HAZMATOLOGY

THE SCIENCE OF HAZARDOUS MATERIALS

VOLUME FIVE

HAZMAT TEAM SPOTLIGHT

ROBERT A. BURKE

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The Science of Hazardous Materials

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Hazmat Team Spotlight

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Dedication

Volume Five

Ron Gore

Jacksonville, Florida Fire Department is the home of the first hazardous materials response team organized in the United States. During the late 1970s, Chief Yarborough of the Jacksonville Fire Department envisioned the need to deal with hazardous materials response in a trained and organized manner. This came directly from the man so many of us credit as the "Godfather of Hazmat". "It wasn't my idea", said retired Captain Ron Gore during a recent visit to Fire Station 7. In town for a reunion of Jacksonville Fire and Rescue Department's (JFRD) original Hazmat Team members, Gore shared how the specialty team's concept originated with Fire Chief Russell Yarbrough in the 1970s. While Ron Gore doesn't want to take credit, even though it was Chief Yarbrough's idea, it was Captain Ron Gore who made it happen. Not just in Jacksonville, but all across the United States. Ron Gore is one

of the most influential people in the world of hazmat and he has touched thousands of people during his training sessions and Ron, you are the undisputed "Godfather of Hazmat" in the American Fire Service. I for one do not think you get enough credit for what you have contributed to all of us in Hazmat Response.

Contents

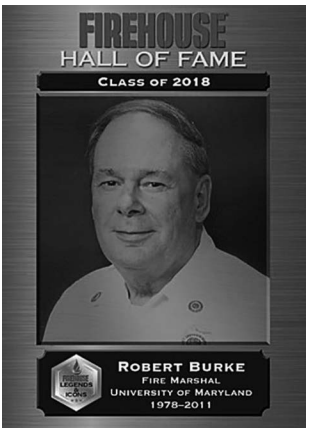
Preface

Volume 5 takes an in-depth look at hazardous materials teams across the United States and Canada. There are hundreds, if not thousands of hazardous materials teams and thousands of hazardous materials team members. Among the teams I have visited, there are differences from one team to another, but the basic operational procedures are similar. Hazardous materials incidents can occur anywhere in the country. Levels of hazardous materials response vary depending on whether the incident occurs in an urban or rural area. Resources also vary widely between locations and impacts on individual agencies will be presented.

Reasons for establishing hazmat teams in jurisdictions differ from major incidents to dealing with potential hazardous in a community along with many other reasons. It is interesting to see all the different types, configurations, and colors of vehicles. Staffing differs in many jurisdictions along with training requirements for personnel.

Additional information is provided on preferred equipment and resources; target hazards within response jurisdictions; innovations in procedures, equipment, and operations; and finally major incidents that have occurred in jurisdictions of the teams covered in this volume.

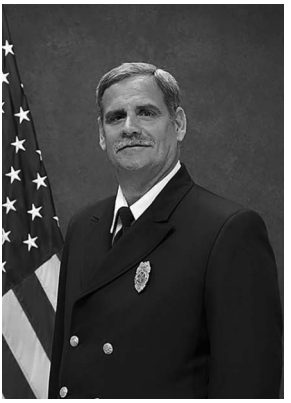
Acknowledgements



I thank the many fire departments and members across the United States and Canada that I have visited and became friends with during my visits to their departments over the years. I also thank the firefighters from classes I have attended as a student and taught for the National Fire Academy, Maryland Fire and Rescue Institute and Community College of Baltimore County since 1988. Learning is a two-way street, and I have learned much from the students as well. I thank the many friends I have met during the 40 plus years in the fire, EMS, hazardous materials and emergency management fields. There are those who I have not seen for a while; some are no longer with us, but once a friend, always a friend.

I express my thanks to *Firehouse Magazine* for allowing me to write stories about hazardous materials for 33 years and counting. During those years, I have had the pleasure of writing under every editor of the magazine including founder Dennis Smith who gave me the chance to be published for the first time. I also thank Firehouse editors, Janet Kimmerly, Barbara Dunleavy, Jeff Barrington, Harvey Eisner, Tim Sendelbach and Peter Mathews for their support over the years. When I read my first copy of *Firehouse Magazine* in the late 1970s, I was hooked. My dream was to someday go to Baltimore to attend a Firehouse Expo. Never did I dream I would not only attend an expo but teach at numerous expos, write for the magazine and in 2018 be inducted into the Firehouse Hall of Fame. To be placed in a fraternity with sixteen of the people who had an enormous impact on the fire service and who I looked up to my entire career was very humbling.

