APPENDIX A

NINE MILE POINT UNIT 1

JUSTIFICATION FOR CONTINUED OPERATION

#999999999

NINE MILE POINT UNIT 1
COMPONENT REVIEW SUMMARY SHEET

Equipment: Control Rod Drive Scram Dump Control
(SV NC-15A, SV NC-16A, SV NC-15B, SV NC-16B)

FRC Equipment Item No.: 13

Manufacturer: ASCO

Model: HVA904058A

Safety Function: Isolate Dump Volume Drain and Vent During Reactor Scram

Qualification Discrepancy: A, QM, QT

Justification for Continued Operation:

During a reactor scram the scram discharge volume isolates by the closure of two air operated vent valves and two air operated drain valves which are in series.

Solenoid operated valves NC 15A and 15B control the operation of only one set of isolation valves (one drain and one vent). The redundant set of isolation valves is controlled by solenoid operated valves NC 15C and 15D. These valves were not included in the original program but are now included. Simultaneous failure of both systems due to aging is highly improbable.

Solenoid operated valves NC 16A and B (Backup Scram Valves) perform a function which is redundant to the two (2) scram valve pilots on each of the 129 Control Rod Drive Hydraulic Units. Instrument air will be vented from the scram valve pilot air header, during a scram initiation, by either the Backup Scram Valves or the Scram Valve Pilots. Failure of solenoid operated valves NC 16A & B to operate would not adversely affect the scram function. Loss of power causes the valves to go to the correct position. Simultaneous failure of the scram valve pilots and the backup scram valves is highly improbable.

Based on the above, continued operation is justified until the SOV's are qualified or replaced with documented qualified valves.

NINE MILE POINT UNIT 1
COMPONENT REVIEW SUMMARY SHEET

Equipment: Solenoid Valve (SV201.2-32, SV201.2-03)

FRC Equipment Item No.: 16

Manufacturer: ASCO

Model: WPLB300B72F

Safety Function: Drywell N_2 Makeup and bleed valve operation

Qualification Discrepancy: QM, Qualified Life

Justification for Continued Operation:

These valves are used to makeup and bleed N_2 following a loss of coolant accident. These valves are normally closed and the solenoids fail closed on loss of power.

This makeup and bleed path has a redundant path connecting to the torus which is in a lower elevation in the Reactor Building. Simultaneous failure of both systems due to aging is highly improbable.

Therefore, justification for the continued safe operation of the plant is demonstrated.

NINE MILE POINT UNIT 1
COMPONENT REVIEW SUMMARY SHEET

Equipment: Master Trip Unit

FRC Equipment Item No.: 19

Manufacturer: Rosemount

Model: 510 DU

Safety Function: Drywell Pressure Trip Unit/Emergency Condenser High Flow Trip/Main Steam Line Flow Trip

Qualification Discrepancy: Radiation, qualification time, aging, qualification method.

Justification for Continued Operation:

These instruments are located in the Reactor Building at elevation 281' one in each of the four corners.

Drywell Pressure Trip Unit

For breaks within the drywell temperature, pressure or humidity does not increase in the Reactor Building where these trip units are located. Radiation is the only effect that these units would experience after a loss of coolant accident.

Only the drywell pressure trip units are needed to mitigate a loss of coolant accident. These units automatically perform their safety function within seconds. Once they have initiated their safety function no failure could negate it. They fail safe on trip unit failure or loss of power.

Emergency Condenser High Flow Trip

The Emergency Condenser Flow trip units for PT-36-06A, B, C, & D are needed to mitigate an emergency condenser steam line break outside of containment. These trip units are not in close proximity to the break locations and automatically perform their safety function within the first few seconds of the event.

Main Steam Line Flow Trip

Main steam line flow trip units are not exposed to the harsh environment of a steamline break since they are not located near the breaks. These instruments automatically perform their safety function by isolating the steam line at the start of the event and once performed, instrument failure cannot open these valves. Subsequent instrument/trip unit failure has no effect on the operator's response.

Therefore, justification for the continued safe operation of the plant is demonstrated.

NINE MILE POINT UNIT 1
COMPONENT REVIEW SUMMARY SHEET

Equipment: Trip Units for LT 36-03A, B, C, D; LT 36-04A, B, C, D; LT 36-05A, B, C, D; PT 36-07A, B, C, D; PT 36-08A, B, C, D.

FRC Equipment Item No.: 20

Manufacturer: Rosemount

Model: 510 DU

Safety Function: Detects low, low low and low low low vessel level and high and low reactor pressure

Qualification Discrepancy: QT, A, QI

Justification for Continued Operation:

These trips units are located in the Reactor Building, one in each of the four ATS cabinets. These cabinets are located in the four corners of the building, one per corner.

They are all de-energized to actuate and provide inputs to the RPS. Their safety functions are automatically performed early in the event sequence as a result of process conditions or as the result of a trip unit failure. Failure of these level and pressure transmitter trip units can only affect long term monitoring and will not affect accident mitigation.

Therefore, justification for the continued safe operation of the plant is demonstrated.

NINE MILE POINT UNIT 1
COMPONENT REVIEW SUMMARY SHEET

Equipment: Temperature Switches located in Steam Tunnels TS 1B-10A thru 10H, J thru N, P, Q, R

FRC Equipment Item No.: 28

Manufacturer: Fenwal

Model: 1700240

Safety Function: Isolates MSIV on high temperature

Qualification Discrepancy: QT, A

Justification for Continued Operation:

The temperature switches monitor steam tunnel temperature and initiate main steam isolation valve closure on high steam tunnel temperature.

If the break is in the main steam line, increased pressure drop across the main steam line flow limiter will initiate main steam isolation valve closure. The pressure drop is measured by instruments PT 01-26A thru H located outside the steam tunnel (Reactor Building El. 237 North Instrument Room) which are not subject to the harsh environment.

A main steam line break in the tunnel will result in low reactor water level which will cause a scram and low low water level which will initiate both main steam isolation valve closure and containment isolation. This instrumentation is located in the Reactor Building which is not subjected to a harsh environment from a high energy line break in the steam tunnel.

Therefore, justification for the continued safe operation of the plant is demonstrated.

NINE MILE POINT UNIT 1
COMPONENT REVIEW SUMMARY SHEET

Equipment: Pressure Switches PS 40-07, 08

FRC Equipment Item No.: 34

Manufacturer: Mercoid

Model: DA 5432

Safety Function: Core Spray System Low Discharge Pressure Alarm

Qualification Discrepancy: QT

Justification for Continued Operation:

These pressure switches have been deleted from the environmental equipment qualification program since operation of the core spray pumps can be verified by pump flow measurement (FT RV-26A, B).

NINE MILE POINT UNIT 1
COMPONENT REVIEW SUMMARY SHEET

Equipment: Vacuum Switches VCS 68-11A, 11B, 12A, 12B, 13A, 13B

FRC Equipment Item No.: 37

Manufacturer: Mercoid

Model: CP 4122

Safety Function: Controls Air Operated Isolation Valves 68-08, 09, 10 to admit building atmosphere to drywell/torus.

Qualification Discrepancy: A, QI

Justification for Continued Operation:

The function of Vacuum Switches VCS 68-11A, 11B, 12A, 12B, 13A, 13B is to open air operated isolation valves 68-08, 09 and 10 when torus pressure is negative with respect to the reactor building. This will admit reactor building atmosphere to the torus, thus equalizing the pressure. There are two (2) vacuum switches associated with each valve. The switches are installed in parallel so that either switch can operate the valve. Simultaneous failure of both switches due to age-related degradation is highly improbable.

In addition, air operated check valves can provide the isolation function should these valves fail.

Based on the above, justification for the continued safe operation of the plant is demonstrated.

NINE MILE POINT UNIT 1
COMPONENT REVIEW SUMMARY SHEET

Equipment: Level Transmitter

FRC Equipment Item No.: 38

Manufacturer: General Electric

Model: 553 HB 3456 19079

Safety Function: Vessel level indication

Qualification Discrepancy: A, QI

Justification for Continued Operation:

LT IA-12 is a wide range reactor vessel level monitor. The monitor does not provide a safety function and its failure would not prevent any safety related equipment from performing its intended safety function. It is used by the operator to monitor vessel water level during normal operation and during vessel filling prior to refueling.

Therefore, justification for the continued safe operation of the plant is demonstrated.

NINE MILE POINT UNIT 1
COMPONENT REVIEW SUMMARY SHEET

Equipment: Radiation Detector located in the Turbine Building Condenser Area (RE RN05A, B, C, C)

FRC Equipment Item No.: 51

Manufacturer: General Electric

Model: 19492792

Safety Function: Isolates MSIV on high radiation

Qualification Discrepancy: R, QT, A, QM

Justification for Continued Operation:

These radiation detectors monitor radiation levels in the main steam line and initiate a reactor scram and main steam isolation valve closure on high radiation level. Their only purpose is to detect major fuel failure and initiate main steam isolation valve closure to minimize the release of fission products. This equipment is not required to detect high energy pipe breaks and has been deleted from the environmental equipment qualification program.

The equipment required to detect high energy line breaks which occur in the Turbine Building are reactor vessel instrumentation which is located in the drywell and reactor building and is not subjected to a harsh environment. This redundant equipment also scrams the reactor and closes the main steam isolation valve. In addition, temperature switches located in the main steam line tunnel initiate main steam isolation.

If somehow there is major fuel damage without a pipe break, the probability is extremely small that these detectors, whose only function is to detect radiation, will fail as a result of radiation exposure without initiating a scram and main steam isolation valve closure. Instrument failure is alarmed in the control room.

Therefore, justification for the continued safe operation of the plant is demonstrated.

NINE MILE POINT UNIT 1
COMPONENT REVIEW SUMMARY SHEET

Equipment: Terminal Boards Inside the Drywell

FRC Equipment Item No.: 53

Manufacturer: General Electric

Model: EB5 and EB25

Safety Function: Terminal Boards

Qualification Discrepancy: A, QI

Justification for Continued Operation:

Testing of EB-5 and EB-25 terminal boards for conditions exceeding those at Nine Mile Point Unit 1 has been performed within the industry. The only differences were in the number of terminals. Therefore, continued operation is justified.

NINE MILE POINT UNIT 1
COMPONENT REVIEW SUMMARY SHEET

Equipment: Coaxial Instrument Cable located in Drywell

FRC Equipment Item No.: 54

Manufacturer: Raychem

Model: RG59B/U

Safety Function: Instrument Control Cable

Qualification Discrepancy: A, QI

Justification for Continued Operation:

Coaxial instrument cable is used to transmit signals from detectors inside the drywell to signal processing equipment located outside the drywell. The cables are connected to the neutron flux detectors, LPRM's, which are inputs to the APRM's. The APRMs trip the reactor on high power. Loss of the APRM as a result of a loss of coolant accident does not present a safety hazard since high drywell pressure or low vessel level will initiate a reactor trip. These transmitters are located outside the drywell and are not affected by the same environment.

Small breaks which do not cause high drywell pressure or low vessel level but increase the drywell temperature will be detected by the drywell temperature monitors. The drywell temperature monitors (thermocouples) do not use coaxial cable.

Therefore, justification for the continued safe operation of the plant is demonstrated.

NINE MILE POINT UNIT 1
COMPONENT REVIEW SUMMARY SHEET

Equipment: Ground Connector located in the Drywell

FRC Equipment Item No.: 56

Manufacturer: Burndy

Model: GZ

Safety Function: Ground Connector

Qualification Discrepancy: QI

Justification for Continued Operation:

The connector is manufactured with metallic components. The physical properties of the metallic components are not affected by the environment which they are subjected to.

Therefore, justification for the continued safe operation of the plant is demonstrated.

NINE MILE POINT UNIT 1
COMPONENT REVIEW SUMMARY SHEET

Equipment: Connection Terminal in the Steam Tunnel at Elev. 240'-0"

FRC Equipment Item No.: 57

Manufacturer: Burndy

Model: QA-B

Safety Function: Cable to Terminal Connection

Qualification Discrepancy: A, QI

Justification for Continued Operation:

The connector is manufactured with metallic components. The physical properties of the metallic components are not affected by the environment which they are subject to.

Therefore, justification for the continued safe operation of the plant is demonstrated.

NINE MILE POINT UNIT 1
COMPONENT REVIEW SUMMARY SHEET

Equipment: Ground Connector located in the Drywell

FRC Equipment Item No.: 58

Manufacturer: Burndy

Model: QA8C-B

Safety Function: Ground Connector

Qualification Discrepancy: A, QI

Justification for Continued Operation:

The connector is manufactured with metallic components. The physical properties of the metallic components are not affected by the environment which they are subjected to.

Therefore, justification for the continued safe operation of the plant is demonstrated.

NINE MILE POINT UNIT 1
COMPONENT REVIEW SUMMARY SHEET

Equipment: Cable Splice located in the Steam Tunnel at Elev. 240'-0"

FRC Equipment Item No.: 59

Manufacturer: AMP Inc.

Model: Pre-Insulated

Safety Function: Butt Connector

Qualification Discrepancy: A, QI check

Justification for Continued Operation:

The failure of equipment which is fed by cable routed through the steam tunnel at elevation 240' does not prevent safe shutdown or result in unacceptable off-site doses as a result of a main steam line break inside the steam tunnel.

A large break in the main steam line, causes increased pressure drop across the main steam flow limiter which initiates main steam isolation valve closure. The pressure drop is measured by instruments PT 01-26A thru H located outside the steam tunnel (Reactor Building El. 237 North Instrument Room) which are not subject to the harsh environment. The inboard main steam isolation valve and its related electrical components are not subject to the harsh environment as they are located in the drywell. The outboard main steam isolation valves which are located in the steam tunnel are air operated valves which fail closed on loss of air or power.

A main steam line break in the tunnel will result in low reactor water level which will cause a scram, and low low reactor water level which will initiate main steam isolation valve closure and containment isolation. The motor operated feedwater isolation valves do not receive any isolation signal. In addition, there is a check valve in series which serves the isolation function.

Failure of the steam tunnel temperature switches, or main steam line radiation detectors does not prevent safe shutdown or result in unacceptable off-site doses.

Therefore, justification for the continued safe operation of the plant is demonstrated.

NINE MILE POINT UNIT 1
COMPONENT REVIEW SUMMARY SHEET

Equipment: Electrical Connector located inside the Drywell

FRC Equipment Item No.: 60

Manufacturer: AMP

Model: RING Tongue Terminal

Safety Function: Cable Termination

Qualification Discrepancy: A, QI

Justification for Continued Operation:

Testing has been performed within the industry on cable terminations. These terminations are insulated with nylon, polyvinyl chloride or polyvinylidene fluoride. Test data on polyvinylidene fluoride, which is designed for nuclear applications has been tested at conditions which exceed those of Nine Mile Point Unit 1. Therefore, continued operation is justified.

NINE MILE POINT UNIT 1
COMPONENT REVIEW SUMMARY SHEET

Equipment: Circuit Breakers

FRC Equipment Item No.: 62

Manufacturer: General Electric

Model: AKD5

Safety Function: Provide Electric Power to Core Spray Valves and Diesel Generator Cooling

Qualification Discrepancy: Qualification Not Established

Justification for Continued Operation:

These circuit breakers provide power to PB161B and PB171B which are needed for loss of coolant accident/high energy line break mitigation and also provide power to various other non-loss of coolant accident/high energy line break electrical loads. The circuit breakers are passive in the safe guard mode, that is they are normally closed and are not required to operate during the course of the loss of coolant accident/high energy line break.

