



There really is a 'you' in safety

How three teams excelled in workplace safety by making it a responsibility shared by all

By Junu Kim

One Boeing organization aims to improve workplace safety by building a culture of caring. Another seeks to learn lessons not only from incidents but also from near misses. And yet another has taken the initiative to make custom machine guards—which prompted requests from other sites for their own customized guards.

Teams across Boeing have undertaken a variety of tactics—some conventional, some offbeat—to improve workplace safety. Yet an important common denominator among Boeing groups with outstanding workplace safety performance is the sense that every teammate is individually and collectively responsible for creating a safe workplace. Indeed, one of the foundations of Safety Now, a new companywide effort to improve workplace safety, is the concept that everybody at Boeing is responsible for their own safety and the safety of their co-workers (see sidebar on Page 25).

“Everyone shares the responsibility to make sure we’re creating a safe, productive work environment—and everyone must

contribute to help make their workplaces even safer,” said Mary Armstrong, vice president of the companywide Environment, Health and Safety organization. “Our families, friends, teammates and customers are counting on us to do our jobs safely.”

With June being National Safety Month in the United States, here are several accounts of how employee ownership of safety at work has helped Boeing teams.

PROPULSION SYSTEMS: A NEW APPROACH

When you hear about a Boeing team improving its performance, you might think about teammates adjusting processes. No doubt, that’s a tried-and-true method. Yet to improve workplace safety,

PHOTOS: (LEFT) Margaret Carter (right), a Propulsion Systems quality records clerk, documents serial numbers while Jeff Fix, Propulsion Systems mechanic, installs engine buildup hardware in Renton, Wash. **JIM COLEY/BOEING (RIGHT)** Dennis Sallutal (left) and Steve Parker, Propulsion System mechanics in Everett, Wash., follow safe workplace practices while building up a 777 engine.

GAIL HANUSA/BOEING

the Propulsion Systems organization of Commercial Airplanes looked to emphasize changes not necessarily in its workflows but more so in its collective mindset.

In 2001, Propulsion Systems had a lost workday case rate of 3.1. That number was around the average for Boeing at the time but was “unacceptable” in the mind of Quentin Sisco, the organization’s director of Manufacturing and Quality and now its acting vice president. (The lost workday case rate measures the number of lost workday cases—an occupational injury or illness resulting in one or more days away from work—in a year per 100 employees.)

To address this situation, “we didn’t approach this by telling people they have to follow regulations,” Sisco said. Instead, under the guidance of Sisco and Annette Champoux, who at the time was the safety administrator for Propulsion Systems, the organization aimed to “create an environment where people really will take care of each other,” Sisco said. In that setting, it naturally follows that teammates are more conscious of workplace safety—which, of course, improves safety performance.

A culture survey determined that Propulsion Systems teammates expected excellence in everything the team undertook. That led to Champoux coining the phrase “Safety Excellence Everyday”—whose acronym of SEE also refers to the three basic tasks teammates need to undertake every day to promote safety:

- **S**urvey the area.
- **E**mployees: Are they safe?
- **E**quipment: Is it in good working order?

To put this phrase into service and build the environment of concern for employees, Propulsion Systems provided ways that teammates could start conversations after spotting a colleague doing something that was potentially unsafe. “It supported the idea that everyone was looking after each other,” Sisco said.

Another tactic the organization undertook to create this environment was to give employees two large elastic bands for stretching exercises. To help reduce the chance of certain muscular injuries, Propulsion Systems worked with Boeing Recreation to develop a daily 10-minute stretching program using these bands. Employees were not required to perform the exercises, but those reporting they had done so for 30 straight days would get a free coffee. (The reason teammates get two bands: One could be kept at work, and the other could be taken home.)

These are a few of the many efforts to increase safety awareness that have changed the culture to where employees readily admit a personal responsibility for safety. “They are inspired and encouraged to make the necessary changes to improve safety,” Sisco said.

