

Prospective Software Validation

Software validation provides documented evidence that software performs as intended. QW 5.0 version 5.00.0511 has been validated per the protocol established by Busitech and agreed to by its primary customer representatives. Any discrepancies discovered in the validation process that could not be resolved by the product release date will clearly be identified in the validation report and corrected in future versions.

QW 5.0 is highly configurable to the customer's application. Some customers also develop custom installation programs (for example, with customer defined calculations). The customer may need to also validate their installation and application of QW 5.0 version 5.00.0511, particularly when QW 5.0 version 5.00.0511 is used directly in the control of regulated products. This additional validation, if needed, is the responsibility of the customer.

Busitech provides this validation so that customers can have confidence in Busitech products and comply with their needs to use validated software.

Busitech programming code is proprietary to Busitech and not available for customer review. All code is based on Visual Basic 6, a commercially released Microsoft language and fully compatible with Windows 95, 98, 2000, XP and NT.

Validation Process

The validation protocol (also known as a test plan) lays out the tests and success criteria required by the validation process. Validation testing is typically organized into 3 steps:

INSTALLATION QUALIFICATION (IQ)	- static checks
OPERATIONAL QUALIFICATION (OQ)	- dynamic testing
PERFORMANCE QUALIFICATION (PQ)	- application verification

Busitech only does IQ and OQ. PQ if necessary is the responsibility of the customer.

The validation report presents the test data relative to success criteria and documents any discrepancies.

The validation process is repeated with each released version. Busitech maintains the right to shorten the validation process or reapply the previous validation when programming changes are known to have not changed specific areas of the program, as is the case with some maintenance releases.

Validation Protocol

Installation Qualification (IQ)

Objectives and Success Criteria

The installation program provided by Busitech will ensure that

- All the right programs (of the right version) are in the right folders.
- All the Busitech components (dll and ocx) are in the right folders.

Key risks

- Wrong version files are installed.
- Necessary files are not successfully installed.
- Note: the customer may choose to not use the Busitech install program or the customer may tamper with the files after installation. These changes are the responsibility of the customer to validate.

Steps & Checks

1. The software will be installed onto a PC (which does not currently have QW 5.0 installed) using the Busitech install program.
2. All files will be verified (relative to a master file list) as to their presence, location, version number and compile date. Note that user can choose to change the default location and name of the folders.
3. A listing of Busitech installed files will be included in the validation report, showing the version number and compile date of each program.

Validation Report

Installation Qualification (IQ)

Objectives and Success Criteria

The installation program provided by Busitech will ensure that

All the right programs (of the right version) are in the right folders.

All the Busitech components (dll and ocx) are in the right folders

Steps & Checks

- The software will be installed onto a PC (which does not currently have QW 5.0 installed) using the Busitech install program.
(Completed by Noel Windle May 5, 2004)
- All files will be verified as to their presence (relative to a master file list), location and compile date. (Completed by Noel Windle May 5, 2004)

All programs and files will be verified (relative to a master file list) as to their presence, location, version number and compile date. A listing of Busitech installed programs and files is shown below, showing the version number and compile dates.

File	MM/DD/YY	Version
Files installed in C:\Busitech\QW 5.0 (default)		
PocketQW.Arm 1100 (4K) v3.00.CAB	01/20/04	Not Applicable
PocketQW.I486 (4K) v3.00.CAB	01/20/04	Not Applicable
PocketQWSetup.exe	03/27/00	1.0.0.1
PocketQWSync.exe	01/20/04	1.00.0007
PocketqwSync.avi	03/28/03	Not Applicable
QW.EXE	04/29/04	5.00.0511
QWADD.EXE	03/30/04	5.0.0.0
QWREPORT.EXE	06/17/03	5.00.0016
QWAPPL.EXE	04/30/04	5.00.0048
QWGLOBAL.EXE	04/30/04	5.00.0048
QWPOPUP.EXE	04/30/04	5.00.0048
QWSETUP.EXE	04/30/04	5.00.0048
QWREGIST.EXE	01/11/02	1.00.0001
QWCONCOM.EXE	10/10/02	5.00.0019
QWLAUNCH.EXE	09/18/02	5.00.0031
QWMERGE.EXE	19/05/04	5.00.0024
QWRS232.EXE	02/03/03	5.00.0006
QWRS232S.EXE	18/05/03	5.00.0024
QWSCHEDULE.EXE	03/30/04	1.0.0.12
QWTRIGGER.EXE	03/22/04	1.0.0.0
QWUTIL.EXE	05/07/04	5.0.0.11
QWXLTOQW.EXE	05/27/03	5.00.0014
UNWISE.EXE	12/27/96	Not Applicable
QW50.HLP	03/11/03	Not Applicable

QW50.CNT	03/11/03	Not Applicable
QWSETUP.HLP	10/01/02	Not Applicable
QWSETUP.CNT	10/01/02	Not Applicable
QWLAUNCH.HLP	09/06/02	Not Applicable
QWLAUNCH.CNT	09/06/02	Not Applicable
QWXLTOQW.HLP	09/18/02	Not Applicable
QWXLTOQW.CNT	09/18/02	Not Applicable
QWLAUNCH.INI	02/26/04	Not Applicable
SETUP.INI	01/20/04	Not Applicable
INSTALL.LOG (created at install time)		Not Applicable
REVISIONS.TXT	05/06/04	Not Applicable
Files installed in C:\Busitech\QW 5.0\Samples (default)		
PM001.HTM	05/03/02	Not Applicable
PM 002.HTM	05/03/02	Not Applicable
PM 003.HTM	05/03/02	Not Applicable
PM 004.HTM	05/03/02	Not Applicable
PM 005.HTM	05/03/02	Not Applicable
PM 006.HTM	05/03/02	Not Applicable
PM 007.HTM	05/03/02	Not Applicable
PM 008.HTM	05/03/02	Not Applicable
PM 009.HTM	05/03/02	Not Applicable
PM 010.HTM	05/03/02	Not Applicable
PM 011.HTM	05/03/02	Not Applicable
PM 012.HTM	05/03/02	Not Applicable
PM 013.HTM	05/03/02	Not Applicable
PM 014.HTM	05/03/02	Not Applicable
PM 015.HTM	05/03/02	Not Applicable
PM 016.HTM	05/03/02	Not Applicable
PM 017.HTM	05/03/02	Not Applicable
PM 018.HTM	05/03/02	Not Applicable
PM 019.HTM	05/03/02	Not Applicable
PM 020.HTM	05/03/02	Not Applicable
PM 021.HTM	05/03/02	Not Applicable
8433.GIF	05/03/02	Not Applicable
CRITICAL.QPD	27/05/02	Not Applicable
CRITICAL.QPI	27/05/02	Not Applicable
CRITICAL.QPT	27/05/02	Not Applicable
DTCAUSES.QPD	14/04/98	Not Applicable
DTCAUSES.QPI	14/04/98	Not Applicable
DTCAUSES.QPT	08/06/94	Not Applicable
DTREASON.QPD	14/04/98	Not Applicable
DTREASON.QPI	14/04/98	Not Applicable
DTREASON.QPT	08/06/94	Not Applicable
FAILURE.QVM	06/23/02	Not Applicable
FAILURE.QWA	02/25/03	Not Applicable

FAILURE.QWD	02/25/03	Not Applicable
FAILURE.QWI	02/25/03	Not Applicable
FAILURE.QWT	02/25/03	Not Applicable
FAILURE.QWX	02/25/03	Not Applicable
FAILURE.V1	06/06/02	Not Applicable
FAILURE.V2	06/06/02	Not Applicable
FAILURE.V3	02/25/03	Not Applicable
FAILURE.V4	02/25/03	Not Applicable
FAILURE.V5	02/25/03	Not Applicable
FAILURE.V6	02/25/03	Not Applicable
KEYWORDS.KEY	12/18/03	Not Applicable
MONITOR.HTM	07/25/03	Not Applicable
MONITOR.JPG	07/23/03	Not Applicable
MONITOR.QVM	07/25/03	Not Applicable
MONITOR.QWD	09/18/02	Not Applicable
MONITOR.QWI	09/18/02	Not Applicable
MONITOR.QWT	07/24/03	Not Applicable
MONITOR.V1	06/21/02	Not Applicable
MONITOR.V2	06/21/02	Not Applicable
MONITOR.V3	06/21/02	Not Applicable
MONITOR.V4	06/21/02	Not Applicable
MONITOR.V5	09/18/02	Not Applicable
MONITOR.V6	06/21/02	Not Applicable
MONITOR.V7	06/21/02	Not Applicable
MONITOR.V8	09/18/02	Not Applicable
MONITOR.V9	09/18/02	Not Applicable
MONITOR.V10	09/18/02	Not Applicable
MONITOR.V11	09/18/02	Not Applicable
MONITOR.V12	09/18/02	Not Applicable
MONITOR.V13	09/18/02	Not Applicable
MONITOR.V14	09/18/02	Not Applicable
MONITOR.V15	06/23/02	Not Applicable
MONITOR.V16	07/25/03	Not Applicable
OFFQUAL.QPD	05/29/02	Not Applicable
OFFQUAL.QPI	05/29/02	Not Applicable
OFFQUAL.QPT	05/29/02	Not Applicable
PRODUCTS.QPD	05/27/02	Not Applicable
PRODUCTS.QPI	05/27/02	Not Applicable
PRODUCTS.QPT	05/27/02	Not Applicable
Quality Root Cause Tracking Analysis.QVM	06/23/02	Not Applicable
Quality Root Cause Tracking Analysis.QWD	09/10/02	Not Applicable
Quality Root Cause Tracking Analysis.QWI	09/10/02	Not Applicable
Quality Root Cause Tracking Analysis.QWT	09/11/02	Not Applicable
Quality Root Cause Tracking Analysis.V1	09/10/02	Not Applicable
Quality Root Cause Tracking Analysis.V2	09/10/02	Not Applicable
Quality Root Cause Tracking Analysis.V3	09/10/02	Not Applicable

