UNITED STATES OF AMERICA

CHEMICAL SAFETY AND HAZARD INVESTIGATION BOARD

KALTECH INDUSTRIES GROUP

PUBLIC HEARING

WEDNESDAY,
APRIL 16, 2003

The hearing was held at the Fashion Institute of Technology Student Center, A Building, Faculty Dining, 8th Floor, 8th Avenue & 27th Street, New York, New York, at 9:00 a.m., Carolyn Merritt, presiding.
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(9:00 a.m.)

CHAIRMAN MERRITT: Welcome to this public hearing of the U.S. Chemical Safety and Hazard Investigation Board. First thing I'd like to do is let you know that there are fire exits. If you are not aware or familiar with this building, there's an exit right in the back corner and another one in front and then there are several on the this aisle right before, or past the elevators. Restrooms are around the corner and then right over here. Thank you for allowing me to do that little announcement, but I think it is important.

I'm Carolyn Merritt and I'm the chairman, I'm CEO of the U.S. Chemical Safety Board, and with me this morning are other Board members and the executives of CSB. With me on my right is Dr. Andrea Taylor and Dr. Gerry Poje and John Bresland sits to my left. And then with us also is Charles Jeffress who is our CEO and Chris Warner who is our general counsel. And Irv Rosenthal, I'm sorry, at the end of the table, last but not least.

Our subject today is a serious chemical explosion that occurred at the Kaltech Industries Group on West 19th Street in the Chelsea neighborhood.
last April 25th. That explosion occurred without warning during the middle of the work day and injured a large number of people, some quite seriously. Sixteen people were hospitalized, four in intensive care, and 15 others were treated and released.

The Chemical Safety Board is the independent federal agency that investigates chemical accidents to determine their root cause. Our authorizing legislation, the Clean Air Act, states that in no event shall the Board forego an investigation where an accidental release caused a fatality or serious injury among the general public, and that certainly is the case with this event. The Chelsea explosion did have major public impact. Among those sent to the hospital were some 14 people who were not employed at Kaltech and were just bystanders or occupants of adjoining offices.

Our team arrived shortly after the explosion on April 26th and it included lead investigation Steve Selk. Steve, where are you? At your table, thank you. And Don Holmstrom, who also sits at the table, and my colleague, Dr. Poje, who was the Board member on scene at the time. The team has continued to investigate this incident over the last 12 months and they are now ready to release the staff
findings.

In the second part of today's meeting we'll hear from two panels of distinguished experts who will help us to unravel some of the remaining questions about this even. We have provided the panels with four specific areas to address, but the general issue before us is, what is the appropriate role of municipal fire codes in promoting the safe handling of hazardous materials?

Our first panel consists of three New York officials who are knowledgeable about the regulatory system that is currently in place.

The second panel consists of three experts in the subject of fire codes and they will discuss how other codes have addressed the problems of hazardous material management.

Finally there will be an opportunity for public comment, and I know many of you here are greatly interested in this issue or you were affected by this accident. If you plan to comment, we ask you to please sign in the sign-in sheets in the front desk when you got off the elevators. We ask you also to limit your comments to three minutes and to keep your comments to the issues at hand. We're also asking our panelists to restrict their comments to ten minutes so
we have an opportunity for questions following your panel discussion. Also we'll not actually entertain questions to the Board members or to the investigators here. The Board will welcome written and/or electronic submission of any other comments that you might have of any length. Instructions for submitting written comments are contained in the Federal Register notice at the entrance so you can pick up a copy there, and our docket for this hearing will remain open until May 5th.

Are there any other opening comments? Dr. Poje?

DR. POJE: I would like to just offer some brief comments, Madam Chair, thank you for your introductory remarks and good morning to all. I also extend welcome to this public hearing. I'm a native New Yorker, born and raised in nearby Brooklyn and educated at New York University, not too far from this hearing site. Including taking classes in the Brown Building at NYU, the site of the Triangle Turquoise Factory fire much earlier in the last century that renovated the whole local, state and national approach to fire protection.

Today we meet on an occasion also noteworthy in the annals of American chemical safety.
56 years ago on this date our nation suffered its worst chemical catastrophe. A vast multitude of dockworkers, industrial workers, clerical staffs had begun their workday as normal that morning in Texas City. Soon, however, firefighters and numerous bystanders, including children, were drawn to the initial spectacle of a colorful fire emanating from the ship the GRAND CAM in the harbor at Texas City. Poor hazard recognition and ill-advised emergency response failed to prevent a runaway reaction of ammonium nitrate fertilizer in the hole, cargo hold. The ship's explosion spawned multitudes of fires, explosions and other catastrophes at nearby chemical facilities and refineries and ultimately more than 600 men and woman and children were killed and thousands others injured.

Now last April's reactive chemical explosion at the Kaltech Industries Group in Chelsea was not of such an epic proportion but it also occurred during the workday and resulted in serious injuries to workers and bystanders as you've already identified. It also caused widespread damage and disrupted the neighborhoods for many days and weeks. Not insignificantly this Manhattan explosion followed close on the heels of 911, further traumatizing many
New Yorkers to the events of that time and of this incident.

Our board has recently examined 137 reactive incidents over the last two decades and we've concluded that reactive problems are of national significance. We understand that managing reactive hazards requires addressing chemical combinations under specific process conditions and we also have agreed that federal policy at the Department of Labor and at the U.S. Environmental Protection Agency is inadequately protective for workers and communities and needs to be reformed.

I look forward to the presentations by Steve, our lead investigator, and Don, the head of our safety team in this incident, who were my colleagues on the scene last April. I also commend the leadership of the city for responding to the Board's request for experts about the existing regulatory and code system in the city, and similarly I look forward to the presentation and dialogue with other experts on fire prevention codes that have bearing on this particular event.

Thank you.

CHAIRMAN MERRITT: Thank you, Dr. Poje.

Are there any other comments?
(No verbal response.)

CHAIRMAN MERRITT: Well, we're back, then, if there is no other comments from the Board, I recognize Mr. Steve Selk and Mr. Don Holmstrom for their presentation and introduction of our panel.

MR. SELK: Good morning, Madam Chairman and members of the Board. One year ago, on April 25th to be exact, there was an explosion in the basement of a building on West 19th Street here in the City of New York. The blast injured many people, at least 31 of them were treated in local hospitals. Sixteen were so seriously hurt they needed to remain the hospital for treatment and recovery. Four individuals required intensive care.

The Chemical Safety Board dispatched a team of investigators from Washington to the incident site here in New York. Our purpose was to find out what happened and also to examine how similar or further incidents could be prevented. Madam Chairman, the investigation team is ready this morning to report our preliminary findings to you and to the people of New York City.

We have concluded that the explosion directly resulted from the mixing of chemical wastes that were incompatible to each other. The company
that produced these wastes, Kaltech Industries Group, did not have adequate procedures in place for handling chemicals. Kaltech did not maintain and administer the hazardous materials it had on hand. The employees were not shown material safety data sheets or trained on the hazard information contained in them and some of the containers of hazardous chemicals found on the premises were not labeled. It appears that management and employees of the firm were not aware of federal safety regulations that were required of these chemicals.

Let me briefly give you the background and amplify on what I have just reported.

Kaltech Industries Group was a tenant in the building which is located at 123 West 19th Street. They occupied the basement of the building, the mezzanine and part of the first floor. Kaltech or its predecessor had been located there for a decade. The other nine stories of the 100-year-old structure were occupied by a diversity of tenants including service firms and even professional offices.

Kaltech manufactures architectural-quality metal signs. Metal panels for the signs were cut from sheets of steel, aluminum, iron and zinc. The panels were then engraved by means of an etching process,
polished and coated with paint. The chemical agents included flammable solvents such as laperthan, alcohol, foaming mill extrudents and implosive chemicals such as a strong solution of ferrate chloride and hydrochloric acid that was used to patch the patterns onto the metal surface of the signs..

The business generated paint waste, dirty solvents and tension solution, all hazardous wastes. It was generally stored in 55-gallon drums before being picked up from the building and taken away every three months or so by a licensed hazardous waste transporter.

Over time as the operations grew larger the volume of hazardous waste being produced occasionally exceeded a metric ton per month. At that point Kaltech was reclassified as a large-quantity generator by the Environmental Protection Agency dealers, a status that presupposes to the highest level of waste handling proficiency.

Now the investigators found another chemical on the premises occupied by Kaltech, nitric acid. In a concentrated state nitric acid is a powerful oxidizer capable of reacting with many substances, sometimes energetically. We believe that nitric acid figures predominantly in the incident.
On the day of the explosion employees were cleaning up. That morning several drums of waste had been taken from the basement up to the garage level and removed from the building by the licensed hazardous waste transporter without incident, but down below an employee in the basement had been complaining for some time that a 15-gallon container was emitting a foul odor. The foreman asked workers to transfer the contents of the leaking container to a drum. Workers then transferred the liquid from the leaking container and also from about a dozen other 15-gallon containers to 55-gallon drums. They used an electric pump to do this. They thought that the liquid in the containers was a safe exshan solution.

A minute or so after they finished a noise was heard coming from one of the drums. It began as a hissing sound and quickly increased to a roar. Liquid was straining upwards from one of the drums. Employees started to flee towards the exits for the basement, a center hall stairway and an auxiliary exit. Before many could escape the drum exploded.

Based on specifically confined environments, confined environments aggravate the consequences of an explosion because the expanding gases produced are not usually visible. This blast
exited where it could, up the center stairwell and the
elevator shaft. This caused the center stairwell of
the building to collapse. The masonry walls of the
elevator shaft blew out in the basement. Windows were
blown out up to the fifth floor sending broken glass
onto 19th Street. Large portions of the masonry
ceiling were basically collapsed. Some of this
masonry fell in the area of the secondary exit
stairwell rendering it useless as a route of egress.
The masonry walls of the mezzanine level collapsed and
portions of the facade of the building fell on 19th
Street.

The glass created a cloud of dust and
searing the basement. In spite of emergency lighting,
employees described to us an environment of darkness
and debris that impeded or prevented their escape.
Some became trapped. A fire also developed, and we
believe that the blast from the explosion knocked over
a drum of alcohol. The highly-flammable alcohol
spilled from the drum and was probably ignited by
electrical equipment installed in the area but
unsuitable and inappropriate for use where flammable
solvents are stored. Fortunately, the fire that
subsequently occurred only involved a very small
portion of the flammable solvents and chemical actions
we had on hand and the basement was protected by fire sprinklers. These factors caused the magnitude of the ensuing fire to be limited. However, Madam Chairman and Board members, had more of the flammable solvents that Kaltech had on hand become involved in the fire, the potential consequences to those who became trapped in the basement would have been very great indeed.

Firefighters entered the building to extricate those trapped inside. One of the firefighters who arrived on the scene early told me he could see the entrance to the building was so obstructed by rubble that he had to make his way to the roof of an enjoining building and then cross over the roof of the subject building and enter there before descending the ten stories to complete rescue efforts.

The explosion did not only harm employees working at Kaltech, 14 members of the public were among the 31 injured. These included a delivery person, painting contractors who were working in the upper levels of the stairwell before it collapsed, and even a handicapped student at the technical college in an adjoining building.

Beyond injuries, the explosion forced tenants from all ten floors to evacuate. They were
kept away from their workplaces until a structural review was completed.

Cleanup operations were delayed when it was discovered that asbestos and lead had been dislodged by the blast and 19th Street remained closed to traffic for many days. The fire department kept emergency equipment in place until it was declared safe. Some tenants could not access their offices for a month or more.

After considering all the evidence, we determined the blast occurred in the basement near the freight elevator. This is the area where we observed the heaviest blast damage. It is the location where the workers conducted the consolidation and mixing of the wastes. It is where witnesses saw first hand the hissing drum spewing its contents and it is where investigators recovered the first 55-gallon drum.

Employees told investigators that the dozen or so containers they pumped liquid from had been dormant in the workplace for many years. They also told us that they thought these containers contained only spent exshan solution. However, the Occupational Safety and Health Administration conducted an analysis of the liquid residues from containers found in the area after the incident and
determined that some of them also contained solvents such as liquid laperthan.

Additionally, investigators from the city Department of Environmental Protection identified a residue of retic acid in one of the 15-gallon containers found in the area. This container matched the description of what workers stated was the last container they pumped into the 55-gallon drum. We do not believe that this container of retic acid had a label affixed to it describing its contents as required by both federal and local regulations.

Madam Chairman, while we cannot be certain of the exact chemicals and reactions involved in this incident, we have information that nitric acid was found at the scene and evidence indicates that it was mixed with other wastes and a chemical reaction occurred. From our knowledge of chemistry and from the totality of the available evidence, we concluded that nitric acid most likely reacted with laperthan causing sudden release of energy and a release of gas. This caused the 55-gallon drum to explode.

The chemicals in question are materials that need to be handled with care and expertise. Our investigation indicates that Kaltech lacked the expertise to safely manage the chemicals it used in
its manufacturing operations.

The Federal Government has developed standards for the management of hazards from workplace chemicals. These regulations require employers to maintain a list of the chemicals in the workplace and to ensure that all containers are labeled. It requires the employer to maintain material safety data sheets for each substance in the workplace and to make these available to the workforce, and the regulations require an employer to train employees regarding the hazards and handling requirements for these materials. Kaltech did not do these things. In fact it appears that management was not aware of the regulations. When followed, they can prevent incidents such as this.

The chemical regulations are required by the Federal Government through the Department of Labor's Occupational Safety and Health Administration. However, that agency, OSHA, does not have the resources to pro-actively inspect all workplaces, particularly those of small business. Kaltech has never been visited by OSHA.

In the area of hazardous waste management Kaltech did responsibly convey its hazardous waste to a licensed contractor for the proper disposal but in
the workplace itself they lacked expertise in handling their waste. They did not label their waste containers as required by EPA and the Bureau of Safe Standards. And earlier I mentioned that workers thought they were handling standard exshan solutions. Lack of effective labeling figures strongly among the misunderstandings that led to the incident. It is unsafe and unlawful to mix hazardous wastes without an adequate understanding of their compatibility. Where employers are uncertain of the nature or compatibility of their wastes, they should not mix it with other wastes, rather they should seek the advice of a competent hazardous waste contractor who can pack the material and safely remove it.

I have talked about federal and state regulations, but in many cases local governments also exercise control over hazardous substances. In particular, local fire codes and building codes include restrictions on where hazardous materials are allowed to be used, permissible quantities and storage requirements. New York City's fire code includes regulations, includes some of these controls and Kaltech has been issued a permit by the New York City Bureau of Fire Prevention allowing storage of ten drums or 550 gallons of such solvents and up to 1,000
gallons of paint. Permits were not in place for other chemicals they were using.

In the course of our investigation we have noted that fire hose in other localities outside had some features that are more highly focused, words of safety and instructions. Specifically, model and other bar codes may, like the regulations mentioned earlier, require that work places maintain material safety features, label all containers, and submit hazardous material management plans before summons are issued. New York City does ask businesses or anyone who is submitting an inventory of hazardous materials. This activity is handled by city's Department of Environmental Protection under the city's community right-to-know law. However, that department does not issue permits for hazardous materials, that activity is handled by the city's Bureau of Fire Prevention. And while the chemical inventory data provides for right-to-know submission that has been made from the Department of Environmental Protection to the fire department, it is only used for emergency response purposes, the data does not make its way to the permanent authority, the Bureau of Fire Prevention.

Madam Chairman, I'm going to describe to you and the other distinguished Board members an
accident the consequences of which is serious, it could have been worse. I express the opinion that the business where the incident occurred did not have adequate skills, consistent advice to handling chemical material safely.

I have also described some of the elements of what are the complex array of federal, state and local authorities and activities.

Our objective today is to provide a forum for you and your colleagues and others gathered here to learn more about the workings of this complex solution.

Among us today are a variety of officials from various agencies and departments as well as subject matter experts. We have invited them to gather with us and asked them to focus on the role that local oversight can serve to prevent an incident such as the one that occurred last April 25th.

If it meets with your approval, I would now like to request that my associate and co-investigator, Donald Holmstrom, introduce some people.

CHAIRMAN MERRITT: Thank you, Mr. Selk.

May I ask everyone to please turn off your cell phones, I'm sorry, I forgot to mention that earlier, but if you would, I would appreciate it.
Thank you very much.

