



# Biennial Report<sup>1</sup> on Occupational Safety and Health Inspections

Conducted in the legislative branch during the 109<sup>th</sup> Congress pursuant to the Congressional Accountability Act of 1995

## *I. Executive Summary:*

### *Goals and Inspection of the 109th Congress*

#### **A. Introduction**

During the 109<sup>th</sup> Congress, significant progress was made in improving the Office of the General Counsel's (OGC) occupational safety and health (OSH) inspection and hazard abatement program. Implementing objectives in the Office of Compliance (OOC) Strategic Plan, the OGC revised its inspection procedures, substantially expanded the scope and thoroughness of its inspections, and initiated precedent setting litigation to secure compliance with a long-standing Citation concerning serious life threatening hazards present in the U.S. Capitol Power Plant utility tunnels.

With these proactive and comprehensive inspection procedures in place, three areas of concern were targeted: (1) completing a comprehensive inspection of all legislative branch facilities in the Washington, DC metropolitan area, (2) monitoring hazard abatement progress, and (3) reducing the backlog of requester-initiated inspections. Because a more comprehensive inspection was conducted during the 109<sup>th</sup> Congress than in previous cycles, a substantially greater number of hazard findings were discovered. This inevitably created a larger work load and demands on employing offices in order to address and abate each finding. Additionally, more requester-initiated inspections were conducted and resolved than during the previous Congress. The highlights of these three areas are presented below and additional information can be found in individual sections within this biennial report.

Since the 109<sup>th</sup> Congress Biennial Inspection was more comprehensive than in past years, the AOC and employing offices were required to devote more extensive staff time in accompanying the OGC inspection team and in providing necessary information to the completion of the *Report* and associated appendices. Throughout this inspection process, this Office has received excellent cooperation from the employing offices and the Architect of the Capitol. In this regard, particular thanks are extended to those most involved in this process: Ann Rogers of the Office of House Employment Counsel, Mike Garrott, representing the Chief Administrative Officer of the House of Representatives, Susan Adams of the Architect of the Capitol, Irvin Queja of the Senate Sergeant at Arms, Janet Jones of the Senate Chief Counsel for Employment, Rick Rogers of the United States Capitol Police and Robert Browne of the Library of Congress for their generous assistance in aiding this Office to accomplish this important task.

#### **B. Inspections**

Routine completion of a thorough OSH inspection of each covered employing office facility during each Congress is a top priority of the OGC. The Congressional Accountability Act (CAA) requires the OOC General Counsel to

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<sup>1</sup> See 2 U.S.C. § 1341(e)(2).



conduct comprehensive inspections of all legislative branch facilities at least once biennially; this mandate was achieved within all covered facilities the Washington, DC metropolitan area during the 109<sup>th</sup> Congress.<sup>2</sup> This accomplishment was made possible due to increased support provided by Congress in the OOC FY2006 budget for the OGC's OSH inspection program. With these greater resources, the OGC was able for the first time to implement a year round inspection cycle that was not possible during past Congresses. The inspections were also completed ahead of schedule and within budget. While only five million square feet were inspected during the 108<sup>th</sup>,<sup>3</sup> approximately 15.3 million square feet were covered during the 109<sup>th</sup> Congress, representing nearly 98% of the covered space over which the OGC has jurisdiction on Capitol Hill and in the legislative branch suburban locations.<sup>4</sup> Consequently, the OOC was able to complete its first ever "baseline" inspection of OSH conditions throughout all covered facilities in this area during a single Congress.<sup>5</sup>

Biennial Inspection	Square Footage Inspected	Hazards Identified
<b>107<sup>th</sup> Congress (2001 – 2002)</b>	50%	350
<b>108<sup>th</sup> Congress (2003 – 2004)</b>	25%	2,666
<b>109<sup>th</sup> Congress (2005 – 2006)</b>	98%	13,140

During the 109<sup>th</sup> Congress inspections, the OOC was able to utilize the recently-acquired Facility Management Assistant (FMA) hazard tracking system to input, process, and report the inspection findings with respect to more than 13,000 hazards identified during the inspection cycle. The FMA system also enabled the OGC to more readily monitor employing office abatement progress of thousands of hazards, which allowed the OGC to focus on the most critical and life threatening hazards to employees and the public.

### **C. Abatement of Open Hazards and Citations**

Improving safety and health conditions in the legislative branch depends upon prompt abatement of known hazards. A particular challenge to both the OGC and responsible employing offices is adequate monitoring and abatement of the 13,000 hazards identified during the 109<sup>th</sup> Congress inspection.<sup>6</sup> That inspection was completed in August 2006. As of March 1, 2007, the employing offices responsible for correcting hazards have

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<sup>2</sup> See 2 U.S.C. §13419(c)(1)

<sup>3</sup> While greater square footage was inspected during some earlier biennial inspections, the inspections were much less thorough, resulting in the identification of substantially less hazards. For example, during the 107<sup>th</sup> Congress, nearly 50% of the facilities were inspected, resulting in the identification of approximately 350 hazards. During the 108<sup>th</sup> Congress inspection, while only 25% of square footage was inspected, over 2,600 hazards were identified because the inspections were more comprehensive.

<sup>4</sup> The remaining areas were either not accessible to the OGC inspectors or were undergoing renovation.

<sup>5</sup> The General Counsel also has OSH jurisdiction over more than 1,000 Congressional District and State Offices, as well as remote offices of other legislative branch agencies. The OOC sought funds in its FY2007 and FY2008 budget requests to work with House and Senate Officials and remote offices to develop a pilot program involving training, self-certified inspection, and spot verification for participating Congressional District and State Offices.

<sup>6</sup> Employers, whether they create the hazard, expose their employees to a hazard, or have control over a facility in which a hazard exists, have different responsibilities with respect to the hazard. In general, the creating and controlling employers have the responsibility for correcting the hazard. The exposing employer is responsible for advising the responsible employer to correct known hazards to which its employees are exposed and to withdraw it employees from danger. In the legislative branch, the responsibility for correcting most hazards rests with the AOC inasmuch as that entity is charged by Congress with the care and maintenance of most legislative branch facilities in which employing offices are located.



reported that they have corrected nearly 52% of hazards identified in the latest inspection. A summary of the percentage of reported abated hazards by each employing office is detailed in the following table:

Employing Office	Hazards	Percentage Abated
<b>Architect of the Capitol (AOC)</b>	5,496	41.5% <sup>7</sup>
<b>United States Capitol Police (USCP)</b>	129	81.3% <sup>8</sup>
<b>House Chief Administrative Officer (CAO)</b>	228	47%
<b>Library of Congress (LOC)</b>	1,127	65%
<b>Government Accountability Office (GAO)</b>	618	74.8% <sup>9</sup>
<b>House Employing Office</b>	3,677	59%
<b>Senate Employing Office</b>	1,408	97.7%

Due to the significantly more thorough inspection by the OOC resulting in the identification of more hazards, the percentage of abated hazards reported to the OGC during the 109<sup>th</sup> Congress inspection cycle appears to be lower than that during the 108<sup>th</sup> Congress inspection.<sup>10</sup>

#### *Abatement of Citations*<sup>11</sup>

Citation Case Load		
	FY06	FY07
<b>Open</b>		31
<b>New</b>	2	1
<b>Closed</b>	12	16

Assuring timely abatement of hazards that are the subject of an outstanding citation is of particular concern to the OGC. Hazards are rated by the OGC inspectors according to their severity and likelihood of causing injury or death, ranging from RAC 1 (most severe) to RAC 4. Some of the most serious hazards identified during the 109<sup>th</sup> Congress inspection were already the subject of a citation issued during a previous inspection. In most instances, the time for abating these hazards as required by the citations had long since expired. Moreover, the CAA requires that “if new appropriated funds are necessary to correct a violation [] for which a citation is

<sup>7</sup> Subsequent data submitted by the AOC represents additional abatement of hazards since March 1, 2007. See Acting Architect of the Capitol, Stephen Ayers’ letter dated November 2, 2007, Table 3, in Appendix F.

<sup>8</sup> The USCP has reported in its November 9, 2007, letter reporting that it has abated a higher percentage of hazards than reported in this chart. No documentation of specific abatement actions was included with its response. See footnote 8.

<sup>9</sup> GOA data is based on report submitted to OOC on August 1, 2007.

<sup>10</sup> The 108<sup>th</sup> Congress inspection concluded in December 2004. OGC reports to employing offices were completed in March 2005. As of the date of the 108<sup>th</sup> report in October 2005, approximately 90% of the 2,666 violations were reported as abated. The 109<sup>th</sup> Congress inspections concluded in August 2006. As of August 1, 2007, 52.2% of the 13,140 violations were reported as abated. As seen in the chart, some offices, such as the Senate and GAO, abated higher percentages of findings assigned as their responsibility.

<sup>11</sup> Please note that not all agencies have outstanding open citations. Only the AOC, LOC, and USCP have outstanding Citations issued by the OOC.



issued,” their “compliance shall take place as soon as possible, but not later than the end of the fiscal year following the fiscal year in which the citation is issued...”<sup>12</sup> The following unabated citations are illustrative:

Hazard Type	Hazard Location	Date of Citation	Abatement Deadline	Severity of Hazard
<b>Unenclosed stairwells</b>	Capitol	2000	2003	RAC 1
	Longworth	“	“	
	Russell	“	“	
	Jefferson	2001	“	
<b>Inadequate Fire Doors</b>	Cannon Rayburn <sup>13</sup>	2000	2003	RAC 1
<b>Improper use of Hazardous Chemicals</b>	Campus Wide	2000	2000	RAC 2
<b>Falling concrete, inadequate emergency communication system and egress, heat stress and asbestos</b>	Capitol Power Plan Utility Tunnels	2000, 2001 & 2006	2002, 2001, 2006 respectively, [extended to 2012 due to Complaint Settlement]	RAC 1
<b>Open Fire Barriers</b>	Jefferson	2001	2003	RAC 2
	Adams	“	“	
<b>Failure to monitor contractors</b>	All buildings	2004	2004	RAC 1
<b>Obstructed exit routes</b>	LOC Book Stacks	2002	2003	RAC 2
	Landover Annex	“	“	
<b>Lack of Emergency Action Plan and training</b>	LOC Facilities	2003	2004	RAC 2

**Table 1 Examples of Open and Current Citations**

Since the first biennial inspection was conducted in 1996, the OGC has issued citations to employing offices and warned about dangerous and unabated fire hazards throughout legislative branch buildings. The open stairwells in the Capitol Building, Russell Senate Office Building, Longworth, Cannon, and Rayburn House Office Buildings, the open atrium in the Hart Senate Office Building, as well as the lack of fire doors and protective barriers in the Jefferson and Adams Library Buildings all contribute to conditions that place thousands of employees and visitors at risk. Several House and Senate Office Buildings, as well as the Capitol Building, including pedestrian and subway tunnels, lack sufficient emergency exits and effective fire barriers. Most of these deficiencies were noted in the inspections of 1996 and 1998 and have been reiterated in subsequent inspections by the OGC. In spite of these repeated warnings, recent AOC plans indicate that most of these fire hazards will not be fully abated for many years. The OGC is reviewing these proposed abatement plans and is working with the AOC to ascertain whether abatement dates can be accelerated.<sup>14</sup> By contrast, when a citation was issued to the GAO in

<sup>12</sup> CAA § 1341(a)(6)

<sup>13</sup> The fire doors in the Rayburn House Office Building from the subbasement to the garage level remain unabated because they have not yet been certified as code compliant fire doors. The AOC has brought the fire doors above this level into compliance.

<sup>14</sup> In subsequent meetings and communications since the conclusion of the 109<sup>th</sup> Congress, the AOC has provided reports concerning its progress reducing fire safety hazards in the Capitol Hill facilities, and continues to work with the OGC to comply with the Life Safety Code requirements. See Acting Architect of the Capitol, Stephen Ayers’ letter dated November 2, 2007, Tables 4-5 in Appendix F.



2004 for fire doors that did not provide an adequate fire barrier, that employing office replaced noncompliant doors with fully compliant units within two years.<sup>15</sup>

As noted in the 108<sup>th</sup> Congress Biennial OSH Report (p.10), unlike OSHA, the OGC does not routinely issue citations with respect to each hazard. Most often, the OGC pursues less formal, non-adversarial means in order to achieve more expeditious and voluntary abatement of hazards. The decision to issue a formal Citation or to follow a more informal process lies within the statutory discretion of the General Counsel. As observed in the 108<sup>th</sup> Congress Report (p.11)

*The General Counsel has issued citations in instances where the identified hazard is particularly serious or creates an imminent risk to legislative branch employees or the public; when the hazard constitutes a 'repeat' or similar or related violation of the type found in past inspections or which a broad, systematic remedy may be required; when an employing office fails to take appropriate and timely steps to correct a hazard; or when he determines it is otherwise necessary to effectuate the purposes of the occupational safety and health laws.*

As the 108<sup>th</sup> Report explained, "there has been little progress in abating many serious violations. Moreover, responsible employing offices do not apprise the General Counsel of the status of abatement efforts or changes in abatement schedules that have further extended the estimated completion dates." (p.82-3) Continuing, the General Counsel explained that:

*In the past, because of limited resources, the OGC has placed insufficient emphasis on abatement and has relied too much on voluntary action by employing offices to follow through on meeting their abatement obligations. During the course of the 109<sup>th</sup> Congress, the General Counsel will place special emphasis on monitoring and assuring compliance with outstanding unabated citations and other uncorrected violations. The implementation of a new case tracking system in 2005 significantly enhances the OGC's ability to increase this oversight and monitoring function.*

Unfortunately, these problems continue to persist with several of the instrumentalities of Congress. For example, the AOC failed to timely supply information requested by the OGC regarding the status of all open (unabated) citations despite long standing requests dating back to January 2005. Such information is essential to the OGC's ability to monitor abatement. In many cases, information that was provided was neither adequate nor complete, and failed to justify the additional time requested to effectively abate or explain why abatement had not been completed within a timely manner. However, in June 2007, the AOC provided detailed briefings explaining actions taken to reduce fire hazards and outlining plans to achieve full abatement of fire safety-related hazards in the Capitol, House and Senate office buildings, and the Library of Congress facilities. Since then, the AOC has been working cooperatively with our office in order to resolve these matters.

Delays in receiving information necessary to the exercise of the General Counsel's authorities under the CAA are the result of an omission in the CAA. Unlike most other regulatory agencies such as OSHA, the OGC is not authorized by the CAA to issue investigatory subpoenas in order to promptly obtain information necessary to either investigate hazards or monitor the status of abatement.<sup>16</sup> In its Section 102(b) Report to Congress (Dec

<sup>15</sup> Of the 560 hazards identified in the GAO building as part of the 108<sup>th</sup> Congress inspections, all but five were fully abated by September 15, 2006.

<sup>16</sup> Information can be obtained through subpoenas by Hearing Officers only after a complaint has been filed by the General Counsel against the responsible employing office for failure to comply with the terms of a CAA §1341(c)(3) and §1405(f).



2006), pp. 8-9, the Board of Directors of the OOC recommended to Congress that the CAA be amended to give the General Counsel authority to issue investigatory subpoenas to obtain such information where necessary, from the instrumentalities of Congress.

Where *The Capitol Power Plant Utility Tunnels Complaint* progress in obtaining timely abatement of very serious citation-related hazards is not forthcoming, the General Counsel is granted complaint authority under §1341(c)(3) of the CAA. In one such matter, the necessity for filing a complaint became apparent during the 109<sup>th</sup> Congress inspection of the Utility Tunnels of the U.S. Capitol Power Plant in June 2005. A previous inspection of that facility was conducted at the request of an employee in 1999, leading to issuance of a citation in 2000 with respect to three very serious life threatening hazards: (1) delaminating and spalling concrete from the ceiling of the tunnels that could occur without warning; (2) unreliable and limited communications capacity necessary to enable tunnel workers and others to communicate with those outside the tunnels to effect rescue; and (3) insufficient numbers of egress points to allow tunnel workers to escape or be rescued from the tunnels in case of emergencies. The General Counsel also reported to the AOC the existence of heat stress and asbestos hazards for investigation and correction.

The 2005 inspection revealed that little had been accomplished in achieving compliance in the interim, and in many instances, conditions had deteriorated creating life threatening hazards. A complaint was filed by the General Counsel with the OOC in February 2006, and additional citations were issued regarding heat stress and asbestos in the tunnels. After lengthy negotiations, the General Counsel and the AOC entered into a Settlement Agreement in June 2007 and a commitment from the AOC to ensure correction of the hazards within five years. This settlement is discussed in detail on page 16 of this report.

As noted above, other significant serious RAC 1 and RAC 2 hazards identified in prior inspections remain unabated. The identification and abatement of continuing violations are of particular concern to the OGC. Specifically, fire hazards, deficient emergency warning systems, and asbestos exposure were among the most serious incidents of continuing violations. Progress was observed from prior inspections with respect to deficiencies in passive systems<sup>17</sup> and evacuation procedures. Deficiencies in these areas were reported in the OGC's prior biennial reports to the Congress. However, the OGC inspectors found continuing and serious problems resulting from features that delay the activation of building-wide alarms and water sprinkler systems. These delay features are known as [REDACTED] and are integrated into the smoke alarm and sprinkler systems maintained in the Capitol Building and House and Senate Office Buildings. [REDACTED] notification and verify the existence of fire or general emergency. The effect of these [REDACTED] discussed in greater detail in Section IV.B.1. [REDACTED] problematic given the age and overcrowded conditions in these buildings. Most buildings also have deficient fire barriers, inadequate egress capacity, and frequently experience significant over-crowding by numerous visitors, including individuals with disabilities, who are likely to be unfamiliar with emergency exit paths. These facilities are also a potential target for terrorist activity. Achieving accelerated abatement efforts with respect to these hazards will be a focus of the OGC during the 110<sup>th</sup> Congress.

#### D. Requester-Initiated Inspections

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Limiting subpoena authority to post-complaint situations, however, fosters what may prove to be premature or unnecessary and resource consuming litigation.

<sup>17</sup> A passive system is defined as physical barriers such as fire walls, fire doors, and smoke proof ceilings.





During the 109<sup>th</sup> Congress, the OOC took more aggressive action to bring to closure open requester-initiated inspections. The OOC worked very closely with the AOC, LOC, and USCP to resolve the issues raised in these cases. The following chart shows the results of these efforts.

OSH Cases		
	FY06	FY07
<b>Open</b>	66	38
<b>New</b>	22	22
<b>Closed</b>	21	51

## Exposure to Asbestos

Six requests for inspection filed during the 109<sup>th</sup> Congress alleged potential exposure of employees to airborne asbestos. Two of these inspections involved police officers working adjacent to construction sites where the officers suspected that construction activities disturbed asbestos-containing materials that could migrate into their duty areas. Two other requests alleged that LOC and AOC safety officials had failed to initiate the required monitoring of work areas where employees were potentially exposed to asbestos. The remaining two cases involved alleged exposure to friable asbestos in the Capitol Power Plant and in the CPP Utility Tunnels. As a result of these allegations, evaluating the potential for employee exposure to asbestos became a priority for inspectors during the 109<sup>th</sup> Congress inspection. While deficient employing office procedures were identified during the investigations, except for in the utility tunnels no excessive asbestos exposure was found to exist. In the tunnels, the OOC inspectors identified areas where asbestos was found on steam pipes as well as other working surfaces, potentially exposing workers if disturbed. The results of these findings are discussed in Section V.

## II. Challenges & Initiatives

### A. Increasing Awareness of Safety and Health Issue

The OOC's Strategic Plan seeks to better facilitate dissemination of information pertaining to hazard prevention. The OOC has developed several tools to reach employing offices and their staffs. The creation and distribution of *Fast Facts* and *Bulletins* by the OOC are significant steps taken to accomplish this goal. These educational materials are published on the OOC website, [www.compliance.gov](http://www.compliance.gov).<sup>18</sup> The use of multi-media efforts to distribute information has had positive reactions from all stakeholders.

*Fast Facts* are brief informational documents developed by OGC safety and health professionals in conjunction with the OOC's Education and Information Office. Many address conditions that are created by employees, such as blocked fire exit doors, blocked fire sprinklers, and the improper use of extension cords in lieu of permanent electrical wiring. They explain why certain situations are hazardous and how they can be addressed. The information is presented in clear, succinct language, and includes illustrative photos, making the documents easy to read and understand. Topics are chosen based upon the issues discovered during the biennial inspections. Some of the topics addressed in past *Fast Facts* include: pressurized cylinders, smoke detectors, exit signs, fire doors, fire extinguishers, fire wall penetrations, ground-fault circuit interrupters, damaged power cords, electrical panel accessibility, exposed energized wiring, space heaters, sprinklers, and the prevention of

<sup>18</sup> For examples of *Fast Facts* and OSH-related *Bulletins*, see appendix G.



slip, trip and fall hazards. Additional *Fast Facts* documents are scheduled to be developed monthly during the 110th Congress.

*Bulletins* are published by the OOC on a quarterly basis and as special editions. They are generally two pages in length and address topics such as federal employer obligations, and employee rights and responsibilities, as well as health and safety issues. During the 110<sup>th</sup> Congress, the OOC will publish *Bulletins* pertaining to fire safety and other hazards commonly found in offices and shops.

The OOC web site is increasingly recognized by legislative branch employers and their staffs as a resource for information on health and safety matters. During FY2006, the OOC website generated approximately 400,000 visits per month with over 40,000 internet downloads of these documents. They included downloadable forms, "Fast Facts," "Bulletins," newsletters, fact sheets, educational resources, tools, and guidelines used for assessing hazard risk. Increased enhancements will be made to the website as time and resources permit to better support all of the OGC's stakeholders who are seeking technical health and safety assistance.

## **B. Fire Safety**

### *Continuing Deficiencies*

The OGC issued six citations in 2000 regarding serious fire protection deficiencies in the U.S. Capitol; Cannon, Longworth, and Rayburn House Office Buildings; and the Russell Senate Office Building. In 2001, Citations were also issued for the Jefferson, Adams, and Madison Library of Congress buildings. Despite the national and historic significance of these buildings, as well as their age and potential as targets for terrorist activity, effective abatement actions were not taken until recent years.<sup>19</sup> Fire deficiencies, such as unprotected stairwells, lack of separate fire zones, incomplete sprinkler coverage, and delays in signaling building-wide alarms, found in biennial inspections all contribute to creating an unsafe environment for employees and visitors, and not limit their ability to safely and quickly evacuate buildings in the event of an emergency. Moreover, these deficiencies substantially increase the risk to the survival of these historical landmarks in the event of fire.

Throughout the Executive Branch and the private sector, modernized protection systems have been installed to detect and control fire, while at the same time preserving the historical integrity of the facilities. Basic fire safety principles have been or are being incorporated into historical Executive Branch buildings and new restorations and construction projects. However, some buildings on Capitol Hill were not built according to recommended fire codes that were being followed in the private sector.<sup>20</sup> From a fire safety perspective, many of these buildings were not constructed in compliance with codes that existed at the time of construction. Furthermore, corrective and remedial actions have been implemented at a precariously slow pace. Since the 109<sup>th</sup> Congress inspection, however, the AOC has undertaken increasing efforts to bring the historical buildings in the legislative branch up to current life safety code requirements.

The findings from 109<sup>th</sup> Congress biennial inspections reconfirmed the continued existence of previously reported fire safety hazards that rank among the most serious identified since the advent of the Congressional Accountability Act. They include lack of adequately protected exit routes by enclosed stairwells; separate fire

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<sup>19</sup> For accomplishments achieved in recent years by the AOC in enhancing fire safety conditions in the major Capitol Hill facilities, see letter November 2, 2007 from Acting AOC, Stephen Ayers, Appendix F tables 4-5.

