December 2, 2003

Dr. Robert C. Mecredy
Vice President, Nuclear Operations
Rochester Gas and Electric Corporation
89 East Avenue
Rochester, New York 14649

SUBJECT: R. E. GINNA - NRC INSPECTION REPORT NO. 05000244/2003008

Dear Dr. Mecredy:

On October 22, 2003, the U.S. Nuclear Regulatory Commission (NRC) completed the second inspection of your application for renewal of the operating license for the R. E. Ginna Nuclear Power Plant focusing on the manner by which you managed the effects of aging on systems, components or structures previously determined to be within the scope of license renewal. The results of the inspection, including a description of the inspection and its findings, were progressively shared with members of your staff on July 25, August 8, and during a public exit meeting on October 22, 2003.

The inspection was conducted in accordance with NRC Manual Chapter 2516, “Policy and Guidance for the License Renewal Inspection Program,” using NRC Inspection Procedure 71002, “License Renewal Inspections.” The inspection was the second scheduled NRC team inspection supporting your application for a renewed license for the R. E. Ginna facility. The inspection consisted of a selected examination of procedures, representative records, and interviews with personnel regarding the aging management of systems, structures and components within the scope of license renewal in accordance with 10 CFR 54, in your license renewal application.

The aging management portion of your license renewal activities was generally implemented or planned as described in your license renewal application. The documentation supporting your application was in an auditable and retrievable form. During the inspection the team identified five items for which your staff must take further action to ensure that your aging management programs are fully effective and consistent with regulatory guidance. Commitment and action tracking system items have been generated for each of these issues. Except for these items, the team determined that your aging management programs can acceptably identify and manage the aging of the structures, systems, and components within the scope of license renewal for the extended period of operation.

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 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/

Richard V. Crlenjak, Deputy Director
Division of Reactor Safety

Docket No. 50-244
License No. DPR-18

Enclosure: Inspection Report 05000244/2003008

cc w/encl:
J. Laurito, President, Rochester Gas and Electric
P. Eddy, Electric Division, Department of Public Service, State of New York
C. Donaldson, Esquire, State of New York, Department of Law
N. Reynolds, Esquire, Winston & Strawn
P. Smith, Acting President, New York State Energy Research and Development Authority
J. Spath, Program Director, New York State Energy Research and Development Authority
D. Stenger, Ballard, Spahr, Andrews and Ingersoll, LLP
T. Wideman, Director, Wayne County Emergency Management Office
M. Meisenzahl, Administrator, Monroe County, Office of Emergency Preparedness
T. Judson, Central New York Citizens Awareness Network

Distribution w/encl:
H. Miller, RA/J. Wiggins, DRA
J. Jolicoeur, RI EDO Coordinator
R. Laufer, NRR
R. Clark, PM, NRR
P. Milano, PM, NRR (Backup)
K. Kolaczyk, SRI Ginna
M. Marshfield, DRP
J. Trapp, DRP
N. Perry, DRP
Region I Docket Room (with concurrences)
W. Lanning, DRS
R. Crlenjak, DRS
R. Lorson, DRS
M. Modes, DRS

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OFFICE	RI/DRS		RI/DRS		RI/DRP		RI/DRS					
NAME	MModes (via email)		RLorson		JTrapp		RCrlenjak					
DATE	11/26/03		11/26/03		12/01/03		12/02/03					

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U.S. NUCLEAR REGULATORY COMMISSION

REGION I

Docket No:	50-244
License No:	DPR-18
Report No:	05000244/2003008
Applicant:	Rochester Gas and Electric Corporation
Facility:	R. E. Ginna Nuclear Power Plant
Location:	1503 Lake Road Ontario, New York 14519
Dates:	July 21 - 25, August 4-8, and September 17, 2003
Inspector:	Michael Modes, Team Leader, Region I Fred Bower, Senior Reactor Engineer, Region I Suresh Chaudhary, Senior Reactor Engineer, Region I Alfred Lohmeier, Senior Reactor Engineer, Region I Kamalamar Naidu, Senior Reactor Engineer, NRR
Approved by:	Raymond K. Lorson, Chief Performance Evaluation Branch Division of Reactor Safety

SUMMARY OF FINDINGS

IR 05000244/2003-009; 07/21/03-10/22/2003; R. E. Ginna Nuclear Power Plant; License Renewal Application, Aging Management Programs.

This inspection of license renewal activities was performed by four regional specialist inspectors with assistance from a reactor engineer from the Office of Nuclear Reactor Regulation. The inspection conformed with NRC Manual Chapter 2516 and NRC Inspection Procedure 71002. This inspection did not identify any "findings" as defined in NRC Manual Chapter 0612.

During the inspection the team identified five items for which your staff must take further action to assure your aging management programs are complete and accurate: Commitment and Action Tracking System (CATS) item 11329 to assure that license renewal documents are revised as a consequence of the license renewal review process, CATS 11330 to modify procedure EP-3P-0169 to clarify the requirements for evaluating bolting and hardware, CATS 11331 to compare M-92.2 to Regulatory Guide 1.127, CATS 11332 to formally notify the NRC that fire system inspection and flushing periodicity is different than described in NRC NUREG 1801, and CATS 11333 to update the fire water system basis documents to incorporate revisions and clarification identified by the NRC team inspection.

The inspection team concluded that the aging management programs referred to in Rochester Gas and Electric's license renewal application were planned and/or conducted as described in the license renewal application and that documentation supporting the application was in an auditable and retrievable form.

The inspection team concluded there was reasonable assurance the aging management processes, as described in the license renewal application, would adequately manage the effects of aging.

REPORT DETAILS

01 LICENSE RENEWAL AGING MANAGEMENT ACTIVITIES

a. Inspection Scope

This inspection was conducted to determine if the license renewal application (LRA) submitted by Rochester Gas Electric Company (RGE), herein referred to as the applicant, for the R. E. Ginna Station (Ginna), was in accordance with 10 CFR Part 54 for the aging management of systems, structures and components (SSC). The team evaluated the applicant's implementation of the aging management process by reviewing the aging management programs identified in the application as applied to selected risk significant plant systems and structures. The inspection objective was to determine if the programs submitted for these selected systems and structures were consistent with NRC guidance for license renewal. Applicable NRC guidance included the statements of consideration that accompanied the license renewal rule (60FR22461, published May 8, 1995); Regulatory Guide 1.188, "Standard Format and Content for the Application to Renew Nuclear Power Plant Operating Licenses," dated July 2001; and the draft license renewal standard review plan, "Standard Review Plan for the Review of License Renewal Applications for Nuclear Power Plants," dated April 21, 2000, and other staff guidance documents. The results of the review in this area are discussed below.

1. ASME Section XI, Subsections IWB, IWC, & IWD In-service Inspection Program (A2.1.2)

The inspectors verified that the American Society of Mechanical Engineers (ASME) Boiler and Pressure Vessel Code, Section XI, Subsections IWB, IWC, & IWD, In-service Inspection (ISI) program was an existing program consistent with NUREG-1801 GALL Report, Section XI.M1 (ASME Section XI ISI Program, Subsections IWB, IWC, and IWD), and Section X1.M3 (Reactor Head Closure Studs). The inspectors noted that aging effects were managed by the applicant through periodic visual, surface and leakage tests of Class 1, 2, and 3 pressure retaining piping, components and attachments identified for inspection in ASME Section XI within the scope of license renewal.

