



**Wisconsin Electric** POWER COMPANY  
231 W. MICHIGAN, P.O. BOX 2046, MILWAUKEE, WI 53201

August 1, 1979

Mr. J. G. Keppler, Director  
Office of Inspection and Enforcement  
Region III  
U. S. NUCLEAR REGULATORY COMMISSION  
799 Roosevelt Road  
Glen Ellyn, Illinois 60137

Dear Mr. Keppler:

DOCKET NOS. 50-266 AND 50-301  
RESPONSE TO IE BULLETIN 79-14  
POINT BEACH NUCLEAR PLANT, UNITS 1 AND 2

On July 2, 1979, the Office of Nuclear Reactor Regulation issued IE Bulletin 79-14 which is entitled, "Seismic Analyses for As-Built Safety-Related Piping Systems". The bulletin requires that licensees verify that the seismic analysis performed for safety-related piping systems applies to the as-built configuration of the piping system. Revision 1 of this bulletin, issued on July 20, 1979, clarifies the application of the original bulletin requirements to piping 2 1/2 inches in diameter and greater and to all Seismic Category I piping which was dynamically analyzed by computer.

Bulletin 79-14 requires three licensee responses which can be summarized as follows:

- a. Within 30 days, submit a detailed listing of the design basis for these systems and identify the inspection elements for verifying acceptability of installed piping systems.
- b. Within 60 days, submit a report of the inspections performed on normally accessible systems; and
- c. Within 120 days, submit a report of the inspections performed on the remaining systems.

This submittal constitutes Wisconsin Electric's first response to IE Bulletin 79-14. The enclosure to this letter presents the requested detailed listing of the design basis used for the safety related piping systems.

*Add: Ltr & Encl*

C. Trammell  
R. LaGrange  
S. Hosford

504 001

*As of 5/11*

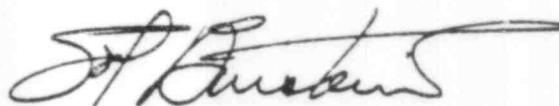
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August 1, 1979

As you are aware, a substantial industry effort is presently ongoing in operating plants to respond to NRC IE Bulletin 79-02. Also, in older operating plants such as the Point Beach Nuclear Plant many areas are not normally accessible except during extended unit outages such as refuelings. Our inspection plan is to inspect all accessible piping as soon as practicable and to inspect the piping systems inside the Unit 1 containment during the Fall 1979 refueling. The piping systems inside the Unit 2 containment will be inspected during the Spring 1980 refueling unless a unit shutdown, during which meaningful inspections could be performed, occurs earlier. This plan should enable us to provide most of the requested information, except for the piping systems inside the Unit 2 containment, within the bulletin specified time intervals.

We trust that you will find this inspection plan satisfactory.

Very truly yours,



Executive Vice President

Sol Burstein

Enclosure

cc: Office of Inspection and Enforcement  
Division of Reactor Operations Inspection

Office of Nuclear Reactor Regulation  
Attention: Mr. A. Schwencer

## ENCLOSURE

### RESPONSE TO NRC IE BULLETIN 79-14

August 1, 1979

This enclosure provides Wisconsin Electric Power Company's first response to IE Bulletin No. 79-14 entitled, "Seismic Analyses for As-Built Safety-Related Piping Systems". This enclosure responds to Item 1 of the bulletin which is as follows:

1. Identify inspection elements to be used in verifying that the seismic analysis input information conforms to the actual configuration of safety-related systems. 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. Also submit a description of the seismic analysis input information which is contained in each document. Identify systems or portions of systems which are planned to be inspected during each sequential inspection identified in Items 2 and 3. Submit all of this information within 30 days of the date of this bulletin.

## RESPONSE

The inspection elements that will be used to verify conformance of the piping systems will include plant plan drawings, pipe hanger and support drawings, valve drawings, and the stress isometric model sketches.

The inspections will be performed on a system basis to the maximum extent possible. Inspection documentation, containing the above elements, will be developed for each system to be inspected. The inspection will verify, or record the actual condition of all pertinent dimensions of the hanger and support locations as well as the piping geometry, pipe attachments, supports, and other pertinent information. Additional inspection items will include verification of pipe nominal size, piping dimensional lengths, existence of branch connections, insulation parameters, valve locations, valve type and mark numbers, valve operators if applicable, and additional piping system concentrated weights (such as flanges).

The piping lines that are to be inspected are identified in Appendix A. The listing in Appendix A identifies the nominal pipe diameter, denotes the accessibility and redundancy of the piping system, and the piping that is common to both units.

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The Point Beach Nuclear Plant spent fuel pool cooling system is not included in the Appendix A listing. During the licensing of the first spent fuel storage rack modification for Point Beach Nuclear Plant (completed in 1975), Wisconsin Electric committed to modifying the spent fuel pool cooling system. The new cooling system was designed as an ASME Section III, Class 3 Seismic Category I system by Stone and Webster Engineering Corporation. Construction of the system was completed in early 1978 and the system has been appropriately "N" stamped. Attached is a Certificate of Conformance provided to Wisconsin Electric by the mechanical contractor for this plant modification. All discrepancies between the design and "as-built" conditions have been resolved and there is adequate documentation to demonstrate the acceptability of this system.

The NRC safety evaluation report for the spent fuel pool cooling system was issued on April 18, 1978, and revised cooling system flow diagrams have been incorporated into the Point Beach Nuclear Plant Final Facility Description and Safety Analysis Report by Amendment No. 24.

Appendix B hereto provides a listing and description of the original design documentation for each of the piping lines identified in Appendix A. Included in Appendix B are:

- a generalized description of the type of design information contained in the design documents
- a listing of applicable piping and pipe support drawings which provides the drawing number and title.
- a listing which identifies the specific design documentation applicable to each piping line contained in Appendix A. This preliminary listing will be completed and retransmitted with Wisconsin Electric's next submittal with respect to NRC IE Bulletin 79-14.

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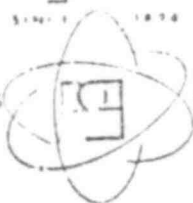
phillips. getschow co.

FILE

MECHANICAL &

NUCLEAR

CONTRACTORS



ENGINEERS / OF PROCESS PIPING • HEATING & AIR CONDITIONING • POWER INDUSTRIAL PIPING  
PIPING FABRICATION • CERTIFIED WELDING • PLUMBING

431 North Dearborn Street • Chicago, Illinois 60610 • 312/644-6116

10 May 1978

Wisconsin Electric Power Company  
231 West Michigan  
Milwaukee, Wisconsin 53201

CERTIFICATE OF CONFORMANCE

○ The Phillips, Getschow Company, hereby certifies, to the best of its knowledge, that the work performed under Contract A-4980C14 and described in Stone & Webster Specification P275B has purchased, fabricated, installed, adjusted and tested in compliance with the specification and all attendant drawings, codes and standards or instructions authorized by the Client's engineering representative.

