



Integrated Safety Management (ISM) Working Group
Energy Facility Contractors Group (EFCOG)
Radiation Protection Task Group

EFCOG Occupational Safety & Health Subgroup Meeting

Minutes of the May 12th and 13th, 2004 Meeting, Las Vegas, NV

Attendance

Greg Perkins, Fluor Hanford, RPTG Chairman
Tom Laiche, Sandia National Lab
Ross Miller, Sandia National Lab
Brian Thomson, Sandia National Lab
Christine Donahue, LBNL
John Edelmayer, INEEL/BBWI
Mike Knight, BWXT Pantex
Mark McMahon, NTS/Bechtel
Carolyn Owen, LLNL
Al Ogurek, Yucca Mountain/Bechtel
Chuck Schaefer, BNL
Jim Tarpinian, BNL
Richard Sexton, Rocky Flats
Jim Stafford, Westinghouse Savannah River Company
Joe Yanek, Westinghouse Savannah River Company
Joe DeMers, Bechtel Hanford
Jerry Hunt, ORNL/UT Battelle
Dan Burnfield, DNFSB

The RP Task Group (RPTG) discussed a number of subjects as follows:

1. Manpower Assessment Work with HPS Presentation – Tom Laiche

There has been no further action requested of the RPTG since the October 2003 update. The subcommittee work is now finished with no further actions due. This action will be closed within the EFCOG tracking system. The information that was generated by this subcommittee is now being used by the National Health Physics Society for the following:

- Raised the visibility of health physicist shortages through HPS communications,
- Expand and improve student recruitment programs,
- Seek financial support for students and academic programs,
- Strengthen existing academic programs through accreditations.

Discussion of this topic prompted additional dialogue related to personnel shortages, including professionals, radiation protection technicians and use of contracted radiation protection technicians. Some sites that are using contracted technicians are experiencing some turnover for those technicians that have exceeded one year on site and have lost untaxed per diem.



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One site has a bonus built into the contract for those contracted technicians that stay on site until the specific project they are working is completed. Those that are terminated or otherwise leave early lose all rights to the bonus.

Rocky Flats has teamed up with Bartlett Nuclear to help employees current on site to become radiation protection technicians (RCTs). By the completion of their training, they believe that these long-term Rocky Flats personnel are qualified to become beginning level RCTs. Rocky Flats also commented that they have found that larger numbers of RCTs are required to be available on site longer than initially planned.

Sandia has recently hired a couple beginning level radiation protection professionals from colleges. They are finding that they are competing with other Sandia organizations for HPs and RCTs because other disciplines (like Security) have discovered radiation protection departmental personnel have skills that are applicable outside of radiation protection.

Savannah River has experienced some trouble recruiting professionals. They are currently working with Francis Marion College to help encourage the few HP professionals that are in training to stick with their major. Savannah River is also experimenting with a couple programs aimed at reducing the need for additional numbers of RCTs.

One program has about 400 personnel trained as “*Advanced Radworkers*.” This group is primarily comprised of operators, mechanics and laboratory technicians. They are able to perform some of their own radiological coverage and undergo an annual requalification.

An additional program is known as “*Multi-Skilled Technicians, (MSTs)*,” and is a smaller group of about 80 personnel. These individuals are fully qualified as RCTs as well as their own discipline. Their qualification in each area are fully maintained.

In both of the programs above, the Savannah River RP group “owns” all of the documentation created by the alternative RP personnel.

LLNL trains their entire group of 70 RCTs to also perform as IH technicians. They commented that to maintain both sets of qualifications does require extensive training. They also commented that they are having trouble finding certified health physicists.

2. RPTG ANSI N13.12-1999 Position Paper Update

In October of 2002, the RPTG developed a “white paper” that reflected a consensus RPTG position for the incorporation of this ANSI standard into DOE rules/standards. The position paper was provided to the EFCOG ISMWG Chair following that meeting. Subsequent to the April 2003 meeting, the RPTG decided the position paper should be provided directly to EH-1. This action was completed in October 2003.

