

Specialized Professional Services, Inc. Emergency Response Solution™



“Setting the
Global Standard for
Safe Response”





Who We Are

Specialized Professional Services, Inc. now includes former DuPont / Chemours Emergency Response Solutions Responders.

Historical

DuPont, an industrial leader in safety, developed DuPont Emergency Response Solutions™ training to deliver effective emergency response education to help First Responders prepare for chemical, biological, and radiation incidents with a focus on keeping these emergency professionals safe in the process. This practical, experienced-based approach to training is provided through seminars and hands-on simulations. All training is designed and delivered by certified SPSI Emergency Responders.

A Commitment to Safety

Through our history and culture, we are dedicated to delivering solutions to make our world safer, more secure, and more comfortable. Safety is a defining part of our culture. During our many years of response, we have handled some of the most hazardous materials known to the chemical industry (hydrogen cyanide, chlorine, oleum, and hydrogen fluoride) with exceptional safety performance. For over 31 years of emergency response, our emergency response teams have responded to more than 1000 incidents without a single injury.

Experienced Emergency Response Training

Since 1988, through various programs, Emergency Response Solutions™ has delivered emergency response training to over 85,000 DuPont, Chemours, public and private sector first responders, federal, state and local governmental agencies and military personnel in 21 countries.

The SPSI training contains unique props and tools, and is taught by certified instructors with over 300 cumulative years of response experience. Additionally, our courses have been reviewed and accredited by emergency response professionals and organizations such as the National Board on Fire Service Professional Qualifications (Pro Board) and The International Fire Service Accreditation Congress (IFSAC). All of our courses include practical hands-on exercises that allow the students to demonstrate competency in a safe, simulated emergency environment using actual response tools and equipment. Our training curriculum is geared to today's environment. First Responder students from public or private sector, military, federal, state or local emergency management agencies receive training that is essential to handle biological, nuclear, incendiary, chemical, or explosive incidents. Courses meet or exceed OSHA, NFPA and EPA Guidelines.



Flexible and Customized Training

The SPSI Emergency Response Solutions™ training team will bring these seminars to your location — eliminating travel expense and lost work time, while allowing your team to train together. Training can be scheduled to fit your situation, giving flexibility for "off-hours" learning. We can combine and focus specific topics to help your organization achieve individual training objectives. Our core safety values are woven into every course with emphasis on keeping responders safe.

Hands-on work can be done at your location using all the latest equipment and addressing a variety of response situations. We have fully-equipped training trucks that bring a full array of training materials to your location for a variety of realistic simulations.

Response Experienced and Certified Trainers

The training is created and staffed by SPSI certified response team members. When not responding to HAZMAT calls, these professionals instruct classes. The learning is strengthened by instructors sharing their own experiences, as well as demonstrating methods for operating safely in hazardous situations. Many of the SPSI instructors are NFPA Tier I and II certified. Many of our instructors also volunteer their time to their community fire and emergency service departments.

Experienced Emergency Response - Highlights

From 1986 to 2016, we have responded to over 1000 hazardous materials emergencies, some of the highlighted ones are listed below

- Coraopolis, PA Truck Fire 5-29-1986
- Blacksburg, VA Train Incident 10-6-1986
- Pesticide Fire, Woodburn IN 5-28-1987
- Columbus, OH Train Derailment 6-10-1988
- Rutherford, NC, Train Derailment 11-27-1994
- Carpet Manufacture Fire, LaGrange, GA 1-31-1995
- Medina, WV Truck Wreck, 177 and Medina Rd 11-19-1995
- Pesticide Fire, West Helena, Arkansas 5-8-1997
- Haywood County Tennessee Truck Explosion 5-28-2002
- Turkey Creek Train Derailment, Farragut, TN 9-26-2002
- Overbrook, OK Train Derailment 6-30-2004
- Hurricane Ivan, Verona PA 9-18-2004
- Creighton, PA Train Derailment 1-13-2005
- Hurricane Andrew / Katrina / Rita / Ike / Gustav Response
- Apex, NC Waste Collection Site Fire 10-6-2006
- Chemical Facility Fire, Columbus, WI 5-11-2009
- Japan Intermodal Container Response 2-29-2012
- P&L Train derailment, Louisville, KY 10-28-2012



Professional Services

Process Safety and Risk Management Model



Process Safety Management (PSM)

- From our days with DuPont and Chemours we have experience with planning and managing a Process Safety Management Program. This includes reviewing the effectiveness of current Process Safety Management work including the effectiveness of resource allocation, meeting regulatory requirements particularly OSHA's 29 CFR 1910.119 and the EPA's Risk Management Program. Conducting Audits and fixing the deficiencies. Leading process hazards analyses of all types (HAZOP, Checklists, FMEA, What-If, and Fault Tree Analysis) and implementing a Management of Change Program

Risk Management Program (RMP)

- The long list of proposed changes to RMP have wide-ranging implications for chemical manufacturers and users. The new changes include requirements for the consideration of safer technologies and alternatives by including the assessment of Inherently Safer Technologies and Designs in the Process Hazard Assessment; Requiring third party audits and root cause analysis to identify process safety improvements for accident prevention; Enhancing emergency planning and preparedness requirements to help ensure coordination between facilities and local communities; Strengthening emergency response planning to help ensure emergency response capabilities are available to mitigate the effect of a chemical accident; Improving the ability of LEPCs (Local Emergency Planning Committees) and local emergency response officials to better prepare for emergencies both individually and with one another; and Improving access to information to help the public understand the risks at RMP facilities. We have an extensive history of working with all phases of RMP. We can help you in your determination of covered RMP chemicals, program development, implementation, evaluation, worst case determination, incident review, plan review and third party audits and root cause analysis.



