

February 13, 2019

KENNETH C. JANDA
DEAN, SCHOOL OF PHYSICAL SCIENCES

RE: February 2019 Air Monitoring Report for Rowland Hall

Dear Dean Janda,

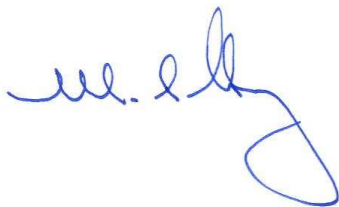
As requested, additional air samples throughout Rowland Hall were taken outside of the containment area during the fifth-floor asbestos-related construction activities on the overnight shift of February 5 to 6, 2019. The attached report from Forensics Analytical Consulting Services (EH&S second asbestos consultant), dated February 13, 2019, provides additional limited air sampling that compliments the Omega air monitoring results from the specified locations throughout Rowland Hall. Omega will also provide their comprehensive report for February 2019 by March 15. We have reviewed the report and the air sample data has been determined to meet the Environmental Protection Agency (EPA) clearance criteria of 0.01 fibers per cubic centimeters of air (f/cc), which means the air quality in public spaces met or exceeded all applicable standards.

If you have any questions regarding the environmental health and safety of Rowland Hall, please don't hesitate to contact us via phone (**949.824.6889**) or email (**magomez@uci.edu**). After hours calls may be directed to 949.824.6200.

If you have any questions regarding the construction activities on the fifth floor of Rowland Hall, please contact Design and Construction Services Senior Project Manager Chris Schneider via email (**jcshne1@uci.edu**).

We look forward to a safe and successful completion of the Rowland Hall fire life safety improvement project. Please let us know if you have any questions.

Sincerely,



Marc A. Gomez
Assistant Vice-Chancellor
Environmental Health and Safety



Dick T. Sun
Associate Deputy Director
Environmental Health and Safety

Attachment

February 13, 2019

TO Alvin M. Samala
Industrial Hygiene Supervisor
EH&S and Risk Services
University of California, Irvine
4600 Health Sciences Road
Irvine, CA 92697-2725

amsamala@uci.edu
949.824.4817

FROM Mark Smith
Forensic Analytical Consulting Services
2959 Pacific Commerce Drive
Rancho Dominguez, CA 90221

msmith@forensicanalytical.com
Phone: 310-668-5629

RE **Rowland Hall – U.C. Irvine
Fire Life Safety Upgrade Project
(FACS Project No. PJ40844)
Ambient Air Sampling – 2/05/2019**

This letter report presents the results of the limited asbestos air sampling conducted by Forensic Analytical Consulting Services (FACS) for the above referenced project. At your request, FACS conducted air monitoring (to determine airborne fiber levels) at specified locations throughout Rowland Hall, located on the University of California Irvine campus in Irvine, California. The air sampling was requested due to occupant concerns regarding air quality in association with asbestos abatement activities related to the ongoing Fire Life Safety Upgrade Project.

The air sampling was conducted on the overnight shift of February 5 to 6, 2019 by FACS personnel certified by the California Division of Industrial Relations, Department of Occupational Safety and Health (Cal/OSHA) as a Certified Asbestos Consultant (CAC). FACS representative Trinidad Rodriguez (CAC Certification No. 03-3320), conducted the air sampling.

The air samples were collected via electrically powered air-sampling pumps. The pumps were calibrated to draw a known volume of air through 0.8um mixed cellulose ester (MCE) sampling media housed in a 25 millimeter cowed cassette. The sampling trains were pre-and post-calibrated in the field using a rotometer which itself had been calibrated with a laboratory primary standard.

The samples were submitted to the Forensic Analytical Laboratories, Inc. (FALI) Rancho Dominguez, California laboratory for phase contrast microscopy (PCM) analysis using the National Institute of Safety and Health (NIOSH) Method 7400. Results are reported in fibers per cubic centimeter of air (f/cc).

Forensic Analytical is an American Industrial Hygiene Association (AIHA) accredited laboratory.

As a reference point to the numbers generated by the analysis, OSHA's permissible exposure limit (PEL) for asbestos is 0.1 f/cc. In addition, the EPA recommends 0.01 f/cc as the clearance criteria for reoccupation of an asbestos abatement area. All air sample results were well below the OSHA and EPA recommended airborne fiber limits.

