State of Delaware

9th Annual Hazardous Materials Training Workshop

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Workshop Training Sessions

Course Descriptions and Instructor Information

Saturday, April 2, 2016

7:00 am-8:30 am: Registration-Continental Breakfast-Exhibitor Booths
8:30 am-4:15 pm - Training Sessions
Delaware State Fire School
1461 Chestnut Grove, Dover, DE 19904
See Separate Course Descriptions for Specialized Pre-Workshop Classes to be held Friday, April 1, 2016
"Educating Responders for Today and Tomorrow"

Session #1 (8:30am – 11:45am)
"Emerging Threats Facing America" – Part 1
Instructors: Sergeant Chris Ennis and Detective Tim Kerstetter, Delaware State Police

Since the tragic events of 9/11, threats facing our nation have significantly evolved. Our first responders need to be informed of emerging threat streams to remain vigilant against homegrown violent extremists and prepared to respond to acts of mass violence. This timely and informative briefing will provide awareness level training on improvised explosive devices (IEDs), homemade explosives, suspicious activity reporting, the emergence of the Islamic State, national security cases with a Delaware nexus, and active shooter events. A live explosives demonstration will follow the classroom briefings. This program is a "Must See" for all First Responders!

Instructor Bios:
Sgt. Chris Ennis has been a member of the Delaware State Police for twenty-seven years and a member of the DSP-Explosive Ordnance Disposal Team for 24 years. Sgt. Ennis has been the Delaware State Police EOD Team Commander since June 2003, and is currently the Delaware Chapter Director of the International Association of Bomb Technicians and Investigators and a board member of the National Bomb Squad Commanders Advisory Board. He has been recognized by the FBI and the National Bomb Squad Commanders Advisory Board as a subject matter expert for Bomb Squad Operations and helped write the National Response Plan for Bomb Squad Responses to Large Vehicle Bombs and Person Borne IEDs and the manufacturing standard for all future bomb suits to be worn by all U.S. Bomb Technicians.

Det. Tim Kerstetter is a 21-year veteran of the Delaware State Police. He was Delaware's first detective assigned to the FBI's Joint Terrorism Task Force after 9/11. He served in the JTTF for nearly nine years. Additionally, Det. Kerstetter served on the Explosive Ordnance Disposal Team for nearly seven years. He currently serves in the Homeland Security Unit as the agency's Terrorism Liaison Officer. His current mission is to analyze terror plots and Homeland Security threats against the U.S. that could have implications within the State of Delaware and provide training to First Responders and private sector partners to mitigate Delaware's risk levels while increasing situational awareness and readiness plans for all citizens.

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Session #2 (8:30am – 11:45am)
TRANSCAER® Presents: "Managing Toxic, Corrosive, & Flammable Gas Emergencies – Case Studies and Tactics for Chlorine, the Three Faces of Hydrogen Chloride, and Vinyl Chloride" – Part 1
Instructors: *Instructors for this session are drawn from Chlorine Institute member companies. This includes a representative mix of chemical producers, packagers, emergency response contractors and emergency equipment manufacturers. The instructors have extensive first-hand experience in chemical operations and hazmat emergency response.*

This training session is designed for technician- and specialist-level emergency responders. The session includes classroom instruction, hands-on workshops, and field exercises where students are required to respond to simulated leak mitigation scenarios. Students will receive copies of all presentations, training videos, and other useful reference materials. Students will begin the day with classroom instruction on chlorine (UN 1017), hydrogen chloride (UN 2186, UN 1050, and UN 1789), and vinyl chloride (UN 1086). The instructors will cover physical and chemical properties, transportation methods, health effects of acute exposure, proper selection of personal protective equipment, first aid and medical treatment, emergency incident scenarios, and risk mitigation measures for each

commodity. Case studies and videos of actual incidents will be presented. Students will advance from the classroom to field exercises, where instructors will cover potential leak scenarios and leak mitigation techniques for cylinders, ton containers, highway cargo tanks, and railroad tank cars containing chlorine, hydrogen chloride, and vinyl chloride. Students will receive instruction on proper use of the A, B, and C-Kits and the Midland ERK, after which they will be challenged to mitigate various leak scenarios that are simulated using compressed air.

