



ORICA MINING SERVICES

SAFEX Congress

**Plenary Session
May 2005 - Geneva**



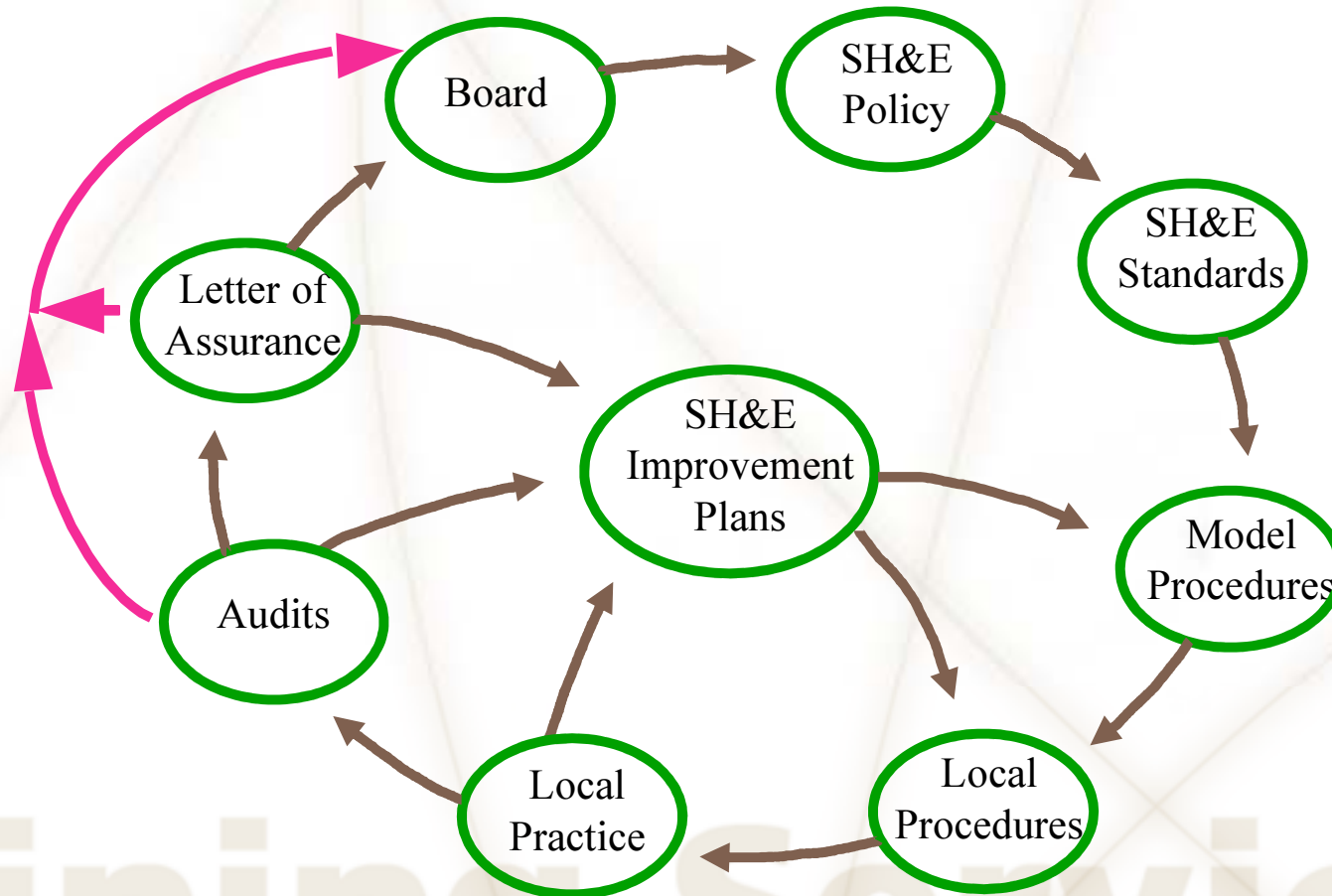
A Visit to the Doctor



- Defining the norm
- Assessing the deviation
- Making the diagnosis
- Writing the prescription
- Returning to and maintaining full health

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A Template for SH&E Management



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Why A System Approach to Safety?



“Systems permit ordinary people to achieve extraordinary results, predictably. Without a system however, even extraordinary people find it difficult to achieve even ordinary results, with predictability.”

