August 25, 2003

Mr. John Skolds
Chairman and CEO
AmerGen Energy Company, LLC
4300 Winfield Road
5th Floor
Warrenville, IL 60555

SUBJECT: THREE MILE ISLAND STATION, UNIT 1 NRC INSPECTION REPORT 05000289/2003007

Dear Mr. Skolds:

On July 11, 2003, the U.S. Nuclear Regulatory Commission (NRC) completed an engineering team inspection at the Three Mile Station (TMI), Unit 1. The enclosed report presents the results of that inspection, which were discussed with Mr. K. Bartes and other members of your staff on July 11, 2003.

The inspection examined activities conducted under your license as they relate to safety, and compliance with the Commission's rules and regulations and with the conditions of your license. The inspection consisted of system walkdowns; examination of selected procedures, drawings, modifications, calculations, surveillance tests and maintenance records; and interviews with site personnel.

Based on the results of this inspection, no findings of significance were identified.

In accordance with 10 CFR 2.790 of the NRC's "Rules of Practice," a copy of this letter and its enclosure will be available electronically for public inspection in the NRC Public Document Room or from the Publicly Available Records (PARS) component of the NRC's document system (ADAMS). ADAMS is accessible from the NRC Website at http://www.nrc.gov/reading-rm/adams.html (the Public Electronic Reading Room).

Sincerely,

/RA/

Lawrence T. Doerflein, Chief
Systems Branch
Division of Reactor Safety

Docket Nos. 50-289
License No. DPR-50

Enclosure: Inspection Report 05000289/2003007
w/Attachment: Supplemental Information

cc w/encl:
Site Vice President, TMI Unit 1
Senior Vice President, Nuclear Services
Vice President, Mid-Atlantic Operations Support
Senior Vice President, Mid-Atlantic Regional Operating Group
Vice President, Licensing and Regulatory Affairs
Director-Licensing Mid-Atlantic Regional Operating Group
Plant Manager, TMI, Unit 1
Regulatory Assurance Manager - TMI, Unit 1
Vice President, General Counsel and Secretary
Correspondence Control Desk - AmerGen Energy Company, LLC
Manager Licensing - TMI - AmerGen Energy Company, LLC
Chairman, Board of County Commissioners of Dauphin County
Chairman, Board of Supervisors of Londonderry Township
R. Janati, Chief, Division of Nuclear Safety
M. Schoppman, Framatome ANP
J. Johnsrud, National Energy Committee
E. Epstein, TMI-Alert (TMIA)
D. Allard, PADER

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U.S. NUCLEAR REGULATORY COMMISSION

REGION I

Docket Nos.	50-289
License Nos.	DPR-50
Report Nos.	05000289/2003007
Licensee:	AmerGen Energy Company, LLC (AmerGen)
Facility:	Three Mile Station, Unit 1
Location:	P.O. Box 480 Middletown, PA 17057
Dates:	June 23 - July 11, 2003
Inspectors:	H. Gray, Senior Reactor Inspector, DRS, Team Leader F. Baxter, NRC contractor J. Benjamin, Reactor Inspector, DRS T. Burns, Reactor Inspector, DRS S. Iyer, Reactor Engineer, DRP J. Schoppy, Senior Reactor Engineer, DRS S. Unikewicz, Mechanical Engineer, NRR A. Ziedonis, Engineering Co-op student
Approved By:	Lawrence T. Doerflein, Chief Systems Branch Division of Reactor Safety

Summary of Findings

IR 05000289/2003-007; on 06/23/03 - 07/11/03, Three Mile Island Station, Unit 1; engineering team report.

The inspection was conducted by five region-based inspectors, one mechanical engineer from NRR, a co-op engineering student and one NRC contractor. No findings of significance were identified. The significance of most findings is indicated by their color (Green, White, Yellow, Red) using IMC 0609 “Significance Determination Process” (SDP). Findings for which the SDP does not apply may be “Green” or may be assigned another severity level after NRC management review. The NRC's program for overseeing the safe operation of commercial nuclear power reactors is described in NUREG-1649, “Reactor Oversight Process,” Revision 3, dated July 2000**.**

A. NRC-Identified and Self-Revealing Findings

No findings of significance were identified.

