



FEMA Urban Search And Rescue (USAR) Summaries

Submitted by each respective USAR team

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Phoenix, Arizona (AZ-TF1) Executive Summary

On the morning of April 19, 1995, a major explosion occurred at the Alfred P. Murrah Federal Building in downtown Oklahoma City, Oklahoma. At 8:45 a.m., Phoenix time, on the day of the explosion, the Phoenix Fire Department Urban Search and Rescue (USAR) Team, AZ-TF1, was activated to deploy to Oklahoma City to assist with search and rescue operations. Less than four hours after the activation order, AZ-TF1 arrived at Luke Air Force Base and began departure preparations.


An advance team composed of Assistant Chief Compton, Assistant Chief Stormont, Deputy Chief Barger, and Captain Gallagher boarded a commercial airline flight to Oklahoma City and arrived approximately two hours before AZ-TF1. Upon their arrival, Chief Stormont and Captain Gallagher provided information directly to FEMA Director James Lee Witt concerning the scope of the emergency and made recommendations on the level of resources that would be needed. Chiefs Compton and Barger began efforts to integrate the FEMA USAR response into the Oklahoma City Fire Department command system. The efforts of Phoenix command staff to integrate USAR and non-USAR resources into the operation continued for the length of the deployment.

Upon the arrival of the full team in Oklahoma City, Team members performed search and rescue duties of the entire Alfred P. Murrah Federal Building and several surrounding buildings. Primary and secondary searches were performed on all floors in the Murrah building, rescue work was performed in the second floor nursery area and the basement, the rubble pile, and several other buildings in the area that had been damaged by the explosion. AZ-TF1 members engaged in search and rescue efforts were supported by other team members assigned to Logistics, Medical Support, and Human Services.

On Monday, April 24, 1995, AZ-TF1 was deactivated and returned to Phoenix.

Primary Recommendations/Lessons Learned And Reinforced

- A management team going to the site of the incident in advance of the full Team is very useful. The advance team should make contact with the local Command Post immediately upon their arrival. The advance team should be prepared to explain USAR's role and capabilities. Be nice and be open to their concerns about the USAR Team's integration.
- It is the responsibility of one of the Team Leaders to integrate the Team's operation into the Command Post and system as soon as possible. They must understand that the incident belongs to the local authority and that the USAR Team is not there to take over the incident. If the USAR Team gives the impression that "they are finally there" so everyone else can relax, or if the Team Leader does not integrate effectively into the existing Command structure, the transition for the USAR Team(s) will be difficult and unnecessarily delayed.
- Defusing/debriefing should be an ongoing responsibility of the Chaplain and all Team members.
- The PIO and technicians (video/slides/stills) are critical to successful interaction with local and national media, as well as appropriate documentation of the incident for historical, critique, and training purposes.
- During pre-briefing procedures, CID process leaders should use more visual image metaphors to enable Team members to better cope with what they might see or experience at the incident.
- The CID process leaders at the incident scene should keep in close contact with the CID



Team at home so that the experiences of team members at the scene of the event (on site) and their perception of the event (at home) remain on the same wave-length and not distorted by the media or other misinformed attitudes.

- Team members should be encouraged to call home more often and, when doing so, to be extremely sensitive in speaking about what they have seen or experienced on-site so as not to emotionally upset family members.
- The technical information function should be an administrative section of the management team. The section should include individual(s) to act as Public Information Officers (PIO), a technical information specialist, an administrative/clerical support person, a videographer, and a still photographer.
- One PIO, the information specialist, and the administrative support person should be deployed with the advance team to establish relations with the local command team at the incident site and prepare for the arrival of the full Task Force.
- An 800 digital pager should be procured for the technical information team as well as pocket tape recorders, spare tapes, batteries, and two cellular phones with spare batteries and chargers.
- The Searchcam was found to be instrumental in finding bodies that had been missed by other search methods. It was determined that two people were necessary to safely and properly operate the Searchcam since it was impossible to watch the video monitor, negotiate the rubble safely, and insert the wand.
- The thermal imaging camera was effective in locating sources of heat.
- When an objective is identified for a squad, allow the squad to decide how the task should be done, making sure that their plan is safe. If at all possible, allow the squad that started the task to complete it, this might lower the sense of confusion and give crews a sense of accomplishment.
- Structural Specialists are very helpful in identifying hazards and their advice was welcome.

After a plan has been made and an area is deemed safe, the role of the Structural Specialist should be one of observation, not direct participation in the work. Structural Specialist's concerns about the safety of a work area should be processed through the chain of command.

- Several equipment and drug items, including anti-nausea/vomiting drugs and bone saws/blades, were identified as necessary for the medical cache, which have now been added to the inventory.
- An "infirmary" that is easily accessible to all Team members should be created. The infirmary should be convenient, yet isolated from the general crew quarters to allow for appropriate medical care while not exposing others to potentially infectious illnesses.
- Sensitive communications with Command should be done by hard line, if possible. News media have scanners and monitor all radio and cellular telephone transmissions. If hard line telephones are not available, the use of a cellular telephone is preferable to the use of a radio.
- Contact with equipment, supplies, and service vendors early on will speed up the process of acquiring needed supplies.
- After equipment is logged out for use, a computerized data base for each piece of equipment should be utilized to track where and which group is using a piece of equipment. The data base could also track total usage of each piece of equipment for the duration of an incident, which would assist in anticipating and forecasting purchases.
- Establishing working relationships early with local equipment suppliers early in the incident will speed the delivery of needed equipment.

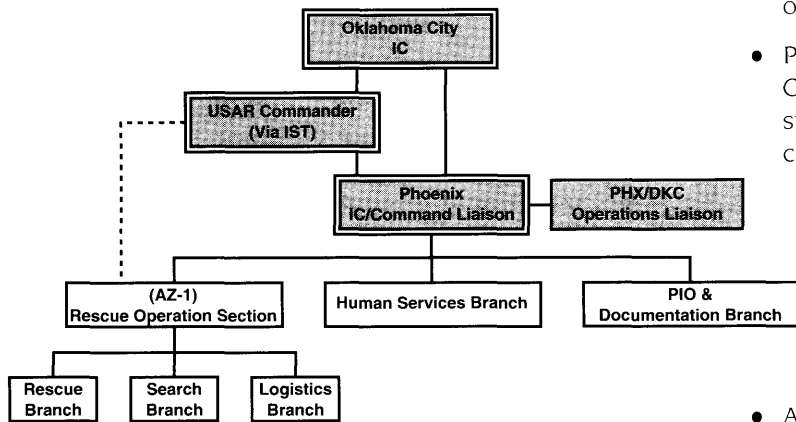
Command Liaison Team Report

Prepared by Deputy Chief Bob Barger, Father Carl Carlozzi, Assistant Chief Dennis Compton, Deputy Chief Steve Kreis, Battalion Chief John Maldonado, Assistant Chief Steve Storment, Division Chief Richard Wolfe, and Division Chief Phil Yeager.

Summary Of Actions

Members of the Command/Liaison team of AZ-TF1 provided management support for the operations of the Phoenix task force as well as acting in a liaison role between the Oklahoma City Fire Department and the FEMA Incident Support Team (IST) operation. Phoenix Command/Liaison staff assisted in the integration of the FEMA USAR response into the incident management system in use by the Oklahoma City Fire Department.

Members of the team also provided public information regarding the work of the task force to local and national media, City officials, Fire Department members, and the families of task force members left behind in Phoenix.



Father Carl Carlozzi supported the spiritual and Critical Incident Debriefing (CID) needs of Phoenix task force members.

Specific Duties Performed

Pre-Departure:

Task Force Leaders

- Implemented the Task Force's written mobilization plan.
- Informed City management of our activation.
- An advance team composed of Assistant Chief Compton, Assistant Chief Storment, Deputy Chief Barger, and Captain Gallagher travelled by commercial airline to Oklahoma City ahead of the balance of the task force to make preparations for their arrival.

Technical Information Specialists

- Provided local media with updates on the task force activation and explained the function and capability of the task force.

On-Scene

Task Force Leader - OKC/USAR Incident Command Liaison

- Determined the critical need for a liaison effort between responding FEMA/USAR resources and the Oklahoma City Fire Department.
- Designed initial Phoenix organizational structure and assigned resources appropriately, in cooperation with 2nd Team Leader.
- Managed Phoenix USAR Team's integration into Oklahoma City's Command structure and ongoing operations.
- Performed ongoing analysis of Oklahoma City's Command structure and Unified Command structure to assist with effectiveness. Kept a current log of on-duty police and military commanders for the Oklahoma City Incident Commander.
 - Facilitated coordination between Oklahoma City's Incident Commander and USAR Commander through AZ-TF1 and Incident Support Team Leaders.
- Attended USAR briefings when possible and reviewed each revised USAR plan with the Oklahoma City Incident Commander, and provided a copy every 12 hours. When unable to attend the briefings, insured that they were represented at the briefing.
- Coordinated with Oklahoma City's Incident Commander and USAR Commander for such things as copies of blue prints, plans, etc.
- Managed all non-USAR out-of-state resources that responded to assist.
- Coordinated with Oklahoma City's Incident Commander with such things as access/security challenges, accountability, food issues, lavatories, facilities for USAR Teams, communication center activities and needs, etc.
- Coordinated incoming offers of equipment and tools with Logistics to determine usefulness and/or need.

- Routinely viewed incident site and conducted walk-throughs/briefings on progress of Team(s).
- Assisted with “psychic” calls and visits to the Command Post by friends and relatives of people missing in the structure.
- Obtained progress reports from AZ-TF1 and Branch Officers.
- Dealt with media as time permitted (and when requested to do so).
- Communicated daily with Fire Chief Alan Brunacini and attempted to communicate with those in Phoenix when possible and practical.
- Conducted briefings with entire Team and/or insured they were occurring.
- Coordinated PIO activities and provided access to video and slides of the scene for Oklahoma City and FEMA.

Task Force Leader - Rescue Operation Section

- Conducted an initial survey of the incident scene and provided information directly to the Director of FEMA to assist in resource allocation decisions.
- Directly supervised the efforts of all Phoenix Search and Rescue teams and coordinated our efforts with those of other teams.
- Acted as liaison with FEMA USAR management, FBI, ATF, Oklahoma City Fire Department, Oklahoma City Police Department, and many other agencies that were represented at the scene.
- Provided FEMA with timely video and photographic records of the scene for distribution to the media.

Human Services Branch

- In conjunction with command staff and team leaders, conducted pre-briefings of all personnel prior to each work assignment that dealt with the operation organizationally, psychologically, emotionally, and spiritually in order to deal with anticipated events and unanticipated circumstances.
- Accompanied all personnel into the assignment, experienced their experience, provided encouragement, support, and met any personal

requests (i.e. “get us some cigars” or “please pray with this citizen”).

- Acted as on-site CID Officer for the Phoenix team, made debriefing a natural part of the daily process through “on assignment interaction” and “after assignment conversation”.

Liaison with OKC Operations Section

- Assisted command with Planning and Briefing.
- Managed accountability system for out-of-state firefighters and USAR Task Forces.
- Coordinated logistical needs of command and the personal needs of team members.
- Managed Visitors and Travel Arrangements.
- Acted as liaison for Unified Command, civilian liaison, and Red Cross.
- Received and routed non-logistical parcels, incoming mail, and messages.
- Managed non-incident related radio traffic.
- Kept in contact with Phoenix Alarm Room.
- Assured proper FBI tagging of all team members.
- Tracked work hours of Phoenix Police Department members.
- Coordinated transportation for Phoenix personnel to and from the incident site.

Technical Information Specialists

- Established liaison with Oklahoma City Fire Department Public Information Officer and staff.
- Worked as members of the AZ-TF1 management team.
- Provided information about the incident and AZ-TF1 involvement in the incident to Phoenix Fire Department management and City of Phoenix management in Arizona.
- Responded to all requests for information and/or interviews from local, state, and national news media. Granted interviews and arranged for other task force members to grant interviews as appropriate.
- Worked directly with Search Teams on several occasions to gain perspective on what task force members were experiencing.

- Managed videography and still photography for entire length of deployment. Provided photo and video documentation releases, as approved, to the media and to FEMA.
- Assisted AZ-TF1 management team with recording and documenting activity during the length of the deployment.

Upon Return to Phoenix:

Task Force Leaders

- Began process of documenting incident and preparing reimbursement requests according to FEMA policy.

Human Services Branch

- Ensured that personnel are given a hero's welcome home by family, friends, department command officers, and the media.
- Ensured that there will be an official department incident wrap-up event for personnel and family members.
- Ensured that multi-option opportunities are provided and available to all personnel who seek post-incident group sharing, professional psychological counsel, pastoral support, or who simply wish to explore the wonders and benefits of a new appreciation of life and personal relationships.

All Command/Liaison Team Members

- Prepared after action report material.

Lessons Learned/Reinforced And Suggestions For Future Deployments

Task Force Leaders

- A management team going to the site of the incident in advance of the full Team is very useful. This should be preceded by a FAX to inform the organization in command of the incident (usually to the Fire Chief's office) that management from a FEMA USAR team is enroute.
- A car should be rented by the Advance Team. Corporate/City credit cards should be taken if possible. (Personal credit cards must be taken by Team Leaders and other supervisors.)
- Make contact with the local Command Post immediately. Be prepared to explain USAR's role and capabilities. Be nice and be open to their concerns about the USAR Team's integration.

- Practice your mobilization plan. Make sure that the plan is written and followed by all concerned at the time of activation.
- A broad view of operational and organizational needs must be initiated early, modified as needed, and maintained throughout if a long-term deployment can be expected to be effective.
- It is the responsibility of one of the Team Leaders to integrate the Team's operation into the Command Post and system as soon as possible. They must understand that the incident belongs to the local authority and that the USAR Team is not there to take over the incident. If the USAR Team gives the impression that "they are finally there" so everyone else can relax, or if the Team Leader does not integrate effectively into the existing Command structure, the transition for the USAR Team(s) will be difficult and unnecessarily delayed.
- We respond to help in any way the incident may require and to the extent that the USAR organization's leaders desire and assign. More effective on-going communications and coordination with the USAR Commander is important for future incidents.
- Defusing/debriefing should be an ongoing responsibility of the Chaplain and all Team members. Good preparation and regular attention to CID issues is the best approach. The Team, if at all possible, must return not only uninjured medically, but physically, psychologically, emotionally, and spiritually as well.
- It is critical that Team members are appropriately and positively "briefed" initially and each time the Team is preparing for duty. Keep them informed as to what's going on.
- Team member's expectations should be as "realistic" as possible. They may be responding into a relatively unstructured system or into a system that is still developing. It could take days to gain control and put an effective on-going system in place. Patience is critical.
- Team leadership must stay positive and be an example for others on the Team. Frustration will be high at times, and all supervisors should understand this and avoid participating in

“bitching” and “complaining” sessions. They must also understand that the local authorities and others might be short tempered and tired. Tempers will increase as people become more tired, and out-of-the-ordinary behavior must be expected. Team members must be careful of what they say and how they act at all times.

- When assigned a task, the squads should be allowed to complete the task whenever safely possible. Digging down to a person, dead or alive, and not being allowed to complete the extrication when possible is very frustrating.
- Security around the site is critical. Provide fencing around the entire area, with a wide perimeter, and minimum access. Provide an entry point for people and another entry point for vehicles/equipment. A waterproof special tag should be provided for access. Uniforms and other items that could be used to gain unauthorized access should be secured.
- A staging area for out-of-town resources, and a separate one for out-of-state resources must be assigned. Be prepared to manage Command level activities that the local Incident Commander might assign.
- As soon as possible, the cleanliness of the Team's quarters should be required consistently. This includes personal hygiene and shaving, etc. After only a couple of days, if ignored, the Team will begin to act like it looks. This could negatively affect morale, safety, and performance.
- The PIO and technicians (video/slides/stills) are critical to the successful interaction with local and national media, as well as appropriate documentation of the incident for historical, critique, and training purposes.
- An administrative person must be assigned to the Team and must have computer capability. The Team Incident Commander and others have considerable need for this position.

Human Services Branch

- During pre-briefing procedures, use more visual image metaphors to enable Team members to

better cope with what they might see or experience at the incident.

- Be more sensitive to the spiritual needs of individual Team members who, at the Oklahoma City incident, were found to be more religious than anticipated.
- Request the assistance of one or two additional CID members (who share a “positive-benefits approach” to dealing with trauma) to accompany the Team in the event we experience a more emotionally demanding situation than was our experience in Oklahoma City.
- Keep in closer contact with the CID Team at home so that our experiences of the event (on site) and their perception of the event (at home) remain on the same wave-length and not distorted by the media or other misinformed attitudes.
- Encourage Team members to call home more often and, when doing so, to be extremely sensitive in speaking about what they have seen or experienced on-site so as not to emotionally upset family members.
- In briefing members on what to expect when they come home, highlight three specific areas:
 - a. Be prepared for the possibility of being welcomed home by a spouse or significant other whose attitude toward you may be very different from their attitude toward you when they said good-bye several days earlier. That is, don't be shocked to find that if your marriage or relationship was in some trouble when you left, to be greeted home by a spouse or significant other who wants to hug you, kiss you and jump in bed with you. Should this happen, take this as a wonderful opportunity to begin to reassess and rebuild your relationship for the better ... or, be aware that given your own peculiar family dynamics, there is a remote chance the opposite could occur, and again, “positive future-oriented psychological counsel” ought to be pursued.
 - b. Be prepared for the possibility for some of your fellow department members to greet you with jealousy, envy, and even an emotional knife in the back over a multitude of their own petty such issues such as the pay

you received, the attention you got, or the opportunity they missed in not being part of the Team because of department and governmental procedures which outlined who went, and of which they were unaware. In short, you may experience something which goes beyond the normal day to day fire station ribbing, humor, or verbal banter. If this occurs, remember this is a statement about their feelings and not your worth!

- c. The following cafeteria plan of options will be provided for your continuing mental health and emotional fitness, should you desire any of them, when you return home: (1) we will rejoice with you that you are in great shape and leave you alone; (2) there will be group-sharing offered with your peers (who were with you at the incident) to discuss and explore any new awareness you may have gained about the appreciation of life or people in it; (3) the therapist at the Health Center will be available to assist you with any areas of concern related to this incident or which existed in your life prior to this incident; (4) you may feel free to call Father Carl at any time about any matter; (5) we will make available a traditional CID debriefing for any who desire it; and finally, (6) just tell us of anything you need to better enhance your life and experience, and we will provide it for you with a happy and joyful heart!

Liaison with OKC Operations Section

- Especially in this position, an attitude of “we are here to help, what assistance can we provide” must be the rule. It must be understood that the local authority is in command of the operation and the FEMA forces are there to provide expertise and support. On the other hand the expertise of the FEMA groups must get integrated into the operation.
- This position deals with politically sensitive issues, one needs to remember that emotions and tempers are pushed to the limit. The incident command liaison must pay particular attention and have a heightened awareness toward these problems. He/she must be proactive not reactive to any possible problem areas.

- If the local jurisdiction has a particular policy in place all USAR/FEMA folks should participate, an example being accountability. In the future it should be understood by the task forces that they need to abide by the local policies.

Technical Information Specialists

- FEMA should consider the establishment of a nation-wide USAR technical information team to provide PIO assistance, videography, and still photography for deployed teams.
- One PIO, the information specialist, and the administrative support person should be deployed with the advance team to establish relations with the local command team at the incident site and prepare for the arrival of the full Task Force.
- Magnetic signs with the words “FEMA USAR”, “Arizona Task Force One” which could be placed on the sides of a white rental van for use at the incident should be added to the cache. This will allow transportation for off-site activity and pick up or departure of Task Force personnel in a marked vehicle.
- An 800 digital pager should be procured for the technical information team as well as pocket tape recorders, spare tapes, batteries, and two cellular phones with spare batteries and chargers.
- Written notes should be maintained in a spiral notebook which can be kept in chronological order.
- A daily videotape of team members which can be sent home and viewed by family and fire department members to reassure them of the condition of team members should be produced.

SEARCH TEAM REPORT

Prepared by Battalion Chief Russ Bovee
SUMMARY OF ACTIONS

Members of the Search Team were responsible for canine and technical searches which included clearing areas before and during rescue efforts. Structural Specialists were assigned initially to the Search Team to assure safe work areas. AZ-TF1 members assigned to the team were one Search Team Leader, three Canine Search Specialists, two search dogs, two Structural Specialists, and two Technical Search Specialists.

Specific Duties Performed:

Pre-Departure:

- Checked and calibrated all equipment.
- Search dogs were checked by Medical Team Managers to assure proper health and readiness for work.
- Logistical needs for the team were reviewed and decision was made to bring along a thermal imaging camera to aid in search operations.
- FOG and team member responsibilities were reviewed.

On-Scene

- Structural Specialists assessed work areas for safety and recommended shoring to improve levels of safety and increase building stability.
- Search dogs were used to search for victims under rubble. One dog was held out of sight of the other dog. If an indication was made that a victim was present, the second dog was brought in to confirm the find.
- Searchcam and thermal imaging camera were used to search for victims and confirm indications made by the search dogs.
- The Search team was split to allow members to support the operations of the Rescue team, which had uncovered areas that needed to be searched.
- Structural Specialists were assigned to other areas of the incident, as necessary, to provide support to AZ-TF1 and other task forces.