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SH&E Standards – A Partial List



1. Appropriate resources provided
2. Training plan/refreshers/assessments
3. Risk assessments completed – new projects, existing processes
3. Safe systems of work developed
4. Engineering controls in place
5. Emergency planning - practiced
6. Incident reporting & analysis
7. Change management system rigorous
8. Regular monitoring

Plus 2 key enablers

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2 Key Enablers . . .



1. Management leadership &
2. Employee participation in the process

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Workshop Sessions



1. SHE System: evaluation at UEE Group
2. Raising safety awareness
3. Management of change
4. Preparation of working instructions by involving employees
5. Operational auditing at Dyno
6. Video monitoring of safety critical operations

Engineering
Environmental
Innovation
Change Processes

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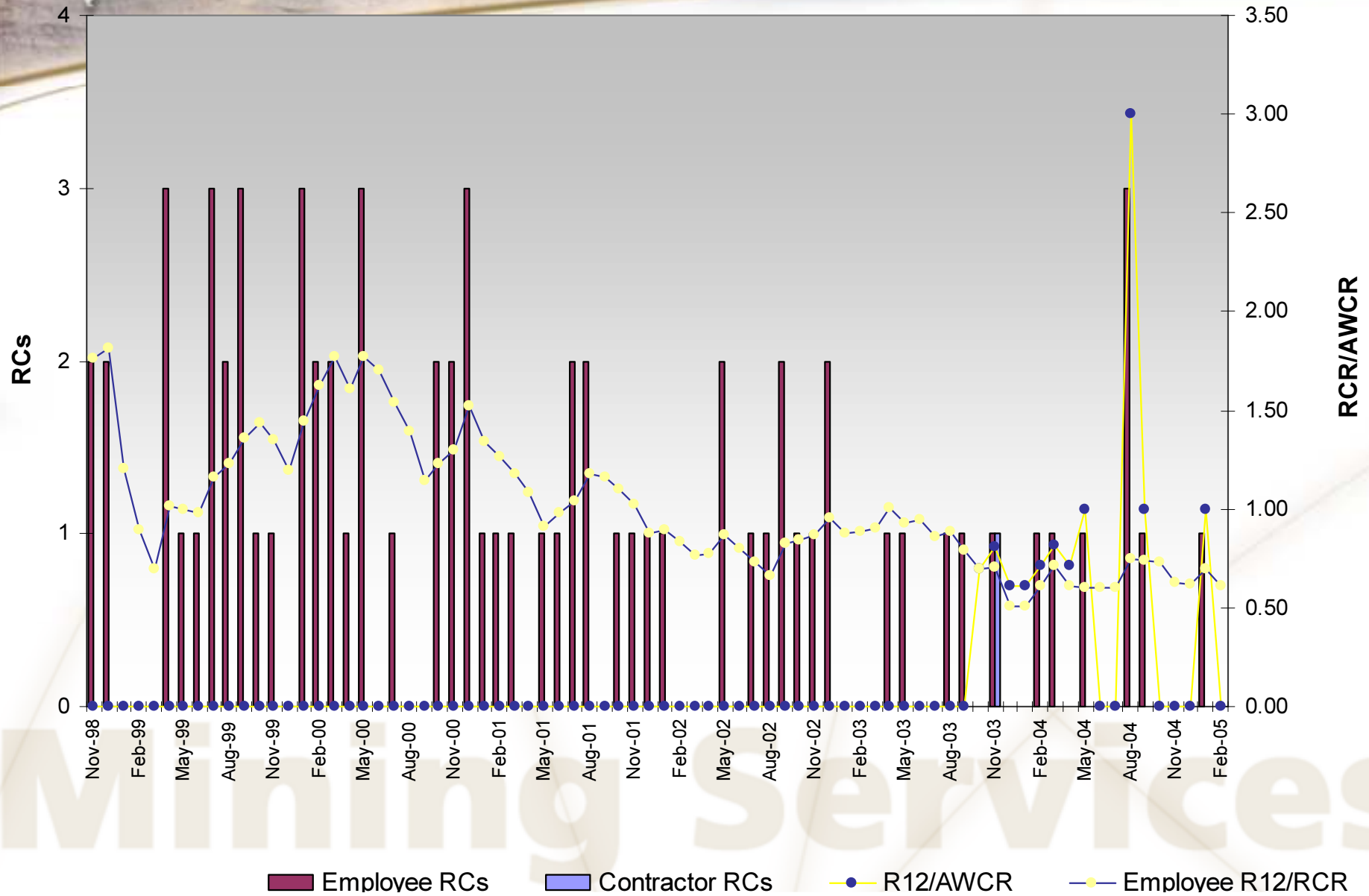
A Visit to the Organisational Doctor



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12 Month Rolling Recordable Case Rates



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A Caution . . .



