



Benchmark

F&SS News and Progress

November-December 2017

Battelle review group recognizes F&SS improvement

Battelle's Continuous Commissioning team visited Facilities and Site Services work sites during the middle of October, and noted significant progress has been made since their last visit two years ago.

The team included experts from five national laboratories who spent the week observing and evaluating operational performance by identifying blind spots, opportunities for improvement, and best prac-

tices. They visited with several F&SS organizations, watched work, talked with groups and individuals, and observed an emergency management drill.

The team singled out areas worthy of note during the outbrief meeting on Oct. 20. Several programs are improving – it is evident that trust is growing within the F&SS organization and the injury/incident prevention teams are much more than simply their names. The supervisor and manager forums show

management commitment to making leadership development opportunities available.

Team Lead Kim Jeskie of Oak Ridge National Laboratory commended a handful of individuals for their efforts. Steve Christensen, David Lively, Ira Pray and Mike Barton were noted as having “effectively established clear lines of authority in their organization.” David Chan, team member from Brookhaven

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Sho-Ban students hear about leadership from INL managers

At the second leadership forum for Sho-Ban Junior and Senior High School students sponsored by F&SS this year, INL managers offered their thoughts about keys to becoming a true leader at a meeting in the Willow Creek Building on Dec. 1.

The 11 students from the Fort Hall Indian Reservation listened to advice and encouragement from a variety of INL leaders, learned about STEM (science, technology, engineering and math) opportunities during lunch, and concluded their visit with a tour of the Warning Communications Center and Emergency Operations Center at the INL Administration Building.

INL speakers stressed the importance of leaders establishing trust, and made it clear they and others at INL are eager to interact with the students as they grow over the years.

Toni L. Carter, INL's Inclusion and Diversity strategy director, inspired students to become world changers while reminding them how critically important they are to Idaho and the world. Carter wholeheartedly believes education eradicates poverty; therefore, she petitioned them to pursue a postsecondary education in STEM. As she walked them through a few of her personal challenges, obstacles, struggles and detours, she predicted they would experience some of them, too.

“Detours may change our direction, but they cannot alter our destination,” Carter said. “Right now is the time for you to create your future. Recognize the decision you make today will create your tomorrow.” She also encouraged them to be strategic with making decisions, because we will all end up somewhere – it is better to choose your own destination than to let it be chosen for you. Carter ended her conversation by reinforcing her belief in each of them. She reminded them to plan so they can end up where they want to be, not where society pushes them to be.

Juan Alvarez, INL deputy lab director for Management and Operations and chief operating officer, agreed with Carter, who told the students many people have risen from a humble childhood to



Dionne Sentieri, left, of INL Emergency Preparedness, and Jory Proctor, far right, WCC supervisor, walk students from Sho-Ban Student Council through a demonstration at the Emergency Operations Center.

achieve their dreams.

Alvarez emigrated from Cuba to the U.S. with his family when he was a child, and he had to learn the English language. Although the language barrier slowed his academic progress in math, potentially preventing him from taking a next-level math course in ninth grade, his parents trusted him to work hard and approved his promotion to the next level. Their belief in him was rewarded because he finished as the top math student in his large high school's graduating class, and near the top of his class overall. His parents' approval of his promotion to the next level of math took courage, which is one of the strong characteristics of a leader, along with being competent, communicating well with others, and



Sean Finnigan, EM technology coordinator, shows students how technology enhances communications in the EOC.

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FACILITIES AND SITE SERVICES

F&SS

Electro/mechanical technicians make things work

INL's fabrication shops are tasked with designing and constructing one-of-a-kind components that enable research projects. When it comes to putting those parts together into systems, researchers turn to electro/mechanical technicians.

"Electro/mechanical techs do a little bit of everything," said Mike Barton, Research and Education Campus Fabrication manager. Piping, electrical, electronics, machining, and pneumatics are a few of the skills that electro/mechanical techs must have as they plan, assemble, and retrofit systems.

In addition to working at the Site's three fabrication shops located at MFC, ATR, and the North Holmes Lab in Idaho Falls, electro/mechanical techs are matrixed to organizations across the site, including the MFC mock up shop, the Test Train Assembly Facility at ATR, the High Temperature Test Laboratory (HTTL), biofuels research at the Energy Systems Laboratory (ESL), and the U.S. Army's Mobile Munitions Assessment System (MMAS).

There is no college or vo-tech program designed to produce electro/mechanical technicians, but those in the field all agree that earning an associate's degree in an industrial trade is a good beginning. The INL contingent includes people with diverse backgrounds – instrumentation/electrical, mechanics, welders, drafters – who all share a passion for understanding how things work.

Suggested plans for new projects can vary from detailed drawings to rough sketches with little detail. "When somebody needs something built, they'll list parts and pieces, but I'll have to figure out how to get them all together – located, mounted, wired, plumbed – that's basically the scope of an electro/mechanical technician," said James Milloway, the electro/mechanical technician who supports the MMAS. Milloway and his team designed and built the custom fixtures and storage for all the components, mounted all the hardware, and made all the electrical connections.

Electro/mechanical work often involves rebuilding existing systems. Bob Ristrem, who works at NHL, recently completely rewired the electronics of a new furnace that will ultimately be placed in a hot cell. "We build control cabinets, out-of-cell cabling, junction boxes, in-cell cabling and breakout boxes," Ristrem said. Finally, we assemble and test the systems before shipping to them to the customer."

The scale of work for electro/mechanical techs can differ dramatically. Milloway's MMAS is a medium-duty, diesel-powered truck. Ashley Lambson, who supports research in the HTTL in the Energy Innovation Laboratory, works at the other end of the size spectrum. She builds specialized sensors such as the Transient Hot Wire Method Needle Probe, and High-Temperature Irradiation-Resistant Thermocouples (HTIR-TCs), which are barely one-sixteenth



Milloway and his team with the Mobile Munitions Assessment System. Milloway is fourth from the right.



Landon and Ristrem reassemble the training flow simulator at the College of Eastern Idaho.

of an inch in diameter and 20 feet long.

Corey Landon, who primarily supports the biofuels program at ESL, recently teamed with Ristrem and fellow electro/mechanical tech Mike McCarron to develop a training flow simulator that will be used in the Dynamic Learning Activities lab at the College of Eastern Idaho (CEI). McCarron wired the electrical components and motors to the control cabinet, Landon ran all of the water piping and installed the gauges, and Ristrem and Landon performed operation checks to ensure the simulator works without any leaks. After constructing the system at NHL, they took it apart and put it back together at CEI, where it will be used for conduct of operations training.

INL's electro/mechanical technicians agree that



Lambson displays a truncated version of a Transient Hot Wire Method Needle Probe that she built at the High Temperature Test Laboratory.

continuing to learn new skills is key to their success. "At INL, I do a little of everything – machining, electronics, pressure assembly," McCarron said. "The best thing about this job is that we're never doing the same thing twice."

Milloway agreed. "There's no real degree," he said. "But you can go study different trades. The more you know about processes, fabrication techniques, and materials, the better equipped you will be as an electro/mechanical tech."

Ristrem says being an electro/mechanical technician is very rewarding. "Machinists make amazing parts – I get to assemble them and make them work."

Bus Ops moving to INL Emergency Notification System

From Transportation Services & Emergency Communications:

INL Transportation and Emergency Communications have teamed up to improve notifications to INL employees when severe weather conditions or other events cause bus route and schedule changes. Employees can now sign up to receive route and schedule updates specific to their desert Site work area.

Effective Nov. 15, Bus Operations is moving its messaging service for bus route information to the INL Emergency Notification System (ENS). The ENS is an independent, robust communications system designed for mass notification, and will give Bus Ops greater flexibility in notifying employees about bus route changes.

The ENS allows Battelle Energy Alliance employees to select their notification preferences. You do not

need to re-enter your contact information and are not required to maintain a separate username or password. You can access the system directly from the INL Emergency Communications website to change notification preferences at any time.

Bus riders and other employees who want bus schedule information will need to sign up through the ENS portal and update notification preferences. During the transition period, employees may receive duplicate notifications; however, the Txtwire system will no longer be used after Monday, Dec. 4.

Be Informed



Be Prepared

The ENS doesn't expose employees' information to any other INL system or database. And under the ENS, there will be no need to request to unsubscribe from the system when terminating from employment, as is the case today. Employee work location changes will be updated automatically; however, all employees are responsible for managing their personal contact information through the ENS access portal. Personal cellphone numbers and email addresses will be used for notification only, and will not be made public or added to the INL directory.

If you have questions, contact [Eddy Frasure](#) (526-5495) or bus@inl.gov.

To enter and manage your profile information, click the link below and then the green "Use my network credential" button.

[Emergency Communications website](#)

Managers, supervisors sharpen leadership skills

Facilities and Site Services supervisors and managers continued honing leadership and team-building strategies in forums held during the end of October and early November.

Supervisors met early on Oct. 25 for breakfast and networking at the Energy Innovation Laboratory. Several brave souls agreed to being interviewed on camera (thanks to Amanda Edelmayer and videographer Carmen Hawk). Later in the day, footage of those interviews was used for the Stir the Paint activity led by Edelmayer, an F&SS construction field representative. “The supervisor forum isn’t just a ‘hand holding-Kumbaya’ session,” she said. “It truly is an opportunity to enhance communication, leadership, and team-building skills. The candid video segment was fun and demonstrated what frontline leaders are taking from the forum and implementing in their day-to-day activities, and was proof that the forum does add value for anyone who chooses to take something away from it.”

Ed Anderson, F&SS deputy director, greeted the group with the good news that the most recent safety statistics show that F&SS workers are safer now than they have ever been. In fact, the Day Away Restricted or Transfer (DART) numbers are arguably the lowest in F&SS history. “This is as good as it gets, thanks to all of you,” Anderson said.

Later in the day, the group divided into teams who worked together on construction projects using Legos™. “The forum is designed to be a safe learning environment for supervisors where we collaborate and learn from each other,” said Kip Capson, who led the team-building activity. “The Lego™ learning scenario provided an excellent opportunity to learn leadership and team building in a dynamic and changing environment.”

F&SS managers met on Nov. 2. Rod Bitsoi, Side-wide Facilities and Operations director, discussed results of the recent employee development survey put out by INL’s Advanced Leadership Development Program.



F&SS managers listen and take notes as facilitator Bryan Parker discusses mindset change.

The F&SS response rate was 14 percent, one of the higher rates for INL organizations. Referring to the F&SS workers who responded to the survey, Bitsoi said, “75 percent answered that ‘my manager/supervisor supports my development,’ and, ‘I have frequent discussions with management on my development.’” He emphasized that leadership development is a long-term endeavor based on a partnership between employees and their management. He reminded the group that failures are an opportunity to learn, not an indication that the initiative doesn’t work. Using the analogy of a baby taking its first steps, he pointed out that no parent watches a baby fall and concludes, “Well, he’s just not a walker, we’ll have to make other plans.” Instead, they change their approach as needed and help the baby take those first stumbling steps while keeping the end goal in mind.

A frequent comment forum leaders have heard is “I hope you aren’t just focused on vertical growth,” Bit-

soi said. “Lots of people in our org want to develop their skills and get better at what they do. They don’t particularly want promotions – they want to stay where they are, but become better.”

The group spent the rest of the morning continuing work on “The Outward Mindset,” which they began studying in early October. Led by Arbingert-trained facilitators Jeff Heath and Bryan Parker, they discussed changing mindset. “Changing behavior requires changing the mindset,” Heath said. “You can change behavior without changing the mindset, but eventually the behavior will go back to what it was.”

Heath and Parker led the group in exercises designed to help them understand the impacts they have on all the people they interact with each day, using the SAM model: See others; Adjust effort; Measure impacts. “Changing to an outward mindset means seeing others as important as you,” said Heath.

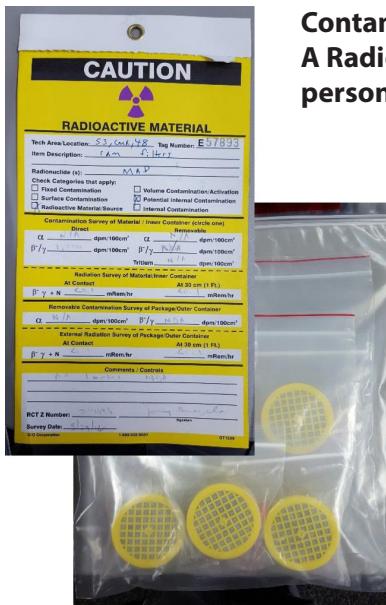
Unexpected package, mystery contents – what should you do?

When you receive a package at work addressed to you, you can usually count on the contents to be something you ordered, or something a colleague said they were going to send to you. But suppose you open a package and discover the contents aren’t what you were expecting? Suppose those contents are hazardous, or radioactive? What if you open a package in a secure area and discover a prohibited article, such as a jump drive? What if you didn’t expect a package, or don’t recognize the sender? Do you know what to do?

Mike Sandvig and Les Scott are the operations leads for INL’s National and Homeland Security and Nuclear Science and Technology programs, respectively. There have been multiple situations in the past couple of years, they said, when items showed up in places where they didn’t belong. Packages have been delivered to offices when they should have gone to a research facility; and in one case, a worker opened a package at their desk that contained somebody else’s radioactively contaminated filters (the shipper had inadvertently switched mailing labels). INL workers received items such as jump drives and cellphones sent from trade show vendors that arrived in secure areas where they were prohibited.

Although each case involved different material, the response in each instance should have been similar. If you receive something you didn’t expect, Sandvig said, “Think about what you are doing, and call the right people. If something isn’t correct, don’t try to deal with it by yourself – get help.”

With the exception of MFC and SMC, WestOne Logistics supports INL shipping and receiving processes for everything but U.S. mail. Because of some of these issues, WestOne employees now open all packages and envelopes coming in to the lab. But if the package is ad-



Contaminated filters inadvertently ended up in an INL desk. A Radiological Control Technician found no contamination of personnel or office space and the package was stored properly.

ressed to the wrong workplace, there may be no way for WestOne to confirm its legitimacy. “We still do have some hazardous material packages coming through the receipt process that aren’t marked in any way,” said INL Logistics Services Manager Noelle Walker.

“Memory devices made to look like something else, like a business card, are popular to hand out at conferences,” said Tomm Larson, a cybersecurity analyst. The problem, he said, is that you never know for sure what is on the device. Although the devices may contain vendor materials, the vendor source may have loaded malicious hidden software that could infect your computer and potentially the INL network if you inserted the device in your machine. If you unexpectedly receive some sort of memory device in your office, remember – only approved memory devices purchased through iBuy can be connected to INL or government systems. Personal memory devices,

including devices supplied by vendors, are prohibited. You can scan the device in a malware scanning kiosk, but don’t put it in your computer.

In general, if something arrives at your workstation that shouldn’t have, the first step is to notify the correct people. If you receive a suspicious, unexpected package, treat the item as if it were dangerous and isolate it. Call the Warning Communications Center (WCC) at 526-1515, notify your supervisor, and warn co-workers in the vicinity. If you open a package and discover radioactive material, leaking chemicals, or other problematic materials, the same rules apply. Clear the immediate area, but stay available to give information to the first responders. “If you are not sure who to call,” said Scott, “call the WCC.” Report cybersecurity concerns to 526-1000. If you have opened a package containing a prohibited item in a secure area, you will need to contact your Physical Security Officer as well.

“If you are expecting a radioactive shipment from another lab, or you’ve ordered hazardous material from a supplier, you need to be firm with the shipper/supplier and make sure they know to identify on the package or on the paperwork inside, the fact that it contains radioactive material,” Walker said. Also, if the shipment needs to go to a research facility, take extra care to make sure that the facility address is what the shipper uses, and not your office address.

What should you not do? “Don’t walk away, and don’t delay notification,” said Sandvig. “Call and get help immediately.”

REC operations group improves safety culture

Videos, forums, team-building activities popular with workers

Workers in Facilities and Site Services' Research and Education Campus operations and maintenance group are safer today than ever before. The crews who maintain and operate the leased facilities (Engineering Research Office Building [EROB], Willow Creek Building [WCB], the INL Administration Building [IAB] and University Boulevard [UB] buildings 1-4) have worked nearly a year and a half now without an accident. The team at the INL Research Center (IRC) has just passed the two-year mark. These safety statistics are no accident – they are the result of conscious, dedicated effort by workers and management to improve their work culture by increasing trust, pride, and ownership throughout their organization.

A little more than two years ago, Scott Lyman, REC Facilities and Operations (F&O) Division director, led a group of thought leaders from the organization in an off-site retreat to brainstorm process improvement. “We spent the day identifying issues we needed to address, and starting to map out some possible initiatives,” he said.

Then the Energy Innovation Laboratory finger incident occurred. In June 2016, an HVAC mechanic performing preventive maintenance on an air handler at the EIL suffered partial amputation of his ring finger when his hand was pulled into the drive belt. Although he and a co-worker had implemented a lockout and tagout (LO/TO) of the return fan, they were unaware of potential energy still left in the system of the pressure differential from the supply fan (see INL-2016-0049 Lessons Learned).

The subsequent investigation identified latent organizational weaknesses – the group from the retreat reviewed those weaknesses and started discussing ways to fix them. Several subteams were established to address topics ranging from knowledge transfer to customer service to procedures. The result of the initiatives they put in place is a safer workplace – with improved processes, increased pride and ownership in the work being done, and greater trust among co-workers, and between workers and management. Here's how they did it.

Each F&SS division spent time formulating their own versions of Battelle's Eight Guiding Principles for Laboratory Research. The REC F&O division came up with seven principles that apply to their group. The words “trusting culture” appear in their list three times, highlighting the core principle the team believes is most important – trust.

The REC F&O group initially addressed these principles through a series of short, commercially produced safety videos that were shown to all workers in weekly Wednesday morning meetings. “We looked at one a week and used the learning activities,” said Dusty Hawker, an REC safety professional. “At the end of the seven weeks, we wanted to do something to carry the momentum forward. Amanda Edelmayer came up with the ‘Did You Know’ forum.”

“We thought, rather than let the meetings disband, let's keep on meeting and let workers ask questions,” said Edelmayer, a construction field representative. The REC F&O work group includes several subcontractor employees from System 1, Wolverine Canyon Construction, Wheeler Electric and Mountain West Electric. The “Did You Know” forum gives all those workers, many of whom have never worked at a national laboratory, an informal place to ask questions without worrying about someone judging them for not knowing the answer. “We have talked about procedures, safety policies, management observations – anything they are wondering about,” Edelmayer said. The meetings usually last 15 to 20 minutes and never longer than an hour.

“We've found that the forums are really effective,” said Hawker. “The guys feel like they are being listened to, they are having their questions answered,



Weekly ‘Did You Know’ forums give workers the chance to ask questions without judgment. Battelle’s Continuous Commissioning team cited the forums as an F&SS best practice.

and as a group we are functioning better because we are answering questions that have had a lot of ambiguity.” Battelle's Continuous Commissioning team included the “Did You Know” forums in a list of F&SS best practices during their visit to the organization in mid-October.

“The ‘Did You Know’ forums are an excellent example of folks coming up with good ideas, and Ed Anderson and Eric Anderson letting them run with it,” said Steve Karns, DOE's facility representative for the REC facilities. Karns regularly attends plan-of-the-day and weekly meetings and is impressed with the communications improvements. “Scott has done a great job facilitating communication between subcontractors, building specialists, and construction and subcontractor field representatives,” he said.

Another innovation was the creation of the culture team, made up of union workers, subcontractors and exempt employees, and their significant others. Over the last year, the group has put together a series of quarterly team-building activities designed to strengthen morale, have fun, and help raise money to assist those in need.

The well-attended activities have included fishing, shooting, golfing and a dunk tank, and lots of food and fun. They have raised thousands of dollars for nonprofit groups such as the Veterans Assistance Program, Wounded Warrior Project, and scholarships for the College of Eastern Idaho.

“Our team-building events have been a lot of fun, and you can see in your day-to-day activities that getting together like that really makes a difference,” said Hawker.

REC maintenance and construction activities are handled by the same individuals, unlike at the desert Site, where maintenance and construction tasks are covered by separate crews. Building Specialist Grayson Russell heads up the Standard 204 team. “Standard 204 was a procedure we put together to define roles and responsibilities,” he said. “Standard 204 helps the building specialists and BEA and subcontracted work crews by outlining who is responsible for each step of maintenance and construction activities at REC facilities.”

A planning team was put in place to help establish an open dialogue between craftspeople and the planning group to ensure work documents are accurate, including what they need while eliminating waste-of-time wording that could distract from the true point of the project. “Comments we receive from crafts personnel on post-job reviews are incorporated back into planning documents so they don't continue to see repeated problems,” said Robert McAteer, a planner in the REC maintenance group.

REC Facilities Operations and Maintenance

Our seven guiding principles

1. We value each other's safety.
2. Operational excellence fosters a safe work environment.
3. Work safely executed equals pride in accomplishments.
4. A trusting culture acknowledges human error is inevitable.
5. A learning environment is essential to nurture a trusting culture.
6. A trusting culture maintains a healthy respect for what can go wrong.
7. Staff raises concerns because customer satisfaction is a value.

Throughout the month, the team selects random work packages, performing quality reviews that grade the packages on accuracy, workability and safety. “Our crafts and trades people are getting really positive feedback,” Hawker said. “They appreciate being involved and seeing that their input is showing up right away in work packages. They are being heard.”

The F&SS organization has pioneered leadership forums for supervisors for more than a year, and recently added forums for mid-level management. In addition to this training, Lyman has sent the REC leadership group, including safety support staff, building specialists, subcontractor foremen, crafts foremen and planners, to Outward Mindset training from Arbinger Institute trained facilitator Bryan Parker.

When the recent Self-Check training was rolled out, Lyman asked the culture team to develop more intensive training for the REC group. Luke Carpenter from Mountain West was a major contributor in developing interactive training sessions based on historical scenarios. “The format was very effective,” said McAteer. “By addressing past events that had catastrophic outcomes, everyone gets involved in a dialogue about things they've seen in their careers and what could have been done differently.” The REC group intends to continue the interactive training each quarter.

The overarching emphasis of each initiative has been trust, and the results – a safer workplace and an involved workforce – show that the initiatives are working. “We will allow anybody to challenge us if they think we are breaking one of our seven principles,” said Kevin Brown, Facility Support Services manager. “This is how we build trust – letting them know that we are never going to violate those principles.”



Higher-than-normal water levels in the Big Lost River combined with sub-freezing temperatures have led Sitewide Facilities & Operations to divert water to spreading areas. In this photo taken from a bridge north of the Naval Reactors Facility, frozen river water fills part of a channel.



Big Lost River: Workers divert water to avoid flooding chances

Unseasonably high water levels in the Big Lost River combined with sub-freezing temperatures have prompted action by INL Sitewide Facilities & Operations – in cooperation with the Mackay Water District 34 – to divert river water into the spreading areas southwest of the Radioactive Waste Management Complex.

This action is being taken with approval from the Department of Energy-Idaho Operations Office in order to send water to the normally dry spreading areas, so the river doesn't flood onto INL desert Site facility complex areas near the Big Lost River channels.

The spreading areas could have water in them for the next few weeks as river water flows onto them. After the water moves into the spreading areas, it infiltrates into the ground.

A key benefit of diverting river water into the spreading areas is to lower the river water level and minimize buildup of ice dams near bridges that cross the Big Lost River. Those bridges are on U.S. 20/26,

at Lincoln Boulevard near the Idaho Nuclear Technology and Engineering Center, and north of the Naval Reactors Facility. With freezing temperatures, ice dams can form near the bridges at high water levels, and create the risk of flooding near or onto facility areas.

INL motorists may have noticed the unusually high water level in the Big Lost River as the Mackay Dam water master lowers the reservoir water level so it can accept next year's runoff. About 30 percent of the Big Lost River flow – or about 120 cubic feet per second – is moving through diversion channels and then to the spreading areas near RWMC on the southwest portion of the desert Site.

"We are already noticing a drop of at least two feet in the river water level north of NRF at the bridge crossing," said Eric Walker, Sitewide Services supervisor. "The spreading areas are slowly filling. So far, everything is working great. We are keeping watch on the water flows daily."

News in brief

INL lauded for telematics studies

A recent story in Government Fleet Magazine about telematics in the federal fleet recognized INL's Transportation Services for its initiative to incorporate telematics data collection in 350 fleet vehicles. INL was cited for the return on investment of its telematics efforts.

[Government Fleet Magazine article](#)

F&SS service anniversaries for November, December

40 years: Tracy Langenwalter

30 years: Clifford Robertson

25 years: Larry Duncan, Trish Morris

20 years: Cherene Laird

15 years: Russel Lewis

10 years: Keith Hughes

New Willow Creek badging office opens for business

Laboratory Protection hosted a ribbon-cutting ceremony to celebrate the opening of the new WCB badging office. The new office has approximately 1,900 square feet of space, and brings together all the badging functions for an improved employee and visitor experience.

In the works since April, the new WCB badging office is located just inside the main entrance doors – right across from the guard desk. Along with the updated look and feel is the functionality and convenience. All badging services, including new or renewal badging, and all HSPD-12 (PIV) services, are now combined into one location inside the WCB badging office.

WCB badging office hours

Monday – Thursday

7 a.m. to noon, 12:45 to 4:30 p.m.

Working Fridays

7 to 11 a.m., noon to 4 p.m.

No-idle HVAC project extended to two INL Security vehicles

Building on the success of INL's no-idle bus retrofit project, Transportation Services and Sustainable INL sponsored a parallel project to install a no-idle HVAC kit/system on two Chevrolet Tahoes used by INL Security forces.

These vehicles are often used for patrols and perimeter security where they idle for extensive periods to provide occupants with air-conditioned workspace. The first project is demonstrating that bus idling can be eliminated by installing a solar-powered air-conditioning and diesel-powered heating system on a bus to precool or preheat the bus prior to occupancy.

The combined system provides almost instantaneous heat or cool at the push of a button without the vehicle running. It uses only solar-generated electricity for cooling, an incidental amount of gasoline for heating, and is incorporated into the factory HVAC system. The cooling system is rated to run from 8 to 10 hours on a full charge, while the heating system uses about one-half gallon of gasoline over a 10-hour security shift when operating on the highest setting. By comparison, an idling engine uses over 8 gallons of gasoline during the same 10-hour shift. This results in savings of over 7.5 gallons of gasoline for just that one 10-hour shift. INL will evaluate the economics of the project based on the installation costs and the reduced cost of maintenance and operations, including fuel and repair costs.



The no-idle HVAC system is installed behind the back seats of two Chevrolet Tahoes used by INL Security staff.

The successful demonstration of this system could prove to be directly applicable to other agencies, particularly for those vehicles that experience significant idle time, such as border patrol and surveillance activities. These projects are sponsored by the DOE Sustainability Performance Office, which publicized the bus project through an INL video on the September SPOTlight Newsletter.



Solar panels placed on the roof of a Chevrolet Tahoe are part of the no-idle HVAC system being tested by INL Transportation Services and the Sustainable INL program.

BIG SHOP Breakfast





lunch

ENERGY INNOVATION LAB





ORNL’s Kim Jeskie, team lead, explains the Continuous Commissioning team’s findings.

National Laboratory, called out Power Management linemen as an example of a high-functioning team demonstrating trust in each other and the engineers they work with.

They described some opportunities for improvement. Jeskie said in a few cases, it wasn’t always clear who was in charge or responsible for completing tasks. She suggested changes within F&SS be more clearly communicated throughout the organization.

David Clark of ORNL, field team lead for High Risk and Drills, pointed out that risk is not yet a natural part of work discussion, and the loss of undocumented knowledge of critical systems and processes due to pending retirements poses a threat.

Several best practices were identified, including formation of the Incident Prevention Teams and Council, the formal onboarding program for subcontractor superintendents, establishment of

quarterly supervisor forums and the new manager forums, the availability and promotion of the INL physical therapist, and the Research and Education Campus’s “Did You Know?” program.

In closing comments, F&SS Director Carlo Melbihess said he appreciates the independent review and valuable assessment of F&SS operations, and promised the organization will strive to pursue improvements identified by the team. “I expected a list of areas where we can improve, and welcome the fresh set of eyes,” Melbihess said. “We have to internalize these recommendations, and focus on areas we can improve as a team over the coming months, while implementing innovative and pioneering solutions. Culture change is difficult to fix, but with a strong foundation, we can make it happen.”

Team members representing INL F&SS were Brooke Jackson, Val Seely, Shawn Williams and Jeff Heath.

Sho-Ban
continued from front page

being compassionate.

“The purpose of a leader is to serve those you lead,” Alvarez said. “You are serving other students by being on your council. Leaders have got to have heart – don’t sacrifice others for your gain.”

Student council members shared examples of the leaders they admire – parents, grandparents, teachers and tribal elders who show they care, and sacrifice for them.

Ed Anderson, F&SS deputy director, said leaders set the tone for an organization and make sure their people feel safe. When people fear a leader, it shackles an organization and keeps it from performing effectively. “You can’t equate leadership with a position, because anyone can fill a position, but if you become a trusted person, then you are a leader,” he said. “Develop trust with people, and you can move mountains.” Establishing trust within the F&SS organization has been instrumental in changing its safety culture over the past two years, Anderson said. “Trust is the cornerstone of excellence.”

Rod Bitsoi, Sitewide Operations Division director, said that as a Native American of Navajo descent, he appreciates how people with diverse ethnic backgrounds can add their perspectives and strengthen organizations. He urged the students to think about the artifacts left behind by their ancestors, and go forward considering what artifacts they are leaving behind for future generations. “Make sure the artifacts you leave behind are as excellent as the ones left for you by your ancestors,” he said. “Define yourself and don’t let others define you. Never stop learning in your schooling or in the workplace. Live a positive life; build up and influence others to do their

best, too. Don’t stay with negative people, and pick out the person you want to become.”

Debby Tate, Campus Development Office director, told the students they are leaders representing their school and fellow students. “Surround yourself with

INL’s Rex Steel earns
his industry’s highest
certification

Industrial hygienist Rex Steel successfully passed the examination for Certified Industrial Hygienist, making him one of fewer than 7,000 CIHs worldwide. The certification is awarded through the American Board of Industrial Hygiene, the field’s premier credentialing organization.

Steel has worked in industrial hygiene at INL for four years, including a stint as an intern in the summer of 2011. He earned a bachelor’s degree in occupational safety from Brigham Young University-Idaho and a master’s of industrial hygiene from the University of Utah.

“People don’t understand how challenging the CIH exam is,” said Dwight Stevenson, the Environment, Safety and Health team lead for F&SS, and Steel’s manager. “It is the equivalent of the bar exam, or the professional engineer exam – the breadth and depth of understanding of the field has to be gargantuan.” Steel passed the five-hour-long, 180-question exam on his first attempt.

Steel credits his site mentors with inspiring him to continue learning and growing. “John Welker is a seasoned industrial hygienist who has worked with construction management for more than 15 years,” he said. “As I’ve transitioned from facility operations to construction management projects, John has been a huge resource to me as I’ve had questions.”

Stevenson added, “I’ve known Rex for the past three years. I appreciate how self-driven he is – earning the CIH is a perfect example of that. His commitment to the profession and protecting workers is exemplary. Rex really cares about doing the right thing.”



Rex Steel

Benchmark

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