The operation of these breakers is mechanical in nature. Therefore, justification for continued operation is demonstrated.

NINE MILE POINT UNIT 1
COMPONENT REVIEW SUMMARY SHEET

Equipment: Electrical Tape located in the Steam Tunnel at Elev. 240'-0"

FRC Equipment Item No.: 63

Manufacturer: 3M Electro Products

Model: 83

Safety Function: Cable Connection Insulation

Qualification Discrepancy: A, QI (check)

Justification for Continued Operation:

The failure of equipment which is fed by cable routed through the steam tunnel at elevation 240' does not prevent safe shutdown or result in unacceptable off-site doses as a result of a main steam line break inside the steam tunnel.

A large break in the main steam line, causes increased pressure drop across the main steam flow limiter which initiates main steam isolation valve closure. The pressure drop is measured by differential pressure instruments PT 01-26A thru H located outside the steam tunnel (Reactor Building El. 237 North Instrument Room) which are not subject to the harsh environment. The inboard main steam isolation valve and its related electrical components are not subject to the harsh environment. The outboard main steam isolation valves which are located in the steam tunnel, are air operated valves which fail closed on loss of air or power.

A main steam line break in the tunnel will also result in low reactor water level which will cause a scram, and low low reactor water level which will initiate main steam isolation valve closure and containment isolation. The motor operated feedwater isolation valve do not receive any isolation signal. In addition, there is a check valve in series which provides an isolation function.

Failure of the steam tunnel temperature switches, or main steam radiation detectors does not prevent safe shutdown or result in unacceptable off-site doses.

Therefore, justification for the continued safe operation of the plant is demonstrated.

NINE MILE POINT UNIT 1
COMPONENT REVIEW SUMMARY SHEET

Equipment: Electrical Cable located inside the Drywell

FRC Equipment Item No.: 65

Manufacturer: General Electric

Model: Vulkene

Safety Function: Power and Control 600V and 1000V

Qualification Discrepancy: CS, A, QI

Justification for Continued Operation:

Vulkene insulated cable without a jacket and with Neoprene and Irradiated Crosslinked Polymer jackets have operated properly under conditions exceeding the environment at Nine Mile Point Unit 1 have been tested with the industry. Unjacketed Vulkene cable and Vulkene insulated cable with a PVC jacket are utilized at Nine Mile Point Unit 1. The addition of a PVC jacket would further improve the environmental resistance of the overall system. Therefore, continued operation is justified.

NINE MILE POINT UNIT 1
COMPONENT REVIEW SUMMARY SHEET

Equipment: Motorized Valve Actuator (IV 80-115)

FRC Equipment Item No.: 73

Manufacturer: Limitorque

Model: SMB-000 H1BC

Function: Primary Containment Isolation (Containment Spray to Waste Building)

Qualification Summary:

This valve operator is judged to possess a 40 year qualified life based on Patel Engineers Report PEI-TR-12-7.

NINE MILE POINT UNIT 1
COMPONENT REVIEW SUMMARY SHEET

Equipment: Motorized Valve Actuator (IV 80-114)

FRC Equipment Item Number: 74

Manufacturer: Limitorque SMB-000 H1BC and SMB-000-2

Model: SMB-000-H1BC

Function: Primary Containment Isolation (Containment Spray to Waste Building)

Qualification Summary:

This valve operator is judged to possess a 40 year qualified life based on Patel Engineers Report PEI-TR-12-8.

NINE MILE POINT UNIT 1
COMPONENT REVIEW SUMMARY SHEET

Equipment: Motorized Valve Actuator (IV 110-127)

FRC Equipment Item Number: 75

Manufacturer: Limitorque

Model: SMB-000-2

Function: Reactor Coolant Sample Isolation Valve

Qualification Summary:

This valve operator is judged to possess a 40 year qualified life based on Patel Engineers Report PEI-TR-12-8.

NINE MILE POINT UNIT 1
COMPONENT REVIEW SUMMARY SHEET

Equipment: Motorized Valve Actuator (IV 110-128)

FRC Equipment Item Number: 76

Manufacturer: Limitorque

Model: SMB-000-2

Function: Reactor Coolant Sample Isolation

Qualification Summary:

This valve operator is judged to possess a 10 year qualified life based on Patel Engineers Report PEI-TR-12-11.

NINE MILE POINT UNIT 1
COMPONENT REVIEW SUMMARY SHEET

Equipment: Motorized Valve Actuator (IV 80-118)

FRC Equipment Item Number: 77

Manufacturer: Limitorque

Model: SMB-0

Function: Flow Control Valve for Torus Cooling

Qualification Summary:

This valve operator is judged to possess a 10 year qualified life based on Patel Engineers Report PEI-TR-12-11.

NINE MILE POINT UNIT 1
COMPONENT REVIEW SUMMARY SHEET

Equipment: Motorized Valve Actuator (IV 05-05, 05-07)

FRC Equipment Item Number: 78

Manufacturer: Limitorque

Model: SMB-000

Function: Emergency Condenser Vent to Torus

Qualification Summary:

This valve operator is judged to possess a 10 year qualified life based on Patel Engineers Report PEI-TR-12-11.

NINE MILE POINT UNIT 1
COMPONENT REVIEW SUMMARY SHEET

Equipment: Solenoid Valve

FRC Equipment Item No.: 79

Manufacturer: ASCO

Model: HT 8317A29

Safety Function: Post Accident Sampling Blocking Valve (122-04 through 06, 122-08 through -11)

Qualification Discrepancy: Qualification Not Established

Justification for Continued Operation:

These valves were recently installed as part of Niagara Mohawk's Post Accident Sampling System.

Failure of these valves would not prevent safety related equipment from performing its intended function. Failure would not affect the plants' accident mitigation capability or its capability to prevent the release of radioactive material to the environment.

Therefore, justification for the continued safe operation of the plant is demonstrated.

NINE MILE POINT UNIT 1
COMPONENT REVIEW SUMMARY SHEET

Equipment: PT 36-23A, B

FRC Equipment Item No.: 81

Manufacturer: Rosemount

Model: 1153GA9

Safety Function: Monitor reactor pressure to correct for pressure change effects on LT-36-24A, B

Qualification Discrepancy: Qualification Not Established

Justification for Continued Operation:

These pressure transmitters were recently installed as required by NUREG 0737 item II.F.2.3, Instrumentation for Detection of Inadequate Core Cooling. This level monitoring system does not provide for actuation of any safety systems.

Therefore, justification for the continued safe operation of the plant is demonstrated.

NINE MILE POINT UNIT 1
COMPONENT REVIEW SUMMARY SHEET

Equipment: Containment Pressure Indication (PT201.2-483, 484)

FRC Equipment Item No.: 82

Manufacturer: Rosemount

Model: 1153 Series A

Safety Function: Provide Containment Pressure indication to the Control Room operator following a LOCA

Qualification Discrepancy: A, QT

Justification for Continued Operation:

Pressure transmitters, PT 201.2-483 and 484, provide the control room operator with indication of pressure inside the primary containment following a loss of coolant accident. These transmitters do not initiate any safety systems, they provide indication only. In the event of failure of one of these devices due to age-related degradiation, the same function will be provided by the redundant transmitter. Simultaneous failure of both components due to aging is highly improbable.

In addition, both devices are located outside of the primary containment and will not be subjected to a steam environment during a Loss of Coolant Accident.

Therefore, justification for the continued safe operation of the plant is demonstrated.

NINE MILE POINT UNIT 1
COMPONENT REVIEW SUMMARY SHEET

Equipment: LT 36-24A, B

FRC Equipment Item No.: 83

Manufacturer: Rosemount

Model: 1153DA5

Safety Function: Monitor reactor vessel level in fuel zone

Qualification Discrepancy: Qualification Not Established

Justification for Continued Operation:

These pressure transmitters were recently installed as required by NUREG 0737 item II.F.2.3, Instrumentation for Detection of Inadequate Core Cooling. This monitoring system does not provide for actuation of any safety systems.

Therefore, justification for the continued safe operation of the plant is demonstrated.

NINE MILE POINT UNIT 1
COMPONENT REVIEW SUMMARY SHEET

Equipment: Flow Switch, FET-664

FRC Equipment Item No.: 84

Manufacturer: Foxboro

Model: El 3DL Transmitter

Safety Function: Flow Control

Qualification Discrepancy: Qualification Not Established

Justification for Continued Operation:

This flow switch was recently installed as required by NUREG 0737 item II.B.3, Post Accident Sampling System. The system does not provide information to indicate whether any plant safety functions are being accomplished.

Failure of this flow switch would not prevent any safety-related equipment from performing their intended safety function. Failure would not affect the plant's accident mitigation capability or its capability to prevent the release of radioactive material to the environment.

Therefore, justification for the continued safe operation of the plant is demonstrated.

NINE MILE POINT UNIT 1
COMPONENT REVIEW SUMMARY SHEET

Equipment: Pressure Switch (PS 122-14)

FRC Equipment Item Number: 85

Manufacturer: Static-O-Ring

Model: 5NNKK351C1A

Function: Post Accident Sampling Pump By-Pass

Qualification Summary:

This pressure switch is judged to possess an 11 year qualified life based on Patel Engineers Report PEI-TR-82-12-18.

NINE MILE POINT UNIT 1
COMPONENT REVIEW SUMMARY SHEET

Equipment: Radiation Detector located in Reactor Building Elev. 261' (201.7 - 36A, 37A)

FRC Equipment Item No.: 86

Manufacturer: General Atomic

Model: RD23

Safety Function: High Range Radiation Monitor

Qualification Discrepancy: Equipment Qualification Not Established

Justification for Continued Operation:

These radiation detectors were recently installed as required by NUREG 0737 item II.F.1.3. The system does not provide either actuation or indication that a safety system is performing its intended function.

Therefore, justification for the continued safe operation of the plant is demonstrated.

NINE MILE POINT UNIT 1
COMPONENT REVIEW SUMMARY SHEET

Equipment: Limit Switch

FRC Equipment Item No.: 87

Manufacturer: Micro Switch

Model: F

Safety Function: Position Indication for valves 122-04 through 06, 122-08 through 11

Qualification Discrepancy: Qualification Not Established

Justification for Continued Operation:

These limit switches were recently installed as required by NUREG 0737 item II.B.3, Post Accident Sampling System. The system does not provide information to indicate whether the plant safety functions are being accomplished.

Failure of these limit switches would not prevent safety related equipment from performing its intended safety function. Failure would not affect the plant's accident mitigation capability or its capability to prevent the release of radioactive material to the environment.

Therefore, justification for the continued safe operation of the plant is demonstrated.

NINE MILE POINT UNIT 1
COMPONENT REVIEW SUMMARY SHEET

Equipment: Thermocouple

FRC Equipment Item No.: 88

Manufacturer: Omega

Model: HWANSA22312DH114T834

Safety Function: Temperature Measurements (TE-70-269A, TE-70-276A) Note: TE-70-269A has been deleted from system.

Qualification Discrepancy: Qualification Not Established

Justification for Continued Operation:

This thermocouple was recently installed as required by NUREG 0737 item II.B.3, Post Accident Sampling System. The system does not provide information to indicate whether the plant safety functions are being accomplished.

Failure of this thermocouple would not prevent safety related equipment from performing its intended safety function. Failure would not affect the plant's accident mitigation capability or its capability to prevent the release of radioactive material to the environment.

Therefore, justification for the continued safe operation of the plant is demonstrated.

NINE MILE POINT UNIT 1
COMPONENT REVIEW SUMMARY SHEET

Equipment: Thermocouple

FRC Equipment Item Number: 89, 90

Manufacturer: Pyco

Model: 02-317.1-082.0-3.95

Function: Temperature Measurement to Detect Inadequate Core Cooling

Qualification Summary:

This thermocouple is judged to posses a 22 year qualified life based on Patel Engineers Report PEI-TR-82-12-4.

NINE MILE POINT UNIT 1
COMPONENT REVIEW SUMMARY SHEET

Equipment: Electric Motor

FRC Equipment Item No.: 91

Manufacturer: Franklin Motor/Burks Pumps

Model: 3CT5MJ

Safety Function: Pump Motor (122-01, 122-02)

Qualification Discrepancy: Qualification Not Established

Justification for Continued Operation:

These motors were recently installed as required by NUREG 0737 item II.B.3, Post Accident Sampling System. These motors drive the post accident sampling pumps. The system does not provide information to indicate whether the plant safety functions are being accomplished.

Failure of these motors would not prevent safety related equipment from performing its intended safety function. Failure would not affect the plant's accident mitigation capability or its capability to prevent the release of radioactive material to the environment.

Therefore, justification for the continued safe operation of the plant is demonstrated.

NINE MILE POINT UNIT 1
COMPONENT REVIEW SUMMARY SHEET

Equipment: Electrical Penetration Assemblies

FRC Equipment Item Number: 92, 93

Manufacturer: D. G. O'Brien

Model: C10CC0001G14, C10C1001G21

Function: Containment High Range Monitors

Justification for Continued Operation

The containment high range monitors provide only indication as to the activity within the primary containment. These monitors would not affect a safety system from performing its intended function. Therefore, justification for containment operation safe operation of the plant is justified.

NINE MILE POINT UNIT 1
COMPONENT REVIEW SUMMARY SHEET

Equipment: Cable

FRC Equipment Item Number: 94, 95, 96

Manufacturer: Rockbestos

Model: RSS6104, TSP16, Control Cable

Function: Radiation Monitor Signals, Instrument Cable, Control Cable (Post Accident Sampling)

Qualification Summary:

These cables are judged to possess a 40 year qualified life based on Patel Engineers Report PEI-TR-82-12-2.

NINE MILE POINT UNIT 1
COMPONENT REVIEW SUMMARY SHEET

Equipment: Kerite Thermocouple Cable

FRC Equipment Item Number: 97

Manufacturer: Kerite

Model: 16 AWG (FRII/FR)

Function: Temperature Signals (Post Accident Sampling)

Qualification Summary:

This cable possesses a 40 year qualified life based on Patel Engineers Report PEI-TR-82-12-15.

NINE MILE POINT UNIT 1
COMPONENT REVIEW SUMMARY SHEET

Equipment: Motor Starter

FRC Equipment Item No.: 98

Manufacturer: General Electric

Model: CR 207B223AAA

Safety Function: Motor Starter and Disconnect

Qualification Discrepancy: Qualification Not Established

Justification for Continued Operation:

These motor starters were recently installed as required by NUREG 0737 item II.B.3, Post Accident Sampling System. These are the motor starters for the post accident sample pump motors. The system does not provide information to indicate whether the plant safety functions are being accomplished.

Failure of these motors would not prevent safety related equipment from performing its intended safety function. Failure would not affect the plant's accident mitigation capability or its capability to prevent the release of radioactive material to the environment.

Therefore, justification for the continued safe operation of the plant is demonstrated.