Upon Return to Phoenix

- Assisted in the rehabilitation of the equipment cache.

Lessons Learned/Reinforced And Suggestions For Future Deployments

- The capability and effectiveness of the search dogs was difficult to assess due to the fact that we did not encounter any live victims.
- The Searchcam was instrumental in finding bodies that had been missed by other search methods. We found that two people were necessary to properly operate the Searchcam since it was impossible to watch the video monitor, negotiate the rubble safely, and insert the wand.

- The thermal imaging camera was effective in locating sources of heat.
- The staffing and equipment cache of the search team should be doubled to allow for proper support of the Rescue Team and other USAR operations.

RESCUE TEAM REPORT

Prepared by Captain Tim Gallagher and
Captain J.C. Hover

SUMMARY OF ACTIONS

Performed search and rescue operations on floor 2, secured secondary all-clears on floors 1 through 9, performed victim recovery from the rubble pile, worked with law enforcement authorities to assure proper identification and processing of criminal evidence, performed victim location and recovery from other buildings north of the Federal building, and secured overhanging debris from upper floors.

Specific Duties Performed:

Pre-Departure:

- Reviewed the FOG manual and prepared for departure.

On-Scene

- Performed search and rescue operations in the second floor nursery area. Located several victims which were marked for later recovery. Debris was "bucket brigaded" from the second floor to the exterior of the building.
- Shored and reinforced the basement area to allow work in that area and stability for the structure above.
- Secured a secondary all-clear for floors 1 through 9 - working in conjunction with and following Search Team members. Debris was moved and stacked on the floor where it was located to save time and prevent the need to remove all debris from the building.
- Worked in processing the rubble pile. Performed selective debris removal to recover victims. Worked with law enforcement officials to assure proper evidence processing.
- Searched and performed victim recovery efforts in two buildings north of the Federal Building.
- Worked with Oklahoma City Fire Department members.

- Worked on floors 7, 8, and 9 to removed debris at the edge of these floors which threatened to fall onto rescue workers working on the rubble pile below. Full technical rope rescue procedures were used to allow Rescue Team members to go out to the edge and “bring back” debris to a safer location. Rapid Intervention Crews (RIC’s) stood by to provide an extra margin of safety.

Upon Return to Phoenix

- Assisted with the rehabilitation of the equipment cache and preparation of the after-action report.

Lessons Learned/Reinforced And Suggestions For Future Deployments

- Squads need to be informed of the overall objective of the operation as well as the objectives for each squad. This would help them understand what they are doing and why (morale).
- It would help if each squad knew what other squads were doing. Sometimes, a squad may be supporting another squad on a different floor (ex. shoring).
- To avoid confusion, all personnel should be informed when command staff or the individual staffing a particular assignment is changed.
- When an objective is identified for a squad, allow the squad to decide how the task should be done, making sure that their plan is safe. If at all possible, allow the squad that started the task to complete it, this might lower the sense of confusion and give crews a sense of accomplishment.
- Structural Specialists are very helpful in identifying hazards and their advice was welcome. After a plan has been made and an area is deemed safe, the role of the Structural Specialist should be one of observation, not direct participation in the work. Structural Specialist’s concerns about the safety of a work area should be processed through the chain of command.
- All work crews should be mentally prepared for start-and-stop work because of decisions made by the various commands. This is especially applicable in the early stages of the incident.

MEDICAL TEAM REPORT

Prepared by John V. Gallagher III, M.D. and Steven Reinhart, M.D.

SUMMARY OF ACTIONS

On mobilization, the medical team’s responsibility was to do physical evaluations on team members and to get the medical cache drugs and IV fluids ready for loading.

On site, the medical team’s responsibility was to render care to any survivors if found, to render care to any injured or ill team members, and to establish liaisons with other task force medical team leaders as well as the local EMS medical director.

Specific Duties Performed:

Pre-Departure:

- Reviewed each team member’s medical history and screened for medical conditions which might have excluded membership on the team or required specific medical attention.
- Performed an updated physical exam of each team member, ensured a current healthy condition, and assured that team members had adequate supplies of any specific personal medications or needs.
- Provided or updated each team member with all necessary vaccinations or immunizations.
- Retained individual medical records throughout the assignment and recorded any necessary treatment or procedures.
- Assembled a complete medical cache, reviewed inventory, and made appropriate adjustments for any disaster-specific needs.
- Ensured that assigned personnel received appropriate issue of gear for physical protection as well as exposure control.
- Coordinated drug accountability and medical logistics issues with the Task Force Logistics Specialist.

On-Scene

- Assisted the Logistics Specialist with the unloading, sorting, and assembly of the medical equipment cache.
- Received initial briefing of tactical assignment from the Task Force Leader and local officials.



- Upon arrival at the site, performed a general needs assessment and located available resources.
- Maintained direct communication with the Task Force Leader and other Team managers and dispersed necessary information to the Medical Specialists.
- Provided direct guidance to the Medical Care Specialists.
- Provided and/or supervised direct medical care of all rescue victims. Completed documentation and maintained records of all medical care provided to rescue victims.
- Ensured the Medical Team's adherence to all medical standards and safety procedures.
- Met with local medical authorities to assure cooperation.
- Monitored disaster related information from local resources to determine unusual or site-specific medical conditions and treatment considerations.
- Monitored on-site coordination with other functions within the Task Force.
- Make periodic progress reports to the Task Force Leader of accomplishments, problems, or conflicts.
- Periodically evaluated medical equipment for function, shortages, and further needs.
- Provided continuous accountability for medical cache, including equipment as well as medications and controlled substances.
- Provided direct medical care, including examinations and drug dispensing, to all Team members, including canines.
- Periodically evaluated the health and welfare of the Team, including food and water intake as well as rest, signs of fatigue, and stress.
- Ensured that food supplies were prepared and served by current, accepted health standards.
- Ensured appropriate facilities were available to Team members to maintain good hygiene.
- Met with the local medical examiner to determine procedures to be taken with the bodies of the deceased, including infection control considerations.

- Offered and participated in critical incident stress debriefing as indicated.
- Meet daily with other FEMA Medical Team Managers to problem-solve and share information about current or potential problems and solutions.
- Observed site and activities for potential infectious/toxic exposures. Educated Team members regarding findings, records maintenance, and provided follow-up for any documented exposures.
- Performed additional tasks or duties deemed necessary or as assigned during the mission.
- Upon deactivation, ensured that all medical equipment was inventoried and returned to the cache, ready for the next activation.

Upon Return to Phoenix

- Participated in the Task Force mission critique and CISD debriefing.
- Coordinated necessary follow-up care for any Task Force member treated by the medical personnel.

Lessons Learned/Reinforced And Suggestions For Future Deployments

- Print our Team name boldly on the back of our uniforms, not only for identification among the Team members, but for recognition by other agencies, i.e., task forces, fire departments, media, etc.
- Several equipment and drug items, including anti-nausea/vomiting drugs and bone saws/blades, were identified as necessary for the medical cache, which have now been added to the inventory.
- An "infirmary" that is easily accessible to all Team members should be created. The infirmary should be convenient, yet isolated from the general crew quarters to allow for appropriate medical care while not exposing others to potentially infectious illnesses.
- The Medical Team initially provided treatment to ill and/or injured Team members in the Medical Team's crew quarters. It was realized that members with potentially infectious problems should be kept somewhat isolated in order to not promote an epidemic situation.

- Due to the many potential safety risks, biohazards and infectious exposures requiring not only immediate attention but possible follow-up upon return, an Infectious Control Officer could be a vital member of the Team.
- In addition to the portable radios, a more private means of communication (such as cellular phones) for the two Medical Team managers would be highly recommended. Notification and discussion of current medical problems could then be kept more confident not only from other Team members, but from local monitoring agencies, i.e., media, etc. The appetite for information from the news media cannot be overstated. The impact of incorrect medical information on any member of the Team could be extremely stressful to Team member's families back home.
- Medical team members should have their clothing and personal gear bags prepacked to speed the mobilization phase of the operation.

cache equipment and task force personnel aboard military transport aircraft.

On-Scene:

Technical Team Managers

- Maintained a knowledge of the overall Incident Action Plan and the Task Force's assignments by attending Command Staff meetings and Task Force briefings.
- Established communications and a rapport with the Oklahoma City Fire Department's Logistics Officers and the FEMA Logistics Officers.
- Structural Specialists were assigned to the Search Team and the Rigging Specialists were assigned to the Rescue Team to facilitate their operations.

Logistics Specialists

- Worked with Tinker Air Force Base staff to unload and prepare cache and task force members for transport to downtown Oklahoma City.
- Established a staging and logistics base in an automobile garage and repair facility located close to the explosion site. The building was chosen for security, protection from the weather, adequate room for equipment storage and retrieval, and the availability of a small shop that was used for equipment maintenance and repair.
- Assisted with the unloading and storage of our cache of equipment.
- Distributed and maintained accountability for all equipment.
- Determined and forecasted the equipment and service needs of the Task Force.
- Procured needed equipment, services, supplies, and commodities, including delivery to the logistics site, if necessary.
- Prepared and maintained cache equipment in a ready state.
- Delivered/retrieved needed equipment to/from the work site.
- Ensured that radio and cellular telephone requirements were met.
- Ensured that the equipment cache and personal belongings were palletized and delivered to

TECHNICAL TEAM REPORT

Prepared by Tempe Battalion Chief
Tom Abbott

SUMMARY OF ACTIONS

Members of the technical team provided Phoenix AZ-TFI members with equipment, communications devices, clothing, and other items necessary to perform their mission.

Specific Duties Performed:

Pre-Departure:

Technical Team Managers

- Implemented the Task Force's written mobilization plan.

Logistics Specialists

- Procured equipment needed to complete the task force cache and other equipment judged necessary for the operation.
- Confirmed the operational condition of all cache equipment.
- Palletized and packaged cache equipment in preparation for transit to Luke Air Force Base.
- Coordinated work efforts with Air Force Loadmasters in preparation for the loading of

Tinker Air Force Base for departure back to Luke Air Force Base.

Hazardous Materials Specialists

- Assigned to identify and monitor atmospheric conditions working with Rescue Squads.
- Determined appropriate levels of protective clothing and equipment for use by Rescue Squad members.
- Determined low levels of carbon monoxide present in the work areas to be from gasoline-powered generators being used on the scene.

Upon Return to Phoenix:

Logistics Specialists

- Unpack, inventory, and account for all cache components.
- Continue to receive cache components from the Myriad Center in Oklahoma City.
- Complete the acquisition of equipment needed to fill cache deficiencies or replace expendable equipment used in Oklahoma City.

All Team Members

- Attended and participated in all meetings regarding the activation and completed necessary reports.

Lessons Learned/Reinforced And Suggestions For Future Deployment

Technical Team Manager

- Members with different technical skills and knowledge are a tremendous asset for the Technical Team.
- Sensitive communications with Command should be done by hard line, if possible. News

media have scanners and monitor all radio and cellular telephone transmissions. If hard line telephones are not available, the use of a cellular telephone is preferable to the use of a radio.

Logistics Specialists

- Contact with equipment, supplies, and service vendors early on will speed up the process of acquiring needed supplies.
- The logistics area should be established with easy access to the incident site, if possible.
- FEMA logistics personnel should establish open or blanket purchase orders with vendors as soon as it is possible. This would allow for quicker service and less paperwork for Task Force logisticians.
- After equipment is logged out for use, a computerized data base for each piece of equipment should be utilized to track where and which group is using a piece of equipment. The data base could also track total usage of each piece of equipment for the duration of an incident, which would assist in anticipating and forecasting purchases.
- Establishment of cellular satellite communications is essential for the Technical Team.
- Laundry and shower facilities are very important to morale and hygiene.
- Establishing working relationships early with local equipment suppliers will speed the delivery of needed equipment.

Sacramento, California CA-TF7 Executive Summary

At 0941 hours on April 19, 1995, Federal Emergency Management Agency (FEMA) through California Office of Emergency Services (OES), activated Sacramento California Task Force-7 (CATF-7) to assist in search and rescue efforts at a partially collapsed, nine (9) story structure in Oklahoma City, OK. Upon receipt of the activation notice all on-duty Urban Search and Rescue (USAR) members of the Sacramento Fire Department were directed to report to the department's Division of Training (POA). Participating agencies were notified to send their pre-assigned task force personnel to the POA. The physicians in the medical team were at the POA for a team meeting when the activation was received. The canine search teams were notified by OES.

All equipment was assembled and pelletized. Equipment and team members were transported by trucks and busses, respectively, to Travis AFB, Fairfield CA. Fairfield, CA is located approximately 40 miles west of Sacramento on interstate 80.

Upon arrival at Travis, the team was met by Deputy Chief Mark Ghilarducci and Assistant Chief Kim Zagaris of OES. There was some delay for the authorization from FEMA to load and depart for Oklahoma City. After receiving authorization, the equipment and personnel were transferred to a C-141, departing at 1841 hours local time.

Meals were provided by the Air Force for all task force members. Also on board, were members of the local press.

Upon arrival at Tinker AFB, Oklahoma City, CA TF-7 was met by a military representative and transported by bus to the disaster site. Shortly after our arrival at the site, CA TF-7 was given a location for our cache and a Base of Operation (BOO) for our personnel.

While CA TF-7 personnel were setting up logistics and the BOO, select CA TF-7 managers and engineers

attended a briefing with the Phoenix Task Force (AZ TF-1). Following this meeting, all TF personnel were briefed and then instructed to stand down. The team managers then surveyed the affected building.

CA TF-7's first assignment was to conduct search and rescue operations while shoring the basement area. At approximately 0600 hours on April 20, 1995 CA TF-7 initiated search and rescue operations with all personnel. This initial work period extended to 0100 hours April 21, 1995. At this time CA TF-7 was put on a 12 hour work cycle beginning at 0100 hours April 22, 1995. This work cycle continued through 1300 hours on Sunday April 23, 1995. During all phases of the rescue effort, Oklahoma City Fire personnel were integrated into TF-7 operations.

Initially, CA TF-7 was informed they would be departing Oklahoma via Tinker AFB on Monday, April 24, 1995, however departure was later changed to Tuesday, April 25, 1995.

CA TF-7 departed Tinker AFB at approximately 1330 hours and landed at Travis AFB at approximately 1445 hours (California Time) and was greeted by Mike Douglas, Acting Deputy Chief OES Fire Rescue and numerous media persons. CA TF-7 reached Sacramento for debriefing at approximately 1700 hours and returned to their families at the demobilization center at 1755 hours.

Introduction

On Wednesday morning April 19, 1995, in Oklahoma City, OK the Alfred P. Murrah Federal Building experienced a major explosion with structural collapse to at least one side/corner of this 9 story, reinforced concrete building.

CA TF-7 was activated at 0941 hours by the Federal Emergency Management Agency through the California Office of Emergency Services to assist in the search and rescue efforts of this building.

Task Force Leaders Division Chiefs Rick Martinez and Don Schroeder organized the mobilization of the USAR team and began the process that prepared the team for travel to the point of departure: Travis Air Force Base.

CA TF-7 Participating Agencies:

Sacramento Fire Department

El Dorado Fire Protection District

Florin Fire Protection District

Sacramento County Fire Protection District

Physicians from the Local Medical Community

Canine Search Specialist

Structural Engineers

Evaluation

The call out procedures worked well, with the exception that more administrative and support staff were needed. Additional training is needed for those task force members that are civilian. Issues such as the chain of command and overall emergency scene operation can be relatively foreign to them and additional training would be of benefit. It should be noted, that we had only minor problems in this area; however, the potential does exist.

Operating the team on a twelve hour basis instead of a half-team twenty-four hour (twelve hour shifts) basis proved to be both good and bad. The positive was that the entire team had off time together. This provided an opportunity for those members from outside agencies as well as the civilian members to become familiar with one another. The down side was when the team was off site, there was some loss in continuity in the strategies. Depending on the incident, the twelve hour full team shift does offer another option and should be further evaluated.

CA TF-7 did not staff the proposed position of Document Specialist. It was our experience that this position would be invaluable to freeing up managers as well as Task Force leaders from doing the much needed, however cumbersome, required report writing necessary to fully document a mission of this magnitude. It also became clear that the recently added safety officer is vital to an effective overall operation. To the untrained eye or even a well trained fire ground safety officer, an USAR operation may appear to be unsafe, thus it is imperative that this position be staffed with an individual that has in-depth knowledge of all components related to USAR activities.

Throughout the year the training is put together bit by bit, piece by piece, and not all personnel are able to visualize an entire USAR scenario. One of the biggest benefits of this activation is that all members involved were able to see all the pieces come together for one effective USAR team effort. This system works!

Lessons Learned

A full Emergency Operation Center (EOC) with representatives from the USAR task forces would have assisted with the coordination of the overall operations. Under the system that was used, there was a breakdown in information reaching the team level due to an overload at the IST level. Without a doubt, the IST operated very well; however, they were overwhelmed with the number of responsibilities assigned. There seemed to be a breakdown at the Task Force Leader level when it came to working with the local agency. As an example, Task Force Leaders were instructed to use Oklahoma City Fire (OCFD) personnel to assist with labor intensive and body removal activities. In attempting to accomplish this direction there was a breakdown, in that OCFD personnel were released from the scene every two hours and when a task force needed additional personnel there was not a direct link at the Task Force Leader level to a OCFD command position. The established contact was the operation officer, this position was also overwhelmed. It was easier for the field personnel (rescue squads) to talk directly to the OCFD members on site. This communication breakdown made it very difficult for the Task Force Leaders in maintaining a log of activities or to know what overall progress was being made.

While task force personnel worked well with OCFD there was still not a clear chain of command of who was in charge of a specific operation, a task force rescue scene manager or OCFD officer assigned to the scene. This problem existed at the squad level and was magnified all the way through the chain of command to the command post (IST).

In the IST, not all USAR teams maintained a representative and there was no consistency when there was someone there as to what authority that representative held. This compounded the problem of overload that the IST experienced. There was no clear cut responsibilities for the Operation Officer assigned by the IST. In some cases, problems that were taken to the IST were re-routed to the Operations Officer. This was a problem due to the fact that he was overwhelmed at the time. This would then cause work to be stopped until the question or problem could be resolved. In



particular, questions regarding the investigation and the movement of some debris became an evidence issue. The Operation Officer was only able to ask the Federal Officers on the scene when this question should have been routed to the federal investigation command people.

At one point, NY TF-1 rescue squads were integrated into CA TF-7 rescue squads and in fact into operating at the same task as CA TF-7. Although the full reasoning as to why this was attempted is not known we do know that this is not an effective utilization of task force personnel. While all task forces are working from the same position descriptions, and in theory operationally similar, the result of attempting to place squads from one task force under managers from another task force created unnecessary tension in an already stressful environment.

At an incident of this magnitude, where there are eight (8) task forces working simultaneously you have potentially 16 differing opinions from 16 different structural engineers as to the stability (or instability) of the building in question. For future deployments at incidents where multiple task forces will be operating on

predominately one building, it may be in the best interest if the assessment of the building could be addressed by all engineers collectively. Once a consensus is reached on the building's status all task forces could then be working on the "same page".

Finally, one of the least recognized areas of consideration is the need for adequate support staff at the sponsoring agency location. It was found that there was a demand for coordinated press releases, task force personnel time keeping, equipment procurement, and the dissemination of information to task force members' families as well as provide for a liaison function.

A complete case study of this incident would be useful in re-evaluating deployment and operational procedures of the USAR task forces. It provides us with a venue for critical review of an actual disaster that incorporated a large portion of the Task Forces in the United States. Considering the magnitude of this incident and the fact that there was an ongoing Federal investigation, the management by both the local agency and Federal authorities is to be commended. They were able to function effectively under such extreme circumstances.

New York City, New York NY-TF1 Executive Summary

This report describes the activities of New York Task Force 1 (NY TF-1) from activation through demobilization for the bombing which took place in Oklahoma City, Oklahoma on Wednesday, April 19, 1995. It contains lessons learned and recommendations for changes to enhance future operations. NY TF-1 did not receive an alert notification, and was activated at 0025 hours April 20, 1995. We mobilized and were airborne at 14:10 hours from John F. Kennedy International Airport (JFK). At 1650 we touched down at Tinker Air Force Base and were operational at the Alfred Murrah Federal Building at 2300 hours. Our primary mission for the 6 days that we were at the site was search and rescue primarily in the front operational sector. While no live victims were recovered, many deceased were, and large amounts of debris removed facilitating the search for victims. This mission would continue until demobilization was begun at 0200 hours on Tuesday, April 25, 1995.

The task force was comprised of members of the New York City Fire Department, New York City Police Department, and the New York City Emergency Medical Service. Task Force Leaders were Craig H. Shelley and Curt Wargo.

