

Documents Made Available to the NRC Staff

MHI Flowcharts for the Implementation of Computer Software Procedures - Commercial Codes

- Table 1-01a Computer Software Procedure - Application of Existing Computer Software (Abaqus 6.7-1 for RCL Design).
- Table 1-01b Computer Software Procedure - Application of Existing Computer Software (Abaqus 6.7-1 for Piping design).
- Table 1-01c-1 Computer Software Control Procedure – Development and Modification (ASMETEMP Ver. 1, CLASSB2 Ver. 0, CLASS3DX Ver. 0, EVALSEFAV Ver. 7, RIGHT Ver. 0, SABRINA Ver. 0).
- Table 1-01c-2 Computer Software Control Procedure – Software acquired by methods not in accordance with department standard (Abaqus Ver. 6.7-1, CLASS2D Ver. 4, CLASS3D Ver. 4, EB3500 Ver. 3, EDITSTRS Ver. 4, EVALPRI Ver. 7, EVALIRAMJ Ver. 3, MCPEVALPRI Ver. 2, MCPEVALSI Ver. 5, MCPFEM Ver. 2, RATCHET Ver. 8).
- Table 1-01d Computer Software Control Procedure - Software acquired by methods not in accordance with group standard (Abaqus 6.7-1 for RCP Design).
- Table 1-02a Computer Software Procedure - Application of Existing Computer Software (ANSYS 11.0 for RV and Internals Design).
- Table 1-2b Computer Software Control Procedure - Software acquired by methods not in accordance with group standard [ANSYS 11.0 for Component Design].
- Table 1-02c Computer Software Procedure - Application of Existing Computer Software (ANSYS 12.1 for RCL Design).
- Table 1-02c Computer Software Procedure - Application of Existing Computer Software (ANSYS 12.1 for RCL Design).
- Table 1-02d Computer Software Procedure - Application of Existing Computer Software (ANSYS 12.1 for SG Internal Design).
- Table 1-02e Computer Software Control Procedure - Software acquired by methods not in accordance with group standard (ANSYS 12.1 for RCP Design).
- Table 1-04 Computer Software Procedure [GOTHIC].
- Table 1-05 Computer Software Procedure [MULTIPLEX].
- Table 1-06 Computer Software Procedure - Application of Existing Computer Software [NASTRAN].
- Table 1-07 Computer Software Procedure - Application of Existing Computer Software [PIPESTRESS].

- Table 1-08 Computer Software Registration Procedure -Procured Computer Software [E_PD STRUDDLE].
- Table 1-09 Computer Software Control Procedure – Development and Modification (Code Name: PICEP).
- Table 1-10 Computer Software Registration Procedure -Procured Computer Software [STAAD PRO].

Note 1: A list of program flowcharts is provided above. The flowcharts themselves contain MHI proprietary information and therefore are not available to the public.

Note 2: MHI chose to label the flowcharts as tables even though they are actually figures. The audit report retains the table designation for consistency.

Note 3: The flowchart numbering scheme is the same as the one used as during the audit. As Table 1-03 was skipped during the audit, it is also skipped in the audit report.

MHI Flowcharts for the Implementation of Computer Software Procedures - MHI Internal Codes:

- Table 1-1 Computer Software Control Procedure – Development and Modification (ASMETEMP Ver. 1, CLASSB2 Ver. 0, CLASS3DX Ver. 0, EVALSEFAV Ver. 7, RIGHT Ver. 0, SABRINA Ver. 0).
- Table 1-2 Computer Software Control Procedure – Software acquired by methods not in accordance with department standard (Abaqus Ver. 6.7-1, CLASS2D Ver. 4, CLASS3D Ver. 4, EB3500 Ver. 3, EDITSTRS Ver. 4, EVALPRI Ver. 7, EVALIRAMJ Ver. 3, MCPEVALPRI Ver. 2, MCPEVALSI Ver. 5, MCPFEM Ver. 2, RATCHET Ver. 8).
- Table 1-3 Computer Software Control Procedure - Development and Modification [House Codes]

Note 1: A list of program flowcharts is provided above. The flowcharts themselves contain MHI proprietary information and therefore are not available to the public.

Note 2: MHI chose to label the flowcharts as tables even though they are actually figures. The audit report retains the table designation for consistency.

MHI Piping Documents Made Available for Audit:

- Table 2-1 ASME Piping & Support Design Specifications.
- Table 2-2 Piping Stress Analysis Documents.
- Table 2-3 Environmental Assisted Fatigue (EAF) Documents.
- Table 2-4 Piping Inputs and Reference Documents.

Table 2-5 Reference Documents for Pressurizer Surge Line and Main Steam Piping Analysis.

Table 2-6 Other Audited Documents.

Note 1: The above lists tables that are included later in this enclosure. The tables list the actual documents made available for audit.

MHI Quality Assurance Documents for Software Control and Design Application Made Available for Audit

Table 3-01a List of Abaqus 6.7-1 (RCL Design) Quality Assurance Documents for Software Control and Design Application.

Table 3-01b List of Abaqus 6.7-1 (Piping Design) Quality Assurance Documents for Software Control and Design Application.

Table 3-01c List of Abaqus 6.7-1 (Component Design) Quality Assurance Documents for Software Control and Design.

Table 3-01d List of Abaqus 6.7-1 (RCP Design) Quality Assurance Documents for Software Control and Design Application.

Table 3-02a List of ANSYS 11.0 (RV and Internals Design) Quality Assurance Documents for Software Control and Design Application.

Table 3-02b List of ANSYS 11.0 (Component Design) Quality Assurance Documents for Software Control and Design Application.

Table 3-02c List of ANSYS 12.1 (RCL Design) Quality Assurance Documents for Software Control and Design Application.

Table 3-02d List of ANSYS 12.1 (SG Internal Design) Quality Assurance Documents for Software Control and Design Application.

Table 3-02e List of ANSYS 12.1 (RCP Design) Quality Assurance Documents for Software Control and Design Application.

Table 3-04 List of GOTHIC Quality Assurance Documents for Software Control and Design Application.

Table 3-05 List of MULTIFLEX Quality Assurance Documents for Software Control and Design Application.

Table 3-06 List of NX-NASTRAN 5.0 Quality Assurance Documents for Software Control and Design Application.

Table 3-07 List of PIPESTRESS 3.6.2 Quality Assurance Documents for Software Control and Design Application.

Table 3-08	List of E/PD STRUDL Quality Assurance Documents for Software Control and Design Application.
Table 3-09	List of PICEP (Version 6/30/87) Quality Assurance Documents for Software Control and Design Application.
Table 3-10	List of STAAD.Pro Version 8i Quality Assurance Documents for Software Control and Design Application.
Table 3-11	List of P4TEDIA Version 1.3 Quality Assurance Documents for Software Control and Design Application.
Table 3-12	List of P2DLOP Version 1.0 Quality Assurance Documents for Software Control and Design Application.
Table 3-13	List of CEFF-N Version 1.0 Quality Assurance Documents for Software Control and Design Application.
Table 3-14	List of ASMETEMP Version 1 Quality Assurance Documents for Software Control and Design Application.
Table 3-15	List of CLASSB2 Version 0 Quality Assurance Documents for Software Control and Design Application .
Table 3-16	List of CLASS2D Version 4 Quality Assurance Documents for Software Control and Design Application .
Table 3-17	List of CLASS3D Version 4 Quality Assurance Documents for Software Control and Design Application.
Table 3-18	List of CLASS3DX Version 0.0 Quality Assurance Documents for Software Control and Design Application.
Table 3-19	List of EB3500 Version 3 Quality Assurance Documents for Software Control and Design Application.
Table 3-20	List of EDITSTRS Version 4 Quality Assurance Documents for Software Control and Design Application.
Table 3-21	List of EVALPRI Version 7 Quality Assurance Documents for Software Control and Design Application.
Table 3-22a	List of EVALSEFAV Version 7 Quality Assurance Documents for Software Control and Design Application.
Table 3-22b	List of EVALSEFAV Version 8 Quality Assurance Documents for Software Control and Design Application.
Table 3-23	List of EVALIRAMJ Version 3 Quality Assurance Documents for Software Control and Design Application.

- Table 3-24 List of MCPEVALPRI Version 2 Quality Assurance Documents for Software Control and Design Application.
- Table 3-25 List of MCPEVALSI Version 5 Quality Assurance Documents for Software Control and Design Application.
- Table 3-26 List of MCPFEM Version 2/Version 3 Quality Assurance Documents for Software Control and Design Application.
- Table 3-27 List of RATCHET Version 8 Quality Assurance Documents for Software Control and Design Application.
- Table 3-28 List of RIGHT Version 0.0 Quality Assurance Documents for Software Control and Design Application.
- Table 3-29 List of SABRINA Version 0.0 Quality Assurance Documents for Software Control and Design Application.
- Table 3-30 List of US Cherry Version 1 Quality Assurance Documents for Software Control and Design Application.

Note 1: The above lists tables that are included later in this enclosure. The tables list the actual documents made available for audit.

Note 2: The Table numbering scheme is the same as the one used as during the audit. As Table 3-03 was skipped during the audit, it is also skipped in the audit report.

