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The eToolkit supports NATA's Safety 1st Management System (SMS) for Ground Operations and NATA's Professional Line Service Training Program (PLST Online). This monthly newsletter highlights known and emerging trends, environmental and geographical matters, as well as advances in operational efficiency and safety. Additional issues include a section of real-time incidents on the ground. Flight and ground safety have been enhanced and many accidents prevented because of shared experiences in this newsletter.

Managing Fatigue: A Systematic Approach

By Lindsey McFarren, lindsey@mcfarrenaviation.com

A fatigue risk management system (FRMS) is a systematic method whereby an organization optimizes the risks associated with fatigue related to error. Fatigue management is a joint responsibility: both the organization and the individual play critical roles in managing fatigue and minimizing risk of errors.

The organization is responsible for managing the workplace, including hours of work, work environment, and workload, while the individual is responsible for managing lifestyle and medical disorders.

FRMS: Fatigue Policies, Training, and Assessments

To develop and implement an FRMS, the organization must first develop policies related to fatigue management. Like a Safety Management System, an FRMS must begin with the commitment and support of the senior leadership of the company. Responsibilities and duties, including fatigue-related event reporting requirements, must be described. These reporting requirements must include a non-punitive policy (except for examples of non-compliance, drug- or alcohol-related scenarios, or acts of negligence or intentional error). A "just culture" is a crucial component of FRMS.

The following policy could be part of an FRMS:
A fatigue risk assessment is required prior to and at the mid-point of all overnight shifts, work periods of more than 8 hours, or other shifts identified by risk management processes. Further, during these shifts, employees should monitor each other for fatigue symptoms, including:

- Fidgeting
- Frequent eye blinking
- Adjusting temperature down
- Yawning
- Head drooping
- Personality change (quieter than normal, withdrawn, or irritable)

An example of a simple fatigue assessment is included at the end of this article.

The organization must also train all employees on fatigue, symptoms of fatigue, and possible risks related

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to fatigue. Training should include discussion on the restorative power of napping and the importance of good physical condition, including exercise and diet. Training should also cover the effective use of caffeine and the negative impacts of alcohol and medications (prescription and over-the-counter). Employees should be instructed on the possible impacts of social/family life, as well as commuting, on work performance.

Finally, the organization must have a process to assess fatigue in the workplace. Some methods of assessing fatigue include regular shift/flight assignment reviews, fatigue level assessments, and fatigue management techniques. There are a number of software programs that attempt to assess fatigue level. There are also some fancy models for assessing fatigue. At the end of the day, the fatigue assessment that should work best for your organization is the one your employees should **USE**, so my advice is to keep it simple.

Fatigue Mitigation Techniques

There may be occasions when operational demands require employees to work longer hours than normal. A number of control factors can be put in place. If at any stage an employee feels unfit for work, they should be relieved of duty and sent home or given an opportunity to rest.

A number of controls or strategies can be used to minimize the likelihood of errors when employees experience low or moderate levels of fatigue. These include:

- Napping
- Supervisor and co-worker monitoring / team tasking
- Task rotation and re-allocation
- Additional breaks and strategic use of caffeine

Napping

Where appropriate, employees should be allowed to take a nap or controlled rest. Reasonable short-term sleeping facilities should be provided for employees during working hours.

Highest priority for napping should be given to those with the highest fatigue-related risk. Naps should be at least 20 minutes and no more than 2 hours, depending on operational constraints and fatigue risk involved. Before returning to work after a nap, employees should be given sufficient time to overcome the effects of sleep inertia. Typically, this is at least 10 minutes during the day, and up to 20 minutes in the early hours of the morning.

Supervisory and co-worker monitoring / team tasking

In instances where operational demands require extended hours of work that may result in employees working through higher levels of fatigue than normal, employees and supervisors should be proactive in observing and acting on fatigue-related symptoms in one another. In cases where fatigue symptoms are repeatedly observed in an employee, the supervisor should be informed and measures should be taken to allow the employee to take a break or a nap, or use other strategies to improve alertness (such as exercise, caffeine). Additional supervisory checks for safety-critical work should also take place.

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Some tasks requiring extended hours of work or opposite side of the clock work might best be accomplished by a two-person team.

Task rotation and task re-allocation

Rotation of tasks should be arranged during periods when operational demands may increase fatigue-related risks. Monotonous tasks with little variety should be targeted in particular. Supervisors should rotate work in consultation with concerned employees to ensure that all are assigned to familiar tasks. No employee should be assigned to more than three different tasks during a given period.