In discussions with the applicant's staff and examination of related documentation, the inspectors reviewed the consistency of the program attributes in the areas of preventative action, parameters monitored, detection of aging effects, monitoring and trending, acceptance criteria, corrective actions, confirmation processes, administrative controls, and operating experience review. The inspectors concluded that the applicant conducted adequate evaluations as well as historical reviews to determine the aging effects that can be managed by the ISI program. The applicant developed adequate guidance to ensure aging effects would be appropriately managed. Thus, there is reasonable assurance that the ASME XI program reflected in the application will be maintained through the extended operating period.

2. ASME Section XI, Subsections IWE & IWL In-service Inspection Program (A2.1.3)

The ISI Program is an existing program which is credited with managing the effects of aging for:

(1) Carbon steel and miscellaneous polymeric materials and components that provide a containment pressure boundary and leak tight barrier function, and are tested/inspected per 10CFR50, Appendix J, and ASME, Section XI, Sub-section IWE requirements.

(2) Containment Post-tensioning System, and

(3) Concrete and embedded steel (rebar) components of the containment that are inspected per ASME, Section XI, Sub-section IWL.

The ISI program procedures, surveillance test procedures, and historic conditions for the covered piping and supports were reviewed to determine the effectiveness of the program. The review included technical adequacy of the procedure, conformance to the applicable requirements, documentation of results, and corrective actions, if necessary. The program was based on plant specific design bases, maintenance history, and regulatory requirements, and included information available through NRC Generic Letters, Bulletins, and Information Notices. Also, the program had previously been reviewed by the NRC and found to be acceptable. The inspectors concluded that the applicant conducted adequate evaluations as well as industry experience and historical reviews to determine aging effects that can be managed by the ASME, Section XI, ISI Program. The applicant provided adequate guidance to ensure aging effects would be appropriately managed. Thus, there is reasonable assurance that covered systems and components will be maintained through the period of extended operation.

3. ASME Section XI, Subsection IWF In-service Inspection Program (ISI) (A2.1.4)

The ISI program, developed in accordance with 10 CFR 50.55a, is an existing program credited to manage the effects of aging in the Class 1, 2, 3, and MC piping, and components, and their associated supports. Ginna is in the first period of the fourth ten-year interval of the ASME, Section XI, ISI program. The ISI program procedures, surveillance test procedures, and historic conditions for the covered piping and supports were reviewed to determine the program effectiveness, technical adequacy, conformance to the regulatory requirements, documentation adequacy, and corrective actions, as necessary.

The program was reviewed by the NRC, and determined to consistent with the licensing basis of the plant. The inspectors concluded that the applicant conducted adequate evaluations as well as industry experience and historical reviews to determine aging effects that could be managed by the ASME, Section XI, ISI Program. The applicant provided adequate guidance to ensure aging effects would be appropriately managed. Thus, there is reasonable assurance that covered systems and components will be maintained through the period of extended operation.

4. Boric Acid Corrosion Inspection Program (A2.1.5)

The boric acid corrosion inspection (BACI) program is an existing program that has been modified to manage the aging effects of boric acid wastage of non-RCS components, including cable connectors and cable trays, as well as other susceptible SSCs on which borated water may leak. The aging effects are managed by minimizing borated water leakage through frequent monitoring of locations where potential leakage could occur and by the timely repair of leaks.

Ginna's LRA, Section B2.1.6 - "Boric Acid Corrosion," stated that the Ginna boric acid corrosion control program would be consistent with NUREG-1801 Generic Aging Lessons Learned (GALL). Ginna procedure IP-IIT-7, "Boric Acid Corrosion Monitoring Program," issued on March 13, 2003, was consistent with the GALL program elements. The inspectors compared the LR boric acid control program plan to Sections XI.M10 and IP-IIT-7 of the GALL to determine the adequacy of the program. The inspectors also walked down selected portions of the auxiliary building and the safety injection, containment spray, spent fuel pool cooling and charging and volume control systems with the boric acid control program coordinator to determine the effectiveness of the program. Discrepancies identified during this walkdown were entered into the corrective action program by the initiation of action requests (ARs) 2003-1766, 1767 and 1768.

The applicant has or is planning to develop additional guidance to implement the BACI program to ensure aging effects of boric acid corrosion are appropriately managed. Commitment and Action Tracking System (CATS) item 11329 was initiated to track to completion the development of the guidance needed to implement the modified BACI program. There is reasonable assurance the applicant will adequately manage the effects of aging due to boric acid corrosion through the period of extended operation.

5. Buried Piping and Tanks Program (A2.1.7)

The buried piping and tanks (BTNK) inspection program is a new aging management program at Ginna that will use existing site procedures in conjunction with the one-time inspection program and the periodic surveillance and preventive maintenance (PSPM) program to manage a loss of material on the pressure-retaining capability of buried piping and tanks due to generalized pitting, crevice corrosion, and microbiologically influenced corrosion. Ginna also credited the BTNK Program with managing the aging effects of external corrosion of the buried piping associated with the fire water and service water systems and the fuel oil storage tanks for the emergency and technical support center diesel generators. The applicant plans to perform visual inspections under the one-time inspection program when buried piping and tanks are excavated for maintenance or for any other reason. Ultrasonic thickness measurements of the emergency diesel generator (EDG) fuel oil storage tanks will be periodically performed in accordance with the PSPM program.

In lieu of periodic inspections, the BTNK inspection program credits inspections performed in accordance with the one-time inspection program. The inspectors verified that CATS 11320 was initiated to improve procedural guidance to ensure that these inspections would be identified as part of the work control process.

During excavation in the yard in July 2003, Ginna performed an inspection of opportunity on the B EDG fuel oil storage tank. The inspectors walked down the area of the completed excavation, examined pictures taken during the inspection and reviewed the inspection report. Additionally, the inspectors noted that Ginna is scheduled to perform internal non-destructive inspections both EDG fuel oil storage tanks during an upcoming refueling outage.

The applicant has or is planning to develop adequate guidance to implement the BTNK program to adequately manage the aging effects on the pressure-retaining capability of buried piping and tanks. Commitment and action tracking system item 11329 was initiated to track to completion the development of the guidance needed to implement the new BTNK program as described in the Ginna LR program plan.

The inspectors concluded that the applicant conducted adequate evaluations, as well as industry experience and historical reviews, to determine aging effects that can be managed by the BTNK program. Thus, there is reasonable assurance the integrity of the buried tanks and piping will be maintained through the period of extended operation.

6. Closed-Cycle Cooling Water (CCW) System Program (A2.1.8)

The CCW system program is an existing program credited with managing the effects of aging in the cooling water system used to dissipate heat in various components through out the plant. The aging effects are managed by maintaining control over the water chemistry and the integrity of the tubes in the CCW heat exchangers.

