

Closeout of IE Bulletin 80-02: Inadequate Quality Assurance for Nuclear Supplied Equipment

Final Report

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PARAMETER, Inc.

Prepared for
U.S. Nuclear Regulatory Commission

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ABSTRACT

Documentation is provided in this report for the closeout of IE Bulletin 80-02. The subject is inadequate quality assurance for nuclear equipment supplied by the Marvin Engineering Company. The equipment of concern is supplied either directly or through other suppliers for use in General Electric boiling water reactors (BWRs). Closeout is based on the implementation and verification of three (3) required actions. Evaluation of utility responses and NRC/Region inspection reports indicates that the bulletin is closed for all of the 38 BWR facilities to which it was issued for action. It is concluded that the safety concerns reflected in the IE Bulletin 80-02 were adequately resolved by the actions taken by licensees and verified by NRC inspectors. Background information is presented in the Introduction and Appendix A.

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CLOSEOUT OF IE BULLETIN 80-02:
INADEQUATE QUALITY ASSURANCE FOR
NUCLEAR SUPPLIED EQUIPMENT

INTRODUCTION

This report provides documentation for the closeout of IE Bulletin 80-02 in accordance with the Statement of Work in Task Order 37 under NRC Contract 05-85-157-02. The documentation is primarily based on records obtained from the NRC Document Control System.

The bulletin was issued by the NRC on January 21, 1980, because of concern about deficiencies in the implementation of quality controls of feedwater spargers and thermal sleeves supplied directly or indirectly to General Electric by the Marvin Engineering Company (MEC). These deficiencies were reported by a former employee and were verified during a special NRC inspection conducted at the Marvin manufacturing facility.

A copy of IE Bulletin 80-02 is included in Appendix A for background information. Evaluation of utility responses and NRC/Region inspection reports is documented in Appendix B as the basis for bulletin closeout. Abbreviations used in the report and associated documents are presented in Appendix C.

SUMMARY

1. The bulletin is closed for the following 21 facilities per Criterion 1 (see Page B-3):

Browns Ferry 1,2,3	FitzPatrick	Peach Bottom 2,3
Brunswick 2	Hatch 1	Pilgrim 1
Cooper Station	LaSalle 1,2	Quad Cities 1,2
Dresden 2,3	Millstone 1	Shoreham
Fermi 2	Monticello	Vermont Yankee 1

2. The bulletin is closed for the following 17 facilities per Criterion 2 (see Page B-3):

Big Rock Point 1	Hatch 2	Perry 1
Brunswick 1	Hope Creek 1	River Bend 1
Clinton 1	Limerick 1,2	Susquehanna 1,2
Duane Arnold	Nine Mile Point 1,2	WNP 2
Grand Gulf 1	Oyster Creek 1	

3. The bulletin is open for none of the 38 BWR facilities.

4. The following GE/BWR facilities are excluded from Table B.1 because they are shut down indefinitely or permanently (SDI) or have construction halted indefinitely (CHI):

Dresden 1 ___SDI Humboldt Bay 3 ___SDI Perry 2 ___CHI

CONCLUSIONS

It is concluded that the safety concerns reflected in the IE Bulletin 80-02 were adequately resolved by the actions taken by licensees and verified by NRC inspectors.

