



Entergy Operations, Inc.
River Bend Station
5485 U.S. Highway 61
PO Box 220
St. Francisville, LA 70775
(504) 381-4374
FAX (504) 381-4872

JOHN R. McGAHA, JR.
Vice President
Operations

October 4, 1994

U. S. Nuclear Regulatory Commission
Mail Station P1-37
Washington, DC 20555

Attention: Document Control Desk

Subject: River Bend Station - Unit 1
Docket No. 50-458
License No. NPF-47
Licensing Amendment Request (LAR 94-11) - Change to Technical Specification
3/4.11.2, "Gaseous Effluents"

File Nos.: G9.5, G9.42

RBF1-94-0060
RBG-40919

As a result of conditions identified during the scram on September 8, 1994, River Bend Station (RBS) has identified a situation which does not allow compliance with Note c of Technical Specification, Table 4.11.2.1.2-1. The Technical Specification requires a sampling and analysis for noble gas and tritium samples within one hour following startup, shutdown, or thermal power changes greater than 15%. These samples cannot be drawn and analyzed within that time frame. Therefore, RBS cannot comply with the one-hour time requirement of Technical Specification Surveillance Requirement 4.11.2.1.2. Entering Operational Condition 2 would require the plant to immediately enter the action for Technical Specification 3.11.2.1.

This Licensing Amendment Request (LAR) is being submitted to revise Technical Specification 4.11.2.1.2, Table 4.11.2.1.2-1 by removing the one-hour requirement for completing noble gas and tritium sampling and analysis. This requested revision will result in the specified requirements being identical to "Standard Technical Specifications - General Electric Boiling Water Reactors (GE-STs) - BWR/6."

9410140022 941004
PDR ADDCK 05000458
P PDR

ADD1

Licensing Amendment Request (LAR) 94-11

October 4, 1994

RBG-40919

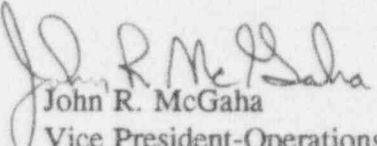
RBF1-94-0060

Page 2 of 2

This request has been reviewed and approved by the RBS Facility Review Committee and the Nuclear Review Board in accordance with Technical Specifications.

If you have further questions regarding this request, please contact me or my staff.

Sincerely,


John R. McGaha
Vice President-Operations

attachment

cc: Mr. Robert Schaaf
U. S. Nuclear Regulatory Commission
M/S OWFN 13-H-15
Washington, DC 20555

NRC Resident Inspector
P. O. Box 1051
St. Francisville, LA 70775

U. S. Nuclear Regulatory Commission
Region IV
611 Ryan Plaza Drive, Suite 400
Arlington, TX 76011

Department of Environmental Quality
Radiation Protection Division
P. O. Box 82135
Baton Rouge, LA 70884-2135
Attn: Administrator

BEFORE THE
UNITED STATES NUCLEAR REGULATORY COMMISSION

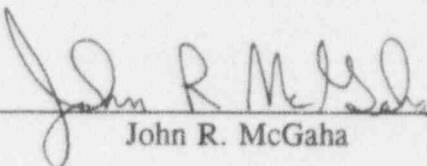
LICENSE NO. NPF-47

DOCKET NO. 50-458

IN THE MATTER OF
GULF STATES UTILITIES COMPANY
CAJUN ELECTRIC POWER COOPERATIVE AND
ENERGY OPERATIONS, INC.

AFFIRMATION

I, John R. McGaha, state that I am Vice President-Operations of Entergy Operations, Inc., at River Bend Station; that on behalf of Entergy Operations, Inc., I am authorized by Entergy Operations, Inc. to sign and file with the Nuclear Regulatory Commission, this License Amendment Request #94-11 for the River Bend Station; that I signed this License Amendment Request as Vice President-Operations at River Bend Station of Entergy Operations, Inc.; and that the statements made and the matters set forth therein are true and correct to the best of my knowledge, information, and belief.




