

#### **Sustainable Issue Resolution**

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### Solving Problems: Trickier than expected











#### What makes corrective actions effective?

- Sydney Dekker:
  - Focus on work environment, tools, resources
- International Atomic Energy Agency and other:
  - Build on existing
  - Account for costs
  - Consider both interim and sustainable action.
  - Account for ability to execute proposed change/correction
  - Unintended consequences/ corrective action failure modes





### Why corrective actions fall short

- Often, the focus is on quick, easy, less costly
- Conversely, an action plan becomes too complex, cumbersome, or costly to complete
- Actions may address awareness or information-sharing, but not underlying process
- Actions often get applied only locally- don't address common failure mode or extent of condition
- Actions may simply not be sustainable
- Actions are developed at a fixed point in time



### **LANL Occurrence Reports**

- "Trainer" event
  - Contact with 3570 volts DC
  - Resulted in burns and exit wound on abdomen
  - High degree of scrutiny
  - 19 corrective actions





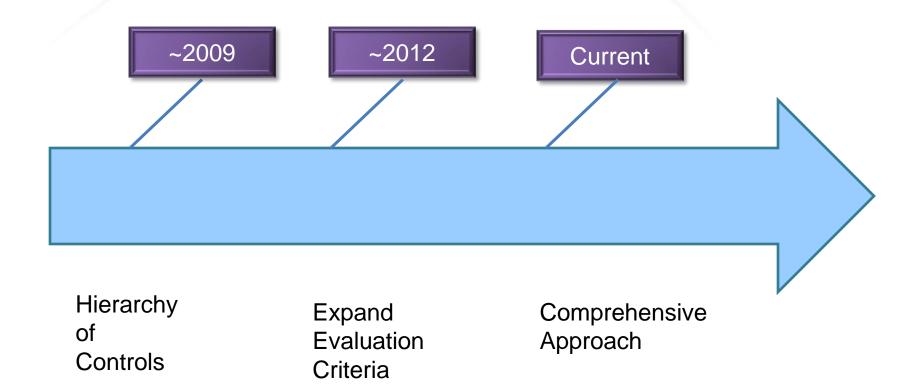


### **LANL Occurrence Reports**

- Fissile Material Handler Issue
  - Fissile Material Handlers (FMH)
  - Training and qualification system inaccurate
  - Unable to discern whether FMHs qualified to be handling nuclear material
  - 2 corrective actions



### Los Alamos learning-issue evaluation:





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# Results- reviews reveal improvement opportunities

- Target areas:
  - Problem statement clarity
  - Action does not address problem
  - Objective evidence may not support action closure





## Results indicate need to increase employee engagement

- Enhance corrective action discussion:
  - Will action reduce likelihood of error?
  - Will improvements address underlying process/performance problems?
  - Will action reduce consequence if a similar occurrence?
  - Are costs of correction commensurate or exceed costs of continued problem?
  - Will investment in correction create sustainable improvement?
  - What is reasonable, given current constraints?





### **Engagement of Issue Owners:**

### We engage our stakeholders by:

- providing criteria we use to evaluate quality and sustainability;
- requesting feedback and incorporating it into our training documents; and
- fostering a continuous communication cycle.

Concise, clear input

Evaluate records for effectiveness

Modify our training

Provide feedback to Issue Owners

Formal/informal feedback

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### **Engaging Management Review Boards:**

- MRBs make issue-related decisions:
  - Problem statement clarity
  - Optimizing corrections to resolve original problem
  - Understanding cost/benefit
  - Understanding and employing project management principles





## Laboratory populace is key to successful issue resolution

Sustainable **Issue Resolution** Trust: **Evaluate Data** Together Training: **Engage Stakeholders** Tool: **Provide Criteria** for evaluating quality of records



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