MHI Piping Documents Made Available for Audit

Table 2-1 ASME Piping & Support Design Specifications

Audit Scope	Doc No.	Rev.	Date	Title
RCL Piping	N0-F700L01	6	7/4/2011	Reactor Coolant Loop Piping Design Specification
Surge Piping	N0-GB00002	4	3/8/2011	Class 1 Piping ASME Design Specification (Excluding Reactor Coolant Loop Piping)
MS Piping	N0-GB00004	4	3/8/2011	Class 2 Main Steam Piping ASME Design Specification
Piping Support	N0-GE00001	2	7/29/2011	Design Specification for Safety Related Pipe Supports inside the PCCV for Decoupled Analysis Methods

Table 2-2 Piping Stress Analysis Documents

Audit Scope	Doc No.	Rev.	Date	Title
RCL Piping	N0-F700M03	4	8/11/2011	Reactor Coolant Loop Piping Stress Analysis Report
Surge Piping	N0-GB00202	2	8/12/2011	Pressurizer Surge Line Stress Analysis Report
	N0-GB00219	0	8/18/2011	Temperature Distribution Analysis Report for Pressurizer Surge Line
	N0-GB00221	0	8/19/2011	Local Stress Evaluation of Thermal Stratification in Pressurizer Surge Line
MS Piping	N0-GB00203	4	8/12/2011	Main Steam Piping inside Containment Vessel Stress Analysis Report
	N0-GB00212	2	8/12/2011	Summary Report on Steam Hammer Analysis for Main Steam Piping

Table 2-3 Environmental Assisted Fatigue (EAF) Documents

Audit Scope	Doc No.	Rev.	Date	Title
RCL Piping	N0-F700M04	2	8/11/2011	Reactor Coolant Loop Piping Survey for Environmental Fatigue Evaluation
Surge Piping	N0-GB00222	0	8/12/2011	Environmental Fatigue Analysis Report for Pressurizer Surge Line

Table 2-4 Piping Inputs and Reference Documents

Audit Scope	Doc No.	Rev.	Date	Title
RCL Piping	N0-EE12001	5	3/31/2011	Class 1 Equipment Design Transient
	N0-EF10003	4	11/19/2010	Design Load for Reactor Coolant Loop Components and Component Supports on Service Level A and B (Thermal and Dead Load)
	N0-EF10013	4	11/26/2010	Design Seismic Loads for Reactor Coolant Loop Components and Component Supports
	N0-EF10014	5	11/30/2010	Design Accident Loads for Reactor Coolant Loop Components and Component Supports on Service Level C and D
	N0-EF10031	6	12/28/2010	Nozzle Loads for ASME Class 1, 2 Components
	N0-F700L11	4	1/17/2011	Reactor Coolant Loop Piping Design Drawings
	N0-F700M20	1	4/22/2011	Reactor Coolant Loop Piping Heat Transfer Coefficients for Stress Analysis
	N0-FB10L01	3	2/3/2011	General Design Specification for Class 1 Components
	N0-EE12001	5	3/31/2011	Class 1 Equipment Design Transient
	N0-EF10030	0	12/13/2010	Accident Displacement of RCS Loop
Surge & MS Piping	N0-GB00216	0	12/14/2010	Pressurizer Model for Piping Analysis and Eigen Value Analysis Result (PIPESTRESS)
	N0-GB00005	5	3/4/2011	Input Package for Stress Analysis of RCL Branch Piping and Main Steam Piping
	N0-GB00218	2	7/29/2011	Input Data for Pipe Support Design of Pressurizer Surge Line and Main Steam Lines
Piping Support	N0-GE07001	0	8/4/2011	NI Pipe Support Drawings (NMS)
	N0-GE10001	0	8/4/2011	NI Pipe Support Drawings (RWS)

Table 2-5 Reference Documents for Pressurizer Surge Line and Main Steam Piping Analysis

Doc No.	Rev	Date	Title
N0-EE10011	6	10/21/2010	Reactor Coolant System Piping and Instrument Diagram (1)
N0-EE10012	6	10/21/2010	Reactor Coolant System Piping and Instrument Diagram (2)
N0-EE10071	7	10/21/2010	Main Steam Supply System Piping and Instrument Diagram (1)
N0-EE11010	4	11/12/2010	Reactor Coolant System Design Package
N0-EE11070	5	11/24/2010	Main Steam System Design Package
N0-EE12001	5	3/31/2011	Class 1 Equipment Design Transient
4CS-UAP-20080065	2	8/2/2010	ECC/CS Sump Strainer Design for the Consideration on Insulation Debris/The Insulation Debris Coverage and Insulation Specification Inside CV
4CS-UAP-20080067	0	9/5/2008	Permanent Pipe Shielding Installation Coverage
N0-EH71001	6	1/20/2011	Piping Isometric of ASME Class-1 Pipes and MSS/FWS Pipes Inside CV (for piping stress analysis)
N0-CF00004	3	2/25/2011	Piping Design Criteria
4DS-UAP-20080125	3	1/12/2011	Valve and Fitting Data for Technical Report (Piping Stress Analysis)
4DS-UAP-20080075	1	12/1/2008	PCCV Maximum Displacement in Each Load Condition
N0-GB00216	0	12/14/2010	Pressurizer Model for Piping Analysis and Eigen Value Analysis Result (PIPESTRESS)
N0-GB00001	5	10/19/2010	Nuclear Island Piping Line Specification (Safety)
N0-GB00010	5	10/19/2010	Nuclear Island Piping Line Specification (Non-Safety)
N0-GB00007	3	10/19/2010	Nuclear Island – Design Criteria of Pipe Bend
ZFT-UAP-20080034	1	9/1/2008	As to the Insulation Thickness and Insulation Weight List for Response to the Technical Report (Rev.1)
N0-F700L11	4	1/17/2011	Reactor Coolant Loop Piping Design Drawings
N0-EF00001	2	12/27/2010	In-Structure Response Spectra of Reactor Building for Standard Design
4DS-NA3-2010006	1	11/12/2010	In-Structure Response Spectra of Reactor Building for North Anna Unit 3
N0-EF10028	4	12/3/2010	US-APWR Standard Design In-Structure Response Spectra of Reactor Coolant Loop Components
4DS-NA3-20100011	0	6/16/2010	North Anna Unit 3 In-Structure Response Spectra of Reactor Coolant Loop Components
N0-EF10015	1	12/1/2010	Thermal Expansion Displacement and Deadweight Displacement of RCS Loop
4DS-UAP-20100092	0	12/10/2010	US-APWR Seismic Displacement for Piping Analysis
4DS-NA3-20100020	0	12/10/2010	North Anna Unit 3 Seismic Displacement for Piping Analysis
4DS-UAP-20100093	0	12/9/2010	In-Structure Response Spectra at Service Level C and D for Piping Analysis
N0-EF10030	0	12/13/2010	Accident Displacement of RCS Loop
4DS-UAP-20110018	0	1/21/2011	US-APWR Time History Seismic Displacement for Main Steam Piping Analysis

Doc No.	Rev	Date	Title
4DS-UAP-20110019	0	1/20/2011	US-APWR In-Structure Response Spectra (ISRS) for Main Steam Piping Analysis
4DS-NA3-20110002	0	1/21/2011	North Anna Unit 3 Time History Seismic Displacement for Main Steam Piping Analysis
4DS-NA3-20110003	0	1/20/2011	North Anna Unit 3 In-Structure Response Spectra (ISRS) for Main Steam Piping Analysis
4DS-UAP-20110012	0	3/4/2011	Pressurizer Surge Line (RC01) Spring Rate and Weight Information Sheet
4DS-UAP-20110013	0	3/4/2011	Main Steam A Line (MS01) Spring Rate and Weight Information Sheet
4DS-UAP-20110014	0	3/4/2011	Main Steam B Line (MS02) Spring Rate and Weight Information Sheet

Table 2-6 Other Audited Documents

Audit Scope	Doc No.	Rev.	Date	Title
Control Rod Drive Mechanism	N0-EC50001	3	12/20/2010	Control Rod Drive Mechanism Design Specification
Quality Assurance Program Description	PQD-HD-19005	2	4/1/2011	Quality Assurance Program Description for Design Certification of the US-APWR

MHI Quality Assurance Documents for Software Control and Design Application Made Available for Audit

Table 3-01a List of Abaqus 6.7-1 (RCL Design) Quality Assurance Documents for Software Control and Design Application

Audit Scope	Doc No.	Rev.	Date	Title
1. Software Design	—	—	—	—
2. Acceptance Testing	—	—	—	—
3. Verification and Validation	08-SA-003	0	2/29/2008	US-APWR Validation and Installation Verification Plan for Abaqus/Standard Ver.6.7-1
	08-SA-004	0	2/29/2008	US-APWR Validation and Installation Verification Report for Abaqus/Standard Ver.6.7-1
4. Installation and Checkout	08-SA-003	0	2/29/2008	US-APWR Validation and Installation Verification Plan for Abaqus/Standard Ver.6.7-1
	08-SA-004	0	2/29/2008	US-APWR Validation and Installation Verification Report for Abaqus/Standard Ver.6.7-1
5. User Documentation	Abaqus Ver.6.7 Manual	0	—	Abaqus Ver.6.7 Manual
6. Control of Operation and Maintenance	QA-10-SSED-002	1	2/28/2011	Export Projects Computer Software List
7. In Use	11-SSDG-016	0	8/2/2011	US-APWR In-use Verification Check Report for Abaqus 6.7-1
8. Error Reporting	11-SSDG-021	0	8/11/2011	Abaqus 6.7-1 Bugs Report
Quality Assurance Procedure	EDC Standard 409	5	11/20/2007	Export Projects Quality Assurance Program Description
	MNEC SOP-421	13	11/12/2010	Export Projects Quality Assurance Program Description

Table 3-01b List of Abaqus 6.7-1 (Piping Design) Quality Assurance Documents for Software Control and Design Application

Audit Scope	Doc No.	Rev.	Date	Title
1. Software Design	—	—	—	—
2. Acceptance Testing	—	—	—	—
3. Verification and Validation	QA-09-配管G-036	0	10/23/2009	Software Installation Test Plan ABAQUS Version 6.7-1 (Windows/x86-64)
	QA-09-配管G-037	0	11/4/2009	Software Results of Installation Tests ABAQUS Version 6.7-1 (Windows/x86-64)
4. Installation and Checkout	QA-09-配管G-036	0	10/23/2009	Software Installation Test Plan ABAQUS Version 6.7-1 (Windows/x86-64)
	QA-09-配管G-037	0	11/4/2009	Software Results of Installation Tests ABAQUS Version 6.7-1 (Windows/x86-64)
5. User Documentation	—	—	—	ABAQUS Help System (On-Line)
6. Control of Operation and Maintenance	QA-09-構安部-006	6	9/17/2010	Export Projects Computer Software List
7. In Use	QA-11-配管G-011	0	4/13/2011	Software ABAQUS Version 6.7-1 (Windows/x86-64) Results of In-Use Check
8. Error Reporting	QA-10-配管G-008	5	5/12/2011	Software ABAQUS Version 6.7-1 (Windows/x86-64) Bug Report Check Result
Quality Assurance Procedure	MNEC SOP-421	9	7/31/2009	Export Projects Quality Assurance Program Description
	MNEC SOP-421	12	9/1/2010	Export Projects Quality Assurance Program Description
	MNEC SOP-421	13	11/12/2010	Export Projects Quality Assurance Program Description

