PRE-DEMOLITION ASBESTOS SURVEY
Curtis Park Ballpark and Pool
1901 NW 24 Avenue
Miami, FL 33125

Prepared For:

City of Miami
Capital Improvements & Transportation Program
444 SW 2nd Avenue, 8th Floor
Miami, FL 33130

Prepared By:

URS Corporation
7800 Congress Ave., Suite 200
Boca Raton, FL 33487
561 994-6500

URS Project # 12640409
April 15, 2015

April 15, 2015

Mr. Andre Bryan, P.E., LEED® AP
Electrical Engineer
City of Miami
Capital Improvements & Transportation Program
444 SW 2nd Avenue, 8th Floor
Miami, FL 33130

Re: Pre-Demolition Asbestos Survey
Curtis Park – Ballpark and Pool
1901 NW 24th Avenue, Miami, FL 33125

Dear Mr. Bryan,

URS Corporation Southern has prepared this pre-demolition asbestos survey report for the above referenced site. The survey was performed in general accordance with our proposal dated November 20, 2014. We trust this report provides you with the information you require at this time. If you have any questions about the information presented within this report, please do not hesitate to contact our office at 561.994.6500.

Sincerely,

URS CORPORATION

Carlton Gordon, CAI/CAS
Industrial Hygienist

Luis E Smith, CIH, FLAC #AX53
URS Asbestos License #ZA295

URS Corporation
7800 Congress Avenue, Suite 200
Boca Raton, Florida 33487
Tel: 561-994-6500
Fax: 561-994-6524

CONTENTS

TABLES

FIGURES

APPENDICES

EXECUTIVE SUMMARY

URS Corporation Southern conducted a pre-demolition asbestos survey of Curtis Park ballpark bathroom building and swimming pool structures located at 1901 NW 24th Avenue in Miami, FL. The survey was conducted in order to identify asbestos-containing materials (ACM) in the referenced area. During the survey, URS collected 45 bulk samples for asbestos analysis.

The following ACMs were identified during this survey.

HSA #	ACM Description	HSA Location(s)	Asbestos Content	Quantity	Condition	NESHAP Category
2	4'x8' Cementitious Ceiling Panels	Pool House Building	35% Chrysotile	2,080 SF	Good	NF – II
4	Roof Flashing	Pool House Building Roof	2% Chrysotile	440 SF	Good	NF – I
9	4'x8' Cementitious Ceiling Panels	Pump House Building	30% Chrysotile	810 SF	Good	NF – II
10	Door Frame Caulk	Pump House Building Doors	2% Chrysotile	24 LF	Good	NF – I

Key
NF – I = Category I Non-Friable ACM
NF – II = Category II Non-Friable ACM

If the ACM identified during this survey will be impacted during the planned demolition, it must be removed and disposed of prior to disturbance in accordance with Federal, State or Local regulations governing the removal of ACM. Abatement of the ACM must be performed by a Florida licensed asbestos abatement contractor prior to disturbance.

Refer to the main report and appendices for detailed findings and supporting documentation.

1.0 INTRODUCTION

URS Corporation Southern (URS) is pleased to submit this report for the pre-demolition asbestos survey conducted at Curtis Park located at 1901 NW 24th Avenue in Miami, Florida (Site). The objective of this survey was to identify the presence of asbestos-containing materials (ACM) at the Site prior to a scheduled demolition. URS' asbestos survey was conducted by Mr. Carlton Gordon on April 9, 2015. Mr. Gordon is an AHERA certified Asbestos Building Inspector, certification number 14442, expiration date: June 2, 2015. The survey was performed under the direction of Mr. Luis Smith, Florida Licensed Asbestos Consultant (FLAC) #AX0000053 with URS Corporation. Refer to Appendix A for copies of the AHERA Building Inspector and Laboratory Certifications. Access to the Site was provided through Mr. Andre Bryan with the City of Miami.

1.1 Site Description

The site consisted of three buildings including the baseball field bathroom building, a pool house building, and a pump house building. The baseball field bathroom building was approximately 256 square feet (SF) in area and consisted of unfinished concrete walls, floor, and composite shingled roof with plywood deck. The pool house building was approximately 2,080 SF in area and consisted of concrete walls with ceramic tiles in the shower area, unfinished floor, and ceiling with 4' x 8' cementitious panels. The pump house building was approximately 810 SF in area and consisted of unfinished concrete walls and floor, and 4'x8' cementitous ceiling panels. The buildings were vacant at the time of the survey.

1.2 Limitations

URS' survey was limited to observation and minimal destructive sampling and analysis of potential asbestos-containing building materials in accessible portions of the Site including the pavilion structures and concrete slab areas only. However, common construction techniques render portions of any building inaccessible. As a result, additional asbestos-containing building materials may be present in inaccessible areas. Inaccessible areas should be presumed to contain asbestos until extensive destructive sampling is performed in those areas.

The conclusions of this report are URS' professional opinions, based solely upon visual site observations and interpretations of laboratory analyses, as described in this report. The opinions presented herein apply to the site conditions existing at the time of URS' investigation and interpretation of current regulations pertaining to asbestos. Therefore, URS' opinions and recommendations may not apply to future conditions that may exist at the site that we have not had the opportunity to evaluate. Applicable Federal, State and local regulations should always be verified prior to work that will disturb materials containing asbestos.

2.0 METHODOLOGY

2.1 Survey Methods

In order to identify suspect ACM and presumed ACM (PACM), URS conducted a walk-through survey of accessible portions of the proposed work areas. URS performed destructive sampling where applicable to investigate concealed areas and suspect materials in the building. URS' asbestos survey was performed in general accordance with the sampling protocol as outlined under AHERA (40 CFR 763). Approximate quantities of suspect materials were estimated by field measurements and/or drawing scale. The condition and friability (i.e., able to be readily crumbled, pulverized, or reduced to powder by hand pressure when dry) of suspect ACM were also noted. Friability of each sampled material was determined by hand-touch.

2.2 Sampling Methods

Suspect ACMs were grouped into homogeneous sampling areas (HSA) and categorized, according to AHERA 40 CFR 763, as thermal system insulation (TSI), surfacing material, or miscellaneous material. Samples were collected in a non-abrasive manner by carefully removing small portions of the suspect material with a sharp knife or other hand tool suitable to the material being sampled. Each sample was placed in a re-sealable plastic bag immediately after collection for transportation to the laboratory. The sampling instrument was subsequently wiped with a clean moist cloth to decontaminate the tool, prevent the potential release of asbestos fibers, and prevent contamination of subsequent samples. Following the collection of each sample, the sample location was patched, where applicable. Samples were numbered in the order they were taken. Data pertinent to each sample (e.g., date, sample number, material description, material quantity, and material condition) was recorded on a field data sheet. URS developed a sampling plan, which, at a minimum, included the collection and analysis of samples as follows:

Thermal System Insulation

In a randomly distributive manner, a minimum of three (3) samples of each suspect material in each HSA (not presumed to contain asbestos) were collected. At least one (1) bulk sample from each HSA of patched TSI was collected if the patch was less than six (6) square feet (SF).

Surfacing Material

In a randomly distributive manner, a minimum of three (3) samples were collected from each HSA that was 1,000 SF or less. A minimum of five (5) samples were collected from each HSA that was greater than 1,000 SF, but less than or equal to 5,000 SF. A minimum of seven (7) samples were collected from each HSA that was greater than 5,000 SF.

Miscellaneous Material

Samples were collected in a randomly distributive manner as deemed sufficient by URS' AHERA-accredited building inspector. At least two (2) samples were collected of each suspect miscellaneous material not presumed to contain asbestos.

Non-Suspect Materials

According to 40 CFR 763-86(4), sampling is not required where an AHERA-accredited building inspector has deemed TSI or miscellaneous materials to be fiberglass, foam glass, rubber, or other non-ACM.

2.3 Analytical Methods

The asbestos bulk samples and completed chain-of-custody sheets were delivered to Optimum Analytical and Consulting for analysis. This laboratory is accredited for asbestos fiber analysis through successful participation in the National Voluntary Laboratory Accreditation Program (NVLAP) for quality control procedures and meets the requirements of section 206(d) of Title II of the USC Chapter 15, TSCA as stated in 40 CFR 763 dated April 30, 1987. Each sample was analyzed using polarized light microscopy (PLM)/dispersion staining techniques, in accordance with EPA Method 600/R-93/116. The results of the analyses were reported on a percentage basis. The detection limit for this type of analysis is approximately one percent (by volume).

