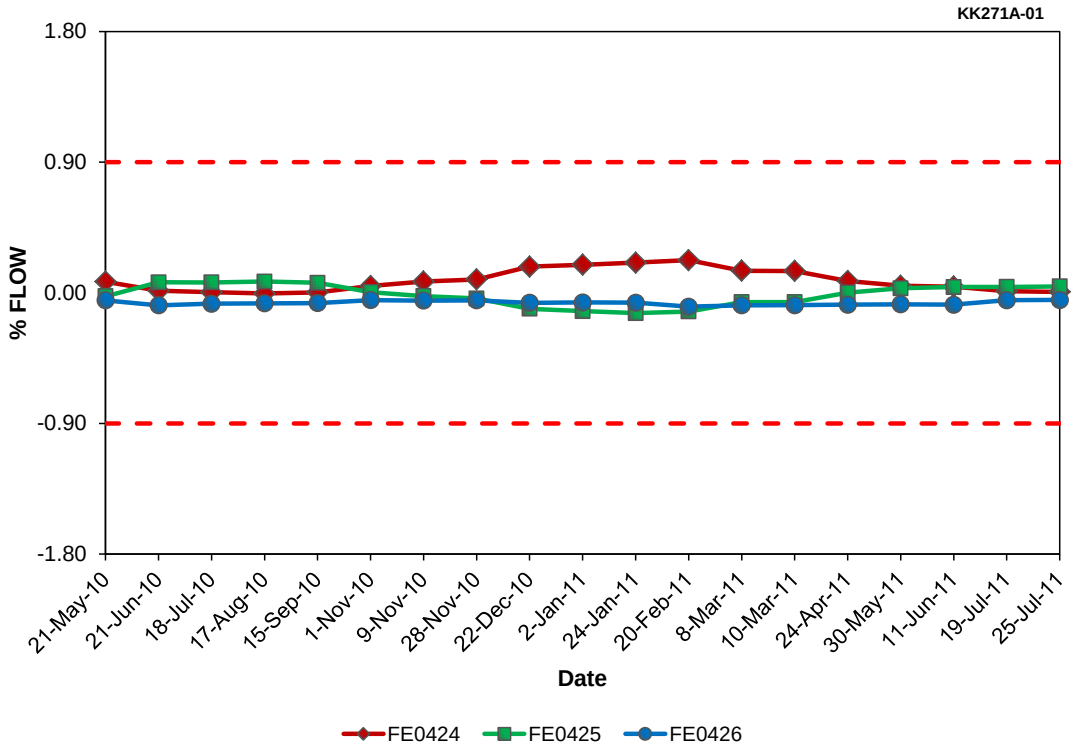



**Figure E.80 RCS LOOP B FLOW Steady-State Deviation at Farley Unit 2 (Cycle 21)**

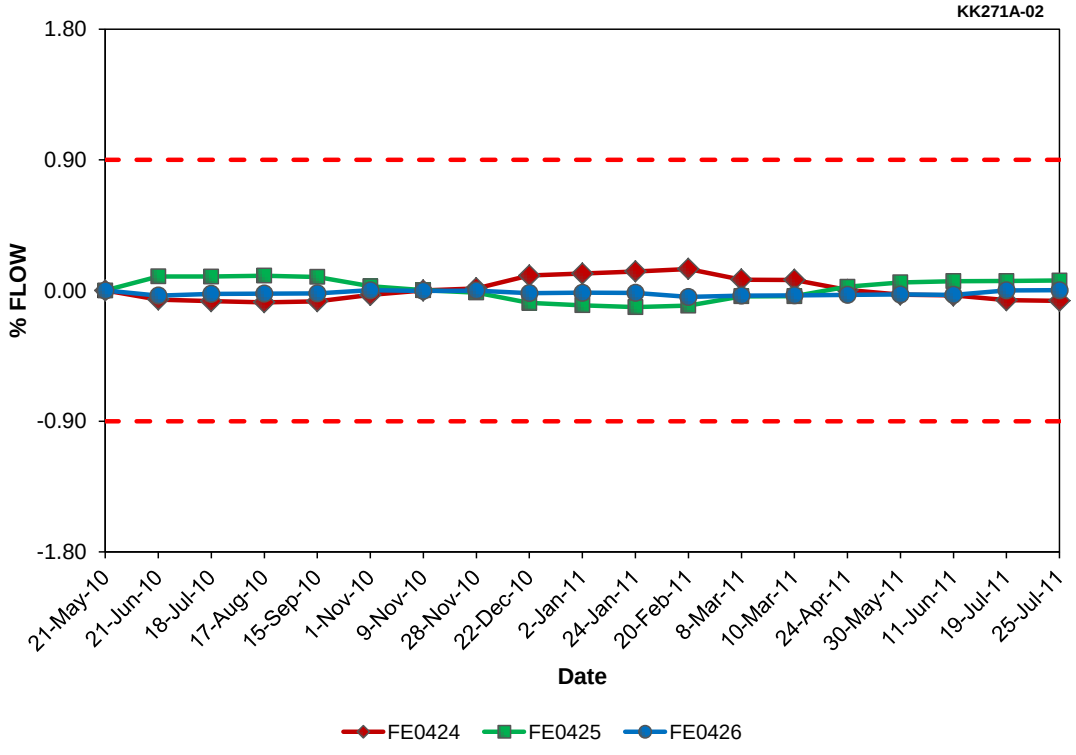



**Figure E. 81 RCS LOOP B FLOW Steady-State Drift at Farley Unit 2 (Cycle 21)**

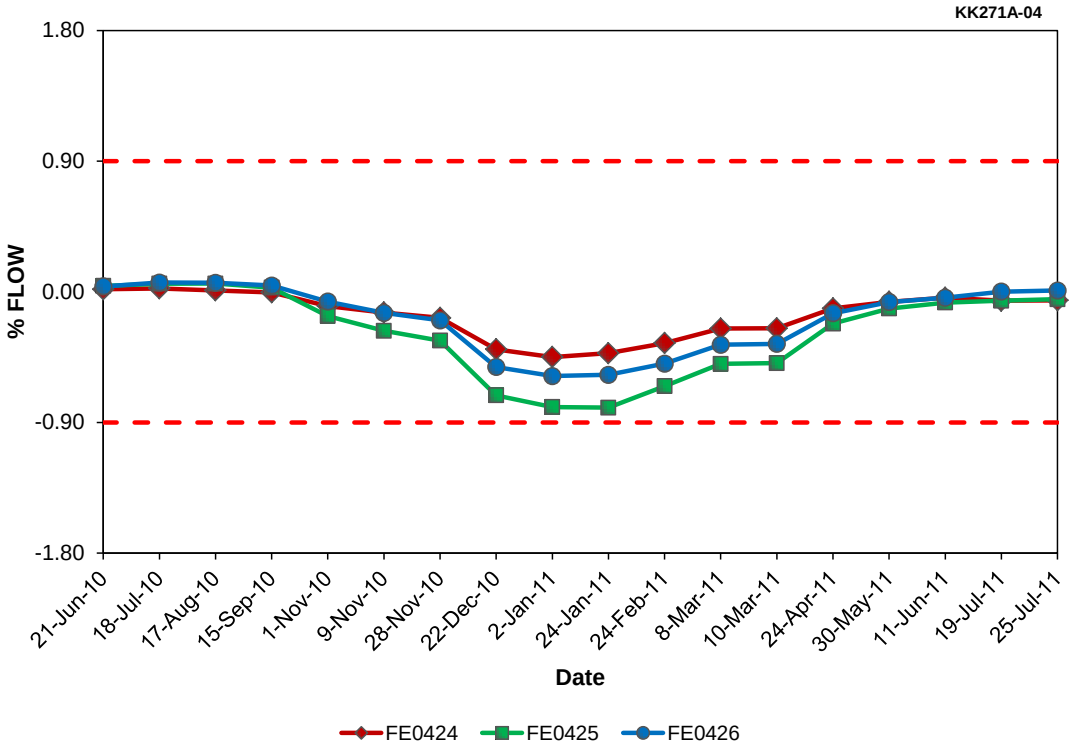



**Figure E. 82 RCS LOOP B FLOW Steady-State Residual AAKR at Farley Unit 2 (Cycle 21)**

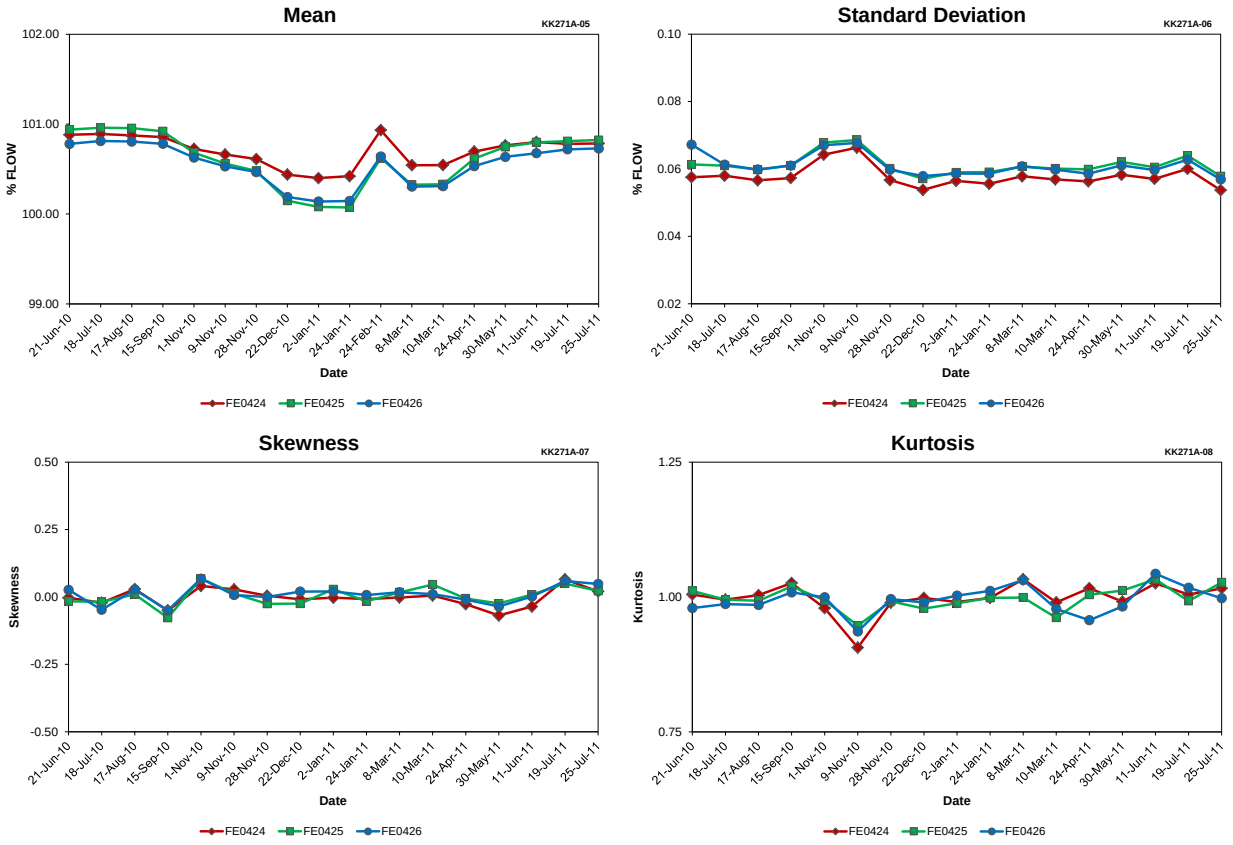



**Figure E. 83 RCS LOOP B FLOW Data Quality Statistics at Farley Unit 2 (Cycle 21)**

**Table E.17 RCS LOOP B FLOW Data Quality for Farley Unit 2 (Cycle 21)**

| | Tag Names | | |
|---|---|---|---|
| **Result Type** | **FE0424** | **FE0425** | **FE0426** |
| Mean | 100.70 | 100.60 | 100.55 |
| Std. Dev. | 0.06 | 0.06 | 0.06 |
| Skewness | 0.00 | 0.00 | 0.01 |
| Kurtosis | 1.00 | 1.00 | 0.99 |

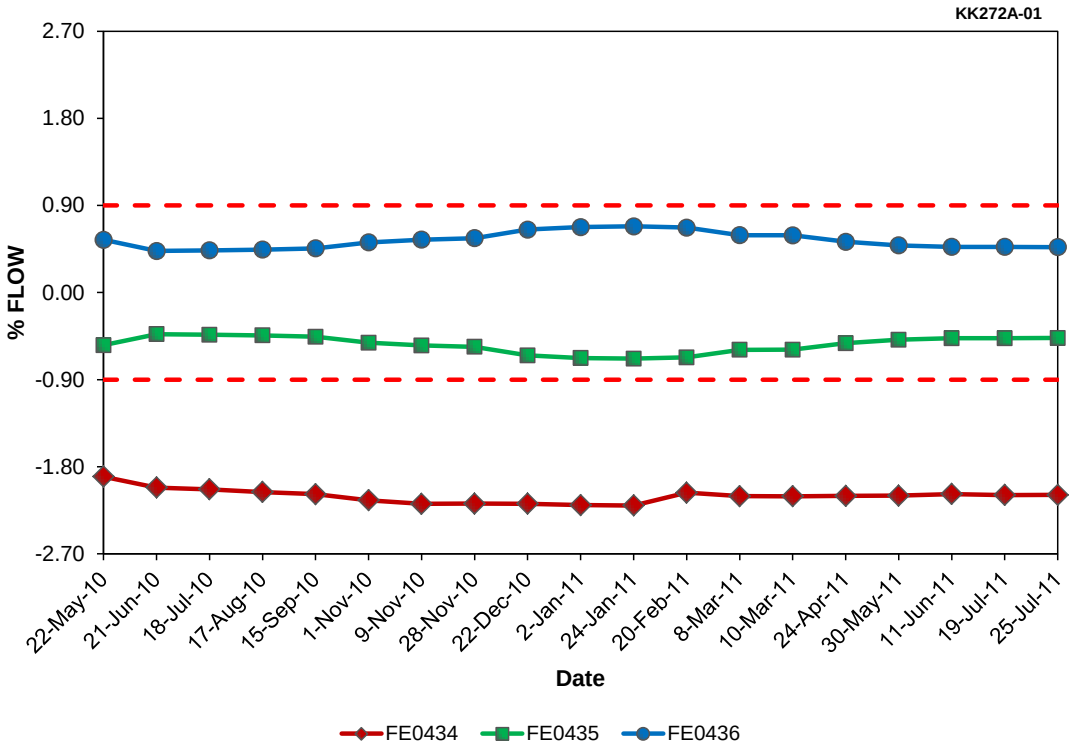



**Figure E.84 RCS LOOP C FLOW Steady-State Deviation at Farley Unit 2 (Cycle 21)**

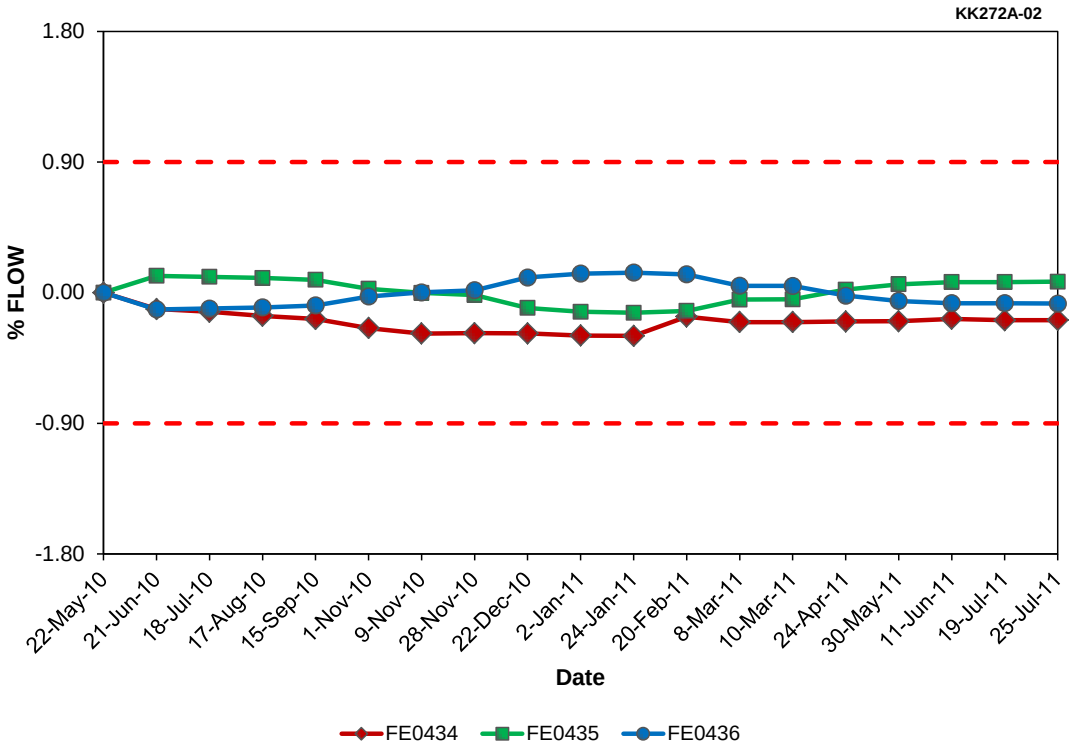



**Figure E. 85 RCS LOOP C FLOW Steady-State Drift at Farley Unit 2 (Cycle 21)**

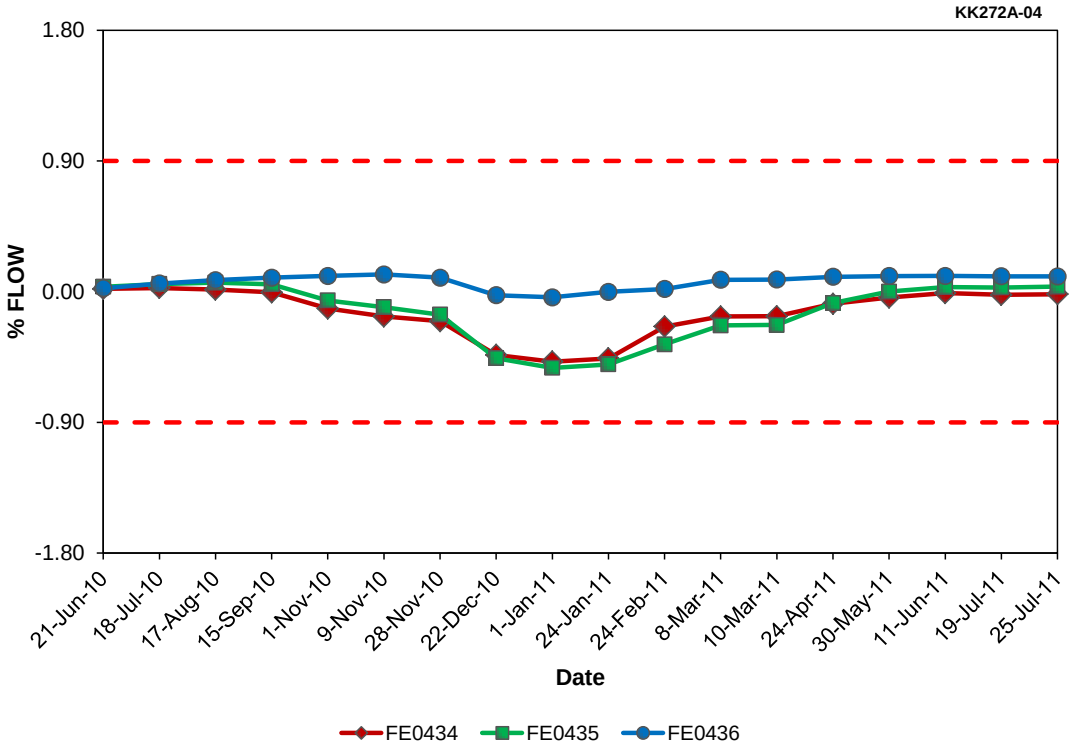



**Figure E. 86 RCS LOOP C FLOW Steady-State Residual AAKR at Farley Unit 2 (Cycle 21)**

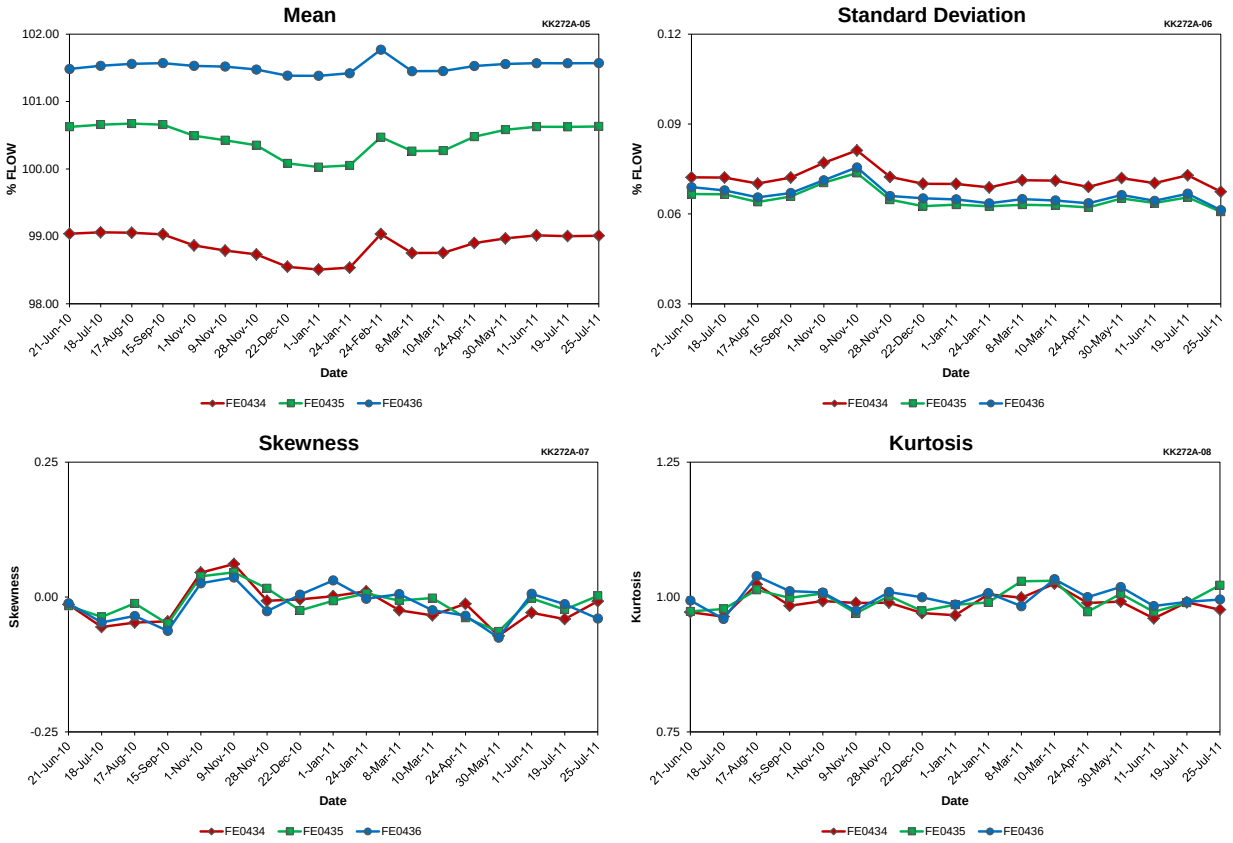



**Figure E. 87 RCS LOOP C FLOW Data Quality Statistics at Farley Unit 2 (Cycle 21)**

**Table E.18 RCS LOOP C FLOW Data Quality for Farley Unit 2 (Cycle 21)**

| Result Type | Tag Names | | |
|---|---|---|---|
| | FE0434 | FE0435 | FE0426 |
| Mean | 98.87 | 100.44 | 101.52 |
| Std. Dev. | 0.07 | 0.06 | 0.07 |
| Skewness | -0.02 | -0.01 | -0.02 |
| Kurtosis | 0.99 | 0.99 | 1.00 |

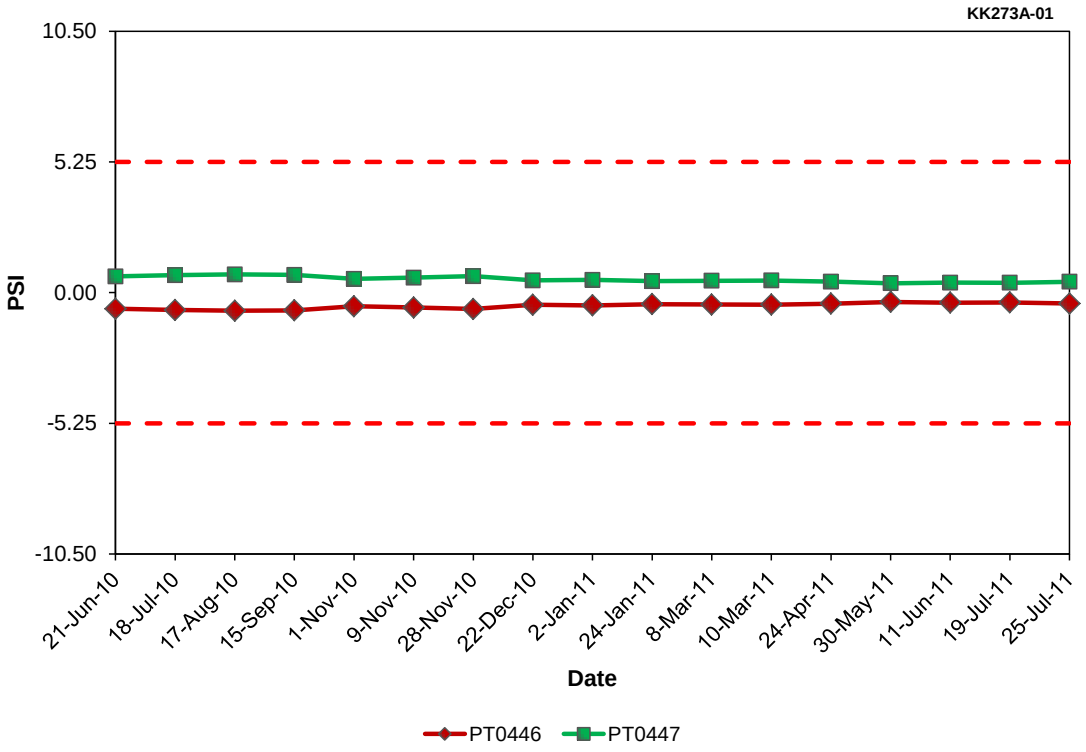



**Figure E. 88 TBIN FIRST STAGE PRESSURE Steady-State Deviation at Farley Unit 2 (Cycle 21)**

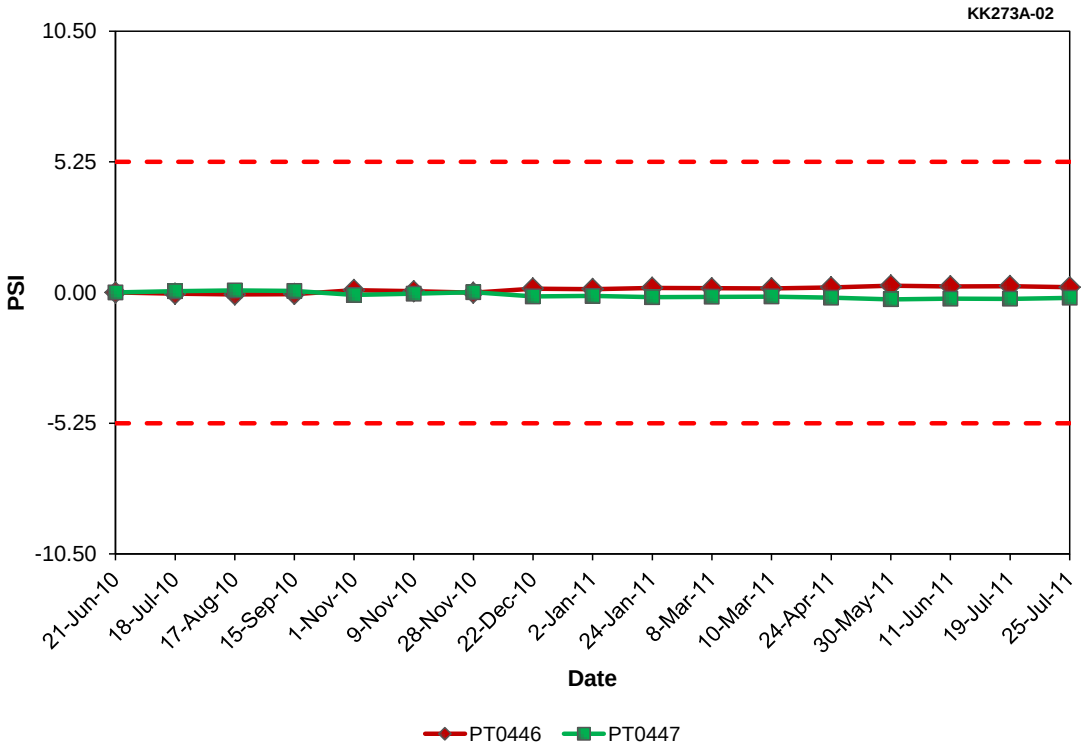



**Figure E. 89 TBIN FIRST STAGE PRESSURE Steady-State Drift at Farley Unit 2 (Cycle 21)**

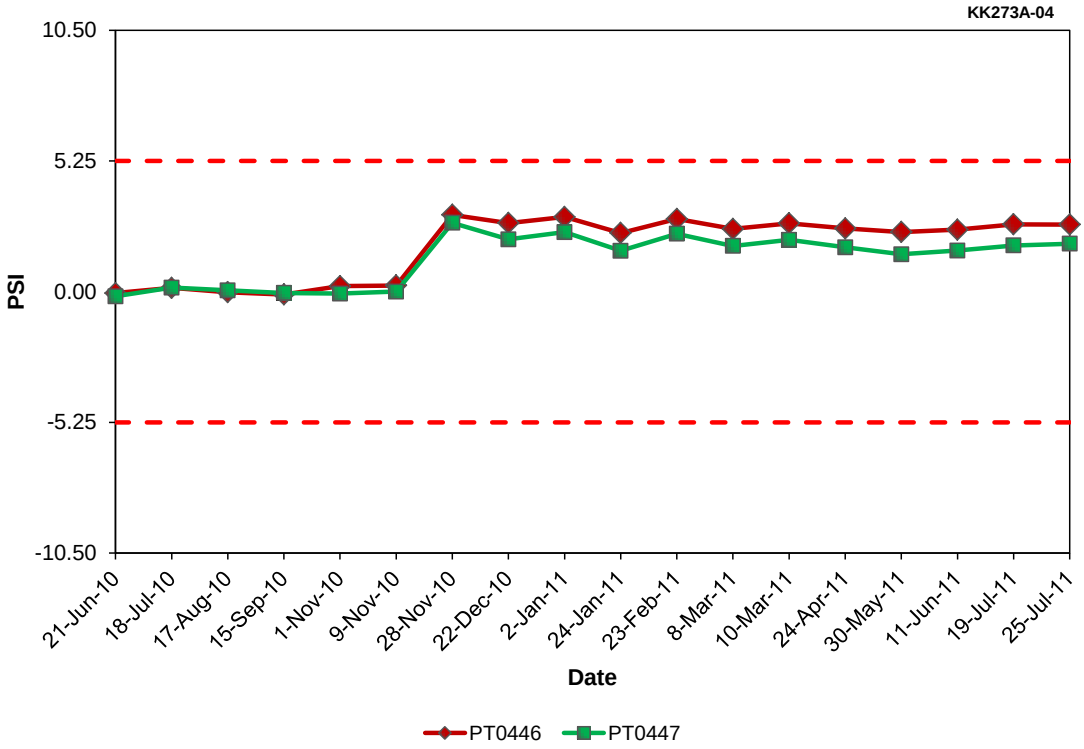



**Figure E. 90 TBIN FIRST STAGE PRESSURE Steady-State Residual AAKR at Farley Unit 2 (Cycle 21)**

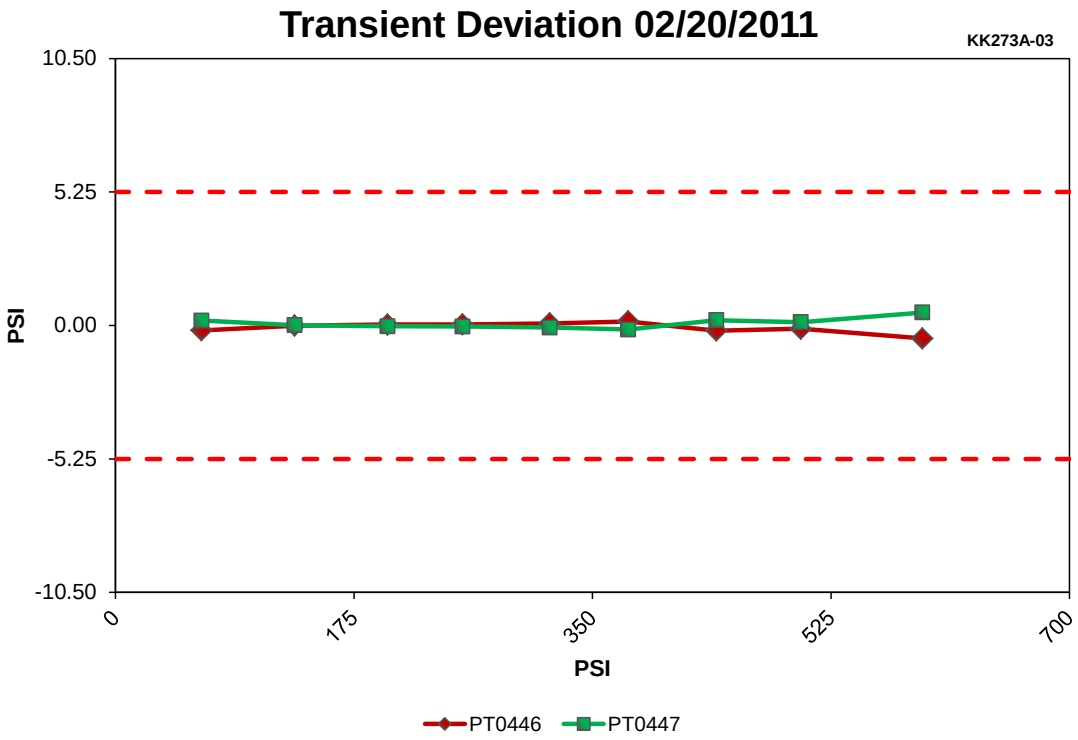



**Figure E. 91 TBIN FIRST STAGE PRESSURE Transient Deviation at Farley Unit 2 (Cycle 21)**

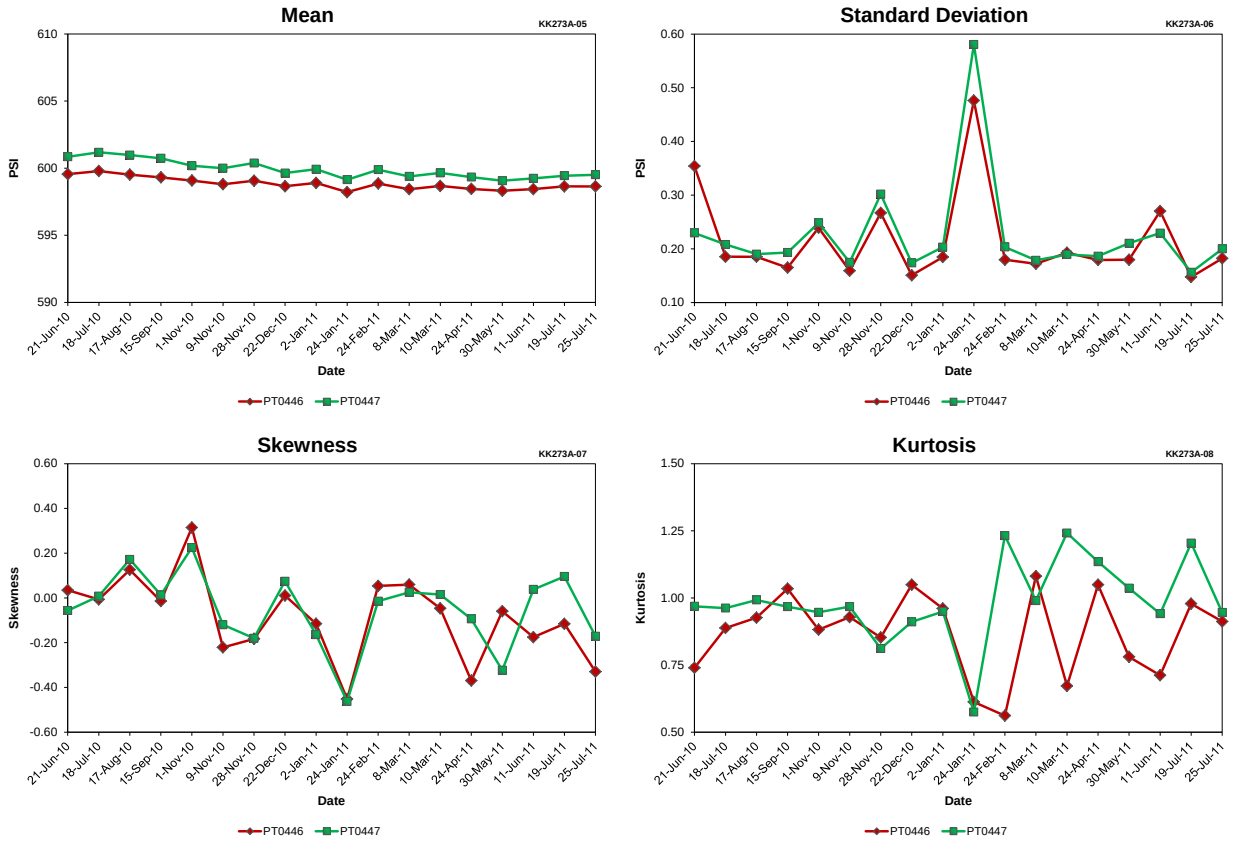



**Figure E. 92 TBIN FIRST STAGE PRESSURE Data Quality Statistics at Farley Unit 2 (Cycle 21)**

**Table E. 19 TBIN FIRST STAGE PRESSURE Data Quality for Farley Unit 2 (Cycle 21)**

| | Tag Names | |
|---|---|---|
| **Result Type** | **PT0446** | **PT0447** |
| Mean | 598.85 | 599.92 |
| Std. Dev. | 0.21 | 0.23 |
| Skewness | -0.08 | -0.05 |
| Kurtosis | 0.87 | 0.99 |

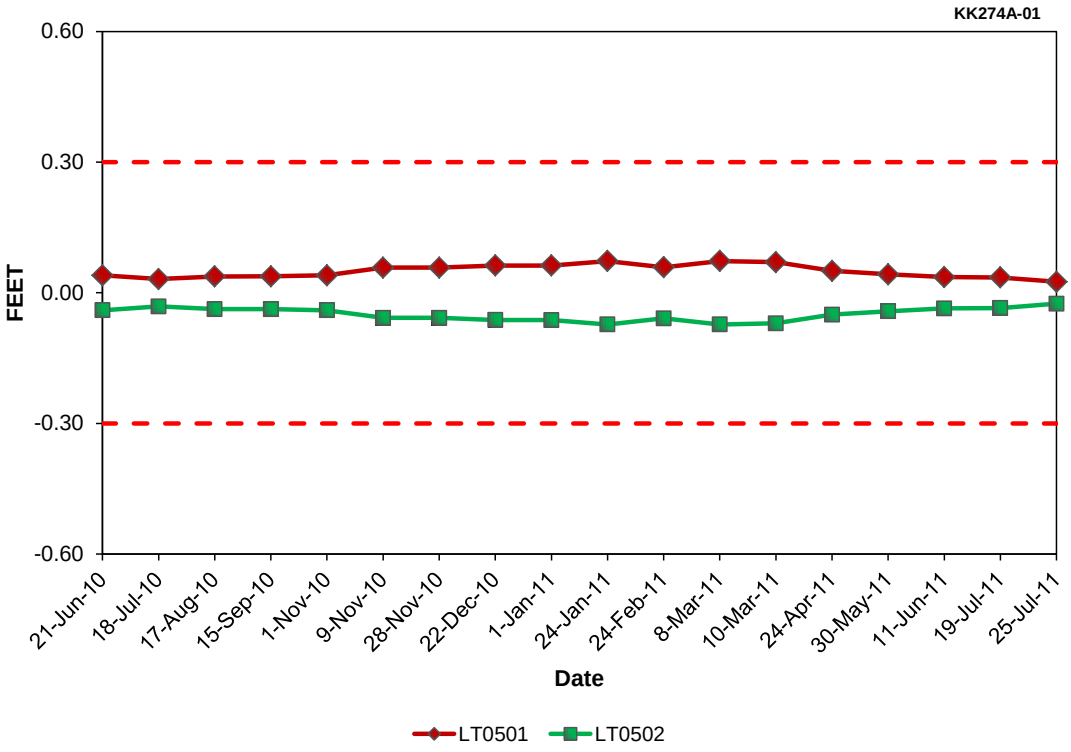



**Figure E. 93 RWST LVL Steady-State Deviation at Farley Unit 2 (Cycle 21)**

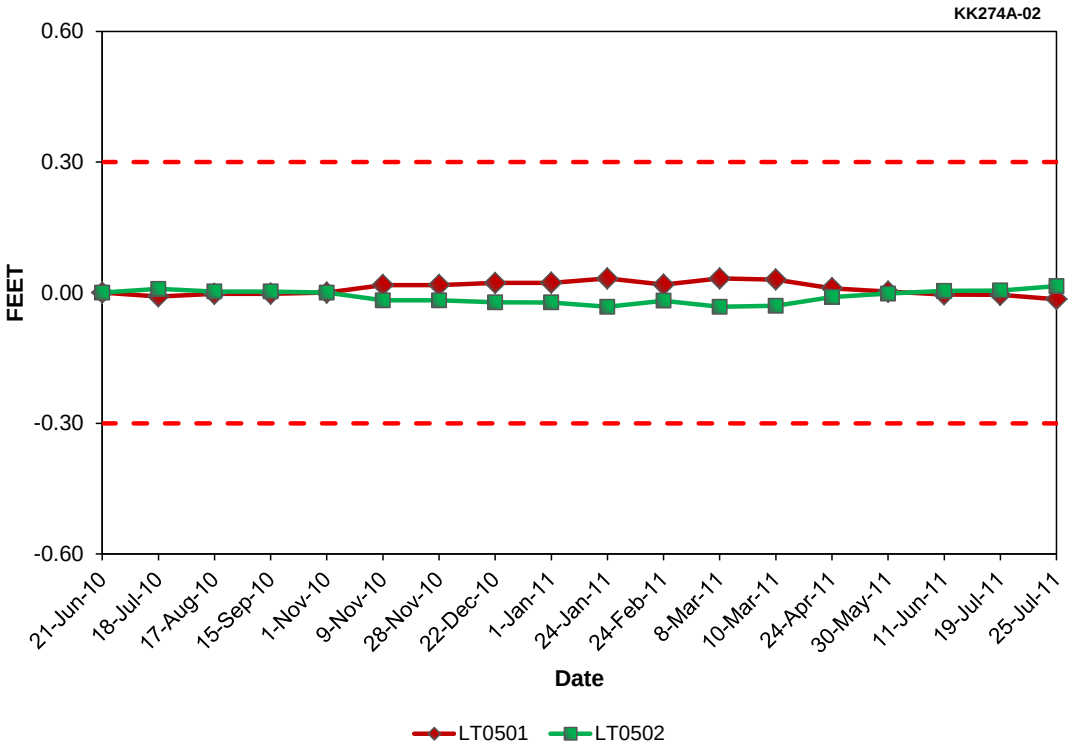



**Figure E. 94 RWST LVL Steady-State Drift at Farley Unit 2 (Cycle 21)**

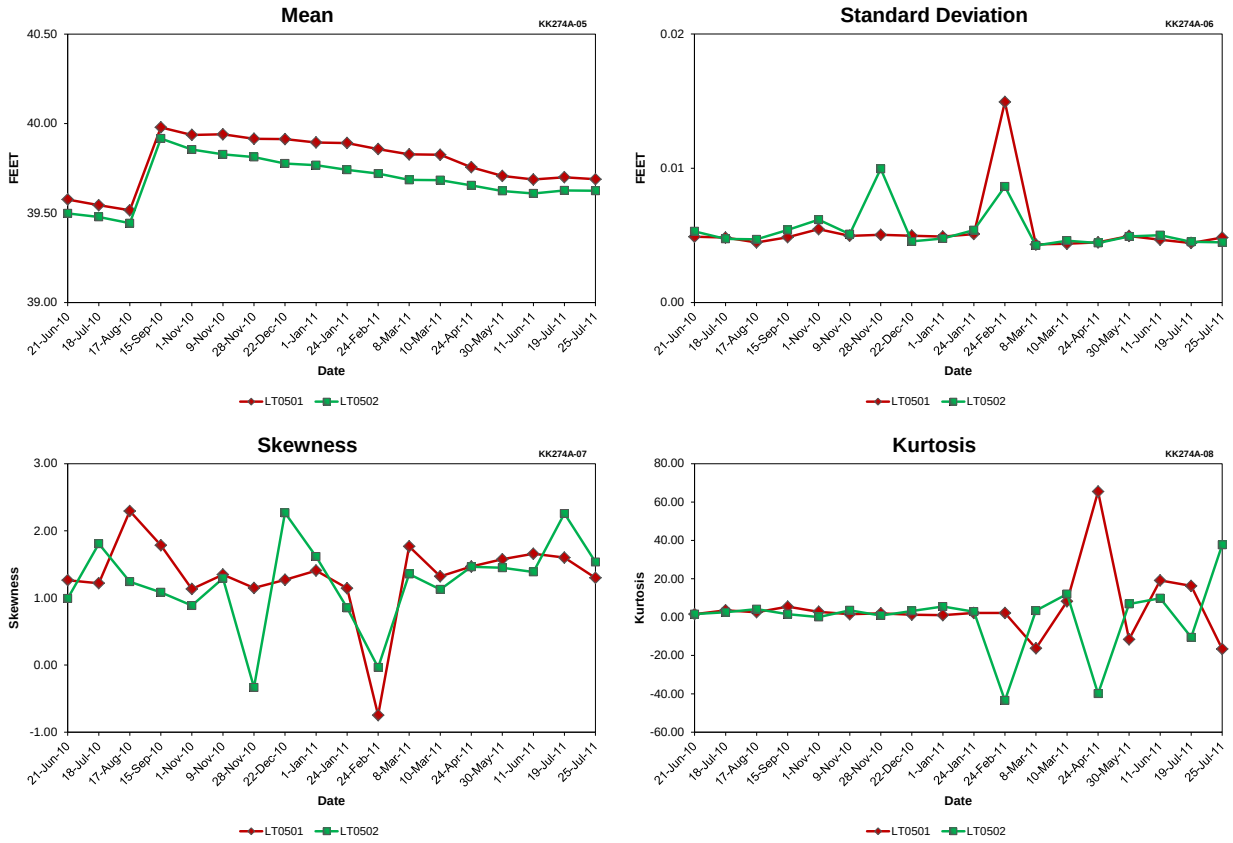



**Figure E. 95 RWST LVL Data Quality Statistics at Farley Unit 2 (Cycle 21)**

**Table E. 20 RWST LVL Data Quality for Farley Unit 2 (Cycle 21)**

| | Tag Names | |
|---|---|---|
| **Result Type** | **LT0501** | **LT0502** |
| Mean | 39.79 | 39.69 |
| Std. Dev. | 0.01 | 0.01 |
| Skewness | 1.33 | 1.24 |
| Kurtosis | 5.02 | 0.09 |

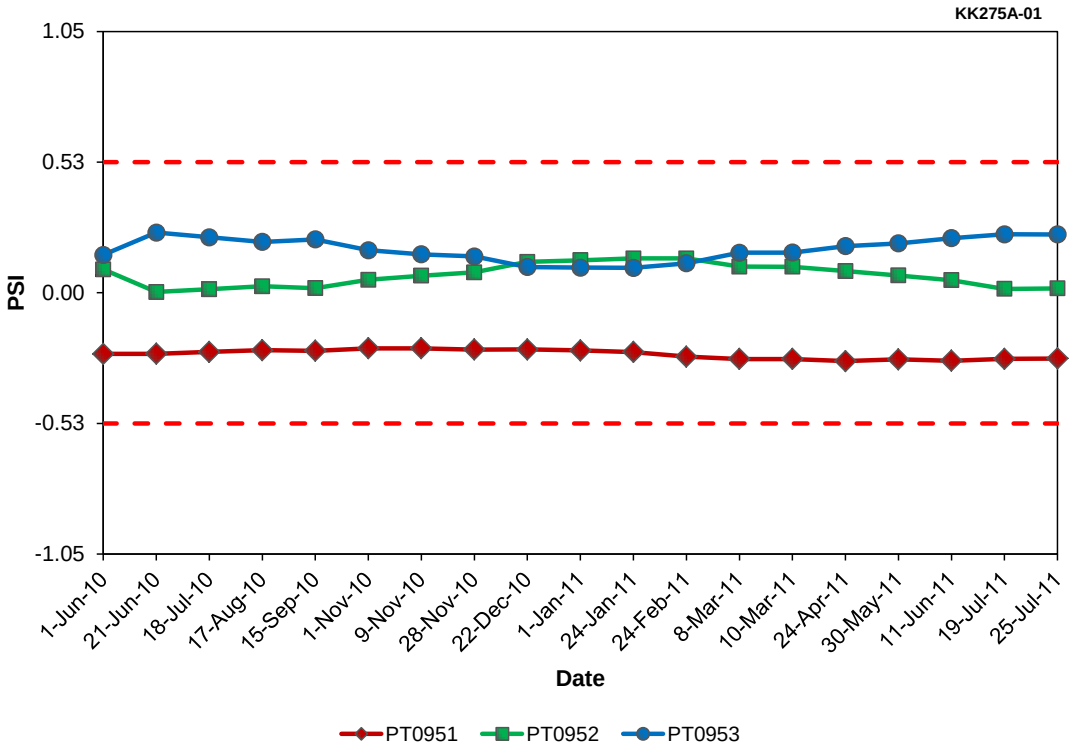



**Figure E. 96 CTMT PSR Steady-State Deviation at Farley Unit 2 (Cycle 21)**

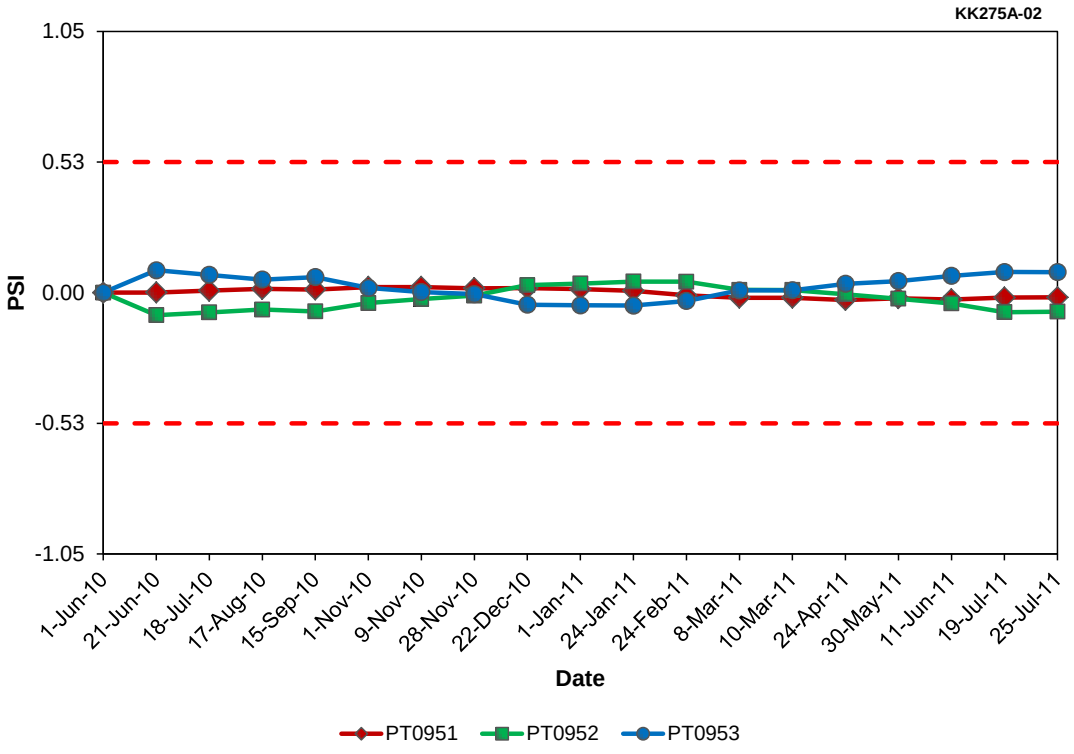



**Figure E. 97 CTMT PSR Steady-State Drift at Farley Unit 2 (Cycle 21)**

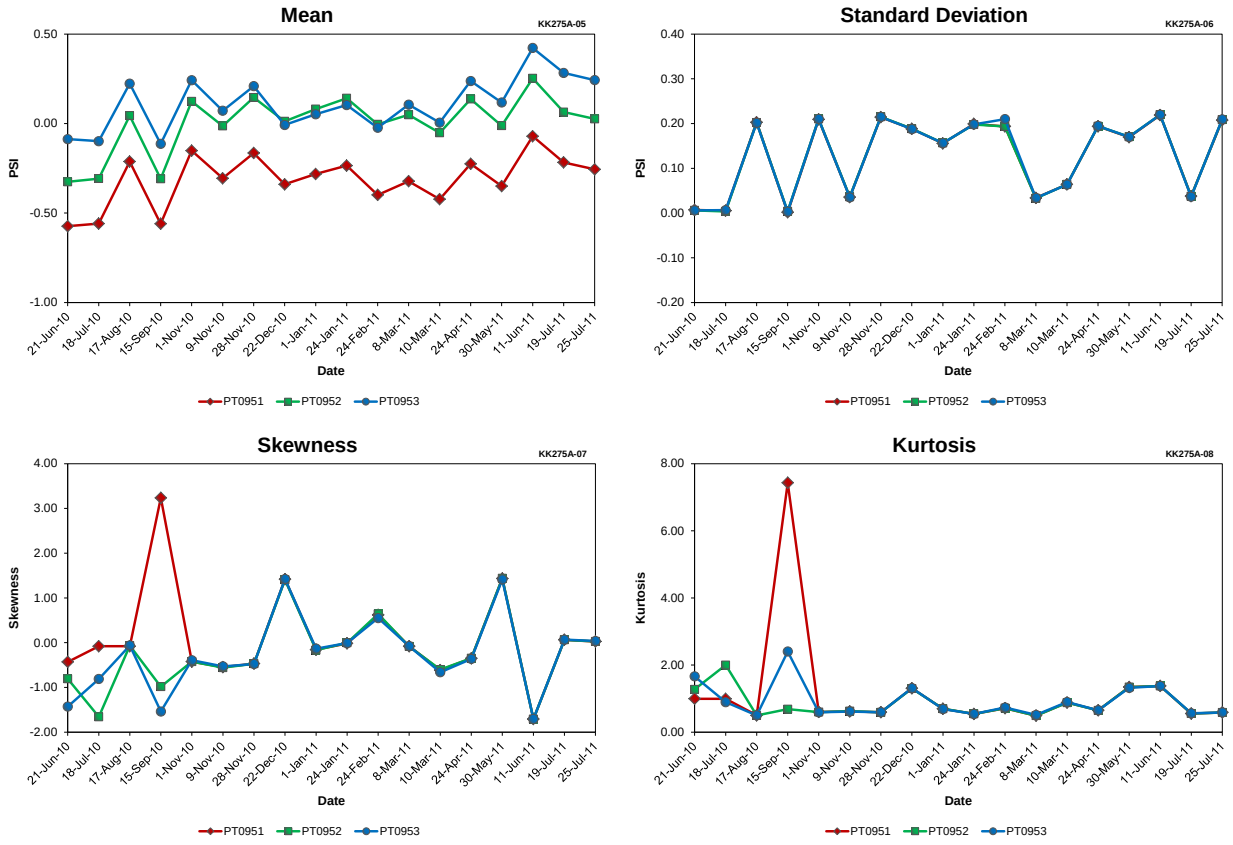



**Figure E. 98 CTMT PSR Data Quality Statistics at Farley Unit 2 (Cycle 21)**

**Table E. 21 CTMT PSR Data Quality for Farley Unit 2 (Cycle 21)**

| | Tag Names | | |
|---|---|---|---|
| **Result Type** | **PT0951** | **PT0952** | **PT0953** |
| Mean | -0.31 | 0.00 | 0.11 |
| Std. Dev. | 0.13 | 0.13 | 0.13 |
| Skewness | 0.10 | -0.24 | -0.26 |
| Kurtosis | 1.16 | 0.86 | 0.91 |

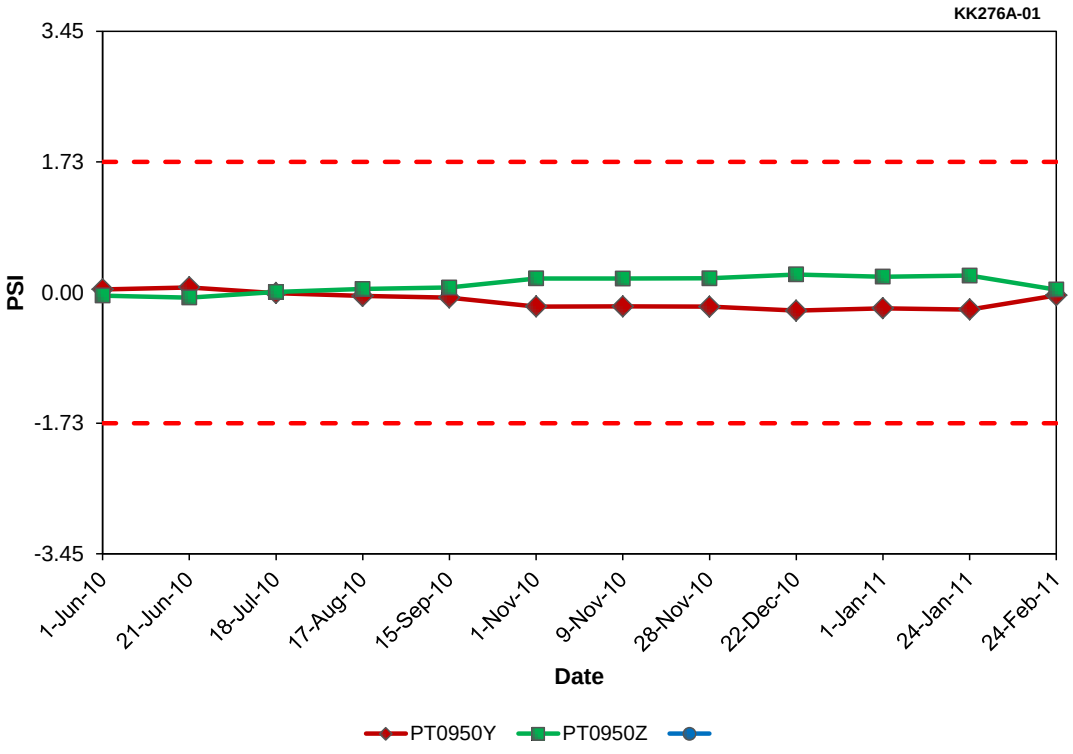



**Figure E. 99 CTMT PSR EXT RANGE Steady-State Deviation at Farley Unit 2 (Cycle 21)**

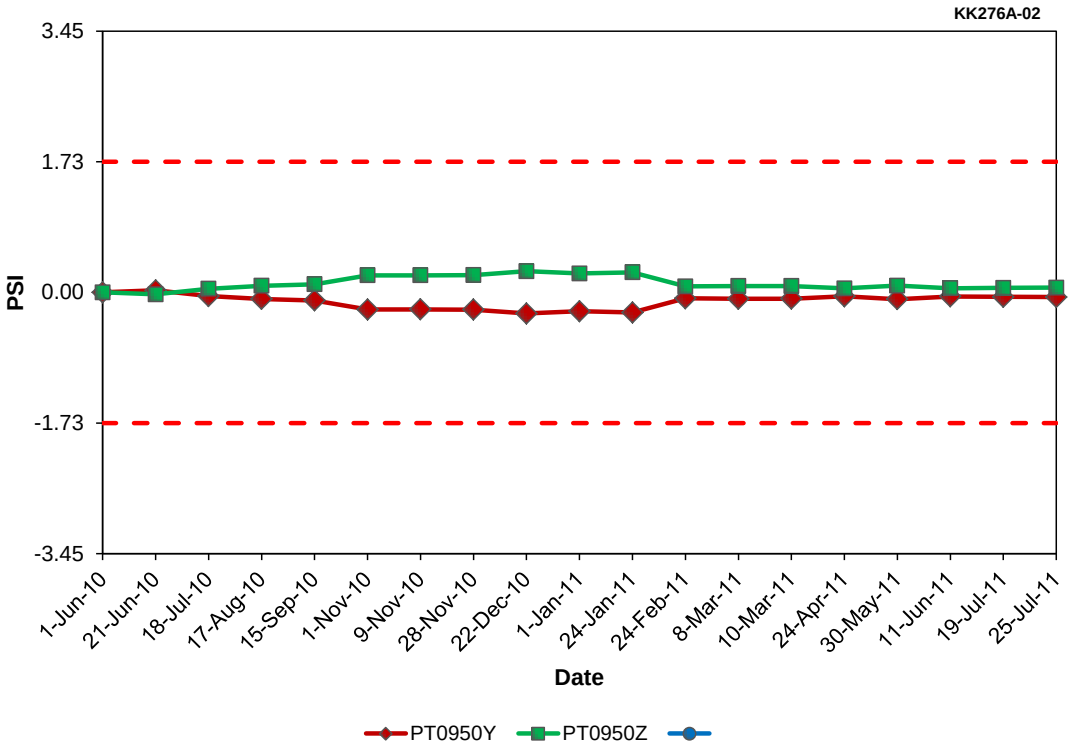



**Figure E. 100 CTMT PSR EXT RANGE Steady-State Drift at Farley Unit 2 (Cycle 21)**

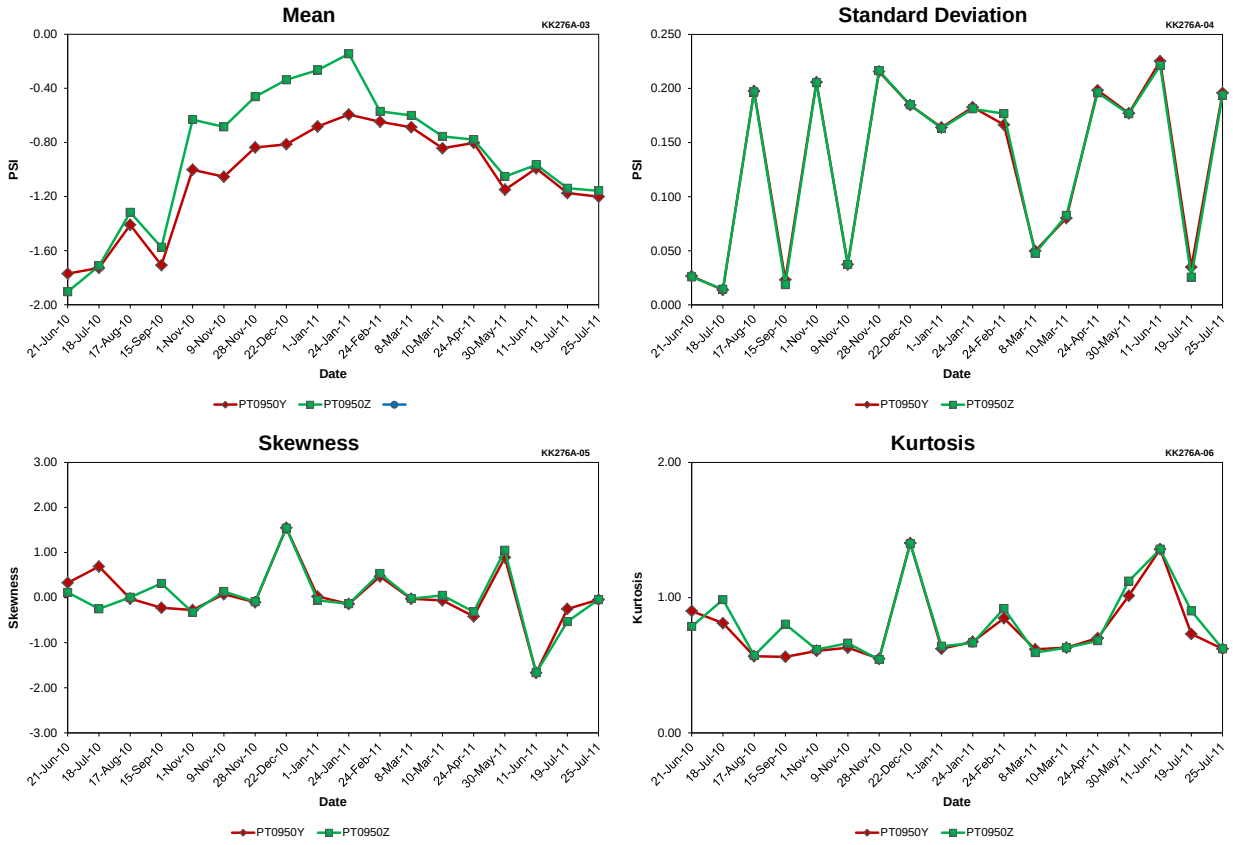



**Figure E. 101 CTMT PSR EXT RANGE Data Quality Statistics at Farley Unit 2 (Cycle 21)**

**Table E. 22 CTMT PSR EXT RANGE Data Quality for Farley Unit 2 (Cycle 21)**

| | Tag Names | |
|---|---|---|
| **Result Type** | **PT0950Y** | **PT0950Z** |
| Mean | -1.06 | -0.89 |
| Std. Dev. | 0.13 | 0.13 |
| Skewness | 0.04 | 0.02 |
| Kurtosis | 0.77 | 0.81 |

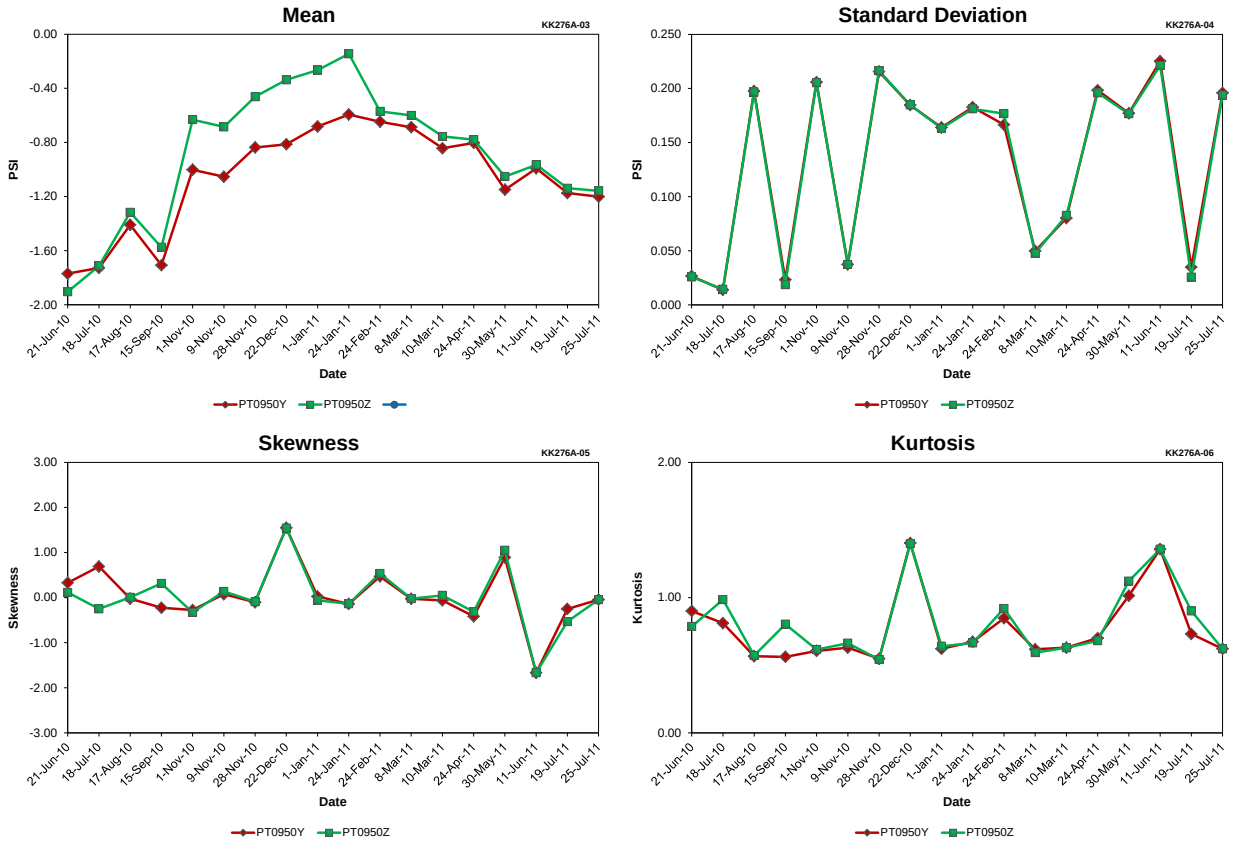



**Figure E. 101 CTMT PSR EXT RANGE Data Quality Statistics at Farley Unit 2 (Cycle 21)**

| Result Type | Tag Names | |
|---|---|---|
| | PT0950Y | PT0950Z |
| Mean | -1.06 | -0.89 |
| Std. Dev. | 0.13 | 0.13 |
| Skewness | 0.04 | 0.02 |
| Kurtosis | 0.77 | 0.81 |

**Table E. 22 CTMT PSR EXT RANGE Data Quality for Farley Unit 2 (Cycle 21)**

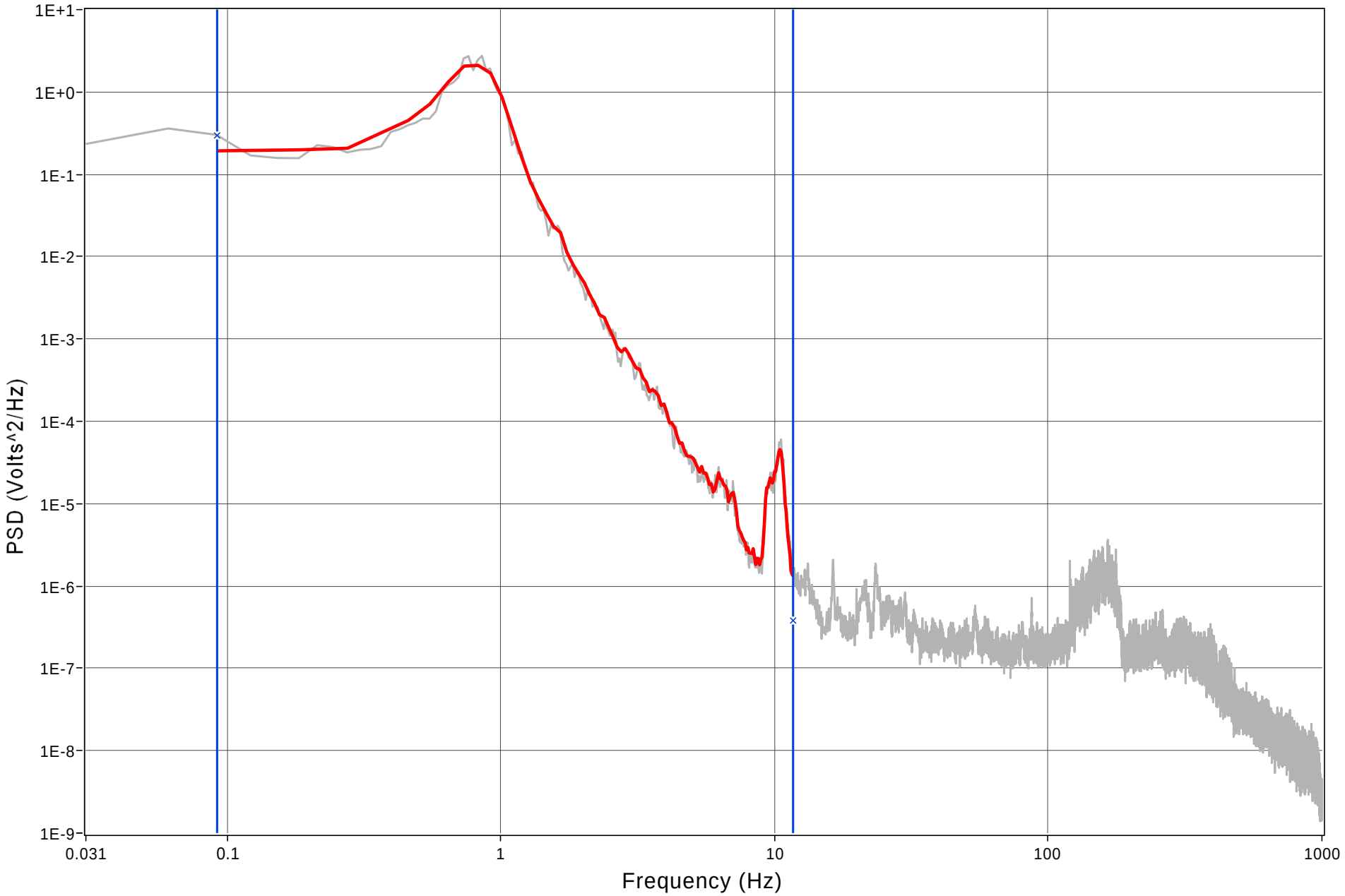
Table E.23 OLM-NA Results

| Item | Tag Name | Service | Filename | WB PSD Range (Hz) | Decimator | Trim Block Size | Trim Low Freq. | Trim High Freq. | AR Method | AR Order |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 | FT0476 | FW FLOW | FU2_2010-07_0004 | 0.0305 : 1000 | 364 | 512 | 0.0107 | 2.7472 | Forward-Backward | 11 |
| 2 | FT0477 | FW FLOW | FU2_2010-07_0003 | 0.0305 : 1000 | 364 | 512 | 0.0107 | 2.7472 | Least-Squares | 17 |
| 3 | FT0486 | FW FLOW | FU2_2010-07_0004 | 0.0305 : 1000 | 364 | 512 | 0.0107 | 2.7472 | Forward-Backward | 11 |
| 4 | FT0487 | FW FLOW | FU2_2010-07_0003 | 0.0305 : 1000 | 364 | 512 | 0.0107 | 2.7472 | Least-Squares | 21 |
| 5 | FT0496 | FW FLOW | FU2_2010-07_0004 | 0.0305 : 1000 | 364 | 512 | 0.0107 | 2.7474 | Forward-Backward | 11 |
| 6 | FT0497 | FW FLOW | FU2_2010-07_0003 | 0.0305 : 1000 | 364 | 512 | 0.0107 | 2.7472 | Least-Squares | 21 |
| | | | | | | | | | | |
| 7 | LT0474 | SG LEVEL | FU2_2010-07_0001 | 0.0305 : 1000 | 85 | 256 | 0.0919 | 11.7643 | Forward-Backward | 11 |
| 8 | LT0475 | SG LEVEL | FU2_2010-07_0002 | 0.0305 : 1000 | 81 | 256 | 0.0964 | 12.3453 | Least-Squares | 18 |
| 9 | LT0476 | SG LEVEL | FU2_2010-07_0003 | 0.0305 : 1000 | 81 | 256 | 0.0964 | 12.3453 | Least-Squares | 11 |
| 10 | LT0484 | SG LEVEL | FU2_2010-07_0001 | 0.0305 : 1000 | 80 | 128 | 0.1953 | 12.4996 | Forward-Backward | 11 |
| 11 | LT0485 | SG LEVEL | FU2_2010-07_0002 | 0.0305 : 1000 | 80 | 256 | 0.0977 | 12.4996 | Least-Squares | 18 |
| 12 | LT0486 | SG LEVEL | FU2_2010-07_0003 | 0.0305 : 1000 | 85 | 128 | 0.1838 | 11.7643 | Least-Squares | 20 |
| 13 | LT0494 | SG LEVEL | FU2_2010-07_0001 | 0.0305 : 1000 | 83 | 256 | 0.0941 | 12.0478 | Forward-Backward | 11 |
| 14 | LT0495 | SG LEVEL | FU2_2010-07_0002 | 0.0305 : 1000 | 78 | 256 | 0.1002 | 12.8201 | Least-Squares | 18 |
| 15 | LT0496 | SG LEVEL | FU2_2010-07_0003 | 0.0305 : 1000 | 83 | 256 | 0.0941 | 12.0478 | Least-Squares | 20 |
| | | | | | | | | | | |
| 16 | FT0474 | STM FLOW | FU2_2010-07_0003 | 0.0305 : 1000 | 29 | 128 | 0.5388 | 34.4817 | Least-Squares | 20 |
| 17 | FT0475 | STM FLOW | FU2_2010-07_0004 | 0.0305 : 1000 | 29 | 128 | 0.5388 | 34.4817 | Forward-Backward | 11 |
| 18 | FT0484 | STM FLOW | FU2_2010-07_0003 | 0.0305 : 1000 | 29 | 128 | 0.5388 | 34.4817 | Least-Squares | 18 |
| 19 | FT0485 | STM FLOW | FU2_2010-07_0004 | 0.0305 : 1000 | 29 | 128 | 0.5388 | 34.4817 | Forward-Backward | 11 |
| 20 | FT0494 | STM FLOW | FU2_2010-07_0003 | 0.0305 : 1000 | 29 | 128 | 0.5388 | 34.4817 | Least-Squares | 19 |
| 21 | FT0495 | STM FLOW | FU2_2010-07_0004 | 0.0305 : 1000 | 29 | 128 | 0.5388 | 34.4817 | Forward-Backward | 11 |

# OLM Narrow Band PSD Window Fitting

| Reactor and Unit | Tag Number | Service | Filename | Blocks : Blocksize | Trim Low Freq. (Hz) | Trim High Freq. (Hz) | Fitting Type | Test Date |
|---|---|---|---|---|---|---|---|---|
| Farley Unit 2 | LT0474 | SG LVL | FU2_2010-07_0001.psd | 11 : 256 | 0.091909 | 11.764348 | Dynamic | 15-Jul-2010 13:36:44 |

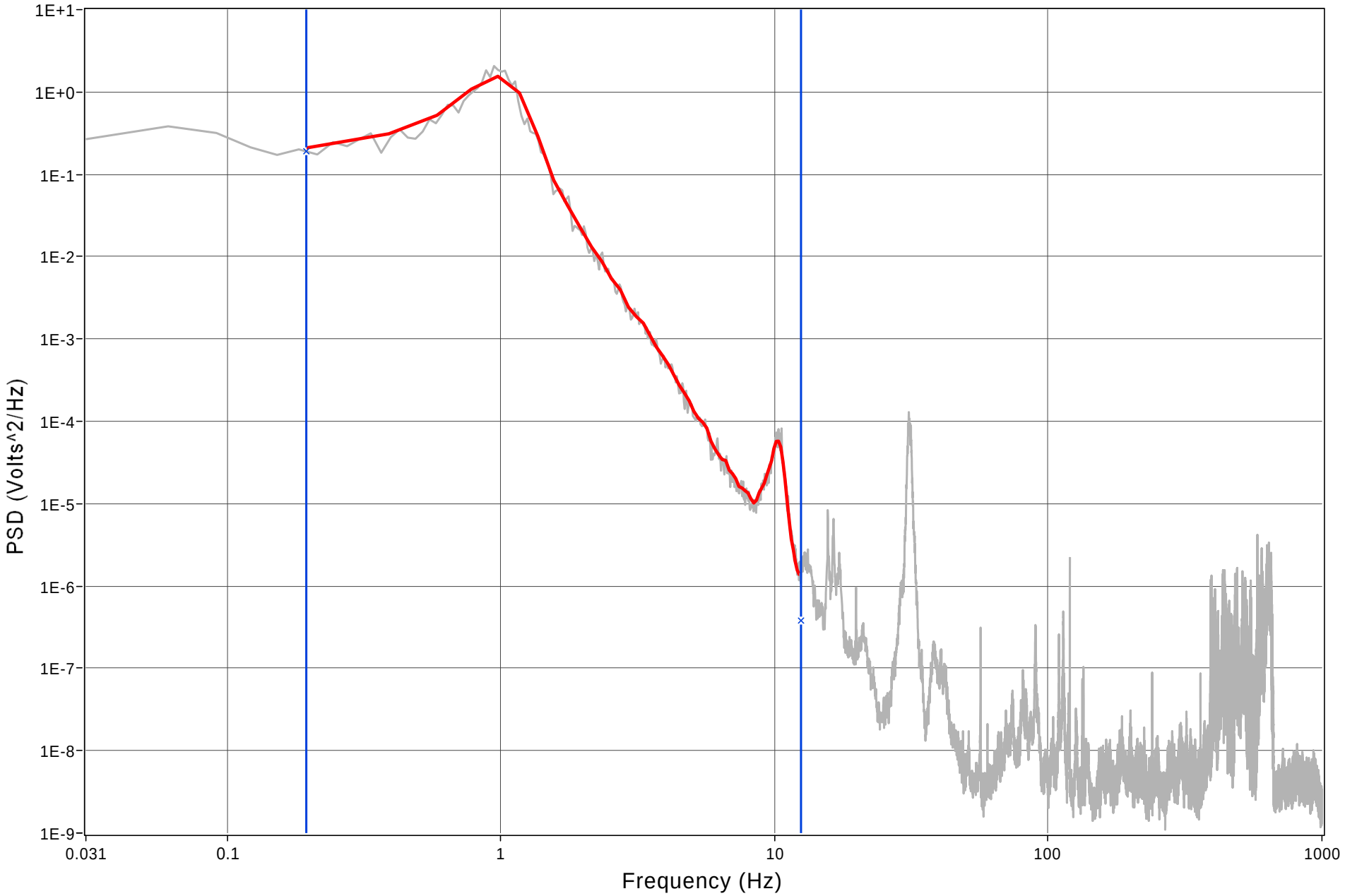
## PSD Window



# OLM Narrow Band PSD Window Fitting

| Reactor and Unit | Tag Number | Service | Filename | Blocks : Blocksize | Trim Low Freq. (Hz) | Trim High Freq. (Hz) | Fitting Type | Test Date |
|---|---|---|---|---|---|---|---|---|
| Farley Unit 2 | LT0484 | SG LVL | FU2_2010-07_0001.psd | 11 : 128 | 0.195307 | 12.499619 | Dynamic | 15-Jul-2010 13:36:44 |

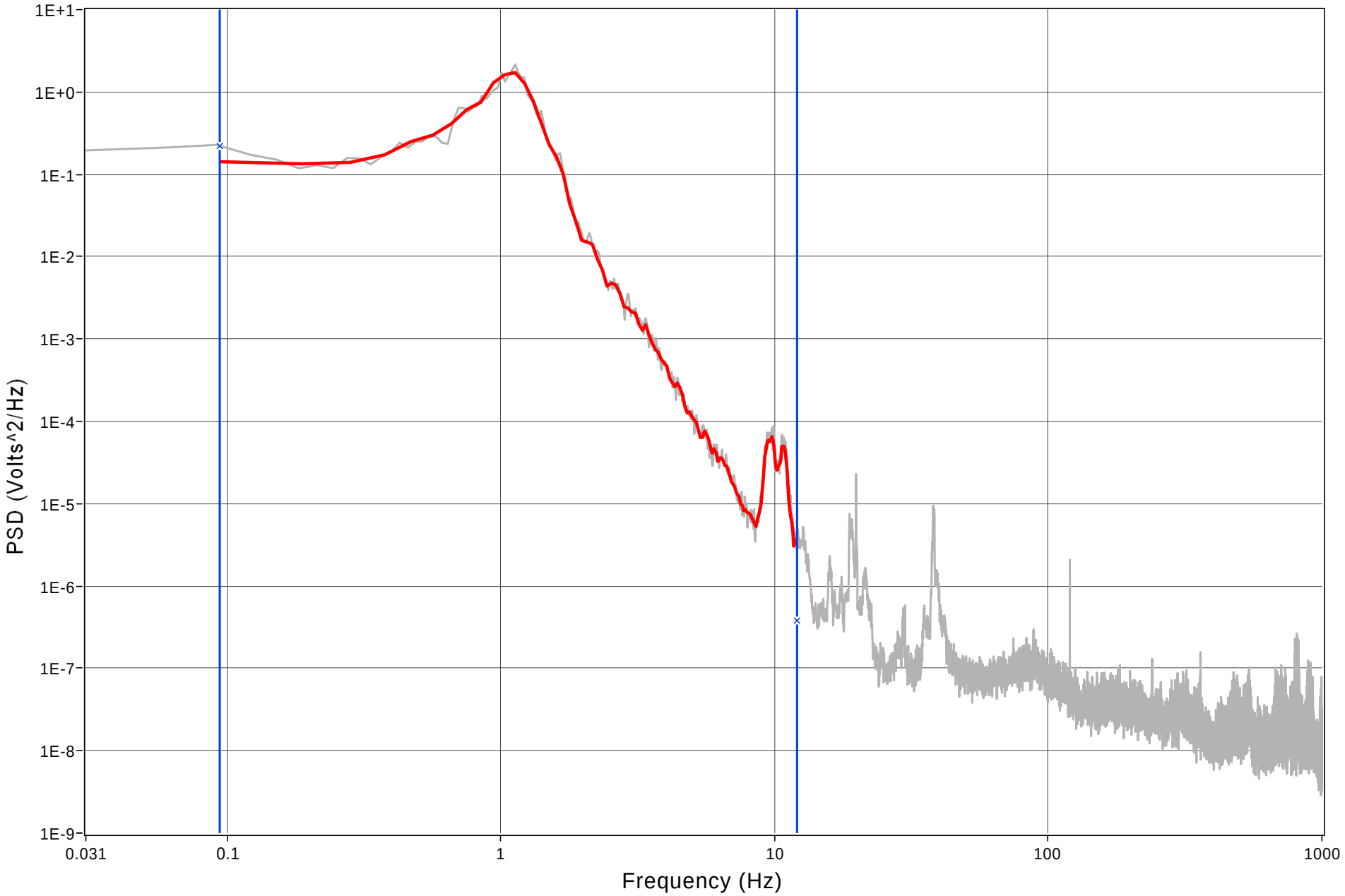
## PSD Window



# OLM Narrow Band PSD Window Fitting

| Reactor and Unit | Tag Number | Service | Filename | Blocks : Blocksize | Trim Low Freq. (Hz) | Trim High Freq. (Hz) | Fitting Type | Test Date |
|---|---|---|---|---|---|---|---|---|
| Farley Unit 2 | LT0494 | SG LVL | FU2_2010-07_0001.psd | 11 : 256 | 0.094124 | 12.047826 | Dynamic | 15-Jul-2010 13:36:44 |

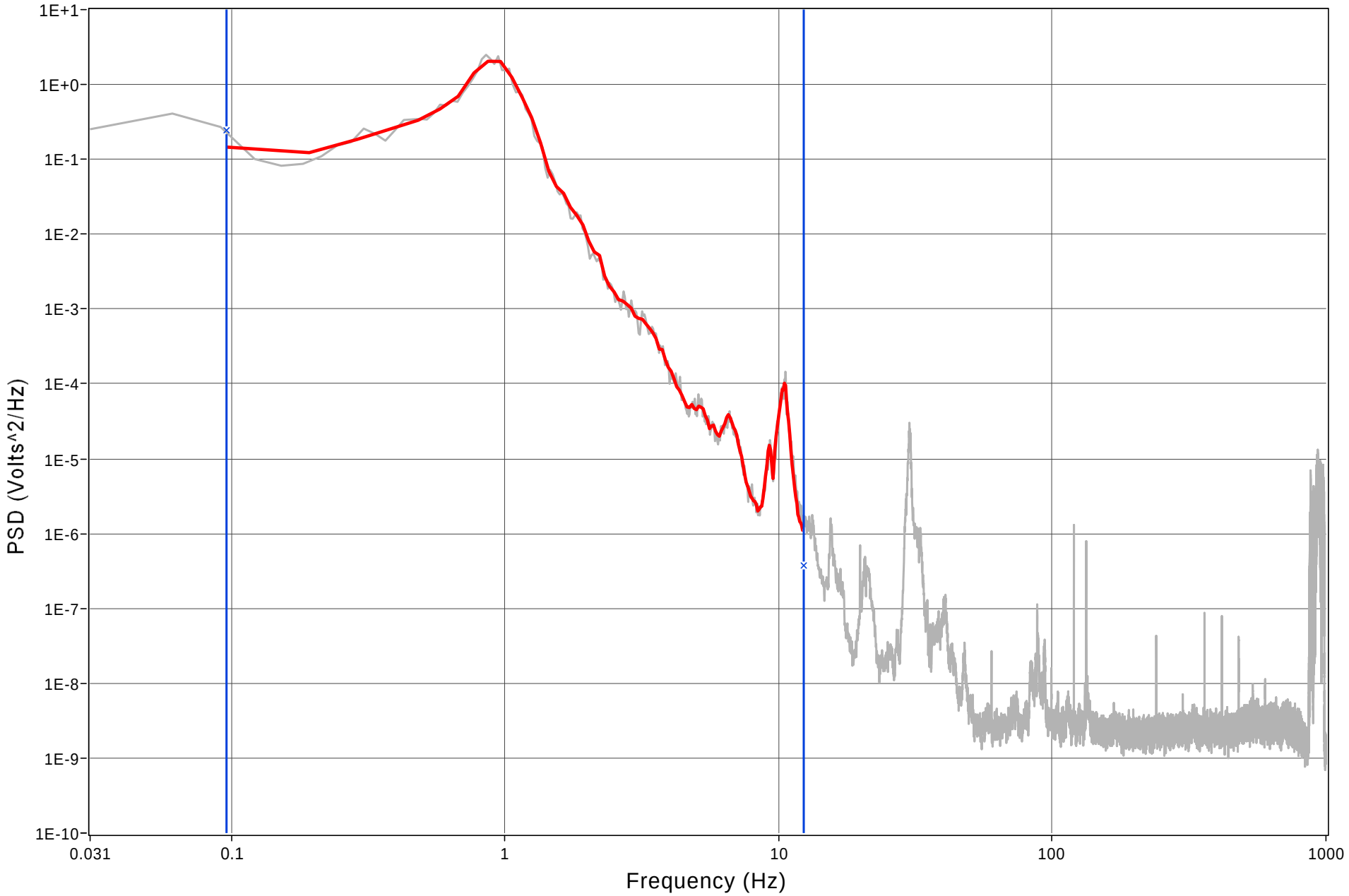
## PSD Window



# OLM Narrow Band PSD Window Fitting

| Reactor and Unit | Tag Number | Service | Filename | Blocks : Blocksize | Trim Low Freq. (Hz) | Trim High Freq. (Hz) | Fitting Type | Test Date |
|---|---|---|---|---|---|---|---|---|
| Farley Unit 2 | LT0475 | SG LVL | FU2_2010-07_0002.psd | 11 : 256 | 0.096448 | 12.345303 | Dynamic | 15-Jul-2010 13:36:44 |

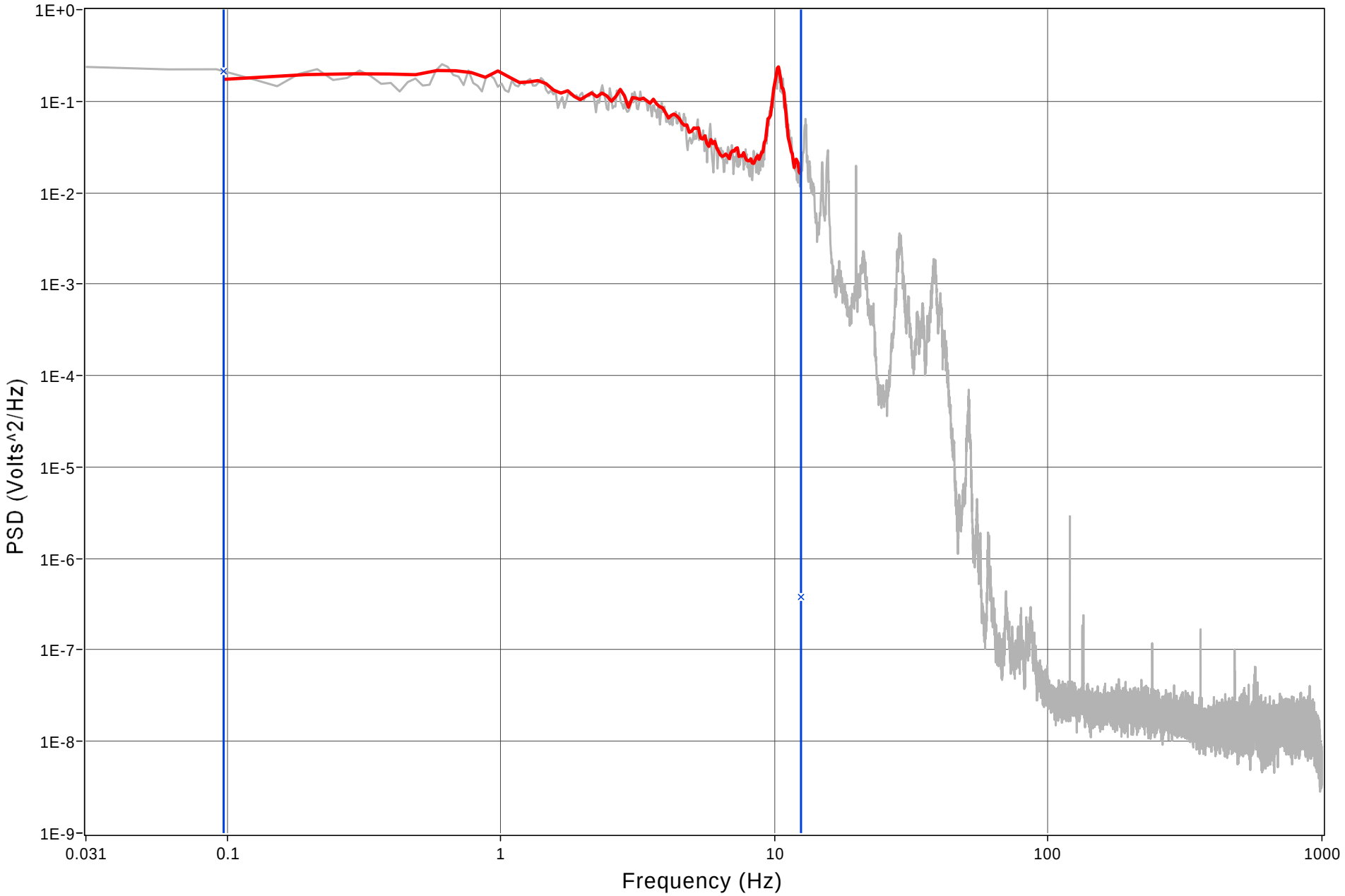
## PSD Window



# OLM Narrow Band PSD Window Fitting

| Reactor and Unit | Tag Number | Service | Filename | Blocks : Blocksize | Trim Low Freq. (Hz) | Trim High Freq. (Hz) | Fitting Type | Test Date |
|---|---|---|---|---|---|---|---|---|
| Farley Unit 2 | LT0485 | SG LVL | FU2_2010-07_0002.psd | 11 : 256 | 0.097653 | 12.499619 | Dynamic | 15-Jul-2010 13:36:44 |

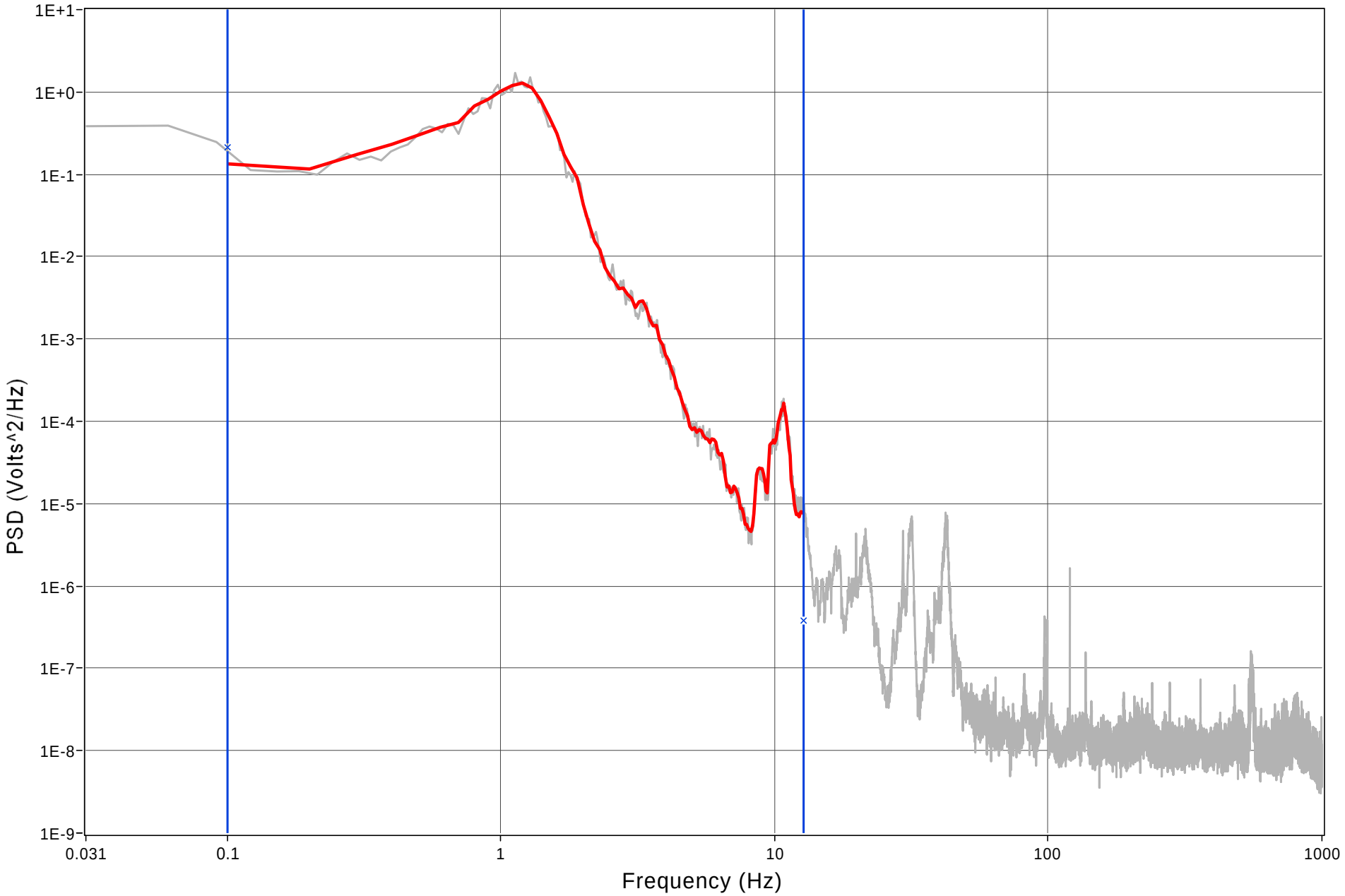
## PSD Window



# OLM Narrow Band PSD Window Fitting

| Reactor and Unit | Tag Number | Service | Filename | Blocks : Blocksize | Trim Low Freq. (Hz) | Trim High Freq. (Hz) | Fitting Type | Test Date |
|---|---|---|---|---|---|---|---|---|
| Farley Unit 2 | LT0495 | SG LVL | FU2_2010-07_0002.psd | 11 : 256 | 0.100157 | 12.820122 | Dynamic | 15-Jul-2010 13:36:44 |

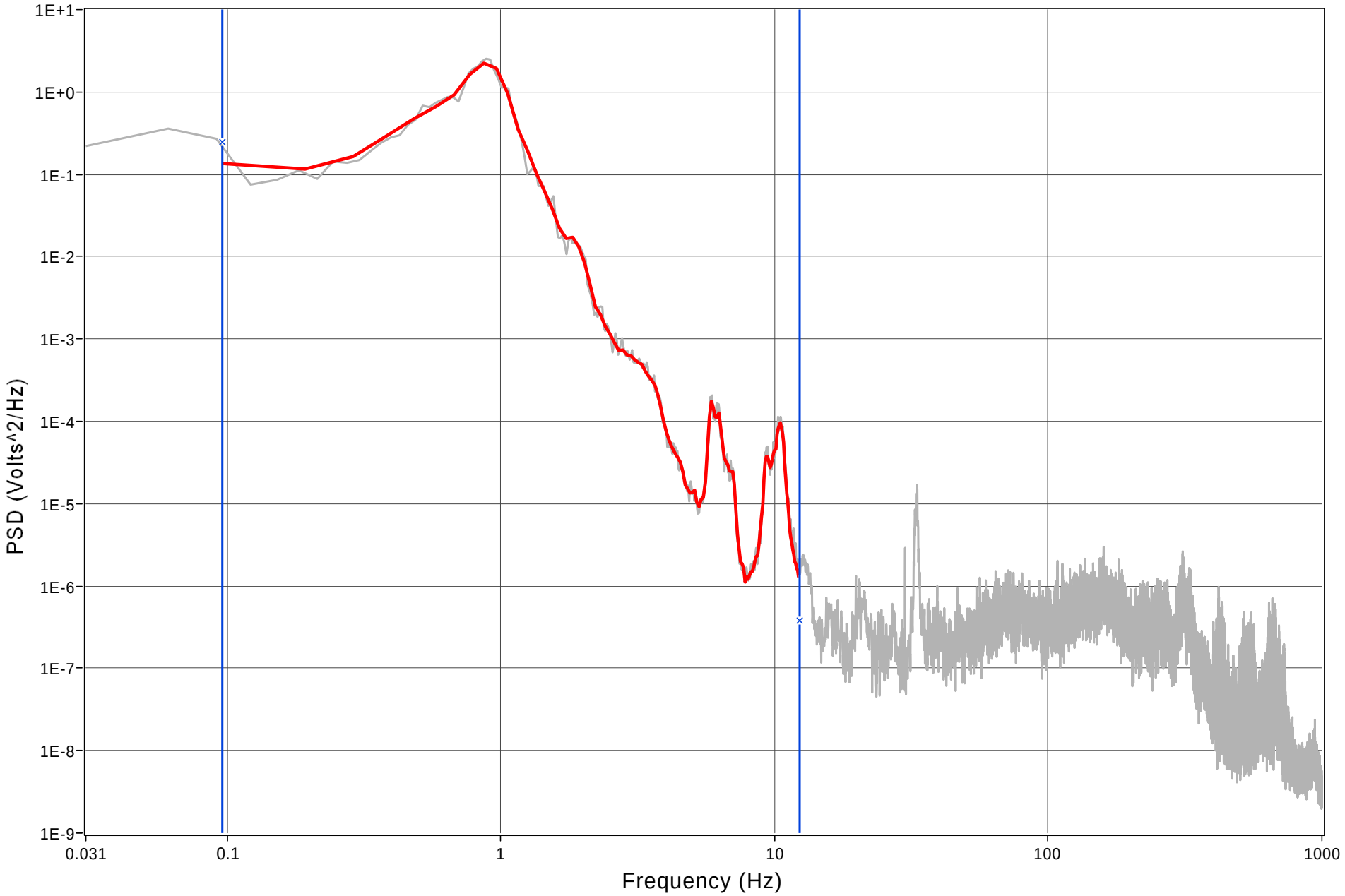
## PSD Window



# OLM Narrow Band PSD Window Fitting

| Reactor and Unit | Tag Number | Service | Filename | Blocks : Blocksize | Trim Low Freq. (Hz) | Trim High Freq. (Hz) | Fitting Type | Test Date |
|---|---|---|---|---|---|---|---|---|
| Farley Unit 2 | LT0476 | SG LVL | FU2_2010-07_0003.psd | 11 : 256 | 0.096448 | 12.345303 | Dynamic | 15-Jul-2010 13:36:44 |

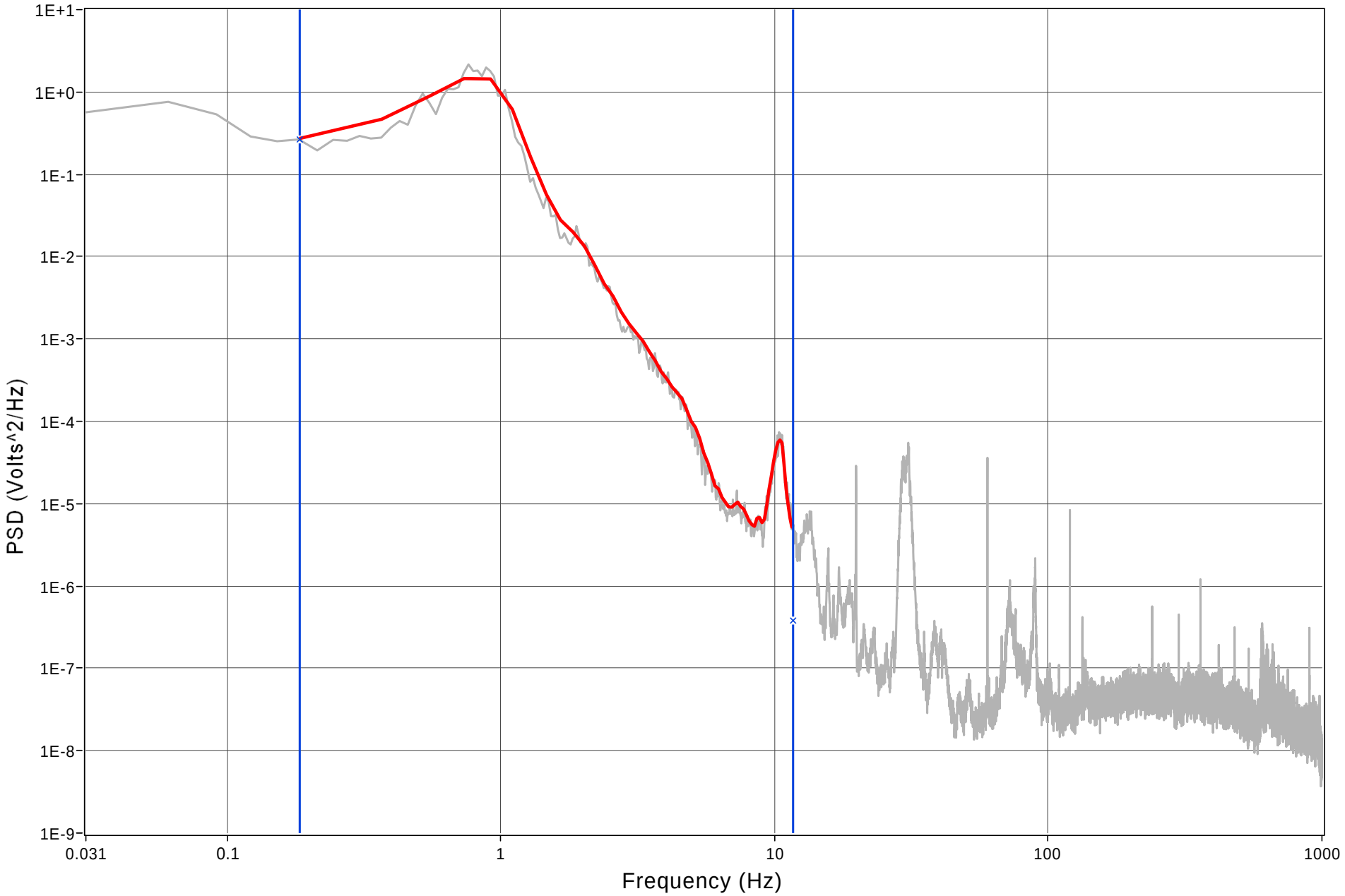
## PSD Window



# OLM Narrow Band PSD Window Fitting

| Reactor and Unit | Tag Number | Service | Filename | Blocks : Blocksize | Trim Low Freq. (Hz) | Trim High Freq. (Hz) | Fitting Type | Test Date |
|---|---|---|---|---|---|---|---|---|
| Farley Unit 2 | LT0486 | SG LVL | FU2_2010-07_0003.psd | 11 : 128 | 0.183818 | 11.764348 | Dynamic | 15-Jul-2010 13:36:44 |

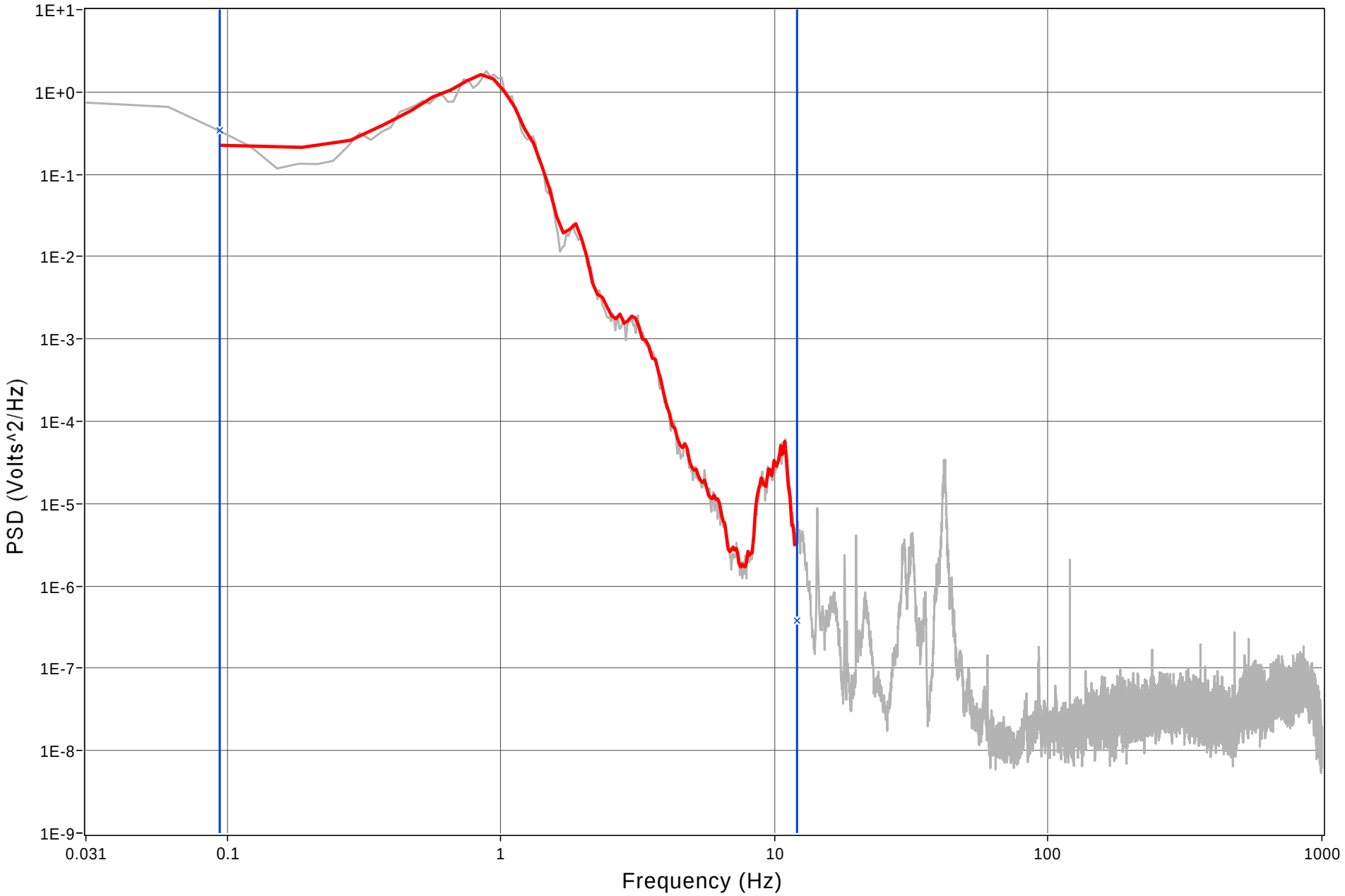
## PSD Window



# OLM Narrow Band PSD Window Fitting

| Reactor and Unit | Tag Number | Service | Filename | Blocks : Blocksize | Trim Low Freq. (Hz) | Trim High Freq. (Hz) | Fitting Type | Test Date |
|---|---|---|---|---|---|---|---|---|
| Farley Unit 2 | LT0496 | SG LVL | FU2_2010-07_0003.psd | 11 : 256 | 0.094124 | 12.047826 | Dynamic | 15-Jul-2010 13:36:44 |

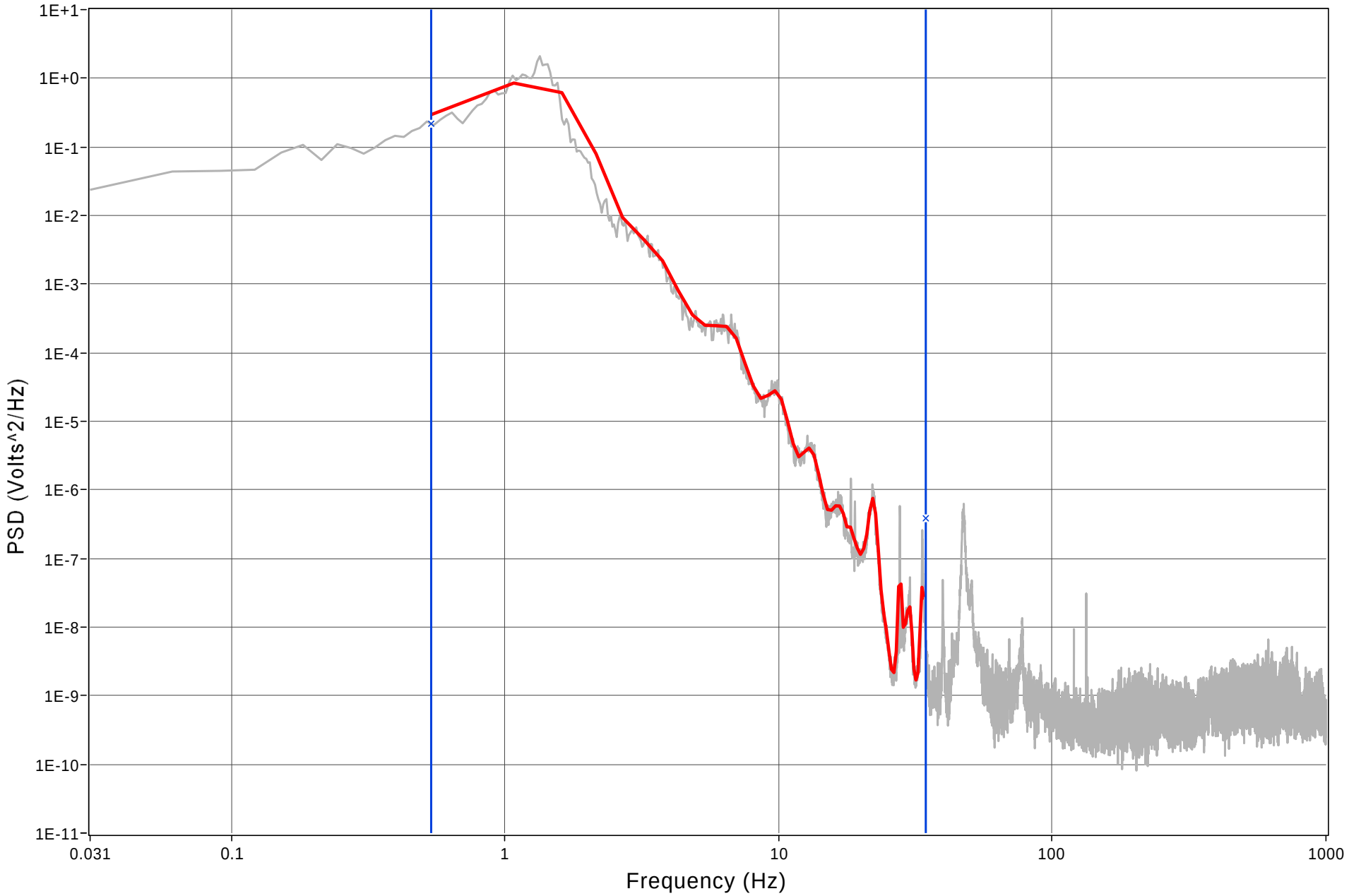
## PSD Window



# OLM Narrow Band PSD Window Fitting

| Reactor and Unit | Tag Number | Service | Filename | Blocks : Blocksize | Trim Low Freq. (Hz) | Trim High Freq. (Hz) | Fitting Type | Test Date |
|---|---|---|---|---|---|---|---|---|
| Farley Unit 2 | FT0474 | STM FLOW | FU2_2010-07_0003.psd | 11 : 128 | 0.538777 | 34.481708 | Dynamic | 15-Jul-2010 13:36:44 |

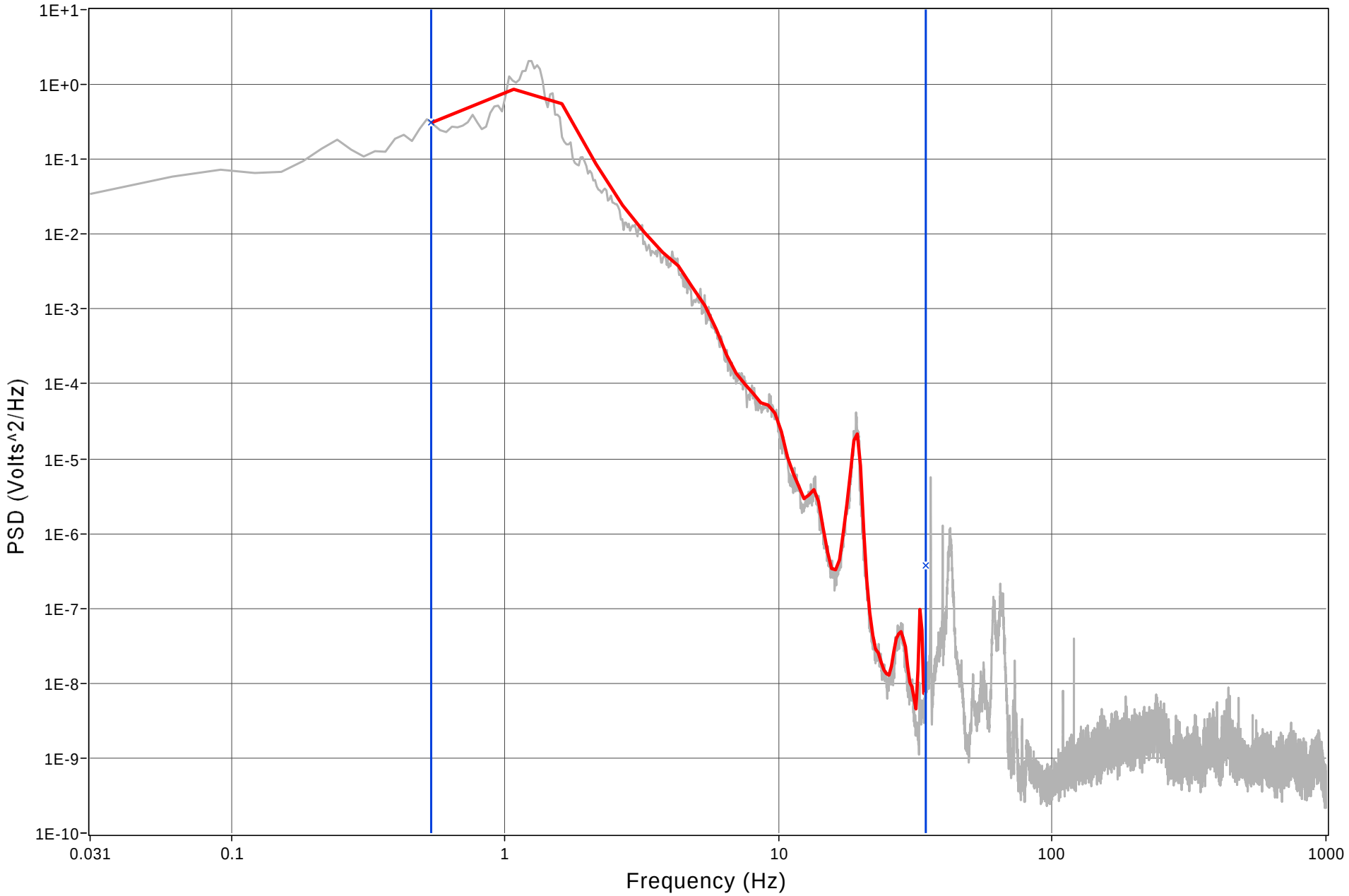
## PSD Window



# OLM Narrow Band PSD Window Fitting

| Reactor and Unit | Tag Number | Service | Filename | Blocks : Blocksize | Trim Low Freq. (Hz) | Trim High Freq. (Hz) | Fitting Type | Test Date |
|---|---|---|---|---|---|---|---|---|
| Farley Unit 2 | FT0484 | STM FLOW | FU2_2010-07_0003.psd | 11 : 128 | 0.538777 | 34.481708 | Dynamic | 15-Jul-2010 13:36:44 |

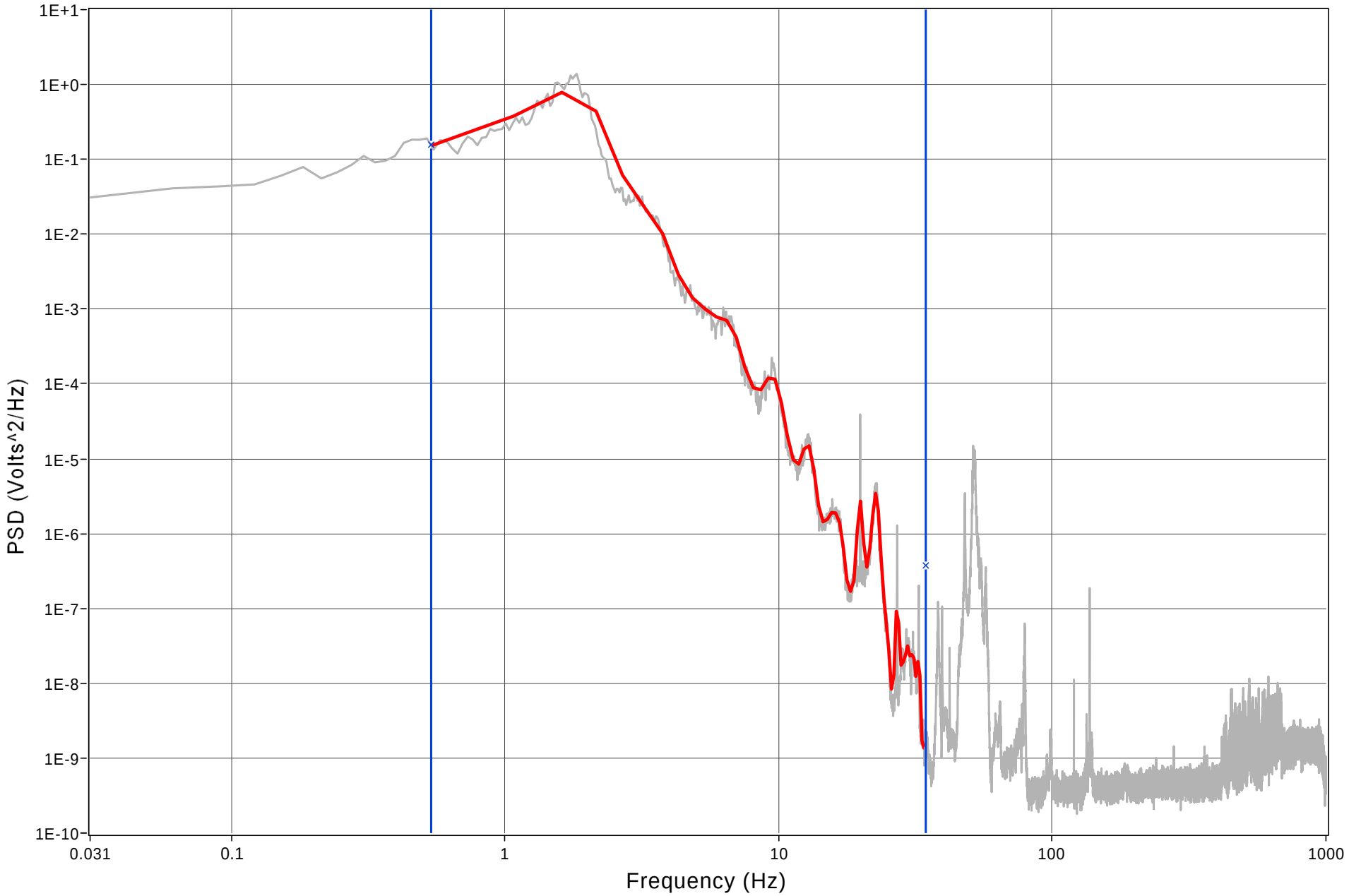
## PSD Window



# OLM Narrow Band PSD Window Fitting

| Reactor and Unit | Tag Number | Service | Filename | Blocks : Blocksize | Trim Low Freq. (Hz) | Trim High Freq. (Hz) | Fitting Type | Test Date |
|---|---|---|---|---|---|---|---|---|
| Farley Unit 2 | FT0494 | STM FLOW | FU2_2010-07_0003.psd | 11 : 128 | 0.538777 | 34.481708 | Dynamic | 15-Jul-2010 13:36:44 |

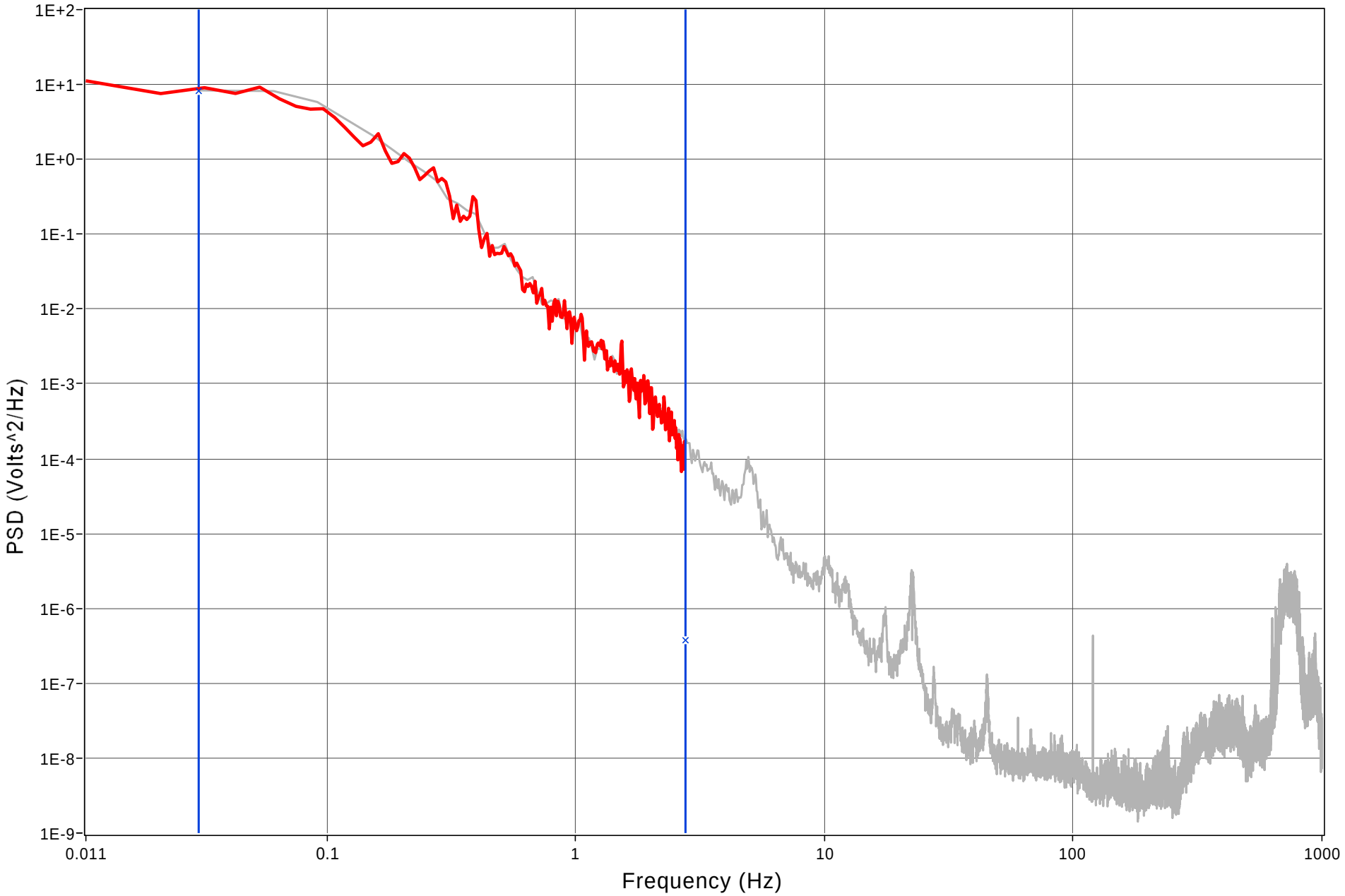
## PSD Window



# OLM Narrow Band PSD Window Fitting

| Reactor and Unit | Tag Number | Service | Filename | Blocks : Blocksize | Trim Low Freq. (Hz) | Trim High Freq. (Hz) | Fitting Type | Test Date |
|---|---|---|---|---|---|---|---|---|
| Farley Unit 2 | FT0477 | FW FLOW | FU2_2010-07_0003.psd | 11 : 512 | 0.010731 | 2.747169 | Dynamic | 15-Jul-2010 13:36:44 |

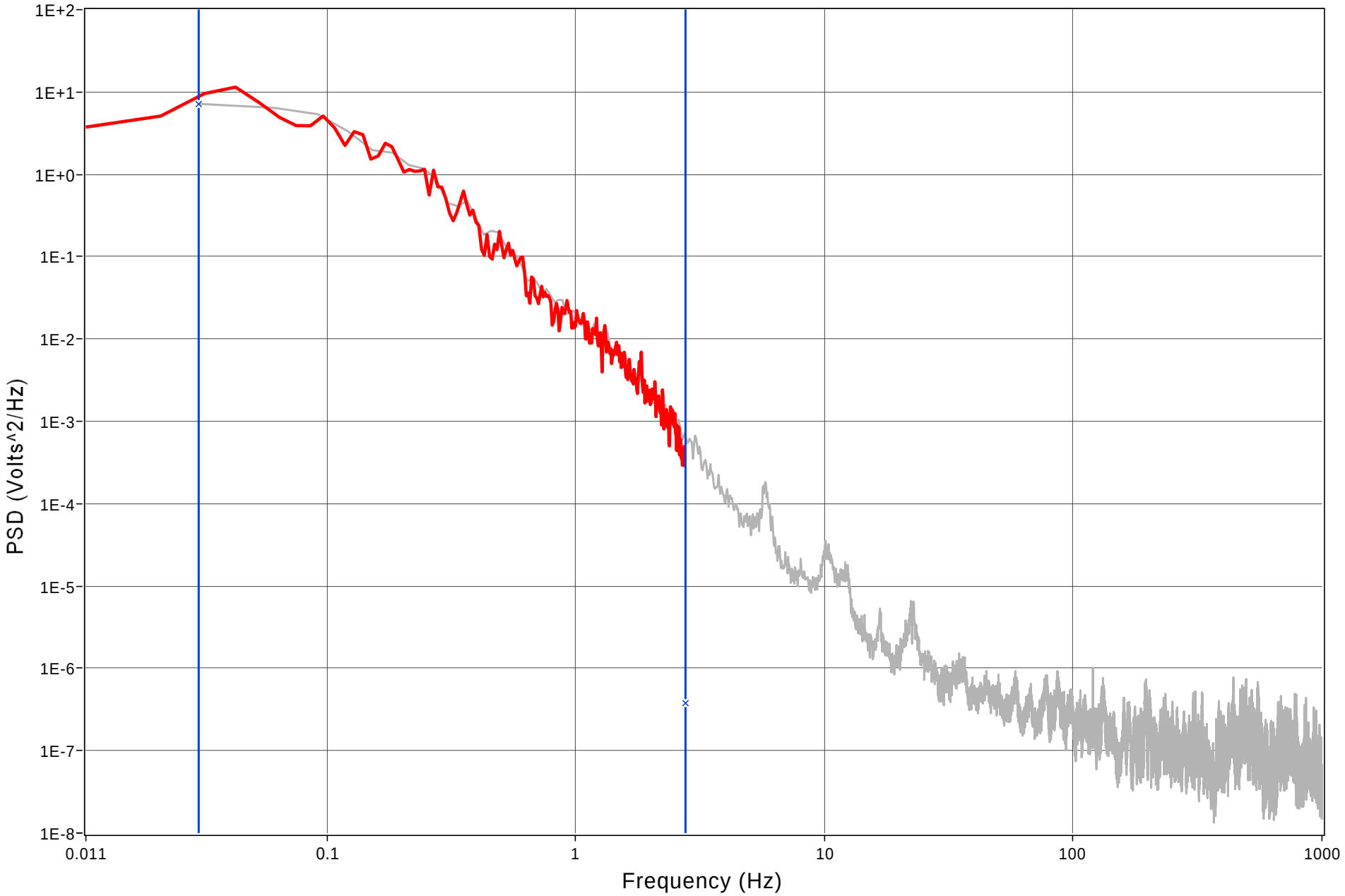
## PSD Window



# OLM Narrow Band PSD Window Fitting

| Reactor and Unit | Tag Number | Service | Filename | Blocks : Blocksize | Trim Low Freq. (Hz) | Trim High Freq. (Hz) | Fitting Type | Test Date |
|---|---|---|---|---|---|---|---|---|
| Farley Unit 2 | FT0487 | FW FLOW | FU2_2010-07_0003.psd | 11 : 512 | 0.010731 | 2.747169 | Dynamic | 15-Jul-2010 13:36:44 |

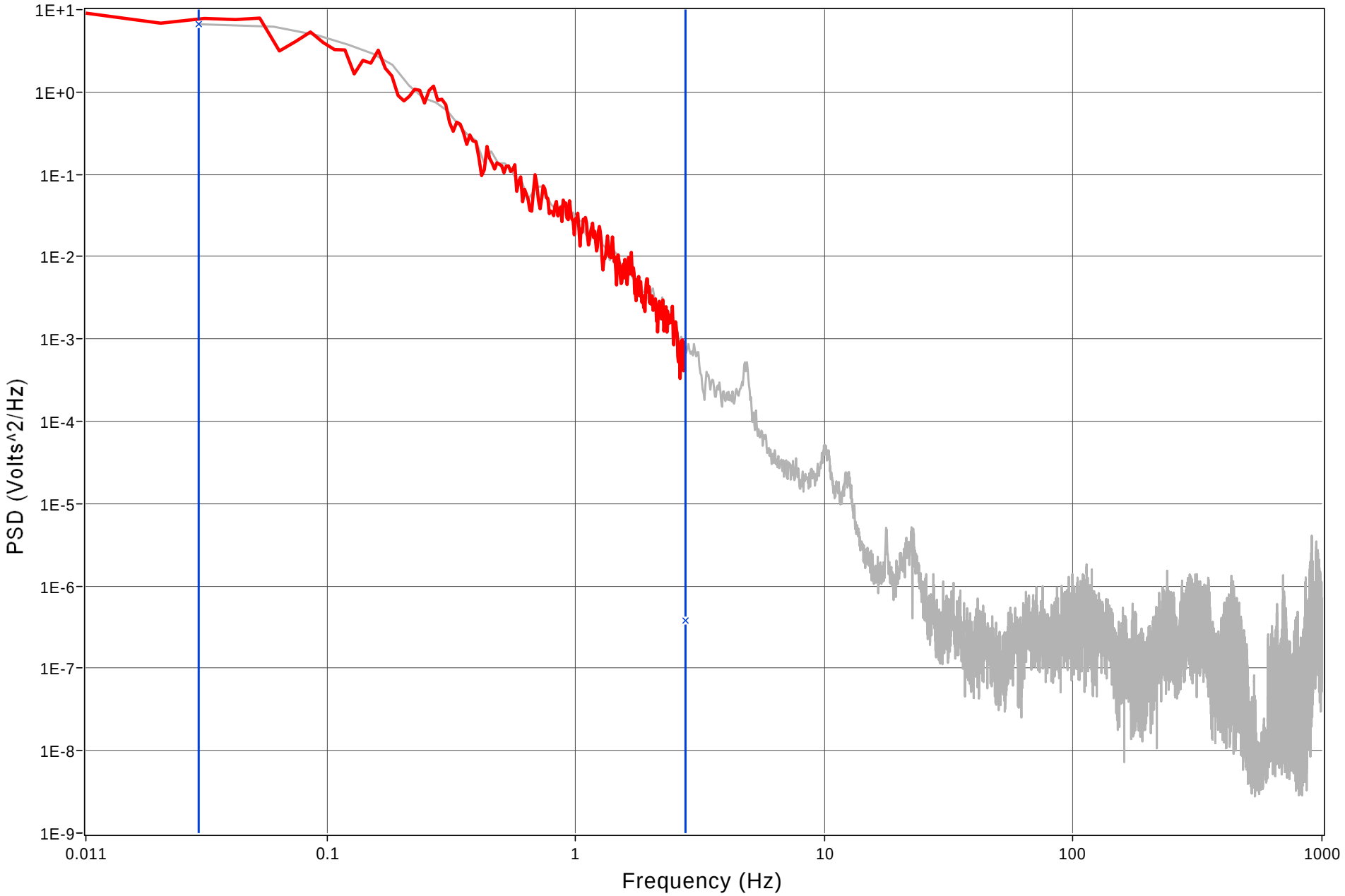
## PSD Window



# OLM Narrow Band PSD Window Fitting

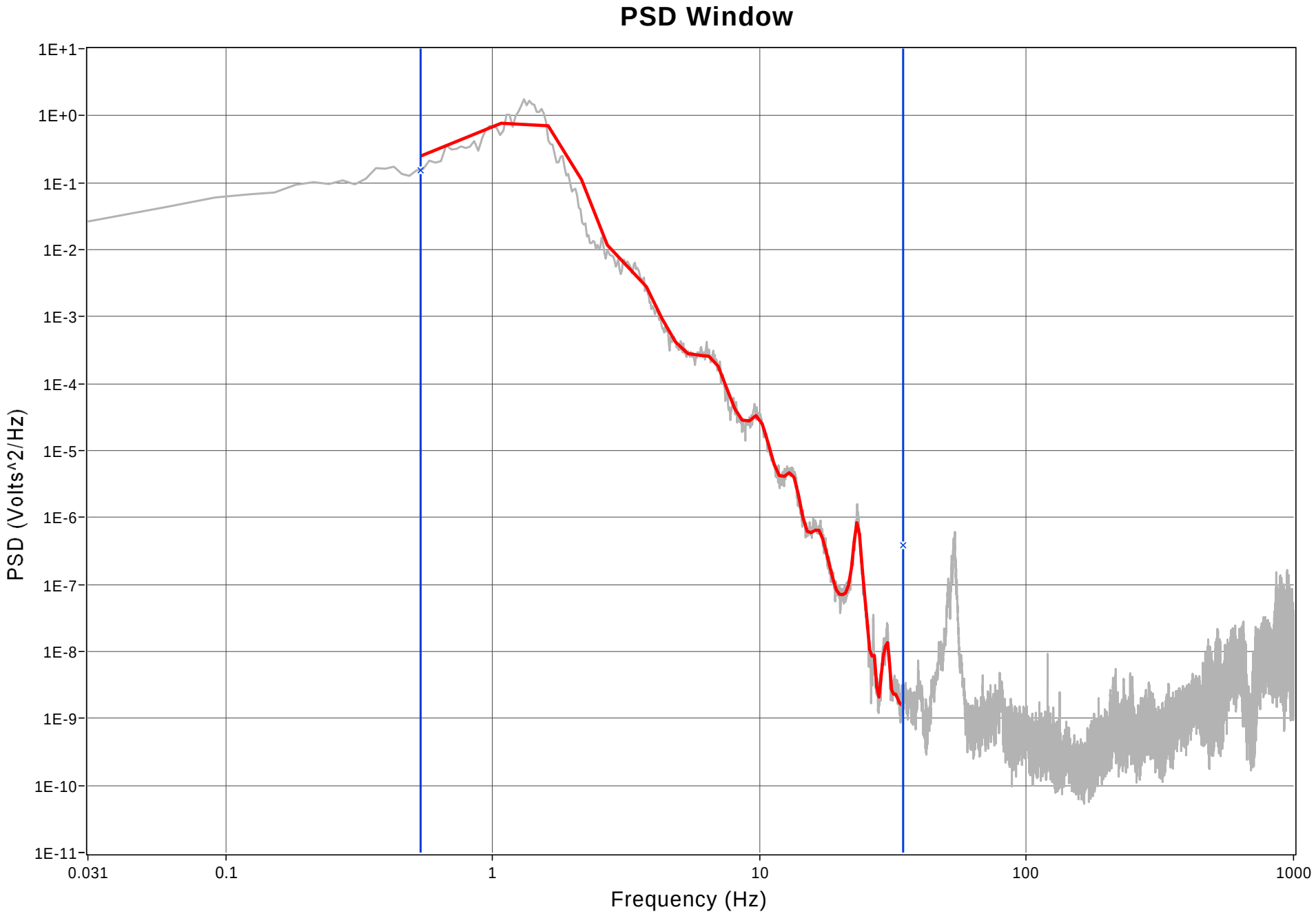
| Reactor and Unit | Tag Number | Service | Filename | Blocks : Blocksize | Trim Low Freq. (Hz) | Trim High Freq. (Hz) | Fitting Type | Test Date |
|---|---|---|---|---|---|---|---|---|
| Farley Unit 2 | FT0497 | FW FLOW | FU2_2010-07_0003.psd | 11 : 512 | 0.010731 | 2.747169 | Dynamic | 15-Jul-2010 13:36:44 |

## PSD Window



# OLM Narrow Band PSD Window Fitting

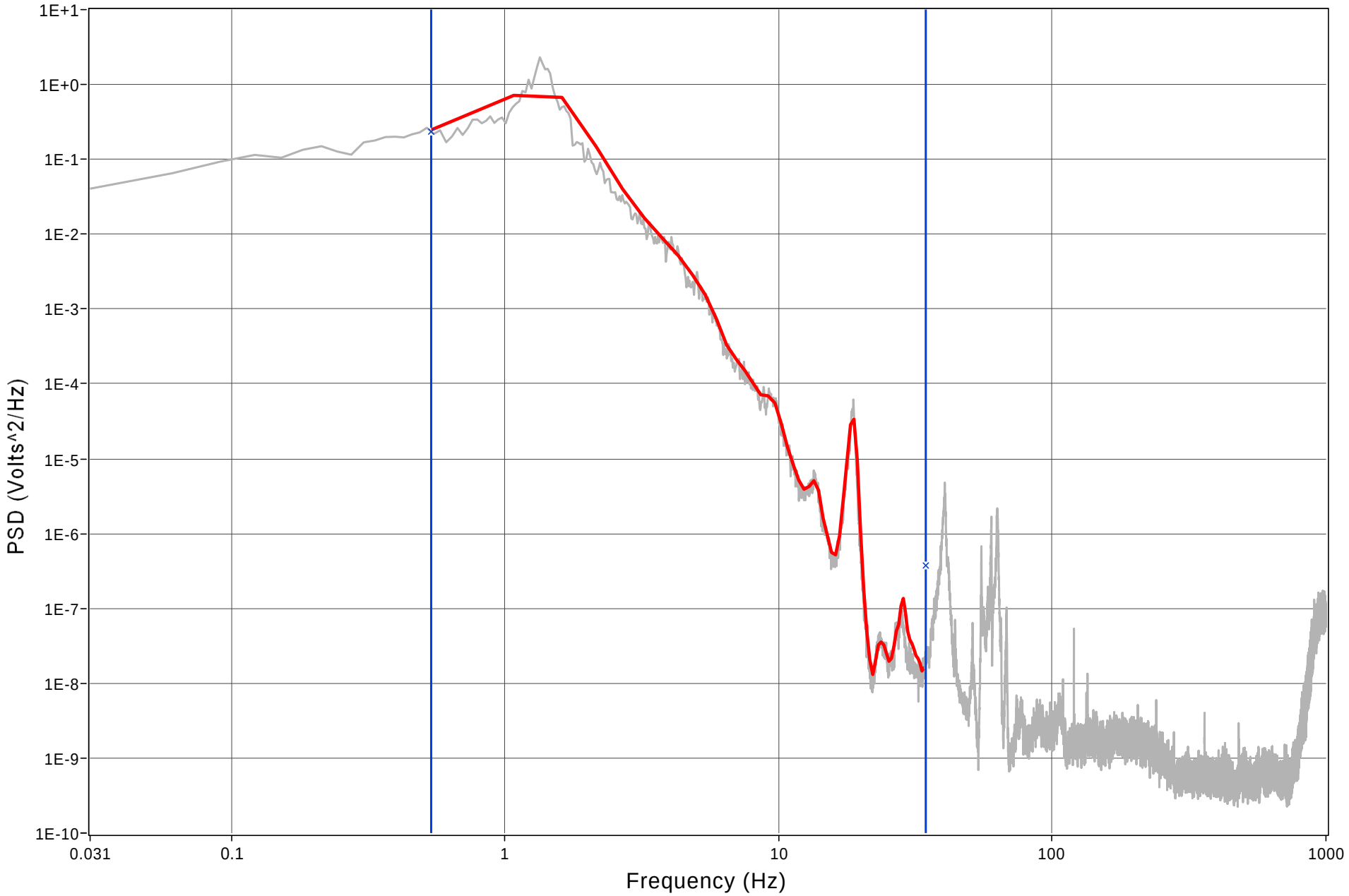
| Reactor and Unit | Tag Number | Service | Filename | Blocks : Blocksize | Trim Low Freq. (Hz) | Trim High Freq. (Hz) | Fitting Type | Test Date |
|---|---|---|---|---|---|---|---|---|
| Farley Unit 2 | FT0475 | STM FLOW | FU2_2010-07_0004.psd | 11 : 128 | 0.538777 | 34.481708 | Dynamic | 15-Jul-2010 13:36:44 |



# OLM Narrow Band PSD Window Fitting

| Reactor and Unit | Tag Number | Service | Filename | Blocks : Blocksize | Trim Low Freq. (Hz) | Trim High Freq. (Hz) | Fitting Type | Test Date |
|---|---|---|---|---|---|---|---|---|
| Farley Unit 2 | FT0485 | STM FLOW | FU2_2010-07_0004.psd | 11 : 128 | 0.538777 | 34.481708 | Dynamic | 15-Jul-2010 13:36:44 |

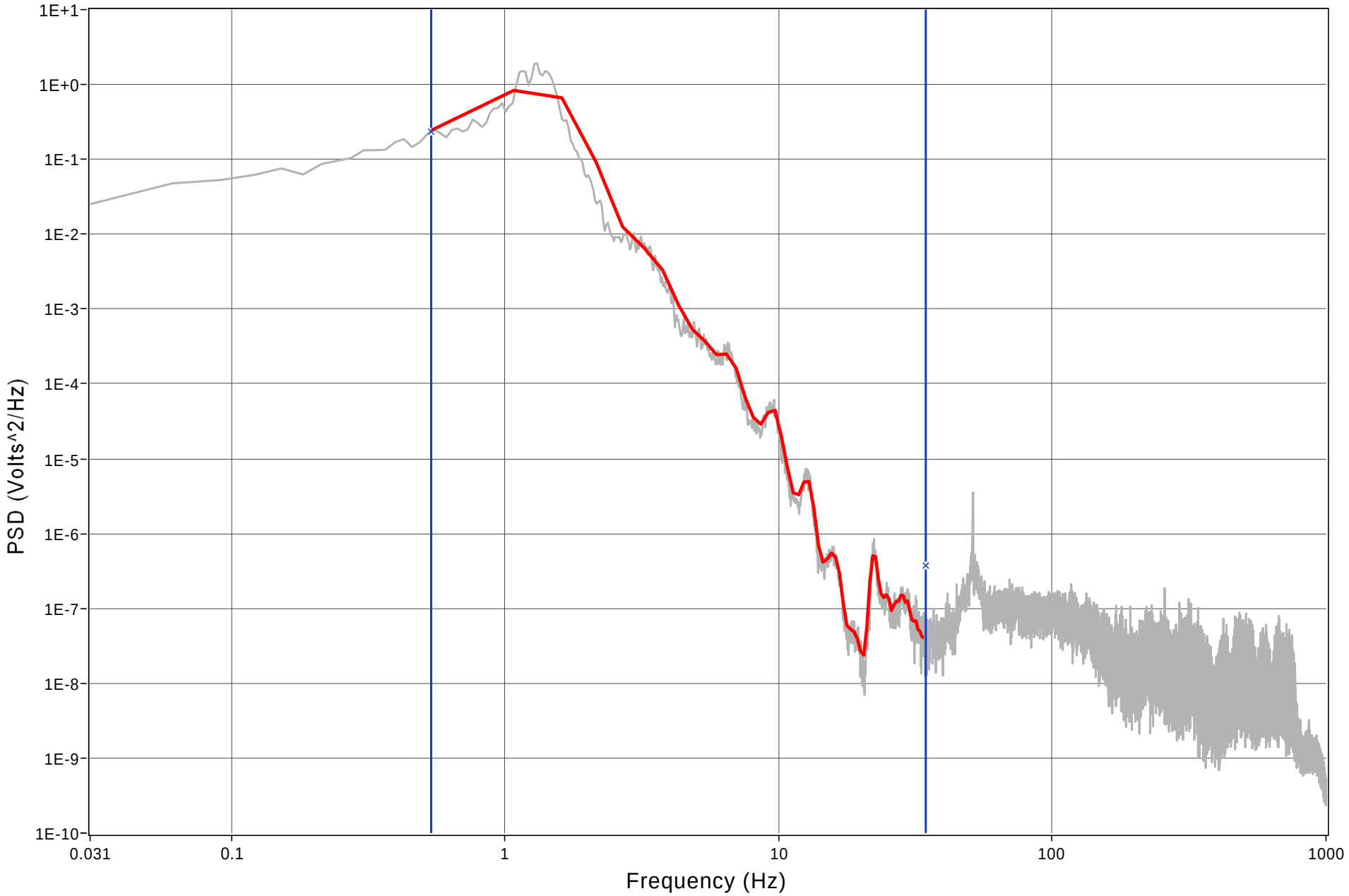
## PSD Window



# OLM Narrow Band PSD Window Fitting

| Reactor and Unit | Tag Number | Service | Filename | Blocks : Blocksize | Trim Low Freq. (Hz) | Trim High Freq. (Hz) | Fitting Type | Test Date |
|---|---|---|---|---|---|---|---|---|
| Farley Unit 2 | FT0495 | STM FLOW | FU2_2010-07_0004.psd | 11 : 128 | 0.538777 | 34.481708 | Dynamic | 15-Jul-2010 13:36:44 |

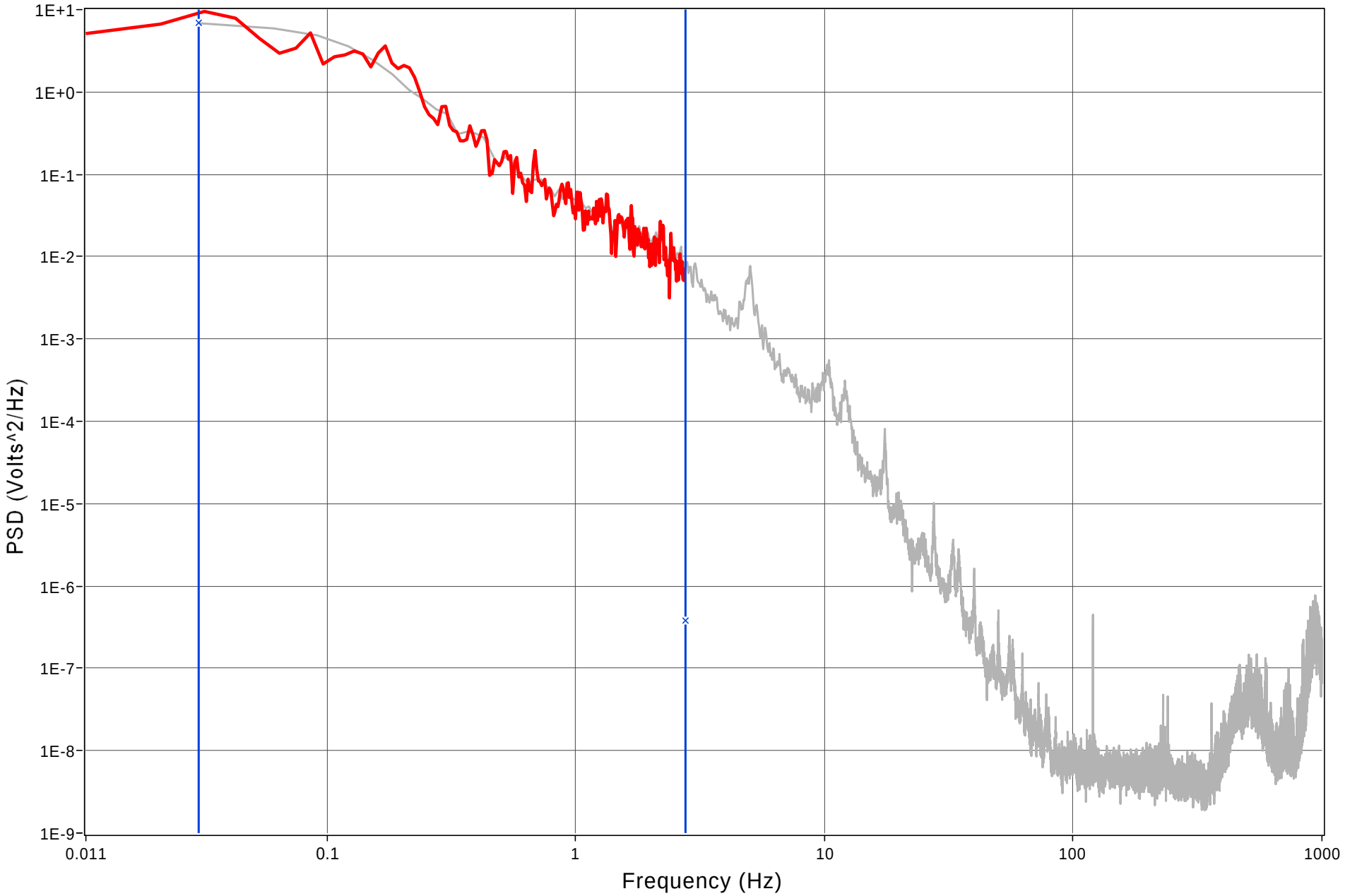
## PSD Window



# OLM Narrow Band PSD Window Fitting

| Reactor and Unit | Tag Number | Service | Filename | Blocks : Blocksize | Trim Low Freq. (Hz) | Trim High Freq. (Hz) | Fitting Type | Test Date |
|---|---|---|---|---|---|---|---|---|
| Farley Unit 2 | FT0476 | FW FLOW | FU2_2010-07_0004.psd | 11 : 512 | 0.010731 | 2.747169 | Dynamic | 15-Jul-2010 13:36:44 |

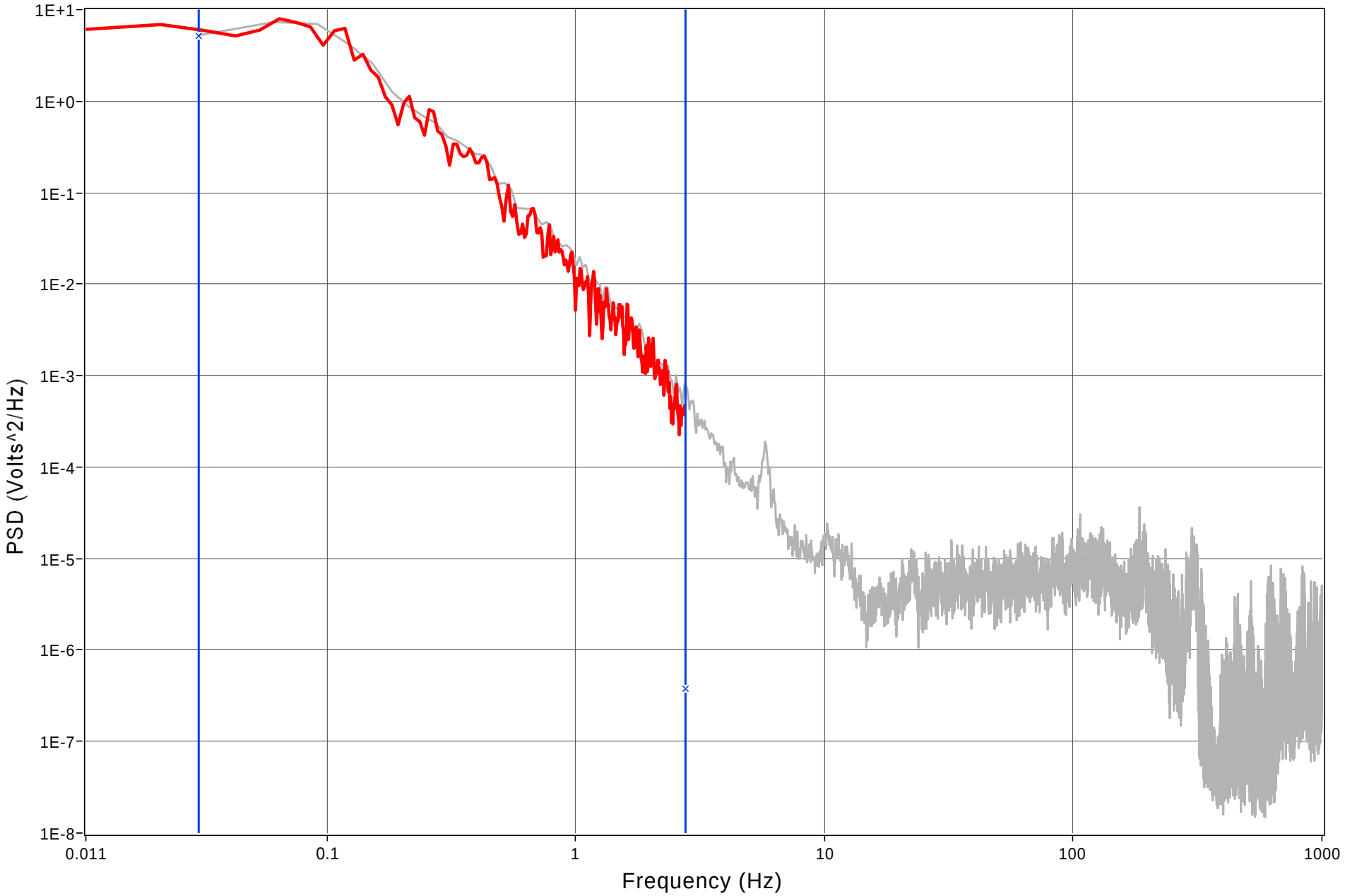
## PSD Window



# OLM Narrow Band PSD Window Fitting

| Reactor and Unit | Tag Number | Service | Filename | Blocks : Blocksize | Trim Low Freq. (Hz) | Trim High Freq. (Hz) | Fitting Type | Test Date |
|---|---|---|---|---|---|---|---|---|
| Farley Unit 2 | FT0486 | FW FLOW | FU2_2010-07_0004.psd | 11 : 512 | 0.010731 | 2.747169 | Dynamic | 15-Jul-2010 13:36:44 |

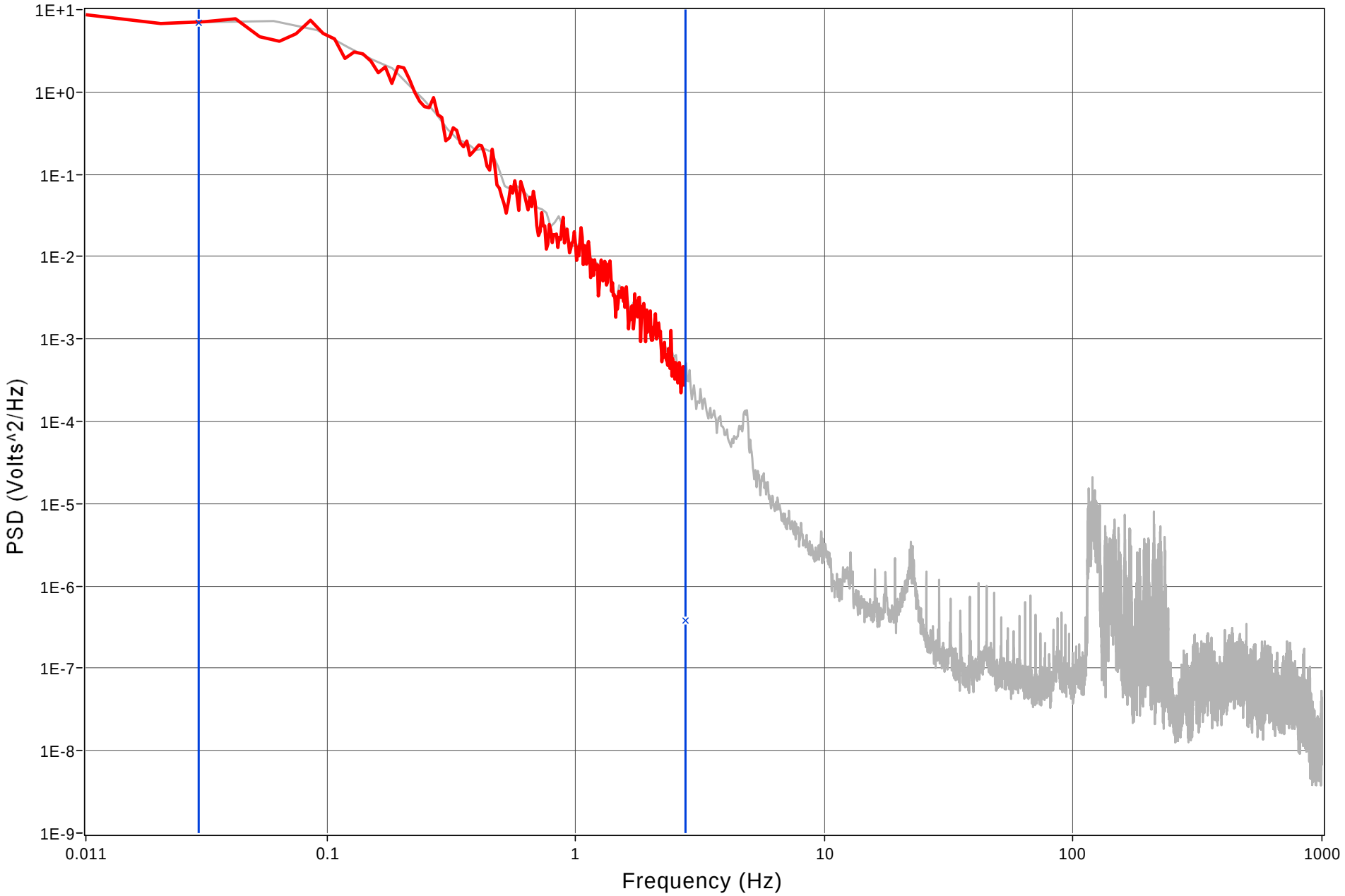
## PSD Window



# OLM Narrow Band PSD Window Fitting

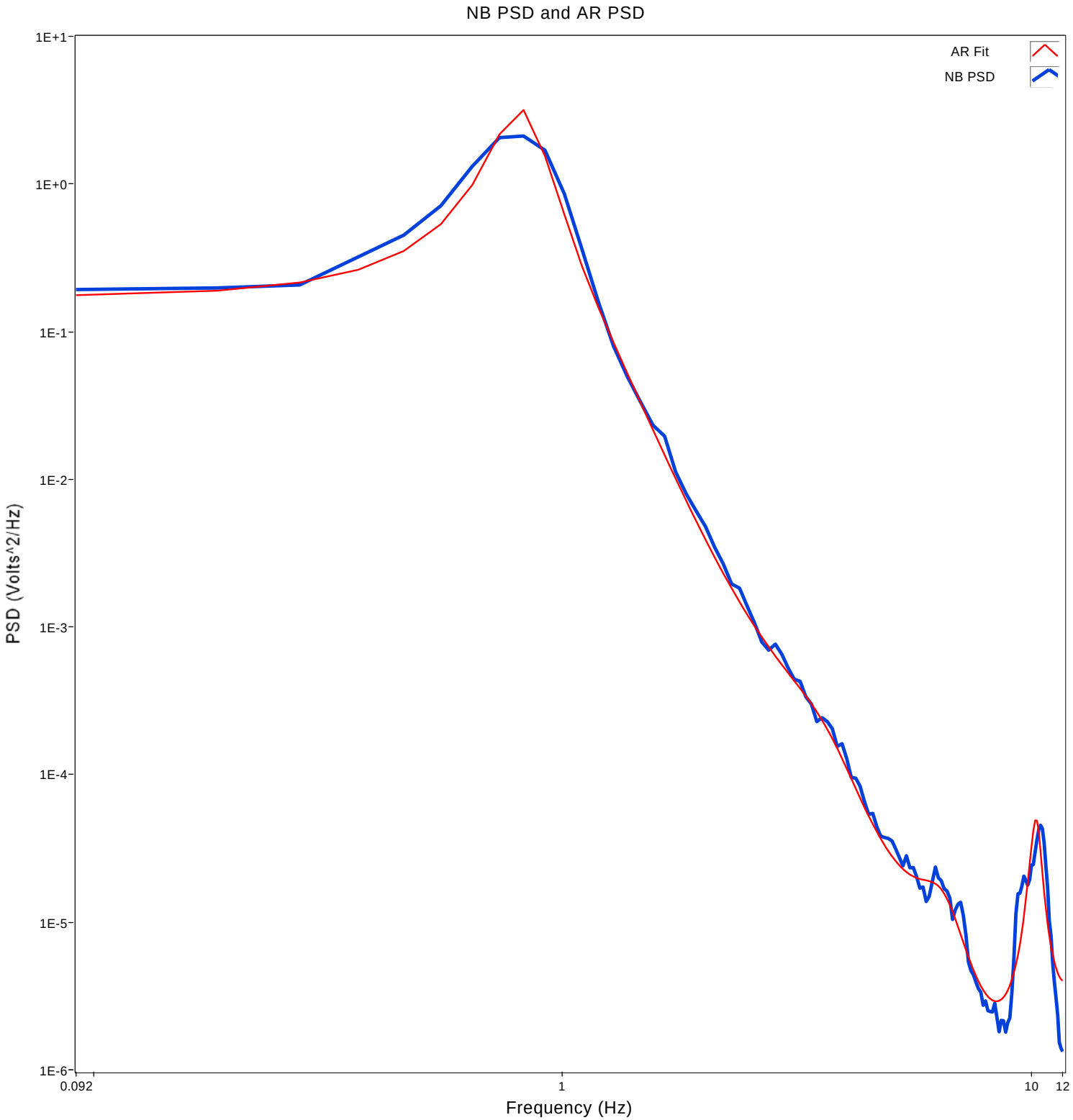
| Reactor and Unit | Tag Number | Service | Filename | Blocks : Blocksize | Trim Low Freq. (Hz) | Trim High Freq. (Hz) | Fitting Type | Test Date |
|---|---|---|---|---|---|---|---|---|
| Farley Unit 2 | FT0496 | FW FLOW | FU2_2010-07_0004.psd | 11 : 512 | 0.010731 | 2.747169 | Dynamic | 15-Jul-2010 13:36:44 |

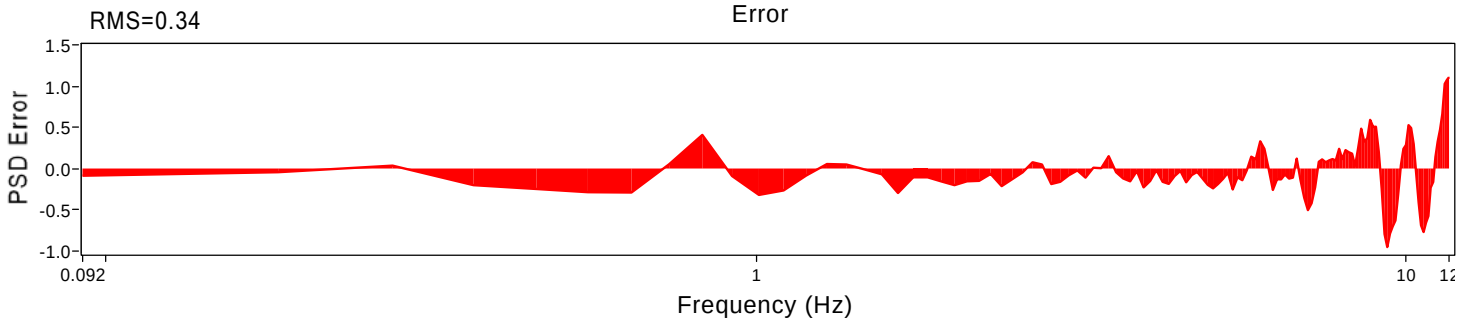
## PSD Window



# OLM Autoregressive Fitting of Narrow Band PSD

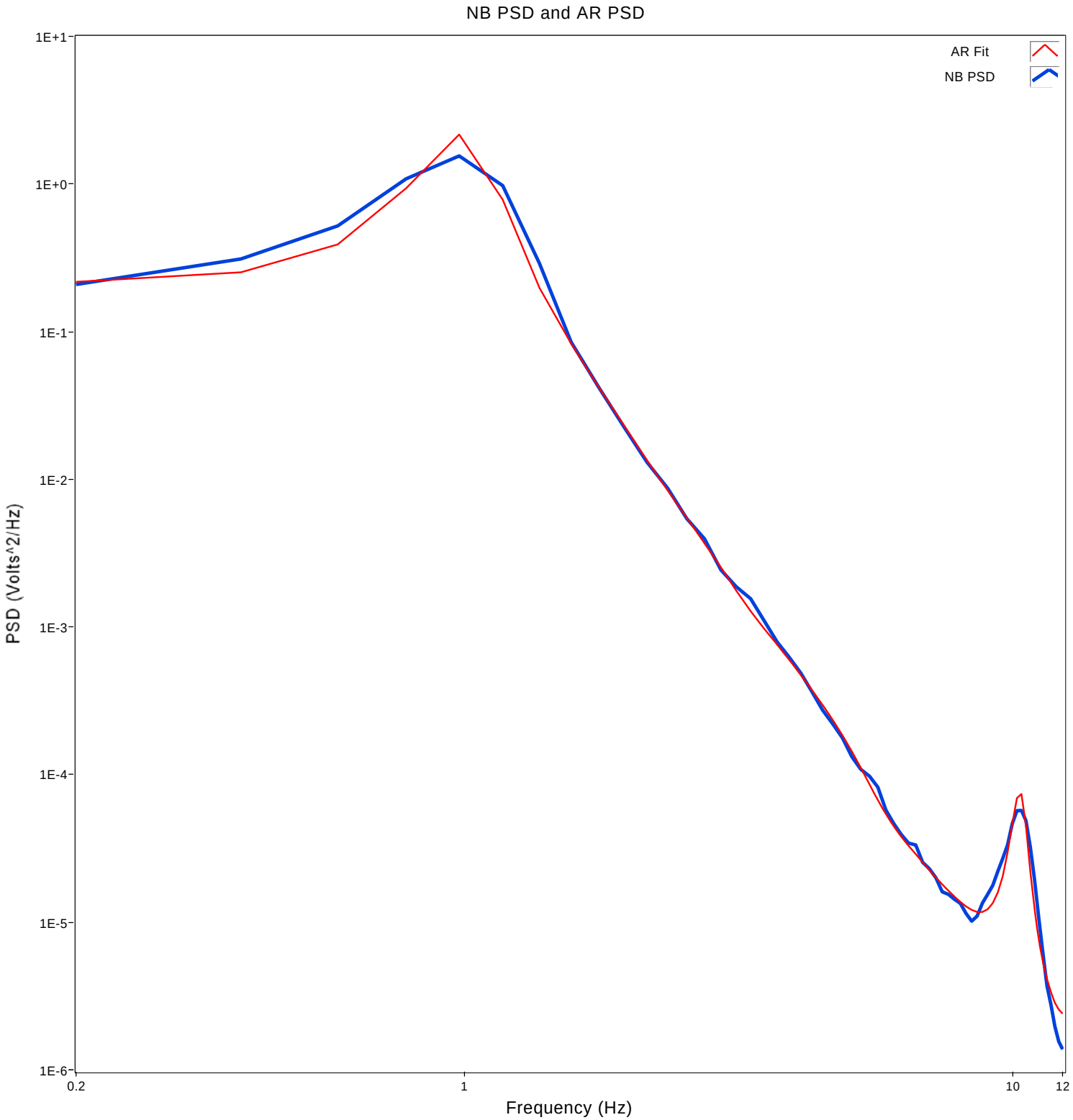
| Reactor and Unit | Tag Number | Service | Filename | Blocks : Blocksize | Trim Low Freq. (Hz) | Trim High Freq. (Hz) | AR Order | AR Method | Test Date |
|---|---|---|---|---|---|---|---|---|---|
| Farley Unit 2 | LT0474 | SG LVL | FU2_2010-07_0001.psd | 96 : 512 | 0.091909 | 11.764348 | 11 | Forward-Backward | 15-Jul-2010 13:36:44 |

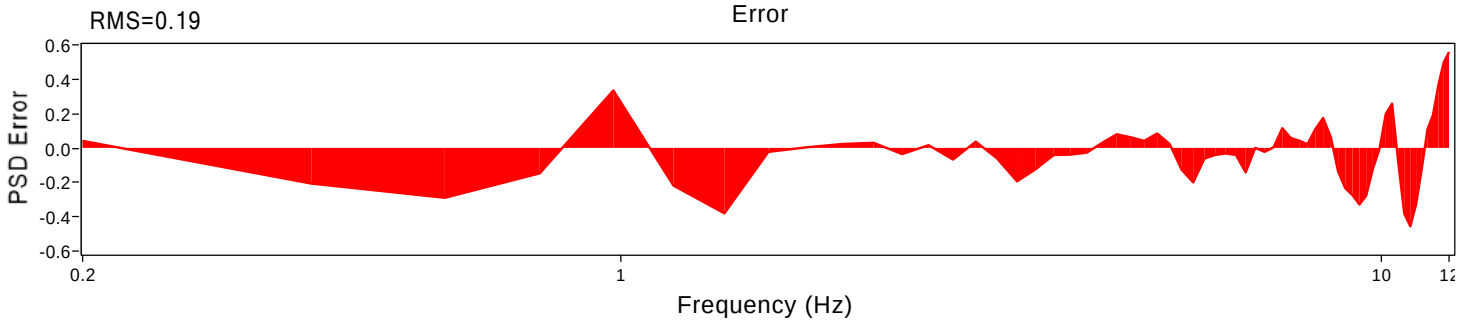


# OLM Autoregressive Fitting of Narrow Band PSD

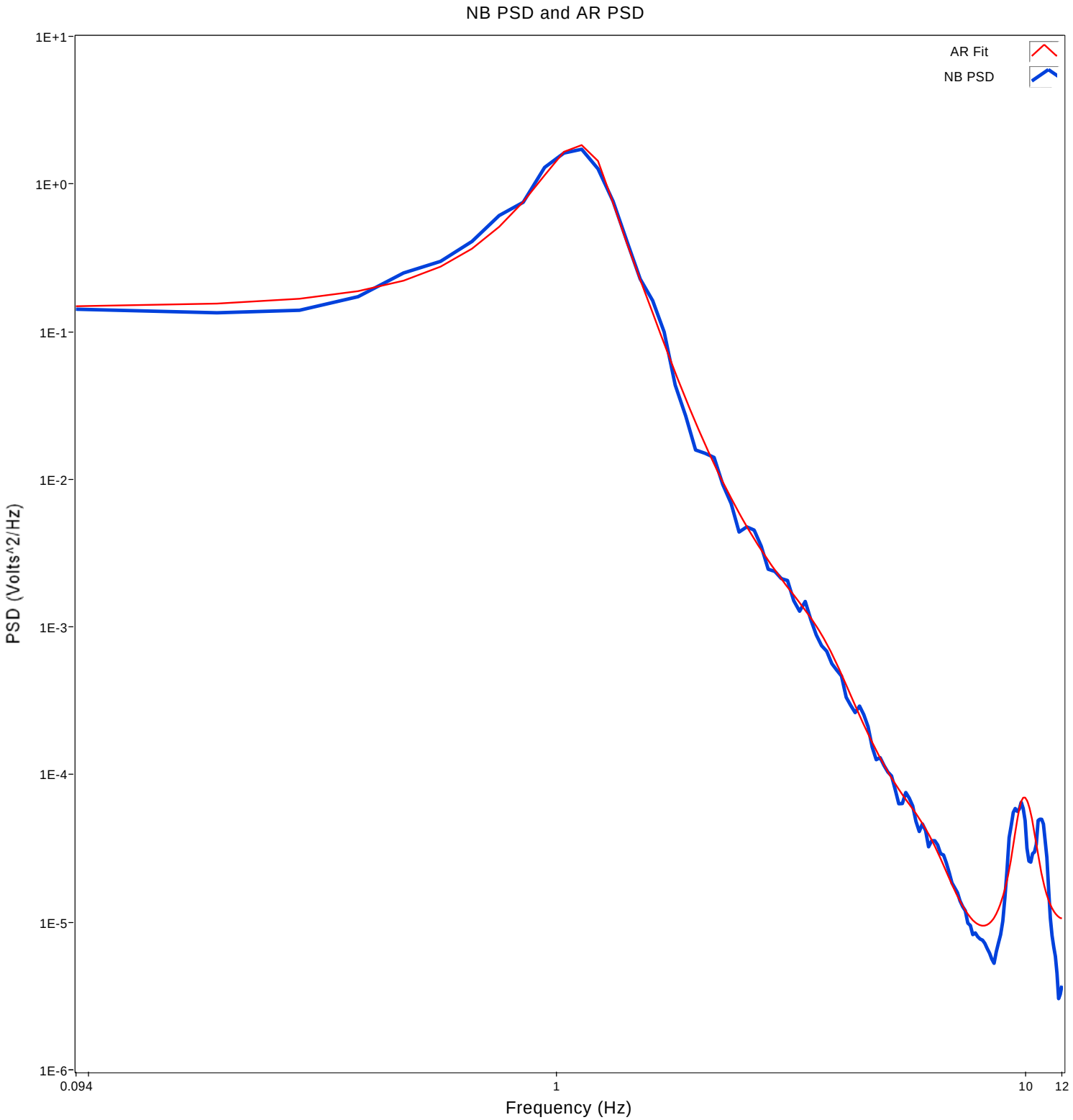
| Reactor and Unit | Tag Number | Service | Filename | Blocks : Blocksize | Trim Low Freq. (Hz) | Trim High Freq. (Hz) | AR Order | AR Method | Test Date |
|---|---|---|---|---|---|---|---|---|---|
| Farley Unit 2 | LT0484 | SG LVL | FU2_2010-07_0001.psd | 204 : 512 | 0.195307 | 12.499619 | 11 | Forward-Backward | 15-Jul-2010 13:36:44 |

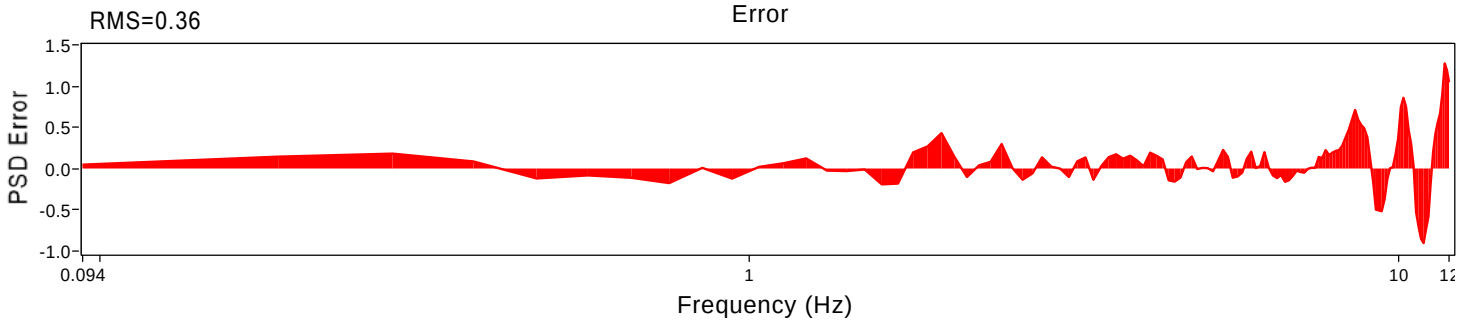


# OLM Autoregressive Fitting of Narrow Band PSD

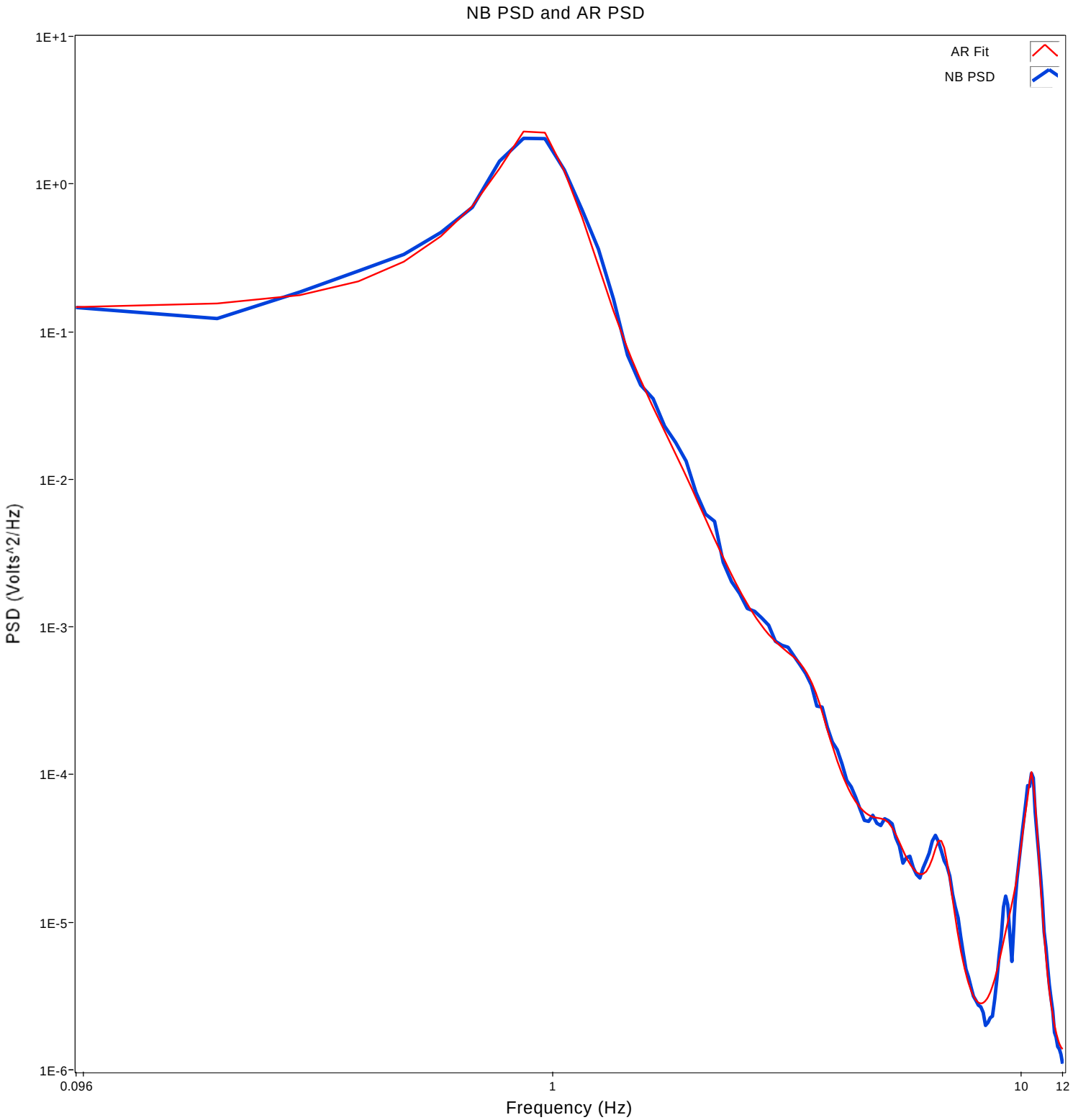
| Reactor and Unit | Tag Number | Service | Filename | Blocks : Blocksize | Trim Low Freq. (Hz) | Trim High Freq. (Hz) | AR Order | AR Method | Test Date |
|---|---|---|---|---|---|---|---|---|---|
| Farley Unit 2 | LT0494 | SG LVL | FU2_2010-07_0001.psd | 98 : 512 | 0.094124 | 12.047826 | 11 | Forward-Backward | 15-Jul-2010 13:36:44 |

