Florida Power & Light Company, 9760 SW 344 St., Fla City, FL 33035

FPL

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U.S. Nuclear Regulatory Commission
Attn: Document Control Desk
Washington, D.C. 20555

Re: Turkey Point Units 3 and 4
Docket Nos. 50-250 and 50-251
Response to Request for Additional Information for the Review of the Turkey Point Units 3 and 4 License Renewal Application

By letter dated February 2, 2001, the NRC requested additional information regarding the Turkey Point Units 3 and 4 License Renewal Application (LRA). Attachment 1 to this letter contains the responses to the Requests for Additional Information (RAIs) associated with Section 3.4, Auxiliary Systems of the LRA.

Should you have any further questions, please contact E. A. Thompson at (305)246-6921.

Very truly yours,

RJH

R. J. Hovey
Vice President - Turkey Point

RJH/EAT/hlo

Attachment

A084

cc: U.S. Nuclear Regulatory Commission, Washington, D.C.

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Turkey Point Units 3 and 4
Docket Nos. 50-250 and 50-251

Response to Request for Additional Information for the Review of the Turkey Point Units 3 and 4, License Renewal Application

STATE OF FLORIDA)
) ss
COUNTY OF MIAMI-DADE)

R. J. Hovey being first duly sworn, deposes and says:

That he is Vice President - Turkey Point of Florida Power and Light Company, the Licensee herein;

That he has executed the foregoing document; that the statements made in this document are true and correct to the best of his knowledge, information and belief, and that he is authorized to execute the document on behalf of said Licensee.

R. J. Hovey

Subscribed and sworn to before me this

22 day of March, 2001.

Ena Basden Ena Basden
Name of Notary Public (Type or Print)

R. J. Hovey is personally known to me.

NOTARY PUBLIC STATE OF FLORIDA
ENA BASDEN
MY COMMISSION # CC 920559
EXPIRES: Mar 20, 2004
1-800-3-NOTARY FL Notary Service & Bonding, Inc.

ATTACHMENT 1
RESPONSE TO REQUEST FOR ADDITIONAL INFORMATION DATED FEBRUARY 2, 2001 FOR THE REVIEW OF THE TURKEY POINT UNITS 3 AND 4, LICENSE RENEWAL APPLICATION

SECTION 3.4 AUXILIARY SYSTEMS - GENERAL

RAI 3.4-1:
In Section 5.4 of Appendix C, the applicant stated that the loss of mechanical closure integrity is an aging effect associated with bolted mechanical closures that can result from the loss of preload due to cyclic loading, gasket creep, thermal or other effects, cracking, or loss of bolting material. The applicant further stated that the effects of these mechanisms are the same as that of a degraded gasket. The applicant also stated that with the exception of the situation where a gasket/seal is utilized to provide a radiological boundary/barrier, the aging mechanisms associated with loss of preload are not considered to require management for non-class 1 components during the period of extended operation. However, loss of mechanical closure integrity resulted from loss of preload may result in the loss of pressure boundary integrity. Justify why the loss of mechanical closure integrity that may result in the loss of pressure boundary integrity is not a concern for the applicable bolted mechanical closures in auxiliary systems and how the system pressure boundary integrity is maintained.

FPL RESPONSE:
License renewal application (LRA) Appendix C, Section 5.4 (page C-21), states that loss of pre-load of mechanical closures can occur due to settling of mating surfaces, relaxation after cyclic loading, gasket creep, and loss of gasket compression due to differential thermal expansion. The loss of pre-load due to these mechanisms can result in leakage at the joint, e.g. gasket or seal leakage, not failure of the mechanical joint. The ASME Code does not consider gaskets, seals, and O-rings to perform a pressure retaining function. It follows that the loss of pre-load from the above mechanisms does not result in loss of mechanical closure or loss of pressure boundary integrity. It is noted that Turkey Point utilizes proper bolt torquing procedures to prevent loss of pre-load, and leakage of auxiliary systems mechanical joints due to loss of pre-load has not been a significant issue at Turkey Point. Therefore, no aging effects associated with loss of pre-load resulting from settling,

relaxation after cyclic loading, gasket creep, and temperature effects are considered to require management during the period of extended operation.

