Duke Energy

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U.S. Nuclear Regulatory Commission
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Subject: Oconee Nuclear Station, Unit 3
Docket Number 50-269
Response to Request for Additional Information
Proposed Technical Specification Amendment for One-time Surveillance Interval Extension of Containment Integrated Leak Rate Test
(TSCR 2000-06, Supplement 1)

By letter dated March 5, 2001, Duke Energy Corporation (Duke) submitted a License Amendment Request (LAR) for Oconee Nuclear Station, Unit 3, that requested a one-time extension to the surveillance interval requirements of Technical Specification (TS) 5.5.2 for the containment Integrated Leak Rate Test (ILRT) required by 10 CFR 50, Appendix J. This one-time surveillance extension was requested due to circumstances that create a requirement to perform a containment ILRT for Unit 3 during two sequential refueling outages at an approximate 18-month interval. This situation occurs since the 10-year interval ILRT is due one refueling cycle prior to the steam generator replacement and refueling outage during which an ILRT will be required to assure containment leakage integrity.

This letter provides Duke's response to a NRC Request for Additional Information as Attachment A. Attachment B provides supplemental risk-informed information, which includes the change in the Large Early Release Frequency (LERF) and the predicted person-rem/year associated with the time interval extension for ILRT performance. Attachment C provides a revised No Significant Hazards Consideration evaluation.

This supplemental information does not change the conclusions of the Environmental Impact Evaluation submitted by the March 5, 2001 letter.

Approval of this change is requested by December 3, 2001, to support timely refueling outage planning. The default 30-day implementation period is adequate for the requested change.

A copy of this application is being forwarded to the South Carolina Department of Health and Environmental Control in accordance with 10 CFR 50.91.

A017

Please contact Robert C. Douglas at 864-885-3073 with any questions regarding this submittal.

Very truly yours,

W. R. McCollum, Jr.
Site Vice President
Oconee Nuclear Station
Attachments

xc: (w/attachments)

L.A. Reyes
Administrator, Region II

M. C. Shannon
NRC Senior Resident Inspector
Oconee Nuclear Station

D. E. LaBarge
ONRR, Senior Project Manager

V.R. Autry, Director
DHEC

AFFIDAVIT

W. R. McCollum, Jr., states that he is Site Vice President of Duke Energy Corporation; that he is authorized on the part of said corporation to sign and file with the Nuclear Regulatory Commission this amendment to the Oconee Nuclear Station Facility Operating License No. DPR-38 and Technical Specifications; and that all statements and matters set forth therein are true and correct to the best of his knowledge.

W. R. McCollum, Jr., Site Vice President

Subscribed and sworn to me: SEPTEMBER 4, 2001
Date

Robert C. Douglas, Notary Public

My Commission Expires: August 13, 2001
Date

SEAL

Duke Energy Corporation
Response To Request For Additional Information
One Time Deferral of Integrated Containment Leak Rate Testing

1. **NRC Request**

None of the references describe (or summarize) the containment ISI program being implemented at Oconee Unit 3. Please provide a description of the ISI methods that provide assurance that in the absence of an ILRT for 15 years, the containment structural and leak-tight integrity will be maintained.

Response

As described in Attachment 3, Section 4.4, of Duke Energy Corporation's (Duke) License Application Request (TSCR 2000-06) dated March 5, 2001, general visual examinations of the containment accessible metal shell and penetration liners, and accessible concrete surfaces will continue to be performed in accordance with applicable codes and regulations. The one time extension requested by this LAR applies only to the 10 CFR 50, Appendix J, Type A integrated leak rate test that is currently on a 10-year interval pursuant to Appendix J, Option B, Performance-based Requirements. Appendix J, Type B and Type C tests are performed at the intervals required by Appendix J, Option A, Prescriptive Requirements, § III.D.2 and § III.D.3. Details of the ISI methods implemented at Oconee Unit 3 (ONS-3) that provide assurance that containment structural and leak-tight integrity in the absence of an ILRT for 12 years, 7 months (151 months) are described below.

