A message from the Center Director

I commend the entire Ames community for their enthusiastic support of, and participation in, the Ames Safety Accountability Program and the Ames Contractor Safety Initiative. We can only achieve our goal of zero injuries if we all work together. You have shown that we can, and do.

The Agency slogan, “Mission Success Starts with Safety” is becoming even more important as we are all required to do more with less. The costs associated with on-the-job injuries and illness cut deeply into our resources. Achieving our goal of zero injuries will surely yield wide-ranging benefits.

For this reason, and the personal rewards that come from maintaining our health and expressing the same regard for the well-being of those around us, we must do everything we can to increase the visibility of safety and to communicate its critical value throughout all of our operations. Achieving our goal of certification and Star status under the Occupational, Safety and Health Administration’s (OSHA), Voluntary Protection Program (VPP) will demonstrate that our safety program is sound. It will validate our belief that it provides substantial benefit to the well being of our professional community.

Many of you are effectively implementing the Ames safety program and thereby demonstrating your established leadership in this area. I thank you and continue to seek your support in improving the Center’s safety program and performance.

The commitment to safety starts with you!

As obvious as it may sound, the Ames safety program is only as safe as you are. It will never be any better than you make it. You already know when to get involved -- every hour of every day -- but how should you make that contribution? Think about your options!

For some of you, your thinking may be as grand and bold as NASA at its best--working with the lightning bolt arc-jets, supersonic wind tunnels, never-been-here-before research laboratories, or one-of-a-kind construction sites. Ames arc-jets operate at temperatures twice those on the surface of the sun. They blast models at 1,000 mph (as fast as the Earth spins and 15 times faster than the freeway speed limit).

Believe it or not, most Ames’ injuries occur in office environments. That may be the result of lesser preparation for office dangers. For instance, back injuries can result from moving office furniture and repetitive stress injuries are often due to poor mouse and keyboard use. Remember what is most important -- your health. And, that is largely within your control.

Ames’ Safety Program

Goal: Zero Injuries
Objective: Provide a Safe Working Environment

Principles:
• All injuries/mishaps can be prevented
• Management is responsible for preventing all injuries/mishaps
• Working safely is a condition of employment
• All hazards can be controlled
• Management has the responsibility to ensure that all employees are adequately trained
• Injury prevention is essential to mission success
• Whenever our safety objectives conflict with other mission objectives, safety shall be our first consideration

Center Director Dr. Henry McDonald
Center Operations provides safe solutions

The Center Operations Directorate’s involvement in creating a safe working environment extends beyond ensuring the safety of its own staff. We also have a centerwide responsibility. A recent example of how success can come from working together to find a solution was in the support we provided in correcting a hazardous condition that existed in the basement of building N-245. Mold had been detected in four basement offices that were located in the building. This was caused by the gradual intrusion of moisture through the basement walls. The moisture, in turn, created an ideal environment for the mold to grow.

As soon as the mold was detected, samples were taken and then tested. The test results confirmed that the mold presented a potential health hazard. The Plant Engineering Branch (Code JFP) worked closely with the customer, the Astrobiology and Space Research Directorate, Code S, and the Safety Office, Code QH, to abate the mold. This required building an air containment to stop the possible spread of the mold spores. In addition, Code JFP was responsible for the removal of contaminated building materials, such as wallboard, ceiling panels and floor tiles, and the sealing of the building walls and floor to prevent water intrusion. Code JFP then rebuilt the walls, ceilings and floors, including fresh paint and waxed floors that restored the offices to usable condition. This type of expediency in solving a hazardous condition achieved our objective of providing a safe working environment to our employees.

The Directorate is leaving no stone unturned in an effort to achieve VPP Star certification by December 31, 2001. Each of our seven divisions are currently involved in fixing known safety problems, inspecting our 45 buildings, keeping pace with training, and housekeeping in preparation for OSHA’s scheduled visits in June and again in the fall.

Recently, the Applied Information Technology Division (Code JT) held a stand-down where everyone came to the office in their work clothes to clean up unused equipment, furniture and files. This resulted in a truckload of trash being thrown away and two truckloads of equipment being put into surplus. In the Protective Services Division (Code JP), training records have been turned from mostly red to completely green. While the Acquisition Division (Code JA) has been holding all-hands safety meetings that focus on the results of last year’s Performance Evaluation Profile (PEP) data.

The work has just begun, but much more remains before certification can be achieved. Our strategy is to avoid burnout in the early stages by carefully selecting our priorities and maintaining a steady, balanced approach. This will allow us to complete all of the tasks (including OSHA pre-assessment recommendations) before the final review in the fall.

Commitment and involvement go “hand in hand”

Management commitment and employee involvement in safety are complementary. Management commitment provides the motivating force and the resources for organizing and controlling activities within the organization. To have an effective safety program, management must regard employee safety and health as a fundamental value of the organization and commit to safety and health protection with as much vigor as the other organizational purposes. It is vital that managers establish safety standards and principles and communicate them regularly and consistently to all employees. It is even more important to demonstrate commitment in highly visible ways, for example, “walking the talk.”

A successful safety program is no different than any other program at the Center. While the primary responsibility for the overall program rests with the Center Director, it is the senior managers that set policy and provide direction and support to our mishap prevention programs. The absence of an active mishap prevention program must never be the root cause of any accident.

Safety needs to be the personal commitment and responsibility of every person at the Center. It is not sufficient to say, “We’ll fix it when it breaks.” That is too late. We must find the hazards now and fix them before they break us. The beauty of this effort is that we will never know what we missed. And, that is something we desperately want to miss.

Safety is an on-going activity, not a one-time or annual event. Safety and health is taken very seriously in Code Q. It is our number one priority. We coordinate ongoing facility and safety inspections, conduct safety reviews and regularly provide safety and environmental training to the resident staff.

As the Center’s primary safety organization, we maintain this Center’s unique Ames Safety Accountability Program (ASAP) metrics on the world wide web, provide monthly safety meeting topics and materials to the Center and provide on-going safety and health support. ASAP information is used to generate on-going safety awareness metrics and provide managers with guidance on programs and activities to improve overall safety at the Center.

