Control Files

Iowa Electric Light and Power Company

October 17, 1980
LDR-80-284

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ASSISTANT VICE PRESIDENT
OF NUCLEAR DIVISION

Mr. James G. Keppler, Director
Office of Inspection and Enforcement
Region III
U.S. Nuclear Regulatory Commission
799 Roosevelt Road
Glen Ellyn, IL 60137

Dear Mr. Keppler:

This letter and enclosure are Iowa Electric Light and Power Company's final response to IE Bulletin No. 79-14 concerning seismic analyses for as-built safety-related piping systems.

Your recent Bulletins have requested cost information. As a result of Bulletin 79-14, Iowa Electric expended approximately three million dollars in preparation of the report and corrective action.

Very truly yours,

Larry D. Root

Larry D. Root
Assistant Vice President
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FINAL REPORT

SEISMIC ANALYSIS
OF
AS-BUILT SAFETY-RELATED PIPING SYSTEMS
FOR
DUANE ARNOLD ENERGY CENTER
IOWA ELECTRIC LIGHT AND POWER COMPANY

1.0 INTRODUCTION

U.S. NRC IE Bulletin 79-14, Seismic Analysis for As-Built Safety-Related Piping Systems, was issued on July 2, 1979, revised on July 18, 1979, and supplemented on August 15, 1979, and September 7, 1979.

The bulletin requested licensees to take certain actions to verify that seismic analyses are applicable to as-built plants.

This is a final report and contains the actions taken and the results of those actions.

2.0 ACTIONS TO BE TAKEN BY LICENSEES AND PERMIT HOLDERS

All power reactor facility licensees and construction permit holders are requested to verify, unless verified to an equivalent degree within the last 12 months, that the seismic analysis applies to the actual configuration of safety-related piping systems. The safety-related piping includes Seismic Category I systems as defined by Regulatory Guide 1.29, Seismic Design Classification, Revision 1, dated August 1, 1973, or as defined in the applicable FSAR. The action items that follow apply to all safety-related piping 2-1/2 inches in diameter and greater and to Seismic Category I piping, regardless of size, which was dynamically analyzed by computer. For older plants, where Seismic Category I requirements did not exist at the time of licensing, it must be shown that the actual configuration of safety-related systems utilizing piping 2-1/2 inches in diameter and greater meets design requirements.

2.1 SPECIFICS

Specifically, each licensee was requested to perform the following tasks:

2.1.1 Item 1

a. Identify inspection elements to be used in verifying that the seismic analysis input information conforms to the actual configuration of safety-related systems.

Response: Attachment 1, Procedure for Verifying Conformance of Seismic Analysis to Actual Configuration of Safety-Related Piping Systems in Response to IE Bulletin 79-14, identifies the inspection elements used.

b. For each safety-related system, submit a list of design documents, including title, identification number, revision, and date, which were sources of input information for the seismic analyses.

Response: Attachment 2 lists the design documents for each safety-related system.

c. Also submit a description of the seismic analysis input information which is contained in each document.

Response: Attachment 1 (Sections III through IX) describes the input information.

d. Identify systems or portions of systems which are planned to be inspected during each sequential inspection identified in Items 2 and 3 (Sections 2.1.2 and 2.1.3, respectively).

Response: Attachment 4, Results of Inspection, identifies the systems which were inspected and the inspection group in which each system was inspected.

2.1.2 Item 2

For portions of systems which are normally accessible*, inspect one system in each set of redundant systems and all nonredundant systems for conformance to the seismic analysis input information set forth in design documents. In the inspection, include pipe run geometry; support and restraint design, locations, function, and clearance (including floor and wall penetration); embedments (excluding those covered in IE Bulletin 79-02); pipe attachments; and valve and valve operator locations and weights (excluding those covered in IE Bulletin 79-04). Within 60 days of the date of this bulletin, submit a description of the results of this inspection. Where nonconformances are found which affect operability of any system, the licensee will expedite completion of the inspection described in Item 3.

*Note: "Normally accessible" refers to those areas of the plant which can be entered during reactor operation.

Response: See the response to Item 3.

2.1.3 Item 3

In accordance with Item 2, inspect all other normally accessible safety-related systems and all normally inaccessible safety-related systems. Within 120 days of the date of this bulletin, submit a description of the results of this inspection.

Response to Items 2 and 3: The inspections described in Bulletin 79-14, Items 2 and 3 were conducted for Iowa Electric Light and Power by Bechtel Associates Professional Corporation of Ann Arbor, Michigan, using its Procedure for Verifying Conformance of Seismic Analysis to Actual Configuration of Safety-Related Piping Systems. (Revision 3 of this procedure is Attachment 1 to this report.)

The inspection reported herein is specifically addressed by Sections III through IX of the procedure. The field inspection was conducted at the Duane Arnold Energy Center. The comparison addressed in Section VIII was performed at Bechtel's Ann Arbor office. The responses for normally accessible lines were submitted via Letters LDR-79-177 dated August 31, 1979, and LDR-79-274 dated October 30, 1979. Normally inaccessible lines were inspected during the February, March, and April 1980 refueling outage. The results of all inspections and comparisons are tabulated in Attachment 4, Results of Inspection.

In summary, inspection groups are classified as follows:

a. Inspection Group 1 lines include all accessible portions of nonredundant systems and accessible portions of one of two nonredundant systems.

b. Inspection Group 2 lines include accessible portions of redundant systems not included in Group 1.

c. Inspection Group 3 lines include all inaccessible piping. (A chilled water line was covered completely by a metal box enclosure and was not inspected.)

d. Computer-analyzed safety-related small pipe was inspected along with Group 3 lines.

2.1.4 Item 4

If nonconformances are identified:

a. Evaluate the effect of the nonconformance upon system operability under specified earthquake loadings and comply with applicable action statements in your technical specifications, including prompt reporting.

b. Submit an evaluation of identified nonconformances on the validity of piping and support analyses as described in the Final Safety Analysis Report (FSAR) or other NRC-approved documents. Where you determine that reanalysis is necessary, submit your schedule for 1) completing the reanalysis, 2) comparisons of the results to the FSAR or other NRC-approved acceptance criteria, and 3) submitting descriptions of the results of reanalysis.

c. In lieu of Item b, submit a schedule for correcting nonconforming systems so they conform to the design documents. Also, submit a description of the work required to establish conformance.

d. Revise documents to reflect the as-built conditions in the plant, and describe measures which are in effect which provide assurance that future modifications of piping systems, including their supports, will be reflected in a timely manner in design documents and the seismic analysis.

Response to Item 4: The results tabulated in Attachment 4 show that no nonconformances exist.

ATTACHMENTS

1. Procedure for Verifying Conformance of Seismic Analysis to Actual Configuration of Safety-Related Piping Systems in Response to IE Bulletin 79-14, Revision 3.

2. Listing of Design Documents for Seismic Analysis of Lines in Various Inspection Groups

   a. Group 1 Lines

   b. Group 2 Lines

   c. Group 3 Lines

   d. Computer-Analyzed Safety-Related Small Pipe

3. Seismic Category I Systems, Associated Piping Line Numbers, and Inspection Group

   (This list, included in the previously submitted response for normally accessible lines, is omitted from this response. Attachment 4 lists all lines inspected.)

4. Results of Inspection

   a. Group 1 Lines

   b. Group 2 Lines

   c. Group 3 Lines

   d. Computer-Analyzed Safety-Related Small Pipe

PROCEDURE

FOR

VERIFYING CONFORMANCE OF SEISMIC ANALYSIS TO ACTUAL CONFIGURATION OF SAFETY-RELATED PIPING SYSTEMS IN RESPONSE TO IE BULLETIN 79-14

FOR

DUANE ARNOLD ENERGY CENTER UNIT 1

IOWA ELECTRIC LIGHT AND POWER COMPANY

CEDAR RAPIDS, IOWA

BY

BECHTEL ASSOCIATES PROFESSIONAL CORPORATION

ANN ARBOR, MICHIGAN

REV. 2
APPROVED BY J. L. Hurley
DATE 8-23-79

REV. 3
APPROVED BY J. L. Hurley
DATE 8/8/80

REV. 0
APPROVED BY J. N. Vance
DATE 7-30-79

REV. 1
APPROVED BY J. N. Vance
DATE 8-1-79

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I. PURPOSE

This procedure describes the method and steps to be taken to verify that the seismic analyses of safety-related piping systems conform to the actual configurations of the installed piping systems at Duane Arnold Energy Center (DAEC). The procedure is intended to be responsive to the requirements of NRC IE Bulletin 79-14 dated July 2, 1979.

II. GENERAL DISCUSSION

This section describes the overall approach to be taken to provide the verification that the seismic analyses performed conform to the actual configuration of the piping systems installed. The general steps are listed below and the detailed description of procedures required to accomplish each step are provided in subsequent sections.

A. Identify all 2-1/2-inch and larger piping and all 2-inch and smaller piping lines which were computer-analyzed and safety-related.

B. Separate these lines into four inspection groups:

   1. Inspection Group 1 lines include all accessible portions of nonredundant systems and accessible portions of one of two redundant system

   2. Inspection Group 2 lines include accessible portions of redundant systems not included in Group 1 lines.

   3. Inspection Group 3 lines include all inaccessible lines.

   4. Computer-analyzed, safety-related small pipe

C. Develop as-built inspection documents for the field surveys of the piping systems. The inspection documents are to contain all information required to be verified by the field inspection.

D. Develop as-designed documents which reflect the piping configuration which was used as input to the seismic analysis.

E. Perform field inspection of actual piping system configurations using the as-built inspection documents described above. Document any deviations from the inspection documents as a result of the inspection.

F. Compare the verified as-built documents with the completed as-designed documents for agreement with the seismic analysis input.

G. Evaluate the significance of any discrepancies between the verified as-built documents and the as-designed documents.

H. Evaluate the results of the field inspections and any reanalyses to determine whether verification inspections beyond the initial phase are warranted.

III. IDENTIFY SAFETY-RELATED LINES

To identify the safety-related piping lines 2-1/2 inches and larger which have been seismically analyzed, use the DAEC Piping Summary Sheets, Drawing M-190 (current revision). The seismic classification of each line is noted in the summary sheets. Use applicable piping and instrument diagrams (P&IDs) to identify computer-analyzed, safety-related small piping. Where the small pipe is not identified by line number or the P&IDs, assign a 500 series line number to line. Once identified, a list of all Seismic Category I (SCI) lines is to be prepared.

IV. INSPECTION PLAN

The nonredundant and redundant safety systems are to be identified using the DAEC FSAR. One train of the redundant systems is to be selected for inspection. Area piping drawings and system P&IDs are to be used to identify accessible portions of these systems. A list of the lines associated with nonredundant systems and the selected trains of redundant systems in accessible areas is to be prepared for the initial field inspection phase. Lists of the remaining lines to be inspected in subsequent inspection phases are also to be prepared.

V. DEVELOP AS-BUILT INSPECTION DOCUMENT

For each line in the field inspection effort, an inspection package is to be developed. The basic documents in the package for each line are the hanger isometric(s) and the hanger detail drawings. This package is assembled as follows:

A. An inspection data sheet for each line to be inspected is prepared. The data sheet lists the line identification number and the DAEC system startup number for the system containing the line.

B. The system P&ID which contains the selected line is checked to determine the seismic boundaries of the line. All hanger isometrics which show the line or portions of the line will be listed in the inspection data sheet. If the line connects to a non-Seismic Category I (non-SCI) line, the SCI line ends at the first rigid anchor after the seismic boundary. The hanger isometric for this portion of the non-SCI line will also be listed.

C. Copies of all hanger isometrics associated with a line will be collected for the inspection package.

D. The hanger isometrics will be reviewed to identify all seismic supports or restraints. The list of supports/restraints and the hanger detail drawing number for each will be listed on the data sheet.

E. Copies of all hanger detail drawings will be collected for inclusion in the package.

F. The dimensions of the hanger locations are to be extracted from the seismic calculation input and added to the hanger isometric. If, because of the availability of inspection packages required to support the inspection teams, there is not ample time to extract these dimensions, then the dimensions are to be added from the field measurements to the hanger isometric and compared to the calculation dimensions after the inspection.

G. The function of the hanger, that is the restriction or load-carrying direction, is to be extracted from the calculation input and checked against the function indicated on the hanger detail drawing. Conformance is to be noted on the inspection data sheet. Because of schedule reasons, the check on the hanger function may be made following the field inspection when the verified as-built isometrics and hanger drawings are compared to the stress isometric and calculation input.

H. Valve mark numbers are to be extracted from the system P&IDs and marked in the inspection data sheet and the hanger isometrics. The inspection data sheet, the hanger isometric(s), and the hanger detail drawing(s) will comprise the field inspection package.

I. Spool checklist

VI. DEVELOP AS-DESIGNED DOCUMENTS

For lines 2-1/2-inches and larger, the stress isometric represents the as-designed configuration which was used as input to the seismic calculation. Copies of the stress isometric will be obtained for each line identified in the inspection effort. If the stress isometric does not contain the location dimensions of the hangers, then the calculation input will be reviewed to extract the dimensions from the input data. Should the stress isometric be unavailable, data from existing isometrics and original stress calculations may be used to reconstruct a stress isometric. For safety-related, computer-analyzed piping 2 inches and smaller, the field isometric represents the as-designed configuration.

VII. FIELD INSPECTION

The actual configuration of the piping systems included in this procedure are to be verified by field inspections or walkdowns of each safety-related line. The inspections are to be conducted using the guidelines listed below. The personnel involved in the field inspections are to receive qualifications training prior to conducting the inspections. Documentation of the qualification training for the individuals is to be provided. The inspection package described in Section V is to be provided to the inspection team assigned to a given line.

The inspection teams are to verify that:

A. Piping geometry conforms to the as-built hanger isometric. The dimensions of the piping configuration are to be checked.

B. Branch connection locations conform to the hanger isometric. The dimensions to the connections are to be checked.

C. Valve locations and valve identification numbers conform to the hanger isometric. The dimensions of the valve location within the piping run are to be checked.

D. Support/restraint locations conform to the hanger isometric. The dimensions of the support/restraint within the piping run are to be checked. Those supports/restraints with concrete expansion bolts are being inspected under Bulletin 79-02, and only the locations of these support/restraints are to be verified under this procedure.

For dimensional checks on the pipe geometry, branch connections, and valve location, a tolerance of ± 6 inches or ± 5% of the total length of any individual piping run between changes of direction, whichever is larger, is acceptable. For dimensional checks on support/restraint locations, a tolerance of ± 6 inches for pipe sizes 4 inches and smaller and ± 2 pipe diameters with a maximum of ± 24 inches for all other sizes is acceptable. For checks on support/restraint orientation, a tolerance of ± 15 degrees is acceptable. It is expected that verification of the majority of the location dimensions will be performed by the use of a measuring device. However, visual verification is acceptable in those situations where the inspector is assured that the dimension can be judged within the above tolerances. For example, when the piping is a larger diameter and the runs are fairly short, the distance can usually be visually determined to be within the established tolerances, or a pipe run may cross two column lines which have a known spacing.

E. Valve operator orientation conforms to the hanger isometric. The orientation of the valve operator in the plane normal to the piping run is to be checked. A tolerance of ± 10 degrees from the drawing orientation is acceptable.

F. The support/restraint function conforms to the function indicated on the hanger detail drawing. This relates to the type and load direction. The type is one of the following: spring, rod, strut, or snubber. The loading direction is to be checked against the hanger design shown in the hanger detail drawing.

G. Support/restraint assembly details conform to the hanger detail drawings. Items to be checked are the existence and size of structural members, existence of reinforcing members, existence of attachment welds (exact size need not be measured), and orientation.

H. Clearances specified for restraints are no larger than 1/8 inch and clearances for floor and wall penetrations which are not designed to act as restraints are no smaller than 1/8 inch.

I. Anchor assembly details are in general compliance with the detail drawing. Visual inspection of anchors is acceptable.

It is not necessary to remove insulation for inspections, except for inspections of clearances specified in Item VII.H. A random sample of approximately 20% of those restraints which are insulated and require checking of clearances shall be selected and the insulation removed for the check to be made. A high incidence of clearances found out of tolerance shall be cause for further inspection of insulated restraints. In the conduct of the field inspections, the information on the inspection drawings which is in conformance with the actual installation will be yellowed out for accessible lines and a green check will be used for inaccessible lines. Inspection information which is added during the inspection will be documented with a green pen. Any information added to the inspection documents from any source other than the field inspection will be added with a red pen. Information added to inspection documents in any other color will be ignored.

VIII. COMPARISON OF THE AS-BUILT AND AS-DESIGNED CONFIGURATIONS

A. A completed inspection package for each line will contain:

1. The completed inspection data sheet signed and dated by the field inspector

2. The verified hanger isometric marked to indicate the measured dimensions which conform to the hanger isometric. Any deviation of the dimensions, piping geometry, or valve orientation will also be marked on the verified hanger isometric.

3. The hanger detail drawings marked to show any deviations of the actual installation from the detail drawing

4. The spool checklist

B. The verified hanger isometric is to be compared to the stress isometric for conformance. A Piping System Design Conformance Data Sheet is to be prepared to document the comparison. Any discrepancies are to be noted on the data sheet. If the hanger location dimensions were not added to the hanger isometric before the field walkdown, the dimensions measured in the field (green pen) will be yellowed out during the conformance comparison unless otherwise approved by the Bechtel project engineer. For inaccessible lines, no marks will be made on the inspection documents. The hanger detail drawings which indicate discrepancies will also be listed on the data sheet. The completed verification package will include:

1. Completed Inspection Package

   a. Inspection data sheet

   b. Hanger isometric

   c. Spool checklist

   d. Hanger detail drawings

2. Completed Comparison Package

   a. Stress isometric

   b. Design conformance data sheet

IX. EVALUATION OF DISCREPANCIES

Following the comparison of the as-built and as-designed configurations, the completed verification package, with discrepancies noted on the Design Conformance Data Sheet, will be turned over to a stress analyst for evaluation. The stress analyst will determine if the noted discrepancies will significantly affect the seismic analysis originally performed. If it is determined that a nonconformance exists, then the line will be reanalyzed. For purposes of this effort, a nonconformance is defined as a discrepancy which the stress evaluation finds invalidates the conclusions of the seismic analysis of record.

PIPING SYSTEM WALKDOWN DATA SHEET

Spool identification: _____ SUS number _____

Hanger isometric used for inspection: _____ Rev: _____ Date _____

Stress isometric: _____ Rev: _____ Date _____

Pipe geometry: This includes spool dimensions, valve locations, and clearances

_____ Meets isometric
_____ Differs from isometric (attach sketch or description)

VALVES (INCLUDING OPERATORS)

Valve	Weight Analyzed	Weight from Vendor Print	Vendor Print Number

SUPPORTS/RESTRAINTS

Identification Number	Drawing/Revision	Type	Location Per Isometric	Configuration Per Detail	Calculation Function Matches Detail	As-Built Function Matches Detail	Clearance Acceptable

Pipe attachments per spool drawing: _____ Yes _____ No (explain)

Clearances required around pipe: _____

Tolerances: Pipe location: _____ Hanger location: _____

Inspection by: _____ Signature: _____ Date ____

PIPING SYSTEM DESIGN CONFORMANCE DATA SHEET

1. Spool identification: _____ SUS number: _____

2. Verified hanger isometric: _____ Rev: _____ Date ____

3. Stress isometric _____ Rev: _____ Date ____

4. Calculation number: _____

5. Pipe geometry

   Stress isometric conforms to verified inspection isometric _____

   Does not conform _____

   List discrepancies: _____

   _____

   _____

   _____

   _____

   _____

6. Hanger details: List hanger detail drawings which have discrepancies:

   _____

   _____

   _____

   _____

7. Valves: List valves in which the vendor weight different from the analyzed weight:

   _____

   _____

   _____

   _____

By _____ Date _____

SPOOL CHECKLIST

1. Spool number: _____

2. Complete set of isometrics to boundaries ___yes ___no. If no, list missing drawings.

3. Complete set of hanger drawings ___yes ___no. If no, list missing drawings.

4. Hanger locations and function extracted from stress input ___yes ___no

5. Items 1, 2, and 3 and the proper columns of Items 5 and 6 completed on data sheet

   by_____ Date_____

6. Hanger list sent for 79-02 check

   by_____ Date_____

7. 79-02 check complete, record attached Date_____

8. Released to field by_____ Date_____

9. Number of data sheets in complete spool package_____

PIPING SYSTEM NONCONFORMANCE RESOLUTION SHEET

1. Spool identification:_____SUS number:_____

Resolution of nonconformances:

By_____Date_____

LIST OF DESIGN DOCUMENTS FOR ANALYSIS OF LINES IN VARIOUS INSPECTION GROUPS

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List of Design Documents for Seismic Analysis of Group 1 Lines

Line #: DBB-1
Service: RHR pump discharge from MO-2004 to MO-2003

Design Input Documents:

Piping Class/Summary Sheet: DBB/M-190
Seismic Response Spectra: See FSAR
Piping Stress Isometric Drawings: Isometric Reconstructed

1) Hanger Drawing Numbers

H-20 A BP-9172, R1

2) Valve Vendor Print Numbers

MO-2004	M133C-2(1)-11
MO-2003	M152A-4-4

Line #: EBB-4
Service: RCIC test line

Design Input Documents:

Piping Class/Summary Sheet: EBB/M-190
Seismic Response Spectra: See FSAR
Piping Stress Isometric Drawings: Isometric cannot be found

1) Hanger Drawing Number

H-15	BP-1651, R1
SR-12	BP-1672, R3
H-16	BP-1652, R1 &
	BP-1652A, R1 &
	BP-1652B, R1
H-17	BP-1653, R1
H-18	BP-1654
H-19	BP-1655

2) Valve Vendor Print Numbers

MO-2515	M133A-004-6
V-25-07	M133A-047-4

Line #: EBB-6
Service: HPCI pump recirculation to MO-2318

Design Input Documents:

Piping Class/Summary Sheet: EBB/M-190
Seismic Response Spectra: See FSAR
Piping Stress Isometric Drawings: Isometric cannot be found

1) Hanger Drawing Numbers

H-21	BP-1657, R1
H-20	BP-1656, R2

2) Valve Vendor Print Numbers

MO-2318	M133A-012-5
V-23-14	M133A-017-4

Line #: EBB-17
Service: Core spray from MO-2115 to MO-2117

Design Input Documents:

Piping Class/Summary Sheet: EBB/M-190
Seismic Response Spectra: See FSAR
Piping Stress Isometric Drawings: Isometric Reconstructed

1) Hanger Drawing Numbers

H-12	BP-1726
H-13	BP-1727
SR-17	BP-1793

2) Valve Vendor Print Numbers

MO-2115	M133A-040-3

Line #: GBB-3
Service: RHR pumps P-229 B, D discharge to MO-1903

Design Input Documents:

Piping Class/Summary Sheet: GBB/M-190
Seismic Response Spectra: See FSAR
Piping Stress Isometric Drawings: Isometric Reconstructed

1) Hanger Drawing Numbers

H-1	BP-1846/3
	BP-1846A/1
H-2	BP-1847/2
H-3	BP-1848/1
H-4	BP-1849/2
	BP-1849A/1
H-5	BP-1850/2
H-6	BP-1851/1
	BP-1851A/1
H-30	BP-1882, R1
SS-235	BP-2088, R1, Sh. A
H-31	BP-1883, R1
H-32	BP-1884, R2
H-33	BP-1885, R2
H-34	BP-1886, R2
SS-236	BP-2089, R1, Sh. A
H-35	BP-1887, R2
H-36	BP-1888, R2
	BP-1888A, R1
H-20C	BP-9715, R1
	BP-9715A, R1
SS-237	BP-2090, R1
SS-238	BP-2091, R2
SA-78	BP-1930/2
H-79	BP-1931/2
H-80	BP-1932/2
H-81	BP-1933/2
H-82	BP-1934/1
H-83	BP-1935/2
H-84	BP-1936/1
H-85	BP-1937/1

2) Valve Vendor Print Numbers

V-19-2	M137A-010-4
V-19-3	M137A-001-4
V-19-4	M137A-010-4
MO-1940	M137A-009-6
V-19-12	M137B-4-3
V-19-13	M137B-4-3

Line #: GBB-5
Service: Discharge crossover from pumps P-229 B, D to P-229 A, C

Design Input Documents:

Piping Class/Summary Sheet: GBB/M-190
Seismic Response Spectra: See FSAR
Piping Stress Isometric Drawings: Isometric Reconstructed

1) Hanger Drawing Numbers

SR-230	BP-2083R1
H-18	BP-1870R3
H-19	BP-1871R2
SS-215	BP-2068/AR1R1
H-20	BP-1872R3

2) Valve Vendor Print Numbers

MO-2010	M137A-8-3
MO-1937	M137B-11-3
MO-1936	M137A-16-4
V-19-48	M137A-56-1

Line #: GBB-6
Service: RHR pumps P-229B, D discharge to RHR heat exchanger IE-201B

Design Input Documents:

Piping Class/Summary Sheet: GBB/M-190
Seismic Response Spectra: See FSAR
Piping Stress Isometric Drawings: Isometric Reconstructed

1) Hanger Drawing Numbers

H-7	BP-1852/1	& BP-1852A/1
SS-225	BP-2078/1	
SS-226	BP-2079/2	

2) Valve Vendor Print Numbers

MO-1939	M137-17-7.2

Line #: GBB-8
Service: RHR pumps discharge from RHR heat exchanger IE-201B to header

Design Input Documents:

Piping Class/Summary Sheet: GBB/M-190
Seismic Response Spectra: See FSAR
Piping Stress Isometric Drawings: Sketch-735

1) Hanger Drawing Numbers

H-29	BP-1881/2 &
	BP-1881A/1 &
	BP-1881B/2

2) Valve Vendor Print Number

MO-1941 M137A-13-4

Line #: GBB-10
Service: RHR pump discharge from header to MO-1901

Design Input Documents:

Piping Class/Summary Sheet: GBB/M-190
Seismic Response Spectra: See FSAR
Piping Stress Isometric Drawings: Sketch-735

1) Hanger Drawing Numbers

H-25	BP-1877, R1
SS-241	BP-2094
H-26	BP-1878, R2 &
	BP-1878A, R1
SS-243	BP-2096, R1
SR-244	BP-2097 &
	BP-2097A
SS-242	BP-2095, R2
H-27	BP-1879, R2
H-28	BP-1880, R2

2) Valve Vendor Print Numbers

None

Line #: GBB-13
Service: Core spray pump IP-211A discharge

Design Input Documents:

Piping Class/Summary Sheet: GBB/M-190
Seismic Response Spectra: See FSAR
Piping Stress Isometric Drawings: Isometric Reconstructed

1) Hanger Drawing Numbers

H-1	BP-1715, R1 & BP-1715 A, R1
SR-13	BP-1789, R1
SR-14	BP-1790, R1
H-2	BP-1716, R1
H-3	BP-1717, R1
H-4	BP-1718, R1 & BP-1718A, R1
H-5	BP-1719A-C, R2 & BP-1719
H-6	BP-1720, R2
H-7	BP-1721, R2
SR-15	BP-1791, R1
SS-16	BP-1792, R1
H-8	BP-1722, R2
H-9	BP-1723, R2
H-10	BP-1724, R2
H-11	BP-1725, R1

2) Valve Vendor Print Number

V-21-7 M137A-002-4

Line#: GBB-15
Service: RHR pumps P-229 B, D discharge to test line upstream of MO-1935, MO-1970

Design Input Documents:

Piping Class/Summary Sheet: GBB/M-190
Seismic Response Spectra: See FSAR
Piping Stress Isometric Drawings: Isometric Reconstructed

1) Hanger Drawing Numbers

H-108	BP-1960, R2
H-109	BP-1961, R1
H-110	BP-1962, R1
H-111	BP-1963, R1
H-112	BP-1964, R1
	BP-1964A, R1
H-113	BP-1965, R1
H-114	BP-1966, R1
H-115	BP-1967, R1
H-116	BP-1968, R1
H-117	BP-1969, R1
H-118	BP-1970, R1
H-119	BP-1971, R1
H-120	BP-1972, R2

2) Valve Vendor Print Numbers

V-19-14	M137A-4-4
V-19-15	M137B-5-3
CV-1966	M144A-8-28
V-19-6	M137A-3-4
MO-1967	M137B-10-3

Line #: GBB-18
Service: Condensate supply to RHR discharge to reactor

Design Input Documents:

Piping Class/Summary Sheet: GBB/M-190
Seismic Response Spectra: See FSAR
Piping Stress Isometric Drawings: Isometric cannot be found

1) Hanger Drawing Numbers

H-156	BP-2009, R1
H-79	BP-4730/1
H-80	BP-4731/1
H-81	BP-4732/1
H-82	BP-4733/1
H-126	BP-4777/1
H-125	BP-4776/1
H-84	BP-4735/1
H-85	BP-4736/1
H-86	BP-4737
H-96	BP-4747/2
H-95	BP-4746/2
H-94	BP-4745/1
H-93	BP-4744/1
H-92	BP-4743/1
H-91	BP-4742/1
H-118	BP-4769/1
H-119	BP-4770/1
H-120	BP-4771/1
H-121	BP-4772/1
H-122	BP-4773/2

2) Valve Vendor Print Numbers

V-34-20	M137B-9-3
V-34-21	M137A-41-3
V-36-13	M137A-40-4
V-19-30	M137B-4-3
V-19-31	M137B-4-3

Line #: GBB-22
Service: RHR service water discharge to RHR system downstream of MO-1942

Design Input Documents:

Piping Class/Summary Sheet: GBB/M-190
Seismic Response Spectra: See FSAR
Piping Stress Isometric Drawings: Isometric Reconstructed

1) Hanger Drawing Number

H-28 BP-2528, R1

2) Valve Vendor Print Numbers

V-20-10	M137A-051-2
MO-1942	M137A-013-4

Line #: GBB-23
Service: RHR discharge to fuel pool storage

Design Input Documents:

Piping Class/Summary Sheet: GBB/M-190
Seismic Response Spectra: See FSAR
Piping Stress Isometric Drawings: SK-M-338

1) Hanger Drawing Numbers

H-153	BP-2006, R2
SR-160	BP-2013, R1
H-155	BP-2008, R2
H-148	BP-2001, R1
SA-157	BP-2010, R2
H-150	BP-2003, R1
SR-158	BP-2011, R1
H-152	BP-2005, R2
SR-159	BP-2012, R1
SR-161	BP-2014, R1

2) Valve Vendor Print Numbers

V-34-48 M137A-48-2

Line #: GBC-2
Service: RHR service water discharge to RHR heat exchanger IE-201B

Design Input Documents:

Piping Class/Summary Sheet: GBC/M-190
Seismic Response Spectra: See FSAR
Piping Stress Isometric Drawings: Isometric Reconstructed

1) Hanger Drawing Numbers

H-66	BP-2566, R1
H-67	BP-2567, R2
SR-157	BP-6257, R1
H-68	BP-2568, R1
SA-90	BP-6190, R1
H-60	BP-2560, R1
H-61	BP-2561, R1
H-62	BP-2562, R2
H-63	BP-2563, R2
H-64	BP-2564, R1
H-65	BP-2565, R1
H-7	BP-2507, R1
H-8	BP-2508, R1
H-9	BP-2509, R1
H-10	BP-2510, R2
SR-60	BP-6160B, R1
	BP-6160, R1
	BP-6160A, R1
H-11	BP-2511, R1
	BP-2511A, R1
H-12	BP-2512, R1
H-13	BP-2513, R1
SR-61	BP-6161, R1
H-14	BP-2514, R1
H-15	BP-2515, R1
SS-62	BP-6162, R1
SR-64	BP-6164, R1
H-16	BP-2516, R1
	BP-2516A, R1
H-17	BP-2517, R1

2) Valve Vendor Print Numbers

V-46-16	M137A-44-2
V-46-17	M137A-44-2
V-46-13	M137-035-3
V-46-11	M137-035-3
V-46-12	M137-045-2
V-46-14	M137-045-2
V-13-1	M137A-44-2
V-13-2	M137-44-2

Line #: GBC-4
SErvice: RHR service water from RHR heat exchanger IE-201B to MO-1946

Design Input Documents:

Piping Class/Summary Sheet: GBC/M-190
Seismic Response Spectra: See FSAR
Piping Stress Isometric Drawings: SK-0217884-149

1) Hanger Drawing Numbers

H-36	BP-2536/1
	BP-2536A/1
	BP-2530A/2
H-37	BP-2537/3
SR-74	BP-6174/1
SR-73	BP-6173/1
	BP-6173A/1

2) Valve Vendor Print Number

MO-1947	M144A-120-4
V-13-3	M137A-44-2

Line #: GBC-5
Service: RHR service water discharge to RHR heat exchanger discharge upstream of MO-1942

Design Input Documents:

Piping Class/Summary Sheet: GBC/M-190
Seismic Response Spectra: See FSAR
Piping Stress Isometric Drawings: Isometric Reconstructed

1) Hanger Drawing Numbers

SA-59	BP-6159, R2
H-24	BP-2524, R1
H-25	BP-2525, R1
H-26	BP-2526, R2
H-27	BP-2527, R1
	BP-2527A, R1
H-18	BP-2518, R1
H-19	BP-2519, R1
H-20	BP-2520, R1
H-21	BP-2521, R1
H-22	BP-2522, R1

2) Valve Vendor Print Numbers

12" Check	M137A-35-3
MO-1943-B	M137-34-5
MO-1943-A	M137A-34-5
V-13-15	M137A-35-3

Line #: GLE-5
Service: RHR pump discharge and test line to torus spray between MO-1932 and MO-1933 and MO-1934

Design Input Documents:

Piping Class/Summary Sheet: GLE/M-190
Seismic Response Spectra: See FSAR
Piping Stress Isometric Drawings: Isometric Reconstructed

1) Hanger Drawing Numbers

H-23	BP-1737
H-24	BP-1738

2) Valve Vendor Print Numbers

MO-1934	M151A-007-4
MO-1932	M151A-006-4
MO-1933	M137A-17-4

Line #: HBB-2
Service: Core Spray Pump IP-211A Suction

Design Input Documents:

Piping Class/Summary Sheet: HBB/M-190
Seismic Response Spectra: See FSAR
Piping Stress Isometric Drawings: SK 75-396-30

1) Hanger Drawing Numbers

H-1	BP-1701 R0
	BP-1701A R1
H-2	BP-1702 R1
	BP-1702 A R1
H-3	BP-1703 R1
	BP-1703A R1
H-4	BP-1704 R0
	BP1704A R1
H-5	BP-1705 R1
	BP-1705A R1
SS-7	BP-1783 R2
SS-8	BP-1785 R1
H-6	BP-1706 R1
	BP-1706A R1
H-7	BP-1707 R3
	BP-1771 R1

2) Valve Vendor Print Numbers

MO-2100	M137A-15-3
V-21-1	M137A-011-4

Line #: HBB-6
Service: HPCI turbine exhaust to torus isolation valve

Design Input Documents:

Piping Class/Summary Sheet: HBB/M-190
Seismic Response Spectra: See FSAR
Piping Stress Isometric Drawings: Isometric Reconstructed

1) Hanger Drawing Numbers

SR-1	BP-1585 R1
	BP-1585A R1
H-1	BP-1501 R2
	BP-1501 R1
SS-20	BP-1586 R2
H-2	BP-1502 R2
	BP-1502A R1
SR-21	BP-1587 R3
H-3	BP-1503 R1
	BP-1503A R1
H-4	BP-1504 R2
H-5	BP-1505 R1
SS-22	BP-1588 R1
H-6	BP-1506 R2

2) Valve Vendor Print Number

V-22-16 M137A-005-5

Line #: HBB-7
Service: RCIC turbine exhaust to torus isolation valve

Design Input Documents:

Piping Class/Summary Sheet: HBB/M-190
Seismic Response Spectra: See FSAR
Piping Stress Isometric Drawings: SK TS-395-51

1) Hanger Drawing Numbers

H-1	BP-1601 R2
	BP-1601A R1
H-2	BP-1602 R1
SS-17	BP-1677 R2
H-3	BP-1603 R1
H-4	BP-1604 R2
SS-18	BP-1678 R2
H-5	BP-1605 R3
SS-1	BP-1680 R1
	BP-1680A R1
H-6	BP-1606 R5
H-7	BP-9725 R3
	BP-9725A R2

2) Valve Vendor Print Numbers

V-24-23 M137A-007-5

Line #: HBB-8
Service: HPCI pump suction from MO-2321 to MO-2322

Design Input Documents:

Piping Class/Summary Sheet: HBB/M-190
Seismic Response Spectra: See FSAR
Piping Stress Isometric Drawings: Isometric Reconstructed

1) Hanger Drawing Numbers

H-1	BP-1524, R1
SR-1	BP-6105, R1
SR-2	BP-6106, R1
	BP-6106A, R1
H-3	BP-1526, R1
H-4	BP-1527, R2
SR-3	BP-6107, R1
	BP-6107A, R2
H-5	BP-1528, R2
SR-4	BP-6108, R1
H-6	BP-1529, R1
	BP-1529A, R1
H-7	BP-1530, R1
H-8	BP-1531, R2

2) Valve Vendor Print Numbers

V-23-1	M137A-012-4
MO-2322	M137A-014-4

Line #: HBB-9
Service: HPCI pump suction from condensate line

Design Input Documents:

