NEW YORK CITY FIRE DEPARTMENT

WRITTEN STATEMENT OF THE FDNY

Before the National Institute of Standards and Technology

November 22, 2004

I. Introduction

Good morning. My name is Peter Hayden and I am the Chief of Department of the New York City Fire Department (FDNY or the Department). I am pleased to have this opportunity to discuss the FDNY's very substantial progress toward enhancing its preparedness since 9/11.

In the aftermath of the World Trade Center (WTC) attacks, and the loss of 343 members with over 4,400 years of collective experience, the FDNY faced an enormous challenge. We needed to simultaneously conduct a massive recovery effort at the WTC site, replace lost equipment, hire and train new personnel, attend hundreds of funerals and memorial services, and begin the difficult process of developing new strategies, procedures, training methods and technologies to enhance our preparedness for future acts of terrorism. Three years later, I am proud to say that the Department has met this historic challenge with bravery, dedication and honor. We are far more prepared to respond to major acts of terrorism than we were on 9/11.

Among other accomplishments, the FDNY has replaced all apparatus and equipment lost on 9/11 and re-staffed to pre-9/11 levels, albeit with much less experienced personnel. We have provided our Firefighters with counter-terrorism training and have begun comprehensive Incident Command System (ICS) training for all fire officers. We now have two fully trained Incident Management Teams (IMTs), 25 strategically located ladder companies trained in HazMat and technical rescue, 22 Haz-Tac ambulances staffed with HazMat-trained personnel, and numerous fire companies throughout the City trained to perform "hot-zone" rescues in Chemical Protective Clothing.

In partnership with the Combating Terrorism Center at the United States Military Academy (USMA), we developed an innovative graduate-level counter-terrorism preparedness course for senior fire and EMS officers. And in partnership with Columbia University and General Electric, we are providing advanced management training for our senior Chiefs.

We also have deployed improved handie-talkie radios and implemented an effective three-component fireground communications system to complement the new radios. We are making progress toward enhancing our operations center and have developed new procedures to improve recall and staging. All of these initiatives, and many more, are part of the Department's *Strategic Plan for 2004-2005*, which was released earlier this year and is the first strategic plan ever issued by the FDNY in its nearly 140-year history.

In this testimony, I will address those areas identified by the National Institute of Standards and Technology (NIST) -- in its latest findings on the World Trade Center disaster – that specifically involve the FDNY; namely, communications and technology; operations/command and control; and New York City fire and building codes. I will also comment briefly on a few of NIST's preliminary findings.

II. Communications and Technology

The Department has addressed its most urgent radio communications needs since 9/11. This major accomplishment has been achieved through the painstaking work of many uniformed and civilian members of the FDNY, who worked together over a period of many months to refine, test, evaluate, pilot and ultimately implement the new radio

system. This group also created an excellent training video that greatly assisted the transition to the new modified radios.

A. Radio System

It is critically important to understand that there is simply no 100 percent, foolproof radio system. Even the best radios cannot always penetrate high-rise buildings, subway tunnels and other difficult environments. That is why we have insisted on not focusing solely on the handie-talkie radio carried by fire personnel, but on creating an integrated system that utilizes multiple components to optimize the radios' performance.

Specifically, the Department successfully tested and deployed newly modified handie-talkie radios to the field in February 2003. These analog radios have several features that provide significant advantages over the previous digital model. The Department's radios now have an emergency alert function, many more channels and use the UHF band, which provides greater penetration in buildings and allows for interoperability among Fire, EMS and other emergency service agencies, including the New York City Police Department (NYPD). The radios operate at a higher basic power level (two watts) and can be boosted to five watts on a pre-defined per channel basis. In addition, analog radios are generally more efficient during incidents when many firefighters and officers are attempting to communicate at the same time over the same frequency. The analog radios allow for more messages to get through without being "stepped on" by other messages, which was a significant flaw of the digital radios.