Where, during the course of construction, this specification, drawings, codes and standards have been deviated from, the Phillips, Getschow Company has, to the best of its ability, achieved timely resolve of such deviations through the Client's engineering representative.

Additionally, we hereby certify that drawings and documentation provided the Client at the completion of the work contain actual "as-built" data and sufficient information to justify design integrity and provide basis for reconciliation of design and stress reports.

Gary L. Marquardt  
Manager-Quality Assurance  
Phillips, Getschow Company

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APPENDIX A

POINT BEACH NUCLEAR PLANT

SEISMIC CATEGORY I LINES

FOR INSPECTION PER

NRC IE BULLETIN 79-14

August 1, 1979

POINT BEACH

SEISMIC CATEGORY I LINES  
FOR NRC IE BULLETIN 79-14

<u>LINE NO.</u>	<u>NOM. DIA.</u> <u>INCHES</u>	<u>SERVICE</u>	<u>INSPECTION</u> <u>TYPE*</u>
CH-2502R-1	3	Charging Pump Disch. to Valves 286-289-290	NR-A
-2	3	Charging Pump Disch. Crossover Line to Seal Injection System (up to 2 Inch piping)	NR-A
-3	3	Charging Pump Disch. Valves 286-289-290 to Regenerative Heat Exchanger	NR-I&A
RC-2501R-1	3	Spray Line from Primary Loop to Pressurizer	R-I
-2	4, 3	Relief Line from Pressurizer through PCV 430 and 431C	NR-I
-3	4	Safety Valve Line from Pressurizer to PCV 434 and 435	R-I
-5	6	Injection into Reactor Vessel	R-I
-6	6	Hot Leg Loop A Injection Line	R-I
-7	10	Cold Leg Loop A Injection Line	R-I
-8	10	Cold Leg Loop B Injection Line	R-I
-9	6	Hot Leg Loop B Injection Line (Stub only)	NR-I
-12	3	Charging Line from CH-2501R-4 (Valve 295) to Loop A Cold Leg	NR-I
-16	10	Residual Heat Removal Line to MOV 700	NR-I
RC-2501R-X	30	Primary Coolant System, Loop A including connections;	R-I
-14	4	Drain	
	3	RTD manifold (flow into RCP) to Valve 560A	
RC-2501R-Y	30	Primary Coolant System, Loop B	R-I
-14	4	Drain	
-10	8	Stub for connections to Drain Tank (2") and Letdown Line (2")	
-14	3	RTD manifold (flow into RCP) to Valve 560B	
RC-2501R-Z	10	Pressurizer Surge Line from Loop B to Pressurizer	NR-I

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<u>LINE NO.</u>	<u>NOM.DIA. INCHES</u>	<u>SERVICE</u>	<u>INSPECTION TYPE*</u>
SI-2501R-1	10	Accumulator (Valve 841) to Cold Leg Loops A & B (thru Valves 842 and 867)	R-I
-2	10	Residual Heat Exchanger Supply to Cold Leg Injection Line (from MOV 720)	NR-I
-3	6	Hot Leg (Loop A & B) Injection Line from 2x6 expander thru Valve 877	R-I
-4	6	Residual Heat Exchanger to Reactor Vessel from MV 852A (redundant with R-5 line)	R-I
-5	6	Reactor Vessel Injection Line from MOV 852B	R-I

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 \* Inspection type is defined as follows:

R - Redundant	A - Accessible (outside containment)
NR - Non-redundant	I - Inaccessible (inside containment)

\*\*Indicates a piping line which is common to both Units 1 and 2.



<u>LINE NO.</u>	<u>NOM. DIA. INCHES</u>	<u>SERVICE</u>	<u>INSPECTION TYPE*</u>
AC-2501R-1	10	Hot Leg A RHR Suction Line (between MOVs 700 and 701)	NR-I
CH-2501R-4	3	Charging Line from Regenerative Heat Exchanger to Valve 295	NR-I
SI-1501R-1	6, 4	Safety Injection Pump Disch. to Injection - Line F.E. 924 and 925	R-A
-2	4	Safety Injection from F.E. 924 to Pipe Reduction to 2 inch diameter (redundant with R-3 line)	R-I&A
-3	4	Safety Injection Disch. from F.E. 925 to Pipe Reduction to 2 inch diameter	R-I&A
AC-601R-1	10	From MOVs 851 A and B (Containment Sump B) to RHR suction (601R-3)	R-A
-2	10, 8	Hot Leg Loop A from MOV-701 to Residual Heat Removal Pump Suction (R-3)	NR-I&A
-3	10	Suction Lines to Residual Heat Removal Pump Suction	R-I&A
-4	8	Residual Heat Removal Pump to Residual Heat Exchanger including crosstie	R-A
-5	6	Bypass around Residual Heat Exchanger (from R-4 to R-6)	NR-A
-6	10, 8, 6	Residual Heat Exchanger Discharge to Valve 720 to loop B cold leg; to valve 742 (RWST); to MOV 871B (spray pumps)	R-I&A
SI-601R-1	10	Refueling Water Storage Tank from MOV 856A and B to Residual Heat Removal Pump Suction (to AC-601R-3)	R-A
-2	6	From Residual Heat Removal System to Reactor Vessel SIS Injection Line to MV 852A or B and valve 720 (redundant to AC-601R-6)	R-I&A
CH-601R-1	10, 3	Nonregenerative Heat Exchanger Pipe and Decay Pipe Inside Containment	NR-I&A
SI-301R-1	6	Discharge from Containment Spray Pump to Spray Nozzles	R-I&A
AC-151R-10	4	Spent Fuel Pool Transfer Canal to and from Recirculation Pump	NR-A

<u>LINE NO.</u>	<u>NOM. DIA. INCHES</u>	<u>SERVICE</u>	<u>INSPECTION TYPE*</u>
CH-151R-1	4, 3	Volume Control Tank to Charging Pumps suction	NR-A
-4	4, 3	Recirc. Pump Discharge Back to Holdup Tanks	NR-A
-8	3	In Letdown Piping - from valve 253 thru Deborating Demineralizers, thru reactor coolant filter (including bypass), and to Volume Control Tank	NR-I&A
-23	8	Boric Acid Tanks to S.I. Pumps (only to valve 827)	R-A
SI-151R-2	16, 12, 10 6	Suction from RWST to Safety Injection Pumps	NR-A R-A
-3	6	Suction from 151R-2 (RWST) to Containment Spray Pumps	R-A
-4	10	Suction from 151R-2 (RWST) to Residual Heat Removal Pumps Upstream of MOVs 856 A and B	NR-A
-5	6	Residual Heat Exchangers to Safety Injection Pump Suction Downstream of Valves 857 A and B	R-A
-6	4	RWST to Charging Pump Suction Upstream of LCV-112B	R-A
-7	8	Boric Acid Tanks to Safety Injection Pumps Suction Line - Downstream of Valves 827 A and B to 151R-2	NR-A
-X	10	From Containment Sump B (Valve 850 A and B) to MOVs 851 A and B (AC-601R-1)	R-I&A
**WD-151R-8	4, 3	Containment Sumps Drain to Auxiliary Building Sump (some piping is common)	R-I&A
-23	4	Component Cooling Surge Tanks and Holdup Tanks Relief Valve Discharge to Waste Holdup Tanks	NR-A
AC-152N-1	14, 10	Component Cooling Pump Discharge to Component Cooling Heat Exch.	R-A
-2	14, 10	Component Cooling Water: from Comp. Cooling Heat Exch. to Comp. Cooling Water Supply Header (N-3)	R-A
-3	14	Component Cooling Water Supply Header	NR-A
-4	6, 4, 3	Comp. Cooling Water through Primary Coolant Pump from Supply Header (N-3) to Return Header (N-7)	R-I&A