Introduction

On April 19, 1995 at approximately 0902 hours an explosion occurred outside of the Alfred Murrah Federal Building, Oklahoma City, Oklahoma. This resulted in a major structural collapse of this building as well as collapse of other buildings nearby and extensive damage to buildings in the surrounding area. The number of fatalities and injuries was beginning to climb. The Alfred E. Murrah building housed several functions including a federal court; day care center; and offices of the United States Department of Agriculture; Veterans Administration; Alcohol, Tobacco, and Firearms; Internal Revenue Service; Social Security Administra-

tion; United States Secret Service; and a military recruiting office.

New York Task Force 1 (NY TF-1) was the fourth task force to be activated and such activation took place on Thursday April 20, 1995 at 0025 hours. Our mission would be to join forces with the Phoenix, Sacramento, and Virginia (VA TF-2) task forces and begin urban search and rescue of the Federal Building and surrounding areas as needed. We would later be joined by several other task forces in order to perform this mission. Upon arrival in Oklahoma City at 1650 hrs. the Task Force Leaders were briefed by FEMA's Incident Support Team (IST) and given our specific assignment. Our mission assignment for the remainder of our stay in Oklahoma City would be to work under the command of the IST Operations Chief Rick Risdon from 1900 hours to 0700 hours, specifically in an area fronting on Fifth Street (front operations sector). We would continue this mission until 0200 hrs. Tuesday April 25, 1995 when demobilization procedures would begin. Demobilization continued until NY TF-1 was released from New York's Floyd Bennet Field at 0030 hrs, Thursday, April 27, 1995.

Evaluation

Within thirty minutes of activation call out procedures were begun by the three agencies comprising NY TF-1. Additional administrative personnel were mobilized to assist with call out procedures and cache management. In order to accomplish an effective mobilization a core group within the task force has been working closely together as the "management team" of NY TF-1. This core group has been meeting monthly where issues pertaining to task force structure, management, equipment, and mobilization have been discussed and problems addressed. During the first week of April 1995, a task force readiness evaluation of NY TF-1 was conducted by FEMA. Our complete cache was moved from its storage location to our mobilization

point. This evaluation, in conjunction with our monthly meetings aided in our activation and mobilization procedures. These procedures were carried out without any major problems. Minor problems developed due to the fact that prior to activation, no alert phase had taken place. Had this alert phase taken place, we feel that more time could have been spent in the selection and notification process. Individuals selected would have had more time to prepare for mobilization. Telephone calls to task force members were hurried due to time limitations placed on the team. A system for automatic telephone notification via computer is being evaluated at this time to make our notification process more efficient.

During check-in at the mobilization site, no problems were encountered. Separate facilities were available for personnel check-in and cache management. This prevented unauthorized personnel from "crowding" the members finalizing cache palleting. Classroom facilities were used for personnel check-in, briefings, and medical evaluation. This provided an area where professional briefings utilizing electronic media (TV/VCR) could be conducted. Areas were established for team manager briefings could be held separate from full task force briefings.

Prior training in task force mobilization procedures aided our mobilization, but there were members of our task force who had not attended this training. This did not interfere with mobilization because briefings were held for *all* members concerning mobilization. Field Operations Guides (FOGs) were reviewed by members prior to briefings, on the aircraft during transit, and after touchdown in Oklahoma City. These guides were invaluable throughout operations.

On site in Oklahoma City, the equipment used was satisfactory and no major equipment problems were noted. Logistically, a problem arose because the equipment cache was located remote from the point of operations. For each operational period, equipment had to be moved to/from the Federal Building and the Convention Center. At times, equipment that was needed had to be requested and brought from the Convention Center. This delayed operations. It was felt that a forward logistics area needed to be set up and maintained on a twenty-four hour basis.

Operating as a complete 56 person task force in close proximity to each other necessitated that positions be assessed and reassigned. For example, two Technical Information Specialists were not required at

all times, nor were two Communications Specialists. After assessing the situation, a squad was formed utilizing some of these members and placed under the supervision of one of the Technical Team Managers. This squad was used as a resource squad (moving equipment and supplies to rescue teams as needed), or as a safety squad (back-up to a rescue squad operating in a precarious position).

For the first activation of NY TF-1 all members agree that the complete response- *activation, operations, and demobilization*- had very few problems that weren't capable of being resolved at the time of the problem.

Lessons Reinforced

- A complete stand alone cache will enable the mobilization process to be accomplished in a shorter time frame. It is anticipated that within three months NY TF-1 will have an independent, stand alone cache.
- The value of incident command cannot be underestimated. Without strict adherence to the incident command system, freelancing may occur, resulting in injuries to members. In addition, all information concerning unusual conditions, stability, or safety must be relayed through the chain of command to the Task Force Leader. Information may seem insignificant, but when coupled with information from other sectors or task forces may indicate a serious hazard to task force members.
- Early utilization of identification vests and nametags. This should be utilized beginning with check-in for rapid identification of task force management and familiarization of task force personnel with one another.
- The value of standardized boxes for cache storage was proven during this activation. NY TF-1 was delayed prior to departure from New York City because some packing boxes did not fit properly on pallets. This problem was corrected quickly, causing a delay of only thirty minutes.
- Do not split task force personnel and equipment. Upon landing at Tinker Air Force Base our personnel and equipment were split, with no communication between the members with the cache and the remainder of the task force. The equipment and **all** personnel must stay together until a base camp is identified and/or established. We feel that a delay in

becoming operational resulted from this separation.

- More visible marking of tools and equipment is recommended to enable rapid identification by task force members. This will prevent or reduce the chance of task force members from inadvertently taking another task force's tools or equipment.
- Personal hygiene must be monitored and emphasized. Hand washing before eating and decontamination of tools, equipment and personnel is a must.
- Task force must have capabilities to rent vans and/or pickups at the scene. NY TF-1 rented two vans (1-12 passenger & 1 cargo) and was able to facilitate transportation of equipment and personnel to/from the operational area relieving some of the responsibility of the IST. Magnetic markings were obtained and placed on the vans for identification. These were FEMA logos and NY TF-1 placards.
- Coordination to ensure military support when returning to NYC. No military unloading at JFK Int'l Airport was available, consequently, storage containers were damaged by improper forklift use.
- Communications between families at home will need to be readdressed. A family network will be set up to facilitate such communications.
- Rehabilitation must be enforced, particularly during early stages of operations. Medical personnel to be assigned to rehab sector at all times.
- Injuries must be reported and documented to ensure proper tracking for IST medical.
- CISD should include family members. The importance of this should not be minimized.

Recommendations

- I. Upon arrival of Task Forces at the point of arrival, a representative from FEMA should meet the task force and accompany them to their Base of Operations. This will enable a smooth assimilation by the task force into existing operations. Preliminary briefings of Task Force Leaders could take place at this time.
- II. While the Convention Center had many advantages for task forces, the distance from the area of operations impeded task forces. Tools and equipment had to be moved twice daily. Once a forward logistics area was set up, operations went smoother, but most of the equipment still had to be moved for each operational period. Our thanks to Los Angeles County for assisting in setting up the forward logistics area.
- III. Task forces should be split into two working groups as designed. By doing this equipment could have been left at the site. In addition, a smooth transition between teams would have been facilitated for each operational period. For example- New York would relieve New York. Operational techniques would remain the same, tools and equipment would be in position, and exchange of information would be easier accomplished between personnel familiar with each other. Splitting the task forces would enable a greater amount of task forces to network with each other during off hours. Instead of two task forces off during the same period, there would be components of four off during the same period.
- IV. A briefing area should be set up for complete task force briefings. Prior to operations both incoming and outgoing task forces would be briefed together and share information concerning safety and operational guidelines.
- V. A representative from the IST should be at the Base of Operations to facilitate the transfer of information from the Operational Area IST to the task forces located at the IST. Information could be relayed through this individual to and from the task forces and the IST.
- VI. A passport system should be designed for US &R task forces unique to our mission. This will result in a more efficient system of tracking operating personnel. A committee should be formulated to work on this project.
- VII. Identification vests should be available for IST personnel.
- VIII. Incident Command Course series 400 should be available for task force leaders at the National Fire Academy. Preferential enrollment

that is not credited towards a person's annual course approval should be arranged.

- IX. Consideration should be given to having tours change at 1300 hours and 0100 hours. This would afford all task forces the opportunity to work in daylight hours.
- X. Planning meetings should include task force leaders when possible. This would ensure a better flow of information up as well as down.

It must be reemphasized that on the whole, the operations of NY TF-1 went very well. We wish to

thank FEMA for their support, especially the members of the IST. Suggestions by Task Force Leaders were listened to and in most cases implemented, enhancing operations. We would also like to the members of Virginia Task Force 2 and the Los Angeles County task force. The close working relationship that we had with them built a bond of friendship that will not be broken. Most importantly though, the members of NY TF-1 wish to thank the people of Oklahoma. Because of their support, love, and kindness we were able to continue when we thought we couldn't. **God Bless You All!!**



Montgomery County, Maryland MD-TF1 Executive Summary

This document is a record of the actions of the Montgomery County Urban Search and Rescue Team of Montgomery County, Maryland (MD-TF1). On April 20, 1995, MD-TF1 was activated to respond to the Sixth Street Bombing Incident in Oklahoma City, Oklahoma. MD-TF1 mobilized their resources and responded with 57 rescue personnel. The following is an account of the task force's activities during the deployment. The document will provide a brief introduction and background information surrounding the events leading to the task force's activation. A chronology will provide a detailed record of the task force's activities during each operational period. The task force examined issues regarding the effectiveness of organizational procedures, structure, and equipment. MD-TF1 discussed their concerns and recommendations concerning these issues. The task force also discussed issues that were unique to this deployment and this task force.

The task force conducted various operations in different geographical areas of the incident. Within the Alfred P. Murrah Federal Building, the team conducted operations from the first to the ninth floor in all weather conditions. The task force's operations commenced on April 21, 1995 and continued until April 27, 1995. The operations were conducted in conjunction with the Oklahoma City Fire Department in addition to other local and Federal law enforcement agencies. Operations yielded the recovery of deceased victims and a search for possible survivors. The team accomplished its objectives with no major injuries to task force members.

The Oklahoma City volunteers provided the task force with a great deal of assistance with comfort needs. The food preparation, sleeping quarters, and hygiene facilities were appreciated. Perhaps more significant, the ability for team members to contact their families partially relieved the stress of the deployment.

The success of this task force was dependent on the team's ability to work as a cohesive unit. Their training served as a base for the task force's success. MD-TF1 strived to not only train each team member to be a proficient rescuer but also to be part of a team. Many hours of formal training have been dedicated to technical skills. However, this team's ability to train itself to be good team members allowed the task force to provide the incident commander with a functional unit that handled many diverse tasks during this mission.

Introduction

On April 19, 1995, a major explosion severely damaged the Alfred P. Murrah Federal Building in Oklahoma City, Oklahoma and the buildings in the immediate area. Initial reports indicated a partial structural collapse of the nine story building with significant casualties. This report will reflect the activities of Maryland Task Force One following this catastrophic event from April 19, 1995 to April 29, 1995. The Task Force operated each day from 0700 hours to 1900 hours (day-side) with pre and post briefings for the Task Force leaders. Operations were staffed with all 56 personnel during the day-side instead of the intended 24 hour rotation. Operations were conducted in the Alfred P. Murrah Federal Building (Federal Building) and the Oklahoma Water Resource Building (Water Resource Building). Primary focus was in the "Pit" (in the Federal Building between columns E to F and 18 to 22) for debris and victim removal, structure shoring and stabilization, infrastructure construction, and to maintain Task Force safety. Operations ceased for this Task Force at 2100 hours on April 27, 1995. The Task Force demobilized and returned to Montgomery County, Maryland on April 29, 1995.

Critical Issues

Issue: **Personnel Cross-Training**

Discussion: During this activation, the Task Force did not need all of its components (i.e. Search, Heavy Rigging, HAZMAT, etc.) at every operational period. In the later half of the mission, the Task Force used the personnel from these components as rescue specialists.

Recommendation: All personnel in the task force would be trained as a rescue specialist in addition to their primary specialty. In addition, personnel may cross-train to other specialties in order to ensure a component will function in the event circumstances disable key personnel.

Issue: **Military Pallet Training**

Discussion: Presently, only a limited number of personnel are trained to properly load military pallets. The problem occurs during mobilization. The limited number of trained personnel hampered loading because of the amount of equipment to be loaded. If more trained task force members were available to coordinate pallet loading, the process would progress more efficiently and expedite mobilization.

Recommendation: Task forces need to obtain military pallets from their point of departure for training purposes. If possible, task forces should attempt to obtain all the pallets necessary for deployment so that cache loading only occurs once for aircraft travel.

Issue: **Deployment Meals**

Discussion: Due to the amount of time involved between activation and actual departure, the task force must have an intake of substantial food and fluids. This is necessary to maintain personnel health and energy.

Recommendation: Each task force should make considerations towards meals during mobilization. During this activation, the USAF gave personnel a box lunch prior to departure. However, MD-TFI did not eat for several hours prior to departure with the exception of per-

sonnel who ate prior to leaving for Andrews AFB.

Issue: **Operational Periods**

Discussion: The alteration of the Operational System Description caused a loss in time and task force efficiency. The 12 hour shifts caused a loss in operational continuity. At each shift change one task force would leave the operational area while another arrived. During this change, the off-going task force withdrew equipment while the on-coming task force did the opposite without overlap. This often caused a time gap of up to two hours. If a task force did not have a secured forward base of operations, they needed to move their equipment back to the Myriad Convention Center. This movement increased the time gap for the affected task forces. MD-TFI often engaged in one operation with all their rescue squads. An equipment concern arose because the cache is not designed for the entire task force at one time. Additionally, equipment rehabilitation was hampered because all the logistical specialists worked during the day shift. Therefore, they worked longer hours to accomplish cache maintenance. The task force's operations would have been more efficient if the 24 hour rotation was adhered to. If each task force maintained the 24 hour rotation, the same number of personnel would be working during each operational period. Also, task force accountability would be easier because each task force would be assigned to potentially two operational areas instead of four. Thus, the span of control would decrease and the number of personnel to account for in each task force would be smaller.

Recommendation: Operational periods should remain on the 24 hour rotation to maintain work continuity and reduce time with task force movement.



Issue: Food Menu

Discussion: The generosity of the Oklahoma volunteers was tremendous. However, the task forces did not make considerations for the type and quantity of food the personnel were consuming. The menu selection included a wide variety of food. Unfortunately, personnel also consumed inappropriate quantities of food and ate food that was not appropriate for physical activity ("junk food"). Each task force should have coordinated with the volunteers to ensure appropriate temperatures were maintained for dormant storage and to dispose of food that was spoiled.

Recommendation: When a food provider is identified, the task forces should coordinate food menus and care. In addition, each task force will establish menu guidelines.

Issue: IST Briefings

Discussion: All information needed for IST was often unavailable or not completely assessed. Therefore, some conflicts occurred between sections. The structural engineers and physicians must meet prior to the IST briefing to bring pertinent concerns to the command staff. The IST briefing should terminate before the affected task force arrives for the operational period. Therefore, task force leaders may brief their task force on pertinent issues from the IST in addition to the period's activities. In some instances, task forces started operations without the benefit of a briefing due to the length of the IST briefing.

Recommendation: The IST briefings should be held after all of the IST component briefings (i.e. Structural and Medical) are finished. All IST briefings should be completed before the arrival of the on-coming task force.

Issue: Command Management

Discussion: On occasion, sector command officers became enveloped with specific operations. The sector commander's attention focused on individual operations rather than the complete sector. Perhaps this focus was due to the high profile nature of an individual operations. The result was specific direction given by sector officers to the rescue squad. In these situations, rescue managers and the technical specialist were bypassed in the decision making process.

Recommendations: Command officers should remain cognizant to their responsibilities to delegate authority for tactical operations. They should allow task force managers to provide specific task direction. If the command officer is compelled to offer suggestions, it must be made to the task force or rescue squad leaders. Command officers always must remain aware of their primary responsibilities.

Issue: Portable Radios

Discussion: The portable radios proved to be adequate under normal circumstances. However, under heavy noise or hazardous environments, personnel had difficulty using the radios. Since all personnel needed to use respirator masks, communication through the mask was difficult. In addition, the noise level created problems receiving transmissions. In confined space environments, personnel had difficulty operating the push-to-talk switch.

Recommendations: Each portable radio should be outfitted with a combination ear-piece and bone-microphone with a remote push-to-talk switch with the option to use voice activation. This apparatus will allow the user to receive and transmit in noisy environments with a mask or a face piece. The remote microphone switch may be attached to the user's wrist allowing

the operator to activate the switch without access to the radio.

Issue: Battery Powered Equipment

Discussion: Many pieces of battery powered equipment was rated to operate for a given amount of time based on a single charge. However, the majority of equipment (especially communications equipment) suffered a significant performance decrease towards the end of a battery charge.

Recommendations: The task force logistics and communications personnel must develop a rotation for their battery powered equipment to maintain peak efficiency.

Issue: Fuel Powered Equipment

Discussion: Fuel powered equipment needed to be drained for mobilization and demobilization. This task became very time consuming on generator based equipment. Smaller equipment, such as saws, were physically turned upside down. Larger equipment required more than one person to drain fuel.

Recommendation: Fuel drains should be installed on larger fuel-powered equipment such as generators, compressors, and hydraulic units.

Issue: Medical Administration Kit

Discussion: During mobilization, many medical administrative items were loaded with the medical cache. The medical team did not have access to forms and recording devices. This presented a problem in accessing information regarding medical information about task force members specifically during mobilization and demobilization.

Recommendations: A medical administration kit should be developed to include all administrative needs during mobilization and demobilization until access to the medical cache is possible.

Issue: Accountability

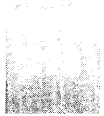
Discussion: Personnel identification became a problem when working with multiple rescue squads in the same area. This problem was compounded by the use of respiratory masks and safety glasses. The problem intensified when task forces worked in close proximity and were wearing similar equipment and clothing. When formal accountability checks were necessary, task force and rescue squad leaders had difficulty identifying their personnel for similar reasons. During accountability checks personnel not assigned to the rescue squads did not have method of accounting for themselves, placing the burden on rescue managers and task force leaders.

Recommendations: Personnel not assigned to a rescue squad should be assigned to a group to ensure task force accounting. For example, upon accountability check or evacuation: structural specialists, heavy rigging specialists, hazardous materials specialists would report to the logistical specialist; the medical specialists and search specialists would report to their respective team managers. The task force should designate an evacuation site at the pre-operations briefing. The evacuation site should be identified as safe from hazards and away from the operational area. Each task force should develop methods to identify each task force member's identity:(name), task force, and component group (rescue squad number) on their work clothing.

Issue: Personal Protection

Discussion: During the deployment, controversy arose regarding respiratory protection. The debate regarding the threat of asbestos exposure created confusion on the adequacy of the task force's respiratory filter masks.

Recommendation: Once incident commanders determines that additional personal pro-



tection is needed, they must determine which regulatory agency will determine the protection level. After that decision is made, this information must be relayed to the task forces as soon as possible to prepare personnel for the exposure.

Issue: **Canine Decontamination**

Discussion: Decontamination of the canines became an issue when the task force was exposed to contaminants that warranted decontamination.

Recommendation: Each task force should research the necessity of canine decontamination or protective clothing.

Issue: **Personal Hygiene**

Discussion: Although personnel were able to wash their hands before eating, the circumstances during this incident allowed the task forces to obtain these facilities easily. If the task force were deployed under different circumstances (an area where the community infrastructure is disrupted), an issue of possessing hand washing facilities in the cache becomes a priority.

Recommendation: Each task force should add hand washing facilities and other hygiene facilities to the equipment cache.

Issue: **Atmospheric Monitoring**

Discussion: When the task force operated in the Pit, personnel used many different power tools such as generators, saws, and Bobcats. All these tools generated fumes and introduced carbon monoxide to the Pit's atmosphere.

Recommendation: When operating in any environment with tools that displace oxygen, the task force should monitor the atmosphere.

Issue: **Warning Signals**

Discussion: Since many different operations were conducted within close proximity of each other. Often, whistle or air horn signals were heard and confused per-

sonnel due to the uncertainty of which operational area the signal applied to.

Recommendation: The incident commander should develop different signal devices for each operational area as needed. The signal should remain the same. However, the nature (whistle, air horn, etc.) of the signal may be varied. At the start of each operational period, the task force should review the evacuation and warning signal applicable to their task force.

Issue: **Medical Team**

Discussion: The task force's medical team started to become overwhelmed due to the amount of patients they treated from the task force, OCFD, military personnel, law enforcement personnel, and civilians. Overall the medical team treated over 150 people during the mission. The medical managers expressed a concern with developing a medical logistics section at the FBOO. However, this may only be applicable to future situations with a forward staging area.

Recommendation: The medical component of the task force structure may need to be increased to handle an increased work load. One medical specialist would be assigned to each rescue squad with the intention of attending to the medical need of their assigned rescue squad. If a forward staging area is established, the medical team should prepare to establish a medical component to the forward staging area.

Task Force Issues

The heavy rigging specialists provided valuable assistance to rescue operations. This component of the task force was very important because of the experience the rigging specialists provided. They were able to advise the rescue team leaders on heavy rigging techniques and options that would help remove large slabs and debris pieces. The specialists also provided supervision and guidance to the Bobcat operators in the Pit. This was especially important since the Bobcat

worked very close to the Pit rescue squads. Hence, the rigging specialists also acted as safety officers for Bobcat operations in addition to ensuring crane and cable operations were conducted in the safest manner possible. The expertise and experience this component provided was necessary for the task force to succeed.