In accordance with 10CFR50.55a(g)(4)(v)(B), metallic shell and penetration liners which are pressure retaining components and their integral attachments are required to meet the inservice inspection, repair, and replacement requirements applicable to components which are classified as ASME Code Class MC.

In accordance with 10CFR50.55a(g)(4)(v)(C), concrete containment pressure retaining components and their integral attachments, and the post-tensioning systems of concrete containments are required to meet the inservice inspection, repair, and replacement requirements applicable to components which are classified as ASME Code Class CC.

In accordance with 10CFR50.55a(b)(2)(vi), the effective edition and addenda of Subsection IWE and IWL must comply with either the 1992 Edition with the 1992 Addenda or the 1995 Edition with the 1996 Addenda as modified and supplemented by the requirements of 10CFR50.55a(b)(2)(viii) and 10CFR50.55a(b)(2)(ix). Oconee uses the 1992 Edition with the 1992 Addenda for Subsections IWE and IWL.

The following examinations and tests, performed in accordance with the ASME Boiler and Pressure Vessel Code, Section XI, Subsections IWE and IWL, as modified and supplemented by the requirements of 10CFR50.55a(b)(2)(viii) and 10CFR50.55a(b)(2)(ix) provide the necessary assurance that the containment

structural and leak-tight integrity will be maintained until verification can be obtained during the next Integrated Leak Rate Test:

1. Table IWE-2500-1, Examination Category E-A, Item No. E1.11 examinations. These General Visual examinations are performed prior to each Type A Test, and during each Period as required by 10CFR50.55a(b)(2)(ix)(E). In accordance with IWE-3510.1, these examinations are performed by, or under the direction of, a Registered Professional Engineer or other individual, knowledgeable in the requirements for design, inservice inspection, and testing of Class MC and metallic liners of Class CC components.

2. Table IWE-2500-1, Examination Category E-C, Item No. E4.11 examinations. As a result of examinations performed during the expedited examination period specified in 10CFR50.55a(g)(6)(ii)(B)(1) and as required by IWE-2420(b), VT-1 visual examinations are now scheduled to be performed during the next 3 successive inspection periods on the containment metallic liner and moisture barriers at the embedment zone in the Reactor Building basement. Conditions warranting augmented examination have been discussed in Containment ISI Summary Reports submitted to the NRC in letters dated March 18, 1999, and August 21, 2000. Ultrasonic thickness measurements in accordance with IWE-2500(c)(2) are not required, as documented in Duke Energy Relief Request Serial No. 98-GO-003, approved by SER documented in NRC letter dated October 1, 1998.

3. Table IWE-2500-1, Examination Category E-D, Item No. E5.30 examinations. These VT-3 visual examinations are performed on 100% of moisture barriers during each inspection interval. Examinations comply with Table IWE-2412-1, Inspection Program B. These Item No. E5.30 examinations are not being deferred and consequently, some examinations will be performed during each inspection period in accordance with Table IWE-2412-1.

4. Table IWE-2500-1, Examination Category E-G, Item No. E8.10 examinations. These VT-1 visual examinations are performed on 100% of containment bolted connections during each inspection interval. Examinations comply with Table IWE-2412-1, Inspection Program B. Although Table IWE-2500-1. Examination Category E-G, allows the "Deferral of Inspection to End of Interval," Item No. E8.10 examinations are not scheduled to be deferred at ONS-3.

5. Table IWL-2500-1, Examination Category L-A, Item No. L1.10 examinations. These VT-3C and VT-1C visual examinations are performed on 100% of accessible containment concrete surfaces in accordance with the schedule specified in IWL-2410.

6. Table IWL-2500-1, Examination Category L-B, Item Nos. L2.10, L2.20, L2.30, L2.40, and L2.50 examinations. These examinations and tests are performed on selected post-tensioning system tendons in accordance with Oconee Relief Request, Serial No. 98-0002 (Formerly 98-ONS-002), as approved by SER documented in NRC letter dated February 16, 1999.

7. Examination of grease caps, as required by 10CFR50.55a(b)(2)(viii), are performed in conjunction with concrete examinations required by Table IWL-2500-1, Examination Category L-A. The Containment ISI Plan for Oconee Unit 3 currently requires a VT-3 visual examination to satisfy this requirement.

