

**Radiological Control Coordinating Committee (RCCC)
Meeting Minutes
July 23, 1996
Seattle, Washington**

I. Convene Meeting, Agenda Additions, Meeting Minutes

The meeting convened at 12:10 p.m. in Room 616 of the Sheraton Seattle Hotel and Towers. A brief introduction of the attendees was given. Attachment 1 is the attendee list.

The Chair discussed the Denver minutes and asked the Committee to either submit revisions or mark an "OK" and initials indicating approval of the minutes. The reviewed minutes should be submitted to the Chair or to the recording secretary. Additional input can be faxed to (505) 845-6195.

II. General Discussion

The past RCCC meeting in Denver, Colorado was discussed. The Denver RCCC meeting was held despite the cancellation of the ES&H Conference so the Committee could meet with Dr. Tara O'Toole and determine RCCC involvement in the ES&H Council. However, the Council is not currently meeting; therefore, the Council has taken no action regarding RCCC involvement. The activities of the Industrial Hygiene Coordinating Committee were discussed.

It was unanimously decided that the RCCC will proceed in the same manner as in the past with an emphasis on using sound technical support for their positions.

A general discussion was held regarding the future of the RCCC. The next RCCC meeting was tentatively scheduled for November 1996, in between the presidential election and the ES&H Conference.

III. Using Robotics as an ALARA Measure

Dennis Riley of the Fernald Site Office provided information on the use of robotics as an ALARA measure for operations at the Fernald Site. A thorium repository had a large quantity of hazardous waste consisting of 6,000 drums of waste containing oxalates and hydroxides. The drums were stacked three high in an unheated butler-style building and had been sitting for approximately 30 years awaiting disposal. Drum failure was discovered and there was a high potential for direct exposure and airborne exposure between 3,000 and 5,000 DACs.

Robotics was used as an ALARA measure during the overpacking of the waste. They have two robot units. One is used for the actual overpacking operations and the other is used for training and qualifying. The robots were made by a Canadian company called "Spar" and consisted of a fork-lift with a boom stretching out approximately ten feet used

to grab drums. Robotics was also used in any clean-up activities needed after overpacking a failed drum.

One of the problems encountered was with the throttle adjustment. Also, the building where the drums were stored was not well-insulated. A thick latex paint was used to ensure the maintenance of negative air pressure inside the building.

The Chair asked how internal uptakes were being evaluated. OH said that fecal and whole body monitoring were used and applicable standards were adhered to. Lapel air samplers were worn as well.

Action Item: OH was asked to obtain written information on this ALARA measure and provide to RCCC members.

Questions arose regarding the cost. OH said a substantial amount was used for the hardware and about half that amount was used for training. An estimated amount was 5 to 6 million dollars, which was noted to be mild compared to potential litigation costs.

ID asked a question regarding the basis for the ALARA analysis. OH said initially it was a manual analysis. However, after the manual analysis, the results showed no internal inhalation dose. This conclusion was not realistic, so they modeled using upset conditions (e.g., drums stacked three-high and the top one falls off) for analysis. ID was concerned about the way the analysis was conducted because they had noticed a trend towards “steady state health physics” in which no upset conditions are used for analysis.

The Chair noted that the dosimetry was unique for thoron. There is similar experience with this with the UMTRA project.

Action Item: OH to obtain information on the dosimetry of thoron. It was suggested that it may be useful for this information on robotics be forwarded to the Health Physics Society (HPS) to be written into work in progress and invite additional peer review.

The Committee expressed interest in the use of robotics and perceived this as being good health physics practice.

IV. Establish Subcommittee for Surface Radioactivity Values

The Chair briefed the Committee on the activities of the Environmental Radiation Control Coordinating Committee (ERCCC), which has been working with Pantex and Andrew Wallo, EH 412. The ERCCC has been evaluating the surface contamination guidelines used to release materials with some residual amounts of surface radioactivity (see Attachment 2). A subcommittee needed to be established to work with the ERCCC.

