Strategic Teaming and Resource Sharing

11/10/08
73 FR 66685
(3)

T. Moser, Chairman
STARS Integrated Regulatory Affairs Group
P.O. Box 620, Fulton, Missouri 65251

Ref: DG-1186 and DG-4013

STARS-09001

February 3, 2009

Rulemaking, Directives, and Editing Branch
Office of Administration
U.S. Nuclear Regulatory Commission
Washington, DC 20555-0001

STRATEGIC TEAMING AND RESOURCE SHARING (STARS)
Draft Regulatory Guide DG-1186 "Measuring, Evaluating, and Reporting Radioactive Material In Liquid And Gaseous Effluents And Solid Waste" And Draft Regulatory Guide DG-4013, "Radiological Environmental Monitoring For Nuclear Power Plants"

Reference: 1) NEI letter from Ralph L. Andersen to U.S. Nuclear Regulatory Commission dated February 3, 2009, Draft Regulatory Guide DG-1186, "Measuring, Evaluating, and Reporting Radioactive Material In Liquid And Gaseous Effluents And Solid Waste" and Draft Regulatory Guide DG-4013, "Radiological Environmental Monitoring For Nuclear Power Plants"

To Whom It May Concern,

Federal Register Notice 73 FR 65705 dated November 4, 2008, announced the issuance for public comment and availability of Draft Regulatory Guide (DG) DG-1186, "Measuring, Evaluating, and Reporting Radioactive Material in Liquid and Gaseous Effluents and Solid Waste." Federal Register Notice 73 FR 66685 dated November 10, 2008, announced the issuance for public comment and availability of Draft Regulatory Guide DG-4013, "Radiological Environmental Monitoring For Nuclear Power Plants." The Strategic Teaming and Resource Sharing (STARS) [1]alliance has reviewed the guidance document and is providing comments.

[1] STARS consists of thirteen plants at seven stations operated by Luminant Power, AmerenUE, Wolf Creek Nuclear Operating Corporation, Pacific Gas and Electric Company, STP Nuclear Operating Company, Arizona Public Service Company, and Southern California Edison.

SUNSI Review Complete
Template = ADM-013

E-RIDS = ADM-03
Add = E. O'Donnell (exo)

Industry comments were provided on draft regulatory guides DG-1186 and DG-4013 via the referenced Nuclear Energy Institute (NEI) letter. STARS supports the comments in that letter and offers the following additional comments on the draft regulatory guides.

Specific comments on draft DG-1186 are provided in Attachment 1 and specific comments on DG-4013 are provided in Attachment 2.

The proposed changes are extensive and the STARS alliance recommends that further opportunity be provided to address potential conflicts identified in the referenced NEI letter and in the attachments to this letter.

Thank you for your consideration of these comments. If there are any questions regarding these comments, please contact me or Carl Corbin, STARS Regulatory Affairs Specialist. I can be reached at 573-676-4775 or tmoser@ameren.com; Mr. Corbin can be reached at 254-897-0121 or carl.corbin@luminant.com.

Sincerely,

T. Moser, Chairman
STARS Integrated Regulatory Affairs Group

Attachment 1 Comments on Draft Regulatory Guide DG-1186
Attachment 2 Comments on Draft Regulatory Guide DG-4013

STARS Comments on Draft Regulatory Guide (DG) DG-1186,
"Measuring, Evaluating, and Reporting Radioactive Material in Liquid and Gaseous Effluents and Solid Waste."

(Federal Register Notice 73 FR 65705 dated November 4, 2008)

The STARS alliance submits the following comments for consideration in the development of Draft Regulatory Guide (DG-1186) "Measuring, Evaluating, and Reporting Radioactive Material in Liquid and Gaseous Effluents and Solid Waste:"

1. Page 4, last paragraph,

   Acronyms used such as ISFSI (Independent Spent Fuel Storage Installation) and ARERR (Annual Radioactive Effluent Release Report) should be defined prior to their use.

2. Page 6, 4th paragraph, *"Less-significant release points are, to the extent reasonable, required to be listed in the ODCM."*

   It is unclear as to the source of this requirement. NUREG-1301 and NUREG-1302 do not appear to contain this "requirement." This seems to contradict the statement on page 5 that states *"NUREG-1301/1302 contains detailed guidance for the content and format of a licensee's ODCM."*

3. Page 7, last paragraph, *"Monitoring Batch Releases -- For batch releases, measurements should be performed to identify specific radionuclides before a release to the environment. In those cases in which an analysis of specific radionuclides (such as strontium-89/90 and iron-55) cannot be done before release (see NUREG-1301 and NUREG-1302), representative samples should be collected for the purpose of subsequent composite analysis. The composite samples should be analyzed at the scheduled frequencies specified in NUREG-1301 and NUREG-1302."*

   NUREG-1301 and NUREG-1302 only require strontium-89/90 and iron-55 sampling and analysis for Liquid Batch releases. Strontium-89/90 and iron-55 sampling are not required for gaseous batch releases.