MR. HOLMSTROM: Madam chairman, Board members, Mr. Jeffress and Mr. Warner, we will now proceed in the panel presentations. We will have two panels today, one a panel of city officials and another panel of fire code experts. The panelists will address questions posed by the Board on the role of New York City fire and right-to-know regulations and their role in helping to prevent chemical accidents like the one at Kaltech. The Board in its final report may address additional issues beyond the scope of today's hearing.

The first panel, and I would like to ask them to come up now, is the panel of city officials. We are pleased today to have four city officials at our hearing.

The first, Deputy Assistant Chief of Fire Prevention Ron Spattafora of the New York City Fire Department. He's a 24-year veteran of the Fire Department, he's a site safety officer at the World Trade Center Ground Zero. He was voted to the New York City's Fire Department staff chief position in August 2002.

We're also pleased to have James Hansen. Mr. Hansen is a professional engineer, he's the
director of engineering and technical standards management for the New York City Fire Department's Bureau of Fire Prevention. James Hansen administers the Code Revision Unit for the Bureau and oversees technology plan review. Mr. Hansen is a New York State licensed professional engineer and possesses a Bachelor's Degree of chemical engineering. His background includes work as a process design engineer with the petrol chemical industry with a speciality in air pollution control. His experience also includes 18 years as an operator of H-Vac equipment and high-pressure boilers. Mr. Hansen was vital to the department's efforts on the pending proposals to amend the New York City fire code and rules regarding mechanical refrigeration.

Today we also have Mr. Robert C. Avatroni who was named deputy commissioner for the Department of Environmental Protection's Bureau of Environmental Compliance. He has prior significant management background in both private and public sectors. After spending 12 years with Consolidated Edison he was appointed to serve in the Kosch administration and became assistant commissioner in the Department of Transportation. He was later appointed to the position of chief of staff for the Office of Sheriff.
In 1994 he was appointed to the position of first deputy commissioner for the Office of Sheriff and in `96 he played an active role in the creation of the Trade Waste Commission.

Also we are pleased to have on the city panel today Mr. John, C. Bosse. He's the director of Code Revision and Implementation Unit of the Department of Building, Bureau of Electrical Control. The code unit was in the forefront of the recent passage of legislation which updated the city's electrical code and adopted the 1999 national electric code and over 300 local amendments reflecting the unique-built environment of New York City. The code unit also implements the requirements of New York City's new electrical code and oversees the ongoing initiative to further an update for the New York City electrical code and the New York City building code.

It's my pleasure to have these gentlemen here today. If you'd proceed up here to the panel for questioning.

Thank you, Madam Chairman.

CHAIRMAN MERRITT: Thank you, Mr. Holmstrom.

MR. HOLMSTROM: Madam Chairman, one other item. Today we're going to ask several questions of
the panel and I'm going to briefly describe those
questions. We've asked in the Federal Register Notice
for both the panels and those interested in making
public comments to address the questions.

The first one is, how does the New York
City Fire Prevention Code function to control the
handling of incompatible material such as nitric acid
and flammable liquids? What are the requirements of
the code's permitting provisions and are they
sufficient to prevent the mixing of incompatible
materials?

The second question, in the light of the
Kaltech incident, are there changes to New York City's
Fire Prevention Code that will enhance the state's
handling of hazardous materials such as nitric acid?
If so, what areas should be addressed? In responding,
consider the following topics: Hazardous material
identification and labeling, permitting requirements
such as the submission of a management plan and
inventory statements, MSDS availability to the
workforce, worker training, and the safe separation of
incompatible material in manufacturing facilities.

The third question that we have for the
panelists today is do model fire codes such as the
International Code Council's International Fire Code
and the National Fire Prevention Protection
Association National Fire Code present a more
comprehensive approach to hazardous materials
management in these areas?

Are there other cities or states that have
adopted more effective hazardous materials provisions
in their fire codes?

How do the requirements of the New York
State Uniform Fire Prevention and Building Code Act
affect the fire code obligations of New York City?

The final question, by what means do the
New York City Fire Department and the Department of
Environmental Protection exchange information
concerning ability to use in storage of hazardous
materials? Are there ways in which communication can
more effectively, can be more effective concerning
hazardous materials inventory and labeling
requirements?

Thank you very much.

CHAIRMAN MERRITT: Thank you. Could I ask
the panel, unfortunately the numbers, or your names
there are almost a little bit too small to see so if
you -- We've got big cards, though. If you could
introduce yourself so we know which one you are.

MR. HANSEN: I'm James Hansen with the Fire
CHAIRMAN MERRITT: Okay.

MR. SPATTAFORA: I'm Chief Spattafora with the Fire Department, assistant chief of fire prevention.

CHAIRMAN MERRITT: Thank you.

MR. AVATRONI: I'm Bob Avatroni, Deputy Commissioner of DEP, good morning.

CHAIRMAN MERRITT: Okay.

MR. BOSSE: And I'm John Bosse with the Department of Buildings.

CHAIRMAN MERRITT: Okay, thank you very much. And for our reporter, if you would, when you speak please give your names so he'll get that right. Thank you.

Who is the first to speak today?

MR. BOSSE: I'm starting off.

CHAIRMAN MERRITT: Okay, thank you very much, Mr. Bosse.

MR. BOSSE: Good morning, Madam Chairman and members of the Board. My name is John Bosse, I'm director of the Code Implementation Unit for the Department of Buildings. Also with me here today is Fatmahama, the PE and our executive engineer, David Nusbaum, our director of Intercontinental Community Department.
Affairs for the department. I want to thank you for the opportunity to speak this morning regarding hazardous materials and building codes. I'll focus my comments in response to questions posed as to how New York City's current building code and the international building code are structured to protect the public from the harmful effects of hazardous materials. I'll also respond to the question of what future plans exist for updating the city's building code.

The city's current building code, also known as the new code, the 1968 code, it's now entitled 27 of the administrative code and is applicable to new buildings, change of use and alterations exceeding 30 percent of the replacement value of the building. The new code classifies different types of occupancies of buildings and spaces into alphabetical categories and provides specific instruction requirements for these categories.

For example, high-hazard occupancy is classified as Route A and is broadly defined as storing, manufacturing or processing of potentially explosive, combustible or flammable products or materials. Occupancies falling within this high hazard definition and are subject to specific
instruction provisions relating to required fire
divisions and/or fire sprinklers, ventilation and
separation of the high hazard use from other
occupancies.

Similar requirements are applicable to
other occupancies involving hazardous material such as
certain storage or industrial uses, among others.

Requirements regarding various high hazard
uses are scattered throughout the building code. For
example, in addition to the occupancy classifications
in Sub Chapter 3, high hazard uses are also regulated
by Sub Chapter 7 titled "Special uses of occupancies"
which include location, ventilation and sprinkler
requirements. Specific requirements and restrictions
are set forth for the high hazard occupancies,
occupancies involving spray or dip finishing, those
involving radioactive material and radiation-producing
equipment, dry cleaning establishments, and those
involving storage of nitric acid, just to name a few.

The emphasis of the code is toward the
more physical properties of hazardous materials such
as flammability, combustibility and explosiveness.

It should be noted that a number of existing buildings
pre 1968 are still subject to the 1938 building code
as amended, also known at the old code. For these
pre-existing buildings the New York Board of Standards and Appeals classifies these as into high hazard, medium hazard and low hazard uses. According to this classification, buildings may be required to provide sprinkler protection, fire extinguishers or may be required to obtain permission from the Fire Commissioner.

The International Building Code 2000, also known as the IBC, has a category, Hazard Group H, to regulate many of the same uses found in New York City's high hazard Group A. It goes beyond the scope of Group A to expressly cover additional high hazard operations and uses. The IBC contains much more detailed definitions of various high hazard uses and breaks down the high hazard classifications into five subgroups, H-1 through H-5, each categorized by material types. IBC uses the term "control area" to define the enclosed space where quantities of hazardous materials, not exceeding the maximum allowable quantities for control area, are stored, dispensed, used or handled.

The IBC goes beyond the emphasis on physical characteristics of the city's building code to include characteristics such as passivity and covers both physical and public safety concerns. The
scope of the IBC provisions covers areas found in the city's building archives.

As you may know, the mayor in November of 2002 created an advisory commission to advise him on the prospect of updating the city's building code and adopting a model code. The commission recently completed its review of the issues and of two model building codes, the IBC 2000 and the National Fire Protection Associations NFPA 5000. This initial review was focused on the format and ease of adaptability to the provisions of the existing New York City building code. The final report from the commission is expected to be released sometime next week.

The commission's recommendation is to adopt a model code and the process will be aimed at modifying the model code text to reflect the intent and high standards of the existing New York City code and to take into consideration the unique conditions found in New York City.

We'd be happy to answer any questions you might have.

CHAIRMAN MERRITT: Okay. Does anyone on the Board have a question for Mr. Bosse? Oh, we were going to, I think we were going to wait until all
three have and then ask questions, if that's all right. Is that all right with the panel or would you prefer to do it -- Okay, thank you very much, Mr. Bosse.

MR. BOSSE: Thank you.

CHAIRMAN MERRITT: Who is -- Mr. Hansen, thank you.

MR. HANSEN: Good morning, Madam Chairman and members of the Board. My name is James Hansen, I'm the director of engineering for the Bureau of Fire Prevention, New York City Fire Department.

The New York City Fire Department's primary mission is to provide fire protection, inspection and prevention services to the firefighters of the city. To help fulfill this mission a comprehensive and easily-enforced fire prevention codes is one of the best tools to achieve life safety, property protection and continuity of building operations.

With regard to the storage and handling of hazardous materials, New York City clearly presents unique safety concerns owing in part to the city's extreme population density, traffic density, and extensive underground networks. In response to these significant public safety concerns, in what manner
does the Fire Department enforce the specific provisions of the existing New York City Fire Prevention Code and Rules? To ensure the safety of life and property, specially-trained inspectors from zero fire prevention visit all premises where hazardous materials are used or for sale and/or stored. Such materials include flammable and combustible liquids, compressed gases, aerosols, acids, motor fuels, and the list goes on.

Roughly 200,000 fire safety inspections are conducted annually by the Bureau. The majority of these inspections relate to the use, sale and/or storage of hazardous materials.

The Bureau is provided with technical support from a technology management unit which reviews plans, applications for variances and new technology. Assistance in the development of inspection standards is also provided as needed.

The Fire Prevention Code of the City of New York was originally adopted in the year 1918. Since that time amendments have been adopted on a piecemeal basis. Typically, the primary driving force behind these amendments were incidents and tragedies that identified the need to regulate certain areas or changed the manner in which certain areas were
regulated. Nonetheless, the Fire Prevention Code of the City of New York has never gone and undergone a comprehensive review or revision.

As John Bosse of the Department of Buildings has indicated, the mayor's advisory commission is assessing the potential viability of adopting one of the model building codes. A detailed study has been undertaken to evaluate the likely impact of differences between the current building code and the various model codes with respect to, amongst other things, public safety and effectiveness of enforcement. We understand that the mayor's advisory commission is expected to release a recommendation on this matter next week.

As you may expect, the Fire Department is playing an integral role in the mayor's advisory commission looking into the potential adoption of the model building code. Additionally, however, it is important to note that we will also necessarily be reviewing the fire, model fire code as many of the model building codes incorporate, duplicate and/or reference sections of the model fire code requirements

Preliminarily, it appears that select model codes are more complete in scope and breadth as compared to the current New York City Fire Prevention
Code. However, particular topics are not in some cases covered in such depth as to adequately meet the needs of New York City. As such, it seems likely that any model code that was indeed eventually adopted would almost certainly require extensive modification so as to effectively address the specific hazards that are unique to New York City.

As you well know, New York State recently adopted both the International Building Code and International Fire Code as amended by the specific New York State modifications. The state's adoption of these model codes does not impact the code obligations of New York City. Currently, New York City is not subject to the Uniform Fire and Building Code. Instead, the city enforces its own Building and Fire Codes whose origin predated January 1st, 1984, the effective date of the uniform code in the rest of New York State.

Executive Law, Section 383, provides that in cities with a population of over one million, existing building and fire prevention codes shall continue in full force and effect unless the code council, after analysis and consultation with the fire and building officials, determines that the local provisions are less stringent than the uniform code.
Existing local statutory, regulatory and administrative laws and provisions of the city shall continue in full force and effect unless the code council makes the aforementioned determination. Irregardless of whether or not New York City ultimately proceeds with the adoption of a model building code or a model fire code, it is significant to point out the city would certainly not be precluded from making modifications or enhancements to our existing New York City building and/or fire prevention code in an effort to address any deficiencies identified in the aforementioned studies.

The Fire Department looks forward to having productive discussions today and we do appreciate the opportunity to participate in this hearing. The U.S. Chemical Safety Board will be considering today's testimony and comments while developing the safety recommendations for this case, we look forward to reviewing the Board's recommendations.

CHAIRMAN MERRITT: Thank you very much, Mr. Hansen.

Next, who is going to speak?

MR. AVATRONI: Good morning, Madam Chairman.
CHAIRMAN MERRITT: Good morning.

MR. AVATRONI: And members of the Board.

My name is Bob Avatroni, I'm the deputy commissioner of the Bureau of Environmental Compliance, New York City Department of Environmental Protection. I thank you for this opportunity to testify today on the city's right-to-know program and our division of emergency response and technical assessment within the context of the hazardous materials emergency at the Kaltech site last April.

DEP is an integral part of the city's first response team. DEP houses the right-to-know data base which is now more comprehensive than at any point in its history. Over the life of the program, DEP's right to know staff, part of the Division of Emergency Response and Technical Assistance, known as DERTA, have developed a city-wide facility inventory data base used to track chemical storage throughout the city. To enhance the program, the right-to-know program has selected and inspected specific industries to be noncompliant or unfamiliar with the reporting requirements of the right-to-know law in order to make data base more complete.

In the event of an emergency involving hazardous materials DEP and the Fire Department can
access these files on site. Because DEP is on hand at all such emergencies and because it is our primary role to be responsible for maintaining and analyzing this data, we ensure that the critical hazardous material information is instantly accessible to the city's first response unit. For example, during the Kaltech event DERTA responded on site immediately, helping to prepare in the specific causes and early response needs. There was then issued the Commissioner's order mandating safe disposal of hazardous materials at the site and that disposal be conducted in accordance with all federal, state and local regulations. DERTA then remained on site 24 hours a day until all substances were removed.

DEP is competent in the level of inter aids, communication and cooperation before and during emergency responses. In fact we will soon be expanding and developing additional methods for accessing right-to-know information. In the near future DEP and the city will be rolling out new laptop software that will make the right-to-know data base available to others at the city's emergency response team. However, I would ask that the Board understand correctly the intent of the technology. This is an important step for helping the city make its response efforts more
This does not mean current record keeping and response techniques are inadequate, in fact quite on the contrary. We are simply creating a way to help the city respond in different formations with different personnel. The need of this or any other technology enhancing access to the data base would have prevented this situation or mitigated its impacts.

Given the existing high standards within the right-to-know program, these people believe the right to know has been tremendously effective in reducing potential hazards during emergency throughout the city. While there is always more that could be done to increase overall safety, the DEP is proud of having found innovative ways to maximize use of the right-to-know data base and its larger role as the integral part of the city's first response team.

I thank you for this opportunity to testify, I will be happy to answer all your questions. And seated my right is Mr. Enzel Cantansaro who has played a prominent part as our assistant director for the hazardous materials response unit and he can help to answer any questions also.

Thank you.
CHAIRMAN MERRITT: Thank you.

Ron Spattafora, it's nice to have you here, thank you.

MR. SPATTAFORA: Thank you.

CHAIRMAN MERRITT: Do you have a statement?

MR. SPATTAFORA: Well, I can just let you know in regards to the statistics in regards to the lab unit what they do. There's approximately 6,800 accounts, approximately 6,000 of those accounts are laboratories. Many of them are in colleges, hospitals, high schools, and the remaining 800 accounts include medical gas accounts, commercial gas accounts and hazardous chemicals. The laboratory unit conducts approximately 9,000 inspections per year. It's a fire prevention laboratory unit. And our accounts consist of approximately 6,000 no-fee accounts and 800 in which we charge a fee.

Common violations include lack of certificates of fitness to handle and store, supervise laboratories, unsecured compressed gas cylinders, flammables stored in non-explosion-proof refrigerators, missing blocks, inoperable safety showers, acid storage not segregated from flammable liquid storage, fire extinguishers not serviced by a certified company, missing warning signs, compressed
gas cylinders exceeding 10-year hydrostatic tanks, and
acid stored on metal shelves.

