



Institute of Nuclear Power Operations

# Improving Shutdown Safety

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and Work Management

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## Improving Shutdown Safety

- Previous industry actions
- Renewed industry focus
- Current industry status
- What is being done about it



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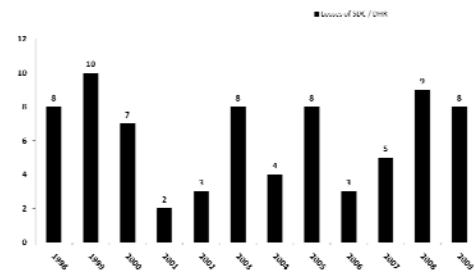
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Losses of SDC / DHR



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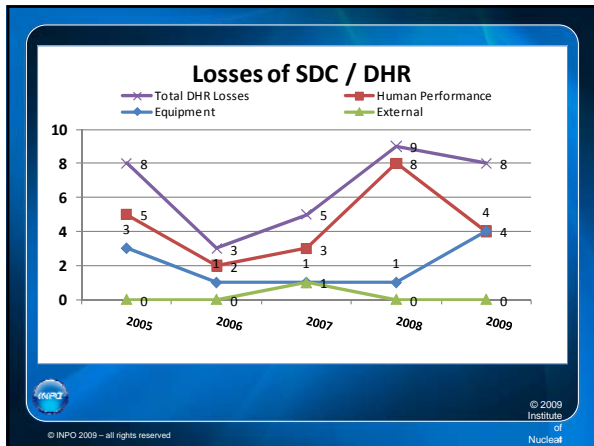
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- ### Other Outage Events
- Still seeing some precursor events each outage season involving other safety functions such as:
    - Inventory control
    - Power availability
    - Reactivity control
    - Containment
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- ### The Good News
- Events have had little actual consequence
  - The need to further improve performance in shutdown safety is clearly understood across the industry
  - Stations are taking needed actions to improve performance
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## Actions to Date

- Outage Planning Review Visits restarted
- Common cause performed and shared
- Letter on shutdown safety performance issued; requested shutdown safety assessment be performed
- SOER issued. Recommendations in four areas:
  - Senior Station Leadership
  - Operations
  - Outage Management
  - Training



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## On-Going Actions

- Additional Outage Planning Review Visits scheduled in 2010
- Outage observations being performed
- INPO / WANO teams reviewing shutdown safety on every trip
- Revision to industry guidelines on shutdown safety



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## Challenges

- "Protected" equipment
- Containment closure
- Redundancy of important equipment
- Time spent at reduced inventory
- Control of switchyard activities during periods of elevated risk
- Contingency plans



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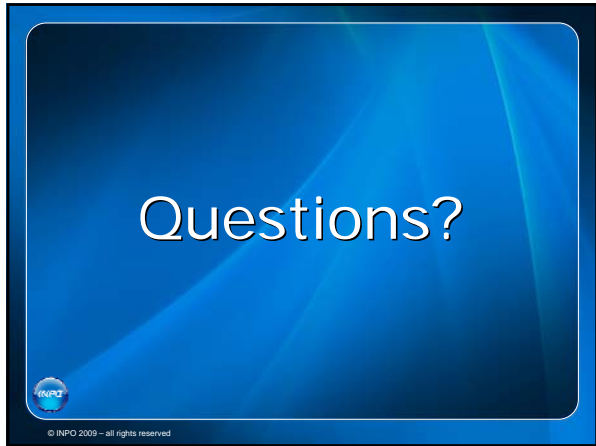
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