Auditing Services

- We have extensively trained auditors from our days as DuPont and Chemours employees. We can do your compliance audits for: Safety, PSM, RMP, Fire, DOT, OH, and Environmental help you fix your deficiencies if found.

Environmental Consulting

- We have the ability to help define your water treatment needs, clean-up of spills, neutralization of chemicals, RCRA issues, air plume modeling and the remediation of sites if need be. We also offer permit consultations to help you with your air and water permits (Clean Air Act Title V, SARA, CERCLA and NPDES) and reporting requirements under EPCRA and TSCA.

Chemical Consulting

- We have chemists on staff with extensive training and years of experience in product safety, inherently safer technology, reactive chemistry technology, detection and monitoring, PPE program development, environmental health and safety programs, and process chemistry development.

Emergency Services

- Need help on your plant emergency services programs and training? We can develop your program from scratch or help you develop your program. We have years of experience developing and refining emergency services programs. We can do Fire Squad assessment, Fire and Hazardous materials preplanning, Fire Protection development and auditing, staffing determination, air monitoring programs, PPE determination, chemical response programs, command training, and safety training.

Occupational Health Services

- We have experience setting up and auditing all aspects of an industrial occupational health and safety program. We can set up and analyze air and biological monitoring programs. We can also perform air monitoring activities for OH purposes as well as for HAZMAT/HAZWOPER. We have experience in developing PPE programs and matrices for use to make sure your employees are wearing and using PPE correctly. We have the ability to do both quantitative and qualitative respiratory fit testing.

Incident Management Team

- We have an experienced Incident Management team to help manage your incidents. We have years of experience dealing with government and municipality organizations in a cooperative and successful manner. This team is fully trained in NIMS operations and can fill any position required.



Class Offerings

<p>First Responder: Hazardous Materials Awareness</p> <p>First Responder: Hazardous Materials Operations</p> <p>Hazardous Materials Technician</p> <ul style="list-style-type: none"> • 40-Hour Technician Course • 80-Hour Technician Course <p>Incident Command</p> <p>Hazardous Materials Branch Officer</p> <p>Hazardous Materials Branch Safety Officer</p> <p>Protective Clothing</p> <p>Specialist Classes</p> <ul style="list-style-type: none"> • Tank Car • Tank Truck • Intermodal • Pesticide Emergencies • Corrosive Emergencies <p>Street Smart Chemistry</p> <ul style="list-style-type: none"> • 8, 16, 24, 40 and 80 hour versions 	<p>Weapons of Mass Destruction</p> <p>Distribution Training</p> <ul style="list-style-type: none"> • DOT Loader/Unloader • Shipping papers <p>Refresher Training</p> <ul style="list-style-type: none"> • First Responder: Hazardous Materials Operations • Hazardous Materials Technician • Incident Command <p>Industrial Training</p> <ul style="list-style-type: none"> • 24-Hour Technician Course • Industrial Fire Brigade Training • Industrial Incident Command • Technician Refresher <p>Drills and Exercises</p> <p>Confined Space Entry and Rescue</p> <p>Manlift Training</p> <p>Fit Testing</p> <p>First Aid and CPR</p> <p>Product Specific Training</p>
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First Responder: Hazardous Materials Awareness

This 8-hour course is designed to provide the First Responder with an understanding and the skills necessary to detect the presence of hazardous materials, identify the hazards associated with these materials, and notify proper authorities. This class meets 29 CFR 1910.120(q) and NFPA 472 2013 Chapter 4 for the First Responder Awareness Level. Certification from the National Fire Pro Board can be obtained for this Class.

This level of response is for people who are likely to witness or discover a hazardous materials release and initiate an emergency response sequence.

Course Objectives:

1. An understanding of what a hazardous material is, and the risks associated with them in an incident.
2. An understanding of the potential outcomes associated with an emergency created when hazardous materials are present.
3. The ability to recognize the presence of hazardous materials in an emergency situation.
4. The ability to identify the hazardous materials, if possible.
5. An understanding of the role of the First Responder Awareness individual in the employer's emergency response plan including site security and control and the U.S. Department of Transportation's emergency response guidebook.
6. The ability to realize the need for additional resources, then to make appropriate notifications to the communication center.



First Responder: Hazardous Materials Operation

This 24-hour course is designed to provide the First Responder with understanding and the skills necessary to detect presence of hazardous materials, identify the hazards associated with these materials, and to take defensive action against these materials. This class meets 29 CFR 1910.120(q) and NFPA 472 2013 Chapter 5 for the First Responder Operational Level. The student must have knowledge of the First Responder Awareness Level. Certification from the National Fire Pro Board can be obtained for this Class.

These are people who respond to releases of hazardous materials as part of the initial response for the purpose of protecting nearby persons, property, or the environment.

Class Objectives:

1. Knowledge of the basic hazard and risk assessment techniques.
2. Know how to select and use proper personal protective equipment provided to the First Responder Operational level.
3. An understanding of basic hazardous materials terms.
4. Know how to perform basic control, containment and/or confinement operations within the capabilities of the resources and personal protective equipment available with their unit.
5. Know how to implement basic decontamination procedures.
6. An understanding of the relevant standard operating procedures and termination procedures.



Hazardous Materials Technician – 40 hours (extended 80 hours)

This 40-hour course is designed to provide the responder with the understanding and skills necessary to respond to most hazardous materials emergencies in an offensive or defensive manner. The course is designed to be a 70/30 mix of hands on and classroom. The student needs to have First Responder Awareness and Operations knowledge. Completion of this course is dependent on both field skills and written examination. This class meets 29 CFR 1910.120(q) and NFPA 472 2013 Chapter 4, 5, 7 for the Hazardous Materials Technician Level. Certification from the National Fire Pro Board or International Fire Service Accreditation Congress (IFSAC) can be obtained for this Class.

