REPORT OF THE
FEDERAL EMERGENCY
MANAGEMENT AGENCY

HAZARDOUS MATERIALS SUMMIT

Working Better Together

May 4-5, 1999
Herndon, Virginia

FEDERAL EMERGENCY MANAGEMENT AGENCY

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HAZMAT SUMMIT PROCEEDINGS:

WORKING BETTER TOGETHER

Introduction

The concept for holding the Hazmat Summit grew out of the need recognized by both the U.S. Fire Administration (USFA) and the Preparedness, Training, and Exercises Directorate (PTE) within FEMA to work together in identifying and addressing the problems and concerns of the local hazmat response community. The Summit was expanded to include the Environmental Protection Agency (EPA) and the Department of Transportation (DOT), the two Federal agencies with primary responsibilities and programs for assisting the local hazmat communities. The International Association of Fire Chiefs (IAFC) assisted in organizing the Hazmat Summit as a part of their Integrated Emergency Management System initiative with FEMA.

This summit was conducted on May 4 and 5, 1999 in Herndon, Virginia.

The goals of the Summit were twofold. The first was to identify problems and challenges facing the local and State emergency response/first responder communities in hazmat response, planning, preparedness and prevention, and to explore proposed solutions to those problems. The second goal was to ask participants to recommend ways in which Federal agencies can assist the local and State hazmat response communities in enhancing their hazardous materials capabilities, including new initiatives as well as modifications to existing programs and services.

Summit attendees included participants with experience in hazardous materials problems confronting the local and State hazmat community. Formal letters of invitation were addressed to major fire service, emergency management, and law enforcement organizations. Those not in attendance are being invited to review this document. In addition to participants knowledgeable on local and State hazmat issues, and representatives from DOT and EPA, regional and headquarters staff from the FEMA's PTE Directorate, staff from the U.S. Fire Administration (USFA) including the National Fire Academy (NFA), staff from the Emergency Management Institute (EMI), and a U.S. Army representative from the Chemical Stockpile program also attended. A complete list of attendees is included in Appendix A.

The meeting was structured in three focused discussion topics: 1) Hazmat Response, Recovery and Clean-up; 2) Hazmat Preparedness; and, 3) Hazmat Prevention and Mitigation. Following welcoming remarks by Gary Briese of the IAFC, introductory remarks were offered by Kay Goss, FEMA's Associate Director for PTE, Carrye Brown, the U.S. Fire Administrator and Rich Marinucci, Acting USFA Chief of Operations.

Participants were divided into three working groups and asked to address specific questions under each of the identified topics. Each working group addressed the same topic simultaneously. Participants reconvened in a large plenary session to review the issues and discussions identified by each group after each topic-specific breakout session.

Following is an Executive Summary of the key themes and recommendations identified by participants during the Hazmat Summit. The recommendations are presented in the aggregate and are not intended to construe consensus findings. Following the Executive Summary is a section on the specific issues and recommendations identified by participants under each of the three key topic areas. The information is organized according to the questions the participants were asked to address in each breakout session.

EXECUTIVE SUMMARY

Based on the issues confronting the local and State hazmat community and the recommendations for improvements suggested by participants, several significant themes emerged during FEMA's Hazmat Summit. The following is a summary of the major concerns and recommendations expressed by Summit participants.

A Decade of Change. Hazardous materials is a safety problem across the U.S. that requires continued vigilance. In fact, recent analysis indicates the problem to be greater than previously reported. More hazardous materials are being developed, produced, transported, used, stored and disposed of than ever before. While the response capabilities and knowledge base of local responders has improved over the last decade, significant improvements are still needed. Difficulties in recruitment and retention of response personnel, deficiencies in the development of local response plans and exercises, and hazmat training, certification and re-certification requirements of response personnel and the allied professions are issues that require continued vigilance.

Hazmat Response, Recovery and Cleanup. Problems with hazmat response, recovery, and clean-up at the local-level are teaching us that problems persist in our planning and preparedness. The Incident Command System (ICS) should be universally utilized, not just by the fire service, but also by the allied response professionals and State and Federal responders. Training opportunities in ICS need to be extended to the allied professions and State and Federal responders. Such training will emphasize to those trained the priority actions that must take place--1) life safety, 2) incident stabilization, and 3) protection of property and the environment. Lack of standardized and adequate hazmat response equipment, and differing radio frequencies still present coordination problems. Escalating operating costs for staffing, equipment, and training are increasingly problematic for local and State agencies charged with hazmat preparedness and response. The costs of clean-up and disposal are increasing as well.

State-wide Mutual Aid. While a growing number of States have developed State-wide mutual aid programs to provide hazmat response team coverage for all citizens and to reduce costs, most States do not have such programs. As a result, major portions of many States throughout the U.S. may not have adequate coverage by trained and equipped hazmat response teams. States need to be encouraged to adopt State-wide hazmat team mutual aid programs. The Federal government could take a leadership role in this area.

