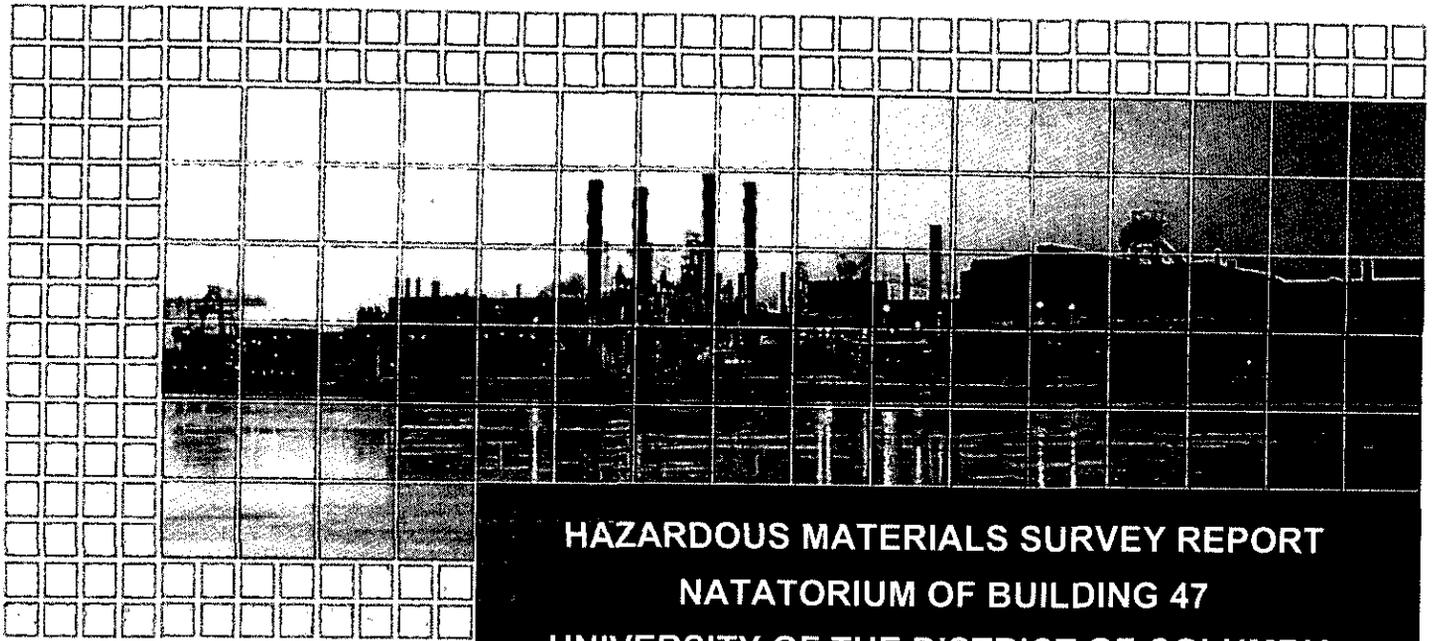


AMENDMENT OF SOLICITATION/MODIFICATION OF CONTRACT				1. Contract Number	Page of Pages	
2. Amendment/Modification Number GF-2010-B-0019-006		3. Effective Date 21-Oct-10	4. Requisition/Purchase Request No.		GF-2010-B-0019 1 28	
6. Issued By: Sherry Jones-Quashie Contracting Officer and Manager of Capital Procurements University of the District of Columbia 4200 Connecticut Avenue, NW Washington D.C. 20008			Code	7. Administered By (If other than line 6) Steve McKenzie Project Manager UDC Capital Construction 4200 Connecticut Avenue, NW Washington DC 20008		
8. Name and Address of Contractor (No. Street, city, country, state and ZIP Code)				(X)	9A. Amendment of Solicitation No. GF-2010-B-0019	
					9B. Dated (See Item 11) 8-Sep-10	
					10B. Dated (See Item 13)	
Code		Facility				
11. THIS ITEM ONLY APPLIES TO AMENDMENTS OF SOLICITATIONS						
<input checked="" type="checkbox"/>	The above numbered solicitation is amended as set forth in Item 14. The hour and date specified for receipt of Offers <input checked="" type="checkbox"/> is extended, <input type="checkbox"/> is not extended. Offers must acknowledge receipt of this amendment prior to the hour and date specified in the solicitation or as amended, by one of the following methods: (a) By completing Items 8 and 15, and returning <u>1</u> copies of the amendment; (b) By acknowledging receipt of this amendment on each copy of the offer submitted; or (c) By separate letter or fax which includes a reference to the solicitation and amendment number. FAILURE OF YOUR ACKNOWLEDGEMENT TO BE RECEIVED AT THE PLACE DESIGNATED FOR THE RECEIPT OF OFFERS PRIOR TO THE HOUR AND DATE SPECIFIED MAY RESULT IN REJECTION OF YOUR OFFER. If by virtue of this amendment you desire to change an offer already submitted, such change may be made by letter or fax, provided each letter or telegram makes reference to the solicitation and this amendment, and is received prior to the opening hour and date specified.					
12. Accounting and Appropriation Data (If Required)						
13. THIS ITEM APPLIES ONLY TO MODIFICATIONS OF CONTRACTS/ORDERS,						
	A. This change order is issued pursuant to: The changes set forth in Item 14 are made in the contract/order no. in item 10A.					
	B. The above numbered contract/order is modified to reflect the administrative changes (such as changes in paying office, appropriation date, etc.) set forth in item 14, pursuant to the authority of 27 DCMR, Chapter 36, Section 3601.2.					
	C. This supplemental agreement is entered into pursuant to authority of:					
	D. Other (Specify type of modification and authority)					
<b>E. IMPORTANT:</b> Contractor <input type="checkbox"/> is not, <input checked="" type="checkbox"/> is required to sign this document and return <u>1</u> copies to the issuing office.						
14. Description of amendment/modification (Organized by UCF Section headings, including solicitation/contract subject matter where feasible.)						
Solicitation No. GF-2010-Q-0019, for the Renovation of the Campus Natatorium at Building no. 47 is hereby amended as follows:						
(1). Hazardous Material Survey Report (Attachment A);						
(2). Additional Questions and Answers (Attachment B);						
(3). Bid submission date of October 22, 2010, by 2:00 pm local time is hereby extended to October 26, 2010, by 2:00 pm, local time.						
(4). All other terms and conditions remain the same.						
Except as provided herein, all terms and conditions of the document referenced in Item (9A or 10A) remain unchanged and in full force and effect						
15A. Name and Title of Signer (Type or print)				16A. Name of Contracting Officer Sherry Jones-Quashie		
15B. Name of Contractor		15C. Date Signed	16B. District of Columbia		16C. Date Signed	
			Sherry Jones-Quashie		10/21/10	
(Signature of person authorized to sign)			(Signature of Contracting Officer)			