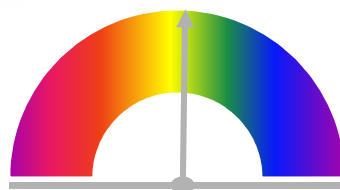
“Recognise that complacency is a great enemy to safety. We must never be complacent with respect to products, plant, vehicles of any type, and the working environment itself, especially in the explosives industry. A long period of successful outcomes in the safety area should result in equal measures of . . . satisfaction for the achievement, and concern for the future.”

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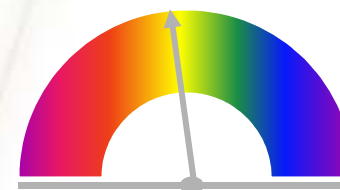
Scorecard YTD - Lead Indicators



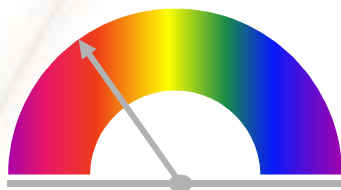
% Actions outstanding
Target: 0%
Actual: 19%



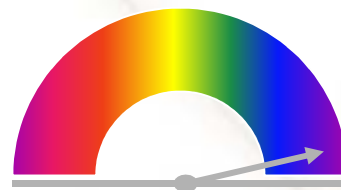
% Audits completed
Target: 100%
Actual: 100%



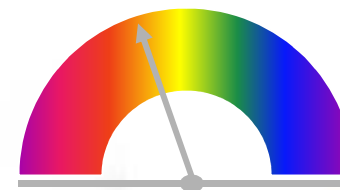
% HAPI
Target: 100%
Actual: 91.03%



% Incidents uninvestigated
Target: 0
Actual: 42.94%



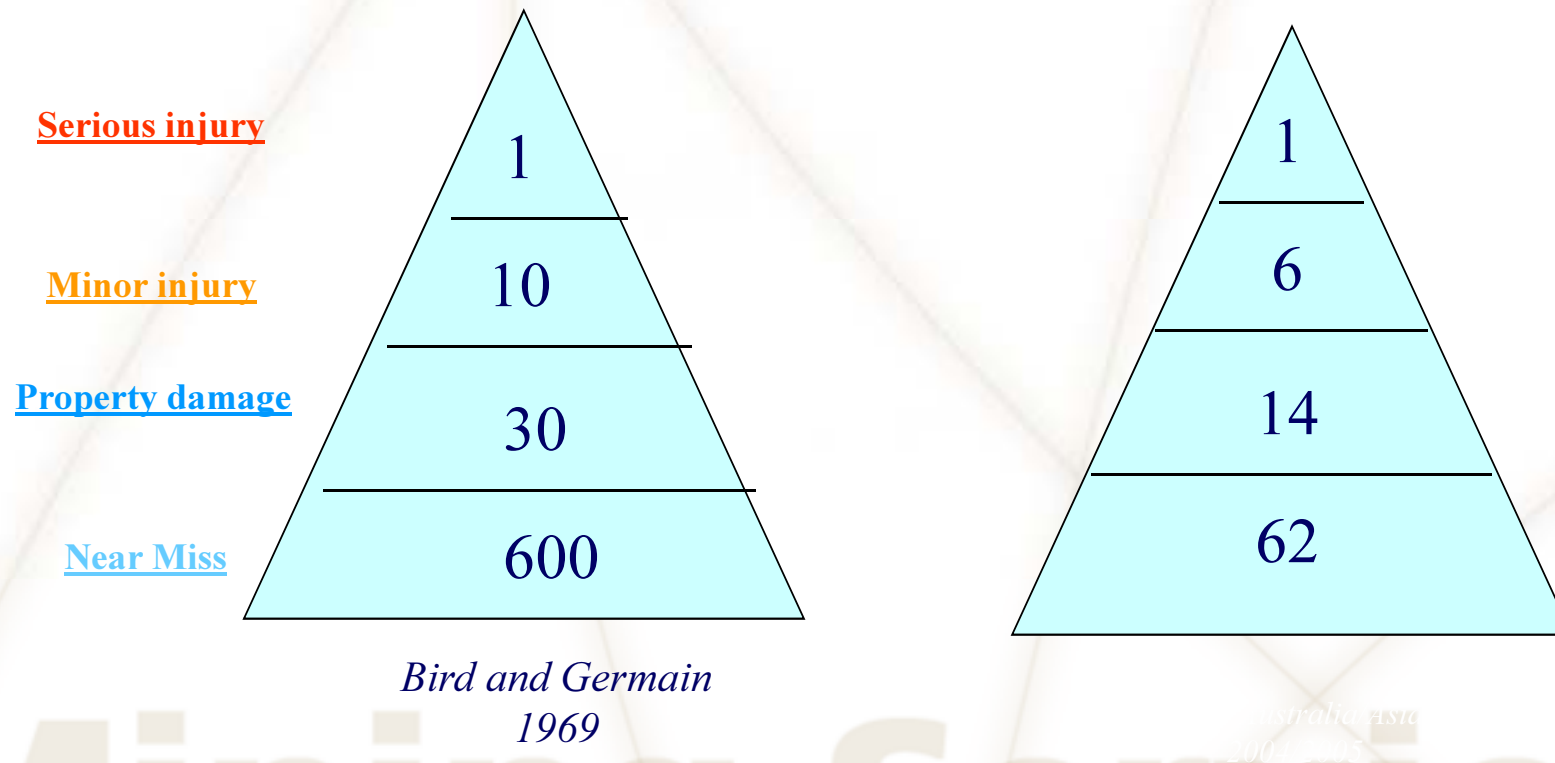
% Response to alerts and snippets
Target: 90% on time
Actual: 100%