The internal safety process that we follow within Code Q is the same process that we promulgate throughout the Center: the ongoing detection and correction of hazards before they become accidents or mishaps, review of mishaps and corrective action programs to ensure that they are not repeated.

“To maintain our competitive edge, we must do more than talk about our concerns for health and safety. Ultimately, it is up to each of us to accept responsibility for our personal health and safety.”

-- Daniel S. Goldin, October 29, 1999
Center Director safety update

Over two years ago, Ames Research Center embarked on a mission to eliminate injuries. Your increased awareness in identifying and correcting hazards and unsafe behaviors has significantly reduced the number and severity of injuries during this time.

However, since December 2000, Ames has begun to experience an increase in workplace injuries. These mishaps range from potentially deadly falls, resulting in serious injuries, to more basic mishaps, resulting in back strains, lacerations and bruises. In almost every one of these mishaps there has been one common cause, inattention to safety. All work, whether at home or on the job, requires that each of us must take the time to think about our activities before proceeding, so we can identify potential hazards and unsafe behaviors. As we all know, this takes time, effort and responsibility, in an already busy world.

All injuries, regardless of severity, are of great concern to me and must never be taken lightly. We all need to take the time to review our workplaces and tasks, before beginning each day’s work. We must remain vigilant on placing safety as our most important value, since you are our most important resource.

Everyone is responsible for their safety and the safety of their fellow workers. I expect you to promote safety by example and ensure your work is performed safely, by using safe behaviors, the correct tools, personal protective equipment, and obtaining the necessary training.

There are no activities at Ames that are important enough to compromise your safety or the safety of your fellow employees. Your safety and health is my greatest concern and your greatest responsibility.

Thank you for paying attention to your safety and the safety of our mission.

The PEP looking glass

NASA is attempting to evaluate how employees and managers view the effectiveness of the safety program at their centers. This encompasses system, industrial and occupational safety. To this end, the Agency is conducting surveys called Performance Evaluation Profiles (PEP). Two PEP surveys have been conducted at Ames to date. They will recur annually. The System Safety Division and the Safety Office will distribute the results of these surveys.

The information should be used as a tool to help improve safety of our operations. Although upper management may be aware of the results of these periodic reviews, we need to better communicate the results of these surveys to all employees.

Can you decode the safety puzzle?

The word ampersand refers to the symbol “&,” which we all know means “and.” An ampersand pair is a common pair of words that are linked by the word and—for example, mix and match. In an ampersand puzzle, one of the two words in a series of ampersand pairs is missing. Your job is to fill in the missing words and then read a message created from the first letter of each missing word. After you have discovered all the missing words, read the first letter of each word. These letters spell out an important message related to this Astrogram issue. Complete this puzzle (all the ‘ampersand’ words must be filled in as well as the message written out) cut it out of the Astrogram, put your name and phone number on it and drop it off at Mega Bytes, the Ames Café. There will be a drawing for a variety of prizes, Center Director for a Day, Space Shuttle flight simulator ride and some attractive opportunities.

Lessons learned

Recently a group of Ames managers inspected recent accident sites at Ames, followed by a discussion of preventive measures. The goal was to learn from mishaps to prevent reoccurring accidents and employee injuries. NASA has directed each center to publish a “Lessons Learned” document to benefit everyone. Ames’ document is posted at: http://q/qh/safetynews.

“There are no activities at Ames that are important enough to compromise your safety or the safety of your fellow employees. Your health and safety is my greatest concern and your greatest responsibility.”

-- Dr. Henry McDonald, April 10, 2001.
The view from Code D

To be safe or not to be safe. This should not be the question! In 1996, after looking at the Center’s safety performance, Ames’ management decided to strengthen its safety program for the benefit of the staff and to improve our performance as a center. As a result, serious injuries at the Center have been significantly reduced. During the period May 13, 1998 to October 12, 1999, we actually had no lost time injuries for civil servants. This was a magnificent accomplishment and a true demonstration of what Ames is capable of. Excellence in safety is good for all of us because accidental injuries not only hurt the victim but also impact the victim’s family and co-workers as well as the ability of Ames to accomplish its mission.

Do fewer injuries save money? The obvious answer is ‘yes.’ Does that translate into a more effective Ames? The simple answer is ‘yes.’ Thinking of safety as our first priority provides an attitude that will benefit everyone at the Center—civil servants, contractors, students, other residents and visiting researchers. All of which makes us a more effective organization.

I am asking each of you to pause for a moment before performing an action and ask the most important questions: What is the best way to proceed? What might go wrong? Has safety been fully addressed?

We build safety factors into our engineering designs and we have safety procedures for our operations. It is up to you to make sure the last critical step is accomplished and that is to ask the safety questions before proceeding. Each of you is authorized to take responsibility for your own safety and for the safety of those around you. The question that must always be asked is: “Are the safety features fully considered, fully accounted for and fully implemented?” In a safe working environment, it is everyone’s job to see that this last and critical step in the safety process for all actions is accomplished.

Code D has a dual role in safety: not only is it responsible for directorate safety, it is responsible for safety at the entire Center. Except for the Child Care Center and Hangar 1, Code D’s working environment consists entirely of offices. Because offices do not contain the types of equipment and substances which shops and laboratories generally contain, office workers often regard their work environment as “hazard free.” At Ames, however, at least one-half of all reported work-related injuries and illnesses are from office workers (although some of the injuries, such as slips and falls, occur outside of the office).

To assist Code D managers and supervisors, Rho Christensen, the Code D safety lead, has organized safety leaders for each division and safety coordinators for the program offices. These employees, both civil service and contractor, work alongside their supervisors to implement the Ames Safety Accountability Program, including conducting safety meetings, training, monthly inspections and hazard identification and correction. Managers and supervisors, however, remain responsible for safety and must themselves be involved in and knowledgeable about ASAP and other safety matters.