The logistical operations during the incident provided ample supplies and equipment to the task force. IST Logistics provided the task force with additional equipment to increase the task force's efficiency. New rescue tools and supplies were provided as soon as they were delivered to the IST. This increased the capability of the task force and resolved the cache issues (see Critical issues: Operational Periods).

Once the incident commander determined the appropriate respiratory protection, the IST Logistics section quickly distributed the filters to the task force without delay. The supply of filter masks was substantial, therefore personnel did not have to worry about having a replacement set of filters in case their filters were damaged.

IST Logistics provided the task force with protective clothing and apparatus. On the first day of operations, protective items such as gloves, knee pads, elbow pads, filter masks, and hazardous material suits were provided for personnel. Additional personal clothing and gear needs were met at the task force's request. In addition, the IST purchased quality personal gear to protect personnel from the extreme cold and wet weather.

The task force training helped to deal with rescue issues more effectively. The training background of the task force was diverse. Members of the task force have been through formal specialist classes (Rescue Specialist Course, Medical Specialist Course, Search Specialist Course, Logistical Specialist Course, Communications Specialist Course etc.). These members were able to provide significant guidance into techniques and procedures relevant to the task force operations. In addition, other task force members had additional training in other disciplines such as hazardous materials and technical rescue that proved valuable.

Regular task force training included simulation exercises. The emphasis of this training was rescue techniques and effective teamwork. Often, the simulations included "worst-case" scenarios to give the team challenging rescue exercises. This training methodology proved effective. The task force was prepared to

face a "worst-case" scenario and worked well within the team concept.

Transportation to and from the work site was an issue but not significant. The transportation buses were often delayed for various reasons. If the operational area was further away from the BOO, these transportation problems would have hampered daily activities. The task force would not have returned to the BOO until later in the evening. As a result, the task force started walking back to the BOO as a group after each work day. This activity proved to be therapeutic. It allowed the team members to relieve tension and slowly relax with their fellow team members which added to team camaraderie.

The FBOO was developed due to adverse weather conditions. We moved our equipment and personnel inside the parking garage for shelter. The task force leaders were given the option of using this facility or the parking garage of the Federal Building (this facility was suggested first). The decision was made to use the facility across the street to avoid the dust, noise, and odor of the Federal Building. This proved to be invaluable because it allowed team member to completely withdraw from the operational site and relax.

The Myriad Convention Center was an excellent facility for the task force's BOO. The task force had access to hot food, shower, and restroom facilities 24 hours a day. This effort by the Oklahoma volunteers provided the task force with a higher level of comfort than expected on normal deployments. One disadvantage to the facilities was the task force's proximity to the support operations. Exhibit Room B was adjacent to the food service area and an IST administrative section. In the dining area, a television was operating 24 hours. Lastly, the Southwestern Bell information center was located just outside the exhibit room's door. With the surrounding activity, the exhibit room was not very quiet. Thus, sleeping was difficult for some task force members. Other task force's sleeping quarters were located on the second floor which was much quieter than the first floor.

Many task force members possess alpha-numeric pagers which expedite the call-down process. However, some members do not have pagers and must rely on telephone contact. This resulted in a delay in activating some team members. The task force must strive to fine tune its call-down procedure to ensure all members are notified in a timely manner.

Family contacts proved to be one of the most important issues that was dealt with during this deployment. The task force members underestimated the importance of home contact until we arrived in Oklahoma City. Most important, family contacts must be fed full and complete information about the disposition of the team members, especially injuries. This became important when the media broadcasted information about injuries to MD-TF1 members before family members were notified. If it is possible, the injured party should make the notification so no second hand information is passed. Additional notification should be made to the remainder of the task force families to ensure accurate information is relayed. Critical Incident Stress Debriefings (CISD) should also be arranged for family members as well.

The laundry service provided the task force with the opportunity to wash their dirty laundry. When the task force received their laundry in the evenings, they often found the returning laundry incomplete (missing items) . Some of the missing items were coveralls used by the task force for daily work clothes. This became a problem because each task force member brought two sets of coveralls on the deployment. Hence, if one set was lost in the laundry, the individual would only have one set to use. The one set of coveralls could not be cleaned because the laundry was done during the task force's operational period.

The task force was due for a change in operational periods (from day-side to night-side) in the middle of the deployment. This change would have disrupted the task force's work and sleep schedule. Therefore if a change did occur, the task force would require at least 24 hours before the next operational period to acclimate themselves to a different sleep and operational schedule. The end result was not change in the task force's schedule.

The medical team must install batteries in equipment prior to departure on aircraft or land.

On large scale operations, a safety officer must be appointed for example: a safety officer dedicated to the Pit.

At the start of each operational period, the task force must establish a procedure to account for non-operational personnel and mitigate routine medical issues that will not render the individual non-operational.

At least 24 hours for demobilization time was necessary due to the physical and mental condition of the task force. The time allowed the team to start recovering physically and load the cache properly for the departure.

The USAF Load Masters that helped the task force demobilize at the BOO were a great help. The USAF personnel were able to load the cache and additional equipment in the most efficient configuration.



Virginia Beach, Virginia VA-TF2 Executive Summary

April 19, 1995, a car bomb gouged a nine-story hole in the Alfred P. Murrah Federal Building in Oklahoma City, Oklahoma. The blast caused parts of the building to collapse injuring and killing many occupants. Additionally, the bomb blast caused significant damage to other buildings within a wide spread area, injuring and killing more civilians. Due to the size of the incident, Oklahoma City requested aid. Within hours after the request, the Federal Emergency Management Agency (FEMA) activated the Urban Search and Rescue component of the FEMA response. Virginia Task Force 2, answered FEMA's request and responded to Oklahoma City.

April 20, 1995, Virginia Task Force 2 departed for Oklahoma City. Arriving at 1400 CDT, the team unloaded at Tinker Air Force Base and received a quick briefing from FEMA Incident Support Team (IST) representatives about the situation at the Alfred Murrah Federal Building downtown Oklahoma City. Once on the site, IST personnel immediately put the team to work. After the first assignment, they assigned the team a twelve-hour night shift for the next five days. During this time, the team removed debris and shored ceilings and walls in the basement, first and second floors. Additionally, the team worked the large rubble pile on the northeast corner of the building and in an area of the building known as the "PIT." Many deceased victims were found and removed during this period. Luckily, the team accomplished these tasks with no major injuries to team members.

FEMA IST personnel ordered the team to stand down and begin demobilizing April 25, 1995. After securing and packing the team's personal and equipment cache, the team departed for home from Tinker Air Force Base, April 26, 1995 at 1215 CDT. Arriving in Virginia Beach, VA 1600 EDT, the team received a hero's welcome from friends, family, relatives and local and state dignitaries. The team deactivated at 1800 EDT after a team and CISD debriefing.


Following details a history of the Task Force's make up, an introduction describing the Task Force's mission and a chronology of events including the alert, activation, mobilization, on-site operations, demobilization, and post mission activities. Additionally, the report summarizes the effectiveness of the Task Force's organization, call out procedures, and operating procedures. Included is an account of the lessons learned, logistical movement, resupply, liaison activities, on-site coordination with the Task Forces, on-site coordination with the IST, and the effectiveness of the team's integration with the local Incident Management System. The report closes with recommendations for changes, enhancements for future urban search and rescue activities and comments.

Task Force History

Virginia Urban Search and Rescue Task Force 2 is an outgrowth of the Tidewater Regional Technical Team. It is unique because it is a multi jurisdictional Task Force with the City of Virginia Beach Fire Department as the lead agency. The Task Force is comprised of the following departments and municipalities: Norfolk; Chesapeake; Newport News; Virginia Beach; Franklin; Norfolk Naval Base F. D.; Little Creek Naval Base F.D.; Department of Emergency Services - State of Virginia; Emergency Physicians of Tidewater, and various other civilian components.

Introduction

April 19, 1995, Sean P. Foohey of the Federal Emergency Management Agency, alerted Virginia Task Force 2 Urban Search and Rescue of a possible deployment to Oklahoma City, Oklahoma. A bomb explosion at the Alfred P. Murrah Federal Building caused the structure to collapse trapping and injuring an undetermined number of citizens. Virginia Task Force 2 received an activation notice at 2350 EDT, from Mr. Foohey. Deputy Fire Chief James Carter alerted the Task Force members at 2400 EDT, and team members began assem-



bling at the Virginia Beach Fire Training Center around 0100 EDT, April 20, 1995. At 0630 EDT, an advance team deployed to Naval Operations Base, Norfolk, VA to help with packaging and loading the team's cache. 0730 EDT, the remainder of the team deployed to Naval Operations Base, Norfolk, VA for departure. At 1130 EDT, the team boarded a C-141 with 27,000 lbs. of cargo, 17,000 lbs. personnel weight, and departed for Oklahoma City, Oklahoma. The Team arrived at 1400 CDT, unloaded, and departed for the Alfred P. Murrah Federal building. Arriving at the 6th Street bombing site, FEMA Incident Support Team (IST) personnel immediately put the team to work at 1500 CDT.

Over the next six days, the team accomplished many Urban Search and Rescue tasks before deactivating and returning to Virginia Beach, Virginia. The team completed all assigned tasks with a high rate of success. I am happy to report Virginia Task Force 2 sustained no major accidents while they were in Oklahoma City. We did not find any live victims; however, many deceased victims were identified and removed from the structure. The team removed much debris and stabilized the structure in the areas they were assigned. After departing Oklahoma City, the team arrived back at Naval Operations Base, Norfolk, VA, April 26, 1995 at 1530 EDT. After an official welcome at the Virginia Beach Fire Training Center, the team conducted a debriefing and CISD evaluation before deactivating and meeting with family members. We scheduled a secondary CISD for Saturday, April 29, 1995. A follow-up Team Leaders and Team Managers meeting is scheduled for a later date along with other CISD sessions.

Effectiveness Of TF Organization

- This was the first FEMA activation for VA TF-2; however, Virginia activated the Task Force for a building collapse from a tornado in Colonial Heights, Virginia in 1993. Because this was the team's first FEMA activation, we were overwhelmed when all the equipment arrived to complete the team's cache. No one anticipated so much needed ordering in such a short time.
- Due to the time of the activation, 2350 EDT, getting team members to the departure assembly point was a little delayed; however, the 0400 hr. time commitment was met.
- Our call-out procedures still needs fine tuning. Some positions were not immediately filled.

There was a problem filling the medical doctors positions. Some members did not receive the page or notification.

- Need to keep better records of personnel helping at the assembly point, especially those team members not selected for deployment but helped with moving the cache and checking personnel in.
- This activation allowed for the funding of the required equipment cache.
- The Task Force FOG guides were useful, especially for the team leaders and squad managers.
- Mobilization and packaging of the cache went extremely well. Previous training and drilling proved very important. We met a four-hour deployment request from the time of activation.
- Radio communications were poor. Due to the time of the activation, we were unable to secure radios for each of the team members. Now that the cache is filled, this should not be a problem.
- Staffing for this deployment was not a significant problem.
- On site FEMA representatives need to take into consideration the time of activation before putting a team to work. Most of VA TF-2 went 48 hours (+) without sleep because of the 2350 EDT activation. Once on site, they assigned the team the night shift.
- Demobilization was a nightmare. An eighteen hour stand-down before departure was unacceptable, especially after working a twelve-hour night shift. At one point, the demobilization officer wanted to send half the team straight home in one plane and the other half on another plane with a several hour delay. Team integrity is important!
- FEMA representatives elected *not* to follow the twelve-hour split shift rotation: entire teams work. This caused an overlap with certain positions and poor communications. As one team left the site, the other team arrived. This left very little time for peer and supervisorial communications. Also, Team Leaders were required to report one hour before the shift began and stay



one hour after the shift was completed for team leader meetings.

- The daily Incident Action Plans were helpful; however, due to the work schedule, it was difficult to pass information onto team members. Often team leaders did not finish with the planning meeting until after the team's arrival. Also, there wasn't an adequate place to hold a constructive meeting.
- Safety of personnel was a real concern. Once command personnel (IST) realized the rescue operation was more or less a body recovery mission the safety of USAR personnel needed more consideration.
- Our Task Force was the first to notify the IST of an illness. The head medical director isolated the team advising the team would be sent home the next day. This was a premature decision. After some investigation, the illness was found to be running through all the teams. Because we were up-front with our concerns, we came close to penalization.
- Need to develop a better Personnel Accountability System. Tracking of personnel was difficult and cumbersome at times.
- Security was a problem. Clothing and other items were taken from the Base of Operation while the team was on-site. Had the team been on shifts, this may not have happened
- Initially, the Task Force had problems integrating with the Oklahoma City Fire Department personnel. Once they realized we were there to help and not to take over, the relationship changed.
- Upon arrival, we found some of the UHF Fire frequencies already in use by other agencies. This locked up our repeater on occasion and would not permit the use of any other frequencies. Will no longer be a problem with the new radios.
- A TV channel was right next to the UHF band causing some minor problems. Again, this will no longer be a problem due to the new radios.
- Because this was a crime scene, we could not access the roof of the Civic Center to place our repeater. Again, with the new equipment, a 40

watt repeater, this should no longer present a problem.

- One repeater was damaged due to a storm. Modification will reduce this potential.
- During this activation, two portables were damaged and one lost. Next deployment, each team member will receive his or her own radio and be accountable for it.
- We did not receive the medical support from the local jurisdiction that was promised each shift. When we called for assistance, we usually had to treat ourselves.
- Call back procedures need further development. Not all team members are on the paging system nor were all team members alerted.
- The Point of Assembly administration worked well; however, it can and will be improved. Good personnel record keeping is essential.
- Because more than fifty-six team members reported, some team members were turned away. This caused some disappointment; however, this is expected.
- The use of on and off-duty staff helped the team assemble, mobilize, and demobilize. The department's call back procedure worked well.
- Must make or take the time to convey the Daily Incident Action Plan to all personnel. Establishing a meeting area favorable for good communications is a must. Team Leaders need time to exchange information after the Incident Action Plan planning session.
- Key Task Force personnel were unavailable at the time of activation. Because secondary Task Force Team Leaders were unfamiliar with other USAR Team Leaders, it took time to learn each others strengths and weakness. We **strongly** suggest all Team Leaders be included in Task Force Team Leaders meetings. Key elements of the operations were learned on-the-job. This is not an effective way to learn.
- Moving the cache from the BOO to the site each day was **very** ineffective. This took time and delayed the team's ability to quickly begin assignments. Setting up and breaking down added additional work causing work cycles of fourteen

to sixteen hours. In the future, we will find an on-site location for the cache.

- Will consider sending three Team Leaders on the next deployment. Should one Team Leader become ill or over worked, the third Team Leader can take over. During this activation, there were times when team leaders went more than forty-eight hours without sleep. Also, the third Team Leader can help with documentation.
- When key Task Force personnel are unavailable, the team can function effectively.
- All members of the Task Force must adhere to the Chain of Command. Team Leaders must know where team members are at all times, even during stand down time. Squad Managers must realize the importance of keeping their squad members together.
- Task Force Leaders need their own sleeping quarters. Often the Team Leaders came in late and got up early to attend meetings or handle unforeseen problems. With separate sleeping quarters, they would not disturb other team members.
- A debriefing after each shift would help iron out problems and alert others of potential hazards. Additionally, it might help to streamline coordination between other components of the team and the other USAR teams.
- Canine teams need time to acclimate the canines to the search area before actually searching.
- Mapping of the search area would greatly enhance the operation as to what was accomplished and what needs addressing.
- Canines were not given ample time to complete searches, must allow more time.
- Need to make a video outlining what the canines are capable of and how to use them in the search element.
- Upon arrival, the structural engineers need to perform a structural evaluation and meet with IST structural engineer before putting the team to work.
- Task Force Structural Engineers need to meet among themselves to formulate structural strat-

egies. Pooling of information makes for better decisions.

- For most of the operation, we did not know what equipment was available other than what was in our own cache. A listing of FEMA's and local jurisdiction's equipment availability is paramount.
- When assigned a work site, structural engineers were not given an opportunity to evaluate the safety of the site. Team Leaders assumed IST assessed the site to be safe, we cannot make assumptions.
- During the Oklahoma incident, controlled substances were carried in medical packs by medical team members, primarily the team physician. This was cumbersome. New medical metal locking drug cabinets should take care of this problem.

Logistical Movement

Logistical movement of the team and team members was disjointed at best. When activated, FEMA requested a four-hour departure commitment. The team met its commitment; however, DOD failed to have the plane at the Naval Operation Base on time. The plane was seven hours late. On-site, the team's cache was nine blocks from the incident due to the demands of Oklahoma City officials. Transportation needed coordination of each shift to move the cache and team to and from the incident. This added work and time to the daily work cycle. Deactivation was a nightmare. Departure times changed almost hourly. At one point the team was split among two planes with part of the team going straight home while the teams cache and the remaining members went in another direction. Luckily, we changed this. These constant changes added additional stress to the team and family members when stress was already very high.

When the team controlled logistical movements, it met or exceeded expectations. Movement of the cache to the departure site and back went well. Previous training proved very helpful.

Resupply

On-site resupply was adequate once the IST established itself. Because a team leader stayed in the IST command center most of the time, a working relationship with key personnel developed.

Coordination With Other Task Forces

Because this was a site specific incident, on-site activity with other Task Forces was adequately coordi-

nated. Virginia Task Force 2 developed a close working relationship with the New York Task Force. The night shift Task Forces appeared effectively coordinated. As for the day Task Forces, there was little contact, both on-site and at the base of operations. Due to transportation needs, very little time was allowed for a meaningful exchange. Team Leaders usually had less than a half hour to exchange information during shift meetings. Squad Managers had no time for information exchanges.

Coordination With Incident Support Team

On-site coordination with the FEMA Incident Support Team worked well for the night shift. Once the team leaders became familiar with IST personnel, cooperation with the IST became very effective. Sensitive decisions were handled fairly. There was good cooperation with IST Operation Commanders and Team Leaders. Though there was some contact with the day shift IST crew, it was limited.

Teams Integration With Local IMS

Integration with the local incident command was difficult at first. Oklahoma Chief Fire Officers initially believed FEMA and the Urban Search and Rescue Teams were there to take over. After some initial confrontations, the Oklahoma Chief Fire Officers came to realize we were there to help. Relations improved afterwards. Eventually, Oklahoma City Fire personnel realized we could offer specialized equipment and technical expertise they did not have. The IST made it clear to the Task Forces, we were there to help and they emphasized this regularly.

Recommendations

- When Task Forces are activated after 2000 hours, the IST must take this into consideration before putting a Task Force to work, especially if it is a night shift.
- If the IST elects to put the entire team to work during one shift, The BOO needs securing.
- Provide funding for all Task Force Leaders to attend the Task Force meetings. On-site training and identification of key personnel is ineffective
- If a BOO isn't established close to the work site, the IST must make available an area for the Task Force Leaders to meet with their Task Force and transportation along with a cache management site.

- Need a uniform accountability system such as the PAR and Passport system.
- Need additional logistics personnel, at least two.
- Task Forces need a manager level position to act as a full-time Safety Officer.
- Each Task Force needs a dedicated video and still camera person for documentation and back home press release material.
- FEMA simply cannot count on DOD for quick transportation of US&R Task Forces. Maybe it is time to look at a private means of transportation or another source.
- Give Task Forces the same priority upon demobilizing as activation when seeking transportation home. Task Force members are stressed, tired, and emotionally drained upon the completion of a mission. Worrying about transportation and constantly making last minute changes only adds to the stress already accumulated. This isn't healthy for the team members or their families.
- Place more emphasis on rehabilitation, especially during the demobilization. There were times during this mission where Team Leaders went forty-eight to sixty hours without sleep.
- Task Force Leaders *must* hold more briefings with the Task Force. When time is tight, TFLs must make the time.
- Task Forces must establish a twenty-four hour communication hot line for the team member's families back home. With late night breaking news, family members might need assistance, especially if the news media reports disturbing news.
- If drinking of alcohol after a work cycle is an issue, it needs spelling out. Alcohol was offered at the BOO. Even after the issue was raised, some teams continue to drink without repercussions. This caused tension between team leaders and team members.
- Because this was a terrorist act, personal life insurance of the USAR members may have been compromised. FEMA may want to investigate. If this is true, personnel and their families need to know up front.

- After returning home, it is very important still photos are developed with due regard to security and sensitivity. FEMA must establish specific guidelines for personal and professional use.
- During this operation, they offered over-the-counter medical drugs at the BOO. This could cause a problem if the team doctors are unaware and someone needs treatment on-site or at the local emergency room and the treatment reacts with the over-the-counter compound. Also, certain over the counter antihistamines cause drowsiness that impairs one's ability to work. A guideline references the use of over-the-counter drugs needs consideration.
- For future deployment, each team member should carry "Baby Wipes" to aid in sanitation when washing and sanitation facilities are unavailable.
- The carnival atmosphere surrounding the BOO contributed to poor sleep and eating habits, which eventually contributed to early fatigue. For health and nutrition reasons, we suggest food be kept away from the work area, except in designated rehab areas with proper hand washing stations. Also, we suggest a designated mandatory sleep time for all members and teams staying in one location.