B. Licensee Identified Findings

None

Report Details

1. REACTOR SAFETY

Cornerstones: Initiating Events, Mitigating Systems, and Barrier Integrity

1R21 Safety System Design and Performance Capability (IP 71111.21)

a. Inspection Scope

The team reviewed the design and performance capability of TMI's instrument air (IA) and emergency diesel generator (EDG) systems; as well as a portion of the decay heat closed cooling water (DHCCW) system and other selected interfacing and supporting systems. The supporting systems included the EDG fuel oil, air start, ventilation, and combustion air systems. The team reviewed the design basis documents, the Updated Final Safety Analysis Report (UFSAR), Technical Specifications, design calculations, and other supporting documents to ensure that the systems could be relied upon to meet their functional requirements. In addition, the team used TMI risk insights to focus inspection activities on components and procedures that would mitigate the effects of postulated events loss of offsite power (LOOP), loss of instrument air (LOIA), station blackout (SBO), and high energy line break (HELB). Components selected for a detailed design basis review included the EF-30 valves, the DHCCW system thermal and hydraulic performance, and DHCCW pump performance.

Regarding the instrument air system, the team reviewed TMI's capability to successfully provide emergency feedwater to the steam generators including operation of the two hour backup IA (2HrBUIA) system and manual operation of the EF-30 valves. In addition, the team reviewed the applicable procedures which would be used following a LOOP or LOIA event. The team reviewed applicable design basis documents and conducted plant walkdowns to verify the adequacy of the IA system design with respect to an Appendix R fire for redundant trains of safe shutdown equipment in the intermediate building (295') and EDG rooms. The team also reviewed the equipment classification and qualification of the IA and 2HrBUIA systems.

The team reviewed how work related to the IA system was controlled. The team interviewed plant personnel responsible for task planning and risk management to review how daily work control practices address risk management.

The team reviewed the operator workaround list, system engineer tracking/trending data, system health reports, temporary modifications, equipment status log, and corrective action database to assess the overall health of the systems. The team also reviewed selected work orders, engineering evaluations, Maintenance Rule functional failure evaluations, operability determinations, and operating experience (OE) responses applicable to these systems. The team conducted several control room instrumentation and in-plant system walkdowns, including a detailed walkdown with the respective system managers, to assess the operational readiness, configuration control, and material condition of these systems.

The team reviewed the procedures used to operate and test the IA system during both normal and accident conditions. The types of procedures reviewed included: system operating procedures, abnormal operating procedures, and surveillance tests. The team reviewed the licensed operator training lesson plans for the IA and EDG systems to ensure they accurately described the design features of the system and were consistent with the design basis. Additionally, the team reviewed the training requirements for key manual actions inside and outside the control room during a loss of instrument air, loss of offsite power and station blackout necessary for plant safety.

For the DHCCW system, the inspectors reviewed the heat exchanger thermal performance calculations, system heat balance analysis, cooling water flow distribution analysis, trouble reports, and the maintenance history of the system. The inspectors also examined the condition of the DHCCW system during walkdowns.

As part of the review of the EDGs and response to a LOOP, the team reviewed the design of the ac and dc electrical distribution system including the EDGs, the SBODG, the 250/125 V station batteries, and the SBODG 125 V battery. This review encompassed design calculations, drawings, specifications, elementary diagrams, test data, vendor data, operating procedures, and walkdowns. Also included in the review of the ac and dc distribution system was a review of the ac and dc short circuit calculations, an assessment of the ac bus ties and auto-transfer switches between redundant 480 V buses, and of the dc power operated relief valve (PORV).