These are people who respond with the purpose of stopping the release. They can take both defensive and offensive measures. Class can be customized to cover your modes of transportation and common container types. This class can be extended to 80 hours to include additional information about the subjects and additional hands on. The class will stress the following:

Class Objectives:

1. Know how to implement the employer's emergency response plan.
2. Know how to classify, identify, and verify known and unknown materials by using field survey instruments and equipment.
3. Be able to function within an assigned role in the incident command system.
4. Know how to select and use proper specialized chemical personal protective equipment provided to the hazardous materials technician.
5. Understand hazard and risk assessment techniques.
6. Be able to perform advance control, containment, and/or confinement operations within the capabilities of the resources, and personal protective equipment available with the unit.
7. Understand and implement decontamination procedures.
8. Understand termination procedures.
9. Understand basic chemical and toxicological terminology and behavior.



Incident Command

This 24-hour class is designed to provide the Incident Commander with the skills and knowledge of how to manage a hazardous materials incident. This class meets 29 CFR 1910.120(q) and NFPA 472 20013 Chapter 8 for the Incident Commander for a Hazardous Materials Incident. The student must be certified in First Responder Operational Level.

These are people who will manage or participate in the management of a hazardous materials incident. The following information will be stressed using classroom and tabletop exercises.

1. Know and be able to implement the employer's incident command system.
2. Know how to implement the employer's emergency response plan.
3. Know and understand the hazards and risks associated with employees working in chemical protective clothing.
4. Know how to implement the local emergency response plan.
5. Know of the state emergency response plan and of the Federal Regional Response Team.
6. Know and understand the importance of decontamination procedures.



Hazardous Materials Branch Officer

This 16-hour class is designed to provide the Hazardous Materials Branch Officer with the skills and knowledge of how to manage a hazardous materials incident. This class meets NFPA 472 2013 Chapter 10. The student must be certified as a Hazardous Materials Technician. Certification from the National Fire Pro Board can be obtained for this Class.

These are people who will manage the hazardous materials response of an incident. The following information will be stressed using classroom and tabletop exercises.

1. Analyze a hazardous materials incident to determine the magnitude of the problem by estimating the potential outcomes within the endangered area.
2. Plan a response within the capabilities and competencies of available personnel, personal protective equipment, and control equipment.
3. Implement a response to favorably change the outcomes consistent with the local emergency response plan and the organization's standard operating procedures.
4. Evaluate the progress of the planned response to ensure that the response objectives are being met safely, effectively, and efficiently and adjust the plan of action accordingly by evaluating the progress of the plan of action
5. Proper termination of an incident.



Hazardous Materials Branch Safety Officer

This 16-hour class is designed to provide the Hazardous Materials Branch Officer with the skills and knowledge to evaluate a hazardous materials incident for safety and ensure that recognized safe operational practices are followed. This class meets NFPA 472 20013 Chapter 11. The student must be knowledgeable at the level of operations being performed. Certification from the National Fire Pro Board can be obtained for this Class.

These are people who will manage the hazardous materials response of an incident. The following information will be stressed using classroom and tabletop exercises.

1. Analyze a hazardous materials incident to determine the magnitude of the problem in terms of safety by observing a scene and reviewing and evaluating hazard and response information as it pertains to the safety of all persons within the hazardous materials branch
2. Assist in planning a safe response within the capabilities of available response personnel, personal protective equipment, and control.
3. Ensure the implementation of a safe planned response consistent with the local emergency response plan, the organization's standard operating procedures, and safety considerations.
4. Evaluate the progress of the planned response to ensure that the response objectives are being met safely
5. Assist in terminating the incident.



Protective Clothing

This 16-hour class is designed to teach the responder how to select, use, and test Chemical and other types of protective clothing.

Upon completion of this class, you will be able to:

1. Identify the need for specialized protective clothing used at hazardous materials incidents.
2. Describe the application, use, and limitations of structural firefighting, chemical protective, high temperature, and flash fire protective clothing used at hazardous materials incidents.
3. Define terms associated with chemical protective clothing.
4. Describe how to interpret a chemical compatibility chart for chemical protective clothing and describe the limitations and deficiencies of compatibility charts.
5. Describe the four levels of protection as found in the EPA/OSHA publications, list the equipment required for each level, and describe the conditions under which each level is used.
6. Identify key points relating to the decontamination of personal protective clothing.
7. Describe a PPE program.
8. Given a hazardous materials incident, select the appropriate personal clothing equipment to be used for that incident.
9. Demonstrate the proper donning, doffing, and usage of Level A, Level B, and Level C chemical protective clothing.
10. Demonstrate proper inspection and testing of chemical protective clothing.



Tank Car Specialist

This 24-hour class is designed for the responder who will respond to railroad tank car emergencies. This class meets NFPA 2013 Chapter 12 requirements. This class covers rail tank car anatomy and design, damage assessment, tank car repair, transloading and emergency deinventory.