Conclusion

This was a *very* successful operation for the Urban Search and Rescue component of FEMA and FEMA as a whole. Because this was successful, an enormous

opportunity for research and evaluation exist. Over the next few months and years, the Urban Search and Rescue component of FEMA needs to look at how the teams will be used. Very few suspected a deployment to a bombing/crime scene. Building collapses from bombings are much different from those caused by natural disasters. We must educate ourselves on the difference. Additionally, we must learn what other agencies will expect and teach them what they can expect from us.

FEMA has a unique opportunity to study the effects of *Post Traumatic Stress Disorder*. Most certainly, Oklahoma City Fire and Urban Search and Rescue personnel will suffer from the effects of what they observed. To what degree is anyone's guess. I suspect, over the next few months and years a wide range of problems will develop. If we study them now, we have an opportunity to develop a strategy to help others if this happens again. It is one thing to pull victims from a collapsed building caused by a natural disaster; however, when it is caused by a person or group, it has a different effect.

Comments

We, Virginia Task Force 2, thank FEMA for giving us an opportunity to show what we trained so hard for. This deployment allowed us to complete our cache, therefore, we are better prepared for future deployments. Also, a completed cache will enhance our training.

This activation taught us a great deal about our team and its ability. We know we can meet a four-hour deployment commitment if necessary. We also realize much can be done to enhance our performance.



Los Angeles County, California CA-TF2 Executive Summary

At 0902 hours on April 19, 1995, a bomb was detonated in front of the Alfred P. Murrah Federal Building in Oklahoma City, OK. The blast caused widespread damage to scores of buildings in the area. The Federal Building sustained the greatest damage with a large portion of it suffering total collapse. Hundreds of casualties were reported with hundreds of people missing and presumed trapped in the rubble. At 0530 hrs. on April 20, 1995, The County of Los Angeles Fire Department's Urban Search and Rescue Team (CA-TF2) was called upon to respond to this disaster. The Task Force consisted of 52 employees of the County of Los Angeles Fire Department, 6 civilian search dog handlers with dogs, 2 structural engineers and 2 physicians. Mobilization of the Task Force, for the most part, was well coordinated and executed effectively. CA-TF2 arrived at the Base of Operations by 2300 hrs. and Task Force leaders immediately went to the Incident building for a briefing. The incident building had suffered a collapse involving the 9 upper floors of reinforced concrete. During the next ten days, CA-TF2 was involved in:

- Extensive Canine and Technical search of the incident building as well as neighboring buildings.

- Removal of debris using hand and power tools.

- Mitigating overhead hazards.

- Coordinating heavy equipment use.

- Assisting FEMA with command, logistics, and planning.

- Assisting FBI with evidence collection.

- Constructing shores using a variety of techniques.

- Performing body recovery.

Injuries and illnesses were minor. With 45 of the 52 Department employees current or former paramedics, the Medical Specialists had a lot of resources upon which to draw. This incident taught valuable lessons and provided our Department with experiences only

acquired in an actual deployment. Demobilization started at the end of the Operational Period on April 27, 1995. Critical Incident Stress was of paramount concern and was addressed informally throughout the deployment, and formally addressed immediately upon return. The following After Action Report describes the events in greater detail.

Activation - Thursday, April 20, 1995 - 0530 hrs.

At 0350 hrs the Fire Command and Control Facility of the Los Angeles County Fire Department received the alert status from the State of California, Office of Emergency Services (OES). At 0530 hrs OES activated the Task Force (CA-TF2) for deployment to Oklahoma. At 0550 hrs., members were notified and check-in began at 0810 hrs.

Mobilization

CA-TF2 was enroute to March Air Force Base (Point of Departure) at 1035 hrs. The Task Force arrived at March AFB at 1238 hrs. and equipment was being unloaded by 1300 hrs. The changeover to military pallets and manifest review was completed by 1650 hrs. Forty-Eight thousand pounds of equipment on 7.5 pallets were loaded onto the C-141 aircraft at 1720 hrs and the flight took off at 1756 hrs. CA-TF2 arrived at Tinker AFB in Oklahoma at 2205 hrs.

Base Of Operations

CA-TF2 arrived at the BOO at 2258 hrs. The BOO was located at the Myriad Convention Center one mile south of the incident. This facility provided space for equipment, sleeping areas, showers and restrooms, and a feeding area. In addition, there were power drops and phone lines available.

Incident Building

The Alfred P. Murrah Building is a nine story reinforced concrete structure. It is supported by a perim-

eter wall extending the full height of the building. There are approximately 14,000 square feet per floor. The 6" thick interior concrete floors are reinforced with ½" rebar and supported by 33 concrete columns. The columns and beams are reinforced with 1" rebar. The first floor is partially below grade from about mid-span to the east end. There is a one story portion of the first floor, entirely below grade and east of the main structure, known as the East Lobby. The south side of the building abuts a garage structure which is capped by a courtyard used for ingress/egress to the second floor. The blast occurred on the roadway at about the middle of the north wall. The effects on the building were a full height collapse of most of the northern half and the portion of the southern half east of the stairwells. The configuration of the debris was described as a "pancake" collapse. In addition, the center portion north of the stairwells suffered collapse of the floor and beams while the columns remained. This portion of collapse involved the 2nd and 3rd floors and was known as "The Pit".

Operations

The damaged Federal Building presented continuous danger to everyone operating in or around it. The debris hanging from each floor was a known hazard and was addressed in each day's Incident Action Plan (IAP). The unknown hazards, such as structural integrity, were a significant challenge. It was unknown exactly how the remaining portion of the building would behave as debris was removed from contact with the damaged columns.

Evaluating Effectiveness

The Task Force Organization was effective in dealing with most of the situations which were presented during the incident.

The call out procedure filled the Task Force in one hour, twenty minutes.

The operating procedures at the Federal Building needed to be supported by clearly defined objectives.

Relevant checklists were utilized and found to be effective.

A questionnaire for team managers would be helpful in addressing After Action Report subjects.

All personnel reviewed position descriptions during mobilization and performed as described.

This incident placed high demands on cutting and breaking tools.

Most team members had favorable comments about the Field Operations Guide.

In the F.O.G. manual, line by line directions for forms content would be helpful.

More training with heavy equipment operators would provide familiarity with their operations and lend to greater personnel safety.

Critical Incident Stress

Formal CISD was started upon arrival back at the Point of Departure. Scheduled CISD's were held May 3, 4 and 5 with follow-up debriefings scheduled for May 16, 17 and 18. The Department frequently phoned the families of the Task Force members throughout the deployment to assess their needs. A program on Critical Incident Stress was presented to the families before the Team's arrival back at home base.

Highlights And Lessons Learned

OPERATIONAL PERIOD:

ISSUE - Communication, coordination and accountability of activities with squads, structural engineers and other Task Forces

RECOMMENDATION - ICS principles and procedures should be given more emphasis in Task Force training.

MOBILIZATION:

ISSUE - Need for pre-activation overhead

RECOMMENDATION - Identify and have overhead personnel in place prior to Task Force activation.

AIRLIFT: LOADING AND DEPARTURE:

ISSUE - Time required to re-palletize equipment

RECOMMENDATION - Pre-load process for all pallets. Have a "load by the numbers" type process.

ISSUE - Dash 2 requirements and paperwork.

RECOMMENDATION - Have IATA Declaration of Dangerous Goods and MSDS forms filled out prior to activation.

ISSUE - Travel time; Distance to the Point of Departure (POD)

RECOMMENDATION - Investigate alternate POD locations in the Los Angeles/Orange County area. March AFB is 2 hours travel time for CA-TF2.

ARRIVAL IN OKLAHOMA - BOO SET- UP:

ISSUE - Equipment and sleeping quarters security

RECOMMENDATION - Provide 24 hour security to alleviate any theft or sabotage possibilities.

ISSUE - Noise in sleeping area

RECOMMENDATION - Provide separation of eating/support areas and sleeping quarters.

COORDINATION WITH INCIDENT COMMAND AND IST:

ISSUE - Use of Incident Command System, Fire Ground Command principles.

RECOMMENDATION - The type of Incident Management System utilized during the emergency must be clearly communicated to the Task Force(s) assigned to the incident. Clear lines of authority must be identified and maintained to ensure unity of command during the incident. Adherence to ICS principles and procedures should be observed in the development of the IAP, Operations Briefing, Plans Meeting and throughout each operational period.

TASK FORCE MANAGEMENT AND COORDINATION:

ISSUE - Added positions for this deployment

RECOMMENDATION - Add Task Force Leader Aide, Canine Coordinator.

ISSUE - Ad Hoc Rescuers.

RECOMMENDATION - Instruct all managers as to policy on convergent volunteers.

COMMUNICATIONS:

ISSUE - Radio interference

RECOMMENDATION - Face to face with IST Communications. Determine frequencies based on Task Force radio capabilities and assess airwaves at the incident during the operational period. Provide for a more flexible communications plan and additional frequencies.

ISSUE - Inability to talk via radio to the BOO. Permission to set up repeater at incident was denied

RECOMMENDATION - Allow repeater set-ups.

ISSUE - Noise in IST command.

RECOMMENDATION - Place generators away from openings at IST.

PLANNING AND BRIEFING ACTIVITIES:

ISSUE - No medical plan.

RECOMMENDATION - Provide comprehensive medical plan.

ISSUE: Incident briefings.

RECOMMENDATION - Keep incident briefings clear and concise.

ISSUE - Post-operational period Task Force briefings

RECOMMENDATION - Conduct Post-Operations Task Force briefings to include safety concerns, op-

erational period critique and upcoming operational period's IAP.

Recommendations From Team Members

SEARCH

A lifting harness is needed for the dogs.

Decontamination of dogs needs to be with warm water and hair dryers need to be available.

Dogs need to be in low traffic area.

Dogs need to be out of the weather in a quiet rehab site.

RESCUE

More body harnesses are needed.

Each squad member should have a signaling device.

Need more tin snips in squad boxes.

Each member should carry electrical side cutter pliers.

Make up squad boxes with hand tools, etc. for each squad. Saves time and sets accountability for tools.

Cache needs a wet/dry vacuum.

Cache needs more adapters with each generator.

Obtain extension cables for come-alongs. They are lighter than chains.

Need small "field" tool box.

Need extra power cells and fuel for Pasload impulse nailer.

Need portable oxy-acetylene cutting torch.

Get 8d nails for Pasload and Hilti nail guns.

Need scraping tools, such as heavy duty rakes or McLeods.

Squad leaders should meet after operational period to determine tool needs for next operational period.


Make up squad buckets similar to those in Rescue II class.

MEDICAL

Educate Task Force members to signs of stress.

Need precise procedures for removal of victim and body parts. Stock more respirator filters. They need to be changed daily.

All equipment for decontamination should be carried in the cache.



Be cautious of cold food, bacteria!

Beware of the Tetnus shot pushers.

Need monitor that is also defibrillator instead of two separate units.

Medical inventory has an overwhelming amount of stock to keep track of. Need a paramedic in logistics. If logistics is separated from the incident and a request is made for a medical item, non-medical personnel may be unfamiliar with the item when contacting suppliers.

Paramedic backpacks need to be more user friendly. Packs are currently packed according to FEMA guidelines. Paramedics need larger back pack (same size as doctor's) to accommodate fluids (saline solutions).

Medical Team members must have their Oath of Office (SF-61) and Declaration of Appointee (SF-61B) forwarded to the Public Health Service in order to be covered as a Disaster Medical Team.

All medical specialists should be taught to do a basic eye exam and how to remove foreign bodies with irrigation or Q-tip.

Use rubber gloves under leather gloves when handling contaminated objects. Stock more latex gloves.

TECHNICAL LOGISTICS

Make triage type tags for boxes. When box is inventoried, tag will be signed and dated and will be torn to indicate ready, items missing, etc.

Develop inventory form for each box, with columns for dates of inventory, that can be used for years.

Make carbonless copy inventory forms so copies do not require a copy machine.

When boxes are repeatedly used at the incident, they should be isolated at base for easy recognition for next operational period.

Item serial numbers should be on inventory list in each box.

Mark all tools with box number.

Need catalogs and CD-ROM with vendors' phone numbers and addresses for ordering.

Need support on report generating items (i.e. printer, plain paper fax).

If FEMA has knowledge of living conditions such as what was available in Oklahoma, we could deploy minus food/water

COMMUNICATIONS

Improved communications could be attained with proper equipment such as radio remote.

Need better storage procedures for disposable batteries. We possibly had a bad batch of batteries.

INFORMATION

Info. Spec. needs micro-cassette recorder.

Fairfax County, Virginia VA-TF1 Executive Summary

Virginia Task Force-1 responded to the Alfred P. Murrah Building incident on Sunday, April 23, 1995. Overall, the mission went exceptionally well both within the Task Force and the incident management level. VA-TF-1 mobilized and deployed with no problems. All operational work periods went smoothly. Task force members accomplished the work period objectives to the best of their abilities, in spite of occasional unforeseen constraints.

All tools with the exception of one air compressor operated well and as expected. Procedures outlined in the FOG and OSD manuals were followed successfully. The level of work performance was exceptional for the first full team deployment. We had no issues or problems with any of the Task Force members during the entire mission.

Demobilization went extremely smoothly with the fine assistance of the Air Force personnel from Tinker Air Force Base. A full team debriefing was held prior to leaving Tinker and each of the four teams held after-action critiques after our return. Full CISD follow-up was in place, both in Oklahoma and after our return. Emergency purchase orders were filled after deployment and new equipment is in the process of being cached.

Overall, the mission was very successful. Considering the number of Task Forces and local emergency personnel on-site, operations were very well coordinated and work assignments were accomplished quickly and without incident.

I would like to thank the US&R program staff at FEMA for their assistance and support in deploying our Task Force. I believe everyone should feel proud of the performance displayed by the US&R program.

Mission Overview

On Saturday, April 22, 1995, at 2200 hours, the Virginia Task Force I received an alert notice for the Alfred


VIRGINIA TASK FORCE 1 Fairfax County After-Action Report on the Alfred P. Murrah Building Bombing Incident Oklahoma City, Oklahoma

Chronology

Alert:	2350 hours,	April 22, 1995
Activation:	0530 hours,	April 23, 1995
Leave Andrews:	1200 hours,	April 23, 1995
Arrive OK:	1630 hours,	April 23, 1995
Start Operations:	1300 hours,	April 24, 1995
Stop Operations:	0800 hours,	April 30, 1995
Mission Debriefing:	1100 hours,	May 1, 1995
Demobilization:	1200 hours,	May 1, 1995
Arrive Andrews:	1600 hours,	May 1, 1995
Initial CISD Debriefing:	0900 hours,	May 4, 1995
Follow-up CISD Session:	0800 hours,	May 27, 1995

P. Murrah Building in Oklahoma City, Oklahoma. This was followed with an activation notice at 0530 hours on Sunday, April 23. This notice authorized us to make emergency procurement. The activation notice was forwarded to the Fire Chief for proper authorization to accept the mission and approval was granted in short order. At the time of the activation, Fairfax County Fire and Rescue had already committed seven people to the IST or to FEMA logistics in Oklahoma City.

We immediately began our mobilization process. Call-downs were initiated and the team personnel were selected by the team managers. Personnel were told to arrive at the Training Academy at 0530 hours for in-processing. Medical checks were performed and a



briefing was given on the incident. The team was transported to Andrews Air Force Base where aircraft loading went very smoothly. After a slight delay for Air Force One to depart, the C- 141 left for Oklahoma at approximately 1200 hours.

The team arrived on Tinker Air Force Base at 1630 hours local time. Air Force personnel were extremely helpful in moving the cache and personnel to the Myriad Convention Center which served as our main base-of-operations.

The Task Force spent the remainder of April 23rd setting up the cache and base in the Myriad Center. The following day, April 23, the Task Force moved a large portion of the most used tools and equipment to a forward staging area in a parking lot adjacent to the incident site. Personnel were on-site at 1300 hours that day as directed in the morning briefing and the Incident Action Plan (IAP) and began search and rescue operations on the north exposure. Due to scheduling changes, the Task Force was told to stand down at 1900 hours and return to work at 0100 hours the next day and work until 0700 hours. After this initial flip-flop, the Task Force settled down to working the 2000 to 0800 hour night shift. The Task Force continued to work this shift until it was relieved on Sunday morning, April 30. The Task Force made considerable progress in debris removal and body recovery during the nightly work shifts. Many tons of debris were removed from the site. During the six operational periods, four minor injuries were incurred by Task Force personnel. These were treated either on the scene or at a local hospital. No long term effects are anticipated from these.

The Task Force Leaders attended both IST daily briefings during this period. Objectives for the upcoming 12-hour period were determined by the IST Team Leaders and relayed to the Task Force by IST Operations personnel. All equipment worked as expected with the exception of the breathing air compressor which would not operate. This was quickly repaired upon return home.

The demobilization went very smoothly. Air Force personnel came to the Myriad Center to assist in palletizing and transporting the cache to Tinker on the afternoon of April 30. Air Force personnel bused the team to Tinker on Monday and provided an excellent meal prior to departure. In both arrival and departure, Air Force personnel were most helpful and should be recognized by FEMA for their contribution. The 24 hour down-time between the last work period and flying out

was most effective and gave the team members some time to unwind as well as to have a team debriefing. This standard should be considered for future missions of five or more days.

A full team debriefing was held prior to departing from Oklahoma. This gave all members the same and correct information on many of the aspects they might have missed while on the mission. In addition, each of the four teams held a after-action critique after returning home. These are attached to this report in the Lessons Learned section. At the Task Force's next full team meeting, a thorough critique of our operations will be held and all lessons learned will be incorporated into the next full team exercise.

CISD issues were handled completely and thoroughly. Counselors were made available for any Task Force member at the mid-point of the deployment. While the Task Force was gone, spouses and families could dial into teleconferences and receive updated information from the Department and one of the Task Force Leaders. They were also offered a face-to-face session with a Department counselor while the team was gone. Upon returning home, counselors met the arriving team to look for signs of critical incident stress. A full CISD de-briefing was held three days after our return with a second session on May 27.

Overall, the entire operational mission of VA-TF-1 went very smoothly. Mobilization and deployment went extremely well, as the Task Force had done this several times prior. The performance of all personnel was exceptional, both on the work site and at the base-of-operations. The most significant problem encountered was the error in scheduling the first operational period, which resulted in some lost sleep at the beginning of the assignment.

By the time our Task Force was operationally on-site, the IST was fully in place, transportation and food issues were in place and the incident operations were proceeding smoothly. Operations followed the FOG and other program guidelines where applicable. These seemed to work well on this incident, even though they were not specifically designed for operation of this type.

There were some issues and recommendations that surfaced during the mission and are listed below.

Issues/Recommendations

Issue:

While short term planning was well executed, the long term planning and mission objectives were not

made known to the individual Task Forces. Therefore, we were not fully aware of what the overall objective or goal of the mission was or the time frame for achieving it. For example, somewhere during the first week, the operation changed from a rescue operation to one of recovery. This changeover was never actually spelled at any time and the operational objectives never reflected this change. Much time was wasted in stopping and starting due to safety issues. It could have stopped once while many of the safety issues such as overhanging concrete could have all been handled at one time, instead of some one night and some the next night.

Recommendation:

When it becomes apparent that Task Forces are operating in a recovery or non-emergency mode, all issues that must be handled while work is stopped should be handled at one time, instead of stopping and starting operations. This only serves to increase the frustration of the workers.

Issue:

While this was not the case for our Task Force, some of the aspects of the operation were micromanaged by the IST, especially in operations. The IST operational people should be there to provide technical guidance, expertise, and coordination, not to supervise the operations of a given Task Force. Our team worked best when it was given the objectives and parameters and left to their discretion as to how to best accomplish it. I am thankful the IST Operations who worked with us allowed this to happen.

Recommendation:

Allow Task Force personnel to use their training and expertise to accomplish given tasks within the guidelines set by the IST. IST Operations personnel should manage multiple team operations, not supervise work assignments.

Issue:

Information exchange between key Task Force personnel at shift change was in many cases lacking or non-existent. Most times, the Oklahoma Fire Department supervisor was not included in these briefings.

Recommendation:

Face-to-face meetings between key personnel of relieving Task Forces must be made to happen so that there is continuity of the operation, especially safety issues. Any briefings prior to beginning or completing a work period should include Task Force Leaders, Team

Managers, IST Operations, and local emergency personnel.

Issue:

More air horns need to be on-site for evacuation purposes.

Recommendation:

Large aerosol can horns need to be carried in the IST administrative kits and need to be carried by all IST operational personnel. In addition, our teams needs to add additional horns to the cache so that all team managers and squad officers have them.

Issue:

Our Task Force had several injuries, some which required hospital treatment. These injuries were never documented by the IST or FEMA for future medical or statistical follow-up. If, in the future, a question arise about who was injured or how seriously, it is unclear if FEMA can produce documentation.

Recommendation:

The IST needs some type of documentation form for injuries suffered on a mission.