The review of the EDGs involved an assessment of the EDG loading calculation to determine if worst case loading had been considered, and if the calculated load was within the rating of the EDG. The EDG step loading study was assessed to determine if the voltage and frequency dips and recovery were within acceptable limits. The EDG fuel consumption calculation was assessed to determine if fuel oil storage requirements were based on valid loading and fuel consumption rate data. Finally, a walkdown was performed to determine the physical condition of the EDGs.

For the EDG fuel oil and air systems, the team reviewed the volume of the fuel oil day tank, the available quantity of fuel, the source of starting air, air receiver capacity, and the associate piping and supports to verify support system readiness. The inspectors performed walkdowns of the support systems to verify that the system configuration was consistent with the design basis, and to confirm the ability to operate the EDG under elevated temperature conditions. The systems and associated components appeared capable to support intended safety related functions. In addition, the team reviewed relevant procedures and analysis to determine the technical adequacy and clarity of the procedures.

The team reviewed the system operating procedures, abnormal and emergency operating procedures, and surveillance tests. Test requirements and results were reviewed for appropriateness, technical validity, acceptability of test results, data analysis and evaluation. On July 10, the team observed the B EDG monthly surveillance from the control room and at the EDG. The team also reviewed the sampling and trend data for air system and diesel fuel oil quality.

The review of the SBODG involved an assessment of the manual load application to the SBODG, and a walkdown to determine the physical condition of the SBODG and its supporting ac and dc electrical distribution systems.

The review of the 250/125 V dc system involved an assessment of the battery sizing calculation to see if worst case loads had been included, that the battery room minimum temperatures could be maintained by the heating and ventilation and air-conditioning system (HVAC), that the fuses and circuit breakers of the dc system were adequately rated for the expected short circuit currents, and finally, a walkdown was performed to determine the physical condition of the batteries.

b. Findings

No findings of significance were identified.

4OA2 Identification and Resolution of Problems (IP 71152)

a. Inspection Scope

The team assessed whether licensee personnel were identifying issues with the IA, DHCCW, EDG, and supporting systems at the proper threshold and entering them in the corrective action program. Specifically, the inspectors reviewed a selection of Action Requests (ARs), Condition Reports (CRs), Corrective Actions (CAs), self-assessments, and Quality Assurance (QA) audits to verify that problems were identified, documented, and effectively resolved in a timely manner.

The team reviewed the process of how procedural quality was controlled and maintained for IA and IA related systems. This process was compared to Exelon's Operational Quality Assurance Plan (1000-PLN-7200.01 Rev. 24). The types of procedures reviewed included: system operating procedures, abnormal operating procedures and emergency operating procedures. Additionally, the team interviewed key personal responsible for implementing the Operational Quality Assurance Plan.

b. Findings

No findings of significance were identified

4OA6 Meetings, Including Exit

.1 Management Meeting

The team presented the inspection results to Mr. K. Bartes and other members of the TMI staff at an exit meeting on July 11, 2003. The team reviewed some proprietary information during the inspection. This material was either returned to TMI personnel or destroyed. The team verified that this inspection report does not contain proprietary information.

ATTACHMENT 1

SUPPLEMENTARY INFORMATION

Key Points Of Contact

Licensee Personnel

K. Bartes, Operations Director, Acting Station Manager
T. Basso, Design Engineering Sr. Manager
L. Clewett, Engineering Director
S. Cohen, Electrical System Engineer
H. Crawford, Manager, Plant Engineering
R. Detwiler, NOS Manager
R. Ezzo, Design Engineering, Electric
K. Heisey, AOV Engineer
T. Lighty, IA System Manager
B. Marshall, DHCCW System Manager
W. J. Marshall, System Engineering
B. McSorley, Operations TMI
A. Miller, Regulatory Assurance
G. Rombold, Regulatory Assurance Manager
B. Shumaker, TMI-Nuclear Oversight
T. Wickel, Engineering
S. Zeman, EDG System Manager
V. Zeppos, Mechanical/Structural Engineering

