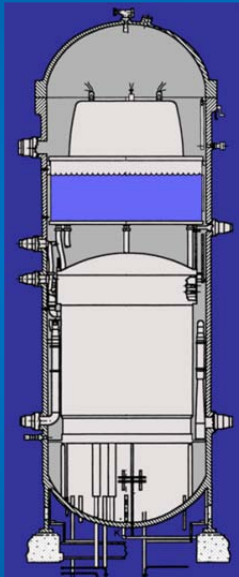


# INPO

*Institute of Nuclear Power Operations*

## INPO Perspective of Materials Issue Program Implementation



July 31, 2012

Dave Garchow

# Materials Section Experience

- Former NDE Level III certs in 6 disciplines
- BWR & PWR SRO certs
- NRC Resident Inspector qualification
- All qualified to lead material review visits as an area lead for plant evaluations

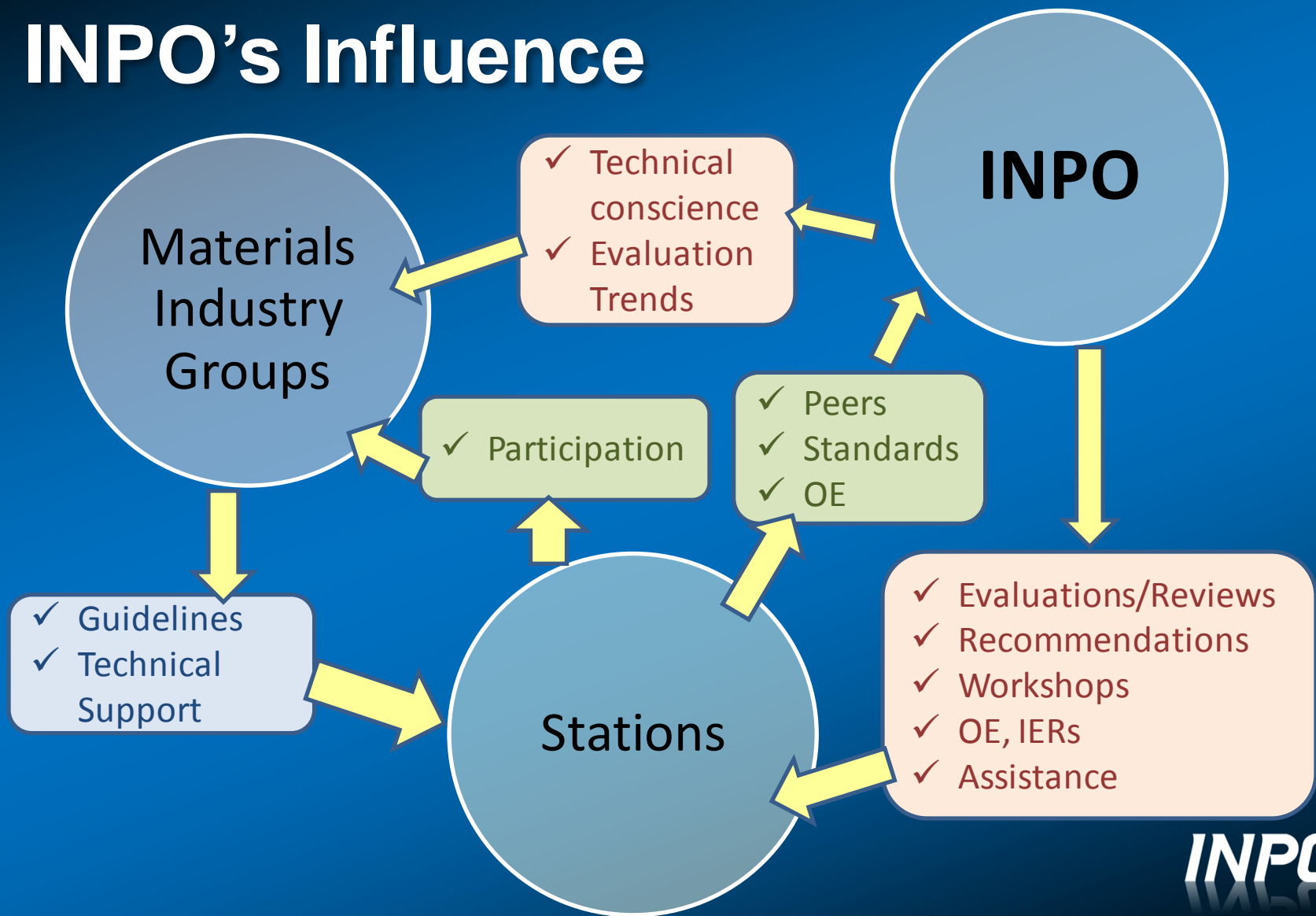


# NEI 03-08, *Guideline for the Management of Materials Issues*

- INPO Role:
  - Participate in industry materials initiatives
  - Conduct on-site reviews
  - Provide periodic updates to industry
  - Monitor OE
- INPO Strategy:
  - Engagement at industry materials meetings
  - PWR and BWR Review Visits
  - IERs, presentations, workshops, website
  - Core business



# INPO's Influence



**INPO**

# Review Visit Scope:

## Macroscopic

- Compliance is the standard
- Covers both programmatic and implementation aspects
- Objective review
- Deep dive site-specific focus areas
  - Identify outliers from ‘industry norms’ and gaps to excellence
  - Identify vulnerabilities
  - Comparative review

# INPO Materials Focus Areas

- PWR internals
- PWR head
- PWR BMI nozzles
- PWR SG pri/sec leakage
- PWR SG tube wear
- PWR 600 MA and 600 TT units
- PWR Alloy 600 welds
- PWR boric acid
- BWR jet pump FIV wear
- BWR shroud ID cracking
- UT reliability



# Review Visit Findings Examples:

- **Macroscopic**

- RCS leak rate calculation methodology not revised following change to industry guidance

- **Deep Dive**

- IVVI quality for CRD guide tube inspection
- Vulnerabilities associated evaluation assumptions
  - crack growth rate calculation depends on hydrogen injection availability
  - boric acid degradation rate based on leakage rate
- SGTR vulnerability using
  - narrow scope of simulator scenarios
  - radiation monitoring system unavailability





# Questions/Comments?