Critical violations include storage of
dry, potentially explosive picric acid, storage of
ethyl ether past its expiration date, storage of
flammable liquids exceeding the allowed flammable lab
capacity, and storage of flammable liquids in
unapproved labs and/or chemical storage rooms.

All laboratory requirements are covered by
Title 3 of the Rules of the City of New York, Section
10-01. In lieu of existing regulations, fire
prevention will refer to the NFPA 45.

All laboratories are required by law to
have at least one CFF holder on each laboratory floor
at all times whenever there is a laboratory in
operation, in some cases around the clock, 24-hour
coverages.

All institutions are required to maintain
MSDS sheets for each chemical used in their
laboratories at a central location, usually the
Environmental Health and Safety Office and/or security
desk.

Existing laboratory rules do not require
the flammable liquids or acids to be stored in OSHA-
approved chemical storage cabinets, they are usually
stored under fume-hood cabinets and under wash-sink cabinets.

Also I have the fire report here, and during the investigation of the fire there were several summonses that were issued to Kaltech in regards to improper storage. Acetylene gas, the improper storage of acetylene gas, illegal storage of paint, no CFF folder for air compressor, no permit for an air compressor, illegal storage of flammables, illegal storage of oxygen and acetylene tanks.

CHAIRMAN MERRITT: Okay, thank you.

At this time I'd like to open the floor for questions from the Board if there is someone who has a question to be recognized.

(No response.)

CHAIRMAN MERRITT: Then we'll start with Dr. Rosenthal. Since I missed you before, we'll start with you.

DR. ROSENTHAL: Okay. In relation to the g43 description of the various authorities that exist in the codes and in the different departments, in retrospect, it appears that there were regulations that covered everything, and in glancing through the report, it looks as though there were people who did some degree of inspections, what are your thoughts
about what additional resources or provisions or things might have assisted any one of you in reducing the likelihood of the type of incident that occurred at Kaltech? So I'd be interested in your response across the table.

CHAIRMAN MERRITT: Would someone like to respond to that?

MR. AVATRONI: I don't know, I'll take a crack at it, Dr. Rosenthal. From a DEP perspective, I think I speak on behalf of my colleagues, obviously any incident, if we have one incident it's one too many and this was a very critical incident. What we try to do is we try to develop as much intelligence as we possibly can, and I think I alluded to that in my testimony with respect to our right-to-know data base, and we have measures in place, obviously, that would be critical and promptly driven if those situations are not met. What we try to do, again, is develop as much information with right to know and we handle that, so that is preventive in nature and it works in the vast majority of incidents. Obviously it did not work here.

We have, and I don't want to compromise anything right now, what we did a year ago is we had the city council, with the city council we passed a
legislation that really modified the spill bill and intensified the penalty structure from a monetary perspective which is significant. Also the ability to pierce the corporate veil and hold an individual responsible personally. So if you have ABC Corporation and you decide to go defunct, you do not waive your immunity to being held responsible.

Additionally what we did in one of the critical issues that we felt were important from our perspective, is that we asked the council, and they did approve this, is that we could prosecute criminally. And if fact we look at each situation in an attempt to determine if in fact people have misused their responsibility. I will tell you this, maybe on some of these incidents we cannot answer all the questions you might have but there is an ongoing investigation as we speak.

So I hope that enlightens you in terms of my feeling toward the situation, the city's feeling as well, and this mayor is driven to fulfill that obligation.

DR. ROSENTHAL: Just a sub thing on your response. In other words, all of the fire department and other people are aware of the information you have when they visit the site?
MR. AVATRONI: Yes. What we do is we quarterly send the fire department information, we work closely with the fire department. And on site, as I alluded to in my testimony again, we do share information so people are aware of what should be in the facility. Again, it's something that, you know, it's sort of like if you go, obviously there's preventive medicine, so you try to act up front and to detect anything early on. And of course then when something does happen, you know, obviously you go to a doctor to be helped if you have something, so I equate that to this type of situation.

MR. SPATTAFORA: The DEP data base is available to our special operations command units, the HASMAT units and the affiliated squad companies that respond to these type emergencies. What we're looking to do, and we're working on it now with the safety battalion, with operations, is to get that data base to our operations center so it will be available not just to the special operations command units that respond to the incident but also the fire prevention inspectors so they can have that information available to them prior. So they don't necessarily have to look at the MSDS sheets that are on the site, they can have that information prior to doing the inspection. Also
it will be available to field units so they'll have that information also.

Prior to this we were just getting hard copy MSDS sheets in fire prevention, the toxic substance unit was getting hard copy. That information had to manually be inputted into a data program, all right, and that took time. And for a period of time a lot of that information wasn't adequately getting put into the system, so we're looking now to get that data base to operations center so that everyone has it.

CHAIRMAN MERRITT: Yes, Mr. Hansen.

MR. HANSEN: Yes, James Hansen. I'd just like to add something to, you know, to what additional resources might be needed, I think, to prevent this from happening at a location. Now we talked about the model codes and the fact that the New York City Fire Prevention Code hasn't been updated in quite a long time and it does need an update and the model code, I think, is a good springboard to move from there, and, you know, adopting the model code with certain modifications and with the program of inspections that the fire department has in place of getting out to these facilities, I think that that's the answer. I think the answer is to get the code up to where it
should be and then to implement an inspection program
that, you know, within the constraints that the city
has, you know, budget wise, to get a program out there
where we can get the job done.

CHAIRMAN MERRITT: Okay, thank you.

Mr. Bosse.

MR. BOSSE: John Bosse. I'd just like to
second Mr. Hansen's insight. I think that one thing
that we're very interested in is making sure that we
fill in any blank spots and overlapping jurisdictions
between agencies, and we did that with the fire
department on our effort to adopt the national
electrical code and the building code effort
continues. The fire department already has
representation on the mayor's advisory commission on
the adoption of the model building code so I think
we're moving in the right direction.

CHAIRMAN MERRITT: Okay, thank you.

DR. TAYLOR: I have a question, I guess any
of the panelists can answer, but specifically for the
fire department. I know that you require a
Certificate of Fitness for the applicants so they know
what materials they're handling and storing. Is there
any requirement for the workers to know that same
information and require a Certificate of Fitness as
well?

MR. HANSEN: Well, our Certificate of Fitness program is, I've explained what it is. There's certain types of activities that are regulated by the fire department and those individuals involved in those certain activities have to secure a fire department Certificate of Fitness. They have to come down, they have to take a test, in some cases they have to have some background requirements and they have to pass an exam and they are personally issued the certificate.

DR. TAYLOR: And that's for all the chemicals that they have on their site?

MR. HANSEN: Well, there is probably about 70 different categories. One of the categories is storage and handling of flammable liquids, there's cryogenic liquid, you know, there's all different categories and certificates. We have currently out there, and they're renewed every three years, 203,000 certificates. So there's quite a few of these and, you know, we test 300 candidates a day, you know. So there are people possibly coming in. Our enforcement program is constantly issuing violations to people who don't have the people who have passed the exam.

And one of the areas that I think that the
fire department, you know, will have to take a look at, and that is what is actually on, what is the study material, because we give the applicants study material so they know where they can, where they need to focus their intention in studying. And if it's not included in there, and I know in some areas it is included and talks about incompatible material and things of that nature, I think it would be very important and very worthwhile to have that in there, have the applicant study that and be tested on that and then I would provide, you know, some increased level of safety.

CHAIRMAN MERRITT: Do you verify who takes the test to assure that is the person who is being represented there?

MR. HANSEN: Well, yeah, that's an interesting thing. That was changed about two years ago when we went onto a system where, similar to motor vehicle, where we take a picture of the applicant. And there have been people who had their picture taken and then when they show up at the test it's a different person, the marshals took them away.

(Laughter.)

DR. TAYLOR: Now the second part of that, so the workers that are on site, is that OSHA's
responsibility and who makes that decision and how is
the training done for the employees at the site?

MR. HANSEN: I'm not that familiar with the
OSHA requirements. I know that they require training,
the right to know. We do not get involved and verify
that the OSHA-required training has been conducted, we
have our own self-certification program.

DR. TAYLOR: Just for the applicant only?

MR. HANSEN: Just for the applicant only,
yes.

DR. TAYLOR: Okay.

CHAIRMAN MERRITT: Thank you, Dr. Taylor,
thank you, panel. Is there any other comments before
we move on? Fine, thank you.

DR. POJE: I would like to ask Mr. Bosse
and maybe comments from Mr. Hansen as well about the
process that the city has been underway in
investigating building code reform. Mr. Bosse, you
told us that the mayor has actually set in motion
something that, and to celebrate the examination of
revision of codes. We're interested most specifically
in the preventative value that might be had for code
revision, particularly fire prevention codes that
might speak to the specific problems at the Kaltech.
You indicated that there were special modifications
that would need to be had for the City of New York in adopting a revised fire prevention code because of the uniqueness of the city.

There are a couple of things. One is, explain the process by which the code is being reexamined and who has standing in being and serving on the code revision recommendation team. And then, second of all, how this revision of code would need to be modified to deal with the explicit New York City context.

MR. BOSSE: First I will just describe the commission. About four months, by executive order, the mayor established an advisory commission on the adoption of a model building code and it is to make recommendations to the mayor regarding whether that is the course that the city should take. On that commission about a dozen members. Two fire department officials sit on that as well as other recognized industry leaders involved in the building code and the building construction industry in the city. As I mentioned, it's expected that sometime next week that commission will issue its recommendations to the mayor. So what I can speak to is the process that we followed in the adoption of the national electrical code and the amendments.
DR. POJE: Will that recommendation to the mayor be something that the Board would have access to?

MR. BOSSE: Certainly. We'll make sure that you're provided with a copy of the report as soon as it's issued.

DR. POJE: I would appreciate that.

MR. BOSSE: But the process that was followed in the electrical effort was that a number of technical committees were established covering, really, groups of subject matter and chapters of national electrical code. That was looked at, compared with the existing code, and where there was a consensus, certain improvements were made. The major intent was to bring the existing code into the format of the national code, but in the process there were over 300 amendments. So it's very specifically tailored to the circumstances that you find in New York City and the problems of environment that we have here.

DR. POJE: Just to interrupt for a second. The electrical code has already been accomplished?

MR. BOSSE: Yes. The mayor has signed the law, Local Law 41, back in December, December 2nd, so we adopted the 1999 and the 300, over 300 local
amendments.

DR. POJE: And just on that matter because I also had the opportunity to be in the building shortly after the event occurred, also I noticed that a number of electrical protection procedures for an environment that might contain flammable vapors were not had. Is there any grandfathering that would be allowed within this code revision or are we to force people to come up to best standard possible for the electrical code portions?

MR. BOSSE: Uh, there is a phase in but the local allowed a six-month phase in of the technical standards. The administrative positions took effect January 1st, but at the option of the applicant, they can, because projects start at the design phase, you want to allow them to have time to switch gears and follow the new code. But I would anticipate that a process, should we go forward with the model building code, will follow what we did with the electrical code.

DR. POJE: So, then, just to be clear, there would be a number of other technical committees following now that this decision might allow the DEP and the fire department to?

MR. BOSSE: Right. All the affected
agencies and public would have input into that and then we would come up with modifying language to the national code.

MR. ROSENTHAL: In other words, you would be going back to a facility like Kaltech and forcing the rewiring and new electrical provisions?

MR. BOSSE: Umm, that would be depending on what applied? As far as work, existing work, if they were to come in and file a job application, then they would have the option of proceeding up until July 1st.

MR. ROSENTHAL: There would be no grandfathering of existing buildings from the electrical portion?

MR. BOSSE: Well, I would have to know the percentage of work that was remaining. I'd have to have more details before I could really answer that.

MR. ROSENTHAL: Okay, thank you. I'll look at the modifications when you send them to me.

MR. BOSSE: Okay.

CHAIRMAN MERRITT: One of the things I've heard and I know we have heard it before is limitations of number of inspectors we have, but we know at this site as well as what I have heard from you, is there are multiple inspectors who may go in and look at a site like this. We may have a fire
inspector or we may have someone out of the water department who's looking at their sewer discharges. Have you looked at it and is there a way to cross-educate people so that the fire inspector goes in and, you know, he may be looking for fire extinguishers but if he saw an operation like this it would trigger something in his mind to report it through an mechanism to other agencies where there may be a concern. That's one question I have.

And the second one has to do with notification of building occupants concerning activities involving chemicals, hazardous chemicals such as the ones that were managed there or supposed to be managed there at Kaltech and created the situation, how do you manage both the right to know and how do you cross-pollinate one another with information concerning things that should be somewhat obvious, I think, in an inspection?

MR. SPATTAFORA: We could start in the program where we're giving the field companies when they do their annual inspections, semi-annual inspections, depending on the type of building, we're giving them information in regards to what we in fire prevention in regards to the storage, what type of materials, flammables, combustibles, paints,
DR. TAYLOR: Pardon me, is anyone looking at the labeling of drums?

MR. SPATTAFORA: The labeling? That's more of a, like the lab unit would go there and check on that in regards to labeling the MSDS sheets, some of them on technical aspects of the code, whereas the field units would want to know the amount that they are permitted to have on the premise. And they'd be looking at the storage, good housekeeping, things of that nature. But we have a program now in place where that information in regards to the quantities of combustibles, flammables, paints are being given to each administrative company and the allowable amount on the permit so that now the companies when they do the inspections, they'll have that information and they'll be able to make a determination on whether those permits are being complied with and whether they have permits at all to have that material.

MR. HANSEN: I would just like to add a little to that. In terms of cross-training or cross-enforcement, currently the fire department enforces, has gross enforcement authority from the building code to enforce many of the life-safety issues, need to be, overcrowding, you know, things of that nature, we have
that authority, and it is very useful and it's used, you know, every day, you know, violations and summons are issued every day for that. And in terms of cross-enforcement with other agencies, I mean once the model fire code or whatever code gets in place in the city, perhaps the fire department will have within their own power the authority to issue what is needed under their own authority. If that doesn't come to be, some level of ability to enforce the provision, not only just training, you know, the ability to go out and actually correct it right there rather than a referral to the agency and then the agency has to allocate resources for that. Some degree of cross-enforcement is worthwhile, you know, and one inspector can handle quite a bit. Even within the Bureau of Fire Prevention there is a possibility, we have many specialty units, and our inspectors may inspect a building, maybe two, three, depending upon what's in the building, public assembly, high rise, whether they have a kitchen, cooking equipment, whether they have an oil tank or they're using flammables or combustibles, we may be in there two, three, perhaps even four times a year to make an inspection. And, you know, in terms of cross-enforcement, it gets into a whole lot of issues, you know, how much you have to
pay somebody who is a super inspector and doing, you
know, the entire building. But certainly, you know, having one inspector go in, inspect the entire building for all the fire code violations, anything that affects fire safety, and then having him leave is a very nice thing, it's a nice thing for us, it's very efficient for the building owner. They're happy only to see a fire inspector perhaps once a year than every three months. Something that certainly, you know. We have talked about, it's been considered, but, you know, it is a big job to implement something of that nature.

DR. POJE: Just following up on the Chair's comments, though, are there any right-to-know access to be had by other tenants in a building about the conduct of material usage and storage in that building? This was a mixed-use building that the Kaltech operation was within. Are people knowledgeable about the right-to-know provisions in the City of New York and are they availing themselves of that information to be more vigilant for materials being used in their immediate environment?

MR. AVATRONI: We have a situation here, obviously, we do exchange our information with our sister agencies for obvious reasons. Unfortunately, I
guess more now than ever in the world we live in it's very difficult to put out information with respect to chemicals to occupants, to the general public from a security perspective.

DR. POJE: What about their safety?

MR. AVATRONI: Right, that's a very good point. You try to balance the safety and, again, we try to be the caretaker, if you will. But I think what we don't want to have happen, I think you folks would agree also, is create an environment that if you had that information out to the general public and someone wanted to do something that was not in anyone's best interest, it might actually pose more of a threat or more of a concern or more of a health risk to the general public at large, so we walk a fine line there. I can tell you this, if we have a situation where information is requested, if we have a formal request we will review people. We work with law enforcement, too, for obvious reasons.

