



U.S.NRC

UNITED STATES NUCLEAR REGULATORY COMMISSION

Protecting People and the Environment

Regulatory Insights

RETS-REMP Workshop
San Jose, CA
28-Jun-2010

- 2010 Groundwater Task Force Final Report
- Cancer Study
- New Inspection Procedures (IP71124.0x)
- NRC Annual Effluent Report (Oak Ridge)
- Annual Report Reviews (Kr-85, H-3 in GRW, TLD)
- UFSAR Implementation (Radwaste)
- Particulate release from containment
- REMP - Water Likely to be Affected (GW & DW)
- C-14 (Public Meeting 10-jun)

- Report Published 16-Jun-10
- 92 Pages
- 4 Themes
 - Regulatory Authority (Protect the Environment)
 - Confine Licensed Material (Engineering Issues)
 - NRC Response to Leaks/Spills (SOP/PI/Comm)
 - Strengthen Public Trust
- 16 Conclusions
- 4 Recommendations
- Will go over in more detail in GW Meeting Wed a.m.

- Office of Research
- Contract is being reviewed by National Academy of Sciences
- Will be first study funded by NRC since 1990
- Will be a grant, independent of NRC
- 1990 Study was based on mortality
- This study will be based on morbidity
- Will be a multi-year effort
- This study may help to address some of the H-3 issues



- Repackaging of 71121 and 71122
- Scope is largely unchanged
- Some implicit items now explicit
- Format matches other IPs
- IP-071124.01 – Rad Hazard and Exposure Control
- IP-071124.02 – Occupational ALARA
- IP-071124.03 – Airborne Radioactivity
- IP-071124.04 – Occupational Dose
- IP-071124.05 – RMS
- **IP-071124.06 – Effluents**
- **IP-071124.07 – REMP**
- IP-071124.08 – Solid Waste, Storage, Transport

- NRC Reviews Licensee's Annual Effluent Reports
- Posted on the NRC public web page
- There are some oddities
 - Some PWRs reporting no H-3 released in GRW
 - If SFP, H-3 is released (unless dewatered)
 - Some plants reporting no Kr-85 (with Hi Xe-133)
 - Look at expected ratios of nuclides
 - Search for unidentified gamma lines

- Effluent data base populated with data (2005-2008)
- Draft Report (2007 data) is in review
- Prepared by Oak Ridge
- Simple graphical interpretation
- Outliers are obvious
 - No H-3 released in GRW
 - No Kr-85 (with Hi Xe-133)
 - Xe-135 without Xe-133
- Expect final report late fall
- Will be available on NRC's public web page

- TLD Data Evaluation
- ANSI N545 (Newer draft ANSI N13.37)
- Indicator and Control
 - Identify “background”
 - Identify net dose greater than bkg
 - Identify “plant related” dose
- Comparison of Pre-Op REMP to Op REMP
- Land Use Census (identify site specific issues)
 - REMP includes H-3, Sr-90, & Others (HTDs)



Water Likely to be Affected

- NUREG-1301/1302, REMP Surveillance (Generic)
- Surface Water
 - Upstream, Downstream
 - Composite Monthly, Analyze Quarterly H-3
- Ground Water
 - Sample one or two sources, if likely affected
 - Grab Quarterly, Analyze Quarterly H-3
- Drinking Water
 - 1 sample each, 1-3 nearest, if could be affected



- Chapter 11 covers LRW and GRW
- Licensees processing methods have improved
 - Portable Skids
 - Advanced processing systems
 - Segregating LRW
- Actions should “match” the UFSAR
- Temporary storage of liquid radwaste
- Use of onsite ponds, canals (evaporation, seepage)
- Use of advanced processing systems
- Sensitivity of RMSs

- ODCM should contain maps (legible, x2)
- Show the boundary to the unrestricted area
- Know the distinction between onsite areas and the unrestricted area.
- Make sure you properly define unrestricted areas
- Required to calculate doses to MOP (unrestricted areas)
- Some sites have retention ponds, canals, or other impoundments onsite, and may be treating them as unrestricted areas when they are not



- Site in RFO & hole in containment for new S/Gs
- Cutting hot legs and cold legs
- Had established some engineering controls
- Shop-vac circulated particulates
- AMS alarms (sampling and analysis challenges)
- Did not close containment, reestablish ventilation
- Particulates detected 1.5 miles away (REMP)
- Correlation RETS to REMP was very good
- Opportunities – Plan the work and work the plan

- RG 1.21, Rev 2 guidance (2009)
- Report principal nuclides, 10 CFR 50.36a(a)
- Principal nuclide is >1% Ci or >1% dose (by type)
- Demonstrate actual exposures are not likely to be underestimated, 10CFR50, Appendix I, II.A.1
- Determine C-14 releases in GRW (msmt, scale, etc)
- Some licensees may report C-14 in 2009 ARERR
- All licensees should address C-14 for 2010 ARERR
- Reporting format (Indian Point, Tables)

Questions

