CoreMedia®

Lead with Leading Indicators
Establishing a Culture of Safety Excellence

Oregon Governor's
Occupational Safety & Health Conference
Portland | 2009

P.O.P.

PURPOSE

- Introduce leading indicator concepts that will transition you toward a "zero incidents" safety culture
- Challenge you to engage in these new technologies

WHAT IS IMPORTANT
TO YOUR ORGANIZATION?

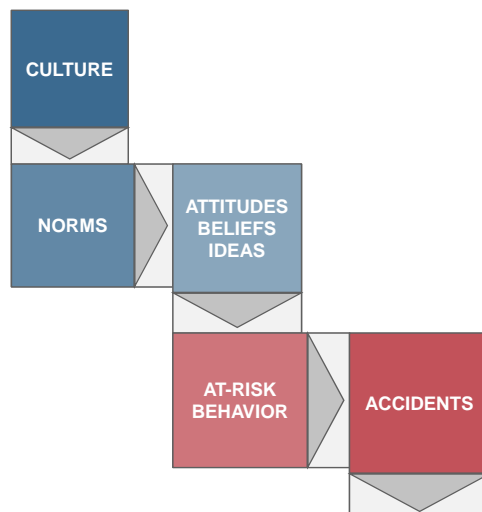---

Safety Performance Indicators

Lagging Indicators
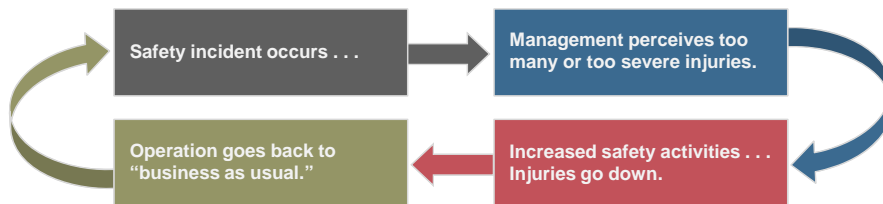- Injury statistics that you react to

Leading Indicators
- Proactive indicators of what you're doing to eliminate incidents and injuries

IMPORTANT MODELS

Root Cause of "Accidents"

