Enclosure 4

NEDC 11-109, Rev. 0
"Instrument Drift Analysis for NBI-PS-51A/B/C/D"

RISK SIGNIFICANT

Title: Instrument Drift Analysis for NBI-PS-51A/B/C/D (Barksdale B2T-M12SS)	Calculation Number: NEDC 11-109
	CED/EE Number: EE 10-045
System/Structure: HPCI	Setpoint Change/Part Eval Number:
Component: NBI-PS-51A/B/C/D	Discipline: IAC
Classification: [X] Essential; [ ] Non-Essential	SQAP Requirements Met? [ ] YES; [X] N/A

Proprietary Information Included? [ ] YES; [X] NO

Stand-Alone? [ ] YES; [X] NO

Description:

Revision 0: Developed statistical analysis of instrument as-found/as-left data collected from past surveillances to determine a value that is representative of historical instrument drift and extrapolate a value for drift intended to be used in the development of setpoint and instrument uncertainty analyses in support of 24 month fuel extension.

Conclusions and Recommendations:

Revision 0: The bounding analyzed drift for NBI-PS-51A/B/C/D has been determined to be ±1.926 % of Setpoint for 30 months (24 months plus 25% grace period) with a bias of -0.401% of Setpoint. The analyzed drift should be treated as a normally distributed, 2 sigma value when used in instrument uncertainty or setpoint calculations.

Rev. Number	Status	Prepared By/Date	Reviewed By/Date	IDVed By/Date	Approved By/Date
0	1	Rob Schmich 8/9/11	8/8/11	8/8/11	10-3-11

Status Codes

1. Active
2. Information Only
3. Pending
4. Superseded or Deleted
5. OD/OE Support Only
6. Maintenance Activity Support Only
7. PRA/PSA

ATTACHMENT 2 DESIGN CALCULATION CROSS-REFERENCE INDEX®[5]

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DESIGN CALCULATION CROSS-REFERENCE INDEX

ITEM NUMBER	DESIGN INPUTS	REVISION NUMBER	PENDING CHANGES TO DESIGN INPUTS
1	EE 10-045	0	
2	6.1LLS.301	7	
3	6.2LLS.301	7	

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DESIGN CALCULATION CROSS-REFERENCE INDEX

ITEM NUMBER	AFFECTED DOCUMENTS	REVISION NUMBER
1	NEDC92-050L	1

ATTACHMENT 3 AFFECTED DOCUMENT SCREENING

The purpose of this form is to assist the Preparer in screening new and revised design calculations to determine potential impacts to procedures and plant operations.Ⓟ[2]

	SCREENING QUESTIONS	YES	NO	UNCERTAIN
1.	Does it involve the addition, deletion, or manipulation of a component or components which could impact a system lineup and/or checklist for valves, power supplies (breakers), process control switches, HVAC dampers, or instruments?	[ ]	[X]	[ ]
2.	Could it impact system operating parameters (e.g., temperatures, flowrates, pressures, voltage, or fluid chemistry)?	[ ]	[X]	[ ]
3.	Does it impact equipment operation or response such as valve closure time?	[ ]	[X]	[ ]
4.	Does it involve assumptions or necessitate changes to the sequencing of operational steps?	[ ]	[X]	[ ]
5.	Does it transfer an electrical load to a different circuit, or impact when electrical loads are added to or removed from the system during an event?	[ ]	[X]	[ ]
6.	Does it influence fuse, breaker, or relay coordination?	[ ]	[X]	[ ]
7.	Does it have the potential to affect the analyzed conditions of the environment for any part of the Reactor Building, Containment, or Control Room?	[ ]	[X]	[ ]
8.	Does it affect TS/TS Bases, USAR, or other Licensing Basis documents?	[ ]	[X]	[ ]
9.	Does it affect a Dry Fuel Storage (CoC) or associated Technical Specification, Dry Fuel Storage UFSAR, or CNS 10CFR72.212 Report?	[ ]	[X]	[ ]
10.	Does it constitute any change or addition to, or removal from, the Independent Spent Fuel Storage Installation (ISFSI) facility or spent fuel storage cask design, or procedures that affects a design function, method of performing or controlling the function, or an evaluation that demonstrates that intended functions will be accomplished?	[ ]	[X]	[ ]
11.	Does it affect DCDs?	[ ]	[X]	[ ]
12.	Does it have the potential to affect procedures in any way not already mentioned (refer to review checklists in Procedure EDP-06)? If so, identify:	[ ]	[X]	[ ]

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If all answers are NO, then additional review or assistance is <u>not</u> required.

If any answers are YES or UNCERTAIN, then the Preparer shall obtain assistance from the System Engineer and other departments, as appropriate, to determine impacts to procedures and plant operations. Affected documents shall be listed on Attachment 2.

ATTACHMENT 4 DESIGN CALCULATION SHEET

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DESIGN CALCULATIONS SHEET

1.0 Purpose and Scope

1.1 The purpose of this analysis is to establish realistic drift values and characteristics to be used by instrument uncertainty calculations for determination of setpoints and allowable values for Barksdale B2T-M12S pressure switches with tag numbers NBI-PS-51A/B/C/D.

1.2 The drift values are determined by the analysis of historical As Found / As Left data in accordance with the guidance and methods provided in Reference 2.1.3.

1.3 The results produced by this calculation are intended to be applied to NEDC92-050L when evaluating the instrument setpoint for 24 month fuel extension and As-Found and As-Left tolerances for implementation of TSTF-493 requirements.

2.0 References

2.1 METHODOLOGY

2.1.1 ANSI/ISA-S67.04-Part I-2000, "Setpoints for Nuclear Safety Related Instrumentation"

2.1.2 ISA-RP67.04-Part II-2000, "Methodologies for the Determination of Setpoints for Nuclear Safety-Related Instrumentation"

2.1.3 CNS Engineering Evaluation 10-045, Rev. 0, "Instrument Drift Analysis Design Guide"

2.1.4 EPRI TR-103335R1, "Statistical Analysis of Instrument Calibration Data; Guidelines for Instrument Calibration Extension / Reduction Programs," October, 1998

2.1.5 DOE Research and Development Report No. WAPD-TM-1292, "Statistics for Nuclear Engineers and Scientists Part 1: Basic Statistical Inference," February 1981

2.1.6 NRC Generic Letter 91-04, "Changes in Technical Specification Surveillance Requirements to Accommodate a 24 Month Fuel Cycle," April 2, 1991

2.1.7 American National Standard N15.15-1974, "Assessment of the Assumption of Normality (Employing Individual Observed Values)"

2.2 CALCULATIONS

2.2.1 NEDC92-050L, Rev 1,"Calculation of Calibration Values for Low-Low Set Pressure Switches"

2.3 MISCELLANEOUS REFERENCES

2.3.1 CNS Technical Specifications, Table 3.3.6.3-1, Function 2, Amendment 178

2.3.2 Equipment Data File (EDF)

2.3.3 Surveillance Procedure 6.1LLS.301, Rev. 7, "LLS Reactor Pressure Permissive Channel Calibration and Logic Tests (Reactor in Mode 1) (Div 1)" and Surveillance Procedure 6.2LLS.301, Rev. 7, "LLS Reactor Pressure Permissive Channel Calibration and Logic Tests (Reactor in Mode 1) (Div 2)"

3.0 Assumptions

3.1 This drift calculation employs those assumptions customarily used for standard statistical analyses, as directed by Reference 2.1.3, such as the assumption that a distribution is normal and the use of statistical tests to confirm this hypothesis.

3.2 For drift calculations, changes in ambient conditions during calibration are of concern, since the temperature effects, humidity effects, etc.; at the time of calibration are the only environmental effects which would affect the calibration readings. During calibration, the ambient environment should be reasonably controlled, since the calibrating technicians will need to be present for the calibration process. The devices analyzed within this calculation are assumed to have similar ambient environments during calibration conditions, such that any difference in calibration conditions will not significantly affect the calibration readings. Thus, these minor variations in room environmental conditions are judged to have an insignificant impact on performance, and would not be considered to be a reason that the instrumentation would be separated for analysis. Additionally, any residual effects due to operation at different temperatures in the individual rooms are considered negligible. Minor residual effects of temperature or minor variations in temperature during calibration are expected to be present during any calibration and would be indistinguishable from drift. Therefore temperature is not tracked during calibration of instruments.

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DESIGN CALCULATIONS SHEET

4.0 Design Inputs

4.1 Reference 2.2.1 provided the instrument manufacturer and model number.

4.2 Reference 2.3.1 provided the applicable Technical Specification sections (3.3.6.3).

4.3 Reference 2.3.1 provided the required channel calibration frequency.

4.4 Reference 2.2.1 provided the old Surveillance Procedure numbers which were then traced to the new Surveillance Procedure numbers.

4.5 Calibration Records for the subject instruments were collected for a ten year period ending 12/31/09.

5.0 Methodology

5.1 The methodology used for this analysis can be found in Reference 2.1.3, supplemented by References 2.1.1, 2.1.2, 2.1.4 and 2.1.7. An overview of the methodology is provided in Section 5.3.

5.2 The devices covered by this calculation are required to be calibrated once every 18 months by Tech Spec SR 3.3.6.3.4 (Reference 2.3.1). However, since the same Surveillance Procedures (Reference 2.3.3) are used to satisfy Tech Spec SR 3.3.6.3.3 (channel functional test – 92 day frequency), SR 3.3.6.3.4 (channel calibration – 18 month frequency) and SR 3.3.6.3.5 (logic system functional test – 18 month frequency), As-Found / As-Left data is collected at least once every 92 days. Although necessary, this practice causes a problem in that the interval between calibrations are shorter and therefore increases the uncertainty associated with extending the maximum calibration interval to 24 months plus the 25% grace period.

Therefore, for the purpose of this calculation, determination of historical drift will be based on the As-Found / As-Left data for consecutive calibration activities that do not exceed 18 months (542 days). There will be only three (3) exceptions to this rule; 1) when an 18 month interval is interrupted by maintenance activities (i.e., setpoint change, troubleshooting, instrument change, etc.), 2) when a setpoint adjustment was made as indicated by a difference in the As-Found / As-Left data recorded on the same date, and 3) missing historical data. Any of these 3 occurrences will mark the end date one calibration interval and the beginning of the next.

This approach accurately models the instrument performance given that the historical data (Reference 4.5) shows that the instruments have operated within the As-Found tolerance band specified in the Surveillance Procedures (Reference 2.3.3) for much longer than 18 months. Furthermore, this approach is inherently conservative in that the analysis will include every instance of an instrument's As-Found data exceeding the tolerance specified in the Surveillance Procedures (Reference 2.3.3) with a time interval less than 18 months which will tend to increase the analyzed drift.

Finally, a study period of 10 years has been chosen as it represents more than six of the currently required 18 month calibration cycles, and five of the proposed 24 month

calibration cycles, which is adequate to understand the component's performance over time. Also, a sufficient number of valid drift values are provided as a result of the selected study period to make a statistically valid pool. Therefore, As-Found and As-Left Data values are entered from calibrations occurring for at least the last 10 years.

5.3 Determination of the Analyzed Drift is as follows:

5.3.1 Gather and Generate Raw Drift Data: All retrievable As-Left and As-Found data is collected for each calibration performed on each device covered by this report, for the study period. Per Section 3.4.2 of Reference 2.1.3, "The goal is to collect enough data for the instrument or group of instruments to make a statistically valid pool."

In addition to gathering the As-Found and As-Left data, and computing the drift values and time intervals, this step also involves an investigation into whether all of the devices should be analyzed together, or whether they should be separated into smaller analysis groups. Finally, this step involves careful screening of the input data for errors or other situations that could disrupt the proper determination of drift.

5.3.2 Determination of Outliers and Statistical Summary: Per Section 3.6.3 of Reference 2.1.3, if outliers are detected in a drift data set, the calculation preparer is allowed to remove only one additional outlier from the data set, if the outlier is judged to be an erroneous point, which would tend to skew the representation of the distribution of data.

Due to the differences in setpoints of the pressure switches (NBI-PS-51A is 1037 psig, NBI-PS-51C is 1027 psig, and NBI-PS-51B and D are 887 psig), the drifts are calculated as a "% of Setpoint", and all further analysis is performed using drift % of Setpoint values.

A "t-Test" is performed on the data to detect any outliers, and remove up to one, if appropriate. Additionally, the basic statistical values which describe the group of drift data are derived in this step, including such parameters as Mean, Standard Deviation, Count, Median, Minimum, Maximum, etc.

5.3.3 Tests for Normality: Per Sections 3.7.2 and 3.7.3 of Reference 2.1.3, a statistical test (W or D-Prime, depending on sample size) is performed on the drift data to support the hypothesis that the data conforms to a normal distribution. If this test is unable to support that hypothesis, a Coverage Analysis is then performed to ensure that the data can be conservatively modeled by a normal distribution and to provide an adjustment to the standard deviation of the drift model, if necessary, to conservatively envelop the observed data population.

5.3.4 Time-Dependency: Per Sections 3.9.2 and 3.9.3 of Reference 2.1.3, Scatter Plots and a time-based Binning Analysis are developed for the data to establish the time-dependency of the drift. If enough drift data exists for significantly different time intervals, regression analysis is performed to aid in the

determination of time-dependency. Based on criteria provided in Sections 3.9.2 and 3.9.3 of Reference 2.1.3, drift data is categorized as either "strongly time dependent" or "moderately time dependent" for the purpose of extrapolation.

5.3.5 Analyzed Drift Derivation and Characterization: The drift values are determined for the current calibration interval. These values are extrapolated for a 30 month calibration interval (24 months plus 25% grace period), based on the methods prescribed in Section 4.6 of Reference 2.1.3, depending on the degree of time-dependency derived for the drift data.

5.4 The mathematical computations of the statistical analysis are performed within a Microsoft Excel spreadsheet using statistical functions available within Excel including the "Analysis ToolPak". Spreadsheet results are printed out and presented in Appendix 1 to this calculation. Excel spreadsheets generally compute values to a 15 decimal resolution, which is well beyond any required rounding for engineering analyses. However, values reported in this calculation may be displayed to lesser resolution. Therefore, it is likely that hand computations will produce slightly different results, because of using rounded numbers in initial and intermediate steps, but the Excel computed values are considered highly accurate in comparison.

5.5 Acceptance Criteria: Since the purpose of the analysis is to generate a value and description of the characteristics of the drift of the evaluated make/model, there are no specific acceptance criteria.

6.0 Calculations

6.1 Gather and Generate Raw Error Data

6.1.1 Specifically, this analysis addresses NBI-PS-51 A/B/C/D. These switches have an identical manufacturer and model number (Barksdale B2T-M12SS Pressure Switches), identical adjustable ranges and are used in similar applications. The setpoints during the 10 year study period were either 887, 1027 or 1037 psig. However, a pooling test is performed as described in Section 6.1.6 to confirm proper pooling of the drift data for analysis. As described previously in Section 5.3.2, the drift data is converted to % of Setpoint to facilitate pooling of data from instruments with greater than a 5% difference in Setpoint value.

6.1.2 Pages 1 through 7 of Appendix 1 provide a listing of the historical As-Left (AL) and As-Found (AF) data from Reference 2.3.3, with any data exclusions or modifications noted. Setpoints, calibration dates and calibration notes were also obtained from Reference 2.3.3. This data is entered into an Excel spreadsheet for computation of the drift values, time intervals between calibrations and statistical analysis as described in Section 5.2 above.

6.1.3 A screening of the initial input data from Reference 2.3.3 was performed. No historical data was removed from the data set.

6.1.4 Per the methodology of Section 4.1.1.11 of Reference 2.1.3, drift is computed by subtracting the As-Left data of one calibration from the As-Found data of the next calibration, as documented in pages 8 through 18 of Appendix 1. These pages also document the time interval between calibrations (in the number of days and months) by subtracting the As-Left date of one calibration from the As-Found date of the next calibration, per Section 4.1.1.10 of Reference 2.1.3.

6.1.5 Pages 8 through 18 of Appendix 1 import the Sequence ID, the Tag No., the AF / AL flags, the dates of calibration and the As-Found and As-Left data from Reference 2.3.3 and compute the interval between calibrations. Pages 8 and 9 of Appendix 1 compute the drift values and summarize the time intervals computed. As an example of the equations used, the first drift value and time interval are computed as follows. The rest of the values are computed identically.

NBI-PS-51A, Sequence ID 1

Drift = AF (11/11/09) – AL (7/30/09)
= 1022 psi (From Seq. 1) – 1026.7 psi (From Seq. 4)
= -4.7 psi

Cal Interval (Days) = 11/25/09 – 7/30/09
= 104 Days

Cal Interval (Mo.) = Cal Interval (Days) x 12 Months / 365.25 Days
= 3.4 Months

6.1.6 The two groups of switches are defined as follows:

Group 1: Barksdale B2T-M12SS Pressure Switches, NBI-PS-51A/C; Setpoints of 1037 and 1027 psig respectively

Group 2: Barksdale B2T-M12SS Pressure Switches, NBI-PS-51B/D; Setpoint of 887 psig

In accordance with Section 3.5.4 of Reference 2.1.3, a test is performed to determine acceptability for pooling groups 1 and 2 on page 23 of Appendix 1. The "t Statistic" is less than the "t Critical two-tail value", indicating that combination of the groups for analysis is appropriate. The means and standard deviations are similar. Therefore, the groups of data are combined for drift analysis.

6.2 Determination of Outliers and Statistical Summary

6.2.1 The outlier analysis is recorded on pages 19 and 20 of Appendix 1. These pages display the Sequence ID, Tag ID, Drift, and Calibration Interval (in units of Days).

The critical T value used in the outlier analysis comes directly from Table 2 of Reference 2.1.3.

As shown on page 19 of Appendix 1, one outlier was detected and removed from further analysis. The Final Data Set (FDS) for this analysis is documented on pages 19 and 20 of Appendix 1 and is identical to the Initial Data Set with the one outlier removed.

6.2.2 A summary of the required statistical values for the Final Data Set, per Section 4.2 of Reference 2.1.3, is developed within the outlier analysis on page 20 of Appendix 1.

6.3 Tests for Normality

6.3.1 Since the FDS contains less than 50 samples, the W Test is performed on the data to test for normality, as shown on pages 21 through 22 of Appendix 1. Per Section 3.7.3 of Reference 2.1.3, the details of the W Test methodology are shown in Reference 2.1.7. Equations used are listed on page 21 of Appendix 1, and the results are provided on page 22. Since the calculated W statistic (0.9067) is less than the critical value for W (0.947), this test rejects the assumption of normality for this data set.