Equipment Needs, Research and Development. Technology changes have also occurred over the last ten years. While more advanced hazmat response equipment is available, some hazmat response teams and many fire departments lack even the most basic equipment. There is great concern within the response community that such advances become available to all hazmat response teams. However, escalating costs for

equipping hazmat teams are prohibiting more wide-scale utilization of such equipment. Standardization of equipment is still needed. A significantly organized and purposeful research and development program dedicated to hazmat is needed.

Hazmat Response Training - NFA and EMI. Training for response to hazardous materials incidents will continue to be a significant need across the U.S. When response personnel do not receive adequate training, their safety is at risk and the communities they are charged to protect are vulnerable as well.

The leadership role of the National Fire Academy (NFA) needs to be restored. This will involve additional resources and revitalization. The position of the Hazmat Chair should be filled. The Chemistry of Hazmat and the Hazmat Fire Prevention and Inspection courses need to be reinstated for direct on-campus deliveries. Field delivery systems and hand-off programs to the States need to be revitalized. New courses need to be developed on chemical-specific topics in partnership with industry. Emergency response field experts need to be utilized in course development.

FEMA, working with the National Response Team (NRT)[1], DOT, and other Federal agencies, needs to become the focal point for finding and distributing information on successful locally-developed hazmat training initiatives which can be applied in communities wishing to make improvements in their training programs. The Emergency Management Institute (EMI) and the National Fire Academy need to strengthen collaborative efforts in hazmat training design, development, and distribution. More training needs to be undertaken at EMI in hazmat prevention and planning. Like the NFA, hazmat training needs to be revitalized and refocused at EMI as well.

Hazmat Training Grants. There is very limited Federal funding for training of hazmat responders and large numbers of personnel to be trained. Because of this reality, it is imperative that the maximum amount of funds allocated for such training reach local responders. A successful model of such a program is the NFA's Terrorism Training Grants. Previously in some cases as much as 48% of the funds have been taken by administering agencies for overhead and administration costs. Requirements for matching funds in some programs are penalizing many communities that simply cannot afford the matching requirements.

FEMA's new proposal to incorporate both SARA Title III hazmat training grant funds and terrorism funds into a type of block grant program for State agencies, entitled the Emergency Management Program Grants (EMPG) initiative is not recommended by local responders and some other Federal agencies, e.g. EPA. Whereas, State agency representatives at the Hazmat Summit indicated that State agencies wish to be

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[1] Under the National Response System, the National Response Team (NRT) is comprised of 15 member agencies and departments charged with developing policy for Federal preparedness and response for oil and hazardous substances; coordinating regional planning; providing policy guidance and support to Regional Response Teams; and coordinating Federal response to nationally significant events. EPA and the USCG co-chair the NRT.

unconstrained in terms of grant funding streams as much as possible. Because of the lack of an advocate in the State agencies for local hazmat responders, the needs of local hazmat responders may not be heard at the State level during the allocation of resources. Therefore, removal of the monies from the EMPG initiative is desired by local responders. At least 75% of these funds should be earmarked to reach local responders. The system such as the one used by the NFA with Terrorism Training Grants may be a way of doing this. A system of accountability to ensure that such funds are used for quality hazmat training of local responders was also recommended.

Local Hazmat Preparedness - Planning and Exercises. While knowledge of hazardous materials risks and preparedness for hazardous materials emergencies have increased over the last decade, a number of issues in local preparedness persist. One of these issues involves uneven planning across the U.S. Some communities are well prepared, others are not. Some States have active Local Emergency Planning Committees (LEPCs) while others do not. The Emergency Planning and Community Right to Know Act's (EPCRA) requirement for local emergency plans and LEPCs has resulted in some States legislating a user fee in order to undertake adequate preparedness. In other States, funding for LEPC planning has been difficult to obtain. Preparedness in rural areas and for tribal nations is still lagging. Some small jurisdictions simply do not have the financial and human resources to manage their hazardous materials risks in the same manner as larger communities.

Often planning is an ancillary duty for those serving on LEPCs. Those assigned to plan are not necessarily those in charge of a response. Hence, the plans often do not reflect operational reality. Because community based planning requires a set of skills that appear to be lacking, new training and new approaches to aiding communities in planning are needed.

Communities which undertake community based hazmat exercises know that such an undertaking is perhaps the most advanced, comprehensive preparedness training for responding to a significant hazmat event that local responders and the allied professions in a community can engage in. Exercising is likely to become more important over the next decade in order to maintain relationships and readiness, and to avoid complacency.

Increased coordination among the Federal agencies with preparedness and response authorities and technical assistance to communities for planning and exercising are needed. Federal agencies need to develop a unified and coordinated strategy for capitalizing on new issues, such as Year 2000 and terrorism, in order to revitalize and re-energize hazmat preparedness at the local level. A national strategy for working with communities and providing technical assistance in undertaking community-wide exercises is needed. Simplification of planning requirements, and clarification of exercise requirements are also needed. Participants recommended that these actions should be accomplished working through existing Federal preparedness and response mechanisms, like the NRT.