% HYPI
Target: 100%
Actual: 81.88%

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Scorecard - Lead Indicators Incident reporting

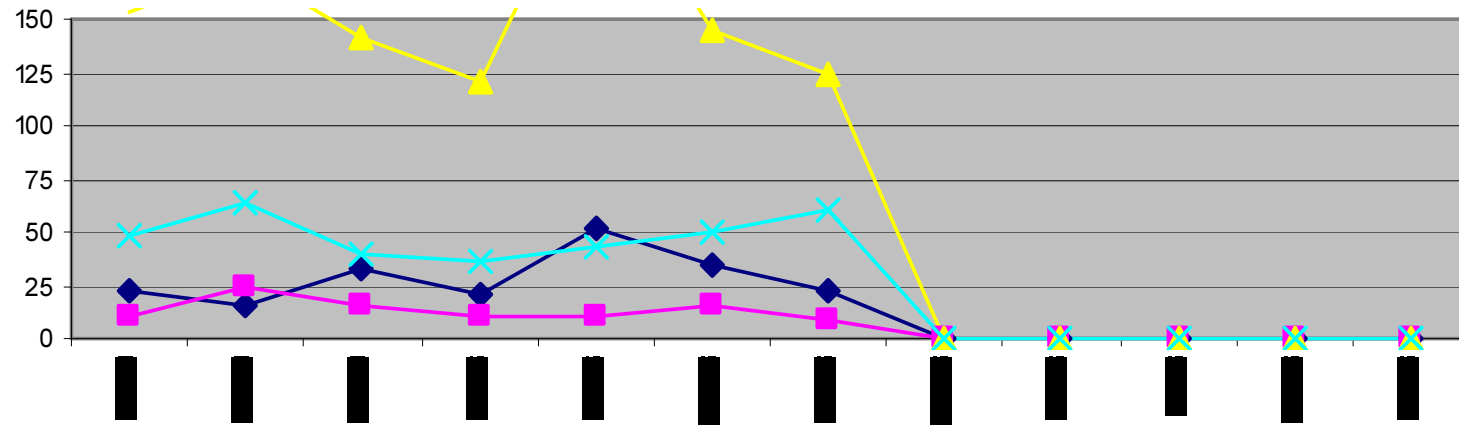


** Need to report and investigate more property damage and near miss*

Change Notices



Global Explosives Change Notice Tracking



	Oct-04	Nov-04	Dec-04	Jan-05	Feb-05	Mar-05	Apr-05	May-05	Jun-05	Jul-05	Aug-05	Sep-05
North America	22	15	33	21	51	34	22	0	0	0	0	0
Latin America	10	24	15	10	10	16	9	0	0	0	0	0
Australia/Asia	153	175	141	121	233	145	125	0	0	0	0	0
Europe	48	63	39	36	43	50	61	0	0	0	0	0



Audit Structure



❖ Business SH&E Review

- every 3 years
- independent assurance
- business support functions

❖ SHEMS Audit

- every 2 years
- overall effectiveness of implementation
- qualified, independent auditors

❖ Significant Risk

- every 4 years
- Hazards and risks identified, critical controls are effective
- approved specialist auditors