6.3.2 Since the data does not pass the W Test for normality, a Coverage Analysis is necessary. For the Coverage Analysis, a Histogram is developed on pages 24 and 25 of Appendix 1, per Sections 3.7.5 and 4.4 of Reference 2.1.3. To generate the histogram data, the drift % of Setpoint values are categorized into 12 bins, in relation to the mean and standard deviation. These bins are generated in multiples of ½ Standard Deviation increments, and the bin maximum values are derived in accordance with the methods given in Section 19 (Appendix C) of Reference 2.1.4. (See column headings for specific formulas used for the Maximums.)

Expected numbers of data points within each bin are calculated, assuming that the data is a normal distribution and that the data set is exactly representative of a normal curve. The population percentages within each bin are derived from Table 18-2 of Reference 2.1.4, which describe the percentage populations within the identified bins. These percentages are then multiplied by the total data population to determine the expected number of values within each bin, for the size of the data set. The observed population within each bin is tabulated and plotted as a bar chart versus the ideal normal curve for comparison.

The Histogram on page 25 of Appendix 1 shows that the data is less peaked in the middle than a normal distribution. However, the Kurtosis value is slightly negative, which signifies a wider peak around the mean (that is, a higher probability than a normally distributed variable of values near the mean) and thinner tails. It is observed that the actual percentage population of data within ± 2 standard deviations is greater than with a normal distribution. Therefore, the

data may be conservatively modeled as a normal distribution without adjustment to the standard deviation.

6.4 Time-Dependency

6.4.1 In order to determine time-dependency of the drift data, the data is first plotted as a scatter plot on page 26 of Appendix 1, in accordance with the methodology of Section 4.5.1 of Reference 2.1.3. The trend line within this scatter plot is very flat and stays slightly below zero. Data scatter does not show an increase over time. The trend line and the associated equation are also noted on the scatter plot.

6.4.2 The binning analysis is performed on pages 27 and 28 of Appendix 1. The drift and time interval data are divided into bins, based on the intervals between calibrations as defined in Section 3.9.3.1 of Reference 2.1.3. Statistical summaries for each bin, including count, mean, standard deviation, mean time interval and maximum observed time interval are computed. Excel functions are used to determine the statistical summary values for each bin, and are used explicitly from Sections 4.2.1, 4.2.2, 4.2.3 and 4.2.7 of Reference 2.1.3. This information is presented on page 27 of Appendix 1. Per Section 3.9.3.4 of Reference 2.1.3, after removing those bins with 5 or less data points and those with less than or equal to 10% of total population, Bins 2 through 5 remain.

Page 28 of Appendix 1 displays a plot of the means and standard deviations of the drift data versus the average time interval between calibrations for the subject bins, in accordance with Section 4.5.2 of Reference 2.1.3. It also provides all of the binning parameters and statistics that are a part of the binning analysis. The mean value of the data is a small negative value (near -0.2 % of Setpoint) for all bins. The line is quite stable, except for an outlier for bin 4, which is not indicative of time dependency of the bias portion. Also, from this plot, the standard deviation is stable near 0.6 % of Setpoint for all bins, which also is not indicative of time-dependency.

6.4.3 Per Section 3.9.4 of Reference 2.1.3, a drift regression analysis is performed within pages 29 and 30 of Appendix 1. The equations and functions used by the Excel spreadsheet are taken specifically from Section 3.9.4 of Reference 2.1.3. The regression analysis output shows an R Squared Value (0.0006384) less than 0.09, a P Value (0.8631825) greater than 0.05 and an F Value (0.0300228) less than F Critical (3.195056). All three of these comparisons indicate no significant time dependency. Although no significant time dependency is indicated in the data, the bias portion of drift is conservatively treated as moderately time-dependent for the purpose of extrapolation.

6.4.4 Per Section 3.9.4 of Reference 2.1.3, an absolute value drift regression analysis is performed within pages 31 and 32 of Appendix 1. The drift data is converted into absolute value via the Excel ABS function for each drift data value. The equations and functions used by Excel for the Regression analysis are taken specifically from Section 3.9.4 of Reference 2.1.3. This regression analysis

output shows an R Squared Value (0.00677813) less than 0.09, a P Value (0.57385422) greater than 0.05, and an F Value (0.32074597) less than F Critical (3.195056). These results all indicate that the random portion of drift is not significantly time-dependent, and the trend lines from the binning plot and this regression plot show either no slope or a slightly decreasing slope. Therefore, the random portion of drift is treated as moderately time-dependent for the purpose of extrapolation.

6.5 Analyzed Drift (DA) Derivation and Characterization

6.5.1 As shown on page 33 of Appendix 1, per Section 3.11 of Reference 2.1.3, the drift bias error is evaluated for significance. The degrees of freedom are computed from the data count, and the value of t is looked up in Table 4 of Reference 2.1.3. The Significant Bias Critical Value (x_{crit}) is computed and compared to the Absolute Value of the Average of the Final Data Set. The bias value for this drift data set is determined to be significant, since the Absolute Value of the Average is less than the x_{crit} value. The mean of the Final Data Set (FDS) is used with the average observed time interval from Bin 5 as the starting point. Note that the mean for the FDS is conservatively used, since it is larger than the mean for the data within Bin 5. The Analyzed Drift Bias term DA_{bias} is extrapolated to a maximum calibration interval of 30 months per the equation within Section 4.6 of Reference 2.1.3. Therefore, the Analyzed Drift Bias term ($DA_{bias(extrap)}$) is calculated to be -0.401% of Setpoint.

6.5.2 Per Section 4.6.6 of Reference 2.1.3, the random portion of the Analyzed Drift is determined from multiplying the standard deviation of the data within Bin 5 by the Tolerance Interval Factor (TIF) and Normality Adjustment Factor (NAF), and extrapolating as required to a calibration interval of 30 months. Note that the standard deviation of the FDS data is conservatively used, since it is larger than the standard deviation for longest interval valid time bin (bin 5). The random portion of drift has been determined to be moderately time-dependent for the purpose of extrapolation. The standard deviation of the FDS data is used with the average observed time interval from Bin 5 on page 27 of Appendix 1 as the starting point. The TIF is obtained from Table 1 of Reference 2.1.3 as 2.408 for a 95/95 significance. The computation of this value is shown on page 33 of Appendix 1 to result in a $DA_{random(extrap)}$ term of $\pm$ 1.926% of Setpoint.

7.0 Summary of Results and Conclusions

The bounding Analyzed Drift (DA) for NBI-PS-51A/B/C/D has been determined to be ±1.926 % of Setpoint for 30 months (24 months + 25%) with a bias term of -0.401% of Setpoint. The Analyzed Drift should be treated as a normally distributed, 2σ value for uncertainty analysis.

Seq ID	Tag ID	Date	Procedure	Make/Model	AF/ AL	Setpt	AF/ AL Data	Units	Comments
1	NBI-PS-51A	11/11/09	6.1LLS.301	Barksdale B2T-M12SS	AF	1027	1022	psig	
2	NBI-PS-51A	11/11/09	6.1LLS.301	Barksdale B2T-M12SS	AL	1027	1022	psig	
3	NBI-PS-51A	7/30/09	6.1LLS.301	Barksdale B2T-M12SS	AF	1027	1034.2	psig	Adjustment made
4	NBI-PS-51A	7/30/09	6.1LLS.301	Barksdale B2T-M12SS	AL	1027	1026.7	psig	Adjustment made
5	NBI-PS-51A	5/1/09	6.1LLS.301	Barksdale B2T-M12SS	AF	1027	1030	psig	
6	NBI-PS-51A	5/1/09	6.1LLS.301	Barksdale B2T-M12SS	AL	1027	1030	psig	
7	NBI-PS-51A	1/29/09	6.1LLS.301	Barksdale B2T-M12SS	AF	1027	1025.9	psig	
8	NBI-PS-51A	1/29/09	6.1LLS.301	Barksdale B2T-M12SS	AL	1027	1025.9	psig	
9	NBI-PS-51A	10/27/08	6.1LLS.301	Barksdale B2T-M12SS	AF	1027	1029.9	psig	
10	NBI-PS-51A	10/27/08	6.1LLS.301	Barksdale B2T-M12SS	AL	1027	1029.9	psig	
11	NBI-PS-51A	7/30/08	6.1LLS.301	Barksdale B2T-M12SS	AF	1027	1031	psig	
12	NBI-PS-51A	7/30/08	6.1LLS.301	Barksdale B2T-M12SS	AL	1027	1031	psig	
13	NBI-PS-51A	5/6/08	6.1LLS.301	Barksdale B2T-M12SS	AF	1027	1028.8	psig	
14	NBI-PS-51A	5/6/08	6.1LLS.301	Barksdale B2T-M12SS	AL	1027	1028.8	psig	
15	NBI-PS-51A	4/9/08	6.1LLS.301	Barksdale B2T-M12SS	AF	1027	1029	psig	
16	NBI-PS-51A	4/9/08	6.1LLS.301	Barksdale B2T-M12SS	AL	1027	1029	psig	
17	NBI-PS-51A	1/31/08	6.1LLS.301	Barksdale B2T-M12SS	AF	1027	1025.5	psig	
18	NBI-PS-51A	1/31/08	6.1LLS.301	Barksdale B2T-M12SS	AL	1027	1025.5	psig	
19	NBI-PS-51A	11/2/07	6.1LLS.301	Barksdale B2T-M12SS	AF	1027	1028	psig	
20	NBI-PS-51A	11/2/07	6.1LLS.301	Barksdale B2T-M12SS	AL	1027	1028	psig	
21	NBI-PS-51A	8/2/07	6.1LLS.301	Barksdale B2T-M12SS	AF	1027	1030	psig	
22	NBI-PS-51A	8/2/07	6.1LLS.301	Barksdale B2T-M12SS	AL	1027	1030	psig	
23	NBI-PS-51A	5/4/07	6.1LLS.301	Barksdale B2T-M12SS	AF	1027	1029	psig	
24	NBI-PS-51A	5/4/07	6.1LLS.301	Barksdale B2T-M12SS	AL	1027	1029	psig	
25	NBI-PS-51A	11/19/06	6.1LLS.301	Barksdale B2T-M12SS	AF	1027	1027	psig	
26	NBI-PS-51A	11/19/06	6.1LLS.301	Barksdale B2T-M12SS	AL	1027	1027	psig	
27	NBI-PS-51A	8/3/06	6.1LLS.301	Barksdale B2T-M12SS	AF	1027	1031	psig	
28	NBI-PS-51A	8/3/06	6.1LLS.301	Barksdale B2T-M12SS	AL	1027	1031	psig	
29	NBI-PS-51A	5/5/06	6.1LLS.301	Barksdale B2T-M12SS	AF	1027	1028	psig	
30	NBI-PS-51A	5/5/06	6.1LLS.301	Barksdale B2T-M12SS	AL	1027	1028	psig	
31	NBI-PS-51A	2/2/06	6.1LLS.301	Barksdale B2T-M12SS	AF	1027	1023	psig	
32	NBI-PS-51A	2/2/06	6.1LLS.301	Barksdale B2T-M12SS	AL	1027	1023	psig	
33	NBI-PS-51A	11/3/05	6.1LLS.301	Barksdale B2T-M12SS	AF	1027	1025.6	psig	
34	NBI-PS-51A	11/3/05	6.1LLS.301	Barksdale B2T-M12SS	AL	1027	1025.6	psig	
35	NBI-PS-51A	8/4/05	6.1LLS.301	Barksdale B2T-M12SS	AF	1027	1029	psig	
36	NBI-PS-51A	8/4/05	6.1LLS.301	Barksdale B2T-M12SS	AL	1027	1029	psig	
37	NBI-PS-51A	5/19/05	6.1LLS.301	Barksdale B2T-M12SS	AF	1027	1027.7	psig	

Seq ID	Tag ID	Date	Procedure	Make/Model	AF/ AL	Setpt	AF/ AL Data	Units	Comments
38	NBI-PS-51A	5/19/05	6.1LLS.301	Barksdale B2T-M12SS	AL	1027	1027.7	psig	
39	NBI-PS-51A	2/25/05	6.1LLS.301	Barksdale B2T-M12SS	AF	1027	1027.5	psig	
40	NBI-PS-51A	2/25/05	6.1LLS.301	Barksdale B2T-M12SS	AL	1027	1027.5	psig	
41	NBI-PS-51A	12/3/04	6.1LLS.301	Barksdale B2T-M12SS	AF	1027	1025	psig	
42	NBI-PS-51A	12/3/04	6.1LLS.301	Barksdale B2T-M12SS	AL	1027	1025	psig	
43	NBI-PS-51A	9/10/04	6.1LLS.301	Barksdale B2T-M12SS	AF	1027	1028	psig	
44	NBI-PS-51A	9/10/04	6.1LLS.301	Barksdale B2T-M12SS	AL	1027	1028	psig	
45	NBI-PS-51A	6/18/04	6.1LLS.301	Barksdale B2T-M12SS	AF	1027	1030	psig	
46	NBI-PS-51A	6/18/04	6.1LLS.301	Barksdale B2T-M12SS	AL	1027	1030	psig	
47	NBI-PS-51A	3/26/04	6.1LLS.301	Barksdale B2T-M12SS	AF	1027	1024	psig	
48	NBI-PS-51A	3/26/04	6.1LLS.301	Barksdale B2T-M12SS	AL	1027	1024	psig	
49	NBI-PS-51A	1/2/04	6.1LLS.301	Barksdale B2T-M12SS	AF	1027	1027	psig	
50	NBI-PS-51A	1/2/04	6.1LLS.301	Barksdale B2T-M12SS	AL	1027	1027	psig	
51	NBI-PS-51A	10/10/03	6.1LLS.301	Barksdale B2T-M12SS	AF	1027	1026	psig	
52	NBI-PS-51A	10/10/03	6.1LLS.301	Barksdale B2T-M12SS	AL	1027	1026	psig	
53	NBI-PS-51A	7/18/03	6.1LLS.301	Barksdale B2T-M12SS	AF	1027	1026	psig	
54	NBI-PS-51A	7/18/03	6.1LLS.301	Barksdale B2T-M12SS	AL	1027	1026	psig	
55	NBI-PS-51A	5/22/03	6.1LLS.301	Barksdale B2T-M12SS	AF	1027	1027.7	psig	
56	NBI-PS-51A	5/22/03	6.1LLS.301	Barksdale B2T-M12SS	AL	1027	1027.7	psig	
57	NBI-PS-51A	1/31/03	6.1LLS.301	Barksdale B2T-M12SS	AF	1027	1024	psig	
58	NBI-PS-51A	1/31/03	6.1LLS.301	Barksdale B2T-M12SS	AL	1027	1024	psig	
59	NBI-PS-51A	11/8/02	6.1LLS.301	Barksdale B2T-M12SS	AF	1027	1025	psig	
60	NBI-PS-51A	11/8/02	6.1LLS.301	Barksdale B2T-M12SS	AL	1027	1025	psig	
61	NBI-PS-51A	8/16/02	6.1LLS.301	Barksdale B2T-M12SS	AF	1027	1029.8	psig	
62	NBI-PS-51A	8/16/02	6.1LLS.301	Barksdale B2T-M12SS	AL	1027	1029.8	psig	
63	NBI-PS-51A	5/22/02	6.1LLS.301	Barksdale B2T-M12SS	AF	1027	1025	psig	
64	NBI-PS-51A	5/22/02	6.1LLS.301	Barksdale B2T-M12SS	AL	1027	1025	psig	
65	NBI-PS-51A	2/28/02	6.1LLS.301	Barksdale B2T-M12SS	AF	1027	1022	psig	
66	NBI-PS-51A	2/28/02	6.1LLS.301	Barksdale B2T-M12SS	AL	1027	1022	psig	
67	NBI-PS-51A	12/7/01	6.1LLS.301	Barksdale B2T-M12SS	AF	1027	1028	psig	
68	NBI-PS-51A	12/7/01	6.1LLS.301	Barksdale B2T-M12SS	AL	1027	1028	psig	
69	NBI-PS-51A	9/13/01	6.1LLS.301	Barksdale B2T-M12SS	AF	1027	1029	psig	
70	NBI-PS-51A	9/13/01	6.1LLS.301	Barksdale B2T-M12SS	AL	1027	1029	psig	
71	NBI-PS-51A	6/21/01	6.1LLS.301	Barksdale B2T-M12SS	AF	1027	1030	psig	
72	NBI-PS-51A	6/21/01	6.1LLS.301	Barksdale B2T-M12SS	AL	1027	1030	psig	
73	NBI-PS-51A	3/29/01	6.1LLS.301	Barksdale B2T-M12SS	AF	1027	1026	psig	

