Volume I, Issue 27 November 15, 2006

# NATA Safety 1st eToolkit

## Welcome to the 27th issue of the NATA Safety 1st eToolkit, our monthly online safety newsletter, supporting the NATA Safety 1st Management System (SMS) for Ground.

The NATA Safety 1st Management System (SMS) for Ground is underway and many of the tools discussed in this and other eToolkits will be provided to SMS and PLST participants.

This monthly newsletter highlights known and emerging trends, environmental and geographical matters, as well as advances in operational efficiency and safety. Flight and ground safety have been enhanced and many accidents prevented because of shared experiences.

## ARE WE SEEING A TREND? OR IS YOUR HEAD ON A SWIVEL?

**By Louis Sorrentino, Vice President, SH&E, Inc.**

Over the past 45 days, there have been at least six accidents involving aircraft within a controlled environment. Accidents that have involved active ramp or gate area equipment coming into physical contact with other aircraft or ground equipment. Of significance in five out of six of these events was the fact that the cockpit crew was relying on ground staff to ensure the area behind the aircraft or within the wing arc was clear. We are making an assumption that the ground crew remained in place to see the actual event unfold.

The foundation of our Ramp Communications DVD program addresses the heart of this issue -- awareness. Awareness to the environment not only from the Line Techs point of view, but also awareness from the aircraft environment and the expectations of the cockpit crew. What these incidents and accidents reveal is that ramp personnel are not watching the entire operation. They are concentrating on their task – driving a string of baggage carts from one gate to another. But during this 'transition' from one area of the ramp to the next, what are they looking at – what are they seeing? In many cases, they are looking straight ahead, often times thinking of their next assignment. But during this 'thinking and driving" phase, can they be looking? Assessing their environment? Looking out for their team members, other personnel and potential incident sources? Of course they can and often many do.

But what allows these six events to occur (and these six are the ones we know about!) – all within a controlled, bustling environment? We believe, it is the 'lack of situational awareness" that causes events like these to occur.

Let's explore just one to prove a point: Boeing 737 (**1**) being pushed off gate struck tail of another B-737[2]. (2)

In this event, we would expect that aircraft **1**, as it was being prepared to be pushed off of the gate, had a properly trained pushback operator, two wing walkers and a small cadre of other employees pulling chocks and moving ground support equipment. Aircraft **2**, at the opposite gate, had recently arrived and was being off loaded and prepared for the next departure. In this case, there was a refueler, lav service, water service, baggage and tug operators and possibly a supervisor. And to make the assumption even a bit more compelling, let's assume these were the only two aircraft in the entire gate area.

What we are sure of is the damage sustained to both aircraft and the associated costs will result in delayed flights, missed connections, upset passengers, route disruptions and so on. The list builds from direct damages (bent metal) to include indirect damages. The dollar signs build as costs associated with this incident are tallied $$$$$$.

Back to the event – what caused it? A B-737 is pushed into the tail of a parked B-737 at the opposite gate. So why did it occur? Could it be because all of the employees were focused

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on their immediate task and not on the overall operation? Could it be that the wing walkers were looking only at their respective wing and the tug operator? Could it be that the pay mover operator was looking only at the nose wheel and talking with the crew? Could it be that none of the employees had any idea how to signal the pay mover operator to stop? There are many assumptions here, but we are sure of one thing, the incident occurred and the Man/Machine/Environment equation broke down because of Man – the human element – the brains.

We failed to maintain an adequate awareness of our operating environment. We failed to ensure our employees understood the "BIG PICTURE." We failed to provide adequate tools, training and procedures to first assess the environment prior to proceeding, maintain awareness to the changing environment and finally to signal "Conditions Have Changed – STOP NOW!"


When we release our new Ramp Communications DVD in the New Year, your company must ensure your employees get the right message. We believe this DVD training aid is needed right now. It's a big complex world out there, - See it all.