Piping Class/Summary Sheet: HBB/M-190
Seismic Response Spectra: See FSAR
Piping Stress Isometric Drawings: Isometric Reconstructed

1) Hanger Drawing Numbers

H-9 BP-9727 R1

2) Valve Vendor Print Numbers

MO-2300	M137A-014-4
V-23-4	M137A-012-4

Line #: HBB-14
Service: RCIC pump suction from MO-2516 to MO-2517

Design Input Documents:

Piping Class/Summary Sheet: HBB/M-190
Seismic Response Spectra: See FSAR
Piping Stress Isometric Drawings: Isometric Reconstructed

1) Hanger Drawing Numbers

H-1	BP-1617 R2
H-2	BP-1618 R1
SR-5	BP-1665 R1
H-3	BP-1619 R2
	BP-1619A R2
H-4	BP-1620 R2
H-5	BP-1621 R1
SR-4	BP-1664 R1
H-6	BP-1622 R1

2) Valve Vendor Print Numbers

V-25-01	M137A-6-4
MO-2517	M137B-14-3

Line#: HBB-15
Service: RCIC pump suction from condensate storage tank

Design Input Documents:

Piping Class/Summary Sheet: HBB/M-190
Seismic Response Spectra: See FSAR
Piping Stress Isometric Drawings: Isometric Reconstructed

1) Hanger Drawing Numbers

H-11	BP-1627 R2
H-7	BP-1623 R1
H-8	BP-1624 R2

2) Valve Vendor Print Numbers

V-25-03	M137A-6-3
MO-2500	M137B-14-3
V-25-02	M137B-6-3
V-25-04	M137B-6-3
MO-2517	M137B-14-3
V-25-05	M137A-6-4
V-25-01	M137A-6-4

Line#: HBB-21
Service: RCIC pump suction from RHR heat exchanger

Design Input Documents:

Piping Class/Summary Sheet: HBB/M-190
Seismic Response Spectra: See FSAR
Piping Stress Isometric Drawings: Isometric Reconstructed

1) Hanger Drawing Numbers

H-10	BP-1626, R1
H-9	BP-1625, R1
H-49	BP-1901, R2
H-50	BP-1902, R2
H-51	BP-1903, R2
H-52	BP-1904, R3
H-53	BP-1905, R2
	BP-1905A, R2
H-54	BP-1906, R1
SS-218	BP-2071, R1
H-48	BP-1900, R2
H-47	BP-1899, R2
H-46	BP-1898, R3
H-45	BP-1897, R2
H-44	BP-1896, R2
H-37	BP-1889, R1

2) Valve Vendor Print Numbers

V-25-04	M137B-6-3
V-25-05	M137A-6-4

Line#: HBB-23
Service: RHR pumps P-229 B,D, suction downstream of MO-1909

Design Input Documents:

Piping Class/Summary Sheet: HBB/M-190
Seismic Response Spectra: See FSAR
Piping Stress Isometric Drawings: Isometric Reconstructed

1) Hanger Drawing Numbers

H-1	BP-1821 R1
H-2	BP-1822 R1
H-3	BP-1823 R1
H-4	BP-1824
	BP-1824A
	BP-1824B
H-5	BP-1825 R2
H-20	BP-1820 R3
H-19	BP-1819 R1
H-18	BP-1818 R2
	BP-1818A R1
H-15	BP-1815 R2
	BP1815A R1
SS-220	BP-2073 R1
H-16	BP-1816 R2
H-17	BP-1817 R3
	BP-1817A R2
SS-219	BP-2072 R1
H-14	BP-1814 R1
	BP-1814A R1
H-13	BP-1813 R3
H-12	BP-1812 R4
	BP-1812A R1
H-11A	BP-9711A R1
	BP-9711 R1
H-11	BP-1811 R2
	BP-1811A R2

2) Valve Vendor Print Numbers

MO-1911	M137A-14-4
MO-1913	M137A-14-4
V-19-10	M137B-4-3
V-19-12	M137B-4-3
MO-1912	M137A-14-4
MO-1920	M137A-14-4
MO-1909	M152A-30-3

Line #: HBB-25
Service: Drain from fuel pool skimmer tanks

Design Input Documents:

Piping Class/Summary Sheet: HBB/M-190
Seismic Response Spectra: See FSAR
Piping Stress Isometric Drawings: Isometric Reconstructed

1) Hanger Drawing Numbers

H-163	BP-2016 R2
H-164	BP-2017 R2
H-165	BP-2018 R2
SS-178	BP-2031 R1
	BP-2031A R1
SR-177	BP-2030 R2
H-166	BP-2019 R2
	BP-2019A R1
H-167	BP-2020 R2
H-168	BP-2021 R2
SA-179	BP-2032 R1
H-170	BP-2032 R2
H-171	BP-2024 R2
H-172	BP-2025 R2
SR-180	BP-2033 R1
	BP-2033a R1
SR-174	BP-2027 R2
H-175	BP-2028 R2
H-176	BP-2029 R2
H-173	BP-2026 R2

2) Valve Vendor Print Numbers

None

Line #: HBB-29
Service: RHR relief valve PSV-1952 to suppression pool

Design Input Documents:

Piping Class/Summary Sheet: HBB/M-190
Seismic Response Spectra: See FSAR
Piping Stress Isometric Drawings: Isometric Reconstructed

1) Hanger Drawing Numbers

H-195	BP-2048, R2
H-196	BP-2049, R2
H-197	BP-2050, R2
H-198	BP-2051, R2 & BP-2051A, R1
SS-199	BP-2052, R1 & BP-2052A, R1
H-200	BP-2053, R2
H-201	BP-2054, R2
H-191	BP-2044, R2
SR-192	BP-2045, R2
H-193	BP-2046, R2
SR-194	BP-2047, R2

2) Valve Vendor Print Numbers

None

Line #: HBD-24
Service: Emergency service water pump IP-99A discharge

Design Input Documents:

Piping Class/Summary Sheet: HBD/M-190
Seismic Response Spectra: See FSAR
Piping Stress Isometric Drawings: Isometric Reconstructed

1) Hanger Drawing Numbers

SA-93	BP-6193/1	SR-150	BP-6250/1 & BP-6250A/1
H-23	BP-2607/1	SA-162	BP-6262/1
H-24	BP-2608/1	H-42	BP-2679/2
H-25	BP-2609/1	H-43	BP-2680/2
H-26	BP-2610/1	H-44	BP-2681/2
H-27	BP-2611/1	SA-92	BP-6192/2
H-28	BP-2612/1	H-157	BP-7094/1
H-29	BP-2613/1	H-158	BP-7095/1
H-30	BP-2614/1	H-35	BP-2672/3 & BP-2672A/1
H-31	BP-2515/1		BP-2672B/2
H-32	BP-2669/1	H-36	BP-2673/1 & BP-2672A/1
H-33	BP-2670/1	SA-91	BP-6191/2
SA-160	BP-6260/1	H-1	BP-2585/2
H-34	BP-2671/1	H-2	BP-2586/2 & BP-2586A/1
H-123	BP-8009/1	H-3	BP-2587/2
SA-146	BP-6246/1	H-4	BP-2588/1
H-124	BP-7061/1	H-5	BP-2589/2
FH-3	BP-9657/1	SR-155	BP-6255/1
H-45	BP-2682/2	H-6	BP-2590/2
H-120	BP-7057/1	H-20	BP-2604/1
H-121	BP-7058/1	H-21	BP-2605/1
SR-149	BP-6249/1	H-22	BP-2606/2
H-122	BP7059/1	SA-161	BP6261/1
H-38	BP-2675/2	H-12	BP-2596/1
	BP-2675A/2	H-13	BP-2597/1
H-39	BP-2676/2	H-14	BP-2598/1
H-40	BP-2677/2	H-15	BP-2599/1
H-41	BP-2678/2	H-16	BP-2600/1
H-37	BP2674/1 &	H-17	BP-2601/1
	BP-2674A/1 &	H-18	BP-2602/1
	BP-2675B/2	H-19	BP-2603/1 & BP-2603A/1

2) Valve Vendor Print Numbers

V-13-53	M135A-31-2	V-46-21	M135A-33-3
V-69-66	M135A-4-8	V-46-22	M135A-4-8
V-69-67	M135A-6-5	V-46-24	M135A-31-2
V-13-61	M135-31-2	V-46-25	M135A-31-2

Line #: HBD-26
Service: Emergency service water to diesel generator IE-53A

Design Input Documents:

Piping Class/Summary Sheet: HBD/M-190
Seismic REsponse Spectra: See FSAR
Piping Stress Isometric Drawings: 0217884-122

1) Hanger Drawing Numbers

SR-103	BP-6203, R1
	BP-6203A, R1
SR-5	BP-6117, R2
	BP-6117A, R2
	BP-6117B, R2
H-1	BP-2654, R1
SG-104	BP-6204, R1
	BP-2655, R1

2) Valve Vendor Print Numbers

CV-2080	M135A-68-1
V-13-35	M135A-32-3

Line #: HBD-28
Service: Emergency service water returns from safeguard equipment serviced by pump IP-99A

Design Input Documents:

Piping Class/Summary Sheet: HBD/M-190
Sesmic Response Spectra: See FSAR
Piping Stress Isometric Drawings: Isometric Reconstructed

1) Hanger Drawing Numbers

SA-96	BP-6196/1	H-15	BP-2651/2
H-1	BP-2637/1	SA-99	BP-6199/2
H-2	BP-2638/1	H-16	BP-2652/1
H-3	BP-2639/1	H-17	BP-2653/1
H-4	BP-2640/1	H-49	BP-2686/2
H-5	BP-2641/1	H-50	BP-2687/1
H-6	BP-2642/1	SA-94	BP-6194/1
H-7	BP-2643/1	SR-152	BP-9748/1
H-8	BP-2644/1	H-51	BP-2688/1
H-9	BP-2645/1	H-128	BP-7065/1
SA-98	BP-6198/1	H-52	BP-2689/2
H-10	BP-2646/1	H-53	BP-2690/2
H-11	BP-2647/1	H-54	BP-2691/2
H-12	BP-2648/1	H-55	BP-2692/2
H-13	BP-2649/1	H-56	BP-2693/2
H-46	BP-2683/1	H-57	BP-2694/2
H-47	BP-2684/1	SA-95	BP-6195/2
H-48	BP-2685/1	H-59	BP-2696/1
H-14	BP-2650/2	H-125	BP-7062/1
	BP-2650A/2	H-126	BP-7063/1
H-159	BP-7096/1	H-127	BP-7064/1
H-160	BP-7097/1		

2) Valve Vendor Print Numbers

TCV-6924B	M90-1-2
V-13-122	M135A-4-8
CV-1956A	M135A-67-1
MO-2077	M135A-34-2
V-13-54	M135-31-2
TCV-6924A	M90-1-2
V-13-62	M135-32-3

Line #: HBD-31
Service: Service water return from RHR heat exchanger IE-201B to downstream of MO-1947 to MO-1998B

Design Input Documents:

Piping Class/Summary Sheet: HBD/M-190
Seismic Response Spectra: See FSAR
Piping Stress Isometric Drawings: SK 0217884-149

1) Hanger Drawing Numbers

SS-71	BP-6171 R1
H-38	BP-2538 R1
H-39	BP-2539 R1
H-40	BP-2540 R1
SR-70	BP-6170 R1
	BP-6160A R1
H-42	BP-2542 R1
H-43	BP-2543 R1
H-44	BP-2544 R1
H-45	BP-2545 R1
SS-101	BP-6201 R1
H-46	BP-2546 R1
H-47	BP-2547 R1
H-48	BP-2548 R1
H-49	BP-2549 R1
H-50	BP-2550 R1

2) Valve Vendor Print Numbers

MO-1998 B M144C-49-1

Line #: HBD-32
Service: RHR service water return from RHR heat exchanger to cooling tower via CW discharge downstream of MO-1998 A,B

Design Input Documents:

Piping Class/Summary Sheet: HBD/M-190
Seismic Response Spectra: See FSAR
Piping Stress Isometric Drawings: Sketch-710

1) Hanger Drawing Numbers

H-35 BP-2353, R2

2) Valve Vendor Print Numbers

None

Line #: HBD-67
Service: River water pumps IP-117 B,D discharge

Design Input Documents:

Piping Class/Summary Sheet: HBD/M-190
Seismic Response Spectra: See FSAR
Piping Stress Isometric Drawings: SK-M-401, SK-M-399, SK-M-403

1) Hanger Drawing Numbers

H-10	BP-2578
H-9	BP2577
H-8	BP-2576
SA-28	BP-6128, R2, F1
H-29	BP-5229, R2
H-28	BP-5228, R2
SA-29	BP-6129, R2, F1
H-27	BP-5227, R1
H-26	BP-5226, R2
H-30	BP-5220, R2
FH-20	BP-9501, R1
H-21	BP-9502, R1
FH-21	BP-5223, R2
H-23	BP-5224, R1
H-24	BP-6127, R2
SA-27	BP-6139, R1
SA-39	BP-2571, R1
H-3	BP-2573, R1
H-4	BP-6137, R2
SA-37	BP-6246, R2
SA-46	BP-6146A, R1
H-2	BP-2570, R2
H-1	BP-2569, R2
SA-44	BP-6144, R3
SA-45	BP-6145, R3
H-13	BP-2581, R1
H-14	BP-2582, R2
SA-30	BP-6130, R4

2) Valve Vendor Print Numbers

AV-2902B	Multiplex (Model A-32)
AV-2909D	Multiplex (Model A-32)
V-29-6	M144C-014-4
V-29-8	M144C-014-4
V-29-5	M132A-002-4
V-29-7	M132A-002-4
V-39-17	M135A-004-8
V-29-25	M135A-004-8
AV-2909F	Multiplex (Model A-32)
CV-4910A	M144C-024-5
CV-4909	M144C-024-5
CV-4914	M144C-028-1
V-46-43	M135A-032-3
V-46-46	M135A-004-8

Line #: HBD-80
Service: Emergency service water from diesel generator IE-53A to

Design Input Documents:

Piping Class/Summary Sheet: HBD/M-190
Seismic Response Spectra: See FSAR
Piping Stress Isometric Drawings: Isometric Reconstructed

1) Hanger Drawing Numbers

SR-1	BP-6113 R3
	BP-6113A R2
H-7	BP-2660 R2
H-8	BP-2661 R2
SG-108	BP-6208 R1
H-9	BP-2662 R2
H-10	BP-2663 R2

2) Valve Vendor Print Numbers

None

Line #: HBD-82
Service: Discharge from PSE to 2079 A, B to radwaste dilution line and deicing

Design Input Documents:

Piping Class/Summary Sheet: HBD/M-190
Seismic Response Spectra: See FSAR
Piping Stress Isometric Drawings: 75.396-48 & Reconstructed Isometric

1) Hanger Drawing Numbers

H-202	BP-1002, R2
H-203	BP-1003. R2
H-204	BP-1004, R2
H-85	BP-7022, R1
H-86	BP-7023, R1
H-87	BP-7024, R1
H-40	BP-5240
H-41	BP-5241 & BP-5241 A
H-44	BP-5244
H-42	BP-5242, R2
H-43	BP-5243, R2
H-45	BP-5245, R2
H-46	BP-5246, R2
H-200	BP-1000, R3
H-201	BP-1001, R2

2) Valve Vendor Print Numbers

V-42-10	M144C-053-3
V-42-11	M144C-36-3, 51-1, 54-2
V-42-12	M144C-56-1, 61-1, 63-2
V-29-37	M144C-74-2
V-29-32	M144C-75-2

Line #: HBD-97
Service: Well water pump discharge

Design Input Documents:

Piping Class/Summary Sheet: HBD/M-190
Seismic Response Spectra: See FSAR
Piping Stress Isometric Drawings: 75.396-9 and 75.396-10

1) Hanger Drawing Numbers

H-79	BP-5079, R1
H-80	BP-5080, R1
H-81	BP-5081, R1
FH-3	BP-9554
FH-2	BP-9553
H-82	BP-5082
H-83	BP-5083

2) Valve Vendor Print Numbers

V-44-20	M135A-3-4
V-44-23	M135A-3-4
CV-5701	M135A-78-2
V-44-24	M135A-31-2

Line #: HBD-122
Service: Diesel exhaust

Design Input Documents:

Piping Class/Summary Sheet: HBD/M-190
Seismic Response Spectra: See FSAR
Piping Stress Isometric Drawings: Isometric Reconstructed

1) Hanger Drawing Numbers

SR-3	BP-6115, R2 & BP-6115A, R2
H-68	BP-3868, R1
H-69	BP-3869, R2
H-70	BP-3870, R1
H-71	BP-3871, R1
SR-4	BP-6116, R2 & BP-6116A, R2
H-72	BP-3872, R3
H-73	BP-3873, R2
H-74	BP-3874, R1
H-75	BP-3875, R1

2) Valve Vendor Print Number

None

Line #: HBD-159
Service: Cooling water P/P IV-CP-30B discharge through chiller to control room air

Design Input Documents:

Piping CIass/Summary Sheet: HBD/M-190
Seismic Response Spectra: See FSAR
Piping Stress Isometric Drawings:

1) Hanger Drawing Numbers:

SA-1	BP-8001, R1
H-6	BP-8006, R1
H-7	BP-8007, R1
H-18	BP-8018-1, R1
H-23	BP-8023-1, R1
H-22	BP-8022-1, R1
H-21	BP-8021-1, R1

2) Valve Vendor Print Numbers:

V-69-68	M135BC-1-1
V-69-83	M135BC-1-1

Line #: HBD-161
Service: Control room air CCW to p/p IV-CP-30B

Design Input Documents:

Piping Class/Summary Sheet: HBD/M-190
Seismic Response Spectra: See FSAR
Piping Stress Isometric Drawings: Isometric Reconstructed

1) Hanger Drawing Numbers

H-19	BP-8019, R2
H-18	BP-8018-2, R1
H-23	BP-8023-3, R1
H-22	BP-8022-3, R1
H-15	BP-8015, R1
SA-14	BP-8014, R1

2) Valve Vendor Print Numbers

V-69-22	M-135A-4-8
V-69-135	M135A-4-8

Line #: HCB-2
Service: Standby liquid control pump suction

Design Input Documents:

Piping Class/Summary Sheet: HCB/M-190
Seismic Response Spectra: See FSAR
Piping Stress Isometric Drawings: Isometric Reconstructed

1) Hanger Drawing Numbers

H-50	BP-4871, R1
H-51	BP-4872, R2
H-52	BP-4873, R2
H-53	BP-4874, R2

2) Valve Vendor Print Numbers

V-26-2	M-143B-001
V-26-3	M-143B-001
V-26-1	M-143B-003
V-26-18	M-143B-003

Line #: HCC-6
Service: HPCI suction from condensate storage tank

Design Input Documents:

Piping Class/Summary Sheet: HCC/M-190
Seismic Response Spectra: See FSAR
Piping Stress Isometric Drawings: Isometric Reconstructed

1) Hanger Drawing Numbers

SR-5	BP-6109, R2
	BP-6109A, R1
	BP-6109B, R1
SR-6	BP-6110, R1
	BP-6110A, R1
SR-7	BP-6111, R2
	BP-6111A, R1
	BP-6111B, R1
H-10	BP-6112, R2
	BP-6112A, R2
H-11	BP-9729, R1
H-12	BP-9730, R1
	BP-9730A, R2
	BP-9730B, R2

2) Valve Vendor Print Numbers

None

Line #: HCC-7
Service: RCIC suction from condensate storage tank

Design Input Documents:

Piping Class/Summary Sheet: HCC/M-190
Seismic Response Spectra: See FSAR
Piping Stress Isometric Drawings: Isometric Reconstructed

1) Hanger Drawing Numbers

H-14	BP-1630 R2
H-13	BP-1629 R2
SR-6	BP-1666 R1
H-12	BP-1628 R2
	BP-1628A R2

2) Valve Vendor Print Numbers

None

Line #: HCC-8
Service: Core spray pump suction from condensate storage tank

Design Input Documents:

Piping Class/Summary Sheet: HCC/M-190
Seismic Response Spectra: See FSAR
Piping Stress Isometric Drawings: Isometric Reconstructed

1) Hanger Drawing Numbers

H-6	BP-1761, R3
	BP-1761A, R3
	BP-1761B, R2
H-7	BP-1762, R2
H-14	BP-1769, R2
H-13	BP-1768, R2
H-12	BP-1767, R3
H-11	BP-1766, R2
H-10	BP-1765, R2
H-9	BP-1754, R3
H-17	BP-1772, R2
	BP-1772A, R2
SS-11	BP-1787, R1
SS-12	BP-1788, R2
H-16	BP-1771, R2
SA-23	BP-1799, R1
H-8	BP-1763, R2
H-2	BP-1757, R3
H-1	BP-1756, R3
H-3	BP-1758, R3
H-4	BP-1759, R2
H-5	BP-1760, R3

2) Valve Vendor Print Numbers

None

Line #: HLE-1
Service: HPCI pump suction from torus to MO-2321

Design Input Documents:

Piping Class/Summary Sheet: HLE/M-190
Seismic Response Spectra: See FSAR
Piping Stress Isometric Drawings: Isometric Reconstructed

1) Hanger Drawing Numbers

None

2) Valve Vendor Print Numbers

MO-2321 M151A-002-4

Line #: HLE-2
Service: RCIC pump suction from torus to MO-2516

Design Input Documents:

Piping Class/Summary Sheet: HLE/M-190
Seismic Response Spectra: See FSAR
Piping Stress Isometric Drawings: Isometric Reconstructed

1) Hanger Drawing Numbers

None

2) Valve Vendor Print Numbers

MO-2516 M137-34-2

Line #: HLE-4
Service: Core spray pump IP-211A suction from torus through MO-2147

Design Input Documents:

Piping Class/Summary Sheet: HLE/M-190
Seismic Response Spectra: See FSAR
Piping Stress Isometric Drawings: Isometric Reconstructed

1) Hanger Drawing Numbers

None

2) Valve Vendor Print Numbers

None

Line #: HLE-5
Service: RCIC turbine exhaust to torus

Design Input Documents:

Piping Class/Summary Sheet: HLE/M-190
Seismic Response Spectra: See FSAR
Piping Stress Isometric Drawings: 75-395-51

1) Hanger Drawing Numbers

None

2) Valve Vendor Print Numbers

V-24-8 M151A-005-4

Line #: HLE-6
Service: HPCI turbine exhaust to torus

Design Input Documents:

Piping Class/Summary Sheet: HLE/M-190
Seismic Response Spectra: See FSAR
Piping Stress Isometric Drawings: Isometric Reconstructed

1) Hanger Drawing Numbers

H-7 BP-1507 R2
H-7A BP-9656 R2

2) Valve Vendor Print Number

V-22-17 M151A-008-4

Line #: HLE-12
Service: RHR pump discharge to torus spray from MO-1933

Design Input Documents:

Piping Class/Summary Sheet: HLE/M-190
Seismic Response Spectra: See FSAR
Piping Stress Isometric Drawings: Isometric Reconstructed

1) Hanger Drawing Numbers

H-17	BP-1731
H-18	BP-1732

2) Valve Vendor Print Numbers

None

Line #: HLE-13
Service: RHR test line to torus from MO-1934 and MO-2038 and MO-2009

Design Input Documents:

Piping Class/Summary Sheet: HLE/M-190
Seismic Response Spectra: See FSAR
Piping Stress Isometric Drawings: Isometric Reconstructed

1) Hanger Drawing Numbers

H-16	BP-1730	H-157	BP-4157, R1
H-19	BP-1733	H-158	BP-4158, R1
H-20	BP-1734	H-159H	BP-4159, R2
H-21	BP-1735	H-160	BP-4160, R1
H-22	BP-1736	H-161	BP-4161, R1
FH-1	BP-9644, R1		
H-210	BP-6710, R1		
H-211	BP-6711, R1		
H-212	BP-6712, R1		
H-213	BP-6713, R1		
H-215	BP-6715, R1		
H-214	BP-6714, R1		

2) Valve Vendor Print Numbers

V-19-28	M137B-33-1
V-19-29	M137B-33-1
V-37-23	M137B-9-3
V-37-21	M137A-41-3
V-37-22	M137B-9-3
V-37-24	M137A-41-3
V-37-25	M137B-9-3

Line # HLE-15
Service: RHR pump discharge to containment coil from MO-200 through penetration

Design Input Documents:

Piping Class/Summary Sheet: HLE/M-190
Seismic Response Spectra: See FSAR
Piping Stress Isometric Drawings: Isometric Reconstructed

1) Hanger Drawing Numbers

H-14 BP-1728,R2
H-15 BP-1729

2) Valve Vendor Print Numbers

MO-2112 M151A-25-1

Line #: HLE-16
Service: Core Spray Test Line

Design Input Documents:

Piping Class/Summary Sheet: HLE/M-190
Seismic Response Spectra: See FSAR
Piping Stress Isometric Drawings: Isometric Reconstructed

1) Hanger Drawing Numbers

H-11 BP-1749 R2
H-12 BP-1750 R2

2) Valve Vendor Print Numbers

None

Line #: HLE-18
Service: RHR pump discharge to containment coil from MO-1902 through penetration

Design Input Documents:

Piping Class/Summary Sheet: HLE/M-190
Seismic Response Spectra: See FSAR
Piping Stress Isometric Drawings: Isometric cannot be found

1) Hanger Drawing Number

None

2) Valve Vendor Print Number

None

Line #: HLE-19
Service: HPCI minimum flow line downstream of MO-2318

Design Input Documents:

Piping Class/Summary sheet: HLE/M-190
Seismic Response Spectra: See FSAR
Piping Stress Isometric Drawings: Isometric cannot be found

1) Hanger Drawing Numbers

H-24	BP-1660, R1
H-23	BP-1659, R2 & BP-1659A, R1
H-22	BP-1658, R1
H-1	BP-1773, R1
H-2	BP-1774, R2 & BP-1774A, R1
H-3	BP-1775, R1
H-4	Bp-1776, R1

2) Valve Vendor Print Numbers

None

Line #: HLE-23
Service: Containment vent purge exhaust

Design Input Documents:

Piping Class/Summary Sheet: HLE/M-190
Seismic Response Spectra: See FSAR
Piping Stress Isometric Drawings: Isometric can not be found

1) Hanger Drawing Numbers

H-11	BP-4511 R2
SR-47	BP-4547 R2

2) Valve Vendor Print Numbers

CV-4302	M144D-2(3)-3
CV-4303	M144D-2(4)-3

Line #: HLE-24
Service: Torus vent purge exhaust

Design Input Documents:

Piping Class/Summary Sheet: HLE/M-190
Seismic Reponse Spectra: See FSAR
Piping Stress Isometric Drawings: Isometric Reconstructed

1) Hanger Drawing Numbers

H-1	BP-4501, R2
H-2	BP-4502, R2
H-3	BP-4503, R1
	BP-4503A, R1
H-4	BP-4504, R2

2) Valve Vendor Print Numbers

CV-4300	M144D-2(1)-3
CV-4301	M144D-2(2)-3

Line #: HLE-25
Service: Containment purge (supply)

Design Input Documents:

Piping Class/Summary Sheet: HLE/M-190
Seismic Reponse Spectra: See FSAR
Piping Stress Isometric Drawings: Isometric Reconstructed

1) Hanger Drawing Numbers

H-5	4505/0
H-6	4506/1
H-7	4507

2) Valve Vendor Print Numbers

CV-4306	M144D-2(6)-3
CV-4307	M144D-9-4

Line #: HLE-26
Service: Torus purge (supply)

Design Input Documents:

Piping Class/Summary Sheet: HLE/M-190
Seismic Response Spectra: See FSAR
Piping Stress Isometric Drawings: Isometric Reconstructed

1) Hanger Drawing Numbers

H-8 4508/2 & 4508A/1

2) Valve Vendor Print Number

CV-4308 M144D-9-4 & M144D-2(7)-3

Line #: HLE-27
Service: Torus Vacuum breaker line

Design Input Documents:

Piping Class/Summary Sheet: HLE/M-190
Seismic Response Spectra: See FSAR
Piping Stress Isometric Drawings: Isometric cannot be found

1) Hanger Drawing Numbers

H-9 BP-4509 R2
BP-4509A R1
H-10 BP-4510 R2
BP-4510A R1

2) Valve Vendor Print Numbers

CV-4304 M144D-2(9)-3
CV-4305 M144D-2(8)-3

Line #: HLE-28
Service: Reactor building cooling water penetration supply

Design Input Documents:

Piping Class/Summary Sheet: HLE/M-190
Seismic Response Spectra: See FSAR
Piping Stress Isometric Drawings: Isometric Reconstructed

1) Hanger Drawing Numbers

None

2) Valve Vendor Print Number

MO-4841 B M137B-15-6

Line #: HLE-29
Service: Reactor building cooling water penetration return

Design Input Documents:

Piping Class/Summary Sheet: HLE/M-190
Seismic Response Spectra: See FSAR
Piping Stress Isometric Drawings: Isometric Reconstructed

1) Hanger Drawing Numbers

None

2) Valve Vendor Print Number

MO-4841 A M137B-16-4

List of Design Documents for Seismic Analysis of Group 2 Lines

Line #: DBB-2
Service: RHR heat exchange discharge

Design Input Documents:

Piping Class/Summary Sheet: DBB/M-190
Seismic Response Spectra: See FSAR
Piping Stress Isometric Drawings: Isometric Reconstructed

1) Hanger Drawing Numbers

H-20B BP 9714, R1

2) Valve Vendor Print Numbers

MO-1904 M133C-2(1)-11

Line #: EBB-18
Service: Core spray pump discharge

Design Input Documents:

Piping Class/Summary Sheet: EBB/M-190
Seismic Response Spectra: See FSAR
Piping Stress Isometric Drawings: Isometric Reconstructed

1) Hanger Drawing Numbers

H-10A BP 9726, R3
BP 9726A, R1

2) Valve Vendor Print Numbers

MO-2135 M133A-40-3

Line #: GBB-4
Service: RHR pump discharge

Design Input Documents:

Piping Class/Summary Sheet: GBB/M-190
Seismic Response Spectra: See FSAR
Piping Stress Isometric Drawings: Isometric Reconstructed

1) Hanger Drawing Numbers

H-1	BP 1839, R1
	BP 1839A, R1
	BP 1839B, R1
H-2	BP 1840, R1
H-3	BP 1841, R1
H-4	BP 1842, R2
	BP 1842A, R1
H-5	BP 1843, R2
H-6	BP 1844, R1
H-2	BP 1854, R2
	BP 1854A, R1
SS-210	BP 2063, R1
H-3	BP 1855, R2
H-4	BP 1856, R2
SR-5	BP 1857, R1
SR-6	BP 1858, R1
SS-217	BP 2070, R2
H-7	BP 1859, R2
H-8	BP 1860, R1
H-9	BP 1861, R3
SS-211	BP 2064, R1
H-10	BP 1862, R2
H-11	BP 1864, R3
H-12	BP 1864, R3
H-13	BP 1865, R3
SS-216	BP 2069, R1
H-200	BP 9713, R1
	BP 9713, R1
SS-213	BP 2066, R1
SS-212	BP 2065, R1

2) Valve Vendor Print Numbers

V-20-1	M137A-1-4
V-20-2	M137A-10-4
V-20-3	M137A-1-4
V-20-4	M137A-10-4
V-20-14	M137B-4-3
V-20-12	M137B-4-3
MO 2030	M137A-9-6

Line #: GBB-7
Service: RHR pump discharge

Design Input Documents:

Piping Class/Summary Sheet: GBB/M-190
Seismic Response Spectra: See FSAR
Piping Stress Isometric Drawings: Isometric Reconstructed

1) Hanger Drawing Numbers

H-7	BP 1845, R1
SS-223	BP 2076, R1
SS-224	BP 2077, R1
	BP 2077A, R1
	BP 2077B, R1

2) Valve Vendor Print Numbers

MO 2029 M137A-13-4

Line #: GBB-9
Service: RHR heat exchange discharge

Design Input Documents:

Piping Class/Summary Sheet: GBB/M-190
Seismic Response Spectra: See FSAR
Piping Stress Isometric Drawings: Isometric Reconstructed

1) Hanger Drawing Numbers

H-1	BP 1853, R1
	BP 1853A, R1

2) Valve Vendor Print Numbers

MO 2031 M137A-13-4

Line #: GBB-14
Service: Core spray pump discharge

Design Input Documents:

Piping Class/Summary Sheet: GBB/M-190
Seismic Response Spectra: See FSAR
Piping Stress Isometric Drawings: Isometric Reconstructed

1) Hanger Drawing Numbers

SR-18	BP 1794, R1
H-1	BP 1739, R1
H-2	BP 1740, R1
H-3	BP 1741, R2
H-4	BP 1742, R2
	BP 1742A, R1
SS-20	BP 1796, R1
	BP 1796A, R2
H-5	BP 1743, R1
H-6	BP 1744, R3
SR-21	BP 1797, R1
H-7	BP 1745, R1
	BP 1745A, R2
H-8	BP 1746, R2
H-9	BP 1747, R2
	BP 1747A, R1
SS-22	BP 1798, R1
	BP 1798A, R1
H-10	BP 1748, R2

2) Valve Vendor Print Numbers

V-21-10	M137A-2-4
MO 2132	M151A-3-4

Line #: GBB-16
Service: RHR pumps - test line; RHR heat exchange discharge

Design Input Documents:

Piping Class/Summary Sheet: GBB/M-190
Seismic Response Spectra: See FSAR
Piping Stress Isometric Drawings: Isometric Reconstructed

1) Hanger Drawing Numbers

SS-214	BP 2067, R2
H-29	BP 1944, R1
H-93	BP 1945, R1
H-94	BP 1946, R1
H-95	BP 1947, R1
H-96	BP 1948, R1
H-97	BP 1949, R1
H-98	BP 1950, R1
H-99	BP 1951, R1
H-100	BP 1952, R1
H-101	BP 1953, R1
H-102	BP 1954, R1
H-103	BP 1955, R1
H-104	BP 1956, R1
H-105	BP 1957, R1
H-106	BP 1958, R1
H-107	BP 1959, R1
H-91	BP 1943, R1
H-90	BP 1942, R1
H-88	BP 1941, R1
H-89	BP 1940, R1
	BP 1940A, R1
H-87	BP 1939, R1
H-86	BP 1938, R1

2) Valve Vendor Print Numbers

V-20-5	M137A-3-4
MO-2036	M137B-10-3
CV-2037	M144A-126-2
MO-2009	M137B-013-4
MO-2038	M137B-012-4
V-20-7	M137B-5-3
V-20-8	M137A-4-4
V-20-9	M137B-5-3
V-20-6	M137A-4-4

Line #: GBC-1
Service: Pumphouse RHR SW

Design Input Documents:

Piping Class/Summary Sheet: GBC/M-190
Seismic Response Spectra: See FSAR
Piping Stress Isometric Drawings: Isometric Reconstructed

1) Hanger Drawing Numbers

H-57	BP 2557, R1
H-58	BP 2558, R2
H-59	BP 2559, R1
SS-56	BP 6156, R1
	BP 6156A, R1
SS-57	BP 6157, R1
H-51	BP 2551, R0
H-52	BP 2552, R1
H-53	BP 2553, R2
H-54	BP 2554, R1
H-55	BP 2555, R1
H-56	BP 2556, R1
H-6	BP 2506, R2
	BP 2506A, R2
SR-85	BP 6185, R1
H-5	BP 2505, R1
SR-58	BP 6158, R1
H-4	BP 2504, R1
	BP 2504A, R1
H-3	BP 2503, R1
H-2	BP 2502, R1
H-1	BP 2501, R1
	BP 2501A, R1
SR-84	BP 6184, R1

2) Valve Vendor Print Numbers

V-46-28	M137A-44-2
V-46-29	M137A-44-2
V-46-30	M137-35-3
V-46-26	M137-35-3
V-46-31	M137-45-2
V-46-27	M137-45-2
V-13-24	M137A-44-2
V-13-23	M137A-44-2

Line #: GBC-3
Service: RHR SW return

Design Input Documents:

Piping Class/Summary Sheet: GBC/M-190
Seismic Response Spectra: See FSAR
Piping Stress Isometric Drawings: Isometric Reconstructed

1) Hanger Drawing Numbers

H-29	BP 2529, R1
SR-67	BP 6167, R1
SR-65	BP 6165, R1
H-30	BP 2530, R1
	BP 2530A, R2
SR-66	BP 6166, R1

2) Valve Vendor Print Numbers

V-13-25	M137A-44-2
MO-2046	M144A-120-4

Line #: GLE-6
Service: Core spray pump discharge

Design Input Documents:

Piping Class/Summary Sheet: GLE/M-190
Seismic Response Spectra: See FSAR
Piping Stress Isometric Drawings: Isometric Reconstructed

1) Hanger Drawing Numbers

H-16	BP 1754, R1

2) Valve Vendor Print Numbers

MO-2005	M151A-006-4
MO-2006	M137A-017-4
MO-2007	M151A-007-4

Line #: HBB-1
Service: Core spray pump suction

Design Input Documents:

Piping Class/Summary Sheet: HBB/M-190
Seismic Response Spectra: See FSAR
Piping Stress Isometric Drawings: Isometric Reconstructed

1) Hanger Drawing Numbers

H-1	BP 1708, R2
H-2	BP 1709, R2
H-3	BP 1710, R1
H-4	BP 1711, R1
H-5	BP 1712, R2
SS-9	BP 1785, R2
SS-10	BP 1786, R1
H-6	BP 1713, R3
	BP 1713A, R2
H-7	BP 1714, R2
	BP 1714A, R2