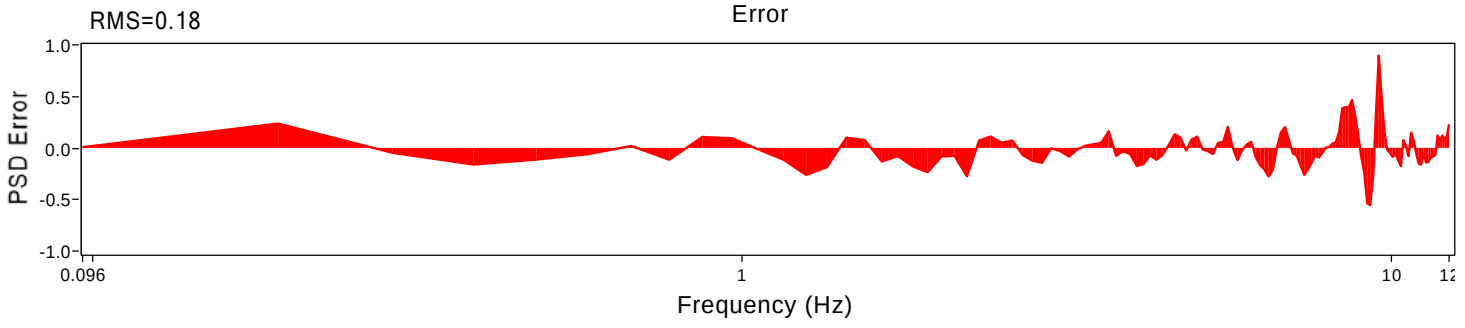


# OLM Autoregressive Fitting of Narrow Band PSD

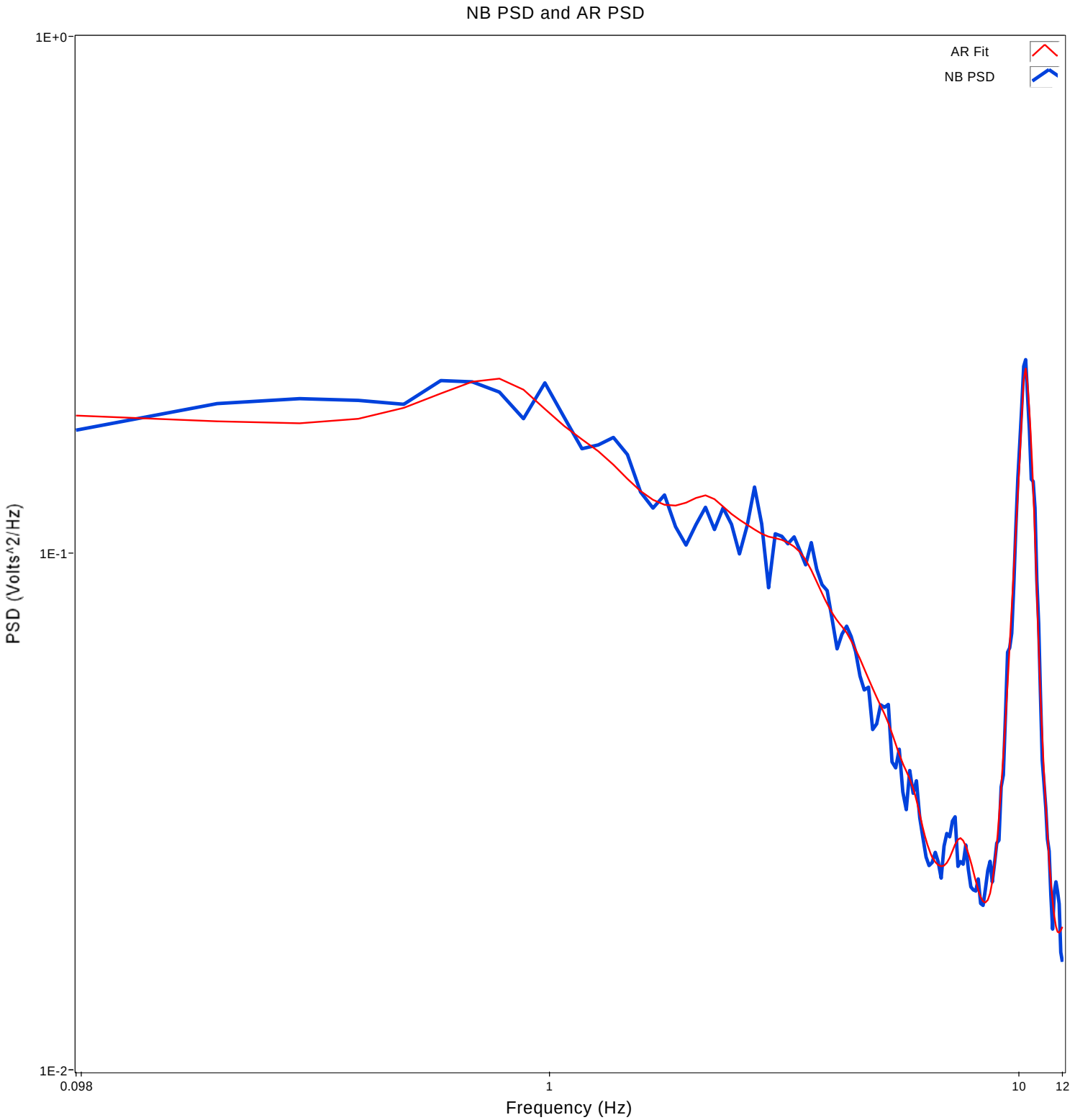
| Reactor and Unit | Tag Number | Service | Filename | Blocks : Blocksize | Trim Low Freq. (Hz) | Trim High Freq. (Hz) | AR Order | AR Method | Test Date |
|---|---|---|---|---|---|---|---|---|---|
| Farley Unit 2 | LT0475 | SG LVL | FU2_2010-07_0002.psd | 101 : 512 | 0.096448 | 12.345303 | 18 | Least-Squares | 15-Jul-2010 13:36:44 |

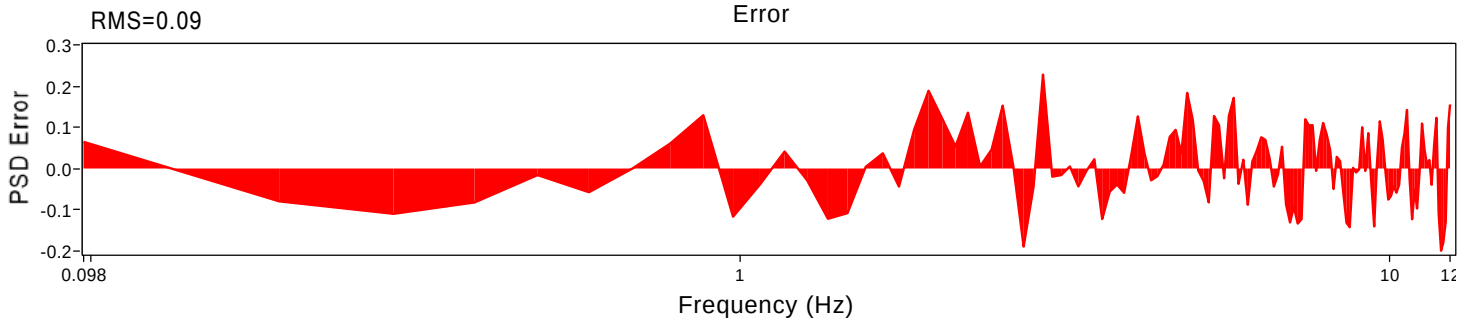


# OLM Autoregressive Fitting of Narrow Band PSD

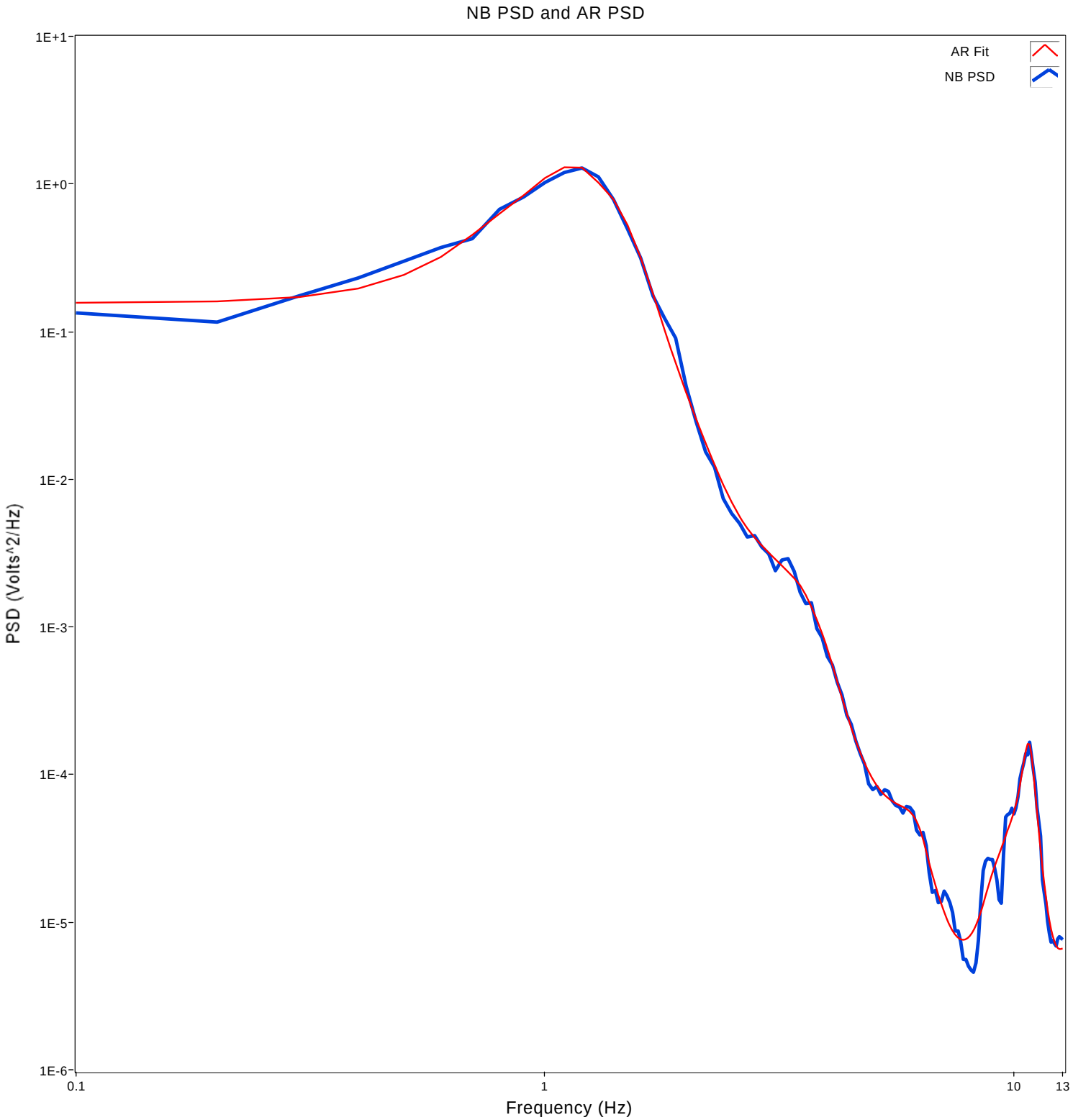
| Reactor and Unit | Tag Number | Service | Filename | Blocks : Blocksize | Trim Low Freq. (Hz) | Trim High Freq. (Hz) | AR Order | AR Method | Test Date |
|---|---|---|---|---|---|---|---|---|---|
| Farley Unit 2 | LT0485 | SG LVL | FU2_2010-07_0002.psd | 102 : 512 | 0.097653 | 12.499619 | 18 | Least-Squares | 15-Jul-2010 13:36:44 |

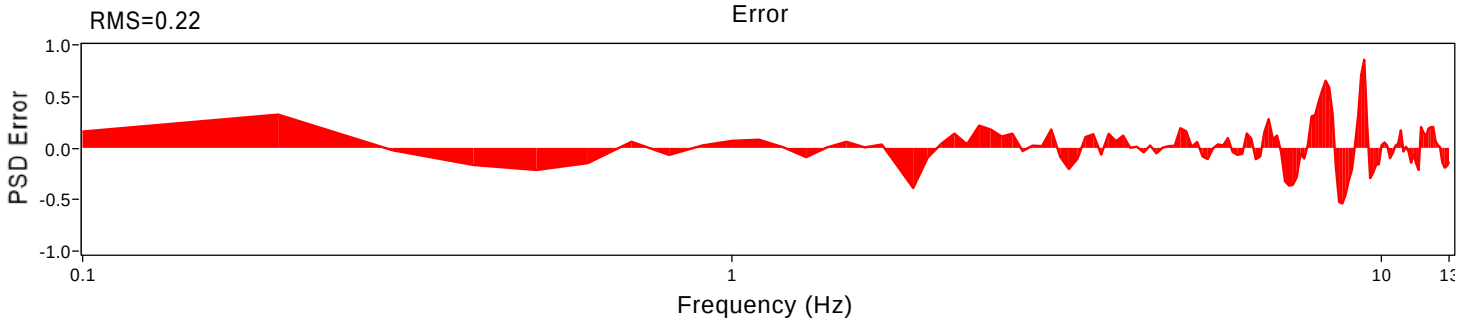


# OLM Autoregressive Fitting of Narrow Band PSD

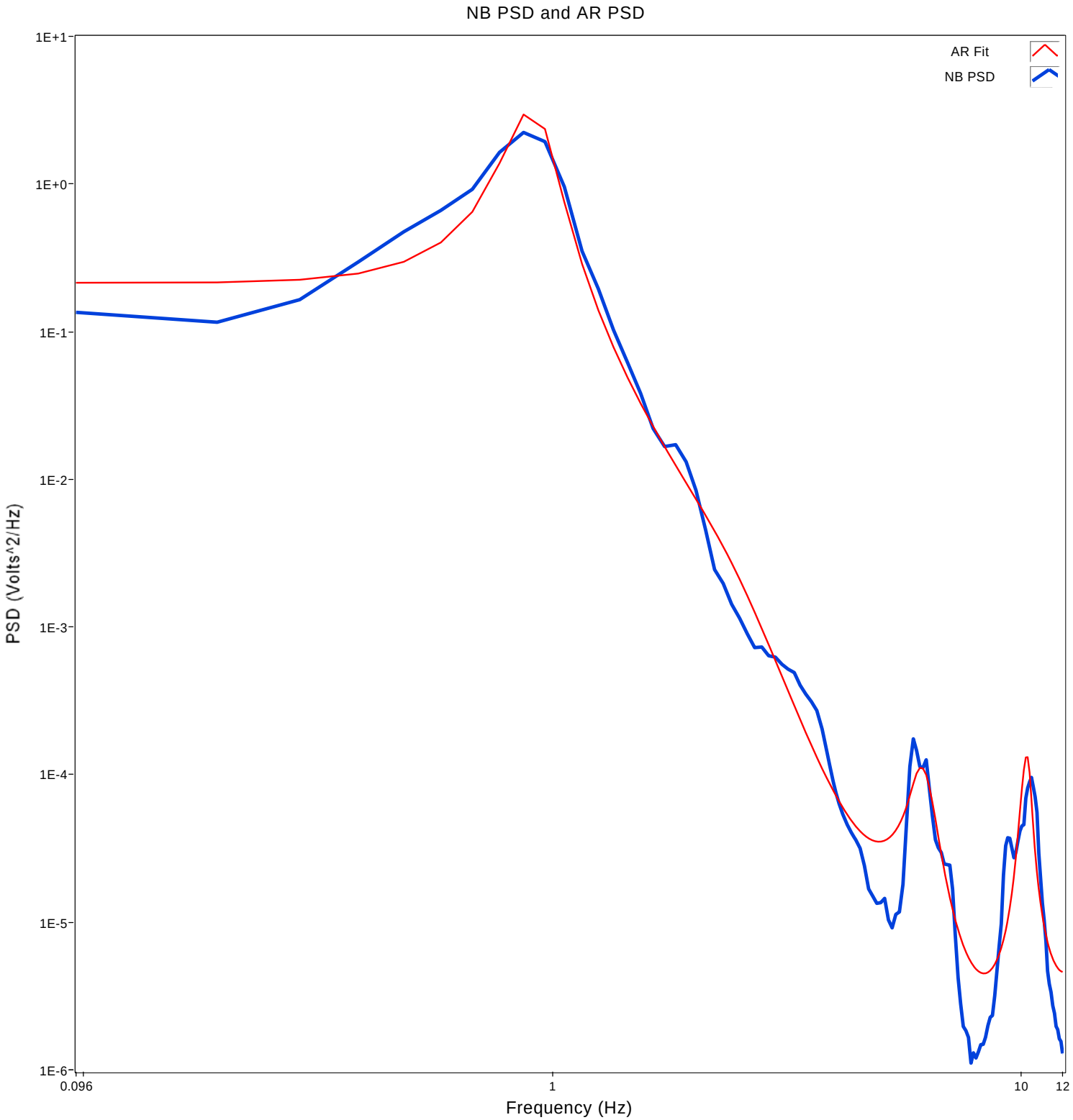
| Reactor and Unit | Tag Number | Service | Filename | Blocks : Blocksize | Trim Low Freq. (Hz) | Trim High Freq. (Hz) | AR Order | AR Method | Test Date |
|---|---|---|---|---|---|---|---|---|---|
| Farley Unit 2 | LT0495 | SG LVL | FU2_2010-07_0002.psd | 104 : 512 | 0.100157 | 12.820122 | 18 | Least-Squares | 15-Jul-2010 13:36:44 |

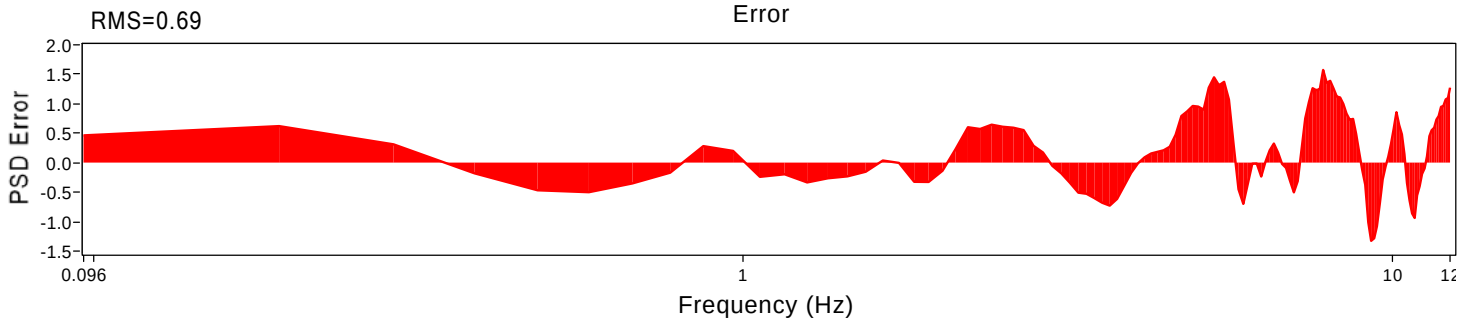


# OLM Autoregressive Fitting of Narrow Band PSD

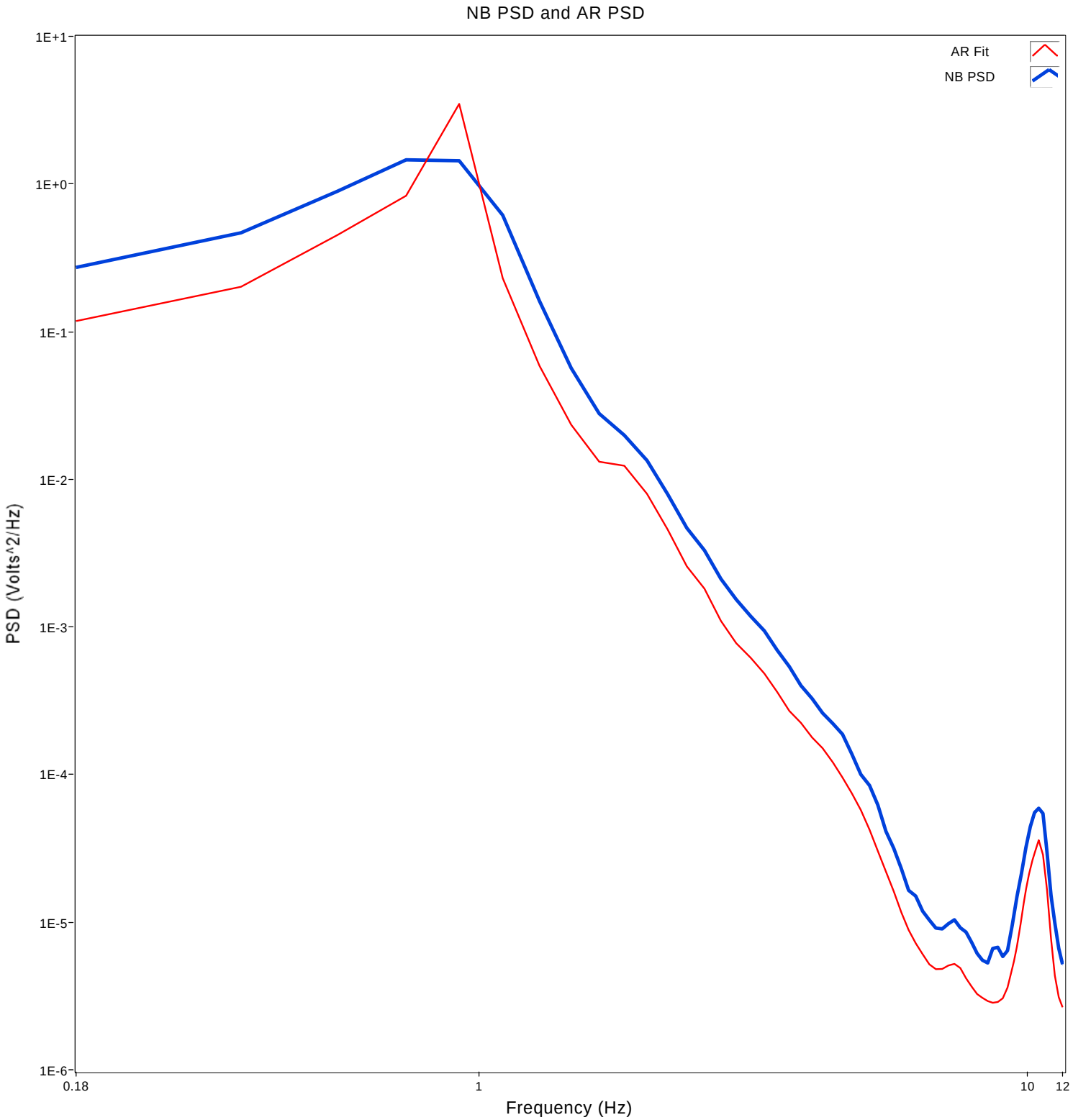
| Reactor and Unit | Tag Number | Service | Filename | Blocks : Blocksize | Trim Low Freq. (Hz) | Trim High Freq. (Hz) | AR Order | AR Method | Test Date |
|---|---|---|---|---|---|---|---|---|---|
| Farley Unit 2 | LT0476 | SG LVL | FU2_2010-07_0003.psd | 101 : 512 | 0.096448 | 12.345303 | 11 | Least-Squares | 15-Jul-2010 13:36:44 |

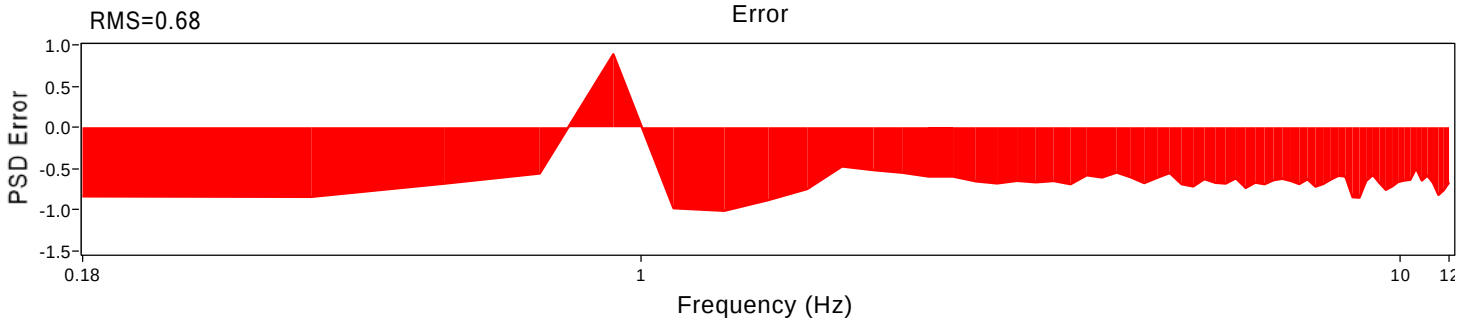


# OLM Autoregressive Fitting of Narrow Band PSD

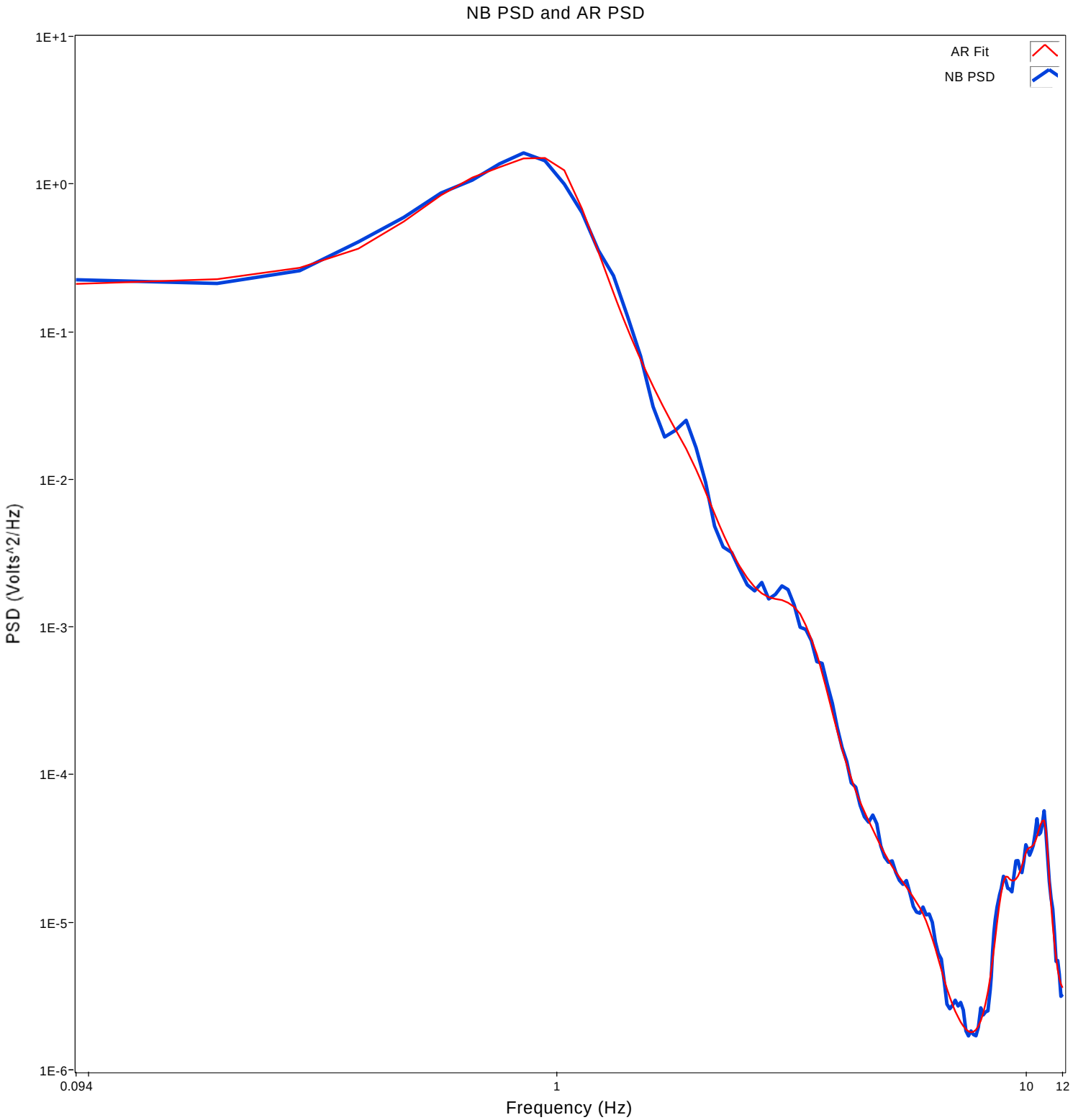
| Reactor and Unit | Tag Number | Service | Filename | Blocks : Blocksize | Trim Low Freq. (Hz) | Trim High Freq. (Hz) | AR Order | AR Method | Test Date |
|---|---|---|---|---|---|---|---|---|---|
| Farley Unit 2 | LT0486 | SG LVL | FU2_2010-07_0003.psd | 192 : 512 | 0.183818 | 11.764348 | 20 | Least-Squares | 15-Jul-2010 13:36:44 |

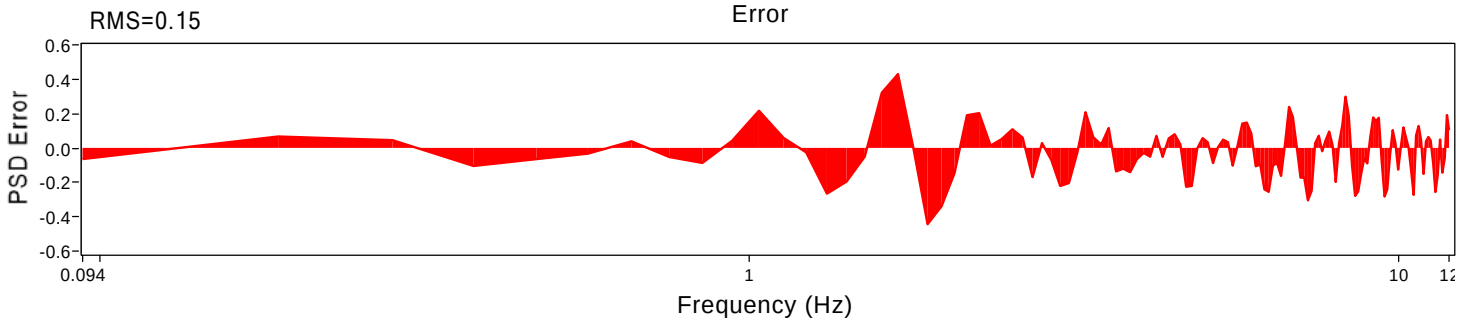


# OLM Autoregressive Fitting of Narrow Band PSD

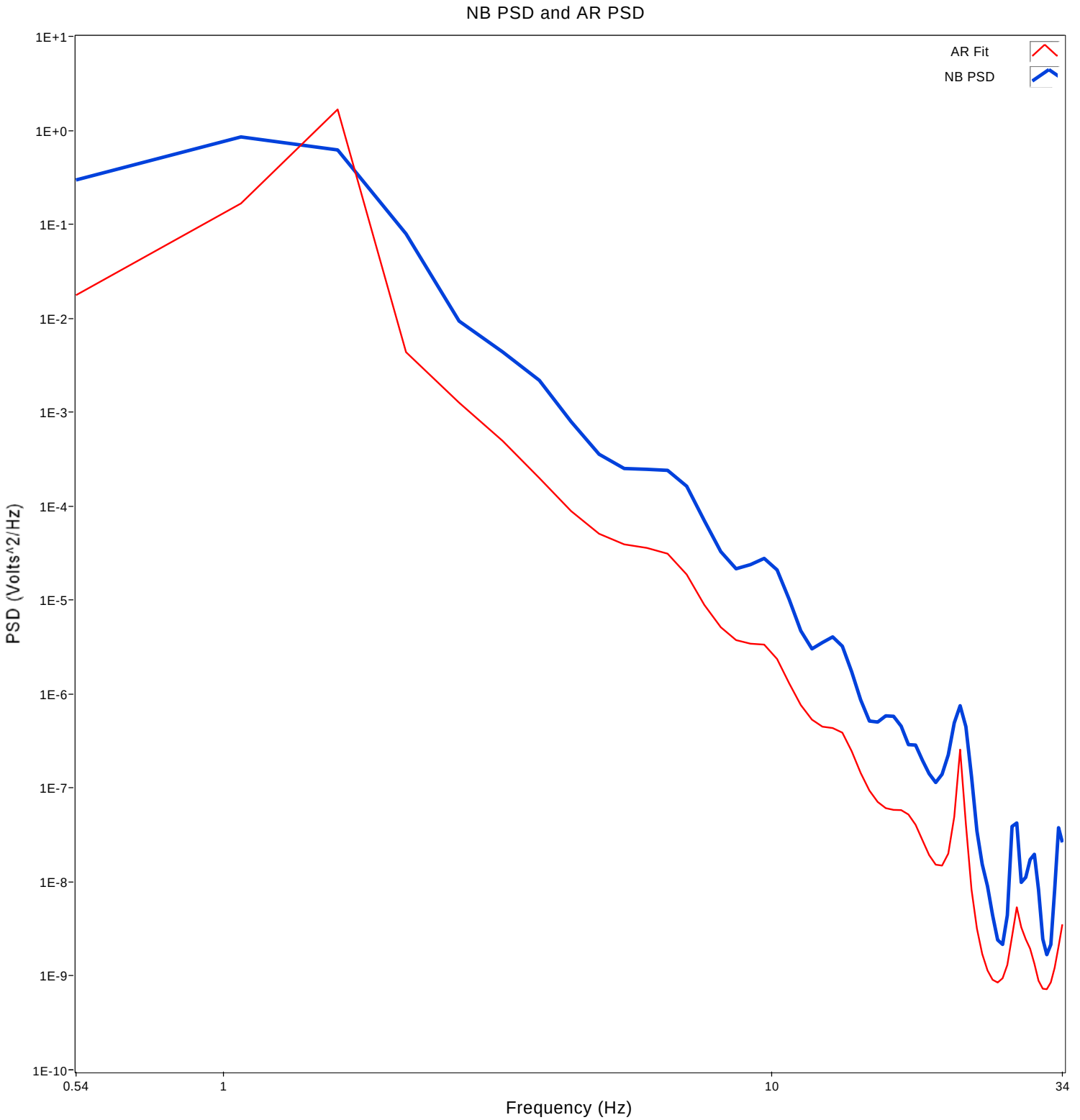
| Reactor and Unit | Tag Number | Service | Filename | Blocks : Blocksize | Trim Low Freq. (Hz) | Trim High Freq. (Hz) | AR Order | AR Method | Test Date |
|---|---|---|---|---|---|---|---|---|---|
| Farley Unit 2 | LT0496 | SG LVL | FU2_2010-07_0003.psd | 98 : 512 | 0.094124 | 12.047826 | 20 | Least-Squares | 15-Jul-2010 13:36:44 |

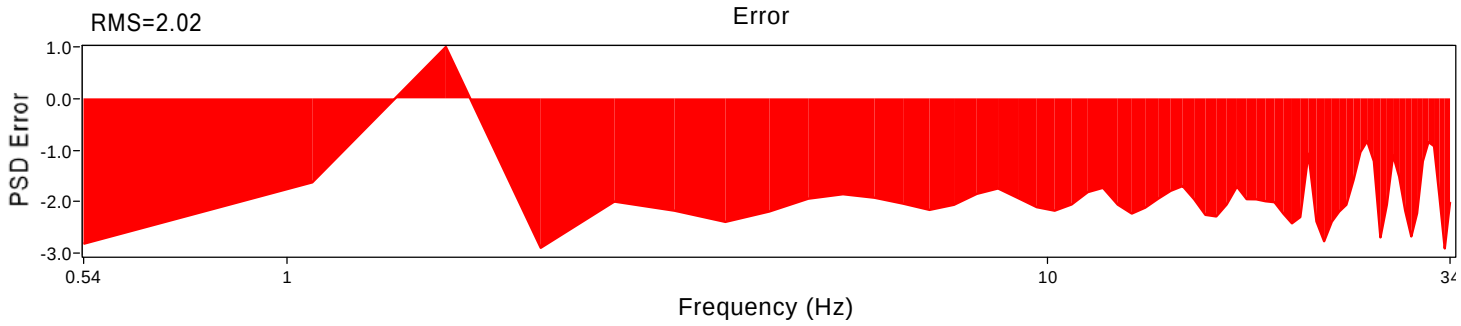


# OLM Autoregressive Fitting of Narrow Band PSD

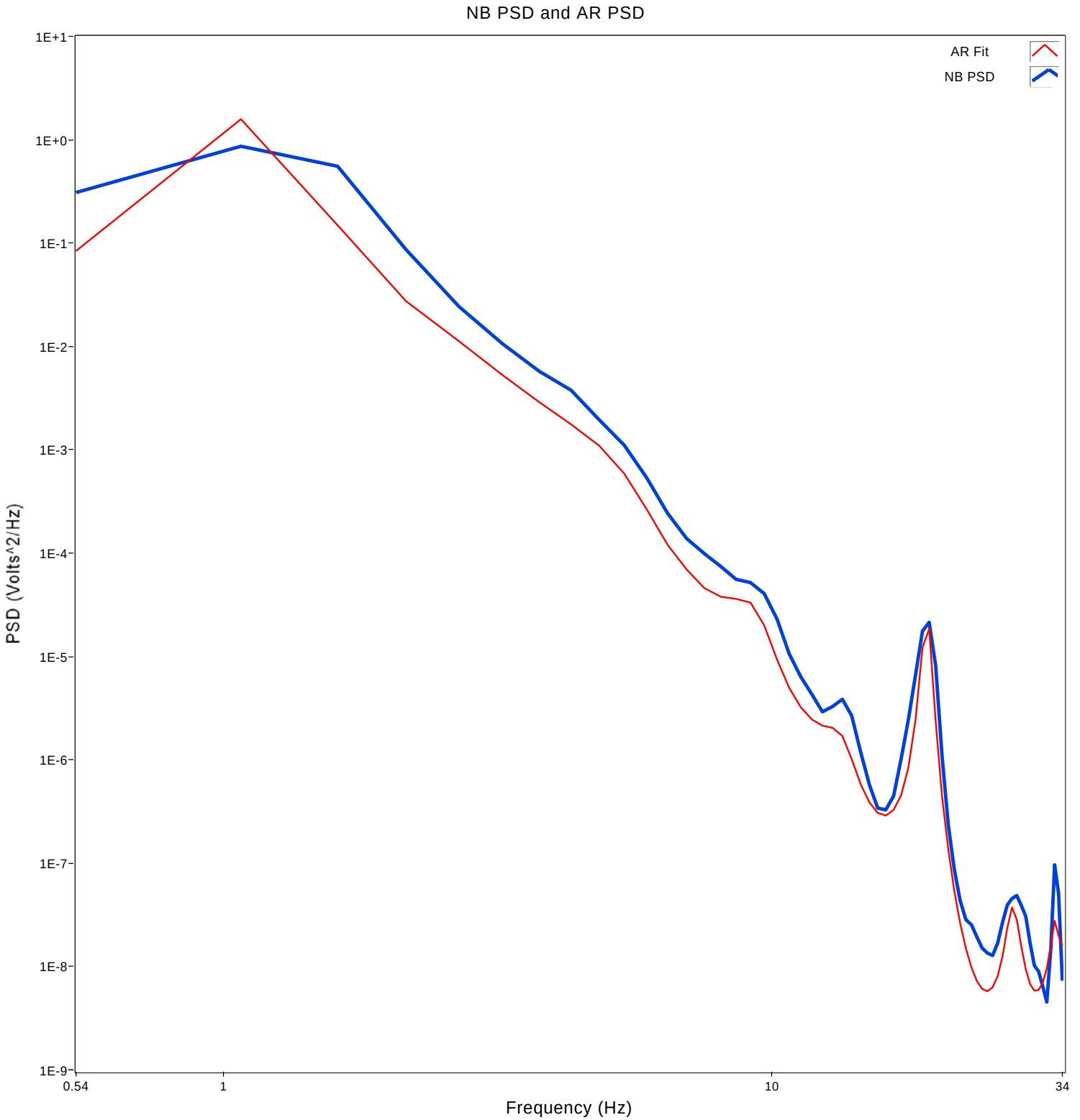
| Reactor and Unit | Tag Number | Service | Filename | Blocks : Blocksize | Trim Low Freq. (Hz) | Trim High Freq. (Hz) | AR Order | AR Method | Test Date |
|---|---|---|---|---|---|---|---|---|---|
| Farley Unit 2 | FT0474 | STM FLOW | FU2_2010-07_0003.psd | 564 : 512 | 0.538777 | 34.481708 | 20 | Least-Squares | 15-Jul-2010 13:36:44 |

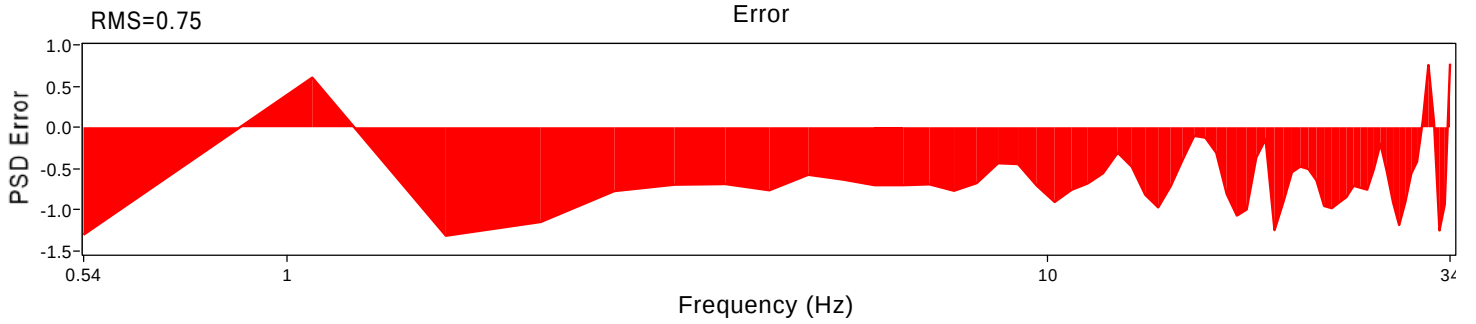


# OLM Autoregressive Fitting of Narrow Band PSD

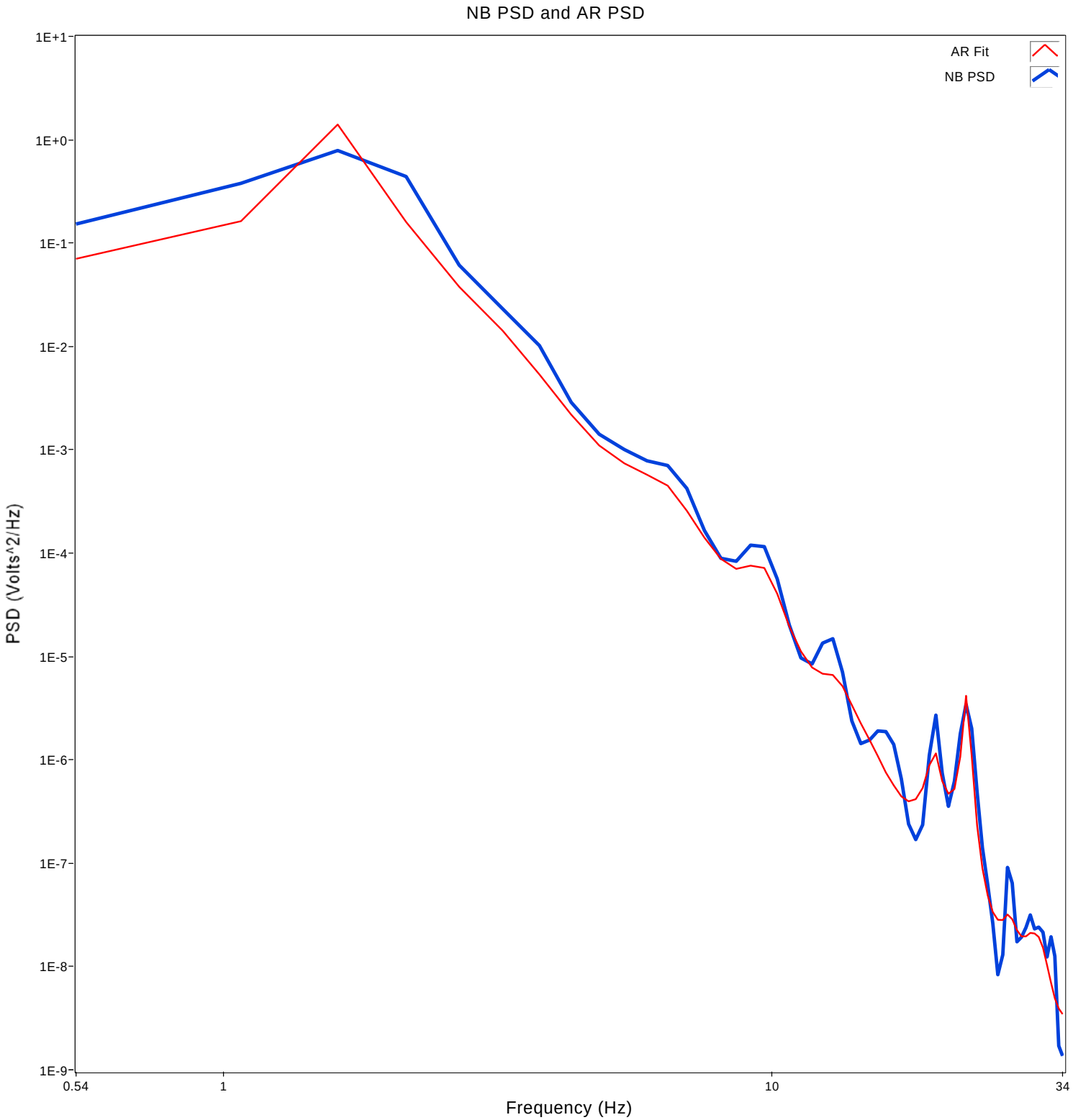
| Reactor and Unit | Tag Number | Service | Filename | Blocks : Blocksize | Trim Low Freq. (Hz) | Trim High Freq. (Hz) | AR Order | AR Method | Test Date |
|---|---|---|---|---|---|---|---|---|---|
| Farley Unit 2 | FT0484 | STM FLOW | FU2_2010-07_0003.psd | 564 : 512 | 0.538777 | 34.481708 | 18 | Least-Squares | 15-Jul-2010 13:36:44 |

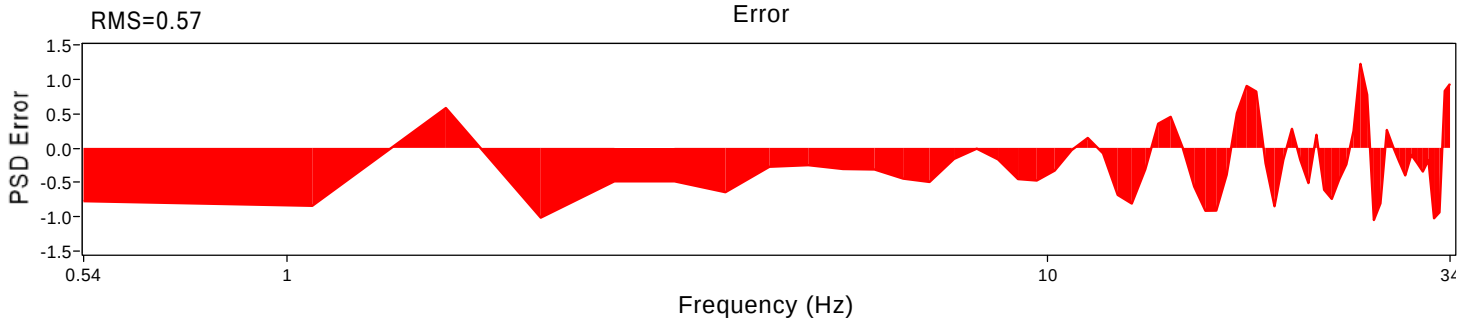


# OLM Autoregressive Fitting of Narrow Band PSD

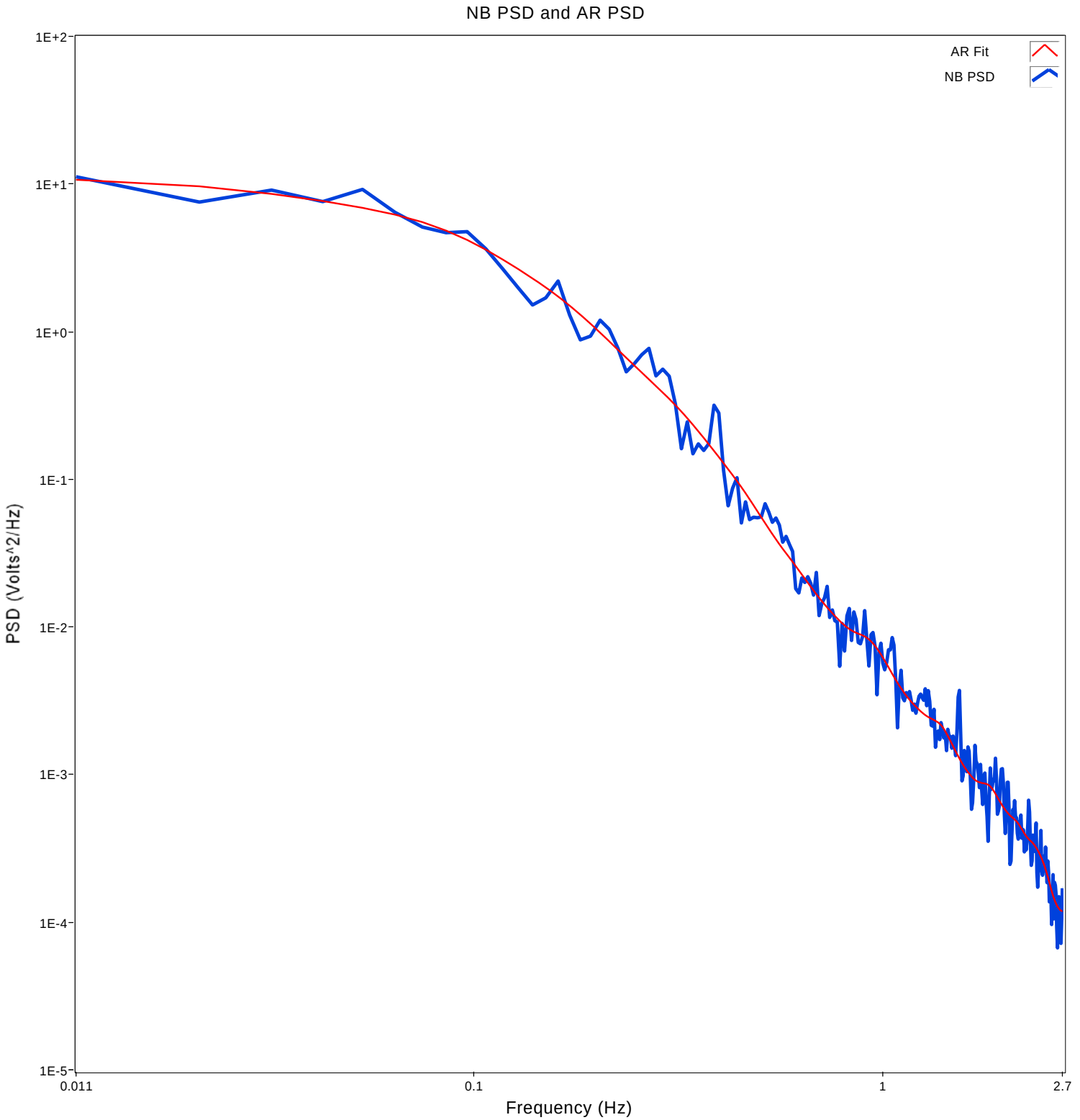
| Reactor and Unit | Tag Number | Service | Filename | Blocks : Blocksize | Trim Low Freq. (Hz) | Trim High Freq. (Hz) | AR Order | AR Method | Test Date |
|---|---|---|---|---|---|---|---|---|---|
| Farley Unit 2 | FT0494 | STM FLOW | FU2_2010-07_0003.psd | 564 : 512 | 0.538777 | 34.481708 | 19 | Least-Squares | 15-Jul-2010 13:36:44 |

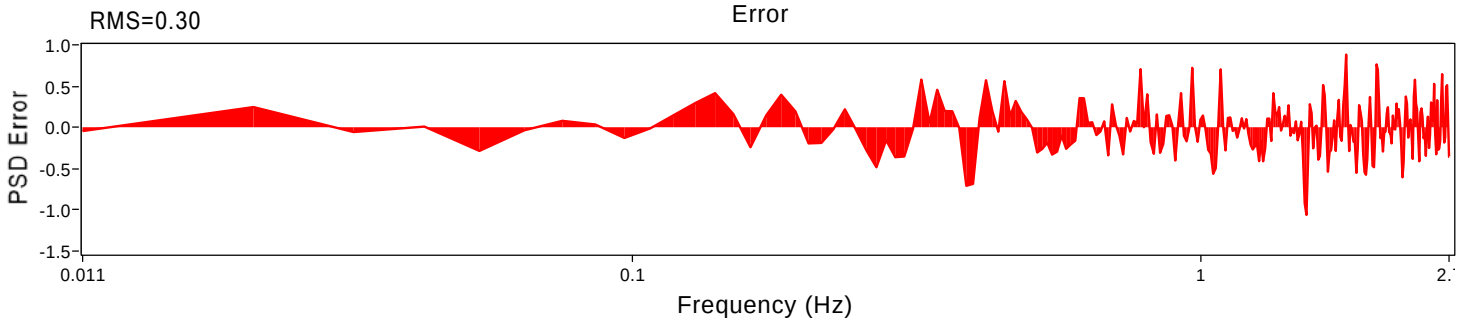


# OLM Autoregressive Fitting of Narrow Band PSD

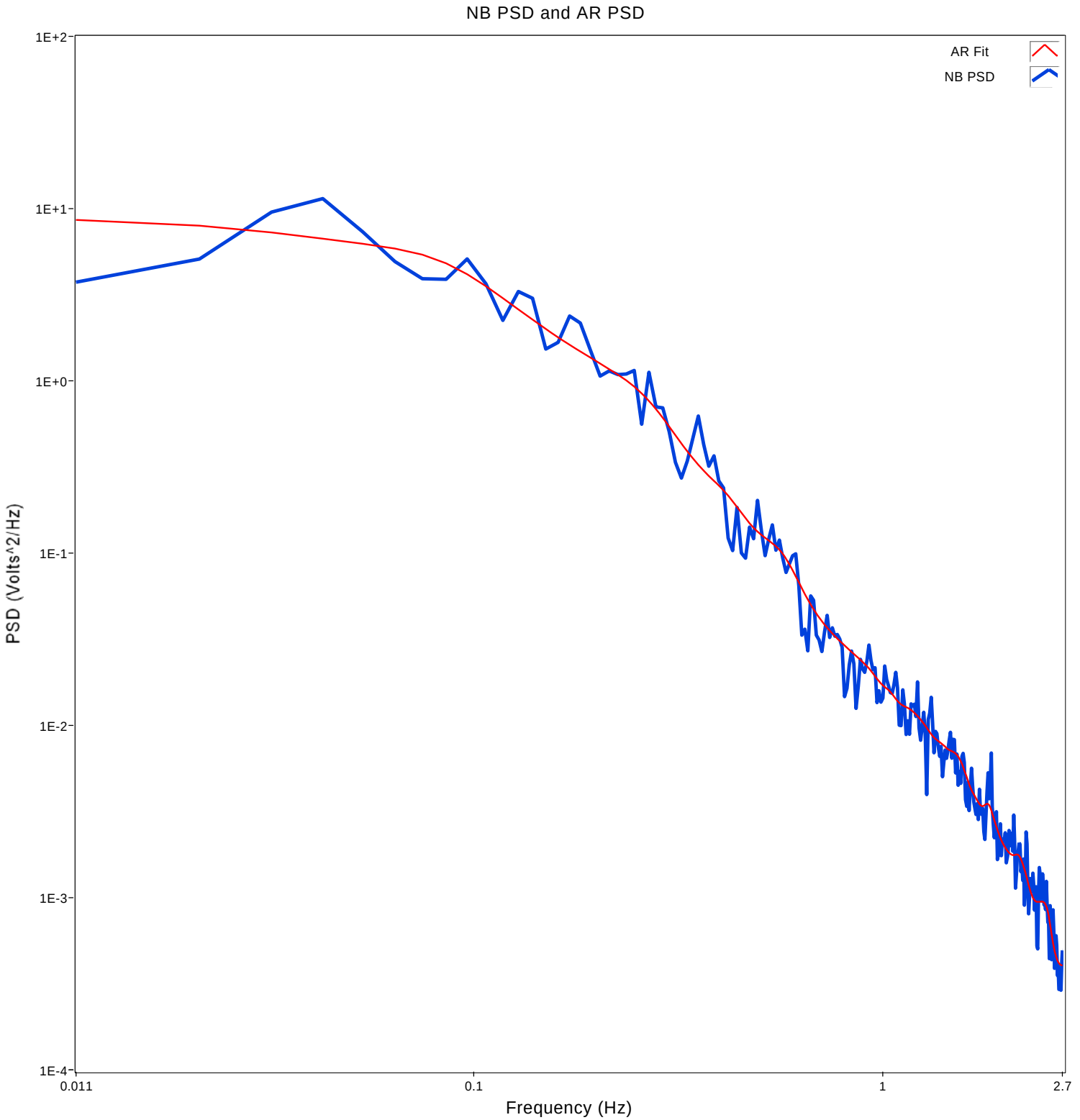
| Reactor and Unit | Tag Number | Service | Filename | Blocks : Blocksize | Trim Low Freq. (Hz) | Trim High Freq. (Hz) | AR Order | AR Method | Test Date |
|---|---|---|---|---|---|---|---|---|---|
| Farley Unit 2 | FT0477 | FW FLOW | FU2_2010-07_0003.psd | 11 : 512 | 0.010731 | 2.747169 | 17 | Least-Squares | 15-Jul-2010 13:36:44 |

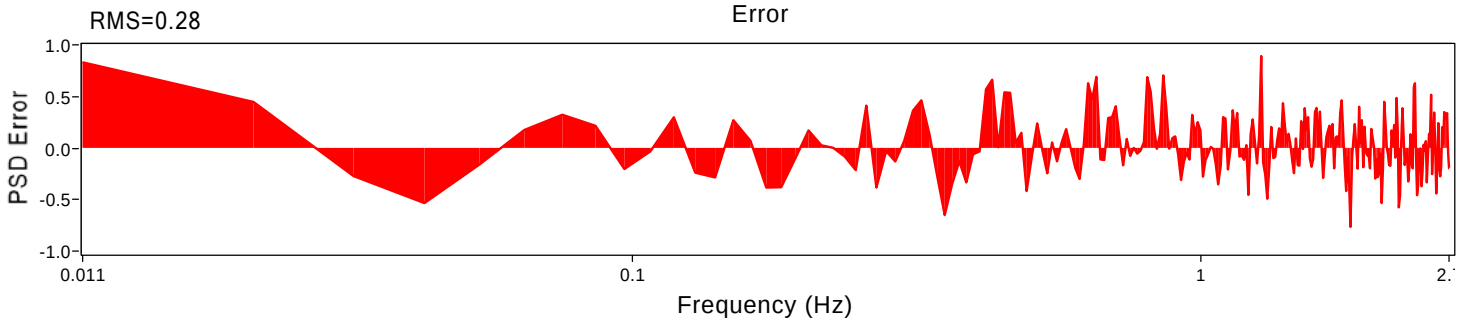


# OLM Autoregressive Fitting of Narrow Band PSD

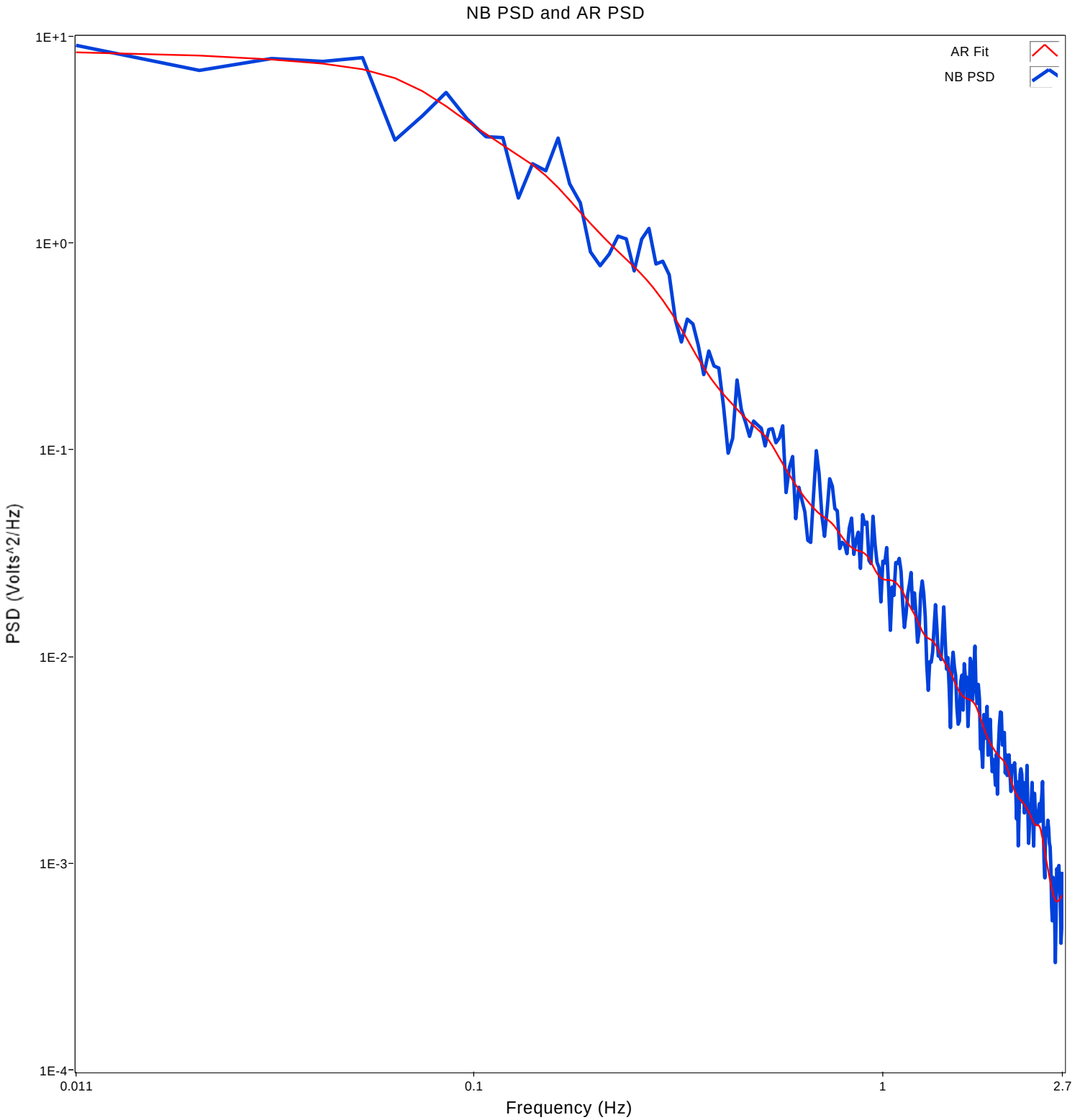
| Reactor and Unit | Tag Number | Service | Filename | Blocks : Blocksize | Trim Low Freq. (Hz) | Trim High Freq. (Hz) | AR Order | AR Method | Test Date |
|---|---|---|---|---|---|---|---|---|---|
| Farley Unit 2 | FT0487 | FW FLOW | FU2_2010-07_0003.psd | 11 : 512 | 0.010731 | 2.747169 | 21 | Least-Squares | 15-Jul-2010 13:36:44 |

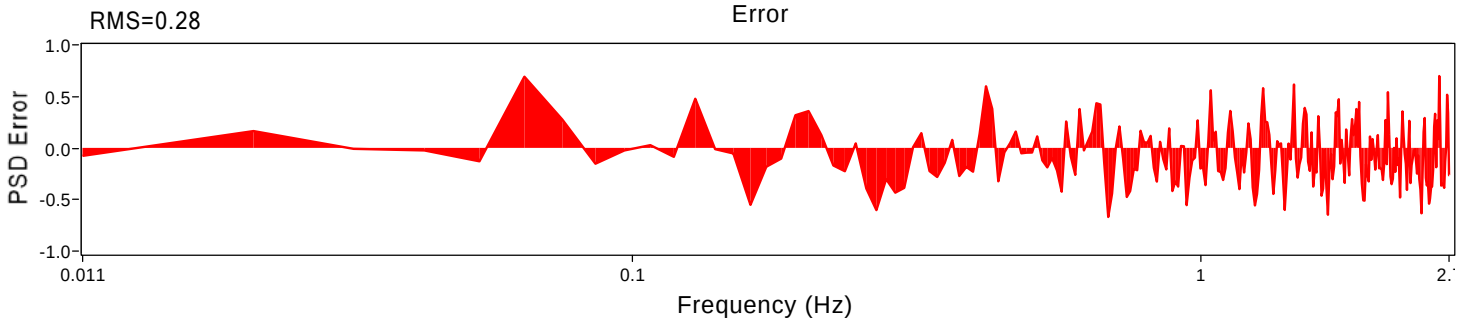


# OLM Autoregressive Fitting of Narrow Band PSD

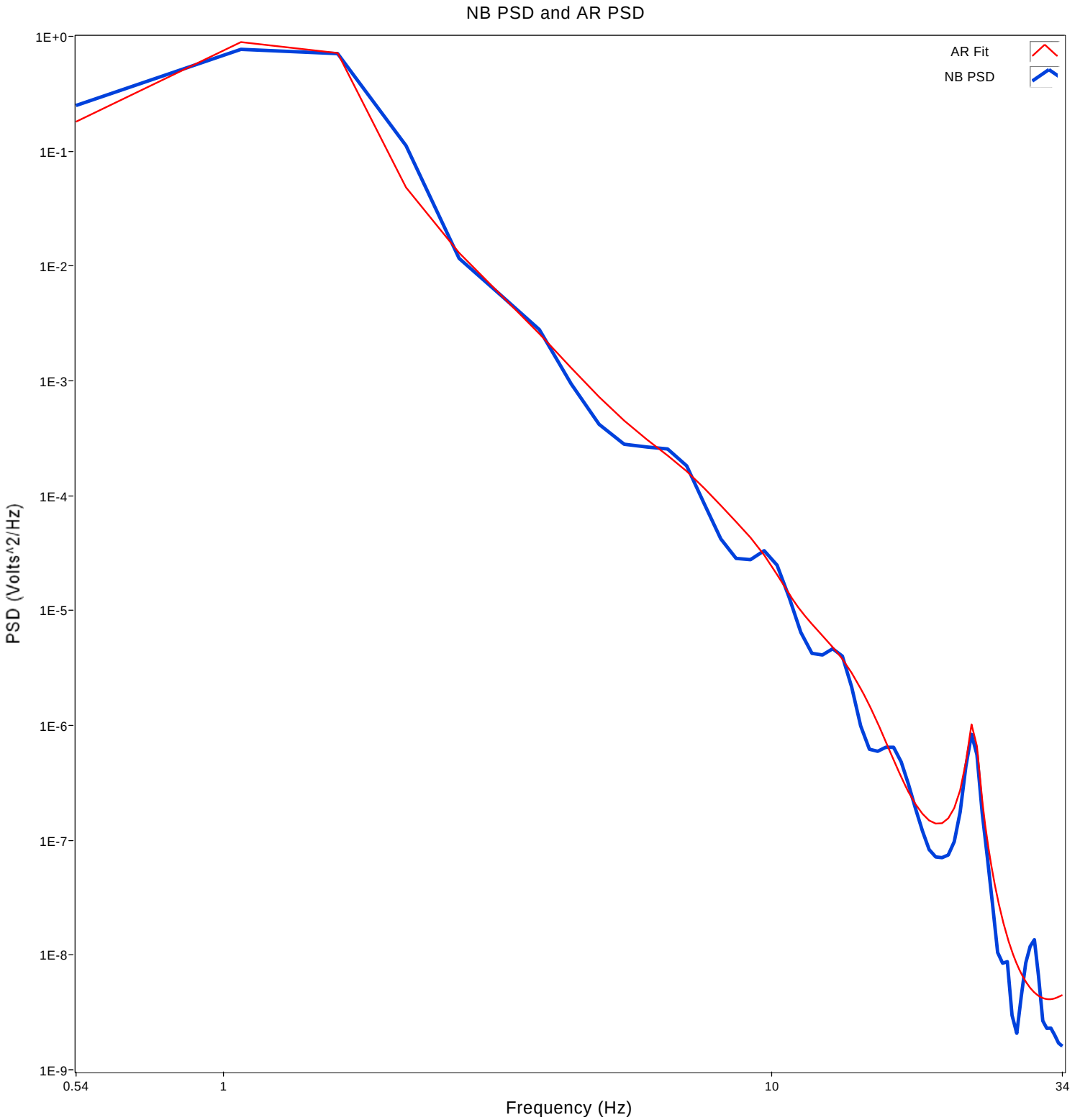
| Reactor and Unit | Tag Number | Service | Filename | Blocks : Blocksize | Trim Low Freq. (Hz) | Trim High Freq. (Hz) | AR Order | AR Method | Test Date |
|---|---|---|---|---|---|---|---|---|---|
| Farley Unit 2 | FT0497 | FW FLOW | FU2_2010-07_0003.psd | 11 : 512 | 0.010731 | 2.747169 | 21 | Least-Squares | 15-Jul-2010 13:36:44 |

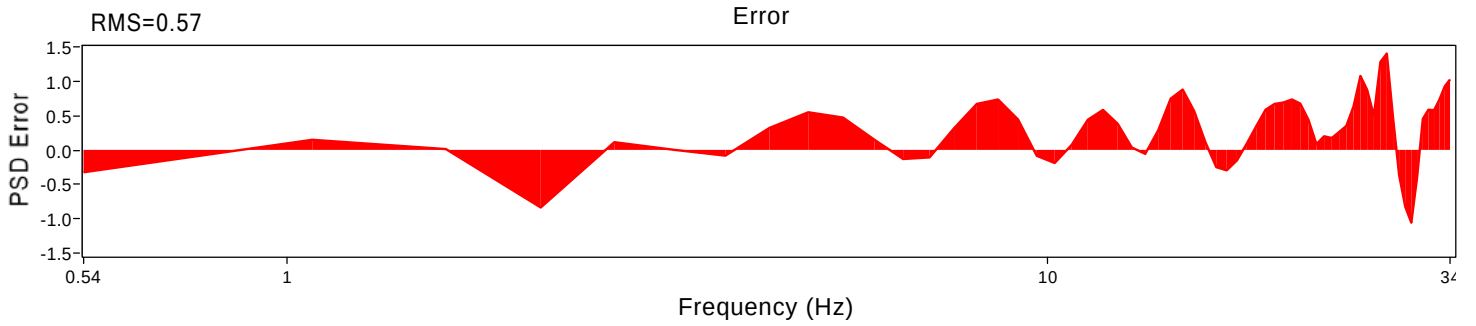


# OLM Autoregressive Fitting of Narrow Band PSD

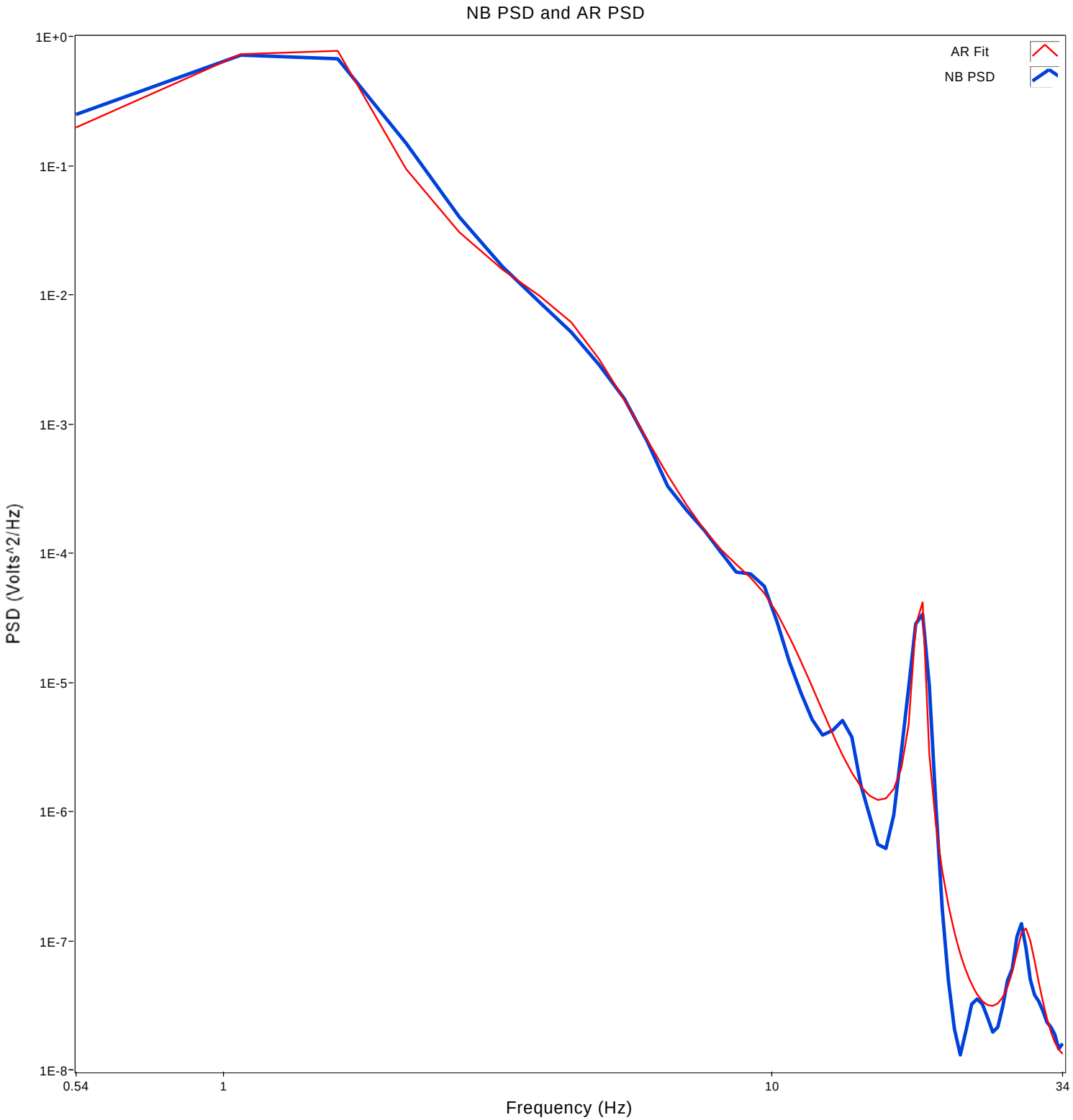
| Reactor and Unit | Tag Number | Service | Filename | Blocks : Blocksize | Trim Low Freq. (Hz) | Trim High Freq. (Hz) | AR Order | AR Method | Test Date |
|---|---|---|---|---|---|---|---|---|---|
| Farley Unit 2 | FT0475 | STM FLOW | FU2_2010-07_0004.psd | 564 : 512 | 0.538777 | 34.481708 | 11 | Forward-Backward | 15-Jul-2010 13:36:44 |

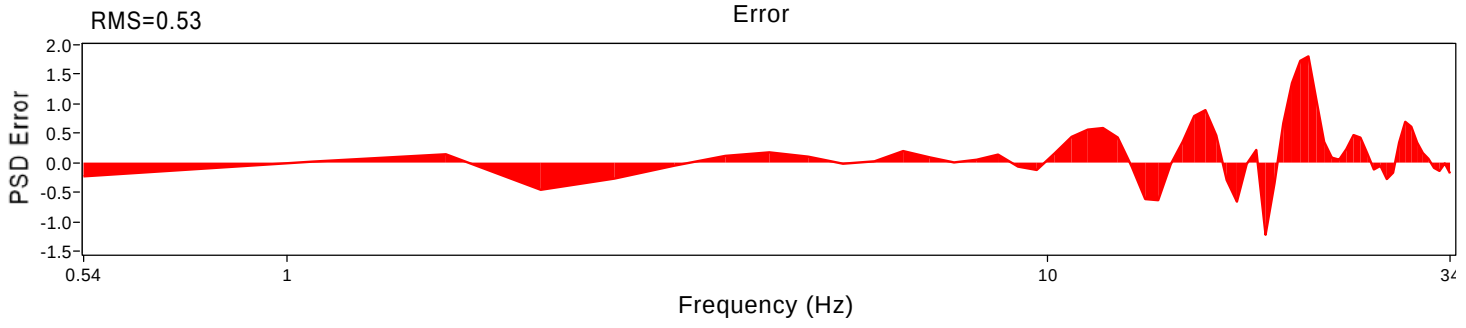


# OLM Autoregressive Fitting of Narrow Band PSD

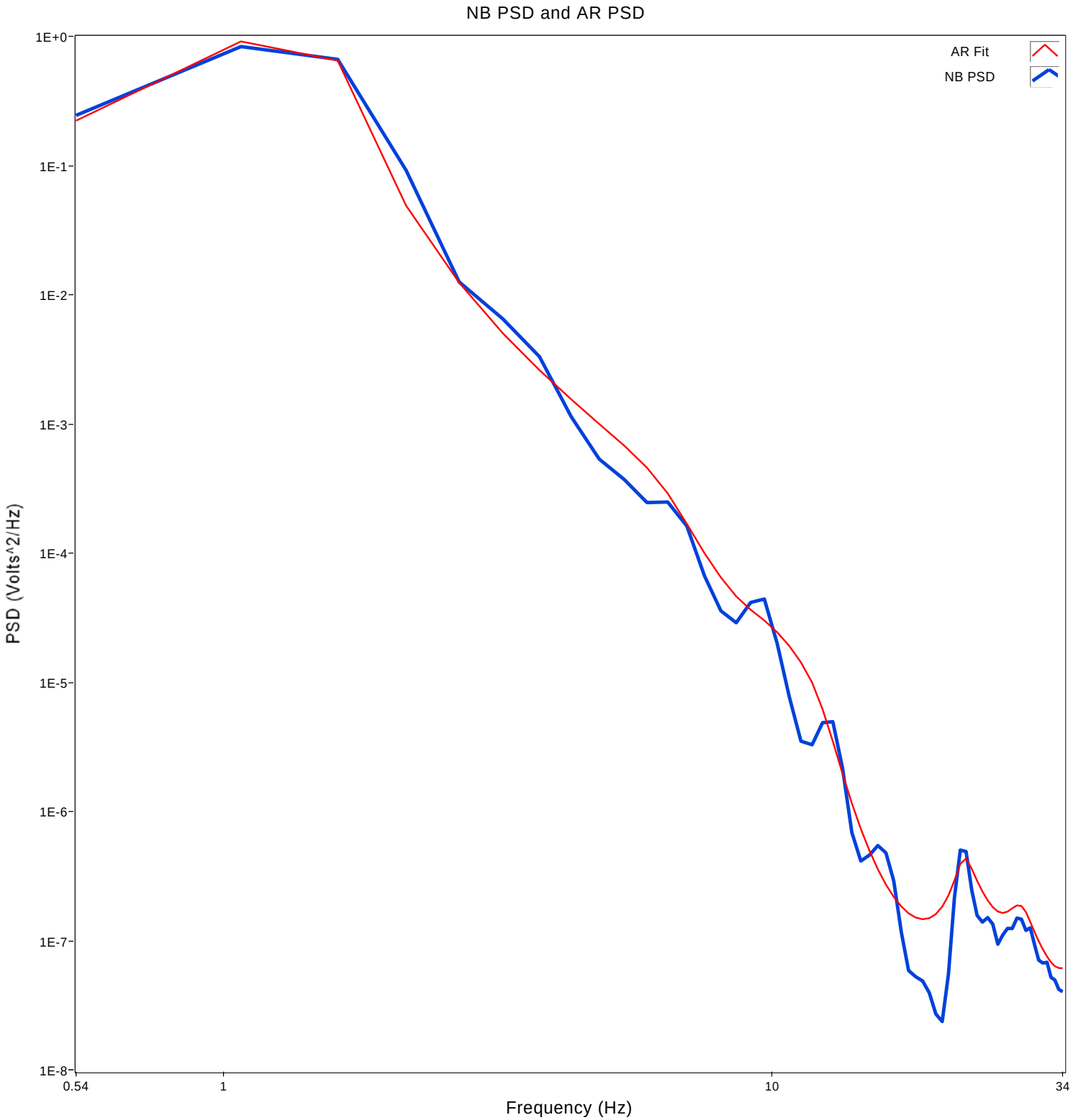
| Reactor and Unit | Tag Number | Service | Filename | Blocks : Blocksize | Trim Low Freq. (Hz) | Trim High Freq. (Hz) | AR Order | AR Method | Test Date |
|---|---|---|---|---|---|---|---|---|---|
| Farley Unit 2 | FT0485 | STM FLOW | FU2_2010-07_0004.psd | 564 : 512 | 0.538777 | 34.481708 | 11 | Forward-Backward | 15-Jul-2010 13:36:44 |

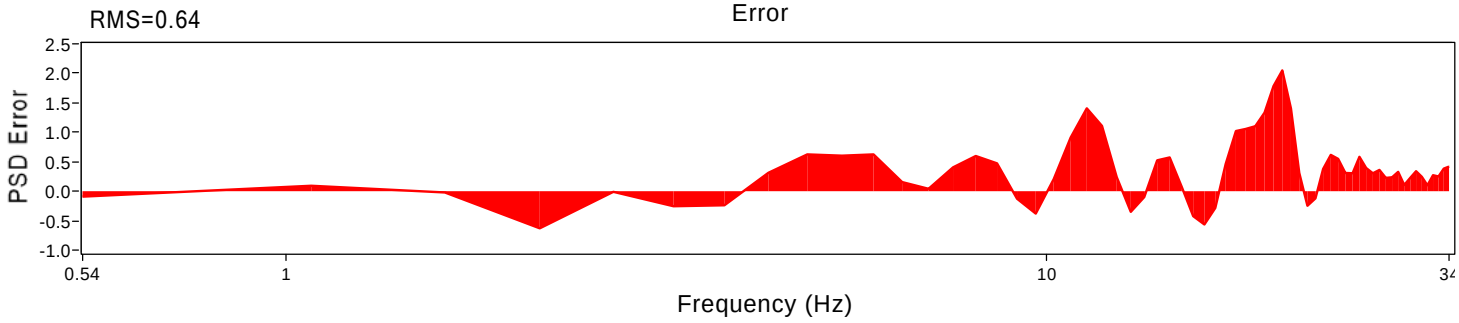


# OLM Autoregressive Fitting of Narrow Band PSD

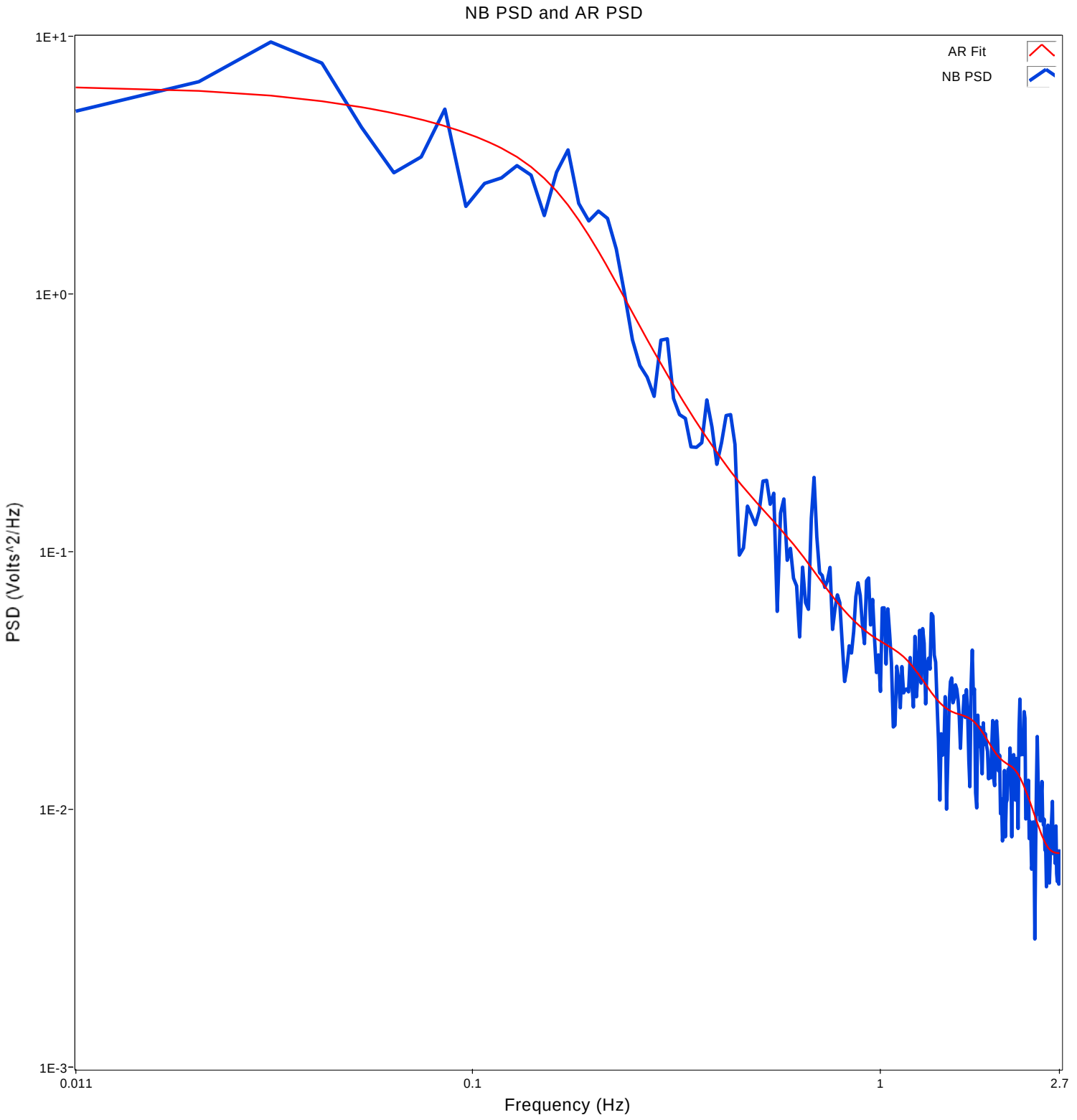
| Reactor and Unit | Tag Number | Service | Filename | Blocks : Blocksize | Trim Low Freq. (Hz) | Trim High Freq. (Hz) | AR Order | AR Method | Test Date |
|---|---|---|---|---|---|---|---|---|---|
| Farley Unit 2 | FT0495 | STM FLOW | FU2_2010-07_0004.psd | 564 : 512 | 0.538777 | 34.481708 | 11 | Forward-Backward | 15-Jul-2010 13:36:44 |

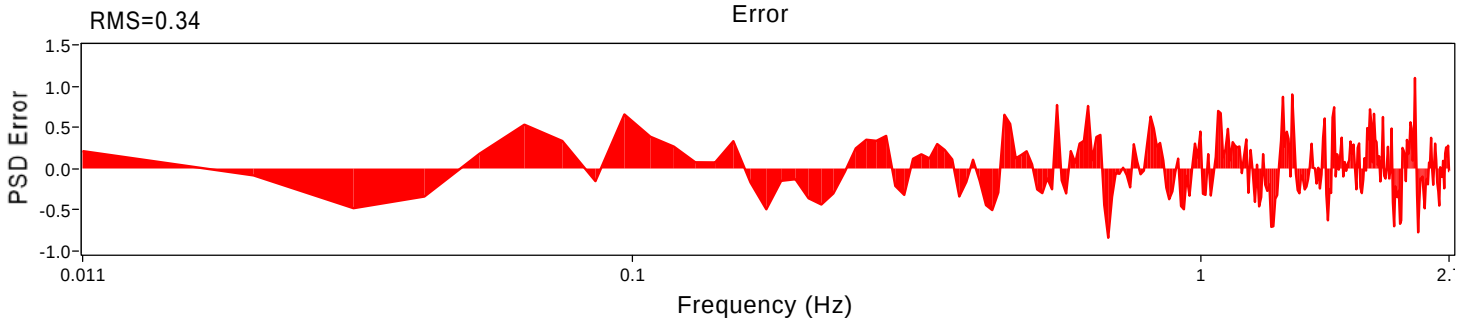


# OLM Autoregressive Fitting of Narrow Band PSD

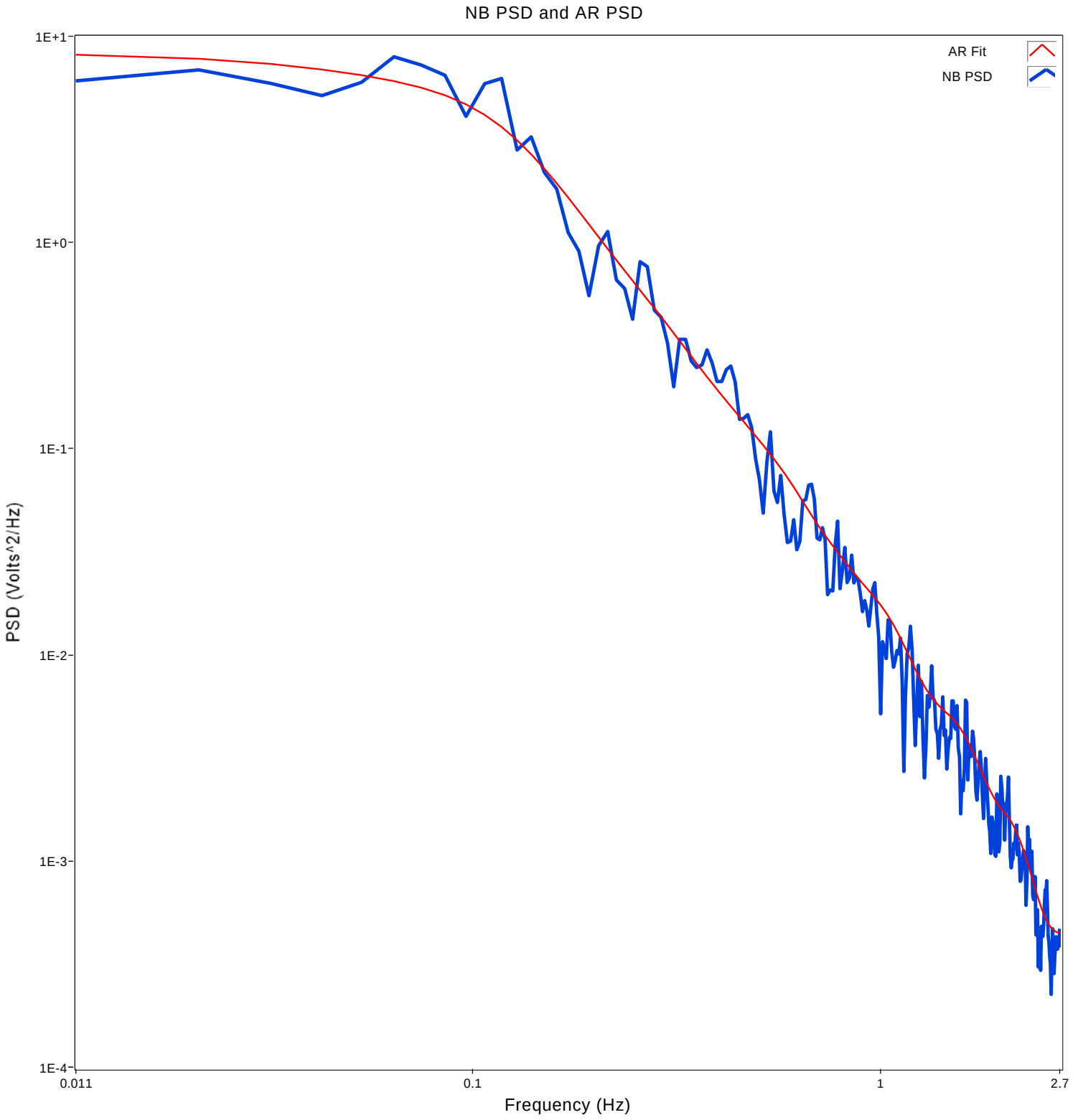
| Reactor and Unit | Tag Number | Service | Filename | Blocks : Blocksize | Trim Low Freq. (Hz) | Trim High Freq. (Hz) | AR Order | AR Method | Test Date |
|---|---|---|---|---|---|---|---|---|---|
| Farley Unit 2 | FT0476 | FW FLOW | FU2_2010-07_0004.psd | 11 : 512 | 0.010731 | 2.747169 | 11 | Forward-Backward | 15-Jul-2010 13:36:44 |

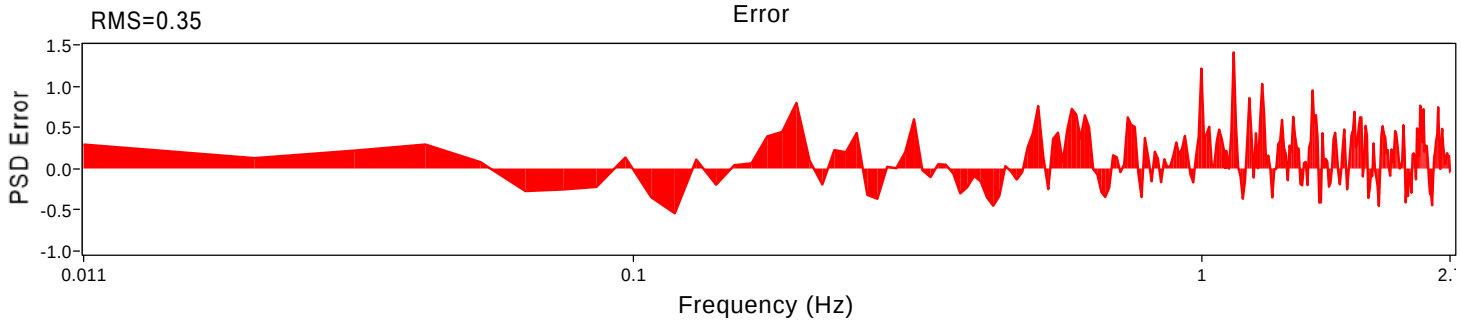


# OLM Autoregressive Fitting of Narrow Band PSD

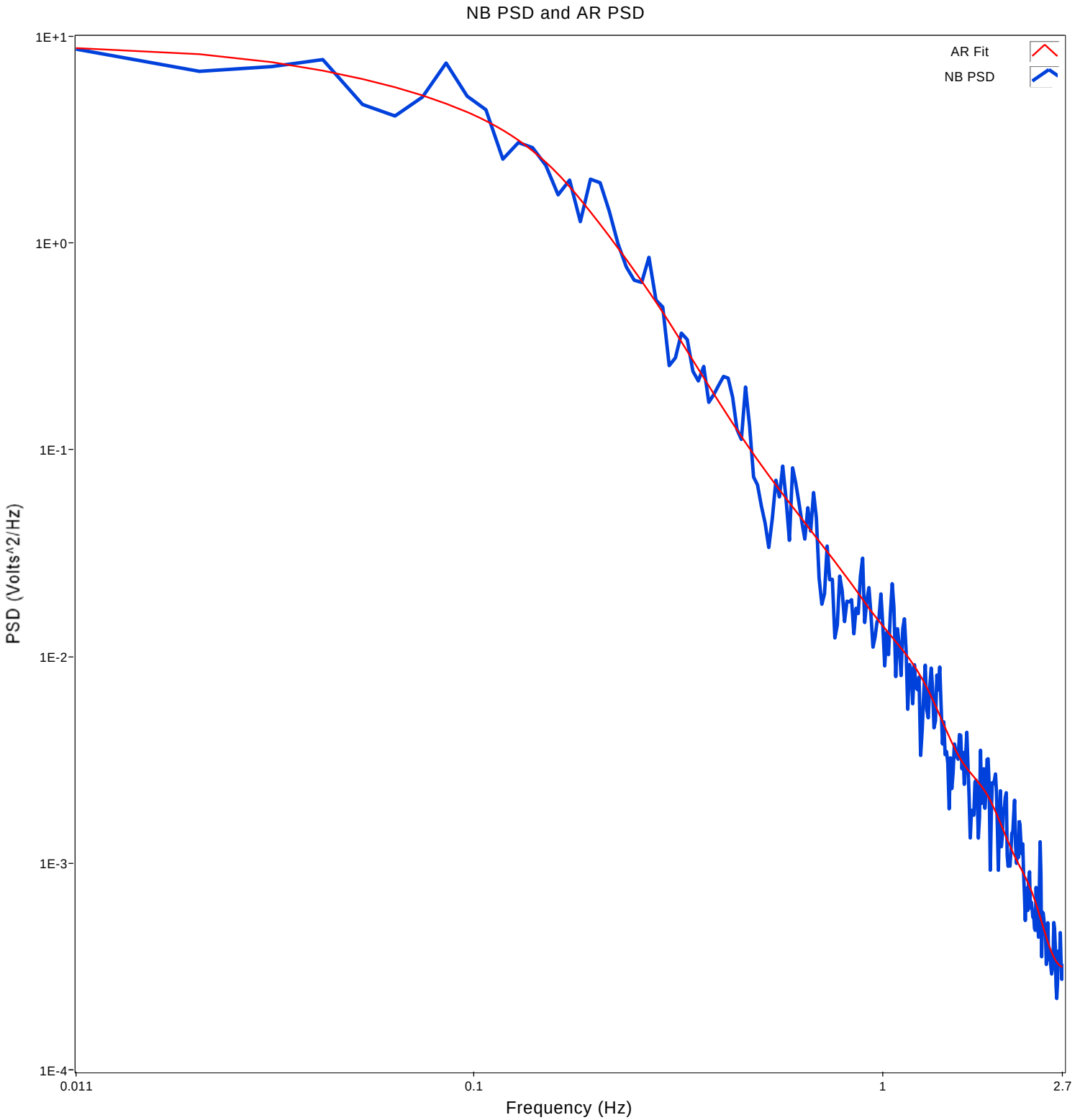
| Reactor and Unit | Tag Number | Service | Filename | Blocks : Blocksize | Trim Low Freq. (Hz) | Trim High Freq. (Hz) | AR Order | AR Method | Test Date |
|---|---|---|---|---|---|---|---|---|---|
| Farley Unit 2 | FT0486 | FW FLOW | FU2_2010-07_0004.psd | 11 : 512 | 0.010731 | 2.747169 | 11 | Forward-Backward | 15-Jul-2010 13:36:44 |

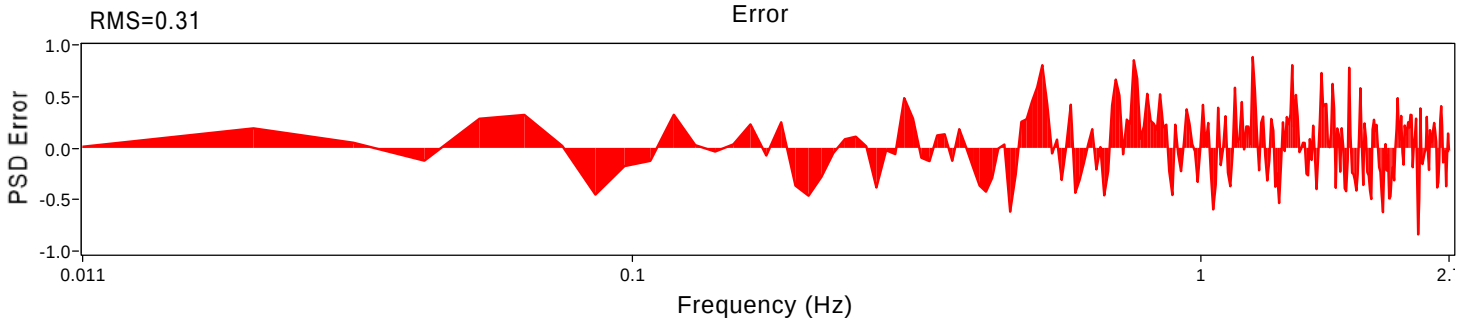


# OLM Autoregressive Fitting of Narrow Band PSD

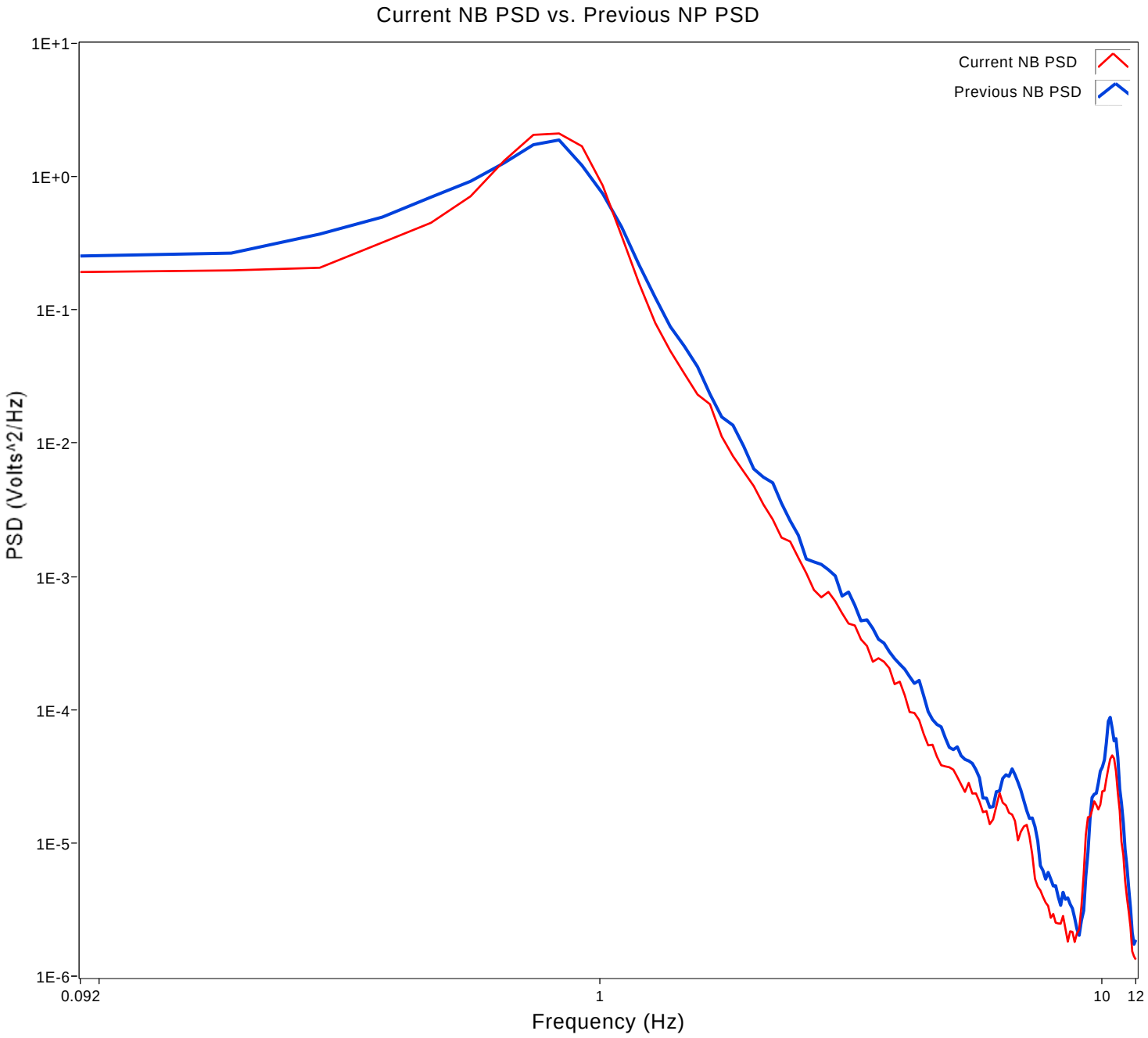
| Reactor and Unit | Tag Number | Service | Filename | Blocks : Blocksize | Trim Low Freq. (Hz) | Trim High Freq. (Hz) | AR Order | AR Method | Test Date |
|---|---|---|---|---|---|---|---|---|---|
| Farley Unit 2 | FT0496 | FW FLOW | FU2_2010-07_0004.psd | 11 : 512 | 0.010731 | 2.747169 | 11 | Forward-Backward | 15-Jul-2010 13:36:44 |

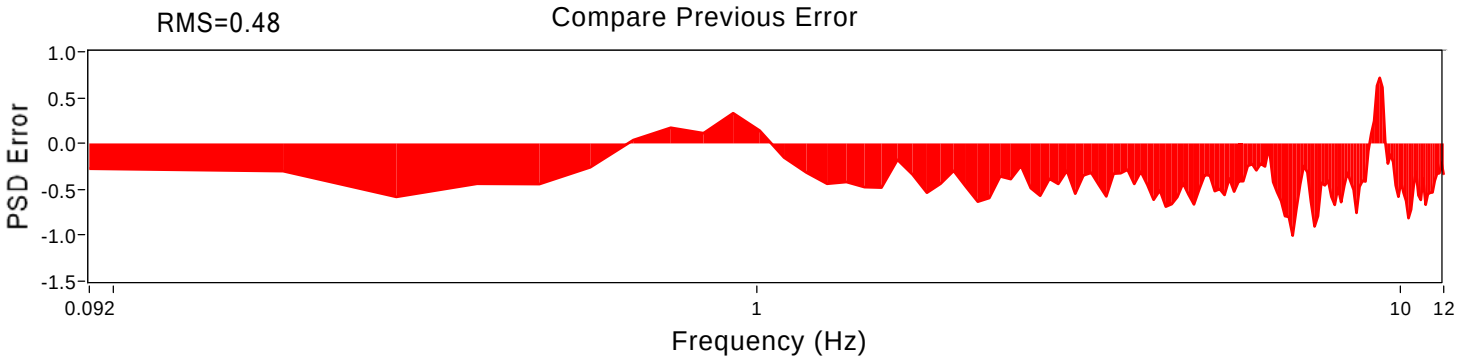


# OLM DYNAMIC ANALYSIS RESULTS COMPARE

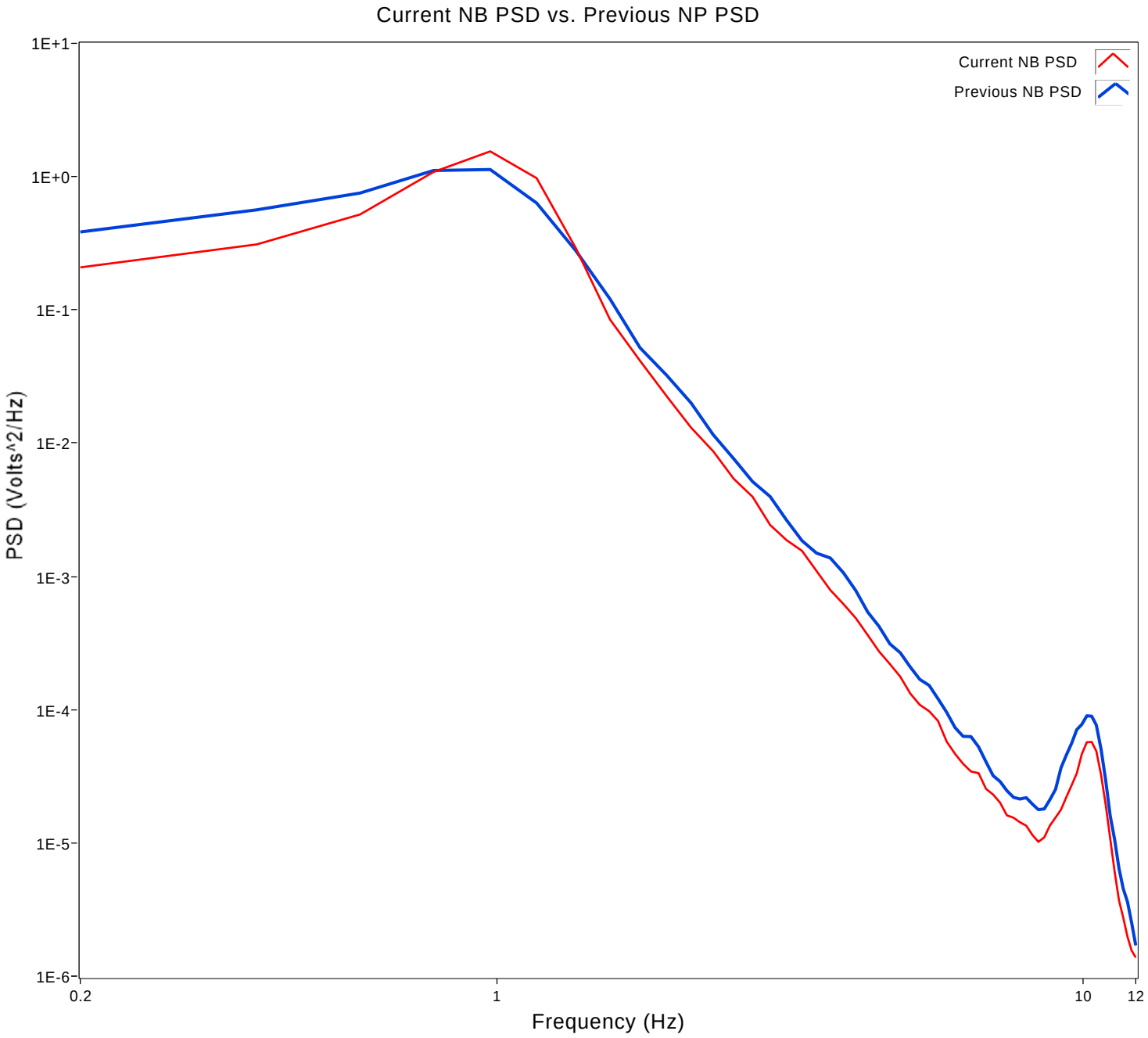
| Reactor and Unit | Tag Number | Service | Filename | Blocks : Blocksize | Trim Low Freq. (Hz) | Trim High Freq. (Hz) | AR Order | AR Method | Test Date |
|---|---|---|---|---|---|---|---|---|---|
| Farley Unit 2 | LT0474 | SG LVL | FU2_2010-07_0001.psd | 96 : 512 | 0.091909 | 11.764348 | 11 | Forward-Backward | 15-Jul-2010 13:36:44 |

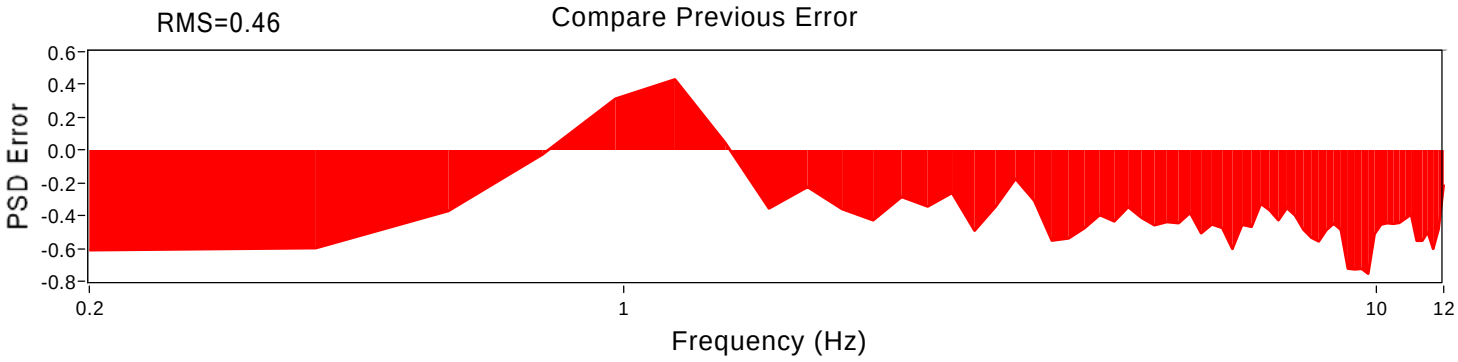


# OLM DYNAMIC ANALYSIS RESULTS COMPARE

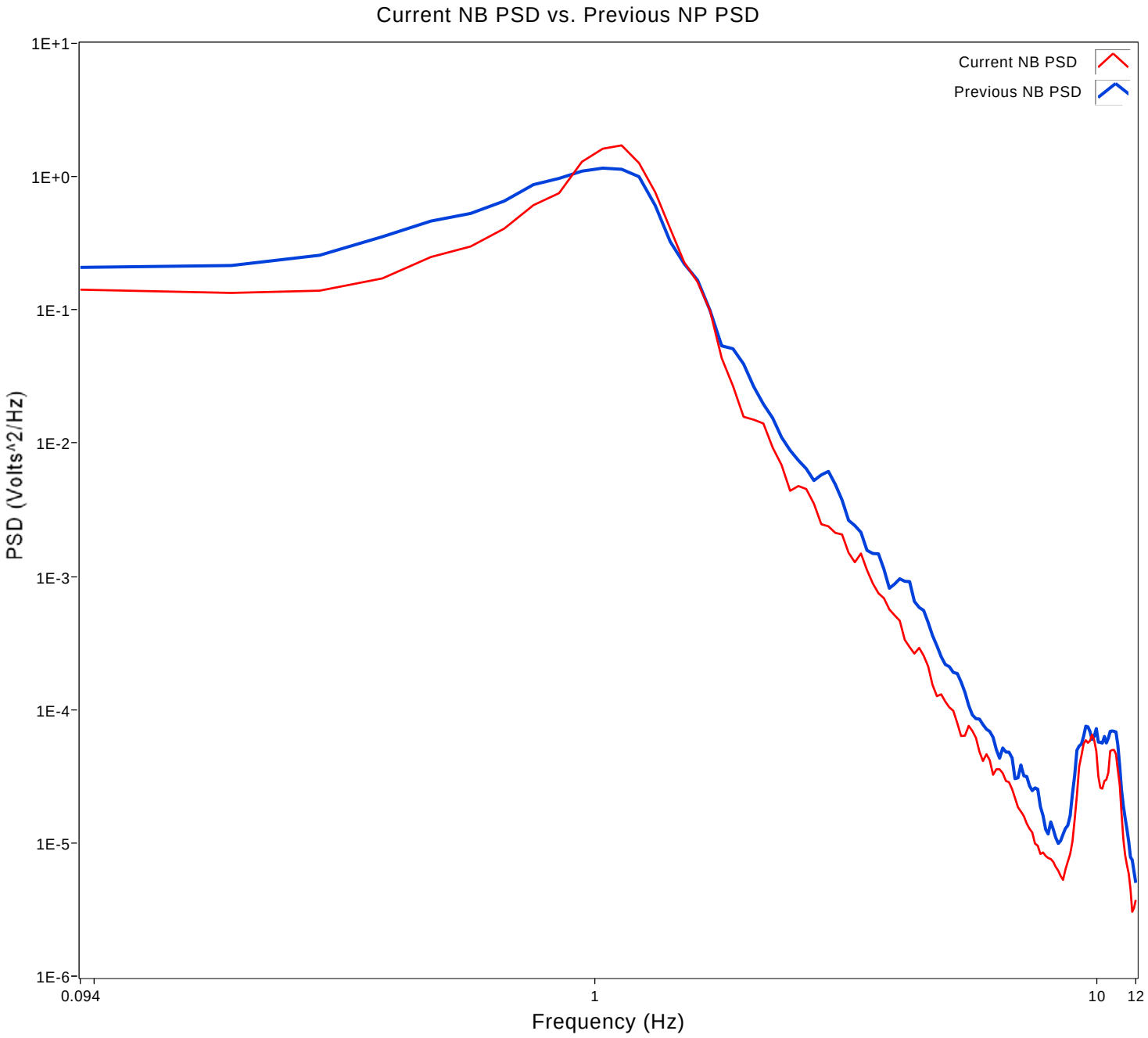
| Reactor and Unit | Tag Number | Service | Filename | Blocks : Blocksize | Trim Low Freq. (Hz) | Trim High Freq. (Hz) | AR Order | AR Method | Test Date |
|---|---|---|---|---|---|---|---|---|---|
| Farley Unit 2 | LT0484 | SG LVL | FU2_2010-07_0001.psd | 204 : 512 | 0.195307 | 12.499619 | 11 | Forward-Backward | 15-Jul-2010 13:36:44 |

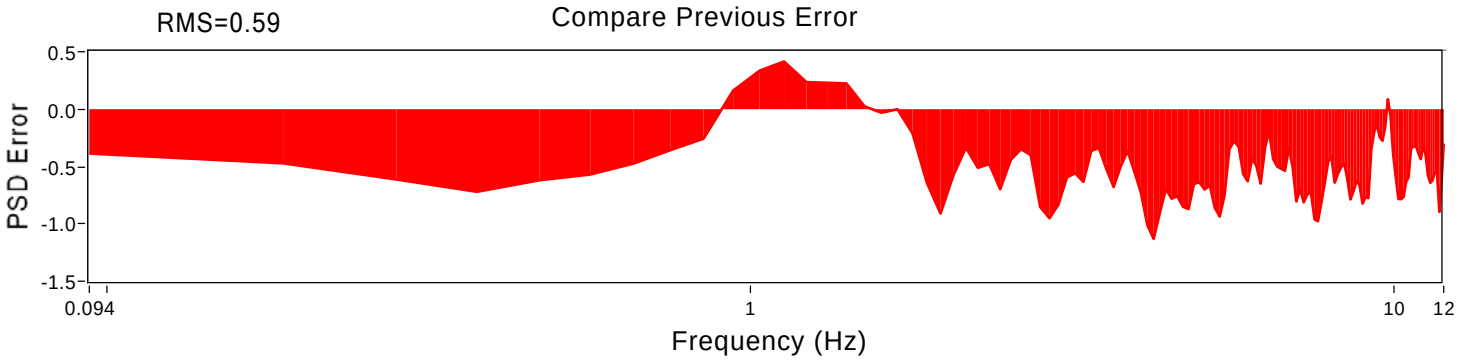


# OLM DYNAMIC ANALYSIS RESULTS COMPARE

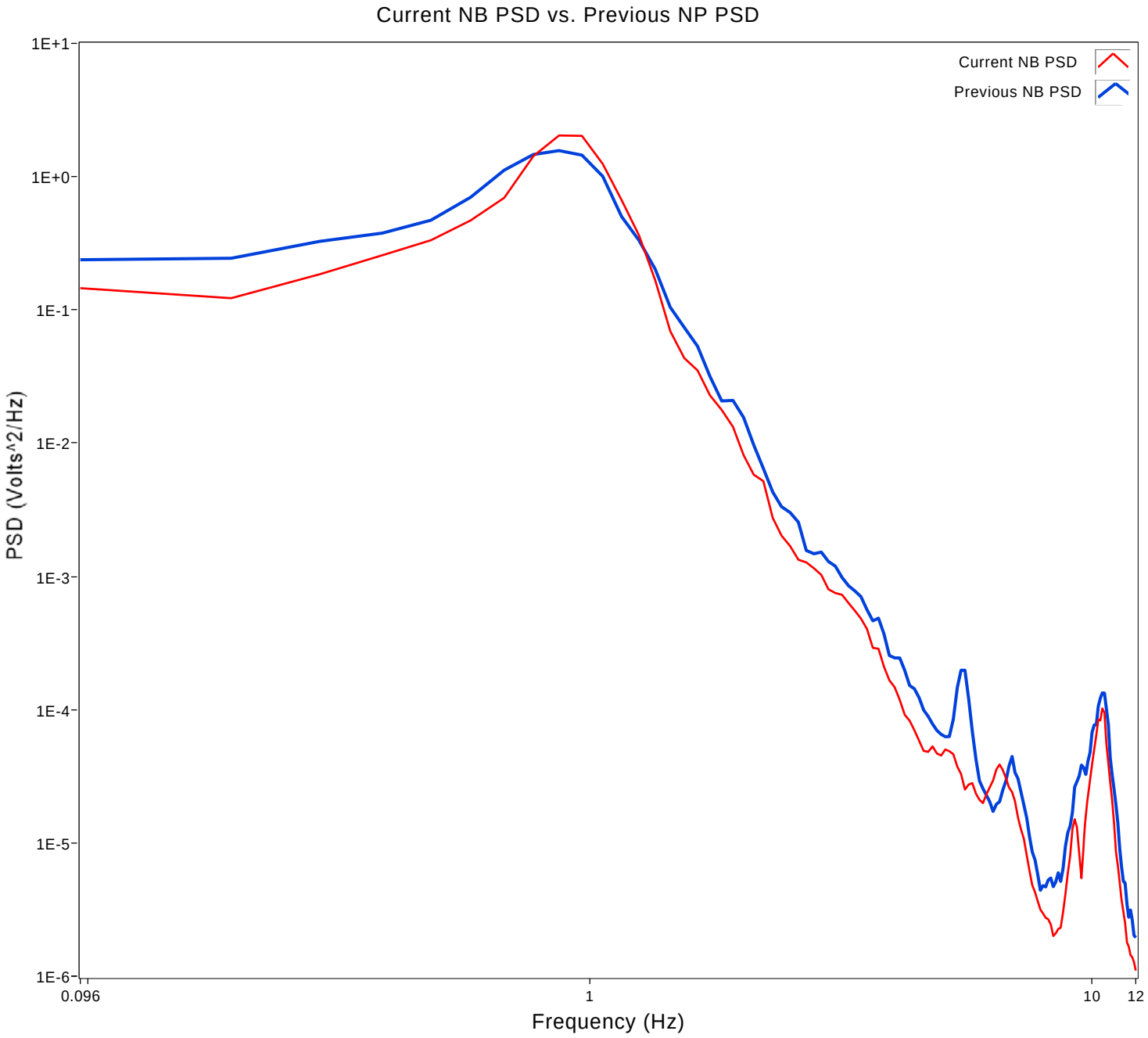
| Reactor and Unit | Tag Number | Service | Filename | Blocks : Blocksize | Trim Low Freq. (Hz) | Trim High Freq. (Hz) | AR Order | AR Method | Test Date |
|---|---|---|---|---|---|---|---|---|---|
| Farley Unit 2 | LT0494 | SG LVL | FU2_2010-07_0001.psd | 98 : 512 | 0.094124 | 12.047826 | 11 | Forward-Backward | 15-Jul-2010 13:36:44 |

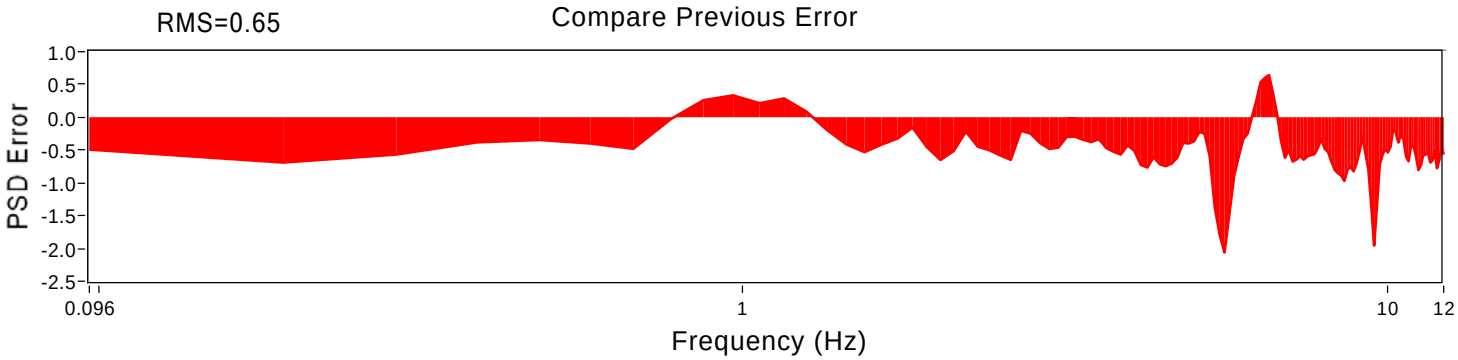


# OLM DYNAMIC ANALYSIS RESULTS COMPARE

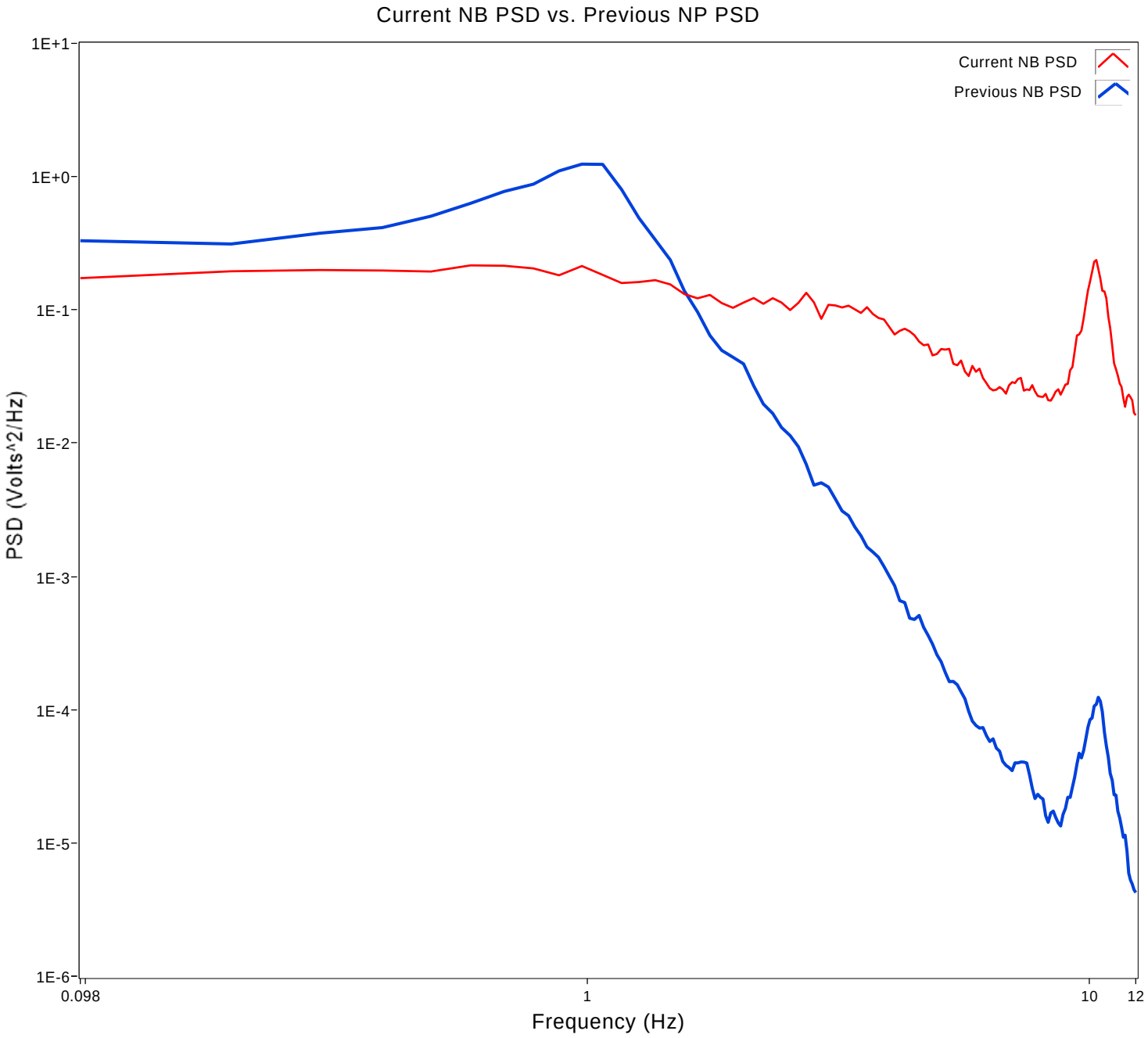
| Reactor and Unit | Tag Number | Service | Filename | Blocks : Blocksize | Trim Low Freq. (Hz) | Trim High Freq. (Hz) | AR Order | AR Method | Test Date |
|---|---|---|---|---|---|---|---|---|---|
| Farley Unit 2 | LT0475 | SG LVL | FU2_2010-07_0002.psd | 101 : 512 | 0.096448 | 12.345303 | 18 | Least-Squares | 15-Jul-2010 13:36:44 |

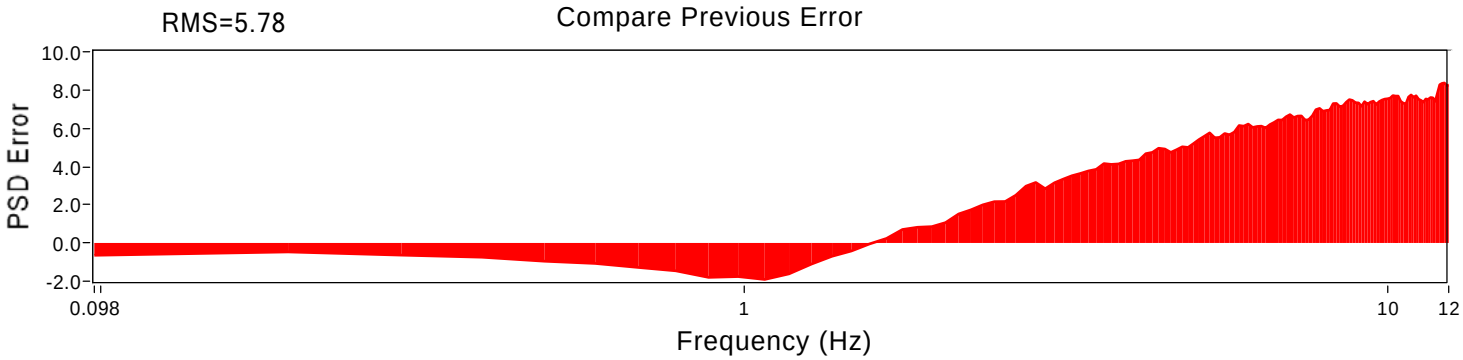


# OLM DYNAMIC ANALYSIS RESULTS COMPARE

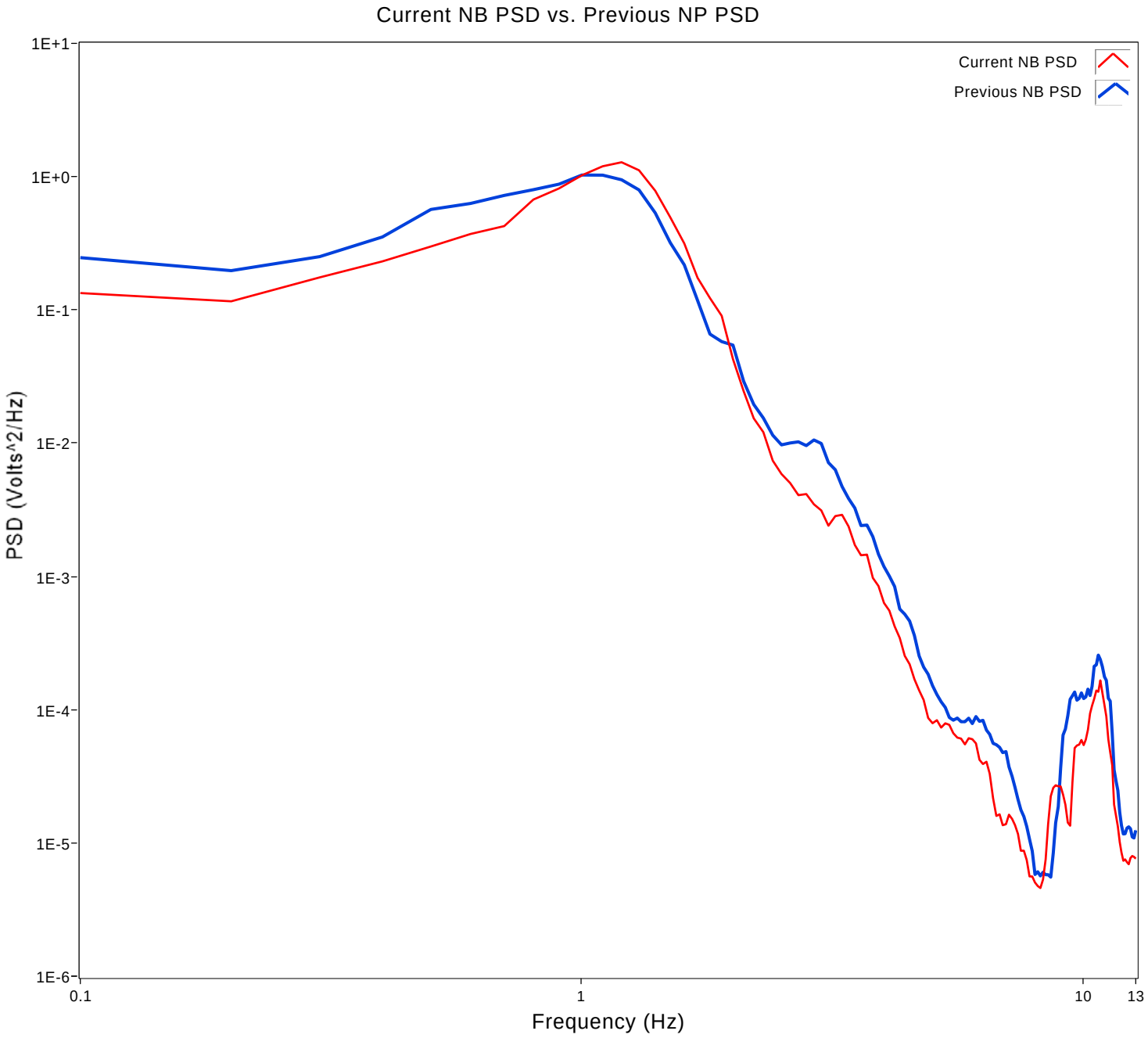
| Reactor and Unit | Tag Number | Service | Filename | Blocks : Blocksize | Trim Low Freq. (Hz) | Trim High Freq. (Hz) | AR Order | AR Method | Test Date |
|---|---|---|---|---|---|---|---|---|---|
| Farley Unit 2 | LT0485 | SG LVL | FU2_2010-07_0002.psd | 102 : 512 | 0.097653 | 12.499619 | 18 | Least-Squares | 15-Jul-2010 13:36:44 |

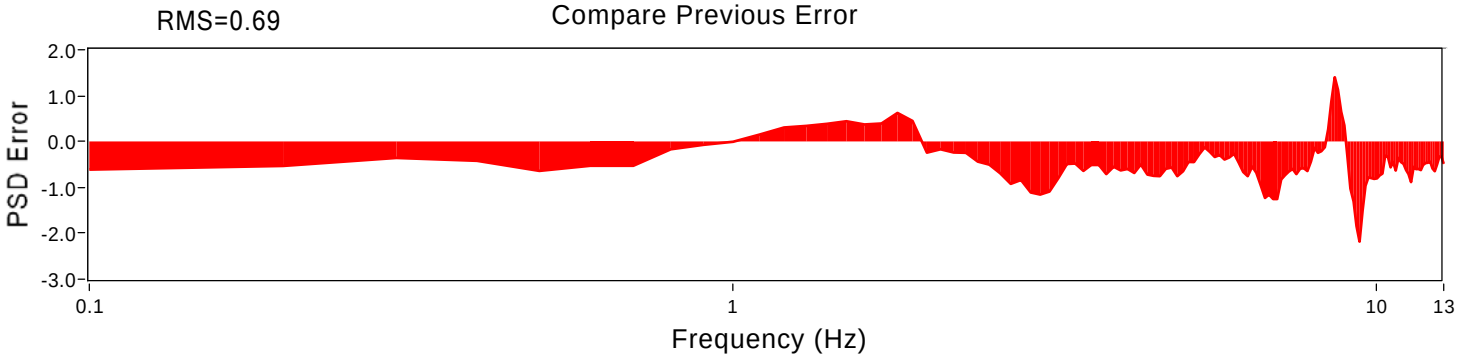


# OLM DYNAMIC ANALYSIS RESULTS COMPARE

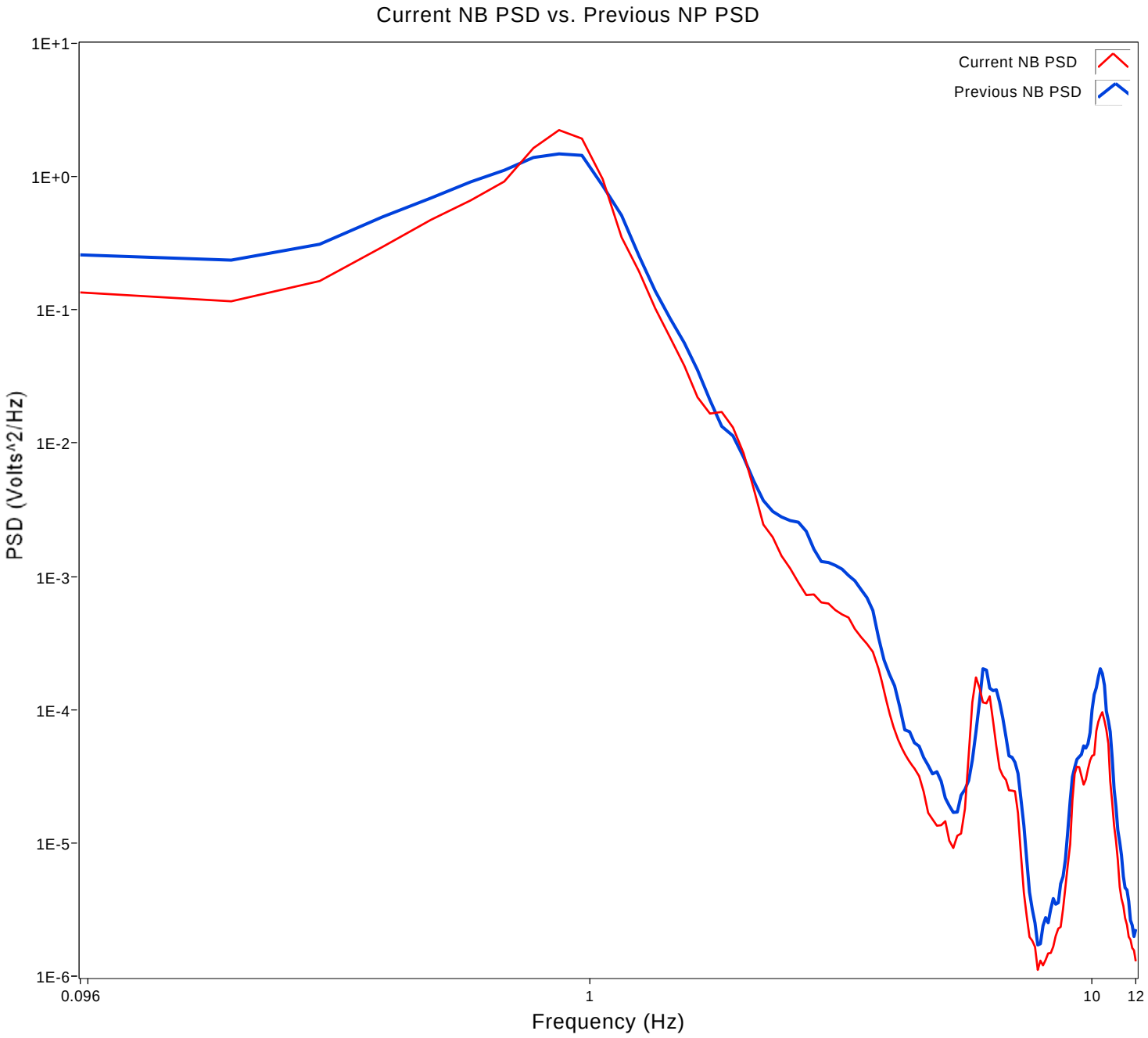
| Reactor and Unit | Tag Number | Service | Filename | Blocks : Blocksize | Trim Low Freq. (Hz) | Trim High Freq. (Hz) | AR Order | AR Method | Test Date |
|---|---|---|---|---|---|---|---|---|---|
| Farley Unit 2 | LT0495 | SG LVL | FU2_2010-07_0002.psd | 104 : 512 | 0.100157 | 12.820122 | 18 | Least-Squares | 15-Jul-2010 13:36:44 |

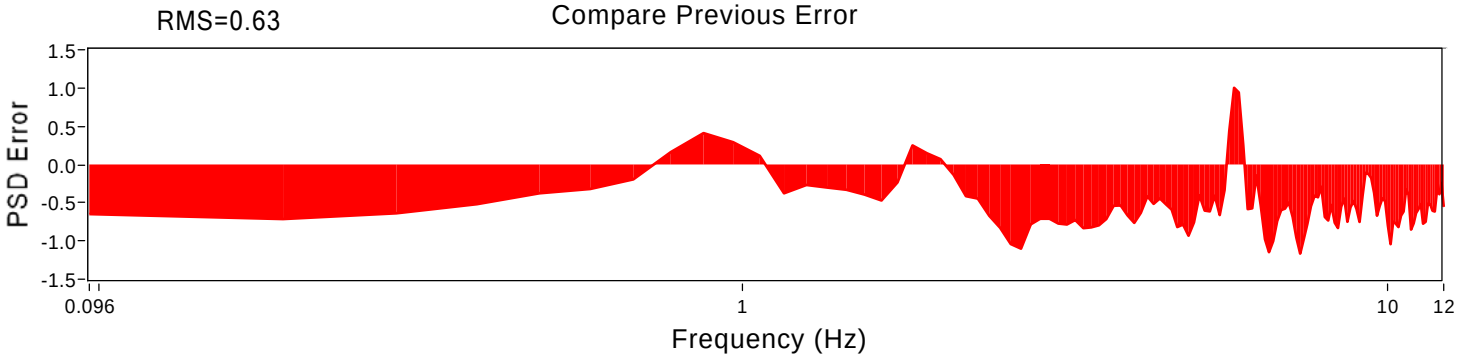


# OLM DYNAMIC ANALYSIS RESULTS COMPARE

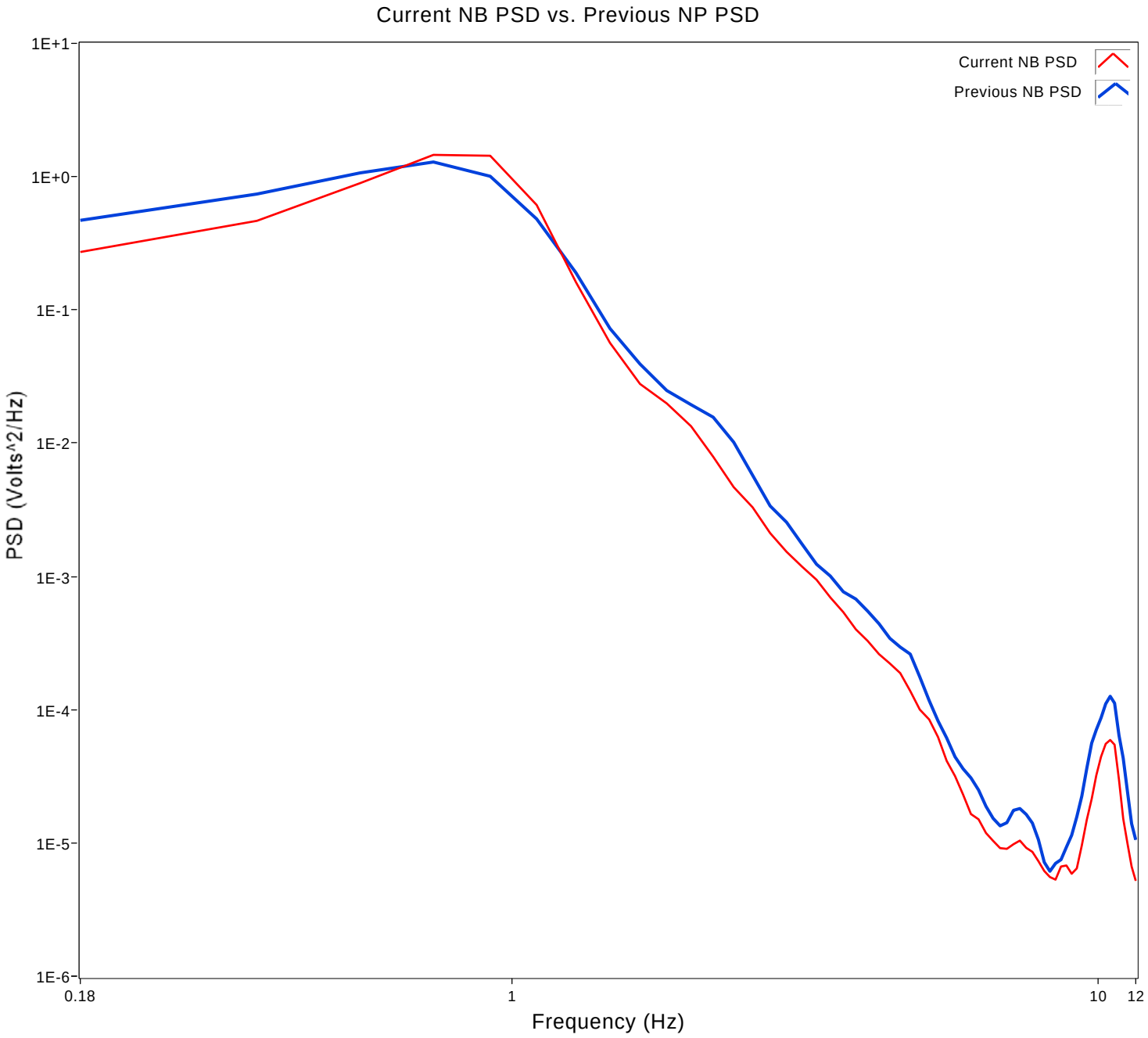
| Reactor and Unit | Tag Number | Service | Filename | Blocks : Blocksize | Trim Low Freq. (Hz) | Trim High Freq. (Hz) | AR Order | AR Method | Test Date |
|---|---|---|---|---|---|---|---|---|---|
| Farley Unit 2 | LT0476 | SG LVL | FU2_2010-07_0003.psd | 101 : 512 | 0.096448 | 12.345303 | 11 | Least-Squares | 15-Jul-2010 13:36:44 |

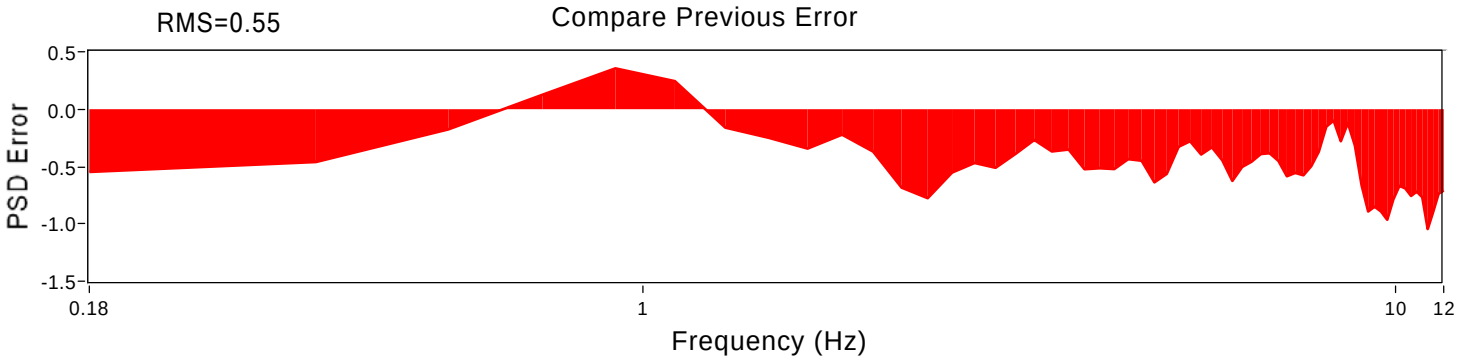


# OLM DYNAMIC ANALYSIS RESULTS COMPARE

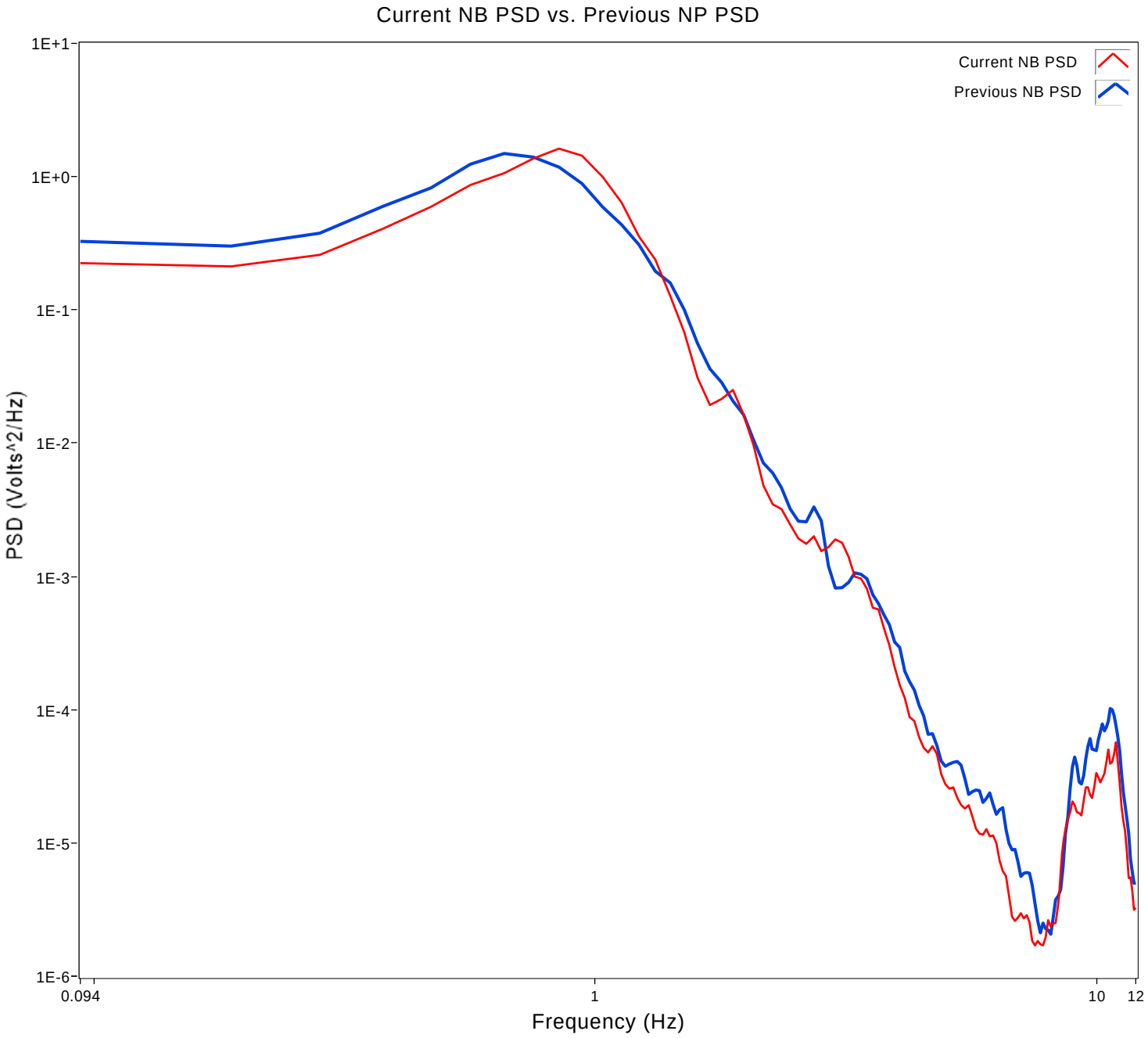
| Reactor and Unit | Tag Number | Service | Filename | Blocks : Blocksize | Trim Low Freq. (Hz) | Trim High Freq. (Hz) | AR Order | AR Method | Test Date |
|---|---|---|---|---|---|---|---|---|---|
| Farley Unit 2 | LT0486 | SG LVL | FU2_2010-07_0003.psd | 192 : 512 | 0.183818 | 11.764348 | 20 | Least-Squares | 15-Jul-2010 13:36:44 |

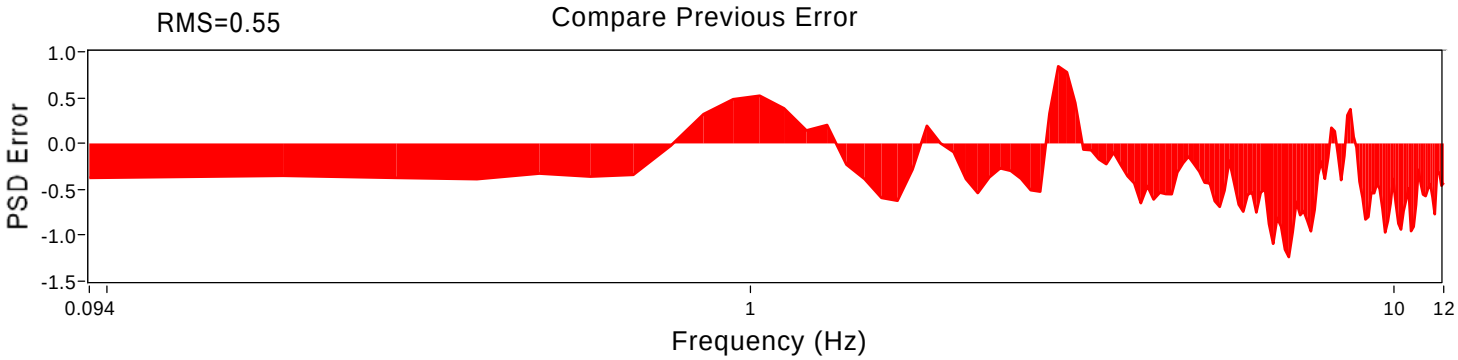


# OLM DYNAMIC ANALYSIS RESULTS COMPARE

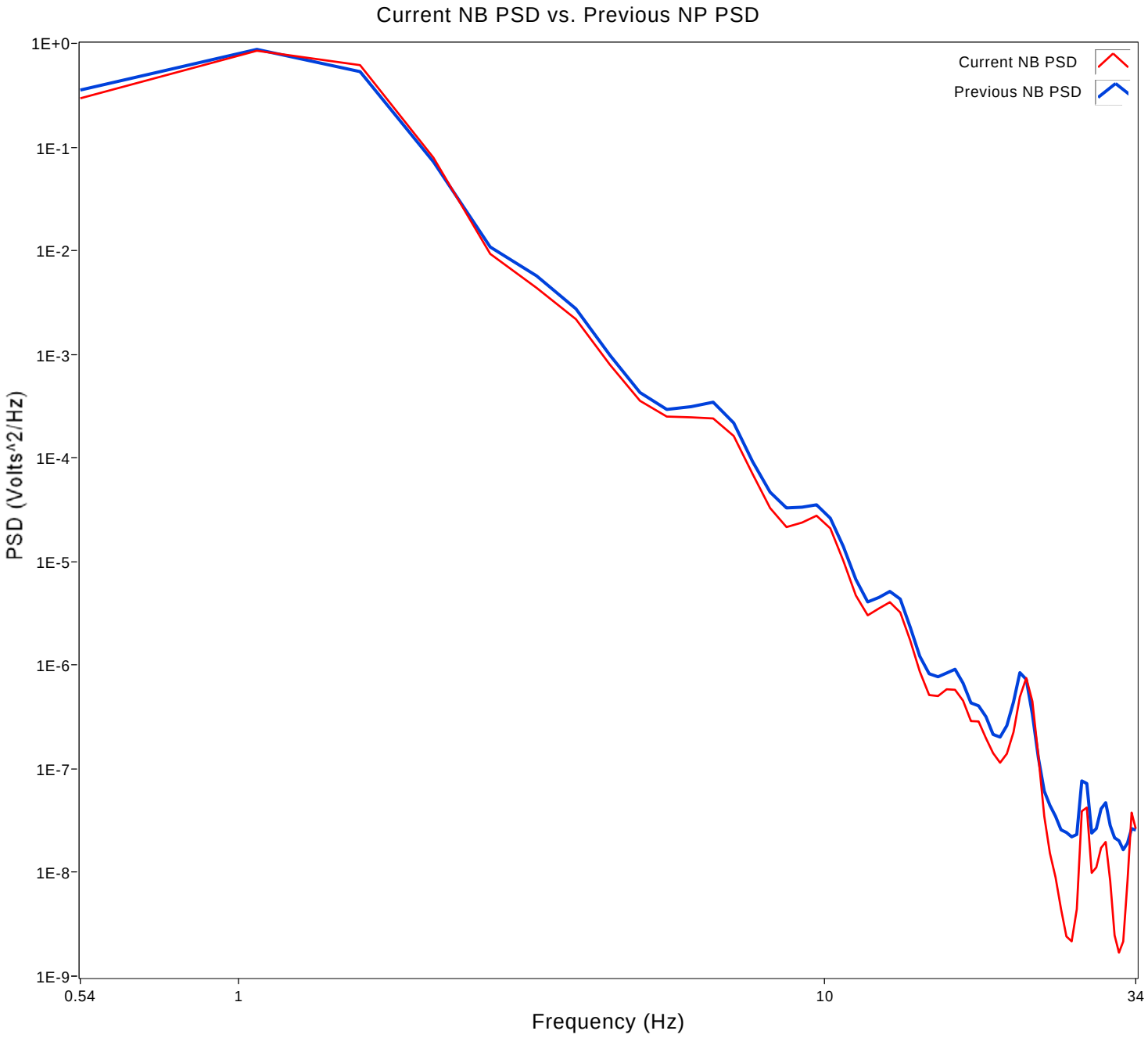
| Reactor and Unit | Tag Number | Service | Filename | Blocks : Blocksize | Trim Low Freq. (Hz) | Trim High Freq. (Hz) | AR Order | AR Method | Test Date |
|---|---|---|---|---|---|---|---|---|---|
| Farley Unit 2 | LT0496 | SG LVL | FU2_2010-07_0003.psd | 98 : 512 | 0.094124 | 12.047826 | 20 | Least-Squares | 15-Jul-2010 13:36:44 |

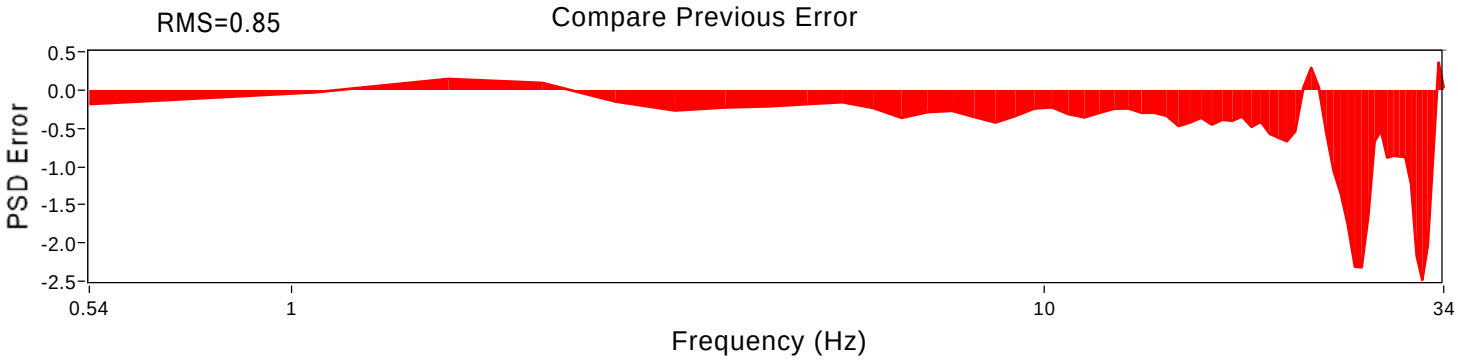


# OLM DYNAMIC ANALYSIS RESULTS COMPARE

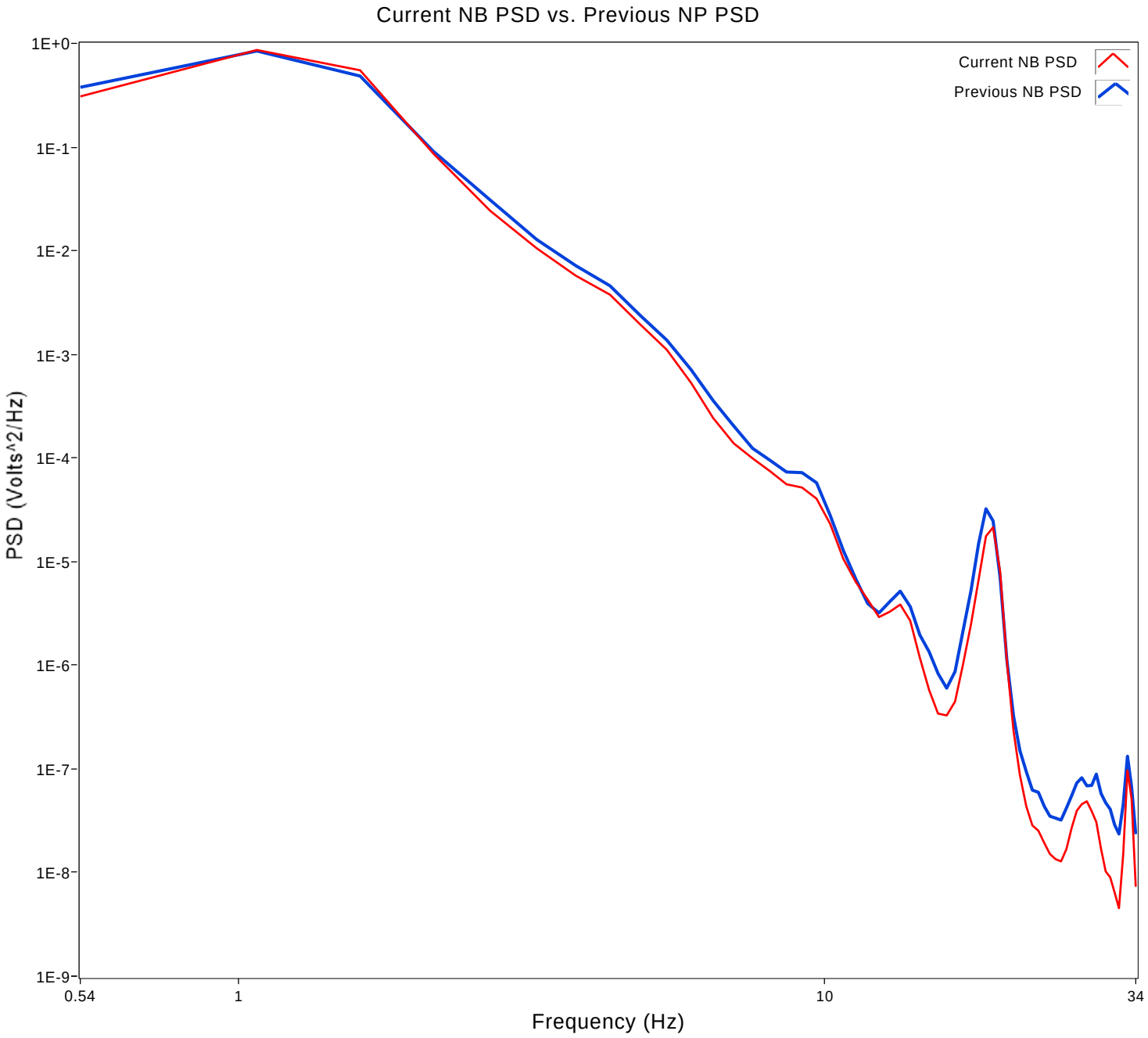
| Reactor and Unit | Tag Number | Service | Filename | Blocks : Blocksize | Trim Low Freq. (Hz) | Trim High Freq. (Hz) | AR Order | AR Method | Test Date |
|---|---|---|---|---|---|---|---|---|---|
| Farley Unit 2 | FT0474 | STM FLOW | FU2_2010-07_0003.psd | 564 : 512 | 0.538777 | 34.481708 | 20 | Least-Squares | 15-Jul-2010 13:36:44 |

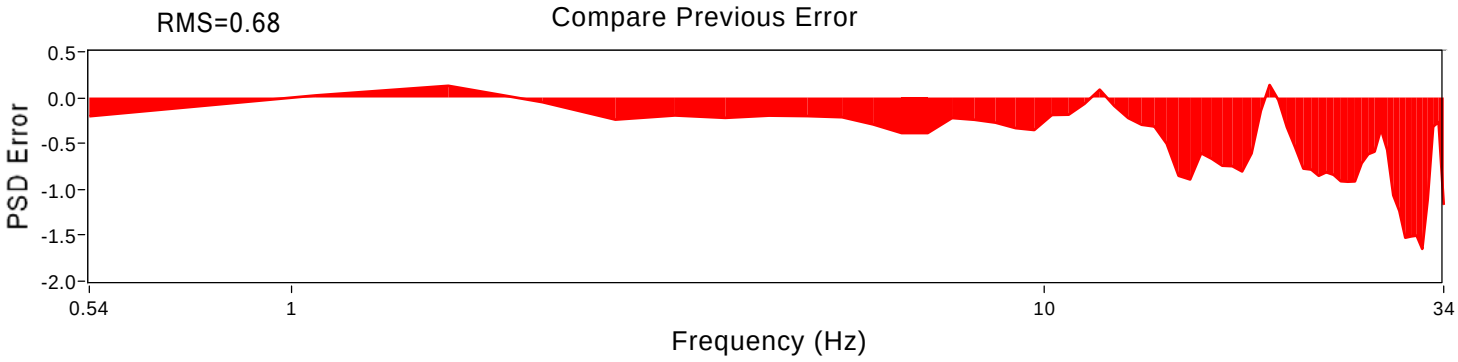


# OLM DYNAMIC ANALYSIS RESULTS COMPARE

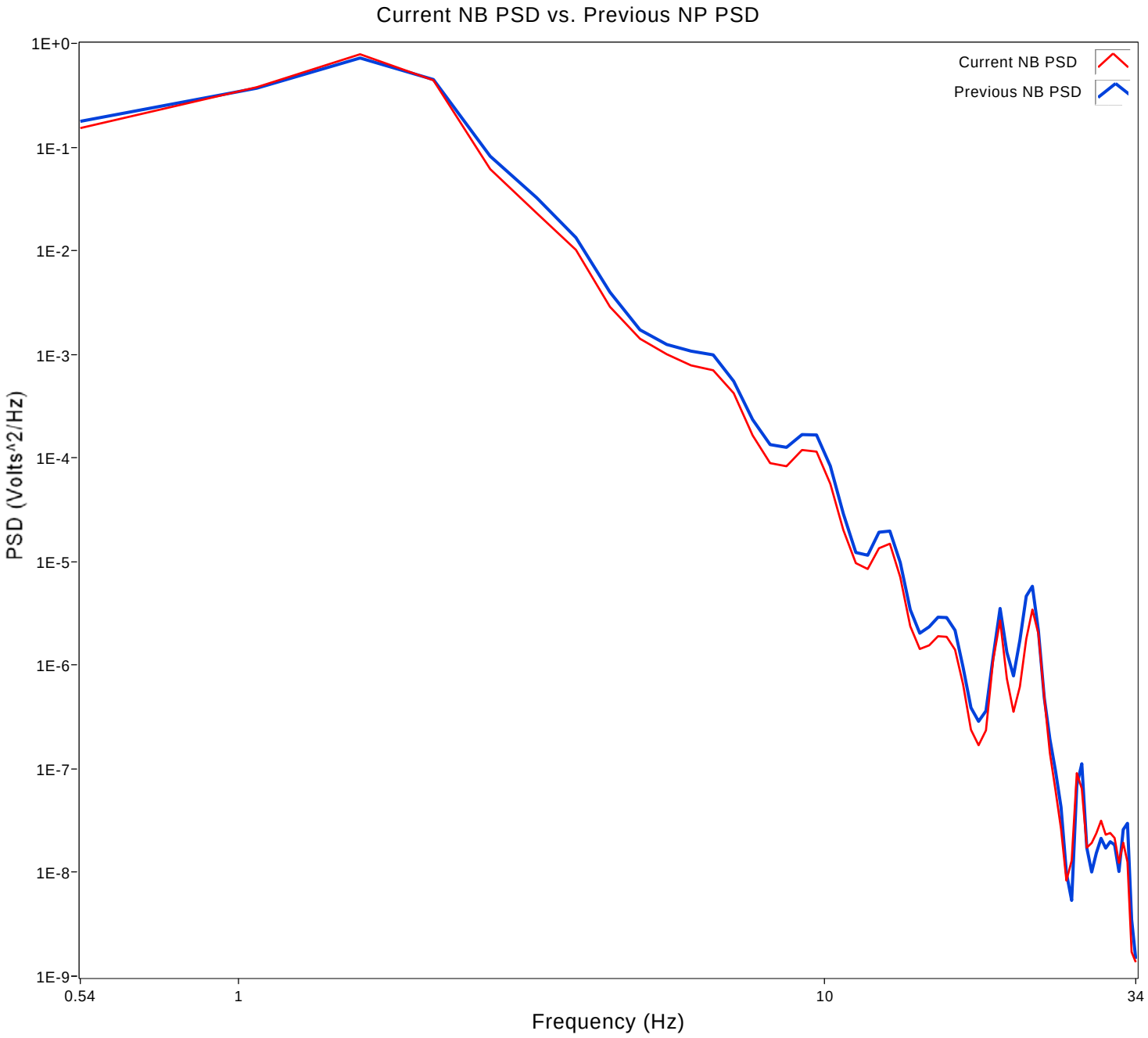
| Reactor and Unit | Tag Number | Service | Filename | Blocks : Blocksize | Trim Low Freq. (Hz) | Trim High Freq. (Hz) | AR Order | AR Method | Test Date |
|---|---|---|---|---|---|---|---|---|---|
| Farley Unit 2 | FT0484 | STM FLOW | FU2_2010-07_0003.psd | 564 : 512 | 0.538777 | 34.481708 | 18 | Least-Squares | 15-Jul-2010 13:36:44 |

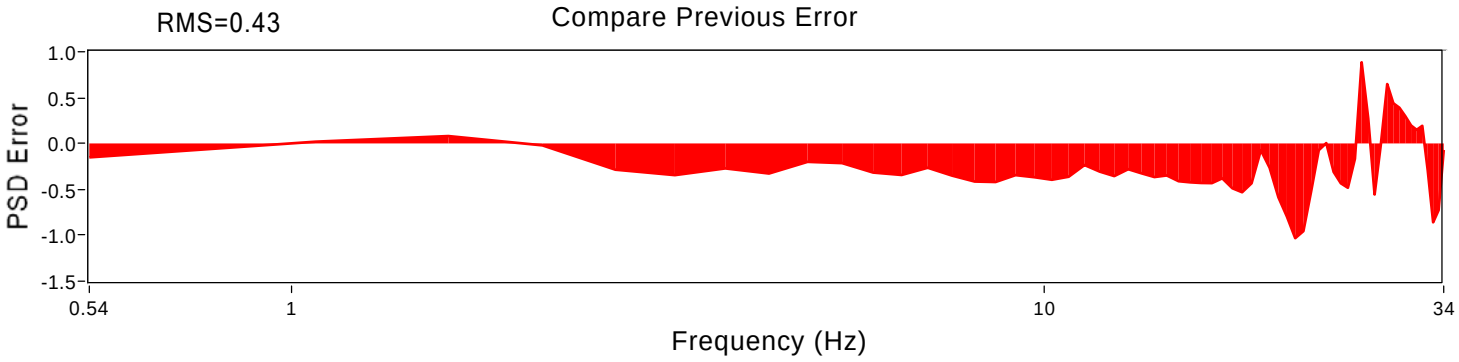


# OLM DYNAMIC ANALYSIS RESULTS COMPARE

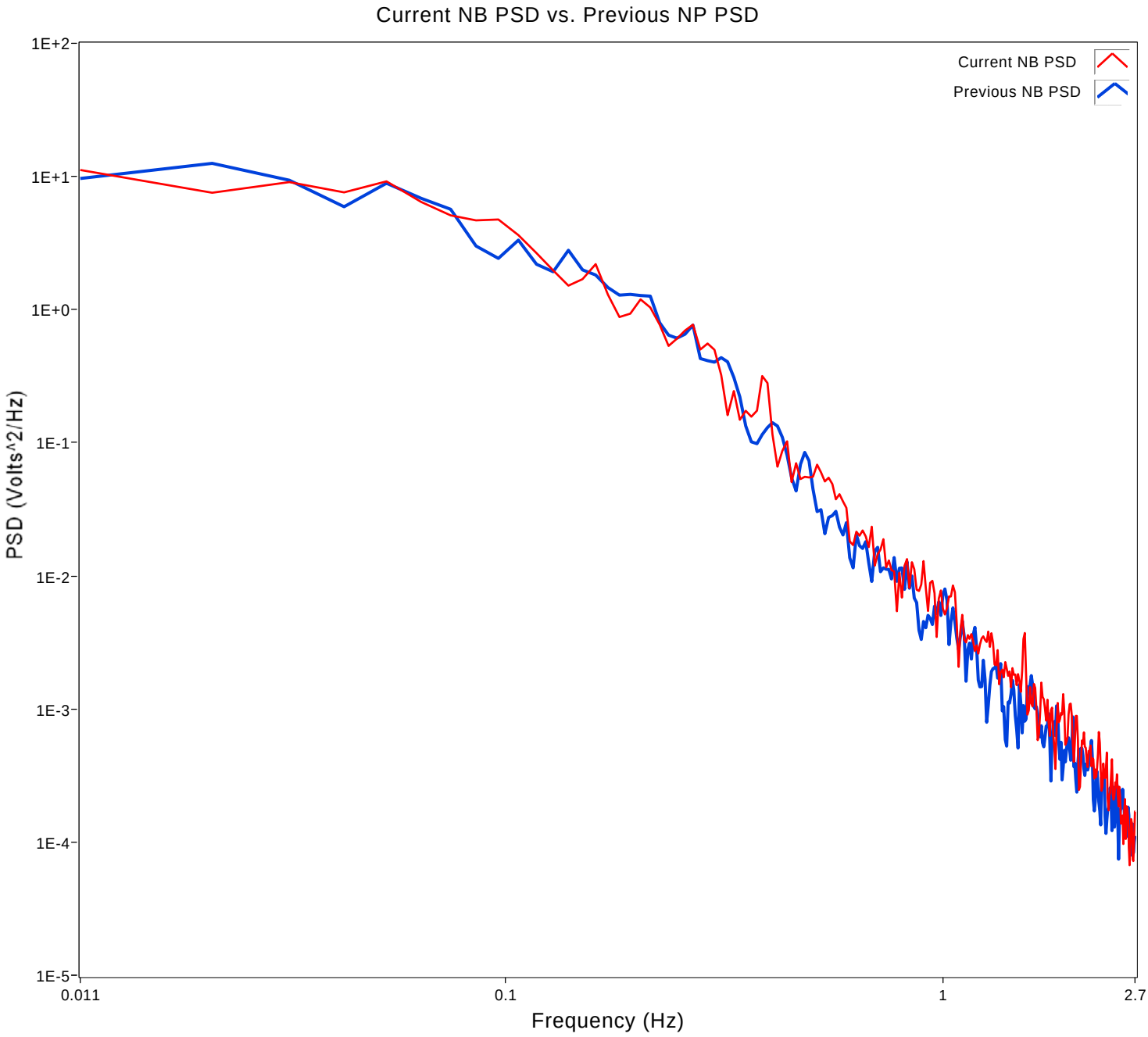
| Reactor and Unit | Tag Number | Service | Filename | Blocks : Blocksize | Trim Low Freq. (Hz) | Trim High Freq. (Hz) | AR Order | AR Method | Test Date |
|---|---|---|---|---|---|---|---|---|---|
| Farley Unit 2 | FT0494 | STM FLOW | FU2_2010-07_0003.psd | 564 : 512 | 0.538777 | 34.481708 | 19 | Least-Squares | 15-Jul-2010 13:36:44 |

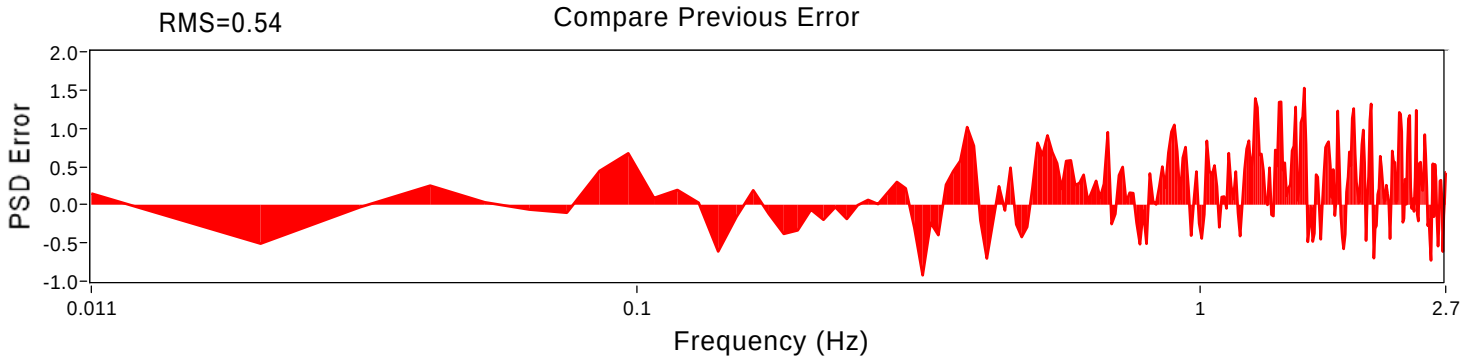


# OLM DYNAMIC ANALYSIS RESULTS COMPARE

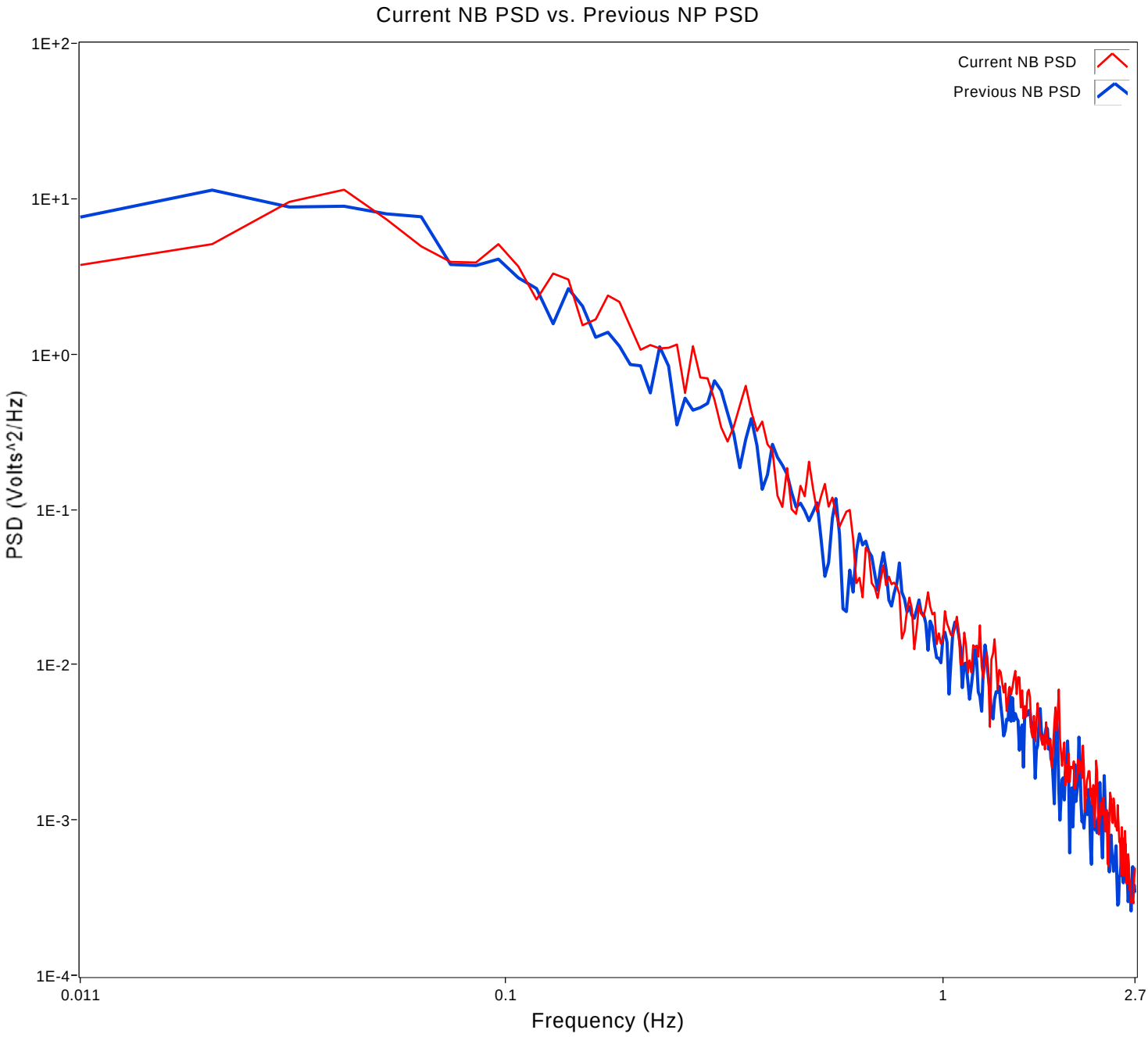
| Reactor and Unit | Tag Number | Service | Filename | Blocks : Blocksize | Trim Low Freq. (Hz) | Trim High Freq. (Hz) | AR Order | AR Method | Test Date |
|---|---|---|---|---|---|---|---|---|---|
| Farley Unit 2 | FT0477 | FW FLOW | FU2_2010-07_0003.psd | 11 : 512 | 0.010731 | 2.747169 | 17 | Least-Squares | 15-Jul-2010 13:36:44 |

