





# New England Kiln Dryers Association

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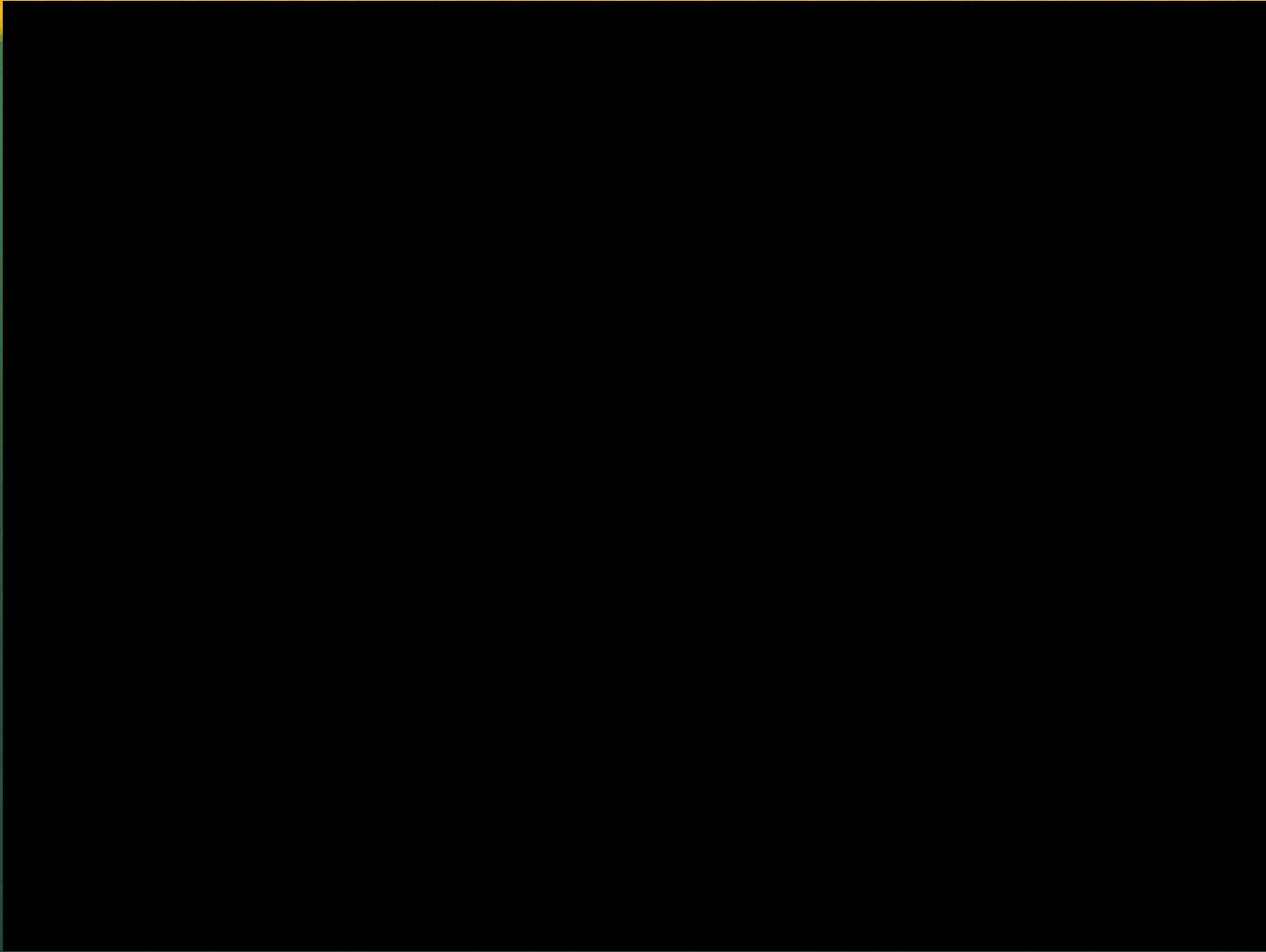
# Goals / Objectives

## Goal – Find Root Cause(s) to a incident

### Objectives:

1. Explain what causal factors are.
2. Define intentional/unintentional errors.
3. Given incidents, determine what type of causal factors are seen.
4. Given Root Cause map, apply causal factors to find root causes.

# Root Cause?



# Root Cause?



# Root Cause?



# Lets Back Up

- What needs to happen for an accident to occur?

Human Errors

Equipment Failures

# Casual Factors

“The human errors and equipment failures that directly lead to the incident or make the consequences of the incident larger”



# Causes of Accidents

Causal Factor #1

- Human Error



# What Types of Human Error Do We Have?

- Unintentional

- Intentional

# Unintentional Human Error

Committed or Omitted w/ NO prior thought typically think of these as ACCIDENTS

- bumping wrong switch
- misreading a gauge
- spilling coffee on control panel

# Intentional Human Errors

We DELIBERATELY Commit or Omit  
because we believe that for whatever  
reasons

- our actions are correct
- our actions will be better (safer, quicker, etc)
- We think our way is better
- etc

# Causes of Accidents

- Causal Factor #2
- Equipment Failures



# Root Cause Definition

- The basic causes of events.
- The absence, neglect, or deficiencies of management **systems** that caused the:
  - causal factor events to occur or
  - allowed the causal factor conditions to exist.
- For the typical causal factor, there are multiple root causes.

# 1-29-300

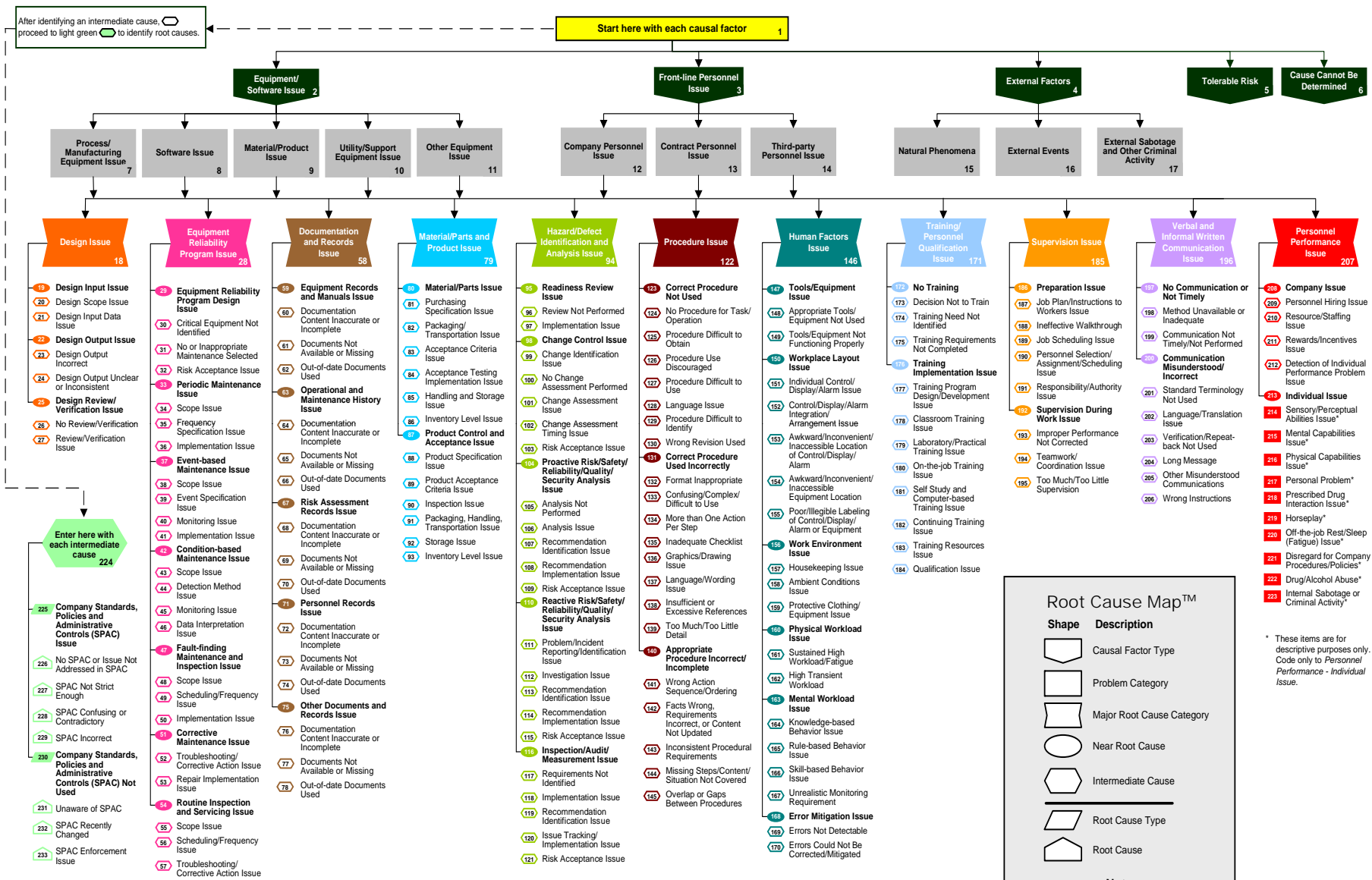


# Causal Factors Identified

- Human Errors – Equipment failures
- Lets put the Root Cause Chart to work!







### Root Cause Map™

Shape	Description
	Causal Factor Type
	Problem Category
	Major Root Cause Category
	Near Root Cause
	Intermediate Cause
	Root Cause Type
	Root Cause

**Notes**


See Appendix E of ABS Consulting's *Root Cause Analysis Handbook* for guidance on using this Map.

Visit our web site for node descriptions.

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\* These items are for descriptive purposes only. Code only to Personnel Performance - Individual Issue.

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**Root Cause Analysis Handbook:**  
 A Guide to Efficient and Effective Incident Investigation  
 by ABS Consulting  
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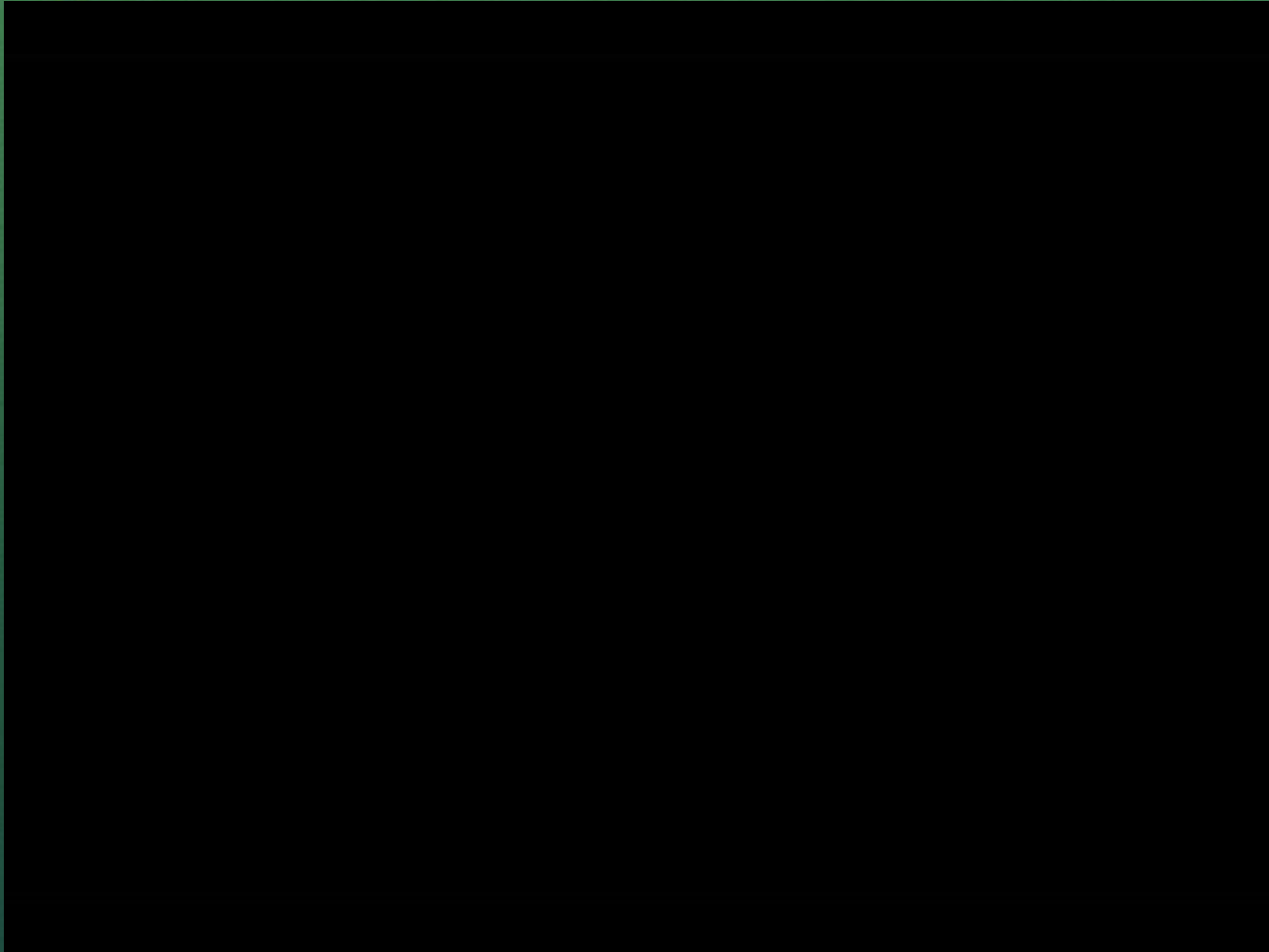
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Lets Look at the *Accident Again*



# Another Accident Scenario



# Conclusion

- ALL accidents should be investigated
- Causal factors (human errors and/or equipment failures) should be identified
- Root Cause(s) should be identified
- Corrective actions applied

Thank YOU !



W. J. Cox Associates, Inc.