2) Valve Vendor Print Numbers

MO-2120	M137A-015-3
V-21-2	M137A-011-4

Line #: HBB-24
Service: RHR pump suction

Design Input Documents:

Piping Class/Summary Sheet: HBB/M-190
Seismic Response Spectra: See FSAR
Piping Stress Isometric Drawings: Isometric Reconstructed

1) Hanger Drawing Numbers

SS-229	BP 2082, R1	H-14	BP 1834, R2
H-6	BP 1826, R2	H-15	BP 1835, R2
H-7	BP 1827, R2	H-16	BP 1836, R2
SS-228	BP 2081, R1	H-17	BP 1837, R2
H-8	BP 1828, R2	H-18	BP 1838, R2
	BP 1828A, R1	H-4	BP 1804, R2
	BP 1828B, R1		BP 1804A, R1
H-1	BP 1801, R3	SS-221	BP 2074, R1
	BP 1801A, R2		BP 2074A, R1
H-1A	BP 9660, R3	H-5	BP 1805, R2
	BP 9660A, R2		BP 1805A, R1
H-2	BP 1802, R3	SS-222	BP 2075, R1
	BP 1802A, R2	H-6-1	BP 1806, R2
H-3	BP 1803, R3	H-7-1	BP 1807, R3
H-9	BP 1829, R2		BP 1807A, R1
H-10	BP 1830, R2	H-8-1	BP 1808, R2
H-11	BP 1831, R2		BP 1808A, R2
H-12	BP 1832, R2	H-9-1	BP 1809, R2
H-13	BP 1833, R2	H-10-1	BP 1810, R3
SS-227	BP 2080, R1		BP 1810A, R1

2) Valve Vendor Print Numbers

MO-2069	M151A-11-3	MO-2015	M137A-18-4
MO-2012	M137A-18-4	MO-2016	M137A-18-4
MO-2011	M137A-18-4		

Line #: HBB-30
Service: Residual heat removal (reactor building)

Design Input Documents:

Piping Class/Summary Sheet: HBB/M-190
Seismic Response Spectra: See FSAR
Piping Stress Isometric Drawings: Isometric Reconstructed

1) Hanger Drawing Numbers

H-202	BP 2055, R1
H-203	BP 2056, R3
H-204	BP 2057, R2
SS-205	BP 2058, R1
SS-206	BP 2059, R1
H-207	BP 2060, R3
SR-208	BP 2061, R2
H-209	BP 2062, R2
SS-245	BP 2098, R1

2) Valve Vendor Print Numbers

None

Line #: HBD-25
Service: Emergency service water

Design Input Documents:

Piping Class/Summary Sheet: HBD/M-190
Seismic Response Spectra: See FSAR
Piping Stress Isometric Drawings: Isometric Reconstructed

1) Hanger Drawing Numbers

H-7	BP 2591, R1	H-114	BP 7051, R1
H-8	BP 2592, R2	H-115	BP 7052, R1
H-9	BP 2593, R3	SA-148	BP 6248, R1
H-10	BP 2594, R2	H-116	BP 7053, R1
H-11	BP 2595, R3	H-117	BP 7054, R2
H-1	BP 2616, R1	H-118	BP 7055, R2
H-2	BP 2617, R1	FH-4	BP 9659, R1
H-3	BP 2618, R1	H-62	BP 2699, R2
SG-145	BP 6245, R1		BP 2699A, R1
H-4	BP 2619, R1		BP 2699B, R1
H-5	BP 2620, R1	H-63	BP 7000, R1
H-6	BP 2621, R1		BP 7000A, R1
H-7-1	BP 2622, R1	H-64	BP 7001, R1
H-8-1	BP 2623, R1	H-65	BP 7002, R1
H-9-1	BP 2624, R1	H-66	BP 7003, R1
H-10-1	BP 2625, R1	H-67	BP 7004, R1
H-11-1	BP 2626, R1	FH-1	BP 7093, R1
H-12	BP 2627, R1	H-68	BP 7005, R1
H-13	BP 2628, R1	H-69	BP 7006, R1
H-14	BP 2629, R2	H-70	BP 7007, R2
H-15	BP 2630, R2	H-71	BP 7008, R2
H-16	BP 2631, R1	H-71	BP 7008, R2
	BP 2631A, R1	H-72	BP 7009, R3
			BP 7009A, R1
		H-119	BP 7056, R1

2) Valve Vendor Print Numbers

V-46-18	M135A-033-3	V-13-38	M135A-031-2
V-46-19	M135A-031-2	V-69-70	M135A-004-8
V-46-20	M135A-031-2	V-69-71	M135A-006-5
V-46-23	M135A-004-8	MO-2039B	M135A-034-2
V-13-37	M135A-033-3	V-13-45	M135A-31-2
V-13-36	M135A-033-3		

Line #: HBD-27
Service: Emergency service water

Design Input Documents:

Piping Class/Summary Sheet: HBD/M-190
Seismic Response Spectra: See FSAR
Piping Stress Isometric Drawings: Isometric Reconstructed

1) Hanger Drawing Numbers

SR-105	BP 6205, R1	SG-106	BP 6206, R1
	BP 6205A, R1		BP 6206A, R1
SR-6	BP 6118, R2	H-4	BP 2657, R1
	BP 6118A, R2	SR-107	BP 6207, R1
	BP 6118B, R2	H-5	BP 2658, R1
H-3	BP 2656, R1	H-6	BP 2659, R1

2) Valve Vendor Print Numbers

CV-2081	M135A-68-1
V-13-34	M135A-32-3

Line #: HBD-29
Service: Emergency service water

Design Input Documents:

Piping Class/Summary Sheet: HBD/M-190
Seismic Response Spectra: See FSAR
Piping Stress Isometric Drawings: Isometric Reconstructed

1) Hanger Drawing Numbers

H-1	BP 2632, R1	FH-2	BP 7092, R1
	BP 2632A, R1	H-79	BP 7016, R1
H-2	BP 2633, R1	H-80	BP 7017, R1
H-3	BP 2634, R2	H-81	BP 7018, R1
H-4	BP 2635, R2	H-82	BP 7019, R2
H-5	BP 2636, R1	H-83	BP 7020, R2
H-73	BP 7010, R1	SA-100	BP 6200, R2
H-74	BP 7011, R1	H-109	BP 7046, R1
SA-151	BP 6251, R1	H-110	BP 7047, R1
H-75	BP 7012, R1	H-111	BP 7048, R1
H-76	BP 7013, R1	H-112	BP 7049, R1
H-77	BP 7014, R1	H-113	BP 7050, R1
H-78	BP 7015, R1		

2) Valve Vendor Print Numbers

V-13-125	M135C-1-1	MO-2078	M135A-34-2
V-13-39	M135A-31-2	CV-1956	M135A-67-1
TCV-6924B	M90-4-1	V-13-46	M135A-32-3

Line #: HBD-162
Service: Chilled water

Design Input Documents:

Piping Class/Summary Sheet: HBD/M-190
Seismic Response Spectra: See FSAR
Piping Stress Isometric Drawings: Isometric Reconstructed

1) Hanger Drawing Numbers

SA-20	BP 8020, R1
H-21	BP 8021-3, R1
H-22	BP 8022-4, R1
H-23	BP 8023-4, R1
H-24	BP 8024, R1

2) Valve Vendor Print Numbers

V-69-49	M135A-4-8
V-69-51	M135A-4-8

Line #: HLE-3
Service: Core spray pump

Design Input Documents:

Piping Class/Summary Sheet: HLE/M-190
Seismic Response Spectra: See FSAR
Piping Stress Isometric Drawings: Isometric Reconstructed

1) Hanger Drawing Numbers

None

2) Valve Vendor Print Numbers

MO-2146	M151A-010-3

Line #: HLE-8
Service: RHR pump suction

Design Input Documents:

Piping Class/Summary Sheet: HLE/M-190
Seismic Response Spectra: See FSAR
Piping Stress Isometric Drawings: Isometric Reconstructed

1) Hanger Drawing Numbers

None

2) Valve Vendor Print Numbers

None

Line #: HLE-11
Service: Core spray pump discharge

Design Input Documents:

Piping Class/Summary Sheet: HLE/M-190
Seismic Response Spectra: See FSAR
Piping Stress Isometric Drawings: Isometric Reconstructed

1) Hanger Drawing Numbers

H-17 BP 1755, R1

2) Valve Vendor Print Numbers

None

Line #: HLE-14
Service: Core spray pump discharge

Design Input Documents:

Piping Class/Summary Sheet: HLE/M-190
Seismic Response Spectra: See FSAR
Piping Stress Isometric Drawings: Isometric Reconstructed

1) Hanger Drawing Numbers

H-13 BP 1751, R1
H-14 BP 1752, R1
H-15 BP 1753, R3

2) Valve Vendor Print Numbers

None

Line #: HLE-17
Service: RHR heat exchange discharge

Design Input Documents:

Piping Class/Summary Sheet: HLE/M-190
Seismic Response Spectra: See FSAR
Piping Stress Isometric Drawings: Isometric Reconstructed

1) Hanger Drawing Numbers

None

2) Valve Vendor Print Numbers

None

Line #: HBD-192
Service: HPCI lube oil piping

Design Input Documents:

Piping Class/Summary Sheet: HBD/M-190
Seismic Response Spectra: See FSAR
Piping Stress Isometric Drawings: Isometric Reconstructed

1) Hanger Drawing Numbers

FH-1 BP 9761, R1
FH-2 BP 9762, R1

2) Valve Vendor Print Numbers

None

List of Design Documents for Seismic Analysis of Group 3 Lines

Line #: DBA-2
Service: Turbine main steam

Design Input Documents:

Piping Class/Summary Sheet: DBA/M-190
Seismic Response Spectra: See FSAR
Piping Stress Isometric Drawings: SKM-266

1) Hanger Drawing Numbers

H-40	BP 160, R1
H-41	BP 161, R2
H-42	BP 162, R1
	BP 162A, R1
H-43	BP 163, R1
H-44	BP 164, R1
H-45	BP 165, R1
H-46	BP 166, R1
H-55	BP 175, R2
SS-137	BP 7857, R1
H-54	BP 174, R1
H-53	BP 173, R1
H-52	BP 172, R1
H-51	BP 171, R1
H-50	BP 170, R1
H-49	BP 169, R1
H-48	BP 168, R1
	BP 168A, R1
H-47	BP 167, R1
H-56	BP 176, R1
H-57	BP 177, R1

2) Valve Vendor Print Numbers

MO-1044	M150-3-5
V-03-01	M1504-2-1
MO-1043	M150-3-5

Line #: DBA-3
Service: Steam to HPCI turbine

Design Input Documents:

Piping Class/Summary Sheet: DBA/M-190
Seismic Response Spectra: See FSAR
Piping Stress Isometric Drawings: SKM-344

1) Hanger Drawing Numbers

H-5	BP-1571
	BP-1571A
	BP-1571B

2) Valve Vendor Print Numbers

MO-2238 M152A-31-2

Line #: DBA-4
Service: Steam to RCIC turbine from main steam

Design Input Documents:

Piping Class/Summary Sheet: DBA/M-190
Seismic Response Spectra: See FSAR
Piping Stress Isometric Drawings: M-706, SA-7222

1) Hanger Drawing Numbers

H-1	BP 1661, R4
	BP 1661A, R3
H-2	BP 1662, R4
	BP 1662A, R1
	BP 1662B, R3
H-3	BP 1663, R2
	BP 1663A, R3
SS-34	BP 6034, R2
	BP 6034A, R1
	BP 6034B, R1
SS-35	BP 6035, R2
	BP 6035A, R2
	BP 6035B, R2
	BP 6035C, R2
SS-36	BP 6036, R2

2) Valve Vendor Print Numbers

MO-2400 M133A-6-5
MO-2401 M133A-13-4

Line #: DBA-5
Service: RHR pump discharge from MO-1901 to reactor head spray

Design Input Documents:

Piping Class/Summary Sheet: DBA/M-190
Seismic Response Spectra: See FSAR
Piping Stress Isometric Drawings: SKM-353

1) Hanger Drawing Numbers

H-1	BP 2120, R2
	BP 2120A, R1
	BP 2120B, R1
H-2	BP 2121, R2
	BP 2121A, R1
	BP 2121B, R1
H-3	BP 2122, R2
H-4	BP 2123, R2
	BP 2123A, R1
H-5	BP 2124, R2
	BP 2124A, R1
H-6	BP 2125, R2
	BP 2125, R1
H-7	BP 2126, R2
	BP 2126A, R1
SS-31	BP 6031, R3
	BP 6031A, R2
	BP 6031B, R2
SS-37	BP 6037, R3
	BP 6037A, R2
SS-38	BP 6038, R4
	BP 6038A, R1
SS-47	BP 6047, R3

2) Valve Vendor Print Numbers

V-19-5	M133A-1-5
MO-1901	M133A-3-7

Line #: DBA-6
Service: Control rod hydraulic from reactor isolation valve to line DCA-16

Design Input Documents:

Piping Class/Summary Sheet: DBA/M-190
Seismic Response Spectra: See FSAR
Piping Stress Isometric Drawings: SKM-355

1) Hanger Drawing Numbers

H-1	BP 4410, R1
	BP 4410A, R1
	BP 4410B, R1
H-2	BP 4411, R1
	BP 4411A, R1
H-3	BP 4412, R1
	BP 4412A, R1
	BP 4412B, R1
H-4	BP 4413, R1
	BP 4413A, R1
SR-28	BP 6028, R1
	BP 6028A, R1
	BP 6028B, R1
SS-29	BP 6029, R2
	BP 6029A, R2
SS-30	BP 6030, R1
	BP 6030A, R1
	BP 6030B, R1
H-30	BP 4430, R1
H-31	BP 4431, R1
H-32	BP 4432, R1
H-33	BP 4433, R2
SA-34	BP 4434, R2

2) Valve Vendor Print Numbers

V-17-51	M133A-11-3
V-17-52	M133A-8-4
V-17-53	M133A-8-4
V-17-54	M133A-53-3

Line #: DCA-2
Service: RHR pump discharge from isolation valve 2008

Design Input Documents:

Piping Class/Summary Sheet: DCA/M-190
Seismic Response Spectra: See FSAR
Piping Stress Isometric Drawings: SKM-331

1) Hanger Drawing Numbers

None

2) Valve Vendor Print Numbers

None

Line #: DCA-6
Service: Cleanup pump suction from reactor recirculation pump suction line

Design Input Documents:

Piping Class/Summary Sheet: DCA/M-190
Seismic Response Spectra: See FSAR
Piping Stress Isometric Drawings: SKM-337

1) Hanger Drawing Numbers

H-1	BP 3642, R2
	BP 3642A, R1
H-2	BP 3643, R2
	BP 3643A, R1
H-4	BP 3645, R2
SR-51	BP 6051, R1
	BP 6051A, R1
SG-52	BP 6052, R1
	BP 6052, R1
SS-48	BP 6048, R2
SS-49	BP 6049, R1
SS-50	BP 6050, R1
	BP 6050A, R1

2) Valve Vendor Print Numbers

V-2701	M134A-1-5
MO-2700	M134A-12-1

Line #: DCA-8 (see DLA-7)
Service: Core spray discharge from stop valve 2142 to upper reactor spray

Design Input Documents:

Piping Class/Summary Sheet: DCA/M-190
Seismic Response Spectra: See FSAR
Piping Stress Isometric Drawings: SKM-334

1) Hanger Drawing Numbers

None

2) Valve Vendor Print Numbers

None

Line #: DCA-9 (part of DLA-8)
Service: Core spray discharge from stop valve 2143 to lower reactor spray

Design Input Documents:

Piping Class/Summary Sheet: DCA/M-190
Seismic Response Spectra: See FSAR
Piping Stress Isometric Drawings: SKM-334

1) Hanger Drawing Numbers

None

2) Valve Vendor Print Numbers

None

Line #: DLA-1
Service: HPCI discharge to FW line upstream of MO-2312

Design Input Documents:

Piping Class/Summary Sheet: DLA/M-190
Seismic Response Spectra: See FSAR
Piping Stress Isometric Drawings: M-701

1) Hanger Drawing Numbers

SR-10	BP 1576, R1
H-12A	BP 1561, R2
H-12	BP 1560, R1
	BP 1560A, R1
	BP 1560B, R1
SR-8	BP 1574, R1
SR-9	BP 1575, R2

2) Valve Vendor Print Numbers

CV-2313	M152B-1-2
MO-2312	M152A-9-3

Line #: DLA-3
Service: Steam to HPCI turbine

Design Input Documents:

Piping Class/Summary Sheet: DLA/M-190
Seismic Response Spectra: See FSAR
Piping Stress Isometric Drawings: SKM-344

1) Hanger Drawing Numbers

H-1	BP 1567, R3
	BP 1567A, R1
	BP 1567B, R1
H-2	BP 1568, R4
	BP 1568A, R1
H-3	BP 1569, R4
	BP 1569A, R1
SS-1	BP 6001, R1
	BP 6001A, R0
SS-2	BP 6002, R3
	BP 6002A, R2
SS-3	BP 6003, R2
	BP 6003A, R1
	BP 6003B, R1
SR-23	BP 1589, R1
	BP 1589A, R1

2) Valve Vendor Print Numbers

None

Line #: DLA-4 (see DCA-5)
Service: RHR pump suction from reactor recirculation line to MO-1909

Design Input Documents:

Piping Class/Summary Sheet: DLA/M-190
Seismic Response Spectra: See FSAR
Piping Stress Isometric Drawings: SKM-330

1) Hanger Drawing Numbers

H-9	BP 2109, R2
	BP 2109A, R1
H-10	BP 2110, R3
	BP 2110A, R1
H-11	BP 2111, R2
	BP 2111A, R1
	BP 2111B, R2
	BP 2111C, R2
H-12	BP 2112, R2
	BP 2112A, R1
	BP 2112B, R1
	BP 2112C, R2
H-13	BP 2113, R2
	BP 2113A, R1
	BP 2113B, R1
	BP 2113C, R1
SS-14	BP 6014, R4
	BP 6014A, R1
	BP 6014B, R1
SS-15	BP 6015, R3
	BP 6015A, R2

2) Valve Vendor Print Numbers

MO-1908	M152A-30-3
ZS-1993	M152A-2-4
MO-1909	M152A-30-3

Line #: DCA-5 (part of DLA-4)
Service: RHR pump suction from reactor recirculation pump suction line to stop valve

Design Input Documents:

Piping Class/Summary Sheet: DCA/M-190
Seismic Response Spectra: See FSAR
Piping Stress Isometric Drawings: SKM-330

1) Hanger Drawing Numbers

None

2) Valve Vendor Print Numbers

None

Line #: DLA-5
Service: RHR discharge from MO-2003 through penetration to valve ZS-2008

Design Input Documents:

Piping Class/Summary Sheet: DLA/M-190
Seismic Response Spectra: See FSAR
Piping Stress Isometric Drawings: SKM-331

1) Hanger Drawing Numbers

H-1	BP 2101, R2
	BP 2101A, R2
H-2	BP 2102, R3
	BP 2102A, R1
H-3	BP 2103, R2
	BP 2103A, R1
H-4	BP 2104, R3
	BP 2104A, R1
H-14	BP 2114, R1
	BP 2114A, R1
	BP 2114B, R1
SS-10	BP 6010, R3
	BP 6010A, R2
	BP 6010B, R2
	BP 6010C, R2
SS-11	BP 6011, R2
	BP 6011A, R2
	BP 6011B, R2
	BP 6011C, R2
	BP 6011D, R1

2) Valve Vendor Print Numbers

CV-2002	M152B-27-1-2
ZS-2008	M152A-1-5

Line #: DLA-6
Service: RHR discharge from MO-1905 through penetration to valve ZS-1907

Design Input Documents:

Piping Class/Summary Sheet: DLA/M-190
Seismic Response Spectra: See FSAR
Piping Stress Isometric Drawings: M-332

1) Hanger Drawing Numbers

H-5	BP 2105, R3
	BP 2105A, R3
H-6	BP 2106, R3
	BP 2106A, R2
H-7	BP 2107, R3
H-8	BP 2108, R3
H-15	BP 2115, R1
	BP 2115A, R1
SS-12	BP 6012, R2
	BP 6012A, R2
SS-13	BP 6013, R3
	BP 6013A, R2
	BP 6013B, R2

2) Valve Vendor Print Numbers

CV-1906	M152B-27(1)-2
ZS-1907	M152A-1-5

Line #: DLA-7 (part of DCA-8)
Service: Core spray discharge from CV-2117 to reactor spray valve

Design Input Documents:

Piping Class/Summary Sheet: DLA/M-190
Seismic Response Spectra: See FSAR
Piping Stress Isometric Drawings: SKM-334

1) Hanger Drawing Numbers

H-1	BP 1777, R3
	BP 1777A, R1
	BP 1777B, R1
	BP 1777C, R1
H-2	BP 1778, R1
	BP 1778A, R2
	BP 1778B, R1
	BP 1778C, R1
H-3	BP 1779, R1

2) Valve Vendor Print Numbers

CV-2118	M152B-6-(1)5
ZS-2142	M152A-3-3
MO-2117	M152A-5-4
V-21-64	M141-55(1)-1
V-21-65	M141-55(1)-1
V-21-62	M141-55(1)-1
V-21-63	M141-55(1)-1

Line #: DLA-8 (see DCA-9)
Service: Core spray discharge from CV-2137 to reactor spray valve

Design Input Documents:

Piping Class/Summary Sheet: DLA/M-190
Seismic Response Spectra: See FSAR
Piping Stress Isometric Drawings: SKM-334

1) Hanger Drawing Numbers

H-4	BP 1780, R3
H-5	BP 1781, R2
H-6	BP 1782, R2

2) Valve Vendor Print Numbers

ZS-2143	M152A-3-3
CV-2138	M152B-6-1-5
MO-2137	M152A-5-4

Line #: EBB-14
Service: HPCI, RCIC

Design Input Documents:

Piping Class/Summary Sheet: EBB/M-190
Seismic Response Spectra: See FSAR
Piping Stress Isometric Drawings: M-702

1) Hanger Drawing Numbers

H-1	BP 1508, R1
SR-18	BP 1584, R1
H-2	BP 1509, R2
SR-17	BP 1583, R1
SS-16	BP 1582, R1
	BP 1582A, R1
	BP 1582B, R1
H-3	BP 1510, R1
	BP 1510A, R1
H-4	BP 1511, R3
SS-16A	BP 9654, R1
H-5	BP 1512, R3
H-6	BP 1513, R3
H-7	BP 1514, R4
SS-15	BP 1581, R2
H-8	BP 1515, R3
H-9	BP 1516, R2
H-10	BP 1517, R3
H-11	BP 1518, R3
H-12	BP 1519, R3
H-13	BP 1520, R3
SS-14	BP 1580, R2
H-14	BP 1521, R1
	BP 1521A, R1
SS-13	BP 1579, R3
	BP 1579A, R1
H-15	BP 1522, R1
H-16	BP 1523, R2

2) Valve Vendor Print Numbers

MO-2202	M133A-9-5
MO-2239	M152A-8-3

Line #: EBB-15
Service: RCIC turbine steam

Design Input Documents:

Piping Class/Summary Sheet: EBB/M-190
Seismic Response Spectra: See FSAR
Piping Stress Isometric Drawings: M-706-H

1) Hanger Drawing Numbers

H-1	BP 1607, R2	H-10	BP 1616, R2
H-2	BP 1608, R2	H-11	BP 1644, R2
H-3	BP 1609, R2		BP 1644A, R2
H-3A	BP 9724, R1	H-12	BP 1645, R2
H-4	BP 1610, R2		BP 1645A, R1
	BP 1610A, R1		BP 1645B, R1
H-5	BP 1611, R2	H-13	BP 1646, R1
	BP 1611A, R1	H-14	BP 1647, R1
H-6	BP 1612, R2		BP 1647A, R1
	BP 1612A, R1	H-15	BP 1648, R1
H-7	BP 1613, R2	H-16	BP 1679, R2
	BP 1613A, R2	SR-13	BP 1673, R2
H-8	BP 1614, R2	SR-14	BP 1674, R4
H-9	BP 1615, R2		BP 1674A, R2

2) Valve Vendor Print Numbers

MO-2401	M133A-13-14
MO-2404	M133A-4-6

Line #: EBD-2
Service: Main steam

Design Input Documents:

Piping Class/Summary Sheet: EBD/M-190
Seismic Response Spectra: See FSAR
Piping Stress Isometric Drawings: SKM-267

1) Hanger Drawing Numbers

H-98	BP 7818, R1	SR-150	BP 7870, R1
SR-159	BP 7879, R1	SS-151	BP 7871, R1
SS-160	BP 7880, R1	SR-155	BP 7875, R1
	BP 7880A, R1	H-25	BP 141, R3
H-34	BP 150, R2	H-24	BP 140, R3
SA-161	BP 7881, R2	SS-153	BP 7873, R1
	BP 7881A, R1	SS-154	BP 7874, R1
H-100	BP 7820, R1		BP 7874A, R1
	BP 7820A, R1	H-95	BP 7815, R1
	BP 7820B, R1	SG-156	BP 7876, R2
H-101	BP 7821, R1		BP 7876A, R1
H-102	BP 7822, R1	SG-157	BP 7877, R2
H-103	BP 7823, R1	SA-158	BP 7878, R2
H-67	BP 189, R1		BP 7878A, R1
H-70	BP 190, R1	FH-1	BP 9696, R1
H-71	BP 191, R1	FH-2	BP 9697, R1
H-72	BP 192, R2	SR-138	BP 7858, R1
H-73	BP 193, R1	SR-139	BP 7859, R1
H-74	BP 194, R1	SR-110	BP 7830, R2
H-75	BP 195, R1		BP 7830A, R1
	BP 195A, R1	SR-134	BP 7854, R2
H-76	BP 196, R1	H-8	BP 108, R3
H-77	BP 197, R1	H-23	BP 9735, R2
H-78	BP 198, R2	SS-2	BP 6102, R3
	BP 198A, R1		BP 6102A, R1
H-79	BP 199, R2	H-18	BP 157, R3
H-80	BP 7800, R1	SS-114	BP 7834, R2
H-81	BP 7801, R1	H-5	BP 105, R3
H-82	BP 7802, R1	H-6	BP 106, R3
H-83	BP 7803, R1	H-19	BP 158, R3
H-84	BP 7804, R1	SS-115	BP 7835, R3
SA-85	BP 7805, R3		BP 7835A, R2
H-17	BP 133, R3		BP 7835B, R2
H-18	BP 134, R3	SS-116	BP 7836, R3
H-19	BP 135, R2	H-9	BP 109, R3
H-20	BP 136, R2	H-10	BP 110, R3
SR-148	BP 7868, R1	SR-111	BP 7831, R2
SR-149	BP 7869, R1		BP 7831A, R1
H-22	BP 138, R1		

Line #: EBD-2 (page 2 of 2)
Service: Main steam

1) Hanger Drawing Numbers (continued)

SR-135	BP 7855, R2
H-12	BP 112, R3
H-22	BP 9734, R2
SS-1	BP 6101, R3
	BP 6101A, R3
	BP 6101B, R2
H-20	BP 159, R3
SS-117	BP 7837, R2
SS-118	BP 7838, R2
H-13	BP 113, R3
SR-112	BP 7832, R2
	BP 7832A, R1
H-14	BP 114, R4
SR-136	BP 7856, R2
H-16	BP 116, R3
H-21	BP 9733, R2
SS-3	BP 6103, R1
	BP 6103A, R1
	BP 6103B, R1
SS-4	BP 6103A, R1
	BP 6103B, R1
	BP 6103, R1
H-17	BP 156, R3
SS-113	BP 7833, R3
	BP 7833A, R2
H-1	BP 101, R3
H-2	BP 102, R3
SR-109	BP 7829, R2
	BP 7829A, R1
	BP 7829B, R1
SR-133	BP 7853, R2
H-4	BP 104, R4
H-24	BP 9736, R2

2) Valve Vendor Print Numbers

MO-1054	M150A-4-5
MO-1055	M150A-4-5
MO-9148	M1-N35-36-2
CV-1097B	M1-N35-43
V-03-04	M150A-1-4
V-03-05	M150A-1-4

Line #: GBC-6
Service: Steam line relief valve PS-4402 discharge to torus

Design Input Documents:

Piping Class/Summary Sheet: GBC/M-190
Seismic Response Spectra: See FSAR
Piping Stress Isometric Drawings: SKM-346

1) Hanger Drawing Numbers

H-1	BP 3529, R2	SS-16	BP 6016, R2
	BP 3529A, R1		BP 6016A, R1
	BP 3529B, R1	SS-17	BP 6017, R1
	BP 3529C, R2		BP 6017A, R1
SR-53	BP 6053, R2	H-3	BP 3531, R2
	BP 6053A, R1		BP 3531A, R1
	BP 6053B, R1		
	BP 6053C, R1		

2) Valve Vendor Print Numbers

PSV-4439C M14-6-66-3

Line #: GBC-7
Service: Steam line relief from PSV-4407

Design Input Documents:

Piping Class/Summary Sheet: GBC/M-190
Seismic Response Spectra: See FSAR
Piping Stress Isometric Drawings: SKM-347

1) Hanger Drawing Numbers

H-4	BP 3532, R3	H-6	BP 3534, R3
	BP 3532A, R1		BP 3534A, R1
	BP 3532B, R1		BP 3534B, R1
	BP 3532C, R1	SS-18	BP 6018, R2
H-5	BP 3533, R3		BP 6018A, R1
	BP 3533A, R1	SS-19	BP 6019, R2
	BP 3533B, R1		

2) Valve Vendor Print Numbers

PSV-4439E M14-6-66-3

Line #: GBC-8
Service: Steam line relief from PSV-4406

Design Input Documents:

Piping Class/Summary Sheet: GBC/M-190
Seismic Response Spectra: See FSAR
Piping Stress Isometric Drawings: SKM-348

1) Hanger Drawing Numbers

H-7	BP 3535, R2
	BP 3535A, R1
	BP 3535B, R1
	BP 3535C, R2
H-8	BP 3536, R2
	BP 3536A, R1
H-9	BP 3537, R2
	BP 3537A, R1
	BP 3537B, R1
H-10	BP 3538, R2
	BP 3538A, R1
SS-20	BP 6020, R2
	BP 6020A, R1
SS-21	BP 6021, R2
SS-44	BP 6044, R1
	BP 6044A, R1
SS-45	BP 6045, R1
	BP 6045A, R1
	BP 6045B, R1
SS-46	BP 6046, R1
	BP 6046A, R1

2) Valve Vendor Print Numbers

PSV-4439F M146-66-3

Line #: GBC-9
Service: Steam line relief from PSV-4400

Design Input Documents:

Piping Class/Summary Sheet: GBC/M-190
Seismic Response Spectra: See FSAR
Piping Stress Isometric Drawings: SKM-349

1) Hanger Drawing Numbers

H-11	BP 3539, R2
	BP 3539A, R1
	BP 3539B, R1
H-12	BP 3540, R2
	BP 3540A, R1
H-13	BP 3541, R2
	BP 3541A, R1
H-14	BP 3542, R2
	BP 3542A, R1
SS-22	BP 6022, R1
	BP 6022A, R1
	BP 6022B, R1
SS-23	BP 6023, R1
	BP 6023A, R1
SS-41	BP 6041, R1
	BP 6041A, R1
SS-42	BP 6042, R2
	BP 6042A, R1
SS-43	BP 6043, R2
	BP 6043A, R1
	BP 6043B, R1

2) Valve Vendor Print Numbers

PSV-4439A M146-66-3

Line #: GBC-10
Service: Steam line relief from PSV-4401

Design Input Documents:

Piping Class/Summary Sheet: GBC/M-190
Seismic Response Spectra: See FSAR
Piping Stress Isometric Drawings: SKM-350

1) Hanger Drawing Numbers

H-15	BP 3543, R2	SS-25	BP 6025, R2
	BP 3543A, R1		BP 6025A, R1
	BP 3543B, R1	SS-39	BP 6039, R1
H-16	BP 3544, R2		BP 6039A, R1
	BP 3544A, R2	SS-40	BP 6040, R2
SS-24	BP 6024, R2		BP 6040A, R1
	BP 6024A, R1		BP 6040B, R1
			BP 6040C, R2

2) Valve Vendor Print Numbers

PSV-4439B M146-66-3

Line #: GBC-11
Service: Steam line relief from PSV-4405

Design Input Documents:

Piping Class/Summary Sheet: GBC/M-190
Seismic Response Spectra: See FSAR
Piping Stress Isometric Drawings: SKM-351

1) Hanger Drawing Numbers

H-17	BP 3545, R2	SS-26	BP 6026, R1
	BP 3545A, R1		BP 6026A, R1
	BP 3545B, R1	SS-27	BP 6027, R1
H-18	BP 3546, R2	SS-32	BP 6032, R3
	BP 3546A, R1		BP 6032A, R3
H-19	BP 3547, R2		BP 6032B, R1
	BP 3547A, R1	SS-33	BP 6033, R1
H-20	BP 3548, R2		BP 6033A, R1
	BP 3548A, R1		BP 6033B, R1
	BP 3548B, R1		BP 6033C, R1

2) Valve Vendor Print Numbers

PSV-4439D M146-66-3

Line #: GLE-7
Service: RHR pump discharge to containment coil from MO-2001 through MO-2000

Design Input Documents:

Piping Class/Summary Sheet: GLE/M-190
Seismic Response Spectra: See FSAR
Piping Stress Isometric Drawings: M-720

1) Hanger Drawing Numbers

H-14	BP 1866, R1
H-15	BP 1867, R1
H-16	BP 1868, R3
	BP 1868A, R1
H-17	BP 1869, R3

2) Valve Vendor Print Numbers

MO-2001	M151A-1-5
MO-2000	M151A-4-4

Line #: GLE-8
Service: RHR pump discharge to containment coil from MO-1903 through MO-1902

Design Input Documents:

Piping Class/Summary Sheet: GLE/M-190
Seismic Response Spectra: See FSAR
Piping Stress Isometric Drawings: M-721 reconstructed

1) Hanger Drawing Numbers

H-21	BP 1873, R1
H-22	BP 1874, R3
	BP 1874A, R1
	BP 1874B, R1
SS-239	BP 2092, R1
	BP 2092A, R1
	BP 2092B, R1
SS-240	BP 2093, R1
H-23	BP 1875, R3
H-24	BP 1876, R1

2) Valve Vendor Print Numbers

MO-1902	M151A-1-5
MO-1903	M151A-4-4

Line #: HBD-94
Service: Well water supply inside drywell loop A

Design Input Documents:

Piping Class/Summary Sheet: HBD/M-190
Seismic Response Spectra: See FSAR
Piping Stress Isometric Drawings: Reconstructed

1) Hanger Drawing Numbers

H-218	BP 5318, R2	H-208	BP 5308, R2
	BP 5318A, R2		BP 5308A, R2
H-219	BP 5319, R2	H-209	BP 5309, R2
	BP 5319A, R2		BP 5309A, R3
H-220	BP 5320, R2	H-210	BP 5310, R2
	BP 5320A, R2	H-211	BP 5311, R2
SA-142	BP 6242, R1		BP 5311A, R2
SA-140	BP 6240, R1	SG-138	BP 6238, R1
H-221	BP 5321, R2	SA-139	BP 6239, R1
	BP 5321A, R2	H-213	BP 5313, R2
SA-141	BP 6241, R1		BP 5313A, R2
H-205	BP 5305, R3	H-214	BP 5314, R2
	BP 5305A, R2		BP 5314A, R2
	BP 5305B, R2	H-215	BP 5315, R2
H-206	BP 5306, R2		BP 5315A, R2
SA-19	BP 6119, R2	H-216	BP 5316, R2
	BP 6119A, R1		BP 5315A, R2
H-207	BP 5307, R2	H-217	BP 5317, R2

2) Valve Vendor Print Numbers

V-57-62 M153-4-8

Line #: HBD-95
Service: Well water supply inside drywell loop B

Design Input Documents:

Piping Class/Summary Sheet: HBD/M-190
Seismic Response Spectra: See FSAR
Piping Stress Isometric Drawings: SKM-668 also reconstructed

1) Hanger Drawing Numbers

H-230	BP 5330, R1	SA-135	BP 6235, R1
	BP 5330A, R2	H-222	BP 5322, R1
H-231	BP 5331, R2		BP 5322A, R2
H-232	BP 5332, R2	H-223	BP 5323, R2
H-233	BP 5333, R2		BP 5323A, R2
	BP 5333A, R2	H-224	BP 5324, R2
H-234	BP 5334, R2		BP 5324A, R2
	BP 5334A, R2	SA-25	BP 6125, R3
SA-137	BP 6237, R1		BP 6125A, R1
SA-136,	BP 6236, R1	SG-134	BP 6234, R1
H-235	BP 5335, R2	H-227	BP 5327, R2
	BP 5335A, R2		BP 5327A, R2
SA-26	BP 6126, R2	H-228	BP 5328, R2
	BP 6126A, R2	H-229	BP 5329, R2
H-236	BP 5336, R2		
	BP 5336A, R2		

2) Valve Vendor Print Numbers

V-57-61	M-135-4
PSV-57-18B	M146-67-3
MO-5707B	M144F-30-3
MO-5714B	M144F-30-3
MO-5716B	M144F-30-3

Line #: HBD-115
Service: Drywell well water

Design Input Documents:

