October 15, 2004

Mr. Paul D. Hinnenkamp
Vice President - Operations
Entergy Operations, Inc.
River Bend Station
5485 US Highway 61N
St. Francisville, LA 70775

SUBJECT: RIVER BEND STATION, UNIT 1 - ISSUANCE OF AMENDMENT RE: ONE-TIME EXTENSION OF THE DRYWELL BYPASS LEAKAGE RATE TEST INTERVAL (TAC NO. MC2071)

Dear Mr. Hinnenkamp:

The Commission has issued the enclosed Amendment No. 144 to Facility Operating License No. NPF-47 for the River Bend Station, Unit 1. The amendment consists of changes to the Technical Specifications (TSs) in response to your application dated February 16, 2004, as supplemented by letters dated June 8 and August 26, 2004.

The amendment changes Surveillance Requirement 3.6.5.1.3 of TS 3.6.5.1, “Drywell,” to allow a one-time extension of the test interval for the next drywell bypass leakage rate test from 10 years to 15 years.

A copy of our related Safety Evaluation is enclosed. The Notice of Issuance will be included in the Commission's next biweekly *Federal Register* notice.

Sincerely,

/RA/

Michael Webb, Project Manager, Section 1
Project Directorate IV
Division of Licensing Project Management
Office of Nuclear Reactor Regulation

Docket No. 50-458

Enclosures: 1. Amendment No. 144 to NPF-47
2. Safety Evaluation

cc w/encls: See next page

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NAME	MWebb	DJohnson	RDennig*	KManoly	SZiplin*	DJaffe for MWebb
DATE	10/15/04	10/15/04	8/24/04	10/5/04	10/14/04	10/15/04

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ENTERGY GULF STATES, INC. **

AND

ENTERGY OPERATIONS, INC.

DOCKET NO. 50-458

RIVER BEND STATION, UNIT 1

AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 144
License No. NPF-47

1. The Nuclear Regulatory Commission (the Commission) has found that:

   A. The application for amendment by Entergy Gulf States, Inc.* (the licensee) dated February 16, 2004, as supplemented by letters dated June 8 and August 26, 2004, complies with the standards and requirements of the Atomic Energy Act of 1954, as amended (the Act), and the Commission's rules and regulations set forth in 10 CFR Chapter I;

   B. The facility will operate in conformity with the application as amended, the provisions of the Act, and the rules and regulations of the Commission;

   C. There is reasonable assurance (i) that the activities authorized by this amendment can be conducted without endangering the health and safety of the public, and (ii) that such activities will be conducted in compliance with the Commission's regulations;

   D. The issuance of this license amendment will not be inimical to the common defense and security or to the health and safety of the public; and

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* Entergy Operations, Inc. is authorized to act as agent for Entergy Gulf States, Inc., and has exclusive responsibility and control over the physical construction, operation and maintenance of the facility.

**Entergy Gulf States, Inc., has merged with a wholly owned subsidiary of Entergy Corporation. Entergy Gulf States, Inc., was the surviving company in the merger.

E. The issuance of this amendment is in accordance with 10 CFR Part 51 of the Commission's regulations and all applicable requirements have been satisfied.

2. Accordingly, the license is amended by changes to the Technical Specifications as indicated in the attachment to this license amendment, and Paragraph 2.C.(2) of Facility Operating License No. NPF-47 is hereby amended to read as follows:

(2) Technical Specifications and Environmental Protection Plan

The Technical Specifications contained in Appendix A, as revised through Amendment No. 144 and the Environmental Protection Plan contained in Appendix B, are hereby incorporated in the license. EOI shall operate the facility in accordance with the Technical Specifications and the Environmental Protection Plan.

3. The license amendment is effective as of its date of issuance and shall be implemented within 60 days from the date of issuance.

