

Constellation Energy

R.E. Ginna Nuclear Power Plant, LLC

December 6, 2004

Mr. Robert L. Clark
Office of Nuclear Regulatory Regulation
U.S. Nuclear Regulatory Commission
Attn: Document Control Desk
Washington, D.C. 20555-0001

Subject: Addendum to License Amendment Request dated March 1, 2004
R.E. Ginna Nuclear Power Plant
Docket No. 50-244

References: 1. Letter from Robert C. Mecredy (RG&E) to Robert L. Clark (NRC) dated May 21, 2003, License Amendment Request Regarding Revision of Ginna Technical Specification Sections 1.1, 3.3.6, 3.4.16, 3.6.6, 3.7.9, 5.5.10, 5.5.16, and 5.6.7 Resulting From Modification of the Control Room Emergency Air Treatment System and Change in Dose Calculation Methodology to Alternate Source Term.

2. Letter from Robert C. Mecredy (RG&E) to Robert L. Clark (NRC) dated September 30, 2003, Summary of Public Meeting Between RG&E and NRC Staff Held on August 19, 2003.

3. Letter from Robert C. Mecredy (RG&E) to Robert L. Clark (NRC) dated March 1, 2004, Addendum to License Amendment Request submitted May 21, 2003.

Dear Mr. Clark:

On May 21, 2003 Ginna submitted Reference 1 related to the Control Room Emergency Air Treatment System (CREATS) modification and conversion to Alternate Source Term (AST). Included in that submittal were proposed Technical Specification (TS) amendments for the new CREATS and related issues. Subsequent to that submittal, Ginna committed to resubmit the appropriate TS sections (Reference 2) upon approval of Tech Spec Task Force (TSTF)-448. After a significant period of time, it became apparent that TSTF-448 approval was not forthcoming. Per phone conversations with your staff, Ginna resubmitted the appropriate TS sections (Reference 3) per the guidance in Regulatory Guide (RG) 1.196, Appendix B. Subsequent to that submittal, Ginna and the NRC Staff discussed the submittal of a License Amendment which did not reference RG 1.196. Attachment 1 to this letter contains a revised submittal reflecting those discussions, and should be considered an addendum to Reference 3.

1001203

Very truly yours,

Joseph A. Widay
Joseph A. Widay

STATE OF NEW YORK :
: TO WIT:
COUNTY OF WAYNE :

I, Joseph A. Widay, being duly sworn, state that I am Acting Vice President – R.E. Ginna Nuclear Power Plant, LLC (Ginna LLC), and that I am duly authorized to execute and file this response on behalf of Ginna LLC. To the best of my knowledge and belief, the statements contained in this document are true and correct. To the extent that these statements are not based on my personal knowledge, they are based upon information provided by other Ginna LLC employees and/or consultants. Such information has been reviewed in accordance with company practice and I believe it to be reliable.

Joseph A. Widay

Subscribed and sworn before me, a Notary Public in and for the State of New York and County of MONROE, this 6th day of December, 2004.

WITNESS my Hand and Notarial Seal:

Michalene A. Bunts
Notary Public

My Commission Expires:

Jan. 11, 2007
Date

MICHAELNE A BUNTS
Notary Public, State of New York
Registration No. 01BU6018576
Monroe County
Commission Expires Jan 11, 2007

Attachments:

1. Revised Submittal – Tech Spec Section 3.7.9, 5.5.10, and Removal of Sections 5.5.16 and 5.6.7 Previously Proposed in Reference 3.

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Attachment 1

Revised Submittal

**Tech Spec Section 3.7.9, 5.5.10, and Removal of Sections 5.5.16 and 5.6.7 Previously
Proposed in Reference 3.**

Marked-up Sections

3.7 PLANT SYSTEMS

3.7.9 Control Room Emergency Air Treatment System (CREATS)

LCO 3.7.9

TWO TRAINS
The CREATS shall be OPERABLE.

APPLICABILITY: MODES 1, 2, 3, and 4,
During movement of irradiated fuel assemblies,
During CORE ALTERATIONS.

ACTIONS

CONDITION	REQUIRED ACTION	COMPLETION TIME
<p>A. <u>ONE</u> CREATS filtration train inoperable.</p>	<p>A.1 Restore CREATS filtration train to OPERABLE status.</p> <p>OR</p> <p>A.2</p> <p>- NOTE - The control room may be unisolated for ≤ 1 hour every 24 hours while in this condition.</p> <p>Place isolation dampers in CREATS Mode F.</p>	<p>48 hours \leftarrow <u>7 Days</u></p> <p>48 hours</p>
<p>B.</p> <p>- NOTE - Separate Condition entry allowed for each damper.</p> <p>One CREATS isolation damper in one or more outside air flowpaths inoperable.</p>	<p>B.1 Restore isolation damper to OPERABLE status.</p>	<p>7 days</p>

CONDITION	REQUIRED ACTION	COMPLETION TIME
B C. Required Action and associated Completion Time of Condition A or B not met in MODE 1, 2, 3, or 4.	B C.1 Be in MODE 3.	6 hours
	AND B C.2 Be in MODE 5.	36 hours
C D. Required Action and associated Completion Time of Condition A or B not met during movement of irradiated fuel or during CORE ALTERATIONS.	D.1 Place OPERABLE isolation damper(s) in CREATS Mode F.	Immediately
	OR C.1 D.2.1 Suspend CORE ALTERATIONS.	Immediately
	AND C.2 D.2.2 Suspend movement of irradiated fuel assemblies.	Immediately
D E. Two CREATS isolation dampers for one or more outside air flow paths inoperable in MODE 1, 2, 3, or 4.	D E.1 Enter LCO 3.0.3.	Immediately
E F. Two CREATS isolation dampers for one or more outside air flow paths inoperable during movement of irradiated fuel assemblies or during CORE ALTERATIONS.	E F.1 Suspend CORE ALTERATIONS.	Immediately
	AND E F.2 Suspend movement of irradiated fuel assemblies.	Immediately

SURVEILLANCE REQUIREMENTS

SURVEILLANCE		FREQUENCY
SR 3.7.9.1	Operate the CREATS filtration train \geq 15 minutes.	31 days
<i>each</i> SR 3.7.9.2	Perform required CREATS filter testing in accordance with the Ventilation Filter Testing Program (VFTP).	In accordance with VFTP
SR 3.7.9.3	Verify the CREATS actuates on an actual or simulated actuation signal. <i>train</i>	24 months

5.0 ADMINISTRATIVE CONTROLS

5.5 Programs and Manuals

The following programs and manuals shall be established, implemented, and maintained.

5.5.1 Offsite Dose Calculation Manual (ODCM)

The ODCM shall contain:

- a. The methodology and parameters used in the calculation of offsite doses resulting from radioactive gaseous and liquid effluents, in the calculation of gaseous and liquid effluent monitoring alarm and trip setpoints, and in the conduct of the radiological environmental monitoring program; and
- b. The radioactive effluent controls and radiological environmental monitoring activities and descriptions of the information that should be included in the Annual Radiological Environmental Operating and Radioactive Effluent Release Reports.

