



... for a brighter future

Argonne National Laboratory's Quest to Integrate ESH into its Culture

*Terri Bray
Associate Director, ESH&QA
Argonne National Laboratory*



U.S. Department
of Energy

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Terri Bray - Biography

- Mrs. Bray has been with Argonne National Laboratory since 1994 working in nuclear research and operations and has significant experience in nuclear safety, facility engineering, operations, and management, infrastructure and project management, strategic planning, work planning and control, quality assurance, and training. She has held numerous positions with increasing levels of responsibility to include managing multiple nuclear research and operations facilities, managing research programs, establishing new divisions, and managing multi-million dollar projects. In 2006, Mrs. Bray led the efforts to establish the Nuclear Operations Division, including recruiting and hiring of >30 technical personnel, establishing of division infrastructure, and merging of all Argonne nuclear facilities into a single organization. Mrs. Bray served as the Interim Division Director for 8 months and the Deputy Division Director for 13 months; in those roles, she led the division in strategic planning efforts that culminated in the receipt of >\$100M in cleanup funding for the laboratory. Since 2008, Mrs. Bray has held the Associate Director, ESH&QA position for the laboratory with responsibilities for Industrial Safety and Industrial Hygiene. She is also leading the laboratory's efforts in establishing a site-wide work planning and control process and program.
- Mrs. Bray holds a Master's of Science Degree in Nuclear Engineering and Engineering Physics from the University of Wisconsin-Madison, a Master's in Business Administration-Operations Management from DePaul University, and a Bachelor's Degree in Nuclear Engineering from Kansas State University.

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 5.1 (Provide a work environment that protects workers and the environment).