Table 3-01c List of Abaqus 6.7-1 (Component Design) Quality Assurance Documents for Software Control and Design Application

Audit Scope	Doc No.	Rev.	Date	Title
1. Software Design	—	—	—	—
2. Acceptance Testing	KB-C/V-049	3	8/11/2011	Computer Software Validation and Installation Verification Report for ABAQUS Standard Version 6.7-1
3. Verification and Validation	KB-C/V-316	0	8/8/2011	Computer Software Validation Plan for ABAQUS Standard Version 6.7-1
	KB-C/V-049	3	8/11/2011	Computer Software Validation and Installation Verification Report for ABAQUS Standard Version 6.7-1
4. Installation and Checkout	KB-C/V-049	3	8/11/2011	Computer Software Validation and Installation Verification Report for ABAQUS Standard Version 6.7-1
5. User Documentation	—	—	—	—
6. Control of Operation and Maintenance	KB-C/V-002	12	7/14/2011	COMPUTER SOFTWARE LIST for ASME Code Section III Division 1 Construction Activities
7. In Use	KB-C/V-057	5	6/14/2010	Computer Software In-Use Check Sheet
8. Error Reporting	—	—	—	—
Quality Assurance Procedure*	5BB60-N08	0	6/2/2011	Procedure for Development and Control of Computer Software

* Document identified as the applicable Quality Assurance procedure but not made available for audit.

Table 3-01d List of Abaqus 6.7-1 (RCP Design) Quality Assurance Documents for Software Control and Design Application

Audit Scope	Doc No.	Rev.	Date	Title
1. Software Design	—	—	—	—
2. Acceptance Testing	—	—	—	—
3. Verification and Validation	NPE11-386	0	1/19/2011	Computer Software Validation Plan for ABAQUS Standard Version 6.7-1
	NPE09-100	0	3/29/2009	Computer Software Validation and Installation Verification Report for ABAQUS Standard Version 6.7-1
	NPE11-387	0	1/21/2011	Computer Software Validation Report for ABAQUS Standard Version 6.7-1
4. Installation and Checkout	NPE09-100	0	3/29/2009	Computer Software Validation and Installation Verification Report for ABAQUS Standard Version 6.7-1
	—	—	—	—
5. User Documentation	—	—	—	—
6. Control of Operation and Maintenance	NPE10-258	0	12/24/2010	Computer Software List
	—	—	—	—
7. In Use	—	—	—	—
8. Error Reporting	—	—	—	—
	—	—	—	—
Quality Assurance Procedure	SS-B-HG-N03	7	6/3/2011	Procedure for Test of Computer Software Used in ASME Job
	—	—	—	—

Table 3-02a List of ANSYS 11.0 (Internals Design) Quality Assurance Documents for Software Control and Design Application

Audit Scope	Doc No.	Rev.	Date	Title
1. Software Design	—	—	—	—
	—	—	—	—
2. Acceptance Testing	—	—	—	—
	—	—	—	—
3. Verification and Validation	07-KSC-511	6	5/11/2009	US-APWR Computer Software Installation Verification Plan Code Name : ANSYS Ver11.0
	07-KSC-512	6	5/21/2009	US-APWR Computer Software Installation Verification Report Code Name : ANSYS Ver11.0
4. Installation and Checkout	07-KSC-511	6	5/11/2009	US-APWR Computer Software Installation Verification Plan Code Name : ANSYS Ver11.0
	07-KSC-512	6	5/21/2009	US-APWR Computer Software Installation Verification Report Code Name : ANSYS Ver11.0
5. User Documentation	—	—	—	ANSYS Help System (On-Line)
	—	—	—	—
6. Control of Operation and Maintenance	QA-11-SSED-013	2	7/26/2011	US-APWR Computer Software List
	—	—	—	—
7. In Use	09-KSC-001	2	3/3/2011	Computer Software Third time In Used Check Report <ANSYS Mechanical Ver11.0 (Kobe STAR Machine)>
	—	—	—	—
8. Error Reporting	08-KSC-036	3	2/23/2011	ANSYS Release 11.0 Class3 Error Report
	—	—	—	—
Quality Assurance Procedure	MNEC SOP-421	13	11/12/2010	Export Projects Quality Assurance Program Description
	EDC Standard 409	8	7/7/2008	Export Projects Quality Assurance Program Description

Table 3-02b List of ANSYS 11.0 (Component Design) Quality Assurance Documents for Software Control and Design Application

Audit Scope	Doc No.	Rev.	Date	Title
1. Software Design	—	—	—	—
2. Acceptance Testing	WJS15083	0	3/12/2009	Validation and Installation plan for ANSYS(Eigenvalue analysis, Stress analysis, Response spectrum analysis)
	WJS15084	0	3/17/2009	Validation and Installation result for ANSYS(Eigenvalue analysis, Stress analysis, Response spectrum analysis)
	WJS18447	0	8/5/2011	English translation of WJS15083 and WJS15084
3. Verification and Validation	WJS15083	0	3/12/2009	Validation and Installation plan for ANSYS(Eigenvalue analysis, Stress analysis, Response spectrum analysis)
	WJS15084	0	3/17/2009	Validation and Installation result for ANSYS(Eigenvalue analysis, Stress analysis, Response spectrum analysis)
	WJS18447	0	8/5/2011	English translation of WJS15083 and WJS15084
4. Installation and Checkout	WJS15083	0	3/12/2009	Validation and Installation plan for ANSYS(Eigenvalue analysis, Stress analysis, Response spectrum analysis)
	WJS15084	0	3/17/2009	Validation and Installation result for ANSYS(Eigenvalue analysis, Stress analysis, Response spectrum analysis)
	WJS18447	0	8/5/2011	English translation of WJS15083 and WJS15084
5. User Documentation	—	—	—	—
6. Control of Operation and Maintenance	WJS15084	0	3/17/2009	Validation and Installation result for ANSYS(Eigenvalue analysis, Stress analysis, Response spectrum analysis)
	WJS18447	0	8/5/2011	English translation of WJS15083 and WJS15084
7. In Use	—	—	—	—
8. Error Reporting	—	—	—	—
Quality Assurance Procedure*	㊦QMS91-N04	4		Quality control procedure of software for research and development of nuclear energy.

* Document identified as the applicable Quality Assurance procedure but not made available for audit.

Table 3-02c List of ANSYS 12.1 (RCL Design) Quality Assurance Documents for Software Control and Design Application

Audit Scope	Doc No.	Rev.	Date	Title
1. Software Design	—	—	—	—
	—	—	—	—
2. Acceptance Testing	—	—	—	—
	—	—	—	—
3. Verification and Validation	11-SSDG-020	0	8/11/2011	US-APWR Validation and Installation Verification Plan for ANSYS 12.1
	10-SSDG-001	1	5/25/2010	US-APWR Validation and Installation Verification Report for ANSYS 12.1
4. Installation and Checkout	11-SSDG-020	0	8/11/2011	US-APWR Validation and Installation Verification Plan for ANSYS 12.1
	10-SSDG-001	1	5/25/2010	US-APWR Validation and Installation Verification Report for ANSYS 12.1
5. User Documentation	—	—	—	ANSYS Help System (On-Line)
	—	—	—	—
6. Control of Operation and Maintenance	QA-10-SSED-002	1	2/28/2011	Export Projects Computer Software List
	—	—	—	—
7. In Use	11-SSDG-015	0	8/2/2011	US-APWR In-use Verification Check Report for ANSYS 12.1
	—	—	—	—
8. Error Reporting	11-SSDG-007	0	4/25/2011	ANSYS Release 12.1 Class3 Error Report
	—	—	—	—
Quality Assurance Procedure	MNEC SOP-421	11	2/2/2010	Export Projects Quality Assurance Program Description
	MNEC SOP-421	13	11/12/2010	Export Projects Quality Assurance Program Description

Table 3-02d List of ANSYS 12.1 (SG Internal Design) Quality Assurance Documents for Software Control and Design Application

Audit Scope	Doc No.	Rev.	Date	Title
1. Software Design	—	—	—	—
	—	—	—	—
2. Acceptance Testing	—	—	—	—
	—	—	—	—
3. Verification and Validation	11-SSDG-020	0	8/11/2011	US-APWR Validation and Installation Verification Plan for ANSYS 12.1
	10-SSDG-001	1	5/25/2010	US-APWR Validation and Installation Verification Report for ANSYS 12.1
4. Installation and Checkout	11-SSDG-020	0	8/11/2011	US-APWR Validation and Installation Verification Plan for ANSYS 12.1
	10-SSDG-001	1	5/25/2010	US-APWR Validation and Installation Verification Report for ANSYS 12.1
5. User Documentation	—	—	—	ANSYS Help System (On-Line)
	—	—	—	—
6. Control of Operation and Maintenance	QA-10-SSED-002	1	2/28/2011	Export Projects Computer Software List
	—	—	—	—
7. In Use	11-SSDG-015	0	8/2/2011	US-APWR In-use Verification Check Report for ANSYS 12.1
	—	—	—	—
8. Error Reporting	11-SSDG-007	0	4/25/2011	ANSYS Release 12.1 Class3 Error Report
	—	—	—	—
Quality Assurance Procedure	MNEC SOP-421	11	2/2/2010	Export Projects Quality Assurance Program Description
	MNEC SOP-421	13	11/12/2010	Export Projects Quality Assurance Program Description

Table 3-02e List of ANSYS 12.1 (RCP Design) Quality Assurance Documents for Software Control and Design Application

Audit Scope	Doc No.	Rev.	Date	Title
1. Software Design	—	—	—	—
	—	—	—	—
2. Acceptance Testing	—	—	—	—
	—	—	—	—
3. Verification and Validation	NPE10-347	1	10/20/2010	ANSYS Verification Manual
	NPE10-388	0	12/13/2010	Result of ANSYS Verification
	P5-13496	1	8/18/2011	Program Verification Report for ANSYS
4. Installation and Checkout	NPE10-388	0	12/13/2010	Result of ANSYS Verification
	P5-13496	1	8/18/2011	Program Verification Report for ANSYS
5. User Documentation	—	—	—	—
	—	—	—	—
6. Control of Operation and Maintenance	FRN6122-07	0	4/20/2011	Computer Software List
	—	—	—	—
7. In Use	—	—	—	—
	—	—	—	—
8. Error Reporting	FRN6122-05	0	4/20/2011	Computer Error Evaluation Report
	—	—	—	—
Quality Assurance Procedure*	SS-B-HG-N03	7	6/3/2011	Procedure for Test of Computer Software Used in ASME Job
	—	—	—	—

* Document identified as the applicable Quality Assurance procedure but not made available for audit.