A list of names are listed below with the corresponding affiliation:

SR	-	Bradley Eichorst, DOE (Chair)
EM	-	Maria Gavrilas-Guinn, DOE
DP	-	Rudy Englemann, ORISE
EH	-	Judith Foulke, DOE
AL	-	Roger Huchton, LANL
NV	-	Harry Black, Bechtel
RL	-	Brenda Pangborn, DOE
OAK	-	Edwin Njoku, DOE and Kathy Shingleton, LLNL
OR	-	Andrew Bassett, DOE and Marty Jamison, Lockheed Martin
ID	-	Kenneth Whitham, DOE and Richard Dickson, DOE
OH	-	David Kent, EGG/Mound
RF	-	William Bair, Kaiser-Hill

Some of these names were provided after this RCCC meeting. A subcommittee appointment letter is being prepared by the Chair and will be sent to the subcommittee members.

V. Transuranic Detection Limits

A summary on transuranic detection limits was distributed (Attachment 3). OR maintains that surface contamination cannot be detected like “we want it to” and raised the question on “why we are doing it anyway.” He explained to the Committee that the calculations used for the detection limits were Gaussian, which only works with high surface contaminations but not with low. OR explained that Poisson statistics should be used instead and that Poisson statistics were used in this document (which was sent to Marty Jamison and who had no negative feedback).

Action Item: These issues will be submitted to the Subcommittee for Surface Radioactivity Values to address. - Completed

VI. Amendment to 10 CFR 835

The latest proposed amendments for 10 CFR 835 were distributed to the Committee for DOE use only. The amendments are not provided as an attachment to these minutes because they are still in the pre-decisional draft phase. The proposed schedule for approving the amendments was to have the Secretary approve the amendments as soon as possible, submit the amendments to the Federal Register before the end of the fiscal year, and to have a public comment period for 60 days.

EH-52 would like the amendments finalized by October 1, 1996, so that the amendments would be effective on January 1, 1997. There seemed to be some confusion among the Committee regarding the RPP revision submittal and approval process. The Chair clarified this issue by explaining that in the new revision to 10 CFR 835, there is a 180-day period to revise an RPP and 180-day period for a review of the revised RPP.

An expressed concern was that the RadCon Manual was inadequate. It was explained that the RadCon Manual is a guidance document and its status does not impact the implementation of 10 CFR 835. The contractor is under obligation to fulfill any requirements outlined in the contractor's RPP, which is approved by the CSO. That is why the RPP content is so important.

VII. Update of RPP as a Result of Granting/Denying of Requested Exemptions and Publications of Technical Topics

EM-4 distributed a list of exemption requests from 10 CFR 835 (Attachment 4). She discussed the process of updating RPPs in light of exemption status and publication of technical positions. EM-4 spoke with the General Counsel to discuss the revision and approval process of RPPs after an exemption is granted. She asked specifically if the RPP needed to be approved again after it was revised to incorporate a granted exemption. The General Counsel said that no approval was needed. EM-4 could not get that statement in writing but was told to quote Anne Troy, GC-52, and incorporate the quote into the minutes.

A question was raised regarding the revising of RPPs in light of exemptions. EM-4 explained that there would be a different approach for every RPP. The RPPs need to be assessed on a case-by-case basis. If an exemption is granted, the process is easier than if the exemption was denied or not submitted. It was stressed that revisions are to be done in a timely manner after the exemption is granted or denied.

Action Item: Each RCCC member will assess the status of requested exemptions for each site. In addition, members will ensure that RPPs for each site are consistent with any applicable exemptions and technical positions. If an exemption has been granted, the exemption-granting letter will be reviewed to ensure all the conditions have been met. After these evaluations have been done, a letter needs to be sent to the PSOs indicating the status of requested exemptions and RPP status for each site. The letter must also address reasons why any requested exemption was not submitted. A conference call is being scheduled to discuss the progress of this action.

A few exemption requests were discussed among the Committee. For example, LLNL's request for an exemption was denied and therefore their RPP had to be revised. Another exemption request discussed was the 400 square-foot building at Berkeley that deals with tritium. The exemption proposed that the building be under 10 CFR 20 (NRC) rather than DOE. The conversion to Part 20 is not being favored by EH. Four specific 10 CFR 835 exemptions are currently being reviewed. The current RPP must reflect this process. The DOE Radiological Control Technical Positions are provided in Attachment 5. These technical positions can also be accessed via the EH home page (<http://www.tis.eh.doe.gov:80/docs/rctp/index.html>).

