BOSTON EDISON COMPANY
GENERAL OFFICES 800 BOYLSTON STREET
BOSTON, MASSACHUSETTS 02199

August 1, 1979

G. CARL ANDOGNINI
SUPERINTENDENT
NUCLEAR OPERATIONS DEPARTMENT

BECo. Ltr. #79-79-156

Mr. Boyce H. Grier, Director
Office Of Inspection and Enforcement
Region I
U. S. Nuclear Regulatory Commission
631 Park Avenue
King of Prussia, PA. 19406

License No. DPR-35
Docket No. 50-293

RESPONSE TO IE BULLETIN 79-14

Dear Sir:

In a letter dated July 2, 1979, revised by a letter dated July 18, 1979, you transmitted IE Bulletin 79-14 titled, "Seismic Analysis for As-Built Safety-Related Systems." Boston Edison was requested to take the following actions within thirty (30) days to review this issue at Pilgrim Nuclear Power Station. Appropriate responses are provided in this letter.

Item 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 analysis. 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 to be used in verifying that the seismic analysis input information conforms to the actual configuration of safety-related systems are shown in Attachment A.

The list of design documents, including title, identification number, revision and date, which were sources of input information for the seismic analyses are provided as Attachment B. For those items marked "later", a detailed list is being generated and will be forwarded to you in a supplementary response. The lists along with copies of the appropriate design documents will be available on-site for reference during your inspection.

A description of the seismic analysis input information is provided as Attachment C.

Those systems or portions of systems which are scheduled to be inspected during each sequential inspection identified in Items 2 and 3 are listed and discussed in Attachment D.

9310070009100585Q

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. Include in the inspection: 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.

Response: The results of the inspection will be forwarded within the requested time frame.

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: It is Boston Edison's intent to inspect all other normally accessible safety-related systems within the required 120 days. However, with regard to the inaccessible systems, we offer the following:

During the outage Pilgrim Station experienced in May, and in accordance with the requirements established to allow the Station to return to service, a substantial effort was extended in the specific areas of as-builts and the inspections required by Bulletin 79-02. Specifically, all support pads utilizing concrete expansion bolts that are in areas inaccessible during normal operations were inspected. Further the entire Recirculation System (both loops) and branch piping as well as two of the four Main Steam lines were subjected to a walk-down to verify the following:

1. Critical dimensions agreed upon by both Boston Edison, NRC: RI and NRR.

2. Seismic restraints including applicable snubbers, hangers and guides

The walk-down of the system was witnessed by the Region I Inspector; no non-conformances were identified with regards to as-builts.

Additional as-built verification of inaccessible portions of systems had also been conducted previously. The Core Spray piping was modified during the August 1977 refueling outage; the as-built condition was verified as a result of the design change process. During the same outage, the Control Rod Drive Return Line was cut and capped at the vessel.

931002

The only remaining systems to be inspected included Head Spray (RHR), Feedwater, the remaining two Main Steam Lines and interconnected branch piping.

Boston Edison believes that the health and safety of the public would not be significantly increased by completing the full 120-day inspection requirements because:

1. The majority of the inaccessible systems were subject to a walk-down previously including a detailed inspection last May.

2. The next refueling outage is schedule for January 1980 which is only 66 days beyond the required 120 days imposed by the subject Bulletin.

We will, however, commit to develop a plan to conduct the required inspections should the unit experience an outage of sufficient duration such that the inspection of the inaccessible areas can be completed without jeopardizing the inspection schedule for the accessible areas which have not been subjected to a walk-down.

Item #4 If nonconformances are identified:

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

2. 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: (i) completing the reanalysis, (ii) comparisons of the results to FSAR or other NRC approved acceptance criteria and (iii) submitting descriptions of the results of reanalysis.

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

4. Revise documents to reflect the as-built conditions in 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: Boston Edison will comply with the corrective actions requested including the revision of documents to reflect as-built conditions.

931003

Boston Edison has measures in effect which provide assurance that future modifications of piping systems, including their supports are reflected in a timely manner in design documents and the seismic analysis. These measures, which are described in approved procedures, require (1) an evaluation of the seismic impact of the modification prior to its implementation and (2) the rigid control of official drawings. Drawings utilized for modifications are treated as controlled documents. After implementation of the modification, the drawings issued for construction are verified to be "as-built" and are submitted to the Records Center for processing. These as-builts are immediately made available within the plant official drawing files with the use of photo-micrographic equipment. The as-builts are retained in the files until such time as the master copies of the drawing are updated and distributed.

