First Response
Responding to a Pesticide-Related Aircraft Accident

The National Agricultural Aviation Research & Education Foundation (NAAREF), through the cooperation of its sister organization, National Agricultural Aviation Association (NAAA) has produced this video to acquaint the public, first responders, fire departments and ambulance services with agricultural aviation. NAAREF has included a PDF of extra explanation and study materials of the information in the video.

A VHS tape was produced and distributed in 1994 as a result of a pilot with life-threatening injuries being left untreated because the emergency personnel on the scene are unsure of their safety because of the potential threat of agricultural chemical exposure. That video was produced to minimize these incidents by making first responders more familiar with agricultural chemicals. This DVD provides an update on aircraft design and agricultural chemical properties.

NAAREF understands the need for prevention of human exposure to an unknown product. Throughout this video, suggestions will be made to rapidly identify the product and allow the first responders to protect themselves and the public from the product once it has been identified. In addition, the video will point out the aircraft's hopper generally contains a highly diluted solution compared to the concentrated chemical product mixed by the ground handling personnel.

This study material also presents additional detail of situations and aircraft construction that could not be addressed in detail in the video because of the various designs of aerial equipment. NAAREF encourages emergency response personnel to make arrangements with local aerial applicators to demonstrate and explain their equipment to better understand the content of the video. Applicators throughout the country have expressed an interest in participating in educational programming about their industry. If you are unable to locate an application company, contact the NAAA for suggestions. The association can be contacted either by phone at (202) 546-5722 or by email at information@agaviation.org. Additional information about the industry can be obtained from the website at http://www.agaviation.org.

Additional reference information below will be provided for each section of the DVD.

Introduction (Chapter 1)

No reference materials necessary.

Approaching a Scene (Chapter 2)

The most important consideration when approaching an accident scene is to provide safety to the public and the emergency personnel involved at the accident scene.

It is good practice to approach the scene from uphill and upwind and avoid any smoke, liquids or spills. It is important to locate the pilot in order to provide any necessary medical assistance. He may or may not be in the cockpit. He may have been ejected from the cockpit or exited under his own power. The pilot's normal reaction is to get away from any hazard posed by the wreckage. If the pilot is conscious, he is the best source of information on the chemical carried in the aircraft.

Look for secondary hazards such as downed power lines which may present a danger to rescue personnel. Avoid any downed power lines and consult with the utility company to ensure electricity has been shut off.

Fuel leaking from the aircraft could cause a fire hazard. Depending on the aircraft type, the fuel may be Avgas (aviation gasoline) or turbine fuel (similar to diesel fuel). Avoid any ignition source and apply a vapor suppressant if necessary.

Odors coming from the wreckage may or may not mean exposure to a pesticide. The smell may be the solvent or an odor intentionally added to the pesticide to identify it or warn of its presence.

On an agricultural airplane, the chemical tank, or hopper, is usually located directly in front of the cockpit area. Usually this location is near the center of the aircraft where the fuselage and the wings meet. It is frequently made of fiberglass and often has gallonage markings on the outside of the fuselage. The contents of the hopper may be a liquid material, dry material or it may be empty.

If the hopper contains a liquid pesticide, it has usually been **diluted with water from its concentrated form by as much as 80 times.** Although the pesticide still presents a hazard, it is considerably safer than handling the concentrated product.

If the hopper contains a dry material, it may be a fertilizer, seed or a pesticide in dry form. Fertilizers are the most common dry material applied by aircraft. Fertilizers generally do not pose a risk but smoke from burning fertilizer may be hazardous. Seeds applied by air are not hazardous but some may be treated with a pesticide which can usually be identified by the color on the outside of the seed. Some

pesticides are available in dry form. Some appear similar to a grain of sand while others may be in the form of a pellet or bait.

Agricultural helicopters may have different characteristics which make them more difficult to identify. One easily identifiable feature on various models would be the spray booms mounted on each side of the aircraft. On helicopters, hoppers may be located internal in the fuselage, below the belly, behind the cockpit or mounted on the landing skids. In some instances, the hopper and dispensing equipment is attached as a “sling-load” suspended below the helicopter.