Several people have been my mentors and have impacted my life and career. When I worked with the State Fire Marshall of Nebraska, Wally Barnett allowed me to accomplish things in the State Fire Marshal's Office



Brent Boydston, Chief Bentonville, AR Fire Department.

that I otherwise would not have. Because of his ability to let his employees reach their potential, I was able to write for *Firehouse Magazine*, become a contributing editor, teach for the National Fire Academy and other things too numerous to mention. He was proud when I gave him a copy of my first book. I owe much of my success in the fire service to the opportunities Wally gave me. Jan Kuczma and Chris Waters at the National Fire Academy have been mentors to me over the years. Ron Gore, retired Captain from the Jacksonville, FL Fire Department and Owner of Safety Systems, has had a large impact on my life and career. The Jacksonville Hazmat Team was the first emergency services Hazmat Team in the United States. Ron Gore is the Godfather of Hazmat response in the United States.

Former student of mine and current Chief of the Bentonville, AR Fire Department Brent Boydston has been a great friend to me and my family over the years. Rudy Rinas, Gene Ryan and John Eversole of the Chicago Fire Department have been fellow classmates and students. Mike Roeshman and Bill Doty of the Philadelphia Fire Department both former students and retired as Hazmat Chief Officers have remained friends. I used to ride with Bill and together we had some great adventures. Mike showed me Philadelphia historical areas, like the spot where Ben Franklin flew his kite and his post office, which is so obscure today in downtown Philadelphia. I also stood on the spot where Rocky stood at the top of the steps in the movie. These adventures enjoyed in Philadelphia would not have happened without Bill and Mike.

Mike Roeshman Retired Hazmat Chief Philadelphia Fire Department.

Just outside of Philadelphia in Delaware County, Tom Micozzie, Hazmat Coordinator for Delaware County, was also a former student and a great friend. We had many adventures together, and I will never forget his introduction to me of the Galati at Rita's Italian Ice! Rita's Italian Ice was started by a retired Philadelphia firefighter and not long ago one opened up in Lincoln, NE.

Thanks to Richmond In Fire Chief Jerry Purcell, who I met during a visit to Richmond to do a Firehouse story on their 1968 explosion in downtown. As a result of

William, "Bill" Doty retired Hazmat Chief Philadelphia Fire Department.

the Richmond story being published I was able to locate and become friends with blast survivor Jack Bales. More recently I visited to do another story on their hazmat team and propane training. Thanks to new friend Ron Huffman who traveled to Richmond to conduct the propane training utilizing water injection to control liquid propane leaks. The article appeared in the September 2019 *Firehouse Magazine*.

Thanks to Tod Allen, Fire Chief in Crete Nebraska who I met when I was researching a train derailment in Crete for another friend Kent Anderson. We have become good friends. Tod is the apparatus operator on Truck one at Station 1 for the Lincoln Nebraska Fire Department. He invited me to come and ride with him, and many adventures later I still go there on a regular basis. I thank all of my friends past and present on "B" Shift at Station 1 for making me feel at home and showing me a good time whenever I am there. Thanks to friend Captain Mark Majors for sharing his experiences with Nebraska Task Force 1 Urban Search and Rescue Team (USAR) and Captain Francisco Martinez Lincoln Hazmat. Finally, I thank Chief Michael Despain and assistant Chief Patrick Borer for their friendship and hospitality while visiting the Lincoln Fire Department on many occasions. This is only the short list—I would have to write a separate book to thank all of you I have met and for the impact you have had on my life over the past 40+ years. You know who you are; I appreciate your friendship and assistance and consider your selves thanked again.

Chief Jerry Purcell Richmond, IN Fire Department.