NRC Personnel

C. Smith	Senior Resident Inspector
J. Herrera	Resident Inspector

List of Items Opened, Closed, and Discussed

Opened and/or Closed

None

List of Acronyms

2HrBUIA	Two hour backup instrument air
AC or ac	Alternating current
AOP	Abnormal operating procedure
AR	Action Request
BUIA	Backup Instrument Air
CA	Corrective Actions
CDF	Core Damage Frequency
CFR	Code of Federal Regulations
CR	Condition Report
DC or dc	Direct current
DHCCW	Decay Heat Closed Cooling Water
DBD	Design Basis Document
DHR	Decay Heat Removal
ECR	Engineering Change Request
EDG	Emergency Diesel Generator
EFW	Emergency Feedwater
EOP	Emergency Operating Procedure
HELB	High Energy Line Break
HVAC	Heating, ventilation, air-conditioning
IA	Instrument Air
LOCA	Loss of Coolant Accident
LOIA	Loss of Instrument Air
LOOP	Loss of Offsite Power
LPCI	Low Pressure Coolant Injection
MNCR	Material Nonconformance Resolution Form
MOV	Motor operated valve
NCV	Non Cited Violation
NRC	Nuclear Regulatory Commission
NPSH	Net Positive Suction Head
NSAC	Nuclear Safety Analysis Center
PARS	Publically available records
P&IDs	Piping & Instrumentation Drawings
PORV	Power Operated Relief Valve
SBO	Station Blackout
SBODG	Station Blackout Diesel Generator
SDP	Significance Determination Process
TMI	Three Mile Island Station
TS	Technical Specification
UFSAR	Updated Final Safety Analysis Report
VDC	Volts - Direct Current
QA	Quality Assurance

List of Documents Reviewed

Design and Licensing Basis Documents:

SDBD T1-424, Emergency Feedwater System-B, Rev. 4
SDBD T1-852, Instrument Air, Rev. 2
SSDI TI-533/543, Decay Heat River Water / Decay Heat Closed Cooling Water, Rev. 2
SSD For Two Hour Air Supply For Main Steam and Emergency
SSD 424C, Feedwater System Controls, Rev. 3
SSD 8612010144, Class 1E Electrical Systems System Description, dated March 23, 1970

UFSAR, Sections:

4.2, Reactor Coolant system Inservice Inspection and Testing
4.6, Emergency Power System Periodic Tests
4.9, Decay Heat Removal Capability - Periodic Testing
8.2, Electrical System Design
8.5, Station Blackout Evaluation
9.6.2.5, Decay Heat Services Cooling System
9.8.7, Diesel Generator Building
9.9, Plant Fire Protection Plan
9.10.1, Instrument and Control Air System
9.10.3, Two-Hour Backup Air Supply
10.6, Emergency Feedwater System
14.1.2.8, Loss Of Electric Power
14.1.2.9, Steam Line Break
Table 14.0-1, Equipment And Related Systems Assumed To Function During Accident Analysis
Appendix 11A, Post Accident Shielding Evaluation
Appendix 14A, Design Review For Consideration Of Effects Of Piping System Breaks Outside Containment

Technical Specifications:

3.3, Emergency Core Cooling, Reactor Building Emergency Cooling And Reactor Building Spray Systems
3.4, Decay Heat Removal Capability
3.5.3, Engineered Safeguards Protection System Actuation Setpoints
3.7, Unit Electric Power System
4.6, Emergency Power System Periodic Tests
4.9, Decay Heat Removal Capability - Periodic Testing

TMI Plans, Policies and Programs:

Instrument Air System Maintenance Rule Performance Monitoring Plan
Lesson Plan 11.2.01.052, Instrument and Control Air, Rev. 20
Lesson Plan 11.2.01.018, Decay Heat Closed Cooling, Rev. 9
1000-PLN-7200.01, Operational Quality Assurance Plan, Rev. 24
ER-AA-410, TMI AOV Program
IST Program Requirements, Rev 41

Management Review Committee (MRC) Charter, Agenda & Root Cause Analysis Training, dated June 27, 2003

Procedures and Surveillance Tests:

OP-TM-543-201, IST of DC-P-1A, dated April 29, 2003
OP-TM-543-202, IST of DC-P-1B, dated April 24, 2003
OP-TM-543-251, DC Leakage Exam for IST, Rev. 1
OP-TM-861-901, Diesel Generator EG-Y-1B Emergency Operations, Rev. 2
OP-TM-864-901, SBO Diesel Generator (EG-Y-4) Operations, Rev. 2,
OP-TM-AOP-020, Loss of Station Power, Rev. 1
OP-TM-AOP-022, Load Rejection, Rev. 2
OP-TM-EOP-001, Reactor Trip, Rev. 3
OP-TM-EOP-009, HPI Cooling - Recovery from Solid Operations, Rev. 1
OP-TM-EOP-010, Abnormal Transients, Rules Guides and Graphs, Rev. 1
OP-TM-864-901, SBO Diesel Generator (EG-Y-4) Operations, Rev. 2
OP-TM-543-000, Decay heat Closed System, Rev. 1
TMI Alarm Response Procedure DGA/B-1-2, Diesel Generator Annunciator Panel A and B, Rev. 10
TMI Operating Procedure 1102-11, Rev. 128
TMI Operating Procedure 1104-25, Instrument and Control Air, Rev. 122
TMI Operating Procedure 1104-2, Makeup and Purification System Operating procedure, Rev. 129
TMI Operating Procedure 1104-24M, Diesel Generator Building H & V System, Rev. 15
TMI Operating Procedure 1104-45P, Fire Mitigation, Rev. 18
TMI Operating Procedure 1106-6, Emergency Feedwater System, Rev. 83
TMI Operating Procedure 1107-3, Diesel Generator, Rev. 102
TMI Operating Procedure 1107-9, SBO Diesel Generator, Rev. 47
TMI Emergency Procedure 1202-31, Fire, Rev. 64
TMI Operating Procedure 1202-32, Flood - Emergency Procedure, Rev. 56
TMI Emergency Procedure 1202-35, Loss of Decay Heat Removal System, Rev. 37
TMI Emergency Procedure 1202-36, Loss of Instrument Air, Rev. 31
TMI Operating Procedure 1210-1, Reactor Trip, Rev. 43
TMI Surveillance Procedure 1300-4F, Test of Two-Hour Back-up Supply Air System
TMI Operating Procedure 1303-4.16, Emergency Power System, Rev. 95
TMI Operations Plant Manual, Diesel Generator and Auxiliary Equipment System, Section A-04,Rev. 12
TMI Operations Plant Manual Section M-02, Instrument and Control Air System, Rev. 19
TMI Operations Plant Manual, Decay Heat Closed Cooling System, Rev. 8
Surveillance Procedure 1303-12.9, Fire barrier Seal Inspection, Rev. 26

Drawings/ Change Notices:

201-043, 480 V Control Center, 1A Engd Safeguards, Sh. 1, Rev. 33
201-043, 480 V Control Center, 1A Engd Safeguards, Sh. 2, Rev. 22
201-043, 480 V Control Center, 1A Engd Safeguards, Sh. 3, Rev. 29
201-044, 480 V Control Center, 1B Engd Safeguards, Sh. 1, Rev. 30
201-044, 480 V Control Center, 1B Engd Safeguards, Sh. 2, Rev. 26
201-044, 480 V Control Center, 1B Engd Safeguards, Sh. 3, Rev. 29
201-052, 480 V Control Center, 1A Engd Safeguard Valves, Sh. 1, Rev. 41
201-052, 480 V Control Center, 1A Engd Safeguard Valves, Sh. 2, Rev. 29
201-053, 480 V Control Center, 1B Engd Safeguard Valves, Sh. 1, Rev. 40

