FACILITY
SAFETY
& NEWS

Volume 4 | TA-55 Nuclear Materials Technology Bulletin | July 1993

Family Day at TA-55
Saturday, June 12, 1993

In this Issue:

Los Alamos
NATIONAL LABORATORY
Los Alamos, New Mexico 87545

Celebrating a Rare Day — a Family Day at TA-55

The success of family days at TA-55 was almost overwhelming. Instead of the 700 visitors expected, exactly 1.300 people signed in on Saturday, June 12. Any U.S. citizen accompanied by a badge holder could take a look at the Facility.

Visitors were signed in by security and then directed to the auditorium to see the TA-55 orientation video. which was shown by **Art Beaumont.** Then they were signed up by **Jan DeField** or **Naomi Hapke** for a tour of PF-4. Many had to wait 40 minutes for the tour.

Eight volunteers served as PF-4 tour guides, although twice as many were needed. Jan said they were excellent guides: they were on their feet eight hours straight, and she never saw a frown or heard a cross word. Even though they did not have time to eat lunch or spend time with their own families. they told the TA-55 story over and over and over. The volunteers were **"Juice" Valdez, Jerry Lugo, Doris Harvey, Robert Valdez, Larry Reese, Mike Gallegos, Jim Foxx, and John Parker.** John and **Joel Williams** helped coordinate things.

Meanwhile **Pete Wallace, Gene Walter, and Wolfgang Dworzak** were busy getting folks into lab coats and booties, which called for creativity when it came to infants.

continued on page 2

Family Day at TA-55 continued

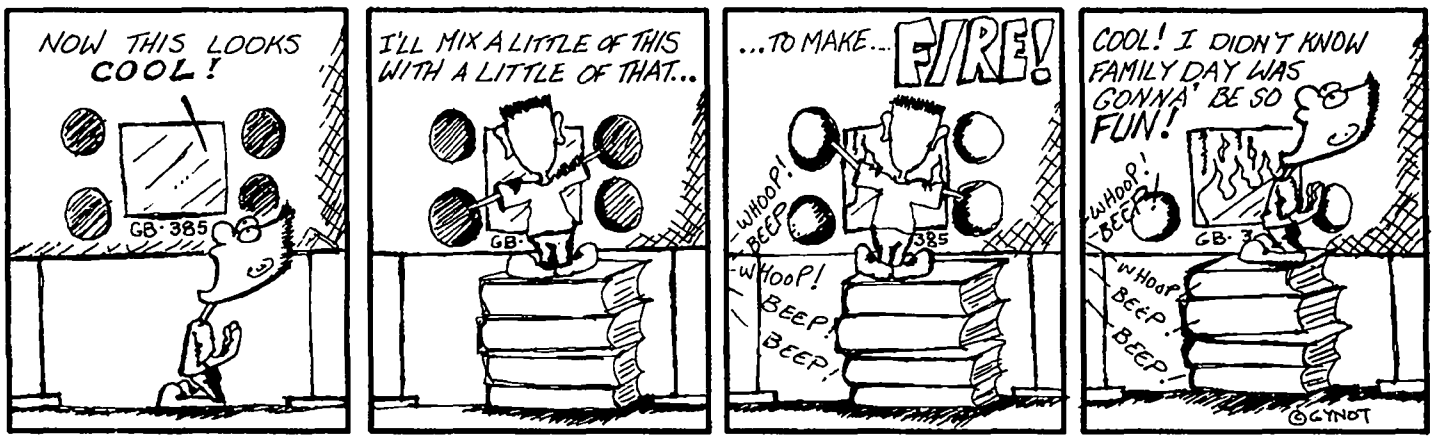
The members of PTLA who were on duty did a fantastic job. Jan said they were always courteous and friendly even after spending hours in the sweltering sun.

Besides sprucing things up for the occasion, JCI added art to the workplace with a huge 50th anniversary logo on the water tower.

Several other attractions were available for the visitors besides the PF-4 tour. **Victor Salazar and Bart Ortiz** were on hand to escort people to the Operations Center. Then **Charlie Stallings and Ben Herrera** gave a brief overview. **Laura Worl** had an exhibit in PF-2 that included a magnet game for children. **Greg Kelley** had a robot in the hallway of PF-3. The Machine Shop demonstrated machining by making key chains. The Training Center was a big hit with those who wanted to try their hand at using a glovebox, and PF-42 had laser demonstrations.

