



The Library of Congress
Office of the Inspector General

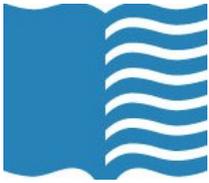


Library-wide

*Survey of the Library's
Fire Suppression Systems*

Survey Report No. 2011-PA-103
January 2012

FOR PUBLIC RELEASE



UNITED STATES GOVERNMENT

LIBRARY OF CONGRESS

Memorandum

Office of the Inspector General

TO: James H. Billington
Librarian of Congress

January 23, 2012

FROM: Karl W. Schornagel
Inspector General

A handwritten signature in black ink, appearing to read 'Karl Schornagel'.

SUBJECT: *Survey of the Library's Fire Suppression Systems*
Report No. 2011-PA-103

This transmits our final report summarizing the results of the Office of the Inspector General's survey of the Library's fire suppression systems. The executive summary begins on page *i*, and complete findings appear on pages 7 to 14. We make no recommendations in this report.

We appreciate the cooperation and courtesies extended by Integrated Support Services, the Preservation Directorate, Architect of the Capitol (AOC), and Office of Compliance during this audit. We also wish to thank the AOC Inspector General.

cc: Chief of Staff
Associate Librarian for Library Services
Director, Integrated Support Services
Inspector General, AOC

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▶▶ EXECUTIVE SUMMARY

The vast collections the American people have entrusted to the Library deserve to be protected in the best and most efficient way possible. Because great quantities of collection materials are flammable, the risk of a fire starting and rapidly spreading at the Library is especially high. The Library employs a variety of means with which it seeks to protect human life, and prevent or mitigate damage to the collections. Significant among these are the Library's fire alert and suppression systems. Such systems can broadly be classified within two categories: smoke detectors and sprinkler systems. In addition, the Library has installed clean agents that suppress fires through chemical and physical systems to provide fire protection for its "Top Treasures" and its Stradivarius and other valuable instruments.

We initiated this audit to evaluate the quality and management of the Library's fire suppression systems. Results of our survey work provided us indications that the internal controls for managing the Library's fire suppression systems were properly designed and functioning as intended. Therefore, we concluded that additional audit work on this project would be unnecessary at this time. We make no recommendations in this report. Details of significant results we obtained through our survey are provided in the following sections.

Library's Fire Suppression Systems Compare Favorably to Other Cultural Institutions—The fire suppression systems installed in the three Library buildings on Capitol Hill are comparable, with several exceptions, to those used by similar, world-class cultural institutions we selected for our survey (the Smithsonian Institution's National Air and Space Museum-Udvar Hazy Center, National Archives and Records Administration, the New York Public Library, and the British Library of the United Kingdom). After discussing the exceptions with officials of the Architect of the Capitol (AOC), Office of Compliance, the Library's Safety Services Office, and the Library's Preservation Directorate, we concluded that they do not materially affect overall fire protection for the Library's three buildings and the AOC has implemented adequate controls to compensate for any significant shortcomings with regard to fire protection.

Office of Compliance Inspections Ensure AOC is Complying with NFPA Standards—The Office of Compliance (OOC), an independent agency established through the Congressional Accountability Act of 1995, is responsible for, among other things, inspecting legislative branch facilities for compliance with occupational safety and health standards at least once each Congress. OOC staff includes a fire protection engineer to provide expertise for these inspections. We met with OOC officials to discuss their inspections and we reviewed the OOC’s *Biennial Report on Occupational Safety and Health Inspections*, June 2009, conducted in the legislative branch for the 109th and 110th Congress. We concluded that through its program of comprehensive inspections, the OOC currently provides assurance that AOC is examining, testing, and maintaining the Library’s fire suppression systems according to applicable fire codes and regulations including the National Fire Protection Association standards. Additionally, we believe that the OOC has in place an effective follow-up system for corrective action of deficiencies.

Library Services and Integrated Support Services submitted written comments on our draft report. Management concurred with all our findings. The full text of Library Services’ and Integrated Support Services’ response is included in appendix B.

▶▶ BACKGROUND

Protection of life and the collections are among the Library's highest priorities. The vast collections the American people have entrusted to the Library deserve to be protected in the best and most efficient way possible. Because the collection materials are flammable and in such great quantity, the risk of a fire starting and rapidly spreading at the Library is especially high.

The Library employs a variety of means with which it seeks to protect human life, and prevent or mitigate damage to the collections. Significant among these are the Library's fire alert and suppression systems. Such systems can broadly be classified within two categories: smoke detectors and sprinkler systems. We initiated this audit to evaluate the quality and management of the Library's fire suppression systems.

Compliance with National Fire Protection Association Standards is Required

The Congressional Accountability Act of 1995 (CAA) (Public Law 104-1) extends the rights and protections of federal workplace laws, including the Occupational Safety and Health Act, to Congressional employees. Under the Occupational Safety and Health Act, the Congress created the Occupational Safety and Health Administration (OSHA). OSHA adopts and enforces certain standards developed by the National Fire Protection Association (NFPA) to ensure the safety and health of employees. Therefore, with the enactment of the CAA requiring legislative branch agencies to comply with the Occupational Safety and Health Act, the legislative branch agencies are required to comply with the NFPA standards.



Figure 1: National Fire Protection Association (NFPA) logo.

NFPA is the principal national organization that develops and establishes standards for the fire protection community. For instance, NFPA 25 establishes standard instructions on how to inspect, test, and maintain a building's water-based fire protection system(s). Another example is NFPA 13, which establishes standards for the design, installation, and testing of sprinkler systems.

Responsibilities of the AOC and the Library's Safety Services Office

The Architect of the Capitol (AOC) is responsible for installing, inspecting, testing, and maintaining the Library's fire suppression systems. U.S. Code Title 2, Chapter 5, Section 141 states in part, "[t]he Architect of the Capitol shall have charge of all work at the Library of Congress buildings and grounds (as defined in section 167j of this title) that affects— ... (D) compliance with building and fire codes, laws, and regulations with respect to the specific responsibilities set forth under this paragraph;..."

Notwithstanding the AOC's responsibilities, the Library is responsible for its fire prevention and protection programs. Library of Congress Regulation (LCR) 211-13, §3B5, *Functions and Organization of Integrated Support Services, Office of the Librarian*, states, "Safety Services is responsible for developing, coordinating, and administering environmental health and safety programs, including accident prevention, analyses, and reporting; loss control; industrial hygiene; sanitation; fire prevention and protection; safety training; and administration of the Library's Self Protection Plan."

Responsibility for the Library's Occupational Safety and Health Program

The Library's Designated Agency Safety and Health Official (DASHO) is the Chief of the Library's Office of Support Operations.¹ That official is principally responsible for the management and administration of the Library's occupational safety and health program.

Responsibility of the Office of Compliance

The Office of Compliance (OOC) is an independent agency that was established through the CAA. It is responsible for administering and enforcing the Act's requirements. The CAA requires OOC's General Counsel to inspect legislative branch facilities for compliance with occupational safety and health standards at least once each Congress. OOC



Figure 2: Seal of the Office of Compliance.

¹ 29 C.F.R. § 1960 (2001) requires that the head of each executive branch agency designate an official with sufficient authority and responsibility to represent effectively the interest and support of the agency head in the management and administration of the agency occupational safety and health program. The Library is voluntarily following this regulation.

staff includes a fire protection engineer to provide expertise for these inspections. The General Counsel reports inspection results to the Speaker of the House, President pro tempore of the Senate, and employing offices which are responsible for correcting violations. OOC's General Counsel has independent investigatory and enforcement authority for some CAA violations.

During the 109th Congress, the OOC inspected the Library's common areas, mechanical and electrical spaces, workshops, offices, laboratories, book-processing areas, book stacks, reading rooms, network operation facilities, dining facilities, and the Health Services suite. The inspection included:

- The three Library buildings on Capitol Hill (the Madison, Jefferson, and Adams Buildings);
- The Library's facility for the National Library Service for the Blind and Physically Handicapped (the Taylor Street Annex), a GSA-leased building;
- The Landover Center Annex, a GSA-leased building;
- Two floors and the outside grounds of the Library's Day Care Center; and
- Modules One and Two of the Book Storage Modules at Fort Meade.

The Library's Fire Suppression Systems

NFPA standards require the installation of an aqueous (i.e., water-based) fire sprinkler system in all of the Library's buildings. However, because they only respond to heat, fire sprinklers are not considered smoke detectors.

There is complete fire sprinkler coverage of the collection areas in the Jefferson, Adams, and Madison Buildings, but smoke detector coverage is only complete in the Jefferson Building. The AOC is working toward 100% smoke detector coverage in the Adams and Madison Buildings, and estimates that those buildings will have full coverage in a year and a half.

The AOC has positioned smoke detectors throughout the book-stacks of the Jefferson and Adams Buildings, which ensures that the continuously-operated communication center



Figure 3: Image of a smoke detector.

of the U.S. Capitol Police (USCP) would have early warning of fires in those areas.

The Library has taken actions in addition to the installation of fire sprinklers and smoke detectors to protect priceless collection items. For instance, the Preservation Directorate collaborated with the National Institute of Standards and Technology in 2007 to create a permanent, oxygen-free housing for the Library's 1507 Waldseemüller Map.² While the oxygen-free housing reduces aging for the map, it also provides fire protection for the item.

In addition, the Library uses FM200 systems³ to provide fire protection for its "Top Treasures" stored in one of the Library's secure storage facilities. For the display cases protecting the Library's copy of the Giant Bible of Mainz, the Gutenberg Bible, and its Stradivarius and other valuable instruments, the Library protects these valuable items by installing comparable clean agents that suppress fires through chemical and physical mechanisms to that of FM200. Unlike a sprinkler system, the FM200 system is triggered by smoke, not heat.



Figure 4: Image of a sprinkler head.



Figure 5: Image of a FM200 release.

² 'America' appears for the first time on a new continent depicted on this map created in 1507 by Martin Waldseemüller. The map was the first to show the western hemisphere and to name the Pacific Ocean as a separate ocean. This is the only known copy to exist from a set printed from woodcuts.

³ FM200® (HFC 227ea) is known chemically as Heptafluoropropane. A colorless gas is liquified under pressure for storage. It rapidly extinguishes most commonly found fires through a combination of chemical and physical mechanisms. When sensor heads are triggered, FM200 vaporizes into an aerosol state. The gas displaces enough oxygen to extinguish ordinary combustible, electrical, and flammable liquids, and the amount of it needed to extinguish a fire in a specific area is carefully calculated.

►► OBJECTIVES, SCOPE, AND METHODOLOGY

The objectives of this survey were to determine 1) how the fire suppression systems installed in the Library's buildings on Capitol Hill compare to the ones installed at other major libraries and museums, and 2) whether the Library/AOC comply with standards of OSHA and NFPA with regard to, among other things, inspecting, testing, and maintaining the Library's systems.

The scope of our survey included activities involving, and features of, the fire suppression systems installed in the Library's Jefferson, Adams, and Madison Buildings, National Archives and Records Administration (NARA) facilities, the Smithsonian Institution National Air and Space Museum-Udvar Hazy Center (NASM-UHC),⁴ the New York Public Library, and the British Library of the United Kingdom.

To accomplish our objectives, we interviewed Library officials in the Safety Services Office, Preservation Directorate, and Interpretive Programs Office; officials of the AOC and the OOC; and officials of the NASM-UHC, NARA, and the New York Public Library.

Additionally, we examined reports presenting results of OOC inspections of Library/AOC compliance with NFPA standards in managing fire suppression systems. The reports we examined involved systems in facilities that the Library leases in Landover, MD, and on Taylor Street in Northwest Washington, DC. They were prepared by OOC for the 109th and 110th Congress. These reports did not cover the Library's Packard Campus in Culpeper, VA, or new modules at Fort Meade, MD. The OOC plans to include these facilities in its 111th Congress biennial inspection. Finally, we conducted research to obtain information about the use of a low oxygen environment in a British Library facility to provide fire protection.

Although the number of internal control transactions we tested was limited, we considered it sufficient to conclude that

⁴ The Smithsonian Institution National Air and Space Museum-Udvar Hazy Center is located near the Dulles International Airport in Chantilly, VA.

the internal controls applied to managing the Library's fire suppression systems were functioning as intended.

We conducted this audit survey from August through November 2011 in accordance with generally accepted government auditing standards, and Library of Congress Regulation (LCR) 211-6, *Functions, Authority, and Responsibility of the Inspector General*. Government auditing standards require that we plan and perform audit work to obtain sufficient, appropriate evidence to provide a reasonable basis for our findings and conclusions, based on our audit objectives. We believe that the evidence we obtained provides a reasonable basis for our findings and conclusions, based on our objectives.

►► FINDINGS

Results of our survey work indicated to us that the internal controls for managing the Library's fire suppression systems were properly designed and functioning as intended. Therefore, we concluded that additional audit work on this project would be unnecessary at this time.

The fire suppression systems installed in the three Library buildings on Capitol Hill are comparable to those used by similar, world-class cultural institutions we selected for our survey. Moreover, through its thorough inspections, OOC is providing assurance that AOC is examining, testing, and maintaining the Library's fire suppression systems according to NFPA standards.

Details of significant results we obtained through our survey are provided in the following sections.

I. Library's Fire Suppression Systems Compare Favorably to Other Cultural Institutions

Although the fire suppression systems installed in the three Library buildings on Capitol Hill are comparable to those used by the other institutions we selected for our survey, several differences exist between the Library's systems and the ones the other institutions use. However, after discussing the differences with officials of AOC, OOC, the Library's Safety Services Office, and the Library's Preservation Directorate, we concluded that they do not materially affect overall fire protection for the Library's three buildings and the AOC has implemented adequate controls to compensate for any significant shortcomings with regard to fire protection. Following are some of the alternatives we found during our survey.

Heat Detectors in Addition to Smoke Detectors

Heat detectors and smoke detectors are installed in the facilities of the New York Public Library and the Smithsonian's NASM-UHC. The AOC has not installed standalone heat detectors in the Library's three buildings on Capitol Hill. However, the AOC informed us that the smoke detectors it is currently utilizing in the Jefferson and Adams

buildings detect both smoke and heat. The AOC is not installing these dual units in the Madison building because it had already installed the majority of the smoke detection devices in that building.

Officials of both the Library's Safety Services Office and OOC opined that installing heat detectors in addition to fire sprinklers would be redundant. A Library Safety Services Office official stated that "heat detectors respond to the same fire signature as fire sprinklers do: heat released by the convective portion of the combustion process. Therefore, most fire protection engineers consider these initiating devices as redundant in nature."

Dry Pipe Sprinkler Systems

The New York Public Library uses a "dry pipe" sprinkler system⁵ in its collection areas to provide fire protection and reduce the possibility of water damage. A dry system is not pressurized with water until activated by an alarm, which may reduce the chance of accidental water leaks into moisture-sensitive collection areas. The Library uses a wet system in the collection areas (with a few exceptions in special vault areas), which is continuously pressurized with water.

Library Preservation Directorate and OOC officials told us that water leak problems have not been experienced with the wet sprinkler system installed in the Library's three Capitol Hill buildings. The OOC official stated that "the existing wet pipe systems have had an excellent record of staying tight and not releasing water inappropriately. The fire sprinkler systems in the Library's book collections all have metal guards in the areas where there is the potential to be struck by something or someone in order to minimize the potential for a water leak from these types of incidents. These guards seem to have worked well from my perspective."

⁵ A dry pipe sprinkler system is one in which pipes are filled with pressurized air or nitrogen, rather than water. This air holds a remote valve, known as a dry pipe valve, in a closed position. Located in a heated space, the valve prevents water from entering the pipe until a sensor is triggered. Once triggered, the air escapes and the dry pipe valve releases. Water then enters the pipe, flowing through open sprinklers onto the fire. Typical dry pipe installations include cold-storage warehouses and outdoor loading docks where freezing is a factor.

Moreover, the OOC official noted that a dry pipe sprinkler system requires more equipment and maintenance on an annual basis than a wet pipe system. Retrofitting a wet system into a dry one could result in additional challenges, such as the introduction of air leaks into the existing water pipe system which would make it necessary to run an air compressor more frequently.

Additionally, the OOC official disagreed with the notion that a dry pipe system provides better protection for the collections against accidental water damage. As he stated, "...[i]f the dry pipe sprinkler system is hit and this hit causes an air leak, that air leak will then bring water to that location fairly quickly."

Given the views of the Preservation Directorate and OOC officials, we concluded that dry pipe systems do not necessarily offer an advantage over wet systems.

Low-oxygen Environments

The British Library constructed a large book storage facility that includes a low-oxygen (15% oxygen, as compared to "U.S. Standard Atmosphere" value of 20.9% oxygen in ambient air) environment to reduce the risk of fire. Library Preservation Directorate officials stated that the British Library book storage facility was specifically constructed to ensure the tight seal needed to maintain an effective low-oxygen environment and that as a robotic retrieval facility there are no staff routinely or consistently working in the low-oxygen space.

OOC officials acknowledged a low-oxygen environment provides effective fire protection, but they cautioned that staff who work in it might be putting their health at risk. Likewise, the Library's Safety Services Office Chief informed us that OSHA considers oxygen content below 19.5% to be "Immediately Dangerous to Life and Health" and requires agencies supply employees working in such environments self contained or supplied air-breathing devices (29 C.F.R. § 1910 (2003)).

Redundant Fire Alarm Panels

There are four redundant networked fire alarm panels at the Smithsonian's NASM-UHC. The rationale supporting that redundancy is that if one panel fails, three other alarm panels would still be available.

An AOC official told us that the Library's existing fire alarm panels are not redundantly configured. However, the official claimed that AOC has taken steps to ensure the panels' continuous and effective operation, stating "...fire alarm panels are continually monitored and inspected daily for any condition that could impact the proper function of the system."

Reserve Tanks for the FM200 Systems

The Smithsonian's NASM-UHC has a reserve tank for its gas fire suppression system to use in case the primary tank fails. The Library does not have reserve tanks for its systems because AOC officials believe the areas covered by the FM200 systems, including the Rare Book collections area, Information Technology Services' Data Center, and the telephone switch rooms, are adequately protected without a reserve tank. An AOC official explained that "[i]n the event that these [FM-200] tanks are discharged, sufficient local supply exists to have the tanks refilled within a few weeks. During this period of time, the installed wet pipe sprinkler system would provide required fire protection."

The OOC concurred that the current system without a reserve tank is sufficient as long as routine inspection, testing, and servicing of the FM200 system continues at its current level.⁶ Moreover, an OOC official pointed out that, in addition to the FM200 systems, the Rare Book collections area is protected by the smoke detection system and the wet pipe sprinkler system.

⁶ Presently, AOC-sponsored contractors perform the major inspection, testing, and servicing work on the FM200 systems. The AOC does follow-up on the contractor work and some inspection of the systems as needed to make sure they are available for use. The OOC also inspects these systems on a less frequent basis as an oversight as long as funding and resources are available.

Microbiological Induced Corrosion

The sprinkler system of the NARA facility in College Park, MD began to leak during its fifth year of operation. The leak, due to bacteria in the water in the system's pipes, led to "Microbiological Induced Corrosion." NARA had to inject chemicals into the facility's incoming water supply to correct the situation.

A similar situation is affecting sprinkler systems of the Library. The AOC has identified corrosion on sprinkler system pipes in the Adams and Jefferson Buildings. As a result, it has engaged an expert consultant to perform a study of the problem. The study is expected to be completed around May 2012. According to the AOC, "the purpose of this study is to evaluate potential causes for corrosion and provide recommended actions to be employed to further preserve and protect sprinkler piping in the [Library] buildings."

We plan to follow up on this issue with the Library and/or AOC when the study's results become available.

Alarm System for Smoke Detectors

The Chief of the Library's Safety Services Office brought to our attention that the Library's smoke detection system is not a "Positive Alarm Sequence." Instead, the Library's current configuration requires action by the investigating officer to sound the general alarm. This could present a risk to the Library staff and collections. According to the Chief, the Library understands that it is a security compromise to avoid evacuating the entire building for minor smoke caused by burned toast, for example.

NFPA 72-2010 *National Fire Alarm and Signaling Code*, states, "In-building fire emergency voice/alarm communications systems shall be permitted to use positive alarm sequence complying with 23.8.1.3." This section details that if the positive alarm sequence operation is initiated (smoke is detected), "[t]rained personnel shall have up to 180 seconds during the alarm investigation phase ... to evaluate the fire condition and reset the system. If the system is not reset during the alarm investigation phase, notification signals in accordance with the building evacuation or relocation plan

and remote signals shall be automatically and immediately activated. If a second automatic fire detector selected for positive alarm sequence is actuated during the alarm investigation phase, notification signals in accordance with the building evacuation or relocation plan and remote signals shall be automatically and immediately activated.”

The Library/AOC/USCP have elected not to implement a positive alarm system such as suggested in NFPA 72. When smoke is detected, a USCP officer and possibly an AOC employee would be dispatched to the smoke detector’s location. The expectation is that the officer would arrive at the scene within three minutes and identify the cause of the activated smoke detector. An alarm would require a positive action by the responding officer. While the officer may activate the alarm, depending upon his investigation at the scene, this activation may or may not occur within 180 seconds.

The AOC Fire Marshall stated that the Library has more smoke detectors than required by building code. With the extra smoke detectors, together with the USCP training regarding fire response, the AOC Fire Marshall believes the Library is adequately protected.

Management Response

Management concurred with our findings. Integrated Support Services responded that it is tracking the corroded sprinklers in the Adams Building.

II. Office of Compliance Inspections Ensure the AOC is Complying with NFPA Standards

OOC conducted a comprehensive occupational safety and health inspection of the Library’s buildings during the 109th and 110th Congress⁷ (OOC had not released its report for the 111th Congress at the time of our fieldwork). As part of its inspection, OOC evaluated the management of the Library’s fire suppression systems. Because OOC is an independent

⁷ *Office of Compliance Biennial Report on Occupational Safety and Health Inspections*, June 2009. The inspection of the Library’s facilities included common areas, mechanical and electrical spaces, workshops, offices, laboratories, book processing areas, book stacks and reading rooms, network operations facilities, dining facilities, and the health suite.

agency and its inspection team included a fire protection engineer, we concluded that the results of OOC's inspection for the 109th and 110th Congress provide reasonable assurance that the Library's fire suppression systems were appropriately managed according to NFPA standards at the time of the inspections. Additionally, we believe that the OOC has in place an effective follow-up system for corrective action of deficiencies.

Significant OOC inspection findings that involved fire protection in Library facilities are summarized in the following paragraphs.

Maximum Height Level for Storing Materials

Materials must be stored at least 18 inches below the level of applicable fire sprinkler heads to enable the sprinklers to disperse water effectively in a fire situation. Notwithstanding this height limit, OOC identified at least thirty locations where the height of stored Library materials exceeded the maximum allowed height level. As a result, applicable sprinklers may not be effective for extinguishing a fire because stored materials would block or partially block water that the sprinklers would disperse.

Damaged and Improperly Installed Sprinklers

OOC identified 17 fire sprinkler heads in the Jefferson Building that were either damaged or improperly installed. As a result, the sprinklers involved may not have been effective in extinguishing a fire.

Unsealed Fire Barriers

OOC identified fire barriers in the Jefferson Building that were not sealed. As a result, fire and smoke could easily spread beyond the unsealed barriers in a fire situation.

Storing and Handling Cellulose Nitrate Film

The Library stores cellulose nitrate film in vaults at its Packard Campus in Culpeper, VA. Cellulose nitrate film is extremely flammable, and highly sophisticated procedures must be followed when it is stored and handled. OOC officials met

with safety experts at the Packard Campus during the 110th Congress to review applicable OSHA standards, and to provide technical assistance to Library staff for complying with those standards. In its report for the 110th Congress, OOC reported that the Library had developed a Hazard Communication Program and was training its employees on the handling procedures applicable to cellulose nitrate film. The report also noted that the Packard Campus was not yet ready to be inspected during the 110th Congress. However, the OOC planned to inspect this facility during its 111th Congress biennial inspection.

Management Response

Management concurred with our findings.

►► CONCLUSION

The fire suppression systems installed in the Library's Jefferson, Adams, and Madison Buildings are comparable to those used by the world-class cultural institutions we selected for our survey. Furthermore, through a program of dynamic inspections, OOC currently provides assurance that AOC is examining, testing, and maintaining the Library's fire suppression systems according to applicable fire codes and regulations.⁸

According to a representative of the independent OOC, "...[t]he current protections being provided to the book collections in the Library of Congress buildings are the best that I have seen. I do not recommend changing the system."

Major Contributors to This Report:

Nicholas Christopher, Assistant Inspector General for Audits
Patrick Cunningham, Senior Lead Auditor
Sarah Sullivan, Management Analyst

⁸ OOC officials informed us that its ability to continue providing this assurance will depend upon the amount of future funding provided by the Congress.

▶▶ APPENDIX A: ACRONYMS USED IN THIS REPORT

AOC	Architect of the Capitol
CAA	Congressional Accountability Act of 1995
DASHO	Designated Agency Safety and Health Official
FM200	Heptafluoropropane
GSA	General Services Administration
LCR	Library of Congress Regulation
MD	Maryland
NARA	National Archives and Records Administration
NFPA	National Fire Protection Association
OOC	Office of Compliance
OSHA	Occupational Safety and Health Administration
NASM-UHC	Smithsonian Institution National Air and Space Museum-Udvar Hazy Center
USCP	U.S. Capitol Police
VA	Virginia

▶▶ APPENDIX B: MANAGEMENT RESPONSE



LIBRARY OF CONGRESS

UNITED STATES GOVERNMENT

Memorandum

TO: Nick Christopher
Assistant Inspector General For Audits

DATE: December 22, 2011

VIA: Dianne van der Reyden *DvR*
Director for Preservation

VIA: Roberta Shaffer *RS*
Associate Librarian for Library Services

FROM: Nancy Lev-Alexander *Nancy Lev-Alexander*
Head, Preventive Preservation Section

SUBJECT: Response to Draft Survey Report No. 2011-PA-103 Survey of the Library's Fire Suppression Systems

I have been asked to respond to Draft Survey Report No. 2011-PA-103 *Survey of the Library's Fire Suppression Systems* by Dianne van der Reyden, Director for Preservation on her behalf as well as on behalf of Roberta Shaffer, incoming Associate Librarian for Library Services.

Finding I: Library's Fire Suppression systems Compare Favorably to Other Cultural Institutions:
Agree

None of the specific differences between the Library and other institutions cited in the report materially affects overall fire protection for the Library's three buildings.

Finding II: Office of Compliance Inspections Ensure that AOC is complying with NFPA Standards: **Agree**

As a minor point of correction, on Page 9, paragraph 4 the Preservation Directorate is referred to as the Preservation Office. In all other instances it is correctly referred to as the Preservation Directorate.

Please let me know if more detailed comment is required to support each example where the Library's fire protection system differs from the other institutions cited under Finding I.

101 INDEPENDENCE AVENUE, S.E. WASHINGTON, DC 20540



LIBRARY OF CONGRESS

Integrated Support Services

January 3, 2012

To: Karl W. Schornagel
Inspector General

From: Elizabeth R. Scheffler 
Director, Integrated Support Services

Subject: Survey of the Library's Fire Suppression System
Draft Audit Report No. 2011-PA-103

Thank you for the opportunity to review the draft audit report on the Library's Fire Suppression System. We are glad to see your confirmation that the Library's system compares favorably with other cultural institutions. As your report indicates, the Architect of the Capitol continues to test and maintain the Library's fire suppression system in accordance with the National Fire Protection Association Standards. We should also note that the Architect of the Capitol continues their work to upgrade the Adams building's fire detection system.

CC: Chief of Staff
Chief, Office of Support Operations
Associate Librarian for Library Services

101 Independence Avenue, SE Washington, DC 20540-9400

Draft Audit Report No. 2011-PA-103

List of minor corrections:

- 1) Please replace “Udvar-Hazy Center” with “National Air and Space Museum - Udvar Hazy Center.”
- 2) P. i, 3rd paragraph, 1st line: “Library's Fire Suppression Systems Compare Favorably to Other Cultural-[Institutions]...”
- 3) P. i, 3rd paragraph, 6th line: “...National Archive[s] and...”
- 4) P. 4, last paragraph, 2nd line: “...‘Top Treasures’ stored in one of the Library’s secured storage facilities...”