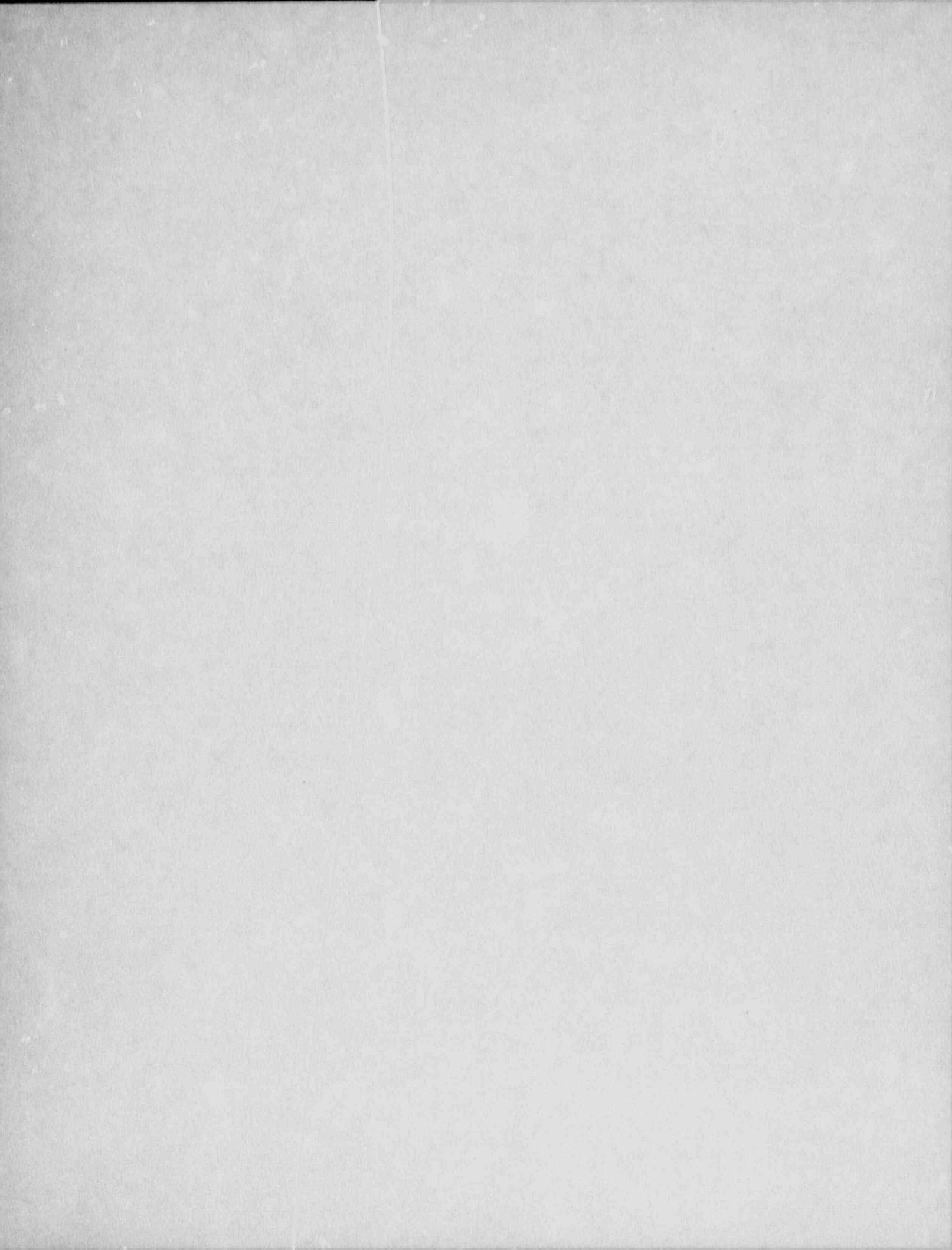
Responses for many of the facilities with MEC components include the following comments:

- (a) GE applied quality procedures intended for safety-related components even though the components were not classified as essential to safety,
- (b) the performance history was satisfactory and
- (c) the NRC had approved the GE topical reports describing the Quality Assurance Program.

APPENDIX A

Background Information and Required Actions

Note: For required actions,
see pages A-1 and A-2.



UNITED STATES
NUCLEAR REGULATORY COMMISSION
OFFICE OF INSPECTION AND ENFORCEMENT
WASHINGTON, D.C. 20555

January 21, 1980

IE Bulletin No. 80-02

INADEQUATE QUALITY ASSURANCE FOR NUCLEAR SUPPLIED EQUIPMENT

Description of Circumstances:

The Marvin Engineering Company (MEC) of Inglewood, California was the subject of a special NRC inspection conducted on September 18-21, 1979 to evaluate their overall QA and QC programs which had come under severe criticism by a former Marvin Engineering employee. The special inspection was judged necessary since the Marvin Engineering Company was a known subcontractor and supplier to General Electric of BWR reactor internal feedwater spargers and feedwater thermal sleeves. The results of the NRC's inspection established that serious deficiencies exist in the implementation of the MEC quality assurance program relative to the manufacture of these components. During this inspection, twenty seven deviations from applicable codes, and contractual and regulatory requirements were documented in the areas of material identification and control, process control, welding and nondestructive examination.

Corrective Action

The Marvin Engineering Company has been issued the NRC's detailed inspection report of the Company, and given 30 days to inform the NRC how the deviations discussed in the report will be corrected and preventive action taken.