John R. McGaha

STATE OF LOUISIANA
WEST FELICIANA PARISH

SUBSCRIBED AND SWORN TO before me, a Notary Public, in and for the Parish and State above named, this 4th day of October, 1994.

(SEAL)



Notary Public

My commission expires: with life

ATTACHMENT 1

**ENTERGY OPERATIONS INCORPORATED
RIVER BEND STATION
DOCKET 50-458/LICENSE NO. NPF-47
GASEOUS EFFLUENTS
(94-11)**

Document Involved: Technical Specifications

Items: Surveillance Requirement; Table 4.11.2.1.2-1 and Note c.

Reason for Request

As a result of conditions identified during the scram on September 8, 1994 River Bend Station (RBS) has identified a situation which does not allow compliance with Note c of Technical Specification (TS) Table 4.11.2.1.2-1, as discussed below. The Technical Specification requires a sampling and analysis for noble gas and tritium samples within one hour following startup, shutdown, or thermal power changes greater than 15%. These samples cannot be drawn and analyzed within that time frame. Therefore, RBS cannot comply with the one-hour time requirement of Technical Specification Surveillance Requirement 4.11.2.1.2. Entering Operational Condition 2 would require the plant to immediately enter the action for Technical Specification 3.11.2.1.

This Licensing Amendment Request (LAR) is being submitted to revise Technical Specification 4.11.2.1.2, Table 4.11.2.1.2-1 by removing the one-hour requirement for completing noble gas and tritium sampling and analysis. This requested revision will result in the specified requirements being identical to the General Electric BWR/6 Standard Technical Specifications (STS).

Discussion

On September 8, 1994 following a reactor scram, Chemistry personnel failed to obtain and analyze noble gas and tritium samples within one hour following the scram as required by Technical Specification Table 4.11.2.1.2-1, Note c, as implemented by Chemistry Section Procedure CSP-0100, "Chemical/Radiochemical Technical Specifications Surveillances." The chemistry technicians were delayed entering the auxiliary building because of operational restrictions. After entering, they discovered that power was not available to the sample system. By the time the sample was taken, the one-hour time period had elapsed. In this event, the sample was obtained and analyzed by Chemistry in about 3.5 hours.

The current RBS Technical Specifications which impose the one-hour time limit for sampling tritium and noble gases following thermal transients is inconsistent with other licensing basis documents reviewed and the technical specifications from the other operating BWR/6 plants in the United States. The one-hour limit cannot be met because collecting and analyzing the noble gas and tritium samples takes a minimum of two hours. A summary of the actions and times to complete these steps are listed in Attachment 2.

The final draft of the RBS Low Power Operating License submitted for NRC review contained wording consistent with the STS guidance documents. When the Low Power License NPF-40 was issued the wording had changed to require sampling and analysis within one hour. A review of the RBS submittal (April, 1985), compared to the approved NRC version (July, 1985), shows several cases where the RBS-submitted TS wording was changed in the NRC-approved version. The RBS submittal reflected the wording from the BWR/6 STS. There is no evidence indicating that RBS requested these changes. It appears the changes were made during an editorial revision. The RBS Updated Safety Analysis Report (USAR) was also reviewed for potential impact. The results of this review indicate that the USAR is not affected by the inconsistency identified in this TS.

A review of similar operating plant specifications indicates the requirement to sample and analyze within one hour is not included in other BWR specifications. The other domestic BWR/6 TS were consistent with the guidance listed in NUREG-0133, "Preparation of Radiological Effluent Technical Specifications for Nuclear Power Plants," and the STS. An example is Perry Nuclear Power Plant. Other plants, like Grand Gulf Nuclear Station, have relocated these controls to plant procedures under the guidance contained in Generic Letter 89-01. RBS will also be relocating these requirements under the Improved Technical Specification program as identified in a submittal dated November 30, 1993 (RBG-39478)