Prevention and Mitigation. Prevention and mitigation will play an increasingly significant role in reducing hazmat accidents because of: safety concerns for hazmat responders; the need to reduce economic losses from hazmat accidents; and, the need to contain preparedness costs. Analysis of potential mitigation measures for hazmat accidents resulting from natural disasters, such as tie downs for drums and propane tanks, may indicate measures local communities could adopt. Beyond the traditional Federal regulatory role, one of the greatest opportunities for Federal support for prevention is in training, such as development of a specialized hazmat awareness course for local zoning and planning officials, and developers to prevent problems before they are inadvertently proposed. Inclusion of hazmat in Project Impact and partnerships with industry programs could raise public awareness and reduce the problems local communities face. Targeted chemical-specific education programs designed in partnership with industry could help improve the responders' safety.

Hazmat and Terrorism. Local responders will be the ones to initially respond to a domestic terrorist event. Counterterrorism preparedness and response is inextricably linked to hazmat and should be. Any Federal government response will arrive much later, and will not be able to assist in the initial stages of the response. Training and equipping local responders, therefore, becomes vital to the safety of those who may encounter such events. The basic concern expressed by the local responders is that Federal terrorism programs are not adequately reflecting the obvious relationship between hazmat and terrorism that State and local governments have already recognized. As such, the Federal resources identified for terrorism response which could serve the dual benefit of further improving local hazmat preparedness and training need to be funneled into the local response community, to ensure adequate funding. Further improvements in coordination between the existing Federal hazmat infrastructure and new terrorist initiatives need to be undertaken to diminish duplication. Some State agencies have extensively worked with EPA on technical hazmat response. They will expect to work with EPA and the Regional Response Teams under the National Response System on a chemical response to a terrorist event.

Improved Coordination and Improved Utilization of Existing Resources for Hazmat. As knowledge about how to provide for hazardous materials safety has become more prevalent, the complexity of government systems, programs and regulations has increased substantially. Simplification of programs, regulations and systems is imperative. Utilization of existing structures, plans and policy forums, rather than creation of new ones, is key. Improved coordination among Federal agencies, and among all hazmat players, is incontrovertible. The underlying message in good government related to hazmat is: "Don't reinvent the wheel. Make the wheel roll better by doing a better job with what already exists. Help us, the local response community, do a better job."

A number of recommendations regarding ways to improve coordination are included in the detailed discussions for each of the specific Summit topics. Many of those recommendations have also been reflected in this Executive Summary. These include: 1)

improving utilization of the National Response Team and the Regional Response Teams, and, 2) development of more collaborative interaction, work and cooperation at the Federal level between those agencies responsible for assisting local responders -- FEMA, DOT, EPA, and others.

Many first responders and hazmat response teams place themselves on the line every day. Improvements in the abilities of local, State and Federal hazmat responders have occurred over the last ten years. Continued vigilance and constructive changes are still needed. The theme of the Hazmat Summit --"Working Better Together"-- must become the benchmark for the hazmat community at the close of this century, and it must guide the work that needs to be undertaken by all those concerned, as we enter the next.

SPECIFIC ISSUES AND RECOMMENDATIONS

Problems, Needs, and Issues in Hazmat Response, Recovery, and Clean-up

The following are the key points made by the Summit participants for the focused discussion on hazmat response, recovery and clean-up. For purposes of clarity, the key points are listed in bullet format.

1. In what ways, if any, has hazmat response changed over the last ten years?

- Although hazmat prevention, preparedness and response has improved over the last decade, significant needs still exist and new issues in hazmat are emerging. There are more hazardous materials being produced and transported each year. The need for hazmat response is increasing. Hazardous materials is not a problem that will go away. It is a safety problem that must be continually addressed by local responders and a problem that requires continued vigilance in terms of preparedness capabilities.

- The constant throughout the decade has been and continues to be the local responders. They respond to hazmat incidents and are the ones responsible for ensuring public safety when a hazmat incident occurs.

- Public perception of risks posed by hazardous materials in a community has increased dramatically. According to local responders, the increased perception of risk by the public may be excessive.

- The incident command system (ICS) (with unified command) has gained wide acceptance and use, particularly in the fire service. However, problems exist in the lack of wide-scale usage of the ICS by allied professions, public officials and Federal responders.

- Responders are more environmentally sensitive than they were ten years ago. It was not uncommon for spilled diesel fuel or gasoline to be washed down the storm drain a decade ago. Such actions are no longer standard practice.

- Technology changes have also occurred. More advanced response equipment is available. Some hazmat teams and fire companies have advanced equipment. Others do not. In fact, many departments lack even the most basic hazmat equipment. Because of existing equipment improvements, there is even greater concern within the response community that such advances become available to all hazmat response teams. However, the costs of equipment are escalating as well.

- Structural firefighters are now more involved in basic offensive operations for hazmat response. Ten years ago, structural firefighters were trained to basic

awareness levels, with basic operational awareness conservatively approached. Today the basic operational awareness training has evolved to incorporate more aggressive actions for basic response. Concurrently, more knowledge and information is now available for designated, trained and equipped hazmat teams. As such their hazmat capabilities, training and response experience have also increased.