VIII. PAAA Reporting/Discussion on Enforcement

Non-compliance is being tracked. The database printout from the tracking system was distributed (Attachment 6).

OR feels EH has been exerting pressure on the system, going against the way he was taught to report, which is by means of threshold. For example, Hanford “reports everything” and Oak Ridge is only reporting by threshold. OR asked for clarification on what to report. It was suggested that OR work with Keith Christopher, EH-3, for reporting guidance and to gain EH perspective.

Westinghouse’s reporting reputation was discussed. Westinghouse has been known as a good self-reporter. Westinghouse was fined \$37,000 and it would seem that they were “crucified” for reporting. However, the reasons for the fine were that (1) the follow-up action on previous incidents was poor (i.e., recurrent similar incidents) and (2) the corrective actions were not brought to top-level management.

One enforcement issue discussed was PNL’s criticality issue. Proper monitoring was not being conducted in this case. PNL did not receive a fine because it is not a nuclear facility and is exempt from fines. In addition, no imminent danger arose from this situation. SNL/NM on the other hand, had a significant radiography incident. The particular process was being conducted under “work for others” during off-hours. It involved pouring molten metal into a mold and performing real-time radiography. A technician was in an unsafe area and the radiographer was just short of starting the radiography process. The radiographer’s hand was on the key when another technician told him to stop the process. No one was injured, but there was a high potential for exposure, unlike the PNL criticality potential. The difference between the two incidents was stressed.

The thermocouple incident at Richland was discussed as well. RL explained that a thermocouple was being removed from a sleeve and it became immobile. A technician was trying to manually shake it loose and received a dose of 13 rem to his hands and arms. The technician did not follow the RWP (i.e., no dose rate was determined first). The incident was attributed to the lack of knowledge by the workers and RCTs.

The Committee discussed the different means of enforcement. The structure for fines was defined in 1989 with the top fine being \$100,000 for Class A reactors and the fines for less severe incidents graded from there. This fine structure is not consistent with the current public posture; therefore, the fine structure will be modified. In addition, a Notice of Violation is issued by press release from the Secretary’s office. There is a stigma attached to receiving a Notice of Violation and it is sometimes perceived as being worse than a fine.

The Chair told the Committee that the SNL Enforcement Conference was professional and went well. There was no disagreement between the field and the EH enforcement staff. The field was neutral, provided an independent view, and participated as full

members. There was good communication with the contractors with lots of positive interaction. The facility representatives provided an operational perspective.

IX. Performance Objectives and Criteria of Radiation Protection

As the DOE has been moving to performance-based oversight, many sites have had to develop objectives and criteria for measuring radiation protection program performance. It has been difficult for many sites to arrive at meaningful measures. The site representatives shared their approaches to developing their measures. Some of the approaches included:

- looking at ORPS as a performance indicator and to compare performance of sites,
- using cost plus award fees,
- normalizing dose,
- capturing time spent by employees involved in rad work,
- using positive bioassays, and
- driving employees to watch each other.

The LANL Performance Measures used for the October 1995 appraisal were distributed as an example (Attachment 7). It is important to note that these performance measures are not being implemented at this time but are being incorporated into LANL's RPP. PSO, field, and area offices will be involved in reviewing the RPP.

During the necessary and sufficient process for radiation protection at LANL, standards were developed that mimic 10 CFR 835--with additional protective measures including the areas of source control and explosive safety. Performance criteria were developed and approved by the Operations office, the lab director, and the LAAO manager. This set of standards will replace the first line of the RPP. The new revisions to 10 CFR 835 will bring relief to LANL and help LANL's needs. For the Committee's information, the Chair said that Rick Jones did a similar "bottom-up" approach of 10 CFR 835 that paralleled LANL's effort. The result was that 10 CFR 835 is a good standard with a few exceptions.

The Committee discussed the transition to performance and agreed that it is not easy. Implementing performance is not straightforward. It can be difficult to keep the group on course when it is easy to slip into the old tracks of compliance. Only time will tell if performance is a better assessment process.