In addition:

- Table IWE-2500-1, Examination Category E-A, Item No. E1.12 examinations are required and are scheduled to be performed during the third inspection period, which begins on September 9, 2005.

- Table IWE-2500-1, Examination Category E-A, Item No. E1.20 examinations are not applicable to Oconee. ASME has since amended the Code to clarify that these examinations are applicable only to Boiling Water Reactor containments.

- Table IWE-2500-1, Examination Category E-B and E-F examinations are not mandatory, as indicated in 10CFR50.55a(b)(2)(ix)(C). As such, these examinations are not required by the Oconee containment inservice inspection program.

- Table IWE-2500-1, Examination Category E-D, Item Nos. E5.10 and E5.20 examinations are not required, as permitted by Relief Request Serial No. 98-GO-001, as approved by the NRC in letter dated September 3, 1998. As such, these examinations are not included in the Oconee containment inservice inspection program.

- Table IWE-2500-1, Examination Category E-G, Item No. E8.20 examinations are not required, as permitted by Relief Request Serial No. 98-GO-002, as approved by the NRC in letter dated November 24, 1998. As such, these examinations are not included in the Oconee containment inservice inspection program.

- Additional information pertaining to specific examination methods utilized at Oconee are addressed in Relief Request Serial No. 98-GO-004, as approved by the NRC in letter dated November 25, 1998.

2. NRC Request

Based on its review of the relief requests for CR-3 containment, the staff understands that Oconee Unit 3 is using the 1992 Edition and the 1992 Addenda of Subsections IWE and IWL of the American Society of Mechanical Engineers Section XI Code (the Code). IWE-1240 requires licensees to identify the surface areas requiring augmented examinations. Please provide the locations of the containment liner surfaces which Oconee Unit 3 has identified as requiring augmented examination and a summary of findings of the examinations performed.

Response

As noted above, ONS-3 is using the 1992 Edition and the 1992 Addenda of Subsections IWE and IWL of the American Society of Mechanical Engineers Section XI Code. IWE-1240 requires areas that are likely to experience accelerated degradation and aging be classified as Examination Category E-C and meet the examination requirements identified in Table IWE-2500-1. Initially, our inspection program did not identify any such areas requiring augmented examination. However, as indicated in our response to Question 1 above, embedment zone areas of the containment metallic liner (including moisture barriers at these locations) are now required to be examined in accordance with Table IWE-2500-1, Examination Category E-C, Item No. E4.11 during the next three successive inspection periods.

3. **NRC Request**

For the examination of seals and gaskets, and torque or tension testing of bolts associated with the primary containment pressure boundary (Examination Categories E-D and E-G), Duke Energy had requested relief from the requirements of the Code.[1] With the extension requested in this amendment for Type A testing, please provide your schedule for examination and testing of seals, gaskets, and bolts that provide assurance regarding the integrity of the containment pressure boundary.

Response

The one time extension requested by this LAR applies only to the 10 CFR 50, Appendix J, Type A integrated leak rate test that is currently on a 10-year interval pursuant to Appendix J, Option B, Performance-based Requirements. Appendix J, Type B and Type C tests are performed at the intervals required by Appendix J, Option A, Prescriptive Requirements, § III.D.2 and § III.D.3. This frequency of testing of seals, gaskets, and containment pressure retaining bolting provides reasonable assurance the integrity of the containment pressure boundary is maintained during the period of the extension.

Examination of seals and gaskets in accordance with Table IWE-2500-1, Examination Category E-D, Item Nos. E5.10 and E5.20, and bolt torque or tension tests on containment pressure retaining bolting in accordance with Table IWE-2500-1, Examination Category E-G, Item Nos. E8.20 are not required at ONS-3, as noted in response to NRC Request No. 1 above.

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[1] Portions of the original request (No. 3) were omitted as they were not applicable to this ONS license amendment request.

4. NRC Request

The stainless steel bellows have been found to be susceptible to trans-granular stress corrosion cracking, and the leakages through them are not readily detectable by Type B testing (see IN92-20). If applicable, please provide information regarding inspection and testing of the bellows at ONS-3, and how the potential bellows degradation has been factored into the risk assessment.

