Setting up a Sustainable Safety System that Drives Safety Improvement

Sean Lane, CSP, CHMM
A Little About Me

- What do I value . . .
  - Father of five
  - Enjoy being outdoors camping, kayaking, and especially fly fishing
  - Enjoy teaching others - explaining the WHY behind the what
  - Enjoy helping develop our youth into the leaders of tomorrow through scouting
My professional background

- I am not an expert. I’m still learning and growing in my own professional vocation.

- 17 years experience within pulp and paper, primary aluminum smelting, battery separator manufacturing and aluminum die casting.


- Developed and implemented EHS systems that have yielded fewer people injured.
Objectives

- Safety has a common thread everywhere – Sharing knowledge
- Share my experiences and successes
- Provide you with a few solutions that can be applied
Overview

- Safety is more than a series of programs and policies.
- Safety is about people and getting them home to their friends and family each and every day.
- A safe organization cannot become so without active participation from the people we wish to protect.
- High levels of safety performance cannot be achieved without Education, Empowerment, and Communication that is centered on those people.
- If you want to find out what drives the safety of your organization, then go out and talk to those most affected – They are the face of safety.
Safety System Basics

- At its core safety is about:
  - Identifying hazards
  - Applying the right level of control to reduce the risk to an acceptable level
  - Completing the task without injury

- Given a task, we would like all employees to view the hazards and determine controls similarly.

\[ \text{Hazard} + \text{Control} = \text{Safe Task Completion} \]
Safety System Basics

- Injuries are the result of an action and condition coming together.
  - The assumption is that either the action or the condition or both are unsafe.

These are the focus of our system

Action + Condition → Injury

NOT THESE
So what truly drives safety in your organization?

- Management? They set the tone and direction of the plant or company.
- If you asked your employees who was responsible for safety, would they say the Safety Department?
- Where does it lie?

> Any safety initiative or strategy, no matter who or what group promotes or champion’s it will only be successful if your employees are the owners and drivers.

- We, as management, are only there to educate, empower, communicate, and guide them on the journey.

- Management style matters! It’s harder if the atmosphere is one of distrust.

As Safety Professionals, our job is to create a framework or system that the Operations and Maintenance personnel can use.
Education

▪ If you don’t recognize a hazard, then there is no hope of controlling it!

▪ Legal obligations do exist for training, but the method of training matters.
  ▪ Same old boring videos and stale presentations?
  ▪ Does training promote feedback?
  ▪ Is it different based upon the risk?

▪ How do your employees learn best? Have you asked them?
  ▪ If you haven’t, then you may be surprised at the answer.

▪ The best training is typically takes a multifaceted approach.
  ▪ What level of competency do they need to have?

“Employees must be taught to recognize hazards – it’s not always “common sense.”
Empowerment

▪ Big word – what’s it mean (*really*)
  ▪ Expectation that employees take appropriate action to keep themselves and coworkers safe.
  ▪ So what systems exist to facilitate this?

What can I do?
Empowerment

▪ First, we want employees to take control of their own safety by taking action when they are presented with the hazard.
▪ If they don’t have the means to take the right action, they will still get the job done.
  ▪ Could mean workarounds or increased the level of accepted risk – Not the behaviors we want.
▪ Provide them with the ability to easily take action in response to the hazard.

Education and Training

I don’t have the right equipment, but I’ll just watch out.

“Simply being aware of a hazard does nothing to control the hazard and decrease risk of injury.”
Empowerment

▪ Will employees be injured each time they perform the task without control?
  ▪ Not necessarily – Breeds Complacency and Increased Risk Tolerance!
  ▪ Will eventually lead to life impacting injury.

▪ Provide the right tools and equipment at the right location so that employees have it at the right time – MAKE IT EASY!
  ▪ Ask them!

It’s nice to have this right here when and where I need it.

Hazard + Control = Safe Job!
Empowerment

- What if the hazard correction is beyond the employee’s ability?
  - Need an EASY mechanism for reporting and correcting.
- Near misses, hazardous condition reports . . . whatever you call them.

I know this is dangerous, but I don’t know what to do......now what?

Education and Training

Hazard
Empowerment

- We’ve all heard these comments from employees:
  - “I reported that years ago and never heard anything.”
  - “Management doesn’t listen.”
  - “You guys (management) don’t fix anything.”

- Verbal reports casually made in conversation to Supervision are soon forgotten.

- The system you create must be such that it doesn’t solely rely on the Supervisor.
  - He’s only the busiest person on the job.
Empowerment

- Near Misses
  - Establish Common Language
    - Get feedback from employees and establish a common definition that ALL can understand or visualize.
    - Provide examples that folks can visualize.
  - Make reporting **SIMPLE**.
    - If it requires three pieces of paper and two levels of management, then employees won’t use it!
    - Paper or electronic – It must be tailored to the needs of **YOUR workforce** – NOT you.
    - Must be READILY available.
    - Cannot be PUNITIVE!
      - No one will use it
  - Train employees and provide examples of completed forms.
  - Make it **FUN**
    - Challenge departments against each other.
    - Have months that focus on specific hazards.
Empowerment

- Risk Assessments
  - Good mechanism for helping identify hazards in the field.

- Can be Misused if:
  - Relies on employee ability to recognize hazard.
  - Completed in the office.
  - Completed after work is finished.

- If required prior to each job, high probability to be “pencil whipped”.

- More effective for work that is non-routine or high hazard.
System Building Review

- Employee input and driven
- Educate how they learn best
- Safety = ID Hazards + Use Right Controls

- Keep it Simple
- Method for identifying and reporting hazards outside ability to control

**Near Misses**

- Action
- Condition

Injury
Communication

▪ Reporting is doomed without one critical and key piece of the system . . . FEEDBACK!

▪ We all crave feedback for our actions - again, it’s human nature.
  ▪ Positive feedback about the behaviors or actions we want will lead to more of those actions!
▪ If YOU report a near miss for a hazard YOU identify, what do YOU want to know?
  ▪ What was done about it?

Education and Training

Hazard

I reported the hazard, but nothing will happen.
Communication

- The feedback loop to employees needs to be started at the same time that the reporting process is started.

- This can be accomplished in numerous ways, but should be clear to any employee receiving it. A couple of examples . . .
  - Corrective Action Reports
  - Safety Work Orders Completions

- Again, the method of communication needs to be tailored to your employee population.
  - If you decide to email it, but the majority of your workforce doesn’t have email accessibility, then you should think about a different strategy.
Communication

- So, why is the feedback loop such an important piece of the system?
- Employees that feel like their voices are heard are more likely to:
  - Buy into the process.
  - Use the system tools repeatedly.
  - Promote and encourage others to use the system tools.

Hey! I reported that near miss last week and it’s says here that it was fixed yesterday.

Hazard
Communication

- There’s another important piece of communication
  - The Near Miss or Hazard Condition Report

- These are great learning opportunities that can help your workforce better understand hazards.
  - Whether you have 10 or 1,000 employees, each person has their own unique view of a hazard.

- Sharing these reports with the ENTIRE workforce has profound effect . . .
  - Helps standardize the view of hazards and lowers the level of accepted risk as an organization.
  - Fosters thought and discussions in smaller teams and groups not directly related to the report.
  - Provides Supervision with material for pre-shift meetings or toolbox talks.

That near miss report reminds me . . .

The Challenge: How do we keep safety FRESH or in the forefront of the minds of our workforce all the time?
System Building Review

- Employee input and driven
- Educate how they learn best
- Safety = Employees (ID Hazards + Use Right Controls)
- Keep it Simple
- Method for identifying and reporting hazards outside ability to control
- Feedback! There's never enough!
System Building Review

- Condition
- Action
- Injury
- Near Misses
- Corrective Actions
  - Training, SOPs, etc.
- Safety Work Orders
  - Items to be fixed
- Education / Training
  - Near Misses
  - Communication
- Feedback

Feedback to Condition and Near Misses.
Supervision

- The system we are building may be employee driven, but employees are influenced by one group within every organization.
  - Direct Supervision
  - If the Supervisor doesn’t support it, then their employees will likely not be supportive either.
  - What expectations have been developed for Supervision?
  - How are you developing and/or coaching to ensure the system works like designed?

Some Supervisor’s aren’t really receptive to near misses
Supervision

▪ How do we generally choose Supervisors?
  ▪ Are they the safest employees or are they the best at getting the job done and understanding the work?
    ▪ Likely the latter . . .
  ▪ May be somewhat predisposed to take and tolerate more risk.

▪ Spend the time on Supervision
  ▪ Develop a system of one on one coaching (preferably from their Superintendent or Manager).
    ▪ Teach them technical aspects of safety
    ▪ Teach them leadership and behavior aspects

*It's always about production* . . .
System Metrics

- Lagging indicators like Incident Rate or Number of Injuries are equivalent to driving forward by looking in the rear-view mirror.

- Leading indicators provide forward looking view of safety and overall health of your system.
  - There’s not a magic leading indicator.
  - At best, leading indicators can give you a sense of the safety climate and some direction surrounding program gaps.

- We stated early on:
  - Safety = Hazard ID + Hazard Correction
  - Education, Empowerment, Communication and Coaching were important

- So let’s examine metrics that address those items.
System Metrics

- Hazard Identification (Empowerment & Communication)
- Potential Metrics include:
  - # of Near Miss Reports
  - # of Hazardous Conditions Reports
  - # of Risk Assessments

These can also help measure the amount of safety conversation taking place.

Be careful with these. Quality is more important with a risk assessment than quantity. Not necessarily a measure of the safety conversation. If they just become about fulfilling the numbers, then it’s time to scrap using them as a metric.
# System Metrics

- **Hazard Control (Communication)**
  - Potential Metrics include
    - % On-time Completion of Safety Work Orders
    - Safety Work Orders Completed within 90 Days
    - % Completion of Corrective Actions

<table>
<thead>
<tr>
<th>Dept</th>
<th>Total # of Safety WOs</th>
<th># of Open WOs</th>
<th># of Closed WOs</th>
<th>Total # of Overdue WOs</th>
<th>% On-Time Completion</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Current Wk</td>
<td>Prior Wk</td>
<td>Current Wk</td>
<td>Prior Wk</td>
<td>Current Wk</td>
</tr>
<tr>
<td>Engineering</td>
<td>12</td>
<td>11</td>
<td>1</td>
<td>2</td>
<td>83%</td>
</tr>
<tr>
<td>Prod. Dept 1</td>
<td>108</td>
<td>53</td>
<td>55</td>
<td>5</td>
<td>95%</td>
</tr>
<tr>
<td>Prod. Dept 2</td>
<td>146</td>
<td>76</td>
<td>70</td>
<td>19</td>
<td>87%</td>
</tr>
<tr>
<td>Prod. Dept 3</td>
<td>119</td>
<td>46</td>
<td>73</td>
<td>10</td>
<td>92%</td>
</tr>
<tr>
<td>Prod. Dept 4</td>
<td>178</td>
<td>95</td>
<td>83</td>
<td>-</td>
<td>100%</td>
</tr>
<tr>
<td>Maint</td>
<td>21</td>
<td>4</td>
<td>17</td>
<td>3</td>
<td>86%</td>
</tr>
<tr>
<td>Mill</td>
<td>584</td>
<td>285</td>
<td>299</td>
<td>39</td>
<td>93%</td>
</tr>
</tbody>
</table>
System Metrics

- Supervisor Coaching (Education and Communication)
- Potential Metrics include
  - # of Coaching sessions
  - Toolbox Communication

<table>
<thead>
<tr>
<th>Step</th>
<th>What was done differently than or not covered in the SOP?</th>
<th>Why? (reference questions on back)</th>
</tr>
</thead>
</table>

Follow-up Actions

<table>
<thead>
<tr>
<th>Responsible</th>
<th>Due Date</th>
</tr>
</thead>
</table>
System Metrics

- Other Potential Leading Indicators
  - % On-time completion of required H&S Training
  - Quality of Supervisor Lead Toolbox Talks
  - Quality of Risk Assessments
  - Safe Behavior Observations
  - Safety Surveys (Communication)

*Don’t measure just to measure. Measure for a purpose!*
Management Behavior – Driven by What you Measure

- How do leading indicators drive management behavior?
  - No safety measurement is effective unless built into the annual performance assessment of your management and supervisory personnel.
  - It’s got to hit them in the pocket book!

- Example: Safety Work Orders
  - Annual target % On-Time Completion = 80%

- Example: Near Misses
  - # of near misses per year (month/week, etc.)

- What behaviors will they drive?

### EHS Scorecard

<table>
<thead>
<tr>
<th>Leading Indicators</th>
<th>Annual Target</th>
<th>Dept 1</th>
<th>Dept 2</th>
<th>Maintenance</th>
<th>Mill</th>
</tr>
</thead>
<tbody>
<tr>
<td>YTD Near Miss Target</td>
<td></td>
<td>105</td>
<td>113</td>
<td>113</td>
<td>291</td>
</tr>
<tr>
<td>Near Misses</td>
<td>450</td>
<td>50</td>
<td>61</td>
<td>79</td>
<td>221</td>
</tr>
<tr>
<td>EHS WO % On-Time Completion</td>
<td>&gt; 80%</td>
<td>85%</td>
<td>94%</td>
<td>100%</td>
<td>86%</td>
</tr>
<tr>
<td>% Completion CAPA</td>
<td>NA</td>
<td>85%</td>
<td>67%</td>
<td>76%</td>
<td>81%</td>
</tr>
<tr>
<td>Risk Assessments</td>
<td>None</td>
<td>4</td>
<td>155</td>
<td>61</td>
<td>224</td>
</tr>
<tr>
<td>Awareness to Action Sessions</td>
<td>1/week</td>
<td>20</td>
<td>21</td>
<td>20</td>
<td>61</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Corrective Actions</th>
<th>Entered</th>
<th>Closed</th>
<th>Open</th>
<th>Completion Rate</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>620</td>
<td>501</td>
<td>115</td>
<td>81%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Days Since Last</th>
<th>Near Miss</th>
<th>Safe Work</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>23</td>
<td>59,139</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Trailing Indicators</th>
<th>Annual Target</th>
<th>Dept 1</th>
<th>Dept 2</th>
<th>Maintenance</th>
<th>Mill</th>
</tr>
</thead>
<tbody>
<tr>
<td>Recordables</td>
<td>4</td>
<td>2</td>
<td>-</td>
<td>-</td>
<td>2</td>
</tr>
<tr>
<td>Lost Time Accidents</td>
<td>1</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>First Aids</td>
<td>48</td>
<td>1</td>
<td>6</td>
<td>4</td>
<td>10</td>
</tr>
<tr>
<td>Report Only</td>
<td>NA</td>
<td>1</td>
<td>1</td>
<td>-</td>
<td>2</td>
</tr>
<tr>
<td>Property Damage</td>
<td>NA</td>
<td>2</td>
<td>-</td>
<td>1</td>
<td>3</td>
</tr>
<tr>
<td>Work Hours</td>
<td>932,000</td>
<td>198,632</td>
<td>223,135</td>
<td>169,588</td>
<td>602,235</td>
</tr>
</tbody>
</table>

| RIR                                    | 0.86         | 2.61   | -      | -           | 0.66 |
| LTI                                    | 0.21         | -      | -      | -           | -    |
Summary

▪ Get employee involvement in development.
▪ Educate based on how employees learn best and the competency they need to demonstrate.
▪ Empower employees to take action by providing a framework within which effective action can be taken.
▪ Communicate the hazard identification and corrective action results.
▪ Measure with a purpose. Drive behavior and assess system health.
Q&A
Thank you!