

NATIONAL CONSTRUCTION SAFETY TEAM ACT

—————
JUNE 25, 2002.—Committed to the Committee of the Whole House on the State of
the Union and ordered to be printed
—————

Mr. BOEHLERT, from the Committee on Science,
submitted the following

R E P O R T

[To accompany H.R. 4687]

[Including cost estimate of the Congressional Budget Office]

The Committee on Science, to whom was referred the bill (H.R. 4687) to provide for the establishment of investigative teams to assess building performance and emergency response and evacuation procedures in the wake of any building failure that has resulted in substantial loss of life or that posed significant potential of substantial loss of life, having considered the same, report favorably thereon with an amendment and recommend that the bill as amended do pass.

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I. AMENDMENT

The amendment is as follows:

Strike all after the enacting clause and insert the following:

SECTION 1. SHORT TITLE.

This Act may be cited as the “National Construction Safety Team Act”.

SEC. 2. NATIONAL CONSTRUCTION SAFETY TEAMS.

(a) **ESTABLISHMENT.**—The Director of the National Institute of Standards and Technology (in this Act referred to as the “Director”) is authorized to establish National Construction Safety Teams for deployment after events causing the failure of a building or buildings that has resulted in substantial loss of life or that posed significant potential for substantial loss of life. To the maximum extent practicable, the Director shall establish and deploy a Team within 48 hours after such an event. The Director shall promptly publish in the Federal Register notice of the establishment of each National Construction Safety Team.

(b) PROCEDURES.—

(1) **DEVELOPMENT.**—Not later than 3 months after the date of the enactment of this Act, the Director, in consultation with the United States Fire Administration and other appropriate Federal agencies, shall develop procedures for the establishment and deployment of National Construction Safety Teams. The Director shall update such procedures as appropriate. Such procedures shall include provisions—

- (A) regarding conflicts of interest related to service on the Team;
- (B) defining the circumstances under which the Director will establish and deploy a National Construction Safety Team;
- (C) prescribing the appropriate size of National Construction Safety Teams;
- (D) guiding the disclosure of information under section 8;
- (E) guiding the conduct of investigations under this Act;
- (F) identifying and prescribing appropriate conditions for the provision by the Director of additional resources and services National Construction Safety Teams may need;
- (G) to ensure that investigations under this Act do not impede and are coordinated with any search and rescue efforts being undertaken at the site of the building failure;
- (H) for regular briefings of the public on the status of the investigative proceedings and findings;
- (I) guiding the National Construction Safety Teams in moving and preserving evidence as described in section 5(a)(4), (b)(2), and (d)(4);
- (J) providing for coordination with Federal, State, and local entities that may sponsor research or investigations of building failures, including research conducted under the Earthquake Hazards Reduction Act of 1977; and
- (K) regarding such other issues as the Director considers appropriate.

(2) **PUBLICATION.**—The Director shall publish promptly in the Federal Register final procedures, and subsequent updates thereof, developed under paragraph (1).

SEC. 3. COMPOSITION OF TEAMS.

National Construction Safety Teams shall be led by an individual named by the Director. National Construction Safety Team members shall include at least 1 employee of the National Institute of Standards and Technology and shall include other experts who are not employees of the National Institute of Standards and Technology, who may include private sector experts, university experts, representatives of professional organizations with appropriate expertise, and appropriate Federal, State, or local officials.

SEC. 4. FUNCTIONS OF TEAMS.

National Construction Safety Teams shall—

- (1) conduct investigations to establish the likely technical cause or causes of the building failure;
- (2) evaluate the technical aspects of evacuation and emergency response procedures;
- (3) recommend specific improvements to building standards, codes, and practices based on the findings made pursuant to paragraphs (1) and (2); and
- (4) recommend research and other appropriate actions needed to improve the structural safety of buildings, and improve evacuation and emergency response procedures, based on the findings of the investigation.

SEC. 5. AUTHORITIES.

(a) **ENTRY AND INSPECTION.**—In investigating a building failure under this Act, members of a National Construction Safety Team, and any other person authorized by the Director to support a National Construction Safety Team, on display of appropriate credentials provided by the Director, may—

(1) enter property where a building failure being investigated has occurred, or where building components, materials, and artifacts with respect to the building failure are located, and do anything necessary to conduct the investigation;

(2) inspect any record (including any design, construction, or maintenance record), process, or facility related to the investigation;

(3) inspect and test any building components, materials, and artifacts related to the building failure; and

(4) move such records, components, materials, and artifacts as provided by the procedures developed under section 2(b)(1).

(b) **AVOIDING UNNECESSARY INTERFERENCE AND PRESERVING EVIDENCE.**—An inspection, test, or other action taken by a National Construction Safety Team under this section shall be conducted in a way that—

(1) does not interfere unnecessarily with services provided by the owner or operator of the building components, materials, or artifacts, property, records, process, or facility; and

(2) to the maximum extent feasible, preserves evidence related to the building failure, consistent with the ongoing needs of the investigation.

(c) **COORDINATION.**—

(1) **WITH SEARCH AND RESCUE EFFORTS.**—A National Construction Safety Team shall not impede, and shall coordinate its investigation with, any search and rescue efforts being undertaken at the site of the building failure.

(2) **WITH OTHER RESEARCH.**—A National Construction Safety Team shall coordinate its investigation, to the extent practicable, with qualified researchers who are conducting engineering or scientific (including social science) research relating to the building failure.

(3) **MEMORANDA OF UNDERSTANDING.**—The National Institute of Standards and Technology shall enter into a memorandum of understanding with each Federal agency that may conduct or sponsor a related investigation, providing for coordination of investigations.

(d) **INTERAGENCY PRIORITIES.**—

(1) **IN GENERAL.**—Except as provided in paragraph (2) or (3), a National Construction Safety Team investigation shall have priority over any other investigation of any other Federal agency.

(2) **NATIONAL TRANSPORTATION SAFETY BOARD.**—If the National Transportation Safety Board is conducting an investigation related to an investigation of a National Construction Safety Team, the National Transportation Safety Board investigation shall have priority over the National Construction Safety Team investigation. Such priority shall not otherwise affect the authority of the Team to continue its investigation under this Act.

(3) **CRIMINAL ACTS.**—If the Attorney General, in consultation with the Director, determines, and notifies the Director, that circumstances reasonably indicate that the building failure being investigated by a National Construction Safety Team may have been caused by a criminal act with intent to cause the building failure, the National Construction Safety Team shall relinquish investigative priority to the appropriate Federal law enforcement agency. The relinquishment of investigative priority by the National Construction Safety Team shall not otherwise affect the authority of the Team to continue its investigation under this Act.

(4) **PRESERVATION OF EVIDENCE.**—If a Federal law enforcement agency suspects and notifies the Director that a building failure being investigated by a National Construction Safety Team under this Act may have been caused by a criminal act with intent to cause the building failure, the National Construction Safety Team, in consultation with the Federal law enforcement agency, shall take necessary actions to ensure that evidence of the criminal act is preserved.

SEC. 6. BRIEFINGS, HEARINGS, WITNESSES, AND SUBPOENAS.

(a) **GENERAL AUTHORITY.**—The Director, on behalf of a National Construction Safety Team, may conduct hearings, administer oaths, and require, by subpoena and otherwise, necessary witnesses and evidence as necessary to carry out this Act.

(b) **BRIEFINGS.**—National Construction Safety Teams shall hold regular public briefings on the status of investigative proceedings and findings.

(c) **PUBLIC HEARINGS.**—During the course of an investigation by a National Construction Safety Team, the National Institute of Standards and Technology may, if

the Director considers it to be in the public interest, hold a public hearing for the purposes of—

- (1) gathering testimony from witnesses; and
- (2) informing the public on the progress of the investigation.

(d) **PRODUCTION OF WITNESSES.**—A witness or evidence in an investigation under this Act may be summoned or required to be produced from any place in the United States. A witness summoned under this subsection is entitled to the same fee and mileage the witness would have been paid in a court of the United States.

(e) **ISSUANCE OF SUBPOENAS.**—A subpoena shall be issued under the signature of the Director but may be served by any person designated by the Director.