During my year-long book writing adventure that led to *Hazmatology: The Science of Hazardous Materials*, I met and spoke to many people and made new friends. I thank my cousin Dustin Schroeder, Senior Captain at Houston Station 68, and the firefighters and others I met. I also thank Kevin Okonski, Hazmat at Houston Station 22; Ludwig Benner, former NTSB Investigator and developer of several incident management models; Bill Hand, Houston; Richard Arwood; Charles Smith, Memphis; Kevin Saunders, Motivator; Chief Jeff Miller, Butte, MT; and all of the Nebraska Regional Team leaders and members.

I express my thanks to my cousin Jeanene and her husband Randy for coming all the way from Montana to be with me at the Firehouse Hall of Fame induction. I am also grateful to Brent Boydston, James Rey Milwaukee, Wilbur Hueser and Saskatoon in Canada for the hospitality and tour, and Captain Oscar Robles, Imperial, CA. The list just goes on and on, and there is no room here for everyone, but the rest of you know who you are and I want you to know how much your assistance is appreciated. You are all considered friends, and I hope we will talk and or meet again. Finally, thanks to librarians and historians across the country for your assistance in research, thanks for the memories!

Robert Burke

Special Acknowledgement

When I began thinking about writing a column for *Firehouse Magazine* in September 2017 on *Hazmatology: The Science of Hazardous Materials*, I envisioned that the science would likely produce Hazmatologists. While visiting the Houston Fire Department Hazmat Team in October of 2018 I had the distinct pleasure of meeting a Hazmatologist Tony Janke. Throughout the day I spent time with Tony, Kevin Okonski and the Houston Hazmat Team members that were present. No longer did I have to envision what a Hazmatologist would be like, I had just met a whole team of them. Even though I had only met one shift of the team, there is no doubt the entire team is cut from the same cloth. Tony was the one that took the part of being a Hazmatologist personally and wore his Hazmatologist tag on his shirt. However, I am sure all of the other team members take Hazmatology just as seriously. What I saw the remainder of the day was a well-oiled hazmat machine, everyone knowing their jobs and performing them automatically not needing prompting from anyone else. Thank you Houston Hazmat letting me inside your workings and accomplishments.

Author

Robert A. Burke was born in Beatrice and grew up in Lincoln, Nebraska; graduated from high school in Dundee, Illinois; and earned an AA in Fire Protection Technology from Catonsville Community College, Baltimore County, Maryland (now Community College of Baltimore County) and a BS in Fire Administration from the University of Maryland. He has also pursued his graduate work at the University of Baltimore in Public Administration. Mr Burke has attended numerous classes at the National Fire Academy in Emmitsburg, Maryland, and additional classes on firefighting, hazardous materials and Weapons of Mass Destruction at Oklahoma State University; Maryland Fire and Rescue Institute; Texas A & M University, College Station, Texas; the Center for Domestic Preparedness in Anniston, Alabama; and others.

Mr. Burke has over 40 years' experience in the emergency services as a career and volunteer firefighter, and has served as a Lieutenant for the Anne Arundel County, Maryland Fire Department; an assistant fire chief for the Verdigris Fire Protection District in Claremore, Oklahoma; Deputy State Fire Marshal in the State of Nebraska; a private fire protection and hazardous materials consultant; and an exercise and training officer for the Chemical Stockpile Emergency Preparedness Program (CSEPP) for the Maryland Emergency Management Agency; and retired as the Fire Marshal for the University of Maryland. He has served on several volunteer fire companies, including West Dundee, Illinois; Carpentersville, Illinois; Sierra Volunteer Fire Department, Chaves County, New Mexico; Ord, Nebraska; and Earleigh Heights Volunteer Fire Company in Severna Park, Maryland, which is a part of the Anne Arundel County, Fire Department, Maryland.

Mr. Burke has been a Certified Hazardous Materials Specialist (CFPS) by the National Fire Protection Association (NFPA) and certified

by the National Board on Fire Service Professional Qualifications as a Fire Instructor III, Fire Inspector, Hazardous Materials Incident Commander, Fire Inspector III and Plans Examiner II. He served on the NFPA technical committee for NFPA 45 Fire Protection for Laboratories Using Chemicals for 10 years. He has been qualified as an expert witness for arson trials as well.