Quality Root Cause Tracking Analysis.V4	09/10/02	Not Applicable
Quality Root Cause Tracking Analysis.V5	09/10/02	Not Applicable
Quality Root Cause Tracking Analysis.V6	09/10/02	Not Applicable
Quality Root Cause Tracking Analysis.V7	09/10/02	Not Applicable
QWWAVE.JPG	05/03/02	Not Applicable
SHIFT.IO	05/27/02	Not Applicable
SHIFT.QPD	05/27/02	Not Applicable
SHIFT.QPI	05/27/02	Not Applicable
SHIFT.QPT	05/27/02	Not Applicable
TEAM.IO	06/24/02	Not Applicable
TEAM.QPD	05/27/02	Not Applicable
TEAM.QPI	05/27/02	Not Applicable
TEAM.QPT	05/27/02	Not Applicable
TEMPGAUGE.JPG	05/03/02	Not Applicable
VISCO.JPG	05/03/02	Not Applicable
WHENWAS.QPD	05/27/02	Not Applicable
WHENWAS.QPI	05/27/02	Not Applicable
WHENWAS.QPT	05/27/02	Not Applicable
WHEREWAS.QPD	05/27/02	Not Applicable
WHEREWAS.QPI	05/27/02	Not Applicable
WHEREWAS.QPT	05/27/02	Not Applicable
Files installed in C:\Windows\System		
ASYCFILT.DLL	06/19/03	2.40.4522
CHILKATMHT.DLL	07/07/03	2.9.6.1
COMCAT.DLL (only if NOT Win/NT)	06/19/03	5.0.2195
COMCT332.OCX	05/22/00	6.07.8862
COMDLG32.OCX	05/06/99	6.00.8418
CTL3D32.DLL (only if Win/NT)	12/07/99	2.31.000
EXPSRV.DLL	07/22/02	6.72.9414
MSCOMCT2.OCX	05/22/00	6.00.8804
MSCOMCTL.OCX	05/22/00	6.00.8862
MSCOMM32.OCX	06/24/98	6.00.8169
MSFLXGRD.OCX	05/22/00	6.00.8418
MSJET35.DLL	04/13/99	3.51.2723.0
MSJINT35.DLL	04/24/98	3.51.0623.0
MSJTER35.DLL	04/24/98	3.51.0623.0
MSMAPI32.OCX	06/24/98	6.00.8169
MSMASK32.OCX	05/22/00	6.00.8418
MSRD2X35.DLL	04/24/98	3.51.0623.0
MSREPL35.DLL	04/13/99	3.51.2404.0
MSSCRIPT.OCX	07/22/02	1.0.0.7615
MSVBVM60.DLL	06/19/03	6.00.9690
MSVCRT.DLL	07/22/02	6.10.9359.0
MSVCRT40.DLL	12/07/99	4.20.6172
MSXBSE.35.DLL	04/24/98	3.51.0623.0

OLEAUT32.DLL	06/19/03	2.40.4522
OLEPRO32.DLL	06/19/03	5.0.4522
OPCDAAUTO.DLL	07/25/01	2.0.0.3
PTXSCP.OCX	10/29/99	1.0.0.38
SSSPLT30.OCX	03/04/02	3.03.0008
STDOLE2.TLB	06/19/03	2.40.4522
TABCTL32.OCX	05/22/00	6.00.8804
TDBG7.OCX	12/15/00	7.0.0254
QWACCESS.DLL	12/03/03	5.00.0360
QWCHARTS.OCX	04/29/04	5.00.1716
QWCOMSRV.EXE	12/05/03	5.00.0012
QWDLG.DLL	04/29/04	5.00.0151
QWLAUNCH.DLL	09/16/02	5.00.0006
QWLIB.DLL	05/22/02	5.00.0032
QWLOGVIEW.DLL	06/13/03	1.00.0001
QWPACIFIER.OCX	05/14/03	5.00.0004
QWPOPUP.OCX	04/23/04	5.00.0040
QWREFRESH.EXE	01/29/04	5.00.0001
QWREP.DLL	04/16/04	5.00.0408
QWREPORT.OCX	08/20/03	5.00.0126
QWSELECT.DLL	04/19/04	5.00.0331
QWTEXT.DLL	12/19/03	5.00.0019
QWTOOL.DLL	03/26/04	5.00.0109
QWUPDATE.OCX	04/22/04	5.00.0223
QWVARINFO.OCX	02/10/04	5.00.0055
VB5DB.DLL	06/18/98	6.00.8169
VBAJET32.DLL	07/22/02	6.1.8268
VSFLEX7L.OCX	03/22/02	7.0.1.151
QWRULES.SYS	10/28/02	Not Applicable
QWSCRIPTS.SYS	06/28/02	Not Applicable
QWSCRIPT.QWX	05/07/04	Not Applicable
QWSECURE.QWX	05/03/02	Not Applicable
QWSTATS.SYS	04/08/04	Not Applicable
QWUNITS.SYS	15/10/02	Not Applicable
Files installed in Program Files\Common Files\Microsoft Shared\DAO\ if it exists otherwise installed in C:\Windows\System		
DAO350.DLL	04/27/98	3.51.1608.0

Existing files are overwritten only if Date, Time and internal version numbers of the files being installed are newer.

Registry Entries

HKEY_LOCAL_MACHINE

SOFTWARE

BUSITECH

PRODUCTS

QW50

InstallDir (default is C:\Busitech\QW50)

LicenseNo

ProductDesc

ProductDescLong

RegName1

RegName2

QWREP

LicenseNo

QWSETUP

Operational Qualification -OQ

Objectives and Success Criteria

- All key features of this software will perform as intended.
- All statistics will calculate as intended by Busitech, and be consistent between screens.
- All statistical control alarms on the Prioritize screen will be correct.
- All colors will be consistent throughout the program.
- Calculated Targets & Control Limits will be accurately calculated and drawn.

Key risks

- Customer receives false signals...wrong or missing alarms, wrong colors or wrong calculated control limits.
- Customer makes incorrect conclusions...inaccurate statistics, color zones or calculated control limits.
- Features do not work properly or as intended.

Steps & Checks

1. The software will be brought up using a standardized template, database and views designed for the purpose of validation. This is kept constant between QW 5.0 versions to make it easy to identify problems.
2. Busitech has a program called "BenchMark" specifically designed to automatically validate all statistical calculations using a test database. The output from this program will be attached to the validation report.
3. All key functions and features of the software will be checked on each screen manually. Successful completion of these checks (who and when checked) will be confirmed on the validation report.
4. The consistency of alarms and colors will be checked for at least 10 variables between all screens (control, prioritize, relate, compare, log). A view is used to test different combinations of calculated targets and limits on the same variables. The consistency of alarms, colors and control limit calculations is confirmed on the validation report (who and when checked).

Operational Qualification -IQ

Objectives and Success Criteria

- All features of this software will perform as intended.
- All statistics will calculate as intended, and be consistent between screens.
- All statistical control alarms on the Prioritize screen will be correct.
- All colors will be consistent throughout the program.
- Calculated Targets & Control Limits will be accurately calculated and drawn.

Steps & Checks

- The software will be brought up using a standardized template, database and views designed for the purpose of validation. This is kept constant between QW 5.0 versions to make it easy to identify problems. Busitech has a program specifically designed to automatically validate all statistical calculations using the standardized template and database. See QW 5.0 Statistics Validation Report below.
- All functions and features of the software will be checked on each screen manually. (Completed by Noel Windle May 6, 2004)
- The consistency of alarms and colors will be checked for at least 10 variables between all screens (control, prioritize, relate, compare, log). A view is used to test different combinations of calculated targets and limits on the same variable. The consistency of alarms, colors and control limit calculations is confirmed on the validation report. (Completed by Noel Windle May 7, 2004)

BenchMark Generated QW 5.0 Statistics Validation Report

QW 50511

05/07/2004

09:40:40

Variable	Statistic	Benchmark	Value	Result
v3 - FFFFFFFF	N	99	99	PASS
v3 - FFFFFFFF	Tgt_Dev	59.729	59.729	PASS
v3 - FFFFFFFF	SD	456.346	456.346	PASS
v3 - FFFFFFFF	Cur_SD	306.926	306.926	PASS
v3 - FFFFFFFF	MR_SD	261.622	261.622	PASS
v3 - FFFFFFFF	Max	2304.83	2304.83	PASS
v3 - FFFFFFFF	+4S	2335.114	2335.114	PASS
v3 - FFFFFFFF	+3S	1878.768	1878.768	PASS
v3 - FFFFFFFF	+1.5S	1194.248	1194.248	PASS
v3 - FFFFFFFF	Xbar	509.729	509.729	PASS
v3 - FFFFFFFF	Cur_XBar	509.729	509.729	PASS
v3 - FFFFFFFF	-1.5S	-174.79	-174.79	PASS
v3 - FFFFFFFF	-3S	-859.31	-859.31	PASS
v3 - FFFFFFFF	-4S	-1315.656	-1315.656	PASS
v3 - FFFFFFFF	Min	-860.08	-860.08	PASS
v3 - FFFFFFFF	Median	473.71	473.71	PASS
v3 - FFFFFFFF	Obser_% OSL	6.061	6.061	PASS
v3 - FFFFFFFF	Obser_PPM OSL	60606	60606	PASS
v3 - FFFFFFFF	Calc_% OSL	3.29	3.29	PASS

