

WISCONSIN PUBLIC SERVICE CORPORATION



P.O. Box 1200, Green Bay, Wisconsin 54305

August 9, 1979

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

Dear Mr. Keppler:

Docket 50-305
Operating License DPR-43
IE Bulletin 79-14
Seismic Analysis for As-Built Safety-Related Piping Systems

The above referenced bulletin has been received and reviewed. In accordance with the bulletin an inspection program consisting of verifying that the as-built seismic Class I safety-related systems conform to the seismic analyses has been initiated.

The attachment to this letter responds to Item 1 of the bulletin identifying the inspection elements that are input to the seismic analysis. The majority of the inspections has been performed, including normally inaccessible portions of systems, and we expect to have these results for response to Items 2 and 3 of the bulletin by the first week of September. To date no major discrepancies have been found.

As related to Mr. Choules of your office in a phone conversation with our Mr. Marchi on August 6, 1979, we required slightly longer than the allowed 30 days to collect and formulate the large amount of information detailed in the attachment.

Very truly yours,

Handwritten signature of E. R. Mathews in cursive.

E. R. Mathews, Vice President
Power Supply & Engineering

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Attach.

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The following inspection elements are used to verify that seismic analysis input information conforms to the actual configuration of safety related systems.

- a. Pipe configuration
- b. Pipe dimensions
- c. Valve and/or operator location
- d. Valve and/or operator type
- e. Valve and/or operator weight
- f. Valve and/or operator center of gravity
- g. Support and restraint location
- h. Support and restraint type
- i. Support and restraint design details

Items a through c, g and h are shown on the pipe stress analysis isometric drawings. Item i is shown on the support design sketch. The isometric drawings and support design sketches (excluding the sketches used in response to IE Bulletin 79-02 and IE Bulletin 79-04) are utilized for the field inspection. The valve and/or operator weight and valve center of gravity are verified by using vendor's drawings and/or vendor's catalog.

Detailed information of design documents including title, drawing identification number, revision, and date, which were used as input for seismic analysis are included in the attached tables.

A description of the design documents common for all safety related systems (except the pipe physical drawings) are as follows:

1. Technical Specification for Station Piping No. 204, revision 10/25/71.

This document contains piping design pressure and temperature, pipe material and schedules, insulation material and insulation thickness

requirement and specification for fittings and flanges.

2. John A. Blume and Associates, Engineers, Kewaunee Nuclear Generating Plant Earthquake Analysis: Reactor - Auxiliary - Turbine Building Report No. JAB-PS-01, 4/6/71 revision.

It contains the maximum accelerations and displacement at specified elevations of every building.

3. John A. Blume and Associates, Engineers, Kewaunee Nuclear Generating Plant Earthquake Analysis: Reactor - Auxiliary - Turbine Building Response Acceleration Spectra, Report No. JAB-PS-03, 4/6/71 revision.

It contains response acceleration spectra for each floor and/or selected elevation of each building.

4. Kewaunee Plant Final Safety Analysis Report Section B.7.

Design criteria for Components. Amendment 10; 9/15/71.

It contains design criteria for Class I Vessels, Piping and Supports.

The pipe physical drawing contains the dimensions of piping. The pipe physical drawings for 2-1/2" and under field routed piping are in isometric format with additional information showing the type of supports and their location.

The inspection program is intended to cover all seismic category 1 safety related equipment, including:

- a. Service Water System
- b. Auxiliary Coolant System
- c. Auxiliary Feedwater System
- d. Containment Spray System
- e. Safety Injection
- f. Safety related portion of the Chemical and Volume Control System
- g. Safety related portion of the Main Steam System.

PIPING PHYSICAL DRAWING LIST

SYSTEM: Main Steam And Auxiliary Steam

Portion/Part	Drawing Number	Title	Revision	Date
Main Steam	M238	Main, Aux. Steam & Steam Dump	AE	9/25/73
	M239	"	AE	5/16/73
	M240	"	S	4/4/73
	M241	"	T	2/9/73
	M410	Main Steam Encapsulation Jet Impingement & Restraint Sleeves	O	6/7/73
	M411	"	A	6/7/73
	M412	"	-	6/7/73
	M413	"	-	6/7/73
Aux. Steam Supply to Turbine Driven Aux. Feedwater Pump	M414	"	C	9/4/73
	M310	Steam Supply to Turbine Driven Aux. Feedwater Pump	F	1/16/71
Aux. Feedwater Turbine Exhaust	M275	Miscellaneous Relief Vent & Exhaust Piping	L	1/11/74
	M279	"	K	11/2/73

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PIPING PHYSICAL DRAWING LIST

SYSTEM: Steam Generator Blowdown System

Portion/Part	Drawing Number	Title	Revision	Date
Steam Gen. Blowdown (Inside Containment)	SKM-1247	Isometric of Steam Generator Blowdown piping & Letdown Piping (CVCS System)	H	4/23/73
Steam Gen. Blowdown (Outside Containment)	SKM-1448	Isometric of Steam Generator Blowdown Piping	A	8/26/77

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PIPING PHYSICAL DRAWING LIST

SYSTEM: <u>Feed Water</u>				
Portion/Part	Drawing Number	Title	Revision	Date
Main Feedwater	M247	Feedwater Piping	T	11/11/71
	M248	"	P	9/9/71
	M249	"	Q	9/9/71
Auxiliary Feedwater	M247	Feedwater Piping	V	2/24/72
	M248	"	S	1/31/72
	M249	"	R	4/16/72
Suction Lines of Aux. Feedwater Pumps & Turbine Driven Pump	M264	Service Water	J	1/11/71
	M256	Condensate Make-up Dump and Supply to Aux. Feedwater Pump	E	1/19/71
	M257	"	D	11/24/70

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PIPING PHYSICAL DRAWING LIST

SYSTEM: <u>Safety Injection (Inside Containment)</u>				
Portion/Part	Drawing Number	Title	Revision	Date
Line 28E, 28N, 103 & 104, 10, 100, 102 & 103	M359	Reactor Bldg. Piping - Chem. & Volume Control, Auxiliary Coolant & Safety Injection	P	7/6/73
	M360	"	P	6/29/73
	M361	"	P	10/1/73
	M362	"	R	10/5/73
Line 48	M359	Reactor Bldg. Piping - Chemical & Volume Auxiliary Coolant & Safety Inspection	P	7/6/73
	M360	"	P	6/29/73
	M361	"	N	6/21/73
	M362	"	P	7/6/73
Line 101	M359	Reactor Bldg. Piping, Chemical & Volume Auxiliary Coolant & Safety Injection	D	3/29/71
	M360	"	E	5/7/71
	M361	"	E	5/7/71
	M362	"	E	5/7/71
Relief Valve SI-114-2 Piping	SKM 1387	Safety Injection Relief Valve Piping	A	1/17/74

PIPING PHYSICAL DRAWING LIST

SYSTEM: Safety Injection (Outside Containment)

Portion/Part	Drawing Number	Title	Revision	Date
S. I. Pumps Suction and Discharge lines	M332	Safety Injection Piping	G	11/1/71
	M339	"	J	12/8/71
	M340	"	F	6/18/71

PIPING PHYSICAL DRAWING LIST

SYSTEM: <u>Residual Heat Removal</u>				
Portion/Part	Drawing Number	Title	Revision	Date
RHR Pumps suction and discharge	M324	Residual Heat Removal Piping	R	11/11/71
	M325	"	K	9/9/71
Lines 103, 104, 105, and 106	M324	Residual Heat Removal Piping	Q	9/9/71
	M325	"	K	9/9/71
	M326	Auxiliary Coolant Piping	F	2/7/71
	M327	"	E	2/7/71
	M328	"	F	2/7/71
Line 9 Inside Containment	M359	Reactor Bldg. Piping-Chem. & Volume Control, Auxiliary Coolant and Safety Injection	G	9/13/71
	M360	"	G	9/13/71
	M361	"	G	9/13/71
	M362	"	G	9/13/71
RHR Relief Piping	M361	"	T	8/17/77

PIPING PHYSICAL DRAWING LIST

SYSTEM: <u>Auxiliary Coolant (Outside Containment)</u>				
Portion/Part	Drawing Number	Title	Revision	Date
Parts I, IV, VI	M326	Auxiliary Coolant Piping	K	11/11/71
	M327	"	L	5/25/72
	M328	"	M	2/8/72
Parts II & V	M326	Auxiliary Coolant Piping	H	6/13/72
	M327	"	P	11/21/72
	M328	"	V	6/11/73
Miscellaneous Equipment Piping (Field routed)	SKM 1271	Isometric - Auxiliary Coolant Piping Miscellaneous Equipment	G	1/17/73
	SKM 1423	Relief Valve for Distillate Cooler & Evaporator Condenser	-	1/17/74

PIPING PHYSICAL DRAWING LIST

SYSTEM: Auxiliary Coolant (Inside Containment)

Portion/Part	Drawing Number	Title	Revision	Date
LINES: 32E, 32N, 33N and 129, 33E, 39 & 40	M359	Reactor Bldg. Piping - Chemical and Vol. Control, Auxiliary Coolant and Safety Injection	D	3/30/71
	M360	"	"	"
	M361	"	"	"
	M362	"	"	"
	SKM 1196	Isometric - Auxiliary Coolant Piping	F	2/18/73
	SKM 1429	Auxiliary Coolant System Lines 32 & 33E	-	2/16/71
Relief Valve AC-107-1 Piping	SKM 1386	Auxiliary Coolant At Valve No. A-C-107-1	B	1/17/74
Relief Valve AC-110-1 Piping	SKM 1388	Auxiliary Coolant at Valve No. AC-110-1	B	1/17/74

PIPING PHYSICAL DRAWING LIST

SYSTEM: Containment Spray

Portion/Part	Drawing Number	Title	Revision	Date
Containment Spray (Inside Containment)	M356	Reactor Bldg. Piping - Service Water, Station Air Steam Gen. Blowdown Containment Spray	D	3/23/71
	M357	"	D	3/23/71
	M358	Reactor Bldg. Piping-Internal Containment	G	3/23/71
	M367	"	D	6/1/71
Containment Spray (Outside Containment)	M329	Containment Spray Piping	B	6/29/70
	SKM-1272	Isometric Miscellaneous Systems DETAIL "A" Internal Containment Spray Piping Test Line & Recirculation DETAIL "B" Internal Containment Spray Piping Purification Piping	G	4/26/74
	SKM 1389	Relief Valve Piping At Containment Spray Pumps	B	1/17/74

PIPING PHYSICAL DRAWING LIST

SYSTEM: <u>Reactor Coolant</u>				
Portion/Part	Drawing Number	Title	Revision	Date
Lines: 137 & 138 RTD Piping	M365	Reactor Bldg. Piping - Chem. & Volume Control Sample, Reactor Coolant, Waste Disposal	G	12/7/71
Lines: 111, 112, 113, Pressurized Relief Piping and Auxiliary Spray Piping	M363	Reactor Bldg. Piping-Chem. & Vol. Control Sample, Reactor Coolant, Waste Disposal	E	5/25/71
	M364	"	E	5/25/71
	M365	"	E	5/25/71
	M366	"	E	5/25/71

PIPING PHYSICAL DRAWING LISTSYSTEM: Service Water (Outside Containment)

Portion/Part	Drawing Number	Title	Revision	Date
Screenhouse Piping	M-231	Screenhouse Piping	C	12/30/72
	M-232	"	G	3/2/71
	M-233	"	F	3/2/71
Parts: II, III, V, VI, VII, VIII, IX & X	M-261	Service Water Piping	L	12/21/70
	M-262	"	P	1/28/71
	M-264	"	J	1/11/71
	M-265	"	L	9/27/71
	M-266	"	L	11/11/71
	M-307	"	B	1/7/71
	M-320	Spent Fuel Pool Cooling and Clean-Up Piping	O	2/3/70
	M-321	"	D	9/24/71

PIPING PHYSICAL DRAWING LIST

SYSTEM: <u>Service Water (Outside Containment)</u>				
Portion/Part	Drawing Number	Title	Revision	Date
Parts: IV, IV-B	M-265	Service Water	L	9/27/71
	M-266	"	K	9/27/71
	M-307	"	B	1/7/71
	M-320	Spent Fuel Pool Cooling & Clean-Up System	D	7/24/71
	M-321	"	D	7/24/71
Parts: 2B & 3B	M-261	Service Water	P	1/9/72
	M-264	"	E	7/20/70
Part: VB	M-265	Service Water Piping	L	7/27/71
	M-266	"	L	11/11/71
	M-307	"	B	1/7/71
	M-624	Air Conditioning Service Water Piping	O	3-6/71
Chillers: 1A & 1B Supply Lines	M-623	Air Conditioning Service Water Piping	A	2/10/72
	M-624	"	A	7/28/71
	M-646	Air Conditioning Chilled Water Piping	O	2/25/72
	M-647	Air Conditioning Service Water Piping	A	7/28/71
	M-265	Service Water Piping	L	9/27/71
	M-266	"	L	11/11/71
	M-267	"	F	11/24/71
Service Water For Lube Oil Cooler, Stuff Box, Air Compressor (Field Routed)	M-307	"	B	1/7/71
	SKM 1272	Isometric - Miscellaneous Systems	D	2/2/73