Tom Baros and Joe Riedel captured the moment on film. Several of these great photos are in this issue. **Bobbie Connellee** made up T-shirt emblems and handed them out, and **Jeanette Urbina** was on hand to blow up balloons. Thanks to **Hector Hinojosa** and his crew, visitors could enjoy breakfast and lunch in the TA-55 cafeteria.

The Family Day Planning Committee spent many hours getting ready for the event. The committee was led by **Bill McKerley**, and included **Jan DeField, Pete Wallace, Gene Walter, Jeff Whicker, Curtis Baker, Darryl Butt, Devin Gray, Naomi Hapke, Relf Price, Vickie Longmire, Leonard Busch, John Parker, Bobbie Connellee, and Bruce Erkkila.**♦



Safety Award Winners

Beverly Bowden, NMT-2, won the first place safety award in April. Beverly recognized that messages over the PA system in the PF-4 basement are difficult to hear and understand because of the high noise level. She suggested that a large electronic message board be installed in the basement to help improve communications in this area and to help direct employees in case of an emergency or an announced evacuation.

Second Place was awarded to **Richard Buteau, ENG-5,** for suggesting that the division purchase a product called "Glass Bandage" for the temporary repair of broken windows in gloveboxes, doors, etc., until replacement is possible.

Third Place was awarded to **Anthony Baca, JCI.** He suggested that electrical outlets be installed outside of buildings near doorways. This would prevent the use of extension cords through doorways where they may be crushed and shorted-out by closing doors.

First place in May was awarded to **Dennis Brandt, NMT-4.** Dennis has recognized a chronic problem with undetected contamination on glovebox worker's surgeon gloves and hands. He noted the problem is the result of inadequate time and care taken in using the alpha probes and lack of a user-friendly design in the alpha probe. He has suggested that TA-55 test an improved alpha probe that he recently saw in use at the Aldermaston Facility in Great Britain. The probe had a built-in timer and was large enough to scan the whole hand.

April-*Beverly Bowden*

May-*Dennis Brandt*

Second Place was awarded to **Catherine Nevill and Michael Loibl of HS-1.** Catherine and Michael recognized that the short, stiff cables used on the glovebox alpha probes do not allow personnel to monitor their extremities and chest area. They have suggested that a longer, more flexible cord be attached to the probes, which would allow complete body monitoring.

Third place was awarded to **Daniel Martinez of NMT-5.** Daniel has suggested that a glovebox glove be designed with an extra thumb. The glove could be used in situations where a standard glovebox glove must be used in reverse, i.e. a left hand glove must be used as a right hand glove.♦

FACILITY
SAFETY
& NEWS

Family Day at TA-55

Saturday, June 12, 1993

Los Alamos
NATIONAL LABORATORY

FACILITY
SAFETY
& NEWS

Family Day at TA-55

Saturday, June 12, 1993

Update on Plutonium Facility Occurrences

by Bill Parras, NMT-8

In the May issue of the TA-55 Facility Safety and News Bulletin, we said that ten occurrences had been reported to DOE by TA-55 organizations from the beginning of the year to April 8. From April to May 10, an additional seven occurrences have been reported. The following is an overview describing the most recent occurrences.

April 28, 1993 - Area Contamination of Plutonium Processing Basement

The top of Room 42 in the southwest corner of the PF-4 basement was discovered to have an area contamination. The area was decontaminated without any adverse effect to personal safety.

May 17 & 24 - Multiple Contamination Incidents While Performing Glovebox Gasket Replacement

In the Plutonium Processing area (PF-4), Room 207, a few technicians in separate, but related, incidents were contaminated while replacing gaskets in gloveboxes. All personnel were examined for internal contamination, and it was determined that they had not received any uptake. All operations in this room have been suspended pending a full investigation.

May 19 - Area Contamination in Plutonium Processing Area (PF-4) Room 401

Workers who were completing an operation in glovebox 460 determined that a shoe cover was contaminated. The source of the contamination was determined to be a six-foot square area beneath the manifold connected to the glovebox. No personnel received contamination. The appropriate valve and manifold were wrapped to prevent any spread of contamination.

May 24 - Personal Injury in Plutonium Processing Basement

A JCI custodian received a head injury in the PF-4 basement after reaching down for an object and stepping forward. The worker's head struck the corner of some channel iron. The individual was initially diagnosed to have a head concussion and remains under medical evaluation.