In situations of increased fatigue-related risk, such as when an employee repeatedly exhibits symptoms of fatigue, it may be necessary to re-schedule or re-assign some tasks. Any task sensitive to the effects of fatigue should be re-scheduled or re-assigned.

Additional breaks and strategic use of caffeine

When operational requirements call for longer hours of work, additional breaks of 10 to 20 minutes should be provided to employees on request. Employees are responsible for monitoring themselves and for requesting a break when they feel it necessary to restore their performance levels. Employees should also suggest breaks to co-workers if they observe fatigue symptoms. During these breaks, employees should take necessary actions to counter fatigue effects (exercise, drink caffeine, etc.).

It should be noted that since habitual use diminishes the stimulating effects of caffeine, regular use of caffeine to prevent fatigue is not encouraged. However, it can be useful in contingency situations to help increase alertness when required.

Lindsey McFarren is the president of McFarren Aviation Consulting, which specializes in general aviation safety and operations consulting. lindsey@mcfarrenaviation.com.

Alertness Assessment Form

A fatigue risk assessment is required prior to and at the mid-point of all overnight shifts, work periods of more than 8 hours, or other shifts identified by risk management processes.

Report Time: _____ (UTC)

Work conditions at time of assessment (check all that apply):
□ Start of shift
□ Mid-point of shift
□ Work period of more than 8 hours
□ Work period of more than 10 hours
□ Prior break period between shifts less than 8 hours

Please circle how you feel:

1. Fully alert, wide awake

2. Very lively, responsive, but not at peak

3. OK, somewhat fresh

4. A little tired, less than fresh

5. Moderately tired, let down

6. Extremely tired, very difficult to concentrate

7. Completely exhausted

Then mark the same score on the line below:

Alert Exhausted
1 4 7

A score in the yellow range (4-5) should be discussed with a co-worker or supervisor immediately.

A score in the red range (6-7) should be discussed with your supervisor immediately.

A score in the green range does not need to be submitted or reviewed.

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Education Corner

NATA's 5th Annual Spring Training Week – Las Vegas March 11-14

NATA is pleased to host our 5th Annual Spring Training Week, March 11-14, 2013, in Las Vegas, Nevada. Spring Training is a line service camp featuring all-star seminars designed to enhance safety practices, provide major league knowledge and help you coach your team to a winning season.

Why Attend Spring Training?

NATA's Spring Training Week provides the business skills and conditioning necessary for improved performance in 2012 and for years to come.

You're Safe…The skills and techniques learned at NATA's Spring Training Week help to ensure safer operations for your team. Don't miss the opportunity to complete FAA-required 14 CFR 139.321 Fire Safety Training.

Cover Your Bases…Attend all seminars for full coverage of safety, environmental, and training issues.

Hit a Home-run…Apply the skills and tactics you have learned at NATA Spring Training Week right away.

Seminars at Spring Training include Line Service Supervisor Training, FBO Success, NATA Safety 1st Trainer, and Environmental Compliance. Registration for Spring Training will be available soon. Visit the Spring Training website in the coming weeks for registration.

NATA Fuel Handling & Quality Control Webinar Series – Purchase Recordings Today

NATA recently offered a four-part webinar series on fuel handling and quality control challenges. The webinars were specifically designed to provide information that your staff needs to ensure that clean, dry and on-specification fuel is provided to every aircraft that visits your facility.

The four webinars, presented by industry experts, were titled **Aviation Fuel Quality Control from Receipt to Issue**, **Aviation Quality Control Record Keeping**, **Fuel Additives**, and **Aviation Fuel Filter Monitors – El-1583, 6th Edition**.

These webinars are invaluable training resources for your staff. For a purchase price of $295 for members and $395 for non-members, you have access to unlimited use of recordings of all four webinars to use at your convenience. Included with your purchase is a copy of NATA's Refueling and Quality Control Procedures for Airport Service and Support Operations

Click here to purchase the webinar series recordings.

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NATA's New Workers' Compensation Insurance Program™

Starting on January 1, 2013, NATA's new workers' compensation insurance program will feature a very nice premium payment plan. Companion P&C sends premium invoices directly to the Policyholder. There are several options available to pay premium based on account size. More information about Companion P&C premium payment plans is available at: http://beaconais.com/E-Z_Pay/E-Z_Pay.html#3. Visit http://www.beaconais.com/NATA/WC.html for more information on the new NATA Workers' Compensation Insurance Program™.

