VETERANS of SAFETY

2014

# VOS August Newsletter

**Message from VOS Newsletter editor Mark Rater:**
Make sure to visit our website at http://vetsofsafety.org/ to get more information from VOS. One article in this issue was a summary. The full version will be available soon on the website.

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# VETERANS OF SAFETY

**AN INTERNATIONAL ORGANIZATION**

# Newsletter

A NOT FOR PROFIT ORGAINZATION

# VOS President's Address

Warren K Brown, CSP, ARM, CSHM

It has been sometime since our last newsletter. We will bring you up to date with activities that have occurred. Your Board of Directors has continued to meet either face to face or by conference call. Probably the most important single activity is the revision of the website where you can now become a new member or renew your old membership on line. We must thank Nigel Ellis and Jack Hirshmann for their efforts in making this happen. Additionally while Diana Bryant is on sabbatical to earn her PhD, Jack Hirshmann is handling the financial activities of the organization. We are working to potentially identify a vendor to eventually take over the administrative duties of the organization. Stay tuned on this important initiative. Mark Rater was elected by the VOS Board of Directors to the position of Vice President. Thank you Mark for accepting the position. Nigel Ellis on behalf of the VOS Board of Directors and VOS Membership presented the Ben Williamson Fellowship Award to James "Jimmy" Zane at the Pac Rim Safety Conference in Hawaii in May. We all congratulate Jimmy for earning this prestigious award. Your Board will be reviewing our bylaws to determine what we need to accomplish to meet the bylaws or recommend revisions to the bylaws to more accurately reflect what our capabilities really are with our diminished headcount. All members need to tell us what you expect from the organization so we can better focus on the issues that members want. Let your Board know of any ideas prior to our annual meeting to be held in Kansas City on September 27, 2014. This is an open meeting so you are more than welcome to attend and be heard in person. Let me know if you want to attend and the hotel information and agenda will be provided.

We all look forward to your input and intend to assure the sustainability of the organization!


# Benjamin F. Williams Fellow Award

Nigel Ellis presented the Benjamin F. Williams Fellow Award to Jimmy Zane in Honolulu at the Pac-Rim Conference, 05/08/2014. I thought this would be a good time provide background information on the award.

The naming of the award comes from a long standing member of the Veterans of Safety, Benjamin F. Williamson. Ben Williamson was a VOS Board Member for a number of decades. He contributed so much of his time, energy, and efforts to the organization that the VOS Fellow award was renamed the Ben Williamson Fellow Award in recognition of his work.

Ben got his start in safety while working as a Traffic Engineer for the City of Norfolk, VA. He then worked for the City of Virginia Beach, VA for 20 years working on safety of highways & roads. Ben initiated safety work done by the city to control their losses, thereby reducing the cities insurance premiums. Ben joined VOS along with a friend of his, "Bud" Smith. Both of them became Presidents of VOS and were VOS Ambassadors. "Bud" is currently retired and living in Pennsylvania. Ben retired when he was 67 but still remained on the VOS Board of Directors, rarely missing one of their meetings. He was active in The Safety & Health Hall Of Fame International (SHHOFI). Ben was the person who made the first nomination for induction of a member into

SHHOFI. Ben passed away in June of 2007, and the Fellow award is still in his name listed in the VOS By-Laws.

Persons are rarely even nominated for the award as so few people have done a great enough job just to be nominated. In the last ten years, only three VOS members have been awarded the honor as follows:

Christopher M. Gates, former VOS President, Council of Ambassadors, who received his award in 2010, after 39 years of full time safety work, and assisting in SHHOFI.

L.M. Rice, Former VOS President, Council of Ambassadors, who received his award in 2007, for his long service to VOS.

Dianna Bryant, Executive Director of VOS, currently on sabbatical while getting her PhD degree. She received her award in 2004 for her work at the University of Central Missouri with the Student VOS chapter there.

The requirements for the honor are listed in the VOS By-Laws:

- The Ben Williamson Fellow Award title can only be conferred by the VOS Board of Directors.
- The title is not granted for normal work for VOS, it is only granted for outstanding contribution to the advancement of the Society.
- The petition to nominate a member for the title of Fellow must be presented by at least five VOS members in good standing (the five signing members do not have to be Board Members).
- The petition must specify reasons for the nomination.
- An approval vote of 2/3's of the Board of Directors is required.
- Recipients of the award get a medallion, which has the back engraved.
- Recipients also receive a wall certificate recognizing the award to the member.

Jimmy Zane has been a member of the VOS for a number of years. He is currently President of the Hawaiian Islands Chapter of the VOS. He was appointed to be a member of the VOS Board of Directors on 09/18/2010.