Upon completion of this class, you will be able to:

1. Describe the use of rail cars and identify the regulatory agencies that effect rail car transportation.
2. Describe how rail tank cars are classified.
3. Describe rail tank car construction features.
4. Locate and identify the components of rail car markings.
5. Identify a non-pressure tank car, explain its uses, and describe its construction and safety features.
6. Identify a pressure tank car, explain its uses, and describe its construction and safety features.
7. Describe the support structure of a rail tank car.
8. Identify and explain major factors that affect tank damage severity.
9. Explain how to obtain the internal pressure of a rail car.
10. Describe common leak points on rail cars.
11. List and describe five types of damage that may occur to railcars during collisions or derailments.
12. Explain the inspection process for damaged rail cars.
13. Describe when transloading hazardous materials may be required.
14. Describe common concerns when transloading hazardous materials.
15. Understanding static electricity - bonding and grounding.
16. Describe and demonstrate proper use of equipment for transloading hazardous materials.
17. Explain the purpose of “flaring” (burn-off).



Tank Truck Specialist

This 24-hour class is designed for the responder who will respond to tank truck emergencies. This class meets NFPA 2013 Chapter 13 requirements. This class covers tank truck anatomy and design, damage assessment, repair, and transloading.

Upon completion of this class, you will be able to:

1. Identify the non-pressure cargo tanks, describe their construction features, and name the hazards associated with each.
2. Identify the low-pressure cargo tanks, describe their construction features, and name the hazards associated with each.
3. Identify the medium-pressure cargo tanks, describe their construction features, and name the hazards associated with each.
4. Identify the high-pressure cargo tanks, describe their construction features, and name the hazards associated with each.
5. Locate and identify the components of a cargo tank specification plate.
6. Identify and explain major factors that affect tank damage severity.
7. Describe common leak points on tank trucks.
8. List and describe types of damage that may occur to tank trucks during collisions or wrecks.
9. Explain the inspection process for damaged tank trucks.
10. Describe when transloading hazardous materials may be required.
11. Describe common concerns when transloading hazardous materials.
12. Understanding static electricity - bonding and grounding.
13. Describe and demonstrate proper use of equipment for transloading hazardous materials.



Intermodal Container Specialist

This 24-hour class is designed for the responder who will respond to intermodal container emergencies. This class meets NFPA 2013 Chapter 14 requirements. This class covers intermodal anatomy and design, damage assessment, repair, and transloading.

Upon completion of this class, you will be able to:

1. Identify an intermodal tank from a group of various hazardous materials shipping containers.
2. Describe the various uses of intermodal tanks.
3. Describe the general construction features of intermodal tanks.
4. Name and identify the three most common intermodal tank containers used for hazardous materials transportation in the United States.
5. Recognize the primary organizations and codes that control intermodal container specifications.
6. Recognize the information presented on a typical intermodal CSC and manufacturer's data plate.
7. Explain the key requirements for intermodal container placarding, marking, and labeling.
8. Describe the function and location of intermodal container valves and accessories.
9. Identify and explain major factors that affect tank damage severity.
10. Describe common leak points on intermodal tanks.
11. List and describe types of damage that may occur to intermodal tanks during collisions or wrecks.
12. Explain the inspection process for damaged intermodal tanks.
13. Describe when transloading hazardous materials may be required.
14. Describe common concerns when transloading hazardous materials.
15. Understanding static electricity - bonding and grounding.
16. Describe and demonstrate proper use of equipment for transloading hazardous materials.



Pesticide Emergencies

This 24-hour class is designed to teach the responder how to respond to pesticide emergencies. This class covers pesticide spill and fire emergencies.

Upon completion of this class, you will be able to:

1. Know how to implement the employer's emergency response plan.
2. Know the classification, identification, and verification of known and unknown materials by using field survey instruments and equipment.
3. Be able to function within an assigned role in the incident command system.
4. Know how to select and use proper specialized chemical personal protective equipment provided to the hazardous materials technician.
5. Understand hazard and risk assessment techniques.
6. Be able to perform advance control, containment, and/or confinement operations within the capabilities of the resources, and personal protective equipment available with the unit.
7. Understand and implement decontamination procedures.
8. Understand termination procedures.
9. Understand basic chemical and toxicological terminology and behavior.
10. Define the terms pesticide and registration.
11. List the three categories of pesticide toxicity and the corresponding label signal word.
12. Identify the signs and symptoms of pesticide poisoning.
13. Identify the information found on a pesticide label.
14. Explain formulations and the hazards of inert pesticide ingredients.
15. Describe the dangers involved in pesticide fires and spills as well as the precautions to be taken.
16. Outline the personal protective equipment requirements when working with pesticides.
17. Discuss the difficulties in decontamination of pesticides.



Responding to Corrosive Emergencies

This 24-hour class is designed to teach the responder how to respond to incidents involving corrosive materials.

These are people who respond with the purpose of stopping the release. They can take both defensive and offensive measures. The class will stress the following:

Know how to implement the employer's emergency response plan.

1. Know the classification, identification, and verification of known and unknown materials by using field survey instruments and equipment.
2. Be able to function within an assigned role in the incident command system.
3. Know how to select and use proper specialized chemical personal protective equipment provided to the hazardous materials technician.
4. Understand hazard and risk assessment techniques.
5. Be able to perform advance control, containment, and/or confinement operations within the capabilities of the resources, and personal protective equipment available with the unit.
6. Understand and implement decontamination procedures.
7. Understand termination procedures.
8. Understand basic chemical and toxicological terminology and behavior.
9. Distinguish between acids and bases.
10. Determine neutralizations of corrosive materials.
11. Discuss the difference between fuming acids and normal acids.
12. Discuss response techniques involving corrosives.
13. Discuss decontamination techniques involving corrosives.



Street Smart Chemistry™

This 24-hour class is designed for to train Emergency Responders and other people who need to know the chemistry of hazardous materials. It addresses the need to know how to respond safely to incidents involving toxic and hazardous materials from a chemical perspective. It covers general and organic chemistry as well as such topics as toxicology, environmental monitoring, explosives, incendiaries and the chemistry of fire. This class doesn't teach "balancing equations" or how to do detailed calculations. Instead it concentrates on teaching the responder to better understand the hazards associated with families of materials and what potentially could happen at an incident. No prior knowledge of chemistry is assumed. Eight and sixteen hour versions of this class are also available. This class covers the following concepts:

1. Atoms, elements and the periodic table
2. Forms and changes of matter
3. Formulas and bonding of inorganic molecules
4. Inorganic chemical formulas and nomenclature
5. Chemistry of the elements
6. Corrosive materials
7. Oxidizing agents
8. Water and air reactive materials
9. Organic chemistry
10. Waste streams
11. Toxicity
12. Air monitoring
13. Chemistry of fire
14. Pesticides
15. DOT chemistry



Street Smart Chemistry™ - 40 hours

This 40-hour class is designed for to train Emergency Responders and other people who need to know the chemistry of hazardous materials. It addresses the need to know how to respond safely to incidents involving toxic and hazardous materials from a chemical perspective. It covers general and organic chemistry as well as such topics as toxicology, environmental monitoring, explosives, incendiaries and the chemistry of fire. This class doesn't teach "balancing equations" or how to do detailed calculations. Instead it concentrates on teaching the responder to better understand the hazards associated with families of materials and what potentially could happen at an incident. No prior knowledge of chemistry is assumed. A separate section deals extensively with the hazards associated with the possible use of Weapons of Mass Destruction in a domestic environment. This class covers the following concepts:

1. Atoms, elements and the periodic table
2. Forms and changes of matter
3. Formulas and bonding of inorganic molecules
4. Inorganic chemical formulas and nomenclature
5. Chemistry of the elements
6. Corrosive materials
7. Oxidizing agents
8. Water and air reactive materials
9. Organic chemistry
10. Waste streams
11. Toxicity
12. Air monitoring
13. Chemistry of fire
14. Pesticides
15. DOT chemistry
16. Biological agents
17. Nuclear agents
18. Incendiary agents
19. Chemical agents
20. Explosive agents



Street Smart Chemistry™ - 80 hours

This enhanced 80-hour class is designed to train Emergency Responders and other people who need to know the chemistry of hazardous materials. It addresses the need to know how to respond safely to incidents involving toxic and hazardous materials from a chemical perspective. It covers general and organic chemistry as well as such topics as toxicology, environmental monitoring, weapons of mass destruction, chemicals as weapons, explosives, incendiaries, types of clandestine laboratories, uses for chemical glassware and the chemistry of fire. This class has multiple hands on sessions that will demonstrate uses of chemistry. No prior knowledge of chemistry is assumed.

This class covers the following concepts:

1. Atoms, elements and the periodic table
2. Forms and changes of matter
3. Formulas and bonding of inorganic molecules
4. Inorganic chemical formulas and nomenclature
5. Chemistry of the elements
6. Corrosive materials
7. Oxidizing agents
8. Water and air reactive materials
9. Basic and Advanced Organic chemistry
10. Waste streams
11. Toxicity
12. Air monitoring
13. Chemistry of fire
14. Pesticides
15. DOT chemistry
16. Biological agents
17. Nuclear agents
18. Incendiary agents
19. Chemical agents
20. Explosive agents
21. Clandestine Laboratories
22. Laboratory Glassware and its uses



Weapons of Mass Destruction

This class is designed to increase the responder's awareness of materials that could be used for weapons of mass destruction. It includes discussions on biological, chemical, radiological, incendiary, explosive and nuclear agents.

The following is covered:

1. Biological agents
 - a. Describe the various types of biological warfare (BW) agents; recognize the signs and symptoms of exposure, and which agents may be spread by secondary transmission
2. Radiological / Nuclear agents
 - a. Recognize the various types of radiological hazards and understand the acute health effects from radiation exposure.
3. Incendiary agents
 - a. Recognize the common incendiary devices and materials that may be used to perform arson or terrorist activities.
4. Chemical agents
 - a. Describe the types of chemical warfare agents and recognize signs and symptoms of exposure. What industrial materials could possibly be used in terrorist activities.
5. Explosive materials
 - a. Describe how explosives work and may be used for terrorist activities.



Distribution Training

DOT Loader / Unloader / Shipping Papers

This customizable class meets 49 CFR 172.700 Subpart H training requirements for the HAZMAT Employee. These classes can be customized to your specific needs, such as DOT Loader/Unloader for tank cars, tank trucks, intermodal containers, cylinders, small containers, or shipping clerk paper work.

Class sections could include:

1. DOT Training Requirements
2. DOT Hazardous Materials Classes
3. Introduction to Hazardous Materials Classification
4. Shipping Papers
5. Exemptions and Exceptions
6. Placarding
7. Marking and Labeling
8. North American Emergency
9. Response Guidebook
10. Cylinders
11. Small Containers
12. Intermediate Bulk Containers
13. Van Trailers
14. Packing Segregation and Separation
15. Blocking and Bracing
16. Bulk Highway Trailers
17. Intermodal Portable Tanks
18. Rail Cars



Hazardous Materials Technician – 24 hours Industrial Technician

This 24-hour course is designed for the Chemical Plant Worker who has the job understanding and skills necessary already, but needs to respond to on site hazardous materials emergencies in an offensive or defensive manner. The course is designed to be a 70/30 mix of hands on and classroom. Completion of this course is dependent on both field skills and written examination. This class meets 29 CFR 1910.120(q) Hazardous Materials Technician Level.

These are people who respond with the purpose of stopping the release. They can take both defensive and offensive measures. Class can be customized to cover your modes of transportation and common container types. The class will stress the following:

1. Know how to implement the employer's emergency response plan.
2. Know how to classify, identify, and verify known materials by using field survey instruments and equipment.
3. Be able to function within an assigned role in the incident command system.
4. Know how to select and use proper specialized chemical personal protective equipment provided to the hazardous materials technician.
5. Understand hazard and risk assessment techniques.
6. Be able to perform advance control, containment, and/or confinement operations within the capabilities of the resources, and personal protective equipment available with the unit.
7. Understand and implement decontamination procedures.
8. Understand termination procedures.
9. Understand basic chemical and toxicological terminology and behavior.



Industrial Fire Brigade Training

This class helps your industrial brigade to organize and operate more efficiently. This class provides training to NFPA 600 and 29CFR 1910.156 standards. This class stresses the occupational safety and health of industrial fire brigade members while performing firefighting and related activities:

Class sections could include:

1. OSHA Requirements
2. Fire brigade organization
3. Fire behavior
4. Fixed-fire protection systems
5. Employee accountability
6. Hose handling
7. Pumping operations
8. Sprinkler inspections
9. Personal protective equipment
10. Breathing apparatus
11. Fit testing
12. Confined space entry and rescue
13. Hazardous materials mitigation
14. Incipient stage firefighting
15. Rope rescue
16. Incident Command Training / Team Leader Training
17. Incident Safety Officer Training
18. Specific Product Training



Industrial Incident Command

This class helps your industrial incident commanders to organize and operate more efficiently. This class provides training to NFPA 600, 29CFR 1910.120(q), and 29CFR 1910.156 standards.

Class Sections Could Include:

1. OSHA Regulations
2. Incident Command – structure and site organization
3. Unified Command with outside parties
4. Chemistry
5. Chemistry of Fire
6. Plant Fire Officer
7. Inspection of Industrial Fire Equipment
8. Fire Cause and Determination
9. Strategy and Tactics
10. Fire Fighting Considerations and Size Up
11. Exterior Fire Considerations
12. Safety Officer
13. Site / Community Evacuation Considerations
14. Hazmat Incident Assessment
15. Local Fire Department and County Response Plans



Exercises and Drills

SPSI personnel are seasoned response professionals with decades of emergency response and industrial chemical handling experience. We offer a selection of table top, Response City, emergency response planning exercises, deployment drills, and Contingency planning drills and exercises. Several programs are available that can be easily customized to suit your objectives. We have the following equipment that is available for these exercises and drills:

CAER Containers - intermodal containers that are made to leak.

Rail car and tank truck fittings and mock-ups.

Response City - a portable city/ airport that can be used for miniature scaled scenario exercises such as terrorist incidents, derailments, industrial accidents and transportation incidents.



Confined Space Entry and Rescue

This course is designed for workers at your facility that must routinely enter permit-required confined spaces to perform some type of work. This course is designed to meet the training requirements of 29 CFR 1910.146.

Class Sections Could Include:

1. OSHA Regulations
2. Rescue Equipment
3. Safety Topics
4. Duties of Supervisors
5. Duties Entrants and Attendants
6. Assessment of Confined Space Hazards
7. Lock Out/ Tag Out Procedures
8. Fall Protection
9. Atmospheric Monitoring
10. Entry and Non-Entry Rescue
11. Confined Space Rescue Equipment Use and Limitations
12. Knots
13. Anchor Development
14. Load And Force Factors
15. Advance Rigging Techniques
16. Vertical and Horizontal Hauling
17. Lowering Systems
18. Respiratory Protection
19. Personal Protective Equipment
20. Ventilation systems
21. High Angle Rescue
22. Plans and Pre-plans
23. Patient Packaging



Product Specific Training

This class teaches the chemistry and response to specific chemicals that you may be dealing with from a site or transportation aspect.

Class sections could include:

1. Government Requirements
2. Chemistry of The Material
3. Effects of The Material
4. Air Monitoring
5. Decontamination
6. PPE Requirements
7. Respiratory Protection
8. Response Protocols to Leaks and Spills
9. Response to Fires
10. Chemical Reactivity
11. Exposure Guidelines
12. Toxicology
13. First Aid
14. Environmental Concerns
15. Containers



Specialized Professional Services, Inc.

Anywhere, Any Time

24-Hour Emergency Response @ 1-877-228-7774

SPSI is your resource for hazmat and environmental emergency response services. We specialize in emergency response, training, chemical transfers and special projects in support of chemical and petrochemical manufacturing and transportation industries. We maintain 24-hour readiness to rapidly respond to customer emergencies. Personnel include hazmat specialists in all modes of transportation and fixed facility emergencies. We have meticulously maintained, dedicated equipment ready to respond and handle virtually all chemical and petroleum products.

Strategically located within a mile from the junction of two major interstate highways (I-79 and I-70), SPSI can be mobilized north, south, east, or west in a matter of minutes. In addition, air charter services are available nearby for mobilization.

Damage Assessments, Chemical Transfers, and Vessel Purging

- In transportation, accidents sometimes occur and cause damage to chemical containers. Damaged containers require special attention, assessment, and careful handling to avoid any further incident.
- SPSI personnel are skilled at performing damage assessments, recommending the best course of action, developing those action plans, and then implementing the corrective actions. SPSI is trained and equipped to handle virtually all types of DOT shipping containers handling hazardous materials and environmentally regulated substances (tank cars, highway trailers, intermodal containers, totes, drums, cylinders, etc).
- In addition to the common liquid chemicals and petroleum products, SPSI has expertise, experience, and dedicated equipment for the safe handling of corrosive, poisonous, and flammable compressed gases, polymerizable materials, fuming acids, oxidizers, molten materials, cryogenic ethylene, and other very dangerous commodities.
- Once the products have been safely transferred into new containers, SPSI personnel clean and purge the damaged vessels right on site to make them safe for repairs or scrap recycling. Several cleaning and purging methodologies are available, and the best method is selected to suit the product and job site conditions.

Special Projects

- Occasionally, projects arise that require special planning, special considerations, and an elevated level of care and handling. Examples would include projects involving fuming acids, fluorides, corrosive compressed gases, polymerizable materials, molten materials, poison inhalation hazards, pyrophoric materials, and many others.
- SPSI fills the gap between environmental/industrial maintenance contractors and your in-house company resources to effectively work with you to plan special projects and execute the necessary work in a safe, cost effective manner. If you don't have the in-house staff to



Emergency Response Solution™

do it, and you aren't 100% confident in your other contractor resources, SPSI is your solution.

- Examples of special projects include storage tank and piping system cleaning and purging, repackaging aging containers, implementing temporary wastewater treatment facilities for effluent streams, vapor scrubbing, flaring, and other unique situations such as treatment of hydro test water from tanks or pipeline systems.

Environmental Remediation and Maintenance

- When chemicals, biological agents, hydrocarbons, or other regulated products are accidentally released, SPSI not only responds to help terminate the emergency, its staff is also very experienced and well-equipped to perform final remediation services to get the site to closure. Several technologies are available and recommended based on site-specific considerations.
- On a more scheduled basis, SPSI provides skilled labor and expertise in plant operations relative to environmental and safety issues. Wastewater outfalls may need boom deployed and maintained, drums may need inventoried and labeled properly, effluent streams may need sampled, groundwater treatment systems may need serviced, activated carbon absorbers may need monitoring and the media changed out periodically, fire brigade equipment may need to be inspected, confined space entry operations may need a stand-by rescue team from SPSI...examples are almost endless in today's plant operating climate. Call SPSI to serve your needs.

High-Volume Positive Pressure Ventilation - Mobile Ventilation Unit (MVU)

- Positive Pressure Ventilation (PPV) tactics have been proven time and time again in the fire/rescue service. When it comes to large structures, large PPV units are needed to rapidly ventilate contaminated atmospheres and improve conditions for life safety.
- The Mobile Ventilation Unit (MVU) by Tempest Technologies is the premier PPV tool for large area ventilation. Airports, tunnels, shopping malls, industrial facilities, and certain hazmat incidents are all candidates for the MVU deployment.
- Hydraulic power of the MVU drives a special blade that produces more than 80,000 cfm performance.
- If you don't want to purchase an MVU, you can still have access to its services. Add SPSI to your major incident mutual aid list and we will mobilize a MVU to your incident scene. SPSI's hazmat team will operate the unit as directed by the incident commander and invoice the responsible party.

Specialized, Dedicated Emergency Response Equipment

- At SPSI, equipment is respected as if our lives depend on it since most of the time they do. SPSI's equipment specifications, operational procedures, and care and maintenance policies are reserved as proprietary information, and our customers are welcome to visit SPSI and verify these policies and procedures in person.



Emergency Response Solution™

- Dedicated emergency response units are ready to respond for small and large emergencies. Virtually any type of hazmat, WMD, and pollution response incident can be effectively handled with SPSI's inventory, personnel, and national resources.
- Chemical Testing and Monitoring Equipment includes multi-gas meters with P.I.D.'s, colorimetric tubes and bellows pumps, reagent papers, and test kits for explosive compounds and other hazards. A variety of temperature monitoring instruments are also on hand to include Thermal Imaging, Infra-Red, and Intrusive Probe temperature monitoring.
- Personal Protective Equipment includes all levels of protection. SPSI's level A and B capabilities include 60-minute SCBA for rapid intervention and/or in-line air supply for extended operations. A variety of chemical protective suits, gloves, and boots are on hand for immediate deployment.
- Plugging, Patching, and Containment Equipment includes Chlorine A, B, and C kits, the Midland tank car capping kit, the Trident Technologies Magnetic Patch, Haz-Hammocks, Fold-a-Tanks, Vetter pneumatic line plugs, a rupture disk inventory, and traditional plugs and wedges of various shapes and sizes.
- Chemical Transfer and Vessel Purging Equipment includes meticulously maintained pumps, vapor compressors, hoses, and fittings to handle virtually all of the DOT hazard classes and most non-hazardous ladings. Corrosive compressed gases, flammable compressed gases, molten materials, poison inhalation hazard materials, reactive materials, oxidizers, polymerizable materials, and many others are safely handled in the most adverse of field conditions.

AAR Certified C6 Tank Car Mobile Repair Services

- Tank Cars moving anywhere in North America are subject to meeting very strict DOT specification compliance, and tank car maintenance facilities (both fixed facilities and mobile service crews) are often limited with respect to working on certain tank cars containing certain commodities with restrictions on what their training and operational competencies allow them to perform. Often those traditional shops and mobile repair crews require the tank cars to be emptied and certified in a clean condition prior to them performing service on the car.
- SPSI is certified by the Association of American Railroads (AAR) as a "C6" mobile repair shop (station stencil "SPSI") which certifies that SPSI can work on the tank car service equipment associated with holding products in the tank cars (i.e. valves, fittings, and DOT required car stenciling).
- SPSI can often perform valve removals and replacements, o-ring and/or gasket replacements, and certain other related service work on the tank cars wherever they are located. At the loading rack, or in a rail yard, SPSI can come to the tank cars, establish appropriate track protection with the host facility, and safely execute the field repairs.
- Our value yields a favorable cost savings in almost every scenario. Car lease and/or depreciation costs for the tank car tally every day, so every day the cars are not in use, your company loses money. FRA OTMA's, railroad movements, and tank car shop processing time all cost money (often a lot of money). SPSI can fix valve and fitting issues on tank



cars at the location where the problem is found, and when we are done with repairs your cars stay in service hauling your product, thus making you money.