**Attachment A**  
**Hazardous Material Survey Report**



**HAZARDOUS MATERIALS SURVEY REPORT  
NATATORIUM OF BUILDING 47  
UNIVERSITY OF THE DISTRICT OF COLUMBIA  
WASHINGTON, D.C.**

**FINAL REVISION  
FEBRUARY 2, 2010**

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# Contents

<b>1</b>	<b>Introduction</b> .....	<b>1</b>
<b>2</b>	<b>Asbestos Survey</b> .....	<b>5</b>
2.1	Survey Methodology.....	5
2.2	Survey Findings.....	6
2.3	Asbestos-Containing Material.....	6
2.3.1	Floor Tile and Mastic.....	6
2.4	Non-Asbestos Containing Materials.....	6
2.4.1	Surfacing Materials.....	6
2.4.2	Floor Covering.....	7
2.4.3	Ceiling Tiles.....	7
2.4.4	Miscellaneous Interior Materials.....	7
2.5	Conclusions and Recommendations.....	7
<b>3</b>	<b>Lead-Based Paint Survey</b> .....	<b>5</b>
3.1	Overview.....	5
3.2	Scope of Inspection.....	5
3.2.1	Building Background.....	5
3.2.2	Certification of Inspectors.....	5
3.2.3	Equipment.....	5
3.2.4	Methods.....	2
3.2.5	Findings.....	2
3.3	Recommendations.....	2
3.4	LPB Survey Disclosure Responsibility and Disclaimer.....	3
3.4.1	Disclosure Responsibility.....	3
3.4.2	Disclaimer.....	3
<b>4</b>	<b>Hazardous Materials</b> .....	<b>1</b>
4.1	Fluorescent Lamps and Switches.....	1
4.2	Switches and Thermostats.....	1
4.3	Light Ballasts and Electronic Equipment.....	1
4.4	Air-Conditioning Units.....	2
4.5	Lead-Acid, Nickel-Cadmium, and Other Batteries.....	2
4.6	Unused and/or Waste Chemicals.....	2
4.7	Conclusions and Recommendations.....	3



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# Contents

## Tables

- Table 2-1 – Asbestos Sampling Locations
- Table 2-2 – Inventory of Asbestos-Containing Material
- Table 4-1 – Inventory of Hazardous Materials

## Figures

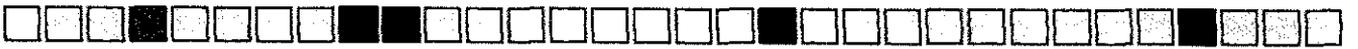
- Figure 2-1 – Asbestos Sampling Locations
- Figure 3-1 – Lead-Based Paint Locations

**Appendix 2A** – Asbestos Laboratory Reports and Chain of Custody

**Appendix 2B** – Asbestos Inspector License – Keith Green

**Appendix 3A** – WSP Environment & Energy Lead-Based Paint Business Entity License and Lead Inspector License – James Edwards

**Appendix 3B** – XRF Calibration Results



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# 1 Introduction

WSP Environment & Energy conducted an asbestos survey, a lead-based paint (LBP) survey, and a hazardous materials inventory at the natatorium portion of Building 47, at the University of the District of Columbia in Washington, D.C. This work was performed in support of Bowie Gridley Architects' architectural and engineering services for the renovation of this structure.

The objective of the survey was to identify specific locations, quantities, and conditions of asbestos-containing material (ACM), LBP, and hazardous material present in the natatorium area of the building. The survey findings and WSP's recommendations are presented in this report. Mr. Keith Green, Maryland licensed asbestos inspector (license number 99996), completed the asbestos and hazardous material survey work and Mr. James Edwards (District of Columbia-licensed lead risk assessor # DC08-3716) conducted the LBP inspection. The surveys were performed on October 22 to 23, 2009.

Building 47 is a 3-story structure consisting of concrete and steel construction with a sub-basement. The natatorium portion of Building #47 is contained within stories B through 1 of the building with the pool mechanical equipment located on Level B (i.e., the sub-basement located below Level A). According to facility personnel, Building 47 was constructed in the late 1970s with no known major renovations of the natatorium.

Building 47 consists of gymnasium with associated locker rooms and offices and an attached natatorium with connecting hallways. The inspections were only conducted for the three levels related to the natatorium. The natatorium section of the building has 3 floors with north and south stairways. Level 1 consists of a mechanical equipment room, the official's booth and office, and a pool observation seating area all located on the east side of the natatorium overlooking the pool area. Level A consists of six locker room areas, hallways, offices, storage rooms, swimming pool, and diving pool. The area above the swimming and diving pool is open through Level 1 to the roof. Level B is the sub-basement area located below the swimming pool and diving pool deck area, which includes a pool observation area, pool filter equipment room, and chemical storage area. The general construction of the building is cinderblock with concrete columns.



