

# Argonne National Laboratory's Safety Culture Pilot Experience - Update for 2010

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# Overview

- Background
- Assessment of Safety Culture
- Parallel Safety Initiatives
- Results
- Continuing Challenges



# Background

- Argonne made a conscious decision to improve safety culture in early 2008.
  - To take the Argonne ESH program to a higher level of performance.
  - To provide for a safe and healthful work environment.
  - To address overall corporate commitments made in the recent contract rebid.
  - To address continuing challenges associated with implementation of safety programs, especially WP&C.
- This overall safety culture initiative was incorporated as a specific measure with multiple targets into the Argonne FY08 PEMP, Goal 5; “safety culture” language remains today.



# Assessment of Argonne's Safety Culture

- Argonne contracted with DuPont to assess effectiveness of current safety management systems and to benchmark the laboratory against other world-class safety management systems.
- Assessment included:
  - Safety Perception Survey (on-line survey; ~70% of employees responded)
  - Interviews with ~80 staff at all levels
  - Visits to laboratories and other work spaces
  - Evaluation of laboratory data on injuries and illness statistics, event investigation reports, etc.
  - Senior Managers workshop to review results and recommendations



# Safety Culture Survey Results

- Top management's personal commitment to safety generally perceived as strong.
  - Some question commitment based on visible decisions and actions.
- Safety is broadly stated as a personal and organizational value.
  - World-class safety performance is not broadly seen as a critical success factor, except at the most senior management levels.
- For some scientists, Safety competes with Science.
- Safety a top priority for:
  - 75% of Managers and Workers and
  - 60% of Professionals.
- 55% of all groups are satisfied with Argonne's safety performance.
- Most managers say they are deeply involved in safety (improvement) activities, but only 10-30% of workers and professionals.



# Safety Initiatives After the Survey

- Safety Observation Reporting Process
  - Has had trouble getting off the ground.
- Revitalization of Safety Leadership Training
- Creation and consolidation of Laboratory R2A2s
- Re-invigoration of lab's ISM program to include an ISM "marketing campaign"
- Roll-out of focused "safety improvement plans" to all divisions; all divisions now maintain an annual safety improvement plan.
- Revitalization of safety reporting metrics into a dashboard format.
- Review of safety metrics; creation of new metrics.
- Receipt of ISO9001 and 14001 certification for the laboratory management system.
- Third annual laboratory-wide ISM Day
- Expansion of an "ergonomics cube" and creation of a "PPE cube" providing sample safety equipment for the workforce to evaluate. Includes vendor fairs.
  
- Recently completed a central ESH division "customer satisfaction survey"; results are being evaluated but are in general positive.



# Work Planning and Control

“Many signs of positive change and significant activities including implementation of new work control elements.”

DOE Headquarters HSS Special Review

The screenshot displays the Argonne National Laboratory's Work Planning & Control (WPC) system. The main window shows a 'Work Control Document' for WCD 8780, currently in 'Draft' status with a 'Hazard Level: H'. The interface is divided into several sections:

- Left Sidebar:** Contains navigation options such as 'Create New WCD', 'Create New Experimental Module', 'My WCDs', 'Pending Your Review', 'My Divisions WCDs', 'SMEs by Role', 'ESH WPC Home', 'WCD Worksheet', and 'Open WCD'.
- Top Bar:** Displays 'Work Planning & Control' and 'WCD 8780'.
- Main Content Area:** Titled 'Edit Experiment/Task', it includes a 'Summary' tab, a 'Hazard Analysis' table, and a 'Training' section. The 'Hazard Analysis' table lists various hazards with 'Yes' and 'No' columns. The 'Hoisting-rigging' hazard is highlighted in blue.
- Right Panel:** Contains 'Reviews and Approvals' and 'Task/Hazard Relationship' fields.

Hazard	Yes	No
Hand tools	<input type="checkbox"/>	<input type="checkbox"/>
High Pressure	<input type="checkbox"/>	<input type="checkbox"/>
High or low Temperature	<input type="checkbox"/>	<input type="checkbox"/>
High vacuum	<input type="checkbox"/>	<input type="checkbox"/>
Hoisting-rigging	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Laser	<input type="checkbox"/>	<input type="checkbox"/>
Radiological Hazards	<input type="checkbox"/>	<input type="checkbox"/>
Other	<input type="checkbox"/>	<input type="checkbox"/>

# Safety Management Programs - Improvement Plans

- In FY08, began to formally use results of trend analyses to target improvement in select safety management programs each year. Some examples of successes are reported below.