FOR THE NUCLEAR REGULATORY COMMISSION

/RA/

Michael K. Webb, Acting Chief, Section 1
Project Directorate IV
Division of Licensing Project Management
Office of Nuclear Reactor Regulation

Attachment: Changes to the Technical Specifications

Date of Issuance:

ATTACHMENT TO LICENSE AMENDMENT NO. 144

FACILITY OPERATING LICENSE NO. NPF-47

DOCKET NO. 50-458

Replace the following page of the Appendix A Technical Specifications with the attached revised page. The revised page is identified by Amendment number and contains marginal lines indicating the areas of change.

Remove	Insert
3.6-61	3.6-61

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION

RELATED TO AMENDMENT NO. 144 TO

FACILITY OPERATING LICENSE NO. NPF-47

ENTERGY OPERATIONS, INC.

RIVER BEND STATION, UNIT 1

DOCKET NO. 50-458

1.0 INTRODUCTION

By application dated February 16, 2004 (Accession No. ML040540445), as supplemented by letters dated June 8, 2004 (Accession No. ML041670597), and August 26, 2004 (Accession No. ML042440634), Entergy Operations, Inc. (Entergy or the licensee), requested changes to the Technical Specifications (TSs) for the River Bend Station, Unit 1 (RBS). The supplements dated June 8 and August 26, 2004, provided additional information that clarified the application, did not expand the scope of the Nuclear Regulatory Commission (NRC) staff's original proposed no significant hazards consideration determination as published in the *Federal Register* on May 25, 2004 (69 FR 29765).

The proposed amendment would allow a one-time change in the drywell bypass leakage rate test (DWBT) interval from 10 years to 15 years. This would enable the licensee to conduct the test on the same frequency as the integrated leak rate test (ILRT). The licensee stated that approval of the amendment will save refueling outage critical path time. The request was made on a risk-informed basis using the guidance of Regulatory Guide (RG) 1.174, "An Approach For Using Probabilistic Risk Assessment in Risk-Informed Decisions on Plant-Specific Changes to the Licensing Basis."

Specifically, the licensee proposes to add the following words to the end of the 120-month Frequency requirement of Surveillance Requirement 3.6.5.1.3 of TS 3.6.5.1, "Drywell,":

> ...except that the next drywell bypass leak rate test performed after the June 24, 1994 test shall be performed no later than June 23, 2009.

2.0 REGULATORY EVALUATION

RBS utilizes a Mark III containment. The overall structural and leakage integrity of a Mark III containment is verified through inspections and leak rate tests of both the containment boundary and the drywell. Inspections of the containment boundary are performed as required by Title 10 of the Code of Federal Regulations (10 CFR) Part 50, Section 50.55a, which cites American Society of Mechanical Engineers (ASME) Boiler and Pressure Vessel Code (Code),

Section XI. Leakage testing of the RBS containment pressure boundary is performed as required by TS 5.5.13 "Primary Containment Leakage Rate Testing Program," which requires, in part, leakage testing in accordance with 10 CFR Part 50, Appendix J, "Primary Reactor Containment Leakage Testing for Water-Cooled Power Reactors." TS SR 3.6.5.1.4 requires a visual inspection of the drywell to be performed prior to each containment integrated leak rate test (ILRT, or Type A test) required by 10 CFR Part 50, Appendix J. TS SR 3.6.5.1.3 requires a periodic DWBT. Because of the relationship between the DWBT and the ILRT, or Type A test, this regulatory evaluation addresses both tests.

2.1.1 Type A Test Interval

Appendix J to 10 CFR Part 50 was revised in 1995 by the addition of Option B, "Performance-Based Requirements," to the original requirements, which were then designated as Option A, "Prescriptive Requirements." Option B requires that a Type A test be conducted at a periodic interval based on historical performance of the overall containment system. RBS TS 5.5.13 requires that leakage rate testing be performed as required by 10 CFR Part 50, Appendix J, Option B, as modified by approved exemptions, and in accordance with the guidelines contained in RG 1.163, "Performance-Based Containment Leak-Test Program," dated September 1995, with certain exceptions listed in the TS. This RG endorses, with certain exceptions, Nuclear Energy Institute (NEI) report 94-01, Revision 0, "Industry Guideline for Implementing Performance-Based Option of 10 CFR Part 50, Appendix J," dated July 26, 1995.