Regulatory Basis

TS 3.11.2.1, "Dose Rate," ensures that dose from gaseous effluents, at any time at and beyond the site boundary, will be within the annual dose limits of 10CFR Part 20 to unrestricted areas. The annual dose limits are those associated with the concentrations of 10CFR Part 20. These limits provide assurance that radioactive material discharged in gaseous effluents will not result in exposure to a member of the public in an unrestricted area, either within or outside the site boundary, to annual average concentrations exceeding the limits specified in 10CFR Part 20. For members of the public who may at times be within the site boundary, the occupancy of that member of the public will usually be sufficiently low to compensate for any increase in the atmospheric diffusion factor above that for the site boundary.

TS 3.3.7.11, "Radioactive Gaseous Effluent Monitoring Instrumentation," is provided to monitor and control, as applicable, the releases of radioactive materials in gaseous effluents during actual or potential releases of gaseous effluents. The alarm setpoints for these instruments are calculated and adjusted in accordance with methodology and parameters established in the Offsite Dose Calculation Manual (ODCM). The setpoints ensure that the alarm will occur prior to exceeding the limits of 10CFR Part 20. The operability and use of this instrumentation is consistent with the requirements of General Design Criteria (GDC) 60, 63, and 64 of 10 CFR Part 50, Appendix A. In addition, the radioactive release paths of the Fuel Building Ventilation Exhaust, Main Plant Exhaust Duct, and the Radwaste Building Ventilation Exhaust contain post-accident monitors. The required detection capabilities for radioactive materials in gaseous effluent samples are tabulated in terms of the lower limits of detection (LLDs). Additional information on this system is contained in Section 11.5 of the USAR.

Regulatory Guide (RG) 1.21, "Measuring, Evaluating and Reporting Radioactivity in Solid Waste and Releases of Radioactive Materials in Liquid and Gaseous Effluents from Light-Water-Cooled Nuclear Power Plants" contains the basis for the sampling requirement. The RG provides guidance on measuring, reporting, and releasing radioactivity from plants. In the Regulatory Position discussion, the following information is included (by section):

3. Type of monitoring: The monitoring is required to demonstrate compliance with 10CFR20 limits and to permit evaluating environmental impact to the public.
5. Measurements: Measurements should be made to quantify radionuclides in continuous releases. The frequency of the measurements of radionuclides should be based on the variance from the established norms.
8. Time between collection and analysis: Analysis should be as-soon-as-practical after collection to avoid loss of short-lived radionuclides. The RG also notes that allowing the short-lived radionuclides to decay may simplify the analysis of longer-lived decay products.

RG-1.21, Appendix A, includes additional information on implementing continuous monitoring and its supporting sampling program. The information includes the guidance that sampling, "... should be performed following each refueling, process change or other occurrence that could alter the mixture of radio nuclides." The appendix also states, "... an analysis should be done following each change until it is shown that a pattern exists that can be used to predict the isotopic composition of the effluent."

NUREG-0133 provides guidance on the basis and preparation of radiological TS or in preparing a request for changes to the existing effluent TS. The methods discussed are used to

implement the requirements of 10CFR50, Appendix I. Section 3.6 of the NUREG states that the ODCM shall contain the methods and limits used to determine the doses pursuant to TS 3.11.1.2, 3.11.2.2 and 3.11.2.3 and limits established in TS 3.11.1.1 and 3.11.2.1. RBS addresses the limits and methods in similar specifications.

In the discussion on gaseous effluents, Chapter 5, the purpose of STS 3.3.3.9, (RBS TS 3.3.7.11), is described. This specification sets limits on the continuous monitoring instruments used to comply with 10CFR50 Appendix A, GDC 60, 63, and 64. The guidance for setpoint determination is provided in the ODCM. The following guidance is also included:

The alarm setpoint for each instrument listed in STS Table 3.3-12 (RBS 3.3.7.11) should be provided and should correspond to a value(s) which represents a safe margin of assurance that the instantaneous gaseous release limit of STS 3.11.2.1 will not be exceeded. The radiation monitor limits should be based on radioactive noble gaseous effluents. The spectrum of radionuclides used should be identified in plant records.