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## 2 Asbestos Survey

### 2.1 SURVEY METHODOLOGY

The survey consisted of the visual inspection and quantification of all suspect ACM in the natatorium portion of Building 47, and the collection and analysis of representative samples of each suspect material. Each type of suspect ACM was noted and quantified, its accessibility and condition were evaluated, and the amount of damage was estimated.

WSP used Asbestos Hazard Emergency Response Act (AHERA) assessment techniques to determine homogeneous areas to be sampled, potential hazards, and to differentiate ACM that would require removal versus repair. AHERA uses three classifications (thermal system insulation [TSI], surfacing material, and miscellaneous material) of ACM to determine separate homogeneous sampling areas and to designate the quantity of samples required to be collected to ensure thorough identifications of suspect materials. TSI includes materials used on items such as pipes, ducts, and tanks to maintain temperatures. Surfacing materials include trowel-applied and spray-applied material such as, but not limited to, plaster, acoustical material, and fireproofing. Miscellaneous materials include all other ACM not described as TSI or surfacing material.

According to AHERA, the condition of ACM is reported to determine if repair, removal, or management in place is warranted. The condition terminology in this report corresponds to the following:

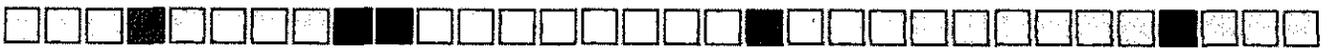
- good condition – no damage or superficial indentations of ACM
- fair condition – less than or equal to 10 percent localized damage of ACM
- poor condition – greater than 10 percent localized damage of ACM

A total of 42 representative samples of suspect ACM were collected during the survey. The location of these samples is summarized in Table 2-1. The suspect ACM that were sampled includes:

- three types of wall plaster/skim coating (surfacing material)
- five types of 12-inch by 12-inch floor tile and associated mastic (miscellaneous)
- twelve types of cove base (miscellaneous)
- three types of miscellaneous caulk/filler material (miscellaneous)
- four types of 2-foot by 4-foot ceiling tile (miscellaneous)

Samples were placed in plastic Zip-loc bags, labeled with a unique identification number, inventoried, and transported to the analytical laboratory. The samples and associated chain-of-custody documentation were submitted to RJ Lee Group, Inc., of Monroeville, Pennsylvania. RJ Lee Group, Inc. is accredited by both the National Voluntary Laboratory Accreditation Program (Accreditation No. 101208-0) and the American Industrial Hygiene Association (Accreditation No. 100364) for analysis by polarized light microscopy (PLM) with dispersion staining and transmission electron microscopy (TEM).

Any materials containing greater than 1 percent asbestos is defined as ACM by the U.S. Environmental Protection Agency's AHERA.



## **2.2 SURVEY FINDINGS**

WSP visually inspected all accessible locations of the natatorium areas. Each type of suspect ACM was grouped into homogeneous areas, sampled and quantified, the condition was evaluated, and the amount of damage was estimated. Any suspect material that contains greater than 1 percent asbestos is considered ACM. For purposes of this report, samples containing 1 percent or less asbestos are termed as containing trace amounts of asbestos or no asbestos, and are not regulated as ACM. The analytical results (Appendix 2A) of samples collected during the inspection indicate that certain flooring materials and mastic were identified as ACM. WSP did not collect samples of intact door fire-proofing materials as these doors were stamped as "non-asbestos".

WSP did not collect samples of roofing materials located at the site due to the potential to void the installation warranty and cause roof leaks. No information regarding the age of the roof was available for review and roofing materials onsite may still contain asbestos. Therefore, roofing materials are presumed asbestos-containing materials. Should roof repair or replacement become necessary, samples of the existing roofing materials should be collected by a District of Columbia-licensed asbestos inspector to verify the asbestos content of the material before the repair or replacement activities commence.

All ACM condition assessment terminology incorporated in this report follows general AHERA guidelines as indicated in the "Survey Methodology" section of this report. Figure 2-1 depicts the locations of ACM sampled in the survey. Mr. Green's asbestos inspector license is provided in Appendix 2B.

## **2.3 ASBESTOS-CONTAINING MATERIAL**

Based on the analytical results, only floor tiles and mastic contained asbestos greater than 1 percent (Table 2-2). Further description of this material is presented below.

### **2.3.1 Floor Tile and Mastic**

The natatorium area has one type of 12-inch by 12-inch floor tile and three types of floor tile mastic (adhesive) that was determined to contain asbestos greater than 1 percent. The floor tile was located in the pool office hallway and was in good condition (chrysotile, 11 percent). Approximately 108 square feet (sf) of this floor tile was present.

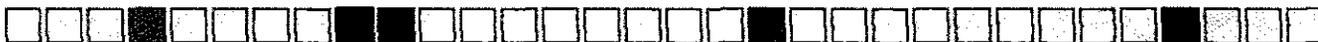
The mastic present on three different types of floor tile was also shown to be asbestos containing (chrysotile, 4 to 14 percent). This mastic was found under floor tiles in the pool office hallway, bathroom across from women's basketball locker area, and the balcony viewing area and official's booth and office. The hallway and bathroom floor tiles, which are above the mastic, were in good condition. The balcony and officials booth floor tile was in fair condition, which may increase potential exposure to the mastic. A total of approximately 1,250 sf of asbestos-containing mastic was estimated.

## **2.4 NON-ASBESTOS CONTAINING MATERIALS**

Based on the sampling results, the following materials do not contain asbestos above 1 percent and are considered non-asbestos containing materials. Descriptions of each material type are provided below.

### **2.4.1 Surfacing Materials**

The natatorium area has four types of suspect surfacing material: ceiling plaster in the women's locker room, ceiling plaster in the men's locker room, and plaster over concrete masonry unit (CMU) in the pool office, and wall plaster over CMU in the official's booth. None of the sampled surfacing materials contained greater than 1 percent asbestos.