Seq ID	Tag ID	Date	Procedure	Make/Model	AF/ AL	Setpt	AF/ AL Data	Units	Comments
74	NBI-PS-51A	3/29/01	6.1LLS.301	Barksdale B2T-M12SS	AL	1027	1026	psig	
75	NBI-PS-51A	1/4/01	6.1LLS.301	Barksdale B2T-M12SS	AF	1027	1024	psig	
76	NBI-PS-51A	1/4/01	6.1LLS.301	Barksdale B2T-M12SS	AL	1027	1024	psig	
77	NBI-PS-51A	10/12/00	6.1LLS.301	Barksdale B2T-M12SS	AF	1027	1027	psig	
78	NBI-PS-51A	10/12/00	6.1LLS.301	Barksdale B2T-M12SS	AL	1027	1027	psig	
79	NBI-PS-51A	7/20/00	6.1LLS.301	Barksdale B2T-M12SS	AF	1027	1028	psig	
80	NBI-PS-51A	7/20/00	6.1LLS.301	Barksdale B2T-M12SS	AL	1027	1028	psig	
81	NBI-PS-51A	4/26/00	6.1LLS.301	Barksdale B2T-M12SS	AF	1027	1029	psig	
82	NBI-PS-51A	4/26/00	6.1LLS.301	Barksdale B2T-M12SS	AL	1027	1029	psig	
83	NBI-PS-51A	2/3/00	6.1LLS.301	Barksdale B2T-M12SS	AF	1027	1024	psig	
84	NBI-PS-51A	2/3/00	6.1LLS.301	Barksdale B2T-M12SS	AL	1027	1024	psig	
85	NBI-PS-51A	11/10/99	6.1LLS.301	Barksdale B2T-M12SS	AF	1027	1024	psig	
86	NBI-PS-51A	11/10/99	6.1LLS.301	Barksdale B2T-M12SS	AL	1027	1024	psig	
87	NBI-PS-51A	10/14/99	6.1LLS.301	Barksdale B2T-M12SS	AF	1027	1030	psig	
88	NBI-PS-51A	10/14/99	6.1LLS.301	Barksdale B2T-M12SS	AL	1027	1030	psig	
89	NBI-PS-51A	9/15/99	6.1LLS.301	Barksdale B2T-M12SS	AF	1027	1028	psig	
90	NBI-PS-51A	9/15/99	6.1LLS.301	Barksdale B2T-M12SS	AL	1027	1028	psig	
91	NBI-PS-51A	8/18/99	6.1LLS.301	Barksdale B2T-M12SS	AF	1027	1030	psig	
92	NBI-PS-51A	8/18/99	6.1LLS.301	Barksdale B2T-M12SS	AL	1027	1030	psig	
93	NBI-PS-51A	7/21/99	6.1LLS.301	Barksdale B2T-M12SS	AF	1027	1030	psig	
94	NBI-PS-51A	7/21/99	6.1LLS.301	Barksdale B2T-M12SS	AL	1027	1030	psig	
95	NBI-PS-51A	6/23/99	6.1LLS.301	Barksdale B2T-M12SS	AF	1027	1032	psig	
96	NBI-PS-51A	6/23/99	6.1LLS.301	Barksdale B2T-M12SS	AL	1027	1032	psig	
97	NBI-PS-51A	5/26/99	6.1LLS.301	Barksdale B2T-M12SS	AF	1027	1027	psig	
98	NBI-PS-51A	5/26/99	6.1LLS.301	Barksdale B2T-M12SS	AL	1027	1027	psig	
99	NBI-PS-51A	4/28/99	6.1LLS.301	Barksdale B2T-M12SS	AF	1027	1030	psig	
100	NBI-PS-51A	4/28/99	6.1LLS.301	Barksdale B2T-M12SS	AL	1027	1030	psig	
101	NBI-PS-51A	4/1/99	6.1LLS.301	Barksdale B2T-M12SS	AF	1027	1028	psig	
102	NBI-PS-51A	4/1/99	6.1LLS.301	Barksdale B2T-M12SS	AL	1027	1028	psig	
103	NBI-PS-51A	3/3/99	6.1LLS.301	Barksdale B2T-M12SS	AF	1027	1025	psig	
104	NBI-PS-51A	3/3/99	6.1LLS.301	Barksdale B2T-M12SS	AL	1027	1025	psig	
105	NBI-PS-51B	11/11/09	6.1LLS.301	Barksdale B2T-M12SS	AF	887	883	psig	
106	NBI-PS-51B	11/11/09	6.1LLS.301	Barksdale B2T-M12SS	AL	887	883	psig	
107	NBI-PS-51B	7/30/09	6.1LLS.301	Barksdale B2T-M12SS	AF	887	893.1	psig	Adjustment made
108	NBI-PS-51B	7/30/09	6.1LLS.301	Barksdale B2T-M12SS	AL	887	887.6	psig	Adjustment made
109	NBI-PS-51B	5/1/09	6.1LLS.301	Barksdale B2T-M12SS	AF	887	890	psig	

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110	NBI-PS-51B	5/1/09	6.1LLS.301	Barksdale B2T-M12SS	AL	887	890	psig	
111	NBI-PS-51B	1/29/09	6.1LLS.301	Barksdale B2T-M12SS	AF	887	877	psig	Adjustment made
112	NBI-PS-51B	1/29/09	6.1LLS.301	Barksdale B2T-M12SS	AL	887	889	psig	Adjustment made
113	NBI-PS-51B	10/27/08	6.1LLS.301	Barksdale B2T-M12SS	AF	887	887	psig	
114	NBI-PS-51B	10/27/08	6.1LLS.301	Barksdale B2T-M12SS	AL	887	887	psig	
115	NBI-PS-51B	7/30/08	6.1LLS.301	Barksdale B2T-M12SS	AF	887	884	psig	
116	NBI-PS-51B	7/30/08	6.1LLS.301	Barksdale B2T-M12SS	AL	887	884	psig	
117	NBI-PS-51B	5/6/08	6.1LLS.301	Barksdale B2T-M12SS	AF	887	882	psig	
118	NBI-PS-51B	5/6/08	6.1LLS.301	Barksdale B2T-M12SS	AL	887	882	psig	
119	NBI-PS-51B	4/9/08	6.1LLS.301	Barksdale B2T-M12SS	AF	887	888	psig	
120	NBI-PS-51B	4/9/08	6.1LLS.301	Barksdale B2T-M12SS	AL	887	888	psig	
121	NBI-PS-51B	1/31/08	6.1LLS.301	Barksdale B2T-M12SS	AF	887	881	psig	Adjustment made
122	NBI-PS-51B	1/31/08	6.1LLS.301	Barksdale B2T-M12SS	AL	887	886	psig	Adjustment made
123	NBI-PS-51B	11/2/07	6.1LLS.301	Barksdale B2T-M12SS	AF	887	885	psig	
124	NBI-PS-51B	11/2/07	6.1LLS.301	Barksdale B2T-M12SS	AL	887	885	psig	
125	NBI-PS-51B	8/2/07	6.1LLS.301	Barksdale B2T-M12SS	AF	887	895	psig	Adjustment made
126	NBI-PS-51B	8/2/07	6.1LLS.301	Barksdale B2T-M12SS	AL	887	888	psig	Adjustment made
127	NBI-PS-51B	5/4/07	6.1LLS.301	Barksdale B2T-M12SS	AF	887	891.4	psig	
128	NBI-PS-51B	5/4/07	6.1LLS.301	Barksdale B2T-M12SS	AL	887	891.4	psig	
129	NBI-PS-51B	11/19/06	6.1LLS.301	Barksdale B2T-M12SS	AF	887	885	psig	
130	NBI-PS-51B	11/19/06	6.1LLS.301	Barksdale B2T-M12SS	AL	887	885	psig	
131	NBI-PS-51B	8/3/06	6.1LLS.301	Barksdale B2T-M12SS	AF	887	888.5	psig	
132	NBI-PS-51B	8/3/06	6.1LLS.301	Barksdale B2T-M12SS	AL	887	888.5	psig	
133	NBI-PS-51B	5/5/06	6.1LLS.301	Barksdale B2T-M12SS	AF	887	885	psig	
134	NBI-PS-51B	5/5/06	6.1LLS.301	Barksdale B2T-M12SS	AL	887	885	psig	
135	NBI-PS-51B	2/2/06	6.1LLS.301	Barksdale B2T-M12SS	AF	887	885.8	psig	
136	NBI-PS-51B	2/2/06	6.1LLS.301	Barksdale B2T-M12SS	AL	887	885.8	psig	
137	NBI-PS-51B	11/3/05	6.1LLS.301	Barksdale B2T-M12SS	AF	887	887.3	psig	
138	NBI-PS-51B	11/3/05	6.1LLS.301	Barksdale B2T-M12SS	AL	887	887.3	psig	
139	NBI-PS-51B	8/4/05	6.1LLS.301	Barksdale B2T-M12SS	AF	887	890.5	psig	
140	NBI-PS-51B	8/4/05	6.1LLS.301	Barksdale B2T-M12SS	AL	887	890.5	psig	
141	NBI-PS-51B	5/19/05	6.1LLS.301	Barksdale B2T-M12SS	AF	887	889.3	psig	
142	NBI-PS-51B	5/19/05	6.1LLS.301	Barksdale B2T-M12SS	AL	887	889.3	psig	
143	NBI-PS-51B	2/25/05	6.1LLS.301	Barksdale B2T-M12SS	AF	887	888	psig	
144	NBI-PS-51B	2/25/05	6.1LLS.301	Barksdale B2T-M12SS	AL	887	888	psig	
145	NBI-PS-51B	12/3/04	6.1LLS.301	Barksdale B2T-M12SS	AF	887	887	psig	

Seq ID	Tag ID	Date	Procedure	Make/Model	AF/ AL	Setpt	AF/ AL Data	Units	Comments
146	NBI-PS-51B	12/3/04	6.1LLS.301	Barksdale B2T-M12SS	AL	887	887	psig	
147	NBI-PS-51B	9/10/04	6.1LLS.301	Barksdale B2T-M12SS	AF	887	892	psig	
148	NBI-PS-51B	9/10/04	6.1LLS.301	Barksdale B2T-M12SS	AL	887	892	psig	
149	NBI-PS-51B	6/18/04	6.1LLS.301	Barksdale B2T-M12SS	AF	887	891	psig	
150	NBI-PS-51B	6/18/04	6.1LLS.301	Barksdale B2T-M12SS	AL	887	891	psig	
151	NBI-PS-51B	3/26/04	6.1LLS.301	Barksdale B2T-M12SS	AF	887	881	psig	Adjustment made
152	NBI-PS-51B	3/26/04	6.1LLS.301	Barksdale B2T-M12SS	AL	887	887	psig	Adjustment made
153	NBI-PS-51B	1/2/04	6.1LLS.301	Barksdale B2T-M12SS	AF	887	882	psig	
154	NBI-PS-51B	1/2/04	6.1LLS.301	Barksdale B2T-M12SS	AL	887	882	psig	
155	NBI-PS-51B	10/10/03	6.1LLS.301	Barksdale B2T-M12SS	AF	887	885	psig	
156	NBI-PS-51B	10/10/03	6.1LLS.301	Barksdale B2T-M12SS	AL	887	885	psig	
157	NBI-PS-51B	7/18/03	6.1LLS.301	Barksdale B2T-M12SS	AF	887	880	psig	Adjustment made
158	NBI-PS-51B	7/18/03	6.1LLS.301	Barksdale B2T-M12SS	AL	887	887	psig	Adjustment made
159	NBI-PS-51B	5/22/03	6.1LLS.301	Barksdale B2T-M12SS	AF	887	863	psig	Adjusted 51B - Outside of Instrument Limit, Violated TS AV
160	NBI-PS-51B	5/22/03	6.1LLS.301	Barksdale B2T-M12SS	AL	887	886.2	psig	
161	NBI-PS-51B	1/31/03	6.1LLS.301	Barksdale B2T-M12SS	AF	887	882	psig	
162	NBI-PS-51B	1/31/03	6.1LLS.301	Barksdale B2T-M12SS	AL	887	882	psig	
163	NBI-PS-51B	11/8/02	6.1LLS.301	Barksdale B2T-M12SS	AF	887	882	psig	
164	NBI-PS-51B	11/8/02	6.1LLS.301	Barksdale B2T-M12SS	AL	887	882	psig	
165	NBI-PS-51B	8/16/02	6.1LLS.301	Barksdale B2T-M12SS	AF	887	886	psig	
166	NBI-PS-51B	8/16/02	6.1LLS.301	Barksdale B2T-M12SS	AL	887	886	psig	
167	NBI-PS-51B	5/22/02	6.1LLS.301	Barksdale B2T-M12SS	AF	887	883	psig	
168	NBI-PS-51B	5/22/02	6.1LLS.301	Barksdale B2T-M12SS	AL	887	883	psig	
169	NBI-PS-51B	2/28/02	6.1LLS.301	Barksdale B2T-M12SS	AF	887	882	psig	
170	NBI-PS-51B	2/28/02	6.1LLS.301	Barksdale B2T-M12SS	AL	887	882	psig	
171	NBI-PS-51B	12/7/01	6.1LLS.301	Barksdale B2T-M12SS	AF	887	886	psig	
172	NBI-PS-51B	12/7/01	6.1LLS.301	Barksdale B2T-M12SS	AL	887	886	psig	
173	NBI-PS-51B	9/13/01	6.1LLS.301	Barksdale B2T-M12SS	AF	887	888	psig	
174	NBI-PS-51B	9/13/01	6.1LLS.301	Barksdale B2T-M12SS	AL	887	888	psig	
175	NBI-PS-51B	6/21/01	6.1LLS.301	Barksdale B2T-M12SS	AF	887	888	psig	
176	NBI-PS-51B	6/21/01	6.1LLS.301	Barksdale B2T-M12SS	AL	887	888	psig	
177	NBI-PS-51B	3/29/01	6.1LLS.301	Barksdale B2T-M12SS	AF	887	884	psig	
178	NBI-PS-51B	3/29/01	6.1LLS.301	Barksdale B2T-M12SS	AL	887	884	psig	
179	NBI-PS-51B	1/4/01	6.1LLS.301	Barksdale B2T-M12SS	AF	887	880	psig	Adjustment made
180	NBI-PS-51B	1/4/01	6.1LLS.301	Barksdale B2T-M12SS	AL	887	888	psig	Adjustment made
181	NBI-PS-51B	10/12/00	6.1LLS.301	Barksdale B2T-M12SS	AF	887	882	psig	

Seq ID	Tag ID	Date	Procedure	Make/Model	AF/ AL	Setpt	AF/ AL Data	Units	Comments
182	NBI-PS-51B	10/12/00	6.1LLS.301	Barksdale B2T-M12SS	AL	887	882	psig	
183	NBI-PS-51B	7/20/00	6.1LLS.301	Barksdale B2T-M12SS	AF	887	883	psig	
184	NBI-PS-51B	7/20/00	6.1LLS.301	Barksdale B2T-M12SS	AL	887	883	psig	
185	NBI-PS-51B	4/26/00	6.1LLS.301	Barksdale B2T-M12SS	AF	887	880	psig	Adjustment made
186	NBI-PS-51B	4/26/00	6.1LLS.301	Barksdale B2T-M12SS	AL	887	889	psig	Adjustment made
187	NBI-PS-51B	2/3/00	6.1LLS.301	Barksdale B2T-M12SS	AF	887	874	psig	Adjustment made
188	NBI-PS-51B	2/3/00	6.1LLS.301	Barksdale B2T-M12SS	AL	887	889	psig	Adjustment made
189	NBI-PS-51B	11/10/99	6.1LLS.301	Barksdale B2T-M12SS	AF	887	886	psig	
190	NBI-PS-51B	11/10/99	6.1LLS.301	Barksdale B2T-M12SS	AL	887	886	psig	
191	NBI-PS-51B	10/14/99	6.1LLS.301	Barksdale B2T-M12SS	AF	887	890	psig	
192	NBI-PS-51B	10/14/99	6.1LLS.301	Barksdale B2T-M12SS	AL	887	890	psig	
193	NBI-PS-51B	9/15/99	6.1LLS.301	Barksdale B2T-M12SS	AF	887	888	psig	
194	NBI-PS-51B	9/15/99	6.1LLS.301	Barksdale B2T-M12SS	AL	887	888	psig	
195	NBI-PS-51B	8/18/99	6.1LLS.301	Barksdale B2T-M12SS	AF	887	890	psig	
196	NBI-PS-51B	8/18/99	6.1LLS.301	Barksdale B2T-M12SS	AL	887	890	psig	
197	NBI-PS-51B	7/21/99	6.1LLS.301	Barksdale B2T-M12SS	AF	887	892	psig	
198	NBI-PS-51B	7/21/99	6.1LLS.301	Barksdale B2T-M12SS	AL	887	892	psig	
199	NBI-PS-51B	6/23/99	6.1LLS.301	Barksdale B2T-M12SS	AF	887	891	psig	
200	NBI-PS-51B	6/23/99	6.1LLS.301	Barksdale B2T-M12SS	AL	887	891	psig	
201	NBI-PS-51B	5/26/99	6.1LLS.301	Barksdale B2T-M12SS	AF	887	890	psig	
202	NBI-PS-51B	5/26/99	6.1LLS.301	Barksdale B2T-M12SS	AL	887	890	psig	
203	NBI-PS-51B	4/28/99	6.1LLS.301	Barksdale B2T-M12SS	AF	887	886	psig	
204	NBI-PS-51B	4/28/99	6.1LLS.301	Barksdale B2T-M12SS	AL	887	886	psig	
205	NBI-PS-51B	4/1/99	6.1LLS.301	Barksdale B2T-M12SS	AF	887	883	psig	
206	NBI-PS-51B	4/1/99	6.1LLS.301	Barksdale B2T-M12SS	AL	887	883	psig	
207	NBI-PS-51B	3/3/99	6.1LLS.301	Barksdale B2T-M12SS	AF	887	888	psig	
208	NBI-PS-51B	3/3/99	6.1LLS.301	Barksdale B2T-M12SS	AL	887	888	psig	
209	NBI-PS-51C	12/11/09	6.2LLS.301	Barksdale B2T-M12SS	AF	1037	1034	psig	
210	NBI-PS-51C	12/11/09	6.2LLS.301	Barksdale B2T-M12SS	AL	1037	1034	psig	
211	NBI-PS-51C	9/10/09	6.2LLS.301	Barksdale B2T-M12SS	AF	1037	1038.7	psig	
212	NBI-PS-51C	9/10/09	6.2LLS.301	Barksdale B2T-M12SS	AL	1037	1038.7	psig	
213	NBI-PS-51C	6/12/09	6.2LLS.301	Barksdale B2T-M12SS	AF	1037	1043.8	psig	Adjustment made
214	NBI-PS-51C	6/12/09	6.2LLS.301	Barksdale B2T-M12SS	AL	1037	1036	psig	Adjustment made
215	NBI-PS-51C	3/12/09	6.2LLS.301	Barksdale B2T-M12SS	AF	1037	1030	psig	Adjustment made
216	NBI-PS-51C	3/12/09	6.2LLS.301	Barksdale B2T-M12SS	AL	1037	1038.7	psig	Adjustment made
217	NBI-PS-51C	12/9/08	6.2LLS.301	Barksdale B2T-M12SS	AF	1037	1032.5	psig	