Issue:

There is no set medical standards and what would disqualify a person from participating in a mission or a work shift. It is currently left up to the Task Force Leader.

Recommendation:

FEMA should direct the appropriate subcommittee to devise a screening format that would be used uniformly through the US&R system. Disqualifying factors should be established and the opinion of the doctor should be final.

Issue:

As the mission progressed, there appeared an ever increasingly amount of US&R signs, messages and other team graffiti on the Murrah building. This had the potential to appear insensitive to the citizens of Oklahoma City and victim relatives.

Recommendation:

FEMA needs to develop a policy on what type of messages, flags, etc., are appropriate to leave on a building during a mission. It should take into consideration that the US&R personnel are guests of the locality and be sensitive to the role played by the Task Forces and local emergency personnel.

**Issue:**

There was not the same level of engineering decision making at night as there was during the day. Thus, many operations at night that involved the stability of the building were deferred to the daytime when Dave Hammond was there. This slowed night operations down significantly, even bringing them to a total halt on some nights.

Recommendations:

If the operations are run 24 hours daily, there must be the same decision-making authority on engineering issues at night as in the daytime. Additional expertise must be found so that the IST structural specialists position can be staffed with the same expertise around the clock as are the other IST positions.

Issue:

Tasks Forces were not briefed fully about the structural stability and engineering issues of the building.

The status changed almost daily, but personnel were not informed of the overall "big picture" of the building. Thus, some issues were resolved at one time but came up again as new Task Forces rotated in. An in-depth briefing to the Task Force Leaders would have allayed questions some people had about working in or around certain parts of the building.

Recommendation:

Keep Task Force personnel briefed about the engineering aspects of a building especially that pertaining to structural stability. Personnel should know what decisions have been made and by whom about the overall safety of the work assignment.

Lessons Learned

Many lessons were learned at the team or individual level. These are contained in the after-action reports from the individual teams.



Dade County, Florida FL-TF1 Executive Summary

All task forces responding to the Oklahoma City (OKC) Alfred P. Murrah Building incident are required to submit an after-action report to FEMA in order to assess the task force's individual and collective experiences.

The purpose of this after-action report is to describe and explore all phases of the Florida Task Force 1 (FL-TF 1) mission to OKC. FL-TF1 is one of the 26 Urban Search and Rescue (US&R) task forces trained and prepared to respond to structural collapses and other disasters. During the response and recovery phases, FEMA deployed 11 of the 14 "deployable" task forces.

This report highlights FL-TF1's specific mission and involvement from the April 19, 1995 activation of Chief Castillo to be part of the Incident Support Team (IST), the April 22 activation of Communications Specialist Carroll and Chief Sears to IST, the April 23 activation of the task force through the demobilization and return to Miami May 1. Upon return, a post-mission critique was held May 5 and a critical incident stress debriefing sessions were conducted on May 9; an optional family debriefing was held on May 10.

The chronology of events reflects FL-TF1 operational periods from 0100-1300 the 23-25th of April and thereafter until deployment from 2000-0800.

The National US&R Response System was developed to respond to urban search and rescue needs following a catastrophic earthquake which often results in multiple building collapses. It is important to note that the OKC incident was different than planned and trained for in several areas: (i.) The OKC incident involved primarily one structure. The magnitude to the nine story building created a need for the OKC fire department to request outside assistance. (ii.) With only one site to consider, FEMA implemented an Operations Section as part of an IST with command and control responsibilities for the search and rescue

operation. The reason for the Operations Section to function with operational search and rescue responsibilities was to coordinate several task forces working one building. (iii.) The use of the entire task force for 12-hour operational periods versus two shifts during a 24 hour schedule. (iv.) The task force mission shifted from rescue to recovery.


FL-TF1 wishes to thank Sherri L. Porcelain, MPH of the University of Miami Field Epidemiology Survey Team for her invaluable assistance in evaluating the team's mission and for her input to this report.

Overview

At 0902 hours on April 19, 1995, a car bomb was detonated in front of the nine-story Alfred P. Murrah Federal Building in Oklahoma City (OKC). The blast caused widespread damage to over 300 buildings in the area. The Federal Building sustained the greatest damage with a large portion of it suffering total collapse. Hundreds of people were injured, many killed and over 100 were reported as missing and presumed trapped in the rubble.

Approximately sixty minutes after detonation of the explosives, the Federal Emergency Management Agency (FEMA) posted an "Advisory" to all 26 Urban Search & Rescue (US&R) task forces that, the National US&R Response System had been activated, that two task forces (Sacramento and Phoenix) had been mobilized to OKC at the request of the governor of Oklahoma, and that two additional task forces were placed on "alert".

Metro-Dade Fire Rescue received the advisory through the Special Operations Division. Chief C.J. Castillo was "Activated" to respond to Oklahoma City as part of the FEMA Incident Support Team (IST) at 1500 on Wednesday April 19. On April 22, Chief C. Sears mobilized to join the IST along with Communications Specialist J. Carroll to set up commu-



nications. FL-TF1 was put on "Alert" at 2350 on April 22 and "Activated" at 0045 on April 23. The complete task force arrived at the point of departure (POD), Miami International Airport at 0620. Arrival at Tinker AFB in OKC was at 1220 CDT. FL-TF1 Metro-Dade, was mobilized on Sunday, April 23 and operated until May 1. At the incident's conclusion on May 6, FEMA had deployed eleven of the fourteen "deployable" task forces.

FL-TF1 was transported by Air Force personnel to the Incident Operations Area. An area familiarization was conducted via a drive around of the Incident Operations Area. Thereafter, the task force was transported to the Myriad Convention Center (one mile south of the Incident Operations Area). FL-TF1 used this facility as its Base Of Operations (BOO) during the next eight days. Task Force Leader (TFL), McIntyre, and Assistant Task Force Leader, Cuoco, located their Point Of Contact (POC) and received initial briefing information. A Logistics Area for equipment staging and repair was established in the arena; sleeping quarters were identified and prepared on the second floor; restrooms, showers and a mess hall were located; and a communications desk with phones, UHF radios and FAX machine was set up.

BOO set up completed by 1350 and initial task force briefing held. Task force personnel were transported to the OPUBCO building for FBI badging. Upon return to the BOO, a pre-operational briefing was held to advise personnel of operational assignments, safety issues and operational periods. A two-ton truck to transport equipment to and from the Incident Operations Area was secured and loaded. Personnel were bedded down in preparation for their first operational period at 0100 on April 24.

The operational periods for FL-TF1 remained 0100-1300 until April 25. On April 25 the task force operated from 0100-0800 to facilitate the change of operational periods to 2000-0800. This operational period remained unchanged for the rest of FL-TF1 involvement in the incident.

The mission objectives for FL-TF1 during the first four days of operations were to conduct extensive shoring operations on the 1st, 3rd and 4th floors as well as debris and body removal from the "Pit" area. The mission objectives for the last four days of operations were to conduct debris and body removal from the north-east face of the building.

Once deemed structurally safe, a forward staging area was established in the lower level parking garage on the southwest corner of the affected building. The staging area housed the equipment staging, medical monitoring and personnel rehabilitation areas. A golf cart was secured to provide transportation of personnel and light equipment to and from staging and BOO, as well as the Incident Operations Area.

A Command Post was established by the IST in the freight receiving area located in the northwest corner of the affected building. The CP housed all sections of the IST, OKC Fire Department Rescue Command, American Red Cross supply and resource desk, and a Technical Information Specialist (TIS) for each operating task force.

Operational briefings were held at the incident operations area prior to every operational period. Safety and weather updates were monitored and transmitted by the IST. Daily updates and information were sent by e-mail to Metro-Dade Fire Department's Headquarters in Miami, FL. Debriefings were held at the BOO prior to FL-TF1 personnel's release to rehab.

FL-TF1 personnel visited with children in the area schools to explain and discuss the work of the task forces. The Task Force also visited the YMCA day care to visit with the children and make a presentation of a plaque and donation.

On May 1, FL-TF1 departed Tinker AFB bound for Miami, Florida. Communications Specialist J. Carroll remained in OKC until May 6. On arrival in Miami, equipment cache management was turned over to the "Home Support Team" for rehabilitation, inventory and storage. A post-mission critique was conducted on May 5. A mandatory Critical Incident Stress Debriefing (CISD) was held on May 9 for all TF members. A second voluntary CISD was held on May 10 for TF members and their families.

Evaluation Of Effectiveness

Prior to the demobilization of FL-TF1, at 0900 May 1, all task force members were requested to complete an extensive questionnaire related to their experience with the Oklahoma activation and response. The questionnaire was an outcome of an ongoing effort by FL-TF 1 to improve their program's efficiency and effectiveness. The purpose of the self-administered evaluation is to provide a mechanism for task force personnel to comment on their experience while current in their mind; to provide rapid

feedback to Metro-Dade Fire Rescue in a systematic manner; to identify procedures and processes that may need improvement; and to establish a baseline for future planning and development of the task force operation. The goal of this evaluation component is to identify gaps in the team preparedness and response which may require additional training, exercises or drills, reallocation of resources and other support necessary to improve the efficiency and effectiveness while maintaining a safe and healthy outcome for task force members.

A questionnaire was initially adapted from one developed for an FL-TFI mobilization exercise August 1-2, 1994. In a collaborative effort with the Field Epidemiology Survey Team (FEST) at the University of Miami School of Medicine and MDR, an expanded questionnaire, addressing all phases of the activation and response, was developed. Field input from Oklahoma, via fax, modem and telephone further guided the design of a questionnaire.

The questionnaire consists of four sections. The first section details each phase requesting answers ranked from outstanding (no improvement), efficient (minimal improvement), satisfactory (more improvement necessary) or inefficient (much improvement necessary) and comments. The second section requests personal answers of yes, no and I don't know with further comments. The third section requests personal comments/observations regarding benefits and limitations of task force positions. The fourth section requests each task force member to circle any of the common signs and symptoms of a psychological reaction to a stressful event they may have experienced during this response. This page was detached and submitted anonymously for use by the CISD team during their debriefing.

A specific procedure for administering the questionnaire was used to respect task force members confidentiality. Chief Castillo emphasized that the interpretations of this evaluation will take place by the Field Epidemiology Survey Team (FEST) at the University of Miami. Completed questionnaires were placed in a closed box and upon arrival in Miami placed into the custody of FEST.

A post-mission critique was held on May 5 to (i.) identify all accomplishments of the task force, (ii.) identify any problems, (iii.) discuss improvements for future mobilizations, (iv.) identify gaps in

the process or procedures in the US&R Response System, (v.) identify how lessons learned may be used to improve task force efficiency and effectiveness.

A preliminary report with corresponding graphs and recommendations was presented. A comprehensive final report is pending further direction from MDR. A meeting is tentatively scheduled for the end of August to discuss and evaluate the findings with the task force members.

Lessons Learned And Recommendations

CALLOUT:

ISSUE: The efficiency of the callout process was hampered.

BACKGROUND: An updated draft of the mobilization manual was recently revised with significant changes in many procedures. A draft of the revised manual has not yet been disseminated. Further, the task force did not properly utilize the established paging system.

RECOMMENDATIONS: Finalize all revisions of mobilization manual and appropriately disseminate. Schedule exercise for task force leaders and staff to train utilizing established paging system.

TF ASSEMBLY & PROCESSING:

ISSUE: Assembly area for task force is inadequate.

BACKGROUND: Assembly area did not provide proper shelter during in-processing. Insufficient lighting for evening mobilization and parking.

RECOMMENDATIONS: Relocate assembly and processing area.

ISSUE: Lack of personnel for efficient and effective in-processing.

BACKGROUND: Activated TF members used for in-processing. Departure time moved up three times.

RECOMMENDATIONS: Need to further develop and expand Home Support Team concept.

CACHE MANAGEMENT

ISSUE: Time delay in securing trucks.

BACKGROUND: Fire Department's Logistical Services Division personnel not contacted in a timely manner and TF members were used to pick-up trucks.

RECOMMENDATIONS: Use of Home Support Team and strict adherence to mobilization manual.

ISSUE: Efficiency of cache palletizing.

BACKGROUND: Palletizing of cache took an extremely long time. TF members not trained in proper palletizing procedures (load limits, Haz-mat, configuration, etc.). Not enough trained logistics specialist on hand.

RECOMMENDATIONS: Provide awareness level training to all TF members. Provide operational level training to more logistics specialists.

TASK FORCE MANAGEMENT:

ISSUE: The task force chain of command was not adhered to.

BACKGROUND: Task Force T.O. designed for 24 hour operation of two groups. Single group working 12 hour shifts creates overage of staff positions. It was often expressed that the structure was there but TF members did not follow it. Some questioned the ability to separate between task force position and fire department rank. Many felt the chain of command needs better enforcement.

RECOMMENDATIONS: Earlier re-assignment of excess staff to other functional areas. Ensure the initiation and maintenance of the chain of command.

ISSUE: The dissemination of information at operational briefings was limited.

BACKGROUND: Incident Daily Briefing Form not used. Information in IAP not shared with all TF members.

RECOMMENDATION. Use of incident Daily Briefing Form to provide complete and standard dissemination of information at briefings.

BASE OF OPERATIONS

ISSUE: There was questionable ventilation at base of operations.

BACKGROUND: Equipment staging and repair area on first floor of arena, sleeping quarters on second floor.

Vehicles and gas powered equipment operating in arena.


RECOMMENDATIONS: Provide for proper ventilation, move equipment repair area or monitor sleeping quarters for clear atmosphere.

Recommendations For System Improvement

There is a need to improve the capability of task forces to communicate with the IST and other task forces.

The National US&R system was developed to respond to urban search and rescue needs following a catastrophic earthquake which often results in multiple building collapses. It is important to note that the OKC incident was different than what the task forces had planned and trained for: (i.) The OKC incident involved primarily one structure. The magnitude to the nine story building created a need for the OKC Fire Department to request outside assistance. (ii.) With only one site to consider, FEMA implemented an Operations Section as part of an IST with command and control responsibilities for the search and rescue operation. The reason for the Operations Section to function with search and rescue responsibilities was to coordinate the multiple task forces working one building. (iii.) The use of the entire task force for 12-hour operational periods versus two shifts during a 24 hour schedule. (iv.) The task force mission shifted from rescue to recovery.

The IST Operational System Description should be revised to reflect lessons learned from OKC. The rescue strategy and tactics guidelines also should be revised to reflect these lessons learned.



Puget Sound, Washington WA-TF1 Executive Summary

Introduction

On April 19, 1995, a manmade disaster of devastating proportions struck the Alfred P. Murrah Federal Building in Oklahoma City, Oklahoma. The magnitude of the resulting destruction necessitated the response of eleven Urban Search and Rescue Task Forces, including WA-TF1 from the Puget Sound Region of Washington State. An estimated 4,000 pounds of explosives were used to shear the North wall of the structure from ground floor to roof, inflicting death and untold grief upon the citizens of Oklahoma City and sending shock waves across the nation. The blast destroyed over half a dozen other buildings and heavily damaged hundreds more.

WA-TF1 was alerted on Sunday, April 23, and mobilized on Monday, April 24. The task force arrived in Oklahoma City at 1939 hours CST Monday evening. After establishing our base of operations at the Myriad Convention Center (approximately 6 blocks from the incident structure), task force leaders toured the site to determine operational needs and initial objectives.

Operations

WA-TF1 members were in Oklahoma City for a total of eight days. Work periods averaged 12 to 14 hours per day and involved the difficult transition from day shift to night shift and back again. Initial efforts involved limited search operations and orientation to recovery work in progress. Our task force members quickly developed good work relationships with members of the Oklahoma City Fire Department, other task forces, law enforcement agencies and private contractors. The hospitality and treatment we received while at this incident were truly exceptional, fueling morale and leaving everyone with heart felt admiration for the citizens of Oklahoma.

Our operations on site primarily consisted of shoring partially collapsed concrete floor sections, breaking and removing concrete, hauling debris

from the structure, and assisting with the extrication and removal of victims. The search component of our group gained access to the upper floors of the East side of the structure by entering a nine foot diameter HVAC tower on the South East corner and using ropes to ascend inside the tower to the ninth floor. At this point they established a rope hoist system enabling access to all floors on the East side of the building.

Rescue squads gained invaluable knowledge of concrete breaking methods with various tools, rebar cutting techniques, heavy object movement, and the shoring of unstable, partially collapsed floor and wall sections.

More visible among our accomplishments were those achieved by the combined efforts of our riggers with the crane crews, responsible for movement of the massive sections of reinforced concrete.


Organization

Initially the standard task force system of organization was utilized. However, with the entire team on site at one time, versus the split team concept with two separate shifts, it was necessary to modify our organization to reflect a more classical incident command format. One task force leader assumed the role of operations officer allowing the other task force leader to organize resources and maintain a liaison with the multitude of other organizations and agencies operating at the incident site.

Search team managers reorganized their groups into rescue squads employing technical search specialists, canine search specialists, and haz mat specialists as rescue specialists.

Both safety officer positions were utilized to monitor the number of squads working at a given time.

A paramedic filled the role of medical team manager as well as assistant medical team manager. This



allowed both doctors the freedom to assist any squad involved with victim recovery operations. Medical monitoring of our personnel under this system proved to be very successful; WA-TF1 members experienced the lowest injury rate of all the task forces.

The work load for logistics personnel remained high for the entire time in Oklahoma City; providing for on site equipment requirements, tool repair, and procurement of new equipment. Logistics, technical information, and communications personnel worked well beyond the scheduled shift periods on a regular basis. After installation of a repeater on a nearby highrise, communications were uninterrupted and clear.

Technical team managers assumed several roles crucial to operations on site; including site logistics coordination, manpower and rehab scheduling, as well as their duties of managing and supporting tech team operations.

Conclusion

Overall the WA-TF1 gained invaluable experience in the effective deployment of resources designed to accomplish search and rescue operations in a heavily damaged concrete structure. Each component of the task force benefited from the challenges provided by this event and improved application of the knowledge and skills that had been untested prior to this tragedy. Since the entire task force was on site during our assigned work period the organization was adapted to accommodate the greater number of personnel and necessity for more coordination. The assignment of a task force leader to operations officer resulted in better management of the activities of the four rescue squads and two search teams. Since the need for search functions was minimal, utilizing the search teams as rescue squads was beneficial. As with many manager functions, both safety officer positions were filled throughout the work period. The coordination of the teams on site improved daily and will provide a standard of operation to enhance large or complex operations where multiple task forces are deployed at the same incident.

PUGET SOUND USAR TASK FORCE OKLAHOMA CITY DEPLOYMENT Lessons Learned

Personnel

Issue:	Standardization of personal gear
Discussion:	Member's gear was transported in various forms, making palletization difficult.
Recommendations:	Issue a standard Task Force duffle bag to each member for their personal gear.
Issue:	Showers
Discussion:	Team members need to have daily showers. This is a health concern.
Recommendations:	Be prepared to deploy with portable showers.
Issue:	Sleep
Discussion:	Sleep time was often limited to a few hours, resulting in premature fatigue of some members. The long term effects could be detrimental to the mission.
Recommendations:	Be disciplined about scheduling a block of time for sleeping breaks. Eliminate some of the pre and post shift activities. Reevaluate the effectiveness of the 12 hour work shift.
Issue:	Critical Incident Stress Debriefing
Discussion:	The Critical Incident Stress Debriefing was not as effective as it could have been, scheduled with too many other parts of the demobilization.
Recommendations:	Task force leaders and mental health professionals should reevaluate, and establish guidelines.



Equipment

- Issue: Rebar cutting capability
- Discussion: There was a strong need for improved rebar cutting capability. The team was unable to efficiently cut 1-½" rebar, slowing operations.
- Recommendations: Research other tools and options.
- Issue: Work Clothes
- Discussion: Inadequate supply of daily work clothes for team members.
- Recommendations: Bring a larger supply of coveralls, establish method for laundering once at the incident location.
- Issue: Saw blades
- Discussion: Diamond tipped circular blades versus abrasive blades. Each blade type is effective in different circumstances.
- Recommendations: Keep a large enough supply of both types of blades for future incidents.

Team Organization

- Issue: Pre-departure personal health screening
- Discussion: Lack of planning forced this process to be rushed.
- Recommendations: Organize an action task list for the medical team.
- Issue: Incident Action Plans
- Discussion: Need incident action plans for each work period, assisting in the dissemination of information throughout the team. This will shorten the team briefing meetings.
- Recommendations: Rely on the Technical Information Specialists to develop an incident action plan for each work period.
- Recommendations: Task Force leaders and managers meet prior to operational work shift and develop a short team plan and schedule. Print and distribute to members.
- Issue: Terminology
- Discussion: Incident site terminology was not standard, often confusing.
- Recommendations: Establish standard terminology, such as utilizing the Incident Command System terms.
- Issue: Personnel identification
- Discussion: Personnel identification at incident site was often difficult.
- Recommendations: Separate Incident Command vests for areas such as: structures, operations, riggers. Utilize different colors in vest, coveralls, or helmets. Utilize large velcro name tags.
- Issue: Logistics
- Discussion: The process of collecting, providing, maintaining, and inventory of equipment is more than a four person job.
- Recommendations: Add additional logistics personnel.
- Issue: Chain of Command

Discussion: Leaders were guilty of jumping over managers, often over supervising and micro managing tasks.