A Type A test is an overall (integrated) leakage rate test of the containment structure. NEI 94-01 specifies an initial test interval of 48 months, but allows an extended interval of 10 years, based upon two consecutive successful tests. There is also a provision for extending the test interval an additional 15 months in certain circumstances.

The licensee requested, and was granted by License Amendment No. 131, dated March 5, 2003 (Accession No. ML030650221), an addition to TS 5.5.13, which added an exception from the guidelines of RG 1.163 regarding the Type A test interval. Specifically, the TS states that the next Unit 1 Type A test performed after the August 15, 1992, Type A test shall be performed no later than August 14, 2007. This amendment was approved primarily on a risk-informed basis, using the guidelines of RG 1.174.

The local leakage rate tests (Type B and Type C tests), including their schedules, are not affected by this exception.

2.1.2 Drywell Bypass Leakage Rate Test Interval

License Amendment No. 87 to the operating license for RBS, was issued on January 29, 1996 (Accession No. ML021620169). The amendment required that the DWBT be conducted at least once every 10 years on a performance-based frequency (the DWBT frequency had been once per 18 months). In the event that a test is performed with the bypass leakage greater than its limit, the test frequency becomes once every 48 months. Following two consecutive tests with bypass leakage greater than its limit, the test frequency is once every 24 months until two consecutive tests are less than or equal to the bypass leakage limit. The last DWBT was successfully conducted in June 1994.

One purpose of the proposed amendment was to make the DWBT frequency the same as the Appendix J Type A test frequency, because the two tests share test equipment and system

lineups. Thus, the licensee is requesting a one-time extension of the DWBT interval to 15 years, to match the one-time Type A test interval extension to 15 years, which is already in place.

To summarize the staff's safety evaluation for the amendment cited above, the staff's acceptance of the proposed 10-year test interval was based on the licensee's capability to assure that the likelihood of significant bypass leakage is acceptably low. This was based on the design of the drywell and its penetrations, the TS and administrative controls in place, and the results of previous leakage tests, as well as deterministic and risk calculations. The staff gave considerable weight in its evaluation to the licensee's commitment to assess the drywell leakage once per cycle to assure that the drywell remains operable.

During a small break loss-of-coolant accident (LOCA), potential leak paths between the drywell and containment airspace could result in excessive containment pressure, since the steam flow into the airspace would bypass the vapor suppression capabilities of the pool. The potential leakage paths between the drywell and the containment are: 1) piping and electrical penetrations; 2) the drywell equipment hatch; and 3) the drywell personnel air lock. The staff found that 1) the electrical penetrations are unlikely to leak significantly, and the design drywell bypass leak rate is so large that, even if the valves in some of the pipes were left open, the design limit would not be exceeded; 2) the equipment hatch has double compression seals and is periodically leak tested; and 3) the drywell air lock is periodically leak tested, and even a total loss of its seals would not disable the drywell safety function.

Regarding testing history, the staff found that the maximum measured value of bypass leakage had been 1.6 percent of the design limit. Six drywell bypass leakage rate tests had been performed at RBS and there had been no test failures.

The staff also reviewed the risk associated with the increase in the test interval from 18 months to 10 years, and found that there was only a small effect on risk. The staff considered the increase in risk due to the increase in the test interval to be acceptable.

The staff had also requested that the licensee propose a method of monitoring the drywell for significant leakage during operation. The licensee committed to perform a qualitative assessment of drywell leaktightness once per operating cycle. Normal air inleakage into the containment requires periodic venting. The licensee proposed to trend drywell pressure changes versus containment pressure changes as an indication of drywell bypass leakage. The staff concluded that the proposed method provided reasonable assurance of drywell operability. The monitoring would be able to detect gross leakage of a magnitude that would exceed the TS limit.

The staff’s safety evaluation for License Amendment No. 87 concluded that the proposal to change the DWBT interval from 18 months to 10 years (given good performance) was acceptable based on the demonstrated margin available due to the large amount of leakage necessary to exceed the containment design pressure, and the licensee's commitment to periodically assess the drywell bypass leakage in order to maintain a reasonable assurance that the drywell remains operable.