Mr. Burke retired as an adjunct instructor at the National Fire Academy in Emmitsburg, Maryland in April 2018 after 30 years. He taught Hazardous Materials, Weapons of Mass Destruction and Fire Protection curriculums. He taught at his Alma Mater Community College of Baltimore County, Catonsville Campus and Howard County Community College in Maryland. He has had articles published in various fire service trade magazines for the past 33 years. Mr. Burke is currently a contributing editor for *Firehouse Magazine*, with a bimonthly column titled "Hazmatology," and he has had numerous articles published in *Firehouse, Fire Chief, Fire Engineering* and *Nebraska Smoke Eater* magazines. He was inducted into the Firehouse Hall of Fame in October 2018 in Nashville, TN. Mr Burke has also been recognized as a subject matter specialist for hazardous materials and been interviewed by newspapers, radio and television about incidents that have occurred in local communities including Fox Television in New York City live during a tank farm fire on Staten Island.

Mr. Burke has been a presenter at Firehouse Expo in Baltimore, MD and Nashville, TN numerous times, most recently in 2017. He gave a presentation at the EPA Region III SERC/LEPC Conference in Norfolk, Virginia, in November 1994 and a presentation at the 1996 Environmental and Industrial Fire Safety Seminar, Baltimore, Maryland, on DOT ERG. He was a speaker at the 1996 International Hazardous Materials Spills Conference on June 26, 1996, in New Orleans, Louisiana; a speaker at the Fifth Annual1996 Environmental and Industrial Fire Safety Seminar in Baltimore, Maryland, sponsored by Baltimore City Fire Department; and at LEPC, an instructor for Hazmat Chemistry, August 1999, at Hazmat Expo 2000 in Las Vegas, Nevada. He also delivered a Keynote presentation at the Western Canadian Hazardous Materials Symposium Saskatoon, Saskatchewan, Canada, in 2008.

Mr. Burke has developed several CD-ROM-based training programs, including the Emergency Response Guide Book, Hazardous Materials and Terrorism Awareness for Dispatchers and 911 Operators, Hazardous Materials and Terrorism Awareness for Law Enforcement, Chemistry of Hazardous Materials Course, Chemistry of Hazardous Materials Refresher, Understanding Ethanol, Understanding Liquefied Petroleum Gases, Understanding Cryogenic Liquids, Understanding Chlorine and Understanding Anhydrous Ammonia. He has also developed the "Burke Placard Hazard Chart." He has published seven additional books titled *Hazardous Materials Chemistry for Emergency Responders* (*1st, 2nd and*

3rd Editions, Counterterrorism for Emergency Responders 1st, 2nd and 3rd editions, Fire Protection: Systems and Response and *Hazmat Teams Across America.*

Currently, Mr. Burke serves on the Homestead LEPC in Southeast Nebraska. He also manages a Hazardous Materials section at the Nebraska Firefighters Museum and periodically rides with friends on "B" shift at Station 1, Lincoln Fire Department. He can be reached via email at robert.burke@windstream.net, on Facebook at https://www.facebook.com/RobertAb8731 and through his website: www.hazardousmaterialspage.com.

Volume Five

Hazmat Team Spotlight

> In five words, his guiding principles are: "Prevent harm. Survive. Be nice."
>
> *Chief Alan Brunacini*

Volume 5 provides an in-depth look at selected hazardous materials teams across the United States and Canada. This volume will focus on hazardous materials teams to highlight information that can be shared by other departments and personnel. Incidents that these hazmat teams have experienced may also provide some lessons learned to help other teams in the future. Fire departments have always responded to emergencies involving chemicals. In fact the fire department is our nation's first responder to all types of emergencies including fires, hazardous materials, emergency medical, natural disasters, and acts of terrorism.

Hazardous materials (hazmat) became the buzz word of the 1970s and 1980s. With the passage of the Superfund Amendments and Reauthorization Act (SARA) of 1986 (also known as the Emergency Planning and Community Right-To-Know Act, EPCRA) and continued reauthorization over the years, hazmat took a giant leap forward in the United States Emergency Response Community. Starting with the Jacksonville Fire Department, hazmat teams sprang up across the United States and Canada within a very short period of time.

Hundreds, if not thousands of hazardous materials teams and thousands of hazardous materials team members placed these teams in service from 1978 through the early 2000s.