v3 - FFFFFFFF	Calc_PPM OSL	32900	32900	PASS
v3 - FFFFFFFF	Cr	1.4	1.4	PASS
v3 - FFFFFFFF	Tz	0.1	0.1	PASS
v3 - FFFFFFFF	Cpk	0.7	0.7	PASS
v3 - FFFFFFFF	%CV	89.527	89.527	PASS
v3 - FFFFFFFF	MR_AVG	346.213	346.213	PASS
v3 - FFFFFFFF	MR_UCL	1131.078	1131.078	PASS
v3 - FFFFFFFF	MR_UWL	738.646	738.646	PASS
v3 - FFFFFFFF	MR_LWL	-46.219	-46.219	PASS
v3 - FFFFFFFF	Sum	50463.17	50463.17	PASS
v3 - FFFFFFFF	Last_Value	2188.27	2188.27	PASS
v3 - FFFFFFFF	Sigma	4.3	4.3	PASS
v3 - FFFFFFFF	CP	0.71	0.71	PASS
v4 - CCCCCC	N	99	99	PASS
v4 - CCCCCC	Tgt_Dev			PASS
v4 - CCCCCC	SD	456.346	456.346	PASS
v4 - CCCCCC	Cur_SD	204.69	204.69	PASS
v4 - CCCCCC	MR_SD	261.622	261.622	PASS
v4 - CCCCCC	Max	2304.83	2304.83	PASS
v4 - CCCCCC	+4S	2335.114	2335.114	PASS
v4 - CCCCCC	+3S	1878.768	1878.768	PASS
v4 - CCCCCC	+1.5S	1194.248	1194.248	PASS
v4 - CCCCCC	Xbar	509.729	509.729	PASS
v4 - CCCCCC	Cur_XBar	670.461	670.461	PASS
v4 - CCCCCC	-1.5S	-174.79	-174.79	PASS
v4 - CCCCCC	-3S	-859.31	-859.31	PASS
v4 - CCCCCC	-4S	-1315.656	-1315.656	PASS
v4 - CCCCCC	Min	-860.08	-860.08	PASS
v4 - CCCCCC	Median	473.71	473.71	PASS
v4 - CCCCCC	Obser_% OSL			PASS
v4 - CCCCCC	Obser_PPM OSL			PASS
v4 - CCCCCC	Calc_% OSL			PASS
v4 - CCCCCC	Calc_PPM OSL			PASS
v4 - CCCCCC	Cr			PASS
v4 - CCCCCC	Tz			PASS
v4 - CCCCCC	Cpk			PASS
v4 - CCCCCC	%CV	89.527	89.527	PASS
v4 - CCCCCC	MR_AVG	346.213	346.213	PASS
v4 - CCCCCC	MR_UCL	1131.078	1131.078	PASS
v4 - CCCCCC	MR_UWL	738.646	738.646	PASS
v4 - CCCCCC	MR_LWL	-46.219	-46.219	PASS
v4 - CCCCCC	Sum	50463.17	50463.17	PASS
v4 - CCCCCC	Last_Value	2188.27	2188.27	PASS
v4 - CCCCCC	Sigma			PASS
v4 - CCCCCC	CP			PASS
v5 - BBBB	N	99	99	PASS
v5 - BBBB	Tgt_Dev			PASS

v5 - BBBBbbb	SD			PASS
v5 - BBBBbbb	Cur_SD			PASS
v5 - BBBBbbb	MR_SD			PASS
v5 - BBBBbbb	Max			PASS
v5 - BBBBbbb	+4S			PASS
v5 - BBBBbbb	+3S			PASS
v5 - BBBBbbb	+1.5S			PASS
v5 - BBBBbbb	Xbar			PASS
v5 - BBBBbbb	Cur_XBar			PASS
v5 - BBBBbbb	-1.5S			PASS
v5 - BBBBbbb	-3S			PASS
v5 - BBBBbbb	-4S			PASS
v5 - BBBBbbb	Min			PASS
v5 - BBBBbbb	Median			PASS
v5 - BBBBbbb	Obser_% OSL			PASS
v5 - BBBBbbb	Obser_PPM OSL			PASS
v5 - BBBBbbb	Calc_% OSL			PASS
v5 - BBBBbbb	Calc_PPM OSL			PASS
v5 - BBBBbbb	Cr			PASS
v5 - BBBBbbb	Tz			PASS
v5 - BBBBbbb	Cpk			PASS
v5 - BBBBbbb	%CV			PASS
v5 - BBBBbbb	MR_AVG			PASS
v5 - BBBBbbb	MR_UCL			PASS
v5 - BBBBbbb	MR_UWL			PASS
v5 - BBBBbbb	MR_LWL			PASS
v5 - BBBBbbb	Sum			PASS
v5 - BBBBbbb	Last_Value	2188.27	2188.27	PASS
v5 - BBBBbbb	Sigma			PASS
v5 - BBBBbbb	CP			PASS
v6 - FFCFCFF	N	99	99	PASS
v6 - FFCFCFF	Tgt_Dev	59.729	59.729	PASS
v6 - FFCFCFF	SD	456.346	456.346	PASS
v6 - FFCFCFF	Cur_SD	575.277	575.277	PASS
v6 - FFCFCFF	MR_SD	261.622	261.622	PASS
v6 - FFCFCFF	Max	2304.83	2304.83	PASS
v6 - FFCFCFF	+4S	2335.114	2335.114	PASS
v6 - FFCFCFF	+3S	1878.768	1878.768	PASS
v6 - FFCFCFF	+1.5S	1194.248	1194.248	PASS
v6 - FFCFCFF	Xbar	509.729	509.729	PASS
v6 - FFCFCFF	Cur_XBar	462.569	462.569	PASS
v6 - FFCFCFF	-1.5S	-174.79	-174.79	PASS
v6 - FFCFCFF	-3S	-859.31	-859.31	PASS
v6 - FFCFCFF	-4S	-1315.656	-1315.656	PASS
v6 - FFCFCFF	Min	-860.08	-860.08	PASS
v6 - FFCFCFF	Median	473.71	473.71	PASS
v6 - FFCFCFF	Obser_% OSL	7.071	7.071	PASS

v6 - FFCFCFF	Obser_PPM OSL	70707	70707	PASS
v6 - FFCFCFF	Calc_% OSL	14.64	14.64	PASS
v6 - FFCFCFF	Calc_PPM OSL	146400	146400	PASS
v6 - FFCFCFF	Cr	1.83	1.83	PASS
v6 - FFCFCFF	Tz	0.1	0.1	PASS
v6 - FFCFCFF	Cpk	0.37	0.37	PASS
v6 - FFCFCFF	%CV	89.527	89.527	PASS
v6 - FFCFCFF	MR_AVG	346.213	346.213	PASS
v6 - FFCFCFF	MR_UCL	1131.078	1131.078	PASS
v6 - FFCFCFF	MR_UWL	738.646	738.646	PASS
v6 - FFCFCFF	MR_LWL	-46.219	-46.219	PASS
v6 - FFCFCFF	Sum	50463.17	50463.17	PASS
v6 - FFCFCFF	Last_Value	2188.27	2188.27	PASS
v6 - FFCFCFF	Sigma	3.3	3.3	PASS
v6 - FFCFCFF	CP	0.55	0.55	PASS
v7 - FFFFBBB	N	99	99	PASS
v7 - FFFFBBB	Tgt_Dev	59.729	59.729	PASS
v7 - FFFFBBB	SD	456.346	456.346	PASS
v7 - FFFFBBB	Cur_SD	393.554	393.554	PASS
v7 - FFFFBBB	MR_SD	261.622	261.622	PASS
v7 - FFFFBBB	Max	2304.83	2304.83	PASS
v7 - FFFFBBB	+4S	2335.114	2335.114	PASS
v7 - FFFFBBB	+3S	1878.768	1878.768	PASS
v7 - FFFFBBB	+1.5S	1194.248	1194.248	PASS
v7 - FFFFBBB	Xbar	509.729	509.729	PASS
v7 - FFFFBBB	Cur_XBar	356.537	356.537	PASS
v7 - FFFFBBB	-1.5S	-174.79	-174.79	PASS
v7 - FFFFBBB	-3S	-859.31	-859.31	PASS
v7 - FFFFBBB	-4S	-1315.656	-1315.656	PASS
v7 - FFFFBBB	Min	-860.08	-860.08	PASS
v7 - FFFFBBB	Median	473.71	473.71	PASS
v7 - FFFFBBB	Obser_% OSL	4.04	4.04	PASS
v7 - FFFFBBB	Obser_PPM OSL	40404	40404	PASS
v7 - FFFFBBB	Calc_% OSL	1.5	1.5	PASS
v7 - FFFFBBB	Calc_PPM OSL	15000	15000	PASS
v7 - FFFFBBB	Cr	1.3	1.3	PASS
v7 - FFFFBBB	Tz	0.1	0.1	PASS
v7 - FFFFBBB	Cpk	0.72	0.72	PASS
v7 - FFFFBBB	%CV	89.527	89.527	PASS
v7 - FFFFBBB	MR_AVG	346.213	346.213	PASS
v7 - FFFFBBB	MR_UCL	1131.078	1131.078	PASS
v7 - FFFFBBB	MR_UWL	738.646	738.646	PASS
v7 - FFFFBBB	MR_LWL	-46.219	-46.219	PASS
v7 - FFFFBBB	Sum	50463.17	50463.17	PASS
v7 - FFFFBBB	Last_Value	2188.27	2188.27	PASS
v7 - FFFFBBB	Sigma	4.6	4.6	PASS
v7 - FFFFBBB	CP	0.77	0.77	PASS