Remember, some sort of PPE is always prudent if a spill is detected.

PPE – Personal Protective Equipment (Chapter 3)

The Emergency Response Guide (ERG) will likely be the first document consulted since it is readily available to first responders. The ERG will recommend Self-contained Breathing Apparatus (SCBA) and PPE for protection against an unknown pesticide.

As mentioned earlier, NAAREF believes the important action is to identify the pesticide as quickly as possible to expedite medical treatment to the injured pilot. The primary purpose of this video is to help the first responder identify the chemical so it is no longer an unknown quantity.

Once the chemical’s identification is made, the chemical label is best source for PPE. The label also includes recommendations of first-aid and treatment for exposure to this chemical.

If the pilot is conscious, he can be a valuable source of chemical identification. If he is not able to assist, some other suggestions are provided. Attempt to contact the company owning or operating the aircraft. In many cases a company logo or name may be on the outside of the aircraft. Application companies are encouraged to ensure contact information is clearly visible on the exterior of the aircraft. The name and address of the aircraft’s registered owner is available on the Federal Aviation Administration’s website at http://registry.faa.gov/aircraftinquiry/NNum_Inquiry.aspx by entering the N-number on the outside of the aircraft. Although the aircraft may be leased to or operated by another entity, this may lead to the correct contact information.

Check with aerial applicators in the area, local airports and other agricultural application companies for information on the aircraft’s operator. Farmers in the area may be able to provide a lead to operator identification. Many times sheriff’s departments or other local law enforcement agencies are aware of agricultural activity being conducted in the area. NAAREF suggests dispatchers be provided with a list of agricultural operators in case some problem should arise and they need to be contacted quickly.

DuPont Crop Protection supplied the DuPont™ Harmony® Extra SG herbicide label and MSDS for one of their widely used crop protection products for use as reference material. Harmony Extra SG is used for selective postemergence broadleaf weed control in wheat, barley, oat, triticale and fallow. It is neither one of the safest nor one of the more dangerous products used by agricultural aviation. The complete documents are attached to the study guide but we will refer to excerpts in this guide. Page 1 of the DuPont Harmony Extra SG label is shown below.

DUPONT®

DuPont™ Harmony® Extra SG

herbicide (with TotalSol® soluble granules)

Soluble Granules

For Use on Wheat, Barley, Oat, Triticale, Fallow and Burndown

Active Ingredients	By Weight
Thifensulfuron-methyl Methyl 3-[[[[(4-methoxy-6-methyl-1,3,5-triazin-2-yl) amino]carbonyl]amino] sulfonyl]-2-thiophenecarboxylate	33.33%
Tribenuron-methyl Methyl 2-[[[[N-(4-methoxy-6-methyl-1,3,5-triazin-2-yl)methylamino]carbonyl] amino]sulfonyl]benzoate	16.67%
Other Ingredients	50.00%
TOTAL	100.00%

EPA Reg. No. 352-714 EPA Est. No. _____

Nonrefillable Container

Net: _____

OR

Refillable Container

Net: _____

KEEP OUT OF REACH OF CHILDREN

CAUTION

Si usted no entiende la etiqueta, busque a alguien para que se la explique a usted en detalle. (If you do not understand this label, find someone to explain it to you in detail.)

FIRST AID

IF ON SKIN OR CLOTHING: Take off contaminated clothing. Rinse skin immediately with plenty of water for 15-20 minutes. Call a poison control center or doctor for treatment advice.

IF IN EYES: Hold eye open and rinse slowly and gently with water for 15-20 minutes. Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye. Call a poison control center or doctor for treatment advice.

Have the product container or label with you when calling a poison control center or doctor, or going for treatment. You may also contact 1-800-441-3637 for emergency medical treatment information.

PRECAUTIONARY STATEMENTS

HAZARDS TO HUMANS AND DOMESTIC ANIMALS

CAUTION! Causes moderate eye irritation. Avoid contact with eyes, skin, or clothing. Prolonged or frequently repeated skin contact may cause allergic reactions in some individuals.