DR. POJE: Now on that very matter, the preface that I gave to my opening remarks about the terrible tragedy 56 years ago in Texas City, Texas was the additional multitudes of lives lost and serious injuries from people who hadn't a clue about how to appropriately respond when a dangerous situation was
upon them. So this weighing of rights to know and rights to protect from an evil intent is the crux of a very serious dilemma for social safety and social security that I think needs serious examination before we adopt what happened after 9/11 as being the sole imperative for protecting our communities. There is too much of a history of the management of hazardous materials that has led to the poor outcome of too few people knowing what was being handled and how best to respond, endangering the lives of many other innocent bystanders in the situation. I don't welcome the task that's upon you at the DEP, I think it's an onerous challenge, but I do think we have to balance safety and security and assure that those innocent bystanders and other workers in other businesses in similar geographies are effectively aware of how to protect themselves during an emergency and how to respond in emergencies.

MR. AVATRONI: I concur with that assessment.

CHAIRMAN MERRITT: Thank you. Are there any other comments to that? Mr. Bresland.

MR. BRESLAND: Thank you, Madam Chair. I've got several questions but maybe I'll ask them in the order that I'm thinking about them.
The volumes of chemicals that were stored in the basement in this building, which is a multi-use building, I understand that they were permitted to store 500 gallons of flammables and 1,000 gallons of paint. How does that, from your perspective as professionals in the fire fighting business, is that an appropriate amount of flammables to be stored in the basement of a multi-use building and how does that volume compare with the model fire code amount?

MR. HANSEN: To my knowledge, the permit that the fire department had issued to Kaltech was based upon an inspection that was conducted on the first floor, so the?

DR. TAYLOR: Only on the first floor and not the basement?

MR. HANSEN: I'm not sure. It's reported that he didn't inspect the basement, I don't know whether that basement was inspected, but the comment indicates that the first floor was issued a permit. In terms of flammables stored in the basement, is that inappropriate now? Based on the model codes I would say no, the model codes do not permit flammable storage in the basement, sprinklered or not sprinklered.

DR. TAYLOR: All right.
MR. HANSEN: Unfortunately, we do not have the model codes in the city and recent legislation for mercantile would allow for certain flammables store in the basement with sprinkler protection and certain other provisions but that legislation did not address the issue of a factory, whether they could have flammables in the basement. So, you know, I would say that, you know, from a fire protection standpoint and a safety standpoint, it's not appropriate, no, to the basement. But it may not have violated any city code other than the fact that they didn't have a permit from us for that and perhaps the Certificate of Occupancy issued by the building department did not indicate that the basement was approved for the use of some type of manufacturing process.

MR. BRESLAND: Just following up now, can you explain how the process works? If an inspector from a department of the city comes and is inspecting the building and I guess they're thinking about an inspection with regard to hazardous chemicals, they go to the first floor but they don't go to the basement, why would that be?

MR. HANSEN: Well, the building owners, I mean some of these buildings are very large, you know, and there's different tenants on different floors, so
the fire department will go to the particular owner of
the building who has requested the first inspection or
if it's a renewal it will go to that, and that tenant
or owner, whoever it happens to be that got the permit
from the fire department, will then indicate and show
the fire inspector the areas where he conducts certain
activities. Sometimes it may happen that the
inspector doesn't get to floors because he was not
aware of or he was not informed that there was any
type of manufacturing activity going on in those
floors. And after he conducts his inspection he
completes a survey and his survey indicates what
floors he actually inspected and what he found on
those floors, and then his recommendation as to
whether a permit should be issued or not issued.

DR. POJE: Is there no kind of checkup
question that is asked for in that, do you have any
other hazardous materials located in other portions of
this building?

MR. HANSEN: There is no requirement for
them to submit a list of hazards to the fire
department, directly to us. Our inspectors are
trained in requirements, you know, they have, they are
aware of what the requirements are. They often pick
up the fact that people are using chemicals that they
don't have permits for and, you know, that goes on every day. We're constantly picking up new accounts based upon our inspecting of the facility where the business is being conducted.

MR. BRESLAND: I have a slightly different question. The Chemical Safety Board has been investigating this incident over the last year, we'll come up with our findings and recommendations, but a question to the professionals here on the panel, what do you think went wrong? I mean if you could wave a magic wand and make things better, what would you do to improve the situation?

MR. AVATRONI: I think, again, the Board is to be commended, obviously we've worked closely with you in the past year. And again going back to the statement I made before, that what we have, a situation, we have a situation here when this final is written, it will not be actually the final epitaph of this incident. There is an ongoing investigation which I don't want to talk much and you folks don't want to talk much as well. So, to answer you question, you know, and let's use a hypothetical situation, if someone is not being genuine in reporting substances, then that individual or that party should be made to pay a price and we fully
intend to use whatever powers that we have to make
that happen with the appropriate authorities.

DR. POJE: If I could just follow up on
that, I think we share your concern over the integrity
of your investigative efforts, but the concern would
be, what could be done in a preventative mode? I mean
clearly we want the long arm of the law to be long
enough and strong enough to catch people when they're
in violation prior to a catastrophic outcome to be
had, so what we're looking for is where is the leech
to be had in either revisions to the way the city does
its business or to augmenting what's been done already
to be preventative of such hard to see facilities.
I've walked through Manhattan, I know there's a lot of
businesses. I appreciate the challenge to the fire
department, to the DEP, to those administering the
building code to be visiting to everybody. We see it
from the federal level regulations, the state's
regulations and local. We believe there's great value
in the infrastructure already established here in the
City of New York to be preventative.

MR. AVATRONI: I totally agree, and I think
what we've done, I think what we've done successfully
is obviously there's heightened awareness of what the
right -to-know program is. I think we have many, many
more facilities filing. We have a multi-agency approach, obviously, that works, and communication, I think, is at the heart of that effort. And I think also, quite frankly, it goes back to, a preventative measure obviously will be how we act in a situation such as the one that we are looking for and the heightened awareness also in the penalty that has to be paid if there is no compliance.

DR. TAYLOR: The question that I have, I just want to follow up, so if the New York Fire Department does this and you're looking at the safe, the handling of storage for permitting purposes, that's correct. If you notice that there were working conditions that were not being -- poor working conditions, you know, no labeling, would you report that, then, to OSHA? Do you have any authority to pass that on to another agency, or to DEP, if that's their authority, could you do that?

MR. SPATTAFORA: Well, in this program that we've just enacted we have notified the field units to let us know if there are any improprieties in regards to storage, permits, housekeeping, anything like that, they would let fire prevention know and then we would let the other agencies know. We have a field public communications unit and they coordinate information,
transfer with other agencies, so we have an ongoing interaction with the buildings department and DEP, all the other agencies in the city.

DR. TAYLOR: Does your department handle the labeling when you go in? Do you conduct targeting inspections of these work sites or labeling violations or anything like that or is it just that you depend on OSHA to do that?

MR. AVATRONI: I think what we try to do is obviously we try to see what chemicals are there, if they are being reported properly, they're being stored properly, the labeling is appropriate as well with the information that's being given to us by the party that's at the location.

DR. TAYLOR: That's what the EP does?

MR. AVATRONI: Yes.

DR. TAYLOR: Okay.

MR. AVATRONI: And, again, that's why there's a right-to-know filing and a facility inventory form that comes to us. Again, we wish the world was perfect and we wish in every instance everybody was being forthright with us, but that's simply not the case, and it goes back, and I really want to make this genuinely clear to everyone, that the need for us to act appropriately when we have a
violation of this magnitude, any magnitude, is that we
will act accordingly and a message will be sent.

MR. ROSENTHAL: I'd like to follow up, one
quick question and then a more involved question.

Has your department actually ever visited
the Kaltech site?

MR. AVATRONI: Yes, we did, sir.

MR. ROSENTHAL: Okay. And so, for whatever
the reason, the unlabeled cans and things just were
either hidden or escaped your attention or something?

MR. AVATRONI: That is a fairly accurate
assessment, sir.

MR. ROSENTHAL: Okay. I have a more
general question. Being a little older, I don't think
you will ever root out all, quote, "evil" or all bad
actions, in fact what we find in the course of our
investigation is that most accidents are caused by the
failure of people to do things that they already know
they ought to do without any intention of evil, just
from the sins of omission that all of us, except the
panel, are prone to have.

(Laughter.)

MR. ROSENTHAL: So here we have a
situation, but, you know, things happen, and when you
plan, in terms of the safety of third parties as we do
in a mixed-use building, one has to ask the question, what if something which is not called for, not illegal, does occur, is it likely enough to occur so that there's significance risk, and what are the consequences of that risk?

Now I'm going to go back and say, here we have a group of solvents, people who are licensed to use chemicals singly and then to dispose of them. What I would like to focus on is the process of disposal, because when you mix chemicals together, and this is known in laboratories, you're going into a very dangerous operation, you're undertaking something far more dangerous than the use of the chemical per se in the intended operation. And some facilities, for example, will recognize this and not mix wastes on site, they will send them out separately in chem pack to be mixed by the licensed disposer at a facility where if there is any mislabeling or an unknown mixing of chemicals the consequences do not endanger people.

And so I raise this question, has the city considered that the disposal of wastes, labeled and identify people in a mixed-use facility should be done in the original containers and taken off site by the disposing of the original containers and then handled off site, since I think would significantly reduce the
likelihood of the type of incident to have occurred. Everyone who's worked in a laboratory knows that there are unlabeled cans, that the labels fall off and somebody moves away. I've looked in places like Las Alamos and others where I've worked and there are unlabeled substances sitting there for six years that someone forgot to move. So given the reality of actual human conduct, I wonder if the city has considered this type of what I would call inherently safer approach to the disposal of waste.

MR. AVATRONI: First of all, they should not be mixing, okay? And EPA and the state DEC is the regulatory body which we look to for protection, if you will. So your point is certainly well taken. I think there's a mechanism in place and I'm certainly not prepared to answer that on behalf of the city because, again, the regulatory requirements have the EPA and the state DEC taking that initiative, but I understand what you're saying.

CHAIRMAN MERRITT: Is there any other questions?

MR. ROSENTHAL: There was another response coming.

CHAIRMAN MERRITT: Oh, I'm sorry.

MR. SPATTAFORA: The investigator's report
from the Chemical Safety Board mentions that a few months ago Kaltech was producing one metric ton per month and at that point it was reclassified as a large-quantity generator under the EPA regulations. That's a status that pre-supposes the highest level of waste handling proficiency. So I would think at that time there would be some type of review of how they were handling that waste, if, like you mentioned, it would be performed off site or at another facility.

MR. ROSENTHAL: Thank you.

MR. BRESLAND: There was some discussion there from the gentleman on the panel about the exchange of information, the exchange of the right-to-know information with our department, and as I understand it, that was usually in the context of an emergency response to a fire or to some sort of hazardous situation; is that correct?

MR. AVATRONI: Well, actually there's a two-prong approach to this. Yes, when we are out in the field, obviously, there will be an exchange instantaneous. But also, as I suggested in my testimony or shortly thereafter, we do hand over that information, our right-to-know information on a quarterly basis to the fire department.

DR. TAYLOR: So they get it prior to?
MR. AVATRONI: Yes, that's correct.

DR. POJE: So from an emergency response function, that seems to be working out, that a team thought there was a very good emergency response taken by the city to such a catastrophic event last April, the challenge is, how can it inform the more upstream inspection process to seek to have a greater degree of prevention potential to the events that occurred last April?

MR. AVATRONI: I agree with your assessment, obviously we work closely together, we're proud of our efforts, collaborative efforts to protect people in the city, and as I suggested in my testimony again, we are working even further with our data base, to exchanging information, to use technology as our friend and to even enhance our efforts, and again to be more proactive, I think is what you're suggesting, and we will continue to do that.

CHAIRMAN MERRITT: One of the things as a large-quantity generator, I understand the State of New York has responsibility for overseeing that program. Would it be of use to you or are you notified about large-quantity generators that are operating here in the city for your further investigation or inspection or awareness, and if not,
would that be something that you would like to know?

MR. AVATRONI: I think there's always room for improvement, there's always room for exchange of information which would be helpful to any party, so I think the answer to that would be yes. But again, exactly where the, you know, the responsibility lays at certain points and we as a city attempt to work collaboratively and I think we're very successful for the most part in doing that and we try to work with our partners at EPA and the state and I think we are successful for the most part but there's always room for improvement.

CHAIRMAN MERRITT: I see. Dr. Poje.

DR. POJE: If I could just follow up on some of the points that I think you raised a little bit earlier, and that would be what Dr. Rosenthal was alluding as a difficulty of our Board. We seek to investigate in order to elevate the lessons learned from a tragic event, educate those who have primary responsibility for the causation of that event, but also to speak to a larger community whose pattern of practice may be slipping to the same kind of pattern of practice that this one sorry incident exemplifies. We are a national agency and we try to speak as particularly as we can to the localities that we can
speak to. So do you have any ideas of how you would reach the multitude of smaller facilities to give them knowledge of what had happened here and what is the existing rules and regulations and standards that the city would want everybody to adhere to and therefore be preventative and not dependent upon your jurisdiction of catching somebody when a failure does a occur?

MR. AVATRONI: I guess the fact that communication is in and the fact that this hearing is taking place, the fact that we've worked collaboratively for a year or so together and identifying a situation that was tragic. The lessons learned are the ability to communicate. As I've mentioned, when we highlight where we are making modifications in the form of changes to a spill bill in fact to intensify our efforts and increase the penalties from a money perspective as well as a criminality perspective, that's heightened awareness. Awareness is good, communication is good. We didn't want this incident to happen, you didn't want this incident to happen, but as you said before, we can use this as a way of sending out a message which is clear and concise to people that, yes, we are doing our jobs collectively and we will not tolerate any situation
that will compromise the public.

DR. POJE: Are there any particular trade
associations that might be representative of such
smaller business entities that the city works with
regularly to communicate rules and regulations and
practice?

MR. AVATRONI: Yes. In fact we've made a
concerted effort to go out to areas where we felt
there would be problems, I'll use the plating
industry, for instance, that uses, as an example, and
there are many others. We have an outreach program at
DEP under our EEDA program, that's the Economical
Environment Development Area, which goes out and
speaks to people, to make them aware, because, you
know, many people for years were not even aware of
what was necessary under the right-to-know program.
So we have taken significant steps over the period of
time and we will continue to educate and broaden the
potential for all those that deal with chemicals to
know what their responsibilities are know how crucial
it is to protect the people of the city.

DR. POJE: I know on behalf of this
personal Board member we'd welcome piggybacking on
such educational efforts so that the lessons learned
from the Board's ultimate report on the Kaltech does
get out to the same kinds of audience that has
prevention done.

MR. AVATRONI: We consider you a partner.

CHAIRMAN MERRITT: And if you can think of
any other, or members of the audience who are also
here, any other avenues for getting this information
out to those who need to have it in order to know what
their responsibilities are and consequences are, we
would certainly appreciate that as well.

Any other questions? Mr. Bresland.

MR. BRESLAND: In earlier testimony you
talked about the number of facilities that were
covered under, I guess the fire department's
inspections and you talked about laboratories. In the
New York City Fire Department's eyes, what's the
definition of a laboratory? Is that what I think it
to be, let's say a university laboratory, a school
laboratory, or is it broader than that to include
operations like Kaltech?

MR. HANSEN: Laboratory is basically a
diagnostic, a clinical, so you find them in the
universities, you find them in the hospitals, you find
them in the health organization groups, you know,
those type of labs. Typically when you get into
laboratories within industrial, that's covered by
another category of the fire code called technical establishments, and that activity is then regulated under the technical establishment and not the lab regulations.

MR. BRESLAND: Where would the operation like Kaltech fall?

MR. HANSEN: Kaltech would probably fall under the category of technical establishment.

MR. BRESLAND: Okay.

DR. TAYLOR: Is that where they were?

MR. HANSEN: They had been issued permits individually for what they had there. They had permits for flammables, combustibles and maybe one other thing. It's kind of like borderline. Technical establishment and individual permits is kind of, it's a gray area, you know, when they have a whole multitude of chemicals, a very large factory, typically they get lumped into technical establishments.

DR. TAYLOR: So this was smaller?

MR. HANSEN: This is smaller, they gave individual permits out, but it may well have been categorized as a technical establishment.

DR. TAYLOR: Okay.

MR. ROSENTHAL: That's the problem, that
there are gray areas, and that is why, for example, as a matter of principle, you don't, I'm taking the experience, you don't allow explosives to be stored in a mixed-use building. What we don't recognize is that when we mix seemingly safe materials together we can and do create explosives, and the question then is, given the establishment where the person's principle knowledge is something other than chemistry, even though he passes your two-day course, he's still not qualified to recognize what very many expert people fail to recognize in sophisticated chemical plants, and so I wonder again whether if one has mixed categories of waste, the disposal should take place in a mixed-use facility.