A summary table listing sample locations and results are included in Table 1. Sample location drawings, laboratory report, and field sampling data sheets are included in Attachment A.

Please let me know if you have any questions about the testing results.

Respectfully,
FORENSIC ANALYTICAL CONSULTING SERVICES, INC.

A handwritten signature in black ink, appearing to be the initials 'M.S.' followed by a horizontal line.

Certified Asbestos Consultant No.00-2736

Table 1: Sample Results Summary Table
Attachment A: Sample location drawings, laboratory report, and field sampling data sheets

Table 1 Ambient Air Sampling Summary Rowland Hall Date Sampled: 2/05/19 & 02-06/19 / Laboratory Report Number: A247409		
Sample ID #	Location	Result (f/cc)
37012	Blank	NA
36943	Blank	NA
39476	Basement – Hallway at elevator	< 0.002
36926	Basement – West hallway outside B35	< 0.002
35544	Basement – East hallway outside B62A	< 0.002
37009	1 st floor – South hallway outside 130	< 0.002
39289	1 st floor – Elevator lobby, west end	< 0.002
39360	1 st floor – East hallway outside 184	< 0.002
39265	2 nd floor – East hallway outside 211	< 0.002
39284	2 nd floor – Elevator lobby, west end	< 0.002
39334	2 nd floor – West hallway outside 264	< 0.002
39298	3 rd floor – West hallway outside 358	< 0.002
37077	3 rd floor – Elevator lobby, center	< 0.002
39295	3 rd floor – East hallway outside 307	< 0.002
39323	4 th floor – East hallway outside 411	< 0.002
39296	4 th floor – Elevator lobby, center	0.006
39293	4 th floor – West hallway outside 438	< 0.002
39290	5 th floor – West hallway outside 539	< 0.002
36933	5 th floor – Elevator lobby, east end	< 0.002
36916	5 th floor – East hallway outside 510 (entry to Department of Mathematics)	< 0.002

< means “less than”

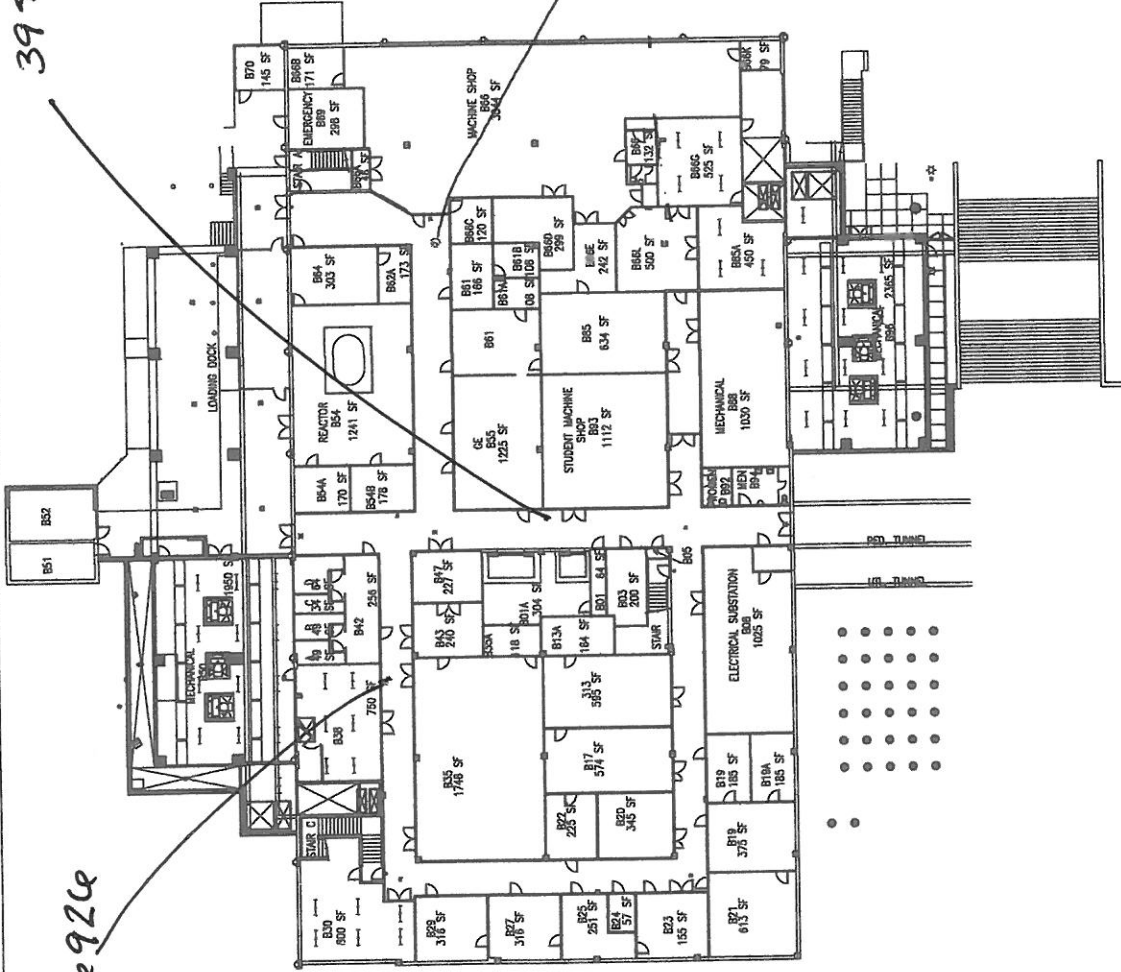
Attachment A: Sample location drawings, laboratory report, and field sampling data sheets