To provide increased reliability when the handie-talkies are used in high-rise buildings, a system was developed that consists of the handie-talkies, high-powered post radios and Battalion car repeaters. Post radios are interoperable-capable 45-watt radios,

which were designed initially for use by the Incident Commander at the command post. Because they fit in a small specially designed hard-shell suitcase and are light enough to be carried, they can be used at any assigned post within a high-rise.

Our new-generation vehicle crossband repeaters have proved to be extremely successful in boosting radio signals in high-rise and other complex environments. Having the capability to bring our own enhanced repeater to the fireground has strengthened our communications enormously. We no longer have to rely entirely on an in-building repeater. Many buildings do not have repeater systems and those that do may lose the ability to boost radio signals when damaged during the very incident to which we are responding. Because of the effectiveness and strategic import of this package of communications enhancements, the Department has acquired more than 75 post radios, which are now deployed throughout the City. We now have 13 Battalion car repeaters installed, enough for each Battalion car who typically respond to the high-rise environment, and we plan to acquire more.

Taken together, these enhanced features measurably improve the communications capabilities of the Department. All of these components, with particular emphasis on the handie-talkie, were exhaustively tested and piloted in the field; the Department compiled literally thousands of evaluations from firefighters and officers, and utilized the data to demand refinements from the manufacturer before full deployment. The result has been that our field personnel are very satisfied with the new radios system; this represents a critical step forward in improving fireground communications.

B. Interoperability

It is critical that the Department's communications capacity be completely interoperable both internally – between Fire and Emergency Medical Service (EMS) personnel – and externally, with the NYPD and numerous other emergency response agencies. Fire and EMS personnel can now communicate directly on the fireground using the new handie-talkies because all of those radios utilize UHF, and we now have the capability of using the same channels. The same is true for FDNY communications with the NYPD, because its portable radios are also both UHF and analog.

Interoperable radio communication has been further enhanced through the installation of a new piece of equipment called the TRP-1000 in the Department's two Field Communications units. The TRP-1000 takes any and all radio frequencies in use and directs them so that personnel on any frequency can hear and communicate with personnel on any other frequency. This allows FDNY Chiefs using their new radios to "patch in" to communicate directly with other City personnel, for example the New York City Office of Emergency Management (OEM), NYPD, and with the FBI and other Federal agencies.

The City has developed redundant capacity for this important new piece of equipment, as both OEM and NYPD also have this unit. In addition, all FDNY units have the capability to communicate with the NYPD on a dedicated tactical channel ("TAC U"). This is a police frequency that we have programmed into the handie-talkies of all FDNY units. Working with key NYPD staff, we have developed operational protocols to effect this interagency communication. Of course, true interoperability requires training, drills and actual experience. These drills and experiences ensure that

new interoperability protocols and procedures are being followed. For example, earlier this year the Department successfully conducted a major drill in downtown Manhattan; there, we tested our interoperable communications equipment, including the TRP-1000, which allows personnel on any radio frequency to hear and communicate with personnel from multiple agencies (including Federal agencies) on up to 10 different frequencies. Drills and exercises continue throughout the year.

C. Technology

Spearheaded by a recently formed Technology Oversight Committee (TOC), the Department has made substantial progress toward the development of several key technological enhancements.

The Fire Department Operations Center (FDOC) serves as a critical hub for information flowing between the Department and other City, State and Federal agencies. Utilizing ICS, FDOC personnel are assigned specific roles to facilitate communications, planning, logistics and other responsibilities. During the past year, the Department has improved the FDOC's capacities by upgrading telecommunications and procedures. In the event of a major incident, key senior Chiefs will report to the FDOC to provide citywide command and control, and operational planning. The FDOC now has the technological infrastructure to receive live video feeds not only from NYPD helicopters but also from our own satellite camera system.

The FDOC will provide our commanders with the resources necessary to facilitate better situational awareness. The plan for the FDOC calls for technological improvements such as video teleconferencing, the ability to analyze data from wireless command boards in the field and an enhanced Geographical Information System. From

the FDOC, Chiefs should be able to establish the Department's operational priorities during resource-taxing events, analyze resource availability and initiate a recall or call for mutual aid. The FDOC can also be used as a regional command post if necessary, and will serve as the information backbone for ICS support functions. We are aiming to fulfill this vision within the coming year.