We trust that this information is responsive to your requests. If you have any questions or comments, please let us know.

Very truly yours,

Eric Olbrycht 83

cc: Director, Division of Operating Reactors
Office of Nuclear Reqctor Regulation
U.S. Nuclear Regulatory Commission
Washington, D. C. 20555

EJZ/gs

931004

Response to Bulletin 79-14

ELEMENTS OF 79-14 INSPECTION

The inspection will include the following items:

- Geometry of the Piping System
- Type of Insulation
- Valve Location
- Valve Operator Orientation
- Support Location, Type and Orientation
- In-Line Equipment Location and Orientation

POOR ORIGINAL

931005

DESIGN DOCUMENTS USED FOR SEISMIC ANALYSIS INPUT INFORMATION

DOCUMENTS WHICH ARE COMMON TO ALL SEISMIC ANALYSES

Description	Document No.	Latest Rev.	Date
Piping Class Summary Sheets	**6498-M300**	**19**	**2-19-74**
Thermal Insulation Specification	**6498-M37**	**1**	**12-5-69**
Reactor Building Seismic Analysis	-	-	8-69
Radwaste Building Seismic Analysis	-	-	9-69
Turbine Building Seismic Analysis	-	-	9-69

POOR ORIGINAL

931008

SYSTEM DESIGN DOCUMENTS

HPCI SYSTEM

Description	Document No.	Latest Rev.	Date
Piping Isometric Drawings	6498-600	5F	2-29-72
	~~6498-600-1~~	~~6F~~	~~4-13-72~~
	~~6498-600-2~~	~~5F~~	~~4-13-72~~
	6498-602	4	3-30-72
	6498-604	4F	2-29-72
	6498-640	6F	4-4-72
	6498-641	3	3-24-72
	6498-676	4F	4-13-72
	6498-687	1F	2-29-72
Piping and Instrument Diagrams	6498-M243	15	3-6-74
	6498-M244	14	3-6-74
	6498-M209	E1	10-13-79
Valve Vendor Drawings	(Later)		
Pipe Support Vendor Drawings	(Later)		
In-Line Equipment Vendor Drawings (if any)	(Later)		

POOR ORIGINAL

931007

CORE SPRAY SYSTEM

Description	Document No.	Latest Rev.	Date
Piping Isometric Drawings	6498-605-1	5F	4-13-78
	6498-605-2	4F	2-29-72
	6498-606-1	4F	4-13-72
	6498-606-2	5	3-24-72
	6498-607	4	3-30-72
	6498-608	5F	4-14-72
	6498-609	4	3-30-72
	6498-610	2	3-24-72
Piping and Instrument Diagram	6498-M242	9	3-6-74
Valve Vendor Drawings	(Later)		
Pipe Support Vendor Drawings	(Later)		
In-Line Equipment Vendor Drawings (if any)	(Later)		

POOR ORIGINAL

931008

RCIC SYSTEM

Description	Document No.	Latest Rev.	Date
Piping Isometric Drawings	6498-611-1	6F	2-29-72
	6498-611-2	8F	4-4-72
	6498-612-1	3F	3-24-72
	6498-612-2	3F	3-24-72
	6498-613	4F	3-24-72
	6498-615	6F	3-24-72
Piping and Instrument Diagrams	6498-M245	E2	12-22-77
	6498-M246	10	3-6-74
Valve Vendor Drawings	(Later)		
Pipe Support Vendor Drawings	(Later)		
In-Line Equipment Vendor Drawings (if any)	(Later)		

POOR ORIGINAL

931009

REACTOR BUILDING CLOSED COOLING WATER SYSTEM

Description	Document No.	Latest Rev.	Date
Piping Isometric Drawings	6498-616	4	3-30-72
	6498-617	6F	4-4-72
	6498-618-1	5F	5-15-72
	6498-618-2	4F	4-13-72
	6498-618-3	4F	4-13-72
	6498-619	4	3-30-72
	6498-620	4F	3-30-72
	6498-621	3	4-4-72
	6498-622	5F	2-29-72
	6498-623	8F	2-29-72
	6498-624	5F	2-28-72
	6498-625-1	2	3-30-72
	6498-626	5F	4-13-72
	6498-627	4F	4-4-72
	6498-628	3F	4-13-72
	6498-634-1	3F	4-13-72
	6498-634-2	3F	4-13-72
	6498-635-1	1F	3-30-72
	6498-635-2	4F	4-13-72
Piping and Instrument Diagram	6498-M215	E1	4-12-77
Valve Vendor Drawings	(Later)		
Pipe Support Vendor Drawings	(Later)		
In-Line Equipment Vendor Drawings (if any)	(Later)		