Thanks from Administrator Goldin

Two years ago, I asked everyone to become as passionate about safety as I am. No activities at NASA are important enough to compromise your safety or the safety of the public. Your heightened awareness in recognizing and correcting hazards and unsafe behaviors that lead to mishaps is proving effective. Workplace injuries have dropped substantially. NASA is considered a model for others who wish to avoid such preventable incidents. Well done!

In addition to fewer workplace injuries, our progress is reflected in the results of the safety Performance Evaluation Profile (PEP) survey. Managers’ and employees’ occupational safety survey profiles provide evidence that our culture is changing for the better. Soon, some of you will be randomly selected to take the survey again. This survey is one of the few anonymous feedback systems we have for safety, and your participation is greatly appreciated. Your candid responses help create an even safer environment at NASA.

Although we have come a long way, people are still getting hurt. I am serious about our ambitious goal of zero injuries in the workplace. Much too often, those involved in mishaps either knew or suspected something was not quite right. Trust your instincts and your experience. It usually does not take much to check out a hunch or obtain a clarification on a procedure. Ask questions. Get answers. The absolute worst thing would be that a future mishap investigation found that people suspected the problem, but, for whatever reason, remained silent.

I value the attention you have given to your personal safety and to the safety of the mission. Keep up the good work because mission success starts with safety.

Dr. Frankenstein would love this!

Do you know the location of your nearest AED (Automated External Defibrillator)? If your heart stops, you will greatly appreciate being near one of these $5,000 units. Those trained in operating an AED, should take a moment to make note of each of the six AED locations. It could help save a life. If you are not yet trained in AED operation, check out the CPR class. The Safety Office is constantly working to get more AED units and trained operators. The AED’s are located in buildings N-19 (inside room 1070A); N-158 (main lobby near stairway); N-215 (Health Unit); N-218 (2nd floor); N-258 (hallway outside room 206); N-3 (centrally located), and soon to come in N-241.

Safety nuggets

- The Government is self-insured, so accidents remove dollars from the budget pie.
- Safety is no accident! Personal injury and property damage are preventable.
- For every 99 brilliant things we do at NASA, we do at least one really stupid thing. Your Safety Program can help to make brilliant things a perfect score!
- There are an average of 300 “almosts” to every “Oh blank!” (accident).
Employee Union outlook

Safety is an area where the Union and management can agree, since both groups have a vision of a safe environment for all employees. Management emphasizes the cost implications of on-the-job accidents and, indeed, cost is relevant. The more money we save avoiding accidents, the more is available for awards, training and other benefits. Not only is there a budget cost connected to injuries or fatal accidents, there is also a physical and emotional cost. Injuries equate to pain--whether it is physical pain from an injury or the pain caused by the loss of a loved one--it is pain that we can all agree we would rather avoid.

Zero accidents can be achieved by working together. But a cultural change needs to take place regarding safety. Sometimes when we see a safety hazard, like someone speeding in their car or using a chair instead of a ladder to hang a picture, we think it is not our business to say something about it. Safety is everyone’s business. Though training is still necessary, awareness of safety can be better achieved through taking an active role--looking around and reporting through the proper channels. Our Ames Center Director and Deputy Director have shown their commitment that if something is not safe, it will be fixed. A safe and healthy working environment is an employee right that the Union is committed to protecting and enhancing.

The Safety office is looking for a few good kids

Safety must be treated with equal importance in every environment or circumstance. Safety is no less important in your car, riding a bike or on roller blades, than it is in the more traditional workplace. This message can and does save lives and hospital bills. There is an expression, “Out of the mouths of babes...” Well, if you have a child who is creative enough to come up with a slogan, a brief tale, a short song or rhyme, a painting or drawing that manages to express the importance of safety, the morality of safety, and/or the evils of not being safe, the Safety Office would like to receive that treasure.

All applicants will receive a NASA safety award certificate, and their work will be put on display. There will be several winners who, along with their families, will be invited to a very royal reception at Ames this summer. The Safety Office deadline for receiving entries is June 15. Please mail them to: M/ S: 218-1. And thanks for involving your kids.

A quick-reference safety tool

Late last year, a team of Ames employees that included contractors, civil servants and an Ames Federal Employees Union representative met for the purpose of developing a document that would be a valued safety tool. This tool was intended to be a quick reference that included an overview of some of the Center’s key safety and health policies, programs and related information. The result of this effort is the employee guide to the Ames safety and health program. Since it’s distribution, many employees have commented that they like the tabbed design and find it an easy-to-use reference tool. Many have fastened it to their office wall or partition using the convenient tab in the back. If you would like a copy of this document, contact your VPP directorate leader.

Ergonomics volunteers needed

The Ames ergonomics program is looking for a few good men and women to help develop a more pro-active program. If you are interested in helping your coworkers stay pain-free at the computer, we need you! Experience immediate gratification by earning your coworkers the “ergonomics guru” of your organization. This is a great opportunity to receive special training and increase your knowledge about ergonomics, while providing a much-needed service for your group. We plan to meet monthly. The ergonomics program manager and staff will be available to assist you with any challenging situation and will assist you along as you put into practice what you learn. We need your help in creating a hazard-free workplace, while increasing your safety and well-being. Call Miriam Glazer at ext. 4-5172 and enlist now!

Aerospace makes safety a priority

We are very pleased with the progress that the Aerospace Directorate has made in the awareness of safety and health over the past seven months. In our quest for VPP STAR certification, we have stressed the importance of a safe working environment for all Ames employees and guests. We have encouraged our employees to identify and help rectify all safety and health related issues, and to create an injury free workplace.

The directorate has also set aside funding for required repairs and purchases necessary to make our workplace safer. As evidenced by recent directorate safety statistics, we have made tremendous progress in the areas of monthly inspections and monthly safety meetings. We are now working to improve hazard identification, analysis and mitigation, as well as the identification of and participation in appropriate safety training for each one of our employees.

Our staff of over 550 combined civil service and on-site contractors work in 25 buildings, spread throughout the center, including offices, labs, simulation facilities, arc jets and small wind tunnels. As a consequence, we have a tremendous variety of safety-related issues, including many related to older buildings. We also have examples of some of the best safety programs at the center. Hats off to Clodagh Meade and Joe Hartman for their excellent work in the arc-jets with respect to safety and to Paul Brown and the Logicon/MCI staff for their safety precautions shown to all visitors to the VMS. We also have examples of some real messes, (created by both people and birds) which are in the process of being cleaned up.