Licensee initiated changes to the ODCM:

- a. Shall be documented and records of reviews performed shall be retained. This documentation shall contain:
 - 1. sufficient information to support the change(s) together with the appropriate analyses or evaluations justifying the change(s),
 - 2. a determination that the change(s) maintain the levels of radioactive effluent control required by 10 CFR 20.1302, 40 CFR 190, 10 CFR 50.36a, and 10 CFR 50, Appendix I, and does not adversely impact the accuracy or reliability of effluent, dose, or setpoint calculations;
- b. Shall become effective after review and acceptance by the onsite review function and the approval of the plant manager; and
- c. Shall be submitted to the NRC in the form of a complete, legible copy of the entire ODCM as a part of or concurrent with the Radioactive Effluent Release Report for the period of the report in which any change in the ODCM was made. Each change shall be identified by markings in the margin of the affected pages, clearly indicating the area of the page that was changed, and shall indicate the date (i.e., month and year) the change was implemented.

5.5.2

Primary Coolant Sources Outside Containment Program

This program provides controls to minimize leakage from those portions of systems outside containment that could contain highly radioactive fluids during a serious transient or accident. The systems include Containment Spray, Safety Injection, and Residual Heat Removal in the recirculation configuration. The program shall include the following:

- a. Preventive maintenance and periodic visual inspection requirements; and
- b. Integrated leak test requirements for each system at refueling cycle intervals or less.

5.5.3

Deleted

5.5.4

Radioactive Effluent Controls Program

This program conforms to 10 CFR 50.36a for the control of radioactive effluents and for maintaining the doses to members of the public from radioactive effluents as low as reasonably achievable. The program shall be contained in the ODCM, shall be implemented by procedures, and shall include remedial actions to be taken whenever the program limits are exceeded. The program shall include the following elements:

- a. Limitations on the functional capability of radioactive liquid and gaseous monitoring instrumentation including surveillance tests and setpoint determination in accordance with the methodology in the ODCM;
- b. Limitations on the concentrations of radioactive material released in liquid effluents to unrestricted areas, conforming to ten times the concentration values in 10 CFR 20, Appendix B, Table 2, Column 2;
- c. Monitoring, sampling, and analysis of radioactive liquid and gaseous effluents in accordance with 10 CFR 20.1302 and with the methodology and parameters in the ODCM;
- d. Limitations on the annual and quarterly doses or dose commitment to a member of the public from radioactive materials in liquid effluents released from the plant to unrestricted areas, conforming to 10 CFR 50, Appendix I and 40 CFR 141;
- e. Determination of cumulative and projected dose contributions from radioactive effluents for the current calendar quarter and current calendar year in accordance with the methodology and parameters in the ODCM at least every 31 days;

- f. Limitations on the functional capability and use of the liquid and gaseous effluent treatment systems to ensure that appropriate portions of these systems are used to reduce releases of radioactivity when the projected doses in a period of 31 days would exceed 2% of the guidelines for the annual dose or dose commitment, conforming to 10 CFR 50, Appendix I;
- g. Limitations on the dose rate resulting from radioactive material released in gaseous effluents to areas beyond the site boundary conforming to the dose associated with 10 CFR 20, Appendix B, Table 2, Column 1;
- h. Limitations on the annual and quarterly air doses resulting from noble gases released in gaseous effluents from the plant to areas beyond the site boundary, conforming to 10 CFR 50, Appendix I;
- i. Limitations on the annual and quarterly doses to a member of the public from iodine-131, iodine-133, tritium, and all radionuclides in particulate form with half lives > 8 days in gaseous effluents released from the plant to areas beyond the site boundary, conforming to 10 CFR 50, Appendix I; and
- j. Limitations on the annual dose or dose commitment to any member of the public due to releases of radioactivity and to radiation from uranium fuel cycle sources, conforming to 40 CFR 190.

5.5.5

Component Cyclic or Transient Limit Program

This program provides controls to track the reactor coolant system cyclic and transient occurrences specified in UFSAR Table 5.1-4 to ensure that components are maintained within the design limits.

5.5.6

Pre-Stressed Concrete Containment Tendon Surveillance Program

This program provides controls for monitoring any tendon degradation in pre-stressed concrete containments, including effectiveness of its corrosion protection medium, to ensure containment structural integrity. The Tendon Surveillance Program, inspection frequencies, and acceptance criteria shall be in accordance with Regulatory Guide 1.35, Revision 2.

The provisions of SR 3.0.2 and SR 3.0.3 are applicable to the Tendon Surveillance Program inspection frequencies.

5.5.7

Inservice Testing Program

This program provides controls for inservice testing of ASME Code Class 1, 2, and 3 components including applicable supports. The program shall include the following:

- a. Testing frequencies specified in Section XI of the ASME Boiler and Pressure Vessel Code and applicable Addenda as follows:

<u>ASME Boiler and Pressure Vessel Code and applicable Addenda terminology for inservice testing activities</u>	<u>Required Frequencies for performing inservice testing activities</u>
Weekly	At least once per 7 days
Monthly	At least once per 31 days
Quarterly or every 3 months	At least once per 92 days
Semiannually or every 6 months	At least once per 184 days
Every 9 months	At least once per 276 days
Yearly or annually	At least once per 366 days
Biennially or every 2 years	At least once per 731 days

- b. The provisions of SR 3.0.2 are applicable to the above required Frequencies for performing inservice testing activities;
- c. The provisions of SR 3.0.3 are applicable to inservice testing activities; and
- d. Nothing in the ASME Boiler and Pressure Vessel Code shall be construed to supersede the requirements of any Technical Specification.

5.5.8

Steam Generator (SG) Tube Surveillance Program

Each SG shall be demonstrated OPERABLE by performance of an inservice inspection program in accordance with the Nuclear Policy Manual. This inspection program shall define the specific requirements of the edition and Addenda of the ASME Boiler and Pressure Code, Section XI, as required by 10 CFR 50.55a(g). The program shall include the following:

- a. The inspection intervals for SG tubes shall be specified in the Inservice Inspection Program.

- b. SG tubes that have imperfections > 40% through wall, as indicated by eddy current, shall be repaired by plugging or sleeving.
- c. SG sleeves that have imperfections > 30% through wall, as indicated by eddy current, shall be repaired by plugging.

5.5.9

Secondary Water Chemistry Program

This program provides controls for monitoring secondary water chemistry to inhibit SG tube degradation. This program shall include:

- a. Identification of a sampling schedule for the critical variables and control points for these variables;
- b. Identification of the procedures used to measure the values of the critical variables;
- c. Identification of process sampling points;
- d. Procedures for the recording and management of data;
- e. Procedures defining corrective actions for all off control point chemistry conditions; and
- f. A procedure identifying the authority responsible for the interpretation of the data and the sequence and timing of administrative events, which is required to initiate corrective action.

5.5.10

Ventilation Filter Testing Program (VFTP)

A program shall be established to implement the following required testing of Engineered Safety Feature filter ventilation systems and the Spent Fuel Pool (SFP) Charcoal Adsorber System. The test frequencies will be in accordance with Regulatory Guide 1.52, Revision 2, except that in lieu of 18 month test intervals, a 24 month interval will be implemented. The test methods will be in accordance with Regulatory Guide 1.52, Revision 2, except as modified below.