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#### 2.4.2 Floor Covering

In addition to the type of 12-inch by 12-inch floor tile identified in Section 2.3, four other 12-inch by 12-inch floor tiles were sampled in the natatorium area. These tiles are located in the women's locker room (Room 1), hallway to lockers, bathroom across from women's basketball locker area, and the balcony and officials booth. None of these flooring materials were determined to contain asbestos at a concentration greater than 1 percent and are considered non-asbestos materials.

#### 2.4.3 Ceiling Tiles

Four types of 2-foot by 4-foot ceiling tiles were sampled in the Natatorium areas. The ceiling tiles are located throughout the facility. None of the ceiling tiles were identified as containing greater than 1 percent asbestos.

#### 2.4.4 Miscellaneous Interior Materials

Miscellaneous interior materials at the site included caulk and filler material at walls, windows, and architectural feature gaps, as well as twelve types of cove base. None of the miscellaneous interior materials contained greater than 1 percent asbestos.

### **2.5 CONCLUSIONS AND RECOMMENDATIONS**

WSP conducted an asbestos survey on October 22, 2009, of the natatorium and associated areas within Building 47 at the University of the District of Columbia. A total of 42 representative samples of suspect ACM were collected during the survey. Floor tiles in the pool office hallway and mastic at three separate locations were determined to be asbestos.

WSP did not collect samples of roofing materials located at the site due to the potential to void the installation warranty and cause roof leaks. Based on the age of the building, roofing materials onsite may still contain asbestos.

Prior to any renovation activities that may disturb ANY ACM, a District of Columbia -licensed asbestos abatement contractor should remove the ACM in accordance with federal, state, and local requirements.

The remaining materials sampled did not contain asbestos at greater than 1 percent asbestos. Consequently, these materials can be handled without restriction.



## 3 Lead-Based Paint Survey

### 3.1 OVERVIEW

The LBP inspection was conducted by Mr. James Edwards, licensed lead inspector and risk assessor, of WSP. The LBP inspection tested all painted and/or finished components according to specifications described in the protocols for LBP testing in Title 40 of the Code of Federal Regulations Part 745 (40 CFR 745) Subpart L and all applicable Washington, D.C. regulations.

The scope of work included x-ray fluorescence (XRF) testing and a surface-by-surface visual inspection of all painted surfaces throughout the entire building. No testing was conducted on the roof. Painted or coated building components that could potentially contain LBP were tested utilizing the XRF analyzer. Factory applied finishes through the building were not tested. A total of 246 surfaces were tested with the XRF analysis, and three surfaces were found to contain lead at levels above the regulatory level of 0.7 milligrams per square centimeter ( $\text{mg}/\text{cm}^2$ ). The LBP surfaces consisted of a 4-inch diameter white drain pipe in Locker Room 4; a heating, ventilating and air-conditioning (HVAC) duct in Locker Room 4; and a 4-inch diameter white drain pipe in Locker Room 6. At each of these three locations the paint was peeling and in poor condition.

### 3.2 SCOPE OF INSPECTION

#### 3.2.1 Building Background

Building 47 has four floors with a north and south courtyard adjacent to the second floor. The general construction of the building is brick and block with concrete columns. The building consists of hallways, stairwells, mechanical rooms, janitorial closets, storage areas, classrooms, offices, gymnasium spaces, locker rooms, and an attached natatorium. The LBP inspection was only conducted in the areas associated with and adjacent to natatorium. The natatorium section of the building has 3 floors with north and south stairwells. According to facility personnel, the estimated construction date of Building 47 was during in the late 1970s with no known major renovations of the natatorium.

#### 3.2.2 Certification of Inspectors

WSP is certified to conduct lead-based paint activities in the District of Columbia. The LBP inspection was conducted by James Edwards of WSP (District of Columbia-licensed lead risk assessor # DC08-3716). A Copy of WSP's business entity licenses and Mr. Edwards' licenses are included in Appendix 3A.

#### 3.2.3 Equipment

The following XRF analyzer was used to conduct the surface-by-surface sampling for the UDC natatorium:

<u>Make:</u>	Innov-X Systems, Inc.
<u>Model:</u>	LBP 4000
<u>Equipment Serial No.:</u>	9011
<u>Source:</u>	X-Ray Tube
<u>Calibration Information:</u>	Calibration of equipment was successfully performed in accordance with PCS (Appendix 3B)
<u>PCS Issue Date:</u>	Innov-X LBP4000, dated December 1, 2006, Edition No. 1



Calibration Standard: SRM Film 1.040 +/- 0.064 mg/cm<sup>2</sup>

Calibration Acceptance Range: 1.0 to 1.1 mg/cm<sup>2</sup>

### 3.2.4 Methods

The calibration of the XRF was performed in accordance with the Performance Characteristic Sheet (PCS). A copy of the PCS and the calibration check test results are included in Appendix 2B. The XRF instrument calibration is checked using a standard reference material with a known lead concentration. Three calibration readings are taken before and after each day and every four hours during operation. If for any reason the instrument is not maintaining a consistent calibration reading within the manufacturer's standards for performance on the calibration blank supplied by the manufacturer, manufacturer's recommendations are used to bring the instrument into calibration.

The inspection was conducted in accordance with EPA 40 CFR 745 Subpart L guidelines, and assumed that if one testing combination (i.e. pipe, window mullion, and doors) is positive for lead in an interior or exterior room equivalent, that all other similar testing combinations in those areas are assumed to be positive, even if all components were not tested. The same is true for negative readings.

Wall locations within the building were assigned a letter for consistent documentation purposes. Wall "A" in each room is the south facing wall. Moving in a clockwise rotation, wall "B" is the west wall of each room, wall "C" is the north wall, and wall "D" is the east wall. All interior building rooms were labeled with a number for reference purposes only. The paint screening sample result at each location was given a designation of either positive for LBP, negative for LBP, or inconclusive. However, no inconclusive results were identified during the LBP inspection of the natatorium.