PERSONAL PROTECTIVE EQUIPMENT (PPE)

Some materials that are chemical resistant to this product are listed below. If you want more options follow the instructions for Category A on an EPA chemical resistance category selection chart.

Applicators and other handlers must wear:

Long-sleeved shirt and long pants.
Chemical Resistant Gloves Category A (such as butyl rubber, natural rubber, neoprene rubber or nitrile rubber) ≥14 mls.
Shoes plus socks.

Follow manufacturer's instructions for cleaning/maintaining PPE. If no such instructions for washables exist, use detergent and hot water. Keep and wash PPE separately from other laundry.

USER SAFETY RECOMMENDATIONS

USERS SHOULD: Wash hands before eating, drinking, chewing gum, using tobacco or using the toilet. Remove clothing/PPE immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing.

Remove PPE immediately after handling this product. Wash the outside of gloves before removing. As soon as possible, wash thoroughly and change into clean clothing.

ENVIRONMENTAL HAZARDS

Do not apply directly to water, or to areas where surface water is present, or to intertidal areas below the mean high water mark. Do not contaminate water when cleaning equipment or disposing of equipment washwaters or rinsate.

PESTICIDE HANDLING

- Calibrate sprayers only with clean water away from the well site.
- Make scheduled checks of spray equipment.
- Ensure that all operation employees accurately measure pesticides.
- Mix only enough product for the job at hand.
- Avoid overfilling of spray tank.
- Do not discharge excess material on the soil at a single spot in the field, grove, or mixing/loading station.
- Dilute and agitate excess solution and apply at labeled rates or uses.
- Avoid storage of pesticides near well sites.
- When triple-rinsing the pesticide container, be sure to add the rinsate to the spray mix.

1

Chemical labels. Once the chemical has been identified, the label is an excellent source of information about the product. The label and MSDS is readily available at the location of mixing and loading of the aircraft. It is also available by searching on-line at sites such as: http://www.cdms.net/LabelsMsds/LMDefault.aspx?t=

Labels use signal words based on the toxicity level of the concentrated product and the amount of exposure.

Danger – (Category I) – pesticide product is highly toxic by at least one route of exposure. It may be corrosive, causing irreversible damage to the skin or eyes. The word "Poison" must be included if the product may be highly toxic if eaten, absorbed through the skin or inhaled.

Warning – (Class II) - moderately toxic if eaten, absorbed through the skin, inhaled or it causes moderate eye or skin irritation.

Caution – (Class III) - slightly toxic if eaten, absorbed through the skin, inhaled or it causes slight eye or skin irritation.

Page 1 of the label recommends the level of PPE which should be worn when handling the concentrated pesticide. The first responder can quickly find the equipment he should wear when exposed to the pesticide. In this example, the label recommends a long-sleeved shirt and long pants, Chemical Resistant Gloves Category A, and shoes plus socks.

This page of the label provides additional information on First Aid if the chemical gets on the skin or clothing or gets in the victim's eyes. A recommendation is made to have a container or label with the victim when he is transferred for treatment. A phone number is given for the emergency personnel to obtain treatment information.

MSDS. If the chemical label is unavailable, much pertinent information can be obtained from the MSDS. Referring to the attached Harmony MSDS, pay particular attention to the following sections:

Section 1. Identifies the product and lists a phone number to be used in the event of a medical emergency.

Section 2. Hazards Identification. Gives the potential health and safety risks when exposed to the material.

Section 4. First Aid Measures. Lists the recommended first aid measures if exposed to the material. Note this information is similar to the information given on the chemical label.

Section 5. Fire-Fighting Measures. Recommends the proper precautions and procedures to use if the material is involved in a fire.

Section 8. Exposure Control/Personal Protection. Recommends type of PPE to be used when handling this material.

Please see the comparative examples concerning levels of PPE from page 4 of the MSDS and from page 1 of the Product Label shown on the following pages.