3.0 TECHNICAL EVALUATION

The Mark III is a pressure suppression containment which is designed to condense steam and contain fission products released during a LOCA. The containment vessel consists of a continuous and essentially leak-tight steel membrane which includes the cylindrical portion, the torispherical portion, and the floor liner plate on the top of the basemat. The containment design incorporates a cylindrical drywell, and a cylindrical weir wall concentric with the containment cylindrical wall, forming a suppression pool. The containment shell and drywell are penetrated by access, process piping, and electrical penetrations. The effectiveness of the design is dependent upon its ability to condense steam during an event. Condensation of steam precludes overpressurization of the containment. The steam is condensed by directing its flow through a vent system from the drywell, through the suppression pool, to the containment.

The Mark III design makes an allowance for a given amount of steam to bypass the suppression pool and enter the containment without being condensed by the suppression pool. If the bypass leakage were too large, the containment design pressure could be exceeded. There is some margin above the design pressure before the containment would fail; however, if the amount of steam leaking into the containment were large enough, not only could the containment fail, but bypassing the suppression pool could result in a radiation source term much larger than would otherwise be the case.

The containment and drywell structural and leakage integrity are verified through a series of tests and inspections, as described above. Entergy has proposed a one-time change to the RBS TS to allow a 15-year interval for the DWBT. The NRC has already approved a one-time 15-year interval for the ILRT. The DWBT has been historically associated with the ILRT because the plant line-ups are similar and the same equipment is used to perform both tests. Entergy's evaluation is based on having both the ILRT and DWBT on a 15-year interval, and is based on the guidance in RG 1.174. In addition to the risk evaluations, the NRC staff considered the impact on the leakage and structural integrity of the drywell.

By License Amendment No. 131 for RBS, the staff approved a 15-year interval for the ILRT. The staff reviewed the leakage tests, inspections required by the Code, and other administrative controls. The staff found the 15-year ILRT interval acceptable based on the licensee's past experience and on the licensee's procedures to examine and monitor potential degradation of the pressure-retaining components of the RBS containment. The staff considered the inservice inspections required by Subsection IWE of Section XI of the ASME Code, the Type B and Type C penetration and isolation valve leakage tests required by 10 CFR Part 50, Appendix J, and the system pressure tests performed following repair and replacement activities adequate to detect degradation. The proposed amendment for a 15-year DWBT does not invalidate any of the staff's conclusions that were the bases for granting License Amendment 131 for RBS.

By License Amendment No. 87 for RBS, the staff approved a performance based DWBT with a maximum interval of 10 years. This approval was based, in part, on the demonstrated margin available due to the large amount of leakage necessary to exceed the containment design pressure, and the licensee's commitment to periodically assess the drywell bypass leakage. In particular, the staff found that 1) the leakage through the structure would not be significant, considering the inspections that are performed of the structure; 2) leakage through the piping

penetrations is unlikely to be significant, because even if some valves were left open, the design leakage rate would not be exceeded; 3) the equipment hatch has double compression seals and is periodically leak tested; 4) the drywell air lock is periodically leak tested, and even a total loss of its seals would not disable the drywell safety function; and 5) the electrical penetrations are unlikely to leak significantly. Regarding testing history, six DWBTs had been performed at RBS and the largest leakage was 1.6 percent of the design limit. The staff found that there was only a small effect on risk with the increase in the test interval from 18 months to 10 years. The staff gave considerable weight to the licensee's commitment to assess the drywell leakage once per cycle to assure that the drywell remains operable.

For License Amendment No. 87, the staff also considered the structural integrity of the drywell. During preoperational testing, the drywell was pressurized to its design pressure of 25 psig while deflections, strains, and concrete crack patterns were recorded. By letter dated November 20, 1995, the licensee characterized the cracking as insignificant, and stated that visual inspections of the accessible drywell surfaces that have been performed since the preoperational tests have not detected additional cracking or other abnormalities in the drywell structure. During the DWBT, the drywell is pressurized to 3 psid (the pressure required for steam to clear the suppression pool), thus, the staff does not expect the DWBT to be a significant challenge to the DWBT structure.