### 3.2.5 Findings

A total of 246 surfaces were tested with the XRF. Twelve calibration readings were taken during the two-day inspection. A total of 246 surfaces were tested using the XRF analyzer, and 3 surfaces were found to contain lead at concentrations above the regulatory level of 0.7 mg/cm<sup>2</sup>. The LBP surfaces consisted were white drain pipes in Locker Rooms 4 and 6, and a HVAC duct in Locker Room 4. The paint was peeling and in poor condition at each location. Photo documentation is included in Appendix C.

All positive LBP building components of natatorium are identified in Table 1. Table 2 includes all testing combinations and calibrations collect during the inspection of natatorium.

## 3.3 **RECOMMENDATIONS**

LBP Abatement is recommended for the building materials with lead concentrations over the regulatory level. The LBP abatement should be conducted under the direction of a District-licensed LBP supervisor and appropriate abatement clearance sampling should be conduct after abatement completion. An LBP abatement permit should be obtained from the District of Columbia before starting LBP abatement. A permit application should be submitted to the Washington, D.C. Department of Health at least 10 days before beginning any proposed abatement activities.



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### **3.4 LBP SURVEY DISCLOSURE RESPONSIBILITY AND DISCLAIMER**

#### **3.4.1 Disclosure Responsibility**

A copy of this report must be provided to new lessees (tenants) and/or purchasers of this property under Federal Law (24 CFR part 35 and 40 CFR part 745) before they become obligated under a lease or sales contract. The complete report must also be provided to new purchasers and it must be made available to new tenants. Landlords (lessors) and sellers are also required to distribute an educational pamphlet and include standard warning language in their leases or sales contracts to ensure that parents have the information needed to protect children from lead-based paint hazards.

#### **3.4.2 Disclaimer**

The content of this report was compiled from a visual survey and XRF analysis of the readily accessible areas of this building and tested components. The presence or absence of LBP or LBP hazards applies only to the tested or assessed surfaces on the date of the field visit and it should be understood that conditions noted within this report were accurate at the time of the inspection and in no way reflect the conditions at the property after the date of the inspection.



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## 4 Hazardous Materials

The hazardous materials survey consisted of a visual inspection of items known or suspected to contain hazardous constituents, including the following items:

- Fluorescent lamps (mercury)
- Switches/thermostats (mercury)
- Light ballasts (polychlorinated biphenyls [PCBs])
- Transformers, capacitors, and similar electronic conveyance equipment (PCBs)
- Air-conditioning equipment (ozone-depleting compounds)
- Unused and/or waste chemicals.

The type, number, and location of each item were documented. No sampling of these items was performed. Further clarification regarding the importance of addressing these hazardous materials is provided below.

### 4.1 FLUORESCENT LAMPS AND SWITCHES

Currently, most waste fluorescent lamps are hazardous wastes due to their mercury content. Other examples of lamps, that when spent, are commonly classified as hazardous waste, include: high-intensity discharge (HID), neon, mercury vapor, high-pressure sodium, and metal halide lamps. On July 6, 1999, the U.S. Environmental Protection Agency (EPA) added hazardous waste lamps to the federal list of "universal wastes." Universal wastes are hazardous wastes; however, they have less stringent requirements for storage, transportation, and collection. Unless waste fluorescent lamps are tested and determined to be non-hazardous wastes or the facility has manufacturer's data indicating the lamps are non-hazardous, waste fluorescent lamps should be managed as a universal waste.

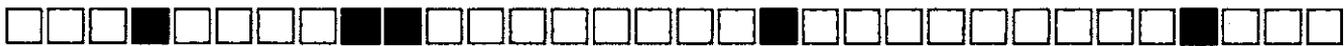
Recently, fluorescent lamps are being manufactured that do not fail the toxicity characteristic leachate procedure (TCLP) test method and are considered non-hazardous wastes. These lamps are commonly marked with a green tag or coloring. Lamps that do not exhibit these markings are considered suspect and should be handled as a universal waste. During the site inspection, WSP identified approximately 192 fluorescent lamps in the Natatorium area.

### 4.2 SWITCHES AND THERMOSTATS

Various switches and thermostats used for environmental control in buildings contained liquid mercury. Waste thermostats typically contain mercury and, therefore, are managed as a hazardous waste. A "thermostat" is defined under the waste regulations as "a temperature control device that contains metallic mercury in an ampule attached to a bimetal sensing element, and mercury-containing ampules that have been removed from these temperature control devices in compliance with the requirements." Unless the waste thermostats are tested and determined to be non-hazardous wastes, the waste thermostats should be managed as a hazardous waste. As part of this inventory, WSP inspected the Natatorium areas for switches and thermostats that would be considered suspect items. No suspect switches or thermostats were identified.

### 4.3 LIGHT BALLASTS AND ELECTRONIC EQUIPMENT

Fluids containing PCBs have not been manufactured since 1979; however, they remain prevalent in many types of electronic equipment and hydraulic fluids. An example of equipment that could contain



PCBs is light ballasts. The regulations under the Toxic Substance and Control Act (TSCA) cover PCBs. Light ballasts manufactured between July 1, 1978, and July 1, 1998, that do not contain PCBs, are required to be marked by the manufacturer at the time of manufacture with the statement, "No PCBs." Therefore, if a light ballast is unmarked, then the facility should assume that the ballast may contain PCBs and manage the waste ballast as a PCB-containing waste.

Wastes containing PCBs are regulated as hazardous waste in the District of Columbia if the waste contains 50 parts per million (ppm) or greater of PCBs. However, the PCBs in light ballasts are exempted under the small capacitor exemption. A "small capacitor" is defined under the New York waste regulations as "a capacitor which contains less than 1.36 kilograms (kg) (3 pounds [lbs.]) of dielectric fluid. The following assumptions may be used if the actual weight of the dielectric fluid is unknown. A capacitor whose total volume is less than 1,639 cubic centimeters (100 cubic inches) may be considered to contain less than 1.36 kg (3 lbs.) of dielectric fluid and a capacitor whose total volume is more than 3,278 cubic centimeters (200 cubic inches) must be considered to contain more than 1.36 kg (3 lbs.) of dielectric fluid. A capacitor whose volume is between 1,639 and 3,278 cubic centimeters may be considered to contain less than 1.36 kg (3 lb.) of dielectric fluid if the total weight of the capacitor is less than 4.08 kg (9 lbs.)."

