

REQUEST FOR ADDITIONAL INFORMATION SNM-1097 LICENSE RENEWAL APPLICATION

Chapter 1.0 General Information

1.1 Clarify that the Controlled Access Area (CAA) described in Section 1.1.2 is the controlled area boundary, as required by 10 CFR 70.22(a)(7)

Chapter 2.0 Organization and Administration

2.1 Revise Chapter 2 to describe the relationship among GE, GE-Hitachi, and Global Nuclear Fuel – Americas, as required by 10 CFR 70.22(a)(1).

2.2 Clarify whether the Facility Manager defined in 2.2.1.1 is the same as the Operations Manager shown on Figure 2.1.

Chapter 3.0 Integrated Safety Analysis

3.1 Revise chapter 3.0 to reflect the ISA methodology as described in your ISA Summary submittal of April 28, 2008, as required by 10 CFR Subpart H.

Chapter 4.0 Radiation Safety

4.1 License application section 2.2.1.2 describes area managers as responsible for ensuring “safe operations and protection of the environment.” However, the organization chart in Figure 2.1 shows the safety functions reporting to the Environment, Health and Safety manager who is separate from the Area Managers. Consistent with 10 CFR 20.1101(a), clarify the difference between the Area Manager and the EHS manager. Redraw the org chart in Figure 2.1 to match the description in sections 2.2.1.2 & 2.2.1.10.

4.2 License application section 4.1 describes commitments to an ALARA program. The section states that the Radiation Protection (RP) Function implements ALARA through written procedures. The Area Managers implement ALARA through engineered controls and supervision. ALARA should be incorporated in procedures throughout the plant operations, not just in RP. Consistent with 10 CFR 20.110(b), state that the ALARA concept will be incorporated into operations procedures when appropriate. Add additional information to section 4.1, “ALARA” to demonstrate that Area Managers will incorporate the ALARA concept into written procedures in the facility design and operations.

4.3 License application section 2.2.1.6 provides a description of the responsibilities of the RP Function and the educational requirements of the RP Function managers. The current description does not clearly define the structure of the RP Function. Consistent with 10 CFR 70.23(a)2, define other key RP positions such as engineers, technicians and contract employees. Describe their responsibilities and list their education and experience requirements. State the relationship (hierarchy of responsibility and who reports to whom) between the job function of these RP roles from highest position (RP manager) to lowest position (technician).

- 4.4 License application section 4.2 in the second paragraph indicates that RWPs can be issued by technicians as well as supervisors in the Radiation Safety Function. Consistent with 10 CFR 70.23(a)4, describe the procedures in place to ensure a member of the Radiation Safety Function will have sufficient experience and authority to issue an RWP. State that only supervisors may issue an RWP or state that supervisors will review and approve RWPs.
- 4.5 Correct the incomplete sentence in License application section 11.4.1 first sentence.
- 4.6 License application section 11.4.2.2 has a commitment to comply with national standard guidance ANSI/ANS 8.19 and ANSI/ANS 8.20. This commitment is partially negated by the statement that the standards will not be implemented verbatim. Consistent with 10 CFR 70.23(a)(2), clarify under what conditions the ANSI standards will be implemented. State a commitment to incorporate, in the radiation protection training program, topics such as:
- correct handling of radioactive materials
 - minimization of exposures to radiation and/or radioactive materials
 - access and egress controls and escort procedures
 - radiation safety principles, policies, and procedures
 - monitoring for internal and external exposures
 - monitoring instruments
 - contamination control, including protective clothing and equipment
 - ALARA and exposure limits
 - radiation hazards and health risks
 - emergency response
- 4.7 Consistent with 10 CFR 70.23(a)(2), modify license application section 11.4.2.2 fourth paragraph to state that the contents of the training program will be reviewed at least every three years.
- 4.8 License application section 4.3.1 contains a reference to “greater than 10 above the established DAC.” The intent of this number appears to be 10 times DAC rather than 10 above the DAC. Consistent with 10 CFR 70.9, clarify the meaning of this commitment by modifying the statement to read “greater than 10 DAC” similar to the use in section 4.3.2.
- 4.9 License application section 4.10 describes the Respiratory Protection Program but does not commit to follow written procedures. Consistent with the requirements in 10 CFR 20.1703(c)(4), state that written procedures will be used for the selection, fitting, issuance, maintenance, testing, training of personnel, monitoring, and recordkeeping for individual respiratory protection equipment, and for specifying when such equipment is to be used. Also indicate that procedures will be reviewed and updated as the Respiratory program is modified.
- 4.10 Consistent with 10 CFR 20.1703(c)(4)viii, state that records of the respiratory protection program, including training for respirator use and maintenance will be maintained.
- 4.11 License application section 4.5.1 describes the survey program. The section has sufficient description of program objectives, frequency of measurements, actions to be taken when measurements exceed administrative limits. However, the section does not commit to using written procedures for the survey program and lacks description of sampling