CULTURE

NORMS → ATTITUDES BELIEFS IDEAS

AT-RISK BEHAVIOR → ACCIDENTS

slide 6

Incident Reaction Cycle

```
┌──────────────────────────┐      ┌──────────────────────────┐
│ Safety incident occurs...│ ───▶ │ Management perceives too │
│                          │      │ many or too severe       │
│                          │      │ injuries.                │
└──────────────────────────┘      └──────────────────────────┘

┌──────────────────────────┐      ┌──────────────────────────┐
│ Operation goes back to   │ ◀─── │ Increased safety         │
│ "business as usual."     │      │ activities . . .         │
│                          │      │ Injuries go down.        │
└──────────────────────────┘      └──────────────────────────┘
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The Heinrich Triangle

RESULT
- FATALITY
- SEVERE INJURY
- MINOR INJURY

BEHAVIOR
- UNSAFE ACTS & CONDITIONS

LEADERSHIP ACTION
- INVESTIGATION
- DISCIPLINE
- ACCOUNTABILITY
- COMMUNICATION
- RECOGNITION
- SUPERVISOR PERFORMANCE

Safety Perception Survey 21 Safety Management Processes

- Incident Investigation
- Alcohol & Drug Abuse
- Attitude Towards Safety
- Awareness Programs
- Communication
- Discipline
- Employee Training
- Goals of Safety Performance
- Hazard Correction
- Inspections

- Involvement of Employees
- Management Credibility
- New Employees
- Operating Procedures
- Quality of Supervision
- Recognition for Performance
- Safety Climate
- Safety Contacts
- Stress
- Supervisor Training
- Support for Safety

Six Criteria for Safety Excellence

- Top management is visibly committed
- Middle management is actively involved
- Supervision is performance-focused
- Hourly employees are actively participating
- System is flexible to accommodate site culture
- Safety system is positively perceived by workforce

— Dan Petersen, Ed.D.

What makes a difference in safety?

Level One Tools – Reacting | 10 to 20 TRIR, 5 LTIR
Compliance Programs, Work Orders, Incident Investigation, Safety Meetings

Level Two Tools – What We See | 3 to 9 TRIR, 1 LTIR
Observation Programs, Job Safety Analysis, Near-Miss Reporting, Inspections

Level Three Tools – What We Do | 1 to 2 TRIR, 0.1 LTIR
Safety Accountability Systems

Level Four Tools – What We Believe | 0.5 to 0.9 TRIR, 0 LTIR
Unseen cultural reality

Level Five Tools – How We Engage | 0.2 to 0.4 TRIR, 0 LTIR
Effective data-driven safety teams

Level Six Tools – How We Lead | Less than 0.2 TRIR, 0 LTIR
Culture in action: participation, ownership, execution,
live a passion for safety excellence

"Level 1" Leading Indicators

Compliance Programs (OSHA, DOT, etc.)
- A passion for foundational perfection
- A culture of correct
  - Safety Culture Training with executive involvement
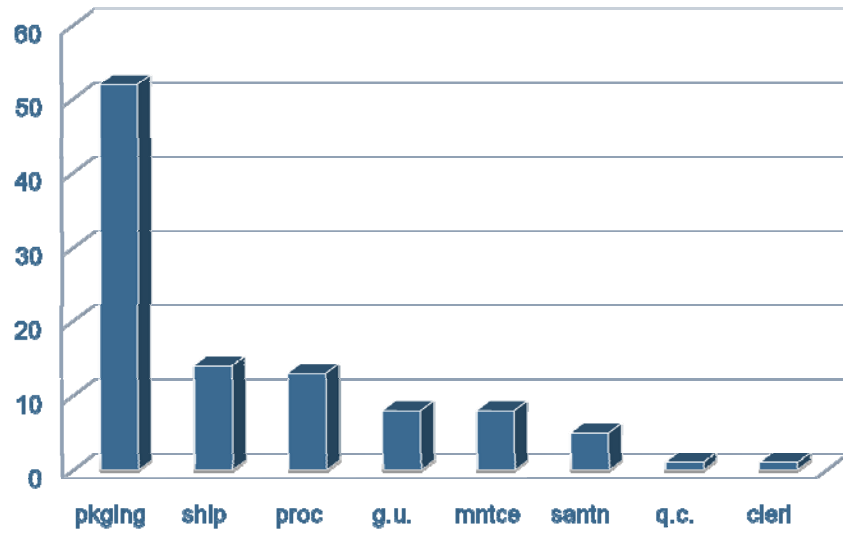 - PPE, Procedures, expectations

Work Orders
- Focus on conditions (5% of all injuries), but dangerous traps