## INCIDENT ROUNDUP

- An unattended Jet rolled through fence at Las Vegas airport. Minimal damage to the aircraft as a result of contact with the fence, but three taxis collided when the plane knocked down a fence and poked its nose into the roadway. The drivers weren't hurt.
- A person acting as a guide walked into an operating C-172 propeller while believing he was helping guide the pilot to an off airport parking area. The injured person suffered non-life threatening upper-body injuries -- a dislocated right shoulder and lacerations to his right side -- in the accident and will survive what could have been a fatal mistake.
- Boeing 737 and Airbus A-320 clipped each other when one aircraft was turning from the gate. Substantial damage to both company aircraft was reported by the FAA.
- Boeing 737 being pushed off gate struck tail of another B-737.
- Boeing 737 was taxiing for departure when a soft drink can was ingested into one of the engines. Aircraft taxied back to gate with no injuries.
- Airbus A320 was awaiting push back from gate and was struck by a belt loader vehicle.
- Boeing 737-76N was struck while parked at the gate at the number one engine by the Jetway. Engine nacelle sustained minor damage with no injuries reported.
- Boeing 747 was being moved from cargo ramp when number four engine caught fire. Fire extinguished with no injuries reported, unknown damage.
- Boeing 727 was parked at gate when the ramp agent fell while pulling the chocks out and sustained serious injuries to leg.
- Boeing 747 was taxiing for departure when left wing clipped the right wing tip of another aircraft, a Boeing 757 that was being towed. No injuries were reported. The 747 sustained substantial damage.
- Airbus 319 struck a parked tug while being towed.

## REAL-LIFE PRIST EVENTS


***The following scenarios are real-case events from crews concerning additive delivery during refueling.***

### Event 1

The original fuel order provided to the FBO customer support staff included a requirement for Prist. Prior to fueling beginning, the Pilot in Command (PIC) discussed the details of the fuel request with the fueler directly.

This included a confirmation of quantity and reconfirming the Prist requirement.

Prior to commencing fueling, the PIC noted that a second rotary switch on the fuel truck labeled "off" and "inject" was positioned to the "off" position, and queried the fueler. The fueler reconfirmed the requirement for Prist and pointed to a primary switch labeled "inject on/off" that was positioned to the "on" position.

Fueling commenced, and a discussion between the PIC and the fueler ensued between regarding the ramifications of not adding Prist to the fuel on the particular aircraft type involved.

The PIC became suspicious that Prist was not being injected, as there was no movement of the Prist injection visual indicator. The PIC then asked for a second opinion on the positioning of the secondary switch. A second fueler arrived and inspected the position of the secondary switch. Subsequently a supervisor arrived at the aircraft and it was confirmed that the fuel already delivered to the aircraft had been delivered without Prist.

The aircraft was subsequently de-fueled of all fuel and re-fueled with the appropriate additive.

### Event 2

Before fueling started, the PIC noticed there was no Prist in the sight gauge. The PIC then asked the fueler whether there was Prist in the tank. The fueler showed the PIC the tank, which had a small amount of Prist remaining, indicating that it was sufficient for the requested fuel load.

The PIC watched as fueling commenced and after several gallons became concerned that there appeared to be no Prist flowing. Fueling was suspended at the request of the PIC. The fueler stopped, but was not convinced that there was no Prist flowing, however the fueler called another lineman over and they changed the Prist tank.

The fuelers attempted to bleed air from the Prist line. After several unsuccessful attempts to clear the line of air, the PIC requested a different truck and fueling was completed uneventfully with the required Prist additive.

### Event 3

The PIC was monitoring the fueling process. The Prist injector on the truck was selected to "Inject". After several minutes of fueling, the PIC noticed that there was no change in the sight glass indicator that shows Prist is flowing.

The PIC requested that the fueler suspend the fueling, and it was discovered that the Prist supply container was empty. The fueler replenished the Prist container contents and fueling continued. The PIC again noted that Prist was not injecting. The PIC requested that fueling stop again. It was determined that the Prist injection system was not bled of air prior to recommencing fueling and all fuel had been added without Prist. The aircraft was subsequently de-fueled and re-fueled with fuel containing Prist.