39476

36926

35544

N
↑



FOR REFERENCE ONLY. SUBJECT TO CHANGE WITHOUT NOTICE

CAMPUS MAP NUMBER 400	SQUARE FOOTAGE OF FLOOR 1234
CHAMP 9100	DATE OF LATEST REVISION 01/2010
DRAWING RETRIEVAL INFORMATION	

FACILITIES MANAGEMENT
UNIVERSITY OF CALIFORNIA, IRVINE

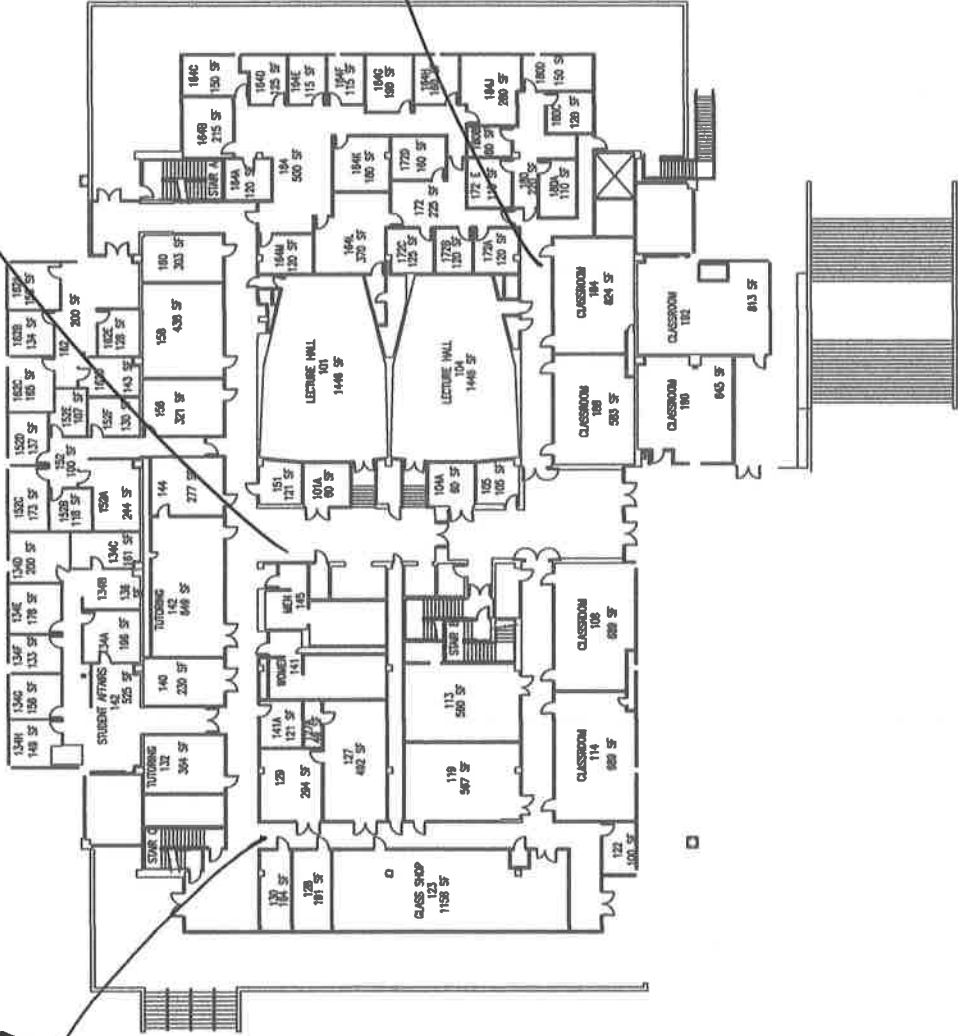