Safety Corner

OSHA Fact Sheet – Hazard Communication Standard Final

New changes to the Occupational Safety and Health Administration's (OSHA) Hazard Communication Standard are bringing the United States into alignment with the Globally Harmonized System of Classification and Labeling of Chemicals (GHS), further improving safety and health protections for America's workers. Building on the success of OSHA's current Hazard Communication Standard, the GHS is expected to prevent injuries and illnesses, save lives and improve trade conditions for chemical manufacturers. The Hazard Communication Standard in 1983 gave the workers the 'right to know,' but the new Globally Harmonized System gives workers the 'right to understand.'

The new hazard communication standard still requires chemical manufacturers and importers to evaluate the chemicals they produce or import and provide hazard information to employers and workers by putting labels on containers and preparing safety data sheets. However, the old standard allowed chemical manufacturers and importers to convey hazard information on labels and material safety data sheets in whatever format they chose. The modified standard provides a single set of harmonized criteria for classifying chemicals according to their health and physical hazards and specifies hazard communication elements for labeling and safety data sheets.

Benefits: The new standard covers over 43 million workers who produce or handle hazardous chemicals in more than five million workplaces across the country. The modification is expected to prevent over 500 workplace injuries and illnesses and 43 fatalities annually. Once fully implemented it will also:

- Enhance worker comprehension of hazards, especially for low and limited-literacy workers, reduce confusion in the workplace, facilitate safety training, and result in safer handling and use of chemicals;
- Provide workers quicker and more efficient access to information on the safety data sheets;
- Result in cost savings to American businesses of more than $475 million in productivity improvements, fewer safety data sheet and label updates and simpler new hazard communication training; and
- Reduce trade barriers by harmonizing with systems around the world.

Rulemaking background: OSHA published a Notice of Proposed Rulemaking to update the Hazard Communication Standard in September 2009 and held public hearings in March 2010.

Major changes to the Hazard Communication Standard:

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- **Hazard classification:** Chemical manufacturers and importers are required to determine the hazards of the chemicals they produce or import. Hazard classification under the new, updated standard provides specific criteria to address health and physical hazards as well as classification of chemical mixtures.
- **Labels:** Chemical manufacturers and importers must provide a label that includes a signal word, pictogram, hazard statement, and precautionary statement for each hazard class and category.
- **Safety Data Sheets:** The new format requires 16 specific sections, ensuring consistency in presentation of important protection information.
- **Information and training:** To facilitate understanding of the new system, the new standard requires that workers be trained by December 1, 2013 on the new label elements and safety data sheet format, in addition to the current training requirements.

Changes from the Proposed to the Final Rule: OSHA reviewed the record and revised the Final Rule in response to the comments submitted. Major changes include:

- Maintaining the disclosure of exposure limits (Threshold Limit Values [TLVs]) established by the American Conference of Governmental Industrial Hygienists (ACGIH) and carcinogen status from nationally and internationally recognized lists of carcinogens on the safety data sheets;
- Clarification that the borders of pictograms must be red on the label;
- Flexibility regarding the required precautionary and hazard statements to allow label preparers to consolidate and/or eliminate inappropriate or redundant statements; and
- Longer deadlines for full implementation of the standard (see the chart below).

What you need to do and when:

- **Chemical users:** Continue to update safety data sheets when new ones become available, provide training on the new label elements and update hazard communication programs if new hazards are identified.
- **Chemical Producers:** Review hazard information for all chemicals produced or imported, classify chemicals according to the new classification criteria, and update labels and safety data sheets.

Effective Completion Date	Requirement(s)	Who
December 1, 2013	Train employees on the new label elements and SDS format.	Employers
June 1, 2015* December 1, 2015	Comply with all modified provisions of this final rule, except: Distributors may ship products labeled by manufacturers under the old system until December 1, 2015.	Chemical manufacturers, importers, distributors and employers
June 1, 2016	Update alternative workplace labeling and hazard communication program as necessary, and provide additional employee training for newly identified physical or health hazards.	Employers
Transition Period	Comply with either 29 CFR 1910.1200 (this final standard), or the current standard, or both.	All chemical manufacturers, importers, distributors and employers

* This date coincides with the European Union implementation date for classification of mixtures.

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Other U.S. Agencies: The Department of Transportation (DOT), Environmental Protection Agency, and the Consumer Product Safety Commission actively participated in developing the GHS. DOT has already modified its requirements for classification and labeling to make them consistent with United Nations transport requirements and the new globally harmonized system.

Global implementation: The new system is being implemented throughout the world by countries including Canada, the European Union, China, Australia, and Japan.

Additional information: More information on the hazard communication standard, including the link to the Federal Register notice, can be found on OSHA's hazard communication safety and health topics page at www.osha.gov/dsg/hazcom/index.html.