(f) **FAILURE TO OBEY SUBPOENA.**—If a person disobeys a subpoena issued by the Director or a National Construction Safety Team under this Act, the Director may bring a civil action in a district court of the United States to enforce the subpoena. An action under this subsection may be brought in the judicial district in which the person against whom the action is brought resides, is found, or does business. The court may punish a failure to obey an order of the court to comply with the subpoena as a contempt of court.

SEC. 7. ADDITIONAL POWERS.

In order to support National Construction Safety Teams in carrying out this Act, the Director may—

- (1) procure the temporary or intermittent services of experts or consultants under section 3109 of title 5, United States Code;
- (2) request the use, when appropriate, of available services, equipment, personnel, and facilities of a department, agency, or instrumentality of the United States Government on a reimbursable or other basis;
- (3) confer with employees and request the use of services, records, and facilities of State and local governmental authorities;
- (4) accept voluntary and uncompensated services;
- (5) accept and use gifts of money and other property;
- (6) make contracts with nonprofit entities to carry out studies related to purpose, functions, and authorities of the National Construction Safety Teams; and
- (7) provide nongovernmental members of the National Construction Safety Team reasonable compensation for time spent carrying out activities under this Act.

SEC. 8. DISCLOSURE OF INFORMATION.

(a) **GENERAL RULE.**—Except as otherwise provided in this section, a copy of a record, information, or investigation submitted or received by a National Construction Safety Team shall be made available to the public on request and at reasonable cost.

(b) **EXCEPTION.**—Subsection (a) does not require the release of information described by section 552(b) of title 5, United States Code, or protected from disclosure by any other law of the United States.

(c) **PROTECTION OF VOLUNTARY SUBMISSION OF INFORMATION.**—Notwithstanding any other provision of law, a National Construction Safety Team, the National Institute of Standards and Technology, and any agency receiving information from a National Construction Safety Team or the National Institute of Standards and Technology, shall not disclose voluntarily provided safety-related information if that information is not directly related to the building failure being investigated and the Director finds that the disclosure of the information would inhibit the voluntary provision of that type of information.

(d) **PUBLIC SAFETY INFORMATION.**—A National Construction Safety Team and the National Institute of Standards and Technology shall not publicly release any information it receives in the course of an investigation under this Act if the Director finds that the disclosure of that information might jeopardize public safety.

SEC. 9. NATIONAL CONSTRUCTION SAFETY TEAM REPORT.

Not later than 90 days after completing an investigation, a National Construction Safety Team shall issue a public report which includes—

- (1) an analysis of the likely technical cause or causes of the building failure investigated;
- (2) technical recommendations for changes to or the establishment of evacuation and emergency response procedures;
- (3) recommended specific improvements to building standards, codes, and practices; and
- (4) recommendations for research and other appropriate actions needed to help prevent future building failures.

SEC. 10. NATIONAL INSTITUTE OF STANDARDS AND TECHNOLOGY ACTIONS.

After the issuance of a public report under section 9, the National Institute of Standards and Technology shall comprehensively review the report and, working with the United States Fire Administration and other appropriate Federal and non-Federal agencies and organizations—

- (1) conduct, or enable or encourage the conducting of, appropriate research recommended by the National Construction Safety Team; and
- (2) promote the appropriate adoption by the Federal Government, and encourage the appropriate adoption by other agencies and organizations, of the recommendations of the National Construction Safety Team with respect to—
 - (A) technical aspects of evacuation and emergency response procedures;
 - (B) specific improvements to building standards, codes, and practices; and
 - (C) other actions needed to help prevent future building failures.

SEC. 11. NATIONAL INSTITUTE OF STANDARDS AND TECHNOLOGY ANNUAL REPORT.

Not later than February 15 of each year, the Director shall transmit to the Committee on Science of the House of Representatives and to the Committee on Commerce, Science, and Transportation of the Senate a report that includes—

- (1) a summary of the investigations conducted by National Construction Safety Teams during the prior fiscal year;
- (2) a summary of recommendations made by the National Construction Safety Teams in reports issued under section 9 during the prior fiscal year; and
- (3) a description of the actions taken by the National Institute of Standards and Technology during the prior fiscal year in response to reports issued under section 9.

SEC. 12. ADVISORY COMMITTEE.

(a) **ESTABLISHMENT AND FUNCTIONS.**—The Director, in consultation with the United States Fire Administration and other appropriate Federal agencies, shall establish an advisory committee to advise the Director on carrying out this Act and to review the procedures developed under section 2(b)(1) and the reports issued under section 9.

(b) **ANNUAL REPORT.**—On January 1 of each year, the advisory committee shall transmit to the Committee on Science of the House of Representatives and to the Committee on Commerce, Science, and Transportation of the Senate a report that includes—

- (1) an evaluation of National Construction Safety Team activities, along with recommendations to improve the operation and effectiveness of National Construction Safety Teams; and
- (2) an assessment of the implementation of the recommendations of National Construction Safety Teams and of the advisory committee.

(c) **DURATION OF ADVISORY COMMITTEE.**—Section 14 of the Federal Advisory Committee Act shall not apply to the advisory committee established under this section.

SEC. 13. ADDITIONAL APPLICABILITY.

The authorities and restrictions applicable under this Act to the Director and to National Construction Safety Teams shall apply to the activities of the National Institute of Standards and Technology in response to the attacks of September 11, 2001.

SEC. 14. AMENDMENT.

Section 7 of the National Bureau of Standards Authorization Act for Fiscal Year 1986 (15 U.S.C. 281a) is amended by inserting “, or from an investigation under the National Construction Safety Team Act,” after “from such investigation”.

SEC. 15. AUTHORIZATION OF APPROPRIATIONS.

There are authorized to be appropriated to the National Institute of Standards and Technology for carrying out this Act \$25,000,000 for each of the fiscal years 2003 through 2005, to remain available until expended.

II. PURPOSE OF THE BILL

The purpose of H.R. 4687 is to improve the structural integrity of buildings and evacuation and emergency response procedures by investigating building failures and recommending specific improvements to building standards, codes, and practices, as well as to evacuation and emergency response procedures.

III. BACKGROUND AND NEED FOR THE LEGISLATION

The aftermath of the collapse of the World Trade Center (WTC) revealed serious flaws in how the Federal government carries out investigations of major building failures. The National Science Foundation (NSF), the Federal Emergency Management Agency (FEMA), and the National Institute of Standards and Technology (NIST) all were involved in investigating this disaster in some way. However, none of these agencies was prepared to conduct a comprehensive and thorough investigation immediately following the collapse of the WTC buildings. In addition, the Federal efforts that were undertaken to study the building failures were hindered by many impediments: no Federal agency was clearly charged with investigating building failures; nothing ensured that an investigation would begin quickly enough to preserve evidence; no Federal agency had the investigative authority to ensure access to all needed information; nothing ensured that the public was kept informed of the progress of the investigation; and inadequate funding limited the efforts that were undertaken. Families of the victims, outside experts, and NIST itself have called for future investigations to be given additional investigative authorities like those used by the National Transportation Safety Board.

Chairman Boehlert and Mr. Weiner on May 9, 2002 introduced H.R. 4687, which is modeled on the legislation that created the National Transportation Safety Board. The legislation also builds on the procedures followed by FEMA to investigate building failures and on the existing authority Congress vested in NIST. The Act is designed to address each of the impediments that hindered the WTC investigation. First, the Act establishes NIST as the lead agency to investigate building failures that have caused a substantial loss of life or that posed significant potential for substantial loss of life. Second, the legislation requires NIST, to the maximum extent practicable, to deploy a Team within 48 hours of a disaster so that the investigation is not hindered by delay. Third, the legislation gives Teams and NIST authority to enter the site of building failure, inspect and move records and materials, issues subpoenas, and impound evidence. Fourth, the legislation requires Teams to hold regular public briefings on the status of the investigation in order to ensure the public is informed. Fifth, to prevent funding limitations from inhibiting future investigations, the legislation authorizes appropriations of \$25,000,000.

RESPONSE OF FEDERAL AGENCIES

FEMA responded to the WTC disaster by sending search and rescue teams to the site, and by establishing a disaster field office within hours of the first strike to assist in New York City's rescue effort. FEMA also employed its standard protocol for studying building failures, which was to deploy a Building Performance Assessment Team (BPAT).