When external leakage involves borated water, the aging effect of concern is loss of carbon or low alloy steel bolting material due to aggressive chemical attack (i.e., boric acid corrosion). Loss of bolting material can result in failure of the mechanical joint and thus, loss of a component's pressure boundary integrity. Therefore, the LRA addresses loss of mechanical closure integrity resulting from borated water leaks, and credits the Boric Acid Wastage Surveillance Program (LRA, Appendix B, page B-44) for management of this effect on carbon and low alloy steel bolting.

High stress in conjunction with an aggressive environment can cause cracking of certain bolting materials due to stress corrosion cracking (SCC). As identified in NRC IE Bulletin 82-02, "Degradation of Threaded Fasteners in the Reactor Coolant Pressure Boundary of PWR Plants" and Generic Letter 91-17, "Generic Safety Issue 29, Bolting Degradation or Failure in Nuclear Power Plants," cracking of bolting in the industry has occurred due to SCC. These instances of SCC have been primarily attributed to the use of high yield strength bolting materials, excessive torquing of fasteners and contaminants, such as the use of lubricants containing molybdenum disulfide (MoS_2). In response to NRC IE Bulletin 82-02, Turkey Point verified that:

(a) Specific maintenance procedures were in place that address bolted closures of the Reactor Coolant pressure boundary with a nominal diameter of 6 inches or greater.

(b) The procedures in use addressed detensioning and retensioning practices and gasket installation and controls.

(c) Threaded fastener lubricants used in the reactor coolant pressure boundary have specified maximum allowable limits for chloride and sulfur content to minimize susceptibility to SCC environments.

(d) Maintenance crew training on threaded fasteners is performed.

At Turkey Point, the potential for SCC of fasteners is minimized by utilizing ASTM A193, Gr. B7 bolting material and limiting contaminants such as chlorides and sulfur in lubricants and sealant compounds. Additionally, sound maintenance bolt torquing practices are used to control bolting material stresses. These actions have been effective in eliminating the potential for SCC

of bolting materials. The results of a review of the Turkey Point condition report and metallurgical report databases (1992 through 2000) supports this conclusion in that no instances of bolting degradation due to SCC were identified. Therefore, cracking of bolting material due to SCC is not considered an aging effect requiring management at Turkey Point.

RAI 3.4-2:
Several ventilation systems included in Section 3.4 of the LRA contain flexible connectors (rubber, neoprene, or coated canvas materials). The ductwork in the HVAC system typically includes isolators (such as flexible connectors between ducts and fans) to prevent transmission of vibration and dynamic loading to the rest of the system. Those isolators may degrade (e.g., hardening and cracking) because of relative motion between vibrating equipment, warm moist air, temperature changes, oxygen, and radiation. In Section 5.2 of Appendix C, the applicant stated that embrittlement is an aging mechanism that could cause cracking of rubber, neoprene, or coated canvas materials. To manage that aging effect, the applicant relies on the visual inspection included in two aging management programs, periodic surveillance and preventive maintenance program, and systems and structures monitoring program described in Appendix B Sections 3.2.11 and 3.2.15 respectively, of the LRA. Neither program provides a description of the inspection schedule (frequency). Describe the frequency of the subject visual inspections. Demonstrate the adequacy of that inspection frequency and the method to ensure that aging degradation will be detected before there is a loss of intended functions.

FPL RESPONSE:
The ductwork flexible connectors for heating and ventilating systems within the scope of license renewal are visually inspected on a five year frequency, except for the flexible connectors for the normal containment coolers. The visual inspection of the flexible connectors for the normal containment coolers is included as part of an 18 month preventive maintenance task for these coolers. These inspection frequencies are appropriate, based on the environment (ambient air) that the connectors are exposed to and the operating history of these components at Turkey Point. The frequency of these inspections may be adjusted as necessary based on future inspection results and industry experience.

RAI 3.4-3:
The boric acid wastage surveillance program provides for visual inspection of external surfaces for evidence of corrosion, cracking, leakage, fouling, or coatings damage. For the following systems: the intake cooling water system, the spent fuel pool cooling system, and the primary water makeup system, provide details specific to of the location of the bolts and the most recent operating history supporting the adequacy of this program in managing the loss of mechanical closure for the carbon steel bolts which are exposed externally to borated water leaks.