Recommendations: Reminder at team meetings to utilize the incident command system. Provide personnel with clear directives, assignments, and authority to complete task.

Issue: Position Assignments

Discussion: Personnel assignments changed, often creating confusion.

Recommendations: Keep personnel assigned to one position for duration of incident. If changes are made, clearly identify those changes at briefings.

Issue: Demobilization plan

Discussion: Lack of task specific demobilization plan caused confusion and duplicated efforts.

Recommendations: Develop a written demobilization plan, providing personnel with assignments and authority to complete task.

Issue: Ability to reorganize squads as needed

Discussion: When one team function was not needed, we were able to reorganize into additional squads as needed.

Recommendations: None, this process was beneficial to the management of the incident.

Issue: Medical team managers

Discussion: Utilizing paramedics instead of doctors as medical team managers. FEMA has outlined doctors as medical team managers.

Recommendations: Utilize paramedics as medical team managers, and the doctors for field work.

Issue: Safety Officer

Discussion: Utilize one task force leader as a safety officer.

Recommendations: None. This gave the safety officer the authority to manage the team in the absence of the task force leader, such as the task force leader briefings.

Issue: Logistics cross training

Discussion: Personnel from all functional areas must be able to work with logistics personnel.

Recommendations: More emphasis on basic logistics training for each member.

Information Dissemination

Issue: Long briefings

Discussion: Long question and answer session should not be included in briefings.

Recommendations: Structure shorter briefings with question and answer time every few days, or have a separate meeting just for questions and answers.

Recommendations: Utilize the chain of command for briefings, let the team managers spread some of the information to team members.

Issue: Call out procedures

Discussion: Call out procedures were not clearly defined.

Recommendations: Take lessons learned from this deployment and establish a better call out procedure.

Issue: Copier and printer



Discussion: The team needed more copying and printing capabilities.
Recommendations: Purchase portable printing and copying equipment with field capabilities.

Communications/Radios

Issue: Radios
Discussion: Often hard to hear radio traffic while working in confined area.
Recommendations: Single ear plugs for the radios.

Issue: 800 MHZ system
Discussion: 800 MHZ system worked extremely well when used in conjunction with the repeater.
Recommendations: Few improvements needed to this system.

Issue: Hometown communications
Discussion: Families lacked a contact person at the incident that could update the families on the status of the task force.
Recommendations: Establish a 24 hour contact phone number for families to collect information about the team.

Menlo Park, California CA-TF3 Executive Summary

On Wednesday April 19th, 1995, at 0902 hrs. a bomb was reported to have been detonated in Oklahoma City on Sixth Street next to the nine story Alfred P. Murrah Federal Building. The blast caused extensive damage to the building. The entire rear portion of the building was collapsed from ground level to the roof including a section which was collapsed almost entirely to the front of the building. There was extensive pancake type collapse and possible void spaces caused by the layering of all nine floors at the street level. Many occupants of the building were killed and a very large number were unaccounted for.

California Task Force 3 was activated on Monday, April 24th, 1995 at 0550 hrs. CA-TF3 was requested to respond to the site of the bombing in Oklahoma City to assist in rescue operations which had been started by several other previously activated Task Forces. (The official facsimile was received at 0624 hrs.) The Task Force was transported by C141 from Travis Air Force Base and arrived late in the evening on 4/24/95 and the Task Force leaders were given a tour of the building. The entire task force worked at a shift starting the next day and continued working for the next seven days.

Tasks included hazard mitigation, concrete and debris removal, victim location and removal and advanced search techniques involving all specialized equipment and utilization of our canine search specialists.

Unfortunately there were no live victim recoveries for our Task Force; however, the service provided to the citizens of Oklahoma City in the dignified recovery of loved ones was extremely valuable to the community and gratitude was freely and openly expressed on a daily basis.

Mission Overview

The overall mission of the Menlo Park California Task Force 3 was to deploy to Oklahoma City and to

relieve Task Force Teams that were already working at the partially destroyed Alfred P. Murrah Federal Building.

The team developed two goals on which to focus:

1. Assist the people of Oklahoma City as directed by the Incident Command Staff.
2. Provide, as much as possible, a safe working environment so that all personnel would return home safely.

April 24, 1995 (Monday):

The Task Force was activated at 0550 hours. The team was assembled at Menlo Park Fire District Headquarters by approximately 1030 hours. The Task Force traveled as a group by bus to Travis AFB. The team left Travis AFB at approximately 1500 hours. The Task Force arrived at Tinker AFB in the late evening. Security badges and lodging were obtained in Oklahoma City. The leaders and managers of the team were given a brief tour of the damaged building and an overview of the situation. A team briefing was conducted at 0100 hours of 4/25/95 and most of the team retired for the night around 0200 hours.

April 25, 1995 (Tuesday):

The Task Force was assigned to start work at 1300 hours. The assignment was to work at debris removal and body recovery at the base of the building, between columns 18 and 20. The Los Angeles County Task Force was working alongside of us, from column 20 to 22. The shift ended at 2000 hours.

April 26, 1995 (Wednesday):

The Task Force started work at 0800 hours. The assignment was for ½ the Task Force (2 Squads) to work on hazard mitigation on the upper floors, and the other half to work on debris and body removal on the rubble pile at the base of the building between column 22 and the east end wall.

The upper floors work meant removing debris and overhanging slabs from floors nine through four. This work involved pre-rigging all of the floors with safety lines and equipment transfer/retrieval lines. The team then started to prepare the individual slabs for removal. This included core-drilling and installing cabling that would allow the large cranes to remove the piece safely after the connecting rebar was cut.

High winds (gusts to 50 mph) stopped work for approximately 1-½ to 2 hours during the afternoon.

The shift ended at 2000 with debris removed from the edges of the affected east-side floors and preliminary rigging completed.

April 27, 1995(Thursday):

The Task Force started work at 0800 hours. The assignment was to have ½ the Task Force work on debris and body recovery at the base of the building between columns 22 and the east-end wall. The other ½ completed the removal of the overhanging slabs from floors nine, seven, six, five and four.

Debris removal from column 22 revealed a portion of the column that was damaged to a point where temporary repair was necessary before continuing with the work.

The shift ended at 2200 hours.

April 28, 1995(Friday):

The Task Force started work at 0800 hours. The assignment was for ½ the Task Force to work on debris removal and body recovery at the base of the building between column 22 and the east end wall. The other ½ started work on securing the 6th and 5th floor overhanging, hazardous slabs in the chimney area (building indentation) to the building.

The shift ended at 2000 hours.

April 29, 1995(Saturday):

The Task Force started work at 0800 hours. The assignment was for ½ the Task Force to work on debris removal and body recovery at the base of the building between column 22 and the east end wall. The other ½ completed the securing of the 6th floor slab in the chimney area (building indentation) to the building. The slab was "diapered" with a large piece of canvas to prevent debris from falling.

The shift ended at 2000 hours.

April 30, 1995(Sunday):

The Task Force started work at 0800 hours. The assignment was to work on debris removal and body recovery at the base of the building between column 22 and the east end wall. A decision was made by the Command Staff to declare the chimney area between column 22 and column 26 as an unsafe area. Barrier tape and a red painted line marked the safe zone from the unsafe zone.

One Squad was given relief at 1600 hours and came back to work with the Orange County Task Force from 2000 to 2400 hours. The Orange County Task Force was just starting their first shift and it was felt that some experienced workers would help them adjust to the situation more rapidly and more safely. The shift ended at 2000 hours.

May 1, 1995(Monday):

The Task Force started work at 0900 hours with three Squads. The assignment was to work on debris removal and body recovery at the base of the building between column 22 and the east end wall. The fourth Squad started work at 1200 hours. This was the last work period for Task Force 3.

The shift ended at 2000 hours.

May 2, 1995(Tuesday):

The Task Force started their 24 hour rehabilitation prior to demobilization. Task Force members visited three different schools in the local area. Also, some members visited with relatives of the victims at the request of the Governor of Oklahoma (through channels).

Task Force members were treated in the late afternoon to a tour and barbecue at the Cowboy Hall of Fame by Congressman Chris Hastings.

May 3, 1995(Wednesday):

The Task Force left Tinker AFB at 1200 hours and returned to Moffett Field in Mt. View, California. A brief welcoming ceremony was held there and then the team was taken to a stress debriefing site in Menlo Park. After a short debriefing, the team was taken to Menlo Park Fire District Headquarters in Menlo Park and reunited with family and friends at approximately 1430 hours.

More formal Critical Incident Stress Debriefings were held for all team members on May 10, 11, & 12, 1995.

Evaluation of Effectiveness

Task Force Organization:

The organization of the Task Force was enhanced during this deployment to include six new positions: two Plans Officers, two Safety Officers, and two additional Logistical Specialists.

The Plans positions were utilized as additional technical positions due to the fact that there was a plans section set up within the Incident Support Team and an individual plans section for the task force was not needed. Had we been assigned a specific area away from the I.S.T. then this position would have been highly desirable. Even without a task force plans section the additional personnel were found to be most valuable in providing relief for the Task Force Leaders and in compiling additional information for the Technical Team.

The Safety Officers were so effective that in the opinion of our Task Force Leaders and Team Managers they should be considered as permanent positions for all future deployments. They were especially important here because of the constant fear of falling debris and the number of firefighters and team members working within close proximity of each other.

The two additional logistics positions were a definite improvement over the old configuration and there were even more people used for logistics from among other technical positions such as the Canine Specialists. The logistical needs of the task force were met at this incident only because of this utilization. It would be beneficial to have some of the technical personnel cross trained in logistics so that they can assist when their specialty is not being used.

All other facets of the task force organization worked well as designed.

Call-out procedure:

The individual agencies which comprise California Task Force 3 did an excellent job of handling the call-out of their members. All positions were filled without any lost time. The advanced alert notification was received in time to be of great value.

The call-out procedures for the Canine Specialists, however, was not smooth and should be revisited. Calling dog handlers from as far away as Marin County and having them respond all the way to Menlo Park was time consuming. It would be preferable to have canine units called in who were nearer to our mobilization site to facilitate briefings and other mobilization activities.

All other items on the evaluation list were deemed effective with the exception of the position descriptions. Descriptions need to be formed for the new Plans and Safety positions.

Note on FOG manuals: Each task force member has been issued a copy of the FOG and there is an additional copy in each of the gear bags which are issued during mobilization. All personnel were encouraged to read over the pertinent sections while en route to our POA.

Lessons Learned:

Safety Issues:

It was found that there were many issues of an emotional nature which threatened the safety of operations during the mission. The understandable desire to search for survivors to the last possible moment and the need for loved ones to know the facts concerning the death of friends and relatives seemed to overshadow the entire operation. This lesson was summed up best by one of our Structures Specialists in his After Action Debriefing report:

“Our two largest concerns on the deployment were the hanging debris from the upper floors and the partially damaged columns. The column instability was partially mitigated with the installation of tube bracing at the FEMA engineer’s request. The hanging debris from the upper floors was stated by all Task Force engineers as well as the overhead engineers to be a hazard to personnel working below. Unfortunately the local fire department was unwilling to allow these hazards to be removed. The task Forces made the, correct move in refusing to work under such life threatening conditions. This type of stand must be taken whenever local emotions supersede sound engineering judgments.”

Other safety issues which were noted and acted upon were the increased possibility of injury due to fatigue in later stages of the operation, the increase in eye injuries due to blown dust and fine debris and other general safety concerns. The fatigue issue was addressed by decreasing the amount of time a squad was assigned to a task and rotating in a rested crew to replace them.

The last safety lesson learned is that the decision of the Menlo Park Task Force to purchase a rated helmet (RK70) was a wise one. During operations which involve overhanging debris and the possibility of falls, it is paramount that every opportunity be taken to provide maximum protection.

Logistics Issues:

The primary logistics lesson which needs to be addressed is the fact that it was learned quickly that there was not enough rope and rigging hardware in the cache to adequately support advanced high angle rope work such as that which was encountered in this operation. Contrary to recommendations for the amount of equipment needed made by the Logistics Group in February, more equipment should be provided for this type of work.

Another lesson learned is that there needs to be a small tool kit issued for all rescue squad members which include screwdrivers, an adjustable wrench, pliers and a striker for igniting torches. The striker being the primary item needed when doing a lot of cutting operations. Much time was lost trying to locate strikers. Also, the striker being considered is easily attachable to personal clothing and is held securely to avoid the possibility of loss.

Efficient logistics support was found to be a great booster of team morale. Having all equipment when needed made squad operations much more efficient.

Operations issues:

Menlo Park's interactive management style seemed to be quite effective. The Team Managers worked closely with the squad officers in the management of operations; likewise the Task Force Leaders were in close communication at all times with the Team Managers.

Daily briefings are extremely important to the safety and well being of all team members. When briefings were not held there was a lack of direction the following day until word filtered down to all members as to the strategy and tactics which would be used and as to the safety concerns and issues involving operations which were brought up at the Task Force Leader's briefings in IST. Due to the long work days a concise but informative briefing needs to be held. Follow the example set by the IST. Maximum time for briefing= 20 minutes.

Search Team Issues:

Work with the Search Cam was most beneficial when done with a Structures Specialist present. It would be advantageous to have the Structures Specialists drill with the Search team to point out what structural areas to watch for.

Communications Issues:

Forward Positioning of Communications Specialist. Having the communications people close to the

rescue squads proved to be advantageous. Radio and battery problems were resolved quickly. Having Tech Info Specialists cross trained in communications assisted greatly in resolving communication problems when needed.

Earphones were a welcome addition in the high noise environment for many, but some found them to be uncomfortable. Headsets or something similar would be preferable in most situations.

Cell phones were extremely valuable, even on the work site. They were used for long conversations between Task force leaders and Team leaders, thus freeing up valuable radio time.

They were also of great value when contacting the IST or Logistics.

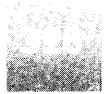
CISD Issues:

The Pre-CISD during mobilization was very beneficial according to many members. Having both counselors as well as clergy present was an excellent idea.

On de-mobilization day it was very beneficial to the team members to be able to visit schools and victim's families. When possible, this type of activity should be encouraged for those wishing to participate.

Recommendations:

1. Structures Specialist: Recommend that Logistics should have 25 to 50 Crack Monitors. Would assist in monitoring stress areas of structures. Cost approximately \$350 to \$800 to supply cache.
2. Recommend a belt-style tool kit (striker, adj. wrench, screwdriver, pliers) for all Rescue Squad members.
3. Recommend increase in minimum rope and rescue equipment for cache. We used 3 Task Force complements of rope.
4. Recommend rated helmets for all personnel. Besides danger from falling objects, there is always a danger of an individual falling and hitting his or her head (it happened to us).
5. Communications: Recommends that we purchase a repeater so that we don't have to rely on homemade alternatives. This would provide clearer radio transmission and would save time in set-up.



6. Recommend compressed-air safety horns, bullhorns, and whistles for Safety Officer positions. The noise factor was very high.
7. Recommend that CISD should be part of a mandatory on-site demobilization process.
8. Standardized accountability system (PASS, Status Board) for all Task Force Team members.

There was some delay in locating all personnel during emergency evacuation procedures.

9. Review size of equipment cache for 100% of Task Force working. If all Squads are working at the same time, more equipment is needed.



Orange County, California CATF-5 Executive Summary

At 09:02 AM on April 19, 1995, a car bomb destroyed the nine-story Alfred P. Murrah Federal Building in Oklahoma City (OKC). The explosion was felt over 30 miles away, damaged over 300 buildings, ignited 40 cars, injured nearly 400 people, and killed 168 people including 19 children. It was the worst terrorist event to occur on American soil in our nation's history.

Local government agencies initiated a total commitment response, much in accordance with their disaster and mass casualty plans. Command and operational activities were conducted in a "disaster mode", which allowed for the use of non-traditional response organizations such as construction contractors and a host of specialized resources. Later, they were assisted by significant State and Federal resources. Local emergency service agencies were challenged by the immediate and tremendous response from emergent volunteers, as well as the unsolicited and overwhelming response from in-state and out-of-state public agencies and individuals. The Federal Bureau of Investigation declared the incident a crime scene and exerted primary command authority over the incident. The Oklahoma City Fire Department commanded rescue operations and were later assisted by the Federal Emergency Management Agency (FEMA) and eleven of their Urban Search and Rescue Task Forces. These multi-disciplinary US&R resources with their specialized search dogs, equipment and training proved invaluable in locating victims and safely recovering their remains from the rubble of the Murrah Building as well as other adjacent buildings. Requirements for command/control and logistical support for all these resources over the three-week course of this incident, which ended May 6, 1995, was monumental.

Critical Incident Stress became a key concern for all incident responders. Horrific visual sights, constant life-threatening physical threats, foul weather, exhaustive work, and lack of sleep was debilitating to responders and caused psychological stress.


Before the incident was concluded FEMA had deployed eleven of their twelve "operational" task forces. Orange County, California Task Force-5 (CA-TF5), being the last of these, deployed to OKC on April 29th, and after recovering 22 victims returned home May 6th, 1995.

OVERVIEW

At 1730 hours on Friday, April 28, Orange County, CA-TF5 was placed on "Alert" by FEMA via OES. At 0900 the following day CA-TF5 was "Activated". By 1300 hours the task force of 62 people, one search dog, and its 40,000 pound cache of equipment and supplies was at March Air Force Base being readied for air transport via a C-141. By 2300 hours CDT, CA-TF5 arrived at Tinker Air Force Base in OKC.

CA-TF5 was taken directly to the Myriad Convention Center (one mile south of the incident site) which was serving as the Incident Base for FEMA's US&R task forces. This facility provided space for equipment, sleeping areas, showers, restrooms, and a feeding area. In addition, there were power drops and phone lines available. CA-TF5 received their initial incident briefing from CA OES Deputy Chief Mark Ghilarducci who was the Team Leader for FEMA's Incident Support Team (IST). CA-TF5 divided their task force into a Day and a Night team, and spent the rest of the night establishing their Base of Operations (BOO) at the convention center, a Forward Staging/Shelter area one block from the incident site, obtaining FBI security badging, and preparing to start their first operational period at 0700 hours the morning of May 30.

Since CA-TF5 was the last and only task force left to assist OKC in the final days before recovery operations were suspended, CA-TF5 worked the next three days and nights around the clock under the direct supervision of FEMA's IST personnel to mitigate safety hazards and clear debris to search for and recover vic-



tims of the blast from the Alfred P. Murrah Federal Building.

The Alfred P. Murrah Building is a nine-story reinforced concrete structure built in 1977. It is supported by a perimeter wall extending the full height of the building. There are approximately 14,000 square feet per floor. The 6" thick concrete floors were reinforced with ½" rebar and supported by 33 concrete columns. The columns and beams are reinforced with 1" rebar. The first floor is partially below grade from about mid-span to the east end. There is a one story portion of the first floor, entirely below grade and east of the main structure, known as the East Lobby. There is another one story portion to the west that is above grade, and although damaged it provided an area for the OCFD & FEMA's Command Post. The south side of the building abuts a garage structure which is capped by a courtyard used for ingress/egress to the second floor. The blast occurred on the roadway at about the middle of the north wall. The effects on the building were a full height collapse of most of the northern half of the building. The configuration of the debris was described as a "pancake" collapse. In addition, the center portion north of the stairwells suffered collapse of the floor and beams while the columns remained. This portion of the collapse involved the 2nd and 3rd floors and was known as "The Pit". Many areas of the building were given descriptive names to aid in easily understood reference points.

The damaged Federal Building presented continuous danger to everyone operating in or around it. The debris hanging from each floor was a known hazard and was addressed by the Structural Engineers in each day's Incident Action Plan (IAP). The known chemical hazards such as asbestos and biochemical hazards were addressed by the Centers for Disease Control out of Atlanta, Georgia. Proper precautions and personal protective equipment were required and enforced. Decontamination of personnel and equipment was conducted as needed and at the end of each 12-hour operational period. The unknown hazards, such as structural integrity, were a significant challenge. It was unknown exactly how the remaining portion of the building would behave as debris was removed from contact with the damaged columns, and as environmental forces such as 30 mph winds, lightning, and heavy rain had its obvious effect on the building. These unknown conditions were monitored constantly and were reassessed and debated every operational period.

Task Force Incident Action Plans (IAP) were developed in conjunction with the Operations Briefings which were held prior to each 12-hour work period. The Structural Engineers would meet separately at the same time. CA-TF5 conducted debriefings at the conclusion of each Operational Period to allow each discipline the opportunity to discuss task force issues, correct problems and to detail the rehab work that needed to be completed. These briefings also afforded the Task Force Leader and Medical Team Manager the opportunity to assess the health and well being of all task force members. Following the debriefings the off-going team would restock/resupply and rehab the tools and equipment they had just used. A large "whiteboard" was placed at the BOO and another at the Forward Staging site to provide a means to post messages and changes to the schedule.