This team, composed of Federal and non-Federal building and fire experts, was tasked with analyzing information about the sequence of events and failures that resulted in the progressive collapse of the WTC towers and severe damage to surrounding buildings. Its goal was to analyze how the structures performed and determine if any recommendations could be made for changing build-

ing codes and design practices. However, this Team faced many impediments, which were uncovered during a March 6 hearing before the House Science Committee. (The impediments are outlined in more detail below.)

Eventually FEMA recognized that it did not have the resources or the authority to conduct a comprehensive and thorough investigation of the disaster. In January, FEMA asked NIST to take over the investigation once the BPAT released its findings and recommendations. Both FEMA and NIST expected that the report would provide initial findings and recommendations that would help guide a more comprehensive investigation and research effort that NIST intends to perform.

The BPAT report was released at a House Science Committee hearing on May 1, 2002. As expected, the final report reached some initial conclusions about the structural performance of the buildings, but it was not a comprehensive and thorough investigation of every important aspect of the disaster. For example, the report reviewed the performance of each building affected by the attacks and subsequent collapses, but it generally did not examine issues related to building evacuation mechanisms and emergency response procedures.

Shortly after the attack, NIST appointed an employee of its Building and Fire Research Laboratory to serve on the 23-member BPAT team. While this partnership lent some of NIST's resources and expertise to the BPAT study, NIST did not immediately launch a formal investigation into the technical causes that led to the collapse of the World Trade Center buildings.

Nearly nine months after the September 11 attacks, NIST proposed a three-phase plan to complete the work that the BPAT report started. First, NIST will conduct a 24-month investigation of the building construction, materials and technical conditions that combined to cause the collapse of the WTC buildings. NIST has requested supplemental funding of \$16 million to carry out this part of the plan. Second, the Agency will undertake a multi-year research and development program to provide the technical basis to support any potential improvements to building and fire codes, standards, and practices. The results of this program will support the voluntary consensus process used in the United States to develop codes and standards. Third, NIST will work with industry to disseminate technical guidance and tools to better prepare facility owners, contractors, designers, and emergency personnel to respond to future disasters. NIST has redirected \$2 million in Fiscal Year 2002 funds and has requested an additional \$2 million in its Fiscal Year 2003 request to carry out second and third parts of the plan.

NIST's Building and Fire Research laboratory will carry out most of the investigative and research activities under the three-part plan. This lab is uniquely qualified to conduct comprehensive building failure investigations; it carries out research in fire science, fire safety engineering, and structural, mechanical, and environmental engineering. It is the only Federal laboratory dedicated to research on building design and fire safety. In the past, the lab has investigated several structural failures using authority Congress made explicit in 1985 (15 U.S.C. 282a). Some of the most prominent of these were the 1981 collapse of a walkway in the Kansas City

Hyatt Regency Hotel, the 1986 Dupont Plaza Hotel fire in San Juan, Puerto Rico, the 1994 Northridge earthquake collapses, and the 1995 Kobe, Japan earthquake building collapses. The goals of these investigations were to determine the probable technical causes of the failures, to examine what lessons could be learned, and to work with code-setting bodies to develop improved building codes, standards, and practices. The investigations also identified areas of research that needed further study.

The National Science Foundation was also involved in responding to the attacks of September 11. The agency awarded nearly \$300,000 to experienced earthquake researchers, including engineers and social scientists, within 72 hours of the attacks. In an effort to quickly deploy researchers to the site, NSF made these awards through the Small Grants for Exploratory Research Program, a supplemental award program that enables NSF's program managers to award additional support to currently funded investigators through an abbreviated internal review process. The same obstacles that hindered other Federal efforts also impeded the NSF-funded researchers. In addition, there was little, if any coordination between FEMA's and NSF's efforts.

SUMMARY OF IMPEDIMENTS TO FEDERAL RESPONSE

The Science Committee's March 6 oversight hearing reviewed how the Federal government investigated the collapse of WTC buildings and what impediments those efforts faced. The Committee found that:

- There was not clear statutory authority directing any federal agency to lead an investigation after major building failures, such as the collapse of the WTC buildings. Immediately after the attacks, private groups (such as the American Society of Civil Engineers and the Structural Engineers Association of New York) and NSF responded by sending engineers to the site. However, these individuals, having no formal authority to conduct an investigation, had trouble gaining access to the disaster site. The Federal agencies that did have limited authority allowing them to conduct investigations (FEMA and NIST) were slow to respond. FEMA did not formally create its investigative team, the BPAT, until October 1. NIST began planning an investigation only after FEMA realized that it could not carry out a comprehensive and thorough investigation. Nine months after the attacks, NIST is only beginning to carry out its proposed investigation. This overall response stands in stark contrast to investigations conducted by the National Transportation Safety Board, which usually has an investigative team at a disaster site immediately following an event.

- The BPAT's lack of investigative powers led to problems gaining access to information it needed to complete its work. BPAT members had no authority to impound steel evidence after it was removed from the WTC site. This problem, coupled with the difficulty the team faced in gaining access to the site, led to the destruction of important pieces of steel evidence. In addition, because FEMA did not immediately intervene on behalf of the BPAT, building owners, designers, and insurers delayed the BPAT's access to pertinent building documents. For example, the BPAT did not receive the full set of blueprints until January 2002. The BPAT was also denied access to other information such as the tapes of 911

calls to the New York City Police Department and unaired high-quality video footage of the attack taken by the major television networks.

- There was no statutory or regulatory requirement to ensure that the public was kept informed of the BPAT's progress and findings. Lack of communication with the public led to public criticism of the Team's efforts, as families of victims could not get a clear picture of exactly what the Team was investigating and what the Team's ultimate goals were. This ongoing controversy needlessly undermined the efforts of the Team.

- Funding limitations severely constrained the BPAT's ability to conduct a comprehensive investigation. Funding limitations also deterred NIST from investigating the building failures immediately after the collapse. The BPAT received \$600,000 in FEMA funding in addition to approximately \$500,000 in in-kind contributions from the American Society of Civil Engineers. However, this amount was not enough to fund a comprehensive and thorough investigation of the WTC disaster. The BPAT ultimately relied on volunteers to help with the investigation. Once FEMA asked NIST to take over the investigation, NIST requested \$16 million in supplemental funding in order to carry out its proposal.

IV. SUMMARY OF HEARINGS

MARCH 6, 2002: LEARNING FROM 9/11—UNDERSTANDING THE COLLAPSE OF THE WORLD TRADE CENTER

On Wednesday, March 6, the House Committee on Science held a hearing on the investigation into the collapse of the World Trade Center (WTC). Witnesses from industry, academia, and government testified on the catastrophic collapse of the WTC complex and subsequent efforts by Federal agencies and independent researchers to understand how and why the structures failed. Witness described why it was important to scrutinize the steel and other debris, blueprints and other documents, and recorded images of the disaster, so that engineers, designers, and construction professionals could learn valuable lessons that could ultimately improve the safety of buildings. Witnesses also described the many impediments that they encountered, such as: no Federal agency believed it was clearly charged with investigating building failures; nothing ensured that an investigation would begin quickly enough to preserve evidence; no Federal agency had the investigative authority, akin to that of the National Transportation Safety Board, to ensure access to all needed information; and no one kept the public informed of the progress of the investigations.

The Committee heard from: (1) Mr. Robert Shea, Acting Administrator, Federal Insurance and Mitigation Administration, Federal Emergency Management Agency (FEMA), accompanied by Mr. Craig Wingo, Director of Division of Engineering Science and Technology, Federal Emergency Management Agency; (2) Dr. W. Gene Corley, P.E., S.E., American Society of Civil Engineers (ASCE) and Chair of the Building Performance Assessment Team (BPAT) reviewing the WTC disaster; (3) Professor Glenn Corbett, Assistant Professor of Fire Science at John Jay College, City University of New York; (4) Dr. Abolhassan Astaneh-Asl, Professor, Department of Civil and Environmental Engineering, University of California,

Berkeley; and (5) Dr. Arden Bement, Director, National Institute of Standards and Technology (NIST).