While these improvements are significant, much more needs to be done to create the state-of-the-art facility we need. That is why the Department hired a consultant to assist in the development of the FDOC. Utilizing Federal grant funds, the Department and the consultant have undertaken a comprehensive needs assessment based on specifications the Department developed with the consultant. The Department has requested additional funding to ensure that the FDOC can be a fully functioning off-site command post.

Large-scale incidents of the kind potentially confronting the Department require the management of large amounts of information regarding the deployment of personnel and equipment. The response to the World Trade Center attacks on September 11, 2001, highlights how essential it is to manage resources and safeguard information recorded at a command post.

In furtherance of that, the Department has been developing Electronic Command Boards (ECBs) that enable Chiefs to communicate wirelessly at an incident and download critical information to the FDOC in real time. These portable, wireless, PC-based ECBs, once adapted to meet the rugged conditions in which the FDNY operates, will replace the magnetic boards traditionally used by Chiefs to track units at an incident.

Prototype ECBs are being researched and developed. FDNY's ECB Selection Committee has recently completed its review of submissions from three vendors who responded to an RFP for ECB production. In addition, we are researching technology for a firefighter accountability system that would enable the Incident Commander (IC) to locate and identify all firefighters and other emergency responders at an incident.

The ability to use a deployment and tracking model to analyze resource data from both Fire and EMS in real time is critical for modernizing the Department's planning and response capacity. The Department has researched various deployment and tracking models and has obtained grant funds to purchase a state-of-the-art, computerized unit-tracking and deployment model. This model will use dispatch data to optimize response to and coverage of routine operations and large-scale incidents. Integrating computer analytical capabilities with real-time response data and the identification of the availability of specialized manpower and apparatus resources will greatly improve the safety of both emergency responders and the public. This initiative should be substantially implemented by the end of 2005.

Since 9/11, the Department has studied ways to enhance EMS radio communications. This summer, we established a second EMS citywide radio channel to support EMS operations in responding to multiple-casualty incidents. The Department obtained Federal grant funding for this project, which will allow EMS to use a dedicated channel to handle a large-scale incident, while simultaneously using existing channels for other incidents that may be occurring at the same time. The Department is modifying current procedures, protocols and staffing needs to effectively utilize the second channel.

In addition, the City's Department of Information Technology and Telecommunications is coordinating the development of a centralized emergency dispatch system in which a new Citywide Computer Aided Dispatch (CAD) system will be implemented. The Department is participating fully in the design of this new CAD system.

The system will integrate FDNY, FDNY-EMS, NYPD and NYPD-Transit dispatch operations into two redundant, resilient centers housing call-takers and agency-specific dispatchers. State-of-the-art technologies will shorten overall response time and enhance the level of service provided to the public by improving interoperability, eliminating call transfers and repetition of information to different agencies, eliminating single points of failure, and optimizing the mix of emergency resource dispatches. We look forward to the completion of this complex, multi-year initiative.

III. Operations/Command and Control

The purpose of the Department's training and technology enhancements is to improve our operational preparedness. We are also accomplishing that through changes in procedures and protocols, efforts to improve cooperation and interoperability in operations between partner agencies, internal and multi-agency drills and exercises, the development of specific emergency response plans and prevention activities relating to building and fire codes.

A. Recall and Staging

The Department has initiated implementation of a flexible recall program in order to efficiently mobilize all or part of its firefighter and EMS personnel in the event of a large-scale emergency or an increase in the terrorism threat level. This recall program allows the Department to effectively recall members by geographic area and/or type of unit in sufficient numbers to address the needs of an IC at a particular event, while simultaneously allowing the Department to safely and effectively manage recalled members and maintain adequate reserve members for later shifts. (Prior to 9/11, the last *full* recall of fire personnel occurred on December 26, 1947 in response to a major snowstorm.)

The Department's regulations were amended in Spring 2003 to clarify and emphasize that recalled members must report to their firehouse, unless instructed otherwise. This mandatory regulation will ensure that recalled members do not report directly to the incident site (or any other location) unless specifically instructed to do so. The Department will strictly enforce its modified recall regulations to ensure future compliance.