Table 3-04 List of GOTHIC Quality Assurance Documents for Software Control and Design Application

Audit Scope	Doc No.	Rev.	Date	Title
1. Software Design	—	—	—	—
	—	—	—	—
2. Acceptance Testing	—	—	—	—
	—	—	—	—
3. Verification and Validation	UAP-KS-L0091-1	4	8/18/2011	GOTHIC Validation of Computer Software and Installation Plan
	UAP-KS-L0091-2	4	8/18/2011	GOTHIC Computer Software Validation and Installation Report
	6AS-1N-UAP-090149-1	1	8/18/2011	GOTHIC Validation of Computer Software and Installation Plan
	6AS-1N-UAP-090149-2	1	8/18/2011	GOTHIC Computer Software Validation and Installation Report
	6AS-1N-UAP-110133	0	8/18/2011	GOTHIC Code Validation and Verification Report for EQ Analysis
4. Installation and Checkout	MUAP-07031-P	1	10/30/2009	Subcompartment Analyses for US-APWR Design Confirmation
	UAP-KS-L0091-1	4	8/18/2011	GOTHIC Validation of Computer Software and Installation Plan
	UAP-KS-L0091-2	4	8/18/2011	GOTHIC Computer Software Validation and Installation Report
	6AS-1N-UAP-090149-1	1	8/18/2011	GOTHIC Validation of Computer Software and Installation Plan
	6AS-1N-UAP-090149-2	1	8/18/2011	GOTHIC Computer Software Validation and Installation Report
5. User Documentation	UAP-KS-L0091-3	2	10/8/2009	GOTHIC User Document
	UAP-KS-L0091-6	5	8/18/2011	GOTHIC Software In Use Check Sheet
6. Control of Operation and Maintenance	6AS-1N-UAP-100024	6	7/13/2011	US-APWR GOTHIC v7.2a(QA) List of Code Error Reports and Impact Evaluation
	UAP-KS-L0091-6	5	8/18/2011	GOTHIC Software In Use Check Sheet
7. In Use	6AS-1N-UAP-100024	6	7/13/2011	US-APWR Containment Response Analysis GOTHIC v7.2a (QA) and v7.2a-p5 (QA) Error Report List
8. Error Reporting	5AB61-124	0	4/27/2011	Standard for the Reactor Safety Engineering Department - US-APWR Computer Software Control Procedure
	UAP-KS-L0436	1	5/18/2010	Code Control Procedure of US-APWR Containment Response Analysis

Table 3-05 List of MULTIFLEX Quality Assurance Documents for Software Control and Design Application

Audit Scope	Doc No.	Rev.	Date	Title
1. Software Design	—	—	—	—
	—	—	—	—
2. Acceptance Testing	—	—	—	—
	—	—	—	—
3. Verification and Validation	UAP-KS-L0342-02	2	8/26/2011	US-APWR MULTIFLEX Validation of Computer Software and Installation Plan
	UAP-KS-L0342-03	2	8/26/2011	US-APWR MULTIFLEX Computer Software Validation and Installation Report
	UAP-KS-L0477-01	0	6/9/2008	US-APWR MULTIFLEX (Ver.M1.0R1) Computer Software Validation and Installation Planning
	UAP-KS-L0477-02	0	6/9/2008	US-APWR MULTIFLEX (Ver.M1.0R1) Computer Software Validation and Installation Report
	6AS-1N-UAP-080036-01	0	8/25/2008	US-APWR MULTIFLEX (Ver.M1.0R2) Computer Software Validation of Computer Software and Installation Planning
	6AS-1N-UAP-080036-02	0	8/25/2008	US-APWR MULTIFLEX (Ver.M1.0R2) Computer Software Validation and Installation Report
	6AS-1N-UAP-110116	1	8/26/2011	US-APWR LOCA Hydraulic Load Evaluation Analysis code, MULTIFLEX (M1.0) Code Manual. (WCAP-8708-P-A, WCAP-9735)
	UAP-KS-L0342-02	2	8/26/2011	US-APWR MULTIFLEX Computer Software Validation and Installation Plan
	UAP-KS-L0342-03	2	8/26/2011	US-APWR MULTIFLEX Validation of Computer Software and Installation Report
	UAP-KS-L0477-01	0	6/9/2008	US-APWR MULTIFLEX (Ver.M1.0R1) Computer Software Validation and Installation Planning
4. Installation and Checkout	UAP-KS-L0477-02	0	6/9/2008	US-APWR MULTIFLEX (Ver.M1.0R1) Computer Software Validation and Installation Report
	6AS-1N-UAP-080036-01	0	8/25/2008	US-APWR MULTIFLEX (Ver.M1.0R2) Validation of Computer Software and Installation Planning
	6AS-1N-UAP-080036-02	0	8/25/2008	US-APWR MULTIFLEX (Ver.M1.0R2) Computer Software Validation and Installation Report
	—	—	—	—

Audit Scope	Doc No.	Rev.	Date	Title
	6AS-1N-UAP-110099	1	8/26/2011	Registration of LOCA Hydraulic Load Evaluation Analysis code MULTIFLEX (Ver.6.1) transmitted from Westinghouse.
	6AS-1N-UAP-110100	0	6/15/2011	Computer Software Installation Qualification Report for US-APWR LOCA Hydraulic Load Analysis Code MULTIFLEX(M1.0R0)
	UAP-KS-L0342-04	2	8/26/2011	US-APWR MULTIFLEX Computer Software User Document
	6AS-1N-UAP-110115	0	7/4/2011	US-APWR LOCA Hydraulic Load Evaluation Analysis code, MULTIFLEX (M1.0) User Guide. (SES Force-10 Rev.2 and ET-NSASD-SAIL-95-69)
5. User Documentation	UAP-KS-L0346	2	11/19/2009	Input Manual for US-APWR Blowdown Analysis during LOCA
	UAP-KS-L0347	2	6/25/2008	Procedure of US-APWR Blowdown Analysis during LOCA
	6AS-1N-UAP-110116	1	8/26/2011	US-APWR LOCA Hydraulic Load Evaluation Analysis code, MULTIFLEX (M1.0) Code Manual. (WCAP-8708-P-A, WCAP-9735)
6. Control of Operation and Maintenance	UAP-KS-L0348	2	6/25/2008	Code Control Procedure for US-APWR Blowdown Analysis during LOCA
	UAP-KS-L0342-06	2	3/23/2011	US-APWR MULTIFLEX Computer Software In-Use Check Sheet
	6AS-1N-UAP-110128	0	8/3/2011	List of Error Report of US-APWR Hydraulic Load Analysis during LOCA
	UAP-KS-L0342-06	2	3/23/2011	US-APWR MULTIFLEX Computer Software In-Use Check Sheet
7. In Use				
8. Error Reporting	6AS-1N-UAP-110128	0	8/3/2011	List of Error Report of US-APWR Hydraulic Load Analysis during LOCA
Quality Assurance Procedure	5AB61-124	0	4/27/2011	Standard for the Reactor Safety Engineering Department - US-APWR Computer Software Control Procedure
	UAP-KS-L0348	2	6/25/2008	Code Control Procedure of US-APWR Blowdown Analysis during LOCA

Table 3-06 List of NX-NASTRAN 5.0 Quality Assurance Documents for Software Control and Design Application

Audit Scope	Doc No.	Rev.	Date	Title
1. Software Design	—	—	—	—
	—	—	—	—
2. Acceptance Testing	—	—	—	—
3. Verification and Validation	08-KSC-164	0	3/17/2008	US-APWR Computer Software Installation Verification Plan for NX Nastran Ver5.0
	08-KSC-165	0	3/25/2008	US-APWR Computer Software Installation Verification Report for NX Nastran Ver5.0
4. Installation and Checkout	08-KSC-164	0	3/17/2008	US-APWR Computer Software Installation Verification Plan for NX Nastran Ver5.0
	08-KSC-165	0	3/25/2008	US-APWR Computer Software Installation Verification Report for NX Nastran Ver5.0
5. User Documentation	—	—	—	Nastran Help System (On-Line)
6. Control of Operation and Maintenance	QA-11-SSED-013	2	7/26/2011	US-APWR Computer Software List
	11-SMDG-410	0	8/4/2011	Computer Software First time In used Check Report for NX Nastran Ver5.0
8. Error Reporting	08-KSC-166	0	3/27/2008	US-APWR NX NASTRAN Ver5.0 Error Report
	MNEC SOP-421	13	11/12/2010	Export Projects Quality Assurance Program Description

Table 3-07 List of PIPESTRESS 3.6.2 Quality Assurance Documents for Software Control and Design Application