- Some States are developing State-wide mutual aid agreements as an approach to ensuring that their citizens are provided with adequate protection during hazmat emergencies. Others are developing regional hazmat teams that provide Statewide coverage. These approaches are being taken as cost effective measures to provide comprehensive State-wide coverage.

- Rural preparedness capabilities are still lagging. Rural communities face extremely difficult challenges in preparing for and responding to hazardous materials emergencies. Many of the principles, concepts, and assumptions in hazardous materials risk management, and most Federal regulations and requirements, presume the existence of community infrastructures and resources that are not present in rural environments. Small jurisdictions simply do not have the financial and human resources to manage their hazardous materials risks in the same manner as larger, more affluent urban and suburban communities. Rural communities nonetheless have considerable hazardous materials risks that must be addressed, especially those associated with highway and rail transportation.

- The hazmat community has gone from one with no rules to one that is structured by many Federal and State rules and regulations that are sophisticated and complex. The hazmat landscape has gone from one of "no systems" to an overkill of systems, including multiple planning bodies and many Federal players. There is no central policy and control of hazmat.

- With increased environmental and worker safety regulations regarding emergency response, there are increased requirements on responders for documentation.

- Preparedness has evolved from a point where there were insufficient courses and training materials to one in which there are many players and significant redundancy and duplication. For example, duplication often occurs in the development of new courses, particularly at the State level.

- The National Fire Academy played a major leadership role in the development of training materials and courses a decade ago. It is now no longer considered the main information source for hazmat - a one stop shopping place. Over the last decade amid loss of resources and budget cuts, the NFA has been unable to sustain its leadership role. As a result, the unifying influence exerted by the NFA on producing quality hazmat courses and training delivery across the country has been diminished.

- Domestic terrorism is a new and dominating issue. Local responders are and will be the first line of defense.

2. What are the significant problems confronting local, State and Federal emergency response personnel in responding to hazmat incidents today? In recovery? In clean-up?

- Training is still a key problem area in response. Problems still exist with recognition of materials and reporting of incidents.

- There are a number of concerns and issues related to training program management at the State level including quality control of hazmat training materials and quality control regarding competency of trainers.

- Refresher training is not occurring. Refresher training and re-certification is mandated by Federal regulation. All responders regardless of prior training or experience need refresher training annually to maintain their skills. This is especially important for suburban and rural volunteer personnel, comprising the bulk of the nation's response cadre, whose skills atrophy because of infrequent hazmat responses.

- The leadership role of the National Fire Academy needs to be restored. This will involve additional resources and revitalization. For revitalization to occur, a number of steps must be taken.

- While a large number of courses are being developed by various State, local and private agencies, there is little communication, coordination or sharing of information during the development phase of such courses. Duplication and inefficiency in terms of wasted resources are resulting.

- Administration of hazmat training funds is still problematical. Issues with the current SARA Title III grant fund include: the lack of coordination and tracking of those trained, e.g., accountability for funds distribution and usage, and the large overhead, sometimes as much as 48%, taken by the administering agencies thus reducing the actual training reaching the responder communities.

- Inclusion of SARA Title III and terrorism grant funds in the EMPG initiative is likely to result in less training money legally mandated for hazmat being received by the local responders. State agencies tend to primarily focus their programs and resources toward mitigation and response to natural disasters. Therefore, incorporation of grant funds for hazmat training under SARA Title III into a lump sum grant to States could result in hazmat training dollars being more readily diverted to State agency concerns other than hazmat. The needs of local hazmat responders may not be heard at the State level.

- The matching funds requirement in hazmat funding programs makes it difficult for some local response groups to receive training. Some recipients cannot afford their share of the match.

- Federal support to States including technical assistance, funding, and program initiatives is fragmented and uncoordinated. When new issues emerge, such as terrorism, the tendency of Federal agencies is to reinvent the wheel, adding new layers of plans and programs on top of an already cumbersome existing structure. Responsibility for hazardous materials response rests at the local level. Improvements involving simplification and increased coordination are needed at the Federal level if the assistance provided is truly intended to help local responders. “Don't reinvent the wheel.”

- "If you can't do hazmat, you can't do terrorism." Local hazmat responders will be responsible for the initial response to terrorist incidents. The two functions are clearly being integrated at the local and State levels to reflect this operational reality. The issue needs to be more clearly recognized by Federal agencies, including FEMA, which have responsibility for counter- terrorism programs. Coordination and integration of hazmat and terrorism programs needs to occur at the Federal level.

- While use of the Incident Command System (ICS) is now standard with the fire service, problems still exist with its lack of implementation and wide-scale use by some allied professions, public officials and Federal responders. These include: skill deficiencies by allied professions, e.g. police, Federal agencies, and others in supporting roles in the use of and participation in ICS, communications and coordination among the differing organizations involved in a response, particularly disparate radio frequencies among responding agencies, the lack of understanding by supporting agencies about the prioritization of what is important in ICS e.g. life safety, incident stabilization including critical systems and, protection of property and the environment; and the application of internet capabilities during a response. Better training in the ICS of law enforcement, other public officials and Federal government officials is needed. Federal recognition of the Incident Command/Unified Command has helped Federal, State and local coordination. However, more needs to be done to facilitate its implementation.