### Event 4

Two (2) aircraft were fueled by the same lineman from a single truck at an FBO. The lineman fueled both aircraft with the truck in the 'high throttle' position with the Prist turned on. Their fuel trucks are equipped with an automatic fuel reporting system that prepares an itemized list of fuel dispensed, Prist delivered, lineman working, and a date/time stamp. The CSR in the FBO was reviewing the fuel ticket and getting ready to bill it in the invoicing software when she noticed that the Prist dispensed was too low for specifications (200 ppm vs the 1,000-1,500 requirement). She alerted the line manager to the issue and they immediately informed the crew of the potential problem.

During the course of their investigation they found that when the throttle was placed in the high position, it caused the fuel line pressure to exceed the line pressure coming from the Prist can, which effectively reduced the amount of Prist entering the fuel. Some Prist was making it into the system, which is why anyone looking at the sight glass would still see Prist flowing.

They have since disabled the high throttle position on the trucks to prevent anyone from making a similar mistake. They are following up with the truck manufacturer and their fuel supplier to identify potential solutions that would enable the

trucks to pump fuel and get adequate concentrations of Prist in the high throttle position.

***Flight crews are concerned and want assurance they are receiving the correct amount of Prist when refueling at FBOs. NATA Safety 1st, with the assistance of industry experts, has begun an initiative to educate both flight crews and FBOs on additive delivery, handling and maintenance.***

***Air BP Aviation Services, Chevron Global Aviation, Gammon Technical Products and Hammonds formulated guidance for flight crews. FBOs can anticipate flight crews' will be following this for Prist delivery and handling.***

***Hammonds and Gammon are developing additional materials to assist FBOs with injector use and maintenance in upcoming issues of the eToolkit. If you have concerns in the meantime, please contact your injector manufacturer or oil company for specific guidance.***

### Crew Checklist For Additive (Prist) Delivery

**Verify** – Prior to any fueling operation PIC shall verify with Line Service that all standard and normal QC checks are completed and documented. PIC shall verify the required fuel grade and additive requirements; Jet-A; Jet-A with additive, etc.

**Dry** - Check that there is a desiccant dryer on the additive reservoir and that it is NOT completely pink. At a minimum, 50% should be blue. If, not, do NOT put additive into the aircraft with this injector. If humidity gets into the additive, it will not dissolve into the fuel and will attack the tank bottom instead.

**Level** - Make sure there is an adequate amount of additive in the additive tank. Make note of the current level in some way. A piece of tape makes a good marker or an O-Ring fit around the sight glass tube.

**On** - Make sure the additive system is turned on.

**Flow** - Make sure additive is flowing during refueling. Every additive system should have some form of flow indicator. This may be visual or by way of a digital display showing ppm concentration or, as applicable, a flashing light.

**Level** - After fueling, make sure the additive level in the additive tank has dropped. An estimate can often be made as to how much additive has been injected. The ration is 1 gallon per thousand gallons, or one quart per 250 gallons. One gallon of additive is 231 cu in. A quart is 58 cu in. (Note: Additive manufacturers may want to consider adding a decal to the side of the container calibrated in quarts.) Pilot may want to ask to see the calibration records for the unit.

**Verify** –When fueling is complete PIC shall verify with Line Service that they received the correct fuel grade and additive as required JetA; JetA with additive, etc.

### Minimum Requirements of FBO Additive Handling (Oil Companies May Require Additional Requirements)

1. FBO should have paperwork for daily sumping of tanks and filter vessels
2. Desiccant dryers must be in proper operating condition (blue)
3. Paperwork shows reconciliation of additive inventory on a weekly basis
4. FBO can verify proper operation of injector system

### B/2 Test

Following these basic steps will not completely insure that you have the concentration of pure additive, but will greatly increase the chances that you do. To accurately verify the additive has dissolved into the fuel in the correct volume, you must use a HB B/2 kit. The HB B/2 test kit is a refractometer for evaluating an extraction of the fuel. It fits into a briefcase sized case and takes less than a half hour to run and is an accurate laboratory test method. All B/2 kits must meet ASTM D5006. .

You **cannot** take a sample from the nozzle or fuel system for the B/2 test, it must come from the aircraft fuel tank because most additive injectors put additive in - in little squirts. An averaging sampler can be used, where fuel is slowly taken from the flowing stream of fuel over several minutes.

## ENERGY INSTITUTE ISSUES BULLETIN ON FUEL FILTER MONITORS

The United Kingdom-based Energy Institute (EI), a leading professional body for the energy industries, has issued a warning on the use of aviation fuel filter monitors (fuses) qualified to IP 1583 4th edition or earlier editions. Aviation fuel filter monitors have been used for many years to prevent water and other contaminants from being delivered to aircraft during fueling operations. Evidence exists that water absorbing polymers from the fuel filter monitors may migrate downstream into aircraft fuel systems resulting in clogged aircraft fuel filters possibly triggering a filter bypass condition. Please see the entire bulletin on the following pages.

26th October 2006

**WARNING ON USE OF AVIATION FUEL FILTER MONITORS (FUSES) 'QUALIFIED TO' IP 1583[1] 4TH EDITION OR EARLIER EDITIONS**

Aviation fuel filter monitors (fuses) containing water absorbent polymer have been used for many years to prevent water and dirt being delivered to aircraft during refuelling operations.
In recent years it has been determined that **FILTER MONITORS 'QUALIFIED TO' IP 1583 4TH EDITION OR EARLIER EDITIONS CANNOT BE REGARDED AS FAIL-SAFE DEVICES FOR PREVENTING WATER BEING DELIVERED TO AIRCRAFT.**
**IT HAS ALSO BECOME APPARENT THAT WATER ABSORBENT POLYMER FROM SUCH ELEMENTS MAY MIGRATE DOWNSTREAM.**
However, in many operations filter monitors continue to form one component in the comprehensive system to control dirt and water in aviation fuel.

**RECOMMENDED ACTION TO BE TAKEN BY FILTER MONITOR USERS**

- Always operate filter monitors in strict accordance with manufacturer's instructions.
- Do not use filter monitors in fuel containing any Fuel System Icing Inhibitor (FSII), also known as DiEGME (diethylene glycol monomethylether) or Prist®.
- Do not use filter monitors where any free water in aviation fuel may contain high concentrations of salts.
- Seek assurance from the filter monitor manufacturer that, in addition to meeting the laboratory qualification requirements of IP 1583 4th edition, filter monitors are suitable for your intended service application.
- Ensure that where a filter monitor is used it forms only one part of a comprehensive system to control dirt and water in aviation fuel. A comprehensive system includes housekeeping procedures and quality assurance checks during into-plane fuelling.
- Users concerned about filter monitor performance should consider the use of different technology, or combinations of different technologies, but should assess the limitations of such alternatives on an individual basis.

**ADDITIONAL INFORMATION**

- **Filter monitor elements 'qualified to' IP 1583 4th edition or earlier editions should not be solely relied upon to ensure that water in fuel is prevented from passing onto aircraft.** The water removal performance of filter monitor elements 'qualified to' IP 1583 4th edition or earlier editions may deteriorate in service, to the extent that a filter monitor may not effectively shut off fuel flow or register a rise in differential pressure sufficient to alert the operator to the passage of water. Despite significant collaborative research and investigations by industry representatives it has not been possible to identify with certainty the causes of such deterioration in service. **WATER IN AIRCRAFT FUEL TANKS MAY AFFECT AIRCRAFT OPERATIONS**.
- Filter monitors that are 'qualified to' IP 1583 4th edition or earlier editions must never be used with aviation fuel containing FSII. **THE PERFORMANCE OF FILTER MONITOR ELEMENTS IS SIGNIFICANTLY IMPAIRED WHEN THEY ARE USED IN FUELS CONTAINING FSII. FILTER MONITOR ELEMENTS ARE ALSO MORE VULNERABLE TO WATER ABSORBENT POLYMER MIGRATION IN FUELS CONTAINING FSII.**
- **The water absorbent polymer in filter monitors may pass downstream from filter monitors into fuel, even in the absence of FSII.** All aviation fuel filter monitor manufacturers providing elements 'qualified to' IP 1583 4th edition have stated that unknown quantities (possibly undetectable) of water absorbent polymer may pass into fuel even when filter monitors are operated in civilian fuels not containing FSII. All size and flow formats of filter monitors are implicated, but the extent of migration from them may vary. **Assessment, impact and mitigating action by commercial airlines on this issue is the subject of current study by the International Air Transport Association working with industry stakeholders including the Energy Institute.**

1 IP Specification 1583 *Specifications and laboratory tests for aviation fuel filter monitors with absorbent type elements*, 4th edition, September 2004. Published by the Energy Institute.

**Limitations of the laboratory test methods included in IP 1583 4th edition and earlier editions:**

- IP 1583 4th edition is not a product specification. It provides general requirements for filter monitor elements and systems, and a series of laboratory tests to measure selected aspects of performance of new unused filter monitor elements.
- Laboratory tests alone cannot replicate the operating conditions to which filter monitors are exposed when in service, and therefore are of limited utility in predicting in-service performance.
- Filter monitors in current use that are 'qualified to' IP 1583 4th and earlier editions, may meet the requirements of the selected laboratory tests, but may not meet 1.7.2.1 d, which states:

"**1.7.2 Performance features**
*1.7.2.1 A filter monitor shall have the following general features:*

*(d) It shall not contaminate the fuel and fuel properties shall remain within the prescribed limits of the relevant fuel specification.*"

**ENERGY INSTITUTE DEVELOPMENTS**

The Energy Institute (publisher of IP 1583 4th edition) is currently developing a 5th edition of IP 1583 for publication in November 2006. Laboratory tests will be included to measure SAP migration with the requirement that none is detected as the limit for qualification. It is not known at this time whether filter monitors meeting this limit will be developed.



**CONTACTS**

- For further information on the use of filter monitors contact your filter monitor manufacturer/ supplier.
- For any clarification on the content of this warning contact Martin Hunnybun, Technical Manager – Distribution & Aviation, Energy Institute, 61 New Cavendish Street, London, W1G 7AR. Tel +44 (0)20 7467 7133; +44 (0)77 9527 2368; mh@energyinst.org.uk

## BITS AND BYTES

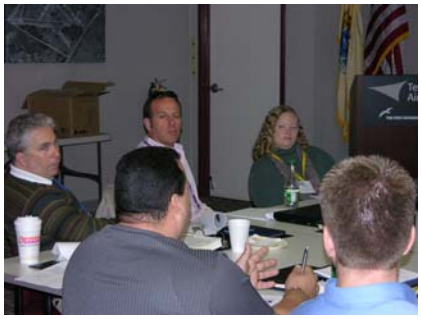
### FAA- Approved Deicing Program Updates, Winter 2006-2007

The Federal Aviation Administration (FAA) issued Notice 8000.329 that discusses FAA-approved deicing programs. The Notice also contains several tables of useful cold-weather flying information, including holdover times (HOT) tables for the 2006-2007 winter season. Click here to read the Notice.

### SMS Workshops – Assistance Offered to All NATA Safety 1st Management System Participants

NATA is holding a series of hands-on workshops to assist participants in the development and implementation of their company's SMS. Workshops include in-depth discussions on SMS concepts and provide helpful templates to assist with manual development. The workshops supplement the ongoing monthly Webcasts and provide interactive question and answer sessions.

The first SMS Workshop was held in Teterboro, New Jersey on November 7, 2006 with ground and air operators from the airport as well as nearby locations. All Teterboro FBOs and representatives from the Port Authority of NY and NJ were in attendance as a part of the Teterboro (TEB) Working Group's agenda to make Teterboro the model for the safest and most efficient general aviation airport in the nation. The TEB Working Group's recommendation requires establishing an airport-wide SMS in partnership with the National Air Transportation (NATA) Safety 1st Program (TEB would be the first non-commercial airport in the country to establish such an SMS) as well as requiring all fixed base operators to participate in the NATA SMS for Ground Operations.



Workshop attendees commended NATA for the presentation and materials provided. One participant stated that the workshop, "Took the fear out of starting our SMS." "Great presentation, very operationally feasible ideas," stated another attendee. "My company was in the process of getting our SMS together, this is going to get us over the hump…very informative and concise," added another attendee. Check our Web site for SMS Workshop details and locations.

### NATA Member Benefits Expand With New Hazmat Response Services

NATA has joined forces with Spill Center, a hazmat support and environmental claims management company based in Hudson, MA, to provide hazardous spill reporting and support services.