Fluorescent overhead lighting is present at various locations in the Natatorium area. The ballasts of older fluorescent lighting fixtures could contain PCBs. Other liquid-filled electronic equipment, such as small transformers or capacitors, was not identified during the survey.

#### **4.4 AIR-CONDITIONING UNITS**

One air-conditioning unit (AHU-7) is present within the Natatorium area of the facility. It is likely that this unit contains refrigerant that contains ozone-depleting chlorofluorocarbons (CFCs), commonly known as ozone-depleting compounds (ODCs). The Clean Air Act prohibits refrigerants from being vented into the atmosphere during installation, service, or retirement of equipment. Therefore, the refrigerants must be recovered and recycled, reclaimed, or destroyed. During any planned renovation or demolition activities, ODC refrigerant in the air conditioning unit should be removed for recycling or proper disposal by a certified heating, ventilation, and air conditioning (HVAC) technician.

#### **4.5 LEAD-ACID, NICKEL-CADMIUM, AND OTHER BATTERIES**

Battery back-up power is provided in various equipment in commercial buildings. Typical items that may contain lead-acid, nickel-cadmium, or other batteries include emergency light fixtures, alarm systems, and exit signs. A battery is defined in the Universal Waste Rule at 40 CFR 273.6 as "a device consisting of one or more electrically connected electrochemical cells which is designed to receive, store and deliver electric energy." Batteries often contain hazardous or potentially hazardous constituents such as cadmium or lead and; therefore, may fail the TCLP. Unless the batteries are tested (by TCLP) and determined to be non-hazardous wastes, the batteries must be managed as universal wastes and transported to a universal waste handling facility. During WSP's site inspection, lighted exit signs with emergency back-up were identified. No additional lead-acid, nickel-cadmium, or similar batteries were observed. It is likely that lead-acid batteries are used to supply emergency back-up power to the signs.

#### **4.6 UNUSED AND/OR WASTE CHEMICALS**

WSP observed many unused chemicals associated with the maintenance of the pools in the natatorium. The majority of the chemicals were located on the "B" level in and near the pump room. The chemicals observed included:

- powdered chlorine and chlorine tablets



- muriatic acid (pH adjust)
- soda ash (pH adjust)
- water clarifier
- latex paint.

The chemicals were in plastic containers that ranged from 1 gallon to 5 gallons in size, and in bags that ranged from 10 pounds to 80 pounds in size. The majority of the containers were in good condition with the exception of a few bags of powdered chemicals that were torn. Before renovations begin, these chemicals should be moved and properly stored or disposed of at an approved facility according to local and federal requirements.

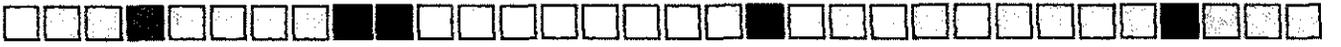
#### **4.7 CONCLUSIONS AND RECOMMENDATIONS**

During the survey, electrical power was supplied to each of the following suspect hazardous materials. Consequently, removal of covers, faceplates, or other disassembly could not be performed. Therefore, this inventory represents suspected hazardous materials that have not been visually verified by label, color, or other means. The hazardous materials survey identified the following items that are suspected hazardous items and their approximate quantities:

- light ballasts – 48
- fluorescent bulbs – 220
- lead-acid batteries – 8
- air-conditioning units – 1

Additionally, pool maintenance chemicals were observed onsite. Before renovations begin, these chemicals should be moved and properly stored or disposed of at an approved facility according to local and federal requirements.

Table 4-1 provides a summary of these materials. No testing was performed on these items. Prior to renovation or demolition, these items should be further characterized to determine if they are hazardous materials or removed.



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# Tables



**Table 2-1**

**Suspect Asbestos Containing Building Materials  
Natatorium at the University of the District of Columbia  
Washington, DC**

<u>Sample ID</u>	<u>Date Collected</u>	<u>Material Description</u>	<u>Material Location(s)</u>	<u>F/NF<sup>(a)</sup></u>	<u>Condition</u>	<u>% ACM &amp; type<sup>(b)</sup></u>
UDC-2009-47A-MISC1	10/22/2009	12-inch x 12-inch floor tile	Womens locker room 1		Good	NAD
UDC-2009-47A-MISC2	10/22/2009	Blue cove base	Womens locker room 1		Good	NAD
UDC-2009-47A-MISC3	10/22/2009	Brown cove base	Dive office		Poor	NAD
UDC-2009-47A-MISC4	10/22/2009	Caulk and filler	Wall of pool area		Poor	NAD
UDC-2009-47A-MISC5	10/22/2009	White cove base	Womens basketball locker room		Fair	NAD
UDC-2009-47A-MISC6	10/22/2009	12-inch x 12-inch floor tile	Pool office hallway		Good	11% CH
UDC-2009-47A-MISC6	10/22/2009	Mastic on 12-inch x 12-inch floor tile	Pool office hallway		Good	14% CH
UDC-2009-47A-MISC7	10/22/2009	Cove base	Pool office, on heater unit		Poor	NAD
UDC-2009-47A-MISC8	10/22/2009	White cove base	Pool office		Good	NAD
UDC-2009-47A-MISC9	10/22/2009	2-foot x 4-foot ceiling tile	Pool office hall		Fair	NAD
UDC-2009-47A-MISC10	10/22/2009	White cove base	47/A14B		Good	NAD
UDC-2009-47A-MISC11	10/22/2009	Brown cove base	Janitor's closet		Poor	NAD
UDC-2009-47A-MISC12	10/22/2009	Grey cove base	Hall stairwell 5 level A		Good	NAD
UDC-2009-47A-MISC13	10/22/2009	Brown cove base	Outer halls		Good	NAD
UDC-2009-47A-MISC14	10/22/2009	Brown cove base	Hallway to lockers 47/AF9		Fair	NAD
UDC-2009-47A-MISC15	10/22/2009	Four different 12-inch x 12-inch tiles, brown with tan and white streaks	Hallway to lockers 47/AF9		Good	NAD