Action To Be Taken

All BWR licensees and construction permit holders shall supply the following information within 90 days for operating plants and 120 days for plants under construction.

- 1.a. Have reactor feedwater spargers and thermal sleeves manufactured and/or fabricated by the Marvin Engineering Company been purchased and/or installed in your facility? Since Marvin Engineering is principally a subcontracting Company, determine if your equipment originated with the Marvin Company and was eventually supplied to your facility through another contractor/supplier.
- 1.b. Provide a description of this equipment to include its purchase date and its design function during both normal and accident conditions.
2. For each piece of identified equipment, provide the performance history associated with its usage. This should include the cause of any failures or malfunctions and the frequency of such events.

3. Provide information on the suppliers and receiver's OA/OC program in effect at the time of purchase. This information should be discussed in terms of it providing sufficient bases for judging that the integrity of the equipment is sufficient to permit plant operation during normal and accident conditions.

Approved by GAO, B180225 (R0072); clearance expires 7-31-80. Approval was given under a blanket clearance specifically for identified generic problems.

APPENDIX B

Documentation of Bulletin Closeout

TABLE B.1 BULLETIN CLOSEOUT STATUS

Facility	Utility	Docket	Facility Status 01-21-80	NRC Region	Utility Response Date	Inspection Report and Date	Closeout Status and Criterion
Big Rock Point 1	CPC	50-155	OL	III	04-25-80	80-10(09-25-80)	Closed 2
Browns Ferry 1	TVA	50-259	OL	II	04-21-80 05-01-80	80-20(05-20-80)	Closed 1
Browns Ferry 2	TVA	50-260	OL	II	04-21-80 05-01-80	80-15(05-20-80)	Closed 1
Browns Ferry 3	TVA	50-296	OL	II	04-21-80 05-01-80	80-16(05-20-80)	Closed 1
Brunswick 1	CP&L	50-325	OL	II	04-21-80 08-19-80		Closed 2
Brunswick 2	CP&L	50-324	OL	II	04-21-80 08-19-80	82-11(04-24-82)	Closed 1
Clinton 1	IP	50-461	CP	III	04-21-80	82-07(06-19-82)	Closed 2
Cooper Station	NPPD	50-298	OL	IV	03-17-80 03-19-80	80-11(08-18-81)	Closed 1
Dresden 2	CECO	50-237	OL	III	05-01-80	83-11(07-06-83)	Closed 1
Dresden 3	CECO	50-249	OL	III	05-01-80	83-09(07-06-83)	Closed 1
Duane Arnold	IELPCO	50-331	OL	III	04-14-80	80-11(08-18-80)	Closed 2
Fermi 2	DECO	50-341	CP	III	05-13-80 09-04-80	81-07(06-26-81)	Closed 1
FitzPatrick	PASNY	50-333	OL	I	04-21-80	81-07(07-28-81)	Closed 1
Grand Gulf 1	MP&L	50-416	CP	II	04-28-80	81-45(10-28-81)	Closed 2
Hatch 1	GPC	50-321	OL	II	04-16-80 05-01-80	80-22(05-30-80)	Closed 1
Hatch 2	GPC	50-366	OL	II	04-16-80 05-01-80	80-22(05-30-80)	Closed 2
Hope Creek 1	PSE&G	50-354	CP	I	05-12-80	82-01(02-11-82)	Closed 2
LaSalle 1	CECO	50-373	CP	III	05-01-80	80-24(05-28-80)	Closed 1
LaSalle 2	CECO	50-374	CP	III	05-01-80	80-16(06-18-80)	Closed 1
Limerick 1	PECO	50-352	CP	i	05-20-80	82-03(02-08-82)	Closed 2

See notes and criteria for closeout of bulletin at end of table.

TABLE B.1 (contd)