3.0 FINDINGS

During the survey, URS collected 45 bulk samples for asbestos analysis. Those building materials identified as ACMs are shown below.

HSA	**2: 4'x8' Cementitious Ceiling Panels**
Asbestos Content:	35% Chrysotile Asbestos
Quantity	Approximately 2,080 SF
HSA Location(s)	Pool House Building
NESHAPS Category	NF-2
Physical Assessment	Good
Photo	

HSA	**4: Roof Flashing**
Asbestos Content:	2% Chrysotile Asbestos
Quantity	Approximately 440 SF
HSA Location(s)	Pool House Building Roof
NESHAPS Category	NF-I
Physical Assessment	Good
Photo	

HSA	**9: 4'x8' Cementitious Ceiling Panels**
Asbestos Content:	30% Chrysotile Asbestos
Quantity	Approximately 810 SF
HSA Location(s)	Pump House Building
NESHAPS Category	NF-2
Physical Assessment	Good
Photo	

HSA	**10: Door Frame Caulk**
Asbestos Content:	2% Chrysotile Asbestos
Quantity	Approximately 24 LF on One Door
HSA Location(s)	Pump House Building
NESHAPS Category	NF-I
Physical Assessment	Good
Photo	

NF-I = Category I Non-Friable ACM.
NF-II = Category II Non-Friable ACM.

Refer to Table 1 located at the end of this report for a Bulk Sample Summary that includes analytical results, HSA & sample numbers, material descriptions, and sample locations for all samples collected. Refer to Appendix B for copies of the laboratory analysis report and chain-of-custody documents.

4.0 CONCLUSIONS

The pre-demolition asbestos survey conducted at the Site revealed the presence of the following ACMs:

1. HSA 2 – 4'x8' Cementitious Ceiling Panels, Category II Non-Friable ACM
2. HSA 4 – Roof Flashing, Category I Non-Friable ACM
3. HSA 9 – 4'x8' Cementitious Ceiling Panels, Category II Non-Friable ACM
4. HSA 10 – Door Frame Caulk, Category I Non-Friable ACM

5.0 RECOMMENDATIONS

Based on the conclusions made, URS recommends the following:

5.1 NF-II ACM

1. If the building is scheduled for demolition, any Category II Non-friable (NF-II) ACM identified in this report must be removed by a Florida licensed asbestos abatement contractor prior to demolition.

2. If abatement will be performed, URS recommends that an asbestos abatement work plan be developed to describe the appropriate engineering and administrative controls to be used for the safe and proper completion of the work. Additionally, project oversight and air monitoring should be performed by a Florida licensed asbestos consultant during asbestos abatement activities.

5.2 NF-1 ACM

As the building is scheduled for demolition, the owner has the option of removing any Category I non-friable (NF-I) ACM to minimize potential liability and ensure compliance with EPA and OSHA regulations. However, the EPA will generally allow NF-1 ACM to remain in place during demolition as long as such materials remain in a non-friable state and are not subjected to mechanical drilling, sanding, abrading, grinding, or sawing during demolition activities. If the building is demolished with this type of ACM in place, there are several requirements of the building owner and demolition contractor that must be met in order to be in full compliance with the NESHAP regulation 40 CFR Part 61, these may include but are not necessarily limited to:

- Wet demolition methods must be employed to prevent any visible emissions
- 10 day notification must be submitted along with fee payment, as applicable
- The work must supervised by a person trained in the NESHAP regulation
- Warning signs and labels must be used as specified.
- The landfill must be notified that the waste contains non-friable asbestos.

In addition to the EPA requirements stated above, the owner and demolition contractor must comply with applicable OSHA regulations for Class II work as per 29 CFR 1926.1101, these may include but are not necessarily limited to:

- Use of wet methods
- Establishment of a regulated area
- Worker exposure monitoring
- Respiratory protection
- Worker training
- Use of leak-tight containers
- Use of a competent person

If the owner elects to leave the Category I non-friable asbestos in place during demolition, it is recommended that demolition oversight be performed by a Florida licensed asbestos consulting firm to help ensure compliance with the various EPA and OSHA requirements.

5.3 General Recommendations

- The proper notification shall be submitted to the Southeast District of the Florida Department of Environmental Protection and local agency prior to building demolition or demolition involving ACM in excess of the threshold amounts.

- A copy of this survey report should be maintained on-site during demolition activities.

- Additional suspect ACMs may be present in inaccessible or concealed spaces that were unable to be identified during this survey. These spaces include, but are not limited to pipe chases, spaces between wall/ceiling/door cavities, interior of mechanical components, areas beneath the foundation, etc. If future maintenance/demolition activities make these areas accessible, URS recommends that a thorough assessment of these spaces be conducted at that time to identify and confirm the presence or absence of additional ACMs. Until then, any such untested suspect ACM should be treated as presumed ACM (PACM).

- Subcontractors and employees working within the structures at the site should be made aware of the locations of the ACMs and the possibility of concealed suspect ACMs that could be found during demolition activities. They should be advised not to disturb the ACMs.

- When demolition by toppling occurs, adequate wetting shall be employed to suppress the dust and reasonable enclosures for dust emission control (as compatible with the building character) shall be employed.

- Category I non-friable ACM waste debris generated during demolition can be generally disposed off-site in a landfill that accepts asbestos-containing demolition/construction debris wastes within the framework of local/state regulations. It is recommended that the demolition contractor and/or waste hauler verify with the local landfills about their policies on accepting such wastes prior to planning the demolition work.

- Category I non-friable ACM debris mixed with demolition debris should not be used as fill material on-site nor should it be sold or given away to others for the same use.

- If the substrate (such as concrete) on which these Category I non-friable ACMs are installed is intended for recycling, the non-friable ACMs shall be removed prior to the recycling process by a state-licensed asbestos abatement contractor prior to initiating substrate recycling activities.

- If the demolition contractor changes the means and methods of demolition and the environmental consultant is of the opinion that the Category I non-friable materials are being made friable, or if visible dust emissions are generated, the work should be stopped. In these situations, revised notification for removal of non-friable ACM may become necessary and the removal work will then need to be done by a State of Florida licensed abatement contractor.

6.0 REFERENCES

1. U.S. Environmental Protection Agency (EPA): Asbestos Hazard Emergency Response Act (AHERA), 40 CFR, Part 763.

2. U.S. EPA: Asbestos School Hazard Abatement Reauthorization Act (ASHARA), U.S. Code Title 15, Chapter 53, Subchapter II-2641 through 2656.

3. U.S. Environmental Protection Agency (EPA): National Emission Standards for Hazardous Air Pollutants (NESHAP). Asbestos, 40 CFR, Part 61, November 20, 1990.

4. Florida Statutes Chapter 469 Asbestos Abatement.

5. Florida Statutes Chapter 62—257.

6. Rule Chapter 61E1, Florida Administrative Code.

TABLES

Table 1
Bulk Sample Summary
Curtis Park - -Ballpark and Pool Buildings

HSA #	Sample #	HSA Description	Sample Location	Asbestos Content (%)
1A	001	Roofing Material	Ballpark Bathroom Building Roof	NAD
	002			
	003			
2A	004	Interior/Exterior Stucco on Ceiling	Ballpark Bathroom Building	NAD
	005			
	006			
3A	007	Ceramic Tile Grout	Ballpark Bathroom Building – Ladies Room	NAD
	008			
	009		Ballpark Bathroom Building – Men's Room	
1	001	Interior Stucco on Wall	Pool House – Men's Locker	NAD
	002		Pool House – Neutral Area	
	003		Pool House – Women's Locker	
2	**004**	**4'x8' Cementitious Interior Ceiling Panels**	**Pool House – Men's Locker**	**35% Chrysotile**
	005		**Pool House – Neutral Area**	
	006		**Pool House – Women's Locker**	
3	007	Roof Membrane	Pool House Roof - SE	NAD
	008		Pool House Roof - North	
	009		Pool House Roof - SW	
4	**010**	**Roof Flashing**	**Pool House Roof - SE**	**2% Chrysotile**
	011		**Pool House Roof - North**	
	012		**Pool House Roof - SW**	
5	013	Ceramic Tile Grout	Pool – East	NAD
	014		Pool – NE	
	015		Pool – West	
6	016	Pool Coating (Marcite)	Pool – North Wall	NAD
	017		Pool – Center Floor	
	018		Pool – SE Wall	
7	019	Pool Perimeter Caulk	Pool – NE	NAD
	020		Pool – North, Central	
	021		Pool – West, Central	