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<u>LINE NO.</u>	<u>NOM. DIA. INCHES</u>	<u>SERVICE</u>	<u>INSPECTION TYPE*</u>
AC-152N-6	10	CCW Supply Header through Residual Heat Exch. A (redundant from N-3)	R-A
-7	14	Component Cooling Return Header to CCW Pump Suction (N-15)	NR-A
-10	6	Component Cooling Water through Non-regenerative Heat Exchangers (Back to N-7)	NR-A
-11	6	Component Cooling Water through Boric Acid Evap. (Back to N-7)	NR-A
-12	3	Component Cooling Water through Waste Evap. and Waste Gas Compressor (Back to N-7)	NR-A
**15	10	Return to Component Cooling Pump Suction from N-7, and Unit 2 connection to Valve 722A	R-A
-16	4	Surge Line to Surge Tank (N-15 to tank)	NR-A
DB-1	20, 16	Boiler Feedwater Pumps to Containment Isolation Valves (CV 466 and 476) to EB-9; not Seismic Category I	R-A
-3	4, 3	Emergency FW from Pumps to MOVs 4000 and 4001 and to EB-10, and cross tie between P38A and B	R-A
EB-1	30, 6	Main Steam from Steam Generator thru containment to Non-return check valve; including R. Valve Header and atmospheric discharge to CVs 2015 and 2016	R-I&A
EB-1	24	Main Steam Outside Containment to HP Turbine Control Valves; not Seismic Category I	R-A
-8	3	Main Steam to Aux. FW Pump (from EB-1)	NR-A
-9	16	Boiler FW from Cont. Isolation Valves (see DB-1) to Steam Generators	R-I&A
-10	3	Emergency FW from DB-3, into Containment to Main FW (EB-9)	R-I&A
**HB-19	30, 24, 16, 14, 8, 6	Service Water Supply Header	R-A
-29	22	Diesel Generator Exhaust inside Turbine Building only	R-A
JG-4	10, 8, 6, 4	Aux. FW Pump Suction from Condensate Storage Tanks	R-A

<u>LINE NO.</u>	<u>NOM. DIA. INCHES</u>	<u>SERVICE</u>	<u>INSPECTION TYPE*</u>
**JB-2	20, 14	Service Water Return Header to Circulating Water Discharge	R-A
<u>**Gas Stripper System (S&amp;W Dwg. 12137-FM-6A)</u>			
CH-4-152	2-1/2	From Gas Stripper Trim Coolers to CH-18-152Q (Valve GW72AQ)	NR-A
CH-18-152Q	2-1/2	From CH-4-152 thru Valve VDW-15YZ to CHG-24-152Q	NR-A
CHG-24-152Q	3	Tie from CH-18-152Q to CH-151R-8 from the Reactor Coolant Filter	NR-A
CH-21-152		Supply to Gas Stripper (HX-130A)	NR-A
CH-1-152		From Gas Stripper A to G.S. Recirculating Pump (P-130A)	NR-A
GR-28-152Q	3, 4	From Gas Stripper A to GR-29-152	NR-A
GR-29-152	6, 4	From GR-28-152Q to WD-151R-23 (to Waste Holdup Tank, T-19)	NR-A

The following line numbers provide the duplicate piping runs (in order) for Loop B of this system which serves Unit 2.

CH-11-152  
CH-19-152Q  
CHG-25-152Q  
CH-23-152  
CH-8-152  
GR-30-152Q  
GR-31-152 (ties into GR-29-152)

Additional equipment involved in the gaseous waste disposal system designed by Stone & Webster Engineering Corporation includes the Cryogenic Gas Separation System (D&W Dwg. 12137-FM-7A), steam supply for the evaporators, and service water for cooling.

While the cryogenic system design basis is Seismic Category I, the piping is all 3/4-inch diameter or less.

The steam supply system (S&W dwg. 12137-FM-8A) is not safety-related.

Auxiliary Coolant and Service Water Flow Diagram (S&W Dwg. 12137-FM-9A)

SW-1-121	8	Service Water Supply (HB-19) to Blowdown Evaporator Overhead Condenser (HX-142)	NR-A
SW-2-121	8	SW Discharge from HX-142 to JB-2	NR-A

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<u>LINE NO.</u>	<u>NOM. DIA. INCHES</u>	<u>SERVICE</u>	<u>INSPECTION TYPE*</u>
AC-1-121	6	Cooling Water Supply (from AC-152N-3) to Gas Stripper Equipment	NR-A
AC-2-121	6	Cooling Water Discharge from Gas Stripper Equipment (to AC-152N-7)	NR-A

These four pipelines were inspected and evaluated in April 1979 in response to NRC IE Bulletin 79-07; see Wisconsin Electric's letter of May 2, 1979. Accordingly, no action is required with respect to IE Bulletin 79-14.

Condenser Air Removal Decay System (S&W Dwg. 12137-FM-10A)

This system is seismic category III (see FFDSAR, page 11.3-2) and no action is required with respect to IE Bulletin 79-14.

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APPENDIX B

POINT BEACH NUCLEAR PLANT

LISTING OF ORIGINAL DESIGN DOCUMENTATION

APPLICABLE TO SEISMIC CATEGORY I

SAFETY RELATED PIPING SYSTEMS

August 1, 1979

504 014

## POINT BEACH

### DOCUMENT DESCRIPTION

#### 1. PIPING AND INSTRUMENTATION DIAGRAMS (P&ID's)

A schematic representation of the piping, process control and instrumentation for a specific mechanical system and shows the functional relationship among the various components. A P&ID serves as the primary record of system requirements for piping, duct work, valves, dampers, instruments and related equipment. The following items are schematically represented on P&ID's.

- a. Mechanical equipment
- b. All valves and dampers, including vent and drain valves, except instrument valves and instrument take off root valves.
- c. Local and remote instruments in sufficient detail to delineate the function(s) of the instrumentation and its interface with the process.
- d. Piping and duct work
  - o Piping and ducts
  - o Vent and drain (including valves)
  - o Special fittings
  - o Sampling lines
  - o Permanent startup and flushing connections
- e. Information included
  - o Instrument designations
  - o Equipment names and number
  - o Piping identification
  - o Duct work identification
  - o Valve identification and size, where different from line
  - o Direction of flow
  - o Interfaces for line and duct class change
  - o Interconnection references including grid references
  - o Identification of components furnished by others.