Reasons for establishing hazmat teams in jurisdictions also vary from major incidents. Hearing about the formation of other teams, to dealing with potential hazardous materials in a community and in response to new Federal Regulations in the 1980s. It is interesting to see all the different types, configurations and colors of vehicles. Staffing also differs in many jurisdictions along with training requirements for personnel. There have been several trends over the years involving regional teams, consolidation, and transition from hazmat teams to Special Operations teams that not only do hazmat but various forms of rescue as well.

The Journey Begins

During the month of May 2004, a new column subject was started on Firehouse.com website titled "Hazmat Team Spotlight". There had been several articles about hazmat teams that I put into the magazine, but this was my first attempt at concentrating on hazmat teams. The idea for the spotlight was born from letters and e-mails from hazmat personnel asking questions about other teams. My intention was to provide a location for hazmat team members to find information about what other hazmat teams are doing around the country; a kind of a place to share information. I published the first spotlight story on the Philadelphia, PA Hazmat Team, which I had covered in *Firehouse Magazine* in January 1999. Information on Philadelphia's team was updated and the first Hazmat Team Spotlight was posted on Firehouse.com.

Following the Philadelphia Hazmat Team Spotlight, I received numerous requests from hazmat teams up and down the East Coast about them wanting their teams in future articles. Over the years I have tried to honor all of the requests as soon as possible, although in some cases it was many years until I had the opportunity to travel to a particular area. Photographic situations are not always available during visits so some photographs are provided by the local hazmat teams and fire departments. But aside from that I do all of my own photography. As I started visiting departments, I found that there were some stories beyond the scope of the website spotlights and some of the team's stories were placed in *Firehouse Magazine*. After a couple of years I would update information on the teams that appeared in the magazine and repost them to the Firehouse.com website, so that others could use them as a resource. During 2008 additions to the website were discontinued and all Hazmat Team articles went directly into *Firehouse Magazine*.

The website had room for many more photographs than the magazine so I had the opportunity to better show (through photography) the assets of the teams that are spotlighted. Since I do not receive travel expenses for the teams I spotlight, I try to plan my visits to teams when I am traveling for another purpose. Additionally, I taught for the National Fire Academy for 30 years (retired in 2018) and tried to visit teams while traveling for teaching jobs. Family vacations also turned into team visits when the opportunity occurred. Some instances I had frequent flyer miles and used those just to visit teams, one in particular that stands out were San Diego, CA, and Yuma, AZ, visits. Team spotlights are listed alphabetically, not in the order of visits for ease of organization and reader searching.

Allegheny County Pennsylvania Green Team Specialized Intervention Team (SIT)

> ***Prologue:*** *When I received an email from Jim Eaborn Deputy Chief of Allegheny County Hazmat about the Hazmat SIT Team, I have to admit I was skeptical. Only a couple of instances where entry personnel got into trouble and required assistance in the Hot Zone came to mind. With all of the precautions taken when preparing for entry, history has shown it has been a relatively safe operation. However, he invited me to a full drill to show me how the team operates and I am glad I accepted. This team is amazing. Procedures have been well thought out and this team is well prepared and equipped to enter a Hot Zone to make a rescue of downed hazmat personnel. My impression was so far beyond what I expected, I would recommend that anyone who has the chance should journey to Pittsburg, PA and visit the Allegheny County Hazmat Green Team.*

Allegheny County is located in the southwest corner of Pennsylvania and has an approximate population of 1,214,040 in 2020 distributed over 725 miles^2. Pittsburg is the largest city in Allegheny County and has a population of over 294,860 in 2020. Hazardous materials response in Allegheny County including the City of Pittsburg is provided by the Allegheny County Department of Emergency Services Hazmat Team. In addition to hazmat the Department of Emergency Services also provides 911 Communications and Fire Marshal services and operates the county fire training academy. There are over 300 independent volunteer fire companies in the county that provide fire and rescue service to 130 municipalities. Emergency medical services (EMS) response is provided by an independent paid EMS organization which also provides EMS support for the hazardous materials teams. The only career for fire department in the county other than the City of Pittsburg is at the international airport.