FPL RESPONSE:
As described in LRA Appendix C, Subsection 7.5.3.2 (page C-43), mechanical closure carbon and low alloy steel bolting on components located in proximity to borated water systems are considered susceptible to aggressive chemical attack. Sections of Intake Cooling Water, Spent Fuel Pool Cooling and Primary Water Makeup with carbon and low alloy steel mechanical closure bolting within the scope of license renewal and with potential exposure to borated water are as follows:

(a) Intake Cooling Water pressure boundary bolted connections for piping, fittings and equipment (including valve bonnets) located in the Component Cooling Water Heat Exchanger rooms, potentially exposed to leakage from borated water systems.

(b) All Spent Fuel Pool Cooling (SFP) pressure boundary bolted connections for piping, fittings and equipment (including valve bonnets) regardless of location, potentially exposed to leakage from SFP and other systems that contain borated water.

(c) Primary Water Makeup pressure boundary bolted connections for piping, fittings and equipment (including valve bonnets) located in the Auxiliary and in the Containment buildings, potentially exposed to leakage from borated water systems.

Review of the Turkey Point condition report and metallurgical report databases (1992 through 2000) did not identify any instances of bolting degradation due to boric acid corrosion in Intake Cooling Water, Spent Fuel Pool Cooling and Primary Water Makeup.

RAI 3.4-4:
Provide the bases for the determination of corrosion rates and for the techniques which will be used in the galvanic corrosion susceptibility inspection program. If industry standards are being used, then the standards should be stated. The application states that visual examinations and proven techniques have assessed the material condition for other plant systems. If industry standards are not relied on, provide details of the inspection methods and criteria which will demonstrate the effectiveness of the program.

FPL RESPONSE:
As described in LRA Appendix B, Subsection 3.1.5 (page B-18), the Galvanic Corrosion Susceptibility Inspection Program is a new program and will utilize volumetric examinations or visual inspections to address the extent of material loss. Plant experience with galvanic corrosion has been limited and typically has occurred in saltwater. Although not solely used to address loss of material due to galvanic corrosion, examples of examination techniques previously employed at Turkey Point to determine the extent of material loss include ultrasonic, radiographic, and visual inspections. The specific technique to be used will be selected based on the component geometry, material of construction and accessibility. Examinations and inspections will be performed using approved procedures, which encompass accepted industry practices and standards, such as those provided by the American Society of Mechanical Engineers and the American National Standards Institute.

Loss of material due to galvanic corrosion will be evident by material losses at the location of the junction between the dissimilar metals. The corrosion rate of the material would be estimated from the original thickness, if known, or the thickness in an area unaffected by corrosion and the time in service for the component.

SECTION 3.4.1 **INTAKE COOLING WATER**

RAI 3.4.1-1:
The periodic surveillance and preventive maintenance program is a current program which will be enhanced with regard to the scope of specific inspections and their documentation. Provide applicable frequencies, bases, and the most recent operating history supporting the adequacy of this program for the following components in the intake cooling water system: stainless steel, carbon steel and cast iron intake cooling water pumps; rubber intake cooling water pump expansion joints; and aluminum-bronze pump discharge valves exposed externally to the raw water environment. For other components in the intake cooling water, this information was provided.

FPL RESPONSE:
The Intake Cooling Water (ICW) pumps, discharge check valves and expansion joints are exposed internally to a raw water environment and externally to an outdoor air environment as presented in LRA Table 3.4-1 (pages 3.4-11, 3.4-15 and 3.4-18). The Periodic Surveillance and Preventive Maintenance Program is utilized to manage the internal and external aging effects of this equipment. The scheduled frequency of the preventative maintenance activity (PM) for the replacement of the ICW pumps, discharge check valves and expansion joints is 42 months. This frequency is appropriate, based on the operating and maintenance history of these components at Turkey Point. The frequency of this PM may be adjusted as necessary based on future plant-specific performance and/or industry experience.

RAI 3.4.1-2:
For those structures which are inaccessible for inspection through the systems and structures monitoring program, an inspection of structures with similar materials and environments may be indicative of aging effects. Several components in the intake cooling water system credit this program for managing loss of material in the raw water environment. Provide the applicable frequencies, bases, and the most recent operating history supporting the adequacy of this program for the following components in the intake cooling water system: cast iron, carbon steel, bronze, monel, and stainless steel valves, piping, tubing, and fittings; stainless steel orifices; and stainless steel thermowells exposed internally to the raw water environment.