#### 2. PIPING AREA DRAWINGS

These are scale ( $\frac{1}{4}$  in = 1 ft) drawing dimensionally representing all mechanical equipment and piping  $2\frac{1}{4}$  inches and larger. The designation "piping" includes pipe, fittings (elbows, tees, flanges, reducers, etc.), valves, headers, expansion joints,

flow nozzles and other components in the piping system. Valve orientation is also shown.

### 3. PIPING CLASS SUMMARY

This provides a single source document for use in defining the requirements noted below for each process piping line in the plant.

- a. Line identification including class and line number
- b. Line description
- c. Design/service ratings in pressure and temperatures
- d. P&ID number
- e. Seismic category
- f. Insulation Class

### 4. PIPING CLASS SHEETS

The piping class sheets define the characteristics of unique material classes within the piping system. The information contained on the piping class sheets is:

- a. Class - Classes are designated by a two letter code. The first letter designates the primary valve and flange rating; and the second letter the type of material.
- b. Pipe - The pipe material specification is called out for all applicable sizes of pipe for the applicable class sheet. Wall thickness for all sizes is shown.
- c. Fittings - The fitting material specification is specified, along with the type of acceptable weld connection.
- d. Flanges - The flange material specification is called out and also the type of flange to pipe joint and style of flange face.
- e. Gaskets - For all applicable sizes, the recommended gasket material is specified.
- f. Bolting - The bolt and associated nut material are specified.
- g. Valves - The valve rating and applicable valve type is specified.
- h. Joints - The applicable drawing showing the weld



end preparation and weld end transition is referenced.

- i. Branch connection - The drawing of acceptable branch connections is included.

## 5. PIPING CLASS SUMMARY

This provides a single source document for use in defining the requirements noted below for each process piping line in the plant.

- 1) Line identification including class and line number
- 2) Line description
- 3) Design/service ratings in pressure and temperatures
- 4) P&ID number
- 5) Seismic category
- 6) Insulation Classification and thickness

## 6. WESTINGHOUSE FLOW DIAGRAM

These are flow diagrams of the NSSS piping system that are similar to the Bechtel P&ID's. Bechtel did not prepare P&ID's for the NSSS piping system but used the Westinghouse flow diagrams. The primary difference is that the Westinghouse flow diagrams do not show the functional relationship of the instrumentation. There are no Westinghouse flow diagrams for systems having Bechtel P&ID's.

## 7. TUBECO FABRICATION ISOMETRICS

These are isometric presentations of a process piping system in the configuration of the plant. These isometrics were primarily prepared by TUBECO (pipe fabricator at Point Beach) and was used for fabrication and construction. The isometrics were prepared from the area drawings described previously.

## 8. FAILURE AND SEISMIC RESTRAINT AREA DRAWINGS

For Point Beach the seismic and failure restraint locations were drawn on a set of piping area drawings for seismic Category I piping system outside containment. These drawings do not include the pipe supports. For piping inside containment a similar set of drawings were prepared except these also included the pipe supports.

## 9. VALVE AND FLOW ELEMENT VENDOR DRAWINGS

Vendor drawings of valves and other flow control devices, such as restriction orifices, contain design data such as weights and end-to-end dimensions.

## 10. STRESS ISOMETRICS

These were sketches prepared by Bechtel or subcontractor to stress analyze the piping system. They were based on the area drawings.

# POINT BEACH L AWING LIST

## PIPING AREA DRAWINGS

Drawing Number	Title
M-20	Area 1 Turb Bldg piping area dwg. plan operating flr
M-21	Area 1 Turb Bldg piping area dwg. plan/intermediate flr
M-22	Area 1 Turb Bldg piping area dwg. plan/ground flr
M-23	Area 1 Turb Bldg piping area dwg. Section A-A, B-B, C-C and details
M-24	Area 1 Turb Bldg piping area dwg. Section D-D
M-25	Area 1 Turb Bldg piping area Sections E-E, F-F & G-G
M-26	Area 2 Turbine Bldg plan operating flr
M-27	Area 2 Turbine Bldg plan intermediate flr
M-28	Area 2 Turbine Bldg plan ground flr
M-29	Area 2 Turbine Bldg plan Section A-A, C-C
M-30	Area 2 Turbine Bldg plan Section D-D, E-E
M-31	Area 2 Turbine Bldg plan Section B-B, F-F
M-32	Area 2 Turbine Bldg plan Section G-G
M-33	Piping area dwg. area #3 Turbine Bldg plan, Section & Control Room A/C piping
M-34	Piping area dwg. area #3 Turbine Bldg plan intermediate floor
M-35	Piping area dwg. area #3 Turbine Bldg plan ground floor
M-36	Piping area dwg. area #3 Turbine Bldg plan Sections, A-A, B-B, E-E, F-F, and G-G
M-37	Piping area dwg. area #3 Turbine Bldg plan Sections, C-C, K-K, L-L, M-M, and N-N
M-38	Piping area dwg. area #3 Turbine Bldg plan Sections, D-D and H-H
M-39	Area 4 Aux Bldg South M-81 Misc. upper floor
M-40	Area 4 Aux Bldg South plan operating floor
M-41	Area 4 Aux Bldg South plan intermediate floor
M-42	Area 4 Aux Bldg South plan ground floor
M-43	Area 4 Aux Bldg South plan Section A-A
M-44	Area 4 Aux Bldg South plan Section B-B
M-45	Area 4 Aux Bldg South Misc. Sections
M-46	Area 4 Aux Bldg South Misc. Sections and L-L and M-M
M-47	Area 5 Aux Bldg East plan operating floor (M-76, 77, 78, 79, and 98)
M-48	Area 5 Aux Bldg East plan intermediate floor
M-49	Area 5 Aux Bldg East plan ground floor
M-50	Area 5 Aux Bldg East Section A-A
M-51	Area 5 Aux Bldg East Section B-B
M-52	Area 5 Aux Bldg East Sections C-C, D-D, and H-H

## POINT BEACH DRAWING LIST

### PIPING AREA DRAWINGS

Drawing Number	Title
M-53	Area 6 Aux Bldg North plan oper., misc. upper floor North (M-75, 81, and M-99)
M-54	Plan operationg floor
M-55	Plan intermediate floor
M-56	Area 7 containment plan ground floor
M-57	Section A-A
M-58	Section B-B
M-59	Area 7 containment Details of coolant loop conn's
M-60	Area 7 containment plan above El 66'0"
M-61	Area 7 containment plan 46'0" to 66'0"
M-62	Area 7 containment plan El 21'0" to 46'0"
M-63	Area 7 containment plan below El 21'0"
M-64	Area 7 containment Section A-A
M-65	Area 7 containment Section B-B
M-66	Area 7 containment Misc. Sections
M-67	Area 7 containment Clg. wtr piping from Hdrs to Clg coils
M-68	Area 8 Aux Bldg West plan operating floor
M-69	Area 8 Aux Bldg West plan intermediate floor
M-70	Area 8 Aux Bldg West plan ground floor
M-71	Area 8 Aux Bldg West Sections A-A, D-D, E-E, F-F and H
M-72	Area 8 Aux Bldg West Section B-B
M-73	Area 8 Aux Bldg West Section C-C
M-74	Area 8 Aux Bldg West Misc. sections and partial plans
M-75	Area 8 Aux Bldg West Misc. sections
M-76	Pipeway #2 upper plan and sections
M-77	Pipeway #2 lower plan and sections
M-78	Area 5 sections E-E, F-F, and G-G
M-80	Area 7 plan and misc. sect. cont'd. spray
M-81	Areas 4, 6, 7, and 11 misc. details