Table 1
Bulk Sample Summary
Curtis Park - -Ballpark and Pool Buildings

HSA #	Sample #	HSA Description	Sample Location	Asbestos Content (%)
8	022	Expansion Joint Caulk	Pool Deck – SE	NAD
	023		Pool Deck – SW	
	024		Pool Deck - NW	
9	**029**	**4'x8' Cementitious Ceiling Panels**	**Pump House – West**	**30% Chrysotile**
	030		**Pump House – Center**	
	031		**Pump House - East**	
10	**032**	**Door Frame Caulk**	**Pump House – West Door**	**2% Chrysotile**
	033			
	034			
11	035	Roof Membrane	Pump House Roof – NW	NAD
	036		Pump House Roof – West	
	037		Pump House Roof – East	
12	038	Roof Flashing	Pump House Roof – NW	NAD
	039		Pump House Roof – West	
	040		Pump House Roof – East	

Key

NAD = No Asbestos Detected
HSA =Homogeneous Sample Area
Positive results shown in **bold** and highlighted
Lab Order No.: Optimum Analytical 1511720 & 1511721

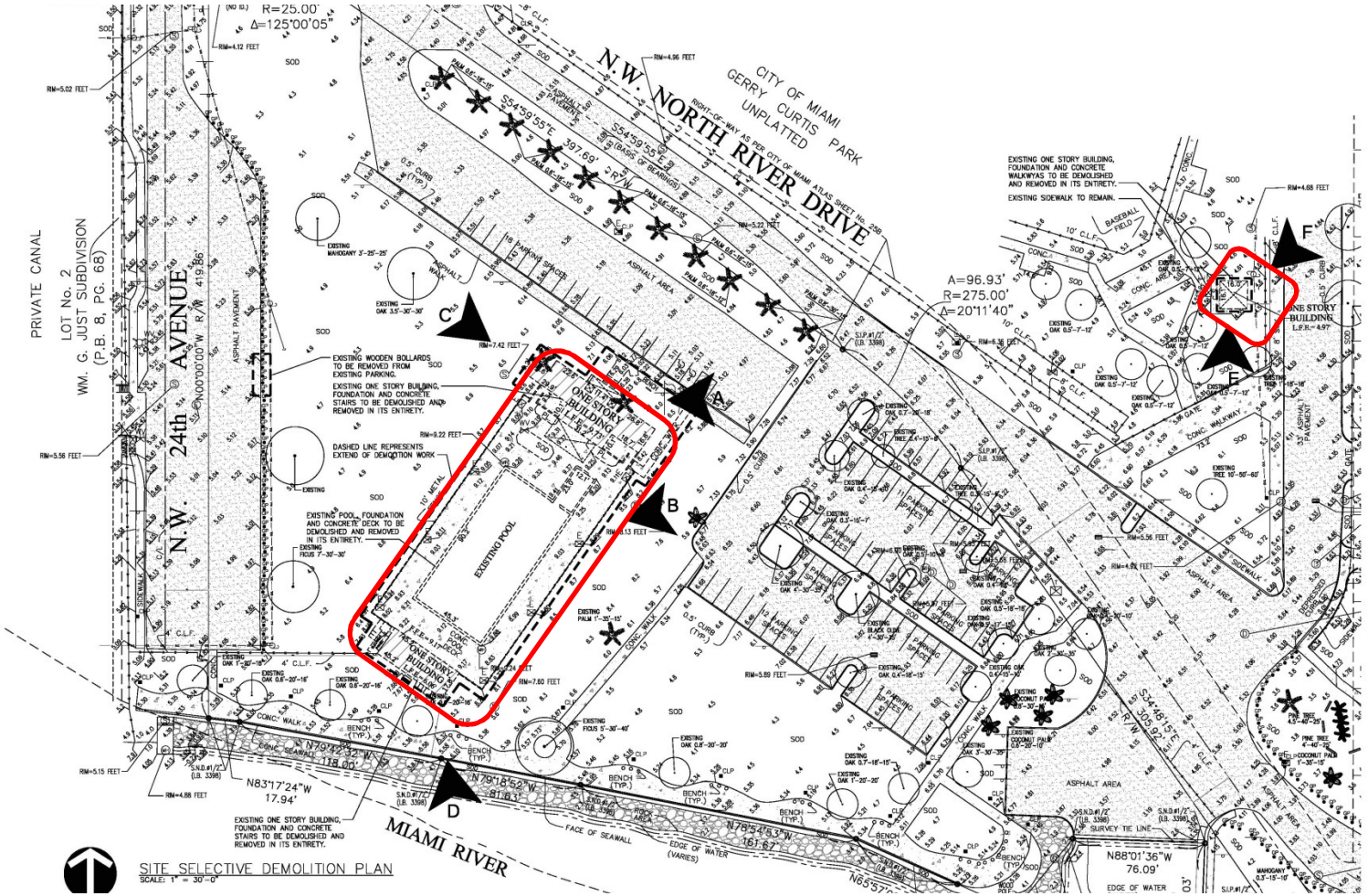
FIGURES

URS Corporation 7800 Congress Ave. #200 Boca Raton, FL 33487 561.994.6500	**SITE PLAN** Job No.: 12640409 Date: 4/14/15	**LEGEND** **HSA 2 - ACM 4'x8' CEMENTITIOUS CEILING PANEL IN POOL HOUSE BUILDING**	**Figure 1** **POOL HOUSE BUILDING**

URS Corporation 7800 Congress Ave. #200 Boca Raton, FL 33487 561.994.6500	**SITE PLAN** Job No.: 12640409 Date: 4/14/15	**LEGEND** **HSA 4 - ACM ROOF FLASHING**	**Figure 2** **POOL HOUSE BUILDING**

N

URS Corporation 7800 Congress Ave. #200 Boca Raton, FL 33487 561.994.6500	**SITE PLAN** Job No.: 12640409 Date: 4/14/15	**LEGEND** **HSA 9 - ACM 4'x8' CEMENTITIOUS CEILING PANEL IN PUMP HOUSE BUILDING**	**Figure 3** **PUMP HOUSE BUILDING**



URS Corporation 7800 Congress Ave. #200 Boca Raton, FL 33487 561.994.6500	**SITE PLAN** Job No.: 12640409 Date: 4/14/15	**LEGEND** Demolition Area	**Figure 4** **SITE DEMOLITION PLAN**

APPENDICES

APPENDIX A

INSPECTOR & LABORATORY ACCREDITATIONS

STATE OF FLORIDA
DEPARTMENT OF BUSINESS AND PROFESSIONAL REGULATION
ASBESTOS LICENSING UNIT

LICENSE NUMBER	
AX53	

The ASBESTOS CONSULTANT
Named below IS LICENSED
Under the provisions of Chapter 469 FS.
Expiration date: NOV 30, 2016

SMITH, LUIS EDUARDO
URS CORPORATION
7800 CONGRESS AVENUE SUITE 200
BOCA RATON FL 33487

ISSUED: 10/29/2014 DISPLAY AS REQUIRED BY LAW SEQ # L1410290003819

STATE OF FLORIDA
DEPARTMENT OF BUSINESS AND PROFESSIONAL REGULATION
ASBESTOS LICENSING UNIT

LICENSE NUMBER	
ZA295	

The ASBESTOS BUSINESS ORGANIZATION
Named below IS LICENSED
Under the provisions of Chapter 469 FS.
Expiration date: NOV 30, 2015

URS CORPORATION
LUIS SMITH
7800 CONGRESS AVENUE SUITE 200
BOCA RATON FL 33487

VIVA FLORIDA 500.