201-053, 480 V Control Center, 1B Engd Safeguard Valves, Sh. 2, Rev. 27
201-062, 480 V Control Center, 1A Engd Safeguard Screen House, Sh. 1, Rev. 21
201-062, 480 V Control Center, 1A Engd Safeguard Screen House, Sh. 2, Rev. 26
201-063, 480 V Control Center, 1B Engd Safeguard Screen House, Sh. 1, Rev. 25
201-063, 480 V Control Center, 1B Engd Safeguard Screen House, Sh. 2, Rev. 24
201-069, 480 V Control Center, 1C Engd Safeguard Valves, Sh. 1, Rev. 31
201-069, 480 V Control Center, 1C Engd Safeguard Valves, Sh. 2, Rev. 32
201-076, 480 V Control Center, 1A Engd Safeguard ESF Vent Bldg, Rev. 4
201-076, 480 V Control Center, 1B Engd Safeguard ESF Vent Bldg, Rev. 5
E-206-011, Rev. 48
E-206-021, One Line & Relay Diagram 6900 V & 4160 V Switchgear, Rev. 14
E-206-022, One Line & Relay Diagram 4160 V Engd. Safeguards Switchgear, Rev. 21
E-206-032, One Line & Rly Dgm - ES. Scr Hse, R Bldg,H&V, 480 V Swgr, Rev. 15
E-206-051, One Line Dgm 250/125 V DC Sys &120 V AC Vital Inst, Rev. 29
SS-208-315, Elec. Elem. Dgm., 480 V Switchgear (ES) (1R-1R), Rev. 11
SS-208-316, Elec. Elem. Dgm., 480 V Switchgear (ES) (1T-1R), Rev. 15
209-147, Elec. Elem. Dgm. DC & Misc. Motor. Driven Fire Pp FS-P, Rev. 10
302-082, Emergency Feedwater Flow Diagram, Rev. 22
302-268, Intermediate Building, Rev. 14
302-269, Intermediate Building, Rev. 10
302-270, Turbine Building, Rev. 4
302-271, Instrument and Station Service Air, Rev. 68
302-272, Backup Instrument Air, Rev. 17
302-273, FW & Main Steam Valve 2 Hour Backup Air Supply
302-275, Turbine Building, Rev. 12
302-276, 2 Hour Backup Instrument Air Charging Compressor, Rev. 5
302-277, SG 1-13 Turbine Building End Users, Revs. 10, 7, 8, B 6, 7, 12, 10, 9, J, 12, 1, 2
302-278, Auxiliary Building, Rev. 10
302-279, SG 1-11 Auxiliary Building End Users Revs. 7, 10, 5, 9, 8, 8, 9, 10, 17, 14, 6
C302-283, Plant Fuel Oil Supply System
302-645, Decay Heat, Closed Cycle Cooling Water, Rev. 36
302-661, Make-up and Purification flow diagram, Rev. 52
302-842, Cont Bldg & Machine Shop Ventilation, Sh. 1, Rev. 53
302-842, Cont Bldg & Machine Shop Ventilation, Sh. 2, Rev. 6
311-823, Roof, Floor and Equipment drains Diesel Bldg, Rev. 2

Calculations:

C-1101-212-E410-081, 1R14 DH-C-1A Performance Evaluation, Rev. 0
C-1101-212-E410-084, DH-C-1A/B Design Analysis, Rev. 0
C-1101-533-5360-002, Design Parameters of the DR System, Rev. 0
C-1101-533-E410-014, DH-DC-DR Performance with low DR system Flow
C-1101-542-E540-014, Decay Heat Service Closed Cooling Water Hydraulic Analysis, Rev. 0
C-1101-543-5360-002, Decay Heat Removal Performance, Rev. 0
C-1101-543-E410-017, 1R14 DC-C-2A Performance Evaluation, Rev. 0
C-1101-543-5450-006, Predicted DHCCW Performance, Rev. 1
C-1101-700-5350-006, Short Circuit Study at Worst case Grid Voltage, Rev. 3
C-1101-734-5350-003, Battery Capacity Sizing and Voltage Drop for DC System, Rev. 6
C-1101-741-E510-005, Loading Summary of EDG & Engd Safeguards Buses, Rev. 2