~~a. Containment Post-Accident Charcoal System~~

- ~~1. Demonstrate the pressure drop across the charcoal adsorber bank is < 3 inches of water at a design flow rate ($\pm 10\%$).~~
- ~~2. Demonstrate that an in-place Freon test of the charcoal adsorber bank shows a penetration and system bypass < 1.0%, when tested under ambient conditions.~~

- ~~3. Demonstrate that a laboratory test of a sample of the charcoal adsorber, when obtained as described in Regulatory Guide 1.52, Revision 2, shows a methyl iodide penetration of less than 14.5% when tested in accordance with ASTM D3803-1989 at a test temperature of 30°C (86°F) and a relative humidity of 95%.~~

a.x. Containment Recirculation Fan Cooler System

1. Demonstrate the pressure drop across the high efficiency particulate air (HEPA) filter bank is < 3 inches of water at a design flow rate ($\pm 10\%$).
2. Demonstrate that an in-place dioctylphthalate (DOP) test of the HEPA filter bank shows a penetration and system bypass < 1.0%.

b.x. Control Room Emergency Air Treatment System (CREATS)

Combined HEPA filters, the prefilters, the charcoal adsorbers, and the post filters

1. Demonstrate the pressure drop across the HEPA filter bank is < 3 inches of water at a design flow rate ($\pm 10\%$).
2. Demonstrate that an in-place DOP test of the HEPA filter bank shows a penetration and system bypass < 1.0%.
- ~~3. Demonstrate the pressure drop across the charcoal adsorber bank is < 3 inches of water at a design flow rate ($\pm 10\%$).~~

* Value to be determined during initial testing of the system and forwarded to the staff for approval. A typed copy of this page will be provided at that time.

3. Demonstrate that an in-place Freon test of the charcoal adsorber bank shows a penetration and system bypass < 1.0%, when tested under ambient conditions.
4. Demonstrate that a laboratory test of a sample of the charcoal adsorber, when obtained as described in Regulatory Guide 1.52, Revision 2, shows a methyl iodide penetration of less than 14.5% when tested in accordance with ASTM D3803-1989 at a test temperature of 30°C (86°F) and a relative humidity of 95%.

c.x. SFP Charcoal Adsorber System

1. Demonstrate that the total air flow rate from the charcoal adsorbers shows at least 75% of that measured with a complete set of new adsorbers.
2. Demonstrate that an in-place Freon test of the charcoal adsorbers bank shows a penetration and system bypass < 1.0%, when tested under ambient conditions.

3. Demonstrate that a laboratory test of a sample of the charcoal adsorber, when obtained as described in Regulatory Guide 1.52, Revision 2, shows a methyl iodide penetration of less than 14.5% when tested in accordance with ASTM D3803-1989 at a test temperature of 30°C (86°F) and a relative humidity of 95%.

The provisions of SR 3.0.2 and SR 3.0.3 are applicable to the VFTP frequencies.

5.5.11

Explosive Gas and Storage Tank Radioactivity Monitoring Program

This program provides controls for potentially explosive gas mixtures contained in the waste gas decay tanks and the quantity of radioactivity contained in waste gas decay tanks. The gaseous radioactivity quantities shall be determined following the methodology in NUREG-0133.

The program shall include:

- a. The limits for concentrations of hydrogen and oxygen in the waste gas decay tanks and a surveillance program to ensure the limits are maintained. Such limits shall be appropriate to the system's design criteria (i.e., whether or not the system is designed to withstand a hydrogen explosion); and
- b. A surveillance program to ensure that the quantity of radioactivity contained in each waste gas decay tank is less than the amount that would result in a whole body exposure of ≥ 0.5 rem to any individual in an unrestricted area, in the event of an uncontrolled release of the tanks' contents.

The provisions of SR 3.0.2 and SR 3.0.3 are applicable to the Explosive Gas and Storage Tank Radioactivity Monitoring Program surveillance frequencies.

5.5.12

Diesel Fuel Oil Testing Program

A diesel fuel oil testing program to implement required testing of both new fuel oil and stored fuel oil shall be established. The program shall include sampling and testing requirements, and acceptance criteria, all in accordance with applicable ASTM Standards. The purpose of the program is to establish the following:

- a. Acceptability of new fuel oil for use prior to addition to storage tanks by determining that the fuel oil has:
 1. an API gravity or an absolute specific gravity within limits,

2. a flash point and kinematic viscosity within limits for ASTM 2D fuel oil, and
 3. a clear and bright appearance with proper color; and
- b. Within 31 days following addition of the new fuel to the storage tanks, verify that the properties of the new fuel oil, other than those addressed in a. above, are within limits for ASTM 2D fuel oil.

5.5.13

Technical Specifications (TS) Bases Control Program

This program provides a means for processing changes to the Bases of these Technical Specifications.

- a. Changes to the Bases of the TS shall be made under appropriate administrative controls and reviews.
- b. Licensees may make changes to Bases without prior NRC approval provided the changes do not require either of the following:
 1. A change in the TS incorporated in the license; or
 2. A change to the UFSAR or Bases that requires NRC approval pursuant to 10 CFR 50.59.
- c. The Bases Control Program shall contain provisions to ensure that the Bases are maintained consistent with the UFSAR.
- d. Proposed changes that meet the criteria of Specification 5.5.13.b.1 or Specification 5.5.13.b.2 shall be reviewed and approved by the NRC prior to implementation. Changes to the Bases implemented without prior NRC approval shall be provided to the NRC on a frequency consistent with 10 CFR 50.71e.

5.5.14

Safety Function Determination Program (SFDP)

This program ensures loss of safety function is detected and appropriate actions taken. Upon entry into LCO 3.0.6, an evaluation shall be made to determine if loss of safety function exists. Additionally, other appropriate actions may be taken as a result of the support system inoperability and corresponding exception to entering supported system Condition and Required Actions. This program implements the requirements of LCO 3.0.6. The SFDP shall contain the following:

- a. Provisions for cross train checks to ensure a loss of the capability to perform the safety function assumed in the accident analysis does not go undetected;

- b. Provisions for ensuring the plant is maintained in a safe condition if a loss of function condition exists;
- c. Provisions to ensure that an inoperable supported system's Completion Time is not inappropriately extended as a result of multiple support system inoperabilities; and
- d. Other appropriate limitations and remedial or compensatory actions.

A loss of safety function exists when, assuming no concurrent single failure, a safety function assumed in the accident analysis cannot be performed. For the purpose of this program, a loss of safety function may exist when a support system is inoperable, and:

- a. A required system redundant to the supported system(s) is also inoperable; or
- b. A required system redundant to the system(s) in turn supported by the inoperable supported system is also inoperable; or
- c. A required system redundant to the inoperable support system(s) for the supported systems (a) and (b) above is also inoperable.

The SFDP identifies where a loss of safety function exists. If a loss of safety function is determined to exist by this program, the appropriate Conditions and Required Actions of the LCO in which the loss of safety function exists are required to be entered.

5.5.15

Containment Leakage Rate Testing Program

A program shall be established to implement the leakage rate testing of the containment as required by 10 CFR 50.54(o) and 10 CFR 50, Appendix J, Option B, as modified by approved exemptions. This program shall be in accordance with the guidelines contained in Regulatory Guide 1.163, "Performance-Based Containment Leak-Test Program," dated September 1995.

The peak calculated containment internal pressure for the design basis loss of coolant accident, P_a , is 60 psig.

The maximum allowable primary containment leakage rate, L_a , at P_a , shall be 0.2% of containment air weight per day.

Leakage Rate acceptance criteria are:

- a. Containment leakage rate acceptance criterion is $\leq 1.0 L_a$. During the first plant startup following testing in accordance with this program, the leakage rate acceptance criteria are $\leq 0.60 L_a$ for the Type B and Type C tests and $\leq 0.75 L_a$ for Type A tests;
- b. Air lock testing acceptance criteria are:
 - 1. For each air lock, overall leakage rate is $\leq 0.05 L_a$ when tested at $\geq P_a$, and
 - 2. For each door, leakage rate is $\leq 0.01 L_a$ when tested at $\geq P_a$.
- c. Mini-purge valve acceptance criteria is $\leq 0.05 L_a$ when tested at $\geq P_a$.