NINE MILE POINT UNIT 1
COMPONENT REVIEW SUMMARY SHEET

Equipment: Circuit Breakers

FRC Equipment Item No.: 99

Manufacturer: General Electric

Model: NTE 20

Safety Function: Branch Circuit Breakers

Qualification Discrepancy: Qualification Not Established

Justification for Continued Operation:

These circuit breakers were recently installed as required by NUREG 0737 item II.B.3, Post Accident Sampling System. These provide circuit protection for the sampling pump motors. The system does not provide information to indicate whether the plant safety functions are being accomplished.

Failure of these circuit breakers would not prevent any safety related equipment from performing their intended safety function. Failure would not affect the plant's accident mitigation capability or its capability to prevent the release of radioactive material to the environment.

Therefore, justification for the continued safe operation of the plant is demonstrated.

APPENDIX B

NINE MILE POINT UNIT 1

ENVIRONMENTAL EQUIPMENT QUALIFICATION MASTER LIST

SYSTEM LIST

01 Core Spray

02 Containment Spray

03 High Pressure Coolant Injection

04 Containment Spray Raw Water

05 Automatic Depressurization

06 Emergency Condenser

07 Reactor Building Emergency Ventilation

08 Control Rod Drive Hydraulic

09 Reactor Building Closed Loop Cooling

10 Service Water

11 Containment Atmosphere Dilution

12 Hydrogen Oxygen Monitoring

13 Station Electric Distribution

14 Containment and Reactor Vessel Isolation

15 Post Accident Sampling

16 Instrument Air

17 Common Electrical Equipment

18 Reactor Vessel Instrumentation

19 Support Instrumentation

SYSTEM: Core Spray (01)

BASES FOR INCLUSION ON MASTER LIST:

Two independent core spray systems are provided to provide core cooling following a loss-of-coolant accident. Each system is designed to accommodate the range of loss-of-coolant accidents from the smallest to the largest line break as described in the FSAR.

The core spray system is an emergency core cooling system which is designed to satisfy the requirements of 10CFR50 Appendix K, as described in the accident analysis section of the FSAR. Plant operators are required to verify successful automatic initiation of this system in special operating procedures N1-SOP-1, "Combined Loss of Coolant and 115 kV", and N1-SOP-29, "Pipe Break Inside Drywell". Subsequent operator actions of special operating procedure N1-SOP-30, "Pipe Break Outside Primary Containment", require the plant operator to continue to monitor and control reactor level using the available injection systems, one of which is the core spray system (Updated FSAR, Section VII-A.3.0). From the largest break down to about 0.30 $ft.^2$, the reactor depressurizes fast enough for the core spray system to effect reactor core cooling. For breaks less than 0.30 $ft.^2$, the automatic depressurization system is used in conjunction with the core spray system.

The reactor core spray system is required to achieve or support functions 3 and 5, Reactor Core Cooling and Core Residual Heat Removal, and should be included on the list of safety-related systems requiring environmental qualification in accordance with IE Bulletin 79-01B.

SYSTEM: Containment Spray (02)

BASES FOR INCLUSION ON MASTER LIST:

Two separate and redundant containment spray systems are provided to remove heat, reduce pressure and reduce the pressure suppression chamber temperature following a loss-of-coolant accident (Updated FSAR, Section VII-B.1.0). Each system is capable of removing decay heat and energy from any credible metal-water reaction (0.8 to 27 percent). This will prevent containment pressures and temperatures from exceeding their design values, assuming a double-ended recirculation line break without core spray. To ensure proper containment atmosphere mixing following a loss of coolant accident, it will be necessary to maintain at least one loop of the containment spray system in service.

The containment spray system is used in conjunction with the core spray systems. Specifically, the core spray system removes heat from the core in the event of a loss-of-coolant accident. In the heat removal process the core spray water is converted to steam and then released to the containment. The cooled spray of the containment spray system condenses the steam in the drywell and removes heat from the containment through heat exchangers. Because the containment spray systems serve as a containment heat removal system and as core residual heat removal system, the plant operators are required to verify successful automatic initiation of these systems in special operating procedures N1-SOP-1, "Combined Loss of Coolant and 115 kV", and N1-SOP-29, "Pipe Break Inside Drywell". Subsequent operator actions of special operating procedure N1-SOP-30, "Pipe Break Outside Primary Containment", requires the plant operator to monitor suppression pool temperatures and begin suppression pooling cooling following automatic depressurization system actuation. Similarly, the operator is required to monitor and control containment pressure.

The containment spray systems are required to achieve or support functions 4 and 5, Containment and Core Residual Heat Removal, and should be included on the list of safety-related systems requiring environmental qualification in accordance with IE Bulletin 79-01B.

SYSTEM: High Pressure Coolant Inspection (03)

BASES FOR INCLUSION ON MASTER LIST:

The High Pressure Coolant Injection System consists of feedwater system components. It uses the two condensate storage tanks, the main condenser hotwell, two condensate pumps, condensate demineralizers, two feedwater booster pumps, feedwater heaters, and two motor-driven feedwater pumps. Its primary purpose is to provide an alternate means of providing cooling of the reactor core under certain abnormal and accident conditions, remove decay and residual heat from the reactor core at such a rate that fuel clad melting would be prevented, and provide for continuity of core cooling over the complete range of postulated break sizes in the primary system process barrier. The high-pressure coolant injection system is operated in the event of a reactor coolant line break which exceeds the capability of the control rod drive pumps (0.003 $ft.^2$), but not large enough to allow rapid depressurization for core spray system to be effective (greater than 0.30 $ft.^2$) at less than 365 psig.

The High Pressure Coolant Injection system should be included on the list of safety-related systems because it could be used to control reactor vessel water level for loss-of-coolant accident and high energy line breaks which have an area less than 0.03 $ft.^2$. For postulated breaks in areas other than the steam tunnel and the Turbine Building condenser bay, the High Pressure Coolant Injection equipment is not exposed to a harsh environment by the accident it is intended to mitigate. Therefore, for postulated breaks within the dyrwell and the Reactor Building, the High Pressure Coolant Injection equipment can be exempted from environmental qualification, because it is in a "mild" environment.

For major steam line breaks inside the steam tunnel or the Turbine Building, the High Pressure Coolant Injection system is not used to maintain reactor vessel water level. Rather, the Control Rod Drive Hydraulic System and the Emergency Condenser System are used to provide reactor water makeup and core cooling, respectively. An alternative would be the core spray system in conjunction with manual actuation of the automatic depressurization system. For less severe steam line breaks, the condition inside the general areas of the Turbine Building are less than 133 F (the maximum temperature within the general area of the Turbine Building from a major steam line break). Consequently, the temperature rise post-accident for less severe steam line breaks will be small and the High Pressure Coolant Injection system is like to be available for use.

The High Pressure Coolant Injection system is required to achieve or support functions 3 and 5, Reactor Core Cooling and Core Residual Heat Removal, and should be included on the list of all safety-related systems requiring environmental equipment qualification in accordance with IE Bulletin 79-01B.

SYSTEM: Containment Spray Raw Water (04)

BASES FOR INCLUSION ON MASTER LIST:

The Raw Water Cooling System, a subsystem of the Containment Spray System, is designed to limit the containment spray water temperature to no greater than 140 F under the most limiting operating conditions (Updated FSAR, Section VII-B.2.0). The Containment Spray Raw Water Cooling System is considered operable when the flow rate is not less than 3000 gpm and the pressure on the raw water side of the containment spray heat exchangers is not less than 160 psig. The higher pressure on the raw water side assures that any leakage is into the containment spray system. The Raw Water Cooling System consists of four independent cooling trains, one for each of the containment spray heat exchangers. Each train consists of a remote, manually started raw water pump, a motor-operated isolation valve on the discharge of the containment spray heat exchangers, a flow element, a radiation monitor, and associated pipes and valves.

The Raw Water Cooling System is an essential support system of the containment spray system. It provides a heat sink to remove decay heat from the containment spray system following system actuation. The plant operators are required, as a subsequent operator action in Special Operating Procedures N1-SOP-1 "Combined Loss of Coolant and 115 kV", to start a raw water pump in each of the containment spray loops in service. For high energy line breaks inside and outside the primary containment, the plant operators are directed to monitor suppression pool temperatures following a manual depressurization of the reactor and to effect suppression pool cooling in the normal mode per operating procedure N1-OP-14, "Loss of Service Water Cooling".

The Raw Water Cooling System is required to support functions 4 and 5, Containment and Core Heat Removal, and should be included on the list of safety-related systems requiring environmental equipment qualification in accordance with IE Bulletin 79-01B.

SYSTEM: Automatic Depressurization (05)

BASES FOR INCLUSION ON MASTER LIST:

The Automatic Depressurization system consists of six solenoid-actuated pressure relief valves, located on the main steam lines, which discharge to the pressure suppression chamber (torus). These solenoid-actuated pressure relief valves serve two purposes: 1) provide sufficient capacity to prevent safety relief valve lift for a moderate frequency event such as main steam isolation valve closure with scram, and 2) depressurization of the reactor vessel in the event of a small break to permit timely operation of the core spray system (Updated FSAR, Section V-B.5.0). The Automatic Depressurization System solenoid-actuated pressure relief valves are protective devices which are independently actuated. Two valves are set at 1090 psig, two are set at 1095 psig and two are set at 1100 psig. These valves are set below the lowest safety relief valve setpoint of 1218 psig.

For posulated line breaks smaller than 0.30 $ft.^2$, reactor pressure does not decrease rapidly enough to prevent fuel clad overheating if feedwater flow is stopped (Updated FSAR, Section VII-A.3.0). Therefore, the Automatic Depressurization System is designed to provide depressurization of the reactor so the low pressure permissive signal, in conjunction with low-low reactor water level or high drywell pressure, will permit operation of the core spray system admitting water into the reactor. The Automatic Depressurization System solenoid-actuated relief valves, either individually or together, depressurize the primary system to approximately 50 psi. Three of the Automatic Depressurization System valves act as backups. Signals used for automatic initiation of the Automatic Depressurization System are simultaneous low-low-low reactor water level, and high drywell pressure sustained for 120 seconds. If one set or any individual valve of a set fails to operate, the logic circuitry will operate the second set or individual valve after a time delay. In addition, the Automatic Depressurization System can be manually initiated by the reactor operator.

The Automatic Depressurization System is required to achieve or support functions 3 and 5, reactor core cooling and core residual heat removal, and shall be included on the list of all safety-related systems requiring environmental equipment qualification in accordance with IE Bulletin 79-01B.

SYSTEM: Emergency Condenser (06)

BASES FOR INCLUSION ON MASTER LIST:

The Emergency Condenser system provides for decay heat removal from the reactor fuel in the event that reactor feedwater capability is lost and the main condenser is not available. The heat removal capacity of one Emergency Condenser is approximately 3% of maximum reactor steam flow. This capacity is sufficient to handle the decay heat production at one hundred seconds following a scram.

The Emergency Condenser system is connected to the reactor and is operated by natural circulation. It serves as an alternate heat sink when the reactor is isolated from its normal heat sink (the main condenser). Automatic operation of the Emergency Condenser system is initiated by high reactor pressure in excess of 1080 psig sustained for ten seconds. To assist in depressurization for small breaks, the system is initiated on low-low reactor water level, five feet below minimum normal water level, sustained for 10 seconds. Because the emergency cooling system provides reactor core cooling and depressurization functions, the plant operators are required to manually initiate the emergency cooling system for a small line break in accordance with Special Operating Procedure N1-SOP-1 "Combined Loss of Coolant and 115 kV". Similarly Special Operating Procedure N1-SOP-29 "Pipe Break Inside Drywell" and N1-SOP-30 "Pipe Break Outside Primary Containment" requires plant operators to verify that those automatic actions which should have occurred on high drywell pressure and/or decreasing level have occurred. If automatic actions have not occurred, the operator is required to manually initiate the appropriate actions.

The Emergency Condenser system is required to achieve or support function 3, Reactor Core Cooling, and should be included on the list of safety-related systems requiring environmental equipment qualification in accordance with IE Bulletin 79-01B.

SYSTEM: Reactor Building Emergency Ventilation System (07)

BASES FOR INCLUSION ON MASTER LIST:

The Reactor Building has two ventilation systems, one used during normal operation (Reactor Building Normal ventilation) and the other to be used under accident conditions (Reactor Building Emergency Ventilation). The ventilation system supplies filtered air to various parts of the Reactor Building with the exhaust fans discharging building exhaust air to the stack. Both supply and exhaust ducts are provided with quick-closing leak-tight valves in series which trip closed upon receipt of isolation signals. The Reactor Building Emergency Ventilation System operates automatically when the normal Ventilation System is shutdown and isolated upon receipt of high radiation in the discharge line, or from high radiation at the refueling platform during refueling operations.

The Reactor Building Emergency Ventilation system functions to minimize the release of radioactivity to the environment in the event of an accident within the Primary Containment or Reactor Building.

The Reactor Building Emergency Ventilation system consists of: 1) supply header taking suction from the normal Reactor Building ventilation discharge before the inlet isolation valves to the normal Reactor Building exhaust fans, 2) a dual bank of filters in each train (absolute and charcoal) for removal of particulate and halogens, 3) a 10 kw electric heater in the common supply duct to the trains to reduce relative humidity from 100 percent to 70 percent assuring filter efficiencies remain high; 4) a motor-driven fan in each train, and 5) train inlet and outlet isolation valves. In addition, a 1 kW electric heater is provided for each charcoal filter train to prevent condensation when the system is first placed in service. Provision is also provided to admit Turbine Building atmosphere to each filter bank for cooling, should a filter become overloaded or damaged and removal from service is required.

Both Emergency Ventilation System fans are designed to:

1) Automatically start upon high radiation in the Reactor Building ventilation duct or at the refueling platform, and

2) Maintain the Reactor Building pressure to the design negative pressure to minimize uncontrolled outleakage and ensure exhaust filters through the charcoal filter trains. After automatic initiation of both trains, the redundant train can be shut down by the operator. The system can be manually started also.

If one Reactor Building Emergency Ventilation train fails to start automatically upon receipt of an initiation signal, the redundant standby train is designed to start automatically.

SYSTEM: Reactor Building Emergency Ventilation System (cont'd)

The Reactor Building Emergency Ventilation system fans discharge a volume equal to 100 percent of reactor building volume per 24 hours. The filter heating values are calculated from the amount of radioactive iodine which would be available to be deposited on the charcoal filters based on a leakage rate of 1.5 percent per day for containment.

The Reactor Building Emergency Ventilation system functions to minimize release of radioactivity to the environment when the Primary Containment is open during refueling and only the Secondary Containment is available. The Reactor Building Emergency Ventilation system also functions after a containment design basis accident. It is this latter function that forms the basis for inclusion of this sytem under the IE Bulletin 79-01B qualification program. For example, credit is taken for the use of this system in calculating off-site radiation dose levels.

The Reactor Building Emergency Ventilation System is required to achieve or support function 6, Prevention of Significant Release of Radioactive Material to the Environment, and should be included on the list of safety-related systems requiring environmental equipment qualification in accordance with IE Bulletin 79-01B.

SYSTEM: Control Rod Drive Hydraulic (08)

BASES FOR INCLUSION ON MASTER LIST:

The Control Rod Drive Hydraulic System is designed to achieve the following objectives (Updated FSAR, Section X-C):

a) Provide a water source at a constant pressure of 1,500 psig for charging the scram accumulations.

b) Provide a water source at a constant pressure of about 250 psi above reactor pressure to supply water for normal drive operation.

c) Provide a water source at a constant pressure of about 20 psi above reactor pressure to supply cooling water for each control rod drive mechanism.