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



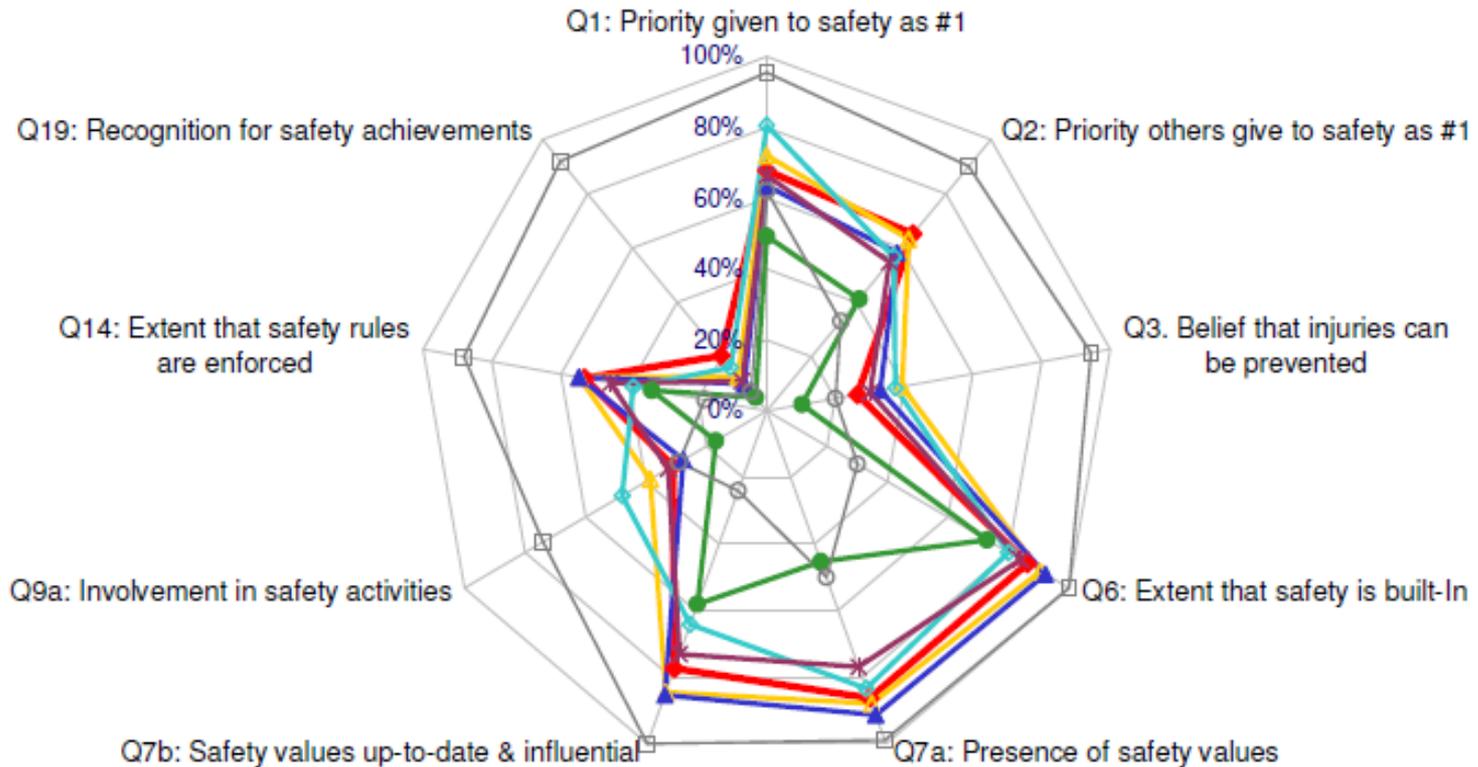
Safety Culture Survey Results¹

- 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.

Ref. 1: Safety Performance Assessment, Report on Findings, Recommendations, and Next Steps, DuPont, January 13, 2009.

An Example of Survey Results

Argonne National Lab's Leadership versus Benchmark



* Benchmark data from DuPont database which includes both companies with world-class and very poor injury frequencies.

Immediate Follow-up to Survey: Safety Initiatives

- Safety Observation Reporting Process
 - Behavior based – variant of the DuPont “STOP” program
 - Focused on Identifying Leading Indicators of Safety Issues/Problems.

- Revitalization of Safety Leadership Training
 - All Argonne supervisors attended this training in 2007; no retraining period at that time.
 - New goal: promotion of recurring Safety Leadership Training for All Laboratory Employees.

- Evaluation of Laboratory R2A2s
 - Ensure that published R2A2 documents address safety performance goals and objectives.

- Cell Phones – banned on-site cell phone use while driving; banned off-site cell phone use while driving when in occupational status.

ISM Education & Marketing Campaign

- Argonne aimed to re-invigorate its ISM programs through an intense education and marketing campaign.
- Campaign included topical seminars, a new web page, multiple information articles in newsletters, and safety posters throughout the site.
- Campaign was successful in increasing awareness as witnessed in our ISM Re-Verification Review (2008).



**Say What You Do,
Do What You Say!**

ISM Guiding Principles

1. Line management responsibility for safety
2. Clear roles & responsibilities
3. Competence commensurate with responsibilities
4. Balanced priorities
5. Identification of standards & requirements
6. Hazard controls tailored to work being performed
7. Operations authorization

ISM Core Functions

1. Define scope of work
2. Analyze hazards
3. Develop/implement controls
4. Perform work
5. Feedback and improvement



Integrated Safety Management
For more information: www.anl.gov/ISM/

Work Planning and Control

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

DOE Headquarters HSS
Special Review



- ISM-based procedures published: non-experimental WP&C and experimental WP&C
 - Effective Date: May 1, 2009
- Procedures applicable to ~1,400 employees across Laboratory
- Training: >1k “seats filled”
- Work Planning and Control Resource Center staffed and Safety Experts visiting divisions for one-on-one assistance
- Constructive feedback from employees being used for process enhancements

Significant focus on helping employees get to the right SMEs at the right time.