A response (dated November 26, 2003) was received from Ms. B.A. Cook, Assistant Secretary, Environment, Safety and Health by the RPTG chairman on January 21, 2004. In this correspondence, Ms. Cook thanked our group for our efforts to provide



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constructive suggestions for improving efficiency of radiological protection operations in the DOE complex. However, she also stated, *“Although there appears to be a growing body of evidence for updating the surface contamination values, EH does not believe it is prudent to initiate a major policy change in this area at this time. The primary reason is the need for compatibility in control and release requirements between DOE and the other Federal Agencies responsible for regulating radiation exposure of the public and the environment.”* She further stated that EH is currently working with other agencies to evaluate possible new strategies. The RPTG chairman can provide any member a copy of this correspondence upon request.

The topic of radiological release continues to be of significant interest to members of the RPTG. Additional discussions and actions can be anticipated into the future. However, receipt of the letter from Beverly Cook completes the specific action tracked under this topic and the item will be closed within the EFCOG tracking system.

Additional discussion with regard to ANSI 13.12-1999 continued at this meeting. There is good justification to follow the development of release criteria into the future. One attendee pointed out that in a recent project, DOE authorized the radiological release of a facility at levels that exceeded 10 CFR 835 requirements for control. This property was then leased back and occupied by DOE personnel.

Both Savannah River and Rocky Flats have experienced increased need to communicate with their state agencies as those agencies are appearing to take a more robust position with regard to radiological release plans.

The DNFSB representative in attendance recommends that we watch for a new EPA federal notice that is expected to be released soon as a replacement for 1960-61 public standards. This new EPA standard will provide federal radiation protection standards for members of the public. We may wish to take particular notice with sections that are provided as “radon guidance.”

3. DOE-EM Metrics

The DOE-EM sites are currently working to meet a “Safety Expectation” initiative that have been presented to the DOE Area/Field offices as the “4.0” program. Under this program, EM-3 has presented four metrics where the expectation for performance is zero incidents. These four metrics include:

- On The Job Injury Requiring Hospital Transport
- Skin/Internal Contamination
- Lock Out/Tag Out Incidents
- Transportation Incidents Involving Hazardous or Radioactive Materials

During the October 2003 meeting, the RPTG focused on the skin contamination metric. The members present at that meeting were concerned that the actions that are required to meet anything close to “zero” skin contaminations will be costly and will not permit appropriate consideration of risks. For instance, the pressures to prevent skin contaminations are now emphasized above concern for heat exhaustion. There may be a tendency to over-dress workers to reduce the potential for contamination.



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The RPTG members determined that committee action would be appropriate with an objective of discussing this issue with EM leadership. Action Item 12 was developed to provide the path forward for the RPTG.

Subsequent to the October 2003 the drafted letter created by the RPTG was presented to the EFCOG Directors. The Directors determined that the letter would be consider contrary to DOE policy and would not support sending it forward. The EFCOG ISM/IM Chairman presented this information to the RPTG members present during this meeting (May 2004).

The RPTG discussed the options we have and determined the best path forward would be to close out further efforts to submit the draft letter, but not to drop the issue altogether. Given that DOE-EH is undergoing a change in leadership, the RPTG believes we should wait to permit new leadership to be assigned and then to work through the EFCOG leadership to sponsor a future meeting with EH and EM. The purpose of such a meeting would be for the RPTG membership to better understand the DOE vision for compliance with DOE-EM expectations of “0” skin contamination along with the implementation of our Integrated Safety Management programs that require consideration of all hazards.

4. INPO RadCon Assist Visit at Savannah River

The Savannah River Site (SRS) has had an on-going contract with the Institute for Nuclear Power Operations (INPO) for a number of years. Recently, SRS asked INPO to evaluate contamination control practices at one of their facilities. INPO provided a senior individual that performed a one week inspection and then provided a written report.

