SAFETY EVALUATION REPORT

DOCKET: 70-1113

LICENSEE: Global Nuclear Fuels – Americas, L.L.C.
Wilmington, North Carolina

SUBJECT: GLOBAL NUCLEAR FUEL - AMERICAS – SAFETY EVALUATION REPORT FOR FUNDAMENTAL NUCLEAR MATERIAL CONTROL PLAN REVISION 19 AND AMENDMENT 11 (TECHNICAL ASSIGNMENT CONTROL NUMBER L33383)

SUMMARY, FNMCP REVISION 19

By cover letter dated August 7, 2015 (Ref. PDO 15-017), Global Nuclear Fuels – Americas (GFN-A), submitted Revision 19 of the Fundamental Nuclear Material Control Plan (FNMCP) in accordance with Title 10 of the *Code of Federal Regulations* (10 CFR) Paragraph 70.32(c). The cover letter stated there were no changes that would decrease the effectiveness of the material control and accounting (MC&A) or the measurement control programs implemented pursuant to 10 CFR Part 74, "Material Control and Accounting of Special Nuclear Material." Attachment 1 contained the FNMCP Change Descriptions by chapter and section. Attachment 2 contained the entire revised FNMCP. Pages were revised in Chapters 2, 3, 4, 6, 7, 8 and 9. No changes were made to Chapters 1, 5, and 10, other than updating the revision number and date in the page footers. The staff's evaluation of the submittal was processed in order to ensure that the revised FNMCP continues to meet the requirements of 10 CFR Part 74, "Material Control and Accounting of Special Nuclear Material." Specifically, the review was performed to ensure that the licensee's revised FNMCP describes the MC&A system, how the system features and capabilities specified in 10 CFR 74.31(c) are achieved and maintained and how such features and capabilities are used to achieve the general performance objectives listed in 10 CFR 74.31(a).

The staff used the licensee's previously approved FNMCP, Revision 18, dated February 3, 2014, and NUREG-1065, "Acceptable Standard Format and Content for the Fundamental Nuclear Material Control (FNMC) Plan Required for Low-Enriched Uranium Facilities," to determine if the licensee's revised FNMCP continues to meet the requirements in 10 CFR Part 74. Staff agrees that the changes included in Revision 19 do not decrease the effectiveness of the MC&A or measurement control programs and that GNF-A was within their authority to make the changes described.

The staff concludes that the revised FNMCP is an acceptably robust document for facility operations that contains appropriate and necessary commitments to meet applicable MC&A requirements as stipulated in 10 CFR 74. Revision 19 of the FNMCP, dated August 7, 2015, continues to describe acceptable methods for achieving the general performance objectives in 10 CFR 74.31(a) and the system features and capabilities of 10 CFR 74.31(c). Therefore, the staff recommends approval of the revised FNMCP.

Thus, the existing Safeguards Condition SG-1.1 of Materials License SNM-1097 is hereby reissued to reflect the revised FNMCP, Revision 19, dated August 7, 2015, submitted by cover letter (Ref. PDO 15-017) as follows:

SG-1.1 The licensee shall follow Chapters 1.0 through 10.0 of its Fundamental Nuclear Material Control Plan, which has been revised as indicated by Revision 19, dated August 7, 2015. Any further revision to this Plan shall be made only in accordance with, and pursuant to, either the provisions of 10 CFR 70.32(c) or 70.34.

BACKGROUND, LICENSE AMENDMENT REQUEST

On October 8, 2015, GNF-A submitted a request to amend their license. The amendment request provides updates to Chapter 3, the Integrated Safety Analysis (ISA), and to Chapter 11 for Management Measures. The changes requested are administrative and are the result of changes to guidance provided by the agency. A description and reason for the change was provided, along with complete revised chapters.

REGULATORY REQUIREMENT

Paragraphs 70.61(b) and (c) of 10 CFR states that the risk of each credible high-consequence or intermediate consequence event must be limited, including uranium intake.

Paragraphs 70.61(d) of 10 CFR states preventive controls and measures must be the primary means of protection against nuclear criticality accidents.

PROPOSED CHANGES

Section 3.3.5 and Table 3.1 were updated to align with the U.S. Nuclear Regulatory Commission (NRC) Guidance issued as Interim Staff Guidance (ISG) – 14, Acute Exposure Standards for Workers, issued June 15, 2015.