### PIPING AND INSTRUMENTATION DIAGRAMS

M-200	Unit 1 piping and instr. diagram Legend
M-201	Unit 1 piping and inst. diagram Main and Reheat Stm.
M-202	Unit 1 piping and inst. diagram Cond. and Feedwater
M-207	Service water
M-209	Instr. and Service Air
M-217	Aux. Feedwater system
M-218	Station service water flow req.
M-219	Fuel oil system

504 019

## POINT BEACH DRAWING LIST

### PIPE SUPPORTS

Drawing Number	Title
M-410	Critical piping failure and Seismic restraints details  Sheets 1 thru 15
M-411	Area #4 plan ground floor
M-412	Area #4 plan intermediate floor
M-415	Area #5 plan ground floor
M-416	Area #5 and 8 Operating floor
M-420	Area 6 ground floor
M-425	Pipeway #2 upper plan and sections
M-426	Pipeway #2 lower plan and sections
M-427	Pipeway #3 upper plan and sections
M-428	Pipeway #3 lower plan and sections
M-429	Area 3 plan ground floor
M-430	Area 3 intermediate floor
M-431	
M-433	Area 8 intermediate floor
M-434	Area 8 plan @ (-) 19'3", (-) 5'3", and 8'0"
M-435	Area 8 Aux. Bldg partial plan and misc. sections
M-436	Failure and Seismic restraints Area 6 Misc. upper floor North
M-437	Failure and Seismic restraints Area 4 Misc. upper floor South

### PIPING AREA DRAWINGS

M-2030	Area 10 Turbine Building plan operating floor
M-2021	Area 10 Turbine Building plan intermediate floor
M-2022	Area 10 Turbine Building ground floor
M-2023	Area 10 Turbine Building Sections A-A and B-B
M-2024	Area 10 Turbine Building Section
M-2025	Area 10 Turbine Building Sections D-D, F-F, G-G and H-H
M-2026	Area 9 Turbine Building plan operating floor
M-2027	Area 9 Turbine Building plan intermediate floor
M-2028	Area 9 Turbine Building plan ground floor
M-2059	Piping Area Drawing Area 11 containment loop conn's. Details of coolant
M-2060	Plan El. 66'0"
M-2061	Plan El. 46'0"
M-2062	Plan from El. 21'0" to 46'0"
M-2063	Plan El. 8'0"

# POINT BEACH DRAWING LIST

## PIPING AREA DRAWINGS

M-2064	Section A-A
M-2065	Elevation B-B
M-2066	Misc. sections
M-2067	Clg. WTR. piping from Hrds to clg. coils
M-2076	Pipeway #3 upper
M-2077	" #3 lower
M-2080	Area 11 Plan & Misc. sect. con't spray
M-2200	Piping and instrument legend
M-2201	Main & reheat steam
M-2207	Service water
M-2209	Instrument & service air
M-2213	Lube oil system

## PIPE SUPPORTS

M-2400	Critical piping support assemblies fabrication & erection	Sh. #1
	" " " " " " "	Sh. #2
	" " " " " " "	Sh. #3
	" " " " " " "	Sh. #4
	" " " " " " "	Sh. #5
	" " " " " " "	Sh. #6
	" " " " " " "	Sh. #7
M-2401	Hanger Guidance & Erection dwg. cont. vent 1	
	cont. spray 2	
	El. +66'0" Sh. 3	
M-2402	" " " " from El #46'0" to 66'0"	
M-2403	" " " " 21'0" to 46'0"	
M-2404	" " " " plan El A-A	
M-2405	" " " " " El B-B	
M-2406	" " " " above El 66'0"	
M-2407	Misc. El	
M-2408	Main Steam Hanger Guidance & Erection Support assemblies	Sh. 1
		Sh. 2
M-2409	Steam gen. feedwater hanger guidance & erection pipe support assemblies	Sh. 1
		Sh. 2

## OTHER DOCUMENTS

M-3320	Piping Class Summary - Bechtel
M-3321	Piping Class Summary - Westinghouse

504 021

WESTINGHOUSE DOCUMENTS

110E017	Safety Injection System	Unit 1
110E018	Auxiliary Coolant System	Unit 1
541F094	Chemical & Volume Control System	
541F091	Reactor Coolant System	Unit 1
684J961	Chemical & Volume Control	Unit 1
110E029	Auxiliary Coolant System	Unit 2
110E035	Safety Injection System	Unit 2
541F445	Reactor Coolant System	Unit 2
541F450	Chemical & Volume Control	Unit 2
685J175	Chemical & Volume Control	Unit 2

PREL

DATE

SYSTEM DESCRIPTION	LINE NO.	P. & I. D. REV.	DATE	FLOW DIAGR.	TUBECO ISO #	AREA DWG #	FAILURE & SEISMIC RESTRICT. DWG. #	VALVE TAG #	WEIGHT (incl. Operator)	VENDOR DWG #	STRESS ISO #	
											REV.	DATE
SPRAY LINE FROM PRIM. LOOP TO PRESSURIZER	3"RC-2501R-1	-	-	541F091 1-25-71		M-60, 61 62, 63		PCV-431A PCV-431B			EDS-5 0	
RELIEF LINE FROM PRESSURIZER THRU PCV 430 & 431C	3"RC-2501R-2	-	-	541F091 1-25-71		M-60, 61 & 65		MV515, MV516 PCV430, PCV431C			EDS-13 1	2-11-70
SAFETY VALVE LINE FROM PRESSURIZER	4"RC-2501R-3	-	-	541F091 1-25-71		M-60, 61 & 65		PCV434 PCV435			EDS-13 1	2-11-70
INJECTION INTO REACTOR	6"RC-2501R-5	-	-	541F091 1-25-71		M-62, 63 & 66		--			EDS-8 0	
HOT LEG LOOP A INJECTION LINE	6"RC-2501R-6	-	-	541F091 1-25-71		M-62, 64 & 65		877A			SA 8 0	3-26-70
COLD LEG LOOP A INJECTION LINE	10"RC-2501R-7	-	-	541F091 1-25-71		M-61 thru M-66		867A			EDS-9 0	





10447

PROJECT: POOL BEACH

SYSTEM: SAFETY INJECTION SYSTEM - 7-500

W/

DATE: PREL.