A question was asked regarding how benchmarking can be shared. It was noted that power plants report into a database that has dose information. EM-4 said that Brookhaven's ALARA Center and Health and Safety personnel at Environmental Management sites were working together to optimize radiation protection activities (Attachment 8). Brookhaven's ALARA Center has a questionnaire which was sent to 400 radiation protection people to gather information on effective radiation protection and available expertise at different sites. This information can be shared and used to improve other sites' radiation protection programs.

A concern was raised regarding a 10 CFR 835 amendment requirement that relaxes the dose reporting requirement. Some sites have performance measures based on collective dose and there is a concern that if the reporting threshold is relaxed, the collective dose will be altered.

Action Item: RCCC members are to review this 10 CFR 835 amendment from an implementation standpoint as it relates to dose reporting requirements.

X. 10 CFR 835 Individual Monitoring Levels

There has been some discussion on raising monitoring levels from 100 to 500 mrem to be consistent with the NRC and the NRC standards. It is important to note that the NRC has concerns with the higher monitoring level and is currently reviewing it.

On one hand it appears the DOE is badging too many people. As a result, efforts to manage collective are questioned with statements like this from the Office of Oversight's annual report: "96% of the workers are under the limit because too many have dosimeters." It was also expressed that the monitoring level used should be the more conservative value, which is the DOE value.

EH-52 said a group of occupational workers have been exposed between 100 and 500 mrem, but there are no exposure data on them. It is important to close this gap but additional information is needed. NRC licensees are doing it to be more responsive, but there is no regulation requiring it. EH-52's advice is to talk to enforcement.

One question discussed by the RCCC was "how do you accurately characterize the population dose when everyone is wearing dosimeters?" There is a need to get rid of those dosimeters on people who don't need them. The problem is complicated at sites like Paducah and Portsmouth, where there are people wearing two dosimeters to monitor for the two different levels identified by the NRC and DOE.

The Chair said that during the necessary and sufficient process at LANL, the line found that they could eliminate the need for many workers to wear dosimeters. However, it was pointed out that the RadCon Manual has encouraged this practice for some time and the line has just now realized it.

EM-4 provided Attachment 9 entitled, "Exposure, Personnel, and Cost for Radiation Protection Activities at Environmental Management Facilities" to the Committee.

There was also some discussion on the 10 CFR 835 requirement to wear nuclear accident dosimeters when entering areas where installed criticality alarms are required. Requirements for installing criticality alarms are driven by other orders and are not based on dose potential. The consistency of requirements for dosimetry and alarms was questioned.

These issues will be discussed in more detail at the next RCCC meeting scheduled for the November timeframe.

XI. New Items:

The Deputy Assistant Secretary for Worker Health and Safety commended the RCCC on the Radon Subcommittee Report (see his memo--Attachment 10). The RCCC's recommendations are being evaluated and forwarded to the Assistant Secretary of Environment Safety and Health.

The Chair asked if the discussion about the RPPs and the RadCon Manual should be opened again to clarify any issues. It was explained that the RadCon Manual is a guidance document. The RadCon Manual is still being revised to incorporate 10 CFR 835 to ensure nothing is lost. The status of the RadCon manual does not impact the RPP. However, there is nothing to prevent it from being implemented as a local requirement, such as via a contract or an RPP.

A brief status on DNFSB Recommendations 91-6 and 95-2 was given. Recommendation 91-6 is being reviewed by the DNFSB and it is moving forward. Dr. Cunningham has package to close. Recommendation 95-2 is the latest agreement between Grumbly and the DNFSB. Frank McCoy is on detail to EH and is responsible for implementing it from a Department-wide perspective and is moving forward. EH-52 explained that everyone should get on board with 95-2 to integrate safety and health into management systems.

External regulation of DOE was discussed. DOE expects external regulation to be implemented over a phase-in period starting in five years. The DNFSB would continue its role in the interim.

The Galvin Report has caused intense interactions involving a lack of trust with labs. It is important to maintain communication as trust will take time to develop.

It was noted that the Necessary and Sufficient process is now called "Work Smart Standards" at the request of the Secretary.

The RCCC meeting adjourned at 5:00 p.m.