DuPont™ Harmony® Extra SG Herbicide (with TotalSol® soluble granules)

Version 2.0

Revision Date 05/05/2011 Ref. 130000012163

Safeguards (Personnel)	:	Evacuate personnel, thoroughly ventilate area, use self-contained breathing apparatus. Use personal protective equipment.
Spill Cleanup	:	Sweep up and shovel into suitable containers for disposal. Take special care to avoid contamination of equipment and facilities during cleanup procedures and disposal of wastes.
Accidental Release Measures	:	Prevent material from entering sewers, waterways, or low areas. Never return spills in original containers for re-use. Dispose of in accordance with local regulations.

SECTION 7. HANDLING AND STORAGE

Handling (Personnel)	:	Wash hands thoroughly with soap and water after handling and before eating, drinking, chewing gum, using tobacco, or using the toilet. Remove clothing/PPE immediately if material gets inside. Wash thoroughly and put on clean clothing. Remove personal protective equipment immediately after handling this product. Wash the outside of gloves before removing. As soon as possible, wash thoroughly and change into clean clothing.
Handling (Physical Aspects)	:	Keep away from heat and sources of ignition. Avoid dust formation in confined areas. During processing, dust may form explosive mixture in air.
Storage	:	Store in original container. Do not contaminate water, other pesticides, fertilizer, food or feed in storage. Keep out of the reach of children.

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Personal protective equipment

Skin and body protection : Applicators and other handlers must wear:
Long sleeved shirt and long pants
Chemical-resistant gloves, Category A (such as butyl rubber, natural rubber, neoprene rubber, or nitrile rubber), all greater than or equal to 14 mils
Shoes plus socks
PPE required for early entry to treated areas that is permitted under the Worker Protection Standard and that involves contact with anything that has been treated, such as plants, soil, or water, is:
Coveralls

MSDS

DuPont™ Harmony® Extra SG

herbicide (with TotalSol® soluble granules)

Soluble Granules

For Use on Wheat, Barley, Oat, Triticale, Fallow and Burndown

Active Ingredients	By Weight
Thifensulfuron-methyl Methyl 3-[[[[(4-methoxy-6-methyl-1,3,5-triazin-2-yl) amino]carbonyl]amino] sulfonyl]-2-thiophenecarboxylate	33.33%
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Have the product container or label with you when calling a poison control center or doctor, or going for treatment. You may also contact 1-800-441-3637 for emergency medical treatment information.

PRECAUTIONARY STATEMENTS

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CAUTION! Causes moderate eye irritation. Avoid contact with eyes, skin, or clothing. Prolonged or frequently repeated skin contact may cause allergic reactions in some individuals.

PERSONAL PROTECTIVE EQUIPMENT (PPE)

Some materials that are chemical resistant to this product are listed below. If you want more options follow the instructions for Category A on an EPA chemical resistance category selection chart.

Applicators and other handlers must wear:

Long-sleeved shirt and long pants.
Chemical Resistant Gloves Category A (such as butyl rubber, natural rubber, neoprene rubber or nitrile rubber) ≥14 mls.
Shoes plus socks.

Follow manufacturer's instructions for cleaning/maintaining PPE. If no such instructions for washables exist, use detergent and hot water. Keep and wash PPE separately from other laundry.

USER SAFETY RECOMMENDATIONS

USERS SHOULD: Wash hands before eating, drinking, chewing gum, using tobacco or using the toilet. Remove clothing/PPE immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing.

Remove PPE immediately after handling this product. Wash the outside of gloves before removing. As soon as possible, wash thoroughly and change into clean clothing.

ENVIRONMENTAL HAZARDS

Do not apply directly to water, or to areas where surface water is present, or to intertidal areas below the mean high water mark. Do not contaminate water when cleaning equipment or disposing of equipment washwaters or rinsate.

PESTICIDE HANDLING

- Calibrate sprayers only with clean water away from the well site.
- Make scheduled checks of spray equipment.
- Ensure that all operation employees accurately measure pesticides.
- Mix only enough product for the job at hand.
- Avoid overfilling of spray tank.
- Do not discharge excess material on the soil at a single spot in the field, grove, or mixing/loading station.
- Dilute and agitate excess solution and apply at labeled rates or uses.
- Avoid storage of pesticides near well sites.
- When triple-rinsing the pesticide container, be sure to add the rinsate to the spray mix.

Label

While trying to identify the product in the aircraft's hopper, the video suggested being aware of signs posted on some fields detailing the chemical to be applied to that field. The information on the sign may be used to assist with the identification of material in the hopper. However, don't spend too much time looking for postings because the aircraft may not come to rest in the field being treated.

NAAREF recommends that first responders and local law enforcement personnel carry basic protective gear in their vehicle at all times in case they are the first to arrive at a chemical emergency. The gear should include:

Long sleeve shirt and pants or coveralls
Shoes and socks
Chemical resistant gloves
Eye protection.

Only this minimum protective gear may be sufficient if no visible spill or odor is detected.

When identifying an aircraft as an agricultural aircraft, another similar use aircraft should be noted. Some agricultural aircraft are used for an entirely different purpose – aerial fire-fighting. These aircraft are referred to as Single-engine Air Tankers (SEATs). The aircraft looks like those used for ag with a few exceptions. They are usually painted white with red trim, spray booms are not used and a large number is usually painted at a conspicuous place on the fuselage. The hopper usually carries either water or a liquid flame retardant. If it contains retardant, it is usually red in color and may be hazardous.

Rescue Operation (Chapter 4)

Some general guidelines are illustrated in the video about rescue operations to help first responders remove the injured pilot from the cockpit. The first step is to be able to access the cockpit. The easiest method is through the doors if they are not jammed.

Doors. Airplanes usually have side doors that are hinged at the bottom and latched at the top. They swing down for entry. The latch at the top is marked on the outside of the fuselage with instructions for turning the handle to release the latch. The bottom of the door usually contains hinges which have removable hinge pins to aid in emergency access to the cockpit. These pins and their attached cables are marked for identification.

Helicopter doors are somewhat similar except they frequently swing horizontally to open. Some helicopter operations are conducted with the doors already removed. If it is necessary to remove the door, the latch should be rotated and the hinge pins should be removed to aid in door removal.

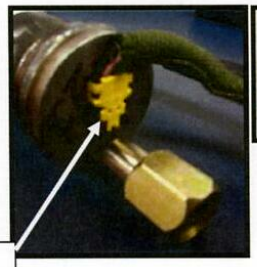
If the doors are damaged to the extent that removal is not possible, the acrylic plexiglass may be broken out of the windshield or side windows (doors) to gain access. The thickness of the acrylic is usually less in the side windows than the windshield.

Battery Switch. Once inside the cockpit, the electrical switch should be turned off. This switch is usually marked as either “Master” or “Battery” but may not be in a standard location. First, check the switches located on the instrument panel. Helicopters sometimes locate the switch on an overhead panel.

Battery or Batteries. Battery locations may vary with the model of aircraft. It may be located ahead of the cockpit near the engine firewall or a far back as the tail of the aircraft. Batteries, being heavy, are sometimes located in the tail to off-set or balance the weight of the engine. Some aircraft may use more than one battery – it is not uncommon to find two batteries connected together. The battery cables may not be marked. Use local protocol for disconnecting or cutting the cables.

Air Restraint Systems. A recent addition to some aircraft has been the safety feature of an air-bag system similar to the ones used in automobiles. AMSAFE Aviation developed a system using a pair of specially designed “air bags” that deploy on impact from the shoulder harness rather than from the panel as is often done on automobiles. These systems can be identified by much larger and thicker straps on the shoulder harness. Use caution if the system is installed and has not been deployed. The inflator bottle and sensor are usually located near the seat – generally directly below the seat. Until deployed, the bottle contains compressed gas at greater than 6,000 psi. Once deployed, the system is safe to work around. If it has not deployed, unplug the cable connecting the sensor and bottle.