Laboratory Management System

- ISO 9001 and 14001 certified management system
- Represents a complete overhaul of how business is managed at Argonne
- Moving the laboratory away from expert-based systems to a process based system.



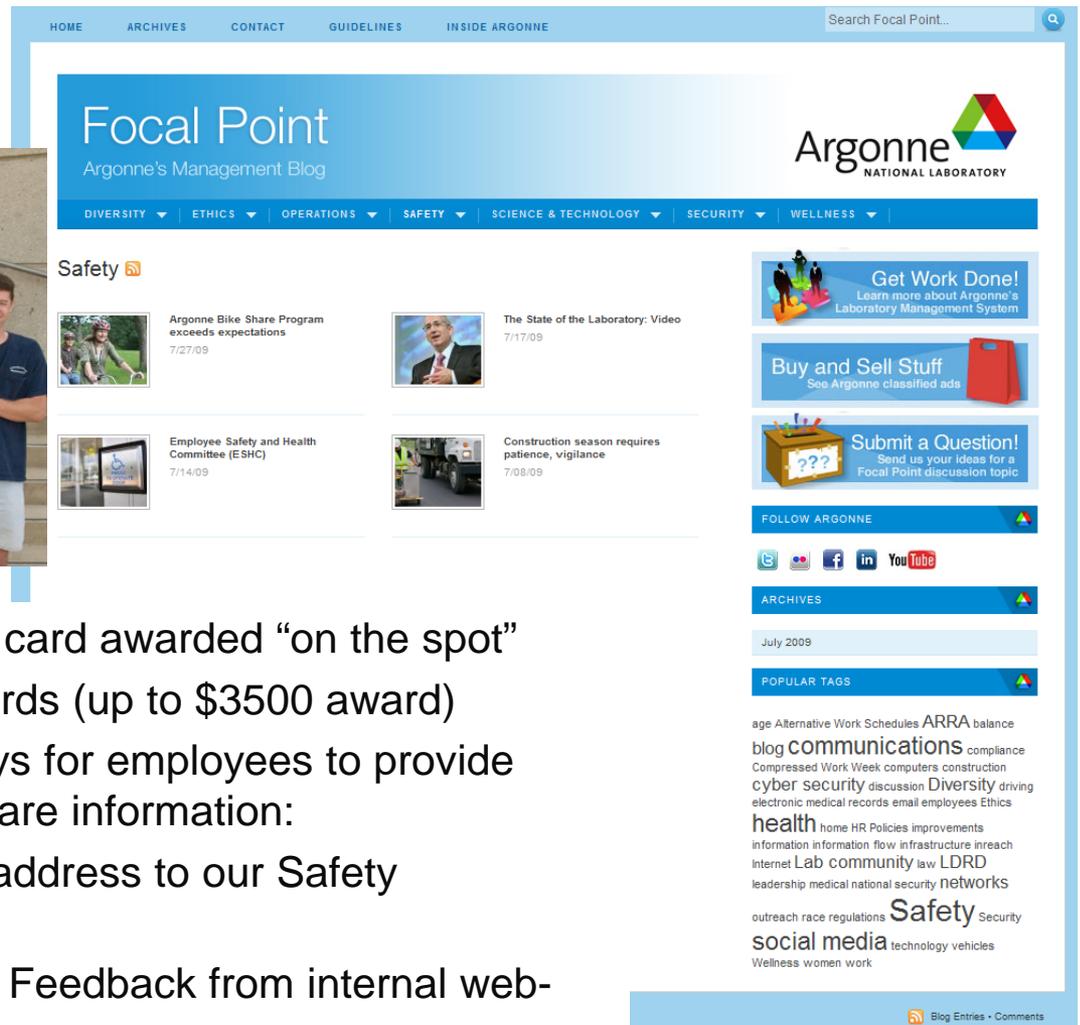
Safety Management Programs – Improvement Plans

- In FY08, began to formally use results of trend analyses to target improvement in select safety management programs each year.