Instructors for this session include: Sam Simon and David Price (Dow Chemical), Tony Dias and Brian Cleary (Kuehne Company), Thomas Keefer and Barry Lindley (Chemours), Drew McCarty (Specialized Professional Services Inc.), Roar Broch (Midland Manufacturing), and Henry Ward (The Chlorine Institute).

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Session #3: "HazMat Branch Officer Training and Certification" – Part 1

Instructors: John Clawson, DuPont (retired) and Bruce Galloway, DuPont (retired)

This course provides students with the necessary skills, knowledge, and tools to perform the Hazardous Materials Officer functions at a Hazardous Materials/WMD incident. As the Hazardous Materials Officer, you will assist the Incident Commander with analyzing the complexity of the incident and estimating the potential outcomes of the incident by planning the best way to respond as well as implementing the response objectives for the Incident Commander. You will also assist in evaluating the successfulness of the response objectives and assist in making changes when needed to bring the incident to a proper termination. This class meets the requirements of the NFPA's standard for Hazmat Branch Officer. The course covers the competencies of NFPA 472-2012, Chapter 10 for Hazardous Materials Officers. Students wishing to take the certification exam must provide proof of certification for both Hazmat Awareness and Hazmat Operations and pay $15.

Instructor Bios:

John Clawson retired from the DuPont Company with over 38 years of service in December 2004. During his tenure with DuPont, he implemented the DuPont CAER Car Program in 1989 and he also led the HazMat team at Chambers Works for six years. Mr. Clawson is a Level II instructor at the Delaware State Fire School and a Pro Board-certified HazMat Specialist, a volunteer firefighter, and a Decon team member. He helped to establish the New Castle County Industrial Hazardous Material Response Alliance (NCCIHMRA) Team.

Bruce Galloway worked for DuPont for 42 years, and served as DuPont Experimental Station Fire Chief for the past 29 years. In addition, Chief Galloway is a certified HazMat Technician, a Delaware State Fire School Instructor, Past Deputy Chief at Wilmington Manor Fire Company, and a Member of the New Castle County Industrial Hazardous Materials Response Alliance (NCCIHMRA).

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Session #4 (8:30am – 11:45am)
"Training for a CBRNE Response: a Safe Perspective"

Instructor: Dr. Carrie A. Poore, Ph.D., Team Leader, Advanced CBRNE Training Team, United States Army Edgewood Chemical Biological Center

This course will begin with a discussion on training CBRNE Responders and examples of programs of instruction designed specifically to address the mission requirements of a particular group of people. Several broad categories that fall under the material trained in these classes include mission planning, site survey, protection, detection, sampling, decontamination, etc. These areas will be addressed to include lessons learned during the training process and implementation of methods and concepts taught. Further discussion will highlight how individual units benefit from these trainings as well as the ability for multiple units to operate more effectively with one another. Most importantly, the importance of safety in all of the above activities will be addressed throughout the lecture.

Instructor Bio: Dr. Poore serves as the Team Leader for the Advanced CBRNE Training Team within the Directorate of Program Integration for the U.S. Army Edgewood Chemical Biological Center (ECBC). She has over 11 years of postgraduate experience at ECBC. As the Training Team Leader, she leads the execution of training programs and also trains the biology portions of the courses for customers that include: National Guard Bureau Weapons of Mass Destruction Civil Support Teams, 20th Support Command, 22nd and 110th Chemical Battalions, US Army CBRN School, National Security Agency, and various other customers. Dr. Poore led the training program for the 20th Support Command's Heavy Mobile Expeditionary Laboratory that covered the entire suite of analytical instrumentation, shelter, and supporting equipment. She also has experience in the development of biological agent detection platforms and has evaluated existing bio detection systems including a DHS funded program for the development of a microtiter screening tool for the screening of biological agents in suspicious powders, an FDA-funded method of validation study for the detection of biological material in various food matrices using electrochemiluminescence, a Smiths Detection-funded *Ricinus communis* DNA method evaluation, and a DHS-funded evaluation of three generic screening tools for the analysis of biological agents in suspicious powders. She had the lead scientific role in the development of several mobile laboratories and kits for the following customers: 20th Support Command DNA Identification Lab, New