Audit Scope	Doc No.	Rev.	Date	Title
1. Software Design	—	—	—	—
	—	—	—	—
2. Acceptance Testing	—	—	—	—
	—	—	—	—
3. Verification and Validation	QA-10-配管G027	0	7/28/2010	Software Installation Test Plan Pipestress Version 3.6.2
	QA-10-配管G-028	0	8/6/2010	Software Results of Installation Tests Pipestress Version 3.6.2
	QA-10-配管G027	0	7/28/2010	Software Installation Test Plan Pipestress Version 3.6.2
	QA-10-配管G-028	0	8/6/2010	Software Results of Installation Tests Pipestress Version 3.6.2
5. User Documentation	—	—	—	—
	—	—	—	—
6. Control of Operation and Maintenance	QA-09-構安部-006	6	9/17/2010	Export Projects Computer Software List
	—	—	—	—
7. In Use	QA-11-配管G-008	0	2/3/2011	Software Pipestress Version 3.6.2 Results of In-Use Check
	—	—	—	—
8. Error Reporting	QA-11-配管G-007	2	3/4/11	Software Pipestress Version 3.6.2 Results of Error report Check
	—	—	—	—
Quality Assurance Procedure	MNEC SOP-421	13	11/12/2010	Export Projects Quality Assurance Program Description
	—	—	—	—

Table 3-08 List of E/PPD STRUDL Quality Assurance Documents for Software Control and Design Application

Audit Scope	Doc No.	Rev.	Date	Title
1. Software Design	—	—	—	—
2. Acceptance Testing	360-N-11(MM)	2	4/20/2011	Machine Validation Report
3. Verification and Validation	IO-QM-11-029	—	2/28/2011	Supplier Evaluation of Phi-Delta Inc. (Phi-Delta. Inc developed the computer software "E/PPD STRUDL" as piping analysis code, complying NQA-1 Subpart 2.7 and 3S-1. URS confirmed above applicability by Audit Report.)
4. Installation and Checkout	360-N-11(MM)	2	4/20/2011	Machine Validation Report
5. User Documentation	—	—	—	Pipestress Help System (On-Line)
6. Control of Operation and Maintenance	—	—	—	—
7. In Use	—	—	—	—
8. Error Reporting	—	—	—	—
Quality Assurance Procedure	—	—	—	—

Table 3-09 List of PICEP (Version 6/30/87) Quality Assurance Documents for Software Control and Design Application

Audit Scope	Doc No.	Rev.	Date	Title
1. Software Design	—	—	—	—
2. Acceptance Testing	SI Report 0900312.402	0	11/11/2009	PICEP/RUNPICEP/CRKMORF Verification and Validation Report
3. Verification and Validation	SI Report 0900312.402	0	11/11/2009	PICEP/RUNPICEP/CRKMORF Verification and Validation Report
	SI Calculation 0900312.301	0	10/15/2009	Verification and Validation of RUNPICEP and PICEP
4. Installation and Checkout	—	—	—	Software Distribution List for PICEP/RUNPICEP/CRKMORF (Attached Letter Report)
5. User Documentation	SI Report 0900312.403	0	11/17/2009	PICEP/RUNPICEP/CRKMORF Leakage Prediction Software Technical Basis and User Manual
6. Control of Operation and Maintenance	SI Report 0900312.401	0	8/7/2009	Software Project Plan PICEP/RUNPICEP/CRKMORF Leakage Prediction Software
7. In Use	SI Report 0900312.401	0	8/7/2009	Software Project Plan PICEP/RUNPICEP/CRKMORF Leakage Prediction Software
8. Error Reporting	SI Report 0900312.401	0	8/7/2009	Software Project Plan PICEP/RUNPICEP/CRKMORF Leakage Prediction Software
Quality Assurance Procedure	SI Quality Procedure Doc. QP03-04	1	9/24/2008	Testing Of Software
	SI Quality Procedure Doc. QP03-02	0	12/20/2006	Development, Verification, Documentation, and Control of Internally Generated Computer Programs
	SI Quality Procedure Doc. QP03-09	0	12/20/2006	Software Deficiencies

Table 3-10 List of STAAD.Pro Version 8i Quality Assurance Documents for Software Control and Design Application

Audit Scope	Doc No.	Rev.	Date	Title
1. Software Design	—	—	—	—
	UD-RE-10828	0	10/16/2010	Computer Software Acceptance Test Report STAAD.Pro V8i
3. Verification and Validation	UD-PL-11512	0	3/18/2011	Validation Plan for STAAD.Pro V8i
	UD-RE-11513	0	4/6/2011	Validation Report for STAAD.Pro V8i
	UD-PL-10821	0	9/8/2010	Computer Software Validation Test Plan STAAD.Pro V8i
	UD-RE-10823	0	9/9/2010	Computer Software Validation Test Report STAAD.Pro V8i
5. User Documentation	UD-ET-10808	1	7/21/2011	STAAD.Pro V8i USERS MANUAL
	UD-LG-10814	0	9/9/2010	Computer Software List
7. In Use	UD-PL-11801	1	7/6/11	Computer Software Validation Test Plan STAAD.Pro V8i
	UD-RE-11803	1	7/6/11	Computer Software Validation Test Report STAAD.Pro V8i
	UD-RE-11809	0	5/12/11	Computer Software Error Report STAAD.Pro V8i
8. Error Reporting	SESU-NQA-101	1	—	Quality Assurance Manual
	SESU-NUD-101	1	—	Design Procedure
	SESU-NUD-112	2	—	Computer Software Control Procedure

Table 3-11 List of P4TEDIA Version 1.3 Quality Assurance Documents for Software Control and Design Application

Audit Scope	Doc No.	Rev.	Date	Title
1. Software Design	QA-09-配管G-042	0	10/28/2009	Export Projects Computer Software Development (Modification) Verification Plan for P4TEDIA Ver. 1.3
	QA-09-配管G-043	0	11/4/2009	Software Requirement Specifications P4TEDIA Ver.1.3
	QA-09-配管G-044	0	11/6/2009	Software Design Specifications P4TEDIA Ver.1.3
	QA-09-配管G-045	0	11/18/2009	Report on Computer Program Development P4TEDIA Ver.1.3
2. Acceptance Testing				
	QA-09-配管G-046	0	11/20/2009	Software Verification Test Plan P4TEDIA Ver.1.3
	QA-09-配管G-047	0	11/25/2009	Software Results of Verification tests P4TEDIA Ver.1.3
	QA-09-配管G-049	0	11/26/2009	Software Installation Test Plans P4TEDIA Ver.1.3
4. Installation and Checkout	QA-09-配管G-050	0	11/27/2009	Software Results of Installation Test P4TEDIA Ver.1.3
	G標準-配管G-001	0	11/30/2009	ABAQUS Axially-Symmetric Model Temperature Processing Program [P4TEDIA Ver.1.3] Users Manual
5. User Documentation				
	QA-09-構安部-006	6	9/17/2010	Export Projects Computer Software List
6. Control of Operation and Maintenance				
	QA-11-配管G-012	0	4/12/2011	Software P4TEDIA Ver.1.3 Results of In-Use Check
7. In Use				
8. Error Reporting				
Quality Assurance Procedure	MNEC SOP-421	13	11/12/2010	Export Projects Quality Assurance Program Description

Table 3-12 List of P2DLOP Version 1.0 Quality Assurance Documents for Software Control and Design Application

Audit Scope	Doc No.	Rev.	Date	Title
1. Software Design	08-SPQA-017	1	10/1/2008	Export Projects Computer Software Development (Modification) Verification Plan for P2DLOP Ver. 1.0
	08-SPQA-018	0	8/1/2008	Software Requirement Specifications P2DLOP Ver.1.0
	08-SPQA-019	0	8/6/2008	Software Design Specifications P2DLOP Ver.1.0
	08-SPQA-020	0	10/20/2008	Report on Computer Program Development P2DLOP Ver.1.0
2. Acceptance Testing				
3. Verification and Validation	08-SPQA-021	1	9/9/2010	Software Verification Test and Installation Test Plan P2DLOP Ver.1.0
	08-SPQA-022	1	9/9/2010	Software Results of Verification Tests and installation tests P2DLOP Ver.1.0
4. Installation and Checkout	QA-10-配管G-035	0	9/6/2010	Software Installation Test Plans P2DLOP Ver.1.0
	QA-10-配管G-036	0	9/16/2010	Software Results of Installation Tests P2DLOP Ver.1.0
	G標準-SP-005	0	11/20/2008	RELAP5-3D Program which calculate loads 「P2DLOP Ver.1.0」 User manual
5. User Documentation				
6. Control of Operation and Maintenance	QA-09-構安部-006	6	9/17/2010	Export Projects Computer Software List
7. In Use	QA-11-配管G-010	0	4/8/2011	Software P2DLOP Ver.1.0 Results of In-Use Check
8. Error Reporting	—	—	—	—
Quality Assurance Procedure	MNEC SOP-421	13	11/12/2010	Export Projects Quality Assurance Program Description

Table 3-13 List of CEFF-N Version 1.0 Quality Assurance Documents for Software Control and Design Application

Audit Scope	Doc No.	Rev.	Date	Title
1. Software Design	QA-09-配管G-024	0	8/26/2009	Export Projects Computer Software Development (Modification) Verification Plan for CEFF-N Ver. 1.0
	QA-09-配管G-025	0	9/9/2009	Software Requirement Specifications CEFF-N Ver.1.0
	QA-09-配管G-026	0	10/7/2009	Software Design Specification CEFF-N Ver.1.0
	QA-09-配管G-027	0	12/3/2009	Report on Computer Program Development CEFF-N Ver.1.0
2. Acceptance Testing				
3. Verification and Validation	QA-09-配管G-028	0	12/9/2009	Software Verification Test Plan CEFF-N Ver.1.0
	QA-09-配管G-029	0	12/11/2009	Software Results of Verification tests CEFF-N Ver.1.0
4. Installation and Checkout	QA-09-配管G-031	0	12/15/2009	Software Installation Test Plans CEFF-N Ver.1.0
	QA-09-配管G-032	0	12/17/2009	Software Results of Installation Test CEFF-N Ver.1.0
5. User Documentation	G標準-配管G-002	0	12/18/2009	Environmental Fatigue Evaluation Program [CEFF-N Ver.1.0] Users Manual
6. Control of Operation and Maintenance	QA-09-構安部-006	6	9/17/2010	Export Projects Computer Software List
7. In Use	QA-11-配管G-013	0	4/12/2011	Software CEFF-N Ver.1.0 Results of In-Use Check
8. Error Reporting	—	—	—	—
Quality Assurance Procedure	MNEC SOP-421	13	11/12/2010	Export Projects Quality Assurance Program Description