The inspectors reviewed the CCW system program, supporting procedures, surveillance test procedures, historic conditions, and water chemistry records. The program includes preventive measures to minimize corrosion and surveillance testing and inspection to monitor the effects of corrosion on the intended function of the component. The aging effects are minimized or prevented by controlling the chemical species that cause the underlying aging mechanisms. Surveillance testing and inspections were performed in accordance with Electric Power Research Institute Topical Report TR-107396 to evaluate the system and component performance. The inspectors noted that the applicant has recently replaced the CCW heat exchangers tubes with tubes fabricated from an admiralty brass material.

The inspectors concluded that the applicant conducted adequate evaluations, as well as industry experience and historical reviews, to determine aging effects that can be managed by the CCW program. The applicant provided adequate guidance to ensure aging effects are appropriately managed. Thus, there is reasonable assurance the integrity of the CCW will be maintained through the period of extended operation.

1. Electrical Cables and Connections Not Subject to 10 CFR 50.49 Environmental Qualification Requirements Program (A2.1.9)

The electrical cables and connections not subject to 10 CFR 50.49 environmental qualification (ECCNS-EQ) program is a new aging management program credited with managing the effects of aging in cables that are exposed to adverse localized environments caused by heat, radiation, or moisture. The aging effects are managed by monitoring parameters such as the temperature of the cables in the balance of plant. During the mid-1990s, the applicant implemented quarterly walkdowns of cables located in accessible areas. During every refueling outage, cables in containment as well as other inaccessible areas are inspected for outer jacket discoloration and cracking. In cases where the temperatures exceed the established limits, the applicant evaluates the cables to determine if the outer jacket exhibits deterioration such as, discoloration of poly vinyl chloride (PVC) cables or cracking. Action requests are expected to be generated to document and correct unacceptable conditions. The team reviewed selected ARs and determined that the actions taken to correct the adverse findings were adequate. Additionally, accessible electrical cables and connections installed in adverse localized environments are scheduled to be visually inspected at least once every 10 years. The first inspection, for the purpose of license renewal, is planned to be completed in 2009. This approach is in conformance with the GALL. Operating experience shows that aging degradation is a slow process. A ten year inspection frequency will provide two data points during a twenty year period to characterize the degradation rate.

In the applicant's response, dated July 11, 2003, to request for additional information (RAI) 3.7-6(a), the applicant committed to perform thermographic inspections of 34-5kV transformer yard components at least once per refueling cycle while the components are energized. This inspection program is scheduled to begin before the end of the current license period (i.e., September 2009). In the same letter, the applicant committed to perform a visual inspection of the phase bus before year 2012. The applicant intends to develop the ECCNS-EQ program with supporting procedures, surveillance test procedures and historic conditions for detecting discolored, and cracked insulation before the extended period of operation commences.

The inspectors concluded that the applicant conducted adequate evaluations, as well as industry experience and historical reviews, to determine aging effects that can be managed by the ECCNS-EQ program. The applicant plans to provide adequate guidance to ensure aging effects are appropriately managed. Thus, there is reasonable assurance the cables identified in the application will be adequately maintained through the period of extended operation.

2. Fire Protection Program (A2.1.10)

The fire protection (FP) program is an existing program which is credited with managing the effects of aging for the fire seals, fire barriers, fire pumps, and the halon system. The program manages the aging effects through periodic inspections of fire barriers and periodic inspection and testing of fire pumps and the halon system. The LR program basis document for the FP system identified inspections that must be performed and specific changes that must be made to existing site procedures prior to the end of the initial operating license for Ginna. The inspectors reviewed the LR FP program plan and supporting documents to verify the effectiveness of the FP program.

The inspectors walked down selected portions of fire protection systems in the turbine, intermediate and auxiliary buildings with the fire protection system engineer. The inspectors noted that the LR FP program plan requires the operability of fire dampers to be verified by drop-testing ten percent of the dampers on a rotating basis so that all dampers are tested at least once in ten years. The inspectors also noted that procedural guidance existed that required periodic inspection of selected fire dampers for mechanical damage.

The inspectors concluded that the applicant conducted adequate evaluations, as well as industry experience and historical reviews, to determine which aging effects and systems and components can be managed by the FP program. The applicant has or is planning to develop adequate guidance to implement the FP program to ensure aging effects will be managed through periodic inspections of fire barriers and periodic inspection and testing of fire pumps and the halon system. Commitment and action tracking system item 11329 was initiated to track to completion the development of the guidance needed to implement the new FP program.

3. Fuel Oil Chemistry Program (A2.1.13)

The fuel oil chemistry (FOC) program is an existing program credited with managing diesel oil used to operate the:

a) Emergency Diesel Generators;
b) Diesel Fire Pump (installed in the pump house);
c) Emergency Diesel Power to the Security System, and
d) Technical Support Diesel.

The aging effects are managed by minimizing the exposure of fuel oil to contaminants, such as water and microbiological organisms, by periodic draining or cleaning of tanks and by verifying the quality of new oil before its introduction into the storage tanks. The applicant developed the fuel oil chemistry program to identify activities credited for license renewal, and to describe how the program manages the identified aging effects. identified in the aging management review process. The inspectors noted the applicant has taken two exceptions to the GALL: a) not using biocides, and b) using a three instead of an eight micron pore size filter recommended in ASTM Standard 2776. The applicant currently tests the fuel oil in accordance with ASTM D 4176, “Free Water and Particulate Contamination in distillate Fuels (Clear and Bright Pass/Fail Procedures),” as required by Tech Specs. Because the purchased fuel oil contains a “red dye,” the “Clear and Bright” test criterion is not considered meaningful and the applicant will not perform this test during the period of extended operation. The principal goal of the FOC program is to minimize corrosion on the internal surfaces of the diesel fuel storage tanks and associated components. This is accomplished by following established procedures that require periodically monitoring the viscosity of the fuel oil, water and sediment content in the diesel fuel oil being stored.

The applicant purchases fuel as a commercial grade item to meet the requirements of ANSI/ASTM D975-78, “Standard Specification for Diesel Fuel Oils.” On receipt, the applicant performs an evaluation to upgrade the diesel fuel oil to a safety-related item using procedure, CGIEE 90-001, revision 12, “Commercial Grade Items Engineering

Evaluation." The CGIEE 90-001 procedure incorporates the requirements of ASTM 975-78. Technicians take samples from three levels of the storage tank and send them to two independent laboratories to determine if the flash point, cloud point, water and sediment content, carbon residues, weight percent, distillation temperatures and other chemical content, are within the acceptable limits specified in ASTM D975-78. If the samples meet the acceptance criteria, the fuel oil is accepted and stored offsite. When fuel oil is requisitioned, a tanker collects sufficient oil from the off site storage and delivers it to the EDG fuel tank(s). Chemistry procedure, CHA-DFOTP, "Diesel Fuel Oil Testing Program," summarizes the major elements of the GINNA Station fuel oil testing program that are required to meet the requirements of Improved Technical Specification 5.5.12, Diesel Fuel Oil Testing. Every 92 days, the fuel being stored offsite is tested for viscosity, water and sediment to verify if it meets the acceptance criteria mentioned in Table 1 of ASTM D-975-78.