RICK SCOTT
GOVERNOR

ISSUED: 10/01/2013 SEQ # L1310010005222
DISPLAY AS REQUIRED BY LAW

KEN LAWSON
SECRETARY

The Environmental Institute

Carlton Gordon

Social Security Number - XXX-XX-0170

URS Corporation - 7800 Congress Avenue, Suite 200 - Boca Raton, Florida 33412

Has completed coursework and satisfactorily passed an examination that meets all criteria required for EPA/AHERA/ASHARA (TSCA Title II) Approved Reaccreditation

Asbestos in Buildings: Inspector Refresher

June 3, 2014
Course Date

June 3, 2014
Examination Date

June 2, 2015
Expiration Date

14442
Certificate Number

Thomas G. Laubenthal - Principal Instructor

Rachel G. McCain - Exam Administrator

David W. Hogue - Training Manager

Training Location: 2670 East Sunrise Blvd. - Ft .Lauderdale, FL 33304

(Approved by the ABIH Certification Maintenance Committee for 1/2 CM point - Approval #11-577)

(Florida Provider Registration Number FL49-0001342 - Course #FL49-0002805)

TEI - 1841 West Oak Parkway, Suite F - Marietta, Georgia 30062 - (770) 427-3600 - www.tei-atl.com

United States Department of Commerce
National Institute of Standards and Technology

NVLAP®

Certificate of Accreditation to ISO/IEC 17025:2005

NVLAP LAB CODE: 101433-0

Optimum Analytical & Consulting LLC

Salem, NH

is accredited by the National Voluntary Laboratory Accreditation Program for specific services, listed on the Scope of Accreditation, for:

BULK ASBESTOS FIBER ANALYSIS

This laboratory is accredited in accordance with the recognized International Standard ISO/IEC 17025:2005. This accreditation demonstrates technical competence for a defined scope and the operation of a laboratory quality management system (refer to joint ISO-ILAC-IAF Communique dated January 2009).

2014-04-01 through 2015-03-31

Effective dates

DEPARTMENT OF COMMERCE * UNITED STATES OF AMERICA *

For the National Institute of Standards and Technology

NVLAP-01C (REV. 2009-01-28)

APPENDIX B

ANALYTICAL REPORT and CHAIN-OF-CUSTODY RECORDS

OPTIMUM
Analytical and Consulting, LLC
85 Stiles Road, Suite 201, Salem, NH 03079 Phone: (603)-458-5247

Luis Smith
AECOM
7800 Congress Ave Suite 200
Boca Raton FL 33487

Project #:
Laboratory Batch #: 1511720
Date Samples Received: 04/10/2015
Date Samples Analyzed: 04/10/2015
Date of Final Report: 04/14/2015

SAMPLE IDENTIFICATION:

Nine (9) Bulk samples from Curtis Park-Baseball Bathroom; 1901 NW 24 Ave; Miami, FL; submitted by: Carlton Gordon

These bulk samples were delivered to Optimum Analytical Consulting, LLC for asbestos content determination.

ANALYTICAL METHOD:

Analytical procedures were performed in accordance with the U.S. Environmental Protection Agency (EPA) Recommended Method for the Determination of Asbestos in Bulk Samples by Polarized Light Microscopy and Dispersion Staining (PLM/DS)(EPA-600/M4-82-020, EPA-600/ R-93-116) and the New York Department of Health Environmental Laboratory Approval Program (NYDOH-ELAP 198.1) with the exception of resinously bound materials (please refer to the comments at the end of this report). This report relates only to those samples actually analyzed, and may not be indicative of other similar appearing materials existing at this, or other sites.

Quantification of asbestos content was determined by Calibrated Visual Estimation.

The EPA requires that friable samples with analytical results of 10% or less asbestos, by visual estimation, be treated as asbestos-containing material unless these quantities are verified using the point counting method. The point counting method is a systematic technique for estimating concentration, also using PLM. The point counting method, however, does not increase the analyst's ability to detect fibers. If you would like any of your friable samples with an asbestos content of less than 10% to be point counted, please contact our office. Point counting is not required for those samples in which no asbestos is detected during analysis by PLM.

In any given material, fibers with a small diameter (<0.25mm) may not be detected by the PLM method. Floor tile and other resinously bound material may yield a false negative if the asbestos fibers are too small to be resolved using PLM. Additional analytical methods may be required. Optimum recommends using Transmission Electron Microscopy (TEM) for a more definitive analysis.

New York state regulations require that all friable samples in which asbestos is detected be point counted (using the NYDOH-ELAP stratified point counting method). New York state regulations also require TEM confirmation of NOB (Non Organically Bound) samples found to have No Asbestos Detected by PLM. These regulations apply only to samples taken within the State of New York.

Optimum Analytical and Consulting, LLC will retain all samples for a minimum of three months. Further analysis or return of samples must be requested within this three month period to guarantee their availability.

Use of the NVLAP and AIHA Logo in no way constitutes or implies product certification, approval, or endorsement by the National Institute of Standards and Technology or the American Industrial Hygiene Association.

This report is considered preliminary until signed by the Laboratory Director and Supervisor.

If you have any questions regarding this report, please do not hesitate to contact us.

NVLAP Lab ID#: 101433-0

Jamie L. Noel
Laboratory Director

Kristina Scaviola
Laboratory Supervisor

OPTIMUM
Analytical and Consulting, LLC
85 Stiles Road, Suite 201, Salem, NH 03079 Phone: (603)-458-5247

BULK SAMPLE ANALYSIS REPORT
POLARIZED LIGHT MICROSCOPY

PLM (EPA-600/M4-82-020, EPA-600/ R-93-116) NVLAP Lab Code: 101433-0

CLIENT: AECOM
ADDRESS: 7800 Congress Ave Suite 200
CITY / STATE / ZIP: Boca Raton FL 33487
CONTACT: Luis Smith
DESCRIPTION: PLM Analysis
LOCATION: Curtis Park-Baseball Bathroom; 1901 NW 24 Ave; Miami, FL

ORDER #: 1511720
PROJECT #:
DATE COLLECTED: 04/09/2015
COLLECTED BY: Carlton Gordon
DATE RECEIVED: 04/10/2015
ANALYSIS DATE: 04/10/2015
REPORT DATE: 04/14/2015
ANALYST: Kristina Scaviola

REPORT OF ANALYSIS

Laboratory ID Sample No.	Sample Location Description	Layer No. Layer %	Asbestos Type	(%)	Non-Asbestos Components	(%)
1511720-001	Ballpark Bathroom Roof-West					
1A-001	LAYER 1 Roofing Materials - Top Layer Shingle, Black	LAYER 1 100%	None Detected		Cellulose Fiber Fibrous Glass Non-Fibrous Material	1% 50% 49%
	LAYER 2 Middle Layers, Built-Up, Black	LAYER 2 100%	None Detected		Cellulose Fiber Fibrous Glass Non-Fibrous Material	1% 35% 64%
	LAYER 3 Bottom Layer, Black	LAYER 3 100%	None Detected		Cellulose Fiber Fibrous Glass Non-Fibrous Material	30% 15% 55%
		Total % Asbestos:	No Asbestos Detected		**Total % Non-Asbestos:**	100.0%
1511720-002	Ballpark Bathroom Roof-North					
1A-002	LAYER 1 Roofing Materials - Top Layer Shingle, Black	LAYER 1 100%	None Detected		Cellulose Fiber Fibrous Glass Non-Fibrous Material	1% 50% 49%
	LAYER 2 Middle Layers, Built-Up, Black	LAYER 2 100%	None Detected		Cellulose Fiber Fibrous Glass Non-Fibrous Material	1% 35% 64%
	LAYER 3 Bottom Layer, Black	LAYER 3 100%	None Detected		Cellulose Fiber Fibrous Glass Non-Fibrous Material	30% 15% 55%
		Total % Asbestos:	No Asbestos Detected		**Total % Non-Asbestos:**	100.0%
1511720-003	Ballpark Bathroom Roof-East					
1A-003	LAYER 1 Roofing Materials - Top Layer Shingle, Black	LAYER 1 100%	None Detected		Cellulose Fiber Fibrous Glass Non-Fibrous Material	1% 50% 49%
	LAYER 2 Middle Layers, Built-Up, Black	LAYER 2 100%	None Detected		Cellulose Fiber Fibrous Glass Non-Fibrous Material	1% 35% 64%
	LAYER 3 Bottom Layer, Black	LAYER 3 100%	None Detected		Cellulose Fiber Fibrous Glass Non-Fibrous Material	30% 15% 55%
		Total % Asbestos:	No Asbestos Detected		**Total % Non-Asbestos:**	100.0%
1511720-004	Ballpark Bathroom Exterior-West Elevation					
2A-004	Stucco, Gray	LAYER 1 100%	None Detected		Cellulose Fiber Non-Fibrous Material	1% 99%
		Total % Asbestos:	No Asbestos Detected		**Total % Non-Asbestos:**	100.0%

OPTIMUM
Analytical and Consulting, LLC
85 Stiles Road, Suite 201, Salem, NH 03079 Phone: (603)-458-5247

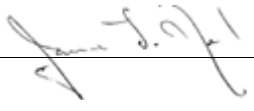
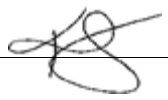
BULK SAMPLE ANALYSIS REPORT
POLARIZED LIGHT MICROSCOPY