Table 3-14 List of ASMETEMP Version 1 Quality Assurance Documents for Software Control and Design Application

Audit Scope	Doc No.	Rev.	Date	Title
1. Software Design	KAS-20090481	0	8/24/2009	ASMETEMP Ver.1 Code Design
	KAS-20090473	5	11/13/2009	ASMETEMP Ver.1 Code Development Plan
	KAS-20090478	0	8/20/2009	ASMETEMP Ver.1 Requirements
	KAS-20090483	0	10/26/2009	ASMETEMP Ver.1 Validation Report
2. Acceptance Testing				
3. Verification and Validation	KAS-20090479	0	8/20/2009	ASMETEMP Ver.1 Code Verification and Validation Plan
	KAS-20090483	0	10/26/2009	ASMETEMP Ver.1 Validation Report
	KAS-20090480	2	8/27/2009	ASMETEMP Ver.1 Code Development Verification Review Report
4. Installation and Checkout	KAS-20090486	0	11/6/2009	ASMETEMP Ver.1 Installation Verification Report
5. User Documentation	KAS-20090485	0	11/13/2009	ASMETEMP Ver.1 Description Note (Code User's Manual)
6. Control of Operation and Maintenance	KAS-20100277	0	10/19/2010	Computer Software Usage Log List
	KAS-20100251	1	4/11/2011	Computer Software List
	KAS-20090482	0	8/27/2009	ASMETEMP Ver.1 Code Implementation
	KAS-20090484	1	11/12/2009	ASMETEMP Ver.1 Computer Software Configuration Management Sheet
7. In Use	KAS-20100277	0	10/19/2010	Computer Software Usage Log List
	KAS-20110108	0	4/6/2011	Computer Software In-Use Check Report of ASME Code Jobs (Machine name: BK0472152(March 2011))
8. Error Reporting	—	—	—	—
Quality Assurance Procedure	5BB60-N08	0	6/2/2011	Procedure for Development and Control of Computer Software

Table 3-15 List of CLASSB2 Version 0 Quality Assurance Documents for Software Control and Design Application

Audit Scope	Doc No.	Rev.	Date	Title
1. Software Design	KAS-20070239	0	7/20/2007	CLASSB2 Code Design
	KAS-20070235	6	8/22/2007	CLASSB2 Code Development Plan
	KAS-20070236	0	7/4/2007	CLASSB2 Requirements
	KAS-20070241	0	8/10/2007	CLASSB2 Validation Report
2. Acceptance Testing				
3. Verification and Validation	KAS-20070237	0	7/13/2007	CLASSB2 Code Verification and Validation Plan
	KAS-20070241	0	8/10/2007	CLASSB2 Validation Report
	KAS-20070238	2	7/27/2007	CLASSB2 Code Development Verification Review Report
	KAS-20070244	0	8/22/2007	CLASSB2 Installation Verification Report
4. Installation and Checkout				
5. User Documentation	KAS-20070243	0	8/22/2007	CLASSB2 Description Note (Code User's Manual)
6. Control of Operation and Maintenance	KAS-20100277	0	10/19/2010	Computer Software Usage Log List
	KAS-20100251	1	4/11/2011	Computer Software List
	KAS-20070240	0	7/27/2007	CLASSB2 Code Implementation
	KAS-20070242	2	1/7/2010	CLASSB2 Computer Software Configuration Management Sheet
7. In Use	KAS-20100277	0	10/19/2010	Computer Software Usage Log List
	KAS-20110108	0	4/6/2011	Computer Software In-Use Check Report of ASME Code Jobs (Machine name: BK0472152(March 2011))
8. Error Reporting	—	—	—	—
Quality Assurance Procedure	5BB60-N08	0	6/2/2011	Procedure for Development and Control of Computer Software

Table 3-16 List of CLASS2D Version 4 Quality Assurance Documents for Software Control and Design Application

Audit Scope	Doc No.	Rev.	Date	Title
1. Software Design	—	—	—	—
2. Acceptance Testing	KB-C/V-153	1	8/9/2011	Program for Stress Classification of Axi-Symmetric Model (ABAQUS Version)CLASS2D (Ver.4) Validation & Installation Verification Report
3. Verification and Validation	KB-C/V-153	1	8/9/2011	Program for Stress Classification of Axi-Symmetric Model (ABAQUS Version)CLASS2D (Ver.4) Validation & Installation Verification Report
4. Installation and Checkout	KB-C/V-153	1	8/9/2011	Program for Stress Classification of Axi-Symmetric Model (ABAQUS Version)CLASS2D (Ver.4) Validation & Installation Verification Report
5. User Documentation	KB-C/V-152	1	8/9/2011	Program for Stress Classification of Axi-Symmetric Model (ABAQUS Version)CLASS2D (Ver.4) User's Manual
6. Control of Operation and Maintenance	KB-C/V-002	12	7/14/2011	COMPUTER SOFTWARE LIST for ASME Code Section III Division 1 Construction Activities
7. In Use	KB-C/V-057	5	6/14/2010	Computer Software In-Use Check Sheet
8. Error Reporting	—	—	—	—
Quality Assurance Procedure	5BB60-N08	0	6/2/2011	Procedure for Development and Control of Computer Software

Table 3-17 List of CLASS3D Version 4 Quality Assurance Documents for Software Control and Design Application

Audit Scope	Doc No.	Rev.	Date	Title
1. Software Design	—	—	—	—
2. Acceptance Testing	KB-C/V-156	1	8/9/2011	Program for Stress Classification of 3-Dimensional Model (ABAQUS Version) CLASS3D (Ver.4) Validation & Installation Verification Report
3. Verification and Validation	KB-C/V-156	1	8/9/2011	Program for Stress Classification of 3-Dimensional Model (ABAQUS Version) CLASS3D (Ver.4) Validation & Installation Verification Report
4. Installation and Checkout	KB-C/V-156	1	8/9/2011	Program for Stress Classification of 3-Dimensional Model (ABAQUS Version) CLASS3D (Ver.4) Validation & Installation Verification Report
5. User Documentation	KB-C/V-155	1	8/9/2011	Program for Stress Classification of 3-Dimensional Model (ABAQUS Version) CLASS3D (Ver.4) User's Manual
6. Control of Operation and Maintenance	KB-C/V-002	12	7/14/2011	COMPUTER SOFTWARE LIST for ASME Code Section III Division 1 Construction Activities
7. In Use	KB-C/V-057	5	6/14/2010	Computer Software In-Use Check Sheet
8. Error Reporting	—	—	—	—
Quality Assurance Procedure	5BB60-N08	0	6/2/2011	Procedure for Development and Control of Computer Software

Table 3-18 List of CLASS3DX Version 0.0 Quality Assurance Documents for Software Control and Design Application

Audit Scope	Doc No.	Rev.	Date	Title
1. Software Design	KCS-20080448	0	8/19/2008	CLASS3DX Version 0.0 (EKC0008) Design
	KCS-20080444	0	6/17/2008	CLASS3DX Version 0.0 (EKC0008) Development Plan
	KCS-20080445	0	6/24/2008	CLASS3DX Version 0.0 (EKC0008) Requirement
	KCS-20080450	0	9/8/2008	CLASS3DX Version 0.0 (EKC0008) Validation Report
2. Acceptance Testing				
3. Verification and Validation	KCS-20080446	0	7/16/2008	CLASS3DX Version 0.0 (EKC0008) Development Verification and Validation Plan
	KCS-20080450	0	9/8/2008	CLASS3DX Version 0.0 (EKC0008) Validation Report
	KCS-20080447	0	7/7/2008	CLASS3DX Version 0.0 (EKC0008) Development Verification Review Report
4. Installation and Checkout	KCS-20080451	0	9/16/2008	CLASS3DX Version 0.0 (EKC0008) Installation Verification Report
5. User Documentation	KCS-20080452	0	10/24/2008	CLASS3DX Version 0.0 (EKC0008) Description Note (Code User's Manual)
6. Control of Operation and Maintenance	KCS-20060397	19	6/23/2011	Reactor Internal Designing Section Computer Software List
	KCS-20080449	0	8/19/2008	CLASS3DX Version 0.0 (EKC0008) Implementation
	KCS-20080453	3	8/5/2009	CLASS3DX Version 0.0 (EKC0008) Configuration Management Sheet
7. In Use	KCS-20110183	0	3/25/2011	Computer Software In-Use Check Report (March 2011) Machine name : 047486 (Windows XP x64)
8. Error Reporting	—	—	—	—
Quality Assurance Procedure	5BB60-N08	0	6/2/2011	Procedure for Development and Control of Computer Software

Table 3-19 List of EB3500 Version 3 Quality Assurance Documents for Software Control and Design Application

Audit Scope	Doc No.	Rev.	Date	Title
1. Software Design	—	—	—	—
2. Acceptance Testing	KB-C/V-243	1	8/12/2011	Program for External Load Data Selection EB3500 (Ver.3) Validation & Installation Verification Report
3. Verification and Validation	KB-C/V-243	1	8/12/2011	Program for External Load Data Selection EB3500 (Ver.3) Validation & Installation Verification Report
4. Installation and Checkout	KB-C/V-243	1	8/12/2011	Program for External Load Data Selection EB3500 (Ver.3) Validation & Installation Verification Report
5. User Documentation	KB-C/V-242	1	8/12/2011	Program for External Load Data Selection EB3500 (Ver.3) User's Manual
6. Control of Operation and Maintenance	KB-C/V-002	12	7/14/2011	Computer Software List for ASME Code Section III Division 1 Construction Activities
7. In Use	KB-C/V-057	5	6/14/2010	Computer Software In-Use Check Sheet
8. Error Reporting	—	—	—	—
Quality Assurance Procedure	5BB60-N08	0	6/2/2011	Procedure for Development and Control of Computer Software

Table 3-20 List of EDITSTRS Version 4 Quality Assurance Documents for Software Control and Design Application

