ADVANCED LOCKOUT/TAG OUT PRACTICES

PRESENTED TO NAMI WORKER SAFETY CONFERENCE JANUARY 30, 2017

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BACKGROUND

- Historically a huge issue
- Progress has been made
- Still major concern

- 3k
- 7k
- 40k
NEW CHALLENGES

• Complex operations
• Sense of invulnerability
• Automation
CONTEXT

• LOTO
• Machine safety
• Control of hazardous energy
• Working with hazardous energy
THE DOCILE BEAST
TRADITIONAL APPROACH

• Program
• Update machinery as issues arise
• Basic training
• Provide equipment
• Annual audit
ADVANCED APPROACH DISTINCTIVES

• Job design/Exposure boundaries
• Systems
• Layered training and oversight
• Procedure and practice harmonization
• Ongoing tracking and improvement
ADVANCED APPROACH ELEMENTS

1. Base program
2. Train key personnel from development phase
3. Internal standards
4. Analyze machinery
5. Improve ease of lockout and reduce failure potential
6. Machine specific standardized graphical guides
7. Ongoing training and practice (scenarios)
8. Personalized equipment issuance
9. Tagging adherence, accuracy, clarity
10. “Off Procedure” work
11. Management of change
12. Cognitive bias identification - Culture
13. Continuous improvement
BASE PROGRAM

- Regulatory compliance
- Incident and exposure prevention
- Level of customization
- Update cycle
- Annual audit
TRAIN KEY PERSONNEL FROM DEVELOPMENT PHASE

• Principles
• Methods
• Issues
• Scenarios
• History
• Focused perception
INTERNAL STANDARDS

- Company-wide
- International
- Industry-wide
- Consensus standards
- Include program development guidance
ANALYZE MACHINERY

• How power is supplied
• How energy is stored
• How zero energy is attained
• Prevention through design
• Improve or replace
• Variations
IMPROVE EASE OF LOCKOUT AND REDUCE FAILURE POTENTIAL

• Human-centered design
• Obvious error states
• One right way
MACHINE SPECIFIC GRAPHICAL GUIDES

- Simple enough
- Complex enough
- Standardized
- Durable
- Accessible
- Easy to understand
ONGOING TRAINING AND PRACTICE

• Any expert skill
• The birth of a student
• New levels of understanding
• Beyond compliance
• Scenarios
PERSONALIZED EQUIPMENT ISSUANCE

- Not absolute
- Pride
- Trust
- Availability
- Customization
TAGGING ADHERENCE, ACCURACY, CLARITY

- Policy
- System
- Oversight
- Accountability
- Tracking
"OFF PROCEDURE" WORK

- Readiness
- Familiarity
- Playing the odds
- Remember the beast
MANAGEMENT OF CHANGE

- Implications
- Magnitude
- Reducing unnecessary change
- Analyze
- Document
- Communicate
COGNITIVE BIAS IDENTIFICATION - CULTURE

• Perception problems
• Useful misconceptions
• Trusting our perception
CONTINUOUS IMPROVEMENT

• Employee involvement
• Capture and use
• Document
• Recognize
• Celebrate
• Contribute
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