



Understanding your Hazmat Liability

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Welcome to the Seminar!

- Understanding your hazmat liability
 - What we will cover today
 - What are hazardous materials & who regulates them
 - How are they regulated
 - The shipper's responsibility
 - Forwarder/Carrier Responsibility
 - The different modal regulations
 - Penalties for non-compliance
 - Training Requirements
 - Presentation from the D.O.T.
 - Recent changes in the regulations

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Note about this Presentation

- In the seminar today, we will not review every single slide
- However, we are providing you with all of the materials we would normally present so that you can use these materials in training your own employees
 - This is a "recognition" training program and is not to be used for certification, however it provides a good introduction and overview of shipping hazardous materials/dangerous goods

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Who is TDG

- Transportation Development Group is a Logistics Consulting Company based in Los Angeles and Hawaii, specializing in training and regulatory compliance
 - TDG conducts hazmat training seminars nationwide for air, ocean, and highway transportation
 - TDG trains forwarders and airlines in international air freight operations through the IATA/FIATA Cargo Agent certification program with CNS.

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Who is TDG

- TDG was founded in February 1992 by Jim Powell. Before starting TDG, his background included the following:
 - 1970's – Station Manager for a several all cargo airlines in BUF, BWI, and ATL
 - 1980's – Hub Manager for AEI Airlines, Chicago
 - 1980's – Director of Cargo, DHL Air Cargo (Hawaii)
 - 1980's – Regional Manager Northern Air Freight (now Danzas/DHL/Airborne/AEI)
 - 1987-1992 – Skyway Freight System. Station Manager, and later Western Region Sales Manager

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Who is TDG (TDG Clients)

- Helped establish \$500 million dollar logistics division of national trucking company
- Helped develop Logistics Information System training program for multi-billion dollar Asia based forwarder
- Set up 3rd Party Logistics training program for MSAS and for BAX Global, trained hundreds of Global Account Managers and VPs in the US, Europe and Asia
- Jim Powell hired as International Product Manager to help establish Arzoon.com, a global logistics software company
- Trained over 2,000 people in the IATA/FIATA Cargo Agent Certification Program
- Helped train over 150 FAA Special Agents at Academy

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Who is TDG

- TDG's Hazmat Clients (a short list)
 - Large Retailers: Cartier (Hong Kong), Herbalife, WalMart
 - Government: Country of Micronesia, Bioterrorism Preparedness Dept, Maui County Police, Hawaii Police (SWAT), US Customs, FBI, State of Hawaii Health Dept
 - Aerospace: Northrop, Bombardier and many others
 - Airlines: Continental Airlines (CS) and many others
 - Forwarders: Kintetsu and hundreds of others
 - Education: University of Hawaii, California State University, California Maritime Academy and others

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Reducing your Hazmat Liability

- Why should your company be concerned?

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Why should your company be concerned?

- Why?
 - Environmental awareness/sensitivity is increasing globally
 - National and international enforcement of the regulations is escalating dramatically
 - Companies risk huge civil and criminal penalties for their employees knowing or unwittingly making mistakes with dangerous goods.

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Why should your company be concerned?

- It could happen to YOU!
 - Criminal Penalties can be involved
 - A shipping manager in Southern California was indicted by a federal grand jury and went to jail for a hazmat shipping violation.
- Since September 11th, the focus on hazmat is at an unprecedented level!

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Why should your company be concerned?

- Why?
 - Public embarrassment can be more devastating than the direct fines and penalties.
 - *Everyone* remembers Exxon's name and the oil spill in Alaska
 - Even a minor incident associated with your company can have a very negative impact

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Who Regulates Dangerous Goods ("Hazmat")

- The U.S. Department of Transportation
 - Enforcement Agencies:
 - AIR: The Federal Aviation Admin. (FAA)
 - TRUCK: The Federal Highway Admin. (FHWA)
 - RAIL: The Federal Railway Admin. (FRA)
 - VESSEL: The U.S. Coast Guard (USCG-DHS)
 - INTER-MODAL: The Research & Special Programs Admin. (RSPA)

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"TSA" was part of DOT



- The Transportation Security Administration
 - New Division (Feb 2002) of the US DOT (now part of Dept of Homeland Security)
 - Many FAA Cargo Security and DG Functions transferred to the TSA
- DG functions transferred *back* to the FAA as of late last year
- FAA retains certain security functions

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Who Regulates Dangerous Goods ("Hazmat")



- The United Nations
 - ICAO (Intl Civil Aviation Organization)
 - Individual nations publish "variations" (additional restrictions) to the ICAO rules
 - IMO (Intl Maritime Organization)
- The Airline Industry
 - The International Air Transport Association (IATA)
 - Individual airlines also publish variations to these rules

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Whose rules must you follow when shipping by air?