Audit Scope	Doc No.	Rev.	Date	Title
1. Software Design	—	—	—	—
2. Acceptance Testing	KB-C/V-159	0	11/30/2009	Program for Edit of Classified Stress Input Files for Evaluation Program EDITSTRS (Ver.4) Validation & Installation Verification Report
3. Verification and Validation	KB-C/V-159	0	11/30/2009	Program for Edit of Classified Stress Input Files for Evaluation Program EDITSTRS (Ver.4) Validation & Installation Verification Report
4. Installation and Checkout	KB-C/V-159	0	11/30/2009	Program for Edit of Classified Stress Input Files for Evaluation Program EDITSTRS (Ver.4) Validation & Installation Verification Report
5. User Documentation	KB-C/V-158	0	11/30/2009	Program for Edit of Classified Stress Input Files for Evaluation Program EDITSTRS (Ver.4) User's Manual
6. Control of Operation and Maintenance	KB-C/V-002	12	7/14/2011	Computer Software List for ASME Code Section III Division 1 Construction Activities
7. In Use	KB-C/V-057	5	6/14/2010	Computer Software In-Use Check Sheet
8. Error Reporting	—	—	—	—
Quality Assurance Procedure	5BB60-N08	0	6/2/2011	Procedure for Development and Control of Computer Software

Table 3-21 List of EVALPRI Version 7 Quality Assurance Documents for Software Control and Design Application

Audit Scope	Doc No.	Rev.	Date	Title
1. Software Design	—	—	—	—
2. Acceptance Testing	KB-C/V-263	1	8/11/2011	Evaluation Program for Primary Stress EVALPRI (Ver.7) Validation & Installation Verification Report
3. Verification and Validation	KB-C/V-263	1	8/11/2011	Evaluation Program for Primary Stress EVALPRI (Ver.7) Validation & Installation Verification Report
4. Installation and Checkout	KB-C/V-263	1	8/11/2011	Evaluation Program for Primary Stress EVALPRI (Ver.7) Validation & Installation Verification Report
5. User Documentation	KB-C/V-262	1	8/11/2011	Evaluation Program for Primary Stress EVALPRI (Ver.7) User's Manual
6. Control of Operation and Maintenance	KB-C/V-002	12	7/14/2011	Computer Software List for ASME Code Section III Division 1 Construction Activities
7. In Use	KB-C/V-057	5	6/14/2010	Computer Software In-Use Check Sheet
8. Error Reporting	—	—	—	—
Quality Assurance Procedure	5BB60-N08	0	6/2/2011	Procedure for Development and Control of Computer Software

Table 3-22a List of EVALSEFAV Version 7 Quality Assurance Documents for Software Control and Design Application

Audit Scope	Doc No.	Rev.	Date	Title
1. Software Design	KB-C/V-252	0	8/26/2010	EVALSEFAV (Ver.7) Computer Software Design
	KB-C/V-248	0	8/23/2010	EVALSEFAV (Ver.7) Computer Software Development Plan
	KB-C/V-249	0	8/25/2010	EVALSEFAV (Ver.7) Computer Software Requirements
	KB-C/V-254	1	8/11/2011	EVALSEFAV (Ver.7) Validation Report
2. Acceptance Testing				
3. Verification and Validation	KB-C/V-250	0	8/25/2010	Computer Software Verification and Validation Plan
	KB-C/V-254	1	8/11/2011	EVALSEFAV (Ver.7) Validation Report
	KB-C/V-251	0	8/25/2010	EVALSEFAV (Ver.7) Computer Software Development Verification Review Report
4. Installation and Checkout	KB-C/V-256	0	10/5/2010	EVALSEFAV (Ver.7) Installation Verification Report
5. User Documentation	KB-C/V-257	1	8/11/2011	EVALSEFAV (Ver.7) User's Manual
6. Control of Operation and Maintenance	KB-C/V-002	12	7/14/2011	Computer Software List for ASME Code Section III Division 1 Construction Activities
	KB-C/V-247	0	8/5/2010	EVALSEFAV (Ver.6) Computer Software Change Request
	KB-C/V-253	0	8/27/2010	EVALSEFAV(Ver.7) Computer Software Implementation
	KB-C/V-255	0	9/14/2010	EVALSEFAV(Ver.7) Computer Software Configuration Management Sheet
	KB-C/V-258	0	10/6/2010	EVALSEFAV(Ver.7) Computer Software Configuration Management Sheet
7. In Use	KB-C/V-057	5	6/14/2010	Computer Software In-Use Check Sheet
8. Error Reporting	—	—	—	—
Quality Assurance Procedure	5BB60-N08	0	6/2/2011	Procedure for Development and Control of Computer Software

Table 3-22b List of EVALSEFAV Version 8 Quality Assurance Documents for Software Control and Design Application

Audit Scope	Doc No.	Rev.	Date	Title
1. Software Design	KB-C/V-297	0	3/16/2011	EVALSEFAV (Ver.8) Computer Software Design
	KB-C/V-293	0	3/11/2011	EVALSEFAV (Ver.8) Computer Software Development Plan
	KB-C/V-294	0	3/11/2011	EVALSEFAV (Ver.8) Computer Software Requirements
	KB-C/V-299	0	3/18/2011	EVALSEFAV (Ver.8) Validation Report
2. Acceptance Testing				
3. Verification and Validation	KB-C/V-295	0	3/15/2011	EVALSEFAV (Ver.8) Computer Software Verification and Validation Plan
	KB-C/V-299	0	3/18/2011	EVALSEFAV (Ver.8) Validation Report
	KB-C/V-296	0	3/15/2011	EVALSEFAV (Ver.8) Computer Software Development Verification Review Report
4. Installation and Checkout	KB-C/V-301	0	6/6/2011	EVALSEFAV (Ver.8) Installation Verification Report
5. User Documentation	KB-C/V-302	0	3/25/2011	EVALSEFAV (Ver.8) User's Manual
6. Control of Operation and Maintenance	KB-C/V-002	12	7/14/2011	Computer Software List for ASME Code Section III Division 1 Construction Activities
	KB-C/V-292	0	3/11/2011	EVALSEFAV (Ver.7) Computer Software Change Request
	KB-C/V-298	0	3/18/2011	EVALSEFAV (Ver.8) Computer Software Implementation
	KB-C/V-300	0	3/18/2011	EVALSEFAV (Ver.8) Computer Software Configuration Management Sheet
	KB-C/V-303	0	6/6/2011	EVALSEFAV (Ver.8) Computer Software Configuration Management Sheet
7. In Use	KB-C/V-057	5	6/14/2010	Computer Software In-Use Check Sheet
8. Error Reporting	—	—	—	—
Quality Assurance Procedure	5BB60-N08	0	6/2/2011	Procedure for Development and Control of Computer Software

Table 3-23 List of EVALIRAMJ Version 3 Quality Assurance Documents for Software Control and Design Application

Audit Scope	Doc No.	Rev.	Date	Title
1. Software Design	—	—	—	—
2. Acceptance Testing	KB-C/V-180	1	8/11/2011	Evaluation Program for Environmental Fatigue EVALIRAMJ (Ver.3) Validation & Install Verification Report
3. Verification and Validation	KB-C/V-180	1	8/11/2011	Evaluation Program for Environmental Fatigue EVALIRAMJ (Ver.3) Validation & Install Verification Report
4. Installation and Checkout	KB-C/V-180	1	8/11/2011	Evaluation Program for Environmental Fatigue EVALIRAMJ (Ver.3) Validation & Install Verification Report
5. User Documentation	KB-C/V-179	1	8/11/2011	Evaluation Program for Environmental Fatigue EVALIRAMJ (Ver.3) User's Manual
6. Control of Operation and Maintenance	KB-C/V-002	12	7/14/2011	Computer Software List for ASME Code Section III Division 1 Construction Activities
7. In Use	KB-C/V-057	5	6/14/2010	Computer Software In-Use Check Sheet
8. Error Reporting	—	—	—	—
Quality Assurance Procedure	5BB60-N08	0	6/2/2011	Procedure for Development and Control of Computer Software

Table 3-24 List of MCPEVALPRI Version 2/Version 3 Quality Assurance Documents for Software Control and Design Application

Audit Scope	Doc No.	Rev.	Date	Title
1. Software Design	—	—	—	—
2. Acceptance Testing	KB-C/V-205	1	8/19/2011	Temperature Data Editing Program for Main Coolant Piping MCPEVALPRI (Ver.2) Validation & Installation Verification Report
	KB-C/V-291	0	3/25/2011	Temperature Data Editing Program for Main Coolant Piping MCPEVALPRI (Ver.3) Validation & Installation Verification Report
3. Verification and Validation	KB-C/V-205	1	8/19/2011	Temperature Data Editing Program for Main Coolant Piping MCPEVALPRI (Ver.2) Validation & Installation Verification Report
	KB-C/V-291	0	3/25/2011	Temperature Data Editing Program for Main Coolant Piping MCPEVALPRI (Ver.3) Validation & Installation Verification Report
4. Installation and Checkout	KB-C/V-205	1	8/19/2011	Temperature Data Editing Program for Main Coolant Piping MCPEVALPRI (Ver.2) Validation & Installation Verification Report
	KB-C/V-291	0	3/25/2011	Temperature Data Editing Program for Main Coolant Piping MCPEVALPRI (Ver.3) Validation & Installation Verification Report
5. User Documentation	KB-C/V-204	2	8/19/2011	Temperature Data Editing Program for Main Coolant Piping MCPEVALPRI (Ver.2) User's Manual
	KB-C/V-290	0	3/25/2011	Temperature Data Editing Program for Main Coolant Piping MCPEVALPRI (Ver.3) User's Manual
6. Control of Operation and Maintenance	KB-C/V-002	12	7/14/2011	Computer Software List for ASME Code Section III Division 1 Construction Activities
	KB-C/V-057	5	6/14/2010	Computer Software In-Use Check Sheet
8. Error Reporting	—	—	—	—
Quality Assurance Procedure	5BB60-N08	0	6/2/2011	Procedure for Development and Control of Computer Software

Table 3-25 List of MCPEVALSI Version 5 Quality Assurance Documents for Software Control and Design Application