We are encouraging our staff to have a stand down day for a safety-related clean up if the problems are large enough, with pizza provided by the directorate office on clean up day.

Our VPP self-assessment helped identify areas that need the most improvement, and we are taking action on those items. Based on the excellent cooperation we are receiving throughout the directorate, we are confident that we will be able to make significant improvements and contribute to the Center’s successful application for VPP certification.
The nose knows, or does it?

Can your nose detect hazardous chemicals before they can hurt you? No. That is the safe answer. A more detailed answer involves knowing if the odor threshold might warn you of a possible hazard. That threshold varies considerably from one chemical and one person to another.

The olfactory response in humans is less acute than in some animals. Even so, we can detect very low concentrations of certain materials that teach avoidance, such as the musk odor of a skunk. Humans can smell as little as thirty-two quadrillionths of an ounce of musk. In other cases, deadly material may have no odor at all, such as carbon monoxide.

The research environment at Ames has us generating some rather exotic conditions. For example, we simulate the carbon monoxide. Odorless
5,000 40,000
Carbon dioxide Odorless 50 1,200
Carbon monoxide Odorless 0.5 0.1 2
Hydrogen cyanide Odor not suitable as warning because toxicity is very rapid
Ethyl mercaptan Added to liquefied petroleum gases to provide warning
Phosgene Odorless 50 1,200
Nitrogen dioxide Odor less 5,000 40,000

As you can see, odor detection does not necessarily correlate with the hazard. This means that a hazard may exist even when there is no apparent odor, or conversely, even when there is an odor, there may not be a hazard. The reliable way to determine if there is a hazard is to monitor and analyze air concentrations either from a direct reading instrument or from a sample submitted to a laboratory. Interpretation of the results is the job of safety professionals who compare the measured concentrations to published exposure limits or recommended guidelines. If you have a concern, monitoring is available from the Safety Office by calling Stan Phillips at ext. 4-3530.

No pain, no gain, no truth

Ergonomics simply means fitting your workstation to you, rather than you to your workstation. You are the best judge of how you might better adjust your workstation to fit your individual needs. Office ergonomics training is offered every month through the Safety and Health Office. If you have not yet taken this two-hour, comprehensive class, then check the Code QH web site and register for one soon. Another tool available to you is the web-based ErgoSmart program, also accessible the QH website, http://qh/health/

Do not ignore the following signs and symptoms; namely, numbness, tingling, burning, pain, and loss of strength. These symptoms can be indicative of cumulative trauma disorders (CTDs), also known as repetitive stress injuries (RSIs) or musculoskeletal disorders (MSDs). Even if these symptoms may seem like a small thing, they are your body’s way of telling you something is wrong—pay attention! Chances are, the symptoms will get worse over time, possibly impairing your ability to work.

If you are experiencing any of these symptoms, first and foremost, report them to your supervisor. Civil servants should go to the Health Unit for a medical evaluation; contractors can go to their contracted occupational health clinics or their own private physicians. Seeking medical attention early is extremely important in preventing and controlling these conditions.

For more information about the Ames ergonomics program, contact Miriam Glazer, at ext. 4-5172 or email her at mglazer@mail.arc.nasa.gov.

Ames gets ISO 9001 recertification

Ames has reached a new milestone in the evolution of its ISO 9001 certified quality management system and congratulations are in order.

On April 25 and 26, National Quality Assurance (NQA), our ISO 9001 registrar, concluded the 3-year audit cycle required for Ames recertification.

NQA reported no major findings and has recommended Ames for recertification to the ISO 9001 Standard. This represents a significant accomplishment and reflects the level of your commitment to achieving the quality and customer satisfaction objectives defined in the Ames Quality Policy.

NQA also identified opportunities to enhance the effectiveness of our processes. We seek your continued involvement in implementing those improvements to provide maximum benefit to Ames and its customers.

All Ames personnel should be proud of their role in achieving this milestone and improving the quality of Ames services and products.
Free first aid (no kits!)

Sterile gauze pads, surgical tape, ace bandages, scissors – sounds like some of the contents you might find in a first aid kit. Seems logical that each work area should have one. Why then does the Safety Office discourage the purchasing of first aid kits? There are several reasons they do recommend first aid kits in work areas.

One reason is the difficulty of keeping first aid kits stocked and sanitary. Inspections of kits at Ames illustrate that this is a serious problem. Second, the Center has highly trained medical staff and a facility dedicated to treating injured personnel. The Health Unit is open daily from 8:00 a.m. until 4:30 p.m. In addition, our fire department Emergency Medical Technicians are on call at all times. While a band-aid from your desk will often suffice, if someone is in need of first aid, call 911 from a Center phone or (604) 555-1212 from any cell phone.

30,000 pennies for your thoughts

Could you use an extra $300? Several Center employees have gone home with a little extra in their pockets thanks to their contributions to the Ames Safety Suggestion Program. Kathleen Giffin suggested that we excess 4-wheeled office chairs. Rho Christensen shared her concern that tungsten-halogen upright lamps can be fire hazards in offices if improperly utilized. Paul Grams recommended offices use smaller water bottles that are easier to install. Jenny Skobielew proposed better traction for the stairs in N213.

The Safety Office welcomes your suggestions each month. Not only are you making Ames a safer place to work, we’ll pay you for it! As a reminder, the guidelines for the program are listed on pamphlets that are available throughout the center as well on the web at http://q/qh/safety/award. If you cannot find an application, please request one from Code QH at ext. 4-5602 or ext. 4-0268.

Ergonomics -- beyond the office

The principles of office ergonomics are applicable to the industrial and laboratory settings. This comprises the elimination or reduction of extreme or awkward postures, excessive force and highly repetitive movements. Tool design along with vibration control can assist in the reduction of repetitive stress injuries.