1. The D.O.T. Rules in 49 CFR
 - Normally you can use the IATA/ICAO Rules, however, certain items in 49 CFR will apply:
 - Placarding Requirements (not found in IATA)
 - Hazardous Substances (not listed in IATA)
 - Part 175 Air Carrier Requirements
2. The IATA Rules
3. Any variations to the rules in the country of destination or transit
4. Any airline variations



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Whose rules must you follow when shipping by ocean?

1. The IMDG Rules published by the International Maritime Organization (IMO)
 - Note – these rules have been completely reformatted from 4 into 2 volumes as of 2000
2. The D.O.T. Rules in 49 CFR
 - Normally you can use the IMO Rules, however, certain items in 49 CFR may apply to you, such as:
 - Placarding Requirements (not the same as IMDG)
 - Hazardous Substances (not listed in IMDG)

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Whose rules must you follow when shipping by ground?

1. The D.O.T. Rules in 49 CFR



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What are Dangerous Goods

- Also referred to as "Hazardous Materials", "Hazmat", "DG's", "Restricted Articles"
- Definition (varies slightly by mode)
 - Any substance that presents a significant danger when transported...
- These "risks" are categorized into Hazard Classes
 - Hazard classes may vary slightly by mode, or country



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Hazard Class Recognition




- CLASS 1 - EXPLOSIVES
 - Divisions 1.1 - 1.6
 - Examples: Cartridges for weapons, signal flares, safety fuses, dynamite, fireworks
- CLASS 2 - GASES
 - Division 2.1 Flammable gas
 - Examples: Butane, Hydrogen.





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Hazard Class Recognition



- CLASS 2 - GASES
 - Division 2.2 Non-flammable gas
 - Examples: Liquefied nitrogen, helium
 - Division 2.3 Toxic gas
 - Examples: Aerosols of low toxicity and tear gas devices are some toxic
- CLASS 3 - FLAMMABLE LIQUIDS






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Hazard Class Recognition




- CLASS 4
 - Division 4.1 Flammable solid
 - Examples: Matches, sulphur, Nitronaphthalene.
 - Division 4.2 Spontaneously Combustible
 - Examples: White or yellow phosphorus, magnesium dia





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Hazard Class Recognition



- Division 4.3 Dangerous When Wet
 - Examples: Calcium carbide, Sodium
- CLASS 5 - OXIDIZING SUBSTANCES and ORGANIC PEROXIDES
 - Division 5.1 Oxidizer
 - Examples: Ammonium nitrate fertilizer, pool chlorine
 - Division 5.2 Organic Peroxides
 - Examples: tert-Butyl hydrogen peroxide, MEK peroxide






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Hazard Class Recognition



- CLASS 6 - POISONOUS (TOXIC) SUBSTANCES and INFECTIOUS SUBSTANCES
 - Division 6.1 Toxic substances
 - Examples: Nicotine, cyanide, arsenic.
 - Division 6.2 Infectious substances
 - Examples: Diagnostic specimens, biological products
 - Note: Major Changes in the 6.2 Regulations 2003





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Hazard Class Recognition

- CLASS 7 - RADIOACTIVE MATERIALS
 - Examples: Medicines, instruments.
- CLASS 8 - CORROSIVES
 - Examples: Battery acids, Mercury.

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Hazard Class Recognition

- CLASS 9 - MISCELLANEOUS DANGEROUS GOODS
 - Examples: Dry ice, Cosmetics, life rafts, asbestos, magnetized materials, Consumer Commodities, other regulated substances, internal combustion engines, motor vehicles



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What are the shipper's responsibilities?

- Identification
- Classification
- Packing
- Marking/Labeling
- Documentation
- Handling



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What are the shipper's responsibilities?

- Identifying DGs
 - Use the correct Proper Shipping Name listed in the appropriate modal regulation
 - Trade Names are not allowed i.e. "Acme Roach Bait" would not be an acceptable proper shipping name
 - Pesticides, solid, toxic, n.o.s. would be the correct name
 - The Chemical name of the primary hazardous ingredient is also required.



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What are the shipper's responsibilities?

- Classifying DGs
 - The shipper must properly classify an item. It is their responsibility to:
 - 1) correctly identify and classify an item into one of the nine hazard classes
 - 2) determine any subsidiary risks
 - 3) assign the item to one of the three Packing Groups, if applicable.
 - Your product could fall into several hazard classes

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What are the shipper's responsibilities?

- Packing
 - Use UN or other authorized packaging
 - multiple substances in one package must be compatible
 - Packaging materials must be compatible with the hazardous material being packaged

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What are the shipper's responsibilities?

- Marking and Labelling
 - Apply the correct marks and labels to every package and overpack. Common marking requirements are:
 - Proper shipping name & Identification number
 - Shipper and/or consignee information
 - Handling Information (i.e. "this way up" label, Cargo Aircraft Only label)

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What are the shipper's responsibilities?

- Documentation
 - DG's must be accompanied by shipping papers and a shipper's certification
 - All modes require this key information on DG paperwork:
 - Proper shipping name, Hazard Class, Identification number, and Packing Group (in that order)
 - Other information
 - Total Quantity, type of packaging, handling information, RO for hazardous substances, Flash Point (ocean), Marine Pollutant (ocean)

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What are the shipper's responsibilities?

- Documentation (Cont)
 - By air, the airlines require a completed IATA Dangerous Goods Declaration
 - By Ocean there is one standard IMO form, but several are used by various carriers
 - Shipping papers must be kept on file for at least 375 days

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What are the shipper's responsibilities?

- Emergency Response Information
 - 1) Telephone Number
 - The Shipping papers must include a 24-hour emergency response telephone number (with area code and international access codes). This number must be monitored at all times by a person who:
 - is knowledgeable of the hazards and characteristics of the substance being transported
 - has comprehensive emergency response and accident mitigation information (or)
 - has immediate access to a person who possesses such knowledge and information



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What are the shipper's responsibilities?

- Emergency Response Information
 - Sometimes an emergency phone number **is not required**:
 - Note, under USG-12 in IATA and in 172.604(c) of 49-CFR, the emergency phone number requirement does not apply to shipments made under the "limited quantity provisions" of the regulations, nor does it apply to "Consumer Commodities", "Battery powered equipment", "Battery Powered Vehicle", "Carbon dioxide solid", "Castor beans, flakes, meal or pomace", "Dry Ice", "Engines, internal combustion (flammable gas powered or flammable liquid powered)", "refrigerating machines", and "vehicle (flammable gas powered or flammable liquid powered)".

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What are the shipper's responsibilities?

- Emergency Response Information
 - 2) Written Instructions on what to do in an emergency
 - This information must include as a minimum:
 - a. the description of the dangerous goods
 - b. immediate hazards to health
 - c. risks of fire or explosion
 - d. immediate precautions to be taken in the event of an accident or incident
 - e. immediate methods for handling fires
 - f. initial methods for handling spills/leaks in the absence of a fire
 - g. preliminary first aid measures

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What are the shipper's responsibilities?

- Emergency Response Information
 - 2) Written Instructions on what to do in an emergency
 - This information must be printed in English, available away from the package, and immediately accessible in the event of an incident. This information can be relayed in the following manners, but not limited to:
 - including the information on the Shipper's Declaration for Dangerous Goods
 - locating the information in a separate document such as a material safety data sheet
 - providing the information in a separate document such as the Emergency Response Guide Book (you can always photocopy the correct guide page from the ERG and attach it to the shipping papers)

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Important Note About New Phone Number requirements by carriers and other countries

- More and more countries and even carriers are requiring an emergency response phone number
 - Some of the requirements differ!
 - For example, LH now requires an emergency response phone number for ALL hazmat and does not make exceptions for dry ice, consumer commodity, LTD QTY, etc as the DOT and IATA do.

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What are the shipper's responsibilities?

- Handling
 - Proper segregation, compatibility, storage
 - There are major differences in segregation requirements depending upon mode of transport.
 - It makes one wonder, but "air" mode is in many ways the most lenient of all when it comes to cargo compatibility and stowage

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What are the shipper's responsibilities?

- Training
 - Company officers are responsible for ensuring that every employee in the company is trained to an appropriate level.
 - Recurrent training must be no later than every two years (IATA) or 3 years (DOT)
 - US Airlines every one year
 - Training will be discussed in detail later



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Responsibilities of shippers *and* offerors

- The forwarder is liable for many, if not MOST shipper errors
 - Improper documentation
 - Wrong labeling (i.e. no subsidiary risk) or use of the "Keep away from food" label
 - Wrong proper shipping name (shipper didn't realise the entry was changed)
 - Incorrect package marking

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Responsibilities of shippers *and* offerors

- The forwarder is NOT liable for
 - Concealed or undeclared DG's where it is not reasonable that the forwarder could have detected it.
 - Misidentified shipments where there is no likely way that the forwarder could have identified the error (i.e. a shipment of Gasoline is declared as Kerosene and non-restricted).
 - Use of the wrong INNER packagings (i.e. glass bottles Vs plastic)

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What about importers?

- Importers are required to notify their foreign suppliers of all the hazmat regs that will apply
 - Under 49 CFR, Sec 171.12(a), importers are required to notify their suppliers of the regulations that will apply when the shipment enters the united states.

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What are the chances of getting caught?

- Airlines are required to turn you in!
- Customs officers are watching for violations and notifying the D.O.T. enforcement agencies
- All shippers' export declarations (SED's) now identify if a shipment is hazardous! (That's a BIG change)
- You, the shipper, are at the end of the audit trail

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Checkpoints for your shipment (Where your shipment may get inspected)

- Shipper tenders cargo to the local trucker
- Trucker gives it to the forwarder
- Forwarder gives it to the airline
- Airline may transfer to another carrier
- Destination airline gives it to the cartage agent
- Cartage agent gives it to the forwarder
- Forwarder gives it to the delivering trucker
- Delivering truck delivers to the consignee

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Checkpoints for your shipment

- At ANY one of these points your shipment can be inspected and you, the shipper, will be held accountable along with the other parties for any mistakes.

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Penalties for non-compliance

■ Civil Penalties

- "Knowingly" violating the regulations
 - Making an "honest" mistake -- i.e. you "should have known" but didn't or you just messed up and didn't catch the error
 - Or perhaps you didn't know you were supposed to train every hazmat employee in your company -- maybe you missed one or two accidentally



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Penalties for non-compliance

- Penalty: Up to \$32,500 dollars per violation per day. This can really add up.
 - i.e. one shipment that has:
 - The wrong label
 - Improper marking (i.e. the "UN" prefix left off)
 - Improper Documentation (the "UN" prefix again)
 - Package marked with a "Z" instead of "X" for PG I
 - No written Emergency Response Info with shipment
 - Each is a separate violation

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Penalties for non-compliance

■ Criminal penalties

- "Willfully" violating the regulation
 - Making a conscious decision not to follow the rules
 - i.e. deliberately concealing or misdeclaring a shipment of DG's
 - Deliberately not training your employees who handle DG's



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Criminal Penalties for non-compliance

- Criminal Penalty: This is a “felony” offense and can result in hundreds of thousand of dollars in fines and prison sentences.

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Are employees personally liable?

- Normally, no. It is the employer who is liable
- However in the case of criminal, willful violation of the regulation -- especially where it results in an accident, injury or death, they can be liable.

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The D.O.T. Penalty Guidelines

- Provides for specific fines for certain violations
 - Copy of the DOT Penalty Guidelines is included with this presentation

Example of penalties under the guidelines: a single undecleared hazmat shipment of:

Failure to execute a shipping paper for a shipment of hazardous materials, 172.201	\$5,200
Failure to mark the required shipping name and identification number on a package, 172.301(a)	\$4,200
Failure to mark a package containing liquid hazardous materials with required orientation marks, 172.312	\$3,700
Failure to label a package, when required	\$4,300
Failure to include an emergency response telephone number on a shipping paper, 172.604	\$2,600
Providing or listing incorrect emergency response information with or on a shipping paper (if significant difference in response), 172.632	\$2,600
Total:	\$22,600

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Reducing the Proposed Penalty

- Penalty Mitigation
 - There are specific steps you can take that may reduce your fine.
 - After you receive notice of a probable violation or a letter from the DOT, you must take immediate action.
 - Call us at (800) 949-4834 and we can help you work through this process

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Frequent Causes of Violations

- Product returns!
 - “This is by far one of the most common causes.
 - A company normally “uses” but does not ship hazmat. They’re not subject to the regulations unless they’re a shipper or offeror.
 - Once in a while a hazardous product will have to be returned to the vendor, that’s when they end up in trouble!

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How do you protect yourself and your company?

- Awareness
 - You must be aware of the dangerous or potentially dangerous materials you are shipping, carrying or warehousing.
 - It could be something as simple as a variety of consumer commodities.
 - Many “off the shelf” items from WD-40, to cosmetics, are classified by the D.O.T as “Hazardous Materials”.



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How do you protect yourself and your company?

Information

- Make awareness of Dangerous Goods a company-wide priority.
- Communicate compliance efforts in newsletters and shift-meetings; let everyone know that management considers it an important issue.



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How do you protect yourself and your company?

Compliance

- It is not enough to be aware of the regulations -- you must follow them!
- Conduct Internal Audits
 - Create your own check-list
 - Use that check-list every time you have a hazmat shipment
 - Review shipment documentation periodically to ensure compliance



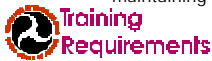
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How do you protect yourself and your company?

Education

- Training is not only a good idea, it's the law.
- All "hazardous materials employees" must be trained.
- Initial Training must be completed within 90 days and recurrent training every three years.
 - IATA Regulations require every two years
 - One year for US 135 and 121 Air Carriers
- Employers are responsible for testing and maintaining documentation of the training.



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The D.O.T. Training Rule

What companies are affected?

- Hazardous Materials Employers
 - Any company that manufactures, warehouses, distributes or transports a hazardous material becomes a "hazardous materials employer."

Who must be trained?

- Hazardous Materials Employees
 - A hazardous materials employee is any person who directly effects the safety of a hazardous material in transportation.



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Getting the right type of training program

- What type of training is required
 - There are four categories of training
- General Awareness & Familiarization
- Safety Training
- Function Specific Training
- Hazmat Security Training
- Areas may overlap with training requirements for other government agencies (i.e. OSHA)



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General Awareness Training

- Required for all hazmat employees; minimal level established by the D.O.T.
 - This type of training enables the hazardous materials employee to:
 - Recognize and identify hazardous materials shipments
 - Understand the numeric hazard class numbering system
 - Understand the hazards presented by the nine UN hazard classes and their subdivisions



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Function Specific Training

- Handling
 - Storage and loading of hazardous materials
 - Cargo compatibility
- Placarding
 - Placarding requirements for trucks and freight containers
- Documentation
- Accident and Incident Reporting Requirements

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Safety training

- Required for all employees who could contact hazardous materials shipments
 - Use of the Emergency Response Guidebook
 - Your company's procedures for dealing with an emergency
 - U.S. Government Emergency Response information required with the shipping papers
 - Emergency Response Phone Number
 - Emergency Response Written Information

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Security training

- Required for all employees who otherwise require hazmat training and
- Required for all employees whose job relates to hazmat security
- Two training deadlines
 - If you are not required to file a written security plan, then training must be complete by the next recurrent training cycle
 - Otherwise, it must be done by December 22, 2003

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How can you get hazmat training?

- D.O.T. says you, the employer are responsible
 - Option: Create your own training program (workbooks, tests, syllabus, etc)
 - Option: In-house training with outside consultant
 - Option: Send employees to outside seminar
 - Option: Self-study w/video or workbook program
 - CD-ROM or Internet Based Training
 - Option: Combination of all of the above

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What about Computer Based Training?

- That's acceptable. DOT allows CBT
 - We have several CBT programs
 - Hazmat Security Training (Free)
 - DOT/49 CFR Training
 - IATA Initial Acceptance and Recurrent Training
 - DOT General Awareness Training (coming soon)
 - We currently have a beta version of the DOT general awareness if you'd like to participate

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Record Keeping requirements

- Type of training documentation
 - Copy of the materials used, including the test
 - Name and address of the instructor
 - Date, location, and duration of training class
- Warning to shippers and forwarders!
 - A certificate is nice for framing but your training company should give you a copy of the corrected test for your files!!! Many don't do this.

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Record Keeping requirements

- How long do you have to keep this documentation?
 - As long as the employee works for your company.
 - You need to keep only the last two years of records.
 - After employee leaves, you are only required to keep his records for 90 days.

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A little known secret about tests...

- Hazmat test must be reviewed with student!
 - To our knowledge, TDG is one of the few IATA schools that actually sits down with the student after the test and reviews every single answer individually with them and gets a confirmation from them that they understand the correct answer.
 - We also follow up in writing with a copy of the test and a letter to the student explaining the important of understanding correct answers

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A little known secret about tests...

- Why do we do that?
 - DOT doesn't require that you "pass" a test, only that you take a test.
 - This means that any score can be passing and any score can be failing as there is no set exam.
 - For example a truck driver takes a 20 question exam and get's 18 questions right – their score is 90%!
 - However, if the two questions they missed were on Placarding (an important driver function) the DOT would not consider their training as complete at a function specific level as they don't know how to perform an important hazmat employee function.

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Important Hazmat Shipping Tips!

- Always... ALWAYS use a check-list 
 - It's cheap insurance -- every discrepancy can be a separate violation. An IATA checklist is on the CD.
- Do not sign for freight from truckers until you have inspected it and found it to be in compliance.
 - Once you accept a hazmat shipment that is not in compliance you may be stuck with it as you legally cannot return it to the shipper unless the problem is fixed!!!
- If your freight is refused by the carrier, you should get a copy of their signed check-list showing the discrepancies.
- Use only appropriately trained personnel.

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Important Hazmat Shipping Tips!

- Tips when using hazmat packing companies 
 - Packing companies are neither specifically authorized nor prohibited from packing DG shipments – anybody is allowed to do it.
 - They (or forwarders or anyone) are allowed to act as your agent, but you (the shipper) are still liable
 - Note: Even though it is legal, IATA does not allow their "Cargo Agents" to fill out the IATA DGD (with good reason!)

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Important Hazmat Shipping Tips!

- Tips when using packing companies 
 - In most situations hazmat will have to be packed on your dock by the packing company. You are not allowed to "offer" a hazmat shipment for highway transport unless you are trained and the shipment is properly prepared for transport.
 - **This is VERY important.** If you are untrained and you put freight on a truck to ship to a packing company so that they can do the DGD, you are violating the law. Don't do it.

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Steps to Creating an effective program

- Identify which training is required for each job function
 - General Awareness and Familiarity
 - Function Oriented Training
 - Security Training
 - Safety Training
- Determine time constraints



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Steps to Creating an effective program (cont.)

- Determine which level of training is required during your hours of operation
 - Best idea is to designate a primary and a back-up employee for each job function
- Maintain Training Records
 - At a minimum include:
 - Employee's name and job function
 - Training dates, times, locations
 - Copy of the materials or the test used
 - Instructor's name, address



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How Much Training is Required

- There is no set time limit
- Beware of... well, substandard training seminars
- There are many unethical trainers out there that offer substandard classes
 - The problem is, you don't know what you don't know!
 - For example, if you haven't been trained before, how do you know you're getting the right training? How much training is enough?



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How Much Training is Required

- DOT allows anyone to teach hazmat and there is no oversight of trainers or training companies
- Because of this, some companies offer quick classes where you learn next to nothing, walk out with "DOT Certification" and think you're trained.



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TDG Recommended Training Times

- DOT Training
 - Acceptance Training (how to use 49 CFR thoroughly) 2 to 3 days
 - General Awareness, Security and Safety – 2 to 4 hours
- IATA Training
 - Full Initial Acceptance – 3 to 5 days
 - Recertification 1 to 2 days
- IMDG Training
 - Full Initial Acceptance – 2 to 4 days
 - Recertification 1 to 2 days



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IATA Certification

- TDG is one of the oldest IATA Training Schools in the US, we've been approved for 10 years
- IATA Approval means that some of our courses are endorsed by IATA, the worldwide body of airlines, for teaching shippers, carriers and forwarders.



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Conclusion

- Shippers and forwarders can protect themselves through
 - Training
 - Using check-lists
 - Self-audits
 - Information -- emphasize the importance of compliance.



Changes in the Regulations

- Major changes to the DOT, IATA/ICAO and IMDG have taken place in 2003 and more will change in 2004



This is "old" news now but in case you didn't know

- Subsidiary labeling requirements
 - As of July 1, 2001 all hazard labels – primary or subsidiary – will have the class or division number printed in the lower corner. See below for an example of a material that is flammable and has a corrosive sub-risk.
- Old: After July 1, 2001



IATA Changes in 2004

- Section 7.1.5** All packages and overpacks will have to be marked with the net quantity of dangerous goods in each package or overpack.
 - This is a big deal! Some shippers send out thousands of packages and often with different quantities in each
 - This requirement has previously only applied to Class 1, Explosives. It will be expanded to cover all classes of dangerous goods.



IATA Changes

- Section 8.1.6.9 Adv. Warning for 2007**
 - Right now the required sequence of information is "S.H.I.P."
 - Proper Shipping Name, Hazard Class, Identification No. and Packing Group
 - This will most likely be changing by 2007
- The new sequence will be mandatory then.**
 - UN/ID#, Proper Shipping Name, Hazard Class, PG




Future Changes

- New "Air Eligible" marking (2004)**
 - A new marking is going to be required on ALL packages of dangerous goods to indicate that the package is suitable for transport by air. That means that the shipper is certifying that the package:
 - Will withstand changes in pressure, temperature and vibration that are normally incident in air transportation
 - The marking can be printed by the shipper on their own labels or they can buy them, as long as it shows an airplane in a circle.








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Air Eligibility Marking


- Some Specifics about the marking itself
 - It is a marking and not a label (but it can be in the form of a label if you want)
 - It can be preprinted on the package, or you can make up your own labels. The only specification for the format is that it be an airplane in a circle. The words "air eligible" may be printed outside the circle


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Future Changes


- What does the marking mean?
 - It means that the person preparing the package for transport is certifying that it will meet the "normal" conditions of air transport, which include:
 - Changes in air pressure and temperature
 - Specifically that inner packagings will withstand a 95 kpa pressure differential
 - Vibration and shock
 - See IATA Section 5.0.4 on the next page


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Air Eligibility Marking


- What does the marking mean?
 - It means that the person preparing the package for transport is certifying that it will meet the "normal" conditions of air transport, which include:
 - Changes in air pressure and temperature
 - Specifically that inner packagings will withstand a 95 kpa pressure differential (with some exceptions)
 - Vibration and shock
 - See IATA Section 5.0.4 on the next page


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Air Eligibility Marking


- 5.0.4 Conditions Normal to Air Transport
 - 5.0.4.1 Temperature
 - For the information of users of these Regulations, the extremes of temperature which may be encountered in international transportation are in the order of -40°C and 55°C (-40°F and 130°F). ...
 - 5.0.4.2 Pressure
 - Due to altitude, pressure reductions will be encountered under flight conditions which may in extreme conditions, be of the order of 68 kPa (0.68 bar, 10 lb/in²). Since receptacles and packagings will generally be filled at normal atmospheric pressure of approximately 100 kPa (1 bar, 14.7 lb/in²), these pressure reductions will tend to cause discharge of liquid contents or bursting of the receptacles or packagings during flight...
 - 5.0.4.3 Vibrations
 - Vibrations in commercial aircraft to which packagings may be exposed range from 5 mm amplitude at 7 Hz (corresponding to 1 g acceleration) to 0.05 mm amplitude at 200 Hz (corresponding to 8 g acceleration).


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Air Eligibility Marking


- Who is required to make this mark?
 - The person preparing and certifying the package for shipment
- Can a packing company do it?
 - Well, is the packing company able to verify that the package will withstand the changes in pressure and vibration and shock?
 - If they're using UN approved packaging, yes
 - If they're using Limited Quantity packaging, probably not.

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Breaking News!

- Monday November 10, 2003
 - ICAO just announced that mandatory implementation of this requirement may be delayed until 2005. Final word will come from ICAO in December 2003.
 - There's already a huge amount of confusion about this marking and ICAO wanted to give the world more time to prepare for this
 - Note: This rule is already printed in the IATA regulations! Many carriers will not know it's been delayed and will reject your shipment without this marking.

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DOT Registration

- Shipper/Forwarder/Carrier Registration
- For nearly a decade, shippers, forwarders and carriers have been required to register with the DOT if they ship, offer or transport certain hazardous materials.
 - Last year, the fee was lowered to \$300 (see registration brief)
 - Many forwarders, airlines or even ground handlers don't realize they must register
 - Any "person" who offers or accepts a hazardous material that would require placarding must register.
 - For example, an air freight forwarder, or ocean forwarder who accepts a 1 pound shipment of Class 4.3 from a shipper would have to register
 - Just reviewing the paperwork for acceptance (i.e. airline ground handler) is an "offeror" function and may require registration

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DOT Registration

- Shipper/Forwarder/Carrier Registration
 - You must have a copy of the DOT Hazmat Registration in the vehicle! Or the registration number has to be referenced on the carrier paperwork (identified as "US DOT Hazmat Reg No. xxxxxx")
- We have included copies of the registration requirements and the DOT forms in our hand-out materials with this presentation.
- Register online at <http://hazmat.dot.gov/register.htm>

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DOT Security Requirements

- Hazmat As A Weapon
 - 1993 World Trade Center Bombing – Fertilizer/Fuel Bomb
 - 1995 Oklahoma City Fertilizer/Fuel Bomb
 - 1999 Plot to detonate 24 million gallons of propane in Elk Grove California foiled
 - 2001 Sept 11th demonstrated how an aircraft full of hazardous fuel can be a devastating weapon

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DOT Security Requirements

- Implemented in the wake of Sept 11th
 - On March 25, 2003, the Research and Special Programs Administration (RSPA) of the U.S. Department of Transportation (DOT) published its final rule on security requirements for shippers and carriers of hazardous materials (Docket #HM-232).
 - Under this new rule, shippers and carriers that are required to register with the DOT under 49 CFR Part 107 or who offer or transport selected agents regulated by the Center of Disease Control and Prevention under 42 CFR Part 73, must:

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DOT Security Requirements

- New Security Rule (Continued)
 - Develop a written security plan by September 25, 2003; and
 - Train all Hazardous Materials (Hazmat) employees on the specifics of the security plan by December 22, 2003.
 - The final rule HM-232 also requires all companies (including those not required to prepare a security plan) to provide all Hazmat employees with "security awareness training" no later than the date of the first schedule recurrent Hazmat training after March 25, 2003, but in no case later than March 24, 2006.

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DOT Security Requirements

- TDG is providing FREE security training
 - All attendees of this seminar will receive a free DOT Hazmat General Awareness Security Training CD (originally dev. by RSPA)
 - If you are one of the many companies who will need to develop a written security plan, we can help provide you with model plans and assist in customizing one that is right for you.