Audit Scope	Doc No.	Rev.	Date	Title
1. Software Design	—	—	—	—
2. Acceptance Testing	KB-C/V-260	1	8/19/2011	Stress & Fatigue Evaluation Program for Main Coolant Piping MCPEVALSI (Ver.5) Validation & Installation Verification Report
3. Verification and Validation	KB-C/V-260	1	8/19/2011	Stress & Fatigue Evaluation Program for Main Coolant Piping MCPEVALSI (Ver.5) Validation & Installation Verification Report
4. Installation and Checkout	KB-C/V-260	1	8/19/2011	Stress & Fatigue Evaluation Program for Main Coolant Piping MCPEVALSI (Ver.5) Validation & Installation Verification Report
5. User Documentation	KB-C/V-259	1	8/19/2011	Stress & Fatigue Evaluation Program for Main Coolant Piping MCPEVALSI (Ver.5) User's Manual
6. Control of Operation and Maintenance	KB-C/V-002	12	7/14/2011	Computer Software List for ASME Code Section III Division 1 Construction Activities
7. In Use	KB-C/V-057	5	6/14/2010	Computer Software In-Use Check Sheet
8. Error Reporting	—	—	—	—
Quality Assurance Procedure	5BB60-N08	0	6/2/2011	Procedure for Development and Control of Computer Software

Table 3-26 List of MCPFEM Version 2/Version 3 Quality Assurance Documents for Software Control and Design Application

Audit Scope	Doc No.	Rev.	Date	Title
1. Software Design	—	—	—	—
2. Acceptance Testing	KB-C/V-202	0	10/30/2009	ABAQUS Input File Creation Program for Main Coolant Piping MCPFEM (Ver.2) Validation & Installation Verification Report
	KB-C/V-288	0	3/25/2011	ABAQUS Input File Creation Program for Main Coolant Piping MCPFEM (Ver.3) Validation & Installation Verification Report
3. Verification and Validation	KB-C/V-202	0	10/30/2009	ABAQUS Input File Creation Program for Main Coolant Piping MCPFEM (Ver.2) Validation & Installation Verification Report
	KB-C/V-288	0	3/25/2011	ABAQUS Input File Creation Program for Main Coolant Piping MCPFEM (Ver.3) Validation & Installation Verification Report
4. Installation and Checkout	KB-C/V-202	0	10/30/2009	ABAQUS Input File Creation Program for Main Coolant Piping MCPFEM (Ver.2) Validation & Installation Verification Report
	KB-C/V-288	0	3/25/2011	ABAQUS Input File Creation Program for Main Coolant Piping MCPFEM (Ver.3) Validation & Installation Verification Report
5. User Documentation	KB-C/V-201	1	12/9/2009	ABAQUS Input File Creation Program for Main Coolant Piping MCPFEM (Ver.2) User's Manual
	KB-C/V-287	0	3/25/2011	ABAQUS Input File Creation Program for Main Coolant Piping MCPFEM (Ver.3) User's Manual
6. Control of Operation and Maintenance	KB-C/V-002	12	7/14/2011	Computer Software List for ASME Code Section III Division 1 Construction Activities
	KB-C/V-057	5	6/14/2010	Computer Software In-Use Check Sheet
7. In Use	—	—	—	—
8. Error Reporting	—	—	—	—
Quality Assurance Procedure	5BB60-N08	0	6/2/2011	Procedure for Development and Control of Computer Software

Table 3-27 List of RATCHET Version 8 Quality Assurance Documents for Software Control and Design Application

Audit Scope	Doc No.	Rev.	Date	Title
1. Software Design	—	—	—	—
2. Acceptance Testing	KB-C/V-266	1	8/11/2011	Evaluation Program for Thermal Ratchet RATCHET (Ver.8) Validation & Installation Verification Report
3. Verification and Validation	KB-C/V-266	1	8/11/2011	Evaluation Program for Thermal Ratchet RATCHET (Ver.8) Validation & Installation Verification Report
4. Installation and Checkout	KB-C/V-266	1	8/11/2011	Evaluation Program for Thermal Ratchet RATCHET (Ver.8) Validation & Installation Verification Report
5. User Documentation	KB-C/V-265	1	8/11/2011	Evaluation Program for Thermal Ratchet RATCHET (Ver.8) User's Manual
6. Control of Operation and Maintenance	KB-C/V-002	12	7/14/2011	Computer Software List for ASME Code Section III Division 1 Construction Activities
7. In Use	KB-C/V-057	5	6/14/2010	Computer Software In-Use Check Sheet
8. Error Reporting	—	—	—	—
Quality Assurance Procedure	5BB60-N08	0	6/2/2011	Procedure for Development and Control of Computer Software

Table 3-28 List of RIGHT Version 0.0 Quality Assurance Documents for Software Control and Design Application

Audit Scope	Doc No.	Rev.	Date	Title
1. Software Design	KCS-20080337	1	8/6/2008	RIGHT (EKC0007) Ver. 0.0 Design
	KCS-20080310	2	8/25/2011	RIGHT (EKC0007) Ver. 0.0 Development Plan
	KCS-20080334	0	6/9/2008	RIGHT (EKC0007) Ver. 0.0 Requirement
	KCS-20080339	0	8/20/2008	RIGHT (EKC0007) Ver. 0.0 Validation Report
2. Acceptance Testing				
3. Verification and Validation	KCS-20080335	0	6/12/2008	RIGHT (EKC0007) Development Verification and Validation Plan
	KCS-20080339	0	8/20/2008	RIGHT (EKC0007) Ver. 0.0 Validation Report
	KCS-20080336	1	8/6/2008	RIGHT (EKC0007) Ver. 0.0 Development Verification Review Report
4. Installation and Checkout	KCS-20080340	0	9/5/2008	RIGHT (EKC0007) Ver. 0.0 Installation Verification Report
	KCS-20080890	0	11/26/2008	RIGHT (EKC0007) Ver. 0.0 Installation Verification Report
5. User Documentation	KCS-20080341	0	8/19/2008	RIGHT (EKC0007) Ver. 0.0 Description Note (Code User's Manual)
6. Control of Operation and Maintenance	KCS-20060397	19	6/23/2011	Reactor Internal Designing Section Computer Software List
	KCS-20080338	0	7/16/2008	RIGHT (EKC0007) Ver. 0.0 Implementation
	KCS-20080342	4	8/25/2011	RIGHT (EKC0007) Ver. 0.0 Configuration Management Sheet
7. In Use	KCS-20110183	0	3/25/2011	Computer Software In-Use Check Report (March 2011) Machine name : 047486 (Windows XP x64)
8. Error Reporting	—	—	—	—
Quality Assurance Procedure	5BB60-N08	0	6/2/2011	Procedure for Development and Control of Computer Software

Table 3-29 List of SABRINA Version 0.0 Quality Assurance Documents for Software Control and Design Application

Audit Scope	Doc No.	Rev.	Date	Title
1. Software Design	KCS-20080540	1	3/9/2009	SABRINA (EKC0009) Ver. 0.0 Design
	KCS-20080536	0	7/16/2008	SABRINA (EKC0009) Ver. 0.0 Development Plan
	KCS-20080537	0	8/6/2008	SABRINA (EKC0009) Ver. 0.0 Requirement
	KCS-20080542	0	3/16/2009	SABRINA (EKC0009) Ver. 0.0 Validation Report
2. Acceptance Testing				
3. Verification and Validation	KCS-20080538	0	8/29/2008	SABRINA (EKC0009) Ver. 0.0 Development Verification and Validation Plan
	KCS-20080542	0	3/16/2009	SABRINA (EKC0009) Ver. 0.0 Validation Report
	KCS-20080539	0	8/6/2008	SABRINA (EKC0009) Ver. 0.0 Development Verification Review Report
4. Installation and Checkout	KCS-20080543	0	3/13/2009	SABRINA (EKC0009) Ver. 0.0 Installation Verification Report
5. User Documentation	KCS-20080544	0	3/12/2009	SABRINA (EKC0009) Ver. 0.0 Description Note (Code User's Manual)
6. Control of Operation and Maintenance	KCS-20060397	19	6/23/2011	Reactor Internal Designing Section Computer Software List
	KCS-20080541	0	3/13/2009	SABRINA (EKC0009) Implementation
	KCS-20080545	1	3/16/2009	SABRINA (EKC0009) Configuration Management Sheet
	KCS-20110183	0	3/25/2011	Computer Software In-Use Check Report (March 2011) Machine name : 047486 (Windows XP x64)
7. In Use				
8. Error Reporting				
Quality Assurance Procedure	5BB60-N08	0	6/2/2011	Procedure for Development and Control of Computer Software

Table 3-30 List of US Cherry Version 1 Quality Assurance Documents for Software Control and Design Application

Audit Scope	Doc No.	Rev.	Date	Title
1. Software Design	08-SAQ-005	1	4/7/2008	Export Projects Computer Software Development (Modification) Verification Plan for US-CHERRY
	08-SA-011	0	4/7/2008	US-APWR Required Specifications for US-CHERRY
	08-SA-012	1	8/29/2011	US-APWR Program Design Report for US-CHERRY
	08-SA-020	1	6/11/2008	US-APWR Development Report for US-CHERRY
2. Acceptance Testing				
3. Verification and Validation	08-SA-013	1	8/26/2011	US-APWR Validation and Installation Verification Test Plan for US-CHERRY
	08-SA-014	1	6/17/2008	US-APWR Validation and Installation Verification Report for US-CHERRY
4. Installation and Checkout	08-SA-013	1	8/11/2011	US-APWR Validation and Installation Verification Test Plan for US-CHERRY
	08-SA-014	1	6/17/2008	US-APWR Validation and Installation Verification Report for US-CHERRY
	08-SA-021	1	6/12/2008	US-APWR User's Manual US-CHERRY
5. User Documentation				
6. Control of Operation and Maintenance	QA-10-SSED-002	1	2/28/2011	Export Projects Computer Software List
	11-SSDG-022	0	8/29/2011	US-APWR In-use Verification Check Report for US-CHERRY
7. In Use				
8. Error Reporting				
Quality Assurance Procedure	MNEC SOP-421	13	11/12/2010	Export Projects Quality Assurance Program Description