Leading investigations of building failures

Witnesses testified as to the confusion that characterized the Federal government's efforts to investigate the collapse of the WTC buildings. It became clear that while the Federal agencies represented at the hearing tried to respond to the disaster in some fashion, no agency believed it had the authority to lead an investigation of a major building failure.

During the hearing when the witnesses were asked to indicate who was in charge of the investigation of the WTC collapse, several witnesses raised their hands. FEMA clearly believed it was initially in charge because it deployed the BPAT. However, Mr. Shea testified that FEMA did not have the authority to investigate the building disaster, but only to study it. Dr. Bement also appeared unclear as to where authority lay to conduct an investigation of the collapses. While he testified that he was acting as though NIST was in charge, it is clear that NIST initially took no action to conduct an investigation in response to the collapse of the WTC.

Ultimately, Mr. Shea concurred with the Chairman that for several months after the attacks it was uncertain who was in charge of investigating this disaster. In addition, Mr. Shea testified that FEMA turned to NIST to lead an investigation because FEMA does not have the technical capability or resources to conduct investigations of major building failures. Mr. Shea said that based on his experience, an overall Federal government strategy for responding to building failures is needed and NIST should be vested with this authority.

Preserving evidence and gaining access to critical information

Witnesses testified that confusion regarding who was in charge of the investigation and the BPAT's lack of investigative authorities led to delays in deploying the BPAT team, problems in gaining access to the WTC site, an inability to preserve valuable steel evidence from the site, and problems gaining access to information the BPAT requested.

During the hearing Members voiced concern about why the BPAT had not been deployed immediately after the attacks and whether the delay had hindered the team's ability to preserve important evidence. Dr. Corley testified that immediately following the attacks, ASCE began assembling a team of experts to study the disaster. Although this team later became part of the official BPAT that FEMA created, that official designation did not occur until late September. Furthermore, it was only at that time that the team was able to gain access to the disaster site. Dr. Corley believed that that one possible reason for this delay was the uncertain relationship between the BPAT and ongoing search and rescue efforts, as well as the criminal investigation. During the time the team was not present on site, the City of New York decided to haul away and recycle the steel, which could have been useful as evidence for the investigation.

Even after the BPAT was on site and had actively assumed its duties, there was still confusion about whether the BPAT had the authority to preserve evidence. Mr. Shea said that the BPAT was

in charge of gathering the necessary evidence for an investigation. However, Dr. Corley, who led the BPAT team, said that he did not know whether anyone had the authority even to ask the City of New York to stop recycling the steel. When Dr. Bement was asked if NIST could presently sequester evidence for its investigation, he said that NIST could request that evidence be preserved, but that it had no power to enforce the request.

Dr. Astaneh-Asl, who was funded by the National Science Foundation to study the collapse, testified that he experienced the same problems that Dr. Corley's team faced in terms of trying to access the site, and studying and preserving the steel evidence. He testified that he had, without any assistance from any federal agency, directly negotiated with the plants recycling the steel, and it was only because of their cooperation that he was given access to the steel.

Professor Corbett described the consequences of losing pieces of steel evidence. He said with steel from critical areas of the building (such as where the planes hit the building) would help the BPAT make more definitive statements as to the specific cause and chronology of the collapse.

Several witness commented on the problems the BPAT faced in gaining access to information it required as part of its investigation. The BPAT requested access to the WTC building blueprints, design drawings, and maintenance records. It planned to use these to validate physical and photographic evidence and to develop computer models to explain why and how the buildings failed and how similar failures might be avoided in the future. The BPAT did not get immediate access to the full set of these documents and eventually, FEMA had to intercede on behalf of the BPAT. However, there was a significant delay in FEMA making this request. Mr. Wingo testified that FEMA did not ask the Port Authority of New York and New Jersey for blueprints and design specifications for the buildings until December 21, nearly four months after the disaster, and Dr. Corley testified that the BPAT did not receive full copies of the blueprints and design drawings until January 8.

In addition to the structural records, the BPAT team requested video footage from the television networks and tapes of 911 calls from the New York City Police Department. Dr. Corley testified that the BPAT team was only able to obtain from TV networks video footage of the collapse that had been played on air; the networks would not release unaired footage. The BPAT ultimately gave up on attempting to obtain the 911 tapes. During the May 1 follow up hearing held by the Science Committee (described below), Dr. Jonathan Barnett, Professor, Center for Fire Safety Studies, Worcester Polytechnic Institute, Worcester, Massachusetts, who was also a BPAT member, said that after being denied access to the 911 tapes for several months, he withdrew the request for the tapes because the computer modeling that would have used the 911 tapes would not be completed in time for the BPAT report.

Dr. Bement explained that NIST's planned investigation could run into the same impediments as the BPAT in terms of gaining access to this information. Dr. Bement explained that, while NIST could request information, it lacked the power to issue subpoenas for information it deemed critical to its investigation, and that he

therefore could not ensure that NIST would have total access to this information.

Informing the public

Members expressed great concern about lack of regular public briefings by FEMA about the status of the BPAT investigation and its factual findings. Witness generally agreed that briefing the public was an important component of any investigation, but the hearing revealed that there were problems with how FEMA handled communications with the public during the BPAT study. While Mr. Shea testified that he believed FEMA did try to respond to inquiries from the public, he also said that BPAT participants were asked to sign confidentiality agreements that prohibited them from publicly disclosing the conversations and opinions discussed during the course of the team's deliberations. He said this was standard practice with BPATs in order to protect the scientific integrity of the process. However, Several Members point out that much of the public criticism and leaks to the press regarding the BPAT initial findings could have been prevented by regular public briefings.

Funding investigations

Witnesses and Members expressed concern about the resources Federal agencies were able to commit to investigate the WTC building collapses. Dr. Corley testified that the total amount of money (both public and private) supporting the BPAT study was about \$1 million, and that, in his opinion, \$40 million would be required to conduct a comprehensive study of the WTC disaster. Dr. Bement concurred with this figure by stating that \$40 million "wasn't too far out of the ballpark" of what NIST would need to complete its proposed investigation. Professor Corbett summarized the general funding problems of this effort by saying that, "a disaster of such epic proportions demands that we fully resource a comprehensive, detailed investigation. He further emphasized that "instead, we are staffing the BPAT with part-time engineers and scientists on a shoestring budget."

MAY 1, 2002: THE INVESTIGATION OF THE WORLD TRADE CENTER
COLLAPSE: FINDINGS, RECOMMENDATIONS AND NEXT STEPS

The purpose of this hearing was to examine the key findings and recommendations of the Federal Emergency Management Agency's (FEMA) investigation into the collapse of the World Trade Center (WTC). The hearing also reviewed the plans of the National Institute of Standards and Technology (NIST) to conduct a more extensive follow-up investigation and to establish a comprehensive research and development plan to help improve standards, practices, and codes for buildings. In addition, the witnesses were asked to comment on a draft version of H.R. 4687.

The Committee heard from: (1) Mr. Robert Shea, Acting Administrator, Federal Insurance and Mitigation Administration, Federal Emergency Management Agency; (2) Dr. W. Gene Corley, P.E., S.E., American Society of Civil Engineers, Chair of the Building Performance Assessment Team reviewing the World Trade Center disaster, accompanied by Dr. Jonathan Barnett, Professor, Center for Fire Safety Studies, Worcester Polytechnic Institute, Worcester, Massachusetts; (3) Dr. Arden Bement, Director, National Institute

of Standards and Technology; and (4) Professor Glenn Corbett, Assistant Professor of Fire Science at John Jay College, City University of New York.

Dr. Corley discussed the findings and recommendations that the BPAT made in its final report (World Trade Center Building Performance Study: Data Collection, Preliminary Observations, and Recommendations, FEMA publication #403, May 2002). The report reached general conclusions about how each of the buildings in the World Trade Center complex performed after the attacks, and made several recommendations for improving buildings that may be the target of terrorist attacks. The report also concluded that some of the recommendations could be considered for all buildings, but that additional studies were needed before any general recommendations could be made. Finally, the report recommended several areas that require further study, such as the interaction of structural elements and fire, how better to integrate structural and fire professionals in building design, and evacuating buildings after a disaster, among other things.