- When needed, SPSI is perfectly equipped to safely transfer your products (reference web site tab/link to chemical transfer services) into other cars, and if the nature of the repairs does need the car to be cleaned first (i.e. bottom outlet valve replacement or pressure plate removals & replacements), we can manage vapors (venting, flaring, filtering, or scrubbing), and we can clean the tank cars as well.

Abrasive Blasting and Non-Spark Cutting Services

- SPSI is prepared to perform abrasive blasting services with many operational options including sandblasting, water-blasting, and CO2 pellet blasting. This work is typically executed to clean steel or stainless-steel surfaces from hardened materials in preparation for new linings or steel scrap recycling.
- Sandblasting using black beauty grit is one option, as well as using a softer blasting media such as walnut shell or other blasting media choices depending on the hardened material being removed and steel or stainless-steel surface end-result desired. High-pressure water blasting is also an option with SPSI. Our capabilities range from 1,500-40,000psi water blasting services.
- Carbon dioxide (CO2) pellet cleaning is another technology option that SPSI has to offer. For projects in which this technology is a consideration, CO2 blasting yields effective cleaning while minimizing waste generated from the process. As the CO2 boils off to gas, the only waste to package and manage for disposal is the material that was removed from the surface that was cleaned.
- Water Jet Cutting is another niche service that SPSI performs. Certain vessels may require openings to be created to facilitate product recovery and/or vessel cleaning operations. When the vessel is not safe for hot work, water jet cutting is a proven technique that uses high-pressure water and a cutting garnet with specialized equipment and operational controls to safely cut into vessels to create openings. SPSI is equipped with different cutting track options and experienced personnel to create your next special opening.

Confined Space Entry & Technical Rescue

- SPSI personnel are trained in both confined space entry and confined space rescue operations. Our safety equipment and PPE in support of these operations is meticulously maintained, inspected regularly, and we maintain dedicated rescue units that serve as our contingency equipment in the event of a man-down situation.
- While SPSI performs confined space entry cleaning and maintenance work on a regular basis, our are personnel experienced in a number of confined space situations. Our customers often contract SPSI to do cleaning or other maintenance tasks within confined spaces for this reason.
- Likewise, when customer employees, or other tank inspection or tank repair contractors are doing the entry work, our customers often hire SPSI to serve as a trained and prepared rescue crew available to respond immediately to an emergency.



- SPSI designs entry and rescue plans on a regular basis, and our consulting capabilities include recommendations on proper isolations, etc. prior to outage work on tanks, vessels, tunnels, pits, sumps, silos, etc.

Facility Decommissioning & Closure

- Occasionally customers shut down facilities. Sometimes it is a temporary idling situation, and sometimes forever. When they do, storage tanks, pipes, pumps, pits, sumps, trenches, sub-basements, and supporting infrastructure need to be de-inventoried, cleaned, and often dismantled – safely.
- SPSI has a great deal of experience with decommissioning and closing industrial facilities. From high-hazard chemicals in the storage and piping systems to the aerosol cans left in the closets, SPSI can safely and effectively work through facility closures. We provide all aspects of decontamination, dismantling, environmental remediation, and complete site restoration at the customer's discretion.

Warehouse Quantity of Supplemental Equipment

In addition to SPSI's fully-loaded, emergency response units, additional equipment and PPE resources are maintained in ready condition at SPSI's headquarters. Additional chemical transfer pumps, hoses, gaskets, and fittings are maintained. Likewise, more than 30 high-pressure SCBA and a portable breathing air compressor and cascade system are ready to respond. Additional PPE inventories include additional Level A suits, encapsulated B suits, and various other chemical protective suits, gloves, and boots. SPSI also maintains firefighting equipment in ready status to apply foam, water and/or inert gases as necessary to safely control and extinguish fires in transportation or fixed facilities. Other equipment includes, but not limited to, service trucks, support trailers, spill containment and absorbent products, air compressors, light plant, generators, skid steer loaders with various bucket attachments, long reach backhoe, track excavator, an all-terrain vehicle for site access to remote accident sites, steam hoses, steam valves, steam traps, and many other inventoried assets.

Magnaseal

- SPSI is proud to be the exclusive USA representative of Magnaseal. Magnaseal (patent pending) is an easy to use temporary sealing device that can be applied easily to leaking containers made of carbon steel. This is a magnetic patching device made with a proprietary blend of urethane polymers and multiple rare earth magnetics. While a few sizes are featured, and most popular, custom sizes can be produced on a made-to-order, case-by-case, basis for customers willing to pay for additional set up and other special preparation costs. While Magnaseal is intended to be an emergency response tool for temporary patching of a container, it is important that the user confirm its compatibility with the leaking chemical prior to applying it. A copy of lab testing data is provided.
- Magnaseal is a great tool to be on hand in every fire truck, on every railroad locomotive, on every tugboat, and in every industrial facility all over the world.



Emergency Response Solution™

- SPSI would not promote such a product unless we felt strongly about it being a meaningful tool in support of emergency responders everywhere. As with any emergency response tool, every tool has its limitations. Its limitations are known and manageable, and its function, ease of use, and performance capability well out-weigh its limitations. The Magnaseal magnetic patch is for real.

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