procedures, data analysis methods, types of equipment and instrumentation to be used, and recordkeeping and reporting requirements. Consistent with 10 CFR 70.23(a)(4) and 10 CFR 20.1501(a), state that the survey program will be conducted in accordance with written procedures. Provide a basic description of the sampling procedures (swipes, survey meters, etc.), data analysis methods, and types of instrumentation used. Describe the recordkeeping for survey data.

- 4.12 License Application section 4.6 addresses dosimeters briefly. Consistent with 20.1502, provide the following information: 1) identify the criteria for worker participation in the program; and 2) identify the types of radiation to be monitored.

Chapter 5.0 Nuclear Criticality Safety

- 5.1. Commit to the ANSI/ANS-8 nuclear criticality safety (NCS) standards as endorsed by NRC in Regulatory Guide (RG) 3.71, Revision 1, which are applicable to activities at GNF-A. Alternatively, justify how the commitments in the license application meet the intent of the standard. The specific version of each standard (e.g., ANSI/ANS-8.1-1998) must be indicated as part of the commitment.

The following standards should be addressed as part of your response:

- ANSI/ANS-8.1-1998. The license application commits to only part of this standard (i.e., double contingency and validation).
- ANSI/ANS-8.3-1997. The license application states that Criticality Warning System (CWS) radiation monitoring unit detectors are located to assure compliance with appropriate requirements of this standard. This is only a partial commitment to the standard and it is unclear as to which requirements GNF-A considers “appropriate.”
- ANSI/ANS-8.7-1998. The license application does not mention this standard.
- ANSI/ANS-8.17-2004. The license application does not mention this standard.
- ANSI/ANS-8.19-2005. The license application commits only to Paragraph 8.3 of this standard, and states that its training program is in general agreement with the training requirements in this standard.
- ANSI/ANS-8.20-1991. The license application only states that its training program is in general agreement with the requirements in this standard.
- ANSI/ANS-8.21-1995. The license application does not mention this standard.
- ANSI/ANS-8.22-1997. The license application does not mention this standard.
- ANSI/ANS-8.23-1995. The license application does not mention this standard.

10 CFR 70.22(a)(8) requires that the license application include proposed procedures to avoid nuclear criticality accidents. If GNF-AA intends to conduct activities to which an endorsed standard applies, the application should include a commitment to comply with the standard. Any variation from the requirements of the standard should be identified and justified in the application. This information is needed to ensure that the procedures for NCS are adequate to protect health and minimize danger to life or property. The version must be identified because not all ANSI/ANS standards have been endorsed by NRC, and future versions of currently endorsed standards may not be endorsed.

- 5.2. Revise the license application to clarify that all activities pertinent to NCS are reviewed and approved by the NCS function before they are conducted. This should include, but should not be limited to, review and approval of operating procedures and maintenance instructions that involve or may impact the handling, use, or storage of enriched uranium. License application Sections 5.1.3, 5.2.1, and 5.3.2.4 state: “Procedures that govern the

handling of enriched uranium are reviewed and approved by the criticality safety function.” License application Section 11.3 states that maintenance instructions are an integral part of the maintenance system for maintenance activities, but does not indicate if NCS would review or approve those instructions.