Dr. Bement testified about NIST's plans for conducting an investigation and follow-on research. NIST's response plan will consist of three elements: First, NIST will conduct a 24-month building and fire safety investigation into the collapse of the Twin Towers (WTC 1 and 2) and WTC 7. Second, NIST will undertake a multi-year research and development (R&D) program to provide the technical basis to support any potential improvements to building and fire codes, standards, and practices. Third, NIST will operate an industry-led dissemination and technical assistance program (DTAP) that will provide practical guidance and tools to better prepare facility owners, contractors, designers, and emergency personnel to respond to future disasters.

Professor Corbett testified that he was supportive of the proposed NIST initiative. However, he said that NIST should rapidly assemble a Federal Advisory Committee to oversee the investigation. He also stressed the need for subpoena power for the proposed NIST investigation. Specifically, Professor Corbett said, "The Science Committee hearing on March 6 clearly highlighted some of the impediments the BPAT faced in obtaining key information. My fear is that the NIST investigation will be hindered by these same problems. Information may be found in a variety of locations and may be held by many different individuals and organizations that will not provide this information voluntarily. Even though the WTC investigation is an investigation of a fact-finding nature, a legal means for obtaining information that would otherwise be unavailable must be provided for investigators."

Comments on the draft version of H.R. 4687

During the hearing the witnesses were offered an opportunity to comment on the proposed legislation. Each witness supported the efforts that the Committee had undertaken in reviewing the WTC disaster and drafting the legislation. Dr. Corley and Professor Corbett both endorsed the legislation. Specifically, Dr. Corley said that this legislation would have helped overcome not only the impediments the BPAT faced during the World Trade Center investigation, but also obstacles that have hindered previous investigations he has led on behalf of the Federal government. Professor

Corbett said that based on his 20 years of experience in the fire service, it is critical that the Federal government have the ability to investigate building failures in order to learn from them. He argued that because lessons learned from an individual disaster can be applied to many similar types of buildings across the United States, it is clearly the responsibility of the Federal government to investigate major building disasters and to derive these lessons.

V. COMMITTEE ACTIONS

The House Science Committee met on May 22, 2002 to consider H.R. 4687. Chairman Boehlert offered several technical amendments to the bill, which were considered en bloc and adopted by voice vote. The Committee favorably reported the bill as amended, by voice vote.

VI. SUMMARY OF MAJOR PROVISIONS OF THE BILL

The Act gives responsibility to the National Institute of Standards and Technology (NIST) to dispatch teams of experts within 48 hours after major building disasters.

The Act gives the teams a clear mandate to:

- Establish the likely technical cause of building failures;
- Evaluate procedures used for evacuation and emergency response;
- Recommend specific changes to building codes, standards and practices; in addition, recommend changes in emergency response and evacuation procedures; and
- Make final recommendations within 90 days of completing an investigation.

The Act gives NIST and the teams comprehensive investigative authorities, similar to those of the National Transportation Safety Board, to:

- Access the site of a building disaster;
- Subpoena evidence;
- Access key pieces of evidence such as records and documents;
- and,
- Move and preserve evidence.

The Act ensures that the team's investigations will not impede search and rescue efforts.

The Act establishes clear lines of communication to ensure that the public will be informed throughout the investigation by:

- Requiring teams to hold regular briefings on the status of the investigative proceedings and findings; and,
- Allowing the Director of NIST to convene a public hearing to take testimony relevant to a team's investigation.

The Act creates a standing advisory committee to oversee the implementation of the Act and evaluate team's duties.

The Act also gives NIST comprehensive authority to complete the investigation of the WTC disaster.

The Act authorizes for each of fiscal years 2003 through 2005 \$25 million to remain available until expended to carry out investigation under this Act.

VII. SECTION-BY-SECTION ANALYSIS

Section 1. Short title

This Act is named the “National Construction Safety Team Act.”

Section 2. National Construction Safety Teams

The Director of the National Institutes of Standards and Technology (NIST) may constitute and deploy a National Construction Safety Team (hereafter referred to as the “Team”) after a building failure that has caused substantial loss of life or had the potential to cause substantial loss of life. To the maximum extent possible, the Director shall establish and deploy a team within 48 hours after such an event. The Director shall promptly publish in the Federal Register a notice any time a Team is established.

The Director has three months after date of enactment to develop and publish the procedures that will govern the operation and deployment of the Teams. When developing the procedures, the Director must consult with the United States Fire Administration (USFA) and other appropriate Federal agencies. The Director has the authority to update these procedures as necessary.

The final procedures, and any updates thereof, shall be published in the Federal Register.

Section 3. Composition of the Teams

Teams created under this Act, shall be led by an individual named by the Director, and shall include at least one NIST employee. Teams shall also include other experts who are not employees of NIST and who may include private sector experts, university experts, representatives of professional organizations with appropriated expertise, and appropriate Federal, State, or local officials.

Section 4. Functions of the Teams

The Act directs the Teams to:

- (1) Determine the likely technical cause of causes of the building failure;
- (2) Evaluate the technical aspects of evacuation and emergency response procedures;
- (3) Recommend specific improvements to building codes, standards, and practices; and
- (4) Recommend research and other appropriate actions needed to improve the structural safety of buildings, or improve evacuation and emergency response procedures.

Section 5. Authorities

In investigating a building failure under this Act and upon the display of appropriate credentials, which shall be issued by the Director of NIST, members of Teams may:

- (1) Enter a property where a building failure being investigated under this Act has occurred, or where building components, materials, and artifacts with respect to the building failure are located, and do anything necessary to conduct the investigation;

(2) Inspect any record (including any design, construction, or maintenance record), process, or facility related to the investigation;

(3) Inspect and test any building components, materials, and artifacts related to the building failure; and

(4) Move such records, components, materials, and artifacts.

When conducting an investigation, Teams must ensure their actions do not unnecessarily interfere with the services provided by the owner of the building components, materials, artifacts, property, records, process, or facility.

When conducting an investigation, Teams must ensure that their actions are coordinated with, and do not impede search and rescue efforts. Teams shall also coordinate investigations, to the extent practicable, with qualified researchers who are conducting engineering or scientific research related to the building failure. In addition, NIST shall enter into a memorandum of understanding with each Federal agency that may conduct or sponsor related investigations, providing for coordination of investigations.

Investigations conducted by Teams under this Act shall have priority over any other investigation of any other Federal agency except in cases where:

(1) The National Transportation Safety Board is conducting an investigation related to a Team's investigation; or

(2) The Attorney General, in consultation with the Director, determines that circumstances reasonably indicate that the building failure may have been caused by a criminal act with intent to cause the building failure.

In either of these cases, Teams retain the authority to conduct an investigation.

In cases where a Federal law enforcement agency suspects and notifies Teams that a building failure may have been caused by a criminal act with the intent to cause the building failure (but has not yet initiated a criminal investigation) Teams must take proper steps to preserve evidence of such act.

Section 6. Briefings, hearings, witnesses, and subpoenas

The Act authorizes the Director, on behalf of the Team, to conduct hearings, administer oaths, and subpoena necessary witnesses and evidence in order to carry out this Act. It requires the Team to hold regular public briefings on the status of the investigation. The Director may hold a public hearing in order to gather testimony for the investigation and keep the public informed about the investigation if the Director deems it in the public interest.

The Act authorizes a witness or evidence to be summoned or be produced from any place in the United States. The Act entitles a witness to the same fee and mileage that the witness would receive in a court of the United States. The Act also requires a subpoena to be signed by the Director, but may be served by a designee chosen by the Director. Finally the Act authorizes the Director to bring a civil action against anyone failing to obey a subpoena. Such action may be brought against the person where the person resides, is found, or does business. Failure to obey an order may be punished as contempt of court.

Section 7. Additional powers

In order to support the Team, the Director may carry out the following activities in support of this Act:

- (1) Procure the services of experts and temporary consultants on a temporary basis;
- (2) When appropriate, request the use of services, equipment, personnel, and facilities of another entity of the U.S. Government on a reimbursable basis;
- (3) Confer with employees of, and request the use of services, records, and facilities of State and local authorities;
- (4) Accept voluntary services;
- (5) Accept and use gifts of money and other property;
- (6) Contract with nonprofits to conduct studies related to the purpose and activities of the Teams; and
- (7) Compensate on a reasonable basis the nongovernmental members of the Team.