Seq ID	Tag ID	Date	Procedure	Make/Model	AF/ AL	Setpt	AF/ AL Data	Units	Comments
218	NBI-PS-51C	12/9/08	6.2LLS.301	Barksdale B2T-M12SS	AL	1037	1032.5	psig	
219	NBI-PS-51C	9/19/08	6.2LLS.301	Barksdale B2T-M12SS	AF	1037	1037.5	psig	
220	NBI-PS-51C	9/19/08	6.2LLS.301	Barksdale B2T-M12SS	AL	1037	1037.5	psig	
221	NBI-PS-51C	6/12/08	6.2LLS.301	Barksdale B2T-M12SS	AF	1037	1037.3	psig	
222	NBI-PS-51C	6/12/08	6.2LLS.301	Barksdale B2T-M12SS	AL	1037	1037.3	psig	
223	NBI-PS-51C	5/6/08	6.2LLS.301	Barksdale B2T-M12SS	AF	1037	1034.1	psig	
224	NBI-PS-51C	5/6/08	6.2LLS.301	Barksdale B2T-M12SS	AL	1037	1034.1	psig	
225	NBI-PS-51C	3/12/08	6.2LLS.301	Barksdale B2T-M12SS	AF	1037	1033	psig	
226	NBI-PS-51C	3/12/08	6.2LLS.301	Barksdale B2T-M12SS	AL	1037	1033	psig	
227	NBI-PS-51C	12/11/07	6.2LLS.301	Barksdale B2T-M12SS	AF	1037	1034.5	psig	
228	NBI-PS-51C	12/11/07	6.2LLS.301	Barksdale B2T-M12SS	AL	1037	1034.5	psig	

Seq.			CAL DATE	AF/AL	AF/AL DATA VALUE	CAL INTERVAL = (Current Date - Previous Date)		Cumulative Drift	Cumulative Interval	Seq.		CUMULATIVE DRIFT	CUMULATIVE INTERVAL =	
ID	Make/Model Number	Tag ID	mm/dd/yy	Status	psi	Days	Months	psi	Days	ID	Tag Number	psi	Days	Months
1	Barksdale B2T-M12SS	NBI-PS-51A	11/11/09	AF	1022	104	3.4	-4.7	104	1	NBI-PS-51A	-4.7	104	3.4
2	Barksdale B2T-M12SS	NBI-PS-51A	11/11/09	AL	1022					3	NBI-PS-51A	5.4	450	14.8
3	Barksdale B2T-M12SS	NBI-PS-51A	07/30/09	AF	1034.2	90	3.0	5.4	450	13	NBI-PS-51A	1.8	534	17.6
4	Barksdale B2T-M12SS	NBI-PS-51A	07/30/09	AL	1026.7					25	NBI-PS-51A	-0.7	549	18.0
5	Barksdale B2T-M12SS	NBI-PS-51A	05/01/09	AF	1030	92	3.0	1.0	360	37	NBI-PS-51A	0.7	503	16.5
6	Barksdale B2T-M12SS	NBI-PS-51A	05/01/09	AL	1030					49	NBI-PS-51A	-2.8	504	16.6
7	Barksdale B2T-M12SS	NBI-PS-51A	01/29/09	AF	1025.9	94	3.1	-3.1	268	61	NBI-PS-51A	3.8	505	16.6
8	Barksdale B2T-M12SS	NBI-PS-51A	01/29/09	AL	1025.9					73	NBI-PS-51A	-2.0	561	18.4
9	Barksdale B2T-M12SS	NBI-PS-51A	10/27/08	AF	1029.9	89	2.9	0.9	174	89	NBI-PS-51A	3.0	196	6.4
10	Barksdale B2T-M12SS	NBI-PS-51A	10/27/08	AL	1029.9					105	NBI-PS-51B	-4.6	104	3.4
11	Barksdale B2T-M12SS	NBI-PS-51A	07/30/08	AF	1031	85	2.8	2.0	85	107	NBI-PS-51B	4.1	182	6.0
12	Barksdale B2T-M12SS	NBI-PS-51A	07/30/08	AL	1031					111	NBI-PS-51B	-9.0	364	12.0
13	Barksdale B2T-M12SS	NBI-PS-51A	05/06/08	AF	1028.8	27	0.9	1.8	534	121	NBI-PS-51B	-7.0	182	6.0
14	Barksdale B2T-M12SS	NBI-PS-51A	05/06/08	AL	1028.8					125	NBI-PS-51B	9.2	546	18.0
15	Barksdale B2T-M12SS	NBI-PS-51A	04/09/08	AF	1029	69	2.3	2.0	507	135	NBI-PS-51B	-6.2	510	16.8
16	Barksdale B2T-M12SS	NBI-PS-51A	04/09/08	AL	1029					147	NBI-PS-51B	5.0	168	5.5
17	Barksdale B2T-M12SS	NBI-PS-51A	01/31/08	AF	1025.5	90	3.0	-1.5	438	151	NBI-PS-51B	-6.0	252	8.3
18	Barksdale B2T-M12SS	NBI-PS-51A	01/31/08	AL	1025.5					157	NBI-PS-51B	-6.2	57	1.9
19	Barksdale B2T-M12SS	NBI-PS-51A	11/02/07	AF	1028	92	3.0	1.0	348	159	NBI-PS-51B	-23.0	531	17.5
20	Barksdale B2T-M12SS	NBI-PS-51A	11/02/07	AL	1028					171	NBI-PS-51B	-2.0	337	11.1
21	Barksdale B2T-M12SS	NBI-PS-51A	08/02/07	AF	1030	90	3.0	3.0	256	179	NBI-PS-51B	-9.0	253	8.3
22	Barksdale B2T-M12SS	NBI-PS-51A	08/02/07	AL	1030					185	NBI-PS-51B	-9.0	83	2.7
23	Barksdale B2T-M12SS	NBI-PS-51A	05/04/07	AF	1029	166	5.5	2.0	166	187	NBI-PS-51B	-14.0	337	11.1
24	Barksdale B2T-M12SS	NBI-PS-51A	05/04/07	AL	1029					209	NBI-PS-51C	-2.0	182	6.0
25	Barksdale B2T-M12SS	NBI-PS-51A	11/19/06	AF	1027	108	3.5	-0.7	549	213	NBI-PS-51C	5.1	92	3.0
26	Barksdale B2T-M12SS	NBI-PS-51A	11/19/06	AL	1027					215	NBI-PS-51C	-8.0	546	18.0
27	Barksdale B2T-M12SS	NBI-PS-51A	08/03/06	AF	1031	90	3.0	3.3	441	229	NBI-PS-51C	6.0	546	18.0
28	Barksdale B2T-M12SS	NBI-PS-51A	08/03/06	AL	1031					241	NBI-PS-51C	-8.0	532	17.5
29	Barksdale B2T-M12SS	NBI-PS-51A	05/05/06	AF	1028	92	3.0	0.3	351	255	NBI-PS-51C	2.2	322	10.6
30	Barksdale B2T-M12SS	NBI-PS-51A	05/05/06	AL	1028					263	NBI-PS-51C	-5.0	181	6.0
31	Barksdale B2T-M12SS	NBI-PS-51A	02/02/06	AF	1023	91	3.0	-4.7	259	267	NBI-PS-51C	-7.0	492	16.2
32	Barksdale B2T-M12SS	NBI-PS-51A	02/02/06	AL	1023					279	NBI-PS-51C	-1.0	349	11.5
33	Barksdale B2T-M12SS	NBI-PS-51A	11/03/05	AF	1025.6	91	3.0	-2.1	168	287	NBI-PS-51C	-5.0	250	8.2
34	Barksdale B2T-M12SS	NBI-PS-51A	11/03/05	AL	1025.6					293	NBI-PS-51C	-9.0	170	5.6
35	Barksdale B2T-M12SS	NBI-PS-51A	08/04/05	AF	1029	77	2.5	1.3	77	297	NBI-PS-51C	-9.0	281	9.2
36	Barksdale B2T-M12SS	NBI-PS-51A	08/04/05	AL	1029					317	NBI-PS-51D	-5.3	547	18.0
37	Barksdale B2T-M12SS	NBI-PS-51A	05/19/05	AF	1027.7	83	2.7	0.7	503	329	NBI-PS-51D	6.3	92	3.0

Seq.			CAL DATE	AF/AL	AF/AL DATA VALUE	CAL INTERVAL = (Current Date - Previous Date)		Cumulative Drift	Cumulative Interval
ID	Make/Model Number	Tag ID	mm/dd/yy	Status	psi	Days	Months	psi	Days
38	Barksdale B2T-M12SS	NBI-PS-51A	05/19/05	AL	1027.7				
39	Barksdale B2T-M12SS	NBI-PS-51A	02/25/05	AF	1027.5	84	2.8	0.5	420
40	Barksdale B2T-M12SS	NBI-PS-51A	02/25/05	AL	1027.5				
41	Barksdale B2T-M12SS	NBI-PS-51A	12/03/04	AF	1025	84	2.8	-2.0	336
42	Barksdale B2T-M12SS	NBI-PS-51A	12/03/04	AL	1025				
43	Barksdale B2T-M12SS	NBI-PS-51A	09/10/04	AF	1028	84	2.8	1.0	252
44	Barksdale B2T-M12SS	NBI-PS-51A	09/10/04	AL	1028				
45	Barksdale B2T-M12SS	NBI-PS-51A	06/18/04	AF	1030	84	2.8	3.0	168
46	Barksdale B2T-M12SS	NBI-PS-51A	06/18/04	AL	1030				
47	Barksdale B2T-M12SS	NBI-PS-51A	03/26/04	AF	1024	84	2.8	-3.0	84
48	Barksdale B2T-M12SS	NBI-PS-51A	03/26/04	AL	1024				
49	Barksdale B2T-M12SS	NBI-PS-51A	01/02/04	AF	1027	84	2.8	-2.8	504
50	Barksdale B2T-M12SS	NBI-PS-51A	01/02/04	AL	1027				
51	Barksdale B2T-M12SS	NBI-PS-51A	10/10/03	AF	1026	84	2.8	-3.8	420
52	Barksdale B2T-M12SS	NBI-PS-51A	10/10/03	AL	1026				
53	Barksdale B2T-M12SS	NBI-PS-51A	07/18/03	AF	1026	57	1.9	-3.8	336
54	Barksdale B2T-M12SS	NBI-PS-51A	07/18/03	AL	1026				
55	Barksdale B2T-M12SS	NBI-PS-51A	05/22/03	AF	1027.7	111	3.6	-2.1	279
56	Barksdale B2T-M12SS	NBI-PS-51A	05/22/03	AL	1027.7				
57	Barksdale B2T-M12SS	NBI-PS-51A	01/31/03	AF	1024	84	2.8	-5.8	168
58	Barksdale B2T-M12SS	NBI-PS-51A	01/31/03	AL	1024				
59	Barksdale B2T-M12SS	NBI-PS-51A	11/08/02	AF	1025	84	2.8	-4.8	84
60	Barksdale B2T-M12SS	NBI-PS-51A	11/08/02	AL	1025				
61	Barksdale B2T-M12SS	NBI-PS-51A	08/16/02	AF	1029.8	86	2.8	3.8	505
62	Barksdale B2T-M12SS	NBI-PS-51A	08/16/02	AL	1029.8				
63	Barksdale B2T-M12SS	NBI-PS-51A	05/22/02	AF	1025	83	2.7	-1.0	419
64	Barksdale B2T-M12SS	NBI-PS-51A	05/22/02	AL	1025				
65	Barksdale B2T-M12SS	NBI-PS-51A	02/28/02	AF	1022	83	2.7	-4.0	336
66	Barksdale B2T-M12SS	NBI-PS-51A	02/28/02	AL	1022				
67	Barksdale B2T-M12SS	NBI-PS-51A	12/07/01	AF	1028	85	2.8	2.0	253
68	Barksdale B2T-M12SS	NBI-PS-51A	12/07/01	AL	1028				
69	Barksdale B2T-M12SS	NBI-PS-51A	09/13/01	AF	1029	84	2.8	3.0	168
70	Barksdale B2T-M12SS	NBI-PS-51A	09/13/01	AL	1029				
71	Barksdale B2T-M12SS	NBI-PS-51A	06/21/01	AF	1030	84	2.8	4.0	84
72	Barksdale B2T-M12SS	NBI-PS-51A	06/21/01	AL	1030				
73	Barksdale B2T-M12SS	NBI-PS-51A	03/29/01	AF	1026	84	2.8	-2.0	561
74	Barksdale B2T-M12SS	NBI-PS-51A	03/29/01	AL	1026				

Seq.		CUMULATIVE DRIFT	CUMULATIVE INTERVAL =	
ID	Tag Number	psi	Days	Months
333	NBI-PS-51D	-8.8	181	6.0
337	NBI-PS-51D	5.4	185	6.1
341	NBI-PS-51D	-8.0	451	14.8
351	NBI-PS-51D	-6.0	359	11.8
361	NBI-PS-51D	-6.7	166	5.5
365	NBI-PS-51D	5.0	84	2.8
367	NBI-PS-51D	-7.0	506	16.6
379	NBI-PS-51D	-7.0	503	16.5
391	NBI-PS-51D	1.0	168	5.5
395	NBI-PS-51D	-7.0	420	13.8
405	NBI-PS-51D	-6.0	84	2.8
409	NBI-PS-51D	-6.0	113	3.7
417	NBI-PS-51D	4.0	84	2.8

Seq.			CAL DATE	AF/AL	AF/AL DATA VALUE	CAL INTERVAL = (Current Date - Previous Date)		Cumulative Drift	Cumulative Interval
ID	Make/Model Number	Tag ID	mm/dd/yy	Status	psi	Days	Months	psi	Days
75	Barksdale B2T-M12SS	NBI-PS-51A	01/04/01	AF	1024	84	2.8	-4.0	477
76	Barksdale B2T-M12SS	NBI-PS-51A	01/04/01	AL	1024				
77	Barksdale B2T-M12SS	NBI-PS-51A	10/12/00	AF	1027	84	2.8	-1.0	393
78	Barksdale B2T-M12SS	NBI-PS-51A	10/12/00	AL	1027				
79	Barksdale B2T-M12SS	NBI-PS-51A	07/20/00	AF	1028	85	2.8	0.0	309
80	Barksdale B2T-M12SS	NBI-PS-51A	07/20/00	AL	1028				
81	Barksdale B2T-M12SS	NBI-PS-51A	04/26/00	AF	1029	83	2.7	1.0	224
82	Barksdale B2T-M12SS	NBI-PS-51A	04/26/00	AL	1029				
83	Barksdale B2T-M12SS	NBI-PS-51A	02/03/00	AF	1024	85	2.8	-4.0	141
84	Barksdale B2T-M12SS	NBI-PS-51A	02/03/00	AL	1024				
85	Barksdale B2T-M12SS	NBI-PS-51A	11/10/99	AF	1024	27	0.9	-4.0	56
86	Barksdale B2T-M12SS	NBI-PS-51A	11/10/99	AL	1024				
87	Barksdale B2T-M12SS	NBI-PS-51A	10/14/99	AF	1030	29	1.0	2.0	29
88	Barksdale B2T-M12SS	NBI-PS-51A	10/14/99	AL	1030				
89	Barksdale B2T-M12SS	NBI-PS-51A	09/15/99	AF	1028	28	0.9	3.0	196
90	Barksdale B2T-M12SS	NBI-PS-51A	09/15/99	AL	1028				
91	Barksdale B2T-M12SS	NBI-PS-51A	08/18/99	AF	1030	28	0.9	5.0	168
92	Barksdale B2T-M12SS	NBI-PS-51A	08/18/99	AL	1030				
93	Barksdale B2T-M12SS	NBI-PS-51A	07/21/99	AF	1030	28	0.9	5.0	140
94	Barksdale B2T-M12SS	NBI-PS-51A	07/21/99	AL	1030				
95	Barksdale B2T-M12SS	NBI-PS-51A	06/23/99	AF	1032	28	0.9	7.0	112
96	Barksdale B2T-M12SS	NBI-PS-51A	06/23/99	AL	1032				
97	Barksdale B2T-M12SS	NBI-PS-51A	05/26/99	AF	1027	28	0.9	2.0	84
98	Barksdale B2T-M12SS	NBI-PS-51A	05/26/99	AL	1027				
99	Barksdale B2T-M12SS	NBI-PS-51A	04/28/99	AF	1030	27	0.9	5.0	56
100	Barksdale B2T-M12SS	NBI-PS-51A	04/28/99	AL	1030				
101	Barksdale B2T-M12SS	NBI-PS-51A	04/01/99	AF	1028	29	1.0	3.0	29
102	Barksdale B2T-M12SS	NBI-PS-51A	04/01/99	AL	1028				
103	Barksdale B2T-M12SS	NBI-PS-51A	03/03/99	AF	1025				
104	Barksdale B2T-M12SS	NBI-PS-51A	03/03/99	AL	1025				
105	Barksdale B2T-M12SS	NBI-PS-51B	11/11/09	AF	883	104	3.4	-4.6	104
106	Barksdale B2T-M12SS	NBI-PS-51B	11/11/09	AL	883				
107	Barksdale B2T-M12SS	NBI-PS-51B	07/30/09	AF	893.1	90	3.0	4.1	182
108	Barksdale B2T-M12SS	NBI-PS-51B	07/30/09	AL	887.6				
109	Barksdale B2T-M12SS	NBI-PS-51B	05/01/09	AF	890	92	3.0	1.0	92
110	Barksdale B2T-M12SS	NBI-PS-51B	05/01/09	AL	890				
111	Barksdale B2T-M12SS	NBI-PS-51B	01/29/09	AF	877	94	3.1	-9.0	364

