‘Safety First Culture’ in Australian Laboratories

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Content

CSIRO in brief

HSE risk profile and governance

Laboratory safety culture

Engaging our people
CSIRO
(Commonwealth Scientific and Industrial Research Organisation)
Who We Are

<table>
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<tr>
<th>People</th>
<th>~5000</th>
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<tbody>
<tr>
<td>Sites</td>
<td>55</td>
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<tr>
<td>Budget</td>
<td>$1B+</td>
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</tbody>
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64% university degrees
Over 2000 doctorates
Over 500 masters

We develop over 800 postgraduate research students with our university partners
Global Connections: impact partnerships

80+ countries
HSE Risk Profile and Governance
What does a scientist look like?

Where do they work?
Scientists .....Then.....

An early CSIRO laboratory in 1932
Scientists .....Now.....

Wet and dry labs, clean rooms
Physical containment
Pilot plants
Animal shelters
Glasshouses
Field stations
National facilities
Health, Safety and Environment Hazards
Key High Risk Areas

Chemicals and gases
Mechanical equipment
Electrical hazards
Fieldwork
Working on water /diving

Psychosocial factors
HSE Governance Structure

- HSE Policy
  - Framework
  - Structure
  - Roles
  - Responsibilities
  - Accountability
  - Performance
  - Review

- HSE Management Standard

- HSE Procedures

- HSE Guidelines

- HSE Tools
Laboratory Safety Culture
How CSIRO Works

Customer first

Our people
- Excellent science
- Inclusion, trust and respect
- Health, safety and environment
- Deliver above commitments

Breakthrough innovation

Global outlook, national benefit

Collaboration hub
R&D versus Risk Assessment

**Research and Development**
- Identify a hypothesis
- Test the theory - conduct experiments
- Validate the results
- Modify the hypothesis

**Risk Assessment**
- 'Plan, Do, Check, Act'
- Identify the hazard
- Assess types of controls
- Validate the controls/mechanism
- Modify the work practice
Engaging our Scientists

Link safety to the science

Provide knowledge and tools

Focus on philosophy, not just compliance

Communicate and consult widely

Motivation programs
Key Elements of a Laboratory Safety Culture

Planning experiments
Risk assessment and control
SOPs
Training and competency
Emergency plans and practices
Audits and inspections
CSIRO Laboratory Safety

Laboratory custodians – awareness, Community of Practice

Lab signage – entrance door

Lab induction and training on equipment

Housekeeping checklist and blitzes

Safety noted in lab notebooks
Engaging Our People
Awareness

- Safety induction
  - Rules for working safely

- Risk assessment
  - Identify hazards & risk controls

- Manuals, checklists, work instructions
  - Instructions for safe operation
Awareness

Hazards, incidents, injuries, near-misses
- Prevent a recurrence

Safety performance
- Lead and lag indicators, workers compensation, safety initiatives

Posters, intranet
- Reminders, access to info & tools
Safe people
Safe work
Safe science

Manufacturing Flagship

Lead by example
- Our words will match our actions
- Take the initiative to make the workplace safe – don’t wait for others

Foster open communication
- Encourage talk about health and safety
- Speak up if you are unsure

Share ways to work safely
- Discuss learnings from incidents, injuries and near-misses
- Leverage best practice

Our people are more important than deadlines
- Plan ahead
- If there is difficulty in meeting deadlines, discuss with your supervisor

Think about tasks and risks in advance
- Don’t rely solely on your own judgement
- Check your actions independently – ask for assistance when required

Inspire safe behaviour
- If you see someone being unsafe, tell them
- Give corrective coaching when people display at-risk behaviour
- Challenge the status quo and complacency

Celebrate success
- Identify people that do the right thing
- Recognise and reward positive behaviours and performance

Report Incidents

- Don’t wait for someone else to report an incident – do it yourself
- Report incidents promptly even if you’re unsure it’s work-related
- Report within 24 hours
- Investigate within 14 days
- Review within 5 days
- Turn on SAP substitution when you’re away

injury/illness, near-miss, property damage, environmental impact
Training .....Then.....

SOME IDIOT STOOD ON A CHAIR AND FELL OFF.

NOW WE ALL HAVE TO TAKE TWELVE HOURS OF CHAIR SAFETY TRAINING.

IS THAT A "DO" OR A "NOT DO"?
Training .....Now.....

WORKPLACE LEARNING
70:20:10

70% Experience

20% Exposure & Exchange

10% Education

70% real life, on-the-job roles, tasks, problem solving

20% feedback, observations, mentoring, networks, collaborations

10% formal programs, e-learning, reading, study
HSE Risk Training

Chemicals, gases, cryogenics
Ergonomics, manual handling
Radiation safety
Plant – forklifts, cranes
Emergency – fire safety, first-aid
Contractor management
Incident investigation
Mental health
CSIRO leaders think and behave personally and collectively in a way in which health and safety is not compromised

*The standard you walk past is the standard you set*
On-the-job Learning

Buddy system

Team meetings

Peer and manager observations and feedback

Human factors – (physical, safety, psychosocial)

Shadowing
Conclusion
Key Conclusions

Science and laboratories have risks

Good safety culture lowers risk

Scientists and students to be risk-aware

Apply science to make labs safe
Thank you

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