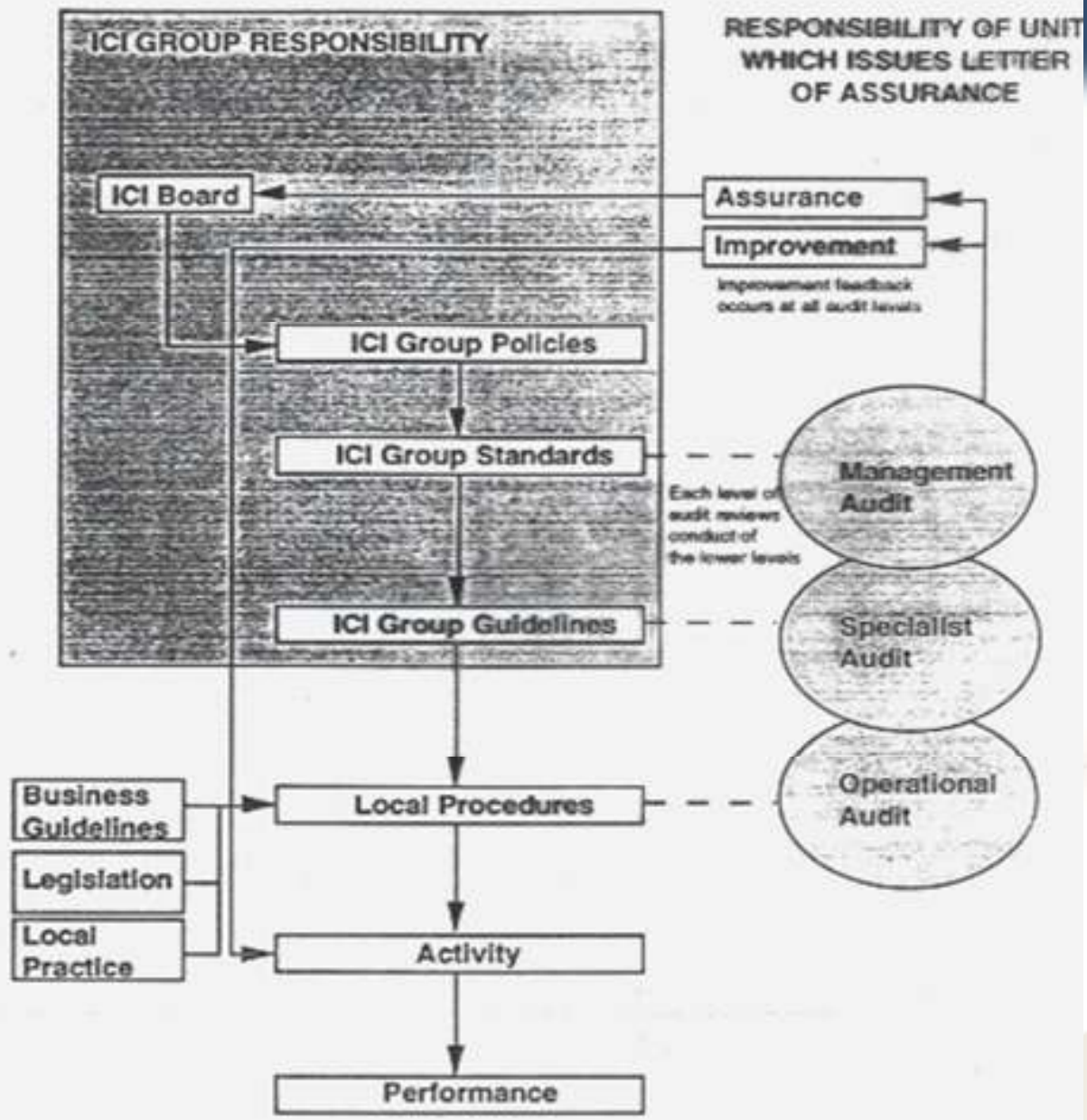
• Regulatory Compliance Review

- every 4 years
- major licences and selected legislation
- approved specialist auditors

• Specialist Audits

- as needed basis
- identify opportunities or best practice
- occupational health
- environmental impact
- fire risk management
- warehousing
- product distribution
- electrical safety.