Although much of the report could be characterized as routine observations, there were a couple of identified issues that may be of interest to EFCOG members. These issues included:

- Hand carried materials (such as notebooks and various personal items) are not required to be monitored for contamination before leaving the radiological buffer areas. These items are often in the vicinity of contaminated areas, but, if they are not taken into the contaminated area, monitoring is not required. As a result, contamination unknowingly spread to materials within the buffer area would go undetected when the materials are removed from the area.
- Portal monitoring detection weaknesses, the lack of monitors in some locations, their configuration, and monitoring practices could allow the release of low levels of contamination. The installed portal monitors are designed to detect alpha and beta contamination. Some workers put on coats and/or sweaters and change their shoes before they exit through the portal monitor. These additional clothes provide significant shielding of alpha and beta particles and hinder the detection of contamination. In addition, other areas of the site have removed the exit contamination portal monitors. These areas have also raised the whole-body contamination monitor alarm setpoint by a



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factor of two. These practices further increase the potential for the inadvertent release of contamination. Recent commercial industry operation experience in this area has demonstrated the need to establish conservative contamination portal monitors alarm setpoints.

Discussion of these issues suggested a wide variety of programs exist with regard to requirements for frisking hand-carried items upon departure from buffer areas. Many facilities do not require this survey.

Until recently, SRS had portal monitors at the exits of their major processing areas as well as exits from facility contamination areas. This was a unique configuration within the DOE complex. They recently removed the final exit portals because they had found them to be expensive to maintain given the consideration they have not discovered personnel that were contaminated. There was essentially consensus at the meeting that personnel surveys at the point of exit from controlled areas are not necessary.

The RPTG membership is interested in the association of INPO with the DOE complex. As it is understood by this group, INPO has an assist contract of some sort with DOE and a specific assist contract with SRS. {Note – The SRS INPO liaison is Joe Fulghum. Joe is willing to provide information about the INPO arrangement with Savannah River to interested parties. He can be reached at (803) 952-9793 or email joseph.fulghum@srs.gov.} The RPTG chairman will contact INPO for additional information and possible attendance at the next scheduled meeting (November 2004 in Albuquerque).

5. RP Benchmarking Questionnaire

Sandia National Labs developed a benchmarking questionnaire that was provided before the meeting to those members that had pre-registered. The thought in mind is that the questionnaire will help us all understand the various organizational structures, staffing, training, etc. across the complex and it may be helpful as we each deal with the never-ending challenges in continuing to provide a compliant and efficient program to our clients. Several of the members provided electronic renderings of the questionnaire to the chairman who will assemble them in a spreadsheet to aid in the program comparisons. The resultant information will be discussed at the next meeting.

6. “ProRad” Integrated RP Information System Experience

The Savannah River Site (SRS) recently implemented a new access control and radiological records management system designated as “ProRad.” This system met the procurement objective of commercial availability. The complications of installation for a complex computer system on a large site like SRS resulted in cost increases of 100% from initial estimates and required a schedule of 3 years versus the initial plan for 1 year. A full 1/3 of the overall cost was for hardware installation.

The system is now operational with approximately 50 field, touch-screen modules and provides services for the SRS population of 8500 employees. A number of improvements have immediately been recognized that include:



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- Administration of the internal dosimetry program,
 - Elimination of manual tracking of bioassay requirements (huge improvement considering SRS processes over 10K tritium samples each year),
 - Automation of bioassay sample requests/notifications.
- Issuance of EPDs automated,
- Elimination of display of social security numbers,
- Real-time availability of individual actual and estimated dose totals,
- Automated personnel qualification checks,
- Improved efficiency and real-time availability of radiological information for ALARA planning, review, and incident investigation.

Overall, SRS is pleased with the performance of the system and user acceptance has been good. SRS believes that teamwork between various responsible organizations has been the key to the project success. The only troublesome issue being worked at this time involves lack of access to the software source code.

Bechtel Hanford also operates a ProRad system and commented that a strength associated with their configuration is the ability to utilize a PDA to permit access control ability in distant and/or temporary work locations. This is very helpful for D&D type work and could be further strengthened if the PDA was upgraded to a Blackberry-type device to permit live-time operation.

The project lead and contact for the SRS ProRad system is Lisa J. Skinner at (803) 925-7885, or email at lisa.skinner@srs.gov.

7. Special Presentation - Training for Emergency Responses to Radiological Dispersal Devices (RDDs) and Improvised Nuclear Devices (INDs)

A special presentation was offered to the RPTG to view an hour presentation for a portion of the training currently provided to Region IV Radiological Assistance Program personnel. Ken Groves of S2-Sevorg Services presented a portion of the training that is provided to first responders that he believed would be most interesting to the Complex RadCon management present at this EFCOG meeting. The presentation provided some information not previously understood and was valuable and will improve our general knowledge of preparedness.