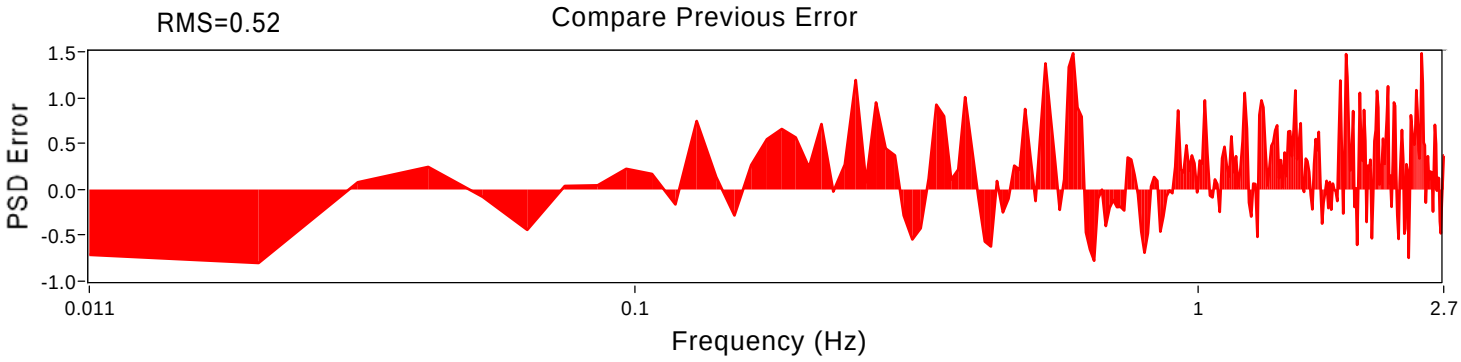


# OLM DYNAMIC ANALYSIS RESULTS COMPARE

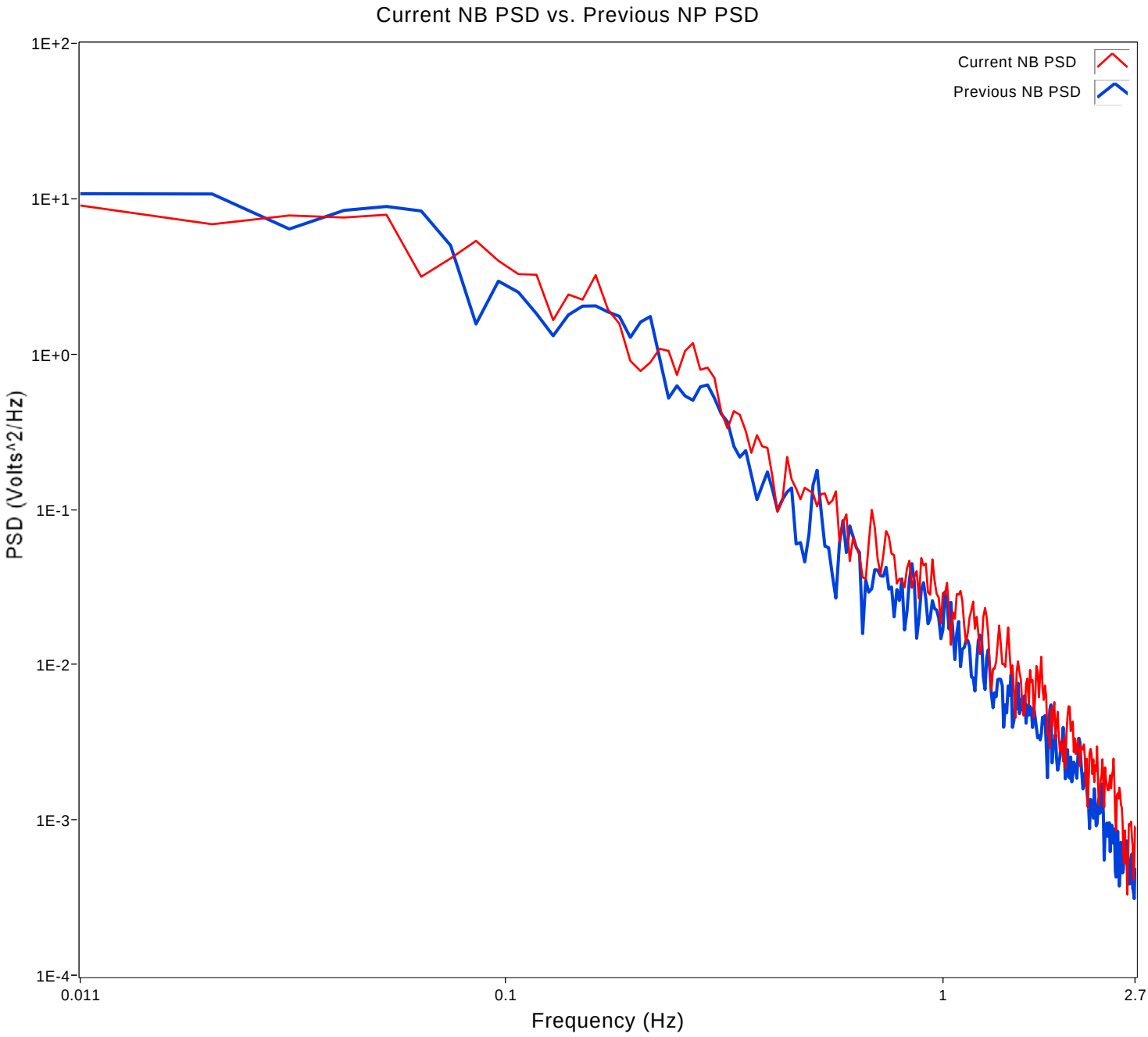
| Reactor and Unit | Tag Number | Service | Filename | Blocks : Blocksize | Trim Low Freq. (Hz) | Trim High Freq. (Hz) | AR Order | AR Method | Test Date |
|---|---|---|---|---|---|---|---|---|---|
| Farley Unit 2 | FT0487 | FW FLOW | FU2_2010-07_0003.psd | 11 : 512 | 0.010731 | 2.747169 | 21 | Least-Squares | 15-Jul-2010 13:36:44 |

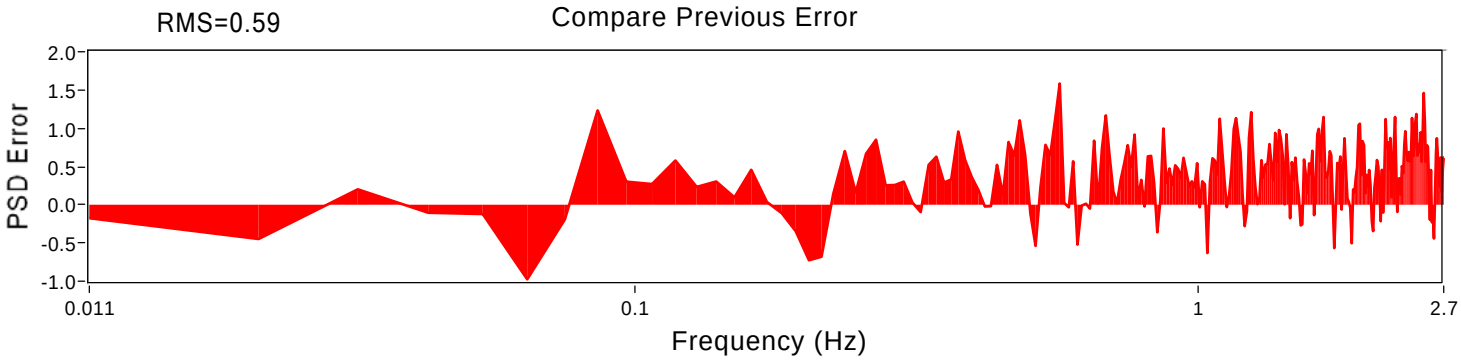


# OLM DYNAMIC ANALYSIS RESULTS COMPARE

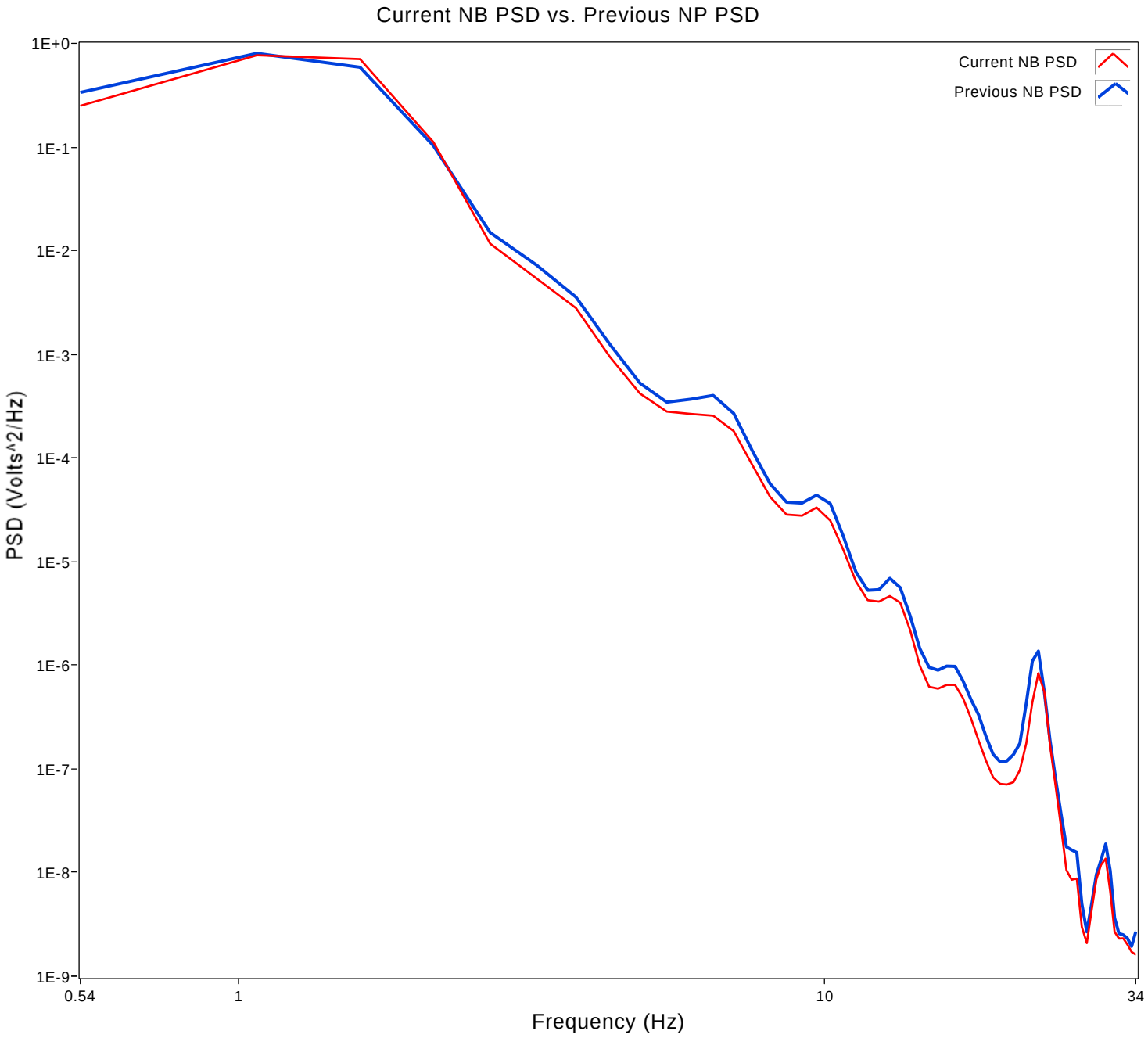
| Reactor and Unit | Tag Number | Service | Filename | Blocks : Blocksize | Trim Low Freq. (Hz) | Trim High Freq. (Hz) | AR Order | AR Method | Test Date |
|---|---|---|---|---|---|---|---|---|---|
| Farley Unit 2 | FT0497 | FW FLOW | FU2_2010-07_0003.psd | 11 : 512 | 0.010731 | 2.747169 | 21 | Least-Squares | 15-Jul-2010 13:36:44 |

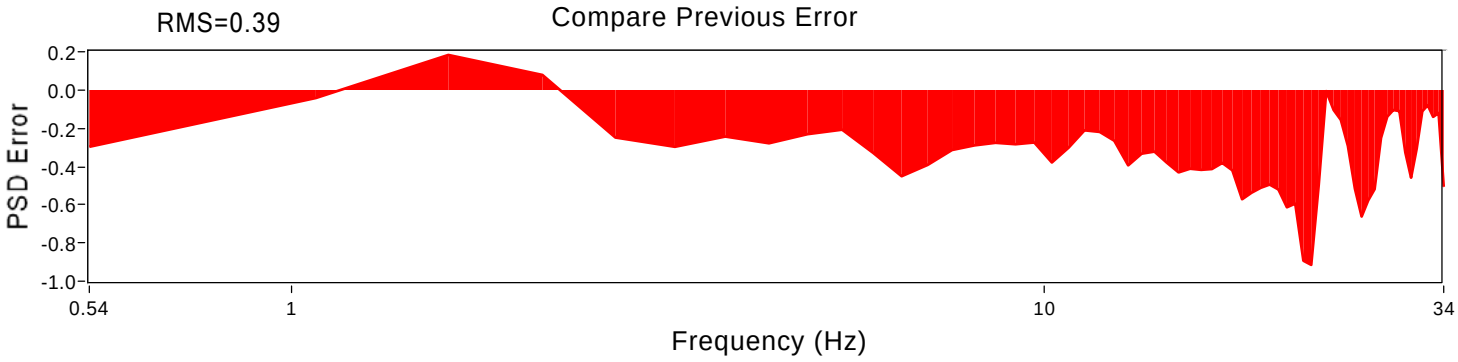


# OLM DYNAMIC ANALYSIS RESULTS COMPARE

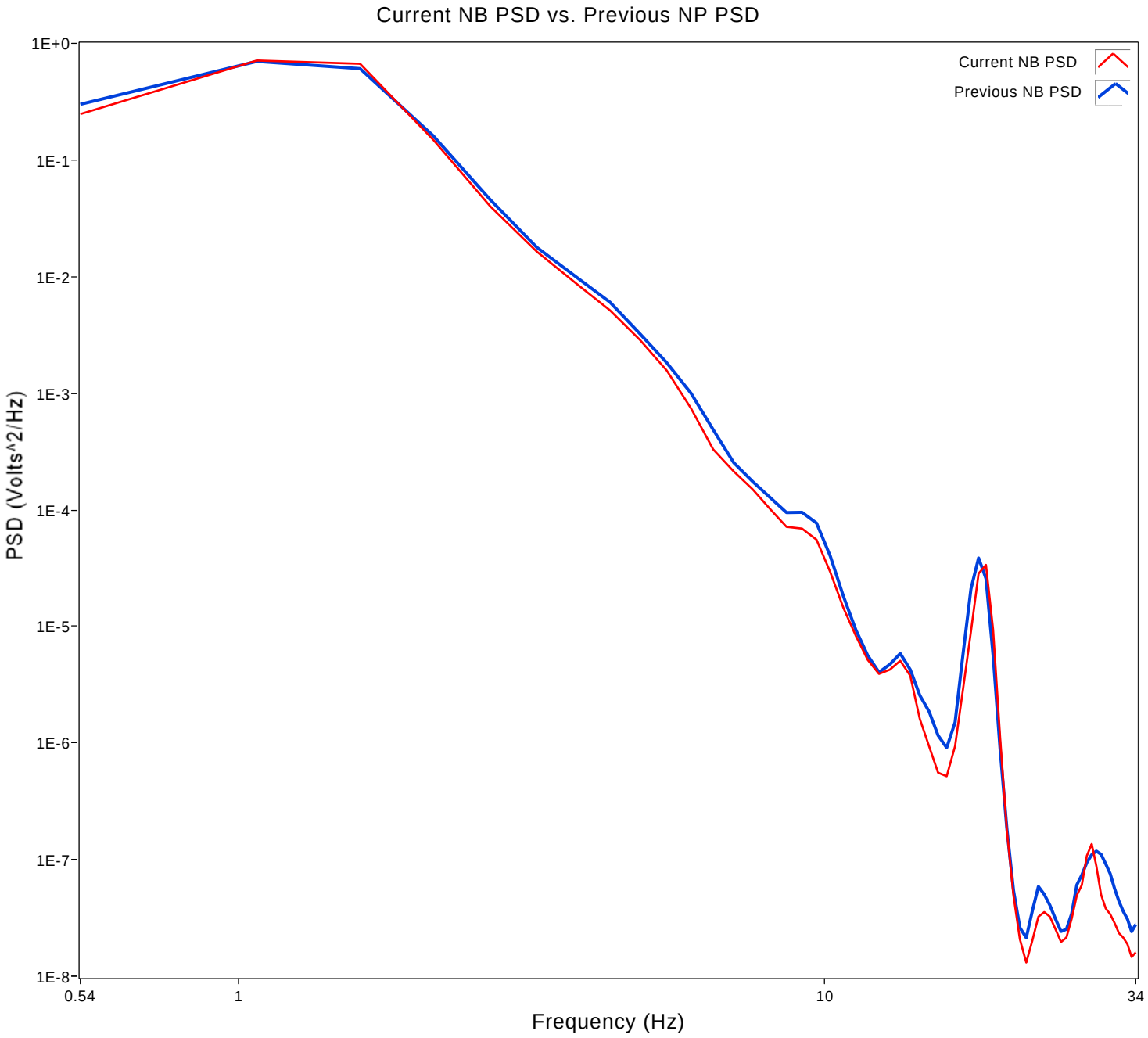
| Reactor and Unit | Tag Number | Service | Filename | Blocks : Blocksize | Trim Low Freq. (Hz) | Trim High Freq. (Hz) | AR Order | AR Method | Test Date |
|---|---|---|---|---|---|---|---|---|---|
| Farley Unit 2 | FT0475 | STM FLOW | FU2_2010-07_0004.psd | 564 : 512 | 0.538777 | 34.481708 | 11 | Forward-Backward | 15-Jul-2010 13:36:44 |

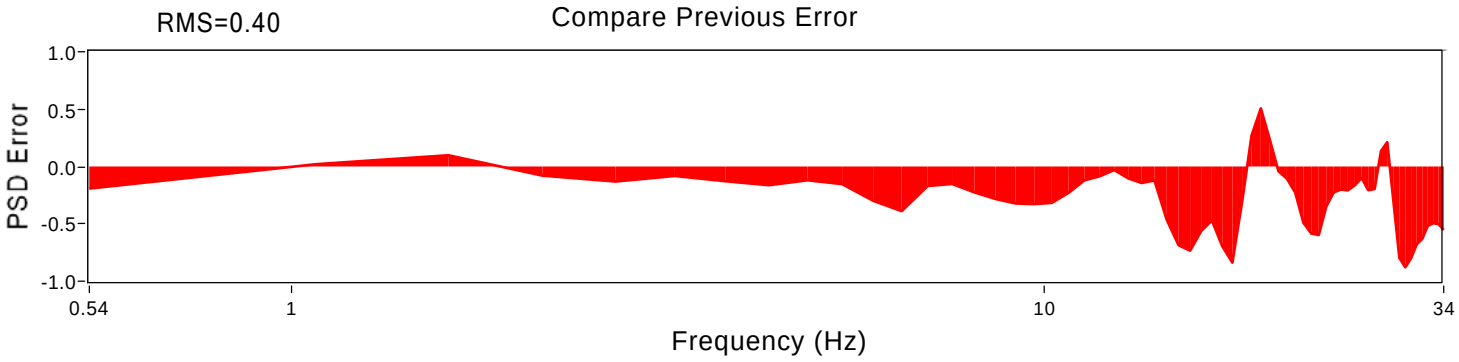


# OLM DYNAMIC ANALYSIS RESULTS COMPARE

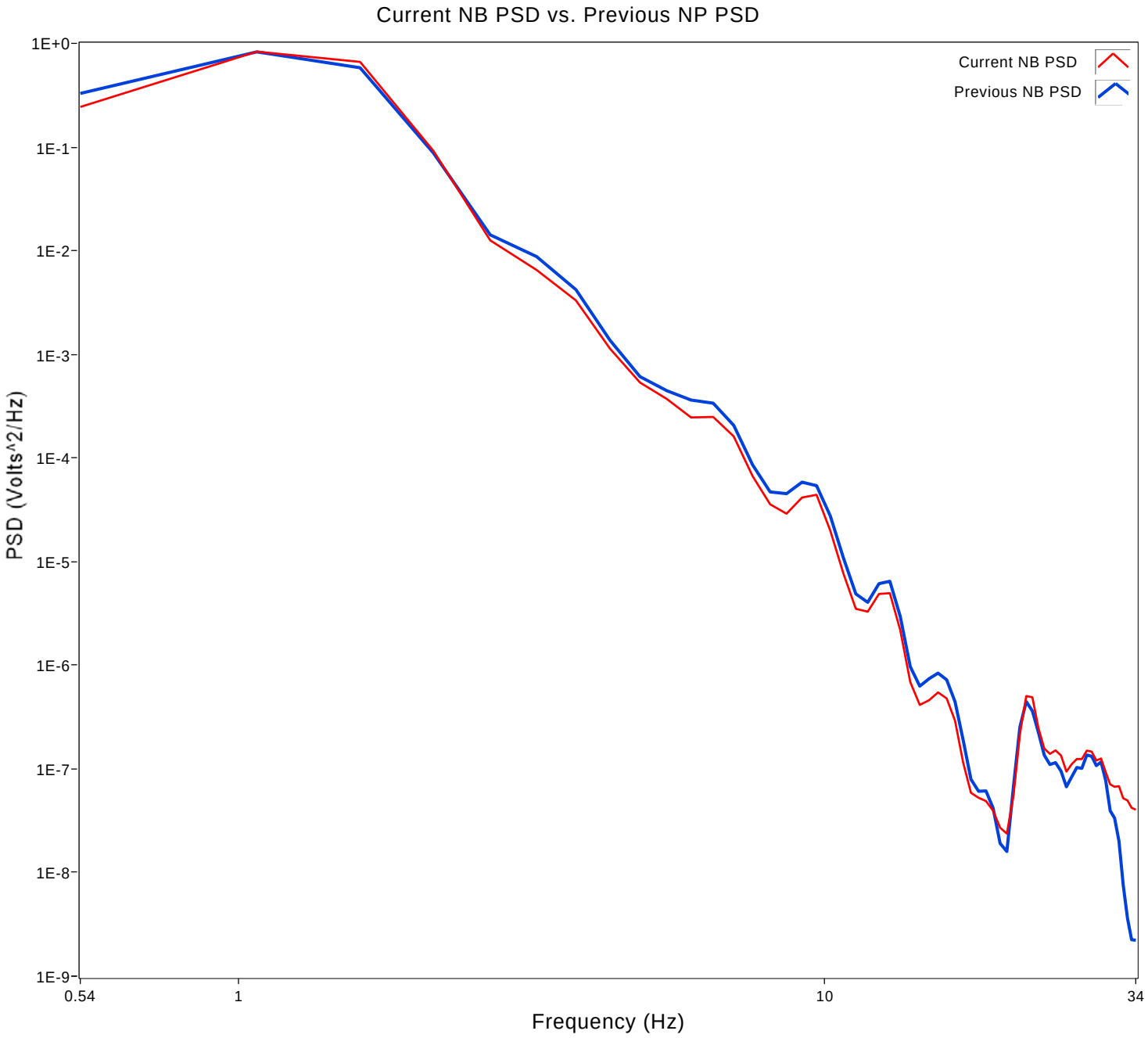
| Reactor and Unit | Tag Number | Service | Filename | Blocks : Blocksize | Trim Low Freq. (Hz) | Trim High Freq. (Hz) | AR Order | AR Method | Test Date |
|---|---|---|---|---|---|---|---|---|---|
| Farley Unit 2 | FT0485 | STM FLOW | FU2_2010-07_0004.psd | 564 : 512 | 0.538777 | 34.481708 | 11 | Forward-Backward | 15-Jul-2010 13:36:44 |

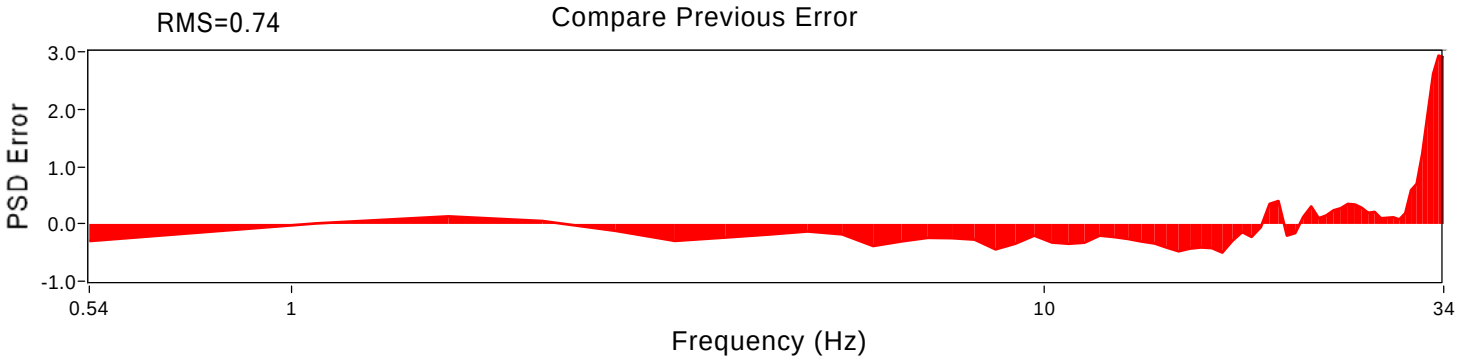


# OLM DYNAMIC ANALYSIS RESULTS COMPARE

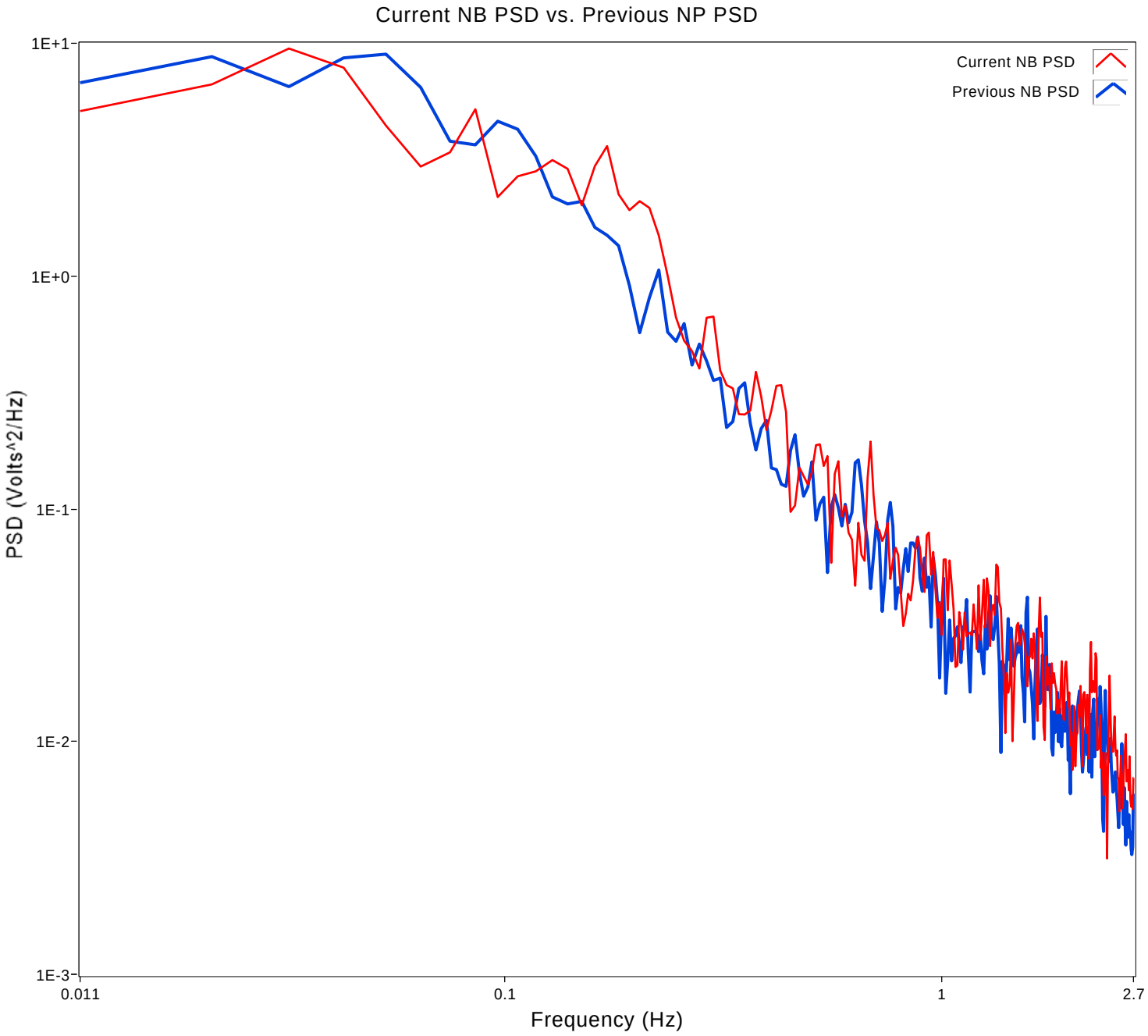
| Reactor and Unit | Tag Number | Service | Filename | Blocks : Blocksize | Trim Low Freq. (Hz) | Trim High Freq. (Hz) | AR Order | AR Method | Test Date |
|---|---|---|---|---|---|---|---|---|---|
| Farley Unit 2 | FT0495 | STM FLOW | FU2_2010-07_0004.psd | 564 : 512 | 0.538777 | 34.481708 | 11 | Forward-Backward | 15-Jul-2010 13:36:44 |

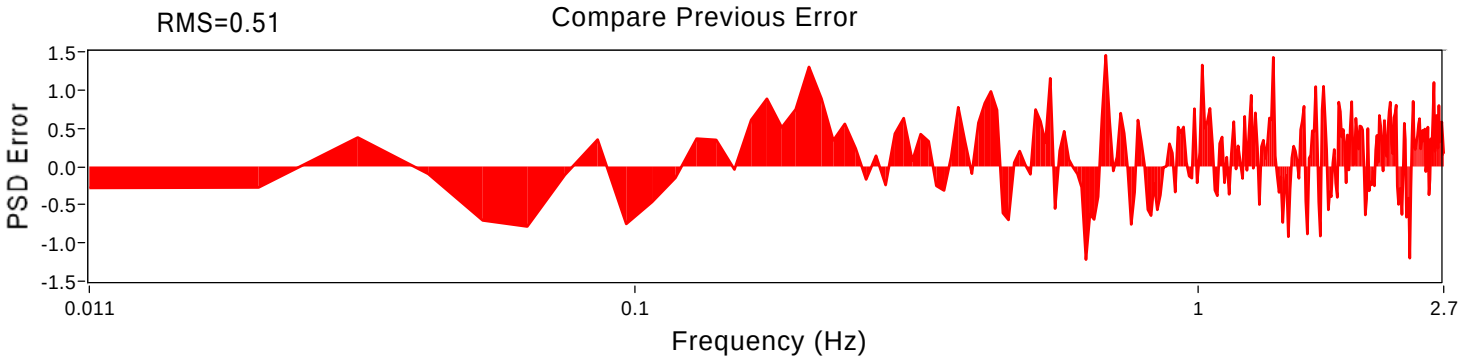


# OLM DYNAMIC ANALYSIS RESULTS COMPARE

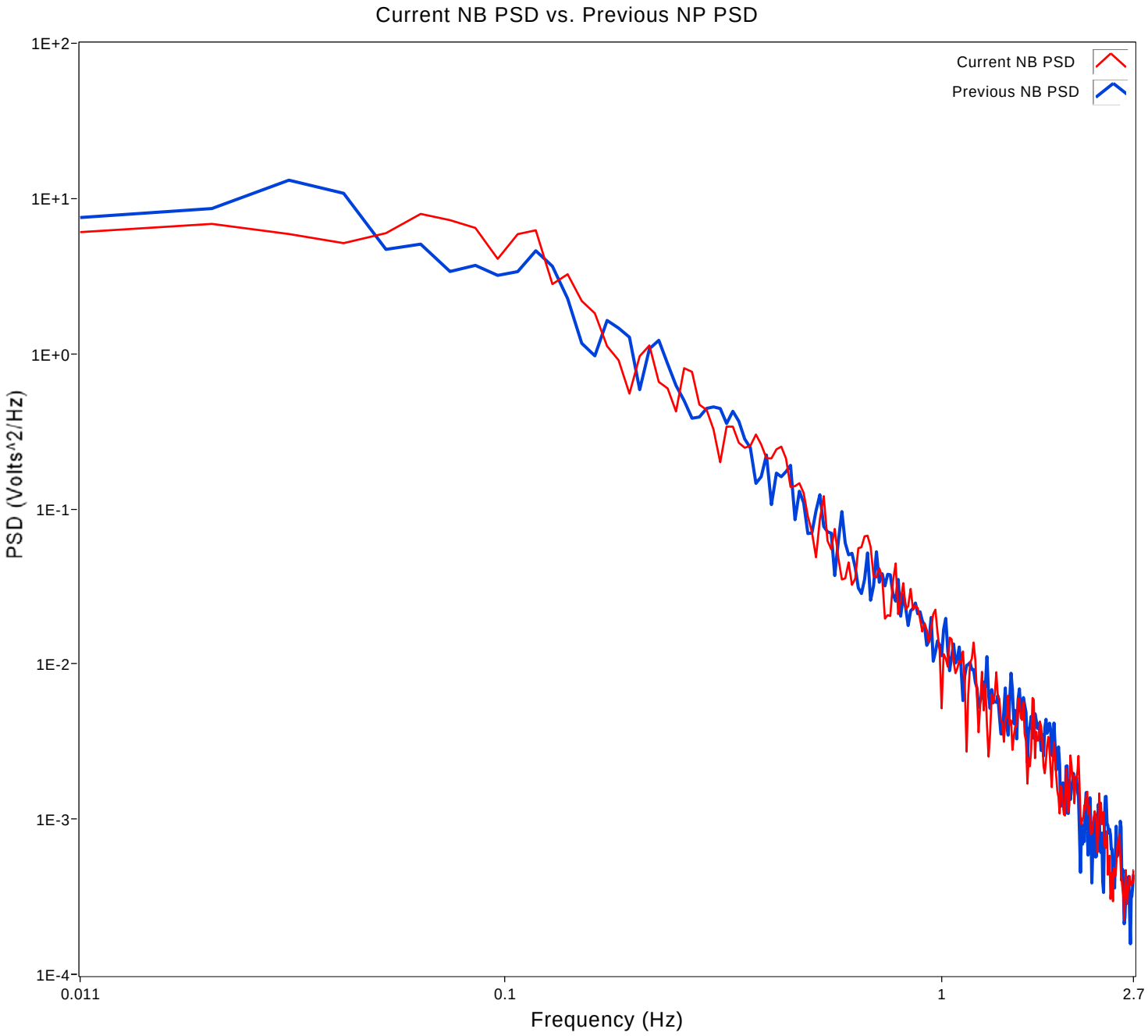
| Reactor and Unit | Tag Number | Service | Filename | Blocks : Blocksize | Trim Low Freq. (Hz) | Trim High Freq. (Hz) | AR Order | AR Method | Test Date |
|---|---|---|---|---|---|---|---|---|---|
| Farley Unit 2 | FT0476 | FW FLOW | FU2_2010-07_0004.psd | 11 : 512 | 0.010731 | 2.747169 | 11 | Forward-Backward | 15-Jul-2010 13:36:44 |

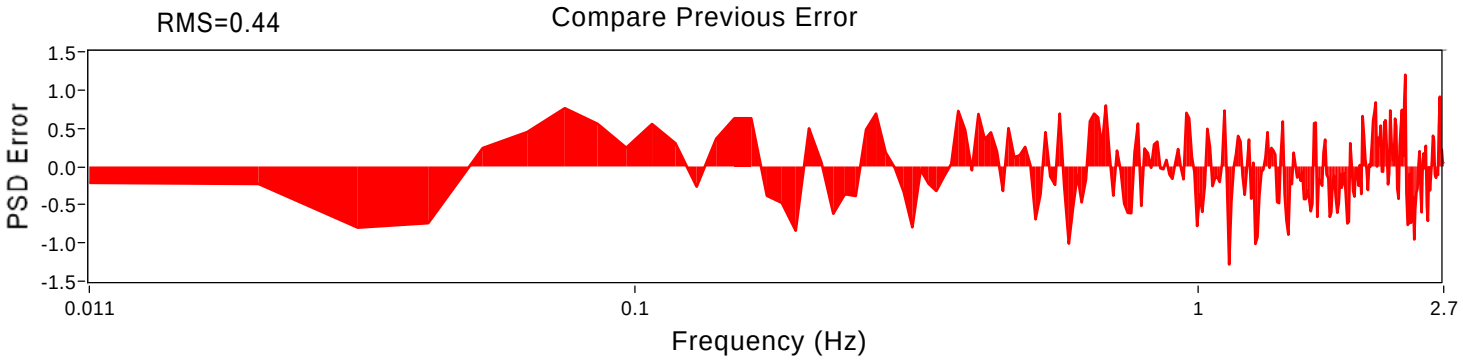


# OLM DYNAMIC ANALYSIS RESULTS COMPARE

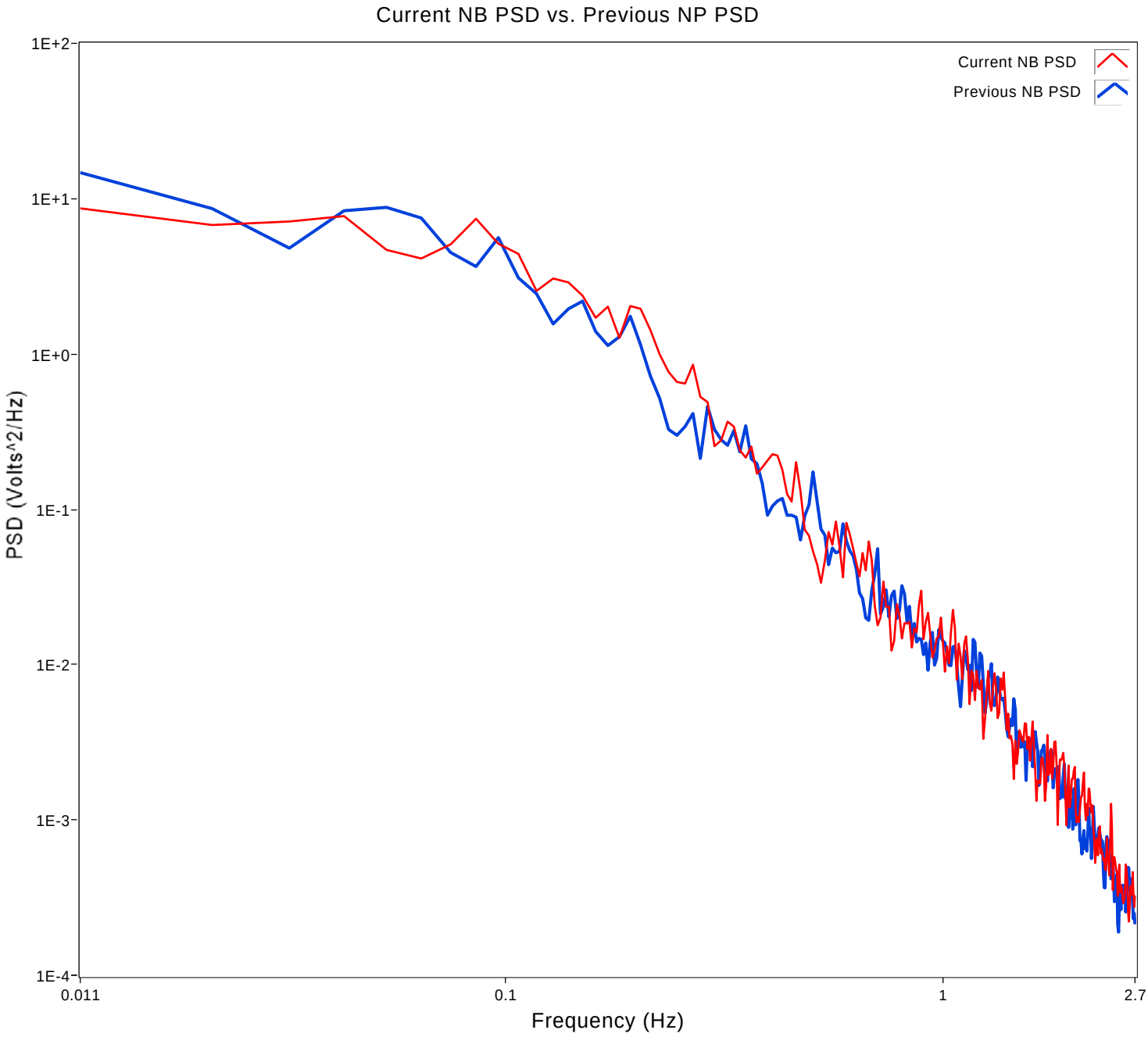
| Reactor and Unit | Tag Number | Service | Filename | Blocks : Blocksize | Trim Low Freq. (Hz) | Trim High Freq. (Hz) | AR Order | AR Method | Test Date |
|---|---|---|---|---|---|---|---|---|---|
| Farley Unit 2 | FT0486 | FW FLOW | FU2_2010-07_0004.psd | 11 : 512 | 0.010731 | 2.747169 | 11 | Forward-Backward | 15-Jul-2010 13:36:44 |

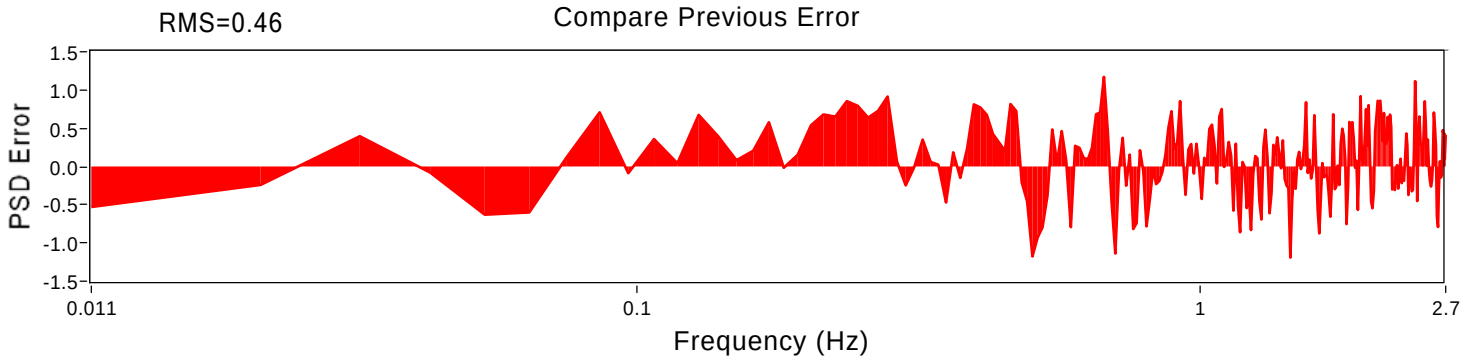


# OLM DYNAMIC ANALYSIS RESULTS COMPARE

| Reactor and Unit | Tag Number | Service | Filename | Blocks : Blocksize | Trim Low Freq. (Hz) | Trim High Freq. (Hz) | AR Order | AR Method | Test Date |
|---|---|---|---|---|---|---|---|---|---|
| Farley Unit 2 | FT0496 | FW FLOW | FU2_2010-07_0004.psd | 11 : 512 | 0.010731 | 2.747169 | 11 | Forward-Backward | 15-Jul-2010 13:36:44 |



# APPENDIX F

# North Anna Unit 1 OLM Results (Cycle 20)

| Item | Tagname | Service | 1 Jan 2008 | 1 Feb 2008 | 1 Apr 2008 | 1 May 2008 | 1 Jun 2008 | 1 Jul 2008 | 1 Sep 2008 | 1 Oct 2008 | 1 Nov 2008 | 2 Dec 2008 | 2 Jan 2009 | 2 Feb 2009 | 2 Mar 2009 | Drift | Final | Comment |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | F1MS001A | SG A STEAM FLOW | | | | | | | | | | | | | | | PASS | |
| 2 | F1MS002A | SG A STEAM FLOW | | | | | | | | | | | | | | | PASS | |
| | | | | | | | | | | | | | | | | | | |
| 3 | F1FW004A | FW FLOW TO SG A | | | | | | | | | | | | | | | PASS | |
| 4 | F1FW005A | FW FLOW TO SG A | | | | | | | | | | | | | | | PASS | |
| | | | | | | | | | | | | | | | | | | |
| 5 | L1FW001A | SG A NARROW RANGE LEVEL | | | | | | | | | | | | | | | PASS | |
| 6 | L1FW002A | SG A NARROW RANGE LEVEL | | | | | | | | | | | | | | | PASS | |
| 7 | L1FW003A | SG A NARROW RANGE LEVEL | | | | | | | | | | | | | | | PASS | |
| 8 | L1FW004A | SG A WIDE RANGE LEVEL | | | | | | | | | | | | | | | PASS | |
| | | | | | | | | | | | | | | | | | | |
| 9 | P1MS001A | SG A OUTLET PRESSURE | | | | | | | | | | | | | | | PASS | |
| 10 | P1MS002A | SG A OUTLET PRESSURE | | | | | | | | | | | | | | | PASS | |
| 11 | P1MS003A | SG A OUTLET PRESSURE | | | | | | | | | | | | | | | PASS | |
| | | | | | | | | | | | | | | | | | | |
| 12 | F1MS003A | SG B STEAM FLOW | | | | | | | | | | | | | | | PASS | |
| 13 | F1MS004A | SG B STEAM FLOW | | | | | | | | | | | | | | | PASS | |
| | | | | | | | | | | | | | | | | | | |
| 14 | F1FW006A | FW FLOW TO SG B | | | | | | | | | | | | | | | PASS | |
| 15 | F1FW007A | FW FLOW TO SG B | | | | | | | | | | | | | | | PASS | |
| | | | | | | | | | | | | | | | | | | |
| 16 | L1FW005A | SG B NARROW RANGE LEVEL | | | | | | | | | | | | | | | PASS | |
| 17 | L1FW006A | SG B NARROW RANGE LEVEL | | | | | | | | | | | | | | | PASS | |
| 18 | L1FW007A | SG B NARROW RANGE LEVEL | | | | | | | | | | | | | | | PASS | |
| 19 | L1FW008A | SG B WIDE RANGE LEVEL | | | | | | | | | | | | | | | PASS | |
| | | | | | | | | | | | | | | | | | | |
| 20 | P1MS004A | SG B OUTLET PRESSURE | | | | | | | | | | | | | | | PASS | |
| 21 | P1MS005A | SG B OUTLET PRESSURE | | | | | | | | | | | | | | | PASS | |
| 22 | P1MS006A | SG B OUTLET PRESSURE | | | | | | | | | | | | | | | PASS | |
| | | | | | | | | | | | | | | | | | | |
| 23 | F1MS005A | SG C STEAM FLOW | | | | | | | | | | | | | | | PASS | |
| 24 | F1MS006A | SG C STEAM FLOW | | | | | | | | | | | | | | | PASS | |
| | | | | | | | | | | | | | | | | | | |
| 25 | F1FW008A | FW FLOW TO SG C | | | | | | | | | | | | | | | PASS | |
| 26 | F1FW009A | FW FLOW TO SG C | | | | | | | | | | | | | | | PASS | |

*R = Exceeded Redundant Sensor Analysis Limits  M = Exceeded Model Analysis Limits  D = Exceeded Drift Limits*

**Table F.1 North Anna Unit 1 OLM Results Summary (Cycle 20)**

| Item | Tagname | Service | 1 Jan 2008 | 1 Feb 2008 | 1 Apr 2008 | 1 May 2008 | 1 Jun 2008 | 1 Jul 2008 | 1 Sep 2008 | 1 Oct 2008 | 1 Nov 2008 | 2 Dec 2008 | 2 Jan 2009 | 2 Feb 2009 | 2 Mar 2009 | Drift | Final | Comment |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 27 | L1FW009A | SG C NARROW RANGE LEVEL | | | | | | | | | | | | | | | PASS | |
| 28 | L1FW010A | SG C NARROW RANGE LEVEL | | | | | | | | | | | | | | | PASS | |
| 29 | L1FW011A | SG C NARROW RANGE LEVEL | | | | | | | | | | | | | | | PASS | |
| 30 | L1FW012A | SG C WIDE RANGE LEVEL | | | | | | | | | | | | | | | PASS | |
| | | | | | | | | | | | | | | | | | | |
| 31 | P1MS007A | SG C OUTLET PRESSURE | | | | | | | | | | | | | | | PASS | |
| 32 | P1MS008A | SG C OUTLET PRESSURE | | | | | | | | | | | | | | | PASS | |
| 33 | P1MS009A | SG C OUTLET PRESSURE | | | | | | | | | | | | | | | PASS | |
| | | | | | | | | | | | | | | | | | | |
| 34 | L1RC001A | PRESSURIZER LEVEL | | | | | | | | | | | | | | | PASS | |
| 35 | L1RC002A | PRESSURIZER LEVEL | | | | | | | | | | | | | | | PASS | |
| 36 | L1RC003A | PRESSURIZER LEVEL | | | | | | | | | | | | | | | PASS | |
| | | | | | | | | | | | | | | | | | | |
| 37 | P1RC001A | PRESSURIZER PRESSURE | | | | | | | | | | | | | | | PASS | |
| 38 | P1RC002A | PRESSURIZER PRESSURE | | | | | | | | | | | | | | | PASS | |
| 39 | P1RC003A | PRESSURIZER PRESSURE | | | | | | | | | | | | | | | PASS | |
| | | | | | | | | | | | | | | | | | | |
| 40 | F1RC001A | RCS LOOP A FLOW | | | | | | | | | | | | | | | PASS | |
| 41 | F1RC002A | RCS LOOP A FLOW | | | | | | | | | | | | | | | PASS | |
| 42 | F1RC003A | RCS LOOP A FLOW | | | | | | | | | | | | | | | PASS | |
| | | | | | | | | | | | | | | | | | | |
| 43 | F1RC004A | RCS LOOP B FLOW | | | | | | | | | | | | | | | PASS | |
| 44 | F1RC005A | RCS LOOP B FLOW | | | | | | | | | | | | | | | PASS | |
| 45 | F1RC006A | RCS LOOP B FLOW | | | | | | | | | | | | | | | PASS | |
| | | | | | | | | | | | | | | | | | | |
| 46 | F1RC007A | RCS LOOP C FLOW | | | | | | | | | | | | | | | PASS | |
| 47 | F1RC008A | RCS LOOP C FLOW | | | | | | | | | | | | | | | PASS | |
| 48 | F1RC009A | RCS LOOP C FLOW | | | | | | | | | | | | | | | PASS | |
| | | | | | | | | | | | | | | | | | | |
| 49 | P1RC005A | RCS WIDE RANGE PRESSURE LOOP A | | | | | | | | | | | | | | | PASS | |
| 50 | P1RC006A | RCS WIDE RANGE PRESSURE LOOP C | | | | | | | | | | | | | | | PASS | |
| | | | | | | | | | | | | | | | | | | |
| 51 | P0398A | TURBINE FIRST STAGE PRESSURE | | M | M | M | M | M | M | M | M | M | M | M | M | | FAIL | Drift high over cycle |
| 52 | P0399A | TURBINE FIRST STAGE PRESSURE | | | | | M | M | M | M | | | | | | | FAIL | Drift high over cycle |

*R = Exceeded Redundant Sensor Analysis Limits  M = Exceeded Model Analysis Limits  D = Exceeded Drift Limits*

**Table F.1 (continued) North Anna Unit 1 OLM Results Summary (Cycle 20)**

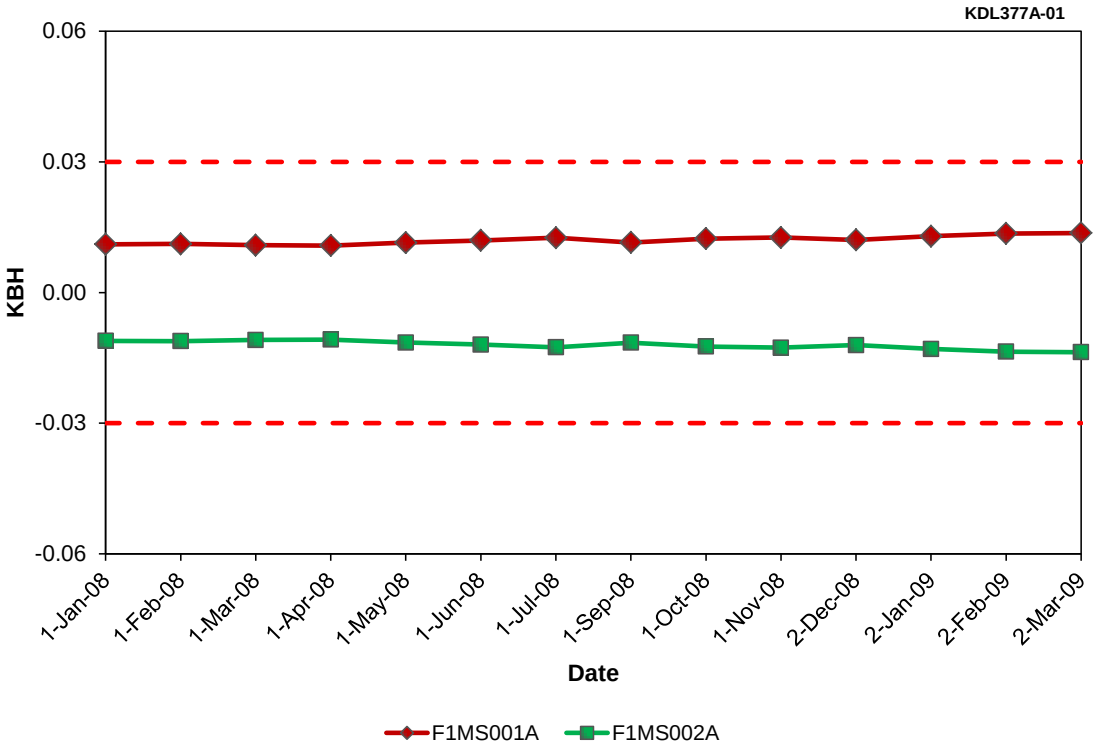



**Figure F.1 SG A STEAM FLOW Steady-State Deviation at North Anna Unit 1 (Cycle 20)**

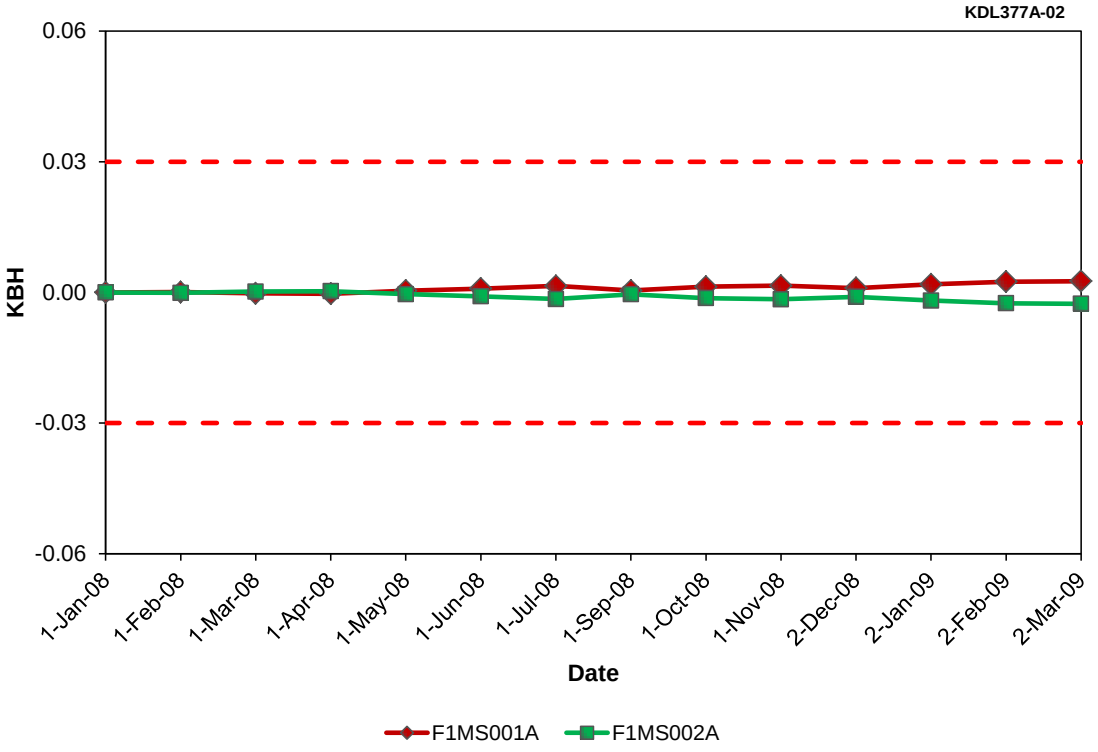



**Figure F.2 SG A STEAM FLOW Steady-State Drift at North Anna Unit 1 (Cycle 20)**

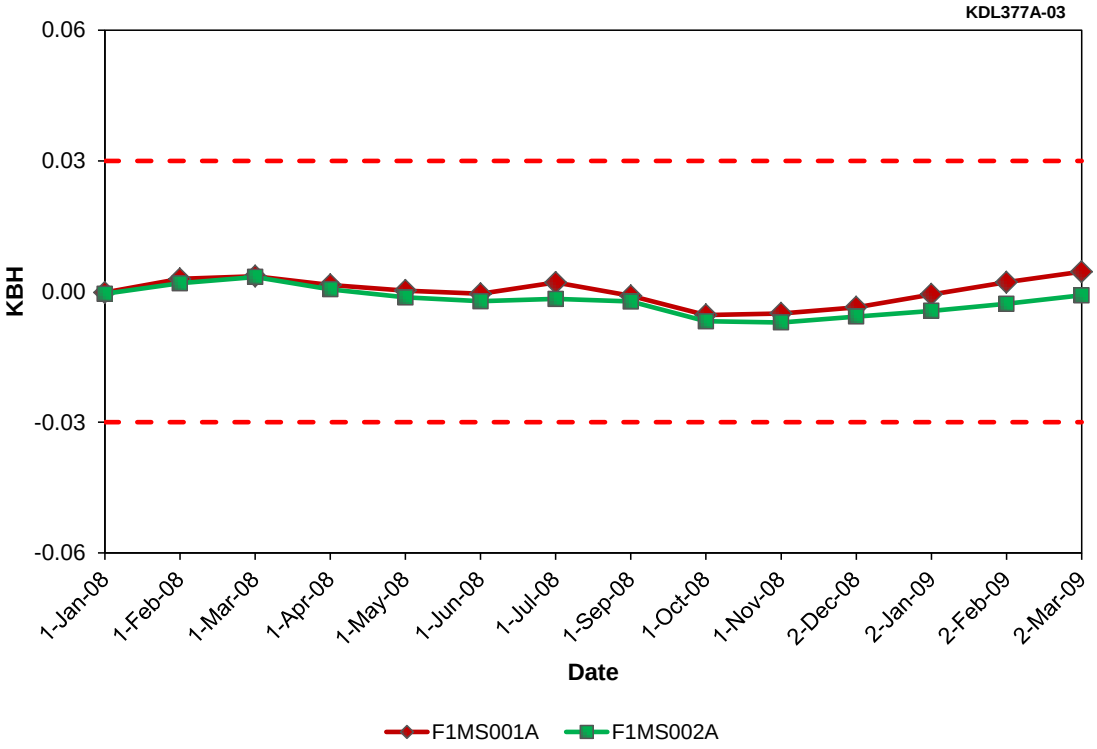



**Figure F.3 SG A STEAM FLOW Steady-State Residual AAKR at North Anna Unit 1 (Cycle 20)**

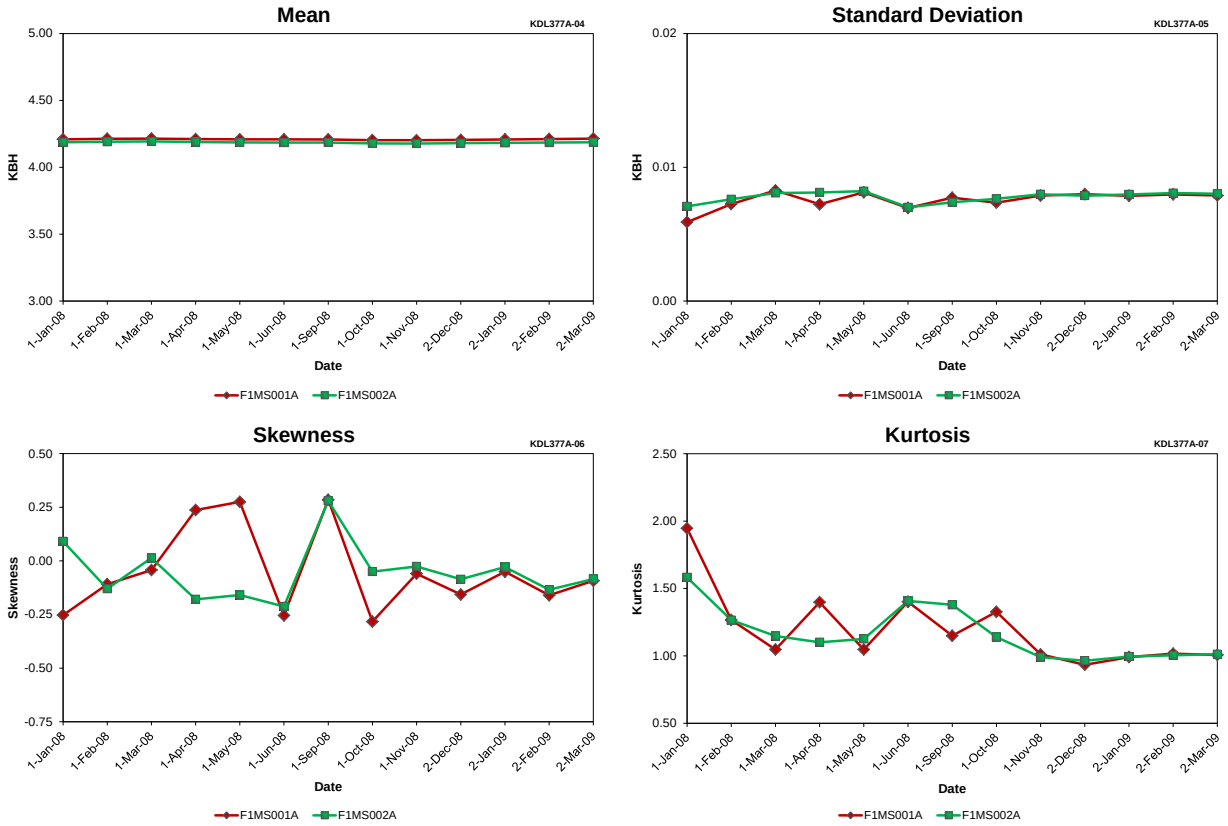



**Figure F.4 SG A STEAM FLOW Data Quality Statistics at North Anna Unit 1 (Cycle 20)**

**Table F.2 SG A STEAM FLOW Data Quality for North Anna Unit 1 (Cycle 20)**

| | Tag Names | |
|---|---|---|
| **Result Type** | **F1MS001A** | **F1MS002A** |
| Mean | 4.21 | 4.19 |
| Std. Dev. | 0.01 | 0.01 |
| Skewness | -0.05 | -0.05 |
| Kurtosis | 1.20 | 1.16 |

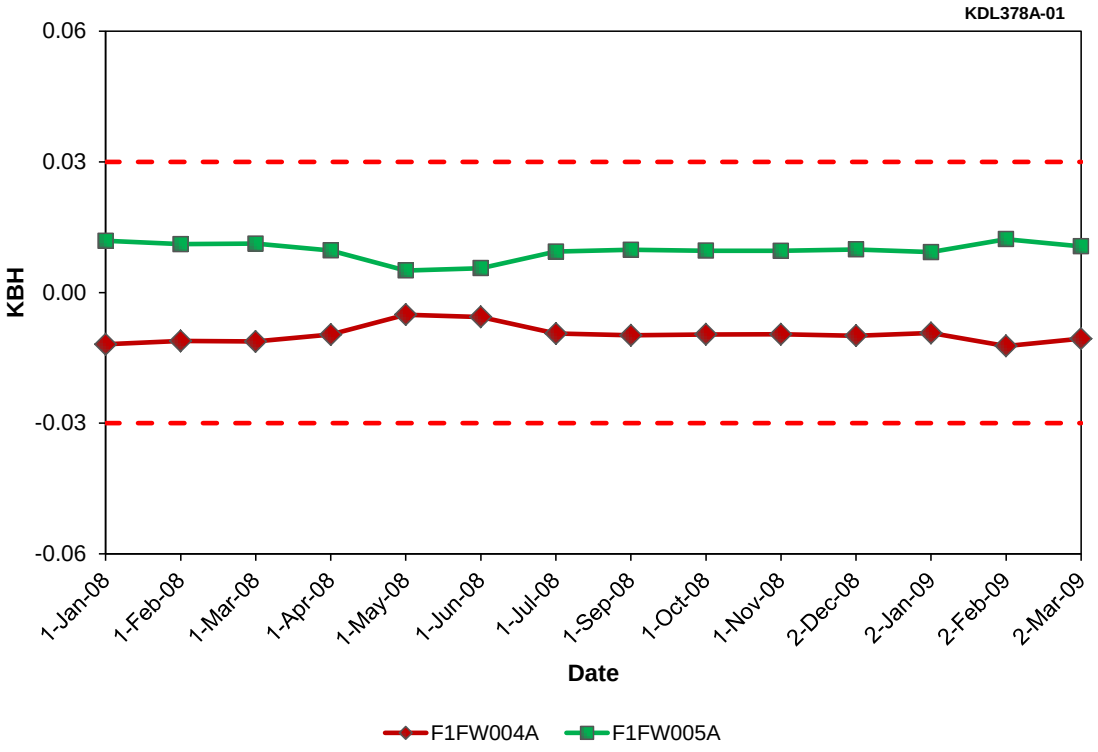



**Figure F.5 FW FLOW TO SG A Steady-State Deviation at North Anna Unit 1 (Cycle 20)**

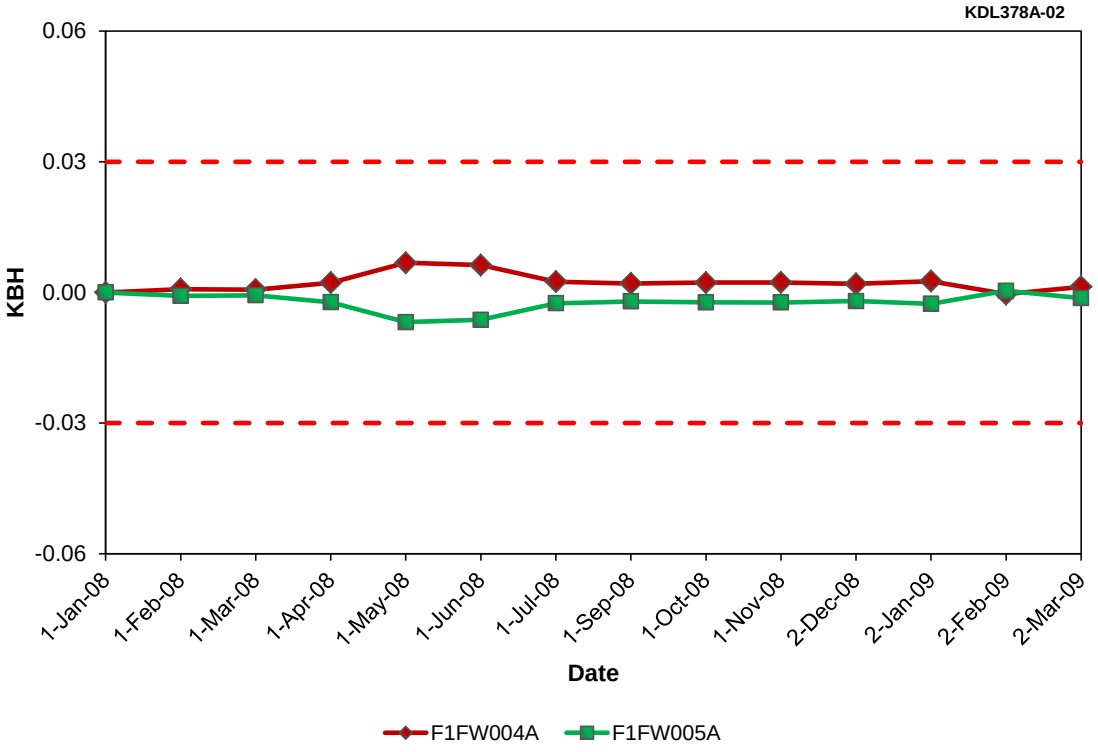



**Figure F.6 FW FLOW TO SG A Steady-State Drift at North Anna Unit 1 (Cycle 20)**

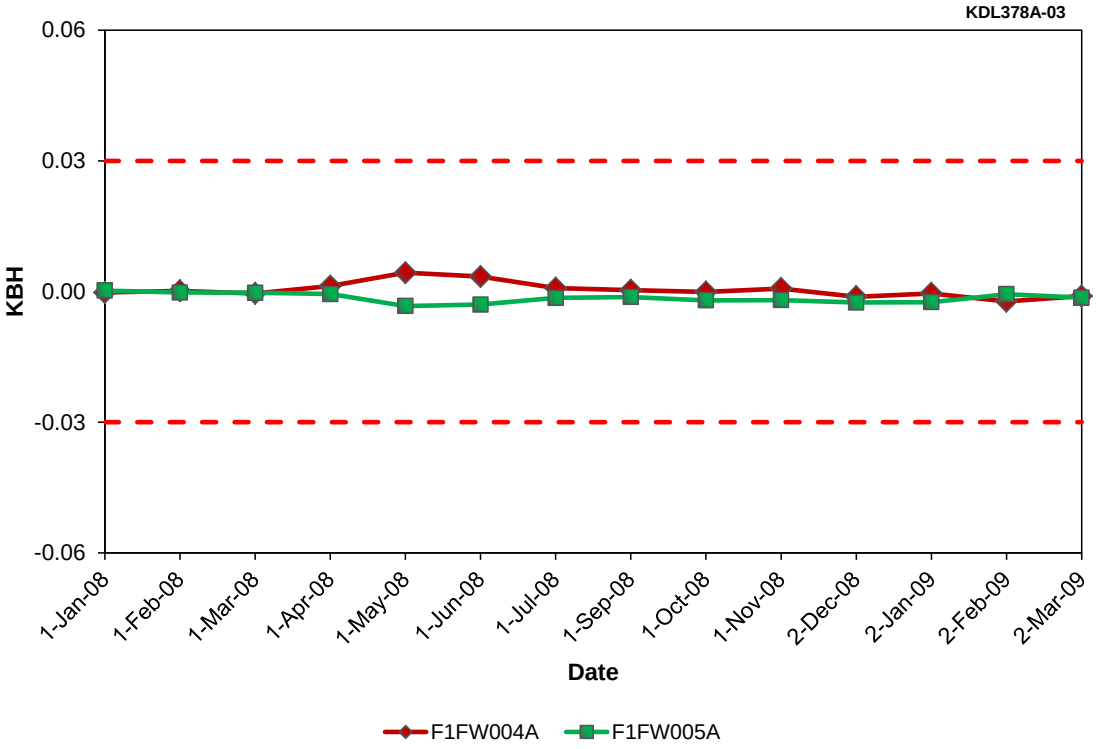



**Figure F.7 FW FLOW TO SG A Steady-State Residual AAKR at North Anna Unit 1 (Cycle 20)**

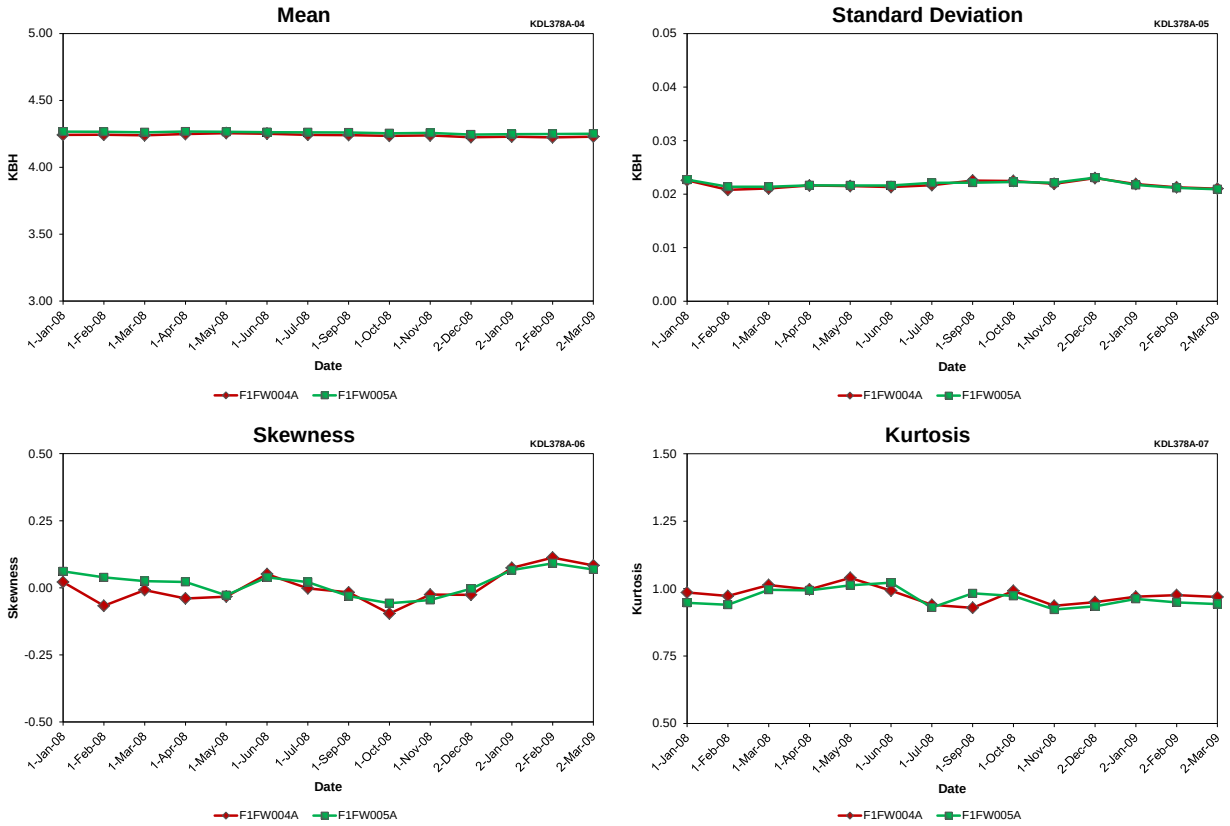



**Figure F.8 FW FLOW TO SG A Data Quality Statistics at North Anna Unit 1 (Cycle 20)**

**Table F.3 FW FLOW TO SG A Data Quality for North Anna Unit 1 (Cycle 20)**

| Result Type | Tag Names | |
|---|---|---|
| | F1FW004A | F1FW005A |
| Mean | 4.24 | 4.26 |
| Std. Dev. | 0.02 | 0.02 |
| Skewness | 0.00 | 0.02 |
| Kurtosis | 0.98 | 0.96 |

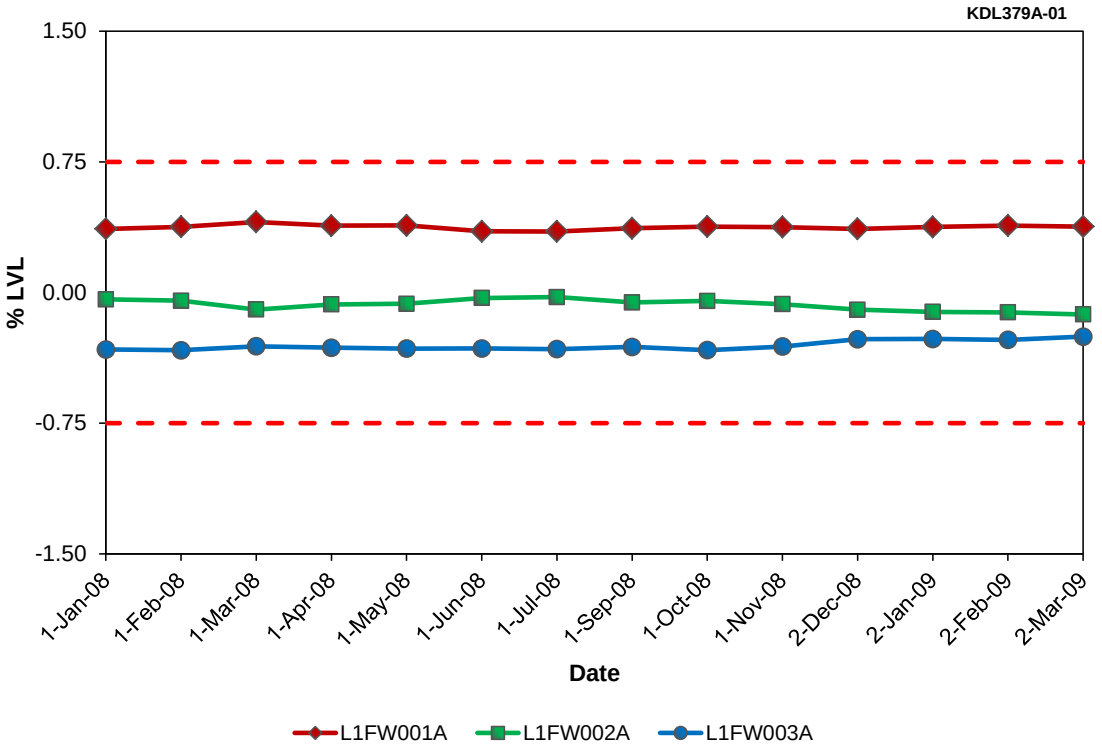



**Figure F.9 SG A LEVEL Steady-State Deviation at North Anna Unit 1 (Cycle 20)**

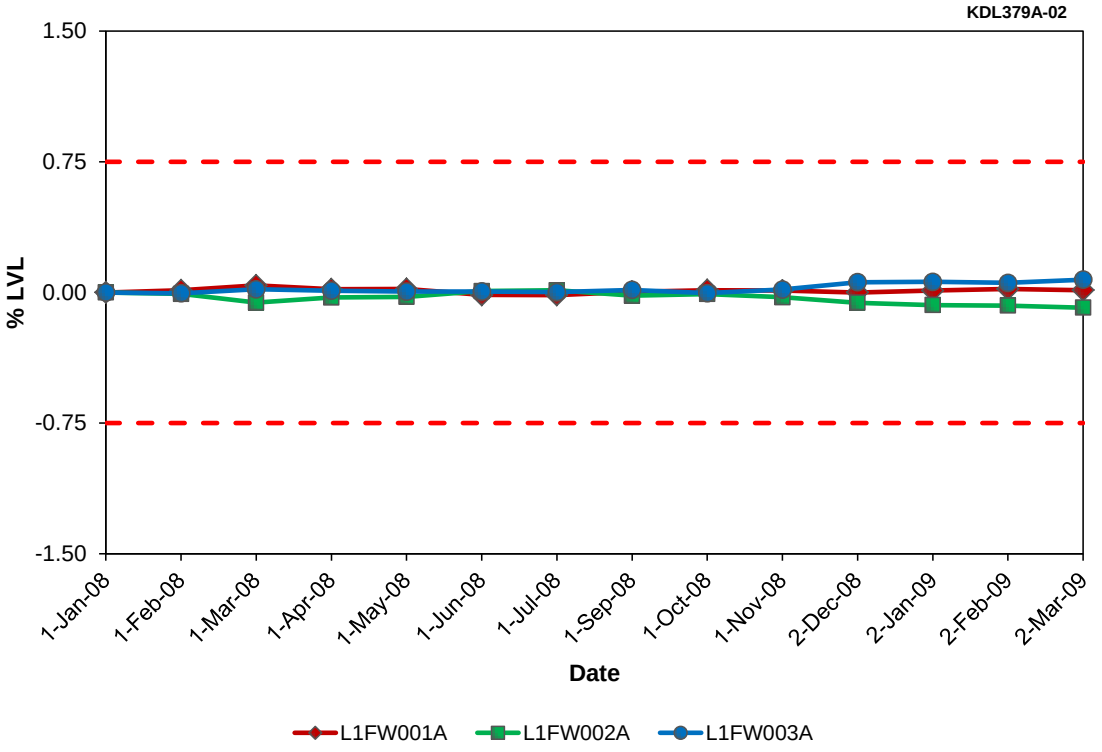



**Figure F.10 SG A LEVEL Steady-State Drift at North Anna Unit 1 (Cycle 20)**

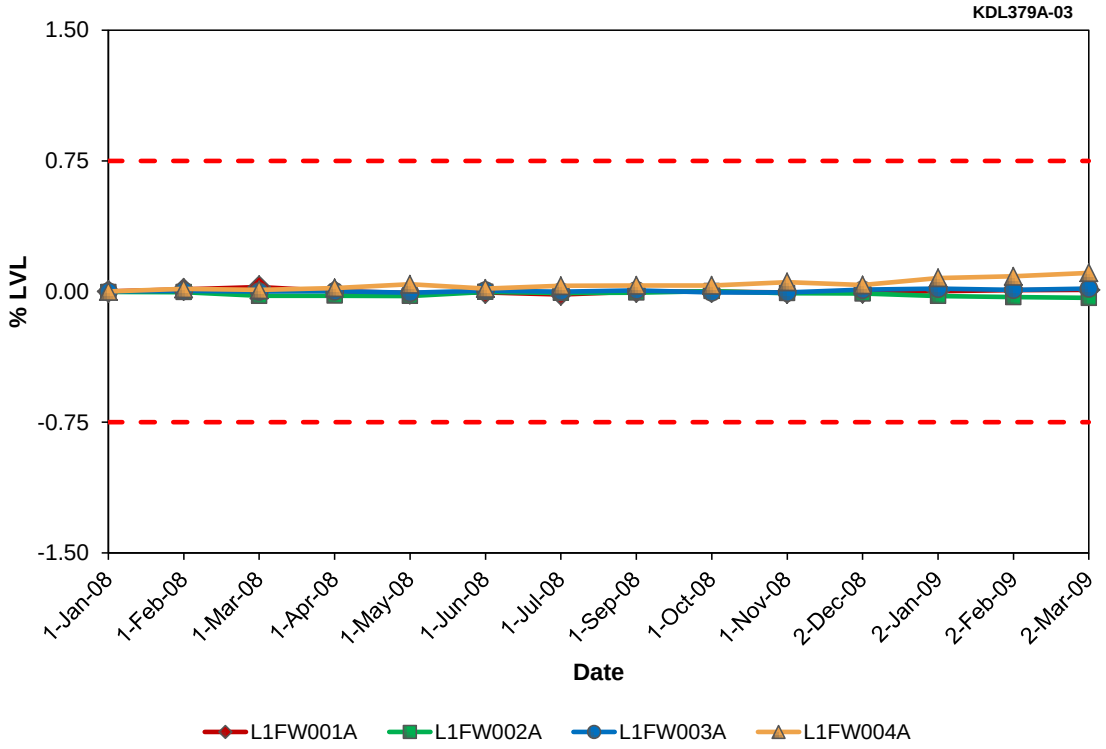



**Figure F.11 SG A LEVEL Steady-State Residual AAKR at North Anna Unit 1 (Cycle 20)**

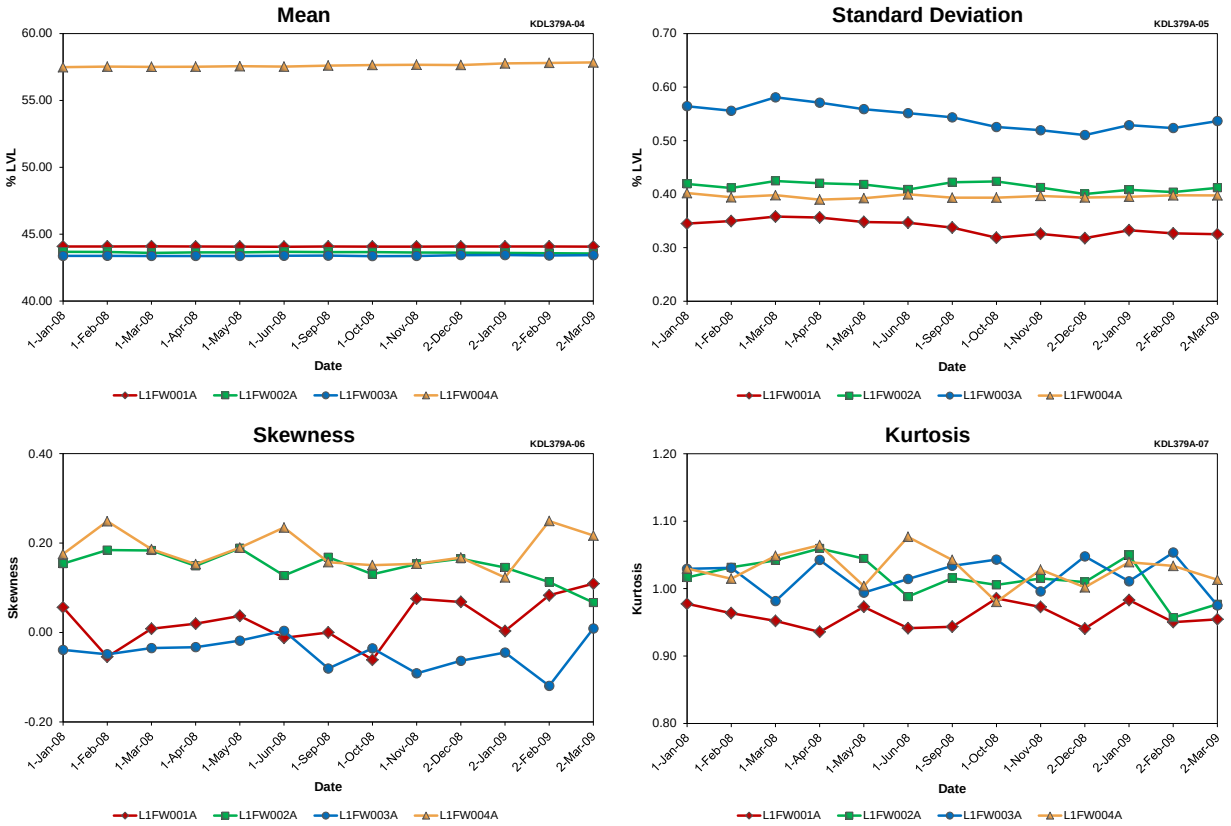



**Figure F.12 SG A LEVEL Data Quality Statistics at North Anna Unit 1 (Cycle 20)**

**Table F.4 SG A LEVEL Data Quality for North Anna Unit 1 (Cycle 20)**

| | Tag Names | | | |
|---|---|---|---|---|
| **Result Type** | **L1FW001A** | **L1FW002A** | **L1FW003A** | **L1FW004A** |
| Mean | 44.07 | 43.63 | 43.39 | 57.63 |
| Std. Dev. | 0.34 | 0.41 | 0.54 | 0.40 |
| Skewness | 0.03 | 0.15 | -0.05 | 0.19 |
| Kurtosis | 0.96 | 1.02 | 1.02 | 1.03 |

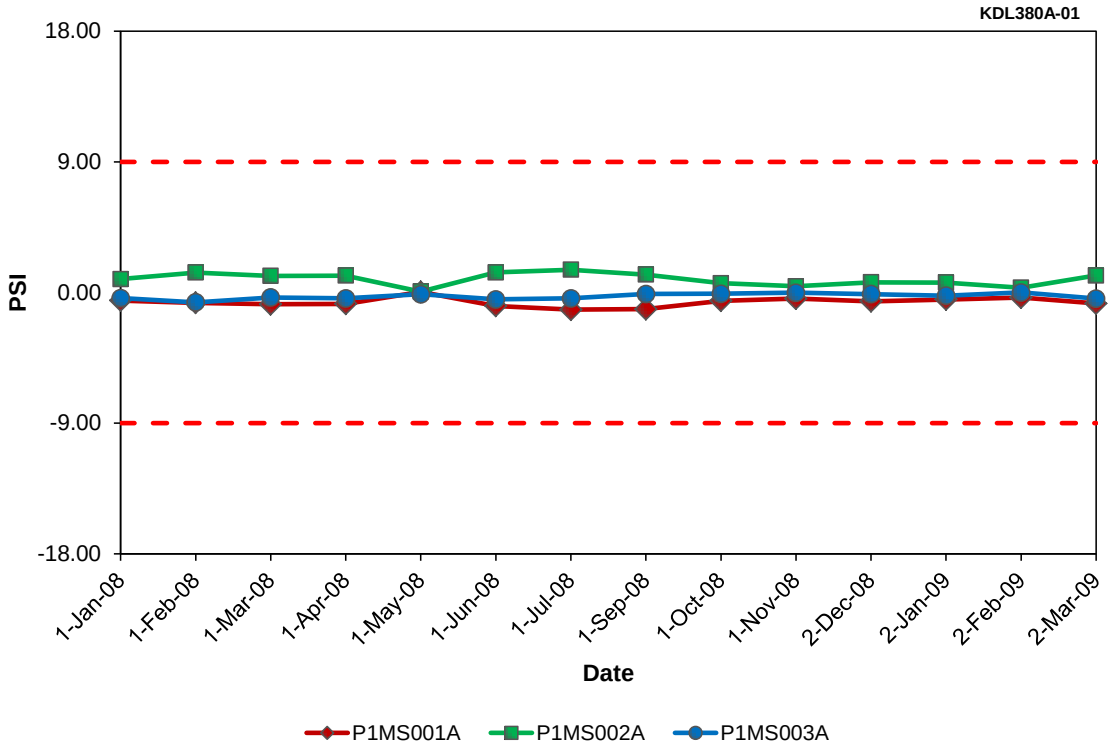



**Figure F.13 SG A OUTLET PRESSURE Steady-State Deviation at North Anna Unit 1 (Cycle 20)**

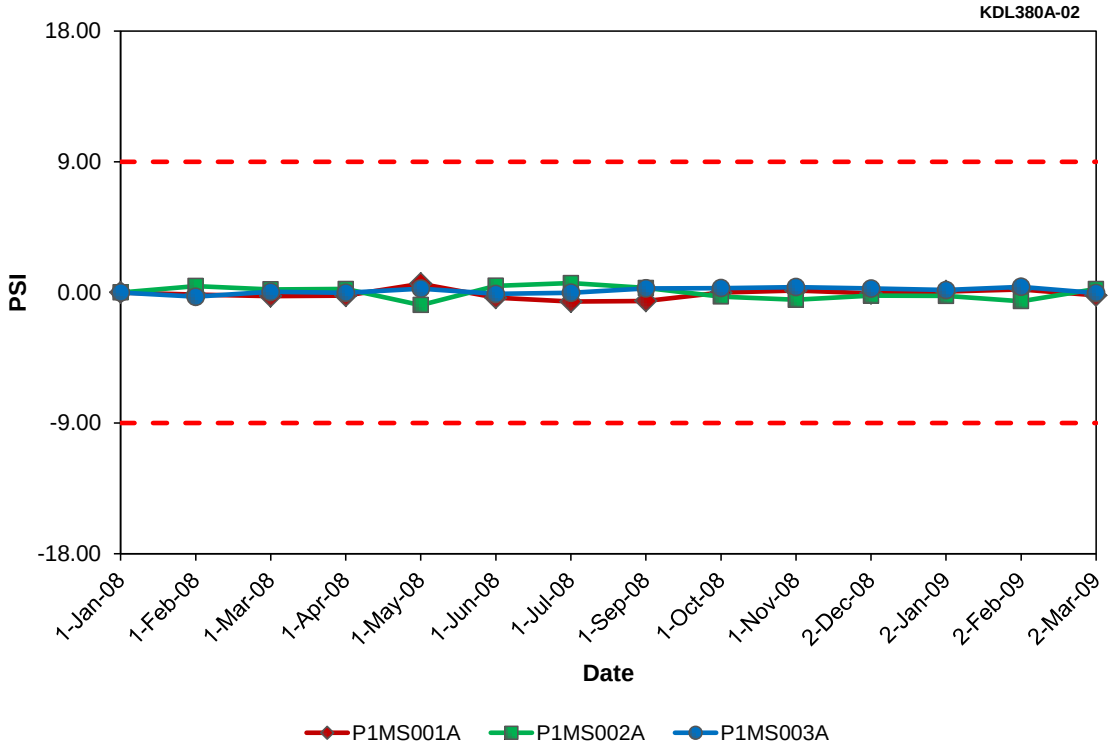



**Figure F.14 SG A OUTLET PRESSURE Steady-State Drift at North Anna Unit 1 (Cycle 20)**

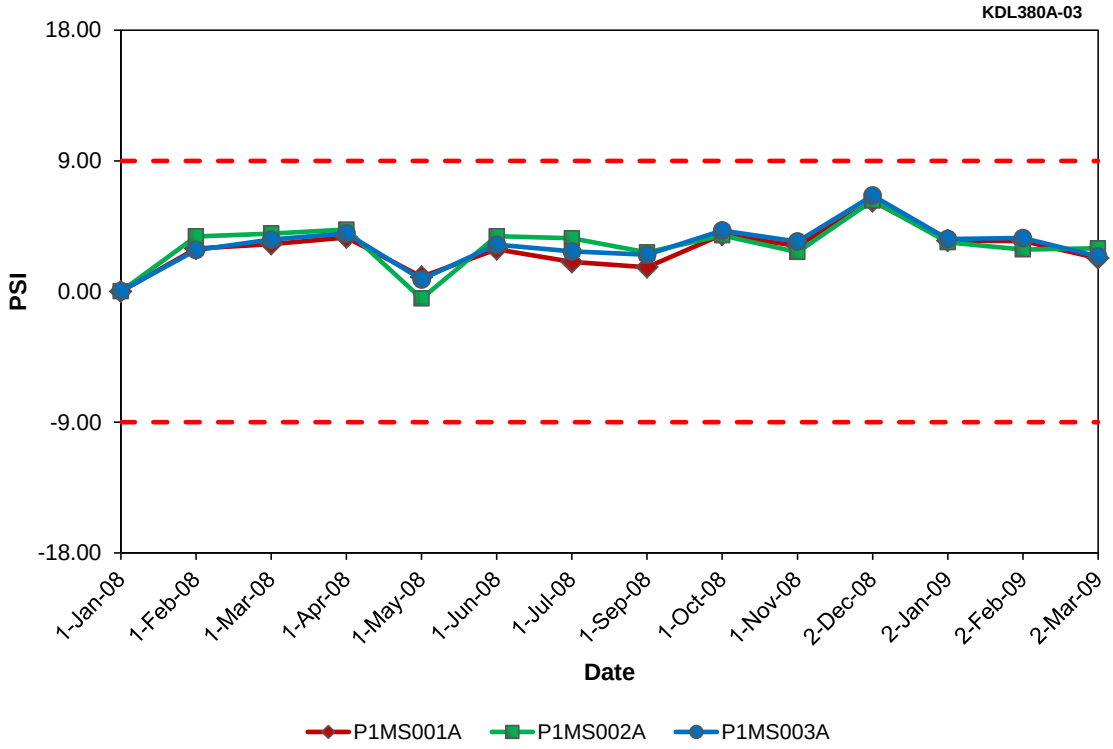



**Figure F.15 SG A OUTLET PRESSURE Steady-State Residual AAKR at North Anna Unit 1 (Cycle 20)**

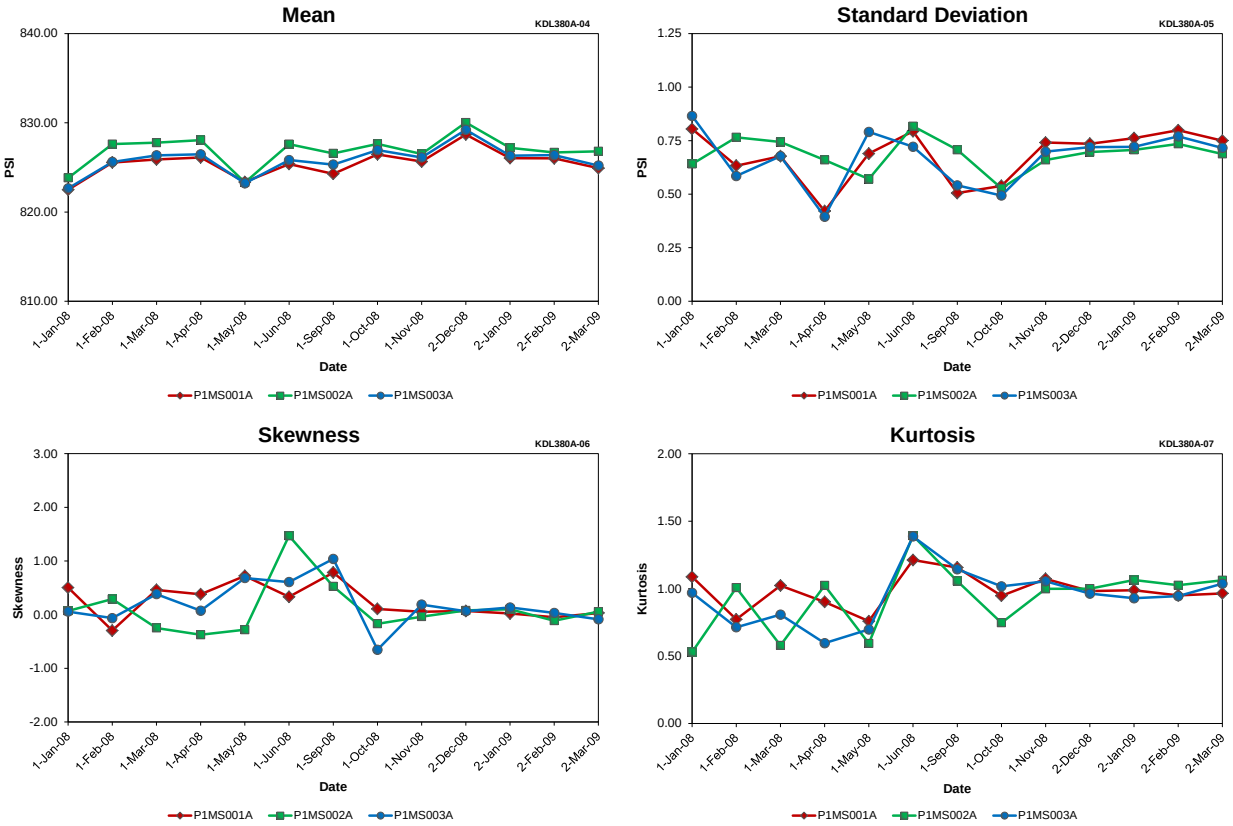



**Figure F.16 SG A OUTLET PRESSURE Data Quality Statistics at North Anna Unit 1 (Cycle 20)**

**Table F.5 SG A OUTLET PRESSURE Data Quality for North Anna Unit 1 (Cycle 20)**

| | Tag Names | | |
|---|---|---|---|
| **Result Type** | **P1MS001A** | **P1MS002A** | **P1MS003A** |
| Mean | 825.45 | 826.89 | 825.82 |
| Std. Dev. | 0.68 | 0.69 | 0.67 |
| Skewness | 0.24 | 0.10 | 0.19 |
| Kurtosis | 0.99 | 0.93 | 0.94 |

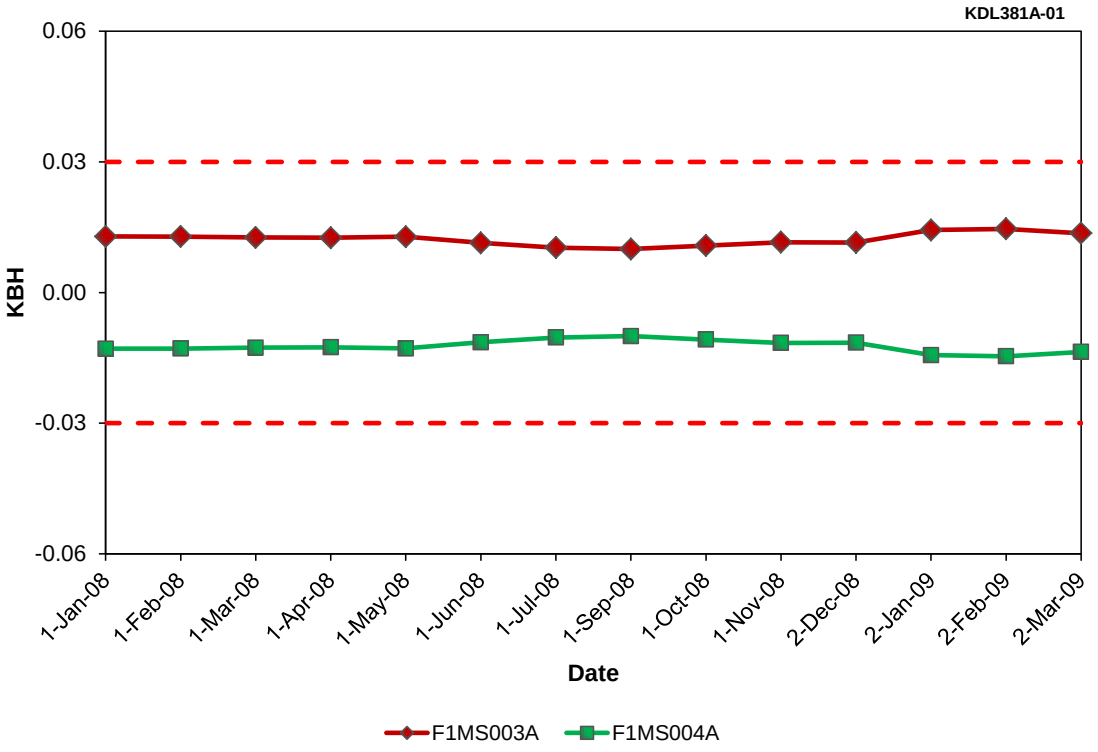



**Figure F.17 SG B STEAM FLOW Steady-State Deviation at North Anna Unit 1 (Cycle 20)**

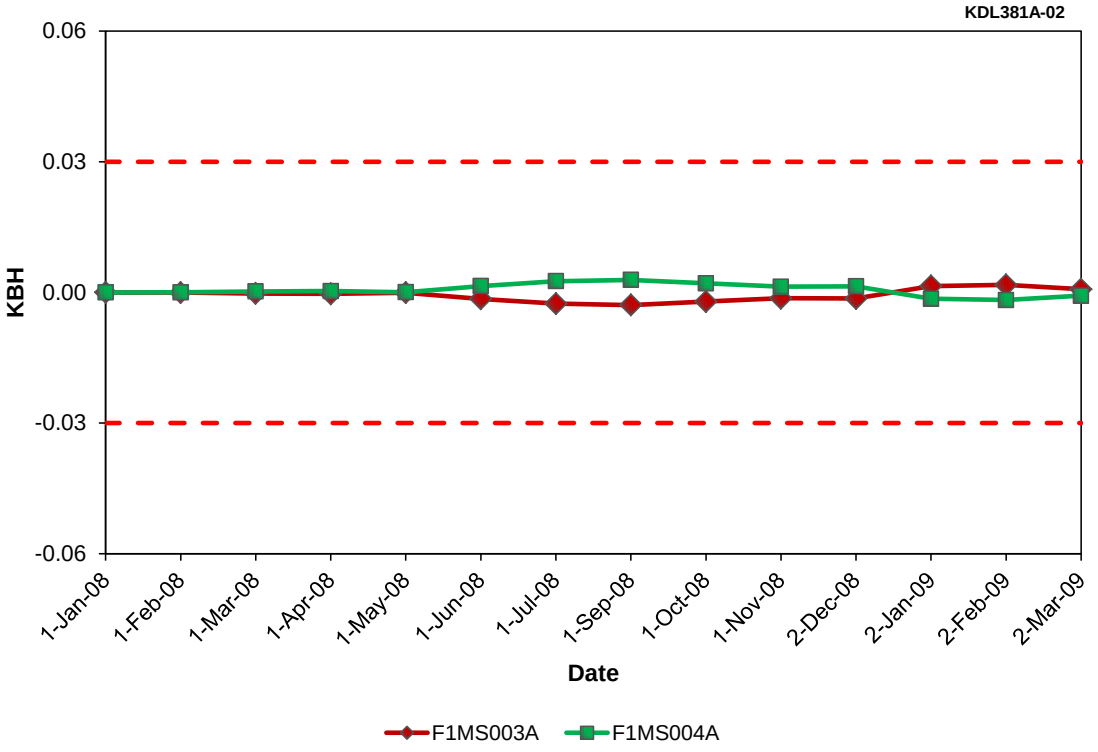



**Figure F.18 SG B STEAM FLOW Steady-State Drift at North Anna Unit 1 (Cycle 20)**

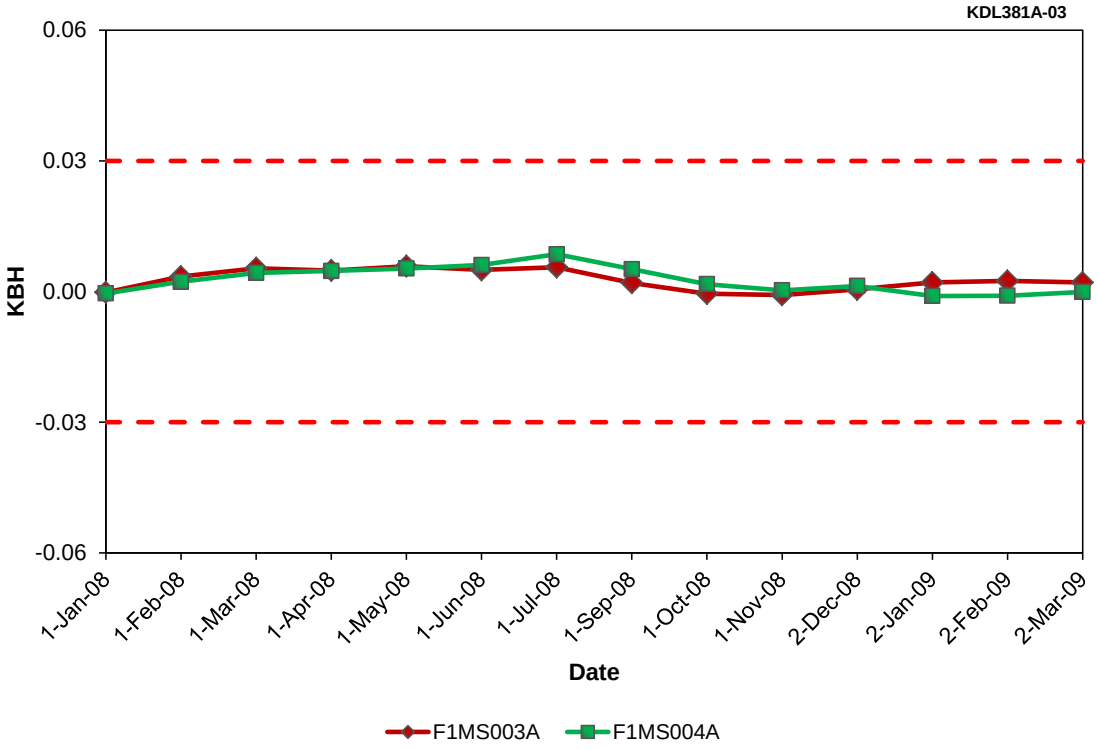



**Figure F.19 SG B STEAM FLOW Steady-State Residual AAKR at North Anna Unit 1 (Cycle 20)**

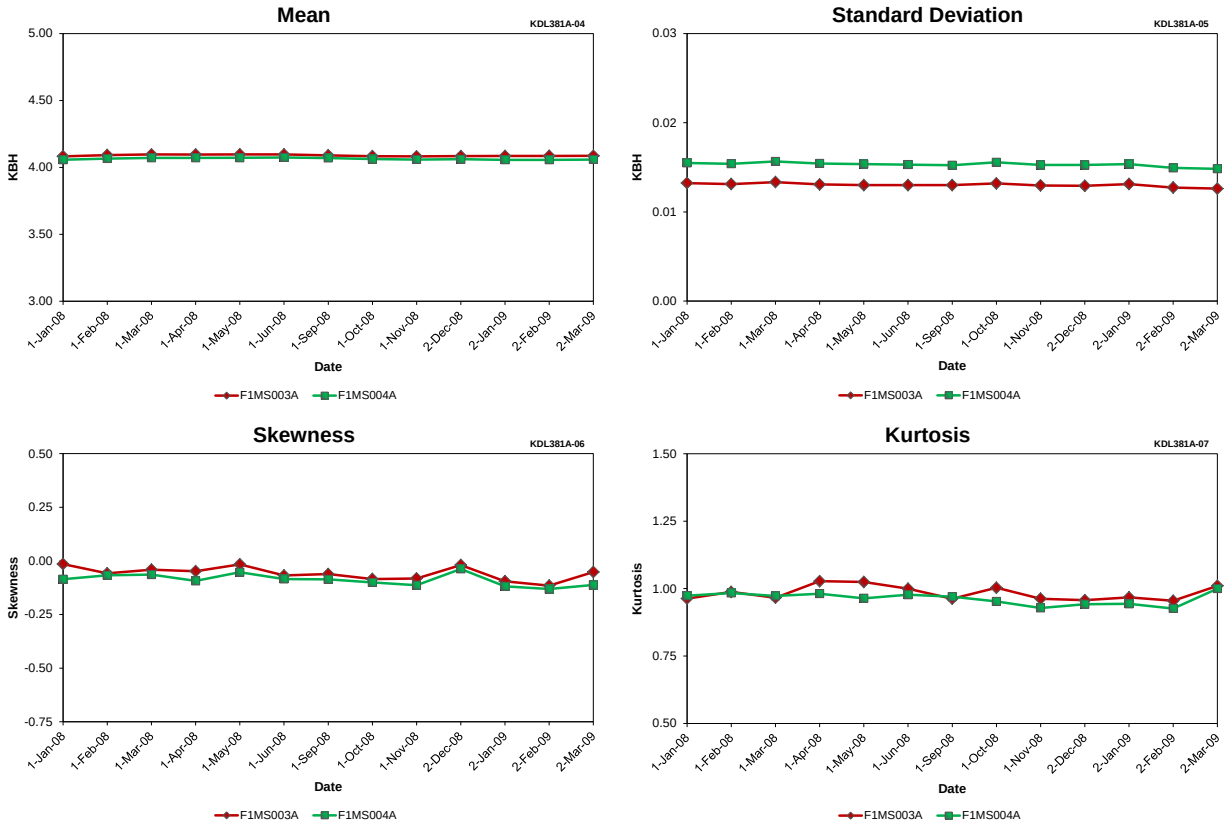



**Figure F.20 SG B STEAM FLOW Data Quality Statistics at North Anna Unit 1 (Cycle 20)**

**Table F.6 SG B STEAM FLOW Data Quality for North Anna Unit 1 (Cycle 20)**

| | Tag Names | |
|---|---|---|
| **Result Type** | **F1MS003A** | **F1MS004A** |
| Mean | 4.09 | 4.06 |
| Std. Dev. | 0.01 | 0.02 |
| Skewness | -0.06 | -0.09 |
| Kurtosis | 0.98 | 0.96 |

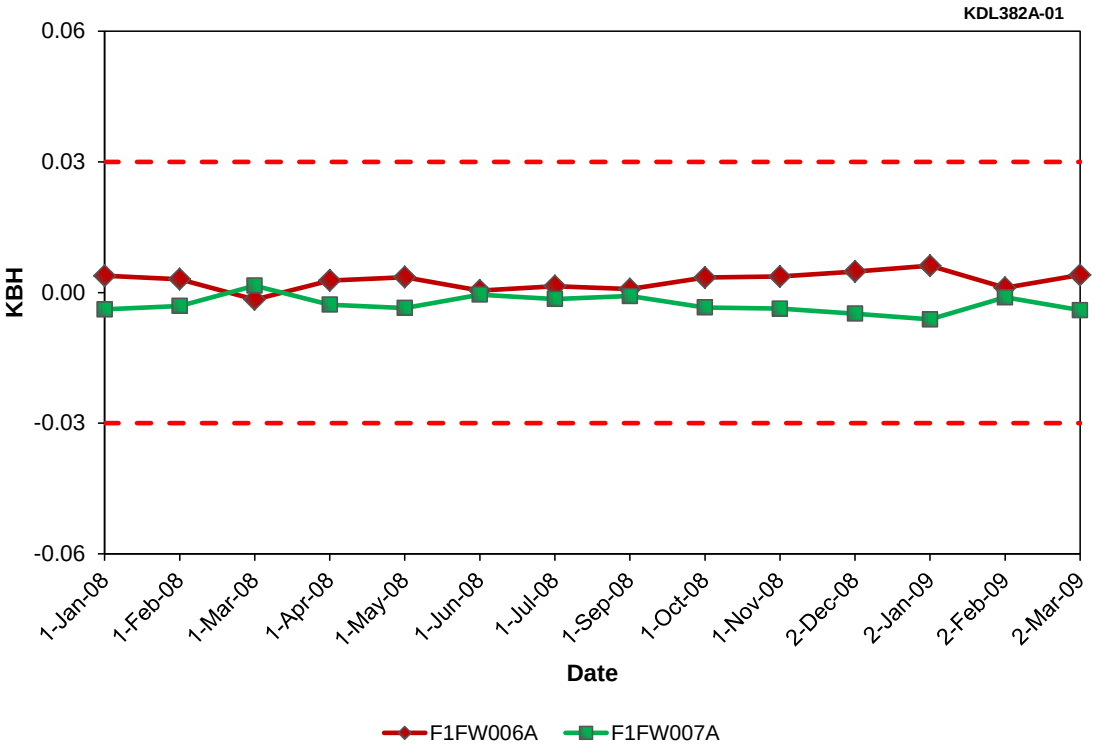



**Figure F.21 FW FLOW TO SG B Steady-State Deviation at North Anna Unit 1 (Cycle 20)**

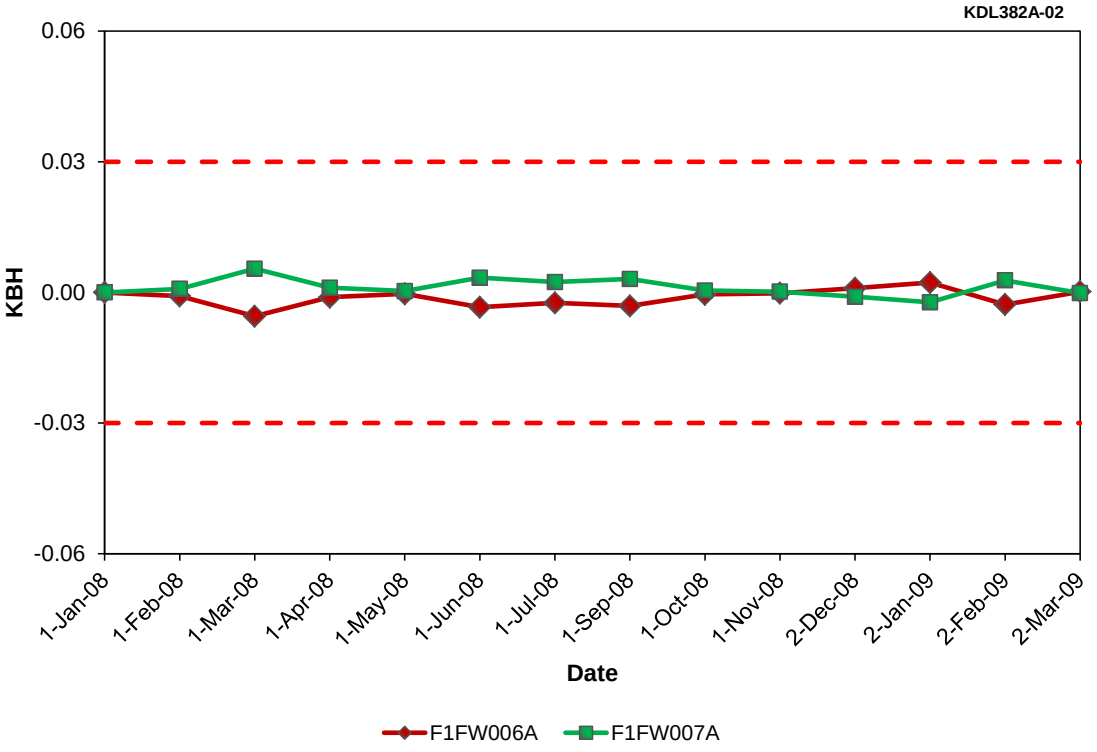



**Figure F.22 FW FLOW TO SG B Steady-State Drift at North Anna Unit 1 (Cycle 20)**

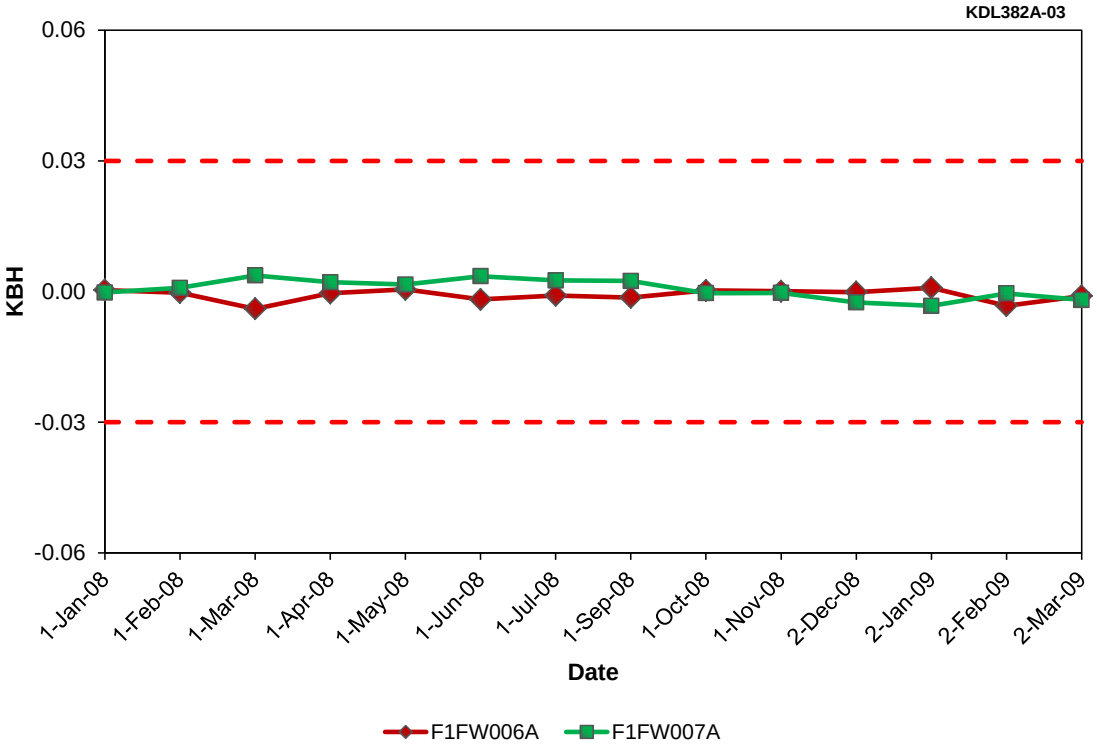



**Figure F.23 FW FLOW TO SG B Steady-State Residual AAKR at North Anna Unit 1 (Cycle 20)**

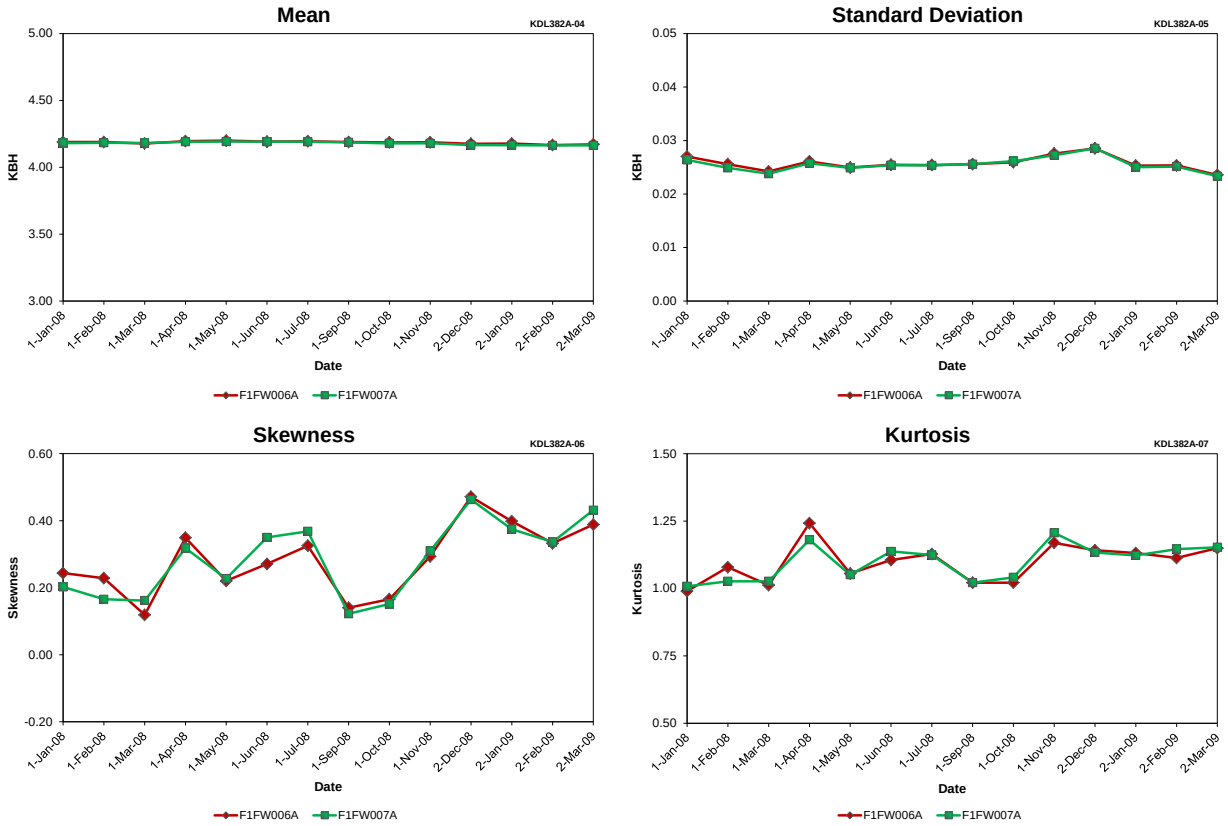



**Figure F.24 FW FLOW TO SG B Data Quality Statistics at North Anna Unit 1 (Cycle 20)**

**Table F.7 FW FLOW TO SG B Data Quality for North Anna Unit 1 (Cycle 20)**

| Result Type | Tag Names | |
|---|---|---|
| | F1FW006A | F1FW007A |
| Mean | 4.19 | 4.18 |
| Std. Dev. | 0.03 | 0.03 |
| Skewness | 0.28 | 0.28 |
| Kurtosis | 1.10 | 1.10 |

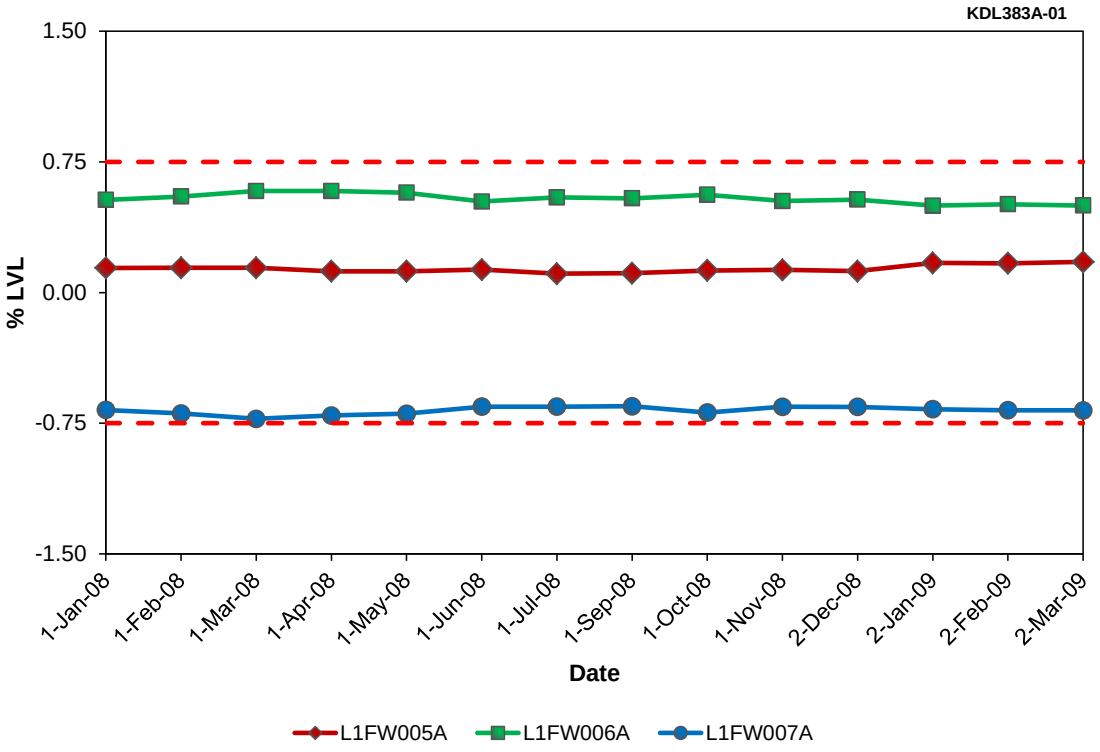



**Figure F.25 SG B LEVEL Steady-State Deviation at North Anna Unit 1 (Cycle 20)**

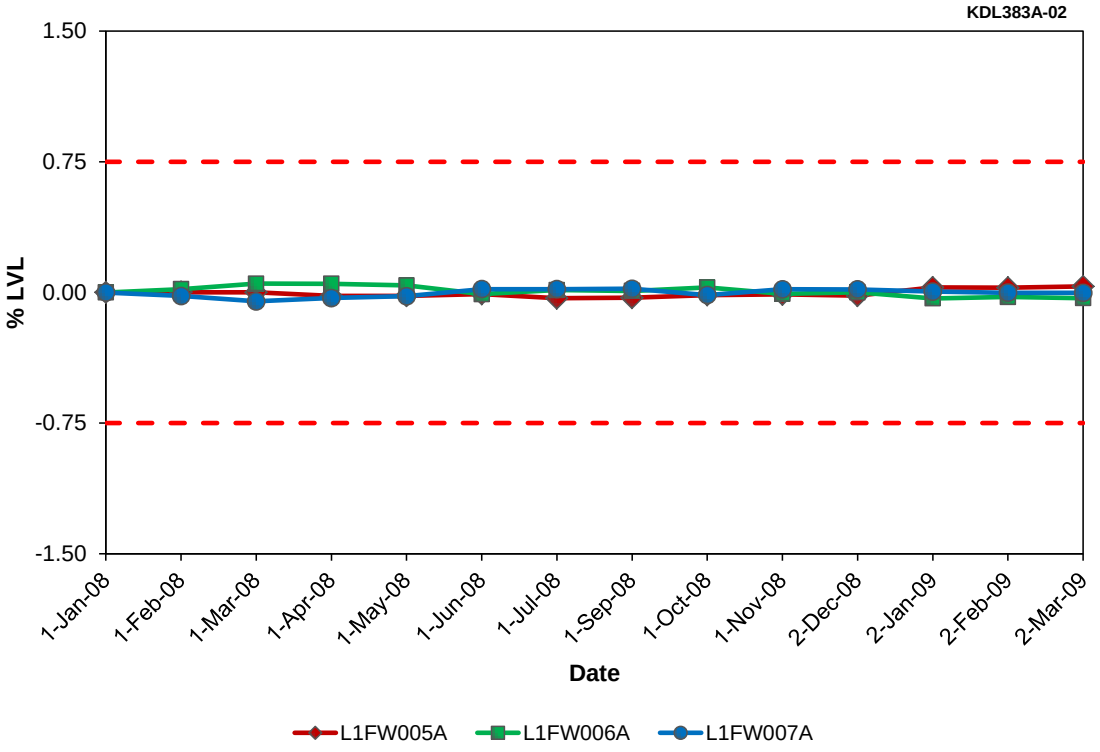



**Figure F.26 SG B LEVEL Steady-State Drift at North Anna Unit 1 (Cycle 20)**

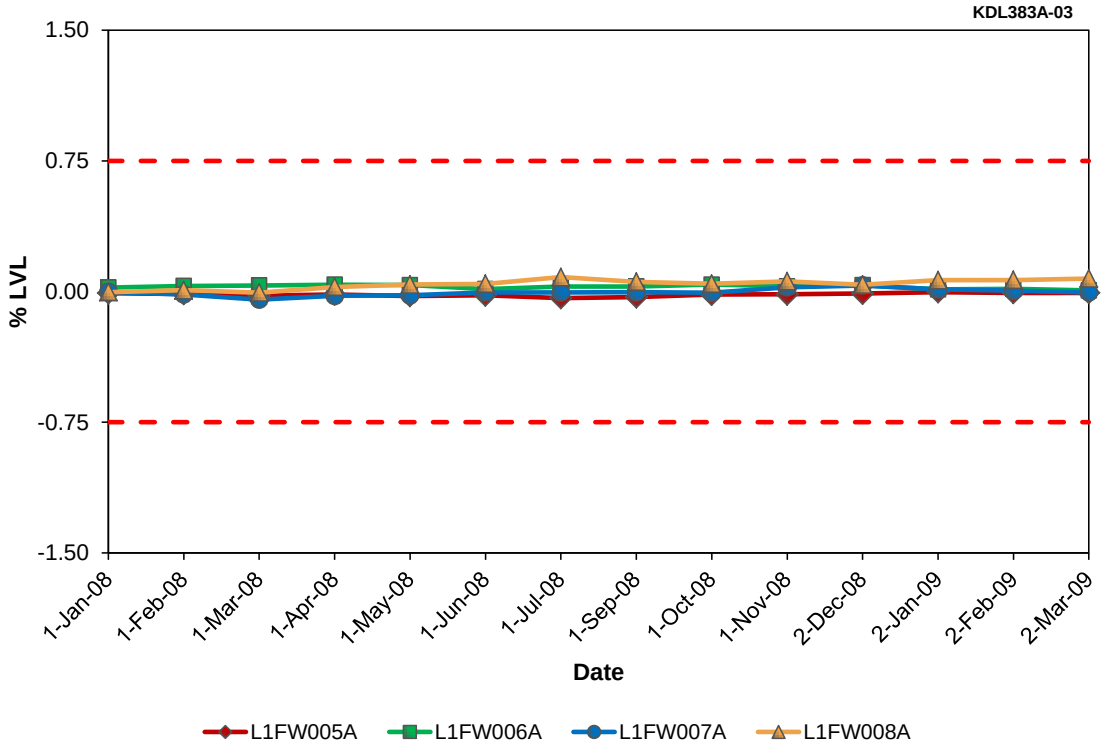



**Figure F.27 SG B LEVEL Steady-State Residual AAKR at North Anna Unit 1 (Cycle 20)**

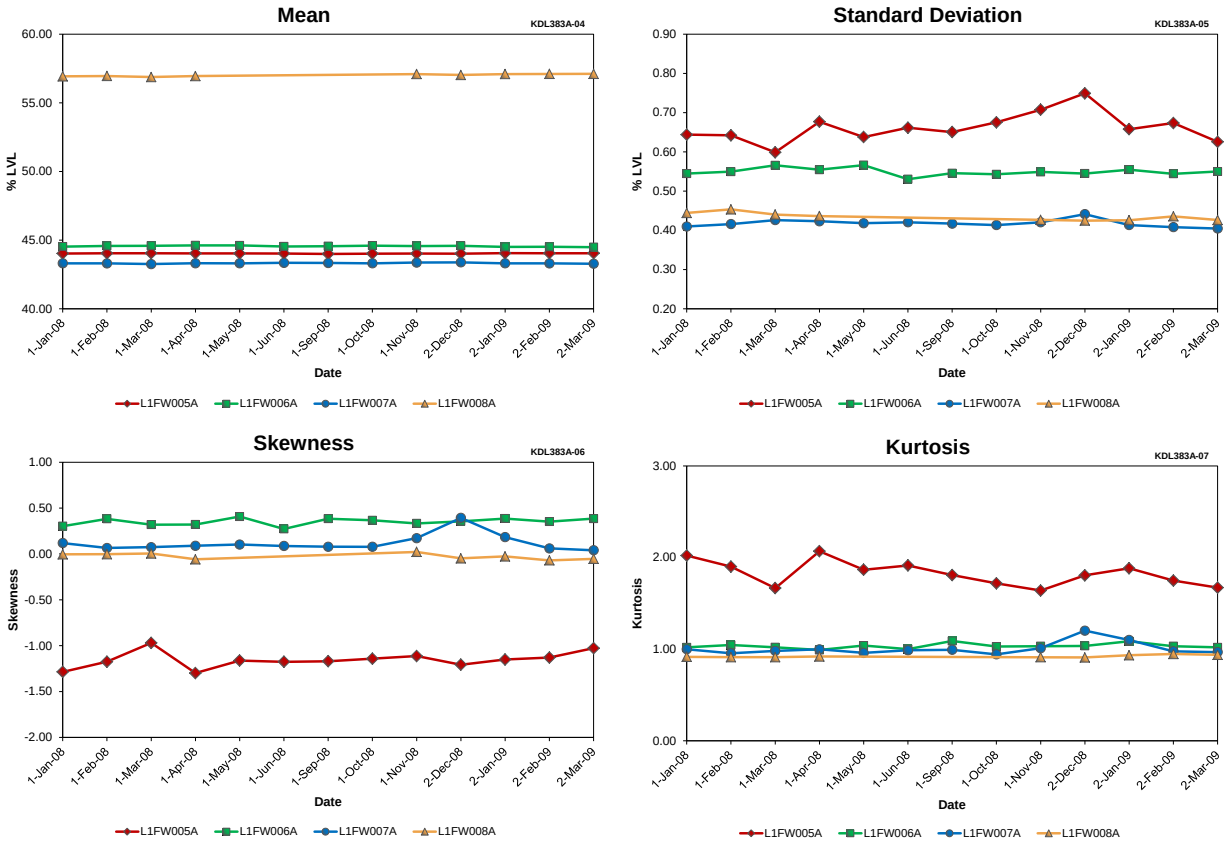



**Figure F.28 SG B LEVEL Data Quality Statistics at North Anna Unit 1 (Cycle 20)**

**Table F.8 SG B LEVEL Data Quality for North Anna Unit 1 (Cycle 20)**

| | Tag Names | | | |
|---|---|---|---|---|
| **Result Type** | **L1FW005A** | **L1FW006A** | **L1FW007A** | **L1FW008A** |
| Mean | 44.03 | 44.56 | 43.32 | 57.01 |
| Std. Dev. | 0.66 | 0.55 | 0.42 | 0.43 |
| Skewness | -1.15 | 0.35 | 0.12 | -0.03 |
| Kurtosis | 1.82 | 1.03 | 1.01 | 0.92 |

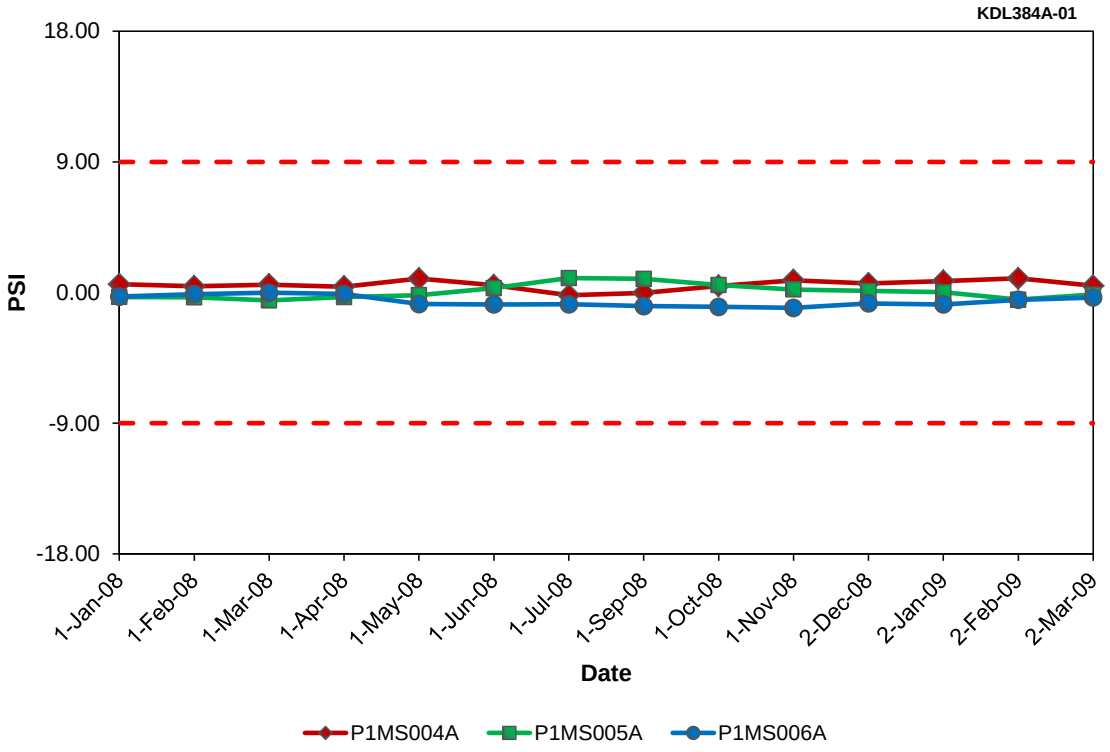



**Figure F.29 SG B OUTLET PRESSURE Steady-State Deviation at North Anna Unit 1 (Cycle 20)**

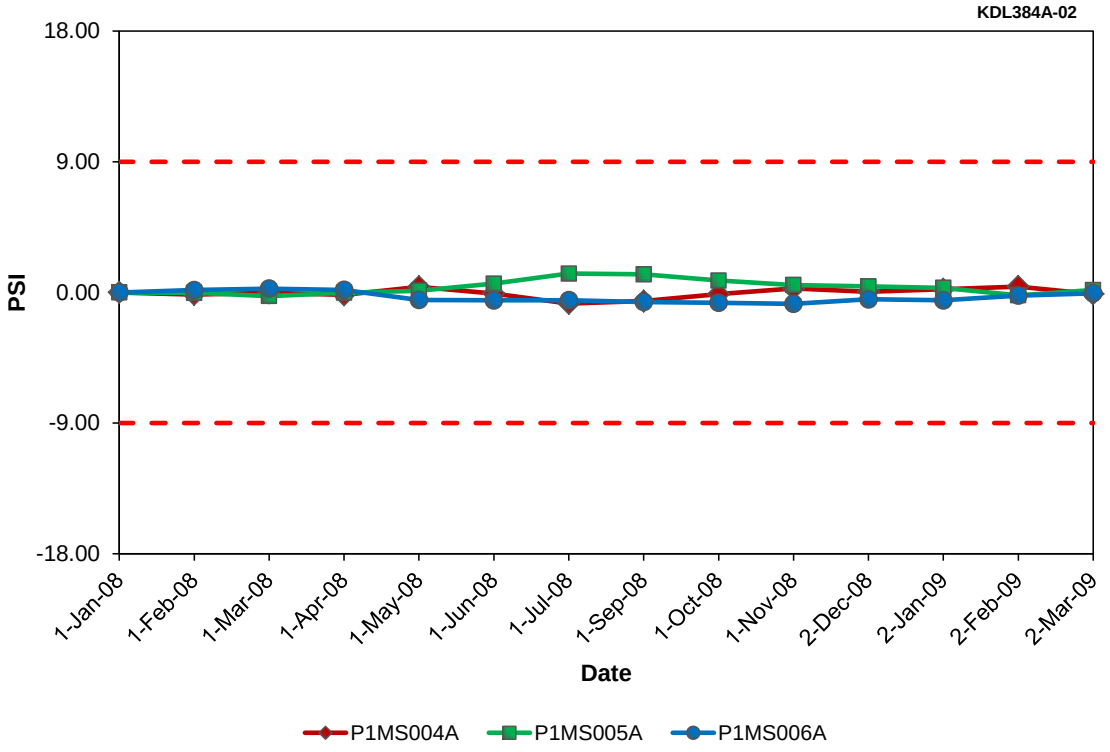



**Figure F.30 SG B OUTLET PRESSURE Steady-State Drift at North Anna Unit 1 (Cycle 20)**

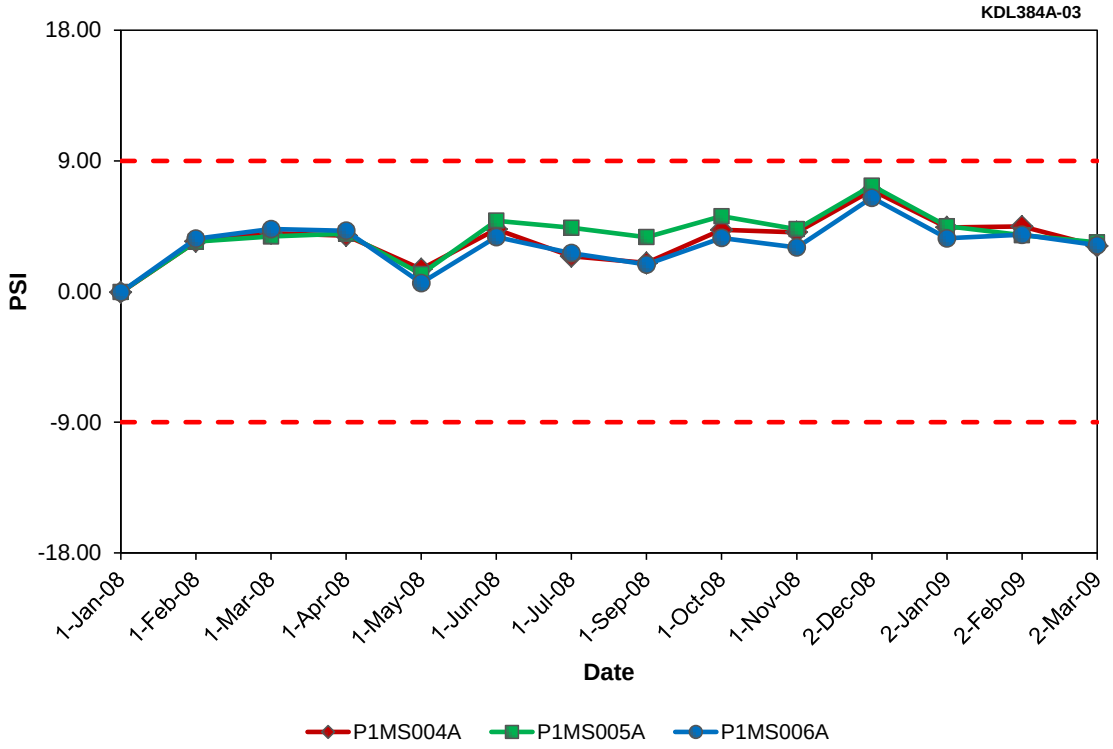



**Figure F.31 SG B OUTLET PRESSURE Steady-State Residual AAKR at North Anna Unit 1 (Cycle 20)**

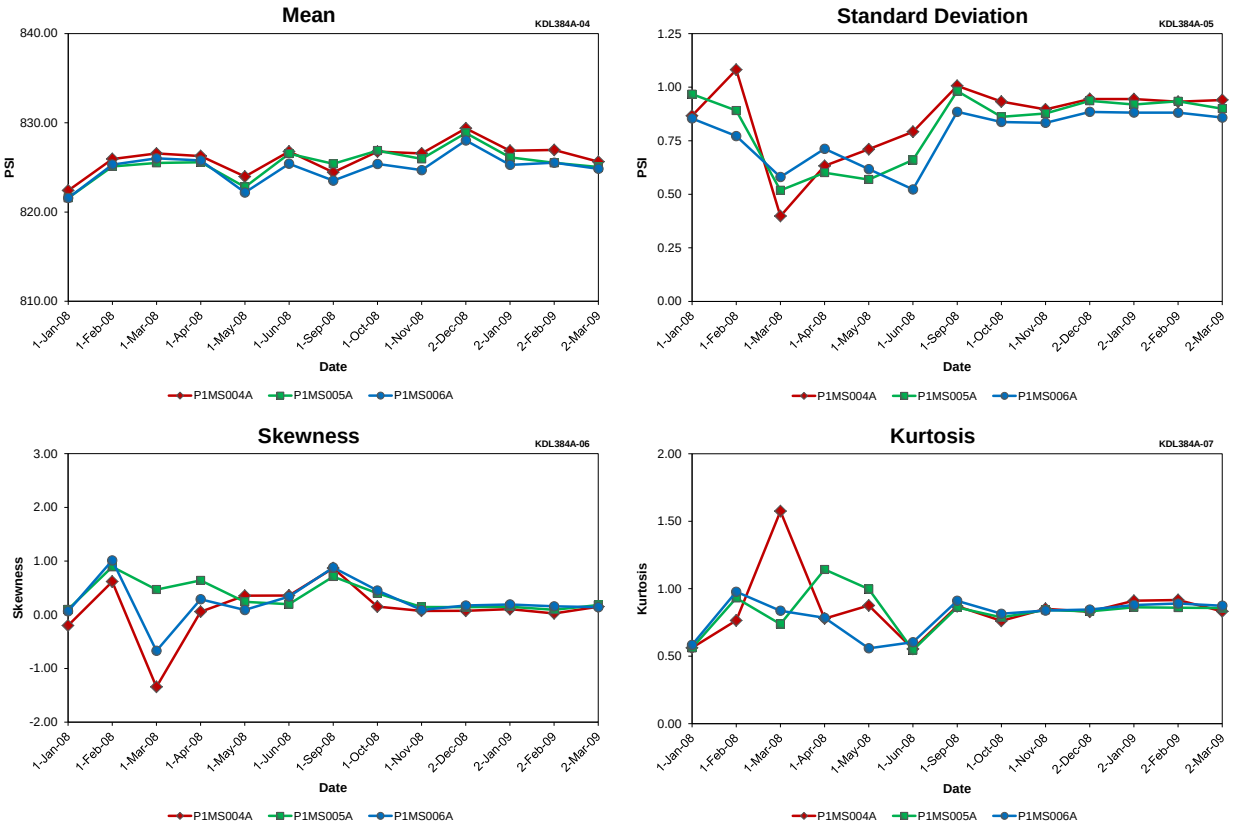



**Figure F.32 SG B OUTLET PRESSURE Data Quality Statistics at North Anna Unit 1 (Cycle 20)**

**Table F.9 SG B OUTLET PRESSURE Data Quality for North Anna Unit 1 (Cycle 20)**

| | Tag Names | | |
|---|---|---|---|
| **Result Type** | **P1MS004A** | **P1MS005A** | **P1MS006A** |
| Mean | 826.05 | 825.45 | 824.89 |
| Std. Dev. | 0.85 | 0.82 | 0.78 |
| Skewness | 0.10 | 0.34 | 0.25 |
| Kurtosis | 0.85 | 0.83 | 0.80 |

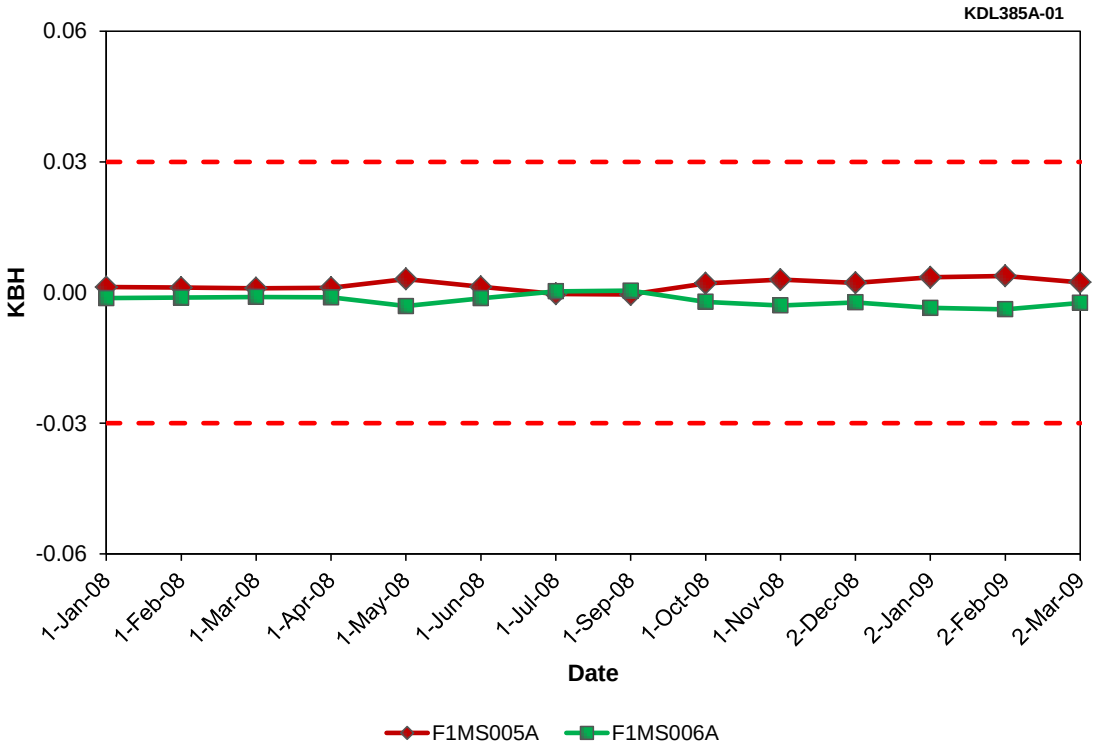



**Figure F.33 SG C STEAM FLOW Steady-State Deviation at North Anna Unit 1 (Cycle 20)**

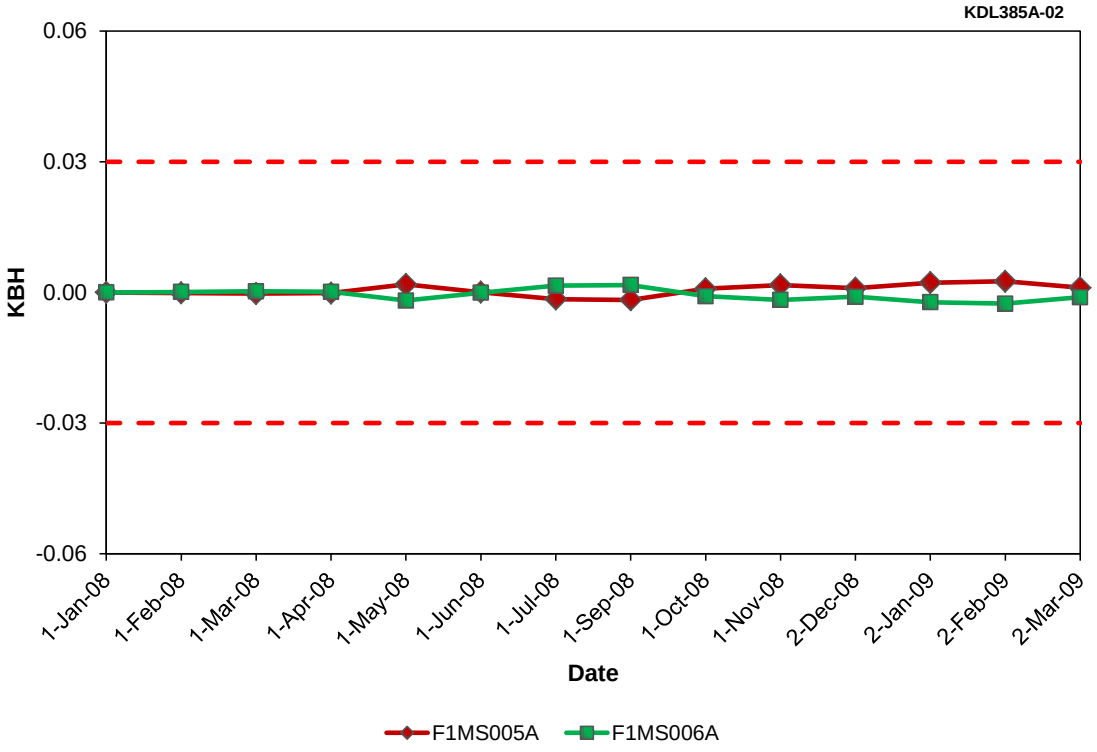



**Figure F.34 SG C STEAM FLOW Steady-State Drift at North Anna Unit 1 (Cycle 20)**

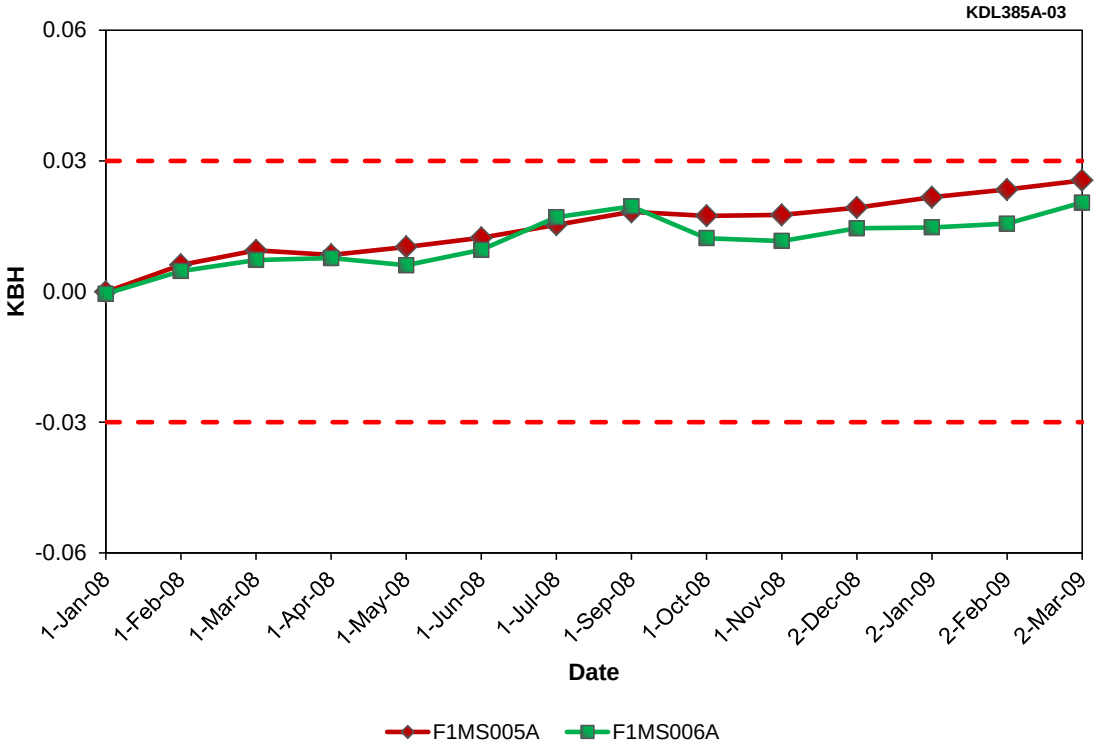



**Figure F.35 SG C STEAM FLOW Steady-State Residual AAKR at North Anna Unit 1 (Cycle 20)**

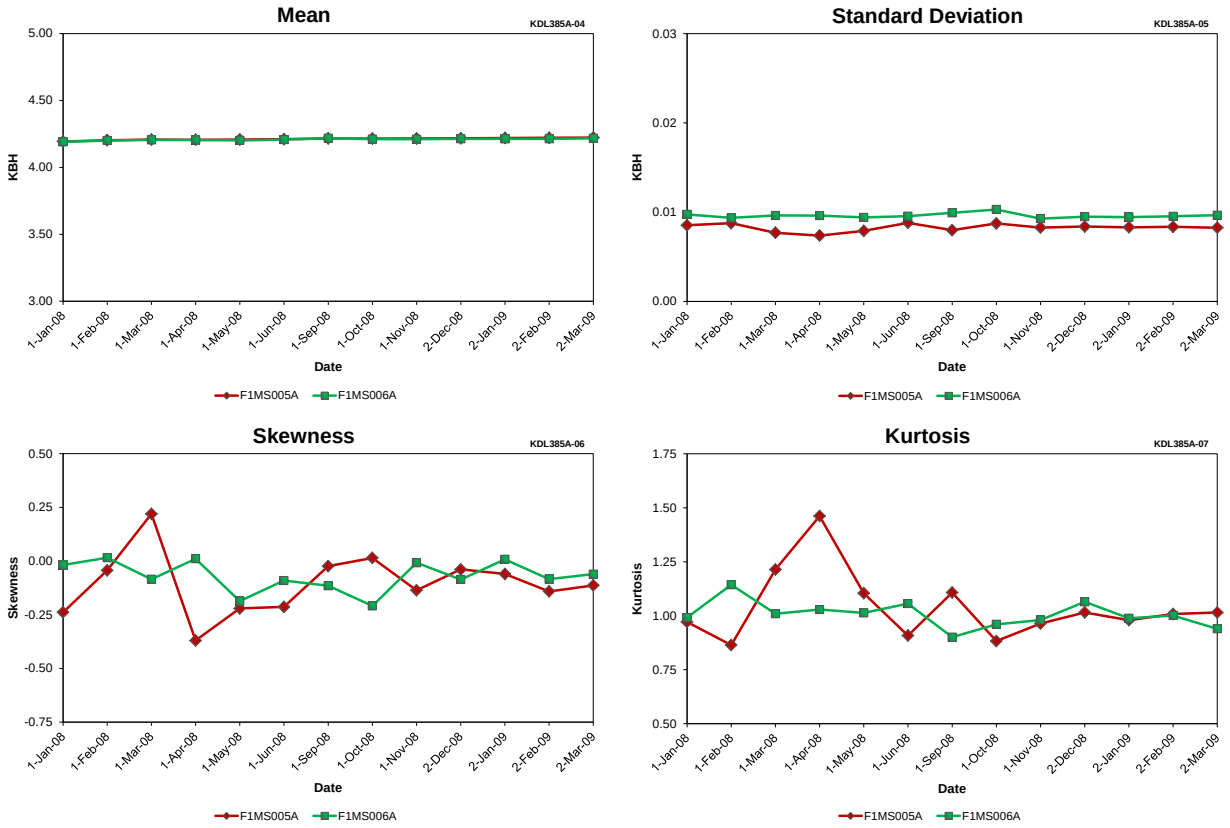



**Figure F.36 SG C STEAM FLOW Data Quality Statistics at North Anna Unit 1 (Cycle 20)**

**Table F.10 SG C STEAM FLOW Data Quality for North Anna Unit 1 (Cycle 20)**

| Result Type | Tag Names | |
|---|---|---|
| | F1MS005A | F1MS006A |
| Mean | 4.21 | 4.21 |
| Std. Dev. | 0.01 | 0.01 |
| Skewness | -0.10 | -0.07 |
| Kurtosis | 1.04 | 1.01 |

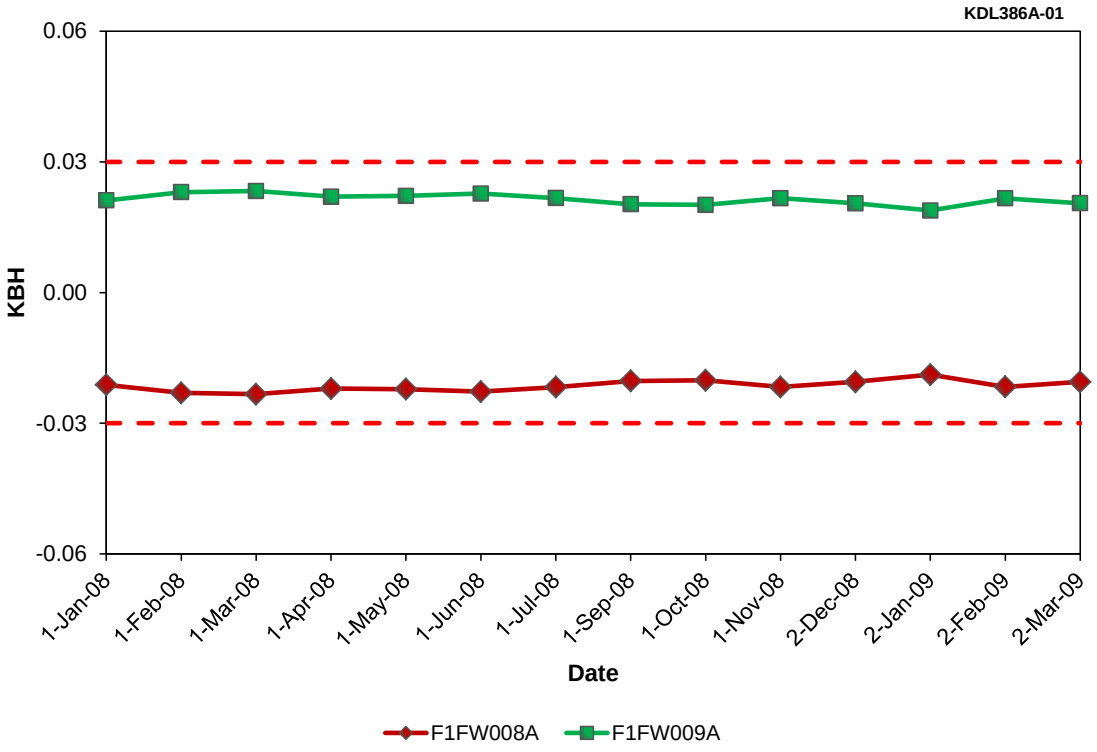



**Figure F.37 FW FLOW TO SG C Steady-State Deviation at North Anna Unit 1 (Cycle 20)**

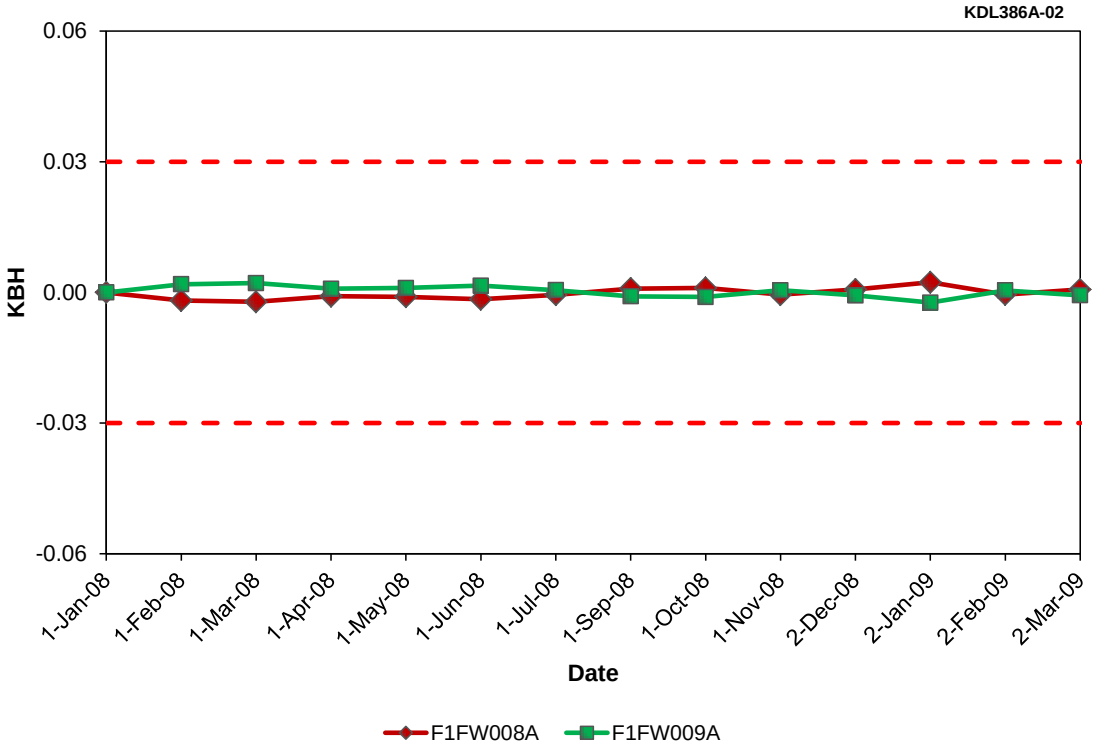



**Figure F.38 FW FLOW TO SG C Steady-State Drift at North Anna Unit 1 (Cycle 20)**

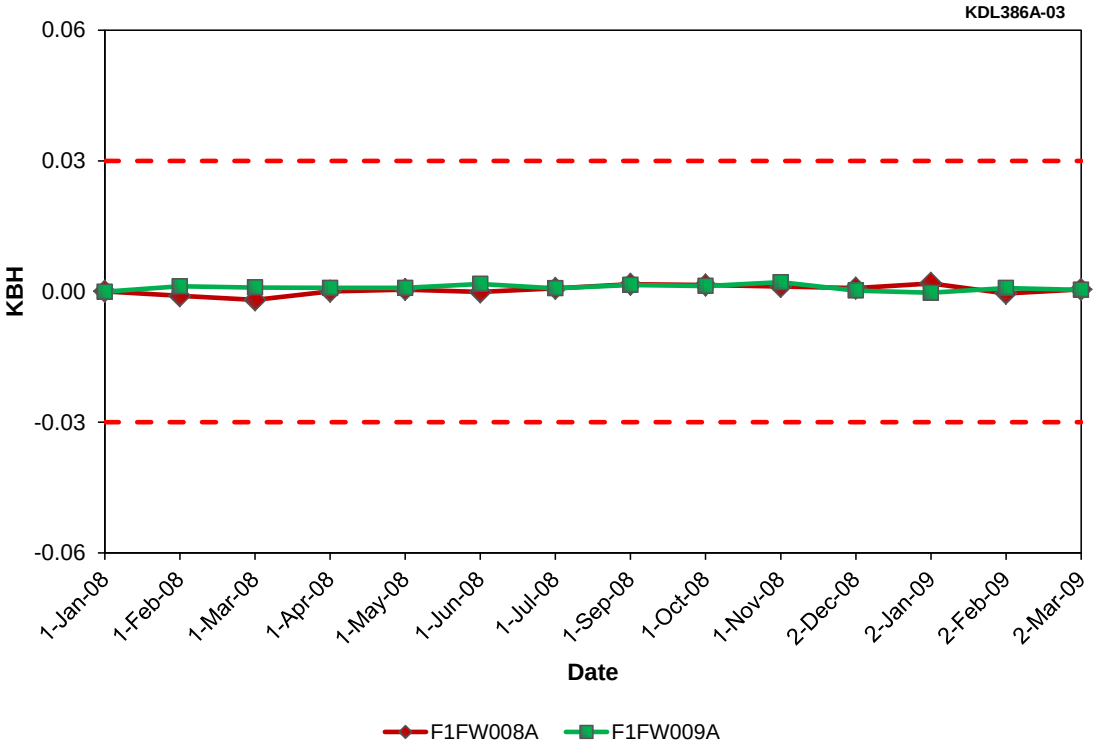



**Figure F.39 FW FLOW TO SG C Steady-State Residual AAKR at North Anna Unit 1 (Cycle 20)**

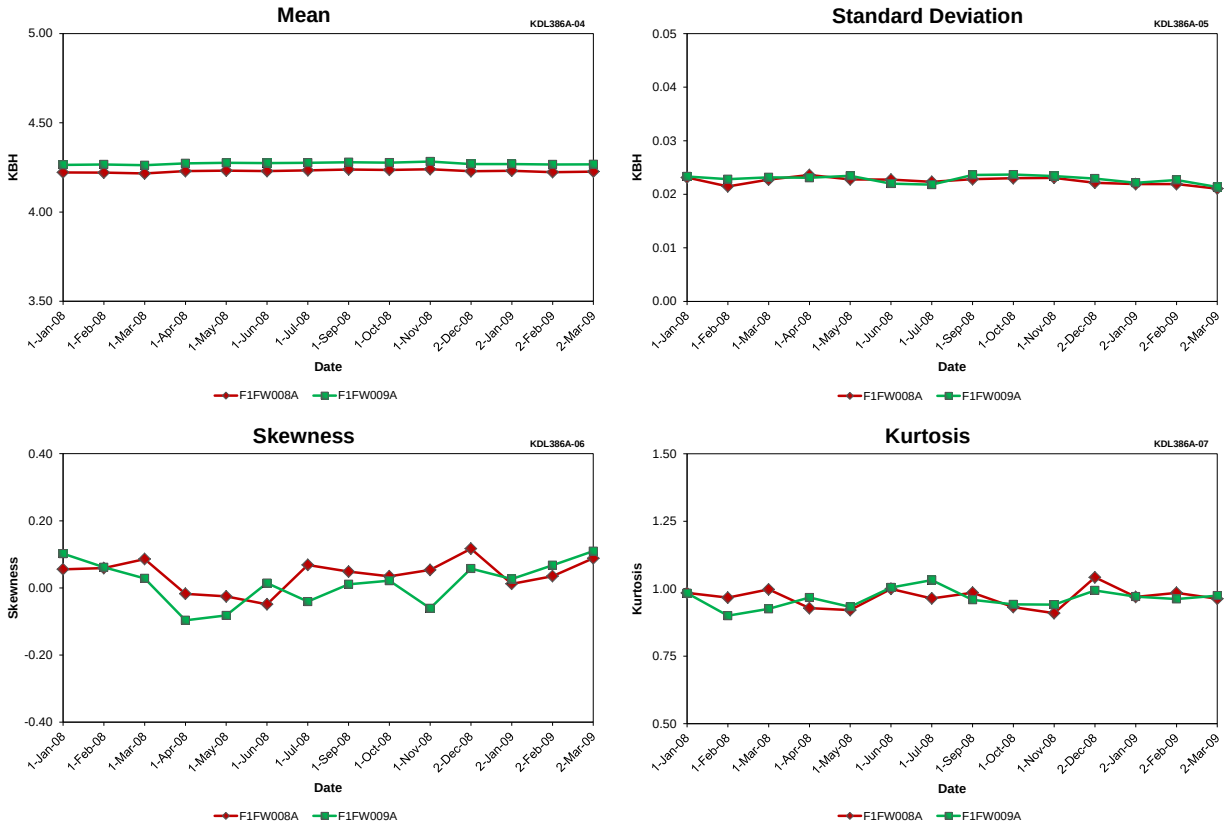



**Figure F.40 FW FLOW TO SG C Data Quality Statistics at North Anna Unit 1 (Cycle 20)**

**Table F.11 FW FLOW TO SG C Data Quality for North Anna Unit 1 (Cycle 20)**

| Result Type | Tag Names | |
|---|---|---|
| | F1FW008A | F1FW009A |
| Mean | 4.23 | 4.27 |
| Std. Dev. | 0.02 | 0.02 |
| Skewness | 0.04 | 0.02 |
| Kurtosis | 0.97 | 0.96 |

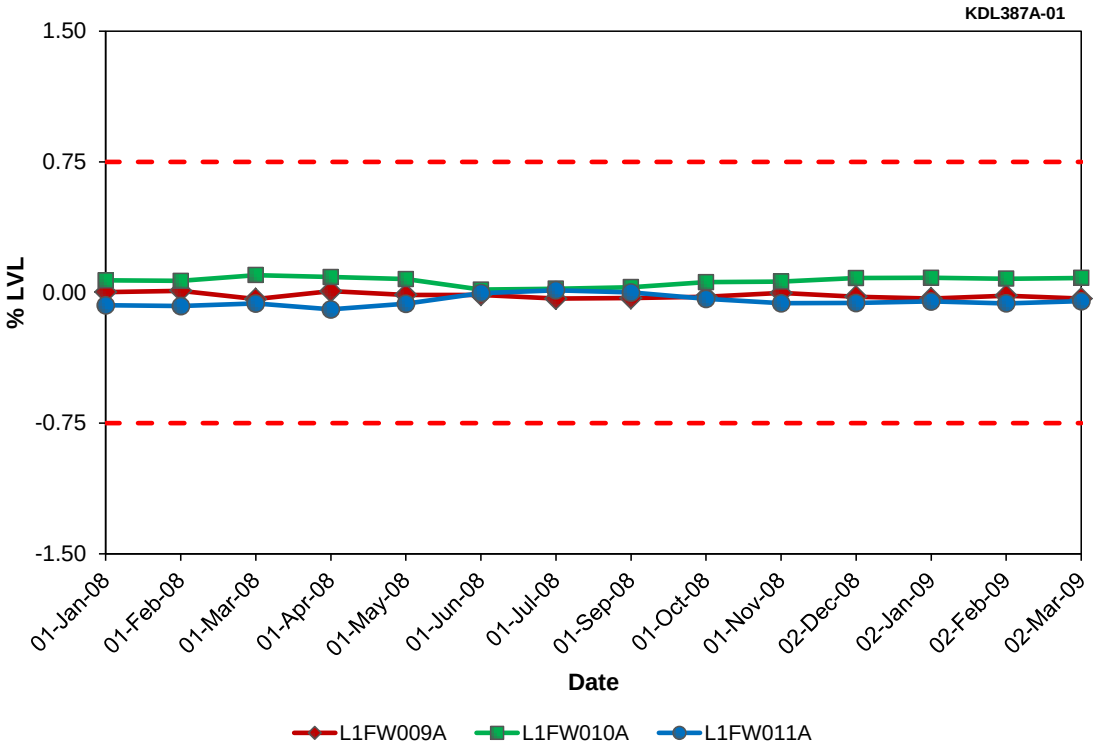



**Figure F.41 SG C LEVEL Steady-State Deviation at North Anna Unit 1 (Cycle 20)**

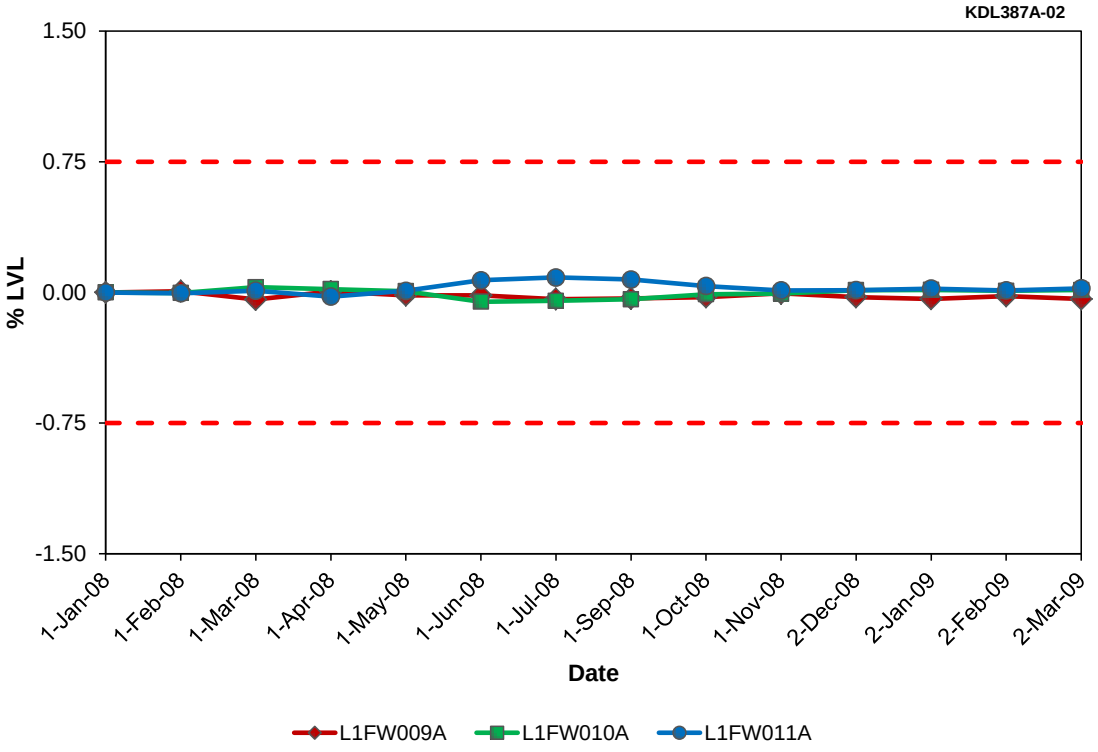



**Figure F.42 SG C LEVEL Steady-State Drift at North Anna Unit 1 (Cycle 20)**

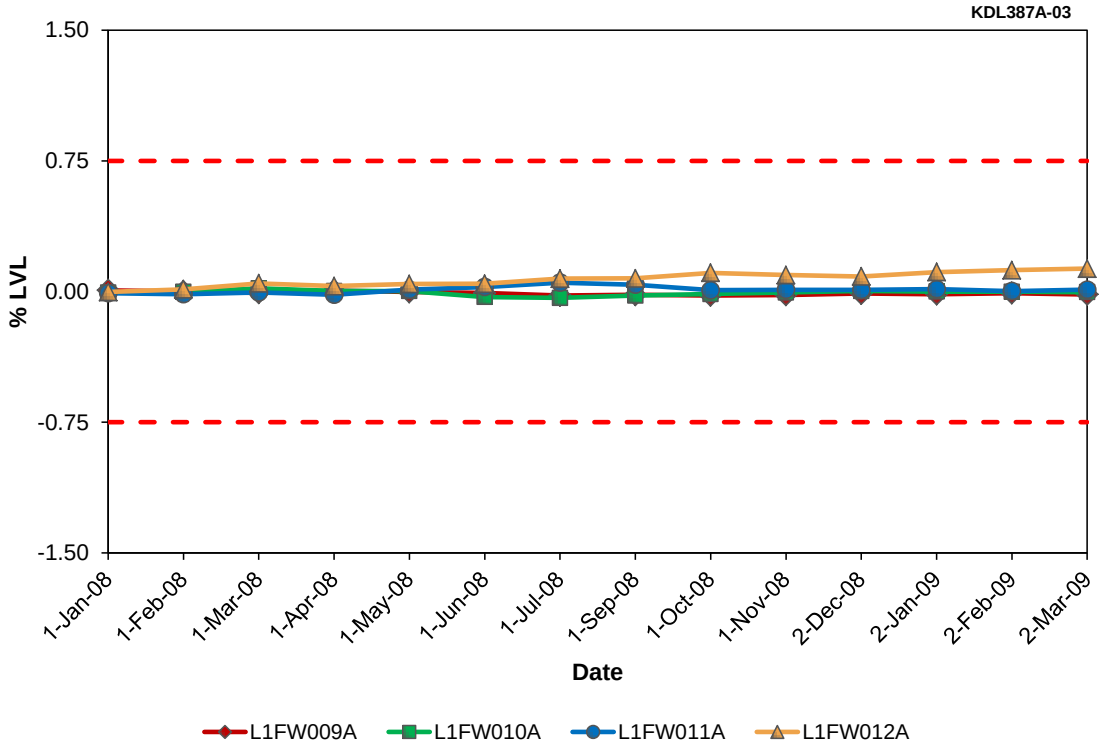



**Figure F.43 SG C LEVEL Steady-State Residual AAKR at North Anna Unit 1 (Cycle 20)**

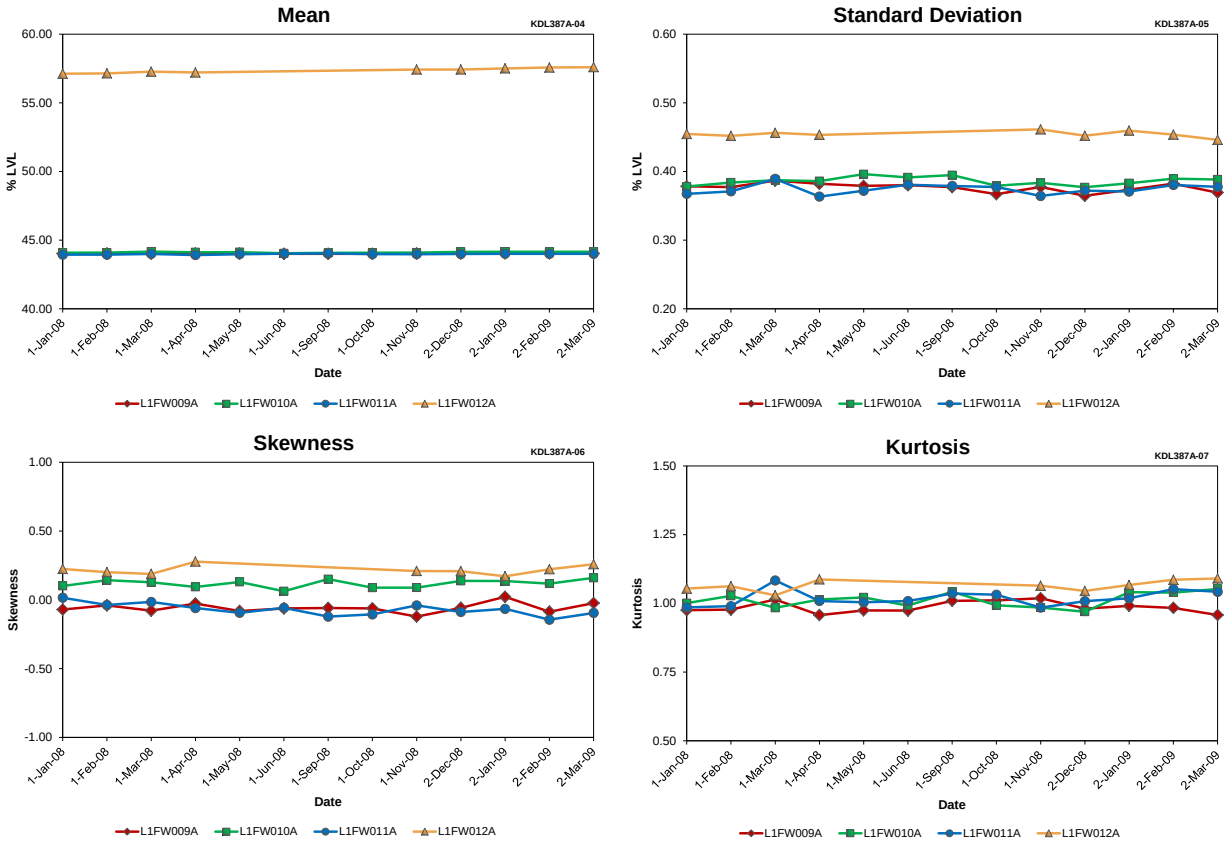



**Figure F.44 SG C LEVEL Data Quality Statistics at North Anna Unit 1 (Cycle 20)**

**Table F.12 SG C LEVEL Data Quality for North Anna Unit 1 (Cycle 20)**

| | Tag Names | | | |
|---|---|---|---|---|
| **Result Type** | **L1FW009A** | **L1FW010A** | **L1FW011A** | **L1FW012A** |
| Mean | 44.02 | 44.12 | 43.98 | 57.36 |
| Std. Dev. | 0.38 | 0.39 | 0.37 | 0.45 |
| Skewness | -0.06 | 0.12 | -0.07 | 0.22 |
| Kurtosis | 0.99 | 1.01 | 1.02 | 1.06 |

