

**EFCOG Radiological Protection Subgroup Meeting
October 6-7, 2009 North Las Vegas, Nevada**

- I. Outside attendance by DOE Headquarters:
 - a. Amanda Anderson
 - b. Pete O'Connell
 - c. Judy Foulke
- II. Introductions and Welcome by:
 - a. Jim Stafford- RP Chair
 - b. Tony Umek – ES&H Executive Representative
 - i. Tony spoke on the on-going DOE evaluation/reorganization and potential impacts on contractors. Tony shared that if you have an effective assessment/oversight process you can withstand both internal and external reviews and stakeholder interests. DOE is reorganizing to focus and re-evaluate how contractors are regulated. The focus will consider DOE requirements and alignment when compared to:
 1. OSHA
 2. NRC
 3. effective assessment processes
- III. Technical Guidance for Implementing Neutron Dose Methods - Ken Crase
 - Key Points of Working group efforts were to resolve
 - a. Inconsistencies between 10 CFR 835 and ICRP-60
 - b. Personal dose equivalent value $H_p(10)$ at zero degrees
 - c. Ambient dose equivalent value $H^*(10)$ for instruments
 - d. Facility design use $H_p(10)$ at zero degrees
 - Neutron dose will likely increase by 21%
 - Most alpha-neutron spectra are conservative for "E" vs $H_p(10)$
 - Technical document is forthcoming from HSS to support implementation of amended rule.
 - See copy of overheads
- IV. Dose Reporting and History of Cleanup Workers- Laurie Kornacki
 - Lessons learned perspective of recent INNEL dose recovery experiences.
 - Discussed how people get dose history after their dose records and contract have transitioned to the Legacy department.
 - See flow diagrams for additional information
- V. Neutron dose change after new ICRP-60 is implemented- Rich Cummins
 - Should expect up to a 21% increase...
 - a. "E" cannot be measured
 - b. W_R - protection quantity
 - c. QF- operational quantity
 - d. Decreased dosimeter calibration factor by 21% (denominator)
- VI. ARRA Status- Jim Stafford (Duane McLane)[Hanford status added by Ted Giltz]

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- Impacts are greatest at larger EM Sites who directly received ARRA dollars.
 - Challenges in all aspects of exempt and labor hiring and management. Recruiting, training, housing, and meeting project needs are a few examples of issues each contractor is dealing with.
 - Block training has proven successful
 - HP/RCT shortage is impacting project schedules and cost. Contractors are competing against each other for limited experienced resource pool and bringing 'retired' workers back as subcontractors to help.
 - Hanford and SRS are starting to look at impacts of retrain and requal requirements that will impact larger work force in next 6 months.
- Mike Gilles (SRNS) discussed how to determine documentation for incidents involving ARRA
- Large deficiency for HP, RCT, IH resources. Major competition between Sites with salary inconsistencies.
- NTS did not get ARRA and may struggle when waste shipments arrive.

VII. Leading Indicators - Jim Stafford

- Past meeting discussion topic. Contractors have different perspectives on the value of leading indicators vs. effort to collect data.
- EFCOG ES&H Executive Committee has assigned action that each sub-committee should provide 2-5 leading indicator recommendations for their topical area. Inputs should be provided to Jim Stafford prior to the March 2010 meeting.
- What should be considered to evaluate/track? Here are some existing examples.
 1. Number of high risk or jobs planned to exceed 500 mrem individual exposures.
 2. How many documents reviewing in work planning?
 3. How many occurrences – NTS? or ORPs reportable?
 4. What is your vacancy rate?
 5. Conduct of Work/Situational awareness non-reportable events.
- TEDE is lagging indicator
- Corporate dashboard is lagging indicator

VIII. Bench Marking Results- Jim Stafford

Summary of requests for benchmarking from HRCF members were reviewed.

- Radiation- generating devices
- High radiation controls
- Use of PCM's
- RWP violations rate: 0.2-06/1000 entries. Recommendations/observations
 - Stop using "general" RWPs
 - Some incorporate RWPs into work plan
- How to establish a radiation safety committees (RSC) (see attached example from Labs)
- Access control programs, such as, ProRad or HIS-20

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This process has proven to be valuable and informative. Based on agreement members requests will be sent from the chair and reviewed by the requesting manager. A summary of the results of review will be shared as a standing agenda item.