ICI SHE Audit Model



Extracted from SHE Group Guidelines GG19.1

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A Visit to the Organisational Doctor



- Defining the norm
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- Writing the prescription
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Preparing a Training Plan



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TRAINING MATRIX

SKILLS	SKILL	MAINTENANCE OF EQUIPMENT	PUMPING EQUIPMENT	SAFETY PROCEDURES	24hr IT Support	24hr Customer Care	EQE
JOB		●	●	●	2	1	1
ISS			●		1	1	0
SAFETY		●	●	●	3	1	2
SHOULD BE ACHIEVED							
SHOULD BE	2	2	2	6			
SHOULD BE	1	2	0	3			
BY	1	0	2				3

- Skill required but employee not trained and does not possess skill.
- Employee "trained" to possess the skill through on the job experience.
- Employee has successfully completed training manual and has demonstrated the skill to the trainer.

	Dept	On	Off	Not	ETC
Total Skills	4	4	6		
Total Skills Complete	1	2	3		
% Trained	11%	33%	50%		

GOAL IS TO REACH ALL ●

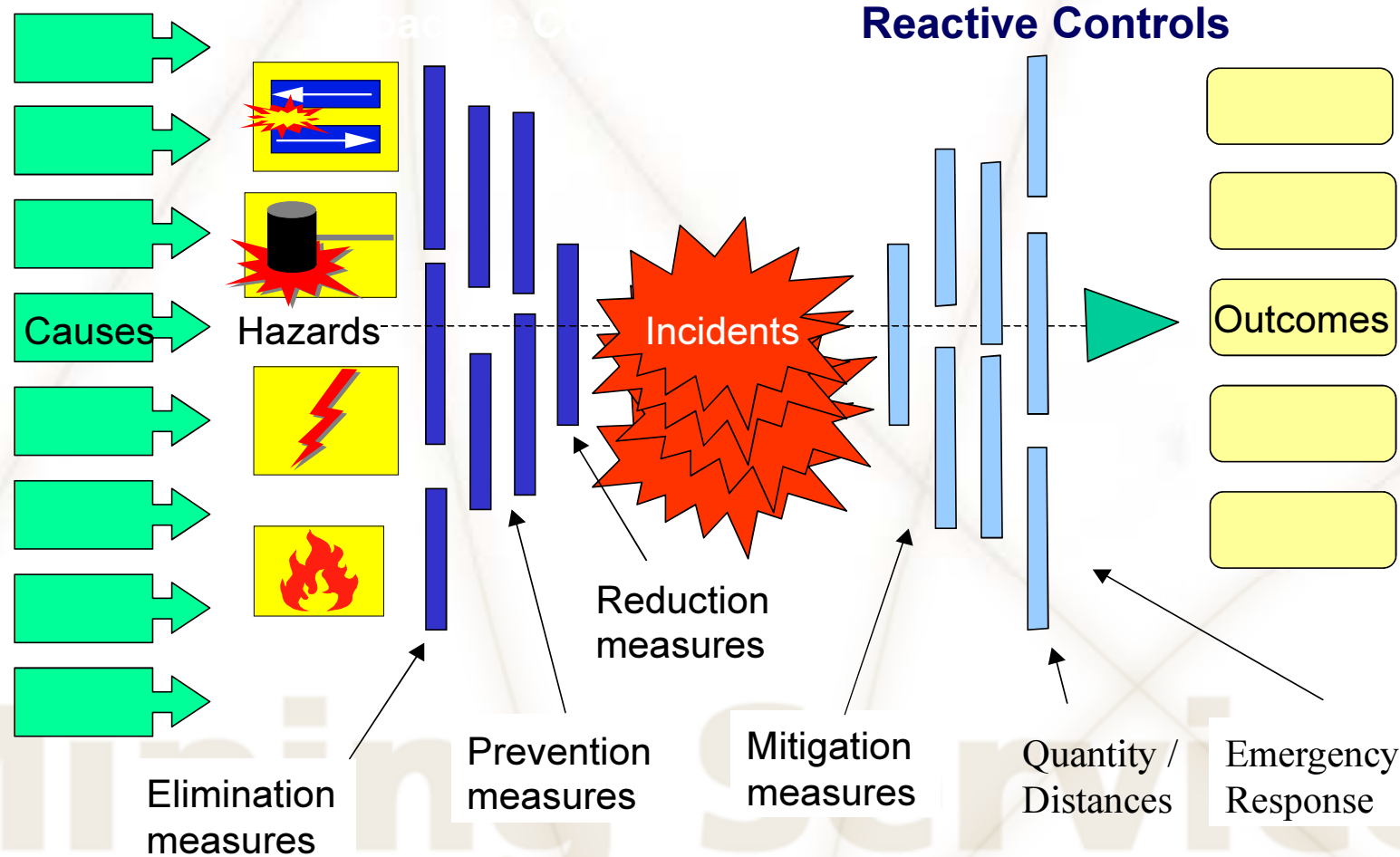


SERVICES

BASIS OF SAFETY



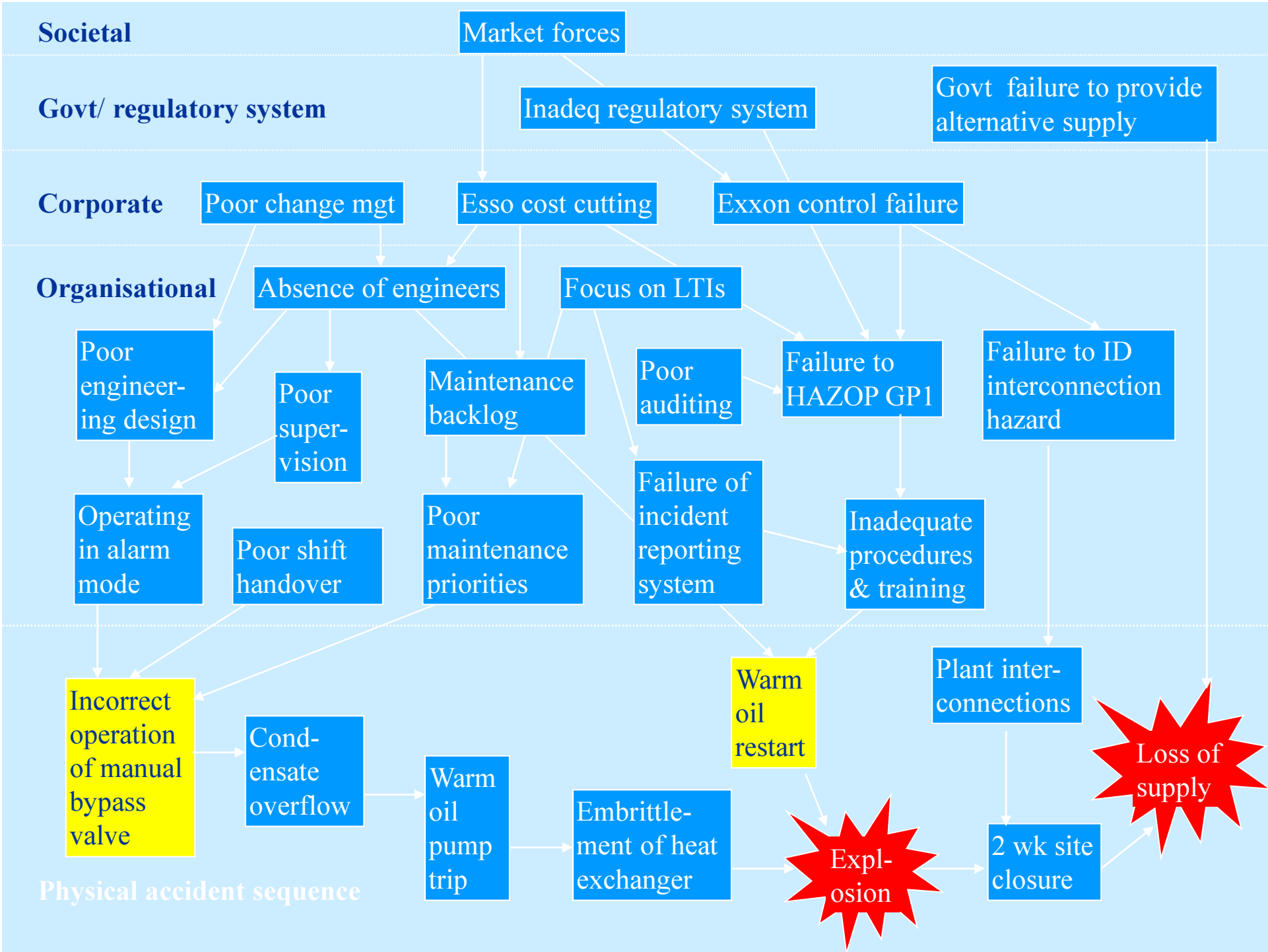
ExplosivesBowTieVer2.pdf





Longford -
Investigating to
Root Cause

2 fatalities, gas supply cut off to 3 million people for 2 weeks



General lessons from Longford

- Systematic hazard identification is vital for accident prevention.
- Auditing must be good enough to identify the bad news & ensure that it gets to the top.
- Reliance on LTIFR as the primary safety indicator for major hazard industries is itself a major hazard.
- Management of change must be done scrupulously
- Maintenance cutbacks foreshadow trouble.
- Governments should enact safety case legislation.