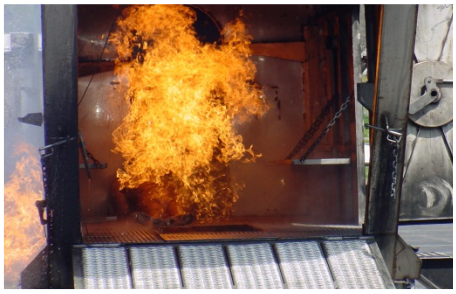
***Thank you goes out to Wendell W. Wahlstedt for writing this and to Warren K Brown for providing the document for inclusion in the newsletter.***

# Pac Rim Safety and Health Conference Report:

Nigel Ellis, Dean of the Ambassadors, returned from this Hawaiian conference held every two years. He represented the Veterans of Safety at two events.

He was a speaker at the conference. The title of his talk was "Why holding ladder rungs and horizontal grab bars at heights may save your life. He presented evidence from a 2012 Ph.D. thesis by Justin Young, University of Michigan on how in a fall, the hand slides on a vertical surface (e.g. a ladder side rail) and which should not be relied upon. Reliance on rungs is built on no hand slippage if a fall occurs. Other shapes than round and different sizes than 1" diameter also reduces performance. Justin's thesis can be found on the www.FallSafety.com website under ladder improvements.

Also Nigel, former President, presented the award from the Veterans of Safety to Jimmy Zane, Hawaii Chapter for his work developing tools for measuring safety progress in the islands and significantly raising the membership of VOS. This award was the VOS Ben Williamson Fellow Award made during the Conference lunch time with all registrants present.



Fireball of propane fed flames coming out the ramp at the rear of the plane.

# AIRPLANE CRASH & FIRE TRAINING FOR SMALL TOWNS

**By Wendell W. Wahlstedt**

In this VOS newsletter, there is an article on the fertilizer plant fire & explosion in West, Texas, about 70 miles south of Dallas that happened a little over a year ago. In the article, Chris Gates points out the need for better safety training for employees and temporary employees in hazardous situations.

This also extends to training for first responders to hazardous situations, such as airline crashes & fires, especially in small towns.

Large cities have many resources that they can devote to crash response, and firefighting at major airports servicing scheduled airlines that have many flights a day arriving & departing from that airport. They can purchase heavy equipment like fire engines specifically outfitted to fight fires at airplane crashes where there can be a lot of aviation gas that can be easily ignited in a crash. They have better turn out gear for the firefighters to wear, and they have a dedicated facility at the airport where the firefighters can practice what to do in a plane crash. Firefighter training in a classroom is good, but "hands on training" with a burning plane right in front of the firefighters gives them training that they never forget.

Firefighters in large cities are also probably full time employees rather than volunteers working another full time job so they get to practice firefighting a lot of the time. Volunteer firefighters in smaller towns have small airports that are for civil aviation (no scheduled air service), and they cannot afford to spend a lot of time training for a plane crash where there may be only a few take offs & landings a day. Even if they could go to an out of town plane crash training facility for a few days of training, what does the small town do if their volunteer firefighters are all out of town taking training, and a large fire breaks out in the small town?

In March of 2004, at the University of Central Missouri located in Warrensburg, Missouri, the Veterans Of Safety was holding a semi-annual meeting, and at the end of the day, the Mobile Aircraft Firefighting Trainer was brought in to a parking lot at the University to display a new safety training development.

The Mobile Aircraft Firefighting Trainer is a full sized steel mockup of an aircraft, about 50' long, with three jets (one on each wing, and one ½ way up the vertical tailfin). It has a short ladder up the left side of the plane to a functioning door, located right behind the cockpit. The right side also has a ladder and a functioning door towards the rear of the plane. The entire back of the plane pivots down to form a 10' wide ramp which offers another entry point the firefighters can use to gain access to interior of the plane. The two wings are swept back and extend about 30' out from each side of the fuselage. Metallic wheels about 3' in diameter are located

next to the fuselage right under the wings (you cannot use rubber tires on the wheels as they would explode from the heat when the plane is engulfed in flames, and would harm any firefighters next to the tires).