The provisions of SR 3.0.2 do not apply to the test frequencies specified in the Containment Leakage Rate Testing Program.

The provisions of SR 3.0.3 do not apply to the test frequencies specified in the Containment Leakage Rate Testing Program.

Delete new sections 5.5.16 and 5.6.7 proposed in Reference 3

Typed Sections

Note: The typed page 5.5-6 will be resubmitted when the value associated with 5.5.10.b.1 is determined during system operational testing.

3.7 PLANT SYSTEMS

3.7.9 Control Room Emergency Air Treatment System (CREATS)

LCO 3.7.9 Two CREATS Trains shall be OPERABLE.

APPLICABILITY: MODES 1, 2, 3, and 4,
During movement of irradiated fuel assemblies,
During CORE ALTERATIONS.

ACTIONS

CONDITION	REQUIRED ACTION	COMPLETION TIME
A. One CREATS train inoperable.	A.1 Restore CREATS train to OPERABLE status.	7 days
B. Required Action and associated Completion Time of Condition A not met in MODE 1, 2, 3, or 4.	B.1 Be in MODE 3. <u>AND</u>	6 hours
	B.2 Be in MODE 5.	36 hours
C. Required Action and associated Completion Time of Condition A not met during movement of irradiated fuel or during CORE ALTERATIONS.	C.1 Suspend CORE ALTERATIONS. <u>AND</u>	Immediately
	C.2 Suspend movement of irradiated fuel assemblies.	Immediately
D. Two CREATS trains inoperable in MODE 1, 2, 3, or 4.	D.1 Enter LCO 3.0.3.	Immediately
E. Two CREATS trains inoperable during movement of irradiated fuel assemblies or during CORE ALTERATIONS.	E.1 Suspend CORE ALTERATIONS. <u>AND</u>	Immediately
	E.2 Suspend movement of irradiated fuel assemblies.	Immediately

SURVEILLANCE REQUIREMENTS

SURVEILLANCE		FREQUENCY
SR 3.7.9.1	Operate each CREATS filtration train \geq 15 minutes.	31 days
SR 3.7.9.2	Perform required CREATS filter testing in accordance with the Ventilation Filter Testing Program (VFTP).	In accordance with VFTP
SR 3.7.9.3	Verify each CREATS train actuates on an actual or simulated actuation signal.	24 months

5.0 ADMINISTRATIVE CONTROLS

5.5 Programs and Manuals

The following programs and manuals shall be established, implemented, and maintained.

5.5.1 Offsite Dose Calculation Manual (ODCM)

The ODCM shall contain:

- a. The methodology and parameters used in the calculation of offsite doses resulting from radioactive gaseous and liquid effluents, in the calculation of gaseous and liquid effluent monitoring alarm and trip setpoints, and in the conduct of the radiological environmental monitoring program; and
- b. The radioactive effluent controls and radiological environmental monitoring activities and descriptions of the information that should be included in the Annual Radiological Environmental Operating and Radioactive Effluent Release Reports.

Licensee initiated changes to the ODCM:

- a. Shall be documented and records of reviews performed shall be retained. This documentation shall contain:
 - 1. sufficient information to support the change(s) together with the appropriate analyses or evaluations justifying the change(s),
 - 2. a determination that the change(s) maintain the levels of radioactive effluent control required by 10 CFR 20.1302, 40 CFR 190, 10 CFR 50.36a, and 10 CFR 50, Appendix I, and does not adversely impact the accuracy or reliability of effluent, dose, or setpoint calculations;
- b. Shall become effective after review and acceptance by the onsite review function and the approval of the plant manager; and
- c. Shall be submitted to the NRC in the form of a complete, legible copy of the entire ODCM as a part of or concurrent with the Radioactive Effluent Release Report for the period of the report in which any change in the ODCM was made. Each change shall be identified by markings in the margin of the affected pages, clearly indicating the area of the page that was changed, and shall indicate the date (i.e., month and year) the change was implemented.

5.5.2 Primary Coolant Sources Outside Containment Program

This program provides controls to minimize leakage from those portions of systems outside containment that could contain highly radioactive fluids during a serious transient or accident. The systems include Containment Spray, Safety Injection, and Residual Heat Removal in the recirculation configuration. The program shall include the following:

- a. Preventive maintenance and periodic visual inspection requirements; and
- b. Integrated leak test requirements for each system at refueling cycle intervals or less.

5.5.3 Deleted

5.5.4 Radioactive Effluent Controls Program

This program conforms to 10 CFR 50.36a for the control of radioactive effluents and for maintaining the doses to members of the public from radioactive effluents as low as reasonably achievable. The program shall be contained in the ODCM, shall be implemented by procedures, and shall include remedial actions to be taken whenever the program limits are exceeded. The program shall include the following elements:

- a. Limitations on the functional capability of radioactive liquid and gaseous monitoring instrumentation including surveillance tests and setpoint determination in accordance with the methodology in the ODCM;
- b. Limitations on the concentrations of radioactive material released in liquid effluents to unrestricted areas, conforming to ten times the concentration values in 10 CFR 20, Appendix B, Table 2, Column 2;
- c. Monitoring, sampling, and analysis of radioactive liquid and gaseous effluents in accordance with 10 CFR 20.1302 and with the methodology and parameters in the ODCM;
- d. Limitations on the annual and quarterly doses or dose commitment to a member of the public from radioactive materials in liquid effluents released from the plant to unrestricted areas, conforming to 10 CFR 50, Appendix I and 40 CFR 141;
- e. Determination of cumulative and projected dose contributions from radioactive effluents for the current calendar quarter and current calendar year in accordance with the methodology and parameters in the ODCM at least every 31 days;

- f. Limitations on the functional capability and use of the liquid and gaseous effluent treatment systems to ensure that appropriate portions of these systems are used to reduce releases of radioactivity when the projected doses in a period of 31 days would exceed 2% of the guidelines for the annual dose or dose commitment, conforming to 10 CFR 50, Appendix I;
- g. Limitations on the dose rate resulting from radioactive material released in gaseous effluents to areas beyond the site boundary conforming to the dose associated with 10 CFR 20, Appendix B, Table 2, Column 1;
- h. Limitations on the annual and quarterly air doses resulting from noble gases released in gaseous effluents from the plant to areas beyond the site boundary, conforming to 10 CFR 50, Appendix I;
- i. Limitations on the annual and quarterly doses to a member of the public from iodine-131, iodine-133, tritium, and all radionuclides in particulate form with half lives > 8 days in gaseous effluents released from the plant to areas beyond the site boundary, conforming to 10 CFR 50, Appendix I; and
- j. Limitations on the annual dose or dose commitment to any member of the public due to releases of radioactivity and to radiation from uranium fuel cycle sources, conforming to 40 CFR 190.

5.5.5

Component Cyclic or Transient Limit Program

This program provides controls to track the reactor coolant system cyclic and transient occurrences specified in UFSAR Table 5.1-4 to ensure that components are maintained within the design limits.

5.5.6

Pre-Stressed Concrete Containment Tendon Surveillance Program

This program provides controls for monitoring any tendon degradation in pre-stressed concrete containments, including effectiveness of its corrosion protection medium, to ensure containment structural integrity. The Tendon Surveillance Program, inspection frequencies, and acceptance criteria shall be in accordance with Regulatory Guide 1.35, Revision 2.