Until 1992, the applicant cleaned and inspected the main storage tanks and found no discernable impurities. After consultation with the engine manufacturers and users group, Ginna decided to clean and inspect the diesel storage tanks every 10 years. The oil in the offsite 12,000 gallon fuel storage tank is sampled every 92 days in accordance with ASTM D875. The oil in the two onsite 6000 gallon tanks is sampled every 60 days to verify it meets ASTM D975-78 Table 1, for viscosity, water and sediment. In 1993, the applicant drained the two fuel oil tanks (A&B) completely, cleaned, visually inspected, pressure tested and refilled them.

The inspectors concluded the applicant conducted adequate evaluations, as well as industry experience and historical reviews, to determine aging effects that can be managed by the FOC program. The applicant provided adequate guidance to ensure aging effects are appropriately managed. Thus, there is reasonable assurance the fuel oil system can be maintained through the period of extended operation.

4. Inspection of Overhead Heavy Load and Light Load (Related to Refueling) Handling System Program (A2.1.14)

The overhead heavy load and light load handling program is an existing program which is credited with managing the effects of aging in the cranes and lifting devises for refueling operations. The program demonstrates that aging effects are managed by existing testing, surveillance, and maintenance program. The aging effects, such as loss of material due to corrosion and wear, are evaluated by periodic examinations under the current maintenance procedures, while over stressing is controlled by load control procedures and vendor instructions.

The crane/lifting devices monitoring program and supporting procedures, testing and surveillance procedures and historic conditions for maintenance and load control were reviewed to determine the effectiveness of the program. The inspector noted R. E. Ginna has included industry experience and NRC generic communications in its program.

The inspector concluded that the applicant conducted adequate evaluations, as well as industry experience and historical reviews, to determine aging effects that can be managed by overhead heavy load and light load handling program. The applicant provided adequate guidance to ensure aging effects are appropriately managed. Thus, there is reasonable assurance that covered systems and components will be maintained through the period of extended operation.

5. Service Water System (SWS) Program (A2.1.16)

The inspectors verified the essential elements of the SWS program which is credited with managing the aging effects in the SWS and other functionally related SSCs. Aging management is accomplished utilizing a program developed in response to NRC Generic Letter 89-13. Aging management utilizes features of the program, such as surveillance and control of bio-fouling, heat transfer capability, routine inspection and maintenance related to corrosion, erosion silting, and bio-fouling degradation.

The inspectors discussed, with the applicant's staff, the consistency of the SWS attributes in the areas of preventative action, parameters monitored, detection of aging effects, monitoring and trending, acceptance criteria, corrective actions, confirmation processes, administrative controls, and operating experience review.

The inspectors concluded that the applicant conducted adequate evaluations, as well as historical reviews, to determine aging effects that can be managed by the SWS program. The applicant provided adequate guidance to ensure aging effects are appropriately managed. Thus, there is reasonable assurance that the SWS program reflected in the application will be maintained through the extended operating period.

6. Periodic Surveillance and Preventive Maintenance (A2.1.17)

The periodic surveillance and preventive maintenance program is an existing reliability-centered maintenance program. This program includes four key activities:

1. Inspection and non-destructive testing of components. After completing the inspections, engineering will review the inspection results, perform an engineering evaluation, and determine if corrective actions are required, as well as the need for additional inspections.

2. Existing preventive maintenance inspections which are performed periodically based on previous experience.

3. Aging effect required management items. For these items, the applicant is committed to preparing check lists for each material environment grouping which may require management of multiple aging effects.

4. Surveillance tests routinely performed on pumps, motors, diesel generators to monitor performance.

The aging effects are managed by examining the wall thickness in pipes and flanges to determine loss of material due to various types of corrosion, such as crevice corrosion, galvanic corrosion, general corrosion, pitting corrosion, and microbiologically induced corrosion. The interrogation of the components is implemented to predict rates of degradation so that components can be replaced in a timely manner. For other components, such as flexible hoses and connections, the program manages the effects of changes in material properties and cracking. The program initiated a task to replace the bladder for the spent fuel pool weir gate on a nine year frequency. When the bladder is replaced, it will be inspected for degradation and change in material properties. The inspectors observed that the applicant upgraded the existing maintenance program, which was originally developed during the past years to routinely replace aged components, and to address other age-related degradation.

The team concluded that the applicant conducted adequate evaluations, considered industry experience, and historical reviews to determine aging effects that can be managed by the existing periodic surveillance and preventive maintenance (PSaPM) Program. Thus, there is reasonable assurance the existing PSaPM program will assure that the aging effects are appropriately managed, and that the components will be maintained through the period of extended operations.

7. Reactor Vessel Internals Program (2.1.19)

The inspectors verified the reactor vessel internals program is a new program credited with managing the effects of aging on the reactor vessel internals consistent with GALL, Section XI.M16, “PWR Vessel Internals,” except that Ginna implements a VT-3 examination schedule different from that suggested in the GALL.

The inspectors verified that the aging effects are managed by identification of the most limiting or susceptible components, development of techniques to permit detection and characterization of degraded components, demonstration of inspection technique effectiveness, and timeliness of the inspection. In discussions with the applicant and documentation review, the inspectors reviewed elements of the aging management program including irradiation embrittlement, neutron irradiation and thermal aging, void swelling, chemistry programs of ASME Section XI, Subsection IWB, and industry participation programs.

The inspectors concluded the applicant conducted adequate evaluations, as well as historical reviews, to determine aging effects that can be managed by the reactor vessel internals program. The applicant provided adequate guidance to ensure aging effects are appropriately managed. Thus, there is reasonable assurance that the ASME XI program reflected in the application will be maintained through the extended operating period.

8. Reactor Vessel Surveillance Program (A2.1.20)

The inspectors verified that the reactor vessel surveillance program is an existing plant specific program that consists of ten elements credited with managing the effects of aging on the reactor vessel and described in Appendix A of NUREG 1800, ”Standard Review Plan for Review of License Renewal Applications for Nuclear Power Plants”. The program is generally consistent GALL Section XI.M.31, “Reactor Vessel Surveillance”.

The inspectors verified the program monitoring methods are those in accordance with 10 CFR 50, Appendix H, which includes the testing of in-vessel capsules for fracture toughness. The fracture toughness values are used to calculate an upper shelf energy, fluence, uncertainty, life expressed as effective-full-power-years, development of temperature-pressure limitations, and determination of low-temperature over-pressure protection setpoints. In discussions with cognizant applicant personnel, the inspectors noted that the applicant has utilized the attributes, history, and supporting evidence that makes this program applicable to managing the aging effects.

The inspectors concluded that the applicant conducted adequate evaluations, as well as historical reviews, to determine aging effects that can be managed by the reactor vessel surveillance program. The applicant provided adequate guidance to ensure aging effects are appropriately managed. Thus, there is reasonable assurance that the ASME XI program, reflected in the application, will be maintained through the extended operating period.

9. Spent Fuel Pool Neutron Absorber Monitoring Program (A2.1.21)

The spent fuel pool neutron absorber monitoring program is an existing program which is credited with managing the effects of aging in the borated stainless steel neutron absorber material used at Ginna. The aging effects are managed by periodic visual examination of test coupons; thickness measurements taken at representative locations of creviced/galvanically coupled areas and exposed surfaces; and weighing the coupons to the accuracy of 0.1 gram. These examinations and measurements are compared to the reference photographs.