PLM (EPA-600/M4-82-020, EPA-600/ R-93-116) NVLAP Lab Code: 101433-0

CLIENT:	AECOM	**ORDER #:**	1511720
ADDRESS:	7800 Congress Ave Suite 200	**PROJECT #:**	
CITY / STATE / ZIP:	Boca Raton FL 33487	**DATE COLLECTED:**	04/09/2015
CONTACT:	Luis Smith	**COLLECTED BY:**	Carlton Gordon
DESCRIPTION:	PLM Analysis	**DATE RECEIVED:**	04/10/2015
LOCATION:	Curtis Park-Baseball Bathroom; 1901 NW 24 Ave; Miami, FL	**ANALYSIS DATE:**	04/10/2015
		REPORT DATE:	04/14/2015
		ANALYST:	Kristina Scaviola

REPORT OF ANALYSIS

Laboratory ID Sample No.	Sample Location Description	Layer No. Layer %	Asbestos Type	(%)	Non-Asbestos Components	(%)
1511720-005	Ballpark Bathroom Exterior-South Elevation					
2A-005	Stucco, Gray	LAYER 1 100%	None Detected		Cellulose Fiber Non-Fibrous Material	1% 99%
		Total % Asbestos:	No Asbestos Detected		**Total % Non-Asbestos:**	100.0%
1511720-006	Ballpark Bathroom Exterior-East Elevation					
2A-006	Stucco, Gray	LAYER 1 100%	None Detected		Cellulose Fiber Non-Fibrous Material	1% 99%
		Total % Asbestos:	No Asbestos Detected		**Total % Non-Asbestos:**	100.0%
1511720-007	Ballpark Bathroom-Ladies Room					
3A-007	Ceramic Tile Grout, White	LAYER 1 100%	None Detected		Cellulose Fiber Non-Fibrous Material	1% 99%
		Total % Asbestos:	No Asbestos Detected		**Total % Non-Asbestos:**	100.0%
1511720-008	Ballpark Bathroom-Ladies Room					
3A-008	Ceramic Tile Grout, White	LAYER 1 100%	None Detected		Cellulose Fiber Non-Fibrous Material	1% 99%
		Total % Asbestos:	No Asbestos Detected		**Total % Non-Asbestos:**	100.0%
1511720-009	Ballpark Bathroom-Men's Room					
3A-009	Ceramic Tile Grout, White	LAYER 1 100%	None Detected		Cellulose Fiber Non-Fibrous Material	1% 99%
		Total % Asbestos:	No Asbestos Detected		**Total % Non-Asbestos:**	100.0%

Approved Signatory:  **Approved Signatory:** 

NVLAP® Lab Code: 101433-0

OPTIMUM
Analytical and Consulting, LLC

BULK SAMPLE ANALYSIS REPORT
POLARIZED LIGHT MICROSCOPY
PLM (EPA-600/M4-82-020, EPA-600/ R-93-116) NVLAP Lab Code: 101433-0

85 Stiles Road, Suite 201, Salem, NH 03079 Phone: (603)-458-5247

CLIENT:	AECOM	**ORDER #:**	1511720
ADDRESS:	7800 Congress Ave Suite 200	**PROJECT #:**	
CITY / STATE / ZIP:	Boca Raton FL 33487	**DATE COLLECTED:**	04/09/2015
CONTACT:	Luis Smith	**COLLECTED BY:**	Carlton Gordon
DESCRIPTION:	PLM Analysis	**DATE RECEIVED:**	04/10/2015
LOCATION:	Curtis Park-Baseball Bathroom; 1901 NW 24 Ave; Miami, FL	**ANALYSIS DATE:**	04/10/2015
		REPORT DATE:	04/14/2015
		ANALYST:	Kristina Scaviola

OPTIMUM
Analytical and Consulting, LLC
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BULK SAMPLE ANALYSIS REPORT
POLARIZED LIGHT MICROSCOPY
PLM (EPA-600/M4-82-020, EPA-600/ R-93-116) NVLAP Lab Code: 101433-0
CLIENT: AECOM
ADDRESS: 7800 Congress Ave Suite 200
CITY / STATE / ZIP: Boca Raton FL 33487
CONTACT: Luis Smith
DESCRIPTION: PLM Analysis
LOCATION: Curtis Park-Baseball Bathroom; 1901 NW 24 Ave; Miami, FL
ORDER #: 1511720
PROJECT #:
DATE COLLECTED: 04/09/2015
COLLECTED BY: Carlton Gordon
DATE RECEIVED: 04/10/2015
ANALYSIS DATE: 04/10/2015
REPORT DATE: 04/10/2015
ANALYST: Kristina Scaviola

1511720

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CHAIN OF CUSTODY

NSA - Sample #	NSA Description	Sample Location
1A-001	Roofing Materials	Ballpark Bathroom Roof - West
002		- North
003		- East
2A-004	Stucco	Ballpark Bathroom Exterior - West Elevation
005		- South Elev.
006		- East Elevation
3A-007	Ceramic Tile Grout	Ballpark Bathroom - Ladies Room
008		- " "
009		- Men's Room

1st Positive Stop Analysis

Date	Time	Samples Relinquished By:	Samples Received By:
4-9-15	16:00		
4/10/15	10:30		

Page 1 of 1

PAGE: 4 of 4

OPTIMUM
Analytical and Consulting, LLC
85 Stiles Road, Suite 201, Salem, NH 03079 Phone: (603)-458-5247

Luis Smith
AECOM
7800 Congress Ave Suite 200
Boca Raton FL 33487

Project #:
Laboratory Batch #: 1511721
Date Samples Received: 04/10/2015
Date Samples Analyzed: 04/13/2015
Date of Final Report: 04/13/2015

SAMPLE IDENTIFICATION:

Thirty Six (36) Bulk samples from Curtis Pool; 1901 NW 24 Ave; Miami, FL; submitted by: Carlton Gordon

These bulk samples were delivered to Optimum Analytical Consulting, LLC for asbestos content determination.

ANALYTICAL METHOD:

Analytical procedures were performed in accordance with the U.S. Environmental Protection Agency (EPA) Recommended Method for the Determination of Asbestos in Bulk Samples by Polarized Light Microscopy and Dispersion Staining (PLM/DS)(EPA-600/M4-82-020, EPA-600/ R-93-116) and the New York Department of Health Environmental Laboratory Approval Program (NYDOH-ELAP 198.1) with the exception of resinously bound materials (please refer to the comments at the end of this report). This report relates only to those samples actually analyzed, and may not be indicative of other similar appearing materials existing at this, or other sites.

Quantification of asbestos content was determined by Calibrated Visual Estimation.

The EPA requires that friable samples with analytical results of 10% or less asbestos, by visual estimation, be treated as asbestos-containing material unless these quantities are verified using the point counting method. The point counting method is a systematic technique for estimating concentration, also using PLM. The point counting method, however, does not increase the analyst's ability to detect fibers. If you would like any of your friable samples with an asbestos content of less than 10% to be point counted, please contact our office. Point counting is not required for those samples in which no asbestos is detected during analysis by PLM.

In any given material, fibers with a small diameter (<0.25mm) may not be detected by the PLM method. Floor tile and other resinously bound material may yield a false negative if the asbestos fibers are too small to be resolved using PLM. Additional analytical methods may be required. Optimum recommends using Transmission Electron Microscopy (TEM) for a more definitive analysis.

New York state regulations require that all friable samples in which asbestos is detected be point counted (using the NYDOH-ELAP stratified point counting method). New York state regulations also require TEM confirmation of NOB (Non Organically Bound) samples found to have No Asbestos Detected by PLM. These regulations apply only to samples taken within the State of New York.

Optimum Analytical and Consulting, LLC will retain all samples for a minimum of three months. Further analysis or return of samples must be requested within this three month period to guarantee their availability.

Use of the NVLAP and AIHA Logo in no way constitutes or implies product certification, approval, or endorsement by the National Institute of Standards and Technology or the American Industrial Hygiene Association.

This report is considered preliminary until signed by the Laboratory Director and Supervisor.

If you have any questions regarding this report, please do not hesitate to contact us.