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DOT Security Plan

- What's required
 - If you are subject to hazmat registration then a written security plan was to be created and on file by 9/25/03.
 - The Security Plan includes several key components
 - Risk Assessments
 - Personnel Security/Information Security
 - Facility Security
 - Enroute Security

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DOT Security Plan

- The following tools are included in the FREE Hazmat Security CD-ROM
 - Background Check Checklist
 - Shipper Hazmat Security Checklist
 - Carrier Hazmat Security Checklist
 - Receiver Hazmat Security Checklist
 - Facility Hazmat Security Checklist

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Security Plan

- RSPA recommends the following steps when developing a security plan:
 1. Identify areas of (security) concern
 2. Assemble detailed information on system operations
 3. Identify control points where interventions can reduce or eliminate risk

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Security Plan

- Recommendations for developing a security plan, cont.:
 4. Select and prioritize options to meet identified security goals
 5. Take action to implement the strategies
 6. Verify implementation of the strategy
 7. Evaluate the effectiveness of the strategy to determine whether additional actions are necessary

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Security Plan

- In addition, hazmat carriers are asked to:
 - Identify those materials with the potential to be used as weapons of mass destruction or targets of opportunity
 - Consider reviewing the entire operation from a transportation security perspective

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Security Plan

RSPA provides a *Risk Management Self-Evaluation Framework* on their website at:

Hazmat.dot.gov

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Personnel Security

- RSPA recommends the following action with regard to personnel security:
 - Assure all employees are familiar with the company's security plan and are properly trained in its implementation.

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Personnel Security

- Security training should include:
 - Company security objectives
 - Specific security procedures
 - Employee responsibilities
 - Organizational security structure

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Personnel Security

- Recommendations for personnel security, cont.:
 - Encourage employees to report suspicious activity (incidents & events)
 - Implement routine security inspections
 - Conduct regular security awareness meetings with all employees
 - Establish an internal communication system that keeps all employees informed and up to date

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Facility Security

- RSPA facility security recommendations:
 - Establish partnerships with local law enforcement agencies, emergency responders, and other public safety officials

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Facility Security

- Partnerships mean educating each other regarding:
 - Security threats,
 - Trends, and
 - Elements of successful security programs

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Facility Security

- RSPA facility security recommendations, cont.:
 - Restrict the availability of information
 - Add security guards and increasing off-hours security patrols
 - Improve fencing that limits access
 - Check adequacy of locks & other protective devices

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Facility Security

- RSPA facility security recommendations, cont.:
 - Conduct frequent facility/perimeter inspections
 - Install additional lights, alarms, or surveillance cameras
 - Limit access to a single entry point or gate
 - Limit visitor access & require all visitors to register, show photo ID, be escorted at all times

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Facility Security

- RSPA facility security recommendations, cont.:
 - Require employees to display ID
 - Conduct security spot checks of personnel and vehicles
 - Secure all hazardous materials in an area with limited and controlled access
 - Inventory all hazardous materials stored at the facility

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Facility Security

- RSPA facility security recommendations, cont.:
 - Keep records of all incidents & review them to identify trends and vulnerabilities
 - Report any suspicious incidents or individuals immediately

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En Route Security

- Hazmat carriers need to:
 - Identify preferred and alternative routing
 - Strive to minimize product exposure to populated areas
 - Avoid tunnels and bridges when possible
 - Expedite transportation of the shipment to its final destination
 - Avoid long layovers

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En Route Security

- Carriers need to, cont.:
 - Consider if a guard or escort for specific shipments is appropriate
 - Consider utilizing advanced technology options to track & protect shipments
 - Install tamper-proof seals on all valves, trailers, and package containers
 - Establish an effective communication system

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En Route Security

- Drivers need to:
 - Minimize stops en route
 - Keep vehicles locked
 - Never discuss load-related information with strangers
- If you must stop:
 - Select locations with adequate lighting on well-traveled roads (reputable rest areas & truck stops)
 - Inspect the vehicle after each stop

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Additional Information

- As a carrier, you should consider methods to:
 - Gather as much data as possible about your operation and those of other hazmat carriers,
 - Develop a communication network to share best practices,
 - Share information on security incidents to determine patterns, and
 - Revise your security plans as necessary

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Thank you!

Please call us any time with your
hazmat questions if you want help
with training!
(800) 949-4834

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- IATA Endorsed Training School for Shippers, Forwarders and Air Carriers
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- IMDG Ocean Training (2 Days)
- Customized Training Program ½ to 4 days

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- **FAA Air Carrier Training Programs** for Part 121 and 135 commercial operators
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- The IATA/FIATA Cargo Agent Training Diploma (through CNS/IATA)
- 2 Day Intro to domestic air freight and expedited trucking
 - Please contact us for information on any of these training programs

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