The neutron monitoring program and supporting procedures, surveillance test procedures, and historic conditions for the borated stainless steel coupons were reviewed to determine the effectiveness of the program. The inspectors noted that Ginna has an appropriate plant specific program that addresses the ten elements described in the Appendix A of the NUREG-1800. The intent of the program is consistent with NUREG-1801.

The inspector concluded that the applicant conducted adequate evaluations, as well as industry experience and historical reviews, to determine aging effects that can be managed by spent fuel pool neutron monitoring program. The applicant provided adequate guidance to ensure aging effects are appropriately managed. Thus, there is reasonable assurance that covered systems and components will be maintained through the period of extended operation.

10. Structures Monitoring Program (A2.1.23)

The structures monitoring program is an existing program that has been modified to include the structural bolting integrity program which is credited with managing the effects of aging in the concrete and steel structures and appurtenances. The aging effects are managed by systematically assessing the physical state of structures and components by periodic surveillances, examinations, and tests to ensure that the structures remain in an acceptable condition. The inspectors noted that Ginna has developed the program to include all safety-related buildings, the containment structure and structures within the containment, other buildings within the scope of license renewal, and also some nonsafety-related component supports. It provides periodic visual examination of concrete and steel structures and components, support steel members and bolts, water control structures, and surveillance of containment pre-stressing tendons.

The aging monitoring program describes aging effects, background and operational/maintenance history, and actions that will assure continued integrity of systems and components. The methodologies are technically valid and sufficiently detailed to include known aging mechanisms and manifestations. They are generally based on plant specific and industry experience.

The program covers the ten aging management program (AMP) attributes described in the RLSB-1, “Aging Management Review-Generic,” which is included in Appendix A of NUREG-1800. The program provides guidance for the attributes and the frequency of inspection for various structures and components. The results are documented, reviewed and evaluated for any corrective action, if needed. Additionally, the AMPs have included information available through NRC Generic Letters, Bulletins, Information Notices, and Vendor Notifications.

The scope of the monitoring program also includes non-structural items (i.e., joints and elastomeric seals); architectural items - roofing, siding, and containment facade; and miscellaneous items - flood barriers, dampers, and cathodic protection. The applicant has performed surveillance and examinations of structures for serviceability and structural degradation, and has implemented corrective actions where appropriate (e.g., containment pre-stressing tendons). The inspectors determined that the guidance

pertaining to the visual inspection and examination of structural bolting and fasteners was not sufficiently detailed to readily disclose aging effects. The applicant initiated a CATS item to review this issue.

The inspector concluded that the applicant conducted adequate evaluations, as well as industry experience and historical reviews, to determine aging effects that can be managed by the structures monitoring program. The applicant's planned and completed actions and guidance were considered adequate to ensure that aging effects would be appropriately managed. Thus, there is reasonable assurance that covered systems and components will be maintained through the period of extended operation.

11. Thimble Tube Inspection Program (A2.1.25)

The program manages the integrity of the incore neutron monitoring thimble tubes, which serve as a portion of the reactor coolant pressure boundary. The thimble tube inspection program (TTIP) is an existing program that has been slightly modified to include aging management attributes. The applicant has 36 thimble tubes, made of 316 type, stainless steel tubing, nominal OD of 0.300, "and nominal wall thickness of 0.049." The aging effects are managed by measuring the wall thickness of the stainless steel tubing every refueling outage, and replacing those which exhibit less than the minimum required thickness. Multi-frequency eddy current examination of thimble tubes are performed by qualified non-destructive examiners in accordance with approved procedures, and the results are tabulated.

The team reviewed the TTIP and supporting procedures, surveillance test procedures and historic conditions for minimum wall thickness, to determine the effectiveness of the program. In response to NRC Information Notice No. 87-44, "Thimble Tube Thinning in Westinghouse Reactors," the applicant has performed thimble tube inspections during every refueling outage (RFO). The focus of the program is to detect thimble tube wall thinning due to wear caused by flow induced vibration and implement preventive maintenance such as flushing, cleaning and replacement. Thimble tube wear is detected at locations associated with geometric discontinuities or area changes along the reactor coolant flow path. The program provides for evaluation of inspection results and appropriate corrective actions. During the March 2002 RFO, thimble tube G6 was retubed due to wear indication at the lower core plate, that was detected during the September 2000 RFO. The wear indication was estimated at 69% through wall and was capped and repositioned for planned replacement during the 2002 RFO. Thimble tube G6 was replaced during the 2002 RFO with a 0.003" chrome plated, wear resistant, thimble tube. This tube is coated approximately ten feet from the end for a distance of approximately ten feet. The chrome coating location coincides with the lower core support area which has shown to initiate thimble tube wear. The applicant will be performing an examination on all thimble tubes during the next RFO to determine if chrome plating will diminish the wear rate.

The inspectors concluded that the applicant conducted adequate evaluations, as well as industry experience and historical reviews, to determine aging effects on thimble tube can be managed by the program. The applicant provided adequate guidance to ensure aging effects are appropriately managed. Thus, there is reasonable assurance the thimble tubes will be maintained through the period of extended operation.

12. Nickel-Alloy Nozzles and Penetrations Inspection Program (New)

The nickel-alloy nozzles and penetrations inspection program (RVH) is a new aging management program which is credited with managing the aging effect manages crack initiation and growth due to primary water stress corrosion cracking (PWSCC) of reactor coolant system alloy 600/690 components, including reactor pressure vessel (RPV) head penetrations and RPV bottom-mounted head penetrations. The program is also credited with managing the aging effects of the replacement steam generator (SG) weld overlay cladding (Alloy 82) on the tubesheets and the weld buttering (Alloy 152) on the (SG) primary inlet and outlet nozzles. The RVH Program manages the aging effects through: (a) PWSCC susceptibility assessment using industry models to identify susceptible components, (b) monitoring and control of reactor coolant chemistry to mitigate PWSCC, and (c) inspections of reactor vessel head penetrations and nickel-alloy J-groove pressure boundary welds in accordance with RGE's commitments to the NRC Order of February 11, 2003, and (d) routine inservice inspections conducted in accordance with ASME, Section XI, Subsection IWB.

The inspectors reviewed documents supporting the RVH program including draft procedure VT-116, "Visual Examination of Reactor Vessel Head," to determine the effectiveness of the program. Ginna implemented this procedure to inspect the RPV bottom-mounted head penetrations during the fall 2003 refueling outage. The ISI engineer was also interviewed. The inspectors noted that Ginna replaced the RPV head during the fall 2003 refueling outage. The inspectors also noted that the RVH Program incorporated the interim inspection requirements of the NRC Order of February 11, 2003. The applicant recognizes that the program may require updating to incorporate revisions to the ASME Code, PSWCC susceptibility determinations and crack growth rate information.