Facility	Utility	Docket	Facility Status 01-21-80	NRC Region	Utility Response Date	Inspection Report and Date	Closeout Status and Criterion
Limerick 2	PECO	50-353	CP	I	05-20-80	82-02(02-08-82) 87-13(11-02-87)	Closed 2
Millstone 1	NNECO	50-245	OL	I	04-21-80	80-22(12-15-80)	Closed 1 (Note 3)
Monticello	NSP	50-263	OL	III	04-21-80	81-02(03-02-81)	Closed 1
Nine Mile Point 1	NMP	50-220	OL	I	02-19-80		Closed 2
Nine Mile Point 2	NMP	50-410	CP	I	05-23-80	81-06(08-19-81)	Closed 2
Oyster Creek 1	JCP&L/ GPUN	50-219	OL	I	02-07-80	84-28(02-11-85)	Closed 2
Peach Bottom 2	PECO	50-277	OL	I	04-16-80	84-41(01-31-85)	Closed 1
Peach Bottom 3	PECO	50-278	OL	I	04-16-80	84-33(01-31-85)	Closed 1
Perry 1	CEI	50-440	CP	III	04-24-80	80-17(09-17-80)	Closed 2
Pilgrim 1	BECO	50-293	OL	I	04-17-80	84-04(03-30-84)	Closed 1
Quad Cities 1	CECO	50-254	OL	III	05-01-80	80-10(05-15-80)	Closed 1
Quad Cities 2	CECO	50-265	OL	III	05-01-80	80-07(02-29-80) 80-13(05-15-80)	Closed 1
River Bend 1	GSU	50-458	CP	IV	05-23-80		Closed 2
Shoreham	LILCO	50-322	CP	I	05-29-80	84-14(06-25-84)	Closed 1
Susquehanna 1	PP&L	50-387	CP	I	07-30-80	80-33(01-05-81)	Closed 2
Susquehanna 2	PP&L	50-388	CP	I	07-30-80	80-20(01-05-81)	Closed 2
Vermont Yankee 1	VYNP	50-271	OL	I	04-04-80	80-13(09-25-80) 83-21(09-26-83)	Closed 1
WNP 2	WPPSS	50-397	CP	V	04-28-80	82-06(04-21-82)	Closed 2

See notes below and criteria for closeout of bulletin on Page B-3.

Notes for Table B.1:

1. Facility status is based on the Reference, Page B-3.
2. The following abbreviations apply to facility status:
CP, Construction Permit;
OL, Operating License.
3. On 08/01/89, Thomas Shedlosky (RI) confirmed verbally to N. P. Kadambi that Item 4 of Inspection Report 80-22 was meant to close out IEB 80-02.

CRITERIA FOR CLOSEOUT OF BULLETIN

1. The utility response and an NRC/Region inspection report indicate that the facility has Marvin Engineering Company components and that the actions requested in the bulletin have been implemented adequately.
2. The utility response indicates that no feedwater spargers or thermal sleeves supplied directly or indirectly by the Marvin Engineering Company to General Electric are used at the facility.

REFERENCE

United States Nuclear Regulatory Commission, Licensed Operating Reactors, Status Summary Report, Data as of 07-31-89, NUREG-0020, Volume 13, Number 8, August, 1989.

APPENDIX C

Abbreviations

BECO	Boston Edison Company
BWR	Boiling Water Reactor
CECO	Commonwealth Edison Company
CEI	Cleveland Electric Illuminating Company
CHI	Construction Halted Indefinitely
CP	Construction Permit
CPC	Consumers Power Company
CP&L	Carolina Power and Light Company
CR	Contractor Report
DECO	Detroit Edison Company
GAO	Government Accounting Office
GE	General Electric Company
GPC	Georgia Power Company
GPUN	GPU Nuclear Corporation
GSU	Gulf States Utilities Company
HQ	Headquarters
IE	(See NRC/IE)
IEB	Inspection and Enforcement Bulletin (NRC)
IELPCO	Iowa Electric Light and Power Company
IP	Illinois Power Company
IR	Inspection Report (NRC/IE)
JCP&L	Jersey Central Power and Light Company
LER	Licensee Event Report
LILCO	Long Island Lighting Company
MEC	Marvin Engineering Company
MP&L	Mississippi Power and Light Company
NMP	Niagara Mohawk Power Company
NNECO	Northeast Nuclear Energy Company
NPPD	Nebraska Public Power District
NRC/IE	Nuclear Regulatory Commission/ Office of Inspection & Enforcement
NRR	Office of Nuclear Reactor Regulation (NRC)
NSP	Northern States Power Company
OL	Operating License
PASNY	Power Authority of the State of New York
PECO	Philadelphia Electric Company

PP&L	Pennsylvania Power and Light Company
PSE&G	Public Service Electric and Gas Company
QA	Quality Assurance
QC	Quality Control
R	Region (NRC)
TVA	Tennessee Valley Authority
VYNP	Vermont Yankee Nuclear Power Corporation
WPPSS	Washington Public Power Supply Systems

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11. ABSTRACT (200 words or less)

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