**Table 2-1**

**Suspect Asbestos Containing Building Materials  
Natatorium at the University of the District of Columbia  
Washington, DC**

<u>Sample ID</u>	<u>Date Collected</u>	<u>Material Description</u>	<u>Material Location(s)</u>	<u>F/NF<sup>(a)</sup></u>	<u>Condition</u>	<u>% ACM &amp; type<sup>(b)</sup></u>
UDC-2009-47A-MISC16	10/22/2009	2-foot x 4-foot ceiling tiles	End of hallway to lockers 47/AF9		Fair	NAD
UDC-2009-47A-MISC17	10/22/2009	12-inch x 12-inch brown floor tile	Bathroom across from women's basketball locker area		Good	NAD
UDC-2009-47A-MISC17	10/22/2009	Mastic on 12-inch x 12-inch brown floor tile	Bathroom across from women's basketball locker area		Good	4%, CH
UDC-2009-47A-MISC18	10/22/2009	2-foot x 4-foot ceiling tile	Bathroom across from women's basketball locker area		Good	NAD
UDC-2009-47A-MISC19	10/22/2009	Brown cove base	Bathroom across from women's basketball locker area		Good	NAD
UDC-2009-47A-MISC20	10/22/2009	Caulk between casing and concrete	Pool area windows		Good	NAD
UDC-2009-47A-SURF1a	10/22/2009	Plaster on ceiling	Womens locker room 1		Good	NAD
UDC-2009-47A-SURF1b	10/22/2009	Plaster on ceiling	Womens locker room 1		Good	NAD
UDC-2009-47A-SURF1c	10/22/2009	Plaster on ceiling	Womens locker room 1		Good	NAD
UDC-2009-47A-SURF1d	10/22/2009	Plaster on ceiling	Womens locker room 2		Good	NAD
UDC-2009-47A-SURF1e	10/22/2009	Plaster on ceiling	Womens locker room 2		Good	NAD
UDC-2009-47A-SURF2a	10/22/2009	Plaster over CMU	Pool office		Good	NAD
UDC-2009-47A-SURF2b	10/22/2009	Plaster over CMU	Pool office		Good	NAD
UDC-2009-47A-SURF2c	10/22/2009	Plaster over CMU	Pool office		Good	NAD

**Table 2-1**

**Suspect Asbestos Containing Building Materials  
Natatorium at the University of the District of Columbia  
Washington, DC**

<u>Sample ID</u>	<u>Date Collected</u>	<u>Material Description</u>	<u>Material Location(s)</u>	<u>F/NF<sup>(a)</sup></u>	<u>Condition</u>	<u>% ACM &amp; type<sup>(b)</sup></u>
UDC-2009-47A-SURF3a	10/22/2009	Plaster on ceiling	Mens locker room		Poor	NAD
UDC-2009-47A-SURF3b	10/22/2009	Plaster on ceiling	Mens locker room		Poor	NAD
UDC-2009-47A-SURF3c	10/22/2009	Plaster on ceiling	Mens locker room		Poor	NAD
UDC-2009-47A-SURF3d	10/22/2009	Plaster on ceiling	Mens locker room		Poor	NAD
UDC-2009-47A-SURF3e	10/22/2009	Plaster on ceiling	Mens locker room		Poor	NAD
UDC-2009-47-1-MISC1	10/22/2009	Caulk and filler	Balcony column		Good	NAD
UDC-2009-47-1-MISC2	10/22/2009	Caulk	Balcony door		Good	NAD
UDC-2009-47-1-MISC3	10/22/2009	White cove base	Balcony		Fair	NAD
UDC-2009-47-1-MISC4	10/22/2009	12-inch x 12-inch floor tile	Balcony and officials booth		Fair	NAD
UDC-2009-47-1-MISC4	10/22/2009	Mastic on 12-inch x 12-inch floor tile	Balcony and officials booth		Fair	16% CH
UDC-2009-47-1-MISC5	10/22/2009	Brown cove base	Officials booth		Good	NAD
UDC-2009-47-1-MISC6	10/22/2009	2-foot x 4-foot ceiling tile	Officials booth		Poor	NAD
UDC-2009-47-1-SURF1a	10/22/2009	Wall plaster over CMU	Officials booth		Good	NAD
UDC-2009-47-1-SURF1b	10/22/2009	Wall plaster over CMU	Officials booth		Good	NAD
UDC-2009-47-1-SURF1c	10/22/2009	Wall plaster over CMU	Officials booth		Good	NAD

a/ F = Friable; NF = Nonfriable

b/ NAD = No Asbestos Detected, Ch = Chrysotile, Am = Amosite, PT = Point Count Analysis

NA = Not applicable.