May 26 - Loss of Control of Radioactive Material in Room 401

While working in glovebox 472, a technician found contamination on the back right shoulder of his protective clothing The source of the contamination may have been caused by a hole in a glove used in this glovebox. No skin contamination occurred, and the individual involved was commended for exceptional self-monitoring.

June 4 - Contamination in an Uncontrolled Area

A technician was found to have contamination in the right armpit area of the protective clothing. The technician exited the Plutonium Processing area without knowing the protective clothing was contaminated, and the RPT did not detect any contamination on this individual when exiting the PF-4 area. The contamination was discovered when the individual reentered PF-4. No contamination was detected in any of the areas outside of PF-4 where the individual had been. No personnel contamination occurred in this incident.

Response to Occurrences

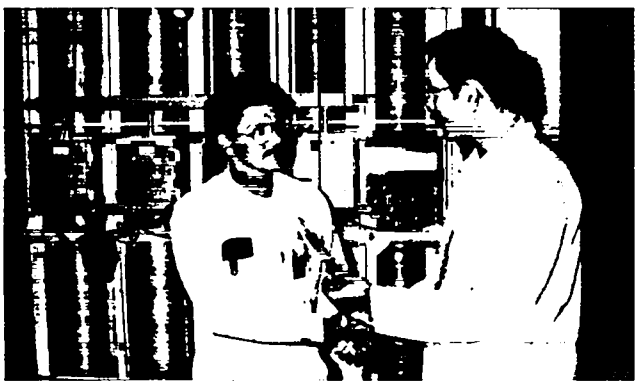
In all these reported occurrences, the TA-55 Rapid Response Team met formally to

- determine the sequence of events and who was involved,
- determine what immediate actions were taken or remain to be taken to stabilize the immediate area and ensure personal safety, and
- develop the course of action for a full investigation.

While there may be some concern regarding the number of occurrences that have been reported by TA-55 organizations since the beginning of the year (17 total), we hope that each occurrence will become a learning experience (lesson learned) for all TA-55 personnel and will result in preventing future occurrences.

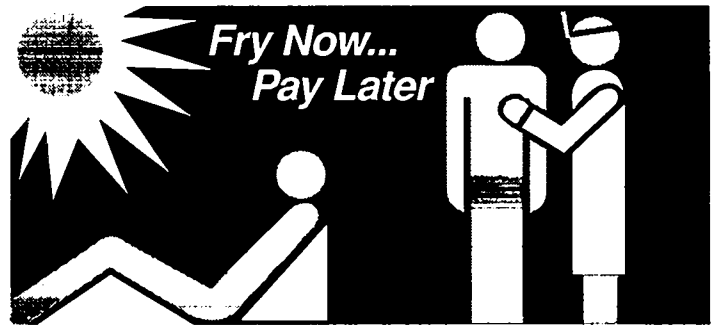
In future safety bulletins, we plan to highlight non-reportable or near-miss incidents at TA-55. Even though these incidents are not part of the DOE occurrence reporting process, we can still learn from them.♦

NMT TA-55 Quality Awards



Michael Trujillo, NMT-2, was presented with an NMT Quality pin by Dana Christensen. Michael received the pin for conscientious self-surveying that went beyond what is required and led to the early detection of a contamination.

Dana Christensen presents an NMT Quality pin to **Sammi Owens, NMT-3, Cindy McAtee, IS-1, Vanessa De La Cruz, IS-1, and Susan Carlson, IS-1** for their work as a publication team. They prepared the "DOE DP Integrated Contractors Waste Minimization Program Accomplishments Document," which was distributed to all members of Congress, all DOE SPOs, Governors of all states where the DOE hosts facilities, and approximately 3,000 others. The book was prepared on a short time schedule and required significant coordination. The DOE sponsors in Albuquerque and Washington wrote letters to the Laboratory management commending this team for producing a document that "exceeded the customer's requirements."



How likely are you to become one of the 500,000 Americans who will have a skin cancer this year? You are at greatest risk for skin cancer if you

- sunburn easily (usually those who have fair skin with red or blond hair),
- spend a lot of time in the sun, and/or
- do not wear protective clothing or sunscreens.

Ninety percent of all skin cancers are on parts of the body that usually are not covered by clothing. The face, tips of the ears, hands, and forearms are the usual sites. However, if you have ever been a sunbather, you might also have skin cancers on your shoulders, back, chest, or lower legs.

Inspect your body regularly for any skin changes. Have your doctor check any unusual growth or color change in your skin. Also check moles and see the doctor if one changes size, shape, or color. Fortunately, skin cancer is one of the most curable forms of cancer when it's discovered early.