v8 - BBBFFFF	N	99	99	PASS
v8 - BBBFFFF	Tgt_Dev	59.729	59.729	PASS
v8 - BBBFFFF	SD	456.346	456.346	PASS
v8 - BBBFFFF	Cur_SD	208.54	208.54	PASS
v8 - BBBFFFF	MR_SD	261.622	261.622	PASS
v8 - BBBFFFF	Max	2304.83	2304.83	PASS
v8 - BBBFFFF	+4S	2335.114	2335.114	PASS
v8 - BBBFFFF	+3S	1878.768	1878.768	PASS
v8 - BBBFFFF	+1.5S	1194.248	1194.248	PASS
v8 - BBBFFFF	Xbar	509.729	509.729	PASS
v8 - BBBFFFF	Cur_XBar	686.472	686.472	PASS
v8 - BBBFFFF	-1.5S	-174.79	-174.79	PASS
v8 - BBBFFFF	-3S	-859.31	-859.31	PASS
v8 - BBBFFFF	-4S	-1315.656	-1315.656	PASS
v8 - BBBFFFF	Min	-860.08	-860.08	PASS
v8 - BBBFFFF	Median	473.71	473.71	PASS
v8 - BBBFFFF	Obser_% OSL	2.02	2.02	PASS
v8 - BBBFFFF	Obser_PPM OSL	20202	20202	PASS
v8 - BBBFFFF	Calc_% OSL	1.79	1.79	PASS
v8 - BBBFFFF	Calc_PPM OSL	17900	17900	PASS
v8 - BBBFFFF	Cr	1.52	1.52	PASS
v8 - BBBFFFF	Tz	0.1	0.1	PASS
v8 - BBBFFFF	Cpk	0.7	0.7	PASS
v8 - BBBFFFF	%CV	89.527	89.527	PASS
v8 - BBBFFFF	MR_AVG	346.213	346.213	PASS
v8 - BBBFFFF	MR_UCL	1131.078	1131.078	PASS
v8 - BBBFFFF	MR_UWL	738.646	738.646	PASS
v8 - BBBFFFF	MR_LWL	-46.219	-46.219	PASS
v8 - BBBFFFF	Sum	50463.17	50463.17	PASS
v8 - BBBFFFF	Last_Value	2188.27	2188.27	PASS
v8 - BBBFFFF	Sigma	3.9	3.9	PASS
v8 - BBBFFFF	CP	0.66	0.66	PASS
v9 - CCCCBBB	N	99	99	PASS
v9 - CCCCBBB	Tgt_Dev			PASS
v9 - CCCCBBB	SD	456.346	456.346	PASS
v9 - CCCCBBB	Cur_SD	456.346	456.346	PASS
v9 - CCCCBBB	MR_SD	261.622	261.622	PASS
v9 - CCCCBBB	Max	2304.83	2304.83	PASS
v9 - CCCCBBB	+4S	2335.114	2335.114	PASS
v9 - CCCCBBB	+3S	1878.768	1878.768	PASS
v9 - CCCCBBB	+1.5S	1194.248	1194.248	PASS
v9 - CCCCBBB	Xbar	509.729	509.729	PASS
v9 - CCCCBBB	Cur_XBar	509.729	509.729	PASS
v9 - CCCCBBB	-1.5S	-174.79	-174.79	PASS
v9 - CCCCBBB	-3S	-859.31	-859.31	PASS
v9 - CCCCBBB	-4S	-1315.656	-1315.656	PASS
v9 - CCCCBBB	Min	-860.08	-860.08	PASS

v9 - CCCCBBB	Median	473.71	473.71	PASS
v9 - CCCCBBB	Obser_% OSL			PASS
v9 - CCCCBBB	Obser_PPM OSL			PASS
v9 - CCCCBBB	Calc_% OSL			PASS
v9 - CCCCBBB	Calc_PPM OSL			PASS
v9 - CCCCBBB	Cr			PASS
v9 - CCCCBBB	Tz			PASS
v9 - CCCCBBB	Cpk			PASS
v9 - CCCCBBB	%CV	89.527	89.527	PASS
v9 - CCCCBBB	MR_AVG	346.213	346.213	PASS
v9 - CCCCBBB	MR_UCL	1131.078	1131.078	PASS
v9 - CCCCBBB	MR_UWL	738.646	738.646	PASS
v9 - CCCCBBB	MR_LWL	-46.219	-46.219	PASS
v9 - CCCCBBB	Sum	50463.17	50463.17	PASS
v9 - CCCCBBB	Last_Value	2188.27	2188.27	PASS
v9 - CCCCBBB	Sigma			PASS
v9 - CCCCBBB	CP			PASS
v10 - BBCCCC	N	99	99	PASS
v10 - BBCCCC	Tgt_Dev			PASS
v10 - BBCCCC	SD	456.346	456.346	PASS
v10 - BBCCCC	Cur_SD	456.346	456.346	PASS
v10 - BBCCCC	MR_SD	261.622	261.622	PASS
v10 - BBCCCC	Max	2304.83	2304.83	PASS
v10 - BBCCCC	+4S	2335.114	2335.114	PASS
v10 - BBCCCC	+3S	1878.768	1878.768	PASS
v10 - BBCCCC	+1.5S	1194.248	1194.248	PASS
v10 - BBCCCC	Xbar	509.729	509.729	PASS
v10 - BBCCCC	Cur_XBar	509.729	509.729	PASS
v10 - BBCCCC	-1.5S	-174.79	-174.79	PASS
v10 - BBCCCC	-3S	-859.31	-859.31	PASS
v10 - BBCCCC	-4S	-1315.656	-1315.656	PASS
v10 - BBCCCC	Min	-860.08	-860.08	PASS
v10 - BBCCCC	Median	473.71	473.71	PASS
v10 - BBCCCC	Obser_% OSL			PASS
v10 - BBCCCC	Obser_PPM OSL			PASS
v10 - BBCCCC	Calc_% OSL			PASS
v10 - BBCCCC	Calc_PPM OSL			PASS
v10 - BBCCCC	Cr			PASS
v10 - BBCCCC	Tz			PASS
v10 - BBCCCC	Cpk			PASS
v10 - BBCCCC	%CV	89.527	89.527	PASS
v10 - BBCCCC	MR_AVG	346.213	346.213	PASS
v10 - BBCCCC	MR_UCL	1131.078	1131.078	PASS
v10 - BBCCCC	MR_UWL	738.646	738.646	PASS
v10 - BBCCCC	MR_LWL	-46.219	-46.219	PASS
v10 - BBCCCC	Sum	50463.17	50463.17	PASS
v10 - BBCCCC	Last_Value	2188.27	2188.27	PASS

v10 - BBBCCCC	Sigma			PASS
v10 - BBBCCCC	CP			PASS
v11 - FFFCFFF	N	99	99	PASS
v11 - FFFCFFF	Tgt_Dev			PASS
v11 - FFFCFFF	SD	456.346	456.346	PASS
v11 - FFFCFFF	Cur_SD	456.346	456.346	PASS
v11 - FFFCFFF	MR_SD	261.622	261.622	PASS
v11 - FFFCFFF	Max	2304.83	2304.83	PASS
v11 - FFFCFFF	+4S	2335.114	2335.114	PASS
v11 - FFFCFFF	+3S	1878.768	1878.768	PASS
v11 - FFFCFFF	+1.5S	1194.248	1194.248	PASS
v11 - FFFCFFF	Xbar	509.729	509.729	PASS
v11 - FFFCFFF	Cur_XBar	509.729	509.729	PASS
v11 - FFFCFFF	-1.5S	-174.79	-174.79	PASS
v11 - FFFCFFF	-3S	-859.31	-859.31	PASS
v11 - FFFCFFF	-4S	-1315.656	-1315.656	PASS
v11 - FFFCFFF	Min	-860.08	-860.08	PASS
v11 - FFFCFFF	Median	473.71	473.71	PASS
v11 - FFFCFFF	Obser_% OSL	6.061	6.061	PASS
v11 - FFFCFFF	Obser_PPM OSL	60606	60606	PASS
v11 - FFFCFFF	Calc_% OSL	3.29	3.29	PASS
v11 - FFFCFFF	Calc_PPM OSL	32900	32900	PASS
v11 - FFFCFFF	Cr	1.4	1.4	PASS
v11 - FFFCFFF	Tz			PASS
v11 - FFFCFFF	Cpk	0.7	0.7	PASS
v11 - FFFCFFF	%CV	89.527	89.527	PASS
v11 - FFFCFFF	MR_AVG	346.213	346.213	PASS
v11 - FFFCFFF	MR_UCL	1131.078	1131.078	PASS
v11 - FFFCFFF	MR_UWL	738.646	738.646	PASS
v11 - FFFCFFF	MR_LWL	-46.219	-46.219	PASS
v11 - FFFCFFF	Sum	50463.17	50463.17	PASS
v11 - FFFCFFF	Last_Value	2188.27	2188.27	PASS
v11 - FFFCFFF	Sigma	4.3	4.3	PASS
v11 - FFFCFFF	CP	0.71	0.71	PASS
v12 - CCCFCCC	N	99	99	PASS
v12 - CCCFCCC	Tgt_Dev	59.729	59.729	PASS
v12 - CCCFCCC	SD	456.346	456.346	PASS
v12 - CCCFCCC	Cur_SD	456.346	456.346	PASS
v12 - CCCFCCC	MR_SD	261.622	261.622	PASS
v12 - CCCFCCC	Max	2304.83	2304.83	PASS
v12 - CCCFCCC	+4S	2335.114	2335.114	PASS
v12 - CCCFCCC	+3S	1878.768	1878.768	PASS
v12 - CCCFCCC	+1.5S	1194.248	1194.248	PASS
v12 - CCCFCCC	Xbar	509.729	509.729	PASS
v12 - CCCFCCC	Cur_XBar	509.729	509.729	PASS
v12 - CCCFCCC	-1.5S	-174.79	-174.79	PASS
v12 - CCCFCCC	-3S	-859.31	-859.31	PASS