Response

NRC Information Notice 92-20, Inadequate Local Leak Rate Testing, discussed the inadequate local leak rate testing of two-ply stainless steel bellows. ONS-3 does not have such bellows that are a part of the containment pressure boundary.

5. NRC Request

Inspections of some reinforced concrete and steel containments have indicated degradation from the uninspectable (embedded) side of the drywell steel shell and steel liner of the primary containments. These degradations cannot be found by VT-3 or VT-1 examinations unless they are through the thickness of the shell or liner, or the 100% of the uninspectable surfaces are periodically examined by ultrasonic testing. Please provide information as to how the potential leakages due to aging related degradations mechanisms described above are factored into the risk assessment related to the extension of the ILRT.

Response

The potential for containment leakage is included in the risk assessment (Reference 1). The intact containment cases (EPRI Containment Failure Class 1) include a leakage term, which is independent of the source of the leak. In the ONS PRA, the intact containment class is assumed to leak at the design leak rate. The ONS ILRT risk assessment also includes specific containment failure classes due to extending the ILRT interval (Classes 3a and 3b). These classes include the potential that the leakage is due to a liner failure. The assessment shows that even with the increased potential to have an undetected containment flaw or leak path, the increase in risk is acceptable.

The ONS PRA, Revision 2 (Reference 2) is a full scope, level 3 PRA. Revison 2 of the PRA uses the containment capacity analysis developed for the ONS IPE. The ONS IPE submittal included a copy of the ONS PRA, Revision 1 report (Reference 3). Appendix G of the ONS PRA report, Revision 1, is a detailed description of the ONS containment capacity assessment. The analysis identified expected failure locations, which would result in a large leak area, and quantified the expected failure pressure for use in the IPE. This analysis was then utilized in the development of the IPE source terms as well as the Revision 2 PRA source terms. The public health consequences (dose, etc.) were also analyzed in Revision 2 of the ONS PRA. The dose results were then used to estimate the impact of extending the ONS ILRT interval.

References:

1. "Risk Assessment of ONS Integrated Leak Rate Test Extension", Duke Energy Corporation, OSC-7888, July 2001.

2. "Oconee Nuclear Station PRA Revision 2", Duke Power Company, December 1996.

3. "Oconee Nuclear Station Unit 3 Probabilistic Risk Assessment", Duke Power Company, December 1990.

Duke Energy Corporation
Response To Request For Risk Assessment

Duke Energy Corporation (Duke) has completed a risk assessment (Reference 1) in support of the license application request for a one-time extension of the Oconee Nuclear Station (ONS) Integrated Leak Rate Test (ILRT) interval to 151 months. This assessment uses the guidance provided in EPRI TR-104285 (Reference 2) and the process identified in NUREG-1493 (Reference 3) to evaluate the risk impact of the ILRT extension request. Additionally, the assessment compares the results of the risk assessment to guidance contained in Reg. Guide 1.174 (Reference 4). The assessment considers three risk metrics – Person-Rem risk, Large Early Release Frequency (LERF), and Conditional Containment Failure Probability (CCFP). There is no impact on Core Damage Frequency. Based on the results of the assessment, the extension request has a small but acceptable increase in risk.

The assessment uses the results of the ONS Revision 2 Internal Events PRA (Reference 5). The ONS PRA is a full scope level three PRA. The containment end-states developed in the ONS PRA were assigned to each of the EPRI Accident Classes identified in EPRI TR-104285. This information is contained in Table 1.