The team’s safety statistics show how this mindset has taken hold. The organization’s lost workday case rate fell to 0.4 in 2007 and 0.19 in 2008. What’s more, it’s working on a streak of more than 500 days and 1 million hours without a lost workday case.

Just as important, that culture of safety is still strong. Sisco recounted a recent story of an employee walking under a scaffold in the Everett, Wash., factory and bumping his head on a low-hanging pipe. Propulsion Systems teammates immediately put padding on this pipe and placed streamers to bring attention to this low point. “They did it on their own,” Sisco said. “It took them only five minutes to get on this.”

ST. LOUIS SITE SERVICES: A LEADER MAKES IT PERSONAL

Shared Services Group’s Site Services team in St. Louis includes people whose work involves a degree of risk, such as electricians, carpenters and firefighters. However, Steve Gill, the team’s director, sought to change the view of this risk from an aspect of the job to something that need not be accepted.

“We’re working to get to zero injuries,” he said. “When it comes to injuries, I don’t think there is an acceptable number.”

To get the organization on board, Gill in mid-2007 formed an SSG team featuring his self-directed work team (High Performance Work Organization) leaders and safety representatives, and all members of his management team. Their simple mission: Prevent injuries.

The team was asked to help determine what could be done to prevent incidents and identify the root causes of SSG injuries. To address this, the team sought feedback from Site Services employees. Interestingly, the team found that despite its work emphasizing the importance of two-way open and honest communication, large gatherings of Site Services colleagues tended to provide little feedback.

Team members realized that not everyone is comfortable speaking before a crowd. In response, attendees at larger meetings were split into smaller circles. “When we broke into these smaller groups, we got fantastic input and feedback and discussions of what things to fix and how to fix them,” said Bryan Kury, Service Center leader for St. Louis Site Services.

As part of the changes brought on by this safety push, the team spends more effort uncovering the lessons learned after an incident. On a similar note: Site Services also spends time looking at near misses to identify lessons learned. “You don’t

Safety Now, for everyone

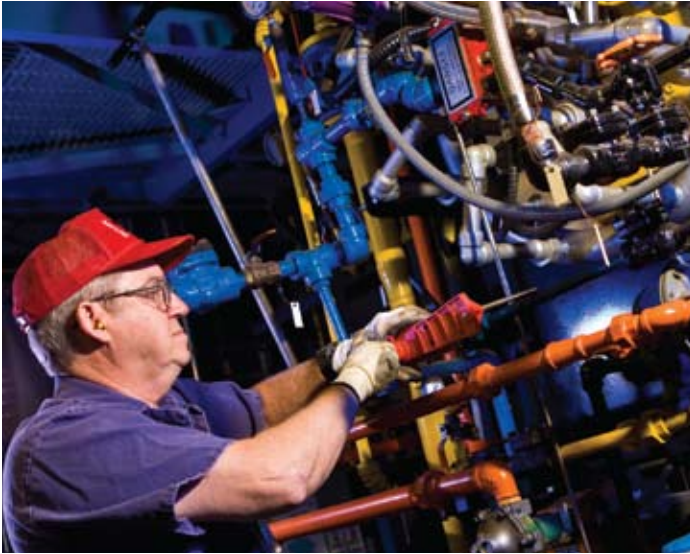
Boeing in March launched a companywide workplace safety effort that reinforces the importance of keeping everyone safe and sets an aggressive performance target.

The effort, Safety Now, aims to cut Boeing’s lost workday case rate by 25 percent over the next five years. The lost workday case rate measures the number of lost workday cases—an occupational injury or illness resulting in one or more days away from work—in a year for every 100 employees.

Safety Now addresses both the individual actions of employees and the ways Boeing asks employees to work. It involves organizations from across the company, including Environment, Health and Safety, Commercial Airplanes, Integrated Defense Systems, Shared Services Group, and Engineering, Operations & Technology engineering and manufacturing teams. It sets up a process to improve design for ergonomics and safety and make targeted investments in high-risk manufacturing areas. And it provides people with tools and resources, all in the interest of reducing workplace injuries.

For more information on Safety Now, visit <http://safetynow.web.boeing.com> on the Boeing intranet.

— Junu Kim



want to have a near miss, but they give you the chance to make sure this doesn't happen again," Gill said.

Yet process changes represent only a part of the plan. Perhaps more important was Gill's stance on the topic and what he said to convey his beliefs. Kury recalled a team discussion after a Site Services employee sustained an injury. "Our talk related to the impact of this injury to the person, the person's family and the St. Louis team. Steve said, 'Safety is about you and your families' and really helped drive home the personal commitment needed to prevent injuries," Kury recalled.

The data validate the effect of these changes. Last year the number of recordable injuries, or an injury requiring medical treatment, fell to 49 from 66 in 2007, for the organization of about 650 employees. Thanks to that performance, along with improvements in lost workday cases and days lost due to lost workday cases, the Site Services team in 2008 registered a 37 percent improvement in an EHS recognition formula that tracks and consolidates these three statistical categories. That safety performance made the team one of the three most-improved programs in St. Louis last year. "Our safety performance is not yet where we want it to be, but the culture is being strongly established to continue to improve," Gill said.

Kury noted that this improvement couldn't have happened without Gill's commitment to workplace safety. "The leadership commitment by Steve is very evident in his words and actions," Kury said.

C-17 QUICK RESPONSE CENTER: HOW CAN YOU MAKE IT BETTER?

Have you seen new protective barriers or ergonomic lift units at the C-17 Quick Response Center in Southern California? They've come about thanks in large part to this team taking a proactive approach to safety.

The C-17 Quick Response Center, also known as C13, was established in April 2002 to provide emergent support to the C-17 Globemaster program by supplying critical parts for production, retrofits and urgent requirements in the field. It provides integrated, efficient fabrication operations including capabilities from precision machining to sheet metal work to

materials processing, all in one facility.

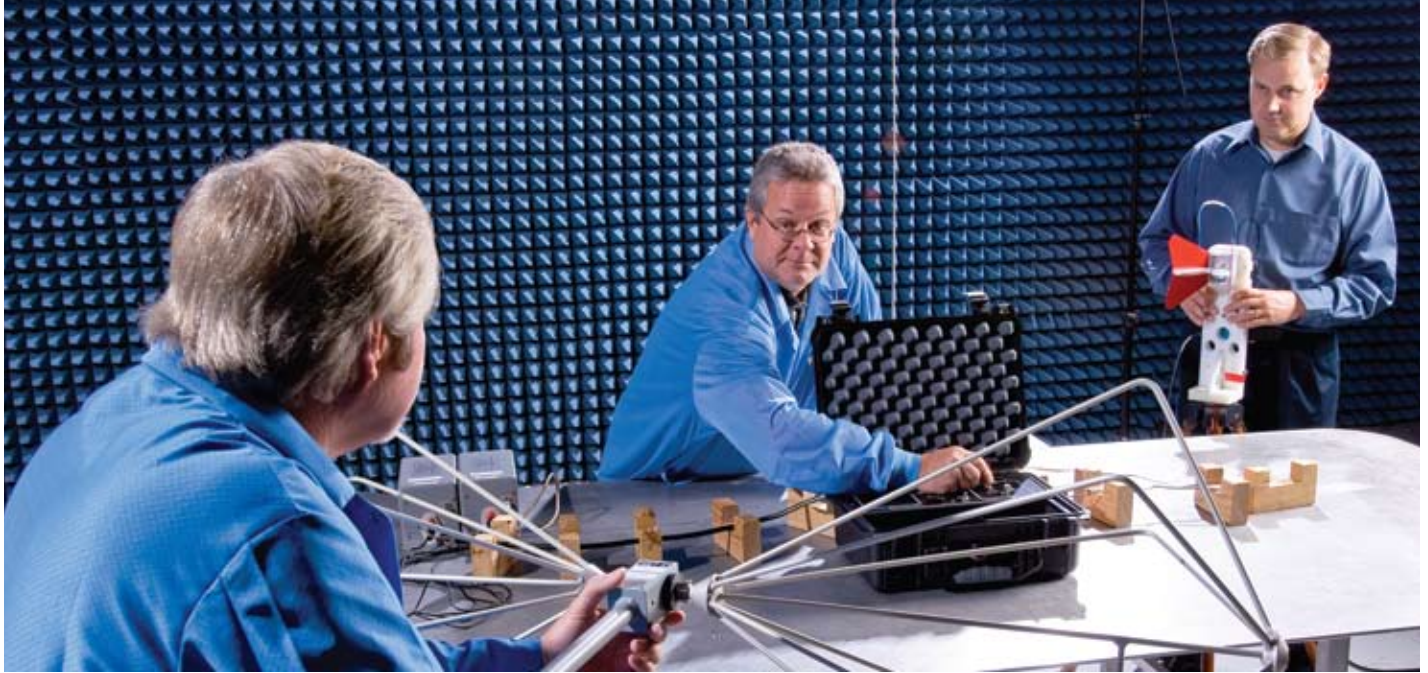
Although each work cell focuses on workplace safety in its own operations, the goal of the C13 site is a "One Team / Safety First" approach, said Ray Murillo, C13 site director. Accordingly, teammates are encouraged to discover potential workplace safety concerns and rapidly fix them through a proactive, team-based business approach. Safety concerns are addressed with the team's manager and are coordinated with the site's Maintenance and Environment, Health and Safety representative. That's led to new safety equipment such as ergonomically safe vacuum lifts for heavy material as well as customized machine guards. In fact, other Boeing sites have tapped the C13 team to design and supply customized guards.

"We don't wait for an accident to find us," Murillo said. "We seek out potential issues before a safety occurrence and resolve them." This safety initiative is reflected in the group's safety metrics. The team hasn't had a lost workday case in more than 18 months and has been six months without a recordable injury.

That take-charge attitude also led to a recent process change that had impacts on safety, the environment and costs—and earned an award. The C13's Quality Integrity Team collaborated with the C-17 program's Material Process Engineering Group to adopt a more environmentally progressive chemical processing method. Collectively, they developed and executed a plan to provide an alternative for a process that uses chromic acid, a chemical used to improve aluminum corrosion resistance in the aircraft, and instead use one based on boric sulfuric acid, which also boosts corrosion resistance but reduces environmental impact. In addition, the switch of chemicals, which also has happened at Commercial Airplanes, has improved quality and reduced cycle time and operating costs. As a result, the team last month received the Global Mobility Systems Safety Silver Eagle Award. ■

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PHOTOS: (LEFT) Don Thorn, a mechanic with the Site Services team in St. Louis, works on an air compressor. **RON BOOKOUT/BOEING**
(RIGHT) Dan Shelton of the C-17's Quick Response Center team uses a vacuum lift to move an aluminum plate. The machine enables a safer, quicker process for moving the heavy plates.
MICHAEL GAIL/BOEING



Safety in numbers

Every Monday morning at Boeing Ogden's Little Mountain Test Facility in northern Utah, workers meet to talk about the coming week. The agenda might include centrifuge testing of a 1,000-pound (450-kilogram) test article, stage separation testing of a rocket or electromagnetic effects testing using lightning strikes.

"We recognize the inherent safety risks of our business," said Russ Hohmann, manager of the facility's Shock and Vibration labs. "Equipment and tests involve hazards and we don't take them for granted. We have a policy that all employees have the authority to stop a test if there is a safety concern."

"I don't worry about getting injured because we follow well-established processes and procedures to keep us all safe," added test engineer Vernon Hardy. "We respect the potential dangers of the tests we perform and, consequently, we work in a very safe place."

'SAFETY FIRST' FOCUS

With risks that include ordnance, laser and radiation sources, forklift and crane activities, and high-voltage work, how did Ogden become a Boeing model for safety? Indeed, the site's 270 employees boast more than 4 million hours—or more than seven years—without a day lost due to a job-related lost-time injury or illness.

"The employees accomplished it," said Rick Schankel, Boeing Intercontinental Ballistic Missile (ICBM) program director and Ogden site executive. "They were supported by a committed Environment, Health and Safety team and by management, but it was accomplished by each and every employee."

Boeing employees at and around Ogden perform sustaining engineering and a variety of upgrades for the ICBM program and

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engineering support for the Ground-based Midcourse Defense (GMD) program. Located at multiple facilities in the area, employees for both programs also work in the field at various locations.

While many of the site's most hazardous operations take place at the Little Mountain Test Facility, employees throughout Boeing Ogden do their part to maintain a safe workplace. Technical publications editor Valerie Woodruff wields a pen instead of a laser, but she and her work group think "safety first" all the same.

"Working in an office environment we accomplish safety training and apply all learned ergonomic principles," she said. "We're also responsible for incorporating safety requirements into our documents to support workers in the field."

Vien Voraotsady, a test and evaluation lab technician for GMD, climbs into missile silos to upgrade launch support equipment as part of his job. "As long as you have the safety mindset, you will

PHOTO: In the lab environment at Ogden Little Mountain Test Facility in Utah, Bill Lang (from left), Terry Blackburn and Vernon Hardy perform test article setup for an electromagnetic compatibility test in an anechoic (echo-free) chamber. **WILLIAM MILNER**



Adding up the numbers

- 4.3 million work hours, 2,724 days or more than seven years without a lost-time injury or work-related illness
- 50 consecutive months on or ahead of plan on the Integrated Defense Systems Environment, Health and Safety performance scorecard
- 50-plus consecutive government agency and customer inspections without a violation
- 100 percent EHS training compliance (averaging nine classes per employee)
- 2008 Boeing Employee Survey: 96 percent of employees say, “I feel safe from accidents and health hazards in my work area,” a 5 percent increase in four years



PHOTOS: (TOP) Dale Sterrett and Joe Oberuc provide environment, health and personnel safety guidance for operations. **(ABOVE)** Lab technicians Bill Lang and Randy Rose work on the Ogden, Utah, site’s electromagnetic effects capacitor bank.

WILLIAM MILNER

incorporate safety into everything you do,” he said. “Before I start a job, I think it through and make sure there is no safety hazard involved. If there is, I try to alert everyone and find a way to eliminate it.”

CREATING A MINDSET

Site leadership believes that “flawless execution of the business means flawless execution of environment, health and safety practices,” according to Schankel. To get there, he said, the site took several steps, including establishing full-time Ogden Environmental, Health and Safety staff: Joe Oberuc and Dale Sterrett. Among the team’s responsibilities: Design facilities and processes, develop programs, and conduct operations to protect the environment, employee health and safety—and ensure compliance with applicable laws, regulations, company requirements and contractual requirements. Ogden also ramped up its employee safety training and established an executive council that meets monthly to oversee safety at the site and review performance measurements.

Also, about three years ago, the Engineering organization at Ogden established an early program involvement procedure that designs EHS practices into new programs. “Planning safety into a program is much more effective than trying to incorporate it later on,” said Kelly Johnson, Ogden’s Ground and Systems program manager. “Through this process, EHS personnel, management, customers and suppliers become involved early in the proposal phase, developing plans that ensure the protection of personnel, compliance to regulatory requirements and fostering of good environment, health and safety behavior with Boeing internal and external partners.”

While acknowledging Ogden’s current safety record may someday end, Oberuc said, “We know the accomplishments can never be taken away. It is the sum of our environment, health and safety performance measures that are most important. With the safety steps Ogden has taken we are keeping Boeing employees safe one day at a time, and supporting a healthy business.”

– Vicki Hogue