v12 - CCCFCCC	-4S	-1315.656	-1315.656	PASS
v12 - CCCFCCC	Min	-860.08	-860.08	PASS
v12 - CCCFCCC	Median	473.71	473.71	PASS
v12 - CCCFCCC	Obser_% OSL			PASS
v12 - CCCFCCC	Obser_PPM OSL			PASS
v12 - CCCFCCC	Calc_% OSL			PASS
v12 - CCCFCCC	Calc_PPM OSL			PASS
v12 - CCCFCCC	Cr			PASS
v12 - CCCFCCC	Tz	0.1	0.1	PASS
v12 - CCCFCCC	Cpk			PASS
v12 - CCCFCCC	%CV	89.527	89.527	PASS
v12 - CCCFCCC	MR_AVG	346.213	346.213	PASS
v12 - CCCFCCC	MR_UCL	1131.078	1131.078	PASS
v12 - CCCFCCC	MR_UWL	738.646	738.646	PASS
v12 - CCCFCCC	MR_LWL	-46.219	-46.219	PASS
v12 - CCCFCCC	Sum	50463.17	50463.17	PASS
v12 - CCCFCCC	Last_Value	2188.27	2188.27	PASS
v12 - CCCFCCC	Sigma			PASS
v12 - CCCFCCC	CP			PASS
v13 - FCFCFCF	N	99	99	PASS
v13 - FCFCFCF	Tgt_Dev			PASS
v13 - FCFCFCF	SD	456.346	456.346	PASS
v13 - FCFCFCF	Cur_SD	456.346	456.346	PASS
v13 - FCFCFCF	MR_SD	261.622	261.622	PASS
v13 - FCFCFCF	Max	2304.83	2304.83	PASS
v13 - FCFCFCF	+4S	2335.114	2335.114	PASS
v13 - FCFCFCF	+3S	1878.768	1878.768	PASS
v13 - FCFCFCF	+1.5S	1194.248	1194.248	PASS
v13 - FCFCFCF	Xbar	509.729	509.729	PASS
v13 - FCFCFCF	Cur_XBar	509.729	509.729	PASS
v13 - FCFCFCF	-1.5S	-174.79	-174.79	PASS
v13 - FCFCFCF	-3S	-859.31	-859.31	PASS
v13 - FCFCFCF	-4S	-1315.656	-1315.656	PASS
v13 - FCFCFCF	Min	-860.08	-860.08	PASS
v13 - FCFCFCF	Median	473.71	473.71	PASS
v13 - FCFCFCF	Obser_% OSL	6.061	6.061	PASS
v13 - FCFCFCF	Obser_PPM OSL	60606	60606	PASS
v13 - FCFCFCF	Calc_% OSL	3.29	3.29	PASS
v13 - FCFCFCF	Calc_PPM OSL	32900	32900	PASS
v13 - FCFCFCF	Cr	1.4	1.4	PASS
v13 - FCFCFCF	Tz			PASS
v13 - FCFCFCF	Cpk	0.7	0.7	PASS
v13 - FCFCFCF	%CV	89.527	89.527	PASS
v13 - FCFCFCF	MR_AVG	346.213	346.213	PASS
v13 - FCFCFCF	MR_UCL	1131.078	1131.078	PASS
v13 - FCFCFCF	MR_UWL	738.646	738.646	PASS
v13 - FCFCFCF	MR_LWL	-46.219	-46.219	PASS

v13 - FCFCFCF	Sum	50463.17	50463.17	PASS
v13 - FCFCFCF	Last_Value	2188.27	2188.27	PASS
v13 - FCFCFCF	Sigma	4.3	4.3	PASS
v13 - FCFCFCF	CP	0.71	0.71	PASS
v14 - CFCFCFC	N	99	99	PASS
v14 - CFCFCFC	Tgt_Dev	59.729	59.729	PASS
v14 - CFCFCFC	SD	456.346	456.346	PASS
v14 - CFCFCFC	Cur_SD	456.346	456.346	PASS
v14 - CFCFCFC	MR_SD	261.622	261.622	PASS
v14 - CFCFCFC	Max	2304.83	2304.83	PASS
v14 - CFCFCFC	+4S	2335.114	2335.114	PASS
v14 - CFCFCFC	+3S	1878.768	1878.768	PASS
v14 - CFCFCFC	+1.5S	1194.248	1194.248	PASS
v14 - CFCFCFC	Xbar	509.729	509.729	PASS
v14 - CFCFCFC	Cur_XBar	509.729	509.729	PASS
v14 - CFCFCFC	-1.5S	-174.79	-174.79	PASS
v14 - CFCFCFC	-3S	-859.31	-859.31	PASS
v14 - CFCFCFC	-4S	-1315.656	-1315.656	PASS
v14 - CFCFCFC	Min	-860.08	-860.08	PASS
v14 - CFCFCFC	Median	473.71	473.71	PASS
v14 - CFCFCFC	Obser_% OSL			PASS
v14 - CFCFCFC	Obser_PPM OSL			PASS
v14 - CFCFCFC	Calc_% OSL			PASS
v14 - CFCFCFC	Calc_PPM OSL			PASS
v14 - CFCFCFC	Cr			PASS
v14 - CFCFCFC	Tz	0.1	0.1	PASS
v14 - CFCFCFC	Cpk			PASS
v14 - CFCFCFC	%CV	89.527	89.527	PASS
v14 - CFCFCFC	MR_AVG	346.213	346.213	PASS
v14 - CFCFCFC	MR_UCL	1131.078	1131.078	PASS
v14 - CFCFCFC	MR_UWL	738.646	738.646	PASS
v14 - CFCFCFC	MR_LWL	-46.219	-46.219	PASS
v14 - CFCFCFC	Sum	50463.17	50463.17	PASS
v14 - CFCFCFC	Last_Value	2188.27	2188.27	PASS
v14 - CFCFCFC	Sigma			PASS
v14 - CFCFCFC	CP			PASS
v15 - BFFFFFF	N	99	99	PASS
v15 - BFFFFFF	Tgt_Dev	59.729	59.729	PASS
v15 - BFFFFFF	SD	456.346	456.346	PASS
v15 - BFFFFFF	Cur_SD	456.346	456.346	PASS
v15 - BFFFFFF	MR_SD	261.622	261.622	PASS
v15 - BFFFFFF	Max	2304.83	2304.83	PASS
v15 - BFFFFFF	+4S	2335.114	2335.114	PASS
v15 - BFFFFFF	+3S	1878.768	1878.768	PASS
v15 - BFFFFFF	+1.5S	1194.248	1194.248	PASS
v15 - BFFFFFF	Xbar	509.729	509.729	PASS
v15 - BFFFFFF	Cur_XBar	509.729	509.729	PASS

v15 - BFFFFFFF	-1.5S	-174.79	-174.79	PASS
v15 - BFFFFFFF	-3S	-859.31	-859.31	PASS
v15 - BFFFFFFF	-4S	-1315.656	-1315.656	PASS
v15 - BFFFFFFF	Min	-860.08	-860.08	PASS
v15 - BFFFFFFF	Median	473.71	473.71	PASS
v15 - BFFFFFFF	Obser_% OSL	2.02	2.02	PASS
v15 - BFFFFFFF	Obser_PPM OSL	20202	20202	PASS
v15 - BFFFFFFF	Calc_% OSL	1.79	1.79	PASS
v15 - BFFFFFFF	Calc_PPM OSL	17900	17900	PASS
v15 - BFFFFFFF	Cr	1.52	1.52	PASS
v15 - BFFFFFFF	Tz	0.1	0.1	PASS
v15 - BFFFFFFF	Cpk	0.7	0.7	PASS
v15 - BFFFFFFF	%CV	89.527	89.527	PASS
v15 - BFFFFFFF	MR_AVG	346.213	346.213	PASS
v15 - BFFFFFFF	MR_UCL	1131.078	1131.078	PASS
v15 - BFFFFFFF	MR_UWL	738.646	738.646	PASS
v15 - BFFFFFFF	MR_LWL	-46.219	-46.219	PASS
v15 - BFFFFFFF	Sum	50463.17	50463.17	PASS
v15 - BFFFFFFF	Last_Value	2188.27	2188.27	PASS
v15 - BFFFFFFF	Sigma	3.9	3.9	PASS
v15 - BFFFFFFF	CP	0.66	0.66	PASS
v16 - FBFFFFFF	N	99	99	PASS
v16 - FBFFFFFF	Tgt_Dev	59.729	59.729	PASS
v16 - FBFFFFFF	SD	456.346	456.346	PASS
v16 - FBFFFFFF	Cur_SD	456.346	456.346	PASS
v16 - FBFFFFFF	MR_SD	261.622	261.622	PASS
v16 - FBFFFFFF	Max	2304.83	2304.83	PASS
v16 - FBFFFFFF	+4S	2335.114	2335.114	PASS
v16 - FBFFFFFF	+3S	1878.768	1878.768	PASS
v16 - FBFFFFFF	+1.5S	1194.248	1194.248	PASS
v16 - FBFFFFFF	Xbar	509.729	509.729	PASS
v16 - FBFFFFFF	Cur_XBar	509.729	509.729	PASS
v16 - FBFFFFFF	-1.5S	-174.79	-174.79	PASS
v16 - FBFFFFFF	-3S	-859.31	-859.31	PASS
v16 - FBFFFFFF	-4S	-1315.656	-1315.656	PASS
v16 - FBFFFFFF	Min	-860.08	-860.08	PASS
v16 - FBFFFFFF	Median	473.71	473.71	PASS
v16 - FBFFFFFF	Obser_% OSL	6.061	6.061	PASS
v16 - FBFFFFFF	Obser_PPM OSL	60606	60606	PASS
v16 - FBFFFFFF	Calc_% OSL	3.29	3.29	PASS
v16 - FBFFFFFF	Calc_PPM OSL	32900	32900	PASS
v16 - FBFFFFFF	Cr	1.4	1.4	PASS
v16 - FBFFFFFF	Tz	0.1	0.1	PASS
v16 - FBFFFFFF	Cpk	0.7	0.7	PASS
v16 - FBFFFFFF	%CV	89.527	89.527	PASS
v16 - FBFFFFFF	MR_AVG	346.213	346.213	PASS
v16 - FBFFFFFF	MR_UCL	1131.078	1131.078	PASS