NVLAP Lab ID#: 101433-0

Jamie L. Noel
Laboratory Director

Kristina Scaviola
Laboratory Supervisor

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BULK SAMPLE ANALYSIS REPORT
POLARIZED LIGHT MICROSCOPY

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CONTACT: Luis Smith
DESCRIPTION: PLM Analysis
LOCATION: Curtis Pool; 1901 NW 24 Ave; Miami, FL

ORDER #: 1511721
PROJECT #:
DATE COLLECTED: 04/09/2015
COLLECTED BY: Carlton Gordon
DATE RECEIVED: 04/10/2015
ANALYSIS DATE: 04/13/2015
REPORT DATE: 04/13/2015
ANALYST: Jason Chomor

REPORT OF ANALYSIS

Laboratory ID Sample No.	Sample Location Description	Layer No. Layer %	Asbestos Type	(%)	Non-Asbestos Components	(%)
1511721-001	Pool House-Men's Locker Room					
1-001	Stucco, Gray	LAYER 1 100%	None Detected		Cellulose Fiber Non-Fibrous Material	1% 99%
		Total % Asbestos:	No Asbestos Detected		**Total % Non-Asbestos:**	100.0%
1511721-002	Pool House-Neutral Area					
1-002	Stucco, Gray	LAYER 1 100%	None Detected		Cellulose Fiber Non-Fibrous Material	1% 99%
		Total % Asbestos:	No Asbestos Detected		**Total % Non-Asbestos:**	100.0%
1511721-003	Pool House-Women's Locker Room					
1-003	Stucco, Gray	LAYER 1 100%	None Detected		Cellulose Fiber Non-Fibrous Material	1% 99%
		Total % Asbestos:	No Asbestos Detected		**Total % Non-Asbestos:**	100.0%
1511721-004	Pool House-Men's Locker Room					
2-004	4'x8' Cementitious Clg. Panel, Grey/Beige	LAYER 1 100%	Chrysotile	35%	Cellulose Fiber Binder/Filler	1% 64%
		Total % Asbestos:		35.0%	**Total % Non-Asbestos:**	65.0%
1511721-005	Pool House-Neutral Area					
2-005	4'x8' Cementitious Clg. Panel, Grey/Beige Note: Positive Stop	LAYER 1 100%				
1511721-006	Pool House-Women's Locker Room					
2-006	4'x8' Cementitious Clg. Panel, Grey/Beige Note: Positive Stop	LAYER 1 100%				
1511721-007	Pool House Roof-SE					
3-007	LAYER 1 Roof Membrane, Black	LAYER 1 100%	None Detected		Cellulose Fiber Fibrous Glass Non-Fibrous Material	1% 80% 19%
	LAYER 2 Tar, Black	LAYER 2 100%	None Detected		Cellulose Fiber Non-Fibrous Material	3% 97%
	LAYER 3 Fiberglass Paper, Black	LAYER 3 100%	None Detected		Cellulose Fiber Fibrous Glass Non-Fibrous Material	1% 85% 14%
		Total % Asbestos:	No Asbestos Detected		**Total % Non-Asbestos:**	100.0%

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PLM (EPA-600/M4-82-020, EPA-600/ R-93-116) NVLAP Lab Code: 101433-0

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CITY / STATE / ZIP: Boca Raton FL 33487
CONTACT: Luis Smith
DESCRIPTION: PLM Analysis
LOCATION: Curtis Pool; 1901 NW 24 Ave; Miami, FL

ORDER #: 1511721
PROJECT #:
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COLLECTED BY: Carlton Gordon
DATE RECEIVED: 04/10/2015
ANALYSIS DATE: 04/13/2015
REPORT DATE: 04/13/2015
ANALYST: Jason Chomor

REPORT OF ANALYSIS

Laboratory ID / Sample No.	Sample Location / Description	Layer No. / Layer %	Asbestos Type	(%)	Non-Asbestos Components	(%)
1511721-008	Pool House Roof-North					
3-008	LAYER 1	LAYER 1	None Detected		Cellulose Fiber	1%
	Roof Membrane, Black	100%			Fibrous Glass	80%
					Non-Fibrous Material	19%
	LAYER 2	LAYER 2	None Detected		Cellulose Fiber	3%
	Tar, Black	100%			Non-Fibrous Material	97%
	LAYER 3	LAYER 3	None Detected		Cellulose Fiber	1%
	Fiberglass Paper, Black	100%			Fibrous Glass	85%
					Non-Fibrous Material	14%
	LAYER 4	LAYER 4	None Detected		Cellulose Fiber	80%
	Insulation, Brown	100%			Non-Fibrous Material	20%
		Total % Asbestos:	No Asbestos Detected		**Total % Non-Asbestos:**	100.0%
1511721-009	Pool House Roof-SW					
3-009	LAYER 1	LAYER 1	None Detected		Cellulose Fiber	1%
	Roof Membrane, Black	100%			Fibrous Glass	80%
					Non-Fibrous Material	19%
	LAYER 2	LAYER 2	None Detected		Cellulose Fiber	3%
	Tar, Black	100%			Non-Fibrous Material	97%
	LAYER 3	LAYER 3	None Detected		Cellulose Fiber	1%
	Fiberglass Paper, Black	100%			Fibrous Glass	85%
					Non-Fibrous Material	14%
	LAYER 4	LAYER 4	None Detected		Cellulose Fiber	80%
	Insulation, Brown	100%			Non-Fibrous Material	20%
		Total % Asbestos:	No Asbestos Detected		**Total % Non-Asbestos:**	100.0%
1511721-010	Pool House Roof-SE					
4-010	LAYER 1	LAYER 1	Chrysotile	2%	Brucite	4%
	Roof Flashing, Black/Silver	100%			Cellulose Fiber	2%
					Binder/Filler	92%
	LAYER 2	LAYER 2	None Detected		Cellulose Fiber	1%
	Roofing Tar, Black	100%			Fibrous Glass	1%
					Binder/Filler	98%
	LAYER 3	LAYER 3	None Detected		Cellulose Fiber	5%
	Roofing Material, Brown/Black	100%			Fibrous Glass	75%
					Binder/Filler	20%
	LAYER 4	LAYER 4	None Detected		Cellulose Fiber	95%
	Roofing Insulation, Brown	100%			Fibrous Glass	2%
					Binder/Filler	3%
		Total % Asbestos:		2.0%	**Total % Non-Asbestos:**	98.0%

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Analytical and Consulting, LLC
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BULK SAMPLE ANALYSIS REPORT
POLARIZED LIGHT MICROSCOPY

PLM (EPA-600/M4-82-020, EPA-600/ R-93-116) NVLAP Lab Code: 101433-0

CLIENT: AECOM
ADDRESS: 7800 Congress Ave Suite 200
CITY / STATE / ZIP: Boca Raton FL 33487
CONTACT: Luis Smith
DESCRIPTION: PLM Analysis
LOCATION: Curtis Pool; 1901 NW 24 Ave; Miami, FL

ORDER #: 1511721
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DATE COLLECTED: 04/09/2015
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DATE RECEIVED: 04/10/2015
ANALYSIS DATE: 04/13/2015
REPORT DATE: 04/13/2015
ANALYST: Jason Chomor

REPORT OF ANALYSIS

Laboratory ID / Sample No.	Sample Location / Description	Layer No. / Layer %	Asbestos Type	(%)	Non-Asbestos Components	(%)
1511721-011	Pool House Roof-North					
4-011	LAYER 1 Roof Flashing, Black/Silver Note: Positive Stop	LAYER 1 100%				
	LAYER 2 Roofing Tar, Black	LAYER 2 100%	None Detected		Cellulose Fiber Fibrous Glass Binder/Filler	1% 1% 98%
	LAYER 3 Roofing Material, Brown/Black	LAYER 3 100%	None Detected		Cellulose Fiber Fibrous Glass Binder/Filler	5% 75% 20%
		Total % Asbestos:	No Asbestos Detected		**Total % Non-Asbestos:**	100.0%
1511721-012	Pool House Roof-SW					
4-012	LAYER 1 Roof Flashing, Black/Silver Note: Positive Stop	LAYER 1 100%				
	LAYER 2 Roofing Tar, Black	LAYER 2 100%	None Detected		Cellulose Fiber Fibrous Glass Binder/Filler	1% 1% 98%
	LAYER 3 Roofing Material, Black/Brown	LAYER 3 100%	None Detected		Cellulose Fiber Fibrous Glass Binder/Filler	5% 75% 20%
		Total % Asbestos:	No Asbestos Detected		**Total % Non-Asbestos:**	100.0%
1511721-013	Pool-East					
5-013	Pool Ceramic Tile Grout, Beige	LAYER 1 100%	None Detected		Cellulose Fiber Binder/Filler	2% 98%
		Total % Asbestos:	No Asbestos Detected		**Total % Non-Asbestos:**	100.0%
1511721-014	Pool-North East					
5-014	Pool Ceramic Tile Grout, Beige	LAYER 1 100%	None Detected		Cellulose Fiber Binder/Filler	2% 98%
		Total % Asbestos:	No Asbestos Detected		**Total % Non-Asbestos:**	100.0%
1511721-015	Pool-West					
5-015	Pool Ceramic Tile Grout, Beige	LAYER 1 100%	None Detected		Cellulose Fiber Binder/Filler	2% 98%
		Total % Asbestos:	No Asbestos Detected		**Total % Non-Asbestos:**	100.0%