Hazmat Team History

The Allegheny County Hazardous Materials Team was formed on June 28, 1988, by the Allegheny County Commissioners. The idea for the formation of a team resulted from training provided by Ron Gore (Jacksonville Florida Fire Department) and owner of Safety Systems, Inc., who presented some of the first hazmat classes in Allegheny County. The Allegheny County Hazardous Materials Team is composed of five teams

staffed totally by volunteers in the county and by career personnel in the City of Pittsburg. The Allegheny County Green Specialized Intervention Team services the entire Southern area of the county; the Red Team, East Boroughs Emergency Services Association serves the Eastern areas of the county; the Blue Team, Northeast Allegheny Response Association serves the Northeast and Northwest areas of the county; the Silver Team, North Hills Response Team serves 25 municipalities in Northeastern Central just north of the Ohio and Allegheny Rivers; and the Yellow Team serves the City of Pittsburg.

Each of the teams is somewhat autonomous administrative but all provide assistance throughout the county when needed. Support and funding is provided by the county. When a hazmat incident occurs in the county, the four county teams would be deployed first and the Pittsburg Team would be deployed if they were not on a call in the city. All five Hazardous Materials Teams are certified by Pennsylvania Emergency Management Agency (PEMA) and by the Commonwealth of Pennsylvania. Certified teams must meet certain standard criteria set forth by the state for certification. Certification requirements include having an Emergency Response Plan, personal protective equipment (PPE) Program, and Medical Surveillance Program.

Training requirements for team members: Team Structure and Response, Dispatch and Response, Incident Command System Structure and procurement of approved equipment on the Team Equipment List. There is also a periodic re-certification process. Allegheny County Police provide a bomb squad for the county and technicians train with the hazmat team. The five county hazmat teams receive support from the Department of Emergency Services under the direction of Chief Matt Brown, the County Fire Marshal and Emergency Management Coordinator. All of the teams are dispatched by the County 911 Center.

Hazmat Team

From January 1 to November 30, 2018, the Allegheny County's Hazardous Materials Team collectively responded to 68 calls in 2018. Fuel spills and odor calls are handled by individual fire companies and provide assistance if needed. Engine companies carry four-gas meters. Hazmat will not respond unless a spill is over 55 gallons unless specially called upon to do so. Hazmat Team trucks in the county are equipped with the latest hazardous materials equipment including encapsulated suits, monitoring equipment, and communications capabilities. Fire frequency radios in the hazmat units enable communications with every fire department in Allegheny County. There are approximately 250 technician-level responders on Allegheny County's Hazmat Team. County Hazmat Companies are all one team and each is equipped to handle a hazmat response for

CBRNE. Additionally, each company is equipped to also handle the hazmat risks in their first due areas.

PPE, Equipment, Training

Some of the specific equipment carried by the hazardous materials teams include Chlorine Kits A, B, and C. Portable fire extinguishers include Purple K and Class D agent. PPE used by the Green Team is primarily DuPont Responder for Level A and DuPont CPF for Level B. Self-contained breathing apparatus (SCBA) is manufactured MSA with 1-h bottles and they also have MSA Millieum Cartridge Respirators. In-suit communications system is provided by Conspec VHF and UHF radios that are used in the county with throat mikes and ear pieces. Decontamination is provided by the hazardous materials team. Decontamination is currently being conducted using pressure washing as a primary process. Recent equipment purchased are:

- Thermo Fisher Gemini (County).
- Ground meter with all grounding and bonding cables and clamps. Developed SOG for use.
- Altair SX 4 gas PID's to supplement current cashe of meters.
- LPG water injection equipment.

Green Team

The Green Team initial response area is located in the Southwest part of the county and serves approximately 56 municipalities within the county in an area of roughly 40 miles^2 and a population of 270,000. They respond in conjunction with as many as 70 different volunteer fire departments in their coverage area. Membership on the Green Team is made up of personnel from 16 different organizations including firefighters, emergency medical technicians (EMTs), paramedics, law enforcement, and industry specialists from within the Green Team's response area. The Green Team responds to approximately 8–10 hazardous materials incidents each year. Currently the Green Team has 42 members and is housed at the Broughton Volunteer Fire Company located at 1030 Cochran's Mill Road in South Park Township. All hazmat responders are on call.