DR. TAYLOR: Can I go back to Mr. Bosse. Mr. Bosse, for new buildings, for someone coming in or occupying the building, what kind of information do you gather regarding the use of chemicals that are being used in a multi-use facility?

MR. BOSSE: I think I might let our executive engineer answer that because she deals with a lot more applications.

UNIDENTIFIED SPEAKER: Actually when, you know, the licensed occupant or engineer on behalf of the building owner files for a new building, he has to
identify the use and occupancy that will be, you know, occupying this building, and based on that if, you know, it's not a lack of building code requirements, but based on that we identify for him in the building code, we spelled it out clearly, if he comes in the category of high hazard, you know, category, he, you know, all the requirements would be in because of the construction classification, the sprinkler protection, the separation from other, you know, occupancy that may exist in the building. The announced, you know, in terms of like, even for nitric acid, nitric acid, if he has like a nitric acid, he has to identify, an identifiable on the plans, we would have proper in storage requirement, the proper, you know, ventilation that would, you know, the proper, you know, neutralization of this acid, that it didn't spill. It means all these requirements as our plans with you were, you know, discovered from the plan submitted. It means, you know, we give it to and we specifically say it's a manufacturing. If it's a dry cleaning establishment, we know there is specific requirements in the building code, and all this triggers, you know, in terms of fire protection, you know, it must meet the requirements of the code.

CHAIRMAN MERRITT: The question I have is,
ten years after this and there is space available in
this building and entity X, Y, Z rents that space, is
there some mechanism in the lease agreement or is
there some mechanism other than just making sure
they've heard about the fact that they need to get
these permits, is there some way, some barrier or some
requirement for notification in the lease agreements
or something like that that, you know, will catch this
to say, yes, I'm going to lease this property and, Mr.
Property Owner, I am also going to use chemicals in
this process as a part of what I'm going to be doing
in this leased space?

UNIDENTIFIED SPEAKER: Unfortunately, when
there is a tenant change, you know, the building
department modified, as long as the tenant falls
within the same, you know, use group in terms of
zoning and the same occupancy group in term of code.
We'd like very much applying the professional who's
been detained by the building owner to give him the
right advice or to come forward if there is a change
that would, you know, trigger code worker requirements
to come and file with the building department.

Right now in terms of like I just wanted
to comment on the exchange of information and the
training for the industry. The building department
meets with BIAC bimonthly, which is the Building Industry Advisory Council. The Real Estate Board, New York City's, you know, Real Estate Board is represented. And I think from this accident, I think we should be addressing them this way. The building owner has to be fully aware of what the tenant is planning to store in the building.

CHAIRMAN MERRITT: I assume he would want to know that. It would seem to me it would be in his best interest to know what's going on in those spaces that he is leasing, whether he is an on-site owner or an absent owner, you know, the security and ability to continue to have that building standing could result, you know, could be in jeopardy if he doesn't know that, so it was a question I had as to whether that might not be another place where you might have a requirement for notification or something.

MR. HANSEN: Yeah. I'd just like to add one thing to that, you know, I guess what Billings is saying is that they're reactive, you know, they wait for people to come to them. The fire department is actually out there and we are proactive in that, you know, we very often will go to a facility and the occupancy has changed. And one of the permit requirements in order for us to give a permit is that
the DOB documentation be in order, so we will very
often issue a violation to submit documentation that
you are in compliance with the Department of
Buildings, so we then force them to go back into the
building department process to get the approvals that
they need.

CHAIRMAN MERRITT: Okay. Any other
questions?

DR. POJE: Just for Mr. Bosse once again,
just to clarify for me where we stand right now with
the state law regarding building and fire codes,
you're not specifically charged as a municipality in
the state with adopting a specific code but you're
precluded from adopting a different code than you have
operational right now?

MR. BOSSE: My understanding, that since
we're a municipality over a million persons that we
adopt our own code, and I guess the only proviso is
that our code must be more stringent or at least as
stringent as the state.

DR. POJE: And the state has adopted which
code?

MR. BOSSE: The state right now has adopted
the International Building Code.

DR. POJE: And that has a fire prevention
code?

MR. BOSSE: Component.

DR. POJE: Component.

MR. BOSSE: I don't know the status of whether they adopted the companion fire code, I believe they have.

DR. POJE: You believe they have?

MR. BOSSE: That's correct.

DR. POJE: And am I correct, I believe I heard one of you testify that the city itself has begun a process of examining the implications of that code?

MR. BOSSE: Yes, and it's coming to conclusion very shortly, so hopefully sometime next week.

DR. POJE: Okay. And not the recommendation, I'm talking more about the study or analysis, just have a look at the implications of the city's adoption of the code portion of that?

MR. BOSSE: Correct.

DR. POJE: That is also to be had next week?

MR. BOSSE: Yes.

DR. POJE: Okay.

CHAIRMAN MERRITT: If there are no other
questions, I would like to take a little break if that would be all right. The panelists I'm sure would like that and the Board would like that.

I would ask that if you have not registered to comment, please sign the sheet out in front so that we would have your name, correct spelling, and know that you would like to speak in the public comment period.

I would ask everyone to please be back at a few minutes before 11:00 and we will proceed then and be on schedule.

I would like to thank these panelists, thank you very much for your prepared remarks as well as your attentive answers to our questions. Thank you very much and we look forward to working with you.

(Applause.)

(Recess.)

MR. HOLMSTROM: We're going to call from the list, please give your name on the list. I'd also like to thank once again Mr. Hansen, Mr. Avatroni and Mr. Bose and Chief Spattafora for their excellent presentations.

On our fire expert panel, Madam Chairman, today we have Glen Corbett. Glen is a professional engineer, he's assistant professor of fire science at
John J. College in New York City, he's also a captain in the Waldwick, New Jersey Fire Department and served as technical editor of fire engineering magazines. Previously he served as the administrator of engineering services for the San Antonio, Texas Fire Department. He was recently appointed to the Federal Advisory Committee of the National Construction Safety Team at the National Institute of Standards and Technology.

Second is Guy Colona. Mr. Colona is the vice-president of fire protection application and is chemical engineer for the National Fire Protection Association. He is a professional engineer with a master's in chemical engineering from Stanford University. He is the staff liaison to the NFPA technical committee dealing with hazardous chemical properties and hazard classifications, explosive protective systems or pyrotechnics. He developed and instructed a confined-space safety training course offered to maritime and general industry. He is the author and presenter of papers and presentations on confined-space safety, vapor dispersion modeling, pyrotechnics and industrial hygiene sampling of maritime workplaces.

We're also privileged to have Dan Lane.
Dan is the eastern regional director of fire service activities for the International Code Council and has been affiliated with the ICC since January 2002. His main responsibility is working with the fire service on a local, state and national level providing support functions such as inter-operations on the fire code and training on fire protections and the codes. Prior to being hired by the ICC he was a career fire chief in Maine and a full-time fire marshal in upstate New York and an arson investigator for Saratoga County, New York. He has been active in the fire service for almost 20 years. He was also an adjunct instructor for the New York State Fire Academy, and among the various other courses he has taught at the National Fire Academy include building construction for fire forces, both combustible and noncombustible.

It's my pleasure to introduce the panel of fire experts. Thank you, Madam Chair.

CHAIRMAN MERRITT: Thank you very much. Is someone designated to go first? Mr. Lane?

MR. LANE: Sure.

CHAIRMAN MERRITT: Okay, thank you very much.

MR. LANE: Thank you, Madam Chairman, Board members.
The International Code Council is committed to ensuring a safe-built environment for the occupants and the responders to all new and existing buildings. We do this by having the most proactive codes and code development process available today. International codes are now in use in over 46 states, Puerto Rico and the District of Columbia, and on reference in federal documents relevant to construction such as the Department of Defense's unified facilities criteria for all military construction.

The ICC developed its building safety codes through the governmental consensus process, a process that allows input from all interested individuals and parties. Anyone can submit a code change.

This process incorporates many checks and balances to protect against undue influence. Before a code change is made it's reviewed at several open meetings over an 18-month cycle. Each meeting is then published, results are then available for public comment. In addition, the process allows anyone not satisfied with the final action on a code provision the opportunity to appeal such action.

Now that I've said our legal stuff I'll
get on with the other.

   Basically when I was asked to attend, I just kind of reviewed our code and tried to address some of the issues that were brought up during the investigation. So what I'll do is, our fire codes specifically I'm talking about here. Basically the code takes a proactive approach to the prevention and management of fires and other emergencies. I'm going to go through just a couple of the chapters that specifically would have had impact on this incident.

   Chapter 1 is our administration, administrative section, it's a legal language on the adoption and enforcement of the code. One of the things addressed in Chapter 1 is permit. On flammable and combustible liquids a permit would have been required anytime over five gallons of Class 1 flammable liquids is used, so in this incident a permit would have been required which would have in turn opened the door on these other code sections.

   Chapter 4 of the fire code is entitled "Emergency Planning and Preparedness". This focuses on the actions of the occupants. Fires and other emergencies can either be prevented or managed, Chapter 4 deals with the management of them.

   Section 41.2, any safety plan, emergency
procedures and training programs for the employees are subject to the approval of the code enforcement official. Code enforcement doesn't mean building, that could be fire official also.

Also under training, employees must be trained to the hazards of the materials stored and used in a facility. The facility also must train a contact person to be the liaison to the fire department to identify the type and location of hazardous materials, so basically they have to work with the fire department.

Also in Chapter 4 there's a section on labeling. Pretty simple, all chemicals must be labeled. Rooms or areas where the materials are located must specifically be labeled. And all this labeling is referenced back to NFPA standards.

There are 18 chapters in the international fire code that are specifically dedicated to hazardous materials. Each of these chapters deal with a specific hazard such as flammable liquids, that's Chapter 34. Chapter 40 deals with oxidizers. And Chapter 27, this is the general requirements for hazardous materials. The scope of this chapter states, prevention, control and mitigation, or before, during and after, of dangerous conditions related to
the storage, dispensing, use and handling of hazardous materials shall be in accordance with Chapter 27. The purpose. Chapter 27 contains the general requirements for hazardous materials in all occupancies. These are above and beyond specific requirements set forth in Chapters 28 through 43 of the International Fire Code.

Some of the examples in Chapter 27, hazardous materials management plan. When applying for a permit, which goes to Chapter 1 with that over five gallons which this facility would have had to have done, when applying for a permit, the HMMP must be submitted and that must include a legible, approximately to scale, facility site plan. That site plan must include the following:

- Storage and use areas.
- Maximum amount stored or used in each area.
- The range of container sizes.
- A storage plan and location and type of emergency equipment.

Also in Chapter 27 hazardous material inventory statements are covered, which is basically anything they're got in there that's considered a hazardous material would have to be included. We also deal with control areas in Chapter 27. This limits
the actual amount -- I'm sorry, there's a table, 2703.1, that would limit the actual amount allowed in each control area. The control area is defined by the exterior walls, fire walls, fire barriers and roofs or a combination thereof where quantities of hazardous materials not exceeding their maximum allowable are stored, dispensed, used or handled.

Table 2703.8.2 is used for the design and number of required control areas.

Once you get one story below in this table it's going to drop your permittable maximum allowable quantities by 75 percent because it is underground. So on a flammable liquid it drops to 22 and a half gallons, just for information.

Training in Chapter 27, the liaison for the fire department, the employee for the facility, shall aid the fire department in preplanning and familiarize them with the facilities. The time to do this is not during an emergency, this is to be done prior to.

Also under training, each tenant or owner shall develop a mitigation plan, post that plan, and ensure all employees are familiar with it. The plan must be placed in effect in case of a spill or release.
Also under Chapter 27, separation of incompatible materials. Incompatible materials must be separated by a minimum of 20 feet, must be separated by noncombustible partitions or stored in separate HASMAT cabinets.

Also in Chapter 27, use, dispensing and handling section, this is separated into two separate sections, the first dealing with quantities over the maximum allowable limits, and that would force the storage to be in a detached structure.

And another section under there, transfer of hazardous liquids must be from gravity or an approved pump.

In Chapter 34 there's a section, no flammable or combustible liquids are permitted in a basement.

These are just some highlights of the International Fire Code that deal with hazardous chemicals. As previously stated, there are 18 chapters dealing with specific hazardous materials. If for some reason new technology or strategies emerge or someone sees a better way to protect lives and property, anyone can propose and present a code change to the code and expect a fair opportunity at the code-change hearings. This code was developed and
maintained by fire service members.

Thank you.

CHAIRMAN MERRITT: Thank you. Let's see, how about Mr. Corbett?

MR. CORBETT: Yes, thank you.

Madam Chairwoman, members of the Board, thank you for inviting me to testify today before your Kaltech hearing. I've got a written statement and some comments I'd like to provide based upon some of the earlier testimony we've heard today.

CHAIRMAN MERRITT: Thank you.

MR. CORBETT: The last 20 years has seen rapid growth in the depth and breadth of hazardous materials regulations across the United States. Specifically, the promulgation of detailed model building and fire code requirements dealing with the production, storage and handling of hazardous materials has provided a sound basis upon which to minimize the threat of a hazardous materials incident.

The incident at Kaltech has highlighted a critical need for the adoption and enforcement of modern hazardous materials regulations in New York City. While some of the city's current requirements adequately address certain hazardous materials concerns, there are large gaps and the regulations
must be corrected. The model building and fire code
developed by the National Fire Protection Association
and International Code Council provide the ability to
fill these gaps.

For example, a critical issue is the need
for industrial and commercial facilities to prepare a
hazardous material inventory statement and a
corresponding hazardous material management plan. In
my opinion, these are the most important aspects of a
model code such as the international building and fire
codes. The broad nature of such provisions provide
facility operators an organized set of operational
plans on handling as well as developing of preplans to
deal with spills and releases. Emergency responders
benefit from increased knowledge about the hazardous
materials used in the facility and in their
jurisdiction and how to deal with them.

My experience has indicated that an HMMP
is critical. When I worked in San Antonio before we
adopted the 1988 Uniform Fire Code which was probably
the turning point, hazardous materials regulations
nationally. That was the first time we went from what
we used to call five pages of toothless to 50 pages of
tough. These were a set of regulations that were very
extensive and required a lot of things, including
training of our inspectors, but most certainly training and education of the public, specifically facility operators and especially smaller operators. It was my experience that, very often that, before we adopted that code and even in the process of adopting it, that facility operators would walk into my office and dump a box load of MSDS sheets on my table and say, what do I have to do, you know, what are the regulations? And so now with the incorporation of HMIS and especially HMMP where there's an actual plan has to be prepared by a recognized authority, specialist, consultant, it puts in a much more organized format. And certainly that also is very beneficial to responders as well because now I have a written document that, maybe they don't need the whole document but I can turn over to local responders, that they can read what that HMMP talks about and what the preplans are for dealing with an incident there and what we can do about it specifically. I'll talk a little bit later about the implications for New York City in something like that.

Now why the HMMP and HMIS provide a facility with an overall general plan to do with hazardous materials, the current model fire and building codes also, this is again NFPA and IBC, also
provide detailed requirements for specific types of hazardous materials, not only packaging and handling provisions but extensive building construction requirements that protect against specific hazard of particular material. Hazardous materials are grouped by their particular hazards, of course, toxicity, flammability, what have you. For example, there is, again, here in New York City as well as other cities, before the implementation or the adoption of these more extensive requirements, very often the fire code only dealt with fire issues, now the model codes deal with health and toxicity issues that have nothing to do with flammability or fire safety. So, again, we'll be getting that added benefit if the city does adopt the model codes. These regulations cast a much wider net, obviously, than New York City's current fire and building code regulations.

The model building and fire codes are matched so that they work in unison. Generally the construction requirements are found in the building code while the handling requirements are found in the fire code. It's critical that both codes are necessary to properly deal with the hazardous materials, they're written in that manner. And you heard earlier testimony that the city is considering
adoption of the building code. I can't more forcefully say they need to look at adopting a fire code in conjunction with the adoption of the building code because they're a matched set, they have to go together. You only get half the puzzle if you adopt just the building code.

Make no mistake about it, the adoption of modern building and fire code will cover many more hazardous materials that's currently addressed in New York City's present codes and will require a new way of thinking about hazardous materials. Enforcement will be more difficult as a direct result of the more broad and extensive requirements. However, I believe that New York City will reap substantial benefits in the form of fewer and less-devastating hazardous materials incidents.