- Escalating costs of hazmat preparedness and response are a significant problem. Operational costs for equipment and salaries are increasing as well as increased costs of training due to compensation for responder’s overtime in order to ensure that training is received.

- Cost recovery for disposal of spilled hazardous materials when a responsible party cannot be identified is an ongoing issue. While large amounts of monies are expended for site clean-up under the Superfund, the time required and magnitude of paperwork necessary to document costs in the absence of a responsible party, as

well as the escalating costs for disposal place significant burdens on State and local agencies. State agencies are often left paying for disposal of such materials when Superfund does not cover such costs.

- Also some jurisdictions may not be fully utilizing existing reimbursement mechanisms from the Oil Pollution Trust Fund. In addition to the large sums of monies expended for clean-up of hazardous substances spills under Superfund, the Oil Pollution Trust Funds also has mechanisms for reimbursement of spills resulting from petroleum and petroleum products.

- The documentation required by the numerous regulations that have been implemented over the last decade is time-consuming and costly. It raises questions among responders about how, or if, the information is being used.

- There is a continued need for increased research and development related to hazmat response equipment including personal protective equipment, detection and decontamination equipment, and transportation equipment. There is also a need for improvements in equipment compatibility or more increased standardization of equipment.

- Many departments make purchases of hazmat equipment. However, the absence of any rating or standardization systems leave departments vulnerable to products which may be substandard. A rating system advising departments of what types of equipment meet safety and operational needs would maximize expenditures of limited hazmat resources.

- There are insufficient equipment and resources at the local level for hazmat teams across the country to handle hazmat emergencies effectively.

- The recruitment and retention of trained personnel is a significant problem facing the fire service and its ability to respond to hazmat incidents. The high turnover rate, the lagging ability of volunteer fire companies to recruit and retain volunteers, and the increased demands for more sophisticated training have resulted in human resources issues. Further, because of the turnover rate, training and retraining must be an ongoing effort.

- While some States have adopted a State-wide mutual aid coverage for hazmat and others have developed a system of regional response teams, many States have no systematic approach to ensuring State-wide coverage by trained and equipped hazmat response teams. In the absence of State-wide mutual aid agreements, typically rural areas are most vulnerable. Better State mutual aid programs are needed. Also there are many different definitions, or approaches to what constitutes a "hazmat team." Some suggest that throughout the U.S. a uniform definition of the capabilities of a "hazmat team" be adopted.

- In some regions of the country, volunteer response organizations have difficulty obtaining and receiving hazmat training. Due to the volunteers routine employment, typically weekends and evenings are the only times available for volunteers to receive training.

- The hazmat preparedness and response capabilities of tribal nations are deficient. There are over 550 recognized tribes. Federal agencies need to improve their information sharing and resources with tribes. Tribal representation is not covered by enough Federal programs.

3. **What problems arise when a response escalates beyond local capabilities?**

- Among the problems that contribute to difficulties in a response when the incident escalates beyond the capabilities of local response are the multiple levels of response and the requirements that drive the response of the various layers of government. Confusion about who is in charge, break-downs in the incident command system; and multiple radio frequencies lead to poor communications.

- Federal agencies should not get in the way or take over in response.

4. What improvements would address the identified problems and issues?

Recommendations regarding Training:

- Make hazmat training a higher priority in FEMA. Revitalize and refocus the National Fire Academy hazmat programs. Improve coordination and collaboration between the NFA and the Emergency Management Institute on hazmat courses and programs. In order to accomplish NFA revitalization, funding for the hazmat program within the NFA will need to be reinvigorated as will staffing. The vacant Hazmat Chair must be filled, and reinstatement of the use of fire service expertise will be needed for program development. Reinstate effective hazmat courses such as the Chemistry of Hazmat and a Hazmat Fire Inspection course. Similar improvements may be needed at EMI. Both need to work more collaboratively to have the greatest positive impact for local responders.

- If locally developed courses are effective, they should be made available as a resource for all to use. Wasteful duplication should be avoided. Diversity of courses in State curriculum is effective. Coordination is central to helping all States improve their programs. The Federal government, through FEMA, should champion this kind of resource availability by fostering such collaborative training efforts. For example, when a Federal, State or local agency develops a successful training program, such as that developed by Georgia for responding to incidents on incendiary devices, such a program should be adopted as a resource to be distributed nationwide.

- To the extent possible, allow some training funds to be used for purchase of equipment to be used in training.

- Improve coordination of training efforts across Federal agencies so that agencies speak with a single voice approach.

- Develop some means to ensure quality control of hazmat training courses and hazmat instructor competency, and re-certification of trained responders.

- Ensure that all hazmat responders, including Federal response personnel are trained in Incident Command.

Recommendations regarding Grant Programs Administration:

- Address and fix grant funding problems and issues. At least 75% of all grant funds specifically designated by law for hazardous materials should benefit local responders, rather than the SARA Title III funding being used for administration costs. Require improvements in reporting of training provided by grant funds and improve training performance criteria. Avoid inclusion of SARA Title III funds and any other hazmat or terrorism funds in the EMPG block grant program to State emergency management agencies. The money needs to be maintained for hazmat training in order to ensure the health and safety of local responders.