Piping Class/Summary Sheet: HBD/M-190
Seismic Response Spectra: See FSAR
Piping Stress Isometric Drawings: EDS-0207884-115

1) Hanger Drawing Numbers

H-187	BP 5187, R3	H-199	BP 5199, R2
	BP 5187A, R2	H-200	BP 5300, R2
	BP 5187B, R1		BP 5300A, R2
H-189	BP 5189, R2	H-201	BP 5301, R2
H-190	BP 5190, R2		BP 5301A, R2
	BP 5190A, R2	FH-201A	BP 9658, R1
H-191	BP 5191, R2	SA-131	BP 6231, R1
H-192	BP 5192, R2	SA-132	BP 6232, R1
	BP 5192A, R2	H-203	BP 5303, R2
H-193	BP 5193, R2		BP 5303A, R3
H-194	BP 5194, R2	H-204	BP 5304, R3
	BP 5194, R2		BP 5304A, R3
H-194	BP 5195, R2		BP 5304B, R3
	BP 5195A, R2	SA-133	BP 6233, R1
H-196	BP 5196, R2		
	BP 5196A, R2		
H-197	BP 5197, R3		
	BP 5197A, R2		
H-198	BP 5198, R3		
SA-52	BP 6152, R3		
	BP 6152A, R1		
SA-130	BP 6230		
SR-129	BP 6229, R1		

2) Valve Vendor Print Numbers

V-57-66 M135A-31-2

Line #: HBD-116
Service: Well water return inside drywell loop B

Design Input Documents:

Piping Class/Summary Sheet: HBD/M-190
Seismic Response Spectra: See FSAR
Piping Stress Isometric Drawings: SKM-670

1) Hanger Drawing Numbers

H-237	BP 5337, R2	H-246	BP 5346, R2
	BP 5337A, R2	H-247	BP 5347, R2
H-238	BP 5338, R2		BP 5347A, R2
	BP 5338A, R2	H-248	BP 5348, R2
H-239	BP 5339, R2		BP 5348A, R2
	BP 5339A, R2		BP 5348B, R2
SA-80	BP 6180, R1	SA-125	BP 6225, R1
H-240	BP 5340, R2	SA-126	BP 6226, R1
H-241	BP 5341, R2	H-250	BP 5350, R2
	BP 5341A, R2	H-251	BP 5351, R2
H-242	BP 5342, R2		BP 5399A, R2
H-243	BP 5343, R2	H-252	BP 5352, R2
	BP 5343A, R2		BP 5352A, R2
H-244	BP 5344, R2	H-253	BP 5353, R2
H-245	BP 5345, R2		BP 5353A, R2
	BP 5345A, R2	SA-128	BP 6228, R1
		SA-127	BP 6227, R1

2) Valve Vendor Print Numbers

V-57-65 M135A-67-1

Line #: HBD-64
Service: Drywell cooling water

Design Input Documents:

Piping Class/Summary Sheet: HBD/M-190
Seismic Response Spectra: See FSAR
Piping Stress Isometric Drawings: SKM-673

1) Hanger Drawing Numbers

H-254	BP 5354, R2
	BP 5354A, R1
H-255	BP 5355, R2
H-256	BP 5356, R3
	BP 5356A, R1

2) Valve Vendor Print Numbers

None

Line #: HBD-65
Service: Drywell cooling water

Design Input Documents:

Piping Class/Summary Sheet: HBD/M-190
Seismic Response Spectra: See FSAR
Piping Stress Isometric Drawings: SKM-612

1) Hanger Drawing Numbers

H-257	BP 5357, R2
H-258	BP 5358, R2
	BP 5358A, R2
H-259	BP 5359, R2
SA-76	BP 6176, R2

2) Valve Vendor Print Numbers

None

Line #: HLE-21
Service: Nitrogen to drywell valves

Design Input Documents:

Piping Class/Summary Sheet: HLE/M-190
Seismic Response Spectra: See FSAR
Piping Stress Isometric Drawings: None

1) Hanger Drawing Numbers

None

2) Valve Vendor Print Numbers

None

Line #: HLE-30
Service: Drywell floor drains sump pump discharge containment penetration

Design Input Documents:

Piping Class/Summary Sheet: HLE/M-190
Seismic Response Spectra: See FSAR
Piping Stress Isometric Drawings: SKM-666

1) Hanger Drawing Numbers

H-200	BP 6700, R1
	BP 6700A, R1
H-201	BP 6701, R1
H-156	BP 4156, R1
H-155	BP 4155, R1
H-154	BP 4154, R1
H-153	BP 4153, R1
SA-78	BP 6178, R2

2) Valve Vendor Print Numbers

CV-3704	M137B-24-5
CV-3705	M137B-22-4

Line #: HLE-31
Service: Drywell equipment drain sump pump discharge containment penetration

Design Input Documents:

Piping Class/Summary Sheet: HLE/M-190
Seismic Response Spectra: See FSAR
Piping Stress Isometric Drawings: SKM-671

1) Hanger Drawing Numbers

H-140	BP 4140, R1
SR-35	BP 6135, R2
H-139	BP 4139, R1
H-138	BP 4138, R2
H-137	BP 4137, R2
SA-36	BP 6136, R2

2) Valve Vendor Print Numbers

CV-3729	M137B-22-4
CV-3728	M137B-24-5

Line #: HLE-32 (see HLE-33)
Service: Drywell cooling water well water supply penetration

Design Input Documents:

Piping Class/Summary Sheet: HLE/M-190
Seismic Response Spectra: See FSAR
Piping Stress Isometric Drawings: SKM-667

1) Hanger Drawing Numbers

H-278	BP 5378, R1	H-284	BP 5384, R1
H-279	BP 5379, R1	H-285	BP 5385, R1
H-280	BP 5380, R1	SA-20	BP 6120, R2
H-281	BP 5381, R1	SA-21	BP 6121, R1
H-282	BP 5382, R1	H-362	BP 5462, R1
H-283	BP 5383, R1		BP 5462A, R1

2) Valve Vendor Print Numbers

CV-5718A	M137B-26-3
V-57-59	M137A-36-3
CV-5719A	M137A-40-4

Line #: HLE-33 (part of HLE-32)
Service: Drywell cooling water well water supply penetration

Design Input Documents:

Piping Class/Summary Sheet: HLE/M-190
Seismic Response Spectra: See FSAR
Piping Stress Isometric Drawings: SKM-668

1) Hanger Drawing Numbers

H-276	BP 5376, R2	H-361	BP 5461, R2
H-277	BP 5377, R1		BP 5461A, R2
SR-23	BP 6123, R1	SR-97	BP 6197, R1
			BP 6197A, R1
			BP 6197B, R1

2) Valve Vendor Print Numbers

CV-5718B	M137A-62-1	CV-5719B	M-137-24-1516-3
V-57-58	M137A-36-3	V-44-30	M135A-67-1

Line #: HLE-34
Service: Drywell cooling water well water return penetration

Design Input Documents:

Piping Class/Summary Sheet: HLE/M-190
Seismic Response Spectra: See FSAR
Piping Stress Isometric Drawings: Reconstructed

1) Hanger Drawing Numbers

H-12	BP 5012, R1	H-260	BP 5360, R1
SA-49	BP 6149, R2	H-6	BP 5006, R2
SA-50	BP 6150, R1	SA-51	BP 6181, R1

2) Valve Vendor Print Numbers

V-44-33	M137B-24-5	CV-5704A	M137A-4-8
V-57-69	M135A-4-8	CV-5703A	M137A-67-2
V-57-61	M137BC		

Line #: HLE-35
Service: Well water drywell

Design Input Documents:

Piping Class/Summary Sheet: HLE/M-190
Seismic Response Spectra: See FSAR
Piping Stress Isometric Drawings: SKM-670

1) Hanger Drawing Numbers

SA-31	BP 5031, R1	H-33	BP 5033, R1
H-32	BP 5032, R3	SA-82	BP 6182, R1
SR-79	BP 6179, R1	SA-83	BP 6183, R1
	BP 6179A, R1		

2) Valve Vendor Print Numbers

V-57-70	M135A-4-8	V-57-60	M137A-67-2
CV-5703B	M137B-24-5	V-44-31	M138-9-1
CV-5704B	M137A-62-1		

Line #: HLE-36
Service: Nitrogen purge supply to containment downstream of FCI valves

Design Input Documents:

Piping Class/Summary Sheet: HLE/M-190
Seismic Response Spectra: See FSAR
Piping Stress Isometric Drawings: Reconstructed

1) Hanger Drawing Numbers

H-44 BP 4544, R1 H-45 BP 4545, R1 H-46 BP 4546, R1

2) Valve Vendor Print Numbers

CV-4312	M137B-41-3	CV-4311	M137B-41-3
CV-4313	M137B-41-3		

List of Design Documents for Seismic Analysis of
Computer-Analyzed Safety-Related Small Pipe

Line #: CRD-524
Service: CRD scram discharge system

Design Input Documents:

Piping Class/Summary Sheet: -/M190
Seismic Response Spectra: See FSAR
Piping Stress Isometric Drawings: DA-007
DA-009

1) Hanger Drawing Numbers

1 RCI DA-9, Sh 10-7884-M115 40-(10)-1
2 RCI DA-9, Sh 10-7884-M115 40-(10)-1
3 RCI DA-9, Sh 10-7884-M115 40-(10)-1
4 RCI DA-9, Sh 10-7884-M115 40-(10)-1
5 RCI DA-9, Sh 10-7884-M115 40-(10)-1
6 RCI DA-9, Sh 10-7884-M115 40-(10)-1
7 RCI DA-7, Sh 1-7884-M115-46-(1)-8
8 RCI DA-7, Sh 1-7884-M115-46-(1)-8
9 RCI DA-7, Sh 1-7884-M115-46-(1)-8
10 RCI DA-7, Sh 1-7884-M115-46-(1)-8
11 RCI DA-7, Sh 1-7884-M115-46-(1)-8
12 RCI DA-7, Sh 1-7884-M115-46-(1)-8
13 RCI DA-7, Sh 1-7884-M115-46-(1)-8

2) Valve Vendor Print Numbers

V-18-3 M115-46(1)-6
V-18-4 M115-46(1)-6
V-18-5 M115-46(1)-6

Line #: CRD-526
Service: CRD scram

Design Input Documents:

Piping Class/Summary Sheet: -/M-190
Seismic Response Spectra: See FSAR
Piping Stress Isometric Drawings: DA-007

1) Hanger Drawing Numbers

H1 PS3 DET U DA-007
H2 PS3 DET U DA-007
H3 PSI DET U DA-007
H4 PSI DET U DA-007
H5 PSI DET U DA-007
H6 PSI DET U DA-007
H7 PSI DET U DA-007
H8 PSI DET U DA-007
H9 PSI DET U DA-007
H10 PSI DET U DA-007
H11 PSI DET U DA-007
H12 PSI DET U DA-007
H13 PSI DET U DA-007

2) Valve Vendor Print Numbers

None

Line #: DBA-1
Service: Drains from steam lines inside containment

Design Input Documents:

Piping Class/Summary Sheet: DBA/M190
Seismic Response Spectra: See FSAR
Piping Stress Isometric Drawings: 4043B

1) Hanger Drawing Numbers

H1 DETI FSK 4043, R6
DETC SKM 1607, R0
PSI SKM 602, R0
H2 PSI SKM 602, R0
DETC SKM 1607, R0
H3 PS2 SKM 602, R0
SNUB 16A
H4 PS 2 SKM 602, R0
Sh 107, SKM 1611, R0

2) Valve Vendor Print Numbers

V-14-7 M123A-6-7

Line #: DBA-2(A)
Service: Drains from steam lines

Design Input Documents:

Piping Class/Summary Sheet: DBA/M190
Seismic Response Spectra: See FSAR
Piping Stress Isometric Drawings: FSK-3939B, FSK-3973B, FSK-3994B

1) Hanger Drawing Numbers

FSK-3973B

Sh 46	DET B	SKM 1609, R1
H1	PS 1	SKM 602, R0
	DET C	SKM 1607, R0
Sh 47		SKM 1611, R0
H2	PS 2	SKM 602, R0
	DET A	SKM 1601, R0

FSK-3994B

H1	PS 6	SKM 602, R0
	DET A	SKM 1606, R0
Sh 1	PS 1	SKM 602, R0
	DET B	SKM 1609, R1
H13	PS 2	SKM 602, R0
	SNUB 15A	
H2	PS 2	SKM 602, R0
	DET C	SKM 1607, R0
H3	PS 1	SKM 602, R0
	DET C	SKM 1607, R0
H4	PS 1	SKM 602,R0
	DET A	SKM 1606, R0
H5	PS 1	SKM 602, R0
	DET A	SKM 1606, R0

FSK-3994B

H6	PS 1	SKM 602, R0
	DET B	SKM 1609, R1
H7	PS 1	SKM 602, R0
	DET A	SKM 1606, R0
H8	PS 1	SKM 602, R0
	DET A	SKM 1606, R0
H9	PS 1	SKM 602, R0
	DET A	SKM 1606, R0
H10	PS 2	SKM 1609, R1
H11	PS 2	SKM 602, R0
	DET C	SKM 1607, R0
H12	PS 2	SKM 602, R0
	DET A	SKM 1606, R0

FSK-3939B

H1	PS 1	SKM 602, R0
	DET A	SKM 1606, R0
H2	PS1	SKM 602, R0
	DET A	SKM 1606, R0
H3	DET 1	FSK 3939B, R4
Sh 40		SKM 1611, R0
H4	DET 1	FSK 3939B, R4

2) Valve Vendor Print Numbers

None

Line #: DBA-2(B)
Service: Test connection and MSIV-LC system

Design Input Documents:

Piping Class/Summary Sheet: DBA/M190
Seismic Response Spectra: See FSAR
Piping Stress Isometric Drawings: FSK-487B

1) Hanger Drawing Numbers

Sh 120		SKM 1611, R0
	PS 2	SKM 602, R0
H1	PS 2	SKM 602, R0
	DET C	SKM 1607, R0
Sh 127		SKM 1611, R0
	PS 2	SKM 602, R0
Sh 121		SKM 1611, R0
	PS 2	SKM 602, R0
H2	PS 2	SKM 602, R0
	DET C	SKM 1607, R0
Sh 126		SKM 1611, R0
	PS 2	SKM 602, R0
Sh 122		SKM 1611, R0
	PS 2	SKM 602, R0
Sh 125		SKM 1611, R0
	PS 2	SKM 602, R0
Sh 124		SKM 1611, R0
	PS 2	SKM 602, R0
H3	PS 2	SKM 602,R0
	DET C	SKM 1607, R0
	SNUB 15	
Sh 123		SKM 1611, R0
	PS 2	SKM 602, R0

2) Valve Vendor Print Numbers

V-14-39	M-123A-6-7	V-14-46	M-123A-6
V-14-40	M-123A-6-7	V-84-43	M141D-21-1
V-14-136	M141D-1-2	V-84-15	M141D-21-1
V-84-41	M141-55-(1)-2	V-14-49	M123A-6-7
V-84-01	M141D-21-1	V-14-135	M141-55(1)-1
V-84-42	M141D-21-1	V-84-22	M141D-21-1
V-84-08	M141D-21-1	V-14-42	M141-55(1)-1
V-14-45	M-123A-6	V-14-138	M141-55(1)-1
V-14-48	M123A-6-7	V-14-43	M141-55(1)-1
V-14-137	M141-55(1)-1	V-84-44	M141D-21-1

Line #: DBA-2(B)
Service: Test connection and MSIV-LV system

Design Input Documents:

Piping Class/Summary Sheet: DBA/M190
Seismic Response Spectra: See FSAR
Piping Stress Isometric Drawings: FSK-10026B

1) Hanger Drawing Numbers

H1	PS 2	SKM 602, R0		
	DET A	SKM 1606, R0		
H2	PS 2	SKM 602, R0		
	DET C	SKM 1607, R0		
	SNUB-009800	FSK	10026B	
H3	PS 2	SKM 602, R0		
	DET C	SKM 1607, R0		
H4	PS 2	SKM 602, R0		
	DET C	SKM 1607, R0		
H5	PS 2	SKM 602, R0		
	DET A	SKM 1606, R0		
H8	PS 2	SKM 602, R0		
	DET A	SKM 1606, R0		
H6	PS 2	SKM 602, R0		
	DET C	SKM 1607, R0		
H7	PS 4	SKM 602, R0		
	DET B	SKM 1609, R1		

2) Valve Vendor Print Numbers

V-84-25	M141D-20-1
V-84-24	M141D-20-1
V-84-23	M141D-21-1
MO-8401B	B-21-3238
MO-8402B	B-21-3238

Line #: DBA-2(B)
Service: Test connection and MSIV-LC system

Design Input Documents:

Piping Class/Summary Sheet: DBA/M190
Seismic Response Spectra: See FSAR
Piping Stress Isometric Drawings: FSK-10027B

1) Hanger Drawing Numbers

H1	PS 2	SKM 602, R0
	DET A	SKM 1606, R0
H2	PS 2	SKM 602, R0
	DET C	SKM 1607, R0
H3	PS 2	SKM 602, R0
	DET C	SKM 1607, R0
H4	PS 2	SKM 602, R0
	DET C	SKM 1607, R0
H5	PS 2	SKM 602, R0
	DET C	SKM 1607, R0
H6	PS 2	SKM 602, R0
	DET C	SKM 1607, R0
H7	PS 2	SKM 602, R0
	DET C	SKM 1607, R0
H8	PS 2	SKM 602, R0
	DET B	SKM 1609, R1

2) Valve Vendor Print Numbers

V-84-03	M141D-20-1
V-84-04	M141D-20-1
V-84-02	M141D-21-1

Line #: DBA-2(B)
Service: Test connection and MSIV-LC system

Design Input Documents:

Piping Class/Summary Sheet: DBA/M190
Seismic Response Spectra: See FSAR
Piping Stress Isometric Drawings: FSK-4187B

1) Hanger Drawing Numbers

H1	PS 2 SKM 602, R0
	DET C SKM 1607,R0
	SNUBBER-000272
	-00921
H2	PS 2 SKM 602, R0
	DET C SKM 1607, R0
H3	PS 2 SKM 602, R0
	DET C SKM 1607, R0
H4	PS 2 SKM 602, R0
	DET C SKM 1607, r0
H5	PS 2 SKM 602, R0
	DET C SKM 1607, R0
H6	PS 4 SKM 602, R0
	DET B SKM 1609, R1
H7	PS 4 SKM 602, R0
	DET B SKM 1609, R1

2) Valve Vendor Print Numbers

V-84-18	M141D-20-1
V-84-17	M141D-20-1
V-84-16	M141D-21-1
MO-8401D	B-21-3238
MO-8402D	B-21-3238

Line #: DBA-2(A)
Service: Test connection and MSIV-LC system

Design Input Documents:

Piping Class/Summary Sheet: DBA/M190
Seismic Response Spectra: See FSAR
Piping Stress Isometric Drawings: FSK-10029B

1) Hanger Drawing Numbers

H1	PS 2	SKM 602, R0
	DET C	SKM 1607, R0
H2	PS 2	SKM 602, R0
	DET C	SKM 1607, R0
H3	PS 2	SKM 602, R0
	DET A	SKM 1606, R0
H4	PS 2	SKM 602, R0
	DET A	SKM 1606, R0
H5	PS 2	SKM 602, $0
	DET C	SKM 1607, R0
H6	PS 2	SKM 602, R0
	DET A	SKM 1606, R0
H7	PS 2	SKM 602, R0
	DET A	SKM 1606, R0
H8	PS 4	SKM 602, R0
	DET B	SKM 1609, R1

2) Valve Vendor Print Numbers

V-84-11	M141D-20-1
V-84-10	M141D-20-1
V-84-9	M141D-21-1
MO-8402C	B-21-3238
MO-8401C	B-21-3238

Line #: DBA-2(B)
Service: Test connection and MSIV-LC system

Design Input Documents:

Piping Class/Summary Sheet: DBA/M190
Seismic Response Spectra: See FSAR
Piping Stress Isometric Drawings: FSK-10030B

1) Hanger Drawing Numbers

J1	PS 4	SKM 602, R0
	DET C	SKM 1607, R0
H2	PS 4	SKM 602, R0
	DET C	SKM 1607, R0
H3	PS 4	SKM 602, R0
	DET A	SKM 1606, R0
H4	PS 4	SKM 602, R0
	DET B	SKM 1609, R1
H5	PS 4	SKM 602, R0
	DET A	SKM 1606, R0
H6	PS 1	SKM 602, R0
	DET C	SKM 1607, R0
H7	PS 2	SKM 602, R0
	DET A	SKM 1606, R0

2) Valve Vendor Print Numbers

MO-8403B B-21-3238

Line #: DBA-2(B)
Service: Test connection and MSIV-LC system

Design Input Documents:

Piping Class/Summary Sheet: DBA/M190
Seismic Response Spectra: See FSAR
Piping Stress Isometric Drawings: FSK-10031B

1) Hanger Drawing Numbers

H1	PS 4	SKM 602, R0
	DET C	SKM 1607, R0
H2	PS 4	SKM 602, R0
	DET C	SKM 1607, R0
H3	PS 4	SKM 602, R0
	DET A	SKM 1606, R0
H4	PS 4	SKM 602, R0
	DET B	SKM 1609, R1
H5	PS 4	SKM 602, R0
	DET A	SKM 1606, R0
H6	PS 1	SKM 602, R0
	DET C	SKM 1607, r0
H7	PS 2	SKM 602, R0
	DET A	SKM 1606, R0

2) Valve Vendor Print Numbers

MO-8403A B-21-3238

Line #: DBA-2(B)
Service: Test connection and MSIV-LC system

Design Input Documents:

Piping Class/Summary Sheet: DBA/M190
Seismic Response Spectra: See FSAR
Piping Stress Isometric Drawings: FSK-10032B

1) Hanger Drawing Numbers

H1	PS 4	SKM 602, R0
	DET C	SKM 1607, R0
H2	PS 4	SKM 602, R0
	DET C	SKM 1607, R0
H3	PS 4	SKM 602, R0
	DET A	SKM 1606, R0
H5	PS 4	SKM 602, R0
	DET A	SKM 1606, R0
H6	PS 2	SKM 602, R0
	DET A	SKM 1606, R0
H4	PS 4	SKM 602, R0
	DET B	SKM 1609, R1

2) Valve Vendor Print Numbers

MO-8403D B-21-3238

Line #: DBA-2(B)
Service: Test connection and MSIV-LC system

Design Input Documents:

Piping Class/Summary Sheet: DBA/M190
Seismic Response Spectra: See FSAR
Piping Stress Isometric Drawings: FSK-10033B

1) Hanger Drawing Numbers

H1	PS 4	SKM 602, R0
	DET C	SKM 1607, R0
H2	PS 4	SKM 602, R0
	DET C	SKM 1607, R0
H3	PS 4	SKM 602, R0
	DET A	SKM 1606, R0
H4	PS 4	SKM 602, R0
	DET A	SKM 1606, R0
H5	PS 4	SKM 602, R0
	DET A	SKM 1606, R0
H6	PS 2	SKM 602, R0
	DET A	SKM 1606, R0

2) Valve Vendor Print Numbers

MO-8403C B-21-3238

Line #: DBA-2(B)
Service: Test connection and MSIV-LC system

Design Input Documents:

Piping Class/Summary Sheet: DBA/M190
Seismic Response Spectra: See FSAR
Piping Stress Isometric Drawings: FSK-10034B

1) Hanger Drawing Numbers

H1	PS	SKM 602, R0
	DET A	SKM 1606, R0
H2	PS 6	SKM 602, R0
	DET A	SKM 1606, R0
H3	PS 6	SKM 602, R0
	DET A	SKM 1606, R0
H4	S 6	SKM 602, R0
	DET 6	SKM 1606, R0
H5	PS 4	SKM 602, R0
	DET A	SKM 1606, R0
H6	PS 4	SKM 602, R0
	DET A	SKM 1606, R0
H7	PS 4	SKM 602, R0
	DET A	SKM 1606, R0

2) Valve Vendor Print Numbers

V-84-48	M141D-21-1
V-84-12	M141D-20-1
V-84-13	M141D-20-1
V-84-45	M141D-21-1
V-84-19	M141D-20-1
V-84-20	M141D-20-1
V-84-47	M141D-21-1
V-84-05	M141D-20-1
V-84-06	M141D-20-1
V-84-46	M141D-21-1
V-84-26	M141D-20-1
V-85-27	M141D-20-1

Line #: DBA-2(B)
Service: Test connection and MSIV-LC system

Design Input Documents:

Piping Class/Summary Sheet: DBA/M190
Seismic Response Spectra: See FSAR
Piping Stress Isometric Drawings: FSK-10035B

1) Hanger Drawing Numbers

H1	DET 1	FSK-10035
	DET A	SKM 1606, R0
H2	PS 2	SKM 602, R0
	DET B	SKM 1609, R1
H3	PS 2	SKM 602, R0
	DET A	SKM 1606, R0
H4	PS 2	SKM 602, R0
	DET A	SKM 1606, R0
H5	PS 1	SKM 602, R0
	DET B	SKM 1609, R1

2) Valve Vendor Print Numbers

V-84-47 M141D-21-1

Line #: DBA-2(B)
Service: Test connection and MSIV-LC system

Design Input Documents:

Piping Class/Summary Sheet: DBA/M190
Seismic Response Spectra: See FSAR
Piping Stress Isometric Drawings: FSK-10036B

1) Hanger Drawing Numbers

H1	PS 2	SKM 602, R0
	DET A	SKM 1606, R0
H2	PS	SKM 602, R0
	DET C	SKM 1607, R0
H3	PS 2	SKM 602, R0
	DET A	SKM 1606, R0
H4	PS 2	SKM 602, R0
	DET A	SKM 1606, R0
H5	PS 2	SKM 602, R0
	DET A	SKM 1606, R0
H6	PS 5	SKM 602, R0
	DET A	SKM 1606, R0
H7	PS 5	SKM 602, R0
	DET C	SKM 1607, R0
H8	PS 5	SKM 602, R0
	DET C	SKM 1607, R0
H9	PS 5	SKM 602, R0
	DET C	SKM 1607, R0

2) Valve Vendor Print Numbers

None

Line #: DBA-2(B)
Service: Test connection and MSIV-LC system

Design Input Documents:

Piping Class/Summary Sheet: DBA/M190
Seismic Response Spectra: See FSAR
Piping Stress Isometric Drawings: FSK-10037B

1) Hanger Drawing Numbers

H1	PS 4	SKM 602, R0
	DET C	SKM 1607, R0
H2	PS 4	SKM 602, R0
	DET A	SKM 1606, R0
H3	PS 4	SKM 602, R0
	DET B	SKM 1609, R1
H4	PS 4	SKM 602, R0
	DET A	SKM 1606, R0
H5	PS 4	SKM 602, R0
	DET A	SKM 1606, R0

2) Valve Vendor Print Numbers

None

Line #: DBA-2(B)
Service: Test connection and MSIV-LC system

Design Input Documents:

Piping Class/Summary Sheet: DBA/M190
Seismic Response Spectra: See FSAR
Piping Stress Isometric Drawings: FSK-10038B

1) Hanger Drawing Numbers

H1	PS	SKM 602, R0
	DET C	SKM 1607, R0
H2	PS 4	SKM 602, R0
	DET A	SKM 1606, R0
H3	PS 4	SKM 602, R0
	DET B	SKM 1609, R1
H4	PS 4	SKM 602, R0
	DET A	SKM 1606, R0
H4	PS 4	SKM 602, R0
	DET A	SKM 1606, R0

2) Valve Vendor Print Numbers

None

Line #: DBA-2(B)
Service: Test connectionand MSIV-LC system

Design Input Documents:

Piping Class/Summary Sheet: DBA/M190
Seismic Response Spectra: See FSAR
Piping Stress Isometric Drawings: FSK-10039B

1) Hanger Drawing Numbers

H1	PS 1	SKM 602, R0
	DET C	SKM 1607, R0
H2	PS 4	SKM 602, R0
	DET A	SKM 1606, R0
H3	PS 4	SKM 602, R0
	DET B	SKM 1609, R1
H4	PS 4	SKM 602, R0
	DET A	SKM 1606, R0
H5	PS 4	SKM 602, R0
	DET A	SKM 1606, R0

2) Valve Vendor Print Numbers
None

Line #: DBA-2(B)
Service: Test connection and MSIV-LC system

Design Input Documents:

Piping Class/Summary Sheet: DBA/M190
Seismic Response Spectra: See FSAR
Piping Stress Isometric Drawings: FSK-10040B

1) Hanger Drawing Numbers

H1	PS 4	SKM 602, R0
	DET A	SKM 1606, R0
H2	PS 4	SKM 602, R0
	DET A	SKM 1606, R0
H3	PS 4	SKM 602, R0
	DET B	SKM 1609, R1
H4	PS 4	SKM 602, R0
	DET A	SKM 1606, R0
H5	PS 4	SKM 602, R0
	DET C	SKM 1607, R0

2) Valve Vendor Print Numbers

None

Line #: DBA-2(B)
Service: Test connection and MSIV-LC system

Design Input Documents:

Piping Class/Summary Sheet: DBA/M190
Seismic Response Spectra: See FSAR
Piping Stress Isometric Drawings: FSK-10041B

1) Hanger Drawing Numbers

H-1	PS4	SKM-602, R0
	DET B	SKM-1609, R1
H-2	PS 4	SKM-602, R0
	DET A	SKM-1606, R0
H-3	PS 5	SKM-602, R0
	DET A	SKM-1606, R0

2) Valve Vendor Print Numbers

V-84-33	M141D-20-1
V-84-32	M141D-20-1
V-84-34	M141A-56-4

Line #: DBA-2(B)
Service: Test connection and JSIB-LC system

Design Input Documents:

Piping Class/Summary Sheet: DBA/M190
Seismic Response Spectra: See FSAR
Piping Stress Isometric Drawings: FSK-10042B

1) Hanger Drawing Numbers

H-1	PS 4	SKM-602, R0
	DET B	SKM-1609, R1
H-2	PS 4	SKM-602, R0
	DET A	SKM-1606, R0
H-3	PS 4	SKM-602, R0
	DET A	SKM-1602, R0

2) Valve Vendor Print Numbers

V-84-35	M141A-56-4
V-84-36	M141D-20-1
V-84-37	M141D-20-1

Line #: DBA-2(B)
Service: Test connection and MSIV-LC system

Design Input Documents:

Piping Class/Summary Sheet: DBA/M190
Seismic Response Spectra: See FSAR
Piping Stress Isometric Drawings: FSK-10046B

1) Hanger Drawing Numbers

H-1	PS 1	SKM-602, R0
	DET B	SKM-1609, R1
H-2	PS 1	SKM-602, R0
	DET A	SKM-1606, R0
H-3	PS 1	SKM-602, R0
	DET A	SKM-1606, R0

2) Valve Vendor Print Numbers

None

Line #: DBA-2(C)
Service: Drains from steam lines inside containment

Design Input Documents:

Piping Class/Summary Sheet: DBA/M190
Seismic Response Spectra: See FSAR
Piping Stress Isometric Drawings: FSK-4220B

1) Hanger Drawing Numbers

H-1	PS 6	SKM-602, R0
	DET A	SKM-1606, R0

2) Valve Vendor Print Numbers

V-14-37 M-123-A-6-7
V-14-38 M-123-A-6-7

Line #: DBA-4
Service: Steam to RCIC turbine from main steam line to MO-2401

Design Input Documents:

Piping Class/Summary Sheet: DBA/M190
Seismic Response Spectra: See FSAR
Piping Stress Isometric Drawings: FSK-4325B, FSK-4026B

1) Hanger Drawing Numbers

FSK-4325

H-2	PS 6	SKM-602, R0
	DET A	SKM-1606, R0

FSK-4026

H-1	PS 1	SKM-602, R0
	DET A	SKM-1606, R0
H-2	PS 1	SKM-602, R0
	DET A	SKM-1606, R0
H-3	PS 1	SKM-602, R0
	DET B	SKM-1609, R1
H-4	DET 1	FSK-4026, R4
	DET C	SKM-1607, R0

2) Valve Vendor Print Numbers

V-23-33	M141-55(1)-1
V-24-27	M141-55(1)-1
V-24-27	M141-55(1)-1
V-24-26	M141-55(1)-1

Line #: DBA-5
Service: RHR pump discharge from MO-1901 to reactor head spray

Design Input Documents:

Piping Class/Summary Sheet: DBA/M190
Seismic Response Spectra: See FSAR
Piping Stress Isometric Drawings: FSK-3934B

1) Hanger Drawing Numbers

H-1	PS-1	SKM-602, R0
	DET B	SKM-1609, R1
H-2	PS 1	SKM-602, R0
	DET A	SKM-1606, R0
H-3	PS 1	SKM-602, R0
	DET A	SKM-1606, R0
H-4	PS 6	SKM-602, R0
	DET C	SKM-1607, R0

2) Valve Vendor Print Numbers

V-19-34	M-141-55(1)-1
V-19-33	M-141-55(1)-1

Line #: DBA-7
Service: Drain test connection

Design Input Documents:

Piping Class/Summary Sheet: DBA/M190
Seismic Response Spectra: See FSAR
Piping Stress Isometric Drawings: FSK-4130B

1) Hanger Drawing Numbers

Sh 35		SKM-1611, R0
	DET 1	FSK-4130
H-1	PS 1	SKM-602, R0
	DET B	SKM-1609, R1

2) Valve Vendor Print Numbers

V-25-25	M-141-A-56-4
V-25-26	M-141-A-56-4
V-25-16	M-141-A-55-1-1
V-25-17	M-141-A-55-1-1

Line #: DBA-9
Service: Reactor vessel vent to drywell equipment drain sump

Design Input Documents:

Piping Class/Summary Sheet: DBA/M190
Seismic Response Spectra: See FSAR
Piping Stress Isometric Drawings: FSK-4041B, FSK-4042B, FSK-4239B, FSK-5593B

1) Hanger Drawing Numbers

FSK-5593B

H-1	PS 2	SKM-602, R0
	DET B	SKM-1609, R1
H-2	PS 1	SKM-602, R0
	DET A	SKM-1606, R0
H-3		SKM-1601, R0
H-4	PS 2	SKM-602, R0
	DET C	SKM-1607, R0
H-5	PS 1	SKM-602, R0
	DET A	SKM-1606, R0
H-6	PS 2	SKM-602, R0
	SNUB 13	
H-7	PS 1	SKM-602, R0
	DET A	SKM-1606, R0
Sh 106		SKM-1611, R0
	PS 1-2	SKM-602, R0

FSK-4239B

H-1	PS 2	SKM-602, R0
	SNUB 17A	
H-2		SKM-1601, R0
H-3		SKM-1601, R0
H-4	PS 2	SKM-602, R0
	SNUB 18A	
H-5	PS 1	SKM-602, R0
	DET C	SKM-1607, R0
H-6		SKM-1601, R0
H-4		SKM-1601, R0
H-8	PS 2	SKM-602, R0
	SNUB 19A	
H-9		SKM-1601, R0
H-10	PS 1	SKM-602, R0
	DET A	SKM-1606, R0
H-11	PS 1	SKM-602, R0
	DET B	SKM-1609, R1

FSK-4042B

H-1	DET C	SKM-1607, R0
Sh 2C		
	DET B	SKM-1609, R1
Sh 2B	DET B	SKM-1609, R1
H-2	PS 1	SKM-602, R0
	DET C	SKM-1607, R0
H-3	PS 1	SKM-602, R0
	DET A	SKM-1606, R0
H-4	PS 1	SKM-602, R0
	DET B	SKM-1609, R1
H-5	PS 2	SKM-602, R0
	DET A	SKM-1606, R0
H-6	PS 1	SKM-602, R0
	DET B	SKM-1609, R1
H-7	PS 2	SKM-602, R0
	DET A	SKM-1606, R0
H-8	PS 2	SKM-602, R0
	SNUB 2B	
Sh 103	PS 1	SKM-602, R0
H-9	PS 2	SKM-602, R0
	DET A	SKM-1606, R0
H-10	PS 2	SKM-602, R0
	DET A	SKM-1606, R0
Sh 104	PS 2	SKM-602, R0
H-11	DET 4	FSK-4042B
H-12	DET 4	FSK-4042B
Sh 105	PS 2	SKM-602, R0
H-13	PS 1	SKM-602, R0
	DET C	SKM-1607, R0

FSK-5593B

H-1	PS 2	SKM-602, R0
	DET U	SKM-1608, R0
Sh 93		SKM-1611, R0
Sh 94		SKM-1611, R0

Line #: DBA-9 Sheet 2 of 2

FSK-5593B

H-2	PS 2	SKM-602, R0
	DET B	SKM-1609, R1
H-3	PS 2	SKM-602, R0
	DET A	SKM-1606, R0
H-4	PS-2	SKM-602, R0
	DET A	SKM-1606, R0
H-5	PS 2	SKM-602, R0
	DET A	SKM-1606, R0
H-6	PS 2	SKM-602, R0
	DET A	SKM-1606, R0
H-7	PS 1	SKM-602, R0
	DET A	SKM-1606, R0
H-8	PS 1	SKM-602, R0
	DET A	SKM-1606, R0
H-9	PS 2	SKM-602, R0
	DET A	SKM-1606, R0
H-10	PS 1	SKM-602, R0
	DET A	SKM-1606, R0
H-11	PS 2	SKM-602, R0
	DET A	SKM-1606, R0
H-12	PS 2	SKM-602, R0
	DET A	SKM-1606, R0
H-13	PS 1	SKM-602, R0
	DET A	SKM-1606, R0