POOR ORIGINAL

931010

TURBINE BUILDING CLOSED COOLING WATER SYSTEM

Description	Document No.	Latest Rev.	Date
Piping Isometric Drawings	6498-629	6F	4-4-72
	6498-630	6F	4-4-72
	6498-631-1	4F	4-4-72
	6498-631-2	3	3-20-72
	6498-632-1	3F	3-30-72
	6498-633-1	5F	3-31-72
Piping and Instrument Diagram	6498-M216	E1	10-24-77
Valve Vendor drawings	(Later)		
Pipe Support Vendor Drawings	(Later)		
In-Line Equipment Vendor Drawings (if any)	(Later)		

POOR ORIGINAL

931011

SERVICE WATER SYSTEM

Description	Document No.	Latest Rev.	Date
Piping Isometric Drawings	6498-636	3F	2-29-72
	6498-637	6F	4-13-72
	6498-638	3F	3-30-72
	6498-639	3F	4-14-72
Piping and Instrument Diagram	6498-M212	E2	10-21-77
Valve Vendor Drawings	(Later)		
Pipe Support Vendor Drawings	(Later)		
In-Line Equipment Vendor Drawings (if any)	(Later)		

POOR ORIGINAL

931012

FEEDWATER SYSTEM

Description	Document No.	Latest Rev.	Date
Piping Isometric Drawings	6498-601-1	6F	-72
	6498-612-1	5F	3-24-72
	6498-642	7	3-30-72
	6498-643	7F	4-13-72
	6498-644	6F	3-30-72
	6498-680	3F	3-30-72
Piping and Instrument Diagrams	6498-M208	E1	10-13-77
	6498-M252	E1	11-3-77
Valve Vendor Drawings	(Later)		
Pipe Support Vendor Drawings	(Later)		
In-Line Equipment Vendor Drawings (if any)	(Later)		

POOR ORIGINAL

931013

CONTAINMENT ATMOSPHERIC CONTROL SYSTEM

Description	Document No.	Latest Rev.	Date
Piping Isometric Drawings	6498-646	5F	2-29-72
	6498-647	2F	2-29-72
	6498-648	4	3-30-72
	6498-649	2	3-30-72
	6498-650	1	3-30-72
	6498-651	1	3-30-72
Piping and Instrument Diagram	6498-M227, Sht.1	1	5-10-77
Valve Vendor Drawings	(Later)		
Pipe Support Vendor Drawings	(Later)		
In-Line Equipment Vendor Drawings (if any)	(Later)		

POOR ORIGINAL

931014

RHR SYSTEM

Description	Document No.	Latest Rev.	Date
Piping Isometric Drawings	6498-608	5F	4-14-72
	6498-610	2	3-24-72
	6498-637	6F	4-13-72
	6498-656	3	3-24-72
	6498-657	4	3-24-72
	6498-658	5	3-24-72
	6498-659	3F	3-24-72
	6498-660	4	3-24-72
	6498-661	2	3-30-72
	6498-662	3	3-30-72
	6498-663	8F	2-29-72
	6498-664	11F	3-30-72
	6498-665	5F	3-30-72
	6498-666	-	4-13-72
	6498-667	3	3-30-72
	6498-668	1F	4-13-72
	6498-669	6F	-
	6498-670	4	3-30-72
	6498-671	4	3-30-72
	6498-672	7F	4-13-72
	6498-673	5F	5-15-72
	6498-674	3F	5-15-72
	6498-675	4F	3-30-72
	6498-676	4F	4-13-72
Piping and Instrument Diagrams	6498-M241	13	3-6-74
	6498-M242	9	3-6-74
Valve Vendor Drawings	(Later)		
Pipe Support Vendor Drawings	(Later)		
In-Line Equipment Vendor Drawings (if any)	(Later)		

POOR ORIGINAL

931015

REACTOR WATER CLEANUP SYSTEM

Description	Document No.	Latest Rev.	Date
Piping Isometric Drawings	6498-679	-	3-30-72
	6498-680	3F	3-30-72
	6498-681	2F	4-13-72
Piping and Instrument Diagram	6498-M247	E1	11-22-77
Valve Vendor Drawings	(Later)		
Pipe Support Vendor Drawings	(Later)		
In-Line Equipment Vendor Drawings (if any)	(Later)		

POOR ORIGINAL

931016

FUEL POOL COOLING SYSTEM

Description	Document No.	Latest Rev.	Date
Piping Isometric Drawings	6498-673	5F	5-15-72
	6498-682	1F	4-13-72
	6498-683	2F	2-29-72
	~~6498-684-1~~	~~P~~	~~3-30-72~~
	~~6498-684-2~~	~~2~~	~~3-30-72~~
	6498-685	5F	3-30-72
	6498-686	0	3-31-72
	6498-686-1	3	3-30-72
	6498-691	3F	2-29-72
	6498-692	3F	2-29-72
	6498-693	3F	4-13-72
Piping and Instrument Diagram	6498-M231	E2	9-13-76
Valve Vendor Drawings	(Later)		
Pipe Support Vendor Drawings	(Later)		
In-Line Equipment Vendor Drawings (if any)	(Later)		

POOR ORIGINAL

931017

STANDBY LIQUID CONTROL SYSTEM

Description	Document No.	Latest Rev.	Date
Piping Isometric Drawing	6498-688	6	3-30-72
Piping and Instrument Diagram	6498-M249	10	3-6-74
Valve Vendor Drawings	(Later)		
Pipe Support Vendor Drawings	(Later)		
In-Line Equipment Vendor Drawings (if any)	(Later)		

POOR ORIGINAL

931018

MAIN STEAM SYSTEM

Description	Document No.	Latest Rev.	Date
Piping Isometric Drawings	6498-694	C	5-15-72
	6498-694-3	0	5-15-72
	6498-694-4	0	5-15-72
	6498-694-5	0	5-15-72
	6498-694-6	0	5-15-72
	6498-695	2	3-30-72
Piping and Instrument Diagram	6498-M252	E1	11-3-77
Valve Vendor Drawings	(Later)		
Pipe Support Vendor Drawings	(Later)		
In-Line Equipment Vendor Drawings (if any)	(Later)		

POOR ORIGINAL

931019

CONTROL ROD DRIVE SYSTEM

Description	Document No.	Latest Rev.	Date
Piping Isometric Drawing	6498-677	1	3-30-72
	6498-678	2F	4-13-72
Piping and Instrument Diagram	6498-M250	E2	12-21-77
Valve Vendor Drawing	(Later)		
Pipe Support Vendor Drawings	(Later)		
In-Line Equipment Vendor Drawings (if any)	(Later)		

POOR ORIGINAL

931020

DESIGN DOCUMENT INPUT INFORMATION DESCRIPTION

Document	Input Information
Piping Class Summary Sheets	Pipe Wall Thickness Pipe Material Pipe Design Temperature Pipe Design Pressure Branch Connection Type
Thermal Insulation Specification	Insulation Weight
Piping Isometric Drawings	Pipe Geometry Valve Locations & Orientation Equipment Locations & Orientation Pipe Support Locations
Piping and Instrument Diagrams	Nominal Pipe Diameter Seismic Class I Boundaries
Valve Vendor Drawings	Valve Weight Valve Operator Weight Valve/Operator Center Of Gravity
In-Line Equipment Vendor Drawings	Equipment Weight
Pipe Support Vendor Drawings	Pipe Support Assembly Details Pipe Support Type Pipe Support Orientation
Piping Seismic Response Spectra Curves	Seismic accelerations as a function of Frequency

POOR ORIGINAL

931021

Response to Bulletin 79-14

SYSTEMS OR PORTIONS OF SYSTEMS WHICH ARE PLANNED TO BE INSPECTED AS REQUIRED BY BULLETIN 79-14.

Field inspections within the Class 1 functional limits of the following Seismic Category 1 piping systems will be conducted as required by IE Bulletin 79-14.

- ~~Pressure Suppression & Containment Atmosphere Control System~~
* Main Steam
* Feedwater
* Control Rod Drive Hydraulic
* Core Spray
* High Pressure Coolant Injection
- Reactor Building Closed Cooling Water
* Recirculation
* Reactor Water Clean-Up
- Fuel Pool Cooling
- Salt Service Water
* Residual Heat Removal
* Reactor Core Isolation Cooling
- Turbine Building Closed Cooling Water
* Standby Liquid Control

The systems marked with an asterisk are either entirely or partially within inaccessible areas during normal operation and will be verified either during the January 1980 outage or as outlined in the cover letter to this response.

The remaining schedule will be consistent with the requirements of Items 1 and 2 of the subject Bulletin. The schedule is presently being developed to inspect all non-redundant and one subsystem (train) of redundant systems by August 31 and the remaining subsystem (train) of the redundant systems by October 31, 1979. The final schedule will be based on existing plant conditions and ALARA considerations.

POOR ORIGINAL

931022