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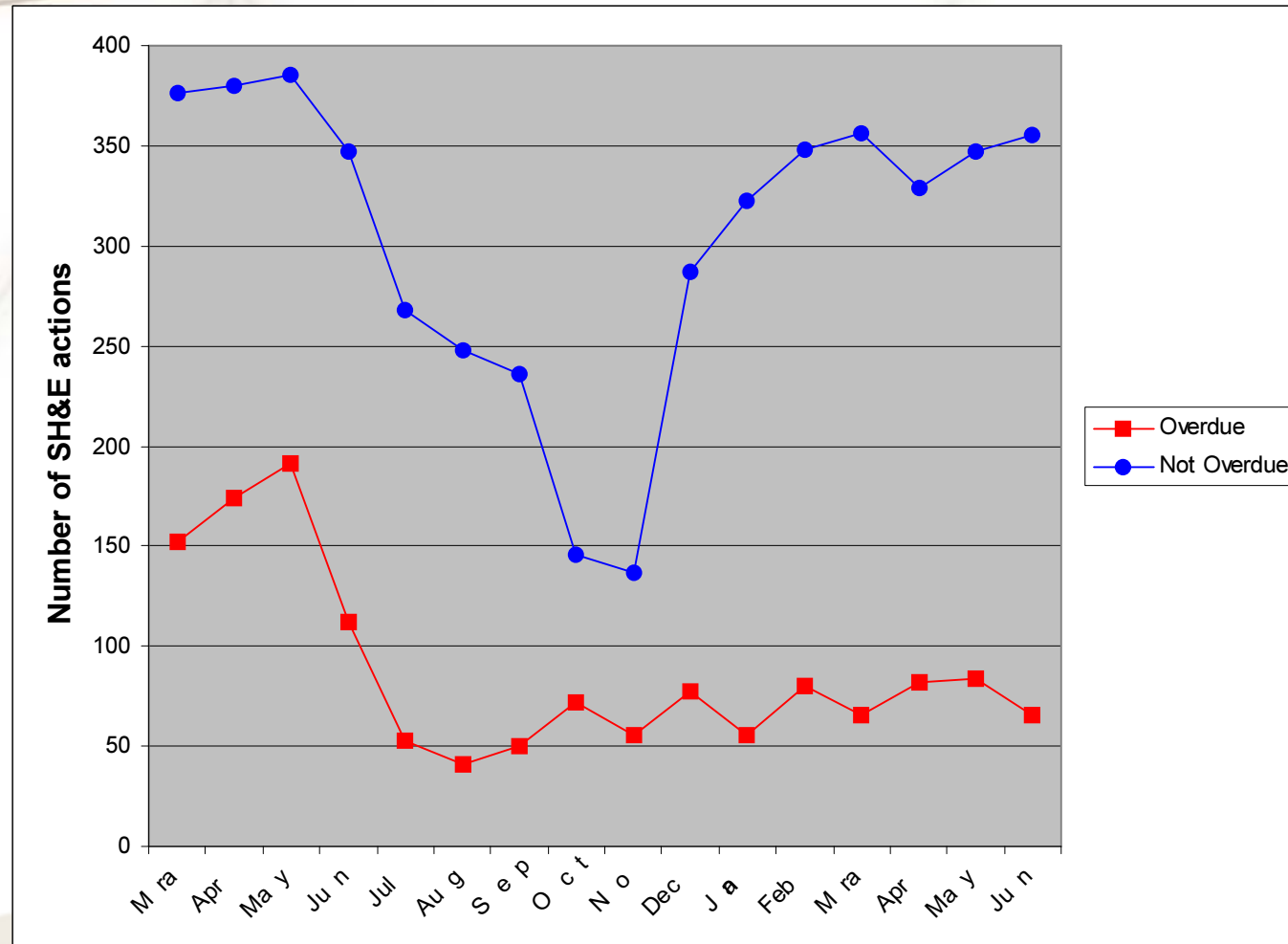
A Visit to the Organisational Doctor



- Defining the norm
- Assessing the deviation
- Making the diagnosis
- Writing the prescription (“corrective action”)
- **Returning to and maintaining full health**

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Audit Close Out



In Conclusion . . .



To ensure the SHE health of your organization you must ensure you :

- establish & communicate the norm
- provide the tools to meet the norm
- monitor compliance to the norm
- and close the gaps.

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