The structural integrity of the drywell is primarily verified through the visual inspection required by RBS TS SR 3.3.6.5.1.4. The staff asked the licensee to describe the drywell visual inspections and the results of the most recent inspection. In its response dated August 26, 2004, the licensee stated that the walk down and visual inspection covered the interior and exterior of the drywell. Items including wall, coatings, concrete damage, penetrations, imbedded steel anchor plates, welds, and access hatches are inspected. The procedure includes specific instructions and acceptance criteria. The results, including a general appearance description, are recorded and reviewed by the licensee’s civil structural engineers. The last walkdown was performed in October 1997 (an ILRT was not performed). The licensee also stated that the drywell coating is inspected every outage. Failed coating or light rust are typically identified during this inspection, and corrective actions are taken. The licensee stated that no structural integrity concerns have been identified during any of these inspections.

RBS TS SR 3.3.6.5.1.4 requires the visual inspection to be performed prior to each ILRT required by TS 5.5.13. TS 5.5.13 requires the next ILRT to be completed no later than August 14, 2007. Since the last visual inspection was performed in October 1997, less than 10 years will elapse between the drywell visual inspections.

The licensee also proposed to perform a qualitative assessment of the leak tightness of the drywell once per cycle; an assessment that is currently being done to support the approved 10-year DWBT interval. The staff asked for additional information on how this assessment is performed. In its response dated August 26, 2004, the licensee explained that normal air inleakage into the containment requires periodic purging of the containment. The purge results in a differential pressure between the drywell and the containment. The licensee trends the differential pressure and compares the results to test acceptance criteria. While the staff does not expect the assessment to be as accurate as the DWBT, the assessment will be able to detect gross leakage of a magnitude that would exceed the TS limit. The staff finds this acceptable since the licensee has committed to provide a reasonable assurance of OPERABILITY.

3.1 Deterministic Conclusion

Based on the above evaluation, the staff finds that the licensee has adequate procedures to examine and monitor potential degradations of the structural and leak tightness of the RBS containment and drywell. Thus, granting a one-time 5-year extension to the current 10-year interval for the DWBT, as proposed by the licensee, is acceptable.

3.2 Risk Assessment Evaluation

In addition to its deterministic evaluation, the staff also reviewed the amendment request from a risk-informed approach. The licensee provided a risk impact assessment in the February 16, 2004, application for license amendment. Additional information was provided by the licensee in its supplemental letter dated June 8, 2004. In License Amendment No. 131, the NRC approved a one-time extension of the Type A test interval from 10 to 15 years. Since the Type A test and DWBT are typically performed on the same frequency, the subject risk assessment contained an evaluation of the combined impact of extended intervals for both the Type A test and DWBT. In performing the risk assessment, the licensee considered the guidelines of NEI 94-01, Revision 0, the methodology used in Electric Power Research Institute (EPRI) TR-104285, "Risk Impact Assessment of Revised Containment Leak Rate Testing," and the guidelines of RG 1.174.

The basis for the 10-year Type A test interval is provided in Section 11.0 of NEI 94-01, Revision 0, and was established in 1995 during the development of the performance-based Option B to Appendix J. The DWBT is also on a performance-based interval with a current maximum testing frequency of 10 years, as approved in License Amendment No. 87. Section 11.0 of NEI 94-01 states that NUREG-1493, "Performance-Based Containment Leak-Test Program," provided the technical basis to revise leakage rate testing requirements contained in Option B to Appendix J. The basis consisted of qualitative and quantitative assessments of the risk impact (in terms of increased public dose) associated with a range of extended leakage rate test intervals. To supplement this basis, industry undertook a similar study. The results of that study are documented in EPRI Research Project Report TR-104285.