The plane has a number of gas jets located throughout the plane including the wings, sides, steel wheels, jets, and at several points in the interior of the plane. These gas jets are connected to hoses that run about 75' back to the computerized control unit which pumps propane though the hoses to the plane. The control unit is a computerized unit on the back of a tractor that pulls the mockup plane from town to town to give small town firefighters a chance to practice putting out an actual fire on and in the mockup. From that unit, the commander in charge of the fire can pump propane to a wing, for example, and ignite it from the control unit. Then the firemen go in and put out the fire on the wing. To simulate a true crash fire, there are several flat steel trays about one foot deep, and filled with water. The control unit can pump propane through a hose to the bottom of one of the trays, and as the propane bubbles up through the water, it comes up as dispersed small bubbles which are ignited by the control unit simulating a pool of burning jet fuel. The firemen then put out the fire in that tray. The plane also has a smoke generator to simulate a realistic fire with thick clouds of smoke.

Propane pumped to the inside of the plane is strong enough to literally blow a ball of flame out the back of the plane over the ramp. Whenever fighting the fires on and around the plane, firefighters wear full turn out gear including breathing units on their backs, and full air masks with face shields. Further realism is generated with a fireproof manikin body in the plane's interior. Firemen are to drag the manikin out of the burning plane to simulate rescue of a trapped airplane passenger. The heat in the interior of the plane gets so high during training drills on putting the fire out, that about 15 minutes after the fire was put out, the floor of the plane was still hot enough to start melting the soles on my tennis shoes when I walked through the plane's fuselage.

This firefighter training system was developed in Missouri as a way to take airplane crash & fire training out to the smaller towns who would not be able to afford to send their firefighters to larger cities for training and hands on experience. The unit is operated as part of the University of Missouri, Missouri Rescue Training Institute. They have sent this program out to other states including Iowa and New Mexico so those states can get an idea of what improvements can be made in safety.

Firefighters in front of computerized control unit on back of tractor used to pull the plane from city to city. Control unit regulates how much propane pumped to what part of the plane & ignited to control the fire.

Additional assistance from a group to improve local safety is not unheard of. There have been so many railroad tanker fires, according to a recent magazine covering safety, that one of the railroads at their own expense, has started sending a tanker railcar around between cities to give local firefighters hands on practice in what valves to close in case of a tanker fire, etc. They are particularly stressing gas tanker rail cars loaded with petroleum from the Bakken oil fields in North Dakota because it seems to be some particularly flammable petroleum.

# LIFE INTERRUPTED

**By Christopher M. Gates, ARM**

The community of West, TX, is what many people would consider “a wide spot in the road” between Dallas and Houston. The people who live there call it home. The community of 2800 provided a gathering place for people from surrounding communities and provided infrastructure, including schools, to support their daily lives.

There was an agricultural chemical blending plant on the north eastern outskirts of town that received agricultural chemicals by truck and railcar, stored these chemicals, and performed custom blending of some of these chemicals for its customers. The plant had caused concerns for some because of its proximity to the edge of the community (especially, two schools, an apartment building, and a nursing home). The plant had been in this location since 1962. The community grew into an area near the plant that initially had no structures or other exposures. There were also some concerns about the recent practice of burning wooden pallets at the plant and the smoke that drifted into town when the wind blew in that direction. Overall, these concerns were not expressed by many of the residents and life appeared to be good in the community.
This relative peace and domestic tranquility was abruptly interrupted on the evening of April 17, 2013. At approximately, 7:29 PM, the local fire dispatch received a report of a fire in the plant. Initially, there was a fire of unknown origin in the agricultural chemical plant. The West, TX, volunteer fire department provided the initial response. This response was augmented by fire fighters from nearby communities who were attending an Emergency Medical Services (EMS) class at the West, TX, EMS building. The first responders quickly realized that the fire could spread and they called for an evacuation of the nursing home and other structures. They also requested mutual aid from nearby fire departments.

Before the evacuations could start, the roof of part of the blending plant’s structure collapsed and the materials that were on fire exploded. The blast left a crater that was 90 feet wide and ten feet deep. The blast left ten firefighters dead along with two civilians who responded to the initial fire call, and three civilians in the area of the community that was west of the plant. Several more firefighters suffered serious, traumatic injuries. Over 250 civilians (in the community) were also injured.
In addition to leveling the plant, the blast destroyed 500 structures in a 37 block area. These structures included three schools, a nursing home, the West EMS building, an apartment complex, and many homes. Initial property loss estimates (not including the chemical blending plant) were over $100 million.

The force of the blast registered as a 2.1 (on the Richter scale) earthquake on seismographs in the area. Pieces of the plant were photographed as far as 2.5 miles from the plant.
After the fires were put out, the injured were treated, and the damaged property was stabilized, several investigations started. Investigations were conducted by the State Fire Marshal, State and local public health agencies, and local media. Investigations were also conducted by the Department of Labor (Occupational Safety and Health Administration) and the U.S. Chemical Safety Board. The State Fire Marshal’s investigation focused on available firefighting equipment, firefighter training and equipment, prefire planning, and compliance with existing consensus standards. The public health agency investigation focused on the number and types of injuries suffered during the explosion and possible actions that could be taken to prevent similar mishaps in the future.