General points to remember are:
- The back should remain straight whether seated or standing.
- Use a footrest to elevate one foot when standing for long periods of time.
- Arms should remain below shoulder level and close to the body.
- Wrists should not be bent to the extreme in any position.
- Tool handles should distribute pressure evenly over the palm of the hand.

- Use tools with consideration for minimal vibration.
- Sit/stand/lean stools for jobs that require constant standing.
- For heavy objects, use a hoist or multiple personnel lift.

Ergonomic controls can vary from a lift/tilt table to a homemade footrest. They should never be ignored due to cost. Take the time to look at what you are doing and ask, “Is there a better way?” Then, share your thoughts with others. We can all learn from each other.

For help with your ergonomic situations in the shop or in the laboratory, contact Deborah Hunter at ext. 4-3352 or Miriam Glazer at ext. 4-5172.

From the Chief Financial Officer

Achieving an “excellent” rating in the areas of facility inspections, employee interviews, employee involvement and safety and health training during the recent VPP self-assessment has had a very positive impact on our code. This reflects our total commitment to our staff’s safety, safe working conditions and our effort to achieve the Centers’ goal of VPP Star status.

Safety is the first priority in Code C. Safe working procedures and habits are routinely discussed in monthly staff safety meetings as well as safety inspections to assist in identifying potential job hazards. Additional safety and hazard analysis information is sent through the e-mail system to keep each individual staff member up-to-date on safety issues.

Job hazard analysis

What’s important—the thousand times that you drive your car without incident or the one time that you don’t? Is it worth it to prepare with equal concern for your safety during each of those events or just when it is convenient?

Obviously, unless you are a gambler or can read crystal balls, you better be ready all the time. To effectively prepare you need to analyze all aspects of each task for the safest procedure. Then you need to ‘buckle-in’ to those procedures each time the task is performed. This is just as important for those oddball tasks that are only performed occasionally. Some of these tasks may have the potential for serious injury.

Throw out your back just once and the pain of that memory should remind you what not to do. But who needs that kind of experience? Moving office furniture (e.g. monitors) or lifting heavy items (e.g. water bottles) can lead to serious and painful injuries. This is also true for those seemingly innocent everyday bad habits, such as poor keyboard posture. Little bad habits can add up to debilitating injuries and chronic pain. Getting old is tough enough without handicapping yourself with unnecessary injuries. Get safe!

May 14, 2001
Safety Awareness

The astrobiology and space research perspective

Employees in the Astrobiology and Space Research Directorate have demonstrated their longstanding awareness of the existence and the types of hazards in the scientific workplace. In our pursuit of Voluntary Protection Plan (VPP) certification, we renew our commitment to safety, to our well-being, and to the well-being of our visitors and co-workers. Each Code S employee should do several things in the coming months. First, review your Employee Guide to Voluntary Protection Certification at Ames. Re-examine your work environment and daily practices, and make at least one real change to promote a safer work environment for yourself or for a co-worker. Re-examine your training survey and enroll in a required or recommended safety class. You, the employees, are our most valuable asset. By taking these small steps to maintain a safe work environment, you will continue to produce the outstanding achievements in research for which Code S is recognized.

The research staff in the directorate address fundamental and profound questions about our universe, about living systems and about the origin of life. Our work and our quest for knowledge are unique and many of our facilities are one-of-a-kind.

Our talents are also unique. Our research and project management staff consists of chemists, biologists, ecologists, physicists, physicians, theoretical and observational astrophysicists, planetary and atmospheric scientists, and engineers. They are highly-trained professionals with advanced degrees and extensive research experience; yet they continually renew their skills and receive training in safe laboratory practices, in electrical, mechanical or biohazard safety, and in emergency procedures. Academic training and laboratory experience, combined with the Ames formal safety training and informal lab-specific training, create a well-informed, safety conscious staff. As an outcome of our training efforts in recent years, we have experienced fewer injuries.

The pursuit of VPP Star certification has given all of us a greater awareness of hazards that exist outside the laboratory environment. For example, we look with a new perspective at our own housekeeping practices, noting and alleviating potentially dangerous fire loads and egress limitations. We recognize an unhealthy workstation arrangement and procure ergonomic equipment to minimize health risks. We rigorously enforce seismic bracing of shelves and cabinets. We identify and rectify potential electrical problems, slip hazards and fall hazards. We identify, evaluate, and whenever possible take action to isolate and alleviate facility safety and industrial hygiene problems, such as our recent mold abatement project in N245.

In short, VPP has not only heightened our awareness of familiar hazards, but also broadened our overall awareness of safety issues and health concerns throughout Ames facilities.

Going somewhere in a hurry?

Better know where you are going before you have to go there! Where can you find the exit routes map to your building and a description of important emergency information? That’s all in your Building Emergency Action Plan (BEAP). Your BEAP provides the location and information for emergency equipment and evacuation routes (i.e. assembly areas, exit routes, eye wash and fire extinguisher locations), emergency responder equipment (i.e. shut-off valves and sprinkler systems), and chemical storage locations (coded by hazard class, including waste accumulation locations). If you do not know where your BEAP is located, ask your supervisor. BEAP training is one of the required training classes for each employee at the Center.

If you are visiting in a building, and an alarm sounds, ask the first person you see what the alarm is for and where the nearest exit and designated assembly area is located. The best rule is: exit as soon as you hear an alarm sound. Do not wait for your neighbor unless they physically need your help and do not finish that all important phone call.

Read the MSDS “label”

When you are hungry, you grab something to eat. If you aren’t sure about the ingredients in your food, you read the label on the box it comes in. In the workplace, you may be ingesting odors, dust, or other chemicals through your skin, organs, and lungs. When you need detailed information about the chemical substances that you are working with, or may be exposed to, the Material Safety Data Sheet (MSDS) is your label. OSHA requires an MSDS for every chemical substance in your workplace. The material safety data sheet provides information about the chemical that may not fit or be otherwise provided. A few of the main categories in the MSDS are: product information, health effects, hazard prevention and protection. OSHA does not require a specific format for the MSDS; however, they do specify the information that the MSDS must contain.