FPL RESPONSE
As described in LRA Appendix B, Subsection 3.2.15 (page B-85), the Systems and Structures Monitoring program manages the aging effect of loss of material for valves, piping, and fittings at limited locations of Intake Cooling Water (ICW) by leakage inspection to detect the presence of internal corrosion. Loss of material for orifices, thermowells and tubing/fittings due to internal exposure to raw water is also managed by leakage inspection via the Systems and Structures Monitoring Program as listed in LRA Table 3.4-1 (pages 3.4-13 and 3.4-14). Leakage inspection of ICW orifices, thermowells and tubing/fittings was inadvertently omitted from the Systems and Structures Monitoring program description in LRA Appendix B, Subsection 3.2.15 (page B-85). The leakage inspection is performed at least once per 18 months. Evaluations have been performed to show that through wall leakage equivalent to a 1 inch diameter opening will not reduce ICW flow to the Component Cooling Water Heat Exchangers below design requirements. The leakage inspection is adequate in managing the aging effect of loss of material for the following reasons:

(a) For above ground cement lined cast iron piping, the maintenance history shows that localized failures of the cement lining have occurred which resulted in small corrosion cells. These corrosion cells will be detected by small through-wall leakage, which provides adequate time for repairs before the system function is degraded.

(b) For carbon steel piping/fittings and valves on the discharge channel of the Component Cooling Water heat exchangers, leakage will not affect the license renewal system intended function because the heat transfer function of the heat exchanger is not affected.

(c) For small instrument valves and piping/tubing/fittings and thermowells and orifices made of stainless steel, monel and bronze, leakage does not affect the system function because the small size of these components limits the leakage. The operating and maintenance history of this equipment demonstrates that leakage from this equipment has not been significant at Turkey Point.

SECTION 3.4.2 **COMPONENT COOLING WATER**

RAI 3.4.2-1:
Although cracking due to stress corrosion, intergranular stress corrosion, embrittlement, and high-cycle fatigue are applicable aging effects for stainless steel materials exposed internally to the treated water environment, this aging effect is not identified for any stainless steel component in Table 3.4-2, "Component Cooling Water" of the LRA. Provide the bases for the exclusion of this applicable aging effect for stainless steel components in the component cooling water system.

FPL RESPONSE:
LRA Appendix C (pages C-18 through C-20) provides the basis utilized at Turkey Point for determining the susceptibility of stainless steel and other materials to cracking due to stress corrosion, intergranular stress corrosion, embrittlement, and high cycle fatigue. Stainless steel components exposed to treated water in Component Cooling Water (CCW) are not susceptible to cracking for the following reasons:

(a) The highest operating temperature in CCW is below 140°F, the threshold temperature for SCC in a treated water environment. Therefore, SCC is not a concern for stainless steel CCW components. Likewise, based upon operational temperature, CCW system materials are not susceptible to intergranular stress corrosion (IGSCC). These conclusions are supported by plant operating and maintenance experience, which did not identify any instances of SCC or IGSCC in stainless steel CCW components.

(b) Embrittlement is not an aging mechanism of concern for stainless steels in treated water environment at the operating temperature of CCW (<140°F).

(c) As described in LRA Appendix C, Section 5.2 (page C-20), high cycle fatigue such as vibration induced fatigue, is fast acting, typically detected early in a component's life, and corrective actions are initiated to prevent recurrence. No fatigue induced cracking of stainless steel components have occurred in Component Cooling Water.

SECTION 3.4.4 CHEMICAL AND VOLUME CONTROL

RAI 3.4.4-1:
Aging effects of components exposed to the air/gas environment is dependent, in part, on the type of air/gas environment, the operating temperature, and the water content. Provide the characteristic parameters of the air/gas environments applicable to the components found in the chemical and volume control system. Provide the bases by which the determination of no aging effects requiring management was concluded for all components exposed to the air/gas environment.

FPL RESPONSE:
As listed in LRA Table 3.4-4, Chemical and Volume Control (CVCS) components exposed to internal air/gas environments are the Boric Acid Storage, Boric Acid Batching, Volume Control and Holdup tanks, valves, and tubing/fittings. Piping/fittings associated with the Volume Control tanks were inadvertently omitted from LRA Table 3.4-4 (pages 3.4-28 through 3.4-34). The type of air/gas environment and the bases for the determination of no aging effects requiring management for these components are provided below:

(a) Volume Control tanks internal gas space surfaces and associated valves, piping/fittings, and tubing/fittings are exposed to a non-wetted hydrogen environment with traces of nitrogen, oxygen, and helium at a temperature of 100 to 130°F. The material of construction of these components is stainless steel, which is not susceptible to loss of material in this environment, per LRA Appendix C, Section 5.1 (page C-15). Therefore, no aging effects requiring management have been identified for these components. This conclusion is supported by plant operational and maintenance history.