The Department's Bureaus of Fire and EMS Operations have developed detailed draft guidelines and training materials on personnel recall procedures, which enable the Department's leadership to mobilize specific, targeted capabilities, such as SOC and Ladder Support Company units. This allows for the recall of large numbers of personnel of all ranks, using clear, straightforward instructions and methods.

The major components of the Department's recall guidelines include:

- Pre-defined recall "trigger points"
- Clearly defined lines of authority to initiate a personnel recall

- Pre-defined recall packages
- Precise and consistent communication of the recall process
- Establishment of designated mobilization points
- Caches of equipment and supplies located around the City

Recall drills utilizing new automated telephone messaging technology have produced satisfactory results. When used in combination with broad media notification of our members, the Department is confident such technology will enable us to effectively recall needed members.

In concert with the new recall procedures, the Department also has modified its staging procedures to ensure that the IC can effectively maintain command and control of resources as incidents escalate. Our new staging regulations require the designation of a Staging Area Chief and the establishment of a staging area at all third or greater alarms. Of course, the IC can make such designations for any alarm level, as necessary.

Under the new regulations, the IC will make the staging area known to the dispatcher, who will direct the Staging Area Chief and affected units to that location. The regulations require that "all responding units, unless otherwise given specific assignments by the IC, shall report to the staging area." These modified and clarified requirements, when strictly enforced, will help avoid any confusion about the location of Department resources and will enable ICs to manage those resources better.

B. Incident Command and Inter-agency Operations

FDNY subscribes fully to the letter, policy and principles of ICS. The Department utilized ICS long before National Incident Management System (NIMS) and the Governor's Executive Order of 1996 prescribed it. We have trained and are

continuing to train extensively in the use of ICS and base all operational plans around it. The FDNY has received special Federal ICS training to create two IMTs, which are now deployable at major incidents.

Since 9/11, we have utilized ICS effectively in responding to several major incidents, including the West 19th Street/Kaltech explosion in April 2002, the Port Mobil fire in April 2003, the August 2003 blackout, the Staten Island ferry crash in October 2003 and the fire this past spring April 19 at Penn Station.

Since 9/11 there has been a great deal of public discussion about the use of ICS citywide. A protocol establishing a Citywide Incident Management System (CIMS) and incorporating ICS was announced by the Mayor in May 2004. We believe this protocol will help ensure that all agencies operate with a common, written understanding of their roles and responsibilities.

That being said, it is clear that every day, in responding to hundreds of incidents large and small, the FDNY and the NYPD operate cooperatively and effectively. This was certainly true at the major incidents just mentioned.

This interagency cooperation is also manifest in the numerous drills and exercises that we participate in together. Since 9/11, we have participated in the following inter-agency drills, all of which included the NYPD, and some of which were coordinated by OEM:

- Operation Tripod (5/22/02) -- OEM conducted Operation Tripod at Pier 92 in Manhattan.
- Yankee Stadium Drill (9/29/02) -- HazMat drill at Yankee Stadium in the Bronx.
- Operation SADD (10/5/02) -- The Port Authority conducted a simulated aircraft disaster drill, “Operation SADD" at LaGuardia Airport in Queens.

- Ft. Hamilton HazMat Drill (10/17/02) -- HazMat decon drill at Fort Hamilton in Brooklyn.

- HazMat Drill (10/27/02) -- HazMat preparedness drill took place at the Verrazano Narrows Bridge in Staten Island.

- Broad Street HazMat Drill (4/27/03) -- The Transit Authority conducted an inter-agency preparedness exercise in Manhattan at the Broad Street subway station that involved a simulated chemical release and evacuation of passengers from the station.

- Winter Sun (5/18/03) -- OEM conducted an inter-agency HazMat preparedness exercise in Brooklyn.