If you don’t have an MSDS for a substance you are currently working with, ask your supervisor for assistance or check out the MSDS section on the web at http://qh/safety. For more information about MSDS, all employees can attend a hazard communication training class. These are also available for enrollment at the same

YOUR Safety Office

The Ames Safety Office provides employees and guests with the best possible support regarding worker safety, medical treatment, health information and fitness programs. And it is all free! If you have a question, contact the Safety Office at ext. 4-5602. They will do their best to understand and address your concerns. Your confidentiality is as important to us as your ultimate well-being.

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May 14, 2001
Is your fire extinguisher handy?

There is a routine task in your hallway, maybe near the exit door or maybe near the stairway. This routine task is just as important as wearing your seat belt. Fortunately, there are other things in our lives which should be much more interesting. This routine task is a monthly visual check of your fire extinguishers. Yes, monthly, year after year, with the hope that even though you’ve assured yourself it’s ready for action, you’ll never need it! But how do you remember the five items that need to be checked? The answer is H-A-N-D-Y.

H is for the hanger by which to hang the extinguisher. Every extinguisher must be hung on the wall in a permanent location, easily visible and easily found. It should easily come off the hook for easy accessibility.

A is for the ABC classification check. The A, B, C, D or ABC is imprinted on the extinguisher. Class A is for normal combustibles like paper and wood. Class B is for flammable liquids and Class C is for electrical fires. To extinguish a printer or a copier use a Class C. Some multi-purpose extinguishers are rated for A, B, and C (ABC) and may be used on these classes of fire. Class D is for combustible metals and is typically used in machine shops.

N is for the needle reading on the pressure gage. The needle must show full pressure and nothing less.

D is for distance traveled. Extinguishers must be located no further than 75 feet from a potential Class A flammable source, no further than 50 feet for Class B and C flammable sources, and no further than 35 feet for a Class D flammable source.

Y is for yearly maintenance on the extinguisher. Check for the service tag indicating professional mechanical maintenance within the last 12 months. Immediately report any deviations for corrective action.

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May 14, 2001

The R&D services approach to safety

Undoubtedly, the most visible facilities of the R&D Services Directorate are the wind tunnels run by the Wind Tunnel Operations Division (FO). Specifically, these are the National Full-Scale Aerodynamics Complex, the Unitary Plan Wind Tunnel and the 12-Ft. Pressure Wind Tunnel. These huge facilities move massive amounts of air, in some cases compressed to as much as six atmospheres, and in the case of the Unitary, at supersonic speeds. Such extreme conditions obviously require a great deal of power, complex machinery and detailed operating procedures. This environment demands effective safety procedures and the absolute safety awareness and practice of all employees.

Code FO has a broad-based safety program, tied in with the Center and directorate programs, to effectively manage the significant hazards present within their facility operations. Code FO has successfully directed considerable resources toward improving general plant safety. Representative actions include improving general housekeeping, improving seismic bracing of furniture and equipment, improving machine guarding, upgrading lighting systems and implementing major pest control at various facilities.

Our civil servant and contractor personnel are working together to implement a comprehensive safety and health program. The managers remain directly involved in safety program and process development through standing weekly safety meetings. Non-management personnel have opportunities to participate in the safety processes through their safety committees, safety problem solving groups, and formal and informal suggestion processes.

We have used internal and external support contractor resources to conduct training on a wide variety of pertinent subjects from basic safety philosophy and hazard recognition to fall protection and lockout/tagout. Initially both management and employees experienced a modest amount of frustration as the implemented safety program required these paradigm shifts, but the overall effect of these activities and the response of our personnel has been a noticeably enhanced safety program.

The R&D services directorate is a very diverse and complex organization that requires cooperation between 250 civil service and 300 contract employees. We have three divisions and eight branches in Code F, occupying some twelve facilities where offices, shops, and labs are found. Our high-risk facilities are wind tunnel operations, composites and metals shops and calibration services.

Safety information from the Center MMR’s, safety committees, and VPP meetings is flowed both up and down, as well as across our whole organization. The weekly directorate staff meetings and briefings are used to discuss and disseminate safety information to the divisions where it is then flowed down to the branches. Progress on monthly safety Inspections, safety meetings, safety training, and inspection metrics are monitored daily for accuracy.

We manage the infamous X-files. These are building safety/hazard correction issues that require significant dollars to be abated, and are outside the scope of the respective code. They have been removed from that code and placed under the Center’s responsibility in the X-files. There are two categories for the X-files: construction of facilities (CoF), which includes fire prevention, fire protection, and ventilation; and maintenance, which includes exit/emergency lighting, seismic bracing/modifications, electrical safety, doors, floors and signage. A file is sent to every VPP directorate representative monthly showing open issues in their organization. A Risk Assessment Code (RAC), as described in NPG 8715.3, is assigned by Code Q’s staff of health and safety professionals and is used to help prioritize in what program year facility issues will be placed.
Sorcery to the test by shooting them several times. He gave them a magic potion and muttered a spell to make two men bulletproof.

“James Numeni, a witch doctor in Liberia, 1999 Darwin award went to James Numeni. The Darwin award judges to have met their demise through acts of extraordinary stupidity. First example: The fourth entry for the 1999 Darwin award went to James Numeni. “James Numeni, a witch doctor in Liberia, cast a spell to make two men bulletproof. He gave them a magic potion and muttered some special words. Then, James put his sorcery to the test by shooting them several times. Both men died instantly.”

Mr. Wizard says that this accident could easily have been avoided through the use of proper personal protective equipment, in this case, Kevlar bulletproof vests. Magic potions and spells are not a scientifically acceptable method to prevent injuries.

Second example: The fifth entry for the 1998 award went to a nineteen-year-old revolver player. In September 1997, a nineteen-year-old youth in Blaine, MN, fatally shot himself with a .38-caliber revolver while playing Russian roulette. The man loaded one bullet into the gun’s cylinder, spun the cylinder, and put the gun to his head. His buddies tried to persuade him to stop but the man, after looking at the ammo cylinder, assured his pals the bullet was not behind the barrel, but next to it. A homicide detective related that not everyone realizes how a revolver works. As you pull the trigger, the cylinder rotates, bringing the next ammo chamber under the hammer.

