

PARTIAL REVIEW

EQUIPMENT EVALUATION REPORT BY THE
OFFICE OF NUCLEAR REACTOR REGULATION

FOR CAROLINA POWER AND LIGHT COMPANY
BRUNSWICK UNITS 1 AND 2

DOCKET NO. 50-325/324

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3 STAFF EQUIPMENT EVALUATION

The staff evaluation of the licensee's response included an onsite inspection of selected Class IE equipment and an examination of the licensee's report for completeness and acceptability. The criteria described in the DOR guidelines and in NUREG-0588, in part, were used as a basis for the staff evaluation of the adequacy of the licensee's qualification program.

The NRC Office of Inspection and Enforcement performed (1) a preliminary evaluation of the licensee's response and (2) an onsite verification inspection (May 28-30 and June 9-12, 1980) of selected safety-related electrical equipment. The nuclear boiler system was inspected. The inspection verified proper installation of equipment, overall interface integrity, and manufacturers' nameplate data. The manufacturer's name and model number from the nameplate data were compared to information given in the Component Evaluation Work Sheets (CES) of the licensee's report. The site inspection is documented in reports IE 50-324/80-18 and 50-325/80-21. For this review, the documents referenced above have been factored into the overall staff evaluation.

3.1 Completeness of Safety-Related Equipment

In accordance with IEB 79-01B, the licensee was directed to (1) establish a list of systems and equipment that are required to mitigate a LOCA and an HELB and (2) identify components needed to perform the function of safety-related display information, post-accident sampling and monitoring, and radiation monitoring.

The staff developed a generic master list based upon a review of plant safety analyses and emergency procedures. The instrumentation selected includes parameters to monitor overall plant performance as well as to monitor the performance of the systems on the list. The systems list was established on the basis of the functions that must be performed for accident mitigation (without regard to location of equipment relative to hostile environments).

The list of safety-related systems provided by the licensee was reviewed against the staff-developed master list.

Based on the licensee's submittal, the staff has concluded that the information on safety-related systems included in the submittal is insufficient to verify that those systems are all the systems required to achieve or support: (1) emergency reactor shutdown, (2) containment isolation, (3) reactor core cooling, (4) containment heat removal, (5) core residual heat removal, and (6) prevention of significant release of radioactive material to the environment. The staff acknowledges the licensee's effort to include only those safety-related systems

located in a potentially harsh environment. However, this review requires the listing of all safety-related systems, both inside and outside potentially harsh environments. The list of safety-related systems submitted by the licensee is included in Appendix D.

Display instrumentation which provides information for the reactor operators to aid them in the safe handling of the plant was not specifically identified by the licensee. A complete list of all display instrumentation mentioned in the LOCA and HELB emergency procedures must be provided. Equipment qualification information in the form of summary sheets should be provided for all components of the display instrumentation exposed to harsh environments. Instrumentation which is not considered to be safety related but which is mentioned in the emergency procedure should appear on the list. For these instruments, (1) justification should be provided for not considering the instrument safety related and (2) assurance should be provided that its subsequent failure will not mislead the operator or adversely affect the mitigation of the consequences of the accident. The environmental qualification of post-accident sampling and monitoring and radiation monitoring equipment is closely related to the review of the TMI Lessons-Learned modifications and will be performed in conjunction with that review.

The licensee identified 1080 items of equipment which were assessed by the staff.

3.2 Service Conditions

Commission Memorandum and Order CLI-80-21 requires that the DOR guidelines and the "For Comment" NUREG-0588 are to be used as the criteria for establishing the adequacy of the safety-related electrical equipment environmental qualification program. These documents provide the option of establishing a bounding pressure and temperature condition based on plant-specific analysis identified in the licensee's Final Safety Analysis Report (FSAR) or based on generic profiles using the methods identified in these documents.

On this basis, the staff has assumed, unless otherwise noted, that the analysis for developing the environmental envelopes for Brunswick Units 1 and 2, relative to the temperature, pressure, and the containment spray caustics, has been performed in accordance with the requirements stated above. The staff has reviewed the qualification documentation to ensure that the qualification specifications envelope the conditions established by the licensee.

Equipment submergence has also been addressed where the possibility exists that flooding of equipment may result from HELBs.

3.3 Temperature, Pressure, and Humidity Conditions Inside Containment

The licensee has provided the results of accident analyses as follows:

	<u>Max Temp (°F)</u>	<u>Max Press (psig)</u>	<u>Humidity (%)</u>
LOCA	340	56	100
MSLB	(not provided)	(not provided)	100

The staff has concluded that the minimum temperature profile for equipment qualification purposes should include a margin to account for analytical uncertainties in the calculated temperature profiles for postulated accidents. A margin of 20°F above steam saturation temperature is considered to be appropriate for either a postulated LOCA or MSLB, whichever is controlling as to potential adverse environmental effects on equipment.

In his submittal, the licensee has not defined which set of temperature and pressure profiles (LOCA design profile or LOCA response profile) was used for equipment qualification. The staff has assumed, and requires the licensee to verify, that the LOCA design profile was used for equipment qualification purposes. Based on this assumption, the licensee's minimum temperature profile for qualification purposes includes a margin at least as large as would result from the staff's recommendation. Therefore, the staff concludes that the specified temperature profile is acceptable.

3.4 Temperature, Pressure, and Humidity Conditions Outside Containment

The licensee has provided the temperature, pressure, humidity and applicable environment associated with an HELB outside primary containment, inside secondary containment.

The staff has verified that the parameters identified by the licensee for the MSLB are acceptable.

3.5 Submergence

The licensee has stated that in the design of the pressure-suppression containment, flooding is not considered to be a credible accident environment because of the high-volume, low-resistance flowpaths from the drywell to the torus, paths which direct LOCA blowdown flow away from the drywell. The staff finds the consideration of submergence acceptable.

3.6 Chemical Spray

Brunswick Units 1 and 2 have demineralized water spray systems rather than chemical spray systems inside containment. This has been considered in the licensee's analysis.

3.7 Aging

Section 7 of the DOR guidelines does not require a qualified life to be established for all safety-related electrical equipment. However, the following actions are required:

The staff has separated the safety-related equipment into three categories: (1) equipment requiring immediate corrective action, (2) equipment requiring additional qualification information and/or corrective action, and (3) equipment considered acceptable if the staff's concern identified in Section 3.7 is satisfactorily resolved.

In its assessment of the licensee's submittal, the NRC staff did not review the methodology employed to determine the values established by the licensee. However, in reviewing the data sheets, the staff made a determination as to the stated conditions presented by the licensee. Additionally, the staff has not completed its review of supporting documentation referenced by the licensee (for example, test reports). It is expected that when the review of test reports is complete, the environmental qualification data bank established by the staff will provide the means to cross reference each supporting document to the referencing licensee.

If supporting documents are found to be unacceptable, the licensee will be required to take additional corrective actions to either establish qualification or replace the item(s) of concern. This effort will begin in early 1981.

An appendix for each subsection of this report provides a list of equipment for which additional information and/or corrective action is required. Where appropriate, a reference is provided in the appendices to identify deficiencies. It should be noted, as in the Commission Memorandum and Order, that the deficiencies identified do not necessarily mean that equipment is unqualified. However, they are cause for concern and may require further case-by-case evaluation.

4.1 Equipment Requiring Immediate Corrective Action

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4.2 Equipment Requiring Additional Information and/or Corrective Action

Appendix B identifies equipment in this category, including a tabulation of deficiencies. The deficiencies are noted by a letter relating to the legend (identified below), indicating that the information provided is not sufficient for the qualification parameter or condition.

Legend

R - radiation
T - temperature
DT - qualification time
RT - required time

P - pressure
 H - humidity
 CS - chemical spray
 A - material-aging evaluation; replacement schedule; ongoing equipment surveillance
 S - submergence
 M - margin
 I - HELB evaluation outside containment not completed
 QM - qualification method
 RPN - equipment relocation or replacement; adequate schedule not provided
 EXN - exempted equipment justification inadequate
 SEN - separate-effects qualification justification inadequate
 QI - qualification information being developed
 RPS - equipment relocation or replacement schedule provided

As noted in Section 4, these deficiencies do not necessarily mean that the equipment is unqualified. However, the deficiencies are cause for concern and require further case-by-case evaluation. The staff has determined that an acceptable basis to exempt equipment from qualification, in whole or part, can be established provided the following can be established and verified by the licensee:

- (1) Equipment does not perform essential safety functions in the harsh environment, and equipment failure in the harsh environment will not impact safety-related functions or mislead an operator.
- (2a) Equipment performs its function before its exposure to the harsh environment, and the adequacy for the time margin provided is adequately justified, and
- (2b) Subsequent failure of the equipment as a result of the harsh environment does not degrade other safety functions or mislead the operator.
- (3) The safety-related function can be accomplished by some other designated equipment that has been adequately qualified and satisfies the single-failure criterion.
- (4) Equipment will not be subjected to a harsh environment as a result of the postulated accident.

The licensee is, therefore, required to supplement the information presented by providing resolutions to the deficiencies identified; these resolutions should include a description of the corrective action, schedules for its completion (as applicable), and so forth. The staff will review the licensee's response, when it is submitted, and discuss the resolution in a supplemental report.

It should be noted that in cases where testing is being conducted, a condition may arise which results in a determination by the licensee that the equipment does not satisfy the qualification test requirements. For that equipment, the licensee will be required to provide the proposed corrective action, on a timely basis, to ensure that qualification can be established by June 30, 1982.

4.3 Equipment Considered Acceptable or Conditionally Acceptable

Based on the staff review of the licensee's submittal, the staff identified the equipment in Appendix C as (1) acceptable on the basis that the qualification program adequately enveloped the specific environmental plant parameters, or (2) conditionally acceptable subject to the satisfactory resolution of the staff concern identified in Section 3.7.

For the equipment identified as conditionally acceptable, the staff determined that the licensee did not clearly

- (1) state that an equipment material evaluation was conducted to ensure that no known materials susceptible to degradation because of aging have been used,
- (2) establish an ongoing program to review the plant surveillance and maintenance records in order to identify equipment degradation which may be age related, and/or
- (3) propose a maintenance program and replacement schedule for equipment identified in item 1 or equipment that is qualified for less than the life of the plant.

The licensee is, therefore, required to supplement the information presented for equipment in this category before full acceptance of this equipment can be established. The staff will review the licensee's response when it is submitted and discuss the resolution in a supplemental report.

5 DEFERRED REQUIREMENTS

IEB 79-01B, Supplement 3 has relaxed the time constraints for the submission of the information associated with cold shutdown equipment and TMI lessons-learned modifications. The staff has required that this information be provided by February 1, 1981. The staff will provide a supplemental safety evaluation addressing these concerns.

APPENDIX B

Equipment Requiring Additional Information and/or Corrective Action (Category 4.2)

LEGEND:

Designation for Deficiency

- R - Radiation
- T - Temperature
- QT - Qualification Time
- RT - Required Time
- P - Pressure
- H - Humidity
- CS - Chemical spray
- A - Material aging evaluation, replacement schedule, ongoing equipment surveillance
- S - Submergence
- M - Margin
- I - HELB evaluation outside containment not completed
- QM - Qualification method
- RPN - Equipment relocation or replacement, adequate schedule not provided
- EXN - Exempted equipment justification inadequate
- SEN - Separate effects qualification justification inadequate
- QI - Qualification information being developed
- RPS - Equipment relocation or replacement schedule provided

<u>Equipment Description</u>	<u>Manufacturer/Model #</u>	<u>Component No.</u>	<u>Deficiency</u>
<u>System: Automatic Depressurization</u>			
Selector Switch	Honeywell/PTSHE 202C-B97	B21-CS-3327	T,P,R,A,QM
Selector Switch	Honeywell/PTSHE 202C-B97	B21-CS-3329	T,P,R,A,QM
Selector Switch	Honeywell/PTSHE 202C-B97	B21-CS-3412	T,P,R,A,QM
Solenoid Valve	AVCO/5450-5	B21-F013A*	A,QT
Solenoid Valve	AVCO/5450-5	B21-F013B*	A,QT

*Items have been discussed in LERs 2-80-46 and 47.

APPENDIX B (Continued)

Equipment Description	Manufacturer/ Model #	Component No.	Deficiency
Solenoid Valve	AVCO/5450-5	B21-F013C*	A,QT
Solenoid Valve	AVCO/5450-5	B21-F013D*	A,QT
Solenoid Valve	AVCO/5450-5	B21-F013E*	A,QT
Solenoid Valve	AVCO/5450-5	B21-F013F*	A,QT
Solenoid Valve	AVCO/5450-5	B21-F013G*	A,QT
Solenoid Valve	AVCO/5450-5	B21-F013H*	A,QT
Solenoid Valve	AVCO/5450-5	B21-F013J*	A,QT
Solenoid Valve	AVCO/5450-5	B21-F013K*	A,QT
Solenoid Valve	AVCO/5450-5	B21-F013L*	A,QT
Level Switch	Yarway/4418C	B21-LS-N031A	A,QM
Level Switch	Yarway/4418C	B21-LS-N031B	A,QM
Level Switch	Yarway/4418C	B21-LS-N031C	A,QM
Level Switch	Yarway/4418C	B21-LS-N031D	A,QM
Level Switch	Yarway/4418C	B21-LS-N042A	A,QM
Level Switch	Yarway/4418C	B21-LS-N042B	A,QM
Pressure Switch	Static-O-Ring/ 12N-AA4-X10TT	E11-PS-N010A	A,QM
Pressure Switch	Static-O-Ring/ 12N-AA4-X10TT	E11-PS-N010B	A,QM
Pressure Switch	Static-O-Ring/ 12N-AA4-X10TT	E11-PS-N010C	A,QM
Pressure Switch	Static-O-Ring/ 12N-AA4-X10TT	E11-PS-N010D	A,QM

*Items have been discussed in LERs 2-80-46 and 47.