2) Valve Vendor Print Numbers

V-15-01	M-123A-6-7
CV-4429	M-141-35-1
V-14-6	M-123A-6-7
V-14-5	M-123A-6-7
CV-4428	M-141-35-1

Line #: DBA-10
Service: High pressure flange leak-off reactor vessel

Design Input Documents:

Piping Class/Summary Sheet: DBA/M190
Seismic Response Spectra: See FSAR
Piping Stress Isometric Drawings: FSK-3352B, FSK-5591B, FSK-4239B, FSK-4238B

1) Hanger Drawing Numbers

FSK-4238B

H-1	PS 2	SKM-602, R0
	DET A	SKM-1606, R0
H-2	PS 2	SKM-602, R0
	DET A	SKM-1606, R0
H-3	PS 2	SKM-602, R0
	DET C	SKM-1607, R0
Sh 66		SKM-1611, R0
H-4	PS 2	SKM-602, R0
	DET A	SKM-1606, R0
Sh 67		SKM-1611, R0
H-6	PS 2	SKM-602, R0
	DET A	SKM-1606, R0
H-7	PS 2	SKM-602, R0
	DET A	SKM-1606, R0
H-5	PS 1	SKM-602, R0
	DET C	SKM-1607, R0
Sh 11		SKM-1611, R0

FSK-5591B

Sh 64		SKM-1611, R0
	PS 1	SKM-602, R0
H-1	PS 1	SKM-602, R0
	DET C	SKM-1607, R0
H-2	PS 1	SKM-602, R0
	DET A	SKM-1606, R0
H-3	DET B	SKM-1609, R1
H-4	PS 1	SKM-602, R0
	DET A	SKM-1606, R0
H-5	PS 1	SKM-602, R0
	DET A	SKM-1606, R0
H-6	PS 3	SKM-602, R0
	DET A	SKM-1606, R0
H-7	PS 1	SKM-602, R0
	DET A	SKM-1606, R0

FSK-5591B

H-8	PS 2	SKM-602, R0
	DET A	SKM-1606, R0
H-9	PS 1	SKM-602, R0
	DET C	SKM-1607, R0
H-10	-PS-2	SKM-602, R0
	DET A	SKM-1606, R0
H-11	PS 3	SKM-602, R0
	DET A	SKM-1606, R0
H-12	PS 1	SKM-602, R0
	DET A	SKM-1606, R0
H-13	PS 2	SKM-602, R0
	DET A	SKM-1606, R0
H-14	PS 1	SKM-602, R0
	DET A	SKM-1606, R0
H-15	PS 1	SKM-602, R0
	DET A	SKM-1606, R0
H-16	PS 1	SKM-602, R0
	DET A	SKM-1606, R0

FSK-4239B

H-1	PS 1	SKM-602, R0
	DET B	SKM-1609, R0

FSK-3352B

H-1	PS 1	SKM-602, R0
	DET A	SKM-1606, R0
H-2	PS 1	SKM-602, R0
	DET B	SKM-1609, R0
H-3	PS 2	SKM-602, R0
	DET C	SKM-1607, R0
H-4	PS 2	SKM-602, R0
	DET C	SKM-1607, R0
H-5	PS 1	SKM-602, R0
	DET A	SKM-1606, R0
H-6	PS 1	SKM-602, R0
	DET A	SKM-1606, R0

2) Valve Vendor Print Numbers

V-14-126	M141D-1-2
V-14-125	M141D-1-2
V-14-127	M141D-1-2
V-16-79	M141-55(1)-1
V-16-78	M141-55(1)-1

Line #: DCA 1/4
Service: Recirculation system Loop A

Design Input Documents:

Piping Class/Summary Sheet: DCA/M190
Seismic Response Spectra: See FSAR
Piping Stress Isometric Drawings: 761E584, 761E344

1) Hanger Drawing Numbers

GE 761E344, Sh 1

SSA8	BP 215, R0
	BP 215A, R1
SSA9	BP 215A, R1
	BP 217, R0
HA1	BP 101, R1
	BP 101A, R1
	BP 101B, R0
	BP 101C, R1
SSA1	BP 201, R0
	BP 201A. R1
SSA2	BP 203A, R1
	BP 203, R1
SSA3	BP 205A, R1
	BP 205, R1
HA5	BP 105A, R1
	BP 105, R1
	BP 105B, R0
HA6	BP 105A, R1
	BP 106A, R1
	BP 105B, R0
HA7	BP 107, R1
	BP 107A, R1
	BP 107B, R0
SSA4	BP 207A, R1
	BP 207, R0
SSA 5	BP 209A, R1
	BP 209, R0
SSA 10	BP 219A, R2
	BP 219A, R1
	BP 219B, R0

GE 761E344, Sh 1

SSA11	BP 221A, R1
	BP 221, R1
	BP 221B, R1
HA9	BP 109, R0
HA2	BP 101A, R1
	BP 101C, R1
	BP 102, R1
	BP 102A, R0
SSA6	BP 211A, R1
	BP 211, R0
SSA 7	BP 211A, R1
	BP 213, R0
HA3	BP 103, R1
	BP 103A, R1
HA4	BP 103A, $1
	BP 104, R1

<u>GE 761E584, Sh 1</u>

RR1	GE 761E584, Sh 2
RR2	GE 761E584, Sh 2
RR3	GE 761E584, Sh 2
RR4	GE 761E584, Sh 2
RR5	GE 761E584, Sh 2
RR6	GE 761E584, Sh 2
RR7	GE 761E584, Sh 2
RR8	GE 761E584, Sh 2
RR9	GE 761E584, Sh 2
RR10	GE 761E584, Sh 2
RR11	GE 761E584, Sh 2
RR12	GE 761E584, Sh 2
RR13	GE 761E584, Sh 2
RR14	GE 761E584, Sh 2

Line #: DCA-10
Service: Test loop from core spray line inside containment

Design Input Documents:

Piping Class/Summary Sheet: DCA/M190
Seismic Response Spectra: See FSAR
Piping Stress Isometric Drawings: FSK-5589B

1) Hanger Drawing Numbers

H-1	PS 1	SKM-602, R0
	DET C	SKM-1607, R0
H-2	PS 1	SKM-602, R0
	DET A	SKM-1606, R0
H-3	PS 1	SKM-602, R0
	DET C	SKM-1607, R0
H-4	PS 1	SKM-602, R0
	DET C	SKM-1607, R0

2) Valve Vendor Print Numbers

V-21-35 M123A-6-7

Line #: DCA-11
Service: HPCI steam

Design Input Documents:

Piping Class/Summary Sheet: DCA/M190
Seismic Response Spectra: See FSAR
Piping Stress Isometric Drawings: FSK-5581B

1) Hanger Drawing Numbers

H-1	PS 6	SKM-602, R0
	DET U	SKM-1608, R0
Sh 49		SKM-1611, R0
Sh 50		SKM-1611, r0
H-2	PS 2	SKM-602, R0
	DET B	SKM-1609, R1
H-3	PS 2	SKM-602, r0
	DET A	SKM-1606, R0
H-4	PS 2	SKM-602, R0
	DET A	SKM-1606, R0
H-5	PS 2	SKM-602, R0
	DET A	SKM-1606, R0
H-6	PS 1	SKM-602, R0
	DET A	SKM-1606, R0
H-7	PS 2	SKM-602, R0
	DET C	SKM-1607, r0
H-8	PS 5	SKM-602, r0
	DET A	SKM-1606, r0
H-9	PS 2	SKM-602, R0
	DET C	SKM-1607, R0

2) Valve Vendor Print Numbers

None

Line #: DCA-11
Service: HPCI steam

Design Input Documents:

Piping Class/Summary Sheet: DCA/M190
Seismic Response Spectra: See FSAR
Piping Stress Isometric Drawings: FSK-5582B

1) Hanger Drawing Numbers

H-1	PS 6	SKM-602, R0
	DET U	SKM-1608, R0
Sh 52		SKM-1611, R0
Sh 51		SKM-1611, R0
H-2	PS 2	SKM-602, R0
	DET B	SKM-1609, R1
H-3	PS-2	SKM-602, R0
	DET A	SKM-1606, R0
H-4	PS 2	SKM-602, r0
	DET A	SKM-1606, R0
H-5	PS 2	SKM-602, R0
	DET A	SKM-1606, R0
H-6	PS 2	SKM-602, R0
	DET A	SKM-1606, R0
H-7	PS 2	SKM-602, R0
	DET C	SKM-1607, R0
	DET 1	FSK-5581B
H-8	PS 5	SKM-602, R0
	DET A	SKM-1606, R0
H-9	PS 2	SKM-602, R0
	DET C	SKM-1607, R0
	DET 1	FSK-5581B

2) Valve Vendor Print Numbers

V-22-3 M-123A-6-7

Line #: DCA-11
Service: HPCI steam

Design Input Documents:

Piping Class/Summary Sheet: DCA/M190
Seismic Response Spectra: See FSAR
Piping Stress Isometric Drawings: FSK-5583B

1) Hanger Drawing Numbers

H-1	PS 6	SKM-602, R0
	DET A	SKM-1606, R0
H-3	DET C	SKM-1607, R0
H-4	PS 2	SKM-602, R0
	DET A	SKM-1606, R0
H-5	PS 2	SKM-602, R0
	DET A	SKM-1606, R0
H-6	PS 2	SKM-602, R0
	DET A	SKM-1606, R0
H-7	PS 2	SKM-602, R0
	DET U	SKM-1608, R0
Sh 18		SKM-1611, R0

2) Valve Vendor Print Numbers

V-22-4 M-123A-6-7

Line #: DCA-11
Service: HPCI steam

Design Input Documents:

Piping Class/Summary Sheet: DCA/M190
Seismic Response Spectra: See FSAR
Piping Stress Isometric Drawings: FSK-5584B

1) Hanger Drawing Numbers

H-1	PS 6	SKM-602, R0
	DET A	SKM-1606, R0
H-2	PS 6	SKM-602, R0
	DET A	SKM-1606, R0
H-3	PS 6	SKM-602, R0
	DET A	SKM-1606, R0
H-4	PS 6	SKM-602, R0
	DET A	SKM-1606, R0
H-5	DET C	SKM-1607, R0
SH 19		SKM-1611, R0
H-8	PS 2	SKM-602, R0
	DET A	SKM-1606, R0
H-9	PS 2	SKM-602, R0
	DET A	SKM-1606, R0
H-10	PS 2	SKM-602, R0
	DET A	SKM-1606, R0

H-11	PS-2	SKM-602, R0
	DET A	SKM-1606, R0
H-12	PS 2	SKM-602, R0
	DET A	SKM-1606, R0

2) Valve Vendor Print Numbers

V-21-1 M137A-2-4

Line #: DCA-3
Service: Standby liquid control test connection

Design Input Documents:

Piping Class/Summary Sheet: DCA/M190
Seismic Response Spectra: See FSAR
Piping Stress Isometric Drawings: FSK-3992B, FSK-3993B

1) Hanger Drawing Numbers

FSK-3992B**

H-1	SH 96	SKM-1611, R0
	DET B	SKM-1609, R1

FSK-3993B*

H-1	Sh 45	SKM-1611, R0
	DET A	SKM-1606, R0
H-2	PS 1	SKM-602, R0
	DET C	SKM-1607, R0
H-3	PS 1	SKM-602, R0
	DET A	SKM-1606, R0
H-4	PS 1	SKM-602, R0
	DET A	SKM-1606, R0

2) Valve Vendor Print Numbers

V-26-8**	M123-4-3
V-26-24*	M123A-6-7
V-26-23*	M123A-6-7

Line #: DCA-13
Service: Standby liquid control test connection

Design Input Documents:

Piping Class/Summary Sheet: DCA/M190
Seismic Response Spectra: See FSAR
Piping Stress Isometric Drawings: FSK-3734B

1) Hanger Drawing Numbers

H-1	PS 2	SKM-602, R0
	DET A	SKM-1606, R0
H-2	PS 2	SKM-602, R0
	DET C	SKM-1607, R0
H-3	PS 3	SKM-602, R0
	DET C	SKM-1607, R0
H-4	PS 2	SKM-602, R0
	DET A	SKM-1606, R0
H-5	PS 1	SKM-602, R0
	DET A	SKM-1606, R0
H-6	PS 1	SKM-602, R0
	DET A	SKM-1606, R0
H-7	PS 1	SKM-602, R0
	DET A	SKM-1606, R0

2) Valve Vendor Print Numbers

V-26-9	M123-4-3
ZS-2615	M123A-5-10
V-26-26	M123A-6-7
V-26-27	M123A-6-7

Line #: DCA-13
Service: Standby liquid control test connection

Design Input Documents:

Piping Class/Summary Sheet: DCA/M190
Seismic Response Spectra: See FSAR
Piping Stress Isometric Drawings: FSK-5507B

1) Hanger Drawing Numbers

H-1	DET C	SKM-1607, R0
H-2	PS 1	SKM-602, R0
	DET A	SKM-1607, R0
H-3	DET C	SKM-1607, R0
H-4	DET C	SKM-1607, R0
H-5	DET C	SKM-1607, R0
H-6	PS 4	SKM-602, R0
	DET A	SKM-1606, R0
H-7	PS 4	SKM-602, R0
	DET A	SKM-1606, R0
H-8	PS 4	SKM-602, R0
	DET A	SKM-1606, R0

2) Valve Vendor Print Numbers

V-15-19 M-123A-6-7

Line #: DCA-13
Service: Standby liquid control test connection

Design Input Documents:

Piping Class/Summary Sheet: DCA/M190
Seismic Response Spectra: See FSAR
Piping Stress Isometric Drawings: FSK-5513B

1) Hanger Drawing Numbers

H-1	PS 1	SKM-602, R0
	DET C	SKM-1607, R0
H-2	PS 1	SKM-602, R0
	DET B	SKM-1609, R1
H-3	PS 1	SKM-602, R0
	DET A	SKM-1606, R0
H-4	PS 1	SKM-602, R0
	DET A	SKM-1606, R0
H-5	PS 1	SKM-602, R0
	DET A	SKM-1606, R0
H-6	PS 1	SKM-602, R0
	DET A	SKM-1606, R0
H-7	PS 1	SKM-602, R0
	DET C	SKM-1607, R0

H-8	PS 4	SKM-602, R0
	DET C	SKM-1607, R0
H-9	PS 4	SKM-602, R0
	DET A	SKM-1606, R0
H-10	PS 4	SKM-602, R0
	DET A	SKM-1606, R0

2) Valve Vendor Print Numbers

V-15-18 M-123A-6-7

Line #: DCA-13
Service: Standby liquid control test connection

Design Input Documents:

Piping Class/Summary Sheet: DCA/M190
Seismic Response Spectra: See FSAR
Piping Stress Isometric Drawings: FSK-5520B

1) Hanger Drawing Numbers

H-1	DET C	SKM-1607, R0
H-2	PS 1	SKM-602, R0
	DET A	SKM-1606, R0
H-3	DET C	SKM-1607, R0
H-4	DET C	SKM-1607, R0
H-5	DET C	SKM-1607, R0
H-6	PS 4	SKM-602, R0
	DET A	SKM-1606, R0
H-7	PS 4	SKM-602, R0
	DET A	SKM-1606, R0
H-8	DET C	SKM-1607, R0

2) Valve Vendor Print Numbers

V-15-37 M123A-6-7

Line #: DCA 17/18
Service: CRDs

Design Input Documents:

Piping Class/Summary Sheet: DCA/M190
Seismic Response Spectra: See FSAR
Piping Stress Isometric Drawings: DA-003

1) Hanger Drawing Numbers

41	RCI DA-9, Sh 2 7884-M115-40(2)-2	46	RCI DA-9, Sh 1 78840N115-40(1)-2
42	RCI DA-9, Sh2 7884-M115-40(2)-2	47	RCI DA-9, Sh 1 7884-M115-40(1)-2
43	RCI DA-9, Sh 4 7884-M115-40(4)-2	48	RCI DA-9, Sh 4 7884-M115-40-(4)-2
44	RCI DA-9, Sh 3 7884-M115-40(3)-2	49	RCI DA-9, Sh 3 7884-M115-40(3)-2
45	RCI DA-9, Sh 3 7884-M115-40(3)-2	50	RCI DA-9, Sh 3 7884-M115-40(3)-2

Piping Stress Isometric Drawings: DA-004

16	RCI DA-9, Sh 8 7884-M115-40(8)-1	20	RCI DA-9, Sh 9 7884-M-115-40(9)-1
17	RCI DA-9, Sh 8 7884-M115-40(8)-1	21	RCI DA-9, Sh 9 7884-M115-40(9)-1
18	RCI DA-9, Sh 4 7884-M115-40(4)-1	22	RCI DA-9, Sh 4 7884-M115-40(4)-1
19	RCI DA-9, Sh 3 7884-M115-40-(3)-1	23	RCI DA-9, Sh 3 7884-M115-40(3)-1
39	RCI DA-9, Sh 3 7884-M115-40-(3)-1	40	RCI DA-9, Sh 3 7884-M115-40(3)-1

Line #: DCA-17/18 Sheet 2
Service: CRDs

Design Input Documents:

Piping Class/Summary Sheet: DCA/M190
Seismic Response Spectra: See FSAR
Piping Stress Isometric Drawings: DA-005

1) Hanger Drawing Numbers

24	RCI DA-9, Sh 5 7884-M115-40(5)-2 RIC DA-9, Sh 7 7884-M115-40(7)-1	31	RCI DA-9, Sh 7 7884-M115-40(7)-1
25	RCI DA-9, Sh 5 7884-M115-40(5)-2 RCI DA-9, Sh 7 7884-M115-40(7)-1	32	RCI DA-9, Sh 5 7884-M115-40(5)-2 RCI DA-9, Sh 7 7884-M115-40(7)-1
26	RCI DA-9, Sh 5 7884-M115-40(5)-2 RCI DA_9, Sh 7 7884-M115-40(7)-1	33	RCI DA-9, Sh 5 7884-M115-40(5)-2 RCI DA-9, Sh 7 7884-M115-40(7)-1
27	RCI DA-9, Sh 7 7884-M115-40(7)-1	34	RCI DA-9, Sh 7 7884-M115-40(7)-1
28	RCI DA-9, Sh 5 7884-M115-40(5)-2 RCI DA-9, Sh 7 7884-M115-40(7)-1	35	RCI DA-9, Sh 5 7884-M115-40(5)-2 RCI DA-9, Sh 7 7884-M115-40(7)-1
29	RCI DA-9, Sh 5 7884-M115-40(5)-2 RCI DA-9, Sh 7 7884-M115-40(7)-1	36	RCI DA-9, Sh 5 7884-M115-40(5)-2
30	RCI DA-9, Sh 7 7884-M115-40(7)-1		

Line #: DCA-17/18 Sheet 2
Service: CRDs

Design Input Documents:

Piping Class/Summary Sheet: DCA/M190
Seismic Response Spectra: See FSAR
Piping Stress Isometric Drawings: DA-005

1) Hanger Drawing Numbers

24	RCI DA-9, Sh 5 7884-M115-40(5)-2 RIC DA-9, Sh 7 7884-M115-40(7)-1	31	RCI DA-9, Sh 7 7884-M115-40(7)-1
25	RCI DA-9, Sh 5 7884-M115-40(5)-2 RCI DA-9, Sh 7 7884-M115-40(7)-1	32	RCI DA-9, Sh 5 7884-M115-40(5)-2 RCI DA-9, Sh 7 7884-M115-40(7)-1
26	RCI DA-9, Sh 5 7884-M115-40(5)-2 RCI DA_9, Sh 7 7884-M115-40(7)-1	33	RCI DA-9, Sh 5 7884-M115-40(5)-2 RCI DA-9, Sh 7 7884-M115-40(7)-1
27	RCI DA-9, Sh 7 7884-M115-40(7)-1	34	RCI DA-9, Sh 7 7884-M115-40(7)-1
28	RCI DA-9, Sh 5 7884-M115-40(5)-2 RCI DA-9, Sh 7 7884-M115-40(7)-1	35	RCI DA-9, Sh 5 7884-M115-40(5)-2 RCI DA-9, Sh 7 7884-M115-40(7)-1
29	RCI DA-9, Sh 5 7884-M115-40(5)-2 RCI DA-9, Sh 7 7884-M115-40(7)-1	36	RCI DA-9, Sh 5 7884-M115-40(5)-2 RCI DA-9, Sh 7 7884-M115-40(7)-1
30	RCI DA-9, Sh 7 7884-M115-40(7)-1	37	RCI DA-9, Sh 7 7884-M115-40(7)-1
		38	RCI DA-9, Sh 7 7884-M115-40(7)-1

2) Valve Vendor Print Numbers

V-18-1364 through V-18-1452	M115-17-1
V-18-1097 through V-18-1185	M115-17-1

	PSA-1	
H-7	SNUB 17	
	PSA-1	
H-8	PS 1	SKM-602, R0
	DET A	SKM-1606, R0

2) Valve Vendor Print Numbers

None

Line #: DCA-19A Sheet 2
Service: Recircualtion system

Design Input Documents:

Piping Class/Summary Sheet: DCA/M190
Seismic Response Spectra: See FSAR
Piping Stress Isometric Drawings: FSK-4166B

1) Hanger Drawing Numbers

H-1	SNUB 18	
	PSA-1	
H-2	PS 1	SKM-602, R0
	Sh 5	SKM-1611, R0

2) Valve Vendor Print Numbers

V-15-43 M123A-6-7
V-16-45 M123A-6-7

Line #: DCA-19A Sheet 2
Service: Recirculation system

Design Input Documents:

Piping Class/Summary Sheet: DCA/M190
Seismic Response Spectra: See FSAR
Piping Stress Isometric Drawings: FSK-4167B

1) Hanger Drawing Numbers

H-1	PS 1	SKM-602, R0
	DET C	SKM-1607, R0
H-2	PS 2	SKM-602, R0
	SNUB 9A	
	PSA-1	
H-3	DET 2	FSK-4167B
	Sh 108	SKM-1611, R0

2) Valve Vendor Print Numbers

V-16-46 M-123A-6-7
V-16-47 M-123A-6-7

Line #: DCA-19A Sheet 4
Service: Recirculation system

Design Input Documents:

Piping Class/Summary Sheet: DCA/M190
Seismic Response Spectra: See FSAR
Piping Stress Isometric Drawings: FSK-4170B

1) Hanger Drawing Numbers

H-1	PS 2	SKM-602, R0
	SNUB 10A	
	PSA-1	
H-2	PS 2	SKM-602, R0
	SNUB 11A	
	PSA-1	
H-3	PS 2	SKM-602, R0
	Sh 111	SKM-1611, R0
H-4	PS 1	SKM-602, R0
	DET C	SKM-1607, R0

2) Valve Vendor Print Numbers

V-16-35 M-123A-6-7
V-16-36 M-123A-6-7

Line #: DCA-19A Sheet 5
Service: Recirculation system

Design Input Documents:

Piping Class/Summary Sheet: DCA/M190
Seismic Response Spectra: See FSAR
Piping Stress Isometric Drawings: FSK-4172B

1) Hanger Drawing Numbers

H-1	PS 2	SKM-602, R0
	Sh 76	SKM-1611, R0
H-2	PS 1	SKM-602, R0
	DET C	SKM-1606, R0

2) Valve Vendor Print Numbers

V-16-38	M-123A-6-7
V-16-39	M-123A-6-7

Line #: DCA-19A Sheet 6
Service: Recirculation system

Design Input Documents:

Piping Class/Summary Sheet: DCA/M190
Seismic Response Spectra: See FSAR
Piping Stress Isometric Drawings: FSK-4173B

1) Hanger Drawing Numbers

H-1	Sh 75	SKM-1611, R0
H-2	SNUB 14	
	PSA-1	
H-3	PS 2	SKM-602, R0
	DET A	SKM-1606, R0
H-4	PS 2	SKM-602, R0
	DET A	SKM-1606, R0

2) Valve Vendor Print Numbers

V-16-42	M-123A-6-7
V-16-41	M-123A-6-7

Line #: DCA-19B
Service: Recirculation system

Design Input Documents:

Piping Class/Summary Sheet: DCA/M190
Seismic Response Spectra: See FSAR
Piping Stress Isometric Drawings: FSK-4168, FSK-4171B, FSK-4174

1) Hanger Drawing Numbers

FSK-4168*

S-1	Sh 86	SKM-1611, R0
	DET B	SKM-1609, R1
H-2	PS 2	SKM-602, R0
	SNUB 13	
	PSA-1	

FSK-4171B**

H-1	Sh 74	SKM-1611, R0
	PS 2	SKM-602, R0

FSK-4174***

H-1	Sh 73	SKM-1611, R0
	DET B	SKM-1609, R1
H-2	PS 1	SKM-602, R0
	DET A	SKM-1606, R0

2) Valve Vendor Print Numbers

V-16-44*	M123A-6-7
V-16-37**	M123A-6-7
V-16-40***	M123A-6-7

Line #: DCA-19C
Service: Recirculation system

Design Input Documents:

Piping Class/Summary Sheet: DCA/M190
Seismic Response Spectra: See FSAR
Piping Stress Isometric Drawings: FSK-4201B, FSK-4204B, FSK-4207

1) Hanger Drawing Numbers

FSK-4201B*

H-1	SH 83	SKM-1611, R0
H-2	Sh 84	SKM-1611, R0

FSK-4204B**

H-1	Sh 78	SKM-1611, R0
H-2	Sh 82	SKM-1611, R0
	PS 2	SKM-602, R0

FSK-4207B***

H-1	Sh 68	SKM-1611, R0

2) Valve Vendor Print Numbers

*V-16-29	M-123A-6-7
**V-16-23	M-123A-6-7
***V-16-20	M-123A-6-7

Line #: DCA-19D
Service: Recirculation system

Design Input Documents:

Piping Class/Summary Sheet: DCA/M190
Seismic Response Spectra: See FSAR
Piping Stress Isometric Drawings: FSK-4198B

1) Hanger Drawing Numbers

H-6	Sh 110	SKM-1611, R0
	PS 2	SKM-602, R0
H-5	SNUB 14A	
	PSA-1	
H-2	Sh 114	SKM-1611, R0
	PS 1	SKM-602, R0
H-4	Sh 115	SKM-1611, R0
	PS 2	SKM-602, R0
H-3	SNUB 12A	
	PS 2	SKM-602, R0
	PSA-1	
H-1	SNUB 13A	
	PS 2	SKM-602, R0
	PSA-1	
H-7	PS 1	SKM-602, R0
	DET A	SKM-1606, R0

2) Valve Vendor Print Numbers

None

Line #: DCA-19D Sheet 2
Service: Recirculation system

Design Input Documents:

Piping Class/Summary Sheet: DCA/M190
Seismic Response Spectra: See FSAR
Piping Stress Isometric Drawings: FSK-4199B, FSK-4200B

1) Hanger Drawing Numbers

H-1	PS 1	SKM-602, R0
	Sh 6	SKM-1611, R0

<u>FSK-42000</u>

H-1	Sh 81	SKM-1611, R0
	PS 1	SKM-602, R0
H-2	SNUB 8A	
	PS 2	SKM-602, R0
	PSA-1	
H-3	PS 1	SKM-602, R0
	DET C	SKM-1607, R0
H-4	Sh 80	SKM-1611, R0

2) Valve Vendor Print Numbers

V-16-27	M-123A-6-7
V-16-28	M-123A-6-7
V-16-86	M-123A-6-7
V-16-26	M-123A-6-7

Line #: DCA-19D Sheet 3
Service: Recirculation system

Design Input Documents:

Piping Class/Summary Sheet: DCA/M190
Seismic Response Spectra: See FSAR
Piping Stress Isometric Drawings: FSK-4202B, FSK-4203B

1) Hanger Drawing Numbers

FSK-4202B

H-1	Sh 117	SKM-1611, R0
H-2	Sh 4	SKM-1611, R0
	PS 2	SKM-602, R0
H-3	Sh 116	SKM-1611, R0

FSK-5203B

H-1	Sh 79	SKM-1611, R0
	PS 1	SKM-602, R0
H-2	SNUB 19	
	PS 2	SKM-602, R0
H-3	PS 1	SKM-602, R0
	DET C	SKM-1607, R0
H-4	PS 1	SKM-602, R0
	DET A	SKM-1606, R0

2) Valve Vendor Print Numbers

V-16-30	M-123A-6-7
V-16-85	M-123A-6-7
V-16-21	M-123A-6-7
V-16-22	M-123A-6-7

Line #: DCA-19D Sheet 4
Service: Recirculation system

Design Input Documents:

Piping Class/Summary Sheet: DCA/M190
Seismic Response Spectra: See FSAR
Piping Stress Isometric Drawings: FSK-4205B, FSK-4206B

1) Hanger Drawing Numbers

FSK-4205B

H-1	PS 2	SKM-602, R0
	Sh 72	SKM-1611, R0

FSK-4206B

H-1	Sh 85	SKM-1611, R0
	DET B	SKM-1609, R1
H-2	SNUB 7A	
	PS-2	SKM-602, R0
	PSA-1	
H-3	PS 2	SKM-602, R0
	DET A	SKM-1606, R0
H-4	PS 2	SKM-602, R0
	DET A	SKM-1606, R0

2) Valve Vendor Print Numbers

V-16-18	M-123A-6-7
V-16-19	M-123A-6-7
V-16-29	M-123A-6-7
V-16-25	M-123A-6-7

Line #: DCA-20
Service: Seal purge from CRD system

Design Input Documents:

Piping Class/Summary Sheet: DCA/M190
Seismic Response Spectra: See FSAR
Piping Stress Isometric Drawings: FSK-4480B

1) Hanger Drawing Numbers

	Sh 100	SKM-1611, R0
	DET B	SKM-1609, R1
	Sh 100	SKM-1611, R0
	PS 2	SKM-602, R0
H-1	PS 1	SKM-602, R0
	DET A	SKM-1606, R0
H-2		FSK-4480B
H-3	PS 2	SKM-602, R0
	DET U	SKM-1608, R0
H-4	PS 1	SKM-602, R0
	DET B	SKM-1609, R1
H-5	PS 1	SKM-602, R0
	DET A	SKM-1606, R0
H-6	PS 1	SKM-602, R0
	DET A	SKM-1606, R0
H-7	PS 1	SKM-602, R0
	DET A	SKM-1606, R0
H-8	PS 1	SKM-602, R0
	DET A	SKM-1606, R0
H-9	PS 1	SKM-602, R0
	DET A	SKM-1606, R0
H-10	PS 1	SKM-602, R0
	DET A	SKM-1606, R0
H-11	PS 1	SKM-602, R0
	DET A	SKM-2606, R0
H-12	PS 1	SKM-602, R0
	DET A	SKM-1606, R0
H-13	PS 1	SKM-602, R0
	DET A	SKM-1606, R0
H-14	PS 1	SKM-602, R0
	DET A	SKM-1606, R0
H-15	PS 1	SKM-602, R0
	DET A	SKM-1606, R0

2) Valve Vendor Print Numbers

V-17-87	M123A-6
V-17-88	M123A-6
CV-1804A	M123D-13

Line #: DCA-20 Sheet 2
Service: Seal purge from CRD system

Design Input Documents:

Piping Class/Summary Sheet: DCA/M190
Seismic Response Spectra: See FSAR
Piping Stress Isometric Drawings: FSK-4871B

1) Hanger Drawing Numbers

	Sh 97	SKM-1611, R0
	PS 2	SKM-602, R0
	Sh 98	SKM-1611, R0
	PS 2	SKM-602, R0
H-1	PS 1	SKM-602, R0
	DET A	SKM-1606, R0
H-2	PS 2	SKM-602, R0
	DET U	SKM-1608, R0
Sh 99 DET 2		FSK-4480B
H-3	PS 1	SKM-602, R0
	DET B	SKM-1609, R1
H-4	PS 1	SKM-602, R0
	DET A	SKM-1606, R0
H-5	PS 1	SKM-602, R0
	DET A	SKM-1606, R0

2) Valve Vendor Print Numbers

V-17-91	M123A-6-7
V-17-92	M123A-6-7
CV-1804B	M123D-13

Line #: DCA-503
Service: Main steam Loop A

Design Input Documents:

Piping Class/Summary Sheet: DCA/M190
Seismic Response Spectra: See FSAR
Piping Stress Isometric Drawings: FSK-5565B

1) Hanger Drawing Numbers

H-1	DET X	FSK-4471B, R2
	DET U	SKM-1608, R0
H-2	DET C	SKM-1607, R0
H-3	PS 2	SKM-602, R0
H-4	PS 2	SKM-602, R0
	DET A	SKM-1606, R0
H-5	PS 2	SKM-602, R0
	DET A	SKM-1606, R0
H-6	PS 2	SKM-602, R0
	DET B	SKM-1609, R1
H-7	PS 2	SKM-602, R0
	DET C	SKM-1607, R0
H-8	PS 2	SKM-602, R0
H-9	PS 2	SKM-602, R0
	DET A	SKM-1606, R0

2) Valve Vendor Print Numbers

V-14-20 M-123A-6-7

Line #: DCA-504
Service: Riciruclation system discharge

Design Input Documents:

Piping Class/Summary Sheet: DCA/M190
Seismic Response Spectra: See FSAR
Piping Stress Isometric Drawings: FSK-5529B, 0207884-100

1) Hanger Drawing Numbers

H-1	PS 5	SKM-602, R0
	DET A	SKM-1606, R0
H-2	PS 1	SKM-602, R0
	DET C	SKM-1607, R0
H-3	PS 5	SKM-602, R0
	DET C	SKM-1607, R0
	DET 2	FSK-5536B
H-4	PS 2	SKM-602, R0
	DET A	SKM-1606, R0
H-5	PS 1	SKM-602, R0
	DET A	SKM-1606, R0
H-6	PS 1	SKM-602, R0
	DET A	SKM-1606, R0
H-7	PS 1	SKM-602, R0
	DET A	SKM-1606, R0
H-8	PS 1	SKM-602, R0
	DET A	SKM-1606, $0
H-9	PS 1	SKM-602, R0
	DET A	SKM-1606, R0

2) Valve Vendor Print Numbers

V-16-17 M-123A-6-7

Line #: DCA-505
Service: Recirculation system riser differential pressure

Design Input Documents:

Piping Class/Summary Sheet: DCA/M190
Seismic Response Spectra: See FSAR
Piping Stress Isometric Drawings: FSK-5531B, EDS 0207884-096

1) Hanger Drawing Numbers

H-1	PS 1	SKM-602, R0
	DET C	SKM-1607, R0
H-2	PS 1	SKM-602, R0
	DET B	SKM-1609, R1
H-3	PS 1	SKM-602, R0
	DET A	SKM-1606, R0
H-4	PS 1	SKM-602, R0
	DET A	SKM-1606, R0
H-5	PS 1	SKM-602, R0
	DET A	SKM-1606, R0
H-6	PS 1	SKM-602, R0
	DET A	1606, R0
H-7	PS 2	SKM-602, R0
	DET A	SKM-1606, R0
H-8	PS 1	SKM-602, R0
	DET C	SKm-1607, R0
	DET 3	FSK-5529B
H-9	PS 5	SKM-602, R0
	DET A	SKM-1606, R0

2) Valve Vendor Print Numbers

V-16-73 M-123A-6-7

Line #: DCA-506
Service: Recirculation system riser differntial pressure

Design Input Documents:

Piping Class/Summary Sheet: DCA/M190
Seismic Response Spectra: See FSAR
Piping Stress Isometric Drawings: FSK-5530B

1) Hanger Drawing Numbers

H-1	PS 5	SKM-602, R0
	DET C	SKM-1607, R0
	DET 2	FSK-5533B
H-2	PS 5	SKM-602, R0
	DET B	SKM-1609, R1
H-3	PS 4	SKM-602, R0
	DET A	SKM-1606, R0
H-4	PS 4	SKM-602, R0
	DET A	SKM-1606, R0
H-5	PS 2	SKM-602, R0
	DET C	SKM-1607, R0
	DET 1	FSK-5533B
H-6	PS 2	SKM-602, R0
	DET B	SKM-1609, R1
H-7	PS 1	SKM-602, R0
	DET A	SKM-1606, R0
H-8	PS 2	SKM-602, R0
	DET A	SKM-1606, R0
H-9	PS 1	SKM-602, R0
	DET A	SKM-1606, R0
H-10	PS 2	SKM-602, R0
	DET A	SKM-1606, R0
H-11	PS 2	SKM-602, R0
	DET A	SKM-1606, R0
H-12	PS 1	SKM-602, R0
	DET A	SKM-1606, R0
H-13	PS 1	SKM-602, R0
	DET A	SKM-1606, R0
H-14	PS 1	SKM-602, R0
	DET A	SKM-1606, R0
H-15	PS 5	SKM-602, R0
	DET A	SKM-1606, R0
Sh 54		SKM-1611, R0

2) Valve Vendor Print Numbers

None

Line #: DCA-507
Service: Recirculation system riser differential pressure

Design Input Documents:

Piping Class/Summary Sheet: DCA/M190
Seismic Response Spectra: See FSAR
Piping Stress Isometric Drawings: FSK-4432B, 0207884-097