And I just have a couple of additional comments I'd like to make about what was talked about earlier.

You heard testimony earlier that the city's fire department does conduct inspections in a variety of facilities here in the city. I think, I would characterize them, they tend to be permit driven as opposed to what I would call routine inspection driven, I would reverse the process. I would say that
if you're going to a facility to inspect a building or a facility, you go through the whole building and not just focus on the permit for that particular activity, I think that's an important point to make. Of course coordination, and you're talking about the largest city in the country here, coordination between agencies is particularly difficult in any sense. I know working in San Antonio that, it was a city of about a million people, just over a million people, that it was very difficult to coordinate with other agencies other than the building department in my case because we were in the same facility, but there were issues that did come up that were certainly environmental protection issues that we had to deal with and unfortunately it's very often left to the individual inspector or the fire marshal to have to get the parties together and what have you. So what I would suggest, perhaps, is that, I know this is a big ticket item, but I think technology can help us to a certain extent here, I think there needs to be a seamless system between all these agencies as far as handling hazardous materials. I not only see it from the benefit from an inspection standpoint but also from a response standpoint that if you had a common data base at particular facilities, the hazardous
materials units within the fire department or even local fire companies could pull up that information, access it very quickly. And I've talked about the HMMP giving a paper copy in New York City, it's probably not the best way to do things because it's just so large, but I think that certainly the ability to provide that in a computer data base, perhaps as part of the fire department's dispatch system, I mean, again, a seamless system that kind of brings all the parties together that they all can access this information.

I think there are some, I think there are benefits in New York City's code that certainly need to be brought over. For example, the Certificate of Fitness that you heard about is a good program, it does attempt to deal with specific individuals and how they handle themselves and how they work in a particular type facility, you heard that there were thousands of those permits, or those certificates issued every year, that's something very beneficial. And I think the important point about that is that we've heard about training earlier and how important it is for workers' safety, training and things like that, I think you need to marry those two together. I think you need to have a Certificate of Fitness
that's tied to the training requirements that you want to implement that's required typically under both of the model codes, there are training requirements for the individuals that would work in these facilities, and I think if you tie the Certificate of Fitness to that training, I think that's a good thing. They do that to a certain extent but, again, if we adopt a model code that's going to be a lot more extensive, I think, and we certainly would encourage the city to use the resources of these two code-writing bodies on either side of me here in terms of training and that type of thing.

So thank you for your time and I'll be happy to answer any questions you may have.

CHAIRMAN MERRITT: Thank you very much.

And we have Mr. Colona.

MR. COLONA: Good morning, Madam Chair, Safety Board members, staff, members of the panel and ladies and gentlemen of the public. Thank you for the opportunity to testify this morning. Again, my name is Guy Colona, I'm an assistant vice-president with the National Fire Protection Association. I have management responsibilities and staff technical responsibilities within NFPA's engineering division for two different departments. The one that's most
relevant here is our chemical and hazardous materials
deptartment. The other department that I manage is our
fire protection applications department which includes
our fire suppression systems activities in the codes
and standards area.

I'd like to begin this morning by
providing you with a brief background about NFPA
followed by a description of the relevant hazardous
chemical codes and standards that I think apply to
today's discussions and finally how I believe these
documents could be effective in managing the safe
storage, handling and use of hazardous chemicals.

NFPA is an international organization that
develops voluntary consensus codes and standards that
are adopted by state and local jurisdictions
throughout the United States and the rest of the
world. Many NFPA codes and standards appear as
mandatory references cited in the federal regulations
such as the U.S. Department of Labor, OSHA, DOT and
APPA. All NFPA codes and standards are accredited by
the American National Standards Institute, ANSI, and
meet the criteria mandated by Congress and Public Law
104-113 which is the National Technology Transfer and
Advancement Act.

In addition to its consensus codes and
standards activities, NFPA also carries out its public education mission through programs that incorporate NFPA’s very recognizable mascot, at least to our children, Sparky the fire dog, which is a registered trademark of the NFPA, and every October NFPA is the official sponsor of fire prevention week, a tradition continuing over the past 80 years. What's more relevant here today, though, is our codes and standards arena. NFPA committees write the national electrical code which has been referenced earlier today, NFPA 101, the life safety code, and a total of about 300 other codes and standards adopted throughout the nation. We have nearly 75,000 members in the association in the United States and from 107 different countries. We convene more than 250 technical committees made up of about 6700 experts who represent the various affected parties in the diverse subject areas covered by our codes and standards. The representation on each committee, as Mr. Lane mentioned, in terms of the ICC process, we also look at taking as much representation from as broad a spectrum as possible. We have nine interest categories such as enforcers, users, consumers, manufacturers, designers, researchers and insurance. These experts in their various fields volunteer their
time to serve as members of the technical committee to write nearly 300 codes and standards.

One of those standards is NFPA 704 which was referenced several times today, a standard system for the identification of the hazards of materials for emergency response. Many people simply refer to this as the hazard diamond standard because of the conspicuous symbol which is the color-coded square on point that is usually more simply described as a diamond that categorizes specific hazards. This is one of many NFPA standards that have some applicability to the questions being asked here today.

Many of you are familiar with the 704 system as it provides a simple system for ranking the hazard of a chemical based on a relative scale from zero to four with four indicating the most severe level of hazard.

The ratings are provided for health, flammability, instability and special hazards. This system is one frequently used for hazardous material identification and labeling. Because of its simplicity, it is easily recognized and understood by workers. Though the primary intent is described as benefitting emergency responders, the standard is frequently used to identify hazards and classify the relative severity within a workplace. For example, the model fire and
building codes have long used NFPA 704 as one criteria for establishing certain risk levels and then imposing certain requirements based on where it fits within the 704 rating. In addition to that standard, the committee responsible for the standard has developed ratings for over 1600 chemicals.

NFPA code, the standards provide a broad-based and comprehensive set of requirements applicable to all forms of chemical, hazardous chemicals. I have noted earlier these documents represent the basis for treatment of this subject within various model fire and building codes.

NFPA addresses the hazardous chemical area in part based upon the physical nature of the material, i.e. whether it's a liquid, gaseous or solid material. In other instances the treatment of a hazardous material may be derived more from its actual use, such as in spray finishing operations or as we've a little bit of discussion today, chemical laboratories.

Our fire code, NFPA-1, the uniform fire code, represents the most comprehensive means within the NFPA codes and standards system by which to address the storage, handling and use of hazardous materials whether liquids, gases or solids. The
purpose of NFPA-1 is, quote, "To prescribe minimum requirements necessary to establish a reasonable level of fire and life safety and property protection from the hazards created by fire, explosion and dangerous conditions.

The code establishes a sequence of steps that must be followed whenever hazardous materials are going to be stored, handled or used.

The first step involves the classification of a hazard in the most general terms as either physical hazards or health hazards. And again, that's an extension beyond what we've heard the New York City regulations have traditionally dealt with where they have limited it to the physical hazards.

The code even addresses procedures for dealing with both mixtures and materials having multiple hazards. The code then establishes permit requirements for the storage, dispensing, use or handling of hazardous materials in excess of a minimum threshold quantity, a quantity above which the permit requirement becomes actionable.

Linked very closely to the permit process might be a requirement for a hazardous material management plan, which we've heard about from the two previous speakers, along with appropriate hazardous
materials documentation. The HMMP includes an emergency response training plan and a facility site plan that designates areas for storage and use, maximum quantity stored or used in each area, container sizes and types, product-conveying piping systems, location of emergency isolation and mitigation valves and a storage plan.

In addition to posting the HMMP with the permit there is also a requirement that you would have material-safety data sheets, MSDS's, readily available.

The code also addresses required signage including the hazard identification signs associated with the NFPA hazard rating and labeling system described earlier.

The code also addresses the significant hazard associated with storage of incompatible materials and specifies acceptable methods for separating incompatible materials in storage and those materials in storage that are incompatible with materials in use.

I'd like to go back to, I think, discussions with the previous panel, I think it was a question for Mr. Bresland related to the inspection and the materials in the basement and looking at the
full facility. The way I would interpret that last statement is that it would be important that you look at incompatibilities for materials that are stored in areas adjacent to materials that are in use. And that would not necessarily be limited to only your operations, it could be floor to floor, it could be building to building. So I think in that discussion that could be extended to that intent. So that kind of addressed again something you talked about in the previous panel.

All these elements come together to create an effective fire and life safety plan when the plan is executed by a trained workforce. The need for trained workers cannot be overlooked. The hazards in industrial workplace require constant attention by management and the workers to ensure that if a plan is developed it's followed. Anytime a change in routine occurs, whether it is a new employee or a new process, there is a potential for something unexpected to occur. New employees aren't necessarily those who have never worked at the facility before, it may be an inexperienced worker who is reassigned to a new process or a new piece of equipment and they, in that context, should be considered new under those guidelines and receive whatever relevant additional
training is going to get them to be proficient in that new environment. In the end, the best plan, the proper classification of hazards, the proper labeling, proper storage, proper separation arrangement all are ineffective if untrained workers are expected to implement the plan.

NFPA-1 uniform fire code references some 40 NFPA codes and standards on subject areas dealing with hazardous materials or special uses or operations. Where a more specific content is available in these codes and standards, the uniform fire code extracts text from those referenced documents into NFPA-1. NFPA-1 is currently adopted in 16 states and a new edition, 2003, incorporates provisions of our code partner, the Western Fire Chiefs Association, and the uniform fire code which is used in approximately 14 additional states.

The provisions found in NFPA-1 and the specific NFPA reference documents form the basis for developing a comprehensive approach to ensuring fire and life safety in environments where hazardous materials are processed, handled, stored and used. The requirements represent a base of knowledge derived from over 6,000 participants in the NFPA consensus codes and standards development process. Through the
ANSI process NFPA and its committees ensure that the provisions in the codes and standards remain state of the art. As mentioned earlier, many of the reference documents contain an NFPA-1 that are either material specific or address a specific operation or process are also the basis for requirements found in regulations for workplace safety and health issued by OSHA.

In addition to preparing the code, NFPA offers products and services to support NFPA-1 uniform fire code, including a training program certification for fire inspectors, handbooks, and other staff assistance. We're also willing to train enforcers in those states and metropolitan jurisdictions where the code is adopted at no expense to the jurisdiction.

One benefit in updating the New York City code is the addition of life safety provisions that go beyond the traditional view which has been on the physical or therefor the fire and explosion-type hazard.

So with that, thank you for you attention and the opportunity to appear before you. Thank you.

CHAIRMAN MERRITT: Thank you very much, panel.

I'd like to open now for questions and
I'll start with Mr. Bresland.

MR. BRESLAND: A question about the international fire code -- Am I using the right term? How many large cities in the United States, for example cities equivalent in size to New York City, would have adopted that fire code?

MR. LANE: Give me one minute. I may -- I don't believe I have an updated list but I do have a list here, I don't know if its states or cities. Unfortunately I don't have a city list.

MR. BRESLAND: Just an approximation at this time. I mean one, two, ten, fifteen?

MR. LANE: I'll be honest with you, I don't want to shoot from the hip so I can't answer that.

CHAIRMAN MERRITT: Would you be able to get that information to us?

MR. LANE: Sure.

CHAIRMAN MERRITT: That would be important as we go forward. Thank you.

MR. LANE: Definitely.

MR. POJE: You said 46 states, I believe, had it?

MR. LANE: The states themselves or a municipality in that state but the codes are being used in 46 states.
MR. POJE: So, in other words, New York State might be listed but we obviously have the coverage in New York City?

MR. LANE: Correct. And another example would be like the State of Maine where there is no state-wide building code but a lot of the municipalities use either the international code or one of our legacy codes.

MR. POJE: Do you have a map?

MR. LANE: Yes, on our web page.

MR. POJE: That would map out where the coverage is?

MR. LANE: On our web page it's pretty extensive, it shows a map of the United States with different colors and you click on that and then it will bring up jurisdictions and which codes they're using.

MR. POJE: Thank you.

MR. BRESLAND: I guess this question is for Professor Corbett. Looking at the current New York City fire code, and I haven't read it in detail but I've looked at it and it's interesting in that it makes references to terms that maybe I learned when I was going to college many, many years ago, how difficult would it be for a city of the size of New
York City and as complex as the city is to switch from its existing fire code to the new standard fire code? Can that happen over night or is that a more difficult or longer-term process than that?

MR. CORBETT: Well, it is a process, certainly, but I think it's something that can be done, I mean there's no question in my mind. I fall to the side of saying start off with a clean slate with a model code rather than try to fix up the late 19's existing fire code that's been retrofitted and retrofitted over decades, basically. And also, you know, there's also the issue of commerce here, too, the fact that New York City does write its own codes does impact commerce in the city because individuals who come from other areas of the country have to basically learn the peculiarities of New York City's codes. I mean I agree with you also that there's terms in there that haven't been used, in my opinion, for over 50 years in some cases, some hazardous materials terms specific of other areas as well and, again, I think it's time to, you know, to move on, basically.

And getting back to your question of how long this would take, it is going to be a process, as I mentioned earlier, it's an educational process for
everyone involved, it's not just even the city, it's
the impacted people, facilities that are out there,
you're going to have to learn the new codes, you
know, and it's going to take some time. I know that
was one of the considerations we had in San Antonio
with even a million people, that we knew that when we
transitioned into the fire code at that time that it
was going to require a lot of internal work as well as
external educational efforts that we had to put
together ourselves, basically.

MR. BRESLAND: Okay, thank you.

CHAIRMAN MERRITT: One of the questions I
have for the panel is, you mentioned several things
with regard to requirements for training and giving
employees information, one of the things I wonder is,
do the codes address language barriers that may occur
or may be present with regard to workers, do they
require, you know, language that can be understood,
and also does it address the educational level.

MR. COLONA: Guy Colona, NFPA.

The elements of the training, the
competencies, and I'm not sure of all of them, but a
number of them do acknowledge that it needs to be
suitable for the languages of the employees, the
workers, has language similar to what OSHA has had for
a number of years in the workplace requirements with respect to training in a way that is understandable to all of those affected.

And as far as getting into the other issue which is training to the right education level, which I think is what you asking, that's probably more silent but it tends to be something that's implicit in developing any training, you have to look at that from that standpoint in terms of knowing that you've successfully achieved the training that you're out there for, so you've got to look at the education levels of the people taking the courses.

CHAIRMAN MERRITT: All right. As a followup, what about certification of the fire inspectors and how does that play with the requirements for the fire codes, the international fire codes?

MR. COLONA: NFPA has a current program on fire inspector certification.

CHAIRMAN MERRITT: For the City of New York?

MR. COLONA: It's open -- I mean it's not limited in terms of its applicability. I don't know the details on who's going through it or where it's focused, but I don't think it's intended to be limited
a single jurisdiction. It is a fire inspector certification program and it has certain competencies and you go through and you get certified according to this program.

CHAIRMAN MERRITT: Let's stay on the original question if we could. Mr. Lane.

MR. LANE: Yes. Just like NFPA, our code basically says that the employees have to be trained. We don't break it down and say that it has to be in different languages, it just says that every employee needs to be trained to the hazards they're working with. And however that has to be done, we don't basically break it down specifically, it follows the OSHA standards and the Fair Labor Act.

CHAIRMAN MERRITT: Okay.

MR. LANE: In the training issue we also have the certification for fire inspectors and, just like NFPA, it's not specific to a municipality that adopts our code, anybody can become certified regardless of what codes your using or if you're using any codes.

CHAIRMAN MERRITT: Okay.

MR. CORBETT: In terms of, I guess the language issue, that certainly is of concern. It's not even just the a language as far as training goes,
it goes to the language issue in the terms of response, response to a particular location where there is a problem, communication always becomes critical. We know that, for example, in New York City that there are problems with high-rise buildings, especially after hours when it's typically cleaning crews and things and there's an alarm initiated within a building and the people that are there perhaps don't speak English and it does complicate issues, so that's certainly important.