York City Public Health All Hazards Receipt Facility (BSL-2/3), Defense Threat Reduction Agency (DTRA) Divable Chem/Bio Sampling Kit, and DTRA Biological Assessment Mobile Laboratory (BAML). She operated and validated the BAML as the lead biologist during an Advanced Test Demonstration.

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Session #5 (8:30am – 11:45am)
"Chemical Suicide"

Instructor: Jamie Bethard, Chief/Manager, DNREC Emergency Prevention and Response Section (EPRS)

Chemical suicides as we know them came to prominence in Japan in 2007 and have unfortunately migrated to the United States. The numbers of chemical suicides within the U.S. is believed to be drastically under-reported and may even be controversial by definition. Within calendar year 2015, Delaware had at least three chemical suicides. This course will discuss the current trends and discuss how Delaware responds or should respond to these unfortunate events. This program will be using training material acquired from Jacob Oreshan, a national recognized subject matter speaker on this topic. In addition, the Division of Forensic Science will be participating in this course.

Instructor Bio: Jamie Bethard is the Chief/Manager of DNREC's Emergency Prevention and Response Section (EPRS). Jamie is a third generation Delaware firefighter and life member of the Magnolia Vol. Fire Co. Jamie has worked for the State of Delaware as an Industrial Hygienist, Environmental Health Specialist III, and for the last 27 years with DNREC's Emergency Response Branch as on On-Scene Coordinator. Jamie is currently the Chief/Manager of the EPRS which is responsible for the Emergency Response, Accidental Release Prevention and Emergency Planning and Community Right to Know programs. Jamie has a Bachelor's degree in Fire & Safety Engineering and a Masters in Safety Engineering.

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Session #6 (8:30am-11:45am)
"Rapid Risk Assessment Techniques"

Instructor: Frank Docimo, CEO, Docimo Associates, LLC, Madison, WI

When responding to a chemical event, it's critical that the material be identified as soon as possible. The thought process should involve protecting oneself and detecting the product or agent of harm. Most responders under-utilize their detectors in standard hazmat response and seem to get away with it. But in a true chemical event, the importance of monitoring is critical in making key decisions, such as identifying a hoax, establishing zones, making evacuation decisions, mandating PPE and determining decontamination needs. This is a hands-on program using tabletop scenarios and multiple interactive detection devices that will provide the first responder the skills that they will need when faced with a hazardous material incident.

Instructor Bio: Frank Docimo: Frank Docimo has been affiliated with the fire service for over 40 years and formerly served as the Hazardous Materials Coordinator for State of Wisconsin Emergency Management. Frank previously had been with Haz-Mat One in the City of Stanford. He has lectured at many national programs including the Fire Department Instructors Conference, International Association of Hazardous Materials Instructors, Hazardous Materials Team Conference, and the FEMA Region Five Conference. His client list includes the US Army, the US Air Force, the CIA, Several CST teams, the US Capitol Haz-Mat Response Team, and the National Security Agency. During the year 1992, Mr. Docimo was honored with two prestigious training awards. He received the "Connecticut Instructor of the Year" award and was also recognized for his expertise and skills as a teacher when he was awarded the "National Instructor of the Year for 1992". In 2001, Frank received the "In the Zone Award" from the Houston Haz-Mat Conference. In the fall of 1998, Mr. Docimo was selected as a subject matter expert (SME) to participate in a needs assessment and formulation of curriculum for the nation's responders to terrorist activities. This project was a joint project of the National Fire Academy, FEMA and the Bureau of Justice. Current projects include response assessment programs for several DC-based agencies. Mr. Docimo is the CEO of Docimo Associates, LLC, in Madison, WI.