1) Hanger Drawing Numbers

H-1	PS 2	SKM-602, R0
	DET C	SKM-1607, R0
	DET 1	FSK-5533B, R2
H-2	PS 2	SKM-602, R0
	DET B	SKM-1609, R1
H-3	PS 2	SKM_602, R0
	DET A	SKM-1606, R0
H-4	PS 1	SKM-602, R0
	DET A	SKM-1606, R0
H-5	PS 1	SKM-602, R0
	DET A	SKM-1606, R0
H-6	PS 1	SKM-602, R0
	DET A	SKM-1606, R0
H-7	PS 2	SKM-602, R0
	DET B	SKM-1609, R1
H-8	PS 2	SKM-602, R0
	DET C	SKM-1607, R0
	DET 1	FSK-5533B
H-9	PS 5	SKM-602, R0
	DET A	SKM-1606, R0
H-10	PS 4	SKM-602, R0
	DET A	SKM-1606, R0
H-11	PS 4	SKM-602, R0
	DET A	SKM-1606, R0
H-12	PS 5	SKM-602, R0
	DET B	SKM-1609, R1
H-13	PS 5	SKM-602, R0
	DET C	SKM-1607, R0
	DET 2	FSK-5533B

2) Valve Vendor Print Numbers

V-16-74 M-123A-6-7

Line #: DCA-508
Service: Instrument piping from drywell water level temperature Column B

Design Input Documents:

Piping Class/Summary Sheet: DCA/M190
Seismic Response Spectra: See FSAR
Piping Stress Isometric Drawings: FSK-5627B, FSK-5663

1) Hanger Drawing Numbers

FSK-5627B

H-1	PS 1	SKM-602, R0
	DET C	SKM-1607, R0
H-2	PS 1	SKM-602, R0
	DET B	SKM-1609, R1
H-3	PS 1	SKM-602, R0
	DET A	SKM-1606, R0
H-4	PS 1	SKM-602, R0
	DET A	SKM-1606, R0
H-5	PS 1	SKM-602, R0
	DET A	SKM-1606, R0
H-6	PS 1	SKM-602, R0
	DET A	SKM-1606, R0

FSK-5663B

H-1	PS 5	SKM-602, R0
	DET A	SKM-1606, R0
H-2	PS 5	SKM-602, R0
	DET A	SKM-1606, R0
H-3	PS 2	SKM-602, R0
	DET A	SKM-1606, R0
H-4	PS 2	SKM-602, R0
	DET A	SKM-1606, R0
H-5	PS 2	SKM-602, R0
	DET A	SKM-1606, R0
H-6	PS 2	SKM-602, R0
	DET A	SKM-1606, R0
H-7	PS 2	SKM-602, R0
	DET A	SKM-1606, R0

2) Valve Vendor Print Numbers

None

Line #: DCA-508 Sheet 2
Service: Instrument piping from drywell water level temperature Column B

Design Input Documents:

Piping Class/Summary Sheet: DCA/M190
Seismic Response Spectra: See FSAR
Piping Stress Isometric Drawings: FSK-5533B, FSK-5556B

1) Hanger Drawing Numbers

FSK-5533B

H-1	PS 1	SKM-602, R0
	DET C	SKM-1607, R0
H-2	PS 1	SKM-602, R0
	DET B	SKM-1609, R1
H-3	PS 2	SKM-602, R0
	DET C	SKM-1607, R0
H-4	PS 5	SKM-602, R0
	DET A	SKM-1606, R0
H-5	PS 4	SKM-602, R0
	DET A	SKM-1606, R0
H-6	PS 4	SKM-602, R0
	DET A	SKM-1606, R0
H-7	PS 5	SKM-602, R0
	DET B	SKM-1609, R1
H-8	PS 5	SKM-602, R0
	DET C	SKM-1607, R0

FSK-5556B

Sh 55		SKM-1611, R0
Sh 8		SKM-1611, R0
	PS 2	SKM-602, R0
H-1	PS 2	SKM-602, R0
	DET C	SKM-1607, R0
H-2	SNUB 2	
PSA-1		
H-3	SNUB 3	
PSA-1		
Sh 44		SKM-1611, R0
	PS 1	SKM-602, R0

2) Valve Vendor Print Numbers

V-16-70 M-123A-6-7

Line #: DCA-508 Sheet 3
Service: Instrument piping from drywell water level temperature Column B

Design Input Documents:

Piping Class/Summary Sheet: DCA/M190
Seismic Response Spectra: See FSAR
Piping Stress Isometric Drawings: FSK-5563B

1) Hanger Drawing Numbers

H-1	PS 2	SKM-602, R0
	DET A	SKM-1606, R0
H-2	PS 2	SKM-602, R0
	DET A	SKM-1606, R0
H-3	PS 4	SKM-602, R0
	DET B	SKM-1609, R1
H-4	PS 1	SKM-602, R0
	DET A	SKM-1606, R0
H-5	PS 1	SKM-602, R0
	DET A	SKM-1606, R0
H-6	PS 1	SKM-602, R0
	DET A	SKM-1606, R0
H-7	PS 1	SKM-602, R0
	DET B	SKM-1609, R1
H-8	PS 1	SKM-602, R0
	DET A	SKM-1606, R0
H-9	PS 1	SKM-602,R0
	DET A	SKM-1606, R0
H-10	PS 2	SKM-602, R0
	DET A	SKM-1606, R0
H-11	PS 1	SKM-602, R0
	DET C	SKM-1607, R0
	DET 3	FSK-5564B
SH 22		SKM-1611, R1

2) Valve Vendor Print Numbers

V-15-25 M123A-6-7

Line #: DCA-509
Service: Main steam A piping

Design Input Documents:

Piping Class/Summary Sheet: DCA/M190
Seismic Response Spectra: See FSAR
Piping Stress Isometric Drawings: FSK-5566B, EDS 0267884-023

1) Hanger Drawing Numbers

H-1	DEX X	FSK-5571B, R2
	DET U	SKM-1608, R0
H-7	PS 6	SKM-602, R0
	DET A	SKM-1606, R0
H-2	PS 2	SKM-602, R0
	DET 6	FSK-5565B, R6
H-3	PS 2	SKM-602, R0
	DET A	SKM-1606, R0
H-4	PS 2	SKM-602, R0
	DET A	SKM-1606, R0
H-5	PS 5	SKM-602, R0
	DET B	SKM-1609, R1
H-6	PS 2	SKM-602, R0
	DET C	SKM-1607, R0
	DET 7	FSK-5565B, R3

2) Valve Vendor Print Numbers

V-14-17 M-123A-6-7

Line #: DCA 510
Service: Main steam D piping

Design Input Documents:

Piping Class/Summary Sheet: DCA/M190
Seismic Response Spectra: See FSAR
Piping Stress Isometric Drawings: FSK-5579

1) Hanger Drawing Numbers

H-1	DET X	FSK-5571B, R2
	DET U	SKM-1608, R0
H-7	PS 6	SKM-602, R0
	DET A	SKM-1606, R0
H-2	PS 2	SKM-602, R0
	DET A	SKM-1606, R0
H-3	PS 2	SKM-602, R0
	DET A	SKM-1606, R0
H-4	SNUB 5	
	PSA-1	FSK-5575B, R6
H-5	PS 2	SKM-602, R0
	DET C	SKM-1607, R0
	DET 5	FSK-5575B, R6
H-6	PS 2	SKM-602, R0
	DET B	SKM-1609, R1

2) Valve Vendor Print Numbers

V-14-12 M-123A-6-7

Line #: DCA 511
Service: Main steam D piping

Design Input Documents:

Piping Class/Summary Sheet: DCA/M190
Seismic Response Spectra: See FSAR
Piping Stress Isometric Drawings: FSK-5578

1) Hanger Drawing Numbers

H-1	DET X	FSK-5571, R2
	DET U	SKM-1608, R0
H-2	PS 2	SKM-602, R0
	DET A	SKM-1606, R0
H-3	PS 2	SKM-602, R0
	DET A	SKM-1606, R0
H-4	PS 2	SKM-602, R0
	DET A	SKM1606, R0
H-5	PS 2	SKM-602, R0
	DET A	SKM-1606, R0
H-6	PS 2	SKM-602, R0
	DET A	SKM-1606, R0
H-7	PS 2	SKM-602, R0
	DET A	SKM-1606, R0

2) Valve Vendor Print Numbers

V-14-13 M-123A-6-7

Line #: DCA 512
Service: Recirculation loop B seal cavity upper 1P-201B

Design Input Documents:

Piping Class/Summary Sheet: DCA/M190
Seismic Response Spectra: See FSAR
Piping Stress Isometric Drawings: FSK-5548B

1) Hanger Drawing Numbers

H-1	PS 1	SKM-602, R0
	DET B	SKM-1609, R1
SH-16		SKM-1611, R0
	SNUB 5A	
	SNUB 6A	
H-2	PS 2	SKM-602, R0
	DET A	SKM-1606, R0

2) Valve Vendor Print Numbers

None

Line #: DCA 513
Service: Recirculation loop A seal cavity lower 1P201A

Design Input Documents:

Piping Class/Summary Sheet: DCA/M190
Seismic Response Spectra: See FSAR
Piping Stress Isometric Drawings: FSK-5539B

1) Hanger Drawing Numbers

H-1	PS 2	SKM-602, R0
	DET C	SKM-1607, R0
Sh 133		FSK-5539B
SH 132		FSK-5539B
H-2	PS 2	SKM-602, R0
	DET u	SKM-1608, R0
Sh 15		FSK-5540B, R5
H-3	PS 1	SKM 602, R0
	DET B	SKM-1609, R1

2) Valve Vendor Print Numbers

V-16-70	M-123A-6-7
V-16-51	M-123A-6-7
V-16-58	M-123A-6-7

Line #: DCA-514
Service: Reactor water level

Design Input Documents:

Piping Class/Summary Sheet: DCA/M190
Seismic Response Spectra: See FSAR
Piping Stress Isometric Drawings: FSK-5564B

1) Hanger Drawing Numbers

Sh 37		FSK-5564B, R5
Sh 38		FSK-5564B, R5
H-9	PS 2	SKM-602, R0
	DET A	SKM-1606, R0
H-8	PS 1	SKM-602, R0
	DET A	SKM-1606, R0
H-7	PS 1	SKM-602, R0
	DET B	SKM-1606, R1
H-6	PS 1	SKM-602, R0
	DET A	SKM-1606, R0
H-5	PS 1	SKM-602, R0
	DET A	SKM-1606, R0
H-4	PS 4	SKM-602, R0
	DET A	SKM-1606, R0
H-3	PS 4	SKM-602, R0
	DET C	SKM-1607, R0
	DET 1	FSK-5561B, R6
H-2	PS 2	SKM-602, R0
	DET A	SKM-1606, R0
H-1	PS 2	SKM-602, R0
	DET A	SKM-1606, R0

2) Valve Vendor Print Numbers

None

Line #: DCA-515
Service: Temperature equivalent column B

Design Input Documents:

Piping Class/Summary Sheet: DCA/M190
Seismic Response Spectra: See FSAR
Piping Stress Isometric Drawings: FSK-5561B, FSK-5556B

1) Hanger Drawing Numbers

FSK-5561B

H-1	PS 2	SKM-602, R0
	DET A	SKM-1606, R0
H-2	PS 2	SKM-602, R0
	DET A	SKM-1606, R0
H-3	PS 2	SKM-602, R0
	DET B	SKM-1609, R1
H-4	PS 4	SKM-602, R0
	DET A	SKM-1606, R0
H-5	PS 1	SKM-602, R0
	DET A	SKM-1606, R0
H-6	PS 1	SKM-602, R0
	DET B	SKM-1609, R1
H-8	PS 2	SKM-602, R0
	DET C	SKM-1607, R0
H-7	DET C	FSK-5561B
Sh 20		SKM-1611, R0
Sh 57		SKM-1611, R0

FSK-5556B

Sh 55		SKM-1611, R0
Sh 8		SKM-1611, R0
H-1	PS 2	SKM-602, R0
	DET C	SKM-1607, R0
H-2	SNUB 2	
	PSA-1	
H-3	SNUB 3	
	PSA-1	
Sh 44		SKM-1611, R0

2) Valve Vendor Print Numbers

V-15-21 M-123A-6-7

Line #: DCA-516
Service: Reactor water temperature column B

Design Input Documents:

Piping Class/Summary Sheet: DCA/M190
Seismic Response Spectra: See FSAR
Piping Stress Isometric Drawings: FSK-5556B, FSK-5662B, FSK-5562B

1) Hanger Drawing Numbers

FSK-5556B

Sh 55		SKM-1611, R0
Sh 8		SKM-1611,, R0
H-1	PS 2	SKM-602, R0
	DET C	SKM-1607, R0
H-2	SNUB 2	SKM-602, R0
	PSA-1	
H-3	SNUB 3	SKM-602, R0
	PSA-1	
Sh 44		SKM-1611, R0
	PS 1	SKM-602, R0

FSK-5662B

H-1	PS 5	SKM-602, R0
	DET A	SKM-1606, R0
H-2	PS 5	SKM-602, R0
	DET A	SKM-1606, R0
H-3	PS 2	SKM-602, R0
	DET A	SKM-1606, R0
H-4	PS 2	SKM-602, R0
	DET A	SKM-1606, R0
H-5	PS 2	SKM-602, R0
	DET A	SKM-1606, R0
H-6	PS 2	SKM-602, R0
	DET A	SKM-1606, R0

FSK-5562

H-1	PS 2	SKM-602, R0
	DET A	SKM-1606, R0
H-2	PS 2	SKM-602, R0
	DET A	SKM-1606, R0
H-3	PS 4	SKM-602, R0
	DET A	SKM-1606, R0
	DET 1	FSK-5661B
H-4	PS 4	SKM-602, R0
	DET A	SKM-1606, R0
H-5	PS 4	SKM-602, R0
	DET A	SKM-1606, R0
H-6	PS 1	SKM-602, R0
	DET B	SKM-1609, R1
H-7	PS 1	SKM, 602, R0
	DET C	SKM-1607, R0
	DET 1	FSK-5561B
H-8	PS 2	SKM-602, R0
	DET A	SKM-1606, R0
Sh 20		SKM-1611, R0
Sh 56		SKM-1611, R0

2) Valve Vendor Print Numbers

V-15-22 M-123A-6-7

Line #: DCA-519C
Service: Recirculation loop A

Design Input Documents:

Piping Class/Summary Sheet: DCA/M190
Seismic Response Spectra: See FSAR
Piping Stress Isometric Drawings: FSK-5541B

1) Hanger Drawing Numbers

H-1	PS 2	SKM-602, R0
	DET C	SKM-1607, R0
	DET 1	FSK-5541B
H-2	PS 1	SKM-602, R0
	DET A	SKM-1606, R0
H-3	PS 1	SKM-602, R0
	DET B	SKM-1609, R1
H-4	PS 2	SKM-602, R0
	DET C	SKM-1607, R0

2) Valve Vendor Print Numbers

V-16-4 M-123A-6-7

Line #: DCA-519D
Service: Recirculation loop A

Design Input Documents:

Piping Class/Summary Sheet: DCA/M190
Seismic Response Spectra: See FSAR
Piping Stress Isometric Drawings: FSK-5542B

1) Hanger Drawing Numbers

	DET 1	FSK-5541B
H-1	PS 2	SKM-602, R0
	DET C	SKM-1607, R0
H-2	PS 1	SKM-602, R0
	DET A	SKM-1606, R0
H-3	PS 1	SKM-602, R0
	DET B	SKM-1609, R1
H-4	PS 2	SKM-602, R0
	DET C	SKM-1607, R0
	DET 1	FSK-5541B

2) Valve Vendor Print Numbers

V-16-17 M-123A-6-7

Line #: DCA-520
Service: Recirculation loop A 1P-21-A

Design Input Documents:

Piping Class/Summary Sheet: DCA/M190
Seismic Response Spectra: See FSAR
Piping Stress Isometric Drawings: FSK-5537B

1) Hanger Drawing Numbers

H-1	PS 2	SKM-602, R0
	DET A	SKM-1606, R0
H-2	PS 2	SKM-602, R0
	DET A	SKM-1606, R0
H-3	PS 2	SKM-602, R0
	DET A	SKM-1606, R0

2) Valve Vendor Print Numbers

V-16-60 M-123A-6-7

Line #: DCA-521
Service: Recirculation loop A 1P-210A

Design Input Documents:

Piping Class/Summary Sheet: DCA/M190
Seismic Response Spectra: See FSAR
Piping Stress Isometric Drawings: FSK-5538B

1) Hanger Drawing Numbers

J=1	PS 2	SKM-602, R0
	DET C	SKM-1607, R0
	DET 1	FSK-5546B
H-2	PS 2	SKM-602, R0
	DET A	SKM-1606, R0
Sh 13		SKM-1611, R0
Sh 60		SKM-1611, R0

2) Valve Vendor Print Numbers

V-16-59 M-123A-6-7

Line #: DCA-522
Service: Recirculation loop B

Design Input Documents:

Piping Class/Summary Sheet: DCA/M190
Seismic Response Spectra: See FSAR
Piping Stress Isometric Drawings: FSK-5554B

1) Hanger Drawing Numbers

H-1	PS 6	SKM-602, R0
	DET A	SKM-1606, R0
H-2	PS 2	SKM-602, R0
	DET C	SKM-1607, R0
	DET 1	FSK-5553B
Sh 48	DET 2	FSK-5553B
H-3	PS 5	SKM-602, R0
	DET A	SKM-1606, R0

2) Valve Vendor Print Numbers

V-16-81 M-123A-6-7

Line #: DCA-553
Service: Reactor water level

Design Input Documents:

Piping Class/Summary Sheet: DCA/M190
Seismic Response Spectra: See FSAR
Piping Stress Isometric Drawings: EDS 027884-087

1) Hanger Drawing Numbers

SNUB 4		
	PSA-1	
SH 58		SKM-1611, R0
H-1	PS 1	SKM-602, R0
	DET A	SKM-1606, R0
H-2	PS 1	SKM-602, R0
	DET A	SKM-1606, R0
H-3	PS 1	SKM-602, R0
	DET 2	FSK-5560B, R6
Sh 9		SKM-1611, R0
		FSK-5558B, R2
	PS 2	SKM-602, R0

2) Valve Vendor Print Numbers

None

Line #: DCA-534
Service: Temperature equalizing column A

Design Input Documents:

Piping Class/Summary Sheet: DCA/M190
Seismic Response Spectra: See FSAR
Piping Stress Isometric Drawings: FSK-5555, FSK-5559B

1) Hanger Drawing Numbers

FSK-5555B

H-2	PS 2	SKM-602, R0
	DET C	SKM-1607, R0
	DET 2	FSK-5556B
H-1	Sh 7	SKM-1611, R0
	PS 2	SKM-602, R0
H-3	DET 3	FSK-5555B

FSK-5559B

Sh 9		SKM-1611, R0
	PS 2	SKM-602, R0
H-1	PS 1	SKM-602, R0
	DET 2	FSK-5560
H-2	PS 1	SKM-602, R0
	DET A	SKM-1606, R0
H-3	PS 1	SKM-602, R0
	DET A	SKM-1606,R0
H-4	PS 1	SKM-602, R0
	DET A	SKM-1606, R0
H-5	PS 1	SKM-602, R0
	DET A	SKM-1606, R0
Sh 89		SKM-1611, R0

2) Valve Vendor Print Numbers

None

Line #: DCA-535
Service: Temperature Equalizing column A

Design Input Documents:

Piping Class/Summary Sheet: DCA/M190
Seismic Response Spectra: See FSAR
Piping Stress Isometric Drawings: FSK-5555B, FSk-5558B, FSK-5657B

1) Hanger Drawing Numbers

FSK-5555B

H-1	PS 2	SKM-602, R0
	DET C	SKM-1607, R0
	DET 2	FSK-5556B
H-2	SH 7	SKM-1611, R0
	PS 2	SKM-602, R0
H-3	DET 3	FSK-5555B

FSK-5558B

Sh 9		SKM-1611, R0
	PS 2	SKM-602, R0
H-1	PS 2	SKM-602, R0
	DET C	SKM-1607, R0
H-2	PS 2	SKM-602, R0
	DET A	SKM-1606, R0

FSK-5657B*

H-1	PS 2	SKM-602, R0
	DET B	SKM-1609, R1
H-2	PS 2	SKM-602, R0
	DET A	SKM-1606, R0
H-3	PS 1	SKM-602, R0
	DET A	SKM-1606, R0
	DET 1	FSK-5656B
H-4	PS 1	SKM-602, R0
H-5	PS 1	SKM-602, R0
	DET A	SKM-1606, R0
H-6	PS 1	SKM-602, R0
	DET A	SKM-1606, R0
H-7	PS 2	SKM-602, R0
	DET A	SKM-1606, R0

2) Valve Vendor Print Numbers

*V-15-03 M-123A-6-7

Line #: DCA-536
Service: Instrument piping from X-14 to 1C-56

Design Input Documents:

Piping Class/Summary Sheet: DCA/M190
Seismic Response Spectra: See FSAR
Piping Stress Isometric Drawings: FSK-5656B

1) Hanger Drawing Numbers

H-1	PS 2	SKM-602, R0
	DET A	SKM-1606, R0
H-2	PS 2	SKM-602, R0
	DET B	SKM-1609, R1
H-3	PS 2	SKM-602, R0
	DET A	SKM-1606, R0
H-4	DET !	FSK-5656B, R2
	PS 1	SKM-602, R0
	DET A	SKM-1606, R0
H-5	PS 1	SKM-602, R0
	DET A	SKM-1606, R0
H-6	PS 1	SKM-602, R0
	DET A	SKM-1606, R0
H-7	DET 2	FSK-5657
	PS 1	SKM-602, R0

2) Valve Vendor Print Numbers

None

Line #: DCA-536 Sheet 2
Service: Temperature equalizing column A reference leg piping

Design Input Documents:

Piping Class/Summary Sheet: DCA/M190
Seismic Response Spectra: See FSAR
Piping Stress Isometric Drawings: FSK-5557B

1) Hanger Drawing Numbers

Sh 9		FSK-1063
	PS 2	SKM-602, R0
H-1	DET 1	FSk-5558B
	PS 2	SKM-602, R0
Sh 88		SKM-1611, R0
H-2	PS 1	SKM-602, R0
	DET A	SKM-1606, R0

2) Valve Vendor Print Numbers

V-15-02 M-123A-6-7

Line #: DCA-536
Service: Temperature equalizing column A

Design Input Documents:

Piping Class/Summary Sheet: DCA/M190
Seismic Response Spectra: See FSAR
Piping Stress Isometric Drawings: FSK-5555B

1) Hanger Drawing Numbers

H-1	PS 2	SKM-602, R0
H-2	SET 2	FSK-5556B
	DET C	SKM-1607, R0
	PS 2	SKM-602, R0
H-3	DET 3	FSK-5555B

2) Valve Vendor Print Numbers

None

Line #: DCA-537
Service: Recirculation system riser differential pressurizer N2G

Design Input Documents:

Piping Class/Summary Sheet: DCA/M190
Seismic Response Spectra: See FSAR
Piping Stress Isometric Drawings: FSK-5535B

1) Hanger Drawing Numbers

H-1	DET 2	FSK-5533B
	DET C	SKM-1607, R0
	PS 5	SKM-602, R0
H-2	DET B	SKM-1609, R1
	PS 5	SKM-602, R0
H-3	PS 4	SKM-602, R0
	DET A	SKM-1606, R0
H-4	PS 4	SKM-602, R0
	DET A	SKM-1606, R0
H-5	PS 5	SKM-602, R0
	DET A	SKM 1606, R0
H-6	DET 1	FSK-5533B
	DET C	SKM-1607, R0
	PS 2	SKM-602, R0
H-7	PS 2	SKM-602, R0
	DET S	SKM-1606, R0
H-8	PS 2	SKM-602, R0
	DET A	SKM-1606, R0
H-9	PS 2	SKM-602, R0
	DET A	SKM-1606, R0
H-10	PS 1	SKM-602, R0
	DET A	SKM-1606, R0

2) Valve Vendor Print Numbers

V-16-68 M-123A-6-7

Line #: DCA-538
Service: Recirculation system riser differential pressurizer N2F

Design Input Documents:

Piping Class/Summary Sheet: DCA/M190
Seismic Response Spectra: See FSAR
Piping Stress Isometric Drawings: FSK-5534

1) Hanger Drawing Numbers

H-1	PS 5	SKM-602, R0
	DET A	SKM-1606, R0
H-2	PS 2	SKM-602, R0
	DET A	SKM-1606, R0
H-3	DET 2	FSK-5536B
	DEC C	SKM-1607, R0
	PS 2	SKM-602, R0
H-4	PS 2	SKM-602, R0
	DET A	SKM-1602, R0
H-5	PS 1	SKM-602, R0
	DET A	SKM-1606, R0
H-6	PS 1	SKM-602, R0
	DET A	SKM-1606, R0
H-7	PS 2	SKM-602, R0
	DET B	SKM-1609, R1
H-8	DET 1	FSK-5536B
	PS 1	SKM-602, R0
	DEC C	SKM-1607, R0
H-9	PS 2	SKM-602, R0
	DET A	SKM-1606, R0
H-10	PS 1	SKM-602, R0
	DET A	SKM-1606, R0
H-11	PS 1	SKM-602, R0
	DET A	SKM-1606, R0
H-12	PS 1	SKM-602, R0
	DET A	SKM-1606, R0
H-13	PS 1	SKM-602, R0
	DET A	SKM-1606, R0
H-14	PS 1	SKM-602, R0
	DET 3	SKM-1609, R1
H-15	DET 5	FSK-5534B
	DET C	SKM-1607, R0
	PS 1	SKM-602, R0

2) Valve Vendor Print Numbers

None

Line #: DCA-539
Service: Recirculation system riser differential pressure N2H

Design Input Documents:

Piping Class/Summary Sheet: DCA/M190
Seismic Response Spectra: See FSAR
Piping Stress Isometric Drawings: FSK-5536B

1) Hanger Drawing Numbers

H-1	PS 5	SKM-602, R0
	DET A	SKM-1606, R0
H-2	PS 2	SKM-602, R0
	DET A	SKM-1606, R0
H-3	DET 2	FSK-5536B
	DET 2	SKM-602, R0
	DEC C	SKM-1607, R0
H-4	PS 2	SKM-602, R0
	DET A	SKM-1606, R0
H-5	PS 1	SKM-602, R0
	DET A	SKM-1606, R0
H-6	PS 4	SKM-602, R0
	DET A	SKM-1606, R0
H-7	PS 2	SKM-602, R0
	DET B	SKM-1609, R1
H-8	DET 1	FSK-5536B
	PS 1	SKM-602, R0
	DET C	SKM-1607, R0
H-9	PS 1	SKM-602, R0
	DET B	SKM-1609, R1
H-10	PS 1	SKM-602, R0
	DET A	SKM-1606, R0
H-11	PS 1	SKM-602, R0
	DET A	SKM-1606, R0

2) Valve Vendor Print Numbers

V-16-67 M-123A-6-7

Line #: DCA-540
Service: Main steam A piping X-102 (low pressure)

Design Input Documents:

Piping Class/Summary Sheet: DCA/M190
Seismic Response Spectra: See FSAR
Piping Stress Isometric Drawings: FSK-5567B

1) Hanger Drawing Numbers

H-1	DET X	FSK-5571B
	DET U	SKM-1608, R0
H-2	SNUB 4A	
	PS 1	FSK-5567B, R6
H-3	DET C	SKM-1607, R0
	PS 6	SKM-602, R0
H-4	PS 2	SKM-602, R0
	DET A	SKM-1606, R0
H-5	PS 1	SKM-602, R0
	DET A	SKM-1606, R0
H-6	SNUB 3A	
	PS 1	FSK-5567B, R6
H-7	PS 1	SKM-602, R0
	DET A	SKM-1606, R0
H-8	PS 1	SKM-602, R0
	DET A	SKM-1606, R0
H-9	PS 2	SKM-602, R0
	DET A	SKM-1606, R0
		FSK-1063

2) Valve Vendor Print Numbers

V-14-18 M-123A-6-7

Line #: DCA-541
Service: Main steam A piping X-102 (high pressure)

Design Input Documents:

Piping Class/Summary Sheet: DCA/M190
Seismic Response Spectra: See FSAR
Piping Stress Isometric Drawings: FSK-5568B

1) Hanger Drawing Numbers

H-1	DET Z	FSK-5571B, R2
	DET U	SKM-1608, R0
H-2	SNUB 2A	
	PSA-1	FSK-5568B, R5
H-3	DET C	SKM-1607, R0
	PS 6	SKM-602, R0
H-4	PS 2	SKM-602, R0
	DET Z	SKM-1606, R0
H-5	PS 1	SKM-602, R0
	DET A	SKM-1606, R0
H-6	SNUB 1A	FSK-5568B, R5
H-7	PS 1	SKM-602, R0
	DET A	SKM-1606, R0
H-8	PS 1	SKM-602, R0
	DET A	SKM-1606, R0
H-9	PS 2	SKM-602, R0
	DET A	SKM-1606, R0
		FSK-1063

2) Valve Vendor Print Numbers

V-15-19 M-123A-6-7

Line #: DCA-542
Service: Main steam B piping X-102C (low pressure)

Design Input Documents:

Piping Class/Summary Sheet: DCA/M190
Seismic Response Spectra: See FSAR
Piping Stress Isometric Drawings: FSK-5571B

1) Hanger Drawing Numbers

H-1	DET X	FSK-5571B, R2
H-2	PS 2	SKM-602, R0
	DET A	SKM-1606, R0
H-3	PS 2	SKM-602, R0
	DET A	SKM-1606, R0
H-4	PS 2	SKM-602, R0
	DET A	SKM-1606, R0
H-5	PS 2	SKM-602, R0
	DET A	SKM-1606, R0
H-6	PS 2	SKM-602, R0
	DET A	SKM-1606, R0
H-7	PS 2	SKM-602, R0
	DET A	SKM-1606, R0
		FSK-1063

2) Valve Vendor Print Numbers

V-14-25 M-123A-6-7

Line #: DCA-543
Service: Main steam line B X-34E (high pressure)

Design Input Documents:

Piping Class/Summary Sheet: DCA/M190
Seismic Response Spectra: See FSAR
Piping Stress Isometric Drawings: 0207884-009, Rev A

1) Hanger Drawing Numbers

H-1	DET 3	FSK-5569B
	DET C	SKM-1607, R0
	PS 2	SKM-602, R0
H-2	DET 4	FSK-5569B
	DET C	SKM-1607, R0
	PS 2	SKM-602, R0
H-3	PS 2	SKM-602, R0
	DET A	SKM-1606, R0
H-4	PS 2	SKM 602, R0
	DET A	SKM-1606, R0
		FSK-1063

2) Valve Vendor Print Numbers

V-14-26 M-123A-6-7

Line #: DCA-545
Service: Main steam B piping X-102 (high pressure)

Design Input Documents:

Piping Class/Summary Sheet: DCA/M190
Seismic Response Spectra: See FSAR
Piping Stress Isometric Drawings: FSK-5572B

1) Hanger Drawing Numbers

(Special)

	DET C	FSK-5571B
H-1	PS 2	SKM-602, R0
	DET A	SKM-1606, R0
H-2	PS 2	SKM-602, R0
	DET A	SKM-1606, R0
H-3	PS 2	SKM-602, R0
	DET A	SKM-1606, R0
H-4	PS 2	SKM-602, R0
	DET A	SKM-1606, R0
H-5	PS 2	SKM-602, R0
	DET A	SKM-1606, R0
H-6	PS 2	SKM-606, R0
	DET A	SKM-1606, R0
		FSK-1063

2) Valve Vendor Print Numbers

V-14-28 M-123A-6-7

Line #: DCA-546
Service: Main steam C piping X-30 (low pressure)

Design Input Documents:

Piping Class/Summary Sheet: DCA/M190
Seismic Response Spectra: See FSAR
Piping Stress Isometric Drawings: FSK-5576B

1) Hanger Drawing Numbers

H-1	DET 4	FSK-5575B
H-2	DET A	SKM-1606, R0
	PS 6	SKM-602, R0
H-3	PS 2	SKM-602, R0
	DET A	SKM-1606, R0
H-4	PS 2	SKM-602, R0
	DET A	SKM-1606, R0
H-5	DET 5	FSK-5575B
	DET C	SKM-1607, R0
	PS 2	SKM-602, R0
H-6	PS 2	SKM-602, R0
	DET A	SKM-1606, R0

2) Valve Vendor Print Numbers

V-14-22 M-123A-6-7

Line #: DCA-547
Service: Main steam C piping

Design Input Documents:

Piping Class/Summary Sheet: DCA/M190
Seismic Response Spectra: See FSAR
Piping Stress Isometric Drawings: FSK-5573B

1) Hanger Drawing Numbers

	DET Y	FSK-5575B
H-1	PS 2	SKM-602, R0
	DET A	SKM-1606, R0
H-2	PS 2	SKM-602, R0
	DET A	SKM-1606, R0
H-3	PS 2	SKM-602, R0
	DET A	SKM-1606, R0
H-4	PS 2	SKM-602, R0
	DET A	SKM-1606, R0
H-5	PS 2	SKM-602, R0
	DET A	SKM-1606, R0
H-6	PS 2	SKM-602, R0
	DET A	SKM-1606, R0
H-7	PS 2	SKM-602, R0
	DET A	SKM-1606, R0
H-8	PS 2	SKM-602, R0
	DET A	SKM-1606, R0

2) Valve Vendor Print Numbers

V-14-24 M-123A-6-7

Line #: DCA-548
Service: Main steam C piping X-34B (low pressure)

Design Input Documents:

Piping Class/Summary Sheet: DCA/M190
Seismic Response Spectra: See FSAR
Piping Stress Isometric Drawings: FSK-5574B

1) Hanger Drawing Numbers

Special		
	DET Y	FSK-5575
H-1	PS 2	SKM-602, R0
	DET A	SKM-1606, R0
H-2	PS 2	SKM-602, R0
	DET A	SKM-1606, R0
H-3	PS 2	SKM-602, R0
	DET A	SKM-1606, R0
H-4	PS 2	SKM-602, R0
	DET A	SKM-1606, R0
H-5	PS 2	SKM-602, R0
	DET A	SKM-1606, R0
H-6	PS 2	SKM-602, R0
	DET A	SKM-1606, R0
H-7	PS 2	SKM-602, R0
	DET A	SKM-1606, R0
H-8	PS 2	SKM-602, R0
	DET A	SKM-1606, R0

2) Valve Vendor Print Numbers

V-14-21 M-123A-6-7

Line #: DCA-549
Service: Main steam C piping X-30 (high pressure)

Design Input Documents:

Piping Class/Summary Sheet: DCA/M190
Seismic Response Spectra: See FSAR
Piping Stress Isometric Drawings: FSK-5575B
EDS ISO-0217884-013, R0

1) Hanger Drawing Numbers

H-1	DET Y	DSK-5575B
H-2	PS 2	SKM-602, R0
	DET A	SKM-1606, R0
H-3	PS 2	SKM-602, R0
	DET A	SKM-1606, R0
H-4	DET 5	FSK-5575B
	DET C	SKM-1607, R0
	PS 2	SKM-602, R0
H-5	PS 2	SKM-602, R0
	DET B	SKM-1609, R1

2) Valve Vendor Print Numbers

V-14-23 M-123A-6-7

Line #: DCA-550
Service: Main steam D piping X-30D (low pressure)

Design Input Documents:

Piping Class/Summary Sheet: DCA/M190
Seismic Response Spectra: See FSAR
Piping Stress Isometric Drawings: FSK-5580B

1) Hanger Drawing Numbers

H-1	DET A	SKM-1606, R0
	PS 6	SKM-602, R0
H-2	DET A	SKM-1606, R0
	PS 2	SKM-602, R0
H-3	DET A	SKM-1606, R0
	PS 2	SKM-602, R0
H-4	SNUB-6	
	PSA-1	
H-5	DET 5	FSK-5575B
	DET C	SKM-1607, R0
	PS 2	SKM-602, R0
H-6	DET A	SKM-1606, R0
	PS 2	SKM-602, R0

2) Valve Vendor Print Numbers

V-14-11 M-123A-6-7

Line #: DCA-551
Service: Main steam D piping

Design Input Documents:

Piping Class/Summary Sheet: DCA/M190
Seismic Response Spectra: See FSAR
Piping Stress Isometric Drawings: FSK-5577B
0207884-015RB

1) Hanger Drawing Numbers

H-1	DET X	FSK-5571B
H-2	PS 6	SKM-602, R0
	DET A	SKM-1606, R0
H-3	PS 2	SKM-602, R0
	DET A	SKm-1606, R0
H-4	PS 2	SKM-602, R0
	DET A	SKM-1606, R0
H-5	PS 2	SKM-602, R0
	DET A	SKM-1606, R0
H-6	PS 2	SKM-602, R0
	DET A	SKM-1606, R0
H-7	PS 2	SKM-602, R0
	DET A	SKM-16067, R0
H-8	PS 2	SKM-602, R0
	DET A	SKM-1606, R0
Ref		FSK-1063

2) Valve Vendor Print Numbers

V-14-10 M-123A-6-7

Line #: DCA-552
Service: Recirculation loop A piping at FE 4631 to X-56 (low pressure)

Design Input Documents:

Piping Class/Summary Sheet: DCA/M190
Seismic Response Spectra: See FSAR
Piping Stress Isometric Drawings: FSK-5544B

1) Hanger Drawing Numbers

H-1	DET 1	FSK-5552B, R4
	DET C	SKM-1607, R0
	PS 2	SKM-602, R0
H-2	PS 2	SKM-602, R0
	DET A	SKM-1606, R0
H-3	PS 2	SKM-602, R0
	DET A	SKM-1606, R0
H-4	DET C	SKM-1607, R0
H-5	DET C	SKM-1609, R1

2) Valve Vendor Print Numbers

V-16-16 M-123A-6-7

Line #: DCA-553
Service: Recirculation loop A piping at FE 4631 to X-56 (high pressure)

Design Input Documents:

Piping Class/Summary Sheet: DCA/M190
Seismic Response Spectra: See FSAR
Piping Stress Isometric Drawings: FSK-5543B

1) Hanger Drawing Numbers

H-1	DET 1	FSK-5552B, R4
	PS 2	SKM-602, R0
	DET C	SKM-1609, R1
H-2	PS 2	SKM-602, R0
	DET A	SKM-1606, R0
H-3	PS 2	SKM-602, R0
	DET A	SKM-1606, R0
H-4	DET C	SKM-1609, R1
H-5	PS 6	SKM-602, R0
	DET A	SKM-1606, R0
H-6	PS 6	SKM-602, R0
	DET A	SKM-1606, R0
H-7	PS 2	SKM-602, R0
	DET C	SKM-1609, R1
H-8	PS 2	SKM-602, R0
	DET C	SKM-1609, R1

2) Valve Vendor Print Numbers

V-16-15 M-123A-6-7

Line #: DCA-554
Service: Recirculation loop A, seal cavity

Design Input Documents:

Piping Class/Summary Sheet: DCA/M190
Seismic Response Spectra: See FSAR
Piping Stress Isometric Drawings: FSK-5540B

1) Hanger Drawing Numbers

H-1	PS 1	SKM-602, R0
	DET B	SKM-1609, R1
SH 15	PS 1	SKM-602, R0
H-2	PSA-1	FSK-5540, R5
	SNUB 8	
H-3	PSA-1	FSK-5540, R5
	SNUB 9	FSK-5540, R5
H-4	SNUB 7	FSK-5540, R5
	SPA-1	FSK-5540, R5

2) Valve Vendor Print Numbers

V-16-34 M123A-6-7

Line #: DCA-554 Sheet 2
Service: Main steam B piping

Design Input Documents:

Piping Class/Summary Sheet: DCA/M190
Seismic Response Spectra: See FSAR
Piping Stress Isometric Drawings: FSK-5569B
0207884-009

1) Hanger Drawing Numbers

H-1	DET 3	FSK-5569B, R3
	DET C	SKM-1607, R0
	PS 2	SKM-602, R0
H-2	DET $	FSK-5569B, R3
	DET C	SKM-1607, R0
	PS 2	SKM-602, R0
H-3	PS 2	SKM-602, R0
	DET A	SKM-1606, R0
H-4	PS 2	SKM-602, R0
	DET A	SKM-1606, R0
Detail X		FSK-5571B

2) Valve Vendor Print Numbers

V-14-27 M-123A-6-7

Line #: DCA-555
Service: Recirculation loop B piping seal cavity (1) lower 1P-201B

Design Input Documents:

Piping Class/Summary Sheet: DCA/M190
Seismic Response Spectra: See FSAR
Piping Stress Isometric Drawings: FSK-5547B

1) Hanger Drawing Numbers

Sh 16		FSK-5540B
H-1	PS 1	SKM-602, R0
	DET B	SKM-1609, R1
H-2	PS 2	SKM-602, R0
	DET A	SKM-1606, R0

2) Valve Vendor Print Numbers

V-16-52	M-123A-6-7
V-16-53	M-123A-6-7

Line #: DCA-555 Sheet 2
Service: Reactor building below 757'-6" drywell recirculation loop B water purge to pump IP-201B

Design Input Documents:

Piping Class/Summary Sheet: DCA/M190
Seismic Response Spectra: See FSAR
Piping Stress Isometric Drawings: FSK-4467B

1) Hanger Drawing Numbers

Sh 119	PS 1	SKM-602, R0
Sh 118	PS 2	SKM-602, R0
Sh 32		SKM-1611, R0
H-1	DET 2	FSK-4467B
	PS 2	SKM-602, R0
	DET C	SKM-1607, R0
H-2	DET A	SKM-1606, R0
	PS 2	SKM-602, R0
H-3	PS 2	SKM-602, R0
	DET 3	SKM-1609, R1
H-4	DET 1	FSK-4467B
	PS 2	SKM-602, R0
H-5	PS 1	SKM-602, R0
	DET A	SKM-1606, R0
H-6	PS 2	SKM-602, R0
	DET A	SKM-1606, R0

2) Valve Vendor Print Numbers

V-17-78	M-123A-6-7
V-17-79	M-123-6-7
V-17-80	M-123A-3-6
V-17-81	M-123A-6-7
V-17-82	M-123A-6-7
V-17-83	M-123D-12-1

Line #: DCA-555 Sheet 3
Service: Reactor bulding below 757'-6" drywell minipurge drain line off feed line to 4" HBC-80

Design Input Documents:

Piping Class/Summary Sheet: DCA/M190
Seismic Response Spectra: See FSAR
Piping Stress Isometric Drawings: FSK-4466B

1) Hanger Drawing Numbers

H-1	PS 6	SKM-602, R0
	DET A	SKM-1606, R0
H-2	PS 2	SKM-602, R0
	DET A	SKM-1606, R0
H-3	PS 2	SKM-602, R0
	DET A	SKM-1606, R0

2) Valve Vendor Print Numbers

None

Line #: DCA-556
Service: Recirculation loop B piping for P-5-4637 (X-31)

Design Input Documents:

Piping Class/Summary Sheet: DCA/M190
Seismic Response Spectra: See FSAR
Piping Stress Isometric Drawings: FSK-5553B

1) Hanger Drawing Numbers

H-1	PS 5	SKM-602, R0
	DET A	SKM-1606, R0
H-2	DET 1	FSK-5553B, R4
	PS 2	SKM-602, R0
	DET C	SKM-1607, R0
H-3	DET 2	FSK-5553B, R4
	Sh 48	FSK-5553B, R4
	PS 1	SKM-602, R0
H-4	PS 6	SKM-602, R0
	DET A	SKM-1606, R0

2) Valve Vendor Print Numbers

V-16-80 M-123A-6-7

Line #: DCA-557
Service: Recirculation loop B

Design Input Documents:

Piping Class/Summary Sheet: DCA/M190
Seismic Response Spectra: See FSAR
Piping Stress Isometric Drawings: FSK-5545B

1) Hanger Drawing Numbers

Sh 36		SKM-1611, R0
H-1	PS 5	SKM-602, R0
	DET A	SKM-1606, R0
H-2	PS 2	SKM-602, R0
	DET C	SKM-1607, R0
	DET 1	FSK-5553B

2) Valve Vendor Print Numbers

V-16-55 M-123A-6-7

Line #: DCA-558
Service: Recirculation loop B piping 1P-201B

Design Input Documents:

Piping Class/Summary Sheet: DCA/M190
Seismic Response Spectra: See FSAR
Piping Stress Isometric Drawings: FSK-5546B

1) Hanger Drawing Numbers

H-1	PS 2	SKM-602, R0
	DET A	SKM-1606, R0
H-2	DET 1	FSK-5546B, R5
	PS 2	SKM-602, R0
	DET C	SKM-1607, R0
Sh 12		FSK-5546B, R5
	DET B	SKM-1609, R1
Sh 61		FSK-5546B, R5

2) Valve Vendor Print Numbers

V-16-54 M-123-17-6-7

Line #: DCA-559
Service: Recirculation loop B

Design Input Documents:

Piping Class/Summary Sheet: DCA/M190
Seismic Response Spectra: See FSAR
Piping Stress Isometric Drawings: FSK-5550B

1) Hanger Drawing Numbers

H-1	PS 2	SKM-602, R0
	DET C	SKM-1607, R0
	DET 2	FSK-5549B, R1
H-2	PS 1	SKM-602, R0
	DET A	SKM-1606, R0
H-3	PS 1	SKM-602, R0
	DET B	SKM-1609, R1
H-4	PS 1	SKM-602, R0
	DET A	SKM-1606, R0
H-5	PS 1	SKM-602, R0
	DET C	SKM-1607, R0
	DET 1	FSK-5549B, R1
H-6	PS 2	SKM-602, R0
	DET A	SKM-1606, R0

2) Valve Vendor Print Numbers

V-16-31 M123A-6-7

Line #: DCA-560
Service: Recirculation loop B

Design Input Documents:

Piping Class/Summary Sheet: DCA/M190
Seismic Response Spectra: See FSAR
Piping Stress Isometric Drawings: FSK-5549

1) Hanger Drawing Numbers

H-1	PS 2	SKM-602, R0
	DET C	SKM-1607, R0
	DET 2	FSK-5549
H-2	PS 1	SKM-602, R0
	DET A	SKM-1606, R0
H-3	PS 1	SKM-602, R0
	DET B	SKM-1609, R1
H-4	PS 1	SKM-602, R0
	DET A	SKM-1606, R0
H-5	PS 1	SKM-602, R0
	DET C	SKM-1607, R0
H-6	PS 2	SKM-602, R0
	DET A	SKM-1606, R0

2) Valve Vendor Print Numbers

V-16-32 M-123A-6-7

Line #: DCA-561
Service: Recircualtion loop B

Design Input Documents:

Piping Class/Summary Sheet: DCA/M190
Seismic Response Spectra: See FSAR
Piping Stress Isometric Drawings: FSK-5552B

1) Hanger Drawing Numbers

H-1	PS 2	SKM-602, R0
	DET C	SKM-1607, R0
H-2	PS 2	SKM-602, R0
	DET A	SKM-106, R0
H-3	PS 3	SKM-602, R0
	DET A	SKM1606, R0
H-4	DET C	SKm-1607, R0
H-5	DET C	SKM-1607, R0

2) Valve Vendor Print Numbers

V-16-34 M-123A-6-7

Line #: DCA-562
Service: Recirculation loop B

Design Input Documents:

Piping Class/Summary Sheet: DCA/M190
Seismic Response Spectra: See FSAR
Piping Stress Isometric Drawings: FSK-5551

1) Hanger Drawing Numbers

H-1	PS 6	SKM-602, R0
	DET A	SKM-1606, R0
H-2	PS 6	SKM-602, R0
	DET A	SKM-1606, R0
H-3	PS 2	SKM-602, R0
	DET A	SKM-1606, R0
H-4	PS 2	SKM-602, R0
	DET A	SKM-1606, R0
H-5	PS 2	SKM-602, R0
	DET C	SKM-1607, R0
H-6	PS 2	SKM-602, R0
	DET C	SKM-1607, R0
H-7	PS 2	SKM-602, R0
	DET C	SKM-1607, R0
	DET 1	FSK-5552B
H-8	DET C	SKM-1607, R0

2) Valve Vendor Print Numbers

V-16-33 M-123A-6-7

Line #: DCA-563
Service: Recirculation sample pipe

Design Input Documents:

Piping Class/Summary Sheet: DCA/M190
Seismic Response Spectra: See FSAR
Piping Stress Isometric Drawings: FSK-5593B, FSK-5693B

1) Hanger Drawing Numbers

FSK-5592B

Sh 53		SKM-1611, R0
	SNUB	
	PSA-1	
H-1	PS 1	SKM-602, R0
	DET C	SKM-1607, R0
H-2	PS 1	SKM-602, R0
	DET A	SKM-1606, R0
H-3	PS 1	SKM-602, R0
	DET C	SKM-1607, R0
H-4	PS 1	SKM-602, R0
	DET C	SKM-1607, R0
H-5	PS 1	SKM-602, R0
	DET A	SKM-1606, R0
Sh 14		SKM-1611, R0
H-6	PS 1	SKM-602, R0
	DET C	SKM-1607, R0
H-7	PS 1	SKM-602, R0
	DET A	SKM-1606, R0
H-8	PS 1	SKM-602, R0
	DET C	SKM-1607, R0
H-9	PS 2	SKM-602, R0
	DET A	SKM-1606, R0
H-10	PS 2	SKM-602, R0

FSK-5692B

Sh 135		SKM-1611, R0
Sh 136		SKM-1611, R0
H-1	PS 1	SKM-602, R0
	DET C	SKM-1607, R0
H-2	PS 2	SKM-602, R0
	DET C	SKM-1607, R0

2) Valve Vendor Print Numbers

V-16-73 M-123A-6-7
CV-4639 M-123A-6-7

Line #: DCA-569
Service: Recirculation steam piping

Design Input Documents:

Piping Class/Summary Sheet: DCA/M190
Seismic Response Spectra: See FSAR
Piping Stress Isometric Drawings: FSK-5587B

1) Hanger Drawing Numbers

H-1	PS 2	SKM-602, R0
	DET V	SKM-1606, R0
Sh 128		SKM-1611, R0
H-2	PS 2	SKM-602, R0
	DET A	SKM-1606, R0
H-3	PS 2	SKM-602, R0
	DET A	SKM-1606, R0
H-4	PS 1	SKM-602, R0
	DET A	SKM-1606, R0
H-5	PS 1	SKM-602, R0
	DET A	SKM-1606, R0
H-6	PS 1	SKM-602, R0
	DET A	SKM-1606, R0
H-7	PS 1	SKM-602, R0
	DET A	SKM-1606, R0
H-8	PS 1	SKM-602, R0
	DET B	SKM-1609, R1
H-9	SNUB 10	
	PSA-1	
H-10	SNUB 12	
	PSA-1	
Sh 25		SKM-1611, R0
Sh 63		SKM-1611, R0
Sh 128		SKM-1611, R0
H-11	PS 1	SKM-602, R0
	DET C	SKM-1607, R0
H-12	SNUB 11	

2) Valve Vendor Print Numbers

V-24-7 M-123A-6-7

Line #: DCA-570
Service: Recirculation steam piping

Design Input Documents:

Piping Class/Summary Sheet: DCA/M190
Seismic Response Spectra: See FSAR
Piping Stress Isometric Drawings: FSK-5585B

1) Hanger Drawing Numbers

H-1	SNUB 6B	
	PSA-1	
H-2	PS 6	SKM-602, R0
	DET C	SKM-1609, R1
H-3	PS 6	SKM-602, R0
	DET U	SKM-1608, R0
Sh 24		SKM-1611, R0
	PS 2	SKM-602, R0
	DET A	SKM-1606, R0
H-4	PS 6	SKM-602, R0
	DET A	SKM-1606, R0
H-5	PS 2	SKM-602, R0
	DET V	SKM-1609, R1
H-6	PS 2	SKM-602, R0
	DET A	SKM-1606, R0
H-7	DET C	SKM-1609, R1
H-8	PS 5	SKM-602, R0
	DET A	SKM-1606, R0
H-9	PS 4	SKM-602, R0
	DET B	SKM-1607, R0
H-10	PS 4	SKM-602, R0
	DET A	SKM-1606, R0
H-11	PS 4	SKM-602, R0
	DET A	SKM-1606, R0
H-12	PS 5	SKM-602, R0
	DET C	SKM-1609, R1
H-13	PS 5	SKM-602, R0
	DET A	SKM-1606, R0
H-14	PS 2	SKM-602, R0
	DET A	SKM-1608, R0

2) Valve Vendor Print Numbers

V-24-5 M-123A-6-7

Line #: DCA-571
Service: Steam piping (RCIC)

Design Input Documents:

Piping Class/Summary Sheet: DCA/M190
Seismic Response Spectra: See FSAR
Piping Stress Isometric Drawings: FSK-5588B

1) Hanger Drawing Numbers

H-1	PS 2	SKM-602, R0
	DET C	SKM-1607, R0
	DET 4	FSK-5587B, R6
H-2	PS 1	SKM-602, R0
	DET A	SKM-1606, R0
H-3	PS 1	SKM-602, R0
	DET A	SKM-1606, R0
H-4	PS 1	SKM-602, R0
	DET A	SKM-1606, R0
H-5	PS 1	SKM-602, R0
	DET A	SKM-1606, R0
H-6	PS 1	SKM-602, R0
	DET A	SKM-1606, R0
H-7	PS 1	SKM-602, R0
	DET C	SKM-1607, R0
	DET 3	FSK-5587B, R6
Sh 91		SKM-1611, R0
H-8	PS 6	SKM-602, R0
	DET C	SKM-1607, R0
Sh 90		SKM-1611, R0
Sh 92		SKM-1611, R0
H-9	SNUB 28A	
	PSA-1	
H-10	PS 2	SKM-602, R0
	DET A	SKM-1606, R0
H-11	PS 2	SKM-602, R0
	DET A	SKM-1606, R0
Sh 90		SKM-1611, R0
Sh 91		SKM-1611, R0
Sh 92		SKM-1611, R0

2) Valve Vendor Print Numbers

V-24-4 M-123A-6-7

Line #: DCA-574
Service: Jet pump instrumentation

Design Input Documents:

Piping Class/Summary Sheet: DCA/M190
Seismic Response Spectra: See FSAR
Piping Stress Isometric Drawings: FSK-5502B, FSK-5503. FSK-5504B, FSK-5505B

1) Hanger Drawing Numbers

FSK-5502B

H-1	PS 5	SKM-602, R0
	DET A	SKM-1606, R0
H-2	PS 4	SKM-602, R0
	DET C	SKM-1607, R0
H-3	PS 4	SKM-602, R0
	DET A	SKM-1606, R0
H-4	PS 4	SKM-602, R0
	DET A	SKM-1606, R0

FSK-5504B***

H-1	PS 5	SKM-602, R0
	DET A	SKM-1606, R0
H-2	PS 4	SKM-602, R0
	DET C	SKM-1607, R0
H-3	PS 4	SKM-602, R0
	DET A	SKM-1606, R0
H-4	PS 4	SKM-602, R0
	DET A	SKM-1606, R0

FSK-5503B**

H-1	PS 5	SKM-602, R0
	DET A	SKM-1606, R0
H-2	PS 4	SKM-602, R0
	DET C	SKM-1607, R0
H-3	PS 4	SKM-602, R0
	DET A	SKM-1606, R0
H-4	PS 4	SKM-602, R0
	DET A	SKM-1606, R0

FSK-5505B****

H-1	PS 5	SKM-602, R0
	DET A	SKM-1606, R0
H-2	PS 4	SKM-602, R0
	DET C	SKM-1607, R0
H-3	PS 4	SKM-602, R0
	DET C	SKM-1606, R0
H-4	PS 4	SKM-602, R0
	DET A	SKM-1606, R0

2) Valve Vendor Print Numbers

*V-15-7	M-123A-6-7
**V-15-12	M-123A-6-7
***V-15-13	M-123A-6-7
****V-15-15	M-123A-6-7

Line #: DCA-574 Sheet 2
Service: Jet pump instrumentation

Design Input Documents:

Piping Class/Summary Sheet: DCA/M190
Seismic Response Spectra: See FSAR
Piping Stress Isometric Drawings: FSK-5506B

1) Hanger Drawing Numbers

FSK-5506B*****

H-1	PS 5	SKM-602, R0
	DET A	SKM-1606, R0
H-2	PS 4	SKM-602, R0
	DET C	SKM-1607, R0
H-3	PS 4	SKM-602, R0
	DET A	SKM-1606, R0
H-4	PS 4	SKM-602, R0
	DET A	SKM-1606, R0

2) Valve Vendor Print Numbers

*****V-15-15 M-123A-6-7

Line #: DCA-578
Service: Jet pump instrumentation

Design Input Documents:

Piping Class/Summary Sheet: DCA/M190
Seismic Response Spectra: See FSAR
Piping Stress Isometric Drawings: FSK-5521B, FSK-5618

1) Hanger Drawing Numbers

FSK-5521B*

H-1	PS 4	SKM-602, R0
	DET A	SKM-1606, R0
H-2	PS 4	SKM-602, R0
	DET A	SKM-1606, R0
H-3	PS 4	SKM-602, R0
	DET C	SKM-1607, R0
H-4	PS 5	SKM-602, R0
	DET A	SKM-1606, R0

FSK-5618B**

H-1	PS 1	SKM-602, R0
	DET A	SKM-1606, R0
H-2	PS 2	SKM-602, R0
	DET B	SKM-1609, R1
H-3	PS 1	SKM-602, R0
	DET C	SKM-1607, R0

2) Valve Vendor Print Numbers

*V-15-34 M-123A-6-7

Line #: DCA-579
Service: Jet pump instrumentation

Design Input Documents:

Piping Class/Summary Sheet: DCA/M190
Seismic Response Spectra: See FSAR
Piping Stress Isometric Drawings: FSK-5519B

1) Hanger Drawing Numbers

H-1	PS 4	SKM-602, R0
	DET A	SKM-1606, R0
H-2	PS 4	SKM-602, R0
	DET A	SKM-1606, R0
H-3	PS 4	SKM-602, R0
	DET C	SKM-1607, R0
H-4	PS 5	SKM-602, R0
	DET A	SKM-1606, R0

2) Valve Vendor Print Numbers

V-15-30 M-123A-6-7

Line #: DCA-580
Service: Jet pump instrumentation pipe detail nozzle N8B

Design Input Documents:

Piping Class/Summary Sheet: DCA/M190
Seismic Response Spectra: See FSAR
Piping Stress Isometric Drawings: FSK-5515

1) Hanger Drawing Numbers

H-1	PS 4	SKM-602, R0
	DET A	SKM-1606, R0
H-2	PS 4	SKM-602, R0
	DET A	SKM-1606, R0
H-3	PS 4	SKM-602, R0
	DET C	SKM-1607, R0
H-4	PS 5	SKM-602, R0
	DET A	SKm-1606, R0

2) Valve Vendor Print Numbers

V-15-29 M-123A-6-7

Line #: DCA-581
Service: Jet pump instrumentation piping flow transmission FT 4503

Design Input Documents:

Piping Class/Summary Sheet: DCA/M190
Seismic Response Spectra: See FSAR
Piping Stress Isometric Drawings: FSK-5517B

1) Hanger Drawing Numbers

H-1	PS 4	SKM-602, R0
	DET A	SKM-1606, R0
H-2	PS 4	SKM-602, R0
	DET A	SKM-1606, R0
H-3	PS 4	SKM-602, R0
	DET C	SKM-1607, R0
H-4	PS 5	SKM-602, R0
	DET A	SKM-1606, R0

2) Valve Vendor Print Numbers

V-15-28 M-123A-6-7

Line #: DCA-582
Service: Jet pump instrumentation piping flow transmission FT 4517, 4501 (low pressure)

Design Input Documents:

Piping Class/Summary Sheet: DCA/M190
Seismic Response Spectra: See FSAR
Piping Stress Isometric Drawings: FSK-5516B

1) Hanger Drawing Numbers

H-1	PS 4	SKM-602, R0
	DET A	SKM-1606, R0
H-2	PS 4	SKM-602, R0
	DET A	SKM-1606, R0
H-3	PS 4	SKm-602, R0
	DET C	SKM-1607, R0
H-4	PS 5	SKM-602, R0
	DET A	SKM-1606,R0

2) Valve Vendor Print Numbers

V-15-26 M-123A-6-7

Line #: DCA-584
Service: Jet pump instrumentation piping flow transmission FT 4509, 4519 (low pressure)

Design Input Documents:

Piping Class/Summary Sheet: DCA/M190
Seismic Response Spectra: See FSAR
Piping Stress Isometric Drawings: FSK-5523B

1) Hanger Drawing Numbers

H-1	PS 5	SKM-602, R0
	DET A	SKM-1606, R0
H-2	PS 4	SKM-602, R0
	DET C	SKM-1607, R0
H-3	PS 4	SKM-602, R0
	DET A	SKM-1606, R0
H-4	PS 4	SKM-602, R0
	DET A	SKM-1606, R0

2) Valve Vendor Print Numbers

V-15-28 M-123A-6-7

Line #: DCA-585
Service: Jet pump instrumentation piping flow transmission FT 4511

Design Input Documents:

Piping Class/Summary Sheet: DCA/M190
Seismic Response Spectra: See FSAR
Piping Stress Isometric Drawings: FSK-5524B

1) Hanger Drawing Numbers

H-1	PS 5	SKM-602, R0
	DET A	SKM-1606, R0
H-2	PS 4	SKM-602, R0
	DET C	SKM-1607, R0
H-3	PS 4	SKM-602, R0
	DET A	SKM-1606, R0
H-4	PS 4	SKM-602, R0
	DET A	SKM-1606, R0

2) Valve Vendor Print Numbers

V-1531 M-123A-6-7

Line #: DCA-586
Service: Jet pump instrumentation piping flow transmission FT 4513

Design Input Documents:

Piping Class/Summary Sheet: DCA/M190
Seismic Response Spectra: See FSAR
Piping Stress Isometric Drawings: FSK-5525B

1) Hanger Drawing Numbers

H-1	PS 5	SKM-602, R0
	DET A	SKM-1606, R0
H-2	PS 4	SKM-602, R0
	DET C	SKM-1607, R0
H-3	PS 4	SKM-602, R0
	DET A	SKM-1606, R0
H-4	PS 4	SKM-602, R0
	DET A	SKM-1606, R0

2) Valve Vendor Print Numbers

V-15-32 M-123A-6-7

Line #: DCA-588
Service: Jet pump instrumentation piping flow transmission
FT 4515

Design Input Documents:

Piping Class/Summary Sheet: DCA/M190
Seismic Response Spectra: See FSAR
Piping Stress Isometric Drawings: FSK-5526B

1) Hanger Drawing Numbers

H-1	PS 5	SKM-602, R0
	DET A	SKM-1606, R0
H-2	PS 4	SKM-602, R0
	DET C	SKM-1607, R0
H-3	PS 4	SKM-602, R0
	DET A	SKM-1606, R0
H-4	PS 4	SKM-602, R0
	DET A	SKM-1606, R0

2) Valve Vendor Print Numbers

V-15-33 M-123A-6-7

Line #: DCA-589
Service: Jet pump instrumentation piping flow transmission FT 4519 (high pressure)

Design Input Documents:

Piping Class/Summary Sheet: DCA/M190
Seismic Response Spectra: See FSAR
Piping Stress Isometric Drawings: FSK-5527B

1) Hanger Drawing Numbers

H-1	PS 5	SKM-602, R0
	DET A	SKM-1606, R0
H-2	PS 4	SKM-602, R0
	DET C	SKM-1607, R0
H-3	PS 4	SKM-602, R0
	DET A	SKM-1606, R0
H-4	PS 4	SKM-602, R0
	DET A	SKM-1606, R0

2) Valve Vendor Print Numbers

V-15-30 M123A-6-7

Line #: DCA-590
Service: Jet pump instrumentation piping flow transmission
FT 4509

Design Input Documents:

Piping Class/Summary Sheet: DCA/M190
Seismic Response Spectra: See FSAR
Piping Stress Isometric Drawings: FSK-5512B

1) Hanger Drawing Numbers

H-1	PS 5	SKM-602, R0
	DET A	SKM-1606, R0
H-2	PS 4	SKM-602, R0
	DET C	SKM-1607, R0
H-3	PS 4	SKM-602, R0
	DET A	SKM-1606, R0
H-4	PS 4	SKM-602, R0
	DET A	SKM-1606, R0

2) Valve Vendor Print Numbers

V-15-11 M-123A-6-7

Line #: DCA-591
Service: Instrumentation piping from X-40A to 1C-122 (tube F)

Design Input Documents:

Piping Class/Summary Sheet: DCA/M190
Seismic Response Spectra: See FSAR
Piping Stress Isometric Drawings: FSK-5612B

1) Hanger Drawing Numbers

H-1	PS 1	SKM-602, R0
	DET A	SKM-1606, R0
H-2	PS 1	SKM-602, R0
	DET A	SKM-1606, R0
H-3	PS 1	SKM-602, R0
	DET A	SKM-1606, R0
H-4	PS 1	SKM-602, R0
	DET A	SKM-1606, R0
H-5	PS 1	SKM-602, R0
	DET A	SKM-1606, R0
H-6	PS 1	SKM-602, R0
		SKM-1606, R0

2) Valve Vendor Print Numbers

None

Line #: DCA-591 Sheet 2
Service: Jet pump instrumentation piping flow transmission
FT 4518, LITS 4565

Design Input Documents:

Piping Class/Summary Sheet: DCA/M190
Seismic Response Spectra: See FSAR
Piping Stress Isometric Drawings: FSK-5514B

1) Hanger Drawing Numbers

H-1	PS 5	SKM-602, R0
	DET A	SKM-1606, R0
H-2	PS 4	SKM-602, R0
	DET C	SKM-1607, R0
H-3	PS 4	SKM-602, R0
	DET A	SKM-1606, R0
H-4	PS 4	SKM-602, R0
	DET A	SKM-1606, R0

2) Valve Vendor Print Numbers

V-15-17 M-123A-6-7

Line #: DCA-592
Service: Jet pump instrumentation low pressure piping flow transmission FT 4518, 4502

Design Input Documents:

Piping Class/Summary Sheet: DCA/M190
Seismic Response Spectra: See FSAR
Piping Stress Isometric Drawings: FSK-5509B

1) Hanger Drawing Numbers

H-1	PS 4	SKM-602, R0
	DET A	SKM-1606, R0
H-2	PS 4	SKM-602, R0
	DET C	SKM-1607, R0
H-3	PS 4	SKM-602, R0
	DET A	SKM-1606, R0
H-4	PS 4	SKM-602, R0
	DET A	SKM-1606, R0

2) Valve Vendor Print Numbers

V-15-20 M-123A-6-7

Line #: DCA-593
Service: Jet pump instrumentation to X-40A

Design Input Documents:

Piping Class/Summary Sheet: DCA/M190
Seismic Response Spectra: See FSAR
Piping Stress Isometric Drawings: FSK-5510B

1) Hanger Drawing Numbers

H-1	PS 5	SKM-602, R0
	DET A	SKM-1606, R0
H-2	PS 4	SKM-602, R0
	DET C	SKM-1607, R0
H-3	PS 4	SKM-602, R0
	DET A	SKM-1606, R0
H-4	PS 4	SKM-602, R0
	DET A	SKM-1606, R0

2) Valve Vendor Print Numbers

None

Line #: DCA-594
Service: Jet pump instrumentatio to X-40A

Design Input Documents:

Piping Class/Summary Sheet: DCA/M190
Seismic Response Spectra: See FSAR
Piping Stress Isometric Drawings: FSK-5511B

1) Hanger Drawing Numbers

H-1	PS 5	SKM-602, R0
	DET A	SKM-1606, R0
H-2	PS 4	SKM-602, R0
	DET C	SKM-1607, R0
H-3	PS 4	SKM-602, R0
	DET A	SKM-1606, R0
H-4	PS 4	SKM-602, R0
	DET A	SKM-1606, R0

2) Valve Vendor Print Numbers

V-15-10 M-123A-6-7

Line #: DLA-1
Service: HPCI discharge to FW line

Design Input Documents:

Piping Class/Summary Sheet: DLA/M-190
Seismic Response Spectra: See FSAR
Piping Stress Isometric Drawings: FSK-4162B

1) Hanger Drawing Numbers

H-1	PS 6	SKM-602, R0
	DET U	SKM-1608, R0

2) Valve Vendor Print Numbers

V-23-17	M-141-55-1-1
V-23-18	M-141-55-1-1

Line #: DLA-2
Service: FW discharge from isolation stop check valve to reactor

Design Input Documents:

Piping Class/Summary Sheet: DLA/M-190
Seismic Response Spectra: See FSAR
Piping Stress Isometric Drawings: FSK-4309

1) Hanger Drawing Numbers

H-2	PS 1	SKM-602, R0
	DET B	SKM-1609, R1
H-2	PS 1	SKM-602, R0
	DET B	SKM-1609, R1

2) Valve Vendor Print Numbers

V-14-59	M141-55(1)-1
V-14-94	M141-55(1)-1
V-14-60	M141-55(1)-1
V-14-56	M141-55(1)-1
V-14-95	M141-55(1)-1
V-14-57	M141-55(1)-1

Line #: DLA-2
Service: FW discharge from isolation stop check valve to reactor

Design Input Documents:

Piping Class/Summary Sheet: DLA/M-190
Seismic Response Spectra: See FSAR
Piping Stress Isometric Drawings: FSK-4145B

1) Hanger Drawing Numbers

H-1	PS 1	SKM-602, R0
	DET A	SKM-1606, R0
H-2	DET A	FSK-4145B, R6
	SH 43	SKM-1611, R0
	PS 6	SKM-602, R0
	DET B	SKM-1609, R1
H-3	PS-6	SKM-602, R0
	DET A	SKM-1606, R0
H-4	PS 2	SKM-602, R0
	DET A	SKM-1606, R0
H-5	DET A	FSK-4145B, R6
	SH 42	SKM-1611, R0
	PS 6	SKM-602, R0
	DET B	SKM-1609, R1
H-6	PS 6	SKM-602, R0
	DET A	SKM-1606, R0

2) Valve Vendor Print Numbers

V-14-35	M-123-A-6-7
V-14-36	M-123-A-6-7
V-14-33	M-123-A-6-7
V-14-34	M-123-A-6-7

Line #: DLA-3
Service: Steam to HPCI turbine

Design Input Documents:

Piping Class/Summary Sheet: DLA/M-190
Seismic Response Spectra: See FSAR
Piping Stress Isometric Drawings: FSK-4074B

1) Hanger Drawing Numbers

H-1	PS 1	SKM-602, R0
	DET B	SKM-1609, R1
H-2	PS 1	SKM-602, R0
	DET A	SKM-1606, R0
H-3	PS 1	SKM-602, R0
	DET A	SKM-1606, R0
H-4	PS 1	SKM-602, R0
	DET A	SKM-1606, R0
H-5	DET 1	FSK-4074, R5
H-6	PS 1	SKM-602, R0
	DET B	SKM-1609, R1

2) Valve Vendor Print Numbers

V-22-5	M-123-A-6-7
V-22-6	M-123-A-6-7

Line #: DLA-4
Service: RHR pump suction from reactor recirculating line valve drains

Design Input Documents:

Piping Class/Summary Sheet: DLA/M-190
Seismic Response Spectra: See FSAR
Piping Stress Isometric Drawings: FSK-3922, FSK-4308

1) Hanger Drawing Numbers

FSK 3922

H-1 DET A SKM-1606, R0

FSK 4308

None

2) Valve Vendor Print Numbers

FSK 3922

V-19-54	M-141-55-1-1
V-19-53	M-141-55-1-1

FSK 4308

V-19-94	M-141A-56-4
V-19-95	M-141A-56-4
V-19-96	M-141A-56-4
V-19-97	M-141A-56-4

Line #: DLA-5
Service: RHR discharge

Design Input Documents:

Piping Class/Summary Sheet: DLA/M-190
Seismic Response Spectra: See FSAR
Piping Stress Isometric Drawings: FSK-4575B

1) Hanger Drawing Numbers

None

2) Valve Vendor Print Numbers

V-20-73	M-141A-56-4
V-20-74	M-141A-56-4

Line #: DLA-6
Service: RHR discharge

Design Input Documents:

Piping Class/Summary Sheet: DLA/M-190
Seismic Response Spectra: See FSAR
Piping Stress Isometric Drawings: FSK-4575B, FSK-4947B, FSK-3946B

1) Hanger Drawing Numbers

FSK 4575B

None

FSK 3947B

H-1 DET 1 FSK-3947B, R6

FSK 3946B

H-1 DET 1 FSK-3946B, R6

2) Valve Vendor Print Numbers

FSK 4575B

V-19-35	M141A-53-2
V-19-38	M141A-53-2

FSK 3947B

V-20-38	M141-55(1)-1
V-20-39	M141-55(1)-1

FSK 3946B

V-19-49	M141-55(1)-1
V-19-50	M141-55(1)-1

Line #: EBB-2
Service: RCIC pump discharge

Design Input Documents:

Piping Class/Summary Sheet: EBB/M-190
Seismic Response Spectra: See FSAR
Piping Stress Isometric Drawings: FSK-4230B

1) Hanger Drawing Numbers

FSK 4230B

H-1	PS 1	SKM-602, R0
	DET B	SKM-1609, R1

2) Valve Vendor Print Numbers

MO-2426	M141-55(1)-1
V-24-41	M141A-53-2

Line #: EBB-3
Service: RCIC pump recirculation line

Design Input Documents:

Piping Class/Summary Sheet: EBB/M-190
Seismic Response Spectra: See FSAR
Piping Stress Isometric Drawings: FSK-4139B, FSK-4147B

1) Hanger Drawing Numbers

FSK-4139B

H-1	PS 6	SKM-602, R0
	DET A	SKM-1606, R0
H-2	PS 1	SKM-602, R0
	DET C	SKM-1607, R0
H-3	PS 1	SKM-602, R0
	DET A	SKM-1606, R0
H-4	PS 1	SKM-602, R0

FSK-4147B

H-1	PS 1	SKM-602, R0
	DET B	SKM-1609, R1

2) Valve Vendor Print Numbers

FSK-4139B		FSK-4147B
V-25-06	M141-057-3	None
V-25-20	M141A-53-2	
V-25-21	M141A-53-2	
V-25-29	M141A-54(1)-4	
MO-2510	M141A-54(1)-4	