The provisions of SR 3.0.2 and SR 3.0.3 are applicable to the Tendon Surveillance Program inspection frequencies.

5.5.7

Inservice Testing Program

This program provides controls for inservice testing of ASME Code Class 1, 2, and 3 components including applicable supports. The program shall include the following:

- a. Testing frequencies specified in Section XI of the ASME Boiler and Pressure Vessel Code and applicable Addenda as follows:

<u>ASME Boiler and Pressure Vessel Code and applicable Addenda terminology for inservice testing activities</u>	<u>Required Frequencies for performing inservice testing activities</u>
Weekly	At least once per 7 days
Monthly	At least once per 31 days
Quarterly or every 3 months	At least once per 92 days
Semiannually or every 6 months	At least once per 184 days
Every 9 months	At least once per 276 days
Yearly or annually	At least once per 366 days
Biennially or every 2 years	At least once per 731 days

- b. The provisions of SR 3.0.2 are applicable to the above required Frequencies for performing inservice testing activities;
- c. The provisions of SR 3.0.3 are applicable to inservice testing activities; and
- d. Nothing in the ASME Boiler and Pressure Vessel Code shall be construed to supersede the requirements of any Technical Specification.

5.5.8

Steam Generator (SG) Tube Surveillance Program

Each SG shall be demonstrated OPERABLE by performance of an inservice inspection program in accordance with the Nuclear Policy Manual. This inspection program shall define the specific requirements of the edition and Addenda of the ASME Boiler and Pressure Code, Section XI, as required by 10 CFR 50.55a(g). The program shall include the following:

- a. The inspection intervals for SG tubes shall be specified in the Inservice Inspection Program.

- b. SG tubes that have imperfections > 40% through wall, as indicated by eddy current, shall be repaired by plugging or sleeving.
- c. SG sleeves that have imperfections > 30% through wall, as indicated by eddy current, shall be repaired by plugging.

5.5.9

Secondary Water Chemistry Program

This program provides controls for monitoring secondary water chemistry to inhibit SG tube degradation. This program shall include:

- a. Identification of a sampling schedule for the critical variables and control points for these variables;
- b. Identification of the procedures used to measure the values of the critical variables;
- c. Identification of process sampling points;
- d. Procedures for the recording and management of data;
- e. Procedures defining corrective actions for all off control point chemistry conditions; and
- f. A procedure identifying the authority responsible for the interpretation of the data and the sequence and timing of administrative events, which is required to initiate corrective action.

5.5.10

Ventilation Filter Testing Program (VFTP)

A program shall be established to implement the following required testing of Engineered Safety Feature filter ventilation systems and the Spent Fuel Pool (SFP) Charcoal Adsorber System. The test frequencies will be in accordance with Regulatory Guide 1.52, Revision 2, except that in lieu of 18 month test intervals, a 24 month interval will be implemented. The test methods will be in accordance with Regulatory Guide 1.52, Revision 2, except as modified below.

- a. Containment Recirculation Fan Cooler System
 - 1. Demonstrate the pressure drop across the high efficiency particulate air (HEPA) filter bank is < 3 inches of water at a design flow rate ($\pm 10\%$).
 - 2. Demonstrate that an in-place dioctylphthalate (DOP) test of the HEPA filter bank shows a penetration and system bypass < 1.0%.

- b. Control Room Emergency Air Treatment System (CREATS)
 - 1. Demonstrate the pressure drop across the combined HEPA filters, the prefilters, the charcoal adsorbers and the post-filters is $< [\quad]$ inches of water at a design flow rate ($\pm 10\%$).
 - 2. Demonstrate that an in-place DOP test of the HEPA filter bank shows a penetration and system bypass $< 0.05\%$.
 - 3. Demonstrate that an in-place Freon test of the charcoal adsorber bank shows a penetration and system bypass $< 0.05\%$, when tested under ambient conditions.
 - 4. Demonstrate that a laboratory test of a sample of the charcoal adsorber, when obtained as described in Regulatory Guide 1.52, Revision 2, shows a methyl iodide penetration of less than 2.5% when tested in accordance with ASTM D3803-1989 at a test temperature of 30°C (86°F) and a relative humidity of 95%.
- c. SFP Charcoal Adsorber System
 - 1. Demonstrate that the total air flow rate from the charcoal adsorbers shows at least 75% of that measured with a complete set of new adsorbers.
 - 2. Demonstrate that an in-place Freon test of the charcoal adsorbers bank shows a penetration and system bypass $< 1.0\%$, when tested under ambient conditions.
 - 3. Demonstrate that a laboratory test of a sample of the charcoal adsorber, when obtained as described in Regulatory Guide 1.52, Revision 2, shows a methyl iodide penetration of less than 14.5% when tested in accordance with ASTM D3803-1989 at a test temperature of 30°C (86°F) and a relative humidity of 95%.

The provisions of SR 3.0.2 and SR 3.0.3 are applicable to the VFTP frequencies.

5.5.11

Explosive Gas and Storage Tank Radioactivity Monitoring Program

This program provides controls for potentially explosive gas mixtures contained in the waste gas decay tanks and the quantity of radioactivity contained in waste gas decay tanks. The gaseous radioactivity quantities shall be determined following the methodology in NU REG-0133.

The program shall include:

- a. The limits for concentrations of hydrogen and oxygen in the waste gas decay tanks and a surveillance program to ensure the limits are maintained. Such limits shall be appropriate to the system's design criteria (i.e., whether or not the system is designed to withstand a hydrogen explosion); and
- b. A surveillance program to ensure that the quantity of radioactivity contained in each waste gas decay tank is less than the amount that would result in a whole body exposure of ≥ 0.5 rem to any individual in an unrestricted area, in the event of an uncontrolled release of the tanks' contents.

The provisions of SR 3.0.2 and SR 3.0.3 are applicable to the Explosive Gas and Storage Tank Radioactivity Monitoring Program surveillance frequencies.

5.5.12

Diesel Fuel Oil Testing Program

A diesel fuel oil testing program to implement required testing of both new fuel oil and stored fuel oil shall be established. The program shall include sampling and testing requirements, and acceptance criteria, all in accordance with applicable ASTM Standards. The purpose of the program is to establish the following:

- a. Acceptability of new fuel oil for use prior to addition to storage tanks by determining that the fuel oil has:
 - 1. an API gravity or an absolute specific gravity within limits,
 - 2. a flash point and kinematic viscosity within limits for ASTM 2D fuel oil, and
 - 3. a clear and bright appearance with proper color; and
- b. Within 31 days following addition of the new fuel to the storage tanks, verify that the properties of the new fuel oil, other than those addressed in a. above, are within limits for ASTM 2D fuel oil.

5.5.13

Technical Specifications (TS) Bases Control Program

This program provides a means for processing changes to the Bases of these Technical Specifications.

- a. Changes to the Bases of the TS shall be made under appropriate administrative controls and reviews.
- b. Licensees may make changes to Bases without prior NRC approval provided the changes do not require either of the following:

1. A change in the TS incorporated in the license; or
 2. A change to the UFSAR or Bases that requires NRC approval pursuant to 10 CFR 50.59.
- c. The Bases Control Program shall contain provisions to ensure that the Bases are maintained consistent with the UFSAR.
 - d. Proposed changes that meet the criteria of Specification 5.5.13.b.1 or Specification 5.5.13.b.2 shall be reviewed and approved by the NRC prior to implementation. Changes to the Bases implemented without prior NRC approval shall be provided to the NRC on a frequency consistent with 10 CFR 50.71e.