8. Open Forum Discussions

Beyond the agenda items communicated at this meeting, a sampling of other topics discussed at the meeting included:

- One attendee asked whether EFCOG has considered the establishment of a "Training" EFCOG task group. This question was briefly discussed with the ISM Working Group Chairman. Essentially, if there is membership interest for such a group, one could be established. Another approach might be to



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have a training discussion at the next RPTG meeting with the membership. The objective of that discussion could be to either sponsor a radiological training group or perhaps extend the meeting time of the RPTG for one day to accommodate training issues related to RadCon.

- For efficiency gains, a couple sites have now established Radworker retraining as computer-based training and have deleted a requirement for practical demonstrations. Practical demonstrations are now required only for initial training. This approach has been in place for 6 months to a year at several sites and each has implemented alternative mechanisms for evaluation of adequate performance:
 - INEEL conducts 10% random testing (field evaluations) to consider adequacy of radworker performance at SOPs. They report the program is working well.
 - SRS dropped their practical requirement in March 2003 and now evaluate dress/undress performance by field evaluation. They report that they look at approximately 10% of the radiological work force and are not seeing any significant deficiencies.
 - Pantex conducts computer-based training but still requires practical demonstrations. However, the demonstration is tailored to the discipline to dress out and exercise performance based upon normal work assignments. For example, firemen never wear PCs, so they are not required to undergo a radiological dress/undress practical after radiological retraining.
 - Rocky Flats has dropped the radworker practical and now places more RP personnel at SOPs with direction to mentor the radworkers if they observe deficiencies. Rocky trains D&D workers much differently than classical radworkers are generally trained. The training is less technical and much more practical and interactive. This is a 3-day program that does contain both written and practical exercises. It is called "Rocky Flats 101" and contains all training modules (rad and non-rad) that may be required for the workforce. A general comment offered by the DNFSB representative in attendance at this meeting was that Rocky Flats did a good job assembling this program.
- BNL reported a recent MSA PAPR problem where a filter "popped off." They were interested in feedback from others that may have had similar problems. The general response was that such an event was pretty uncommon but may be associated with a substantial physical challenge to the filter. An MSA sales rep reported that should the filter be inadvertently cross-threaded, it actually could be dislodged if lightly bumped. No additional information is available at this time.
- SRS discussed the civil penalty they recently received that involved several workers that falsified dosimetry documentation. Although a substantial fine was assigned, a significant mitigation in the potential fine was realized because of the rapid action and thorough investigation that was conducted by SRS management.
- Rocky Flats reported a "near miss" that involved the use of a hydrolaser in poorly lit building. The operator did not see a 480 VAC electrical cable that ran adjacent to an I-beam. The high pressure water stream tore the insulation off the cable and resulted in an electrical arc, however, there was no personnel injury.



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- Rocky Flats reported they are using 15-25,000 respirators a month to support D&D operations.
- Nevada Test Site is having problems tracking and controlling small check sources that may be contained in or with IH and other instrumentation.
- Hanford presented information regarding a possible need for a special unit exemption from 10 CFR 835.4 that is currently in the review cycle with DOE. Often, bioassay data may be reported in DPM or other industry standard units that are not specifically identified in the regulation as a “special unit.” If the response from DOE acknowledges a valid need for an exception, the RPTG Chairman will provide that information to the membership.
- Rocky Flats reported an ORPs issue involving shipping containers located in posted radioactive material areas that are found to have fixed contamination. There have been some discussions between Rocky and WIPP where WIPP is suggesting a need for a fixed contamination limit on waste containers. Other sites present at this meeting have not had similar discussions.