Recommendations regarding Mutual Aid:

- Foster and support State-wide mutual aid programs. Every incident needs a team. There are some rural areas that cannot support a team. If States sent a team from 80 miles away, it would be a simple solution. States need to be encouraged to develop State-wide mutual aid programs. Otherwise some communities predominantly in rural areas will continue to be vulnerable as a result of the lack of adequate response coverage for hazardous materials safety.

Recommendations regarding Research and Development, and Equipment:

- Increase research and development on equipment, including: personal protective equipment, detection, decontamination and transportation equipment. Ensure that equipment is simple and easy to use. Improve identification capabilities for fixed and mobile containers of hazmat. For example, develop a barcode type system that could be used to determine the contents of a chemical container.

- Lobby for and support funding of equipment.

Recommendations regarding Coordination:

- Utilizing existing mechanisms, enhance coordination with the chemical industry.

- Discourage and avoid making Federal programs any more complex, thus adding to the problem. Just help local responders do their jobs.

- Enhance national and regional coordination among Federal agencies involved with hazmat e.g. EPA, DOT, DOE, FEMA, etc.

- Federal agencies, collectively and individually, should continue to seek guidance from the hazmat community -- responders and State agencies.

- The Federal government should improve efforts to address the hazmat preparedness and response needs of tribal communities, possibly through a more coordinated approach by Federal agencies responsible addressing tribal preparedness (FEMA, EPA, DOT, DOE and DOI).

Problems, Needs and Issues in Hazmat Preparedness Planning and Exercises

The following are the key points made by the Summit participants for the focused discussion on hazmat preparedness—planning and exercises. For purposes of clarity, the key points are listed in bullet format.

1. What are the issues in local planning for hazmat emergencies?

- Local planning is inconsistent and performance is uneven at the LEPC level. Some LEPCs plan, some don't.

- Plans are generally boiler plate rather than integrated and community based. As such they are ineffective as tools for assisting responders.

- The regulatory requirements for contingency planning and provision of information regarding chemicals present in facilities are often too complex and cumbersome to be useful to local responders. Plans need to be simplified and consolidated.

- Plans are in place to do radiological, chemical stockpile, hazmat and all hazards. Duplication of planning is rampant. With the influx of money for terrorism response, agencies with large terrorism budgets are now creating their own plans with Presidential Decision Directive 39 being used to supercede the existing Federal systems. Redundancy needs to be decreased. Some single body needs to take ideas from across the board that will facilitate reasonable, efficient planning. LEPCs should pull the plan together.

- Because LEPCs are an unfunded mandate, but are the primary body for local planning (LEPC plans), they either need funding and other assistance in order to adequately undertake their mission at the local level. Lack of LEPC funding is the primary source of the problems with local planning. While some States have successful planning and exercising programs using a State generated fee and alternative funding strategies, most do not.

- Often technical assistance is focused on the active communities leaving those that are inactive unprepared. Planning is often only as good as the most ardent planner. At issue is how to activate the low performing or non-performing LEPCs.

- Recruitment and retention of field personnel and the high turnover rate of local responders negatively impact planning.

- Obtaining and distributing consistent information is problematical in planning.

- Keeping plans current is problematical. Such efforts require an active LEPC, diligence and accountability on the part of all agencies participating in the plan.

- There are skill deficiencies in planning at the local level. Often planning is an ancillary duty assigned to the person, who represents the Agency on the LEPC. As such, the person responsible for planning is often not trained in what planning is required. Coordination between the LEPC representative, e.g. the planner, with the hazmat responders may or may not occur. The result is an ineffective input to the LEPC plan and the potential for disconnects in various aspects of an LEPC plan. Improvements in training for planners are needed.

- Plans are often vulnerable to disconnects. The standard operating procedures (SOPs) across levels of government don't fit with the local response SOPs. Unless planning is community based, the linkages that are necessary between response organizations will not be effectively considered in training for the individual units' SOPs, or in exercising the community's plan. Unless plans are coordinated among local, State and Federal levels, there are disconnects when a response escalates beyond local capabilities.

- For planning and exercising to be effective, there must be a partnership and teamwork between the local planners and responders and the chemical industries, including the Chemical Manufacturer Association (CMA) programs of Community Awareness and Emergency Response (CAER) and Transportation Community Awareness and Emergency Response (TRANSCAER).

- There are changes and upcoming new challenges for local communities in planning and exercising, These include: introduction of the Risk Management Planning rule impacting 60,000 facilities; counter-terrorism; Y2K concerns; and certain exemptions such as the propane industry which will impact local planning. Failure to

take advantage of these changes and challenges as a stimulus to local planning will impede improvements in local planning.

- There is a wealth of expertise, knowledge and experience to follow in planning and exercising.

2. How are locally developed plans useful in guiding responders when an accident escalates from a purely local one to one that involves State/Federal resources?

- Plans can be useful in guiding responders when an event escalates if they are successfully used in exercises and training prior to an event.

