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RuhterPaul@aol.com Saturday, March 02, 2002 4:25 PM NIOCINDOCKET@cdc.gov Irr@inel.gov; frenrf@inel.gov; ruh@inel.gov; singan@inel.gov; orp@inel.gov 42 CFR Part82

Subject:



Comments on 42

CFR Part 82.doc...
Please consider the attached comments to 42 CFR Part 82. Thank you.

Comments on 42 CFR Part 82 Paul E. Ruhter, CHP Manager, Radiation Dosimetry & Records Bechtel BWXT Idaho, LLC INEEL

I appreciate the opportunity to comment on the Rule related to Methods for Conducting Dose Reconstruction under the EEOICPA. These comment cover inconsistencies in the Rule as well as issues relating to significant difficulties in the process, with some suggested improvements.

- ¶ 82.2(b) This paragraph discusses "If individual monitoring data are not available or inadequate..." without defining what these terms might mean. DOE and the contractor supplying the data should be required to concur that the data is not available or inadequate. The concern is that the data being supplied is very complex and will most likely be supplied in summary form without the extensive explanation that typically is necessary to fully understand the basis for the dose record. Without some dialogue and reiteration between the DOE Contractor supplying the record and the NIOSH staff, there will be inevitable misinterpretations of the data.
- ¶ 82.2 (c) This paragraph indicates that "process description information" may be relied upon to analytically develop an exposure model, by characterizing the radiation environments to which workers were exposed and "to then place each worker in time and space within this exposure environment" (¶ 82.2). Although records generally exist to support this dose reconstruction approach, it will be very time consuming and labor intensive to retrieve and evaluate the records necessary to accomplish. The funding for this level of effort on the part of the DOE contractors, which are custodians of the records and have the knowledge to evaluate them, is not addressed in the Rule and is currently not provided in the budgets approved by DOE for its contractors.
- ¶82.3 (a) This paragraph states that dose reconstruction will be conducted for employees who were not monitored or were monitored inadequately. There are many reasons why an employee may not have been monitored, including that he was not working in an environment that required him to be monitored. Many employees were monitored because they were assigned to facilities that required the employee to wear a badge, but may, in fact, not have entered a posted radiological area where he could have received exposure. So the concept of assigning missed dose because exposure was undetected or unrecorded dose may be grossly in error. This emphasizes the importance of requiring DOE concurrence on the dose reconstruction results.
- \P 82.5 (i) The term "weighting factor" is used appropriately in this definition of "Equivalent dose", but no explanation is provided of the nature of this factor. "Weighting factor" in this application is always less than or equal to 1. \P 82.10 (j) also discusses "weighting factors" for calculating equivalent doses and provides a table of these factors, all of which are GREATER than or equal to 1. There will considerable

confusion for the lay person (most of the population involved with this Rule) if the distinction between these two "weighting factors" is not clarified.

¶ 82.10 (g), (h) & (i) – These three paragraphs discuss the dose reconstruction process that NIOSH will perform. Para. (i), in particular, describes the process of characterizing the radiation exposure environments to which workers were exposed. However, the effort which will actually be required to complete this process for the number of workers involved with this Rule is truly monumental, and cannot be completed without the assistance of the DOE Contractors to retrieve the relevant records and aid in there interpretation. Paragraph (i) describes a process that is not compatible with the discussion about the need to be efficient.

This process cannot be completed by NIOSH alone from "records requested from DOE". The process needs to put considerable weight on the judgment of the contemporary professionals that conducted the radiological monitoring programs and the DOE Contractors staff evaluation of their records. For example, a zero value for a monitoring period should not be subject to a "missed dose" estimate based upon the minimum reporting level of the monitoring program, because there are many explanations for a legitimate "zero"; the worker was on vacation, he was assigned to work that did not incur the likelihood of any exposure (desk work for an engineer, for example), and, in fact, he worked on a radiological job, but in fact, received no exposure. A worker may also have been employed by the contractor, but assigned to work that did not even require his being monitored; this should not be interpreted as a period that should be assigned "missed dose" because he was not monitored. But that cannot be determined without a detailed look at the employees work history, which is typically not available without an extensive evaluation of archived records beyond the employment history. This is further emphasis on the need for DOE and its contractors to be involved with evaluating the dose reconstruction results.

- ¶ 82.15 This paragraph discusses how NIOSH will evaluate the completeness of an individual's monitoring data provided by DOE. The first item is "comparisons with information provided by claimants, ...". Experience with employees inquiring about exposure histories indicates that, unless they were specifically knowledgeable about radiological controls program, they frequently have a distorted view of distant past events associated with their exposure history. The last item in the list is "Reviews of the DOE contractor record systems", which should have considerably more weight, but will require a significant amount of effort that is not currently a part of the process.
- ¶ 82.17 This paragraph discusses the information that could be used to supplement or substitute for individual monitoring data. As discussed above in ¶82.10, this is a truly monumental effort. For the nearly 10,000 requests that have already been received, even assuming only a nominal 200 man-hours to research the records for each claimant, this effort would require about \$100,000,000.

In summary, the process described in the Rule is legitimate in appearance, but does not even hint of the monumental effort required to complete as described. Although the

intent of the rule appears to be "to err reasonably on the side of overestimating exposures" (see Paragraph E. in Section III Background), the process has the likelihood of grossly overestimating the exposures, without more involvement by the organizations that created and have custody of the records detailing that exposure. The Rule should prescribe more involvement on the part of DOE and its contractors with the review of the dose reconstruction results