As far as the training goes, training for the employees, this is one issue that I think on a couple of levels here is very important. Certainly training for employees, we've talked about that a lot, but also educational efforts in terms of the code requirements because, again, we all, you know, we can teach someone perhaps how to properly handle a container or transfer of a liquid or things like that, but generally speaking, as I mentioned earlier, a lot of facilities don't really understand the codes themselves, and this is, I think, an area where both, again, talking to the NFPA and the ICC. But I think this is an effort that they should put out there in terms of having some kind of informational program for facility operators. I'm not saying they have to train
them, I'm saying I think there should be materials out there that puts into, I won't say plain English, but has some kind of explanation of what the code requirements are. For example, you know, talking about the ICC, they have the control area concept, and it takes me an hour to explain to someone, a facility operator, what a control area is and how it all works, you know. We've gone through the training but facility operators haven't, and I think that's an area where both the NFPA and ICC could extent their efforts as far as, you know, dealing with that kind of issue.

One last point on certification inspectors. I live in New Jersey, I'm on the State Fire Code Council in New Jersey, we have a pretty extensive inspector certification program, it's a multi-level program, other states have similar programs. I think the most important part of our program is the re-certification process. A lot of states have a certification. I had one under the uniform fire code many years ago in San Antonio, but once I was certified that was it for me. It took years to go by and I was never asked to do it again. So, anyway, New Jersey has a program in which there is a re-certification to maintain that certification. I think that's a very important part of any kind of
program like that.

CHAIRMAN MERRITT: Thank you. Dr. Poje.

DR. POJE: If I could change the focus back to the Kaltech incident and what we have is a small business that's been involved in this incident, I'm happy to see the implementation of the uniform fire code in a number of jurisdictions. Has there been any analysis done in those jurisdictions where either code has been adopted for the impact that the code has had on the small business community? In other words, what has the enforcement and adherence to the code been like for those businesses and is there something special that's done to address the specialized needs? I know Mr. Corbett just described some of the difficulties of being able to communicate and I daresay probably those who are employing his services are a larger business with more complexity but here we have a smaller business for which chemical usage was an incidental aspect of the business, not the primary rationality of the business.

MR. LANE: Normally when somebody comes in to apply for a new business they're going to have, especially a facility like this, some type of fire protection engineering firm that's going to assist them through the process to set them up and running
because you're right, the normal person could not walk in, understand the codes, and I don't think they've even been through the permitting process, let alone the design and construction of a facility to operate, would need some type of an engineer with plans and a site plan and?

DR. POJE: I think the question that I was asking, has there been any specific analysis into the small business community's responsiveness to the implementation of these codes and, you know, is it a successful process of having them be embraced in a city or municipality where that code is adopted?

MR. LANE: Only speaking for the international codes, I know we've got letters from like the American Institute of Architects, Homebuilders Association, those types. I don't know of anybody endorsing our codes as far as like a small business association or anything like and their impact.

DR. POJE: And how about from NFPA-1?

MR. LANE: Dr. Poje, I'd like to defer to my colleague, Jim Dolan, who is the regional manager for the fire code office. Welcome to the table.

MR. DOLAN: Thank you very much. Just a very brief introduction. Before being with NFPA I was
in the New Jersey fire service for 25 years and the
retired state fire marshal over in New Jersey.

Specific to your question on the adoption
which goes back to the AHJ's or the municipalities or
states that would adopt, they have to do an impact
study, especially for small business, on the effects
there.

The second part of that is, the authority
having jurisdiction, the fire departments, have to do
that educational program and bring those small
businesses in there together either to trade
associations or something there, but that is something
that has to be provided by the enforcing authority to
make sure if what you're saying happens that they
don't fall through the cracks because they're small,
an allied chemical or something like that.

DR. POJE: Has either association, the
council or the NFPA, prepared any specific research on
this topic that would assess the ability to understand
the impact on small business and their ability to move
progressively and dramatically in the spirit of what
the code is intending to achieve?

MR. DOLAN: Not that I'm aware of offhand
but I can check with the Petroleum institute and those
type of things and get back to you on that.
DR. POJE: We'd appreciate any information you should gather on that subject.

CHAIRMAN MERRITT: Also the National Association of Manufacturers has a small and medium business group, that might be another place to check as well. Thank you.

Dr. Taylor.

DR. TAYLOR: Just going back again to some of the training issues. Mr. Corbett, some of your suggestions were really helpful. In a small business like Kaltech, how could we, if we adopted the international fire code standards that the city adopted, a, I think you called it a seamless system, how would that impact, again I guess it's twofold, the training aspect for small businesses and how could we assure that those businesses would be in compliance?

MR. CORBETT: Well, that's a very important question or a set of questions and I think Jim Dolan mentioned earlier, he just said the responsibility for educating the small business facility operators falls to that local jurisdiction typically, and having worked for a local jurisdiction, I can tell you it's a very tough thing because I don't have any physical things, for example like a handout, to say, this is what a control area is or is what an HMMP is. As I
said, my recommendation would be if these two code bodies could actually prepare written materials, training materials that could be delivered by the local enforcing agency, I mean that's the thing. My problem is at the LEA I don't have literature, I have to create my own or sit down with the people through workshops and things like that. This is not easy stuff to understand. I can tell you that, you know, when the uniform fire code, again, when they adopted back in '88 when they put that new set of requirements out there, there were numerous hours of training even our own inspectors had to go through just to understand it, you can image what a small business guy, you know, again, with a box load of sheets walk into my office saying, what do I have to do, because he has no clue, typically, what to do.

As far as the seamless operation goes, I mean one of the issues here is the information sharing we talked about earlier between the different agencies, and I think for a city the size of New York, I don't know how you can do it other than through a computer data base that would share that information because, again, it is very important. I mean you're putting a lot of responsibility on individual inspectors to communicate when there is some issue in
somebody else's code or some other issue. Now they do have, New York City has joint jurisdiction over certain areas and things, but it does come up, in my opinion, quite often where something comes up that isn't in their code and they have to call the other agency. It's a long, protracted practice. So I think if there was some way of using that same computer database to share that information. For example, if you're going to do an inspection, you know, if there's a problem with a particular issue that comes up, then that could be relayed through that same data base and have some kind of central collection point for handling them. But I think, you know, we rely very heavily on paper in New York City and I think we need to get away from that in a lot of respects.

DR. TAYLOR: Mr. Lane, did you have any comments regarding that same question?

MR. LANE: No.

CHAIRMAN MERRITT: All right, thank you.

DR. ROSENTHAL: I want to come back to my same issue. The incident at Kaltech was not a question of the mishandling of any single material, it was a question of an unintended reaction. NFPA-704 deals with properties of single materials, it does not
deal with the problem of mixtures or the hazards of mixtures. We have completed a study that shows there are a large number of reactive incidents. We are dealing here with a reacting incident resulting from the mixture of materials which in and of themselves were hazardous but the result was, shall we put it, a synergistic effect. And I come back again to this lead-in question which is supposed to set you up. So the set-up question is, would you allow the nitration of pondering to take place in a mixed-use building?

Any panelists want to respond?

CHAIRMAN MERRITT: Can anybody here answer that?

MR. CORBETT: Incompatible materials is, you know, if you've seen them very often, I think the first incident you ever dealt with in that chemical company in New Jersey, that was an issue of incompatibility and reactions and things like that. This is an issue that permeates, I think, all areas. And I've done a lot of inspections, I can tell you that facility operators who should be knowledgeable about just storing, not even mixing but just storing incompatible materials together is a problem and it's definitely a problem now. I think there are issues here that we've touched on here as far as compliance,
let's say, with what happened at Kaltech versus, you know, what the model codes call for. A mixed-use building, there are extensive requirements in these model codes to prevent, you know, having a catastrophe because you have other uses going on inside the building, obviously, and I think, you know, to answer your question directly I'd probably say, no, I don't, you know.

DR. ROSENTHAL: What I'm coming to is that I think when you deal with a potential for an extremely catastrophic event one has multiple values to prevent the realization of a sequence of events that could lead to it. No one in his right mind wants to hurt anybody or kill someone, we happen to be weak. You've all been trained how to drive exactly right. I would love to have a dollar for every time you have gone outside the prescribed limits. So here we're dealing, however, with consequences to people and I come back to the question, should facilities be allowed to mix wastes in registered large generators in a mixed-use facility, and if so, what might be done, particularly for these installations which involve this added reactivity hazard? So I'd like your comments individually.

MR. LANE: Mr. Rosenthal, we do have a
section that deals specifically with incompatible materials, it's in 2703.9.8 and it's called "Separation of incompatible materials", and there are various steps that have to be taken to ensure anything that's incompatible is kept away from the other?

DR. ROSENTHAL: Does it deal particularly with waste disposal?

MR. LANE: It deals with any incompatible material.

DR. ROSENTHAL: All right. So that, in other words, if that standard were in place Kaltech could not mix classes of incompatible materials or individual incompatible materials?

MR. LANE: They would have been trained if it was in place and everything would have been labeled and it would have been a perfect world.

(Laughter.)

MR. LANE: But you're right, there is a section of the code that does deal specifically with the incompatible materials and how they have to handle them.

DR. ROSENTHAL: But it is based on people being able to understand it being labeled and use it even though other people than themselves may be at significant risk?
MR. LANE: Correct, and that would go with training.

DR. ROSENTHAL: Right, okay, thank you. Well, it comes back to my question, would you allow a trained group to manufacture nitroconduit in a mixed-use facility that you have looked at?

MR. LANE: No.

CHAIRMAN MERRITT: We have five minutes so?

MR. COLONA: Just to follow up, Dr. Rosenthal, the NFPA-1 uniform fire code has the same provisions with respect to the ways in which you can treat the storage provisions that you establish for incompatible materials in terms of quantity limitations and protection levels that you establish, but the fact is that you would have a specific place designated and a means for dealing with the incompatible materials. You would be limited in certain quantities and then it would go back, as Mr. Lane said, you'd be back to the same place. That would have presumed that you labeled the stuff, that the people moving these commodities in and out of these designated incompatible storage areas were trained to know that this area was only for this stuff and this area was only for this stuff. But if all of
that was in place, it's covered by our code as well.

CHAIRMAN MERRITT: All right, and one more question, our last question will be Dr. Poje's.

DR. POJE: One final question. What are the most frequent reasons given for failure to adopt either NFPA-1 or the uniform fire codes for the municipalities?

MR. DOLAN: You can put that in one word, it's unique. The city, state or locality, municipality will say, we're very unique we can't take these codes off the shelf and have it work here. We have, over the years, because of enabling legislation or other things, even by definitions that they want. But the thing with the model codes is the committees that are out there, the experts, you know, they've dealt with this before. We're not too scientific on code development, and I think you're all aware that we started with our life safety code after the Shinewood Shareways fire here in New York City in 1911, that's what started it. We're up in Rhode Island right now in that nightclub fire to see what happened. So that's the thing with the model codes, to get on that to identify them. But everyone thinks they're unique and it won't work here.

CHAIRMAN MERRITT: Well, I have time for
one more, Mr. Bresland asked, so this is the last.

MR. BRESLAND: Thank you. I understand from Mr. Lane we're not living in a perfect world. That's not my question. If the City of New York had adopted the model codes, both the building code and the fire code that you are suggesting here and rightly so, would this have prevented the incident that we are talking about today from happening?

MR. LANE: I'll be honest with you, I don't think we're ever going to. There were model codes in place, like Mr. Dolan said, in Rhode Island and you can have the perfect code, you can have all your employees trained, you can have all your enforcement agencies trained, if it's not followed it doesn't do any good. So I think one of the big issues is penalties.

CHAIRMAN MERRITT: Thank you, panel, very much for your contributions.

(Applause.)

CHAIRMAN MERRITT: At this point we would very much like to open the floor for our public comments. We allowed this to go on here at noon so that we hoped we would get the availability of as many people as possible. I do have a list of eight people. We are asking you several things. Please limit your
comments to the issues that are being discussed here today. Please limit your comments to three minutes and we will let you know if you're approaching that time frame. And if there is anyone else besides these eight people who would like to register, please go back and let Mr. Selk know or somebody at the table. We do want to adjourn on time. We appreciate very much the public comments and contribution to this hearing.

The first person on our list is Mr. John Dunn. If you are here, would you please tell us who you are affiliated with and give your name again so that in case I mispronounced it.

MR. DUNN: My name is John Dunn, I'm a captain in the New York City Fire Department. I'm an elected official of the New York City Uniformed Fire Officers Association. That's the union representing approximately 2500 lieutenants, captains and chiefs in the City of New York. And I also serve on the union's safety committee.

CHAIRMAN MERRITT: Thank you.

MR. DUNN: My comments are very brief.

We welcome you as safety committee of U.S. Chemical Safety and Hazard Investigation Board as well as your recommendations.
From the fire officers union's perspective, we are concerned about the safety of our members and the general public. The New York City Fire Department is charged with the mitigation of hazardous materials incidents in New York City. In June of 2001, before September and the events of 9-11 we thought we had suffered our greatest loss on Father's Day. Three firefighters were killed in a commercial building fire after a volatile flammable-liquid-generated explosion caused a collapse that took their lives. We supported the option of a new building code that will provide the most stringent rules. There needs to be a tightening up and uniform reporting requirements on the movement of chemicals in the United States and hazardous materials from the standpoint of use for normal commerce as well as for those materials that might be misappropriated for evil use, for example Oklahoma City and any other act of terrorism. There should be uniformity in reporting from point of manufacture and sale to monitoring the placketing during transportation to a chemical's final use and storage on site. There should be reporting at this end point to local fire jurisdictions in order to assure storage requirements are complied with and allow us in the fire department to conduct pre-fire
planning. The pre-fire plan involves awareness of the chemical, its storage amount and location as well as associated hazards. For example, you might not use water on certain materials. This information should available to units responding into the location and also this would allow for safe operation for pre-fire plan of tactics and procedures as a guideline plan of attack.

Thank you very much.

CHAIRMAN MERRITT: Thank you very much for you comments.

The next person is a Mr. Collins. Please give your name and your affiliation.

MR. COLLINS: My name is Paul Collins, I represent the Sheet Metal Workers Local Union 137 which represents around approximately 850 workers in the City of New York, Long Island, northern New Jersey, Westchester.

Kaltech Industries, this accident happened for one reason and only one reason, poor government, lack of enforcement. You guys are all savvy, you all heard everybody speak in here about all the laws, all the things that you guys wrote, brilliant pieces of work. Some doctors up there and professors I understand. Really great things, I'm sure you did a
great job, but there's nobody on the street enforcing it. It's that simple. If you don't put people out there to enforce the laws you're going to have these incidents happen.

Kaltech Industries is a non-union contractor, its workers don't have a voice. If they say a word about anything that you guys talked about they will be fired. It will take the government approximately two to three years to get them their jobs back. I don't know how many people in this room can afford to go without a job for two to three years, but that's the system we have today.

Kaltech did not close its operation. Within hours after that explosion they moved this operation to Queens. It has other affiliates, Big Apple Signs which is currently doing work for the City of New York on the Staten Island Ferry, Signs and Decal and Millennium signs, they are all related, so they didn't miss a beat, but I don't know how many workers were severely damaged in that explosion, they're missing a lot of time and they're poorly had.

I've tried to organize that shop several times, I've won labor board decisions against them, but because of the fact that a person could get fired and not be able to be compensated for the next two or three years, we
can't organize.

Day after day I walk these city streets and once again I tell you all that if there's no enforcement you'll have no laws, and if we didn't have cops giving out tickets on the streets, we wouldn't have the traffic laws. That's exactly what the problem is here, it happens every day, it happens to the firemen. The firemen they get hurt on job sites. The reason they get hurt, a majority of the firemen, is because of the lack of enforcement, and that's the only thing that has to be done. The City of New York does not enforce the laws. The buildings department has become a useless organization. If I called them today, there was a report in the Times not too long ago, if you call them today about a guy putting a sign up on his building with that unlicenced crane hoisting over the public and clearly in danger, we will get a response in two to three days. By then the crane is packed up and gone to wherever it had to go. OSHA, totally useless. I don't know who that is there for but it's a totally useless organization.

Thank you for the time and comments.

CHAIRMAN MERRITT: Thank you very much.

Our next commenter is Mr. Eugene Degan.

MR. DEGAN: Good afternoon. My name is
Eugene Degan, I'm a consultant in metal and stone maintenance of commercial buildings in New York City and I'm a member of the Building Owners and Managers Association of New York. I serve on the Rules and Regulation Committee.

I'm here today because I want to really reiterate what the prior questioner had said, and that is the fundamental problem here is enforcement of laws that are on the books in that no one is opposed to creating new laws to make it safer for the people of the City of New York.