ROWLAND HALL
BASEMENT

39289

37009

39360

→N



FOR REFERENCE ONLY, SUBJECT TO CHANGE WITHOUT NOTICE

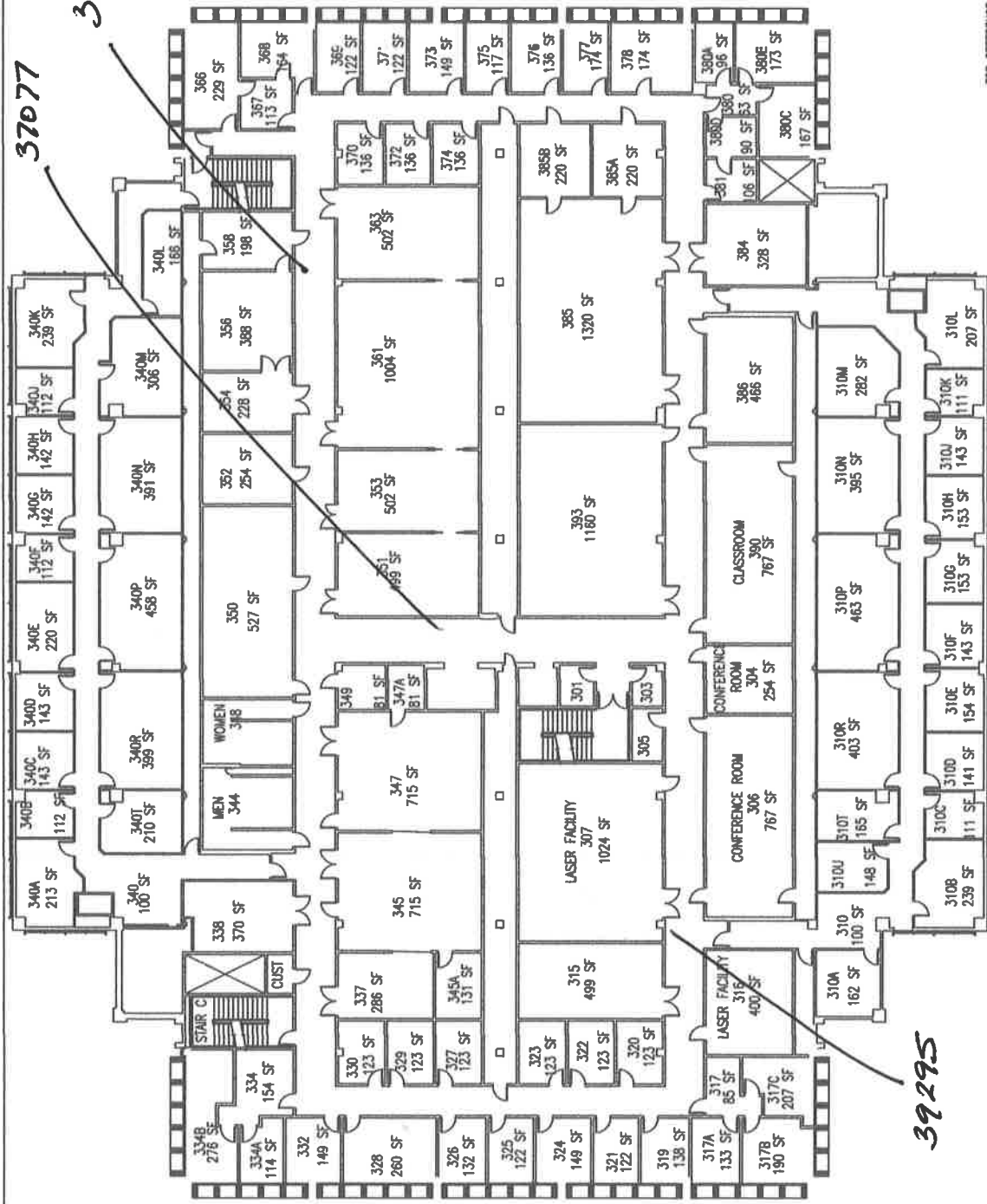
CAMPUS MAP NUMBER	400	SQUARE FOOTAGE OF FLOOR	1234
"DAMN"	9100	DATE OF LATEST REVISION	01/2010
DRAWING RETRIEVAL INFORMATION			