5.5.14

Safety Function Determination Program (SFDP)

This program ensures loss of safety function is detected and appropriate actions taken. Upon entry into LCO 3.0.6, an evaluation shall be made to determine if loss of safety function exists. Additionally, other appropriate actions may be taken as a result of the support system inoperability and corresponding exception to entering supported system Condition and Required Actions. This program implements the requirements of LCO 3.0.6. The SFDP shall contain the following:

- a. Provisions for cross train checks to ensure a loss of the capability to perform the safety function assumed in the accident analysis does not go undetected;
- b. Provisions for ensuring the plant is maintained in a safe condition if a loss of function condition exists;
- c. Provisions to ensure that an inoperable supported system's Completion Time is not inappropriately extended as a result of multiple support system inoperabilities; and
- d. Other appropriate limitations and remedial or compensatory actions.

A loss of safety function exists when, assuming no concurrent single failure, a safety function assumed in the accident analysis cannot be performed. For the purpose of this program, a loss of safety function may exist when a support system is inoperable, and:

- a. A required system redundant to the supported system(s) is also inoperable; or
- b. A required system redundant to the system(s) in turn supported by the inoperable supported system is also inoperable; or

- c. A required system redundant to the inoperable support system(s) for the supported systems (a) and (b) above is also inoperable.

The SFDP identifies where a loss of safety function exists. If a loss of safety function is determined to exist by this program, the appropriate Conditions and Required Actions of the LCO in which the loss of safety function exists are required to be entered.

5.5.15

Containment Leakage Rate Testing Program

A program shall be established to implement the leakage rate testing of the containment as required by 10 CFR 50.54(o) and 10 CFR 50, Appendix J, Option B, as modified by approved exemptions. This program shall be in accordance with the guidelines contained in Regulatory Guide 1.163, "Performance-Based Containment Leak-Test Program," dated September 1995.

The peak calculated containment internal pressure for the design basis loss of coolant accident, P_a , is 60 psig.

The maximum allowable primary containment leakage rate, L_a , at P_a , shall be 0.2% of containment air weight per day.

Leakage Rate acceptance criteria are:

- a. Containment leakage rate acceptance criterion is $\leq 1.0 L_a$. During the first plant startup following testing in accordance with this program, the leakage rate acceptance criteria are $\leq 0.60 L_a$ for the Type B and Type C tests and $\leq 0.75 L_a$ for Type A tests;
- b. Air lock testing acceptance criteria are:
 - 1. For each air lock, overall leakage rate is $\leq 0.05 L_a$ when tested at $\geq P_a$, and
 - 2. For each door, leakage rate is $\leq 0.01 L_a$ when tested at $\geq P_a$.
- c. Mini-purge valve acceptance criteria is $\leq 0.05 L_a$ when tested at $\geq P_a$.

The provisions of SR 3.0.2 do not apply to the test frequencies specified in the Containment Leakage Rate Testing Program.

The provisions of SR 3.0.3 do not apply to the test frequencies specified in the Containment Leakage Rate Testing Program.

Marked-up Bases Sections

Note: These bases pages are being provided for information only to show the changes that Ginna intends to make following approval of the LAR. The bases are under Ginna control for all changes in accordance with Specification 5.5.13. Ginna requests that the NRC document acceptance of these bases changes in the SER.

B 3.7 PLANT SYSTEMS

B 3.7.9 Control Room Emergency Air Treatment System (CREATS)

BASES

BACKGROUND

According to Atomic Industry Forum (AIF) GDC 11 (Ref. 1), a control room shall be provided which permits continuous occupancy under any credible postaccident condition without excessive radiation exposures of personnel. Exposure limits are provided in GDC 19 of 10 CFR 50, Appendix A (Ref. 2) which requires that control room personnel be restricted to 5 rem whole body, or its equivalency, for the duration of the accident. The CREATS provides a protected environment from which operators can control the plant following an uncontrolled release of radioactivity for 30 days without exceeding this 5 rem whole body limit. The CREATS is part of the Control Building ventilation system.

, or 10 CFR 50.67 (Ref. 2)
By conversion to the
Alternate Source Term
(AST), Ginna's dose to
control room personnel
is restricted to 5 REM
TEDE (Ref. 2)

a post-accident

TEDE

two trains,
each containing
one

The CREATS consists of a high efficiency particulate air (HEPA) filter, activated charcoal adsorbers for removal of gaseous activity (principally iodines), and two fans (control room return air fan and emergency return air fan) (see Figure B 3.7.9-1). Ductwork, dampers, and instrumentation also form part of the system (Ref. 3).

starts both
recirculation
fans and closes
dampers AKD02,
AKD03, AKD21, AKD22,
AKD23, AKD24. This
action isolates the control
room emergency
zone, and begins
cleanup recirculation
of the control room
environment

The CREATS is an emergency system, parts of which may operate during normal plant operations. Actuation of the CREATS places the system in one of four separate states of the emergency mode of operation, depending on the initiation signal. The following are the normal and emergency modes of operation for the CREATS:

CREATS Mode A

The CREATS is in the standby mode with the exception that the control room return air fan is in operation.

CREATS Mode B

This mode was permanently defeated under Reference 6.

CREATS Mode C

This is the CREATS configuration following an accident with a radiation release as detected by radiation monitor R-1. Upon receipt of an actuation signal, the control room emergency return air fan will actuate and system dampers align to recirculate a nominal 2000 cfm (approximately one fourth of the Control Building Ventilation System design) through the CREATS charcoal and HEPA filters. CREATS automatic isolation dampers AKD01 and

AKD04, and permanently closed isolation damper AKD08, isolate the CREATS from outside air.

CREATS Mode D

This is the CREATS configuration following the detection of smoke within the Control Building. Upon receipt of an actuation signal, the system continues to draw outside air. However, the control room emergency return air fan will actuate and system dampers align to recirculate a nominal 2000 cfm through the CREATS and HEPA filters. This effectively purges the control room air environment.

CREATS Mode E

This is the same CREATS configuration as Mode D with exception that all outside air is isolated to the control room by one damper in each air supply flow path.

CREATS Mode F

This is the CREATS configuration following the detection of a toxic gas as indicated by the chlorine or ammonia detectors, or high radiation as detected by R-45 or R-46. Upon receipt of an actuation signal, the system aligns itself consistent with Mode C except that two dampers in each air supply path are isolated.

Normally open air supply isolation dampers are arranged in series so that the failure of one damper to close will not result in a breach of isolation.

The air entering the control room is continuously monitored by radiation and toxic gas detectors. One detector output above the setpoint will cause actuation of the emergency radiation state or toxic gas isolation state, as required. The actions of the toxic gas and high radiation state (Mode F) are more restrictive than the emergency radiation state (Mode C) and close an additional isolation damper in the outside air flowpaths. Only the high radiation state CREATS Mode F is addressed by this LCO.

APPLICABLE SAFETY ANALYSES

*The applicable
design basis
accidents (DBAs)*

The location of components and CREATS related ducting within the control room emergency zone envelope ensures an adequate supply of filtered air to all areas requiring access. The CREATS provides airborne radiological protection for the control room operators in MODES 1, 2, 3, and 4, as demonstrated by the control room accident dose analyses for the most limiting design basis loss of coolant accident and steam generator tube rupture (Ref. 3). This analysis shows that with credit for the CREATS, or with credit for instantaneous isolation of the control room

~~coincident with the accident initiator and no CREATS filtration train available, the dose rates to control room personnel remain within CDC-49 limits.~~

10 CFR 50.67

~~The current control room dose analysis assumes 45.8 cfm of in-leakage during design basis accidents (DBA), which correlates to a 5.25 square inch breach. Therefore a breach of up to 5.25 square inches would require no compensatory actions. A sensitivity analysis assuming potassium iodide (KI) is ingested within 2 hours of the DBA indicates an in-leakage of greater than several thousand cfm can be tolerated and remain well within the dose limits.~~

~~The current toxic chemical analysis indicates 500 cfm of in-leakage would be required before the toxic limits would be exceeded. This correlates to a 58.9 square inch breach. Since KI has no impact on toxic chemicals, control room in-leakage is driven by the chemical analysis, even considering KI compensatory actions. However, toxic gas protection is not a technical specification requirement and therefore LCO 2.0.3 does not need to be entered for exceeding this limit.~~

During movement of irradiated fuel assemblies or during CORE ALTERATIONS, the CREATS ensures control room habitability in the event of a fuel handling accident. It has been demonstrated that the CREATS is not required in the event of a waste gas decay tank rupture (Ref. 5).

or a Tornado
Missile Accident
(Ref 8).

The CREATS satisfies Criterion 3 of the NRC Policy Statement.

LCO

two

The CREATS is comprised of a filtration train^F and two independent and redundant isolation damper trains all of which are required to be OPERABLE. Total system failure could result in exceeding a dose of 5 rem to the control room operators in the event of a large radioactive release.

TEDE

The CREATS is considered OPERABLE when the individual components necessary to permit CREATS Mode F operation are OPERABLE (see Figure B 3.7.9-1). The CREATS filtration train is OPERABLE when the associated:

- Recirculation fans
- ~~Control room return air and emergency return air fans are OPERABLE and capable of providing forced flow;~~
 - HEPA filters and charcoal adsorbers for the emergency return air fan are not excessively restricting flow, and are capable of performing their filtration functions; and

associated with the
Operable CREATS Fan

CREATS
B 3.7.9

6000

d. Control room emergency zone isolation dampers are OPERABLE. Dampers AKD03, AKD21, and AKD23 are associated with the A Train. Dampers AKD02, AKD22 and AKD24 are associated with the B Train

c. Ductwork and automatic dampers AKD07 and AKD09 are OPERABLE, and the CREATS filter flow is a nominal 2000 cfm and

Control room emergency zone

The CREATS automatic isolation dampers are considered OPERABLE when the damper (AKD01, AKD04, AKD05, and AKD10) can close on an actuation signal to isolate outside air or is closed with motive force removed. The CREATS isolation damper AKD08 is OPERABLE when maintained in a closed and deactivated state (Ref. 6). Two dampers are provided for each CREATS outside air path.

As an alternative, the redundant isolation damper may be closed with the motive force removed, such that the flow path is not susceptible to a single active failure

In addition, the control room emergency zone boundary must be maintained, including the integrity of the walls, floors, ceilings, ductwork, and personnel access doors. The control room emergency zone boundary also includes the control room lavatory exhaust damper (AKD02), which closes on an actuation signal, and associated ductwork. Opening of the personnel access doors for entry and exit does not violate the control room emergency zone boundary. A personnel access door or a ventilation system ductwork access door may be opened for extended periods provided a dedicated individual is stationed at the access door to ensure closure, if required (i.e., the individual performs the isolation function), the door is able to be closed within 30 seconds upon indication of the need to close the door, and the CREATS filtration train is

60

and

Dampers and duct work in the normal control room HVAC system are isolated by Dampers AKD01, AKD22, AKD23 and AKD24, and are not part of control room emergency zone

OPERABLE. The ventilation ductwork may also be opened for extended periods provided that the CREATS filtration train is declared inoperable, the fans are off, and the portion of ductwork that is open is isolated from the control room by a damper that is closed with motive force removed or a passive isolation device. The control room air handling unit temperature control dampers (AKD12, AKD13, and AKD14) provide for air flow regardless of damper position.

affected

If a breach greater than 5.25 square inches is discovered in the control room emergency zone boundary and cannot be immediately sealed, the following compensatory actions must be implemented to ensure compliance with GDC 19, per Regulatory Guide 1.196. If these actions cannot be performed, then LCO 3.0.3 must be entered.

- The on duty personnel required by Specification 5.2.2.a, b, c and f must take a potassium iodide (KI) tablet within two hours of any valid automatic isolation of CREATS that occurs from the radiation monitors due to a radiological event in progress, or as directed by the Emergency Response Organization.
- Provisions must be made to provide (KI) to the oncoming shifts as required.

The above compensatory measures are not intended as a substitute for timely action to seal control room boundary breaches, but rather to ensure safe plant operation while maintenance activities proceed.

two trains

APPLICABILITY In MODES 1, 2, 3, and 4, the CREATS must be OPERABLE to control operator exposure during and following a DBA.

two trains

During movement of irradiated fuel assemblies or during CORE ALTERATIONS, the CREATS must be OPERABLE to cope with the release from a fuel handling accident.

ACTIONS

ONE A.1 and A.2 ✓

With the CREATS filtration train inoperable, action must be taken to restore OPERABLE status within 48 hours or isolate the control room from outside air. In this Condition, the isolation dampers are adequate to perform the control room protection function but no means exist to filter the release of radioactive gas within the control room. The 48-hour Completion Time is based on the low probability of a DBA occurring during this time frame, and the ability of the CREATS dampers to isolate the control room.

7 days.

7 Day

remaining OPERABLE
CREATS train to
provide protection
and maintain the
control room close
less than the limits
of 10 CFR 50.67

Required Action A.2 is modified by a Note which allows the control room to be unisolated for ≤ 1 hour every 24 hours. This allows fresh air makeup to improve the working environment within the control room and is acceptable based on the low probability of a DBA occurring during this makeup period.

B.1 ✓

~~With one CREATS isolation damper inoperable for one or more outside air flow paths, action must be taken to restore OPERABLE status within 7 days. In this Condition, the remaining OPERABLE CREATS isolation damper is adequate to perform the control room protection function. However, the overall reliability is reduced because a single failure of the OPERABLE CREATS isolation damper could result in loss of the CREATS isolation function. The 7 day Completion Time is based on the low probability of a DBA occurring during this time period, and ability of the remaining isolation damper to provide the required isolation capability.~~

B
C.1 and C.2

In MODE 1, 2, 3, or 4, if the Required Actions of Conditions A or B cannot be completed within the required Completion Time, the plant must be placed in a MODE that minimizes accident risk. To achieve this status, the plant must be placed in at least MODE 3 within 6 hours, and in MODE 5 within 36 hours. The allowed Completion Times are reasonable, based on operating experience, to reach the required plant conditions from full

power conditions in an orderly manner and without challenging plant systems.

C.1 and C.2
~~D.1, D.2.1, and D.2.2~~

During movement of irradiated fuel assemblies or during CORE ALTERATIONS, if the Required Actions of Conditions A or B cannot be completed within the required Completion Time, action must be taken to immediately place the OPERABLE isolation damper(s) in CREATS Mode F. This action ensures that the remaining damper(s) are OPERABLE, that no failures preventing automatic actuation will occur, and that any active failure would be readily detected.

An alternative to Required Action D.1 is immediately suspend activities that could result in a release of radioactivity that might enter the control room. This requires the suspension of CORE ALTERATIONS and the suspension of movement of irradiated fuel assemblies. This places the plant in a condition that minimizes risk. This does not preclude the movement of fuel or other components to a safe position.