"Our members are sensitive to the different hazmat reporting requirements around the country," said NATA President James K. Coyne. "We welcome Spill Center as the newest NATA affiliate and encourage our members to take advantage of the complimentary consultation, no-charge online resources, and discounted support services that are now available to NATA members."

Online resources include a state-by-state spill-reporting database, which lists current regulatory requirements and agency contact information. Members can access this data and other information through the Spill Center link on NATA's Web site. Spill Center personnel also can help NATA members by providing rapid response to all spill events, reports and inquiries.

"Spill Center offers a comprehensive program of accidental spill support services, including legal, technical and environmental expertise and resources. The program is designed to control costs and limit liability arising from accidental releases of fuel and other regulated materials," stated Spill Center President Tom Moses, an environmental attorney and former U.S. EPA toxicologist.

Fee-based services include spill reporting, cleanup contractor referrals and management, disposal assistance and spill contingency planning. NATA members pay only for the services they need.

"No company ever has enough fuel or hazmat spills to become experts at handling them," said Moses. "Spill Center helps companies with spill incidents control their costs, limit their liability and get through the governmental regulatory maze – which can be very expensive to the uninitiated. We welcome the opportunity to work with NATA members."

Spill Center supports clients in the transportation, chemical and insurance industries.

For Spill Center information or for a complimentary consultation, contact Tom Moses at 978-568-1922, ext. 222 or mailto:tmoses@spillcenter.com.

## Proposed Alabama Fueling Requirement Has National Significance

Recently, the Alabama Department of Agriculture and Industries' Heavy Weights and Measures Division began inspecting aviation fuel providers' facilities to ensure compliance with the state's adopted legal standard, Handbook 44 of the National Institute of Standards and Technology (NIST). The Heavy Weights and Measures Division has interpreted the standards in Handbook 44 as requiring all self-service aviation fuel pumps to be equipped with a visual of the quantity and cost meters, that shows both the amount of gallons pumped as well as the price per gallon. Additionally, the NIST standards would require all pumps to "reset" to zero after the sale is completed. Regulations regarding the care and maintenance of fuel pumps and hoses are also included in the regulations.

NATA has heard from several fuel providers in Alabama that the Heavy Weights and Measures Division is misinterpreting Handbook 44 and is failing to consider the unique nature of the aviation fueling industry. The state has begun routine inspections of existing equipment and has denied certification to new equipment for not complying with the regulations. The Department of Agriculture and Industries' Heavy Weights and Measures Division will publish final rules on the standards by November 28.

NATA is concerned about the new interpretation of the adopted standards and encourages Alabama to consider the unique nature of the aviation fueling industry before implementing a "one-size-fits-all" standard for all fuel industries. The association is also concerned that adoption of this policy could set a dangerous precedent for other states to implement similar standards and policies.

NATA is currently working with its members in Alabama and with representatives of the Alabama Department of Agriculture and Industries to educate officials on the problems posed by adoption of this new policy. All NATA members in Alabama affected by these regulations are encouraged to contact Ashley Moore for information.

## EPA Revises Hazardous Waste Manifest Form

The Environmental Protection Agency (EPA) has standardized the hazardous waste manifest form that must be used for all hazardous waste shipments.

The new standardized form was created to help in the tracking of shipments and to ensure that EPA qualified facilities are carrying, receiving and managing hazardous waste. The standardized forms are also a way to increase efficiency and move towards tracking hazardous waste electronically.

Effective September 5, 2006, any hazardous waste generators and treatment, storage and disposal facilities not using the EPA standardized form could be subjected to state fines and ramifications.

To view the EPA's hazardous waste manifest training video, click here.

## DOT Responds To NATA Concerns Over Fund Allocations

Since early this year, NATA members and staff have been expressing concerns to senior Department of Transportation (DOT) staff, up to and including the Secretary, regarding the distribution of funds under the Small Community Air Service Development Program (Small Community Program). The recently appointed Secretary of Transportation Mary E. Peters and Under Secretary Jeff Shane have acknowledged the association's concerns and stated that the DOT will be evaluating the effectiveness of the Small Community Program in anticipation of the Congress' deliberation of the program's reauthorization.