APPENDIX B (Continued)

Equipment Description	Manufacturer/ Model #	Component No.	Deficiency
<u>System: Cont. Atmospheric Control</u>			
H ₂ /O ₂ Analyzer	Nuclear Measurement Corp.	CAC-AT-1259	RPN
H ₂ /O ₂ Analyzer	Nuclear Measurement Corp.	CAC-AT-1263	RPN
Radiation Analyzer	Nuclear Measurement Corp.	CAC-AT-1260	RPN
Radiation Analyzer	Nuclear Measurement Corp.	CAC-AT-1262	RPN
Radiation Analyzer	Nuclear Measurement Corp.	CAC-AT-1261	RPN
Level Indicator	EMICO/35W	CAC-LI-2601-2	RPN
Level Indicator	EMICO/35W	CAC-LI-2602-2	RPN
Level Transmitter	Bailey/BQ15222	CAC-LT-2601	RPN
Level Transmitter	Bailey/BQ15222	CAC-LT-2602	RPN
Pressure Switch	Barton/289A	CAC-PDS-4222	A,P
Pressure Switch	Barton/289A	CAC-PDS-4223	A,P
Pressure Indicator	EMICO/35W	CAC-PI-1257-1	RPN
Pressure Indicator	EMICO/35W	CAC-PI-2599-2	RPN
Pressure Indicator	EMICO/35W	CAC-PI-1257-2	RPN
Pressure Transmitter	Bailey/KQ123	CAC-PT-1257-1	A,QM
Pressure Transmitter	Bailey/KQ123	CAC-PT-2599	A,QM
Pressure Transmitter	Bailey/KQ12C	CAC-PT-1257-1	A,QM
Limit Switch	Honeywell Micro Sw/OP-AR	CAC-PV-1260	T,P,A,QM
Limit Switch	Honeywell Micro Sw/OP-AR	CAC-PV-1261	T,P,A,QM

APPENDIX B (Continued)

Equipment Description	Manufacturer/ Model #	Component No.	Deficiency
Limit Switch	Honeywell Micro Sw/OP-AR	CAC-PV-1262	T,P,A,QM
Solenoid Valve	ASCO/WPHT8321A1	CAC-PV-1260	A,QM
Solenoid Valve	ASCO/WPHT8321A1	CAC-PV-1261	A,QM
Solenoid Valve	ASCO/WPHT8321A1	CAC-PV-1262	A,QM
Solenoid Valve	ASCO/8321A6	CAC-SV-4222	A,QM
Solenoid Valve	ASCO/8321A6	CAC-SV-4223	A,QM
Resistance Temperature Detector	Pyco/100-ohm Platinum	CAC-TE-1258-1	A,QM
Resistance Temperature Detector	Pyco/100-ohm Platinum	CAC-TE-1258-2	A,QM
Resistance Temperature Detector	Pyco/100-ohm Platinum	CAC-TE-1258-3	A,QM
Resistance Temperature Detector	Pyco/100-ohm Platinum	CAC-TE-1258-4	A,QM
Resistance Temperature Detector	Pyco/100-ohm Platinum	CAC-TE-1258-5	A,QM
Resistance Temperature Detector	Pyco/100-ohm Platinum	CAC-TE-1258-6	A,QM
Resistance Temperature Detector	Pyco/100-ohm Platinum	CAC-TE-1258-7	A,QM
Resistance Temperature Detector	Pyco/100-ohm Platinum	CAC-TE-1258-8	A,QM
Resistance Temperature Detector	Pyco/100-ohm Platinum	CAC-TE-1258-9	A,QM
Resistance Temperature Detector	Pyco/100-ohm Platinum	CAC-TE-1258-10	A,QM
Resistance Temperature Detector	Pyco/100-ohm Platinum	CAC-TE-1258-11	A,QM
Resistance Temperature Detector	Pyco/100-ohm Platinum	CAC-TE-1258-12	A,QM

APPENDIX B (Continued)

Equipment Description	Manufacturer/Model #	Component No.	Deficiency
Resistance Temperature Detector	Pyco/100-ohm Platinum	CAC-TE-1258-13	A,QM
Resistance Temperature Detector	Pyco/100-ohm Platinum	CAC-TE-1258-22	A,QM
Resistance Temperature Detector	Pyco/100-ohm Platinum	CAC-TE-1258-23	A,QM
Resistance Temperature Detector	Pyco/100-ohm Platinum	CAC-TE-1258-24	A,QM
Resistance Temperature Detector	Pyco/100-ohm Platinum	CAC-TE-1258-14	A,QM
Resistance Temperature Detector	Pyco/100-ohm Platinum	CAC-TE-1258-17	A,QM
Resistance Temperature Detector	Pyco/100-ohm Platinum	CAC-TE-1258-18	A,QM
Resistance Temperature Detector	Pyco/100-ohm Platinum	CAC-TE-1258-19	A,QM
Resistance Temperature Detector	Pyco/100-ohm Platinum	CAC-TE-1258-20	A,QM
Resistance Temperature Detector	Pyco/100-ohm Platinum	CAC-TE-1258-21	A,QM
Solenoid Valve	ASCO/HT8321A6	CAC-V4	A,QM
Solenoid Valve	ASCO/HT8321A6	CAC-V5	A,QM
Solenoid Valve	ASCO/HT8211B33 V1v, HT80143 Sol.	CAC-V5	A,QM
Solenoid Valve	ASCO/HT8211B33	CAC-V6	A,QM
Solenoid Valve	ASCO/HB8342A4	CAC-V6	A,QM
Solenoid Valve	ASCO/HB8342A4	CAC-V7	A,QM
Solenoid Valve	ASCO/HT8321A6	CAC-V8	A,QM

APPENDIX B (Continued)

Equipment Description	Manufacturer/ Model #	Component No.	Deficiency
Limit Switch	Bettis/RX-341	CAC-V9	T,P,R,A,QM
Solenoid Valve	ASCO/HB8342A4	CAC-V9	A,QM
Limit Switch	Bettis/RX-41	CAC-V10	T,P,R,A,QM
Solenoid Valve	ASCO/HT8321A6	CAC-V10	A,QM
Limit Switch	Bettis/RX-341	CAC-V15	T,P,R,A,QM
Solenoid Valve	ASCO/HB8342A4	CAC-V15	A,QM
Motor Operator	Limitorque/ SMB-000-5	CAC-V23	QI
Limit Switch	Honeywell Micro Sw/OP-AR	CAC-V47	T,P,R,A,QM
Solenoid Valve	ASCO/HB8302 C25 RU	CAC-V47	A,QM
Solenoid Valve	ASCO/HT8262 C71	CAC-V47	A,QM
Limit Switch	Honeywell Micro Sw/OP-AR	CAC-V48	T,P,R,A,QM
Solenoid Valve	ASCO/8262 D23	CAC-V48	A,QM
Solenoid Valve	ASCO/HB8302 C25 RU	CAC-V48	A,QM
Limit Switch	Bettis/RX-41	CAC-V49	T,P,R,A,QM
Solenoid Valve	ASCO/HT8316B15	CAC-V49	A,QM
Limit Switch	Bettis/RX-41	CAC-V50	T,P,R,A,QM
Solenoid Valve	ASCO/HT8316B15	CAC-V50	A,QM
Limit Switch	Honeywell Micro Sw/OP-AR	CAC-V55	T,P,R,A,QM
Solenoid Valve	ASCO/HB8302 C25 RU	CAC-V55	A,QM
Limit Switch	Honeywell Micro Sw/OP-AR	CAC-V56	T,P,R,A,QM
Solenoid Valve	ASCO/HB8302 C25 RU	CAC-V56	A,QM

APPENDIX B (Continued)

Equipment Description	Manufacturer/ Model #	Component No.	Deficiency
Radiation Detector	GE/194X927G	D12-RE-N010A	RPN
Radiation Detector	GE/194X927G	D12-RE-N010B	RPN
<u>System: Core Spray</u>			
Level Switch	Yarway/4418C	B21-LS-N031A	A,QM
Level Switch	Yarway/4418C	B21-LS-N031B	A,QM
Level Switch	Yarway/4418C	B21-LS-N031C	A,QM
Level Switch	Yarway/4418C	B21-LS-N031D	A,QM
Pressure Switch	Barton/288	B21-PS-N021B	P,A
Pressure Switch	Barton/288	B21-PS-N021D	P,A
Pressure Switch	Static-O-Ring/ 12N-AA4-X10TT	E11-PS-N011A	A,QM
Pressure Switch	Static-O-Ring/ 12N-AA4-X10TT	E11-PS-N011B	A,QM
Pressure Switch	Static-O-Ring/ 12N-AA4-X10TT	E11-PS-N011C	A,QM
Pressure Switch	Static-O-Ring/ 12N-AA4-X10TT	E11-PS-N011D	A,QM
Motor	GE/5K6346XC94A	E21-C001A	A,QM
Motor	GE/5K6346XC94A	E21-C001B	A,QM
Flow Switch	Barton/289	E21-FS-N006A	A,P
Motor Operator	Limitorque/SMB-00	E21-F001A	QI,A
Motor Operator	Limitorque/SMB-00	E21-F001B	QI,A
Motor Operator	Limitorque/SMB-2	E21-F004A	QI,A
Motor Operator	Limitorque/SMB-2	E21-F004B	QI,A
Motor Operator	Limitorque/SMB-2	E21-F005A	QI,A
Motor Operator	Limitorque/SMB-2	E21-F005B	QI,A

APPENDIX B (Continued)

Equipment Description	Manufacturer/ Model #	Component No.	Deficiency
Motor Operator	Limitorque/SMB-1	E21-F015A	QI
Motor Operator	Limitorque/SMB-1	E21-F015B	QI
Motor Operator	Limitorque/SMB-000	E21-F031A	QI
Motor Operator	Limitorque/SMB-000	E21-F031B	QI
Motor Operator	Limitorque/ SMB-00-10	E21-F037A	CS,QI
Motor Operator	Limitorque/ SMB-00-10	E21-F037B	CS,QI
Pressure Switch	Static-O-Ring/ 5N-AA3-X9STT	E21-PS-N008A	A,QM
Pressure Switch	Static-O-Ring/ 5N-AA3-X9STT	E21-PS-N008B	A,QM
Pressure Switch	Static-O-Ring/ 5N-AA3-X9STT	E21-PS-N009A	A,QM
Pressure Switch	Static-O-Ring/ 5N-AA3-X9STT	E21-PS-N009B	A,QM
<u>System: Electric Distribution</u>			
Motor Control Center	GE/IC 7700	MCC-2XA	A,QI
Motor Control Center	GE/IC 7700	MCC-2XB	A,QI
Motor Control Center	GE/IC 7700	MCC-2XB-2	A,QI
Motor Control Center	GE/IC 7700	MCC-2XC	A,QI
Motor Control Center	GE/IC 7700	MCC-2XD	A,QI
Motor Control Center	GE/IC 7700	MCC-2XDA	A,QI
Motor Control Center	GE/IC 7700	MCC-2XDB	A,QI
Motor Control Center	GE/IC 7700	MCC-2XE	A,QI
Motor Control Center	GE/IC 7700	MCC-2XF	A,QI
Motor Control Center	GE/IC 7700	MCC-2XH	A,QI

APPENDIX B (Continued)

Equipment Description	Manufacturer/ Model #	Component No.	Deficiency
Motor Control Center	GE/IC 7700	MCC-2XJ	A,QI
Motor Control Center	GE/IC 7700	MCC-2XK	A,QI
<u>System: HPCI</u>			
Relay	GE/CR2811A217Y	B11-B09-RS	A,QM
Selector Switch	Honeywell Micro Sw/PTKBC2221	B11-RS	T,P,A,R,QM
Control Switch	Honeywell Micro Sw/PTSHA201	B11-RS1	T,P,A,R,QM
Selector Switch	Honeywell Micro Sw/PTKBC2221CCC	B21-CS-3345	T,P,A,R,QM
Level Transmitter	Yarway/4418EC	B21-LITS-N026A	A,QM
Level Transmitter	Yarway/4418EC	B21-LITS-N026B	A,QM
Level Switch	Barton/288A	B21-LS-N017B	A,P
Level Switch	Barton/288A	B21-LS-N017D	A,P
Level Switch	Yarway/4418C	B21-LS-N031A	A,QM
Level Switch	Yarway/4418C	B21-LS-N031B	A,QM
Level Switch	Yarway/4418C	B21-LS-N031C	A,QM
Level Switch	Yarway/4418C	B21-LS-N031D	A,QM
Steam Turbine and Auxiliaries	Terry Steam Turbine Co./CCS	E41-C002	A,QI
Motor	Tuthill/CD259AT	E41-C002-AOP	A,QI
Flow Switch	Barton/289	E41-FSL-N006	A,R,P
Flow Transmitter	GE/50-555111 BDAA3PDH	E41-FT-N008	RPN
Motor Operator	Limiterque/SMB-1	E41-F001	QI
Motor Operator	Limiterque/SMB-1	E41-F002	T,CS,QI

APPENDIX B (Continued)

Equipment Description	Manufacturer/ Model #	Component No.	Deficiency
Motor Operator	Limitorque/SMB-1	E41-F003	A,QI
Motor Operator	Limitorque/SMB-00	E41-F004	A,QI
Motor Operator	Limitorque/SMB-3	E41-F006	A,QI
Motor Operator	Limitorque/SMB-3	E41-F007	QI
Motor Operator	Limitorque/SMB-3	E41-F008	QI
Motor Operator	Limitorque/SMB-0	E41-F012	QI
Motor Operator	Limitorque/SMB-00	E41-F041	A,QI
Motor Operator	Limitorque/SMB-00	E41-F042	A,QI
Motor Operator	Limitorque/SMB-000	E41-F059	A,QI
Level Switch	Robertshaw/ SL-205-A2-R11-B11-1	E41-LSH-N015A	RPN
Level Switch	Robertshaw/ SL-205-A2-R11-B11-1	E41-LSH-N015B	RPN
Pressure Switch	Barton/288	E41-PDS-N004	A,P
Pressure Switch	Barton/288	E41-PDS-N005	A,P
Pressure Switch	Barton/288A	E41-PS-N001A	A,P
Pressure Switch	Barton/288A	E41-PS-N001B	A,P
Pressure Switch	Barton/288A	E41-PS-N001C	A,P
Pressure Switch	Barton/288A	E41-PS-N001D	A,P
Pressure Switch	Static-O-Ring/ 6N-AA21-X9-SVTT	E41-PS-N010	A,QM
Pressure Switch	Barksdale/ D2T-M18SS	E41-PSH-N012A	M,A,QM
Pressure Switch	Barksdale/ D2T-M18SS	E41-PSH-N012C	M,A,QM
Pressure Switch	Barksdale/ D2T-M18SS	E41-PSH-N012B	M,A,QM

APPENDIX B (Continued)

Equipment Description	Manufacturer/ Model #	Component No.	Deficiency
Pressure Switch	Barksdale/ D2T-M18SS	E41-PSH-N012D	M,A,QM
Pressure Switch	Barksdale/ P1H-M340SS	E41-PSH-N017A	A,QM
Pressure Switch	Barksdale/ P1H-M340SS	E41-PSH-N017B	A,QM
Pressure Switch	Barksdale/ P1H-M340SS	E41-PSH-N027	A,QM
Temperature Switch	Fenwall/17002-40	E41-TS-3314	A,QM
Temperature Switch	Fenwall/17002-40	E41-TS-3315	A,QM
Temperature Switch	Fenwall/17002-40	E41-TS-3316	A,QM
Temperature Switch	Fenwall/17002-40	E41-TS-3317	A,QM
Temperature Switch	Fenwall/17002-40	E41-TS-3318	A,QM
Temperature Switch	Fenwall/17002-40	E41-TS-3354	A,QM
Temperature Switch	Fenwall/17002-40	E41-TS-3448	A,QM
Temperature Switch	Fenwall/17002-40	E41-TS-3489	A,QM
<u>System: NSSS</u>			
Solenoid Valve	ASCO/HB8302 C25 RU	B21-F003	A,QM
Solenoid Valve	ASCO/HB8302 C25 RU	B21-F004	A,QM
Motor Operator	Limitorque/SMB-00	B21-F016	T,QI
Motor Operator	Limitorque/SMB-00	B21-F019	A,QI
Limit Switch	NAMCO/EA740-80100	B21-F022A	A,QM,CS
Solenoid Valve	ASCO/HT-X-8320A70	B21-F022A	A,QM,CS
Limit Switch	NAMCO/EA 740-80100	B21-F022B	A,QM,CS
Limit Switch	NAMCO/EA 740-80100	B21-F022C	A,QM,CS
Limit Switch	NAMCO/EA 740-80100	B21-F022D	A,QM,CS