- Plans can also provide current reference listings and numbers for points of contact should an event escalate.

- If plans are developed properly, obtaining State assistance is usually easier.

- Plans and planning is a mechanism for establishing important relationships that will be needed in emergency situations.

3. What are the issues confronted in developing community-wide hazmat exercises?

- Community-wide exercises involving all of the key agencies that would respond to a hazmat incident is a time consuming endeavor.

- Because a number of agencies are involved in a community-wide exercise requiring commitment of human and fiscal resources, local politics can often hamper the effective initiation and implementation of such exercises.

- Funding is an issue in the development of a community-wide exercise. Time away from the participant's job, equipment, evaluation, etc. all require resource commitments.

- Leadership, through a motivated individual is key to the development of such an exercise. It requires an individual with experience and vision to understand and follow through on the complexity and organization necessary to implement such an exercise.

4. What improvements can be made in local hazmat planning and exercising?

Recommendations on funding for planning:

- Increased funding is needed to enhance local planning. Seek or foster more resources and dollars for SERCs and LEPCs (including the radiological model).

- Additional Federal assistance is needed in resources, equipment and training for response and planning.

Recommendations on technical assistance needed for planning:

- Focus planning on known risks in the community.

- Plans should include all players at the local level.

- Ensure that functions are adequately stated in plans and that authorities for those functions are clearly understood.

- Ensure that plans are evaluated and changed, as needed, after a major incident. Incident critiques can assist the community's response organizations in determining if their plan reflects what is or should be undertaken during a response.

- Foster peer exchange to share skills and to help low performing SERCs and LEPCs.

- Technical assistance is needed to enhance regulatory compliance.

- Typically plans are product driven, that is an LEPC goes through a process and develops a plan, a written strategy for how the various agencies will respond to hazmat emergencies. However, this product driven approach to planning does not take into account all the issues that most agencies in a response face, such as turnover of personnel, changes in chemical industries present in a community, new technologies, etc. Hazmat planning needs to be addressed by agencies on the LEPCs as an ongoing process for establishing relationships, updating information, and reviewing authorities to determine who will do what tasks when a response is necessary. Any preparedness activities, such as exercises or training that will contribute to re-energizing the plans and planning process, need to be viewed as such.

Recommendations regarding training needed for planning:

- Improvements in training for planners are needed specifically to address skill deficiencies in planning and to develop more appropriate training and job aids.

- Federal agencies need to develop a unified, or coordinated strategy or game plan to capitalize on upcoming events, e.g. EPA's Risk Management Planning rule, terrorism, etc. to stimulate greater LEPC work, more plans and exercises -- to help local governments re-energize their plans and planning process.

Recommendations regarding exercising:

- Improve, clarify and communicate exercise requirements.

- Refine and consolidate standards for hazmat exercise evaluation.

- Provide regional exercise technical assistance.

- Develop a comprehensive exercises program.

- Develop a Federal system at the regional level for tracking LEPC planning and exercises.

Problems, Needs and Issues in Hazmat Prevention and Mitigation

The following are the key points made by the Summit participants for the focused discussion on hazmat prevention and mitigation. For purposes of clarity, the key points are listed in bullet format.

1. **What are the common hazmat accident problems confronting local responders? Are there prevention measures and initiatives, not already in place, to address these problems?**

- Even though Federal regulations provide for right-to know information regarding chemical hazards stored or moved through communities, one of the ongoing issues confronting local responders is really getting a handle on what chemicals are produced, manufactured, stored at chemical facilities in the community and what chemicals are transported through the communities. As might be expected there are also unknown substances that responders confront in emergency situations. Information access, including understanding the properties of the chemicals and how the facilities have planned for emergencies are among the issues responders confront.

- Increased analysis of and attention to reducing railroad hazmat accidents is needed.

- Alternative fuel vehicles represent a new kind of hazmat risk that needs to be addressed in advance of wide scale usage of such vehicles.

- Re-occurring incidents at the same location need to be examined as possible candidates for prevention initiatives.

- Increased coordination with the military is needed due to the lack of knowledge by local responders of chemicals stored and used on military bases in their communities.

- Better coordination between LEPC planning and responders is needed.

- Develop a hazmat resource guide to share information about available resources.

- Increased coordination with Federal agencies including the Bureau of Indian Affairs and the Indian Health Service is needed.

3. What are the primary hazmat problems that occur as a result of natural disasters? Are there mitigation steps or prevention measures that would address these problems?

- The types of emergencies confronted by local responders during natural disasters include: loose or floating containers and drums; household hazardous wastes, debris, chemicals such as pesticides that accumulate in standing water; naturally occurring hazards, such as methane and sulfur, and damage to fixed facilities; water contamination; biohazards; flooded water treatment plants; local responders overwhelmed with management of disaster, including possible personal crises arising from disaster.

4. What improvements could be made to prevent hazmat accidents?

Recommendations regarding Training and Education:

- Develop partnerships with specific chemical industry/industry associations and agricultural interest groups to obtain funding and commitments to assist NFA in the development of specific training courses on topics including anhydrous ammonia, chlorine, and explosives. FEMA, first responders, and industry specialists must work as partners to accomplish these types of programs.