Better still, most skin cancer can be prevented. Preventing and detecting skin cancer is as easy as 1,2,3.

1. **Protect your skin** from the sun with clothing or with a sunscreen that has a Sun Protective Factor (SPF) rating of 15 or higher.

2. **Inspect your body** regularly for any skin changes.

3. **See a dermatologist** if you have a concern and take advantage of screening programs when they are available at the Laboratory.

If you would like more information about skin cancer, see Jan Croasdell at the TA-55 nurses station (PF-3-142). She has detailed information about the three kinds of skin cancer and pictures of what they look like.♦

Engineering Our Jobs to Fit Our Bodies

Sometimes our work requires us to use our bodies in ways we wouldn't ordinarily use them. We sit, stare at a terminal, and move our fingers and wrists for hours at a time. Or we stand with arms extended into glovebox gloves that may not be aligned with our arms. What effect does this continual trauma have on our bodies? Is there anything we can do to improve our workplace?

What effect does continual trauma have on our bodies?

Statistics at the Laboratory parallel those in industry. Each year, HS division submits a report to DOE about the occupational injuries and illnesses that occurred at the Laboratory during the year. In 1992, repetitive trauma was the largest category of occupational illness with 87 people reporting that they suffered from carpal tunnel syndrome or some other kind of repetitive motion trauma.

The Bureau of Labor Statistics in 1991 reported that 56% of all workman's compensation claims were due to cumulative trauma disorders. By the year 2000 it is predicted that 50¢ of every $1.00 of workman's compensation will be spent for these disorders.

How can I avoid these injuries?

Using the principles of human factors engineering and ergonomics is a way to prevent these illnesses and injuries. Human factors engineering concentrates on the mental or psychological interface between job and worker. Ergonomics is the engineering side and concentrates on biomechanics. Both fields work to match the work environment and work station to the worker. The goal is to fit the tool to the person — the task to the worker — instead of trying to adjust the person to the work station

How can I get more information and training?

Training in ergonomics is offered by HS-8 at the training center in White Rock. The class, which lasts one and a half hours is called "Office Ergonomics." You can register at no cost to your group. Contact Pam Mascarenas at 7-0059 for details about registration. The TA-55 safety office plans to bring this course to TA-55 if there is enough interest.

If you want more information or would like to have your work station evaluated, contact the HS-5 field support office at 5-4427. They will put you in touch with Greg Rowell, HS-5's ergonomics specialist. Greg is an Industrial Engineer with a specialty in ergonomics and occupational safety. Greg provides work station evaluations (at gloveboxes as well as terminals) and makes recommendations for engineering and administrative controls. Greg Rowell is also taking glovebox training at TA-55. What he learns here will be used to develop a glovebox and hood workers class. This course will teach the general principles of ergonomics and glovebox work. Since engineering controls, such as making an adjustable glovebox, are difficult or impossible, the class will have to concentrate on administrative controls. This course will include such things as showing workers the best way to arrange their work inside the box, the kinds of exercises they should do when they take breaks, and how to improve the alignment of their bodies to the glovebox.♦

Interested in an ergonomics class at TA-55 for those who sit in front of computer screens?

Interested in participating as a volunteer in pilot programs to
(a) analyze the ergonomics of your glovebox operations or
(b) develop an ergonomically friendly glove box?

Contact the Safety Office at 7-2556

Nancy Butler of HS-5 Sets Up Office at TA-55

Nancy Butler

Now that Nancy Butler, the HS-5 representative for TA-55, has her clearance, she is setting up an office in room 108 of PF-20. She is scheduled to be at TA-55 on Tuesday, Wednesday, and Thursday afternoons. She can be reached at 5-0487 on these days and 5-5128 at other times. Her pager is 104-2549.

Nancy is an Industrial Hygienist, and her job is to protect workers from hazards in the workplace. Nancy helps TA-55 control chemical hazards, high noise levels, and non-ionizing radiation. Her duties include such things as

- evaluating new projects to be sure proper engineering controls are in place and that the hazards have been defined and addressed,
- taking measurements and calculating noise and non-ionizing radiation levels,
- serving as a member of the Facility Safety Committee and the Chemical Safety Committee,
- reviewing and signing off on procedures, and
- participating in facility inspections.