10 CFR 70.22(a)(8) requires that the license application include proposed procedures to avoid nuclear criticality accidents. Personnel should perform actions only in accordance with written, approved procedures. This information is needed to ensure that the procedures for NCS are adequate to protect health and minimize danger to life or property.

5.3. Revise license application Section 11.5 to clarify the commitments regarding procedures.

- a. Commit to require personnel to perform actions only in accordance with written, approved procedures. It is not clear that the license application prohibits operators from performing activities pertinent to NCS which do not have procedures.
- b. Commit to report defective NCS conditions to the NCS function, and take no action until the NCS function has evaluated the situation and provided recovery procedures. Section 11.5 states that operators are trained to report inadequate procedures, however, it does not state that operators should not proceed with an activity when the procedures are inadequate or cannot be followed.

10 CFR 70.22(a)(8) requires that the license application include proposed procedures to avoid nuclear criticality accidents. This information is needed to ensure that the procedures for NCS are adequate to protect health and minimize danger to life or property.

5.4. Revise license application Section 2.2.1.5 to describe the responsibilities and authorities of the criticality safety function manager.

10 CFR 70.22(a)(8) requires that the license application include proposed procedures to avoid nuclear criticality accidents. The license application should contain a description of organizational positions, responsibilities, and experience and qualifications of personnel responsible for NCS. This information is needed to ensure that the procedures for NCS are adequate to protect health and minimize danger to life or property.

5.5. License application Section 5.1.1 states that the established design criteria and NCS reviews are applicable to all *new* activities with fissile material and all *changes* in process that may impact the established basis for NCS. Revise this section to also indicate what requirements are applicable to existing activities, and provide justification if these requirements do not include the established design criteria and NCS reviews applied to new activities and process changes. Explain the process for determining if a change may impact the established basis for NCS.

10 CFR 70.22(a)(8) requires that the license application include proposed procedures to avoid nuclear criticality accidents. This information is needed to ensure that the procedures for NCS are adequate to protect health and minimize danger to life or property.

5.6. Section 5.1.2.1 of the license application states that “change requests which establish or involve a change in existing criticality safety parameters require a senior engineer who has been approved by the criticality safety function to disposition the proposed change with respect to the need for a criticality safety analysis.” Revise Section 5.1.2.1 to indicate that this person is a senior engineer within the criticality safety function.

10 CFR 70.22(a)(8) requires that the license application include proposed procedures to avoid nuclear criticality accidents. The license application should contain a description of organizational positions, responsibilities, and experience and qualifications of personnel responsible for NCS. This information is needed to ensure that the procedures for NCS are adequate to protect health and minimize danger to life or property.

5.7. Revise license application Section 5.2.1 to clearly describe the general organization and administration methods. The heading for Section 5.2.1 is "General Organization and Administration Methods," but the text in this section is for operating procedures and is identical to Sections 5.1.3 and 5.3.2.4. This appears to be a typographical error.

5.8. Commit to maintain at the facility a documented evaluation that demonstrates the criticality warning system (CWS) meets the requirements of 10 CFR 70.24.

10 CFR 70.24 requires a CWS be maintained in each area where special nuclear material (SNM) is handled, used, or stored for facilities authorized to possess greater than a critical mass of SNM. This information is needed to ensure a CWS is in place that will adequately meet the requirements of 10 CFR 70.24.

5.9. Commit to have a CWS that is uniform throughout the facility for the type of radiation detected, the mode of detection, the alarm signal, and the system dependability.

10 CFR 70.24 requires a CWS be maintained in each area where SNM is handled, used, or stored for facilities authorized to possess greater than a critical mass of SNM. This information is needed to ensure a CWS is in place that will adequately meet the requirements of 10 CFR 70.24.

5.10. Commit to have a CWS that is designed to remain operational during credible events (e.g., design-basis earthquake, fires, explosions, or other events described in ISA) or provide and justify an alternative standard for CAAS operability during events.

10 CFR 70.24 requires a CWS be maintained in each area where SNM is handled, used, or stored for facilities authorized to possess greater than a critical mass of SNM. This information is needed to ensure a CWS is in place that will adequately meet the requirements of 10 CFR 70.24.

5.11. Commit to render operations safe, by shutdown and quarantine if necessary, any area where CWS coverage has been lost and not restored within a specified number of hours. Justify the specified number of hours. Describe, in the license application, any compensatory measures that may be used when CWS coverage has been lost.

10 CFR 70.24 requires a CWS be maintained in each area where SNM is handled, used, or stored for facilities authorized to possess greater than a critical mass of SNM. It is recognized that it may take some time to render operations safe in the event that CWS coverage has been lost. This information is needed to ensure a CWS is in place that will adequately meet the requirements of 10 CFR 70.24.

5.12. License application Section 5.3.1 states that documented criticality safety analyses (CSAs) establish the nuclear criticality safety bases for a particular system under normal

and credible abnormal conditions. License application Section 5.4.1 states that CSAs identify specific controls necessary for the safe and effective operation of a process.

Regarding these statements address the following:

- a. Commit to determine and explicitly identify in the CSAs the controlled parameters and their associated limits upon which NCS depends.
- b. Commit to implement and maintain criticality safety controls that are capable of controlling these parameters within the limits identified in the CSAs.
- c. Commit to demonstrate, within the CSAs, that those criticality safety controls designated as items relied on for safety (IROFS) are sufficient to ensure that each process will remain subcritical under all normal and credible abnormal conditions regardless of any other controls which may be implemented.

10 CFR 70.61(d) requires that all nuclear processes be subcritical under both normal and credible abnormal conditions. Limits on controlled parameters should be established using credible optimum conditions unless specific controls are implemented to control the limit to a range of values. These limits should be derived from NCS determinations. 10 CFR 70.61(e) states that controls needed to comply with 70.61(d) shall be designated as IROFS. This information is needed to ensure that activities with SNM are adequately subcritical.

- 5.13. Commit to establish NCS limits using credible optimal conditions (i.e., most reactive) for NCS parameters, unless specified controls are implemented which will maintain the limits on the NCS parameters. Explain how credible optimal conditions are to be determined for uncontrolled parameters. License application Section 5.4.4 states that “nuclear criticality safety is achieved by controlling one or more parameters of a system within established subcritical limits.” However, the license application does not clearly indicate that these limits will be established assuming credible optimal conditions on the other parameters.

10 CFR 70.61(d) requires that all nuclear processes be subcritical under both normal and credible abnormal conditions. Limits on controlled parameters should be established using credible optimum conditions unless specific controls are implemented to control the limit to a range of values. This information is needed to ensure that activities with SNM are adequately subcritical.

- 5.14. License application Section 5.3.2.2 states: *Routine surveillance inspections of the processes and associated conduct of operations within the facility, including compliance with operating procedures, postings, and administrative guidelines, are also conducted as described in Chapter 11.*

Regarding this statement address the following:

- a. Revise this section to clearly indicate the section in the license application where the surveillance inspections are described—the term “surveillance inspections” is not used in Chapter 11.
- b. Commit to have NCS staff conduct these surveillance inspections to determine that activities involving SNM are being conducted in accordance with the established NCS limits and controls. Alternatively, justify that other staff are qualified to determine that activities involving SNM are being conducted in accordance with the established NCS limits and controls. The license application does not indicate the staff responsible for conducting these inspections.

- c. Revise the license application to indicate the minimum frequency at which these surveillance inspections will occur. These inspections should be conducted on a weekly basis such that all SNM activities are inspected at least every two weeks, unless an alternative schedule is described and justified.

10 CFR 70.62(d) requires that management measures be established which will ensure compliance with the performance requirements of 10 CFR 70.61. Organizational positions, functional responsibilities, and experience and qualifications of personnel responsible for NCS should be described. This information is needed to ensure that adequate management measures are in place to ensure compliance with the performance requirements as they pertain to NCS.

- 5.15. Commit to have NCS staff audit all SNM activities at the facility at least every two years, or describe and justify an alternative schedule. License application Section 11.6.1 states that NCS audits are conducted on a quarterly basis, but the scope of the audits is not described.

10 CFR 70.62(d) requires that management measures be established which will ensure compliance with the performance requirements of 10 CFR 70.61. This information is needed to ensure that adequate management measures are in place to ensure compliance with the performance requirements as they pertain to NCS.

- 5.16. License application Section 5.4.4.3 states that when moderation is the primary NCS controlled parameter the described “graded approach to the design control philosophy is typically applied in accordance with established facility practices.” Revise this section to clearly describe all means of implementing a moderation control as the primary NCS controlled parameter.

10 CFR 70.61(d) requires that all nuclear processes be subcritical under both normal and credible abnormal conditions. This information is needed to ensure that activities with SNM are adequately subcritical.

- 5.17. Explain how an acceptable moderation safety factor is established. License application Section 5.4.4.3 states that the moderation safety factor “will normally be three or higher, but never less than two.”

10 CFR 70.61(d) requires that all nuclear processes be subcritical under both normal and credible abnormal conditions. NCS operating limits must establish sufficient margins of safety for operations and take into account variability and uncertainty. This information is needed to ensure that activities with SNM are adequately subcritical.

- 5.18. Commit to identify potential precipitating agents when concentration controls are used (license application Section 5.4.4.4). Commit to take precautions to ensure that such agents will not be inadvertently introduced.

10 CFR 70.61(d) requires that all nuclear processes be subcritical under both normal and credible abnormal conditions. This information is needed to ensure that activities with SNM are adequately subcritical.

- 5.19. License application Section 5.4.4.5 states that credit may be taken for neutron absorbers that are normal constituents of filter media. Revise the License Application to clearly

indicate that this statement refers only to HEPA filters, as GNF-A staff stated during the site visit on June 10, 2008. Explain how the neutron absorber content is “certified” by GNF-A. Explain how the neutron absorber content is modeled in NCS analyses, and justify that this is conservative.

10 CFR 70.61(d) requires that all nuclear processes be subcritical under both normal and credible abnormal conditions. Limits on controlled parameters should be established assuming credible optimum conditions, unless specified controls are implemented to control the limit to a range of values. This information is needed to ensure that activities with SNM are adequately subcritical.

- 5.20. License application Section 5.4.4.8 states: *However, subject to approved controls which limit reflection, certain system designs may be analyzed, approved, and operated in situations where the analyzed reflection is less than optimum.* Revise this section to indicate the minimum reflector condition that may be used. Provide justification that this minimum reflector condition accounts for all potential reflectors during normal operations and credible process upsets.

10 CFR 70.61(d) requires that all nuclear processes be subcritical under both normal and credible abnormal conditions. Wall thickness and all adjacent materials must be considered when applying reflection control. This information is needed to ensure that activities with SNM are adequately subcritical.

- 5.21. License application Section 5.4.4.9 states: *In cases where enrichment control is not utilized, the maximum credible area enrichment is utilized in the criticality safety analysis.* Explain how the maximum credible area enrichment is determined, and how it is ensured when enrichment controls are not used.

10 CFR 70.61(d) requires that all nuclear processes be subcritical under both normal and credible abnormal conditions. Limits on controlled parameters should be established assuming credible optimum conditions, unless specified controls are implemented to control the limit to a range of values. This information is needed to ensure that activities with SNM are adequately subcritical.

- 5.22. License application Section 5.4.5.1 states: *The sensitivity of key parameters with respect to the effect on keff are evaluated for each system such that adequate criticality safety controls are defined for the analyzed system.* Explain how the sensitivities of key parameters are evaluated and how this information is used to determine NCS controls.

10 CFR 70.61(d) requires that all nuclear processes be subcritical under both normal and credible abnormal conditions. NCS operating limits must establish sufficient margins of safety for operations and take into account variability and uncertainty. This information is needed to ensure that activities with SNM are adequately subcritical.

- 5.23. Commit to include in the validation report a description of the theory of the methodology that is sufficiently detailed and clear to allow understanding of the methodology and independent duplication of results. License application Section 5.4.5.3 only states that the validity of the calculation method that is documented in written validation reports according to internal procedures.

10 CFR 70.61(d) requires that all nuclear processes be subcritical under both normal and credible abnormal conditions. This information is needed to ensure that activities with SNM are adequately subcritical.

- 5.24. Provide the most recent validation report for GEMER and a summary of the validation reports for other calculational methods (License application Section 5.4.5.2). The summary should include a description of the validated areas of applicability, which are relevant to GNF-A activities, for each NCS calculational methods (Section 5.4.5.3).

10 CFR 70.61(d) requires that all nuclear processes be subcritical under both normal and credible abnormal conditions, including use of an approved margin of subcriticality for safety. NUREG-1520, Section 5.4.3.4.1(7)(b) states that the area of applicability of the code should be described. This information is needed to ensure that calculational methods are only used within valid bounds.

- 5.25. Justify the use of a 0.03 minimum margin of subcriticality (license application Section 5.4.5.3).

10 CFR 70.61(d) requires that all nuclear processes be subcritical under both normal and credible abnormal conditions, including use of an approved margin of subcriticality for safety. This information is needed to ensure that activities with SNM are adequately subcritical.

- 5.26. Commit to apply the methodology for calculating keff only in the validated area of applicability or describe and justify the methods used to extend an upper subcritical limit (USL) beyond the area of applicability. Revise the license application to include any methods used for extending the area of applicability. License application Section 5.4.5.3 states that the calculational bias, bias uncertainty and USL over the defined area of applicability are determined by statistical methods.

10 CFR 70.61(d) requires that all nuclear processes be subcritical under both normal and credible abnormal conditions. This information is needed to ensure that activities with SNM are adequately subcritical.

- 5.27. License application Section 5.4.5.3 states that the normality of calculated keff values is verified. Describe how information on normality is used (e.g., selection of specified statistical methods). Describe the methods used to verify normality.

10 CFR 70.61(d) requires that all nuclear processes be subcritical under both normal and credible abnormal conditions. GNF-A should commit to use pertinent assumptions and techniques in validating computer codes. Normality is a key assumption in many of the statistical techniques. This information is needed to ensure that activities with SNM are adequately subcritical.

- 5.28. License application Section 5.4.5.3 states that the calculational bias is determined by regression analysis if trends exist with parameters statistically important over the area of applicability. Explain how GNF-A determines if a trend is statistically important.

10 CFR 70.61(d) requires that all nuclear processes be subcritical under both normal and credible abnormal conditions. This information is needed to ensure that activities with SNM are adequately subcritical.

- 5.29. Commit to document the verification of each individual workstation for the use of NCS software (License application Section 5.4.5.4).

10 CFR 70.61(d) requires that all nuclear processes be subcritical under both normal and credible abnormal conditions. This information is needed to ensure that activities with SNM are adequately subcritical.

- 5.30. License application Section 5.4.5.4 states that “software changes are conducted in accordance with an approved configuration control program described in Chapter 11 that addresses both hardware and software qualification.”

- a. Describe the license application to clearly indicate how the configuration management program described in Chapter 11 would apply to hardware and software used by the NCS function. The term “configuration control program” is not used in Chapter 11, and the configuration management program described in Chapter 11 does not clearly apply to software and hardware used by the NCS function.
- b. Explain what is meant by “hardware and software *qualification*.”

10 CFR 70.61(d) requires that all nuclear processes be subcritical under both normal and credible abnormal conditions. GNF-A should commit to use controlled hardware and software when using computer codes. This information is needed to ensure that activities with SNM are adequately subcritical.

- 5.31. License application Section 5.4.5.4 states: *Deviations noted in code verification that might alter the bias or uncertainty requires requalification of the code prior to release for use.* Revise the license application to indicate what occurs when a deviation is noted in the calculated keff. Explain what is meant by *re-qualification*.

10 CFR 70.61(d) requires that all nuclear processes be subcritical under both normal and credible abnormal conditions. This information is needed to ensure that activities with SNM are adequately subcritical.

- 5.32. Provide a summary of the selected calculations that are used to perform code operability verification (License application Section 5.4.5.4). Justify that these selected calculations adequately test code operability.

10 CFR 70.61(d) requires that all nuclear processes be subcritical under both normal and credible abnormal conditions. GNF-A should use a verification process when using computer codes. For such a verification process to be effective, it must contain provisions for addressing situations when the results are not acceptable. This information is needed to ensure that activities with SNM are adequately subcritical.

- 5.33. Section 5.1.1 of the license application contains the following statement regarding the commitment to implement and document the double contingency principle for fissile material operations: *For each significant portion of the process, a defense of one or more system parameters is documented in the criticality safety analysis, which is reviewed and enforced.*

Revise this statement to indicate that all fissile material operations (not just significant portions) shall be documented to meet the double contingency principle. Revise Section

5.1.1 to indicate that “a defense of one or more system parameters” is provided by at least two controls or describe and justify an alternative means of defense including how it meets double contingency.

10 CFR 70.61(d) requires that all nuclear processes be subcritical under both normal and credible abnormal conditions. This information is needed to ensure that activities with SNM are adequately subcritical.

- 5.34. Clarify Section 5.4.5.6 regarding the methods by which and independent technical review can be performed. License application Section 5.4.5.6 has five bullets which are described as methods by which an independent technical review can be performed. However, the last of these bullets does not appear to actually be one of the intended methods. This appears to be a typographical error.

Chapter 6.0 Chemical Safety

No comments.

Chapter 7.0 Fire Safety

- 7.1 License application Section 7.2 states that, “the fire protection program equipment is maintained as part of the formal planned preventative maintenance program at GNF-A.” The LRA must provide either reference to nationally recognized codes or standards that the fire protection portion of the preventative maintenance program commits to following, or provide sufficient details of the program to demonstrate its robustness and effectiveness.

10 CFR 70.23(a)(4) requires “proposed procedures to protect health and to minimize danger to life or property are adequate.” The acceptance criteria in Standard Review Plan (SRP) Section 7.4.3.5, Fire Protection and Emergency Response, states – the application should describe which standards are met for the design, installation, testing, and maintenance of the fire protection equipment.

- 7.2 License application Section 7.3 states that Administrative Controls are on Section 11.6.4, however the section referred to is does not have anything beneath the header “Fire Protection Audits and Assessments.” Clarify if a combustible controls program is part of the Administrative Controls. Also, provide either reference to nationally recognized codes or standards that “Fire Protection Audits and Assessments” commits to following, or provide sufficient details of the program to demonstrate its robustness and effectiveness.

10 CFR 70.23(a)(4) requires “proposed procedures to protect health and to minimize danger to life or property are adequate.” The acceptance criteria in SRP Section 7.4.3.1, Fire Safety Management Measures, states – the application should reflect a commitment to ensure the facility controls transient ignition sources and combustibles.

- 7.3 License application Section 7.4.1 discusses the design of the building. Clarify if an egress plan was developed. Also, provide either reference to any nationally recognized standards which worker egress complies with, or provide sufficient details of the egress plan to demonstrate its robustness and effectiveness.

10 CFR 70.23(a)(3) requires proposed equipment and facilities to be adequate to protect health and minimize danger to life or property. The acceptance criteria in SRP Section 7.4.3.3, Facility Design, states – an adequate application documents the design criteria used for worker egress, including analysis of delays due to physical security.

- 7.4 The previously-approved License clarified that the Dry Conversion Facility was compartmentalized with 1.5-hour fire wall ratings. Discuss the reason for this omission in license application Section 7.4.2 and provide reference to any fire hazard analysis which supports this change.

