



ATA ASSOCIATES, INC.  
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### ON THE ROAD

- 10/22/14 TIDA, Las Vegas, Nevada - Bob Swint, Seena Prentice and Anita White
- 11/08/14 Houston Livestock Show and Rodeo Cowboys and Cowgirls Who Cook, NASA Gilruth Center, Houston, TX
- 11/19/14 Women In Claims Luncheon, Houston, Texas - April Yergin and Anita White
- 12/12/14 LADC Winter Conference, New Orleans, Louisiana - Bob Swint and Anita White
- 01/18/15 National Trial Lawyers, Miami, Florida - Bob Swint, and April Yergin
- 03/11/15 ABA Transportation Megaconference, New Orleans, Louisiana - Bob Swint, Anita White and Seena Prentice

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## ATA Assists in Prosecution of Coast Guardsman's Killers



In December 2012, U.S. Coast Guard Chief Petty Officer Terrell Horne, III was killed in a collision between a Coast Guard vessel and a boat operated by a Mexican national near Santa Cruz Island, not far offshore from the city of Santa Barbara, California. The episode began when an open-bow fishing boat, known as a "panga", was spotted near the island by a Coast Guard aircraft on a routine nighttime patrol. An inflatable boat with a crew of four was deployed from the Coast Guard Cutter *Halibut* to investigate. Video recorded by a forward looking infrared (FLIR) system on the aircraft shows that as the inflatable approached the stationary panga, the panga abruptly accelerated and turned to port. In the collision that followed, the bow of the 30-foot Mexican craft rode up on the smaller Coast Guard vessel and knocked two crewmen, including Chief Horne, into the ocean, where both men received propeller strikes from the panga's outboard motors. Despite first aid administered by his crewmates, Horne died aboard the cutter while being evacuated from the scene. Meanwhile, the surveillance aircraft followed the panga as it fled south, eventually handing off the chase to a Coast Guard helicopter and armed, fast response boat. After a lengthy pursuit, the panga was stopped and Coast Guard personnel apprehended the panga's driver and a crewman. Surprisingly, no contraband was found; instead, the panga was carrying over 2,400 pounds of gasoline meant to be used to refuel other northbound boats involved in drug running or human trafficking.

The U.S. Attorney's Office contacted ATA Associates, Inc. in February 2013 seeking a reconstruction of the collision to be presented at the trial of the panga's captain and his crewman who had been charged with second degree murder, failure to heave to and four counts of assault on a federal officer with a deadly weapon. ATA's work in preparing the reconstruction included an examination of the FLIR video and eye-witness accounts of the collision, physical inspections of the panga and the Coast Guard inflatable, in-water performance testing of the panga and a nighttime visit to the collision site to witness visibility at the site under lighting conditions similar to those at the time of the collision.

The surveillance aircraft's FLIR video was a major component in reconstructing the event, though interpretation of the video proved to be a challenge. Progressive movement of the aircraft during the recording, panning of the FLIR camera by its operator, who had no foreknowledge of what he was about to witness, and foreshortening of the camera's view created by a separation distance of almost four nautical miles between the aircraft and the collision scene made quantifying distances between the two boats difficult. (continued on page 3)

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## Problems on Texas Roadways

There has been a critical rise in Texas traffic accidents, particularly involving commercial motor vehicles. What has caused this significant rise in costly accidents? Van O'Neal, retired founder/director of the commercial truck driver training program at Houston Community College, says after 25 plus years in the transportation industry his immediate answer would be the lack of education and training. Federal Motor Carrier Safety Administration (FMCSA) is once again considering mandating entry level driver training within a year to help alleviate some of the problems. However, many commercial drivers now actively engaged in the industry have never received any formal driver training.



In addition, an increased population growth in metropolitan areas and a new wave of heavy equipment on sub-standard roadways in the Eagle Ford and Permian Basin oil exploration areas are a major cause for concern. The Houston Chronicle recently produced a series of articles devoted to commercial trucking accidents, specifically the oil field heavy equipment sector. According to the articles, persons working in the oilfields are 8.5 times more likely to die in job related transportation accidents than those outside the oil industry. Company officials from the state's largest worker's compensation company confirm that fatigue is frequently a factor in these accidents. Two week shifts of 12 hour days and long commutes add to these dangers from driver fatigue. Highway 72, a highway that is 111 miles long going through no major cities but supporting traffic through the Permian Basin oil fields, has been dubbed "Death Row", resulting from the high number of fatality accidents, many related to driver fatigue. In Texas commercial motor vehicle accidents have increased more than 50% from 2009-2014 while the nation for the past 60 years has seen a decline in highway deaths.