PIPING PHYSICAL DRAWING LIST

SYSTEM: Containment Service Water

Portion/Part	Drawing Number	Title	Revision	Date
Lines 37ES, 37EN, 37NW, 37NE, 38ES, 38EN, 38NW, 38NE	M356	Reactor Bldg. Piping - Service Water Station Air. Steam Gen. Blowdown, Containment Spray	D	3/23/71
	M357	"	E	3/19/71

PIPING PHYSICAL DRAWING LIST

SYSTEM:

Air Condition Cooling Water

Portion/Part	Drawing Number	Title	Revision	Date
Return Line From Control Room and Aux. A/C Units	M265	Service Water Piping	L	9/27/71
	M266	"	L	11/11/71
	M267	"	F	11/24/71
	M307	"	B	1/7/71
	M623	Air Conditioning Service Water Piping	-	
	M624	"	A	7/28/71
	M647	"	A	7/28/71
Chiller Pumps Discharge Line	M646	Air Conditioning Chilled Water Piping	D	11/2/72
Fan Coil Units In Auxiliary Turbine Bldg. CRDM Room, Battery Room, RHR pit	SKM 1284	Air Condition Cooling Water Piping	G	1/17/74

PIPING PHYSICAL DRAWING LIST

SYSTEM: Diesel Generator Fuel Oil and Station Air Piping

Portion/Part	Drawing Number	Title	Revision	Date
Start-Up Air	SKM 1266	Diesel Generator Fuel Oil & Station Air Piping	G	1/4/73
Fuel Oil	SKM 1266	"	L	1/17/74

PIPING PHYSICAL DRAWING LIST

SYSTEM: CO₂ Fire Protection

Portion/Part	Drawing Number	Title	Revision	Date
CO ₂ Fire Protection	M 391	CO ₂ Fire Protection Piping	B	7/31/72
	M 392	"	B	5/12/72
	M 393	"	C	8/24/72

PIPING PHYSICAL DRAWING LIST

SYSTEM: Chemical & Volume Control (Outside Containment)

Portion/Part	Drawing Number	Title	Revision	Date
Charging Pump Suction & Discharging Lines	M 330	Chemical & Volume Control Piping	P	4/27/72
	M 333	"	P	5/4/72
	M 338	"	R	8/11/72
	M 339	Safety Injection Piping	L	3/6/71
	SKM 1168	Isometric-Chemical & Volume Control Piping	J	12/14/72
	SKM 1169	"	F	10/17/72
4 Inch Piping To Hold Up Tank 1A, 1B and 1C	M 334	Chemical & Volume Control Piping	D	2/1/72
3 Inch Seal Water Return Line to C.V.C. Tank	M 330	Chemical & Volume Control Piping	E	2/1/72
	M 331	"	D	2/1/72
	M 332	"	D	1/4/72
	M 337	"	F	10/1/71
	M 338	"	F	2/1/71
	M 349	Shield Shelf Piping	B	1/26/71
Recirculation Pump Suction & Discharge Piping From Hold-Up Tank	M 330	Chemical & Volume Control Piping	P	4/27/72
	M 331	"	G	7/14/72
	M 332	"	H	4/15/72
	M 333	"	N	7/14/72
	M 334	"	H	8/11/72
	M 335	"	L	7/31/72
	M 336	"	H	2/11/72
	M 337	"	J	2/21/72
M 338	"	R	8/11/72	

PIPING PHYSICAL DRAWING LISTSYSTEM: Chemical & Volume Control (Outside Containment)

Portion/Part	Drawing Number	Title	Revision	Date
Part Nos.: 4, 8, 27, 35, 36, & 38 to 45	SKM 1168	Isometric-Chemical & Volume Control Piping	J	12/14/72
	SKM 1169	"	F	10/17/72
	SKM 1170	"	H	3/28/73
	SKM 1171	"	K	11/8/73
CVC Field Routed Portions	SKM 1315	Part 1 CVC	A	1/17/74
	SKM 1316	Part 2 CVC	A	1/17/74
Instrument Piping for CVC & SI Systems	SKM 1379	Instrument Piping On Hold-Up Tanks	B	1/17/74
	SKM 1380	Accumulator Instrument Piping	B	1/17/74

PIPING PHYSICAL DRAWING LIST

SYSTEM: Chemical & Volume Control (Inside Containment)

Portion/Part	Drawing Number	Title	Revision	Date
Line 14	M 363	Reactor Bldg. Piping-Chem. & Vol. Control	K	18/18/72
	M 364	Sample, Reactor coolant, Waste Disposal	L	8/18/72
	M 365	"	L	7/5/72
	M 366	"	L	8/18/72
	SKM 1172	Isometric-Chemical & Volume Control Piping	D	12/8/72
Lines 12, 13E and 13N	SKM 1172	Isometric-Chemical-Volume Control Piping	L	5/31/73
Line 11	SKM 1247	Isometrics of Steam Generator Blowdown Piping & Letdown Piping (CVCS System)	E	2/22/73

PIPING PHYSICAL DRAWING LIST

SYSTEM: <u>Waste Disposal</u>				
Portion/Part	Drawing Number	Title	Revision	Date
Part 1 through 12 from Gas Decay Tanks to Intermediate Anchors	SKM 1174	Isometric-Waste Disposal Piping	D	3/9/72
Parts: 13, 14, 15A, 15B, & 16	SKM 1174	Isometric Waste Disposal Piping	M	2/22/73
Parts: 17-22, 24, 25, 26 (A,B,C) 27 & 30 (A,B,C)	SKM 1168	Isometric-Chemical & Volume Control Piping	R	6/12/73
	SKM 1174	Isometric-Waste Disposal Piping	R	5/30/73
Part: 26C	SKM 1174	Isometric-Waste Disposal Piping	S	10/30/73
Penetration #5 & #26 Piping (outside Containment)	SKM 1409	Piping @ Penetration #5 & #26 (Outside Containment)	C	12/10/73
Penetration #26 Piping (Inside Containment)	SKM 1410	Piping @ Penetration #26 (Inside Containment)	A	11/7/73
Penetration #5 Piping (Inside Containment)	SKM 1411	Piping @ Penetration #5 (Inside Containment)	A	11/7/73

PIPING PHYSICAL DRAWING LIST

SYSTEM: Post Loca Hydrogen Control

Portion/Part	Drawing Number	Title	Revision	Date
Post Loca Hydrogen Control Piping	M 356	Reactor Bldg. Piping - Service Water Station Air Steam Gen, Blowdown Control Piping	M	6/21/73
	M 357	"	M	6/21/73
	M 404E	Post LOCA Hydrogen Control Piping	E	5/11/73

PIPING PHYSICAL DRAWING LIST

SYSTEM: <u>Containment Spray Additive</u>				
Portion/Part	Drawing Number	Title	Revision	Date
Containment & Spray Additive Piping	M 405	Containment Spray Additive Piping	C	4/4/73

PIPING PHYSICAL DRAWING LIST

SYSTEM: Auxiliary Bldg, Traps & Drains

Portion/Part	Drawing Number	Title	Revision	Date
Main Steam (1A) Leak-Off and Drain	SKM 1357	Main Steam Leak-Off & Drains At East Side HDR.	A	1/17/74
Main Steam (1B) Leak-Off and Drain	SKM 1358	Main Steam Leak-Off & Drain @ West Side HDR.	A	1/17/74
Steam Trap Off 3" HDR, 1B	SKM 1368	Steam Trap Piping Off 3" Header 1B	C	1/17/74
3" Auxiliary Steam Vent	SKM 1372	3" Auxiliary Steam Vent Piping	B	1/17/74
3" Auxiliary Steam Vent	SKM 1373	3" Auxiliary Steam Vent Piping	A	1/17/74
Steam Trap At The Turbine Driven Auxiliary F.W. Pump	SKM 1381	Steam Trap Piping At The Turbine Driven Auxiliary F.W. Pump	C	1/17/74
Steam Trap Off 3" Steam Supply to Turbine Driven Pump	SKM 1390	Steam Trap Piping Off 3" Steam Supply to Turbine Auxiliary F. W. Pump	C	1/17/74
Steam Trap Off 3" HDR. Steam Supply to Turbine Driven Pump	SKM 1391	Steam Trap Piping Off 3" Steam Supply to Turbine DR. Auxiliary F. W. Pump At Valve SDG-18	A	10/9/73