APPENDIX B (Continued)

Equipment Description	Manufacturer/ Model #	Component No.	Deficiency
Limit Switch	NAMCO/EA 740-80100	B21-F028A	A,QM,CS
Limit Switch	NAMCO/EA 740-80100	B21-F028B	A,QM,CS
Limit Switch	NAMCO/EA 740-80100	B21-F028C	A,QM,CS
Limit Switch	NAMCO/EA 740-80100	B21-F028D	A,QM,CS
Solenoid Valve	ASCO/HT-X-8320A70	B21-F022B	A,QM,CS
Solenoid Valve	ASCO/HT-X-8320A70	B21-F022C	A,QM,CS
Solenoid Valve	ASCO/HT-X-8320A70	B21-F022D	A,QM,CS
Solenoid Valve	ASCO/HT-X-8320A70	B21-F028A	A,QM,CS
Solenoid Valve	ASCO/HT-X-8320A70	B21-F028B	A,QM,CS
Solenoid Valve	ASCO/HT-X-8320A70	B21-F028C	A,QM,CS
Solenoid Valve	ASCO/HT-X-8320A70	B21-F028D	A,QM,CS
Level Switch	Yarway/4418C	B21-LS-N024A	A,QM
Level Switch	Yarway/4418C	B21-LS-N024B	A,QM
Level Switch	Yarway/4418C	B21-LS-N025A	A,QM
Level Switch	Yarway/4418C	B21-LS-N025B	A,QM
Pressure Switch	Barton/288A	B21-PDS-N006A	A,P
Pressure Switch	Barton/288A	B21-PDS-N006B	A,P
Pressure Switch	Barton/288A	B21-PDS-N006C	A,P
Pressure Switch	Barton/288A	B21-PDS-N006D	A,P
Pressure Switch	Barton/288A	B21-PDS-N007A	A,P
Pressure Switch	Barton/288A	B21-PDS-N007B	A,P
Pressure Switch	Barton/288A	B21-PDS-N007C	A,P
Pressure Switch	Barton/288A	B21-PDS-N007D	A,P
Pressure Switch	Barton/288A	B21-PDS-N008A	A,P

APPENDIX B (Continued)

Equipment Description	Manufacturer/ Model #	Component No.	Deficiency
Pressure Switch	Barton/288A	B21-PDS-N008B	A,P
Pressure Switch	Barton/288A	B21-PDS-N008C	A,P
Pressure Switch	Barton/288A	B21-PDS-N008D	A,P
Pressure Switch	Barton/288A	B21-PDS-N009A	A,P
Pressure Switch	Barton/288A	B21-PDS-N009B	A,P
Pressure Switch	Barton/288A	B21-PDS-N009C	A,P
Pressure Switch	Barton/288A	B21-PDS-N009D	A,P
Temperature Switch	Fenwall/17002-40	B21-TS-N010A	A,QM
Temperature Switch	Fenwall/17002-40	B21-TS-N010B	A,QM
Temperature Switch	Fenwall/17002-40	B21-TS-N010C	A,QM
Temperature Switch	Fenwall/17002-40	B21-TS-N010D	A,QM
Limit Switch	Honeywell Micro Sw/OP-AR	B32-F019	T,P,A,QM,CS
Limit Switch	Honeywell Micro Sw/OP-AR	B32-F020	T,P,A,QM,CS
Solenoid Valve	ASCO/HB8302 C25 RU	B32-F019	A,QM,CS
Solenoid Valve	ASCO/HB8302 C25 RU	B32-F020	A,QM,CS
Pressure Switch	Barksdale/ PIH-M340SS	B32-PS-N018A-1	A,QM
Pressure Switch	Barksdale/ TC9622-1	B32-PS-N018B	A,QM
Relay	GE/CR2811A217Y	B49-BN7-RS	A,QM
Selector Switch	Honeywell Micro Sw/PT/BC221CCB99	B49-RS	T,P,A,R,QM
Selector Switch	Honeywell Micro Sw/PTSHA202F-B52	B49-RS1	T,P,A,R,QM
Relay	GE/CR2811A217Y51	B50-B28-RS	A,QM

APPENDIX B (Continued)

Equipment Description	Manufacturer/ Model #	Component No.	Deficiency
Relay	GE/CR2811A217Y	B50-B28-RX	A,QM
Selector Switch	Honeywell Micro Sw/PTKBC221CCB99	B50-RS	P,T,A,R,QM
Selector Switch	Honeywell Micro Sw/PTSHA202F-B52	B50-RS1	P,T,A,R,QM
Selector Switch	Honeywell Micro Sw/PTKBC221CC	DH2-RS	P,T,A,R,QM
Selector Switch	Honeywell Micro Sw/PTSHA202F-B52	DH2-RS1	P,T,A,R,QM
Selector Switch	Honeywell Micro Sw/PTKBC221CC	DH3-RS	P,T,A,R,QM
Selector Switch	Honeywell Micro Sw/PTSHA202F-B52	DH3-RS1	P,T,A,R,QM
Relay	GE/CR 2810A14	D00-RS	A,QM
Relay	GE/HFA51A49H	D00-RX	A,QM
Motor Operator	Limitorque/SMB-3	E11-F008	A,QI
Motor Operator	Limitorque/SMB-3	E11-F009	CS,QI
Motor Operator	Limitorque/SMB-00	E11-F022	T,CS,QI
Motor Operator	Limitorque/SMB-00	E11-F023	A,QI
Motor Operator	Limitorque/SMB-000	E11-F049	T,QI
Solenoid Valve	ASCO/8302 C26D	G16-F003	A,QM
Solenoid Valve	ASCO/8302 C26D	G16-F004	A,QM
Solenoid Valve	ASCO/8302 C26 RU	G16-F019	A,QM
Solenoid Valve	ASCO/8302 C26 RU	G16-F020	A,QM
Motor Operator	Limitorque/SMB-00	G31-F001	T,CS,QI
Motor Operator	Limitorque/SMB-00	G31-F004	A,QI

APPENDIX B (Continued)

Equipment Description	Manufacturer/ Model #	Component No.	Deficiency
<u>System: RCIC</u>			
Level Switch	Barton/288A	B21-LS-N017A	A,P
Level Switch	Barton/288A	B21-LS-N017C	A,P
Relay	GE/CR2811A217Y	B41-B28-RS	A,QM
Relay	GE/CR2811A217Y	B45-BN7-RS	A,QM
Relay	GE/CR2811A217Y	B46-E28-RS	A,QM
Relay	GE/CR2811A217Y	B47-E28-RS	A,QM
Selector Switch	Honeywell Micro Sw/PTKBC221	B41-RS	P,R,T,A,QM
Selector Switch	Honeywell Micro Sw/PTKBC221	B45-RS	P,R,T,A,QM
Selector Switch	Honeywell Micro Sw/PTKBC221	B46-RS	P,R,T,A,QM
Selector Switch	Honeywell Micro Sw/PTKBC221	B47-RS	P,R,T,A,QM
Control Switch	Honeywell Micro Sw/PTSHA201	B41-RS1	P,R,T,A,QM
Control Switch	Honeywell Micro Sw/PTSHA201	B45-RS1	P,R,T,A,QM
Control Switch	Honeywell Micro Sw/PTSHA201	B46-RS1	P,R,T,A,QM
Control Switch	Honeywell Micro Sw/PTSHA201	B47-RS1	P,R,T,A,QM
Relay	GE/CR2811A217Y	B43-B28-RS	A,QM
Selector Switch	Honeywell Micro Sw/PTKBC221CCB99	B43-RS	P,R,T,A,QM
Control Switch	Honeywell Micro Sw/PTSHA202F-B52	B43-RS1	P,R,T,A,QM

APPENDIX B (Continued)

Equipment Description	Manufacturer/ Model #	Component No.	Deficiency
Selector Switch	Honeywell Micro Sw/PTKBC2221	DS4-RS	P,R,T,A,QM
Control Switch	Honeywell Micro Sw/PTSEA202F-B52	DS4-RS1	P,R,T,A,QM
Motor Operator	Limiterque/SMB-00	E51-F007	T,CS,QI
Motor Operator	Limiterque/SMB-00	E51-F008	A,QI
Motor Operator	Limiterque/SMB-00	E51-F013	A,QI
Motor Operator	Limiterque/SMB-000-5	E51-F019	A,QI
Motor Operator	Limiterque/SMB-00	E51-F029	QI
Motor Operator	Limiterque/SMB-00	E51-F031	T,QI
Pressure Switch	Barton/288	E51-PDS-N017	A,P
Pressure Switch	Barton/288	E51-PDS-N018	A,P
Pressure Switch	Barksdale/ P1H-M85SS-V	E51-PS-N019A	A,QM
Pressure Switch	Barksdale/ P1H-M85SS-V	E51-PS-N019B	A,QM
Pressure Switch	Barksdale/ P1H-M85SS-V	E51-PS-N019C	A,QM
Pressure Switch	Barksdale/ P1H-M85SS-V	E51-PS-N019D	A,QM
Pressure Switch	Barksdale/ B2T-M12SS	E51-PS-N020	M,A,QM
Pressure Switch	Barksdale/ D2H-M150SS	E51-PSH-N009A	A,M,QM
Pressure Switch	Barksdale/ D2H-M150SS	E51-PSH-N009B	A,M,QM
Pressure Switch	Barksdale/ D2H-M150SS	E51-PSH-N012A	A,M,QM

APPENDIX B (Continued)

Equipment Description	Manufacturer/ Model #	Component No.	Deficiency
Pressure Switch	Barksdale/ D2H-M150SS	E51-PSH-N012B	A,M,QM
Pressure Switch	Barksdale/ D2H-M150SS	E51-PSH-N012C	A,M,QM
Pressure Switch	Barksdale/ D2H-M150SS	E51-PSH-N012D	A,M,QM
Temperature Switch	Fenwall/17002-40	E51-TS-3319	A,M,QM
Temperature Switch	Fenwall/17002-40	E51-TS-3320	A,M,QM
Temperature Switch	Fenwall/17002-40	E51-TS-3321	A,M,QM
Temperature Switch	Fenwall/17002-40	E51-TS-3322	A,M,QM
Temperature Switch	Fenwall/17002-40	E51-TS-3323	A,M,QM
Temperature Switch	Fenwall/17002-40	E51-TS-3355	A,M,QM
Temperature Switch	Fenwall/17002-40	E51-TS-3487	A,M,QM
<u>System: RHR</u>			
Level Switch	Yarway/4418EC	B21-LITS-N036	A,QM
Level Switch	Yarway/4418EC	B21-LITS-N037	A,QM
Level Switch	Yarway/4418C	B21-LITS-N031B	A,QM
Level Switch	Yarway/4418C	B21-LITS-N031D	A,QM
Pressure Switch	Barksdale/B2T-M12SS	B21-PS-N021A	A,M,QM
Pressure Switch	Barksdale/B2T-M12SS	B21-PS-N021C	A,M,QM
Pressure Switch	Barksdale/288	B21-PS-N021B	A,P
Pressure Switch	Barksdale/288	B21-PS-N021D	A,P
Motor Operator	Limitorque/SMB-3	B32-F031A	CS,A,QI
Motor Operator	Limitorque/SMB-3	B32-F031B	CS,A,QI
Motor Operator	Limitorque/SMB-000	B32-F032A	CS,A,QI

APPENDIX B (Continued)

Equipment Description	Manufacturer/ Model #	Component No.	Deficiency
Motor Operator	Limiterque/SMB-000	B32-F032B	CS,A,QI
Motor Operator	Limiterque/SMB-2	B32-F043A	CS,A,QI
Motor Operator	Limiterque/SMB-2	B32-F043B	CS,A,QI
Motor Operator	Limiterque/SMB-000	B32-F044A	CS,A,QI
Motor Operator	Limiterque/SMB-000	B32-F044B	CS,A,QI
Pressure Switch	Barksdale/ PIH-M340SS-V	B32-PS-N019A	A,QM
Pressure Switch	Barksdale/ TC-9622-1	B32-PS-N018B	A,QM
Relay	GE/CR2810A14AC	DA6-3	A,QM
Relay	GE/CR2810A14AC	DA6-3-1	A,QM
Selector Switch	Honeywell Micro Sw/PTKBC2221CC	DK8-RS	P,R,T,A,QM
Control Switch	Honeywell Micro Sw/PTSEA202F-B52	DK8-RS1	P,R,T,A,QM
Selector Switch	Honeywell Micro Sw/PTKBC2221CC	DK9-RS	P,R,T,A,QM
Control Switch	Honeywell Micro Sw/PTSEA202F-B52	DK9-RS1	P,R,T,A,QM
Relay	GE/HFA51A49H	DK9-RX	A,QM
Selector Switch	Honeywell Micro Sw/PTKBC2221CC	DL0-RS	P,R,T,A,QM
Control Switch	Honeywell Micro Sw/PTSEA202F-B52	DL0-RS1	P,R,T,A,QM
Selector Switch	Honeywell Micro Sw/PTKBC221CC	DL1-RS	P,R,T,A,QM
Control Switch	Honeywell Micro Sw/PTSHA202F-B52	DL1-RS1	P,R,T,A,QM
Relay	GE/HFA51A49H	DL1-RX	A,QM

APPENDIX B (Continued)

Equipment Description	Manufacturer/ Model #	Component No.	Deficiency
Selector Switch	Honeywell Micro Sw/PTKBC221CC	DL2-RS	P,R,T,A,QM
Control Switch	Honeywell Micro Sw/PTSHA202F-B52	DL2-RS1	P,R,T,A,QM
Relay	GE/HFA51A49H	DL2-RX	A,QM
Selector Switch	Honeywell Micro Sw/PTKBC2221CC	DL7-RS	P,R,T,A,QM
Control Switch	Honeywell Micro Sw/PTSHA202F-B52	DL7-RS1	P,R,T,A,QM
Selector Switch	Honeywell Micro Sw/PTKBC2221CC	DL8-RS	P,R,T,A,QM
Control Switch	Honeywell Micro Sw/PTSEA202F-52	DL8-RS1	P,R,T,A,QM
Selector Switch	Honeywell Micro Sw/PTKBC2221CC	DL9-RS	P,R,T,A,QM
Control Switch	Honeywell Micro Sw/PTSHA202F-B52	DL9-RS1	P,R,T,A,QM
Selector Switch	Honeywell Micro Sw/PTKBC2221CC	DM2-RS	P,R,T,A,QM
Control Switch	Honeywell Micro Sw/PTSEA202F-B52	DM2-RS1	P,R,T,A,QM
Selector Switch	Honeywell Micro Sw/PTKBC2221CC	DM4-RS	P,R,T,A,QM
Control Switch	Honeywell Micro Sw/PTSEA202F-B52	DM4-RS1	P,R,T,A,QM
Selector Switch	Honeywell Micro Sw/PTKBC2221CC	DM5-RS	P,R,T,A,QM
Control Switch	Honeywell Micro Sw/PTSEA202F-B52	DM5-RS1	P,R,T,A,QM
Selector Switch	Honeywell Micro Sw/PTKBC2221CC	DM7-RS	P,R,T,A,QM