The State Fire Marshal’s report detailed deviations from the existing fire codes and building codes in the structure of the chemical processing plant. It also detailed deviations from building codes in the siting of the two schools, the nursing home, and the apartment complex. It found that the community volunteer fire department had not complied with national fire codes with regard to inspections of the chemical processing plant; had not properly trained the department staff; had not properly planned to respond to a fire at the chemical processing plant; and was not equipped to suppress a fire in the plant. This investigation also found that the responding fire fighters did not follow existing standards for command and control of the response to the reported fire in the chemical plant.

The Chemical Safety Board investigation was a traditional “root cause” investigation that looked at all potential fire and explosion sources and actions that could have prevented or reduced the severity of this or a similar mishap. The Chemical Safety Board developed 18 preliminary findings and recommendations that were release approximately one year after the incident. Many of these findings duplicated or overlapped the

findings and recommendations that were developed during the State Fire Marshal and public health agency investigations and reports. (Install link to the document with these findings.)

Because this mishap occurred after several other chemical plant incidents, the President of the United States signed an Executive Order (EO) 13650 - *Improving Chemical Facility Safety and Security* on August 1, 2013. The Executive Order directed a number of federal agencies to work together to improve:

- Improve operational coordination with State, local, and tribal partners;
- Enhance Federal agency coordination and information sharing;
- Modernize policies, regulations, and standards; and
- Work with stakeholders to identify best practices.

To accomplish these goals, the EO established a Federal interagency working group (Working Group) led by the Environmental Protection Agency (EPA), the Department of Labor (DOL), and the Department of Homeland Security (DHS) and including other departments and agencies involved in the oversight of chemical facility safety and security. Recognizing that stakeholders are essential to managing and mitigating the risks of potential chemical facility hazards, the Working Group initiated a robust stakeholder outreach effort to assist the workgroup in identifying successes and best practices.

A thorough analysis of the current operating environment, existing regulatory programs, and stakeholder feedback resulted in immediate actions and a consolidated Federal Action Plan of future actions to further minimize risks, organized by five thematic areas:

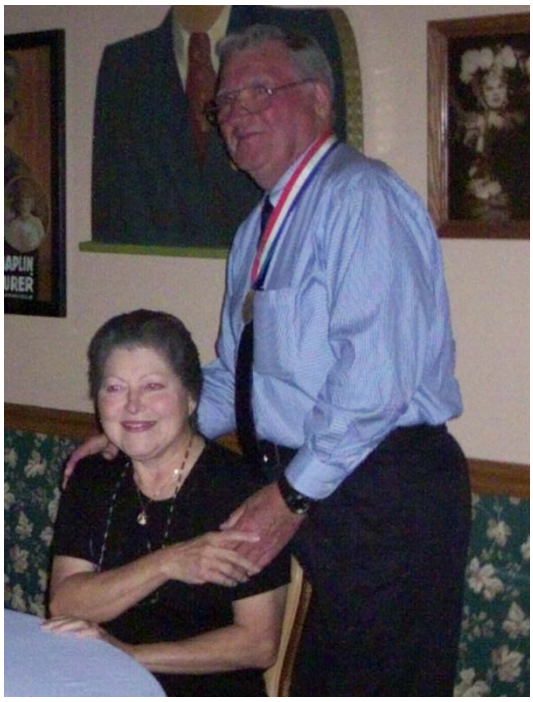
- Strengthening community planning and preparedness;
- Enhancing Federal operational coordination;
- Improving data management;
- Modernizing policies and regulations; and
- Incorporating stakeholder feedback and developing best practices.

These agencies worked together to outline current activities to improve chemical facility safety and security and provide a plan for moving forward. It is important to emphasize accomplishing this strategy requires a shared commitment among facility owners and operators; Federal, State, tribal, and territorial governments; regional entities; nonprofit organizations; facility workers; emergency responders; environmental justice and local environmental organizations; and communities.

The interagency working group rendered a 121 page report one year after the mishap. This report detailed short and long term action items in each of the five thematic areas. These action items include proposals to change land use planning, building codes, fire codes, and fire department operations within the State of Texas. (Insert a link to the final Executive Order Working Group report.)
This mishap with the associated loss of life and property damage was preventable. However, state and local policies reduced the likelihood that effective preventive actions would take place. The absence of land use planning regulations allowed the community to develop into what was, initially, a buffer zone between the plant and the community. As evidenced by the size of the explosion blast, the initial buffer zone would not have been adequate to prevent damage to property in the community.