- A safety work order system that has a well managed backlog

Incident Investigation
- POP & AIM team with closure tracking for every incident
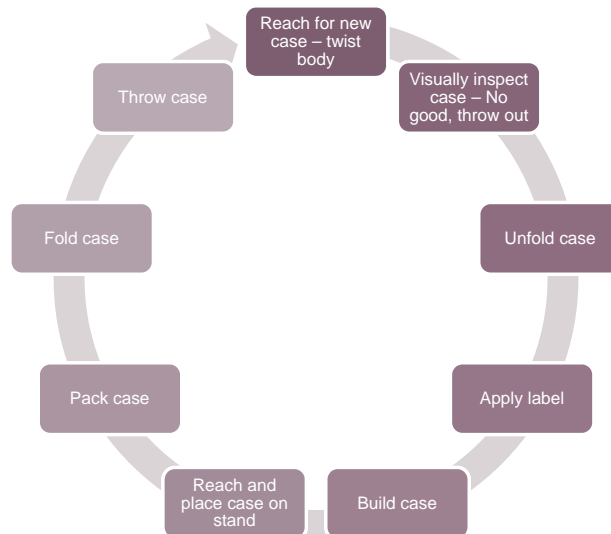- Post Injury Management excellence

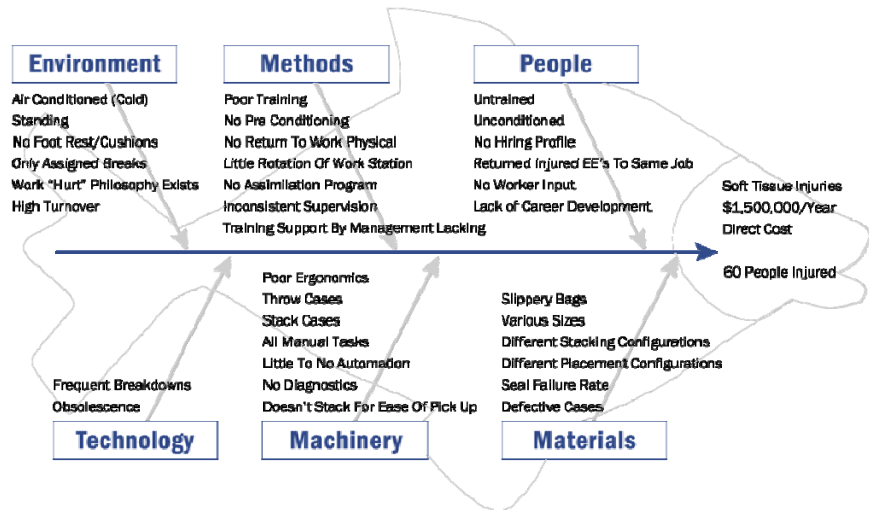## Department Lost Time | Injuries Last 10 Periods

Process to Erect a Case

- Reach for new case – twist body
- Visually inspect case – No good, throw out
- Unfold case
- Apply label
- Build case
- Reach and place case on stand
- Pack case
- Fold case
- Throw case

Packer Cause & Effect

Continuous Improvement Team – Action Item Matrix

TEAM: Packer Safety Improvement   Date: 11/30

Members: John, Sam, Steve, Dimitri, Sharon, Bob

ITEM	ACTION ITEM	WHO	DATE	COMMENTS
1	Hire ergonomist to study and make recommendations	John	12/10	M. Ayub, J.L. Sangre, K State, UT
2	Get EE's to develop training program	Sam	3/3	
3	Retain doctor to develop physical requirements of job	Steve	3/3	
4	Improve case sorting prior to use	John & packers	12/2	
5	Change supervision rotation program from 6 months to 1 year	Sharon	2/6	
6	Improve mechanical reliability of packaging machines	Bob	12/8	
7	Work with EE's to develop warm up program	Dimitri	1/15	

"Level 2" Leading Indicators

Job Safety Analysis (SOP's, Pre-Op's)

- Workface teams develop, train and use

Job Safety Briefings

- Given at workface by employees as conditions dictate

Near-Miss Reporting

- Serious training in a near miss culture at the crew level
  - Number done per crew per week
  - Number solved per crew per week
  - Action Item Matrix for Red and Yellow Near Misses
  - A recognition system that reinforces intense participation

Workface Audits

- Includes both conditions and accountability activities
- Has hourly, supervision and management participation

Near-Miss Kaizen Team (an example)

Purpose Improve safety culture by involving all employees in reporting, analyzing and communicating lessons learned from NMR.

Outcomes (deliverables) for this team are:

- Define accountabilities of each process
- Determine measures for each
- Determine rewards and/or recognition methods
- Flexibility – Six Criteria
- Determine (establish?) training needs
- Forms – KISS
- Minimize paper
- Consider communication
- Implementation Plan

Process (by which this will be accomplished):

- Safety Kaizen to be completed in three (3) days or less
- Test model in a pilot work group
- Rollout to entire region

Fishbone: Near Miss Reports
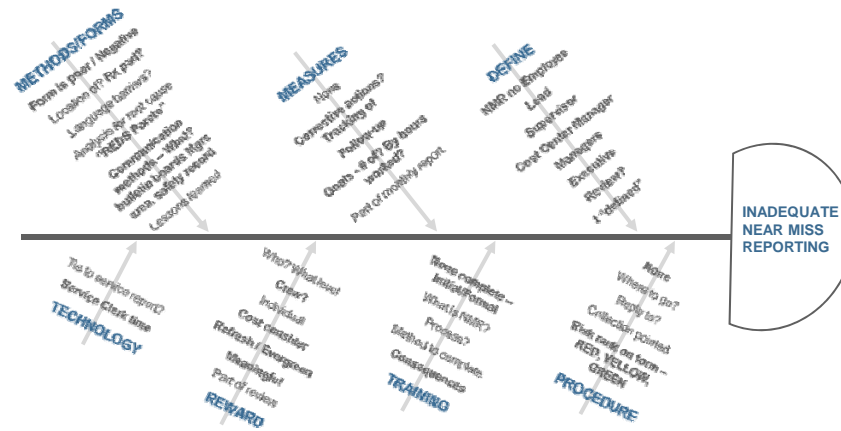
The Solution

Defining What is Expected:

- **Employee** – Report to Lead, Scheduler or manager any recognized near miss and complete form, including suggested corrective actions.

- **Leads** – Same as Employee. Plus interview with employee to determine RED, YELLOW, GREEN and actions taken. Help if needed . Lead daily "bucket meeting" to communicate safety.

- **Scheduler** – Same as Employee, same as Lead. Coordinate root analysis on REDS, "Follow-up", tracks corrective actions generated on all NMR reports.

- **Managers** – Same as Employee, Lead, Scheduler. Backup Leads on daily, start of day "bucket meeting" to communicate safety. Communicate numbers, status, provide recognition, NMR, behavior observations, inspection issues.

The Solution

Training to Enable Success:

- Four hour course close to initial hire
- All personnel included
- Mix of hourly and management personnel
- Include:
    - Company definition of near misses
    - Location of forms (plus request for suggestions)
    - Practice use of forms and reporting of actual incident to "test the waters"
    - Communicate number of near misses and where they occur
    - Leadership as influence at the peer level
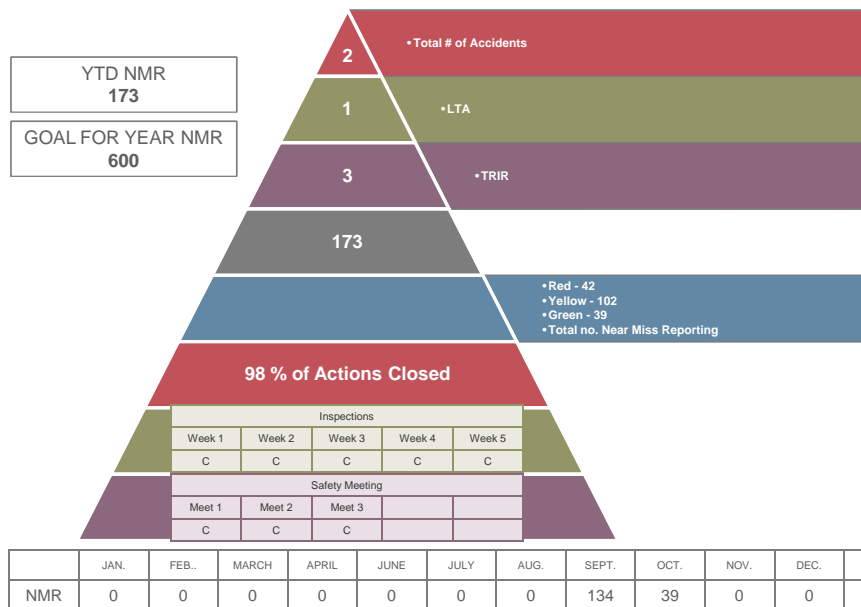- Additional four-hour course on Speak Up! and Listen Up!

The Solution

Measuring:

- Measure the number reported by department/store
- Measure the number reported per 10,000 exposure-hours
- Track and report daily, post for high visibility
- Recognize reports by crew
- Correlate Near Miss Reporting/safety activities with better production, quality, costs, as well as fewer first aid cases

"THE MINIMUM LEVEL OF EXPECTATION
BECOMES THE MAXIMUM LEVEL OF PERFORMANCE."

Activity Tracking – October 2008 | Albuquerque

YTD NMR
173

GOAL FOR YEAR NMR
600

- **2** • Total # of Accidents
- **1** • LTA
- **3** • TRIR
- **173**
- • Red - 42
  • Yellow - 102
  • Green - 39
  • Total no. Near Miss Reporting
- **98 % of Actions Closed**

Inspections				
Week 1	Week 2	Week 3	Week 4	Week 5
C	C	C	C	C

Safety Meeting				
Meet 1	Meet 2	Meet 3		
C	C	C		

	JAN.	FEB..	MARCH	APRIL	JUNE	JULY	AUG.	SEPT.	OCT.	NOV.	DEC.	YTD
NMR	0	0	0	0	0	0	0	134	39	0	0	173

The Solution

Reward and Recognition
- Reward the *activity*, not the outcome
- Crew of the Month
  - Early-out daily
  - Desirable parking spots
  - Recognition lunches
- Success largely in control of the crew
- Visibility of performance
- The literal sign of the times

A World Class Safety Organization?

A Power Plant Construction Site
- The Results
  - TRIR = 0.68
  - First 1 million hours with no recordables
  - LWCR = 0.0
  - No lost time injuries for 3.1 Million Hours
  - 3,000 Near Miss Reports in 12 Months
  - Now at 230 per week, every week
  - OSHA VPP STAR Status March 2008
  - Significant Schedule Boosts
  - Additional Project Awards

"Level 3" Leading Indicators

**Safety Accountabilities developed by a team**
- Applied and lived at all levels of the organization
- Completion measured and rewarded
- Safety Process training by employees at all levels
- Safety Culture training by employees at all levels
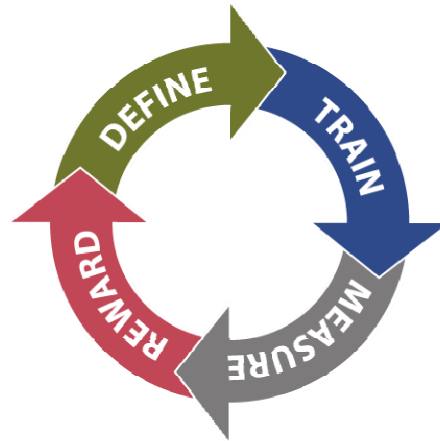
THE SAFETY ACCOUNTABILITY CYCLE
A FOUR STEP APPROACH

Message to Management (video)

- Everyone is in charge of safety.
- Pay attention to the "how and what needs to get done."
- Focus on activities that will produce a safe work environment, rather than on results you hope to achieve.
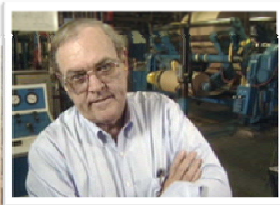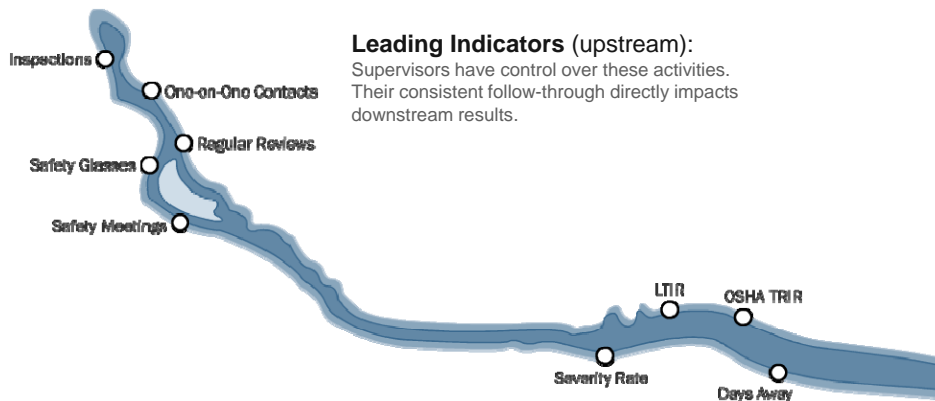
Four Steps to Accountability

The Safety River

Leading Indicators (upstream):
Supervisors have control over these activities.
Their consistent follow-through directly impacts
downstream results.

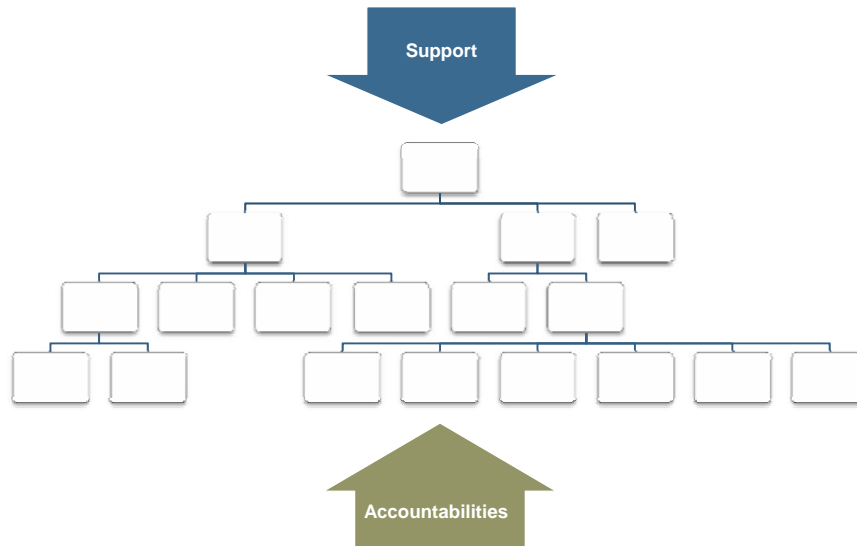**Lagging Indicators** (downstream):
Management is required to "walk the talk" not only by
ensuring clear accountabilities throughout the organization,
but to support and model how they're defined, trained,
measured, and rewarded.

Accountability flows up, support flows down

Support

Accountabilities

Role Definitions: The Executive

The role of the executive is to visibly demonstrate the value of safety by:

- Establishing and visibly participating in the safety management process
- Receiving information regularly on who is and who is not performing safely by some pre-determined criteria
- Initiate positive or negative rewards to middle managers

Role Definitions: Middle Managers

Without the support of this group, safety will not succeed. The role of the middle manager is to:

- Ensure supervisor/subordinate performance
- Ensure the quality of that performance
- Personally engage in some agreed upon visible tasks

Role Definition: Safety Staff

The role of the safety staff is to advise and assist line organization in carrying out their responsibilities.

- Examples include:
  - Identifying and appraising loss producing conditions and practices (Risk Assessment)
  - Developing loss prevention methods, procedures, programs
  - Communicating loss prevention information
  - Measuring and evaluating the effectiveness of the loss control system
  - Coaching personnel in safety performance improvement

Defining Activities

- Clearly defining safety activities is the first step in managing safety
- Activities/Accountabilities are the things we do to keep ourselves safe
- Necessity of clear communication
- Must be specific and measurable
- Must meet the Six Criteria for Safety Excellence

"THE MINIMUM LEVEL OF EXPECTATION
BECOMES THE MAXIMUM LEVEL OF PERFORMANCE."

Operator Accountabilities

Tasks

- Before each shift, inspect/check the work area to identify unsafe issues and correct or initiate corrective action.
- Perform daily housekeeping duties to maintain work area in a safe and clutter-free condition.
- Attend and participate in regular supervisor safety meetings.
- Team with the supervisor to present/discuss relevant topics during safety meetings (2-4/year).
- Initiate and follow-up with safety work orders.
- And more ...

Operator Accountabilities

Measures of Performance

- Injury and near-miss records
- Job hazard analysis reviews
- Housekeeping condition and audit scores
- Documentation of safety meeting attendance
- Crew safety training
- Safety work order records
- Quarterly safety goals and follow-up review
- And more …

Are We Managing Safety?

1.

What do you do on a regular basis (daily) to prevent accidents?

2.

What do you expect your employees to do?

3.

How do you measure safety performance?

4.

How do you reward and recognize safety performance?

5.

What does your boss expect you to do an a regular basis to prevent accidents?
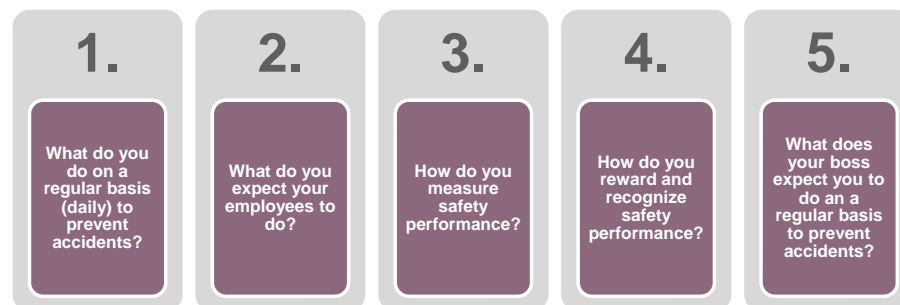
"Level 4" Leading Indicators

- Survey completed
- Interviews occurring
- Action Item Matrix teams working on level four issues

SURVEY RESULTS

Safety Perception Survey: Summary

	Percent Positive		
Category	Emp.	Sup.	Mgr.
Inspections	**56.2**	69.0	**77.5**
Recognition for Performance	**58.5**	61.9	**42.4**
Alcohol & Drug Abuse	**59.8**	**54.6**	**43.8**
Operating Procedures	60.9	60.0	71.4
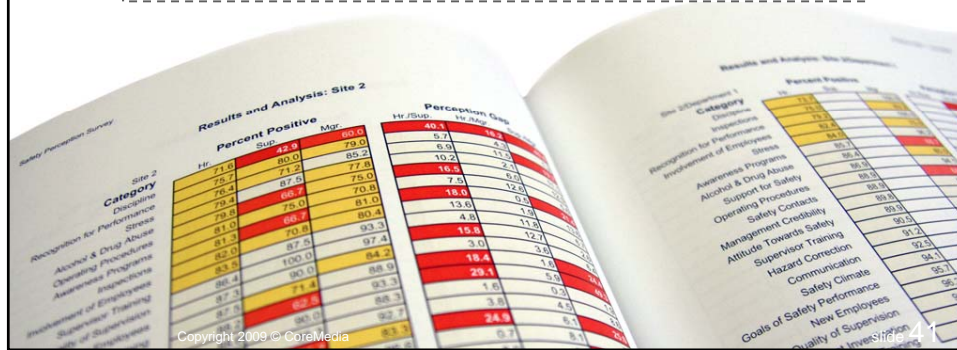
Safety Perception Survey: Summary

			Percent Positive		
		Question	Emp.	Sup.	Mgr.
Hazard Correction	37	Do you think your organization seeks prompt correction of problems found during inspections?	**49.0**	**50.0**	**57.1**
	52	Do you have problems obtaining support for the correction of hazardous conditions?	**51.0**	60.0	71.4
	14	Are records kept of potential hazards found during inspections?	64.4	100.0	100.0
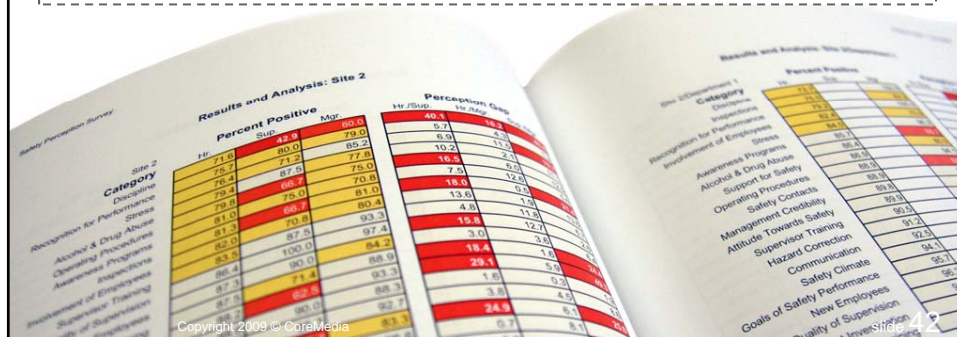
Safety Perception Survey: Summary

Category	Company Composite Average Hourly Score	Global Database Average All Hourly Takers	Hourly 167	Supervisors 5	Managers 7
	The Bottom 10 Categories for each of the organizational levels				
Inspections	56.2	60.0	1	5	
Recognition of Performance	58.5	56.9	2	3	1
Alcohol & Drug Abuse	59.8	63.7	3	1	2

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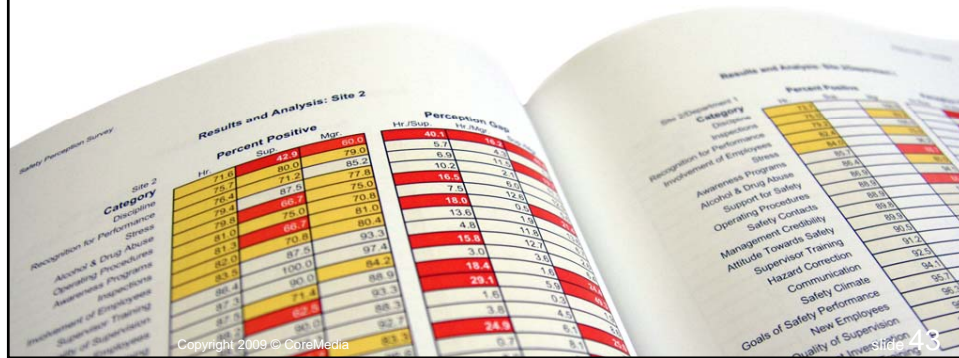
Interview question examples for each level

1.
Describe the corrective action process

2.
How are unsafe work practices corrected?

3.
How does upper management reinforce the importance of safety?

4.
Who are the strongest performing hourly employees with respect to safety? Why?

5.
Describe your Continuous Improvement teamwork

6.
If you were in charge of safety what would you do differently?

slide 44

"Level 5" Leading Indicators

- Effective data-driven Safety Improvement Teams
- Utilize data to build and implement the 2-3 year plan
- POP and AIM in place and tracking completion
- Kaizen leader training and practicing

CONTINUOUS IMPROVEMENT LEADERSHIP
PRACTICAL GROUND RULES

Continuous Improvement Leadership

What needs to happen?

- Open and honest communication
- Two-way input/listening from everyone
- A method by which to put ideas into action (POP)
- A method to track tasks (AIM)

Four W's for Forming a Committee

Who?	• Volunteers Only
How?	• POP
What?	• Complaint = Goal
When?	• AIM

Charter

- Statement of Purpose
- Scope
- Method
- Roles & Responsibilities
- Resource Available
- Deliverables
- Schedule
- Communication
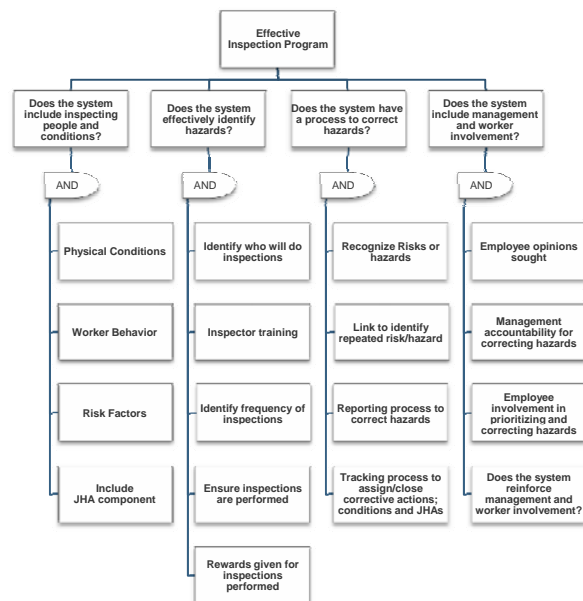- Critical Success Factors

POP – The Start of Every Meeting

Purpose

Outcome

Process

Purpose, Outcome, Process (example)

Inspection Continuous Improvement Team
POP Statement

Date	10/11/07		
Purpose	Develop a comprehensive inspection system that identifies all hazards to help us achieve zero injuries.		
Outcomes	Rank		Comments
	C	A training program set-up by EHS for the new inspection system	Not Applicable
	A	Gather existing check lists	Yes- 8/8
	A	Team reviews existing check lists & decided to leave them be	Yes
	C	Develop the system- present to Management for critique and approval	On going
	B	Develop inspection accountabilities for all levels (in Policy Statement)	Yes- 8/15

Fault Tree (example)

Cause & Effect

Environment

Monthly quick review of each department conditions
Focus on check in the box
No quality time with personnel interaction

People/Procedures

Look only at conditions
No hourly participation
No manager participation
Little training
No action item matrix to track issue closure
No standard for closure time
No consistent well thought out processes
No policy to support what we do
No JHA review during inspections

Effect

Ineffective inspections –
time wasted with little
or no results

Look at high hazard equipment
Ladders
Housekeeping
Fire Extinguisher
First Aid Kit
Electrical Installations
Conveyors

No Database to keep track of what we do
Hand written notes
No department check lists
Review chemical storage
Review HAZMAT facilities

Machinery

Materials

Action Item Matrix | Key Components

- Tasks/Action Items
- Team Members
- Targeted Delivery

90–120 days or Intensive Kaizen teams

Action Item Matrix (example)

Inspection Continuous Improvement Team
Follow-up AIM
7/4/07
Members in attendance: Robert, Richard, Frank, Chad, Cathy, Steve, Mark

	ACTION ITEM	WHO	TARGET DATE	X	COMMENTS
1	Next meeting 8/1 at 1 pm. Reserve a room- Mead 1	Norm	7/27	X	Done
2	Type notes & prioritize outcomes	Frank	Before 8/1	X	Notes typed. Items prioritized 8/1
3	Review flip chart (figure out hard to read words)	Team	8/1	X	Done- 8/8
4	Team Leader/Facilitator	TBD on 8/1	8/1	X	Norm- Team Leader, Frank- Secretary
5	Finish off action item matrix		On going		
6	Develop physical inspection for each dept				
7	Develop personnel inspection for each dept				
8	Get other assistance for inspection				
9	Develop our process for doing this Inspection/ flow chart	Steve Ross- draft flow chart	8/15	X	Done- team reviewed "fault-tree"
10	Bring up to 3 inspection sheets used in your department or area	All Team Members	8/8	X	Done