For RBS the radionuclide assumptions for the noble gas monitor setpoints are based on NUREG-0016, "Calculated Releases of Radioactive Materials and Gaseous and Liquid Effluents from a Boiling Water Reactor," Revision 1, January 1979. The chemistry samples provide for specific nuclide ratios and concentrations to calculate dose and/or dose rate for specific time intervals. Historical data for RBS indicate that NUREG-0016 mixtures provide conservative setpoints with respect to actual releases. Therefore, delayed sampling of the effluent stream does not invalidate the assumptions associated with NUREG-0016 or the setpoint of the monitors. The guidance also states that STS 3.11.2.1 implements 10CFR20. These limits are the same as in RBS TS 3.11.2.1.

The guidance listed in NUREG-0133 for TS 4.11.2 refers to Table 4.11.2.1.2-1 in the General Electric STS. The STS recommends sampling and analyzing for fission products during shutdown, startup, or other operating conditions where the potential for release of fission products exists. This "potential for release" has been determined to be a change in thermal power greater than 15% in one hour. Tritium analysis was recommended to be performed on a monthly frequency for release paths that were not from spent fuel pool storage. Otherwise, the STS recommends a weekly analysis.

As a result of this guidance, the 10CFR20 limits are protected by the ODCM which implements the 10CFR50 Appendix I program. This program results in the continuous monitoring of the effluent by TS 3.3.7.11. This monitoring and the associated calculation establishes compliance with 10CFR20 requirements. The results of the monitoring are reviewed in accordance with limits included in ODCM Section 3. Sampling effluent streams correlates the effluent reading to the actual radionuclide distribution. This correlation determines the actual dose effects of plant effluents. RG 1.21 requires that correction be made

for decay of radionuclides to ensure the sample is accurate. Due to the correction, the delay in obtaining a sample will not affect the accuracy of the correlation. Therefore, no change to the offsite effects will be created. A delay of sample analysis is neither a non-compliance with regulatory programs, nor does it result in any loss of monitoring.

River Bend Program

The ODCM (RSP-0008) provides methodology for calculating effluent offsite doses and for calculating monitoring setpoints to ensure compliance with the Radiological Effluent Technical Specifications (RETS). This program includes:

- Measurements of radioactivity in the potential pathways
- Verification of the accuracy of the effluent monitoring program
- Modeling of the pathways

The ODCM follows the guidance in NUREG-0133 and 10CFR50 Appendix I. The associated procedure identifies the gaseous release points. These points are monitored as listed in TS 3/4.11.2.1, Table 4.11.2.1.2-1. The setpoints are in accordance with TS 3.11.2.1. The distribution of noble gases is determined in accordance with samples taken.

The change to the sample requirements from any 15% (of rated) power increases to those increases over a one-hour period is consistent with the GE BWR STS. The purpose of the specification is to sample under conditions which could result in fuel failures. The 15% per hour condition is consistent with other fuel-failure-related TS, including TS 3.4.5.

A 15% increase in power is not necessarily a challenge to fuel reliability. RBS has a full core of barrier fuel which currently has no recommended ramp rate restrictions for normal operation. Non-barrier fuel typically operates with ramp rate restrictions to avoid PCI-related fuel failures. These restrictions are not dependent on rate of global thermal power increase, but on rate of local LHGR increase. As long as the applicable ramp rate restrictions are met and margins to thermal limits are monitored in accordance with TS, there is no reason to believe that operations will have challenged fuel integrity. Power and flow-dependencies on thermal limits are designed to protect the fuel at off-rated conditions. Also, thermal limits are only required to be monitored within 12 hours of a 15% power increase. It would be appropriate for the same time to be allowed for chemistry sampling.