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Session #7 (8:30am – 11:45am)
"Tank Firefighting Seminar" – Part 1, Classroom Theory

Instructors: Edward Hawthorne, Global Emergency Response Discipline Lead for Shell Oil Company and Bill Kelly, Sunoco Logistics

This workshop will review the different types of tanks and their construction. We will review case studies of how fire departments successfully and unsuccessfully dealt with major spills, fires and explosions involving petrochemical products stored in fixed location storage tanks. At the conclusion of the workshop the participant will have the knowledge to recognize the major hazards of petrochemicals storage tanks and the basic tactics priorities to deal with them. The local Industrial Fire Group within the DBRC with

members consisting of Philadelphia Energy Solutions, Paulsboro, Delaware City, Monroe, and Sunoco Logistics will be demonstrating some of the equipment which they have to deal with this type of incident at the conclusion of the workshop.

Instructor Bios:

Mr. Hawthorne is a Life Member of the Aetna Hose, Hook and Ladder Company, Newark Delaware. He is presently the Safety Officer for the Newark, Texas Volunteer Fire Department. Mr. Hawthorne is a graduate of Oklahoma State University Fire Protection and Safety Program. He is past Chair of the Channel Industries Mutual Aid Association in Houston, Texas. He is also a Charter Member of the National Fire Service Incident Management Consortium, a member of the FEMA Incident Management Working Group, and a member of the San Jacinto Texas Type III Incident Management Team. Mr. Hawthorne has worked with fire departments in Delaware, Oklahoma, Louisiana, California, Arizona, Texas, Singapore, Netherlands, Canada, Argentina, South Africa, and many other areas. He is also a collector of antique fire apparatus.

Chief Bill Kelly is a Certified Fire Protection Specialist through the NFPA. He has 26 years of refinery fire chief experience with Sunoco, Inc. and presently employed by Sunoco Logistics as the Senior Manager of Emergency Services. He is a life member, past Chief, and Chief emeritus of the Claymont Fire Department and presently serves as the Deputy Fire Chief with the Hartly Fire Department. He also actively serves as a field instructor with the Delaware State Fire School and has done so for 25 years. He also served as past president of both the New Castle County Fire Chiefs Association and Delaware Valley Fire Chiefs Association. The Chief authors the "Saving Fireman Ryan" articles in the Delaware Fire Service News.

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Session #8 (1:00pm – 4:15pm)

"Emerging Threats Facing America" – Part 2

Instructors: Sergeant Chris Ennis and Detective Tim Kerstetter, Delaware State Police

See Session #1 above for the course description and instructor bios.

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Session #9 (1:00pm – 4:15pm)

TRANSCAER® Presents:"Managing Toxic, Corrosive & Flammable Gas Emergencies – Case Studies and Tactics for Chlorine, the Three Faces of Hydrogen Chloride, and Vinyl Chloride"– Part 2

Instructors: *Instructors for this session are drawn from Chlorine Institute member companies. This includes a representative mix of chemical producers, packagers, emergency response contractors and emergency equipment manufacturers. The instructors have extensive, first-hand experience in chemical operations and hazmat emergency response.*

See Session #2 above for the course description and instructor bios.

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Session #10 (1:00pm – 4:15pm)

"HazMat Branch Officer Training and Certification– Part 2"

Instructors: John Clawson, DuPont (retired) and Bruce Galloway, DuPont (retired)

See Session #3 above for the course description and instructor bios.

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Session #11 (1:00pm – 4:15pm)

"Bio Threat Brief"

Instructor: Dr. Carrie A. Poore, Ph.D., Team Leader, Advanced CBRNE Training Team, United States Army Edgewood Chemical Biological Center

This course will discuss biological agents, characteristics of the different types of bio agents, and the small scale production of such. Generalized medical effects will be addressed for the main types of bio agents. Basic theory regarding the motivation of using a biological agent will be covered. A discussion on challenges that exist in the development of detection platforms will show what we currently use now and where we are going as technology constantly improves.