APPENDIX B (Continued)

Equipment Description	Manufacturer/ Model #	Component No.	Deficiency
Control Switch	Honeywell Micro Sw/PTSEA202F-552	DM7-RS1	P,R,T,A,QM
Selector Switch	Honeywell Micro Sw/PTKBC2221CC	DM8-RS	P,R,T,A,QM
Control Switch	Honeywell Micro Sw/PTSEA202F-B52	DM8-RS1	P,R,T,A,QM
Selector Switch	Honeywell Micro Sw/PTKBC2221CC	DN6-RS	P,R,T,A,QM
Control Switch	Honeywell Micro Sw/PTSEA202F-B52	DN6-RS1	P,R,T,A,QM
Relay	GE/CR2810A14AC2	DP5-3	A,QM
Relay	GE/CR2810A14AC2	DP5-3-1	A,QM
Motor	GE/5K634XC95A	E11-C002A	A,QM
Motor	GE/5K634XC95A	E11-C002C	A,QM
Motor	GE/5K634XC95A	E11-C002B	A,QM
Motor	GE/5K634XC95A	E11-C002D	A,QM
Motor Operator	Limitorque/SMB-1	E11-F003A	T,QI
Motor Operator	Limitorque/SMB-1	E11-F003B	T,QI
Motor Operator	Limitorque/SMB-0	E11-F004A	T,QI
Motor Operator	Limitorque/SMB-0	E11-F004B	T,QI
Motor Operator	Limitorque/SMB-0	E11-F004C	T,QI
Motor Operator	Limitorque/SMB-0	E11-F004D	T,QI
Motor Operator	Limitorque/SMB-0	E11-F006A	T,QI
Motor Operator	Limitorque/SMB-0	E11-F006B	T,QI
Motor Operator	Limitorque/SMB-0	E11-F006C	T,QI
Motor Operator	Limitorque/SMB-0	E11-F006D	T,QI

APPENDIX B (Continued)

Equipment Description	Manufacturer/ Model #	Component No.	Deficiency
Motor Operator	Limiterque/SMB-000	E11-F007A	T,QI
Motor Operator	Limiterque/SMB-000	E11-F007B	T,QI
Motor Operator	Limiterque/SMB-000	E11-F011A	T,QI
Motor Operator	Limiterque/SMB-000	E11-F011B	T,QI
Motor Operator	Limiterque/SMB-4	E11-F015A	QI
Motor Operator	Limiterque/SMB-4	E11-F015B	QI
Motor Operator	Limiterque/SMB-3	E11-F016A	T,QI
Motor Operator	Limiterque/SMB-3	E11-F016B	T,QI
Motor Operator	Limiterque/SMB-5T	E11-F017A	QI
Motor Operator	Limiterque/SMB-5T	E11-F017B	QI
Motor Operator	Limiterque/SMB-5T	E11-F020A	T,QI
Motor Operator	Limiterque/SMB-0	E11-F020B	T,QI
Motor Operator	Limiterque/SMB-2	E11-F021A	A,QI
Motor Operator	Limiterque/SMB-2	E11-F021B	A,QI
Motor Operator	Limiterque/SMB-3	E11-F024A	T,QI
Motor Operator	Limiterque/SMB-3	E11-F024B	T,QI
Motor Operator	Limiterque/SMB-0	E11-F027A	T,QI
Motor Operator	Limiterque/SMB-0	E11-F027B	T,QI
Motor Operator	Limiterque/SMB-1	E11-F028A	T,QI
Motor Operator	Limiterque/SMB-1	E11-F028B	T,QI
Motor Operator	Limiterque/SMB-1	E11-F047A	T,QI
Motor Operator	Limiterque/SMB-1	E11-F047B	T,QI
Motor Operator	Limiterque/SMB-3	E11-F048A	T,QI
Motor Operator	Limiterque/SMB-3	E11-F048B	T,QI

APPENDIX B (Continued)

Equipment Description	Manufacturer/ Model #	Component No.	Deficiency
Motor Operator	Limiterque/SMB-00	E11-F052A	QI
Motor Operator	Limiterque/SMB-00	E11-F052B	QI
Solenoid Valve	ASCO/HB8302C5U	E11-F053A	A,QM
Solenoid Valve	ASCO/HB8302C5U	E11-F053B	A,QM
Motor Operator	Limiterque/ SMB-00-5	E11-F103A	QI
Motor Operator	Limiterque/ SMB-00-5	E11-F103B	QI
Motor Operator	Limiterque/ SMB-00-5	E11-F104A	QI
Motor Operator	Limiterque/ SMB-00-5	E11-F104B	QI
Motor Operator	Limiterque/ SMB-00-10	E11-F122A	QI
Motor Operator	Limiterque/ SMB-00-10	E11-F122B	QI
Flow Switch	Barton/289	E11-PDIS-N021A	R,A,P
Flow Switch	Barton/289	E11-PDIS-N021B	R,A,P
Pressure Transmitter	GE/552032HKZZ2	E11-PDT-N002A	RPN
Pressure Transmitter	GE/552032HKZZ2	E11-PDT-N002B	RPN
Pressure Switch	Static-O-Ring/ 12N-AA4-X10TT	E11-PS-N011A	A,QM
Pressure Switch	Static-O-Ring/ 12N-AA4-X10TT	E11-PS-N011B	A,QM
Pressure Switch	Static-O-Ring/ 12N-AA4-X10TT	E11-PS-N011C	A,QM
Pressure Switch	Static-O-Ring/ 12N-AA4-X10TT	E11-PS-N011D	A,QM
Pressure Switch	Barksdale/ B2T-M12SS	E11-PS-N016A	A,M,QM

APPENDIX B (Continued)

Equipment Description	Manufacturer/ Model #	Component No.	Deficiency
Pressure Switch	Barksdale/ B2T-M12SS	E11-PS-N016B	A,M,QM
Pressure Switch	Barksdale/ B2T-M12SS	E11-PS-N016C	A,M,QM
Pressure Switch	Barksdale/ B2T-M12SS	E11-PS-N016D	A,M,QM
Pressure Switch	Static-O-Ring/ 12N-AA4-X10TT	E11-PS-N019A	A,QM
Pressure Switch	Static-O-Ring/ 12N-AA4-X10TT	E11-PS-N019B	A,QM
Pressure Switch	Static-O-Ring/ 12N-AA4-X10TT	E11-PS-N019C	A,QM
Pressure Switch	Static-O-Ring/ 12N-AA4-X10TT	E11-PS-N019D	A,QM
Pressure Switch	Barksdale/ P1H-M340SS	E11-PS-N020A	A,M,QM
Pressure Switch	Barksdale/ P1H-M340SS	E11-PS-N020B	A,M,QM
Pressure Switch	Barksdale/ P1H-M340SS	E11-PS-N020C	A,M,QM
Pressure Switch	Barksdale/ P1H-M340SS	E11-PS-N020D	A,M,QM
Motor Operator	Limiterque/ SMB-000-5	E11-V35	QI
Motor Operator	Limiterque/ SMB-000-5	E11-V36	QI
Motor Operator	Limiterque/ SMB-000-5	E11-V37	QI
Motor Operator	Limiterque/ SMB-000-5	E11-V38	QI
Pressure Transmitter	GE/551032GKZZ2	C32-PT-N005A	RPN
Pressure Transmitter	GE/551032GKZZ2	C32-PT-N005B	RPN

APPENDIX B (Continued)

Equipment Description	Manufacturer/Model #	Component No.	Deficiency
<u>System: Reactor Instrument Penetration</u>			
Flow Switch	Magnetrol/F-521	B21-FS-F015 A thru H, J thru N, P, R and S	A,QM
Flow Switch	Magnetrol/F-521	B21-FS-F043A&B	A,QM
Flow Switch	Magnetrol/F-521	B21-FS-F045A&B	A,QM
Flow Switch	Magnetrol/F-521	B21-FS-F047A&B	A,QM
Flow Switch	Magnetrol/F-521	B21-FS-F049A&B	A,QM
Flow Switch	Magnetrol/F-521	B21-FS-F051A&B	A,QM
Flow Switch	Magnetrol/F-521	B21-FS-F055	A,QM
Flow Switch	Magnetrol/F-521	B21-FS-F1227F	A,QM
Flow Switch	Magnetrol/F-521	E41-FS-F024 A thru D	A,QM
Flow Switch	Magnetrol/F-521	E51-FS-F044 A thru D	A,QM
Position Switch	Cherry Elec Prod. Co./E23-60H	B21-F014 A thru H, J thru N, P, R and S	A,QM
Position Switch	Cherry Elec Prod. Co./E23-60H	B21-F042A&B	A,QM
Position Switch	Cherry Elec Prod. Co./E23-60H	B21-F044A&B	A,QM
Position Switch	Cherry Elec Prod. Co./E23-60H	B21-F048A&B	A,QM
Position Switch	Cherry Elec Prod. Co./E23-60H	B21-F050A&B	A,QM
Position Switch	Cherry Elec Prod. Co./E23-60H	B21-F054	A,QM

APPENDIX B (Continued)

Equipment Description	Manufacturer/ Model #	Component No.	Deficiency
Position Switch	Cherry Elec Prod. Co./E23-60H	B21-PV-1227	A,QM
Position Switch	Cherry Elec Prod. Co./E23-60H	CAC-PV-1209D	A,QM
Position Switch	Cherry Elec Prod. Co./E23-60H	CAC-PV-1225C	A,QM
Position Switch	Cherry Elec Prod. Co./E23-60H	E11-F037 A thru D	A,QM
Position Switch	Cherry Elec Prod. Co./E23-60H	E11-F043 A thru D	A,QM
Position Switch	Cherry Elec Prod. Co./E23-60H	E41-F023 A thru D	A,QM
Position Switch	Cherry Elec Prod. Co./E23-60H	E51-F043 A thru D	A,QM
Position Switch	Honeywell Micro Sw/OP-DAR	CAC-PV-1200 B	P,T,A,QM
Position Switch	Honeywell Micro Sw/OP-DAR	CAC-PV-1205 E	P,T,A,QM
Position Switch	Honeywell Micro Sw/OP-DAR	CAC-PV-1209 A&B	P,T,A,QM
Position Switch	Honeywell Micro Sw/OP-DAR	CAC-PV-1211F	P,T,A,QM
Position Switch	Honeywell Micro Sw/OP-DAR	CAC-PV-1227A	P,T,A,QM
Position Switch	Honeywell Micro Sw/OP-DAR	CAC-PV-1227B	P,T,A,QM
Position Switch	Honeywell Micro Sw/OP-DAR	CAC-PV-1227C	P,T,A,QM
Position Switch	Honeywell Micro Sw/OP-DAR	CAC-PV-1227E	P,T,A,QM
Position Switch	Cherry Elec Prod. Co./E23-60H	CAC-PV-1218C	A,QM

APPENDIX B (Continued)

Equipment Description	Manufacturer/ Model #	Component No.	Deficiency
Position Switch	Cherry Elec Prod. Co./E23-60H	CAC-PV-1219B	A,QM
Position Switch	Cherry Elec Prod. Co./E23-60H	CAC-PV-1219C	A,QM
Position Switch	Cherry Elec Prod. Co./E23-60H	CAC-PV-1220D	A,QM
Position Switch	Cherry Elec Prod. Co./E23-60H	CAC-PV-1221C	A,QM
Position Switch	Cherry Elec Prod. Co./E23-60H	E41-PV-1218D	A,QM
Position Switch	Cherry Elec Prod. Co./E23-60H	E41-PV-1219D	A,QM
Position Switch	Cherry Elec Prod. Co./E23-60H	E41-PV-1220D	A,QM
Position Switch	Cherry Elec Prod. Co./E23-60H	E41-PV-1221D	A,QM
Position Switch	Honeywell Micro Sw/OP-DAR	CAC-PV-1211E	T,P,A,QM
Position Switch	Honeywell Micro Sw/OP-DAR	CAC-PV-1211B	T,P,A,QM
Position Switch	Honeywell Micro Sw/OP-DAR	CAC-PV-1231B	T,P,A,QM
Selector Switch	Honeywell Micro Sw/PTKBC22211CCF9	RIP-CS-1203C-2	T,P,A,QM
Selector Switch	Honeywell Micro Sw/PTKBC22211CCF9	RIP-CS-1203F-2	T,P,A,QM
Selector Switch	Honeywell Micro Sw/PTKBC22211CCF9	RIP-CS-1217A-2	T,P,A,QM
Selector Switch	Honeywell Micro Sw/PTKBC22211CCF9	RIP-CS-1217B-2	T,P,A,QM
Selector Switch	Honeywell Micro Sw/PTKBC22211CCF9	RIP-CS-1217C-2	T,P,A,QM

APPENDIX B (Continued)

Equipment Description	Manufacturer/ Model #	Component No.	Deficiency
Selector Switch	Honeywell Micro Sw/PTKBC22211CCF9	RIP-CS-1217D-2	T,P,A,QM
Selector Switch	Honeywell Micro Sw/PTKBC22211CCF9	RIP-CS-1218C-2	T,P,A,QM
Selector Switch	Honeywell Micro Sw/PTKBC22211CCF9	RIP-CS-1220C-2	T,P,A,QM
Selector Switch	Honeywell Micro Sw/PTKBC22211CCF9	RIP-CS-1225C-2	T,P,A,QM
Pressure Switch	Barksdale/ D2T-M150SS	RIP-PSL-1200	A,QM
Pressure Switch	Barksdale/ D2T-M150SS	RIP-PSL-1201	A,QM
Pressure Switch	Barksdale/ D2T-M150SS	RIP-PSL-1206	A,QM
Pressure Switch	Barksdale/ D2T-M150SS	RIP-PSL-1209	A,QM
Pressure Switch	Barksdale/ D2T-M150SS	RIP-PSL-1210	A,QM
Pressure Switch	Barksdale/ D2T-M150SS	RIP-PSL-1211	A,QM
Pressure Switch	Barksdale/ D2T-M150SS	RIP-PSL-1212	A,QM
Pressure Switch	Barksdale/ D2T-M150SS	RIP-PSL-1217	A,QM
Pressure Switch	Barksdale/ D2T-M150SS	RIP-PSL-1222	A,QM
Pressure Switch	Barksdale/ D2T-M150SS	RIP-PSL-1223	A,QM
Pressure Switch	Barksdale/ D2T-M150SS	RIP-PSL-1225	A,QM
Pressure Switch	Barksdale/ D2T-M150SS	RIP-PSL-1227	A,QM