The tritium sampling frequency change to only once per month is consistent with the generation of tritium in the reactor coolant and the STS. Tritium does not need to be evaluated after plant startup, shutdown, or power changes because the tritium concentrations in reactor coolant and other plant effluents are primarily due to neutron activation processes and ternary fission products that build up to an equilibrium concentration. This concentration does

not change appreciably during a plant startup, shutdown, or during thermal power change greater than 15% within one hour. Also, as identified in "Environmental Aspects of Nuclear Power" by Eichhols, 99% or more of fission product tritium remains within the fuel rods. With this amount contained in the fuel, any significant increase in the tritium concentration would be an indication of failed fuel which would be supported by other monitoring corroboration, including those of TS 3.4.5. These requirements are much more frequent than the monthly requirement. The samples are also taken at the most probable source of tritium production. Main plant effluent tritium data taken following plant shutdowns verifies this statement.

Compliance with Current Requirements

RBS will comply with the current requirements as allowed by the present TS. If the sampling and analysis required to be performed within one hour is not complete, the surveillance requirement will be considered in non-compliance with the operability requirements for a Limiting Condition for Operation. At that time, the ACTION requirements are applicable. The applicable TS ACTION requirement is to restore the release to within limits. If there existed indications of effluent releases in excess of the limits, the operators would take actions to reduce the release to within limits as required by the ACTION.

References

NUREG-0133, "Preparation of Radiological Effluent Technical Specifications for Nuclear Power Plants"

Regulatory Guide 1.21, "Measuring, Evaluating and Reporting Radioactivity in Solid Waste and Releases of Radioactive Materials in Liquid and Gaseous Effluents from Light-Water-Cooled Nuclear Power Plants" June 1974

10CFR Part 20

USAR Section 11.3, "Gaseous Waste Management Systems"

USAR Section 11.5, "Process and Effluent Radiological Monitoring and Sampling Systems"

NUREG-0123 Standard Technical Specifications for General Electric reactors

Final Draft of the Low Power Operating License NPF-47.

Low Power Operating License NPF-40.

Current RBS Operating License NPF-40 Technical Specifications.

Grand Gulf Nuclear Station Operating License.

Perry Station Operating License.

Clinton Power Station Operating License.

"Environmental Aspects of Nuclear Power" by Eichhols

No Significant Hazards Consideration

- 1) The request does not involve a significant increase in the probability or consequences of an accident previously evaluated.

The event of concern is the release of radiological effluents with a distribution non-conservative to that expected. This condition can result in the projected dose exceeding the limits of 10CFR20.

RG-1.21 requires monitoring of radiological releases from the plant for compliance with 10CFR20 and provides guidance on acceptable methods. NUREG-0133 provides guidance on the specification requirements to implement the RG. The RBS program, ODCM, is in compliance with this guidance as identified in the SAR Section 11.5 and accepted by the NRC in SER Section 11.5.

TS 3.3.7.11 provides the on-line monitoring for normal operation. The noble gas monitor instrument setpoints are controlled by the ODCM which uses the methodology in NUREG-0133. TS 3.11.2.1 also includes the sampling and analysis requirements to correlate the effluent radionuclides to the continuous noble gas monitor.

RG-1.21 requires corrections be made associated with decay of radionuclides. The delay in obtaining a sample will not significantly affect the determination of the radionuclides in the effluent. Therefore, a delay of the sample analysis does not result in a loss of monitoring or non-compliance with regulatory programs.

The tritium concentrations in reactor coolant and in plant effluents are primarily due to ternary fission and neutron activation processes. These concentrations build up to an equilibrium. This concentration does not change appreciably during a plant startup, shutdown, or thermal power change. Therefore, the change to the tritium sampling frequency will not significantly change the actual effluent.

Because the sampling and analysis program supports the continuous monitoring program, the change of sampling and analysis time from one hour to a longer period will not directly result in releases above 10CFR20 limits. The increase in time will not change the releases; therefore, the effects on the public will not change. The design

basis of the plant for these monitoring instruments complies with 10CFR20; therefore, the margin of safety has not significantly changed.