D.1

Trains

In MODE 1, 2, 3, or 4, if both CREATS isolation dampers for one or more outside air flow paths are inoperable, the CREATS may not be capable of performing the intended function and the plant is in a condition outside the accident analyses. Failure of the integrity of the control room emergency zone boundary (i.e., walls, floors, ceilings, ductwork, personnel access doors, or control room lavatory exhaust damper AK(D02)) also results in a condition outside the accident analyses. Therefore, LCO 3.0.3 must be entered immediately.

E.1 and E.2

During movement of irradiated fuel assemblies or during CORE ALTERATIONS with two CREATS isolation dampers for one or more outside air flow paths inoperable, action must be taken immediately to suspend activities that could result in a release of radioactivity that might enter the control room. This requires the suspension of CORE ALTERATIONS and the suspension of movement of irradiated fuel assemblies. This places the plant in a condition that minimizes accident risk. This does not preclude the movement of fuel or other components to a safe position.

Trains

SURVEILLANCE REQUIREMENTS

SR 3.7.9.1

Standby systems should be checked periodically to ensure that they function properly. As the environment and normal operating conditions

and the two
train redundancy
availability

on this system are not too severe, testing each CREATS filtration train once every 31 days for ≥ 15 minutes provides an adequate check of this system. The 31 day Frequency is based on the reliability of the equipment.

SR 3.7.9.2

This SR verifies that the required CREATS testing is performed in accordance with the Ventilation Filter Testing Program (VFTP). The CREATS filter tests are in general accordance with Regulatory Guide 1.52 (Ref. 4). The VFTP includes testing the performance of the HEPA filter, charcoal adsorber efficiency, ~~minimum~~ flow rate, and the physical properties of the activated charcoal. The ~~minimum~~ required flowrate through the CREATS filtration train is ~~2000~~ cubic feet per minute ($\pm 10\%$). Specific test Frequencies and additional information are discussed in detail in the VFTP. However, the maximum surveillance interval for refueling outage tests is based on 24 month refueling cycles and not 18 month cycles as defined by Regulatory Guide 1.52 (Ref. 4).

Each

6000

①

SR 3.7.9.3

This SR verifies that the CREATS filtration train starts and operates and that each CREATS automatic damper actuates on an actual or simulated actuation signal. The Frequency of 24 months is based on Regulatory Guide 1.52 (Ref. 4).

Each

REFERENCES

1. Atomic Industry Forum (AIF) GDC 11, Issued for comment July 10, 1967.
2. 10 CFR 50, Appendix A, GDC 19.
3. UFSAR, Section 6.4.
4. Regulatory Guide 1.52, Revision 2.
5. Letter from Robert C. Mecredy, RG&E, to Guy S. Vissing, NRC, Subject: Application for Amendment to Facility Operating License Control Room Emergency Air Treatment System (CREATS) Applicability Change (LCO 3.3.6 and LCO 3.7.9), dated July 21, 2000.
6. PCR 2003-0019, "CREATS Modifications Inside of the Control Room Emergency Zone".

7. 10 CFR 50.67, Accident Source Term

8. DA-NS-2002-019, Tornado Missile Accident Offsite and Control Room Doses, Revision 2

① The value of 2.5% methyl iodide penetration was chosen for the laboratory test sample because, even though the new system contains 4-inch charcoal beds, the design face velocity of Ginna's system results in approximately one half of the standard 0.25 second per 2-inch residence time. Therefore, since the resulting residence time is 0.25 seconds per 4-inch bed depth, the 2-inch bed depth section of Regulatory Guide 1.52, Revision 3, Table 1, was considered appropriate.

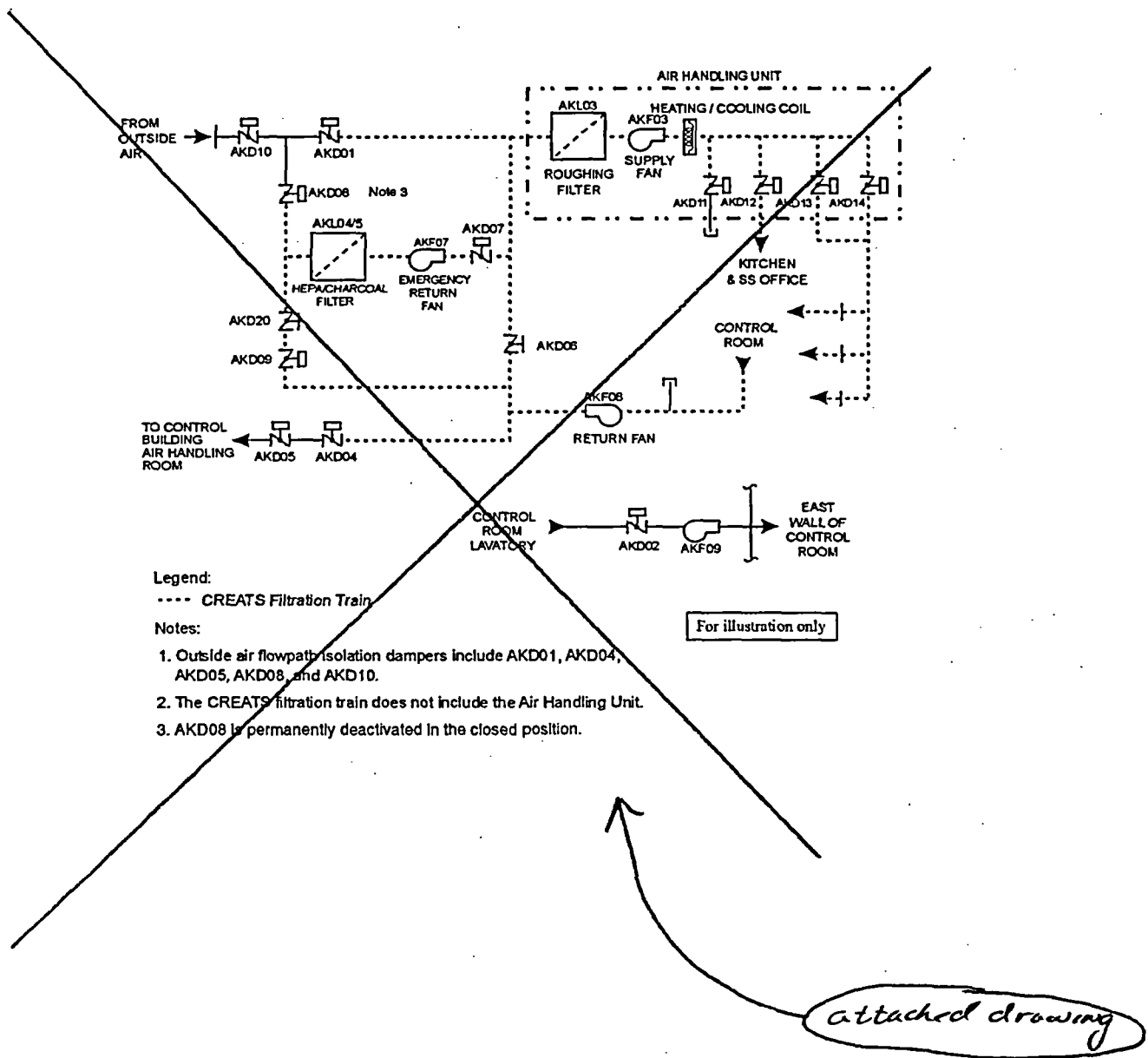


Figure B 3.7.9-1
CREATS

CREATS Design