- Grand Central Terminal Drill (10/27/03) -- FDNY Division 3 conducted a drill in the Waldorf train yard of Grand Central Terminal in Manhattan. The drill involved a simulated electrical malfunction in the M-50 substation of the Waldorf yard resulting in an explosion and fire in the vicinity of the substation. The simulated malfunction also caused a power surge into the third rail resulting in an ensuing fire in a parked train.

- Operation United Response (3/14/04) -- OEM conducted a preparedness exercise at Shea Stadium in Queens simulating a large-scale, multi-casualty incident.

- Operation Transit Safe (5/16/04) -- OEM conducted a preparedness exercise at the Bowling Green Subway station in Manhattan. This exercise simulated a large-scale, underground multi-casualty incident.

The Department has made significant, perhaps unprecedented, progress since 9/11 in improving coordination between NYPD and FDNY. These steps include:

- Agreement for FDNY to receive live feeds from NYPD helicopters.

- Agreement for an FDNY Chief to ride in a NYPD helicopter as may be required by the incident.

- Mutual stationing of liaison officers at each other's headquarters.

- Procedure to station a Chief at each other's command post.

- An NYPD supervisor responds to all second alarms or greater to provide an on-scene liaison.

- Interoperable communications equipment (TRP-1000) deployed along with radios that have a specific channel (Channel 13 or "TAC U") for interagency communications.

- Joint FDNY/NYPD teaching of Citizens Emergency Response Team (CERT) programs to train the public on how to assist their community in the event of a disaster. This curriculum was custom developed for the urban environment by a team of FDNY and NYPD responders. Team-taught classes for community groups are continuing throughout the City.

We look forward to continued cooperation and progress as we begin to operate under the recently released CIMS protocol.

C. SOC and Special Units

Expanding the FDNY's SOC is critical to the Department's efforts to improve its responses to large-scale incidents. Of particular importance is the expansion of the Department's HazMat-capable units, which are called upon to respond to incidents involving chemical, biological, radiological, nuclear and explosive (CBRNE) agents often associated with terrorist attacks. Preparing for and responding to such attacks requires special operations capabilities well beyond those that the Department possessed on September 11, 2001.

The Department has acquired additional equipment with the assistance of grant funds from the Federal government. Chemical Protective Clothing (CPC), radiation detectors, reserve rescue apparatus and strategically located caches of equipment and medical supplies have increased the Department's preparedness, while enhancing the safety of the members operating in the field.

The Department's Squad and Rescue Companies and EMS Haz-Tac units are trained as HazMat technicians; many members of HazMat Company 1 are trained to the level of HazMat Specialist, the highest level of HazMat training in the City. Radiation

detection training has been incorporated into the First Line Supervisors Training Program (FLSTP) for new officers and for members of the EMS Haz-Tac Battalion. Hazardous materials refresher training has been provided to all members of HazMat, Rescue and Squad Companies; seven Ladder Companies have been trained to use CPC.

To expand resources for hazardous materials and rescue incidents, the Department has trained 25 Ladder Companies to serve as SOC Support Ladder Companies. These companies are standard ladder companies that receive extensive new training in, and are equipped to respond to, both technical rescue and HazMat operations. They can also respond as additional units during large incidents when Rescue and Squad Companies are otherwise unavailable, and provide support for SOC units once Rescue, HazMat or Squad Companies arrive on-scene. These Ladder Companies have been trained in hazardous materials monitoring, operations in CPC and decontamination. All members of these Companies received 40 hours of rescue operations training and 40 hours of HazMat training.

The Department has also provided three engine companies with 80 hours of HazMat training and information. These engine companies will continue to fight fires but now have the responsibility to work as a HazMat Tech unit when needed. A fourth HazMat Tech Engine Company has been funded and will go on-line later this year. The Department is also now training and recruiting personnel for 22 HazTac ambulances. Members of these units are being trained to the level of HazMat Technician. These companies, geographically dispersed throughout the City, can quickly respond to incidents requiring these special capacities, including the ability to perform scene surveys of collapse and confined space incidents.

It should be noted that the Department continues to work toward the goal of creating a second HazMat unit. Until full funding makes this possible, the Department will continue to implement its parallel strategy of enhancing and broadening the HazMat training and responsibilities of dozens of companies located around the City.