v16 - FBFFFFFF	MR_UWL	738.646	738.646	PASS
v16 - FBFFFFFF	MR_LWL	-46.219	-46.219	PASS
v16 - FBFFFFFF	Sum	50463.17	50463.17	PASS
v16 - FBFFFFFF	Last_Value	2188.27	2188.27	PASS
v16 - FBFFFFFF	Sigma	4.3	4.3	PASS
v16 - FBFFFFFF	CP	0.71	0.71	PASS
v17 - FFBFFFFF	N	99	99	PASS
v17 - FFBFFFFF	Tgt_Dev	59.729	59.729	PASS
v17 - FFBFFFFF	SD	456.346	456.346	PASS
v17 - FFBFFFFF	Cur_SD	456.346	456.346	PASS
v17 - FFBFFFFF	MR_SD	261.622	261.622	PASS
v17 - FFBFFFFF	Max	2304.83	2304.83	PASS
v17 - FFBFFFFF	+4S	2335.114	2335.114	PASS
v17 - FFBFFFFF	+3S	1878.768	1878.768	PASS
v17 - FFBFFFFF	+1.5S	1194.248	1194.248	PASS
v17 - FFBFFFFF	Xbar	509.729	509.729	PASS
v17 - FFBFFFFF	Cur_XBar	509.729	509.729	PASS
v17 - FFBFFFFF	-1.5S	-174.79	-174.79	PASS
v17 - FFBFFFFF	-3S	-859.31	-859.31	PASS
v17 - FFBFFFFF	-4S	-1315.656	-1315.656	PASS
v17 - FFBFFFFF	Min	-860.08	-860.08	PASS
v17 - FFBFFFFF	Median	473.71	473.71	PASS
v17 - FFBFFFFF	Obser_% OSL	6.061	6.061	PASS
v17 - FFBFFFFF	Obser_PPM OSL	60606	60606	PASS
v17 - FFBFFFFF	Calc_% OSL	3.29	3.29	PASS
v17 - FFBFFFFF	Calc_PPM OSL	32900	32900	PASS
v17 - FFBFFFFF	Cr	1.4	1.4	PASS
v17 - FFBFFFFF	Tz	0.1	0.1	PASS
v17 - FFBFFFFF	Cpk	0.7	0.7	PASS
v17 - FFBFFFFF	%CV	89.527	89.527	PASS
v17 - FFBFFFFF	MR_AVG	346.213	346.213	PASS
v17 - FFBFFFFF	MR_UCL	1131.078	1131.078	PASS
v17 - FFBFFFFF	MR_UWL	738.646	738.646	PASS
v17 - FFBFFFFF	MR_LWL	-46.219	-46.219	PASS
v17 - FFBFFFFF	Sum	50463.17	50463.17	PASS
v17 - FFBFFFFF	Last_Value	2188.27	2188.27	PASS
v17 - FFBFFFFF	Sigma	4.3	4.3	PASS
v17 - FFBFFFFF	CP	0.71	0.71	PASS
v18 - FFFBFFFF	N	99	99	PASS
v18 - FFFBFFFF	Tgt_Dev			PASS
v18 - FFFBFFFF	SD	456.346	456.346	PASS
v18 - FFFBFFFF	Cur_SD	456.346	456.346	PASS
v18 - FFFBFFFF	MR_SD	261.622	261.622	PASS
v18 - FFFBFFFF	Max	2304.83	2304.83	PASS
v18 - FFFBFFFF	+4S	2335.114	2335.114	PASS
v18 - FFFBFFFF	+3S	1878.768	1878.768	PASS
v18 - FFFBFFFF	+1.5S	1194.248	1194.248	PASS

v18 - FFFBFFF	Xbar	509.729	509.729	PASS
v18 - FFFBFFF	Cur_XBar	509.729	509.729	PASS
v18 - FFFBFFF	-1.5S	-174.79	-174.79	PASS
v18 - FFFBFFF	-3S	-859.31	-859.31	PASS
v18 - FFFBFFF	-4S	-1315.656	-1315.656	PASS
v18 - FFFBFFF	Min	-860.08	-860.08	PASS
v18 - FFFBFFF	Median	473.71	473.71	PASS
v18 - FFFBFFF	Obser_% OSL	6.061	6.061	PASS
v18 - FFFBFFF	Obser_PPM OSL	60606	60606	PASS
v18 - FFFBFFF	Calc_% OSL	3.29	3.29	PASS
v18 - FFFBFFF	Calc_PPM OSL	32900	32900	PASS
v18 - FFFBFFF	Cr	1.4	1.4	PASS
v18 - FFFBFFF	Tz			PASS
v18 - FFFBFFF	Cpk	0.7	0.7	PASS
v18 - FFFBFFF	%CV	89.527	89.527	PASS
v18 - FFFBFFF	MR_AVG	346.213	346.213	PASS
v18 - FFFBFFF	MR_UCL	1131.078	1131.078	PASS
v18 - FFFBFFF	MR_UWL	738.646	738.646	PASS
v18 - FFFBFFF	MR_LWL	-46.219	-46.219	PASS
v18 - FFFBFFF	Sum	50463.17	50463.17	PASS
v18 - FFFBFFF	Last_Value	2188.27	2188.27	PASS
v18 - FFFBFFF	Sigma	4.3	4.3	PASS
v18 - FFFBFFF	CP	0.71	0.71	PASS
v19 - FFFFBFF	N	99	99	PASS
v19 - FFFFBFF	Tgt_Dev	59.729	59.729	PASS
v19 - FFFFBFF	SD	456.346	456.346	PASS
v19 - FFFFBFF	Cur_SD	456.346	456.346	PASS
v19 - FFFFBFF	MR_SD	261.622	261.622	PASS
v19 - FFFFBFF	Max	2304.83	2304.83	PASS
v19 - FFFFBFF	+4S	2335.114	2335.114	PASS
v19 - FFFFBFF	+3S	1878.768	1878.768	PASS
v19 - FFFFBFF	+1.5S	1194.248	1194.248	PASS
v19 - FFFFBFF	Xbar	509.729	509.729	PASS
v19 - FFFFBFF	Cur_XBar	509.729	509.729	PASS
v19 - FFFFBFF	-1.5S	-174.79	-174.79	PASS
v19 - FFFFBFF	-3S	-859.31	-859.31	PASS
v19 - FFFFBFF	-4S	-1315.656	-1315.656	PASS
v19 - FFFFBFF	Min	-860.08	-860.08	PASS
v19 - FFFFBFF	Median	473.71	473.71	PASS
v19 - FFFFBFF	Obser_% OSL	6.061	6.061	PASS
v19 - FFFFBFF	Obser_PPM OSL	60606	60606	PASS
v19 - FFFFBFF	Calc_% OSL	3.29	3.29	PASS
v19 - FFFFBFF	Calc_PPM OSL	32900	32900	PASS
v19 - FFFFBFF	Cr	1.4	1.4	PASS
v19 - FFFFBFF	Tz	0.1	0.1	PASS
v19 - FFFFBFF	Cpk	0.7	0.7	PASS
v19 - FFFFBFF	%CV	89.527	89.527	PASS

v19 - FFFFBF	MR_AVG	346.213	346.213	PASS
v19 - FFFFBF	MR_UCL	1131.078	1131.078	PASS
v19 - FFFFBF	MR_UWL	738.646	738.646	PASS
v19 - FFFFBF	MR_LWL	-46.219	-46.219	PASS
v19 - FFFFBF	Sum	50463.17	50463.17	PASS
v19 - FFFFBF	Last_Value	2188.27	2188.27	PASS
v19 - FFFFBF	Sigma	4.3	4.3	PASS
v19 - FFFFBF	CP	0.71	0.71	PASS
v20 - FFFFBF	N	99	99	PASS
v20 - FFFFBF	Tgt_Dev	59.729	59.729	PASS
v20 - FFFFBF	SD	456.346	456.346	PASS
v20 - FFFFBF	Cur_SD	456.346	456.346	PASS
v20 - FFFFBF	MR_SD	261.622	261.622	PASS
v20 - FFFFBF	Max	2304.83	2304.83	PASS
v20 - FFFFBF	+4S	2335.114	2335.114	PASS
v20 - FFFFBF	+3S	1878.768	1878.768	PASS
v20 - FFFFBF	+1.5S	1194.248	1194.248	PASS
v20 - FFFFBF	Xbar	509.729	509.729	PASS
v20 - FFFFBF	Cur_XBar	509.729	509.729	PASS
v20 - FFFFBF	-1.5S	-174.79	-174.79	PASS
v20 - FFFFBF	-3S	-859.31	-859.31	PASS
v20 - FFFFBF	-4S	-1315.656	-1315.656	PASS
v20 - FFFFBF	Min	-860.08	-860.08	PASS
v20 - FFFFBF	Median	473.71	473.71	PASS
v20 - FFFFBF	Obser_% OSL	6.061	6.061	PASS
v20 - FFFFBF	Obser_PPM OSL	60606	60606	PASS
v20 - FFFFBF	Calc_% OSL	3.29	3.29	PASS
v20 - FFFFBF	Calc_PPM OSL	32900	32900	PASS
v20 - FFFFBF	Cr	1.4	1.4	PASS
v20 - FFFFBF	Tz	0.1	0.1	PASS
v20 - FFFFBF	Cpk	0.7	0.7	PASS
v20 - FFFFBF	%CV	89.527	89.527	PASS
v20 - FFFFBF	MR_AVG	346.213	346.213	PASS
v20 - FFFFBF	MR_UCL	1131.078	1131.078	PASS
v20 - FFFFBF	MR_UWL	738.646	738.646	PASS
v20 - FFFFBF	MR_LWL	-46.219	-46.219	PASS
v20 - FFFFBF	Sum	50463.17	50463.17	PASS
v20 - FFFFBF	Last_Value	2188.27	2188.27	PASS
v20 - FFFFBF	Sigma	4.3	4.3	PASS
v20 - FFFFBF	CP	0.71	0.71	PASS
v21 - FFFFBF	N	99	99	PASS
v21 - FFFFBF	Tgt_Dev	59.729	59.729	PASS
v21 - FFFFBF	SD	456.346	456.346	PASS
v21 - FFFFBF	Cur_SD	456.346	456.346	PASS
v21 - FFFFBF	MR_SD	261.622	261.622	PASS
v21 - FFFFBF	Max	2304.83	2304.83	PASS
v21 - FFFFBF	+4S	2335.114	2335.114	PASS

v21 - FFFFFFFB	+3S	1878.768	1878.768	PASS
v21 - FFFFFFFB	+1.5S	1194.248	1194.248	PASS
v21 - FFFFFFFB	Xbar	509.729	509.729	PASS
v21 - FFFFFFFB	Cur_XBar	509.729	509.729	PASS
v21 - FFFFFFFB	-1.5S	-174.79	-174.79	PASS
v21 - FFFFFFFB	-3S	-859.31	-859.31	PASS
v21 - FFFFFFFB	-4S	-1315.656	-1315.656	PASS
v21 - FFFFFFFB	Min	-860.08	-860.08	PASS
v21 - FFFFFFFB	Median	473.71	473.71	PASS
v21 - FFFFFFFB	Obser_% OSL	4.04	4.04	PASS
v21 - FFFFFFFB	Obser_PPM OSL	40404	40404	PASS
v21 - FFFFFFFB	Calc_% OSL	1.5	1.5	PASS
v21 - FFFFFFFB	Calc_PPM OSL	15000	15000	PASS
v21 - FFFFFFFB	Cr	1.3	1.3	PASS
v21 - FFFFFFFB	Tz	0.1	0.1	PASS
v21 - FFFFFFFB	Cpk	0.72	0.72	PASS
v21 - FFFFFFFB	%CV	89.527	89.527	PASS
v21 - FFFFFFFB	MR_AVG	346.213	346.213	PASS
v21 - FFFFFFFB	MR_UCL	1131.078	1131.078	PASS
v21 - FFFFFFFB	MR_UWL	738.646	738.646	PASS
v21 - FFFFFFFB	MR_LWL	-46.219	-46.219	PASS
v21 - FFFFFFFB	Sum	50463.17	50463.17	PASS
v21 - FFFFFFFB	Last_Value	2188.27	2188.27	PASS
v21 - FFFFFFFB	Sigma	4.6	4.6	PASS
v21 - FFFFFFFB	CP	0.77	0.77	PASS
v22 - SD=0 Value=USL N		100	100	PASS
v22 - SD=0 Value=USL Tgt_Dev		1050	1050	PASS
v22 - SD=0 Value=USL SD		0	0	PASS
v22 - SD=0 Value=USL Cur_SD		0	0	PASS
v22 - SD=0 Value=USL MR_SD		0	0	PASS
v22 - SD=0 Value=USL Max		1500	1500	PASS
v22 - SD=0 Value=USL +4S		1500	1500	PASS
v22 - SD=0 Value=USL +3S		1500	1500	PASS
v22 - SD=0 Value=USL +1.5S		1500	1500	PASS
v22 - SD=0 Value=USL Xbar		1500	1500	PASS
v22 - SD=0 Value=USL Cur_XBar		1500	1500	PASS
v22 - SD=0 Value=USL -1.5S		1500	1500	PASS
v22 - SD=0 Value=USL -3S		1500	1500	PASS
v22 - SD=0 Value=USL -4S		1500	1500	PASS
v22 - SD=0 Value=USL Min		1500	1500	PASS
v22 - SD=0 Value=USL Median		1500	1500	PASS
v22 - SD=0 Value=USL Obser_% OSL		0	0	PASS
v22 - SD=0 Value=USL Obser_PPM OSL		0	0	PASS
v22 - SD=0 Value=USL Calc_% OSL				PASS
v22 - SD=0 Value=USL Calc_PPM OSL				PASS
v22 - SD=0 Value=USL Cr		0	0	PASS
v22 - SD=0 Value=USL Tz		1	1	PASS

v22 - SD=0 Value=USL Cpk			PASS
v22 - SD=0 Value=USL %CV	0	0	PASS
v22 - SD=0 Value=USL MR_AVG	0	0	PASS
v22 - SD=0 Value=USL MR_UCL	0	0	PASS
v22 - SD=0 Value=USL MR_UWL	0	0	PASS
v22 - SD=0 Value=USL MR_LWL	0	0	PASS
v22 - SD=0 Value=USL Sum	150000	150000	PASS
v22 - SD=0 Value=USL Last_Value	1500	1500	PASS
v22 - SD=0 Value=USL Sigma			PASS
v22 - SD=0 Value=USL CP			PASS
v23 - SD=0 Value=UCL N	100	100	PASS
v23 - SD=0 Value=UCL Tgt_Dev	549	549	PASS
v23 - SD=0 Value=UCL SD	0	0	PASS
v23 - SD=0 Value=UCL Cur_SD	0	0	PASS
v23 - SD=0 Value=UCL MR_SD	0	0	PASS
v23 - SD=0 Value=UCL Max	999	999	PASS
v23 - SD=0 Value=UCL +4S	999	999	PASS
v23 - SD=0 Value=UCL +3S	999	999	PASS
v23 - SD=0 Value=UCL +1.5S	999	999	PASS
v23 - SD=0 Value=UCL Xbar	999	999	PASS
v23 - SD=0 Value=UCL Cur_XBar	999	999	PASS
v23 - SD=0 Value=UCL -1.5S	999	999	PASS
v23 - SD=0 Value=UCL -3S	999	999	PASS
v23 - SD=0 Value=UCL -4S	999	999	PASS
v23 - SD=0 Value=UCL Min	999	999	PASS
v23 - SD=0 Value=UCL Median	999	999	PASS
v23 - SD=0 Value=UCL Obser_% OSL	0	0	PASS
v23 - SD=0 Value=UCL Obser_PPM OSL	0	0	PASS
v23 - SD=0 Value=UCL Calc_% OSL			PASS
v23 - SD=0 Value=UCL Calc_PPM OSL			PASS
v23 - SD=0 Value=UCL Cr	0	0	PASS
v23 - SD=0 Value=UCL Tz	1	1	PASS
v23 - SD=0 Value=UCL Cpk			PASS
v23 - SD=0 Value=UCL %CV	0	0	PASS
v23 - SD=0 Value=UCL MR_AVG	0	0	PASS
v23 - SD=0 Value=UCL MR_UCL	0	0	PASS
v23 - SD=0 Value=UCL MR_UWL	0	0	PASS
v23 - SD=0 Value=UCL MR_LWL	0	0	PASS
v23 - SD=0 Value=UCL Sum	99900	99900	PASS
v23 - SD=0 Value=UCL Last_Value	999	999	PASS
v23 - SD=0 Value=UCL Sigma			PASS
v23 - SD=0 Value=UCL CP			PASS
v24 - SD=0 Above TGT N	100	100	PASS
v24 - SD=0 Above TGT Tgt_Dev	250.09	250.09	PASS
v24 - SD=0 Above TGT SD	0	0	PASS
v24 - SD=0 Above TGT Cur_SD	0	0	PASS
v24 - SD=0 Above TGT MR_SD	0	0	PASS

v24 - SD=0 Above TGT Max	700.09	700.09	PASS
v24 - SD=0 Above TGT +4S	700.09	700.09	PASS
v24 - SD=0 Above TGT +3S	700.09	700.09	PASS
v24 - SD=0 Above TGT +1.5S	700.09	700.09	PASS
v24 - SD=0 Above TGT Xbar	700.09	700.09	PASS
v24 - SD=0 Above TGT Cur_XBar	700.09	700.09	PASS
v24 - SD=0 Above TGT -1.5S	700.09	700.09	PASS
v24 - SD=0 Above TGT -3S	700.09	700.09	PASS
v24 - SD=0 Above TGT -4S	700.09	700.09	PASS
v24 - SD=0 Above TGT Min	700.09	700.09	PASS
v24 - SD=0 Above TGT Median	700.09	700.09	PASS
v24 - SD=0 Above TGT Obser_% OSL	0	0	PASS
v24 - SD=0 Above TGT Obser_PPM OSL	0	0	PASS
v24 - SD=0 Above TGT Calc_% OSL			PASS
v24 - SD=0 Above TGT Calc_PPM OSL			PASS
v24 - SD=0 Above TGT Cr	0	0	PASS
v24 - SD=0 Above TGT Tz	1	1	PASS
v24 - SD=0 Above TGT Cpk			PASS
v24 - SD=0 Above TGT %CV	0	0	PASS
v24 - SD=0 Above TGT MR_AVG	0	0	PASS
v24 - SD=0 Above TGT MR_UCL	0	0	PASS
v24 - SD=0 Above TGT MR_UWL	0	0	PASS
v24 - SD=0 Above TGT MR_LWL	0	0	PASS
v24 - SD=0 Above TGT Sum	70009	70009	PASS
v24 - SD=0 Above TGT Last_Value	700.09	700.09	PASS
v24 - SD=0 Above TGT Sigma			PASS
v24 - SD=0 Above TGT CP			PASS
v25 - SD=0 Value=TGT N	100	100	PASS
v25 - SD=0 Value=TGT Tgt_Dev	0	0	PASS
v25 - SD=0 Value=TGT SD	0	0	PASS
v25 - SD=0 Value=TGT Cur_SD	0	0	PASS
v25 - SD=0 Value=TGT MR_SD	0	0	PASS
v25 - SD=0 Value=TGT Max	450	450	PASS
v25 - SD=0 Value=TGT +4S	450	450	PASS
v25 - SD=0 Value=TGT +3S	450	450	PASS
v25 - SD=0 Value=TGT +1.5S	450	450	PASS
v25 - SD=0 Value=TGT Xbar	450	450	PASS
v25 - SD=0 Value=TGT Cur_XBar	450	450	PASS
v25 - SD=0 Value=TGT -1.5S	450	450	PASS
v25 - SD=0 Value=TGT -3S	450	450	PASS
v25 - SD=0 Value=TGT -4S	450	450	PASS
v25 - SD=0 Value=TGT Min	450	450	PASS
v25 - SD=0 Value=TGT Median	450	450	PASS
v25 - SD=0 Value=TGT Obser_% OSL	0	0	PASS
v25 - SD=0 Value=TGT Obser_PPM OSL	0	0	PASS
v25 - SD=0 Value=TGT Calc_% OSL			PASS
v25 - SD=0 Value=TGT Calc_PPM OSL			PASS

