



**EPRI**

ELECTRIC POWER  
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## **EPRI Alpha GL Revision**

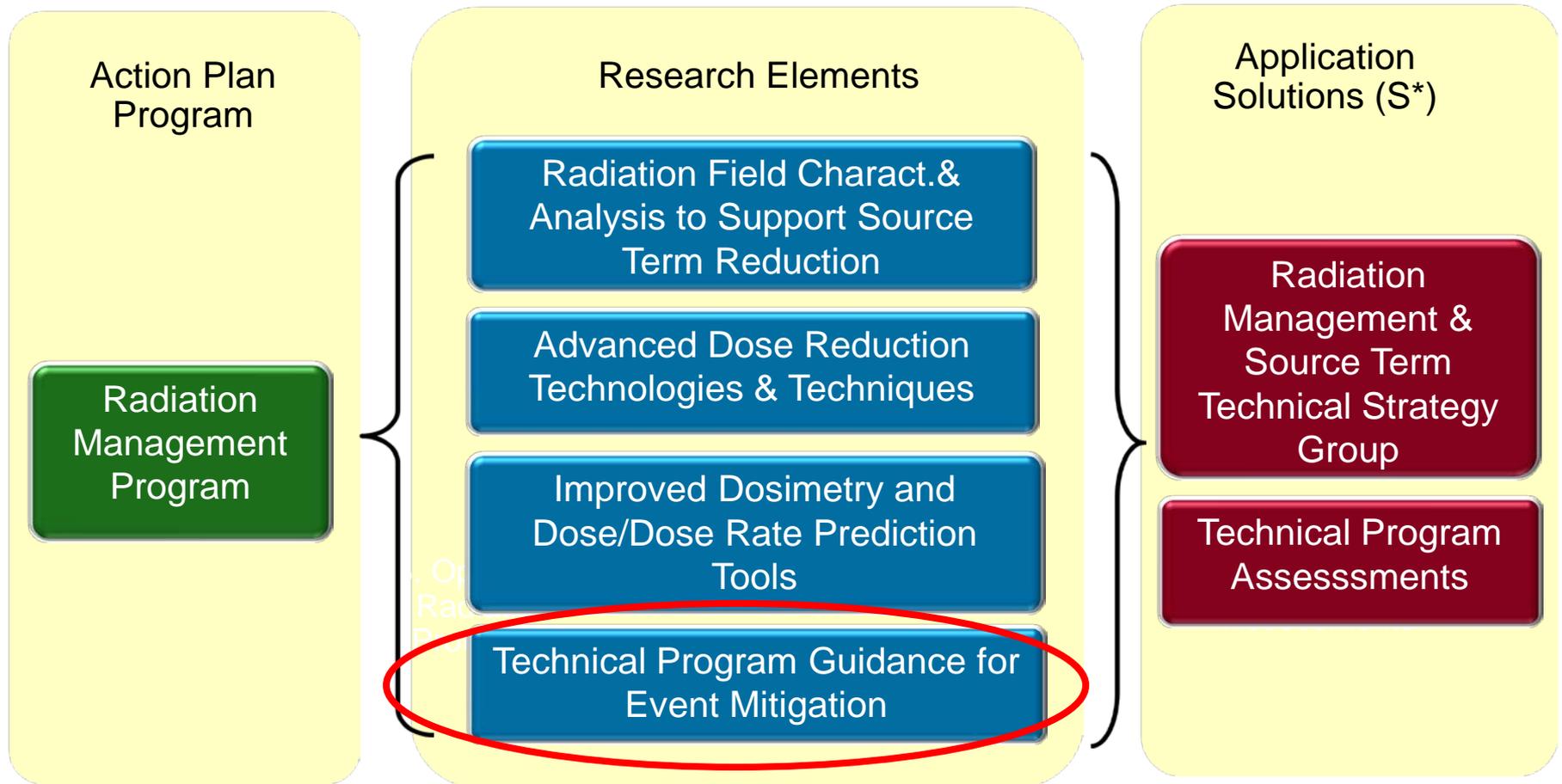
**Presented by: David Perkins, Program Manager**