This system also provides high pressure makeup to the reactor vessel for a specified primary system leakage of 25 gpm (technical specifications) and to provide core cooling in the case of a small line break (up to 0.003 $ft.^2$).

The Control Rod Drive System makes changes in core reactivity by incrementally positioning neutron-absorbing control rods within the reactor core in response to manual control signals. The system is also designed to shutdown the reactor (scram) in emergency situations by rapidly inserting withdrawn control rods into the core in response to manual or automatic signals. The Control Rod Drive Hydraulic System is a subsystem of the Control Rod Drive System that controls the pressure and flow to position the control rods, and cool the drive mechanisms and supply water for the scram. The hydraulic system directs the flow to the control rod drives for inserting or withdrawing the control rods at a controlled rate or provides the high pressure, high flow for fast insertion (scram) of the control rods. The Technical Specifications state that the high pressure coolant injection capability of the control rod drive pumps is used to provide high pressure makeup for the specified leakage of 25 gpm and to provide core cooling in the event of a small line break. Each pump can supply 50 gpm water makeup to the reactor vessel. This minimum delivery rate of 50 gpm within 60 seconds of receipt of automatic initiation signal will assure that Automatic Depressurization System is not actuated for the specified leakage of 25 gpm as described in operating procedure N1-OP-5, "Control Rod Drive System". The 60-second delay in pump starting is acceptable since at least 15 minutes are available before the low-low-low reactor water level signals automatic depressurization. In summary, the Control Rod Drive Hydraulic System provides a means to scram the reactor and provide makeup for small breaks.

The Control Rod Drive Hydraulic System is required to achieve or support functions 1 and 3, Emergency Reactor Shutdown and Reactor Core Cooling. It should be included on the list of safety-related systems requiring environmental equipment qualification in accordance with IE Bulletin 79-01B.

SYSTEM: Reactor Building Closed Loop Cooling System (09)

BASES FOR INCLUSION ON MASTER LIST:

The Reactor Building Closed Loop Cooling System provides demineralized water at 85-95F to cool auxiliary equipment located in the Reactor and Waste Disposal Buildings. The closed loop permits isolation of systems containing radioactive liquids from the service water which is returned to the lake.

The system has a heat removal capability of 136×10^6 BTU/hr and a flow capability of 9,000 gpm. The system consists of three half-capacity horizontal centrifugal pumps rated at 4500 gpm with a total developed head of 65 psi each three half-capacity counterflow shell and tube heat exchangers. The Reactor Building Closed Loop Cooling System provides cooling water to the following major components:

- Fuel Pool Heat Exchangers
- Instrument Air Compressors
- Electric Feedwater Pumps
- Condensate Pumps
- Feedwater Booster Pumps
- Control room, Laboratory, and Administration Building Air Conditioning Equipment
- Recirculation Pump Coolers
- Cleanup System Nonregenerative Heat Exchangers
- Drywell Air Coolers
- Waste Disposal System Heat Exchangers
- Shutdown Cooling System Heat Exchangers and Pump Coolers
- Off-Gas Vacuum Pump Coolers
- H_2 - O_2 Monitoring Systems

Following a loss-of-coolant accident or high energy line break, the special operating procedures require the following systems or equipment cooled by the Reactor Building Closed Loop Cooling System to be operational:

- High Pressure Coolant Injection System (electric feedwater pumps, condensate pumps, feedwater booster pumps)
- Instrument Air Compressor
- H_2 - O_2 Monitoring Systems

The Reactor Building Closed Loop Cooling System is required to support Functions 3 and 6, Reactor Core Cooling and Prevention of Significant Release of Radioactive Material to the Environment. It should be included on the list of all safety-related systems requiring environmental equipment qualification in accordance with IE Bulletin 79-01B.

Note: High Pressure Coolant Injection provides Safety Function 3

Instrument Air to CRD System (function 3), Emergency Condenser (function 3) and Reactor Building Emergency Ventilation (Function 6)

H_2 - O_2 coolers - Safety Function 6

SYSTEM: Service Water (10)

BASES FOR INCLUDING OR DELETING FROM MASTER LIST:

The Service Water System is designed to provide strained lake water for cooling the reactor and turbine building closed loop cooling systems, the steam jet air ejectors precooler, ejector vent cooler, the building local air coolers and other building services. The system is designed to be available to cool the reactor building cooling water system under all conditions of operation. The cooling water requirements during shutdown mode represent the most severe condition and is used as the design basis.

Following a loss-of-coolant accident or high energy line break, the Service Water System is required to provide a heat sink for the Reactor Building Closed Loop Cooling System.

The station Service Water System is required to support functions 3 and 6, Reactor Core Cooling and Prevention of Significant Release of Radioactive Material to the Environment, and should be included on the list of all safety-related systems requiring environmental equipment qualification in accordance with IE Bulletin 79-01B.

Note: Reactor Building Closed Loop Cooling Water Supports Functions 3 and 6.

SYSTEM: Containment Atmospheric Dilution (11)

BASES FOR INCLUSION ON MASTER LIST:

The Containment Atmospheric Dilution System is designed to limit the oxygen concentration of the primary containment atmosphere to less than 4.0% during a loss-of-coolant accident (Updated FSAR, Section VII-G.3.0). Following a loss-of-coolant accident, hydrogen and oxygen may be released within the primary containment from postulated metal-water reactions and radiolysis. The initially inerted primary containment prevents the combustion of hydrogen evolved from a metal-water reaction. However, radiolytic decomposition results in the release of both hydrogen and oxygen. The Containment Atmospheric Dilution System functions by adding nitrogen to the primary containment atmosphere as the radiolytic formation of oxygen occurs. Oxygen concentration is, therefore, diluted to remain below 4% by volume. Since the radiolysis rate decreases with time as a result of fission product decay, the required nitrogen addition rate will also decrease.

Because the Containment Atmospheric Dilution System provides a means for limiting the oxygen concentration to less than 4.0 percent by volume (mitigates oxygen concentration produced by radiolysis after loss-of-coolant accident), it is concluded that the Containment Atmosphere Dilution System is required to achieve or support function 6, Prevention of Significant Release of Radioactive Material to the Environment. It should be included on the list of safety-related systems requiring environmental equipment qualification in accordance with IE Bulletin 79-01B.

SYSTEM: Hydrogen and Oxygen Monitoring (12)

BASES FOR INCLUSION ON MASTER LIST:

The Hydrogen and Oxygen Monitoring System is a subsystem of the Combustible Gas Control System. The Hydrogen and Oxygen Monitoring system provides hydrogen-oxygen concentration monitoring of the primary containment atmosphere.

Two redundant Hydrogen and Oxygen Sampling Systems monitor the hydrogen and oxygen concentrations in the drywell and suppression chamber to minimize stratification and sampling errors. Five sampling probes check the drywell atmosphere (including the downcomer ring header), while two sampling probes check the suppression chamber atmosphere. An indication of hydrogen concentration (0-20 percent) and oxygen concentration (0-5 percent and 0-25 percent) in the primary containment atmosphere is provided in the control room.

In accordance with N1-SOP-01, "Continual Loss of Coolant and 115 kV", the plant operator is required to monitor containment oxygen and maintain containment atmosphere at less than 4 percent oxygen. The operator, therefore, uses the Hydrogen and Oxygen Monitoring Systems following a line break in the drywell to assist him in limiting oxygen concentration.

Because the Hydrogen and Oxygen Monitoring Systems assist the operator in limiting the oxygen concentration to less than 4.0% by volume, it is required to support function 6, Prevention of Significant Release of Radioactive Material to the Environment. It should be included on the list of safety-related systems requiring environmental equipment qualification in accordance with IE Bulletin 79-01B.

SYSTEM: Station Electric Distribution (13)

BASES FOR INCLUSION ON MASTER LIST:

The Station Electrical Power System provides normal and emergency sources of electrical power for normal plant operation and for prompt shutdown. It also maintains the plant in a safe condition under various events.

Following a loss-of-coolant accident or high energy line break, portions of the Electrical Power Systems support accident mitigating, containment isolation, and post-accident systems and components by providing electrical power for accomplishment of design basis safety-functions.

The electrical power system is required to support functions 1 through 6, and shall be included on the list of all safety-related systems requiring environmental equipment qualification in accordance with IE Bulletin 79-01B.

SYSTEM: Containment and Reactor Vessel Isolation (14)

BASES FOR INCLUSION ON MASTER LIST:

Isolation valves are provided on lines penetrating the drywell and pressure suppression chamber to assure integrity of the containment when required during emergency and post-accident periods. Isolation valves which must be closed to ensure containment integrity immediately after a major accident are automatically controlled by the reactor protection system. Reactor vessel isolation valves are also included in this system.

The design objective of the containment isolation system allows the normal or emergency passage of fluids through the containment boundary while preserving the ability of the boundary to prevent or limit the escape of fission products that may result from postulated accidents.

The containment isolation system is required to support functions 2 and 6, Containment Isolation and Prevention of Significant Release of Radioactive Material to the Environment, and should be included on the list of safety-related systems requiring environmental equipment qualification in accordance with IE Bulletin 79-01B.

SYSTEM: Post-Accident Sampling (15)

BASES FOR INCLUSION ON MASTER LIST:

Post-Accident Sampling meets the requirements of NUREG 0737.

This system and its electrical components are not required to be environmentally qualified by IE Bulletin 79-01B. However, environmental qualification of electrical equipment located in harsh environments is required for some TMI Lessons Learned requirements (NUREG 0737). Action Item II.B.3 "Post-Accident Sampling Capability of Reactor Coolant and Containment" is such an item. Consequently, the post-accident sampling system should meet environmental equipment qualification in accordance with IE Bulletin 79-01B, Supplement 3.

SYSTEM: Instrument Air (16)

BASES FOR DELETION FROM MASTER LIST:

The Instrument Air System is a subsystem of the service, instrument and breathing air systems. The Instrument Air System provides a reliable source of clean dry air for use in instruments and controls. It functions as a backup to the breathing air system. Compressed air is supplied by one or a combination of three air compressors. Two can be powered from the emergency diesel generators. The Instrument Air System provides air to safety-related components.

Although safety-related equipment that uses instrument air is designed to fail to its fail safe position on loss of instrument air, there are some safety-related components that require air in order to mitigate the consequences of a design basis accident. Following a loss-of-coolant accident Special Operating Procedure N1-SOP-1 requires the operator under "Immediate Operator Action" to start an Instrument Air Compressor. Air provided by this Instrument Air Compressor is used for the following components:

- Reactor Building Emergency Ventilation E/P converters for FCV 202-50 and FCV 202-51.

- Control Rod Hydraulic System E/P converters for FCV-NC-30A and FCV-NC-30B.

- Emergency Cooling System condensate return valves IV-39-05 and IV-39-06. These valves are to be cycled open and close to limit cooldown rate as described in N1-OP-13.

- H_2 -O_2 System number 11 sample stream supply and return valves as well as System 11 analyzer.

- H_2 -O_2 System number 12 Analyzer

- Containment N_2 inverting and purge valves

BV 201.2-02	IV- 201.1-14
BV- 201.2-04	IV- 201.1-16
BV- 201.2-46	PIC 201.2-532A
FCV-201.8-02	IV- 201.2-32
PCV-201.8-01	IV- 201.2-03

- Post Loss-of-Coolant Accident Sampling System Valves

IV-122-03	BV-122-10
BV-122-04	BV-122-11
BV-122-05	
BV-122-06	
BV-122-08	
BV-122-09	

- Vacuum Relief Valves require air to open

IV 68-08
IV 68-09
IV 68-10

SYSTEM: Instrument Air (cont'd)

The Instrument Air System is required to support functions 1, 2, 3, 5 and 6; and it should be included on the list of safety-related systems requiring environmental equipment qualification in accordance with IE Bulletin 79-01B.

Electrical components of the Instrument Air System are located in the Turbine Building. Therefore, for postulated breaks within the drywell and the reactor building, the Instrument Air System can be exempted from environmental equipment qualification because it is in a "mild" environment. For steam or feedwater line breaks in the Turbine Building, not all of the safety-related components supplied with air will need to operate. Only equipment from the control rod drive hydraulic and emergency condenser systems are required. For a major steam line break and feedwater line break inside the steam tunnel or condenser bay area, the control rod drive hydraulic and emergency cooling systems are not required to maintain adequate core cooling. For less severe high energy line breaks the conditions inside the general area of the turbine building are less than 133F (maximum temperature of turbine building general area from major steam line break). Since the temperature rise post-accident for less severe high energy line breaks is smaller (and negligible for small breaks), both systems are expected to operated.

The control rod drive hydraulic system provides makeup flow for small high energy line breaks (i.e. less than 0.003 $ft.^2$) when off-site power is not available. As stated above, a high energy line break of this size would not be large enough to cause a harsh environment in the Turbine Building. The emergency core cooling system provides heat removal capability for both small and medium size breaks. Although the Instrument Air System is expected to function following a medium size break, the loss of instrument air to the emergency condenser will not prevent the system from removing decay heat. The emergency cooling system only requires instrument air for cycling open and closed the condensate return valves to regulate cooldown rate. Upon loss of air these valves move to their fail safe position of open permitting continuous cooldown.

Based upon the above discussions, it is concluded that the Instrument Air System is exempt from environmental equipment qualification because its equipment is not exposed to a harsh environment.

SYSTEM: Common Electrical Equipment (17)

BASES FOR INCLUSION ON LIST:

Electrical equipment common to systems provides or facilitates normal and emergency electrical power distribution to system equipment which perform required safety-functions.

Following a loss-of-coolant accident or high energy line break, electrical equipment items common to all safety-related systems support accident mitigating, containment isolation, and post-accident systems and components by providing or facilitating electrical power distribution for accomplishment of design basis safety-functions.

The electrical equipment common to systems is required to support functions 1 through 6, and should be environmentally qualified in accordance IE Bulletin 79-01B. For convenience and accountability, this equipment has been compiled into a "system" and is included on the list of safety-related sytsems.

SYSTEM: Reactor Vessel Instrumentation (18)

BASES FOR INCLUSION ON MASTER LIST:

The Reactor Vessel Instrumentation System is a subset of a redundant fail-safe reactor protection system. It consists of instrumentation which automatically initiates safety-related systems and equipment whenever pre-established limits are exceeded.

The reactor protection system consists of two independent logic channels (channels 11 and 12). Each channel has its own input sensors. Within each logic channel are two identical subchannels (Channels A and B in Channel 11 and Channels C and D in Channel 12) consisting of trip devices. Thus, the system has a total of four independent subchannels. Each subchannel has an input from an independent sensor monitoring each of the critical parameters. The outputs of two of the subchannels are combined in a one-out-of-two logic. The outputs of the remaining two channels are also combined in a one-out-of-two logic. The outputs of the two logic channels are combined so that they both must be tripped to initiate a scram or other protective function.

During normal operation, sensor and trip contacts are closed and vital relays are energized. Thus, the protective system is designed to fail safe.

Following a loss-of-coolant accident or high energy line break, the instrumentation and sensors of the Reactor Vessel Instrumentation System automatically provide signals to the reactor protection system logic channels to actuate systems and components required to perform design basis safety-functions.