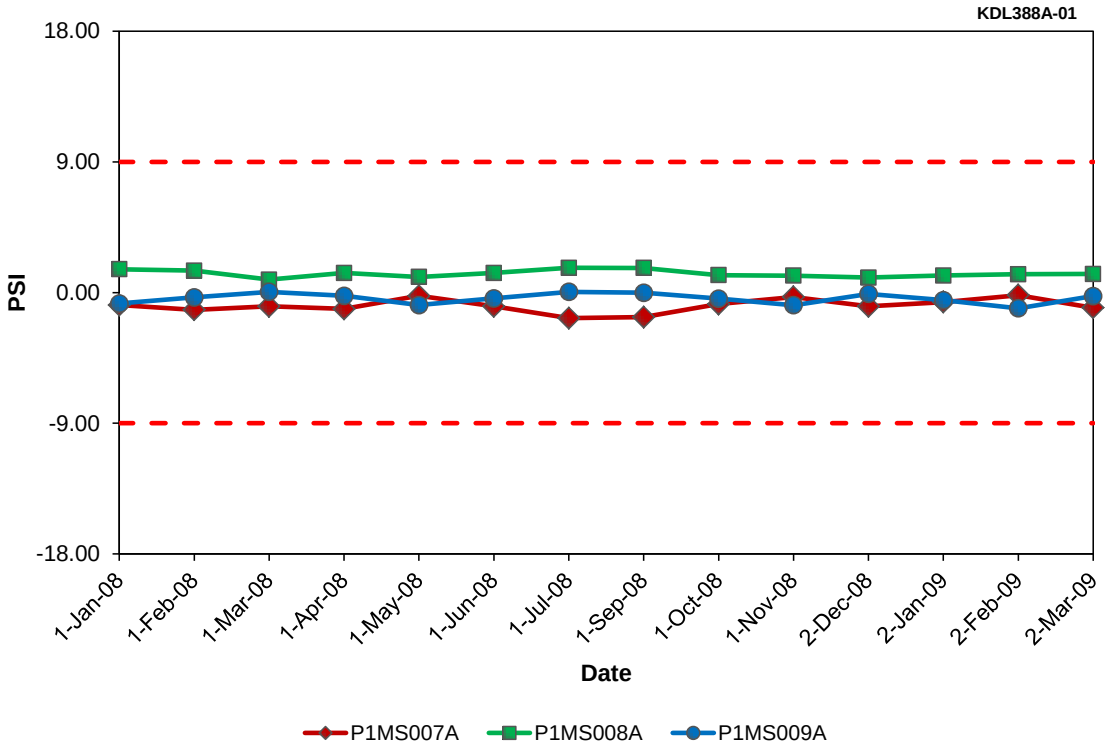



**Figure F.45 SG C OUTLET PRESSURE Steady-State Deviation at North Anna Unit 1 (Cycle 20)**

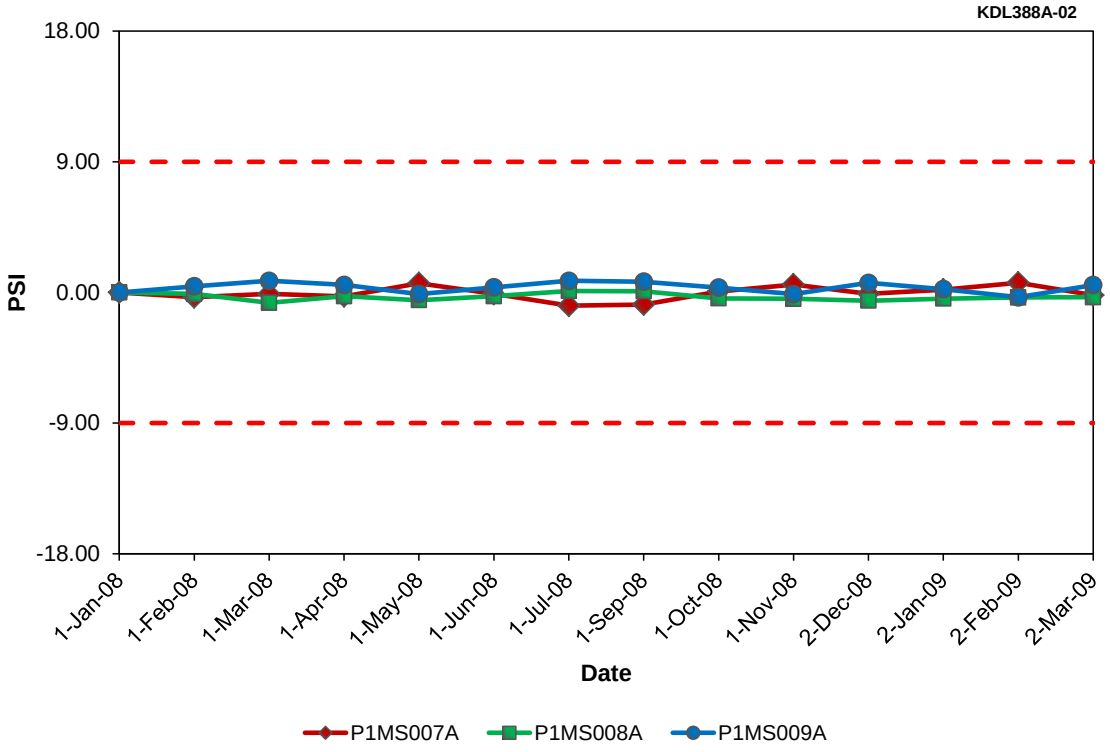



**Figure F.46 SG C OUTLET PRESSURE Steady-State Drift at North Anna Unit 1 (Cycle 20)**

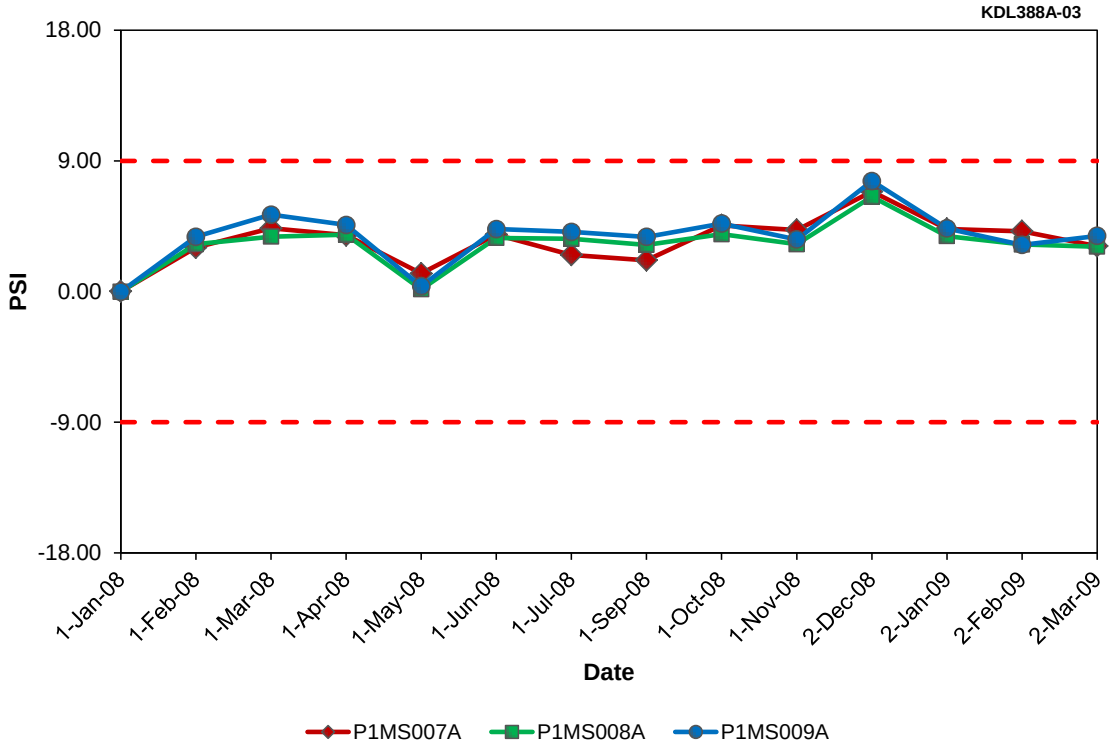



**Figure F.47 SG C OUTLET PRESSURE Steady-State Residual AAKR at North Anna Unit 1 (Cycle 20)**

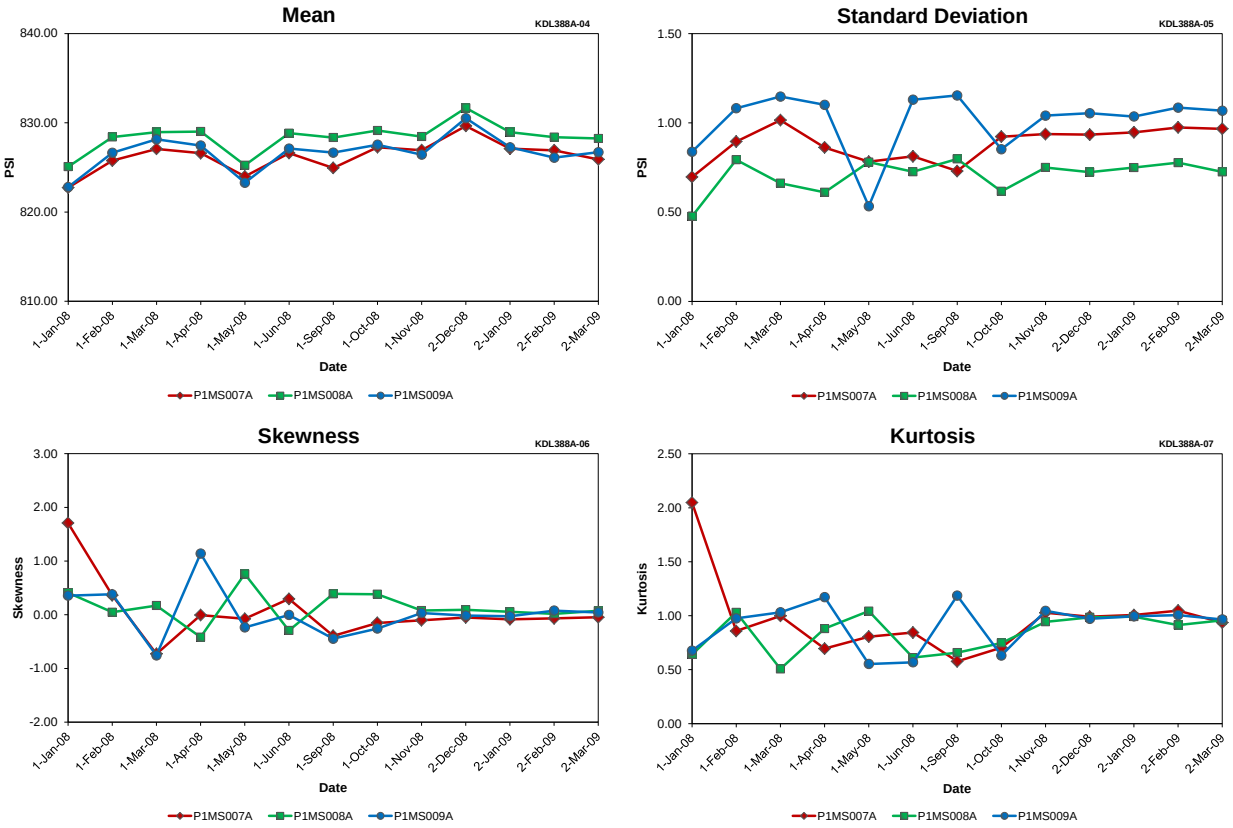



**Figure F.48 SG C OUTLET PRESSURE Data Quality Statistics at North Anna Unit 1 (Cycle 20)**

**Table F.13 SG C OUTLET PRESSURE Data Quality for North Anna Unit 1 (Cycle 20)**

| | Tag Names | | |
|---|---|---|---|
| **Result Type** | **P1MS007A** | **P1MS008A** | **P1MS009A** |
| Mean | 826.26 | 828.36 | 826.66 |
| Std. Dev. | 0.88 | 0.71 | 1.01 |
| Skewness | 0.05 | 0.14 | 0.02 |
| Kurtosis | 0.96 | 0.84 | 0.91 |

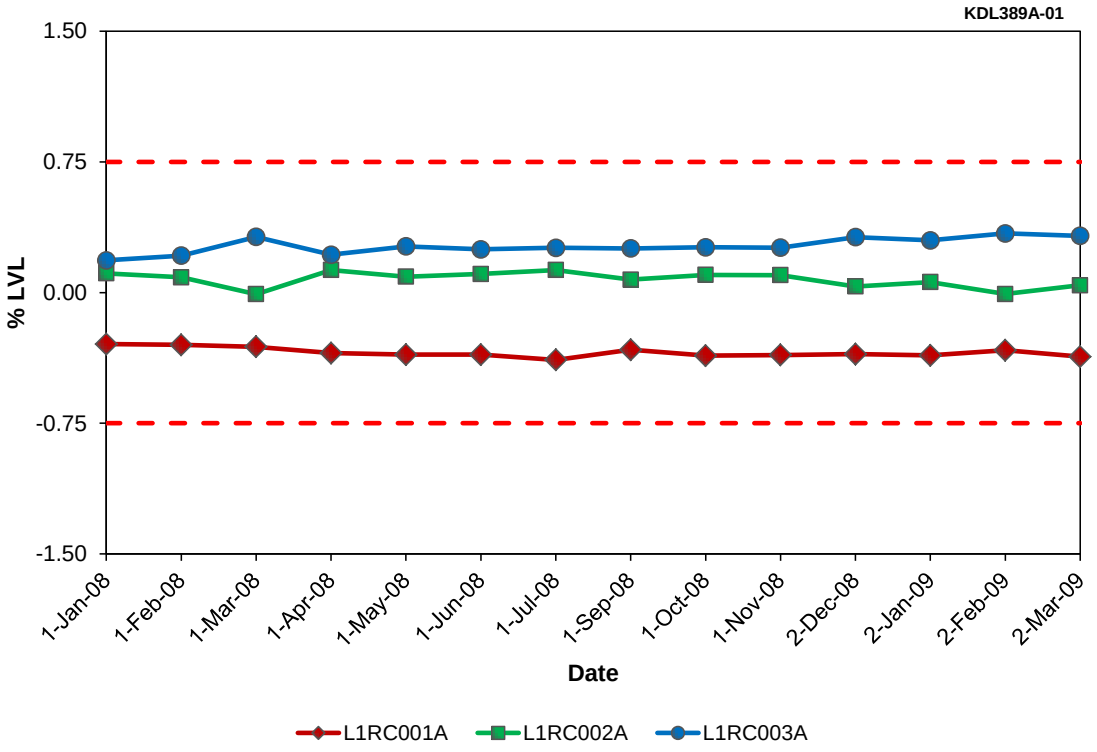



**Figure F.49 PRESSURIZER LEVEL Steady-State Deviation at North Anna Unit 1 (Cycle 20)**

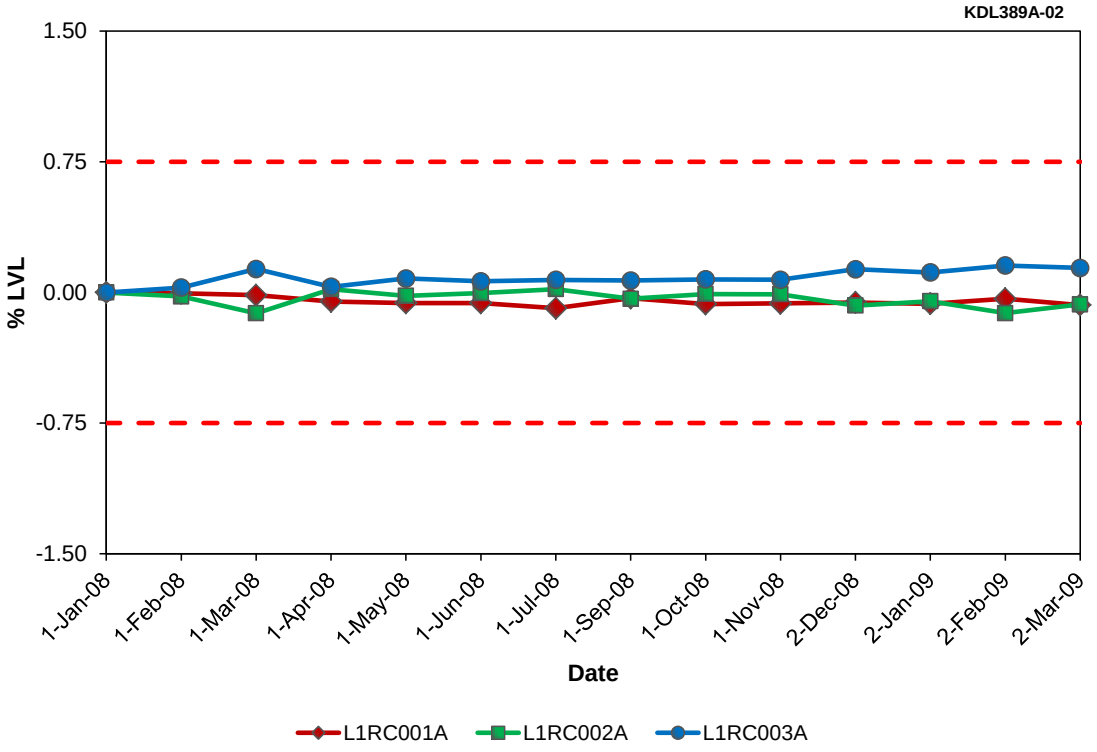



**Figure F.50 PRESSURIZER LEVEL Steady-State Drift at North Anna Unit 1 (Cycle 20)**

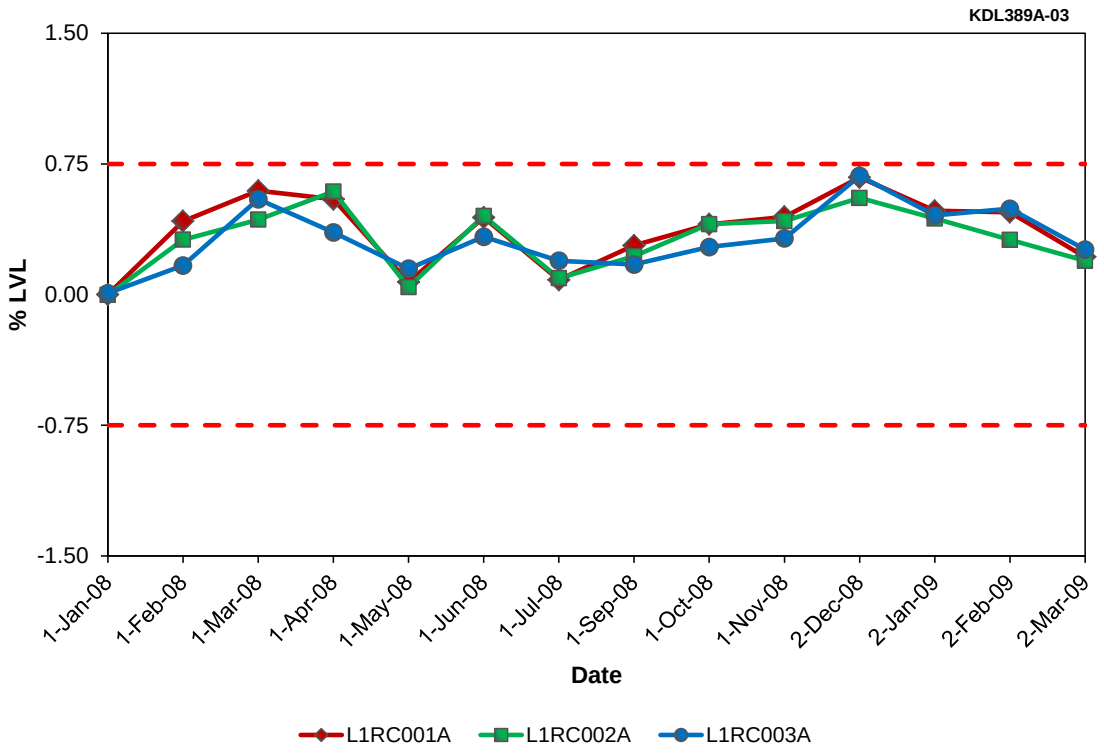



**Figure F.51 PRESSURIZER LEVEL Steady-State Residual AAKR at North Anna Unit 1 (Cycle 20)**

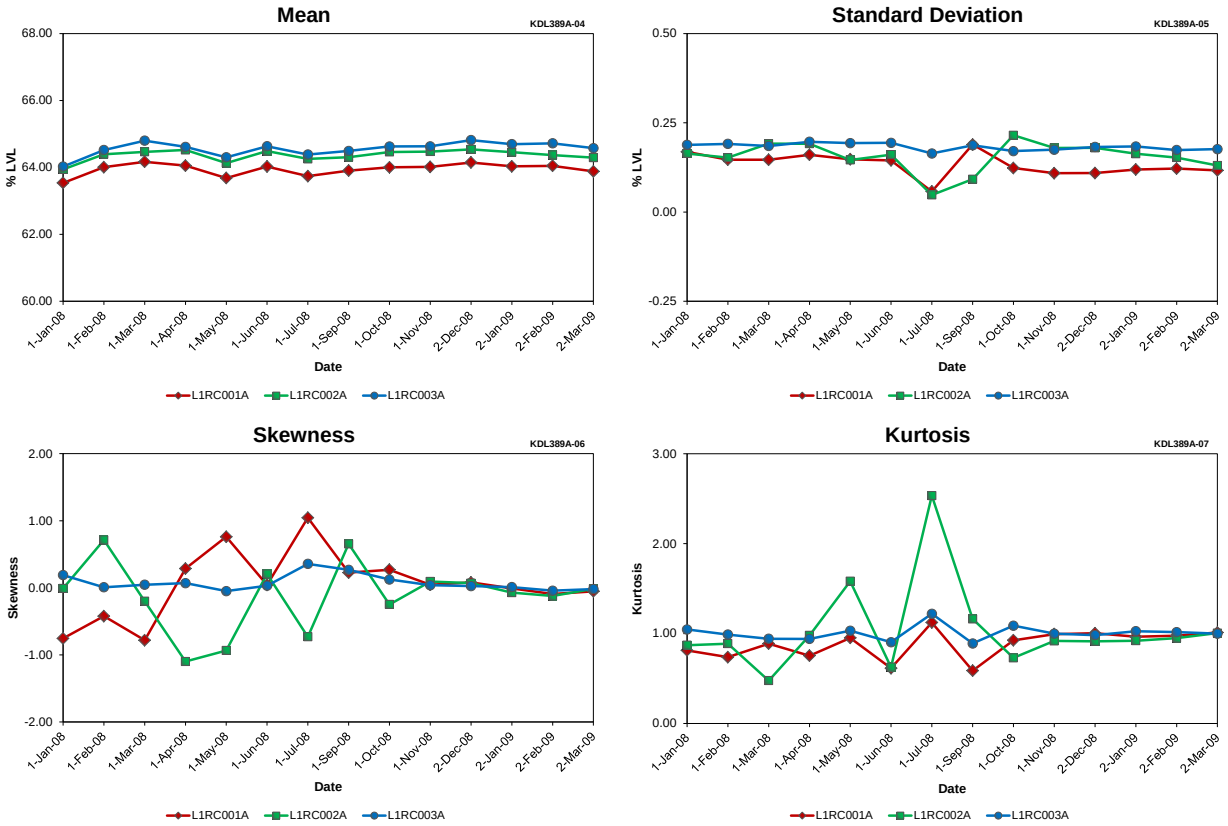



**Figure F.52 PRESSURIZER LEVEL Data Quality Statistics at North Anna Unit 1 (Cycle 20)**

**Table F.14 PRESSURIZER LEVEL Data Quality for North Anna Unit 1 (Cycle 20)**

| | Tag Names | | |
|---|---|---|---|
| **Result Type** | **L1RC001A** | **L1RC002A** | **L1RC003A** |
| Mean | 63.95 | 64.36 | 64.56 |
| Std. Dev. | 0.13 | 0.15 | 0.18 |
| Skewness | 0.05 | -0.12 | 0.08 |
| Kurtosis | 0.88 | 1.04 | 1.01 |

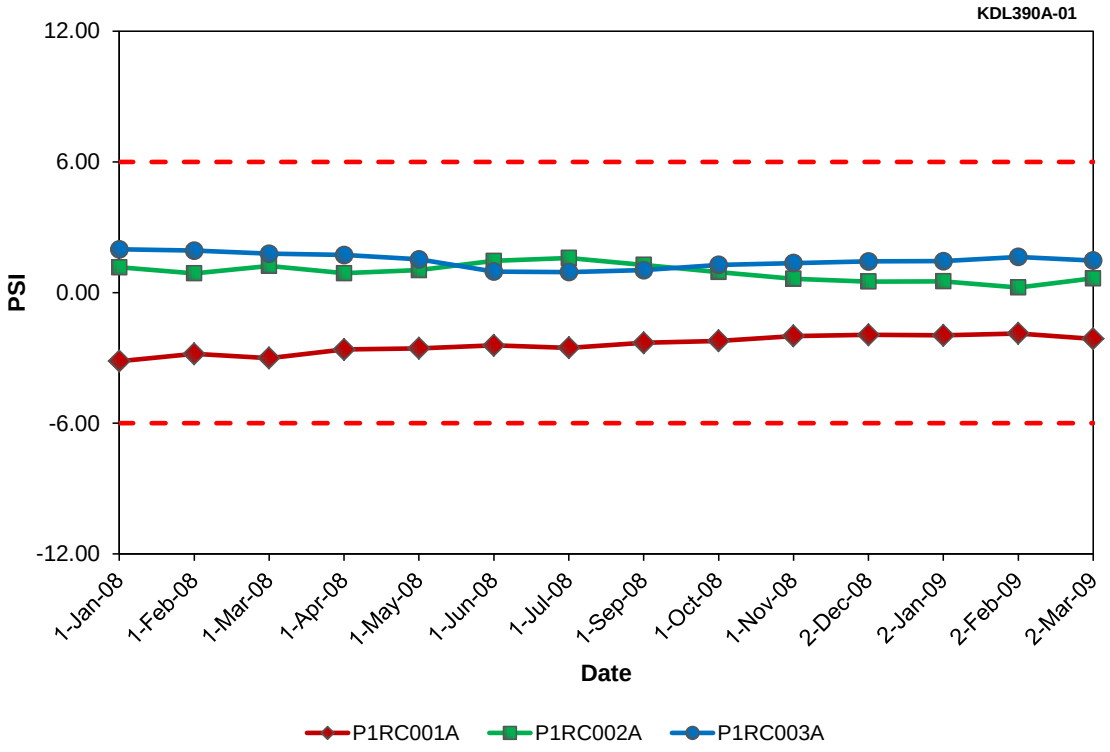



**Figure F.53 PRESSURIZER PRESSURE Steady-State Deviation at North Anna Unit 1 (Cycle 20)**

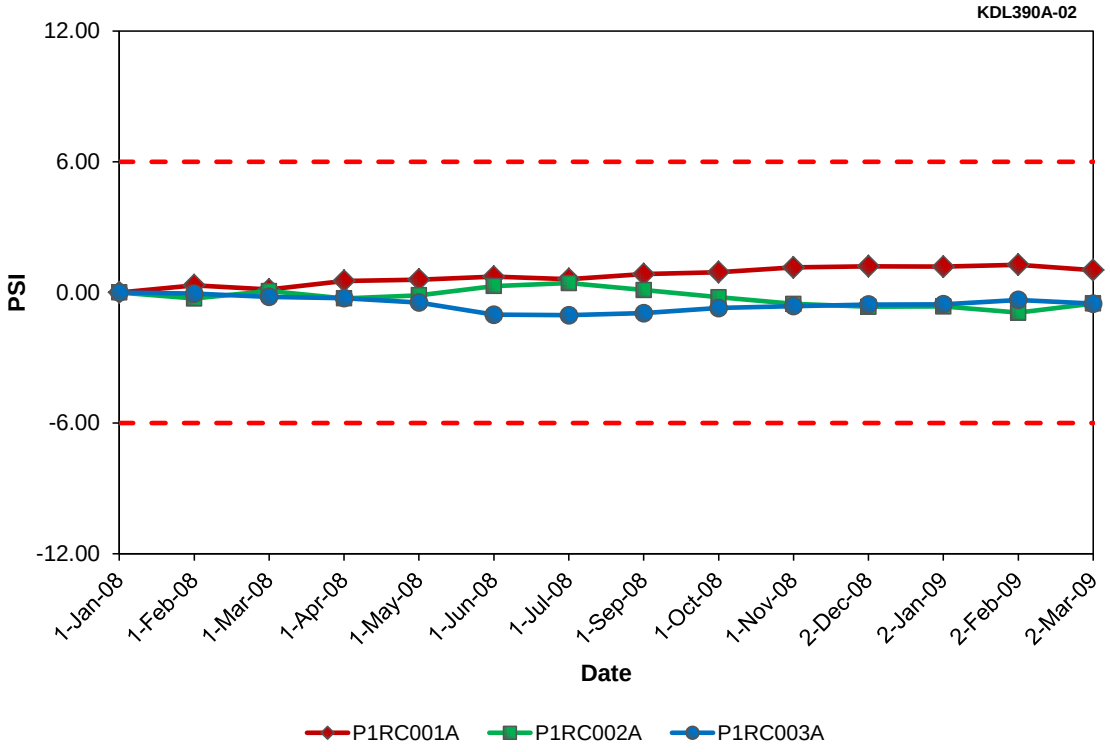



**Figure F.54 PRESSURIZER PRESSURE Steady-State Drift at North Anna Unit 1 (Cycle 20)**

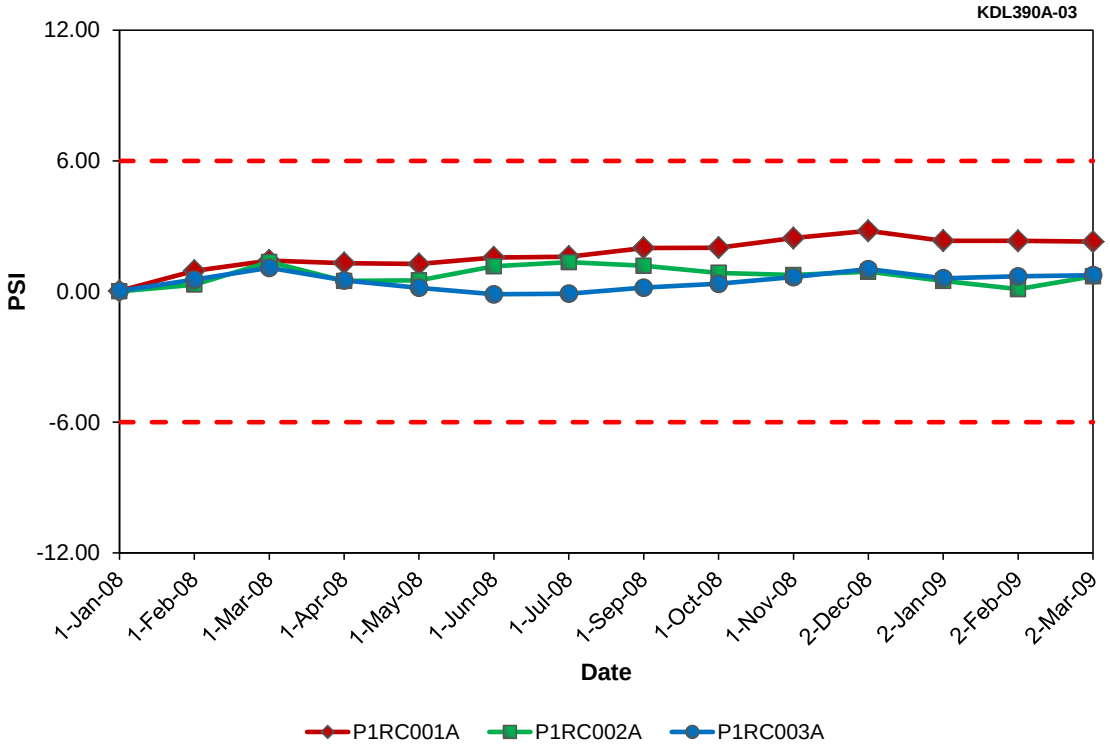



**Figure F.55 PRESSURIZER PRESSURE Steady-State Residual AAKR at North Anna Unit 1 (Cycle 20)**

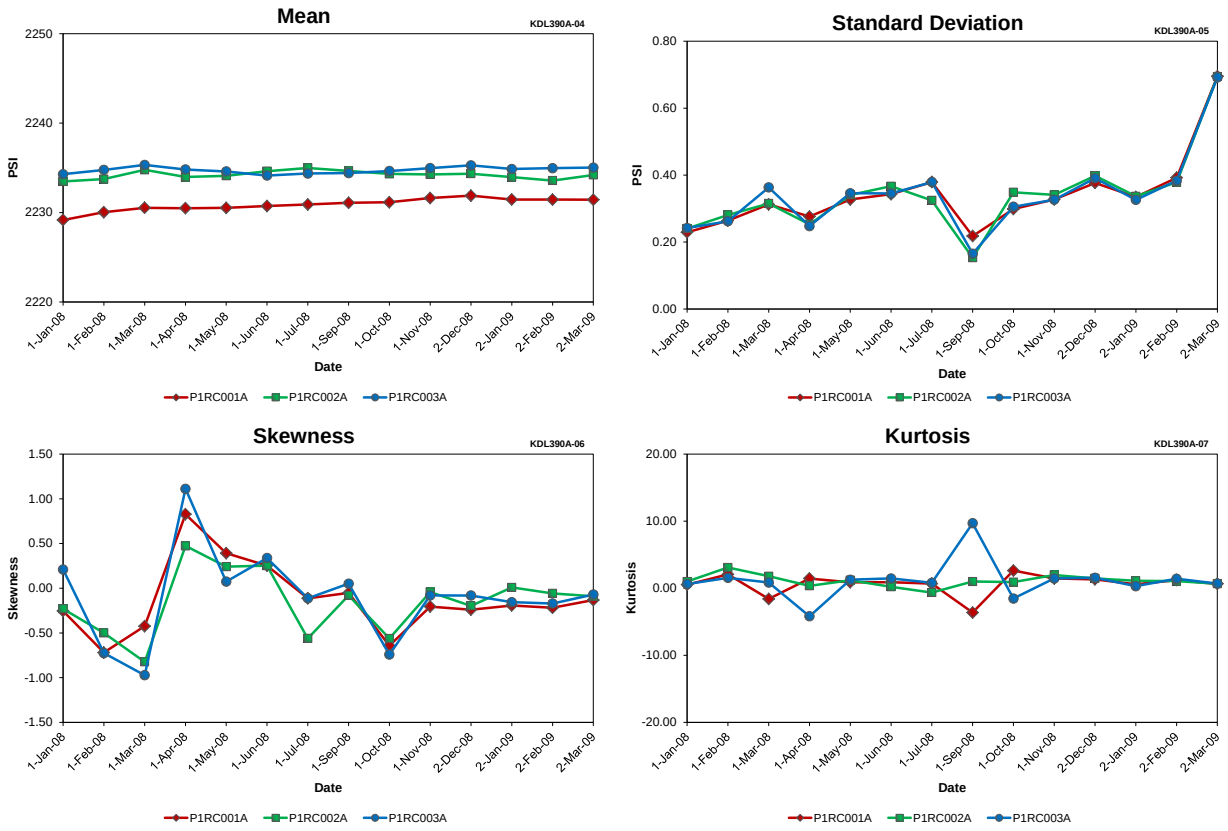



**Figure F.56 PRESSURIZER PRESSURE Data Quality Statistics at North Anna Unit 1 (Cycle 20)**

**Table F.15 PRESSURIZER PRESSURE Data Quality for North Anna Unit 1 (Cycle 20)**

| | Tag Names | | |
|---|---|---|---|
| **Result Type** | **P1RC001A** | **P1RC002A** | **P1RC003A** |
| Mean | 2230.89 | 2234.21 | 2234.75 |
| Std. Dev. | 0.34 | 0.34 | 0.34 |
| Skewness | -0.12 | -0.16 | -0.09 |
| Kurtosis | 0.66 | 1.08 | 1.14 |

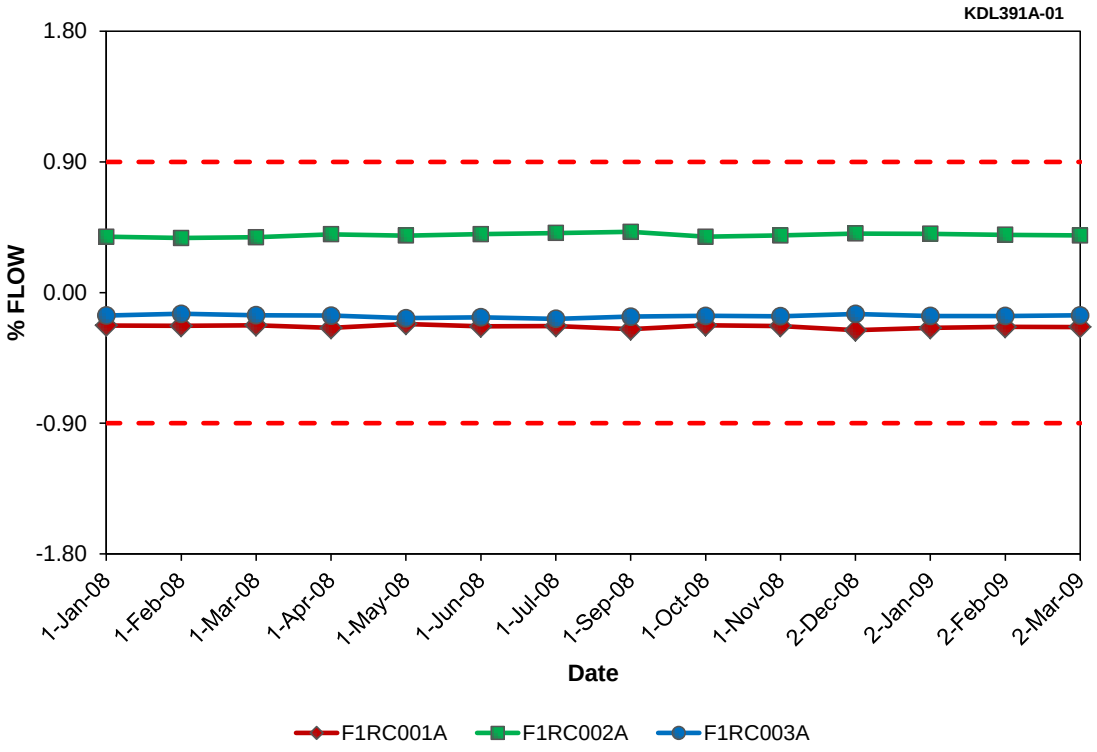



**Figure F.57 RCS LOOP A FLOW Steady-State Deviation at North Anna Unit 1 (Cycle 20)**

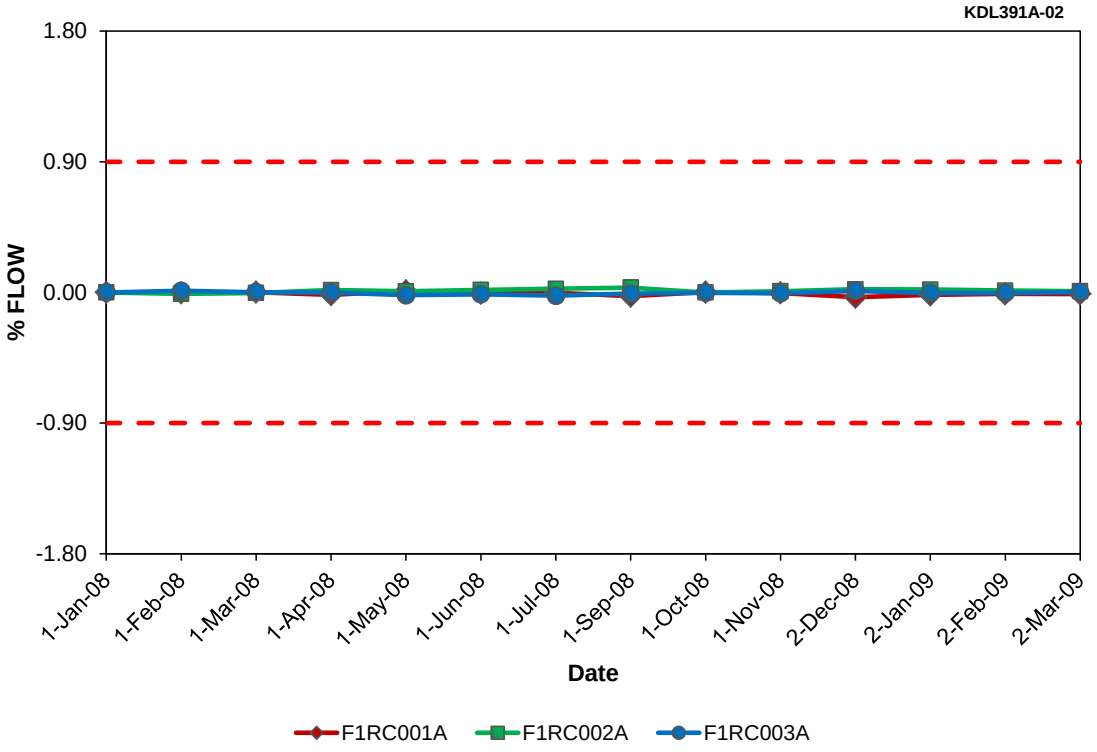



**Figure F.58 RCS LOOP A FLOW Steady-State Drift at North Anna Unit 1 (Cycle 20)**

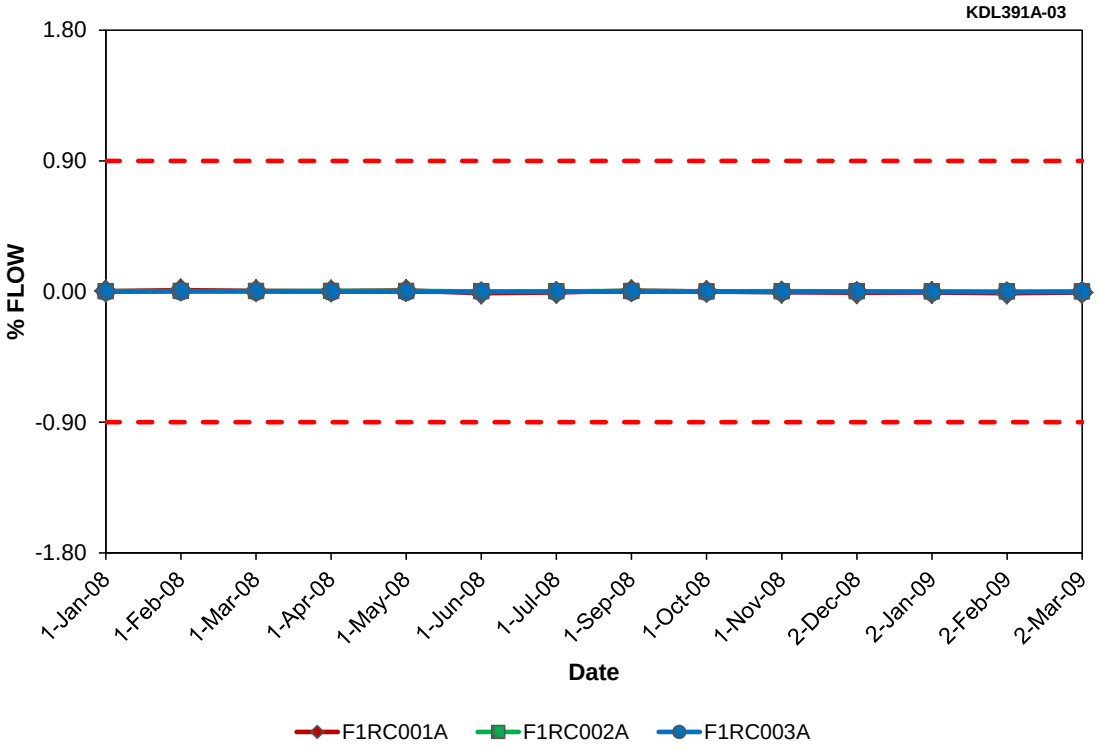



**Figure F.59 RCS LOOP A FLOW Steady-State Residual AAKR at North Anna Unit 1 (Cycle 20)**

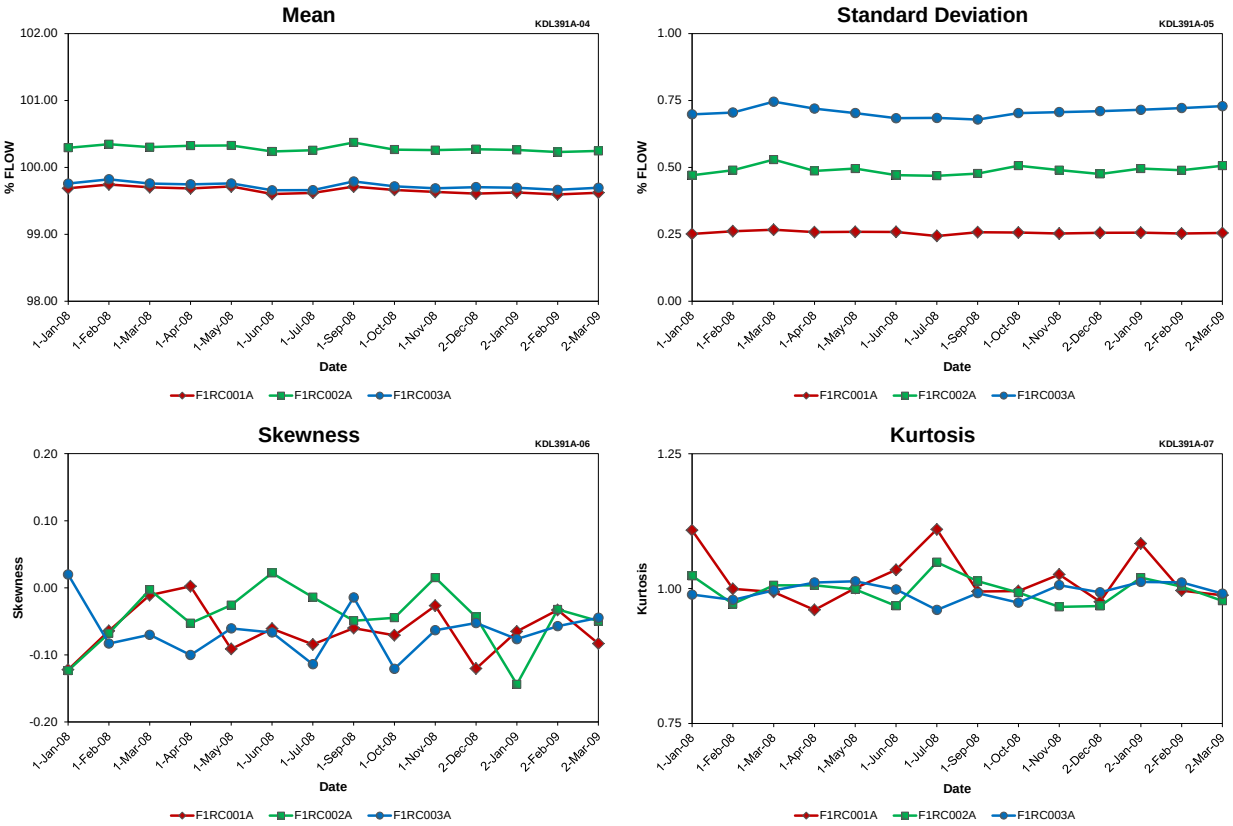



**Figure F.60 RCS LOOP A FLOW Data Quality Statistics at North Anna Unit 1 (Cycle 20)**

**Table F.16 RCS LOOP A FLOW Data Quality for North Anna Unit 1 (Cycle 20)**

| | Tag Names | | |
|---|---|---|---|
| **Result Type** | **F1RC001A** | **F1RC002A** | **F1RC003A** |
| Mean | 99.66 | 100.29 | 99.72 |
| Std. Dev. | 0.26 | 0.49 | 0.71 |
| Skewness | -0.06 | -0.04 | -0.06 |
| Kurtosis | 1.02 | 1.00 | 0.99 |

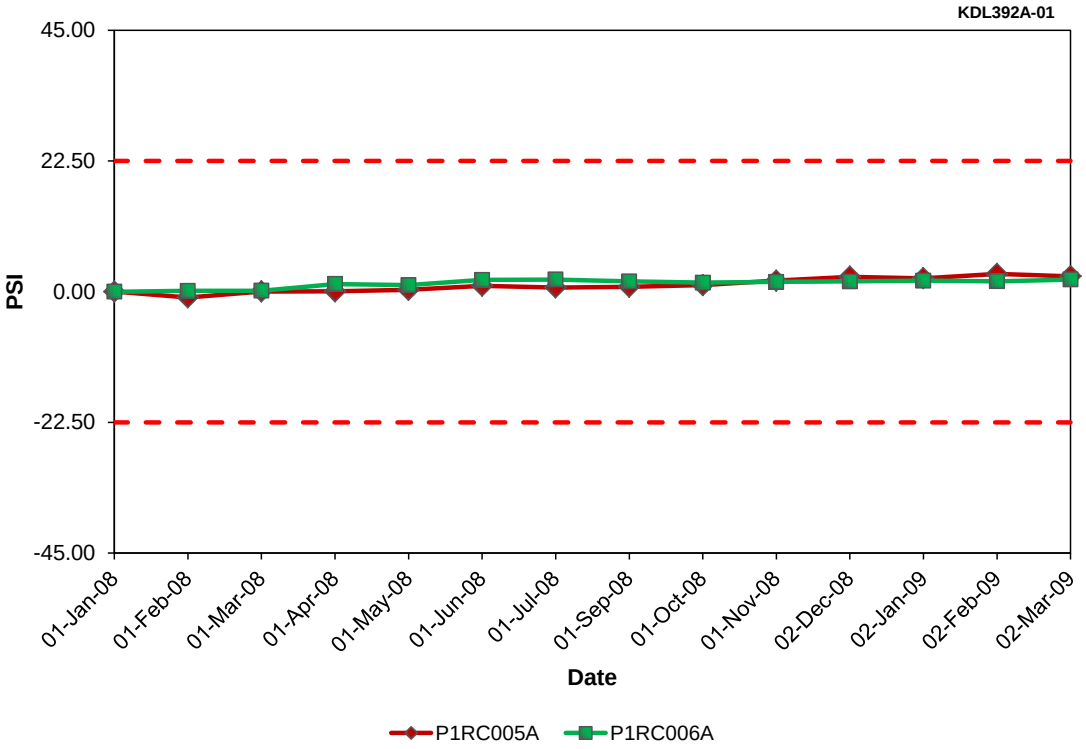



**Figure F.61 RCS WIDE RANGE PRESSURE Steady-State Residual AAKR at North Anna Unit 1 (Cycle 20)**

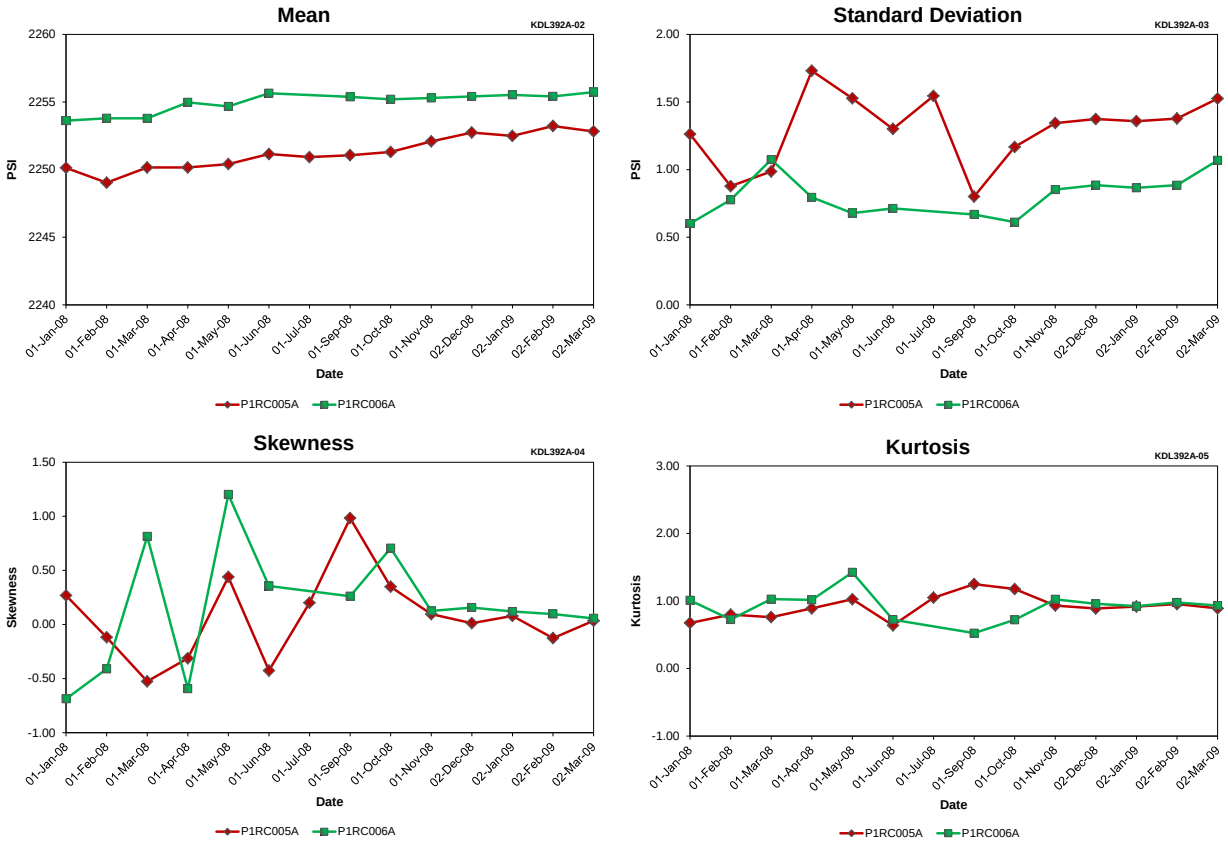



**Figure F.62 RCS WIDE RANGE PRESSURE Data Quality Statistics at North Anna Unit 1 (Cycle 20)**

**Table F.17 RCS WIDE RANGE PRESSURE Data Quality for North Anna Unit 1 (Cycle 20)**

| | Tag Names | |
|---|---|---|
| **Result Type** | **P1RC005A** | **P1RC006A** |
| Mean | 2251.26 | 2254.96 |
| Std. Dev. | 1.30 | 0.81 |
| Skewness | 0.07 | 0.17 |
| Kurtosis | 0.92 | 0.92 |

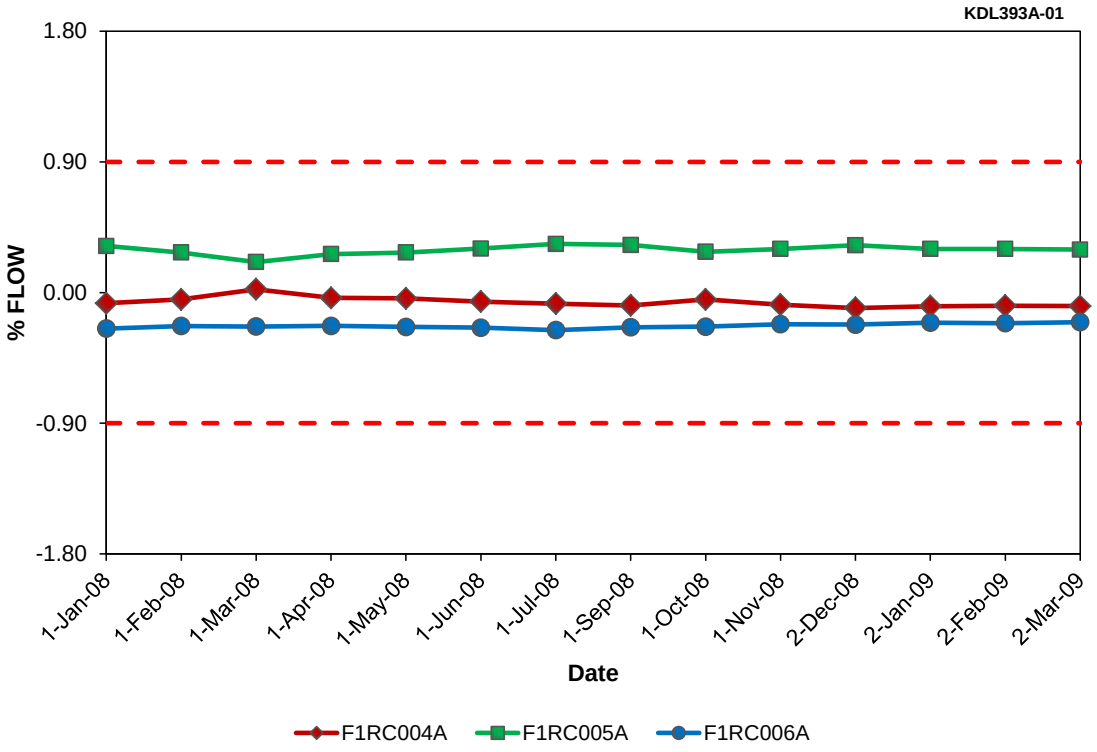



**Figure F.63 RCS LOOP B FLOW Steady-State Deviation at North Anna Unit 1 (Cycle 20)**

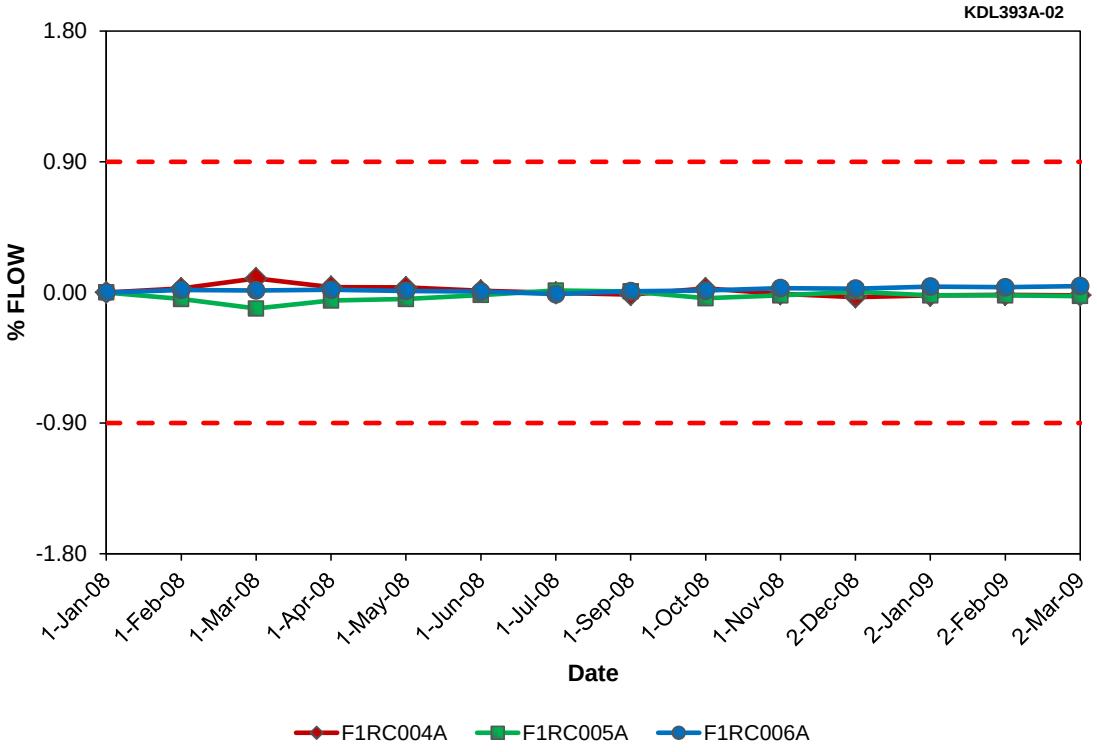



**Figure F.64 RCS LOOP B FLOW Steady-State Drift at North Anna Unit 1 (Cycle 20)**

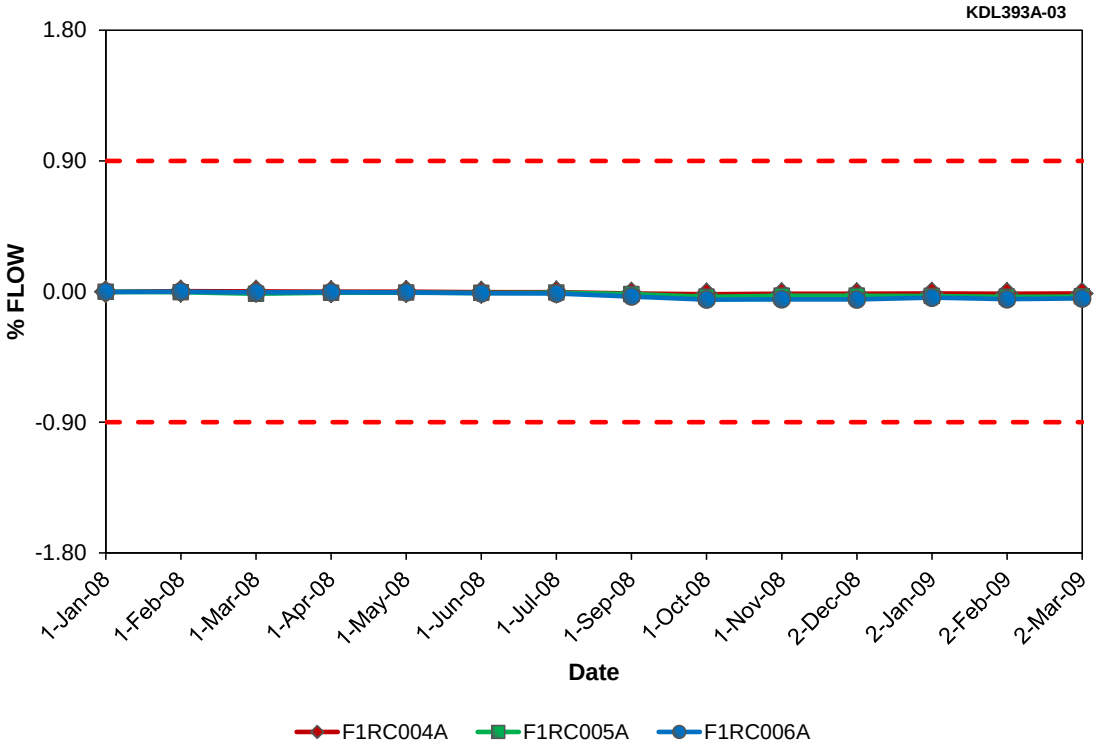



**Figure F.65 RCS LOOP B FLOW Steady-State Residual AAKR at North Anna Unit 1 (Cycle 20)**

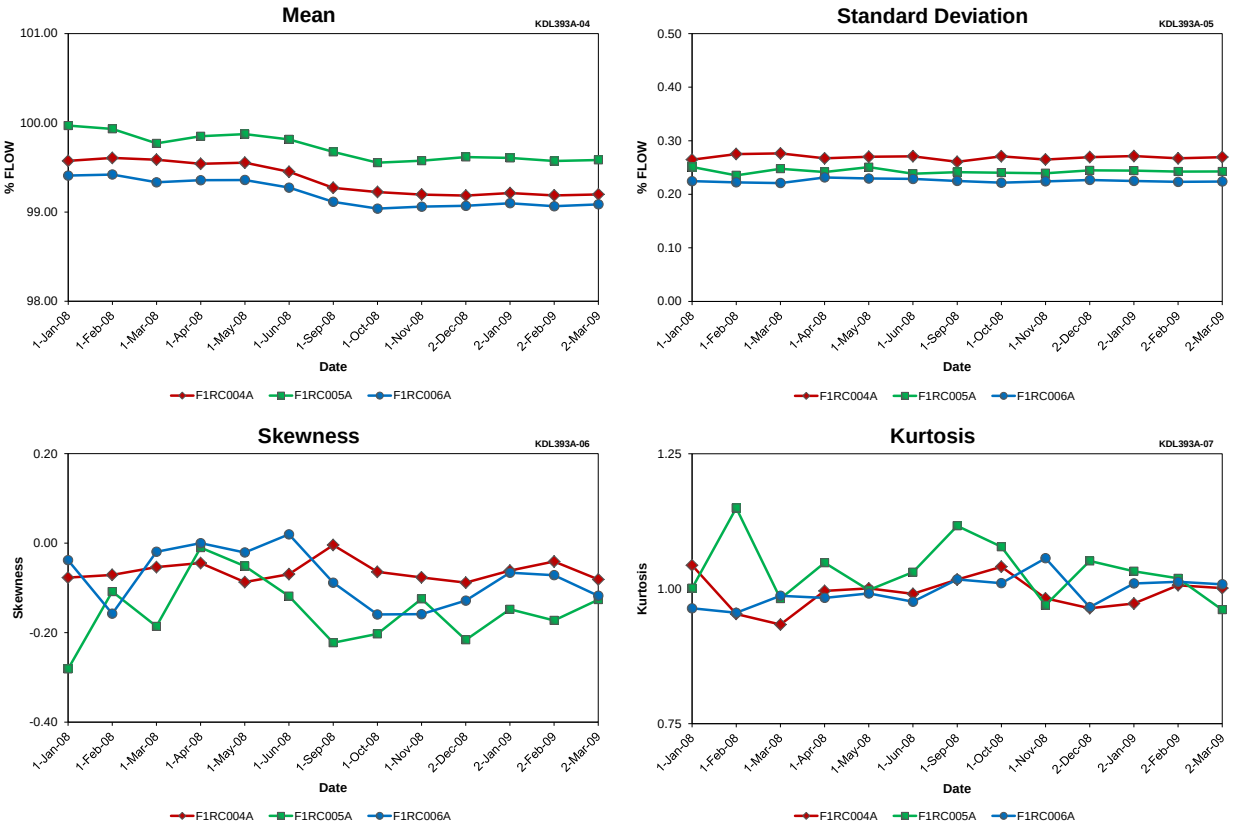



**Figure F.66 RCS LOOP B FLOW Data Quality Statistics at North Anna Unit 1 (Cycle 20)**

**Table F.18 RCS LOOP B FLOW Data Quality for North Anna Unit 1 (Cycle 20)**

| | Tag Names | | |
|---|---|---|---|
| **Result Type** | **F1RC004A** | **F1RC005A** | **F1RC006A** |
| Mean | 99.37 | 99.72 | 99.21 |
| Std. Dev. | 0.27 | 0.24 | 0.23 |
| Skewness | -0.06 | -0.15 | -0.08 |
| Kurtosis | 0.99 | 1.03 | 1.00 |

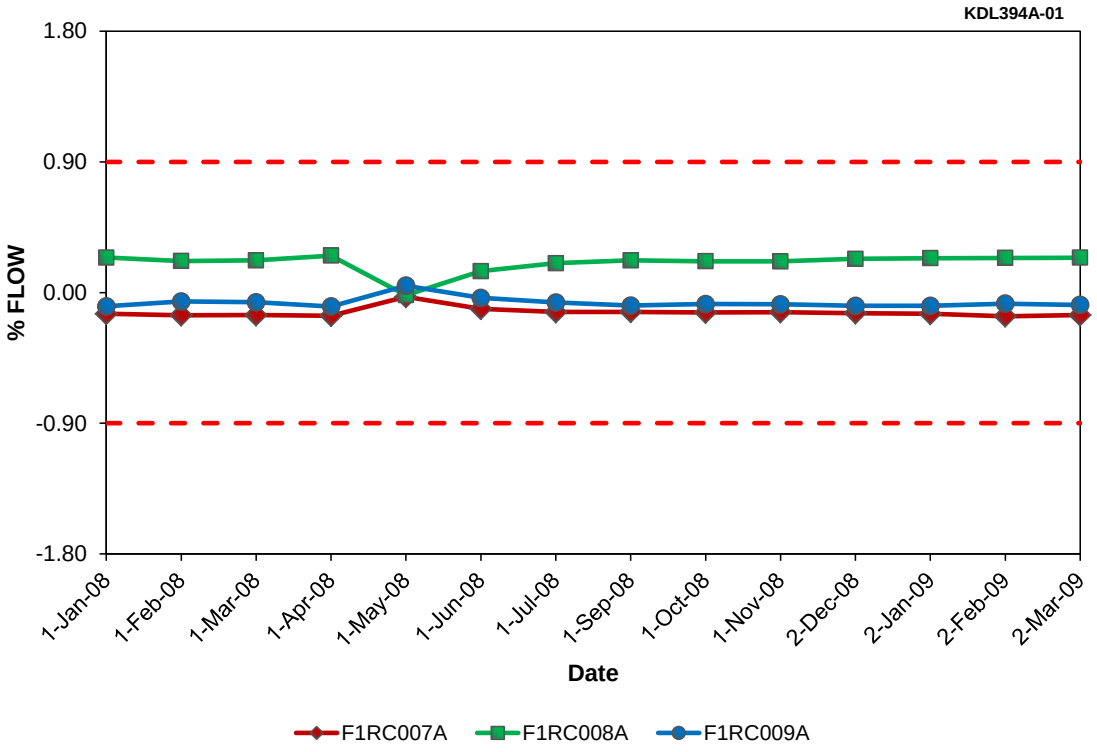



**Figure F.67 RCS LOOP C FLOW Steady-State Deviation at North Anna Unit 1 (Cycle 20)**

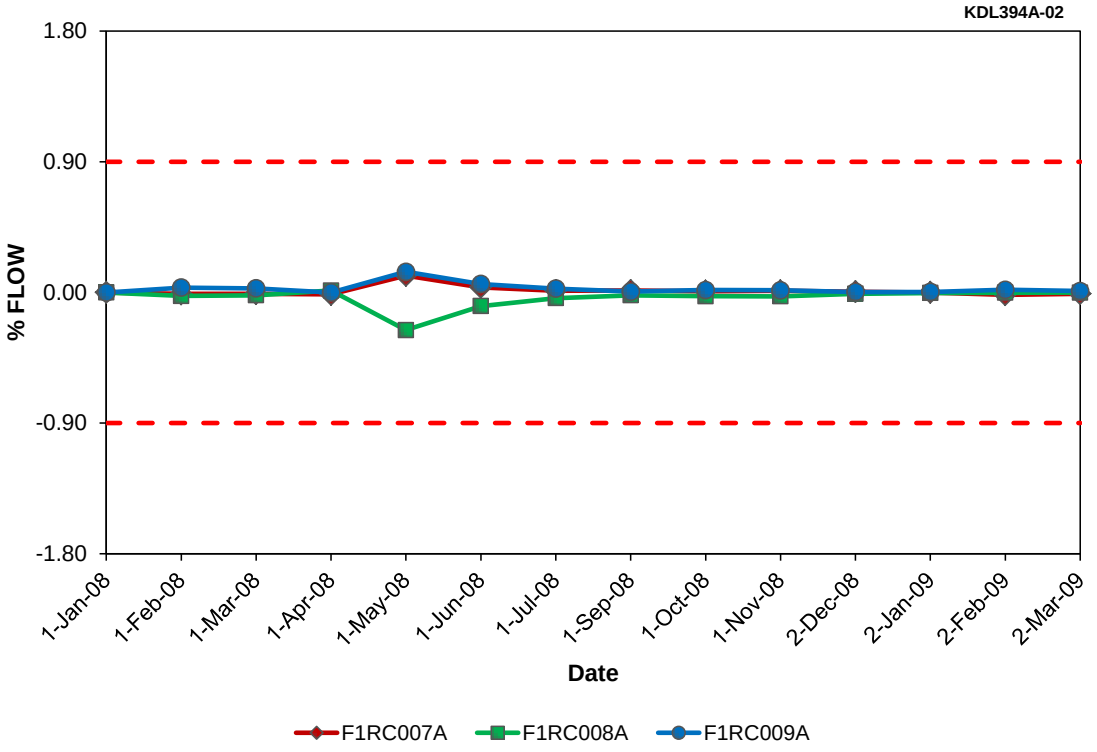



**Figure F.68 RCS LOOP C FLOW Steady-State Drift at North Anna Unit 1 (Cycle 20)**

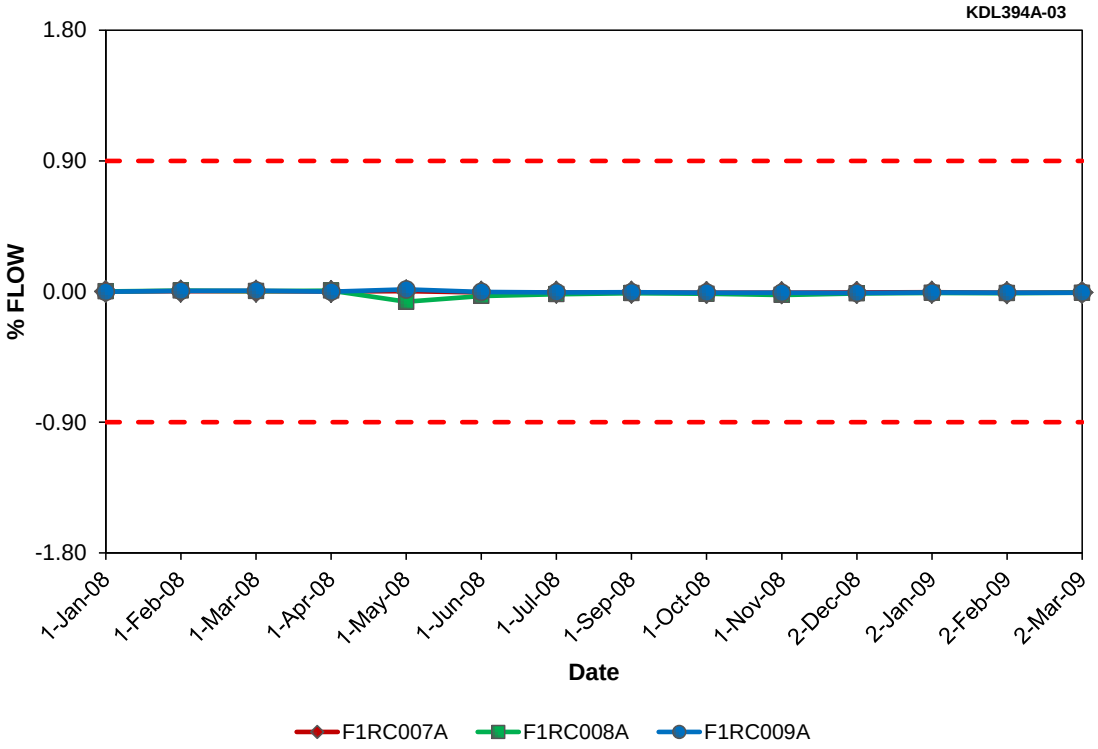



**Figure F.69 RCS LOOP C FLOW Steady-State Residual AAKR at North Anna Unit 1 (Cycle 20)**

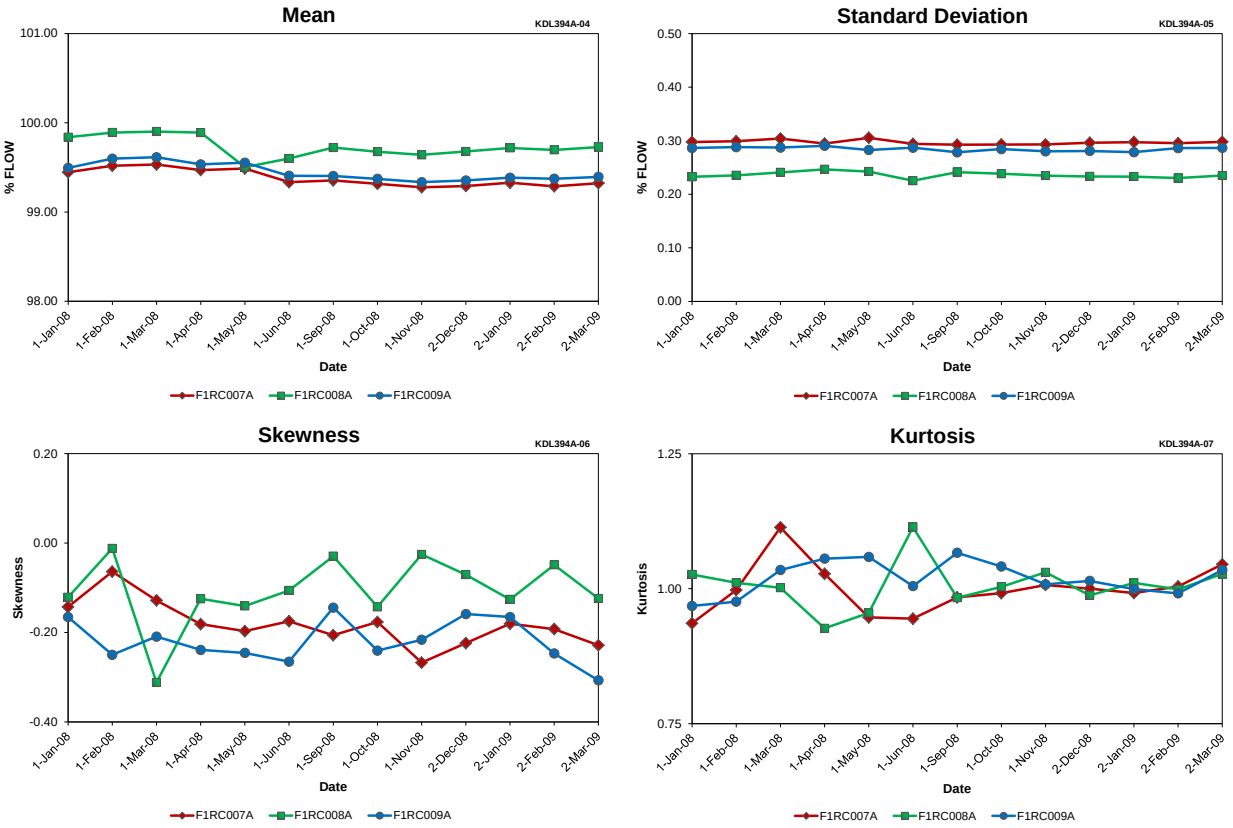



**Figure F.70 RCS LOOP C FLOW Data Quality Statistics at North Anna Unit 1 (Cycle 20)**

**Table F.19 RCS LOOP C FLOW Data Quality for North Anna Unit 1 (Cycle 20)**

| | Tag Names | | |
|---|---|---|---|
| **Result Type** | **F1RC007A** | **F1RC008A** | **F1RC009A** |
| Mean | 99.38 | 99.73 | 99.45 |
| Std. Dev. | 0.30 | 0.24 | 0.28 |
| Skewness | -0.18 | -0.11 | -0.22 |
| Kurtosis | 1.00 | 1.01 | 1.02 |

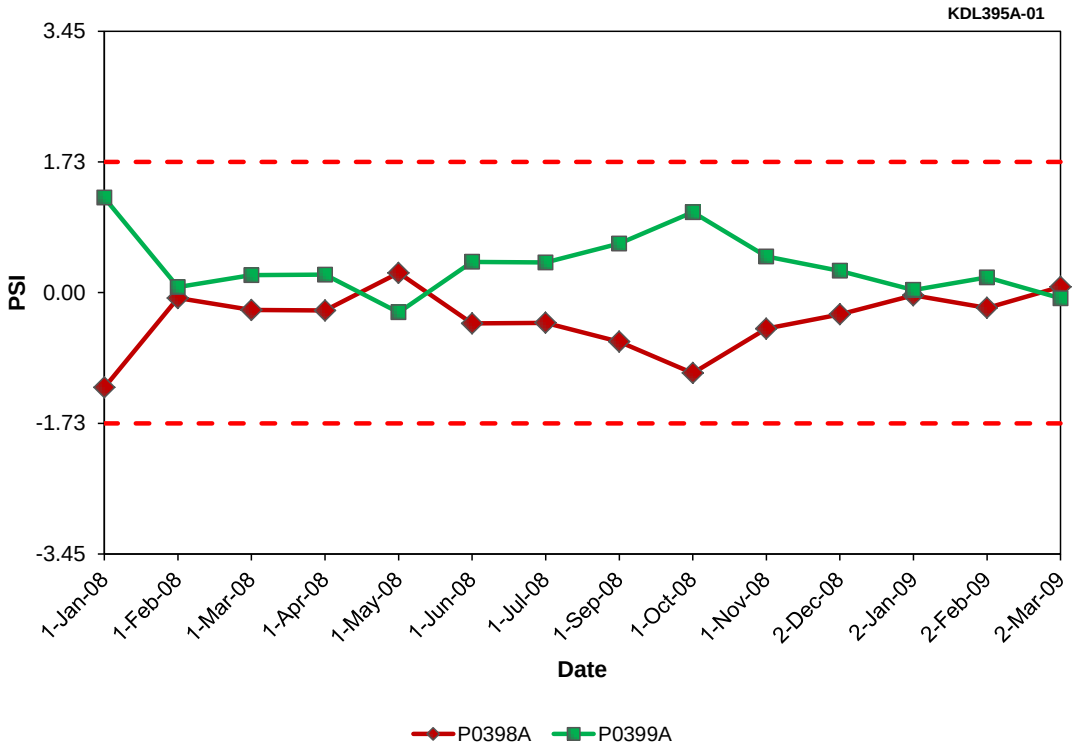



**Figure F.71 TBIN FIRST STAGE PRESSURE Steady-State Deviation at North Anna Unit 1 (Cycle 20)**

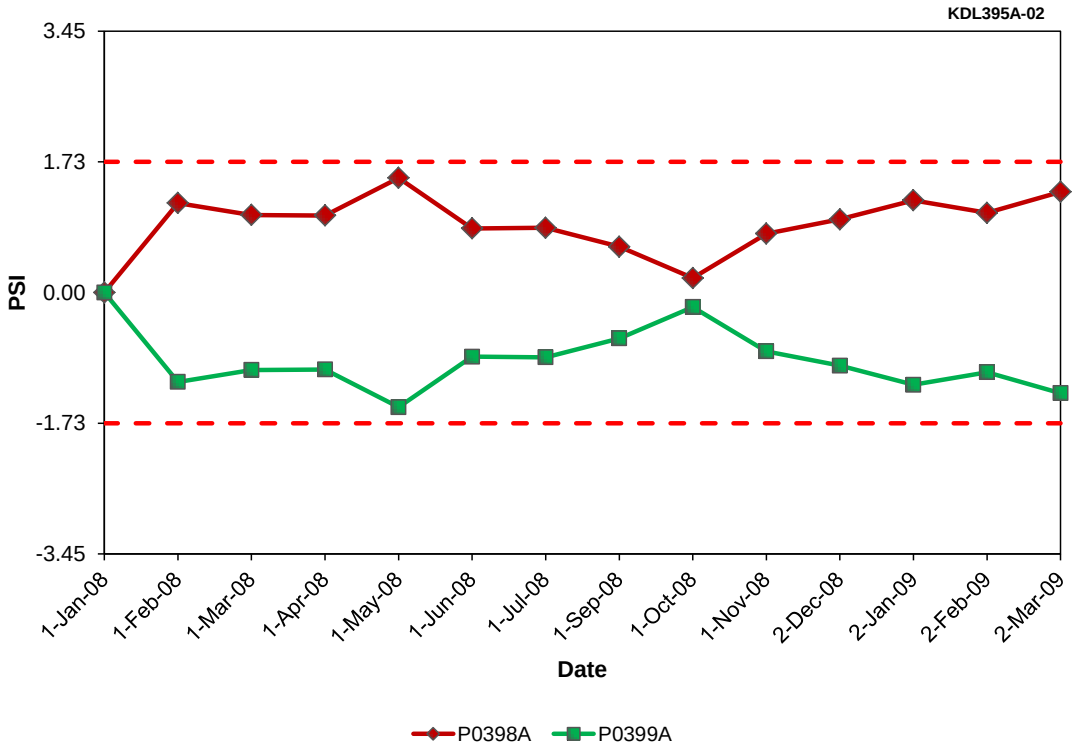



**Figure F.72 TBIN FIRST STAGE PRESSURE Steady-State Drift at North Anna Unit 1 (Cycle 20)**

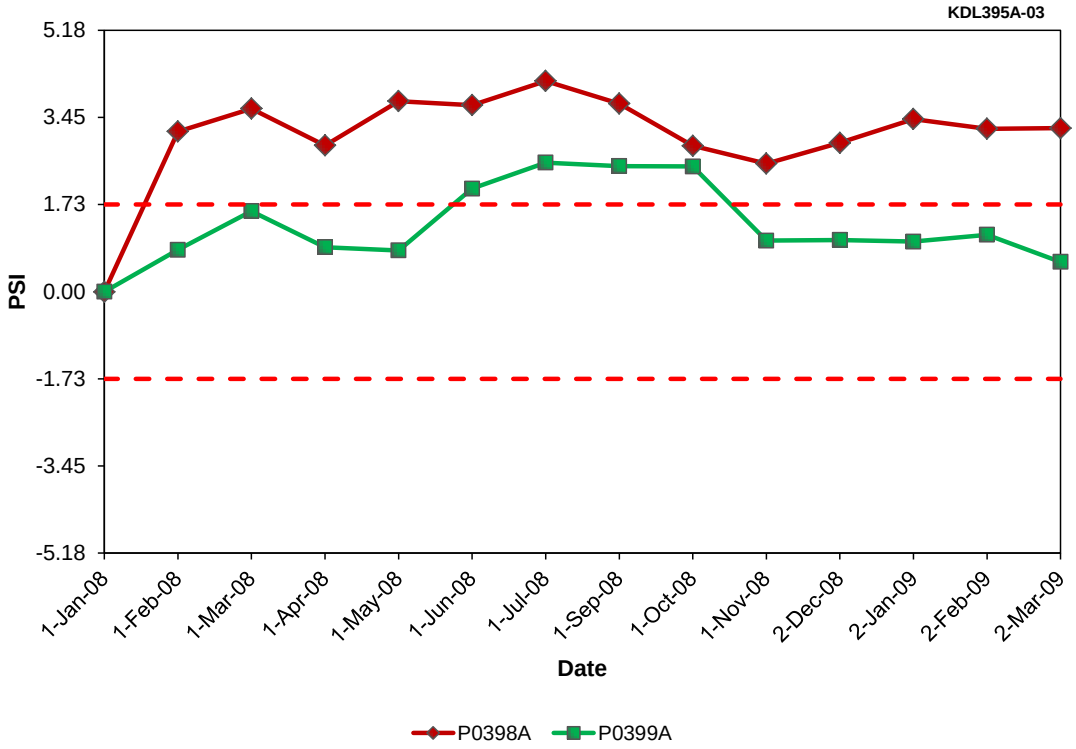



**Figure F.73 TBIN FIRST STAGE PRESSURE Steady-State Residual AAKR at North Anna Unit 1 (Cycle 20)**

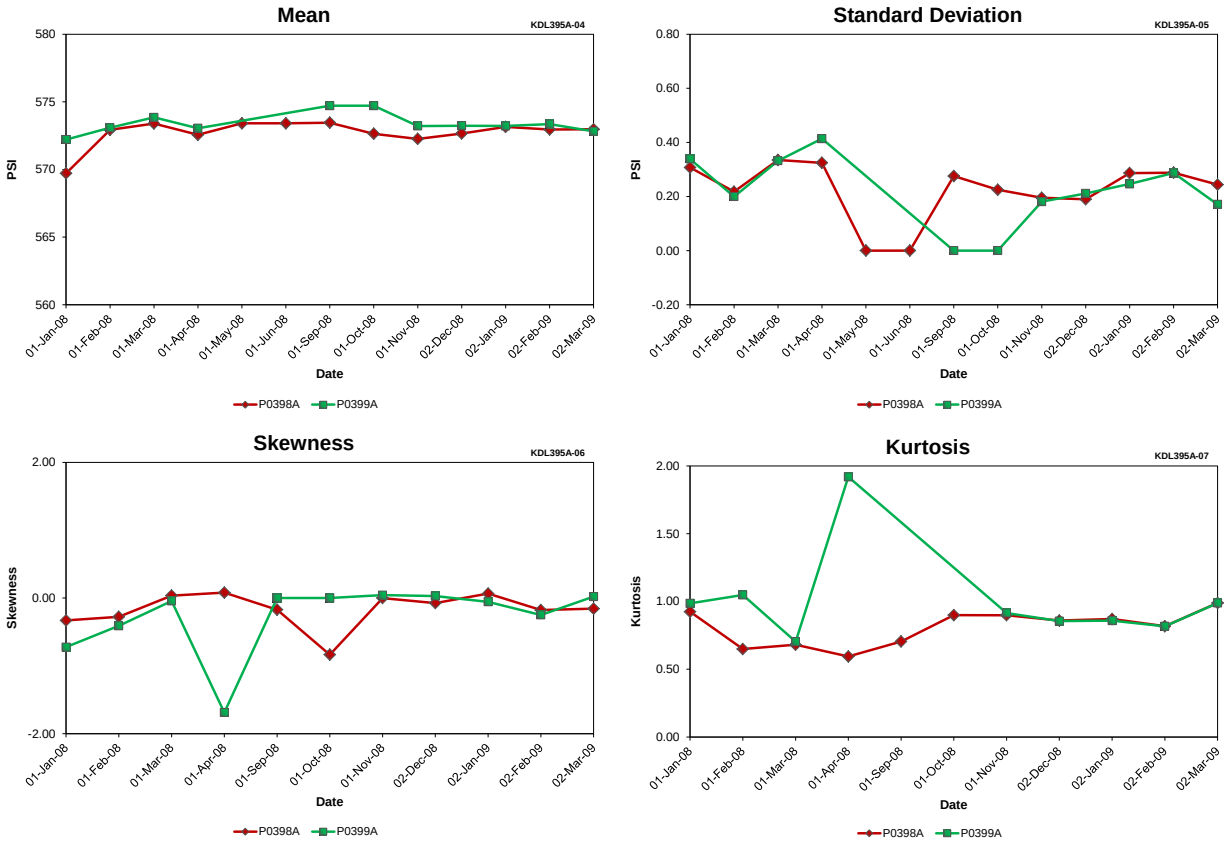



**Figure F.74 TBIN FIRST STAGE PRESSURE Data Quality Statistics at North Anna Unit 1 (Cycle 20)**

**Table F.20 TBIN FIRST STAGE PRESSURE Data Quality for North Anna Unit 1 (Cycle 20)**

| | Tag Names | |
|---|---|---|
| **Result Type** | **P0398A** | **P0399A** |
| Mean | 572.73 | 573.41 |
| Std. Dev. | 0.22 | 0.22 |
| Skewness | -0.17 | -0.28 |
| Kurtosis | 0.81 | 1.01 |

# APPENDIX G

# North Anna Unit 1 OLM Results (Cycle 21)

| Item | Tagname | Service | 5 Apr 2009 | 2 May 2009 | 2 Jun 2009 | 2 Jul 2009 | 5 Aug 2009 | 9 Sep 2009 | 2 Oct 2009 | 2 Nov 2009 | 2 Dec 2010 | 5 Jan 2010 | 2 Feb 2010 | 2 Mar 2010 | 8 Apr 2010 | 2 May 2010 | 2 Jul 2010 | 2 Aug 2010 | Drift | Final | Comment |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | F1MS001A | SG A STEAM FLOW | R | | | | | | | | | | | | | | M | M | | PASS | Process change |
| 2 | F1MS002A | SG A STEAM FLOW | R | | | | | | | | | | | | | | M | M | | PASS | Process change |
| | | | | | | | | | | | | | | | | | | | | | |
| 3 | F1FW004A | FW FLOW TO SG A | | | | | | | | | | | | | | | | M | | PASS | Process change |
| 4 | F1FW005A | FW FLOW TO SG A | | | | | | | | | | | | | | | | M | | PASS | Process change |
| | | | | | | | | | | | | | | | | | | | | | |
| 5 | L1FW001A | SG A NARROW RANGE LEVEL | | | | | | | | | | | | | | | | | | PASS | |
| 6 | L1FW002A | SG A NARROW RANGE LEVEL | | | | | | | | | | | | | | | | | | PASS | |
| 7 | L1FW003A | SG A NARROW RANGE LEVEL | | | | | | | | | | | | | | | | | | PASS | |
| 8 | L1FW004A | SG A WIDE RANGE LEVEL | | | | | | | | | | | | | | | | | | PASS | |
| | | | | | | | | | | | | | | | | | | | | | |
| 9 | P1MS001A | SG A OUTLET PRESSURE | | | | | | | | | | | | | | | M | M | | PASS | Process change |
| 10 | P1MS002A | SG A OUTLET PRESSURE | | | | | | | | M | M | M | M | M | M | M | M | M | | PASS | Process change |
| 11 | P1MS003A | SG A OUTLET PRESSURE | | | | | | | | | | | | | | | M | M | | PASS | Process change |
| | | | | | | | | | | | | | | | | | | | | | |
| 12 | F1MS003A | SG B STEAM FLOW | | | | | | | | | | | | | | | | | | PASS | |
| 13 | F1MS004A | SG B STEAM FLOW | | | | | | | | | | | | | | | | M | | PASS | Process change |
| | | | | | | | | | | | | | | | | | | | | | |
| 14 | F1FW006A | FW FLOW TO SG B | | | | | | | | | | | | | | | | | | PASS | |
| 15 | F1FW007A | FW FLOW TO SG B | | | | | | | | | | | | | | | | | | PASS | |
| | | | | | | | | | | | | | | | | | | | | | |
| 16 | L1FW005A | SG B NARROW RANGE LEVEL | | | | | | | | | | | | | | | | | | PASS | |
| 17 | L1FW006A | SG B NARROW RANGE LEVEL | | | | | | | | | | | | | | | | | | PASS | |
| 18 | L1FW007A | SG B NARROW RANGE LEVEL | | | | | | | | | | | | | | | | | | PASS | |
| 19 | L1FW008A | SG B WIDE RANGE LEVEL | | | | | | | | | | | | | | | | | | PASS | |
| | | | | | | | | | | | | | | | | | | | | | |
| 20 | P1MS004A | SG B OUTLET PRESSURE | | | | | | | | | | | | | | | M | M | | PASS | Process change |
| 21 | P1MS005A | SG B OUTLET PRESSURE | | | | | | | | | | | | | | | | M | | PASS | Process change |
| 22 | P1MS006A | SG B OUTLET PRESSURE | | | | | | | | | | | | | | | | M | | PASS | Process change |
| | | | | | | | | | | | | | | | | | | | | | |
| 23 | F1MS005A | SG C STEAM FLOW | R | | | | | | | | | | | | | | | M | | PASS | Process change |
| 24 | F1MS006A | SG C STEAM FLOW | R | | | | | | | | | | | | | | M | M | | PASS | Process change |
| | | | | | | | | | | | | | | | | | | | | | |
| 25 | F1FW008A | FW FLOW TO SG C | | | | | | | | | | | | | | | | | | PASS | |
| 26 | F1FW009A | FW FLOW TO SG C | | | | | | | | | | | | | | | | | | PASS | |

*R = Exceeded Redundant Sensor Analysis Limits  M = Exceeded Model Analysis Limits  D = Exceeded Drift Limits*

**Table G.1 North Anna Unit 1 OLM Results Summary (Cycle 21)**

| Item | Tagname | Service | 5 Apr 2009 | 2 May 2009 | 2 Jun 2009 | 2 Jul 2009 | 5 Aug 2009 | 9 Sep 2009 | 2 Oct 2009 | 2 Nov 2009 | 2 Dec 2010 | 5 Jan 2010 | 2 Feb 2010 | 2 Mar 2010 | 8 Apr 2010 | 2 May 2010 | 2 Jul 2010 | 2 Aug 2010 | Drift | Final | Comment |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 27 | L1FW009A | SG C NARROW RANGE LEVEL | | | | | | | | | | | | | | | | | | PASS | |
| 28 | L1FW010A | SG C NARROW RANGE LEVEL | | | | | | | | | | | | | | | | | | PASS | |
| 29 | L1FW011A | SG C NARROW RANGE LEVEL | | | | | | | | | | | | | | | | | | PASS | |
| 30 | L1FW012A | SG C WIDE RANGE LEVEL | | | | | | | | | | | | | | | | | | PASS | |
| | | | | | | | | | | | | | | | | | | | | | |
| 31 | P1MS007A | SG C OUTLET PRESSURE | | | | | | | | | | | | | | | | M | | PASS | Process change |
| 32 | P1MS008A | SG C OUTLET PRESSURE | | | | | | | | | | | | | | | | | | PASS | |
| 33 | P1MS009A | SG C OUTLET PRESSURE | | | | | | | | | | | | | | | | | | PASS | |
| | | | | | | | | | | | | | | | | | | | | | |
| 34 | L1RC001A | PRESSURIZER LEVEL | | | | | | | | | | | | | | | | | | PASS | |
| 35 | L1RC002A | PRESSURIZER LEVEL | | | | | | | | | | | | | | | | | | PASS | |
| 36 | L1RC003A | PRESSURIZER LEVEL | | | | | | | | | | | | | | | | | | PASS | |
| | | | | | | | | | | | | | | | | | | | | | |
| 37 | P1RC001A | PRESSURIZER PRESSURE | | | | | | | | | | | | | | | | | | PASS | |
| 38 | P1RC002A | PRESSURIZER PRESSURE | | | | | | | | | | | | | | | | | | PASS | |
| 39 | P1RC003A | PRESSURIZER PRESSURE | | | | | | | | | | | | | | | | | | PASS | |
| | | | | | | | | | | | | | | | | | | | | | |
| 40 | F1RC001A | RCS LOOP A FLOW | | | | | | | | | | | | | | | | | | PASS | |
| 41 | F1RC002A | RCS LOOP A FLOW | | | | | | | | | | | | | | | | | | PASS | |
| 42 | F1RC003A | RCS LOOP A FLOW | | | | | | | | | | | | | | | | | | PASS | |
| | | | | | | | | | | | | | | | | | | | | | |
| 43 | F1RC004A | RCS LOOP B FLOW | | | | | | | | | | | | | | | | | | PASS | |
| 44 | F1RC005A | RCS LOOP B FLOW | | | | | | | | | | | | | | | | | | PASS | |
| 45 | F1RC006A | RCS LOOP B FLOW | | | | | | | | | | | | | | | | | | PASS | |
| | | | | | | | | | | | | | | | | | | | | | |
| 46 | F1RC007A | RCS LOOP C FLOW | | | | | | | | | | | | | | | | | | PASS | |
| 47 | F1RC008A | RCS LOOP C FLOW | | | | | | | | | | | | | | | | | | PASS | |
| 48 | F1RC009A | RCS LOOP C FLOW | | | | | | | | | | | | | | | | | | PASS | |
| | | | | | | | | | | | | | | | | | | | | | |
| 49 | P1RC005A | RCS WIDE RANGE PRESSURE LOOP A | | | | | | | | | | | | | | | | | | PASS | |
| 50 | P1RC006A | RCS WIDE RANGE PRESSURE LOOP C | | | | | | | | | | | | | | | | | | PASS | |
| | | | | | | | | | | | | | | | | | | | | | |
| 51 | P0398A | TURBINE FIRST STAGE PRESSURE | | | | | | | M | | M | M | M | M | M | M | | M | | PASS | Process change |
| 52 | P0399A | TURBINE FIRST STAGE PRESSURE | | | | | | | | | | | M | M | M | M | | M | | PASS | Process change |

*R = Exceeded Redundant Sensor Analysis Limits  M = Exceeded Model Analysis Limits  D = Exceeded Drift Limits*

**Table G.1 (continued) North Anna Unit 1 OLM Results Summary (Cycle 21)**

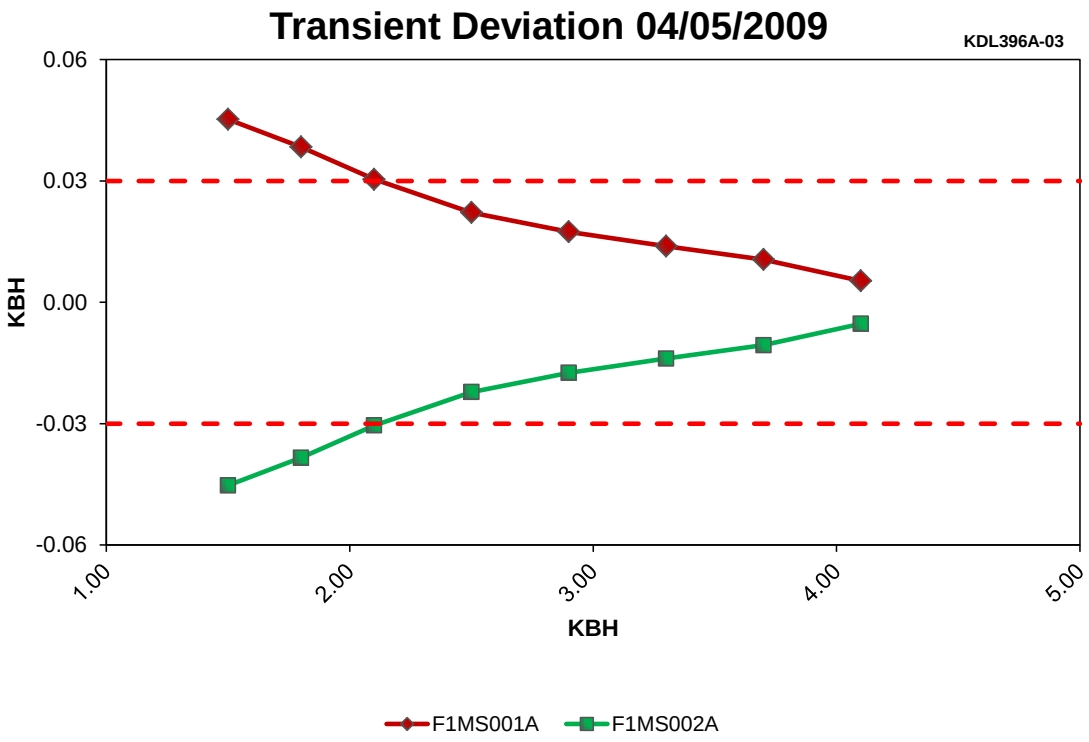



**Figure G.1 SG A STEAM FLOW Transient Deviation at North Anna Unit 1 (Cycle 21)**

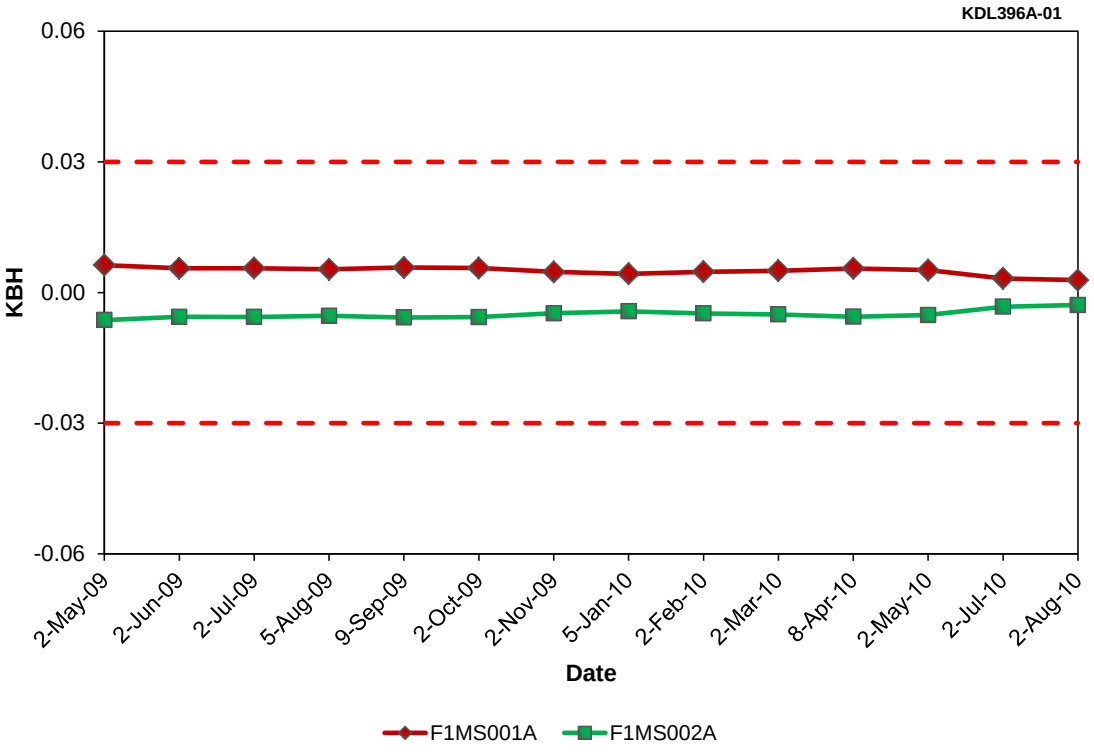



**Figure G.2 SG A STEAM FLOW Steady-State Deviation at North Anna Unit 1 (Cycle 21)**

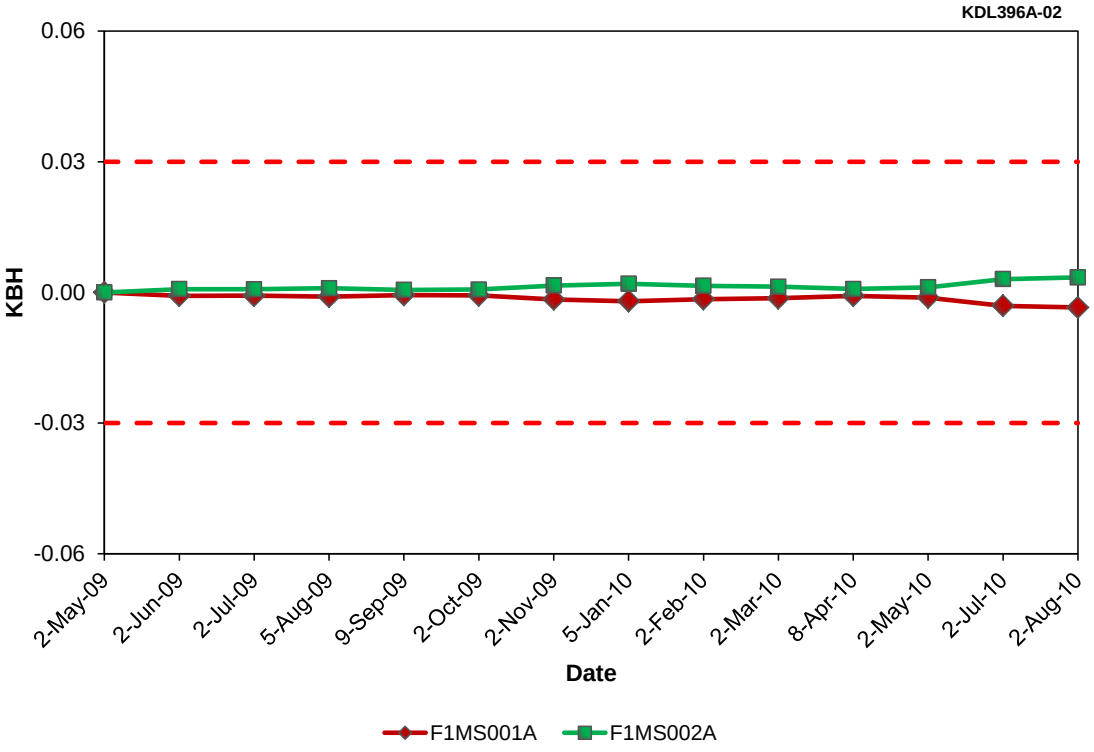



**Figure G.3 SG A STEAM FLOW Steady-State Drift at North Anna Unit 1 (Cycle 21)**

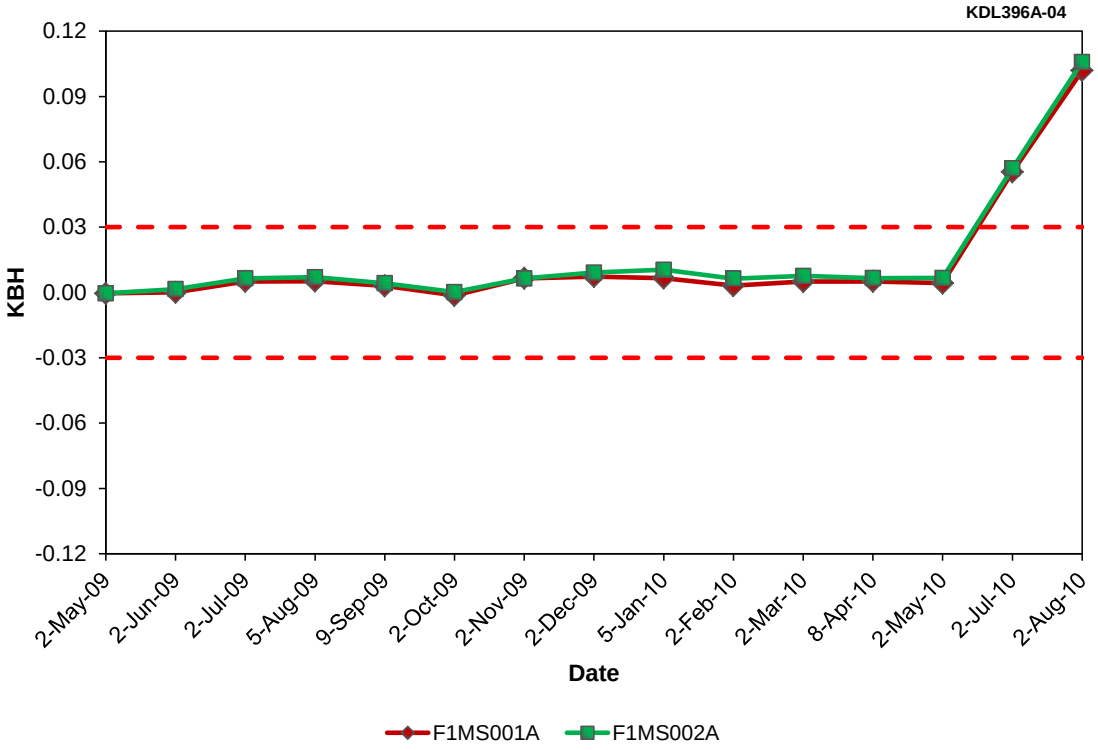



**Figure G.4 SG A STEAM FLOW Steady-State Residual AAKR at North Anna Unit 1 (Cycle 21)**

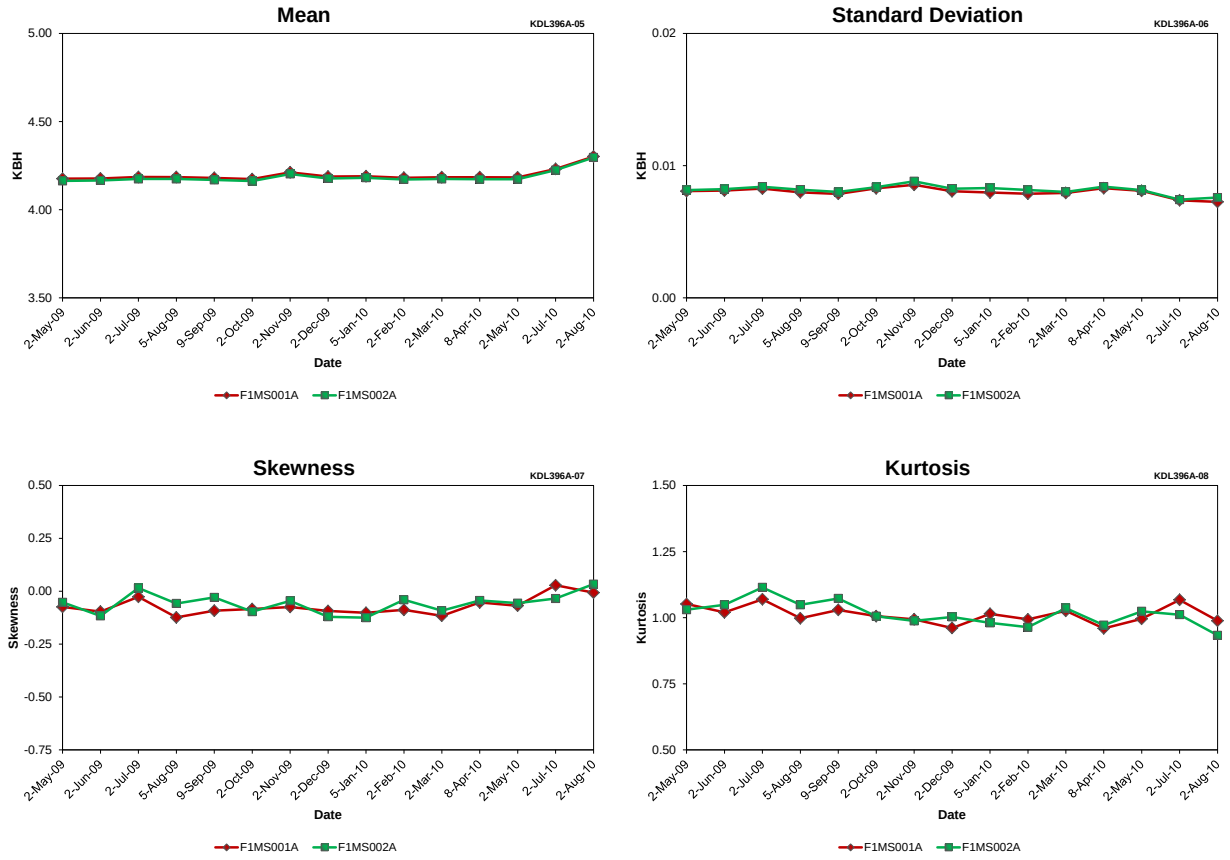



**Figure G.6 SG A STEAM FLOW Data Quality Statistics at North Anna Unit 1 (Cycle 21)**

**Table G.2 SG A STEAM FLOW Data Quality for North Anna Unit 1 (Cycle 21)**

| | Tag Names | |
|---|---|---|
| **Result Type** | **F1MS001A** | **F1MS002A** |
| Mean | 4.20 | 4.19 |
| Std. Dev. | 0.01 | 0.01 |
| Skewness | -0.07 | -0.06 |
| Kurtosis | 1.01 | 1.02 |

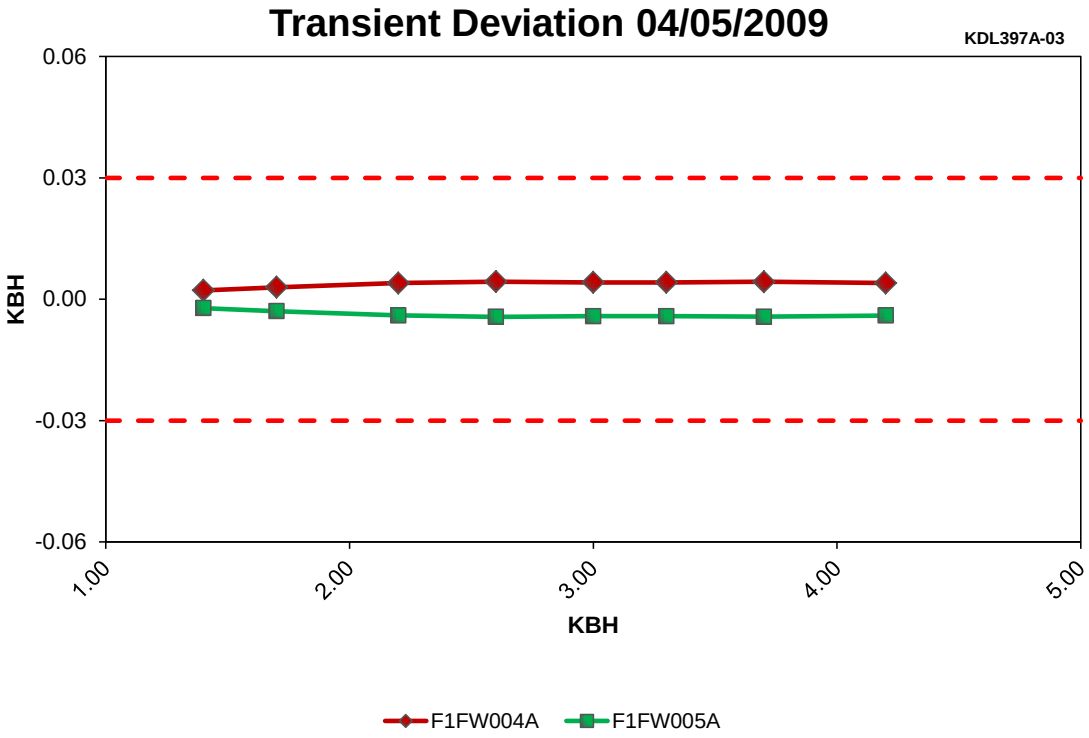



**Figure G.7 SG A FW FLOW Transient Deviation at North Anna Unit 1 (Cycle 21)**

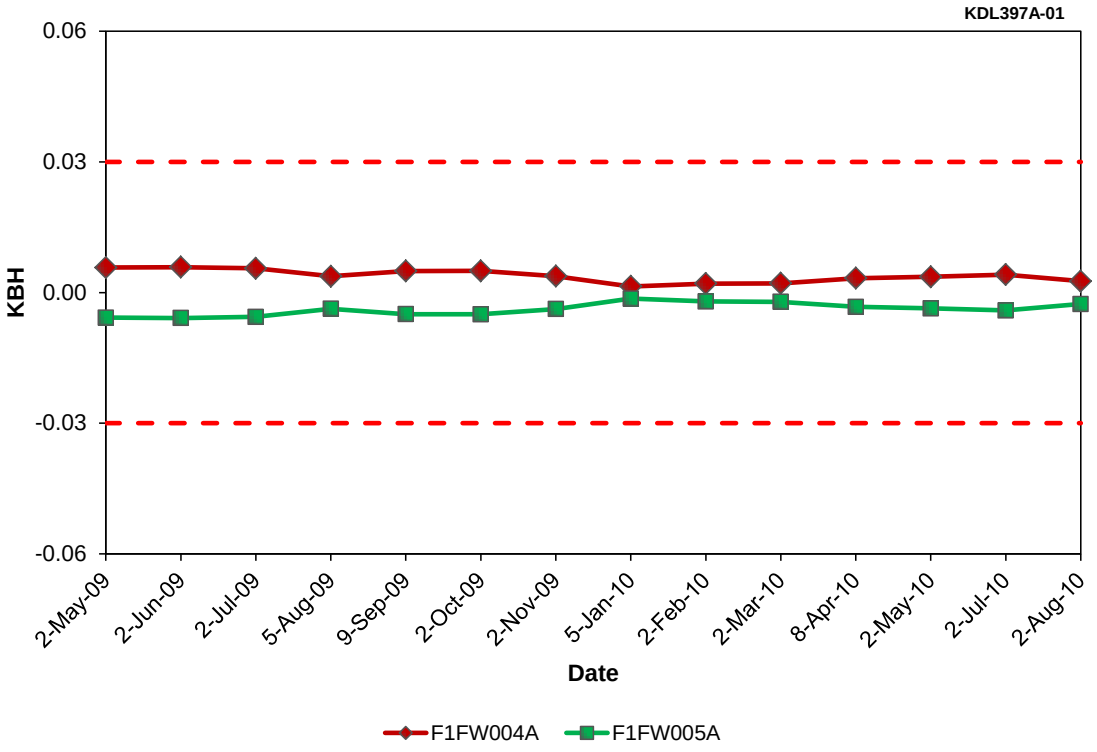



**Figure G.8 SG A FW FLOW Steady-State Deviation at North Anna Unit 1 (Cycle 21)**

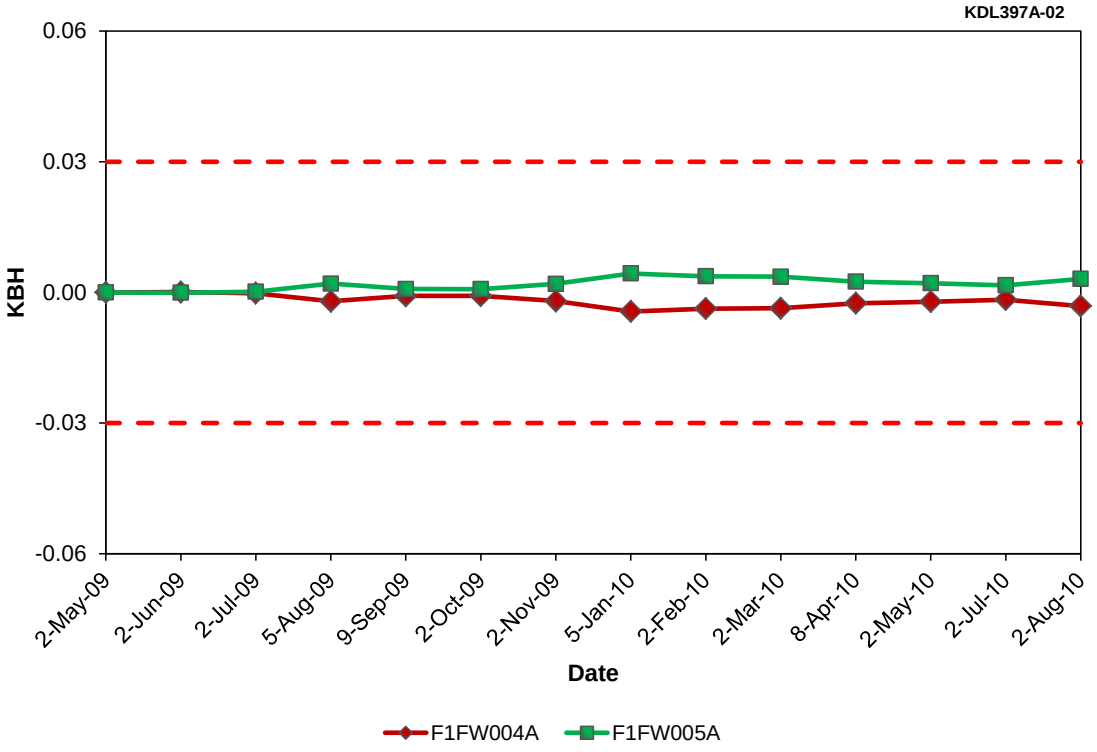



**Figure G.9 SG A FW FLOW Steady-State Drift at North Anna Unit 1 (Cycle 21)**

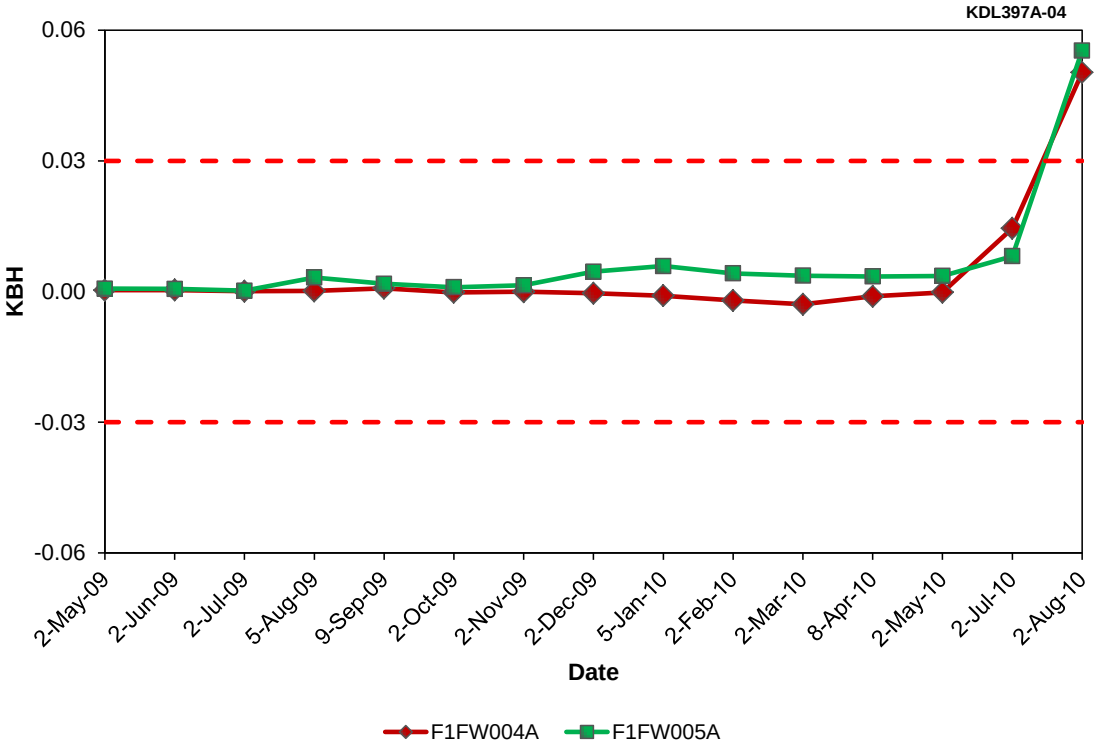



**Figure G.10 SG A FW FLOW Steady-State Residual AAKR at North Anna Unit 1 (Cycle 21)**

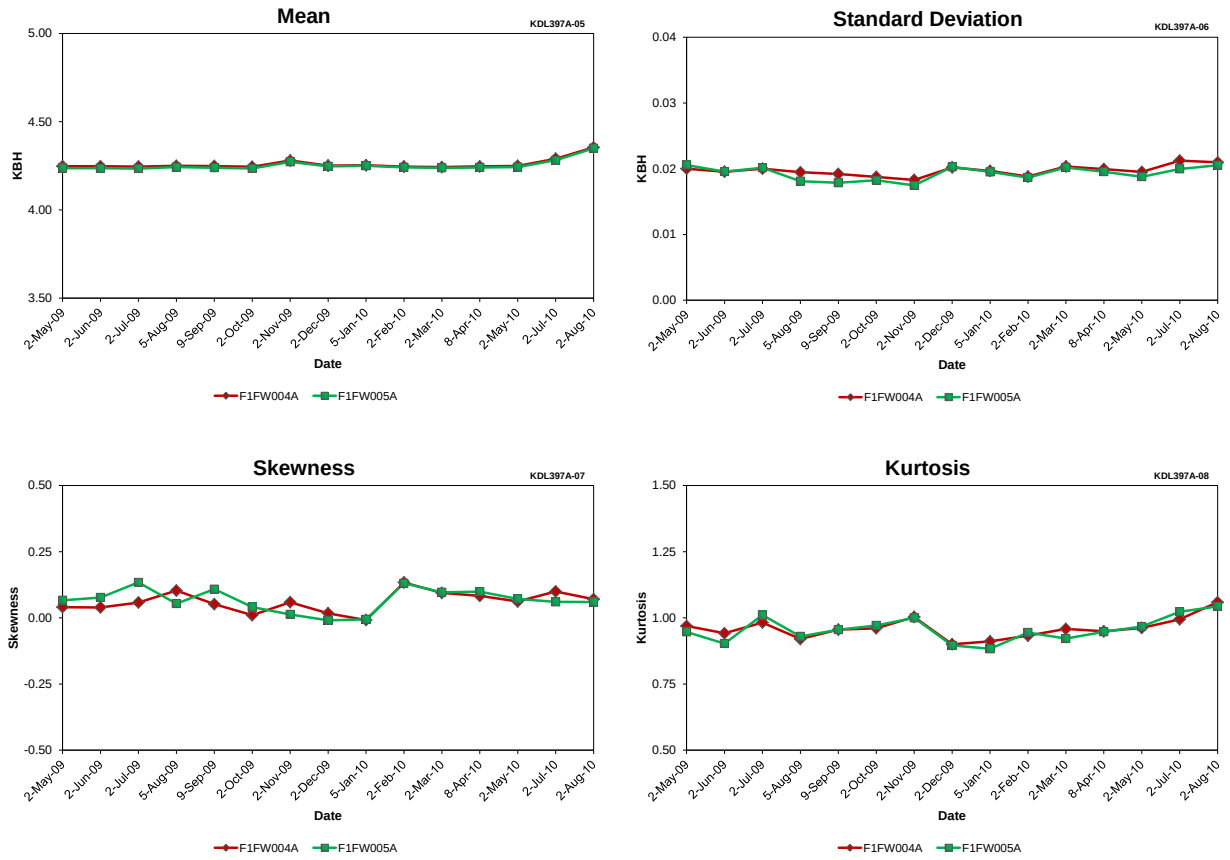



**Figure G.11 SG A FW FLOW Data Quality Statistics at North Anna Unit 1 (Cycle 21)**

**Table G.3 SG A FW FLOW Data Quality for North Anna Unit 1 (Cycle 21)**

| Result Type | Tag Names | |
|---|---|---|
| | F1FW004A | F1FW005A |
| Mean | 4.26 | 4.25 |
| Std. Dev. | 0.02 | 0.02 |
| Skewness | 0.06 | 0.07 |
| Kurtosis | 0.96 | 0.96 |

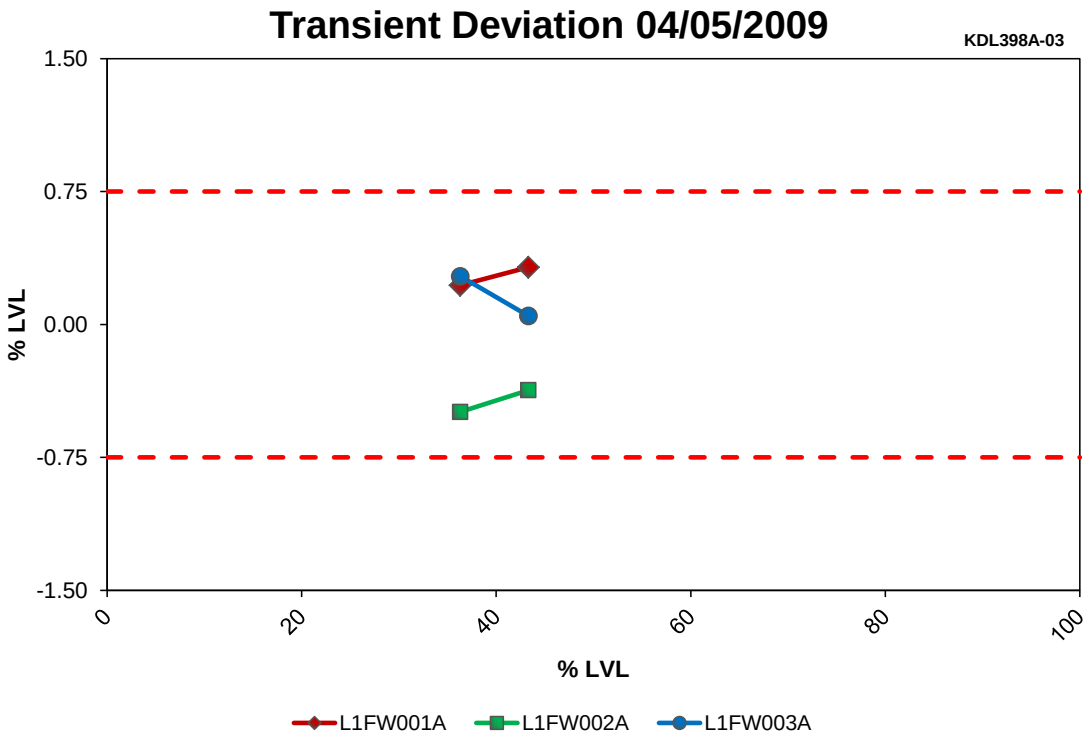



**Figure G.12 SG A LEVEL Transient Deviation at North Anna Unit 1 (Cycle 21)**

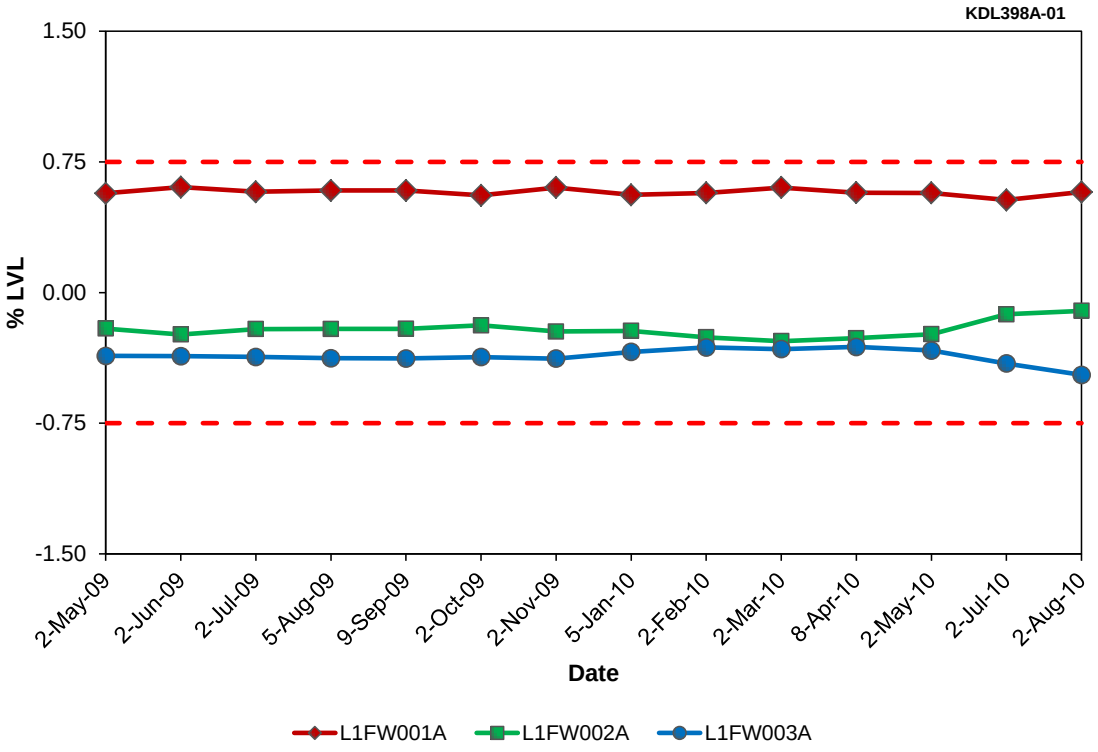



**Figure G.13 SG A LEVEL Steady-State Deviation at North Anna Unit 1 (Cycle 21)**

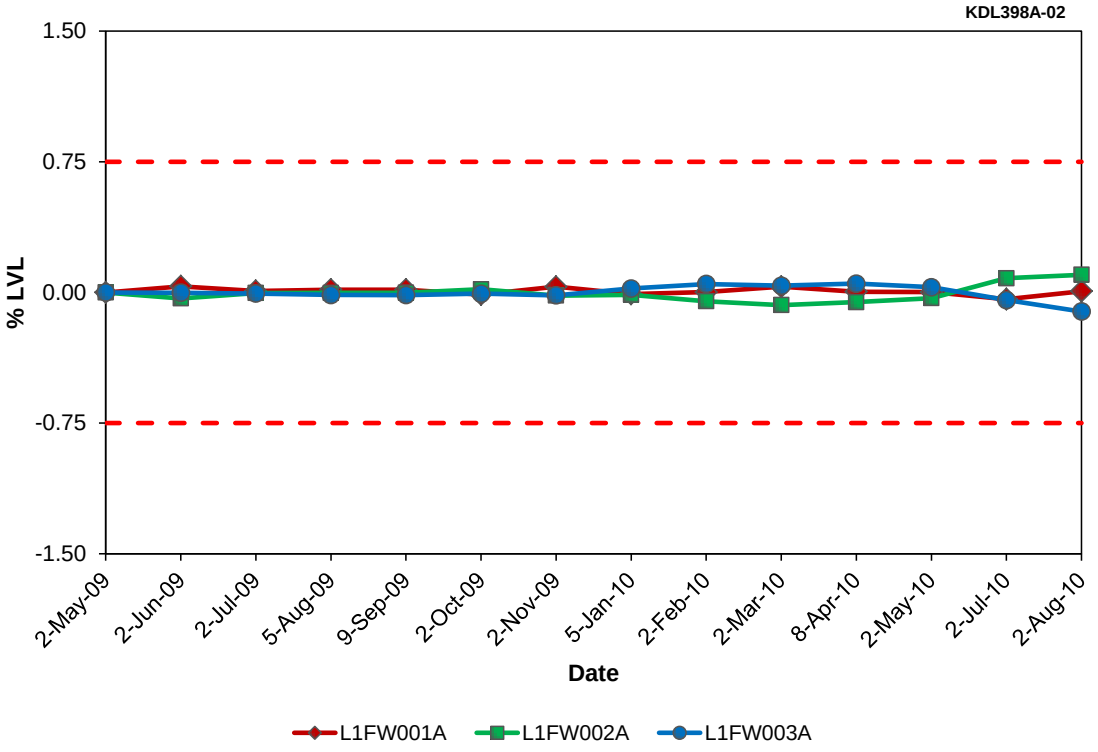



**Figure G.14 SG A LEVEL Steady-State Drift at North Anna Unit 1 (Cycle 21)**

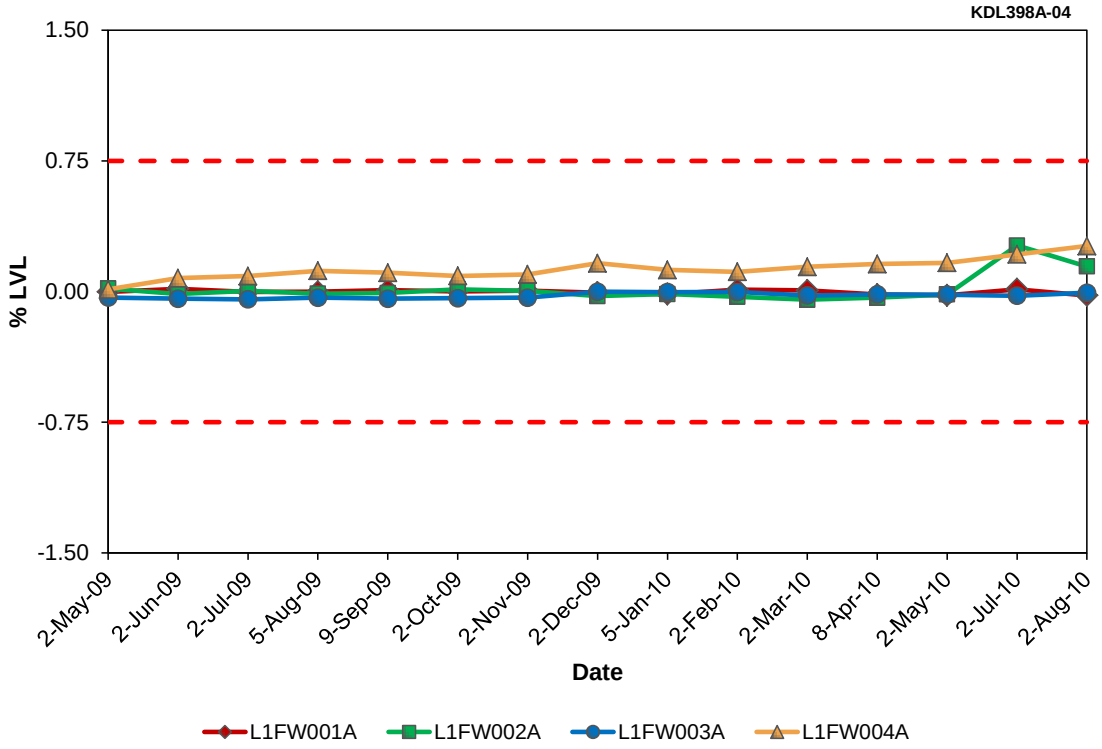



**Figure G.15 SG A LEVEL Steady-State Residual AAKR at North Anna Unit 1 (Cycle 21)**

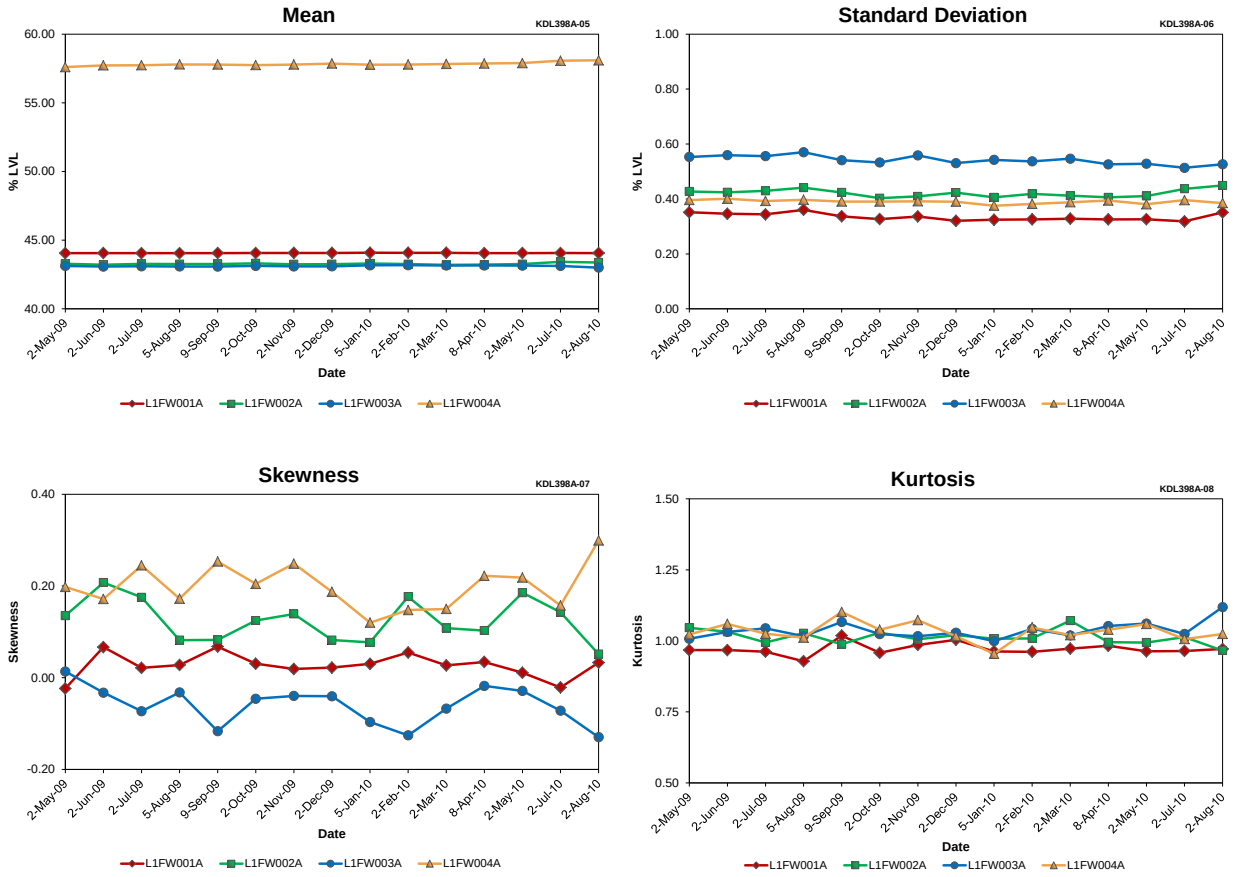



**Figure G.16 SG A LEVEL Data Quality Statistics at North Anna Unit 1 (Cycle 21)**

**Table G.4 SG A LEVEL Data Quality for North Anna Unit 1 (Cycle 21)**

| | Tag Names | | | |
|---|---|---|---|---|
| **Result Type** | **L1FW001A** | **L1FW002A** | **L1FW003A** | **L1FW004A** |
| Mean | 44.06 | 43.28 | 43.11 | 57.82 |
| Std. Dev. | 0.33 | 0.42 | 0.54 | 0.39 |
| Skewness | 0.03 | 0.12 | -0.06 | 0.20 |
| Kurtosis | 0.97 | 1.01 | 1.04 | 1.03 |

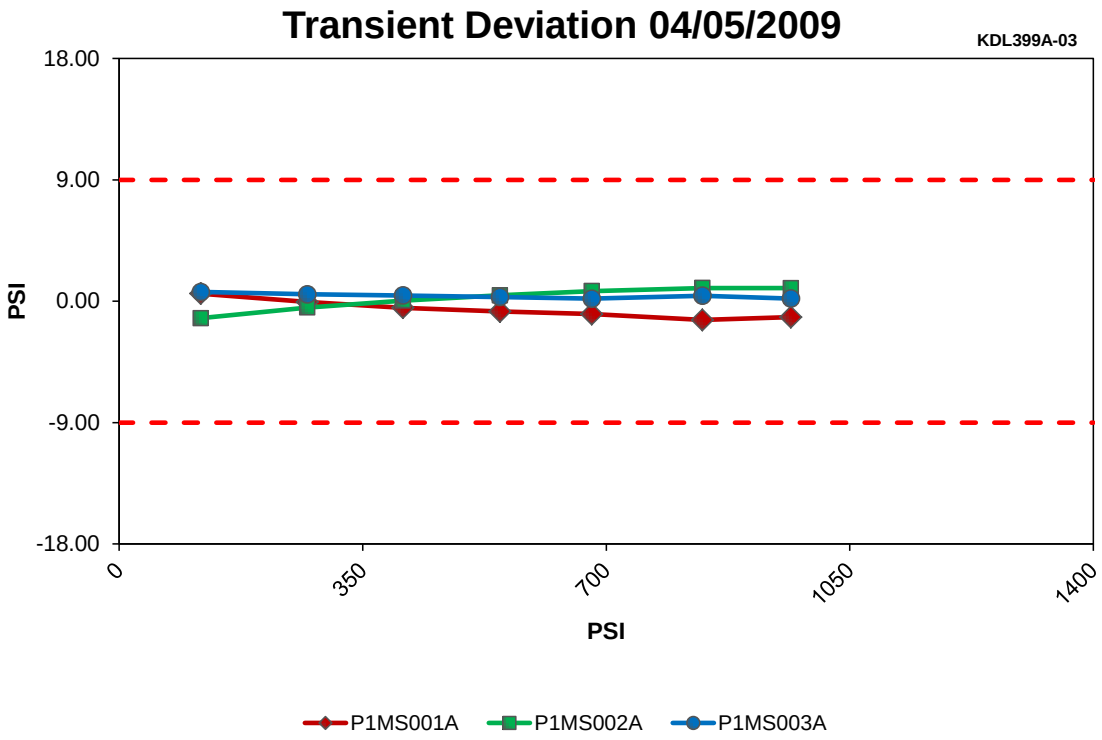



**Figure G.17 SG A OUTLET PRESSURE Transient Deviation at North Anna Unit 1 (Cycle 21)**

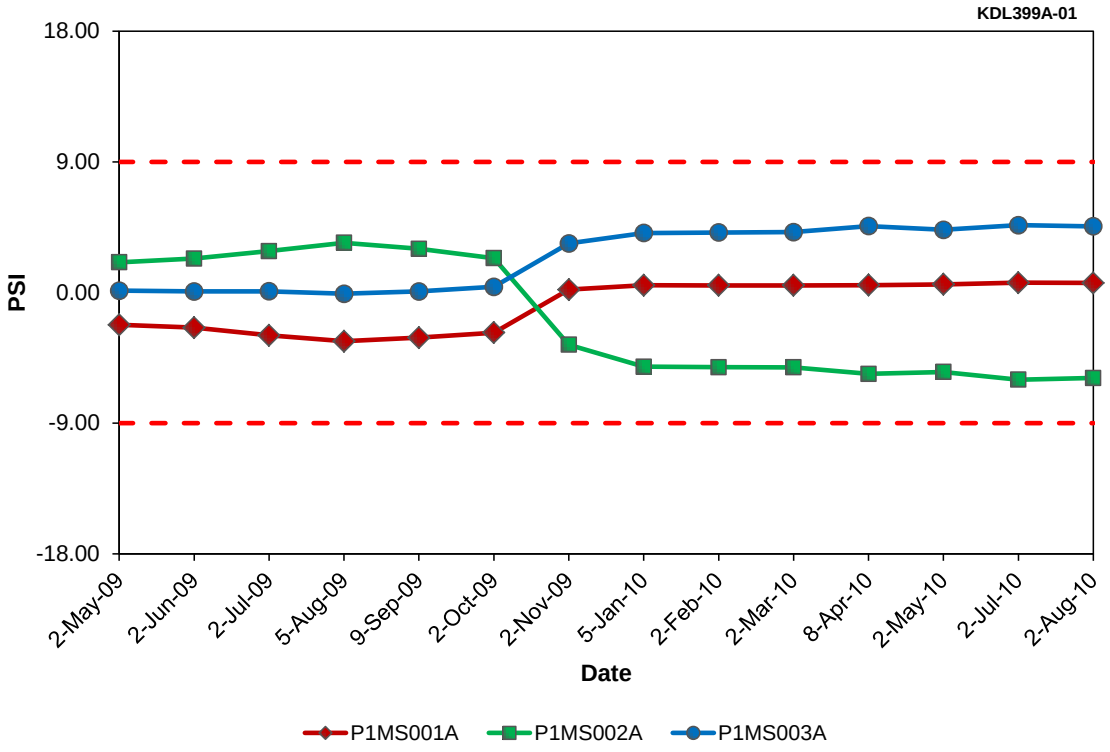



**Figure G.18 SG A OUTLET PRESSURE Steady-State Deviation at North Anna Unit 1 (Cycle 21)**

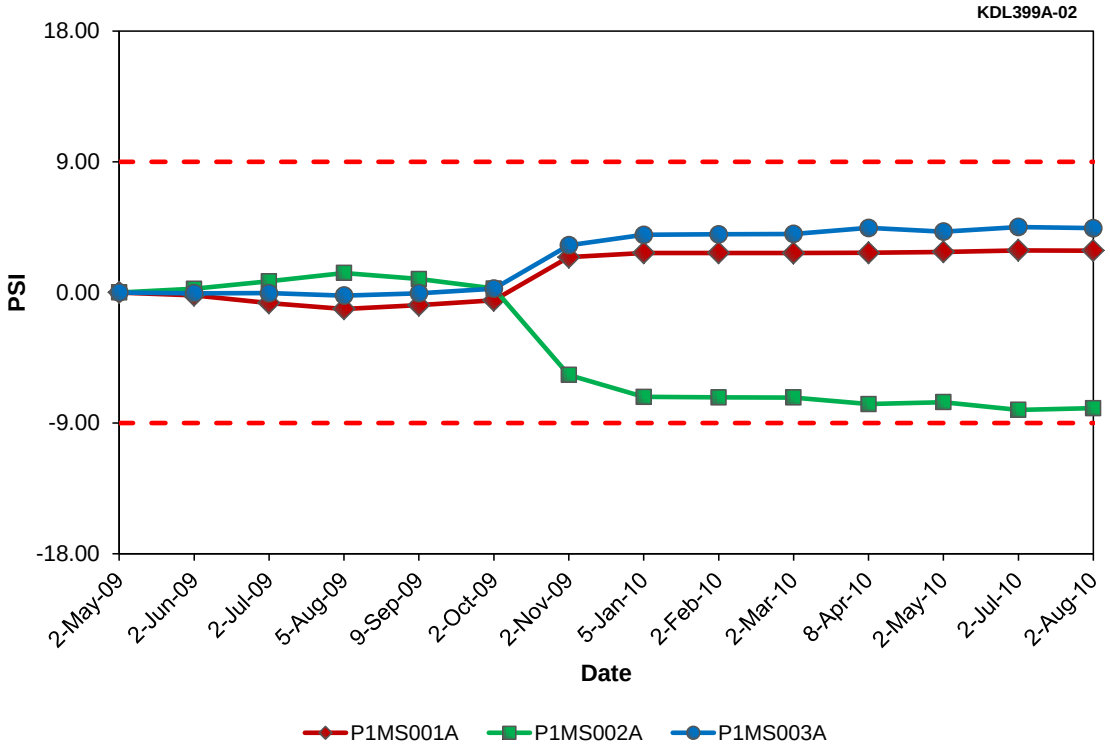
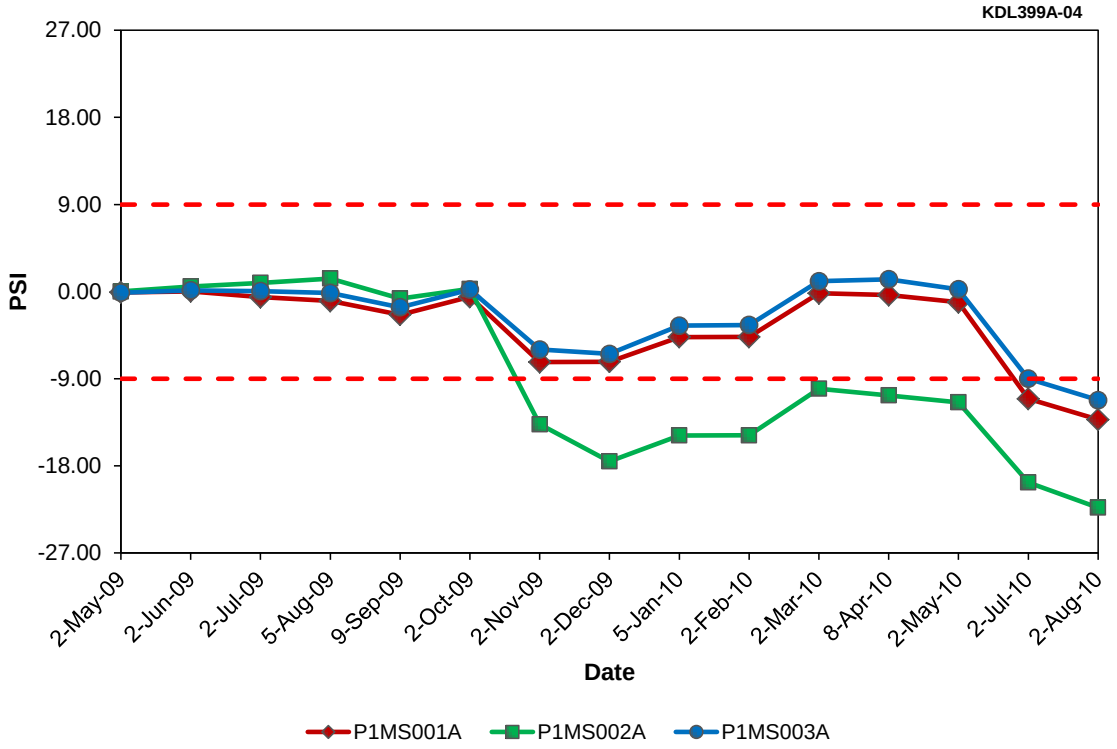



**Figure G.18 SG A OUTLET PRESSURE Steady-State Drift at North Anna Unit 1 (Cycle 21)**

**Figure G.19 SG A OUTLET PRESSURE Steady-State Residual AAKR at North Anna Unit 1 (Cycle 21)**



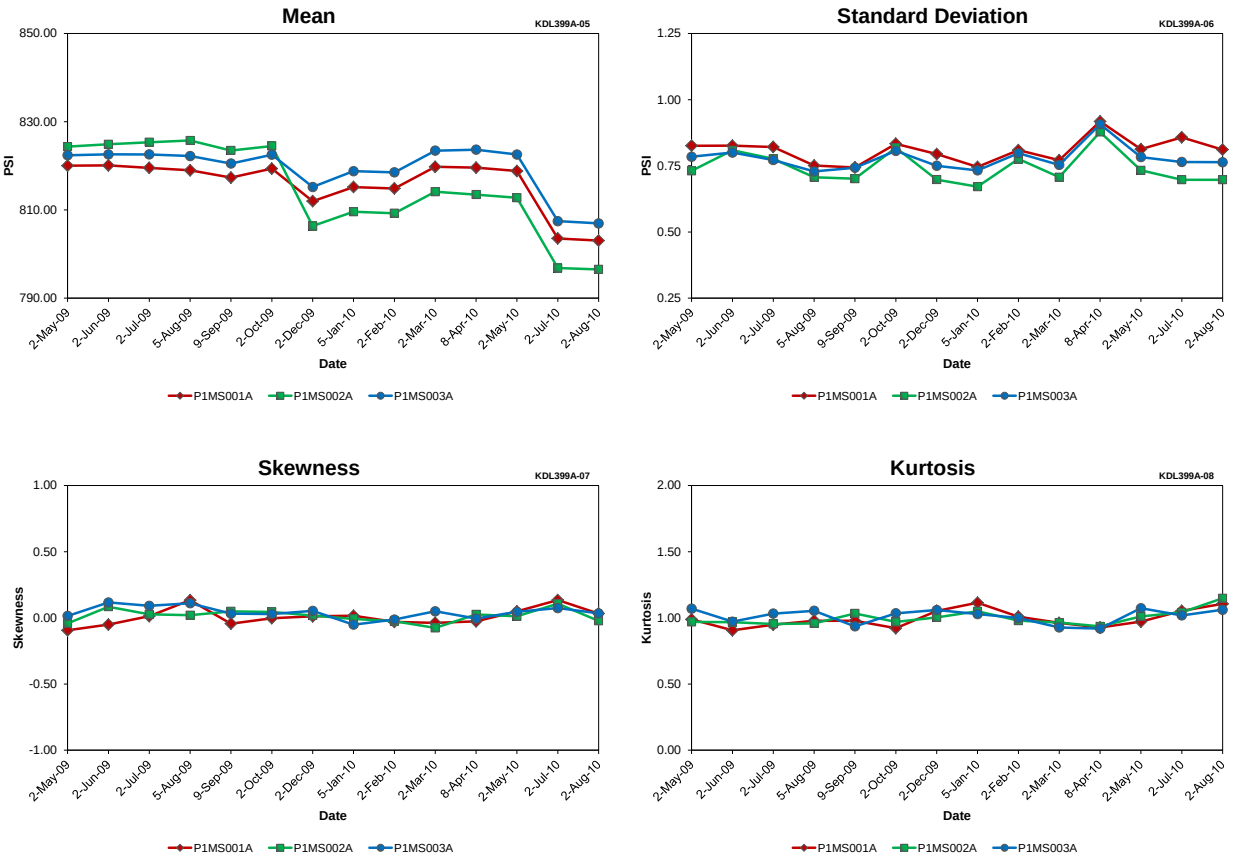
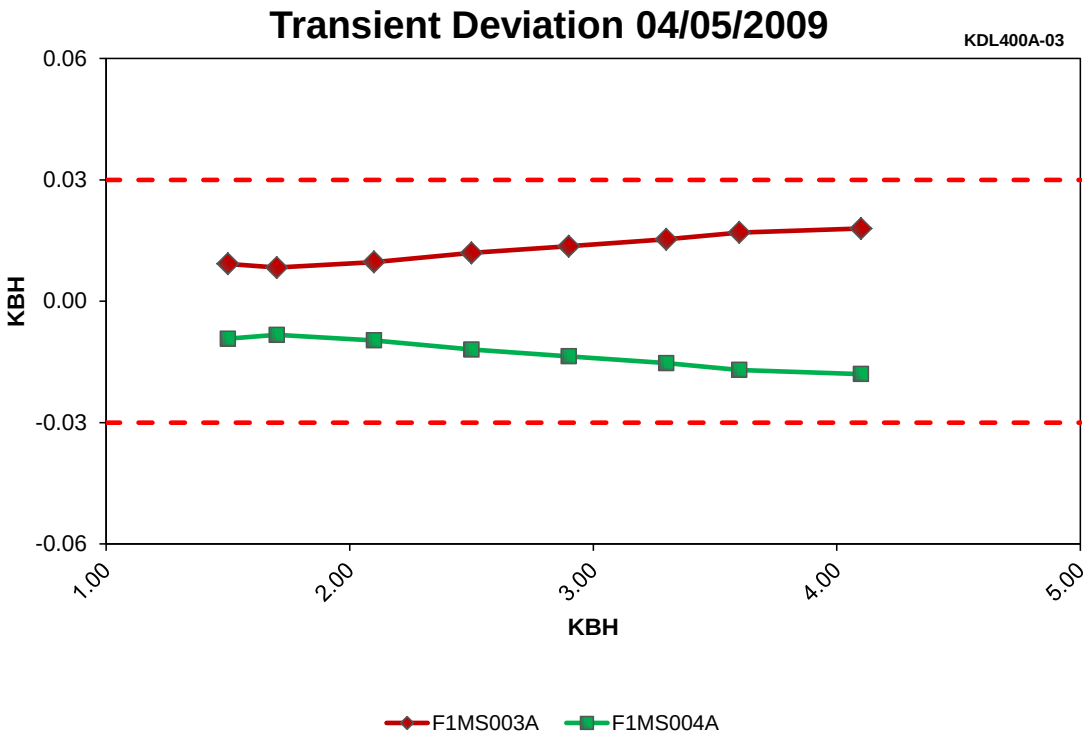



**Figure G.20 SG A OUTLET PRESSURE Data Quality Statistics at North Anna Unit 1 (Cycle 21)**

**Table G.5 SG A OUTLET PRESSURE Data Quality for North Anna Unit 1 (Cycle 21)**

| | Tag Names | | |
|---|---|---|---|
| **Result Type** | **P1MS001A** | **P1MS002A** | **P1MS003A** |
| Mean | 815.87 | 814.80 | 819.25 |
| Std. Dev. | 0.81 | 0.74 | 0.78 |
| Skewness | 0.01 | 0.01 | 0.01 |
| Kurtosis | 0.99 | 1.00 | 1.01 |

**Figure G.21 SG B STEAM FLOW Transient Deviation at North Anna Unit 1 (Cycle 21)**



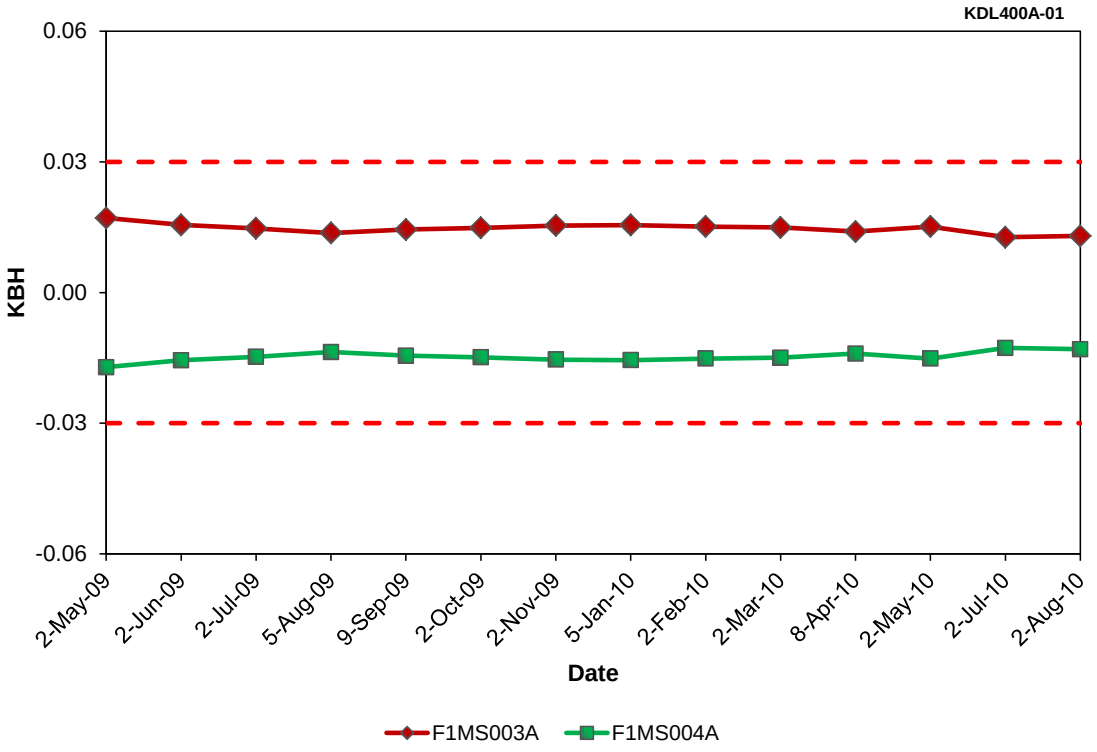



**Figure G.22 SG B STEAM FLOW Steady-State Deviation at North Anna Unit 1 (Cycle 21)**

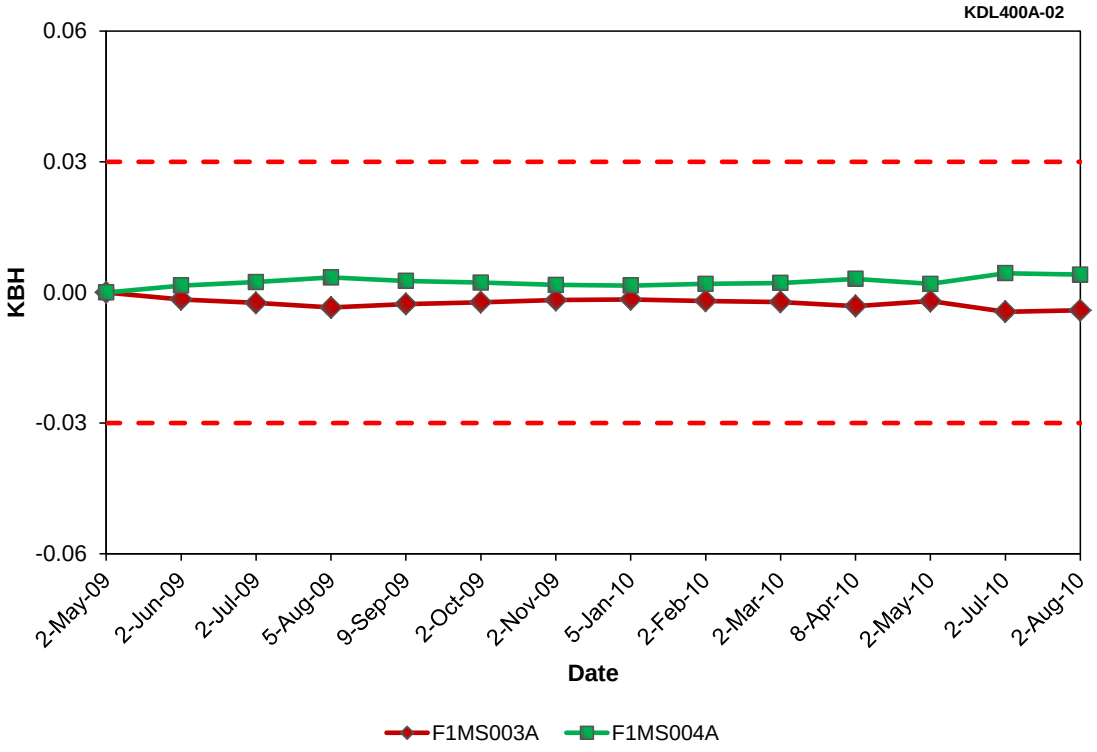
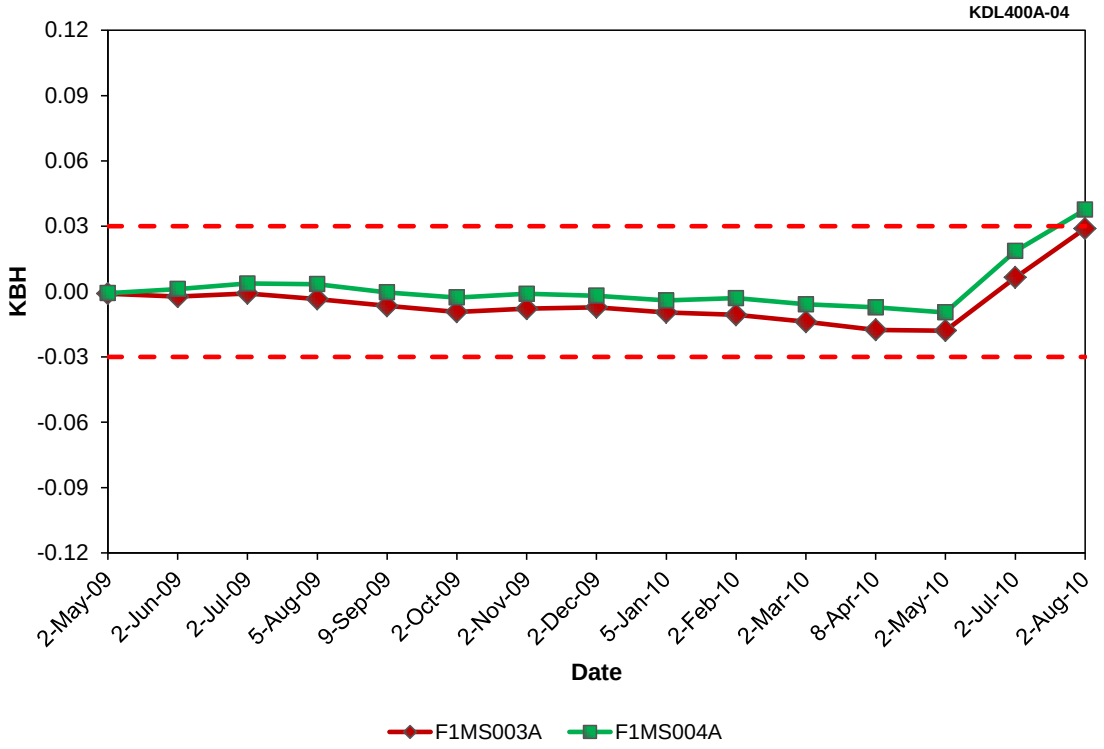



**Figure G.23 SG B STEAM FLOW Steady-State Drift at North Anna Unit 1 (Cycle 21)**

**Figure G.24 SG B STEAM FLOW Steady-State Residual AAKR at North Anna Unit 1 (Cycle 21)**



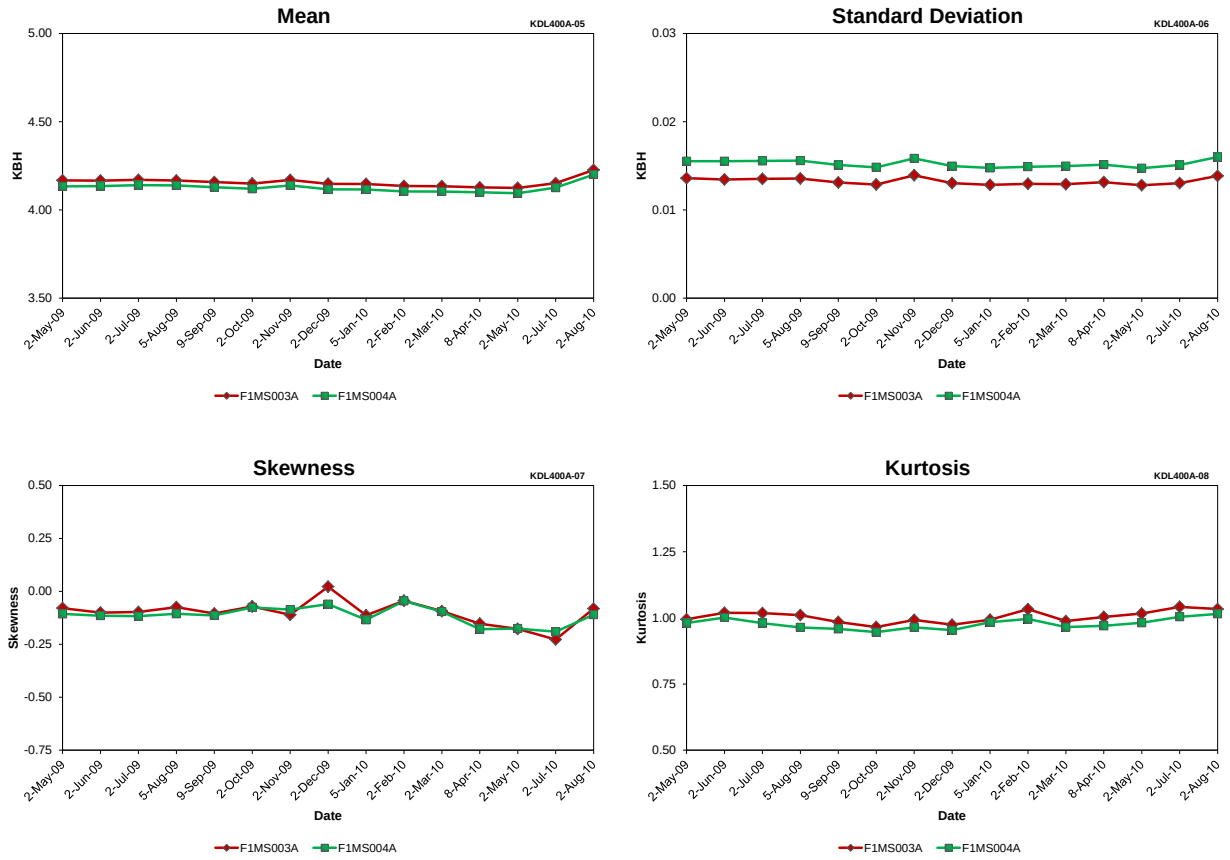
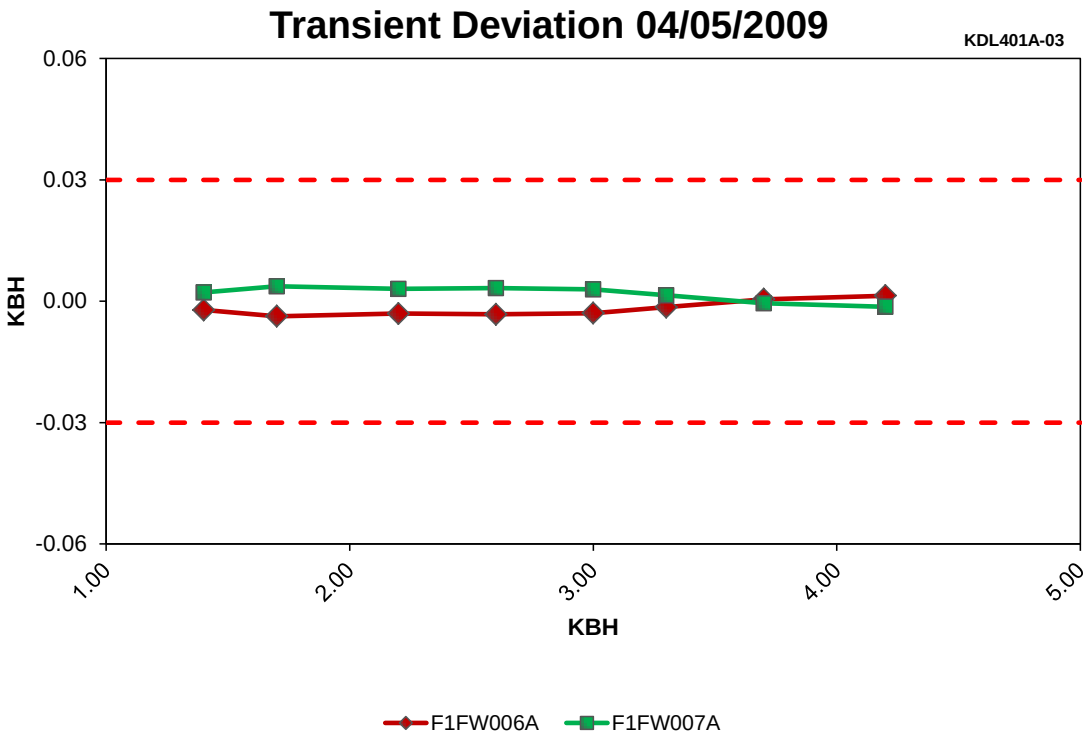



**Figure G.25 SG B STEAM FLOW Data Quality Statistics at North Anna Unit 1 (Cycle 21)**

**Table G.6 SG B STEAM FLOW Data Quality for North Anna Unit 1 (Cycle 21)**

| | Tag Names | |
|---|---|---|
| **Result Type** | **F1MS003A** | **F1MS004A** |
| Mean | 4.16 | 4.13 |
| Std. Dev. | 0.01 | 0.02 |
| Skewness | -0.10 | -0.11 |
| Kurtosis | 1.00 | 0.98 |

**Figure G.26 SG B FW FLOW Transient Deviation at North Anna Unit 1 (Cycle 21)**



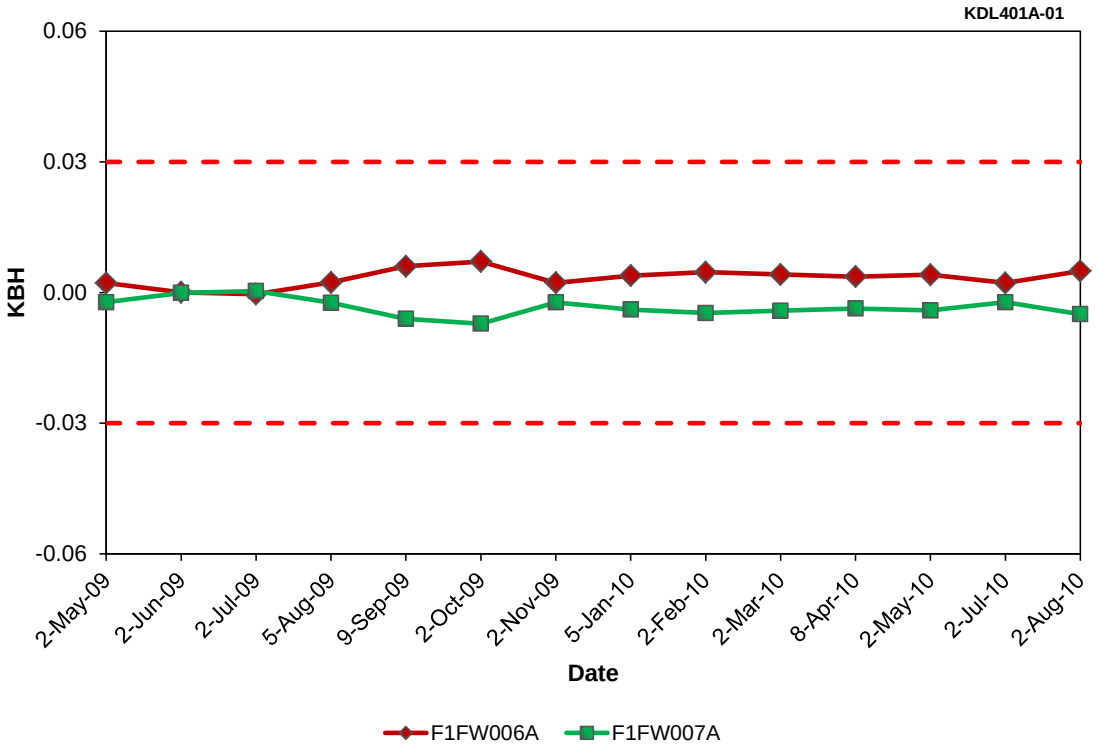



**Figure G.27 SG B FW FLOW Steady-State Deviation at North Anna Unit 1 (Cycle 21)**

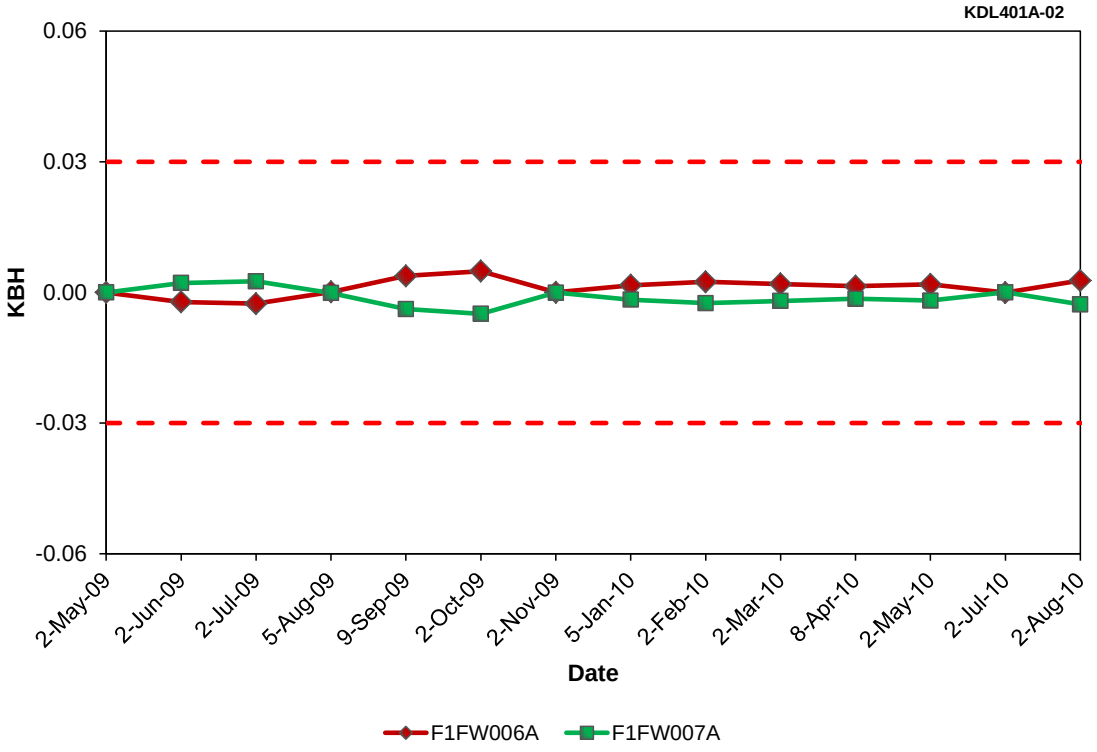
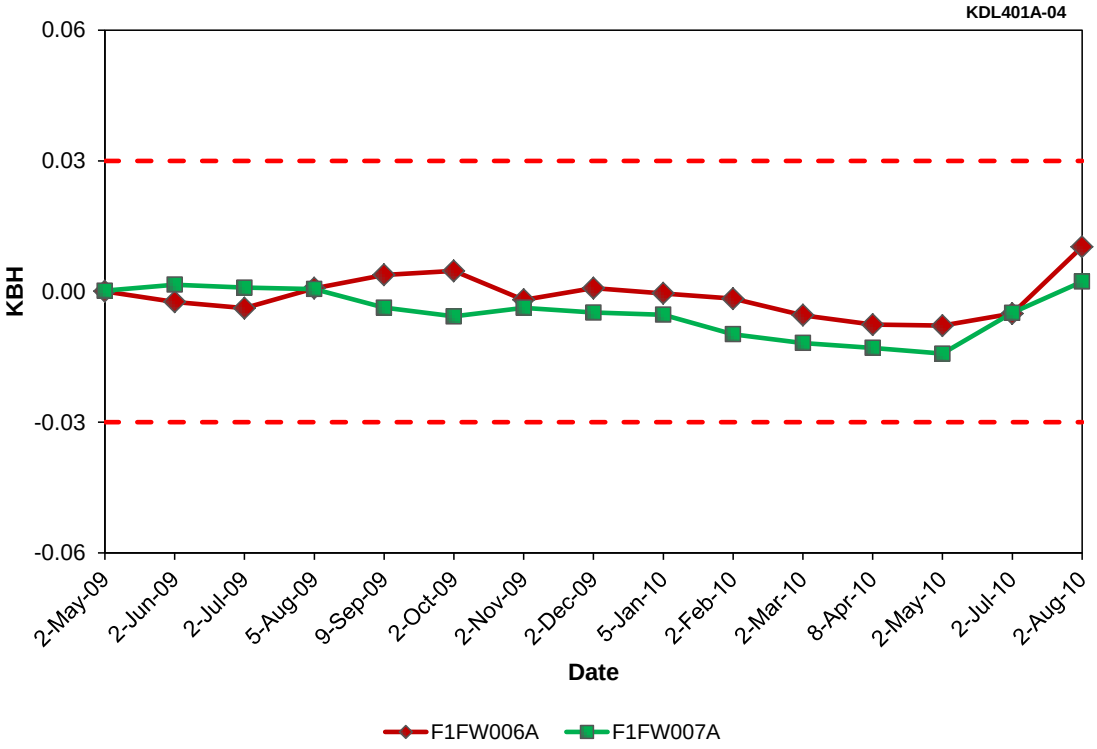