- 2) The request does not create the possibility of occurrence of a new or different kind of accident from any accident previously evaluated.

The continuous on-line monitoring systems are credited in the accident analysis. With this monitoring remaining in place, the response to an event will remain within the bounds of the previous analysis.

The change to the tritium sampling frequency to only once per month is consistent with the generation of tritium in the reactor coolant. Tritium does not need to be evaluated after plant startup, shutdown, or power changes because the tritium concentrations in reactor coolant and other plant effluents are primarily due to neutron fission and activation processes and build up to an equilibrium concentration. There are more reliable indications of failed fuel such as reactor coolant dose equivalent iodine and the offgas pretreatment activity monitor. With the ability to identify other events which will significantly increase the tritium in the reactor coolant, the change in the sampling frequency will not create a new event which will result in unknown tritium releases.

The change to the sample requirements to 15% rated power increases over a one-hour period is consistent with the purpose to sample under conditions which could result in fuel failures. The 15% per hour condition is consistent with other fuel failure related TS, including 3.4.5. This rate of increase is less than expected to cause significant stress and thereby, fuel failures. With the fuel design margins being maintained no new event is created.

- 3) The request does not involve a significant reduction in a margin of safety.

The event of concern is the release of radiological effluents with a distribution non-conservative to that expected. This condition can result in the projected dose exceeding the limits of 10CFR20.

The margin of safety associated with the sampling requirement is maintenance of 10CFR50 Appendix I projected dose limits. The requirements of this regulation have not been revised; therefore, the margin of safety has not been significantly affected.

The change to the sample requirements after power increases of 15% rated power, to those increases over a one-hour period is consistent with the conditions which could result in fuel failures. The 15% per hour condition is consistent with other fuel related TS, including 3.4.5. With the applicable ramp rate restrictions met and margins to thermal limits monitored in accordance with TS, the possibility that fuel integrity has been challenged is minimized. Also, the power and flow-dependencies on thermal

limits are designed to protect the fuel at off-rated conditions. These limits are only required to be monitored within 12 hours of a 15 % rated thermal power increase. The change to the thermal power rate sampling requirement will not affect the fuel margins; therefore, no significant effect on the effluent margin of safety.

The change of tritium sampling frequency to only once per month is consistent with the generation of tritium in the reactor. Tritium concentrations in reactor coolant and other plant effluents are primarily due to ternary fission and neutron activation processes and build up to an equilibrium concentration. This concentration does not change appreciably during a plant startup, shutdown, or thermal power changes. Significant increase in the tritium concentration, demonstrating fuel failure, would be indicated by other monitoring, including those of TS 3.4.5 which are much more frequent than the monthly requirement. Therefore, the change to the tritium sampling frequency does not result in a loss of monitoring ability. With the conformation of offsite effluent limits maintained, the margin of safety related to sampling is maintained.

Environmental Impact Consideration

RBS has reviewed this request against the criteria of 10CFR51.22 for environmental considerations. This regulation allows for a categorical exclusion provided that (i) the amendment involves no significant hazards consideration, (ii) there is no significant change in the amounts of any effluents that may be released offsite, and (iii) there is no significant increase in individual or commutative occupational radiation exposure.

As discussed above, the request is for change to the time required for obtaining and analyzing the required samples. This request has been determined by RBS not to involve a significant hazards consideration. The change will continue to allow for timely and accurate determination of the radiological plant effluents, and will not affect the amounts or types of effluents because a change in sampling would not affect the generation itself. The requested change would reduce the sampling requirements, therefore, would not increase the individual or commutative occupational radiation exposure.

Therefore, RBS concludes that the proposed change meets the criteria given in 10CFR51.22 (c)(9) for a categorical exclusion from the requirement for an environmental impact statement.