Mr. Wizard says that training is the key to prevention of this injury. If all owners and potential operators of revolvers were required to take a 2-hour course on the basic principles of handgun design, a 2-hour course in rotational mathematics and Euclidean geometry, a 40-hour course in probabilistic risk assessment, a 2-hour class on job hazard analysis, and a six-week language course in Russian as a second language, they would be too busy to play roulette.

Third example: The 1995 Darwin award went to an unnamed victim of a recalcitrant Coke machine. “Our fragmentary report indicates a young man was killed by a Coke machine when the machine toppled over on top of him as he was trying to tip a free Coca Cola from it.”

Mr. Wizard says that this is a clear case for engineering controls to eliminate hazards. If the Coke machine had proper earthquake bracing, it would not have toppled, and the vendor would save thousands of coins for products delivered for actual coinage, greatly increasing their profit margin, maybe enough to lift an economy out of recession.

So, to summarize, all accidents can be prevented using scientifically proven methods of personal protective equipment selection, training and engineering control.
Ames Classifieds

Ads for the next issue should be sent to astrogmaill arc.nasa.gov by the Monday following publication of the present issue and must be resubmitted for each issue. Ads must involve personal needs or items; no commercial/ third-party ads will run. Space is available on a first-come, first-served basis. Classified ads are $1.25 per word, minimum of $4 per ad. Deadline is Monday, March 20. The Ames Astrogram is available at the Ames Exchange on the first & third Wednesday of each month. Issue dates: May 9, May 23.

Housing

3 bd/1.5 ba, 2-story twins on Luz Ave, San José. Newly painted inside, dishwasher, gas heat, w/v carpeting, outside child play area/large 1 car port. Easy access to H101/880/280. $295k. Carolina Guzman (408) 359-2881.

NRC senior research associate & spouse seek a furnished 2 bdrm apartment or house, Feb 1 to end July 2001. Interested in buying/leasing a car, used car for this period. Sophie Wuerger, email to: s.wuerger@keck.ucsc.edu or phone (+1 44 782 572299 or +44 782 584214) or by fax (+44 782 583055).

Recently expanded and remodeled home 4bd/2ba home available for rent for one year starting July '01. West San Jose. Moreland school district. 30 minute commute. Quiet street with great neighbors. Available fully or partially furnished. No smoking, no pets. $2500/mo. Carol (408) 253-7417.

NRC post-doctoral fellow from Chile seeks a studio or 1-bdrm apartment for immediate occupancy. Marcella (408) 296-6235.

Very cute, quiet & secluded 1bd/1ba condo for rent in Sunnyvale just off Old San Francisco Rd/commute to Ames of ca. 10 mins. New paint and carpet, washer and dryer, microwave and new dishwasher, large patio and 1 car carport with storage. N/S & no pets. $1,800/mo. plus dep. Available June 1st. Call (408) 379-9039 or email to: msegal3833@aol.com.

Miscellaneous

Audio case briefcase, (60) capacity, black vinyl exterior, black felt interior, call for emailing photos $15. Call (408) 295-2160.

25 ft. '85 Alpenlite 5th wheel trailer, clean, loaded, new batts & propane tanks. $6,900. Call (650) 369-0578.

Sale boat, beautiful, 15 ft, mahogany "Flying Dutchman" Junior, complete trailer sails, spinnaker and ready to go. Great for novice or experienced sailor alike. $1,195 or B/O. John (408) 249-8209.

Indoor cat climbing tree: floor to ceiling tension pole, w/3 platforms, covered w/beige carpet. $35. Mark, Call (650) 257-3175.


American Std. toilet. 2-piece antiquity 1.6 GTF 99%. New, pd $216, sell $75. Call (650) 968-8650.

For sale: Self-Cleaning Cat Litter Box, in excellent condition. Electrical 'Litter Maid' with motion detector and delayed action. $65. Mark (408) 257-3175.

85 Toyota ’86 MR2; 5 spd, A/C, sunrf, AM/FM/cass, runs, nds, 123K mls, $1,500 or B/O. Call (831) 442-0985.


Acra Integra C5R 2-door, turquoise ext, charcoal int., 5 spd, loaded, gd cond, 1 owner. Asking $9k. Call (650) 368-2501.

95 Suzuki RF600 4cy, 66dp, exe. cond., 13k m, Teel, Yosh pipe, t/shield, flush blinkers, tank bra, very clean never down $35000bbs, Damon (831) 630-0716 or e-mail me for a picture at Dflansburg.

BMW Z3-2.8, metallic green w/ black top, loaded, only 22k mls, $29,500. Call (408) 955-9122.


Transportation

Parks & Rec. (AC Transit) - 4pm, 3:45pm, 3pm, 2:30pm, 1:45pm, 1:00pm, 02pm, 11am, 09am. From N-269/Rm 179. Guests welcome. POC: Samson Wuerger, email to: swuerger@keck.ucsc.edu.

Carpool

Climate-Walnut Creek Vanpool seeking additional rider. Departs Clayton 5 a.m., Rudgear 5:20 a.m. Arrive Ames 6:30 a.m; Departs Ames 4:00 p.m., M-Th, 3:00 p.m. every other Thursday (check website for meeting dates: http://accc.arc.nasa.gov), 12 noon to 2 p.m., N269, rm. 201. POC: Katharine Lee, ext A-5659.

Ames Child Care Center Board of Directors Mtg. Every other Thursday (check website for meeting dates: http://accc.arc.nasa.gov), 12 noon to 2 p.m., N269, rm. 201. POC: Helen Hwang, email to: bmohlenhoff@mail.arc.nasa.gov.

Ames Amateur Radio Club, May 17, 12 noon, T28-N (across from N-235). POC: Michael Wright, K6GRK, at ext. 4-6262. URL: http://hamradio.arc.nasa.gov.

Native American Advisory Committee mtg, May 22, 12 noon to 1 p.m., Ames Café. POC: Mike Liu at ext. 4-1121.