The EPRI study used an analytical approach similar to that presented in NUREG-1493 for evaluating the incremental risk associated with increasing the interval for Type A tests. The Appendix J, Option A, requirements that were in effect for RBS early in the plant's life required a Type A test frequency of three tests in 10 years. The EPRI study estimated that relaxing the test frequency from three tests in 10 years to one test in 10 years would increase the average time that a leak that was detectable only by a Type A test goes undetected from 18 months to 60 months. Since Type A tests only detect about 3 percent of the leaks (the rest are identified during local leakage rate tests based on industry leakage rate data gathered from 1987 to 1993), this results in a 10 percent increase in the overall probability of leakage. The risk contribution of pre-existing leakage for the pressurized water reactor and boiling water reactor representative plants in the EPRI study confirmed the NUREG-1493 conclusion that a reduction in the frequency of Type A tests from three tests in 10 years to one test in 20 years leads to an "imperceptible" increase in risk that is on the order of 0.2 percent and a fraction of one person-rem per year in increased public dose.

Building upon the methodology of the EPRI study, the licensee assessed the combined risk impact associated with the proposed one-time extension of the DWBT from 10 years to 15 years, together with the previously-approved one-time extension of the Type A test from 10 years to 15 years. The licensee quantified the risk from sequences that have the potential to result in large releases if a pre-existing containment leak or drywell bypass leak were present.

Since the Option B rulemaking was completed in 1995, the staff has issued RG 1.174 on the use of probabilistic risk assessment in evaluating risk-informed changes to a plant's licensing basis. The licensee has proposed using RG 1.174 guidance to assess the acceptability of the estimated risk increase. RG 1.174 defines very small changes in the risk-acceptance guidelines as increases in core damage frequency (CDF) less than 10^{-6} per year and increases in large early release frequency (LERF) less than 10^{-7} per year. Since the Type A test and DWBT do not impact CDF, the relevant criterion is the change in LERF. RG 1.174 also discusses defense-in-depth and encourages the use of risk analysis techniques to help ensure and show that key principles, such as the defense-in-depth philosophy, are met. The licensee estimated the change in the conditional containment failure probability for the proposed changes to demonstrate that the defense-in-depth philosophy is met.

In assessing the risk impacts associated with the DWBT interval extension, the licensee applied the same basic approach as embodied in the EPRI methodology for Type A test interval extensions. The primary difference in the methodology used to evaluate the DWBT extension is in the determination of the conditional probability of an existing drywell leak, and in the assignment of various drywell and containment leakage combinations to appropriate containment failure categories. In a Mark III containment, the drywell is completely enclosed by the primary containment. As such, drywell leakage does not leak directly to the environment, but is further mitigated by the primary containment. Because of this dual structure, the licensee considered the probability of various drywell and containment leakage combinations. Similar to the EPRI methodology for Type A test interval extensions, the drywell was considered either to be intact (base leakage assumed), to have a small pre-existing failure (10 times the base leakage), or to have a large pre-existing failure (35 times the base leakage). The base drywell leakage rate (800 scfm) was established through review of the "as-found" DWBT results from the previous DWBTs at RBS. The probability of each of the drywell failure categories (intact, small leak, and large leak) was assumed to be the same as the equivalent categories for the Type A evaluations. The three drywell leakage levels were considered in combination with the three different containment leakage levels in the EPRI methodology, resulting in nine combinations of drywell and containment leakage sizes. For leakage combinations involving drywell leakage, the availability of containment unit coolers was also evaluated. For events in which containment unit coolers operate, drywell leakage was assumed to have no impact on the containment's existing leakage category, since the containment coolers would condense any steam that bypasses the suppression pool. For events in which containment unit coolers do not operate, any increased drywell leakage was assumed to lead to containment failure. Each of the leakage combinations was assigned to one of the EPRI containment failure categories, based on consideration of the availability of containment unit coolers. The remaining portions of the DWBT methodology are identical to that used for the Type A test frequency extension.