v25 - SD=0 Value=TGT Cr	0	0	PASS
v25 - SD=0 Value=TGT Tz	0	0	PASS
v25 - SD=0 Value=TGT Cpk			PASS
v25 - SD=0 Value=TGT %CV	0	0	PASS
v25 - SD=0 Value=TGT MR_AVG	0	0	PASS
v25 - SD=0 Value=TGT MR_UCL	0	0	PASS
v25 - SD=0 Value=TGT MR_UWL	0	0	PASS
v25 - SD=0 Value=TGT MR_LWL	0	0	PASS
v25 - SD=0 Value=TGT Sum	45000	45000	PASS
v25 - SD=0 Value=TGT Last_Value	450	450	PASS
v25 - SD=0 Value=TGT Sigma			PASS
v25 - SD=0 Value=TGT CP			PASS
v26 - SD=0 Below TGT N	100	100	PASS
v26 - SD=0 Below TGT Tgt_Dev	-250.09	-250.09	PASS
v26 - SD=0 Below TGT SD	0	0	PASS
v26 - SD=0 Below TGT Cur_SD	0	0	PASS
v26 - SD=0 Below TGT MR_SD	0	0	PASS
v26 - SD=0 Below TGT Max	199.91	199.91	PASS
v26 - SD=0 Below TGT +4S	199.91	199.91	PASS
v26 - SD=0 Below TGT +3S	199.91	199.91	PASS
v26 - SD=0 Below TGT +1.5S	199.91	199.91	PASS
v26 - SD=0 Below TGT Xbar	199.91	199.91	PASS
v26 - SD=0 Below TGT Cur_XBar	199.91	199.91	PASS
v26 - SD=0 Below TGT -1.5S	199.91	199.91	PASS
v26 - SD=0 Below TGT -3S	199.91	199.91	PASS
v26 - SD=0 Below TGT -4S	199.91	199.91	PASS
v26 - SD=0 Below TGT Min	199.91	199.91	PASS
v26 - SD=0 Below TGT Median	199.91	199.91	PASS
v26 - SD=0 Below TGT Obser_% OSL	0	0	PASS
v26 - SD=0 Below TGT Obser_PPM OSL	0	0	PASS
v26 - SD=0 Below TGT Calc_% OSL			PASS
v26 - SD=0 Below TGT Calc_PPM OSL			PASS
v26 - SD=0 Below TGT Cr	0	0	PASS
v26 - SD=0 Below TGT Tz	-1	-1	PASS
v26 - SD=0 Below TGT Cpk			PASS
v26 - SD=0 Below TGT %CV	0	0	PASS
v26 - SD=0 Below TGT MR_AVG	0	0	PASS
v26 - SD=0 Below TGT MR_UCL	0	0	PASS
v26 - SD=0 Below TGT MR_UWL	0	0	PASS
v26 - SD=0 Below TGT MR_LWL	0	0	PASS
v26 - SD=0 Below TGT Sum	19991	19991	PASS
v26 - SD=0 Below TGT Last_Value	199.91	199.91	PASS
v26 - SD=0 Below TGT Sigma			PASS
v26 - SD=0 Below TGT CP			PASS
v27 - SD=0 Value=LCL N	100	100	PASS
v27 - SD=0 Value=LCL Tgt_Dev	-450	-450	PASS
v27 - SD=0 Value=LCL SD	0	0	PASS

v27 - SD=0 Value=LCL Cur_SD	0	0	PASS
v27 - SD=0 Value=LCL MR_SD	0	0	PASS
v27 - SD=0 Value=LCL Max	0	0	PASS
v27 - SD=0 Value=LCL +4S	0	0	PASS
v27 - SD=0 Value=LCL +3S	0	0	PASS
v27 - SD=0 Value=LCL +1.5S	0	0	PASS
v27 - SD=0 Value=LCL Xbar	0	0	PASS
v27 - SD=0 Value=LCL Cur_XBar	0	0	PASS
v27 - SD=0 Value=LCL -1.5S	0	0	PASS
v27 - SD=0 Value=LCL -3S	0	0	PASS
v27 - SD=0 Value=LCL -4S	0	0	PASS
v27 - SD=0 Value=LCL Min	0	0	PASS
v27 - SD=0 Value=LCL Median	0	0	PASS
v27 - SD=0 Value=LCL Obser_% OSL	0	0	PASS
v27 - SD=0 Value=LCL Obser_PPM OSL	0	0	PASS
v27 - SD=0 Value=LCL Calc_% OSL			PASS
v27 - SD=0 Value=LCL Calc_PPM OSL			PASS
v27 - SD=0 Value=LCL Cr	0	0	PASS
v27 - SD=0 Value=LCL Tz	-1	-1	PASS
v27 - SD=0 Value=LCL Cpk			PASS
v27 - SD=0 Value=LCL %CV	0	0	PASS
v27 - SD=0 Value=LCL MR_AVG	0	0	PASS
v27 - SD=0 Value=LCL MR_UCL	0	0	PASS
v27 - SD=0 Value=LCL MR_UWL	0	0	PASS
v27 - SD=0 Value=LCL MR_LWL	0	0	PASS
v27 - SD=0 Value=LCL Sum	0	0	PASS
v27 - SD=0 Value=LCL Last_Value	0	0	PASS
v27 - SD=0 Value=LCL Sigma			PASS
v27 - SD=0 Value=LCL CP			PASS
v28 - SD=0 Value=LSL N	100	100	PASS
v28 - SD=0 Value=LSL Tgt_Dev	-900	-900	PASS
v28 - SD=0 Value=LSL SD	0	0	PASS
v28 - SD=0 Value=LSL Cur_SD	0	0	PASS
v28 - SD=0 Value=LSL MR_SD	0	0	PASS
v28 - SD=0 Value=LSL Max	-450	-450	PASS
v28 - SD=0 Value=LSL +4S	-450	-450	PASS
v28 - SD=0 Value=LSL +3S	-450	-450	PASS
v28 - SD=0 Value=LSL +1.5S	-450	-450	PASS
v28 - SD=0 Value=LSL Xbar	-450	-450	PASS
v28 - SD=0 Value=LSL Cur_XBar	-450	-450	PASS
v28 - SD=0 Value=LSL -1.5S	-450	-450	PASS
v28 - SD=0 Value=LSL -3S	-450	-450	PASS
v28 - SD=0 Value=LSL -4S	-450	-450	PASS
v28 - SD=0 Value=LSL Min	-450	-450	PASS
v28 - SD=0 Value=LSL Median	-450	-450	PASS
v28 - SD=0 Value=LSL Obser_% OSL	0	0	PASS
v28 - SD=0 Value=LSL Obser_PPM OSL	0	0	PASS

v28 - SD=0 Value=LSL	Calc_% OSL			PASS
v28 - SD=0 Value=LSL	Calc_PPM OSL			PASS
v28 - SD=0 Value=LSL	Cr	0	0	PASS
v28 - SD=0 Value=LSL	Tz	-1	-1	PASS
v28 - SD=0 Value=LSL	Cpk			PASS
v28 - SD=0 Value=LSL	%CV	0	0	PASS
v28 - SD=0 Value=LSL	MR_AVG	0	0	PASS
v28 - SD=0 Value=LSL	MR_UCL	0	0	PASS
v28 - SD=0 Value=LSL	MR_UWL	0	0	PASS
v28 - SD=0 Value=LSL	MR_LWL	0	0	PASS
v28 - SD=0 Value=LSL	Sum	-45000	-45000	PASS
v28 - SD=0 Value=LSL	Last_Value	-450	-450	PASS
v28 - SD=0 Value=LSL	Sigma			PASS
v28 - SD=0 Value=LSL	CP			PASS
v29 - SD=0 Calc Limits	N	100	100	PASS
v29 - SD=0 Calc Limits	Tgt_Dev			PASS
v29 - SD=0 Calc Limits	SD	0	0	PASS
v29 - SD=0 Calc Limits	Cur_SD	0	0	PASS
v29 - SD=0 Calc Limits	MR_SD	0	0	PASS
v29 - SD=0 Calc Limits	Max	1499.99	1499.99	PASS
v29 - SD=0 Calc Limits	+4S	1499.99	1499.99	PASS
v29 - SD=0 Calc Limits	+3S	1499.99	1499.99	PASS
v29 - SD=0 Calc Limits	+1.5S	1499.99	1499.99	PASS
v29 - SD=0 Calc Limits	Xbar	1499.99	1499.99	PASS
v29 - SD=0 Calc Limits	Cur_XBar	1499.99	1499.99	PASS
v29 - SD=0 Calc Limits	-1.5S	1499.99	1499.99	PASS
v29 - SD=0 Calc Limits	-3S	1499.99	1499.99	PASS
v29 - SD=0 Calc Limits	-4S	1499.99	1499.99	PASS
v29 - SD=0 Calc Limits	Min	1499.99	1499.99	PASS
v29 - SD=0 Calc Limits	Median	1499.99	1499.99	PASS
v29 - SD=0 Calc Limits	Obser_% OSL			PASS
v29 - SD=0 Calc Limits	Obser_PPM OSL			PASS
v29 - SD=0 Calc Limits	Calc_% OSL			PASS
v29 - SD=0 Calc Limits	Calc_PPM OSL			PASS
v29 - SD=0 Calc Limits	Cr			PASS
v29 - SD=0 Calc Limits	Tz			PASS
v29 - SD=0 Calc Limits	Cpk			PASS
v29 - SD=0 Calc Limits	%CV	0	0	PASS
v29 - SD=0 Calc Limits	MR_AVG	0	0	PASS
v29 - SD=0 Calc Limits	MR_UCL	0	0	PASS
v29 - SD=0 Calc Limits	MR_UWL	0	0	PASS
v29 - SD=0 Calc Limits	MR_LWL	0	0	PASS
v29 - SD=0 Calc Limits	Sum	149999	149999	PASS
v29 - SD=0 Calc Limits	Last_Value	1499.99	1499.99	PASS
v29 - SD=0 Calc Limits	Sigma			PASS
v29 - SD=0 Calc Limits	CP			PASS

Pass: 864 Fail: 0 Formating: 0

Known Issues with This Release

QW 5.00.511, addresses all known issues reported since the last general release with the exception of:

1. Printing charts under Windows ME
2. This version of QW5.0 runs under Asian versions of Windows. However, data entered using the Asian double character set is not supported.

Busitech is choosing to go forward with this release of QW 5 to replace the previous version due to significant advantages of this release. Any outstanding items will be prioritized and scheduled for the next or future release of QW 5.

The purpose of listing any known discrepancies is to ensure that:

1. The customer understands these discrepancies and properly considers them in their application.
2. Busitech has documentation on current versions discrepancies that will be prioritized and scheduled for the next of future release of QW 5.

Performance Qualification –PQ - not applicable or by Customer if needed.

QW 5.0 version 5.00.0511 has been properly tested and checked as per the validation protocol. All results match success criteria. All known issues have been identified and communicated to Busitech technical resources to be resolved by the next release.

Validated by:



Noel Windle
Busitech Validation Leader

We indicate that we have reviewed the information and concur with the indicated decision to consider QW 5.0 version 5.00.0511 IQ/OQ validated.



Ray St Denis
Busitech
Technical Director

Date: August 23, 2004