



Plant Modernization At STP

Clayton Bonnot
12/3/2024



2023 Study – Integrated Operations for Nuclear

- INL ION
 - Cost reduction opportunities (mostly labor)
 - Use modern technology and alternative business models
 - Requires top-down drivers
 - Compare station resource levels to ION model
- Current STP Project Focus Areas
 - Ongoing – paperless and smart processes
 - Pilot project – training modernization
 - Future - AI to improve efficiency (e.g. Engineering)



Training Modernization Pilot Project

- Advanced Training Initiative
 - Pilot project/study funded by DOE / INL
 - Video and computer based
 - Goal: Reduce cost and improve effectiveness
- Successes
 - More effective than current classroom training
 - INPO 23-001 vision (Teaching and Learning)
 - Industry Sharing – cost effective
 - Better suited for new generation
- Challenges for STP
 - Does not replace all lab exercises
 - Resources needed for wide-scale implementation



AI Technology at STP

- Current Focus:
 - Indexing of records management system
 - Developing business case for applications
 - Benchmarking use cases in industry
- Challenges:
 - Cost/benefit analysis
 - Rapidly changing technologies



Digital Upgrades

- Present:
 - Moisture Separator Reheater Controls
 - Non-Safety Plant Computer System
- Future:
 - Fire Detection System (2026-2032)
 - Safety-Related Display and Processing (2027-2032)
- Challenges:
 - Design Timeframe
 - High Costs
 - Obsolescence