**Figure G.28 SG B FW FLOW Steady-State Drift at North Anna Unit 1 (Cycle 21)**

**Figure G.29 SG B FW FLOW Steady-State Residual AAKR at North Anna Unit 1 (Cycle 21)**



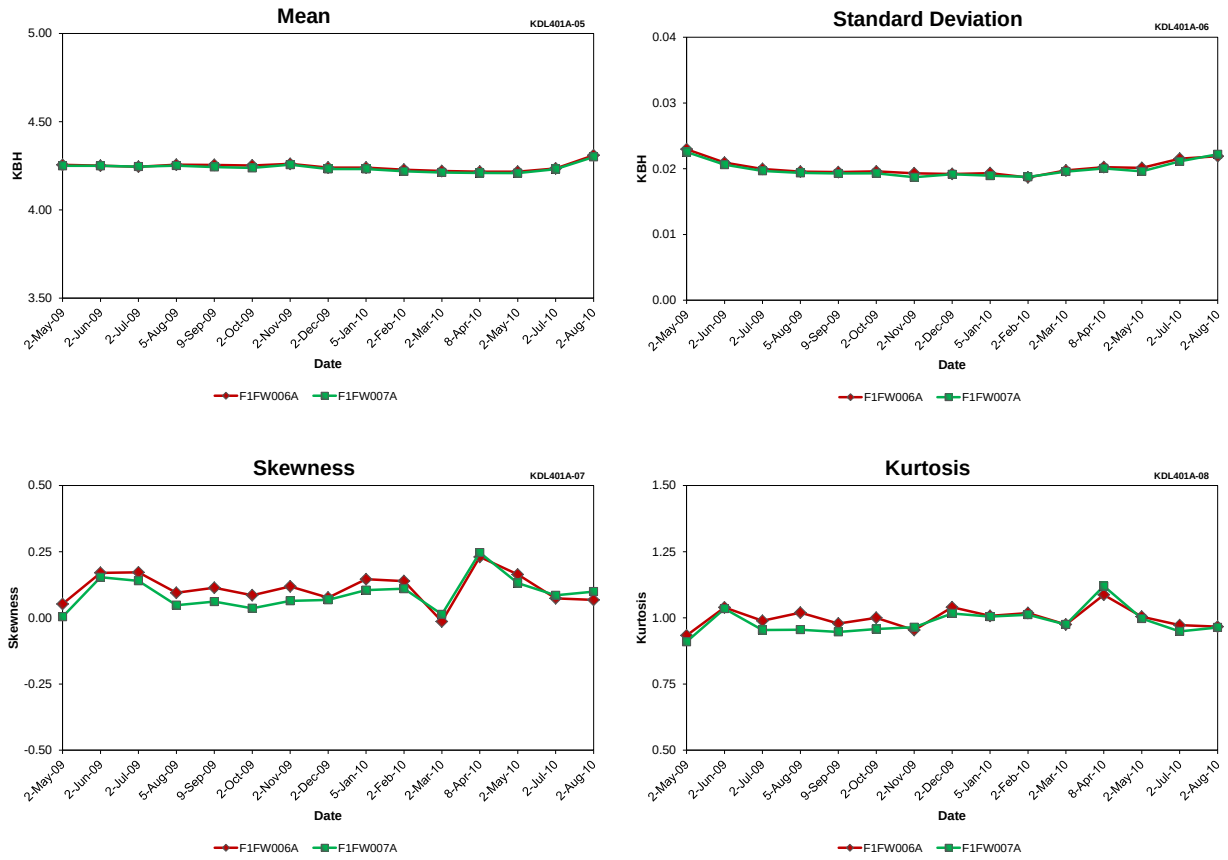
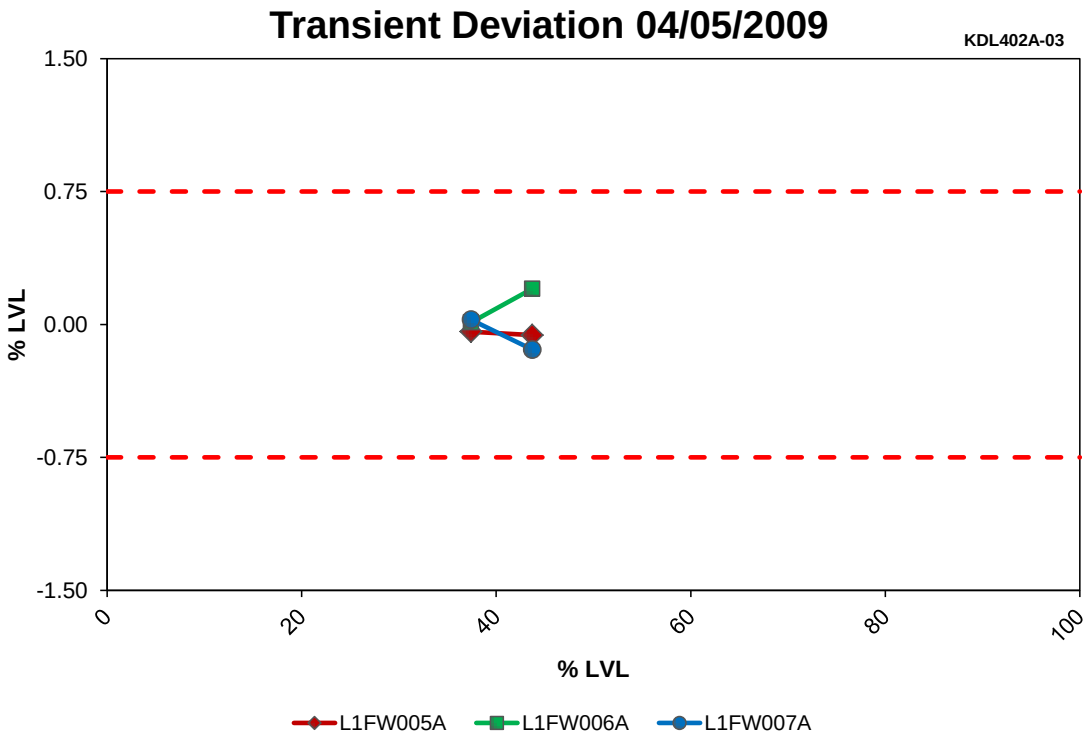



**Figure G.30 SG B FW FLOW Data Quality Statistics at North Anna Unit 1 (Cycle 21)**

**Table G.7 SG B STEAM FLOW Data Quality for North Anna Unit 1 (Cycle 21)**

| | Tag Names | |
|---|---|---|
| **Result Type** | **F1FW006A** | **F1FW007A** |
| Mean | 4.25 | 4.24 |
| Std. Dev. | 0.02 | 0.02 |
| Skewness | 0.11 | 0.09 |
| Kurtosis | 1.00 | 0.98 |

**Figure G.31 SG B LEVEL Transient Deviation at North Anna Unit 1 (Cycle 21)**



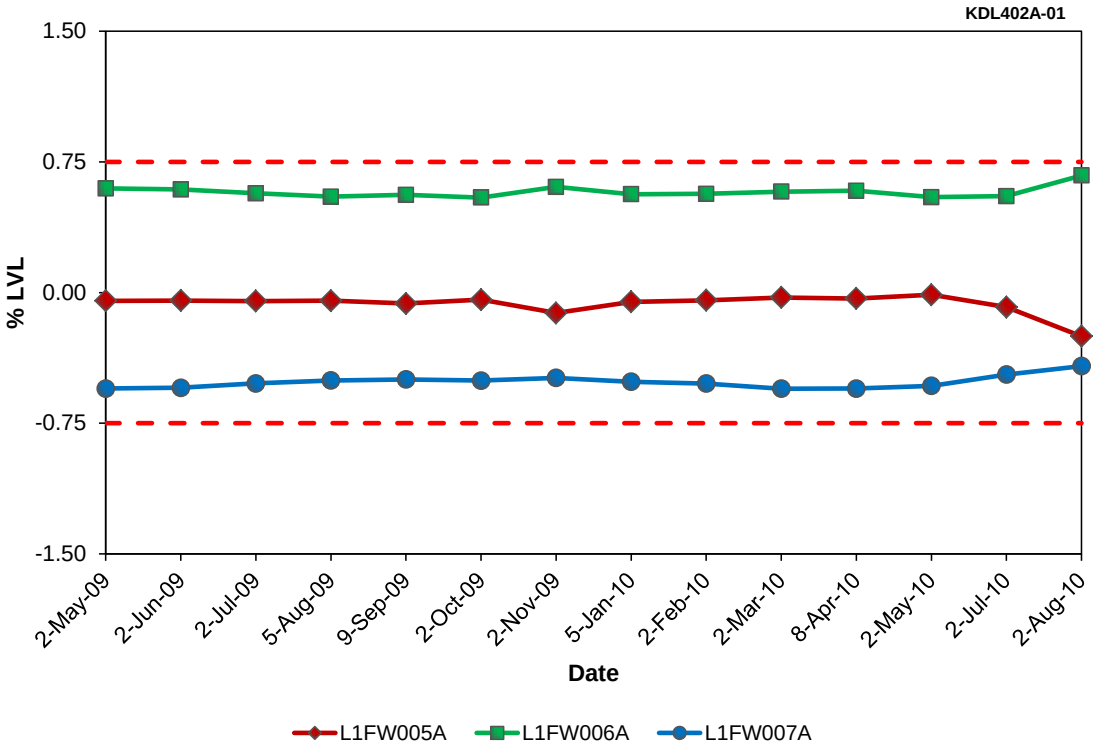



**Figure G.32 SG B LEVEL Steady-State Deviation at North Anna Unit 1 (Cycle 21)**

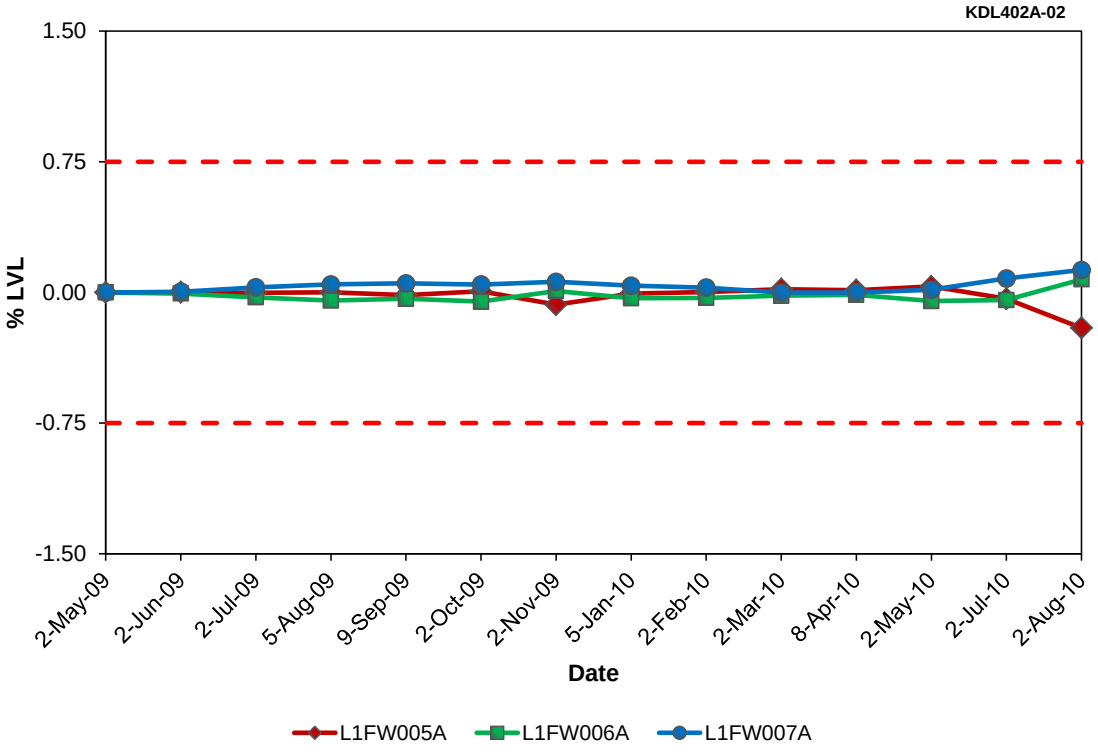



**Figure G.33 SG B LEVEL Steady-State Drift at North Anna Unit 1 (Cycle 21)**

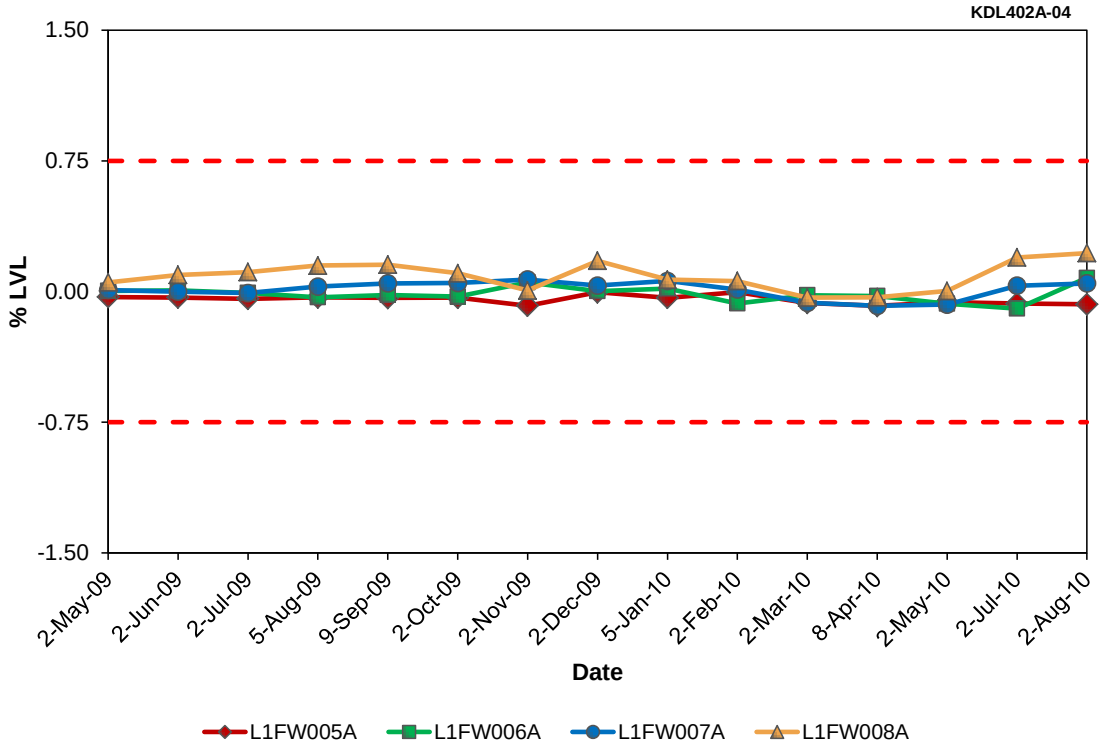



**Figure G.34 SG B LEVEL Steady-State Residual AAKR at North Anna Unit 1 (Cycle 21)**

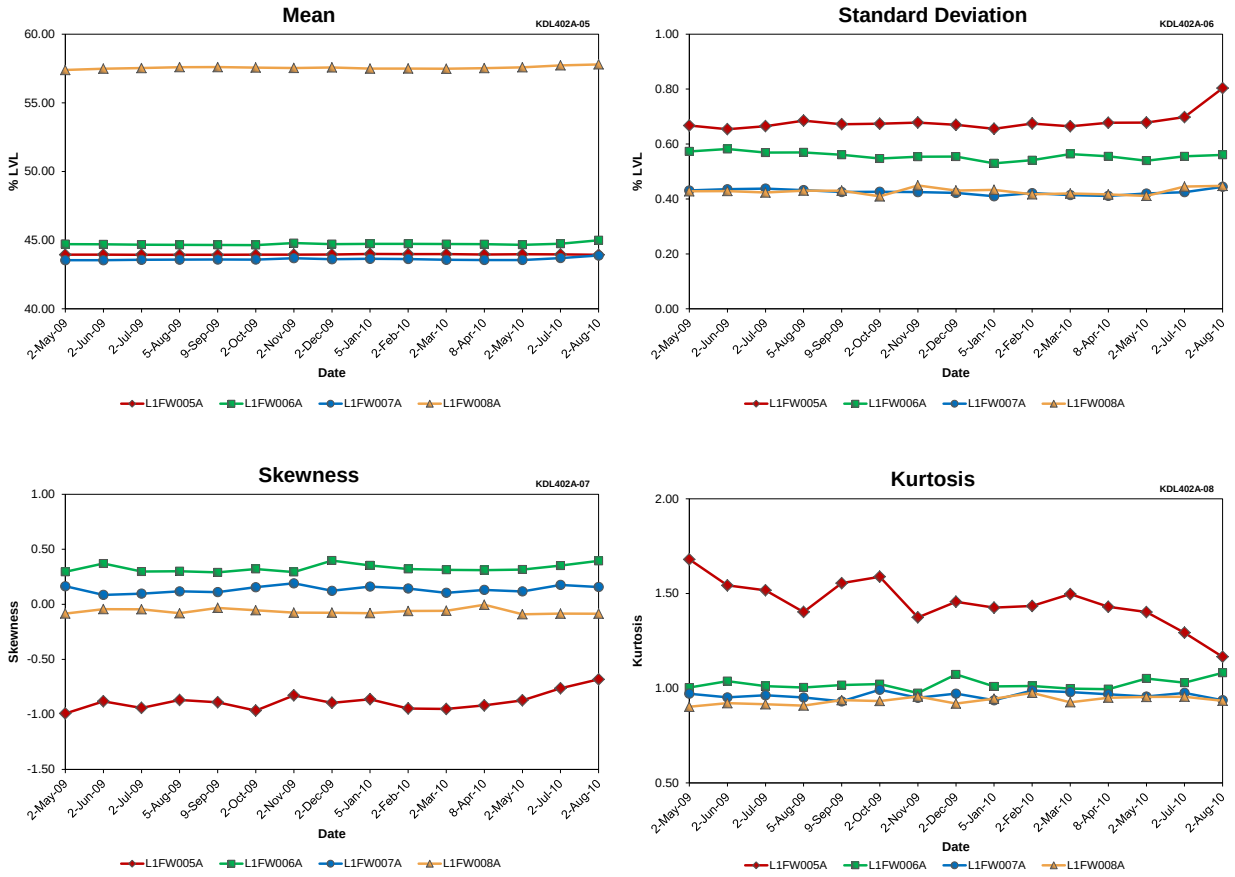



**Figure G.35 SG B LEVEL Data Quality Statistics at North Anna Unit 1 (Cycle 21)**

**Table G.8 SG B LEVEL Data Quality for North Anna Unit 1 (Cycle 21)**

| | Tag Names | | | |
|---|---|---|---|---|
| Result Type | L1FW005A | L1FW006A | L1FW007A | L1FW008A |
| Mean | 43.96 | 44.72 | 43.62 | 57.56 |
| Std. Dev. | 0.68 | 0.56 | 0.43 | 0.43 |
| Skewness | -0.88 | 0.33 | 0.14 | -0.06 |
| Kurtosis | 1.45 | 1.02 | 0.96 | 0.94 |

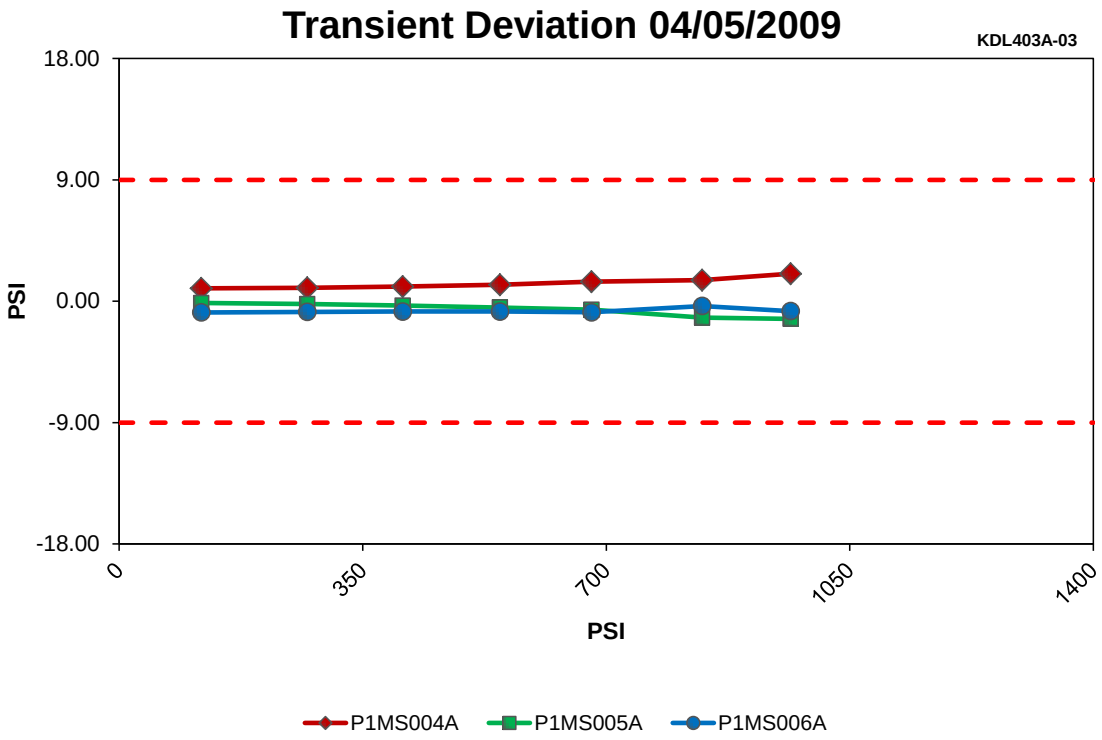



**Figure G.36 SG B OUTLET PRESSURE Transient Deviation at North Anna Unit 1 (Cycle 21)**

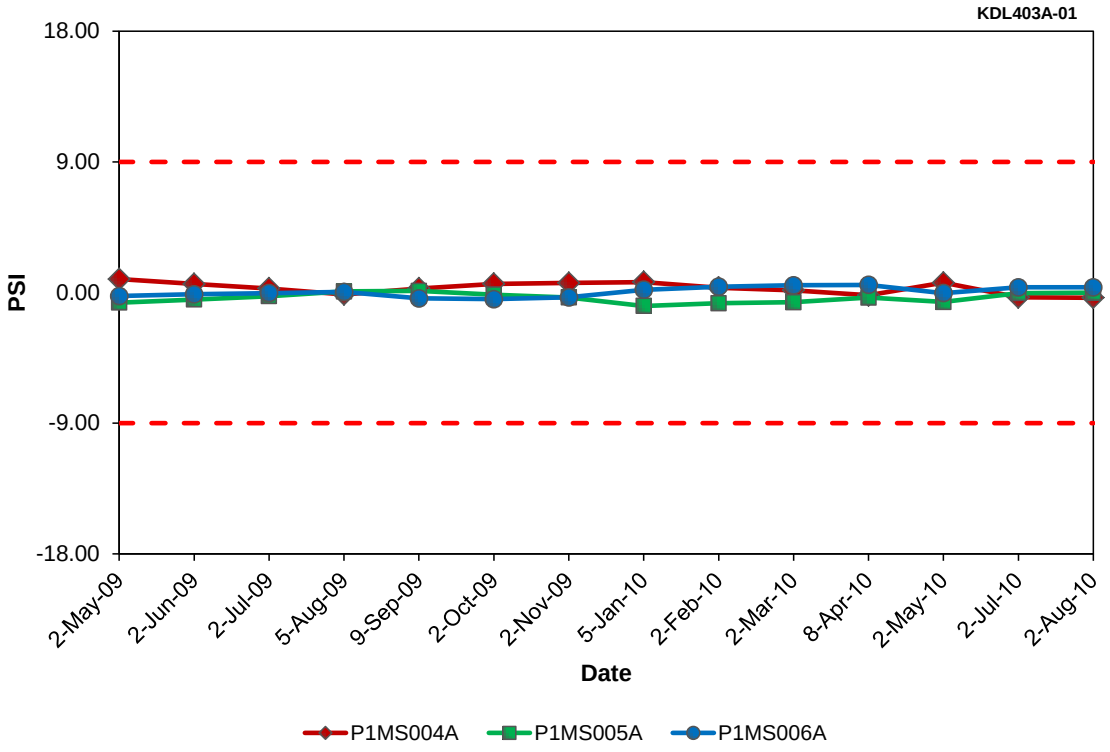



**Figure G.37 SG B OUTLET PRESSURE Steady-State Deviation at North Anna Unit 1 (Cycle 21)**

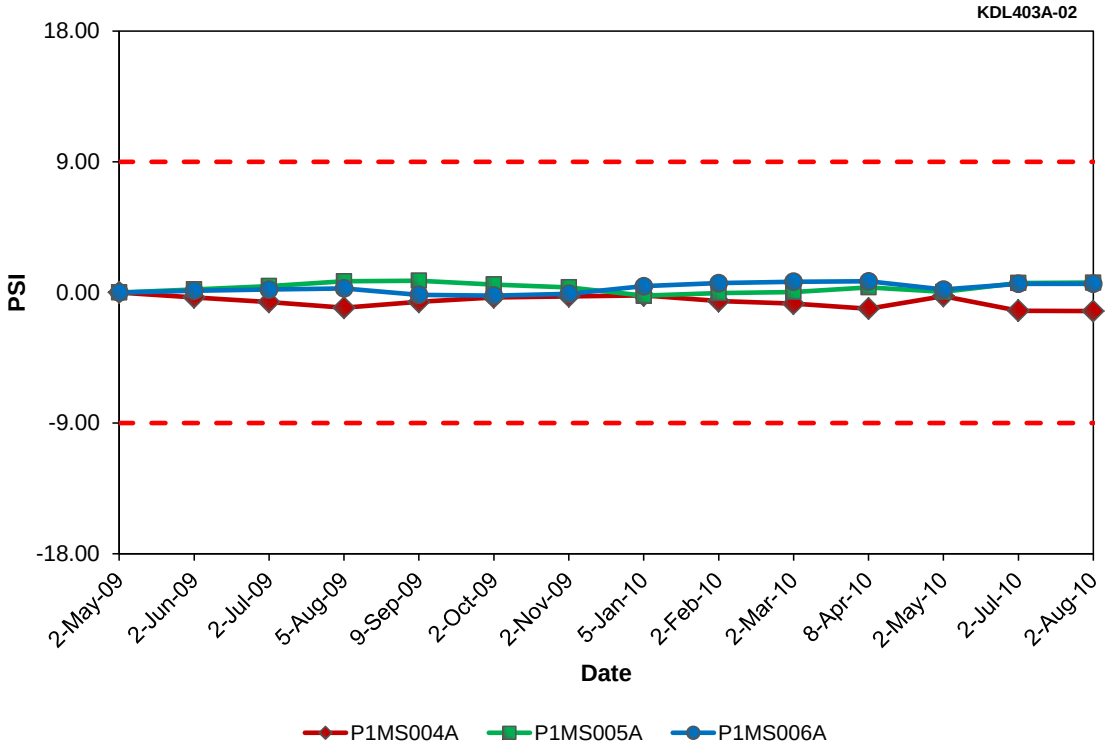



**Figure G.38 SG B OUTLET PRESSURE Steady-State Drift at North Anna Unit 1 (Cycle 21)**

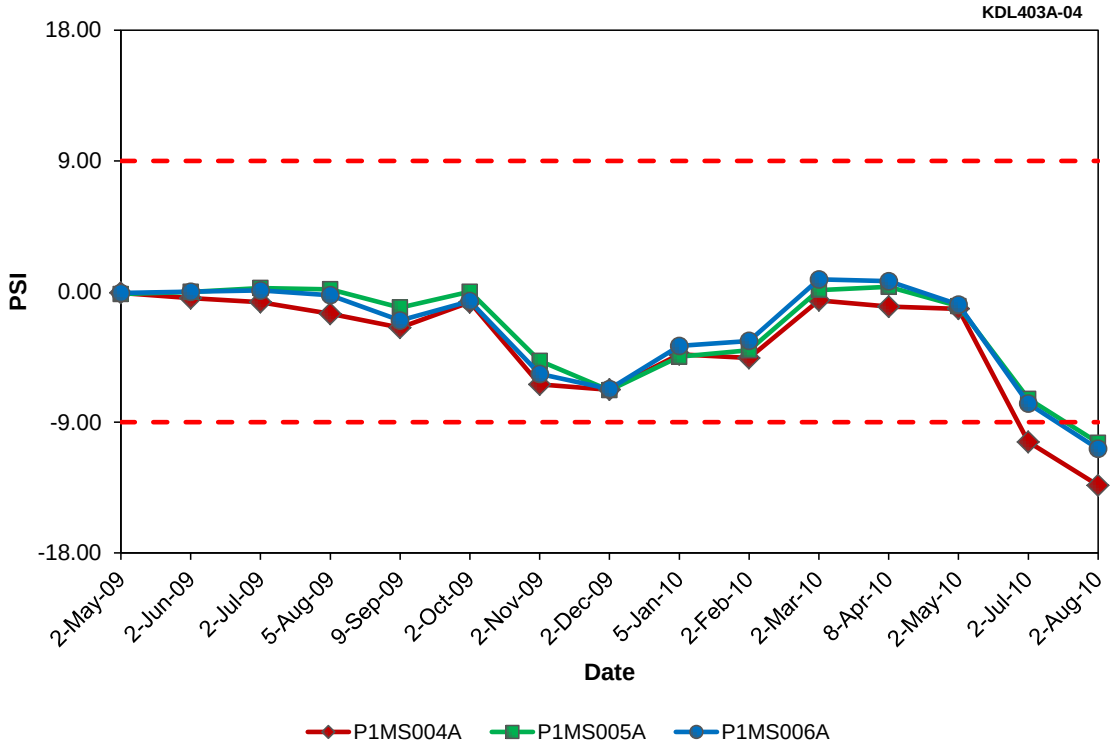



**Figure G.39 SG B OUTLET PRESSURE Steady-State Residual AAKR at North Anna Unit 1 (Cycle 21)**

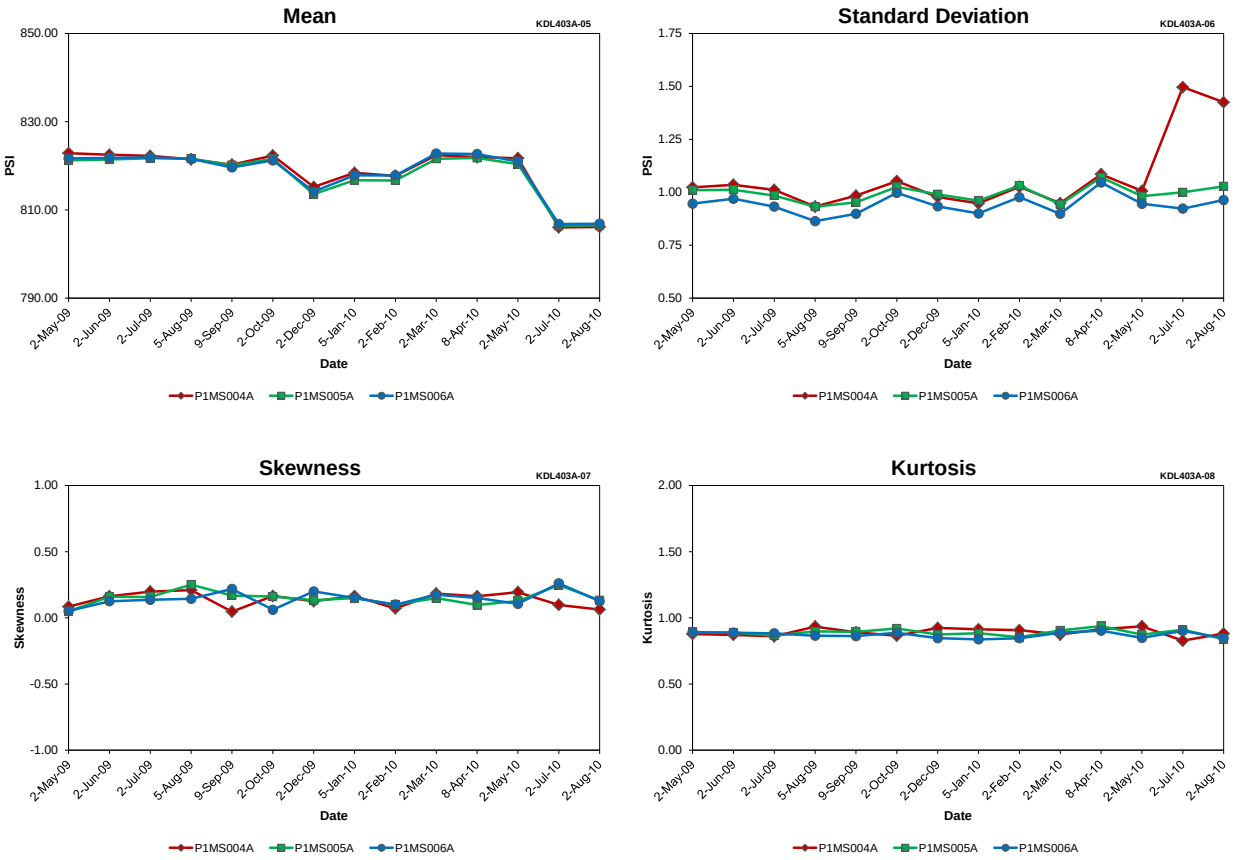



**Figure G.40 SG B OUTLET PRESSURE Data Quality Statistics at North Anna Unit 1 (Cycle 21)**

**Table G.9 SG B OUTLET PRESSURE Data Quality for North Anna Unit 1 (Cycle 21)**

| | Tag Names | | |
|---|---|---|---|
| **Result Type** | **P1MS004A** | **P1MS005A** | **P1MS006A** |
| Mean | 818.67 | 817.96 | 818.42 |
| Std. Dev. | 1.07 | 0.99 | 0.94 |
| Skewness | 0.14 | 0.14 | 0.14 |
| Kurtosis | 0.89 | 0.89 | 0.87 |

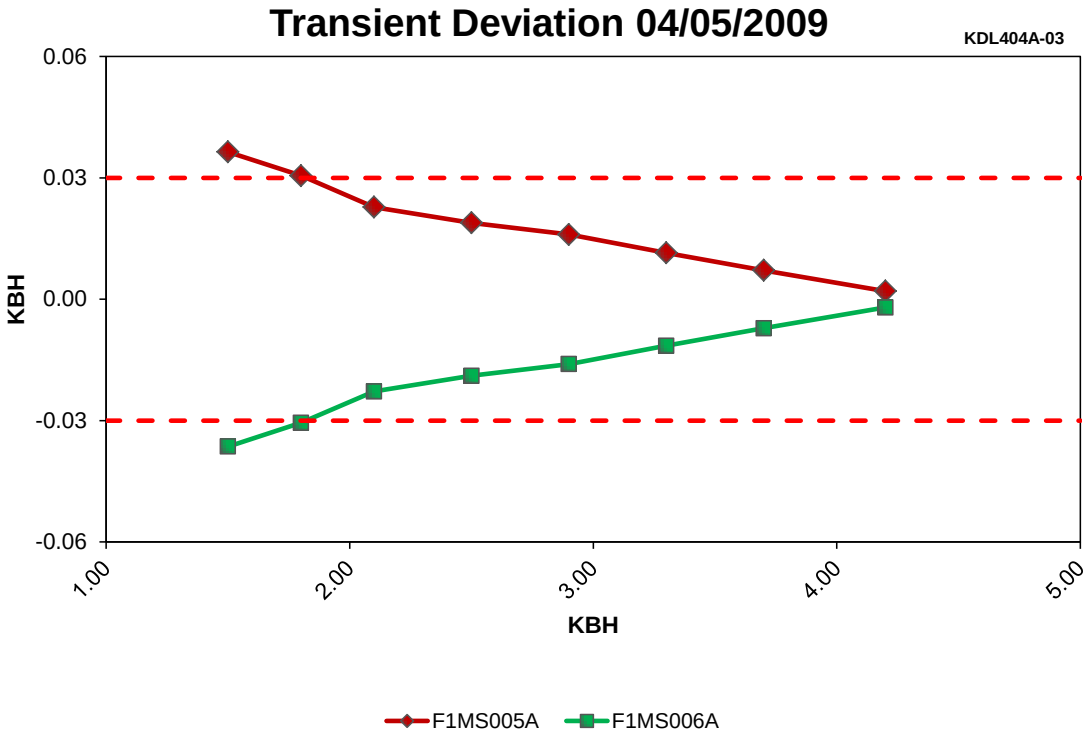



**Figure G.41 SG C STEAM FLOW Transient Deviation at North Anna Unit 1 (Cycle 21)**

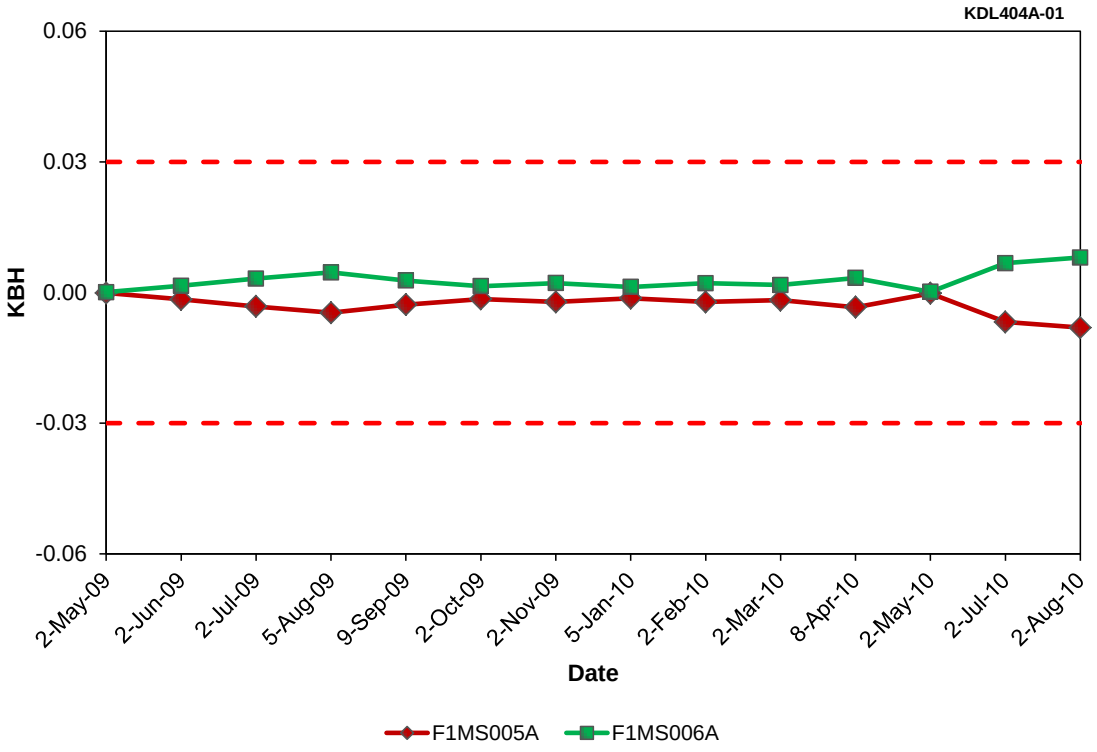



**Figure G.41 SG C STEAM FLOW Steady-State Deviation at North Anna Unit 1 (Cycle 21)**

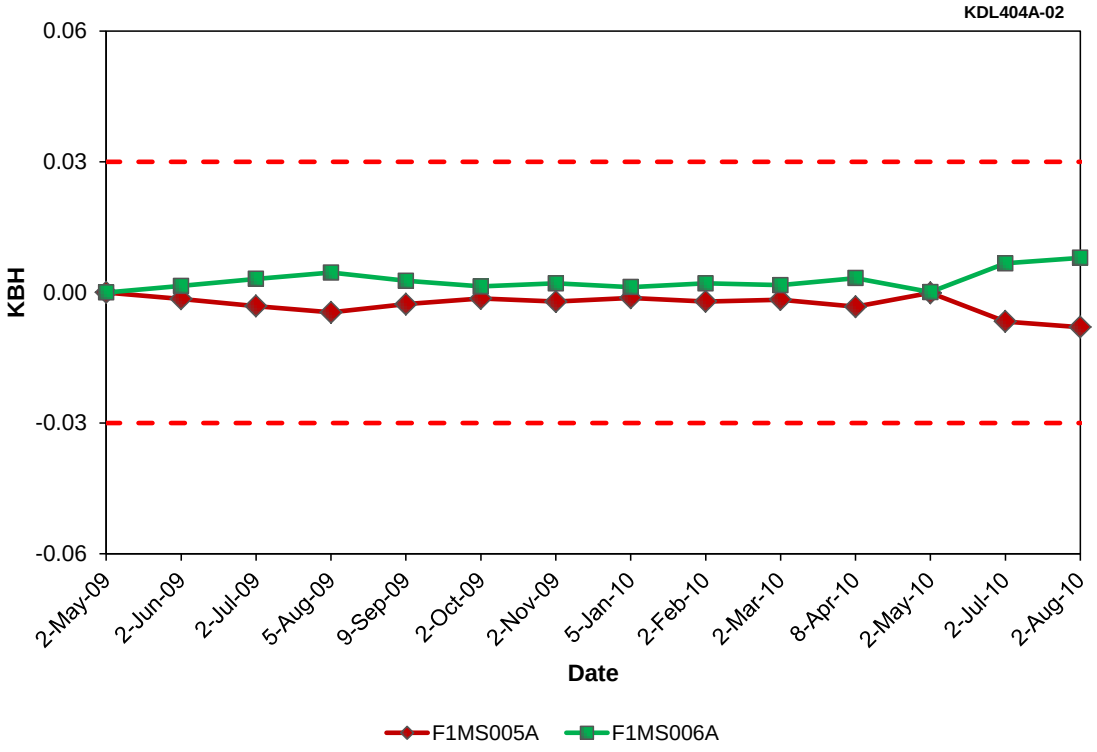



**Figure G.42 SG C STEAM FLOW Steady-State Drift at North Anna Unit 1 (Cycle 21)**

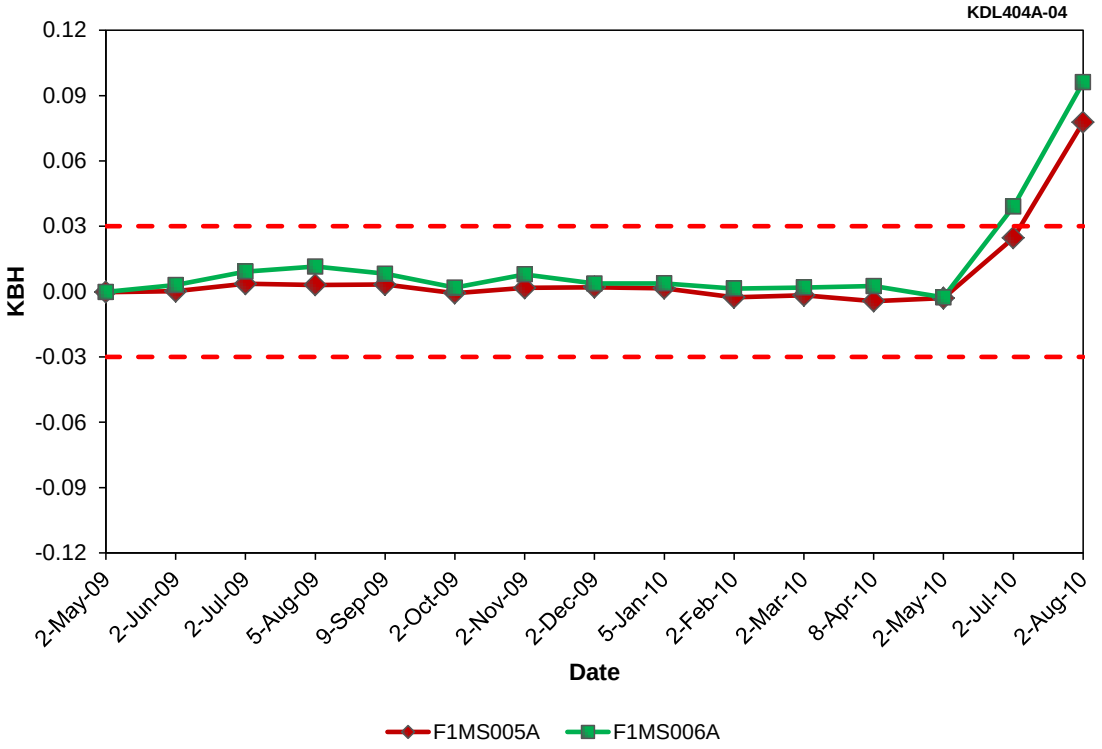



**Figure G.43 SG C STEAM FLOW Steady-State Residual AAKR at North Anna Unit 1 (Cycle 21)**

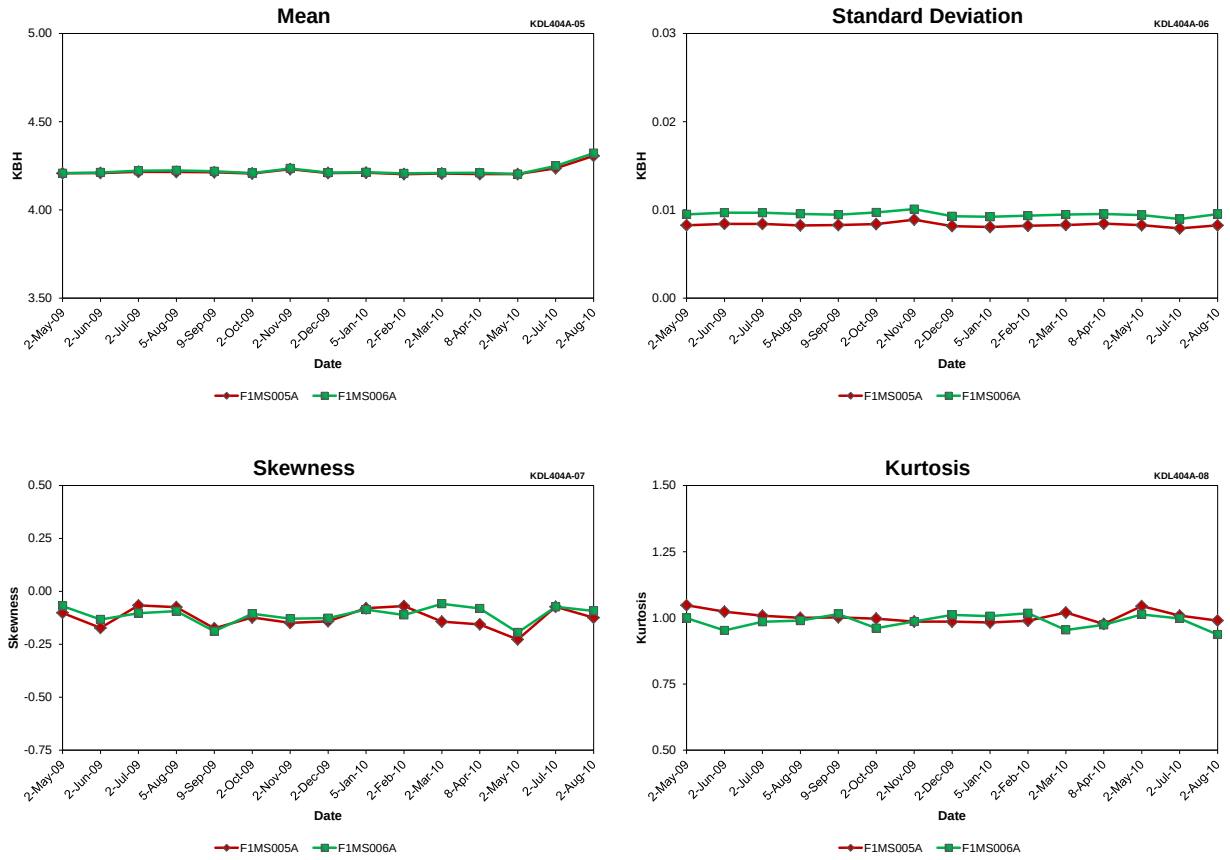



**Figure G.44 SG C STEAM FLOW Data Quality Statistics at North Anna Unit 1 (Cycle 21)**

**Table G.10 SG C STEAM FLOW Data Quality for North Anna Unit 1 (Cycle 21)**

| | Tag Names | |
|---|---|---|
| **Result Type** | **F1MS005A** | **F1MS006A** |
| Mean | 4.22 | 4.22 |
| Std. Dev. | 0.01 | 0.01 |
| Skewness | -0.12 | -0.11 |
| Kurtosis | 1.00 | 0.99 |

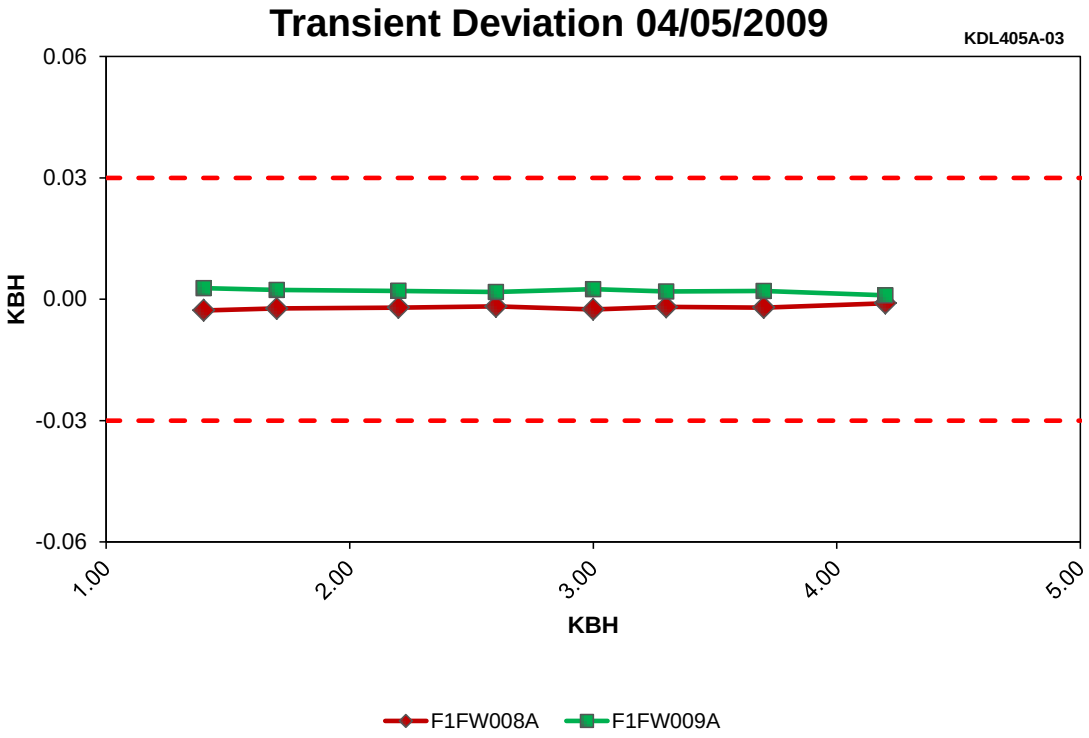



**Figure G.45 SG C FW FLOW Transient Deviation at North Anna Unit 1 (Cycle 21)**

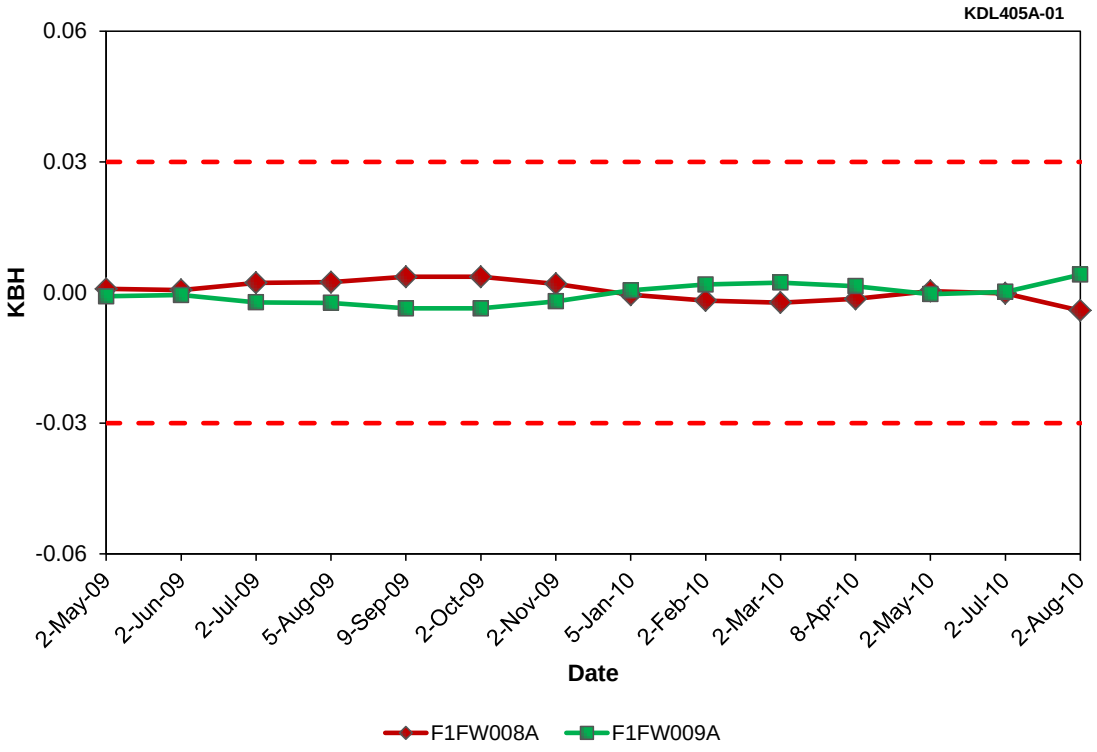



**Figure G.46 SG C FW FLOW Steady-State Deviation at North Anna Unit 1 (Cycle 21)**

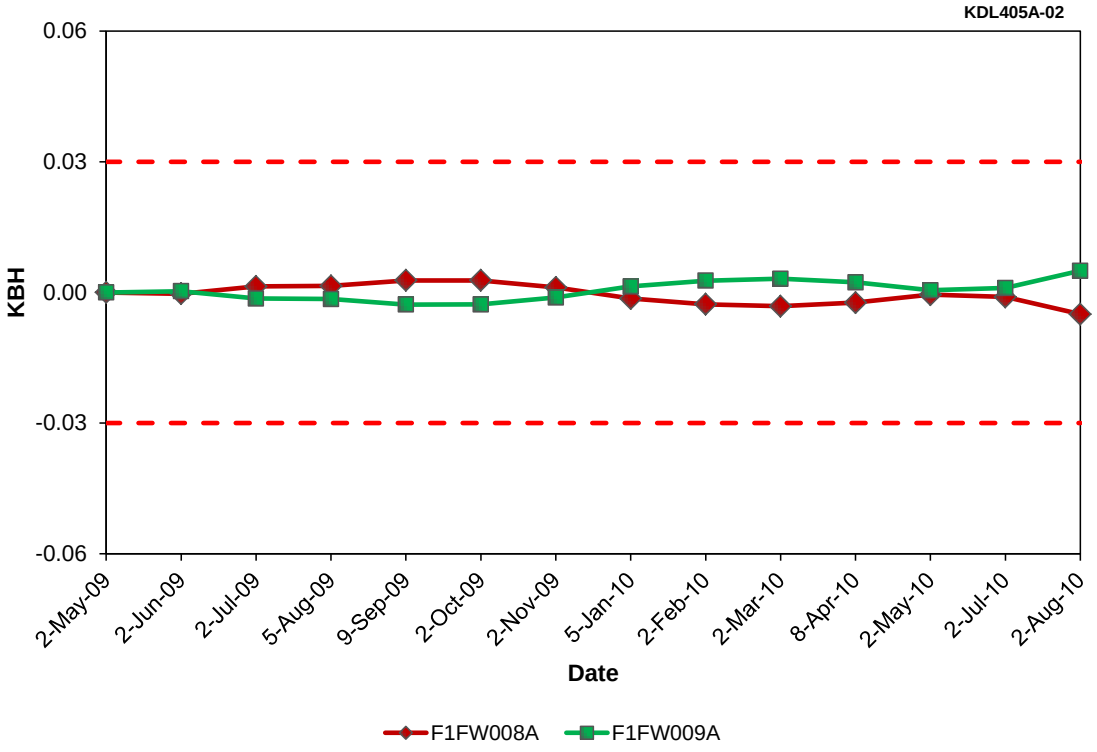



**Figure G.47 SG C FW FLOW Steady-State Drift at North Anna Unit 1 (Cycle 21)**

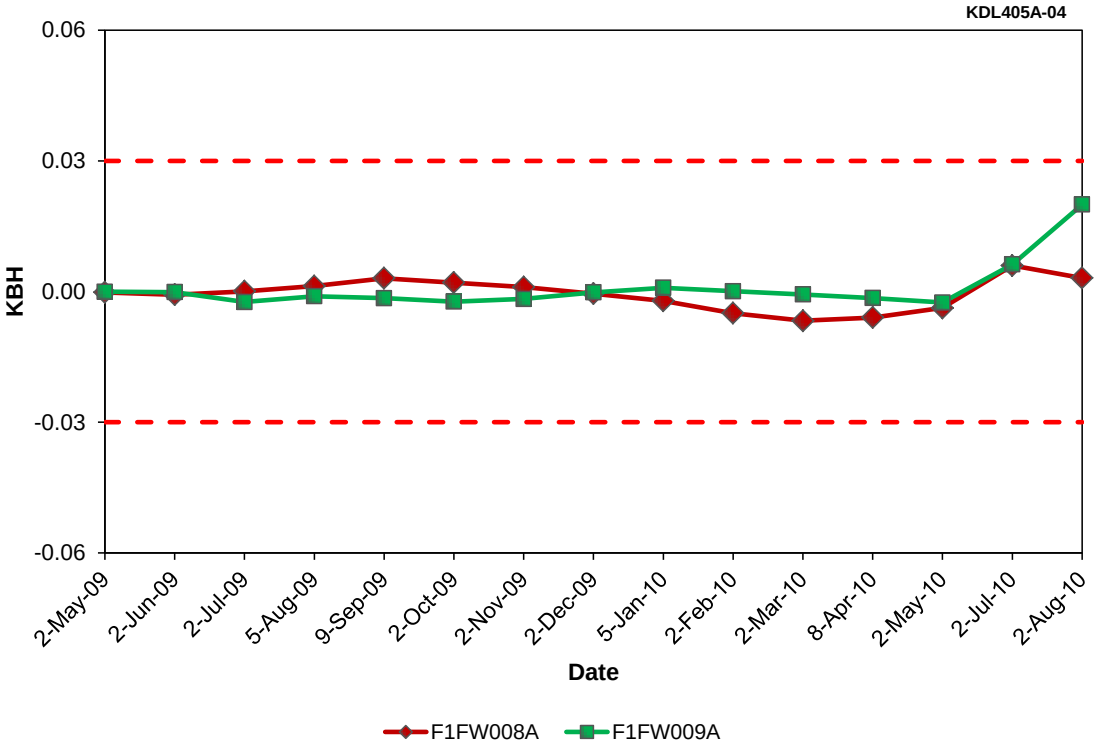



**Figure G.48 SG C FW FLOW Steady-State Residual AAKR at North Anna Unit 1 (Cycle 21)**

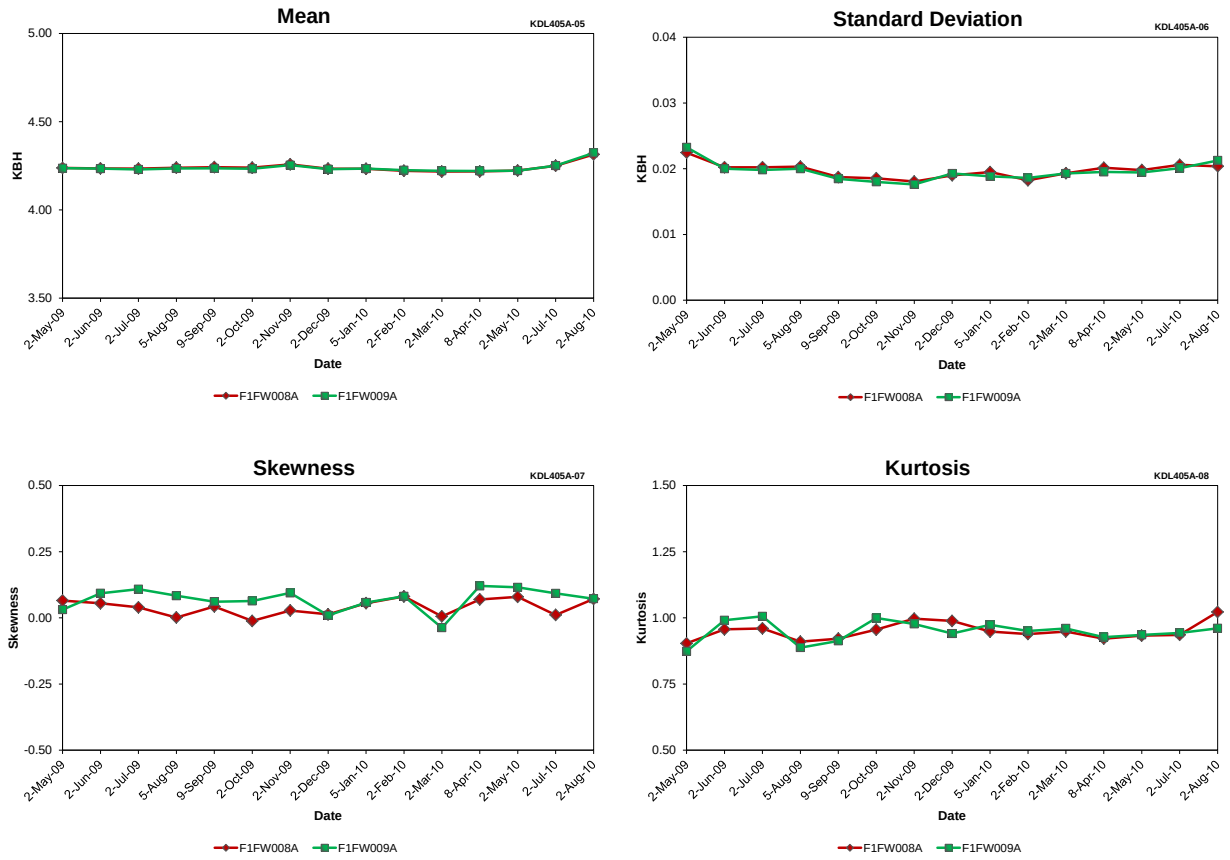



**Figure G.49 SG C FW FLOW Data Quality Statistics at North Anna Unit 1 (Cycle 21)**

**Table G.11 SG C FW FLOW Data Quality for North Anna Unit 1 (Cycle 21)**

| Result Type | Tag Names | |
|---|---|---|
| | F1FW008A | F1FW009A |
| Mean | 4.24 | 4.24 |
| Std. Dev. | 0.02 | 0.02 |
| Skewness | 0.04 | 0.07 |
| Kurtosis | 0.95 | 0.95 |

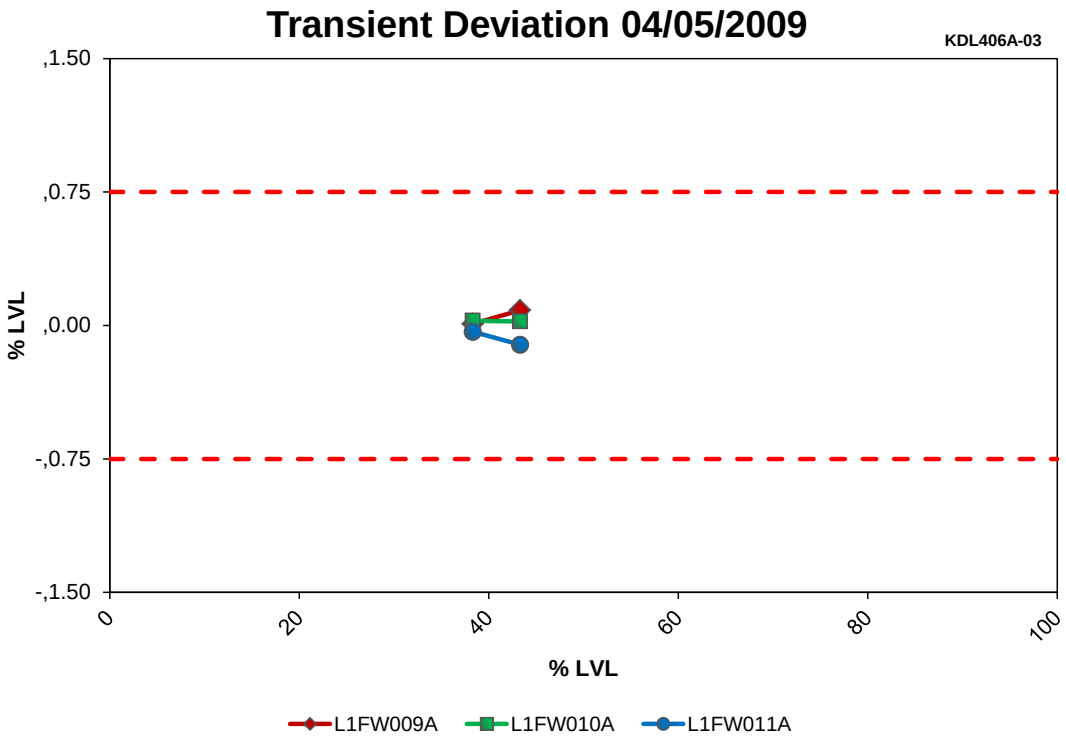



**Figure G.61 SG C LEVEL Transient Deviation at North Anna Unit 1 (Cycle 21)**

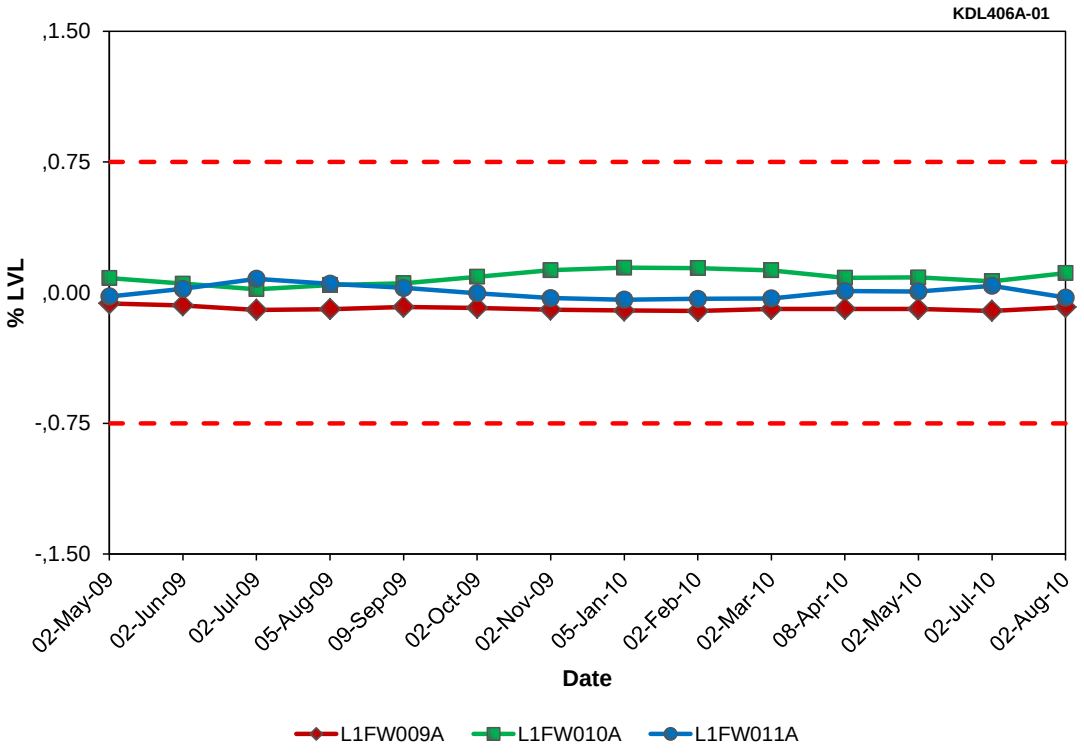



**Figure G.62 SG C LEVEL Steady-State Deviation at North Anna Unit 1 (Cycle 21)**

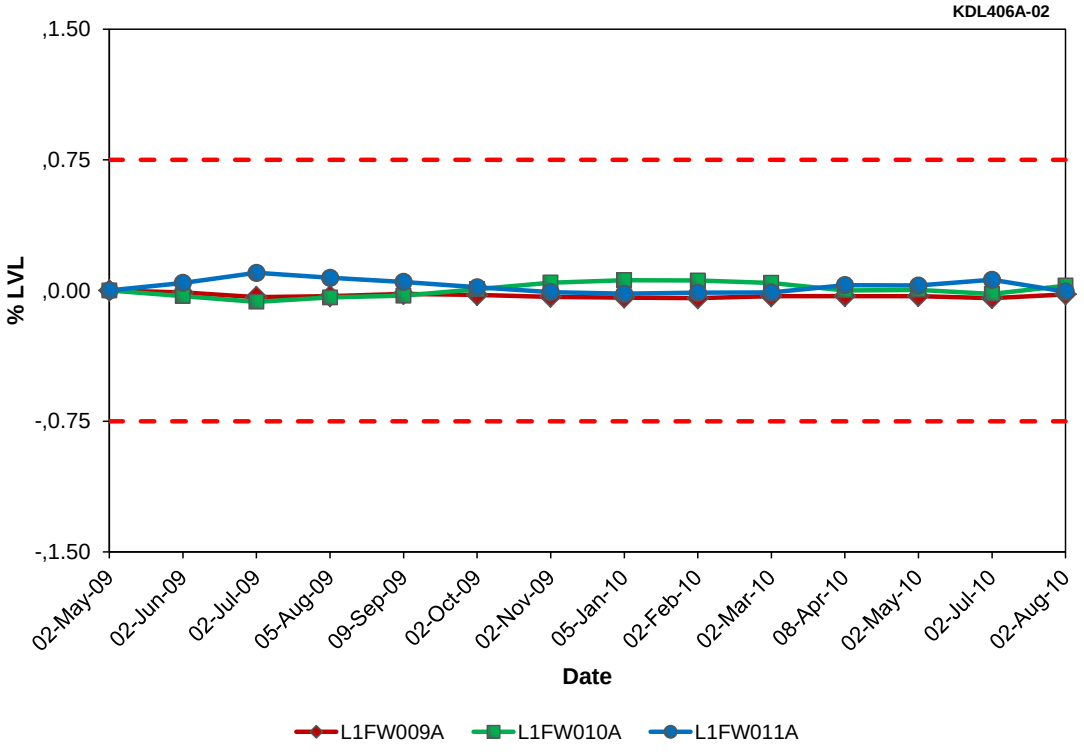



**Figure G.63 SG C LEVEL Steady-State Drift at North Anna Unit 1 (Cycle 21)**

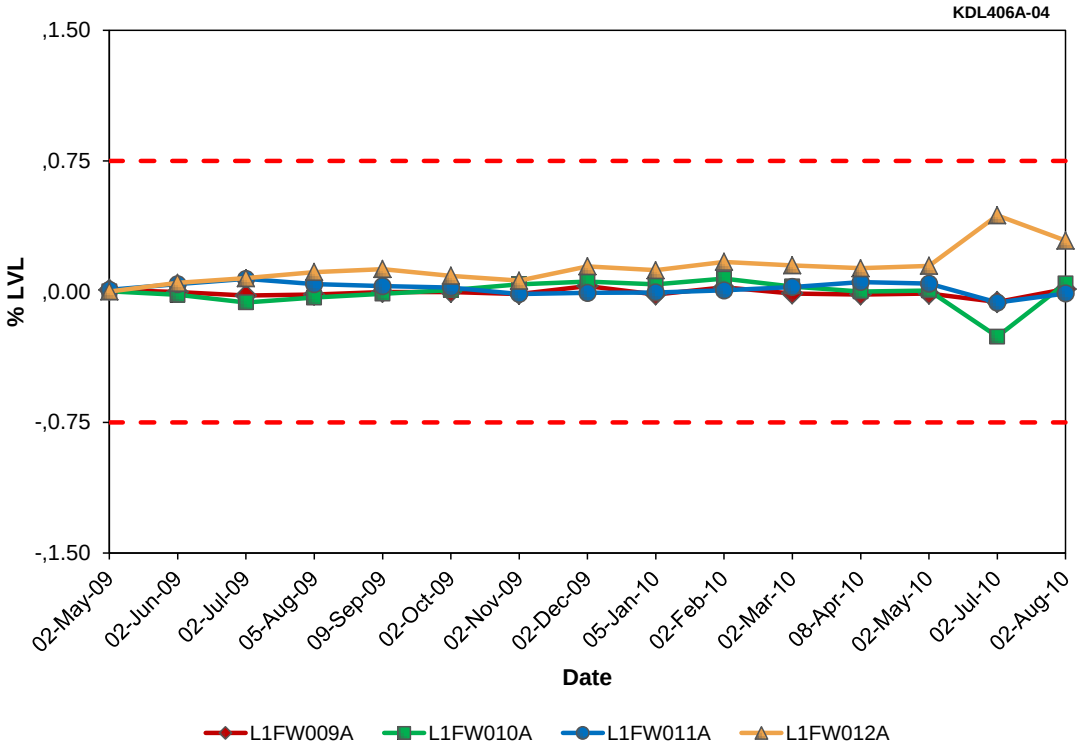



**Figure G.64 SG C LEVEL Steady-State Residual AAKR at North Anna Unit 1 (Cycle 21)**

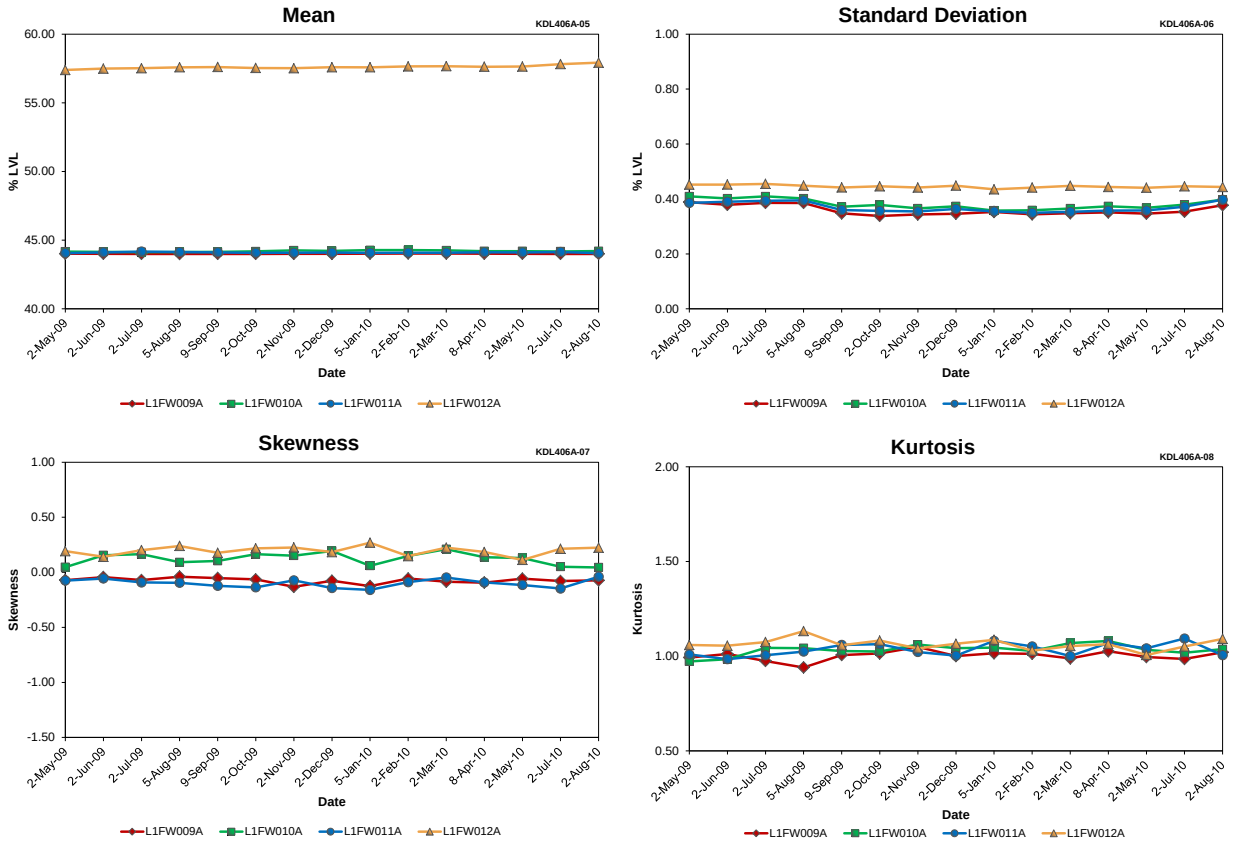



**Figure G.65 SG C LEVEL Data Quality Statistics at North Anna Unit 1 (Cycle 21)**

| | Tag Names | | | |
|---|---|---|---|---|
| **Result Type** | **L1FW009A** | **L1FW010A** | **L1FW011A** | **L1FW012A** |
| Mean | 44.01 | 44.20 | 44.10 | 57.61 |
| Std. Dev. | 0.36 | 0.38 | 0.37 | 0.45 |
| Skewness | -0.07 | 0.12 | -0.10 | 0.20 |
| Kurtosis | 1.00 | 1.03 | 1.03 | 1.06 |

**Table G.12 SG C LEVEL Data Quality for North Anna Unit 1 (Cycle 21)**

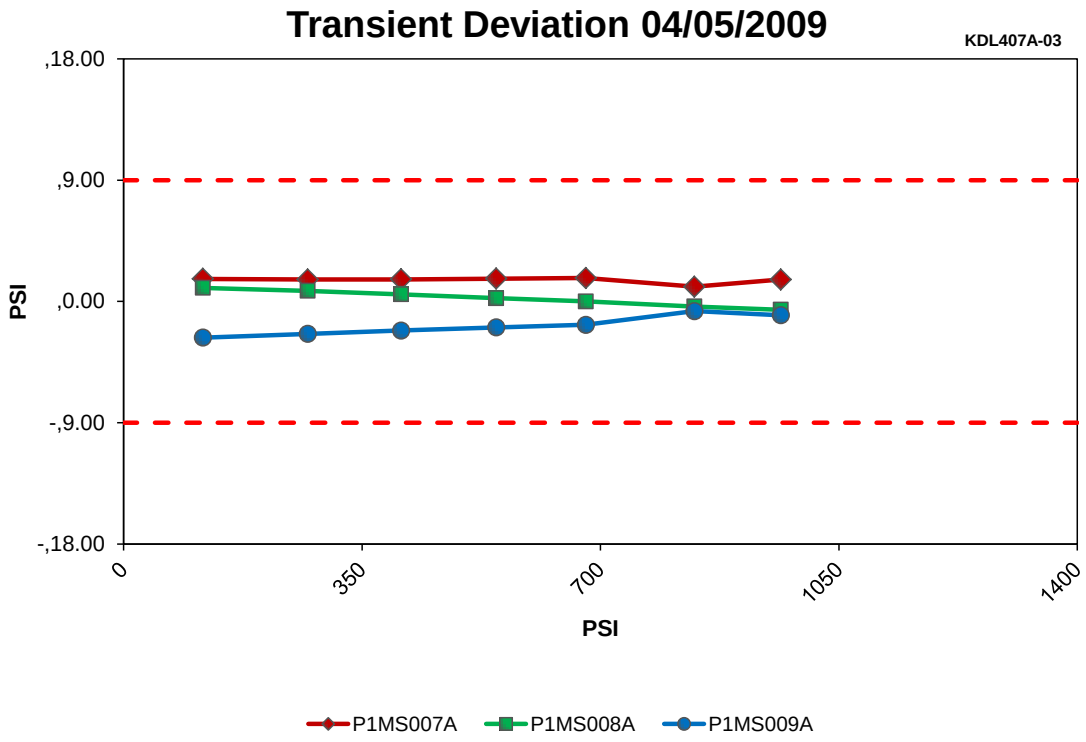



**Figure G.66 SG C OUTLET PRESSURE Transient Deviation at North Anna Unit 1 (Cycle 21)**

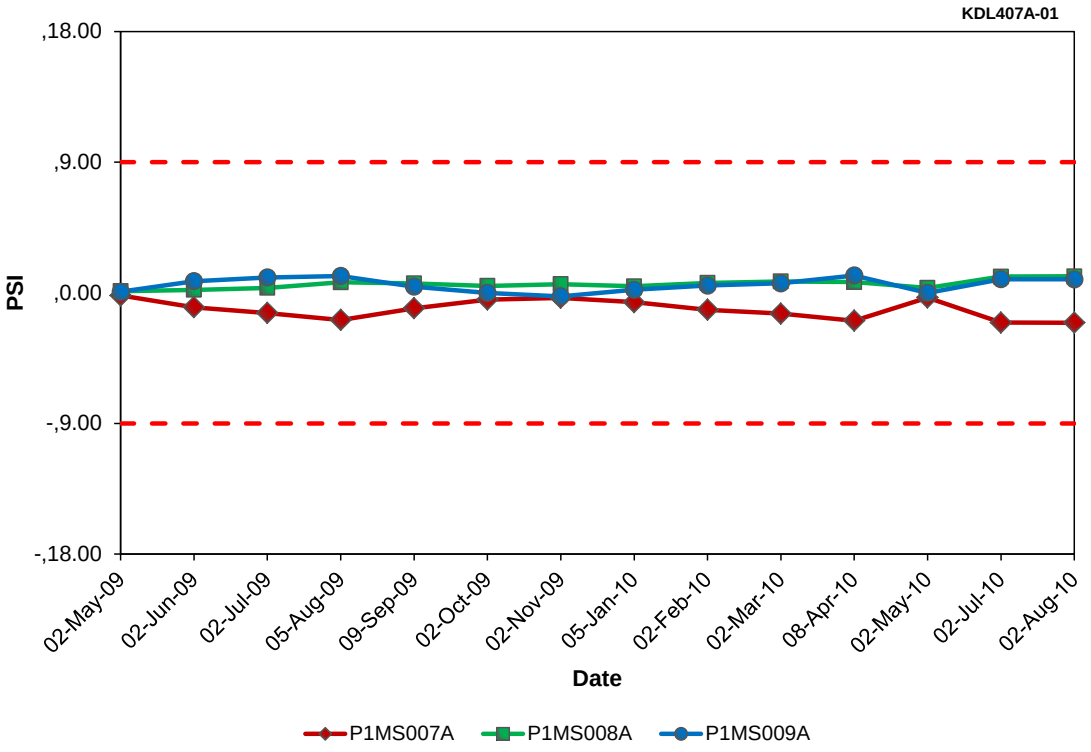



**Figure G.67 SG C OUTLET PRESSURE Steady State Deviation at North Anna Unit 1 (Cycle 21)**

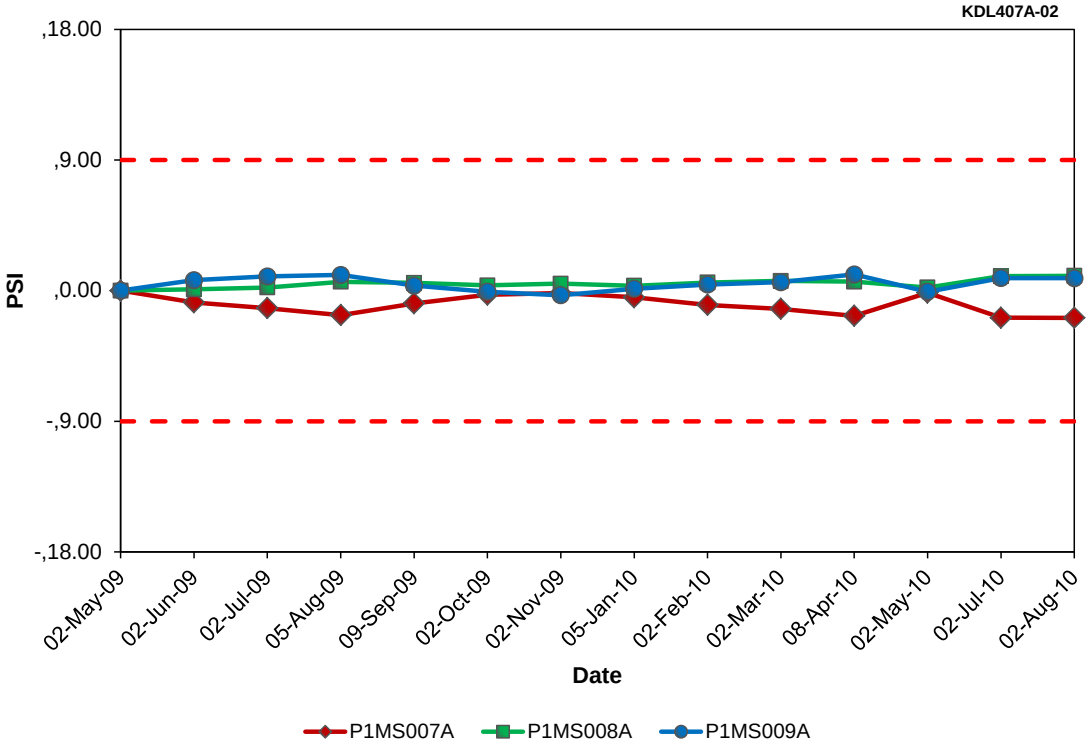



**Figure G.68 SG C OUTLET PRESSURE Steady State Drift at North Anna Unit 1 (Cycle 21)**

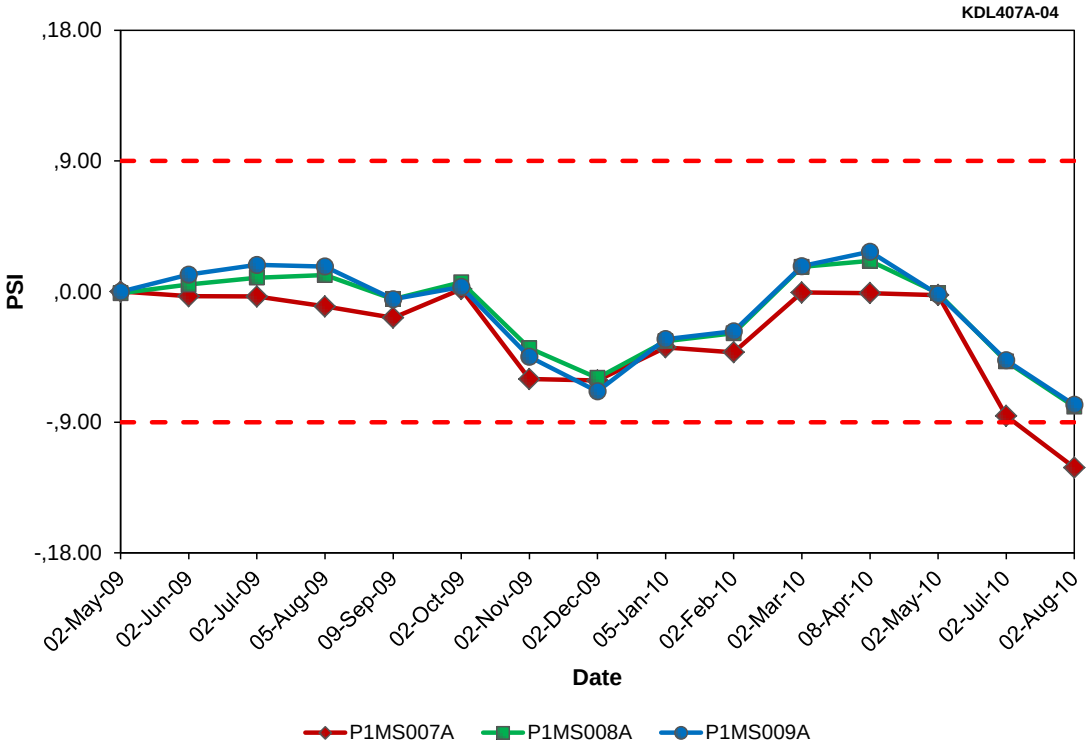



**Figure G.69 SG C OUTLET PRESSURE Steady-State Residual AAKR at North Anna Unit 1 (Cycle 21)**

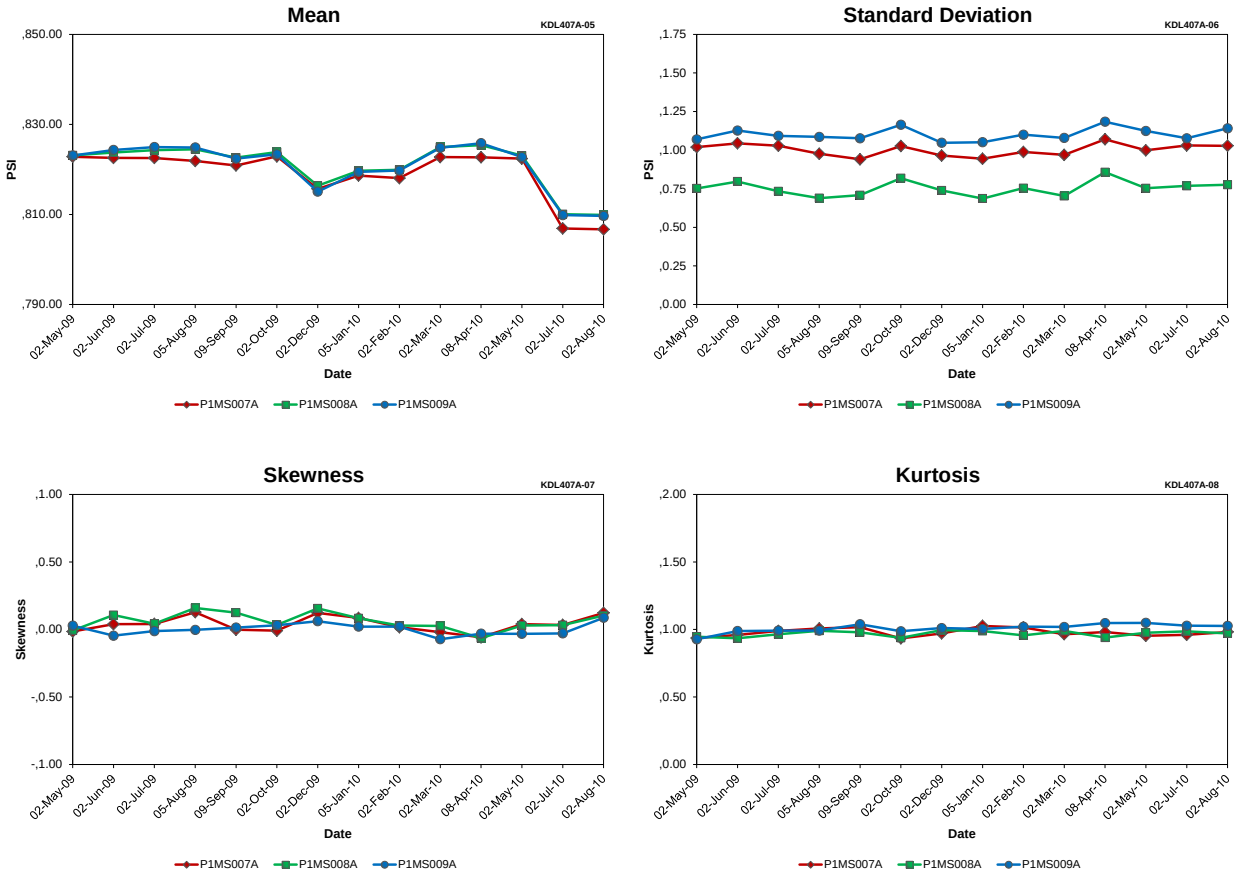



**Figure G.70 SG C OUTLET PRESSURE Data Quality Statistics at North Anna Unit 1 (Cycle 21)**

**Table G.13 SG C OUTLET PRESSURE Data Quality for North Anna Unit 1 (Cycle 21)**

| | Tag Names | | |
|---|---|---|---|
| **Result Type** | **P1MS007A** | **P1MS008A** | **P1MS009A** |
| Mean | 819.10 | 820.82 | 820.73 |
| Std. Dev. | 1.00 | 0.75 | 1.10 |
| Skewness | 0.04 | 0.04 | 0.04 |
| Kurtosis | 0.98 | 0.97 | 1.01 |

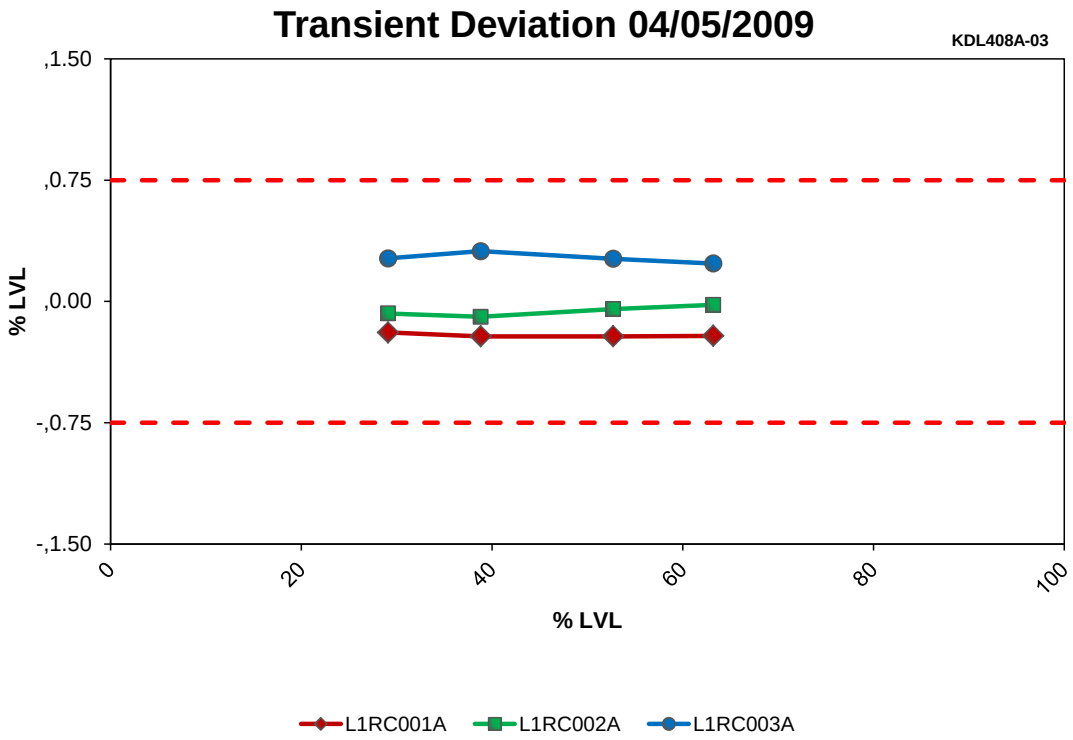



**Figure G.71 PRESSURIZER LEVEL Transient Deviation at North Anna Unit 1 (Cycle 21)**

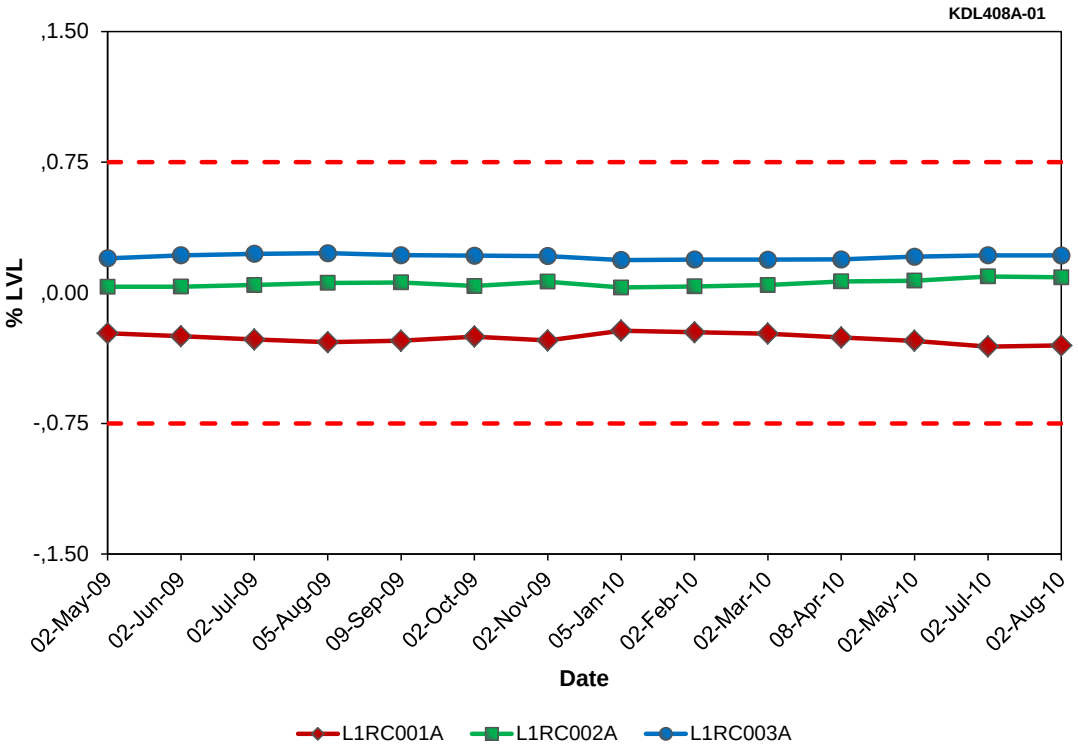



**Figure G.72 PRESSURIZER LEVEL Steady-State Deviation at North Anna Unit 1 (Cycle 21)**

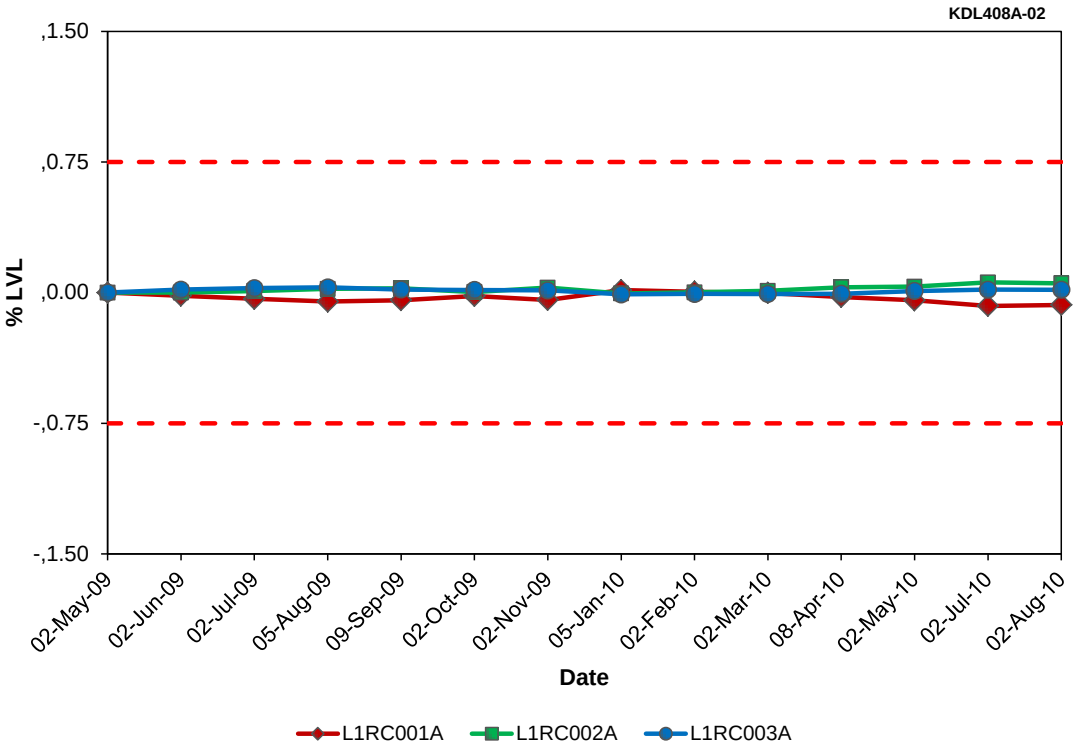



**Figure G.73 PRESSURIZER LEVEL Steady-State Drift at North Anna Unit 1 (Cycle 21)**

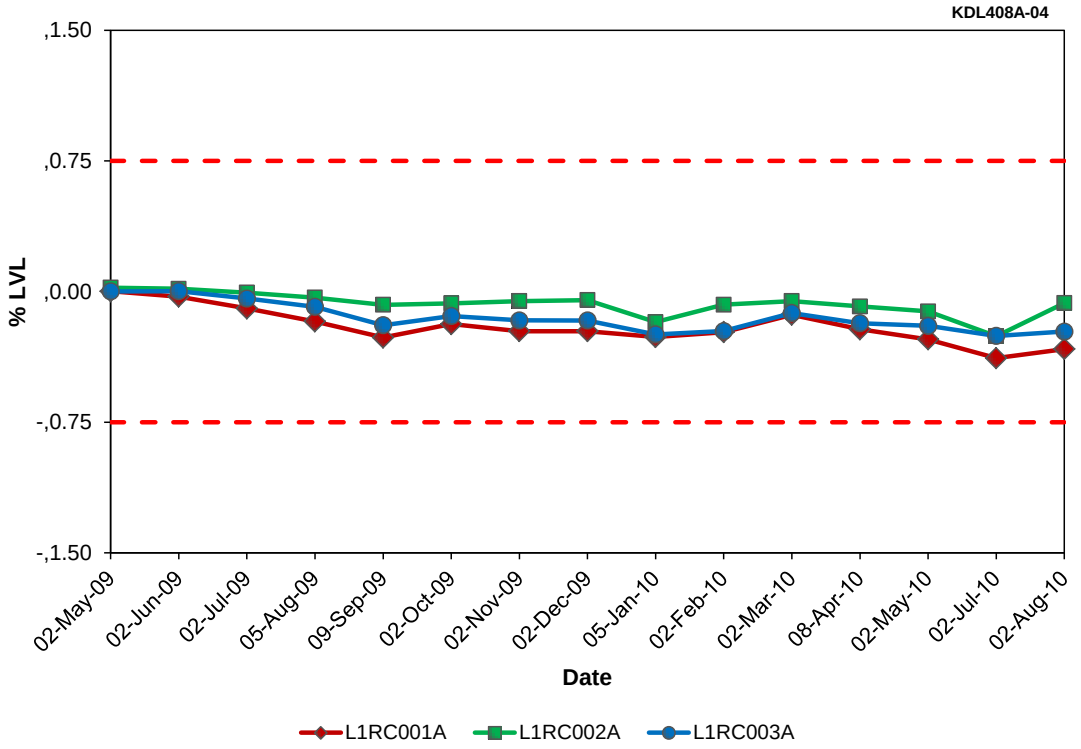



**Figure G.74 PRESSURIZER LEVEL Steady-State Residual AAKR at North Anna Unit 1 (Cycle 21)**

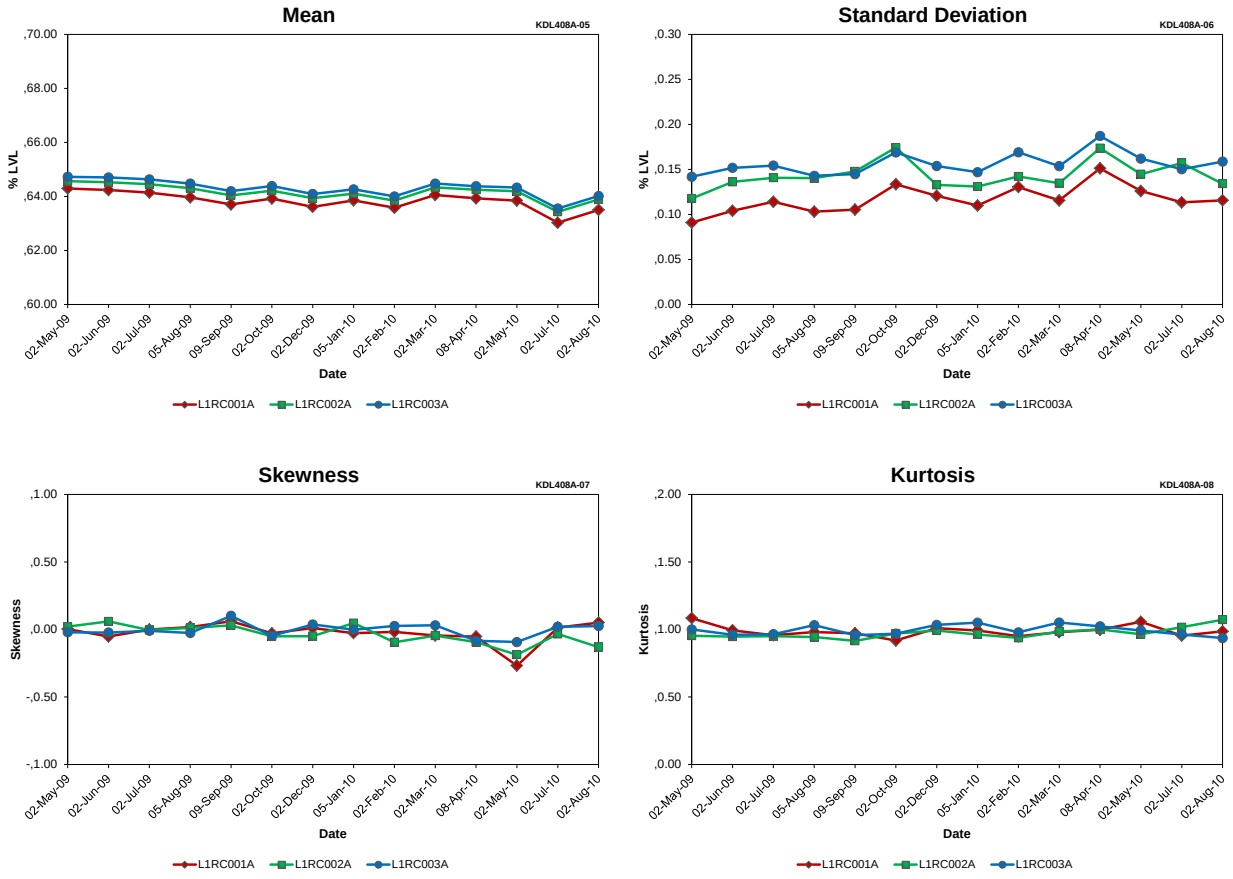



**Figure G.75 PRESSURIZER LEVEL Data Quality Statistics at North Anna Unit 1 (Cycle 21)**

**Table G.14 PRESSURIZER LEVEL Data Quality for North Anna Unit 1 (Cycle 21)**

| | Tag Names | | |
|---|---|---|---|
| **Result Type** | **L1RC001A** | **L1RC002A** | **L1RC003A** |
| Mean | 63.83 | 64.15 | 64.30 |
| Std. Dev. | 0.12 | 0.14 | 0.16 |
| Skewness | -0.02 | -0.02 | -0.02 |
| Kurtosis | 0.99 | 0.97 | 0.99 |

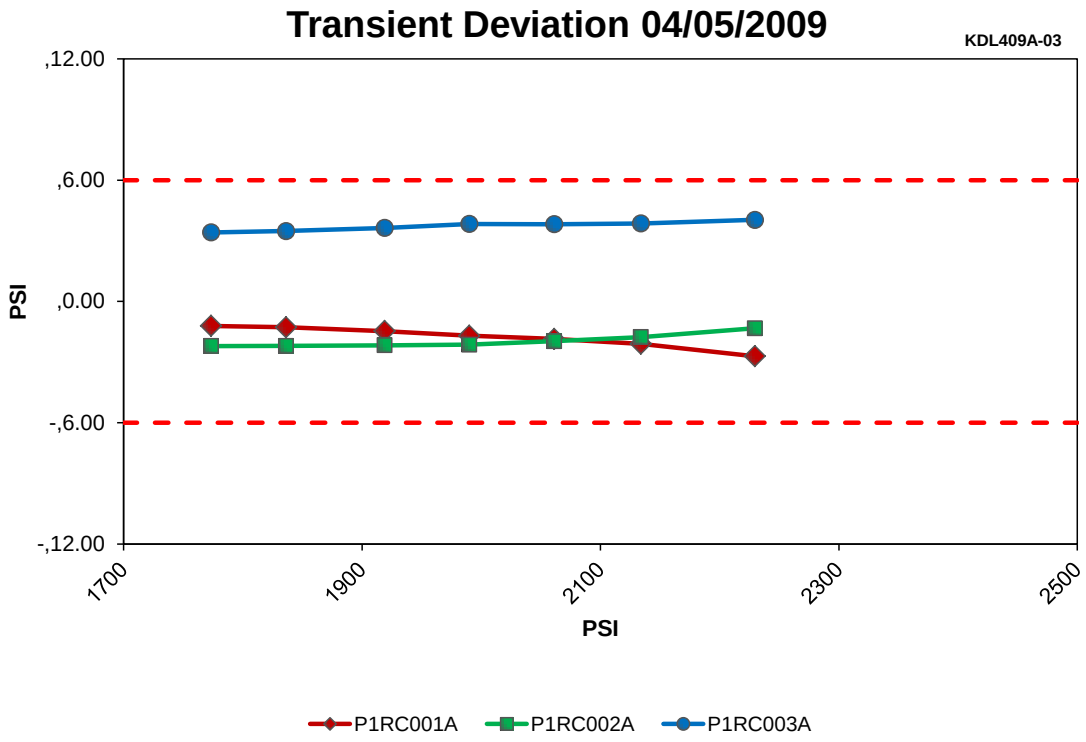



**Figure G.76 PRESSURIZER PRESSURE Transient Deviation at North Anna Unit 1 (Cycle 21)**

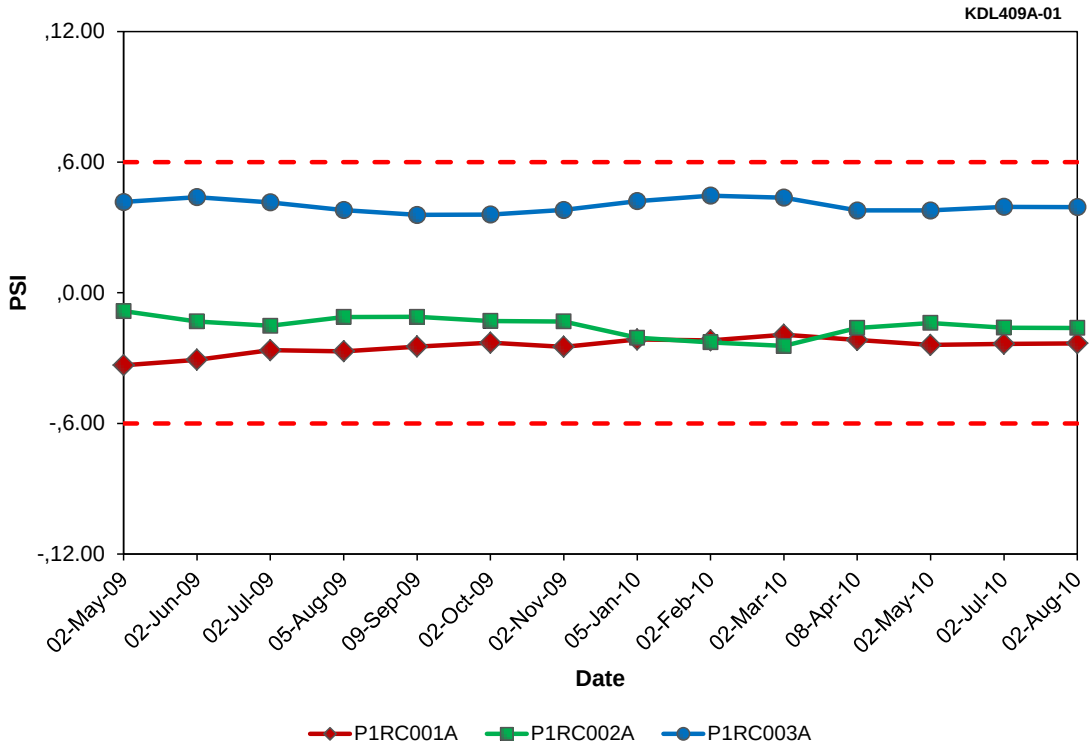



**Figure G.77 PRESSURIZER PRESSURE Steady-State Deviation at North Anna Unit 1 (Cycle 21)**

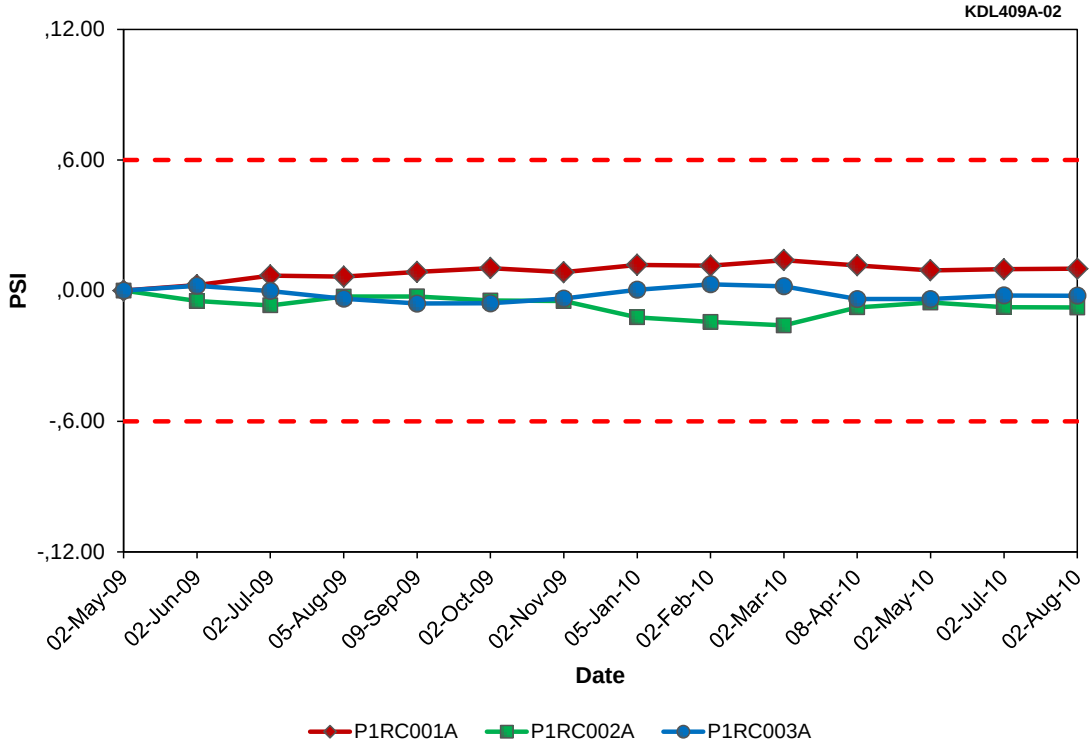



**Figure G.78 PRESSURIZER PRESSURE Steady-State Drift at North Anna Unit 1 (Cycle 21)**

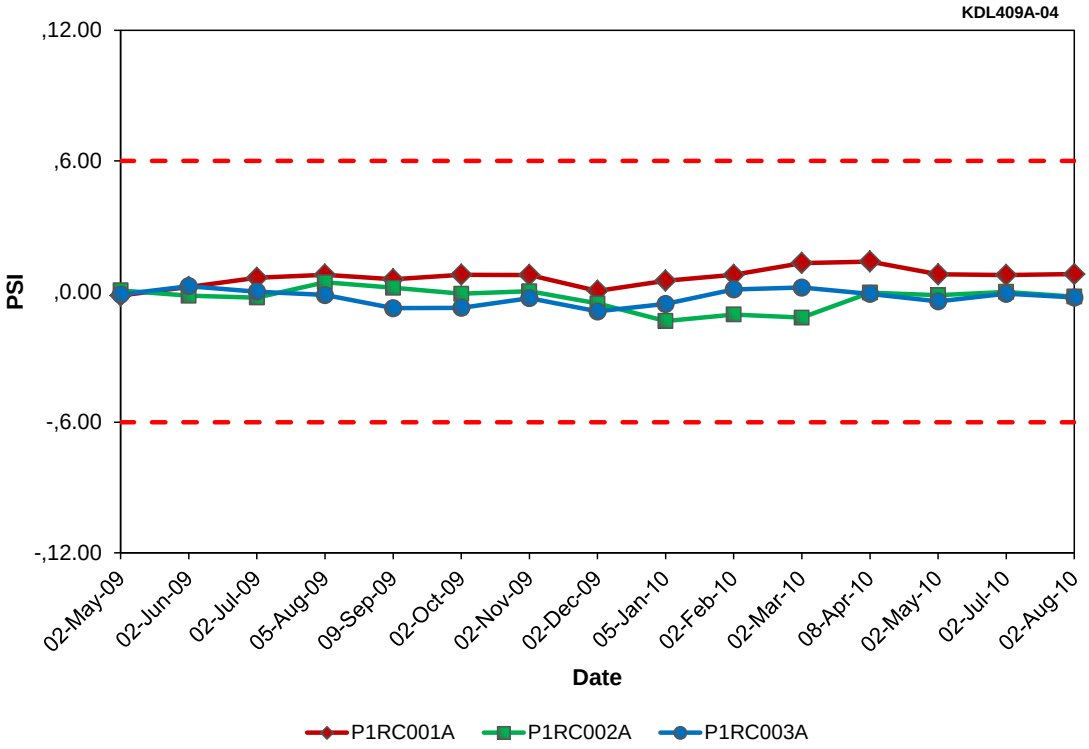



**Figure G.79 PRESSURIZER PRESSURE Steady-State Residual AAKR at North Anna Unit 1 (Cycle 21)**

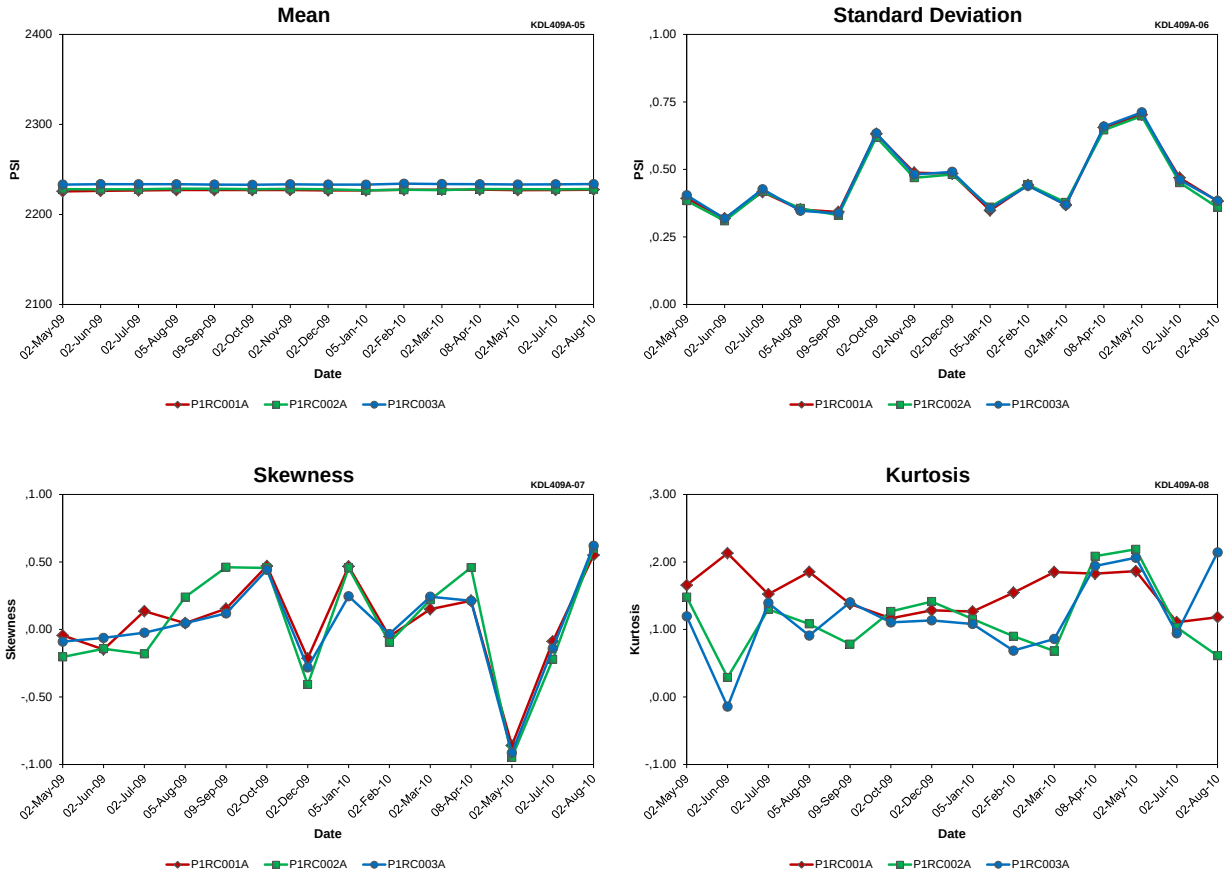



**Figure G.80 PRESSURIZER PRESSURE Data Quality Statistics at North Anna Unit 1 (Cycle 21)**

**Table G.15 PRESSURIZER PRESSURE Data Quality for North Anna Unit 1 (Cycle 21)**

| | Tag Names | | |
|---|---|---|---|
| **Result Type** | **P1RC001A** | **P1RC002A** | **P1RC003A** |
| Mean | 2227.00 | 2227.94 | 2233.45 |
| Std. Dev. | 0.45 | 0.45 | 0.45 |
| Skewness | 0.06 | 0.06 | 0.03 |
| Kurtosis | 1.48 | 1.14 | 1.15 |

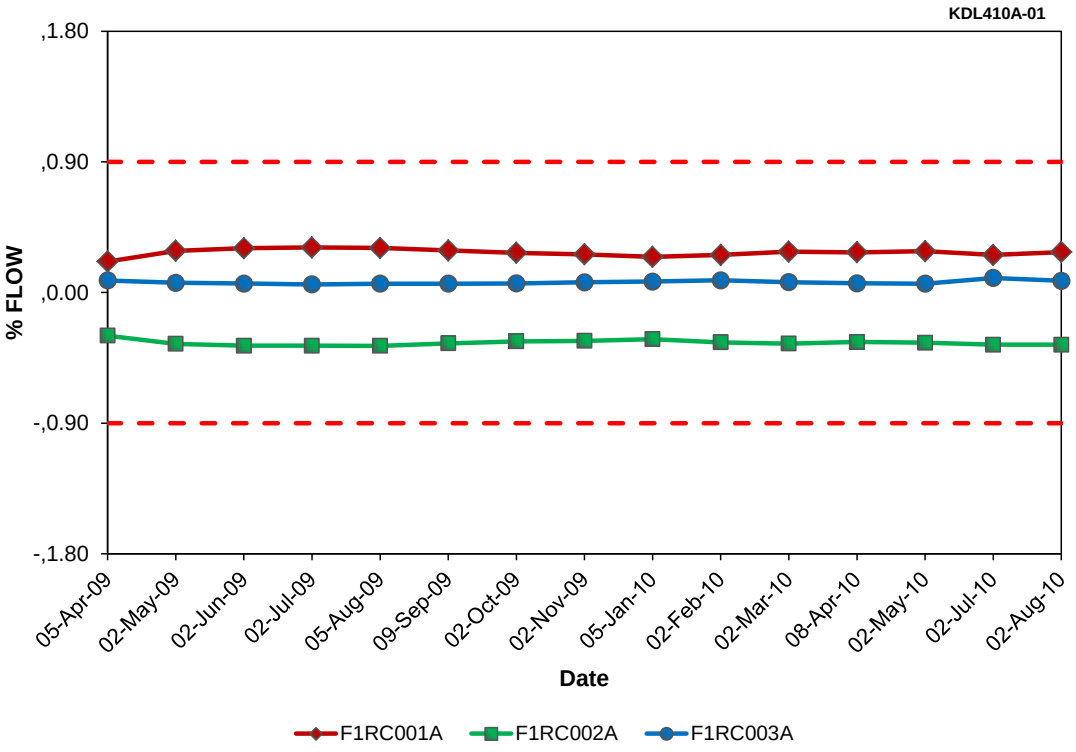



**Figure G.81 RCS LOOP A FLOW Steady-State Deviation at North Anna Unit 1 (Cycle 21)**

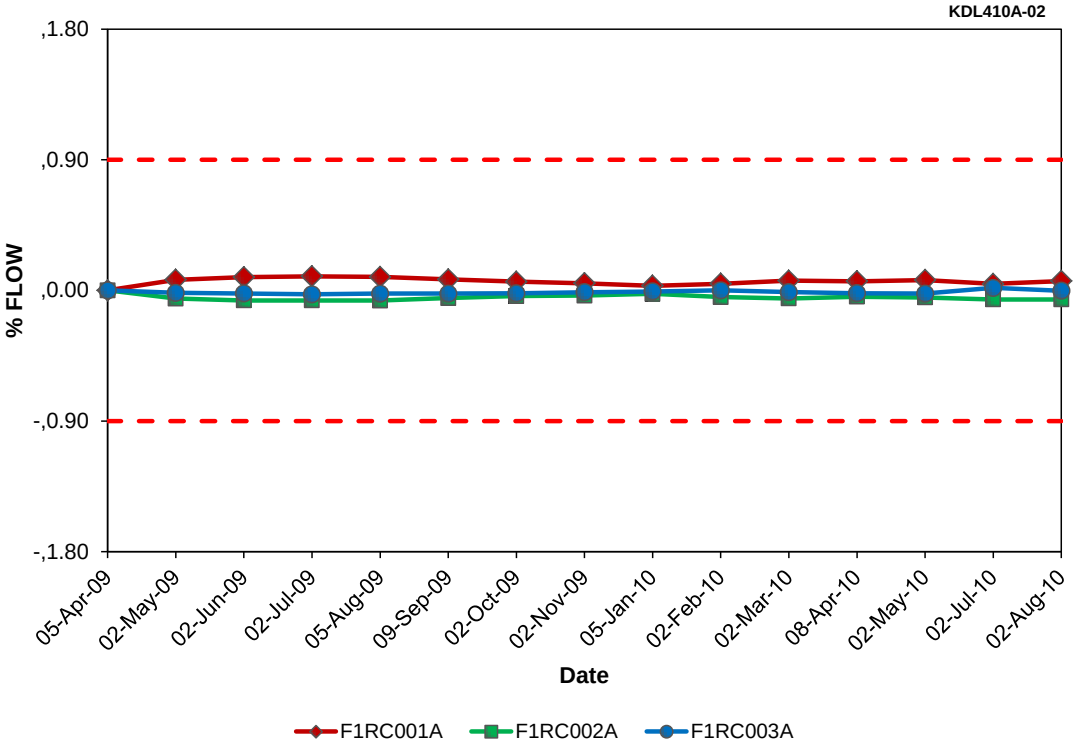



**Figure G.82 RCS LOOP A FLOW Steady-State Drift at North Anna Unit 1 (Cycle 21)**

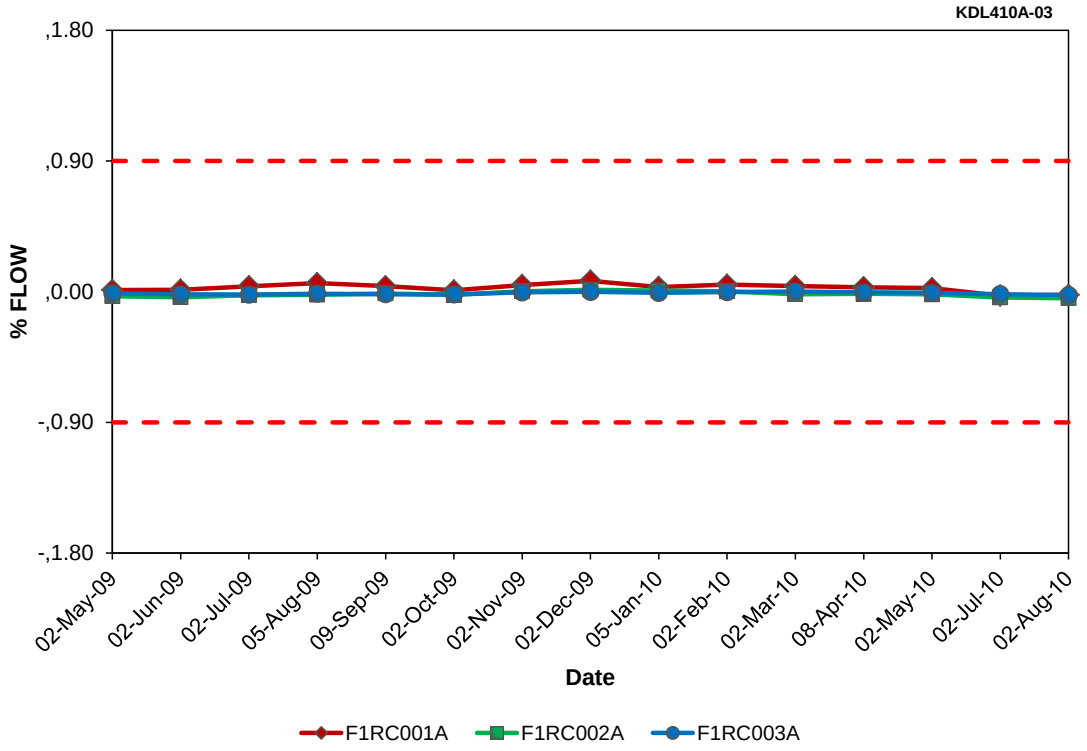



**Figure G.83 RCS LOOP A FLOW Steady-State Residual AAKR at North Anna Unit 1 (Cycle 21)**

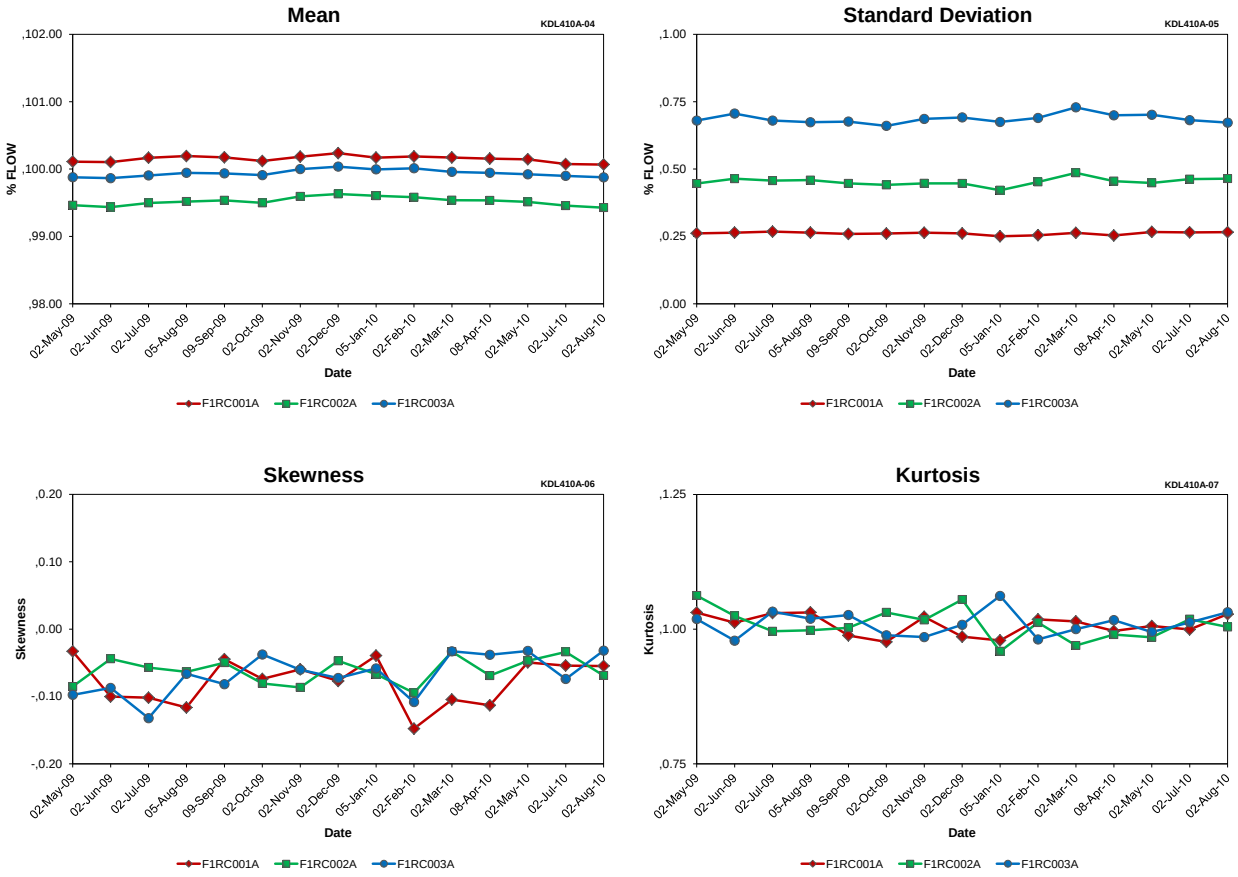



**Figure G.84 RCS LOOP A FLOW Data Quality Statistics at North Anna Unit 1 (Cycle 21)**

**Table G.16 RCS LOOP A FLOW Data Quality for North Anna Unit 1 (Cycle 21)**

| | Tag Names | | |
|---|---|---|---|
| **Result Type** | **F1RC001A** | **F1RC002A** | **F1RC003A** |
| Mean | 100.15 | 99.52 | 99.94 |
| Std. Dev. | 0.26 | 0.45 | 0.69 |
| Skewness | -0.08 | -0.06 | -0.07 |
| Kurtosis | 1.01 | 1.01 | 1.01 |

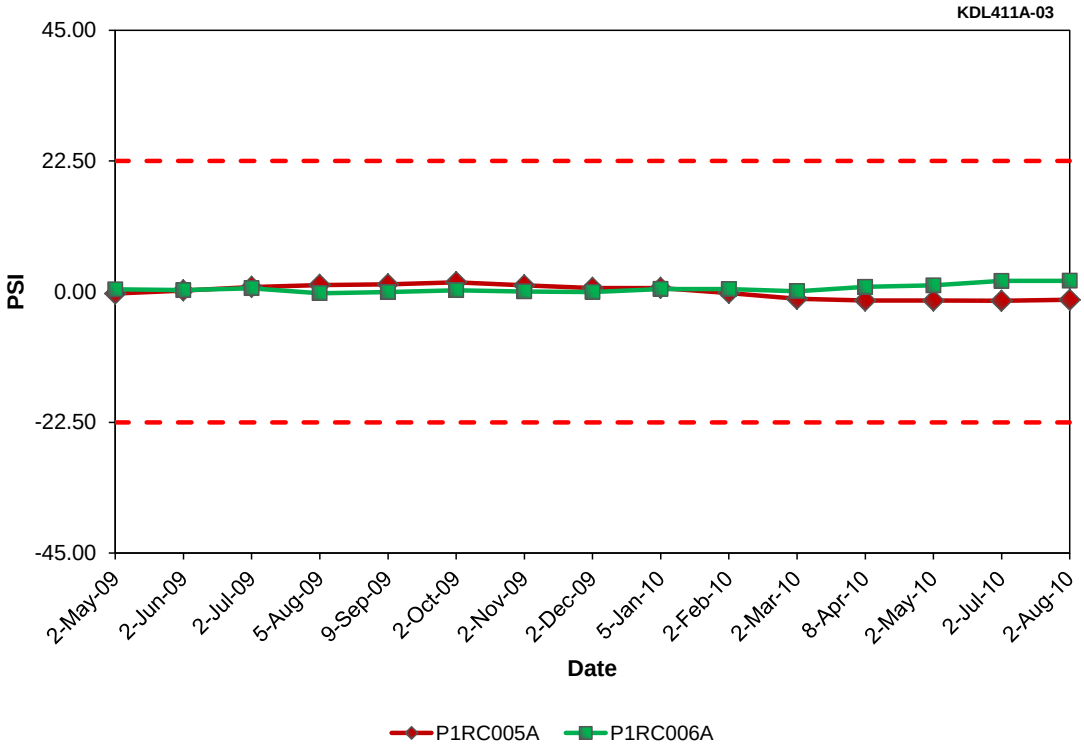



**Figure G.85 RCS WIDE RANGE PRESSURE Steady-State Residual AAKR at North Anna Unit 1 (Cycle 21)**

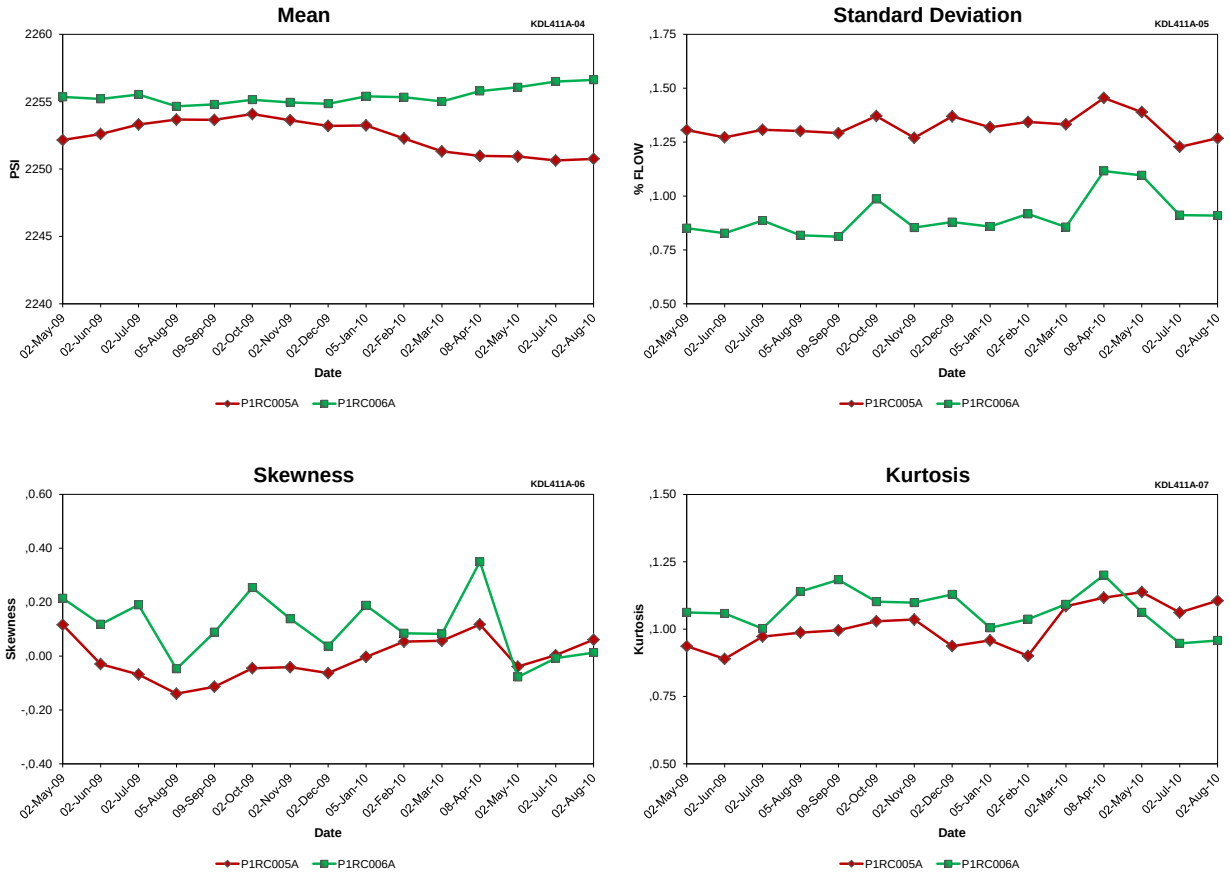



**Figure G.86 RCS WIDE RANGE PRESSURE Data Quality Statistics at North Anna Unit 1 (Cycle 21)**

**Table G.17 RCS WIDE RANGE PRESSURE Data Quality for North Anna Unit 1 (Cycle 21)**

| | Tag Names | |
|---|---|---|
| **Result Type** | **P1RC005A** | **P1RC006A** |
| Mean | 2252.43 | 2255.41 |
| Std. Dev. | 1.32 | 0.91 |
| Skewness | -0.01 | 0.11 |
| Kurtosis | 1.01 | 1.07 |

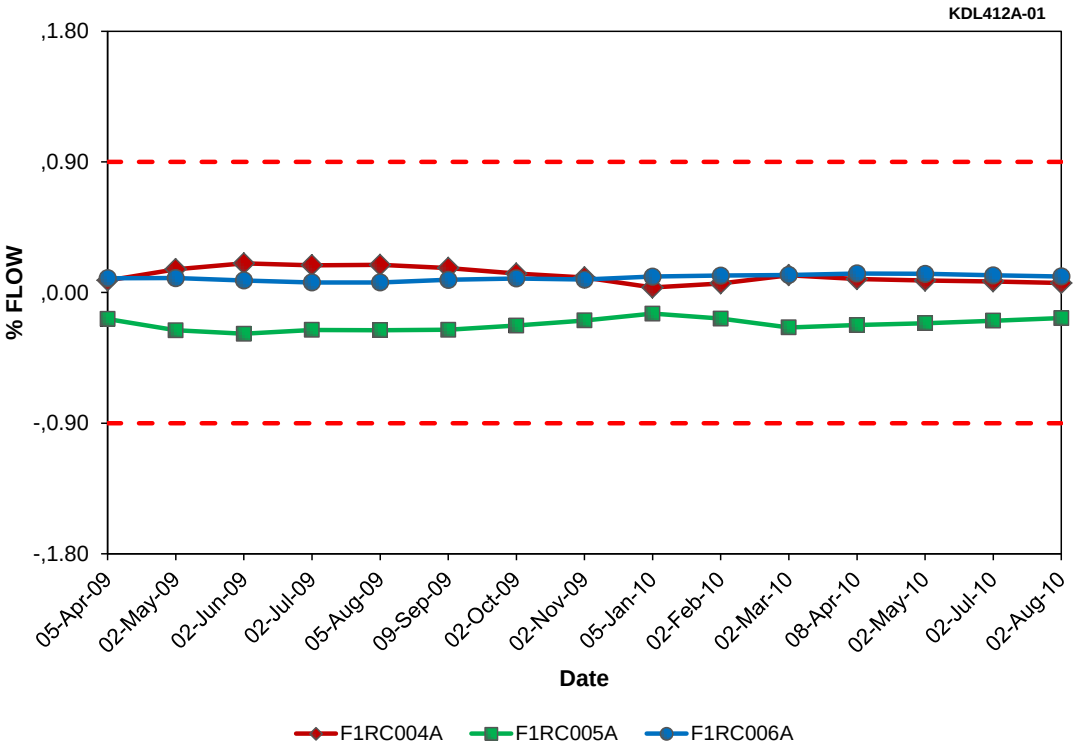



**Figure G.87 RCS LOOP B FLOW Steady-State Deviation at North Anna Unit 1 (Cycle 21)**

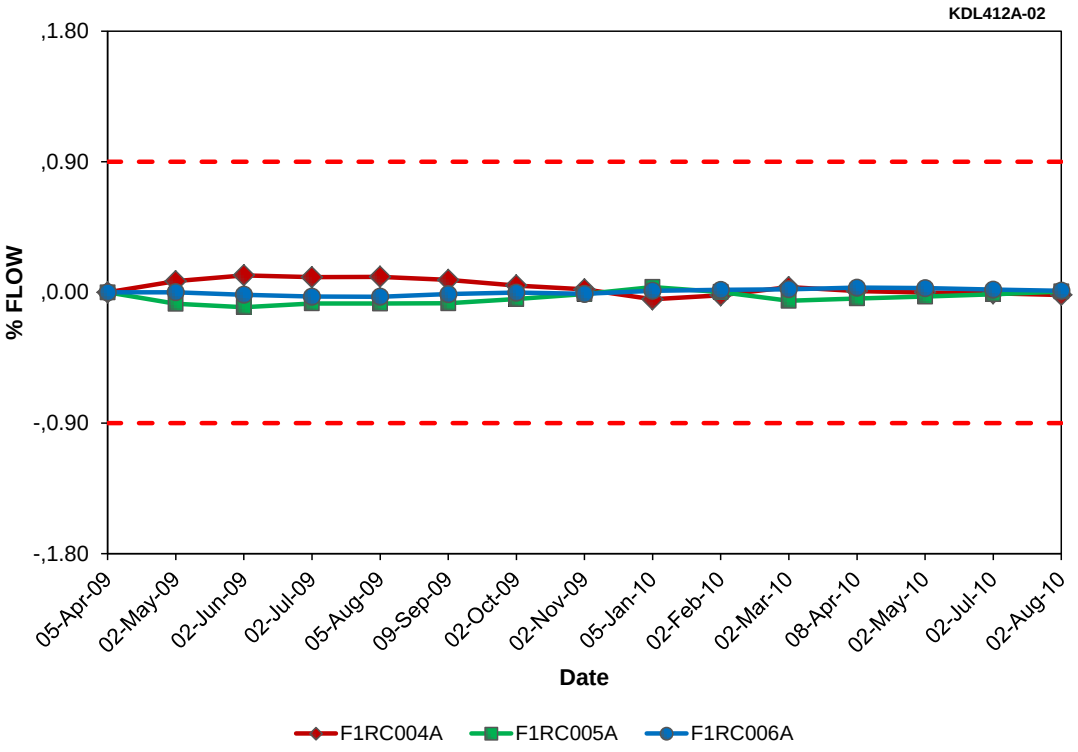



**Figure G.88 RCS LOOP B FLOW Steady-State Drift at North Anna Unit 1 (Cycle 21)**

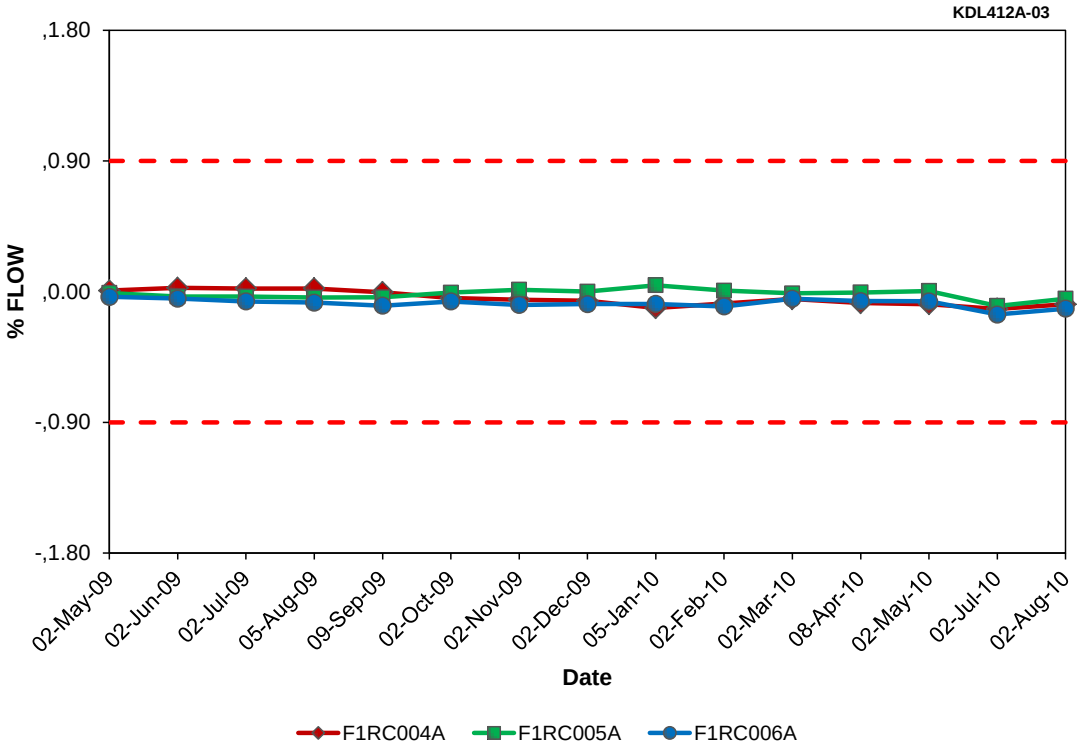



**Figure G.89 RCS LOOP B FLOW Steady-State Residual AAKR at North Anna Unit 1 (Cycle 21)**

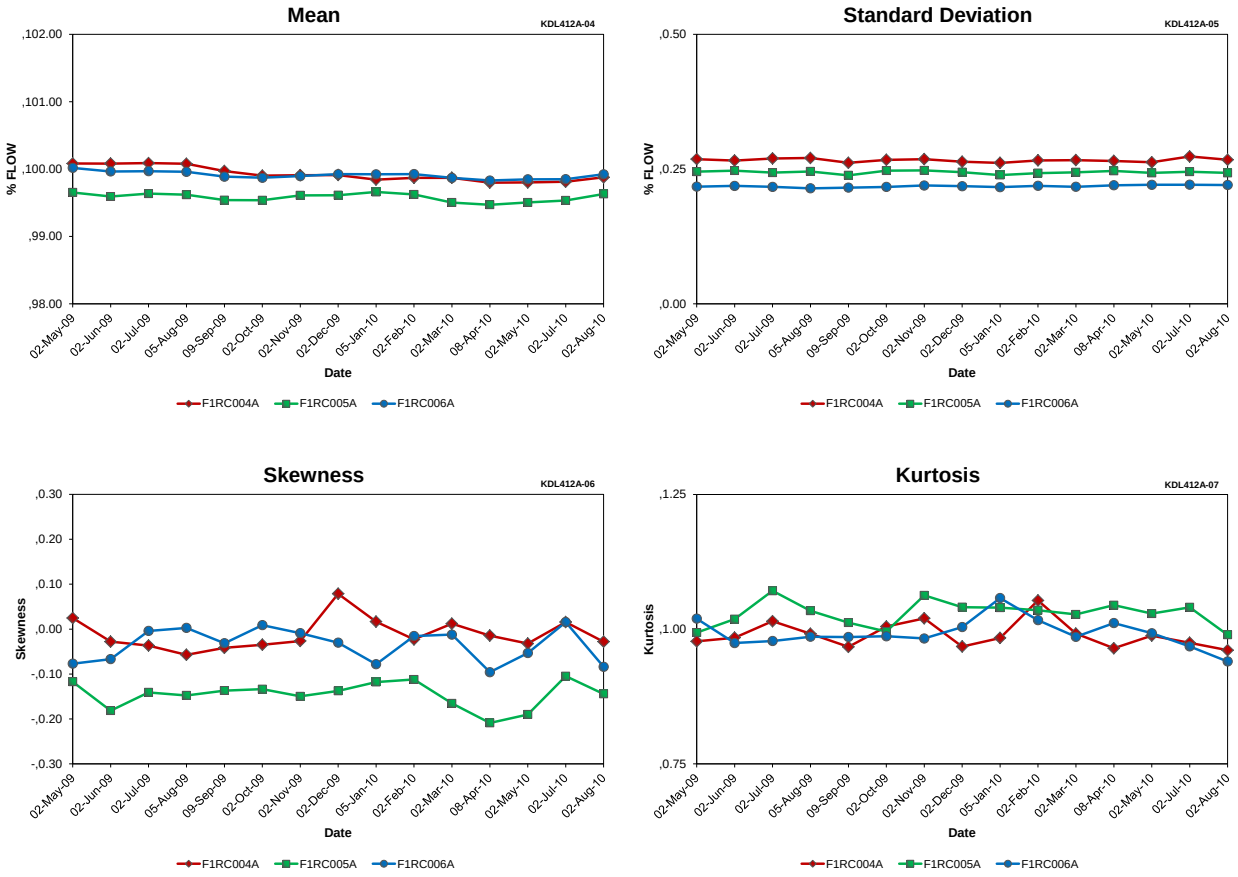



**Figure G.90 RCS LOOP B FLOW Data Quality Statistics at North Anna Unit 1 (Cycle 21)**

**Table G.18 RCS LOOP B FLOW Data Quality for North Anna Unit 1 (Cycle 21)**

| | Tag Names | | |
|---|---|---|---|
| **Result Type** | **F1RC004A** | **F1RC005A** | **F1RC006A** |
| Mean | 99.93 | 99.58 | 99.91 |
| Std. Dev. | 0.27 | 0.24 | 0.22 |
| Skewness | -0.01 | -0.15 | -0.04 |
| Kurtosis | 0.99 | 1.03 | 0.99 |

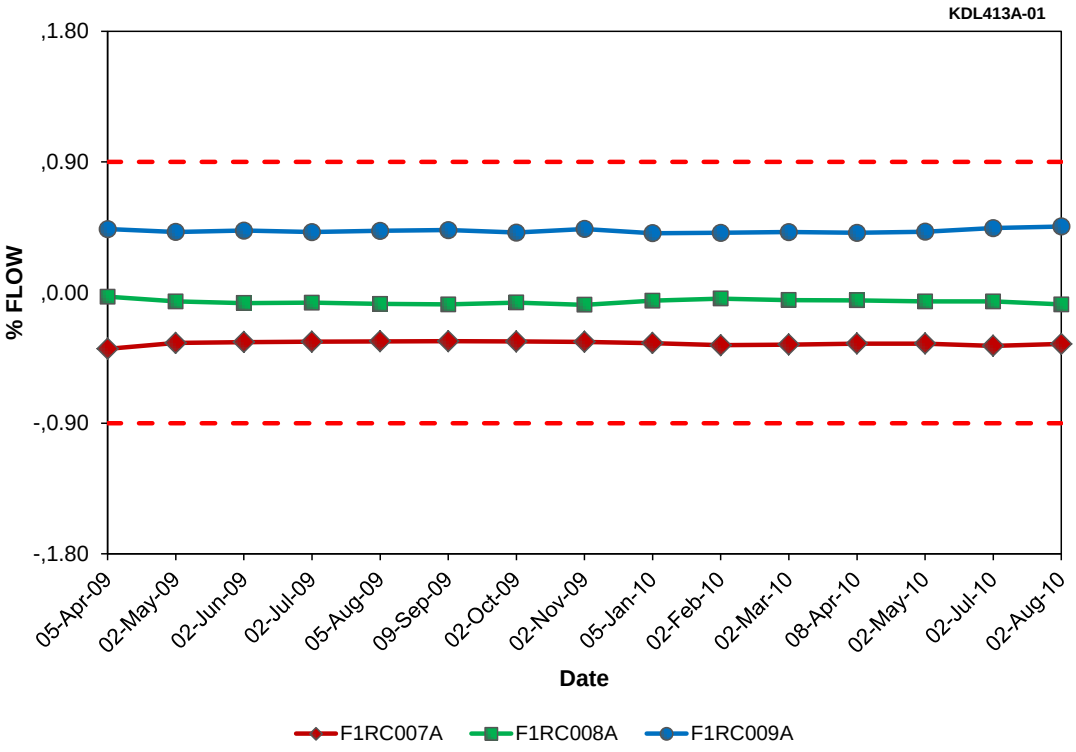



**Figure G.91 RCS LOOP C FLOW Steady-State Deviation at North Anna Unit 1 (Cycle 21)**

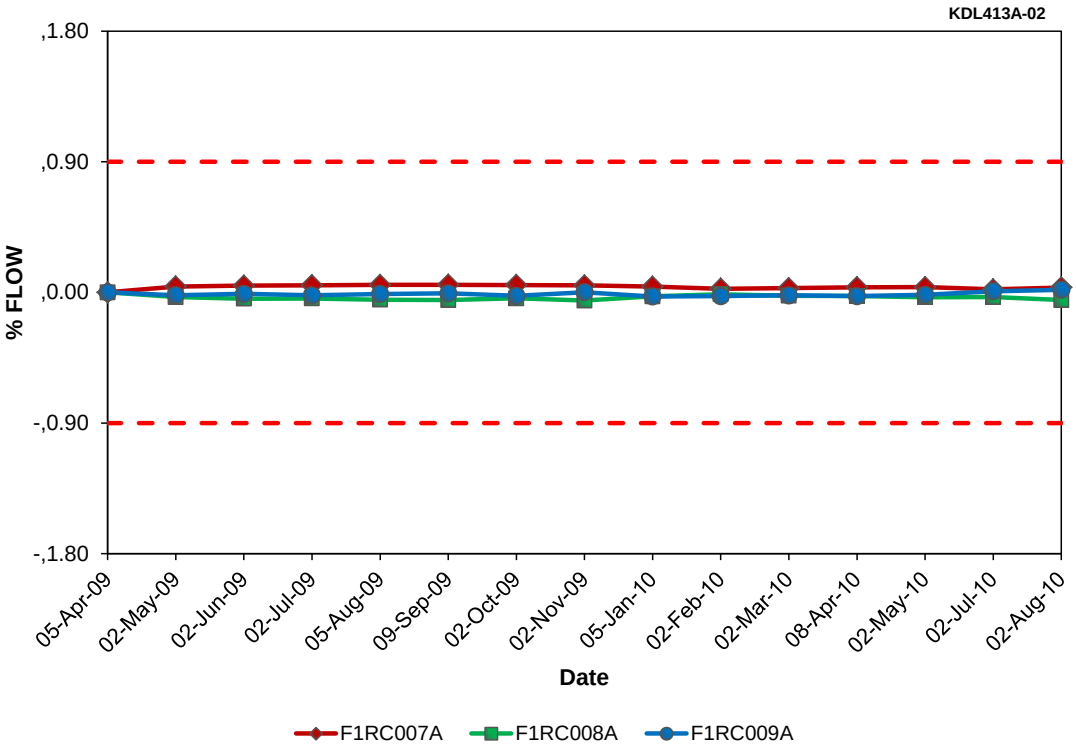



**Figure G.92 RCS LOOP C FLOW Steady-State Drift at North Anna Unit 1 (Cycle 21)**

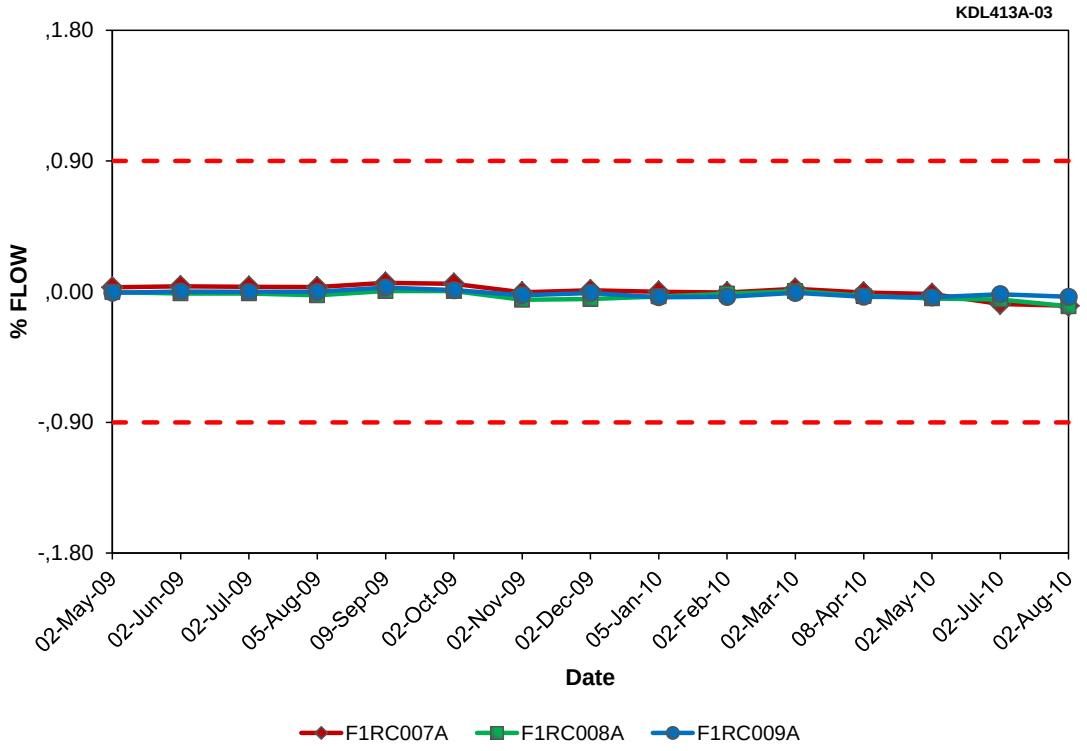



**Figure G.93 RCS LOOP C FLOW Steady-State Residual AAKR at North Anna Unit 1 (Cycle 21)**

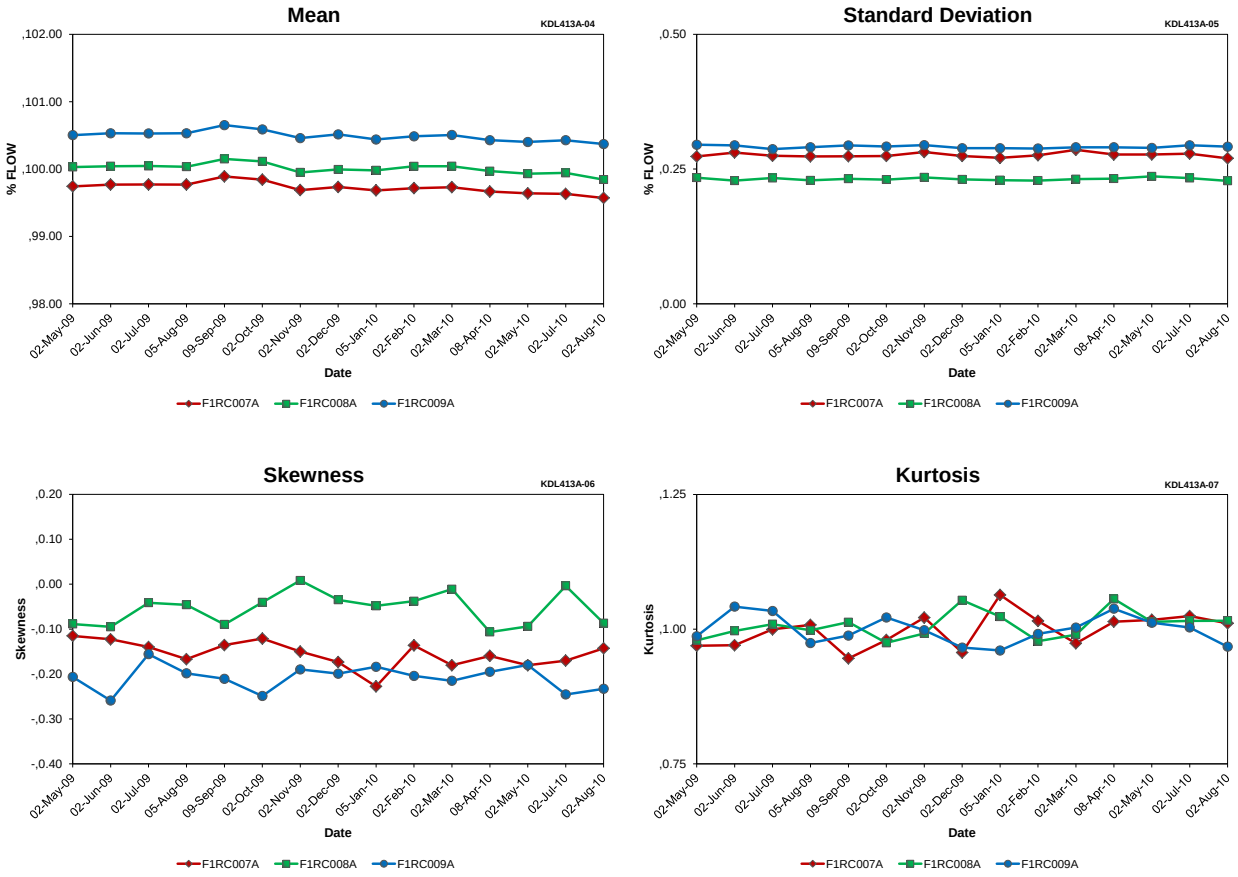



**Figure G.94 RCS LOOP C FLOW Data Quality Statistics at North Anna Unit 1 (Cycle 21)**

**Table G.19 RCS LOOP C FLOW Data Quality for North Anna Unit 1 (Cycle 21)**

| | Tag Names | | |
|---|---|---|---|
| **Result Type** | **F1RC007A** | **F1RC008A** | **F1RC009A** |
| Mean | 99.72 | 100.01 | 100.49 |
| Std. Dev. | 0.28 | 0.23 | 0.29 |
| Skewness | -0.15 | -0.05 | -0.21 |
| Kurtosis | 1.00 | 1.01 | 1.00 |

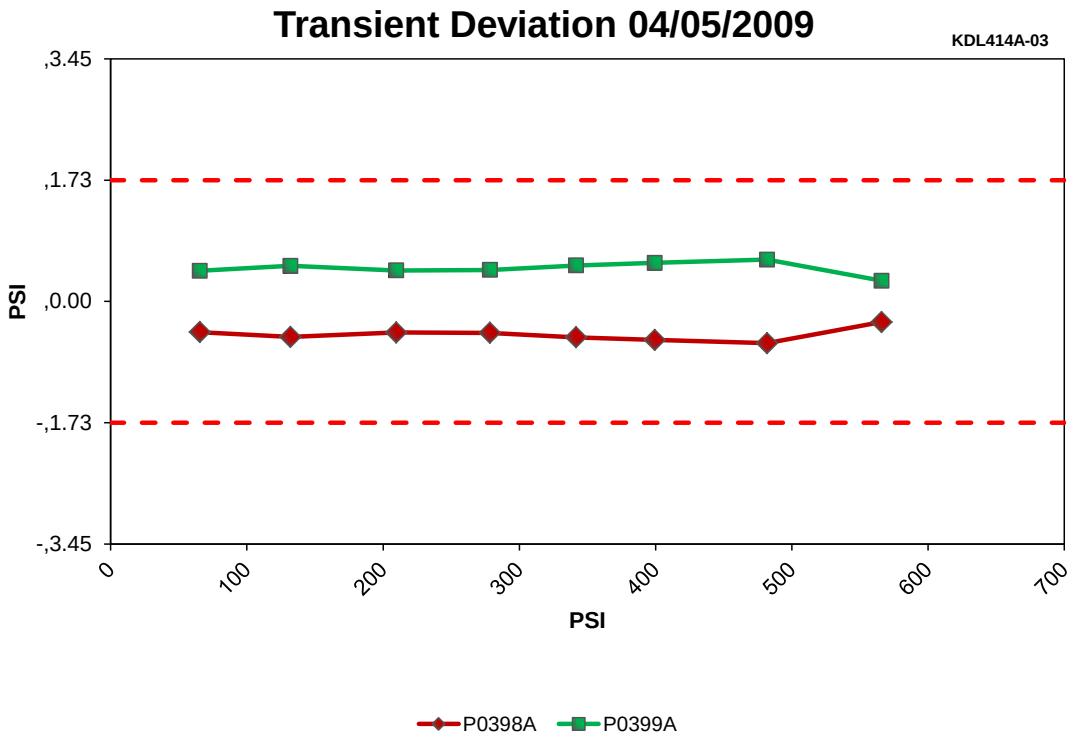



**Figure G.95 TURBINE FIRST STAGE PRESSURE Transient Deviation at North Anna Unit 1 (Cycle 21)**

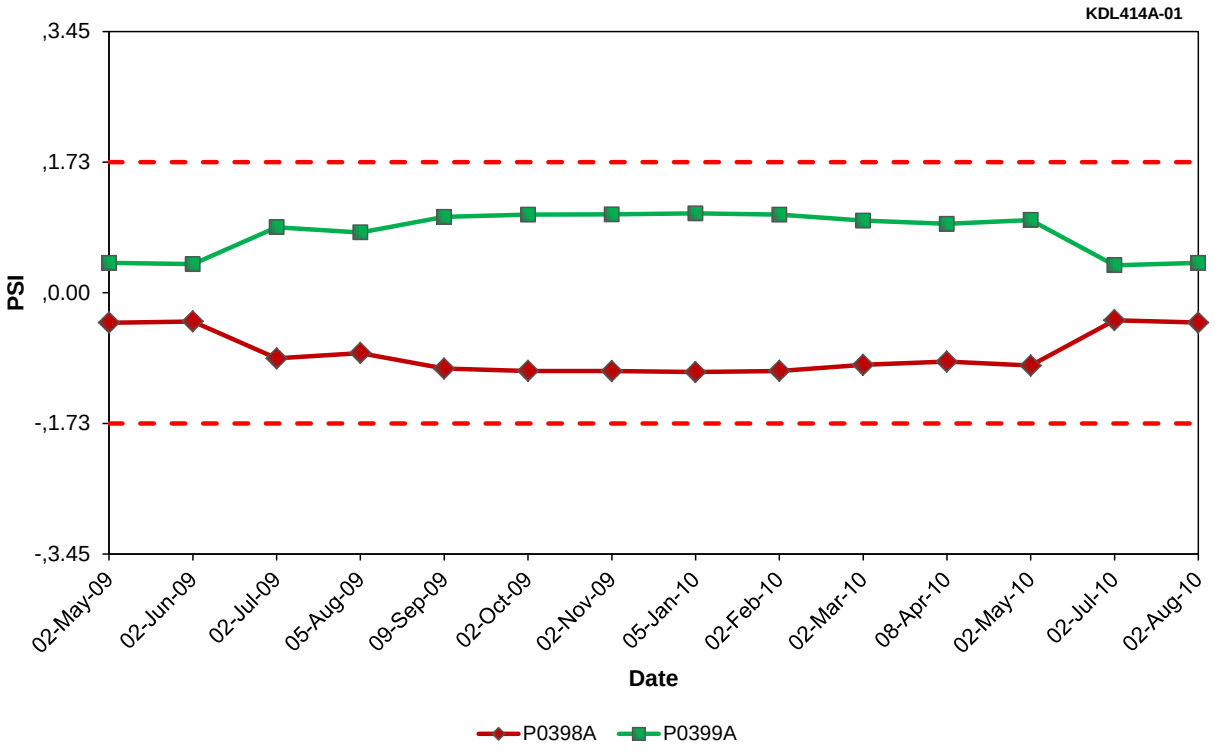



**Figure G.96 TURBINE FIRST STAGE PRESSURE Steady-State Deviation at North Anna Unit 1 (Cycle 21)**

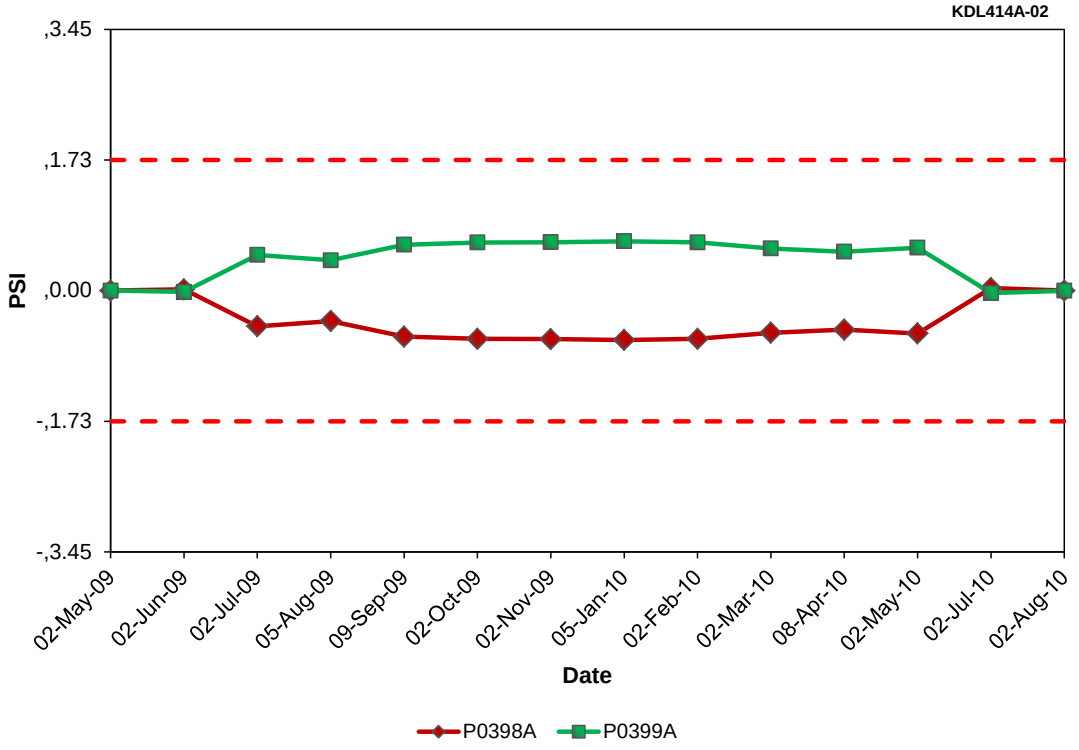



**Figure G.97 TURBINE FIRST STAGE PRESSURE Steady-State Drift at North Anna Unit 1 (Cycle 21)**

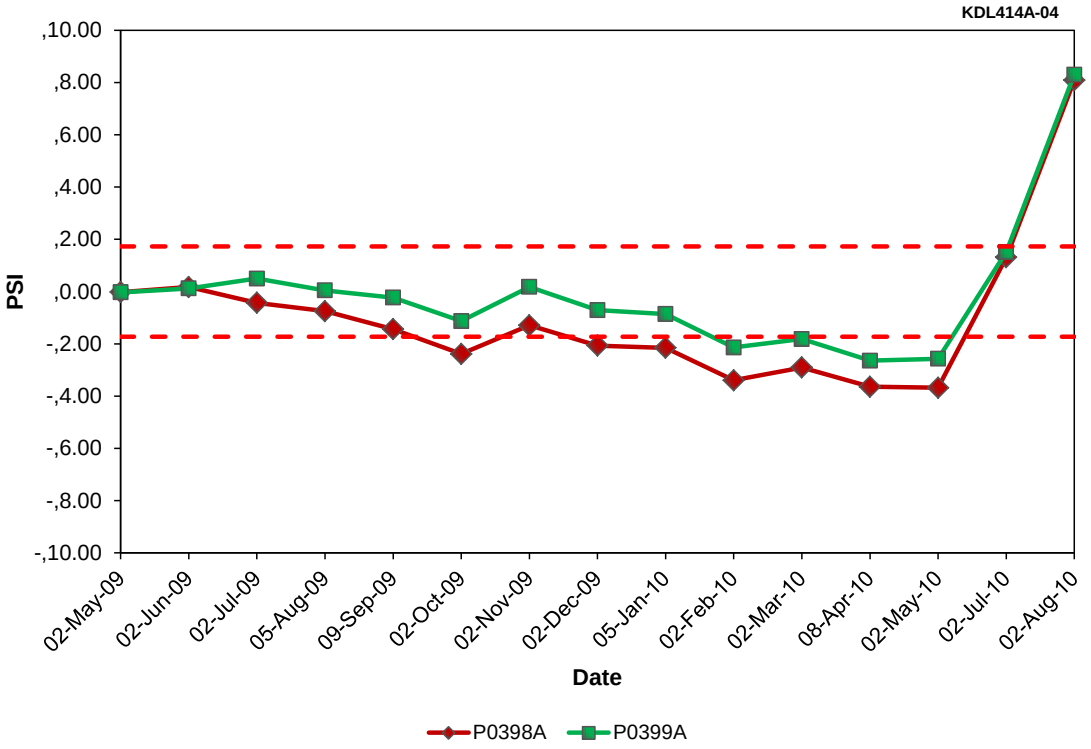



**Figure G.98 TBIN FIRST STAGE PRESSURE Steady-State Residual AAKR at North Anna Unit 1 (Cycle 21)**

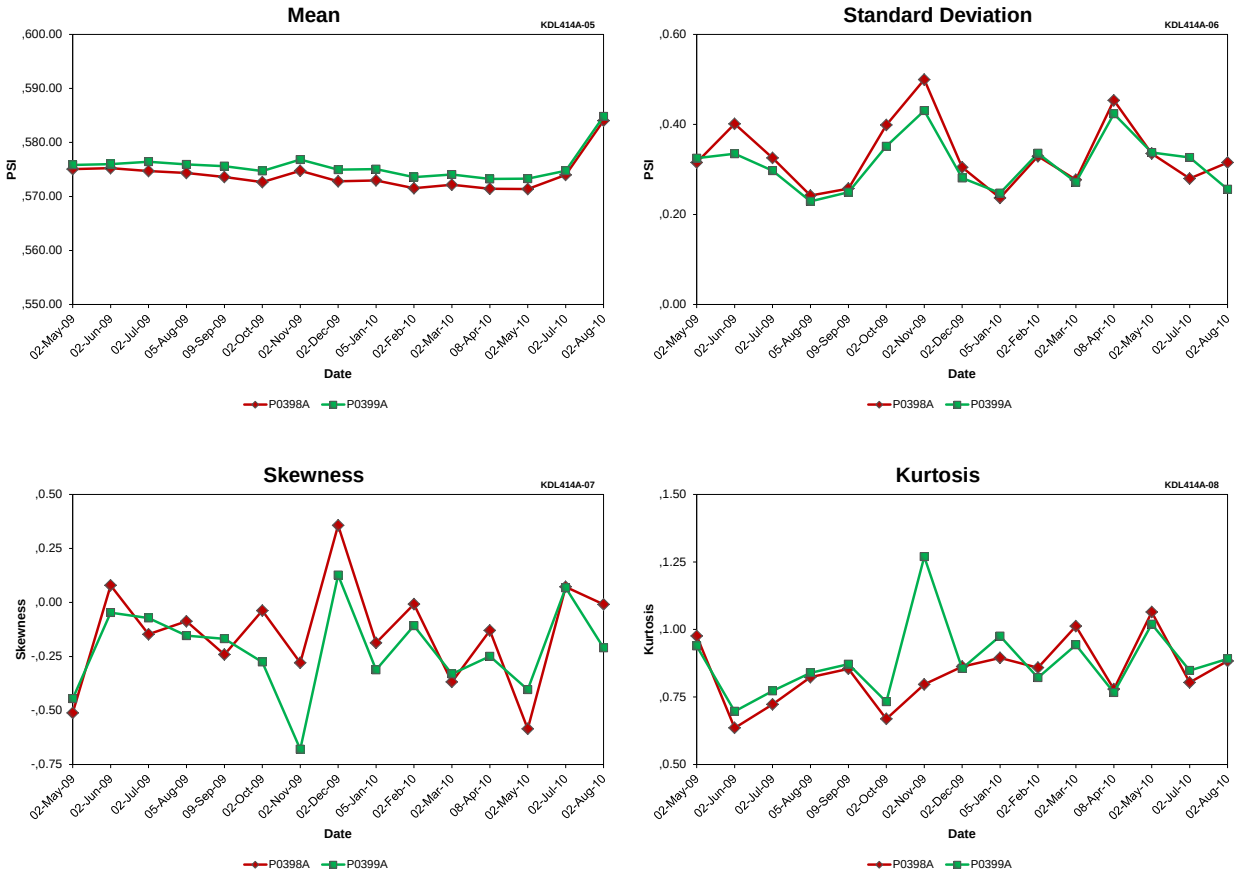



**Figure G.99 TURBINE FIRST STAGE PRESSURE Data Quality Statistics at North Anna Unit 1 (Cycle 21)**

**Table G.20 TURBINE FIRST STAGE PRESSURE Data Quality for North Anna Unit 1 (Cycle 21)**

| | Tag Names | |
|---|---|---|
| **Result Type** | **P0398A** | **P0399A** |
| Mean | 574.04 | 575.67 |
| Std. Dev. | 0.33 | 0.31 |
| Skewness | -0.14 | -0.22 |
| Kurtosis | 0.84 | 0.88 |

# APPENDIX H

# North Anna Unit 1 OLM Results (Cycle 22)

| Item | Tagname | Service | 6 Nov 2010 | 11 Dec 2010 | 2 Jan 2011 | 2 Feb 2011 | 2 Mar 2011 | 2 Apr 2011 | Drift | Final | Comment |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | F1MS001A | SG A STEAM FLOW | | | | | | | | PASS | |
| 2 | F1MS002A | SG A STEAM FLOW | | | | | | | | PASS | |
| | | | | | | | | | | | |
| 3 | F1FW004A | FW FLOW TO SG A | | | | | | | | PASS | |
| 4 | F1FW005A | FW FLOW TO SG A | | | | | | | | PASS | |
| | | | | | | | | | | | |
| 5 | L1FW001A | SG A NARROW RANGE LEVEL | | | | | | | | PASS | |
| 6 | L1FW002A | SG A NARROW RANGE LEVEL | | | | | | | | PASS | |
| 7 | L1FW003A | SG A NARROW RANGE LEVEL | | | | | | | | PASS | |
| 8 | L1FW004A | SG A WIDE RANGE LEVEL | | | | | | | | PASS | |
| | | | | | | | | | | | |
| 9 | P1MS001A | SG A OUTLET PRESSURE | | | | | | | | PASS | |
| 10 | P1MS002A | SG A OUTLET PRESSURE | | | | | | | | PASS | |
| 11 | P1MS003A | SG A OUTLET PRESSURE | | | | | | | | PASS | |
| | | | | | | | | | | | |
| 12 | F1MS003A | SG B STEAM FLOW | | | | | | | | PASS | |
| 13 | F1MS004A | SG B STEAM FLOW | | | | | | | | PASS | |
| | | | | | | | | | | | |
| 14 | F1FW006A | FW FLOW TO SG B | | | | | | | | PASS | |
| 15 | F1FW007A | FW FLOW TO SG B | | | | | | | | PASS | |
| | | | | | | | | | | | |
| 16 | L1FW005A | SG B NARROW RANGE LEVEL | | | | | | | | PASS | |
| 17 | L1FW006A | SG B NARROW RANGE LEVEL | | | | | | | | PASS | |
| 18 | L1FW007A | SG B NARROW RANGE LEVEL | | | | | | | | PASS | |
| 19 | L1FW008A | SG B WIDE RANGE LEVEL | | | | | | | | PASS | |
| | | | | | | | | | | | |
| 20 | P1MS004A | SG B OUTLET PRESSURE | | | | | | | | PASS | |
| 21 | P1MS005A | SG B OUTLET PRESSURE | | | | | | | | PASS | |
| 22 | P1MS006A | SG B OUTLET PRESSURE | | | | | | | | PASS | |
| | | | | | | | | | | | |
| 23 | F1MS005A | SG C STEAM FLOW | | | | | | | | PASS | |
| 24 | F1MS006A | SG C STEAM FLOW | | | | | | | | PASS | |
| | | | | | | | | | | | |
| 25 | F1FW008A | FW FLOW TO SG C | | | | | | | | PASS | |
| 26 | F1FW009A | FW FLOW TO SG C | | | | | | | | PASS | |