<sup>20</sup> At the turn of the 20<sup>th</sup> century, insurance companies recommended to architects a set of construction standards. Most of the older buildings on Capitol Hill were not built in accordance with these recommendations.





zones; complete sprinkler coverage to retard the spread and growth of fire; and the delay in sounding building-wide fire alarms.

During briefings conducted by AOC project managers in June 2007, the General Counsel and interested stakeholders were advised of the AOC's plans to address and prioritize the abatement of fire safety hazards.<sup>21</sup> They also identified specific actions that have been taken to address some of these deficiencies. However, the General Counsel was concerned that under the AOC's proposed abatement plans the most serious hazards, involving open stairwells, would not be fully abated until 2014 or later, although other hazards would be corrected at an earlier date. Accordingly, the OGC suggested alternative approaches to accelerate abatement. After extensive and ongoing discussions between the parties, the AOC has recently developed revised performance-based abatement plans with respect to the Cannon and Russell buildings, as well as faster abatement within the Longworth Building. The OGC is optimistic that these planned improvements can assure an adequate level of safety protection without adversely affecting the most historically significant features of these buildings.

### *Historical Perspective*

Between 1946 and 2003, six building fires stand as reminders of the grave harm that can occur from failing to take all available precautions to protect building occupants from fire hazards. The following table demonstrates the magnitude of the loss of life when fire safety hazards are not adequately addressed.

Year	Location	Number of Deaths
1946	Winecoff Hotel	119
1958	Our Lady of Angels School	95
1977	Beverly Hills Supper Club	87
1980	MGM Grand Hotel	85
1990	Happy Land Social Club	87
2003	Station Night Club	100

All of these fires,<sup>22</sup> and many others that resulted in smaller numbers of death, shared one or more of the fire safety deficiencies discussed in the following sections. Some similar deficiencies are present in some of the buildings on Capitol Hill. Such deficiencies, particularly when coupled with the crowded office conditions and

<sup>21</sup> In September 2006, AOC submitted a Notice of Corrective Action/Request for Modification of Abatement (NOCA/RFMA) update package addressing open citations. In general these did not adequately provide for timely abatement of the identified hazards. In spring 2007, the OOC requested the AOC to submit revised NOCAs/RFMAs to address these deficiencies. Since that time, further information has been supplied by the AOC regarding several of the most serious citations.

<sup>22</sup> These facilities were either not sprinklered or were incompletely sprinklered. When facilities are fully sprinklered, the potential for significant loss of life is substantially reduced due to the ability to contain the spread of fire. However, while that risk is reduced, sprinklers do not fully prevent the spread of toxic smoke and gases which is the most common cause of death in fires. While not all AOC managed facilities are fully sprinklered, extensive efforts have been made in recent years to cover the entirety of the facilities. See Table 4 of Stephen Ayers letter, Appendix F. Significant progress has been achieved since the first OGC Fire Safety reports were issued in 2000 and 2001. Today, most facilities, except the Capitol, are nearly fully sprinklered.



large number of visitors present in Capitol Hill buildings, have the potential to result in significant injury or loss of life.

### *Unenclosed Stairwells and Lack of Fire Zones*

The Longworth House Office Building and the Russell Senate Office Building continue to have open, unprotected exit pathways and unenclosed exit stairways, despite the issuance of citations during previous biennial inspection cycles. Such conditions render these buildings as single, very large fire zones that expose large numbers of occupants to heat, fire, and toxic smoke. Most of these buildings also lack smoke barriers that could provide a limited - but valuable - measure of protection during a fire or other emergency.

Exposing employees or visitors to smoke and toxic gases is of great concern to the OGC because it can significantly impair their ability to make the appropriate decisions vital to a safe exit. For example, exposure to carbon monoxide levels typically found in a fire will cause mental and physical impairment, chemical asphyxiation and death. Exposure to carbon monoxide is the cause of most fire deaths. Combustion of various synthetic materials commonly found in office furniture produces dangerous concentrations of toxic, airborne chemicals that create narcotic effects, further contributing to the impairment.

The Cannon and Rayburn House Office Buildings, the Jefferson Building, and the U.S. Capitol Building have exit stairways that are partially enclosed, but do not have doors that are code-compliant in terms of their fire rating. Consequently, these stairwells do not provide safe emergency egress. Code-rated fire doors are designed to buy time critical for the safe evacuation of people on upper floors and those who are mobility impaired and require additional time to evacuate.

### *Fire Doors*

A citation was issued in 2001 after numerous fire doors in the Library of Congress buildings were found not to be code-compliant. This problem also exists throughout many buildings on Capitol Hill. OGC inspectors discovered that to allow easier passage or to improve ventilation, fire doors are frequently blocked or tied open, which prevents them from serving their intended purpose. During an inspection of the Madison Building, OGC inspectors found that many of the fire doors failed to fully close and latch. When fire doors fail to self-close and latch when an alarm sounds, the integrity of the exit stairways is compromised by allowing the entry of smoke or fire.

When it is necessary for fire doors to be kept open during normal operations, magnetic hold-open devices, tied into the central alarm system, should be installed. Such devices keep the fire door open until a fire alarm or smoke control system is activated, and then releases them, restoring protection to the exit route. These devices have been installed in some locations, but not yet enough to ensure adequate protection throughout these facilities. Once installed, these systems require simple testing and periodic maintenance to ensure they are fully operable when needed.

### *Elevators*

As a general rule, absent certain conditions, elevators should not to be used as a means of egress from upper floors of buildings during a fire. Several elevators may be designated for use by the fire department to assist in the evacuation of mobility-impaired persons. For such elevators, the shafts are being refitted with protective



materials to protect from heat, smoke and fire, and the elevator shaft machinery room, and lobby areas must be equipped with smoke detectors.

### *Emergency Exit Doors*

During the 109<sup>th</sup> Congress inspections, OGC inspectors identified some locked emergency exit doors in 10 buildings in the legislative branch. Typically, these emergency exit doors are locked for security reasons; however, most of these doors are usually unlocked and usable during regular business hours.

A number of solutions are available that can both assure security and allow emergency egress. Some exit doors have been fitted with devices that delay opening and notify security officials when the door is opened. Doors can be fitted with panic bar hardware enabling the door to be opened from the inside but only with a key from the outside. These doors are frequently alarmed. Security cameras have been installed in other locations. The 109<sup>th</sup> Congress biennial inspections revealed where delayed-opening doors have been installed; some lack the required signage that indicates the delay status. In the event of an emergency, employees attempting to exit could mistakenly believe the door cannot be opened, causing them to attempt unnecessarily to find another exit.

### *Fire Sprinklers, Smoke Detectors, and Fire Alarms*

Fire sprinkler systems remain the most common and effective protection of life and property from fire. Efforts have been made by the AOC to fully sprinkler all buildings on Capitol Hill. As noted, with the exception of the Capitol, most of these buildings are nearly fully sprinklered. This represents a significant improvement of conditions over earlier biennial inspections. Sprinkler systems are effective in slowing the growth of fire, while reducing the amount of toxic gas and smoke. Sprinkler systems also are used to activate alarms that notify employees and other occupants to evacuate.

The AOC reported in its June 2007 briefings to the OGC and other stakeholders that significant improvements have been made to the scope of coverage provided by fire sprinklers and alarm systems in buildings with open stairways. The General Counsel remains concerned, however, since fire alarm systems in the House and Senate Office Buildings have been modified [REDACTED]

[REDACTED] Given the large size of some fire zones, [REDACTED] All protective measures are thereby delayed including notification of the District of Columbia Fire Department, and the notification to employees and visitors to evacuate the building. Under governing fire code requirements any delays exceeding three minutes for an investigation of a smoke alarm is not acceptable.<sup>23</sup>

[REDACTED] to heightened risk that is present as a result of the crowded office conditions and high visitor occupancy in Capitol Hill buildings. Several of these buildings maintain only one or two exit routes that are fully ADA-compliant putting employees and visitors with mobility impairments at an even higher risk during an emergency requiring evacuation.

<sup>23</sup> The AOC disagrees with this assessment. For Fire Code requirements, see discussion at page 22.



## Recommendations

Fortunately, the fires that have been publicly reported in the press in the recent past in Capitol Hill buildings have been contained and have not resulted in serious property or physical injury. These instances include:

1. May 1998 – volatile grease fire in the Longworth Cafeteria;
2. June 2002 – small electrical fire in the ventilation system of the Capitol Building which created a large amount of smoke; and,
3. April 2007 – computer fire in the Longworth Building Credit Union.

It is imperative that comprehensive fire safety measures be implemented to assure that a serious fire event does not occur. The General Counsel recommends the following measures be promptly implemented. Some of this work already has commenced:

- Installation of passive protection systems including fire barriers around the exit stairways using fire-rated doors and the creation of fire zones to compartmentalize the buildings. The integrity of the fire barriers around each fire zone must be maintained by protecting penetrations with code-compliant fire stopping materials and fire-rated doors and dampers.
- Installation of active fire protection systems including:
  - Building-wide fire alarm systems;
  - Building-wide smoke detection and smoke control systems;
  - Emergency standby power systems for emergency lighting; and
  - Fire suppression systems that include fire sprinklers and specialized suppression systems that use extinguishing agents that comply with the Montreal Accords.

Fortunately much progress has been made in the inspection, testing, and maintenance of a number of active fire protection systems since the OGC issued citations respecting fire safety deficiencies.<sup>24</sup> However, more needs to be done to extend fire suppression systems to provide complete coverage.

### C. Training Outreach<sup>25</sup>

As part of an ongoing effort to continue the OGC's mission to educate employing offices and their staffs, the OGC has continued to sponsor quarterly seminars on safety and health issues. These seminars were initiated after the first-ever Capitol Hill Conference on Workplace Safety and Health in Congress held during the 108<sup>th</sup> Congress. The success of the initial Conference led to the creation of the Legislative Branch Health and Safety Group, which provides a forum for the OOC to relay information to employing offices and to assist legislative branch personnel who have health and safety-related responsibilities on Capitol Hill.

During the 109<sup>th</sup> Congress inspection cycle, the OGC presented programs in which the following topics were addressed at these seminars:

- Joint Occupational Safety and Health (JOSH) Committee Meetings: Some legislative branch employing offices have established JOSH Committees that meet regularly to address safety and health concerns. Typically, JOSH Committee members include supervisory and non-supervisory staff as well as safety and

<sup>24</sup> See Ayers letter dated November 2, 2007, Appendix F Tables 4-5(a)-(d).

<sup>25</sup> The OOC has increased its health and safety education and outreach efforts to the covered community. The House AOC jurisdiction conducts a House Safety Fair and other outreach measures, and during the 110<sup>th</sup> Congress Inspection, the OGC observed that the Senate Chief Counsel for Employment has implemented pre-inspections and other training seminars for Member and Committee offices to make them aware of their OSH obligations under the CAA.



health professionals and union representatives. The committees regularly inspect working conditions; identify hazards; and recommend and monitor the correction of identified hazards. These committees can be effective in achieving prompt abatement of hazards and in educating the workforce about potential safety and health issues. Several employing offices have supported the formation and activities of the JOSH Committees and have found them to be beneficial.

- Hazard Communication: The results of the 109<sup>th</sup> Congress inspection cycle reveal that many employing offices have difficulty complying with OSHA's Hazard Communication Standard. Some still confuse hazard communication requirements with hazardous waste and emergency response requirements, though they are different but overlapping programs.
- Biennial Inspection Schedule and Findings: During previous inspection cycles, emails and telephone calls were exchanged between the OOC and covered employing offices to schedule the biennial inspections. This proved to be labor intensive and difficult to manage. Consequently, the OGC now posts the inspection schedule on the OOC's website to better facilitate stakeholder use and input, and updates are made as needed. The OGC has received positive feedback regarding these web postings, particularly from various employee representatives who can now more readily schedule their work to permit them to accompany OGC inspectors during inspections. At these seminars, stakeholders were advised as a "heads up" of the types of hazards that were being identified by inspectors during the course of the on-going inspection.
- Recording and Reporting Inspection Findings: As part of an OOC's Strategic Plan initiative to improve OSH data collection methods and software applications, the OOC implemented new means of inspection data management during the 109<sup>th</sup> Congress inspection cycle. Through the use of a database and handheld personal digital assistants (PDAs), OGC inspectors now record hazard findings while in the field. They will soon be able to extract the most frequently identified hazards in summary form, and remotely access data from prior inspections through the use of PDAs. Use of the database has enabled OGC inspectors to improve the tracking of safety and health hazard abatement efforts and to generate timely reports. Consistent reporting between the OGC and individual employing offices facilitates prompt abatement of deficient conditions, and enables the OGC to more effectively monitor abatement. Given sufficient resources, the OGC intends to implement further improvements to expedite this exchange of findings and abatement information between the OGC and the employing offices.
- Office Safety Awards: In an effort to recognize improvements and best practices among employing offices, the OGC recognized and presented *Office Safety Awards* to those seven Member offices for outstanding safety performance where no violations were found in the 109th Congress biennial inspection. Member offices receiving these awards were:
  - Senator Wayne Allard (CO)
  - Senator George Allen (VA)
  - Representative Dan Boren (OK)
  - Representative Jerry Costello (IL)
  - Representative Doris Matsui (CA)
  - Representative Major Owens (NY)
  - Representative Roger Wicker (MS)
- Fast Facts: As previously noted, near the end of the 108<sup>th</sup> Congress, the OGC initiated an important effort to educate the legislative branch workforce about safety and health violations commonly identified during biennial inspections. The effort involves creating, publishing, and distributing *Fast Fact* brochures. Typically, these brochures address violations that are frequently created through the actions of office workers. The brochures, initially drafted by the University of Maryland engineering student



interns, describe the general nature of the violation, provide photos of the examples, suggest simple solutions, and provide a sidebar of relevant statistics and other facts.

Recurring violations such as using extension cords as permanent wiring result from user unawareness of regulatory requirements. Consequently, the frequency of such violations has been significantly reduced by ensuring that office staff and equipment installers are made aware of limitations and compliance measures that can be taken to avoid creating hazards. During the 109<sup>th</sup> Congress, *Fast Facts* brochures were published on OSH topics including:

- Fire Door Safety
- Methylene Chloride
- Space Heaters
- Exit Signage

The OGC's safety and health inspectors also distributed hard copies of relevant *Fast Facts* brochures to office managers in many specific areas where these hazards were found to exist during the 109<sup>th</sup> Congress inspections. Additionally, the brochures were published in the eResources section of the OOC's website, [www.compliance.gov](http://www.compliance.gov).

#### ***D. Monitoring Abatement of Citations and Violations***

Until an increase in safety funding was provided in FY2006, the OGC lacked the resources to effectively track the abatement of violations, particularly those identified during biennial inspections. As a result of the increase in funding, the OGC has made great strides in reporting and tracking violations during the 109<sup>th</sup> Congress.

In prior inspections, word processing software was used to generate inspection reports. Each violation required manual entry of an identification number, location, responsible employing office, hazard description, risk level (RAC), recommended abatement action, and relevant OSHA standard. The report was also provided in different software formats for different employing offices. Responses received from the employing offices responsible for correcting the individual violations were manually entered, often requiring conversion from one software format to another.

During the 109<sup>th</sup> Congress, after consulting with the LOC and AOC, Congress provided the OOC sufficient resources to acquire and utilize a facility management database (FMA). This database enables the OGC to document, analyze, and report violations and the employing office abatement actions. The database has been populated with categories of pick-list findings descriptions, each of which has a pre-associated recommended abatement action and applicable OSHA standards, and identifies the appropriate employing office, RAC number and inspector. The database assigns a unique identifier to each finding. While information regarding abatement response actions must be entered manually, this new system requires less data entry time, provides new sorting capabilities, facilitates better data exchange with employing offices, generates valuable reports and graphs, and facilitates the OGC's ability to track violations.

After completion of the individual safety and health inspections, each employing office is provided with a detailed report of findings. Employing offices are required to respond within 30 days to the OGC regarding actions taken to abate the identified hazards, to propose dates for correction of those findings that have not been abated, or to provide additional information or clarification regarding specific findings. During the 109<sup>th</sup>





inspection cycle, the response turnaround times from the employing offices to the OGC were generally between 45 to 60 calendar days as compared to six months during the 107<sup>th</sup> and 108<sup>th</sup> Congress.

When employing offices respond that specific findings are abated, the findings are updated to reflect that the employing office reported that the violation is abated. During the 110<sup>th</sup> Congress inspections, OGC inspectors will verify that abatement has in fact occurred. Dedicating an inspector to this verification process will be a new initiative during the 110<sup>th</sup> Congress.

During the 109<sup>th</sup> inspection cycle, the OGC determined that a number of previously issued citations had not been abated. As previously noted, some of these citations were issued as early as 2000. Typically, hazards for which citations are issued involve high levels of risk. It is of particular concern to the OGC that in some instances the employing office has neither proposed an abatement action nor submitted a Request for Modification of Abatement (RFMA) requesting additional time to effect abatement. Consequently, the OGC has directed these responsible employing offices to submit updated plans to abate these conditions and to justify any additional time required.

The OGC is actively seeking to monitor all open citations to determine if adequate abatement progress has been made and if proposed abatement dates are reasonable. To better enable the tracking of the more complex, unabated citations and requester-initiated inspections, the OGC has created a case monitoring database.

As previously noted, following completion of the 109<sup>th</sup> Congress inspections, the AOC has provided detailed briefings on actions taken and actions planned to address most of the significant fire safety hazards. The OGC is seeking to work with Congressional oversight committees and other interested stakeholders to forge a comprehensive approach and enforceable timetable for such abatement.

#### *Capitol Power Plant Utility Tunnel Citations*

As a result of the inspection of the U.S. Capitol Power Plant (CPP) utility tunnels in 2000, the OGC issued a citation to the AOC for delaminating and falling concrete; inadequate emergency egress; and inadequate communication capability within these confined spaces. During its inspection of these tunnels in 2005, the OGC interviewed employees working in the tunnels regarding their concerns about the serious hazards that remained unabated. Only limited progress was made to correct these hazards that were exposing workers to imminent danger. Disintegrating concrete in the tunnels was found to have fallen and damaged the protective coverings on asbestos-containing insulation, exposing friable asbestos. Employee potential exposure to friable asbestos was previously identified as a problem in the OGC 2000 OSH Report. By 2006 the problem had worsened. Asbestos released from the damaged insulation contaminated many surfaces. Analysis of bulk samples collected from the surfaces of pipes, ledges, and other structures confirmed the presence of asbestos fibers.

The lack of adequate emergency egress or escape points created a potential life-threatening condition that could hinder the ability of tunnel workers to escape or seek assistance in the event of an emergency. The emergency communication system failed to operate in some sections of the tunnels. It was reported to the OGC inspectors by some tunnel workers that conditions were so severe that the USCP would not send their employees into the tunnels for routine inspections and drills, due to heat stress and other serious hazards.

In January 2006, the OGC issued new citations to the AOC for having an inadequate program for heat stress and for a number of serious violations involving worker exposure to asbestos. In one of the tunnels the temperature



exceeded 160 degrees Fahrenheit. On February 28, 2006, the OGC filed its first formal complaint since the passage of the CAA.

After extensive negotiations the General Counsel and the AOC entered into a comprehensive Settlement Agreement in June 2007. The Agreement requires the AOC to abate all identified and newly discovered RAC 1 and RAC 2 hazards in the tunnel system within five years and requires regular inspections and quarterly reports by the AOC, and monitoring by the OGC. The AOC projects that the cost of repair will exceed \$300 million.

#### *E. Self Monitoring of Safety Conditions and Maintenance Programs*

Since 1996, employing offices have augmented their staffing of safety engineers and safety and health specialists as a step toward improving safety and health conditions. A significant step in preventing the occurrence of common hazards would be to perform periodic self-inspections and provide employee training to recognize and prevent hazards. Unfortunately not all responsible offices have undertaken this action. The OGC urges employing offices to reduce employee risk by prioritizing development and implementation of self-inspection programs. Because large areas - often in multiple buildings - should be monitored by staff familiar with safety and occupational health requirements, solutions may need to include broader distribution of responsibility for the performance of self-inspections as well as the incorporation of properly trained employee teams. Leading edge companies in the private sector have successfully developed safety and health plans that call for such monitoring.

The OGC recognizes that many important issues compete for the attention of the safety and health staff of the covered employing offices. However, the OGC's inspection team identified over 13,000 violations during this inspection cycle. Biennial inspections alone are not sufficient to adequately monitor safety and health conditions. These inspections highlight the need for employing offices to prevent, reduce and eliminate hazards through employee training and self-inspection efforts - the traditional role of an employer's safety office. In this regard, which progress has been made, much remains to be done to reduce the number of unnecessary hazards. For example, despite efforts by some employing offices to pre-inspect prior to OGC inspections, approximately 4,000 noncompliant uses of extension cords and surge protected power strips were still identified by the inspection team. Clearly, this large number of easily preventable and recognizable hazards illustrates the need for implementation of more effective hazard control strategies. Frequently, violations like improper use of extension cords as permanent wiring and the daisy chaining of surge protected power strips results from employee unfamiliarity with regulatory requirements. The frequency of such violations could be significantly reduced by ensuring that office staff and equipment installers are aware of measures that can be taken to avoid creating these hazards. Without that knowledge, hazardous conditions will recur after the previous ones are eliminated.

To that end, the OGC has published several *Fast Facts* brochures regarding these and other common hazards, most of which are created by employee actions, rather than as a result of inherent structural deficiencies. Copies of these brochures are frequently distributed by OGC inspectors during the biennial inspections and are available on the OGC's website. Tools such as these or similar materials have been created by the employing offices and used in education programs provided to the employing offices by safety offices on Capitol Hill.

Without regular self-inspections, many violations remain in prolonged existence until identified by the OGC's inspection team. Therefore, a more active role in the process by employing offices would result in significant



benefits. Periodic, self-monitoring would reduce the number of violations, as well as reduce the “life span” of many violations.

Employing offices would also benefit from establishing training programs in which office managers or other employees are trained to identify and correct many common violations. The OGC stands ready to assist offices in providing such training. The most commonly identified hazards, such as the use of extension cords are easy to identify and correct. These efforts would allow the employing offices’ safety and health staff to address the more difficult, technical issues while significantly reducing employee risk of harm on an ongoing basis. To aid in these efforts, the OGC recently published a checklist to be used in office self-inspections in the February 2007 OOC Bulletin, “Office Fire Safety Hazards.” See Appendix G. Applying a variation of this concept, the Library of Congress already uses a periodically touring group of Safety Committee volunteers to help control many common problems.

#### ***F. Development of Employing Office Health and Safety Programs***

The General Counsel recommended in the 108<sup>th</sup> Biennial OSH Report that all employing offices conduct a routine self-evaluation of their safety and health programs. To date, the OGC has not conducted a comprehensive evaluation of the written safety and health programs of covered employing offices. Subject to resource availability, the OGC intends to initiate such a program during FY2008.

During the 108<sup>th</sup> inspection cycle, general deficiencies were noted in the implementation of some employee safety and health training programs. Effective safety and health training programs require a substantial amount of time and effort, which may require additional budget resources for some of the employing offices. Training should communicate the policies and procedures required by the employing office’s safety and health programs, and OSHA standards applicable to the covered legislative branch offices.

The AOC has provided extensive health and safety training to its workers. AOC is fortunate to have the safety and health professionals on staff who have the necessary experience and skills for a training program to succeed. In many instances, while employing offices have developed draft plans, too often they are not finalized and implemented. Other plans are too general in nature and lack detailed procedures that provide practical guidance to managers and employees who are responsible for implementing the programs.

Drills are useful tools to evaluate the effectiveness of safety plans and ways in which they can be improved. Several unusual events triggered emergency responses during the 109<sup>th</sup> Congressional cycle. They included whole-building evacuations caused by unauthorized aircraft in restricted airspace, as well as limited response actions due to the presence of suspicious materials, or ██████████ sensors. Plans must also be updated as building spaces are reconfigured and as mechanical systems within buildings are significantly modified.

#### ***G. Space Restrictions and Associated Hazards***

Because the demand for office space within the legislative branch often exceeds availability, managers have become creative at utilizing space that was never designed to function as a workspace. Storage areas have been converted, and it is not unusual to find offices established in basement and cellar levels. This conversion of space significantly increases the number of employees in each building and on many floors. Many Capitol Hill buildings were constructed without meeting building codes and fire safety standards in effect in other



jurisdictions at the time of construction and do not meet current standards. These conditions further exacerbate the problems and risks associated with high density congestion.

Capitol Hill office buildings as a whole are considered “mixed occupancies.” However, the hearing rooms and meeting rooms are considered to be “assembly occupancies” according to the National Fire Protection Association (NFPA). Many hearings and functions on Capitol Hill bring together large numbers of people where egress points are not readily identifiable or close in proximity. Many attendees are visitors who may be unfamiliar with the buildings. In addition, television crews frequently place TV monitors, wires, cords, and other obstacles in exit corridors.

The demand for electrical outlets to accommodate computers, fax machines, copiers, and telephones often lead office managers to implement solutions that are inherently hazardous - using extension cords as permanent wiring; running electric cords beneath rugs, carpeting, or doorways; and linking extension cords and power strips together in a “daisy chain” formation. The increased electrical demands can also overwhelm the capacity of the wiring systems. The competing demands on AOC’s resources resulted in delays in abatement and upgrades to office space. Therefore, “temporary” solutions by the employing offices frequently become permanent. It is common for office managers not to request an upgrade because they were unaware of restrictions on the use of extension cords and daisy chains as permanent wiring.<sup>26</sup>

Another hazard resulting from space restrictions is the stacking of combustible materials on shelves above fire sprinkler heads. In many employing offices, supplies and file boxes are stacked to the ceiling. This condition significantly compromises the effectiveness of the sprinklers. It was identified as a systemic problem during the 109<sup>th</sup> Congress, as well as prior inspections and will need to be re-examined during the 110<sup>th</sup> Congress.

The OGC recommends that non-permanent, non-modular walls be removed where the walls block outlets and create a need to use extension cords and daisy-chains. The OGC further recommends use of modular furniture to reduce many of the safety and fire hazards that are associated with overcrowded office conditions. Modular furniture, when properly wired into a building’s electrical system, provides the user with multiple electrical outlets, eliminates the need for extension cords, power strips, and other non-compliant electrical fixtures, and reduces egress problems associated with narrow passageways and clutter.<sup>27</sup>

### *III. Inspection Methodology*

#### ***A. Scheduling***

After the conclusion of the 109<sup>th</sup> inspection cycle, the OGC consulted with all employing offices and Congressional stakeholders to determine what improvements could be made to the inspection process. This effort was undertaken as part of the General Counsel’s continuing emphasis on process improvement to ensure that the biennial inspection process is efficient, effective, and accommodates the needs of employing offices and employees working at the inspected sites.

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<sup>26</sup> Since the completion of the 109<sup>th</sup> Congress inspection, the OGC has seen increased efforts on the part of the employing offices safety officers, and, consequently, a reversal of this trend.

<sup>27</sup> All Member offices that received Safe Office Awards during the 109<sup>th</sup> Congress were equipped with modern modular furniture. According to the GSA, most executive branch agencies have already switched to modular furniture to make most efficient use of available space.



As a result of the input received from all stakeholders, several new initiatives and process improvements were implemented:

- A full-time Program/Management Analyst was assigned to monitor, schedule, and administer the inspection and abatement process;
- Employing offices were provided an overview of the anticipated inspection schedule and the opportunity to comment well before inspections began;
- The inspection calendar was placed on the [www.compliance.gov](http://www.compliance.gov) website and was routinely updated in order to reflect inspection progress, the inspection schedule, and any changes hereto; and
- Attendees at the OGC's quarterly Safety and Health Working Group conferences are provided briefings on the progress of the inspections as well as the occurrence of common hazards found by the OGC.

These efforts have yielded significant and beneficial results in the 109<sup>th</sup> Congress inspection. Providing the report findings, on average within 30 days during the 110<sup>th</sup> Congress inspection was also a major improvement in the inspection process. In prior inspection cycles, employing offices were typically not provided the hazard findings reports until the entire inspection process was completed. This significantly delayed initiation of abatement efforts. Providing findings within 30 days of the conclusion of the facility inspection allows the employing office to initiate abatement actions much sooner. Additionally, inspections now require less time since inspectors use an automated facility management database during inspections to verify abatement of prior violations and to focus on areas with systemic and repeat violations.

The dates for the OGC inspections were scheduled after consultation with representatives of the AOC and the employing offices, and adjustments in scheduling were often made to minimize any interference with employing office operations. In advance of the inspection of each facility, an opening conference was held for interested participants, advising of the content and procedures that would be followed. In addition, the OGC began posting a three month inspection schedule on the OOC website ([www.compliance.gov](http://www.compliance.gov)). As with OSHA inspections, management representatives designated by the employing office and AOC representatives accompanied the OGC inspection team. Representatives of affected employees were also invited to participate, a right to which they are entitled under law, and frequently did so. Inspectors discussed violations of OSHA standards with representatives of employing office and the AOC, and offered technical advice on how to eliminate the identified hazards. Photographs were taken of many of the conditions observed. Briefings were held throughout the process to provide employing offices with "heads up" about violations commonly identified and to let offices know what to expect in the upcoming inspection. As with OSHA inspections, the General Counsel's goal has been to help employing offices and employees reduce on-the-job hazards. Frequently AOC personnel were able to correct hazards "on the spot." At the conclusion of the inspection process, the General Counsel met with representatives of the AOC and other employing office to discuss the inspections and to solicit suggestions for improvement in the 110<sup>th</sup> Congress Biennial Inspection. These suggestions are being adopted wherever feasible.

### ***B. Safety and Health Staffing during the 109th Congress***

As a result of an increase in funding to support its safety and health function in FY2006, the OGC was able to complete a comprehensive inspection of legislative branch facilities in the Washington, D.C. metropolitan area. Most of the biennial inspection was conducted between October 2005 and August 2006. The primary inspections were directed by a full-time detailee from OSHA (Stephen Mallinger), an OGC safety and health specialist, and four OSH contractors.



The increase in funding allowed the OGC to retain a new Management/Program Analyst, David Young, and Safety and Health Specialist, Luis Guzman the first OSH FTE inspector allocated to the OOC. The analyst served as the primary liaison with employing offices in scheduling and coordinating the inspection schedule; prepare summaries and reports regarding identified violations to be submitted to employing offices; and efficiently implemented the newly acquired database used to track violations and monitor the abatement status. The Safety and Health Specialist participated in the inspection of most facilities and supports the services provided by the OSHA detailee in the inspection process as well as in Requestor-Initiated inspections. The increased funding also enabled the General Counsel to fund contractors with varied expertise on a regular and recurring basis, as opposed to the sporadic periods of prior inspections.

These factors permitted the physical inspection to be completed in ten months while continuing to monitor and process the investigation and abatement of numerous Requestor-Initiated inspections.

#### *IV. Findings*

##### ***A. Introduction***

The OGC inspectors documented hazard findings as they conducted inspections of various legislative branch facilities during the 109<sup>th</sup> Congress inspection cycle. The results of these inspections are presented in this Section (Findings) and are organized by jurisdiction: Capitol Building; Capital Power Plant and Utility Tunnels; House Office Buildings; Senate Office Buildings; the Library of Congress Buildings; the United States Capital Police locations, and the Government Accountability Office (GAO). The responsibility for abating the findings documented in these reports is sometimes split between the AOC and individual employing offices based upon the location and nature of the hazard. Findings relating to the buildings and grounds are typically the responsibility of the AOC, GAO, GSA, or private owner. Findings pertaining to a building's interior and use typically are the responsibility of the employing office.

A hazard finding is a condition identified during the course of an OGC inspection, whether it be a biennial inspection or a Requestor-Initiated inspection, that violate one or more specific federal OSHA standards or the General Duty Clause of the Occupational Safety and Health Act. During the inspection, each finding is assigned a Risk Assessment Code (RAC) by the inspector. The RAC is a standard method used to prioritize the relative risk of a particular finding as well as the urgency for abatement. The RAC describes the relative risk of injury, illness or premature death that could result from exposure to a hazard. RAC ratings can vary between a RAC 1 for a high risk to a RAC 4 for a substantially lower but still serious risk.

A RAC rating is determined by a combination of the *probability* that an employee could be hurt and the *severity* of the likely illness or injury. Appendix D details the RAC methodology used by OOC to assign RACs to various findings.

Each Findings Report submitted to the employing office presents information in a similar manner. An introduction identifies the building or facility covered by the inspection and the controlling office(s). A bar graph below presents the number of findings in each RAC category and several pie charts break out "Findings by Controlling Office" and then "Common Findings" by major hazard groups.

##### ***B. Comparison of 108th and 109th Congressional Inspection Findings***





## 1. Safety Hazards – Ongoing Violations

While substantial progress has been made in improving health and safety conditions on Capitol Hill since the adoption of the CAA in 1995, many significant hazards identified in past Biennial Reports continue to be found in covered facilities. Moreover, the most serious and longstanding hazards related to fire protection remain unabated.

### Emergency Evacuation

The General Counsel has reported in each Biennial Report since 1996 that fire and suspicious package and hazardous substance spill emergencies are the hazards most likely to be encountered by employees of the legislative branch. Few hazards have the potential to adversely affect personal safety as much as ineffective emergency response and evacuation procedures or unsafe routes of egress.

The 2002 Biennial Report noted that “the risk of future terrorist action emphasizes the importance of completing all fire and safety abatement projects that were initiated in more peaceful times. All apparent vulnerabilities – inadequate building exit capacity, inaudible alarms, missing fire barriers – loom much larger now as the prospect of an emergency has become more imminent.” 2002 Report, p. 39. In 2000, the General Counsel reported that the primary legislative branch buildings – the U.S. Capitol, the Russell, Dirksen, and Hart Senate Office Buildings, and the Cannon, Longworth, and Rayburn House Office Buildings – alone, serve as the work site for over 12,000 employees and are visited by thousands of visitors each day. Each Biennial Report issued since 2000 has noted similar deficiencies in fire safety and emergency preparedness. Compounding the problem is the extended schedule for proposed abatement. The AOC has indicated that many remaining fire safety hazards may not be fully abated until 2014 or later.

Continuing hazards that remained uncorrected include:

- Ineffective or lack of viable fire barriers
- Ineffective or non-existent fire doors
- [REDACTED]
- Deficiencies in emergency egress procedures for persons with disabilities
- Shelter in-place staging areas
- Communications systems
- Incomplete sprinkler coverage
- Blocked sprinkler heads
- Fire barrier penetration
- Fire doors improperly held open
- Damaged fire doors
- Inoperative or improper locking mechanism on fire doors
- Open exit stairwells
- Egress deficiencies

The OGC recognizes that preserving the historic architectural features of the Capitol and Senate and House Office Buildings as was the Jefferson and Adams Library of Congress buildings is a significant consideration influencing abatement of these hazards. The challenge to the AOC is to assure full and timely abatement without adversely affecting these historic structures. While dangerous hazards remain unabated today in these



facilities, significant progress has been made since the completion of the 109<sup>th</sup> Congress inspection in the development of plans to abate many of the most fire hazard conditions in these facilities.

### Ineffective fire doors

Several citations have been issued respecting doors that are not properly fire-rated. Exit stairwells with non-fire-rated doors were also found in the recently renovated United States Capitol Police Cheltenham Training Center and the Cannon and Rayburn House Office Buildings. The Longworth House Office Building stairwells have no doors at all and are in need of proper fire protection. The AOC was cited for these violations following the 2000 inspection.<sup>28</sup> At that time, the AOC initially represented the installation would occur in 2004. This violation remains unabated.

### Fire Alarm System

Under the Fire Code, a fire alarm system is required to activate a building-wide alarm to alert occupants of fire or other emergencies. See OSHA 29 CFR § 1910.165; NFPA 101 Life Safety Code 2000 Edition, §§ 39.3.4.3(a), 9.6.3. There are, however, two exceptions to this requirement. First, a positive alarm sequence is permitted when it complies with NFPA 101 Section 9.6.3.4; that Section references NFPA 72, National Fire Alarm Code, 1999 Edition which allows a [REDACTED] the activation of the general alarm. The standard allows [REDACTED] to investigate and evaluate the fire condition. If the system is not reset by the expiration of this period, all alarms are activated immediately and automatically. [REDACTED] by the Life Safety Code is considered a reasonable amount of time before sounding the building-wide alarm in order to permit an investigation to determine whether there is a false alarm. The second exception permits [REDACTED] in accordance with the Life Safety Code Section 9.6.3.3. That Section requires that the initial fire alarm system be automatically transmitted without delay to a municipal fire department and an on-site person trained to respond to a fire emergency.

In December 2004, the U.S. Capitol Police Board decided to put smoke detectors and water flow sprinkler alarms [REDACTED] Buildings with alarm pull stations to remain in [REDACTED] status in the Capitol. Alarm pull stations that had previously been put in [REDACTED] in all Senate and House buildings were restored to general alarm upon activation. Accordingly, the AOC has reactivated pull stations in the Senate and House Office Buildings, but left them [REDACTED] in the Capitol.

Under [REDACTED], all alarm activations, whether from a smoke detector or water flow alarm, [REDACTED] [REDACTED] - the closing of fire doors, and the notification of the District of Columbia Fire Department and to employees and visitors through the sounding of a general alarm to promptly vacate the building. These [REDACTED] in the office buildings that is permissible under the Fire and Safety Standards established by NFPA, as discussed above.<sup>29</sup>

<sup>28</sup> The AOC reports that this project is to be funded in 2009, nine years after citation was issued, with abatement in 2014.

<sup>29</sup> The National Fire Protection Association reports that fires can double in size each minute. (NFPA Fire Protection Handbook 18<sup>th</sup> Edition, pp 1-85-1-86.)



The procedures followed in the House and Senate Office Buildings do not comply with either exception to the Fire Code requirements. The systems do not provide a [REDACTED] because the alarms are not immediately and automatically activated after [REDACTED]. Rather, the current procedure [REDACTED] general building-wide alarm. Nor does it constitute a compliant [REDACTED] since the initial fire alarm signal is not [REDACTED] to the DC Fire Department.

Moreover, in practice, the use of [REDACTED] in the Senate and House Office Buildings in some instances causes increased and [REDACTED] in notifying building occupants of the need to evacuate. While the restoration of pull alarms in the Senate and House Office Buildings to general alarm status is a positive step, the continuation of sprinkler water flow alarms and smoke detectors [REDACTED] the Senate and House Office Buildings is of great concern. [REDACTED] pose particular dangers to employees and visitors with physical impairments. Because of the large crowds of visitors, many of whom are students and families with young children and are unfamiliar with exit pathways and evacuation procedures; [REDACTED] the existence of a potential fire emergency appears unwarranted. The need for such measures is not manifest given almost no history of intentional false alarms in these facilities.<sup>30</sup>

#### Ineffective fire zones

The Russell Senate Office Building, the Longworth House Office Building, and the Capitol all are essentially [REDACTED]

[REDACTED] There are no effective fire barriers to block or retard the growth and the spread of fire and smoke. Employees on the upper floors and those who are mobility-impaired are at the greatest risk. Even in buildings with partial fire sprinkler coverage large quantities of smoke and toxic gas can be generated from a moderate fire. While the sprinklers may retard the growth of the fire, they may be unable to extinguish it. The large quantities of paper and other combustibles present within these buildings further exacerbate the danger. In sum, the earliest possible notification to building occupants of a potential fire emergency is essential if they are to have sufficient time to promptly and safely evacuate these facilities.

#### Emergency egress of persons with disabilities

Several deficiencies were identified that adversely affect the ability of employees with mobility-impairments to safely and promptly evacuate legislative branch buildings. These deficiencies include the lack of fire barriers in stairwells and the absence of adequate fire-rated doors, [REDACTED], limited accessible egress points, inappropriately situated staging areas, absence of accurate wall maps displaying emergency information, and lack of communication capabilities to notify the PCC of employees with disabilities requiring assistance at staging areas. See OOC's *Report on American with Disabilities Relating to Public Accommodations*.

The lack of fire barriers and adequate fire doors pose a unique risk for the mobility-impaired since they frequently require longer periods to evacuate during an emergency evacuation, or must wait for assistance from co-workers or emergency responders. Therefore, any delay in sounding a building-wide alarm creates a substantially greater risk for these employees.

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<sup>30</sup> The AOC and USCP disagree with the OOC's code analysis regarding fire alarms.



### Staging areas

All employees must be provided with a safe means to evacuate from their work place during an emergency. 29 C.F.R. § 1910.38(c). In buildings on Capitol Hill, "staging areas" have been designated which serve as an integral part of the evacuation route for employees with mobility impairments. During the inspection in the first part of the 109<sup>th</sup> Congress, the "staging areas" in the Longworth and Cannon buildings were located near open stairwells and in the way of the general evacuation route. These "staging areas" have since been moved to safer locations.

### Communication systems

Employees awaiting assistance in staging areas must have a means to contact emergency personnel. NFPA 101-2000, Life Safety Code Sec 7.2.12.2.5. See also 28 CFR Pt 36 App A 4.3.11.4. If individual USCP officers checking each staging area are not to be the only means of communication, each area must have an accessible communications device. An accessible device must be within reach of individuals who use a wheelchair and must be usable by those who cannot see, hear or speak. When the device is in use it should signal its location to the main emergency control panel.

### Incomplete sprinkler systems

All Capitol Hill buildings have some or most of their areas covered by sprinkler systems.<sup>31</sup> Some areas within those buildings are not yet completely covered. To encourage building owners to install sprinkler systems, the Life Safety Code exempts from certain safety requirements when a building is fully sprinkled. For example, existing business buildings with complete sprinkler coverage may increase their common path of travel from 75 feet to 100 feet and the acceptable exit travel distance is increased to 300 feet rather than 200 feet. Buildings that have complete sprinkler coverage are also exempted from having to provide areas of refuge. However, buildings lacking complete sprinkler coverage or basic Life Safety Code compliant conditions are not entitled to any of these exemptions.

### Blocked sprinklers



While some progress has been made in complying with the OSHA and NFPA standards, the inspection team found 86 instances of obstruction and failure to maintain the required eighteen inches of separation between the sprinkler heads and obstructions during the 108<sup>th</sup> Inspections; and, over 300 instances during the 109<sup>th</sup> Inspections.

**Picture 1 Capped fire sprinkler**

### Electrical boxes, outlets, and switches

The inspection team identified hazardous electrical boxes, outlets, and switches with exposed, energized wires throughout the legislative branch during both the 108<sup>th</sup> and 109<sup>th</sup> inspections. Many of these wires were within

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<sup>31</sup> The House Office Buildings are expected to be covered fire sprinklers by the end of 2008.



employee reach. A majority of these hazards qualified as RAC 2 in severity requiring prompt correction. Several qualified for RAC 1 in severity requiring immediate attention. Hazards of this type were specifically noted in the 1998 and 2002 Reports. 1998 Report, p. 21; 2002 Report, pp. 39-40. Many remain unabated.



**Picture 2 Faceplate missing from outlets**

### Impeded access to electrical panel boards

In the event of emergency, it is imperative that electricians and other authorized individuals be able to identify where electrical panels are located and to access them quickly. The panel board itself must provide an accurate, current directory of its circuits. Earlier reports identified numerous instances where access to electrical panel boards was impeded by the inappropriate placement of furniture. From 1998 through the current inspection, the inspection team found instances where stored materials, equipment, or furniture blocked the front of electrical panels. More widespread, however, was the finding that the circuit breaker directories in many panel boards were not current in identifying newly-added circuit breakers, while others had no directory at all. Significant improvement is necessary to ensure access to the panel boards and to maintain the circuit directories.

### Ground fault circuit interrupters

Ground fault circuit interrupters (GFCI) protect employees from electrical shock hazards when working near wet or damp locations. Without a GFCI, a faulty electrical appliance could deliver a fatal shock. The installation of GFCIs on outlets is relatively simple and inexpensive. The 108<sup>th</sup> inspections identified 120 locations that needed the installation or replacement of faulty ground fault circuit interrupters. The 109<sup>th</sup> inspections identified 350 such locations.

### Extension cords, power cords, and plugs



**Picture 3 Extension Cords and Cube Tabs in Use**

The 109<sup>th</sup> inspection continued to reveal numerous locations using non-permanent wiring in lieu of available outlets. Over 2,300 locations were found with extension cords used as permanent wiring. An additional 2,400 locations had “daisy chains” wherein power strips or surge protectors were linked to extend their reach or increase capacity. Both of these conditions violate the National Electrical Code and OSHA requirements. These standards establish that extension cords may not be used as permanent wiring and their use may not

exceed a 30-day period.



## Portable space heaters

The 108<sup>th</sup> inspection team noted a widespread problem regarding the use of portable space heaters in a number of legislative branch buildings. Although prior Reports did not specifically address this issue, in the 108<sup>th</sup> inspection, the General Counsel noted 82 findings regarding the use of heaters that were either not certified or defective. This problem has continued into the 109<sup>th</sup> inspections with 225 findings regarding uncertified or broken units. Approved commercial portable space heaters are equipped with a “tip-over” switch that shuts off electrical current to the device when it falls over, thereby preventing carpet and paper fires. Portable heaters without this feature have caused many fires in homes and businesses.

## **2. Health Violations**

### Methylene chloride



**Picture 4 Product containing Methylene Chloride**

Methylene chloride is a volatile chemical that has been used as a stripping agent and industrial lubricant. Since 1998, its use has been strictly regulated by OSHA because of its carcinogenic nature. Methylene chloride is known to cause respiratory distress, depress the nervous and cardiovascular systems, damage the liver and kidneys, and cause eye irritation. For this reason, the use of and exposure to methylene chloride are subject to strict monitoring and exposure control requirements. The OOC inspection team discovered methylene chloride in use, or stored in legislative branch facilities, without the proper hazard communication and chemical use program, and monitoring in place despite prior reports warning against this hazard.

### Asbestos

Most legislative branch buildings on Capitol Hill were constructed during a time when asbestos was widely used in construction to enhance fire safety. Asbestos was also used in floor tiles, ceiling tiles, pipe lagging, insulation for boilers; sheet rock embedded plaster, and mixed into concrete and flooring materials. As a consequence, materials used in buildings constructed during this period are presumed to contain asbestos unless they are sampled and proven to be free from asbestos.

During the 108th Congress, the General Counsel identified a number of instances of non-compliance regarding the identification and control of asbestos and protective steps required for the removal of asbestos materials. The 109<sup>th</sup> inspection team found many locations in which asbestos containing materials (ACM) are not properly labeled and maintained. Many compliance issues regarding asbestos were found in the utility tunnels of the Capitol Power Plant and in LOC buildings.

### Lead

A number of employee Requests for Inspection pertaining to lead exposure were filed during the 108th Congress. These exposures arose from three primary sources - lead-based paints, lead particles in the Rayburn House Office Building, and elevated lead levels in drinking water systems in the three primary LOC buildings.



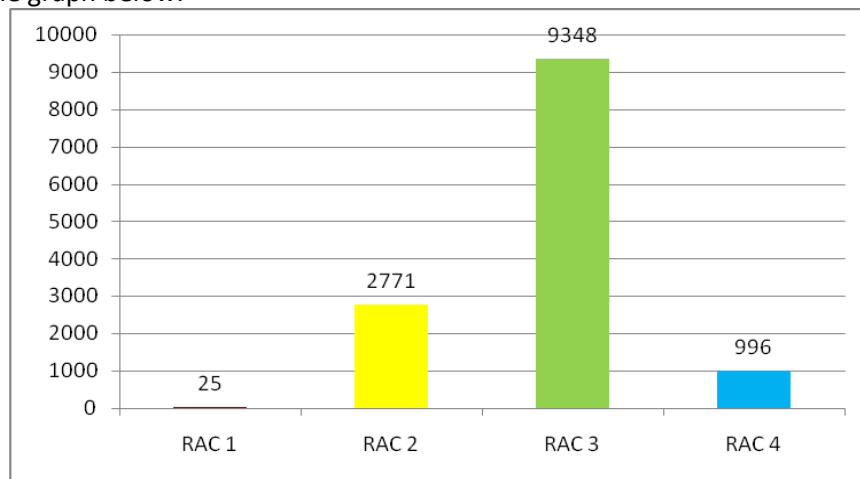


During the 109<sup>th</sup> inspections, violations were identified regarding the testing of paint for the presence of lead, training for employees who are exposed to leaded paint, and the improper clean-up of areas exposed to water damage where lead paint was present.

#### *D. Common Findings of the 109th Congressional Inspections*

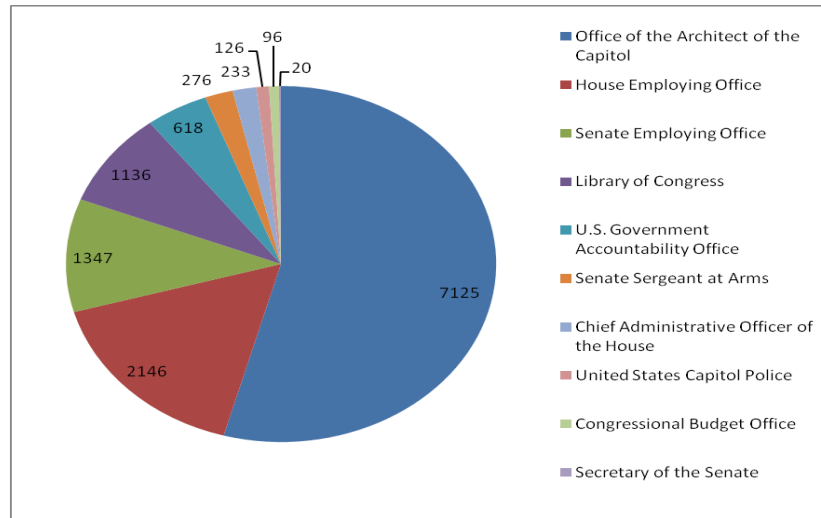
##### Summary

Approximately 15.3 million square feet were inspected during the 109<sup>th</sup> Congress, which was approximately four times the area inspected during the 108<sup>th</sup> Congress. During this inspection cycle, the OGC inspection team was able to access most of the spaces within each building. In contrast, during the 108<sup>th</sup> Congressional inspections, the OGC inspection team was unable to gain access to many offices. The OGC inspection team documented 13,147 findings during this Biennial inspection, approximately five times the number of findings during the 108<sup>th</sup> Congress. As of August 1, 2007, there were 5,715 findings unabated (43.5%). The distribution of findings by RAC levels is shown in the graph below:



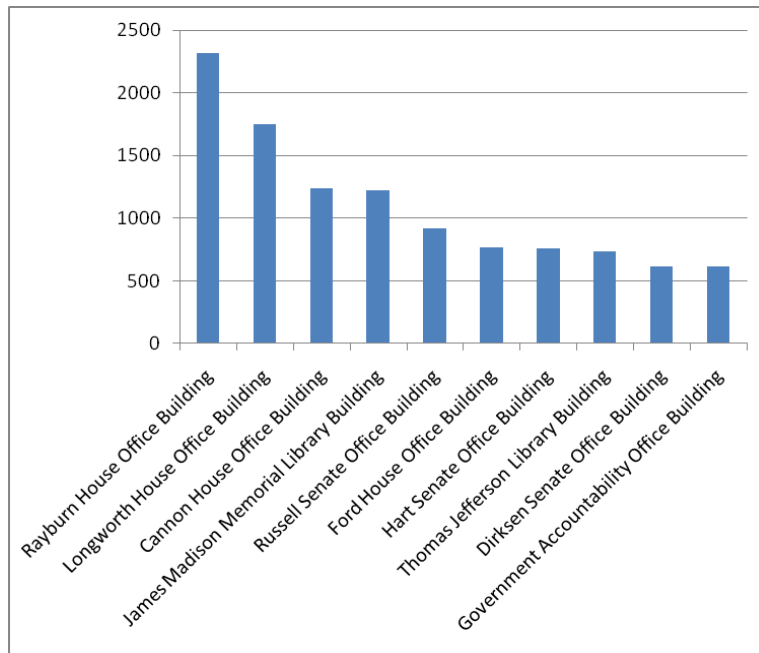
**Figure 1 RAC Distribution in the 109th Congress Inspection**

The AOC is principally responsible for the maintenance of the structure of most of these legislative branch buildings occupied by legislative branch entities as well as the mechanical and electrical systems and the Capitol Hill grounds. The following chart illustrates the number of hazard findings by the organization responsible for their abatement:



**Figure 2 Organizations with highest number of findings**

The ten facilities with the highest total number of findings are listed below. The findings for these individual buildings are presented in the jurisdictional findings sections of this Report discussed below.

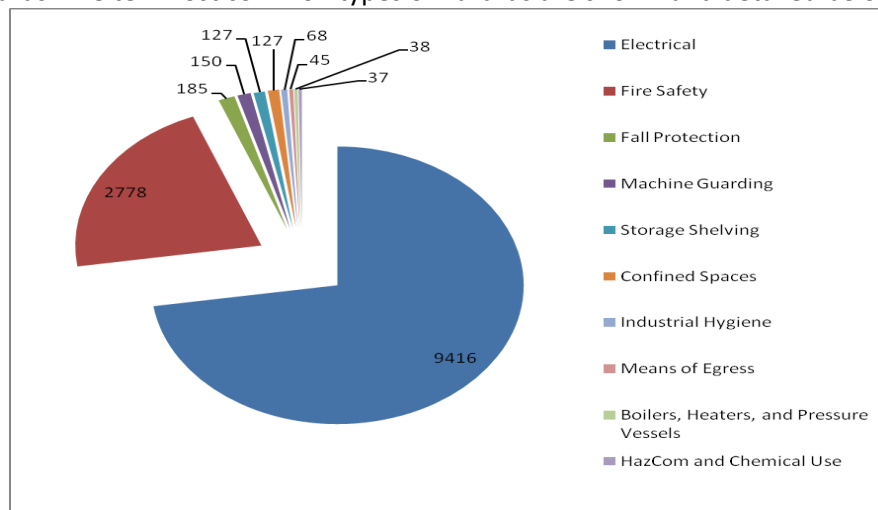


**Figure 3 Facilities with the Highest Number of Findings**

The most common findings of the 109<sup>th</sup> Congressional inspections are very similar to the past Congressional inspections. Electrical hazards were the most common findings, representing 9,416 of the total. There were 2,778 fire safety hazards, 195 fall protection (potential slip and fall) findings, 150 improper or missing machine guarding findings, 127 instances of unsecured storage shelving, and 127 confined space hazards. Other miscellaneous findings included industrial hygiene issues; means of egress; hazards regarding boilers, heaters, and pressure vessels; and hazard communication and chemical use issues. Even though some of the latter issues



were not as prevalent, in many cases they pose a more serious hazard than some of the more common electrical and fire safety hazards. The ten most common types of hazards are shown and detailed below:



**Figure 4 Most Common Types of Hazards Cited in 109th Congress Inspection**

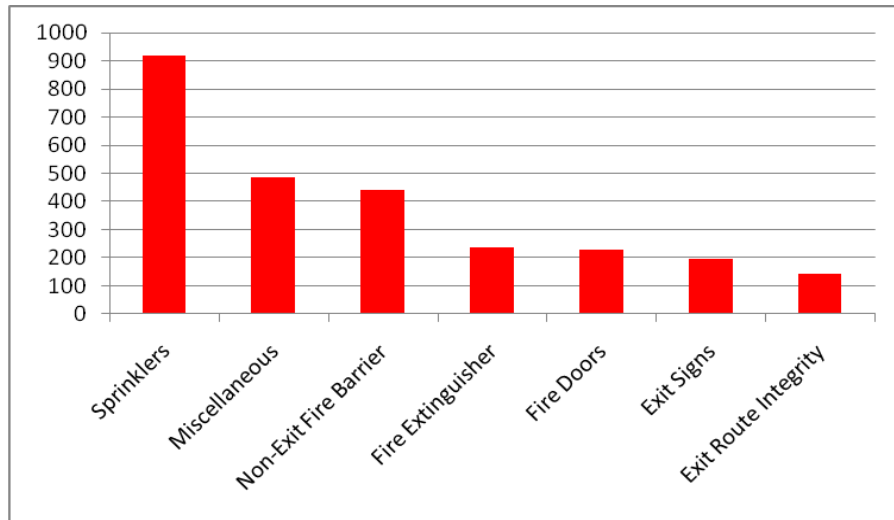
### Electrical hazards

The most common electrical hazard findings during the 109<sup>th</sup> Congressional inspections consisted of:

- Temporary wiring in use for greater than the 90 day limit. Extension cords, even those rated for commercial use, are recognized by OSHA and the National Electrical Code, at best, as being a temporary wiring solution. For long-term provision of electrical power, a hard-wired circuit current rating adequate to supply the devices must be extended to a point near the appliance(s), close enough so that the device(s) can be plugged-in using their own electrical cords. Electrical cords without approval for commercial use (“zip cords”) should never be used due to the imminent fire hazards they pose. Improper use of extension cords accounted for greater than 2,960 of the electrical findings;
- Daisy chains, which refer to the sequential addition of power strips to gain additional power outlets in office areas with limited access to electrical power, accounted for greater than 2,455 findings. Used this way, the daisy chain, including the wiring in the walls, becomes a fire hazard;
- Obstructed access to electrical panels and incomplete panel directories accounted for more than 880 findings. This condition potentially impedes the ability of fire or security personnel to quickly access and shut off the proper breaker in an emergency situation; and
- In 355 instances there was a failure to provide GFCI protected outlets or circuits when the outlet is located within six feet of a water source such as a sink or wash basin.

### Fire safety hazards

The following figure shows the distribution of the most common fire safety hazard findings during the 109<sup>th</sup> Congress inspections. The safety implications of these findings are summarized below:



**Figure 5 Most Prevalent Fire Safety Hazards Cited in the 109th Congress Inspection**

**Sprinkler systems:** Deficiencies involving sprinkler systems were the most common fire safety hazard. The inspection team noted at over 300 locations where high storage of materials either blocked water distribution from the sprinkler heads, or were stacked above the sprinkler heads, thereby impeding their ability to extinguish fires. Storage must be kept at least 18 inches below the plane of the sprinkler heads to ensure proper water dispersion. Additionally, ceiling tiles were missing in approximately 190 locations within legislative branch facilities, potentially delaying activation of smoke or heat detection devices in those areas. Other sprinkler deficiencies include damaged, incomplete coverage, and recalled Omega sprinkler heads.

**Portable space heaters:** A significant number of employees throughout the legislative branch use portable space heaters to provide comfort during cold weather to supplement building heating systems. Some consumer models of portable space heaters lack a “tip switch” - a mechanism that automatically turns off the heating element if the device tipped over. Although testing laboratories may approve models that lack this feature for home use, they are not approved for use in the workplace. Some space heaters have components which have become damaged or inoperable, voiding their laboratory approval. Clearly, the use of unapproved space heaters or improperly placing them too close to combustible materials is one of the most significant fire hazards identified during the 109<sup>th</sup> inspections. The OGC inspection team identified 225 space heaters that did not have tip switches or were not in proper working order.

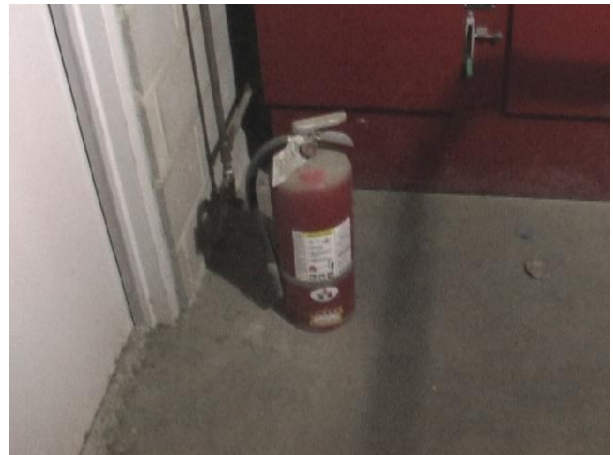
**Fire wall penetrations:** The integrity of rooms and stairwells constructed with fire resistant materials can be compromised by gaps around pipes and wires that penetrate walls and floors. The inspection identified 441 locations having openings in fire barriers. Gaps most often occur when additional power, telecommunications, and fire and security cables or plumbing are added, resulting in penetration of fire walls. Fire codes require that fire resistant materials be used to close these gaps, keeping fire and smoke from readily spreading beyond the fire barriers.

**Picture 5 Penetration in a fire wall**





**Fire extinguishers:** The National Fire Code requires that portable fire extinguishers be mounted on walls or stored in an accessible case. Fifty-six fire extinguishers were inaccessible and another nineteen were not properly mounted or secured. Additionally, portable fire extinguishers must be inspected monthly for damage and charge, and inspected yearly by a company certified to conduct inspections and repairs by the manufacturer. These monthly and annual inspections are usually documented using inspection tags attached to each fire extinguisher. The OGC inspection team found over 130 fire extinguishers to be beyond their monthly inspection date. Fire extinguishers that are not checked on a regularly scheduled basis may lose their charge and may not work as intended in an emergency situation.



**Picture 6 Unsecure fire extinguisher**

**Exit signs:** The OGC inspection team identified 114 locations within the legislative branch buildings that lacked an exit sign where one is required. In over 40 instances, exit signs were present but lacked or had incorrect directional markers. Twenty-two exit signs did not properly light when tested and twenty-two exit routes were found to lack adequate emergency lighting, either due to the failure to install proper emergency lighting or failure to maintain charged back-up batteries or functional light bulbs.

**Unprotected exit stairways and exit routes:** The OGC issued several citations addressing the very serious hazards of open unprotected exit stairways and exit routes. These citations were issued in 2000, but remain unabated. This finding is considered a RAC 1 hazard, which is the highest level of risk. It is well known that most fire related fatalities occur because of smoke and toxic gas inhalation. Additionally, such open exit stairways provide a readymade chimney effect to convey these products of combustion from a smoky or self-sustaining fire to the higher floor levels in the building and have the potential to prevent employees on these levels from safely evacuating the building during a fire. Thirty-five stairwells were identified as not having the proper enclosures for emergency exit stairwells and another twenty-two exit routes were either partially obstructed or blocked. Fifty locations were lacking some form of fire/emergency alarm systems, either visual or audio, and eight additional locations were lacking all forms of alarm systems.

**Miscellaneous safety hazards:**

- Observed fall hazards included hazardous conditions that create tripping hazards, as well as missing handrails and guardrails, and unguarded obstructions in the walkways. Fall hazards included wires strung across walkways, loose carpeting, or protruding furniture within walkways that can cause employees to trip and fall. OSHA regulations require that walkways, particularly those used as routes of egress in an emergency, remain clear and free of obstructions. There were twenty-three fall hazard findings related to general housekeeping. The OGC inspection team noted over thirty locations either lacking handrails or guardrails; many of these are a recurring violation.
- Machine guarding issues were also noted. Removal or damage to point-of-operation guards can be a very serious hazard that can lead to severe injuries, including amputation. Though older designs of straight-edge cutters often lack guards, the guards of some units in the House-occupied buildings have



been removed or have fallen off without being replaced. Carelessly used paper cutters can amputate fingers unless properly guarded. OSHA regulations require the maintenance of the manufacturer's installed guards; however, there were a total of 150 machine guarding hazard findings during this inspection.



**Picture 7 Bench Grinder with inadequate guarding**

- Unsecured shelving and cabinets can tip over and severely injure workers caught underneath or struck by objects falling from them. OSHA regulations require that storage shelving either be attached to a wall or be bolted together in a manner that provides stability, preventing it from tipping over. The OGC inspection team noted 127 instances where unstable shelving was not properly secured.
- OSHA regulations also require that all employees be alerted to confined spaces in their workplace. Warning signs are one means of communicating that warning. The OGC inspection team noted fifty permit entry confined spaces that were not properly marked at the time of the inspections. The AOC is actively working on identifying and labeling all confined spaces and has been making significant progress since the 108<sup>th</sup> Congressional inspection. There were 127 hazards associated with confined spaces: 64 lacked a posted sign marking the area as a confined space, and 72 of the 127 confined space hazards were observed in the Capitol Power Plant Utility Tunnels.
- Sixty-eight findings were industrial hygiene-related hazards that included exposure to heat stress and airborne asbestos fibers in the CPP Utility Tunnels. Twenty-one of the total industrial hygiene findings involved lack of proper signage or labeling of known asbestos-containing material (ACM) throughout the legislative branch facilities.
- In a few of the buildings, the OGC inspection team noted that forty-six egress routes were not within standards because 28 of the exit routes had a width of less than 28 inches. This can impede the ability of mobility impaired persons to vacate a building during an emergency. The OGC inspection team also found three exit routes that were not properly marked.
- There were thirty-eight findings regarding boilers, heaters, and pressure vessels and twenty-six cylinders of compressed gases were found to be unsecured. A cylinder's valve is susceptible to damage if it falls over, risking leakage of the cylinder's contents. A leak will cause the cylinder to rapidly release its internal pressure, causing the cylinder to become an unguided missile capable of breaking through a block wall. Leakage of the gases can result in fires and explosions. The inspectors also found multiple relief and pressure valves were not properly tested, maintained and tagged.
- Thirty-seven findings dealt with hazardous communications and improper chemical use. In five instances, chemicals containing the carcinogen methylene chloride were found in the legislative branch facilities. In multiple locations, the staff were unaware of the presence of this chemical and no material safety data sheets (MSDS) were available for the product, which is a RAC 1 hazard. Therefore, most of these chemicals containing methylene chloride were immediately removed and disposed of as hazardous waste. Eleven of the total findings also included missing, inaccessible, or poorly organized MSDS books. Seven chemicals had missing or defaced labeling on the bottles.



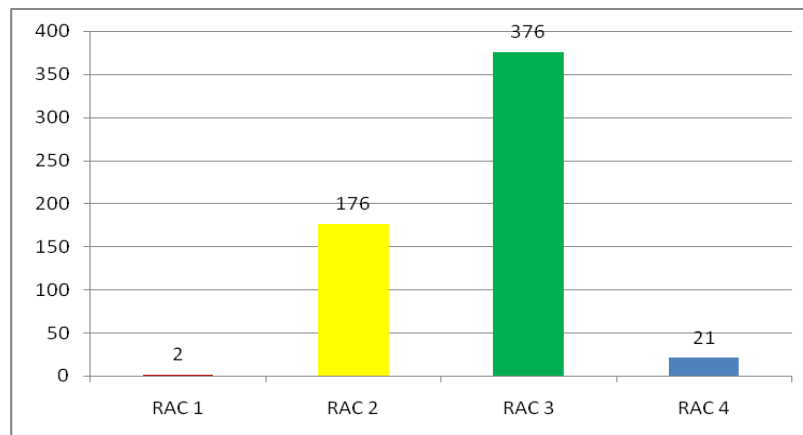


## E. The U.S. Capitol Building

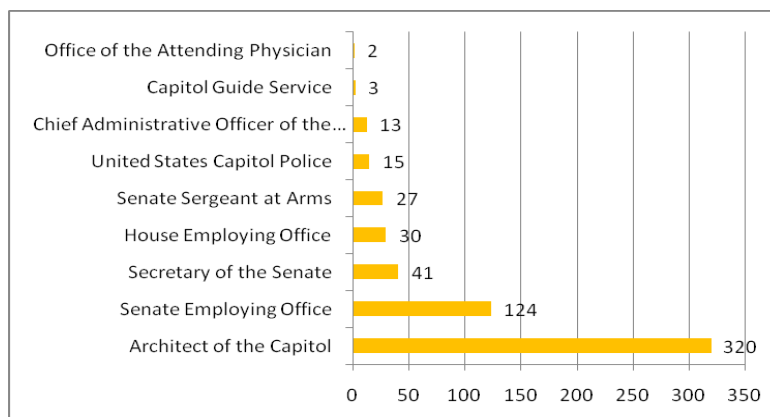
### Summary

The OOC inspection team conducted a comprehensive inspection of the U.S. Capitol Building, inspecting most of its 843,000 square feet. Inspected areas included Member, Committee, and Leadership areas, common areas, OAP spaces, CAO offices and spaces, Capitol Guide Service, media galleries, mechanical areas, and workshops. Though the House of Representatives Chamber was inspected, the Senate Chamber was not accessible during the time of the inspections.

The inspection team identified 575 findings during its inspection. Two findings were ranked as RAC 1's, and 179 were ranked as RAC 2's. Of the 575 findings identified, 416 findings were electrical hazards; 120 fire safety hazards; fifteen fall protection hazards; five machine guarding; five for unsecured storage shelving. Other findings include tripping hazards, failure to comply with the Methylene Chloride Standard and hazardous communications requirements for hazardous materials, and several confined spaces were not posted with proper warning signage. As of August 1, 2007, 449 of the findings were reported to the OOC as having been abated; 126 remain open (unabated). The following charts show the distribution of findings with corresponding RAC levels and number of findings by responsible office.



**Figure 6 Proportion of Capitol Building Hazards by Risk Assessment Code**



**Figure 7 Hazards in the U.S. Capitol Building by Responsible Office**

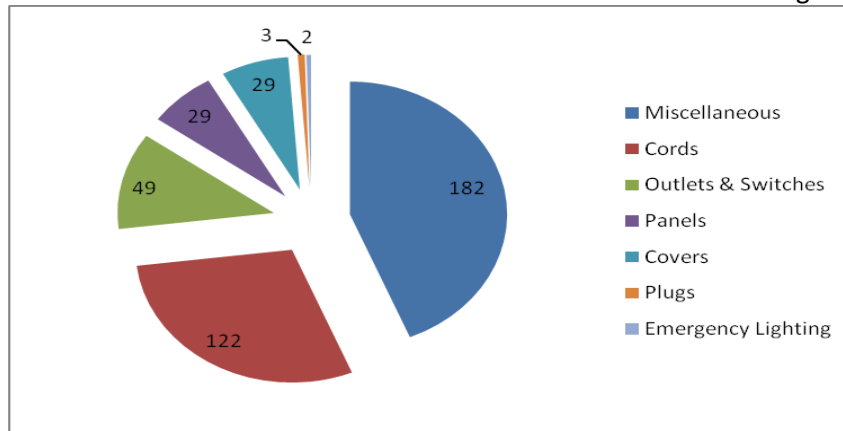


### Electrical hazards

The most common electrical hazards identified in the Capitol Building consisted of:

- Daisy chains, sequential addition of power strips to gain additional power outlets in office areas with limited access to electrical power.
- Temporary wiring in use for greater than the ninety day limit; and,
- The failure to provide GFCI protected outlets or circuits when the outlet is located within six feet of a water source such as a sink or wash basin.

The following chart shows the distribution of the most common electrical hazard findings in the Capitol Building.



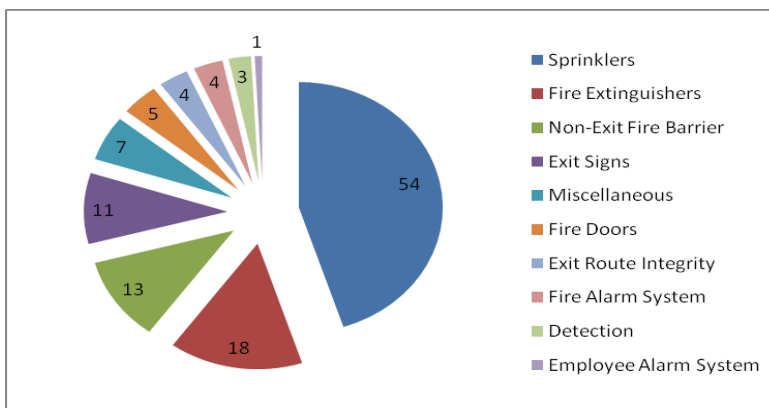
**Figure 8 Electrical Hazards Cited in the U.S. Capitol Building**

During the inspections, access to seven electrical circuit breaker panels were obstructed, potentially impeding access by either fire or security personnel in an emergency situation. OSHA and the National Electrical Code prohibit this condition. Eleven electrical panels were found to lack or had inadequately completed directories indicating the service controlled by individual circuit breaker. This condition could also delay shutting off power in an emergency.

Electrical junction boxes, pieces of the electrical system where electrical wires are spliced together, are required to have a firmly affixed cover. Twenty-nine of these were found to be without covers, exposing energized wires that could result in an electric shock. It was also noted that twenty-one electrical outlets had high ground impedance or reversed polarity, conditions which could result in an electrical shock or malfunction of electrical appliances.

### Fire safety hazards

The following chart shows the distribution of the most common fire safety hazard findings in the Capitol Building. The safety implications are discussed below.



**Figure 9 Fire Safety Hazards Cited in the U.S. Capitol Building**

Most significantly, the Capitol continues to have open exit stairways, lacking protection from fire, smoke, and toxic gases. Prior inspections have noted these serious RAC 1 hazards, for which Citation 16 was issued to the AOC in 2000. The stairways' inability to protect evacuees by limiting the spread of fire and smoke is of particular concern in a building that is widely recognized as a potential terrorist target. The OGC continues to urge that protective actions be taken as soon as possible.

As of the time of the inspection, approximately 80% of the Capitol Building lacked sprinkler coverage, the highest deficit of all buildings on Capitol Hill.<sup>32</sup> Within the spaces having sprinkler coverage, four isolated areas were found to use a mode of sprinkler head that was recalled in 1998 by the U.S. Consumer Product Safety Commission (CPSC) because it too frequently fails to activate.

The National Fire Code requires that portable fire extinguishers be mounted on a wall or stored in an accessible case. These rules also require that portable fire extinguishers be inspected monthly for damage and charge, and inspected yearly by a company certified to conduct inspections and repairs by the manufacturer. These monthly and annual inspections are usually documented using tags attached to each fire extinguisher. The inspection team found that at least eighteen fire extinguishers were not properly mounted or tagged, or both, making them susceptible to damage. The dates and frequency of inspection of the units without tags could also not be verified. Without proper documentation, the functionality of the individual fire extinguisher in an emergency is suspect.

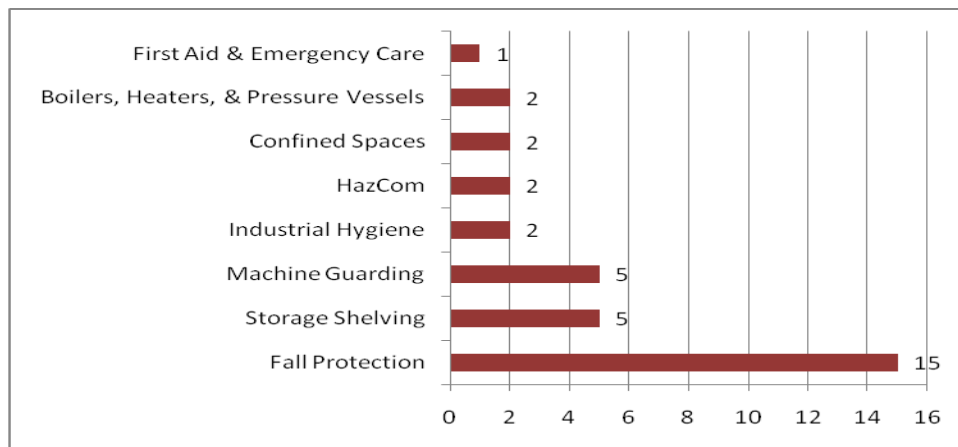
The inspection team noted three locations that lacked exit signage. Seven exit routes were found to lack adequate emergency lighting, either due to failure to install emergency lighting, failure to keep backup batteries charged, or failure to replace burnt out light bulbs.

Penetrations in critical fire barriers were identified in thirteen locations, and five areas were found to have missing ceiling tiles. These openings enable smoke and fire to travel rapidly to other areas of the building, and prevent the smoke detection system from working properly.

<sup>32</sup> See Ayers letter in Appendix F, Table 4.



Miscellaneous safety hazards



**Figure 10 Additional Hazards Cited in the U.S. Capitol Building**

As the chart above shows, hazards other than electrical or fire safety hazards were also identified in the Capitol Building. These findings are discussed below.

Trip and fall hazards are created by the presence of unguarded obstructions in walkways or work areas and missing handrails and guardrails. Nine locations had walkways with power cords or telephone cords crossing them, buckled carpet, or protruding furniture that could cause people to trip. OSHA regulations require that walkways, particularly those used as routes of egress, remain clear and free from obstructions. The inspection team noted six locations where stairs did not have handrails or the guardrails were inadequate or lacking.

Storage shelving was found unsecured and capable of toppling over trapping or injuring an individual. As well, mechanical devices were identified lacking the proper machine guarding to prevent contact with motorized parts.

**F. Senate Jurisdiction**

Summary

The OGC inspection team conducted a comprehensive inspection of the Dirksen, Hart, and Russell Senate Office Buildings (SOBs), including their common areas, dining facilities, storage areas, mechanical spaces, workshops, Member and Committee offices, and Committee hearing rooms. Other inspected buildings within the Senate jurisdiction include the Senate Underground Garage, the Daniel Webster Senate Page Dormitory, the Senate Day Care Center, and spaces within Postal Square.

The Russell Senate Office Building was first occupied in 1909, making it the oldest Senate Office Building. This 661,000 square foot building contains suites for Senators and staff, committee staff office space and hearing rooms, offices for other Senate groups, a library, mechanical spaces and maintenance shops, and food services. Four different pedestrian tunnels extend from the Russell Building, two to the Dirksen Building, one to the Senate Underground Garage, and one housing the subway that leads to the Capitol Building.



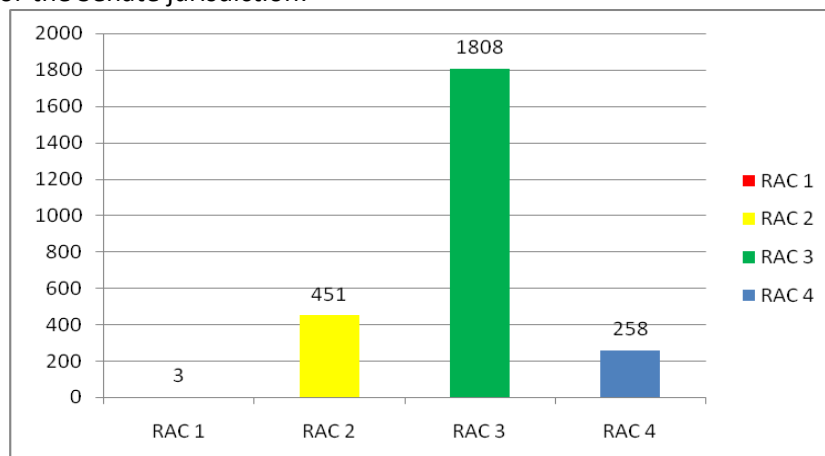
The Dirksen Senate Office Building, built in 1954, is approximately 730,000 square feet. It contains office suites for Senators and staff, Committee staff office space and hearing rooms, offices for other Senate groups, mechanical and electrical spaces, workshops, dining facilities, an auditorium, an underground parking garage, as well as recording, broadcast and other service facilities.

The Hart Senate Office Building, which adjoins the Dirksen Building, first occupied in 1982, contains over one million square feet of interior space. The Hart Building houses suites for Senators and staff offices for other Senate groups and public media, mechanical areas and workshops, three floors of underground garage space, service facilities, and other miscellaneous office spaces. On most floor levels, there are connecting corridors or stairs between the Hart and Dirksen buildings, making it possible to access both buildings within an enclosed environment.

The three Senate Office Buildings were inspected over a period of twelve months to accommodate the needs of the Members, Committees, and others. This biennial inspection was the first that evaluated all of the Member offices during a single session of Congress.

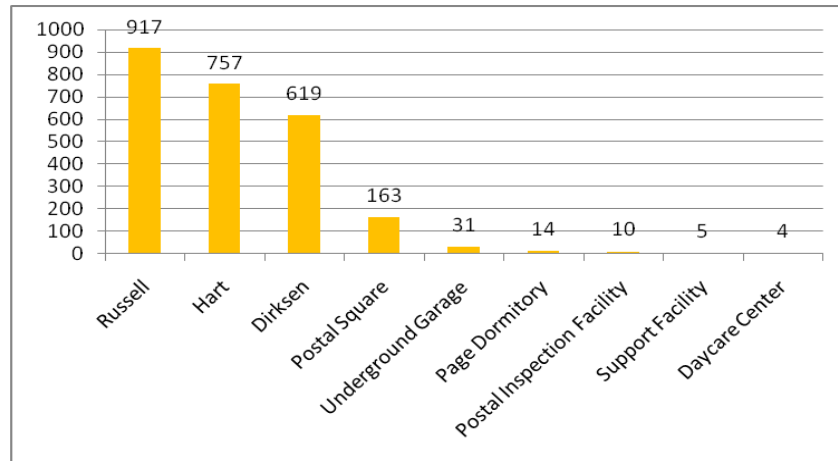
The OGC inspection team identified 2,520 findings during the inspection of the Senate facilities. Three findings were assigned a hazard rating of RAC 1, and 451 were rated as RAC 2. Of the 2,520 findings, 1,911 were electrical hazards, 519 were fire safety hazards; twenty-three related to slip, trip or fall hazards, fourteen involved machine guarding, and thirteen findings involved unstable or unsecured storage furniture. Other findings involved inadequate means of egress: the presence of products containing a regulated carcinogenic chemical, like methylene chloride without compliance with OSHA’s Methylene Chloride Standard and Hazard Communication Standard, and several confined spaces that were not posted with proper hazard signage. Fortunately, many electrical violations were corrected during the inspection or within 24-hours of discovery. As of August 1, 2007, 1,675 of the findings were reported to the OOC as having been abated; 845 (approximately 1/3 of the total findings) were not.<sup>33</sup>

The following two charts show the distribution of findings with their corresponding RAC levels and number of findings by building for the Senate jurisdiction:



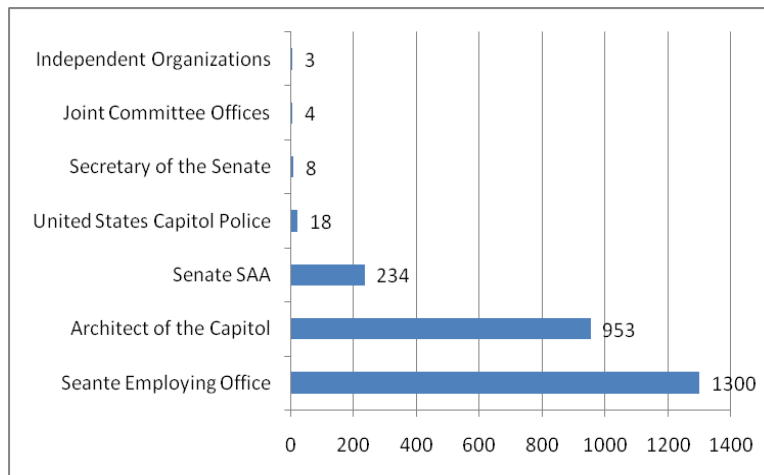
**Figure 11 Proportion of Senate Building Hazards by Risk Assessment Code**

<sup>33</sup> During the course of the inspections of the Senate jurisdiction, the AOC assigned an electrician to the inspection team to abate as many hazards during the inspection. This effort greatly decreased the number of open findings upon issuance of this Report. It also helps to explain why the Senate Employing Office’s abatement rate is higher than any other jurisdiction.



**Figure 12 Findings per Building in the Senate Jurisdiction**

Many offices occupy space within the Senate jurisdiction. Spaces are occupied by Members, Committees, the Senate Sergeant at Arms, the Secretary of the Senate, Senate Chief Counsel for Employment, the Architect of the Capitol, and the U.S. Capitol Police; all occupy significant amounts of space in several of these buildings. Senate Members, Committees, and the Senate Chief Counsel for Employment are listed under Senate Employing Office, and Joint Committees are those spaces occupied by the Senate and House Joint Committees in the Senate Office Buildings. The following chart shows the distribution of findings by organizations responsible for their abatement:



**Figure 13 Hazards in the Senate Jurisdiction by Responsible Office**

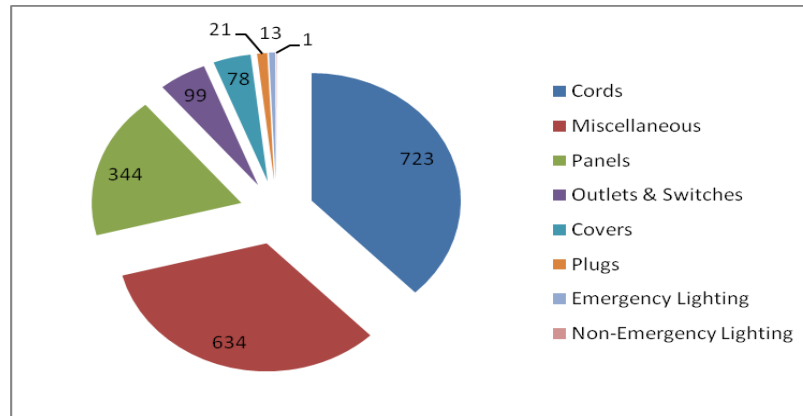
Electrical hazards

The most common electrical findings in the Senate jurisdiction consisted of:

- The use of temporary wiring as permanent wiring for more than the 90 day limit,
- Use of daisy-chained power cords and surge-protected power strips, and
- Blocked, unlabeled, and/or open dead fronts for electrical panels.

The following figure shows the distribution of the most common electrical hazard findings within the Senate jurisdiction:





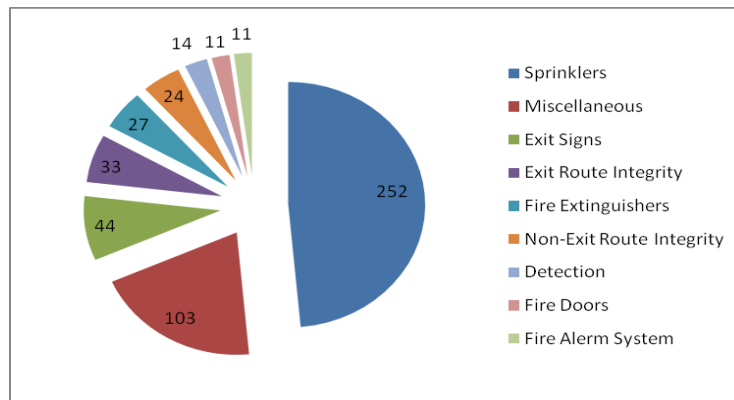
**Figure 14 Electrical Hazards Cited in the Senate Jurisdiction**

During the 109<sup>th</sup> inspection cycle, access to 159 electrical panels housing circuit breakers were obstructed. Impeding an electrician or fire or security professional’s access to a breaker in an emergency situation creates unnecessary delay in emergency response.

Electrical junction boxes and similar electrical system components where electrical wires are spliced together are required to have a firmly affixed cover. Seventy-seven were found with exposed energized wires that may provide an electrical shock or possible fire hazard. At least twenty-one electrical outlets had high ground impedance or reversed polarity, which may result in electrical shock or damage electrical appliances, possibly resulting in a fire.

Fire safety hazards

The following figure shows the distribution of the most common fire safety hazard findings in the Senate jurisdiction. The safety implications of these findings are summarized below:



**Figure 15 Fire Safety Hazards Cited in the Senate Jurisdiction**

Most of the storage closets in the Member and Committee offices had no fire sprinkler coverage. Many of those having coverage had sprinkler heads that were not suspended low enough below the ceiling tiles to properly disperse water, or stored materials were stacked too high, impeding the ability of the sprinkler to extinguish a fire. Storage must be kept at least 18 inches below the plane of the sprinkler heads to ensure proper water



dispersion. Areas lacking sprinkler systems with large quantities of combustibles pose a greater risk to employees.

A significant number of employees in Senate-occupied buildings use portable space heaters in the winter to provide comfort. Clearly, use of unapproved space heaters or improperly placing them too close to combustible materials presents a significant fire hazard. The inspection identified thirty-three space heaters that did not have tip switches or were not in proper working order.

The OGC inspection team identified thirty-two locations within the Senate buildings that lacked an exit sign where one was needed. In four instances, exit signs were present but lacked or had an incorrect directional marker. Two exit signs were found not to be properly illuminated at the time of the survey, and five exit routes lacked adequate lighting.

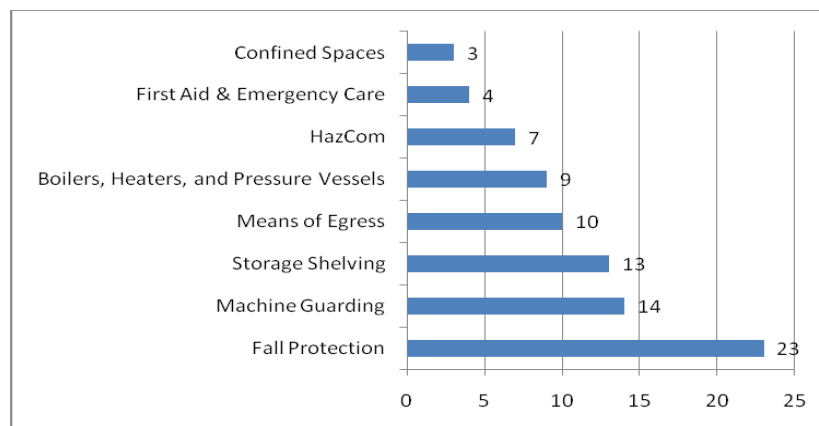
The integrity of rooms and stairwells constructed with fire resistant materials can be compromised by gaps around pipes and wires that penetrate walls and floors. The inspection identified seventeen locations having openings in fire barriers, other than those of exit stairwells. Fire codes require that fire resistant materials be used to close these gaps, keeping fire and smoke from readily spreading beyond the fire barriers.

The National Fire Code requires that portable fire extinguishers must be inspected monthly for damage and charge, and inspected yearly by a company certified to conduct inspections and repairs by the manufacturer. The inspection team found fourteen fire extinguishers to be beyond their monthly inspection date. Additionally, some units lacked tags, so frequencies of inspections of those units could not be verified.

The OOC issued a citation in 2000 addressing the very serious RAC-1 hazard of open unprotected exit stairways and exit routes from the upper floors in Senate buildings. This citation has not been abated.

### Miscellaneous safety hazards

The inspection team noted eighty-one findings that were neither electrical nor fire safety hazards. These findings are discussed below:



**Figure 16 Other Hazards Cited in the Senate Jurisdiction**

Observed fall hazards include hazardous conditions that result in trip hazards, as well as missing handrails and guardrails, and unguarded obstructions in the walkways. Fall hazards include wires strung across walkways,



loose carpeting, or protruding furniture within walkways that can cause employees to trip and fall. OSHA regulations require that walkways, particularly those used as routes of egress in an emergency, remain clear and free of obstructions. One of the most common fall hazards is present in the form of a trip hazard. Wires strung across walkways, loose carpeting, or other obstructions or abnormalities within walkways can cause persons to trip and fall. The inspection team noted as a repeat violation five separate stairways some with over twelve steps that were lacking handrails.

Machine guarding issues were predominately noted in the mechanical rooms and maintenance shops. Removal or damage to point-of-operation guards can be a very serious hazard that can lead to severe injuries, including amputation. Though older designs of straight-edge cutters often lack guards, the guards of some units in the Senate-occupied buildings have been removed or have fallen off without being replaced. OSHA regulations require the maintenance of the manufacturer's installed guards.

Unsecured shelving and cabinets can tip over and severely injure workers caught underneath or struck by objects falling from them. The OOC inspection team found fourteen occurrences of this type of hazard in the Senate jurisdiction.

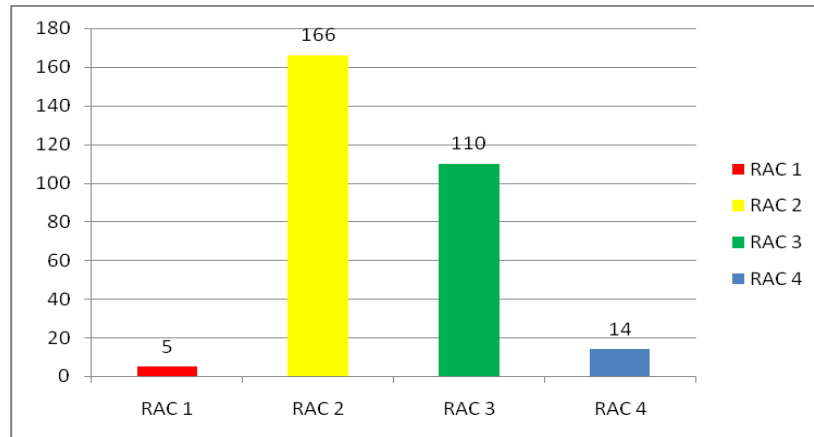
Unprepared entry into confined spaces can be fatal. Warning signs are one means of communicating the hazard. The inspection team noted three locations that lacked the proper warning signs of a permit confined space.

### ***G. The Capitol Power Plant***

#### ***Summary***

A comprehensive biennial inspection of the two-and-a-half miles of utility tunnels and approximately 80,000 square feet of the U.S. Capitol Power Plant buildings was conducted. These facilities provide steam for heating and chilled water for cooling of Capitol Hill buildings. The facility includes an administration building, the East and West Refrigeration Plants, a building housing boilers, scrubbers and smoke stacks, cooling towers, a coal yard, an ash collection and transfer building, and six utility tunnels.

The OGC's inspection team identified 295 hazards during the inspection. Five were rated as RAC 1 hazards, and 166 were rated as RAC 2 hazards. Of the 295 findings, eighty-two were electrical, seventy-two were confined space, forty-two were related to fire safety, and thirty-nine involved industrial hygiene hazards. The remaining sixty findings include boiler and pressure vessel hazards, improper machine guarding, fall protection hazards, health and chemical hazards associated with inadequate implementation of the site's Hazardous Communication Program. The following chart shows the distribution of findings by RAC level:



**Figure 17 Proportion of Hazards at the Capitol Power Plant and Utility Tunnels by Risk Assessment Code**

### Electrical hazards

The most common electrical findings in the Capitol Power Plant consisted of:

- Temporary wiring in use for greater than the ninety day limit.
- Daisy chains, the sequential addition of power strips to gain additional power outlets in office areas with limited access to electrical power.
- The failure to provide GFCI protected outlets or circuits when the outlet is located within six feet of a water source such as a sink or wash basin
- Electrical panel boards had incomplete or missing directories indicating the individual circuit breaker service; and
- Electrical junction boxes, a number of which were found to be without covers which exposes energized wires and may result in an electrical shock hazard.

A notice of Serious Deficiency Needing Prompt Attention was issued at the East Refrigeration Plant when an energized, electrical cabinet was found to be missing a cover panel, exposing energized wires. That condition created a RAC 1 hazard. The same hazard had also been identified and reported during the 108<sup>th</sup> Congress Inspection, but had not been corrected. Issuance of the notice resulted in its being corrected the same day as issuance of the notice.

### Confined space hazards

Hazards of particularly great concern to the OGC were found to exist within permit-required confined spaces of the facility and the utility tunnels. Hazards that have not been fully identified, characterized, and effectively controlled have high potential to dangerously expose authorized entrants to potentially life threatening injuries.

Observed hazards included heat stress from air temperatures exceeding 160° F and delaminated and spalling concrete fallen from tunnel ceilings and walls. Falling concrete also tore the protective coverings surrounding asbestos insulation on pipes, releasing asbestos fibers into the air and adding to tripping hazards created by debris on the floor. The fallen concrete exposed rusted reinforcement bars. The lack of adequate lighting in some tunnel areas, particularly in combination with the tripping hazards, increases the risk of an entrant being lacerated, punctured, or otherwise injured by the exposed “rebar.” Other hazards, including exposed, energized electrical components contribute to the risks to entrants.



These tunnels are regulated as permit-required confined spaces. Though the AOC has established a program for entry of permit-required confined spaces, at the time of the inspections the program had not been effectively implemented. For example, some tunnels were found to have segments from which entrants were unable to communicate with designated monitors outside the tunnels. Additionally, many manhole covers could no longer be readily opened. Locks on doors of entries to some buildings impeded or prevented exit. Therefore, it was found that in an emergency, entrants would have to travel over a thousand feet in order to escape or summon assistance, contrary to applicable OSHA standards.

### Fire safety hazards

The inspection team found at least eighteen fire extinguishers were not properly mounted or tagged, or both, increasing the likelihood of their not working when needed.

The OGC inspection team noted many locations lacked required exit signs. Some fire doors in the Capitol Power Plant failed to fully close or latch. This condition compromises the ability to protect evacuees during a fire emergency. Other doors that are not emergency exits were not properly labeled.

Some employees use space heaters for additional warmth in the office spaces. Many of these personal units do not have tip switches that turn off if the device is tipped over. Other heaters have tip switches that are damaged or inoperable. Missing or inoperable tip switches represent a significant fire hazard.

### Additional safety hazards

The OGC inspection team noted ninety-nine findings that did not fall under electrical, confined space, or fire safety hazards. These findings are discussed below:

- Of the 295 observed hazards, thirty-nine were industrial hygiene-related. Many of these included potential exposure to heat stress and airborne asbestos fibers in the Utility Tunnels. Known asbestos-containing material (ACM) in the tunnels has been disturbed and made friable, creating the potential for fibers to become airborne. Some of the pipe insulation is not labeled to indicate it contains asbestos. Active steam pipes in the utility tunnels create a hot environment that can adversely impact the health of employees entering the tunnels.<sup>34</sup>
- A notice of *Serious Deficiency Needing Prompt Attention* was issued when twenty-four aerosol cans of silicone spray containing the carcinogen, methylene chloride, were found in a storage area within the Boiler Building. No material safety data sheets (MSDS) were available for the product. This RAC 1 hazard was abated the day after the notice was issued when all cans of the product were removed from the site for disposal as hazardous waste.
- Multiple cylinders of compressed gases were found to be unsecured. A cylinder's valve is susceptible to damage if it falls over, risking leakage of the cylinder's contents. A cylinder of extremely flammable acetylene and a nearby cylinder of oxygen were both found to be unsecured in the West Refrigeration Plant. Propane cylinders and another oxygen cylinder were found to be unsecured while stored in the South Coal Yard. Another two cylinders of nitrogen gas were found to be unsecured while stored in the Boiler Building.

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<sup>34</sup> The hottest of the tunnels exceeded 160° F.



- Twenty violations were associated with boiler and pressure vessel conditions. They include lack of a needed program for conducting annual inspection and testing of the pressure release valves on boilers and steam lines. Additionally, some pressure gauges were missing their lens covers, making them vulnerable to damage and providing incorrect readings.
- Machine guarding issues were noted in seventeen locations.
- Fall hazards, in this instance, consisted of hazardous conditions that result from trip hazards, missing handrails and guardrails, and unguarded obstructions in walkways.

### Critical, unabated citation

The OGC issued a citation to the AOC for conditions in the utility tunnels in 2000. The General Counsel determined that workers could be struck by falling concrete, did not have adequate means of emergency egress, and had not provided adequate communication capability within these confined spaces. AOC, at the time of the initial inspections, did not comply with an entry permit system while working in the tunnels. Little progress was made to correct the conditions outlined in the citation. Subsequent inspections conducted by the OGC's inspectors verified that very serious hazards continued to exist that were exposing workers to imminent and dangerous conditions. Two additional citations were also issued in 2006 for exposure to asbestos and heat stress. As previously discussed (p.15) a comprehensive settlement agreement was reached between the AOC and the General Counsel that provides for complete abatement of the hazards in five years.

### H. Library of Congress Buildings

#### Summary

The inspection team conducted a comprehensive inspection of the Library of Congress (LOC) Buildings, including the James Madison Memorial Building, Thomas Jefferson Building, John Adams Building, the National Library for the Blind & Physically Handicapped, Landover Center Annex, Fort Meade Book Modules One and Two, and the LOC Day Care Center. The inspection included common areas, mechanical and electrical spaces, workshops, offices, laboratories, book processing areas, book stacks and reading rooms, network operations facilities, dining facilities, and a health suite.

- Madison Building built and occupied in 1981, 2,100,000 square feet of space, nine stories.
- Jefferson Building built in 1897, 636,000 square feet of space, five stories.
- Adams Building built in 1938, 985,000 square feet of space, eight stories.
- National Library for the Blind & Physically Handicapped is a privately owned, GSA-leased building. It includes 88,630 square feet of space, with three levels, plus some mechanical equipment and parking on its roof.
- Landover Center Annex, a privately owned, GSA-leased building. It includes 246,100 square feet of space enclosed within two stories.
- The LOC Day Care Center built in 1932, has 13,858 square feet of space. Only two floors of the building and the outside grounds were in use and evaluated by the inspection team.
- The Fort Meade Book Storage Modules One and Two were built in 2004-2005. Module One consists of 21,668 square feet and Module Two has 17,000 square feet. The Module One structure consists of three levels, containing offices and break facilities and mechanical equipment. Module Two is a contiguous addition to Module One.

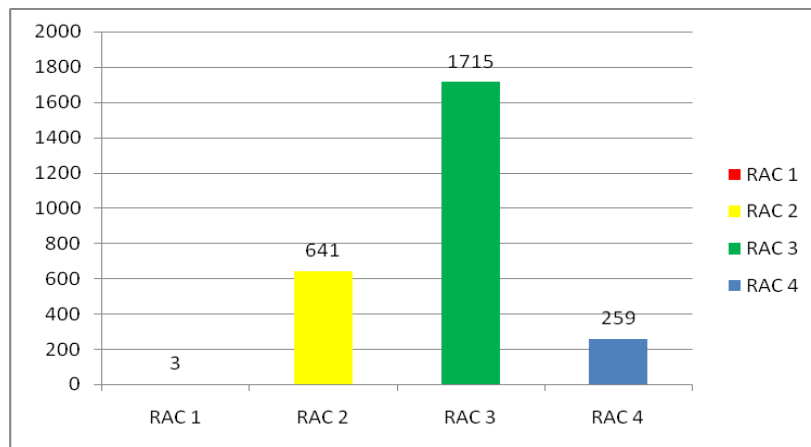




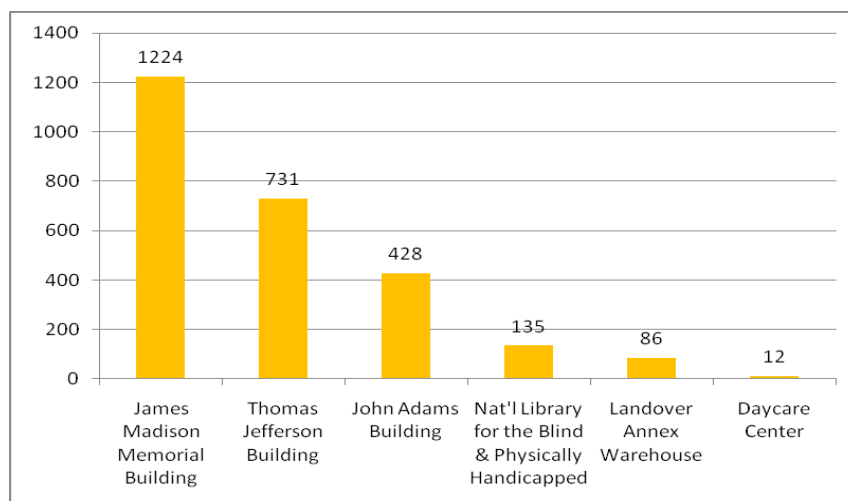
- LOC occupies four, one story warehouses, each encompassing approximately 9,000 square feet at Fort Meade. In general, these wooden buildings are in fair condition, and are not regularly occupied.

The inspection team identified 2,618 findings during inspection of the LOC facilities identified above. Three findings were ranked as RAC 1 hazards, and 641 were ranked as RAC 2 hazards. Of the 2,618 total findings, 1,498 involved electrical hazards, 825 were fire safety violations, sixty-five involved fall protection hazards, fifty-eight findings were related to unsecured storage shelving, and fifty were associated with improper machine guarding. Other findings include several permit-required confined spaces that were not posted with proper hazard signage and the presence of hazardous chemical products without compliance with chemical-specific standards and lacking proper hazard communication procedures. As of August 1, 2007, 1,239 of the findings were abated, leaving 1,379 findings open (unabated). Therefore, approximately 52.6% of the total violations were not abated as of that date.

The following two charts show the distribution of findings by RAC levels and number of findings per building within the LOC jurisdiction:



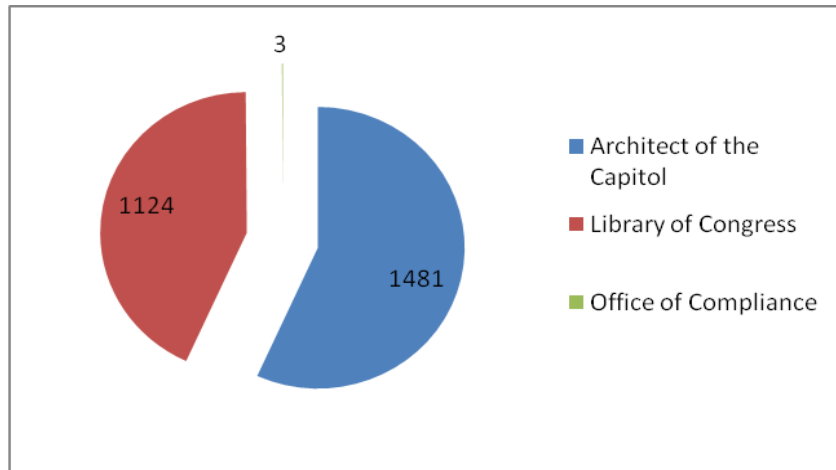
**Figure 18 Proportion of Hazards in the Library of Congress Jurisdiction by Risk Assessment Code**



**Figure 19 Hazards Cited per Building in the Library of Congress Jurisdiction**



Organizations other than the LOC occupy space within LOC buildings. The AOC has office areas and workshops and maintains the mechanical and electrical systems of most of the buildings; GSA contractors maintain the Landover Annex and National Library for the Blind & Physically Handicapped. The OOC occupies office space in the Adams Building, and the House Page School is in one of the LOC buildings. A House committee also occupied space in the Adams Building during the 109<sup>th</sup> Congress. The following chart shows the distribution of findings by organizations responsible for their abatement:



**Figure 20 Hazards Cited in the Library of Congress Jurisdiction by Responsible Office**

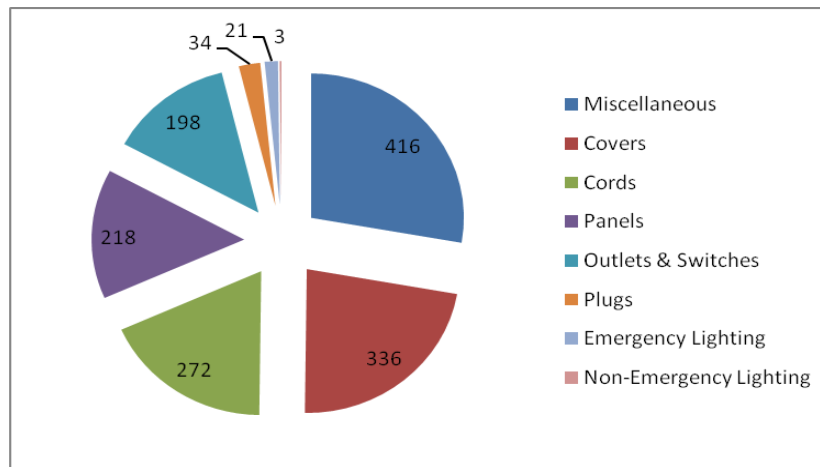
### Electrical hazards

The most common electrical findings in the LOC jurisdiction consisted of:

- The use of daisy chained power cords and surge-protected power strips.
- Temporary wiring used for more than ninety days. Extension cords, even those rated for commercial use, may only serve as a temporary solution; and
- Failure to provide GFCI protected outlets or circuits when the outlet is located within six feet of a water source such as a sink or wash basin. Most of these electrical findings were assigned RAC 2 or RAC 3 hazard ratings.

Outlets were found to have reversed polarity in thirty-two separate locations. Fourteen outlets were not grounded; twenty-five had a false ground; and ninety-nine outlets or switches were either broken or had loose cover places.

The following chart shows the distribution of the most common electrical hazard findings within the LOC jurisdiction:

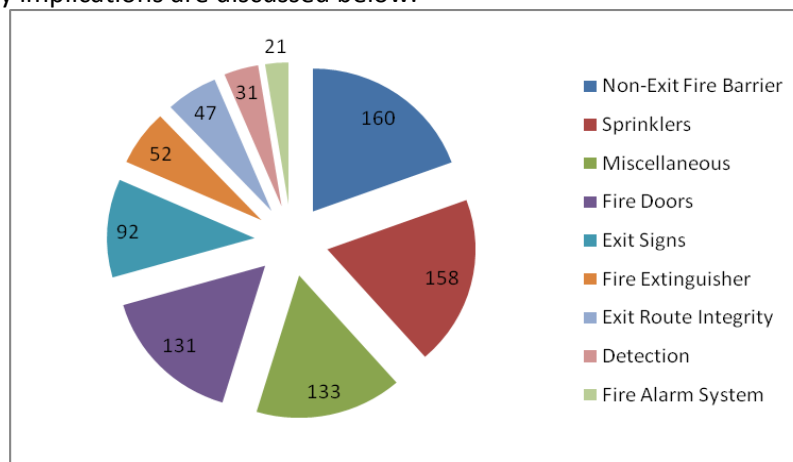


**Figure 21 Electrical Hazards Cited in the Library of Congress Jurisdiction**

In over fifty-three instances, access to electrical panels housing circuit breakers was obstructed. Additionally, 144 electrical panels were found not to have a directory or were not otherwise labeled to indicate which circuit or piece of machinery is shut off by which breaker.

#### Fire safety hazards

The following chart shows the distribution of the most common fire safety hazard findings in the LOC jurisdiction. The safety implications are discussed below:



**Figure 22 Fire Safety Hazards Cited in the Library of Congress Jurisdiction**

The inspection team noted at least thirty locations where high storage of materials either blocked some of the potential water distribution from the sprinkler heads, or was stacked above the sprinkler heads, severely impeding their ability to extinguish fires. Storage must be kept at least 18 inches below the place of the sprinkler heads to ensure proper water dispersion. Seventeen sprinkler heads in the Jefferson Building were damaged or improperly installed. Attempting to store materials near a sprinkler head can result in the accidental damage of the sprinkler head, preventing it from functioning as intended.

The integrity of rooms and stairwells constructed with fire resistant materials can be compromised by gaps around pipes and wires that penetrate walls and floors. Unsealed fire barrier penetrations were found in



approximately 170 locations, including ten critical segments of evacuation routes, such as stairwells within the Jefferson Building. Fire resistant materials should be used to close these gaps, keeping fire and smoke from readily spreading beyond the fire barriers.

A significant number of occupants of LOC buildings were found to use space heaters. Fifty units, none of which had an LOC required permit, were found to lack a “tip switch” mechanism. Thirty-four of these violations occurred in the Madison Building, suggesting a need for better environmental control in some building areas.

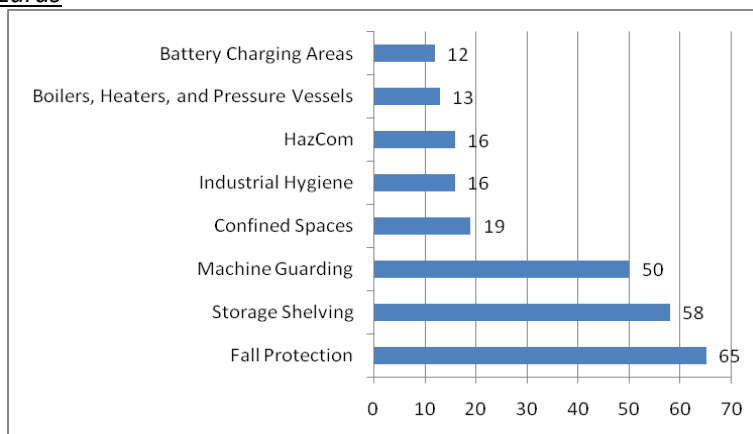
Half of the 230 violations involving fire doors observed during the 109<sup>th</sup> inspection occurred in LOC buildings. Most of these involved fire doors that failed to fully close or latch. Some paired fire doors were found to have a gap wider than 1/8 inch between them when they are closed contrary code requirements. Other doors were either not rated as fire doors, or were rated for too short a time period to qualify as proper fire doors. Each of these conditions compromises the ability of the fire doors to protect evacuees during a fire emergency.

The inspection team identified fifty-eight locations within LOC buildings that lacked an exit sign where one was needed. In eleven instances, exit signs existed but were lacking or had an incorrect directional marker. Fifteen exit signs had burned out bulbs at the time of the survey, limiting their ability to be seen in an emergency where smoke could impair vision.

The inspection team found nineteen fire extinguishers to be beyond their monthly inspection dates and that twenty-nine extinguishers were blocked and inaccessible for use. Fire extinguishers that are not checked on a regularly scheduled basis may lose their charge and may not work as intended in an emergency situation.

The OGC has issued several citations addressing the serious RAC 1 hazards of open unprotected exit stairways and exit routes from the upper floors in LOC buildings. These citations were issued to responsible employing offices in 2001 and have not been abated. It is well known that most fire related fatalities occur as a result of smoke and gas inhalation. Open exit stairways create a chimney effect that conveys smoke and gas to higher floor levels.

### Miscellaneous safety hazards



**Figure 23 Miscellaneous Hazards Cited in the Library of Congress Jurisdiction**

Electrical and fire safety hazards were the most common types of hazards found in the 109<sup>th</sup> Congress Biennial Inspection of the Library of Congress facilities. The chart above identifies the eight most common other types of



hazards other than electrical and fire safety in LOC facilities. Though these are less common they are no less hazardous or of less concern to the OGC.

Observed fall hazards include hazardous conditions that result in trip hazards, as well as missing handrails and guardrails, and unguarded obstructions in the walkways. Fall hazards include wires strung across walkways, loose carpeting, or protruding furniture within walkways. OSHA regulations require that walkways, particular those used as routes of egress in an emergency, remain clear and free of obstructions.

Unsecured shelving and cabinets can tip over and severely injure workers caught underneath or struck by objects falling from them. The inspection team noted fifty-eight instances where unstable shelving was not properly secured. Machine guarding issues were also noted in the LOC buildings. Finally, the inspection team noted nineteen permit entry confined spaces that were not properly marked at the time of the inspections.

### *I. House Office Buildings and Facilities under Control of the House of Representatives*

#### Summary

The inspection team conducted a comprehensive inspection of the House Office Buildings: Rayburn, Longworth, Cannon, and Ford House Office Buildings (HOBs), including their common areas, dining facilities, Member and Committee offices, Committee hearing rooms, a day care center, mechanical areas, and offices and workshops occupied by the AOC and House CAO. Other inspected buildings within the House jurisdiction include the East and West Underground Garages, the House Page Dormitory, and the E Street Garage.

- The Rayburn House Office Building, first occupied in 1965, is a 2.4 million square feet building, including the one million square feet of underground garage space. The building consists of suites for the House Members and staff, House Committee hearing rooms and staff office space, offices for other House groups, a health unit, mechanical spaces and maintenance shops, and dining facilities. The Rayburn HOB was the site of the greatest number of findings of all legislative branch facilities in the biennial inspection conducted for the 109<sup>th</sup> Congress.
- The Longworth House Office Building, constructed in 1933, is a 642,000 square feet building. It consists of suites for the House Members and staff, House Committee hearing rooms and staff office space, offices for other House groups, the Credit Union, Post Office, mechanical spaces and maintenance shops, a cafeteria, and several other spaces including pedestrian tunnels joining it to the Cannon and Rayburn House Office Buildings. The US Capitol Police also maintains a precinct office here. The Longworth had the second highest number of findings of all inspected facilities.
- The Cannon House Office Building is an 800,000 square feet building constructed in 1906, making it the oldest House office Building. The building consists of suites for the House Members and staff, Committee staff office space and hearing rooms, offices for other House groups, a health unit, dining facilities, and pedestrian tunnels to the Capitol Building, the Longworth House Office Building, and the Madison Library of Congress Building. The Cannon Building had the third highest number of findings of all inspected facilities.
- The Ford House Office Building is a 585,000 square feet building. Though its construction began in 1939, it was not occupied by the legislative branch until 1975. It mainly consists of office spaces, conference rooms, a child care center, a health unit, dining facilities, mechanical spaces, and an underground parking garage.



- The West Underground Garage is a 288,000 square foot building, adjacent to the Rayburn and Longworth House Office Buildings. It contains parking and storage areas, AOC and House CAO workshops and offices, and mechanical spaces.
- The East Underground Garage is a 288,000 square foot building, contiguous to the West Underground Garage. It also contains parking and storage areas, and mechanical spaces.
- The E Street Garage, occupied solely by the AOC Grounds Division, is supported by the AOC's House jurisdiction, which is responsible for providing building repair and maintenance service not otherwise provided by the AOC grounds crews. This building, renovated since the 108<sup>th</sup> Congress inspection, provides 5,000 square feet of space. It contains a workshop, some storage areas, a few offices associated with its operations and a refueling station near the east side of the building.

The inspection team identified 6,181 findings during its inspection of these House of Representatives facilities. Nine of these findings were ranked as RAC 1, and 1,036 were ranked as RAC 2. Of the 6,181 findings, 4,944 involved electrical hazards, 991 involved fire safety hazards, sixty-five involved inadequate fall protection, forty-four findings involved unsecured storage shelving, and forty involved machine guarding. Other findings include inadequate means of egress, the presence of products containing a regulated carcinogenic chemical, specifically methylene chloride without complying with the Methylene Chloride Standard and Hazard Communication Standard, and several permit entry confined spaces that were not posted with proper hazard signage. As of August 1, 2007, 3,183 of the findings were abated, with 2,998 findings (approximately 48.5% of the total) not reported as being abated.

The following figures show the distribution of findings with their corresponding RAC levels and the number of findings by building within the House jurisdiction:

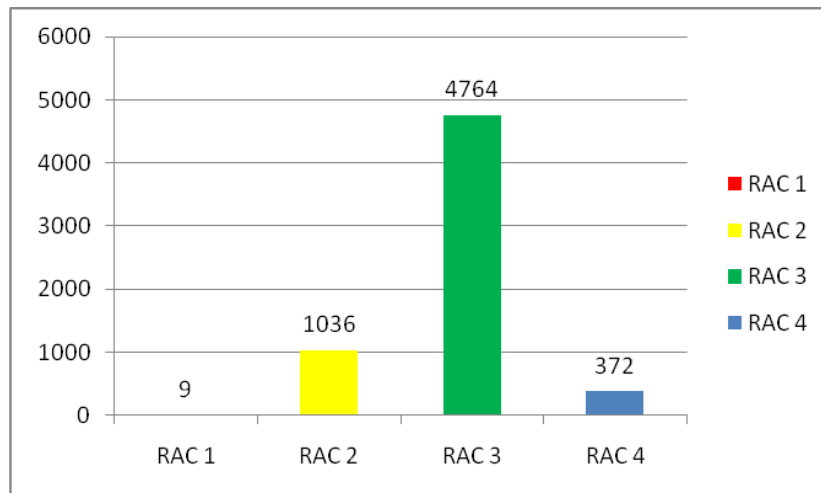
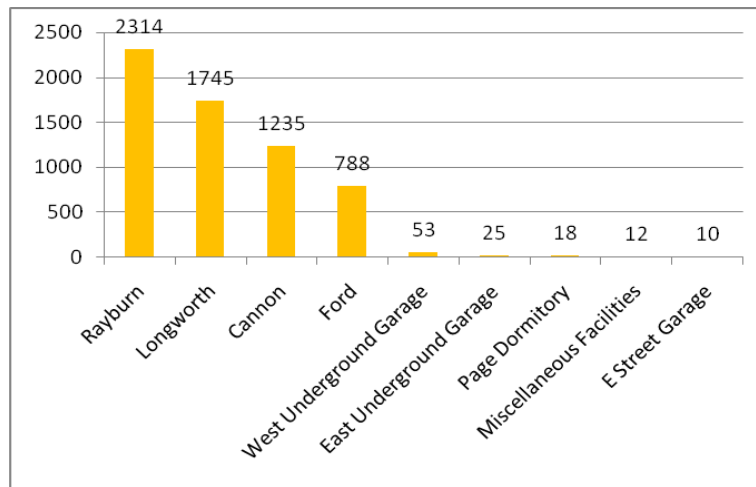


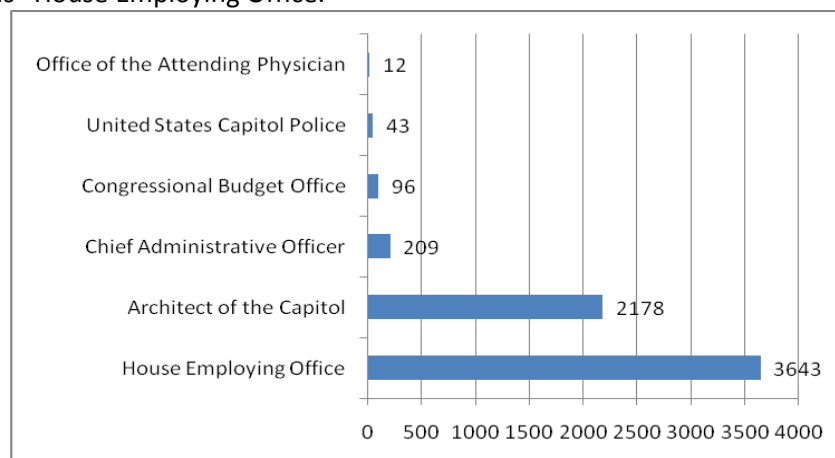
Figure 24 Proportion of Hazards in the House Jurisdiction by Risk Assessment Code





**Figure 25 Hazards Cited per Building in the House Jurisdiction**

Many offices occupy space within the House Office Buildings including Members, Committees, the Office of the Clerk, the Office of the Inspector General, the House Sergeant at Arms, the Office of Legislative Counsel, the Office of Law Revision Counsel, Leadership offices, the Office of the Chief Administrative Officer, and the Architect of the Capitol. For purposes of responding to the OOC’s safety and health investigation findings, the Office of House Employment Counsel (OHEC) represents a large number, but not all, of the House employing offices, and receives and responds to the OOC’s inspection findings on their behalf. Accordingly, the offices represented by OHEC, namely the Members, Committees, House Leadership, the Clerk, the House Sergeant at Arms, the General Counsel, the Law Revision Counsel, and the Legislative Counsel, are collectively referred to in the following chart as “House Employing Office.”



**Figure 26 Hazards Cited in the House Jurisdiction by Responsible Office**

Electrical hazards

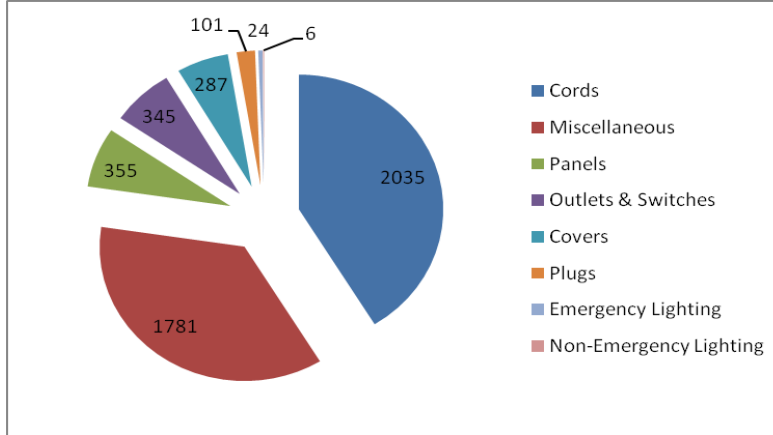
The most common electrical violations in the House buildings consisted of:

- Use of daisy chained power cords;
- Temporary wiring in use for more than 90 days; and



- Failure to provide GFCI protected outlets or circuits when the outlet is located within six feet of a water source such as a sink or wash basin. Most of these electrical findings were assigned RAC 2 or RAC 3 hazard ratings.

The following figure shows the distribution of the most common electrical violations within the House facilities:



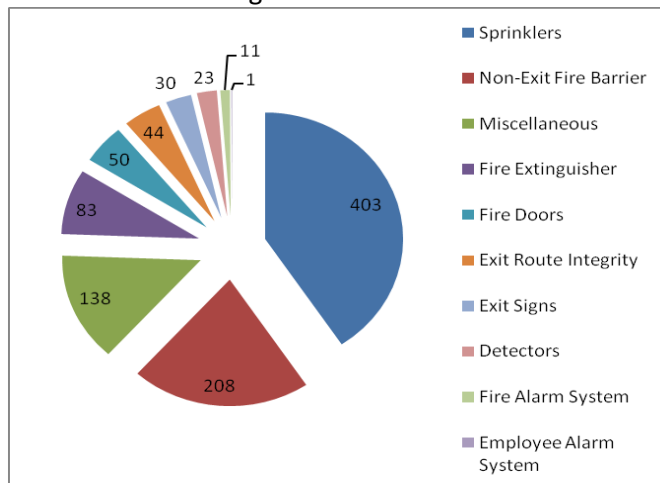
**Figure 27 Electrical Hazards Cited in the House Jurisdiction**

In over 300 instances, access to electrical panels housing circuit breakers were obstructed impeding an electrician or fire or security professional’s access to a breaker in an emergency situation creates unnecessary delay in emergency response. Additionally, many of the electrical fuse panels did not have a directory or were not otherwise labeled to indicate which circuit or piece of machinery were shut off by which breaker. The absence of complete labeling can increase response time in an emergency situation.

Many electrical junction boxes were found to lack covers, exposing energized wires that could provide an electrical shock or possible fire hazard. Several electrical outlets had high ground impedance or reversed polarity, which could result in electrical shock or damage electrical appliances, possibly resulting in a fire.

Fire safety hazards

The following figure shows the distribution of the most common fire safety hazard findings in the House buildings. The safety implications of these findings are summarized below:



**Figure 28 Fire Safety Hazards Cited in the House Jurisdiction**



Deficiencies involving sprinkler systems were the most common fire safety hazard. The inspection team noted at least 160 locations where high storage of materials either blocked water distribution from the sprinkler heads, or were stacked above the sprinkler heads, thereby impeding their ability to extinguish fires. Storage must be kept at least eighteen inches below the plane of the sprinkler heads to ensure proper water dispersion.

The inspection identified 208 locations having openings in fire barriers, other than those of exit stairwells. Gaps most often occurred when additional power, telecommunications, and fire and security cables or plumbing are added, resulting in penetration of fire walls.

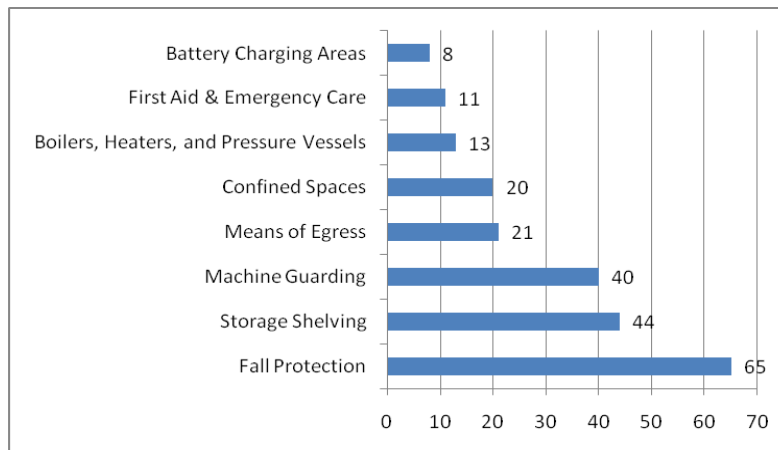
A significant number of employees in House-occupied buildings use portable space heaters. The inspection identified seventy-seven space heaters that did not have tip switches or were not in proper working order. The responsible offices in the House of Representatives are making considerable efforts to assure that any space heaters in use in any offices have "tip-over" switches and are approved for use in the office.

The National Fire Code requires that portable fire extinguishers must be inspected monthly for damage and charge, and inspected yearly by a company certified to conduct inspections and repairs by the manufacturer. The inspection team found fifty-eight fire extinguishers to be beyond their monthly inspection date. Fire extinguishers that are not checked on a regularly scheduled basis may lose their charge and may not work as intended in an emergency situation.

The inspection team identified seventeen locations within the House jurisdiction that lacked an exit sign where one was needed. In three instances, exit signs were present but lacked or had incorrect directional markers. Four exit routes were found to lack adequate emergency lighting during the survey, either due to the failure to install proper emergency lighting or failure to maintain charged back-up batteries or functional light bulbs.

The OGC has issued several citations in 2000 addressing the very serious RAC 1 hazards of open unprotected exit stairways and exit routes from the upper floors in House buildings. They remain unabated. It is well known that most fire related fatalities occur because of smoke and toxic gas inhalation by the victims. Such open exit stairways provide a readymade chimney to convey these products of combustion from a smokey or self-sustaining fire to the higher floor levels in the building and have the potential to prevent employees on these levels from safely evacuating the building during a serious fire event.

#### *Miscellaneous safety hazards*



**Figure 29 Miscellaneous Hazards Cited in the House Jurisdiction**

Most frequent fall protection hazards found (forty-five) were wires strung across walkways, loose carpeting, or protruding furniture within walkways, or other items within a walking path that can cause employees to trip and fall. OSHA regulations require that walkways, particularly those used as routes of egress in an emergency, remain clear and free of obstructions. In addition, the OOC inspection team identified open side platforms with greater than a four foot drop and floor holes that could cause a person to trip and fall. Also, deficient ladders were identified that could break and cause someone to fall from an elevated position.

OSHA regulations require that storage shelving either be attached to a wall or be bolted together in a manner that provides stability, preventing it from tipping over. The inspection team noted forty-four instances where unstable shelving was not properly secured. Of that total, twenty-three are in the Rayburn House Office Building. Machine guarding issues were also noted in the House Office Buildings.

In a few of the buildings, the inspection team noted that seventeen egress routes within offices had a width of less than 36 inches. This can impede the ability of a physically disabled person in a wheelchair or a crowd of people from being able to promptly vacate the building during an emergency. The inspection team also found two instances in which exit routes were not properly marked or labeled. The House Employing Offices have represented that they are making abatement efforts which the OOC will verify during the 110<sup>th</sup> Congress.

The inspection team noted nineteen permit entry confined spaces that were not properly marked at the time of the inspections. AOC is actively working on identifying and labeling all confined spaces and has made great progress in some of the House buildings since the biennial inspection conducted for the 108<sup>th</sup> Congress.

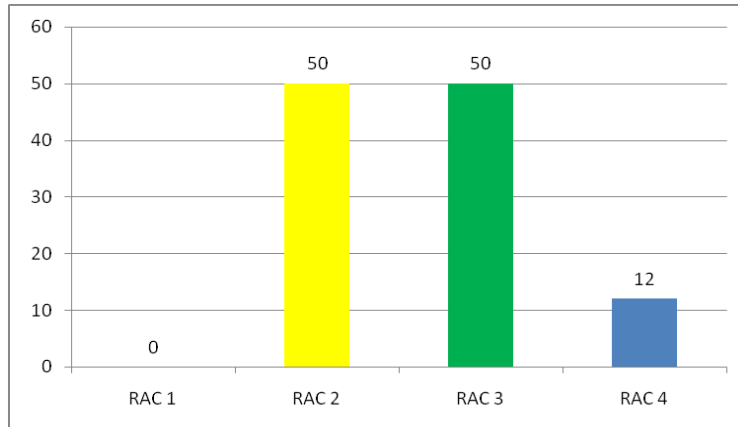
## ***J. U.S. Capitol Police Facilities***

### ***Summary***

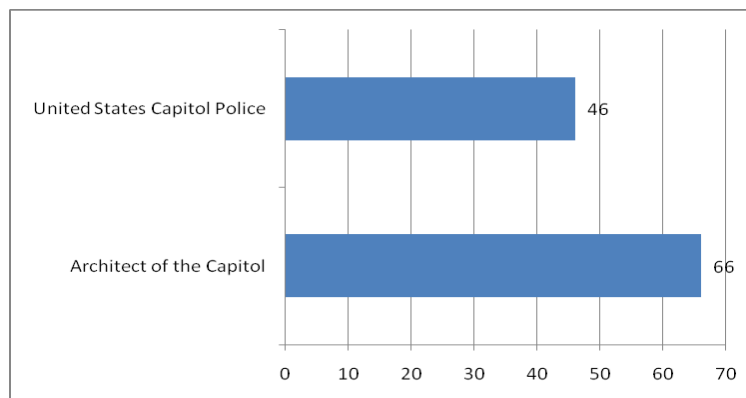
The OGC inspection team conducted a comprehensive inspection of the U.S. Capitol Police (USCP) facilities, including common areas, mechanical areas, offices, locker and break rooms, and training and exercise areas. The buildings that fall under the USCP Jurisdiction include the USCP Headquarters (Eney, Chestnut, Gibson Memorial Building), Fairchild Building, K Street Garage, Truck Inspection Facility, Canine Facility, and the Federal Law Enforcement Training Center operated by the Department of Homeland Security in Cheltenham, Maryland. Of the 112 findings at the USCP facilities, no RAC 1 hazards were observed. The organizations responsible for



taking appropriate actions to protect employees from exposure to hazards are the AOC and USCP. This also includes the security posts throughout Capitol Hill. The distribution of findings by RAC and by organization for the USCP occupied buildings are shown below:

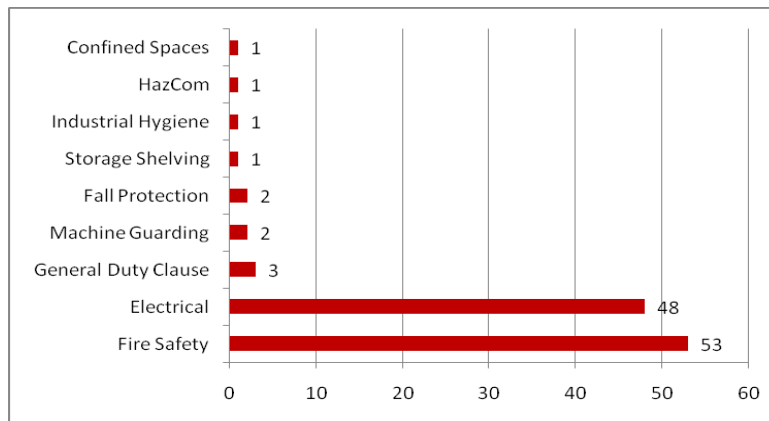


**Figure 30 Proportion of Hazards in the USCP Jurisdiction by Risk Assessment Code**



**Figure 31 Hazards Cited in the USCP Jurisdiction by Responsible Office**

The most common findings in the USCP occupied facilities were fire safety or electrical issues. The other findings included General Duty clause findings (discussed below), slip, trip, and fall hazards, unsecured storage shelving, products containing methylene chloride (a regulated carcinogenic chemical) without compliance with OSHA’s Methylene Chloride Standard and Hazard Communication Standard and several confined spaces that were not posted with proper hazard signage. Many of the findings were abated within 24-hours of the inspection. As of August 1, 2007, ninety-one of the 112 findings (81.3% of the total findings) in the USCP-occupied buildings were reported as abated. The distributions of findings are show and discussed below:



**Figure 32 Types of Hazards Cited in the USCP Jurisdiction**

### Eney, Chestnut, Gibson Memorial Building

The seven story Eney, Chestnut, Gibson Memorial Building provides over 85,000 square feet of space and serves as the USCP headquarters. The building was under significant renovation during the 109<sup>th</sup> inspection. This biennial inspection revealed forty-one findings, of which sixteen were assigned RAC 2 values. Half of the RAC 2 findings directly related to fire safety issues, including three unsealed penetrations of critical fire barriers and four non-compliant fire doors. Additionally, five of the RAC 2 findings involved exposed, energized wires, typically within junction boxes lacking cover plates. Of the forty-one total findings observed at this site, twenty-four are reported as having been abated.

### Fairchild Building

The USCP occupies a total of 115,000 square feet of space on five of the eight floors in the privately owned Fairchild Building. The inspection was conducted soon after completion of building renovations. This biennial inspection revealed thirty-nine findings, of which sixteen were assigned RAC 2 values. Nine of the RAC 2 findings were directly related to fire safety issues: five for the lack of visual alerting devices in restrooms and four for non-compliant fire doors at exit stairways. Of the thirty-nine total findings observed at this site, eight are reported as having been abated.

### DC Village

The USCP's Off-Site Delivery Truck Screening Facility, Canine Kennels and Training Facility, and Hazardous Materials Storage Facilities located in DC Village, encompass approximately 6,000 square feet. The Off-Site Delivery Screening Facility was first occupied approximately one month prior to the inspection.

This biennial inspection revealed eleven findings, of which four were assigned RAC 2 values in the Off-Site Delivery Truck Screening Facility. Three of the RAC 2 findings involved finding of the General Duty Clause of the OSH Act, due to the presence of recognized hazards capable of causing death or serious physical harm to employees. In one of these instances, employees were exposed to a risk of being injured or killed by trucks due to lack of a standard operating procedure to protect those who go beneath trucks to inspect them. In the second instance, employees were at risk of being struck and injured by lowering bay doors that lacked a sensor to detect employees or objects in the plane below them, and an interlock system that would stop the doors from closing when an object was sensed below the doors. In the third instance, employees were exposed to a



risk of electrocution if mobile flood lights were to be raised in close proximity or contact with overhead power lines. The fourth RAC 2 finding was an electrocution risk created by the absence of GFCI protection for electrical outlets in a booth prone to having a wet floor during inclement weather. None of the eleven findings observed at this site are reported as having been abated.

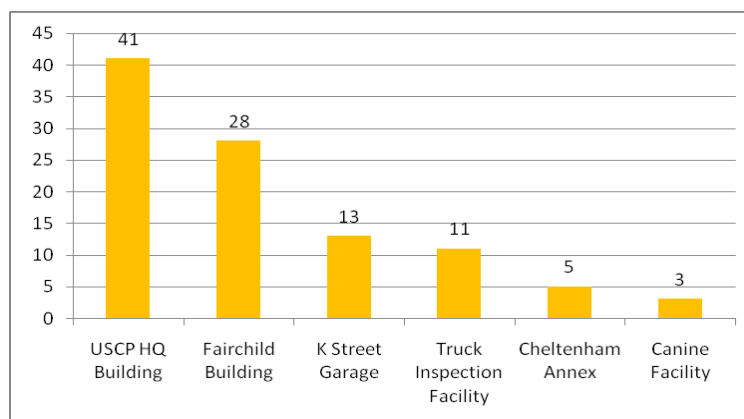
The Canine and Hazardous Materials Facilities include dog kennels, storage trailers, an administrative building, and hazardous materials storage facilities (magazines). The kennel's administrative building and the Hazardous Materials Storage Facility were refurbished in 2003-2004. All three of the findings in these areas were assigned RAC 2 values. One, at an ordinance storage magazine, involved an inadequately installed electrical bonding system, potentially enabling an electrical charge differential to develop, possibly resulting in a spark. Another involved a trailer's emergency light that failed to light when tested. All three of the findings observed at this site are reported as having been abated.

### K Street Garage

The USCP's Vehicle Maintenance Garage and the Hazardous Devices Unit Facility is 24,000 square feet. This biennial inspection revealed thirteen findings, of which seven were assigned RAC 2 hazard level: one, for which a Serious Deficiency Needing Prompt Attention was issued, involved the presence of an aerosol can of a spray gasket product containing methylene chloride, without documentation of programs to ensure compliance with OSHA's specific Methylene Chloride Standard or training required under the Hazard Communications standard. The product was removed from site by the USCP during the inspection, and it was subsequently disposed of as hazardous waste. Two other RAC 2 findings involved electrical panels that exposed energized wires. Other RAC 2 findings at this site involved damaged power cords or plugs. Of the thirteen total findings observed at this site, eleven were reported as having been abated.

### Federal Law Enforcement Training Center at Cheltenham Maryland

The USCP leases a training building and firing range space at a Federal Law Enforcement Training Center in Cheltenham, Maryland. This biennial inspection included the training building, but not the firing ranges; however, a limited inspection of the firing range was conducted as part of a subsequently filed Requestor-Initiated Inspection. Of the five findings recorded at this site, three involved the lack of sprinkler coverage. All of the findings were either a RAC 3 or RAC 4 hazard.



**Figure 33 Hazards Cited per Building in the USCP Jurisdiction**





In addition to the 112 findings at the sites described above, approximately 150 others were found in and around Senate, House, U.S. Capitol Buildings, at which the USCP has assets, but in which the USCP is not a primary occupant. Most are security posts, though some are offices, break, locker, and equipment rooms. Approximately 150 findings were identified in those spaces. Of them, none were RAC 1 hazards; however, twenty-six were RAC 2 hazards. Of the approximate 150 findings at security posts and other limited USCP presences, approximately 30% are reported as having been abated. Like the USCP occupied facilities, AOC and USCP are responsible for abating these findings. These additional findings are highlighted below; detailed findings are discussed in the jurisdictional reports in which they were actually found.

### *U.S. Capitol Building*

Twenty-five findings were recorded at USCP sites associated within the U.S. Capitol Building; two were assigned a RAC 2 hazard rating. One of the RAC 2 hazards involved exposed energized wires near frequently used computers in a break room.

### *Senate Office Buildings*

There were forty-three findings recorded at USCP sites in the Russell Senate Office Building, thirteen were assigned a RAC 2 value. Only one of the RAC 2 findings was reported as having been abated. The total findings in the Russell Building included six instances involving exposure to energized components and six instances involving fire-related findings. Two rooms occupied by the USCP lacked fire sprinkler coverage, and ten were missing suspended ceiling tiles, potentially delaying activation of smoke or heat detection devices in those areas. Four of the RAC 2 findings involved a lack of safe emergency egress. In addition, three areas experience water intrusion during wet weather, creating slip hazards in egress routes and other areas of travel. Water intrusion also increases the risk of electrocution. Four electric panels were found to lack a properly labeled directory.

Five findings were recorded at the Dirksen Senate Office Building. One electrical hazard was assigned a RAC 2 value where an electrical outlet within six feet of a sink that lacked GFCI protection. Eight findings were recorded in the Hart Senate Office Building, three of which involved the use of damaged space heaters. Security posts in other Senate and House facilities were also found to be using defective or otherwise inadequate space heaters.

### *House Office Buildings*

Twenty-seven findings were recorded at USCP sites associated with the Rayburn House Office Building; five were assigned a RAC 2 value. All five findings involved exposed, energized wiring. Twenty-two findings were recorded at USCP sites within the Longworth House Office Building; three involved electrical hazards which were assigned a RAC 2 value. Twelve findings were recorded at USCP sites associated with the Cannon House Office Building: two involved exposed, energized wires which were assigned a RAC 2 value. Two findings were recorded at USCP sites within the Ford House Office Building. These findings were assigned either a RAC 3 or RAC 4 value.

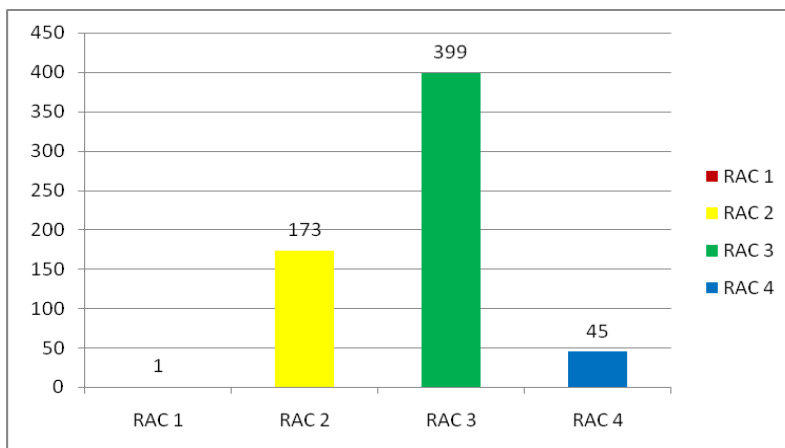
### *Library of Congress Buildings*

The LOC remains responsible for all LOC Police assets in its three main buildings on Capitol Hill. Although some LOC areas may have hazards to which USCP personnel are exposed, they are not discussed in this section.

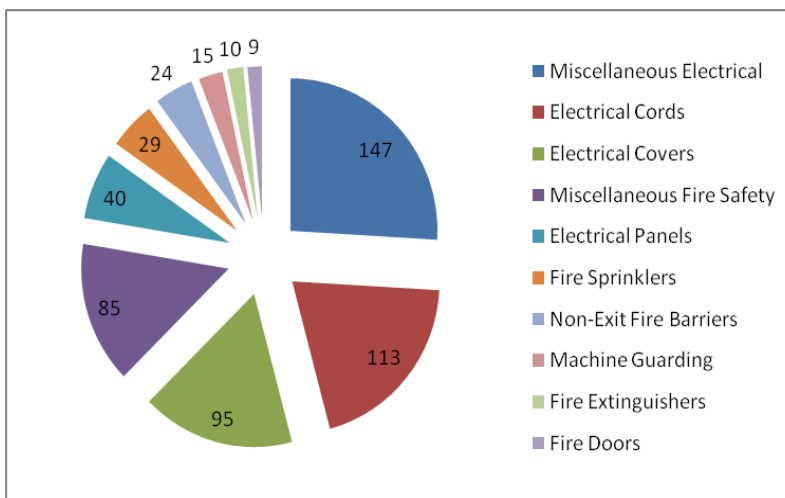


### K. The Government Accountability Office (GAO)

The OOC has fully inspected the GAO in both the 108<sup>th</sup> and 109<sup>th</sup> Congress. The OOC has worked closely with the GAO in order to abate hazards in a timely manner and upon request from the OOC, the GAO reported that its abatement rate would exceed 95% by the end of 2007. The GAO is the sole responsible office in the building, though it does receive limited support and services from the executive branch. The OOC identified 618 hazards in the GAO buildings. The charts below express the distribution of RACs in the GAO building and the most common types of hazards identified.



**Figure 34 Distribution of RACs in the GAO Building**



**Figure 35 Common Types of Hazards Identified in the GAO Building**

The chart above expresses 567 of the 618 hazards identified in the building. The distribution of findings are very similar to the other legislative branch jurisdictions in that general electrical hazards are the most common hazards identified. The use of non-permanent cords in lieu of permanent wiring, daisy chains, and unapproved portable space heaters were all common findings in the GAO building.

### V. Requester-Initiated Inspections



## Introduction

Section 215(c) of the CAA allows covered employees, employing offices, and bargaining unit representatives of covered employees to file Requests for Inspection (Requests) alleging violations of the Occupational Safety and Health Act. 2 U.S.C. §1341(c). The OGC investigates these allegations and determines an appropriate abatement or other corrective action. In cases where no hazard is determined to exist, the OGC may nevertheless recommend changes in practice or procedure.

Requests are often filed by employees most familiar with, and exposed to, unsafe and unhealthy conditions in the legislative branch. Therefore, many of the citations issued by the OGC arose from such requests. The formal complaint filed by the General Counsel regarding hazards within the Capitol Power Plant Utility Tunnels initially arose from such a request. See Findings Section of the Capitol Power Plant for more information.

A total of twenty-five Requests for Inspection were filed during 2005 and 2006. As of December 2006, the following actions occurred:

- 9 resolved - abated, corrective action undertaken, or no violation identified
- 4 Citations issued
- 8 corrective action reported - awaiting verification
- 4 unabated.

The following discussion summarizes Requests that either raise the significant issues or are recurring violations observed during investigation of previously-filed Requests.

Topic and Number of Relevant Requests	Number of Requests Filed	Location
<b>Asbestos (6)</b>	1	LOC
	1	CPP Tunnel Shop
	3	USCP
	1	LOC
<b>Emergency Evacuation (4)</b>	4	LOC
<b>Indoor Air Quality (6)</b>	1	Russell SOB
	1	Ford HOB
	1	C Street Garage
	1	Rayburn HOB
	1	Jefferson Library Building
	1	Adams Library Building
<b>Lead Based Paint (2)</b>	1	USCP HQ Bldg
	1	Cannon/Capitol Tunnel - AOC
<b>Machine Barriers &amp; Emergency Shutdown Switches (1)</b>	1	Jefferson Building
<b>Noise Protection (1)</b>	1	USCP-Cheltenham
<b>Staffing of Police Communications Centers (1)</b>	1	USCP Police Communication Center
<b>Hazardous Material Response (1)</b>	1	LOC Police



Topic and Number of Relevant Requests	Number of Requests Filed	Location
Emergency Egress from Utility Tunnels (2)	2	Capitol Power Plant
Hazardous Trench Evacuation (1)	1	Architect of the Capitol

**Table 1 Summary of Requestor-Initiated Inspections Filed during the 109th Congress**

### Asbestos and lead exposure

During the 109<sup>th</sup> Congress, the OGC conducted Requestor-Initiated Inspections that involved employee exposure or potential exposure to asbestos or lead:

- Three Requests alleged that USCP and LOC employees located adjacent to construction projects were potentially exposed to asbestos. At only one location could the OGC determine that asbestos-containing materials were present. In that case, USCP officials collected samples within 24 hours and notified employees of the air monitoring results and potential hazards. No hazard was found because the concentration did not exceed OSHA's permissible exposure limit (PEL).
- LOC Safety Staff did not conduct routine daily checks to ascertain whether employees were appropriately protected during an asbestos abatement project. This type of violation was also noted in two previous inspections at the same location. The LOC has since implemented appropriate procedures to comply with this requirement.
- AOC's Asbestos Abatement Team did not comply with the AOC's written Asbestos Abatement Plan. Abatement of this violation requires that the third-party contractor review each Project Plan.
- Violations related to the removal or disturbance of presumed asbestos-containing materials (PACM) and debris and air monitoring for asbestos were alleged in the Capitol Power Plant Utility Tunnels. This investigation has been subsumed by the Utility Tunnels Complaint and resulting Settlement Agreement.

The OSH Act requires that surfaces be maintained "as free as practicable" of lead and that special procedures be used for housekeeping where lead is found on surfaces. Consequently, if building conditions caused leaded paint to peel and fall onto a surface, it must be regularly removed using appropriate methods that limit creation of airborne dust. The following Requests alleged exposure to lead generated by renovation projects:

- USCP Officers, who were required to pass through a renovation area where paint chips fell and accumulated on horizontal surfaces, alleged that they were exposed to lead. AOC collected the paint chips samples for analytical laboratory testing and determined that they did not, in fact, contain lead. AOC has agreed to use more reliable testing means to determine lead concentration levels and to not rely on portable X-ray diffraction units to provide definitive, negative results.
- AOC employees assigned to clean up chips of lead paint alleged they did not receive proper training. The investigation determined that exposures were significantly lower than OSHA's action level and that the employees did not require either special training or use of a respirator.

Two Citations were issued to the LOC in separate Requests alleging exposure to asbestos and lead in the Jefferson LOC Building:

- After water leaks damaged walls and caused paint flakes and chips to fall on various surfaces, the LOC inappropriately used fans to dry the area, which potentially exposed employees to airborne lead. The LOC also failed to seek assistance from the AOC Hazard Abatement Team for five days.
- LOC employees were exposed to asbestos in and around book stacks as a result of the use of heavy rolling carts that damaged floor tiles and wall panels that contained high concentrations of chrysotile



asbestos. The LOC failed to take action to prevent potential exposure. However, the AOC took prompt action to remove dust and loose material and to cover the floor surfaces with protective materials when it was notified of the condition.

- LOC did not conduct required monitoring of the work area where employees could reasonably be expected to be exposed to asbestos.

### Emergency evacuation and egress

Four Requests filed by LOC employees' alleged violations regarding evacuation procedures. The Requests occurred as a result of evacuation drills in the Jefferson and Adams Buildings, evacuation resulting from the intrusion by an unauthorized aircraft into protected airspace over the Capitol, and a Jefferson Building evacuation resulting from smoke in the Central Control Room. The following violations were determined by the OGC's investigations of these Requests:

- An obstructed emergency exit caused accumulation of a large group of evacuees, creating a potential "crush" situation.
- Absence of an alternative exit direction during a construction project.
- Presence of trip hazards in an evacuation route.
- Failure of the pager system to notify hearing-impaired employees with an "all clear" signal.
- LOC police officers were not trained to collapse revolving doors at building exits.
- Traffic control was not provided to protect employees required to cross the street during evacuation.
- Employees were not notified to use an alternate assembly location away from building for five minutes after alarm warning.
- Ten minute delay in notifying employees who assembled in areas designated for mobility-impaired staff to exit by stairs.
- Mobility-impaired staff requiring assistance were abandoned due to lack of training for LOC police officers in using elevator override keys.
- Two Requests were filed alleging that the Capitol Power Plant Utility Tunnels have too few egress points to allow safe evacuation. In one instance, AOC employees were unable to exit a tunnel because of an electronically locked door. These Requests have been subsumed by the Utility Tunnels Complaint and resulting Settlement Agreement.

### Indoor air quality

Six Requests were filed regarding indoor air quality. Concerns including odors, insect infestations, mold, symptoms of respiratory allergies, excessive sneezing, and other indicators of possible inadequate indoor air quality were raised by employees working in the Russell Senate Office Building, Ford and Rayburn House Office Buildings, C Street Garage of the Rayburn House Office Building, and the Jefferson and Adams LOC Buildings.

OSHA has not promulgated a specific standard regarding indoor air quality. Consequently, the OGC is constrained in such cases to compare measured exposures to OSHA's permissible exposure level (PEL). Those limits typically exceed the concentrations found in office environments. However, in investigating such claims, the OGC considers whether the OSH Act's General Duty Clause is triggered by a recognized hazard that is likely to cause serious injury or death.



Only one of the six investigations determined that a violation of OSHA standards occurred. Bird excrement at a USCP post in the C Street Garage of the Rayburn House Office Building was found to pose a risk of carrying avian-borne illness. The USCP responded by taking measures to eliminate locations where birds can roost.

An investigation in the Ford HOB determined that the presence of mold in an office resulted from excessive dampness and was the cause of an employee's adverse health symptoms. The AOC has initiated efforts to abate the hazard.

#### Machine barriers

One request alleged that a book conveyor in the Jefferson LOC Building was not properly guarded and did not have an emergency shutdown switch. The AOC Machine, Carpentry and Electric Divisions abated these hazards by modifying the equipment to provide guarding and installing emergency shutoff switches at appropriate locations.

#### Noise protection

USCP firing range instructors alleged hearing loss as a result of noise levels encountered at a firing range used for training. The OGC has retained the services of several experts to assist in the investigation who determined that Center instructors suffered hearing losses. This investigation is ongoing.

#### Staffing of police communication centers

Two Requests were filed regarding the staffing and training of personnel assigned to the Police Communications Centers (PCC) for the USCP and LOC. These investigations are ongoing.

#### Hazardous material response

A filed Request alleges the LOC Police failed to properly secure an adequate perimeter around the site of a suspicious substance. During the prior two years, five Requests alleged similar violations regarding LOC Police responses to suspicious substance calls. All six Requests remain unresolved, and the investigation continues.

#### Hazardous trench excavation

In April 2005, OSHA officials notified the OGC that AOC employees were employing unsafe practices while working in a trench. An immediate investigation by OGC inspectors identified four unsafe conditions that could result in serious injury:

- No required shoring;
- Water running into the trench made the soil unstable;
- Excavated soil was piled close to the trench; and
- An employee was standing under the bucket.

Three specific regulatory violations were found:

- No adequate protective system, such as shoring or sloped sides, was used to prevent collapse;
- No required inspections of the job site; and
- No training provided in the recognition and avoidance of hazards during trenching and excavation.



The AOC has subsequently conducted training for appropriate employees in order to resolve these violations.

## VI. RECOMMENDATIONS

Section 215(e) of the CAA requires the General Counsel to conduct a comprehensive assessment of the health and safety conditions within the legislative branch. An essential element of this responsibility is to not only identify hazards but to assure that the responsible office will timely and fully abate those hazards in order to enhance the health and safety of all employees of the legislative branch.

### A. Cooperation in the abatement of violations

As discussed throughout this Report, with the cooperation and assistance of the employing offices, the OGC staff has been able to increase the efficiency of the biennial inspection process. As a result, a comprehensive baseline of safety and health conditions throughout the legislative branch has been established. Over 13,000 violations have been identified. However, the mere identification of violations does not create a safer work environment. The primary task is to ensure that known violations are promptly corrected.

The General Counsel recommends the following initiatives to facilitate the prompt abatement of violations:

#### *Prompt action by employing offices*

Based on the degree of risk involved each employing office should establish a plan to prioritize and abate all outstanding identified hazards in a timely manner. Many citations and hazards noted in this Report have remained unabated for substantial periods of time indicating that employing offices have not dedicated sufficient resources to address these matters. In many instances, employing offices have failed to provide acceptable abatement plans, implement fully corrective abatement actions or seek additional time to correct the hazards. The OGC recognizes that because of high number of identified hazards in the 109<sup>th</sup> Congress the employing offices found it difficult to abate hazards within the OOC's abatement timeline. To facilitate cooperation between our agencies in order to accelerate abatement, the OGC typically meets with AOC and LOC representatives on a monthly basis to address issues regarding unabated violations.

#### *Investigatory subpoena authority*

Most employing offices cooperate with the OGC and provide requested information that will aid in the investigation of or monitoring of abatement efforts. However, the abatement of some serious violations has been hampered because the OGC was not provided prompt access to fact witnesses or necessary records as part of its investigation. In some cases, employing offices have failed to respond to a request for reports, test results, or other information. In other instances, necessary witnesses were not made available for interview by OGC inspectors. The end result was that cases could not be timely investigated and resolved.

Unlike the Secretary of Labor, the General Counsel was not granted statutory authority under the CAA to issue investigatory subpoenas in aid of his inspections and investigations where the employing office fails to cooperate. Currently, the only means to compel production of documents or testimony when





cooperation is not forthcoming is to issue a citation and complaint. When there is no other source of information, the OGC may be unable to conclude an investigation or forced to proceed, relying only on the evidence provided by the requestor. This has the effect of needlessly delaying abatement of meritorious Requests or unduly persuing cases that could have been earlier dismissed if the requested information had been timely provided. On the other hand, when information is provided in a timely manner, investigations can be concluded and abatement promptly effected.

The General Counsel has raised this problem in the past several biennial OSH Reports. The OGC Board of Directors has requested investigation subpoena authority from Congress in its 2006 Section 102(b) Report.

### ***B. Focus on Fire Safety Issues***

Since its first biennial Report in 1996, the General Counsel has repeatedly warned of the significant fire safety issues that exist in buildings throughout Capitol Hill. Most of these citations were issued to the AOC in 2000-2001 regarding fire safety deficiencies. As discussed in this Report, the citations have remained unabated since that time.

In June 2007 the General Counsel was encouraged that the AOC has shared with us abatement plans to address many fire safety citations. The General Counsel has been working with the AOC to accelerate projected pace of abatement under these plans. Many of the most serious fire safety hazards are not projected to be abated until the middle of the next decade.

### ***C. Hazard Prevention***

This Report has discussed many efforts that employing office can undertake to prevent the development of hazards and to promptly abate those that are discovered.

#### *Employing office self-monitoring*

The incidence of common hazards is reduced, and serious hazards are rare, when employing offices implement a plan to conduct regular and recurring inspections of their facilities. This process of self-inspection has since been initiated on a limited basis in Member, Committee, and similar office spaces in the House and Senate for the 110<sup>th</sup> Congress. This has resulted in a reduction of identified hazards by the OGC during its inspections in these jurisdictions and has expedited the inspection process. It is therefore recommended that employing offices and other jurisdictions implement a program for the safety offices to conduct routine inspections or train employees to conduct self-inspections of the worksite. Employees should also be trained to identify those hazards and violations that are more serious, how to respond, and whom to contact for assistance. Most programs of this nature yield great benefit in avoiding the creation of many common hazards.

#### *Review of Employing Office Safety and Health Programs*

During several OOC sponsored OSH/ADA Working Group Meetings and OOC Strategic Plan, the General Counsel has informed covered employing offices that the OGC will conduct inspections of safety and health programs. To this end the OOC will work with the covered employing offices in order to develop



an effective evaluation program. Funds for this purpose were requested in FY2007 and FY2008. These inspections would have the benefit of identifying problems and deficiencies that can often lead to systemic violations. As discussed in this Report, many violations, including those related to hazard communication deficiencies, result from inadequate training programs and notification requirements that should be addressed in a health and safety program.

#### *VIII. A Look towards the 110th and 111th Congresses*

Following the completion of the 109<sup>th</sup> Congress, the General Counsel met with the employing offices to elicit their feedback regarding their perceptions on what worked and what needed improvement in the biennial inspection process. During these discussions, the employing offices made several recommendations to improve the process. As a result of their helpful recommendations, the OOC was able to develop a two year inspection calendar in preparation for the 110<sup>th</sup> Congress, develop new and employing office-driven reporting systems, and designate specific points of contact in the offices to work more effectively together to accomplish the goals set forth in the inspection process. With the opening of the Capitol Visitor Center and the LOC's Packard Campus coming online late in the 110<sup>th</sup> Congress, the OOC will need to prepare for an additional one million square feet to be added to its inspection cycle.

#### *IX. Acknowledgements*

The 109<sup>th</sup> Congress Biennial Inspection was commenced in March 2005. The inspection was led by Stephen Mallinger, Certified Industrial Hygienist and Special Assistant to the General Counsel since November 1997 on long-term detail from the Occupational Safety and Health Administration. Mr. Mallinger's substantial and sustained contributions to the advancement of health and safety on Capitol Hill deserve particular recognition. Mr. Mallinger was principally assisted in the inspection by Thomas H. Seymour, a part-time consultant to the General Counsel since 1999 and registered Professional Safety and Fire Protection Engineer, David Thompson, a safety consultant retained since the 108<sup>th</sup> Congress Biennial Inspection, George Maze, a consultant retained for the 109<sup>th</sup> Congress Biennial inspection, Luis Guzman, the OGC's first ever Safety and Health Professional, two student interns from the University of Maryland, Sean Wrightson and Victor Ontiveros, and David K. Young, Management/Program Analyst. In addition, Mr. Young scheduled inspections and prepared and distributed reports and charts of violations and abatement information. Requestor-Initiated Inspections were primarily conducted by Mr. Mallinger, Mr. Seymour, and Henry C. Woodcock, a Certified Industrial Hygienist, consultant retained by the OGC since 1999.

James Abbott, Deputy General Counsel of the Office of Compliance, was the primary author of the *Report* and had overall responsibility for its presentation. Major portions of the *Report* were prepared by Mr. Mallinger, Mr. Seymour, Mr. Thompson, Mr. Guzman, and Mr. Maze. Mr. Young and Kathy Schluter, Administrative Assistant, and Joseph Loomis, a case officer, assisted in the production of the *Report*.

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General Counsel

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