The licensee provided the results of a sensitivity analysis in which the probability of each of the drywell failure categories is based on consideration of an expanded data set consisting of all "as-found" DWBT results for all Mark III containments. The licensee estimated the failure probability for the small drywell leakage category using a mean value derived from the available

data, and estimated the failure probability for the large drywell leakage category using the Jeffreys non-informative prior value since there have been no occurrences of large drywell leakage within the available data. The staff considers use of these failure probabilities appropriate for a realistic evaluation. The licensee also provided a sensitivity analysis in which credit is taken for the ability to depressurize the reactor coolant system (RCS) via release of steam to the suppression pool. Drywell bypass is not a concern for such sequences as there is no steam release into the drywell early in an event (prior to reactor vessel breach).

Based on the analyses provided by the licensee, the following risk comparisons and conclusions can be drawn:

1. Given the change from a one in 10-year test frequency to a one in 15-year test frequency, the increase in the total integrated plant risk is estimated to be approximately 0.7 person-rem per year in the baseline analysis, and 0.1 person-rem per year based on "as-found" DWBT results for all Mark III containments and credit for RCS depressurization. This increase is comparable to that estimated in NUREG-1493, where it was concluded that a reduction in the frequency of tests from three in 10 years to one in 20 years leads to an "imperceptible" increase in risk. Therefore, the increase in the total integrated plant risk for the proposed change is considered small and supportive of the proposed change.

2. The increase in LERF resulting from a change in the Type A test and DWBT frequency from one in 10 years to one in 15 years is estimated to be 2.1×10^{-8} per year in the licensee's baseline analysis. Sensitivity cases considering "as-found" DWBT results for all Mark III containments, and credit for RCS depressurization, resulted in smaller increases. There is some likelihood that the flaws in the containment estimated as part of the Class 3b frequency would be detected as part of the IWE/IWL visual examination of the containment surfaces (as identified in ASME Code, Section XI, Subsections IWE/IWL). Visual inspections are expected to be effective in detecting large flaws in the visible regions of containment, and this would reduce the impact of the extended test interval on LERF. The staff concludes that increasing the Type A and DWBT interval to 15 years results in only a small change in LERF and is consistent with the acceptance guidelines of RG 1.174.

3. RG 1.174 encourages the use of risk analysis techniques to help ensure and show that the proposed change is consistent with the defense-in-depth philosophy. Consistency with the defense-in-depth philosophy is maintained if a reasonable balance is preserved between prevention of core damage, prevention of containment failure, and consequence mitigation. Based on information provided by the licensee, the change in the test frequency from one in 10 years to one in 15 years would increase the conditional containment failure probability by about 0.5 percentage point. The staff finds that the defense-in-depth philosophy is maintained based on the small magnitude of the change in the conditional containment failure probability for the proposed amendment.

3.3 Probablistic Conclusion

Based on these conclusions, the staff finds that the increase in predicted risk due to the proposed change is within the acceptance guidelines, while maintaining the defense-in-depth philosophy of RG 1.174 and, therefore, is acceptable.

4.0 STATE CONSULTATION

In accordance with the Commission's regulations, the Louisiana State official was notified of the proposed issuance of the amendment. The State official had no comments.

5.0 ENVIRONMENTAL CONSIDERATION

The amendment changes a requirement with respect to installation or use of a facility component located within the restricted area as defined in 10 CFR Part 20. The NRC staff has determined that the amendment involves no significant increase in the amounts, and no significant change in the types, of any effluents that may be released offsite, and that there is no significant increase in individual or cumulative occupational radiation exposure. The Commission has previously issued a proposed finding that the amendment involves no significant hazards consideration, and there has been no public comment on such finding published May 25, 2004 (69 FR 29765). Accordingly, the amendment meets the eligibility criteria for categorical exclusion set forth in 10 CFR 51.22(c)(9). Pursuant to 10 CFR 51.22(b) no environmental impact statement or environmental assessment need be prepared in connection with the issuance of the amendment.

6.0 CONCLUSION

The Commission has concluded, based on the considerations discussed above, that: (1) there is reasonable assurance that the health and safety of the public will not be endangered by operation in the proposed manner, (2) such activities will be conducted in compliance with the Commission's regulations, and (3) the issuance of the amendments will not be inimical to the common defense and security or to the health and safety of the public.

Principal Contributors: J. Pulsipher
R. Palla
S. Bailey

Date: October 15, 2004

cc:

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