The recent trend of the application for funds by some airports in order to provide ground-handling services to the airlines has continued to trouble NATA's members. Airports, which are largely run by local governments, have applied for federal funds that enable them to compete unfairly with, and sometimes close, privately run companies that offer the same services. The efforts of NATA President James K. Coyne, NATA members and the NATA Government and Industry Affairs Team were recently acknowledged via a letter from Secretary Peters, in which she stated that she is mindful of the potential harm to private enterprise from the inappropriate application of the Small Community Program funds and stated that the issue raised by NATA deserves close examination.

For additional information, contact NATA staff member Stan Mackiewicz.

## NATA Safety 1st Management System (SMS) Workshop

***WHAT:*** **SMS Workshops are one-day workshops to assist SMS participants in the development and implementation of their company's SMS.**

***WHEN:*** ***Please check the SMS Workshop You Will Attend***

- ❑ **December 7, 2006** *at the Sheraton Suites Cypress Creek Hotel (Ft. Lauderdale Executive Airport, FXE) in* ***Ft. Lauderdale, FL***
- ❑ **December 14**, 2006 at the Airtel Plaza Hotel & Conference Center in **Van Nuys, CA**

Click here for additional details on Ft. Lauderdale, FL

Click here for additional details on Van Nuys, CA

***WHO SHOULD ATTEND:***

Safety Coordinators

Flight Safety Officers

Safety Managers

Maintenance Professionals

NATA will hold a series of hands-on workshops to assist participants in the development and implementation of their company's SMS. We will conduct in-depth discussions on SMS concepts and provide helpful templates to assist with manual development. The workshops supplement the ongoing monthly Webcasts and provide interactive question and answer sessions.

**Yes, sign me up**! I am a current participant in NATA's SMS for Ground/Air Operator

- ❑ $150 / NATA **Safety 1st** SMS Members or
- ❑ $250 / Non- NATA member

Name: _____

Company: _____

Address: _____

City: _____ State: _____ Zip: _____

Phone: _____ Fax: _____

Email: _____

❑ VISA - MasterCard - AMEX ❑ My check is enclosed _____

***Card Number***: _____ Exp. Date: _____

***Name On card*** _____

***Signature*** _____

**Fax to**: (703) 845-0396
Email: Safety1st@nata.aero
**Mail**: NATA
4226 King Street
Alexandria, VA 22302

## Advanced Line Service Supervisor Training (ALSST)

**WHAT:** We have heard your requests to take our popular LSST Seminar up a notch. Join us as we expand your knowledge and in-depth supervisory skills. Our ALSST explores challenges that Line Service Supervisors face on a daily basis. It is meant for professionals that wish to reach the next level in line service excellence.

**WHEN / WHERE**: Jan 15 & 16, 2007 at the Embassy Suites Lake Buena Vista Resort in Orlando, FL
Click here for additional details on our Web site

**WHO SHOULD ATTEND**: Line Service Personnel

Supervisors

Line Service Technicians

Line Manager

The ALSST provides the tools necessary to turn good supervisors into great supervisors. This seminar will significantly increase the performance of line supervisors and set them apart from others in the industry by expanding their knowledge base and enabling them to better communicate as leading members of the management team. Advanced topics include; dealing with challenging employees, managing your manager, communicating as a leader, managing risk, hiring practices, performance evaluations, terminations, and many more exciting, yet challenging management and technical issues.

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**Yes, sign me up!**

- ❑ $650 / NATA Members
- ❑ $750 / Non- NATA member

Name: _____

Company: _____

Address: _____

City: _____ State: _____ Zip: _____

Phone: _____ Fax: _____

Email: _____

**Payment Type: ___Check Enclosed ___MasterCard ___ Visa ___ American Express**

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Name on Card: _____

Signature: _____

**Fax to** (703) 845-0396
**Email:** Safety1st@nata.aero
**Mail**: NATA
4226 King Street
Alexandria, VA 22302

## CONTINUING EDUCATION

**Current SMS participants… Come one, Come All!**

**NATA Safety 1st Management System (SMS) Workshops**

NATA will hold a series of hands-on workshops to assist participants in the development and implementation of their company's SMS. We will conduct in-depth discussions on SMS concepts and provide helpful templates to assist with manual development. The workshops supplement the ongoing monthly Webcasts and provide interactive question and answer sessions.