Table 1
Oconee PRA Revision 2 Internal Events Risk Results[a]
Mapped to EPRI Accident

Accident Class	Frequency (yr^{-1})	Person-Rem[b]	Person-Rem (yr^{-1})	Comments
1	5.50E-06	4.27E+02	2.35E-03	
2	7.09E-08	4.27E+05	3.03E-02	Includes both small and large isolation failures (EPRI Class 2). Also includes isolation failures due to latent human error – failure to restore the isolation following maintenance (EPRI Class 6).
3				Not Developed in the ONS PRA
4				Not Developed in the ONS PRA
5				Not Developed in the ONS PRA
6				Included in Class 2.
7	2.01E-05	7.52E+04	1.51E+00	
8	4.17E-07	7.51E+05	3.13E-01	
Total	2.60E-05		1.86E+00	

a. Source of Data is ONS PRA Revision 2, Tables 6.2-1 and 6.3-1
b. Frequency Weighted Person-Rem = Sum of Person-Rem Risk/Sum of Release Category Frequency

Accident Class 3 is the EPRI Accident Class that contains leakage and/or containment failure involving ILRT. For the ONS study, Class 3 was divided into two groups. Class 3a represents a small leak that is greater than $10L_a$. Class 3b represents a much larger leak that contributes to LERF. The probability of leakage associated with Class 3 is assumed to be proportional to the time between tests. The probability of Class 3a was estimated using data from NUREG-1493. NUREG-1493 found that there have been five failed ILRT out of 180 ILRTs that only ILRTs could have detected. Based on this data, the Class 3a probability is approximately 0.03. The Class 3b probability was estimated using the Jeffrey's "non-informative prior distribution" (Reference 6).

$$\text{Failure Probability} = \frac{\text{Number of Failures (0)} + \frac{1}{2}}{\text{Number of Tests (180)} + 1}$$

The data for class 3b consists of zero failures out of 180 ILRTs. The resulting probability is approximately 0.003. These values were used to estimate the frequencies of Class 3a and Class3b

For each accident class, the population dose and LERF were estimated. For Class 3a, the population dose is assumed to be 10 times the ONS PRA no containment failure dose (the no containment failure end-states assume that containment leaks at $1L_a$). For Class 3b, the population dose was assumed to be the same as the population dose for the isolation failure end-states.

The Accident Classes in Table 1 can be placed into those that are LERF and those that are not LERF. The LERF due to class 3b was estimated by multiplying the Class 3b probability and the frequency of accident classes that are not LERF. The off-site consequences associated with Class 3a are assumed to be small and do not impact LERF.

The CCFP was calculated using the following equation:

$$\text{CCFP} = 1 - \frac{\text{Intact Containment Frequency}}{\text{Total Core Damage Frequency}}$$

The risk metrics were calculated for each of the following test intervals:

- 3 Tests in 10 years – original requirements for ILRT
- 1 Test in 10 years – ONS current test interval
- 1 Test in 151 months – ONS current test interval plus extension request
- 1 Test in 15 years – sensitivity case
- 1 Test in 18 years – sensitivity case
- 1 Test in 20 years – sensitivity case

The results of the ONS ILRT risk assessment are contained in Table 2:

Table 2
Summary of Assessment Risk Results

Case	Person-Rem Risk (yr-1)			LERF			CCFP		
	Total	Increase Relative to Baseline	Increase Relative to Current Interval	Total	Increase Relative to Baseline	Increase Relative to Current Interval	Total	Increase Relative to Baseline	Increase Relative to Current Interval
3 per 10 Yr (baseline)	1.884E+00			6.59E-07			78.91%		
1 per 10 yr (current)	1.942E+00	5.82E-02		8.01E-07	1.42E-07		79.02%	0.12%	
1 per 151 months (extension)	1.965E+00	8.10E-02	2.29E-02	8.57E-07	1.97E-07	5.51E-08	79.07%	0.17%	0.05%
1 per 15 yr	1.986E+00	1.02E-01	4.36E-02	9.08E-07	2.49E-07	1.07E-07	79.11%	0.21%	0.09%
1 per 18 yr	2.012E+00	1.28E-01	6.96E-02	9.72E-07	3.13E-07	1.71E-07	79.17%	0.26%	0.14%
1 per 20 yr	2.030E+00	1.45E-01	8.73E-02	1.01E-06	3.56E-07	2.13E-07	79.20%	0.30%	0.18%

The first risk measure that was considered in the assessment is person-rem risk. The increase in person-rem risk for extending the Type A test frequency for an additional 31 months beyond the current 1 in 10 years frequency is estimated to be 2.29E-02 person-rem/yr. This increase is a small change in the public health risk. Extending the Type A test frequency by 31 months does not have a significant impact on person-rem risk.

The second risk measure considered in the assessment is Large Early Release Frequency (LERF). The historical data (NUREG-1493) indicates that there has not been a failed ILRT that resulted in a leak rate sufficient to qualify as LERF. However, for comparison to Reg. Guide 1.174, an estimate of LERF was determined as described above.

The estimated increase in LERF due to extending the ILRT interval of 10 years by 31 months is 5.51E-08/yr. Changes in LERF that are less than 1E-07 per year are considered very small in Reg. Guide 1.174. Therefore, the ONS extension does not result in a significant increase in LERF.

Increasing the ILRT frequency from 3 in 10 years to 1 in 10 years increases the LERF by 1.42E-07/yr. The LERF increase for going from an ILRT frequency of 3 in 10 years to extension request results in an increase in LERF of 1.97E-07/yr. These values are slightly above the Reg. Guide 1.174 value for a very small change. When the increase in LERF is between 1.0E-07/yr and 1.0E-06/yr, the total LERF must be considered. For these situations, the total LERF must be less than 1.0E-05/yr. For the case of a test frequency of 1 in 10 years, the total LERF is 8.01E-07/yr. For the ONS extension case, the total LERF is 8.57E-07/yr. Therefore, the ONS extension is acceptable by the Reg. Guide 1.174 guidelines.

The assessment calculates the CCFP for the Type A test intervals. Extending the test frequency by 31 months increases the CCFP by 0.05% above the current frequency of 1 in 10 years. Changing the test frequency from 3 in 10 years to 1 in 10 years results in a CCFP increase of 0.12%. For the extension request the increase is 0.17% over the baseline. The requested extension has very little impact on CCFP.

The person-rem risk results in this analysis are very different from the results in NUREG-1493 and the EPRI analysis. These two previous assessments found that extending the Type A test interval results in a person-rem risk increase that is much less than 1% (0.02% to 0.14%). The main difference in the person-rem risk increase calculated in the ONS assessment and the previous assessments is the assumption of the dose associated with Class 3b. Neither the NUREG study nor the EPRI study considers a very large leak that is sufficient to result in LERF. These studies assumed that a Type A failure would result in a leak rate of approximately $2L_a$. However, since Class 3b is supposed to represent LERF, then the person-rem associated with Class 3b is very large compared to the person-rem for a $2L_a$ leak. The leak rate and the dose associated with Class 3b are more representative of a hole in containment versus a leak in containment.

Based on the results of this analysis, the ONS ILRT extension result has an acceptable impact on plant risk.

In addition to the ONS Risk Assessment, the NRC has provided a spreadsheet (References 7 and 8) to evaluate the ONS extension request using the data in Table 1 and the previously accepted method for Indian Point 3 and Crystal River 3. The results of this spreadsheet are

shown in Table 3. The NRC spreadsheet results support the conclusion that the ONS ILRT extension has an acceptable impact on plant risk.

Table 3
NRC Spreadsheet Results Using ONS Data

Delta LERF going from 3 in 10 year test interval to 1 in 15 year test interval = Difference in Class 3b frequency =	8.19E-08
Delta LERF going from 3 in 10 year test interval to 1 in 20 year test interval = Difference in Class 3b frequency =	1.09E-07
Delta LERF going from 1 in 10 year test interval to 1 in 15 year test interval = Difference in Class 3b frequency =	2.73E-08
Delta person-rem/year going from 3 in 10 year test interval to 1 in 15 year interval =	2.15E-03
Percentage increase = ((Total15 - Total Base)/Total Base)*100 =	0.11%
Delta person-rem/year going from 1 in 10 year test interval to 1 in 15 year interval =	7.16E-04
Percentage increase = ((Total15 - Total10)/Total10)*100 =	0.04%
Delta increase in CCFP going from 3 in 10 year test interval to 1 in 15 year interval =	0.31%
Delta increase in CCFP going from 1 in 10 year test interval to 1 in 15 year interval =	0.10%

References:

1. "Risk Assessment of ONS Integrated Leak Rate Test Extension", Duke Power Company, OSC-7888, July 2001.

2. Gisclon, J. M., et al, "Risk Impact Assessment of Revised Containment Leak Rate Testing Intervals, Electric Power Research Institute, TR-104285, August 1994.

3. Dey, M., et al., "Performance-Based Containment Leak-Test Program", USNRC, NUREG-1493, September 1995.

4. "An Approach for Using Probabilistic Risk Assessment in Risk-Informed Decisions on Plant-Specific Changes to the Licensing Basis", USNRC, Regulatory Guide 1.174, July 1998.

5. "Oconee Nuclear Station PRA Revision 2", Duke Power Company, December 1996.

6. Engelhardt, M. E., "Events in Time: Basic Analysis of Poisson Data", Idaho National Engineering Laboratory, EG&G Idaho, Incl., EGG-RAAM-11088, September 1994.

7. Conference Call with Duke Power Personnel (Robert Douglas, Duncan Brewer, Bryan Carroll, and others) and NRC Staff (David LaBarge, Michael Snodderly, and others), Wednesday, August 1, 2001, 9:00 am.

8. E-Mail from David LaBarge (NRC) to Robert Douglas (Duke Power), Subject: "Spreadsheet used to support Oconee plant specific data", Dated 8/01/2001.

NO SIGNIFICANT HAZARDS CONSIDERATION

Duke Energy Corporation (Duke) has evaluated whether or not a significant hazards consideration is involved with the proposed changes by focusing on the three standards set forth in 10 CFR 50.92 as discussed below:

1. **Do the proposed changes involve a significant increase in the probability or consequences of an accident previously evaluated?**

   Response: No

   The proposed revision to the Oconee Nuclear Station, Unit 3 (ONS-3) Technical Specifications (TS) adds a one-time extension to the current interval for Type A testing (containment Integrated Leak Rate Testing (ILRT)). The current test interval of 10 years, would be extended on a one time basis to 12 years 7 months from the last Type A test. The proposed extension to Type A testing cannot increase the probability of an accident previously evaluated since the containment Type A testing extension is not a modification to plant systems, or a change to plant operation that could initiate an accident. The proposed extension to Type A testing does not involve a significant increase in the consequences of an accident since research documented in NUREG-1493 found that, generically, very few potential containment leakage paths fail to be identified by Type B and C tests. In fact, an analysis of 144 ILRT results, including 23 failures, found that no failures were due to containment liner breach. The NUREG concluded that reducing the Type A testing frequency to one per twenty years would lead to an imperceptible increase in risk. The NUREG conclusions are supported by an ONS-3 specific evaluation of risk and consequences. ONS-3 provides a high degree of assurance through testing and inspection that the containment will not degrade in a manner detectable only by Type A testing. Inspections required by the Maintenance Rule and American Society of Mechanical Engineers (ASME) code are performed in order to identify indications of containment degradation that could affect leak tightness. Type B and C testing required by the ONS-3 TS will identify any containment opening, such as valves, that would otherwise be detected by the Type A tests. Type B and C testing is performed at the frequency specified by 10 CFR 50, Appendix J, Option A, § D.2 and § D.3, respectively. These factors show that a ONS-3 Type A test extension will not represent a significant increase in the consequences of an accident.

2) **Do the proposed changes create the possibility of a new or different kind of accident from any accident previously evaluated?**

   Response: No

   The proposed extension to Type A testing cannot create the possibility of a new or different type of accident since there are no physical changes heing made to the plant. There are no changes to the operation of the plant that could introduce a new failure mode creating the possibility of a new or different kind of accident.

3) Do the proposed changes involve a significant reduction in the margin of safety?

Response: No

The proposed extension to Type A testing will not significantly reduce the margin of safety. The NUREG-1493 generic study of the effects of extending containment leakage testing found that a 20 year extension in Type A leakage testing resulted in an imperceptible increase in risk to the public. NUREG-1493 found that, generically, the design containment leakage rate contributes a very small amount to the individual risk, and that the decrease in Type A testing frequency would have a minimal affect on this risk since most potential leakage paths are detected by Type C testing. The NUREG conclusions are supported by an ONS-3 specific evaluation of risk and consequences.