D. Preparedness Planning

The new threats and long-term challenges facing the FDNY demand an in-depth and comprehensive planning effort that takes into account the need for inter- and intra-departmental coordination, research, strategic and tactical planning, development of in-depth response plans for various kinds of incidents, development and coordination of drills and exercises and critical analysis of operations.

The Department recently expanded its Planning and Strategy Unit and tasked it to, among other things:

- Develop and prepare training exercises for the FDNY, including inter-agency exercises
- Provide risk assessments of potentially hazardous locations throughout the City
- Develop FDNY Emergency Response Plans (ERPs)
- Coordinate with all bureaus on terrorism preparedness
- Participate in post-incident critiques
- Maintain inter-agency relationships at the operational level

The Planning and Strategy Unit has drafted a plan for "Fire and EMS Tactics and Procedures for Subway Incidents involving WMD -- Chemical Agents" and a bio-terrorism response plan. To maximize preparedness, the Department is developing a plan for all major WMD threat categories. FDNY will then integrate these plans into its

Standard Operating Procedures. In addition, the Department has completed vulnerability assessments of 58 designated sites to increase preparedness for possible future terrorist acts. The Department will develop a networked database to capture the information from the risk assessment surveys. The new database then will be made accessible to all members, Borough Commanders, Staff Chiefs and Incident Commanders via the FDNY Intranet.

In recognition of the increasing need to standardize the preparation, scheduling and evaluation of intra- and inter-agency exercises, FDNY has also established an Exercise Design Team. This new unit is dedicated to developing appropriate exercises, both intra- and inter-departmental. Team members focus exclusively on the development and coordination of tabletop scenarios and hands-on exercises with internal FDNY units and external partners, including the NYPD, OEM, the Port Authority Police, the Department of Homeland Security (DHS) and its constituent agencies, utility companies and health care providers. The team also will be responsible for standardizing the roles and responsibilities of tabletop exercise controllers and evaluators, producing after-action critiques and interfacing with the Bureau of Training to ensure that lessons learned are implemented. The Department intends to conduct tabletop exercises on a monthly basis, with a minimum of 12 exercises per year. The Exercise Design Team has completed the Master Exercise Practitioners Certification Program sponsored by the National Fire Academy.

The Department is also creating a Counter-Terrorism Center. This innovative undertaking consolidates many of the planning activities just described into a central location and also serves as planning liaison with other agencies.

E. Intelligence Sharing and Needs

The Department is taking a proactive approach to working cooperatively with intelligence-gathering agencies at all levels. Our Bureau of Fire Investigation, which is the law enforcement arm of the Department, is the focal point for many of our intelligence sharing measures. The Bureau is linked to the New York State Office of Public Security Counter Terrorism Network System and receives instantaneous intelligence alerts. This information is analyzed and shared with Department leaders as appropriate.

The Department participates in intelligence-sharing efforts such as the Joint Terrorist Task Force and the Metropolitan Committee on Counter Terrorism, among others. These ventures are facilitating a reciprocal information flow. For instance, we have revised the way the FDNY deals with missing or stolen property so that the NYPD Intelligence Bureau and the FBI are now notified immediately. Other cooperative efforts include participation in the compilation of the City's Vulnerable Location Database and initiation of systemized reporting of potentially suspicious toxic substances.

There is more we can do and will do. Although our responders are not law enforcement personnel, they can, by the nature of their work, gather valuable information. We are in the process of creating a curriculum that incorporates terrorism recognition awareness for all firefighters and EMS personnel.

IV. Training

The relative inexperience of our workforce makes training more vital than ever before. In addition to the training discussed above, we are providing appropriate levels of

terrorism-response training across the ranks and in every division and unit. For instance, all uniformed Fire and EMS members have received at least eight hours of terrorism-response training. All new firefighters are receiving 40 hours of combined Hazmat and terrorism awareness training, and officers are receiving up to 40 hours of ICS training. At the same time, we have also increased the competencies of more than 1,000 firefighters by providing specialized training in WMD operations such as HazMat, technical rescue, Decontamination and CPC response. All fire officers and members of EMS' HazTac Battalion have been trained to use the RAD Alert 50 detector. Over 625 members in 25 Ladder Support Companies have received 40 hours of HazMat training and 40 hours of specialized rescue training.