OSHA Quick Card – Hazard Communication Safety Data Sheets

OSHA® QUICK CARD™

Hazard Communication Safety Data Sheets

The Hazard Communication Standard (HCS) requires chemical manufacturers, distributors, or importers to provide Safety Data Sheets (SDSs) (formerly known as Material Safety Data Sheets or MSDSs) to communicate the hazards of hazardous chemical products. As of June 1, 2015, the HCS will require new SDSs to be in a uniform format, and include the section numbers, the headings, and associated information under the headings below:

Section 1, Identification includes product identifier; manufacturer or distributor name, address, phone number; emergency phone number; recommended use; restrictions on use.

Section 2, Hazard(s) identification includes all hazards regarding the chemical; required label elements.

Section 3, Composition/information on ingredients includes information on chemical ingredients; trade secret claims.

Section 4, First-aid measures includes important symptoms/effects, acute, delayed; required treatment.

Section 5, Fire-fighting measures lists suitable extinguishing techniques, equipment; chemical hazards from fire.

Section 6, Accidental release measures lists emergency procedures; protective equipment; proper methods of containment and cleanup.

Section 7, Handling and storage lists precautions for safe handling and storage, including incompatibilities.

Section 8, Exposure controls/personal protection lists OSHA's Permissible Exposure Limits (PELs); Threshold Limit Values (TLVs); appropriate engineering controls; personal protective equipment (PPE).

Section 9, Physical and chemical properties lists the chemical's characteristics.

Section 10, Stability and reactivity lists chemical stability and possibility of hazardous reactions.

Section 11, Toxicological information includes routes of exposure; related symptoms, acute and chronic effects; numerical measures of toxicity.

Section 12, Ecological information*
Section 13, Disposal considerations*
Section 14, Transport information*
Section 15, Regulatory information*

Section 16, Other information, includes the date of preparation or last revision.

*Note: Since other Agencies regulate this information, OSHA will not be enforcing Sections 12 through 15 (29 CFR 1910.1200(g)(2)).

Employers must ensure that SDSs are readily accessible to employees.
See Appendix D of 29 CFR 1910.1200 for a detailed description of SDS contents.

For more information:

OSHA® Occupational Safety and Health Administration
U.S. Department of Labor
www.osha.gov (800) 321-OSHA (6742)

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Industry Corner

FAA Releases Interim Policy Guidance On Land Use In An RPZ

The FAA has released interim policy guidance on compatible land use within a designated Runway Protection Zone (RPZ). The agency's memorandum states, "The FAA Office of Airports (ARP) has identified the need to clarify our policy on land uses within the Runway Protection Zone (RPZ). This memorandum presents interim policy guidance on compatible land uses within Runway Protection Zones (RPZ) to address recurrent questions about what constitutes a compatible land use and how to evaluate proposed land uses that would reside in an RPZ."

This policy will serve as guidance to regional and district airport offices until the FAA Office of Airports has completed a more comprehensive policy. This policy requires regional and district airport offices to coordinate with ARP-400 (National Airport Planning and Environmental Division) when determining if any of the following land uses within a specific RPZ are compatible:

- Buildings and structures
- Recreational land use
- Transportation facilities
- Fuel storage facilities
- Hazardous material storage
- Wastewater treatment facilities
- Above-ground utility infrastructure, including any type of solar panel installations

Click here to review the Interim Policy Guidance on Land Use Compatibility in an RPZ.

FAA Revised RTTF Policy

The FAA issued a correction on its previously published draft policy regarding Residential Through-the-Fence (RTTF) agreements at federally obligated airports. The correction, which did not make any substantive changes in the draft policy, added a docket number that was omitted from the original *Federal Register* publication. Due to the issuance of the correction, the FAA extended the public comment period on the document, which was scheduled to close on August 31, to September 14.

The draft RTTF policy was made necessary by language in the FAA Modernization and Reform Act of 2012 (FMRA) that overruled the agency's prohibition of RTTF access at general aviation airports. While allowing RTTF access agreements at general aviation airports, the FMRA requires that RTTF access may only be provided by a written agreement between the airport and property owner that includes:

- Payment of access fees to the airport of an amount similar to what other airport users pay
- A requirement that the property owner must pay for and maintain the infrastructure used to access the airport
- A prohibition on providing commercial services from a property subject to the RTTF agreement
- A requirement that the property owner prohibit other adjoining property owners from accessing the airport through his or her RTTF access point

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NATA strongly supported and lobbied for the inclusion of these restrictions in the final FMRA language to ensure that RTTF access points would not become a means for off-airport commercial aeronautical service providers to gain an unfair economic advantage over on-airport service providers.