11	Review inspection sheets- ck for dis/similarities, redundancy, good info for future use etc?	Frank	8/15	X	Inspection sheets from different dept are "all over the map"

Policy Statement

All personnel shall be familiar with this policy.

Employee's responsibility: Periodically perform inspections and to participate in audits when required.

Supervisor's responsibility: Ensure all required inspections are performed within their area of responsibility, to ensure employees are trained to perform inspections, and to participate in audits when required.

Manager's responsibility: Periodically perform audits to ensure inspections are being performed, to ensure records of audits are kept, and to ensure observations or findings of inspections and audits are acted upon.

Inspection Guidelines

Audit/inspector: Employee assigned to make safety audit/inspection.

Responsibility

All employees are responsible to participate in a safety audit/inspection of their work area or group according to the following pre-defined schedule:

1. **General Manager** – at least one per quarter
   a. **Directors** – at least one / quarter
   b. **Managers** – at least one / quarter
   c. **Supervisors** – on a frequency developed by the individual department or at least as often as they inspect for production and quality issues (minimum of once per month)

"Level 6" Leading Indicators

- Continuous Improvement team leaders from all levels
- Executive Steering Team with all level representation
  - Meets, Plans, Executes
- Tracking for Upstream Activities
- Clearly defined rewards for upstream activity culture excellence
- Injury/incident downstream indicators improve every year
- Survey and interview scores regularly improve
- Zero-incident, zero-error mentality evident in all functions

A culture with a relentless, passionate pursuit of Zero

AIM Team Tracking

Action Item Status

Transitioning to World Class?

A Heavy Equipment Dealer

- Starting
  - ◆ TRIR = Around 10
  - ◆ LWCR = 3.0
  - ◆ Few Established Safety Process
  - ◆ Fewer than 10 Reported Near Misses per Year
  - ◆ An Executive Leader who "gets it"
  - ◆ 173 Near Miss Reports five weeks after Rollout
  - ◆ Hundreds of Pre-job Hazard Assessments completed

Morrison Bros. Foundry

- Focused Supervisor Performance
- Active Employee Involvement
  - Employees build JHAs and live them
  - One-on-one interviews to determine additional issues
- Safety Accountabilities at the floor level
- Complaint = Goal CI Teams in all departments
- Significant training of safety basics, safety culture and safety excellence at all operations organizations

The Results

- 1999 TCIR 28.69, LWDR 3.48
- 2007 TCIR 2.73, LWDR 0
- No LTAs since 2002
- 1999 Mod Factor 1.34, 2007 Mod Factor 0.7
- Productivity increased 29%

slide 61

TRUST
The result of character and competence.

LEADING INDICATORS

Making Leading Indicators part of the
Organization's DNA