NARFE (National Association of Retired Federal Employees, NARFE), San Jose Chapter #50, Mtg. Jun 1, at Hometown Buffet, Westgate Mall, 4735 Hamilton Av, San Jose. Prog: Ice cream & Mtg. at 9 a.m., followed by lunch, $6.27, in a reserved area. Program starts at 9:30 a.m. followed by lunch. POC: Rod Perry (650) 967-9418 or NARFE 1-800-627-3394.

Ames Contractor Council Mtg, Jun 6, 11 a.m., N-200, Comm. Rm. POC: David Lawrence at ext. 4-6434.

Environmental, Health and Safety Monthly Information Forum, Jun 7, 8:30 a.m. to 9:30 a.m. Bidg. 19/Rm 1040. POC: Julie Quanz at ext. 4-6810.

Exchange Information

Information about products, services and opportunities provided to the employed and contractor community by the Ames Exchange Council.

Beyond Galileo N-235 (6 a.m. to 2 p.m.)

New items arriving daily. Stop by and see the unique one of kind items. Ask about the NASA customized gifts for special occasions.

Mega Bites (Ames Café) N-235 (6 a.m. to 2 p.m.)

• Catering is available for your office BBQ. BBQ choices: hamburgers, chicken, hot dog, potato or pasta salad, 1/2 assorted soads, 1/2 bottle water; cookies. Price per person if you do the cooking, $7.50. Price per person with Mega Bites cooking, $8.00. Chicken $9.5 - $12.95; steak or ribs $12.95 and up. Side orders: beans, garlic bread or add'l salads, $1 per person.

Visitor Center Gift Shop N-223 (10 a.m. to 4:30 p.m.)

NASA logo merchandise, souvenirs, toys, gifts and educational items. Make your reservations for Chase Park here.

Tickets, etc... (8 a.m. to 4 p.m.)

Entertainment and transit tickets. Great discounts on many favorites. Don’t miss the huge discounted ticket price for Victor/Virginia, San José Center for the Performing Arts, Saturday June 2. $60 tickets for only $43. Stop by and check out the entertainment tickets for summer fun!

NASA Lodge (N-19) 603-7100

Open 7 days a week, 7:00 a.m. to 10 p.m. Rates from $40 - $50.

NASA Swim Center (N108) 603-8025


Vacation Opportunities

Lake Tahoe-Squaw Valley townhouse, 3bd/2ba, view of slopes, close to lifts. Wknd $490, midwk $180 nite. Includes linens, fireplace. Call (650) 968-4155 or e-mail DBMcKellar@aol.com.

South Lake Tahoe cottage with wood fireplace and hot tub. Rnts from $50 to $130 per night. Call (650) 967-7659 or (650) 704-7732.

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May 14, 2001
**Stressed? Want help?**

Job stress can attack you in numerous and insidious ways. Your immune system takes a dive. Your patience and ability to enjoy the world around you plummet. Days get long and productivity limps along at less than optimum levels. All of which can, of course, make you even more stressed! Bottom line: stress is a killer. It kills joy, relaxation and productivity.

Job stress is the harmful physical and emotional response that occurs when job requirements do not match the capabilities, resources, needs, or interests of the worker. Job stress increases your chances for poor health and injury. Job stress is often confused with challenge, but these two are not the same. A challenge energizes us psychologically and physically, and it motivates us to learn new skills and master the job. When this challenge is met, we feel more in tune with ourselves and the world around us. A challenge is an important ingredient for healthy and productive work. This type of challenge is akin to the adage “a little bit of stress is good for you.”

But the situation is much different when the challenge turns to job demands that cannot be met. Then relaxation is displaced by frustration leading to exhaustion. Job satisfaction shrinks while job stress grows. These conditions are a recipe for disaster with illness, injury, and job failure being the likely outcome.

De-stress! But how? Here are the keys:

- Balance between work and family or personal life
- A support network of friends and coworkers
- A relaxed and positive outlook

Short-lived or infrequent episodes of stress pose little risk. But when stressful situations go unresolved, the body is kept in a constant state of agitation, which incurs an exacting toll in wear and tear to your delicate biological systems. Ultimately, fatigue or other biological or emotional damage results.

The ability of your body to be healthy and happy can become seriously compromised. The result is a major escalation in the risk of injury or disease.

But do not suffer alone! Professional and caring help is available! Concern: Employee Assistance Program (EAP) offers short-term counseling and referral as a benefit to civil service employees and their dependents.

Call for free, confidential counseling, referral or educational material at (408) 223-4050, (650) 940-7100 or 1-(800) 344-4222. You can also find them on the web at: http://www.concern-eap.com.

If you are a contractor, check with your benefits office to see if you have EAP coverage. If you don’t have the benefit, remember that most medical insurance plans have some kind of mental health benefits.

The Health and Safety Office is offering two programs in the next couple of months: “Keys for Managing Stress” on May 17 from 12 noon to 1:00 p.m. in the N-245 Auditorium; and “Managing Stress Through Humor” on June 7 in the N201 Auditorium.

Watch your emails for more information, and call Miriam Glazer at ext. 4-5172 for more information.

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**Safety, health and medical services website**

The Code QH web site located at: http://q/qh provides the most current safety, health, training and safety history information to the Center. The web site provides policy and procedures established to protect workers safety and health.

Under the safety section you will find the Ames Safety and Health Manual, MSDS information, laboratory regulations and OSHA information.

Under the health section you will find information on the Employee Assistance Program (someone who wants to hear your personal concerns), Ames’ blood donor program, the organ donor program, and information on domestic violence, including where you can get help.

We have a doctor and registered nurses on call here at the Ames Health Unit, between Mega Bytes (the Ames Café) and the volleyball court. If you are injured or do not feel well, you can receive excellent medical attention right here at the Center.

Under “training” you can not only see what classes are available, but you can also register for environmental, health and safety training classes right at the web site.

Ames fitness center offers a variety of free fitness related programs. Anywhere else these programs would cost more money and be far less convenient.

We hope to provide a supportive resource through our services and to assist all Center personnel to accomplish their mission.