Our training programs focus not only on increasing technical skills, but also on fostering leadership. In addition to the partnership with the United States Military Academy and the two 32-member IMTs, discussed above, the FDNY has custom designed a management-focused training program to strengthen the management and planning capabilities of our most senior Fire and EMS Officers. The FDNY Officers Management Institute (FOMI) is provided by the Columbia University School of International and Public Affairs at General Electric's Management Training Center in Westchester County. The third FOMI class began in November 2004.

V. Prevention: Revising the Building Code and Fire Code

The events of 9/11 focused attention on the need for high-rise safety and the need to provide greater life and property protection in high-rise buildings. NIST's findings demonstrated this dramatically as well. Because of their height and high occupancy, high-rise buildings present unique challenges to the FDNY, building employees and occupants for both fire and non-fire-related emergencies. After September 11, 2001, Mayor Bloomberg directed the Department of Buildings to establish a Task Force to examine the World Trade Center disaster and current Building Code provisions as they relate to high-rise buildings.

FDNY representatives from the Bureaus of Fire Prevention and Fire Operations were key participants in the development of the Task Force's recommendations, which included proposals to require the hardening of stairwells, to improve the marking of egress paths, doors and stairs with photo-luminescent materials, and to require all high-rise commercial buildings over 100 feet without automatic sprinklers to install a sprinkler system within 15 years. Another key recommendation called for the City to enact a law requiring an emergency evacuation plan for non-fire emergencies, in addition to a fire safety plan. The City Council passed, and the Mayor signed this summer, historic legislation that will implement most of the Commission's recommendations.

The Department supported legislation, passed by the City Council this summer and signed into law, that gives the Fire Commissioner the authority to require emergency action plans for office buildings. The legislation calls for the Department to promulgate regulations requiring office building owners to develop emergency action plans and file them with the FDNY. The purpose is to require owners of large buildings to anticipate

emergencies that may affect their buildings and to ascertain the best method to ensure the safety of building occupants.

In addition, the Department has undertaken a long-term plan to revise the New York City Fire Prevention Code. Consistent with the Building Code revision being undertaken by the Department of Buildings, the FDNY intends to amend the International Code Council's Model International Fire Code for adoption in New York City. The revision code project has started and is expected to be completed within a year. This will be by far the most significant revision to the Fire Code since its adoption in 1913.

VI. Comments on NIST's Preliminary Findings

A. Communication to Evacuees

Contrary to NIST's findings that emergency communications on 9/11 were generally uncoordinated, unhelpful and inconsistent, is the fact that that in the aftermath of the WTC attacks no one knew exactly which floors were affected or whether rooftop rescues would eventually be possible. For much of the operation that day, there was no way 911 operators or FDNY dispatch could possibly have had that information. FDNY commanders on the scene almost immediately ordered an evacuation of the entire WTC complex and records indicate that 911 and FDNY dispatch advised almost all callers below the impact to evacuate.

Obviously, no amount of situational awareness by the 911 operators could have saved the callers above the impact. Even with the most advanced protocols for providing information from the field to 911, and better situational awareness, these operators could not have offered any information to callers above the impact that could have saved those

lives. To say otherwise creates the painful misimpression for the families of those above the impact zone who perished. It would be unrealistic to suggest that dispatchers could have communicated that Stairwell A in WTC 2 was briefly open – to those in the building lucky enough to have been near it -- and to instruct them to evacuate via that stairwell.

Moreover, despite the unprecedented volume of calls that day, the 911 personnel passed on an extraordinary amount of correct and helpful information. Their efforts entailed creative and quick thinking and a great sensitivity under enormous pressure and tragic circumstances.