The Reactor Vessel Instrumentation system is required to support functions 1, 2, 3, 4 and 6, and should be included on the list of safety-related systems requiring environmental equipment qualification in accordance with IE Bulletin 79-01B.

SYSTEM: Support Instrumentation (19)

BASES FOR INCLUSION ON MASTER LIST:

Additional instrumentation is a subset of instrumentation in various systems that have not been accounted for during the review of the respective system and placed on the master list of safety-related equipment. The instrumentation in this "system" consists of equipment which provides various safety-related functions to support accident mitigation, containment isolation, or post-accident monitoring.

Following a loss-of-coolant accident or high energy line break, the instrumentation included herein supports accident mitigation, containment isolation, or post-accident monitoring.

This instrumentation is required to support functions 1, 2, 3, 4 and 6, and should be included on the list of safety-related systems requiring environmental equipment qualification in accordance with IE Bulletin 79-01B.

APPENDIX C

NINE MILE POINT UNIT 1

ENVIRONMENTAL EQUIPMENT QUALIFICATION

COMPONENT CORRECTIVE

ACTION LIST

LIST OF TABLES

TABLE 1

System Code	System
01	Core Spray (CS)
02	Containment Spray (COS)
03	High Pressure Coolant Injection (HPCI)
04	Raw Water System
05	Automatic Depressurization System (ADS)
06	Emergency Cooling (EC)
07	Reactor Building Emergency Ventilation (RBEV)
08	Control Rod Hydraulic System (CRD)
09	Reactor Building Closed Loop Cooling Water (RBCLC)
10	Service Water
11	Containment Atmospheric Dilution (CAD)
12	Hydrogen and Oxygen Monitoring (H_2O_2)
13	Electrical Power Distribution (PD)
14	Containment and Reactor Vessel Isolation
15	Reactor Vessel Post Accident Sampling
16	Instrument Air
17	Electrical Equipment Common to All Systems (CEE)
18	Reactor Vessel Instrumentation (RVI)
19	Additional Instrumentation

TABLE 2

LOCATION CODE

Location Code	Location	Elevation (ft)	Building
1	Steam Tunnel	240	Turbine
2	Condenser Bay Area of Turbine Building	243-297	Turbine
3	Remainder of Turbine Building	All Elevations	Turbine
4	Emergency Cooling Condenser Area	340	Reactor
5	Containment Spray Heat Exchanger Area	318	Reactor
6	Emergency Condenser Isolation Valve Cubicle	298	Reactor
7	Emergency Condenser Return Valve Cubicle	281	Reactor
8	Clean-up System Cubicles	261	Reactor
9	Floor Area (general)	340	Reactor
10	Floor Area (general)	318	Reactor
11	Floor Area (general)	298	Reactor
12	Floor Area (general)	281	Reactor
13	Floor Area (general)	261	Reactor
14	East Instrument Room	281	Reactor
15	West Instrument Room	281	Reactor
16	Instrument Room (North)	237	Reactor
17	Floor Area (general)	237	Reactor
18	Floor Area	198	Reactor
19	Drywell	-	Containment

TABLE 3

CORRECTIVE ACTION CODE

1	Replacement with available qualified equipment
2	Equipment modification
3	Equipment relocation
4	Replacement pending determination of suitably qualified equipment
5	Qualification by additional testing
6	Qualification testing of equipment in progress
7	Qualification by additional/supplemental analysis (other than qualified life)
8	Qualification by supplemental analysis of qualified life or modification of maintenance/surveillance program requirements.
9	Obtain qualification report from vendor and evaluate qualification.
10	Obtain technical information from manufacturer and evaluate. Qualify the equipment by supplemental analysis or replace with qualified equipment.

TABLE 4

SCHEDULE CODES

Code	Date
1	September 30, 1983
2	December 30, 1983
3	March 30, 1984
4	June 29, 1984
5	September 28, 1984

TABLE 5

SOLENOID ACTUATORS FOR
PRESSURE RELIEF VALVES

Manufacturer	Model No.	Plant ID No.	System Code	Location Code	TER No.	New/ Deleted Item	Corrective Action Code	Schedule Code
GE	1525VX	PSV-NR-108A	05	19	14	N/A	7,8	2
GE	1525VX	PSV-NR-108B	05	19	14	N/A	7,8	2
GE	1525VX	PSV-NR-108C	05	19	14	N/A	7,8	2
GE	1525VX	PSV-NR-108D	05	19	14	N/A	7,8	2
GE	1525VX	PSV-NR-108E	05	19	14	N/A	7,8	2
GE	1525VX	PSV-NR-109F	05	19	14	N/A	7,8	2
Unimax	KBL7HB-5	POS-NR-108A	05	19	14	N/A	7,8	2
Unimax	KBL7HB-5	POS-NR-108B	05	19	14	N/A	7,8	2
Unimax	KBL7HB-5	POS-NR-108C	05	19	14	N/A	7,8	2
Unimax	KBL7HB-5	POS-NR-108D	05	19	14	N/A	7,8	2
Unimax	KBL7HB-5	POS-NR-108E	05	19	14	N/A	7,8	2
Unimax	KBL7HB-5	POS-NR-108F	05	19	14	N/A	7,8	2

TABLE 6

SOLENOID VALVES

Manufacturer	Model No.	Plant ID No.	System Code	Location Code	TER No.	New/ Deleted Item	Corrective Action Code	Schedule Code
ASCO	HT8360A90	SOV-40-32B	01	13	N/A	New	1	5
ASCO	HT8360A90	SOV-40-32C	01	13	N/A	New	1	5
ASCO	HT8350A90	SOV-40-33B	01	13	N/A	New	1	5
ASCO	HT8350A90	SOV-40-33C	01	13	N/A	New	1	5
Decco	24166	SOV-80-15	02	12	12	N/A	1	5
Decco	24166	SOV-80-16	02	12	12	N/A	1	5
Decco	24166	SOV-80-35	02	12	12	N/A	1	5
Decco	24166	SOV-80-36	02	12	12	N/A	1	5
ASCO	8300 Series	SV-39-05E	06	7	17	N/A	1	5
ASCO	8300 Series	SV-39-05E	06	7	17	N/A	1	5
ASCO	8300 Series	SV-39-06E	06	7	17	N/A	1	5
ASCO	8300 Series	SV-39-06E	06	7	17	N/A	1	5
ASCO	HT8300B58BU	SV/IV-39-05	06	7	N/A	New	1	5
ASCO	HT8300B58BU	SV/IV-39-05	06	7	N/A	New	1	5
ASCO	HT8300B58BU	SV/IV-39-06	06	7	N/A	New	1	5
ASCO	HT8300B58BU	SV/IV-39-06	06	7	N/A	New	1	5
ASCO	NP8344A71E*	SV/IV-05-01R	06	2	N/A	New	1	5
ASCO	NP8344A71E*	SV/IV-05-01R	06	2	N/A	New	1	5
ASCO	NP8344A71E*	SV/IV-05-02R	06	2	N/A	New	1	5
ASCO	NP8344A71E*	SV/IV-05-02R	06	5	N/A	New	1	5
ASCO	NP8344A71E*	SV/IV-05-03R	06	5	N/A	New	1	5
ASCO	NP8344A71E*	SV/IV-05-03R	06	5	N/A	New	1	5
ASCO	NP8344A71E*	SV/IV-05-04R	06	2	N/A	New	1	5
ASCO	NP8344A71E*	SV/IV-05-04R	06	2	N/A	New	1	5
ASCO	NP8344A71E*	SV/IV-05-11	06	2	N/A	New	1	5
ASCO	NP8344A71E*	SV/IV-05-11	06	2	N/A	New	1	5
ASCO	NP8344A71E*	SV/IV-05-12	06	2	N/A	New	1	5
ASCO	NP8344A71E*	SV/IV-05-12	06	2	N/A	New	1	5
Valcor	V70900-21-1	60-17E	06	2	N/A	New	7,8	3
Valcor	V70900-21-1	60-17D	06	2	N/A	New	7,8	3
Valcor	V70900-21-1	60-18D	06	9	N/A	New	7,8	3
Valcor	V70900-21-1	60-18E	06	9	N/A	New	7,8	3
ASCO	8315B3F	SOV-39-11C	06	06	N/A	New	1	5
ASCO	8315B3F	SOV-39-11D	06	6	N/A	New	1	5
ASCO	831533F	SOV-39-12C	06	6	N/A	New	1	5
ASCO	831533F	SOV-39-12D	06	6	N/A	New	1	5
ASCO	831533F	SOV-39-13C	06	6	N/A	New	1	5
ASCO	831533F	SOV-39-13D	06	6	N/A	New	1	5
ASCO	831533F	SOV-39-14C	06	6	N/A	New	1	5
ASCO	831533F	SOV-39-14D	06	6	N/A	New	1	5

* Model number is for qualified replacement solenoid

TABLE 6 (Continued)

SOLENOID VALVES

Manufacturer	Model No.	Plant ID No.	System Code	Location Code	TER No.	New/ Deleted Item	Corrective Action Code	Schedule Code
ASCO	8300C68F	SV/BV-202-15	07	3	N/A	New	7,8	3
ASCO	8300C68F	SV/BV-202-15	07	3	N/A	New	7,8	3
ASCO	8300C68F	SV/BV-202-16	07	3	N/A	New	7,8	3
ASCO	8300C68F	SV/BV-202-16	07	3	N/A	New	7,8	3
ASCO	8300C68	SV/BV-202-31	07	3	N/A	New	7,8	3
ASCO	8300C68	SV/BV-202-31	07	3	N/A	New	7,8	3
ASCO	8300C68	SV/BV-202-32	07	3	N/A	New	7,8	3
ASCO	8300C68	SV/BV-202-32	07	3	N/A	New	7,8	3
ASCO	8300C68	SV/BV-202-34	07	3	N/A	New	7,8	3
ASCO	8300C68	SV/BV-202-35	07	3	N/A	New	7,8	3
ASCO	HVA 90-405-2A 83160	SV/BV-202-36	07	3	N/A	New	7,8	3
ASCO	HVA 90-405-2A 83160	SV/BV-202-36	07	3	N/A	New	7,8	3
ASCO	HVA 90-405-2A 83160	SV/BV-202-37	07	3	N/A	New	7,8	3
ASCO	HVA 90-405-2A 83160	SV/BV-202-38	07	3	N/A	New	7,8	3
ASCO	HVA 90-405-2A 83160	SV/BV-202-74	07	3	N/A	New	7,8	3
ASCO	HVA 90-405-2A 83160	SV/BV-202-75	07	3	N/A	New	7,8	3
ASCO	HVA 90 405 2A	SV NC-15A	08	17	13	N/A	7,8	3
ASCO	HVA 90 405 8A	SV NC-15B	08	17	13	N/A	7,8	3
Valcor	PNV 70900-21-1	SV NC-15C	08	17	N/A	New	7,8	3
Valcor	PNV 70900-21-1	SV NC-15D	08	17	N/A	New	7,8	3
ASCO	8300B61RU	SV 201-2-06	11	17	15	N/A	7,8	3
ASCO	8300B61RU	SV 201-2-33	11	17	15	N/A	7,8	3
ASCO	WPLB 8300B72F	SV 201-2-03	11	6	16	N/A	1	5
ASCO	WPLB 8300B72F	SV 201-2-32	11	6	16	N/A	1	5
ASCO	WPLB 8300B72F	SV/IV-201-10	11	17	N/A	New	7,8	3
ASCO	WPLB 8300B72F	SV/IV-201-10	11	17	N/A	New	7,8	3
ASCO	WPLB 8300B72F	SV/IV-201-08	11	17	N/A	New	7,8	3
ASCO	WPLB 8300B72F	SV/IV-201-08	11	17	N/A	New	7,8	3
ASCO	WPLB 8300B72F	SV/IV-201-16	11	17	N/A	New	7,8	3
ASCO	WPLB 8300B72F	SV/IV-201-16	11	17	N/A	New	7,8	3
ASCO	WPLB 8300B72F	SV/IV-201-16	11	17	N/A	New	7,8	3
ASCO	WPLB 8300B72F	SV/IV-201-16	11	17	N/A	New	7,8	3
ASCO	NP8344A71E	SV/IV-201.1-09	11	6	N/A	New	1	5
ASCO	NP8344A71E	SV/IV-201.1-09	11	6	N/A	New	1	5
ASCO	NP8344A71E	SV/IV-201.1-11	11	6	N/A	New	1	5
ASCO	NP8344A71E	SV/IV-201.1-11	11	6	N/A	New	1	5
ASCO	HT8317A30	SOV-201.9-91	11	11	N/A	New	1	5
ASCO	HT8317A30	SOV-201.9-92	11	17	N/A	New	7,8	3

TABLE 6 (Continued)

SOLENOID VALVES

Manufacturer	Model No.	Plant ID No.	System Code	Location Code	TER No.	New/ Deleted Item	Corrective Action Code	Schedule Code
ASCO	8300B61F	SOV-201.2-02	11	11	N/A	New	1	5
ASCO	8300B61F	SOV-201.2-04	11	11	N/A	New	1	5
ASCO	HT80173	SOV-201.2-431	12	17	N/A	New	7,8	3
ASCO	HT80173	SOV-201.7-432	12	17	N/A	New	7,8	3
ASCO	HT80173	SOV-201.2-429	12	17	N/A	New	7,8	3
ASCO	HT80173	SOV-201.2-430	12	17	N/A	New	7,8	3
ASCO	HT80173	SOV-201.2-421	12	17	N/A	New	7,8	3
ASCO	HT80173	SOV-201.2-422	12	17	N/A	New	7,8	3
ASCO	HT80173	SOV-201.2-420	12	17	N/A	New	7,8	3
ASCO	HT80173	SOV-201.2-419	12	17	N/A	New	7,8	3
ASCO	LB8320A-25	SV/IV-201.7-03	12	17	N/A	New	7,8	3
ASCO	LB8320A-25	SV/IV-201.7-03	12	17	N/A	New	7,8	3
ASCO	LB8320A-25	SV/IV-201.2-04	12	17	N/A	New	7,8	3
ASCO	LB8320A-25	SV/IV-201.2-04	12	17	N/A	New	7,8	3
Lawrence	26DCSWPS	IV-201.2-23	12	16	10	N/A	7,8	3
Lawrence	26DCSWPS	IV-201.2-23	12	16	10	N/A	7,8	3
Lawrence	26DCSWPS	IV-201.2-25	12	16	10	N/A	7,8	3
Lawrence	26DCSWPS	IV-201.2-26	12	16	10	N/A	7,8	3
Lawrence	26DCSWPS	IV-201.2-27	12	16	10	N/A	7,8	3
Lawrence	26DCSWPS	IV-201.2-28	12	16	10	N/A	7,8	3
Lawrence	26DCSWPS	IV-201.2-29	12	16	10	N/A	7,8	3
Lawerence	26DCSWPS	IV-201.2-30	12	16	10	N/A	7,8	3
ASCO	LB8320A-25	SV/IV-201.7-01	12	11	N/A	New	1	5
ASCO	LB8320A-25	SV/IV-201.7-01	12	11	N/A	New	1	5
ASCO	LB8320A-25	SV/IV-201.7-02	12	11	N/A	New	1	5
ASCO	LB8320A-25	SV/IV-201.7-02	12	11	N/A	New	1	5
ASCO	HT8300B6RU	SOV-201.7-20	12	11	N/A	New	1	5
ASCO	HT8300B6RU	SOV-201.7-21	12	11	N/A	New	1	5
ASCO	HT8300B6RU	SOV-201.7-23	12	12	N/A	New	1	5
ASCO	HT8300B6RU	SOV-201.7-26	12	12	N/A	New	1	5
ASCO	HT80173	SOV-201.7-24	12	11	N/A	New	1	5
ASCO	HT80173	SOV-201.7-25	12	11	N/A	New	1	5
ASCO	HT80173	SOV-201.7-22	12	12	N/A	New	1	5
ASCO	HT80173	SOV-201.7-27	12	12	N/A	New	1	5