**Content provided by: Phung Tran, Senior Project Manager**

**European ISOE Symposium (Prague, Czech Republic)**

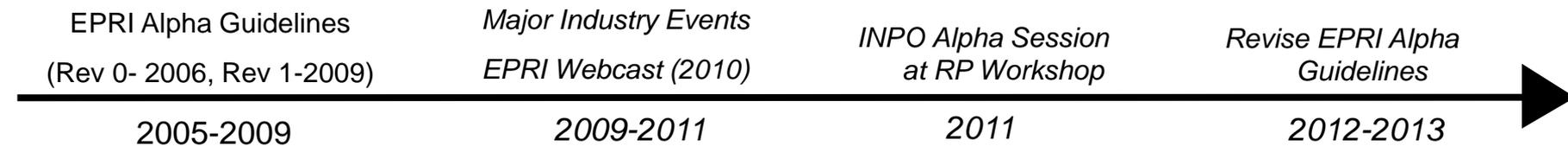
**June 1012**

# Radiation Management Program Elements



\* Self Directed Allocations (EPRI Member Dues Are Allocated to Specific Projects Based on Utility Interest)

# Overview: Alpha Guideline Update (2012-2013)



## Objective:

- Update Alpha Guidelines to reflect current industry experiences, challenges, and needs

## Description:

- Re-evaluate existing guidance
- Update industry standards to include additional guidance:
  - Work planning based on alpha level
  - Standardize collection and analysis of bioassay to support accurate internal dose assessments
  - Include sample of calculations based on updated dosimetry values for international members

## Benefits:

- Standardized industry protocol based on sound technical basis, best practices, and industry consensus.

# Guidelines Revision Process

- Information Gathering of Implementation Experiences and Industry Events (Webcasts, emails, etc)

2010-2011

- Guideline Revision Participation Letter (4Q 2011)

- Alpha Guideline Revision Kick-off with presentation of issues from ANI & INPO

- Collection and categorization of issues (85 submitted comments to date)

January 2012

- Review and finalize scope (topics) & outline of Alpha Guideline revision

- Develop revisions for industry review and consensus

April 2012 +

# History of 2006 EPRI Alpha GL Development

- NRC informed NEI they were willing to allow industry to develop guidelines addressing potential alpha contamination
  - If final document acceptable, NRC would not develop specific guidance for alpha
- Original scope by EPRI Alpha 2005-06 GLs Committee included providing specific guidance for many topics including: internal dosimetry, instrumentation, bioassay, radon interference, etc.
- To reach committee consensus within project publication date, original scope was limited to specific guidance on area characterization with general recommendations/information on Lapels, Frisking, Bioassay, Instruments, and Radon

# Issues Identified During 2007 – 2011 Implementation Period

- Alpha GLs not always being implemented in accordance with document's intention
- Several industry events have challenged current alpha programs
- More direction needed for radiation techs in field
- Application of GL to global community

# Alpha Guideline Committee Members

- American Electric Power
- AmerenUE
- Arizona Public Service
- **Bruce Power\***
- Constellation
- Detroit Edison
- Dominion
- Duke Power
- **Electricite de France\***
- **Eletronuclear\***
- Energy Northwest
- Entergy
- **Eskom\***
- Exelon
- **Korean Hydro & Nuclear Power\***
- Luminant
- Nebraska Public Power District
- Nextera/FPL
- Omaha Public Power District
- **Ontario Power Generation\***
- Pacific Gas and Electric
- Progress Energy
- PSEG Nuclear
- Southern Carolina Electric & Gas
- South Texas Project
- Southern California Edison
- Southern Nuclear Operating Co.
- Tennessee Valley Authority
- Wolf Creek
- Xcel Energy

6 (Global)  
24 (U.S.)  
-----  
30 Total Utilities  
+ ANI, COG,  
EPRI, INPO, NEI