Seq.		CUMULATIVE DRIFT	CUMULATIVE INTERVAL =	
ID	Tag Number	psi	Days	Months

Seq.			CAL DATE	AF/AL	AF/AL DATA VALUE	CAL INTERVAL = (Current Date - Previous Date)		Cumulative Drift	Cumulative Interval	Seq.		CUMULATIVE DRIFT	CUMULATIVE INTERVAL =	
ID	Make/Model Number	Tag ID	mm/dd/yy	Status	psi	Days	Months	psi	Days	ID	Tag Number	psi	Days	Months
112	Barksdale B2T-M12SS	NBI-PS-51B	01/29/09	AL	889									
113	Barksdale B2T-M12SS	NBI-PS-51B	10/27/08	AF	887	89	2.9	1.0	270					
114	Barksdale B2T-M12SS	NBI-PS-51B	10/27/08	AL	887									
115	Barksdale B2T-M12SS	NBI-PS-51B	07/30/08	AF	884	85	2.8	-2.0	181					
116	Barksdale B2T-M12SS	NBI-PS-51B	07/30/08	AL	884									
117	Barksdale B2T-M12SS	NBI-PS-51B	05/06/08	AF	882	27	0.9	-4.0	96					
118	Barksdale B2T-M12SS	NBI-PS-51B	05/06/08	AL	882									
119	Barksdale B2T-M12SS	NBI-PS-51B	04/09/08	AF	888	69	2.3	2.0	69					
120	Barksdale B2T-M12SS	NBI-PS-51B	04/09/08	AL	888									
121	Barksdale B2T-M12SS	NBI-PS-51B	01/31/08	AF	881	90	3.0	-7.0	182					
122	Barksdale B2T-M12SS	NBI-PS-51B	01/31/08	AL	886									
123	Barksdale B2T-M12SS	NBI-PS-51B	11/02/07	AF	885	92	3.0	-3.0	92					
124	Barksdale B2T-M12SS	NBI-PS-51B	11/02/07	AL	885									
125	Barksdale B2T-M12SS	NBI-PS-51B	08/02/07	AF	895	90	3.0	9.2	546					
126	Barksdale B2T-M12SS	NBI-PS-51B	08/02/07	AL	888									
127	Barksdale B2T-M12SS	NBI-PS-51B	05/04/07	AF	891.4	166	5.5	5.6	456					
128	Barksdale B2T-M12SS	NBI-PS-51B	05/04/07	AL	891.4									
129	Barksdale B2T-M12SS	NBI-PS-51B	11/19/06	AF	885	108	3.5	-0.8	290					
130	Barksdale B2T-M12SS	NBI-PS-51B	11/19/06	AL	885									
131	Barksdale B2T-M12SS	NBI-PS-51B	08/03/06	AF	888.5	90	3.0	2.7	182					
132	Barksdale B2T-M12SS	NBI-PS-51B	08/03/06	AL	888.5									
133	Barksdale B2T-M12SS	NBI-PS-51B	05/05/06	AF	885	92	3.0	-0.8	92					
134	Barksdale B2T-M12SS	NBI-PS-51B	05/05/06	AL	885									
135	Barksdale B2T-M12SS	NBI-PS-51B	02/02/06	AF	885.8	91	3.0	-6.2	510					
136	Barksdale B2T-M12SS	NBI-PS-51B	02/02/06	AL	885.8									
137	Barksdale B2T-M12SS	NBI-PS-51B	11/03/05	AF	887.3	91	3.0	-4.7	419					
138	Barksdale B2T-M12SS	NBI-PS-51B	11/03/05	AL	887.3									
139	Barksdale B2T-M12SS	NBI-PS-51B	08/04/05	AF	890.5	77	2.5	-1.5	328					
140	Barksdale B2T-M12SS	NBI-PS-51B	08/04/05	AL	890.5									
141	Barksdale B2T-M12SS	NBI-PS-51B	05/19/05	AF	889.3	83	2.7	-2.7	251					
142	Barksdale B2T-M12SS	NBI-PS-51B	05/19/05	AL	889.3									
143	Barksdale B2T-M12SS	NBI-PS-51B	02/25/05	AF	888	84	2.8	-4.0	168					
144	Barksdale B2T-M12SS	NBI-PS-51B	02/25/05	AL	888									
145	Barksdale B2T-M12SS	NBI-PS-51B	12/03/04	AF	887	84	2.8	-5.0	84					
146	Barksdale B2T-M12SS	NBI-PS-51B	12/03/04	AL	887									
147	Barksdale B2T-M12SS	NBI-PS-51B	09/10/04	AF	892	84	2.8	5.0	168					
148	Barksdale B2T-M12SS	NBI-PS-51B	09/10/04	AL	892									

Seq.			CAL DATE	AF/AL	AF/AL DATA VALUE	CAL INTERVAL = (Current Date - Previous Date)		Cumulative Drift	Cumulative Interval	Seq.		CUMULATIVE DRIFT	CUMULATIVE INTERVAL =	
ID	Make/Model Number	Tag ID	mm/dd/yy	Status	psi	Days	Months	psi	Days	ID	Tag Number	psi	Days	Months
149	Barksdale B2T-M12SS	NBI-PS-51B	06/18/04	AF	891	84	2.8	4.0	84					
150	Barksdale B2T-M12SS	NBI-PS-51B	06/18/04	AL	891									
151	Barksdale B2T-M12SS	NBI-PS-51B	03/26/04	AF	881	84	2.8	-6.0	252					
152	Barksdale B2T-M12SS	NBI-PS-51B	03/26/04	AL	887									
153	Barksdale B2T-M12SS	NBI-PS-51B	01/02/04	AF	882	84	2.8	-5.0	168					
154	Barksdale B2T-M12SS	NBI-PS-51B	01/02/04	AL	882									
155	Barksdale B2T-M12SS	NBI-PS-51B	10/10/03	AF	885	84	2.8	-2.0	84					
156	Barksdale B2T-M12SS	NBI-PS-51B	10/10/03	AL	885									
157	Barksdale B2T-M12SS	NBI-PS-51B	07/18/03	AF	880	57	1.9	-6.2	57					
158	Barksdale B2T-M12SS	NBI-PS-51B	07/18/03	AL	887									
159	Barksdale B2T-M12SS	NBI-PS-51B	05/22/03	AF	863	111	3.6	-23.0	531					
160	Barksdale B2T-M12SS	NBI-PS-51B	05/22/03	AL	886.2									
161	Barksdale B2T-M12SS	NBI-PS-51B	01/31/03	AF	882	84	2.8	-4.0	420					
162	Barksdale B2T-M12SS	NBI-PS-51B	01/31/03	AL	882									
163	Barksdale B2T-M12SS	NBI-PS-51B	11/08/02	AF	882	84	2.8	-4.0	336					
164	Barksdale B2T-M12SS	NBI-PS-51B	11/08/02	AL	882									
165	Barksdale B2T-M12SS	NBI-PS-51B	08/16/02	AF	886	86	2.8	0.0	252					
166	Barksdale B2T-M12SS	NBI-PS-51B	08/16/02	AL	886									
167	Barksdale B2T-M12SS	NBI-PS-51B	05/22/02	AF	883	83	2.7	-3.0	166					
168	Barksdale B2T-M12SS	NBI-PS-51B	05/22/02	AL	883									
169	Barksdale B2T-M12SS	NBI-PS-51B	02/28/02	AF	882	83	2.7	-4.0	83					
170	Barksdale B2T-M12SS	NBI-PS-51B	02/28/02	AL	882									
171	Barksdale B2T-M12SS	NBI-PS-51B	12/07/01	AF	886	85	2.8	-2.0	337					
172	Barksdale B2T-M12SS	NBI-PS-51B	12/07/01	AL	886									
173	Barksdale B2T-M12SS	NBI-PS-51B	09/13/01	AF	888	84	2.8	0.0	252					
174	Barksdale B2T-M12SS	NBI-PS-51B	09/13/01	AL	888									
175	Barksdale B2T-M12SS	NBI-PS-51B	06/21/01	AF	888	84	2.8	0.0	168					
176	Barksdale B2T-M12SS	NBI-PS-51B	06/21/01	AL	888									
177	Barksdale B2T-M12SS	NBI-PS-51B	03/29/01	AF	884	84	2.8	-4.0	84					
178	Barksdale B2T-M12SS	NBI-PS-51B	03/29/01	AL	884									
179	Barksdale B2T-M12SS	NBI-PS-51B	01/04/01	AF	880	84	2.8	-9.0	253					
180	Barksdale B2T-M12SS	NBI-PS-51B	01/04/01	AL	888									
181	Barksdale B2T-M12SS	NBI-PS-51B	10/12/00	AF	882	84	2.8	-7.0	169					
182	Barksdale B2T-M12SS	NBI-PS-51B	10/12/00	AL	882									
183	Barksdale B2T-M12SS	NBI-PS-51B	07/20/00	AF	883	85	2.8	-6.0	85					
184	Barksdale B2T-M12SS	NBI-PS-51B	07/20/00	AL	883									
185	Barksdale B2T-M12SS	NBI-PS-51B	04/26/00	AF	880	83	2.7	-9.0	83					

Seq.			CAL DATE	AF/AL	AF/AL DATA VALUE	CAL INTERVAL = (Current Date - Previous Date)		Cumulative Drift	Cumulative Interval	Seq.		CUMULATIVE DRIFT	CUMULATIVE INTERVAL =	
ID	Make/Model Number	Tag ID	mm/dd/yy	Status	psi	Days	Months	psi	Days	ID	Tag Number	psi	Days	Months
186	Barksdale B2T-M12SS	NBI-PS-51B	04/26/00	AL	889									
187	Barksdale B2T-M12SS	NBI-PS-51B	02/03/00	AF	874	85	2.8	-14.0	337					
188	Barksdale B2T-M12SS	NBI-PS-51B	02/03/00	AL	889									
189	Barksdale B2T-M12SS	NBI-PS-51B	11/10/99	AF	886	27	0.9	-2.0	252					
190	Barksdale B2T-M12SS	NBI-PS-51B	11/10/99	AL	886									
191	Barksdale B2T-M12SS	NBI-PS-51B	10/14/99	AF	890	29	1.0	2.0	225					
192	Barksdale B2T-M12SS	NBI-PS-51B	10/14/99	AL	890									
193	Barksdale B2T-M12SS	NBI-PS-51B	09/15/99	AF	888	28	0.9	0.0	196					
194	Barksdale B2T-M12SS	NBI-PS-51B	09/15/99	AL	888									
195	Barksdale B2T-M12SS	NBI-PS-51B	08/18/99	AF	890	28	0.9	2.0	168					
196	Barksdale B2T-M12SS	NBI-PS-51B	08/18/99	AL	890									
197	Barksdale B2T-M12SS	NBI-PS-51B	07/21/99	AF	892	28	0.9	4.0	140					
198	Barksdale B2T-M12SS	NBI-PS-51B	07/21/99	AL	892									
199	Barksdale B2T-M12SS	NBI-PS-51B	06/23/99	AF	891	28	0.9	3.0	112					
200	Barksdale B2T-M12SS	NBI-PS-51B	06/23/99	AL	891									
201	Barksdale B2T-M12SS	NBI-PS-51B	05/26/99	AF	890	28	0.9	2.0	84					
202	Barksdale B2T-M12SS	NBI-PS-51B	05/26/99	AL	890									
203	Barksdale B2T-M12SS	NBI-PS-51B	04/28/99	AF	886	27	0.9	-2.0	56					
204	Barksdale B2T-M12SS	NBI-PS-51B	04/28/99	AL	886									
205	Barksdale B2T-M12SS	NBI-PS-51B	04/01/99	AF	883	29	1.0	-5.0	29					
206	Barksdale B2T-M12SS	NBI-PS-51B	04/01/99	AL	883									
207	Barksdale B2T-M12SS	NBI-PS-51B	03/03/99	AF	888									
208	Barksdale B2T-M12SS	NBI-PS-51B	03/03/99	AL	888									
209	Barksdale B2T-M12SS	NBI-PS-51C	12/11/09	AF	1034	92	3.0	-2.0	182					
210	Barksdale B2T-M12SS	NBI-PS-51C	12/11/09	AL	1034									
211	Barksdale B2T-M12SS	NBI-PS-51C	09/10/09	AF	1038.7	90	3.0	2.7	90					
212	Barksdale B2T-M12SS	NBI-PS-51C	09/10/09	AL	1038.7									
213	Barksdale B2T-M12SS	NBI-PS-51C	06/12/09	AF	1043.8	92	3.0	5.1	92					
214	Barksdale B2T-M12SS	NBI-PS-51C	06/12/09	AL	1036									
215	Barksdale B2T-M12SS	NBI-PS-51C	03/12/09	AF	1030	93	3.1	-8.0	546					
216	Barksdale B2T-M12SS	NBI-PS-51C	03/12/09	AL	1038.7									
217	Barksdale B2T-M12SS	NBI-PS-51C	12/09/08	AF	1032.5	81	2.7	-5.5	453					
218	Barksdale B2T-M12SS	NBI-PS-51C	12/09/08	AL	1032.5									
219	Barksdale B2T-M12SS	NBI-PS-51C	09/19/08	AF	1037.5	99	3.3	-0.5	372					
220	Barksdale B2T-M12SS	NBI-PS-51C	09/19/08	AL	1037.5									
221	Barksdale B2T-M12SS	NBI-PS-51C	06/12/08	AF	1037.3	37	1.2	-0.7	273					
222	Barksdale B2T-M12SS	NBI-PS-51C	06/12/08	AL	1037.3									

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ID	Make/Model Number	Tag ID	mm/dd/yy	Status	psi	Days	Months	psi	Days	ID	Tag Number	psi	Days	Months
223	Barksdale B2T-M12SS	NBI-PS-51C	05/06/08	AF	1034.1	55	1.8	-3.9	236					
224	Barksdale B2T-M12SS	NBI-PS-51C	05/06/08	AL	1034.1									
225	Barksdale B2T-M12SS	NBI-PS-51C	03/12/08	AF	1033	92	3.0	-5.0	181					
226	Barksdale B2T-M12SS	NBI-PS-51C	03/12/08	AL	1033									
227	Barksdale B2T-M12SS	NBI-PS-51C	12/11/07	AF	1034.5	89	2.9	-3.5	89					
228	Barksdale B2T-M12SS	NBI-PS-51C	12/11/07	AL	1034.5									
229	Barksdale B2T-M12SS	NBI-PS-51C	09/13/07	AF	1038	90	3.0	6.0	546					
230	Barksdale B2T-M12SS	NBI-PS-51C	09/13/07	AL	1038									
231	Barksdale B2T-M12SS	NBI-PS-51C	06/15/07	AF	1036.6	95	3.1	4.6	456					
232	Barksdale B2T-M12SS	NBI-PS-51C	06/15/07	AL	1036.6									
233	Barksdale B2T-M12SS	NBI-PS-51C	03/12/07	AF	1033	88	2.9	1.0	361					
234	Barksdale B2T-M12SS	NBI-PS-51C	03/12/07	AL	1033									
235	Barksdale B2T-M12SS	NBI-PS-51C	12/14/06	AF	1036.4	91	3.0	4.4	273					
236	Barksdale B2T-M12SS	NBI-PS-51C	12/14/06	AL	1036.4									
237	Barksdale B2T-M12SS	NBI-PS-51C	09/14/06	AF	1042	90	3.0	10.0	182					
238	Barksdale B2T-M12SS	NBI-PS-51C	09/14/06	AL	1042									
239	Barksdale B2T-M12SS	NBI-PS-51C	06/16/06	AF	1038.2	92	3.0	6.2	92					
240	Barksdale B2T-M12SS	NBI-PS-51C	06/16/06	AL	1038.2									
241	Barksdale B2T-M12SS	NBI-PS-51C	03/16/06	AF	1032	90	3.0	-8.0	532					
242	Barksdale B2T-M12SS	NBI-PS-51C	03/16/06	AL	1032									
243	Barksdale B2T-M12SS	NBI-PS-51C	12/16/05	AF	1035	95	3.1	-5.0	442					
244	Barksdale B2T-M12SS	NBI-PS-51C	12/16/05	AL	1035									
245	Barksdale B2T-M12SS	NBI-PS-51C	09/12/05	AF	1040	95	3.1	0.0	347					
246	Barksdale B2T-M12SS	NBI-PS-51C	09/12/05	AL	1040									
247	Barksdale B2T-M12SS	NBI-PS-51C	06/09/05	AF	1036	84	2.8	-4.0	252					
248	Barksdale B2T-M12SS	NBI-PS-51C	06/09/05	AL	1036									
249	Barksdale B2T-M12SS	NBI-PS-51C	03/17/05	AF	1034	40	1.3	-6.0	168					
250	Barksdale B2T-M12SS	NBI-PS-51C	03/17/05	AL	1034									
251	Barksdale B2T-M12SS	NBI-PS-51C	02/05/05	AF	1034	45	1.5	-6.0	128					
252	Barksdale B2T-M12SS	NBI-PS-51C	02/05/05	AL	1034									
253	Barksdale B2T-M12SS	NBI-PS-51C	12/22/04	AF	1035	83	2.7	-5.0	83					
254	Barksdale B2T-M12SS	NBI-PS-51C	12/22/04	AL	1035									
255	Barksdale B2T-M12SS	NBI-PS-51C	09/30/04	AF	1040	83	2.7	2.2	322					
256	Barksdale B2T-M12SS	NBI-PS-51C	09/30/04	AL	1040									
257	Barksdale B2T-M12SS	NBI-PS-51C	07/09/04	AF	1040.2	84	2.8	2.4	239					
258	Barksdale B2T-M12SS	NBI-PS-51C	07/09/04	AL	1040.2									
259	Barksdale B2T-M12SS	NBI-PS-51C	04/16/04	AF	1035	84	2.8	-2.8	155					
260	Barksdale B2T-M12SS	NBI-PS-51C	04/16/04	AL	1035									
261	Barksdale B2T-M12SS	NBI-PS-51C	01/23/04	AF	1035	71	2.3	-2.8	71					