C-1101-823-5450-001, EQ Profile, Rev. 9
C-1101-862-5360-002, EDG Fuel Oil Requirements, Rev. 0
C-1101X-5350-053, DC Power System Short Circuit Calculations, Rev. 1
DC-045394-040-1, Station Blackout AAC Batt & Charger Sizing & H2 Evolution, Rev. 0
L-1101-852-5360-001, Two Hour Backup Instrument Air System As-Built Capacity Rev. 1

Evaluations:

TDR-1064, Voltage and Frequency Response Study, Rev. 0
SP-1101-38-016, Specification For Diesel Fuel Oil No. 2., Rev. 6
Analysis of TMI Diesel Fuel Oil (sampled May 7, 2003 from DF-T-1)
Categorization of TMI Air Operated Valves Topical Report 145, Rev. 5
GPU Nuclear Report 990-1879: TMI SBO Ejaculation
Transient Assessment Report (TAR-TMI-024), Reactor Trip Due to Loss of Offsite Power dated June 21, 1997
TMI Unit 1 Fire hazards Analysis Report, Volume 1, Rev. 20
SQ-T1-EG-Y-0001A, Rev. 2
SQ-T1-EG-Y-0001B, Rev. 2
TMI Code Classification of 2HrBUIA System
50.59 Evaluation SE-945100-388 - Cover Sheet LS-AA-104-1001, & Screening form
Functional Failure Evaluation, 1A-P-1A dated September 5, 2001
Functional Failure Evaluation, 1A-P-1B dated September 7, 2001
Functional Failure Evaluation, 1A-P-4 dated October 3, 2001
Functional Failure Evaluation, 1A-P-4 dated October 5, 2000
Functional Failure Evaluation, 1A-V-1619A dated July 29, 2002
Functional Failure Evaluation, DC-P-1B dated December 6, 2001
Functional Failure Evaluation, DC-V-45B dated February 6, 2003
Functional Failure Evaluation, EG-C-6 dated January 30, 2003
Functional Failure Evaluation, EG-P-3B dated May 8, 2001
Functional Failure Evaluation, EG-Y-G0-V001A dated July 5, 2002

Engineering Change Request:

ECR TM 01-00340, Reslope Impulse Tubing for DC-FT/FIS-26
ECR TM 02-02-00244, DC-P-1A Motor Replacement
ECR TM 02-00652, IST Reference Value Update for DC-P-1A
ECR TM 02-00912, IST Reference Value Update for DC-P-1B

Self-Assessments:

Nuclear Oversight Assessment Schedule 2003-2005, Rev. 0
AR 153268, Focus Area Self Assessment Report

Action Requests (AR) and Condition Reports (CR):

AR 00073622	AR 00081731	AR 00101928	AR 00102461
AR 00074747	AR 00095410	AR 00101994	AR 00102702
AR 00077699	AR 00099304	AR 00102002	AR 00103768
AR 00081297	AR 00101525	AR 00102097	AR 00106958

AR 00138930	AR 00147808	AR 00149393	AR 00155073
AR 00141090	AR 00148514	AR 00144450	AR00155318
AR 00147808	AR 00148682	AR 00150612	
AR 00149050			
*CR 124694,	CR 126394	*CR 164640	*CR 166881
CR 74747	CR 126765	*CR 164725	*CR 166931
CR 81731	CR 126786	*CR 164844	*CR 167099
CR 103768	CR 126847	*CR 164875	*CR 167108
CR 110300	CR 127710	*CR 164885	*CR 167935
CR 110331	CR 127815	*CR 165028	*CR 165321
CR 111949	CR 128190	*CR 165321	*CR 166967
CR 112549	CR 132062	*CR 166006	*CR 167117
CR 116674	CR 139231	*CR 166598	*CR 167266
CR 116730	CR 143271	*CR 166662	*CR 167269
CR 116741	CR 143740	*CR 166674	*CR 167468
CR 117066	CR 145895	*CR 166682	
CR 117697	CR 148983	*CR 166683	MNCR T2000-0343
CR 119531	CR 154203	*CR 166828	
CR 125364	*CR 164528		