The inspectors concluded that the applicant conducted adequate evaluations, as well as industry experience and historical reviews, to determine which aging effects and systems and components can be managed by the RVH Program. The applicant has or is planning to develop adequate guidance to implement the RVH Program to ensure the aging effects of primary water stress corrosion cracking (PWSCC) are appropriately managed. Commitment and Action Tracking System (CATS) item 11329 was initiated to track to completion the development of the guidance needed to implement the modified RVH program. Thus, there is reasonable assurance that the applicant has demonstrated that the new RVH Program will adequately manage the effects of aging due to PWSCC corrosion through the period of extended operation.

b. Conclusion

The inspection team concluded that the aging management portion of Ginna's license renewal activities were conducted as described in the license renewal application and that documentation supporting the application is in an easily auditable and retrievable form. During the inspection the team identified five items for which your staff must take further action to assure your aging management programs are complete and accurate: Commitment and Action Tracking System (CATS) item 11329 to assure that license renewal documents are revised as a consequence of the license renewal review process, CATS 11330 to modify procedure EP-3P-0169 to clarify the requirements for evaluating bolting and hardware, CATS 11331 to compare M-92.2 to Regulatory Guide 1.127, CATS 11332 to formally notify the NRC that fire system inspection and flushing periodicity is different than described in NRC NUREG 1801, and CATS 11333 to update the fire water system basis documents to incorporate revisions and clarification identified by the NRC team inspection.

The inspection team also concluded that applicant provided adequate information to ensure that the aging effects would be appropriately managed. Thus, there is reasonable assurance that covered systems and components will be maintained through the period of extended operation.

02 MANAGEMENT MEETINGS

Exit Meeting Summary

The inspector presented the inspection results to Mr. George Wrobel, Project Manager and other members of the applicant's management at a public meeting on October 22, 2003. The applicant acknowledged the observations presented.

The applicant did not indicate that any of the information discussed was proprietary.

SUPPLEMENTAL INFORMATION

KEY POINTS OF CONTACT

Applicant Personnel:

Robert Mecredy, VP, Nuclear Operations
George Wrobel, Project Manager, License Renewal
David Wilson, License Renewal Engineer
George Herrick, License Renewal Engineer
Gerry Geiken, License Renewal Engineer
Yvonne Selbig, Human Resources, Ginna

LIST OF ITEMS OPENED, CLOSED, AND DISCUSSED

None

LIST OF DOCUMENTS REVIEWED

General License Renewal Documents

Application for Renewed Operating License - R.E. Ginna - Chapter 2.0 Scoping and Screening Methodology
NRC Inspection Manual - Inspection Procedure 71002, IMC 2516, License Renewal Inspection, 09/18/00
Regulatory Guide 1.188 - Standard Format and Content for Applications to Renew Nuclear Power Plant Operating Licenses
Ginna Nuclear Power Plant, License Renewal Application Scoping and Screening Methodology Mechanical Systems
10 CFR 54 Code of Federal Regulations - Energy - Requirements for Renewal of Operating Licenses for Nuclear Power Plants
NEI 95-10 Rev. 3 Industry Guideline for Implementing the Requirements of 10 CFR Part 54 - The License Rule, March 2001.
Ginna Probabilistic Assessment - Chapter 9
NEI 95-10 Industry Guideline for Implementing Licensee Renewal Rule

License Renewal Drawings

33013 -1262 Sheet 1 of 2 - LR and Sheet 2 of 2 - LR, Safety Injection System
33013 -1237 - LR, UFSAR Section 10.5.2, Auxiliary Feed Water

Miscellaneous

IP-QAP-1, Rev. 4; Structures, Systems and Component Safety Classification
System/Structure Scoping Report: LRSP-FIRE; Fire Protection (LR-21), Ginna Nuclear Power Plant, Rev. 0, 4/30/2002
Procedure FPS-2, Rev. 0, Ginna Station Fire Barrier Penetration Seal Program
Procedure M-103, Rev. 12, Inspection and Maintenance of Fire Dampers, May 3, 2002

Procedure FPS-2.1, Rev. 5; Control and Verification of UFSAR and/or 10CFR50 Appendix R Fire Barriers
Procedure FPS-1, Rev. 7; Fire Barrier Control Inspection
Procedure ME-302, Rev. 0; Installation Specification Ginna Station Fire Barrier Penetration Seal Program
F-RAI 2.1-1
F-RAI 2.3.3.6-1
Completed Procedure FPS-2.1, Rev. 5; Control and Verification of UFSAR and/or 10CFR50 Appendix R Fire Barriers; September 2002
Completed Procedure FPS-2.1, Rev. 5; Control and Verification of UFSAR and/or 10CFR50 Appendix R Fire Barriers; October 2002
Completed Procedure FPS-2.1, Rev. 5; Control and Verification of UFSAR and/or 10CFR50 Appendix R Fire Barriers; November 2002
IP-CAP-1; Abnormal Condition Tracking Initiation or Notification (Action) Report
Ginna Station Fire Protection Program Report, Part IV Safe Shutdown Analysis
Ginna License Renewal Aging Management Program (LR-AMP) Basis Document, Nickel-Alloy Nozzles and Penetrations Inspection Program, LR-RVH-PROGPLAN, Revision 0
Ginna License Renewal Aging Management Program (LR-AMP) Basis Document, Nickel-Alloy Nozzles and Penetrations Inspection Program, LR-RVH-PROGPLAN, Revision 1 (Draft)
PT-7, ISI System Leakage Test, Reactor Coolant System
VT-110, Visual Examination of the Reactor Vessel and Removable Internal Structures
VT-109, Visual Examination for Leakage
VT-116, Visual Examination of the Reactor Vessel Head, Revision 6 (Draft)
VT-101, Visual Examination Acceptance Criteria, Revision 9 (Draft)
GMS-43-08-Tubesheet, Steam Generator Tubesheet Inspection
Work Order 20100793 - Component Summary I006200 for:
RCS ISI PT Inspection Report 02GP071
RCS ISI RT Inspection Report 02GRT191
RCS ISI PT Inspection Report 02GP069
RCS ISI RT Inspection Report 02GRT184
Ginna License Renewal Aging Management Program (LR-AMP) Basis Document, Boric Acid Corrosion (BAC) Inspection Program, LR-BAC-PROGPLAN, Revision 0
RAI B2.1.6-1
RAI B2.1.6-2
RAI B2.1.23-2
IP-IIT-7, Boric Acid Corrosion Monitoring Program
IP-CAP-1.9, Boric Acid Leakage Initial Investigation Form
IP-HSC-3, Attachment 2, Part 5, Containment Component Leakage Monitoring Log
PT-39, Leakage Evaluation of Primary Coolant Sources Outside Containment
S-12.4, RCS Leakage Surveillance Record Instructions
S-12.2, Operator Action in the Event of Indication of Significant Increase in Leakage
VT-109, Visual Examination for Leakage
VT-101, Visual Examination Acceptance Criteria
CATS 11329, Update License Renewal Project Documents

Action Reports Reviewed:

AR2001-0327; Redundant Equipment With Conflicting Safety Classifications
AR2001-0383; Plant Components Used For Flood Prevention Measures Improperly Safety Classified
AR2001-0388; Configuration Management Activities Associated With Chemical Nuclear Skid Inadequate
AR2001-1732; Mis Classification Of Pressure Indicators
AR2001-1817; Solenoid Valve 14423S Misclassified As Safety Equipment
AR2000-0027; C Charging Pump Discharge Manifold Leak
AR2000-0041; SW Leak on Supply Line to Charging Pump Cooler “B”
AR2000-0061; Inability to Update Anti-virus Files
AR2000-0074; 115 KV Pipe Cable Pothead Leaking Oil
AR2000-0086; Rod Insertion Limit Alarm
AR2000-0134; MCB Alarm G-4 S/G A Hi Level Alert Alarmed Intermittently
AR2000-0200; AOV-110C Outlet Block Valve has Diaphragm Leak
AR2000-0250; Field Calibrator Source Stuck Open
AR2000-0270; New Parts from Stock Were Defective
AR2000-0272; Air Conditioning Unit Overflow in Central Records
AR2000-0277; Appendix R Emergency Lite RR-2 Failed
AR2000-0278; Appendix R Emergency Lite SB-20 Failed
AR2000-0291; Rust Found In LT-935 Displacer Column (Not on Transmitter)
AR2000-0295; Removed Bearing, Defective
AR2000-0306; Flux Mapping System Intermittent Power Supply Failure
AR2000-0325; Simulator Building - Sewer Pump Alarm
AR2000-0329; Battery Room A Structural Steel Fire Proofing Degradation
AR2000-0379; Simulator Problems Disrupted Evaluated Scenario Twice
AR2000-0412; Spare MQ-483 Failed In-storage Maintenance Worksheet
AR2000-0429; Valve Stem on V-691A, Isolation to PI-629B (B RHR Pump Discharge Press.)
AR2000-0468; RCP A and B Seal Delta Temperature Deviation
AR2000-0497; Resistance & Meggar Check Indicates Partial Open Circuit On Jacket Water Heater
AR2000-0514; Bus 16 “C” Safety Injection Pump Main Control Board Switch Failed
AR2000-0522; RR-2 Lamp Failure Light is Lit
AR2000-0528; Simulator Aydin Display System Failures
AR2000-0546; Circulating Water Total Residual Chlorine Data Logger Malfunctioning
AR2000-0569; Boric Acid Heat Trace Circuit 21 Primary Has No Load Current
AR2000-0599; Potassium Chromate Leak, Exposure Hazard
AR2000-0629; SAS Failure - No Update
AR2000-0636; Degraded Flange Upstream of V-9545A
AR2000-0752; Increase in Plant Radio Gas Activity
AR2000-0765; Control Rods Moving Within Dead Band
AR2000-0768; Multiple Trouble Alarms On SSA and SSB
AR2000-0807; Excessive Wear Found in HHS Pipe
AR2000-0819; Security Radios Began Breaking Up During Security Contingency Drills
AR2000-0865; Low Meggar Readings On Jacket Water Heaters A D/G
AR2000-0877; Tube Wall Degradation In A D/G Jacket Water Heat Exchanger
AR2000-0900; Environmental Air Sampler Flow Meter Failed Calibration Check
AR2000-0904; Deteriorated Insulation On Electrical Cable

AR2000-0917; Radiation Monitor R-24 (AVT Mixed Bed B) Does Not Respond To Source Check
AR2000-0937; Battery Electrolyte Level In Cell #48 Changed
AR2000-0952; Water Hammer In Area of V-5743B
AR2000-0962; Inline Dionex Computer Failed
AR2000-0964; Plant Vent Radiogas Increase During Performance of PT 2.5.4
AR2000-1033; R-15A Failure
AR2000-1042; Small Steam Leak Visible From The Insulation Around v-5731 In Cnmt
AR2000-1131; Spare Source Range Detector Unable To Be Calibrated
AR2000-1132; Leak Developed Upstream Of Steam Trap ZMS-02
AR2000-1133; AOV-392A Failed To Open With Less Than 257.5 PSID Per PT-2.6.4
AR2000-1140; A Atmospheric Relief Valve Nitrogen Supply Check Valve Failure
AR2000-1151; Minor Oil Spill In Turbine Oil Storage Room
AR2000-1159; Bus 11B Undervoltage Time Delay Relays Out Of Tolerance
AR2000-1184; Relay Holding Current Found Out Of Tolerance
AR2000-1251; Low UT Measurements At The Steam Extraction To 4B Heater Line
AR2000-1257; Debris Found In Turbine Lube Oil Guard Pipe
AR2000-1260; Cracks Identified In The 3516, 3517 Disc Seat Area
AR2000-1262; Wall Thickness For Comp #63 On Dwg M46B Is Below Min Allowable Thickness
AR2000-1263; Wall Thickness For Comp #08 On Dwg M46B Is Below Min Allowable Thickness
AR2000-1266; A Fuel Oil Transfer Pump Discharge Pressure Low
AR2000-1274; Work Activities Under WO 19903422 Results In Degraded HEMYC Wrap
AR2000-1275; Wall Thickness For Comp #2690-2680 On Dwg C381-358 Sht #3 Is Below Min. Allowable Thickness
AR2000-1276; Cable (Unknown Circuit Schedule) Located In SIB2 (Front) Rack Has 4 Conductors With Degraded Wire Insulation
AR2000-1283; Insulation Broken On RTD Wires
AR2000-1325; Unable To Transmit Emergency Response Data (ERDS) During Quarterly Test
AR2000-1340; DC Switch DCPDPCB03A/10 Will Not Open. (Bus 13 Normal DC Power
AR2000-1341; High Carbon Monoxide Levels Identified In Off Loading Portal (Old Receiving Bldg.) During Fork Lift Operation (Fork Lift Needs Service)
AR2000-1349; Gas Line Fitting Leaking
AR2000-1374; Containment Sump Level Indication Test Switch Broken
AR2000-1376; Thermocouple Number 25 Connector Broken In Bridge Cable Tray
AR2000-1414; 52/CRSF1B-P Breaker Failed To Close
AR2000-1415; Lead/Lag Unit Found Out of Tolerance
AR2000-1421; Main Steam Safety Valve Position Indication Failures (MSSV)
AR2000-1473; Moisture Separator Reheater Level Switch Wiring Found Melted, Mechanical Failure
AR2000-1474; Broken Wires Found At Lugs On LAH-2100
AR2000-1483; Emergency Light 1BN-8 Failure
AR2000-1487; V-5088C Sprays Chlorine Into Contained Area When Opened
AR2000-1528; Charging Pump Leakoff Rate At .5 GPM For Charging Pump C
AR2000-1545; Main Steam Loop “B” Guide MSU-21 Has Bent I-Beam Flange
AR2000-1560; Minimum Charging Flow Acceptance Criteria
AR2000-1563; Wire In MCCS Contains PCBs And Wires Show Signs Of Degradation
AR2000-1575; R-31 Reading All ES
AR2000-1581; HEMYC Wrap Concerns On Cable Tray 111 (Appendix R)
AR2000-1629; R-9 Spiking Hi and Low