Revised Technical Specifications

The two requested changes to TS Table 4.11.2.1.2-1 are: 1) Move Note c from the **Sampling Frequency** to the **Type of Analysis** on Principal Gamma Emitters; and 2) within Note c, move the "one hour" from following the sample and analysis to following "15 percent of RATED THERMAL POWER." Relocating the note will only require the sampling and analysis on the principal gamma emitters from which the information is needed. The first change will also include numbering the conditions which need to be evaluated for sampling;

e.g., startup, shutdown, and a power increase. Changing the location of the one-hour time limit will remove the time restriction from the sampling and analysis allowing time to complete the analysis. This location will also limit the sampling to those power changes which should be reviewed for possible fuel leakage. The second change will remove the requirement for the tritium analysis upon startup, shutdown, or power changes. These requested changes are consistent with the GE BWR/6 STS. The requested revision to TS Table 4.11.2.1.2-1 is shown on Attachment 3.

Schedule for Attaining Compliance

As indicated above, RBS is currently in compliance with the applicable Technical Specifications. The Technical Specification revisions are requested to resolve the inability to perform the surveillance as written. RBS requests the changes become effective within 30 days of approval.

Notification of State Personnel

A copy of this amendment request has been provided to the State of Louisiana, Department of Environmental Quality - Nuclear Energy Division.

ATTACHMENT 2

DESCRIPTION OF THE TIME REQUIRED FOR SAMPLING AND ANALYSIS

Postulated Scenario and Timeline for noble gas and tritium

<u>Minutes</u>	<u>Action</u>
0000	Immediately Notified of Reactor Scram via Plant Paging System
0001	Nuclear Chemistry Technicians call the Main Control Room to find out status of Off Gas Pretreat monitor and if it increased by a factor of three.
0005	NCTs review procedures and prepare ice-bath for tritium collection.
0010	NCTs leave lab for Auxiliary Bldg.
0015	Start Noble Gas sampling.
0025	Noble Gas sampling complete, start tritium sampling, leave for lab.
0030	Start Noble Gas analysis.
0085	Noble Gas analysis complete.
0090	Tritium sampling complete, leave Aux. Bldg. with sample.
0095	Prepare tritium sample, start 10 minute dark adapt.
0115	Perform tritium analysis 20-minute count.
0135	Tritium analysis complete.
<hr/>	
2.25	Hours

Attachment 3

Proposed revisions to specification 3/4.11.2.1.

Table 4.11.2.1.2-1, present;

Gaseous Release Type	Sampling Frequency	Minimum Analysis Frequency	Type of Activity Analysis	Lower Limit of Detection (LLD) ^a (uCi/ml)
A. Main Plant Exhaust Duct	M ^c Grab Sample	M	Principal Gamma Emitters ^b ----- H-3	1x10 ⁻⁴ 1x10 ⁻⁴

Table 4.11.2.1.2-1, proposed;

A. Main Plant Exhaust Duct	M ^e Grab Sample	M	Principal Gamma Emitters ^{b,c} ----- H-3	1x10 ⁻⁴ 1x10 ⁻⁴
----------------------------	-------------------------------	---	---------------------------------------------------------	----------------------------------------------

Table 4.11.2.1.2-1 note c, present;

c - Sampling and analysis shall also be performed, within one hour following shutdown, startup, or a THERMAL POWER change exceeding 15 percent of RATED THERMAL POWER, unless (1) analysis shows that the DOSE EQUIVALENT I-131 concentration in the primary coolant has not increased more than a factor of 3 and (2) the condenser offgas noble gas activity monitor shows that offgas activity has not increased by more than a factor of 3.

Table 4.11.2.1.2-1 note c, proposed;

c - Sampling and analysis shall also be performed, ~~within one hour~~ following; 1) shutdown, 2) startup, or 3) a THERMAL POWER change exceeding 15 percent of RATED THERMAL POWER **in one hour**, unless (1) analysis shows that the DOSE EQUIVALENT I-131 concentration in the primary coolant has not increased more than a factor of 3 and (2) the condenser offgas noble gas activity monitor shows that offgas activity has not increased by more than a factor of 3.