Frequently Asked Questions (FAQs) Regarding REMS Requirements in DOE M 231.1-1A

The following questions and answers pertain to requirements in DOE M 231.1-1A, Chapter 3 Reporting Ionizing Radiation Exposure Information and Appendix G Instructions for Preparing Occupational Exposure Data for Submittal to the DOE Radiation Exposure Monitoring System (REMS) Repository.

Additional FAQs will be posted on this page as new issues are identified. Continuous input from dosimetry managers and other stakeholders are encouraged to ensure consistency and quality of data reported. Please e-mail your questions to Nimi Rao, REMS Project Manager at nimi.rao@hq.doe.gov

1. **Requirement:**
   DOE M 231.1-1A Chapter 3.1(c): All Radiation exposure data sent to the REMS repository as noted in paragraph 1.a. and 1.b must be submitted in electronic format and must be prepared in accordance with Appendix G of the Manual.

   When will compliance be required for reporting radiation data using the new format?

   DOE M 231.1-1A was signed on March 9, 2004. Occupational radiation exposure data collected during and after CY 2005 is required to be in compliance with DOE M 231.1-1A (Chapter III and Appendix G).

2. **It is usually DOE O 231.1A that is listed in the company contracts with DOE. DOE O 231.1A references DOE M 231.1-1, not DOE M 231.1-1A. Therefore, DOE O 231.1A needs to be revised to reference DOE M 231.1-1A, and the contracts need to be revised to include the revision to DOE O 231.1A. Do you have any information on the schedule for revising all contracts to reference the new manual?**

   As per Office of Management (ME), contracts automatically revert to the most current version of the Manual. However, page changes for the Manual have been submitted.

3. **Requirement:**

   DOE M 231.1-1A, Chapter III, 1.b (1) Radiation Exposure Records for Special Individuals.

   A special individual is a person employed by DOE Headquarters, a contractor supporting DOE Headquarters or field office activities, a Defense Nuclear Facilities Safety Board employee or contractor, or an International Atomic Energy Agency

inspector who visits a DOE or DOE contractor site or facility to conduct Department-related business. Radiation exposure data pertaining to special individuals will be reported to the REMS repository within 30 days after the determination of the dosimetry.

I have read this section defining and giving instructions for "special individuals" as <u>not</u> including DOE personnel from other sites who visit us. For example, if a DOE person from Hanford or a Bechtel-Hanford person visits SRS and is monitored, we would treat them like any other radiation worker, but not as a "special individual". SRS would not be required to report their dose to REMS with in 30 days. This is different from the previous M231.1, Ch III, I.a, which started off the similar list of workers with one called "a DOE employee". That employee type is not in the new M231.1-1A. Am I correct? Please clarify.

Yes, this is a change. DOE employees are no longer considered "special individuals". EH reviews and distributes dose records for DOE Headquarters personnel on a quarterly basis. Hence the requirement to report their doses within 30 days after the determination of dose is necessary. In order to reduce the reporting burden, the requirement to report doses for DOE employees at the sites within 30 days to REMS is dropped in DOE M 231.1-1A. The sites still need to report doses for DOE employees at the site in the annual report and need to send the individual their records in accordance with 10 CFR 835.801.

Note: If an individual is a contractor supporting DOE Headquarters or Field Office activities, they are included in the 'special individual' category. This requirement remains unchanged.

4. **DOE M 231.1-1A, Appendix G: Table G-3 requires that sites would need to calculate the committed effective dose equivalent (CEDE) for each radionuclide separately. This is a significant change from the previous reporting requirements and would require major changes to the procedures used to calculate internal dose. This would be costly for the sites to implement. Please provide further guidance.**

It was DOE's intent to collect information on the collective CEDE per radionuclide for analysis and presentation of this information in the annual report on occupational exposure. However, it was not the intent to add a new requirement that would be a burden and costly for the sites to implement. In order to reduce the burden on the sites, the following method of reporting will be allowed: Reporting the collective CEDE by intake mode for groups of radionuclides (mixtures) as the sites have been reporting in the past, but using the format provided in the DOE M 231.1-1A, Appendix G, Table G-3. If the information is available, sites are encouraged to report the collective CEDE per radionuclide.

For Table G-3, "Intake Summary File," sites may list more than one radionuclide for a given mode of intake and collective CEDE. Each record should contain only one

radionuclide in the radionuclide field, but multiple records may be reported for the mixture. The list of radionuclides should be given in the relative order of contribution to the collective CEDE with the highest dose contributors in a mixture listed first. The Facility, Year, and Intake Mode should be repeated in subsequent records, but the collective CEDE for this group of radionuclides should be listed only once on the first record. The following is an example of how to report multiple radionuclides.

Intake Summary File Record Example: First three records are for a radionuclide mixture and the fourth record is for a single nuclide.

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LAB#12          2003Pu238  W   3489
LAB#12          2003Pu239  W
LAB#12          2003Am241  W
FRG LAB         2003H3     H    174
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5. DOE M 231.1-1A, Appendix G: Table G-1: How to report the "Remainder Dose" consisting of five organ doses in a single field?

Committed Dose Equivalent (CDE) to the gonads, breasts, red bone marrow, lungs and thyroid, and bone surface are reported separately using the format given in Table G-1 # 42- 47 using the weighting factors defined for these organs in 10 CFR 835.2(b) (ii).

Report the "Remainder" CDE as per the format given in Table G-1, # 48. The remainder dose would be the sum of the dose to the five other organs or tissues with highest dose (excluding the skin and lens of the eye; and the organs listed separately in # 42-47). The weighting factor for each remaining organ or tissue is 0.06. The remainder dose is defined in 10 CFR 835.2(b) (ii) as a footnote to the table of the weighting factors.