(Note " * " = Generated as result of inspection)

System Health Reports:

Plant Health Committee System Presentation, System P861/862/863 Emergency Diesel Generators, April 03
Plant Health Committee System Presentation, System 545 Decay Heat Closed Cooling Water, April 03
Plant Health Committee System Presentation, System 852 Instrument Air, April 03
Decay Heat Closed Cooling Water System Walkdown Report, dated March 25, 2003 & June 6, 2003
Instrument Air System Walkdown Report, dated February 13, 2003, April 17, 2003 & June 4, 2003
Open CM/AT ARS for the Decay Heat Closed Cooling Water System

Work Orders:

A2033528, C2001866, C2001870, C2002410

NRC References:

NRC Generic Letter 88-14, Instrument Air Supply System problems Affecting Safety-Related Equipment
NRC Information Notice 97-16, Preconditioning of Plant Structures, Systems, and Components Before ASME Code Inservice Testing or Technical Specification Surveillance Testing
NUREG-1275, Vol. 2, Operating Experience Feedback Report - Air Systems Problems
Regulatory Guide 1.9, Selection Design, Qualification, and Testing of Emergency Diesel Generator Units Used as Class IE Onsite Electric Power Systems at Nuclear Power Plants
Regulatory Guide 1.28, Quality Assurance Program Requirements
Regulatory Guide 1.29, Seismic Design Classification

Regulatory Guide 1.30, Quality Assurance Requirements for the Installation, Inspection, and Testing of Instrumentation and Electrical Equipment
Regulatory Guide 1.32, Criteria for Safety-Related Electric Power Systems for Nuclear Power Plants
Regulatory Guide 1.33, Quality Assurance Program Requirements (Operation)
Regulatory Guide 1.75, Physical Independence of Electric Systems
Regulatory Guide 1.155, Station Blackout
Regulatory Guide 1.158, Qualification of Safety-Related Lead Storage Batteries for Nuclear Power Plants
NRC Risk-Informed Inspection Notebook for TMI
NRC Information Notice 97-21, Availability of Alternate AC Power Source Designed For Station Blackout Event
NRC Information Notice 97-52, Inadvertent Loss of Capability For Emergency Core Cooling System Motors
NRC Information Notice 98-22, Deficiencies Identified During NRC Design Inspections
NRC Information Notice 98-25, Loss of Inventory From Safety-Related, Closed-Loop Cooling Water Systems
NRC Information Notice 98-43, Leaks in the Emergency Diesel Generator Lubricating Oil and Jacket Cooling Water Piping
NRC Information Notice 2000-08, Inadequate Assessment of the Effect of Differential Temperatures on Safety-Related Pumps
NRC Information Notice 2000-20, Potential Loss of Redundant Safety-Related Equipment Because of the Lack of High-Energy Line Break Barriers

NRC Generic Communications:

TMI Response to GL 88-14 (C311-89-2016), dated February 24, 1989

Completed Surveillance, Tests:

TMI Unit 1 LER 97-007, Generator Output Breaker Failure Resulting in a Loss of Offsite Power and Reactor Trip
Surveillance Procedure 1300-4F, Test of Two-Hour Backup Supply Air System, dated November 24, 2001
Surveillance Procedure 1301-8.2, Diesel Generator Major Inspection (Mechanical), dated April 6, 2003 for EG-Y-1A
Surveillance Procedure 1301-8.2, Diesel Generator Major Inspection (Mechanical), dated October 10, 2002 for EG-Y-1B
Instrument Air System Quality Test Results (sampled April 1, 2003)

Logs :
Equipment Status Tag Log
Open Operability Log
Temporary Modifications Log
Workarounds Log

IST Valve Data Sheets

Miscellaneous :
Gilbert Associates Bill of Materials for the EDG starting air system, September 23, 1969
NSAC 137, maintaining Operability of Nuclear plant Instrument Air Systems, February 1990