- IX. 10 CFR 835 Implementation Status- All
 - Final implementation July 2010. Many sites implementing January 1st to align with New Year dosimetry program requirements (calendar year based).
 - Each site in various stages of implementation but no identified issues.
 - No exemption requests have been submitted to HSS.
 - No one has submitted an exemption or authorized limits for Pu-241
- X. Control of Bench Top and Fume Hood Work/RBA's for Contamination Control- Steve Coleman/Dennis Ryan (BNL)
 - "Contamination Area" requires increased controls better to use "RBA-Dispersibles in Use"
- XI. Daily Wrap-up, Tuesday, October 6, 2000
 - Argonne Lab HSS Review- Gary Ziemann
 - Technical assist visit
 - Identified gaps and recommendations but no findings
 - Good practices to support
 - Assigned Lead Tech to DOE Inspectors – worked well
 - Created a specific directory on SharePoint
 - Analyzed previous assessments and developed a "get well plan"
 - Written plan to review RPP
 - Improvement areas
 - Technical basis documents are weak
 - RWP- paper program
 - Moratorium on Scrap Metal (Amanda on the phone)
 - 4-5 member DOE team from NNSA benchmarking scrap metal volumes and attempting to identify relief solutions.
 - DOE looking for way to help; such as, independent verification (IV)
 - Still a political/policy issue and not a technical HSS issue.
- XII. Consistency in Personal Contamination Event Reporting
 - > 50K dpm beta – Per DOE O 231 is ORPs reportable
 - Discussion on how contractors deal with evaluating 'specks.' Some contractors do not report a speck when > 50K dpm because of the numerator requirement of 100 cm² in the reporting criteria.
 - For DU, only alpha contamination has limit for reporting. Direction does not include a beta value.
- XIII. Pipeline Development- Jerry Hiatt (see copy of presentation)
 - Status Update

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- NEI
 - INPO
 - Workforce age increasing
 - ANSI 18.1-1971: 2 years for senior HPT
 - College Programs Doing Well and Growing
 - Linn State program
 - Using uniform curriculum
 - With 2 year program, consider 4 year program
 - Aiken State program doing well
 - Jim Stafford will e-mail template for benchmarking employees
- XIV. DOE Order 5400.5 revision update– Mark Ledoux
- Property clearance program with respect to Richardson memo is being incorporated
 - NNSA is benchmarking performance standards for clearing material and equipment.
 - Independent Verification Program has largest potential impact on contractors. Lack of clarity in expectations and definitions is a concern.
 - Potential graded approach
 - What does “independent” mean?
 - How will “graded” approach be interpreted by auditor?
 - DOE Order in revision by QA specific to IV
 - Major Pugh NA-17
 - Scott Davis SC-31
 - RP Sub-ground established a 5400.5 Task Team, chaired by Robert Miltenberger to help build clarification and understanding of rule. A copy of the team members is attached.
- XV. ICRP-60/103 Briefing – Mark Ledoux
- Replaces ICRP Publication 60, “1990 Recommendations of the International Commission on Radiological Protection”
 - No substantial changes to radiological protection regulations or policy guidance
 - Propose the use of “Reference Animals and Plants” in order to establish a basis for acceptable dose to the environment.
 - The most significant change from Publication 60 is the 6-8 fold reduction in the nominal risk coefficient for heritable (stochastic) effects.
 - The Radiation Weighting Factors, W_R , values for protons and neutrons are different than Publication 60.
 - Discusses the use of EPD’s for legal dosimeters
 - Declared pregnant females should not exceed about 1 mSv (100 mrem) to embryo/fetus – recommendation that will likely be driven into DOE guidance.
 - Dose limits are consistent with Publication 60:

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- Effective dose of 20 mSv (2 rem) per year, averaged over defined 5 year periods [100 mSv (10 rem) in 5 years], with the further provision that the effective dose should not exceed 50 mSv (5 rem) in any single year.
- Publication 60 resulted in dose conversion factors (DCF) as defined in ICRP Publication 68, "Dose Coefficients for Intakes of Radionuclides by Workers." This modeling has not been completed for Publication 103.
- Inconsistency between DOE and NRC exist. Potential concern for moving workers between regulatory bodies as well as for contractors who work in both environments.
- NVLAP for gamma only OK'd for EPD's
- DOE considering 2 rem/year regulatory limit.

XVI. Contract Transition Lesson- Dropped as a standing topic. This round of contractor transitions appears to be complete. Any new lessons learned or information can be shared during meeting round-table discussions.

XVII. NTS tour was conducted on October 8, 2009. Very informative attended by 11 EFCOG members.

XVIII. ES&H Executive Committee Oct 7th evening meeting

- Assigned action to develop leading indicators for each sub-group. Looking for volunteer to participate. Please contact Jim Stafford if you are interested.

Next EFCOG meetings:

- March 16-18, 2010- Forrestal building, Washington DC
- October 11-15, 2010- Exploring Brookhaven National Lab site

RP Members of EFCOG Independent
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