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Discussion/Resolution of Previous Radiation Protection Task Group Action Items

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Action Items Summary: 1 new, 3 done

Task
<p>1. Prepare a white paper reflecting the consensus RPTG position on the incorporation of ANSI N13.12-1999 into DOE rules/standards. Provide position paper to ISM WG chair and DOE representatives. Perkins 10/03 04/04 Potential large financial savings.</p> <p>Status: Done</p> <p>A white paper was developed during the October 2002 RPTG Meeting. Following the meeting, the paper was provided to the ISMWG Chair.</p> <p>Update – At the April 2003 meeting, it was decided that the RPTG should go on record with EH-1 regarding this issue. A letter will be drafted and submitted to EH-1 to transmit the position for the support of ANSI Standard 13.12-1999. The status for this task should be revised to <u>On-Going</u>. Completion date should reflect a change to 10/03.</p> <p>Update – A letter was transmitted to EH-1 on October 10, 2003. The RPTG Chair will follow up on any response from DOE and will update the membership.</p> <p><i>Update – A response from EH-1 to the RPTG Chairman was dated November 26, 2003 and received January 21, 2004. In the response, EH-1 acknowledged the position of support for ANSI N13.12-1999 by the RPTG and thanked them for "...constructive suggestions for improving the efficiency of radiological protection operations...". However, EH does not believe it is prudent to initiate a major policy change in this area at this time. EH-1 stated that they are working with other federal agencies on this issue and are looking for possible new strategies.</i></p> <p><i>The RPTG considers this action <u>closed</u> and will evaluate possible related actions in the future as DOE establishes a path forward for the control and release of personal property containing residual radioactive material.</i></p>
<p>2. Respond to a request by the national chapter of the HPS to the RPTG on a health physicist manpower assessment survey. Laiche 10/03 04/04 unknown savings</p> <p>Status: Done</p> <p>The HPS request for support regarding HP manpower was discussed during the RPTG October Meeting. A decision was reached to accommodate the HPS request and Tom Laiche, Sandia National Laboratories agreed to represent the RPTG. A letter was prepared by the RPTG Chair agreeing to support and sent to John R. Frazier, Ph.D., CHP, who will lead the HPS actions.</p> <p>Update - Tom Laiche updated us at the April 2003 meeting. The underlying goals for the assessment include:</p>



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- Verify the current HP manpower status,
- Project future needs for radiation safety personnel, and
- Identify ways to meet current and future manpower needs.

Related to his assessment, Tom presented several questions that our members are asked to provide before the end of June 2003. These questions are:

- What are your present needs (numbers) for professional health physicists?
- Does your site have specific, written qualifications for health physicists?
- Does your site have specific CHPS requirements for any positions?
- How many vacancies do you presently have?

Response is due to Tom via email at tlaich@sandia.gov by the end of June. This action will be carried as On-Going and updated at the next RPTG Meeting.

Update – Tom updated us at the October 2003 meeting. Results of the HP manpower survey were presented and reflected excellent DOE complex participation. Top will continue to follow this issue and update the members at the next meeting.

Update - There has been no further action requested of the RPTG since the October 2003 update. The subcommittee work is now finished with no further actions due. This action will be closed within the EFCOG tracking system.

3. New DOE-EM “Safety Metrics” may prove to be expensive to implement and may not be conducive to integrated safety management. Specifically, the EM goal of “zero skin contaminations” does not adequately consider risk management. The planned action is to draft a letter to Beverly Cook, EH-1 to address the issue. The RPTG believes that there are cross-cutting areas in Occ Med and IH and will solicit support for this letter from these Task Groups. Assuming support, the letter sponsored by the RPTG will carry the weight of the Occupational Safety and Health Subgroup. The letter will also be forwarded to the EFCOG Executive Management Committee for consideration.

Status: Done

Update – The EFCOG Executive Management Committee did not support sending this letter forward to EH-1. They believe the letter to be confrontational and wish to apply a general rule that EFCOG will not challenge DOE “policy.” This action item will be considered by the RPTG to be closed. However, the RPTG will follow the organizational assignment of a new individual in the currently vacant EH-1 position. The RPTG will then work through EFCOG leadership to schedule a meeting with EH/EM to discuss implementation strategies/difficulties for the set of “Safety Metrics” established as policy under the EM Program Office.

4. The RPTG membership is interested in the association of INPO with the DOE complex. As it is understood by this group, INPO has an assist contract of some sort with DOE and a specific assist contract with SRS. The RPTG would be interested in further exploring this association with INPO and will contact them for additional information and possible attendance at the next scheduled meeting (November 2004 in Albuquerque). Perkins/Stafford – due 11/04.

Status: New