APPENDIX B (Continued)

Equipment Description	Manufacturer/ Model #	Component No.	Deficiency
Pressure Switch	Barksdale/ D2T-M150SS	RIP-PSL-1228	A,QM
Pressure Switch	Barksdale/ D2T-M150SS	RIP-PSL-1229	A,QM
Pressure Switch	Barksdale/ D2T-M150SS	RIP-PSL-1218	A,QM
Pressure Switch	Barksdale/ D2T-M150SS	RIP-PSL-1219	A,QM
Pressure Switch	Barksdale/ D2T-M150SS	RIP-PSL-1220	A,QM
Pressure Switch	Barksdale/ D2T-M150SS	RIP-PSL-1221	A,QM
Solenoid Valve	ASCO/HV180-414	RIP-SV-1200A1	A,QM
Solenoid Valve	ASCO/WPHT8321A1	RIP-SV-1200A2	A,QM
Solenoid Valve	ASCO/JV182-084	RIP-SV-1201B1	A,QM
Solenoid Valve	ASCO/JV182-084	RIP-SV-1201D1	A,QM
Solenoid Valve	ASCO/JV182-084	RIP-SV-1203C1	A,QM
Solenoid Valve	ASCO/JV182-084	RIP-SV-1203F1	A,QM
Solenoid Valve	ASCO/JV182-084	RIP-SV-1205C1	A,QM
Solenoid Valve	ASCO/JV182-084	RIP-SV-1205D1	A,QM
Solenoid Valve	ASCO/JV182-084	RIP-SV-1206A1	A,QM
Solenoid Valve	ASCO/JV182-084	RIP-SV-1208B1	A,QM
Solenoid Valve	ASCO/JV182-084	RIP-SV-1208E1	A,QM
Solenoid Valve	ASCO/JV182-084	RIP-SV-1208F1	A,QM
Solenoid Valve	ASCO/JV182-084	RIP-SV-1209D1	A,QM
Solenoid Valve	ASCO/JV182-084	RIP-SV-1210A1	A,QM
Solenoid Valve	ASCO/JV182-084	RIP-SV-1210B1	A,QM

APPENDIX B (Continued)

Equipment Description	Manufacturer/ Model #	Component No.	Deficiency
Solenoid Valve	ASCO/JV182-084	RIP-SV-1210C1	A,QM
Solenoid Valve	ASCO/JV182-084	RIP-SV-1210D1	A,QM
Solenoid Valve	ASCO/JV182-084	RIP-SV-1211A1	A,QM
Solenoid Valve	ASCO/JV182-084	RIP-SV-1211B1	A,QM
Solenoid Valve	ASCO/JV182-084	RIP-SV-1211C1	A,QM
Solenoid Valve	ASCO/JV182-084	RIP-SV-1211D1	A,QM
Solenoid Valve	ASCO/JV182-084	RIP-SV-1211E1	A,QM
Solenoid Valve	ASCO/JV182-084	RIP-SV-1212A1	A,QM
Solenoid Valve	ASCO/JV182-084	RIP-SV-1212B1	A,QM
Solenoid Valve	ASCO/JV182-084	RIP-SV-1212C1	A,QM
Solenoid Valve	ASCO/JV182-084	RIP-SV-1212D1	A,QM
Solenoid Valve	ASCO/JV182-084	RIP-SV-1217A1	A,QM
Solenoid Valve	ASCO/JV182-084	RIP-SV-1217B1	A,QM
Solenoid Valve	ASCO/JV182-084	RIP-SV-1217C1	A,QM
Solenoid Valve	ASCO/JV182-084	RIP-SV-1217D1	A,QM
Solenoid Valve	ASCO/JV182-084	RIP-SV-1222A1	A,QM
Solenoid Valve	ASCO/JV182-084	RIP-SV-1222D1	A,QM
Solenoid Valve	ASCO/JV182-084	RIP-SV-1222E1	A,QM
Solenoid Valve	ASCO/JV182-084	RIP-SV-1222F1	A,QM
Solenoid Valve	ASCO/JV182-084	RIP-SV-1223A1	A,QM
Solenoid Valve	ASCO/JV182-084	RIP-SV-1225A1	A,QM
Solenoid Valve	ASCO/JV182-084	RIP-SV-1225B1	A,QM
Solenoid Valve	ASCO/JV182-084	RIP-SV-1225C1	A,QM
Solenoid Valve	ASCO/JV182-084	RIP-SV-1225D1	A,QM

APPENDIX B (Continued)

Equipment Description	Manufacturer/ Model #	Component No.	Deficiency
Solenoid Valve	ASCO/JV182-084	RIP-SV-1225E1	A,QM
Solenoid Valve	ASCO/JV182-084	RIP-SV-1225F1	A,QM
Solenoid Valve	ASCO/JV182-084	RIP-SV-1226E1	A,QM
Solenoid Valve	ASCO/JV182-084	RIP-SV-1226F1	A,QM
Solenoid Valve	ASCO/JV182-084	RIP-SV-1227F1	A,QM
Solenoid Valve	ASCO/JV182-084	RIP-SV-1228A1	A,QM
Solenoid Valve	ASCO/JV182-084	RIP-SV-1228B1	A,QM
Solenoid Valve	ASCO/JV182-084	RIP-SV-1229A1	A,QM
Solenoid Valve	ASCO/JV182-084	RIP-SV-1229B1	A,QM
Solenoid Valve	ASCO/JV182-084	RIP-SV-1229C1	A,QM
Solenoid Valve	ASCO/JV182-084	RIP-SV-1229D1	A,QM
Solenoid Valve	ASCO/HV180-414	RIP-SV-1201B2	A,QM
Solenoid Valve	ASCO/HV180-414	RIP-SV-1201D2	A,QM
Solenoid Valve	ASCO/HV180-414	RIP-SV-1203C2	A,QM
Solenoid Valve	ASCO/HV180-414	RIP-SV-1203F2	A,QM
Solenoid Valve	ASCO/HV180-414	RIP-SV-1205C2	A,QM
Solenoid Valve	ASCO/HV180-414	RIP-SV-1205D2	A,QM
Solenoid Valve	ASCO/HV180-414	RIP-SV-1205E2	A,QM
Solenoid Valve	ASCO/HV180-414	RIP-SV-1206A2	A,QM
Solenoid Valve	ASCO/HV180-414	RIP-SV-1208B2	A,QM
Solenoid Valve	ASCO/HV180-414	RIP-SV-1208E2	A,QM
Solenoid Valve	ASCO/HV180-414	RIP-SV-1208F2	A,QM

APPENDIX B (Continued)

Equipment Description	Manufacturer/ Model #	Component No.	Deficiency
Solenoid Valve	ASCO/HV180-414	RIP-SV-1209A2	A,QM
Solenoid Valve	ASCO/HV180-414	RIP-SV-1209B2	A,QM
Solenoid Valve	ASCO/HV180-414	RIP-SV-1209D2	A,QM
Solenoid Valve	ASCO/HV180-414	RIP-SV-1210A2	A,QM
Solenoid Valve	ASCO/HV180-414	RIP-SV-1210B2	A,QM
Solenoid Valve	ASCO/HV180-414	RIP-SV-1210C2	A,QM
Solenoid Valve	ASCO/HV180-414	RIP-SV-1210D2	A,QM
Solenoid Valve	ASCO/HV180-414	RIP-SV-1211A2	A,QM
Solenoid Valve	ASCO/HV180-414	RIP-SV-1211B2	A,QM
Solenoid Valve	ASCO/HV180-414	RIP-SV-1211C2	A,QM
Solenoid Valve	ASCO/HV180-414	RIP-SV-1211D2	A,QM
Solenoid Valve	ASCO/HV180-414	RIP-SV-1211E2	A,QM
Solenoid Valve	ASCO/HV180-414	RIP-SV-1211F2	A,QM
Solenoid Valve	ASCO/HV180-414	RIP-SV-1212A2	A,QM
Solenoid Valve	ASCO/HV180-414	RIP-SV-1212B2	A,QM
Solenoid Valve	ASCO/HV180-414	RIP-SV-1212C2	A,QM
Solenoid Valve	ASCO/HV180-414	RIP-SV-1212D2	A,QM
Solenoid Valve	ASCO/HV180-414	RIP-SV-1217A2	A,QM
Solenoid Valve	ASCO/HV180-414	RIP-SV-1217B2	A,QM
Solenoid Valve	ASCO/HV180-414	RIP-SV-1217C2	A,QM
Solenoid Valve	ASCO/HV180-414	RIP-SV-1217D2	A,QM
Solenoid Valve	ASCO/HV180-414	RIP-SV-1222A2	A,QM
Solenoid Valve	ASCO/HV180-414	RIP-SV-1222D2	A,QM
Solenoid Valve	ASCO/HV180-414	RIP-SV-1222E2	A,QM

APPENDIX B (Continued)

Equipment Description	Manufacturer/ Model #	Component No.	Deficiency
Solenoid Valve	ASCO/HV180-414	RIP-SV-1222F2	A,QM
Solenoid Valve	ASCO/HV180-414	RIP-SV-1223A2	A,QM
Solenoid Valve	ASCO/HV180-414	RIP-SV-1225A2	A,QM
Solenoid Valve	ASCO/HV180-414	RIP-SV-1225B2	A,QM
Solenoid Valve	ASCO/HV180-414	RIP-SV-1225C2	A,QM
Solenoid Valve	ASCO/HV180-414	RIP-SV-1225D2	A,QM
Solenoid Valve	ASCO/HV180-414	RIP-SV-1225E2	A,QM
Solenoid Valve	ASCO/HV180-414	RIP-SV-1225F2	A,QM
Solenoid Valve	ASCO/HV180-414	RIP-SV-1226E2	A,QM
Solenoid Valve	ASCO/HV180-414	RIP-SV-1226F2	A,QM
Solenoid Valve	ASCO/HV180-414	RIP-SV-1227A2	A,QM
Solenoid Valve	ASCO/HV180-414	RIP-SV-1227B2	A,QM
Solenoid Valve	ASCO/HV180-414	RIP-SV-1227C2	A,QM
Solenoid Valve	ASCO/HV180-414	RIP-SV-1227E2	A,QM
Solenoid Valve	ASCO/HV180-414	RIP-SV-1227F2	A,QM
Solenoid Valve	ASCO/HV180-414	RIP-SV-1228A2	A,QM
Solenoid Valve	ASCO/HV180-414	RIP-SV-1228B2	A,QM
Solenoid Valve	ASCO/HV180-414	RIP-SV-1229A2	A,QM
Solenoid Valve	ASCO/HV180-414	RIP-SV-1229B2	A,QM
Solenoid Valve	ASCO/HV180-414	RIP-SV-1229C2	A,QM
Solenoid Valve	ASCO/HV180-414	RIP-SV-1229D2	A,QM
Solenoid Valve	ASCO/JV182-084	RIP-SV-1205E1	A,QM
Solenoid Valve	ASCO/JV182-084	RIP-SV-1209A1	A,QM
Solenoid Valve	ASCO/JV182-084	RIP-SV-1209B1	A,QM

APPENDIX B (Continued)

Equipment Description	Manufacturer/ Model #	Component No.	Deficiency
Solenoid Valve	ASCO/JV182-084	RIP-SV 227A1	A,QM
Solenoid Valve	ASCO/JV182-084	RIP-SV-1227B1	A,QM
Solenoid Valve	ASCO/JV182-084	RIP-SV-1227E1	A,QM
Solenoid Valve	ASCO/WPHT8321A1	RIP-SV-1211F1	A,QM
Solenoid Valve	ASCO/WPHT8321A1	RIP-SV-1227C1	A,QM
Solenoid Valve	ASCO/JV182-084	RIP-SV-1218C1	A,QM
Solenoid Valve	ASCO/JV182-084	RIP-SV-1218D1	A,QM
Solenoid Valve	ASCO/JV182-084	RIP-SV-1219B1	A,QM
Solenoid Valve	ASCO/JV182-084	RIP-SV-1219C1	A,QM
Solenoid Valve	ASCO/JV182-084	RIP-SV-1219D1	A,QM
Solenoid Valve	ASCO/JV182-084	RIP-SV-1220C1	A,QM
Solenoid Valve	ASCO/JV182-084	RIP-SV-1220D1	A,QM
Solenoid Valve	ASCO/JV182-084	RIP-SV-1221C1	A,QM
Solenoid Valve	ASCO/JV182-084	RIP-SV-1221D1	A,QM
Solenoid Valve	ASCO/JV182-084	RIP-SV-1231B1	A,QM
Solenoid Valve	ASCO/HV180-414	RIP-SV-1218C2	A,QM
Solenoid Valve	ASCO/HV180-414	RIP-SV-1218D2	A,QM
Solenoid Valve	ASCO/HV180-414	RIP-SV-1219C2	A,QM
Solenoid Valve	ASCO/HV180-414	RIP-SV-1219D2	A,QM
Solenoid Valve	ASCO/HV180-414	RIP-SV-1220C2	A,QM
Solenoid Valve	ASCO/JV182-084	RIP-SV-1219B2	A,QM
<u>System: RPS</u>			
Limit Switch	NAMCO/EA740-80100	B21-F022A	CC,A,QM

APPENDIX B (Continued)

Equipment Description	Manufacturer/ Model #	Component No.	Deficiency
Limit Switch	NAMCO/EA740-80100	B21-F022B	CS,A,QM
Limit Switch	NAMCO/EA740-80100	B21-F022C	CS,A,QM
Limit Switch	NAMCO/EA740-80100	B21-F022D	CS,A,QM
Limit Switch	NAMCO/EA740-80100	B21-F028A	A,QM
Limit Switch	NAMCO/EA740-80100	B21-F028B	A,QM
Limit Switch	NAMCO/EA740-80100	B21-F028C	A,QM
Limit Switch	NAMCO/EA740-80100	B21-F028D	A,QM
Level Switch	Barton/288A	B21-25-N017A	A,P
Level Switch	Barton/288A	B21-25-N017B	A,P
Level Switch	Barton/288A	B21-25-N017C	A,P
Level Switch	Barton/288A	B21-25-N017D	A,P
Pressure Switch	Barksdale/ B2T-M12SS	B21-25-N023A	A,QM
Pressure Switch	Barksdale/ B2T-M12SS	B21-25-N023B	A,QM
Pressure Switch	Barksdale/ B2T-M12SS	B21-25-N023C	A,QM
Pressure Switch	Barksdale/ B2T-M12SS	B21-25-N023D	A,QM
Solenoid Valve	ASCO/HT832322	C12-F009A	A,QM
Solenoid Valve	ASCO/HT832322	C12-F009B	A,QM
Solenoid Valve	ASCO/HT8316C37	C12-F110A	A,QM
Solenoid Valve	ASCO/HT8316C37	C12-F110B	A,QM
Level Switch	Magnetrol/ 5.0-751	C12-LSH-N013A A thru D	R,A,QM
Level Switch	Magnetrol/ 5.0-751	C12-LSH-N013B	R,A,QM

APPENDIX B (Continued)