Section 8. Disclosure of information

A copy of a record, information, or investigative report submitted or received by the Team shall be made available to the public on request for a reasonable cost except where the information requested is protected by 5 U.S.C. 552(b) (originally enacted as part of the Freedom of Information Act) or where the Director determines that the disclosure of voluntarily provided information not directly related to the building failure may inhibit the voluntary provision of such information. In addition, the Director shall not disclose information if the Directory finds that the release of such information will jeopardize public safety.

Section 9. National Construction Safety Team report

After completing an investigation initiated under this Act, Teams have 90 days to submit a report on their findings. The report shall include:

- (1) Analysis of the likely technical cause or causes of the building failure;
- (2) Technical recommendations for changes to or the establishment of evacuation and emergency response procedures;
- (3) Recommendations for specific improvements to building standards, codes, and practices; and
- (4) Recommendations for research and other appropriate actions needed to prevent future building failures.

Section 10. National Institute of Standards and Technology actions

After a Team issues the report required under section 9 regarding the findings of an investigation, NIST shall review the report and working with the USFA:

- (1) Conduct, or encourage other Federal agencies to conduct, appropriate research recommended by the National Construction Safety Team; and
- (2) Promote and encourage the adoption of the Team's recommendations.

Section 11. National Institute of Standards and Technology annual report

Not later than February 15 of each year, NIST shall transmit to Congress a report that includes a:

- (1) Summary of the investigations conducted by Teams during the prior fiscal year;
- (2) Summary of recommendations made by the Teams in reports required under section 9; and
- (3) Description of action taken by NIST during the prior fiscal year in response to reports issued under section 9.

Section 12. Advisory committee

The Director shall establish, in consultation with the USFA and other appropriate Federal agencies, an advisory committee to advise the Director on carrying out this Act, review the procedures developed by the Director under this Act, and review the post-investigation reports issued by Teams.

The advisory committee shall prepare and transmit to Congress a report that includes an evaluation of Team activities, recommendations to improve the operation and effectiveness of Teams, and an assessment of the implementation of the Teams' recommendations.

The Act exempts the advisory committee from the sunset provision of the Federal Advisory Committee Act.

Section 13. Additional applicability

The Act applies all of the authorities and restrictions given to the Director or to Teams under this Act, to actions that NIST is undertaking in response to the attacks of September 11, 2001.

Section 14. Amendment

The Act amends 15 U.S.C. 281(a) to include investigations conducted under this Act.

Section 15. Authorization of appropriations

The Act authorizes \$25,000,000 for fiscal year 2003 and 2005, to remain available until expended.

VIII. COMMITTEE VIEWS

Responding to building failures

The Committee believes the Federal government lacks a clear protocol for conducting comprehensive and thorough investigations of building failures and for learning the lessons that these failures can teach us. Building failures can stem from a number of causes, such as natural disasters, terrorist actions, flaws in building design and construction practices, and other unforeseen events. It is the Committee's view that building failures caused by any of these events should be investigated with the authority in this Act in cases where there is substantial loss of life or the significant potential for substantial loss of life. Clearly not every building failure will be investigated under this Act, but the Director should investigate building failures that were unexpected or that are likely to yield significant lessons that could be broadly applied.

The Act requires that investigations review the technical causes of building failures and recommend how to improve building codes, standards, and practices, and emergency response and evacuation procedures. The Committee believes that by learning and applying the lessons that building failures have to teach us, the Federal government can ultimately reduce financial losses and save lives.

While it is the Committee's intent that this legislation supplement the National Institute of Standards and Technology's (NIST) existing authority to respond to building failures, this Act should not be construed as giving NIST any new regulatory powers over building design, practices, and standards, or over evacuation and emergency response procedures.

It is the Committee's view that the Director of NIST should not limit investigations only to buildings that have collapsed. NIST may find instances in which a building failure has not led to a collapse, but has resulted in significant loss of life. Such instances may hold important lessons about the design of the building or evacuation and emergency response procedures.

It is the Committee's view that Teams created under this Act should not be permanent, standing entities requiring ongoing funding. Rather, Teams should be formed only in response to a specific building failure. It is also the Committee's view that the Director should immediately notify the public through appropriate means, including the Internet, of the decision to establish a Team. That notification would be in addition to the requirement in the Act that the Director notice the establishment of Teams in the Federal Register.

Section 2. National Construction Safety Teams

The Committee believes that the procedures required by this section are critical to ensuring the successful implementation of this Act. Past efforts to investigate structural failures by other Federal agencies have been uncoordinated, incomplete, and without a clear mandate to review the technical causes or to recommend how to improve building codes, standards, and practices, or emergency response and evacuation procedures. As such, it is the Committee's view that the Director should ensure that these procedures are clear, comprehensive, and developed, where appropriate, in consultation with the United States Fire Administration and other Federal entities.

The National Transportation Safety Board (NTSB) has extensive experience with many of the procedures that NIST must develop pursuant to this Act. It is the Committee's view that the Director should, to the maximum extent possible, draw on this experience by consulting with the NTSB when developing these procedures.

The legislation requires the Director to develop procedures within three months after enactment of this legislation. The Committee expects NIST to begin working promptly on these procedures to meet this deadline.

It is the Committee's view that while the Director has the discretion to determine the appropriate size of Teams created under this Act, Teams should generally consist of ten members or more to ensure adequate representation of various disciplines, which are described in the next section. In addition, it is the Committee's view that when developing procedures for coordination with Federal,

State, and local entities, the Director should also consult with agencies engaged in earthquake related research authorized under the Earthquake Hazards Reduction Act of 1977, such as the National Science Foundation. The Director should clearly define how earthquake researchers and Teams will carry out their responsibilities in a coordinated fashion in cases where building failures have been caused by an earthquake.

Section 3. Composition of Teams

The Committee believes that the Director of NIST should ensure that the membership of any Team created under this Act has a wide variety of expertise. For any given investigation, the Director has the discretion to determine the appropriate composition of the Team. It is the Committee's view that, when exercising this discretion, the Director should consider representation from the following disciplines: structural engineering, forensic engineering, fire protection engineering, geotechnical and geoenvironmental engineering, the engineering of deep foundations, earthquakes and soil dynamics, wind engineering, and other engineering disciplines as the Director may deem necessary. In addition, it is the Committee's view that lessons learned regarding emergency response and evacuation procedures are as important as structural lessons. Where appropriate, the Director should ensure that experts in both emergency response and evacuation procedures are part of any Team.

Section 4. Function of the Teams

The ultimate goal of investigations conducted under this Act should be to develop a detailed set of recommendations for any necessary improvements to building codes, standards, and practices, as well as emergency response and evacuation procedures, based on the findings of the investigation. Many of these procedures are based on an understanding of how people respond to a disaster. It is the Committee's view that, when examining emergency response and evacuation procedures, Teams should evaluate not only the effect that a building's design has on emergency response and evacuation procedures, but also on human behavior.

While Teams are tasked to make specific recommendations regarding changes that may be warranted in building codes, standards, and practices, the authority to make those changes lies with other State, local and private authorities (and with Federal agencies in the case of Federal buildings). Applying the lessons learned through building investigations conducted under this Act therefore is ultimately left to the different public and private entities that are now responsible for building standards and codes. The Act does not give any regulatory authority to Teams or NIST over building codes, standards, practices, but the Committee hopes that recommendations made by the Team will be taken under consideration quickly by the appropriate authorities.

Section 5. Authorities

When a Team arrives at a disaster site, members should have written notification of the Director's establishment of the Team, as well as official credentials from NIST stating that they are members of the Team and that they have authority vested under this Act to conduct an investigation. It is the Committee's view that, be-

cause the credentials issued by the Director will allow the Team to exercise its authority provided by this Act, the Director should establish a rapid credentialing process for Team members.

The Act gives Teams the authority to move records, components, materials, and artifacts in order to inspect, preserve, or test these materials. It is the Committee's view that this authority allows Teams to move these materials from the site where the building failure occurred or where they are stored.