AR2000-1660; Coolant Leaking From Radiator On TSC Diesel Generator
AR2000-1664; AOV-4238, Condensate Recirc Valve, Repeatedly Alarms
AR2000-1666; RM-14A5 Shows Intermittent Spikes To 2E-6 UCI/CC
AR2000-1669; R-22 Fails PT-17.2
AR2000-1693; Heat Detector S-13 DX Failed To Alarm (North Detector)
AR2000-1694; Fire System S-13 (“b” Emer Diesel Gen) Approximately 25 Gals Of Water And 1 Cup Of Sand/Grit Drained From Sprinkler Header
AR2000-1702; Fire Suppression System S-13 Will Not Reset
AR2001-0011; Flowswitch Not Able To Be Calibrated
AR2001- 0019; Battery Charger BYCA Erratic Output
AR2001- 0022; Sirens Failed During Silent Test
AR2001- 0025; Siren Failed During Silent Test
AR2001- 0045; CRFC “D” Did Not Start When Switch Taken To Close (Cnmt Recirc Fan)
AR2001- 0046; A D/G Fuel Oil Transfer Pump Discharge Check Valve 5961 Failed Its Closure Test
AR2001- 0051; Valve Stem Found Detached From Bonnet During Maintenance, 5961 (“A” D/G Fuel Oil Transfer Check Valve)
AR2001- 0073; Plastic Bags Are Duct Taped Over Control Room Chlorine And Ammonia Transmitters to Deflect Building Leakage
AR2001- 0094; Heat Detectors Failed During Fire System Testing
AR2001- 0194; Power Supplies Out of Tolerance On Channel 3 Nuclear Instruments
AR2001- 0205; Air Ejector Offgas Monitor RM-15A Channel 6 High Failure
AR2001- 0210; Bus 17 Undervoltage Control Cabinet Abnormal Indication
AR2001- 0306; New Storage Reel From Stock For Incore Detector Drive Unit Was Defective
AR2001- 0357; Aux Bldg Crane Failure
AR2001- 0393; Category Two Digital Pressure Indicator Found Out Of Tolerance
AR2001- 0400; Switch Malfunction
AR2001- 0406; Work Order 20101575 Identified Degraded Diesel Fire Pump Condition
AR2001- 0425; Valve 518 Pressurizer Mini Spray Had Packing Leak
AR2001- 0526; SFP Pump A Found Tripped
AR2001- 0612; Heavy Static Heard On Headset When Plugged Into Aux Benchboard Jack
AR2001- 1030; Relief Valve 9204R Flowing Water
AR2001- 1274; Leaking Capacitors On Siren 62
AR2001- 1344; Fuse Clip Loose
AR2001- 1478; Incore Drive A Display/Logic Problem
AR2001- 1570; Defective Neutron Meter ASP-1, NRD
AR2001- 1690; Possible Hole In AOV Diaphragm For V413
AR2001- 1761; Lube Oil Leak
AR2001- 1762; Lube Oil Leak
AR2001- 2029; PT-944 Found Out Of Tolerance
AR2001- 2183; Corrosion On B Battery Cell 29 And 11 Post To Link Connection
AR2001- 2249; R-9 Letdown Indications Read Low Locally
AR2002-0034; Low Voltage On Mux 2 Backup Power Supply
AR2002-0208; Bus 17 Undervoltage Relay 27D/B/17 Inoperable
AR2002-0294; Bast Pump B
AR2002-0590; J-10 And C-3 Fittings Found Damaged On Seal Table
AR2002-0698; Evaluate “B” RCP Boric Acid Leakage
AR2002-0798; Bus 11A Wattmeter RH
AR2002-0803; MCB 480V Bus Ammeters Not Working

AR2002-0809; “B” RCP Flange Stud Stretch Below Minimum
AR2002-0948; Aux Building Main HEPA Failed Testing
AR2002-1324; Small Leak On SW Piping In Aux Building
AR2002-1387; Bu2 14 Transformer Cooling Fan Reverse Rotation
AR2002-1398; Charging Pumps Exhibiting Increased Leakage
AR2002-1542; Service Water Leakage On Piping For RHR Pump Cooling Fan Cooler “A”
AR2002-1557; Bushing Cracked On “A” Charging Pump Plunger
AR2002-1623; R12, CV Gas Increases
AR2002-1627; A Hotwell Cation Conductivity Analyzer Failed Verification
AR2002-1647; RCS Lithium Outside Desired Range
AR2002-1767; Meteorology Tower 13A Wind Speed Not Recording
AR2002-1949; DMIMS Inoperability
AR2002-2035; “B” Inter Bldg Exh Fan Mounting Loose
AR2002-2055; Water On Top Of “B” Condensate Storage Tank Diaphragm
AR2002-2057; NIS Channel 2B Drawer Operation Selector Switch Not Working Properly
AR2002-2158; Service Water Leak: Supply To A RHR Fan Coolers
AR2002-2267; Rubber Mounts Are Out Of Their Retaining Rings
AR2002-2400; Calibrate UV Relay 27/17
AR2002-2420; Siren #61 Quit Alerting 60 Seconds Into It’s 3 Minute Run.
AR2002-2447; RK-32, 33 Foot Wind Speed Recorder Has Broken String
AR2002-0223; V-300A Has Slight Packing Leak
AR2002-0229; Boric Acid Leak - V-893A Packing
AR2002-0393; Fire Water Booster Tank Filling Unexpectedly
AR2002-0408; Received Loss Of Communications When Testing Security Alarm Status Panels
AR2002-0640; Control Room Ammonia Analyzer Found Low Out Of Tolerance
AR2002-0990; High Rate On TSC Diesel Generator Battery Charger
AR2002-0794; Relay Room North Wall Block Needs Repair
AR2002-2076; Voids and Gaps in North Wall of Intermediate Building
AR2002-2322; Hole in Intermediate Building Wall Needs Repair
AR2003-1386; Classification Differences Between CMIS & FPPR
AR 2003 0310, Boric Acid Residue on “C” and “D” Containment Recirculation Fans
ARs 2003-1766, Boric Acid Residue\Leak - PS102B
ARs 2003-1767, Boric Acid Residue\Leak - PCH05
ARs 2003-1768, Boric Acid Residue\Leak - PI-922A

LIST OF ACRONYMS

AMP	Aging Management Program
AR	Action Request
ASME	American Society of Mechanical Engineers
BACI	Boric Acid Corrosion Inspection
BTNK	Buried Piping and Tanks
CATS	Commitment and Action Tracking System
CCW	Closed-Cycle Cooling Water
CGIEE	Commercial Grade Items Engineering Evaluation
CAP	Corrective Action Program
ECCNS-EQ	Electrical Cables and Connections Not Subject to 10 CFR 50.49 Environmental Qualification
EDG	Emergency Diesel Generator
FOC	Fuel Oil Chemistry
FP	Fire Protection
GALL	Generic Aging Lessons Learned
ISI	In-service Inspection Program
kV	Kilo-volt
LRA	License Renewal Application
NRC	Nuclear Regulatory Commission
PSaPM	Periodic Surveillance and Preventive Maintenance
PSPM	Periodic Surveillance and Preventive Maintenance
PVC	Poly Vinyl Chloride
PWSCC	Primary Water Stress Corrosion Cracking
RAI	Request for Additional Information
RFI	Request for Additional Information
RFO	Refueling Outage
RGE	Rochester Gas Electric Company
RVH	Nickel-Alloy Nozzles and Penetrations Inspection
RPV	Reactor Pressure Vessel
SG	Steam Generator
SRP	Standard Review Plan
SSC	Systems, Structures and Components
SWS	Service Water System
TTIP	Thimble Tube Inspection Program