SYSTEM DESCRIPTION	LINE	NO.	P. & I. D. REV. DATE	WEST. FLOW DIAGR.	TUBECO ISO #	AREA DWG. #	PA. URE & SEISMIC RESTRICT. DWG. #	VALVE TAG #	WEIGHT (incl. Operator)	VENDOR DWG #	STRESS ISO# PLV. DATE
ACCUMULATOR (VALVE 841A&B) TO COLD LEG LOOP A & B	10"SI-2501R-1		—	110E017 SHL 7-3-65	11-61 THRU 11-66			MV841A&B, 842 A&B, 867A&B			EDS-9 0 2-4-70 EDS-6 0 2-4-70
RESIDUAL HT. EXCHANGER TO COLD LEG (FROM VALVE 720)	10"SI-2501R-2		—	110E017 7-3-68	11-62, 63 & 64			---			EDS-8 0 2-2-70
RESIDUAL HT. EXCHANGER TO REACTOR VESSEL FROM MV852A	6"SI-2501R-4		—		11-61 THRU 66			853C 853A			EDS-6 0
REACTOR VESSEL INJECTION LINE FROM TV 852B	6"SI-2501R-5		—		11-62, 63 & 66			052B, 853B, 853D			EDS-8 0 2-2-70

504-025

POOR ORIGINAL

SYSTEM. SAFETY INJECTION SYSTEM - 1500

 $\frac{1}{8}$ 

PREL.

SYSTEM DESCRIPTION	LINE NO.	P.S.I.D. REV. DATE	WEST. FLOW DIAGR.	TUBING ISO #	AREA DWG #	FAILURE & SEISMIC RESTRIC. DWG. #	VALVE ON F. E.		VENDOR DWG #	STRESS ISO#	
							TAG #	WEIGHT (incl. Operator)		RLV.	DATE
SAFETY INJECT. PUMP DISCH. TO INJECTION	6"SI-150IR-1	- - 110E07 Sh. 2/8 1/28/71			M-49, 50, 51		889A&B, 888A&B, 829A&B, FE 924 & FE 925			499 0	
SAFETY INJECT. PUMP DISCH. FR. F.E. 925 to COLD LEG to MV-878B-D	4"SI-150IR-3	- - 110E017 Sh. 1&2/10 1/28/71			M-49 50, 51	M-415	866A, MV878B -D			499 0	

504 026

~~POOR ORIGINAL~~

$\frac{1}{2}$ 

PER:

SYSTEM	DESCRIPTION	LINE	NO.	P. & I. D.		WEST. FLOW DIAGR.	TUBECO ISO #	AREA DWG #	FAILURE & SEISMIC RESTRIC. DWG. #	VALVE OR P. E. TAG #	WEIGHT (incl. Operator)	VENDOR DWG #	STRESS ISO#	
				REV.	DATE								REV.	DATE
	REFUELING WATER STORAGE TANK FROM MV856A-B TO RHR PUMP SUCTION	10" ST-601R-1		-	1106017 SH.2 1-28-71					MV 856 A & B 854 A & B				
	FROM RHR SYSTEM TO REACT. VESSEL SIS INJECTION LINE TO MV852A&B & 720	6" ST-601R-2		-	1106017 SH.1 1-29-71					FE 928				

504 027

CH 104:7

PROJECT: Point Beach

SYSTEM: SAFETY INJECTION SYSTEM - 150 %

PREL.

SYSTEM DESCRIPTION	LINE NO.	P.S.I.D. REV.	WEST. FLOW DIAGR.	TUBECO ISO #	AREA	FAILURE & SEISMIC RESTRICT. DIAG. #	TAG #	VALVE OP. F. E. (incl. Operator)	STRESS ISO#	
									REV.	DATE
SUCT. FROM RWST TO SAFETY INJECTION PUMP	16" SI-151R-2 SI-151R-2	-	110E017 SH.2 1-29-71		M-42, 49, 51, & 52		MV896A&B, 894 MV825A&B, 895			
SUCT. TO CONTAINMENT SPRAY PUMPS	6" SI-151R-3	-	110E017 SH.2 1-29-71		M-42, 49, 51, & 52		MV870A&B 858A&B MV871A&B 831C&D			
SUCT. TO RHR PUMPS UPSTREAM OF MV856A&B	10" SI-151R-4	-	110E017 SH.2 1-29-71							
RES. HT. EXCH. TO SAFETY INJ. PUMP DOWNSTREAM OF V857A&L	6" SI-151R-5	-	110E017 SH.2 1-29-71				857 A & B			
RWST TO CHARGING PUMP SUCT. UPSTREAM OF LCY-112B	4" SI-151R-6	-	641J741 110E017 SH.2		M-41, 42, 44	M-41				
BORIC ACID TANKS TO SAFETY INJECT. PUMPS SUCT. LINE-DOWNSTREAM OF VALVES 827A&B	8" SI-151R-7	-	110E017 SH.2 1-29-71				MV827A&B MV826A & B & C		701	

504 028

504 10447

PRODUCTION FINE PRINT

87

SYSTEM, FIELD & VALVE TAGS - 2/2/66

PREL

SYSTEM DESCRIPTION	LINE	NO.	P.A.I.D. PLV. DATE	WST. FLOW DIAGRAM	TUBING ISO #	AREA	REL. PRIC. DRG. #	TAG #	VALVE (TAG) Operator	VALVE TAG #
CHARGING PUMP DISCH. TO VALVES 286, 289, 290	3"CH-2502R1		—	SH.1 3-27-70		M-62 -65 -66		286, 289, 290		
CHARGING PUMP DISCH. CROSS OVER LINE TO SEAL-INJECTION SYSTEM	3"CH-2502R-2		—	SH.1		M-62 -65 -66		287, 288, 291 275		
CHARGING PUMP DISCH. VALVES 286, 289, 290 TO REG. HEAT EXCHANGER	3"CH-2502R-3		—	SH.1		M-62 -65 -66		384A & B HCV142, 370	SA-6 0	

504 029

POOR ORIGINAL

sheet 1 of 1

PROJECT: Point Beach  
SYSTEM: CHEMICAL & VOLUME CONTROL - 150 8/1

PREL.