Equipment Description	Manufacturer/ Model #	Component No.	Deficiency
Level Switch	Magnetrol/ 5.0-751	C12-LSH-N013C	R,A,QM
Level Switch	Magnetrol/ 5.0-751	C12-LSH-N013D	R,A,QM
Solenoid Valve	ASCO/ HVA-90-405-2A	C12-SV-117-0219	A,QM
Solenoid Valve	ASCO/ HVA-90-405-2A	C12-SV-117-0223	A,QM
Solenoid Valve	ASCO/ HVA-90-405-2A	C12-SV-117-0227	A,QM
Solenoid Valve	ASCO/ HVA-90-405-2A	C12-SV-117-0231	A,QM
Solenoid Valve	ASCO/ HVA-90-405-2A	C12-SV-117-0235	A,QM
Solenoid Valve	ASCO/ HVA-90-405-2A	C12-SV-117-0611	A,QM
Solenoid Valve	ASCO/ HVA-90-405-2A	C12-SV-117-0615	A,QM
Solenoid Valve	ASCO/ HVA-90-405-2A	C12-SV-117-0619	A,QM
Solenoid Valve	ASCO/ HVA-90-405-2A	C12-SV-117-0623	A,QM
Solenoid Valve	ASCO/ HVA-90-405-2A	C12-SV-117-0627	A,QM
Solenoid Valve	ASCO/ HVA-90-405-2A	C12-SV-117-0631	A,QM
Solenoid Valve	ASCO/ HVA-90-405-2A	C12-SV-117-0635	A,QM
Solenoid Valve	ASCO/ HVA-90-405-2A	C12-SV-117-0639	A,QM
Solenoid Valve	ASCO/ HVA-90-405-2A	C12-SV-117-0643	A,QM

APPENDIX B (Continued)

Equipment Description	Manufacturer/ Model #	Component No.	Deficiency
Solenoid Valve	ASCO/ HVA-90-405-2A	C12-SV-117-1007	A,QM
Solenoid Valve	ASCO/ HVA-90-405-2A	C12-SV-117-1011	A,QM
Solenoid Valve	ASCO/ HVA-90-405-2A	C12-SV-117-1015	A,QM
Solenoid Valve	ASCO/ HVA-90-405-2A	C12-SV-117-1019	A,QM
Solenoid Valve	ASCO/ HVA-90-405-2A	C12-SV-117-1023	A,QM
Solenoid Valve	ASCO/ HVA-90-405-2A	C12-SV-117-1027	A,QM
Solenoid Valve	ASCO/ HVA-90-405-2A	C12-SV-117-1031	A,QM
Solenoid Valve	ASCO/ HVA-90-405-2A	C12-SV-117-1035	A,QM
Solenoid Valve	ASCO/ HVA-90-405-2A	C12-SV-117-1039	A,QM
Solenoid Valve	ASCO/ HVA-90-405-2A	C12-SV-117-1043	A,QM
Solenoid Valve	ASCO/ HVA-90-405-2A	C12-SV-117-1047	A,QM
Solenoid Valve	ASCO/ HVA-90-405-2A	C12-SV-117-1407	A,QM
Solenoid Valve	ASCO/ HVA-90-405-2A	C12-SV-117-1411	A,QM
Solenoid Valve	ASCO/ HVA-90-405-2A	C12-SV-117-1415	A,QM
Solenoid Valve	ASCO/ HVA-90-405-2A	C12-SV-117-1419	A,QM
Solenoid Valve	ASCO/ HVA-90-405-2A	C12-SV-117-1423	A,QM

APPENDIX B (Continued)

Equipment Description	Manufacturer/ Model #	Component No.	Deficiency
Solenoid Valve	ASCO/ HVA-90-405-2A	C12-SV-117-1427	A,QM
Solenoid Valve	ASCO/ HVA-90-405-2A	C12-SV-117-1431	A,QM
Solenoid Valve	ASCO/ HVA-90-405-2A	C12-SV-117-1435	A,QM
Solenoid Valve	ASCO/ HVA-90-405-2A	C12-SV-117-1439	A,QM
Solenoid Valve	ASCO/ HVA-90-405-2A	C12-SV-117-1443	A,QM
Solenoid Valve	ASCO/ HVA-90-405-2A	C12-SV-117-1447	A,QM
Solenoid Valve	ASCO/ HVA-90-405-2A	C12-SV-117-1803	A,QM
Solenoid Valve	ASCO/ HVA-90-405-2A	C12-SV-117-1807	A,QM
Solenoid Valve	ASCO/ HVA-90-405-2A	C12-SV-117-1811	A,QM
Solenoid Valve	ASCO/ HVA-90-405-2A	C12-SV-117-1815	A,QM
Solenoid Valve	ASCO/ HVA-90-405-2A	C12-SV-117-1819	A,QM
Solenoid Valve	ASCO/ HVA-90-405-2A	C12-SV-117-1823	A,QM
Solenoid Valve	ASCO/ HVA-90-405-2A	C12-SV-117-1827	A,QM
Solenoid Valve	ASCO/ HVA-90-405-2A	C12-SV-117-1831	A,QM
Solenoid Valve	ASCO/ HVA-90-405-2A	C12-SV-117-1835	A,QM
Solenoid Valve	ASCO/ HVA-90-405-2A	C12-SV-117-1839	A,QM

APPENDIX B (Continued)

Equipment Description	Manufacturer/ Model #	Component No.	Deficiency
Solenoid Valve	ASCO/ HVA-90-405-2A	C12-SV-117-1843	A,QM
Solenoid Valve	ASCO/ HVA-90-405-2A	C12-SV-117-1847	A,QM
Solenoid Valve	ASCO/ HVA-90-405-2A	C12-SV-117-1851	A,QM
Solenoid Valve	ASCO/ HVA-90-405-2A	C12-SV-117-2203	A,QM
Solenoid Valve	ASCO/ HVA-90-405-2A	C12-SV-117-2207	A,QM
Solenoid Valve	ASCO/ HVA-90-405-2A	C12-SV-117-2211	A,QM
Solenoid Valve	ASCO/ HVA-90-405-2A	C12-SV-117-2215	A,QM
Solenoid Valve	ASCO/ HVA-90-405-2A	C12-SV-117-2219	A,QM
Solenoid Valve	ASCO/ HVA-90-405-2A	C12-SV-117-2223	A,QM
Solenoid Valve	ASCO/ HVA-90-405-2A	C12-SV-117-2227	A,QM
Solenoid Valve	ASCO/ HVA-90-405-2A	C12-SV-117-2231	A,QM
Solenoid Valve	ASCO/ HVA-90-405-2A	C12-SV-117-2235	A,QM
Solenoid Valve	ASCO/ HVA-90-405-2A	C12-SV-117-2239	A,QM
Solenoid Valve	ASCO/ HVA-90-405-2A	C12-SV-117-2243	A,QM
Solenoid Valve	ASCO/ HVA-90-405-2A	C12-SV-117-2247	A,QM
Solenoid Valve	ASCO/ HVA-90-405-2A	C12-SV-117-2251	A,QM

APPENDIX B (Continued)

Equipment Description	Manufacturer/ Model #	Component No.	Deficiency
Solenoid Valve	ASCO/ HVA-90-405-2A	C12-SV-117-2603	A,QM
Solenoid Valve	ASCO/ HVA-90-405-2A	C12-SV-117-2607	A,QM
Solenoid Valve	ASCO/ HVA-90-405-2A	C12-SV-117-2611	A,QM
Solenoid Valve	ASCO/ HVA-90-405-2A	C12-SV-117-2615	A,QM
Solenoid Valve	ASCO/ HVA-90-405-2A	C12-SV-117-2619	A,QM
Solenoid Valve	ASCO/ HVA-90-405-2A	C12-SV-117-2623	A,QM
Solenoid Valve	ASCO/ HVA-90-405-2A	C12-SV-117-2627	A,QM
Solenoid Valve	ASCO/ HVA-90-405-2A	C12-SV-117-2631	A,QM
Solenoid Valve	ASCO/ HVA-90-405-2A	C12-SV-117-2635	A,QM
Solenoid Valve	ASCO/ HVA-90-405-2A	C12-SV-117-2639	A,QM
Solenoid Valve	ASCO/ HVA-90-405-2A	C12-SV-117-2643	A,QM
Solenoid Valve	ASCO/ HVA-90-405-2A	C12-SV-117-2647	A,QM
Solenoid Valve	ASCO/ HVA-90-405-2A	C12-SV-117-2651	A,QM
Solenoid Valve	ASCO/ HVA-90-405-2A	C12-SV-117-3003	A,QM
Solenoid Valve	ASCO/ HVA-90-405-2A	C12-SV-117-3007	A,QM
Solenoid Valve	ASCO/ HVA-90-405-2A	C12-SV-117-3011	A,QM

APPENDIX B (Continued)

Equipment Description	Manufacturer/ Model #	Component No.	Deficiency
Solenoid Valve	ASCO/ HVA-90-405-2A	C12-SV-117-3015	A,QM
Solenoid Valve	ASCO/ HVA-90-405-2A	C12-SV-117-3019	A,QM
Solenoid Valve	ASCO/ HVA-90-405-2A	C12-SV-117-3023	A,QM
Solenoid Valve	ASCO/ HVA-90-405-2A	C12-SV-117-3027	A,QM
Solenoid Valve	ASCO/ HVA-90-405-2A	C12-SV-117-3031	A,QM
Solenoid Valve	ASCO/ HVA-90-405-2A	C12-SV-117-3035	A,QM
Solenoid Valve	ASCO/ HVA-90-405-2A	C12-SV-117-3039	A,QM
Solenoid Valve	ASCO/ HVA-90-405-2A	C12-SV-117-3043	A,QM
Solenoid Valve	ASCO/ HVA-90-405-2A	C12-SV-117-3047	A,QM
Solenoid Valve	ASCO/ HVA-90-405-2A	C12-SV-117-3051	A,QM
Solenoid Valve	ASCO/ HVA-90-405-2A	C12-SV-117-3403	A,QM
Solenoid Valve	ASCO/ HVA-90-405-2A	C12-SV-117-3407	A,QM
Solenoid Valve	ASCO/ HVA-90-405-2A	C12-SV-117-3411	A,QM
Solenoid Valve	ASCO/ HVA-90-405-2A	C12-SV-117-3415	A,QM
Solenoid Valve	ASCO/ HVA-90-405-2A	C12-SV-117-3419	A,QM
Solenoid Valve	ASCO/ HVA-90-405-2A	C12-SV-117-3423	A,QM

APPENDIX B (Continued)

Equipment Description	Manufacturer/ Model #	Component No.	Deficiency
Solenoid Valve	ASCO/ HVA-90-405-2A	C12-SV-117-3427	A,QM
Solenoid Valve	ASCO/ HVA-90-405-2A	C12-SV-117-3431	A,QM
Solenoid Valve	ASCO/ HVA-90-405-2A	C12-SV-117-3435	A,QM
Solenoid Valve	ASCO/ HVA-90-405-2A	C12-SV-117-3439	A,QM
Solenoid Valve	ASCO/ HVA-90-405-2A	C12-SV-117-3443	A,QM
Solenoid Valve	ASCO/ HVA-90-405-2A	C12-SV-117-3447	A,QM
Solenoid Valve	ASCO/ HVA-90-405-2A	C12-SV-117-3451	A,QM
Solenoid Valve	ASCO/ HVA-90-405-2A	C12-SV-117-3807	A,QM
Solenoid Valve	ASCO/ HVA-90-405-2A	C12-SV-117-3811	A,QM
Solenoid Valve	ASCO/ HVA-90-405-2A	C12-SV-117-3815	A,QM
Solenoid Valve	ASCO/ HVA-90-405-2A	C12-SV-117-3819	A,QM
Solenoid Valve	ASCO/ HVA-90-405-2A	C12-SV-117-3823	A,QM
Solenoid Valve	ASCO/ HVA-90-405-2A	C12-SV-117-3827	A,QM
Solenoid Valve	ASCO/ HVA-90-405-2A	C12-SV-117-3831	A,QM
Solenoid Valve	ASCO/ HVA-90-405-2A	C12-SV-117-3835	A,QM
Solenoid Valve	ASCO/ HVA-90-405-2A	C12-SV-117-3839	A,QM

APPENDIX B (Continued)

Equipment Description	Manufacturer/ Model #	Component No.	Deficiency
Solenoid Valve	ASCO/ HVA-90-405-2A	C12-SV-117-3843	A,QM
Solenoid Valve	ASCO/ HVA-90-405-2A	C12-SV-117-3847	A,QM
Solenoid Valve	ASCO/ HVA-90-405-2A	C12-SV-117-4207	A,QM
Solenoid Valve	ASCO/ HVA-90-405-2A	C12-SV-117-4211	A,QM
Solenoid Valve	ASCO/ HVA-90-405-2A	C12-SV-117-4215	A,QM
Solenoid Valve	ASCO/ HVA-90-405-2A	C12-SV-117-4219	A,QM
Solenoid Valve	ASCO/ HVA-90-405-2A	C12-SV-117-4223	A,QM
Solenoid Valve	ASCO/ HVA-90-405-2A	C12-SV-117-4227	A,QM
Solenoid Valve	ASCO/ HVA-90-405-2A	C12-SV-117-4231	A,QM
Solenoid Valve	ASCO/ HVA-90-405-2A	C12-SV-117-4235	A,QM
Solenoid Valve	ASCO/ HVA-90-405-2A	C12-SV-117-4239	A,QM
Solenoid Valve	ASCO/ HVA-90-405-2A	C12-SV-117-4243	A,QM
Solenoid Valve	ASCO/ HVA-90-405-2A	C12-SV-117-4247	A,QM
Solenoid Valve	ASCO/ HVA-90-405-2A	C12-SV-117-4611	A,QM
Solenoid Valve	ASCO/ HVA-90-405-2A	C12-SV-117-4615	A,QM
Solenoid Valve	ASCO/ HVA-90-405-2A	C12-SV-117-4619	A,QM

APPENDIX B (Continued)

Equipment Description	Manufacturer/ Model #	Component No.	Deficiency
Solenoid Valve	ASCO/ HVA-90-405-2A	C12-SV-117-4623	A,QM
Solenoid Valve	ASCO/ HVA-90-405-2A	C12-SV-117-4627	A,QM
Solenoid Valve	ASCO/ HVA-90-405-2A	C12-SV-117-4631	A,QM
Solenoid Valve	ASCO/ HVA-90-405-2A	C12-SV-117-4635	A,QM
Solenoid Valve	ASCO/ HVA-90-405-2A	C12-SV-117-4639	A,QM
Solenoid Valve	ASCO/ HVA-90-405-2A	C12-SV-117-4643	A,QM
Solenoid Valve	ASCO/ HVA-90-405-2A	C12-SV-117-5019	A,QM
Solenoid Valve	ASCO/ HVA-90-405-2A	C12-SV-117-5023	A,QM
Solenoid Valve	ASCO/ HVA-90-405-2A	C12-SV-117-5027	A,QM
Solenoid Valve	ASCO/ HVA-90-405-2A	C12-SV-117-5031	A,QM
Solenoid Valve	ASCO/ HVA-90-405-2A	C12-SV-117-5035	A,QM
Solenoid Valve	ASCO/ HVA-90-405-2A	C12-SV-118-0219	A,QM
Solenoid Valve	ASCO/ HVA-90-405-2A	C12-SV-118-0223	A,QM
Solenoid Valve	ASCO/ HVA-90-405-2A	C12-SV-118-0227	A,QM
Solenoid Valve	ASCO/ HVA-90-405-2A	C12-SV-118-0231	A,QM
Solenoid Valve	ASCO/ HVA-90-405-2A	C12-SV-118-0235	A,QM