(b) The Holdup tanks gas space surfaces are exposed to a non-wetted nitrogen environment with traces of hydrogen, helium, and oxygen at a temperature of 50 to 130°F. The material of construction of this tank is stainless steel which is not susceptible to loss of material in this environment per LRA Appendix C, Section 5.1 (page C-15). Therefore, no aging effects requiring management have been identified for this component. This conclusion is supported by plant operational and maintenance history.

(c) The Boric Acid Storage and Boric Acid Batching tanks gas space surfaces and associated valves and tubing/fittings are exposed to a non-wetted indoor not-air conditioned environment at a maximum temperature of 104°F. The material of construction of these components is stainless steel, which is not susceptible to loss of material in this environment per LRA Appendix C, Section 5.1 (page C-15). Therefore, no aging effects requiring management have been identified for these components. This conclusion is supported by plant operational and maintenance history.

RAI 3.4.4-2:
Cracking has been identified as a potential aging effect for stainless steel components which have been previously heat-traced. Provide the justification of crediting a sampling program of visual inspections for detecting cracking in these stainless steel components. In addition, provide additional information of the most recent inspection of these stainless steel components, the baseline inspection of these components, if applicable, and the plant history of previously heat-traced components.

FPL RESPONSE:
As described in LRA Table 3.4-4 (page 3.4-28), cracking has been identified as an aging effect requiring management for all Chemical and Volume Control (CVCS) stainless steel components previously heat traced. Visual leakage inspection via the Periodic Surveillance and Preventive Maintenance Program as described in LRA Appendix B (page B-67) is utilized to manage this aging effect. All safety related components in CVCS previously heat traced are visually inspected for leakage on a periodic basis. Therefore, a sampling program is not utilized.

Periodic inspection of CVCS stainless steel components previously heat traced was initiated as a result of minor leakage discovered when the thermal insulation and heat tracing were removed as part of a boron concentration reduction project in the early 1990s. The root cause of the leakage was cracking attributed to SCC resulting from halogen contaminants. Corrective actions included additional inspections to identify all affected components and replacement of components as necessary.

The most recent visual leak inspections of these components did not reveal any through-wall leakage. No baseline is required for visual inspections. There are no other stainless steel components at Turkey Point, presently in service, where previously existing heat tracing was removed.

SECTION 3.4.11 **CONTROL BUILDING VENTILATION**

RAI 3.4.11-1:
Provide a basis for the statement that condensation causes loss of material for stainless steel, copper or aluminum. Provide operating experience for this aging effect.

FPL RESPONSE:
The aging mechanisms that result in loss of material for Control Building Ventilation stainless steel, copper and aluminum components include general corrosion, pitting, and galvanic corrosion. A wetted environment is necessary for these mechanisms to be active. Per LRA Table 3.4-11 (page 3.4-63), the Cable Spreading Room and Computer Room air handling unit headers, tubes, and tube fins are exposed to an indoor - air conditioned (wetted with condensation) environment. Because condensation lacks chemistry control, the potential for concentration of contaminants increases thereby increasing the potential for loss of material due to general corrosion, and pitting. Additionally, these air handling units are constructed of stainless steel headers, copper tubes and aluminum fins which are connected, thus creating the potential for galvanic interaction. Review of operating history indicates that loss of material has occurred for these components at Turkey Point.

SECTION 3.4.14 FIRE PROTECTION

RAI 3.4.14-1:
Selective leaching has been known to occur when certain alloys such as cast iron, brass, or bronze are exposed to certain environments such as raw water. Provide a basis, such as operating experience, for not conducting a one time inspection program for these materials in these environments for the fire protection piping.

FPL RESPONSE:
As described in LRA Appendix C, Section 5.1 (page C-17), and Subsection 6.2.3.1 (page C-28), loss of material due to selective leaching has been identified as an aging effect requiring management for gray cast iron and certain brass or bronze components. Specifically, brass and bronze with >15% zinc, or aluminum bronze with >8% aluminum are susceptible to dealloying. As a result, loss of material due to selective leaching is an aging effect requiring management for Fire Protection gray cast iron components in contact with raw water. Fire protection brass and bronze components have zinc content <15%, therefore, these components are not susceptible to loss of material due to selective leaching. There are no aluminum bronze components in Fire Protection. The Fire Protection Program as described in LRA Appendix B, Subsection 3.2.8, (page B-57) is utilized to manage loss of material due to selective leaching.