The Committee recognizes that saving lives must be the top priority in the wake of a building failure. The Act makes clear that Team members should not do anything to impede search and rescue efforts. Teams should work closely with search and rescue teams to ensure that any evidence important to the Team's investigation is preserved. For example, while Team members must not prevent the necessary removal of debris, they may attempt to take photographic evidence of the debris before it is moved and should be allowed to determine where any evidence critical to the investigation should be moved.

The Committee notes that several Federal agencies will likely respond to building failures. While other Federal agencies may have reason to carry out work at the site of a failure, the Act makes clear that NIST is responsible for leading investigations of building failures.

The Committee also recognizes that in the wake of natural disasters, researchers with expertise in a number of fields are deployed to a disaster site to conduct research. In such cases, these researchers may serve as a valuable source of information for investigations conducted under this Act. The Act requires that Teams should coordinate their investigation, to the maximum practicable, with qualified researchers at a site to minimize duplication of effort and ensure that investigations are complete and thorough.

In cases where a building failure may have been caused by criminal actions, the Committee has included provisions to ensure that Teams relinquish investigative priority to the appropriate Federal law enforcement agency. In some cases, there may be a question as to whether a Federal law enforcement agency will conduct a criminal investigation. It is the Committee's view that in these instances, after the Federal law enforcement agency notifies the Director of a potential criminal investigation, a Team should preserve evidence in a way that would not hamper the criminal investigation should it take place. Teams should not themselves conduct any criminal investigations. The Committee notes that the NTSB has experience preserving evidence for a potential criminal investigation, and it is the Committee's view that the Director should consult with the NTSB when developing procedures under this section.

The Committee notes that in cases in which Teams must relinquish investigative priority under this Act either to NTSB or a Federal law enforcement agency, Teams still have the authority to continue an investigation of the building failure.

Section 6. Briefings, hearings, witnesses, and subpoenas

The Committee notes that nothing ensured that the public was kept informed during FEMA's investigation of the World Trade Center disaster. This led to public criticism of the Team's efforts, as families of victims did not know the status of the investigation

or what the BPAT's ultimate goals were. Many families of the victims called for regular public briefings about the effort's status and factual findings, much like the National Transportation Safety Board holds during an investigation of an accident. To prevent this problem from reoccurring, the Act requires that Teams conducting investigations brief the public on regular basis about the investigation's status and findings.

Section 8. Disclosure of information

It is the Committee's intent that as a general practice the Director should make every effort to publicly release as much information obtained by Teams under this Act as possible. It is the Committee's view that the exceptions to the release of information contained in this section should be used infrequently and only after careful deliberation by the Director.

Section 13. Additional applicability

NIST is planning to conduct a \$16 million comprehensive and thorough two-year investigation and a technical analysis to determine how World Trade Center buildings 1, 2 and 7 collapsed. The Administration has formally requested Fiscal Year 2002 supplemental funding for this investigation.

While this legislation is generally focused on investigating future building failures, this section gives NIST all of authorities and restrictions conferred by this Act for its investigation of the World Trade Center disaster. The Committee does not believe that NIST must create a National Construction Safety Team for this investigation. Rather, NIST should move forward with the current proposed structure of its investigation, while utilizing the authorities, such as the power to subpoena evidence, that are granted under this Act.

IX. COST ESTIMATE

A cost estimate and comparison prepared by the Director of the Congressional Budget Office under section 402 of the Congressional Budget Act of 1974 has been timely submitted to the Committee on Science prior to the filing of this report and is included in Section X of this report pursuant to House Rule XIII, clause 3(c)(3).

H.R. 4687 does not contain new budget authority, credit authority, or changes in tax expenditures. Assuming that the sums authorized under the bill are appropriated, H.R. 4687 does authorize additional discretionary spending, as described in the Congressional Budget Office report on the bill, which is contained in Section X of this report.

H.R. 4687 could affect both direct spending and receipts. However, the Congressional Budget Office estimates that any such effect would be less than \$500,000 a year.

X. CONGRESSIONAL BUDGET OFFICE COST ESTIMATE

U.S. CONGRESS,
 CONGRESSIONAL BUDGET OFFICE,
 Washington, DC, June 7, 2002.

Hon. SHERWOOD L. BOEHLERT,
 Chairman, Committee on Science,
 House of Representatives, Washington, DC.

DEAR MR. CHAIRMAN: The Congressional Budget Office has prepared the enclosed cost estimate for H.R. 4687, the National Construction Safety Team Act.

If you wish further details on this estimate, we will be pleased to provide them. The CBO staff contacts are Ken Johnson (for federal costs), Elyse Goldman (for the state and local impact), and Cecil McPherson (for the private-sector impact).

Sincerely,

BARRY B. ANDERSON
 (For Dan L. Crippen, Director).

Enclosure.

H.R. 4687—National Construction Safety Team Act

Summary: H.R. 4687 would authorize the National Institute of Standards and Technology (NIST) within the Department of Commerce to establish National Construction Safety Teams to investigate the structural causes of building failures that cause substantial loss of life. The bill would authorize the appropriation of \$75 million over three years for this purpose. NIST also would be allowed to accept and spend monetary gifts to support the teams.

CBO estimates that maintaining a Construction Safety Team program prepared to respond to building failures would cost about \$2 million a year during the 2003–2007 period. The amount of the added costs for investigations would depend upon the number and size of the building failures that occur during a given year. Although the agency is incurring significant costs to investigate the terrorists attacks on the World Trade Center, historically, the frequency and cost of investigating such building failures has been small. These amounts would be subject to the availability of appropriated funds.

The provisions of H.R. 4687 related to the acceptance of monetary gifts could affect both revenues and direct spending; therefore, pay-as-you-go procedures would apply. We expect that any such effects would be less than \$500,000 a year.

H.R. 4687 contains an intergovernmental mandate defined in the Unfunded Mandates Reform Act (UMRA). CBO estimates that the total costs associated with the mandate would be small, and therefore, would not exceed the threshold established in UMRA (\$58 million for intergovernmental mandates in 2002, adjusted annually for inflation).

H.R. 4687 also contains a private-sector mandate as defined in UMRA. CBO expects that the direct costs of the mandate would be well below the annual threshold established by UMRA (\$115 million for private-sector mandates in 2002, adjusted annually for inflation).

Estimated cost to the Federal Government: H.R. 4687 would authorize the appropriation of \$25 million a year over three years for NIST to send teams to investigate the structural causes of major building collapses. CBO expects that the agency would need to maintain the personnel and equipment necessary to respond to any collapses that occur, as well as to write an annual report required under the bill. Based on information from NIST, CBO estimates that these costs would amount to about \$2 million a year, assuming the appropriation of the necessary amounts. Excluding the World Trade Center investigation, the historical costs of federal investigations into collapsed building incidents have been only a few million dollars (or less) each year.

The amount of the additional cost NIST would incur to investigate specific incidents would depend greatly on the number and size of the collapses that occur during a specific year. For example, similar investigations conducted by NIST and by the Federal Emergency Management Agency (FEMA) have cost less than \$500,000 a year. However, the total cost to the two agencies of investigating the collapse of the World Trade Center could cost as much as \$57 million over the next several years. Over the next three years, any additional costs for new investigations would be subject to the availability of appropriated funds from the \$75 million that would be authorized to be appropriated by this bill.

H.R. 4687 would allow NIST to accept and spend monetary gifts for the National Construction Safety Team program. Although NIST is not allowed under current law to receive any such gifts, the Department of Commerce does possess this authority. Any additional gifts accepted or spent under this bill would be classified in the federal budget as revenues and direct spending. However, CBO expects that these effects would be less than \$500,000 in each year.

Pay-as-you-go considerations: The Balanced Budget and Emergency Deficit Control Act sets up pay-as-you-go procedures for legislation affecting direct spending or receipts. Although H.R. 4687 could affect both direct spending and receipts, CBO estimates that any such effects would be less than \$500,000 a year.

Pay-as-you-go considerations: The Balanced Budget and Emergency Deficit Control Act sets up pay-as-you-go procedures for legislation affecting direct spending or receipts. Although H.R. 4687 could affect both direct spending and receipts, CBO estimates that any such effects would be less than \$500,000 a year.

Estimated impact on State, Local, and Tribal Governments: H.R. 4687 would authorize the Director of the National Institute of Standards and Technology to establish National Construction Safety Teams and to issue subpoenas on their behalf. Such power would constitute an intergovernmental mandate as defined in UMRA. CBO expects that the probability of an event resulting in substantial loss of life is low, and that state and local governments would likely comply voluntarily with federal investigators. Therefore, CBO estimates that the costs of complying with the mandate would be low and would not exceed the threshold established in UMRA (\$58 million in 2002, adjusted annually for inflation). The remaining provisions of the bill contain no intergovernmental mandates and would impose no costs on state, local, or tribal governments.

Estimated impact on the private sector: H.R. 4687 contains a private-sector mandate as defined by the UMRA. Section 6 would require private-sector entities, if subpoenaed, to provide testimony and evidence related to matters the National Construction Safety Team would be empowered to investigate. Such a requirement would be a private-sector mandate as defined by UMRA. CBO expects that the probability of an event that would trigger such as an investigation is very low. Consequently, although the precise number of individuals likely to be subpoenaed under this provision is uncertain, CBO expects that the direct cost of the mandate to private-sector entities would be well below the annual threshold established by UMRA (\$115 million in 2002, adjusted annually for inflation).

Estimate prepared by: Federal Costs, Ken Johnson; Impact on State, Local, and Tribal Governments: Elyse Goldman; Impact on the Private Sector: Cecil McPherson.

Estimate approved by: Peter H. Fontaine, Deputy Assistant Director for Budget Analysis.

XI. COMPLIANCE WITH PUBLIC LAW 104-4

H.R. 4687 contains provisions that allow the director of the National Institute of Standards and Technology to issue subpoenas on behalf of a National Construction Safety Team to governmental and private-sector entities. The Congressional Budget Office finds that this is an intergovernmental and private-sector mandate, but estimates that the costs of complying with this provision are well below the threshold established by Public Law 104-4.

XII. COMMITTEE OVERSIGHT FINDINGS AND RECOMMENDATIONS

The Committee on Science's oversight findings and recommendations are reflected in the body of this report.

XIII. STATEMENT ON GENERAL PERFORMANCE GOALS AND OBJECTIVES

Pursuant to clause (3)(c)(4) of House Rule XIII, the goals and objectives of H.R. 4687 are to investigate building failures in order to make recommendations that will result in changes in building codes, standards, and practices, as well as evacuation and emergency response procedures. These recommendations should include a description of how the safety of buildings will be improved if adopted. H.R. 4687 also requires two annual reports to Congress. The National Institute of Standards and Technology must submit a report detailing investigations conducted under this Act, recommendations made by National Construction Safety Teams and a description of how NIST responded to these recommendations. The advisory committee established under this Act must also submit a report evaluating investigations conducted under this Act and an assessment of the implementation of the recommendations made by Teams.

XIV. CONSTITUTIONAL AUTHORITY STATEMENT

Article I, section 8 of the Constitution of the United States grants Congress the authority to enact H.R. 4687.

XV. FEDERAL ADVISORY COMMITTEE STATEMENT

The functions of the advisory committee established by H.R. 4687 are not currently being nor could they be performed by one or more agencies or by enlarging the mandate of another existing advisory committee.

XVI. CONGRESSIONAL ACCOUNTABILITY ACT

The Committee finds that H.R. 4687 does not relate to the terms and conditions of employment or access to public services or accommodations within the meaning of section 102(b)(3) of the Congressional Accountability Act (Public Law 104-1).

XVII. STATEMENT ON PREEMPTION OF STATE, LOCAL, OR TRIBAL LAW

This bill is not intended to preempt any state, local, or tribal law.

XVIII. CHANGES IN EXISTING LAW MADE BY THE BILL, AS REPORTED

In compliance with clause 3(e) of rule XIII of the Rules of the House of Representatives, changes in existing law made by the bill, as reported, are shown as follows (new matter is printed in italics and, existing law in which no change is proposed is shown in roman):

**SECTION 7 OF THE NATIONAL BUREAU OF STANDARDS
AUTHORIZATION ACT FOR FISCAL YEAR 1986**

* * * * *

STRUCTURAL FAILURES

SEC. 7. The National Bureau of Standards, on its own initiative but only after consultation with local authorities, may initiate and conduct investigations to determine the causes of structural failures in structures which are used or occupied by the general public. No part of any report resulting from such investigation, *or from an investigation under the National Construction Safety Team Act*, shall be admitted as evidence or used in any suit or action for damages arising out of any matter mentioned in such report.

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XIX. COMMITTEE RECOMMENDATIONS

On May 22, a quorum being present, the Committee on Science favorably reported the National Construction Safety Team Act, by a voice vote and recommended its enactment.

XX. ADMINISTRATION LETTER ON H.R. 4687

GENERAL COUNSEL OF THE
UNITED STATES DEPARTMENT OF COMMERCE,
Washington, DC, May 21, 2002.

Hon. SHERWOOD BOEHLERT,
*Chairman, Committee on Science,
House of Representatives, Washington, DC.*

DEAR MR. CHAIRMAN: This is to present the views of the Administration on H.R. 4687, the National Construction Safety Team Act. The bill would authorize the National Institute of Standards and Technology (NIST) to establish investigative teams to respond to major building failure events. The teams would investigate the performance of buildings in and following such events and the probable technical cause of the building failures. Based on its technical findings, NIST would recommend improvements to standards, codes and practices. NIST would also recommend future research to improve building safety as well as evacuation and emergency response procedures. To support these investigations, the bill would provide NIST with investigatory powers, including subpoena power. The bill would also extend those powers to NIST for its proposed investigations into the collapse of buildings at the World Trade Center.

Among Federal laboratories, NIST is uniquely qualified to conduct comprehensive building failure investigations. NIST's Building and Fire Research Laboratory is the foremost in its field, and through the National Earthquake Hazards Reduction Program, NIST is the principal agency involved in R&D to improve building codes and standards for structures and lifelines. NIST has extensive disaster investigation experience and expertise—including investigations following structural or construction failures, fires, earthquakes, hurricanes, and tornadoes. Some of the most prominent of these were the 1981 collapse of a walkway in the Kansas City Hyatt Regency Hotel, the 1986 Dupont Plaza Hotel fire in San Juan, Puerto Rico, the 1994 Northridge earthquake collapses, and the 1995 Kobe, Japan earthquake building collapses.

NIST is currently proposing to undertake a building and fire safety investigation into the collapse of several of the buildings at the World Trade Center. That investigation is part of an overall response plan with three main elements. One is the 24-month investigation of the building construction, materials and technical conditions that combined to cause these disasters following the initial impact of the aircraft. The second element is a multi-year research and development program to provide the technical basis to support improved building and fire codes, standards, and practices. The results of this program will support the voluntary consensus process that is used in the United States to develop codes and standards. Third, the response plan calls for an industry-led dissemination and technical assistance program to provide practical guidance and tools to better prepare facility owners, contractors, designers, and emergency personnel to respond to future disasters.

The Administration supports the NIST response plan and has requested \$16 million as part of the Federal Emergency Management Agency's FY 2002 supplemental budget request to support the NIST investigation. The President's FY 2003 budget request to

Congress also requests an increase of \$2 million in base funding to support other elements of the NIST response plan. NIST's Building and Fire Research Laboratory has already redirected about \$2 million of its existing base funds to support the response plan.

The Administration supports the intent of H.R. 4687. To this end, the Administration supports vesting NIST with subpoena power to complete full and thorough investigations of major structural failures, provided however that enforcement power rests, as is typical, with the Department of Justice. At the same time, the Administration is concerned that the historic role of NIST as a technological and standard-setting body not be materially altered by this legislation. NIST has operated effectively in the past to investigate building and structural failures, and we wish to work closely with the Congress to ensure that NIST not be tasked in this bill with inappropriate regulatory responsibilities. The Administration will seek improvements in the bill to address liability and other issues that might otherwise discourage private sector participation on investigatory teams, and to ensure that NIST is not transformed into a regulatory or quasi-regulatory agency. In addition, the Administration requests that the authorization levels conform to the President's FY 2003 budget.

Thank you for the opportunity to present our views. The Office of Management and Budget has advised us that, from the standpoint of the Administration's program, there is not objection to submission of this letter.

Sincerely,

THEODORE W. KASSINGER.