\* International Utility

# Scope of Revisions

## GOAL: Adequately Monitor & Protect Worker

- Work Planning for Alpha Environments
  - Risk Assessment, Rad Work Controls, Work Planning & Communication, Execution of Work
    - Generic ratios still used for initial characterization of plant areas
    - New Work Planning section will assign job-specific stop work absolute values as appropriate
    - Flow chart to serve as section Work Planning road map
- In-Vitro Bioassay
  - Individual Monitoring & Internal Dose information being updated
  - New In-Vitro Bioassay Section will help sites be prepared to collect pertinent bioassay information in a timely fashion

# Scope of Revisions

- Instrumentation Appendix updated based on current applicable technology
  - Radon Compensation Appendix will also be updated based on current technology and best practices
- Lapel section will be updated with applicable LLD calculation & example
- Implementation examples included for various sections of GL (e.g. Work Controls, Internal Dose Calculations applicable to US & International Community)
- Intended Use of GLs
  - New section in the beginning of the document defines exactly how the GL is intended to be implemented: specifying the language used that informs the reader of which elements are requirements vs. recommendations

# Industry Roll-Out of GL Revisions

- Aid implementation of revised GL by conducting Web Casts and/or Workshop to optimize interpretation and intended implementation of new GL
  - Communicating to the industry the exact intent of the revised GL will help minimize misinterpretations and aid implementation in a timely fashion

# Schedule and Project Manager

- Publication of Update GL – September 2013
- WebCasts/ Workshop Communicating Update – start in September 2013
- Project Manager:
  - Phung Tran ([ptran@epri.com](mailto:ptran@epri.com), 650-855-2158)
- Technical Support:
  - Ron Cardarelli ([rcardarelli@charter.net](mailto:rcardarelli@charter.net) or [Ron.Cardarelli@gmail.com](mailto:Ron.Cardarelli@gmail.com), 978-456-1290)
  - Russ Gray ([russg0@sbcglobal.net](mailto:russg0@sbcglobal.net))
  - Billy Cox ([bcox@epri.com](mailto:bcox@epri.com), 603-583-2877)

# Summary

- New Sections
  - Work Controls
  - In-Vitro Bioassay
- Revised Sections
  - Individual Monitoring
  - Internal Dose Assessment
  - Instrumentation
  - Lapels
  - Radon Compensation

Overall Goal: Clearly Define Intent of GL

Improve Worker Monitoring & Protection

# Radiation Management Program

## 2012 Meetings

### Scaffolding and Shielding Workshop (TSG Sponsored)

- June 12-15, 2012
- Charlotte, NC (EPRI Office)

### Remote Monitoring Technology Workshop (TSG Sponsored)

- September 18-20, 2012
- Phoenix, AZ (Hosted by Palo Verde)

### Radiation Field and Source Term Reduction Workshop (TSG Sponsored)

- October 24-26, 2012
- Dallas, TX (EPRI Office)

### Low Dose Radiation Health Effects Workshop (NEW)

- December 11-13, 2012
- Washington, D.C.

### Alpha Guideline Committee Meetings (by invitation)

- April 24-25, 2012 (Dallas, TX)
- **August 9-10, 2012 (Boston, MA)--after NEI RP Forum**

### SRMP/BRAC Working Group Meetings (by invitation)

- July 10 & 12, 2012
- Warrenville, IL

# Together...Shaping the Future of Electricity

# Radiation Management Program

## 2012 Projects

### Radiation Field Characterization and Minimization

- Effects of Chemical Injections on Dose Rates (2012 - 2013)
- SRMP/BRAC Revision (2012-2013)

### Dose Reduction Technologies

- Refueling Dose Reduction Techniques (2011-2012)

### Advanced ALARA Planning Tools

- 3D ALARA Work Planning Prototypes (2010-2012)

### Technical Guidelines and Sourcebooks

- Alpha Guideline Revision (2012-2013)

### Low Dose Health Effects Research

- Review and formal comments on National Academies Phase 1 Cancer Study Report
- Data mining of DOE dog and mice studies for dose rate effects
- Atomic bomb data re-analysis