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PLM (EPA-600/M4-82-020, EPA-600/ R-93-116) NVLAP Lab Code: 101433-0

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ADDRESS: 7800 Congress Ave Suite 200
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DESCRIPTION: PLM Analysis
LOCATION: Curtis Pool; 1901 NW 24 Ave; Miami, FL

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REPORT OF ANALYSIS

Laboratory ID Sample No.	Sample Location Description	Layer No. Layer %	Asbestos Type	(%)	Non-Asbestos Components	(%)
1511721-016	Pool-North Wall					
6-016	LAYER 1 Pool Coating (Marcite), Top Layer, White	LAYER 1 100%	None Detected		Cellulose Fiber Binder/Filler	1% 99%
	LAYER 2 Pool Coating (Marcite), Bottom Layer, Blue	LAYER 2 100%	None Detected		Cellulose Fiber Binder/Filler	1% 99%
		Total % Asbestos:	No Asbestos Detected		**Total % Non-Asbestos:**	100.0%
1511721-017	Pool-Center Floor					
6-017	LAYER 1 Pool Coating (Marcite), Top Layer, White	LAYER 1 100%	None Detected		Cellulose Fiber Binder/Filler	1% 99%
	LAYER 2 Pool Coating (Marcite), Middle Layer, Blue	LAYER 2 100%	None Detected		Cellulose Fiber Binder/Filler	1% 99%
	LAYER 3 Pool Coating (Marcite), Bottom Layer, Grey	LAYER 3 100%	None Detected		Cellulose Fiber Binder/Filler	2% 98%
		Total % Asbestos:	No Asbestos Detected		**Total % Non-Asbestos:**	100.0%
1511721-018	Pool-South East Wall					
6-018	LAYER 1 Pool Coating (Marcite), Top Layer, White	LAYER 1 100%	None Detected		Cellulose Fiber Binder/Filler	1% 99%
	LAYER 2 Pool Coating (Marcite), Bottom Layer, Blue	LAYER 2 100%	None Detected		Cellulose Fiber Binder/Filler	1% 99%
		Total % Asbestos:	No Asbestos Detected		**Total % Non-Asbestos:**	100.0%
1511721-019	Pool-North East					
7-019	Caulk, Red/Beige	LAYER 1 100%	None Detected		Cellulose Fiber Binder/Filler	2% 98%
		Total % Asbestos:	No Asbestos Detected		**Total % Non-Asbestos:**	100.0%
1511721-020	Pool-North Central					
7-020	Caulk, Red/Beige	LAYER 1 100%	None Detected		Cellulose Fiber Binder/Filler	2% 98%
		Total % Asbestos:	No Asbestos Detected		**Total % Non-Asbestos:**	100.0%

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REPORT OF ANALYSIS

Laboratory ID Sample No.	Sample Location Description	Layer No. Layer %	Asbestos Type	(%)	Non-Asbestos Components	(%)
1511721-021 7-021	Pool-West Central Caulk, Red/Beige	LAYER 1 100%	None Detected		Cellulose Fiber Binder/Filler	2% 98%
		Total % Asbestos:	No Asbestos Detected		**Total % Non-Asbestos:**	100.0%
1511721-022 8-022	Pool Deck-SE Expansion Joint Compound, Grey/Red	LAYER 1 100%	None Detected		Cellulose Fiber Binder/Filler	1% 99%
		Total % Asbestos:	No Asbestos Detected		**Total % Non-Asbestos:**	100.0%
1511721-023 8-023	Pool Deck-SW Expansion Joint Compound, Grey/Red	LAYER 1 100%	None Detected		Cellulose Fiber Binder/Filler	1% 99%
		Total % Asbestos:	No Asbestos Detected		**Total % Non-Asbestos:**	100.0%
1511721-024 8-024	Pool Deck-NW Expansion Joint Compound, Grey/Red	LAYER 1 100%	None Detected		Cellulose Fiber Binder/Filler	1% 99%
		Total % Asbestos:	No Asbestos Detected		**Total % Non-Asbestos:**	100.0%
1511721-025 9-029	Pump House-West 4'x8' Cementitious Clg. Board, Grey	LAYER 1 100%	Chrysotile	30%	Cellulose Fiber Binder/Filler	2% 68%
		Total % Asbestos:		30.0%	**Total % Non-Asbestos:**	70.0%
1511721-026 9-030	Pump House-Center 4'x8' Cementitious Clg. Board, Grey Note: Positive Stop	LAYER 1 100%				
1511721-027 9-031	Pump House-East 4'x8' Cementitious Clg. Board, Grey Note: Positive Stop	LAYER 1 100%				
1511721-028 10-032	Pump House-West Door Door Frame Caulk, Green/Tan	LAYER 1 100%	Chrysotile	2%	Brucite Cellulose Fiber Binder/Filler	3% 1% 94%
		Total % Asbestos:		2.0%	**Total % Non-Asbestos:**	98.0%

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REPORT OF ANALYSIS

Laboratory ID / Sample No.	Sample Location / Description	Layer No. / Layer %	Asbestos Type	(%)	Non-Asbestos Components	(%)
1511721-029	Pump House-West Door					
10-033	Door Frame Caulk, Green/Tan Note: Positive Stop	LAYER 1 100%				
1511721-030	Pump House-West Door					
10-034	Door Frame Caulk, Green/Tan Note: Positive Stop	LAYER 1 100%				
1511721-031	Pump House Roof-NW					
11-035	LAYER 1 Roof Membrane, Flashing, Silver/Black	LAYER 1 100%	None Detected		Cellulose Fiber Binder/Filler	5% 95%
	LAYER 2 Roof Membrane, Roofing Tar, Black	LAYER 2 100%	None Detected		Cellulose Fiber Fibrous Glass Binder/Filler	1% 1% 98%
	LAYER 3 Roof Membrane, Roofing Material, Black	LAYER 3 100%	None Detected		Cellulose Fiber Fibrous Glass Binder/Filler	5% 75% 20%
	LAYER 4 Roof Membrane, Roof Insulation, Brown	LAYER 4 100%	None Detected		Cellulose Fiber Binder/Filler	95% 5%
		Total % Asbestos:	No Asbestos Detected		**Total % Non-Asbestos:**	100.0%
1511721-032	Pump House Roof-West					
11-036	LAYER 1 Roof Membrane, Flashing, Silver/Black	LAYER 1 100%	None Detected		Cellulose Fiber Binder/Filler	4% 96%
	LAYER 2 Roof Membrane, Roofing Tar, Black	LAYER 2 100%	None Detected		Cellulose Fiber Fibrous Glass Binder/Filler	1% 1% 98%
	LAYER 3 Roof Membrane, Roofing Material, Black	LAYER 3 100%	None Detected		Cellulose Fiber Fibrous Glass Binder/Filler	5% 75% 20%
	LAYER 4 Roof Membrane, Roof Insulation, Brown	LAYER 4 100%	None Detected		Cellulose Fiber Binder/Filler	95% 5%
		Total % Asbestos:	No Asbestos Detected		**Total % Non-Asbestos:**	100.0%