10 CFR 70.23(a)(3) requires proposed equipment and facilities to be adequate to protect health and minimize danger to life or property. The acceptance criteria in SRP Section 7.4.3.3, Facility Design, states – an adequate application documents the fire safety considerations used in the general design of the facility, including building construction and fire area determination.

- 7.5 License application Section 7.6 states that “potential fire hazards are determined, evaluated, and controlled by internal and external personnel using industry accepted methods, analysis, and procedures.” Discuss where/how this process is formalized.

10 CFR 70.23(a)(4) requires “proposed procedures to protect health and to minimize danger to life or property are adequate.” The acceptance criteria in SRP Section 7.4.3.1, Fire Safety Management Measures, states – an adequate application documents how the applicant will administer and ensure fire safety at the licensed facility.

- 7.6 License application Section 7.7 discusses fire detection, alarms, and notification appliances. The LRA must provide either reference to nationally recognized codes or standards that this portion of the preventative maintenance program commits to following, or provide sufficient details of the program to demonstrate its robustness and effectiveness. Furthermore, NFPA 72, The National Fire Alarm Code, requires visual notification appliances (strobes) in any areas which could be occupied by a hearing impaired individual. Discuss the applicability of this requirement to GNF-A.

10 CFR 70.23(a)(3) requires proposed equipment and facilities to be adequate to protect health and minimize danger to life or property. The acceptance criteria in SRP Section 7.3, Areas of Review, states – an applicant should provide commitments pertaining to fire safety in the area of fire protection systems including fire detection and alarm.

- 7.7 License application Section 7.8 discusses fire protection equipment and states, “GNF-A’s fire protection system is designed in accordance with the applicable NFPA.” Was this statement intended to say “applicable NFPA codes and standards, including...”? Also, at the end of LRA Section 7.8, provide either reference to nationally recognized codes or standards which have been utilized for portable fire extinguishers, or provide sufficient details on the type and placement of the fire extinguishers to demonstrate their robustness and effectiveness.

10 CFR 70.23(a)(3) requires proposed equipment and facilities to be adequate to protect health and minimize danger to life or property. The acceptance criteria in Standard Review Plan (SRP) Section 7.4.3, Regulatory Acceptance Criteria, states – nationally recognized

codes and standards are used by the reviewer to measure reasonable assurance of fire safety.

7.8 License application Section 7.9 discusses the fire protection water system. Provide either reference to nationally recognized codes or standards which the fire protection water system commits to following, or provide sufficient details on the fire protection water system to demonstrate its robustness and effectiveness. Also, discuss how the potential for contaminated fire water run off is mitigated.

10 CFR 70.23(a)(3) requires proposed equipment and facilities to be adequate to protect health and minimize danger to life or property. The acceptance criteria in Standard Review Plan (SRP) Section 7.4.3, Regulatory Acceptance Criteria, states – nationally recognized codes and standards are used by the reviewer to measure reasonable assurance of fire safety. The acceptance criteria in Standard Review Plan (SRP) Section 7.4.3.3, Facility Design, also states an adequate application documents any measures used to control fire water runoff.

7.9 License application Section 7.11 discusses the Emergency Response Team (ERT). Provide either reference to nationally recognized codes or standards which apply to the training, organization, qualifications of the ERT, or provide sufficient details on the training, organization, and qualifications of the ERT which demonstrate its robustness and effectiveness.

10 CFR 70.23(a)(4) requires “proposed procedures to protect health and to minimize danger to life or property are adequate.” The acceptance criteria in Standard Review Plan (SRP) Section 7.4.3.5, Fire Protection and Emergency Response, states – an acceptable standard is NFPA 600, “Industrial Fire Brigades”, however other nationally recognized codes and standards may be used if appropriate.

Chapter 8.0 Radiological Contingency and Emergency Plan

No comments.

Chapter 9.0 Environmental Protection

No comments.

Chapter 10.0 Decommissioning

No comments.

Chapter 11.0 Management Measures

Revise License application chapter 11.0 to reflect the management measures described in the ISA Summary submittal dated April 28, 2008, as required by 10 CFR 70.62(d)