- Develop hazmat awareness training programs for local planners, zoning officials, etc. to show them hazmat issues that impact the community and responders. One general example cited was the construction of the Dimaggio Statue in a Chicago street circle without sufficient account taken for the fire service vehicles that could not maneuver around the statue. Analysis of the types of concerns that planning and zoning officials need to take into account for hazmat needs to be undertaken.

- Take education programs developed by local departments and distribute them nationally. The Georgia program on incendiary devices and the Virginia program on responding to terrorism are two good examples. The NFA should be used to distribute such programs because it is nationally recognized by fire and rescue agencies.

- Develop a coordinated national education focus championed by FEMA and other Federal agencies.

- Reinstate NFA hazmat training for fire prevention inspectors. Prior to the loss of the hazmat program at the NFA, there was a course offered to fire service personnel on awareness of chemical hazards during an ordinary fire safety code inspection. This course needs to be reinstated and upgraded.

- Distribute prevention training initiatives through agencies the responders respect -- fire and police.

- Expand Project Impact to include hazmat and other technological hazards.

- Provide for hazmat public education at the grass roots level. Specific course ideas included: an updated DOT placard identification course; and, development of a lab safety module to be used in high school chemistry classes.

- Educate and develop relationships with the media on hazmat preparedness and response.

- Develop a national children's education program on hazmat safety as is being done in Phoenix.

Recommendations regarding Operational Improvements:

- Conduct hazmat site assessments as part of the planning and prevention process.

- Improve building codes and ordinances.

- Include hazmat in plan review and code enforcement.

- Increase transportation risk assessment and flow studies.

- Conduct hazard specific studies as a part of the planning process.

- Use right-to-know information in regular pre-planning activities.

- Identify a mechanism to further prevention ideas.

Recommendations regarding Research and Development:

- The USFA needs to expand their findings from the Firefighter Fatality Survey to include losses resulting from hazmat incidents.

- Additional analysis of accident data is needed to determine if there are accidents reoccurring at specific locations, and accidents occurring on rail routes which could be addressed through prevention measures.

- Identification of safety hazards associated with accidents involving alternative fuel vehicles needs to be undertaken in order to determine if specific hazmat response strategies will be needed.

- Research and development needs to be ongoing, for example the feasibility of a bar code type identification system for containerized chemicals.

OTHER ISSUES INDENTIFIED

RAID TEAMS (Rapid Assessment Immediate Deployment Teams) - RAID Teams are the proposed terrorism response teams to be organized and managed by the National Guard to respond to incidents of domestic terrorism. The theory is that they would be a State resource, which could be available to augment local terrorism response.

- RAID teams will not be first responders. They will be follow up support.

- There are a number of unanswered questions regarding the RAID teams. For example:

  What kind of agreement will be reached between the National Guard Adjutant General and the States for how the RAID Teams will support local and State response? Will these agreements be consistent?

  What types of technical assistance will they bring to the scene? How will it be maintained?

  How will activation be determined? Who will determine it? When? Under what legal authority will they respond in other jurisdictions?

  How will they fit into and be trained for incident command?

  Would training and equipping of existing hazmat teams and developing mutual aid coverage be preferable to introducing RAID teams?

- While there are a number of unanswered questions regarding the RAID Teams, according to some participants, the concept has a place in hazmat terrorism response, but each State must determine the best mission for its National Guard force. They will provide a follow-on and support role.

USAR TEAMS (Urban Search and Rescue) - USAR teams are organized to assist in national disasters involving collapsed buildings and trapped victims. There are 27 USAR teams located throughout the country. Members are generally part of a specific fire department such as the Montgomery County, Md. or Fairfax County, Va. Department of Fire/Rescue. Each team has 62 members with varying types of expertise in rescue, medical, search, etc. The USAR teams do not respond to hazardous materials incidents but they do have two hazardous materials specialists to insure the safety of the team from possible hazardous materials that may be encountered in rescue operations. USAR teams are a part of the National USAR Response System that is administered by FEMA's Response & Recovery Directorate. When activated, they are mission assigned under ESF #9 of the Federal Response Plan.

- Of concern to local responders is the issue of potential injuries and fatalities of USAR team members while on the job, and associated liability issues.

- Of specific concern is that USAR teams may not have enough hazmat assets for situations they may become involved in.

RRTs (Regional Response Teams) - RRTs, which are co-chaired by the USCG and EPA, are the regional counterpart of the National Response Team. They maintain regional response plans and act as a resource to the On Scene Coordinator in the event of a National Contingency Plan activation. FEMA, and fourteen other Federal agencies and departments serve as members on the RRTs as well as the NRT. State agencies are represented on the RRTs. Local agencies are invited generally through the State agencies.

- RRTs are an underutilized resource, in some regions.

- Participation of local responders would be a good addition to the RRT. Invitations would need to come from the national level, e.g. invitations from the RRT Co-Chairs to local responders should be encouraged in order to ensure more local participation.

APPENDIX A
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