Two hazmat vehicles are operated by the Green Team, Specialized Intervention Team 450 Hazmat 1 and 450 Hazmat 2 (Figure 5.1). Hazmat 1 is a 2008 Pierce Velocity with a rescue body. The rear cab is set up as a mini command post. The cab also has "meter" cabinets with charging stations for the meters and extra batteries. The truck has an onboard weather station and light tower. Additionally the outside of the truck has a retractable awning. Hazmat 2 has a roof mounted deck for clearer view of the

Figure 5.1 Two hazmat vehicles are operated by the Green Team, Specialized Intervention Team 450 Hazmat 1 and 450 Hazmat 2. (Courtesy: Allegheny County Green Team.)

operations for the command staff. This vehicle functions as a support unit with extra equipment, supplies and all of the Midland kits, Chlorine Kits, rail car fittings, and tarps for ammonia leaks.

Training requirements for team members include 168 h of training with 24 h of annual refresher. Subjects covered are Hazmat Awareness, Operations, Technician, Hazmat Chemistry, Command Post Operating I, II, III, Research, Evacuation, Communications, Command and Control, Radiological Monitoring, LPG, and Pesticide Challenge. Training is provided by the Allegheny County Training Academy and the Pennsylvania State Fire Academy. Most volunteer fire companies in the county require operation-level hazmat training for response personnel. EMS personnel are all trained to the awareness level for hazmat response. Green Team entry personnel now work in teams of three instead of two.

Special Intervention Team (SIT)

One of the unique specialties of the Allegheny County Pennsylvania Green Team is their Rapid Intervention Procedure (Figure 5.2) that was developed by team members for rescue of hazmat team personnel who might become trapped from falling debris or other cause during an entry into the hot zone. The RIT procedure was developed by Deputy Chief Ryan Lattner, Allegheny County Airport Authority, Deputy Chief Kurt Gardner, Allegheny County Specialized Intervention Team, and Commander Jim Eaborn, Allegheny County Specialized Intervention Team.

Figure 5.2 One of the unique specialties of the Allegheny County Pennsylvania Green Team is their Special Intervention Procedure.

The primary purpose of the RIT is to provide an emergency air supply for personnel in Level "A" protective clothing who become disabled during an entry until they can be extricated (Figure 5.3), decontaminated and receive medical attention as required by any injuries. The emergency air supply procedure is a last resort and is only used in situations where death or serious injury would occur due to lack of air. The SIT is established, and on stand-by anytime a Level A entry is performed. They are partially suited up and ready for rapid deployment. Special kits are assembled ahead of time and contain a modified SCBA, cutting tools and Chem Tape. Strips of tape are precut and placed on the SCBA tank for quick access. When the team makes an entry, they bring the kit and a skid for removal of the team member when extricated if needed.

When a responder goes down the SIT Team enters the site and locates the team member. They determine if the scene is safe for them to enter and if a rapid extrication is possible. If rapid extrication is not possible, they assess the level of consciousness of the responder that is trapped and their available air supply. When the air supply reaches a critical level the SIT will breach the suit of the responder and supply additional air. A cut approximately 2–3 inches is made in the Level "A" suit. The hose from the rescue SCBA is inserted into the Level "A" suit through the cut. Pre-cut pieces of Chem Tape are used to secure the hose in place and reduce air leakage through the hole.

Figure 5.3 The primary purpose of the RIT is to provide an emergency air supply for personnel in Level "A" protective clothing who become disabled during an entry until they can be extricated.

Once the hose is secured, the air supply is turned on slightly so that the suit is not inflated. If the trapped responder is conscious, they are instructed to remove their arms from the sleeves of the Level "A" suit and remove their SCBA mask. If the responder is not conscious, SIT team members remove the mask from the outside of the suit. RIT team members monitor the air supply of the trapped responder and assist with extrication. Once extricated the responder is then removed from the entry site and decontaminated.

> ***Author's Note:*** *During my visit to the Green Team they staged a drill with a team member trapped by a fallen large shelve inside of a building. I watched the rescue procedures being implemented first hand and it not only went smoothly, but works very effectively.*

Common Sense Decontamination

While gathering updated information on the Green Team for inclusion in this Volume, I learned about their innovative common sense approach to decontamination.

> ***Author's Note:*** *While preparing for the Hazmatology book project, decontamination was one of the areas that I felt science would back up the idea of taking another look at the way we approach decontamination. Finding a team that was already using "common sense" for decontamination was very refreshing and worth sharing.*