Nancy also plans to use the health-hazard assessment for TA-55 that was done by HS-5 and the TA-55 Safety Office to set up strategies for sampling and monitoring areas with the most need. This summer she will be characterizing the noise level in the basement of PF-4 and other TA-55 equipment rooms to determine the frequency range of each fan and motor. This information will be used to plan ways to engineer out some of the noise.

She is pleased with how responsive and helpful everyone at TA-55 has been and is particularly grateful for Gene Walter's help during her red badge days. She welcomes you to stop by or give her a call if you have any concerns or questions about workplace hazards.♦

FACILITY SAFETY & NEWS

Finnie Garcia Leads Search and Rescue Efforts in Rio Arriba County

Finnie Garcia, like several others at TA-55, has special skills for dealing with emergencies. He learned some of these skills in his training as an HS-2 supervisor of Radiation Control Technicians at TA-55. But many of his skills come from his volunteer work as a field coordinator of Search and Rescue missions for the New Mexico Department of Public Safety.

Finnie has been a volunteer in Search and Rescue organizations for 14 years and a field coordinator for eight years. He coordinates all rescue missions in Rio Arriba county, which stretches from Dulce to the intersection of highways 502 and 30 at the foot of the hill road.

When there's a problem, the dispatcher for the State Police in Espanola calls Finnie and gives him a briefing on the incident. Finnie then goes to the location and decides what kind of resources need to be called in. He establishes a base camp and coordinates the mission from this point.

No two missions are alike. The operation can get quite large and may require search by airplane, snow mobile, ATV, horseback, or ground searchers with or without dogs. Rock climbers and divers can also be called in. Finnie coordinates the efforts of all these people.

Besides searching for lost children, hunters, criminals, and old people who have wandered off, searchers also recover bodies from plane crashes and drownings. They may also be called on to get people out of precarious situations. Finnie coordinates 10-15 missions per year. As a volunteer, he doesn't get paid, but the job is rewarding when the mission is successful.

Search and Rescue volunteers are trained through the Department of Public Safety. Those wanting to be field coordinators must first have several years of Search and Rescue experience before taking the advanced training required for certification, which is given by the Law Enforcement Academy. After training, they complete a year of on-the-job training under the supervision of a certified coordinator. During that time, they must coordinate at least two missions.

Finnie sometimes goes to elementary schools to teach children how to avoid getting lost and what to do if they do get lost. Also, once a year, he helps coordinate health and safety coverage for the pilgrims to Sanctuario on Good Friday.

Finnie doesn't like some things about Search and Rescue, and number one on the list is the paperwork. A detailed report is required for each mission. It's also hard to leave his family and warm home to go out into a blizzard to search for someone. Dividing his time between his ranch, his family, his Laboratory job, and his volunteer activities, is often difficult. But he takes the Search and Rescue motto, "That Others May Live," seriously. Seeing parents reunited with a lost child is the kind of "pay" that keeps volunteers like Finnie going.

Using Search and Rescue Skills at TA-55

Finnie finds his training and experience in Search and Rescue very helpful at work. He is a better supervisor at TA-55 because of his experience in managing volunteers during emergency missions. Leadership in these situations requires clear and direct communication and skills in team building. Also, when there is a contamination incident at TA-55, Finnie is calm and methodical in his actions and is able to communicate the essentials to management quickly and accurately.

Using TA-55 Skills for Search and Rescue

Finnie's training in the Incident Command System (ICS) at the Laboratory helps him as a Search and Rescue field coordinator. The base camp he establishes is really a command post, and operates much the same as a command post at the Laboratory. Finnie's training in how to respond to hazardous material spills has also come in handy — particularly when a fuel tanker truck overturned near the Chama river six years ago. Finnie continues to build his complementary skills with every experience. ♦

Finnie Garcia has a vehicle that is specially equipped and dedicated to his Search and Rescue work.

FACILITY SAFETY & NEWS

LALP-93-2
Volume 4, July 1993
NMT Division
P.O. Box 1663
MS E500
Los Alamos,
New Mexico 87545

Bulletin Staff:
Pete Wallace ..... Safety Officer
Joan Farnum, IS-1 ..... Editor
Susan Carlson, IS-1 .... Designer
Joe Riedel ..... Photographer

Division Leader ..... Del Harbur
Deputy Division Leader ... Dana Christensen

Los Alamos NATIONAL LABORATORY

Los Alamos National Laboratory, an affirmative action/equal opportunity employer, is operated by the University of California for the U.S. Department of Energy under contract W-7405-ENG-36.