Line #: EBB-14
Service: HPCI steam side

Design Input Documents:

Piping Class/Summary Sheet: EBB/M-190
Seismic Response Spectra: See FSAR
Piping Stress Isometric Drawings: FSK-3559B

1) Hanger Drawing Numbers

H-1	PS 1	SKM-602, R0
	DET B	SKM-1609, R1
H-2	PS 2	SKM-602, R0
	DET U	SKM-1608, R0
H-3	PS 2	SKM-602, R0
	DET U	SKM-1608, R0
H-4	PS 1	SKM-602, R0
	DET A	SKM-1606, R0
H-5	PS 1	SKM-602, R0
	DET A	SKM-1606, R0
H-6	PS 2	SKM-602, R0
	DET B	SKM-1609, R1

2) Valve Vendor Print Numbers

V-25-10	M141A-55-1-1
V-22-9	M141A-55-1-1
CV-2212	M141-56-4
CV-2211	M141-56-4
V-22-52	M141D-1-2
V-22-53	M141-55-1-2
V-22-7	M141-56-4
V-22-8	M141-56-4
CV-2206	M141A-38-1

Line #: EBB-15
Service: Drain pot to main condenser RCIC steam side

Design Input Documents:

Piping Class/Summary Sheet: EBB/M-190
Seismic Response Spectra: See FSAR
Piping Stress Isometric Drawings: FSK-3558B

1) Hanger Drawing Numbers

H-1	PS 1	SKM-602, R0
	DET A	SKM-1606, R0
H-2	PS 2	SKM-602, R0
	DET U	SKM-1608, R0
H-3	PS 2	SKM-602, R0
	DET B	SKM-1609, R1
H-4	PS 1	SKM-602, R0
	DET A	SKM-1606, R0
H-5	PS 5	SKM-602, R0
	DET U	SKM-1608, R0
H-6	PS 5	SKM-602, R0
	DET U	SKM-1608, R0
H-7	PS 1	SKM-602, R0
	DET B	SKM-1608, R0

2) Valve Vendor Print Numbers

V-24-39	M141-54-14
V-24-40	M141-54-14
V-24-1	M141A-56-4
V-24-2	M141A-56-4
CV-2409	M141A-38-1
CV-2410	M141A-38-1
CV-2411	M141A-38-1
V-24-28	M141-55-1-1
V-24-29	M141-55-1-1

Line #: EBB-16
Service: Steam to RHR heat exchanger to CV-2033, CV-1963

Design Input Documents:

Piping Class/Summary Sheet: EBB/M-190
Seismic Response Spectra: See FSAR
Piping Stress Isometric Drawings: FSK-4392B

1) Hanger Drawing Numbers

H-1	PS 1	SKM-602, R0
	DET A	SKM-1606, R0
H-2	PS 1	SKM-602, R0
	DET A	SKM-1606, R0
H-3	PS 1	SKM-602, R0
	DET B	SKM-1609, R1
H-4	PS 1	SKM-602, R0
	DET C	SKM-1607, R0
H-5	PS 6	SKM-602, R0
	DET A	SKM-1606, R0

2) Valve Vendor Print Numbers

V-19-78	M141-55(1)-1
V-19-79	M141-55(1)-1
CV-1964	M144A-118-3
CV-2034	M144A-118-3

Line #: GE main steam Loop A
Service: Main Steam

Design Input Documents:

Piping Class/Summary Sheet: Loop A/M-190
Seismic Response Spectra: See FSAR
Piping Stress Isometric Drawings: BEC-01-13(3-5-73)

1) Hanger Drawing Numbers

MS-1-1	C-516R5	SSAI	BP401AR1
	C-518R5		401R1
	M-352R5	SSA2	BP401AR1
HA-1	BP301R4		402R0
	301AR0	MS-1-5	C524R4
	301BR2		M-352R5
	301CR0	HA-2	B03R4
MS-1-2	C-516R5		303AR2
	C-518R5		303BR4
	M-352R5	MS-1-6	C-524R4
MS-1-3	C-516R5		M-352 R5
	C-518R5	MS-1-7	M-359 R3
	M-352R5		M-352 R5
MS-1-4	C-516R5	MS-1-8	C-533 R3
	C-518R5		M-332 R5
	M-352R5	MS-1-9	C-531 R5
			M-352 R5
		AA1	GE-731E 782 SHTS 1 & 3

2) Valve Vendor Print Numbers

PSV-4400	B-21-12-13
	B-21-3379-1-1-2
PSV-4401	B-21-12-13
	B-21-3379-1-1-2
CV-4412	B-21-4-3
CV-4413	B-21-4-3

Line #: GE main steam Loop B Sheet 1 of 2
Service: Main Steam

Design Input Documents:

Piping Class/Summary Sheet: Loop B/M-190
Seismic Response Spectra: See FSAR
Piping Stress Isometric Drawings: BEC-01-14(3-5-73)

1) Hanger Drawing Numbers

MS-2-1	C516 R5	MS-2-4	C-516 R5
	C518 R5		C-532 R4
	M352 R5		M-352 R5
HB-1	BPB01A R0	MS-2-5	C-524 R4
	302A R2		M-352 R3
	302 R4	MS-2-6	C-524 R4
MS-2-2	C516 R5		M-352 R5
	C518 R5		M-357 R3
	M-352 R5	HB-2	BP-304 R4
MS-2-3	C-516 R5		304A R0
	C-518 R5		304B R4
	M 352 R5	MS-2-9	C-524 R4
SSB1	BP405 R0		M-352 R5
	405A R3	HB-3	BP-304A R0
	405B R2		305 R4
SSB2	BP405A R3		305A R4
	405B R2		
	406 R0		

2) Valve Vendor Print Numbers

PSV 4403	B-21-2831-53-9
PSV 4402	B-21-13-2
PSV-4401	B-21-3379-1-12
CV 4415	B-21-4-3
CV 4316	B-21-4-3

Line #: GE main steam Loop B Sheet 1 of 2
Service: Main Steam

Design Input Documents:

Piping Class/Summary Sheet: Loop B/M-190
Seismic Response Spectra: See FSAR
Piping Stress Isometric Drawings: BEC-01-14(3-5-73)

1) Hanger Drawing Numbers

MS-2-1	C-516 R5
	C-518 R5
	M-352 R5
HB-1	BPB01A R0
	302A R2
	302 R4
MS-2-2	C-516 R5
	C-518 R5
	M-352 R5
MS-2-3	C-516 R5
	C-518 R5
	M-352 R5
SSB1	BP-405 R0
	405A R3
	405B R2
SSB2	BP-405A R3
	405B R2
	406 R0
MS-2-4	C-516 R5
	C-534 R4
	M-352 R5
MS-2-5	C-524 R4
	M-352 R3
MS-2-6	C-524 R4
	M-352 R5
	M-357 R3
HB-2	BP-304 R4
	304A R0
	304B R4
MS-2-7	C-524 R4
	M-352 R5
MS-2-0	C-524 R4
	M-352 R5
HB-3	BP-304A R0
	305 R4
	305A R4

2) Valve Vendor Print Numbers

PSV 4403	B-21-2831-53-9
PSV 4402	B-21-13-2
PSV 4401	B-21-3379-1-12
CV 4415	B-21-4-3
CV 4316	B-21-4-3

Line #: GE main steam Loop C Sheet 1 of 2
Service: Main Steam

Design Input Documents:

Piping Class/Summary Sheet: Loop C/M-190
Seismic Response Spectra: See FSAR
Piping Stress Isometric Drawings: BEC-01-15(3-5-73)

1) Hanger Drawing Numbers

MS-3-1	C-516 R5	MS-3-34	C-534 R4
	C-518 R5		M-352 R5
	M-352 R5	MS-3-5	C-524 R4
HC1	BP301A R0		M-352 R5
	302A R3	MS-3-6	C-524 R4
	302 R4		M-352 R5
MS-3-2	C-516 R5		M-357 R3
	C-518 R5	HC 2	BP 304 R4
MS-3-3	C-516 R5		304A R0
	C-518 R5		304B R4
	M-352 R5	MS-3-7	C-524 R4
SSC1	BP407 R0		M-352 R5
	407A R4	MS-3-9	C-524 R4
	407B R1		M-352 R5
SSC2	408 R0	HC3	BP305 R4
	408 R4		305A R4
	407A R4		304A R0
	407B R1		

2) Valve Vendor Print Numbers

CV-4418	B-21-4-3
CV-4419	B-21-4-3

Line #: GE main steam Loop C Sheet 2 of 2
Service: Main Steam

Design Input Documents:

Piping Class/Summary Sheet: Loop C/M-190
Seismic Response Spectra: See FSAR
Piping Stress Isometric Drawings: BEC-01-15(3-5-73)

1) Hanger Drawing Numbers

MS-3-11	C-524 R4
	M-352 R5
MS-3-12	M-359 R3
	M-352 R5
MS-3-13	C-533 R3
	M-352 R5
MS-3-14	C-531 R5
	M-352 R5
AC-1	GE-731E782 Sheets 1 & 3

2) Valve Vendor Print Numbers

None

Line #: GE Main steam Loop D
Service: Main Steam

Design Input Documents:

Piping Class/Summary Sheet: Loop D/M-190
Seismic Response Spectra: See FSAR
Piping Stress Isometric Drawings: BEC-01-16(3-5-73)

1) Hanger Drawing Numbers

MS-4-1	C-516 R5	SSD2	BP401A R1
	C-518 R5		BP404 R0
	M-357 R5	MS-4-5	C-524 R4
HD-1	BP-301 R4		M-352 R5
	301A R0	HD-2	BP303A R2
	301B R2		303 R4
	301C R0		303B R4
MS-4-2	C-516 R5	MS-4-6	C-524 R4
	C-518 R5		M-352 R5
	M-352 R5	MS-4-7	M-359 R3
MS-4-3	C-516 R5		M-352 R5
	C-518 R5	MS-4-8	C 533 R3
	M-352 R5		M-352 R5
M5-4-4	C-516 R5	MS-4-9	C-531 R5
	C-518 R5		M-352 R5
	M-352 R5	AD-1	GE731E782 Sheet 1 & 3
SS01	BP401A R1		
	403 R1		

2) Valve Vendor Print Numbers

PSV 4406	B21-73-2
PSV 4401	B21-3379-1-1-2
PSV 4407	B21-13-2
CV 4420	B21-4-3
CV4421	B21-4-3

Line #: HBC-21
Service: Discharge from sump pumps

Design Input Documents:

Piping Class/Summary Sheet: HBC/M-190
Seismic Response Spectra: See FSAR
Piping Stress Isometric Drawings: FSK-3530B

1) Hanger Drawing Numbers

H-1 PSI SKM-602 R0
DET A SKM-1606 R0

2) Valve Vendor Print Numbers

V-37-1	M141-52-2
V-37-2	M141-54(1)-4
V-37-3	M141-52-3
V-37-4	M141-54(1)-4

Line #: HBD-34
Service: Diesel oil piping

Design Input Documents:

Piping Class/Summary Sheet: HBD/M-190
Seismic Response Spectra: See FSAR
Piping Stress Isometric Drawings: FSK-3437

1) Hanger Drawing Numbers

H-1	PS 1	SKM-602, R0
	DET U	SKM-1608, R0
H-2	PS 1	SKM-602, R0
	DET U	SKM-1608, R0
H-3	PS 1	SKM-602, R0
	DET U	SKM-1608, R0
H-4	PS 1	SKM-602, R0
	DET U	SKM-1608, R0
H-5	PS 1	SKM-602, R0
	DET U	SKM-1608, R0
H-6	FSK-3437B, Rev 1	

2) Valve Vendor Print Numbers

None

Line #: DLA-2
Service: Feedwater discharge from isolation stop check valve to reactor

Design Input Documents:

Piping Class/Summary Sheet: DLA/M190
Seismic Response Spectra: See FSAR
Piping Stress Isometric Drawings: FSK-4345

1) Hanger Drawing Numbers

None

2) Valve Vendor Print Numbers

V-14-58	M141-55(1)-1
V-14-61	M141-55(1)-1

RESULTS OF INSPECTION

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4-1	Group 1 Lines
4-6	Group 2 Lines
4-8	Group 3 Lines
4-11	Computer-Analyzed, Safety-Related Small Pipe
4-18	General Electric Piping

Notes:

1. "Note 1" is shown in the tables where original seismic calculations were not available to determine the number of discrepancies.

2. Discrepancies are defined as anomalies found during comparison of as-built configurations with as-designed configurations.

3. "No nonconformances" is defined as follows:

   - Lines in which comparison found no discrepancies
   - Lines for which stress evaluation found that discrepancies did not invalidate original analysis.

RESULTS OF INSPECTION OF ACCESSIBLE LINES

Group 1 Lines

Line Number	System	Number of Discrepancies	Evaluation Status	Remarks
DBB-1	RHR heat exchanger discharge	None	Evaluation complete, no nonconformance	
EBB-4 includes EBB-1	RCIC	Note 1	Evaluation complete, no nonconformance	Seismic analysis of as-built performed
EBB-6	HPCI	Note 1	Evaluation complete, no nonconformance	Seismic analysis of as-built performed
EBB-17	Core spray	3	Evaluation complete, no nonconformance	
GBB-3	RHR pump discharge	1	Evaluation complete, no nonconformance	Seismic analysis of as-built performed
GBB-5	RHR pump discharge	4	Evaluation complete, no nonconformance	Seismic analysis of as-built performed
GBB-6	RHR pump discharge	2	Evaluation complete, no nonconformance	
GBB-8	RHR pump discharge	3	Evaluation complete, no nonconformance	Seismic analysis of as-built performed
GBB-10	RHR	3	Evaluation complete, no nonconformance	
GBB-13	Core spray	4	Evaluation complete, no nonconformance	
GBB-15	RHR pump discharge to test line	4	Evaluation complete, no nonconformance	Seismic analysis of as-built performed
GBB-18	RHR	2	Evaluation complete, no nonconformance	
GBB-22	RHR	2	Evaluation complete no nonconformance	Seismic analysis of as-built performed
GBB-23	RHR	2	Evaluation complete, no nonconformance	Seismic analysis of as-built performed
GBC-2	RHR service water	7	Evaluation complete, no nonconformance	Seismic analysis of as-built performed

Group [illegible] Lines (continued)

Line Number	System	Number of Discrepancies	Evaluation Status	Remarks
GBC-4	RHR cooling water	1	Evaluation complete, no nonconformance	
GBC-5	RHR service water	7	Evaluation complete, no nonconformance	Seismic analysis of as-built performed
GLE-5	RHR pump test lines to torus	None	Evaluation complete, no nonconformance	
HBB-2	Core spray pump suction	2	Evaluation complete, no nonconformance	
HBB-6	HPCI turbine exhaust	2	Evaluation complete, no nonconformance	
HBB-7	Turbine steam exhaust	1	Evaluation complete, no nonconformance	
HBB-8	HPCI pump suction	1	Evaluation complete, no nonconformance	
HBB-9	HPCI pump suction from condensate	1	Evaluation complete, no nonconformance	
HBB-14	RCIC pump suction	5	Evaluation complete, no nonconformance	
HBB-15	RCIC pump suction from condensate storage tank	2	Evaluation complete, no nonconformance	
HBB-21	RCIC from RHR heat exchanger	8	Evaluation complete, no nonconformance	Seismic analysis of as-built performed
HBB-23	RHR pump suction	8	Evaluation complete, no nonconformance	
HBB-24	RHR pump suction	1	Evaluation complete, no nonconformance	
HBB-25	Drain from fuel pool skimmer	3	Evaluation complete for accessible portions, no non-conformance	Portions inaccessible, pipeway entrance sealed
HBB-29	RHR	1	Evaluation complete, no nonconformance	
HBD-24	Emergency service water	28	Evaluation complete, no nonconformance	Seismic analysis of as-built performed
HBD-26	Emergency service water	2	Evaluation complete, no nonconformance	

Group 1 Lines (continued)

Line Number	System	Number of Discrepancies	Evaluation Status	Remarks
HBD-28	Emergency service water	6	Evaluation complete, no nonconformance	
HBD-31	RHR cooling water	6	Evaluation complete, no nonconformance	
HBD-32	RHR service water	2	Evaluation complete, no nonconformance	
HBD-34	Diesel oil	2	Evaluation complete, no nonconformance	
HBD-61	Diesel-air supply	2	Evaluation complete, no nonconformance	
HBD-67	River water pump discharge	15	Evaluation complete, no nonconformance	
HBD-80	Emergency Service water	6	Evaluation complete, no nonconformance	
HBD-82	Circulating water	4	Evaluation complete, no nonconformance	
HBD-97	Well water	2	Evaluation complete, no nonconformance	
HBD-122	Standby diesel generator	7	Evaluation complete, no nonconformance	
HBD-159	Reactor building chill water	7	Evaluation complete, no nonconformance	
HBD-161	HVAC control building	7	Evaluation complete, no nonconformance	
HCB-2	Standby liquid control	4	Evaluation complete, no nonconformance	
HCC-6	HPCI pump suctions	1	Evaluation complete, no nonconformance	
HCC-7	Condenser and demineralized water	3	Evaluation complete, no nonconformance	
HCC-8	Core spray pump suction	3	Evaluation complete, no nonconformance	

Group 1 Lines (continued)

Line Number	System	Number of Discrepancies	Evaluation Status	Remarks
HLE-1	HPCI suction	None	Evaluation complete, no nonconformance	
HLE-2	RCIC pump suction from torus	None	Evaluation complete, no nonconformance	
HLE-4	Core spray	None	Evaluation complete, no nonconformance	
HLE-5	Turbine steam exhaust	3	Evaluation complete, no nonconformance	
HLE-6	HPCI turbine exhaust	None	Evaluation complete, no nonconformance	
HLE-7	RHR pump suction	1	Evaluation complete, no nonconformance	
HLE-12	Core spray pump discharge	None	Evaluation complete, no nonconformance	
HLE-13	Core spray pump discharge	None	Evaluation complete, no nonconformance	
HLE-15	Core spray pump discharge	None	Evaluation complete, no nonconformance	
HLE-16	Core spray test lines	1	Evaluation complete, no nonconformance	
HLE-18	Core spray test lines	None	Evaluation complete, no nonconformance	
HLE-19	Core spray pump discharge	Note 1	Evaluation complete, no nonconformance	Seismic analysis of as-built performed
HLE-23	Containment vent purge exhaust	Note 1	Evaluation complete for accessible portion, no nonconformance	Seismic analysis of as-built performed; portion sealed in duct chase inaccessible
HLE-24	Torus vent purge exhaust	5	Evaluation complete, no nonconformance	
HLE-25	Containment atmospheric control	2	Evaluation complete, no nonconformance	
HLE-26	Containment atmospheric control	None	Evaluation complete, no nonconformance	

Group 1 Lines (continued)

Line Number	System	Number of Discrepancies	Evaluation Status	Remarks
HLE-27	Torus vacuum breaker	1	Evaluation complete, no nonconformance	
HLE-28	Drywell cooling water	None	Evaluation complete, no nonconformance	
HLE-29	Drywell cooling water	None	Evaluation complete, no nonconformance	

RESULTS OF INSPECTION OF ACCESSIBLE LINES

Group 2 Lines

Line Number	System	Number of Discrepancies	Evaluation Status	Remarks
DBB-2	RHR heat exchanger discharge	None	Evaluation complete, no nonconformance	
EBB-18	Core spray pump discharge	3	Evaluation complete, no nonconformance	
GBB-4	RHR pump discharge	5	Evaluation complete, no nonconformance	Analysis of as-built configuration performed
GBB-7	RHR pump discharge	See GBB-5	Evaluation complete, no nonconformance	Analysis of as-built configuration performed
GBB-9	RHR heat exchanger discharge	See GBB-4	Evaluation complete, no nonconformance	Analysis of as-built configuration performed
GBB-14	Core spray pump discharge	6	Evaluation complete, no nonconformance	Analysis of as-built configuration performed
GBB-16	RHR pumps-test line: RHR heat exchanger discharge	8	Evaluation complete, no nonconformance	
GBC-1	Pumphouse RHR service water	10	Evaluation complete, no nonconformance	
GBC-3	RHR service water return	1	Evaluation complete, no nonconformance	
GLE-6	Core spray pump discharge	See GBB-14	Evaluation complete, no nonconformance	
HBB-1	Core spray pump suction	8	Evaluation complete, no nonconformance	Analysis of as-built configuration performed
HBB-24	RHR pump suction	2	Evaluation complete, no nonconformance	Analysis of as-built configuration performed
HBB-30	RHR reactor building	4	Evaluation complete, no nonconformance	
HBD-25	Emergency service water	11	Evaluation complete, no nonconformance	Analysis of as-built configuration performed

Group 2 Lines (continued)

Line Number	System	Number of Discrepancies	Evaluation Status	Remarks
HBD-27	Emergency service water	3	Evaluation complete, no nonconformance	Analysis of as-built configuration performed
HBD-29	Emergency service water	24	Evaluation complete, no nonconformance	Analysis of as-built configuration performed
HBD-30	RHR service water return	3	Evaluation complete, no nonconformance	
HBD-68	River water supply	13	Evaluation complete, no nonconformance	Analysis of as-built configuration performed
HBD-81	Emergency service water	None	Evaluation complete, no nonconformance	
HBD-160	Chilled water	5	Evaluation complete, no nonconformance	
HBD-162	Chilled water	4	Evaluation complete, no nonconformance	Analysis of as-built configuration performed
HBD-192	Lube oil	Note 1	Evaluation complete, no nonconformance	Analysis of as-built configuration performed
HLE-3	Core spray pump discharge	See HBB-1	Evaluation complete, no nonconformance	Analysis of as-built configuration performed
HLE-8	RHR pump suction	None	Evaluation complete, no nonconformance	
HLE-11	Core spray pump discharge	See GBB-14	Evaluation complete, no nonconformance	Analysis of as-built configuration performed
HLE-14	Core spray pump discharge	See GBB-14	Evaluation complete, no nonconformance	Analysis of as-built configuration performed
HLE-17	RHR heat exchanger discharge	See GBB-4	Evaluation complete, no nonconformance	Analysis of as-built configuration performed

RESULTS OF INSPECTION OF ACCESSIBLE LINES

Group 3 Lines

Line Number	System	Number of Discrepancies	Evaluation Status	Remarks
DBA-002	Turbine main steam	3	Evaluation complete, no nonconformance	None
DBA-003	HPCI	1	Evaluation complete, no nonconformance	None
DBA-004	Steam to RCIC turbine	1	Evaluation complete, no nonconformance	None
DBA-005	RHR	0	Evaluation complete, no nonconformance	Portion inaccessible due to submergence in spent fuel pool
DBA-006 (includes DCA-16)	Control rod	4	Evaluation complete, no nonconformance	None
DBA-7/8	Drain test connection	1	Evaluation complete, no nonconformance	None
DCA-2	RHR	0	Evaluation complete, no nonconformance	None
DCA-006	Cleanup pump suction	2	Evaluation complete, no nonconformance	None
DCA-008 (includes DLA-7)	Core spray discharge	2	Evaluation complete, no nonconformance	None
DCA-009 (includes DLA-8)	Core spray discharge	1	Evaluation complete no nonconformance	None
DLA-001 (includes EBB-5)	HPCI discharge	1	Evaluation complete, no nonconformance	None
DLA-002	Feedwater discharge	1	Evaluation complete, no nonconformance	None
DLA-003	HPCI	6	Evaluation complete, no nonconformance	None
DLA-004 (includes DCA-5)	RHR	1	Evaluation complete, no nonconformance	None

Grou[illegible] Lines (continued)

Line Number	System	Number of Discrepancies	Evaluation Status	Remarks
DLA-005	RHR	7	Evaluation copmlete, no nonconformance	None
DLA-006 (includes DCA-3)	RHR	6	Evaluation complete no nonconformance	None
DLA-007	Core spray discharge	-	Evaluation complete	See DCA-008
DLA-008	Core spray discharge	-	Evaluation complete	See DCA-009
EBB-014	HPCI-RICI	3	Evaluation complete, no nonconformance	None
EBB-016	HPCI turbine steam	Note 1	Evaluation complete, no nonconformance	Seismic analysis of as-built performed
EBB-015	RCIC turbine steam	1	Evaluation complete, no nonconformance	Seismic analysis of as-built performed
EBD-002	Main steam	25	Evaluation complete, no nonconformance	None
GBC-006	Main steam	0	Evaluation complete, no nonconformance	None
GBC-007	Main steam	0	Evaluation complete, no nonconformance	None
GBC-008	Main steam	0	Evaluation complete, no nonconformance	None
GBC-009	Main steam	0	Evaluation complete, no nonconformance	None
GBC-010	Main steam	0	Evaluation complete, no nonconformance	None
GBC-011	Main steam	0	Evaluation complete, no nonconformance	None
GLE-007	RHR pump discharge	2	Evaluation complete, no nonconformance	None
GLE-008 (includes HLE-18)	RHR	4	Evaluation complete, no nonconformance	None
HBD-094	Well water	5	Evaluation complete, no nonconformance	None
HBD-095	Well water supply	3	Evaluation complete, no nonconformance	None

G[illegible] 3 Lines (continued)

Line Number	System	Number of Discrepancies	Evaluation Status	Remarks
HBD-115	Drywell well water	6	Evaluation complete, no nonconformance	None
HBD-116	Well water return	8	Evaluation complete, no nonconformance	None
HBD-64/65	Drywell cooling water	2	Evaluation complete, no nonconformance	None
HLE-006	HPCI turbine exhaust to torus	2	Evaluation complete, no nonconformance	None
HLE-021	Nitrogen	0	Evaluation complete, no nonconformance	None
HLE-030	Drywell floor drains	3	Evaluation complete, no nonconformance	None
HLE-031	Drywell equipment drain	3	Evaluation complete, no nonconformance	None
HLE-032/ HLE-033	Drywell cooling water	7	Evaluation complete, no nonconformance	None
HLE-034	Cooling water	6	Evaluation complete, no nonconformance	None
HLE-035	Well water	4	Evaluation complete, no nonconformance	None
HLE-036	Nitrogen purge supply	1	Evaluation complete, no nonconformance	None
HBD-159	Chilled water	1	Evaluation complete, no nonconformance	Portion is enclosed in metal box and inaccessible.
HBD-160	Chilled water	2	Evaluation complete, no nonconformance	Portion is enclosed in metal box and inaccessible.
HBD-161	Chilled water	6	Evaluation complete, no nonconformance	Portion is enclosed in metal box and inaccessible.
HBD-162	Chilled water	0	Evaluation not performed	Line is enclosed in metal box and inaccessible.

COMPUTER-ANALYZE[illegible]ETY-RELATED SMALL PIPE

Line Number	System	Number of Discrepancies	Evaluation Status	Remarks
CRD-524	CRD scram	1	Evaluation complete, no nonconformance	None
CRD-525	CRD scram	3	Evaluation complete, no nonconformance	None
CRD-526	CRD scram	1	Evaluation complete, no nonconformance	None
DBA-001	Steam line drains containment	3	Evaluation complete, no nonconformance	None
DBA-02A	Steam line drains containment	3	Evaluation complete, no nonconformance	None
DBA-02B	Test connection - MSIV LC system	94	Evaluation complete, no nonconformance	Includes 22 isometrics
DBA-02C	Steam line drains containment	0	Evaluation complete, no nonconformance	None
DBA-004	Steam to RCIC turbine	1	Evaluation complete, no nonconformance	None
DBA-005	RHR pump discharge	3	Evaluation complete, no nonconformance	None
DBA-007	Drain test connection	3	Evaluation complete, no nonconformance	None
DBA-009	Reactor vessel vent	11	Evaluation complete, no nonconformance	Portions of piping inaccessible due to submergence in fuel storage pool
DBA-010	High-pressure leakoff	9	Evaluation complete, no nonconformance	Portions of piping inaccessible due to high conjestion of piping in area
DCA-1/4A (includes large pipe)	Recirculating loop A	0	Evaluation complete, no nonconformance	None
DCA-1/4B (includes large pipe)	Recirculating loop B	2	Evaluation complete, no nonconformance	None
DCA-006	Cleanup pump	1	Evaluation complete, no nonconformance	None

Computer-Analyzed Safety-Related Small Pipe (continued)

Line Number	System	Number of Discrepancies	Evaluation Status	Remarks
DCA-010	Test loop for core spray	2	Evaluation complete no nonconformance	None
DCA-011	HPCI steam	6	Evaluation complete, no nonconformance	Portions of line inaccesslble due to conjestion of piping in area
DCA-013	Standby liquid control	13	Evaluation complete, no nonconformance	None
DCA-17/18	CRDs	8	Evaluation complete, no nonconformance	None
DCA-19A	Recirculation system	3	Evaluation complete, no nonconformance	None
DCA-19B	Recirculation system	2	Evaluation complete, no nonconformance	None
DCA-19C	Recirculation system	2	Evaluation complete, no nonconformance	None
DCA-19D	Recirculation system	18	Evaluation complete, no nonconformance	None
DCA-020	Recirculation system	2	Evaluation complete, no nonconformance	None
DCA-503	Main steam A	3	Evaluation complete, no nonconformance	None
DCA-504	Recirculating system riser	3	Evaluation complete, no nonconformance	None
DCA-505	Recirculating system riser	4	Evaluation complete, no nonconformance	None
DCA-506	Recirculating system riser	3	Evaluation complete, no nonconformance	None
DCA-507	Recirculating system riser	3	Evaluation complete, no nonconformance	None
DCA-508	Temperature column B	8	Evaluation complete, no nonconformance	None
DCA-509	Main steam A	5	Evaluation complete, no nonconformance	None
DCA-510	Main steam D	4	Evaluation complete, no nonconformance	None

Computer-Analyzed Safety-Related Small Pipe (continued)

Line Number	System	Number of Discrepancies	Evaluation Status	Remarks
DCA-511	Main steam D	3	Evaluation complete, no nonconformance	None
DCA-512	Recirculating loop B	2	Evaluation complete, no nonconformance	None
DCA-513	Recirculating loop A	3	Evaluation complete, no nonconformance	None
DCA-514	Reactor water level	4	Evaluation complete, no nonconformance	None
DCA-515	Temperature column B	2	Evaluation complete, no nonconformance	None
DCA-516	Temperature column B	3	Evaluation complete, no nonconformance	None
DCA-519C	Recirculating loop A	1	Evaluation complete, no nonconformance	None
DCA-519D	Recirculating loop A	3	Evaluation complete, no nonconformance	None
DCA-520	Recirculating loop A	2	Evaluation complete, no nonconformance	None
DCA-521	Recirculating loop A	1	Evaluation complete, no nonconformance	None
DCA-522	Recirculating loop A	3	Evaluation complete, no nonconformance	None
DCA-534	Temperature column A	5	Evaluation complete, no nonconformance	None
DCA-535	Temperature column A	6	Evaluation complete, no nonconformance	None
DCA-536	Temperature equalization column A	3	Evaluation complete, no nonconformance	None
DCA-537	Recirculating system riser differential pressure N2G	2	Evaluation complete, no nonconformance	None
DCA-538	Recirculating system riser differential pressure N2F	0	Evaluation complete, no nonconformance	None
DCA-539	Recirculating system riser differential pressure N2H	3	Evaluation complete, no nonconformance	None

Computer-Analyzed Safety-Related Small Pipe (continued)

Line Number	System	Number of Discrepancies	Evaluation Status	Remarks
DCA-540	Main steam A piping X-102 (low-pressure)	1	Evaluation complete, no nonconformance	None
DCA-541	Main steam A piping X-102 (high-pressure)	4	Evaluation complete, no nonconformance	None
DCA-542	Main steam B piping X-102C (low-pressure)	2	Evaluation complete, no nonconformance	None
DCA-543	Main steam line B X-34E (high-pressure)	2	Evaluation complete, no nonconformance	None
DCA-545	Main steam B piping X-102 (high-pressure)	2	Evaluation complete, no nonconformance	None
DCA-546	Main steam C piping X-30 (low-pressure)	2	Evaluation complete, no nonconformance	None
DCA-547	Main steam C	1	Evaluation complete, no nonconformance	None
DCA-548	Main steam C piping X-34B (low-pressure)	1	Evaluation complete, no nonconformance	None
DCA-549	Main steam C piping X-30 (high-pressure)	0	Evaluation complete, no nonconformance	None
DCA-550	Main steam D piping	2	Evaluation complete, no nonconformance	None
DCA-551	Main steam B piping	1	Evaluation complete, no nonconformance	None
DCA-552	Recirculation loop A piping	2	Evaluation complete, no nonconformance	None
DCA-553	Recirculation loop A piping	3	Evaluation complete, no nonconformance	None
DCA-554	Recirculating loop A	2	Evaluation complete, no nonconformance	None
DCA-554	Recirculating loop B	6	Evaluation complete, no nonconformance	None
DCA-555	Recirculating loop B piping	5	Evaluation complete, no nonconformance	None
DCA-556	Recirculating loop B	2	Evaluation complete, no nonconformance	None

Computer-Analyzed Safety-Related Small Pipe (continued)

Line Number	System	Number of Discrepancies	Evaluation Status	Remarks
DCA-557	Recirculating loop B	2	Evaluation complete, no nonconformance	None
DCA-558	Recirculating loop B	4	Evaluation complete, no nonconformance	None
DCA-559	Recirculating loop A	4	Evaluation complete, no nonconformance	None
DCA-560	Recirculating loop B	3	Evaluation complete, no nonconformance	None
DCA-561	Recirculating loop B	5	Evaluation complete, no nonconformance	None
DCA-562	Recirculating loop B	3	Evaluation complete, no nonconformance	None
DCA-563	Recirculation sample	5	Evaluation complete, no nonconformance	None
DCA-569	RCIC steam	1	Evaluation complete, no nonconformance	None
DCA-570	RCIC steam	2	Evaluation complete, no nonconformance	None
DCA-571	RCIC steam	3	Evaluation complete, no nonconformance	None
DCA-574	Jet pump instrumentation	10	Evaluation complete, no nonconformance	None
DCA-578	Jet pump instrumentation	3	Evaluation complete, no nonconformance	None
DCA-579	Jet pump instrumentation	1	Evaluation complete, no nonconformance	None
DCA-580	Jet pump instrumentation	1	Evaluation complete, no nonconformance	None
DCA-581	Jet pump instrumentation	2	Evaluation complete, no nonconformance	None
DCA-582	Jet pump instrumentation	2	Evaluation complete, no nonconformance	None
DCA-584	Jet pump instrumentation	1	Evaluation complete, no nonconformance	None

Computer-Analyzed Safety-Related Small Pipe (continued)

Line Number	System	Number of Discrepancies	Evaluation Status	Remarks
DCA-585	Jet pump instrumentation	1	Evaluation complete, no nonconformance	None
DCA-586	Jet pump instrumentation	1	Evaluation complete, no nonconformance	None
DCA-588	Jet pump instrumentation	2	Evaluation complete, no nonconformance	None
DCA-589	Jet pump instrumentation	1	Evaluation complete, no nonconformance	None
DCA-590	Jet pump instrumentation	1	Evaluation complete, no nonconformance	None
DCA-591	Instrument piping	3	Evaluation complete, no nonconformance	None
DCA-592	Jet pump instrumentation	2	Evaluation complete, no nonconformance	None
DCA-593	Jet pump instrumentation to X-40A	1	Evaluation complete, no nonconformance	None
DCA-594	Jet pump instrumentation to X-40A	1	Evaluation complete, no nonconformance	None
DLA-001	HPCI discharge to feedwater line	0	Evaluation complete, no nonconformance	None
DLA-002	Feedwater discharge from isolation stop check valve to reactor	5	Evaluation complete, no nonconformance	None
DLA-003	Steam to HPCI turbine	0	Evaluation complete, no nonconformance	None
DLA-004	RHR pump suction from reactor recirculating line valve drains	0	Evaluation complete, no nonconformance	None
DLA-5/6	RHR discharge	0	Evaluation complete, no nonconformance	None
EBB-001	RCIC pump discharge	1	Evaluation complete, no nonconformance	None
EBB-002	RCIC pump discharge	0	Evaluation complete, no nonconformance	None
EBB-003	RCIC pump recirculation	2	Evaluation complete, no nonconformance	None

Computer-Analyzed Safety-Related Small Pipe (continued)

Line Number	System	Number of Discrepancies	Evaluation Status	Remarks
EBB-014	HPCI steam side	3	Evaluation complete, no nonconformance	None
EBB-015	Drain pot to main condenser RCIC steam side	2	Evaluation complete, no nonconformance	None
EBB-015	Steam to RHR heat exchanger to CV-2033, CV-1963	6	Evaluation complete, no nonconformance	None
HBC-021	Sump discharge	5	Evaluation complete, no nonconformance	None
HBD-034	Diesel oil piping	1	Evaluation complete, no nonconformance	None
DCA-533	Reactor water level	3	Evaluation complete, no nonconformance	None
DCA-007	RCIC discharge to feedwater line	3	Evaluation complete, no nonconformance	None
HLE-564	Test connection for expansion joint XJ-2400	0	Evaluation complete, no nonconformance	None

General Electric Piping

Line Number	System	Number of Discrepancies	Evaluation Status	Remarks
Loop A	GE main steam	7	Evaluation complete, no nonconformance	None
Loop B	GE main steam	1	Evaluation complete, no nonconformance	None
Loop C	GE main steam	5	Evaluation complete, no nonconformance	None
Loop D	GE main steam	4	Evaluation complete, no nonconformance	None