In response to lessons learned on 9/11, the Department has issued its "Procedure for Reports of Trapped Occupants." This Directive advises Fire Dispatchers of procedures to follow when dealing with calls from occupants of a fire building seeking instructions. This does not change FDNY strategy or procedures, but provides the following specific instructions to Dispatchers when calls are received from occupants of a fire building seeking instruction as to whether or not to evacuate:

- Immediately contact the Incident Commander for guidance and information and relay this information to the callers.
- Until the Incident Commander provides guidance, advise callers that on-scene FDNY personnel will be notified of the caller's location and to await further instructions.
- If a Chief Officer is not yet on-scene, notify the responding or on-scene ladder companies immediately.

The on-scene Chief officers will provide guidance to occupants via the Dispatcher based on the officer's assessment of the building and existing fire conditions.

Further, to facilitate communications between the NYPD and the FDNY, a direct "ring-down" line has been installed in each of the Fire Central Offices that connects them with the 911 Center at 11 Metrotech. This direct line is to be used only between NYPD and FDNY and only as a means of expedient inter-agency communication to relay and/or obtain critical information or instructions during incidents where the FDNY and NYPD are operating.

This line may, at times, be used by 911 Supervisors to obtain instructions from the FDNY as to what information or instructions to give to callers relative to whether or not to evacuate. When such a call is received, the FDNY IC at the scene shall be immediately contacted for these instructions, which shall then be relayed to the NYPD via the direct line. Fire Dispatch personnel shall be guided by the instructions received from the FDNY IC as well. Whichever agency receives this information will immediately relay it to the other agency, via the direct line, to pass along to the on-scene units.

B. Command and Control

In contrast to NIST's findings, the vast majority of FDNY units properly dispatched to the WTC site and very few units self-dispatched: indeed, the McKinsey Report found that only four companies self-dispatched. Because the initial attack occurred during a shift change, some firefighters who were already at the firehouse and were getting ready to go off duty, went to World Trade Center site with their companies. These firefighters were supervised by their commanding officers. Thus the number of additional firefighters beyond those dispatched was not in fact very large. Significantly,

there is no evidence that additional personnel impeded operations, or were anything but helpful in handling the massive rescue operation.

While the command post could not track every unit under the unprecedented circumstances at the WTC site, most units checked in at the command post. Further, since the command boards tracking the units were destroyed with the collapse of the towers, it is impossible to verify how many units were not successfully tracked.

We believe that NIST's preliminary findings with regard to the above lack sufficient understanding of the unprecedented challenges the FDNY was forced to address in a unique and ever-escalating crisis.

C. The Repeater

NIST's general finding that the WTC repeater was operating is inaccurate. Several facts lead to the conclusions that the repeater was not functioning properly: first, the FDNY Chiefs who tested the system that day, and concluded that it was not working properly, were both highly experienced in testing and using the repeater. Second, the Port Authority audiotape shows that our highly experienced Chief directing operations from the lobby of Tower 2, Assistant Chief Donald Burns, who later died that day, was unable to communicate over the repeater after 9:21 a.m. on 9/11. There is no plausible explanation for the apparent halt in communications between Chief Burns and Battalion Chief Oreo Palmer – who reached the 78th floor before perishing in the collapse – other than repeater failure. Statements by the building's Deputy Fire Safety Director also contradict a finding that the repeater system was functioning perfectly. Finally, after a lengthy study, McKinsey & Co. concluded that the repeater was not operating reliably on

9/11 or, at most, it could not be determined from the conflicting evidence whether or not it was.

VII. Conclusion

We believe that the FDNY has made very substantial progress toward enhancing its preparedness since 9/11. The Department is enormously proud of these accomplishments; indeed, we believe the tremendous heroism exhibited by the men and women of this Department on 9/11 has been followed by an equally admirable and necessary effort – in the face of overwhelming grief and adversity – to rebuild the Department and find a way to move forward to meet future challenges.

As I believe I have also made clear, much more remains to be done. I am confident, however, that with ongoing, sufficient, flexible funding we will not only remain this nation's leading fire department in terms of fire suppression and pre-hospital medical care, but also become a model for overall first responder preparedness throughout the world.

Thank you for the opportunity to speak with you today.