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	Too early to tell.
~20% of first aid injuries are bee/wasp stings	Early season campaign to remove nests; hotline for reporting; signs	Some reduction in stings noticed in FY09; too early to tell.
Summer brings increased injuries	Summer safety seminar series	Too early to tell.
First aid injuries likely not all reported	Working to simplify reporting process	Still in progress.

- Other targeted areas: fall protection, confined spaces, eyewashes/showers, electrical safety, fixed ladders

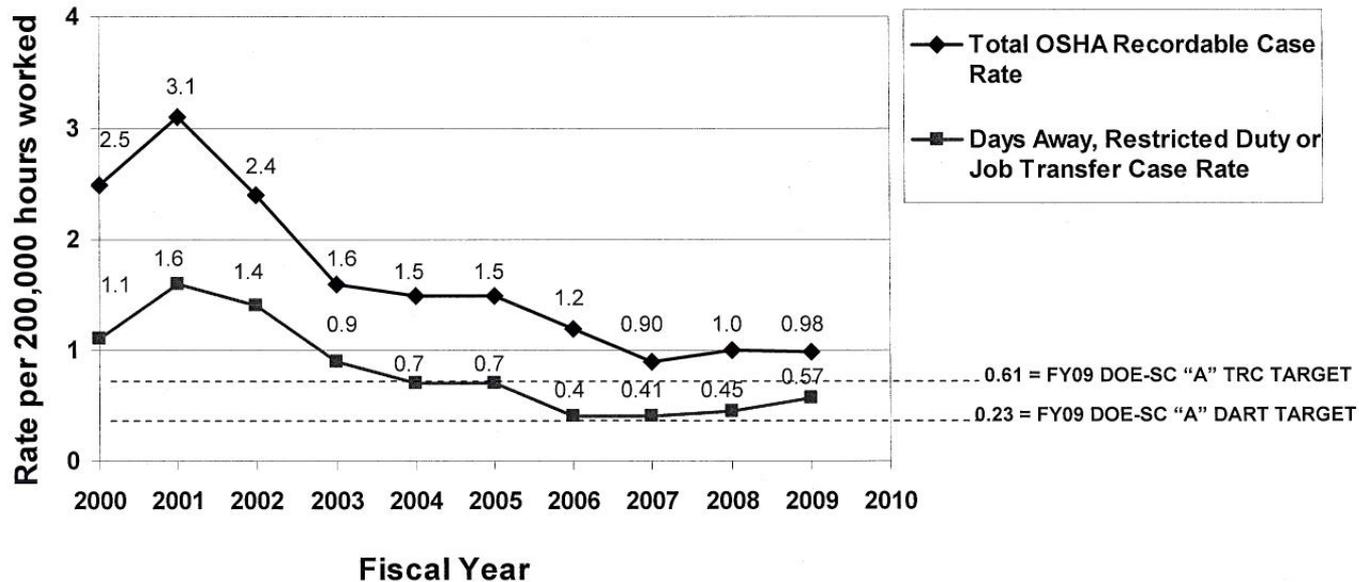
Other Initiatives



- 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 – 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

- Recent 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 significant and serious events demonstrate that much change is still needed, especially in WP&C efforts.



Questions and Discussion



Argonne Operations - Goals

- Enable the Laboratory's science mission through excellence in operations by integrating science needs into operations more efficiently and effectively
- Be recognized as the safety leader in the DOE complex
- Be the Laboratory's safety leader

1-630-252-3305
Chief Operations Officer

 Our Key To Success - www.anl.gov/ISM/

Our Values

The safety of our people is most important.

We will thoroughly plan our projects and work using the Work Planning and Control procedures to implement our ISM process.

We will only perform safe, regulatory-compliant, quality work.

We will employ top quality people.

We will treat our people with respect and dignity.

We will always be truthful and ethical.

Argonne's reputation for quality service and satisfied customers, as well as environmental protection and regulatory compliance, must be maintained.