TABLE 6 (Continued)

SOLENOID VALVES

Manufacturer	Model No.	Plant ID No.	System Code	Location Code	TER No.	New/ Deleted Item	Corrective Action Code	Schedule Code
Decco	24166	SV/IV-01-05	14	1	11	N/A	1	5
Decco	24166	SV/IV-01-05	14	1	11	N/A	1	5
Decco	24166	SV/IV-01-06	14	1	11	N/A	1	5
Decco	24166	SV/IV-01-05	14	1	11	N/A	1	5
ASCO WPLB	8300B68F	SV 68-08C	14	17	18	N//A	7,8	3
ASCO WPLB	8300B68F	SV 68-09C	14	17	18	N/A	7,8	3
ASCO WPLB	8300B68F	SV 68-10C	14	17	18	N/A	7,8	3
ASCO	WP8300B61RU	SV/IV-83.1-10	14	17	N/A	New	7,8	3
ASCO	WP8300B61RU	SV/IV-83.1-12	14	17	N/A	New	7,8	3
ASCO	WP8300B61RU	SV/IV-83.1-12	14	17	N/A	New	7,8	3
ASCO WPHTX	8300B61U	SV/IV-01-03	14	1	N/A	New	1	5
ASCO WPHTX	8300B61U	SV/IV-01-03	14	1	N/A	New	1	5
ASCO WPHTX	8300B61U	SV/IV-01-04	14	1	N/A	New	1	5
ASCO WPHTX	8300B61U	SV/IV-01-04	14	1	N/A	New	1	5
ASCO	WP8300B61U	SV/IV-83.1-10	14	17	N/A	New	7,8	3
ASCO	WP8300B61U	SV/IV-83.1-10	14	17	N/A	New	7,8	3
ASCO	WP8300B61U	SV/IV-83.1-12	14	17	N/A	New	7,8	3
ASCO	WP8300B61U	SV/IV-83.1-12	14	17	N/A	New	7,8	3
ASCO	8300B61RU	SV/IV-58.1-01	14	18	N/A	New	7,8	3
ASCO	8300B61RU	SV/IV-58.1-01	14	18	N/A	New	7,8	3
ASCO	HT8320A90MB	SOV-122-03B	14	17	N/A	New	7,8	3
ASCO	HT8320A90MB	SOV-122-03C	14	17	N/A	New	7,8	3
ASCO	HT8317A29	SOV-122-04	15	12	79	N/A	1	5
ASCO	HT8317A29	SOV-122-05	15	17	79	N/A	1	5
ASCO	HT8317A29	SOV-122-06	15	17	79	N/A	1	5
ASCO	HT8317A29	SOV-122-08	15	12	79	N/A	1	5
ASCO	HT8317A29	SOV-122-09	15	12	79	N/A	1	5
ASCO	HT8317A20	SOV-122-10	15	12	79	N/A	1	5
ASCO	HT8317A29	SOV-122-11	15	17	79	N/A	1	5

TABLE 7

POSITION LIMIT SWITCHES

Manufacturer	Model No.	Plant ID No.	System Code	Location Code	TER No.	New/ Deleted Item	Corrective Action Code	Schedule Code
Limitorque	N/A	POS-81-02	01	18	N/A	New	7,8	5
Limitorque	N/A	POS-81-01	01	18	N/A	New	7,8	5
Limitorque	N/A	POS-81-21	01	18	N/A	New	7,8	5
Limitorque	N/A	POS-81-22	01	18	N/A	New	7,8	5
Limitorque	N/A	POS-40-02	01	17	N/A	New	7,8	5
Limitorque	N/A	POS-40-12	01	17	N/A	New	7,8	5
Limitorque	N/A	POS-40-01	01	19	N/A	New	1	4
Limitorque	N/A	POS-40-09	01	19	N/A	New	1	4
Limitorque	SMB 3	POS-40-11	01	19	N/A	New	1	4
Limitorque	SMB 3	POS-40-10	01	19	N/A	New	1	4
Limitorque	SMB 000	POS-40-30	01	19	N/A	New	1	4
NAMCO	17031100	POS-40-32	01	13	N/A	New	9	2
Limitorque	N/A	POS-40-31	01	19	N/A	New	1	4
NAMCO	17031100	POS-40-33	01	13	N/A	New	9	2
Limitorque	N/A	POS-40-05	01	17	N/A	New	7/8	5
Limitorque	N/A	POS-40-06	01	17	N/A	New	7/8	5
NAMCO	D2400X-2	POS-80-15	02	12	N/A	New	7	2
NAMCO	D2400X-2	POS-80-16	02	12	N/A	New	7	2
NAMCO	D2400X-2	POS-80-35	02	12	N/A	New	7	2
NAMCO	D2400X-2	POS-80-36	02	12	N/A	New	7	2
Limitorque	N/A	POS-80-01	02	18	N/A	New	7,8	2
Limitorque	N/A	POS-80-02	02	18	N/A	New	7,8	2
Limitorque	N/A	POS-80-21	02	18	N/A	New	7,8	2
Limitorque	N/A	POS-80-22	02	18	N/A	New	7,8	2
Limitorque	N/A	POS-80-118	02	11	N/A	New	7,8	2
Limitorque	N/A	POS-80-114	02	12	N/A	New	7,8	2
Limitorque	N/A	POS-80-115	02	12	N/A	New	7,8	2
NAMCO	SL3L	POS-39-05	06	07	50	N/A	7	2
NAMCO	SL3L	POS-39-06	06	07	50	N/A	7	2
NAMCO	180 32302	POS-05-04	06	2	N/A	New	8	2
NAMCO	180 32302	POS-05-12	06	2	N/A	New	8	2
NAMCO	180 32302	POS-05-01	06	2	N/A	New	8	2
NAMCO	180 32302	POS-05-11	06	2	N/A	New	8	2
Limitorque	N/A	POS-39-07	06	6	N/A	New	7,8	5
Limitorque	N/A	POS-39-08	06	6	N/A	New	7,8	5
Limitorque	N/A	POS-39-09	06	6	N/A	New	7,8	5
Limitorque	N/A	POS-39-10	06	6	N/A	New	7,8	5
Fisher Control	304	POS-39-11	06	6	N/A	New	1	5
Fisher Control	304	POS-39-12	06	6	N/A	New	1	5
Fisher Control	304	POS-39-13	06	6	N/A	New	1	5
Fisher Control	304	POS-39-14	06	6	N/A	New	1	5
Limitorque	N/A	POS-05-05	06	18	N/A	New	7,8	5

TABLE 7 (Continued)

POSITION LIMIT SWITCHES

Manufacturer	Model No.	Plant ID No.	System Code	Location Code	TER No.	New/ Deleted Item	Corrective Action Code	Schedule Code
Limitorque	N/A	POS-05-07	06	18	N/A	New	7,8	2
Limitorque	N/A	POS-70-94	09	17	N/A	New	7,8	2
Limitorque	N/A	POS-70-92	09	13	N/A	New	7,8	2
NAMCO	D2400X	POS-201.2-32	11	6	47	N/A	7	2
NAMCO	D2400X	POS-201.2-03	11	6	47	N/A	7	2
NAMCO	D2400X	POS-201.32	11	6	47	N/A	7	2
NAMCO	D2400X	POS-201-08	11	17	45	N/A	7	2
NAMCO	D2400X	POS-201-10	11	17	45	N/A	7	2
NAMCO	D2400X	POS-201-16	11	17	45	N/A	7	2
NAMCO	D2400X	POS-201.2-33	11	17	45	N/A	7	2
NAMCO	D2400X	POS-201.2-06	11	17	45	N/A	7	2
Limitorque	N/A	POS-201.31	11	11	N/A	New	7,8	5
NAMCO	2-180C1302	POS-201.1-09	11	6	N/A	New	8	2
NAMCO	2-180C1302	POS-201.1-11	11	6	N/A	New	8	2
Limitorque	N/A	POS-201-07	11	17	N/A	New	7,8	5
Limitorque	N/A	POS-201-09	11	17	N/A	New	7,8	5
Limitorque	N/A	POS-201-17	11	17	N/A	New	7,8	5
Microswitch	LSD4L	POS-201.9-46	11	11	N/A	New	1	5
Microswitch	LSD4L	POS-201.9-47	11	17	N/A	New	7	3
Microswitch	276	POS-201.2-02	11	11	N/A	New	1	5
Microswitch	E236	POS-201.2-04	11	17	N/A	New	7	3
Lawrence	506WA26DC SW-PS	POS-201.2-24	12	17	N/A	New	7,8	3
Lawrence	506WA26DC SW-PS	POS-201.2-24	12	17	N/A	New	7,8	3
Lawrence	506WA26DC SW-PS	POS-201.2-25	12	17	N/A	New	7,8	3
Lawrence	506WA26DC SW-PS	POS-201.2-26	12	17	N/A	New	7,8	3
Lawrence	506WA26DC SW-PS	POS-201.2-27	12	17	N/A	New	7,8	3
Lawrence	506WA26DC SW PS	POS-201.2-28	12	17	N/A	New	7,8	3
Lawrence	506WA26DC SW PS	POS-201.2-29	12	17	N/A	New	7,8	3
Crouse Hinds	CPS 026	POS-201.2-30	12	17	N/A	New	7,8	2
NAMCO	EA-17031100	POS-201.2-111	12	17	N/A	New	9	2
NAMCO	EA-17031100	POS-201.2-110	12	17	N/A	New	9	2
NAMCO	EA-17031100	POS-201.2-109	12	17	N/A	New	9	2
NAMCO	EA-17031100	POS-201.2-112	12	17	N/A	New	9	2
Micro	DTE6-2RN	POS-201.7-03	12	19	N/A	New	1	5
Micro	DTE6-2RN	POS-201.7-04	12	19	N/A	New	1	5
Micro	DTE6-2RN	POS-201.7-01	12	11	N/A	New	1	5
Micro	DTE6-2RN	PSO-201.7-02	12	11	N/A	New	1	5
NAMCO	D2400X-2	POS-201.7-08	12	11	N/A	New	7	2
NAMCO	D2400X-2	POS-201.7-09	12	11	N/A	New	7	2
NAMCO	D2400X-2	POS-201-7-10	12	12	N/A	New	7	2

TABLE 7 (Continued)

POSITION LIMIT SWITCHES

Manufacturer	Model No.	Plant ID No.	System Code	Location Code	TER No.	New/ Deleted Item	Corrective Action Code	Schedule Code
NAMCO	D2400X-2	POS-201.7-11	12	12	N/A	New	7	2
NAMCO	SL3C58TW	POS-01-01	14	01	49	N/A	7	2
NAMCO	SL3C58TW	POS-01-02	14	01	49	N/A	7	2
NAMCO	SL3C58TW	POS-01-03	14	01	100	N/A	7	2
NAMCO	SL3C58TW	POS-01-04	14	01	100	N/A	7	2
NAMCO	D2400X	POS-01-05	14	01	46	N/A	7	2
NAMCO	D2400X	POS-01-06	14	01	46	N/A	7	2
NAMCO	D2400X	POS-83.1-12	14	17	45	N/A	7	2
NAMCO	D2400X	POS-83.1-10	14	17	45	N/A	7	2
Microswitch	11LS1	POS-68-08	14	17	48	N/A	7	3
Microswitch	11LS1	POS-68-09	14	17	48	N/A	7	3
Microswitch	11LS1	POS-68-10	14	17	48	N/A	7	3
NAMCO	D2400X	POS-58.1-01	14	18	N/A	New	7	2
NAMCO	D2400X-2	POS-68-01	14	17	N/A	New	7	2
NAMCO	D2400X-2	POS-68-02	14	17	N/A	New	7	2
NAMCO	D2400X-2	POS-68-03	14	17	N/A	New	7	2
NAMCO	D2400X-2	POS-68-04	14	17	N/A	New	7	2
NAMCO	D2400X-2	POS-68-05	14	17	N/A	New	7	2
NAMCO	D2400X-2	POS-68-06	14	17	N/A	New	7	2
NAMCO	D2400X-2	POS-68-07	14	17	N/A	New	7	2
Limitorque	N/A	POS-33-01	14	19	N/A	New	1	4
Limitorque	N/A	POS-33-02	14	19	N/A	New	1	4
Limitorque	N/A	POS-33-04	14	8	N/A	New	7,8	5
Limitorque	N/A	POS-38-01	14	19	N/A	New	1	4
Limitorque	N/A	POS-38-13	14	19	N/A	New	1	4
Limitorque	N/A	POS-38-02	14	13	N/A	New	7,8	5
Limitorque	N/A	POS-31-08	14	01	N/A	New	7,8	5
Limitorque	N/A	POS-31-07	14	01	N/A	New	1	4
Limitorque	N/A	POS-34-01	14	6	N/A	New	7,8	5
Limitorque	N/A	POS-83.1-09	14	19	N/A	New	1	4
Limitorque	N/A	POS-83.1-11	14	19	N/A	New	1	4
Rockwell	CWP2075-800	POS-122-03	14	17	N/A	New	7,8	3
Limitorque	N/A	POS-110-127	14	19	N/A	New	1	4
Limitorque	N/A	POS-110-128	14	12	N/A	New	7,8	2
Microswitch	F	POS-122-04	14	17	87	N/A	7,8	2
Microswitch	F	POS-122-05	14	17	87	N/A	7,8	2
Microswitch	F	POS-122-06	14	17	87	N/A	7,8	2
Microswitch	F	POS-122-08	14	17	87	N/A	7,8	2
Microswitch	F	POS-122-09	14	17	87	N/A	7,8	2
Microswitch	F	POS-122-10	14	17	87	N/A	7,8	2
Microswitch	F	POS-122-11	14	17	87	N/A	7,8	2

TABLE 8

ELECTRONIC TRIP UNTIS

Manufacturer	Model No.	Plant ID No.	System Code	Location Code	TER No.	New/ Deleted Item	Corrective Action Code	Schedule Code
Rosemount	510DU	201.2-476A	19	12	19	N/A	7,8	4
Rosemount	510DU	201.2-476B	19	12	19	N/A	7,8	4
Rosemount	510DU	201.2-476C	19	12	19	N/A	7,8	4
Rosemount	510DU	201.2-476D	19	12	19	N/A	7,8	4
Rosemount	510DU	36-06A	19	12	19	N/A	7,8	4
Rosemount	510DU	36-06B	19	12	19	N/A	7,8	4
Rosemount	510DU	36-06C	19	12	19	N/A	7,8	4
Rosemount	510DU	36-06D	19	12	19	N/A	7,8	4
Rosemount	510DU	01-26A	19	12	19	N/A	7,8	4
Rosemount	510DU	01-26B	19	12	19	N/A	7,8	4
Rosemount	510DU	01-26C	19	12	19	N/A	7,8	4
Rosemount	510DU	01-26D	19	12	19	N/A	7,8	4
Rosemount	510DU	01-26E	19	12	19	N/A	7,8	4
Rosemount	510DU	01-26F	19	12	19	N/A	7,8	4
Rosemount	510DU	01-26G	19	12	19	N/A	7,8	4
Rosemount	510DU	01-26H	19	12	19	N/A	7,8	4
Rosemount	510DU	36-03A	19	12	20	N/A	7,8	4
Rosemount	510DU	36-03C	19	12	20	N/A	7,8	4
Rosemount	510DU	36-03D	19	12	20	N/A	7,8	4
Rosemount	510DU	36-04A	19	12	20	N/A	7,8	4
Rosemount	510DU	36-04B	19	12	20	N/A	7,8	4
Rosemount	510DU	36-04C	19	12	20	N/A	7,8	4
Rosemount	510DU	36-04D	19	12	20	N/A	7,8	4
Rosemount	510DU	36-05A	19	12	20	N/A	7,8	4
Rosemount	510DU	36-05B	19	12	20	N/A	7,8	4
Rosemount	510DU	36-05C	19	12	20	N/A	7,8	4
Rosemount	510DU	36-05D	19	12	20	N/A	7,8	4
Rosemount	510DU	36-07A	19	12	20	N/A	7,8	4
Rosemount	510DU	36-07B	19	12	20	N/A	7,8	4
Rosemount	510DU	36-07C	19	12	20	N/A	7,8	4
Rosemount	510DU	36-07D	19	12	20	N/A	7,8	4
Rosemount	510DU	36-08A	19	12	20	N/A	7,8	4
Rosemount	510DU	36-08B	19	12	20	N/A	7,8	4
Rosemount	510DU	36-08C	19	12	20	N/A	7,8	4
Rosemount	510DU	36-08D	19	12	20	N/A	7,8	4

TABLE 9

CABLE

Manufacturer	Model No.	Plant ID No.	System Code	Location Code	TER No.	New/ Deleted Item	Corrective Action Code	Schedule Code
Raychem	RG59BU	-	17	19	54	N/A	9	2
GE	Vulkene	-	17	19	65	N/A	7,8,9	2
Rockbestos	RSS6104	-	17	06	94	N/A	7,9	2
Kerite	Power	-	17	01	71	N/A	7,8,9	3

TABLE 10

MOTOR CONTROL CENTERS, MG SETS, PANELS

Manufacturer	Model No.	Plant ID No.	System Code	Location Code	TER No.	New/ Deleted Item	Corrective Action Code	Schedule Code
GE	IC 7700	167	13	12	72	N/A	7,8	4
GE	IC 7700	171B	13	13	72	N/A	7,8	4
GE	IC 7700	161B	13	13	72	N/A	7,8	4
GE	5LS4404 A22Y25	MG-172	13	03	N/A	New	7,8	4
GE	51S4404 A22Y25	MG-162	13	03	N/A	New	7,8	4
GE	IC 7700	161A	13	13	N/A	New	7,8	4
GE	IC 7700	171A	13	13	N/A	New	7,8	4
GE	AKD5	PB-16A	13	12	N/A	New	7,8	4
GE	AKD5	PB-17A	13	12	N/A	New	7,8	4
GE	AKD5	PB-16B	13	12	62	N/A	7,8	4
GE	AKD5	PB-17B	13	12	62	N/A	7,8	4
GE	IC7700	PB-155	13	12	N/A	New	7,8	4
GE	IC7095	Battery Board 12	13	03	N/A	New	7,8	4
GE	Control Panel	MG-162	13	03	N/A	New	7,8	4
GE	Control Panel	MG-172	13	03	N/A	New	7,8	4

TABLE 11

ELECTRICAL INSULATION/TAPE

Manufacturer	Model No.	Plant ID No.	System Code	Location Code	TER No.	New/ Deleted Item	Corrective Action Code	Schedule Code
J-M	Duxseal	Sealant	17	01	55	N/A	7,8	2
Amp	Pre-insul	splice	17	01	59	N/A	7,8	2
Amp	Ring	Connector	17	19	60	N/A	7,8	2
3M/Electro	83	Tape	17	01	63	N/A	7,8	2
GE	227	Sealant	17	01	64	N/A	7,8	2
GE	1309	Varnish	17	01	66	N/A	7,8	2
GE	8380	Tape	17	01	67	N/A	7,8	2
Kerite	Cement	Sealant	17	01	68	N/A	7,8	2
Kerite	Friction	Tape	17	01	69	N/A	7,8	2
Kerite	Splice	Tape	17	01	70	N/A	7,8	2

TABLE 12

ELECTRICAL TERMINAL BLOCKS

Manufacturer	Model No.	Plant ID No.	System Code	Location Code	TER No.	New/ Deleted Item	Corrective Action Code	Schedule Code
GE	EB-5	N/A	17	19	53	N/A	7	1
GE	EB-25	N/A	17	19	53	N/A	7	1

TABLE 13

ELECTRICAL TERMINALS

Manufacturer	Model No.	Plant ID No.	System Code	Location Code	TER No.	New/ Deleted Item	Corrective Action Code	Schedule Code
Burndy	GZ	N/A	17	19	56	N/A	7,8	1
Burndy	QAB	N/A	17	01	57	N/A	7,8	1
Burndy	QA8CB	N/A	17	19	58	N/A	7,8	1

TABLE 14

TEMPERATURE SWITCHES

Manufacturer	Model No.	Plant ID No.	System Code	Location Code	TER No.	New/ Deleted Item	Corrective Action Code	Schedule Code
Fenwal	1700240	TS1B-10A	19	01	28	N/A	7,8	3
Fenwal	1700240	TS1B-10B	19	01	28	N/A	7,8	3
Fenwal	1700240	TS1B-10C	19	01	28	N/A	7,8	3
Fenwal	1700240	TS1B-10D	19	01	28	N/A	7,8	3
Fenwal	1700240	TS1B-10E	19	01	29	N/A	7,8	3
Fenwal	1700240	TS1B-10F	19	01	28	N/A	7,8	3
Fenwal	1700240	TS1B-10G	19	01	28	N/A	7,8	3
Fenwal	1700240	TS1B-10H	19	01	28	N/A	7,8	3
Fenwal	1700240	TS1B-10I	19	01	28	N/A	7,8	3
Fenwal	1700240	TS1B-10J	19	01	29	N/A	7,8	3
Fenwal	1700240	TS1B-10K	19	01	28	N/A	7,8	3
Fenwal	1700240	TS1B-10L	19	01	28	N/A	7,8	3
Fenwal	1700240	TS1B-10M	19	01	28	N/A	7,8	3
Fenwal	1700240	TS1B-10N	19	01	29	N/A	7,8	3
Fenwal	1700240	TS1B-10P	19	01	29	N/A	7,8	3
Fenwal	1700240	TS1B-10Q	19	01	29	N/A	7,8	3
Fenwal	1700240	TS1B-10R	19	01	29	N/A	7,8	3
United Elect.	829C	TIS-202-54	07	03	N/A	New	7,8	1
United Elect.	829C	TIS-202-55	07	03	N/A	New	7,8	1

TABLE 15

TEMPERATURE ELEMENTS

Manufacturer	Model No.	Plant ID No.	System Code	Location Code	TER No.	New/ Deleted Item	Corrective Action Code	Schedule Code
Pyco	0231710 820395	36-29A	18	19	89	N/A	7	2
Pyco	0231710 820395	36-29B	18	19	89	N/A	7	2
Pyco	0231710 820395	36-29C	18	14	90	N/A	7	2
Pyco	0231710 820395	36-29D	18	15	90	N/A	7	2
Pall Trinity	CU/6	TE-70-23	09	12	22	N/A	1	4
Minco Nickel	R-T-D	TE IB06-13	06	06	32	N/A	1	4
Minco Nickel	R-T-D	TE IB06-14	06	06	32	N/A	1	4
Minco Nickel	R-T-D	TE IB06-23	06	06	32	N/A	1	4
Minco Nickel	R-T-D	TE IB06-24	06	06	32	N/A	1	4
Minco Nickel	R-T-D	TE IB06-15	06	06	N/A	New	1	4
Minco Nickel	R-T-D	TE IB06-12	06	06	N/A	New	1	4
Minco Nickel	R-T-D	TE IB06-21	06	06	N/A	New	1	4
Minco Nickel	R-T-D	TE IB06-22	06	06	N/A	New	1	4
Pall Trinity	CU/6	TT IG01A	06	04	N/A	New	1	4
Pall Trinity	CU/6	TE IG01B	06	04	N/A	New	1	4
Pall Trinity	CU/6	TE IG01C	06	10	N/A	New	1	4
Pall Trinity	CU/6	TE IG01D	06	10	N/A	New	1	4

TABLE 16

E/P CONVERTERS

Manufacturer	Model No.	Plant ID No.	System Code	Location Code	TER No.	New/ Deleted Item	Corrective Action Code	Schedule Code
Fisher	546	E/P 60-22A	06	04	N/A	New	7,8	3
Fisher	546	E/P 60-17A	06	04	N/A	New	7,8	3
Fisher	546	E/P 60-23A	06	04	N/A	New	7,8	3
Fisher	546	E/P 60-18A	06	04	N/A	New	7,8	3
Fisher	S/N 4247252	E/P 202-92D	07	03	N/A	New	7,8	3
Fisher	S/N 4354590	E/P 202-49D	07	03	N/A	New	7,8	3
Fisher	546	E/P NC-30A	08	17	N/A	New	7,8	3
Fisher	546	E/P NC-30B	08	17	N/A	New	7,8	3
Fisher	546/4154882	E/P 70-137	09	11	21	N/A	7,8	3
Fisher	546	E/P 201.9-48A	11	13	N/A	New	7,8	3
Fisher	546	E/P 201.9-49A	11	13	N/A	New	7,8	3
Fisher	546	E/P 201.8-01A	11	13	N/A	New	7,8	3
Fisher	546	E/P 201.8-02A	11	13	N/A	New	7,8	3

TABLE 17

TRANSMITTERS

Manufacturer	Model No.	Plant ID No.	System Code	Location Code	TER No.	New/ Deleted Item	Corrective Action Code	Schedule Code
Rosemount	1151DP	FT-RV26A	01	17	39	N/A	10	4
GE/MAC	553-112DAA2	FT-RV26B	01	17	39	N/A	7,8,10	4
Rosemount	1153A	LT-58-05	01	18	80	N/A	7,8	3
Rosemount	1153A	LT-58-06	01	18	80	N/A	7,8	3
Rosemount	1153	DPT 201.2-476A	02	15	30	N/A	7,8	3
Rosemount	1153	DPT 201.2-476B	02	15	30	N/A	7,8	3
Rosemount	1153	DPT 201.2-476C	02	14	30	N/A	7,8	3
Rosemount	1153	DPT 201.2-476D	02	14	30	N/A	7,8	3
GE/MAC	553-122BAAY2	FT-80-49A	02	13	N/A	New	7,8,10	4
GE/MAC	553-122BAAY2	FT-80-71A	02	13	N/A	New	7,8,10	4
GE/MAC	553-122BDLA2R-N	FT-80-56A	02	13	N/A	New	7,8,10	4
GE/MAC	553-122BAAY2	FT-80-76A	02	13	N/A	New	7,8,10	4
GE/MAC	553-122BAAY2	FT-93-30A	02	10	N/A	New	7,8,10	4
GE/MAC	553-122BAAY2	FT-93-33A	02	10	N/A	New	7,8,10	4
GE/MAC	553-122BAAY2	FT-93-32A	02	10	N/A	New	7,8,10	4
GE/MAC	553-122BAAY2	FT-93-34A	02	10	N/A	New	7,8,10	4
Endevco	2273AM20	FT-19	05	19	N/A	New	9	1
Endevco	2273AM20	FT-20	05	19	N/A	New	9	1
Endevco	2273AM20	FT-21	05	19	N/A	New	9	1
Endevco	2273AM20	FT-22	05	19	N/A	New	9	1
Endevco	2273AM20	FT-23	05	19	N/A	New	9	1
Endevco	2273AM20	FT-24	05	19	N/A	New	9	1
Rosemount	1151DP	DPT-36-06A	06	15	29	N/A	10	4
Rosemount	1151DP	DPT-36-06B	06	15	29	N/A	10	4
Rosemount	1151DP1	DPT-36-06C	06	14	29	N/A	10	4
Rosemount	1151DP1	DPT-36-06D	06	14	29	N/A	10	4
GE/MAC	553- 112BAAY2	LT-IG06A	06	10	New	N/A	7,8,10	4
GE/MAC	553- 112BAAY2	LT-IG06B	06	10	New	N/A	7,8,10	4

TABLE 17 (Continued)

TRANSMITTERS

Manufacturer	Model No.	Plant ID No.	System Code	Location Code	TER No.	New/ Deleted Item	Corrective Action Code	Schedule Code
Rosemount	1153DA5	LT-60-22	06	2	N/A	New	7,8	3
Rosemount	1153DA5	LT-60-23	06	9	N/A	New	7,8	3
GE/MAC	554	FT-202-52A	07	3	N/A	New	7,8,10	4
GE/MAC	554	FT-202-49A	07	3	N/A	New	7,8,10	4
GE/MAC	553	FT-RD-15	08	17	N/A	New	7,8,10	4
Rosemount	1153A	201.2-483	11	12	82	N/A	7,8	3
Rosemount	1153A	201.2-484	11	12	82	N/A	7,8	3
Fisher	2340-390	PT-201.9-26	11	13	N/A	New	1	5
Fisher	2340-390	PT-201.9-80	11	13	N/A	New	1	5
Fisher	2340-390	FT-201.9-31	11	13	N/A	New	1	5
Fisher	2340-390	PT-201.8-45	11	13	N/A	New	1	5
Fisher	2340-390	PT-201.8-35	11	13	N/A	New	1	5
Fisher	2340-380	FT-201.8-41	11	13	N/A	New	1	5
Foxboro	E13DL	FET-664	15		84	N/A	7,8	4
Rosemount	1151DP	PT-36-07A	18	15	27	N/A	10	4
Rosemount	1151DP	PT-36-07B	18	15	27	N/A	10	4
Rosemount	1151DP	PT-36-07C	18	14	27	N/A	10	4
Rosemount	1151DP	PT-36-07D	18	14	27	N/A	10	4
Rosemount	1151DP	PT-36-08A	18	15	27	N/A	10	4
Rosemount	1151DP	PT-36-08B	18	15	27	N/A	10	4
Rosemount	1151DP	PT-36-08C	18	14	27	N/A	10	4
Rosemount	1151DP	PT-36-08D	18	14	27	N/A	10	4
Rosemount	1151DP	LT-36-03A	18	15	35	11	10	4
Rosemount	1151DP	LT-36-03B	18	15	35	11	10	4
Rosemount	1151DP	LT-36-03C	18	14	35	11	10	4
Rosemount	1151DP	LT-36-03D	18	14	35	11	10	4
Rosemount	1151DP	LT-36-04A	18	15	35	N/A	10	4
Rosemount	1151DP	LT-36-04B	18	15	35	N/A	10	4
Rosemount	1151DP	LT-36-04C	18	14	35	N/A	10	4
Rosemount	1151DP	LT-36-04D	18	14	35	N/A	10	4
GE/MAC	551 JB394616611	PT-ID-46A	18	15	25	N/A	7,8,10	4
GE/MAC	551 JB394616611	PT-ID-46B	18	14	25	N/A	7,8,10	4
GE/MAC	553 HB345619079	LT-IA-12	18	15	38	N/A	7,8,10	4
Rosemount	1153GA9	PT-36-23A	18	15	81	N/A	7,8	3
Rosemount	1153GA9	PT-36-23B	18	15	81	N/A	7,8	3
Rosemount	1153DA5	LT-36-24A	18	15	83	N/A	7,8	3
Rosemount	1153DA5	LT-36-24B	18	15	83	N/A	7,8	3

TABLE 18

VALVE ACTUATORS

Manufacturer	Model No.	Plant ID No.	System Code	Location Code	TER No.	New/ Deleted Item	Corrective Action Code	Schedule Code
Limitorque	SMB 3	IV-40-11	01	19	3	N/A	1	4
Limitorque	SMB 3	IV-40-10	01	19	3	N/A	1	4
Limitorque	SMB 00	IV-40-05	01	17	4	N/A	7,8	5
Limitorque	SMB 00	IV-40-06	01	17	4	N/A	7,8	5
Limitorque	SMB-3	IV-40-09	01	19	7	N/A	1	4
Limitorque	SMB-3	IV-40-01	01	19	7	N/A	1	4
Limitorque	SMB 00	IV-81-01	01	18	N/A	New	7,8	5
Limitorque	SMB 00	IV-81-02	01	18	N/A	New	7,8	5
Limitorque	SMB 00	IV-81-21	01	18	N/A	New	7,8	5
Limitorque	SMB 00	IV-81022	01	18	N/A	New	7,8	5
Limitorque	SMB 3	IV-40-30	01	19	N/A	New	1	4
Limitorque	SMB 3	IV-40-31	01	19	N/A	New	1	4
Limitorque	SMO 0	BV-93-27	02	5	5	N/A	7,8	5
Limitorque	SMO 0	BV-93-28	02	5	5	N/A	7,8	5
Limitorque	SMB 0	BV-93-26	2	5	5	N/A	7,8	5
Limitorque	SMB 0	BV-93-25	2	5	5	N/A	7,8	5
Limitorque	SMB000 HIBC	80-115	2	12	73	N/A	7,8	2
Limitorque	SMB 000	80-114	2	12	74	N/A	7,8	2
Limitorque	SMB 0	80-118	2	11	77	N/A	7,8	2
Limitorque	SMB 00	IV-80-01	2	18	N/A	New	7,8	2
Limitorque	SMB 00	IV-80-02	2	18	N/A	New	7,8	2
Limitorque	SMB 00	IV-80-21	2	18	N/A	New	7,8	2
Limitorque	SMB 00	IV-80-22	2	18	N/A	New	7,8	2
Limitorque	SMB 2	IV-39-10	6	6	8	N/A	7,8	5
Limitorque	SMB 2	IV-39-08	6	6	6	N/A	7,8	5
Limitorque	SMB 2	IV-39-07	6	6	6	N/A	7,8	5
Limitorque	SMB 2	IV-39-09	6	6	6	N/A	7,8	5
Limitorque	SMB 000	BV-05-05	06	18	78	N/A	7,8	2
Limitorque	SMB 000	BV-05-07	06	18	78	N/A	7,8	2
Limitorque	SMB 000-5	IV-201-31	11	06	8	N/A	7,8	5
Limitorque	SMB 000	IV-201-07	11	17	9	N/A	7,8	5
Limitorque	SMB 000	IV-201-09	11	17	9	N/A	7,8	5
Limitorque	SMB 000	IV-201-17	11	17	9	N/A	7,8	5
Limitorque	SB 4	IV-01-02	14	19	2	N/A	1	4
Limitorque	SB 4	IV-01-01	14	19	2	N/A	1	4
Limitorque	SB 0	IV-33-01	14	19	2	N/A	1	4
Limitorque	SB 0	IV-33-02	14	19	2	N/A	1	4
Limitorque	SB 1	IV-33-04	14	8	1	N/A	7,8	5
Limitorque	SMB 000	IV-83.1-09	14	19	7	N/A	1	4
Limitorque	SMB 000	IV-83.1-11	14	19	7	N/A	1	4
Limitorque	SMB 000	110-128	14	12	76	N/A	7,8	2

TABLE 18 (Continued)

VALVE ACTUATORS

Manufacturer	Model No.	Plant ID No.	System Code	Location Code	TER No.	New/ Deleted Item	Corrective Action Code	Schedule Code
Limitorque	SMB 000	110-127	14	19	75	N/A	1	4
Limitorque	SMB 2	IV-38-02	14	13	N/A	New	7,8	5
Limitorque	SMB 2	IV-38-01	14	19	N/A	New	1	4
Limitorque	SMB 2	IV-38-13	14	19	N/A	New	1	4
Limitorque	SMB	MOV-IV-31-08	14	1	N/A	New	1	4
Limitorque	SMB	MOV-IV-31-07	14	1	N/A	New	1	4
Limitorque	SMB 000	MOV-IV-34-01	14	6	N/A	New	7,8	5
Limitorque	SMB 000	IV-70-92	9	13	N/A	New	7,8	5
Limitorque	SMB 000	IV-70-94	9	17	N/A	New	7,8	5
Limitorque	SMB 00	PCV-NC-18	8	17	N/A	New	7,8	5
Limitorque	SMB 00	PCV-NC-40	8	17	N/A	New	7,8	5

TABLE 19

MOTORS

Manufacturer	Model No.	Plant ID No.	System Code	Location Code	TER No.	New/ Deleted Item	Corrective Action Code	Schedule Code
GE	5K6366XC 166A-HC8365174	M81-23	01	18	44	N/A	7,8	2
GE	5K6366XC 166A-HC8365174	M81-24	01	18	44	N/A	7,8	2
GE	5K6366XC 166A-HC8365174	M81-03	01	18	44	N/A	7,8	2
GE	5K6366XC 166A-HC8365174	M81-04	01	18	44	N/A	7,8	2
GE	5K828837C7 HC8365172	M81-49	01	17	42	N/A	7,8	2
GE	5K828837C7 HC8365172	M81-50	01	17	42	N/A	7,8	2
GE	5K828837C7 HC8365172	M81-51	01	17	42	N/A	7,8	2
GE	5K828837C7 HC8365172	M81-52	01	17	42	N/A	7,8	2
GE	5K6338XC 136A	M80-03	02	18	43	N/A	7,8	2
GE	5K6338XC 136A	M80-04	02	18	43	N/A	7,8	2
GE	5K6328CX 136A	M80-23	02	18	43	N/A	7,8	2
GE	5K6328XC 136A	M80-24	02	18	43	N/A	7,8	2
Franklin	3CT5MJ	122-01	15	16	91	N/A	7,8	3
Franklin	3CT5MJ	122-02	15	16	.91	N/A	7,8	3
GE	5K334AK249A CB161088	M70-01	09	11	41	N/A	7,8	1
GE	5K334AK249A CB161088	M70-02	09	11	41	N/A	7,8	1
GE	5K334AK249A CB161088	M70-03	09	11	41	N/A	7,8	1
GE	5K184AL218	202-33	7	3	N/A	New	7,8	1
GE	5K184AL218	202-53	7	3	N/A	New	7,8	1
GE	5K8143 16A73	NC08A	8	17	N/A	New	7,8	2
GE	5K8143 16A73	NC08B	8	17	N/A	New	7,8	2

TABLE 20

RADIATION DETECTORS

Manufacturer	Model No.	Plant ID No.	System Code	Location Code	TER No.	New/ Deleted Item	Corrective Action Code	Schedule Code
GE	194X927	RE-RN04A3	06	2	N/A	New	7,8,10	3
GE	194X927	RE-RN04B4	06	2	N/A	New	7,8,10	3
GE	194X927	RE-RN04C	06	2	N/A	New	7,8,10	3
GE	194X927	RE-RN04D	06	2	N/A	New	7,8,10	3
GE	194X927	RE-RN04A	06	11	N/A	New	7,8,10	3
GE	194X927	RE-RN04B	06	11	N/A	New	7,8,10	3
General Atomic	RD23	201.7-36A	11	13	86	N/A	7,8	1
General Atomic	RD23	201.7-37A	11	13	86	N/A	7,8	1

TABLE 21

PRESSURE SWITCHES

Manufacturer	Model No.	Plant ID No.	System Code	Location Code	TER No.	New/ Deleted Item	Corrective Action Code	Schedule Code
Mercoid	DA23-156	PS-RD68A	8	17	N/A	New	7,8	1
Mercoid	DAW-43-103	PS-RD68B	8	17	N/A	New	7,8	1
Vibraswitch	366	PS-70-108	9	11	N/A	New	1	5
Vibraswitch	366	PS-70-109	9	11	N/A	New	1	5
Vibraswitch	366	PS-70-110	0	11	N/A	New	1	5
Mercoid	CP4122	VCS 68-11A	14	17	37	N/A	7,8	1
Mercoid	CP4122	VCS 68-11B	14	17	37	N/A	7,8	1
Mercoid	CP4122	VCS 68-12A	14	17	37	N/A	7,8	1
Mercoid	CP4122	VCS 68-12B	14	17	37	N/A	7,8	1
Mercoid	CP4122	VCS 68-13A	14	17	37	N/A	7,8	1
Mercoid	Cp4122	VCS 68-13B	14	17	37	N/A	7,8	1
Static O-Ring	SNNKK3S1C1A	122-14	15	16	85	N/A	7,8	3
Barksdale	B2S-H12SS	NR-108A	18	15	N/A	New	7,8	1
Barksdale	B2S-H12SS	NR-108B	18	15	N/A	New	7,8	1
Barksdale	B2S-H12SS	NR-108C	18	14	N/A	New	7,8	1
Barksdale	B2S-H12SS	NR-108D	18	14	N/A	New	7,8	1
Barksdale	B2S-H12SS	NR-108E	18	14	N/A	New	7,8	1
Barksdale	B2S-H12SS	NR-108F	18	14	N/A	New	7,8	1

TABLE 22

PENETRATIONS/CONNECTORS

Manufacturer	Model No.	Plant ID No.	System Code	Location Code	TER No.	New/ Deleted Item	Corrective Action Code	Schedule Code
D.G. O'Brien	19,5,28 PIN #16 4 PIN #5	N/A	17	19	52	N/A	7,8	4
D.G. O'Brien	C10C0001G14/ C10C0001G21	N/A	17		92	N/A	7,8	4
D.G. O'Brien	C10C0001G14/ C10C0001G21	N/A	17		93	N/A	7,8	4

TABLE 23

ELECTRIC HEATERS

Manufacturer	Model No.	Plant ID No.	System Code	Location Code	TER No.	New/ Deleted Item	Corrective Action Code	Schedule Code
Thermon	TFK	202-73	7	03	N/A	New	7,8	3
Thermon	TFK	202-73	7	03	N/A	New	7,8	3
Honeywell	R7283B1081	202-76	7	03	N/A	New	7,8	3

TABLE 24

H_2-O_2 MONITORS

Manufacturer	Model No.	Plant ID No.	System Code	Location Code	TER No.	New/ Deleted Item	Corrective Action Code	Schedule Code
Beckman	H_2-O_2	No. 11	12	03	N/A	New	7,8	3
Beckman	H_2-O_2	No. 11	12	03	N/A	New	7,8	3

TABLE 25

DELETED EQUIPMENT

Manufacturer	Model No.	Plant ID No.	System Code	Location Code	TER No.	New/ Deleted Item	Corrective Action Code	Schedule Code
Mercoid	DA5432	PS-40-08	01	12	34	Deleted	N/A	N/A
Mercoid	DA5432	PS-40-07	01	12	34	Deleted	N/A	N/A
GE/MAC	551	PT-80-75	02	18	23	Deleted	N/A	N/A
GE/MAC	551	PT-80-69	02	18	24	Deleted	N/A	N/A
GE/MAC	551	PT-80-47	02	18	24	Deleted	N/A	N/A
GE/MAC	551	PT-80-54	02	18	24	Deleted	N/A	N/A
Mercoid	SD 8136	PS-80-61	02	12	33	Deleted	N/A	N/A
Mercoid	SD 8136	PS-80-60	02	12	33	Deleted	N/A	N/A
Rosemount	1151DP	FT-ID-33A	05	16	40	Deleted	N/A	N/A
Rosemount	1151DP	FT-ID-33B	05	16	40	Deleted	N/A	N/A
ASCO	HVA904058A	SV-NC-16A	08	17	13	Deleted	N/A	N/A
ASCO	HVA904058A	SV-NC-16B	08	17	13	Deleted	N/A	N/A
Omega	HWANSA2231	TE-70-269A						
	DH114T834		09	17	88	Deleted	N/A	N/A
Omega	HWANSA2231	TE-70-276A						
	DH114T834		09	17	88	Deleted	N/A	N/A
GE	IC7700	PB-1671	13	11	72	Deleted	N/A	N/A
GE/MAC	551	PT-ID-45	18	15	26	Deleted	N/A	N/A
GE	194X92792	RE-RN05A	19	2	51	Deleted	N/A	N/A
GE	194X92792	RE-RN05B	19	2	51	Deleted	N/A	N/A
GE	194X92792	RE-RN05C	19	2	51	Deleted	N/A	N/A
GE	194X92792	RE-RN05D	19	2	51	Deleted	N/A	N/A
Rosemount	1151DP	DPT-01-26A	5	16	31	Deleted	N/A	N/A
Rosemount	1151DP	DPT-01-26B	5	16	31	Deleted	N/A	N/A
Rosemount	1151DP	DPT-01-26C	5	16	31	Deleted	N/A	N/A
Rosemount	1151DP	DPT-01-26D	5	16	31	Deleted	N/A	N/A
Rosemount	1151DP	DPT-01-26E	5	16	31	Deleted	N/A	N/A
Rosemount	1151DP	DPT-01-26F	5	16	31	Deleted	N/A	N/A
Rosemount	1151DP	DPT-01-26G	5	16	31	Deleted	N/A	N/A
Rosemount	1151DP	DPT-01-26H	5	16	31	Deleted	N/A	N/A
Rosemount	1151DP	LT 58-05	01	18	36	N/A	N/A	N/A
Rosemount	1151DP	LT 58-06	01	18	36	N/A	N/A	N/A

TABLE 26

QUALIFIED EQUIPMENT

Manufacturer	Model No.	Plant ID No.	System Code	Location Code	TER No.	New/ Deleted Item	Corrective Action Code	Schedule Code
			ELECTRICAL TERMINALS					
OZ Gedney	XL	N/A	17	01	61	N/A	N/A	N/A
			CABLE					
Kerite	FR2/FR	-	17	7	97	-	-	-
Rockbestos	16TSP	N/A	17	06	95	N/A	N/A	N/A
Rockbestos	Control	N/A	17	06	96	N/A	N/A	N/A