The illustrations on the following pages are a typical AMSAFE air-bag system and a First Responder’s check list of safety considerations. ***This is for reference only***. Please refer to the *10-page AMSAFE First-Responder Reference Guide* which is included on this DVD for complete instructions on how to respond to an accident when the aircraft is configured with an AMSAFE air-bag system.

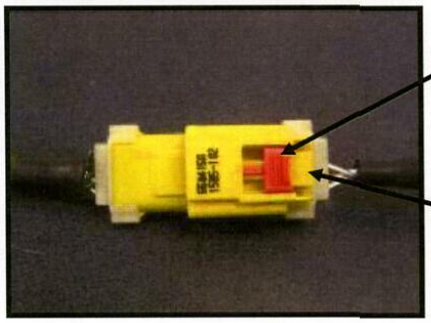


Squib Connector - Squeeze connector sides to release (ROI Inflator shown) Squib connector is the same for all inflator types.

NOTE:

Disabling the system can be accomplished by either locating the Inflatable Lap Belt Assembly connector within the Cable Interface or by simply cutting the connection.

- *Locate the Inflatable Lap Belt Assembly connector (yellow) section of the Cable Interface Assembly. and disconnect by sliding the red locking tab backwards to the unlocked position, depressing the yellow tab and then pull apart both connector halves.*
- *If access to either of these connectors is not possible due to deformation of the seat assembly or the fuselage, it is acceptable to cut the cable that connects to the inflator assembly or the EMA.*
- *If access to the connectors or cable assemblies is not feasible, another option is to cut the inflator hose as close to the bottom end of the restraint as possible to prevent deployment of a non-deployed airbag.*



Red Locking Tab in LOCKED position

Yellow Locking Tab

AMSAFE

First Responder Quick Check List for AmSafe Seatbelt Airbag System Safety Considerations

1. DISCONNECTING THE AIRCRAFT BATTERY WILL NOT DISABLE THE AMSAFE SEATBELT AIRBAG SYSTEM AS IT IS SELF-CONTAINED AND NOT CONNECTED TO AIRCRAFT POWER

2. Check to see if the aircraft is configured with the AmSafe Seatbelt Airbag System
   a) The restraint system will have a padded bag attached on the lap belt or the shoulder harness
   b) If the airbags have deployed it will be obvious, however, unoccupied seats may also have an active airbag system so take precautions to disable accordingly

3. Disable the airbag system using one of the following options:
   a) Disconnect the yellow airbag connector by pressing the red locking tab and separating the connector pieces
   b) Cut the cable assembly to the EMA or to the inflator, to deactivate the circuit
   c) Cut the inflator hose as close to the bottom end of the restraint as possible to prevent deployment of a non-deployed airbag. If somehow the system were activated with the hose cut, the gas would be released away from the responder and the occupant (lasting approximately 5-10 ms, at high pressure between 6200-7400 psi).

4. Extraction Considerations:
   a) If for some reason the airbags are not deployed, use extreme caution while cutting structure as the inflator assembly will still be a hazard and severe or fatal injury could occur if the inflator is cut or drilled
   b) If a fire occurs after an aircraft crash event, the inflator will ignite in excessive heat:
      (1) ACH inflator will auto ignite at approximately 130° C or 266° F and will release the stored gas to inert the system to reduce the risk of injury to emergency personnel
      (2) ROI inflator will auto ignite at approximately 400° C or 750° F and will release the stored gas to inert the system to reduce the risk of injury to emergency personnel

Note: The AmSafe Seatbelt Airbag Inflator Assembly is a high pressure device (6250 psi – ROI compressed helium inflator or 7400 psi for the hybrid ASH inflator described above) and can create a fragmentation hazard if cut or punctured by hydraulic extraction tools. Please use caution when responding to an accident where the airbags have not deployed. Typical installation of the inflator assembly is under or around the seat. The inflator assembly is the same device used in automotive side-curtain airbag applications.

AMSAFE Aviation recommends all first responder organizations register with the manufacturer to receive updates to instructional materials as changes are made to AMSAFE's safety equipment and procedures. The company provides the following instructions for registration:

- Access their website at: www.amsafe.com.
- Select "Customer Login" at the top RH Corner of the web page.
- Select "Aviation Customer Partner Site" link in the middle of the page.
- First Time User – Select "Register" button and fill in all information. Under "Notes", please include: FIRST RESPONDER as this will expedite your access to the proper location on our website for updated information.
- After your registration is processed, you will receive an e-mail authorizing your access within 24-48 hours. The more information included in the NOTES section the faster your access can be authorized.
- After registration is accepted, you can return to the www.amsafe.com site.
- Then select and click on "Aviation Customer Partner Site" link in the middle of the web page.
- Enter your name and password and click on "Go" button.

This will access the Customer Client page which contains AmSafe documents/reference material that is the most current for AAIR fielded applications.

Ballistic Parachute System (BPS). Some general aviation aircraft are equipped with a BPS which is a parachute designed to be manually deployed to parachute the entire aircraft to the ground in case of an emergency. An un-deployed BPS can be very hazardous to emergency personnel if not handled properly. To date, no agricultural aircraft have or intend to have the BPS installed.

As with any vehicular accident, the pilot should be removed from the wreckage by trained personnel except in the case where there is danger of complications such as fire. As in a roll-over accident, the pilot may be hanging from the seat belt. Additional considerations are as follows:

May need to cut belts and shoulder harness – experience shows it is very difficult when contending with as many as five separate straps coming together to a single buckle.

Helmets are connected to the aircraft by one or more cords which need to be unplugged.

Use helmet removal protocol to prevent additional injury to pilot.

NAAREF recommends all first responders complete additional training on the subject of safety at small aircraft or helicopter accidents. In the event of an accident, even small aircraft systems have presented additional hazards to first responders or any potential rescuer at an aircraft accident scene. With this in mind, the FAA has developed training especially for firefighters, Emergency Medical Service (EMS) and police. The training is divided into five modules:

Module 1 – Systems and Material Hazards
Module 2 – Aircraft Type Familiarization and Mission Specific Hazards
Module 3 – Command and Recovery
Module 4 – Ballistic Parachute System Familiarization
Module 5 – System and Material Hazards for Rescuers

This training program can be found on-line at
http://www.faa.gov/aircraft/gen_av/first_responders/

Decontamination (Chapter 5)

Evaluate the situation and decide if decontamination is required. The pilot may not have been exposed to the chemical even if the hopper has been compromised. The priority should be to administer first aid to the injured pilot. Follow local protocol and decontaminate as necessary to provide medical aid. When decontamination is required, it should be done to keep the hospital emergency room from being contaminated and shut down.

When performing decontamination, remove the contaminated clothing and use only soap and water on the victim. Upon completion, place any contaminated clothing and materials in a suitable container for later disposal by site clean-up personnel.

Call ahead to medical facility and provide the following information:
Give details of decontamination at the scene
Electronically send label or MSDS so they can begin treatment on arrival
If possible, send copy of label with injured person.

Review (Chapter 6)

Quick review of the points detailed above:

- Make a list of aerial applicators in the area
- Include crop protection companies
- Provide list to your dispatch center
- Carry PPE kit in your vehicle
    - Coveralls
    - Chemical resistant boots
    - Chemical resistant gloves
    - Eye protection

    - Hat
    - Respirator with organic vapor filters (fit tested)
- Pesticides in the hopper have probably been diluted with water – they are not concentrated
- Dispatch hazmat and EMT immediately
- Look for posted field signs
- Look for downed power lines
- Approach scene from upwind and uphill
- Avoid smoke, fumes and puddles
- Use your Incident Command System
- Use industry experts to help identify the chemical
- Obtain labels or MSDS
- Keep site personnel to a minimum
- Turn off electrical switches in the cockpit
- Only trained personnel should move victim unless there is a fire
- Remove pilot's harness
- Unplug helmet communications cord
- Decontaminate if necessary for basic medical care
- Decontaminate using only soap and water
- Call hospital in advance and alert of pesticide
- Send label to hospital as soon as possible
- Alert hospital of any decontamination