Early in the mission one of CA-TF5's physicians became extremely ill with a diagnosis of pneumonia. He was admitted to St. Anthony's Hospital for three days, was discharged, but suffered a relapse that subsequently led to a joint decision by the IST Medical Officer and CA-TF5's Medical Team Managers and Task Force Leader to evacuate him by a DOD arranged air ambulance back to Orange County. The physician recovered several days later and is now back to work. There were only six other incidents where team members needed medical attention. One required foot X-rays, but the remainder were treated by the task force medical team without further assistance. The two biggest issues were airborne particles affecting eyes and respiratory tract, and minor soft tissue injuries due to overexertion. There were a few flu-like symptoms and one of the Task Force Leaders lost his voice due to exposure to caustic concrete dust. Given the long hours, extremes of weather, exhausting manual labor, and of course the hazardous work environment, it is fortunate the task force didn't experience more injuries and illnesses. This excellent track record can be attributed to the high priority that was placed on the health, well-being, and safety of all personnel.

On the night of May 30, CA-TF5 was joined by a FEMA-certified disaster search dog (Ditto) and handler (Elaine Sawtell) from Nebraska Task Force-1. This provided CA-TF5 with a fully operational disaster search dog team of two qualified canines which were used successfully throughout the remainder of the mission.

From the time of arrival, throughout the term of the mission, and for weeks after they returned, the members of CA-TF5 were overwhelmed with the

warmth, kindness, generosity, and gratefulness of the citizens of Oklahoma. The mission became "personal", and the task force members felt as though they were working for close friends; recovering the bodies of their loved ones.

CA-TF5 assisted in the recovery of the final 22 victims before recovery activities were suspended by the OKC Fire Department. Prior to their departure, at the request of the IST, CA-TF5 met with several schools in the area to explain their task force composition and mission. The task force returned to Orange County the evening of May 4th and conducted a full CIS Debriefing prior to leaving March Air Force Base to join their families. A group of five specialists who were left behind to assist OKC returned to Orange County the afternoon of May 6th. On May 7th a second CIS Debriefing was held for the responding CA-TF5 members. At the same time their spouses were invited to attend a separate CISD group at the same location.

Task Force Effectiveness

CA-TF5 was placed on Alert by FEMA with a specific anticipated Activation time. The task force used this to their advantage by advising all task force members to report to the Assembly Point at the designated time unless they heard otherwise. Call-out therefore went well, and all task force members were at the assembly point within minutes after the official activation.

A FEMA US&R Task Force has 62 people, 4 dogs, and a cache of equipment and supplies that weighs approximately 40,000 pounds, occupies over 3,000 cubic feet, yet has no intrinsic transportation assets that are airlifted with it. Aside from being difficult to mobilize, transport, palletize and load on an aircraft for deployment, this lack of vehicles leaves the TF with uncertainty about obtaining appropriate transportation in a timely manner at their point of arrival. It places an extra burden on local resources of a disaster-impacted community, and delays the Task Force's response as the cache is unloaded from the aircraft and reloaded onto ground transportation. Although CA-TF 5 was able to be at its point of departure airfield in four hours, and adequate transportation was available to the Myriad Convention Center when we arrived at Tinker Air Force Base, these assets still had to be shared over the next several days with other Task Forces. In a larger disaster the ability to obtain transportation will be much more difficult, and each time the number and type of vehicles provided will most likely be different.

This lack of consistency will add delay to the Task Force's response as a new loading configuration is worked out.

The US&R cache has a great variety of tools, many of which do the same job, and for which there is only one. Because there was only one of some tools, e.g. concrete cutting chain saw, we often had to use other less appropriate tools for the job because the tool of choice was either in use, being refurbished, or was broken. FEMA should review their equipment cache with a critical eye to reduce the number of different tools that have redundant functions, but ensure there are at least two of every tool that has proven itself capable and reliable.

Relevant checklists were utilized and found to be effective. However, Position Descriptions and operational checklists need to be written for the newly authorized Plans Officer and Safety Officer positions. Additionally, all PDs and checklists should be reviewed and possibly rewritten to remove redundant material and to reflect the change in task force staffing. FEMA should give consideration to reconfiguring the Task Force in light of these newly added positions to improve "unity of command" concepts. CA-TF5 recommends a reconfiguration as depicted in our attached organizational chart.

CA-TF5's organization was effective in dealing with most of the situations which were presented during the incident. When certain specialists weren't being used in their regular capacity, they chipped in and helped where needed. Everyone, especially supervisors need to be mindful of where help is needed and where that help might come from. This also re-enforces the need for cross-trained personnel. It cannot be avoided, that depending on the phase of the mission, or the specific activity/function that needs to be performed, there is a constant reconfiguring of the task force. TFLs and Managers must anticipate the manpower needs for each of these phases, be flexible in their implementation, and plan for their staffing early enough to include them in the TF's IAP. It should be noted that although the task force can operate independently, it was designed with the forethought that it may augment an existing work group and/or be augmented by specialized resources such as heavy equipment. This concept of operations was fully realized as CA-TF5 worked within the Incident Command System augmenting OKC fire and rescue personnel and other task forces, while themselves being assisted by several large cranes and earthmovers.

Lessons Learned And Recommendations

MOBILIZATION:

DISCUSSION - CA-TF5 received its Alert Notification Friday, April 28th at 1653 hours. The notification included an anticipated "Activation" of our task force for the following day at 0900 hours. In the past we have gone from Alert to Activation within as little as 30 minutes. Providing 12 to 24 hours Alert notice prior to Activation greatly improved the efficiency of our mobilization. However, given the time of day and day of the week that we were placed on Alert, we had difficulty contacting some of the doctors and engineers. Additionally, 24-hour emergency contact phone numbers had to be used (sometimes without success) to contact equipment suppliers, activate cell phones and pagers, and secure transportation services since many of these businesses were closed Friday night and going into the weekend.

RECOMMENDATION - Whenever possible, FEMA's Alert Notifications should also provide an anticipated Activation time. Alerts are of greatest value when received early in the day, preferably on weekdays, and preferably at least 12 hours before activation. Task forces should issue pagers to key personnel who may be difficult to contact. The Task Force's cell phones and pagers should be "on-line" at all times; this has the added benefit of consistency of access numbers for these communication resources. Task Forces should have all of their own ground transportation assets - tractor/trailers, forklifts, buses and auxiliary vehicles. Emergency contact numbers and pre-prepared Purchase Orders for vendors and service providers should be in place and reviewed at least biannually.

AIRLIFT: LOADING AND DEPARTURE:

DISCUSSION - CA-TF5 had to contact March AFB to advise them of our Activation orders from FEMA. We were unable to contact our usual point of contact (POC), their Director of Emergency Preparedness, and we had no reliable alternate means of contact because usual business numbers at March AFB on the weekend were not being answered. When contact was finally made at their Command Post, just hours before our departure, we had difficulty being taken seriously.

RECOMMENDATION - Point of departure (POD) military airfields should receive "mission orders" from a single federal source (FEMA, DOMS, FORSCOM, etc.) with direction to assist task forces with their airlift deployment. They should be provided with and directed to immediately call the POC names and numbers for

the Task Force agencies they are to assist. Simultaneously, point of arrival (POA) military airfields should also receive mission orders that direct them to receive and assist the arriving TFs with their logistical needs such as feeding, transportation, communications, and billeting.

A written mobilization/deployment plan of action should be in place that details the procedures to be followed and the resources that will be provided by both parties (the Task Force sponsoring agency and the POD military airfield), to include 24-hour emergency POC phone numbers for both parties. This plan should be verified biannually.

DISCUSSION - CA-TF2 (LA County) was returning to March AFB just prior to CA-TF5's departure from March AFB. This is one of the reasons why we were unable to contact our POC. March AFB had received notification of CA-TF2's arrival (but not of our departure), and therefore they were prepared to assist in CA-TF2's debarkation which fortunately positioned the appropriate military personnel to also assist us, however they were initially detailed to assist with the arriving task force and were therefore understaffed to handle both operations simultaneously.

RECOMMENDATION - FEMA needs to be alerted to this potential conflict and avoid it where possible. POD airfields could be better prepared to handle such situations if the federal tasking entity for all air transport mobilizations and demobilizations of Task Forces was coordinated by the same source.

DISCUSSION - IATA requirements are now in force. These new international requirements for transportation of hazardous cargo are complex, and there is a wide interpretation of their application from one loadmaster to the next which can cause frustrations manifesting the Task Force's cargo and delays in their departure.

RECOMMENDATION - FEMA should place a high priority on providing "Airlift Transport of Hazardous Cargo" training to all TF logisticians. Task forces should have IATA "Declaration of Dangerous Goods" forms filled out with all proper documentation, cache labeling, and appropriate packaging prior to activation. Task forces should have their "Time Phased Forced Deployment Data" forms completed and entered into the military system. The pre-designated POD military airfields should be directed to provide assistance with these requirements to their assigned task forces.

DISCUSSION - CA-TF5's current pallet buildup plan is designed for transportation aboard a C-141. We have made no provision for transportation using other aircraft such as the smaller C-130, civilian air cargo aircraft, or military cargo helicopters such as the CH-53E. Although all military cargo aircraft will accommodate the 463L pallet, some require that the configuration of cargo on the pallet have a different footprint and/or height. Most civilian air cargo planes are not configured to accommodate the military's 463L pallet. Any air transportation in an aircraft that does not accept our current pallet plan will delay our departure by as much as two hours and may require that some equipment be left behind.

RECOMMENDATION - To the extent possible, Task Forces should configure their standard pallet plan based on the use of a C-130 which is the most plausible and restrictive scenario. Appropriate civilian air cargo aircraft that are capable of accommodating the transportation needs of a US&R Task Force should be identified, and alternate pallet plans should be developed for these aircraft. Additionally, pallet plans should be developed for use by military air cargo helicopters.

BASE OF OPERATIONS (BOO):

DISCUSSION - The site selected, the Myriad Convention Center, was an ideal facility for the establishment of multiple task force BOOs. There was ample room to layout and secure the equipment cache and provide separate sleeping areas indoors. Vehicles could access the interior of the building to move personnel and equipment. Twenty-four hour support facilities were in place for feeding, bathing, communications, and resupply of personal items. This freed the task forces from the added burden of providing for themselves, which allowed them to concentrate their efforts on their primary SAR mission. The convention center was secured from the general public and news media. The convention center was 5 - 6 city blocks from the Murrah building which required the establishment of a forward equipment staging area, transportation schedules, and necessitated the use of a repeater for radio communications. Additionally the sleeping areas were too close to the support facilities which were noisy 24 hours a day. Although the task force is capable of self-sufficiency for 72 hours, to do so detracts from their ability to concentrate solely on their SAR mission. Self-sufficiency for a task force means crowded tents with no climate control, cold showers and MREs for meals. The cache may have to be setup out in the open exposed to the elements and requiring around the clock

security. The less a Task Force has to do to shelter, feed, decontaminate, and cleanup, the more time and energy they will have to work on the site and to maintain their tools.

RECOMMENDATION - Finding suitable facilities and establishing support operations for the task forces should be one of FEMA IST's initial assignments. If arriving before the IST, Task Forces should attempt securing this kind of accommodation prior to unloading their cache. Once a US&R task force cache and BOO is established, it is a major undertaking to relocate it. If such facilities are to be used, it should be communicated to the task force prior to their deployment so they may leave that kind of equipment behind. Additionally the IST should come prepared to set up appropriate radio repeaters. Radio frequencies, cell phone and pager numbers for the IST members should be provided to the Task Forces prior to their departure. Sleeping areas should be set up away from all potential sources of noise.

TASK FORCE COORDINATION WITH INCIDENT COMMAND AND IST:

DISCUSSION - From CA-TF5's perspective, FEMA's Incident Support Team (IST) was configured in an Incident Command System (ICS) structure (staffed with US&R qualified personnel, but not necessarily ICS qualified) that worked very closely with and under the authority of the Oklahoma City Fire Dept. (OCFD). CA-TF5 worked directly for the IST who had established an Operations Chief "Ops Ray", an interior Division "Ops Mike", and an exterior Division "Ops Don" none of whom were OCFD members. There was also a contingent of OCFD firefighters who rotated every six hours and were unaccounted for in the IST's Incident Action Plan (IAP). They were detailed to various tasks by Ops Mike and "Chief Mike" (OCFD Battalion Chief Mike Shannon) who had final say on all major operations, but who was not identified in the IAP. CA-TF5 was met and received an overview of the incident on the night they arrived by the IST Leader. The following morning TF5 Leader attended the IST's brief "Operations Meeting." This meeting was attended by the IST's Command & General Staff, several OCFD chief officers, the FBI Agent-In-Charge, and the US&R TF Leaders. There was more debate about the "Slab from Hell", whose ultimate disposition was decided by "Chief Mike", than there was direction and clarification about the IST's Incident Action Plan. At this same time the IST and TF engineers were meeting separately to discuss their progress and plans for the next Operational Period. The

Incident Action Plan developed by the IST showed only the FEMA US&R resources assigned to the incident. Although the IAP had many pages consisting mainly of the Murrah Building's floor plans, it had no Medical Plan, no Division Assignment forms, and lacked clear incident priorities and objectives. It should be noted that personnel safety was of paramount concern and led to macro-management at all levels of the organization. Although this term is often used negatively, in this case it provided for constant face to face communications and achieved the ultimate objective of no serious injuries. The downside was that it overburdened command personnel, impeded progress, and frustrated rescue personnel as tactics and strategy were debated and changed repeatedly.

RECOMMENDATION - Incident Command is not the primary role of the IST, however it is a function that can be assumed if the local jurisdiction requests it. In order to ensure the local jurisdiction's involvement at all levels of decision making for which they are ultimately responsible, the IST should encourage the development of an incident command structure with local jurisdiction personnel assuming the primary Command and General Staff roles with IST members acting in an advisory role as their deputies. This pairing of personnel could occur with any of the "vested" ICS positions. In a wide-spread disaster the IST will also need to maintain its primary role of representing FEMA's Emergency Support Function for Urban Search and Rescue at the State level, and if requested will have to bring in additional IST personnel to assist local jurisdictions. Another resource that should not be overlooked is the U.S. Forest Service's Class I Incident Management Teams. These teams have extensive training and experience in managing large incidents outside their home jurisdiction, are use to working together, and are sensitive to the delicacies of "assisting" other jurisdictions with the management of their incident. The IST could then assign US&R specialists to assist in advisory roles where needed. FEMA should adopt ICS qualification standards for their IST personnel similar to those practiced by the U.S. Forest Service.

ICS principles should be followed as closely as possible by the IST and Task Forces. Degradation of command, control, mission effectiveness, and personnel safety occurs when incident organization, position titles, and ICS planning principles deviate from the "standard". When these things do occur because of outside influences, every effort should be made to bring them back into compliance at the Planning Meetings,

and the differences in the IAP discussed and clarified at the Operations Briefings.

Task Force Leaders should be well versed in ICS principles and practices. They should be diligent in asking questions and seeking information to ensure their assignment is clearly understood and that standard safety practices are known and followed.

All incident policies of the local Incident Commander/Joint Command should be written into the "priorities" of the IAP, i.e. resource ordering, use of volunteers, disposition of remains, and significant operations that may change the stability of the structure/debris pile.

TASK FORCE MANAGEMENT AND COORDINATION:

DISCUSSION - Each Operational Period (12-hours) there was a need to gather progress information and recommendations from the off-going TF, and then brief the on-coming TF with their assignment. Additionally, off-going TF personnel had to go through decontamination and then conduct their de-briefing session before they rehabilitated their tools. These activities were being conducted before and after the full 12-hour Operational Period which left little personal time before their next Operational Period. Personnel were doing good if they could get an average of four hours sleep per 24 hour period.

RECOMMENDATION - The on-duty TFL needs to gather progress information and recommendations from his Team Managers and Specialists early enough to share this information with his supervisor (Branch or Division) before he attends the Incident Planning Meeting. If the supervisor is not well versed in US&R operations, the TFL and appropriate Specialists should attend the Planning Meeting and subsequent Ops Briefing (which should also be attended by the on-coming TFLs and their specialists) as advisors. The on-duty TF members should conduct decon, de-brief, and rehab early enough to be completed prior to the end of their Operational Period. Allowance for these activities should be planned for and discussed at the Ops Briefings.

Task Forces should develop internal Action Plans that complement the IAP. These plans should outline and schedule the activities of both the on-coming and off-going groups. A message board should be located at the BOO to post these plans and to provide news and updates. A message board should also be placed at the forward Staging Area.

DISCUSSION - Critical Incident Stress became a key concern for all incident responders. Horrific visual sights, constant life-threatening physical threats from the compromised structure and work being performed, lack of sleep, foul weather, and exhaustive labor was debilitating to responders and caused psychological stress. Additionally, there was a tremendous outpouring of support offered by local citizens, the state, and the nation. Thousands of letters were received and placed on the cots and dining tables of the rescuers. This was a bitter-sweet experience that personalized the incident and placed the rescuers in the frustrating position of being unable to "make it all better."

RECOMMENDATION - Response personnel should receive more training and information about critical incident stress; its causes, symptoms, and treatment. Thus armed personnel may be better able to minimize and/or avoid stress exposures. While cards and letters are deeply appreciated, rescuers should be able to "get away" from the incident during their off-duty hours. A personality profile and test should be developed that could be used to identify rescuers with a pre-disposition toward adverse critical incident stress reactions.

COMMUNICATIONS:

DISCUSSION - Frequencies used by some Task Forces and IST were not part of the designated system. This required the Task Force management personnel to carry more than one radio.

RECOMMENDATION - Integrate the system to the recommended frequency band. If needed share radios. The goal should be to not use more than one radio to accomplish Command, Tactical, and Logistics communications.

DISCUSSION - Noisy environment impaired hearing the radio and interfered with transmissions. It was difficult to be understood when wearing a respirator.

RECOMMENDATION - Radios should be provided with noise-canceling earphones and throat or bone conducting ear mics.

DISCUSSION - There are no "standard" radio identifiers for each Task Force position. TF members were called by and used different radio identifiers, this made it difficult to train your ear to be alert for when you were called.

RECOMMENDATION - Develop standard radio identifiers and radio protocol.

Team Recommendations-Search Team

A belay harness is needed for the dogs.

Decontamination of dogs needs to be with warm water and hair dryers need to be available.

Dogs need to be quartered in low traffic area.

Dogs need to be out of the weather in a quiet rehab site.

Rescue Team

More body harnesses are needed.

Each squad member should have a signaling device.

Need more tin snips in squad boxes.

Each member should carry electrical side cutter pliers and striker.

Make up squad boxes with hand tools, etc., for each squad. Saves time and sets accountability for tools.

Cache needs a wet/dry vacuum.

Cache needs more adapters with each generator.

Obtain extension cables for come-alongs. They are lighter than chains.

Need small "field" tool box.

Need extra power cells and fuel for Pasload impulse nailer.

Need portable oxyacetylene cutting torch with wand lengths of 3', 5', 8'.

Get 8d nails for Pasload and Hilti nail guns.

Need scraping tools, such as heavy duty rakes or McLeods, and hand scrapers like used in gardening.

Squad leaders should meet after operational period to determine tool needs for next operational period.

Make up squad buckets similar to those in Rescue H class.

Polaroid camera should be issued to Rescue Team Manager.

Medical Team

Educate Task Force members to signs of stress.

Need precise policies & procedures for removal of victim and body parts.

Stock more respirator filters, they need to be changed daily.

All equipment for decontamination should be carried in the cache.

Be cautious of cold food, bacterial!

Beware of the shot pushers.

Need monitor that is also defibrillator instead of two separate units.

Medical inventory has an overwhelming amount of stock to keep track of.

Need a paramedic in logistics. If logistics is separated from the incident and a request is made for a medical item, non-medical personnel may be unfamiliar with the item when contacting suppliers.

Paramedic backpacks need to be more user friendly. Packs are currently packed according to FEMA guidelines.

Paramedics need larger backpacks (same size as doctor's) to accommodate fluids (saline solutions).

Medical Team members must have their Oath of Office (SF-61) and Declaration of Appointee (SF-61B) forwarded to the Public Health Service in order to be covered as a Disaster Medical Team.

All medical specialists should be taught to do a basic eye exam and how to remove foreign bodies.

Use rubber gloves under leather gloves when handling contaminated objects.

Stock more latex gloves.

Technical/Logistics Team

Make triage type tags for boxes. When box is inventoried, tag will be signed and dated and will be torn to indicate ready, items missing, etc.

Develop inventory form for each box with columns for dates of inventory. These can be used for years.

Make carbonless copy inventory forms so copies do not require a copy machine.

When boxes are repeatedly used at the incident, they should be isolated at base for easy recognition for next operational period.

Item serial numbers should be on inventory list in each box.

Mark all tools with box number.

Need catalogs and CD-ROM with vendor's phone numbers and addresses for ordering.

FEMA list needs to be provided on a standard computer database software.

Need support on report generating items (i.e. printer, plain paper fix).

Structures Specialists need a polaroid camera and micro cassette recorder.

If FEMA has knowledge of living conditions such as what was available in Oklahoma, we could deploy minus food/water and shelter.

Communications Team

Improved communications could be attained with proper equipment such as radio remote.

Need better storage procedures for disposable batteries. We possibly had a bad batch of batteries.

Planning/Documentation Team

Info. Spec. needs micro-cassette recorder.