

SAFETY EVALUATION REPORT

DOCKET: 70-1151

LICENSEE: Westinghouse Electric Company, LLC

SUBJECT: Change in the Frequency of Calibrating Radiation Protection Instrumentation and Clarification of Text

BACKGROUND

The Westinghouse Electric Company, LLC (Westinghouse) holds special nuclear materials license (SNM) SNM-1107 of the Columbia Fuel Fabrication Facility in Hopkins, SC. Section 5.2.59 of the license application (Ref. 1) states that radiation protection survey instrumentation is calibrated semi-annually. By letter (Ref. 2) dated July 8, 2014, Westinghouse requested to change the calibration frequency from semi-annually to annually as a page change to the license application. Though Westinghouse contracts the calibration service from a vendor, the vendor acts on the behalf of Westinghouse.

Also, a change to Section 5.2.5 was made to reduce ambiguity.

REGULATORY REQUIREMENTS

Title 10 of the *Code of Federal Regulations* (10 CFR) Part 20.1502(c) states that the licensee will ensure that instruments and equipment used for quantitative radiation measurements are calibrated periodically.

Part 20, Subpart F of 10 CFR, Surveys and Monitoring, 20.1501(a) requires that a licensee conduct surveys capable of identifying the magnitude and extent of radiation levels, as well as concentrations and quantities of radiation levels and radioactivity.

Paragraph 70.22(a)(8) of 10 CFR requires the proposed procedures to protect health and minimize danger to life or property.

DISCUSSION

Section 34.25 of 10 CFR is the only regulation specifying an instrument calibration frequency; though this regulation is applicable to industrial radiography, for many years, other licensees have used this requirement as a guide. In 1997, the American National Standards Institute (ANSI) approved a standard (Ref. 3) stating that calibration shall be required at least annually. In 2009, ANSI reaffirmed the annual calibration standard (Ref. 4). By Regulatory Guide 8.24 (Ref. 5), the U.S. Nuclear Regulatory Commission (NRC) staff adopted the annual calibration frequency for instruments used under a Part 70 license. In the Westinghouse license application SNM-1107, Section 5.2.59 states that radiation protection instruments are calibrated on a routine schedule at least semi-annually. Westinghouse requested a page change to the license application to state that such instruments will be calibrated at least annually.

The requested page change to Section 5.2.59 of the license application is as follows:

Enclosure

Radiation protection instruments are calibrated on a routine schedule established by the Radiation Protection Function. The schedule requires calibration:

- Following initial instrument acquisition,
- Following major repairs, and
- At least annually.

The change in the calibration frequency does not affect other requirements and commitments regarding portable radiation survey instruments.

In accordance with 10 CFR Part 20, Subpart F, Surveys and Monitoring, 20.1501(a), the licensee remains able to conduct surveys capable of identifying the magnitude and extent of radiation levels, as well as concentrations and quantities of radiation levels and radioactivity. In accordance with 10 CFR 20.1502(c), the licensee remains able to ensure that instruments and equipment used for quantitative radiation measurements are calibrated periodically.

Though the calibration frequency is reduced from semi-annually to annually, the reduced frequency is acceptable for the following reasons:

- 10 CFR 20.1502(c) does not specify a frequency of calibration.
- ANSI N323A-1997 allows calibration to be conducted annually.
- ANSI N323A-2009 allows calibration to be conducted annually.
- By Regulatory Guide 8.24, the NRC allows calibration to be conducted annually for Part 70 licensees.
- Remaining aspects of the radiation safety program are unchanged.

Therefore, the NRC staff approves of the page change, allowing Westinghouse to calibrate portable radiation survey instruments at least annually.

CLARIFICATION CHANGE

Westinghouse clarified Section 5.2.5, adding the word “radiological”. The section now reads:

Short-term ALARA progress is tracked by the Regulatory Component through a formal quarterly evaluation and documentation of the radiological performance indicators listed in Section 3.6.2.3 of this License Application. This is reported to the ALARA committee and management, as appropriate.

The NRC staff agrees with the change; the NRC staff has no further questions at this time.

ENVIRONMENTAL REVIEW

In accordance with 10 CFR 51.22(c)(11), issuance of amendments to licenses for fuel cycle plants which are administrative, organizational, or procedural in nature belong to a category of actions which the Commission has declared to be a categorical exclusion. Therefore, neither an Environmental Assessment nor Environmental Impact Statement is required for this action.

FINDINGS

The NRC staff finds that the licensee remains in compliance with 10 CFR 20.1502(a) and 10 CFR 20.1502(c).

The NRC staff finds that, per 10 CFR 23(a)(4), the applicant's proposed procedures to protect health and to minimize danger to life or property are adequate.

PRINCIPAL CONTRIBUTOR

Christopher Ryder, Licensing Project Manager
Tyrone Naquin, Health Physicist

REFERENCES

1. Letter from G. Couture, Westinghouse Electric Company, "Westinghouse Columbia Plant License Application Revision", March 20, 2012. ADAMS accession number ML12081A034.
2. Letter from N. Parr, Westinghouse Electric Company, "Westinghouse License SNM-1107 Amendment Request (Docket 70-1151)", July 8, 2014. ADAMS accession number ML14190A317.
3. American National Standards Institute (ANSI), "Radiation Protection and Instrumentation Test and Calibration, Portable Survey Instruments", ANSI N323A-1997, April 3, 1997.
4. American National Standards Institute (ANSI), "Radiation Protection and Instrumentation Test and Calibration, Portable Survey Instruments", ANSI N323A-2009, November 6, 2009.
5. U.S. Nuclear Regulatory Commission, "Health Physics Surveys during Enriched Uranium Processing and Fuel Fabrication", Regulatory Guide 8.24, Revision 2, June 2012.