*R = Exceeded Redundant Sensor Analysis Limits  M = Exceeded Model Analysis Limits  D = Exceeded Drift Limits*

**Table H.1 North Anna Unit 1 OLM Results Summary (Cycle 22)**

| Item | Tagname | Service | 6 Nov 2010 | 11 Dec 2010 | 2 Jan 2011 | 2 Feb 2011 | 2 Mar 2011 | 2 Apr 2011 | Drift | Final | Comment |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 27 | L1FW009A | SG C NARROW RANGE LEVEL | | | | | | | | PASS | |
| 28 | L1FW010A | SG C NARROW RANGE LEVEL | | | | | | | | PASS | |
| 29 | L1FW011A | SG C NARROW RANGE LEVEL | | | | | | | | PASS | |
| 30 | L1FW012A | SG C WIDE RANGE LEVEL | | | | | | | | PASS | |
| | | | | | | | | | | | |
| 31 | P1MS007A | SG C OUTLET PRESSURE | | | | | | | | PASS | |
| 32 | P1MS008A | SG C OUTLET PRESSURE | | | M | M | | M | | PASS | Process change |
| 33 | P1MS009A | SG C OUTLET PRESSURE | | | M | M | M | M | | PASS | Process change |
| | | | | | | | | | | | |
| 34 | L1RC001A | PRESSURIZER LEVEL | | | | | | | | PASS | |
| 35 | L1RC002A | PRESSURIZER LEVEL | | | | | | | | PASS | |
| 36 | L1RC003A | PRESSURIZER LEVEL | | | | | | | | PASS | |
| | | | | | | | | | | | |
| 37 | P1RC001A | PRESSURIZER PRESSURE | | | | | | | | PASS | |
| 38 | P1RC002A | PRESSURIZER PRESSURE | | | | | | | | PASS | |
| 39 | P1RC003A | PRESSURIZER PRESSURE | | | | | | | | PASS | |
| | | | | | | | | | | | |
| 40 | F1RC001A | RCS LOOP A FLOW | | | | | | | | PASS | |
| 41 | F1RC002A | RCS LOOP A FLOW | | | | | | | | PASS | |
| 42 | F1RC003A | RCS LOOP A FLOW | | | | | | | | PASS | |
| | | | | | | | | | | | |
| 43 | F1RC004A | RCS LOOP B FLOW | | | | | | | | PASS | |
| 44 | F1RC005A | RCS LOOP B FLOW | | | | | | | | PASS | |
| 45 | F1RC006A | RCS LOOP B FLOW | | | | | | | | PASS | |
| | | | | | | | | | | | |
| 46 | F1RC007A | RCS LOOP C FLOW | | | | | | | | PASS | |
| 47 | F1RC008A | RCS LOOP C FLOW | | | | | | | | PASS | |
| 48 | F1RC009A | RCS LOOP C FLOW | | | | | | | | PASS | |
| | | | | | | | | | | | |
| 49 | P1RC005A | RCS WIDE RANGE PRESSURE LOOP A | | | | | | | | PASS | |
| 50 | P1RC006A | RCS WIDE RANGE PRESSURE LOOP C | | | | | | | | PASS | |
| | | | | | | | | | | | |
| 51 | P0398A | TURBINE FIRST STAGE PRESSURE | | | | | | | | PASS | |
| 52 | P0399A | TURBINE FIRST STAGE PRESSURE | | | | | | | | PASS | |

*R = Exceeded Redundant Sensor Analysis Limits  M = Exceeded Model Analysis Limits  D = Exceeded Drift Limits*

**Table H.1 (continued) North Anna Unit 1 OLM Results Summary (Cycle 22)**

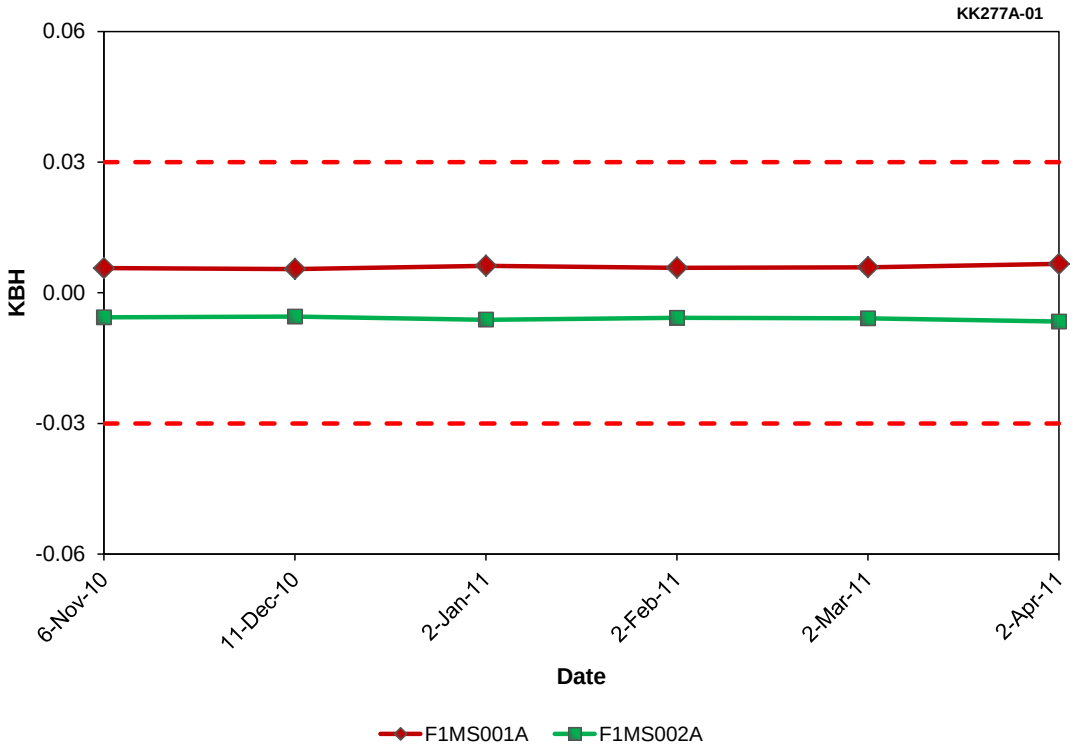



**Figure H.1 SG A STEAM FLOW Steady-State Deviation at North Anna Unit 1 (Cycle 22)**

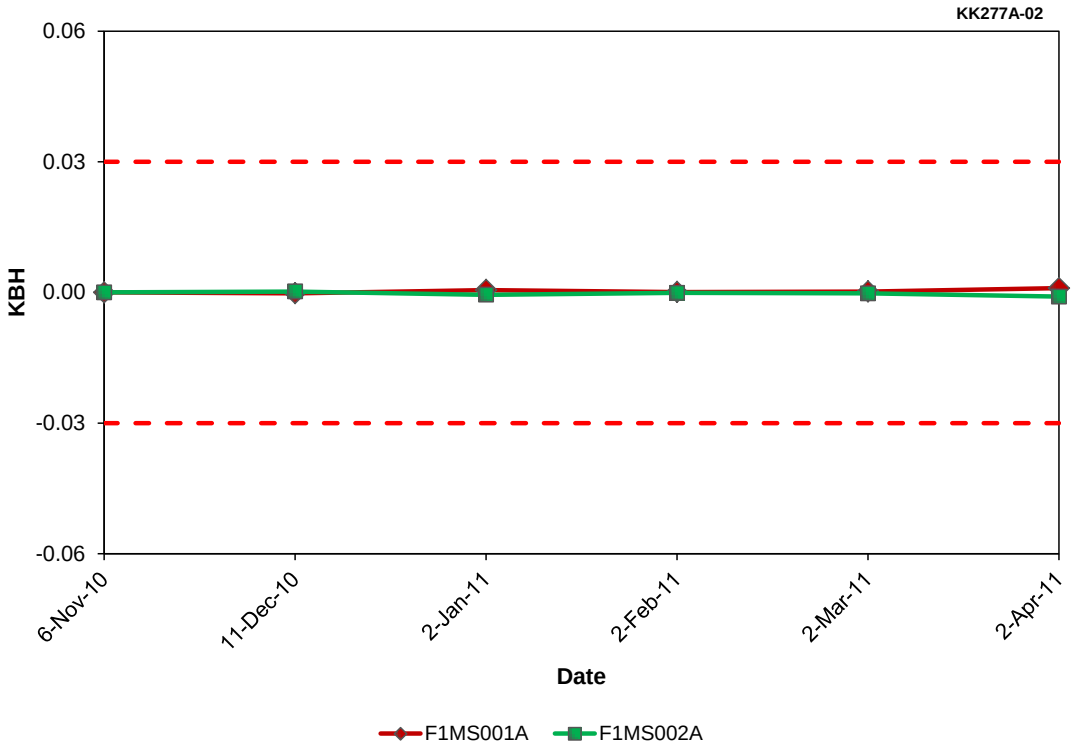



**Figure H.2 SG A STEAM FLOW Steady-State Drift at North Anna Unit 1 (Cycle 22)**

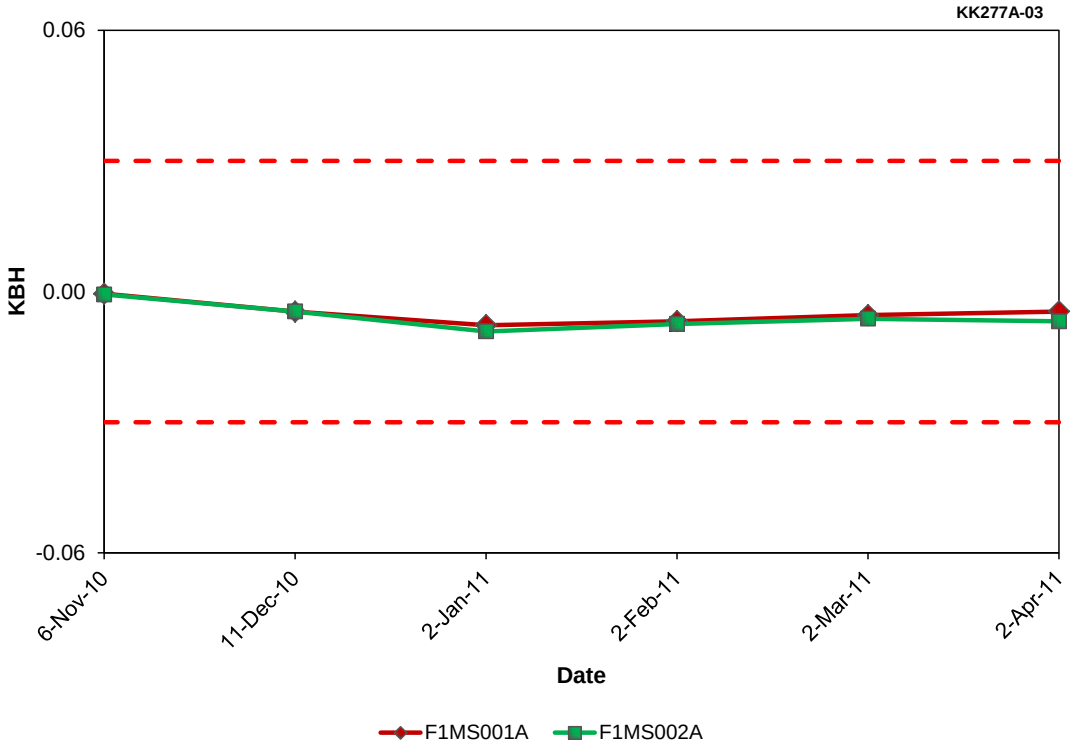



**Figure H.3 SG A STEAM FLOW Steady-State Residual AAKR at North Anna Unit 1 (Cycle 22)**

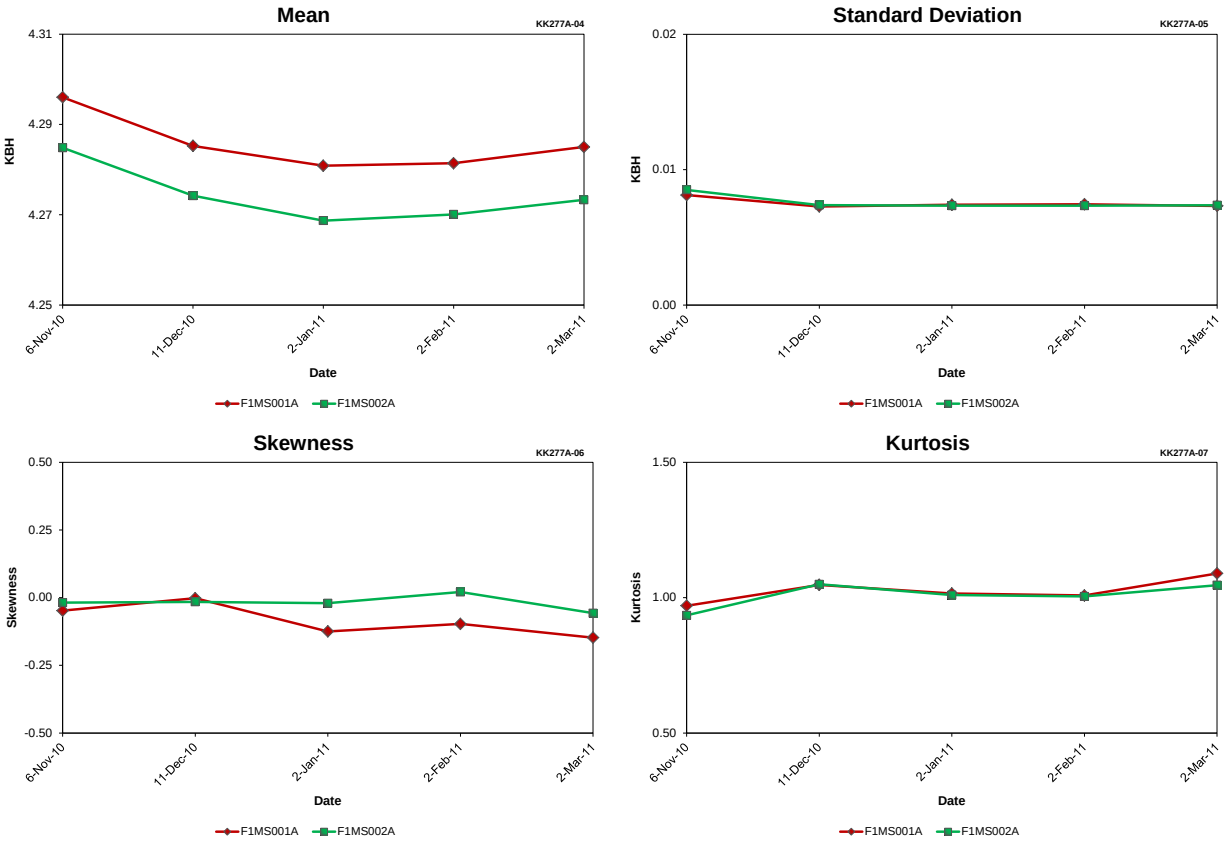



**Figure H.4 SG A STEAM FLOW Data Quality Statistics at North Anna Unit 1 (Cycle 22)**

**Table H.2 SG A STEAM FLOW Data Quality for North Anna Unit 1 (Cycle 22)**

| | Tag Names | |
|---|---|---|
| **Result Type** | **F1MS001A** | **F1MS002A** |
| Mean | 4.29 | 4.27 |
| Std. Dev. | 0.01 | 0.01 |
| Skewness | -0.08 | -0.02 |
| Kurtosis | 1.03 | 1.01 |

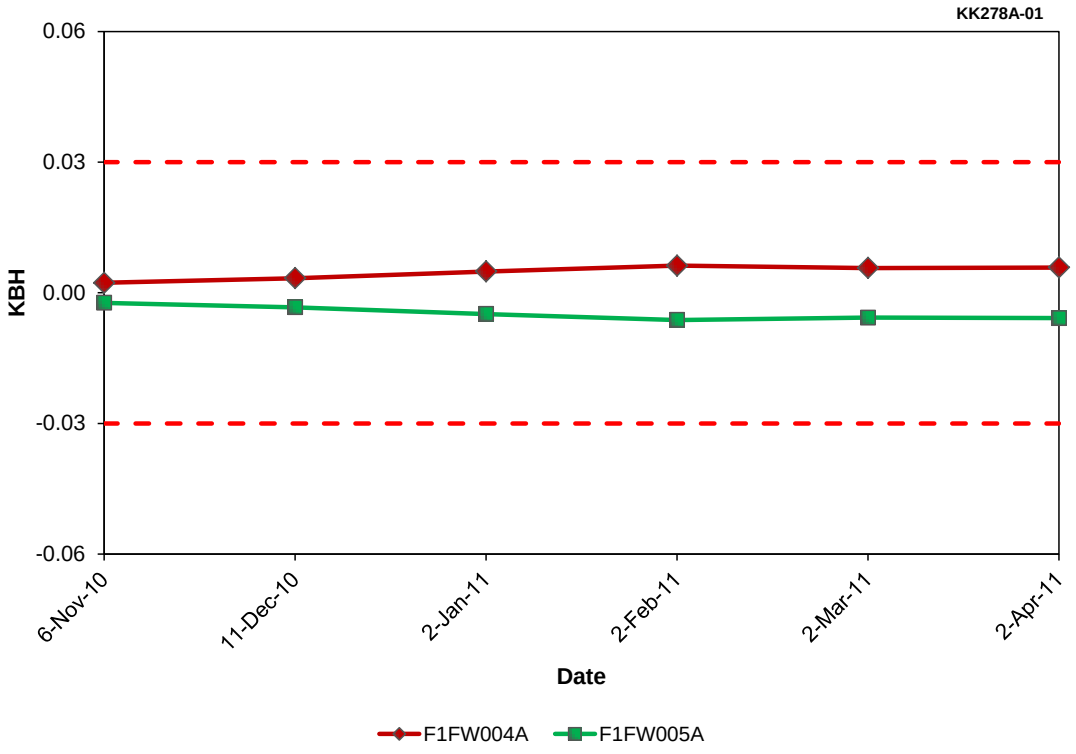



**Figure H.5 FW FLOW TO SG A Steady-State Deviation at North Anna Unit 1 (Cycle 22)**

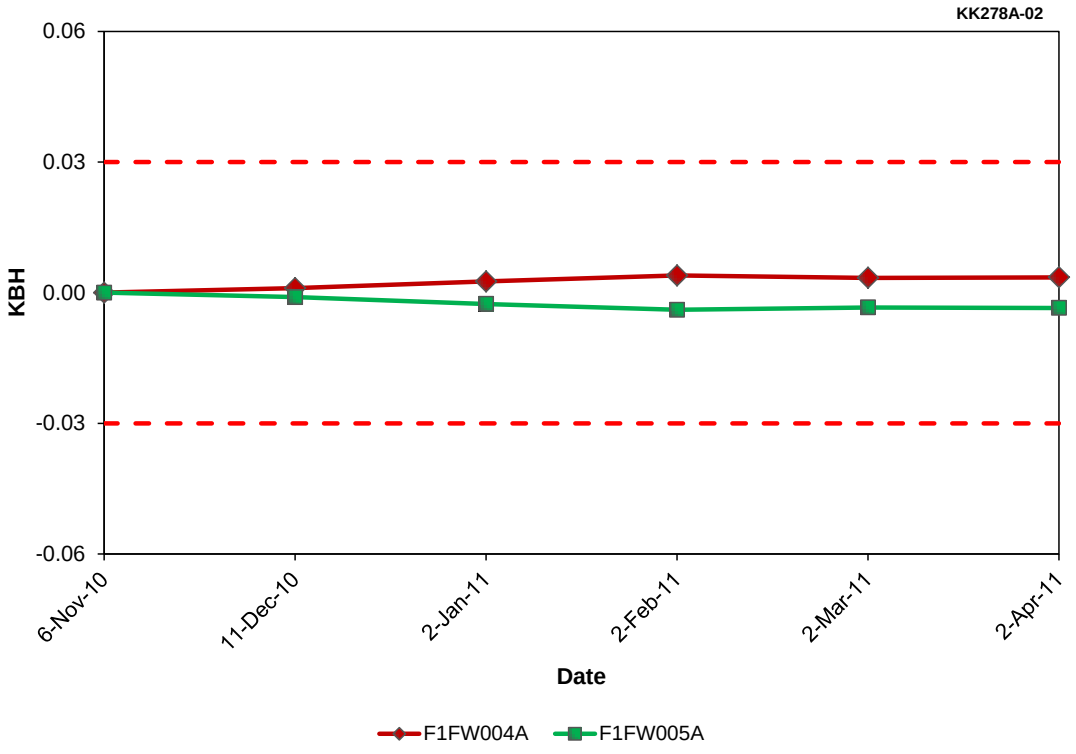



**Figure H.6 FW FLOW TO SG A Steady-State Drift at North Anna Unit 1 (Cycle 22)**

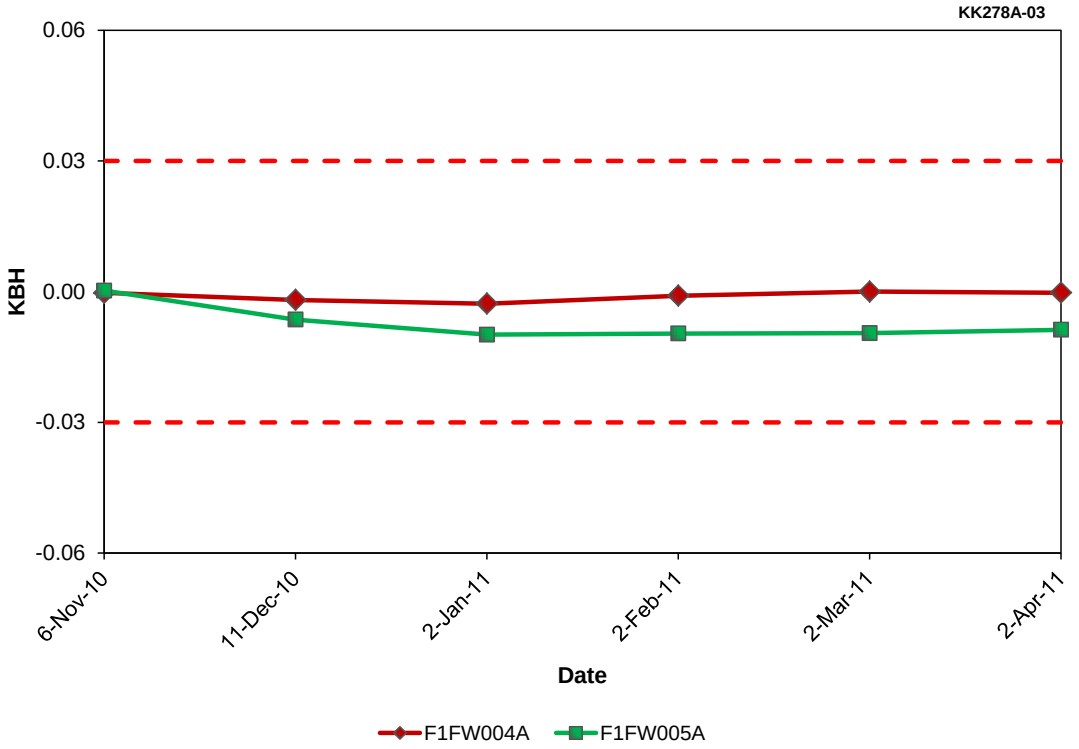



**Figure H.7 FW FLOW TO SG A Steady-State Residual AAKR at North Anna Unit 1 (Cycle 22)**

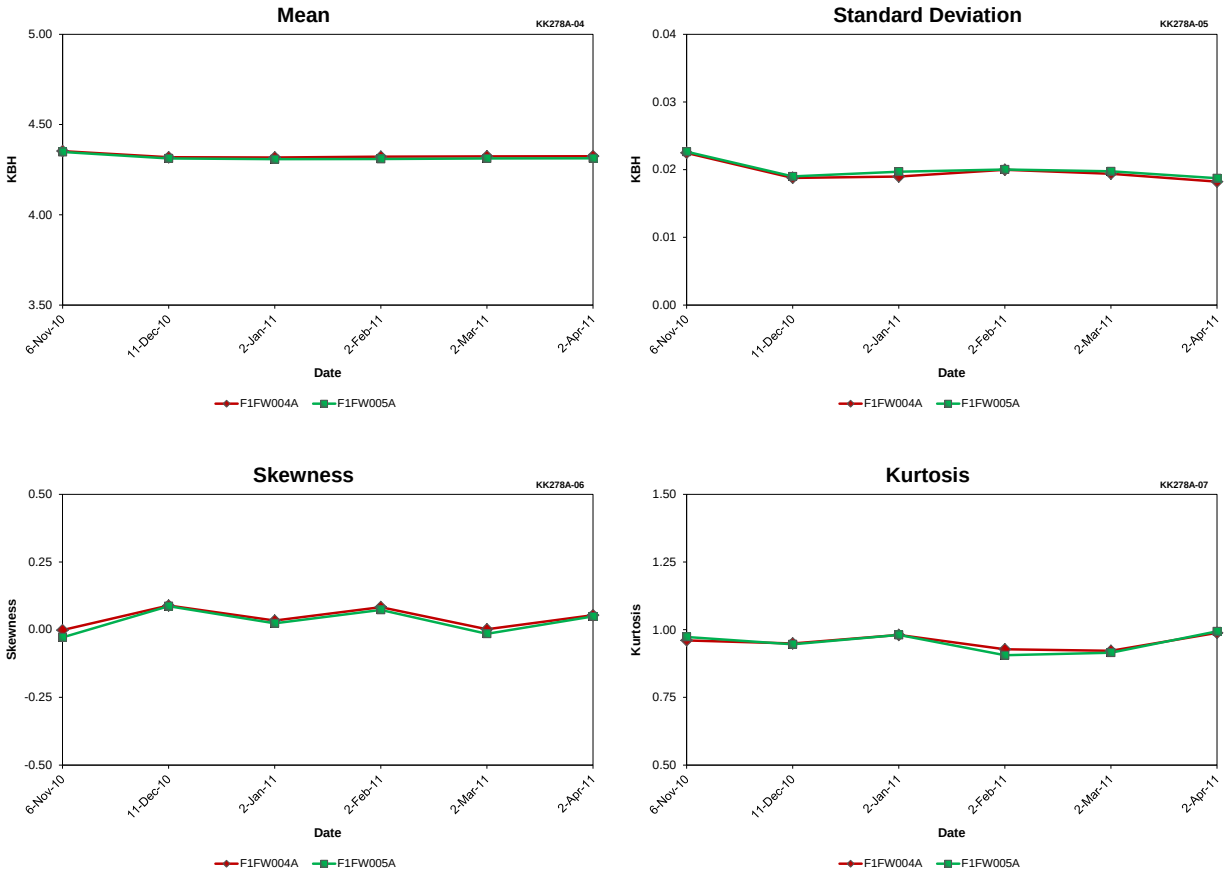



**Figure H.8 FW FLOW TO SG A Data Quality Statistics at North Anna Unit 1 (Cycle 22)**

**Table H.3 FW FLOW TO SG A Data Quality for North Anna Unit 1 (Cycle 22)**

| | Tag Names | |
|---|---|---|
| Result Type | F1FW004A | F1FW005A |
| Mean | 4.33 | 4.32 |
| Std. Dev. | 0.02 | 0.02 |
| Skewness | 0.04 | 0.03 |
| Kurtosis | 0.95 | 0.95 |

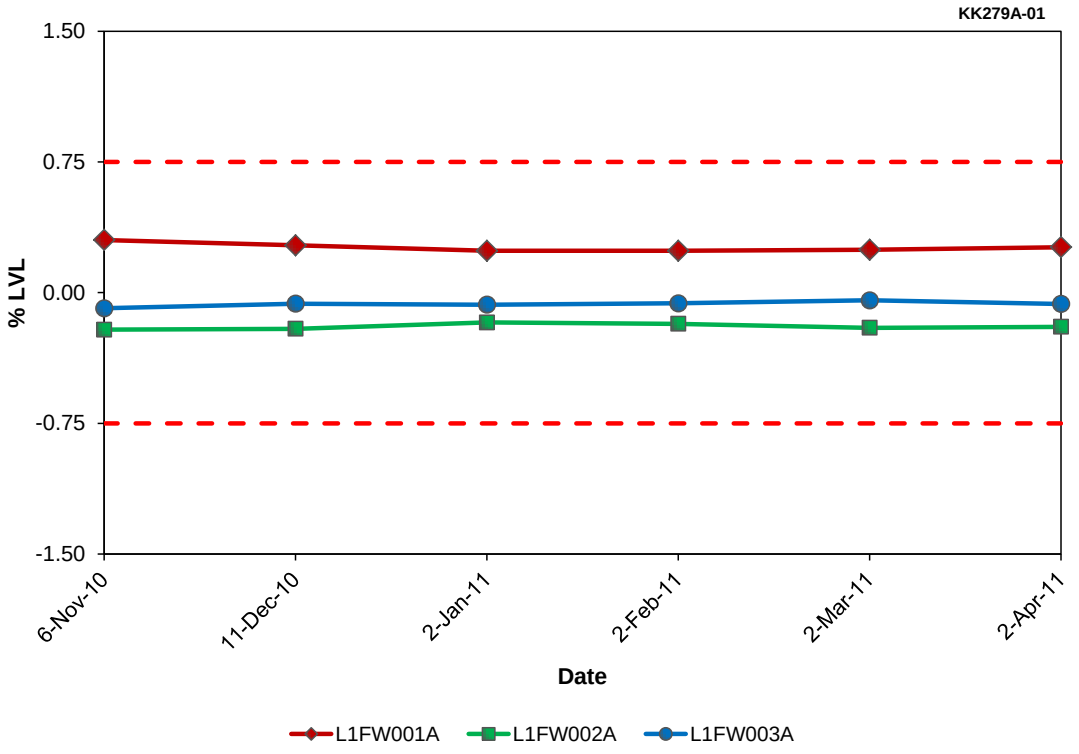



**Figure H.9 SG A LEVEL Steady-State Deviation at North Anna Unit 1 (Cycle 22)**

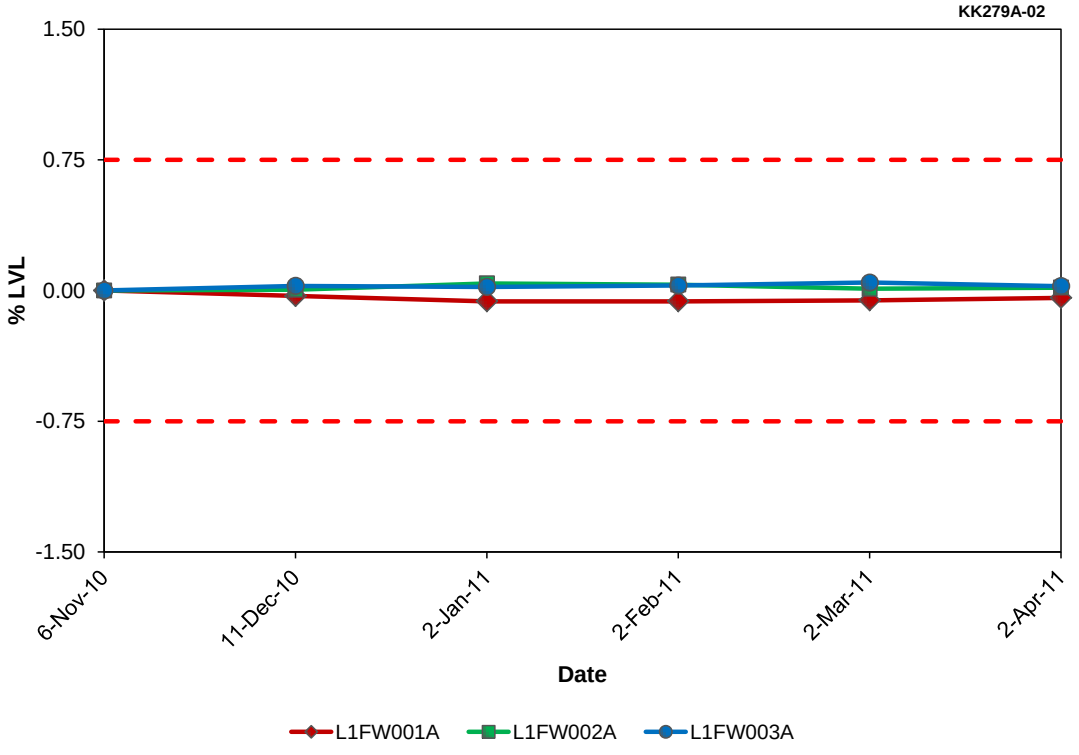



**Figure H.10 SG A LEVEL Steady-State Drift at North Anna Unit 1 (Cycle 22)**

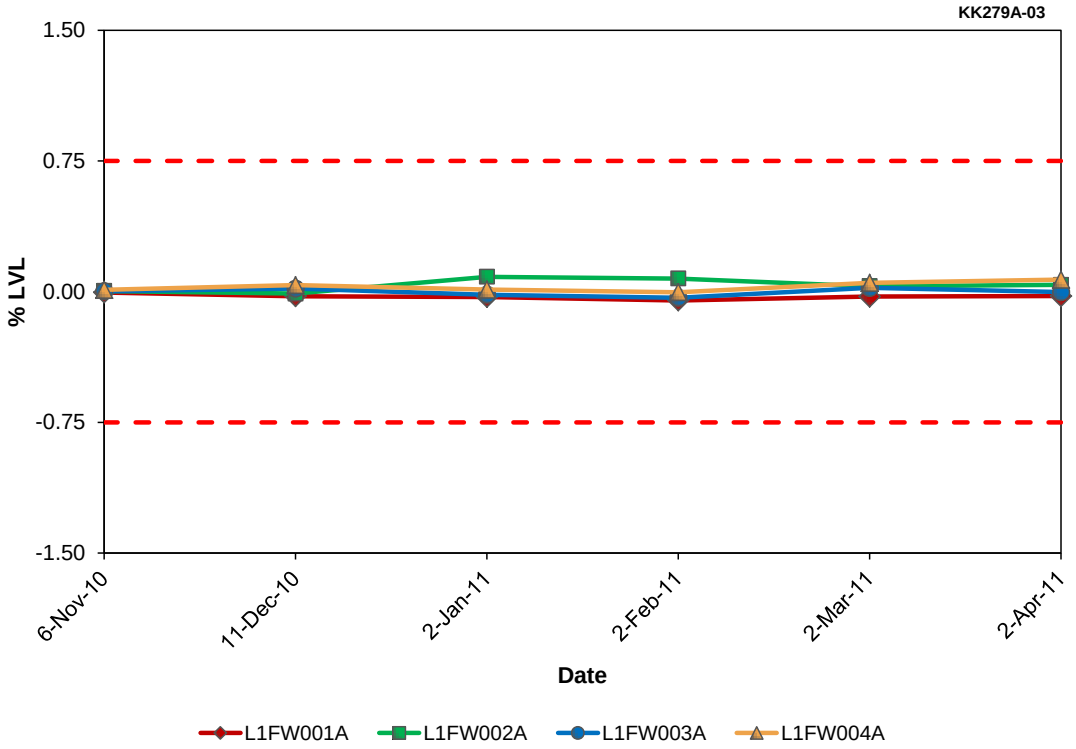



**Figure H.11 SG A LEVEL Steady-State Residual AAKR at North Anna Unit 1 (Cycle 22)**

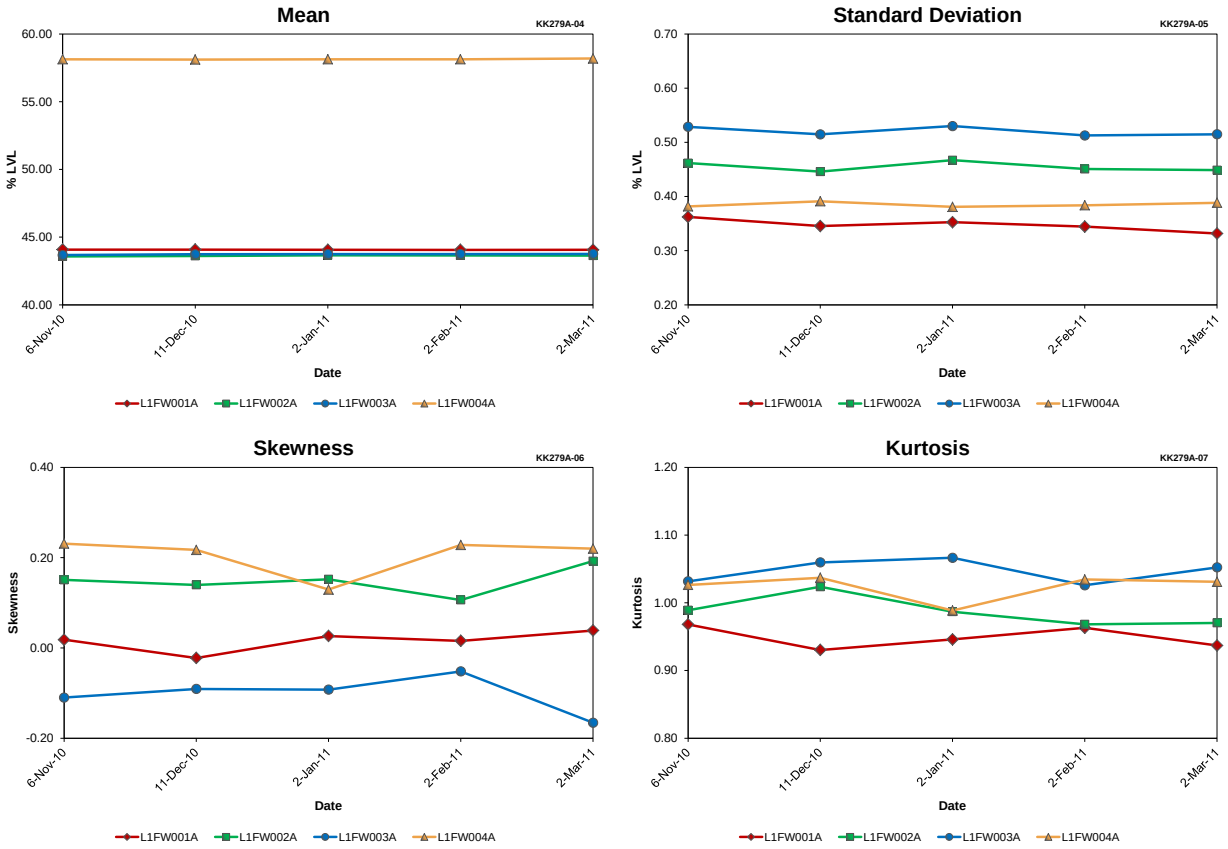



**Figure H.12 SG A LEVEL Data Quality Statistics at North Anna Unit 1 (Cycle 22)**

**Table H.4 SG A LEVEL Data Quality for North Anna Unit 1 (Cycle 22)**

| | Tag Names | | | |
|---|---|---|---|---|
| **Result Type** | **L1FW001A** | **L1FW002A** | **L1FW003A** | **L1FW004A** |
| Mean | 44.07 | 43.62 | 43.73 | 58.14 |
| Std. Dev. | 0.35 | 0.45 | 0.52 | 0.39 |
| Skewness | 0.02 | 0.15 | -0.10 | 0.21 |
| Kurtosis | 0.95 | 0.99 | 1.05 | 1.02 |

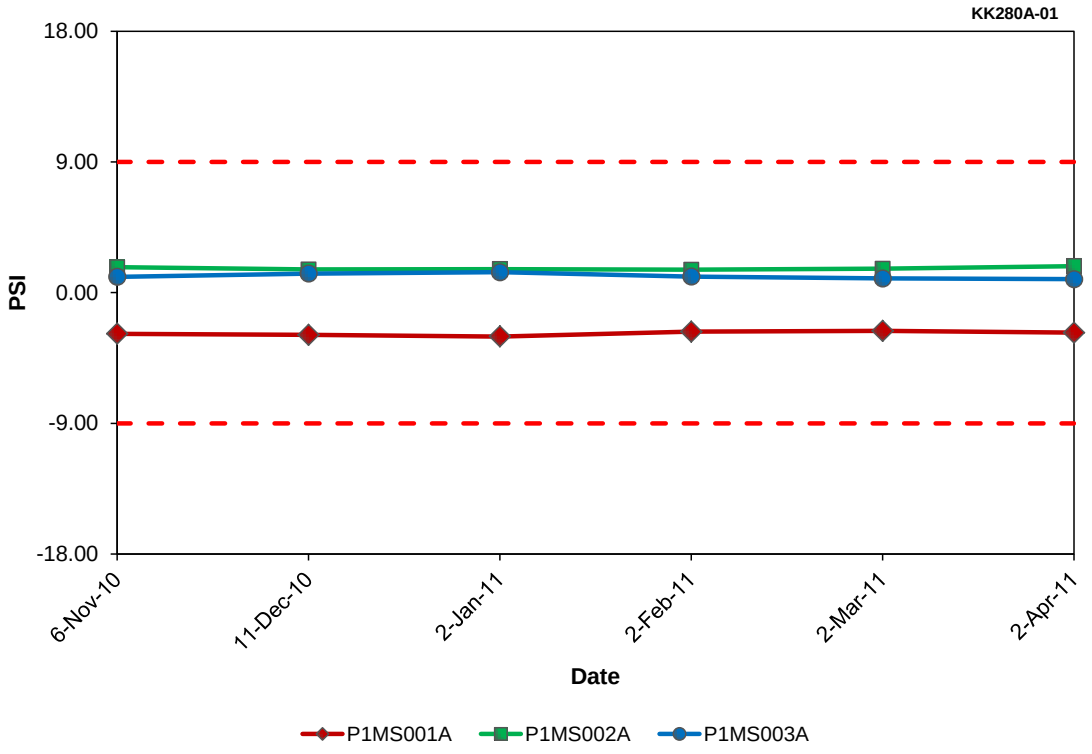



**Figure H.13 SG A OUTLET PRESSURE Steady-State Deviation at North Anna Unit 1 (Cycle 22)**

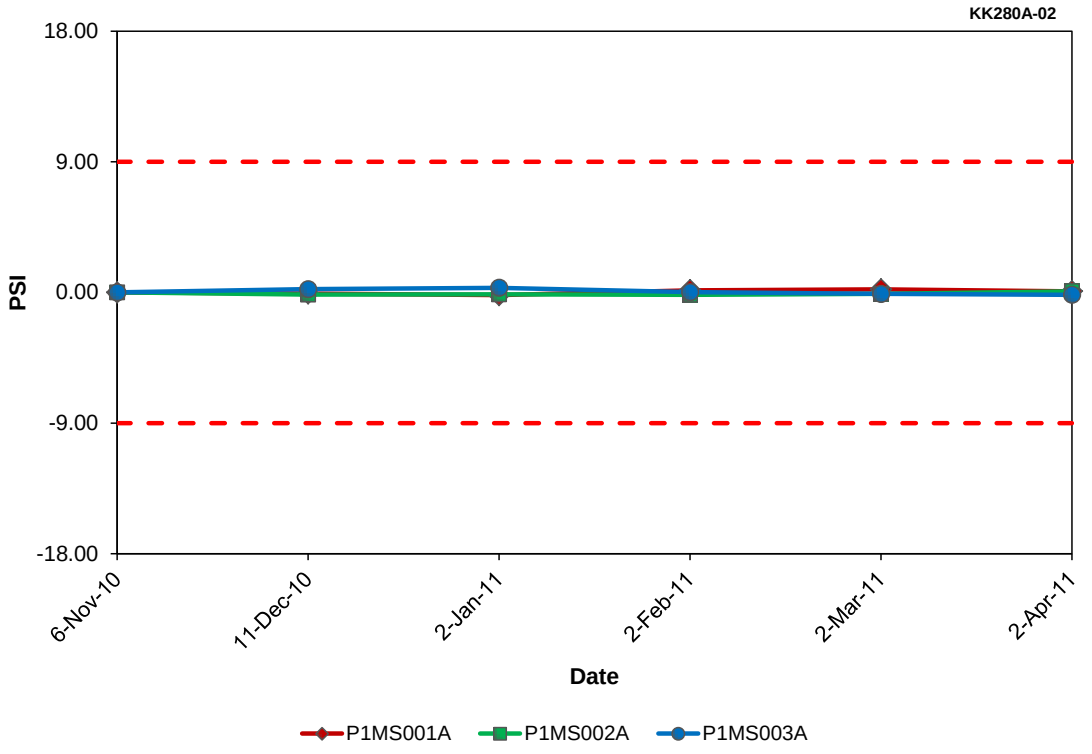



**Figure H.14 SG A OUTLET PRESSURE Steady-State Drift at North Anna Unit 1 (Cycle 22)**

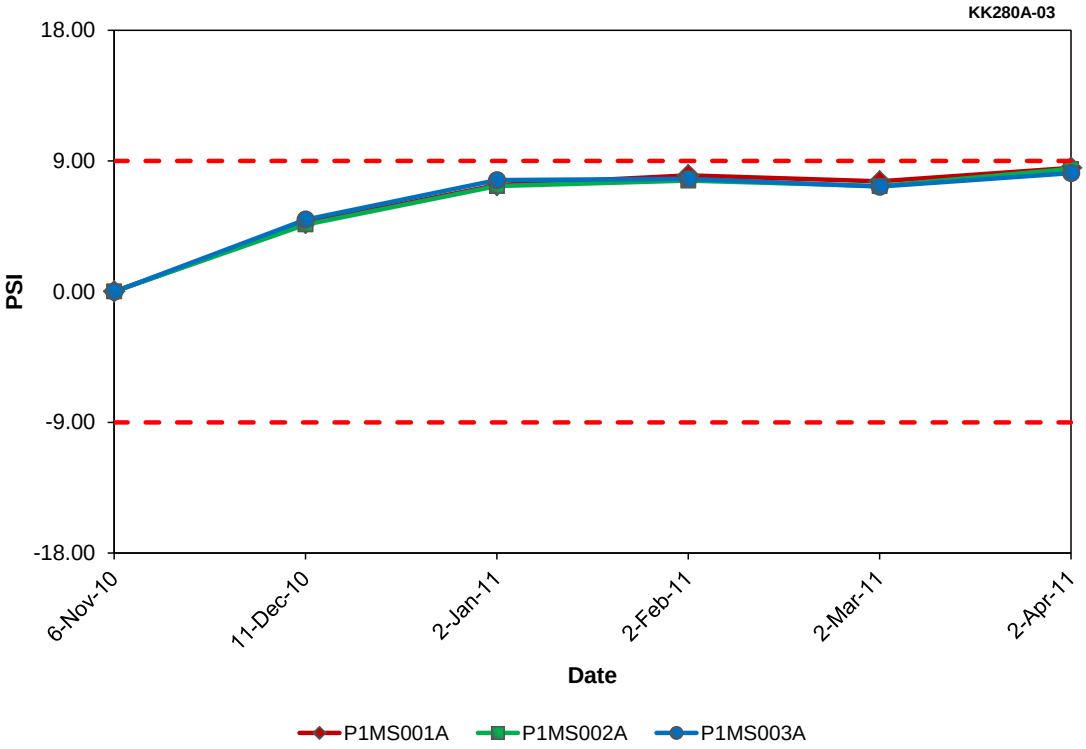



**Figure H.15 SG A OUTLET PRESSURE Steady-State Residual AAKR at North Anna Unit 1 (Cycle 22)**

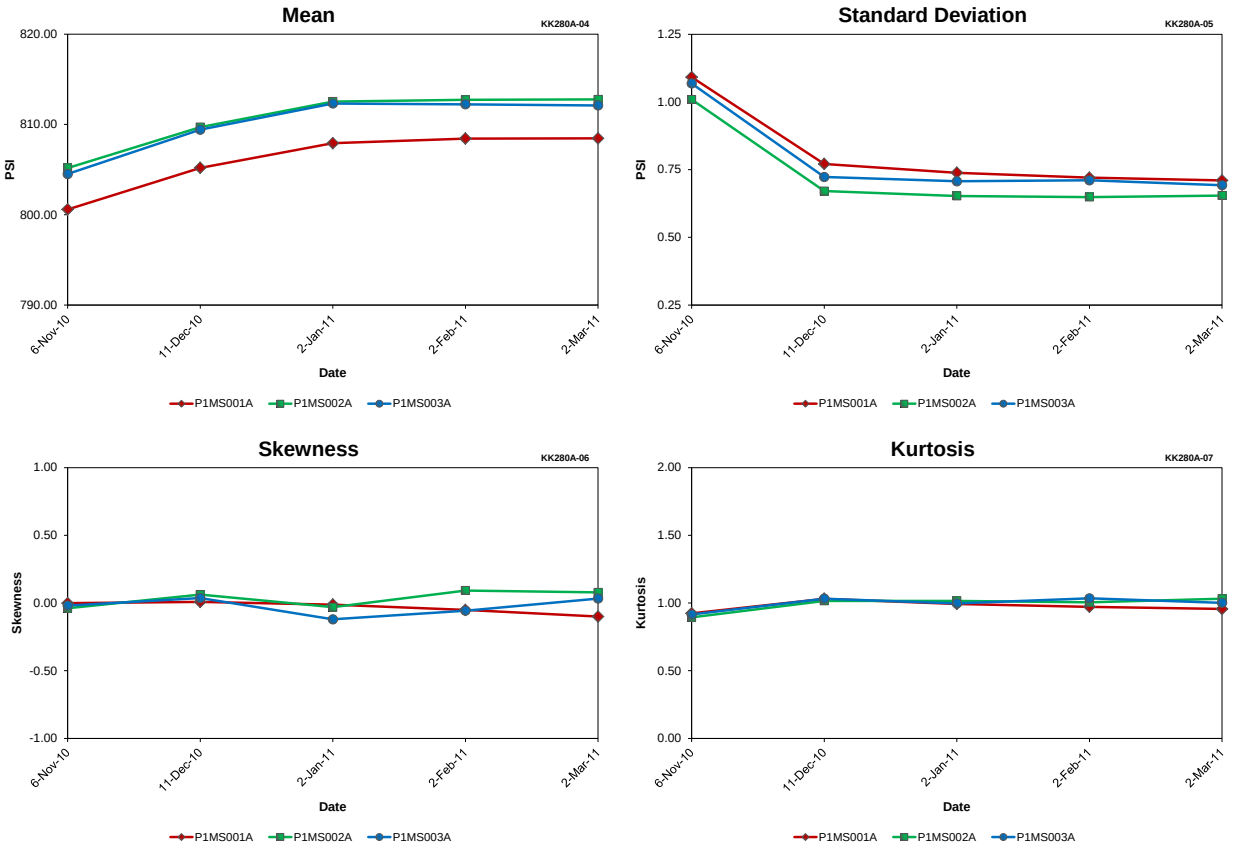



**Figure H.16 SG A OUTLET PRESSURE Data Quality Statistics at North Anna Unit 1 (Cycle 22)**

**Table H.5 SG A OUTLET PRESSURE Data Quality for North Anna Unit 1 (Cycle 22)**

| | Tag Names | | |
|---|---|---|---|
| **Result Type** | **P1MS001A** | **P1MS002A** | **P1MS003A** |
| Mean | 806.12 | 810.58 | 810.11 |
| Std. Dev. | 0.81 | 0.73 | 0.78 |
| Skewness | -0.03 | 0.03 | -0.03 |
| Kurtosis | 0.98 | 0.99 | 1.00 |

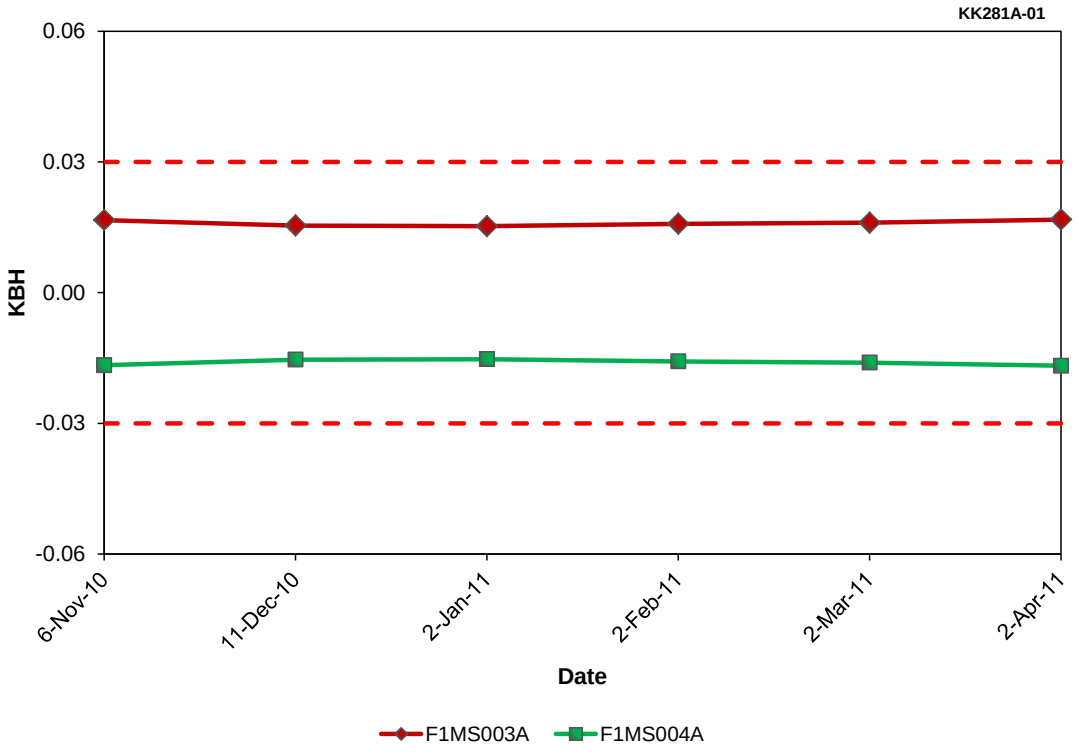



**Figure H.17 SG B STEAM FLOW Steady-State Deviation at North Anna Unit 1 (Cycle 22)**

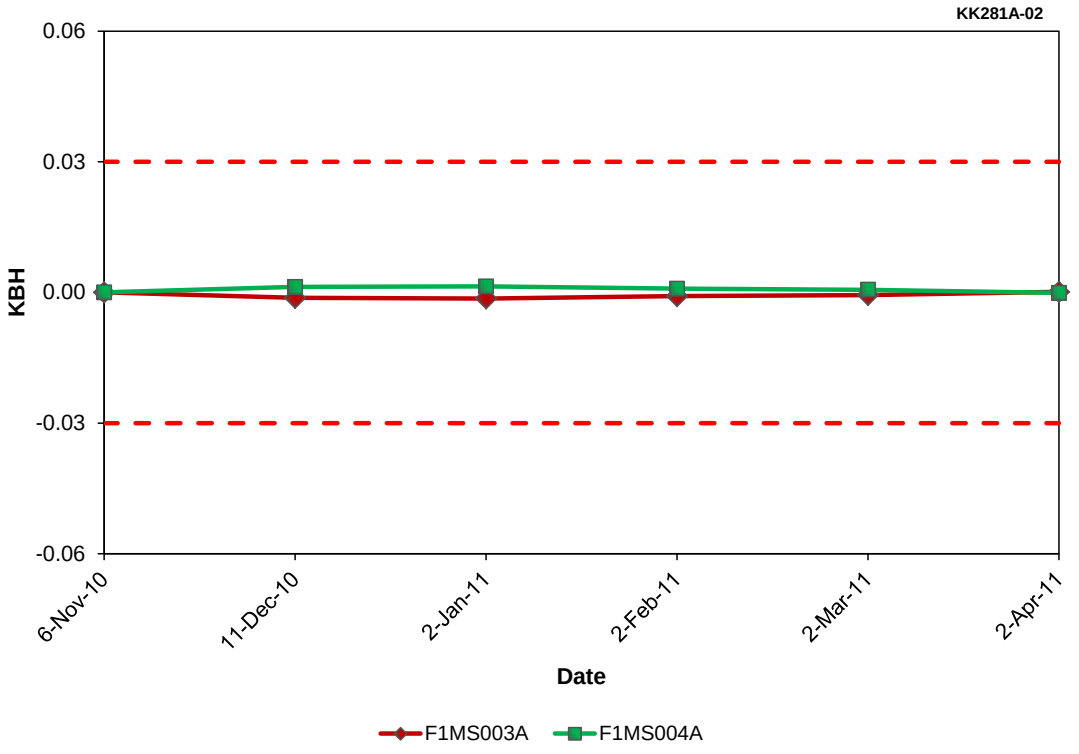



**Figure H.18 SG B STEAM FLOW Steady-State Drift at North Anna Unit 1 (Cycle 22)**

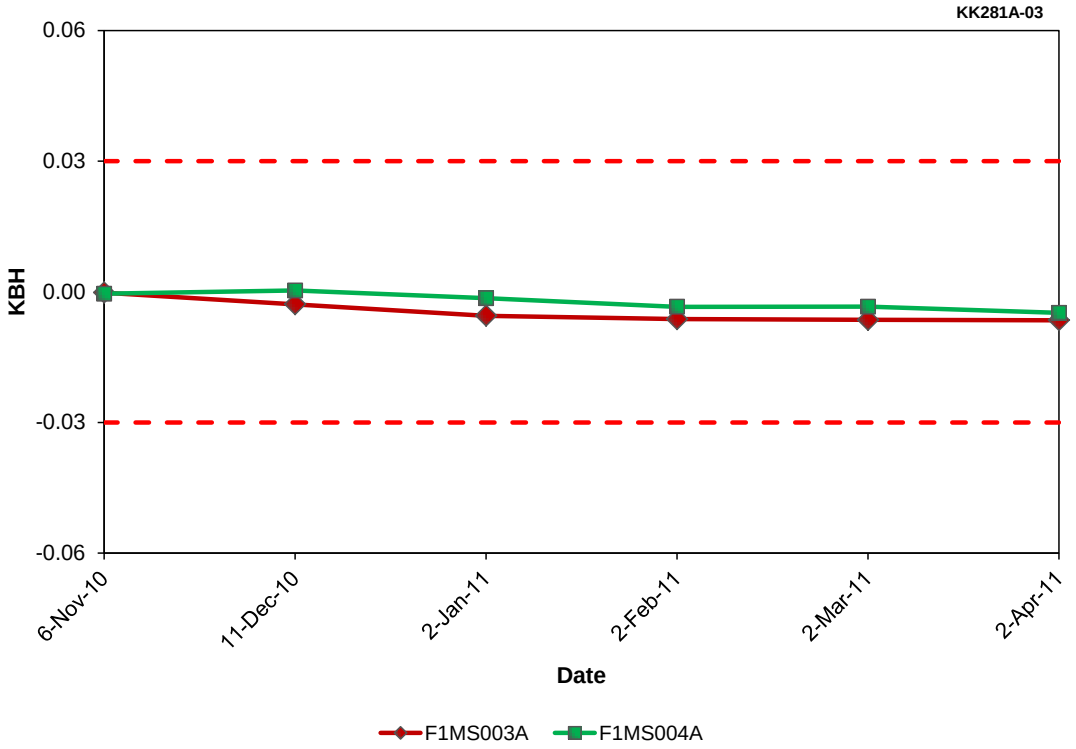



**Figure H.19 SG B STEAM FLOW Steady-State Residual AAKR at North Anna Unit 1 (Cycle 22)**

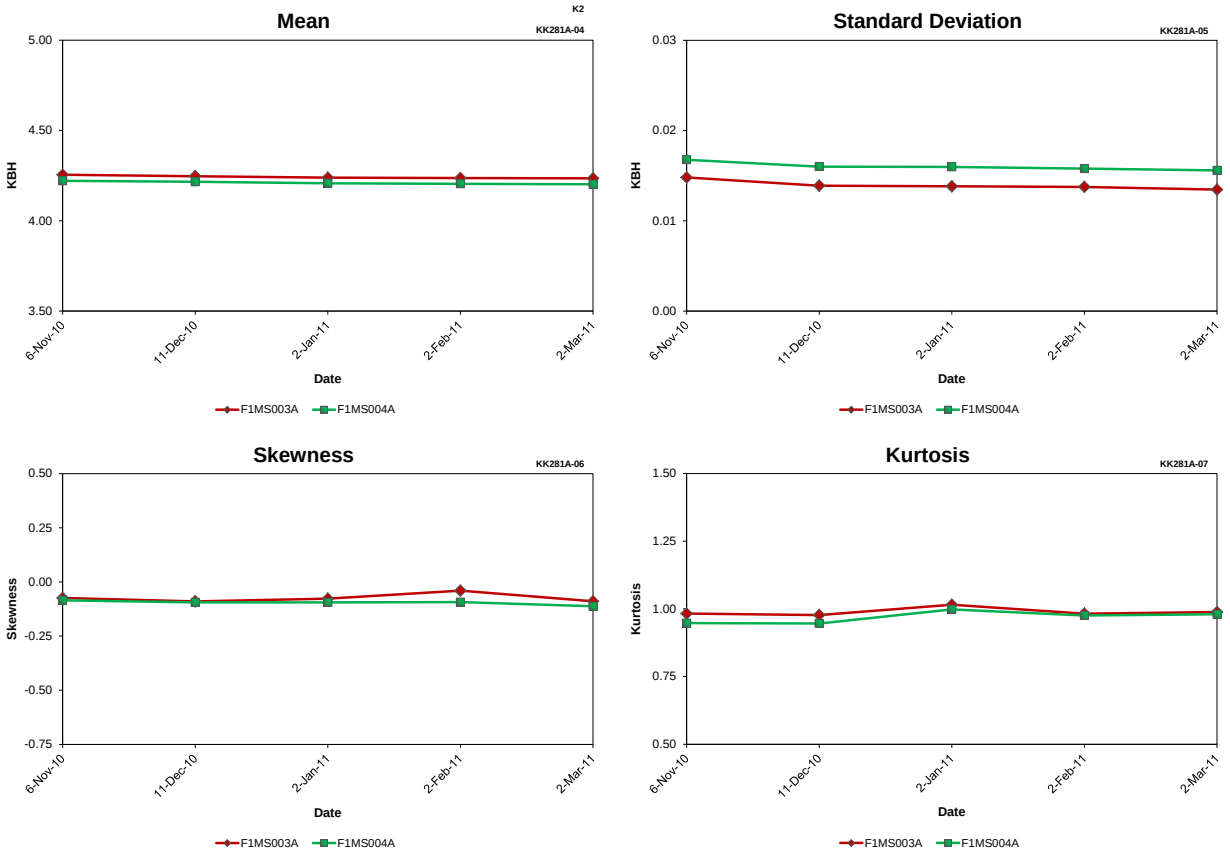



**Figure H.20 SG B STEAM FLOW Data Quality Statistics at North Anna Unit 1 (Cycle 22)**

**Table H.6 SG B STEAM FLOW Data Quality for North Anna Unit 1 (Cycle 22)**

| | Tag Names | |
|---|---|---|
| **Result Type** | **F1MS003A** | **F1MS004A** |
| Mean | 4.24 | 4.21 |
| Std. Dev. | 0.01 | 0.02 |
| Skewness | -0.07 | -0.10 |
| Kurtosis | 0.99 | 0.97 |

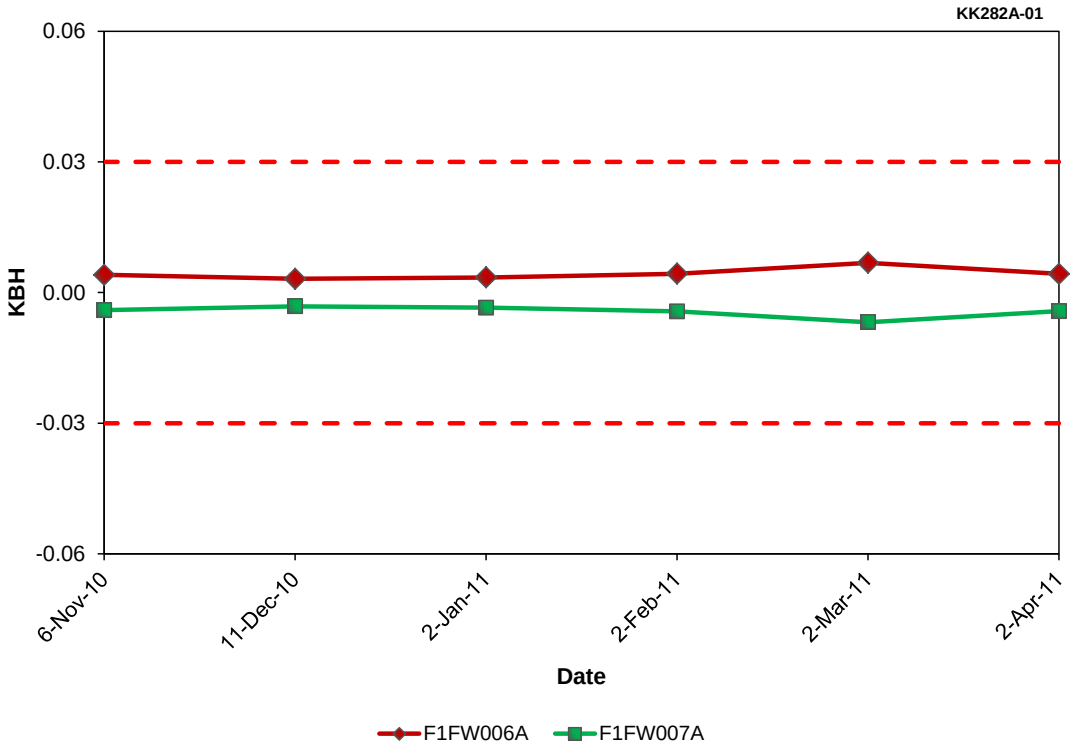



**Figure H.21 FW FLOW TO SG B Steady-State Deviation at North Anna Unit 1 (Cycle 22)**

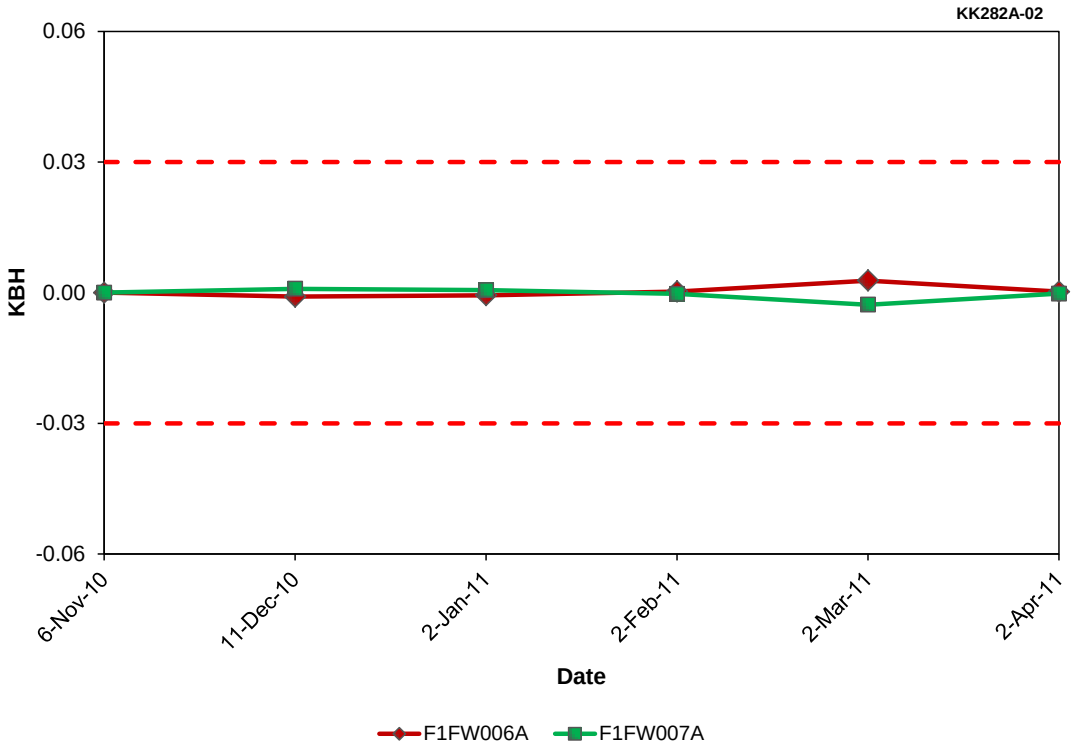



**Figure H.22 FW FLOW TO SG B Steady-State Drift at North Anna Unit 1 (Cycle 22)**

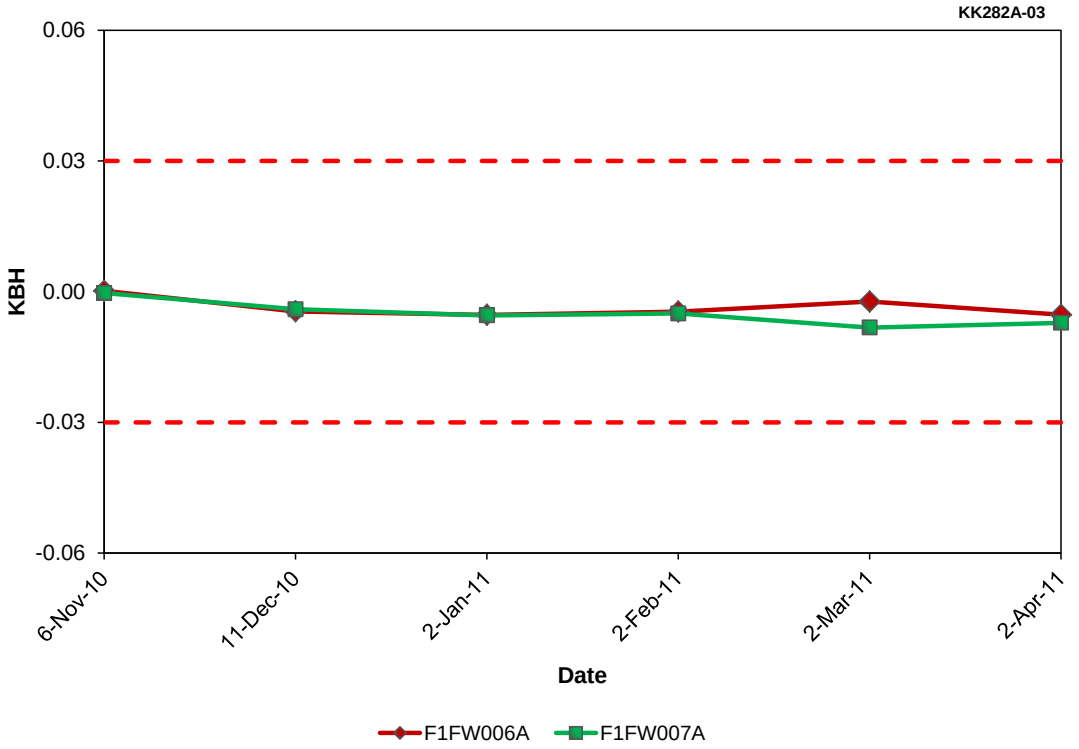



**Figure H.23 FW FLOW TO SG B Steady-State Residual AAKR at North Anna Unit 1 (Cycle 22)**

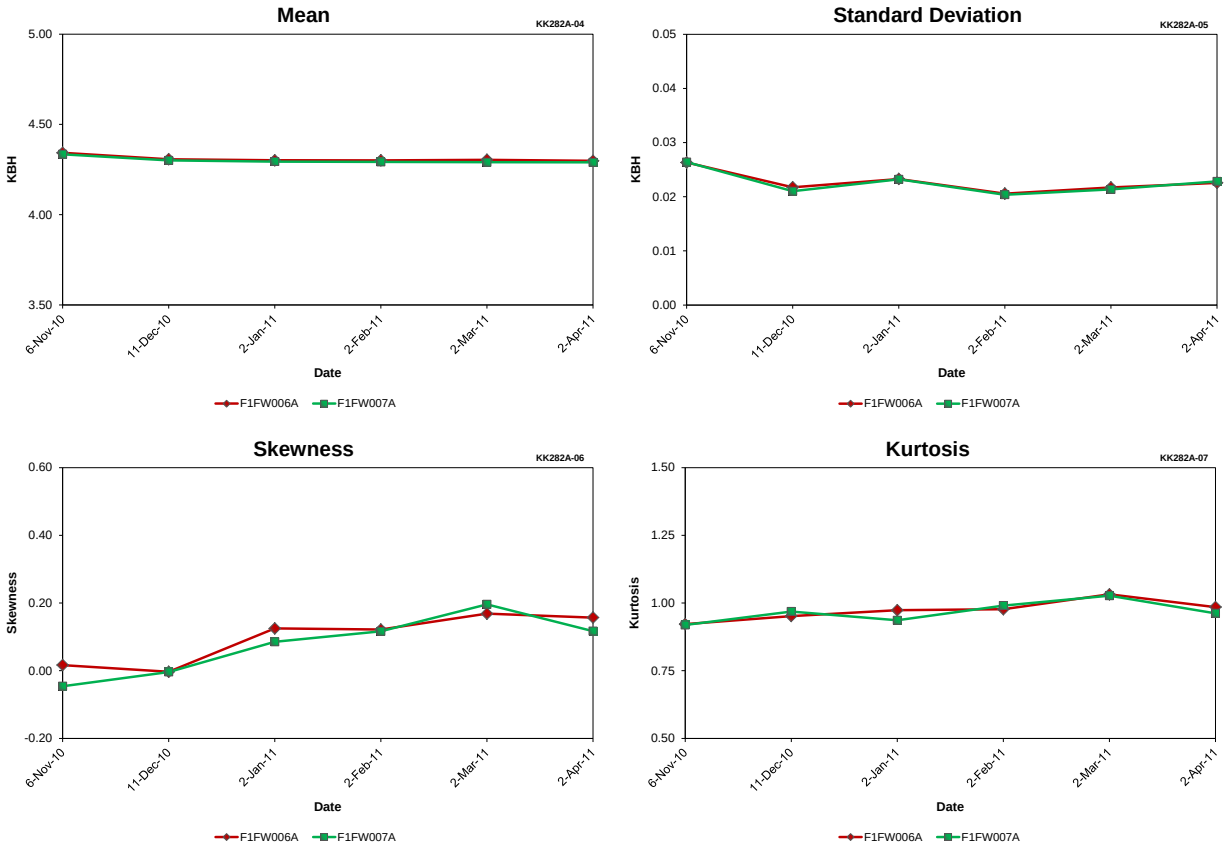



**Figure H.24 FW FLOW TO SG B Data Quality Statistics at North Anna Unit 1 (Cycle 22)**

**Table H.7 FW FLOW TO SG B Data Quality for North Anna Unit 1 (Cycle 22)**

| Result Type | Tag Names | |
|---|---|---|
| | F1FW006A | F1FW007A |
| Mean | 4.31 | 4.30 |
| Std. Dev. | 0.02 | 0.02 |
| Skewness | 0.10 | 0.08 |
| Kurtosis | 0.97 | 0.97 |

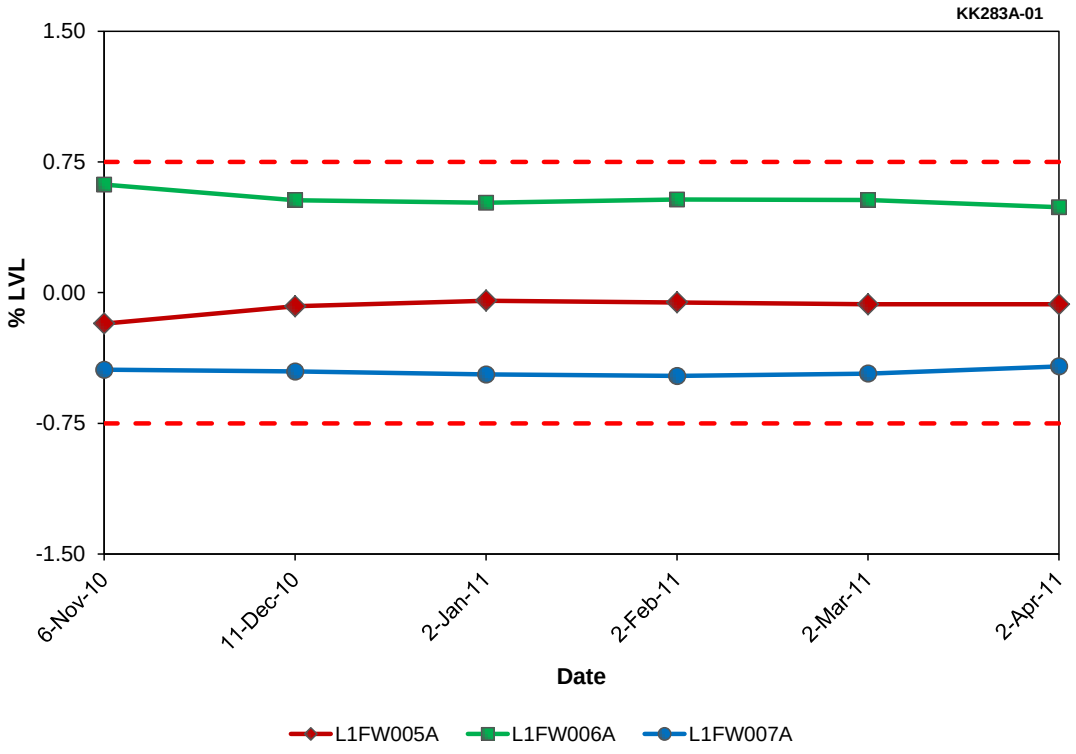



**Figure H.25 SG B LEVEL Steady-State Deviation at North Anna Unit 1 (Cycle 22)**

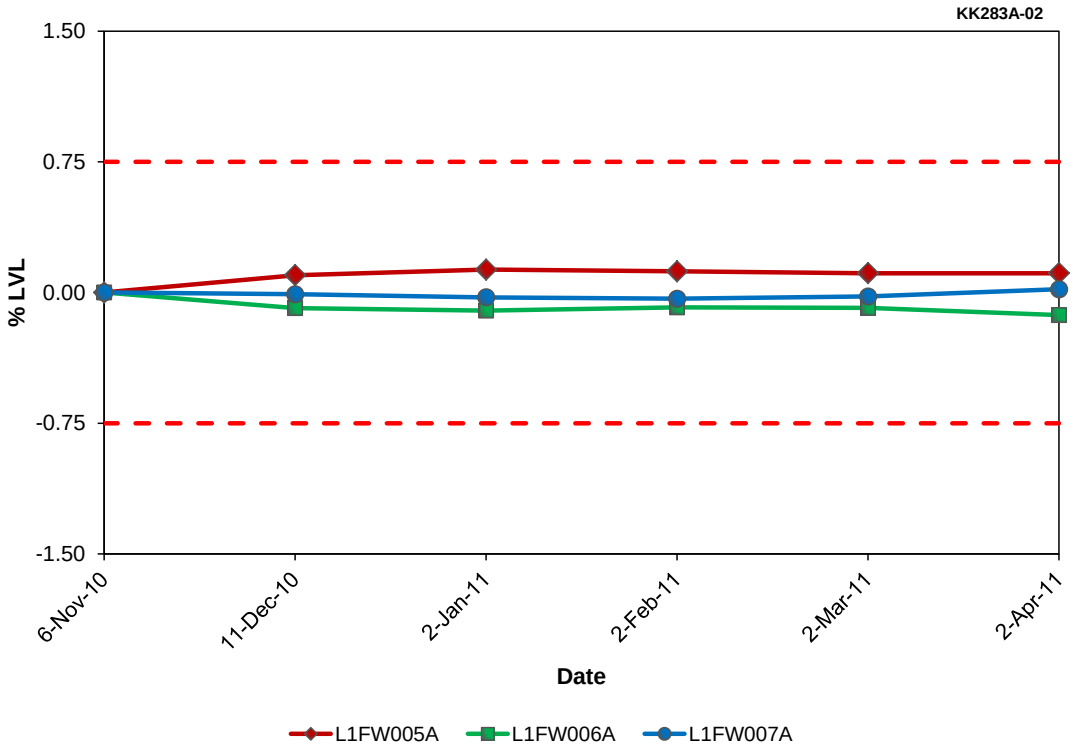



**Figure H.26 SG B LEVEL Steady-State Drift at North Anna Unit 1 (Cycle 22)**

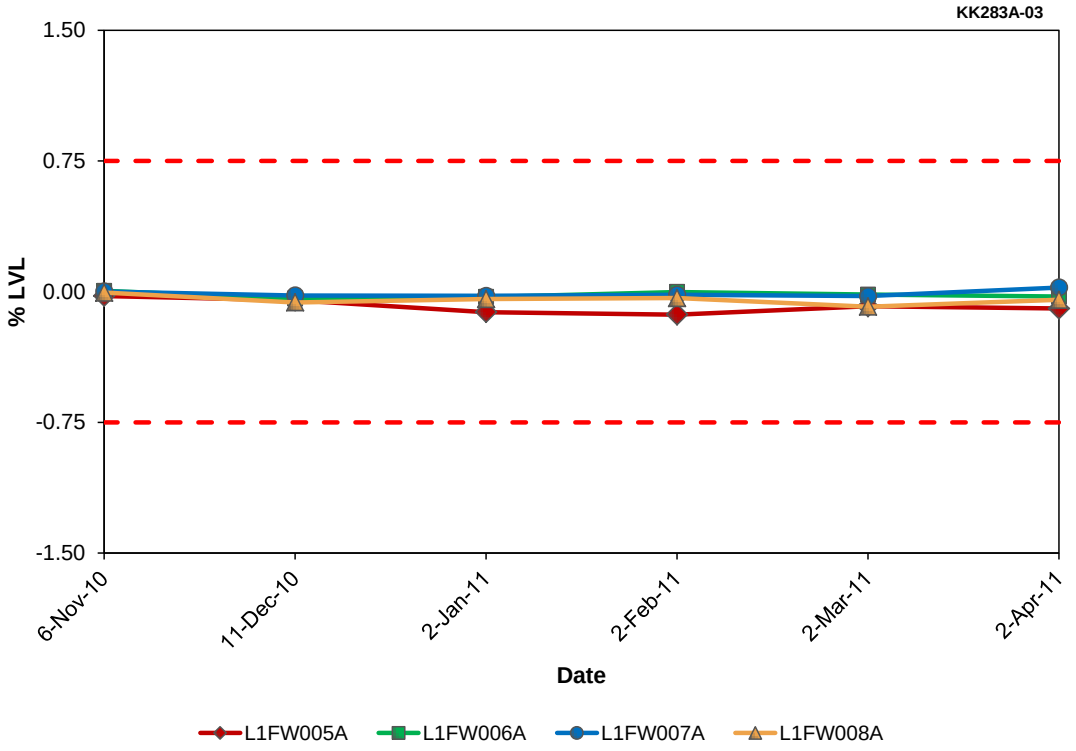



**Figure H.27 SG B LEVEL Steady-State Residual AAKR at North Anna Unit 1 (Cycle 22)**

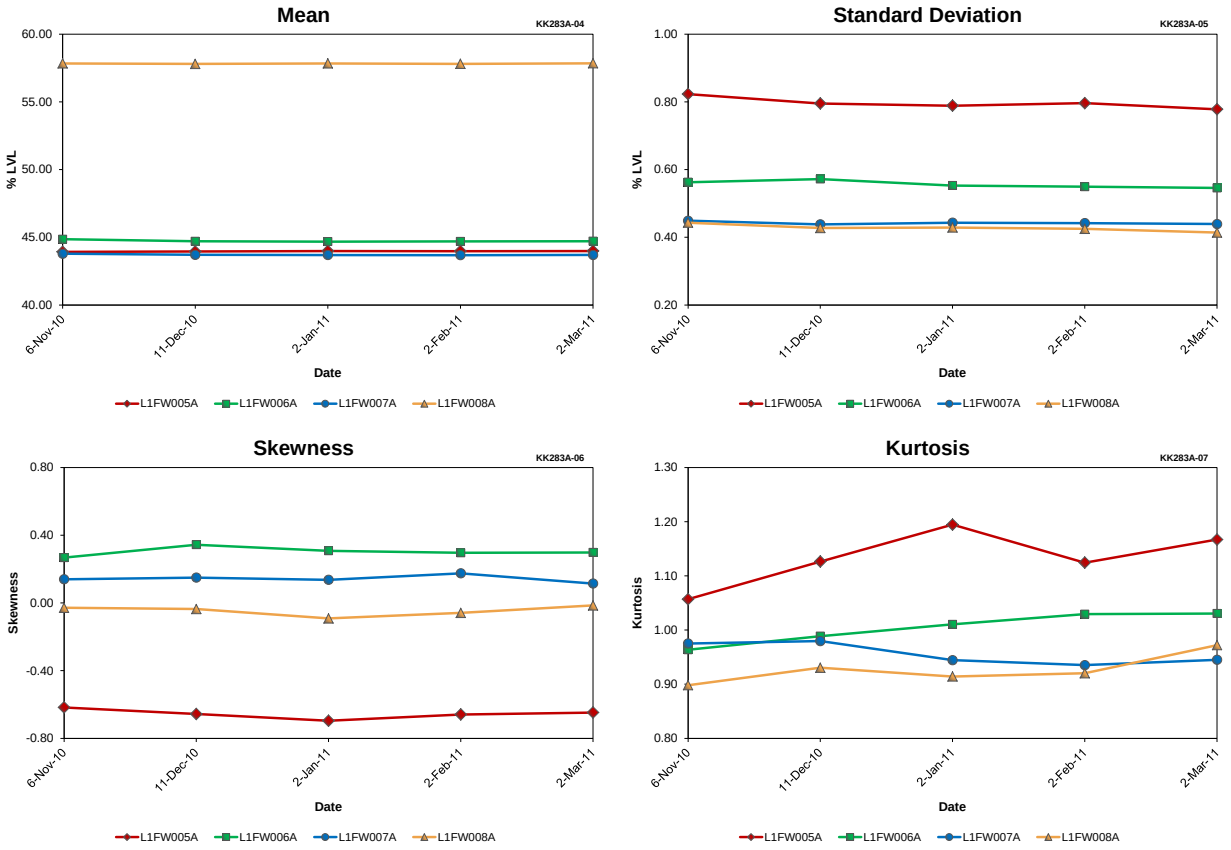



**Figure H.28 SG B LEVEL Data Quality Statistics at North Anna Unit 1 (Cycle 22)**

**Table H.8 SG B LEVEL Data Quality for North Anna Unit 1 (Cycle 22)**

| | Tag Names | | | |
|---|---|---|---|---|
| **Result Type** | **L1FW005A** | **L1FW006A** | **L1FW007A** | **L1FW008A** |
| Mean | 43.97 | 44.73 | 43.71 | 57.82 |
| Std. Dev. | 0.80 | 0.56 | 0.44 | 0.43 |
| Skewness | -0.66 | 0.30 | 0.14 | -0.05 |
| Kurtosis | 1.13 | 1.00 | 0.96 | 0.93 |

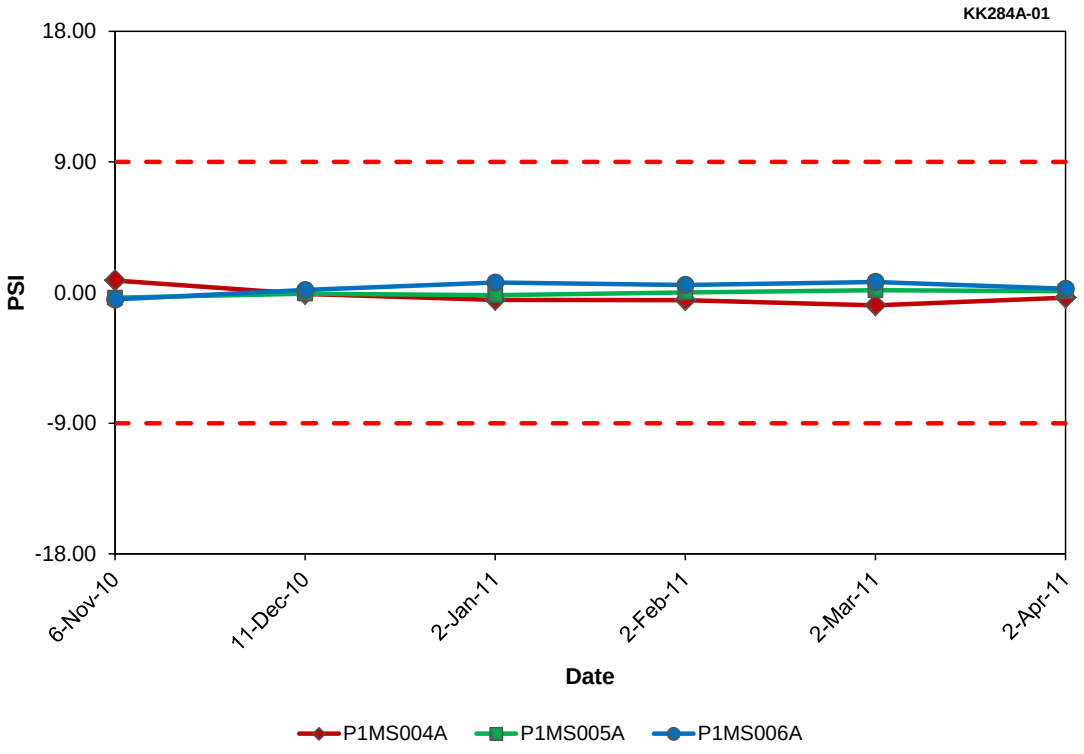



**Figure H.29 SG B OUTLET PRESSURE Steady-State Deviation at North Anna Unit 1 (Cycle 22)**

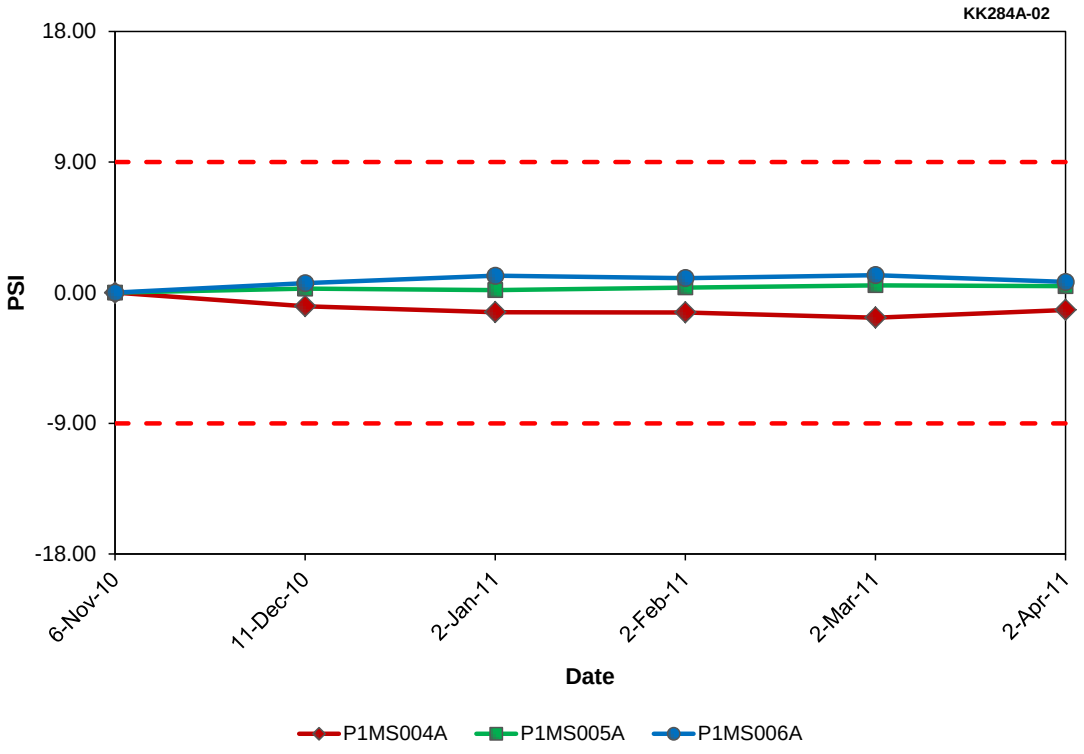



**Figure H.30 SG B OUTLET PRESSURE Steady-State Drift at North Anna Unit 1 (Cycle 22)**

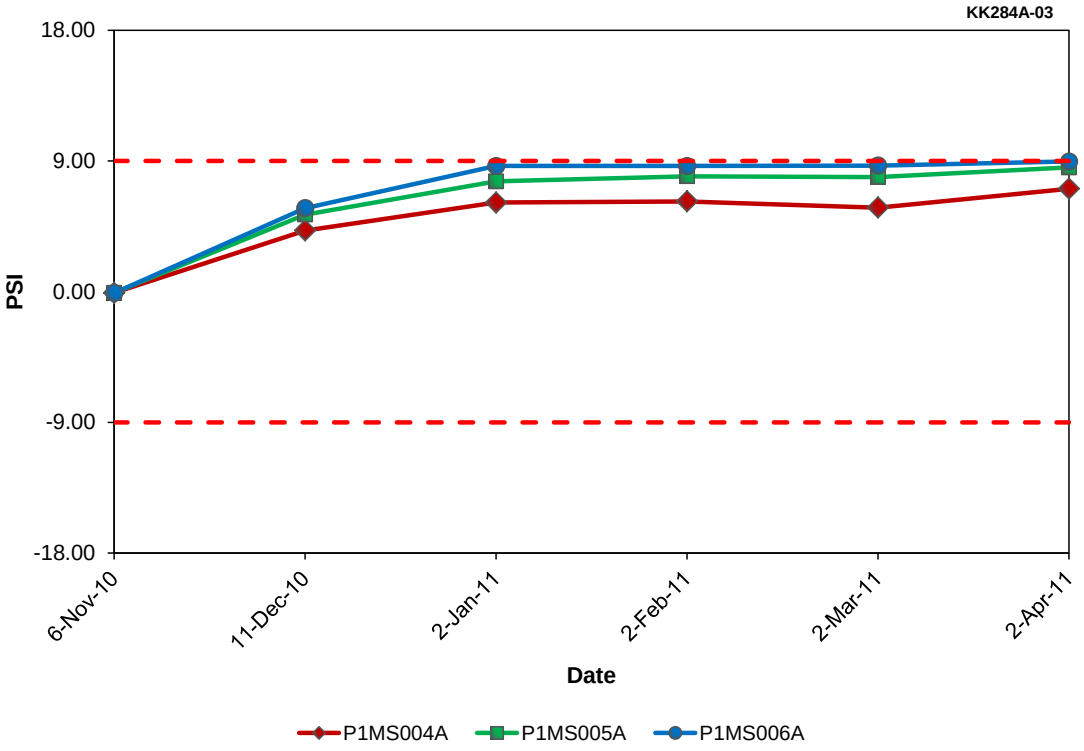



**Figure H.31 SG B OUTLET PRESSURE Steady-State Residual AAKR at North Anna Unit 1 (Cycle 22)**

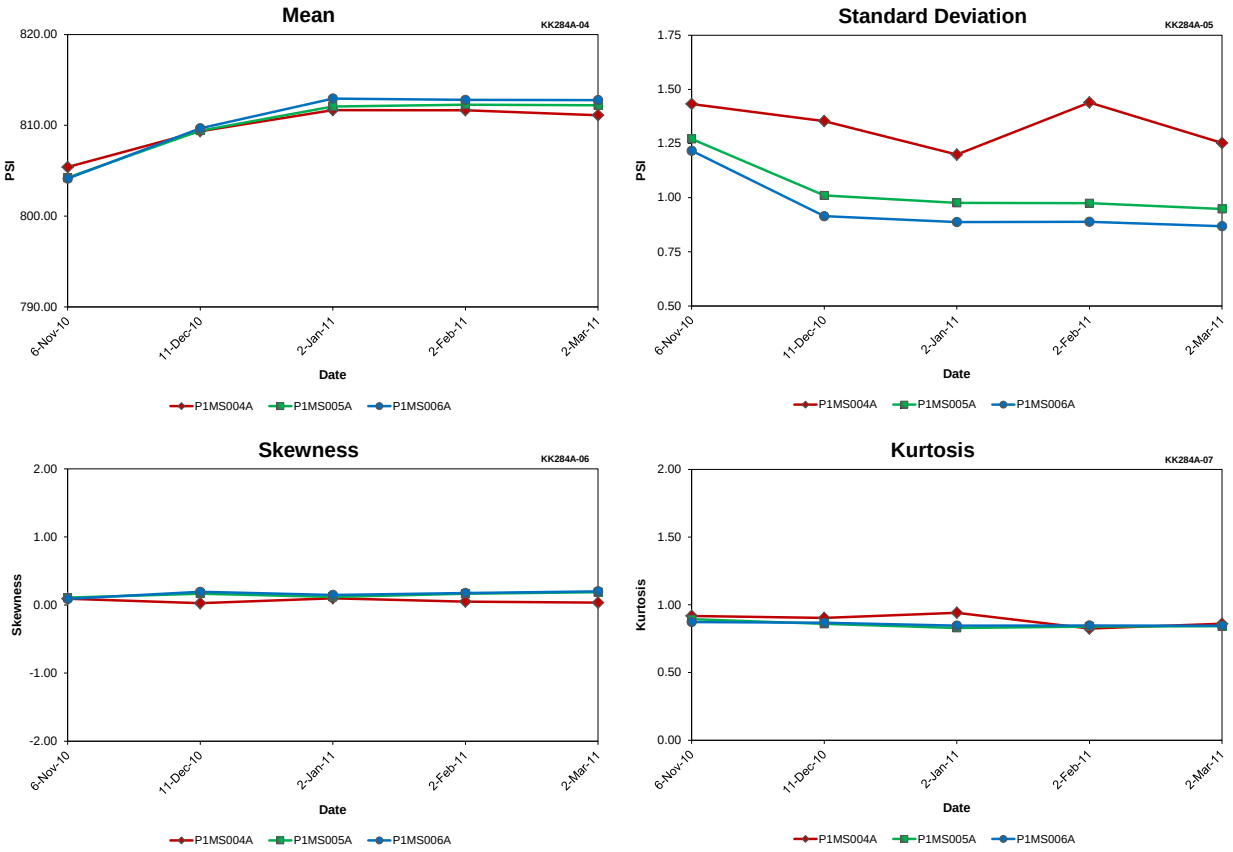



**Figure H.32 SG B OUTLET PRESSURE Data Quality Statistics at North Anna Unit 1 (Cycle 22)**

**Table H.9 SG B OUTLET PRESSURE Data Quality for North Anna Unit 1 (Cycle 22)**

| | Tag Names | | |
|---|---|---|---|
| **Result Type** | **P1MS004A** | **P1MS005A** | **P1MS006A** |
| Mean | 809.84 | 810.03 | 810.47 |
| Std. Dev. | 1.34 | 1.04 | 0.96 |
| Skewness | 0.06 | 0.15 | 0.16 |
| Kurtosis | 0.89 | 0.85 | 0.86 |

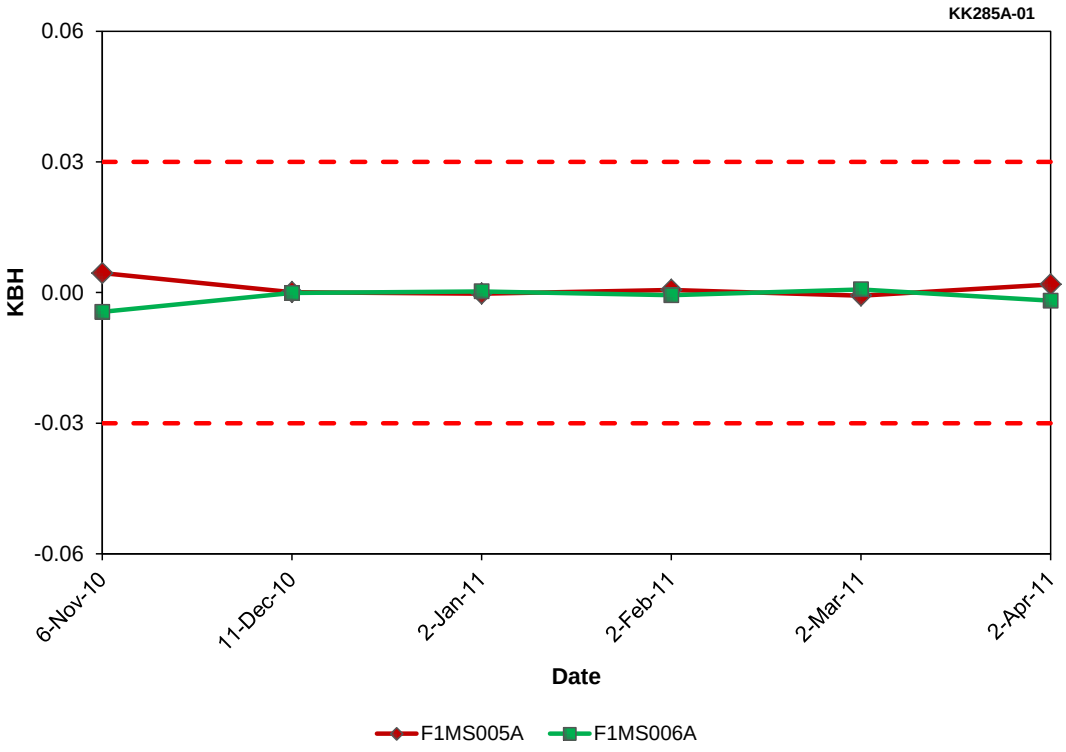



**Figure H.33 SG C STEAM FLOW Steady-State Deviation at North Anna Unit 1 (Cycle 22)**

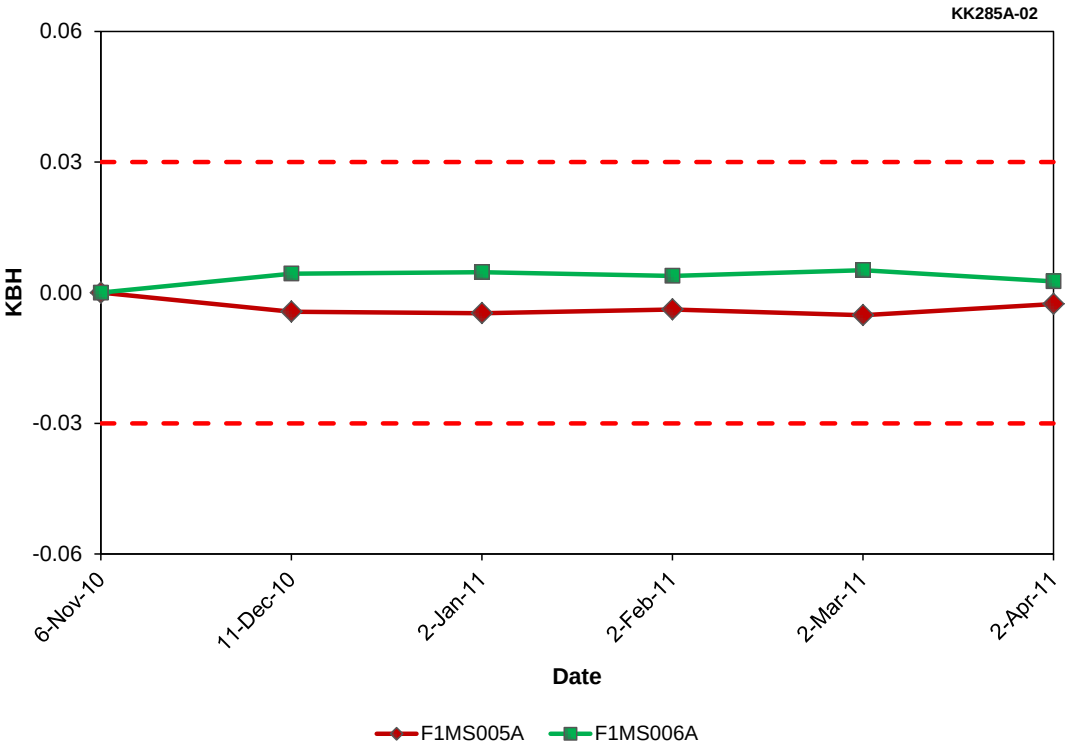



**Figure H.34 SG C STEAM FLOW Steady-State Drift at North Anna Unit 1 (Cycle 22)**

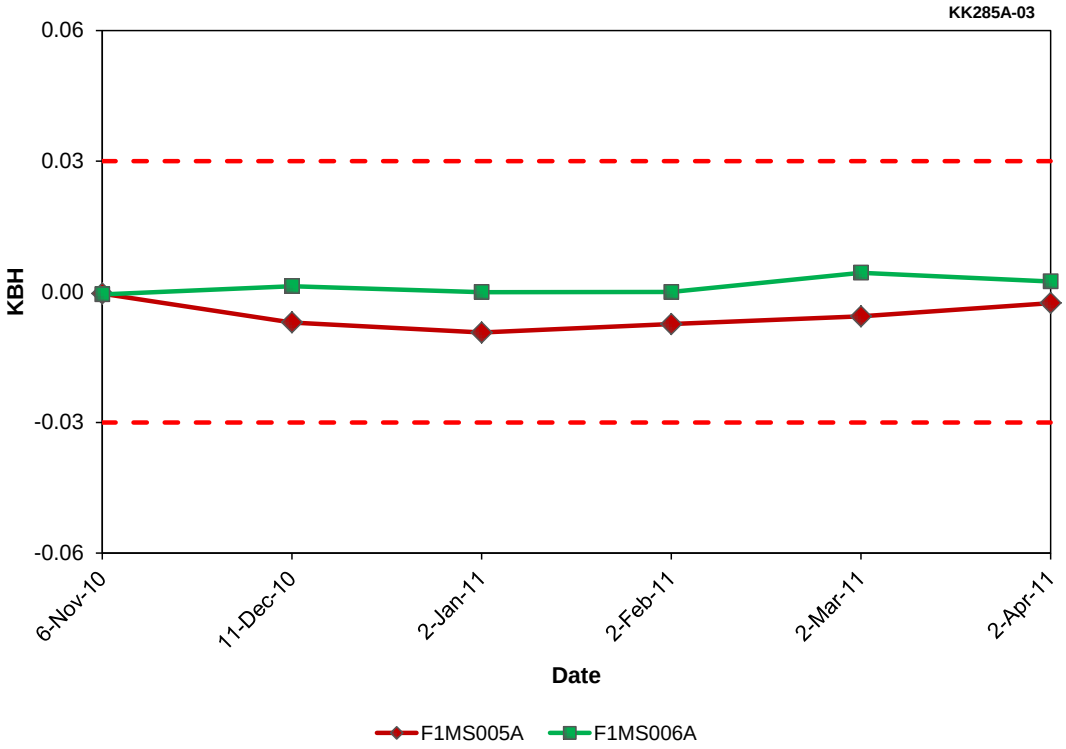



**Figure H.35 SG C STEAM FLOW Steady-State Residual AAKR at North Anna Unit 1 (Cycle 22)**

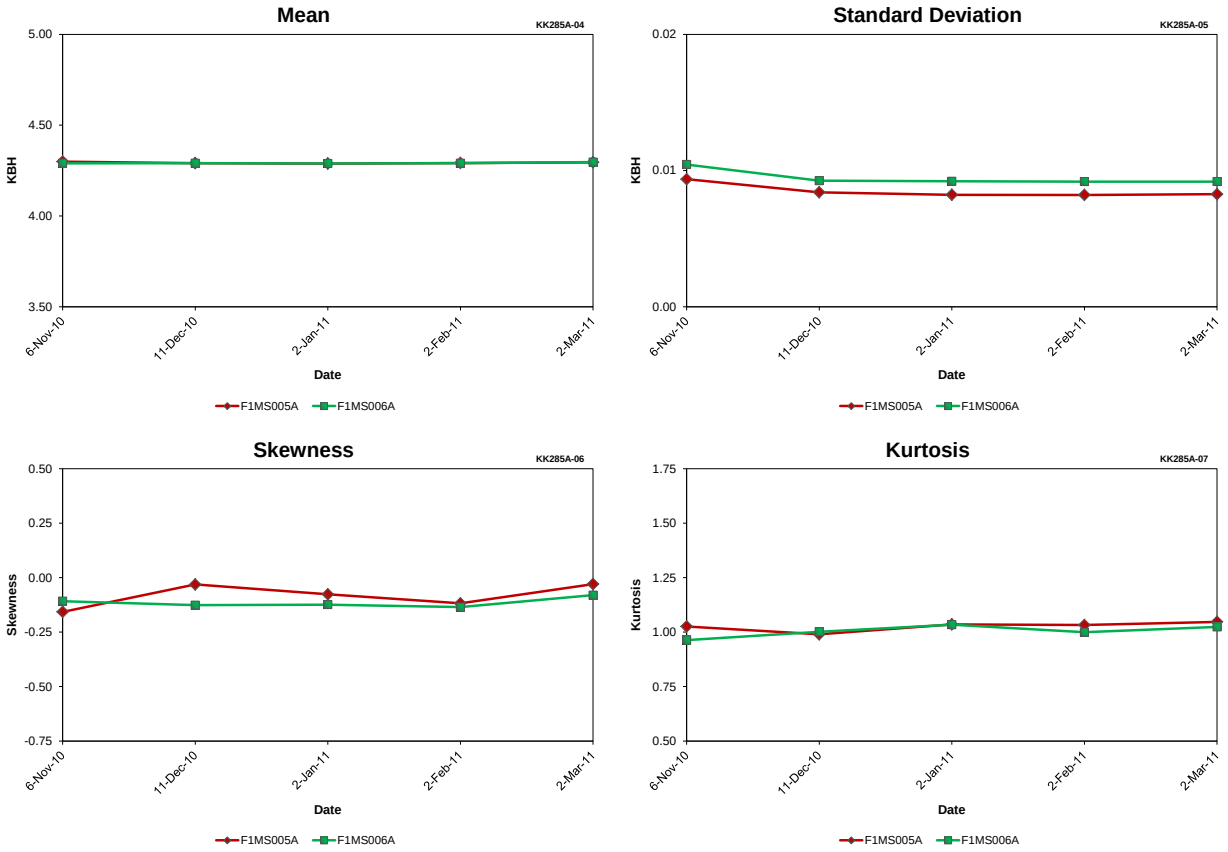



**Figure H.36 SG C STEAM FLOW Data Quality Statistics at North Anna Unit 1 (Cycle 22)**

**Table H.10 SG C STEAM FLOW Data Quality for North Anna Unit 1 (Cycle 22)**

| | Tag Names | |
|---|---|---|
| **Result Type** | **F1MS005A** | **F1MS006A** |
| Mean | 4.29 | 4.29 |
| Std. Dev. | 0.01 | 0.01 |
| Skewness | -0.08 | -0.11 |
| Kurtosis | 1.03 | 1.00 |

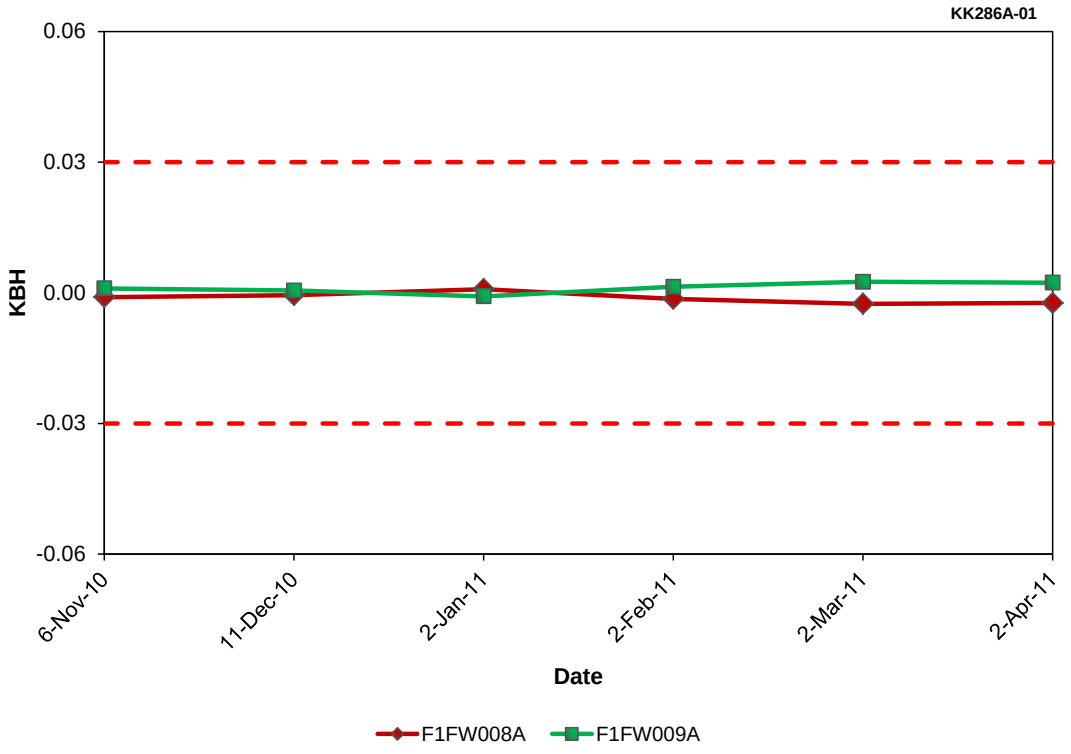



**Figure H.37 FW FLOW TO SG C Steady-State Deviation at North Anna Unit 1 (Cycle 22)**

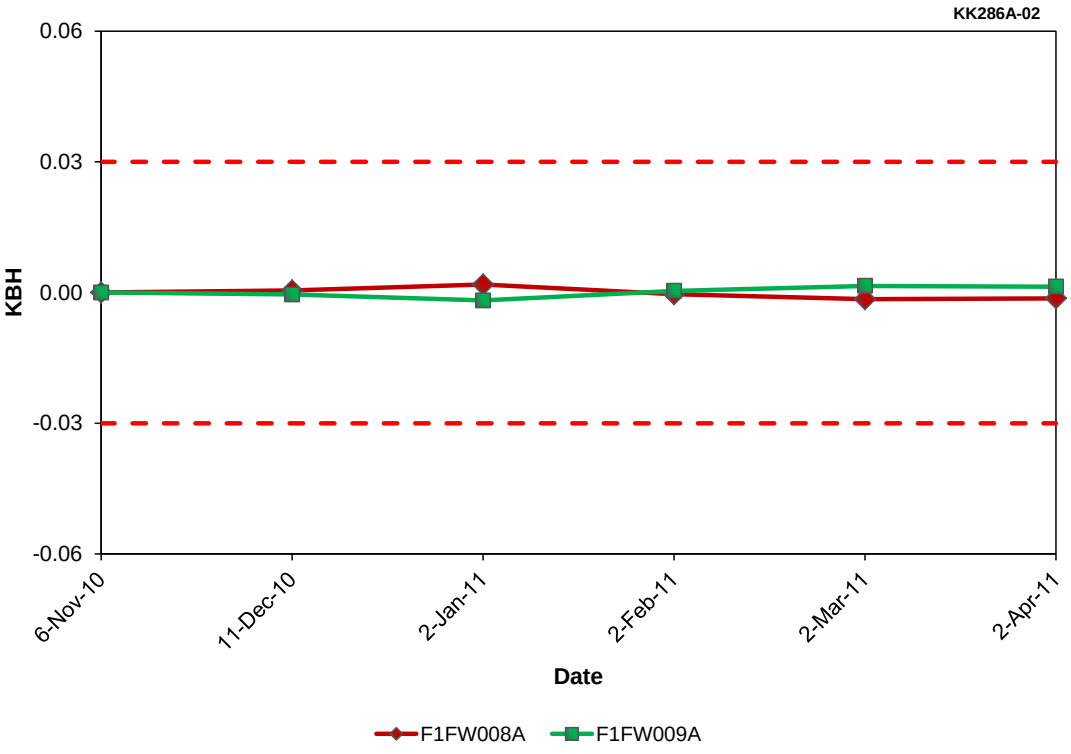



**Figure H.38 FW FLOW TO SG C Steady-State Drift at North Anna Unit 1 (Cycle 22)**

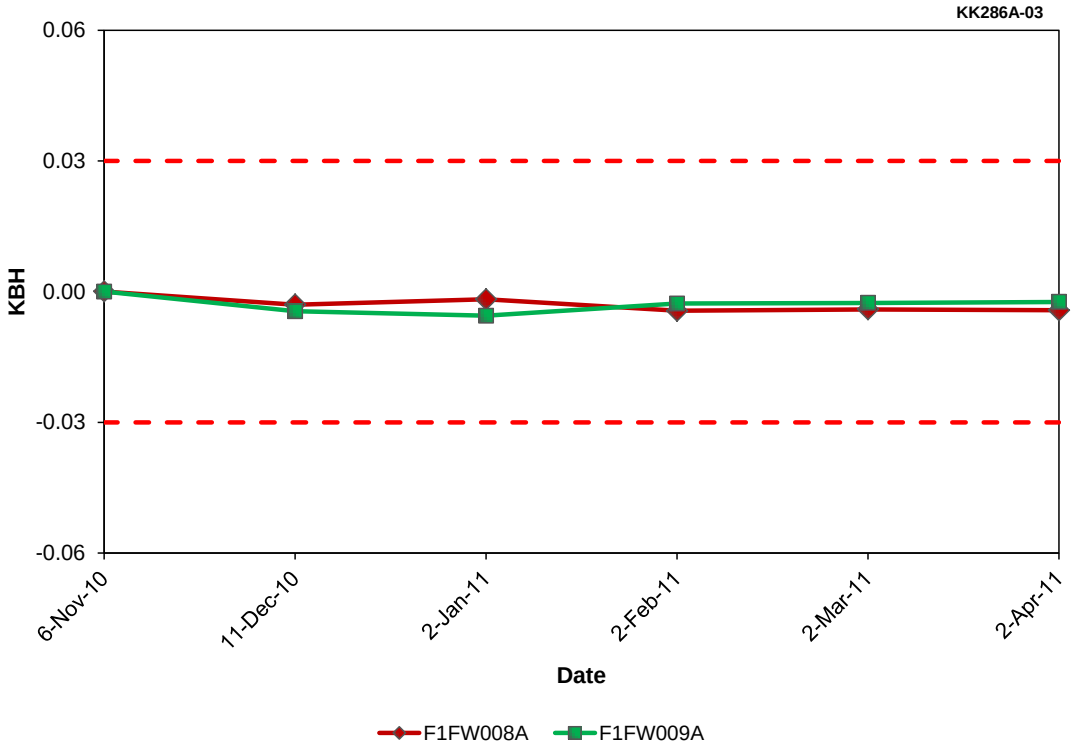



**Figure H.39 FW FLOW TO SG C Steady-State Residual AAKR at North Anna Unit 1 (Cycle 22)**

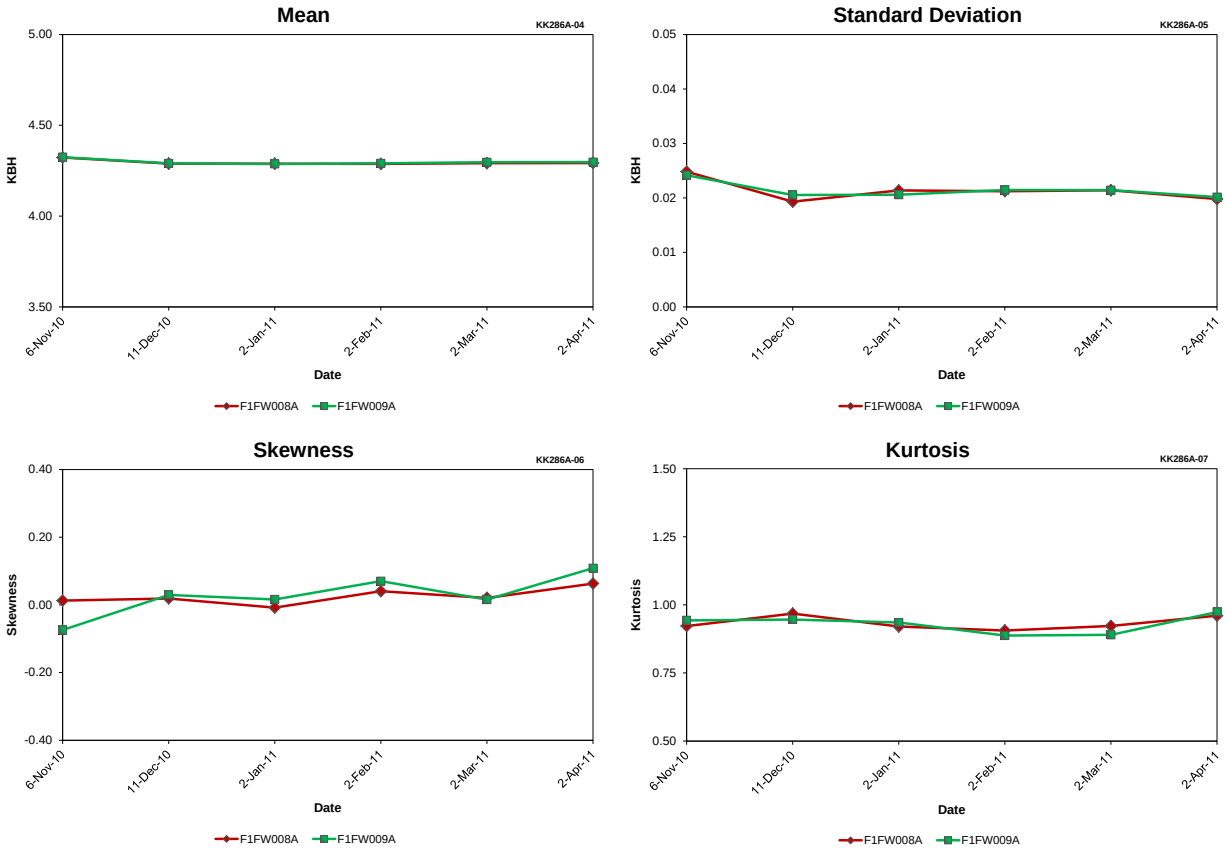



**Figure H.40 FW FLOW TO SG C Data Quality Statistics at North Anna Unit 1 (Cycle 22)**

**Table H.11 FW FLOW TO SG C Data Quality for North Anna Unit 1 (Cycle 22)**

| | Tag Names | |
|---|---|---|
| **Result Type** | **F1FW008A** | **F1FW009A** |
| Mean | 4.30 | 4.30 |
| Std. Dev. | 0.02 | 0.02 |
| Skewness | 0.02 | 0.03 |
| Kurtosis | 0.93 | 0.93 |

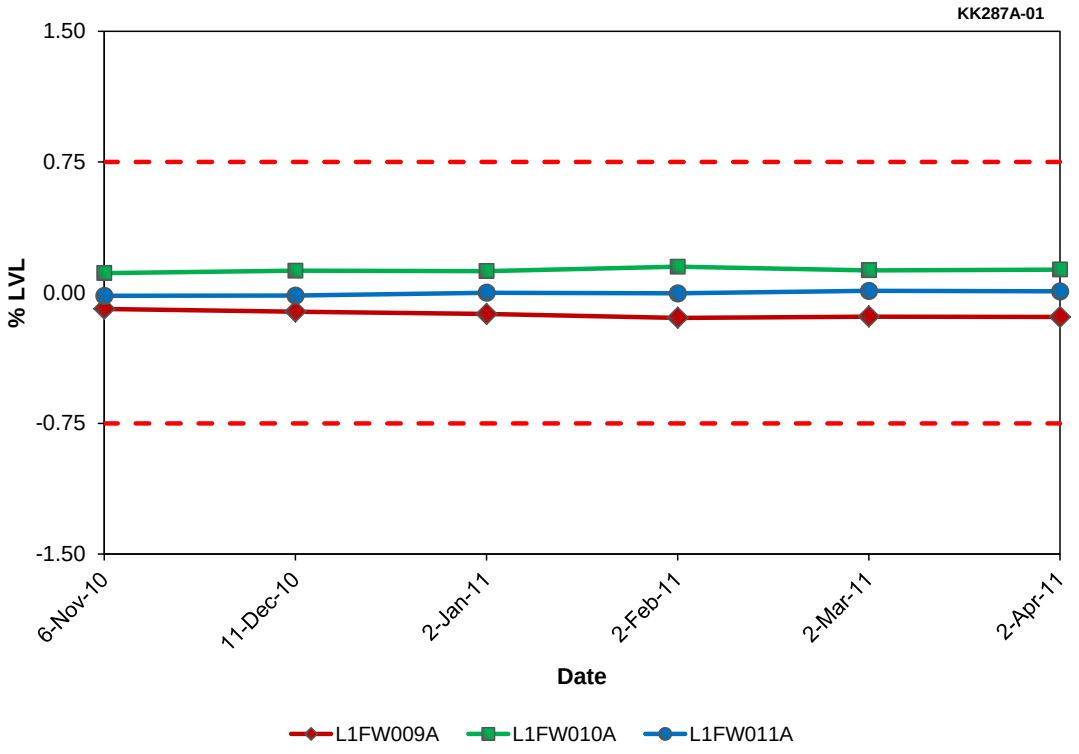



**Figure H.41 SG C LEVEL Steady-State Deviation at North Anna Unit 1 (Cycle 22)**

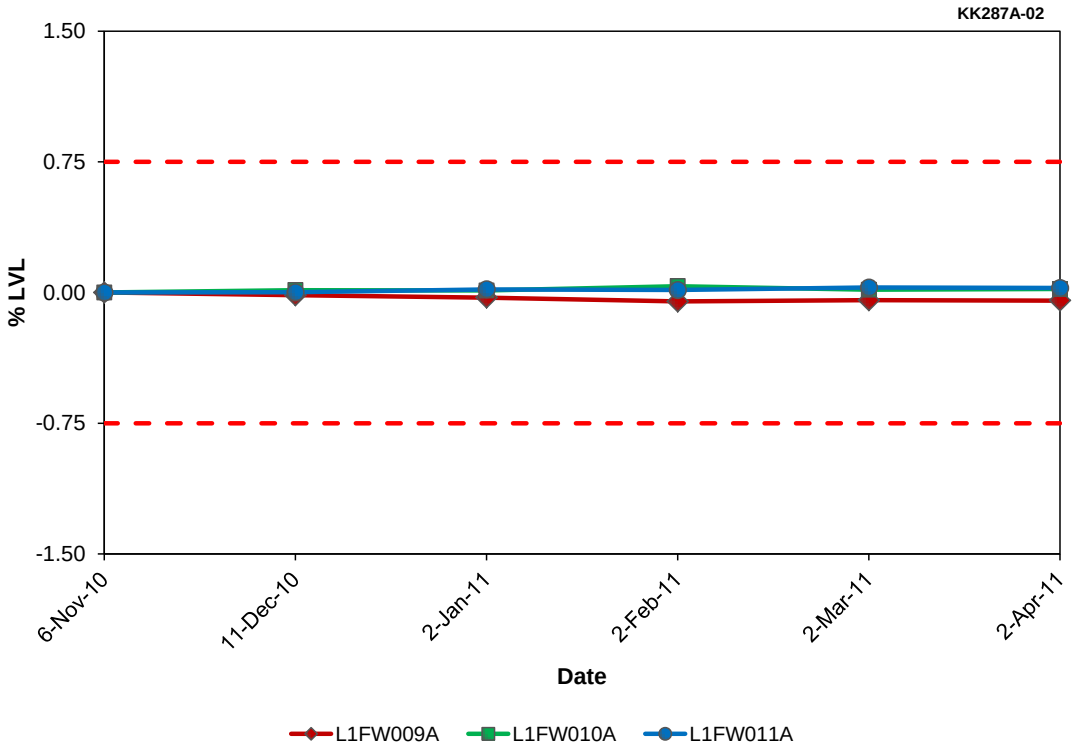



**Figure H.42 SG C LEVEL Steady-State Drift at North Anna Unit 1 (Cycle 22)**

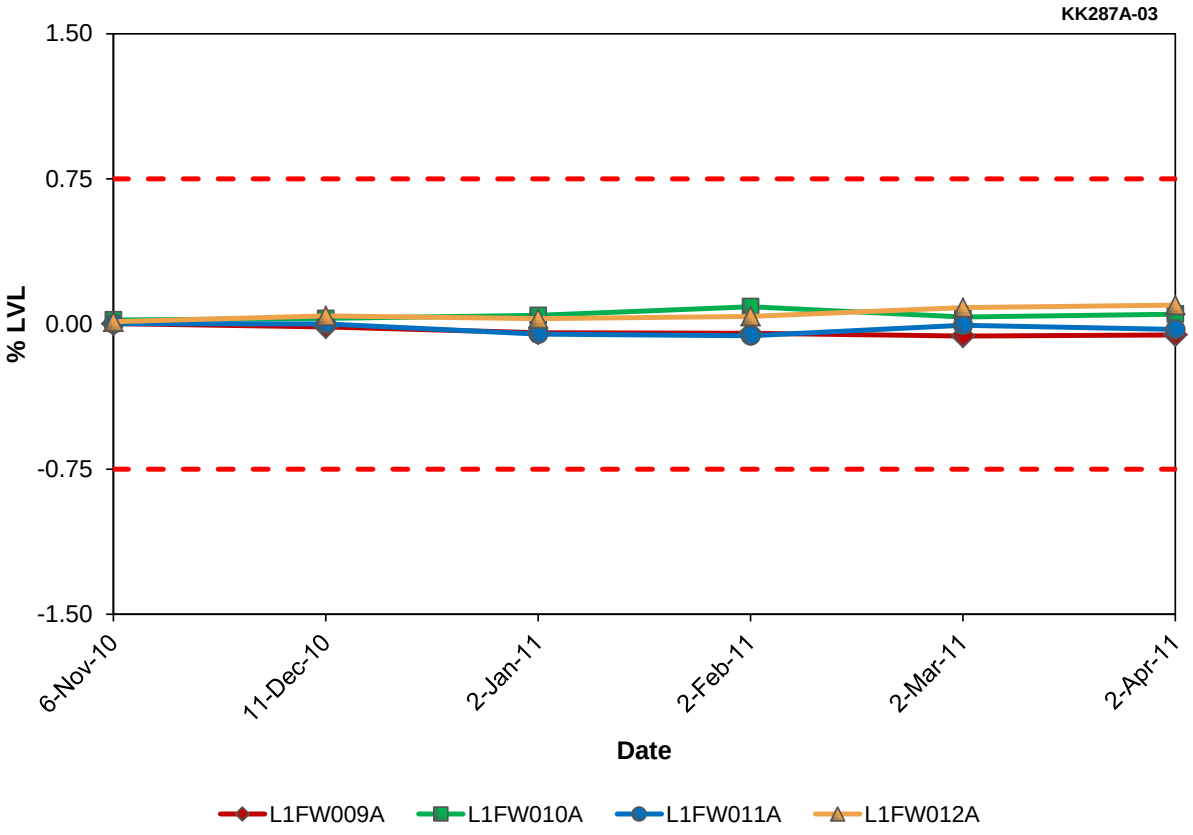



**Figure H.43 SG C LEVEL Steady-State Residual AAKR at North Anna Unit 1 (Cycle 22)**

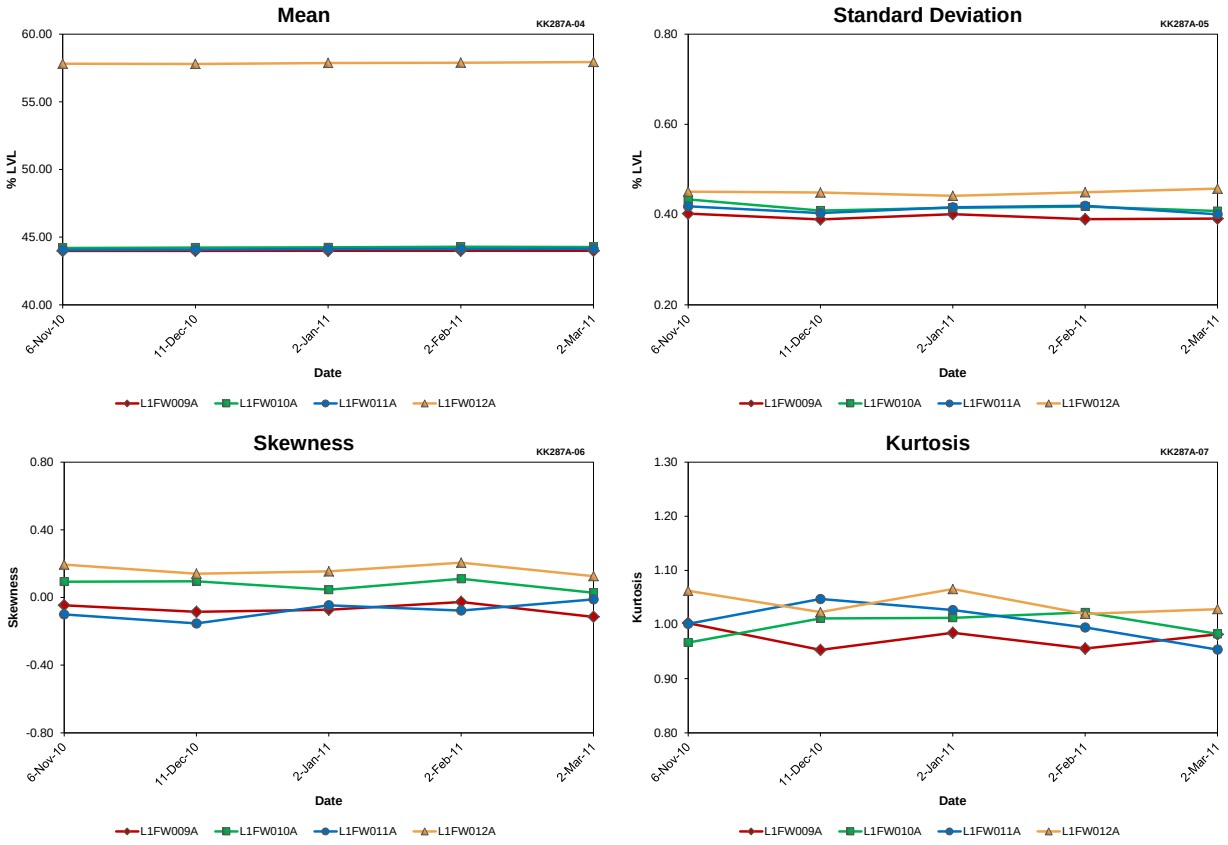



**Figure H.44 SG C LEVEL Data Quality Statistics at North Anna Unit 1 (Cycle 22)**

**Table H.12 SG C LEVEL Data Quality for North Anna Unit 1 (Cycle 22)**

| Result Type | Tag Names | | | |
|---|---|---|---|---|
| | L1FW009A | L1FW010A | L1FW011A | L1FW012A |
| Mean | 43.99 | 44.25 | 44.11 | 57.86 |
| Std. Dev. | 0.39 | 0.42 | 0.41 | 0.45 |
| Skewness | -0.07 | 0.07 | -0.08 | 0.16 |
| Kurtosis | 0.98 | 1.00 | 1.00 | 1.04 |

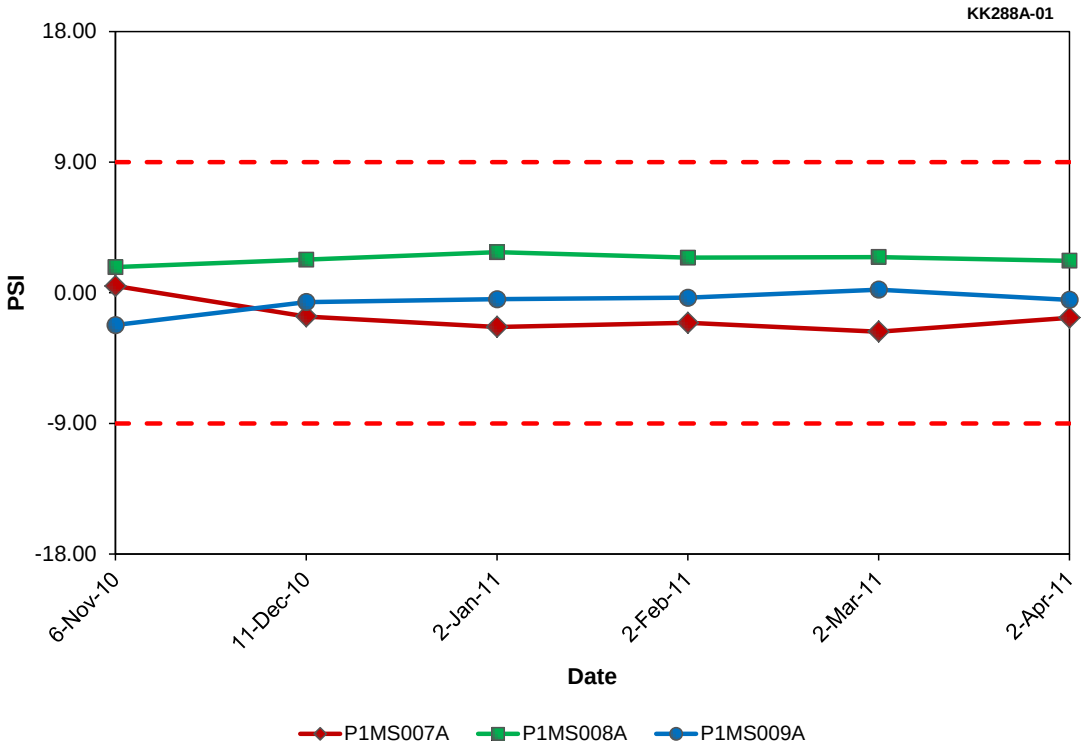



**Figure H.45 SG C OUTLET PRESSURE Steady-State Deviation at North Anna Unit 1 (Cycle 22)**

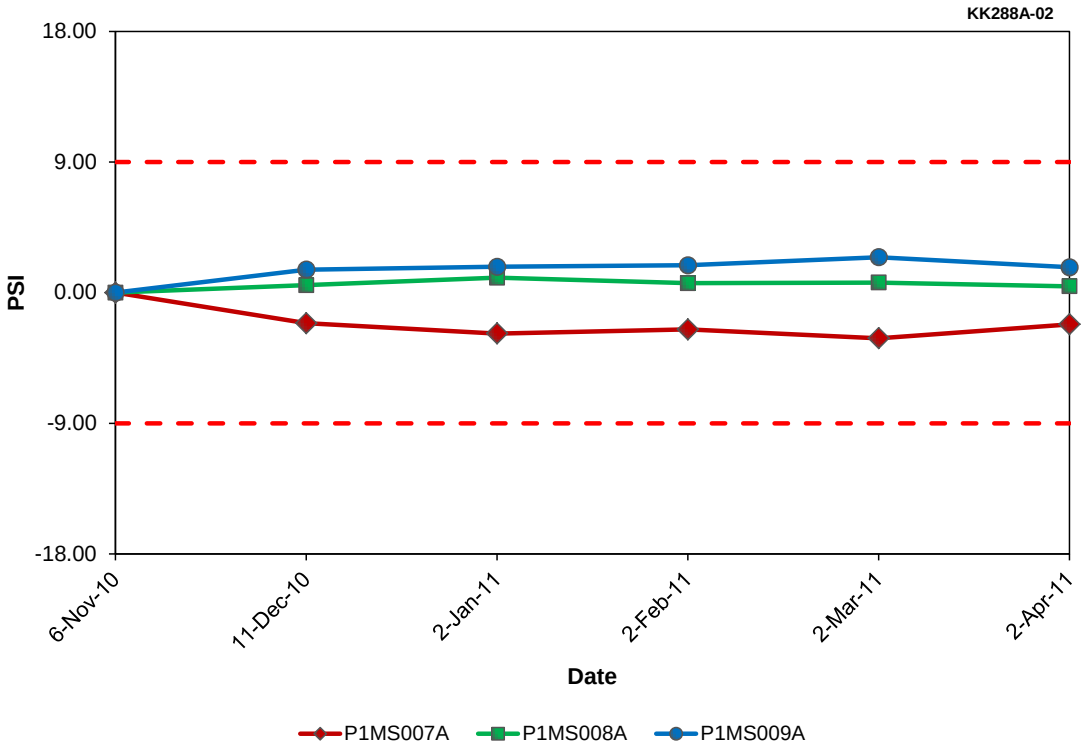



**Figure H.46 SG C OUTLET PRESSURE Steady-State Drift at North Anna Unit 1 (Cycle 22)**

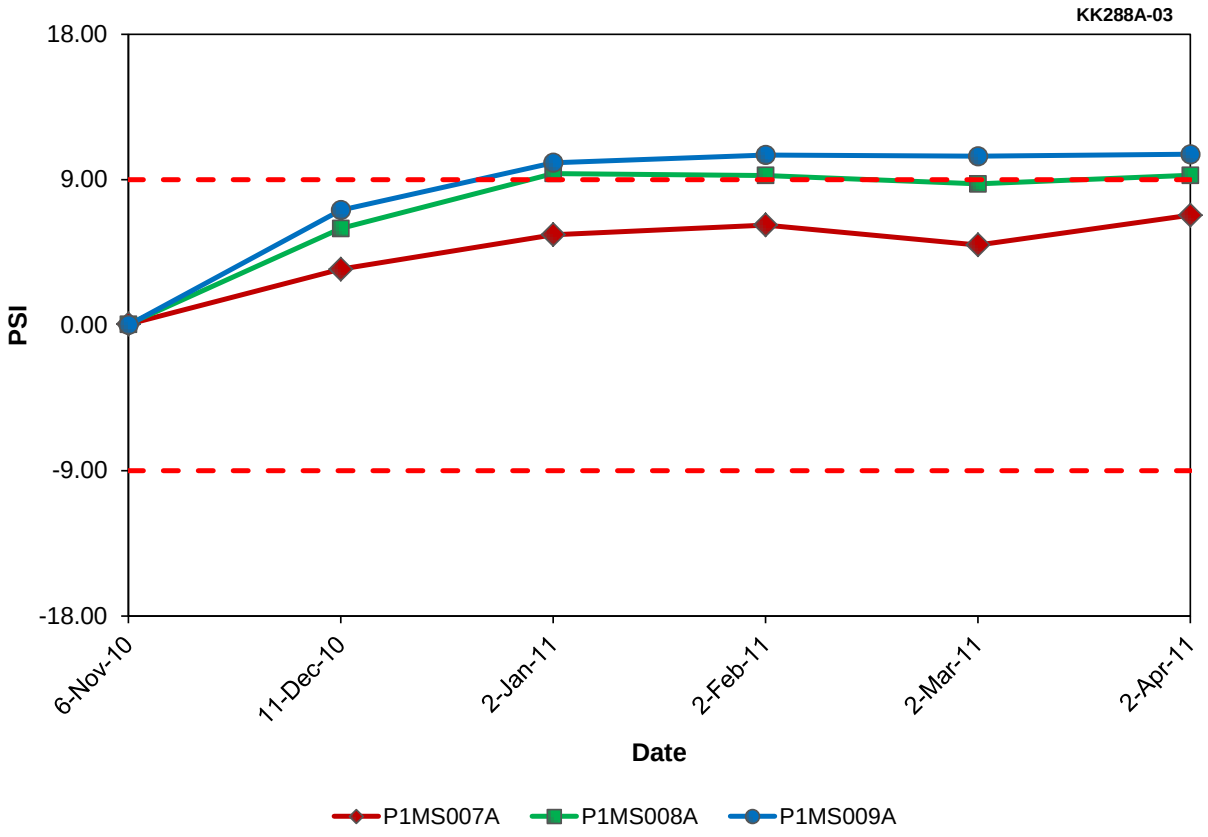



**Figure H.47 SG C OUTLET PRESSURE Steady-State Residual AAKR at North Anna Unit 1 (Cycle 22)**

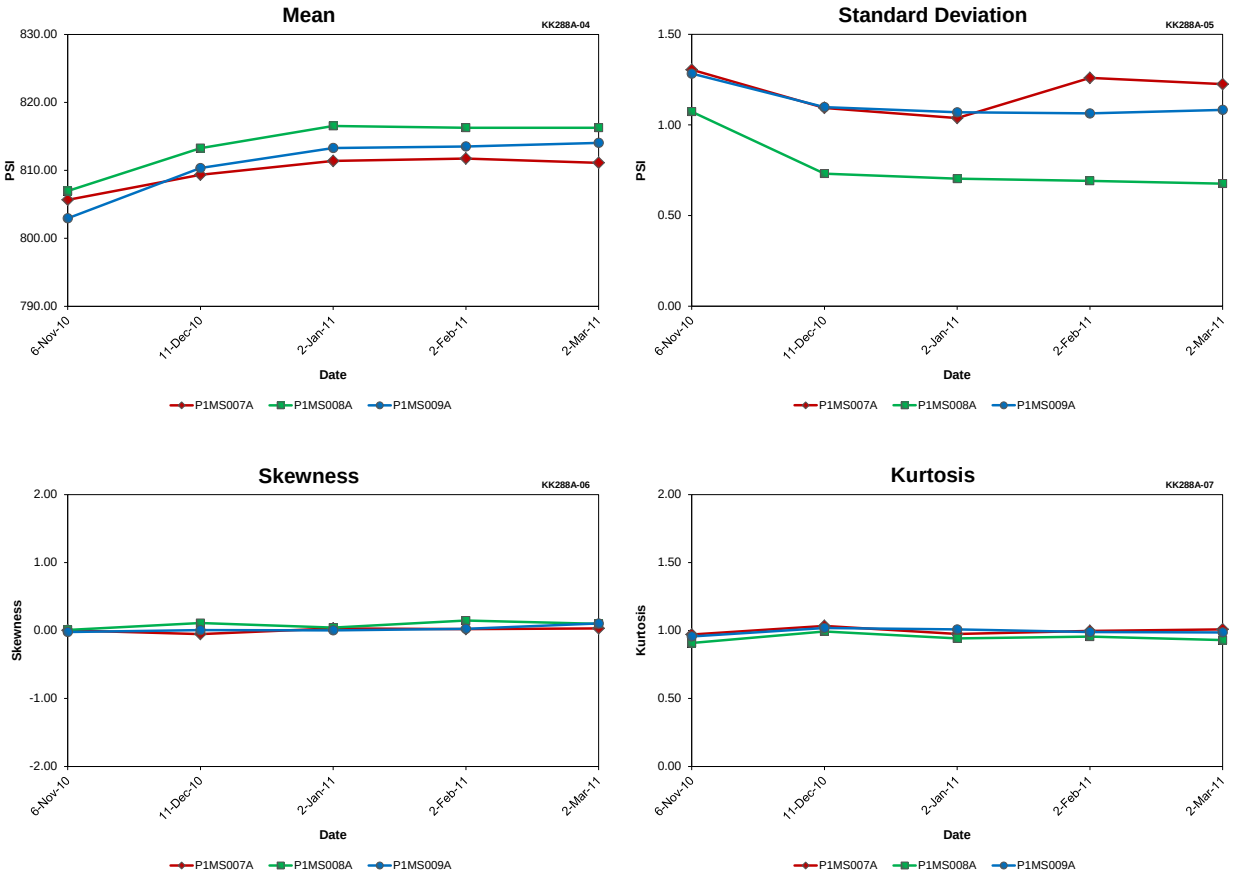



**Figure H.48 SG C OUTLET PRESSURE Data Quality Statistics at North Anna Unit 1 (Cycle 22)**

**Table H.13 SG C OUTLET PRESSURE Data Quality for North Anna Unit 1 (Cycle 22)**

| | Tag Names | | |
|---|---|---|---|
| **Result Type** | **P1MS007A** | **P1MS008A** | **P1MS009A** |
| Mean | 809.85 | 813.86 | 810.83 |
| Std. Dev. | 1.18 | 0.78 | 1.12 |
| Skewness | 0.01 | 0.08 | 0.02 |
| Kurtosis | 1.00 | 0.95 | 0.99 |

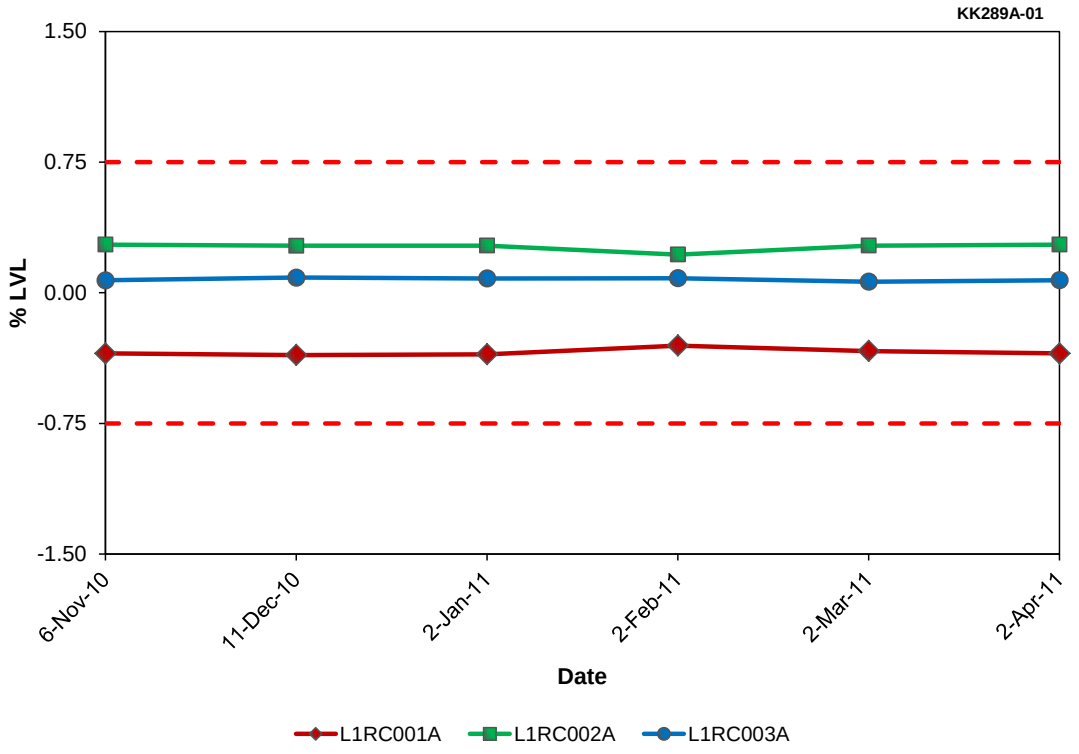



**Figure H.49 PRESSURIZER LEVEL Steady-State Deviation at North Anna Unit 1 (Cycle 22)**

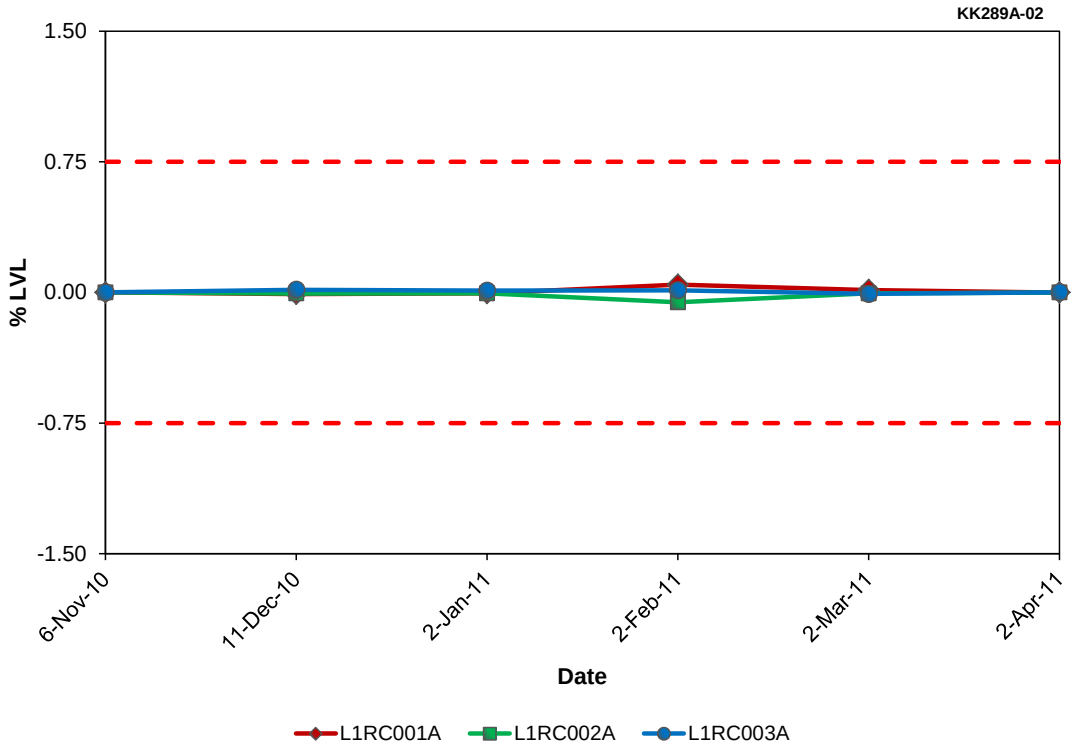



**Figure H.50 PRESSURIZER LEVEL Steady-State Drift at North Anna Unit 1 (Cycle 22)**

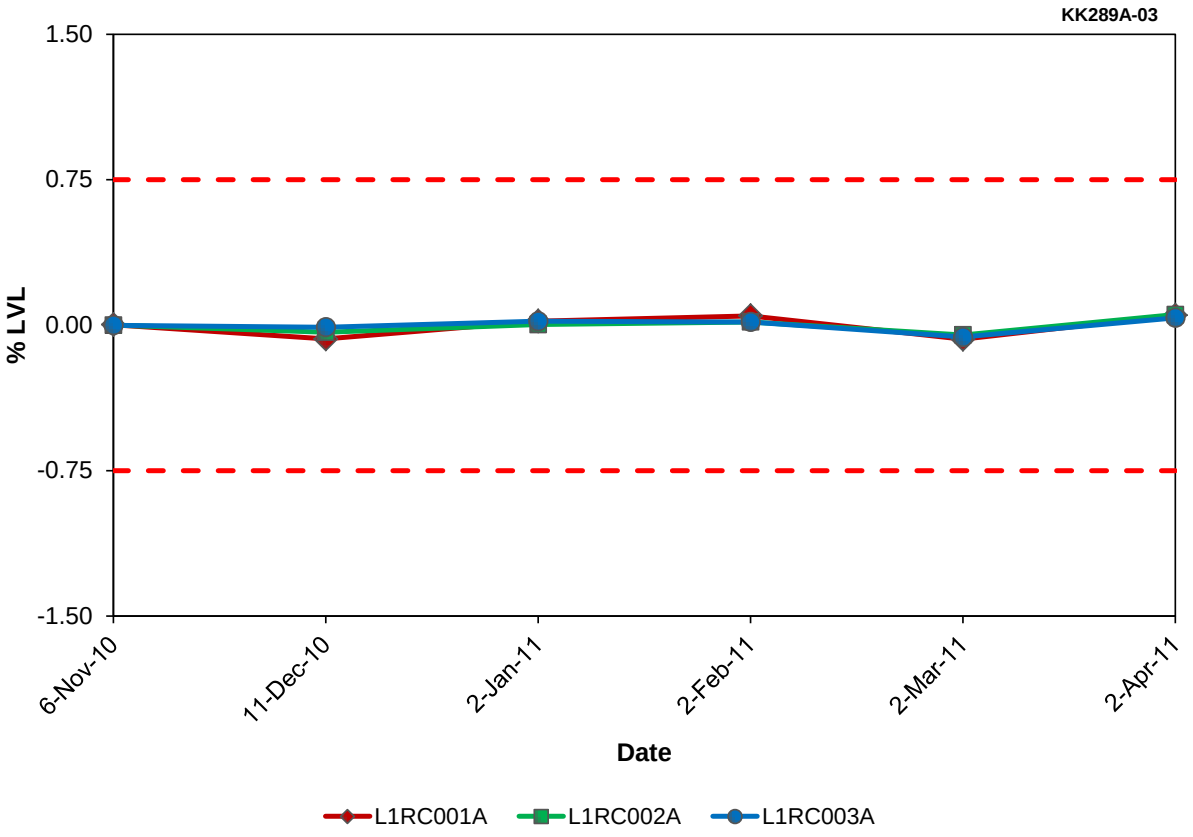



**Figure H.51 PRESSURIZER LEVEL Steady-State Residual AAKR at North Anna Unit 1 (Cycle 22)**

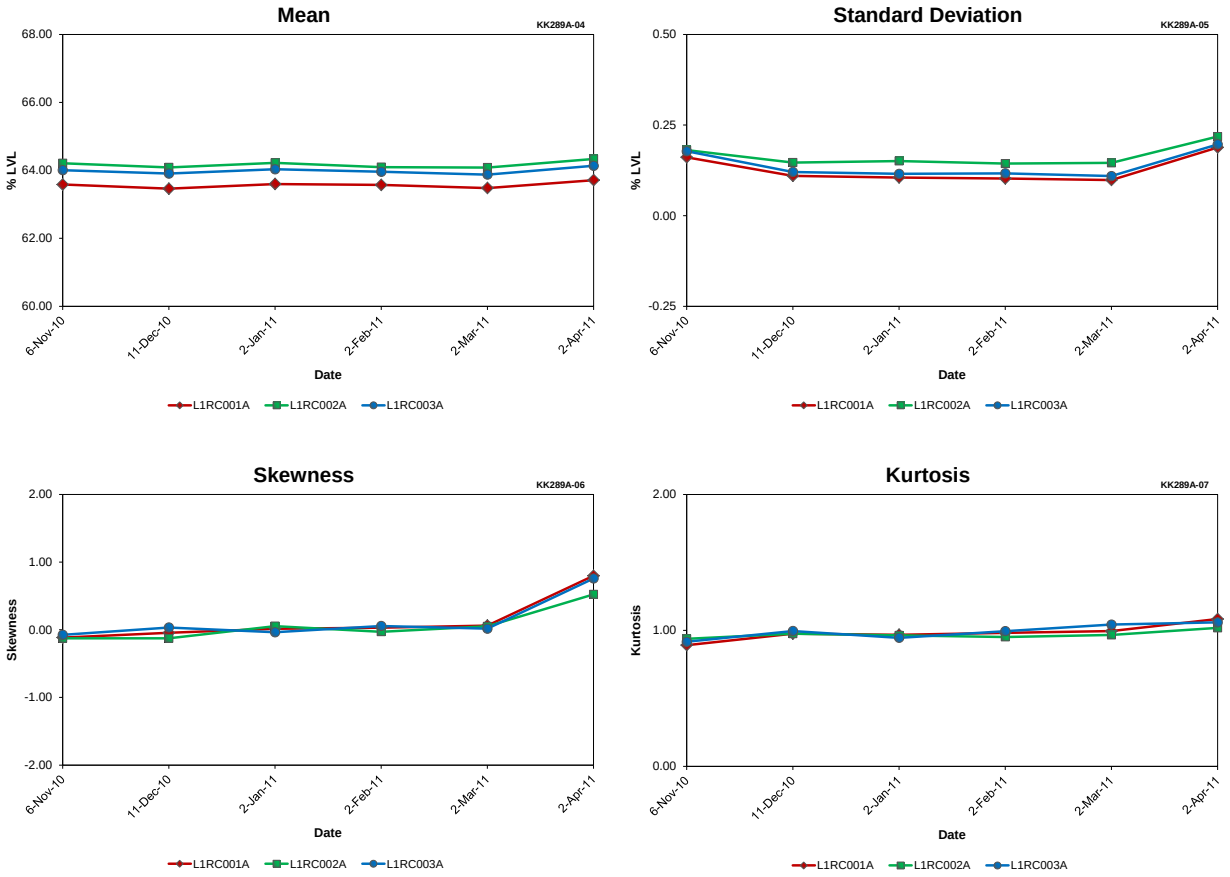



**Figure H.52 PRESSURIZER LEVEL Data Quality Statistics at North Anna Unit 1 (Cycle 22)**

**Table H.14 PRESSURIZER LEVEL Data Quality for North Anna Unit 1 (Cycle 22)**

| Result Type | Tag Names | | |
|---|---|---|---|
| | L1RC001A | L1RC002A | L1RC003A |
| Mean | 63.57 | 64.17 | 63.99 |
| Std. Dev. | 0.13 | 0.16 | 0.14 |
| Skewness | 0.12 | 0.06 | 0.13 |
| Kurtosis | 0.98 | 0.97 | 0.99 |

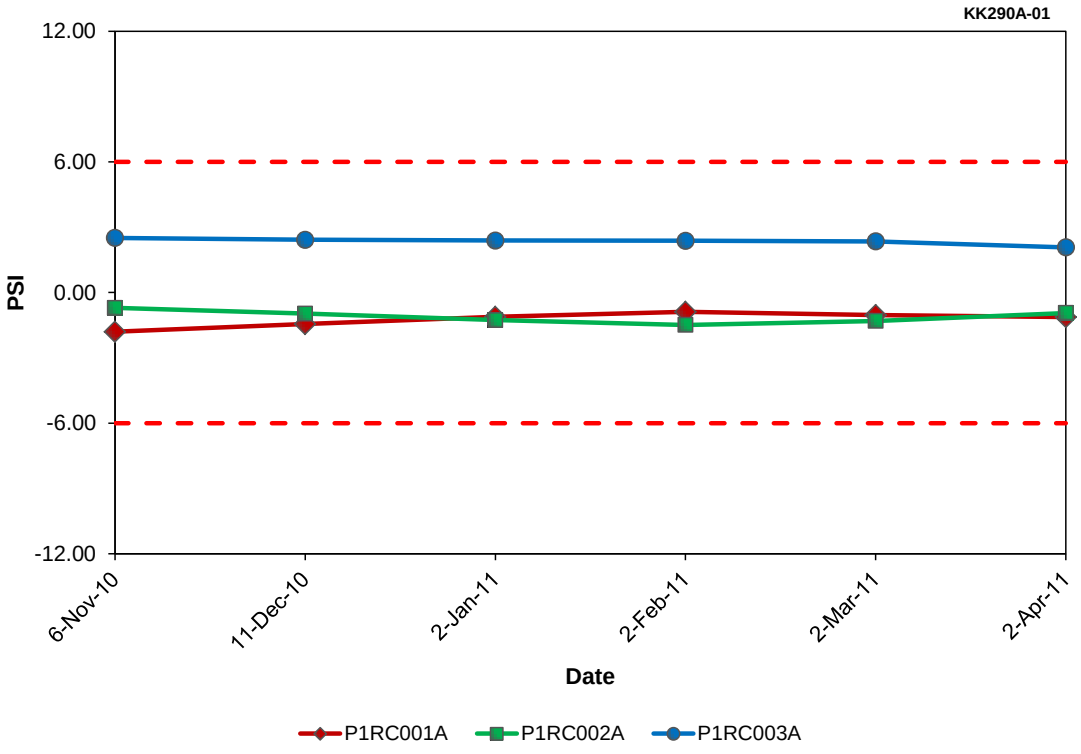



**Figure H.53 PRESSURIZER PRESSURE Steady-State Deviation at North Anna Unit 1 (Cycle 22)**

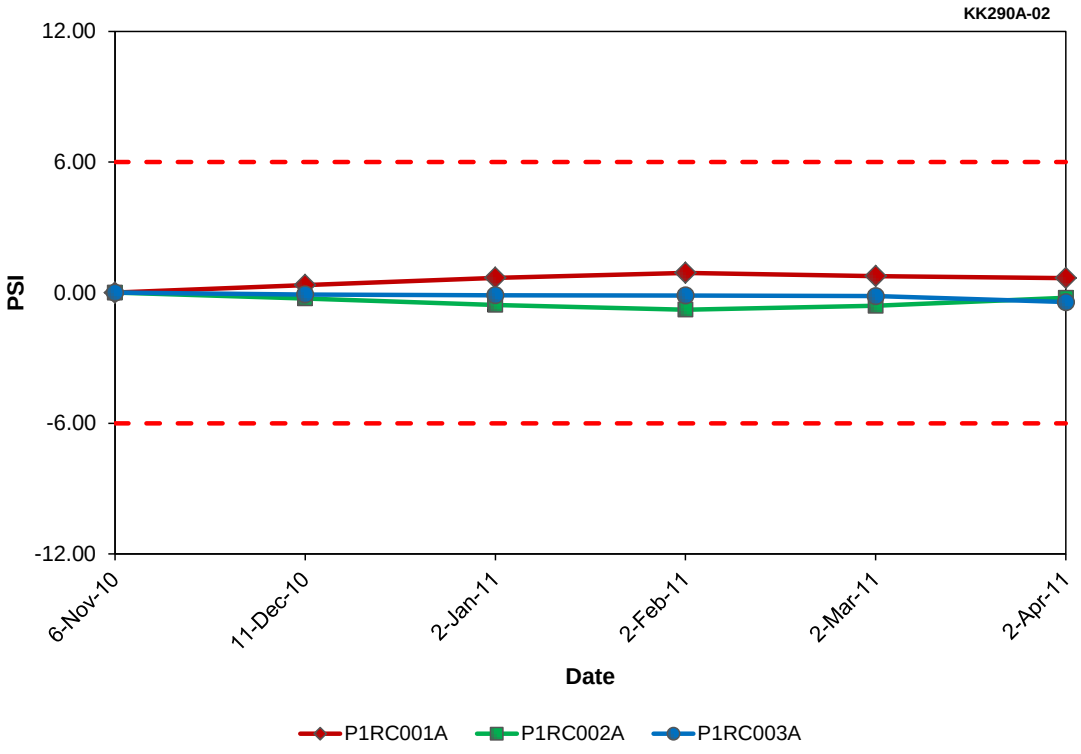



**Figure H.54 PRESSURIZER PRESSURE Steady-State Drift at North Anna Unit 1 (Cycle 22)**

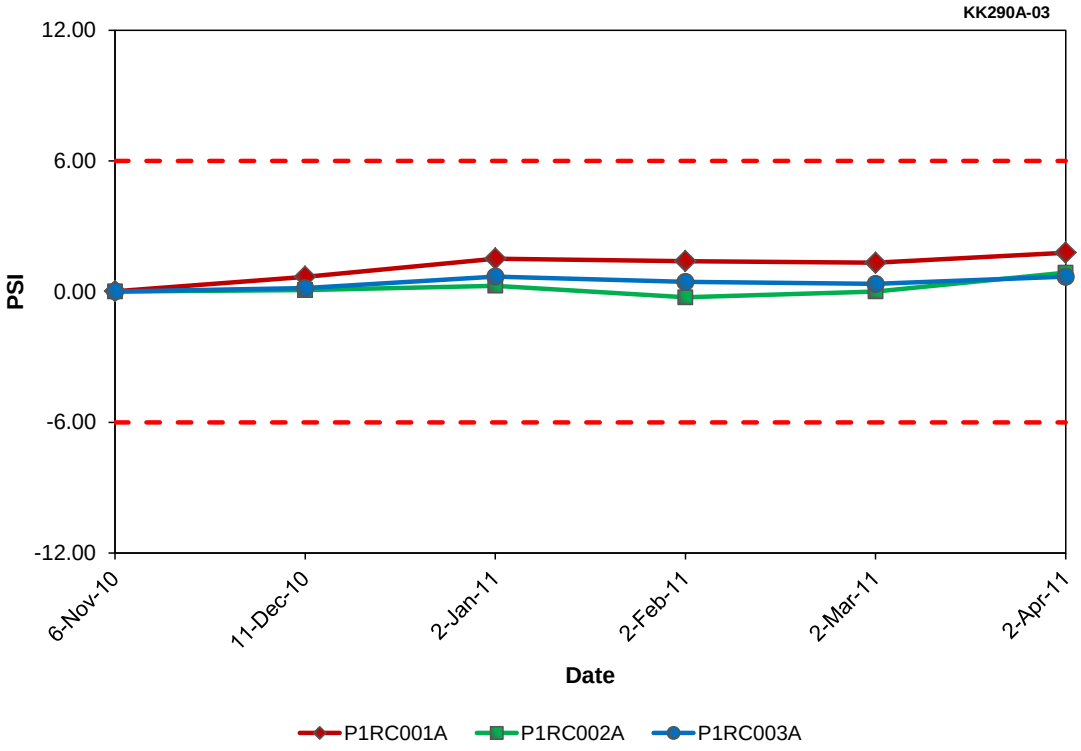



**Figure H.55 PRESSURIZER PRESSURE Steady-State Residual AAKR at North Anna Unit 1 (Cycle 22)**

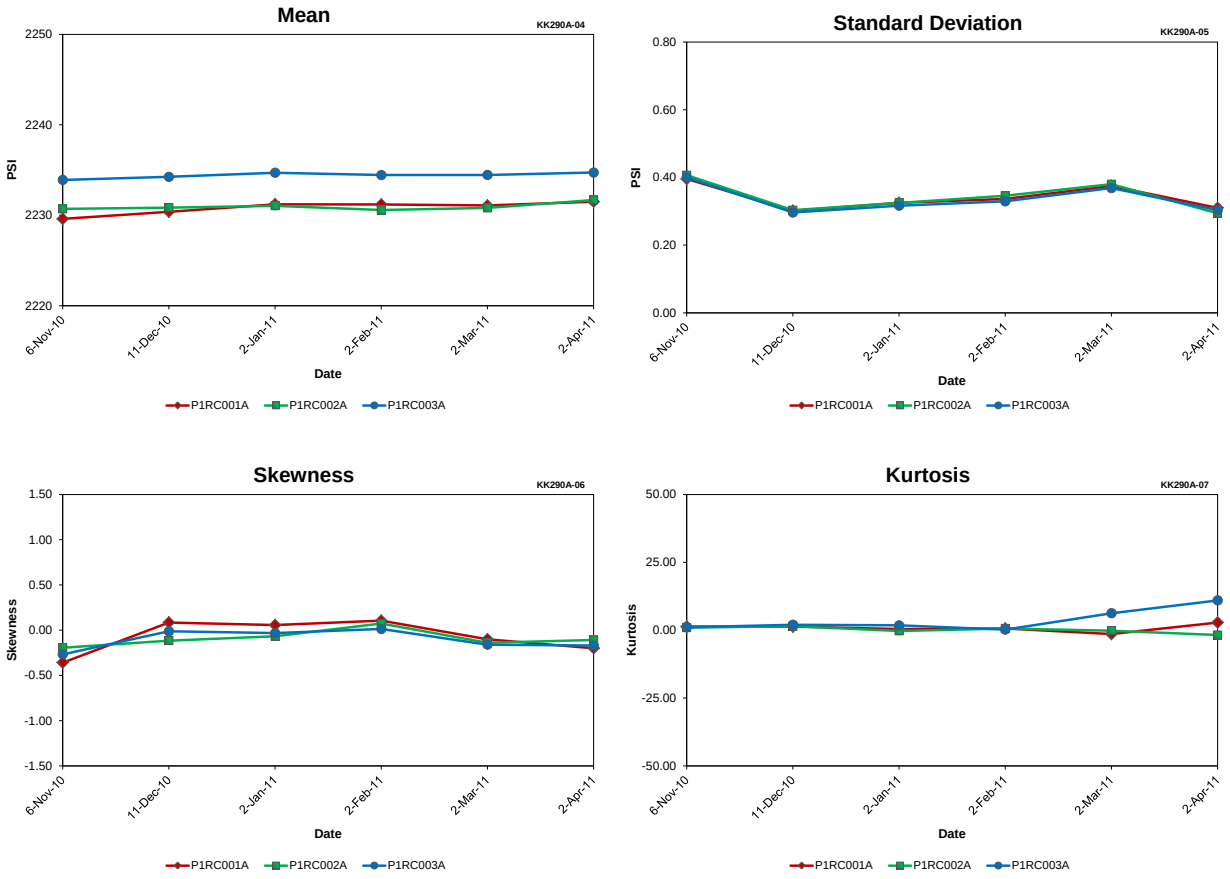



**Figure H.56 PRESSURIZER PRESSURE Data Quality Statistics at North Anna Unit 1 (Cycle 22)**

**Table H.15 PRESSURIZER PRESSURE Data Quality for North Anna Unit 1 (Cycle 22)**

| Result Type | Tag Names | | |
|---|---|---|---|
| | P1RC001A | P1RC002A | P1RC003A |
| Mean | 2230.83 | 2230.94 | 2234.41 |
| Std. Dev. | 0.34 | 0.34 | 0.34 |
| Skewness | -0.07 | -0.09 | -0.10 |
| Kurtosis | 0.84 | 0.12 | 3.72 |

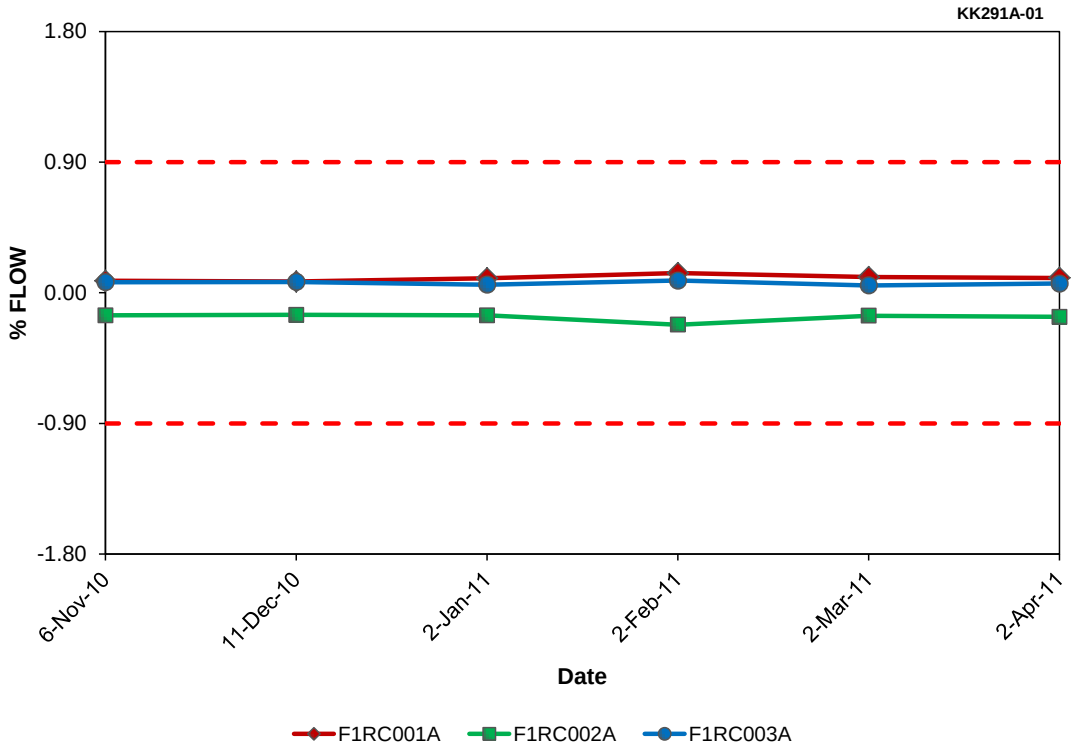



**Figure H.57 RCS LOOP A FLOW Steady-State Deviation at North Anna Unit 1 (Cycle 22)**

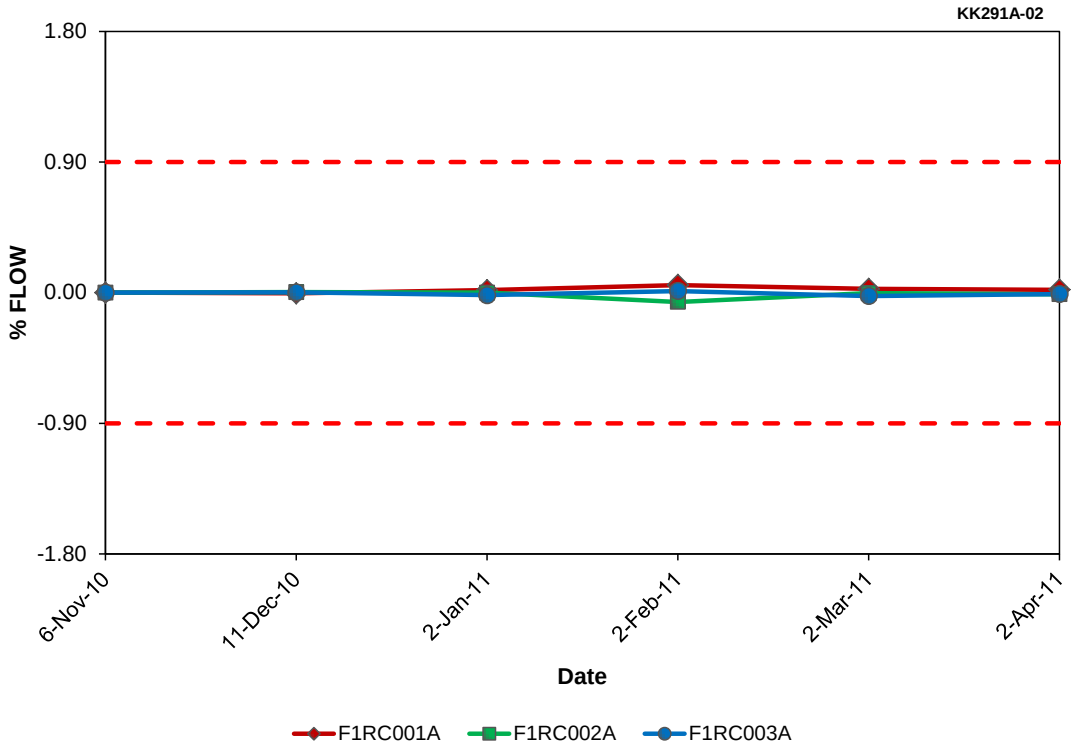



**Figure H.58 RCS LOOP A FLOW Steady-State Drift at North Anna Unit 1 (Cycle 22)**

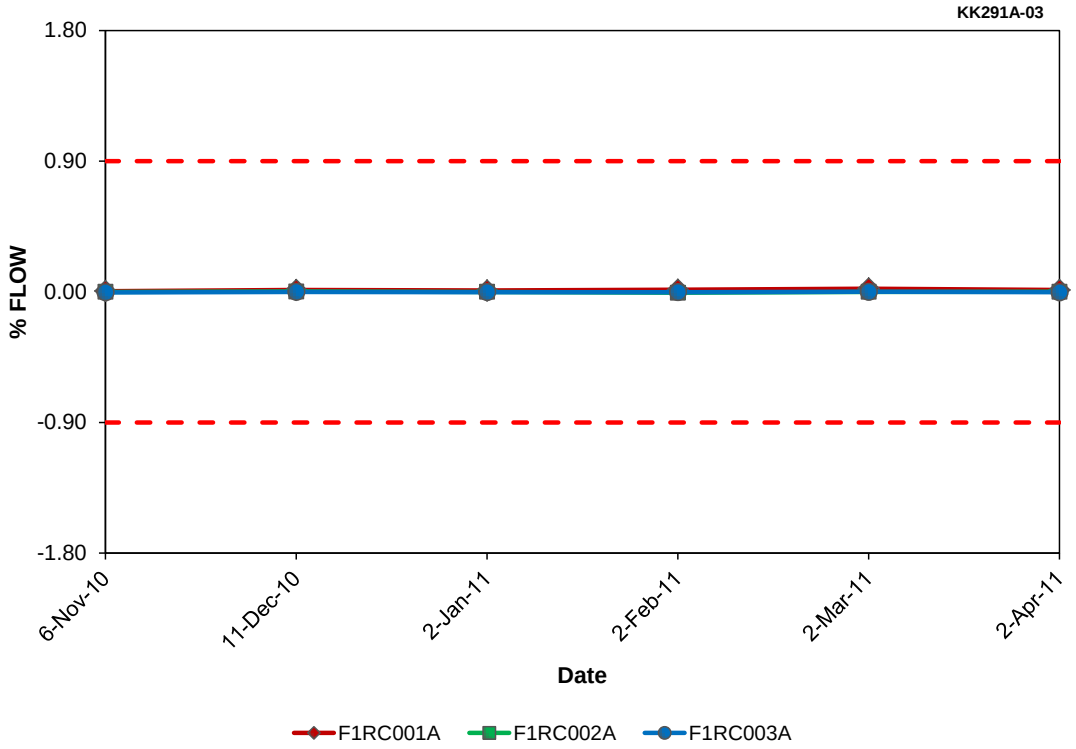



**Figure H.59 RCS LOOP A FLOW Steady-State Residual AAKR at North Anna Unit 1 (Cycle 22)**

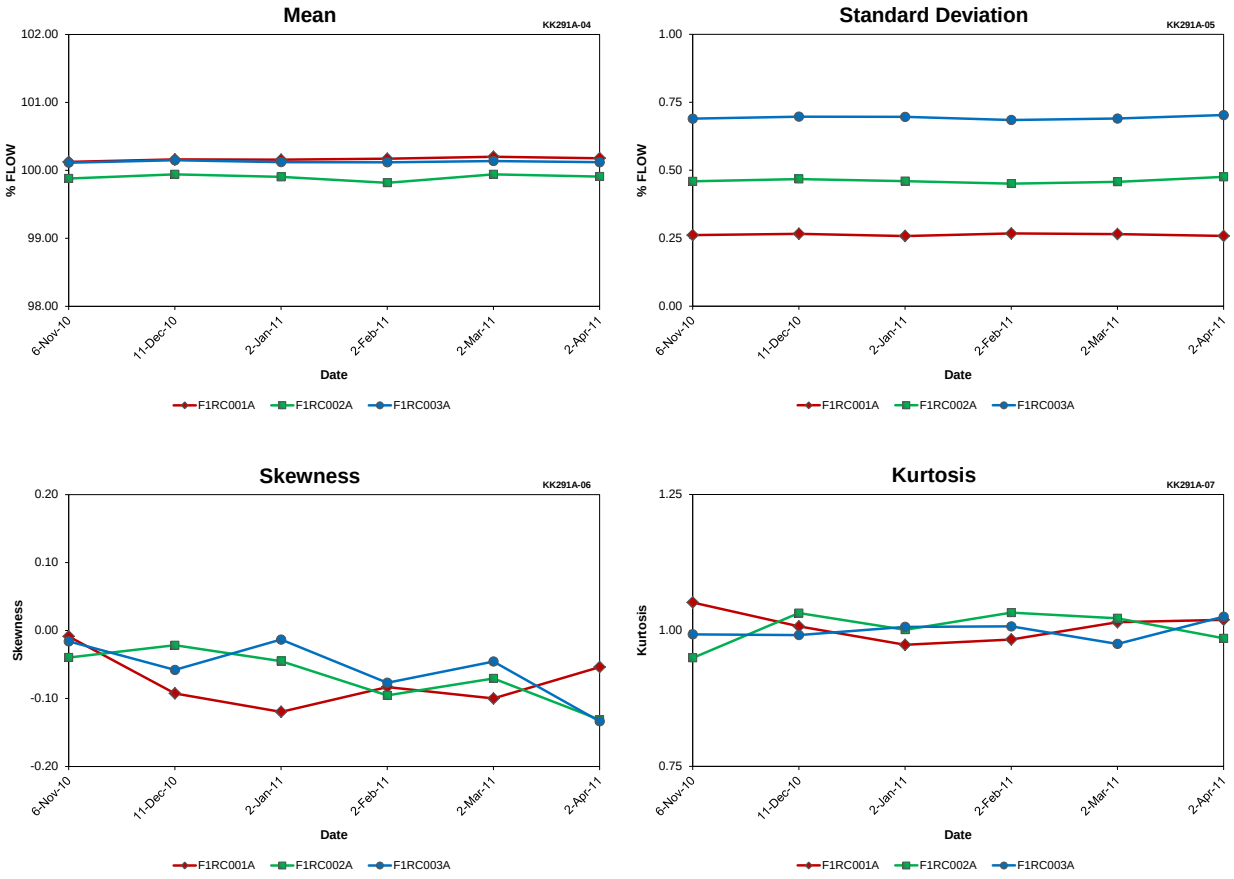



**Figure H.60 RCS LOOP A FLOW Data Quality Statistics at North Anna Unit 1 (Cycle 22)**

**Table H.16 RCS LOOP A FLOW Data Quality for North Anna Unit 1 (Cycle 22)**

| Result Type | Tag Names | | |
|---|---|---|---|
| | F1RC001A | F1RC002A | F1RC003A |
| Mean | 100.16 | 99.90 | 100.13 |
| Std. Dev. | 0.26 | 0.46 | 0.69 |
| Skewness | -0.08 | -0.07 | -0.06 |
| Kurtosis | 1.01 | 1.00 | 1.00 |

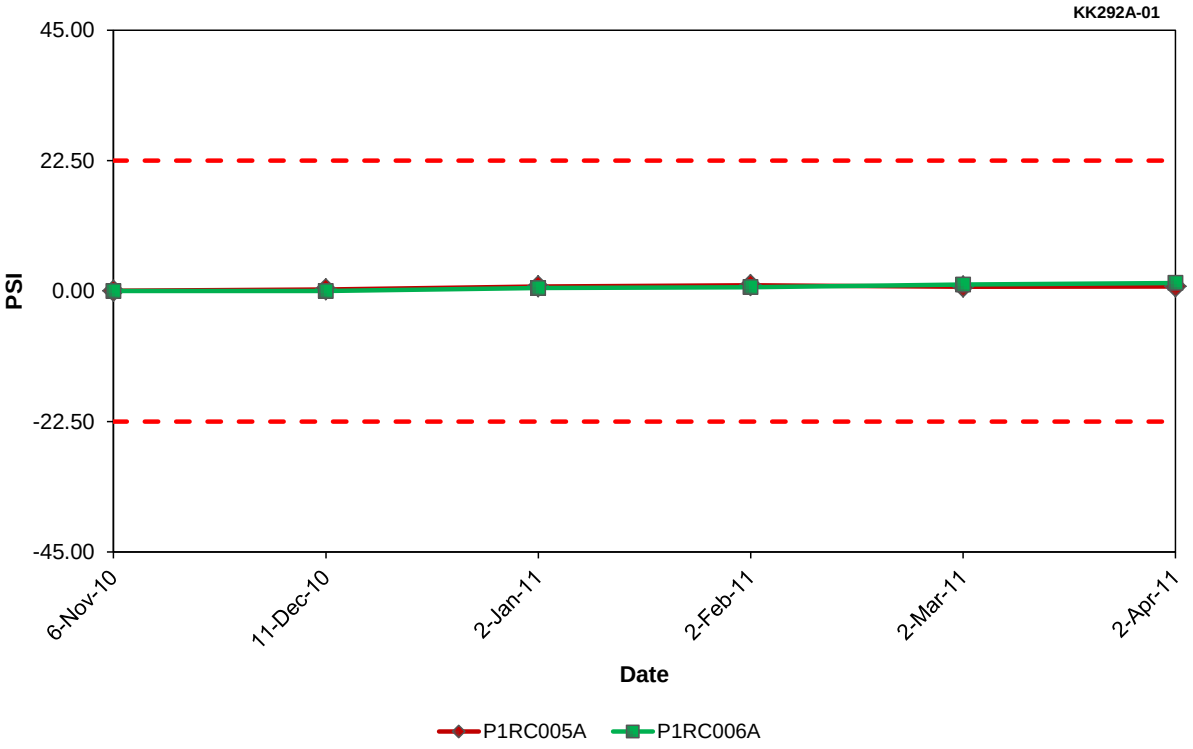



**Figure H.61 RCS WIDE RANGE PRESSURE Steady-State Residual AAKR at North Anna Unit 1 (Cycle 22)**

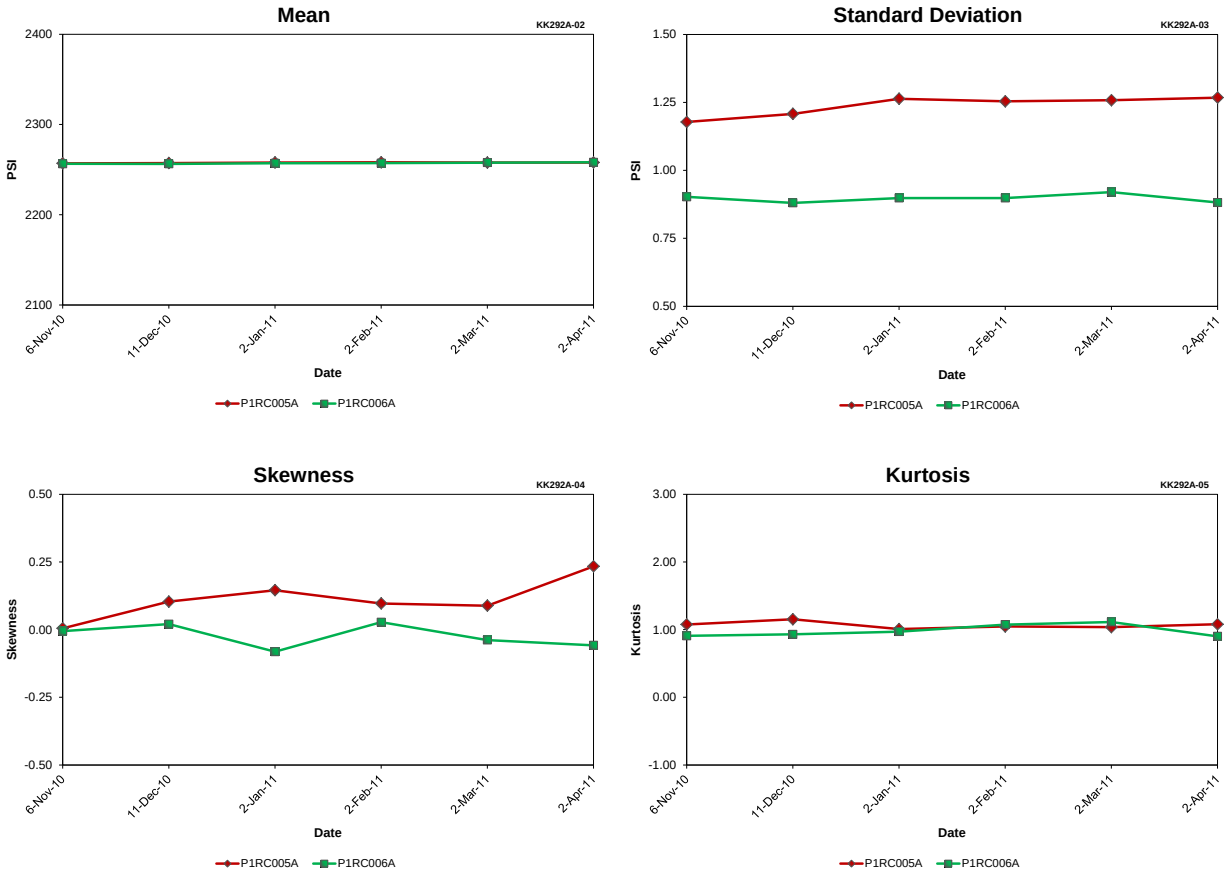



**Figure H.62 RCS WIDE RANGE PRESSURE Data Quality Statistics at North Anna Unit 1 (Cycle 22)**

**Table H.17 RCS WIDE RANGE PRESSURE Data Quality for North Anna Unit 1 (Cycle 22)**

| Result Type | Tag Names | |
|---|---|---|
| | P1RC005A | P1RC006A |
| Mean | 2257.63 | 2257.12 |
| Std. Dev. | 1.24 | 0.90 |
| Skewness | 0.11 | -0.02 |
| Kurtosis | 1.07 | 0.98 |

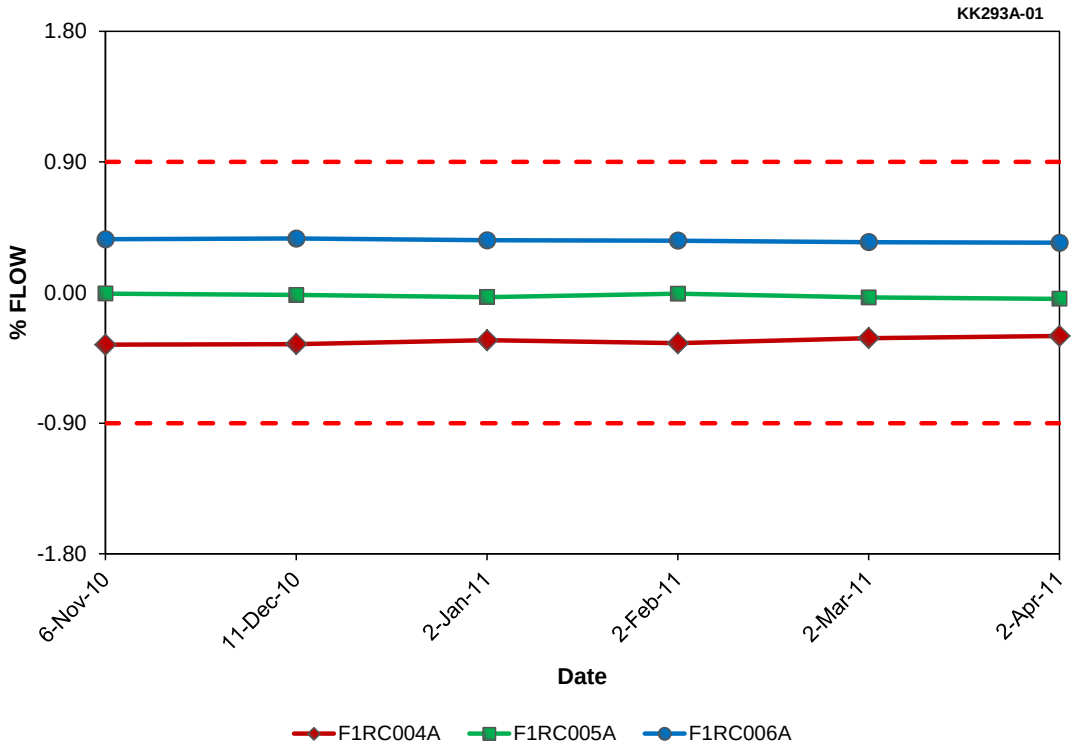



**Figure H.63 RCS LOOP B FLOW Steady-State Deviation at North Anna Unit 1 (Cycle 22)**

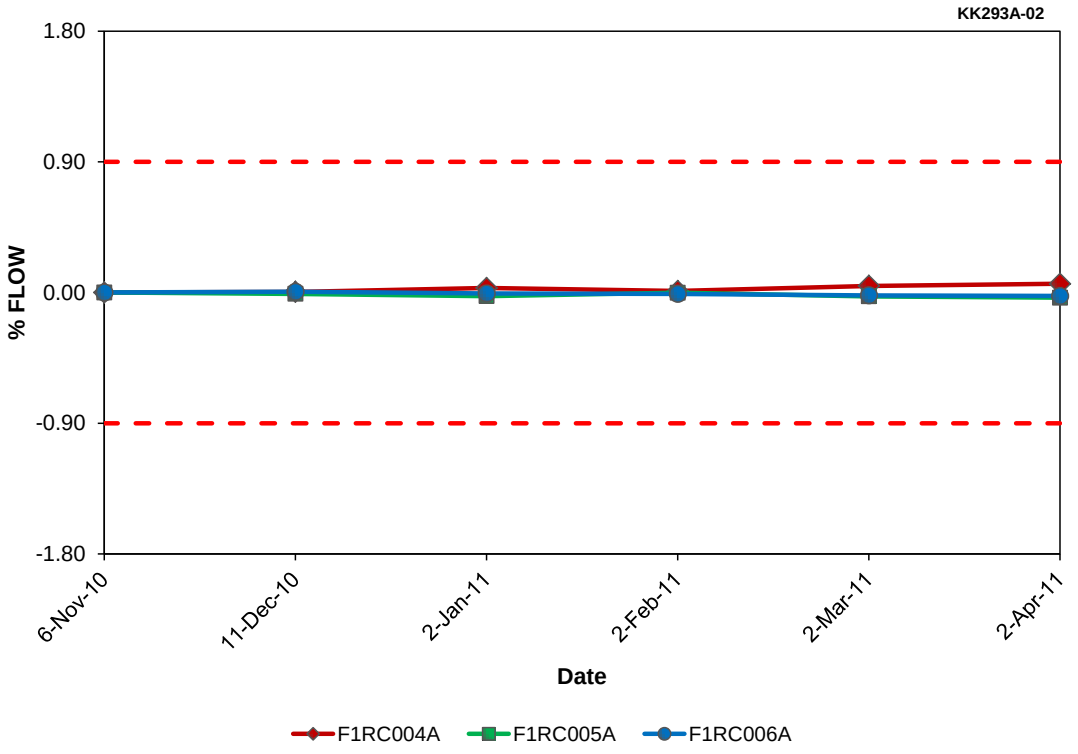



**Figure H.64 RCS LOOP B FLOW Steady-State Drift at North Anna Unit 1 (Cycle 22)**

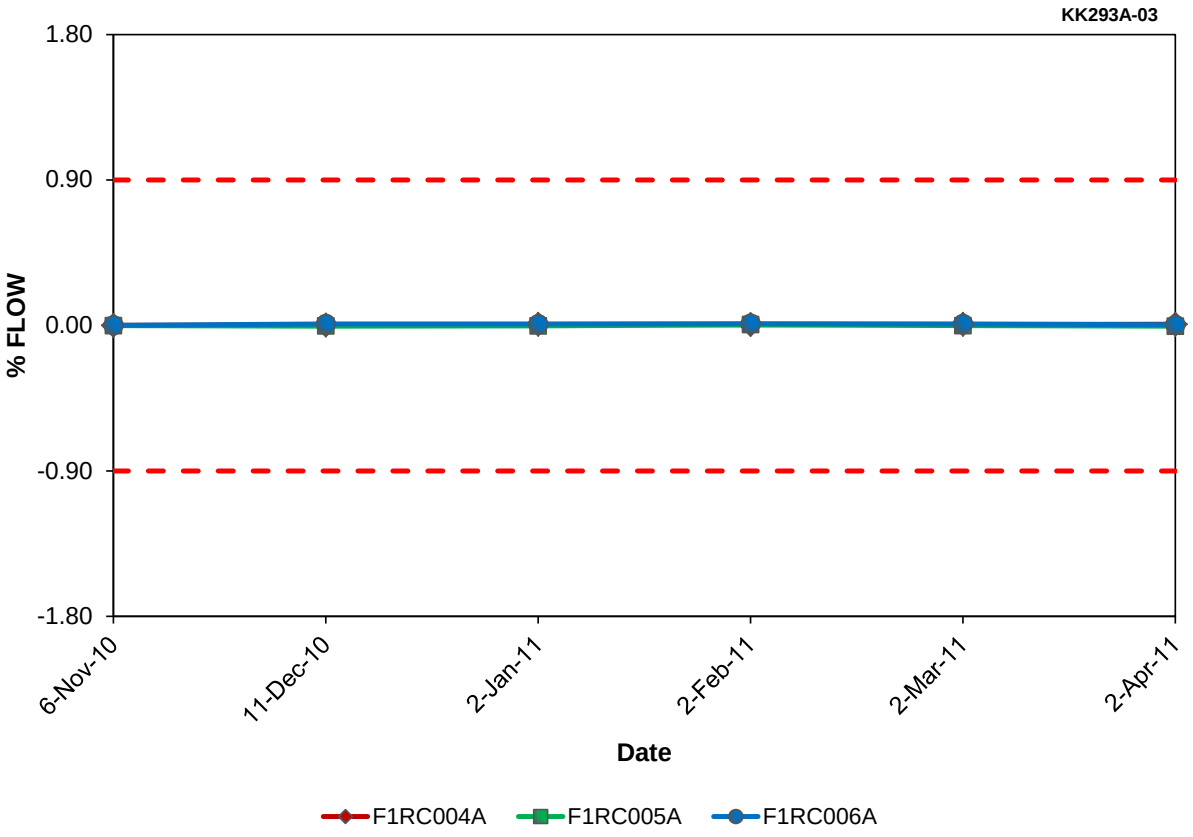



**Figure H.65 RCS LOOP B FLOW Steady-State Residual AAKR at North Anna Unit 1 (Cycle 22)**

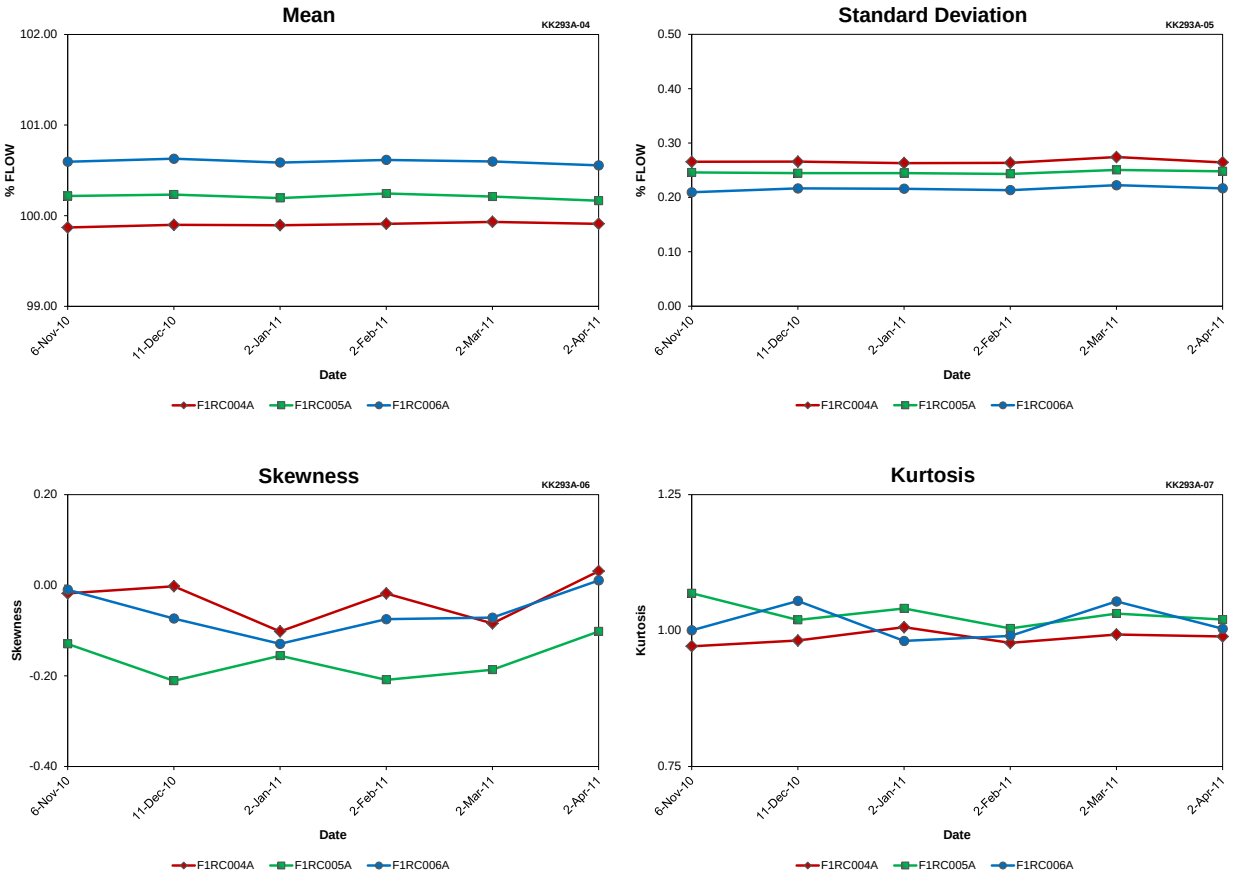



**Figure H.66 RCS LOOP B FLOW Data Quality Statistics at North Anna Unit 1 (Cycle 22)**

**Table H.18 RCS LOOP B FLOW Data Quality for North Anna Unit 1 (Cycle 22)**

| | Tag Names | | |
|---|---|---|---|
| Result Type | F1RC004A | F1RC005A | F1RC006A |
| Mean | 99.90 | 100.21 | 100.60 |
| Std. Dev. | 0.27 | 0.25 | 0.22 |
| Skewness | -0.03 | -0.17 | -0.06 |
| Kurtosis | 0.99 | 1.03 | 1.01 |

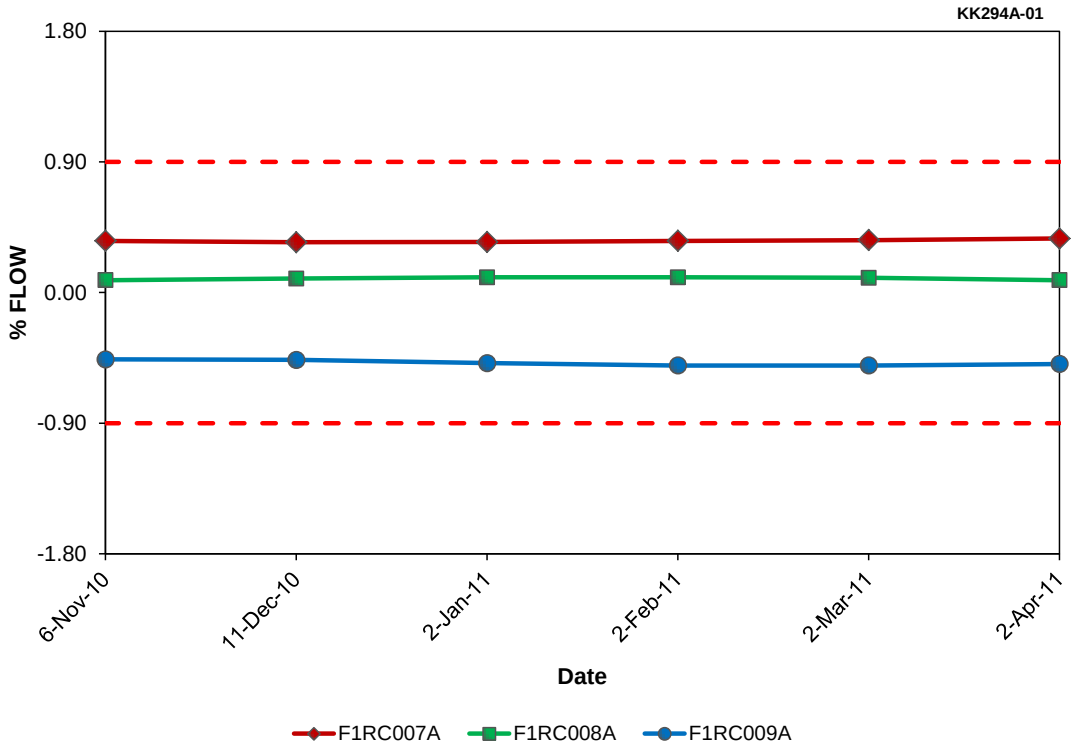



**Figure H.67 RCS LOOP C FLOW Steady-State Deviation at North Anna Unit 1 (Cycle 22)**

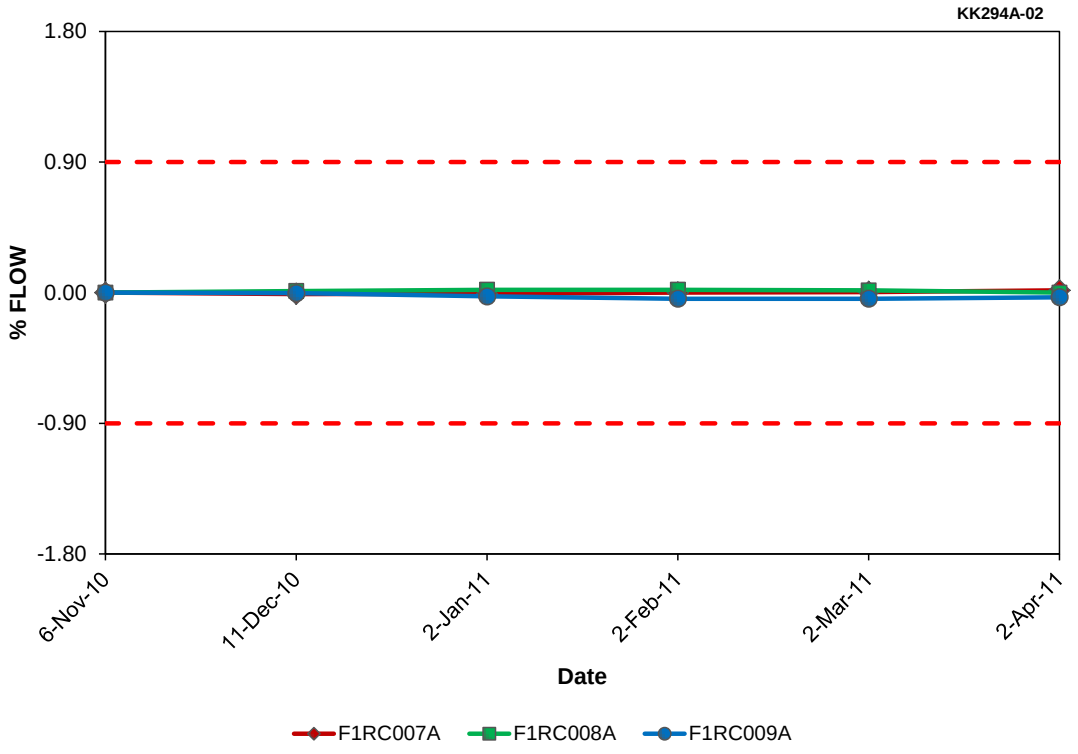



**Figure H.68 RCS LOOP C FLOW Steady-State Drift at North Anna Unit 1 (Cycle 22)**

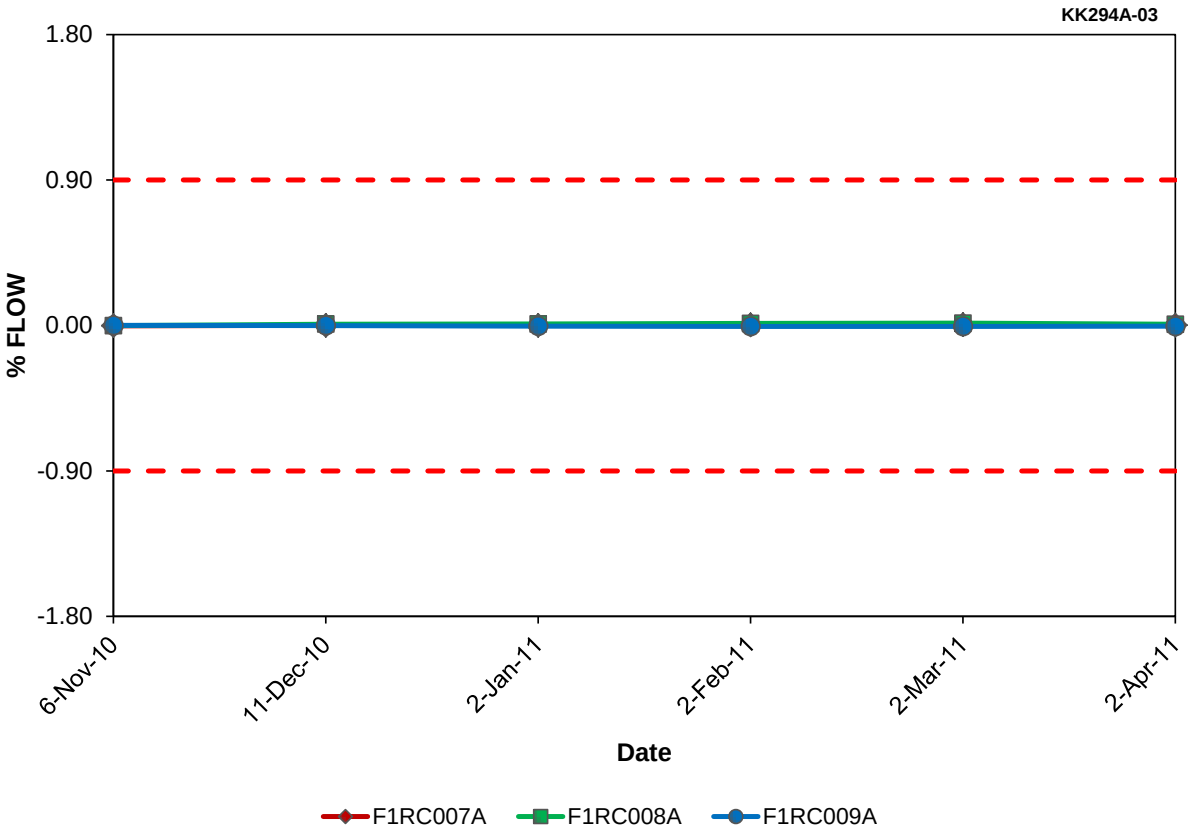



**Figure H.69 RCS LOOP C FLOW Steady-State Residual AAKR at North Anna Unit 1 (Cycle 22)**

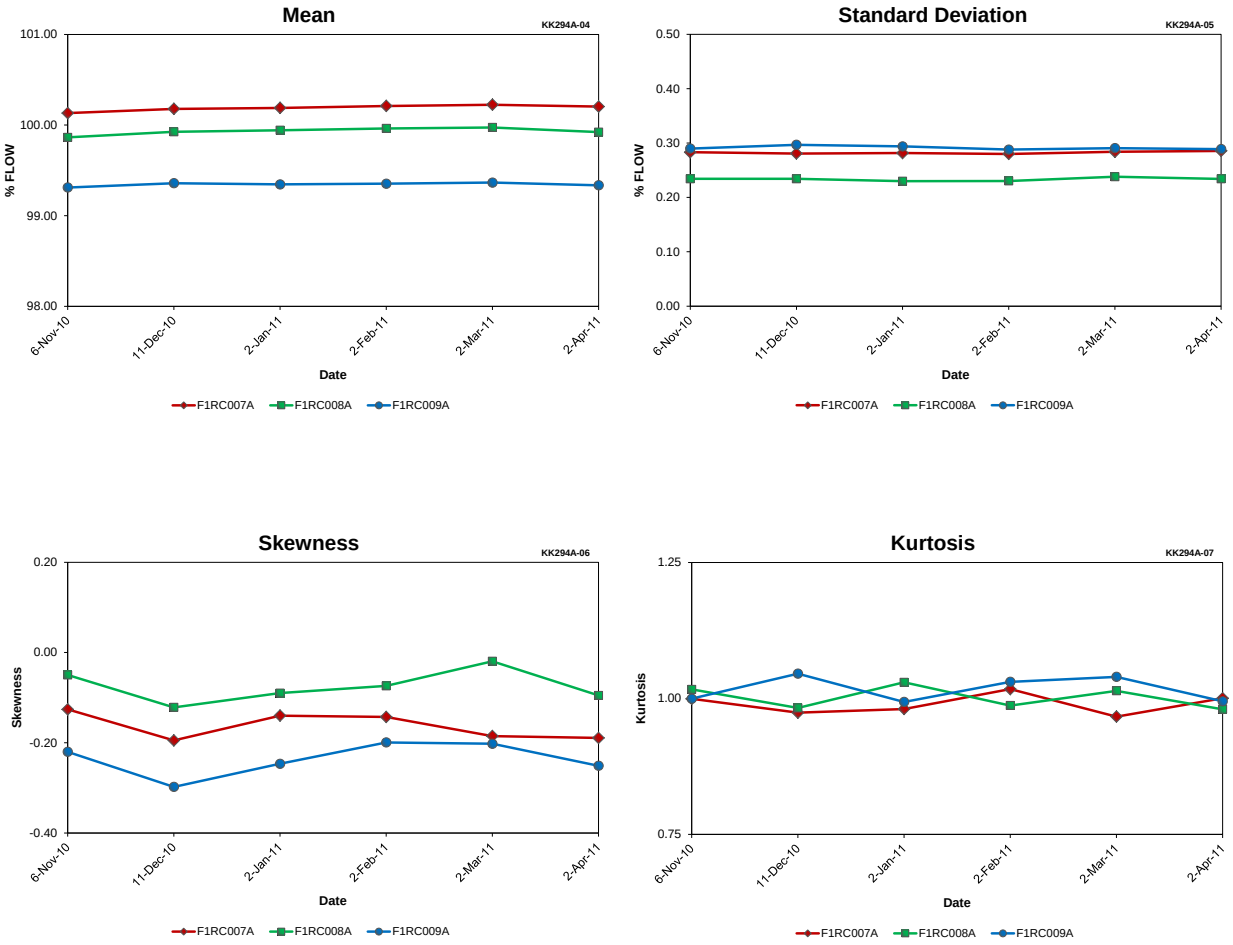



**Figure H.70 RCS LOOP C FLOW Data Quality Statistics at North Anna Unit 1 (Cycle 22)**

**Table H.19 RCS LOOP C FLOW Data Quality for North Anna Unit 1 (Cycle 22)**

| | Tag Names | | |
|---|---|---|---|
| Result Type | F1RC007A | F1RC008A | F1RC009A |
| Mean | 100.19 | 99.93 | 99.34 |
| Std. Dev. | 0.28 | 0.23 | 0.29 |
| Skewness | -0.16 | -0.08 | -0.24 |
| Kurtosis | 0.99 | 1.00 | 1.02 |

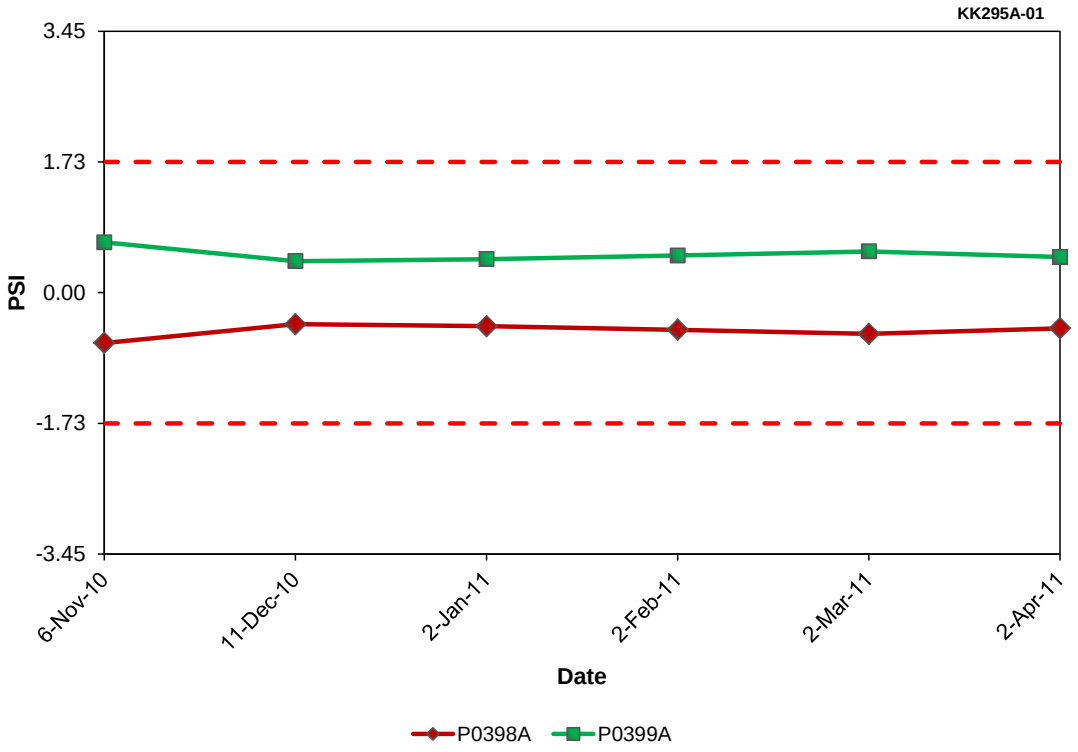



**Figure H.71 TBIN FIRST STAGE PRESSURE Steady-State Deviation at North Anna Unit 1 (Cycle 22)**

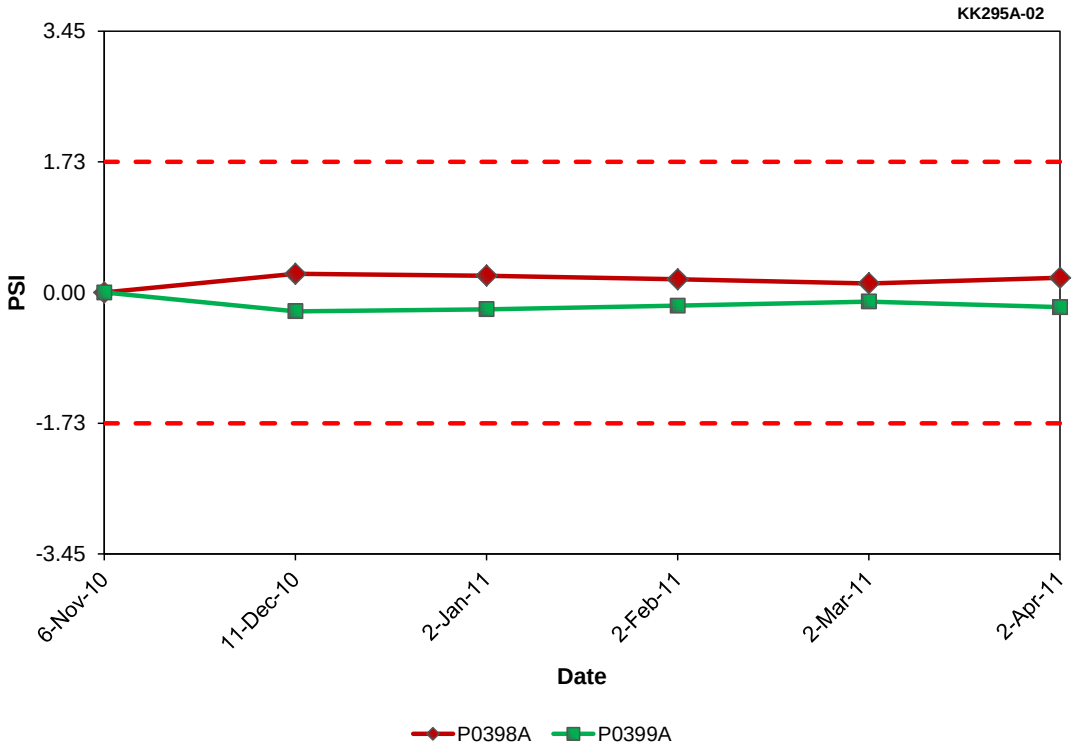



**Figure H.72 TBIN FIRST STAGE PRESSURE Steady-State Drift at North Anna Unit 1 (Cycle 22)**

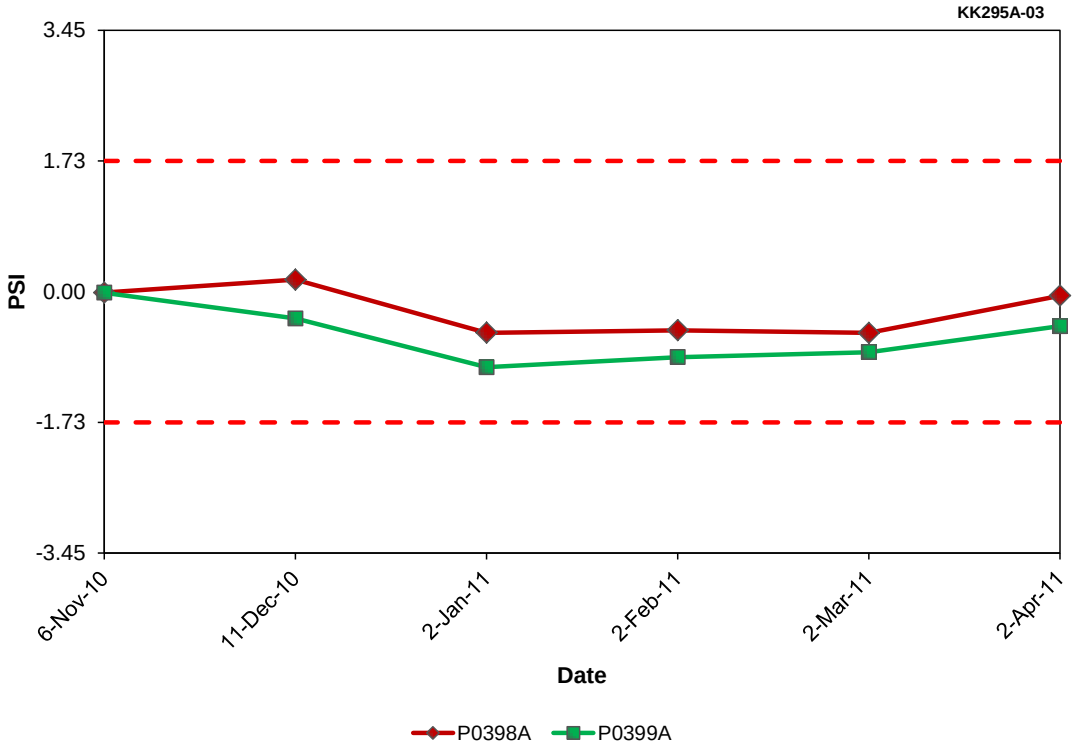



**Figure H.73 TBIN FIRST STAGE PRESSURE Steady-State Residual AAKR at North Anna Unit 1 (Cycle 22)**

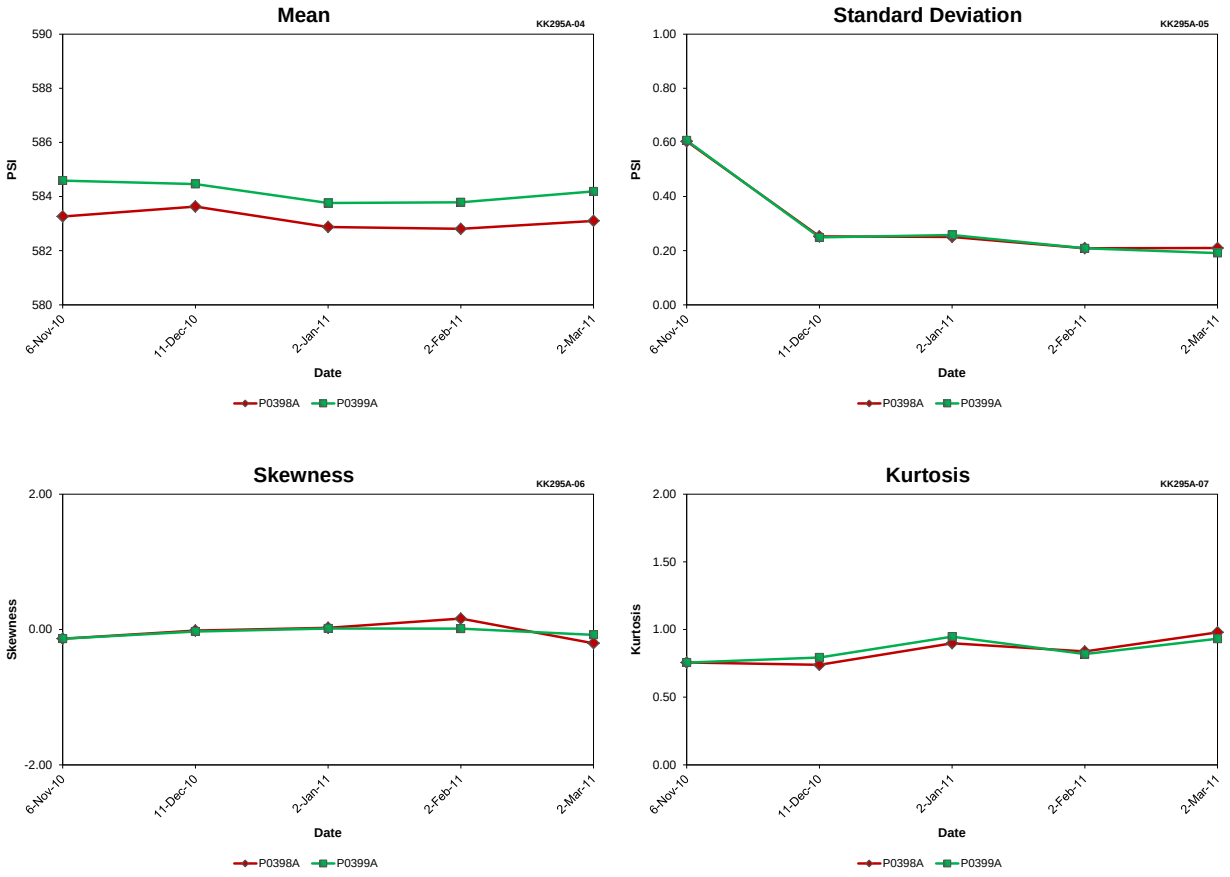



**Figure H.74 TBIN FIRST STAGE PRESSURE Data Quality Statistics at North Anna Unit 1 (Cycle 22)**

**Table H.20 TBIN FIRST STAGE PRESSURE Data Quality for North Anna Unit 1 (Cycle 22)**

| | Tag Names | |
|---|---|---|
| **Result Type** | **P0398A** | **P0399A** |
| Mean | 583.13 | 584.16 |
| Std. Dev. | 0.31 | 0.30 |
| Skewness | -0.03 | -0.04 |
| Kurtosis | 0.84 | 0.85 |

# APPENDIX I

# North Anna Unit 2 OLM Results (Cycle 21)

| Item | Tagname | Service | 27 Apr 2010 | 3 May 2010 | 2 Jul 2010 | 2 Aug 2010 | 11 Nov 2010 | 2 Dec 2010 | 2 Jan 2011 | 2 Feb 2011 | 2 Mar 2011 | 2 Apr 2011 | Drift | Final | Comment |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | F2MS001A | SG A STEAM FLOW | | | | | M | M | M | M | M | | | PASS | Process change. Not transmitter. |
| 2 | F2MS002A | SG A STEAM FLOW | | | | | | M | M | M | M | M | | PASS | |
| | | | | | | | | | | | | | | | |
| 3 | F2FW004A | FW FLOW TO SG A | | | | | | | | | | | | PASS | |
| 4 | F2FW005A | FW FLOW TO SG A | | | | | | | | | | | | PASS | |
| | | | | | | | | | | | | | | | |
| 5 | L2FW001A | SG A NARROW RANGE LEVEL | | | | | | | | | | | | PASS | |
| 6 | L2FW002A | SG A NARROW RANGE LEVEL | | | | | | | | | | | | PASS | |
| 7 | L2FW003A | SG A NARROW RANGE LEVEL | | | | | | | | | | | | PASS | |
| 8 | L2FW004A | SG A WIDE RANGE LEVEL | | | | | | | | | | | | PASS | |
| | | | | | | | | | | | | | | | |
| 9 | P2MS001A | SG A OUTLET PRESSURE | | | | | | | | | | | | PASS | |
| 10 | P2MS002A | SG A OUTLET PRESSURE | | | | | | | | | | | | PASS | |
| 11 | P2MS003A | SG A OUTLET PRESSURE | | | | | | | | | | | | PASS | |
| | | | | | | | | | | | | | | | |
| 12 | F2MS003A | SG B STEAM FLOW | | | | | | | | | | | | PASS | |
| 13 | F2MS004A | SG B STEAM FLOW | | | | | | | | | | | | PASS | |
| | | | | | | | | | | | | | | | |
| 14 | F2FW006A | FW FLOW TO SG B | | | | | | | | | | | | PASS | |
| 15 | F2FW007A | FW FLOW TO SG B | | | | | | | | | | | | PASS | |
| | | | | | | | | | | | | | | | |
| 16 | L2FW005A | SG B NARROW RANGE LEVEL | | | R | | | | | | | | | FAIL | Group is spread out |
| 17 | L2FW006A | SG B NARROW RANGE LEVEL | | | | | | | | | | | | PASS | |
| 18 | L2FW007A | SG B NARROW RANGE LEVEL | | | R | R | | | | | | | | FAIL | |
| 19 | L2FW008A | SG B WIDE RANGE LEVEL | | | | | | | | | | | | PASS | |
| | | | | | | | | | | | | | | | |
| 20 | P2MS004A | SG B OUTLET PRESSURE | | | | | | | | | | | | PASS | |
| 21 | P2MS005A | SG B OUTLET PRESSURE | | | | | | | | | | | | PASS | |
| 22 | P2MS006A | SG B OUTLET PRESSURE | | | | | | | | | | | | PASS | |
| | | | | | | | | | | | | | | | |
| 23 | F2MS005A | SG C STEAM FLOW | R | R | R | R | M | R,M | R,M | R,M | R,M | R,M | | FAIL | |
| 24 | F2MS006A | SG C STEAM FLOW | R | R | R | R | M | R,M | R,M | R,M | R,M | R,M | | FAIL | |
| | | | | | | | | | | | | | | | |
| 25 | F2FW008A | FW FLOW TO SG C | | | | | | | | | | M | | PASS | Process change. Not transmitter |
| 26 | F2FW009A | FW FLOW TO SG C | | | | | M | M | | | | M | | PASS | |

*R = Exceeded Redundant Sensor Analysis Limits  M = Exceeded Model Analysis Limits  D = Exceeded Drift Limits*

**Table I.1 North Anna Unit 2 OLM Results Summary (Cycle 21)**

| Item | Tagname | Service | 27 Apr 2010 | 3 May 2010 | 2 Jul 2010 | 2 Aug 2010 | 11 Nov 2010 | 2 Dec 2010 | 2 Jan 2011 | 2 Feb 2011 | 2 Mar 2011 | 2 Apr 2011 | Drift | Final | Comment |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 27 | L2FW009A | SG C NARROW RANGE LEVEL | | | | | | | | | | | | PASS | |
| 28 | L2FW010A | SG C NARROW RANGE LEVEL | | | | | | | | | | | | PASS | |
| 29 | L2FW011A | SG C NARROW RANGE LEVEL | | | | | | | | | | | | PASS | |
| 30 | L2FW012A | SG C WIDE RANGE LEVEL | | | | | | | | | | | | PASS | |
| | | | | | | | | | | | | | | | |
| 31 | P2MS007A | SG C OUTLET PRESSURE | | | | | | | | | | | | PASS | |
| 32 | P2MS008A | SG C OUTLET PRESSURE | | | | | | | | | | | | PASS | |
| 33 | P2MS009A | SG C OUTLET PRESSURE | | | | | | | | | | | | PASS | |
| | | | | | | | | | | | | | | | |
| 34 | L2RC001A | PRESSURIZER LEVEL | | | | | | | | | | | | PASS | |
| 35 | L2RC002A | PRESSURIZER LEVEL | | | | | | | | | | | | PASS | |
| 36 | L2RC003A | PRESSURIZER LEVEL | | | | | | | | | | | | PASS | |
| | | | | | | | | | | | | | | | |
| 37 | P2RC001A | PRESSURIZER PRESSURE | | | | | | | | | | | | PASS | |
| 38 | P2RC002A | PRESSURIZER PRESSURE | | | | | | | | | | | | PASS | |
| 39 | P2RC003A | PRESSURIZER PRESSURE | | | | | | | | | | | | PASS | |
| | | | | | | | | | | | | | | | |
| 40 | F2RC001A | RCS LOOP A FLOW | | | | | | | | | | | | PASS | |
| 41 | F2RC002A | RCS LOOP A FLOW | | | | | | | | | | | | PASS | |
| 42 | F2RC003A | RCS LOOP A FLOW | | | | | | | | | | | | PASS | |
| | | | | | | | | | | | | | | | |
| 43 | F2RC004A | RCS LOOP B FLOW | | | | | | | | | | | | PASS | |
| 44 | F2RC005A | RCS LOOP B FLOW | | | | | | | | | | | | PASS | |
| 45 | F2RC006A | RCS LOOP B FLOW | | | | | | | | | | | | PASS | |
| | | | | | | | | | | | | | | | |
| 46 | F2RC007A | RCS LOOP C FLOW | | | | | | | | | | | | PASS | |
| 47 | F2RC008A | RCS LOOP C FLOW | R | R | R | R | R | R | R | R | R | R | | PASS | High bias |
| 48 | F2RC009A | RCS LOOP C FLOW | | | | | | | | | | | | PASS | |
| | | | | | | | | | | | | | | | |
| 49 | P2RC005A | RCS WIDE RANGE PRESSURE LOOP A | | | | | | | | | | | | PASS | |
| 50 | P2RC006A | RCS WIDE RANGE PRESSURE LOOP C | | | | | | | | | | | | PASS | |
| | | | | | | | | | | | | | | | |
| 51 | P0398A | TURBINE FIRST STAGE PRESSURE | | | | | | | | | | | | PASS | |
| 52 | P0399A | TURBINE FIRST STAGE PRESSURE | | | | | | | | | | | | PASS | |

*R = Exceeded Redundant Sensor Analysis Limits  M = Exceeded Model Analysis Limits  D = Exceeded Drift Limits*

**Table I.1 (continued) North Anna Unit 2 OLM Results Summary (Cycle 21)**

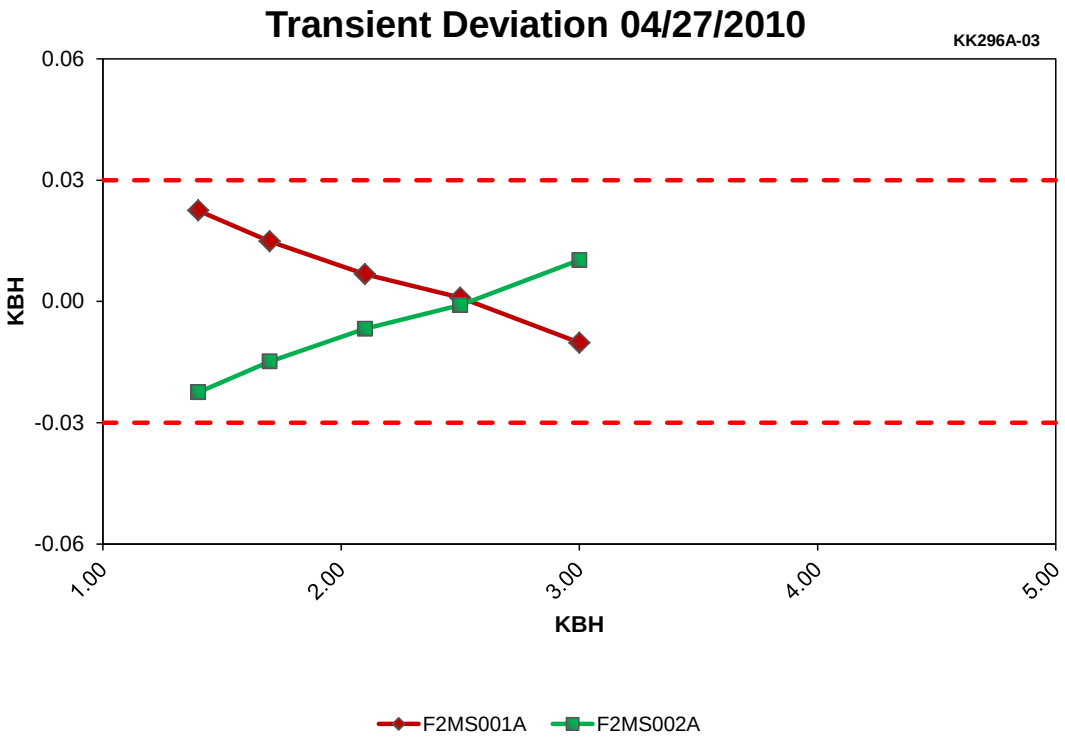



**Figure I.1 SG A STEAM FLOW Transient Deviation at North Anna Unit 2 (Cycle 21)**

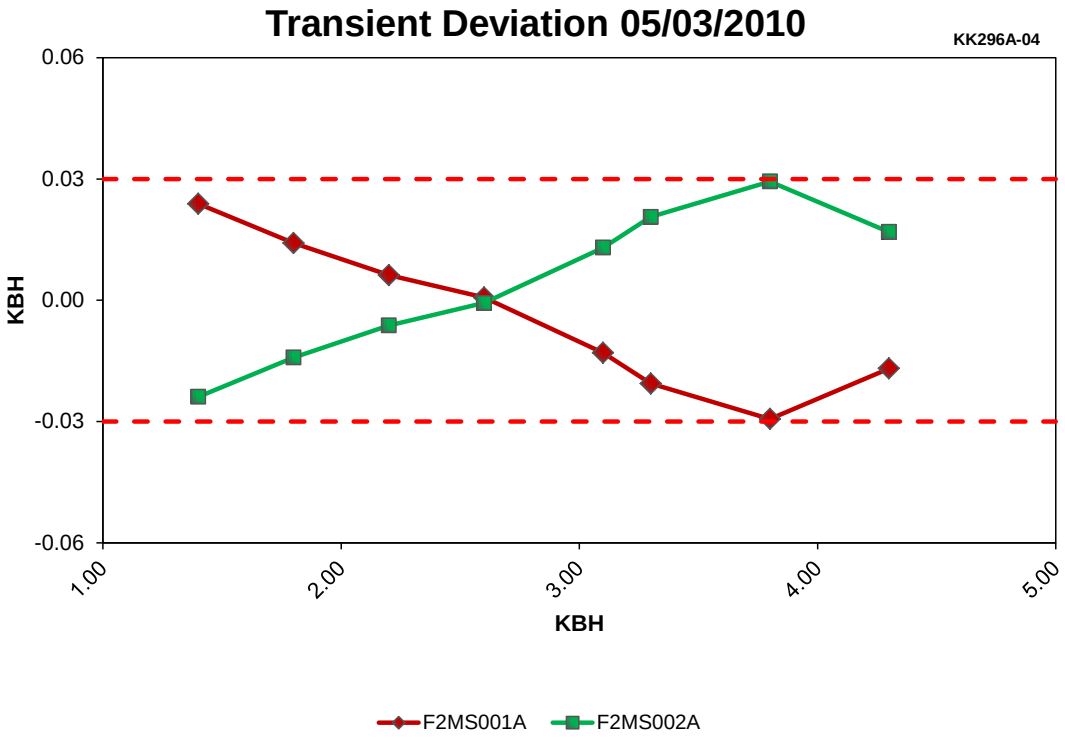



**Figure I.2 SG A STEAM FLOW Transient Deviation at North Anna Unit 2 (Cycle 21)**

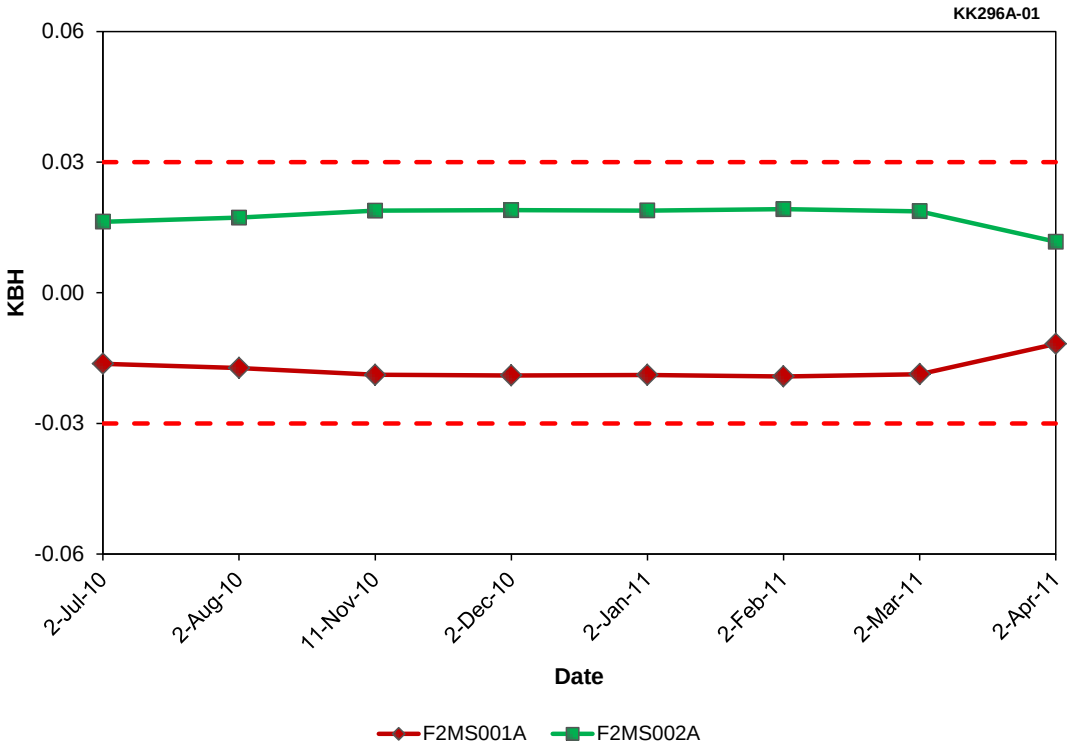



**Figure I.3 SG A STEAM FLOW Steady-State Deviation at North Anna Unit 2 (Cycle 21)**

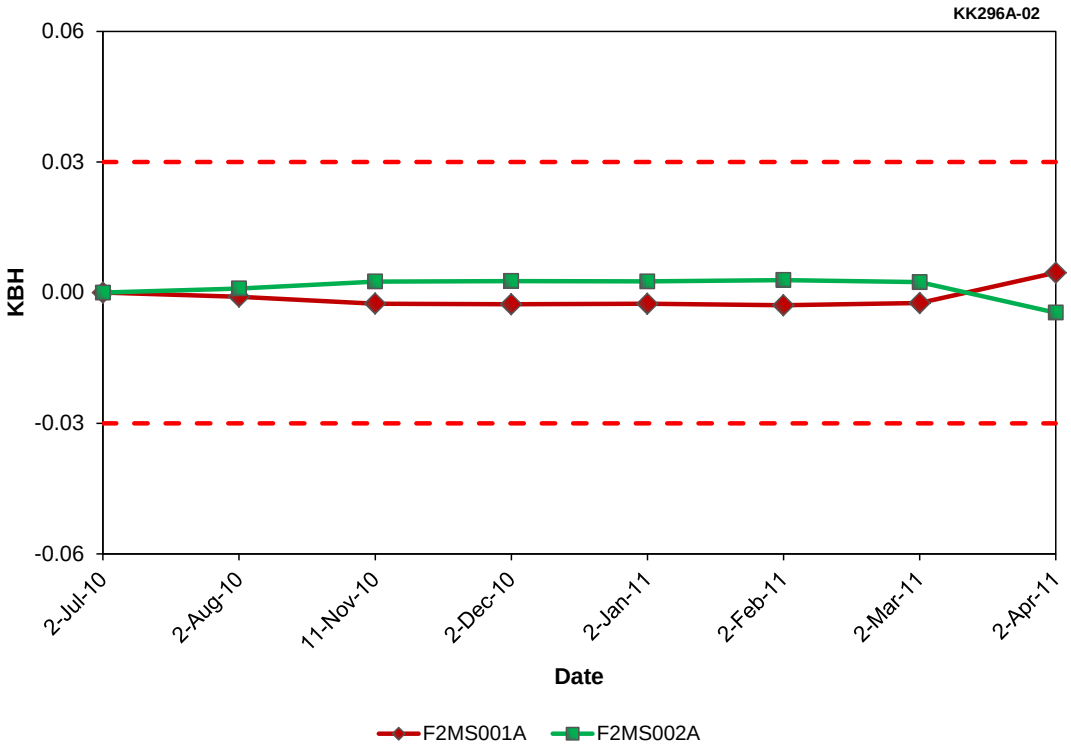



**Figure I.4 SG A STEAM FLOW Steady-State Drift at North Anna Unit 2 (Cycle 21)**

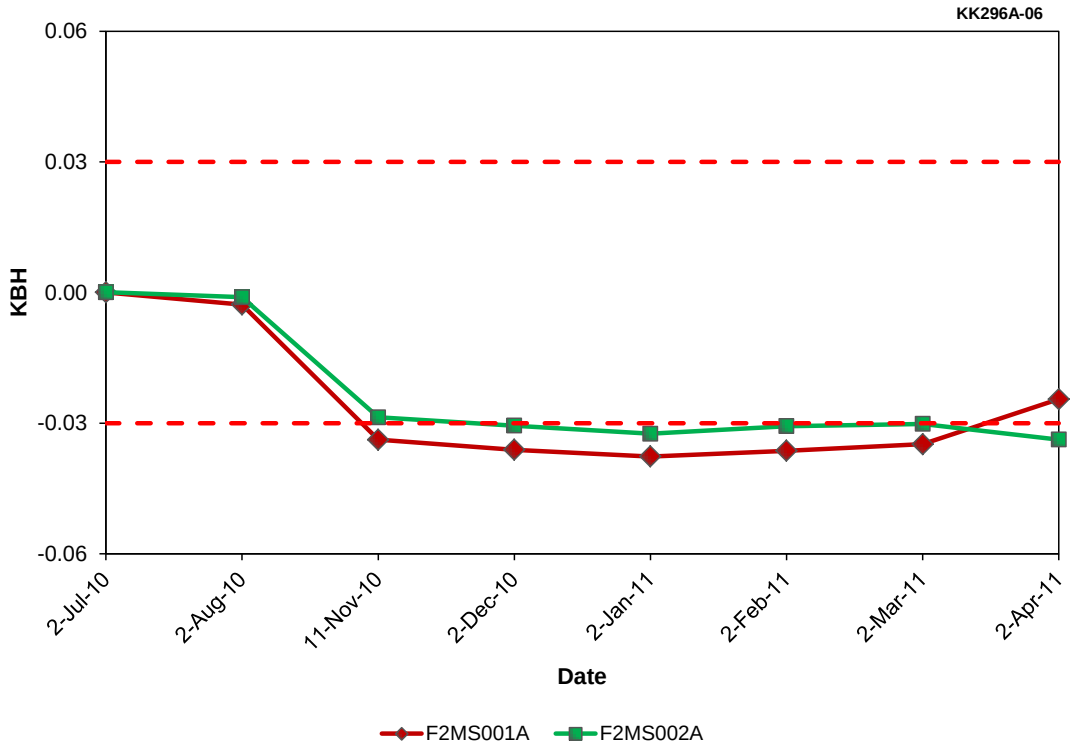



**Figure I.5 SG A STEAM FLOW Steady-State Residual AAKR at North Anna Unit 2 (Cycle 21)**

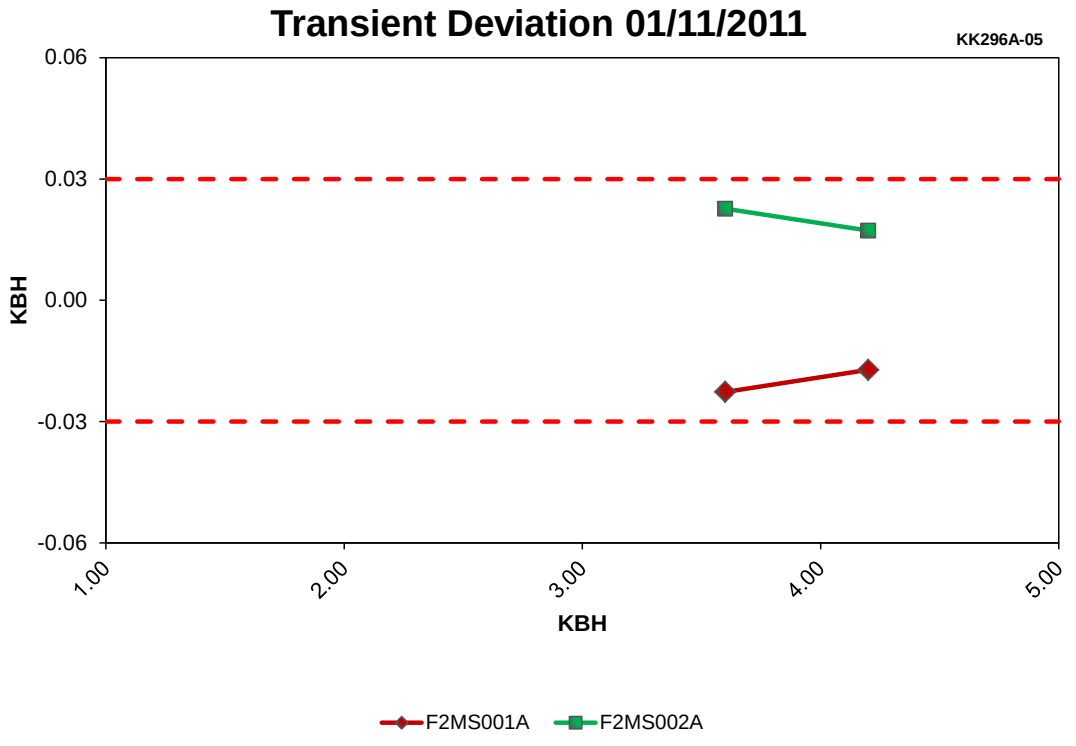



**Figure I.6 SG A STEAM FLOW Transient Deviation at North Anna Unit 2 (Cycle 21)**

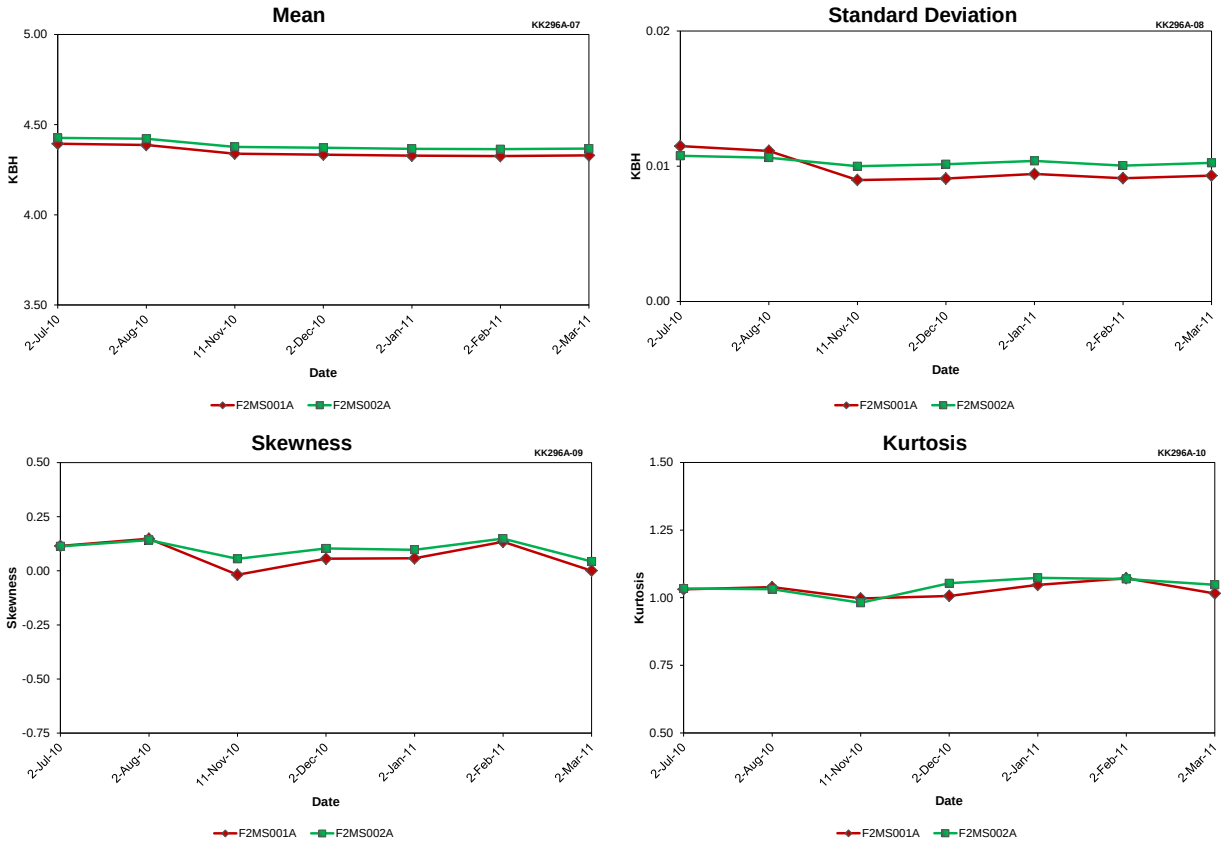



**Figure I.7 SG A STEAM FLOW Data Quality Statistics at North Anna Unit 2 (Cycle 21)**

**Table I.1 SG A STEAM FLOW Data Quality for North Anna Unit 2 (Cycle 21)**

| | Tag Names | |
|---|---|---|
| **Result Type** | **F2MS001A** | **F2MS002A** |
| Mean | 4.35 | 4.38 |
| Std. Dev. | 0.01 | 0.01 |
| Skewness | 0.07 | 0.10 |
| Kurtosis | 1.03 | 1.04 |

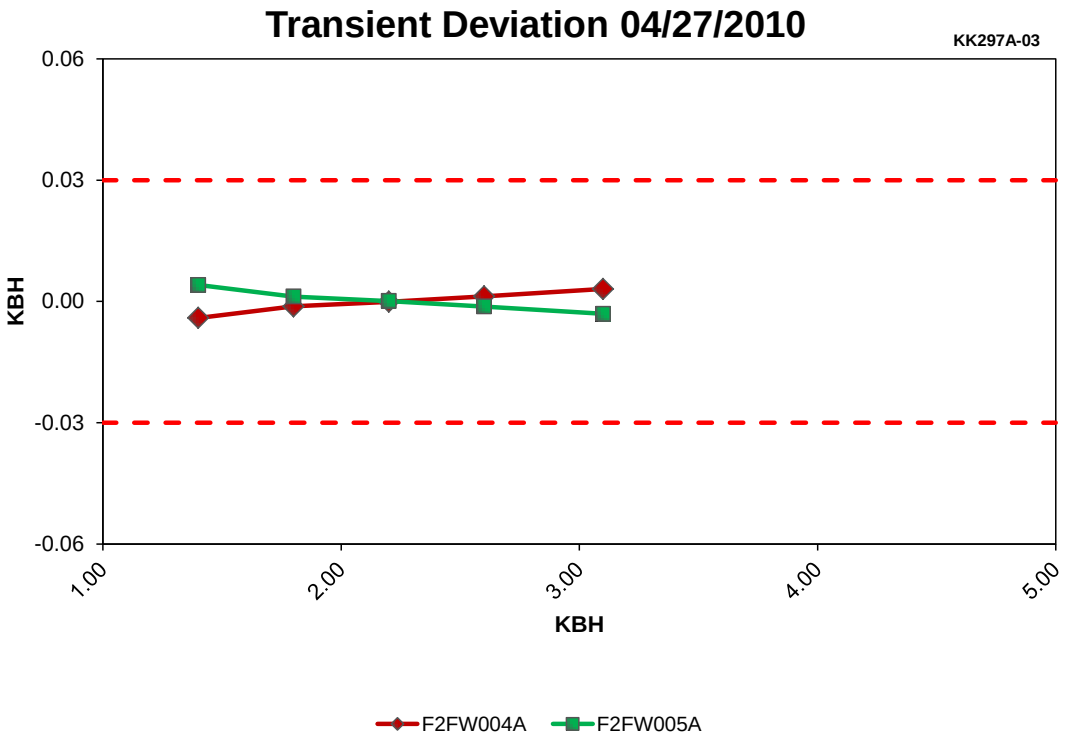



**Figure I.8 FW FLOW TO SG A Transient Deviation at North Anna Unit 2 (Cycle 21)**

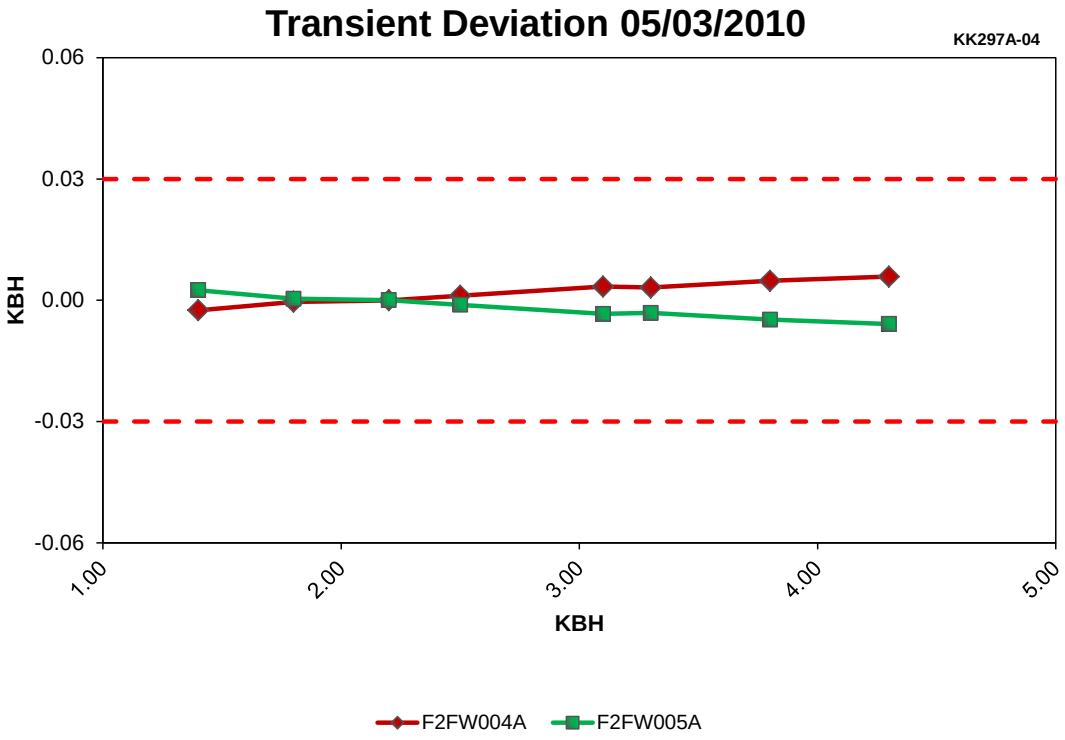



**Figure I.9 FW FLOW TO SG A Transient Deviation at North Anna Unit 2 (Cycle 21)**

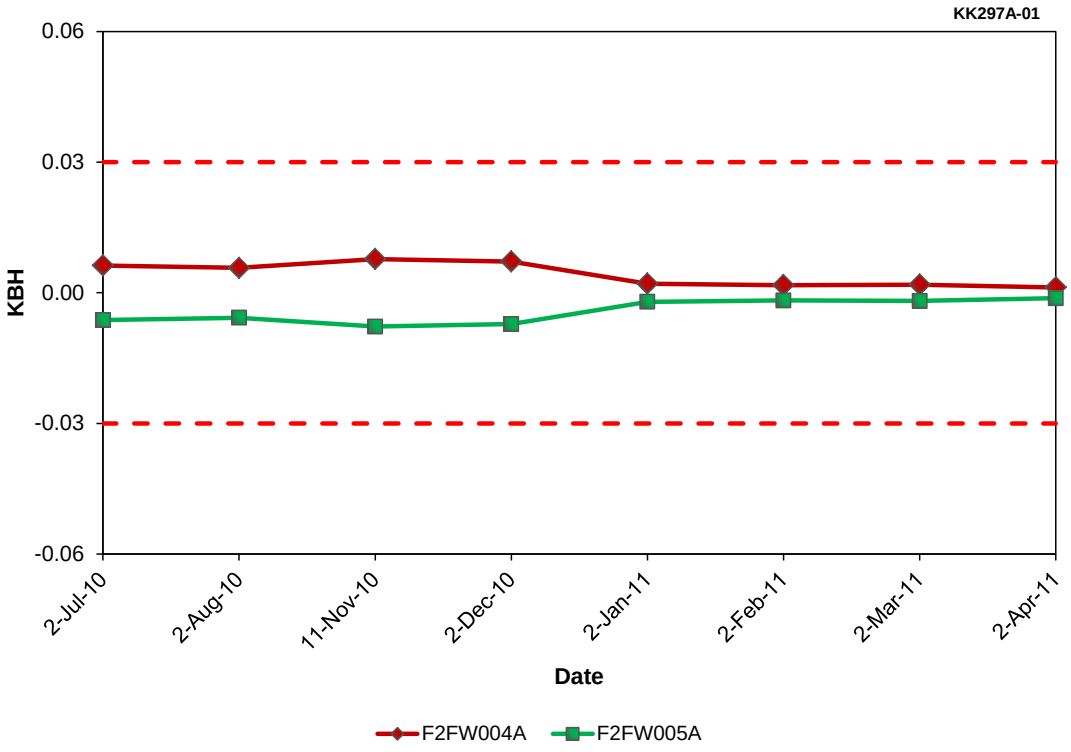



**Figure I.10 FW FLOW TO SG A Steady-State Deviation at North Anna Unit 2 (Cycle 21)**

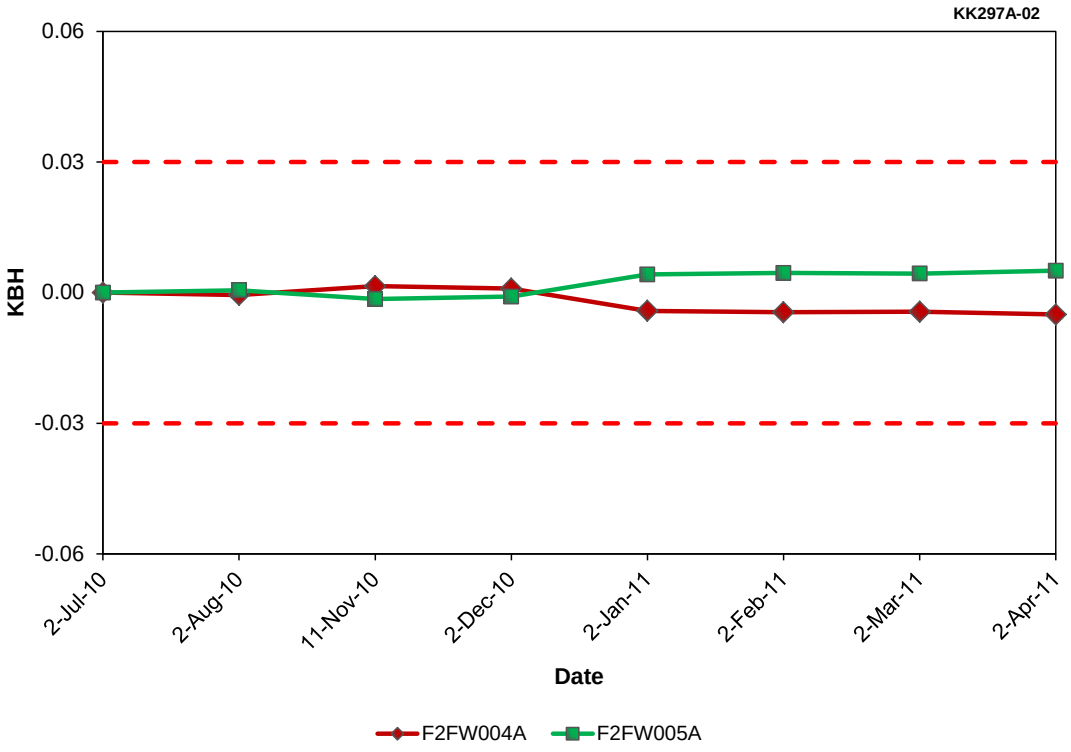



**Figure I.11 FW FLOW TO SG A Steady-State Drift at North Anna Unit 2 (Cycle 21)**

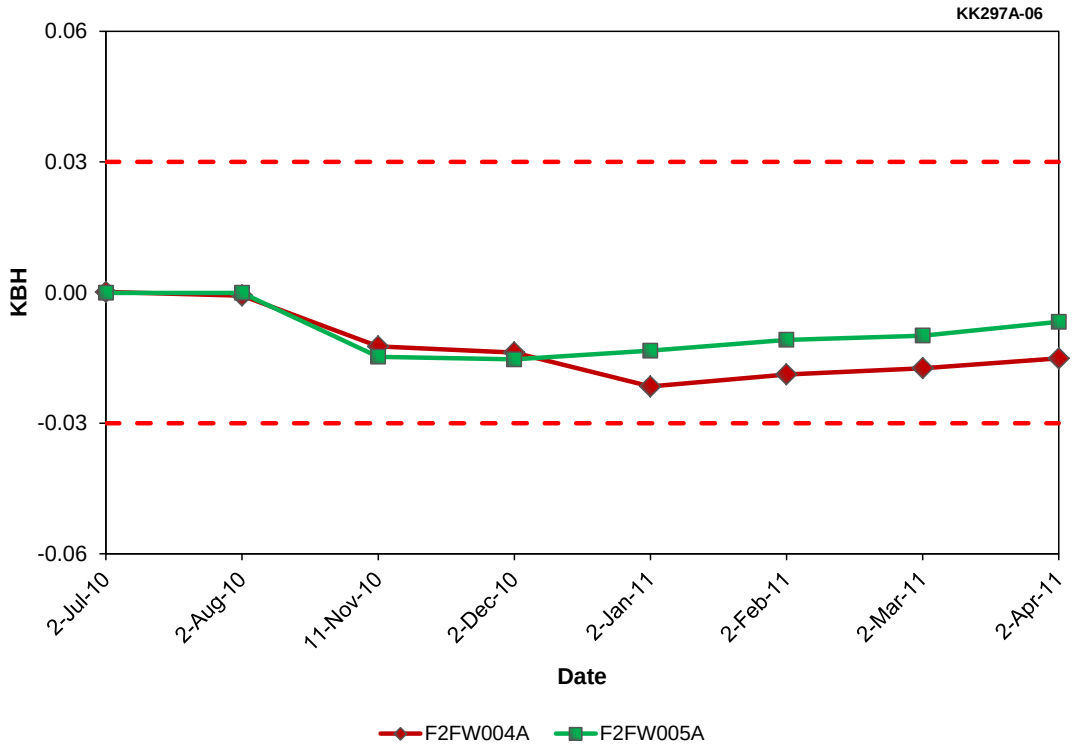



**Figure I.12 FW FLOW TO SG A Steady-State Residual AAKR at North Anna Unit 2 (Cycle 21)**

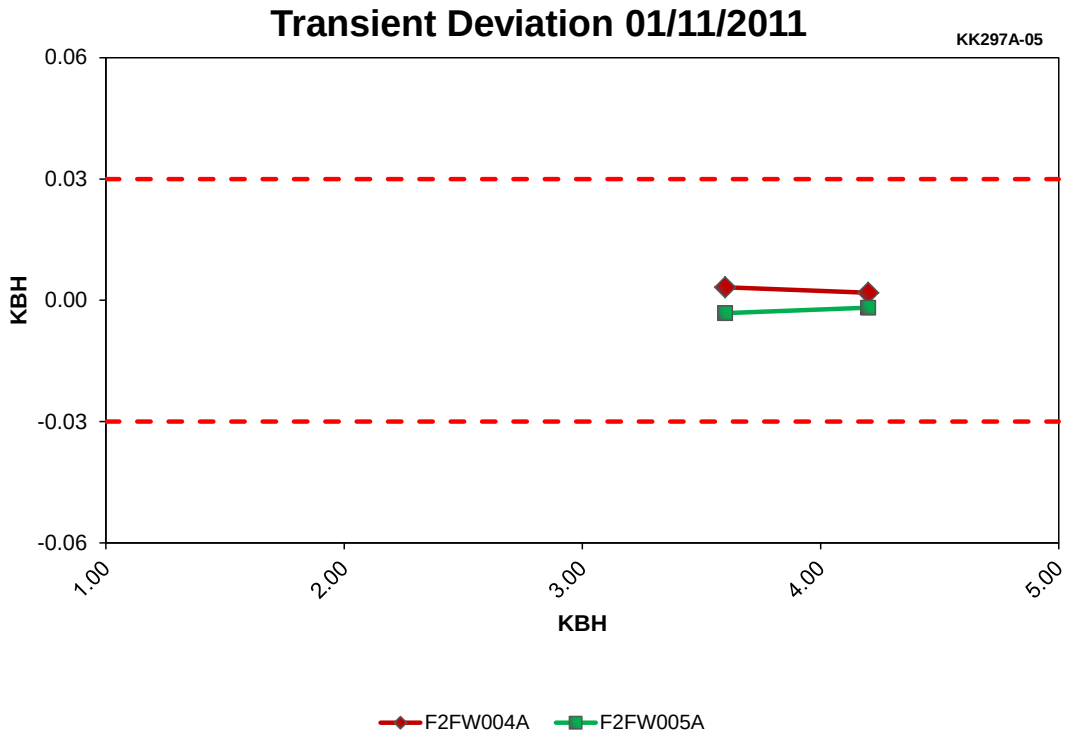



**Figure I.13 FW FLOW TO SG A Transient Deviation at North Anna Unit 2 (Cycle 21)**

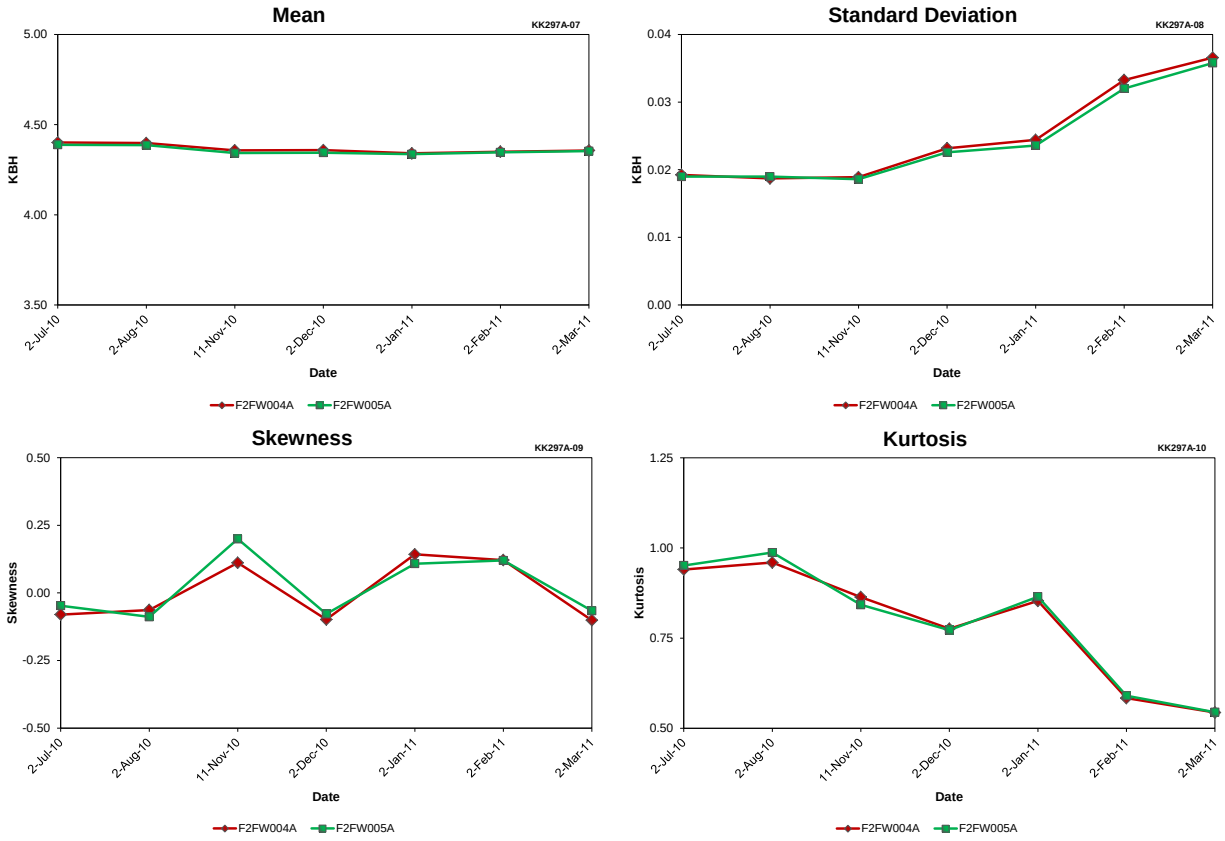
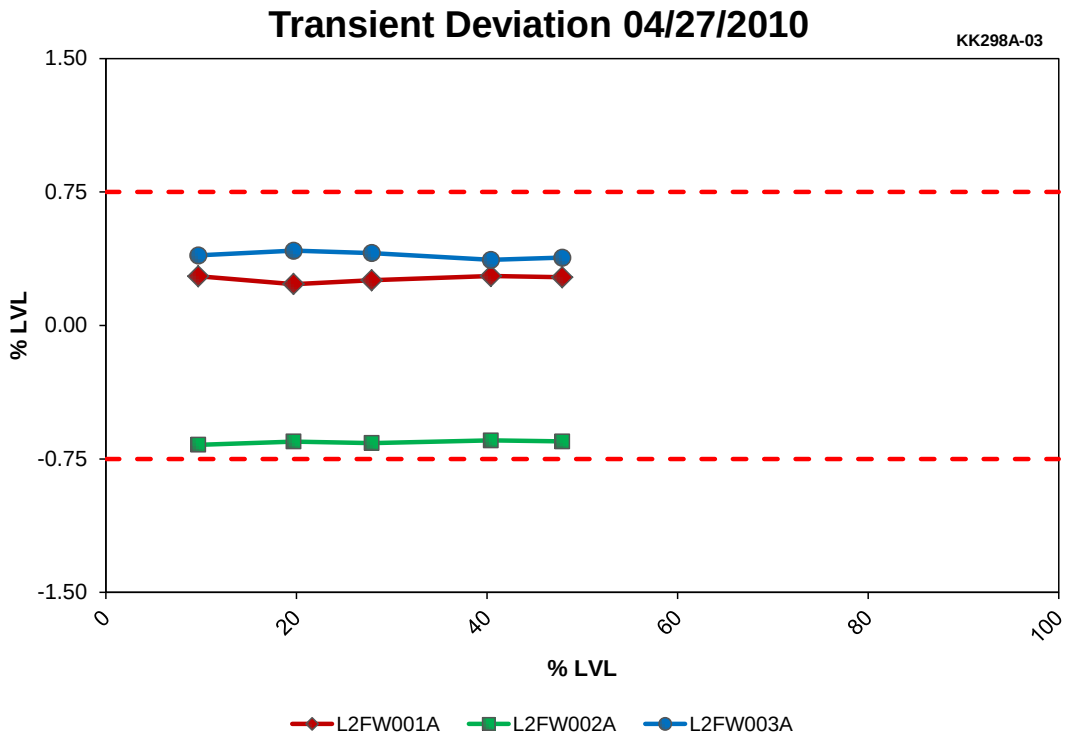



**Figure I.14 FW FLOW TO SG A Data Quality Statistics at North Anna Unit 2 (Cycle 21)**

**Table I.2 FW FLOW TO SG A Data Quality for North Anna Unit 2 (Cycle 21)**

| Result Type | Tag Names | |
|---|---|---|
| | F2FW004A | F2FW005A |
| Mean | 4.37 | 4.36 |
| Std. Dev. | 0.02 | 0.02 |
| Skewness | 0.00 | 0.02 |
| Kurtosis | 0.79 | 0.79 |

**Figure I.15 SG A LEVEL Transient Deviation at North Anna Unit 2 (Cycle 21)**



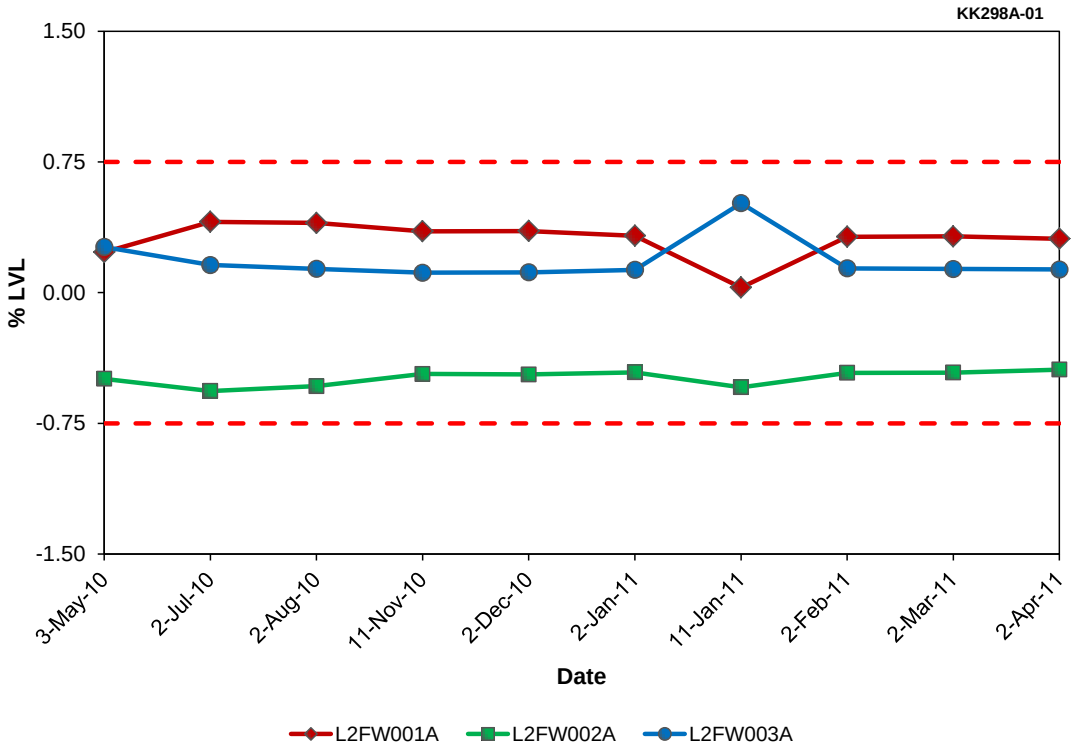



**Figure I.16 SG A LEVEL Steady-State Deviation at North Anna Unit 2 (Cycle 21)**

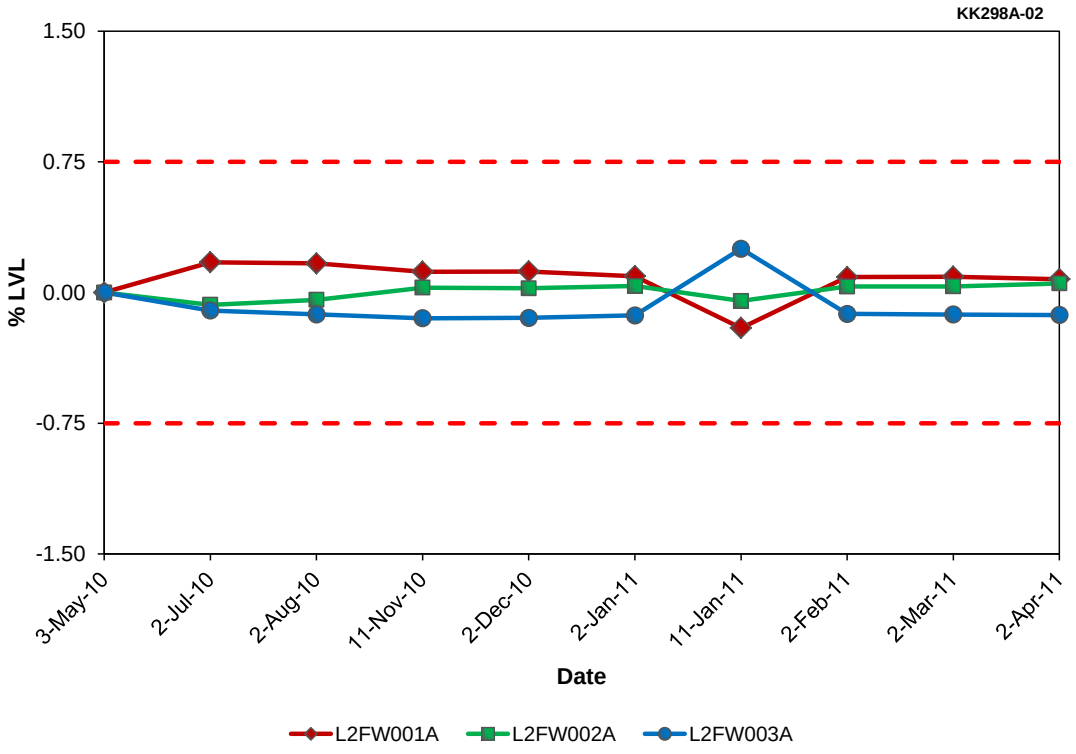



**Figure I.17 SG A LEVEL Steady-State Drift at North Anna Unit 2 (Cycle 21)**

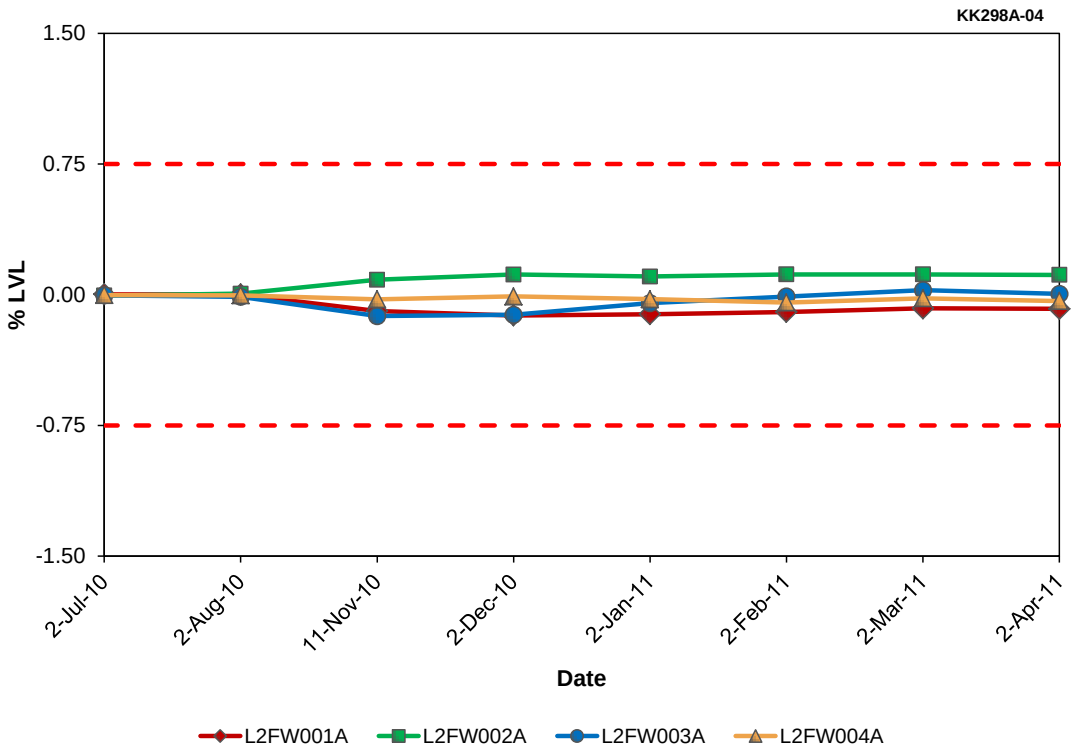



**Figure I.18 SG A LEVEL Steady-State Residual AAKR at North Anna Unit 2 (Cycle 21)**

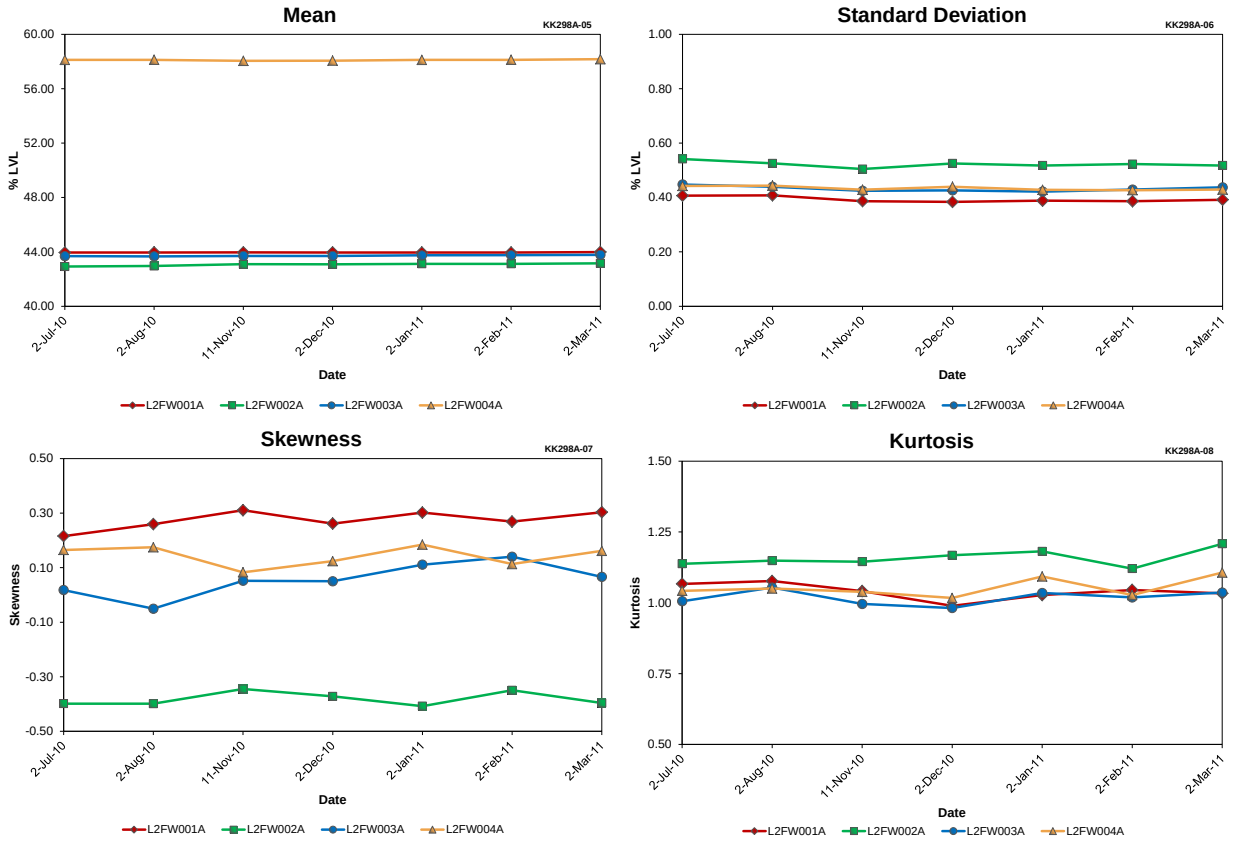



**Figure I.19 SG A LEVEL Data Quality Statistics at North Anna Unit 2 (Cycle 21)**

**Table I.3 SG A LEVEL Data Quality for North Anna Unit 2 (Cycle 21)**

| | Tag Names | | | |
|---|---|---|---|---|
| **Result Type** | **L2FW001A** | **L2FW002A** | **L2FW003A** | **L2FW004A** |
| Mean | 43.96 | 43.07 | 43.72 | 58.11 |
| Std. Dev. | 0.39 | 0.52 | 0.43 | 0.43 |
| Skewness | 0.27 | -0.38 | 0.06 | 0.14 |
| Kurtosis | 1.04 | 1.16 | 1.02 | 1.05 |

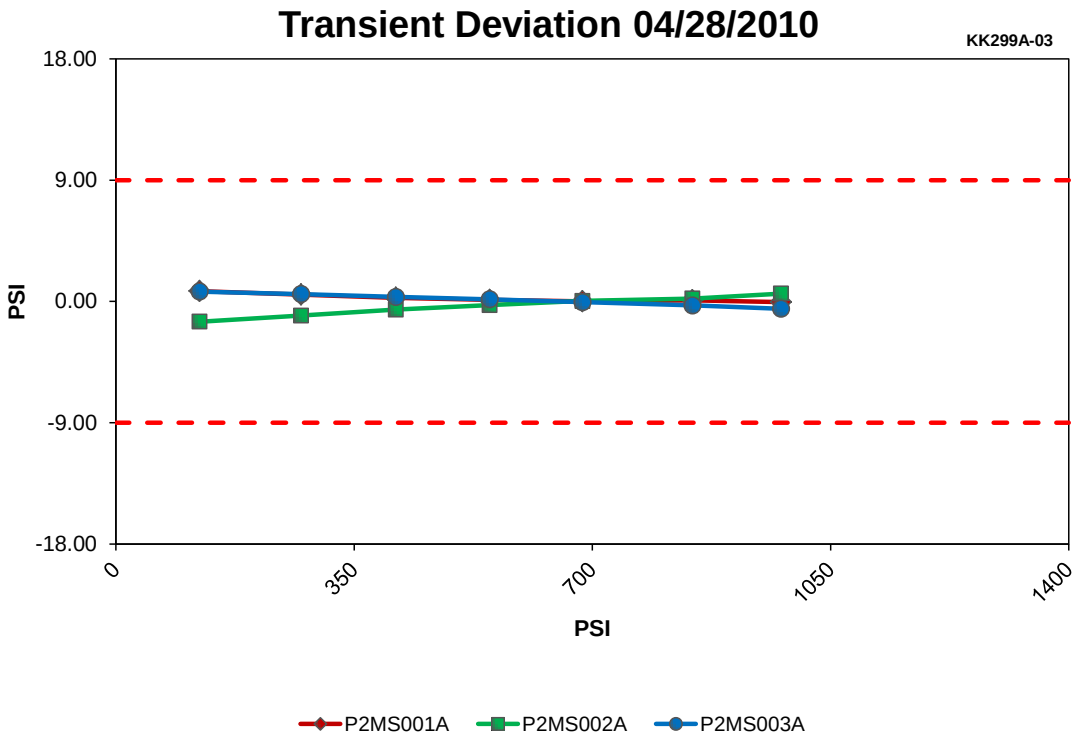



**Figure I.20 SG A OUTLET PRESSURE Transient Deviation at North Anna Unit 2 (Cycle 21)**

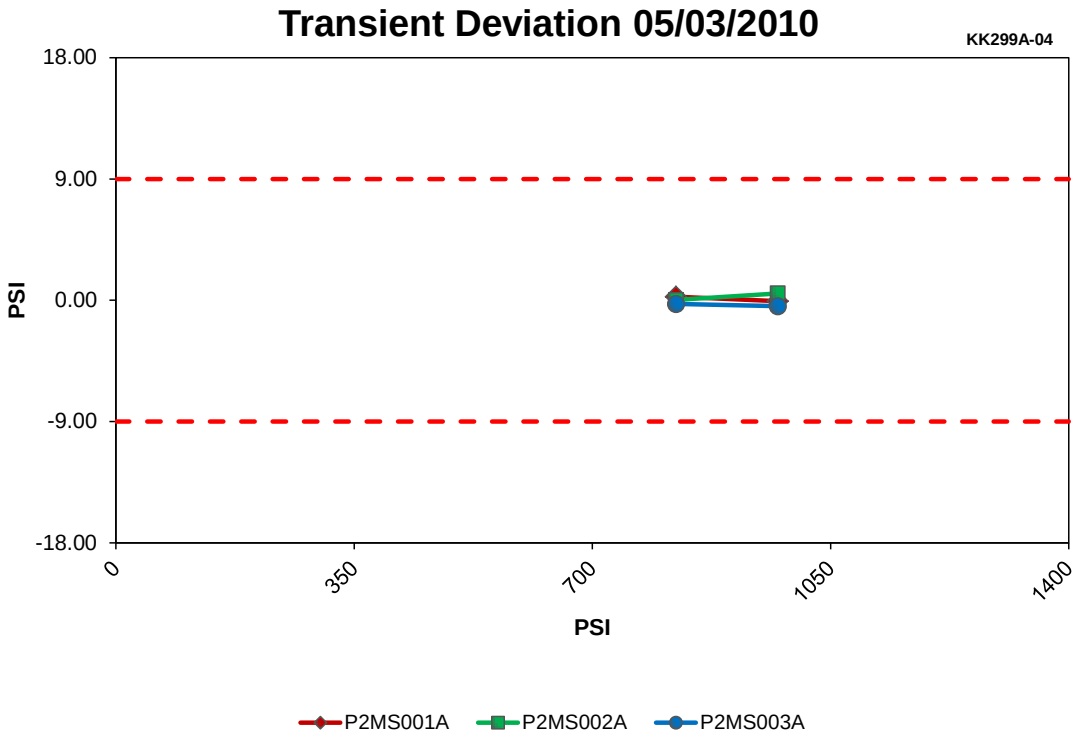



**Figure I.21 SG A OUTLET PRESSURE Transient Deviation at North Anna Unit 2 (Cycle 21)**

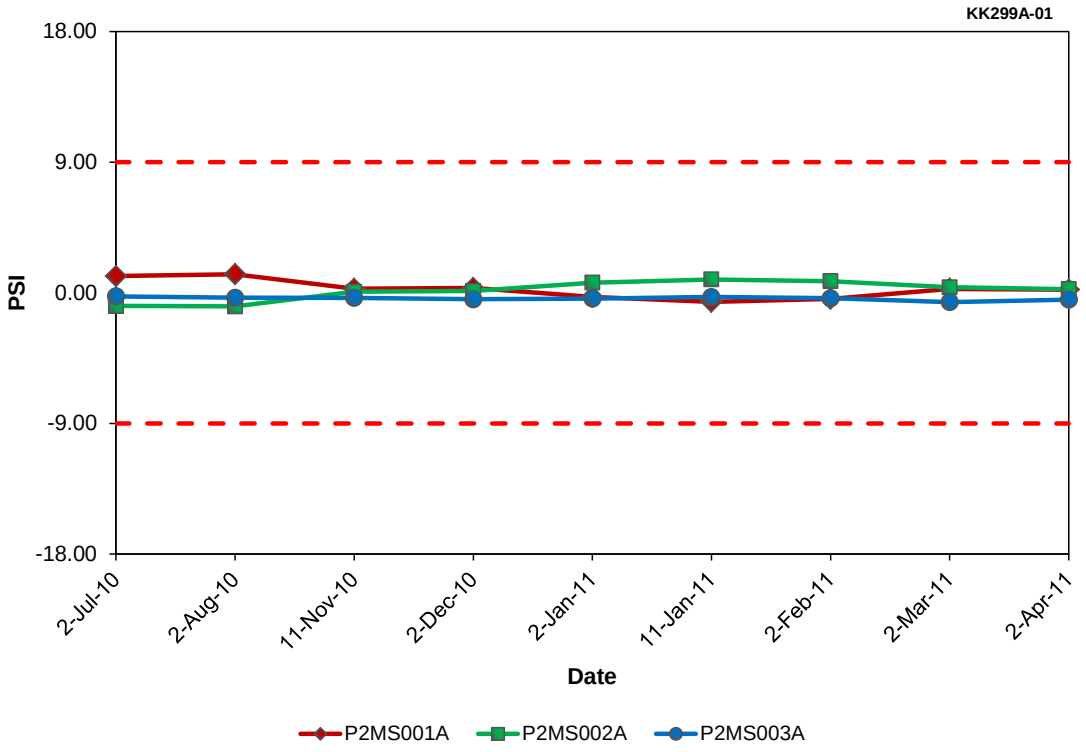



**Figure I.22 SG A OUTLET PRESSURE Steady-State Deviation at North Anna Unit 2 (Cycle 21)**

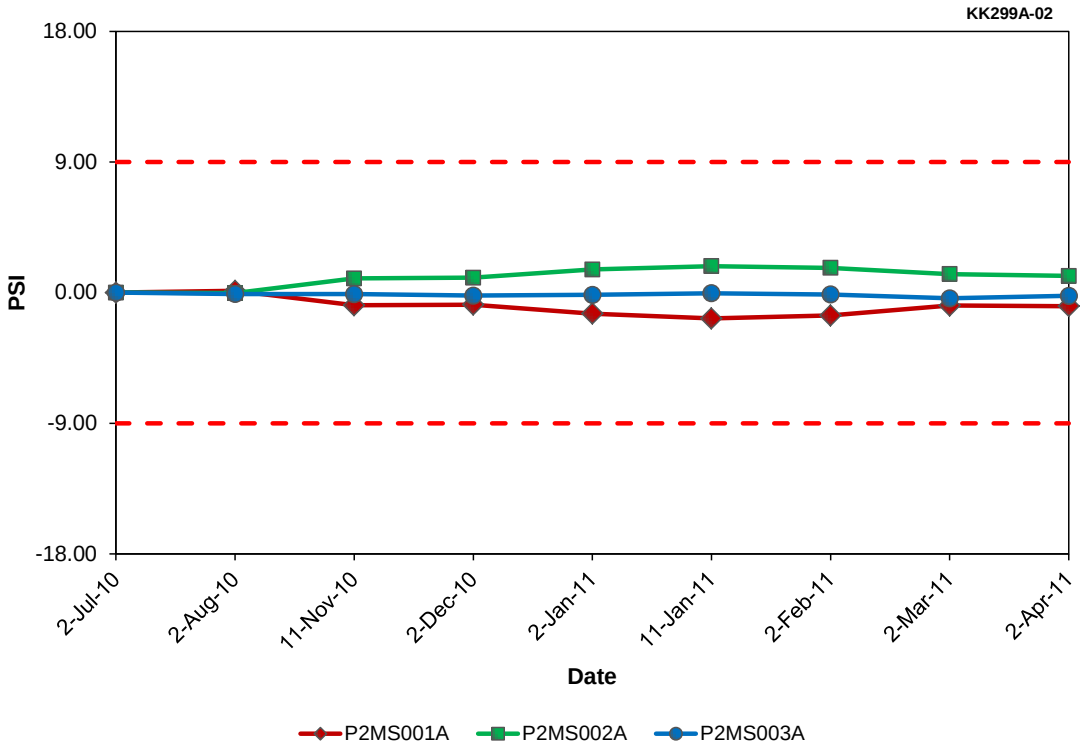



**Figure I.23 SG A OUTLET PRESSURE Steady-State Drift at North Anna Unit 2 (Cycle 21)**

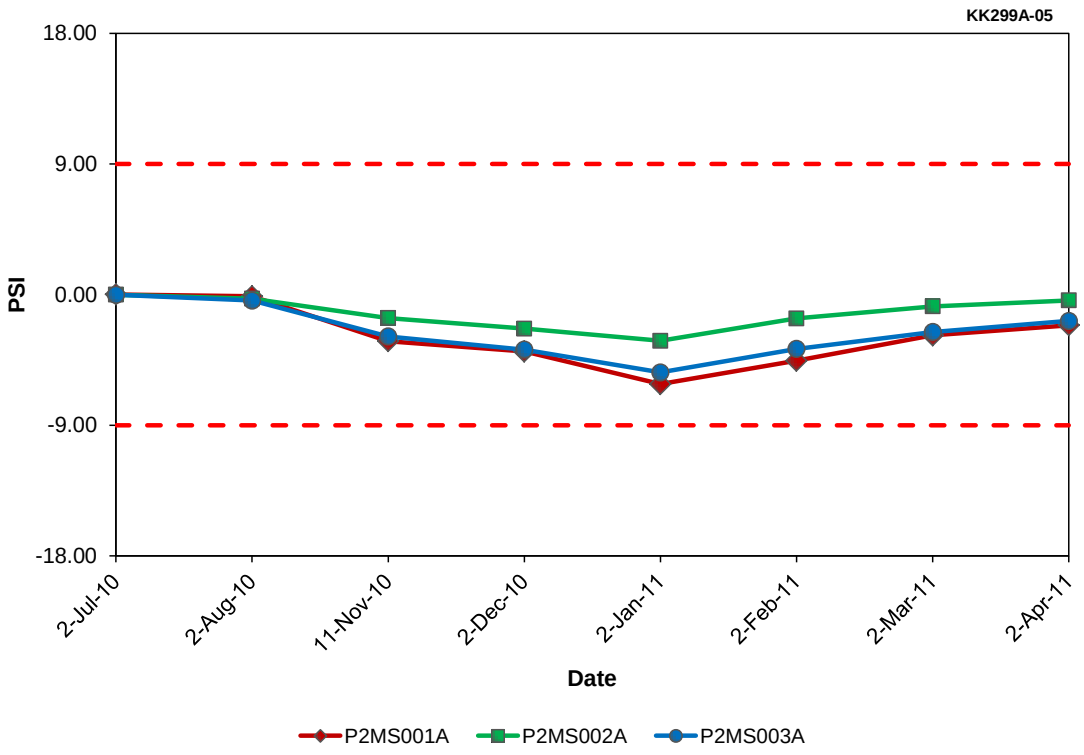



**Figure I.24 SG A OUTLET PRESSURE Steady-State Residual AAKR at North Anna Unit 2 (Cycle 21)**

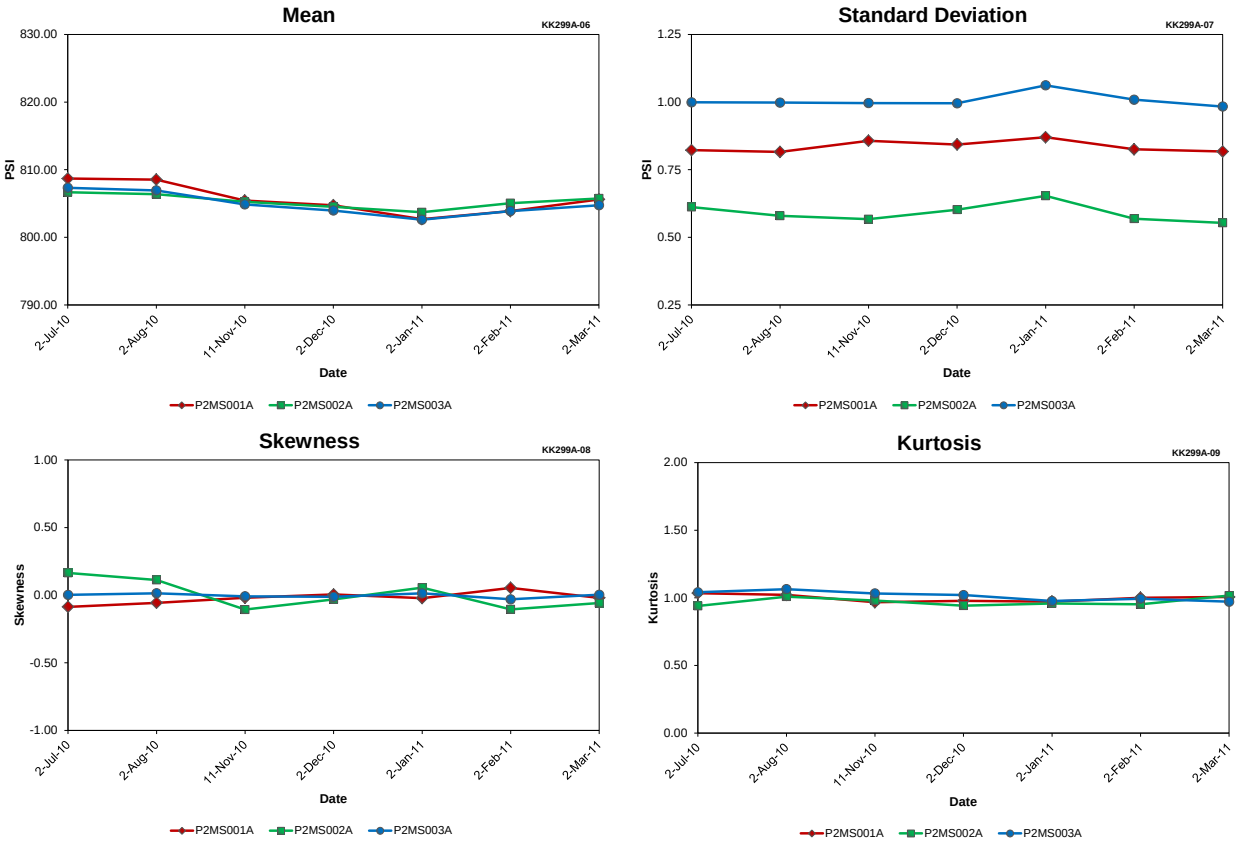



**Figure I.25 SG A OUTLET PRESSURE Data Quality Statistics at North Anna Unit 2 (Cycle 21)**

**Table I.4 SG A OUTLET PRESSURE Data Quality for North Anna Unit 2 (Cycle 21)**

| | Tag Names | | |
|---|---|---|---|
| **Result Type** | **P2MS001A** | **P2MS002A** | **P2MS003A** |
| Mean | 805.66 | 805.33 | 804.90 |
| Std. Dev. | 0.84 | 0.59 | 1.01 |
| Skewness | -0.02 | 0.00 | 0.00 |
| Kurtosis | 1.00 | 0.97 | 1.01 |

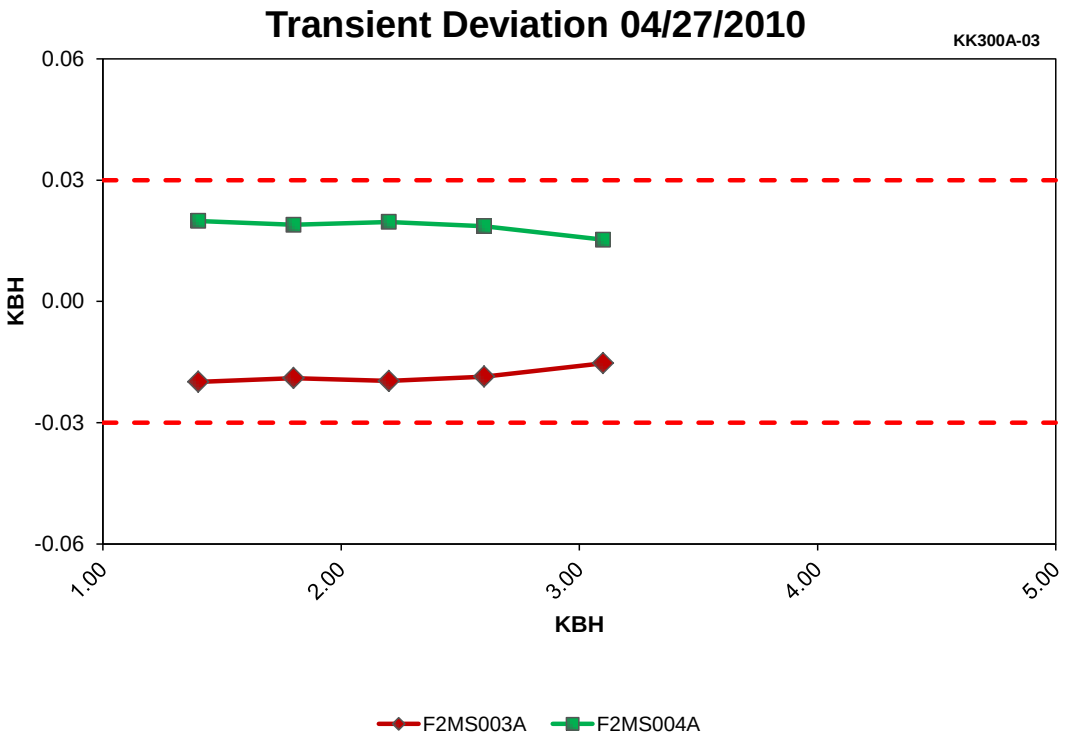



**Figure I.26 SG B STEAM FLOW Transient Deviation at North Anna Unit 2 (Cycle 21)**

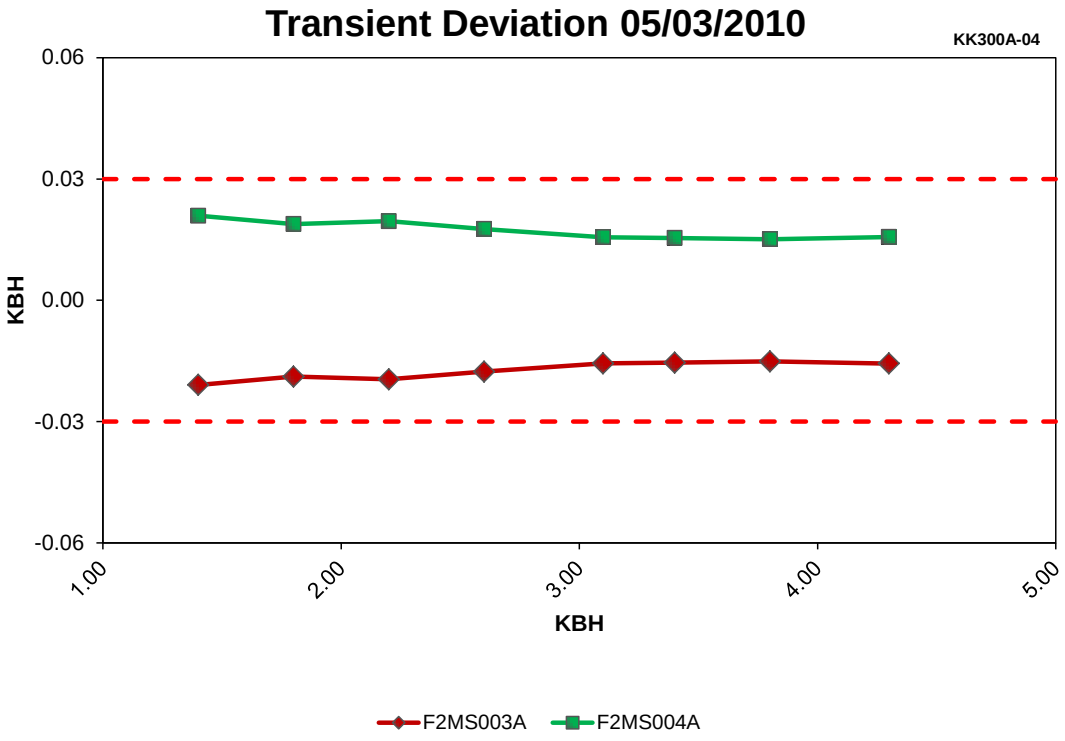



**Figure I.27 SG B STEAM FLOW Transient Deviation at North Anna Unit 2 (Cycle 21)**

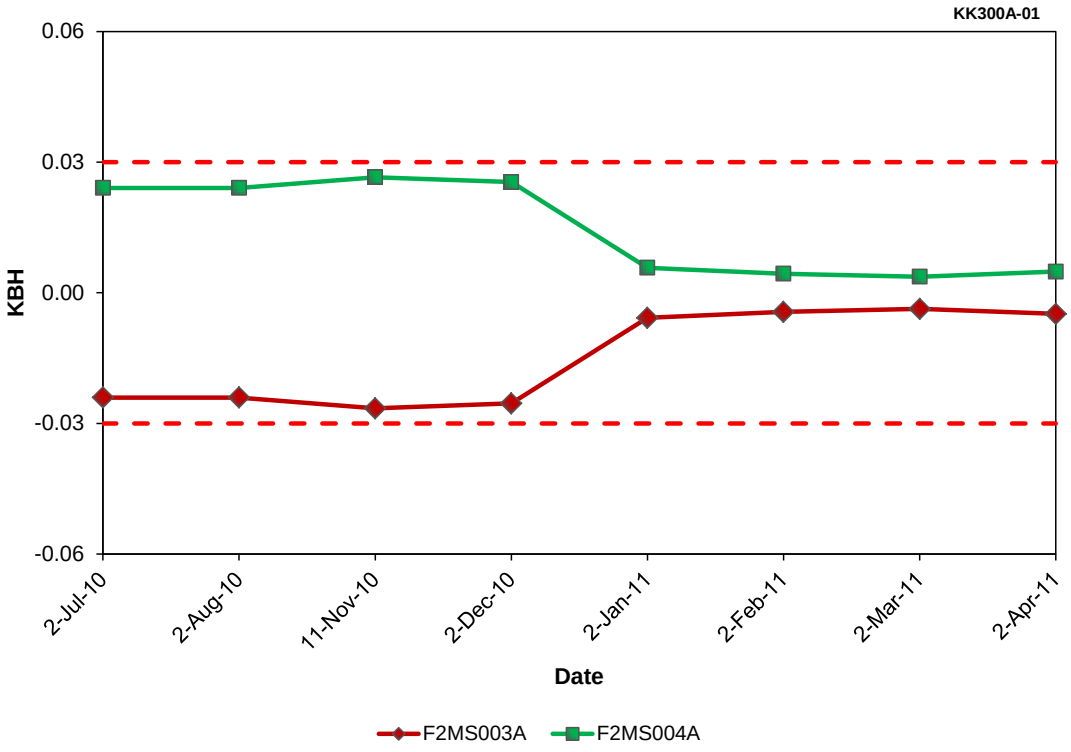



**Figure I.28 SG B STEAM FLOW Steady-State Deviation at North Anna Unit 2 (Cycle 21)**

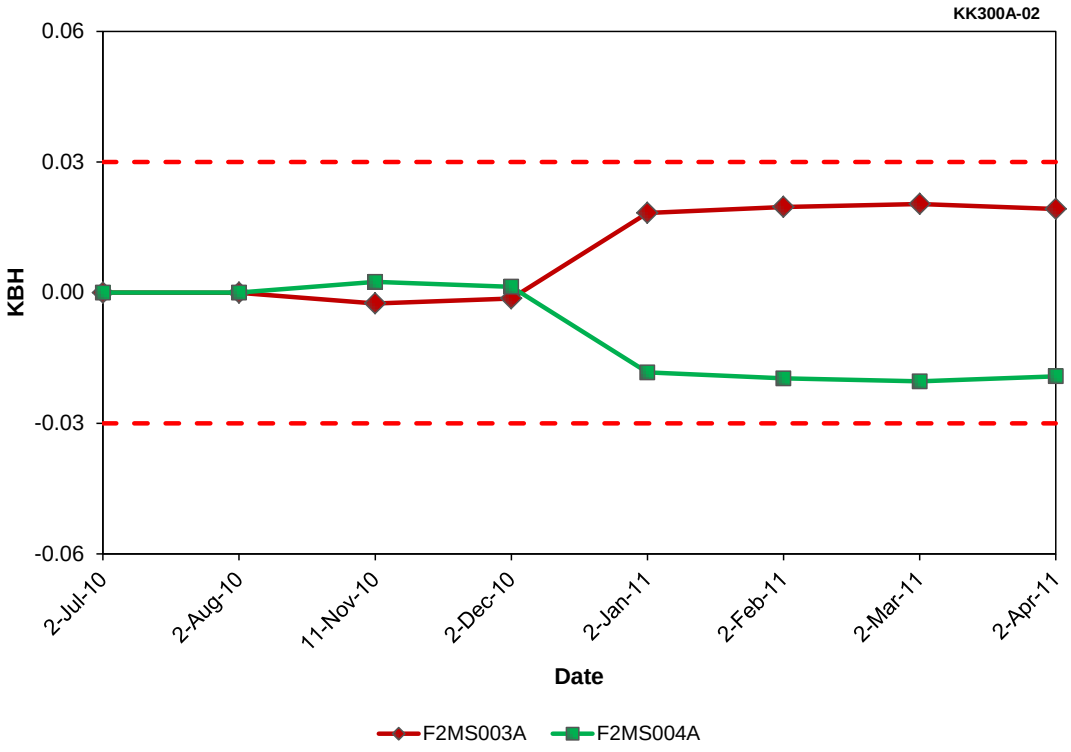



**Figure I.29 SG B STEAM FLOW Steady-State Drift at North Anna Unit 2 (Cycle 21)**

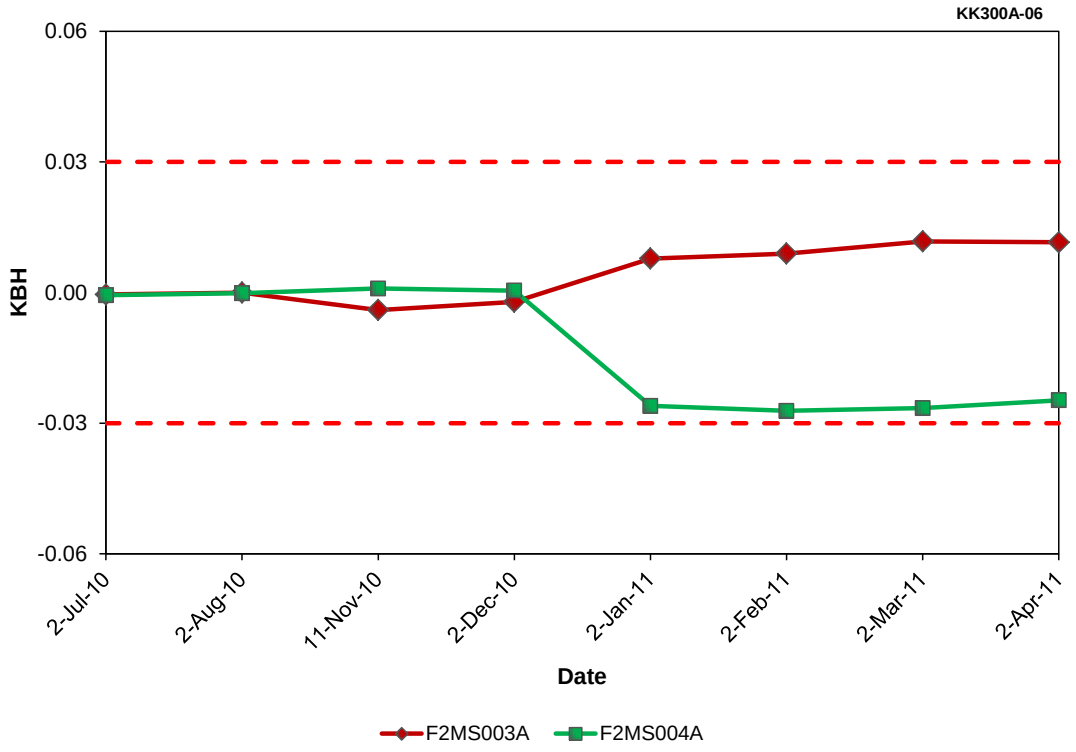



**Figure I.30 SG B STEAM FLOW Steady-State Residual AAKR at North Anna Unit 2 (Cycle 21)**

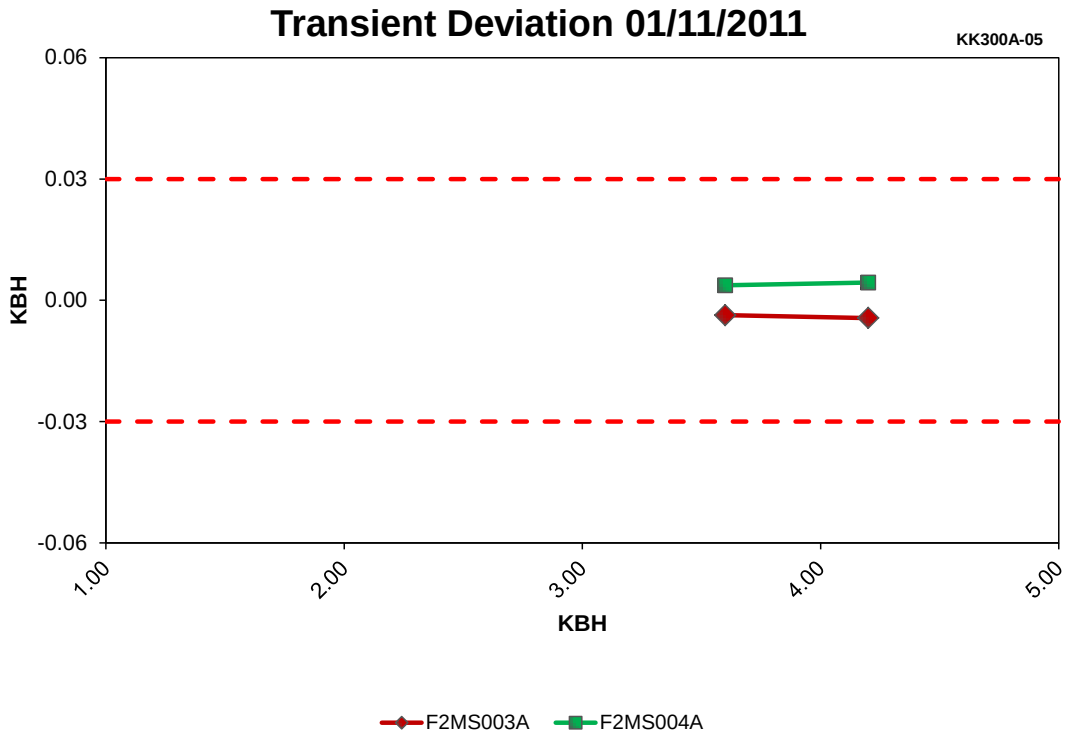



**Figure I.31 SG B STEAM FLOW Transient Deviation at North Anna Unit 2 (Cycle 21)**

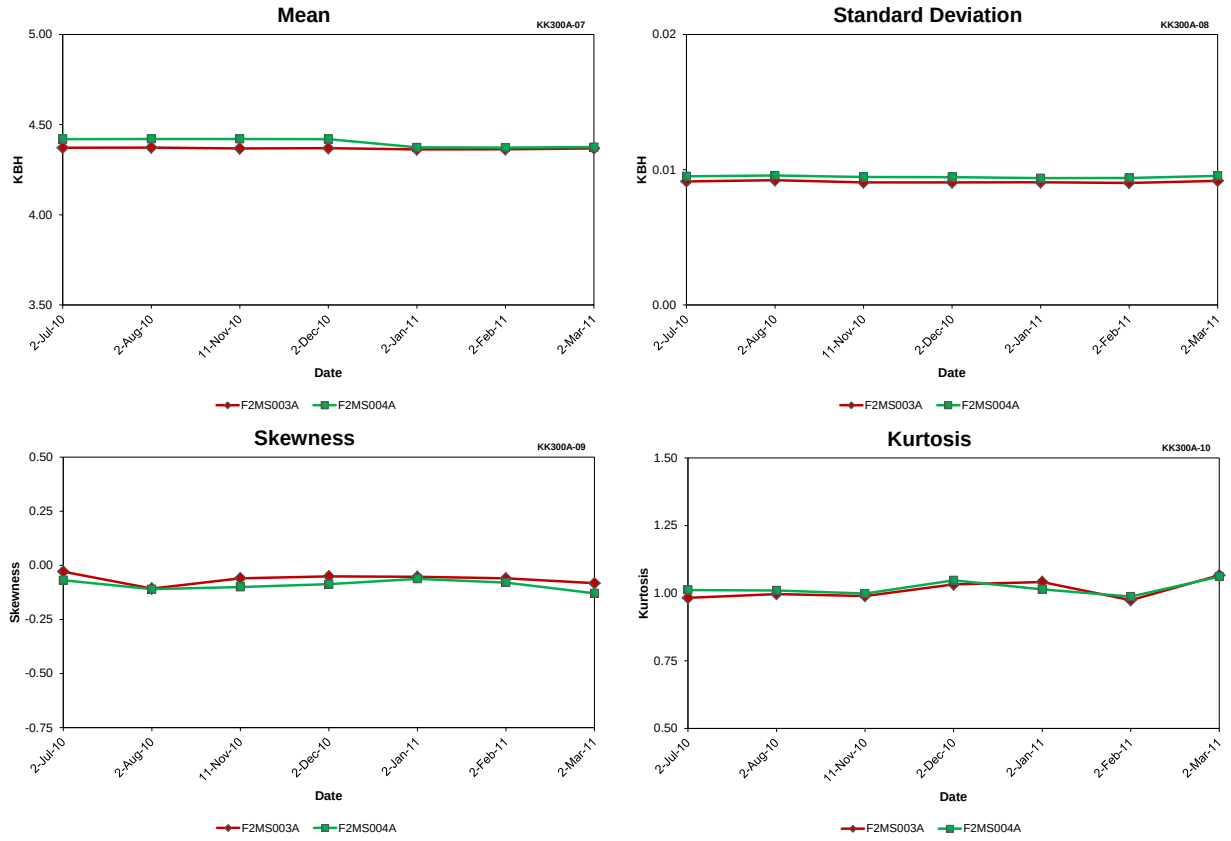



**Figure I.32 SG B STEAM FLOW Data Quality Statistics at North Anna Unit 2 (Cycle 21)**

**Table I.5 SG B STEAM FLOW Data Quality for North Anna Unit 2 (Cycle 21)**

| | Tag Names | |
|---|---|---|
| Result Type | F2MS003A | F2MS004A |
| Mean | 4.37 | 4.40 |
| Std. Dev. | 0.01 | 0.01 |
| Skewness | -0.06 | -0.09 |
| Kurtosis | 1.01 | 1.02 |

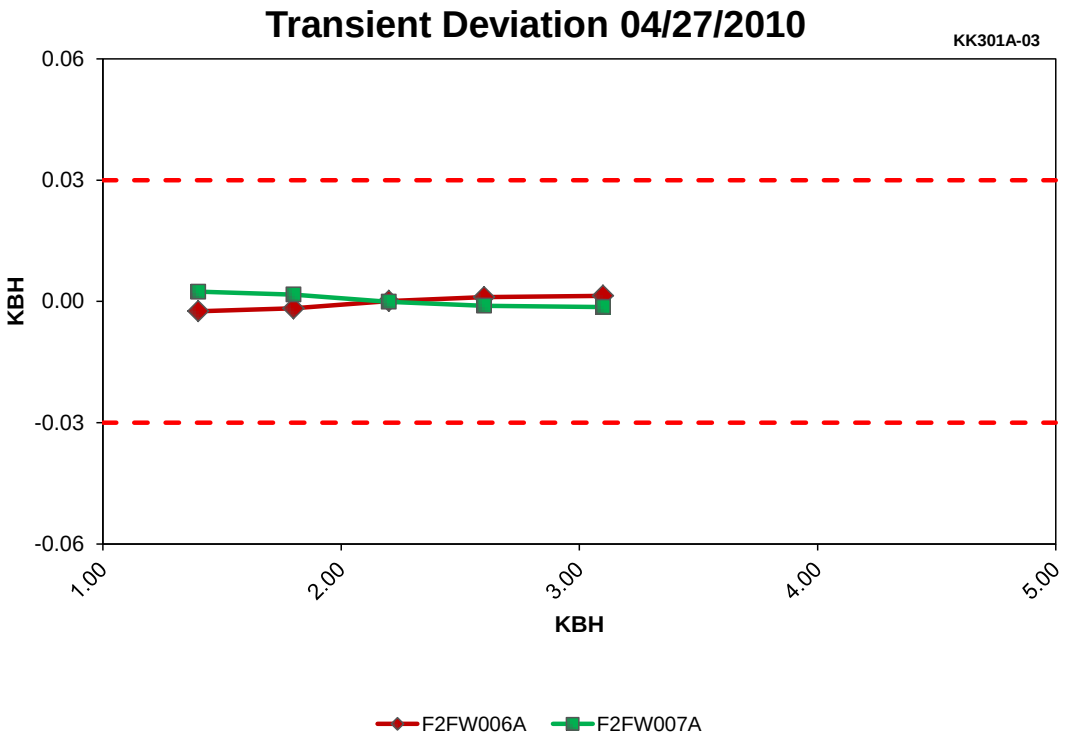



**Figure I.33 FW FLOW TO SG B Transient Deviation at North Anna Unit 2 (Cycle 21)**

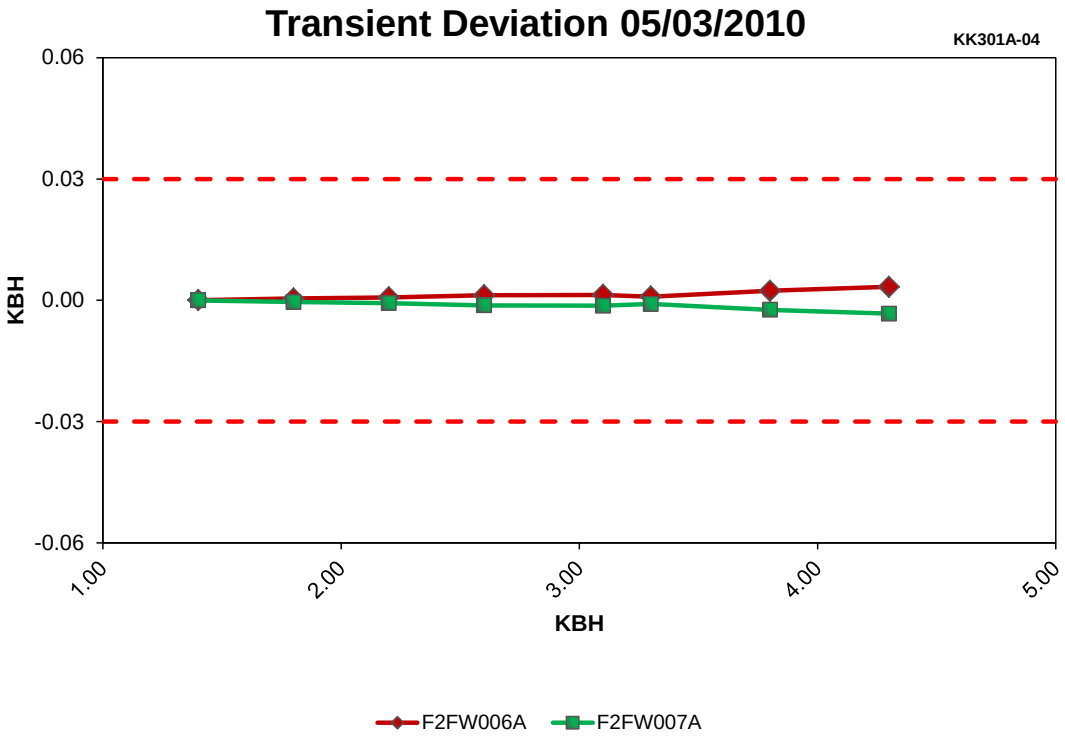



**Figure I.34 FW FLOW TO SG B Transient Deviation at North Anna Unit 2 (Cycle 21)**

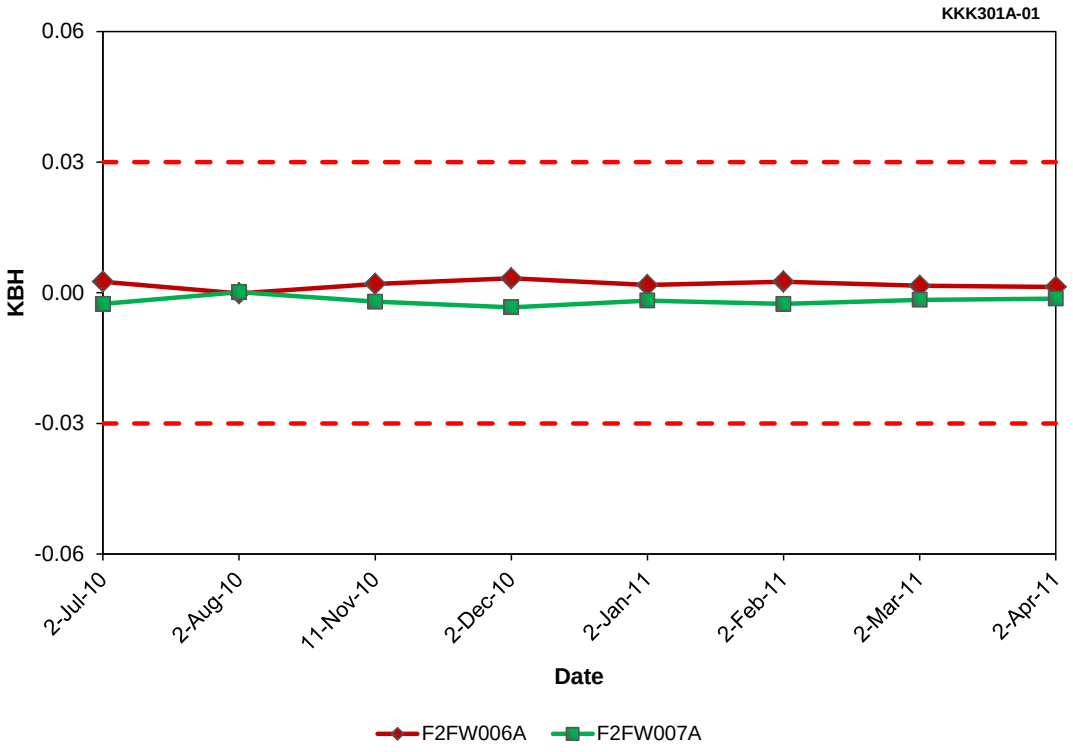



**Figure I.35 FW FLOW TO SG B Steady-State Deviation at North Anna Unit 2 (Cycle 21)**

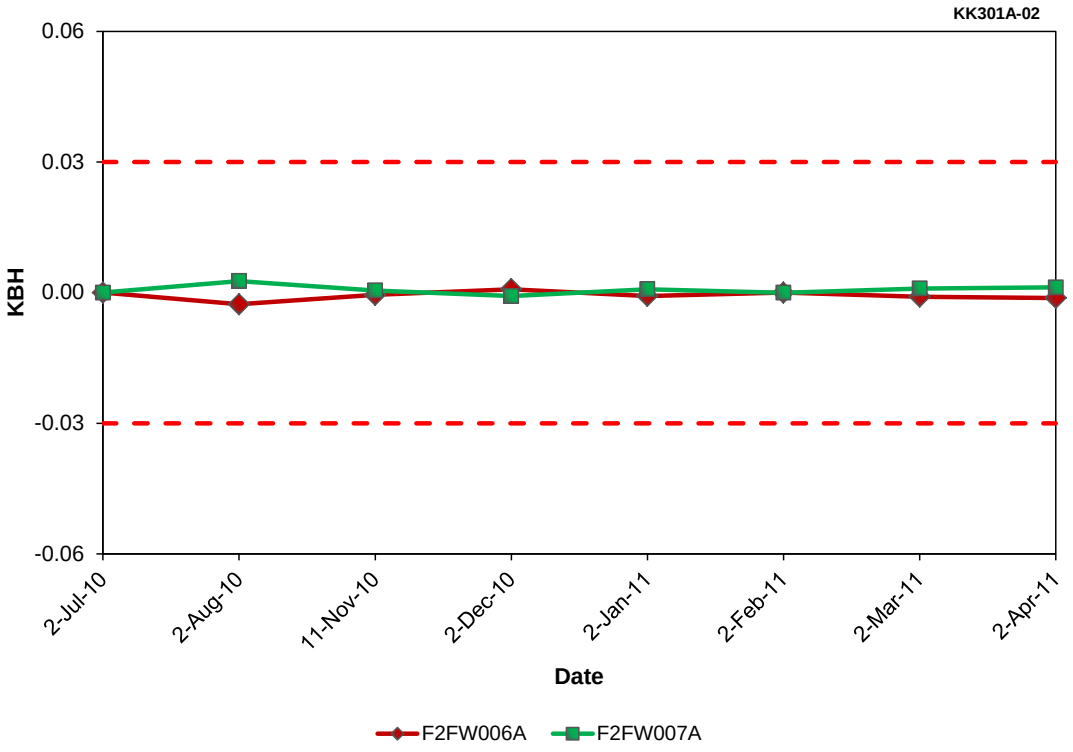



**Figure I.36 FW FLOW TO SG B Steady-State Drift at North Anna Unit 2 (Cycle 21)**

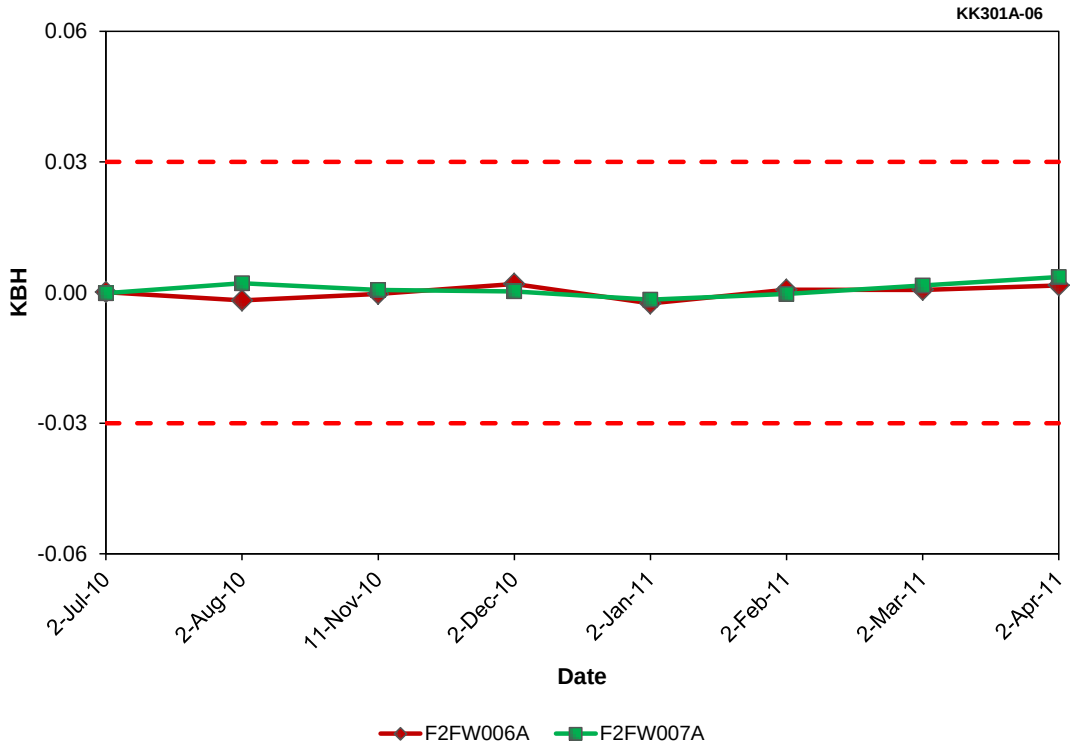



**Figure I.37 FW FLOW TO SG B Steady-State Residual AAKR at North Anna Unit 2 (Cycle 21)**

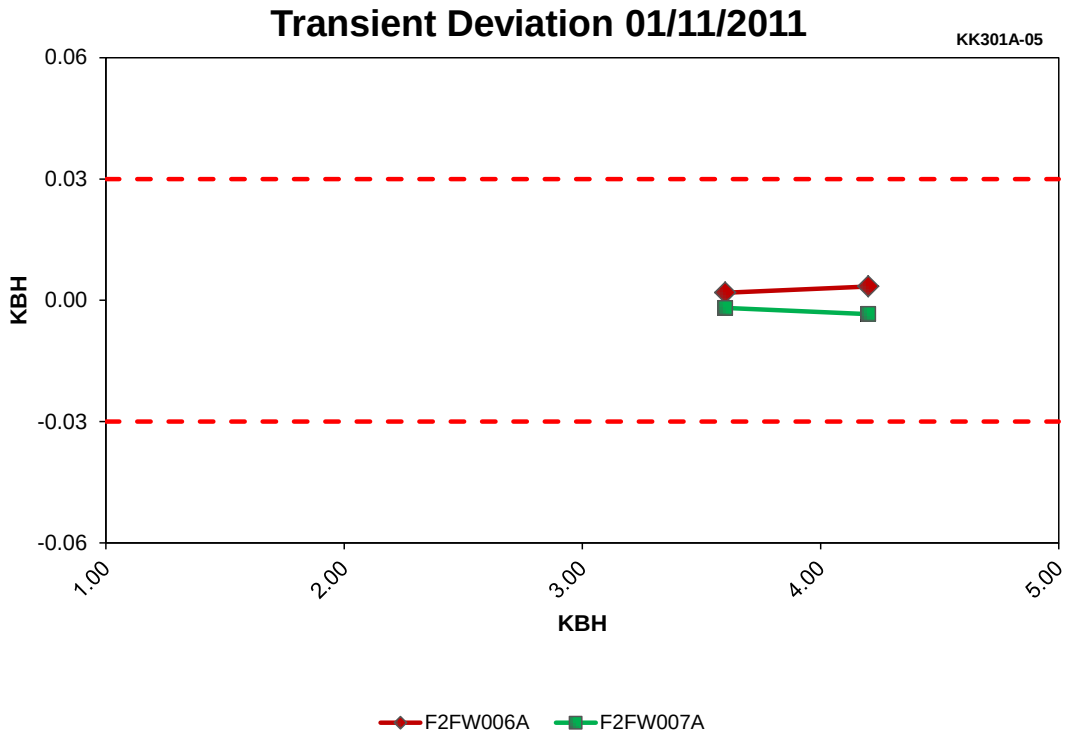



**Figure I.38 FW FLOW TO SG B Transient Deviation at North Anna Unit 2 (Cycle 21)**

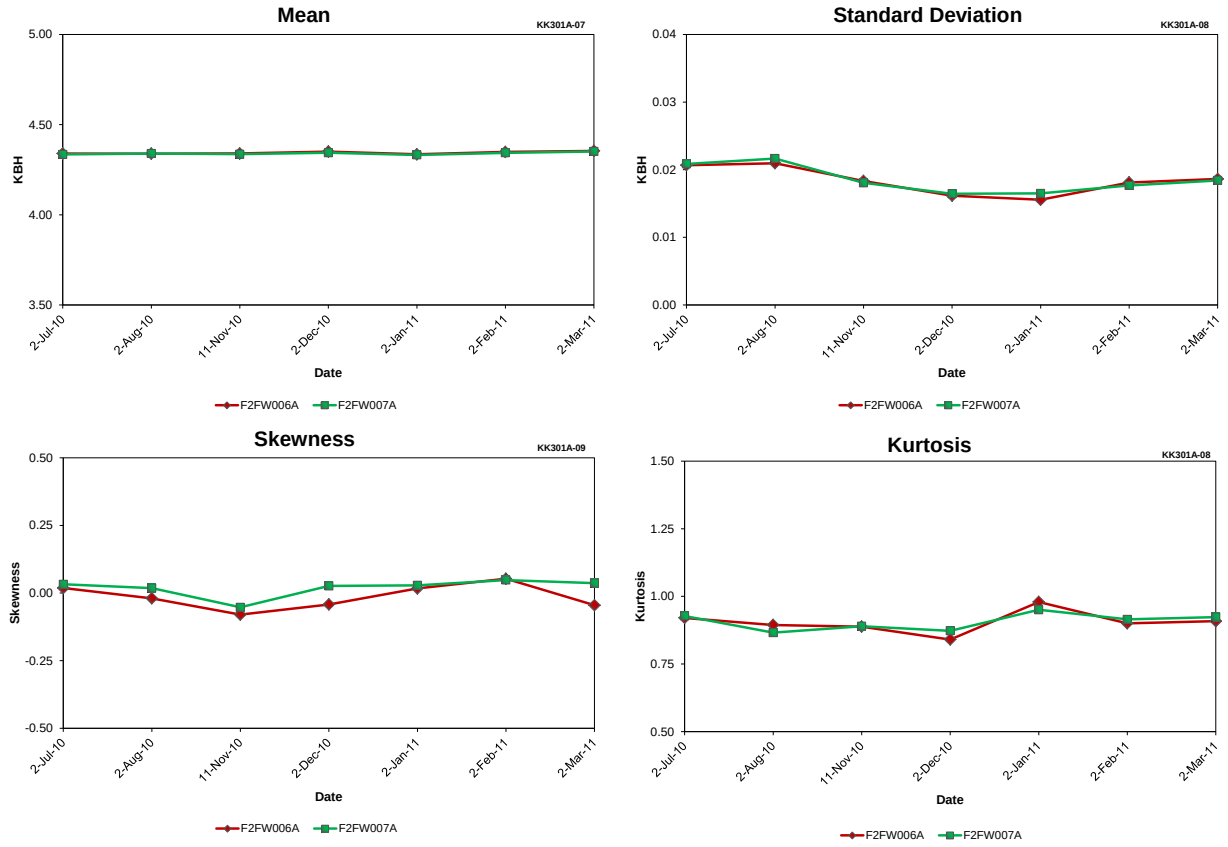



**Figure I.39 FW FLOW TO SG B Data Quality Statistics at North Anna Unit 2 (Cycle 21)**

**Table I.6 FW FLOW TO SG B Data Quality for North Anna Unit 2 (Cycle 21)**

| | Tag Names | |
|---|---|---|
| **Result Type** | **F2FW006A** | **F2FW007A** |
| Mean | 4.34 | 4.34 |
| Std. Dev. | 0.02 | 0.02 |
| Skewness | -0.01 | 0.02 |
| Kurtosis | 0.90 | 0.91 |

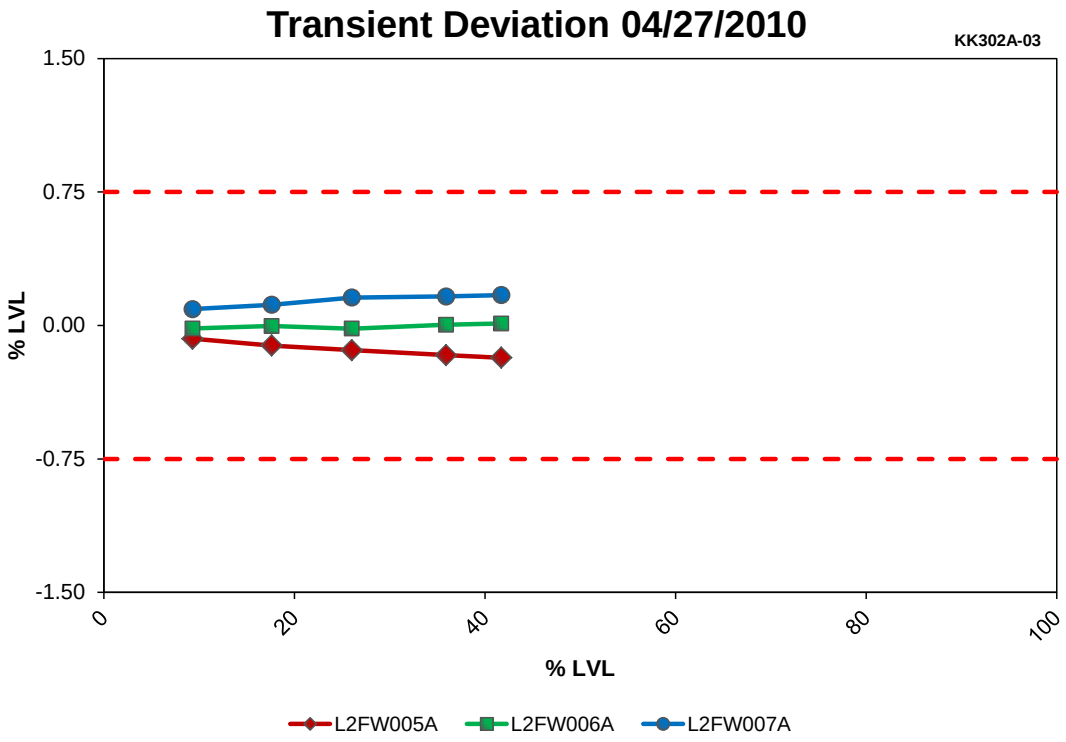



**Figure I.40 SG B LEVEL Transient Deviation at North Anna Unit 2 (Cycle 21)**

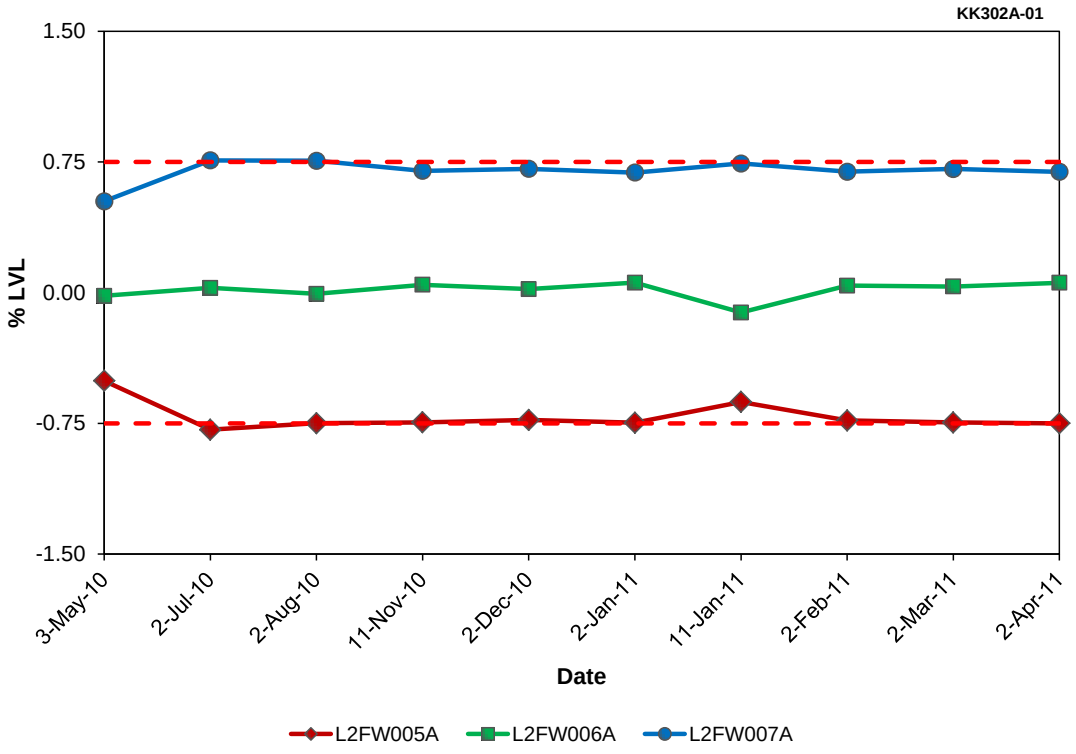



**Figure I.41 SG B LEVEL Steady-State Deviation at North Anna Unit 2 (Cycle 21)**

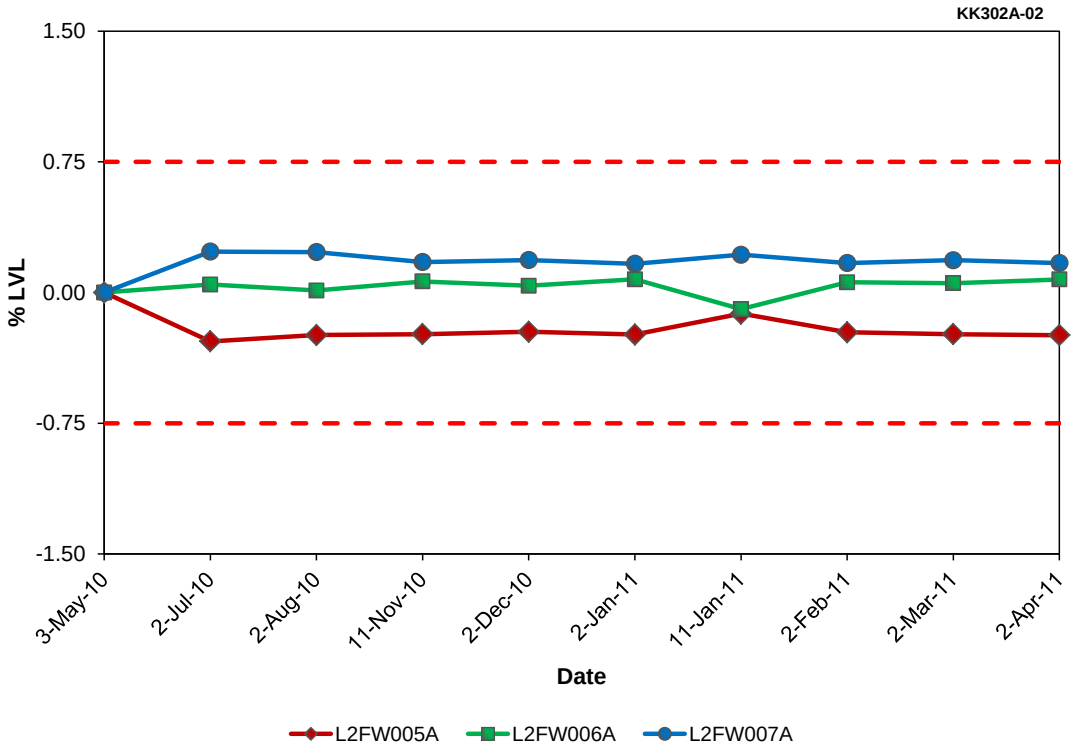



**Figure I.42 SG B LEVEL Steady-State Drift at North Anna Unit 2 (Cycle 21)**

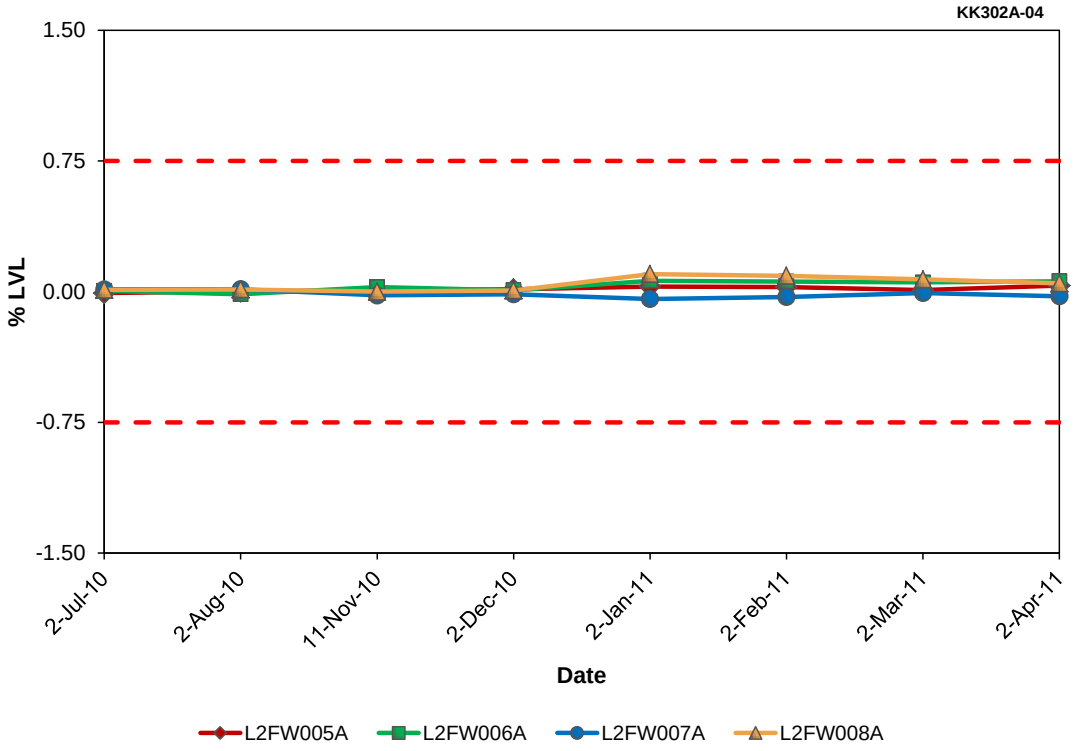



**Figure I.43 SG B LEVEL Steady-State Residual AAKR at North Anna Unit 2 (Cycle 21)**

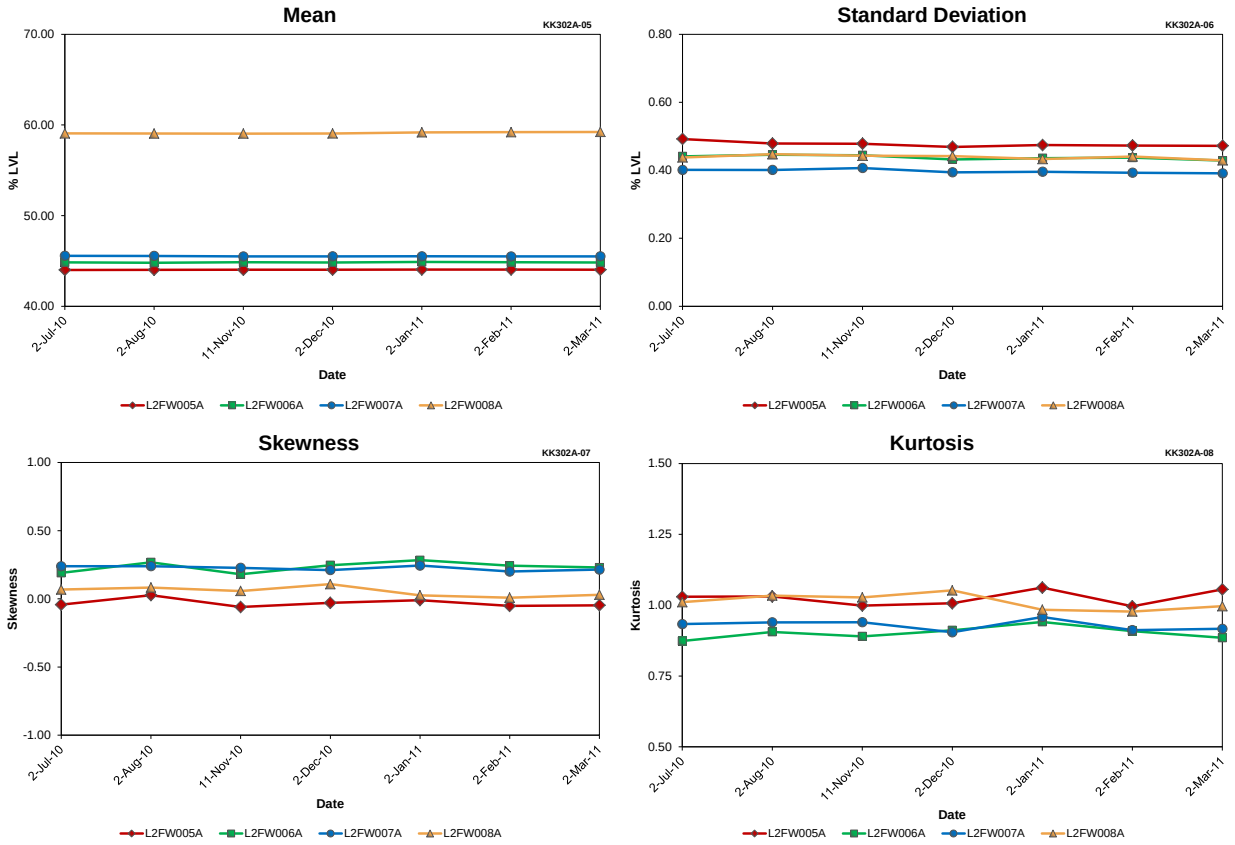



**Figure I.44 SG B LEVEL Data Quality Statistics at North Anna Unit 2 (Cycle 21)**

**Table I.7 SG B LEVEL Data Quality for North Anna Unit 2 (Cycle 21)**

| | Tag Names | | | |
|---|---|---|---|---|
| Result Type | L2FW005A | L2FW006A | L2FW007A | L2FW008A |
| Mean | 44.03 | 44.84 | 45.52 | 59.12 |
| Std. Dev. | 0.48 | 0.44 | 0.40 | 0.44 |
| Skewness | -0.03 | 0.23 | 0.23 | 0.05 |
| Kurtosis | 1.03 | 0.90 | 0.93 | 1.01 |

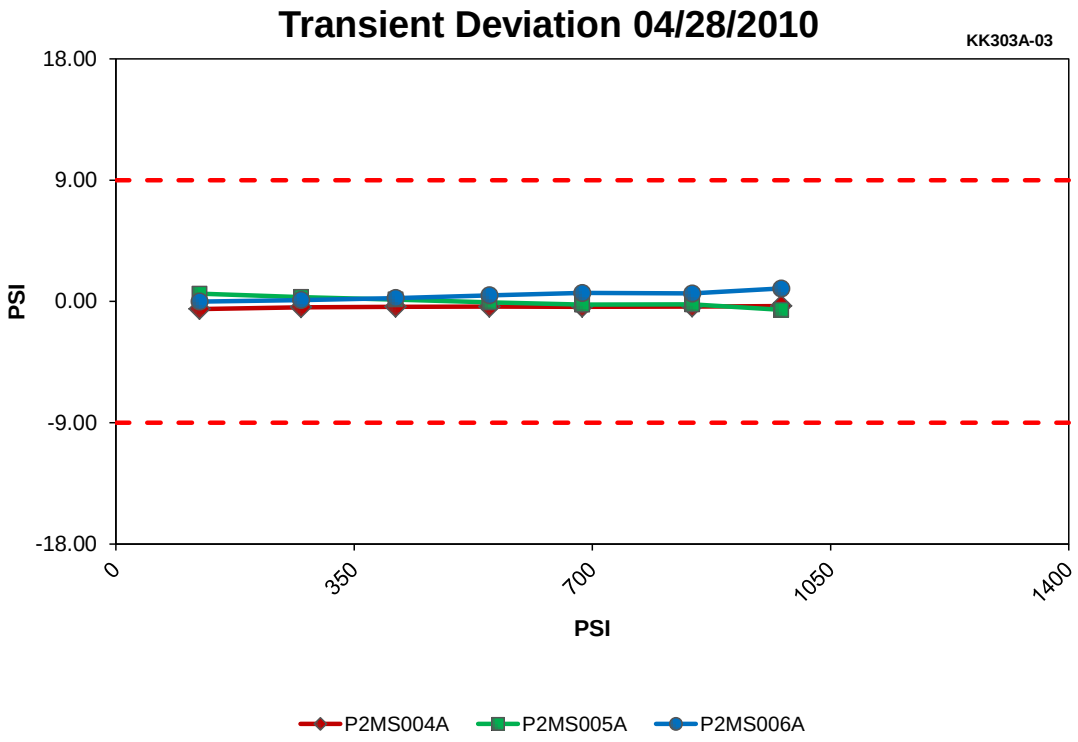



**Figure I.45 SG B OUTLET PRESSURE Transient Deviation at North Anna Unit 2 (Cycle 21)**

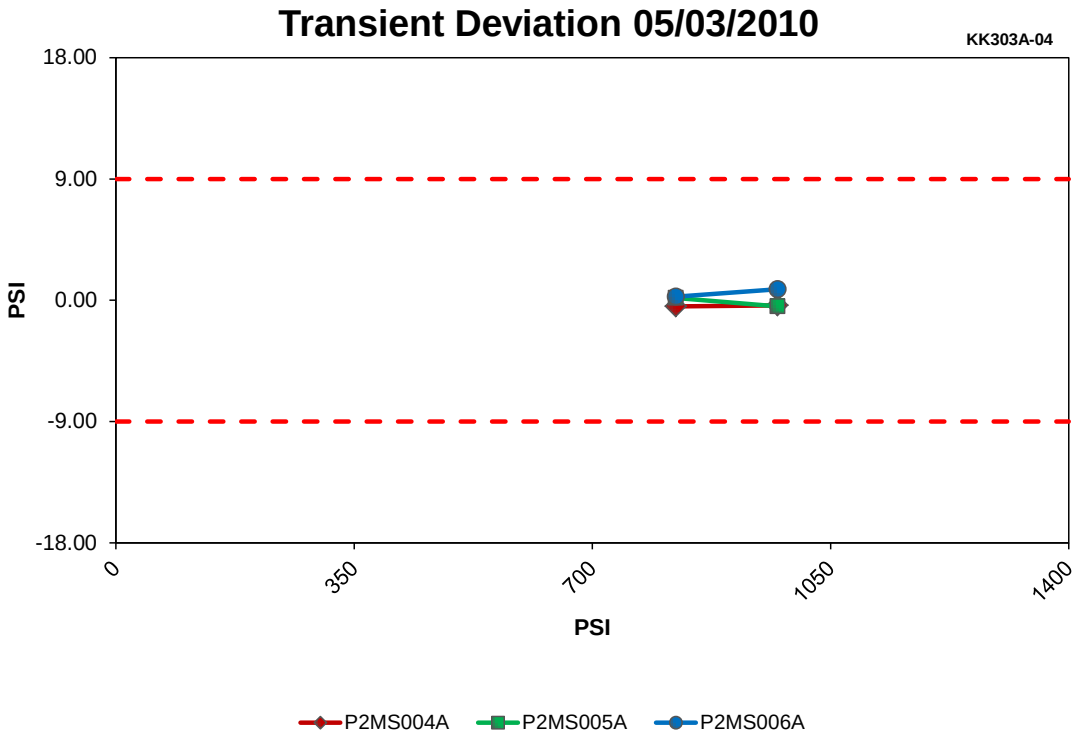



**Figure I.46 SG B OUTLET PRESSURE Transient Deviation at North Anna Unit 2 (Cycle 21)**

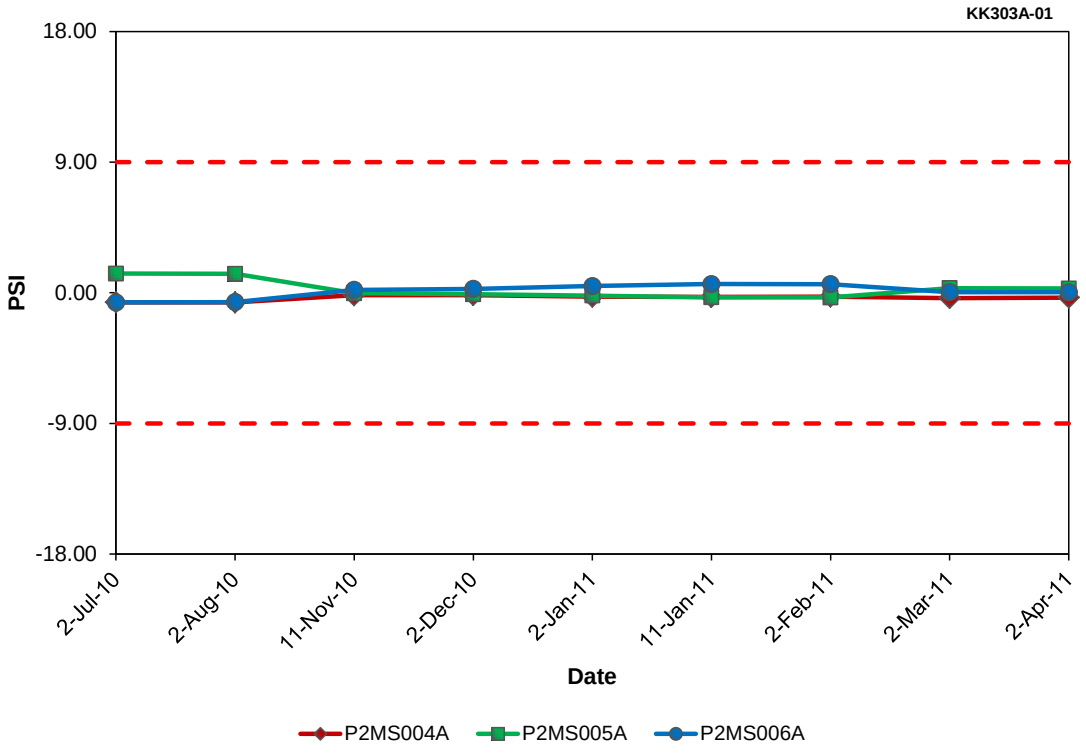



**Figure I.47 SG B OUTLET PRESSURE Steady-State Deviation at North Anna Unit 2 (Cycle 21)**

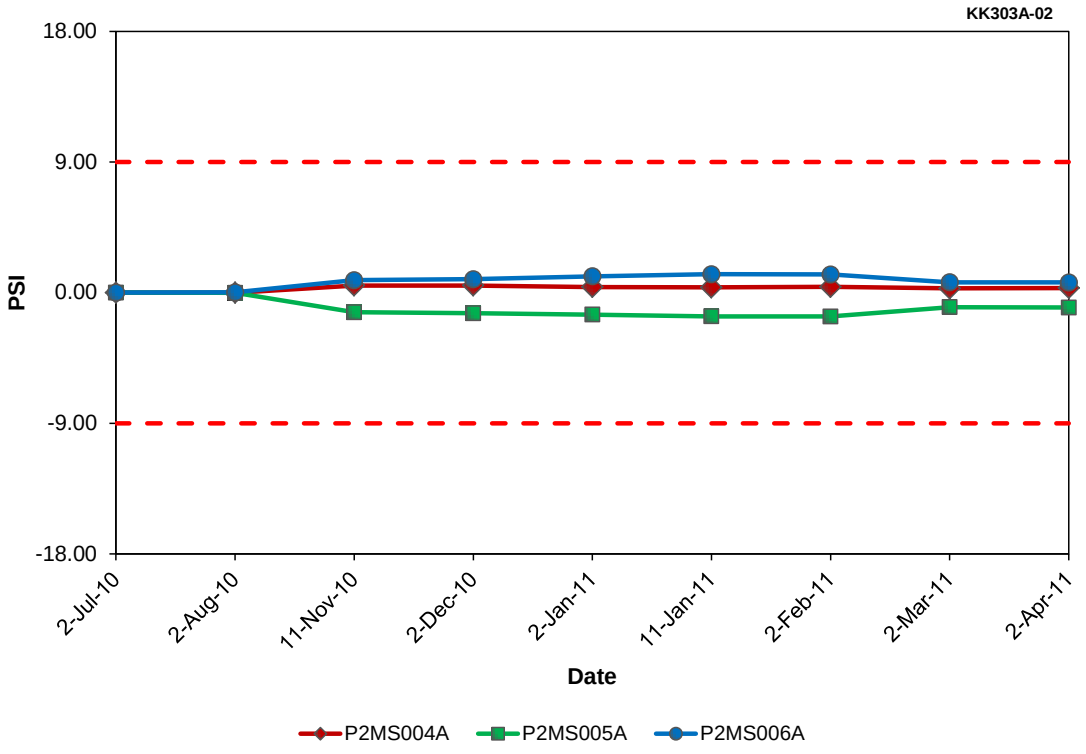



**Figure I.48 SG B OUTLET PRESSURE Steady-State Drift at North Anna Unit 2 (Cycle 21)**

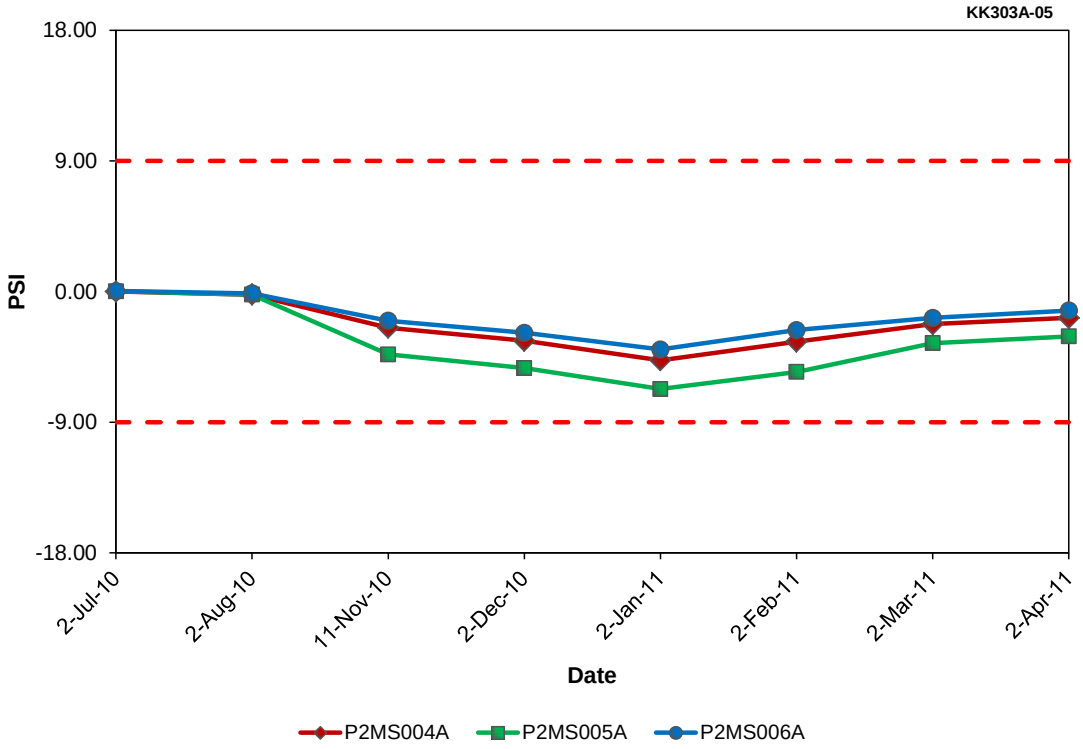



**Figure I.49 SG B OUTLET PRESSURE Steady-State Residual AAKR at North Anna Unit 2 (Cycle 21)**

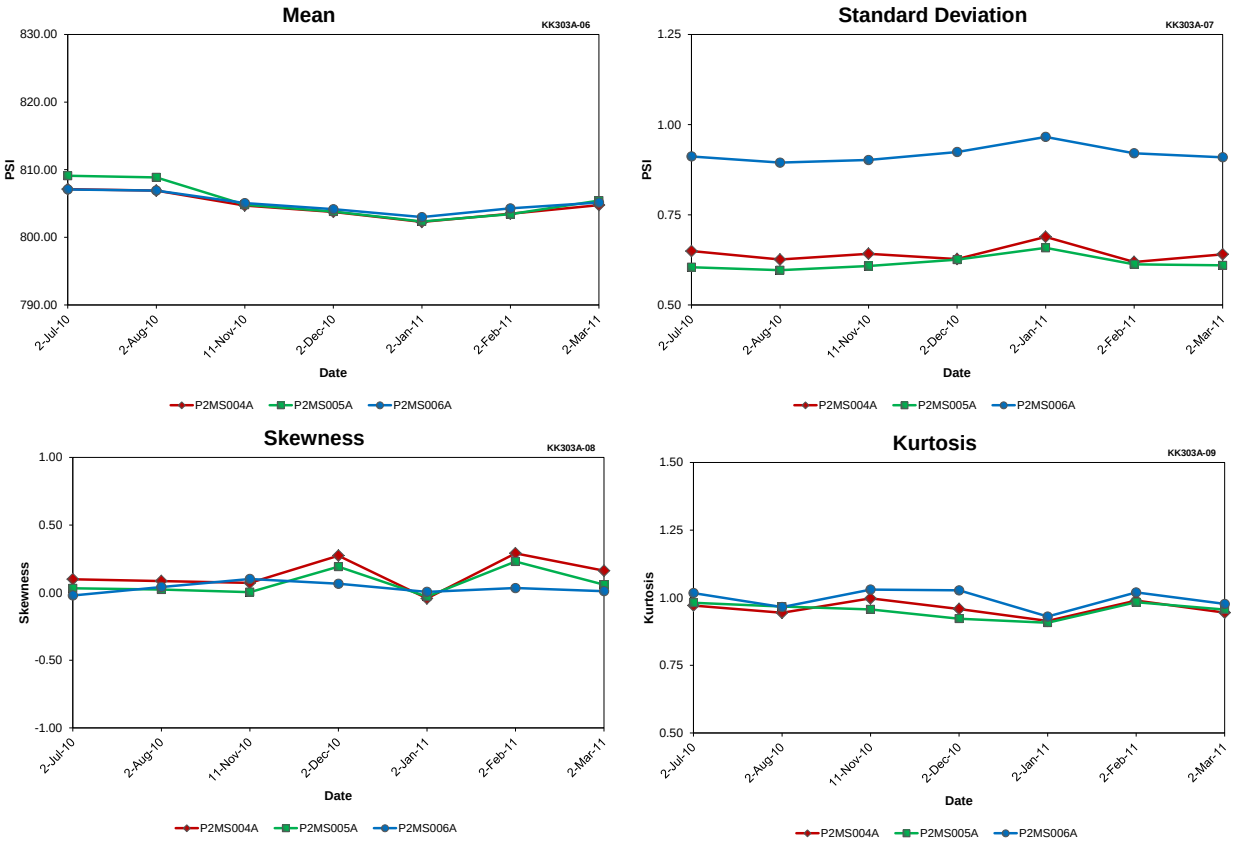



**Figure I.50 SG B OUTLET PRESSURE Data Quality Statistics at North Anna Unit 2 (Cycle 21)**

**Table I.8 SG B OUTLET PRESSURE Data Quality for North Anna Unit 2 (Cycle 21)**

| | Tag Names | | |
|---|---|---|---|
| **Result Type** | **P2MS004A** | **P2MS005A** | **P2MS006A** |
| Mean | 804.72 | 805.40 | 805.09 |
| Std. Dev. | 0.64 | 0.62 | 0.92 |
| Skewness | 0.13 | 0.07 | 0.03 |
| Kurtosis | 0.96 | 0.95 | 1.00 |

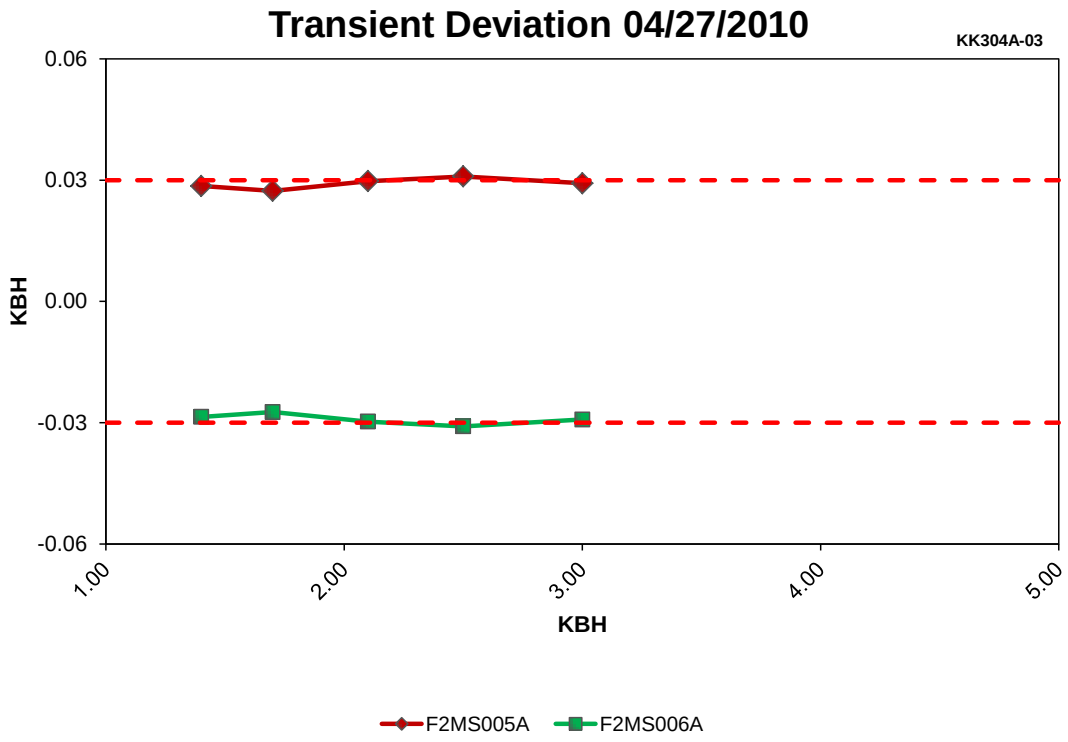



**Figure I.51 SG C STEAM FLOW Transient Deviation at North Anna Unit 2 (Cycle 21)**

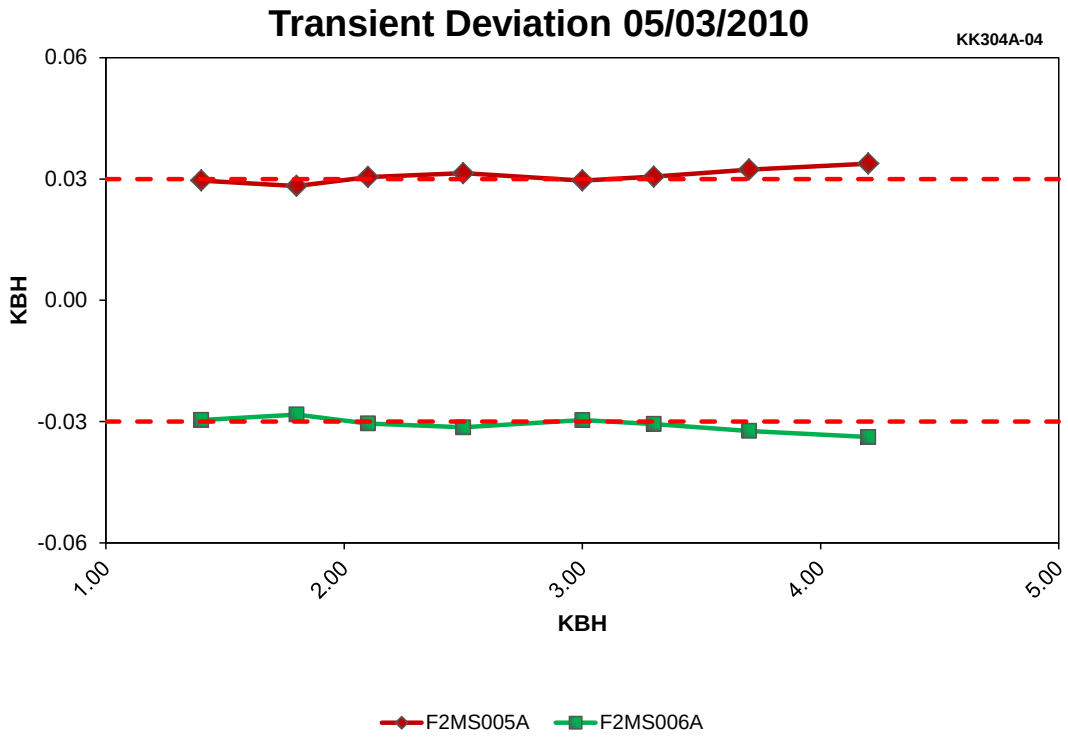



**Figure I.52 SG C STEAM FLOW Transient Deviation at North Anna Unit 2 (Cycle 21)**

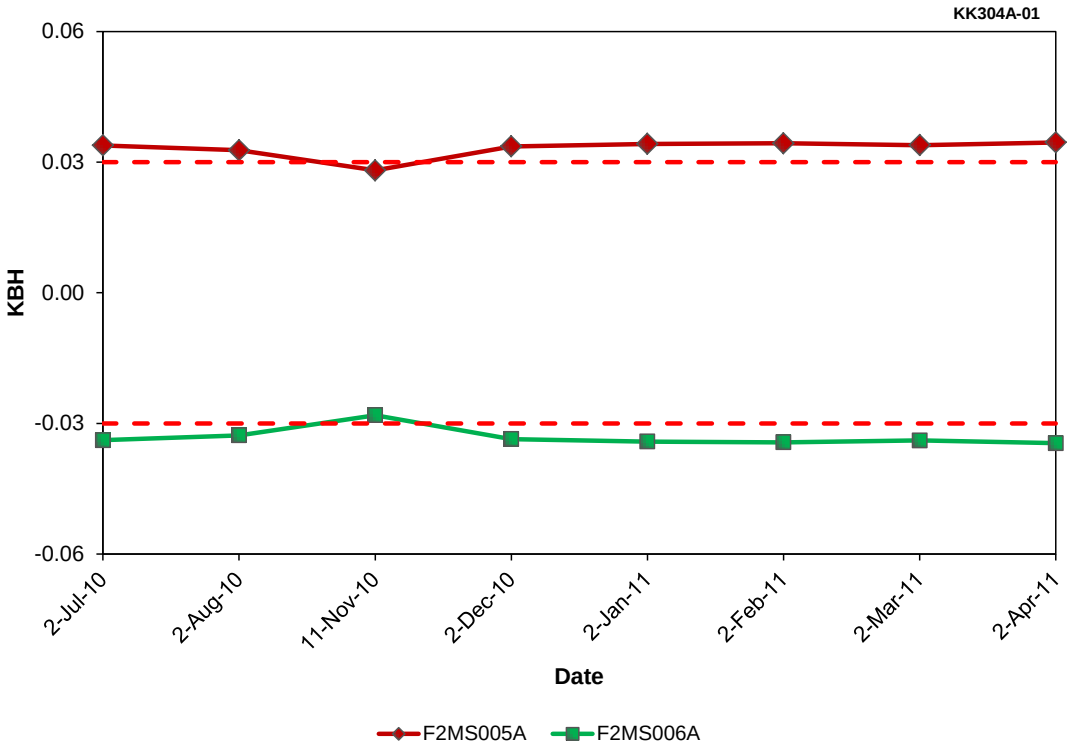



**Figure I.53 SG C STEAM FLOW Steady-State Deviation at North Anna Unit 2 (Cycle 21)**

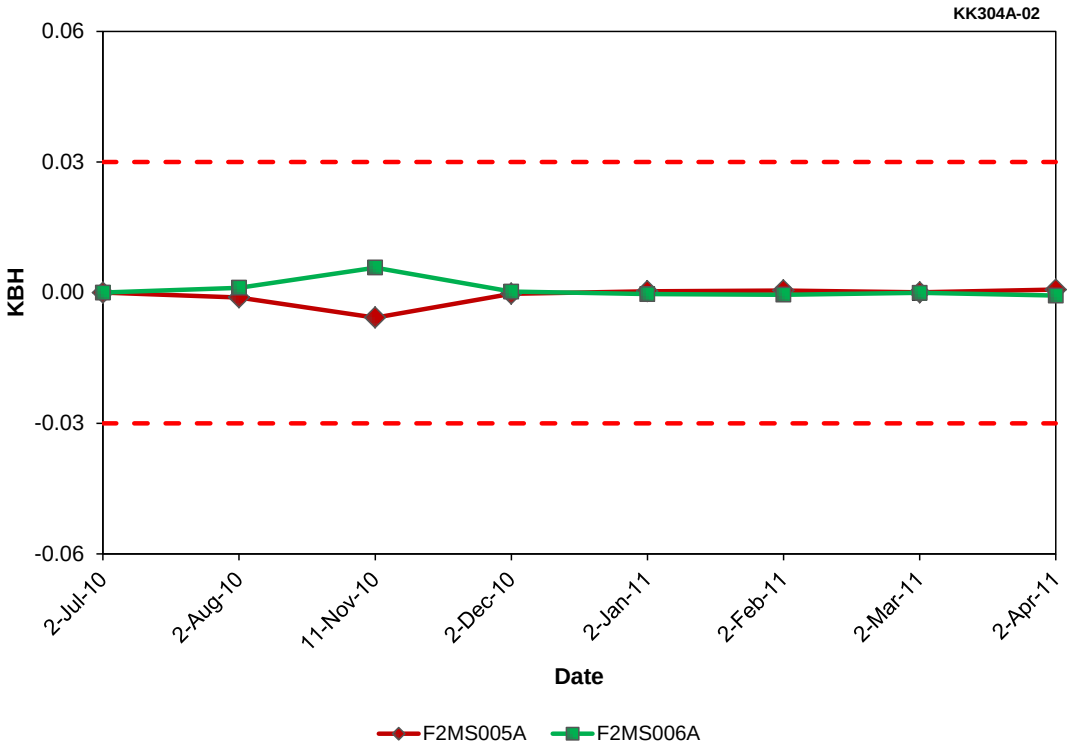



**Figure I.54 SG C STEAM FLOW Steady-State Drift at North Anna Unit 2 (Cycle 21)**

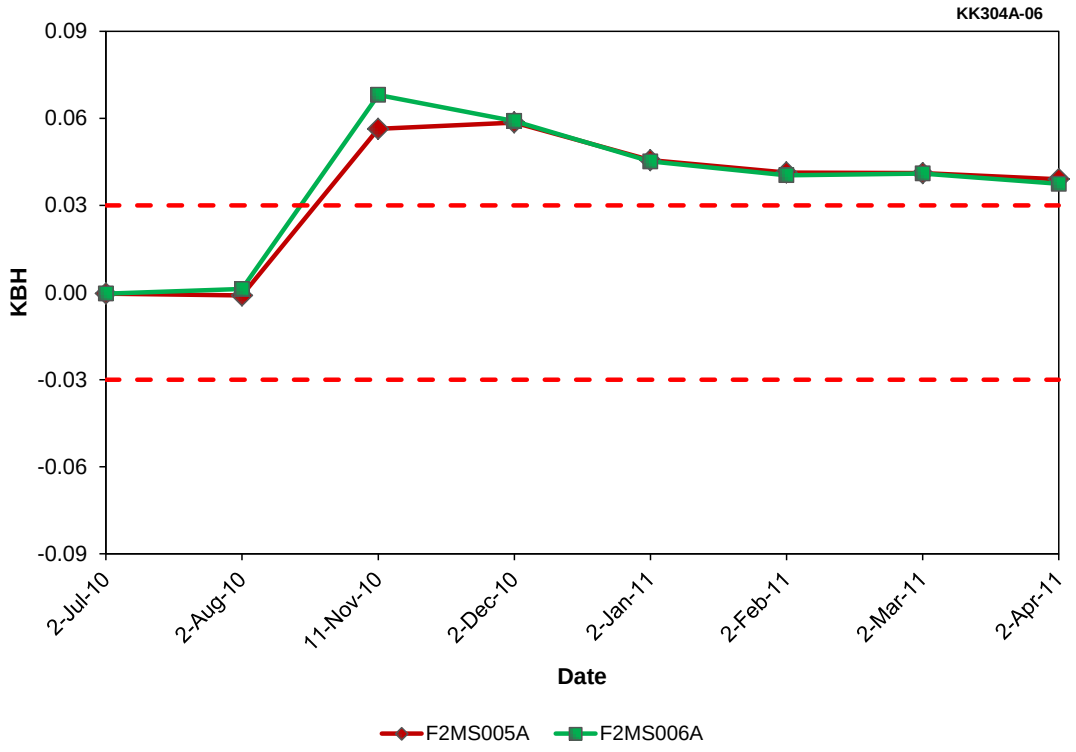



**Figure I.55 SG C STEAM FLOW Steady-State Residual AAKR at North Anna Unit 2 (Cycle 21)**

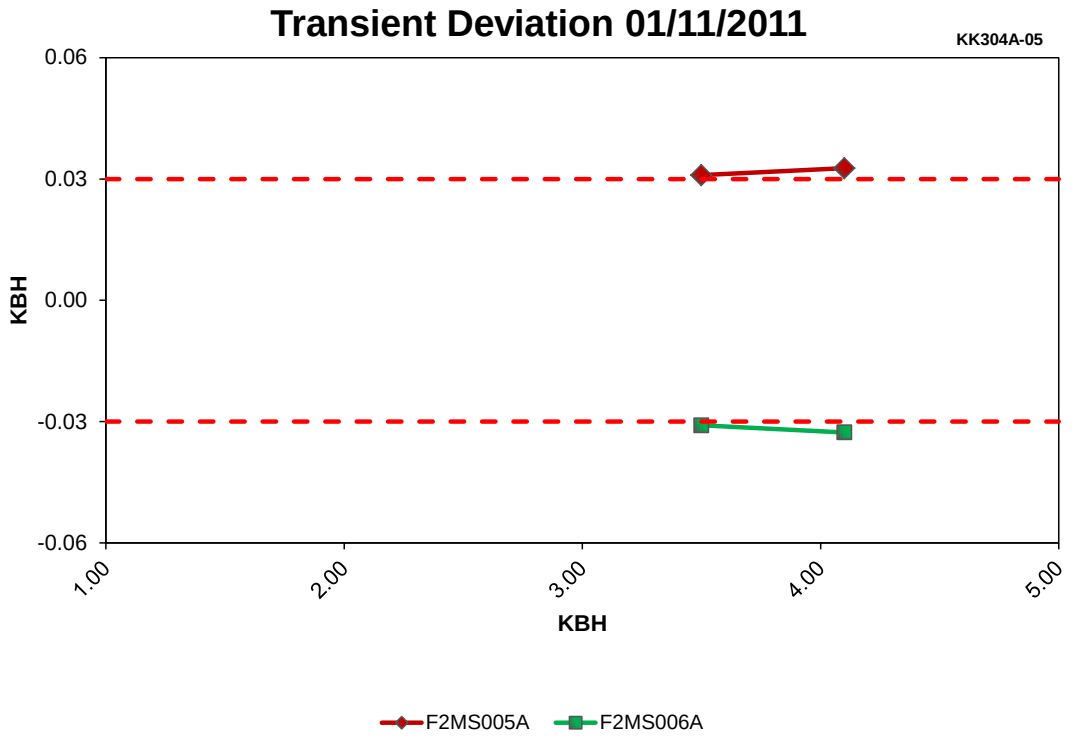



**Figure I.56 SG C STEAM FLOW Transient Deviation at North Anna Unit 2 (Cycle 21)**

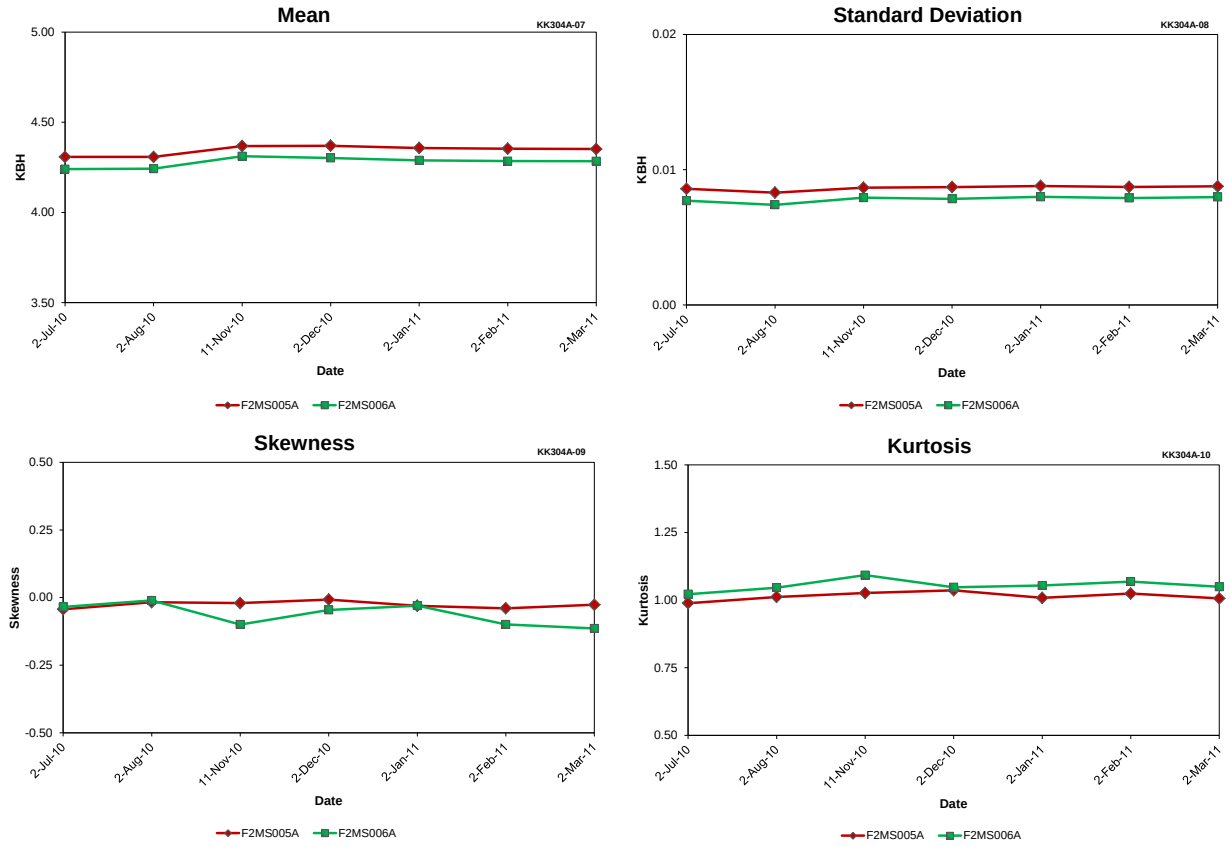



**Figure I.57 SG C STEAM FLOW Data Quality Statistics at North Anna Unit 2 (Cycle 21)**

**Table I.9 SG C STEAM FLOW Data Quality for North Anna Unit 2 (Cycle 21)**

| | Tag Names | |
|---|---|---|
| **Result Type** | **F2MS005A** | **F2MS006A** |
| Mean | 4.35 | 4.28 |
| Std. Dev. | 0.01 | 0.01 |
| Skewness | -0.03 | -0.06 |
| Kurtosis | 1.01 | 1.05 |

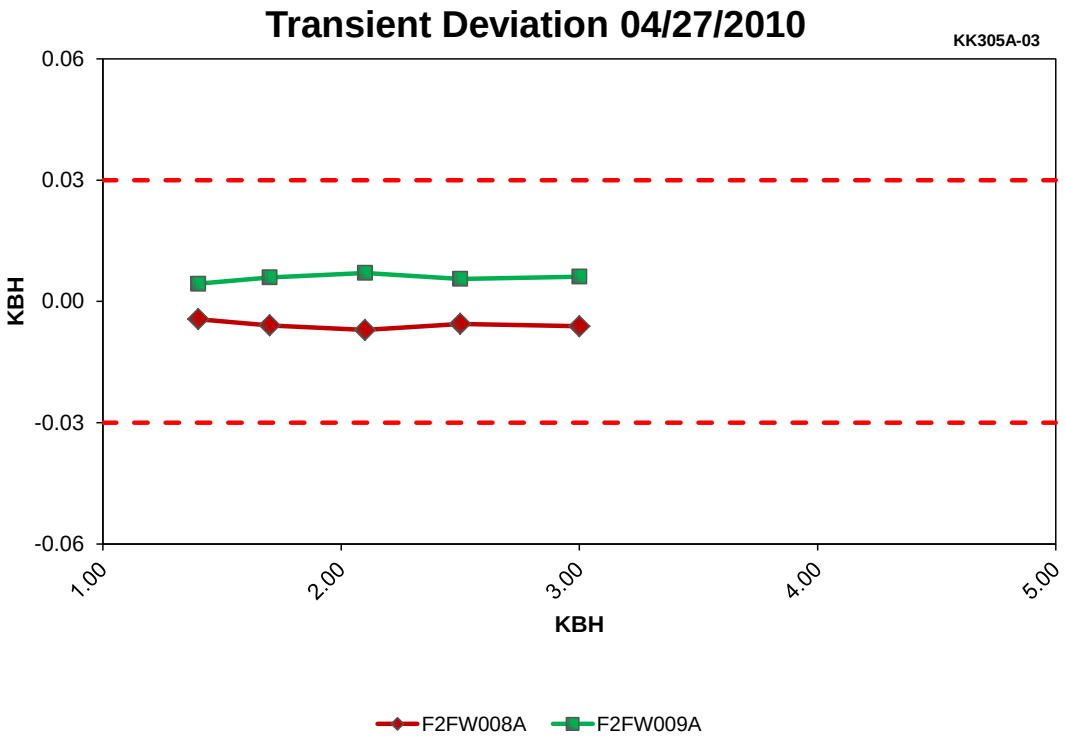



**Figure I.58 FW FLOW TO SG C Transient Deviation at North Anna Unit 2 (Cycle 21)**

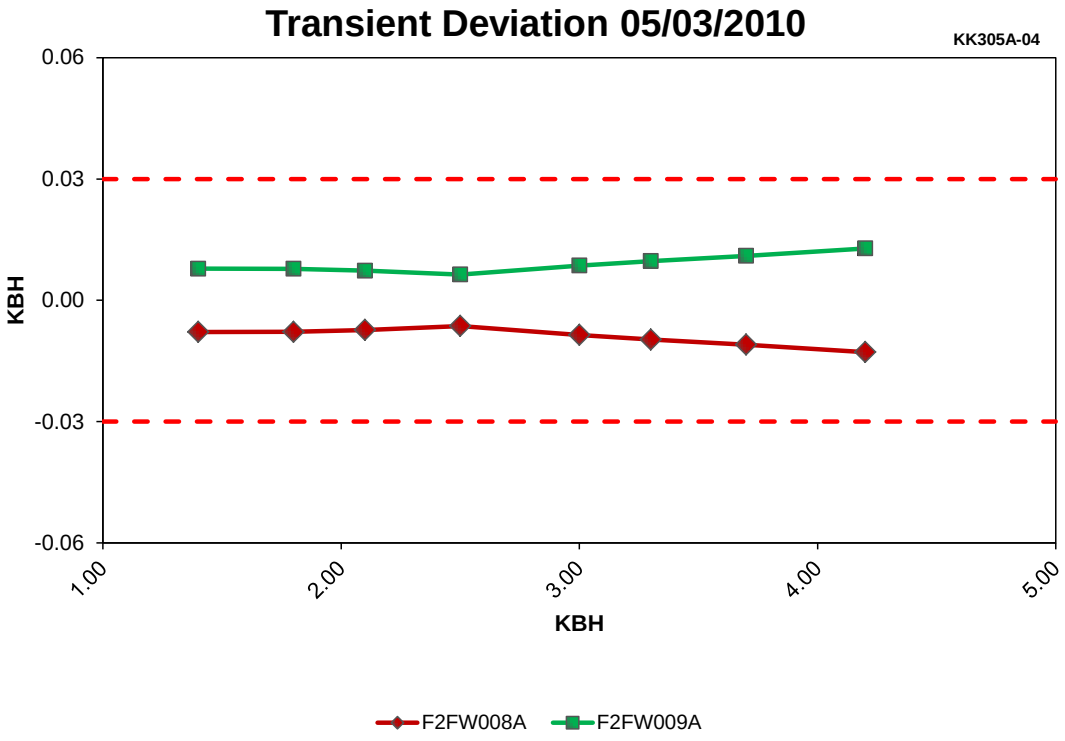



**Figure I.59 FW FLOW TO SG C Transient Deviation at North Anna Unit 2 (Cycle 21)**

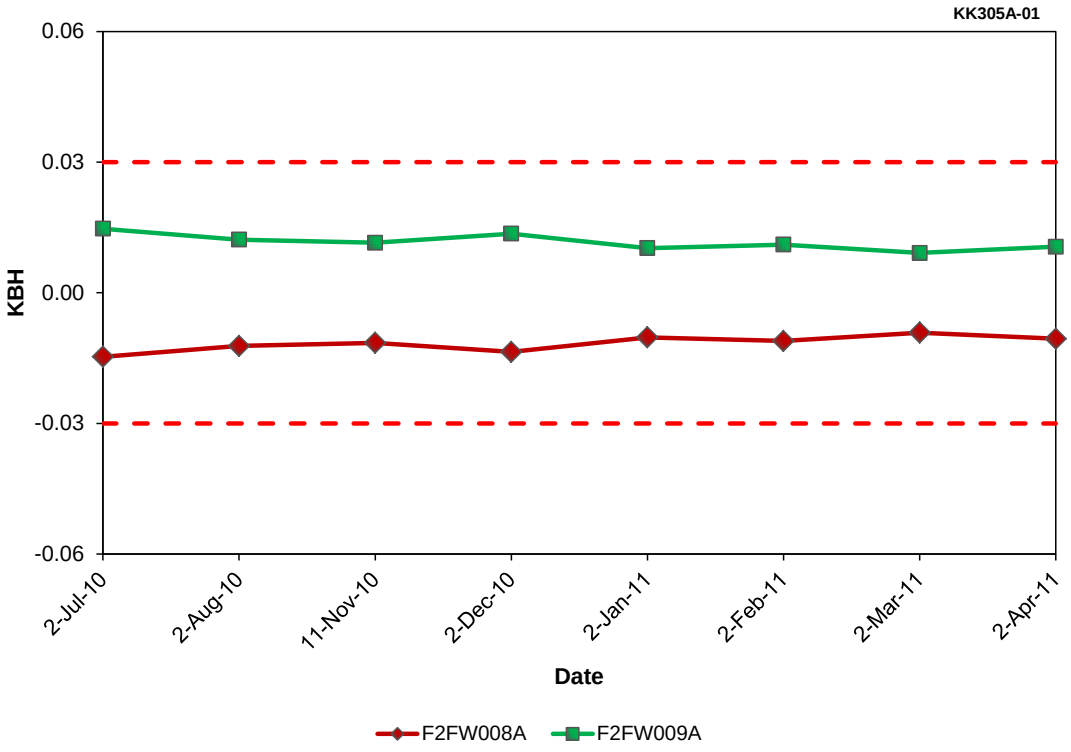



**Figure I.60 FW FLOW TO SG C Steady-State Deviation at North Anna Unit 2 (Cycle 21)**

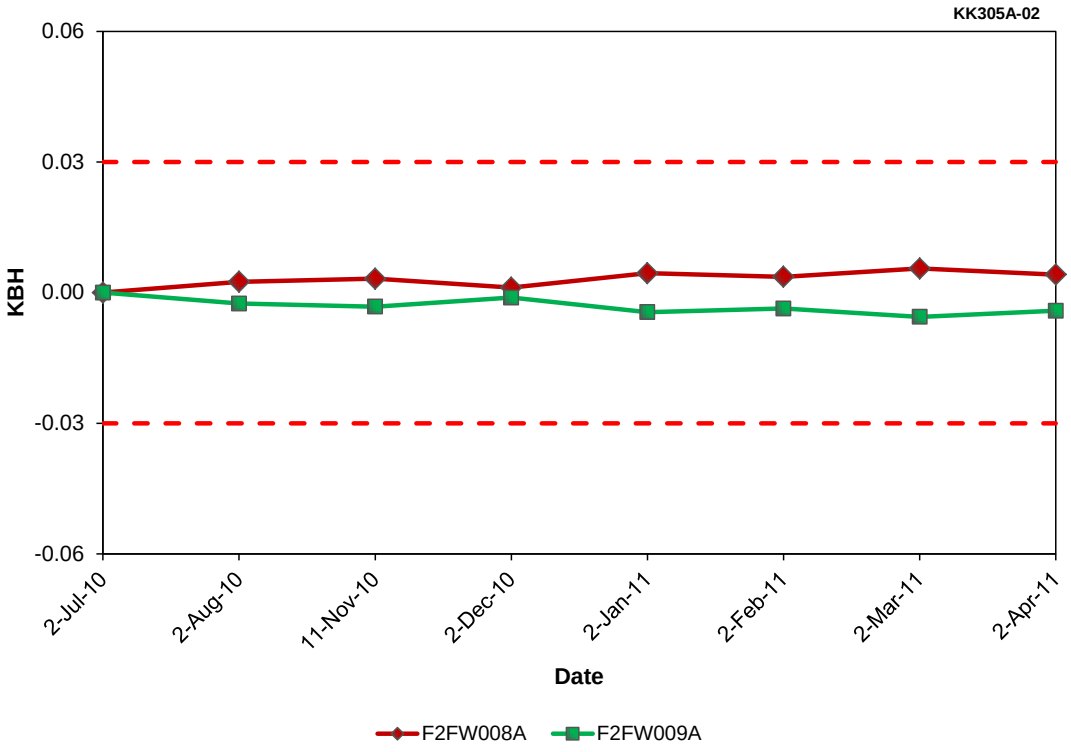



**Figure I.61 FW FLOW TO SG C Steady-State Drift at North Anna Unit 2 (Cycle 21)**

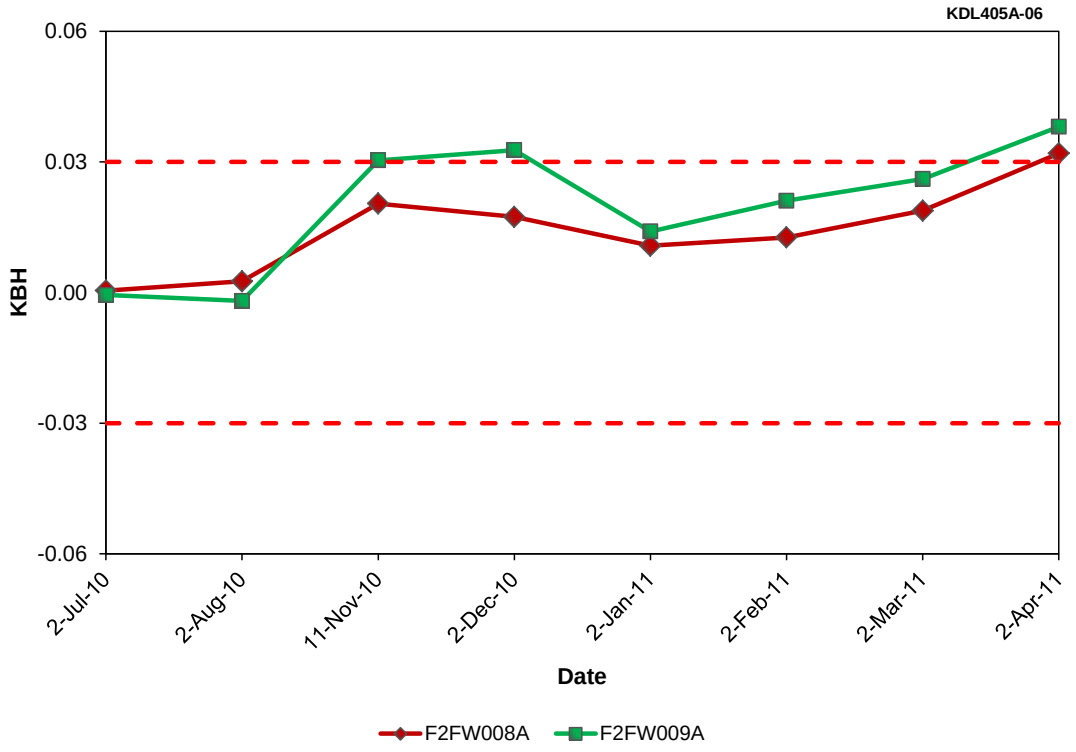



**Figure I.62 FW FLOW TO SG C Steady-State Residual AAKR at North Anna Unit 2 (Cycle 21)**

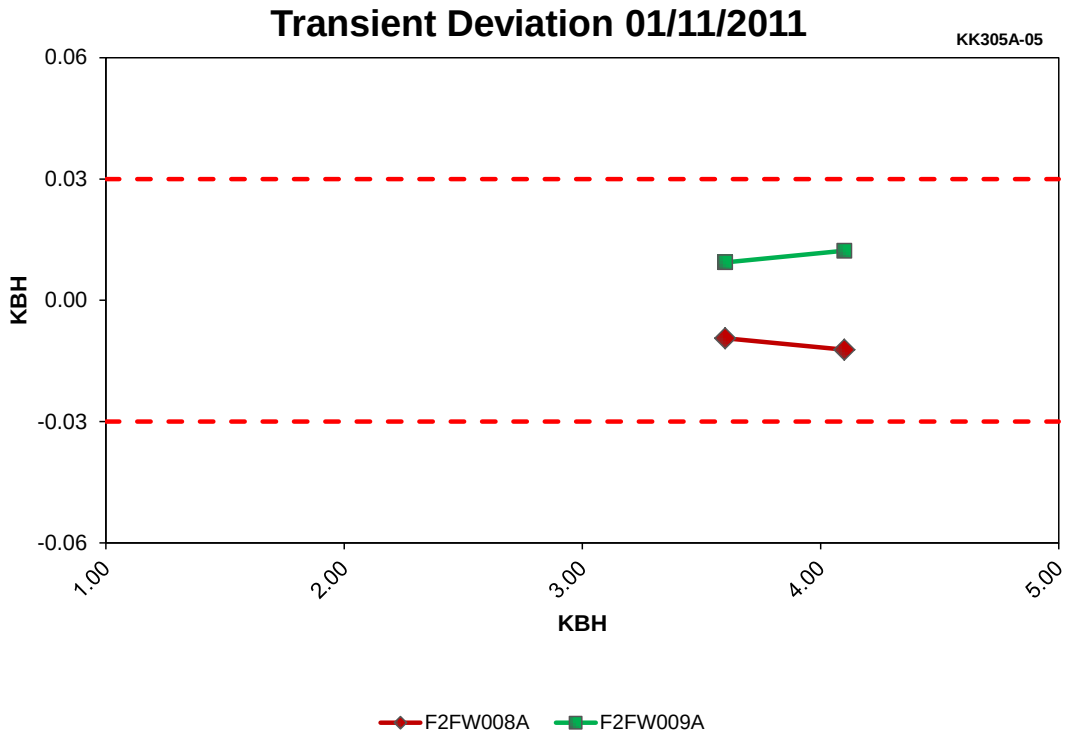



**Figure I.63 FW FLOW TO SG C Transient Deviation at North Anna Unit 2 (Cycle 21)**

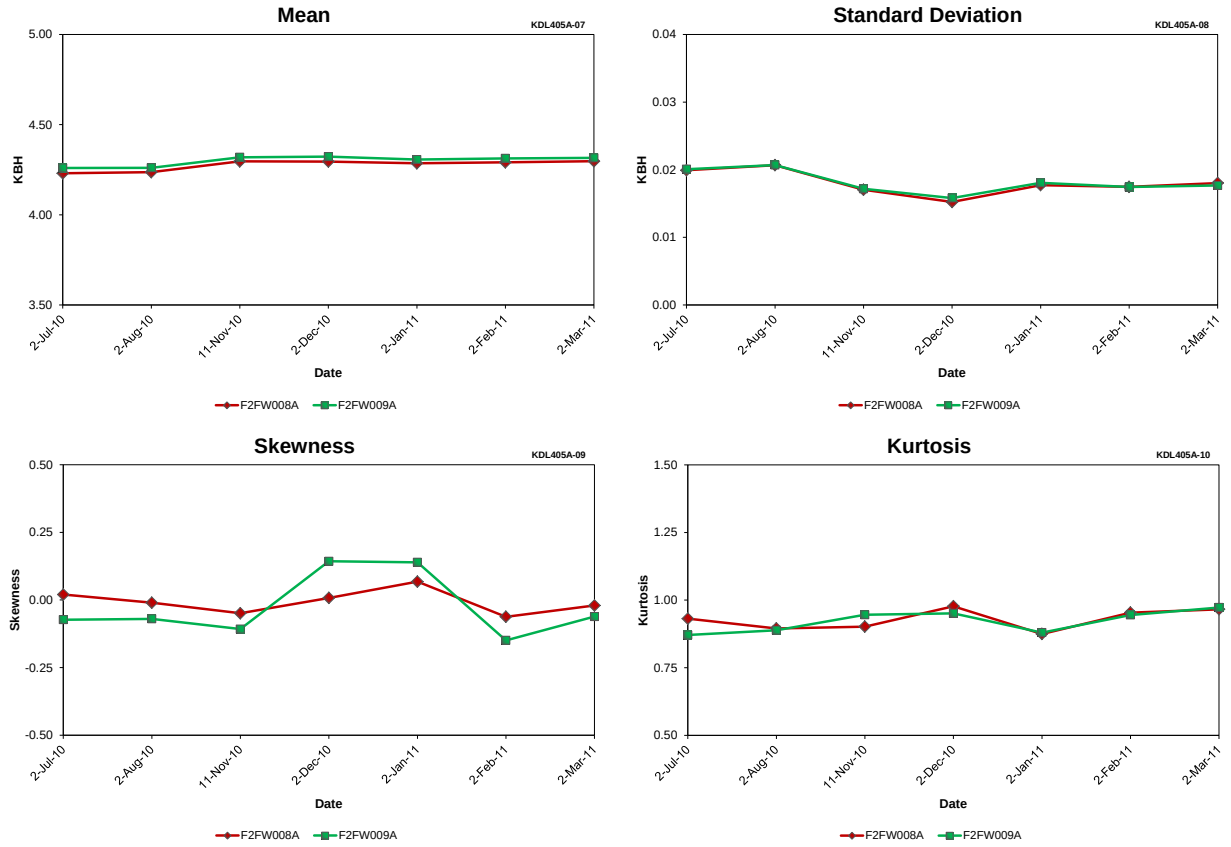



**Figure I.64 FW FLOW TO SG C Data Quality Statistics at North Anna Unit 2 (Cycle 21)**

**Table I.10 FW FLOW TO SG C Data Quality for North Anna Unit 2 (Cycle 21)**

| | Tag Names | |
|---|---|---|
| Result Type | F2FW008A | F2FW009A |
| Mean | 4.28 | 4.30 |
| Std. Dev. | 0.02 | 0.02 |
| Skewness | -0.01 | -0.03 |
| Kurtosis | 0.93 | 0.92 |

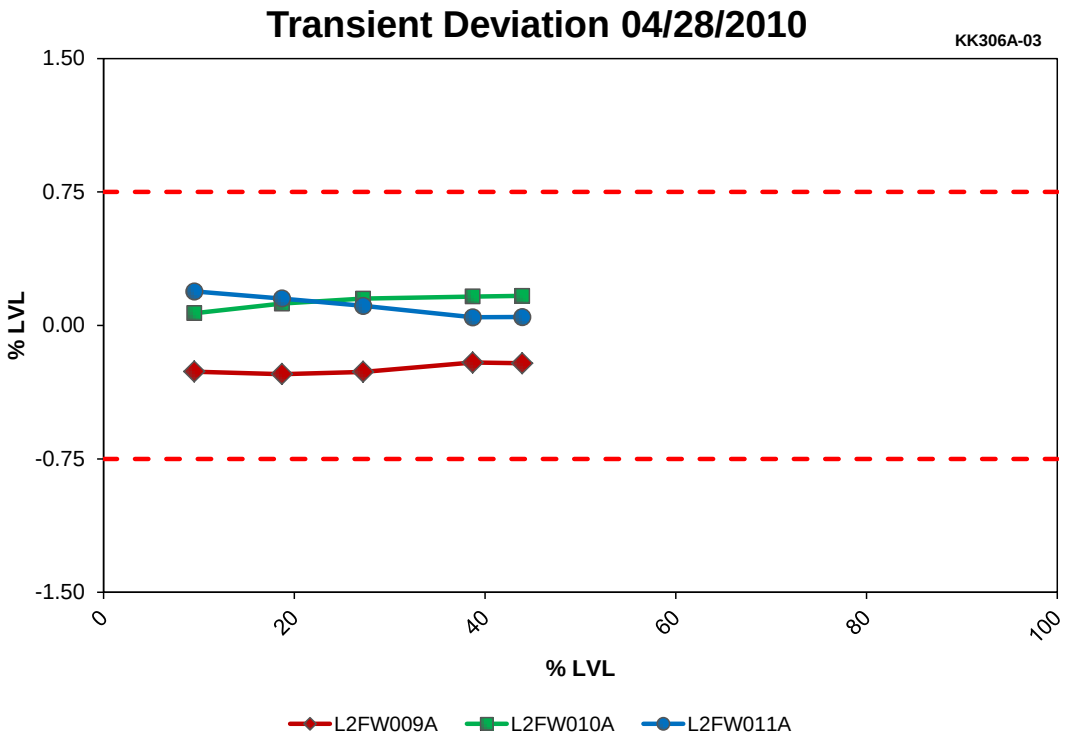



**Figure F.65 SG C LEVEL Transient Deviation at North Anna Unit 2 (Cycle 21)**

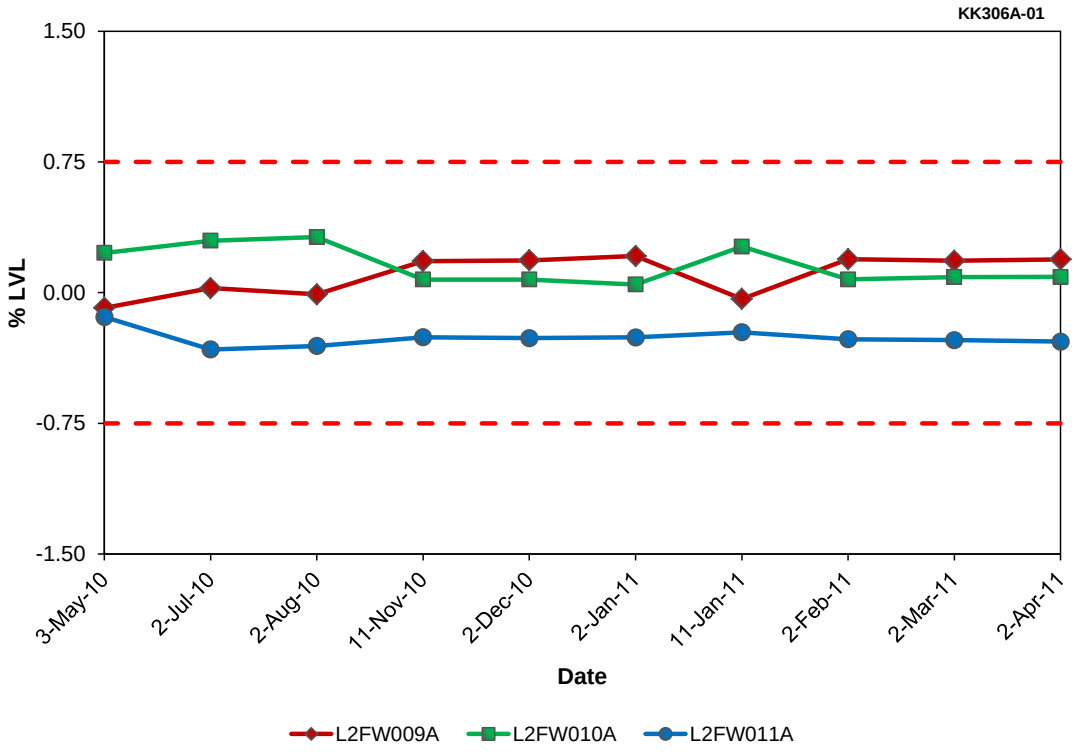



**Figure F.66 SG C LEVEL Steady-State Deviation at North Anna Unit 2 (Cycle 21)**

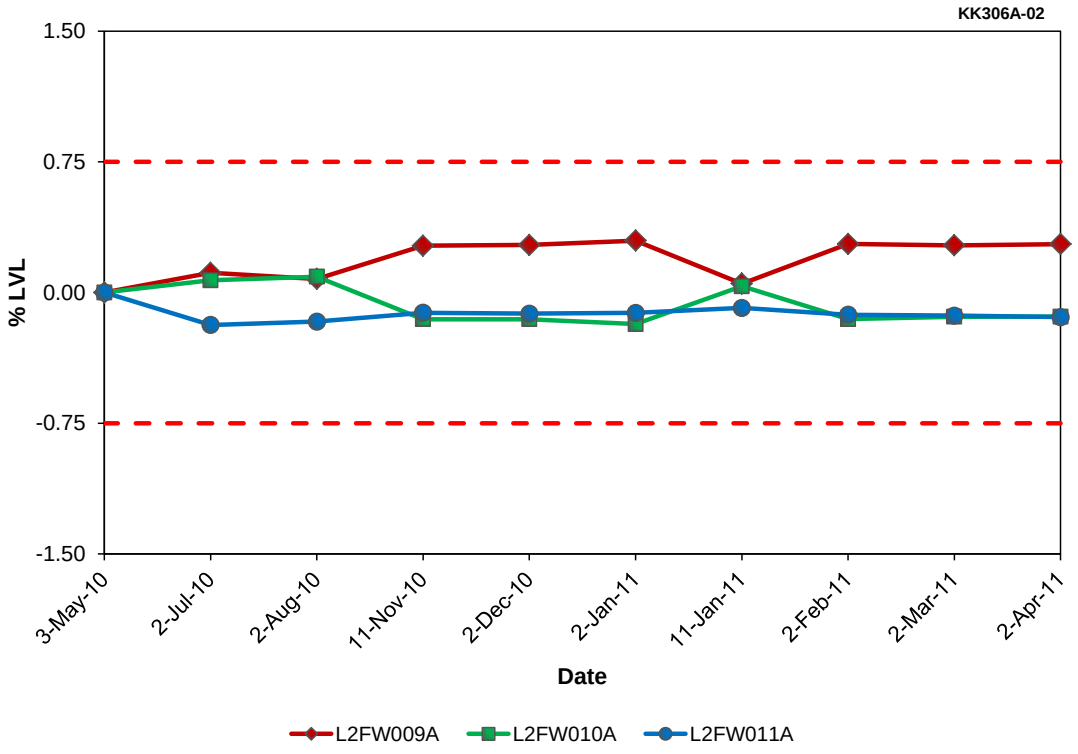



**Figure F.67 SG C LEVEL Steady-State Drift at North Anna Unit 2 (Cycle 21)**

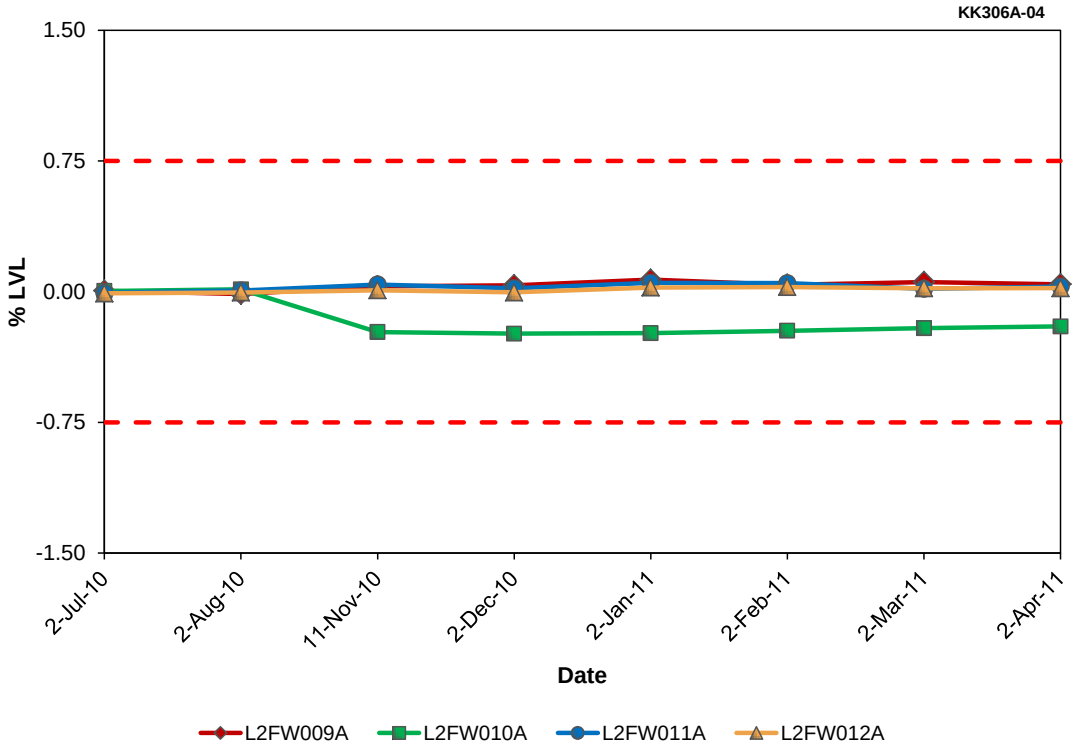



**Figure F.68 SG C LEVEL Steady-State Residual AAKR at North Anna Unit 2 (Cycle 21)**

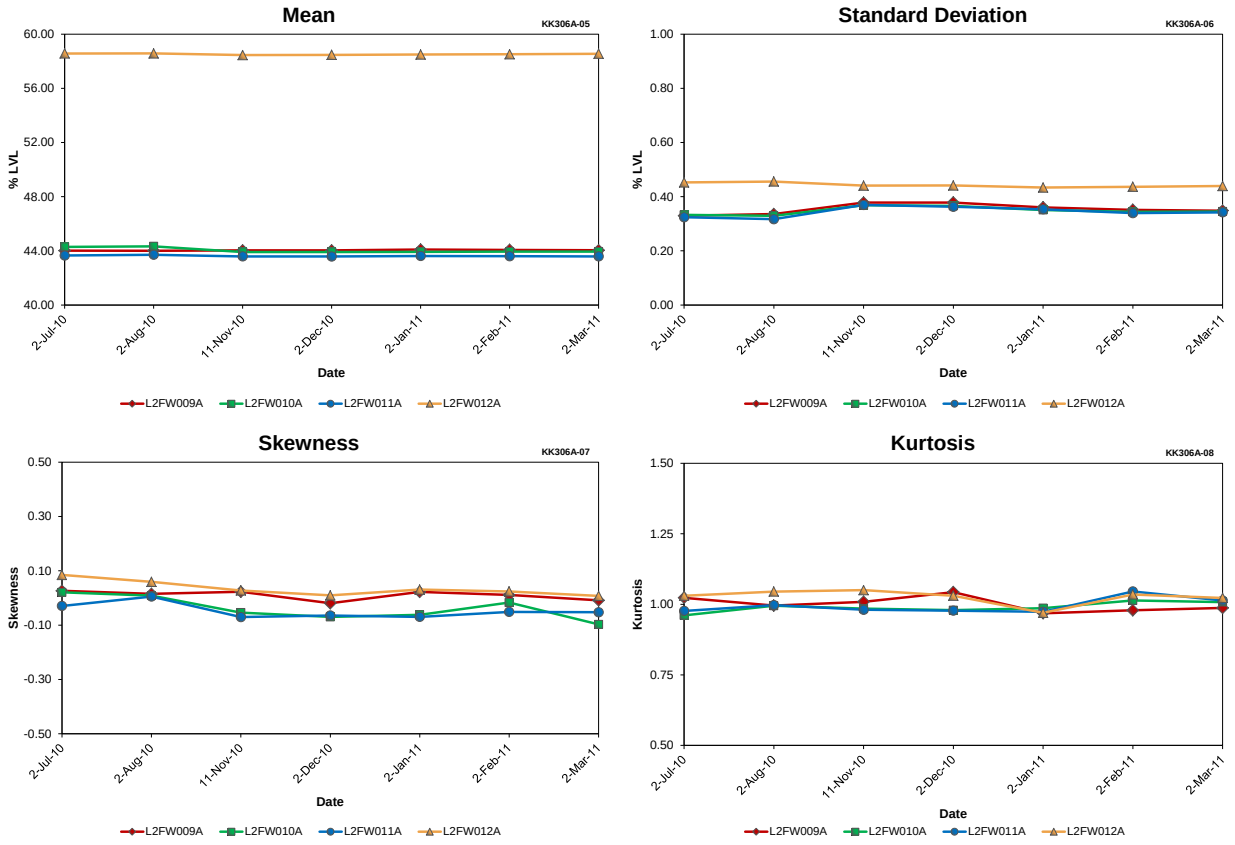



**Figure F.69 SG C LEVEL Data Quality Statistics at North Anna Unit 2 (Cycle 21)**

**Table F.12 SG C LEVEL Data Quality for North Anna Unit 2 (Cycle 21)**

| | Tag Names | | | |
|---|---|---|---|---|
| **Result Type** | **L2FW009A** | **L2FW010A** | **L2FW011A** | **L2FW012A** |
| Mean | 44.04 | 44.04 | 43.62 | 58.52 |
| Std. Dev. | 0.35 | 0.35 | 0.34 | 0.44 |
| Skewness | 0.01 | -0.04 | -0.05 | 0.03 |
| Kurtosis | 1.00 | 0.99 | 0.99 | 1.03 |

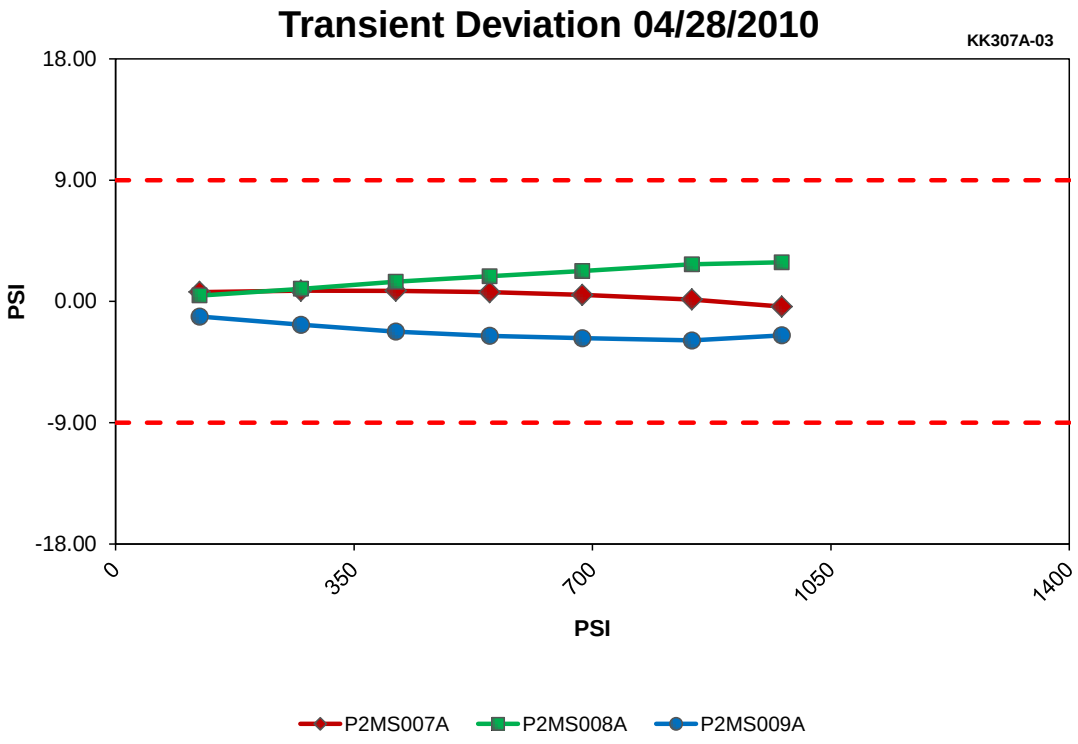



**Figure F.70 SG C OUTLET PRESSURE Transient Deviation at North Anna Unit 2 (Cycle 21)**

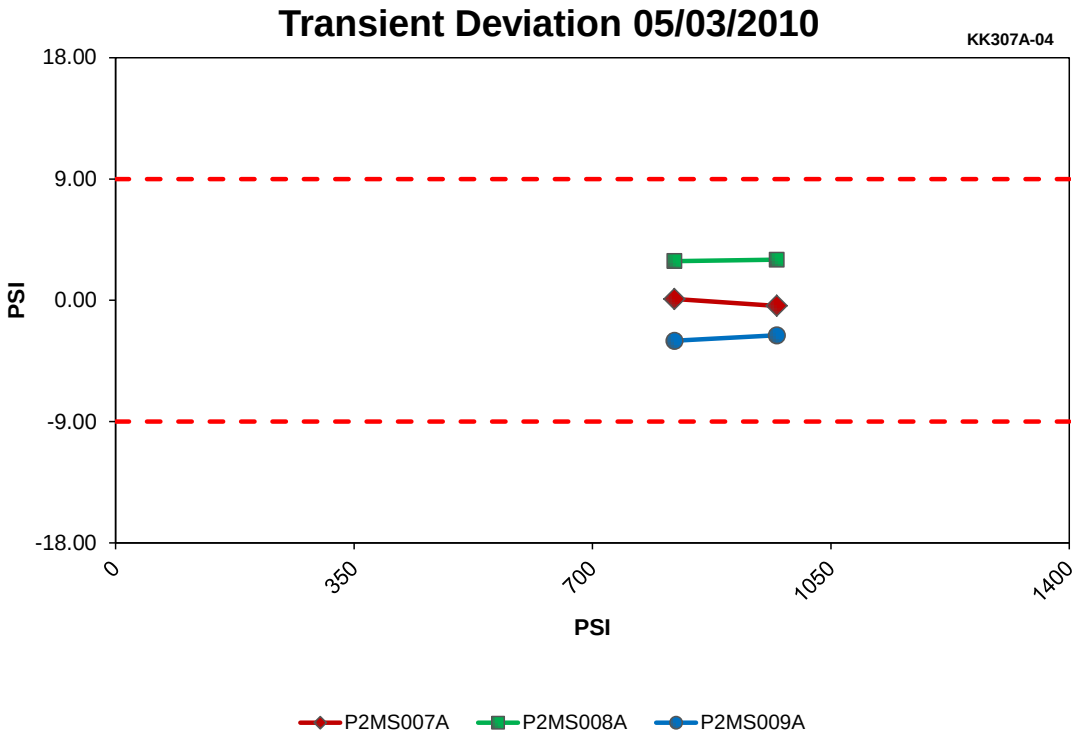



**Figure F.71 SG C OUTLET PRESSURE Transient Deviation at North Anna Unit 2 (Cycle 21)**

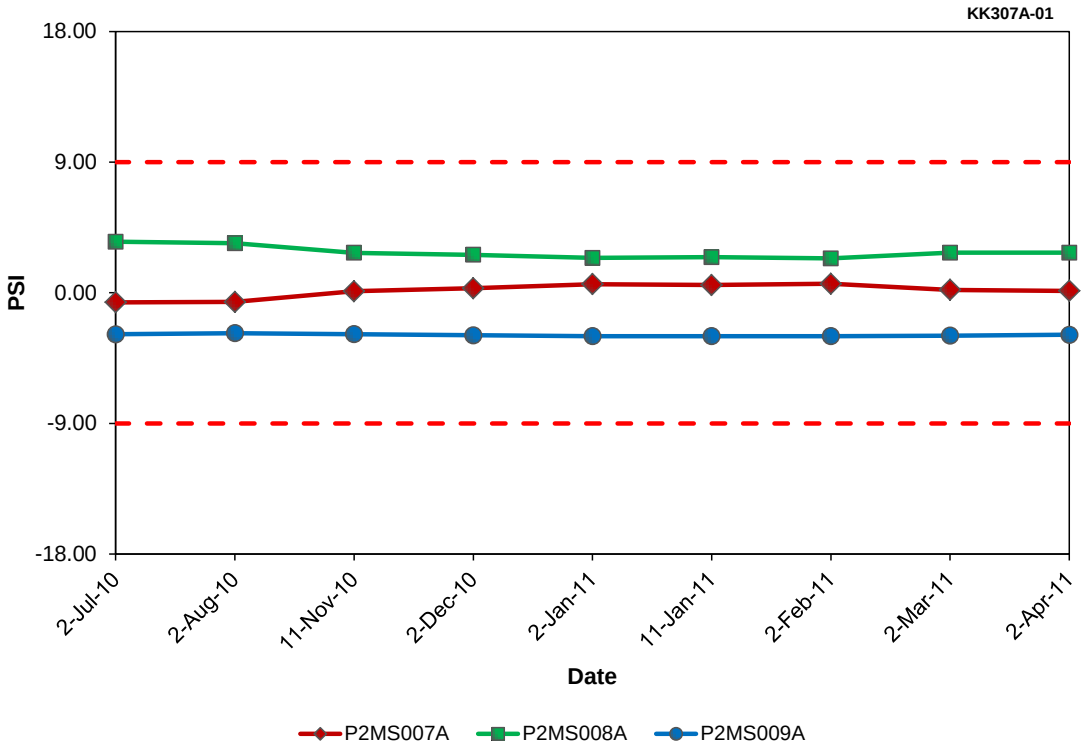



**Figure F.72 SG C OUTLET PRESSURE Steady-State Deviation at North Anna Unit 2 (Cycle 21)**

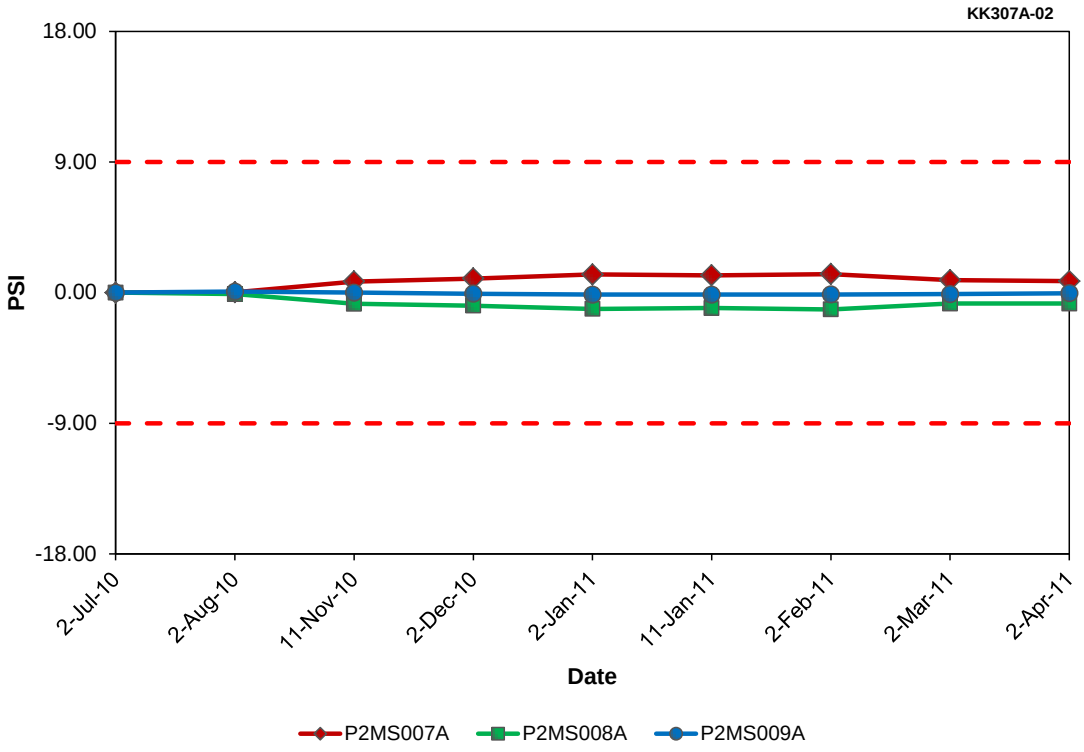



**Figure F.73 SG C OUTLET PRESSURE Steady-State Drift at North Anna Unit 2 (Cycle 21)**

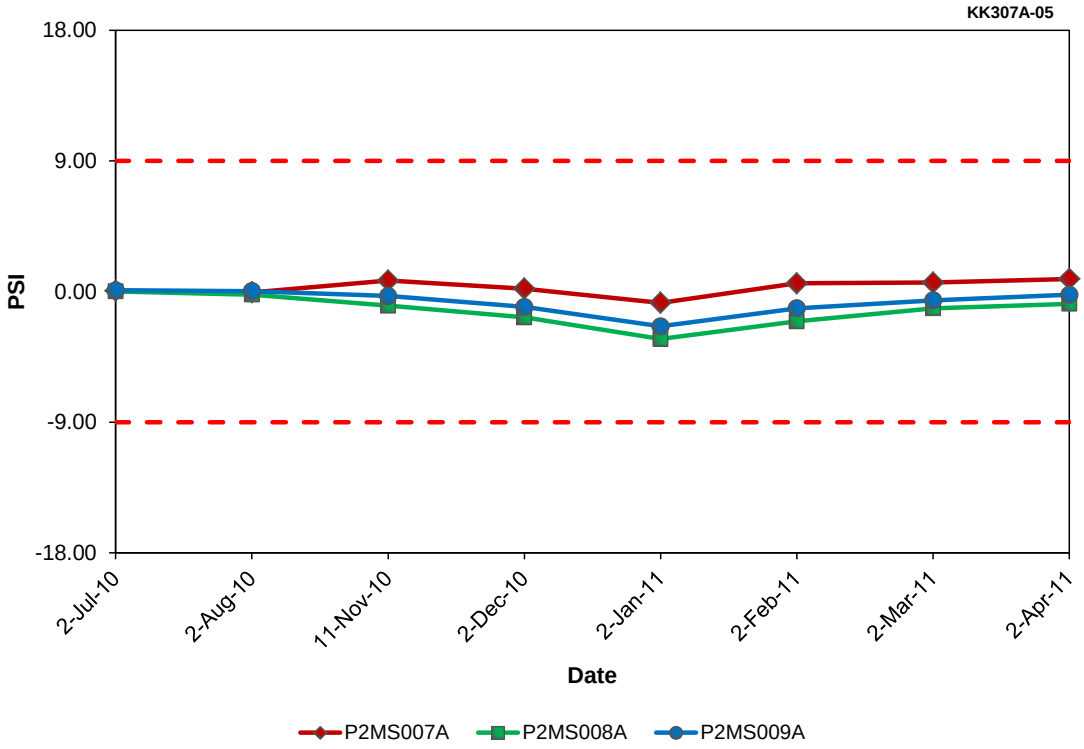



**Figure F.74 SG C OUTLET PRESSURE Steady-State Residual AAKR at North Anna Unit 2 (Cycle 21)**

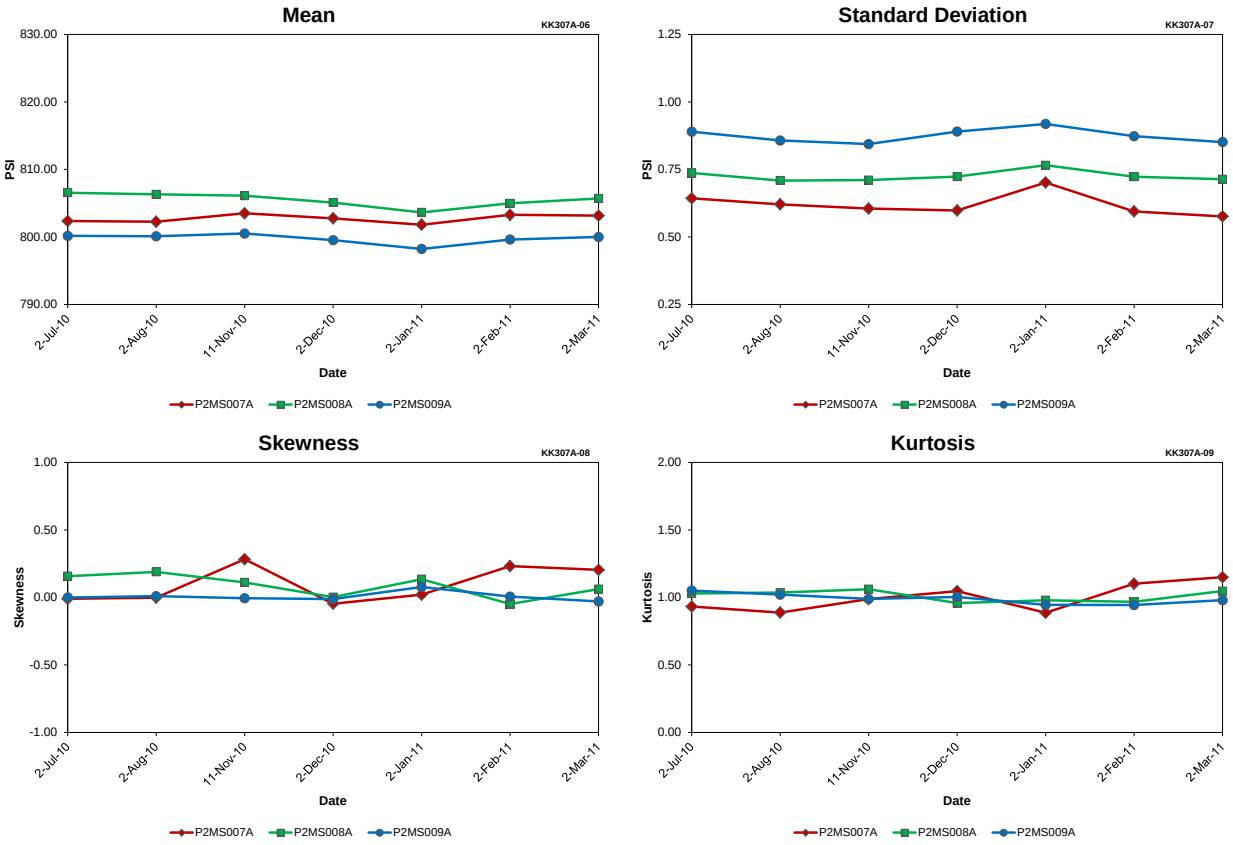



**Figure F.76 SG C OUTLET PRESSURE Data Quality Statistics at North Anna Unit 2 (Cycle 21)**

**Table F.13 SG C OUTLET PRESSURE Data Quality for North Anna Unit 2 (Cycle 21)**

| | Tag Names | | |
|---|---|---|---|
| **Result Type** | **P2MS007A** | **P2MS008A** | **P2MS009A** |
| Mean | 802.73 | 805.48 | 799.74 |
| Std. Dev. | 0.62 | 0.73 | 0.87 |
| Skewness | 0.10 | 0.09 | 0.01 |
| Kurtosis | 1.00 | 1.01 | 0.99 |

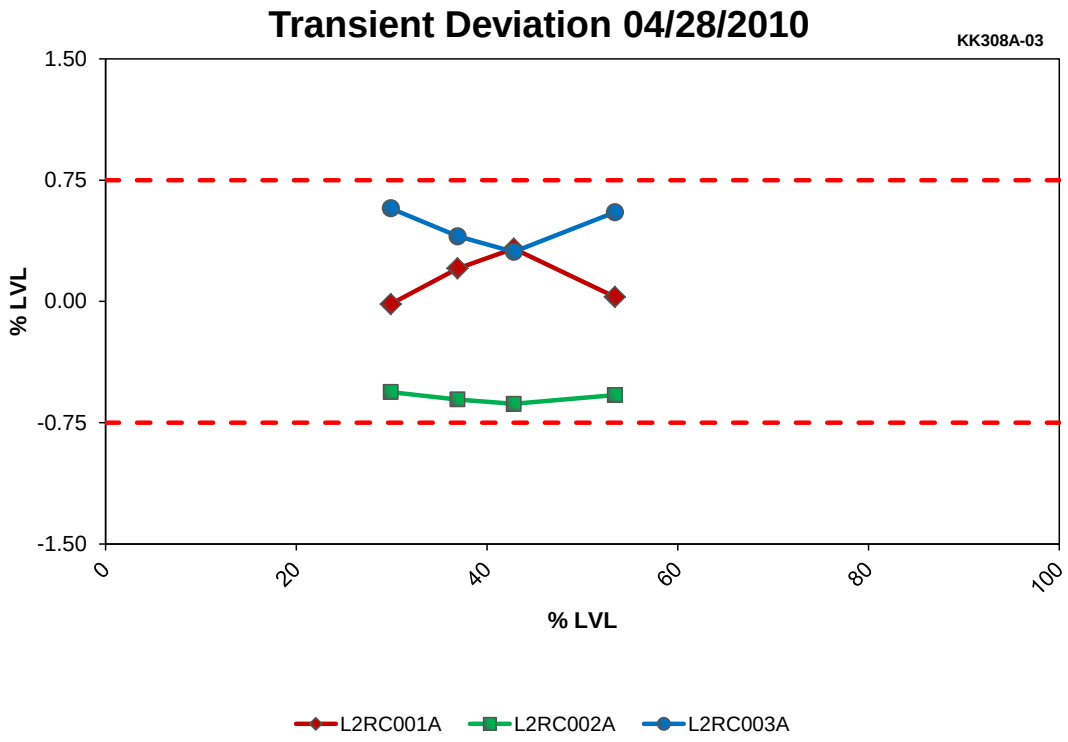



**Figure F.77 PRESSURIZER LEVEL Transient Deviation at North Anna Unit 2 (Cycle 21)**

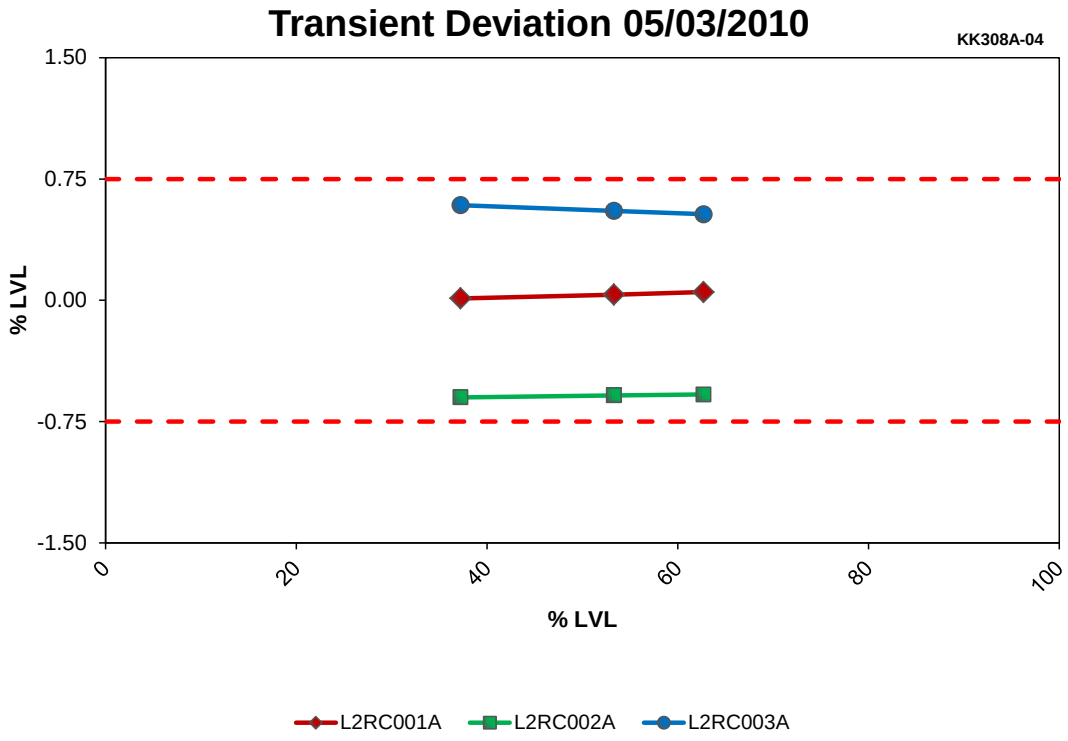



**Figure F.78 PRESSURIZER LEVEL Transient Deviation at North Anna Unit 2 (Cycle 21)**

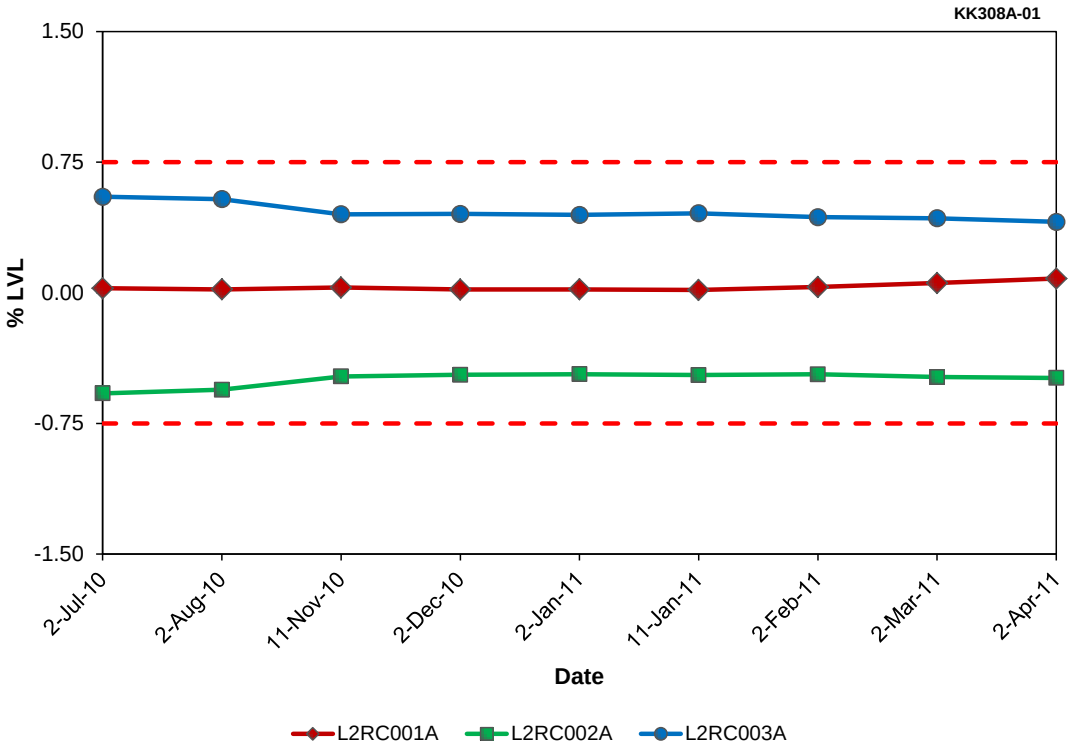



**Figure F.79 PRESSURIZER LEVEL Steady-State Deviation at North Anna Unit 2 (Cycle 21)**

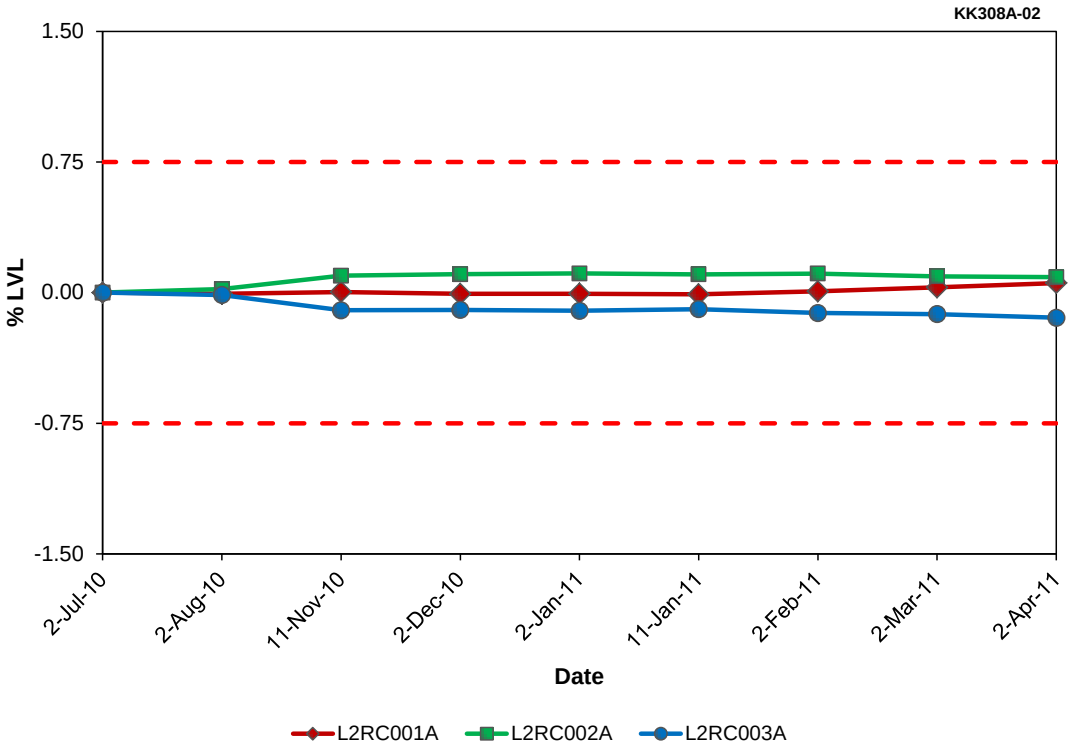



**Figure F.80 PRESSURIZER LEVEL Steady-State Drift at North Anna Unit 2 (Cycle 21)**

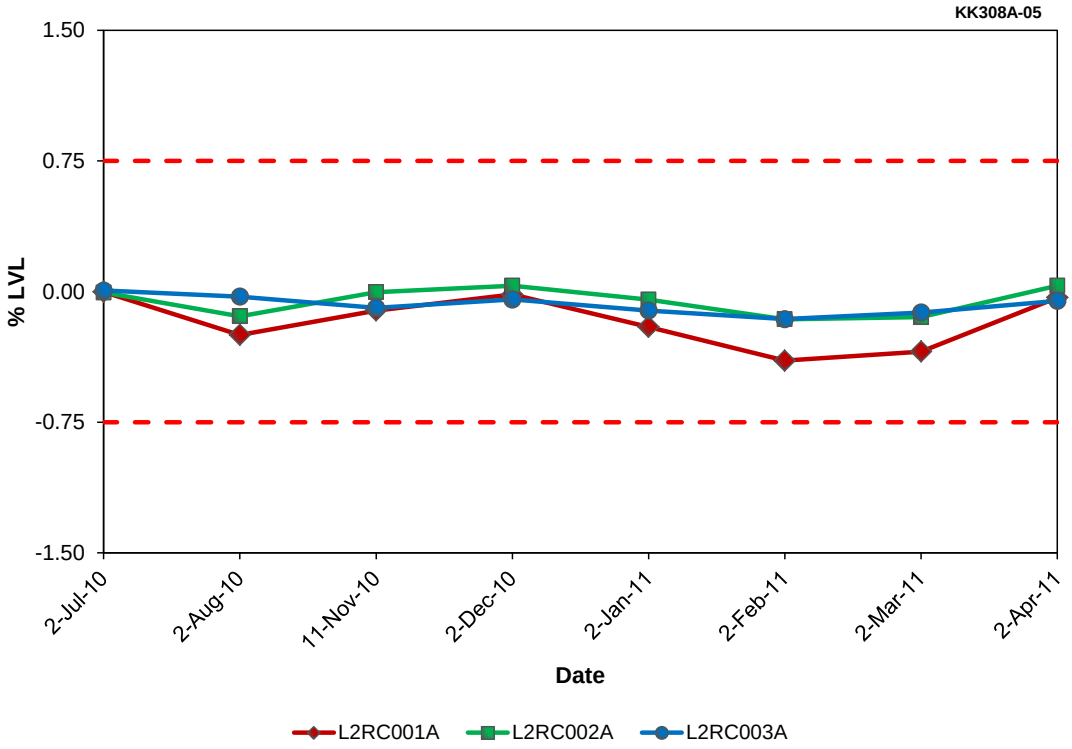



**Figure F.81 PRESSURIZER LEVEL Steady-State Residual AAKR at North Anna Unit 2 (Cycle 21)**

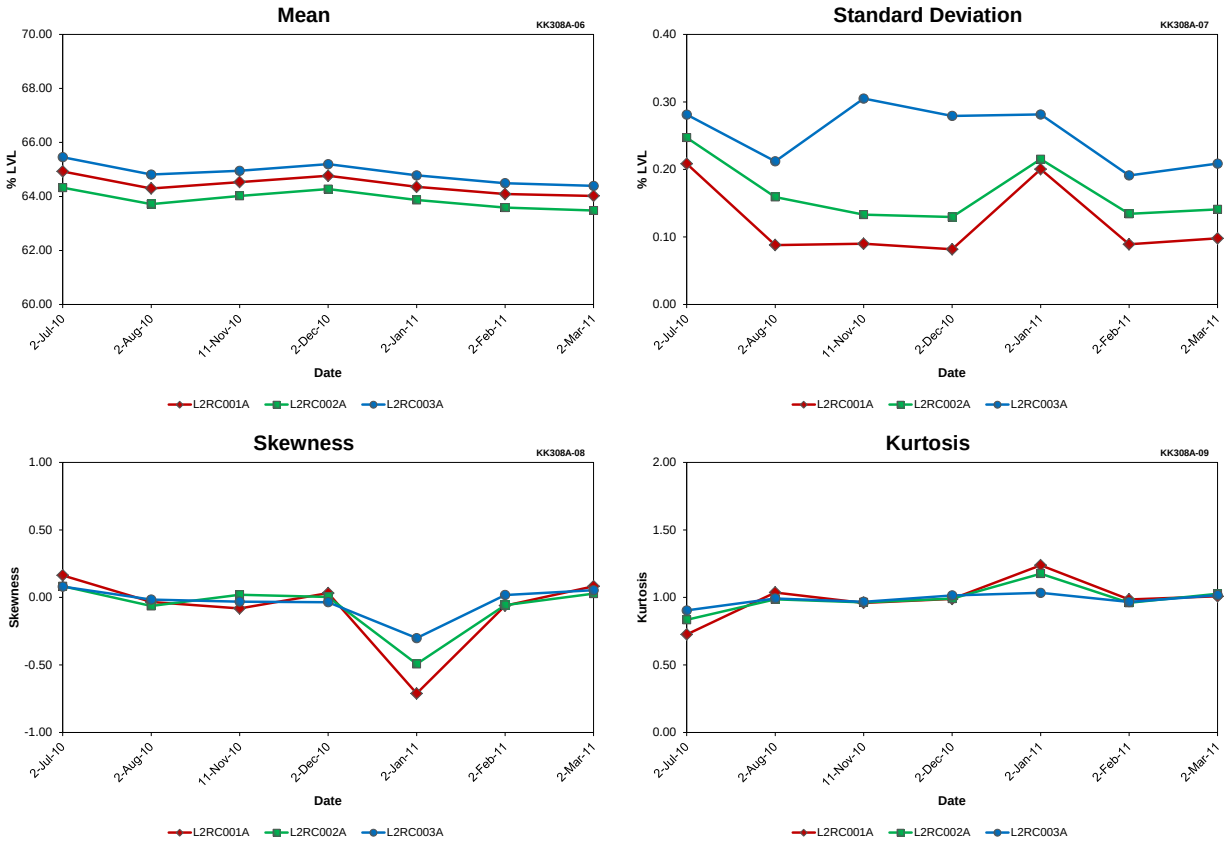



**Figure F.82 PRESSURIZER LEVEL Data Quality Statistics at North Anna Unit 2 (Cycle 21)**

**Table F.14 PRESSURIZER LEVEL Data Quality for North Anna Unit 2 (Cycle 21)**

| | Tag Names | | |
|---|---|---|---|
| **Result Type** | **L2RC001A** | **L2RC002A** | **L2RC003A** |
| Mean | 64.43 | 63.90 | 64.87 |
| Std. Dev. | 0.12 | 0.17 | 0.25 |
| Skewness | -0.09 | -0.07 | -0.03 |
| Kurtosis | 0.99 | 0.99 | 0.99 |

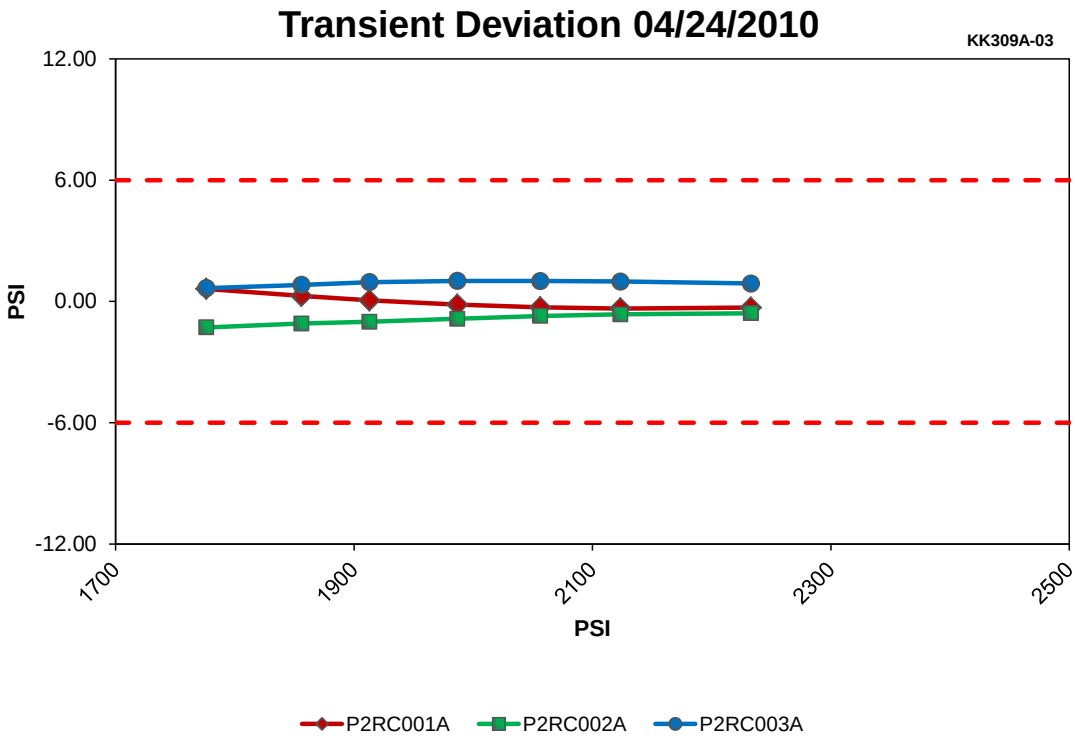



**Figure F.83 PRESSURIZER PRESSURE Transient Deviation at North Anna Unit 2 (Cycle 21)**

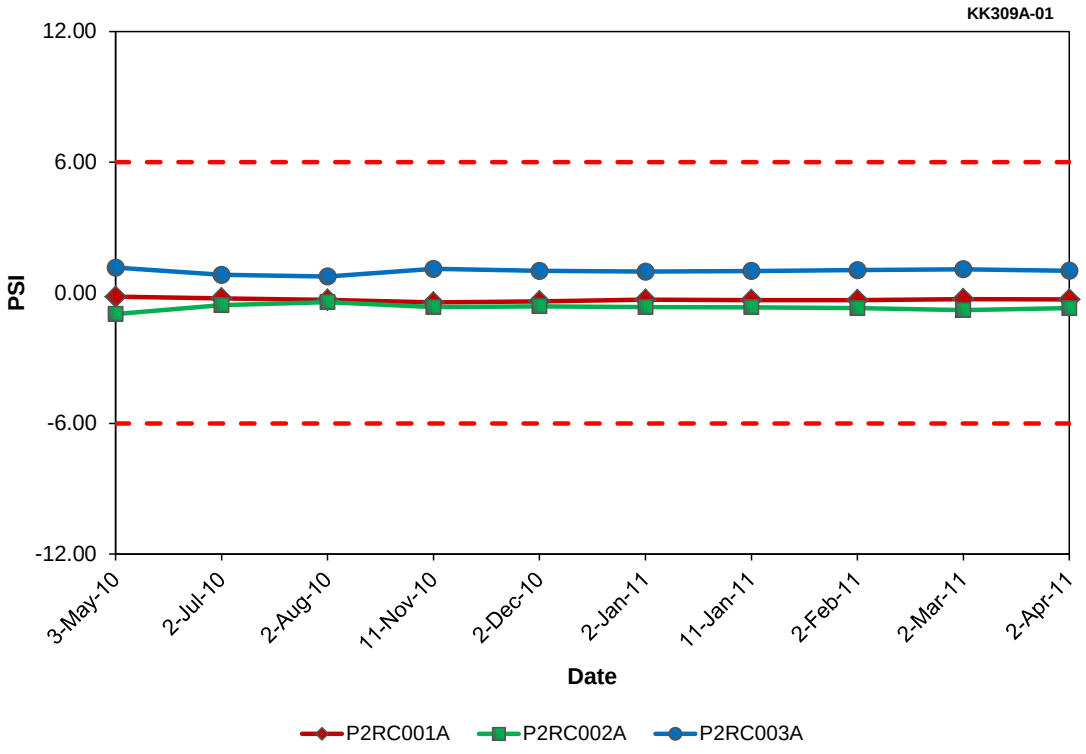



**Figure F.84 PRESSURIZER PRESSURE Steady-State Deviation at North Anna Unit 2 (Cycle 21)**

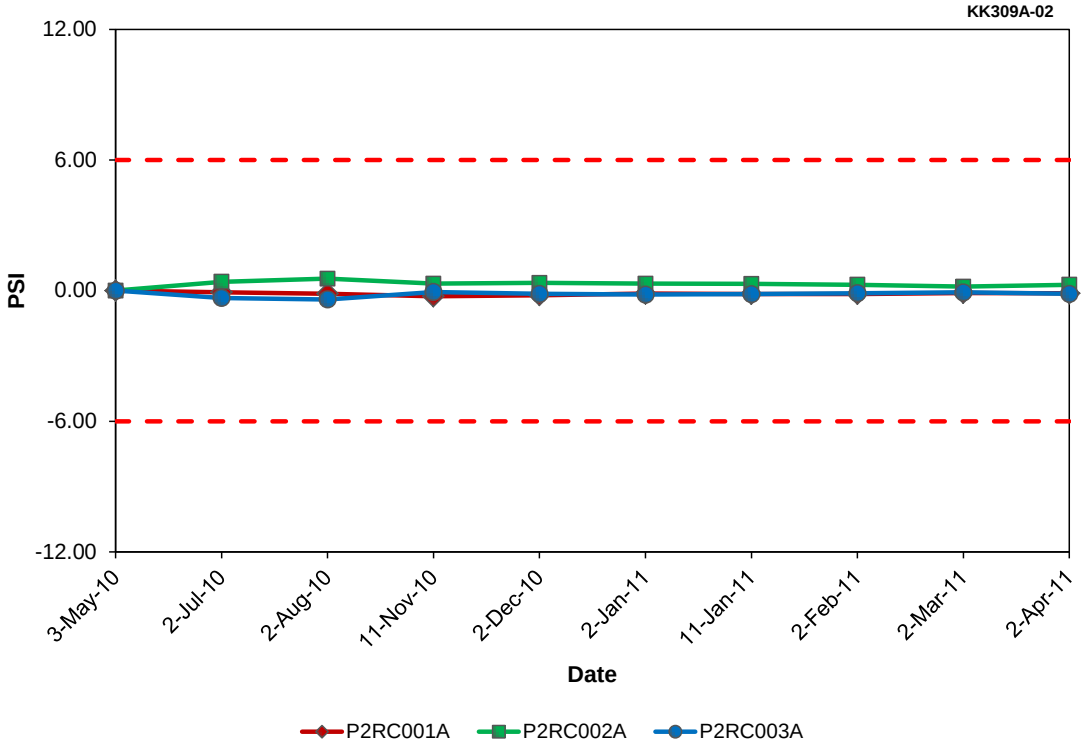



**Figure F.85 PRESSURIZER PRESSURE Steady-State Drift at North Anna Unit 2 (Cycle 21)**

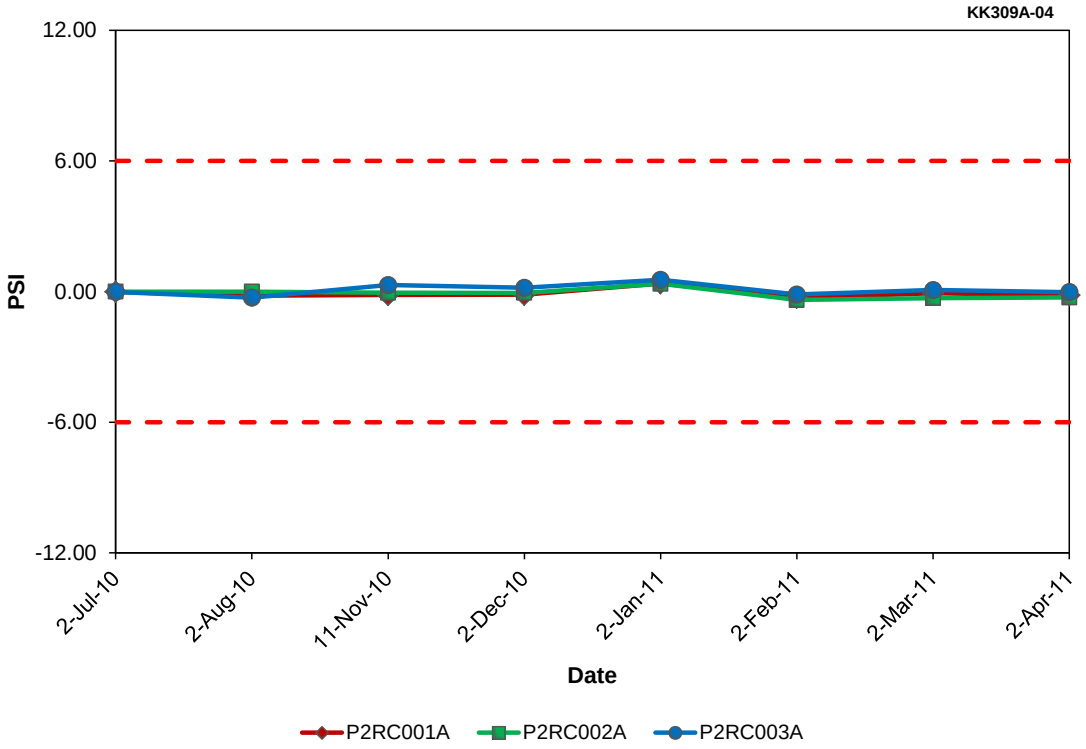



**Figure F.86 PRESSURIZER PRESSURE Steady-State Residual AAKR at North Anna Unit 2 (Cycle 21)**

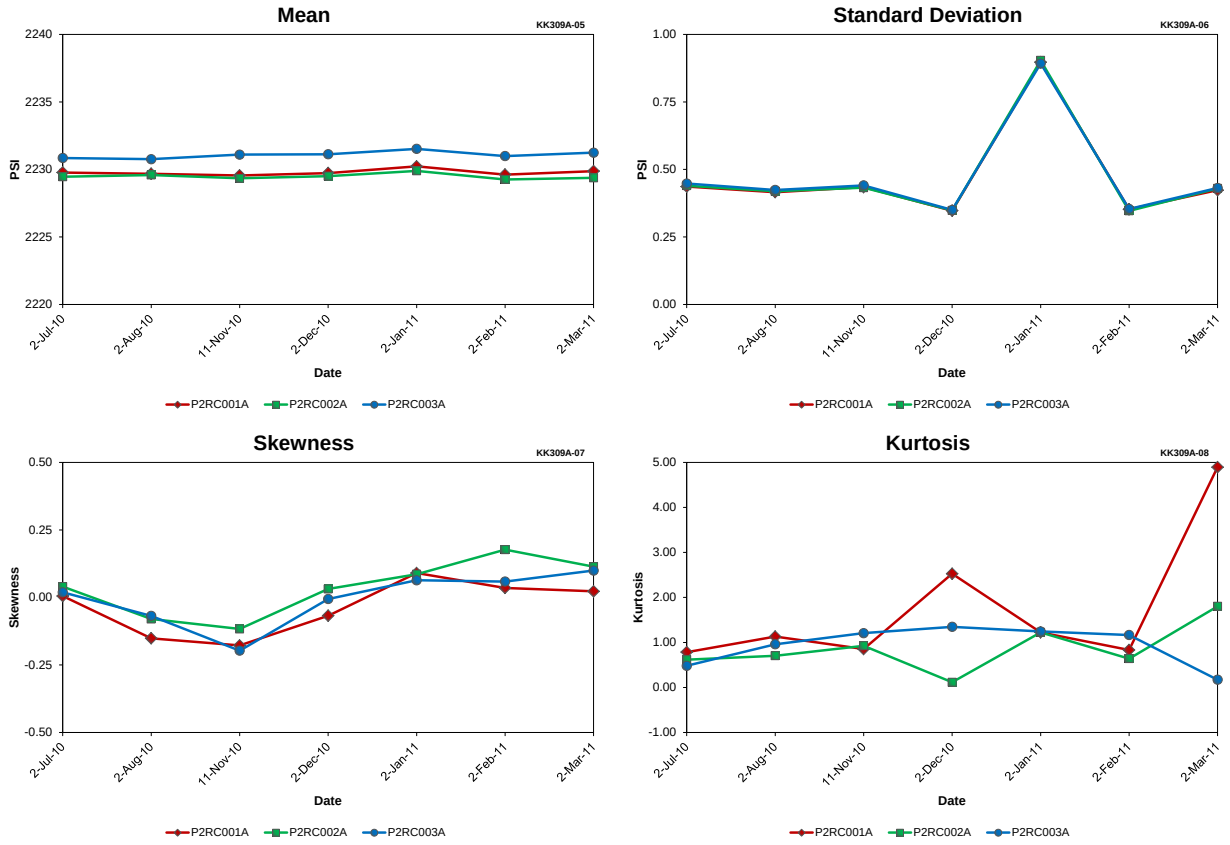



**Figure F.87 PRESSURIZER PRESSURE Data Quality Statistics at North Anna Unit 2 (Cycle 21)**

**Table F.15 PRESSURIZER PRESSURE Data Quality for North Anna Unit 2 (Cycle 21)**

| | Tag Names | | |
|---|---|---|---|
| **Result Type** | **P2RC001A** | **P2RC002A** | **P2RC003A** |
| Mean | 2229.78 | 2229.49 | 2231.08 |
| Std. Dev. | 0.47 | 0.47 | 0.48 |
| Skewness | -0.03 | 0.04 | 0.00 |
| Kurtosis | 1.75 | 0.86 | 0.94 |

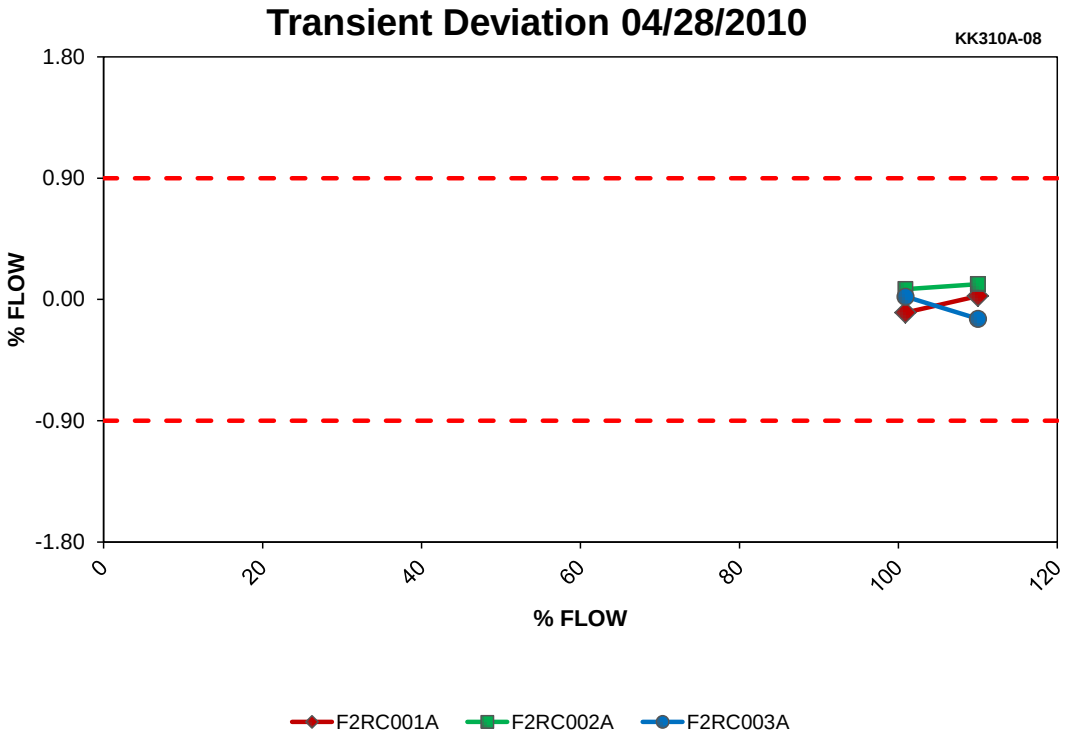



**Figure F.88 RCS LOOP A FLOW Transient Deviation at North Anna Unit 2 (Cycle 21)**

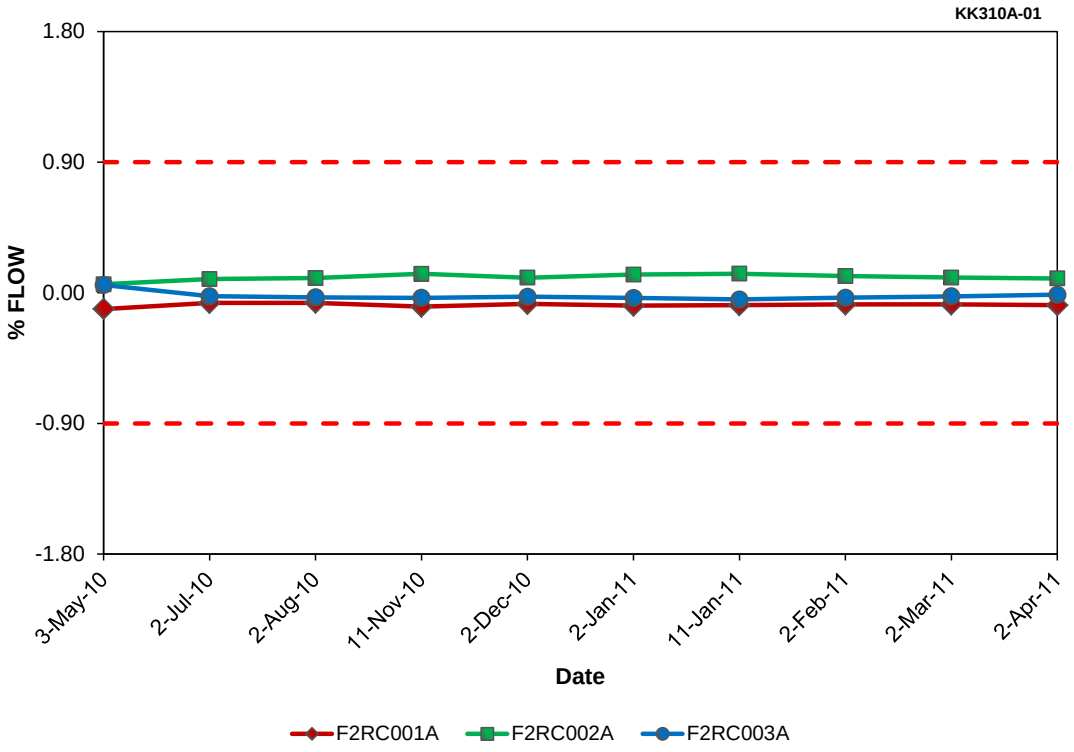



**Figure F.89 RCS LOOP A FLOW Steady-State Deviation at North Anna Unit 2 (Cycle 21)**

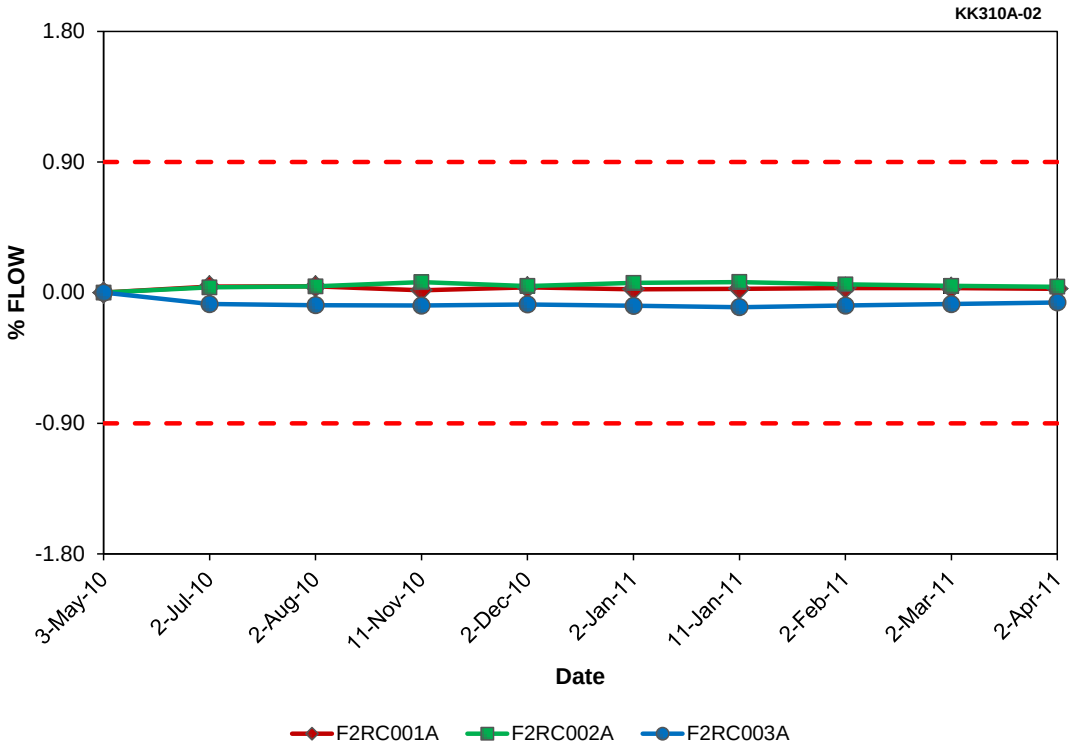



**Figure F.90 RCS LOOP A FLOW Steady-State Drift at North Anna Unit 2 (Cycle 21)**

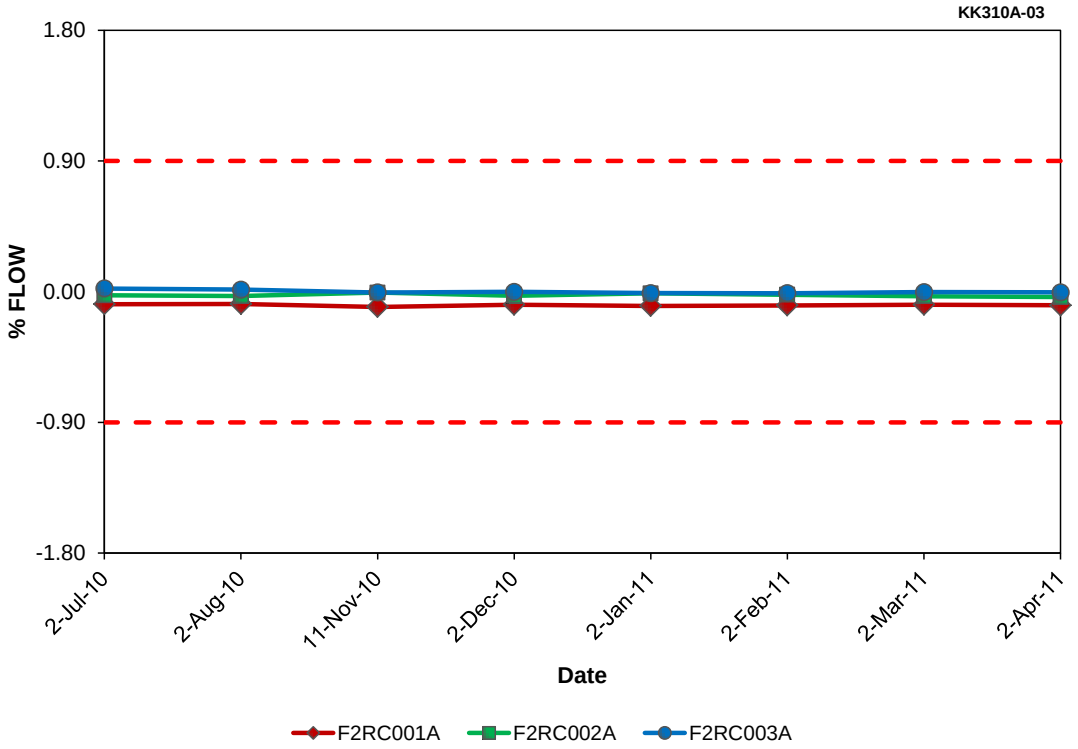



**Figure F.91 RCS LOOP A FLOW Steady-State Residual AAKR at North Anna Unit 2 (Cycle 21)**

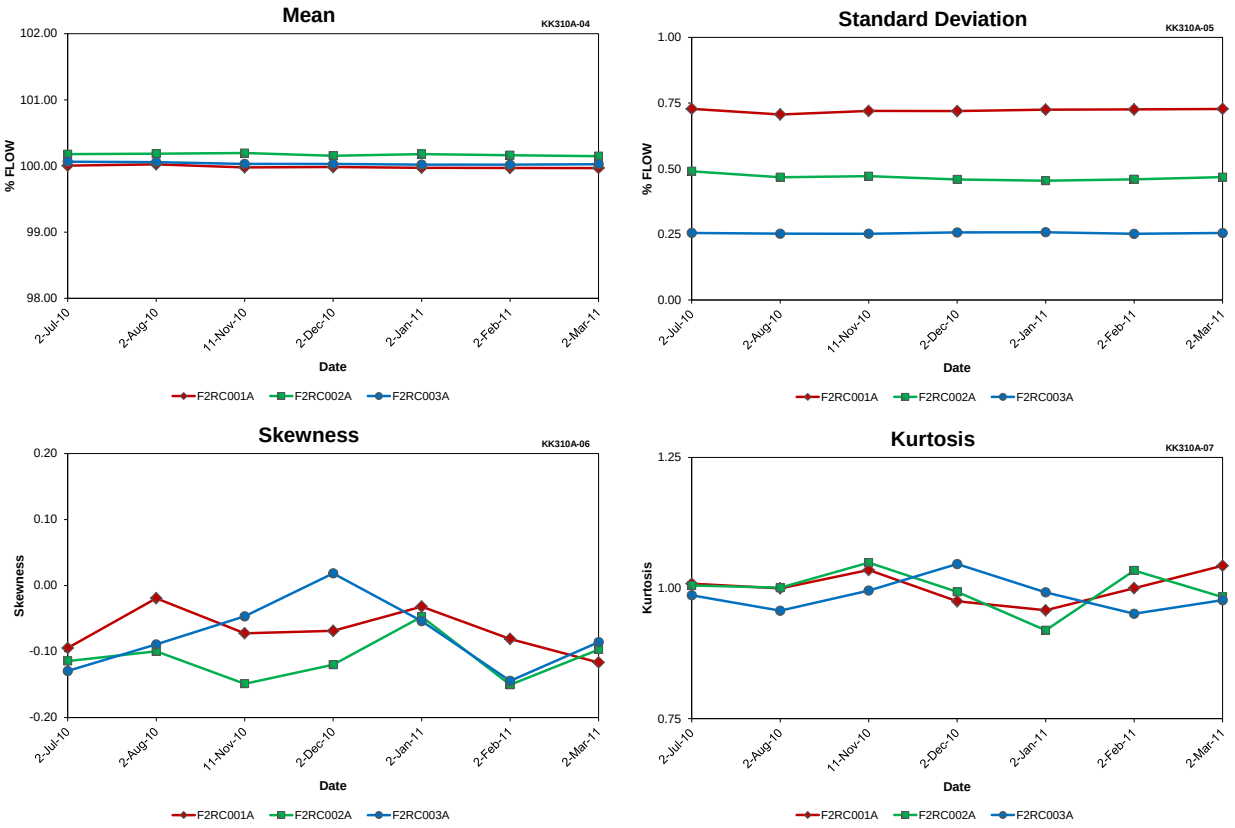



**Figure F.92 RCS LOOP A FLOW Data Quality Statistics at North Anna Unit 2 (Cycle 21)**

**Table F.16 RCS LOOP A FLOW Data Quality for North Anna Unit 2 (Cycle 21)**

| | Tag Names | | |
|---|---|---|---|
| **Result Type** | **F2RC001A** | **F2RC002A** | **F2RC003A** |
| Mean | 99.99 | 100.17 | 100.04 |
| Std. Dev. | 0.72 | 0.47 | 0.25 |
| Skewness | -0.07 | -0.11 | -0.08 |
| Kurtosis | 1.00 | 1.00 | 0.99 |

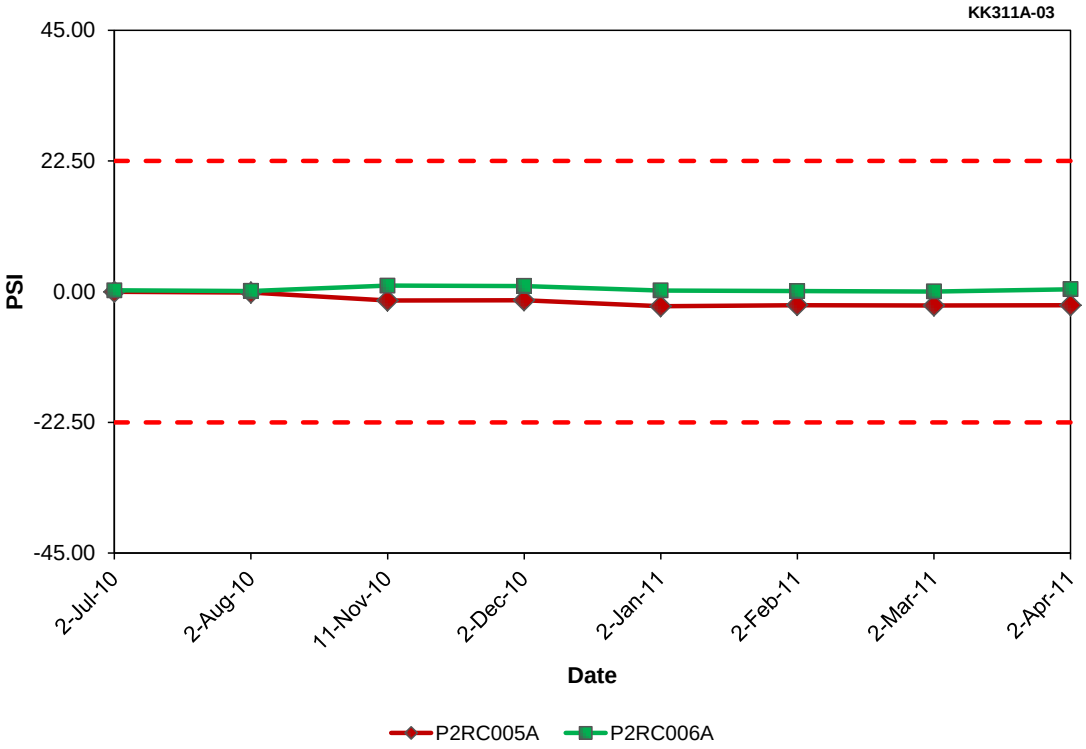



**Figure F.93 RCS WIDE RANGE PRESSURE Steady-State Residual AAKR at North Anna Unit 2 (Cycle 21)**

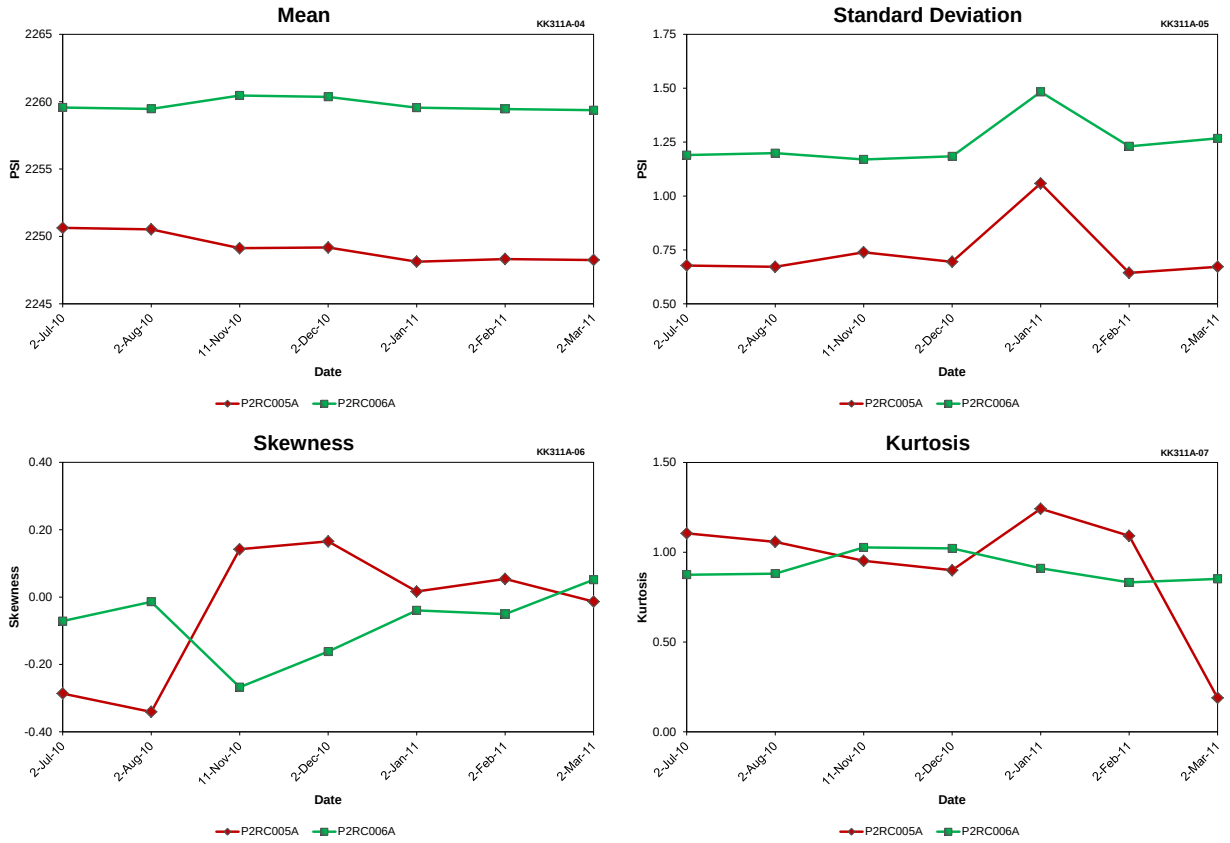



**Figure F.94 RCS WIDE RANGE PRESSURE Data Quality Statistics at North Anna Unit 2 (Cycle 21)**

**Table F.17 RCS WIDE RANGE PRESSURE Data Quality for North Anna Unit 2 (Cycle 21)**

| | Tag Names | |
|---|---|---|
| **Result Type** | **P2RC005A** | **P2RC006A** |
| Mean | 2249.17 | 2259.75 |
| Std. Dev. | 0.74 | 1.25 |
| Skewness | -0.04 | -0.08 |
| Kurtosis | 0.93 | 0.91 |

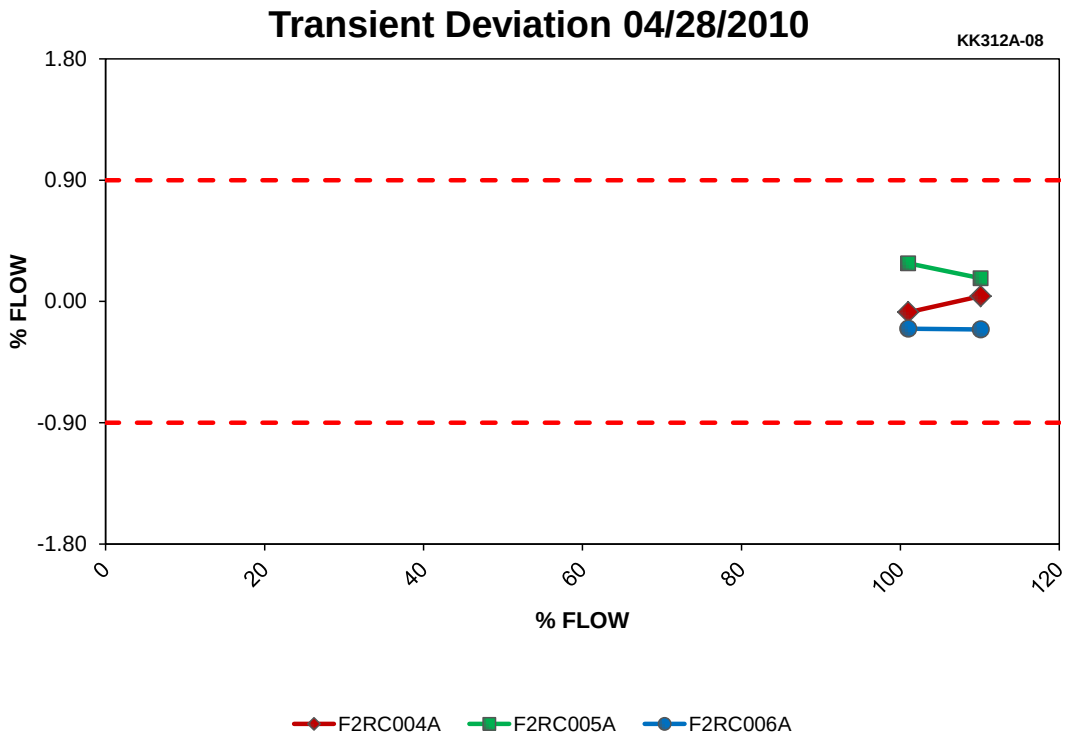



**Figure F.95 RCS LOOP B FLOW Transient Deviation at North Anna Unit 2 (Cycle 21)**

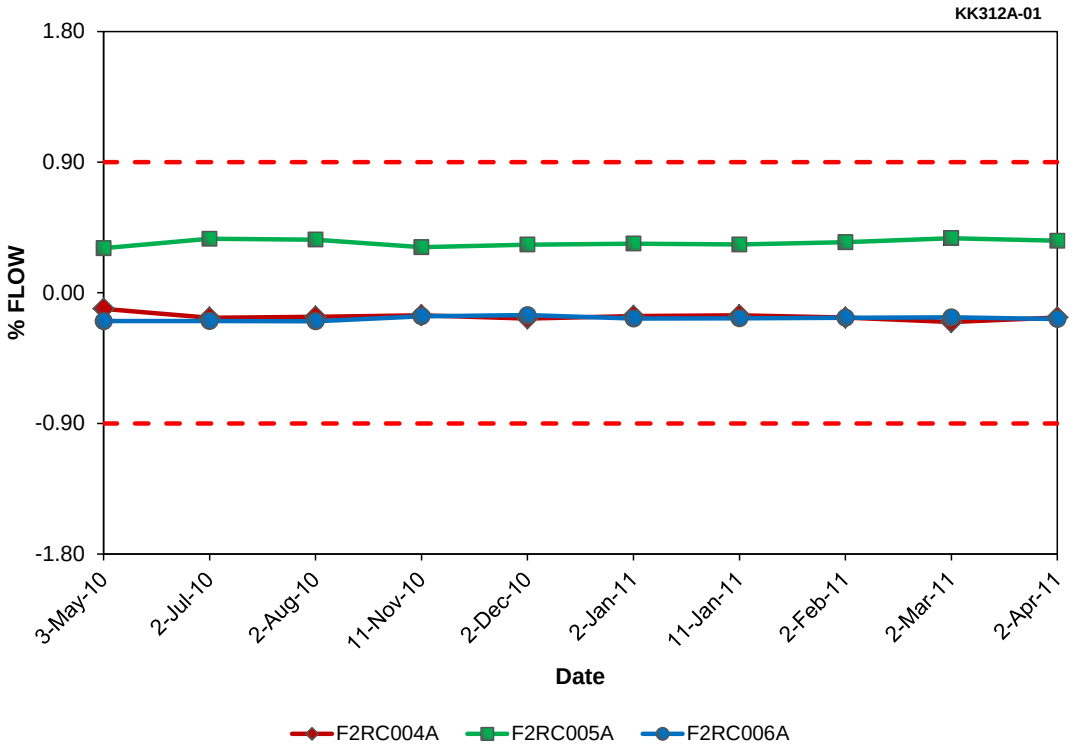



**Figure F.96 RCS LOOP B FLOW Steady-State Deviation at North Anna Unit 2 (Cycle 21)**

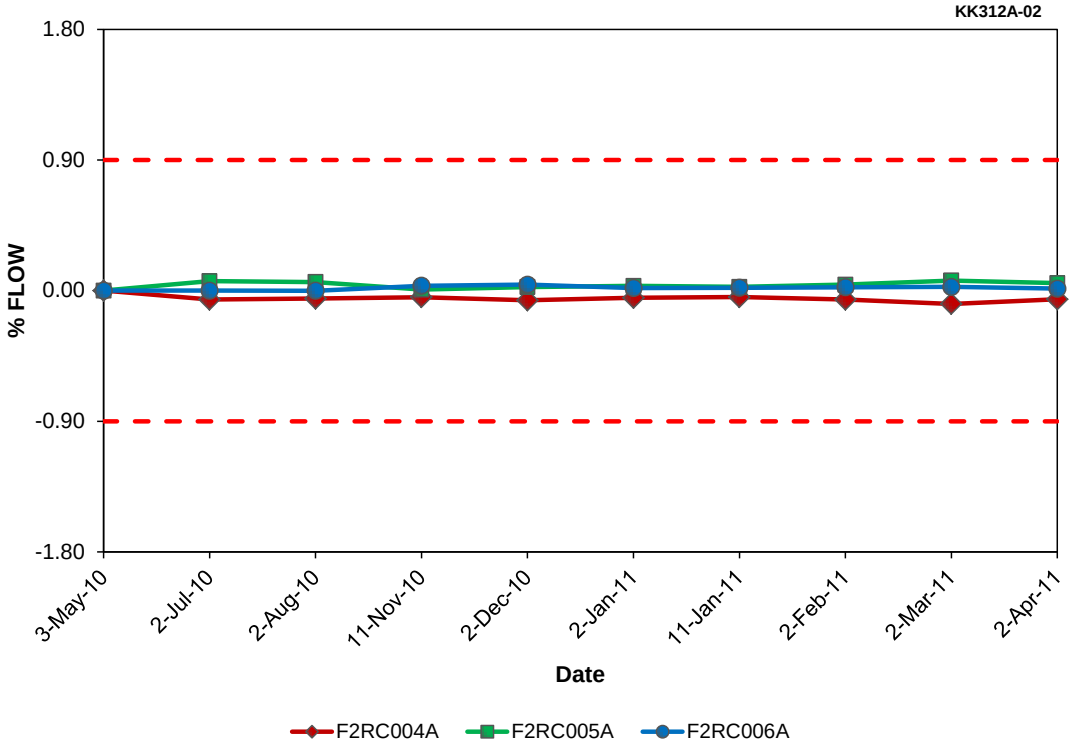



**Figure F.97 RCS LOOP B FLOW Steady-State Drift at North Anna Unit 2 (Cycle 21)**

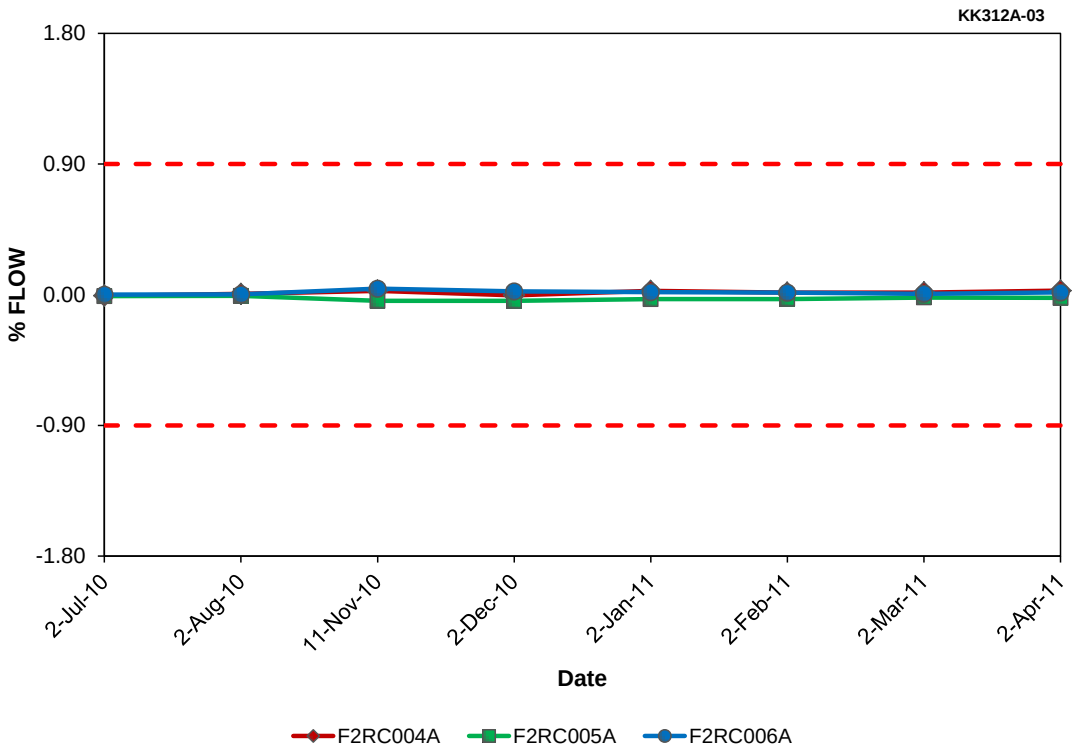



**Figure F.98 RCS LOOP B FLOW Steady-State Residual AAKR at North Anna Unit 2 (Cycle 21)**

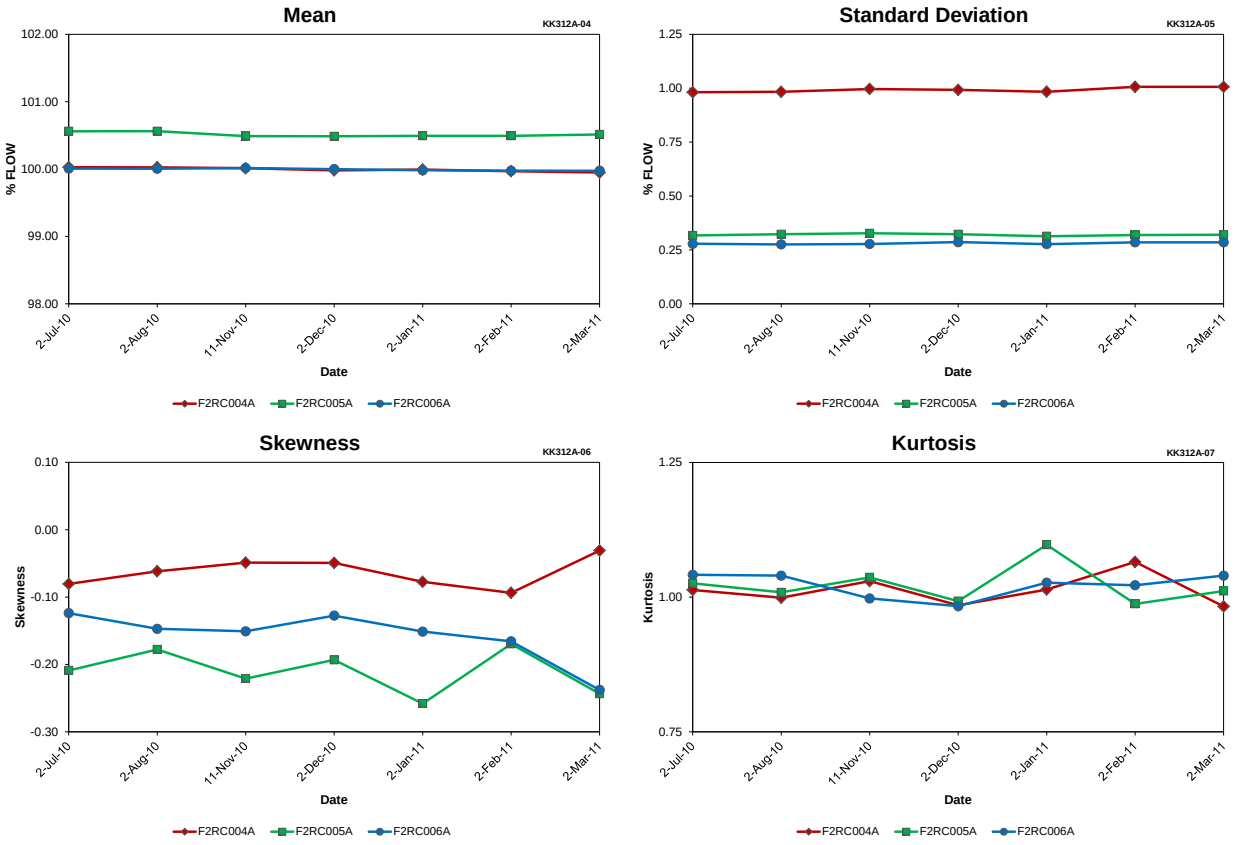



**Figure F.99 RCS LOOP B FLOW Data Quality Statistics at North Anna Unit 2 (Cycle 21)**

**Table F.18 RCS LOOP B FLOW Data Quality for North Anna Unit 2 (Cycle 21)**

| | Tag Names | | |
|---|---|---|---|
| **Result Type** | **F2RC004A** | **F2RC005A** | **F2RC006A** |
| Mean | 99.99 | 100.51 | 99.99 |
| Std. Dev. | 0.99 | 0.32 | 0.28 |
| Skewness | -0.06 | -0.21 | -0.16 |
| Kurtosis | 1.01 | 1.02 | 1.02 |

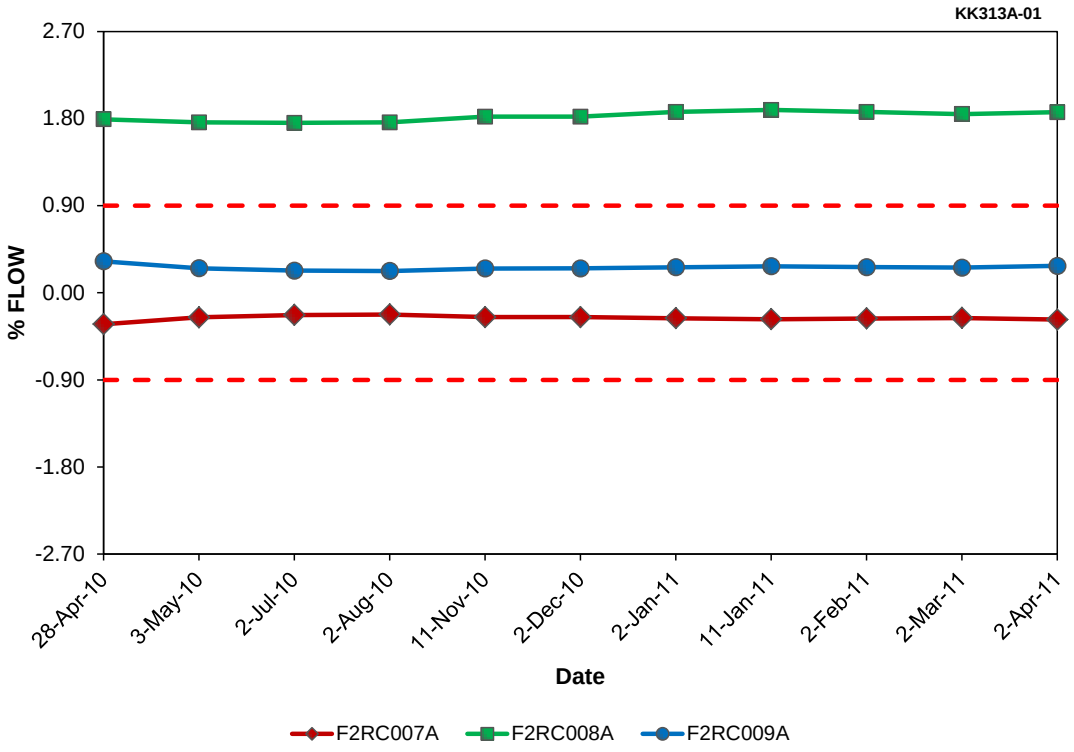



**Figure F.100 RCS LOOP C FLOW Steady-State Deviation at North Anna Unit 2 (Cycle 21)**

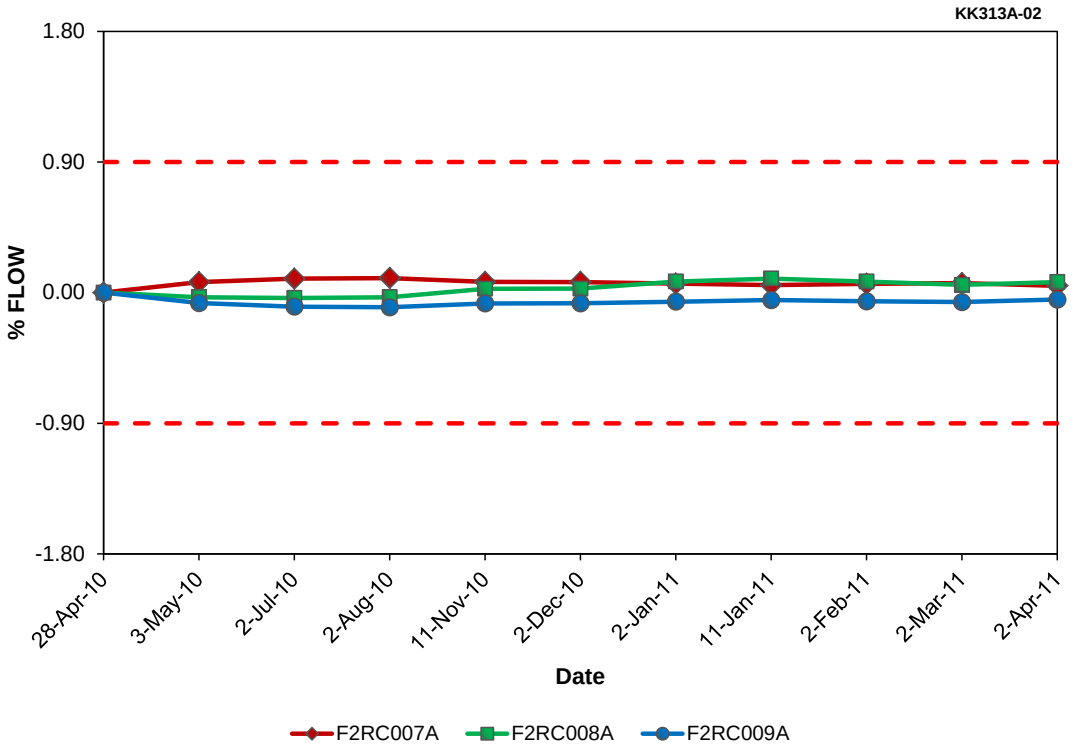



**Figure F.101 RCS LOOP C FLOW Steady-State Drift at North Anna Unit 2 (Cycle 21)**

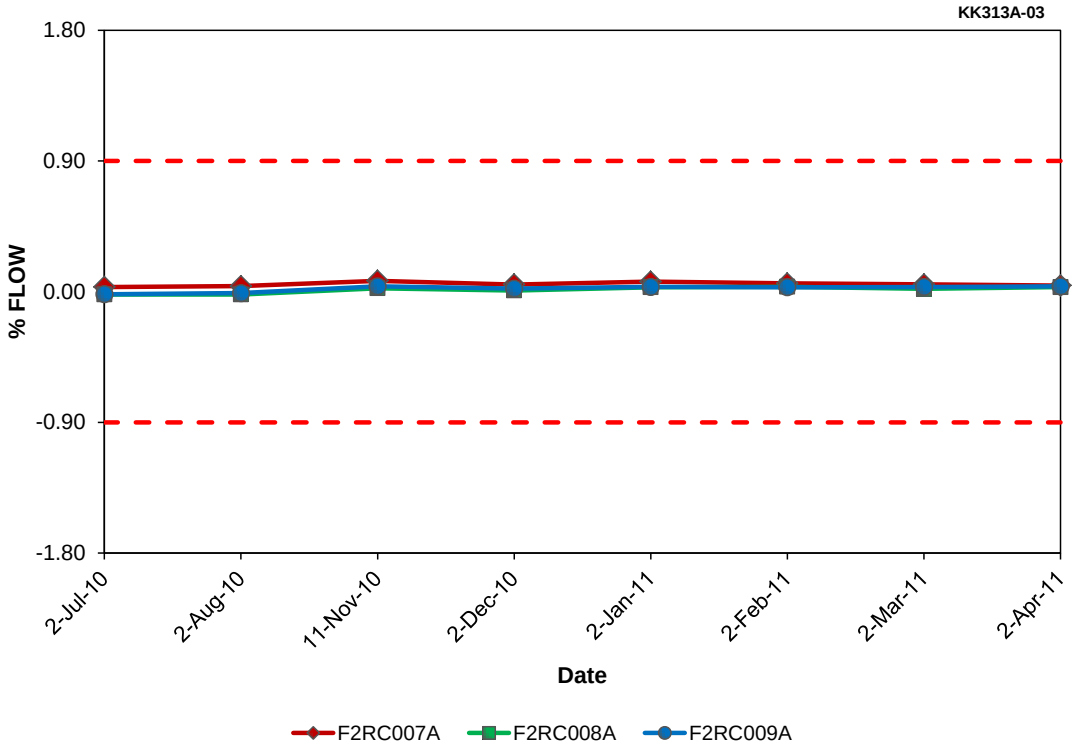



**Figure F.102 RCS LOOP C FLOW Steady-State Residual AAKR at North Anna Unit 2 (Cycle 21)**

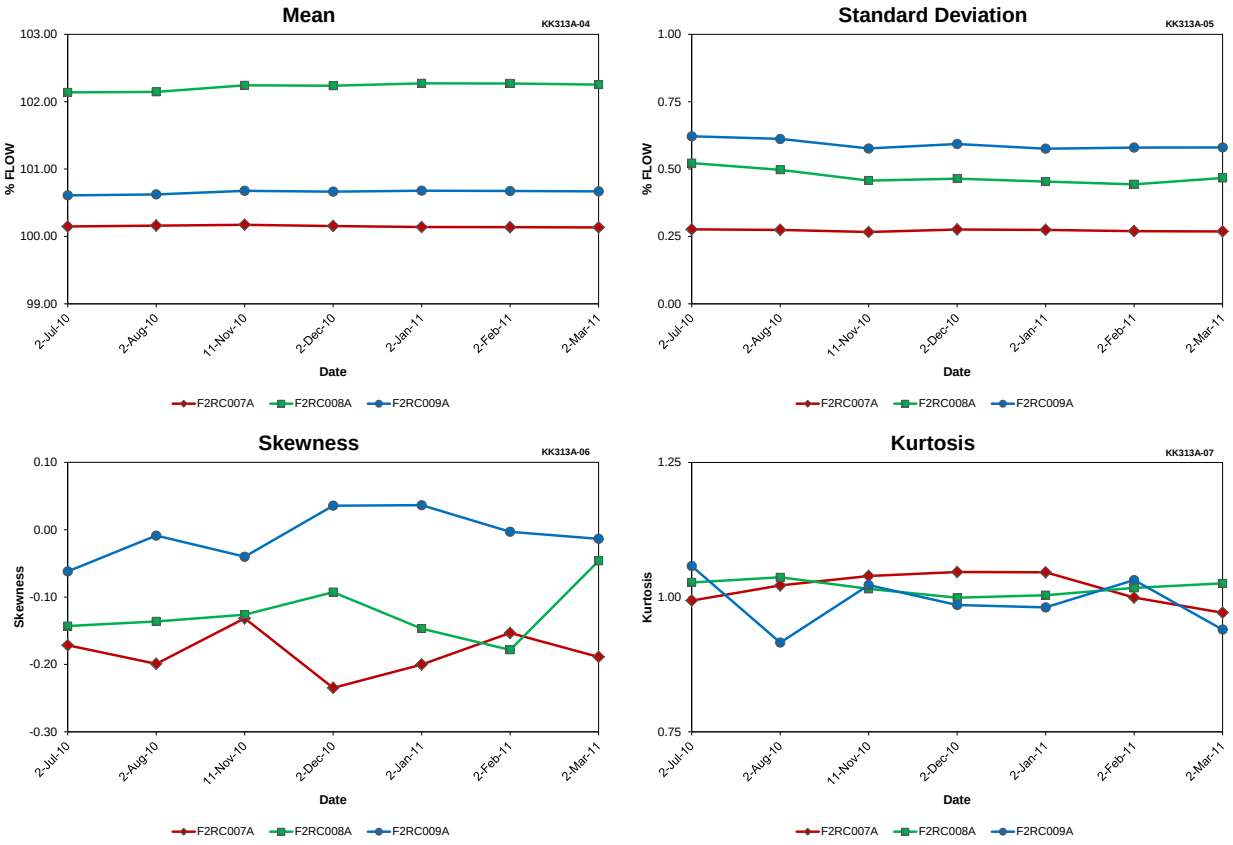



**Figure F.103 RCS LOOP C FLOW Data Quality Statistics at North Anna Unit 2 (Cycle 21)**

**Table F.19 RCS LOOP C FLOW Data Quality for North Anna Unit 2 (Cycle 21)**

| | Tag Names | | |
|---|---|---|---|
| **Result Type** | **F2RC007A** | **F2RC008A** | **F2RC009A** |
| Mean | 100.15 | 102.22 | 100.66 |
| Std. Dev. | 0.27 | 0.47 | 0.59 |
| Skewness | -0.18 | -0.12 | -0.01 |
| Kurtosis | 1.02 | 1.02 | 0.99 |

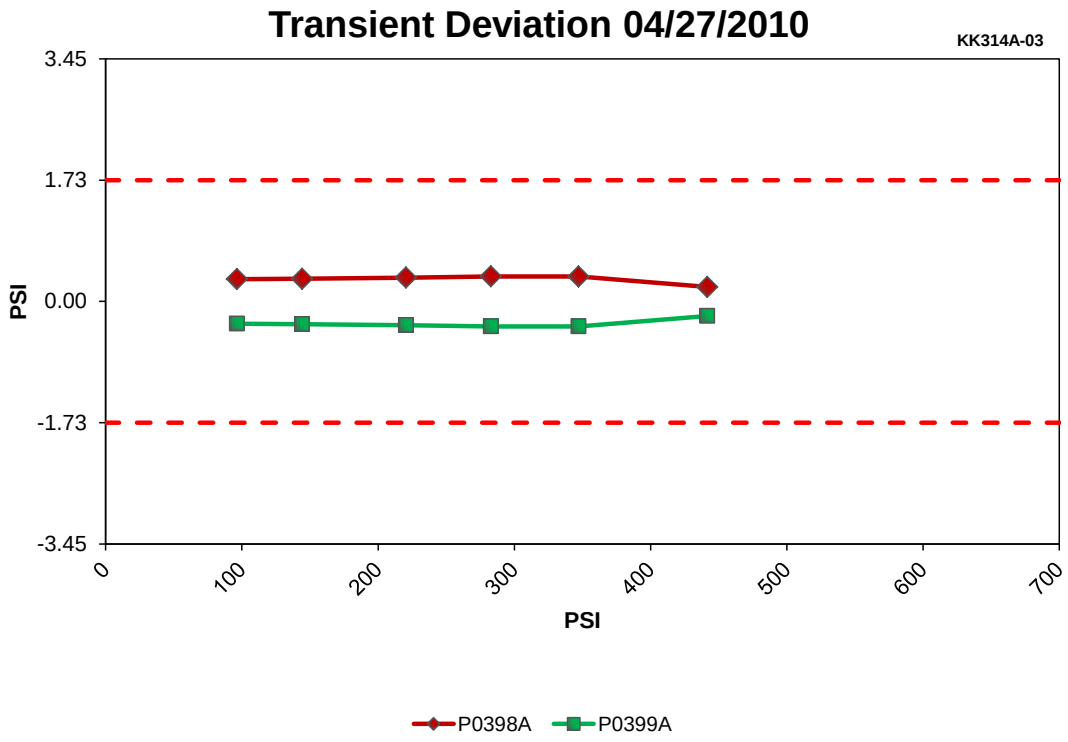



**Figure F.104 TBIN FIRST STAGE PRESSURE Transient Deviation at North Anna Unit 2 (Cycle 21)**

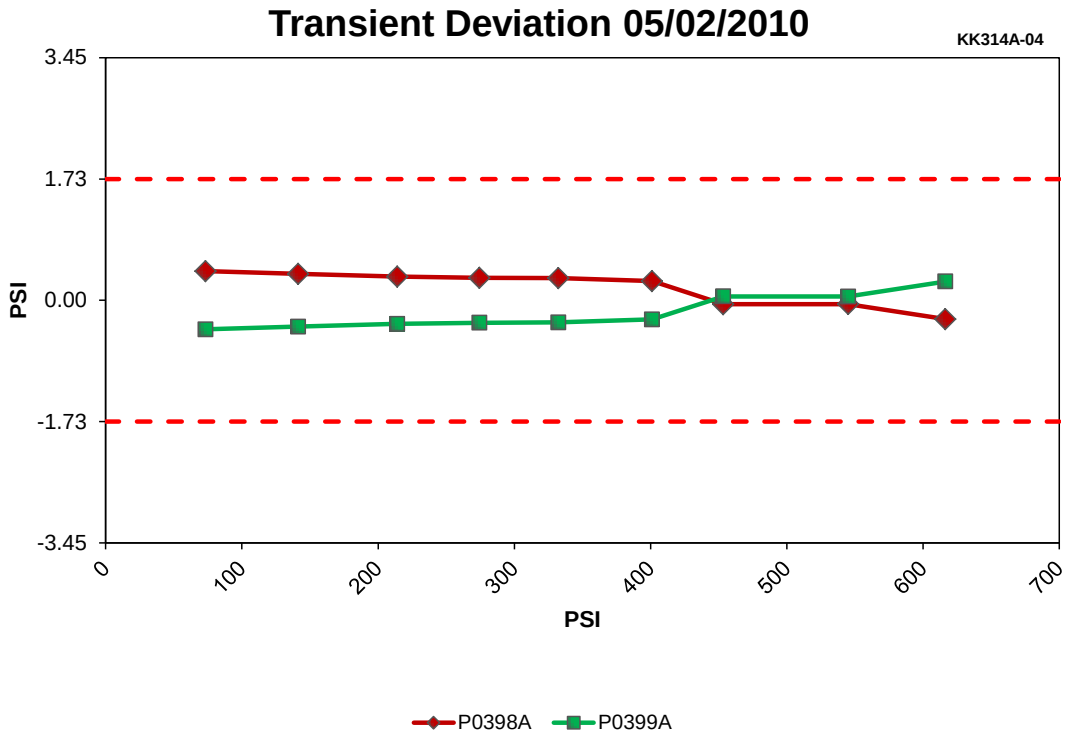



**Figure F.105 TBIN FIRST STAGE PRESSURE Transient Deviation at North Anna Unit 2 (Cycle 21)**

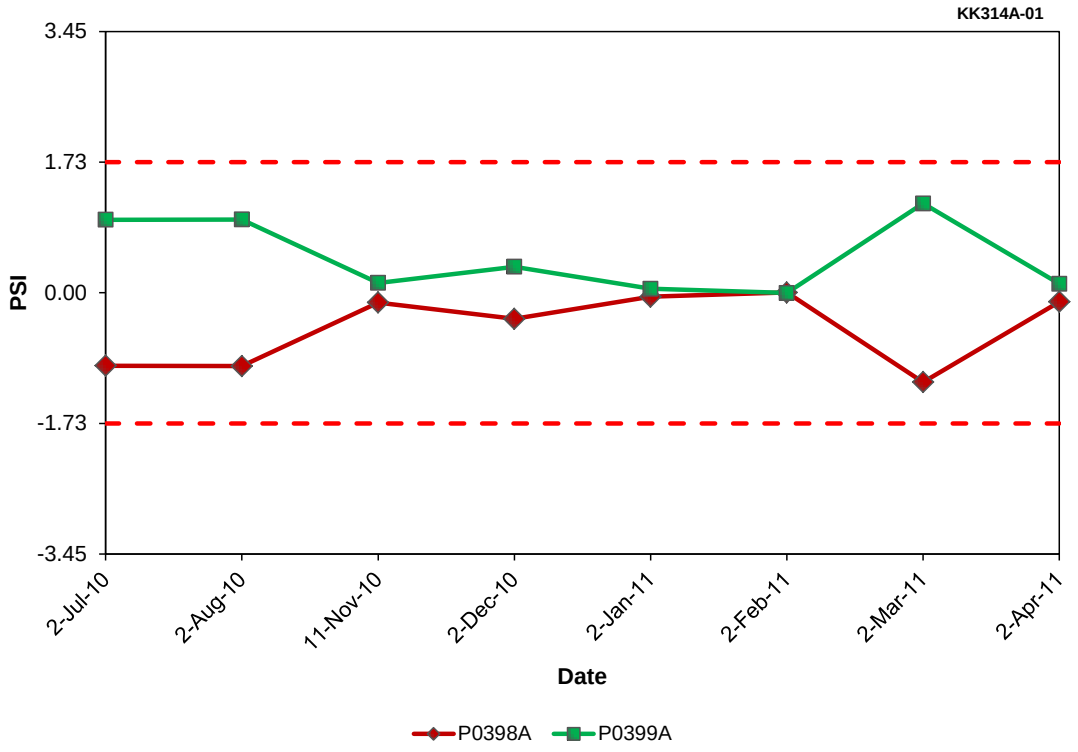



**Figure F.106 TBIN FIRST STAGE PRESSURE Steady-State Deviation at North Anna Unit 2 (Cycle 21)**

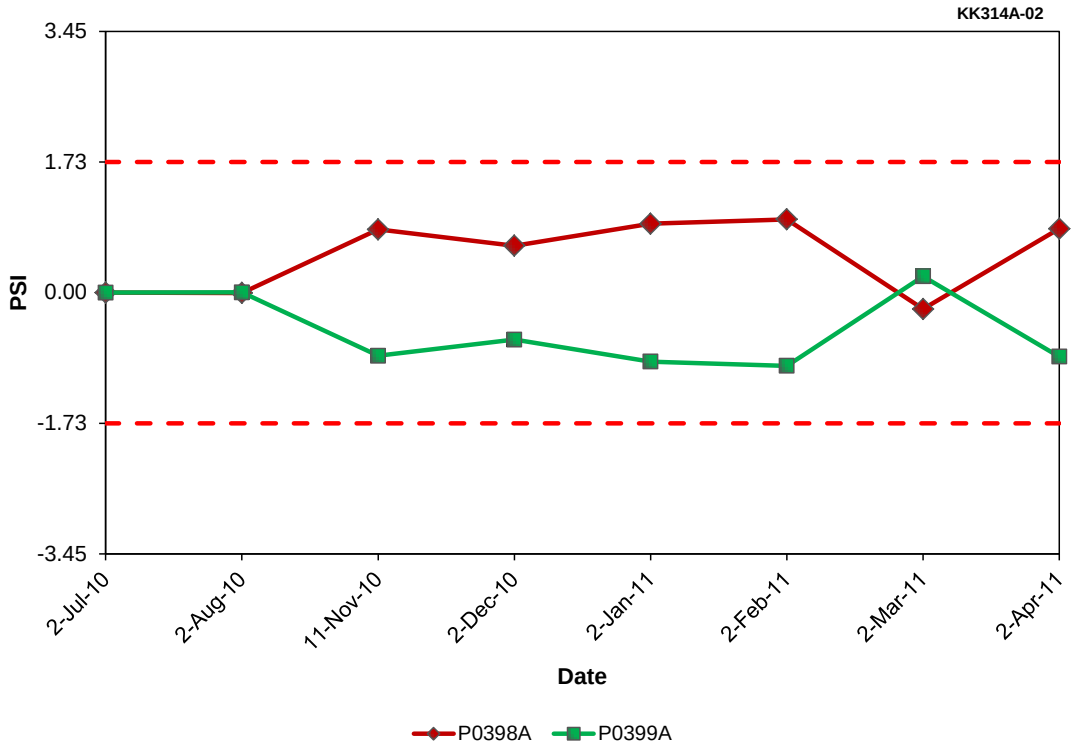



**Figure F.107 TBIN FIRST STAGE PRESSURE Steady-State Drift at North Anna Unit 2 (Cycle 21)**

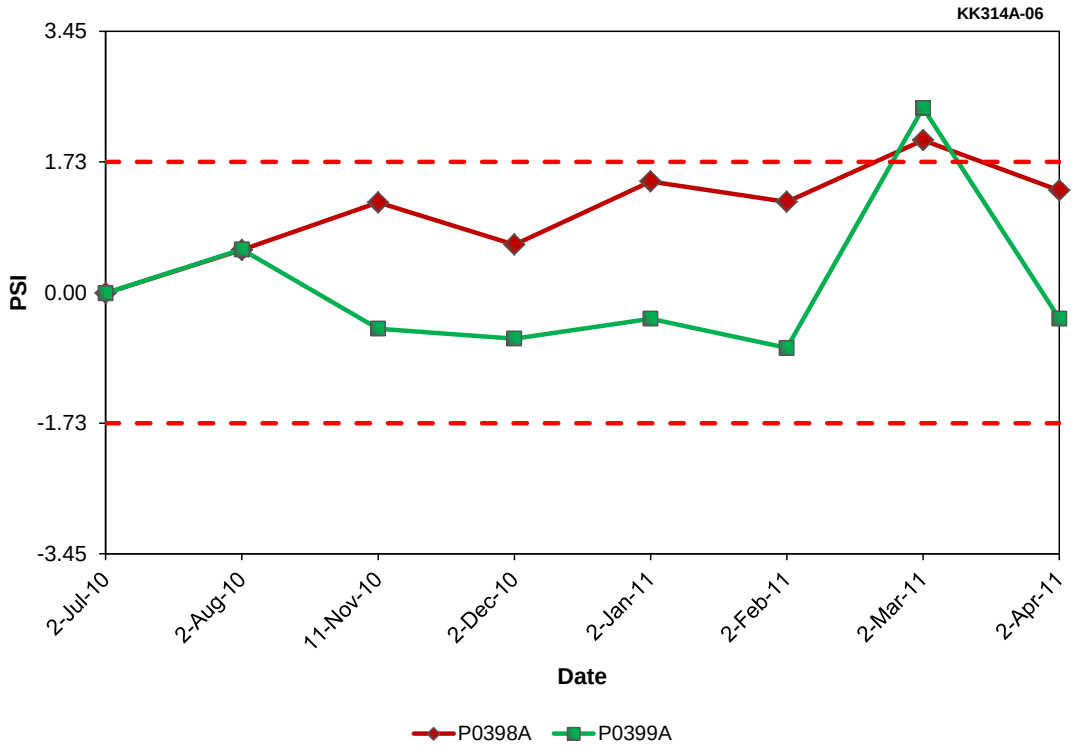



**Figure F.108 TBIN FIRST STAGE PRESSURE Steady-State Residual AAKR at North Anna Unit 2 (Cycle 21)**

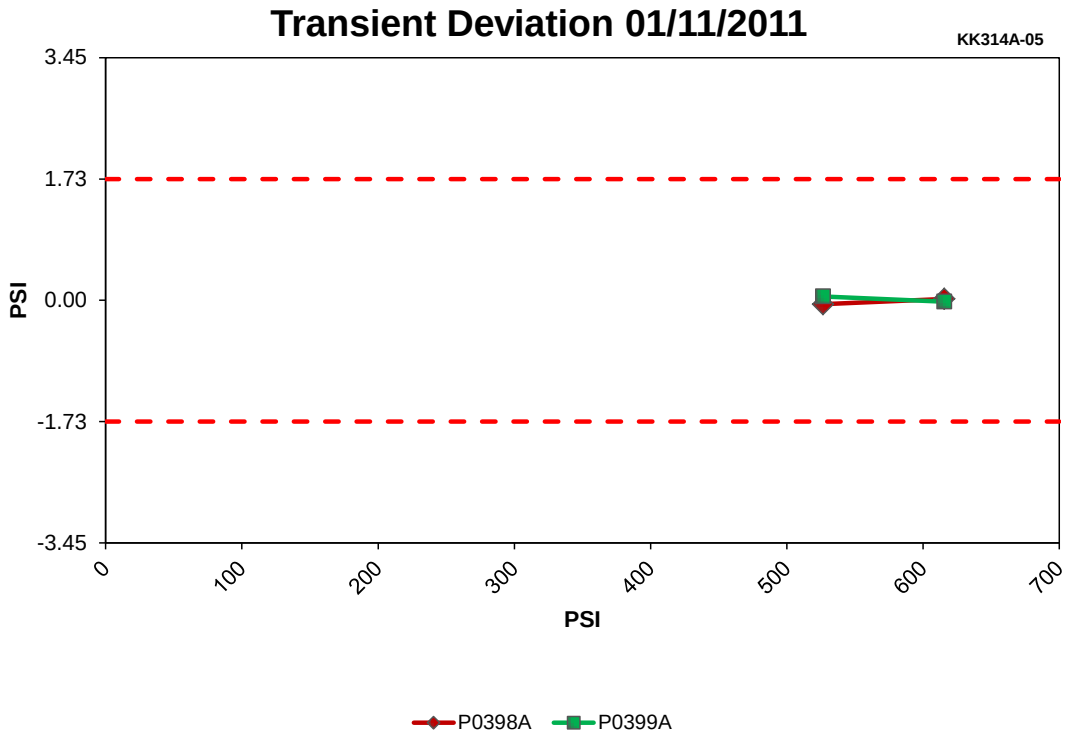



**Figure F.109 TBIN FIRST STAGE PRESSURE Transient Deviation at North Anna Unit 2 (Cycle 21)**

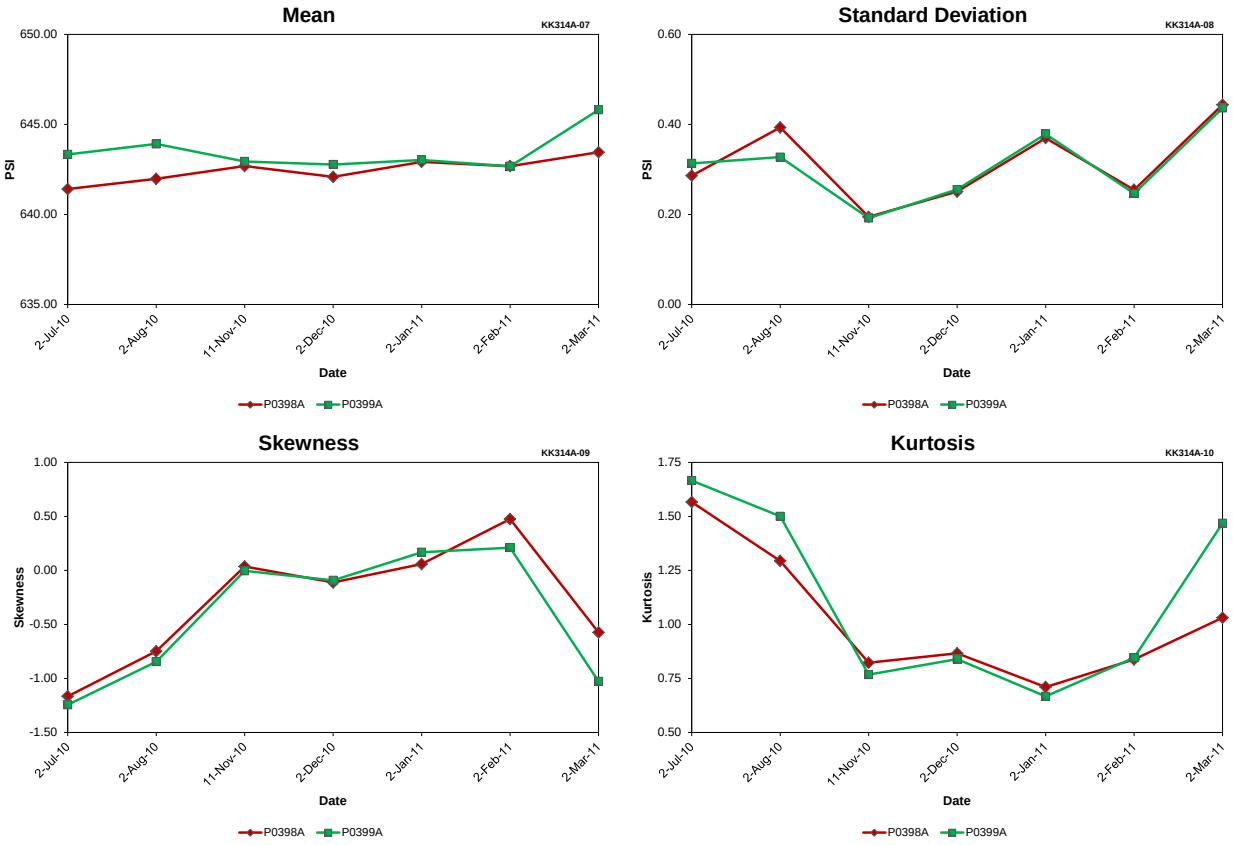



**Figure F.110 TBIN FIRST STAGE PRESSURE Data Quality Statistics at North Anna Unit 2 (Cycle 21)**

**Table F.20 TBIN FIRST STAGE PRESSURE Data Quality for North Anna Unit 2 (Cycle 21)**

| | Tag Names | |
|---|---|---|
| **Result Type** | **P0398A** | **P0399A** |
| Mean | 642.46 | 643.50 |
| Std. Dev. | 0.31 | 0.31 |
| Skewness | -0.29 | -0.40 |
| Kurtosis | 1.02 | 1.11 |

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