A one-time inspection for these materials is not required since the Fire Protection Program requires system flow and pressure tests to verify system integrity. During these tests, system degradation would become evident as variations or reductions in flow rate or system pressure would occur. These changes would initiate actions to resolve the deficiency, i.e. isolate and repair a leak, and/or flush corrosion products from the system. A review of the Turkey Point condition report and metallurgical report data bases did not identify any instances of selective leaching of fire protection piping or components.

RAI 3.4.14-2:
Table 3.4-14, page 3.4-74 shows flame arrestors fabricated from carbon steel exposed to an air/gas environment as having no aging effects. This is not consistent with the other parts of the Table 3.4-14.

FPL RESPONSE:
Carbon steel components exposed to an air/gas environment above an oil filled system or tank (such as flame arrestors) are considered to contain a protective coating, resulting from the fuel oil vapor, that precludes corrosion of the internal surfaces. Carbon steel components in an ambient air/gas environment (such as Raw Water tanks) would be subject to loss of material.

SECTION 3.4.15 EMERGENCY DIESEL GENERATORS AND SUPPORT SYSTEMS

RAI 3.4.15-1:
Table 3.4-15, in the application showed that same material-environment combination (air/gas and carbon steel or stainless steel) resulted in loss of material or cracking in some parts of the table and no aging in other parts of the table. Clarify this discrepancy.

FPL RESPONSE:
The air/gas environments for the Emergency Diesel Generators (EDG) and support systems vary. These environments include atmospheric air, dry/filtered compressed air, and air containing oil vapor. These variances in environment provide for differences in susceptibility to aging effects. Following are the air/gas environments encountered in the EDG and support systems and susceptible aging mechanisms/effects:

- Carbon steel - subject to exhaust air/gas - potential for loss of material due to general corrosion, crevice corrosion, and pitting - exhaust gases contain moisture along with other potential contaminants.

- Stainless steel - subject to ambient air/gas - no aging effects.

- Stainless steel, carbon steel, galvanized carbon steel, aluminum, and copper alloy - subject to dry/filtered compressed air/gas - no aging effects.

- Carbon steel subject to air/gas in an enclosed area with diesel fuel oil vapor - no aging effect. Fuel oil vapor affords a protective coating to the internal surfaces, thus inhibiting corrosion.

- Stainless steel expansion joint - exhaust air/gas - subject to cracking due to fatigue. This is a specific application where modifications to eliminate the potential for cracking due to fatigue were not a viable option. Cracking is minor and is managed by periodic inspection under the Periodic Surveillance and Preventive Maintenance Program.

- Carbon steel Diesel Oil Storage Tank - The Unit 3 Diesel Oil Storage Tank is located outdoors and therefore subjected to more temperature fluctuations than tanks located indoors. The temperature fluctuations may result in condensation on the insides of the tank. This condensation collects in the tank bottom and is periodically drained off. For this tank, the oil vapor does not afford as much protection due to its size and location, therefore loss of material has conservatively been listed as a potential aging effect for the Unit 3 Diesel Oil Storage Tank.

RAI 3.4.15-1-2:
The staff requests that the applicant apply a selective leaching program to cast iron, brass, and bronze exposed to treated water. See question (1) in fire protection.

FPL RESPONSE:
As described in LRA Appendix C, Section 5.1 (page C-17), and Subsection 6.1.3.1 (page C-26), loss of material due to selective leaching has been identified as an aging effect requiring management for cast iron and susceptible brass and bronze components (see response to RAI 3.4.14-1, above) with an internal environment of treated water. As a result, loss of material due to selective leaching is an aging effect requiring management for EDG and Support System cast iron, brass and bronze components in contact with the cooling water system (treated water). The Chemistry Control Program as described in LRA, Appendix B, Subsection 3.2.4 (page B-47) is utilized to manage the loss of material due to selective leaching. The effectiveness of the Chemistry Control Program in managing selective leaching for the for EDG Cooling Water System is supported by a review of plant operating and maintenance history, including condition reports and metallurgical laboratory reports. This review indicated no instances of loss of material due to selective leaching.