The FAA draft policy outlines the agency's interpretation of these restrictions and includes the FAA's assertion (with which NATA concurs) that the FMRA languages provides for agency review of all general aviation airport RTTF access agreements to ensure compliance with the FMRA limitations.

Click here to view the FAA's Draft Revised Policy On RTTF Access.

PLST Online Corner

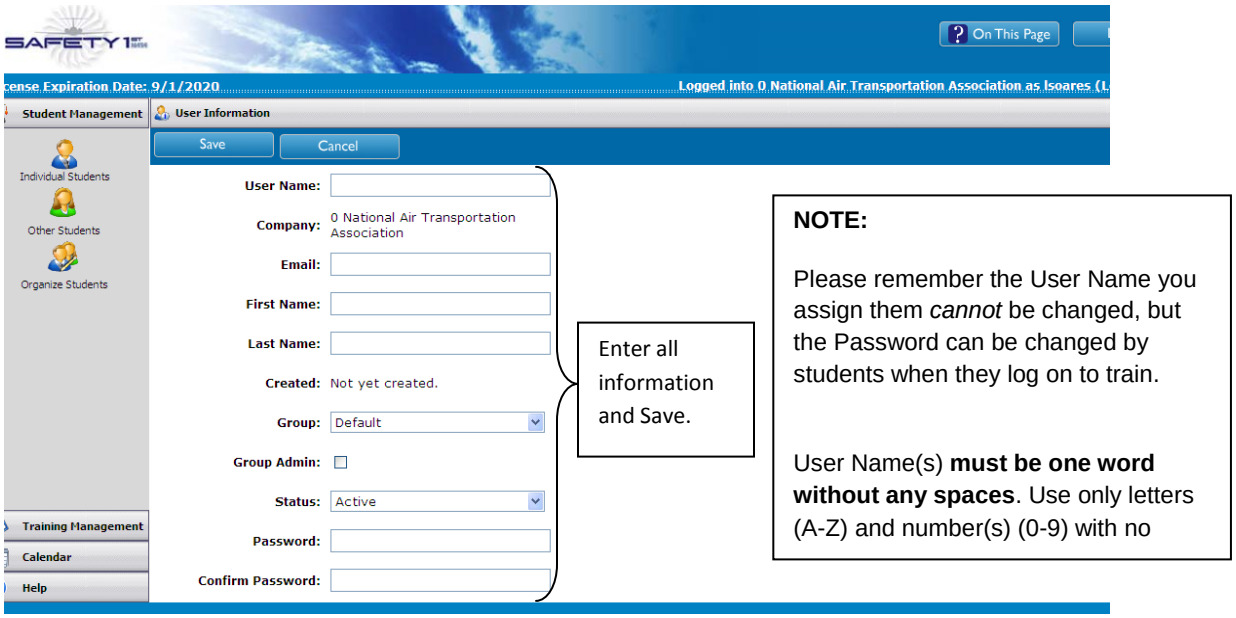
PLST Online Frequently Asked Questions

Q. Do I need to retain copies of my employees' expired certificates?

A. Yes, it is a best practice to keep all training records of your employees – current or expired. These certificates/records not only give your company a history of student training, but it's also important for employees to have access to training records and review what has been done over the years.

The following may request training records; the airport authority, FAA, fuel suppliers, NTSB and/or the TSA, as well as other entities.

Q. How should I set up new students?



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When adding a new student to your roster, please remember the following:

1. **User Name**:
    a. The user name **cannot** be changed. Please choose a user name they will not forgot – their email address or first initial with last name.
    b. The user name must be one word without any spaces. using **ONLY** letters, numbers and/or the @ symbol.

2. **Email address**:
    a. This field is for the student's email address, not the trainers. If the student does not have a company address, please use a personal email address.

3. **First name and Last name**:
    a. Names on the student's official certificates will look just as you enter them in the training fields. You **MUST** ensure first and last names are capitalized properly (DO NOT USE ALL LOWERCASE).

4. **Group**:
    a. Use the drop down arrow to assign a student to a particular group. You can set up different groups by going to Organize Students.

5. **Status**:
    a. If an employee leaves your company, change their status to inactive. This will remove the student from your active roster of students.

6. **Password**:
    a. The password can be changed by a student once logged in, but we suggest making this as easy as possible. They won't forget how to spell their last name.

If the student forgets their password – you have the ability to edit this field and reset the password for them. (NOTE: the password field is ALWAYS blank when you review students' passwords – you can ONLY reset it and let them know the password.)

The National Air Transportation Association (**NATA**), **the voice of aviation business**, is committed to raising the standard on ground safety. **Subscribe to NATA Safety 1st *eToolkit*.**