APPENDIX B (Continued)

Equipment Description	Manufacturer/ Model #	Component No.	Deficiency
Solenoid Valve	ASCO/ HVA-90-405-2A	C12-SV-118-0611	A,QM
Solenoid Valve	ASCO/ HVA-90-405-2A	C12-SV-118-0615	A,QM
Solenoid Valve	ASCO/ HVA-90-405-2A	C12-SV-118-0619	A,QM
Solenoid Valve	ASCO/ HVA-90-405-2A	C12-SV-118-0623	A,QM
Solenoid Valve	ASCO/ HVA-90-405-2A	C12-SV-118-0627	A,QM
Solenoid Valve	ASCO/ HVA-90-405-2A	C12-SV-118-0631	A,QM
Solenoid Valve	ASCO/ HVA-90-405-2A	C12-SV-118-0635	A,QM
Solenoid Valve	ASCO/ HVA-90-405-2A	C12-SV-118-0639	A,QM
Solenoid Valve	ASCO/ HVA-90-405-2A	C12-SV-118-0643	A,QM
Solenoid Valve	ASCO/ HVA-90-405-2A	C12-SV-118-1007	A,QM
Solenoid Valve	ASCO/ HVA-90-405-2A	C12-SV-118-1011	A,QM
Solenoid Valve	ASCO/ HVA-90-405-2A	C12-SV-118-1015	A,QM
Solenoid Valve	ASCO/ HVA-90-405-2A	C12-SV-118-1019	A,QM
Solenoid Valve	ASCO/ HVA-90-405-2A	C12-SV-118-1023	A,QM
Solenoid Valve	ASCO/ HVA-90-405-2A	C12-SV-118-1027	A,QM
Solenoid Valve	ASCO/ HVA-90-405-2A	C12-SV-118-1031	A,QM

APPENDIX B (Continued)

Equipment Description	Manufacturer/ Model #	Component No.	Deficiency
Solenoid Valve	ASCO/ HVA-90-405-2A	C12-SV-118-1035	A,QM
Solenoid Valve	ASCO/ HVA-90-405-2A	C12-SV-118-1039	A,QM
Solenoid Valve	ASCO/ HVA-90-405-2A	C12-SV-118-1043	A,QM
Solenoid Valve	ASCO/ HVA-90-405-2A	C12-SV-118-1047	A,QM
Solenoid Valve	ASCO/ HVA-90-405-2A	C12-SV-118-1407	A,QM
Solenoid Valve	ASCO/ HVA-90-405-2A	C12-SV-118-1411	A,QM
Solenoid Valve	ASCO/ HVA-90-405-2A	C12-SV-118-1415	A,QM
Solenoid Valve	ASCO/ HVA-90-405-2A	C12-SV-118-1419	A,QM
Solenoid Valve	ASCO/ HVA-90-405-2A	C12-SV-118-1423	A,QM
Solenoid Valve	ASCO/ HVA-90-405-2A	C12-SV-118-1427	A,QM
Solenoid Valve	ASCO/ HVA-90-405-2A	C12-SV-118-1431	A,QM
Solenoid Valve	ASCO/ HVA-90-405-2A	C12-SV-118-1435	A,QM
Solenoid Valve	ASCO/ HVA-90-405-2A	C12-SV-118-1439	A,QM
Solenoid Valve	ASCO/ HVA-90-405-2A	C12-SV-118-1443	A,QM
Solenoid Valve	ASCO/ HVA-90-405-2A	C12-SV-118-1447	A,QM
Solenoid Valve	ASCO/ HVA-90-405-2A	C12-SV-118-1803	A,QM

APPENDIX B (Continued)

Equipment Description	Manufacturer/ Model #	Component No.	Deficiency
Solenoid Valve	ASCO/ HVA-90-405-2A	C12-SV-118-1807	A,QM
Solenoid Valve	ASCO/ HVA-90-405-2A	C12-SV-118-1811	A,QM
Solenoid Valve	ASCO/ HVA-90-405-2A	C12-SV-118-1815	A,QM
Solenoid Valve	ASCO/ HVA-90-405-2A	C12-SV-118-1819	A,QM
Solenoid Valve	ASCO/ HVA-90-405-2A	C12-SV-118-1823	A,QM
Solenoid Valve	ASCO/ HVA-90-405-2A	C12-SV-118-1827	A,QM
Solenoid Valve	ASCO/ HVA-90-405-2A	C12-SV-118-1831	A,QM
Solenoid Valve	ASCO/ HVA-90-405-2A	C12-SV-118-1835	A,QM
Solenoid Valve	ASCO/ HVA-90-405-2A	C12-SV-118-1839	A,QM
Solenoid Valve	ASCO/ HVA-90-405-2A	C12-SV-118-1843	A,QM
Solenoid Valve	ASCO/ HVA-90-405-2A	C12-SV-118-1847	A,QM
Solenoid Valve	ASCO/ HVA-90-405-2A	C12-SV-118-1851	A,QM
Solenoid Valve	ASCO/ HVA-90-405-2A	C12-SV-118-2203	A,QM
Solenoid Valve	ASCO/ HVA-90-405-2A	C12-SV-118-2207	A,QM
Solenoid Valve	ASCO/ HVA-90-405-2A	C12-SV-118-2211	A,QM
Solenoid Valve	ASCO/ HVA-90-405-2A	C12-SV-118-2215	A,QM

APPENDIX B (Continued)

Equipment Description	Manufacturer/ Model #	Component No.	Deficiency
Solenoid Valve	ASCO/ HVA-90-405-2A	C12-SV-118-2219	A,QM
Solenoid Valve	ASCO/ HVA-90-405-2A	C12-SV-118-2223	A,QM
Solenoid Valve	ASCO/ HVA-90-405-2A	C12-SV-118-2227	A,QM
Solenoid Valve	ASCO/ HVA-90-405-2A	C12-SV-118-2231	A,QM
Solenoid Valve	ASCO/ HVA-90-405-2A	C12-SV-118-2235	A,QM
Solenoid Valve	ASCO/ HVA-90-405-2A	C12-SV-118-2239	A,QM
Solenoid Valve	ASCO/ HVA-90-405-2A	C12-SV-118-2243	A,QM
Solenoid Valve	ASCO/ HVA-90-405-2A	C12-SV-118-2247	A,QM
Solenoid Valve	ASCO/ HVA-90-405-2A	C12-SV-118-2251	A,QM
Solenoid Valve	ASCO/ HVA-90-405-2A	C12-SV-118-2603	A,QM
Solenoid Valve	ASCO/ HVA-90-405-2A	C12-SV-118-2607	A,QM
Solenoid Valve	ASCO/ HVA-90-405-2A	C12-SV-118-2611	A,QM
Solenoid Valve	ASCO/ HVA-90-405-2A	C12-SV-118-2615	A,QM
Solenoid Valve	ASCO/ HVA-90-405-2A	C12-SV-118-2619	A,QM
Solenoid Valve	ASCO/ HVA-90-405-2A	C12-SV-118-2623	A,QM
Solenoid Valve	ASCO/ HVA-90-405-2A	C12-SV-118-2627	A,QM

APPENDIX B (Continued)

Equipment Description	Manufacturer/ Model #	Component No.	Deficiency
Solenoid Valve	ASCO/ HVA-90-405-2A	C12-SV-118-2631	A,QM
Solenoid Valve	ASCO/ HVA-90-405-2A	C12-SV-118-2635	A,QM
Solenoid Valve	ASCO/ HVA-90-405-2A	C12-SV-118-2639	A,QM
Solenoid Valve	ASCO/ HVA-90-405-2A	C12-SV-118-2643	A,QM
Solenoid Valve	ASCO/ HVA-90-405-2A	C12-SV-118-2647	A,QM
Solenoid Valve	ASCO/ HVA-90-405-2A	C12-SV-118-2651	A,QM
Solenoid Valve	ASCO/ HVA-90-405-2A	C12-SV-118-3003	A,QM
Solenoid Valve	ASCO/ HVA-90-405-2A	C12-SV-118-3007	A,QM
Solenoid Valve	ASCO/ HVA-90-405-2A	C12-SV-118-3011	A,QM
Solenoid Valve	ASCO/ HVA-90-405-2A	C12-SV-118-3015	A,QM
Solenoid Valve	ASCO/ HVA-90-405-2A	C12-SV-118-3019	A,QM
Solenoid Valve	ASCO/ HVA-90-405-2A	C12-SV-118-3023	A,QM
Solenoid Valve	ASCO/ HVA-90-405-2A	C12-SV-118-3027	A,QM
Solenoid Valve	ASCO/ HVA-90-405-2A	C12-SV-118-3031	A,QM
Solenoid Valve	ASCO/ HVA-90-405-2A	C12-SV-118-3035	A,QM
Solenoid Valve	ASCO/ HVA-90-405-2A	C12-SV-118-3039	A,QM

APPENDIX B (Continued)

Equipment Descripti	Manufacturer/ Model #	Component No.	Deficiency
Solenoid Valve	ASCO/ HVA-90-405-2A	C12-SV-118-3043	A,QM
Solenoid Valve	ASCO/ HVA-90-405-2A	C12-SV-118-3047	A,QM
Solenoid Valve	ASCO/ HVA-90-405-2A	C12-SV-118-3051	A,QM
Solenoid Valve	ASCO/ HVA-90-405-2A	C12-SV-118-3403	A,QM
Solenoid Valve	ASCO/ HVA-90-405-2A	C12-SV-118-3407	A,QM
Solenoid Valve	ASCO/ HVA-90-405-2A	C12-SV-118-3411	A,QM
Solenoid Valve	ASCO/ HVA-90-405-2A	C12-SV-118-3415	A,QM
Solenoid Valve	ASCO/ HVA-90-405-2A	C12-SV-118-3419	A,QM
Solenoid Valve	ASCO/ HVA-90-405-2A	C12-SV-118-3423	A,QM
Solenoid Valve	ASCO/ HVA-90-405-2A	C12-SV-118-3427	A,QM
Solenoid Valve	ASCO/ HVA-90-405-2A	C12-SV-118-3431	A,QM
Solenoid Valve	ASCO/ HVA-90-405-2A	C12-SV-118-3435	A,QM
Solenoid Valve	ASCO/ HVA-90-405-2A	C12-SV-118-3439	A,QM
Solenoid Valve	ASCO/ HVA-90-405-2A	C12-SV-118-3443	A,QM
Solenoid Valve	ASCO/ HVA-90-405-2A	C12-SV-118-3447	A,QM
Solenoid Valve	ASCO/ HVA-90-405-2A	C12-SV-118-3451	A,QM

APPENDIX B (Continued)

Equipment Description	Manufacturer/ Model #	Component No.	Deficiency
Solenoid Valve	ASCO/ HVA-90-405-2A	C12-SV-118-3807	A,QM
Solenoid Valve	ASCO/ HVA-90-405-2A	C12-SV-118-3811	A,QM
Solenoid Valve	ASCO/ HVA-90-405-2A	C12-SV-118-3815	A,QM
Solenoid Valve	ASCO/ HVA-90-405-2A	C12-SV-118-3819	A,QM
Solenoid Valve	ASCO/ HVA-90-405-2A	C12-SV-118-3823	A,QM
Solenoid Valve	ASCO/ HVA-90-405-2A	C12-SV-118-3827	A,QM
Solenoid Valve	ASCO/ HVA-90-405-2A	C12-SV-118-3831	A,QM
Solenoid Valve	ASCO/ HVA-90-405-2A	C12-SV-118-3835	A,QM
Solenoid Valve	ASCO/ HVA-90-405-2A	C12-SV-118-3839	A,QM
Solenoid Valve	ASCO/ HVA-90-405-2A	C12-SV-118-3843	A,QM
Solenoid Valve	ASCO/ HVA-90-405-2A	C12-SV-118-3847	A,QM
Solenoid Valve	ASCO/ HVA-90-405-2A	C12-SV-118-4207	A,QM
Solenoid Valve	ASCO/ HVA-90-405-2A	C12-SV-118-4211	A,QM
Solenoid Valve	ASCO/ HVA-90-405-2A	C12-SV-118-4215	A,QM
Solenoid Valve	ASCO/ HVA-90-405-2A	C12-SV-118-4219	A,QM
Solenoid Valve	ASCO/ HVA-90-405-2A	C12-SV-118-4223	A,QM

APPENDIX B (Continued)

Equipment Description	Manufacturer/ Model #	Component No.	Deficiency
Solenoid Valve	ASCO/ HVA-90-405-2A	C12-SV-118-4227	A,QM
Solenoid Valve	ASCO/ HVA-90-405-2A	C12-SV-118-4231	A,QM
Solenoid Valve	ASCO/ HVA-90-405-2A	C12-SV-118-4235	A,QM
Solenoid Valve	ASCO/ HVA-90-405-2A	C12-SV-118-4239	A,QM
Solenoid Valve	ASCO/ HVA-90-405-2A	C12-SV-118-4243	A,QM
Solenoid Valve	ASCO/ HVA-90-405-2A	C12-SV-118-4247	A,QM
Solenoid Valve	ASCO/ HVA-90-405-2A	C12-SV-118-4611	A,QM
Solenoid Valve	ASCO/ HVA-90-405-2A	C12-SV-118-4615	A,QM
Solenoid Valve	ASCO/ HVA-90-405-2A	C12-SV-118-4619	A,QM
Solenoid Valve	ASCO/ HVA-90-405-2A	C12-SV-118-4623	A,QM
Solenoid Valve	ASCO/ HVA-90-405-2A	C12-SV-118-4627	A,QM
Solenoid Valve	ASCO/ HVA-90-405-2A	C12-SV-118-4631	A,QM
Solenoid Valve	ASCO/ HVA-90-405-2A	C12-SV-118-4635	A,QM
Solenoid Valve	ASCO/ HVA-90-405-2A	C12-SV-118-4639	A,QM
Solenoid Valve	ASCO/ HVA-90-405-2A	C12-SV-118-4643	A,QM
Solenoid Valve	ASCO/ HVA-90-405-2A	C12-SV-118-5019	A,QM

APPENDIX B (Continued)