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ANALYST: Jason Chomor

REPORT OF ANALYSIS

Laboratory ID Sample No.	Sample Location Description	Layer No. Layer %	Asbestos Type	(%)	Non-Asbestos Components	(%)
1511721-033	Pump House Roof-South					
11-037	LAYER 1	LAYER 1	None Detected		Cellulose Fiber	5%
	Roof Membrane, Flashing, Black/Silver	100%			Binder/Filler	95%
	LAYER 2	LAYER 2	None Detected		Cellulose Fiber	1%
	Roof Membrane, Roofing Tar, Black	100%			Fibrous Glass	1%
					Binder/Filler	98%
	LAYER 3	LAYER 3	None Detected		Cellulose Fiber	5%
	Roof Membrane, Roofing Material, Black	100%			Fibrous Glass	75%
					Binder/Filler	20%
	LAYER 4	LAYER 4	None Detected		Cellulose Fiber	95%
	Roof Membrane, Roof Insulation, Brown	100%			Binder/Filler	5%
		Total % Asbestos:	No Asbestos Detected		**Total % Non-Asbestos:**	100.0%
1511721-034	Pump House Roof-NW					
12-038	LAYER 1	LAYER 1	None Detected		Cellulose Fiber	5%
	Roof Flashing, Silver/Black	100%			Binder/Filler	95%
	LAYER 2	LAYER 2	None Detected		Cellulose Fiber	3%
	Roofing Material, Black	100%			Fibrous Glass	80%
					Binder/Filler	17%
	LAYER 3	LAYER 3	None Detected		Cellulose Fiber	1%
	Roofing Tar, Black	100%			Fibrous Glass	1%
					Binder/Filler	98%
	LAYER 4	LAYER 4	None Detected		Cellulose Fiber	95%
	Roofing Insulation, Brown	100%			Binder/Filler	5%
		Total % Asbestos:	No Asbestos Detected		**Total % Non-Asbestos:**	100.0%
1511721-035	Pump House Roof-West					
12-039	LAYER 1	LAYER 1	None Detected		Cellulose Fiber	5%
	Roof Flashing, Silver/Black	100%			Binder/Filler	95%
	LAYER 2	LAYER 2	None Detected		Fibrous Glass	80%
	Roofing Material, Black	100%			Cellulose Fiber	3%
					Binder/Filler	17%
	LAYER 3	LAYER 3	None Detected		Cellulose Fiber	1%
	Roofing Tar, Black	100%			Fibrous Glass	1%
					Binder/Filler	98%
	LAYER 4	LAYER 4	None Detected		Cellulose Fiber	95%
	Roofing Insulation, Brown	100%			Binder/Filler	5%
		Total % Asbestos:	No Asbestos Detected		**Total % Non-Asbestos:**	100.0%

OPTIMUM
Analytical and Consulting, LLC
85 Stiles Road, Suite 201, Salem, NH 03079 Phone: (603)-458-5247

BULK SAMPLE ANALYSIS REPORT
POLARIZED LIGHT MICROSCOPY

PLM (EPA-600/M4-82-020, EPA-600/ R-93-116) NVLAP Lab Code: 101433-0

CLIENT:	AECOM	**ORDER #:**	1511721
ADDRESS:	7800 Congress Ave Suite 200	**PROJECT #:**	
CITY / STATE / ZIP:	Boca Raton FL 33487	**DATE COLLECTED:**	04/09/2015
CONTACT:	Luis Smith	**COLLECTED BY:**	Carlton Gordon
DESCRIPTION:	PLM Analysis	**DATE RECEIVED:**	04/10/2015
LOCATION:	Curtis Pool; 1901 NW 24 Ave; Miami, FL	**ANALYSIS DATE:**	04/13/2015
		REPORT DATE:	04/13/2015
		ANALYST:	Jason Chomor

REPORT OF ANALYSIS

Laboratory ID Sample No.	Sample Location Description	Layer No. Layer %	Asbestos Type	(%)	Non-Asbestos Components	(%)
1511721-036	Pump House Roof-South					
12-040	LAYER 1	LAYER 1	None Detected		Cellulose Fiber	5%
	Roof Flashing, Black	100%			Binder/Filler	95%
	LAYER 2	LAYER 2	None Detected		Cellulose Fiber	3%
	Roofing Material, Black	100%			Fibrous Glass	80%
					Binder/Filler	17%
	LAYER 3	LAYER 3	None Detected		Cellulose Fiber	1%
	Roofing Tar, Black	100%			Fibrous Glass	1%
					Binder/Filler	98%
		Total % Asbestos:	No Asbestos Detected		**Total % Non-Asbestos:**	100.0%

Approved Signatory: **Approved Signatory:**

NVLAP® Lab Code: 101433-0

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Analytical and Consulting, LLC

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BULK SAMPLE ANALYSIS REPORT
POLARIZED LIGHT MICROSCOPY

PLM (EPA-600/M4-82-020, EPA-600/ R-93-116) NVLAP Lab Code: 101433-0

CLIENT:	AECOM
ADDRESS:	7800 Congress Ave Suite 200
CITY / STATE / ZIP:	Boca Raton FL 33487
CONTACT:	Luis Smith
DESCRIPTION:	PLM Analysis
LOCATION:	Curtis Pool; 1901 NW 24 Ave; Miami, FL

ORDER #:	1511721
PROJECT #:	
DATE COLLECTED:	04/09/2015
COLLECTED BY:	Carlton Gordon
DATE RECEIVED:	04/10/2015
ANALYSIS DATE:	04/13/2015
REPORT DATE:	04/13/2015
ANALYST:	Jason Chomor

1511721

URS

7800 Congress Avenue, Suite 200
Boca Raton, Florida 33487
561-994-6500

Project Name	Curtis Pool
Project Address	1901 NW 24 Ave - Miami, FL
Sampler Name	CARLTON GORDON
Date Collected	4-9-15
Turnaround Time	24 Hrs
E-mail To:	luis.e.smith@aecom.com

CHAIN OF CUSTODY

HSA - Sample #	HSA Description	Sample Location
1 · 001	Stucco	Pool House - Men's Locker Rm
· 002	↓	- Neutral Area
· 003	↓	- Women's Locker Rm
2 · 004	4'x8' Cementitious	Pool House - Men's Locker Rm
· 005	clg. Panels	- Neutral Area
· 006	↓	- Women's Locker Rm
3 · 007	Roof Membrane	Pool House Roof - SE
· 008	↓	- North
· 009	↓	- SW
4 · 010	Roof Flashing	Pool House Roof - SE
· 011	↓	- North
· 012	↓	- SW
5 · 013	Pool Ceramic Tile Grout	Pool ~~House~~ - East
· 014	↓	- North East
· 015	↓	- West
6 · 016	Pool Coating (Marcite)	Pool - North Wall
· 017	↓	- Center - Floor
· 018	↓	- South East Wall
7 · 019	Caulk	Pool - North East
· 020	↓	North - Central

Special Instructions: 1st Positive Stop

Date	Time	Samples Relinquished By:	Samples Received By:
4-9-15	16:00		4.10.15

Page 1 of 2

OPTIMUM
Analytical and Consulting, LLC

85 Stiles Road, Suite 201, Salem, NH 03079 Phone: (603)-458-5247

BULK SAMPLE ANALYSIS REPORT
POLARIZED LIGHT MICROSCOPY

PLM (EPA-600/M4-82-020, EPA-600/ R-93-116) NVLAP Lab Code: 101433-0

CLIENT:	AECOM
ADDRESS:	7800 Congress Ave Suite 200
CITY / STATE / ZIP:	Boca Raton FL 33487
CONTACT:	Luis Smith
DESCRIPTION:	PLM Analysis
LOCATION:	Curtis Pool; 1901 NW 24 Ave; Miami, FL

ORDER #:	1511721
PROJECT #:	
DATE COLLECTED:	04/09/2015
COLLECTED BY:	Carlton Gordon
DATE RECEIVED:	04/10/2015
ANALYSIS DATE:	04/13/2015
REPORT DATE:	04/13/2015
ANALYST:	Jason Chomor

1511721

URS

7800 Congress Avenue, Suite 200
Boca Raton, Florida 33487
561-994-8500

Project Name	Curtis Pool
Project Address	1901 NW 24 Ave - Miami, FL
Sampler Name	Carlton Gordon
Date Collected	4-9-15
Turnaround Time	24 Hrs
E-mail To:	luis.e.smith@aecom.com

CHAIN OF CUSTODY

HSA - Sample #	HSA Description	Sample Location
7 · 021	Caulk	Pool - West - Central
8 · 022	Expansion Joint Caulk	Pool Deck - SE
↓ · 023	↓	- SW
↓ · 024	↓	- NW
9 · 029	4'x8' Cementitious Clg. Board	Pump House - West
↓ · 030	↓	- Center
↓ · 031	↓	- East
10 · 032	Door Frame Caulk	Pump House - West Door
↓ · 033	↓	↓
↓ · 034	↓	↓
11 · 035	Roof Membrane	Pump House Roof - NW
↓ · 036	↓	- West
↓ · 037	↓	- South
12 · 038	Roof Flashing	Pump House Roof - NW
↓ · 039	↓	- West
↓ · 040	↓	- South

Special Instructions: 1st Positive Stop

Date	Time	Samples Relinquished By:	Samples Received By:
4-9-15	1600	(W)	4-10-15

Page 2 of 2