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# Efficiency Bulletin 17-01: Portable Supplemental Radiation Protection Technician Training and Qualification Program

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# Background - 13 Teams DNP Teams

- Corrective Action Program
- Engineering:
- Preventive Maintenance Program Scope
- **Radiation Protection**
- Regulatory Efficiency
- Security
- Training
- Transform the Organization
- Work Management
- Supply Chain Efficiency
- Oversight and Assessment
- In-Processing
- Finance - Review IO Savings Estimates

# Background – RP DNP Team

## Fadi Diya, SVP & CNO Ameren Missouri

- Betsy Langille, TVA
- Steve Mooneyhan, Duke
- Doug Noble, FENOC
- Johann Geyer, Ameren
- Willie Harris, Exelon
- Clayton Stone, STP
- Liette Lemieux, OPG
- Ryan Adams, WCNOG
- Keith Lovendale, Radeco
- Brad Cole, Entergy
- Kevin Pushee, INPO
- Paul McNulty, INPO
- Ellen Anderson, NEI
- Jim Kost, Mirion
- Jimmy Orr, BHI Energy
- Phung Tran, EPRI

# RP Strategy & Vision for 2018

**Strategy:** An effective and efficient radiation protection organization that maintains and promotes radiological safety.

**2018 Vision:** Radiological protection program that is transitioned to a reliance on knowledgeable and accountable workers and leaders that safely perform low radiological risk work, while efficiently applying common processes and technologies. While the radiation protection program will still exist, the sphere of responsibility is focused on worker and leadership accountability.

## End State:

- Common process tools – postings, surveys, RWPs, etc.
- Reduced outage costs for in-processing, training, and qualifying supplemental radiation protection technicians
- Increase the use of Junior RP technicians in outages
- Reliance on workers to be accountable for their own radiological safety (bounded/limited)
- Reliance on cross functional leadership accountability for radiological protection
- Efficient use of common radiation monitoring tools (dosimetry, instruments, remote monitoring)
- Common radiation protection staffing and responsibilities



# End State and Desired Outcomes

- Desired end-state—
  - Prior to arrival on-site, Supplemental Radiation Protection vendors will train and qualify their technicians using industry standard task list training criteria.
- Value proposition (vision of excellence)—
  - Eliminate on average the 2 to 3 days each site historically spends to qualify the supplemental RP technicians (SRPTs)
  - Result in improved SRPT performance due to standardization of key radiation protection processes and procedures.

# Key Actions

- Actions To be Completed by December 2017
  - All fleets/sites adopt the standard Industry procedures maintained on the INPO webpage.
  - Industry to develop the STEs including Objectives, Test Bank, and Practical Evaluation Criteria
  - Equivalencies documented for all currently 'qualified' Supplemental RPTs with sufficient rigor that ALL sites accept.
- Industry Documents to be revised as needed
  - ACAD 93-008, Radiation Protection Technician Training
  - INPO 05-008
  - NEI 03-04

# Relevant Standards

## INPO

- Performance Objectives and Criteria
  - RP.1 through RP.4, TR.1
- ACAD 02-001 Rev 1: Objectives and Criteria for Accreditation of Training Programs in the Nuclear Power Industry
  - Objective 2, Criteria 2.5 - *“Personnel, including supplemental and non-plant personnel, satisfy established training and qualification requirements in support of working independently”*

## Regulatory

- UFSAR and technical specifications for ANSI-qualified RP technicians
- ANSI 3.1 and ANSI 18.1 (various, depending on site-specific commitment)

# Key Deliverables

- Standardized Industry Task List
- Standardized Industry Processes/Procedures for key RP practices
- Standard training and qualification completed by the Vendor at their training facilities
- Standard acceptance criteria for meeting ANSI requirements (ANSI 3.1 1978 or 2014)



# Standard Task Lists

## Standard Supplemental Junior Tech Tasks

- RPFUND1 RP Fundamentals for STEs
- RP2.01 Operate Portable Radiological Survey Instruments
- RP2.02 Perform Radiation and Contamination Surveys
- RP2.03 Collect and Evaluate Radiological Air Samples
- RP2.04 Post Radiological Hazards
- RP2.05 Control Access into High Radiation Areas
- RP2.06 Monitor for Personnel Contamination
- RP2.07 Control Radioactive Material Within an RCA
- RP2.08 Control HEPA Vacuums and Ventilation Equipment
- RP2.10 Perform Low Risk Radiological Job Coverage

## Standard Supplemental Senior Tech Tasks

- RPFUND2 Senior RPT Fundamentals
- RP3.05 Control Access into LHRAs and VHRAs
- RP3.06 Unconditionally Release Personnel
- RP3.07 Unconditionally Release Materials from an RCA
- RP3.09 Provide Job Coverage for Radiography
- RP3.10 Provide Medium and High Risk Job Coverage
- AN18.1 Two Years RP Experience
- AN3.1 Three Years RP Experience
- RPCONT SRPT Continuing Training

# Nuclear Industry Standard Processes/Procedures

- **NISP-RP-01: Instruments (Complete)**
- **NISP-RP-02: Surveys (Complete)**
- **NISP-RP-03: Air Sample (Complete)**
- **NISP-RP-04: Postings (Complete)**
- **NISP-RP-05: HRA and LHAR access controls (Complete)**
- **NISP-RP-06: PCEs (Complete)**
- **NISP-RP-07: Radioactive Material Control (Complete)**
- **NISP-RP-08: HEPAs (Complete)**
- **NISP-RP-09: Radiography (Complete)**
- **NISP-RP-10: Job Coverage (Complete)**
- **NISP-RP-11: Core Values (Complete)**
- **NISP-RP-12: Training (Complete)**
- **NISP-RP-13: Glossary (Complete)**

# Implementation of NISP

- CNOs challenged team to develop a process such that can take from the INPO Webpage and Implement
- Exelon is currently implementing the NISPs into our procedure management system.
- NISP were revised to put into a “standard procedure format”
  - Effective Date revised to Approval date
  - Changed format for revision number and notes
  - Minor revision to some section order and numbering
  - Added the following sections:
    - Terms – reference to NISP-RP-13
    - Documentation/Record Retention

# Training Materials

- Develop the following standard training materials and functions:
  - Supplemental Radiation Protection Technician Task List (Complete)
  - Training materials including task qualification tools using the EPRI STE process (Complete)
  - Establish an industry process description for supplemental RP technician program (NISP-RP-12)
  - Establish the periodic industry oversight committee (Complete)

# Industry Oversight

- Periodic program reviews using the EPRI Standardized Task Evaluation (STE) program
- SRPT performance monitoring using relevant industry indicators and ICES reports
- Recommendations to adjust the vendor training program as appropriate based on any SRPT performance gaps
- An industry oversight committee meeting will be conducted periodically and at least annually to review outage performance and make recommended changes to the training programs

# Implementation

- Fleets/sites Adopt the standard Industry procedures
  - RPMs to revise procedures (if needed)
  - Communications to site personnel on the change
  - Develop change management plan
- Develop Standard Task Evaluations
- Complete LMS to PADS transition
  - Method to determine equivalencies for 'qualified' SRPTs
  - Required to develop "Gap" training

# Future Actions

- Implementation Workshop
  - Planned date is January 11<sup>th</sup>, 2018 in conjunction with the ISOE meeting
  - Need members for the program committee
  - Training representatives are welcome
- NISPs
  - Take a revised version of NISPs to industry committees to align on format
  - Work with INPO to develop an industry document to standardize process



Thank you for your attention

# Questions