The Texas population has grown 125% in the past four decades, road use had increased 200% and yet the capacity of state highways grew only 10%. There is a potential for the population of Texas to double by 2030 and a possibility Texas oil patches will be active for the next 20-30 years. Much of the traffic in those areas travels on roads never intended for such heavy traffic.

What can the transportation industry do to improve this critical issue? Endorse and Support: Compliance on driver licensing requirements; increased safety inspections; insurance compliance; better infrastructure for a burgeoning traffic issue that could last for the next thirty years in the oil field areas, and is an ongoing problem in the metro areas, a highway system that serves an ever expanding population; a law endorsed by John Esparza, President, Texas Trucking, prohibiting firms with low safety ratings from continuing to operate simply by changing their names. Costly recommendations, yes! What else can be done to improve this critical situation that, if left unaddressed, will only exasperate this already devastating issue? A better prepared driver! That means education and training for entry level drivers. Texas has some world class driving schools that provide quality education and training for those desiring to enter the trucking industry. Professional drivers must avail themselves of continuing education and training classes that deal with basic and evolving knowledge, rules and equipment. Much of this training can be received at local community colleges or on-site, company sponsored training provided by knowledgeable proprietary vendors.

ATA Associates has long been a supporter and provider of quality truck driver training. Van O'Neal, retired Director of Transportation Training at Houston Community College, is an active member of ATA's team of qualified professionals. He is the founder of the Commercial Truck Driving program at HCC and has served as director for the automotive programs including, automotive technology, paint and body and diesel technology, logistics, motorcycle and driver education programs. He developed the curriculum for all truck driver training and the HCC Train the Trainer Program.

O'Neal now serves as consultant to the trucking industry and provides testimony regarding driver behavior. He believes that comprehensive driver education is vital to the trucking industry and necessary to ensure safer public transportation on highways.

## Prosecution of Coast Guardsman's Killers (continued from Page 1)

Global positioning system (GPS) data for a "target" at the center of the frame was provided by the FLIR system, but those data were less helpful in estimating distances between the boats than was initially expected. Observations of distinctive features of Santa Cruz Island's shoreline, seen in the background of the FLIR video image, provided the best means for determining distances between the boats when the locations of those shoreline features were considered in the context of data provided by the FLIR system on the camera's location and its pointing direction. Clarity of the video was also enhanced by ATA's novel deconstruction of the video into its constituent frames and the subsequent reanimation of those frames after they were reoriented in relation to prominent, fixed island landmarks.

In January 2014, Ed Fritsch presented ATA's reconstruction, including the stabilized FLIR video, in U.S. District Court for the Central District of California as one of the final witnesses for the prosecution in the jury trial of the panga's captain and his accomplice. Both men were subsequently convicted; the panga's captain receiving a life sentence without parole and his accomplice receiving a sentence of ten years in federal prison.

## Forensic Value of Paint Evidence in a Vehicular Accident by E. Lynn Shirey

It is inevitable that when vehicles are involved in an accident that there will be physical evidence of contact between the multiple entities. The nature of the physical contact can be in the form of very slight scrapes, indentions, smears, crumpling, and severe deformation and tearing of vehicular members. The types of vehicle materials that can be investigated include:

1. Plastic from bumper covers, engine compartments, light assemblies and door handles.
2. Rubber from tires, seals on light assemblies and door seals.
3. Painted metal from structural members (wheel wells, hoods and doors) and the engine compartment.
4. Fiberglass from hoods as well as bumper and engine compartment support structures.

Within each vehicle construction member are paint systems unique to each material type, such that when these members come in contact, exchange of one material type to another material type can occur along with the corresponding paint layer(s) present on the structural member.

The evaluation of either exchange of the base materials of construction or the paint present on those items can provide insight into whether a vehicle was involved in the collisional aspects of the wreck, but of even greater value to the accident reconstructionist is the knowledge of which body member likely struck a particular area. This is based upon the finding of the mutual exchange in the areas affected.

The evaluation of the exchange of these items is usually investigated by visual microscopy from removed components or scraped painted areas from the vehicles in question (From 40X – 200X magnification). Oftentimes, entire paint layers containing OEM primer, intermediate and topcoat/clear coat systems can be found. The number of layers, color of the paint system, thickness of the layers and type (solid versus metal flake) can be used to substantially determine the nature of the exchange. Other analytical tools such as Fourier Transform Infrared Spectroscopy (FTIR), particularly one with a microscope attachment, can be used to spectrally fingerprint the paint and the materials of construction as to their respective polymeric types from microscopic samples removed from the scraped areas and removed components. The combination of microscopic evaluation and spectroscopy can provide answers to reconstruction questions, which a simple visual examination might miss.