Please see Session #4 above for instructor bio.

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Session #12 (1:00pm – 4:15pm)
"HazMat Medicine: Mechanisms of Injury"
Instructor: Fred Haas, Paramedic District Supervisor, Sussex County (DE) EMS

Response to hazardous materials incidents often presents an atmosphere of uncertainty for medical responders. This presentation will attempt to simplify EMS response by looking at major classes of hazmats (based on their placarding), common risks, PPE requirements, safety considerations, and medical management of injuries related to each class.

Instructor Bio: Fred Haas: Mr. Haas is a Paramedic District Supervisor for Sussex County EMS in Georgetown, DE. In addition, he is a member of the department's Hazardous Materials Medical Response Team and their Tox-Medic Coordinator. He also works for the Delaware Office of EMS as their Domestic Preparedness Coordinator. Finally, he is the EMS Captain for Selbyville Volunteer Fire Company.

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Session #13 (1:00pm – 4:15pm)
"If You Cannot Measure It, You Cannot Manage It!"
Instructor: Frank Docimo, Hazardous Materials Coordinator, State of Wisconsin Emergency Management, Madison, WI

When responding to a chemical event, it's critical that the material be identified as soon as possible. The thought process should involve protecting oneself and detecting the product or agent of harm. Most responders under-utilize their detectors in standard hazmat response and seem to get away with it. But in a true chemical event, the importance of monitoring is critical in making key decisions, such as identifying a hoax, establishing zones, making evacuation decisions, mandating PPE, and determining decontamination needs. This is a hands-on program using tabletop scenarios and multiple interactive detection devices that will provide the first responder the skills that they will need when faced with a hazardous material incident.

See Session #6 above for the instructor bio.

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Session #14 (1:00pm – 4:15pm)
"Meth Labs and Marijuana Grow Labs"
Instructor: Matthew Higgins, Environmental Scientist IV, DNREC Emergency Prevention & Response Section, Dover, DE

Individuals attending this presentation will gain a thorough understanding of clandestine drug labs and the strategic methods used to safely process these labs. During the presentation attendees will understand the methodology of the process, the importance of evidence photography and seizure, and identifying common procedural tactics that put officers and hazmat response personnel in harm's way. Attendees will understand the importance of refusing to tow vehicles containing One Pot meth labs, but rather to process these meth labs on site due to the increased danger these meth labs present on all roadways in the United States. The final training item will include a new trend that is occurring in numerous states that resembles the One Pot meth lab but possesses a very different, but lethal characteristic.

Instructor Bio: Matthew Higgins: Matthew Higgins is an Environmental Scientist IV with the State of Delaware's Department of Natural Resources & Environmental Control's (DNREC) Division of Waste & Hazardous Substance's Emergency Prevention & Response Section. Mr. Higgins is a Hazardous Materials Response Technician and is an On-Scene Coordinator with the DNREC - Emergency Response Team (ERT), which responds to hazardous material incidents in the State of Delaware. Mr. Higgins is a Certified Hazardous Materials Manager and holds a Bachelor's of Science Degree in Environmental Sciences from Wesley College. Mr. Higgins has responded to numerous clandestine meth labs in the State of Delaware and Maryland. He has attended several training seminars on clandestine meth lab response, including Safety Officer training. Mr. Higgins worked with other members of the DNREC - ERT in developing the current methodologies used by the team for clandestine meth lab response and hazard mitigation in the State of Delaware.

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Session #15 (1:00pm – 4:15pm)
"Tank Firefighting Seminar" – Part 2, Demonstration
Instructors: Edward Hawthorne and Bill Kelly

See Session #7 above for the course description and instructor bios.

For Questions Regarding this Workshop Contact:
For Questions Regarding this Workshop, Contact Jerry Brennan:
Phone: (302) 739-4773 or via email at ***jerry.brennan@state.de.us***

Thank You to Our Workshop Partners: