March 31, 2009

The Honorable Robert Brady
Chairman
Committee on House Administration
1309 Longworth House Office Building
Washington, DC 20515

Subject: Testimony for April 1 Hearing, "Management of Asbestos and Hazardous Materials at the Smithsonian Institution"

Dear Chairman Brady,

I have been invited to provide testimony to summarize my views and opinions on the management of asbestos-containing materials (ACM) in the Smithsonian Air and Space Museum. My testimony will be based upon my education and experience gained in over 30 years of professional practice in the evaluation and control of ACM in public and commercial buildings and my review of pertinent materials on the Smithsonian's practices and procedures which have been provided by Committee Staff in advance of this hearing. I have attached a short bio statement outlining my professional experience (Attachment 1) and a summary of documents reviewed in preparation of my testimony (Attachment 2).

I have organized my testimony to address the following topics:

1. Asbestos Management in Public Buildings – General Requirements and Standard Practices
2. Asbestos Management Practices and Procedures for the Smithsonian Air and Space Museum
3. Comparison of Smithsonian Practices to Current Standards
4. Summary and Recommendations

1. <u>Asbestos Management in Public Buildings – General Requirements and Standard Practices</u>

Asbestos is a general name for a group of naturally occurring minerals composed of small fibers. It makes an excellent insulation material and is heat, fire and corrosion resistant. It is a common ingredient in many materials found in buildings constructed prior to 1980 including floor tiles, ceiling tiles, insulation on pipes and ducts, acoustical and decorative coatings and roofing materials. Under current Federal regulations these type of building materials are ***presumed*** to contain asbestos if installed before 1980 unless testing has proven otherwise.

Asbestos exposure, when fibers are released and inhaled, may cause several serious illnesses including asbestosis, lung cancer and mesothelioma. These diseases are often associated with a long latency period, so that symptoms may not be evident until 20 or more years after exposure. In order to prevent such illness among the workforce and the general public, asbestos use,

Atrium Environmental Health and Safety Services, LLC
11495 Sunset Hills Road, Suite 210
Reston, VA 20190
Phone: (703)689-9482 Fax: (703)689-3998

handling, removal and disposal has been subject to strict Federal regulations implemented by the EPA and OSHA since the early 1970's. Many states, localities, agencies and private employers have enacted site-specific or task-specific rules and procedures which follow more detailed and restrictive policies.

The presence of asbestos in a building does not mean that the health of building occupants is endangered. As long as asbestos-containing materials remain in good condition and are not disturbed or damaged, exposure is unlikely. EPA only requires asbestos removal (abatement) in order to prevent significant public exposure during planned activities such as renovation or demolition. EPA generally recommends in-place management and maintenance to prevent exposure in areas where asbestos is discovered.

In accordance with current regulatory requirements and established practices for effective asbestos control, most facilities follow a site-specific Asbestos Management Plan (Plan). This Plan will typically address the types of asbestos (ACM), the quantity, location and define the duties and responsibilities of the persons who are required to take action, verify performance and document results. Some of the actions routinely cited in such a Plan include periodic surveillance and inspection of building areas, air testing and laboratory analysis, training of maintenance staff and contractors, scheduling of abatement and corrective actions and the periodic review and update of the written plan and its performance documentation. Many of the most effective protective measures are practical, low-cost actions to reduce dust generation. For example, cleaning by wet wiping is preferred to dry sweeping. Vacuums must have special high-efficiency particulate (HEPA) filters to trap small particles. Some power tools may be equipped with vacuum attachments to eliminate dust emissions while drilling or cutting.

Training requirements applicable to persons working in facilities operation and maintenance organizations are defined under 29 CFR 1926.1101, OSHA's Asbestos in Construction Standard.

OSHA defines repair and maintenance activities where small amounts of ACM are likely to be damaged or disturbed as Class III work. OSHA requires that workers who perform Class III repair and maintenance activities receive a 2-day (16-hour) training class that covers working safely with the materials. The course must include hands-on training on proper respirator use and work practices. OSHA requires that this training be provided prior to or at the time of assignment and annually thereafter.

OSHA defines maintenance and custodial activities where workers may contact but do not disturb ACM and activities to clean up dust, waste and debris resulting from other activities that disturb ACM as Class IV work. OSHA requires that workers who perform Class IV clean up or custodial receive a 2-hour training class that covers working safely around ACM. OSHA requires that this training be provided prior to or at the time of assignment and annually thereafter.

The US General Services Administration cites key elements of Asbestos Management Plans to include:

- Managing ACM in place as long as it is in good visual condition;
- Abating ACM that is damaged or subject to disturbance;

- Complying with OSHA and EPA regulations, standards and guidance on the management, handling, transportation and disposal of ACM.
- Using products that do not contain ACM in new construction, renovation or repair projects;
- Requiring qualified persons to do the initial and follow up visual inspections in determining the location and condition of ACM; and
- Promoting openness in communication with customers, regulatory agencies, the public and other interested parties during asbestos related repair, renovation and abatement projects.

2. Asbestos Management Practices and Procedures for the Smithsonian Air & Space Museum

The Smithsonian Institution Safety, Health and Environmental Management Program is defined by Smithsonian Directive 419 (SD419) and is implemented through the companion document, The Smithsonian Institution Safety Manual. The objective of this program, with the accompanying policies and procedures, is to "create a comprehensive, self-sustaining culture of safety performance in each museum, research institute, and office that enables employee effectiveness, productivity and professional fulfillment in executing the SI mission." Within the written Safety Manual is a section on Hazardous Materials Management which includes Chapter 22 – ASBESTOS.

The ASBESTOS control procedure in the SI Safety Manual is detailed and comprehensive with defined roles and responsibilities for:

- Building Managers
- Safety Coordinators
- Supervisors
- Employees
- Facilities Management, Design and Construction Offices
- Real Estate Division
- Safety, Health and Environmental Management

Specific sections are provided to address:

- Hazard Control Requirements for Specific Jobs and Activities
- Asbestos Waste Disposal
- Training Requirements for Staff
- Recordkeeping to maintain compliance documentation
- References, including current OSHA and EPA Regulations and SI policy documents

In addition, a series of Attachments (1-8) provide additional detail, training requirements and checklists for required safe work practices on tasks which may encounter ACM in routine daily operations, such as floor stripping, abatement work area preparation, inspections and cleaning.

Attachment 8 summarizes Training Requirements for various tasks which may encounter asbestos, including:

- Class I and II (Abatement and full removal work) requires a 4-day EPA-accredited training program;

- Class III (Repair and Maintenance for small tasks under 25 square feet) requires a 16-hour Operations and Maintenance Training Class
- Class IV (Housekeeping) requires a 2-hour awareness training program

All levels of training require an annual update and review.

3. Comparison of Smithsonian Practices to Current Standards

Current standards and regulations for safe and effective asbestos management require adherence to a comprehensive program of defined duties which must be fully integrated in all aspects of facility and real estate management, project design, maintenance, construction, demolition and employee supervision and training. These requirements are nothing new – they have been known and effectively applied over many decades of experience in order to protect the health of employees, contractors and the general public. The employer and the building owner are responsible for ensuring that these program elements are in place and effectively followed.

Many highly varied but effective examples of facility-wide asbestos control programs are available for comparison, since implemented programs will typically conform to the function and administrative structure of the responsible organization. That is, there is not a "one size fits all." The SI has developed a comprehensive asbestos control policy in accordance with the written procedures in the Hazardous Materials Management section of their Safety Manual. Upon review of the written program, it appears to be thorough and complete with detailed requirements for specific routine operations. Ultimately the effectiveness of the program will be determined by how closely these requirements are followed in regular operations.

4. Summary and Recommendations

This evaluation has compared Smithsonian policy for asbestos management and control to the regulations and practices in place for similar facilities in a workplace or construction setting. Based upon a review of the written Smithsonian policies, reports and materials provided by Committee Staff, a comparative analysis of applicable regulations and standards and my 30 years of professional experience in this area of technical specialization, I have found the Smithsonian Institution asbestos control policy, as written, to be quite complete and comprehensive. Please be aware that this evaluation has not included any on-site evaluation or audits to determine how effectively these policies have been implemented in daily practice. By fully implementing an asbestos control procedure as written in the SI Safety Manual, the Smithsonian should be able to maintain a safe and healthy work environment for its employees and the general public that is consistent with the current standards and practices in the field.

Sincerely,

Daniel O. Chute, CIH, CSP

Attachment 1

Summary of Technical and Professional Experience in Asbestos Programs

Daniel O. Chute, CIH, CSP
Atrium Environmental Health and Safety Services, LLC
11495 Sunset Hills Road, Suite 210
Reston, VA 20190
Phone (703)689-9482, ext. 104
Fax (703)689-3998
Email: dchute@atriumehs.com
Website: www.atriumehs.com

Summary

Mr. Chute has approximately 30 years of broad-based professional experience in the recognition, evaluation and control of exposures to asbestos, through work in public buildings, schools, housing, construction, manufacturing, shipbuilding and defense industries. He is a Certified Industrial Hygienist (CIH) and for more than 20 years has maintained EPA accreditation as an asbestos Inspector, Management Planner and Project Designer. His experience includes a history of successful development, implementation and management of many programs which have demonstrated highly specialized and detailed requirements for:

- Inspection and Air Monitoring
- Risk Assessment
- Cost and Feasibility Analysis
- Training
- Abatement Design and Oversight
- Logistics and Information Management
- Research and Special Studies

Asbestos-related Experience

- Has conducted asbestos inspections, testing and delivered training in accordance with established industry protocol since 1980.
- Completed McCrone Institute training in optical microscopy for PLM analysis of bulk samples.
- EPA-accredited training credentials maintained continuously since 1987. Currently maintain EPA-accredited certificates as Inspector, Management Planner and Project Designer.
- Active licensure as Inspector, Management Planner, Project Designer and Project Monitor.
- Prepared abatement project design specifications for over 20 major abatement projects in VA Medical Centers.
- Project Manager for asbestos testing and inspection contract for National Capitol Region, US General Services Administration (Federal Facilities in Washington, DC area)
- Asbestos Training Instructor, US Department of State Domestic Environmental and Safety Division
- Served as Instructor in University-based EPA-accredited Asbestos Training Programs since 1988

- Conducted FEMA Asbestos Inspections and Damage Reports, 1988-1992
- Managed Maryland's first Statewide Industrial Hygiene Services Contracts for inspection and testing during asbestos removal operations, 1987-1990.
- Technical management of first statewide asbestos inspection contract in US, conducted in Maryland, 1986-1988. Received letter of commendation from Maryland DGS Program Manager, Joel Matz, for successful effort.
- Conducted over 100 comprehensive Loss Control Surveys of Asbestos Abatement Contractors throughout US for Reliance National Insurance, 1995-2000.
- Managed and completed first comprehensive asbestos inspection and survey for US Capitol and Architect of the Capitol facilities, 2000-2002.
- Extensive inspection experience in public and private facilities, schools, hospitals, industrial sites, military, laboratory, historical buildings and ships for construction, renovation or demolition.

EDUCATION

M.S., Industrial Hygiene, *Texas A&M University*
B.S., Environmental Health, *Old Dominion University*

CERTIFICATION AND LICENSURE

Certified Industrial Hygienist, Comprehensive Practice, American Board of Industrial Hygiene
Certified Safety Professional, Comprehensive Practice, Board of Certified Safety Professionals

Asbestos Licensure: Inspector, Management Planner, Project Designer, Project Monitor

Attachment 2

Daniel O. Chute, CIH, CSP – List of References Relied Upon for Opinions (April 2009)

1.	Versar, Inc., Final Asbestos Survey Report for National Air and Space Museum, Volume 1, November 25, 1992.
2.	KEM, Letter from J. Brent Kynoch to Mr. David Marshall, Katz, Marshall and Banks, LLP, December 1, 2008; RE: Richard Pullman – National Air and Space Museum KEM Project 3 21351
3.	KEM, Letter from J. Brent Kynoch to Mr. David Marshall, Katz, Marshall and Banks, LLP, December 2, 2008; RE: Richard Pullman – National Air and Space Museum Comments regarding Smithsonian Office of General Counsel Responses 11-12-2008 KEM Project # 21351
4.	AMA, Inc., Letter from Gary L. Urban to Ms. Rachel L. Gregory, Smithsonian Institution, January 26, 2009; RE: Ambient air sample collection and analysis performed at the Smithsonian Institution (SI), national Air and Space Museum (NASM) located at 6th and Independence Avenue, SW, Washington, D.C.
5.	Smithsonian Institution, Letter from Cristian Samper, to Colleagues; 11/07.
6.	Smithsonian Institution, Directive 419, October 30, 2006, Smithsonian Institution Safety and Health Program
7.	Smithsonian Institution, Chapter 22 Asbestos,
8.	Smithsonian Institution, Chapter 22 Asbestos, Attachment 1 – Recommended Safe Practices When Work on or Around ACM
10.	Smithsonian Institution, Chapter 22 Asbestos, Attachment 2 – EPA Guidelines for Striping Asbestos-Containing Floors
11.	Smithsonian Institution, Chapter 22 Asbestos, Attachment 3 – Sample Asbestos Management Plan
12.	Smithsonian Institution, Chapter 22 Asbestos, Attachment 4 – Re-Inspection of Asbestos-Containing Materials
13.	Smithsonian Institution, Chapter 22 Asbestos, Attachment 5 – Sample Asbestos Notification Fact Sheet for Building Occupants
14.	Smithsonian Institution, Chapter 22 Asbestos, Attachment 6 – Sample Abatement Notification to Occupants
15.	Smithsonian Institution, Chapter 22 Asbestos, Attachment 7 – ACM Area General Cleaning Procedures
16.	Smithsonian Institution, Chapter 22 Asbestos, Attachment 8 – Asbestos Work classifications and Training Requirements (OSHA 29 CFR 1926.1101)
17.	Environmental Protection Agency (EPA) National Emission Standards for Hazardous Air Pollutants , 40 CFR Part 61, Subparts A and M.
18.	Environmental Protection Agency (EPA)Document 560/5-85-024 (June 1985) *Guidance for Controlling Asbestos – Containing Materials in Buildings*
19.	Environmental Protection Agency (EPA) Document 20T-2003 (July 1990) *Managing Asbestos in Place: A Building Owner's Guide to Operations and Maintenance Programs for Asbestos Containing Materials*
20.	Environmental Protection Agency (EPA) Asbestos Hazard Emergency Response Act (AHERA), 1986; 40 CFR Part 763 Asbestos, Subpart E – Asbestos Containing Materials in Schools
21.	Environmental Protection Agency (EPA), Asbestos School Hazard Abatement

Daniel O. Chute, CIH, CSP – List of References Relied Upon for Opinions (April 2009)

	Reauthorization Act (ASHARA), 1990: (Summary)
22.	Smithsonian (SI) Guide specifications for Asbestos Abatement, Section 13280, and Mechanical System Insulation, Section 15080
23.	US Department of Labor, Occupational Safety and Health Administration (OSHA), General Industry Standards, 29 CFR 1910.1001, Asbestos
24.	US Department of Labor, Occupational Safety and Health Administration (OSHA), General Industry Standards, 29 CFR 1910.134, Respiratory Protection
25.	US Department of Labor, Occupational Safety and Health Administration (OSHA), Construction Standards, 29 CFR 1910.1101, Asbestos