Seq.			CAL DATE	AF/AL	AF/AL DATA VALUE	CAL INTERVAL = (Current Date - Previous Date)		Cumulative Drift	Cumulative Interval	Seq.		CUMULATIVE DRIFT	CUMULATIVE INTERVAL =	
ID	Make/Model Number	Tag ID	mm/dd/yy	Status	psi	Days	Months	psi	Days	ID	Tag Number	psi	Days	Months
262	Barksdale B2T-M12SS	NBI-PS-51C	01/23/04	AL	1035									
263	Barksdale B2T-M12SS	NBI-PS-51C	11/13/03	AF	1031	97	3.2	-5.0	181					
264	Barksdale B2T-M12SS	NBI-PS-51C	11/13/03	AL	1037.8									
265	Barksdale B2T-M12SS	NBI-PS-51C	08/08/03	AF	1034.5	84	2.8	-1.5	84					
266	Barksdale B2T-M12SS	NBI-PS-51C	08/08/03	AL	1034.5									
267	Barksdale B2T-M12SS	NBI-PS-51C	05/16/03	AF	1030	84	2.8	-7.0	492					
268	Barksdale B2T-M12SS	NBI-PS-51C	05/16/03	AL	1036									
269	Barksdale B2T-M12SS	NBI-PS-51C	02/21/03	AF	1032	86	2.8	-5.0	408					
270	Barksdale B2T-M12SS	NBI-PS-51C	02/21/03	AL	1032									
271	Barksdale B2T-M12SS	NBI-PS-51C	11/27/02	AF	1034	82	2.7	-3.0	322					
272	Barksdale B2T-M12SS	NBI-PS-51C	11/27/02	AL	1034									
273	Barksdale B2T-M12SS	NBI-PS-51C	09/06/02	AF	1039	84	2.8	2.0	240					
274	Barksdale B2T-M12SS	NBI-PS-51C	09/06/02	AL	1039									
275	Barksdale B2T-M12SS	NBI-PS-51C	06/14/02	AF	1036	85	2.8	-1.0	156					
276	Barksdale B2T-M12SS	NBI-PS-51C	06/14/02	AL	1036									
277	Barksdale B2T-M12SS	NBI-PS-51C	03/21/02	AF	1035	71	2.3	-2.0	71					
278	Barksdale B2T-M12SS	NBI-PS-51C	03/21/02	AL	1035									
279	Barksdale B2T-M12SS	NBI-PS-51C	01/09/02	AF	1037	97	3.2	-1.0	349					
280	Barksdale B2T-M12SS	NBI-PS-51C	01/09/02	AL	1037									
281	Barksdale B2T-M12SS	NBI-PS-51C	10/04/01	AF	1042	84	2.8	4.0	252					
282	Barksdale B2T-M12SS	NBI-PS-51C	10/04/01	AL	1042									
283	Barksdale B2T-M12SS	NBI-PS-51C	07/12/01	AF	1042	84	2.8	4.0	168					
284	Barksdale B2T-M12SS	NBI-PS-51C	07/12/01	AL	1042									
285	Barksdale B2T-M12SS	NBI-PS-51C	04/19/01	AF	1037	84	2.8	-1.0	84					
286	Barksdale B2T-M12SS	NBI-PS-51C	04/19/01	AL	1037									
287	Barksdale B2T-M12SS	NBI-PS-51C	01/25/01	AF	1030	84	2.8	-5.0	250					
288	Barksdale B2T-M12SS	NBI-PS-51C	01/25/01	AL	1038									
289	Barksdale B2T-M12SS	NBI-PS-51C	11/02/00	AF	1032	84	2.8	-3.0	166					
290	Barksdale B2T-M12SS	NBI-PS-51C	11/02/00	AL	1032									
291	Barksdale B2T-M12SS	NBI-PS-51C	08/10/00	AF	1037	82	2.7	2.0	82					
292	Barksdale B2T-M12SS	NBI-PS-51C	08/10/00	AL	1037									
293	Barksdale B2T-M12SS	NBI-PS-51C	05/20/00	AF	1028	86	2.8	-9.0	170					
294	Barksdale B2T-M12SS	NBI-PS-51C	05/20/00	AL	1035									
295	Barksdale B2T-M12SS	NBI-PS-51C	02/24/00	AF	1032	84	2.8	-5.0	84					
296	Barksdale B2T-M12SS	NBI-PS-51C	02/24/00	AL	1032									
297	Barksdale B2T-M12SS	NBI-PS-51C	12/02/99	AF	1029	56	1.8	-9.0	281					
298	Barksdale B2T-M12SS	NBI-PS-51C	12/02/99	AL	1037									
299	Barksdale B2T-M12SS	NBI-PS-51C	10/07/99	AF	1035	28	0.9	-3.0	225					
300	Barksdale B2T-M12SS	NBI-PS-51C	10/07/99	AL	1035									
301	Barksdale B2T-M12SS	NBI-PS-51C	09/09/99	AF	1037	29	1.0	-1.0	197					
302	Barksdale B2T-M12SS	NBI-PS-51C	09/09/99	AL	1037									

Seq.			CAL DATE	AF/AL	AF/AL DATA VALUE	CAL INTERVAL = (Current Date - Previous Date)		Cumulative Drift	Cumulative Interval	Seq.		CUMULATIVE DRIFT	CUMULATIVE INTERVAL =	
ID	Make/Model Number	Tag ID	mm/dd/yy	Status	psi	Days	Months	psi	Days	ID	Tag Number	psi	Days	Months
303	Barksdale B2T-M12SS	NBI-PS-51C	08/11/99	AF	1038	30	1.0	0.0	168					
304	Barksdale B2T-M12SS	NBI-PS-51C	08/11/99	AL	1038									
305	Barksdale B2T-M12SS	NBI-PS-51C	07/12/99	AF	1039	27	0.9	1.0	138					
306	Barksdale B2T-M12SS	NBI-PS-51C	07/12/99	AL	1039									
307	Barksdale B2T-M12SS	NBI-PS-51C	06/15/99	AF	1039	27	0.9	1.0	111					
308	Barksdale B2T-M12SS	NBI-PS-51C	06/15/99	AL	1039									
309	Barksdale B2T-M12SS	NBI-PS-51C	05/19/99	AF	1037	27	0.9	-1.0	84					
310	Barksdale B2T-M12SS	NBI-PS-51C	05/19/99	AL	1037									
311	Barksdale B2T-M12SS	NBI-PS-51C	04/22/99	AF	1035	29	1.0	-3.0	57					
312	Barksdale B2T-M12SS	NBI-PS-51C	04/22/99	AL	1035									
313	Barksdale B2T-M12SS	NBI-PS-51C	03/24/99	AF	1035	28	0.9	-3.0	28					
314	Barksdale B2T-M12SS	NBI-PS-51C	03/24/99	AL	1035									
315	Barksdale B2T-M12SS	NBI-PS-51C	02/24/99	AF										
316	Barksdale B2T-M12SS	NBI-PS-51C	02/24/99	AL	1038									
317	Barksdale B2T-M12SS	NBI-PS-51D	12/11/09	AF	886	92	3.0	-5.3	547					
318	Barksdale B2T-M12SS	NBI-PS-51D	12/11/09	AL	886									
319	Barksdale B2T-M12SS	NBI-PS-51D	09/10/09	AF	892	90	3.0	0.7	455					
320	Barksdale B2T-M12SS	NBI-PS-51D	09/10/09	AL	892									
321	Barksdale B2T-M12SS	NBI-PS-51D	06/12/09	AF	891.1	92	3.0	-0.2	365					
322	Barksdale B2T-M12SS	NBI-PS-51D	06/12/09	AL	891.1									
323	Barksdale B2T-M12SS	NBI-PS-51D	03/12/09	AF	885	93	3.1	-6.3	273					
324	Barksdale B2T-M12SS	NBI-PS-51D	03/12/09	AL	885									
325	Barksdale B2T-M12SS	NBI-PS-51D	12/09/08	AF	882.9	81	2.7	-8.4	180					
326	Barksdale B2T-M12SS	NBI-PS-51D	12/09/08	AL	882.9									
327	Barksdale B2T-M12SS	NBI-PS-51D	09/19/08	AF	892	99	3.3	0.7	99					
328	Barksdale B2T-M12SS	NBI-PS-51D	09/19/08	AL	892									
329	Barksdale B2T-M12SS	NBI-PS-51D	06/12/08	AF	891.3	37	1.2	6.3	92					
330	Barksdale B2T-M12SS	NBI-PS-51D	06/12/08	AL	891.3									
331	Barksdale B2T-M12SS	NBI-PS-51D	05/06/08	AF	887.5	55	1.8	2.5	55					
332	Barksdale B2T-M12SS	NBI-PS-51D	05/06/08	AL	887.5									
333	Barksdale B2T-M12SS	NBI-PS-51D	03/12/08	AF	879	92	3.0	-8.8	181					
334	Barksdale B2T-M12SS	NBI-PS-51D	03/12/08	AL	885									
335	Barksdale B2T-M12SS	NBI-PS-51D	12/11/07	AF	882.2	89	2.9	-5.6	89					
336	Barksdale B2T-M12SS	NBI-PS-51D	12/11/07	AL	882.2									
337	Barksdale B2T-M12SS	NBI-PS-51D	09/13/07	AF	894.4	90	3.0	5.4	185					
338	Barksdale B2T-M12SS	NBI-PS-51D	09/13/07	AL	887.8									
339	Barksdale B2T-M12SS	NBI-PS-51D	06/15/07	AF	891.9	95	3.1	2.9	95					
340	Barksdale B2T-M12SS	NBI-PS-51D	06/15/07	AL	891.9									
341	Barksdale B2T-M12SS	NBI-PS-51D	03/12/07	AF	880	88	2.9	-8.0	451					
342	Barksdale B2T-M12SS	NBI-PS-51D	03/12/07	AL	889									
343	Barksdale B2T-M12SS	NBI-PS-51D	12/14/06	AF	882.8	91	3.0	-5.2	363					

Seq.			CAL DATE	AF/AL	AF/AL DATA VALUE	CAL INTERVAL = (Current Date - Previous Date)		Cumulative Drift	Cumulative Interval	Seq.		CUMULATIVE DRIFT	CUMULATIVE INTERVAL =	
ID	Make/Model Number	Tag ID	mm/dd/yy	Status	psi	Days	Months	psi	Days	ID	Tag Number	psi	Days	Months
344	Barksdale B2T-M12SS	NBI-PS-51D	12/14/06	AL	882.8									
345	Barksdale B2T-M12SS	NBI-PS-51D	09/14/06	AF	894	90	3.0	6.0	272					
346	Barksdale B2T-M12SS	NBI-PS-51D	09/14/06	AL	894									
347	Barksdale B2T-M12SS	NBI-PS-51D	06/16/06	AF	892	92	3.0	4.0	182					
348	Barksdale B2T-M12SS	NBI-PS-51D	06/16/06	AL	892									
349	Barksdale B2T-M12SS	NBI-PS-51D	03/16/06	AF	885	90	3.0	-3.0	90					
350	Barksdale B2T-M12SS	NBI-PS-51D	03/16/06	AL	885									
351	Barksdale B2T-M12SS	NBI-PS-51D	12/16/05	AF	881	95	3.1	-6.0	359					
352	Barksdale B2T-M12SS	NBI-PS-51D	12/16/05	AL	888									
353	Barksdale B2T-M12SS	NBI-PS-51D	09/12/05	AF	890.1	95	3.1	3.1	264					
354	Barksdale B2T-M12SS	NBI-PS-51D	09/12/05	AL	890.1									
355	Barksdale B2T-M12SS	NBI-PS-51D	06/09/05	AF	889	84	2.8	2.0	169					
356	Barksdale B2T-M12SS	NBI-PS-51D	06/09/05	AL	889									
357	Barksdale B2T-M12SS	NBI-PS-51D	03/17/05	AF	885	40	1.3	-2.0	85					
358	Barksdale B2T-M12SS	NBI-PS-51D	03/17/05	AL	885									
359	Barksdale B2T-M12SS	NBI-PS-51D	02/05/05	AF	886	45	1.5	-1.0	45					
360	Barksdale B2T-M12SS	NBI-PS-51D	02/05/05	AL	886									
361	Barksdale B2T-M12SS	NBI-PS-51D	12/22/04	AF	880	83	2.7	-6.7	166					
362	Barksdale B2T-M12SS	NBI-PS-51D	12/22/04	AL	887									
363	Barksdale B2T-M12SS	NBI-PS-51D	09/30/04	AF	886	83	2.7	-0.7	83					
364	Barksdale B2T-M12SS	NBI-PS-51D	09/30/04	AL	886									
365	Barksdale B2T-M12SS	NBI-PS-51D	07/09/04	AF	893	84	2.8	5.0	84					
366	Barksdale B2T-M12SS	NBI-PS-51D	07/09/04	AL	886.7									
367	Barksdale B2T-M12SS	NBI-PS-51D	04/16/04	AF	881	84	2.8	-7.0	506					
368	Barksdale B2T-M12SS	NBI-PS-51D	04/16/04	AL	888									
369	Barksdale B2T-M12SS	NBI-PS-51D	01/23/04	AF	882.1	71	2.3	-5.9	422					
370	Barksdale B2T-M12SS	NBI-PS-51D	01/23/04	AL	882.1									
371	Barksdale B2T-M12SS	NBI-PS-51D	11/13/03	AF	884	97	3.2	-4.0	351					
372	Barksdale B2T-M12SS	NBI-PS-51D	11/13/03	AL	884									
373	Barksdale B2T-M12SS	NBI-PS-51D	08/08/03	AF	887	84	2.8	-1.0	254					
374	Barksdale B2T-M12SS	NBI-PS-51D	08/08/03	AL	887									
375	Barksdale B2T-M12SS	NBI-PS-51D	05/16/03	AF	887	84	2.8	-1.0	170					
376	Barksdale B2T-M12SS	NBI-PS-51D	05/16/03	AL	887									
377	Barksdale B2T-M12SS	NBI-PS-51D	02/21/03	AF	886	86	2.8	-2.0	86					
378	Barksdale B2T-M12SS	NBI-PS-51D	02/21/03	AL	886									
379	Barksdale B2T-M12SS	NBI-PS-51D	11/27/02	AF	881	82	2.7	-7.0	503					
380	Barksdale B2T-M12SS	NBI-PS-51D	11/27/02	AL	888									
381	Barksdale B2T-M12SS	NBI-PS-51D	09/06/02	AF	886.2	84	2.8	-1.8	421					
382	Barksdale B2T-M12SS	NBI-PS-51D	09/06/02	AL	886.2									
383	Barksdale B2T-M12SS	NBI-PS-51D	06/14/02	AF	887	85	2.8	-1.0	337					
384	Barksdale B2T-M12SS	NBI-PS-51D	06/14/02	AL	887									

Seq.			CAL DATE	AF/AL	AF/AL DATA VALUE	CAL INTERVAL = (Current Date - Previous Date)		Cumulative Drift	Cumulative Interval	Seq.		CUMULATIVE DRIFT	CUMULATIVE INTERVAL =	
ID	Make/Model Number	Tag ID	mm/dd/yy	Status	psi	Days	Months	psi	Days	ID	Tag Number	psi	Days	Months
385	Barksdale B2T-M12SS	NBI-PS-51D	03/21/02	AF	882	71	2.3	-6.0	252					
386	Barksdale B2T-M12SS	NBI-PS-51D	03/21/02	AL	882									
387	Barksdale B2T-M12SS	NBI-PS-51D	01/09/02	AF	887	97	3.2	-1.0	181					
388	Barksdale B2T-M12SS	NBI-PS-51D	01/09/02	AL	887									
389	Barksdale B2T-M12SS	NBI-PS-51D	10/04/01	AF	890	84	2.8	2.0	84					
390	Barksdale B2T-M12SS	NBI-PS-51D	10/04/01	AL	890									
391	Barksdale B2T-M12SS	NBI-PS-51D	07/12/01	AF	888	84	2.8	1.0	168					
392	Barksdale B2T-M12SS	NBI-PS-51D	07/12/01	AL	888									
393	Barksdale B2T-M12SS	NBI-PS-51D	04/19/01	AF	887	84	2.8	0.0	84					
394	Barksdale B2T-M12SS	NBI-PS-51D	04/19/01	AL	887									
395	Barksdale B2T-M12SS	NBI-PS-51D	01/25/01	AF	880	84	2.8	-7.0	420					
396	Barksdale B2T-M12SS	NBI-PS-51D	01/25/01	AL	887									
397	Barksdale B2T-M12SS	NBI-PS-51D	11/02/00	AF	882	84	2.8	-5.0	336					
398	Barksdale B2T-M12SS	NBI-PS-51D	11/02/00	AL	882									
399	Barksdale B2T-M12SS	NBI-PS-51D	08/10/00	AF	887	82	2.7	0.0	252					
400	Barksdale B2T-M12SS	NBI-PS-51D	08/10/00	AL	887									
401	Barksdale B2T-M12SS	NBI-PS-51D	05/20/00	AF	885	86	2.8	-2.0	170					
402	Barksdale B2T-M12SS	NBI-PS-51D	05/20/00	AL	885									
403	Barksdale B2T-M12SS	NBI-PS-51D	02/24/00	AF	882	84	2.8	-5.0	84					
404	Barksdale B2T-M12SS	NBI-PS-51D	02/24/00	AL	882									
405	Barksdale B2T-M12SS	NBI-PS-51D	12/02/99	AF	879	56	1.8	-6.0	84					
406	Barksdale B2T-M12SS	NBI-PS-51D	12/02/99	AL	887									
407	Barksdale B2T-M12SS	NBI-PS-51D	10/07/99	AF	885	28	0.9	0.0	28					
408	Barksdale B2T-M12SS	NBI-PS-51D	10/07/99	AL	885									
409	Barksdale B2T-M12SS	NBI-PS-51D	09/09/99	AF	881	29	1.0	-6.0	113					
410	Barksdale B2T-M12SS	NBI-PS-51D	09/09/99	AL	885									
411	Barksdale B2T-M12SS	NBI-PS-51D	08/11/99	AF	886	30	1.0	-1.0	84					
412	Barksdale B2T-M12SS	NBI-PS-51D	08/11/99	AL	886									
413	Barksdale B2T-M12SS	NBI-PS-51D	07/12/99	AF	889	27	0.9	2.0	54					
414	Barksdale B2T-M12SS	NBI-PS-51D	07/12/99	AL	889									
415	Barksdale B2T-M12SS	NBI-PS-51D	06/15/99	AF	887	27	0.9	0.0	27					
416	Barksdale B2T-M12SS	NBI-PS-51D	06/15/99	AL	887									
417	Barksdale B2T-M12SS	NBI-PS-51D	05/19/99	AF	893	27	0.9	4.0	84					
418	Barksdale B2T-M12SS	NBI-PS-51D	05/19/99	AL	887									
419	Barksdale B2T-M12SS	NBI-PS-51D	04/22/99	AF	888.5	29	1.0	-0.5	57					
420	Barksdale B2T-M12SS	NBI-PS-51D	04/22/99	AL	888.5									
421	Barksdale B2T-M12SS	NBI-PS-51D	03/24/99	AF	885	28	0.9	-4.0	28					
422	Barksdale B2T-M12SS	NBI-PS-51D	03/24/99	AL	885									
423	Barksdale B2T-M12SS	NBI-PS-51D	02/24/99	AF										
424	Barksdale B2T-M12SS	NBI-PS-51D	02/24/99	AL	889									

Seq. ID	Tag ID	Drift (psi)	Cal Interval (Days)	Extreme Studentized Deviate (T)
1	NBI-PS-51A	-4.7	104	0.241
3	NBI-PS-51A	5.4	450	1.381
13	NBI-PS-51A	1.8	534	0.803
25	NBI-PS-51A	-0.7	549	0.401
37	NBI-PS-51A	0.7	503	0.626
49	NBI-PS-51A	-2.8	504	0.064
61	NBI-PS-51A	3.8	505	1.124
73	NBI-PS-51A	-2.0	561	0.193
89	NBI-PS-51A	3.0	196	0.995
105	NBI-PS-51B	-4.6	104	0.225
107	NBI-PS-51B	4.1	182	1.172
111	NBI-PS-51B	-9.0	364	0.931
121	NBI-PS-51B	-7.0	182	0.610
125	NBI-PS-51B	9.2	546	1.991
135	NBI-PS-51B	-6.2	510	0.482
147	NBI-PS-51B	5.0	168	1.316
151	NBI-PS-51B	-6.0	252	0.449
157	NBI-PS-51B	-6.2	57	0.482
159	NBI-PS-51B	-23.0	531	3.179
171	NBI-PS-51B	-2.0	337	0.193
179	NBI-PS-51B	-9.0	253	0.931
185	NBI-PS-51B	-9.0	83	0.931
187	NBI-PS-51B	-14.0	337	1.734
209	NBI-PS-51C	-2.0	182	0.193
213	NBI-PS-51C	5.1	92	1.332
215	NBI-PS-51C	-8.0	546	0.771
229	NBI-PS-51C	6.0	546	1.477
241	NBI-PS-51C	-8.0	532	0.771
255	NBI-PS-51C	2.2	322	0.867
263	NBI-PS-51C	-5.0	181	0.289
267	NBI-PS-51C	-7.0	492	0.610
279	NBI-PS-51C	-1.0	349	0.353
287	NBI-PS-51C	-5.0	250	0.289
293	NBI-PS-51C	-9.0	170	0.931
297	NBI-PS-51C	-9.0	281	0.931
317	NBI-PS-51D	-5.3	547	0.337
329	NBI-PS-51D	6.3	92	1.525

Raw Drift Data Statistics Summary (Initial Data Set)	
Mean (Average)	-3.2000
Variance	38.8033
Std. Dev.	6.2292
Sample Size (Count)	50
Maximum	9.200
Median	-5.000
Minimum	-23.000
Range	32.200
Sum	-160.000
Kurtosis	0.673
Skewness	-0.238
Critical T-Value (Upper 5% Signif.)	2.96

Equation for Each Studentized Deviate: T= |Drift-Mean|/Std. Dev.
Crit T Value Lookup Value from Ref. 3.1.3 Table 2, per sample size. See Sections 3.6.1 and 3.6.2 of Reference 3.1.3.
Outliers are highlighted.

Seq ID 159 identified as an outlierand is removed.

Drift Data Statistics Summary (Final Data Set)	
Mean (Average)	-2.7959
Variance	31.2775
Std. Dev.	5.5926
Sample Size (Count)	49
Maximum	9.200
Median	-5.000
Minimum	-14.000
Range	23.200
Sum	-137.000
Kurtosis	-0.978
Skewness	0.401

Final Drift Data Set (psi)	Cal Interval (Days)	Final Drift Set (% of Setpoint)
-4.7	104	-0.458
5.4	450	0.526
1.8	534	0.175
-0.7	549	-0.068
0.7	503	0.068
-2.8	504	-0.273
3.8	505	0.370
-2	561	-0.195
3	196	0.292
-4.6	104	-0.519
4.1	182	0.462
-9	364	-1.015
-7	182	-0.789
9.2	546	1.037
-6.2	510	-0.699
5	168	0.564
-6	252	-0.676
-6.2	57	-0.699
OUTLIER	OUTLIER	OUTLIER
-2	337	-0.225
-9	253	-1.015
-9	83	-1.015
-14	337	-1.578
-2	182	-0.195
5.1	92	0.497
-8	546	-0.779
6	546	0.584
-8	532	-0.779
2.2	322	0.214
-5	181	-0.487
-7	492	-0.682
-1	349	-0.097
-5	250	-0.487
-9	170	-0.876
-9	281	-0.876
-5.3	547	-0.598
6.3	92	0.710

Seq. ID	Tag ID	Drift (psi)	Cal Interval (Days)	Extreme Studentized Deviate (T)
333	NBI-PS-51D	-8.8	181	0.899
337	NBI-PS-51D	5.4	185	1.381
341	NBI-PS-51D	-8.0	451	0.771
351	NBI-PS-51D	-6.0	359	0.449
361	NBI-PS-51D	-6.7	166	0.562
365	NBI-PS-51D	5.0	84	1.316
367	NBI-PS-51D	-7.0	506	0.610
379	NBI-PS-51D	-7.0	503	0.610
391	NBI-PS-51D	1.0	168	0.674
395	NBI-PS-51D	-7.0	420	0.610
405	NBI-PS-51D	-6.0	84	0.449
409	NBI-PS-51D	-6.0	113	0.449
417	NBI-PS-51D	4.0	84	1.156

Equation for Drift % of Setpoint

% of Setpoint = drift/setpoint (either 1027 or 887)*100

Setpoint used for NBI-PS-51A/C 1027
Setpoint used for NBI-PS-51B/D 887

Note that actual setpoint for NBI-PS-51A is 1037psig.
1027psig is used to group NBI-PS-51A/C, and is conservative.

Final Drift Data Set (psi)	Cal Interval (Days)	Final Drift Set (% of Setpoint)
-8.8	181	-0.992
5.4	185	0.609
-8	451	-0.902
-6	359	-0.676
-6.7	166	-0.755
5	84	0.564
-7	506	-0.789
-7	503	-0.789
1	168	0.113
-7	420	-0.789
-6	84	-0.676
-6	113	-0.676
4	84	0.451

Drift Data Statistics Summary (Final Data Set - % of Setpoint)	
Mean (Average)	-0.3039
Variance	0.3676
Std. Dev.	0.6063
Sample Size (Count)	49
Maximum	1.037
Median	-0.487
Minimum	-1.578
Range	2.616
Sum	-14.889
Kurtosis	-0.873
Skewness	0.374

Drift Values	"i"	a_{n-i+1} *	b_i (Per Step 4)
-14	1	0.377	8.7464
-9	2	0.2589	3.9612
-9	3	0.2271	3.4065
-9	4	0.2038	2.9347
-9	5	0.1851	2.6654
-8.8	6	0.1692	2.3519
-8	7	0.1553	2.0189
-8	8	0.1427	1.8551
-8	9	0.1312	1.5875
-7	10	0.1205	1.3255
-7	11	0.1105	1.1934
-7	12	0.101	1.0100
-7	13	0.0919	0.8455
-7	14	0.0832	0.7322
-6.7	15	0.0748	0.5760
-6.2	16	0.0667	0.4602
-6.2	17	0.0588	0.3234
-6	18	0.0511	0.2555
-9	19	0.0436	0.3052
-6	20	0.0361	0.1444
-6	21	0.0288	0.1152
-6	22	0.0215	0.0688
-5.3	23	0.0143	0.0100
-5	24	0.0071	0.0021
-5		**b =**	**36.8950**
-4.7		(Per Step 4)	
-4.6		* From Table 1 of Ref. 3.1.7.	
-2.8			
-2			
-2			
-2			
-1			
-0.7			
0.7			
1			
1.8			
2.2			
3			

Specific W Normality Test Methodology from Reference 3.1.7 and Section 19 of Reference 3.1.4

Steps to Perform:

1. Paste all final drift data into column 1.
2. Sort in ascending order.
3. Calculate S^2 taking the variance of the drift data adjusted by (Count-1)

$$S^2 = (n-1)(\text{Variance (Drift)})$$

where: n = Count

4. Calculate the Quantity b:

$$b = \text{Sum}[(a_{n-i+1})(x_{n-i+1} - x_i)]$$

where: i = 1 to k
k = (n-1)/2

a_{n-i+1} values are taken from Table 1 of Reference 3.1.7.

Calculate b^2.

Compute the W Statistic and compare to the critical value at the 5% confidence level. The table of critical values is given as Table 2 on page 9 of Reference 3.1.7.

Drift Values	"i"	a_{n-i+1}	b_i (Per Step 4)
3.8			
4			
4.1			
5			
5			
5.1			
5.4			
5.4			
6			
6.3			
9.2			

W = ***Computed Values***

S^2 =	1501.3192	
b =	36.8950	
b^2 =	1361.2410	
Count (n):	49	
$W = b^2/S^2$ =	0.9067	
W Critical =	0.947	5% Significance From Table 2 of Reference 3.1.7.

Results:
Since the W statistic, 0.9067, is less than the critical value for W, 0.947, this test rejects the assumption of normality for this data set.

Group 1: NBI-PS-51A/C
Setpoints: 1027/1037 psig

Group 2: NBI-PS-51B/D
Setpoints: 887 psig

Since the setpoints are not within 5%, the drift values were converted to % of setpoint and used for the pooling test.
% of Setpoint = drift/setpoint (either 1027 or 887)*100

% of Setpoint
t-Test: Two-Sample Assuming Unequal Variances

	Group 1	Group 2
Mean	-0.153359299	-0.401686918
Variance	0.239471591	0.473623019
Observations	20	27
Hypothesized Mean Difference	0	
df	45	
t Stat	1.445447623	
P(T<=t) one-tail	0.077630393	
t Critical one-tail	1.679427393	
P(T<=t) two-tail	0.155260786	
t Critical two-tail	2.014103359	
Std Dev	0.481567242	0.675699348

Conclusion:
The only significant difference in the groups of devices is the setpoint.
The standard deviation values are close to equal.
The t Stat is less than t Critical two-tail, indicating acceptability
in combining the groups. The standard deviations and means are
similar. Therefore, the two groups of data are combined for drift analysis.

Bin No.	Bin Descriptions	No. StDev (NS)	Bin Maximums = Mean + (NS*StDev)	Observed Frequency	Cumulative Probability (CP_i) (Table 18-2 Ref 3.1.4)	Normal Distribution Probability ($Pnorm = CP_i - CP_{i-1}$)	Expected Frequency (Ei = Pnorm*N)
1	Up to - 2.5 Standard Deviations from Mean	-2.5	-1.8196	1	0.0062	0.0062	0.3038
2	-2.5 to -2.0 Standard Deviations from Mean	-2.0	-1.5165	0	0.0228	0.0166	0.8110
3	-2.0 to -1.5 Standard Deviations from Mean	-1.5	-1.2133	4	0.0668	0.0441	2.1585
4	-1.5 to -1.0 Standard Deviations from Mean	-1.0	-0.9102	17	0.1587	0.0919	4.5007
5	-1.0 to -0.5 Standard Deviations from Mean	-0.5	-0.6070	5	0.3086	0.1499	7.3451
6	-0.5 Standard Deviations from Mean to Mean	0.0	-0.3039	6	0.5000	0.1915	9.3811
7	Mean to +0.5 Standard Deviations from Mean	0.5	-0.0007	5	0.6915	0.1915	9.3811
8	+0.5 to +1.0 Standard Deviations from Mean	1.0	0.3025	8	0.8414	0.1499	7.3451
9	+1.0 to +1.5 Standard Deviations from Mean	1.5	0.6056	2	0.9332	0.0919	4.5007
10	+1.5 to +2.0 Standard Deviations from Mean	2.0	0.9088	1	0.9773	0.0441	2.1585
11	+2.0 to +2.5 Standard Deviations from Mean	2.5	1.2119	0	0.9938	0.0166	0.8110
12	More than Mean + 2.5 Standard Deviations	More	More	0	1.0000	0.0062	0.3038
			Totals	49			49

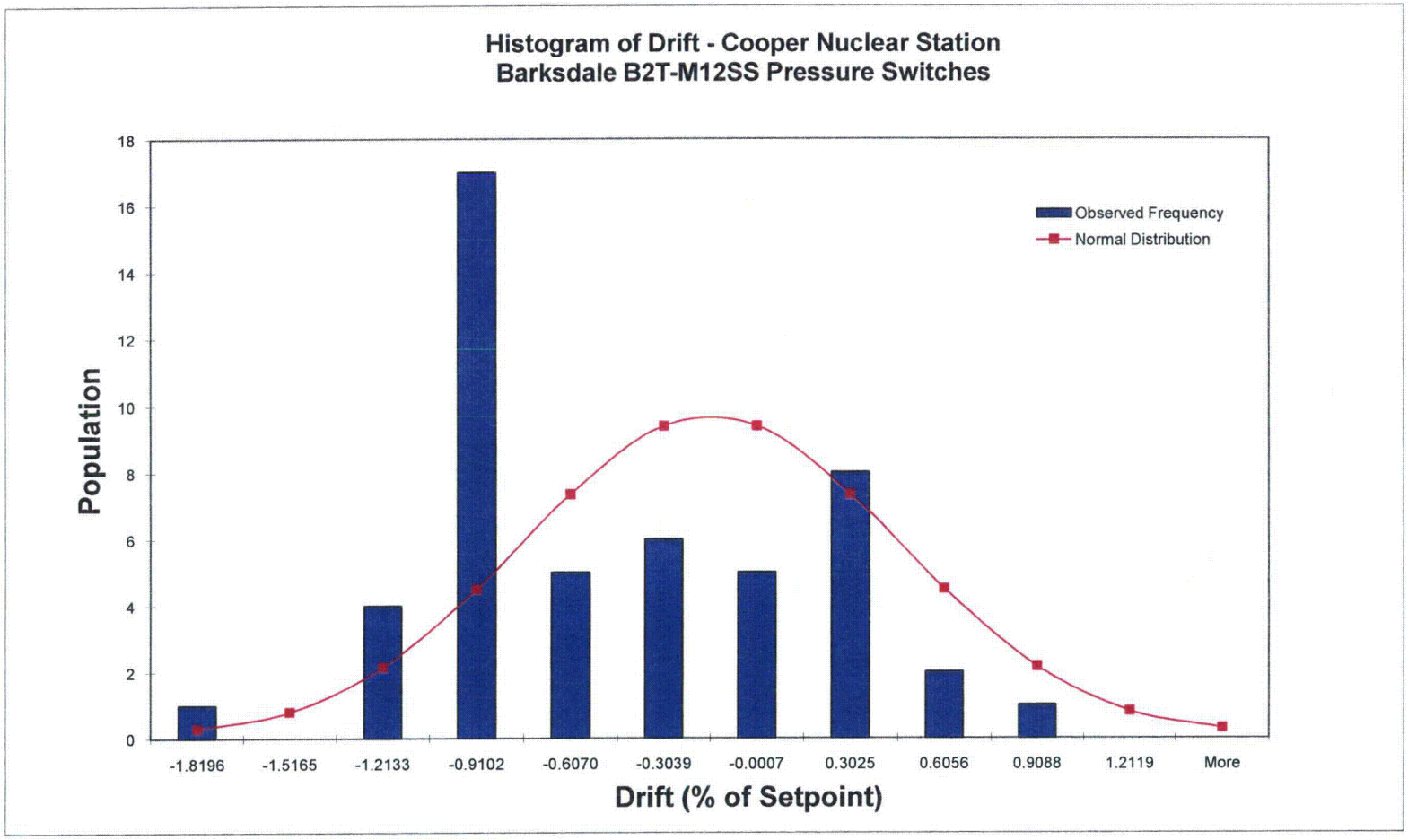
+/- Sigma Bounds	Observed Drift Values	Observed Percentages	Percentage for Normal Distribution
2.5 (Bins 2-11)	48	97.96%	
2 (Bins 3-10)	48	97.96%	95.45%
1.5 (Bins 4-9)	43	87.76%	
1 (Bins 5-8)	24	48.98%	68.27%
0.5 (Bins 6-7)	11	22.45%	

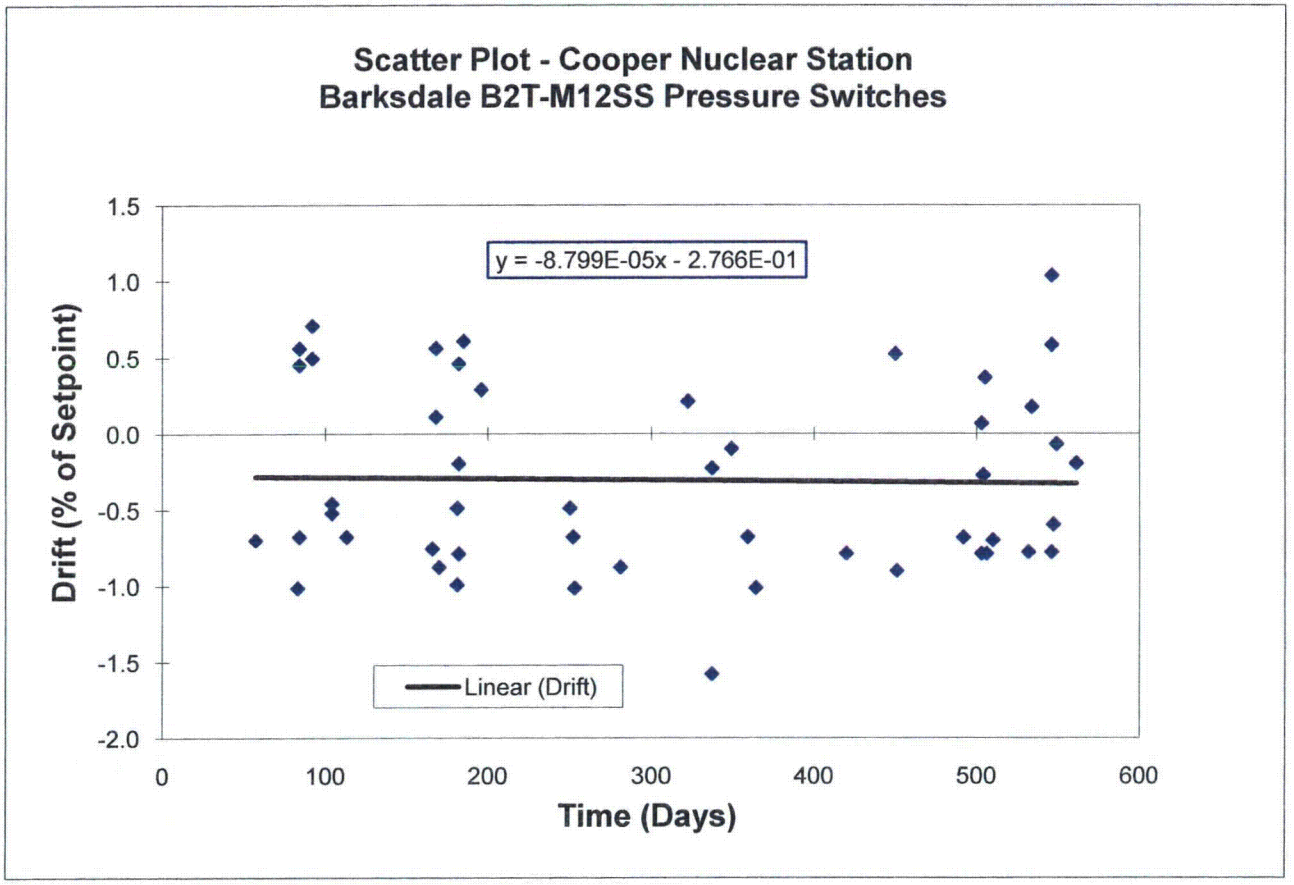
Mean	**-0.3039**
Std. Dev.	**0.6063**
Sample Size	**49**
Kurtosis	**-0.873**

Methodology for Coverage Analysis Taken from Section 19 of Reference 3.1.4 and Section 3.7.5 of Reference 3.1.3

1. Order the drift data in ascending order.
2. Obtain mean, standard deviation, sample size, and kurtosis.
3. Establishing bins in 1/2 sigma increments from the mean to 2.5 sigma in both directions, derive the upper bin limits, in units of drift, based on the values of the mean and standard deviation.
4. Obtain expected frequency for a normal distribution in each bin.
5. Manually compute the number of observed drift data points within each bin, and list under observed frequency.
6. Plot the Expected Frequency and the Observed Frequency Data on the Histogram for comparison to each other.
7. Compare the population of data within the +/- 2 standard deviation limits to that of a normal distribution. If necessary, adjust the standard deviation upward to obtain greater than or equal to the percentage contained by a normal distribution.

Results: The data did not pass the W Test, so a coverage analysis is necessary. The data is highly peaked at 1 standard deviation, as is apparent from the Histogram. The kurtosis value is slightly negative, which signifies a wider peak around the mean (that is, a higher probability than a normally distributed variable of values near the mean) and thinner tails, as shown on the Histogram. The observed percent of data within ± 2 standard deviations is greater than that of a normal distribution. Therefore, the data may be conservatively modeled as a normal distribution without adjustment to the standard deviation.


Histogram of Drift - Cooper Nuclear Station
Barksdale B2T-M12SS Pressure Switches
Population
18
16
14
12
10
8
6
4
2
0
Observed Frequency
Normal Distribution
-1.8196
-1.5165
-1.2133
-0.9102
-0.6070
-0.3039
-0.0007
0.3025
0.6056
0.9088
1.2119
More
Drift (% of Setpoint)



Note: Equation on Scatter Plot is computer generated, based on the associated trend line.

Bin Statistics

	Bin 1	Bin 2	Bin 3	Bin 4	Bin 5	Bin 6	Bin 7
Count	0	10	11	13	15	0	0
Standard Dev.	#DIV/0!	0.6542	0.6194	0.5663	0.5793	#DIV/0!	#DIV/0!
Mean	#DIV/0!	-0.1821	-0.1868	-0.5844	-0.2277	#DIV/0!	#DIV/0!
Mean Interval	#DIV/0!	89.70	178.27	340.38	525.60	#DIV/0!	#DIV/0!
Max Interval	0	113	196	451	561	0	0

Bin Definition and Selection

Bins	Bin Hi Limit (Days)	Bin Count	Population Percentage	Valid Bins Included
1	45	0	0.0%	
2	135	10	20.4%	2
3	230	11	22.4%	3
4	460	13	26.5%	4
5	690	15	30.6%	5
6	915	0	0.0%	
7	Over	0	0.0%	

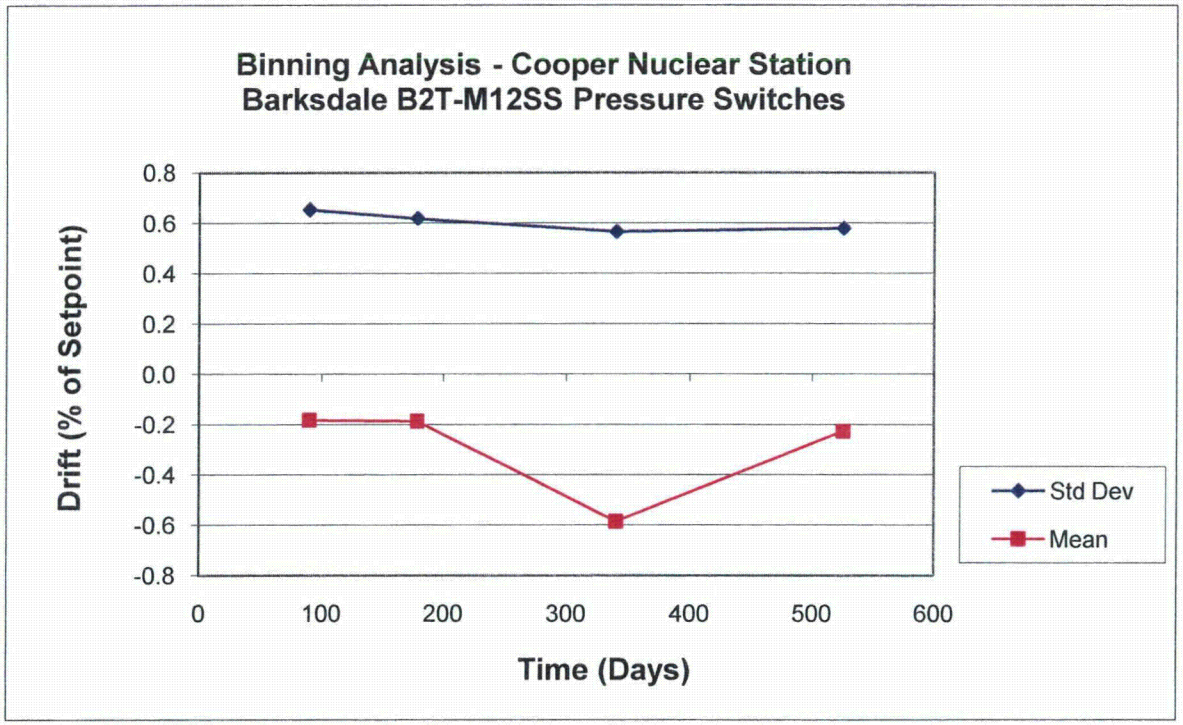
Total Count: 49 100%

See Section 3.9.3 of Reference 3.1.3 for Binning Analysis Methodology.

Graph Summary

Bin	Time	Std Dev	Mean
2	89.70	0.6542	-0.1821
3	178.27	0.6194	-0.1868
4	340.38	0.5663	-0.5844
5	525.60	0.5793	-0.2277

Test of Variances	
F Critical	2.637
Variance Ratio	1.046
Potential Strong TD of Random Drift?	No



Regression Analysis - Drift

REGRESSION ANALYSIS
SUMMARY OUTPUT

Regression Statistics	
Multiple R	0.0252661
R Square	0.0006384
Adjusted R Square	-0.020625
Standard Error	0.6125298
Observations	49

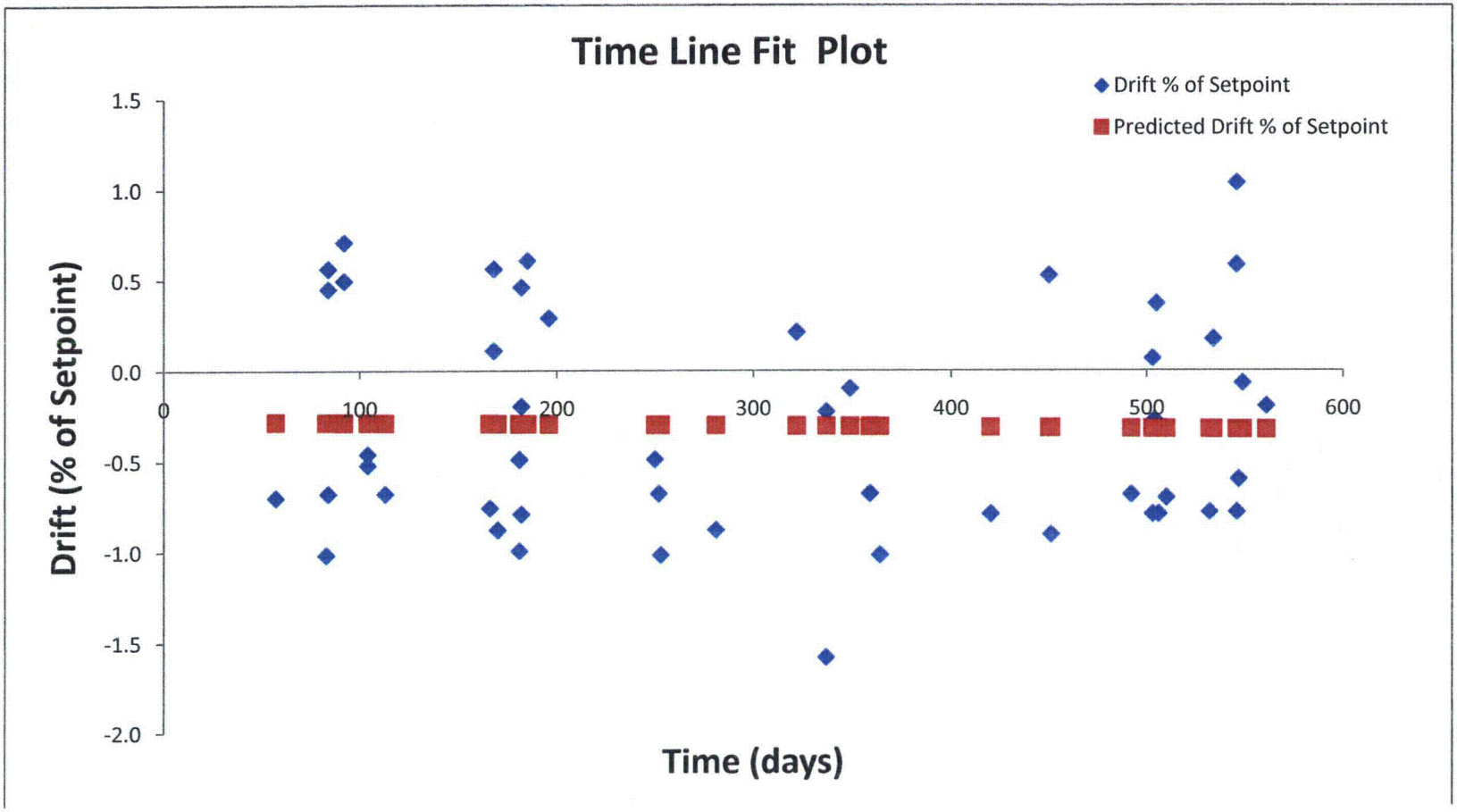
F Critical
3.195056

ANOVA

	df	SS	MS	F	Significance F
Regression	1	0.011264355	0.011264	0.0300228	0.863182486
Residual	47	17.63405998	0.375193		
Total	48	17.64532433			

	Coefficients	Standard Error	t Stat	P-value	Lower 95%	Upper 95%	Lower 95.0%	Upper 95.0%
Intercept	-0.27662	0.17990526	-1.537588	0.1308551	-0.638542807	0.08530258	-0.63854281	0.08530258
Time	-8.8E-05	0.000507836	-0.173271	0.8631825	-0.001109627	0.00093364	-0.00110963	0.00093364

Refer to Section 3.9.4 of Reference 3.1.3 for Methodology for Regression Analysis.


Time Line Fit Plot
Drift % of Setpoint
Predicted Drift % of Setpoint
Drift (% of Setpoint)
1.5
1.0
0.5
0.0
-0.5
-1.0
-1.5
-2.0
0
100
200
300
400
500
600
Time (days)

Regression Analysis - AV of Drift

ABSOLUTE VALUE
REGRESSION ANALYSIS
SUMMARY OUTPUT

F Critical
3.195056

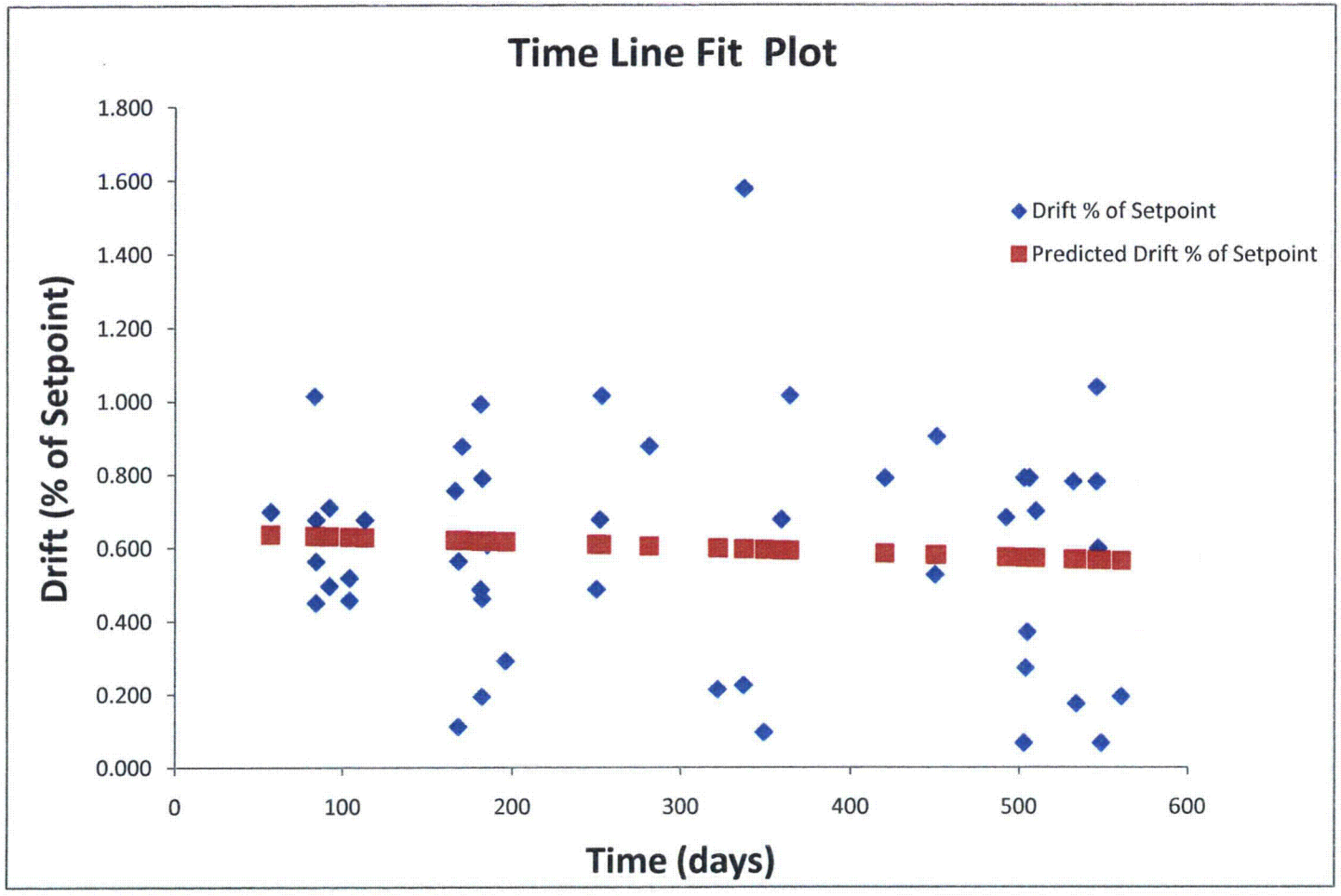
Regression Statistics	
Multiple R	0.08232937
R Square	0.00677813
Adjusted R Square	-0.01435425
Standard Error	0.31097948
Observations	49

ANOVA

	df	SS	MS	F	Significance F
Regression	1	0.031018778	0.031019	0.32074597	0.573854225
Residual	47	4.54528721	0.096708		
Total	48	4.576305988			

	Coefficients	Standard Error	t Stat	P-value	Lower 95%	Upper 95%	Lower 95.0%	Upper 95.0%
Intercept	0.64439967	0.091337342	7.055161	6.7418E-09	0.460652641	0.8281467	0.46065264	0.828146698
Time	-0.00014602	0.000257827	-0.566344	0.57385422	-0.0006647	0.00037266	-0.0006647	0.000372662

Refer to Section 3.9.4 of Reference 3.1.3 for Methodology for Regression Analysis.


Time Line Fit Plot
Drift (% of Setpoint)
1.800
1.600
1.400
1.200
1.000
0.800
0.600
0.400
0.200
0.000
0
100
200
300
400
500
600
Time (days)
Drift % of Setpoint
Predicted Drift % of Setpoint

Drift Bias Determination

First, the bias term is evaluated for significance per Section 3.11 of Reference 3.1.3.

Per Outlier Statistical Summary,

Time Dependency	Moderate		
Count (n)	49	Drift Data Points	
Degrees of Freedom (df = n-1)	48		
Absolute Value of Average of FDS	0.3039	% of Setpoint	
Standard Deviation (s_{FDS})	0.6063	% of Setpoint	
Average Bin 5 Observed Interval	525.6	Days	
Maximum Required Cal Interval	915	Days	
t (for df = 48)	2.011		(Ref. 3.1.3, Table 4)

Significant Bias Critical Value (x_{crit})

[$x_{crit} = t * s_{FDS} / (n)^{0.5}$]

x_{crit} =	0.1742	

The bias value for this drift data set is significant, since the Absolute Value of the Average is greater than the x_{crit} value.

$DA_{bias\ (current)}$ =	-0.3039	% of Setpoint

[Extrap Bias Drift = $DA_{bias\ (current)} * (\text{Maximum Required Cal Interval} / \text{Average Bin 5 Observed Interval})^{1/2}$]

$DA_{bias\ (extrap)}$ =	-0.401	% of Setpoint

Random Drift Determination

Time Dependency			
Count (n)	49	Drift Data Points	
Standard Deviation (from FDS)	0.6063	% of Setpoint	the SD of the FDS is more conservative than bin 5
Average Bin 5 Observed Interval	525.6	Days	
Maximum Required Cal Interval	915	Days	
Tolerance Interval Factor (TIF)	2.408		(Ref. 3.1.3, Table 1)
Normality Adjustment Factor (NAF)	1.000	(NAF not required per coverage analysis)	

[Current Interval Drift = $S_{FDS} * TIF * NAF$]

$DA_{random\ (current)}$ =	+/-	1.460	% of Setpoint

[Extrap Drift = $DA_{random\ (current)} * (\text{Maximum Required Cal Interval} / \text{Average Bin 5 Observed Interval})^{1/2}$]

$DA_{random\ (extrap)}$ =	+/-	1.926	% of Setpoint for up to 915 Days