SYSTEM DESCRIPTION	LINE	NO.	P. & I. D. REV. DATE	WEST. FLOW DIAGR.	TUBECO ISO #	AREA DWG #	FAILURE & SEISMIC RESTRAINT DWG. #	VALVE OR F. E. TAG #	WEIGHT (incl. operator)	VENDOR		STRESS ISO#	
										DWG #	REV.	DATE	
VOL. CONTROL TANK TO CHARGING PUMPS	4" CH-151R-1		— 5 2-26-70	684J741		M-41, 42 43 & 48		MV112 B & C, 266, 267, 268, 269, 399, 281A B & C, 357, 358			726 2	3-27-70	
RECIRC. PUMP DISCH. BACK TO HOLDUP TANK	CH-151R-4		— 6 3-4-71	684J961		M-41, 42 43 & 48		1104A, B & C 1120A & B, 1100, 1132, 1109, 1110			465 SH1-SH4 0		
FROM NON-REGENERATIVE HT. EXCHANGER DOWN- STREAM OF CV THROUGH DEMINEALIZERS INCLUDING DRAINS, VENTS, ETC. ON DEMINEALIZERS & TO VOL. CONTROL TANK	3" CH-151R-8		— 5 2-26-70	684J741		M-41, 42 43 & 48		TCV145, 239 A&B 212, 223, 225, 373, 372, 216, 246, 379, 380, 228, 211, 244, 245, 226A&B, 227A&B, 230A&B, 237A&B, 238A&B, 247, 249A&B, 250, LCV112A, 277, 256A&B, 254			465 SH1-4 0		
BORIC ACID TANK TO S.I. PUMPS	8" CH-151R-23		— 5 2-26-70	684J741		M-47 & 50		—			701 0		

504 030

POOL ORIGINAL

1994, 1995, 1996, 1997, 1998, 1999, 2000, 2001, 2002, 2003, 2004, 2005, 2006, 2007, 2008, 2009, 2010, 2011, 2012, 2013, 2014, 2015, 2016, 2017, 2018, 2019, 2020, 2021, 2022, 2023, 2024, 2025, 2026, 2027, 2028, 2029, 2030, 2031, 2032, 2033, 2034, 2035, 2036, 2037, 2038, 2039, 2040, 2041, 2042, 2043, 2044, 2045, 2046, 2047, 2048, 2049, 2050, 2051, 2052, 2053, 2054, 2055, 2056, 2057, 2058, 2059, 2060, 2061, 2062, 2063, 2064, 2065, 2066, 2067, 2068, 2069, 2070, 2071, 2072, 2073, 2074, 2075, 2076, 2077, 2078, 2079, 2080, 2081, 2082, 2083, 2084, 2085, 2086, 2087, 2088, 2089, 2090, 2091, 2092, 2093, 2094, 2095, 2096, 2097, 2098, 2099, 2100, 2101, 2102, 2103, 2104, 2105, 2106, 2107, 2108, 2109, 2110, 2111, 2112, 2113, 2114, 2115, 2116, 2117, 2118, 2119, 2120, 2121, 2122, 2123, 2124, 2125, 2126, 2127, 2128, 2129, 2130, 2131, 2132, 2133, 2134, 2135, 2136, 2137, 2138, 2139, 2140, 2141, 2142, 2143, 2144, 2145, 2146, 2147, 2148, 2149, 2150, 2151, 2152, 2153, 2154, 2155, 2156, 2157, 2158, 2159, 2160, 2161, 2162, 2163, 2164, 2165, 2166, 2167, 2168, 2169, 2170, 2171, 2172, 2173, 2174, 2175, 2176, 2177, 2178, 2179, 2180, 2181, 2182, 2183, 2184, 2185, 2186, 2187, 2188, 2189, 2190, 2191, 2192, 2193, 2194, 2195, 2196, 2197, 2198, 2199, 2200, 2201, 2202, 2203, 2204, 2205, 2206, 2207, 2208, 2209, 2210, 2211, 2212, 2213, 2214, 2215, 2216, 2217, 2218, 2219, 2220, 2221, 2222, 2223, 2224, 2225, 2226, 2227, 2228, 2229, 2230, 2231, 2232, 2233, 2234, 2235, 2236, 2237, 2238, 2239, 2240, 2241, 2242, 2243, 2244, 2245, 2246, 2247, 2248, 2249, 2250, 2251, 2252, 2253, 2254, 2255, 2256, 2257, 2258, 2259, 2260, 2261, 2262, 2263, 2264, 2265, 2266, 2267, 2268, 2269, 2270, 2271, 2272, 2273, 2274, 2275, 2276, 2277, 2278, 2279, 2280, 2281, 2282, 2283, 2284, 2285, 2286, 2287, 2288, 2289, 2290, 2291, 2292, 2293, 2294, 2295, 2296, 2297, 2298, 2299, 2300, 2301, 2302, 2303, 2304, 2305, 2306, 2307, 2308, 2309, 2310, 2311, 2312, 2313, 2314, 2315, 2316, 2317, 2318, 2319, 2320, 2321, 2322, 2323, 2324, 2325, 2326, 2327, 2328, 2329, 2330, 2331, 2332, 2333, 2334, 2335, 2336, 2337, 2338, 2339, 2340, 2341, 2342, 2343, 2344, 2345, 2346, 2347, 2348, 2349, 2350, 2351, 2352, 2353, 2354, 2355, 2356, 2357, 2358, 2359, 2360, 2361, 2362, 2363, 2364, 2365, 2366, 2367, 2368, 2369, 2370, 2371, 2372, 2373, 2374, 2375, 2376, 2377, 2378, 2379, 2380, 2381, 2382, 2383, 2384, 2385, 2386, 2387, 2388, 2389, 2390, 2391, 2392, 2393, 2394, 2395, 2396, 2397, 2398, 2399, 2400, 2401, 2402, 2403, 2404, 2405, 2406, 2407, 2408, 2409, 2410, 2411, 2412, 2413, 2414, 2415, 2416, 2417, 2418, 2419, 2420, 2421, 2422, 2423, 2424, 2425, 2426, 2427, 2428, 2429, 2430, 2431, 2432, 2433, 2434, 2435, 2436, 2437, 2438, 2439, 2440, 2441, 2442, 2443, 2444, 2445, 2446, 2447, 2448, 2449, 2450, 2451, 2452, 2453, 2454, 2455, 2456, 2457, 2458, 2459, 2460, 2461, 2462, 2463, 2464, 2465, 2466, 2467, 2468, 2469, 2470, 2471, 2472, 2473, 2474, 2475, 2476, 2477, 2478, 2479, 2480, 2481, 2482, 2483, 2484, 2485, 2486, 2487, 2488, 2489, 2490, 2491, 2492, 2493, 2494, 2495, 2496, 2497, 2498, 2499, 2500, 2501, 2502, 2503, 2504, 2505, 2506, 2507, 2508, 2509, 2510, 2511, 2512, 2513, 2514, 2515, 2516, 2517, 2518, 2519, 2520, 2521, 2522, 2523, 2524, 2525, 2526, 2527, 2528, 2529, 2530, 2531, 2532, 2533, 2534, 2535, 2536, 2537, 2538, 2539, 2540, 2541, 2542, 2543, 2544, 2545, 2546, 2547, 2548, 2549, 2550, 2551, 2552, 2553, 2554, 2555, 2556, 2557, 2558, 2559, 2560, 2561, 2562, 2563, 2564, 2565, 2566, 2567, 2568, 2569, 2570, 2571, 2572, 2573, 2574, 2575, 2576, 2577, 2578, 2579, 2580, 2581, 2582, 2583, 2584, 2585, 2586, 2587, 2588, 2589, 2590, 2591, 2592, 2593, 2594, 2595, 2596, 2597, 2598, 2599, 2600, 2601, 2602, 2603, 2604, 2605, 2606, 2607, 2608, 2609, 2610, 2611, 2612, 2613, 2614, 2615, 2616, 2617, 2618, 2619, 2620, 2621, 2622, 2623, 2624, 2625, 2626, 2627, 2628, 2629, 2630, 2631, 2632, 2633, 2634, 2635, 2636, 2637, 2638, 2639, 2640, 2641, 2642, 2643, 2644, 2645, 2646, 2647, 2648, 2649, 2650, 2651, 2652, 2653, 2654, 2655, 2656, 2657, 2658, 2659, 2660, 2661, 2662, 2663, 2664, 2665, 2666, 2667, 2668, 2669, 2670, 2671, 2672, 2673, 2674, 2675, 26

PREL.