Section 11.2.1 was modified, deleting the standing description of ‘safety controls.’

Section 11.6.1 was modified, changing the audit frequency to align with NUREG-1520, Revision 2, issued June 2015.

DISCUSSION

Section 3.3.5 was changed, deleting ‘GNF-A uses an accepted intake value of 75 mg or greater, corresponding to the threshold for permanent renal damage consistent with a high-consequence event to a worker as defined in 10 CFR 70.61(b)(4). This value is consistent with the NRC letter to AREVA NP, Inc., dated July 26, 2007.’ This was replaced with ‘GNF-A uses worker intake quantities consistent with NRC FCSE Interim Staff Guidance ISG-14, Rev. 0 “Acute Uranium Exposure Standards for Workers”, dated June 15, 2015.’

Table 3.1 of the application was modified, changing ‘75 mg’ to ‘400 mg’ for worker severity ranking 3 and ‘150 mg’ was added for worker severity ranking 2. This is consistent with the guidance issued in ISG-14.

Section 11.2.1 was modified, deleting the second sentence of the second paragraph, ‘Safety controls are systems, structures, components and procedures that prevent and/or mitigate the risk of accidents.’ This was an administrative change to clarify the understanding of ‘safety controls.’ The statement is very similar to the definition of an ISA, as provided in NUREG-1513.

The intent was to decouple the term 'safety control' from the ISA, i.e. not all safety controls are part of the ISA. The change does not modify the ISA content or basis.

Paragraph 2 of section 11.6.1 was modified, changing the first sentence from 'Criticality and radiological audits are performed quarterly (at intervals not to exceed 110 days)…' to 'Criticality and radiological audits are performed periodically, in accordance with documented, approved practices, such that all applicable process and support areas will be audited at least every two (2) years.' This administrative change aligns with the audit frequency identified in section 5.4.3.1.6.2.b. of NUREG-1520, Revision 2. This does not decrease the effectiveness of the Nuclear Criticality Safety (NCS) or auditing program. To date the auditing program has been driven by an artificial periodicity and did not allow for a basis of risk significance. There are 13 identified audit and assessment areas that are a part of the NCS Program, requiring greater than one audit to be performed each week on the quarterly schedule, with no consideration of risk. This administrative change meets the requirement of the guidance and ensures consideration of the complexity of the process and risk significance.

ENVIRONMENTAL REVIEW

The staff has determined that the FNMCP changes are related to safeguards matters, which are categorically excluded from the requirements to prepare a site-specific environmental assessment. Therefore, in accordance with 10 CFR 51.22(c)(12), neither an environmental assessment nor an environmental impact statement is warranted for this action.

Regarding the administrative amendments to the GNF-A license submitted on October 8, 2015, according to 10 CFR 51.22(c)(11), the issuance of amendments to licenses for fuel cycle plants which are administrative, organizational, or procedural in nature—or which result in a change in process operations or equipment—are eligible for categorical exclusion provided that:

i. There is no significant change in the types or significant increase in the amounts of any effluents that may be released offsite.
ii. There is no significant increase in individual or cumulative occupational radiation exposure.
iii. There is no significant construction impact.
iv. There is no significant increase in the potential for or consequences from radiological accidents.

The changes in this amendment do not affect the scope or nature of the licensed activity and will not result in a significant change in the types or amounts of effluents released offsite. There will not be any significant increase in individual or cumulative occupational radiation exposure, and there will not be any significant increase in the potential or consequences from radiological accidents. There is no construction associated with these changes, so there will not be any impact from construction.

CONCLUSION

The staff concludes that the revised FNMCP is an acceptably robust document for facility operations that contains appropriate and necessary commitments to meet applicable MC&A requirements as stipulated in 10 CFR 74. Revision 19 of the FNMCP, dated August 7, 2015, continues to describe acceptable methods for achieving the general performance objectives in 10 CFR 74.31(a) and the system features and capabilities of 10 CFR 74.31(c). Therefore, the staff recommends approval of the revised FNMCP.

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Regarding the administrative License Amendment Request, based on the review and evaluation of the licensee's submittal, the staff has determined that the proposed changes to the license application are administrative in nature and the commitments continue to ensure effective programs at the GNF-A facility. Approval of the amendment is recommended.

PRINCIPAL CONTRIBUTOR

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