The fact is there are a multitude of laws on the books that were not followed in this incident. I was shocked when I heard today that Kaltech had no proper labeling of materials, no MSDS sheets available for inspection, yet this is a large waste generator. I mean a material large waste generator, you have to files gobs of paper. This isn't a red flag for someone to walk down and say, hey, we just want to make sure you know what you're doing here. And then to find out on top of that, the EPA actually had an inspector in there and the city fire department went down and inspected it. I mean this is, it's just really impossible to conceive that we could have two inspections by two agencies that I have a lot of
respect for, I've dealt with in the past.

I've managed a company in New York City that dealt with handling of hazardous materials. We had every one of our employers trained on an annual basis, we had all our little diamond signs. I had illiterate immigrants working for me who understood what those diamond designs meant and that materials that would have this marking should not be near this marking. And they were very concerned. This is not a function that you have people that can't learn. This is a function that there's individuals out there who are so callous to their employees' life and safety that they do not follow the law, and unless you have those laws enforced, it doesn't matter what you do.

Thank you.

CHAIRMAN MERRITT: Thank you very much.

Next on our list is Ms. Sally Reganhard; is that right?

MR. REGANHARD: Thank you, good afternoon, Madam Chairperson.

CHAIRMAN MERRITT: Please state your name and who you are affiliated with.

MS. REGANHARD: Oh, yes. My name is Sally Reganhard and I'm the founder and chairperson of the Skyscraper Safety Campaign. The Skyscraper Safety
Campaign is an organization that was created after 9/11 by the parents and relatives of firefighters and civilian victims of the World Trade Center collapse.

I lost my son who was a probationary firefighter for the New York City Fire Department and -- I'm sorry. I created this organization so that people who live, work and fight fires in buildings in this city have a chance of surviving. For more information please visit my web site, I won't go into the wonderful work that we've been able to accomplish during the past 18 months, but I must tell you that I'm very proud of my organization and I'm proud of all the members in it. I'm here today with by co-chairperson who lost her husband, her name is Monica Gabriel, she lost her husband at the World Trade Center.

I'm here today to speak regarding the Kaltech explosion and how this relates to the issues of the Skyscraper Safety Campaign. I'd like to begin by thanking you for holding this hearing. The citizens of this city need governmental agencies like yours who do this thorough type of investigation to really help us and to look at the agencies that we have this city and to make determinations whether they're doing the job and how they can improve the
I'd like to begin by saying that right now in New York City we have an antiquated building and fire code. The Skyscraper Safety Campaign strongly advocates for the adoption of an upgraded model building and fire code for New York City.

Regarding the fire department, the fire department needs to do far more routine fire inspections and they need to charge for these inspections. I was very shocked to hear a representative from the fire department earlier refer to the fact that they had thousands of inspections that they do not get paid for and a few hundred that they do get paid for. You may know that right now New York City is in dire straits with a budget crisis. Eight fire houses are scheduled to be closed in the next few weeks.

The Skyscraper Safety Campaign feels that the New York City Fire Department did more fire inspections, routine, thorough fire inspections, and charged for it, it would have a double beneficial factor and the people of this city would be safer in these buildings, the workers would be safer, and also the fire department would get much-needed revenue and perhaps they could keep their fire houses open.
Next, I don't if you're aware of this, but at the recent New York City council hearing both the DEP and the SDNY do not really even know how many tech hotels with storage of diesel fuel tanks we actually have in New York City. The term "tech hotel" means the buildings that are totally composed of computer equipment that are backups for large financial institutions and other critical functions that need to go on in case of a power shortage. There are buildings here in New York City, and as I say, the fire department doesn't even know how many, that have cropped up and have these diesel fuel tanks in the building. This is something that should be investigated and followed through, this is a great potential hazard. As a matter of fact, I mentioned the collapse of the World Trade Center. You know No. 7 World Trade Center burned to the ground and collapsed. It was never hit by any airplane. To this day it remains a mystery why No. 7 burned to the ground and collapsed. And the strongest theory is that that building also had diesel fuel storage tanks in their building, and they feel, there is currently a governmental investigation, but they feel that that's probably the reason why. So that certainly will, you know, highlight the fact and I hope your panel can
look into the tech hotel.

CHAIRMAN MERRITT: Thirty seconds, please.

MS. REGANHARD: Finally I'd like to say that a term that started to be used after 9/11 was the term "lessons learned". The families of victims reject this term which implies no accountability or responsibility for standards and practices. We instead suggest that an appropriate term to be used would be deadly mistakes. It was a series of deadly mistakes that caused the Kaltech explosion as it was a series of deadly mistakes that contributed to the loss of life of nearly 3,000 people at the World Trade Center. Recognizing accountability and responsibility, whether it be on the part of private industry or governmental enforcement, will be the key to public safety in the future.

Thank you very much.

CHAIRMAN MERRITT: Thank you very much for your time.

Our next speaker is Mr. David Newman.

MR. NEWMAN: Good afternoon. My name is David Newman, I'm an industrial hygienist with the New York Committee for Occupational Safety and Health, NYCOSH. I'm presenting the testimony of Joel Shufro, our executive director.
NYCOSH is a non-profit coalition of more than 200 local unions and 400 legal and health and safety professionals and rank-and-file activists in the metropolitan area.

The Kaltech explosion in Chelsea was not an isolated event. As you know, there are 25,000 toxic fires, spills or explosions each year, at least 1,000 of which involve deaths, injuries or evacuations. The density of New York City's population and the mixed-use character of its buildings and neighborhoods makes the widespread use of toxic substances a serious threat to all of us. Several laws protect New York City residents and workers from chemical fires and explosions.

OSHA's hazard communication standard is designed to ensure that employers and workers know about work hazards including flammability and chemical reactivity. The New York City right-to-know law administered by the Department of Environmental Protection, DEP, requires some employers to report the storage of certain substances, certain chemical substances. Finally, the New York City fire code regulates chemical storage and handling. All three of these laws overlap but each is individually enforced by agencies that, to our knowledge, rarely cooperate.
With stronger cooperative efforts by responsible agencies these laws could be powerful tools with which to protect our workers and our communities.

OSHA’s hazard communication standard was instituted with the exclusive assumption that the knowledge that workers would gain under hazard communication would help reduce the incidents of chemical-source injuries and illnesses. Unfortunately, employers frequently shirk the provisions of this standard which requires a written program, training of employees about the health hazards of the chemical substances to which they may be exposed, training conducted in language that is comprehensible to workers, labeling of chemical containers and ready availability of material safety data sheets. Kaltech has a largely immigrant workforce. According to OSHA, Kaltech conducted no health and safety training and provided no material safety data sheets. We believe this situation to be typical of many New York City employers. This situation is compounded by lack of government oversight and lack of government enforcement.

The hazard communication standard provides the foundation for chemical safety and health programs. Two factors make the standard and its
enforcement less than effective.

First, the fines levied for noncompliance are a pittance. The average fine for violating the hazard communication standard in OSHA, Region 2, New York, New Jersey and Puerto Rico, is $76.00. This is significantly less than the cost of a parking ticket in New York City. Surely workers' safety must be worth more than a parking ticket for parking on the wrong side of the street.

Secondly, OSHA is woefully understaffed, meaning that most workplaces, including Kaltech, are rarely or never inspected. Even with stepped-up enforcement, the hazard communication standard is still problematic. The standard does not require training on the hazards of accidental combinations of chemicals that are designated non reactive. The combination of these same non-reactive chemicals caused the explosion at the Kaltech building. The Chemical Safety Board has noted this omission in another OSHA standard, it should be addressed within the provisions of the hazard communication standard.

The New York City Right-To-Know law requires that employers that store amounts of hazardous substances file facility reporting forms with DEP. This local law goes beyond the requirements
of state and federal statutes. Even so, the law is only as good as its enforcement and there is substantial evidence that portions of the Right-To-Know law are not being enforced. The DEP's own staff estimate that 50 percent of the facilities that are required to report do not do so. In addition, DEP's program of community and employer outreach on right-to-know requirements has been eliminated. Limited resources may in part be to blame.

The law also requires facilities that store extremely hazardous chemicals to follow risk-management plans which include estimations of the total damage that could be incurred given the amounts and types of chemicals on hand. The facilities that must file these plans are also required to file toxic-use reduction plans and to carry out these toxic-use reduction plans. Toxic use reduction is a strategy that must receive top priority in order to protect communities and workers from chemical accidents and from terrorist attacks. Reduction of the use of toxic or hazardous chemicals must be an important part of homeland security.

A major component of the Right-To-Know law is to provide critical information about workplace hazards to individuals in the community?
CHAIRMAN MERRITT: Thirty seconds, please.

MR. NEWMAN: -- with emphasis on the community. Since September 11th, DEP no longer honors requests for information about chemical inventories or releases. This has significant adverse effects on the ability of tenants and workers and employers to plan emergency evacuation and emergency preparedness.

The final law to complete the city's chemical safety program is the fire code. It was intended to prevent chemical fires and explosions that has degenerated into merely a revenue source for the city. Certification under the fire code should require compliance, at a minimum, with the HAZCOM standard and with the New York City Right-To-Know law as with OSHA's hazardous waste operations and emergency response standard as appropriate.

CHAIRMAN MERRITT: Thank you very much.

MR. NEWMAN: Thank you.

CHAIRMAN MERRITT: You can submit the rest for the record.

MR. NEWMAN: Yes, I've given you copies of that.

CHAIRMAN MERRITT: Yes, sir, I appreciate that. And that's true for anyone who's here, this will be an open docket until May 9th, I think, and you
may submit full written comments electronically to us and we'll gladly accept those.

Our next speaker is Mr. Adam Kelly. Is he here? Thank you.

MR. KELLY: Hello, my name is Adam Kelly, I'm with Environmental Defense in the New York City headquarters. Environmental Defense is a leading national non-profit organization representing more than 300,000 members, and I'm here today to urge the New York City Fire Department and other city officials to take an active role in preventing chemical incidents such as the one that occurred in Kaltech, at Kaltech last April.

Sadly, the Kaltech incident is all too familiar. Thousands of chemical accidents happen each year that seriously threaten the health of workers, communities and environments. Just two months ago two people were killed in an explosion at the Exxon-Mobil fuel storage facility near Staten Island. Two weeks before that incident several people were killed in a factory explosion in North Carolina.

While the ultimate burden is on the companies to ensure safe operations, there is much that the fire department can do to reduce the likelihood of such accidents. Just as promoting fire
prevention is a key responsibility of the local fire
departments, so too should chemical accident
prevention.

What do I mean by chemical accident
prevention? Preventing chemical accidents means going
beyond adding
protective equipment such as fire extinguishers and
the like. It means looking at the design and
operation of a facility to determine safer ways of
doing business. For example, can safer chemicals be
used? Can the process be improved to eliminate the
use of hazardous chemicals? Is the building location
and construction suitable for industry operation
involving potentially-explosive or flammable
substances? Have operators provided for safe handling
of chemicals including ensuring proper labeling and
training of workers? I know that the fire department
can't know the answers for every facility but needs to
ask the questions to ensure that companies are doing
everything possible to prevent accidents from
happening. The fire department has a unique
opportunity when it comes to the thousands of small
businesses such as Kaltech. These businesses are
often not aware of environmental or workers' safety
rules governing the safe handling of toxic substances.

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Fire codes on the other hand are more widely known and revising the codes to prevent accidents is an important step. The code should specify the conditions under which dangerous chemicals can be used. If those conditions are not met then the operation should cease, just as restaurants that violate the smoking codes must close until corrections are made.

In addition, these businesses are much more likely to be visited by a building inspector than one from any other government agency. In addition to checking for whether building codes are being violated, the inspectors can provide information to companies about how to reduce or eliminate the use of dangerous chemicals. The inspectors may not be experts but can provide referrals to the technical assistance centers that do have the knowledge and expertise. In short, the fire department should use all means at its disposal, building code permits, inspections, community outreach to promote chemical safety in the same manner in which it promotes fire safety.

The risks to New York City residents are significant and steps to prevent accidents are long overdue.
Thank you.

CHAIRMAN MERRITT: Thank you very much.

Mr. Michael McAnn.

MR. McANN: Hello, thank you. My name is Michael McAnn, I work for the Center to Protect Workers' Rights which is the research arm or the building instruction trades department of the AFL/CIO, basically on construction safety. I've got a few comments here.

I am a certified industrial hygienist, I have PhD in chemistry. The whole question of these chemical reactions that occur, I've seen them in laboratories, I've seen them in many inspections I've done at the schools and universities. It's a very common problem and I wouldn't like it to be focused just on large generators.

In this Kaltech incident they had huge amounts in storage but it was only one drum, really, that was the cause of the incident there. It doesn't have to be large quantities. I think the major difference is probably the scale of the number of people potentially at risk. But this was one building, dozens of people injured from a fairly small-scale incident. This whole question of these small-scale chemicals, we've got thousands of these
plants all over the City of New York, and I want to make sure that they get inspected, these small-scale ones, not like OSHA's problem of not inspecting any of these small industries and that.

The other question is the whole, as a more national issue, this whole question of the reactive chemicals. I know that the Chemical Safety Board has been pushing a lot on this and that there is need for OSHA and EPA to take action on these standards dealing with these, to make it a much bigger issue that would like to support the Chemical Safety Board in those issues.

And working for the construction unions, we're very concerned about a lot of these same issues because many of these accidents that have occurred in chemical plants have involved contractors where you had workers, construction workers, doing retrofits and things like that and didn't know anything about the hazards of what they were working around, and many of the people who were injured and killed in these incidents were construction workers. And so I think there needs to be real attention paid to this group because they have even less information than the people working in these situations on a daily basis.

Thank you.
CHAIRMAN MERRITT: Thank you very much.

And our last registered speaker is Mr. Leonard Wharton. Is Mr. Wharton here?

I really appreciate all of your comments. You've put a very personal and human face on this event from all of your perspectives. Although there was no one killed in this incident, we deal with incidents on a daily basis where there are people who are killed and become the victims of chemical incidents that are no unlike this one on different scales. Your comments and your approach and your recommendations will be weighed in our recommendations as we proceed, and thank you very much for your comments.

If there are no other comments at this time, then we've reached the end of the planned agenda. I would very much like to thank Congressman Jerry Nadler for helping us to make this hearing possible, his assistance was much appreciated.

On behalf of the Board I want to thank each of the speakers today and members of the public. You have brought a wealth of knowledge and insight to this process that we undergo.

I also want to thank our able investigators, Steve Selk and Don Holmstrom, for doing
an outstanding job with what I think has been a very
difficult case.

Our intention is to take all of the
information gathered here today, to analyze it, and
then develop our final report and recommendations, due
sometime this summer. At that point we will reconvene
here in New York City for a final presentation and a
vote of the Board on the report as well as the
recommendations, and the public will be welcome at
that meeting as well.

If any of you leave today having further
thoughts or information you wish to share with the
Board, remember that our docket remains open for
written or electronic submissions until May 5th.

While today's hearing was focused on the
ways the city codes can be more effective in
preventing chemical accidents, our report will also
address some of the broader issues that have also been
raised by this event.

Small businesses that use hazardous
materials are common throughout this country. If
those business were not following good safety
practices or environmental practices and they are not
being effectively inspected, then the public is at
risk. Certainly the public was endangered in this
case and the public would have had very little awareness of the danger that they lived so closely to. Kaltech no doubt missed many opportunities to learn about the safety and environmental requirements and to implement effective programs. I've said this before but I'm not sure that there was ever a clearer case of how inexpensive the cost of safety is compared to the cost of this serious accident. Very straight-forward safety measures would have saved this business and spared its employees and its neighbors much anguish.

As concerned as I am about how the business was operated, I'm also disquieted by the fact that federal, state and local regulators were not able to intervene before this accident occurred to improve the company's safety performance. Some agencies have adequate rules on the book but evidently lack the resources to inspect or enforce. Others may have had the resources but lacked the need regulatory authority covering hazardous materials. The Kaltech accident challenges us to do better.

The Board's next scheduled meeting will be May 1st in Festus, Missouri, the site of a major chlorine release last year. To learn about that meeting or to watch our live web cast, we ask you to visit our web site on www.csb.go. Watch that site
also for announcements concerning our final Kaltech meeting which will be held here in New York City this next summer.

With that, I thank everyone, the Board and the panel members and the members of the public and those of you who sat through this, I hope you learned a lot about what we do, and we look forward to meeting with you again this next summer.

With that, this hearing is adjourned, thank you.

(Whereupon, at 12:15 p.m. hearing was adjourned.)