Identified Trend	Actions	Results
>50% of injuries are to hands/wrists (FY07 & FY08)	Hand safety awareness; hand out of work gloves; ergonomics initiatives	Reduced hand injuries to 30% of total in FY09
~30% of injuries to slips/falls (esp. winter)	Hotline for reporting; signs; salt in buildings; “winter preparedness kits” for all employees	14 winter-related falls in FY09.....6 in FY10
~20% of first aid injuries are bee/wasp stings	Early season campaign to remove nests; hotline for reporting; signs	Reduced insect sting injuries by ~30%; doubled size of early season campaign for CY2010
Summer brings increased injuries	Summer safety seminar series	Number of injuries relatively constant; severity dropping.
First aid injuries likely not all reported	Working to simplify reporting process	Reduced paperwork associated with reporting/investigating by ~80%; created web form for simplified reporting.



# Other Initiatives

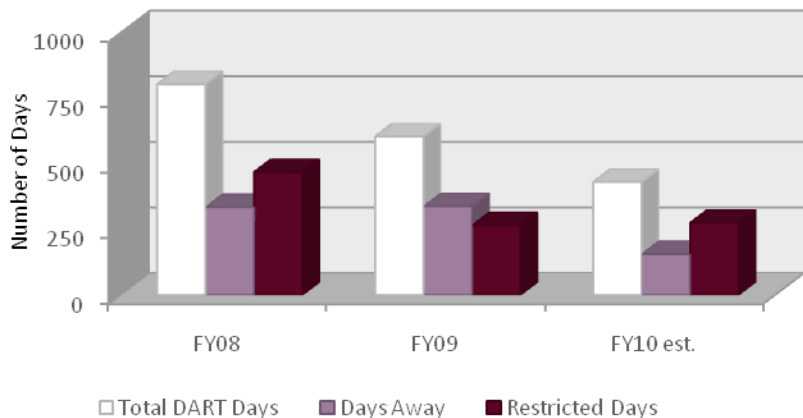


- SPOT safety awards – a \$25 gift card awarded “on the spot”
- Individual and Team Safety Awards (up to \$3500 award)
- Introducing new and simpler ways for employees to provide feedback, find information, or share information:
  - [safety@anl.gov](mailto:safety@anl.gov) – an email address to our Safety Department
  - Lab Management System – Feedback from internal web-sites
  - Use of Twitter, Facebook, and Focal Point blog
  - Use of RSS feeds, Wiki pages, Google gadgets

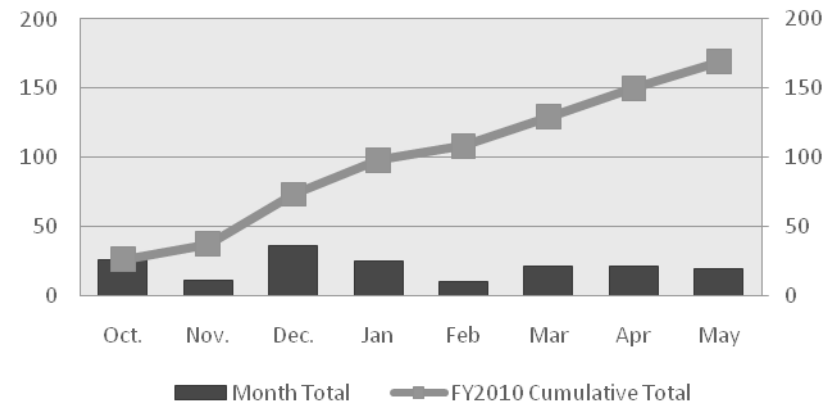
# Results

- July 2009 HSS Review of Argonne had many positive comments.
  - This is an indicator that many folks are on the right path and culture is changing.
  - But there are still numerous pockets where the culture is not changing as desired and there is much work to be done.
- Multiple recent events demonstrate that much change is still needed, especially in WP&C efforts.
- Some good news: the significance of our injuries is decreasing and we continue to receive input from our workforce, as demonstrated below.

### Injury Impact on Productivity



### Number of Workforce Reported Safety Issues and Actions



# Next Steps

- Working now on a Strategic Safety Improvement Plan with three strategic themes:
  - Line management responsibility for safety
  - Real Safety at the Bench top
  - Regulatory Relationships
- Plan will be finalized this summer and ready for implementation in FY11.



# Questions?