4. Page 9, 2nd paragraph, *"However, the concept of 'principal radionuclides' does not reduce the burden for reporting nuclides detected in effluents. In addition to 'principal radionuclides,' other radionuclides detected during routine monitoring of release points must be reported in the radioactive effluent release report and included in dose assessments to members of the public."*

   Without a standardized lower limit of detection (LLD), how can a licensee ensure they meet the *"1 % of the total activity"* approach?

5. Page 11, 3rd paragraph, *"Release Height,"*

   The Release Height section should reference Regulatory Guide 1.111 for definition or discussion.

6. Page 20, Section 5.8.5, *". . . A pathway is considered significant if a realistic evaluation yields an additional dose increment equal to or more than 10% of the total from all pathways considered (see the regulatory position in Regulatory Guide 1.109)."*

   This is not the exact wording in Regulatory Guide 1.109: *"A pathway is considered significant if a conservative evaluation yields an additional dose increment equal to or more than 10 percent of the total from all pathways considered in this guide."*

7. Page 21, Section 5.10.3, *"The dose contributions from direct radiation may be estimated based on either (1) thermoluminescent dosimetry (TLD) measurements, (2) calculations, or (3) a combination of TLD measurements and calculations."*

   In addition to TLD measurement, there are other methods available for direct radiation measurements (e.g., ion chambers). Recommend changing "TLD measurements" to "direct measurements."

8. Page 24, Section 8, *"Data Trending,"*

   General Comments:

   There is no stated purpose for Data Trending in the ARERR. Data trending in the ARERR does not provide meaningful information and is redundant to other trending requirements.

   Total curies released are typically a function of core effective full power days, thermal plant rating and fuel integrity. Dose values are a function of curies released, pathways present, physical location of residences and meteorological data. Generally, a plant has little control over airborne effluent release concentrations. Fuel reliability is already tracked through the INPO Consolidated Data Entry (CDE) process. A comparison of a given plant from year to year is possible but of questionable value. It is not possible to compare different plants, especially when individual plants are allowed to establish LLDs based on "principal nuclides" (see page 8, Principal Radionuclides for Effluent Monitoring). This is implied in Section 9, "The aspect of consistency aids review by members of the public and allows easier industry-wide comparisons of the data."

   Effluent Release Data was formerly compiled in NUREG/CR-2907 (ADAMS Accession Number: ML041450170), http://hps.ne.uiuc.edu/natcenviro/eff2000s.htm and http://www.reirs.com/effluent/EDB_Main.asp.

   The most current data is only available through 2004 at http://www.reirs.com/effluent/EDB_Main.asp

The issue of summarizing data was also the subject of SECY-06-0212 (http://www.nrc.gov/reading-rm/doc-collections/commission/secys/2006/secy2006-0212/2006-0212scy.html)

If the desire is to provide data for "review by members of the public and allows easier industry-wide comparisons of the data", it would be more appropriate to keep the on-line database current, and provide on-line trending tools, rather than providing this information in each individual ARERR.

9. Page 24, Section 8.1.1, *"source term for curies of total mixed fission and activation products,"*

   Is this intended to include tritium, gases, and alpha? If not, change to "curies of fission and activation products (excluding tritium, gases, and alpha)." (See Table A-2).

10. Page 24, Sections 8.1.2 and 8.2.4, *"source term for curies of tritium,"*

    Change to "curies of tritium."

11. Page 24, Section 8.2.1, *"source term for curies of total mixed fission and activation products,"*

    Change to "curies of fission and activation gases" (see Table A-1).

12. Page 24, Section 8.2.3, *"source term for curies of iodine,"*

    From a practical perspective and to standardize trending it is more useful to simply trend I-131. Suggest changing to "curies of I-131."

13. Page 24, Section 9.1.1 References Table A-1, *"(b) iodines/halogens,"*

    Table A-1, Column heading states only "iodines" it does not include "halogens."

14. Page 24/25, *"9.1.2 Table A-1A, Gaseous Effluents—Ground-Level Release—Batch Mode contains a summation of gaseous effluent releases from ground-level release points in the batch mode of release for the five radionuclide categories of fission gases, iodines/halogens, particulates, tritium, and gross alpha. Report the following:*
    9.1.2.1 curies of each radionuclide released by quarter and year, and
    9.1.2.2 total curies released in each radionuclide category (fission and activation gases, iodines/halogens, particulates, tritium, and gross alpha) by quarter and year."

    Section 9.1.2 should state "fission and activation gases" instead of just "fission gases" for consistency with section 9.1.2.2, Table A-1A should state "fission and activation gases" instead of just "fission gases" in the heading row.

15. Page 25, Sections 9.1.3, 9.1.4, 9.1.5, 9.1.6 and 9.1.7,

    Sections should state "fission and activation gases" instead of just "fission gases" for consistency with section 9.1.2.2. Tables A-1A, A-1B, A-1C, A-1D, A-1E, and A-1F should state "fission and activation gases" instead of just "fission gases" in the heading row.

16. Page 26, 9.4 *"The annual evaluations of public dose should be calculated...,"*

    Change "public dose" to "dose to Members of the Public." This is consistent with the wording in Section 5 and the term in the glossary.

17. Page 27/28, Section 9.5.1.3.2 *"...minimum detectable activity (MDA)...,"*

    This is the only occurrence of the term "MDA" in this document. Section 4, Quality Assurance, has a lengthy discussion of RG 4.15, but no discussion of MDA.

18. Page 28, Section 9.5.1.4.15 *"residual radioactivity levels and whether any levels exceed the DCGLs provided in Table H.2 in Appendix H to NUREG-1757, Volume 2,"*

    This is a decommissioning requirement. There is no routine sampling requirement for Soil Surface Contamination.

19. Page 28, Section 9.5.5 references NUREG-1301/1302, section 3.3.3.10.b,

    NUREG-1301, section 3.3.3.10.b, is for liquid effluent monitoring instrumentation channels only. NUREG-1301, Section 3.3.3.11.b for gaseous effluent monitoring instrumentation should also be included.

20. Page 32, Channel Calibration *"...See also the definition in NUREG-1302/1302."*

    This appears to be a typo. The definition should refer to "NUREG-1301/1302."

21. Pages 32 and 35, Glossary, *"Channel Operational Test (COT)," and "Source Check,"*

    These are not the exact definitions in NUREG-1301.

22. Pages 33 through 35, Glossary, *"Controlled Area," "Member of the Public," "Monitoring," "Restricted Area," "Site Boundary," and "Source Check,"*

    These are not the exact definitions in 10CFR20.1003.

23. Page 35, *"Significant Release Point,"*

    See the definition for Minor Release Point. The wording is not consistent.

24. Page 32 thru 36, Glossary,

Definitions for "A priori," "Abnormal Release," "Effluent Discharge (Radioactive)," "Significant Contamination," "Significant Residual Radioactivity," "Site Environs," and "Unlicensed Material," do not match definitions listed the Glossary of DG-4013, Radiological Environmental Monitoring for Nuclear Power Plants.

25. Appendix A, Tables A-1A, A-1B, A-1C, A-1D, A-1E, and A-1F,

Tables A-1A, A-1B, A-1C, A-1D, A-1E, and A-1F should state "fission and activation gases" instead of just "fission gases" in the heading row.

STARS Comments on Draft Regulatory Guide DG-4013,
"Radiological Environmental Monitoring For Nuclear Power Plants."

(Federal Register Notice 73 FR 66685 dated November 10, 2008)

The STARS alliance submits the following comments for consideration in the development of Draft Regulatory Guide DG-4013, "Radiological Environmental Monitoring For Nuclear Power Plants,"

1. Pages 6-10, Section 2.3 *"Onsite Environmental Monitoring Program"*

   This addition effectively expands the scope of the codified radiological environmental monitoring program (REMP). Abnormal releases are already required to be evaluated. There is no requirement to backfit the REMP to include an "onsite environmental monitoring program."

   There are many new ground water discussions and evaluations. Some aspects of the NEI Groundwater Protection Initiative (GPI) are evident. The NRC is inspecting to NEI GPI criteria and including it in the DG-4013 revision, but the requirements have not been codified. It is unclear what the consequences are of not meeting the "intent" of the changes.

2. Page 11, Section 2.6 *"Analytical Detection Capabilities"*

   The revised LLD of 300 pCi/liter is recommended for tritium in ground water. This is considered as "not a regulatory required LLD" (if other than 300 pCi/liter is selected as the "enhanced detection capability," a written evaluation is required, using objective methodology (e.g. MARLAP)). The use of such a value has no basis with regard to dose potential or decommissioning. If a ground water sample identifies that tritium is present at a concentration below 2000 pCi/liter (10 % of the EPA drinking water limit), there is inference that some interdiction would be necessary.