[illegible]

504 031

FROM DESIGN



PREL.

SYSTEM DESCRIPTION	LINE	NO.	P. & I. D. REV.	WEST. FLOW DIAGR.	TUBECO ISO #	AREA DWG #	LINE INDEX	VALVE OR F. E. TAG #	WEIGHT (incl. Operator)	VENDOR DWG #	STRESS ISO#	
											REV.	DATE
COMPONENT COOLING PUMP DISCH. TO COMPONENT COOLING HT EXCH.	14" AC-152N-1 10" AC-152N-1		—	119P013 SH. 1 2-21-70				724A&B, 725A&B 728A, 726A&B 722B, 784				
COMPONENT COOLING WATER FROM COMP. COOLING HEAT EXCH. TO COMPONENT COOLING WATER SUPPLY HEADER	14" AC-152N-2 10" AC-152N-2		—	SH. 3		M-47, 48 49, 70 & 72		721A&B, 728B 727A&B				
COMP. COOLING WATER SUPPLY HEADER	14" AC-152 N-3		—	SH. 1, 2 & 3		M-47, 48 49, 70 & 72		---			722 0	4-7-70
COMP. COOLING WATER THRU PRIM. COOLANT PUMP FROM SUPPLY HDR. TO RETURN HDR.	3" 4" 6" AC-152N-4		—	SH. 2		M-49, 51 M-61 THRU 66		MV719, MV754A & B, 755A&B, 756A&B, 761A&B, 758A&B, 761A&B, 745, 765A&B, MV759A&B, 763 A&B			SA-5 0	
SUPPLY HDR. THROUGH RESIDUAL HT. EXCH. A	10" AC-152N-6		—	SH. 1		M-49 & 51		MV738A&B, 739A&B 824A&B, 736A&B			722 0	4-7-70
COMP. COOLING RETURN HDR.	14" AC-152N-7		—	SH. 1, 2 & 3		M-49 & 51		---			725 2	4-6-70



NO 10447

PROJECT: Point Beach

SYSTEM: AUX. COOLANT SYSTEM - 152N

PREL.

SYSTEM DESCRIPTION	LINE NO.	P. & I. D. REV. DATE	WEST. FLOW DIAGR.	TUBECO. ISO #	AREA DWG #	LINE INDEX	VALVE OR F. E.		STRESS ISO#	
							TAG #	WEIGHT (incl. Operator)	REV.	DATE
COMP. COOLING WATER THROUGH NON-REG. HT. EXCH.	6"AC-152N-10	-	SH. 3 2-21-70	M-49 & 51	740A & B TCV 130 F.E. 601				2	4-6-70
COMP. COOLING WATER THROUGH BORIC ACID EVAP. & DISTILLATE COOLER	6"AC-152N-11	-	SH. 3	M-49 & 51	744 A&B 748 A&B F.E. 642			725	2	4-6-70
COMP. COOLING WATER THROUGH WASTE EVAP. & WASTE GAS COMPRESSOR	3"AC-152N-12	-	SH. 2	M-49 & 51	732A, B, C, D, E, & F 743A, B & C 776A & B FE-647					
RETURN HDR. TO COMP. COOLING PUMP SUCT.	10"AC-152N-15	-	SH. 3	M-49, 48 & 51 & 98	723 A&B			724	2	4-6-70
SURGE LINE TO SURGE TANK	4"AC-152N-16	-	SH. 3	M-49, 48 & 51	RCV-17, 779, 777C, 774			724	2	4-6-70

504 033

POOR ORIGINAL

PREL.

POOR ORIGINAL

NO 10447

PROJECT: POINT BEACH

UN

SYSTEM: MAIN STEAM, FEEDWATER &

8/1

DATE

PREL.

SERVICE WATER

SYSTEM DESCRIPTION	LINE NO.	B P.&I.D. REV. DATE	WEST. FLOW DIAGR.	TUBECO ISO #	AREA DWG. #	FAILURE & SEISMIC RESTRIC DWG. #	VALVE OR F.		VENDOR DWG. #	STRESS	ISO #
		TAG #	WEIGHT (incl. Operator	REV.	DATE						
MAIN STEAM-OUTSIDE CTMT LOOP "A"	30"-EB-1	M-201	—		M-27, 34, 39, 47, 48 & 60		CV-2017 CV-2018			SK-M-1979	
		9 7- 16-71							5	5-6-79	
MAIN STEAM TO AUX. FEEDWATER PUMP	3"-EB-8	M-201	—		M-35, 39 45, 47 48 & 49						
		9 7- 16-71									
BOILER FEEDWATER INSIDE CTMT-LOOP "A"	16"-EB-9	M-217	—		M-60 thru 63					EDS 3	
		12 7- 16-71							0	1-26-70	
BOILER FEEDWATER INSIDE CTM-LOOP "B"	16"-EB-9	M-217	—		M-60 THRU 63					EDS 4	
		12 7- 16-71							0	1-26-70	
EMERGENCY FEEDWATER LOOP "A"	3"-EB-10	M-217	—		M-60 THRU 63					EDS-3	
		12 7- 16-71							0	1-26-70	
EMERGENCY FEEDWATER LOOP "B"	3"-EB-10	M-217	—		M-60 thru 63					EDS 4	
		12 7- 16-71							0		
									EDS 4		
SERVICE WATER	HE-19	M-207	—		M-61 THRU 66					0	1-26-70
		11 7- 16-71							SA-1		
									0		
DIESEL EXHAUST	22"-HB-29	M-219	—		M-31, 35, 36 & 37						
		9 7- 16-71									

504 035

POOL CONTROL

SYSTEM: SERVICE WATER RETURN &amp; AUX. F.W.

PREL.

PUMP SUC: ON - JB

SYSTEM DESCRIPTION	LINE NO.	P. & I. D. REV. DATE	WEST. FLOW DIAGR.	TUBECO. ISO #	AREA DN# #	FAILURE & SEISMIC NESTRIC DN# #	TAG	VALVE OP P. I. D.	WEIGHT (incl. Operator)	VENDOR DN# #	STRESS ISO#	
											REV.	DN# #
SERVICE WATER RETURN	20"-JB-2 14"-JB-2	11-207 11-7- 16-71	—		1-35, 47 48 & 49							
AUX. FW PUMP SUCTION	4" 6" 3" 10"	11-217 12-7- 16-71	—		M-34, 35, 36 6 38						EDS-737 0	4-13-70

POOR CRIMINAL