**One-Day Workshop Schedule: 9 AM – 4 PM**

**December 7, 2006 in Ft. Lauderdale, Florida**

**December 14, 2006 in Van Nuys, California**

### *General Education Offerings*

### *LAST* Line Service Supervisor Training Seminar (LSST) in 2006

***November 29 & 30, 2006***
Hotel & Seminar: AmeriSuites, San Antonio, TX
**Additional Details & Registration Online**:
http://www.nata.aero/events/event_detail.jsp?EVENT_ID=366

### *2006 Schedules: Aviation Safety and Security Offerings*

**Embry-Riddle Aeronautical University's Center for Aerospace Safety/Security Education (CASE)**
Website: http://www.avsaf.org/case/programs_events.html

**Southern California Safety Institute**

Website: http://www.scsi-inc.com/

**The GW Aviation Institute**
**Aviation Safety and Security Certificate Program**
Website: http://www2.gwu.edu/~aviation/safetyandsecurity/ss_courses.html

**Transportation Safety Institute**
Website:
http://www.tsi.dot.gov/divisions/Aviation/aviation.htm

**University of Southern California**
**Aviation Safety and Security Program**
Website: http://viterbi.usc.edu/aviation/

SH&E

The NATA **Safety 1st *eToolkit*** is brought to you by NATA **Safety 1st** SMS and SH&E. SH&E is the leading expert in safety and operational integrity evaluations and safety management consulting. SH&E has developed a proprietary evaluation methodology, called Safety Architecture, which is unique within the industry as it focuses on systemic surveillance and process evaluation. This is a systems and controls look at how an operator manages those technical functions that support aviation operations.

**Subscribe To NATA Safety 1st *eToolkit*.** If you are not currently a subscriber to NATA **Safety 1st *eToolkit*** and would like to receive it on a regular basis, please send an email to **Safety1st@nata.aero** with the word "Subscribe" in the header. Please include your name, title, company and e-mail address. **Safety 1st *eToolkit*** is distributed free of charge to NATA member companies and NATA **Safety 1st** participants.

# Order Form

# NATA Safety 1st® Management System (SMS) for Ground

4226 King Street
Alexandria, VA 22302
(703) 845-9000
Fax: (703) 845-0396

**Yes, we want to sign up for the NATA SMS for Ground! We understand the following will be included in the price of our participation in the SMS:**

- SMS Guide
- SMS Webcast Tutorials
- SMS Consultation by Telephone or email
- SMS Secure, Online Event Reporting Form
- SMS Monthly Online Newsletter
- SMS Root Cause Analysis

## Contact Information (please print legibly)

CEO/Owner _____ Email _____

Safety Coordinator _____ Email _____

Company _____

Street Address _____

City _____ State _____ Zip _____

Phone _____ Fax _____ Email _____

## Pricing

The prices below reflect the total number of employees at your facility. This number should include all you FBO locations. Please note that we will correspond with one Safety Coordinator per company and will require additional company information once established in the program. Please check appropriate box below.

☐ $600 for NATA Safety 1st participants / NATA Members with 0-50 employees

☐ $1,200 for NATA Safety 1st participants / NATA Members with 51-150 employees

☐ $1,800 for NATA Safety 1st participants / NATA Members with more than 150 employees

## Payment

☐ Check enclosed (Please make payable to Aviation Training Institute, LLC.)

☐ Please charge my ☐ MasterCard ☐ Visa ☐ American Express

Credit card number _____ Expiration _____

Signature _____ Name on card _____

**Fax to (703) 845-8176 or mail to NATA Safety 1st® SMS, 4226 King Street, Alexandria, VA 22302**

## Agreement

I understand as CEO/Manager of this facility, Safety is our #1 priority. As such, the authority and responsibility to implement this program is placed with me. I will provide the resources necessary to ensure the safety of our customers, their equipment, our employees and the environment in our daily operations

Signed this date _____ CEO/Owner Signature _____