Equipment Description	Manufacturer/ Model #	Component No.	Deficiency
Solenoid Valve	ASCO/ HVA-90-405-2A	C12-SV-118-5023	A,QM
Solenoid Valve	ASCO/ HVA-90-405-2A	C12-SV-118-5027	A,QM
Solenoid Valve	ASCO/ HVA-90-405-2A	C12-SV-118-5031	A,QM
Solenoid Valve	ASCO/ HVA-90-405-2A	C12-SV-118-5035	A,QM
Pressure Switch	Static-O-Ring/ 12N-AA4-X10TT	C72-PS-N002A	A,QM
Pressure Switch	Static-O-Ring/ 12N-AA4-X10TT	C72-PS-N002B	A,QM
Pressure Switch	Static-O-Ring/ 12N-AA4-X10TT	C72-PS-N002C	A,QM
Pressure Switch	Static-O-Ring/ 12N-AA4-X10TT	C72-PS-N002D	A,QM
Fuse Panel	GE/None Applicable	C72-P002A	A,QM
Fuse Panel	GE/None Applicable	C72-P002B	A,QM
Fuse Panel	GE/None Applicable	C72-P002C	A,QM
Fuse Panel	GE/None Applicable	C72-P002D	A,QM
Fuse Panel	GE/None Applicable	C72-P002E	A,QM
Fuse Panel	GE/None Applicable	C72-P002F	A,QM
Fuse Panel	GE/None Applicable	C72-P002G	A,QM
Fuse Panel	GE/None Applicable	C72-P002H	A,QM
<u>System: SBT</u>			
Relay	GE/CR120A08002AA	NG7-CR9A	RPN
Relay	GE/CR120A08002AA	NG7-CR9XA	RPN
Relay	GE/CR120A08002AA	NG5-CR9B	RPN

APPENDIX B (Continued)

Equipment Description	Manufacturer/ Model #	Component No.	Deficiency
Relay	GE/CR120A08002AA	NG8-CR9XB	RPN
Control Switch	GE/CR2940BM204A	SBGT A Cont Sta	RPN
Control Switch	GE/CR2940BM204A	SBGT B Cont Sta	RPN
Motor/Control	FARR Co/D51423	SGT-FILT-2ARB	RPN
Motor/Control	FARR Co/D51423	SGT-FILT-2BRB	RPN
Limit Switch	NAMCO/D2400X-R	2A-BFIV-RB	A,QM
Limit Switch	NAMCO/D2400X-R	2B-BFIV-RB	A,QM
Solenoid Valve	ASCO/HT80033	2A-BFIV-RB	A,QM
Solenoid Valve	ASCO/HT8003	2B-BFIV-RB	A,QM
Motor Operator	Limiterque/ SMB-000-5	2A-BFV-RB	QI
Motor Operator	Limiterque/ SMB-000-5	2B-BFV-RB	QI
Limit Switch	NAMCO/D2400X-R	2C-BFIV-RB	A,QM
Limit Switch	NAMCO/D2400X-R	2D-BFIV-RB	A,QM
Solenoid Valves	ASCO/HT80033	2C-BFIV-RB	A,QM
Solenoid Valves	ASCO/HT80033	2D-BFIV-RB	A,QM
Motor Operator	Limiterque/ SMB-000-5	2C-BFV-RB	QI
Motor Operator	Limiterque/ SMB-000-5	2D-BFV-RB	QI
Motor Operator	Limiterque/ SMB-000-5	2E-BFV-RB	QI
Motor Operator	Limiterque/ SMB-000-5	2F-BFV-RB	QI
Motor Operator	Limiterque/ SMB-000-5	2G-BFV-RB	QI

APPENDIX B (Continued)

Equipment Description	Manufacturer/ Model #	Component No.	Deficiency
Motor Operator	Limiterque/ SMB-000-5	2H-BFV-RB	QI
Motor Operator	Limiterque/ SMB-000-5	2I-BFV-RB	QI
Motor Operator	Limiterque/ SMB-000-5	2N-BFV-RB	QI
Flow Indicator	EMICO/35W	VA-FI-2577	RPN
Flow Transmitter	Bailey/BQ13221	VA-FT-2577	RPN
<u>System: SVC Water</u>			
Motor	GE/5K821161C11	E11-C001A	A,QM
Motor	GE/5K821161C11	E11-C001B	A,QM
Motor	GE/5K821161C11	E11-C001C	A,QM
Motor	GE/5K821161C11	E11-C001D	A,QM
Motor Operator	Limiterque/SMB-00	E11-F002A	QI
Motor Operator	Limiterque/SMB-00	E11-F002B	QI
Motor Operator	Limiterque/SMB-00	E11-F068A	QI
Motor Operator	Limiterque/SMB-00	E11-F068B	QI
Motor Operator	Limiterque/SMB-0	E11-F075	QI
Temperature Switch	Barksdale/ T2H-M2515-12	SW-TSH-1109	A,QM
Temperature Switch	Barksdale/ T2H-M2515-12	SW-TSH-1110	A,QM
Temperature Switch	Barksdale/ T2H-M2515-12	SW-TSH-1111	A,QM
Temperature Switch	Barksdale/ T2H-M2515-12	SW-TSH-1112	A,QM
Motor Operator	Limiterque/ SMB-000-5	SW-V101	QI

APPENDIX B (Continued)

Equipment Description	Manufacturer/ Model #	Component No.	Deficiency
Motor Operator	Limiterque/ SMB-000-15	SW-V102	QI
Motor Operator	Limiterque/ SMB-000-15	SW-V105	QI
Motor Operator	Limiterque/ SMB-000-5	SW-V106	QI
Motor Operator	Limiterque/ SMB-000-5	SW-V111	QI
Motor Operator	Limiterque/ SMB-000-5	SW-V117	QI
Motor Operator	Limiterque/ SMB-000-5	SW-V118	QI
Solenoid Valve	ASCO/WPHT8321A1	SW-V123	A,QM
Solenoid Valve	ASCO/80034	SW-V124	A,QM
Solenoid Valve	ASCO/WPHT8321A1	SW-V125	A,QM
Solenoid Valve	ASCO/WPHT8321A1	SW-V126	A,QM
Solenoid Valve	ASCO/WPHT8321A1	SW-V128	A,QM
Solenoid Valve	ASCO/WPHT8321A1	SW-V129	A,QM
Solenoid Valve	ASCO/WPHT8321A1	SW-V130	A,QM
Solenoid Valve	ASCO/WPHT8321A1	SW-V131	A,QM
Solenoid Valve	ASCO/WPHT8321A1	SW-V136	A,QM
Solenoid Valve	ASCO/WPHT8321A1	SW-V137	A,QM
Solenoid Valve	ASCO/WPHT8321A1	SW-V138	A,QM
Solenoid Valve	ASCO/WPHT8321A1	SW-V139	A,QM
<u>System: Ventilation Air</u>			
Relay	GE/CR2810A14AK2	DBO-TS-936X	A,QM
Time Relay	Agastat/7022AC	DBO-74-17	RPN

APPENDIX B (Continued)

Equipment Description	Manufacturer/ Model #	Component No.	Deficiency
Relay	GE/CR2810A14AT	DP5-936X	A,QM
Solenoid	Johnson Services/ V-24-2	VA-SV-936A	RPN
Solenoid	Johnson Services/ V-24-2	VA-SV-936B	RPN
Temperature Switch	Johnson Services/ A19AAC9	VA-TS-936A	RPN
Temperature Switch	Johnson Services/ A19AAC9	VA-TS-936B	RPN
Temperature Switch	Johnson Services/ A19AAC9	VA-TS-936C	RPN
Temperature Switch	Johnson Services/ A19AAC9	VA-TS-936D	RPN
Temperature Switch	Johnson Services/ A19AAC9	VA-TS-936E	RPN
Temperature Switch	Johnson Services/ A19AAC9	VA-TS-936F	RPN
Position Switch	Johnson Services/ D-251-595	VA-ZS-936A	RPN
Position Switch	Johnson Services/ D-251-595	VA-ZS-936B	RPN
Motor	Reliance/256T	2A-FCU-RB	A,P
Motor	Reliance/256T	2B-FCU-RB	A,P
Motor	Reliance/256T	2C-FCU-RB	A,P
Motor	Reliance/256T	2D-FCU-RB	A,P
<u>System: Common Components</u>			
Terminal Lugs	AMP Spec Ind/ PIDG-Nylon & Plastic	Amp Spec Ind	RPN
Connectors	Amphenol/ 48-03R18-31P&S	General	CS,A,QM

APPENDIX B (Continued)

Equipment Description	Manufacturer/ Model #	Component No.	Deficiency
Inst Cable	BIW/-	MA16, MC16 and TC16	A,QM
Thermocouple Cable	BIW/-	XA16 & XE16	A,QM
Terminal Block	Curtis/Type "L"	Curtis Type "L"	RPN
Terminal Block	GE/CR151D30	GE-CR151D30	RPN
Terminal Block	GE/EB-5	GE/EB-5	RPN
Terminal Block	GE/EB-25	GE/EB-25	RPN
4/C AWG Cable	Okonite Co/ Okoguard-Okolon- Okoprene	AC41 and IA41	A,QM
Power Cable	Okonite Co/ Okonite-Okoprene	BB08,BD10,BD06, HC25,JC25,JC50	A,QM
5KV Terminations	Burndy, Okonite	5KV Term	A,QM
480V Splices & Term	Burndy, Okonite	480V Splice/Term	A,QM
Heat Shrink Insulation	Pennwalt Corp/-	KYNAR	A,QM
Connectors	Pyle-National/NS2	NS2	RPN
Control Cable 2/C#12, 4/C#12/ 1/C#12, 1/C#14	Rockbestos	FB12, FD12, Panel Wire	A,QM

APPENDIX C

Equipment Considered Acceptable or Conditionally Acceptable (Category 4.3)

LEGEND

Designation for Deficiency

- R - Radiation
- T - Temperature
- QT - Qualification Time
- RT - Required Time
- P - Pressure
- H - Humidity
- CS - Chemical spray
- A - Material aging evaluation, replacement schedule, ongoing equipment surveillance
- S - Submergence
- M - Margin
- I - HELB evaluation outside containment not completed
- QM - Qualification method
- RPN - Equipment relocation or replacement, adequate schedule not provided
- EXN - Exempted equipment justification inadequate
- SEN - Separate effects qualification justification inadequate
- QI - Qualification information being developed
- RPS - Equipment relocation or replacement schedule provided

Equipment Description	Manufacturer/ Model #	Component No.	Deficiency
<u>System: Core Spray</u>			
Pressure Switch	Barksdale/ B2T-M12SS	B21-PS-N021A	A
Pressure Switch	Barksdale/ B2T-M12SS	B21-PS-N021C	A
<u>System: HPCI</u>			
Thermocouple	Pyco/ N145C3224-P1	E41-TE-N030A	A
Thermocouple	Pyco/ N145C3224-P1	E41-TE-N030B	A
Thermocouple	Pyco/ N145C3224-P1	E51-TE-N025C	A
Thermocouple	Pyco/ N145C3224-P1	E51-TE-N025D	A

APPENDIX C (Continued)

Equipment Description	Manufacturer/ Model #	Component No.	Deficiency
Thermocouple	Pyco/ N145C3224-P1	E51-TE-N026C	A
Thermocouple	Pyco/ N145C3224-P1	E51-TE-N026D	A
Thermocouple	Pyco/ N145C3224-P1	E51-TE-N027C	A
Thermocouple	Pyco/ N145C3224-P1	E51-TE-N027D	A
<u>System: NSSS</u>			
Thermocouple	Pyco/ N145C3224-P1	G31-TE-N016 A,B,C,D,E,F	A
Thermocouple	Pyco/ N145C3224-P1	G31-TE-N022 A,B,C,D,E,F	A
Thermocouple	Pyco/ N145C3224-P1	G31-TE-N023 A,B,C,D,E,F	A
<u>System: RCIC</u>			
Thermocouple	Pyco/ N145C3224-P1	E51-TE-N021A	A
Thermocouple	Pyco/ N145C3224-P1	E51-TE-N021B	A
Thermocouple	Pyco/ N145C3224-P1	E51-TE-N023A	A
Thermocouple	Pyco/ N145C3224-P1	E51-TE-N023B	A
Thermocouple	Pyco/ N145C3224-P1	E51-TE-N025A	A
Thermocouple	Pyco/ N145C3224-P1	E51-TE-N027A	A
Thermocouple	Pyco/ N145C3224-P1	E51-TE-N022A	A

APPENDIX C (Continued)

Equipment Description	Manufacturer/ Model #	Component No.	Deficiency
Thermocouple	Pyco/ N145C3224-P1	E51-TE-N022B	A
Thermocouple	Pyco/ N145C3224-P1	E51-TE-N025B	A
Thermocouple	Pyco/ N145C3224-P1	E51-TE-N026A	A
Thermocouple	Pyco/ N145C3224-P1	E51-TE-N026B	A
Thermocouple	Pyco/ N145C3224-P1	E51-TE-N027B	A
<u>System: Common Components</u>			
Terminal Lugs	AMP Special Ind/ PIDG-KYNAR	AMP Special Ins	A
Power & Inst Cable	Cerro Wire & Cable Co./-	ED10, BD06, VD16 JG15, Panel Wire	A
Control Cable	Kerite Co./ 55MILS HTK(N-98), 65MILS FR(HC711)	FB12, FD12	A
#8, 9, 10 & 12 AWG Cable	Raychem/Flamtrol	Various - See Licensee's Report	A
1PR#16, 1TR #16	Raychem/Flamtrol	N416, RC16, FA26, A G422, IA22	A
Thermocouple Splices	AMP, Scotch, Raychem/ 320557, No. 70, WCSF-N	Splices	A
Thermocouple Cable 1PR #16 & SPR #16	Samuel More & Co./Dekoron E CI Wire	YA16, YC16, YE16, A XA16, XC16, XE16	A
Terminal Lug	T&B/T&B Sta-Kon Lug #C10-10	T&B Sta-Kon #C10-10	A

APPENDIX C (Continued)

Equipment Description	Manufacturer/ Model #	Component No.	Deficiency
Terminal Lug	T&B/T&B Ring Tongue #G971	T&B#G971	A
Terminal Lug	T&B/T&B Ring Tongue #54108	T&B#54108	A
Elec Pent Assemblies	Westinghouse/ Class B, C & F	Various - See Licensee's Report	A
<u>System: SBT</u>			
Motor Operator	Limiterque/ SMB-000-2	SGT-V8	A
Motor Operator	Limiterque/ SMB-000-2	SGT-V9	A
<u>System: Cort Atm Control</u>			
Motor Operator	Limiterque/ SMB-000-5	CAC-V22	A

APPENDIX D

Safety-Related Systems List¹

Automatic depressurization system (ADS) - B21
Containment atmospheric control system (CAC)
Core spray system (CS) - E21
Electrical distribution system (ED)
High pressure coolant injection system (HPCI) - E41
Nuclear steam supply shutoff system (NSSS) - A71
Reactor core isolation cooling system (RCIC) - E51
Residual heat removal system (RHR) - E11
Reactor instrument penetration system (RIP)
Reactor protection system (RPS) - C72
Standby gas treatment system (SGT)
Service Water system (SW)
Ventilating air system (VA)

¹As submitted by licensee