***You can find the full text of the investigation reports on VOS website under "What's New in Safety & Health":*** http://vetsofsafety.org/

# We lost a great friend in A.J." Scardino



Angelo Joseph "A.J." Scardino, Jr., age 79, born in New Orleans, LA on June 19, 1934, entered into eternal life on February 6th, 2014. He and his wife, Loislyn Blanchard Scardino, shared over 56 years together, were blessed with 10 children, and called Pass Christian, MS their home for nearly 40 years.

He was a highly accomplished and world renowned health and safety professional and was a global pioneer in preventative safety, risk management and an advocate for occupational health. He completed a master's of science in safety engineering and earned the esteemed designation of Doctor of Philosophy in Safety and Ergonomics. He was a registered professional engineer, a certified fire investigator, and a licensed aviation pilot. In 1999, A.J. Scardino was nominated and inducted into the Safety and Health Hall of Fame International (SHHOFI).

**YouTube tribute to AJ**: https://www.youtube.com/watch?v=gJNxeJQ4IzA

# A.J. Scardino and the Commercial Use PFD

**By Patrick Conroy**

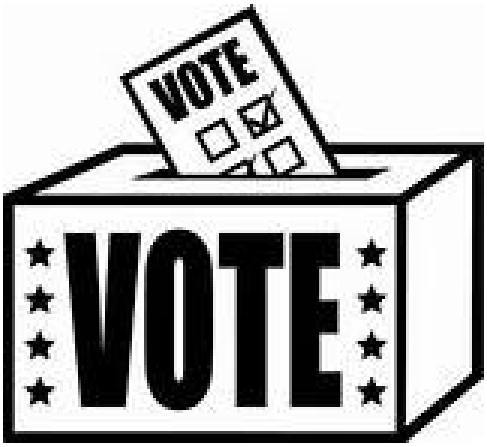
This essay is written from memory because we were unable to locate AJ's Safety and Health Hall of Fame International (SHHOFI) nomination documents. The nomination documents included a narrative and a photograph concerning AJ creating a Personal Floatation Device (PFD) during the early 60's specifically designed to be used by Marine Industry and Construction workers whom work in, around and over water regularly to do their jobs. This accomplishment along with many additional success stories are why AJ was inducted into SHHOFI.

For many years Marine and Construction workers depended on ring buoys, gaff poles and in some cases lifesaving skiffs to save them if they fell into the water. Finally the US Coast Guard made it mandatory for these workers to wear a "Mae West" life jacket. What AJ discovered was that the Mae West and soon more modern models of the Personal Floatation Devices (PFDs) could not take the physical abuse they underwent during the course of a regular workday. These devices damaged easily for the rigors of the jobs being done by the workers. He also learned from personally testing that the Mae West/PFDs used by the workers could not roll a worker over if they fell into the water face first. This was because the heavy clothes and tools worn around the waist of these workers made it impossible for the commercially available products at the time to hold the worker's head up or to roll them over so they could breathe.

AJ using medium weight canvas and cork inserts created a more durable and functional PFD for these workers. Reference the cork inserts; AJ made one cork insert smaller than the other. When someone fell into the water face first the two different size cork inserts allowed the workers body to roll over so they were face up while they awaited rescue.

This technology was already available in the commercial market place using other insert methods but had not found its way into the Marine or Construction Industries.

# *Two pictures shared by Warren Brown on VOS Board of Directors meeting with ASSE on April 12, 2014*


# VETERANS OF SAFETY

# BOARD OF DIRECTORS

# ELECTION BALLOT 2014

The VOS Bylaws require that an annual election be held to elect up to five Board of Directors. This year's slate is current Directors who have agreed to run for another three year term.

| NAME | STATE | STATUS | VOTE | |
|---|---|---|---|---|
| | | | Yes | No |
| Tom Broderick | IL | Ambassador<br>Current Board Member | | |
| Nigel Ellis | DE | Dean of Ambassadors<br>Current Board Member | | |
| Jack Hirschmann | CT | Treasurer<br>Current Board Member | | |
| Warren Brown | OH | President<br>Current Board Member | | |
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| | | | | |

Directions to complete ballot:

- Mark your yes or no vote
- Email completed ballots to wwwahlstedt@nationalindemnity.com
- If using US postal service standard mail, use this address:
  **Wendell Wahlstedt**
  **8108 Fireside Dr.**
  **N. Richland Hills, TX 76182-7325**
- All completed ballots need to be received by September 12, 2014.