Table 2-2

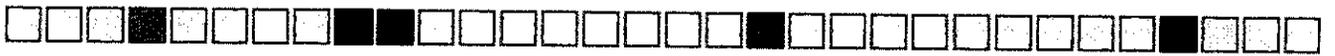
Inventory of Asbestos Containing Material  
 Natatorium at the University of the District of Columbia  
 Washington, DC

<u>Location</u>	<u>Material Description</u>	<u>Sample Numbers</u>	<u>Quantity (a)</u>	<u>Condition</u>
Pool office hallway	12-inch x 12-inch floor tile	UDC-2009-47A-MISC6	108 square feet	Good
Pool office hallway	Mastic on 12-inch x 12-inch floor tile	UDC-2009-47A-MISC6	108 square feet	Good
Bathroom across from women's basketball locker area	Mastic on 12-inch x 12-inch brown floor tile	UDC-2009-47A-MISC17	100 square feet	Good
Balcony and officials booth	Mastic on 12-inch x 12-inch floor tile	UDC-2009-47-1-MISC4	>1,000 square feet	Fair

**Table 4-1**

**Hazardous Materials Inventory  
Natatorium at the University of the District of Columbia  
Washington, DC**

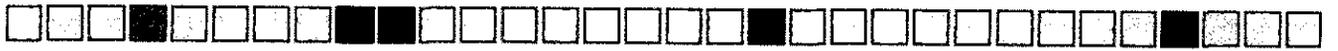
<u>Material Description</u>	<u>Material Locations</u>	<u>Estimated Quantity</u>	<u>Potential Hazardous Material</u>
Light ballasts	Womens locker room 1	8	PCBs
	Mens locker	15	
	Dive Office	2	
	Pool Office	6	
	HVAC mechanical room	15	
	Level "1"	10	
	Level "B"	5	
Fluorescent	Womens locker room 1	32	Mercury and other heavy metals
	Mens locker	60	
	Dive Office	8	
	Pool Office	24	
	HVAC mechanical room	60	
	Level "1"	40	
	Level "B"	20	
Lead-acid batteries	Exits to exterior	8	Lead and sulfuric acid
Air-conditioning units	HVAC room	1	Refrigerant
Chlorine	Level "B"	150 pounds	Chlorine and caustic chemical
Muriatic acid	Level "B"	100 gallons	Hydrochloric acid and acidic chemical
Soda ash	Level "B"	500 pounds	Sodium hydroxide and caustic chemical
Water clarifier	Level "B"	25 gallons	Unknown
Latex paint	Level "B"	50 gallons	Latex paint



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# Figures

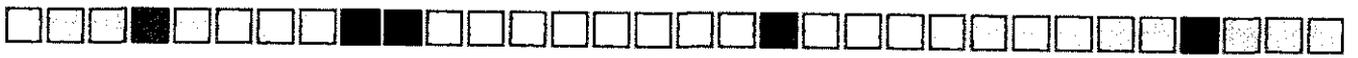




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# Appendix 2A – Asbestos Laboratory Reports and Chains of Custody





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Appendix 2B – Asbestos Inspector License – Keith Green

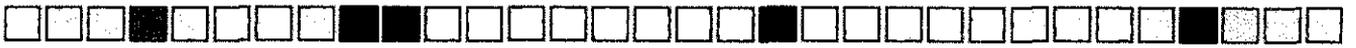
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**Appendix 3A – WSP Environment & Energy Lead-Based  
Paint Business Entity License and Lead Inspector  
License – James Edwards**





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## Appendix 3B – XRF Calibration Results



**Attachment B**  
**Additional Questions and Answers**

**Renovation of Campus Natatorium at Building no. 47**  
**Bid Questions and Clarifications**  
**GF-2010-B-0019**

59	Locks, panics, closers, wall stops, and flat goods are not available in 611 (US9) finish, This is brite bronze. The closest available finish to this is US10 Brushed bronze. Is this acceptable.	Section 08710	<i>The intent is to match as closely as possible to existing hardware finish. US10, 612 should be a very close match and is acceptable. If possible ALL hardware finishes to be same US 10, 612 finish such that they are consistant throughout.</i>
60	The 8875 exit device is not available with CD (cylinder dogging) option.	Section 08710	<i>Eliminate Dogging this exit device</i>
61	Locks are shown as Schlage D series which is a Knob. Should this be ND series with levers.	Section 08710	<i>Yes, All locks to be Schlage ND series with levers.</i>
62	The trim designation 02 for locks does not exist. What knob or lever trim is needed.	Section 08710	<i>07, Athens</i>
63	The core #04-039 shown for the Schlage locks does not exist. Please provide the correct part number. As this is listed as a permanent core are the locks to have interchangeable cylinders.	Section 08710	<i>23-030, 626</i>
64	Regarding pool and diving surge tanks. With the exception of Detail 6/SP4.1 and Detail 12/SDP4.1 a downward look at the hatch openings to access the pool Surge Tanks. We are assuming that these Hatches are accessed from the pool deck. Is this correct?		<i>yes, the surge tank hatches are accessed from the pool deck</i>
65	Detail 3/S2 shows an existing tunnel. Is there access to this tunnel from Corridor 004? Is this tunnel on the exterior of the building?	S2 & A3.01	<i>Yes, Space marked "tunnel" in detail 3/S2 is same as Observation Corr. 004 on 2/A3.01</i>
66	Are there any framing details ( other than bulkhead ) for the Gypsum Board Ceilings in Rooms 112, 119, 110, 113, 107, 109, and `104	Sheet A3.04	<i>No. Intent is to install GWB ceiling hung from framing mounted to conc. structure above at elevation show and to abut to existing concrete "step" along west side of these spaces. see 4/A4.01 to see config of"step" below bleacher area.</i>
67	What does M.O.an abbreviation for in Floor Plan Key Note on Drawing A3.0?	Sheet A3.01	<i>Masonry Opening.</i>
68	Are the Wall Mounted Acoustical Panels also to be Tectum panels a noted for the answer to Question 33 of Amendment 4 regarding the ceiling acoustical tile shown in detail 2/A305	A4.01 & A3.01	<i>Yes, all accoustical panels are now Tectum as specified in Question 33 above. See sheet A4.01 for extend and layout of wall panels. See A3.05 for extend and layout of ceiling panels.</i>
69	Regarding Question 38 of Amendment 4 requesting the height of the partitions: "See answer to Note 23" was the answer given, but Question 23 was asking about the existence of pre-bid meeting minutes. Is this correct or was there an answer to a different question that is to be referred?		<i>Answer to Question 38 should have read "See answer to 39 below" (Note we have changed the wording in response to 38 accordingly)</i>