FACILITIES MANAGEMENT
UNIVERSITY OF CALIFORNIA, IRVINE

ROWLAND HALL
FIRST FLOOR

37077

39298



39295

→

FOR REFERENCE ONLY, SUBJECT TO CHANGE WITHOUT NOTICE

ROWLAND HALL THIRD FLOOR	CAMPUS MAP NUMBER 400	SQUARE FOOTAGE OF FLOOR 1234
	"CAAD" 8100	DATE OF LATEST REVISION 01/2010
	DRAWING RETRIEVAL INFORMATION	

FACILITIES MANAGEMENT
UNIVERSITY OF CALIFORNIA, IRVINE



Airborne Fiber Analysis

NIOSH 7400 Method, Issue 2, 15 August 1994, counting rules 'A'

Forensic Analytical Consulting Svcs
Mark A. Smith
2959 Pacific Commerce Drive

Rancho Dominguez, CA 90221

Client ID: LA05
Report Number: A247409
Date Received: 02/06/19
Date Analyzed: 02/07/19
Date Printed: 02/07/19
First Reported: 02/07/19

Job ID/Site: PJ40844; Roland Hall - Ambient Air Monitoring UCI Campus - Ring Road
Irvine CA 92697

FALI Job ID: LA05
Total Samples Submitted: 20
Total Samples Analyzed: 20

Sample ID	Lab Number	Date Collected	Volume (L)	Fibers	Fields	Fibers/mm ²	LOD F/cc	Fibers/cc
37012	51207021	02/05/19	0.0	0.0	100	--	--	--
Comments:	This result was used to blank correct the other samples on this rpt. Blank filters are reported only as # of fibers & fields counted.							
36943	51207022	02/05/19	0.0	0.0	100	--	--	--
Comments:	This result was used to blank correct the other samples on this rpt. Blank filters are reported only as # of fibers & fields counted.							
39476	51207023	02/05/19	1208.0	4.0	100	<7.0	0.002	< 0.002
36926	51207024	02/05/19	1208.0	1.5	100	<7.0	0.002	< 0.002
35544	51207025	02/05/19	1208.0	0.5	100	<7.0	0.002	< 0.002
37009	51207026	02/05/19	1208.0	0.0	100	<7.0	0.002	< 0.002
39289	51207027	02/05/19	1208.0	3.0	100	<7.0	0.002	< 0.002
39360	51207028	02/05/19	1208.0	1.0	100	<7.0	0.002	< 0.002
39265	51207029	02/05/19	1208.0	0.0	100	<7.0	0.002	< 0.002



Airborne Fiber Analysis

NIOSH 7400 Method, Issue 2, 15 August 1994, counting rules 'A'

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Job ID/Site: PJ40844; Roland Hall - Ambient Air Monitoring UCI Campus - Ring Road
Irvine CA 92697

FALI Job ID: LA05
Total Samples Submitted: 20
Total Samples Analyzed: 20

Sample ID	Lab Number	Date Collected	Volume (L)	Fibers	Fields	Fibers/mm ²	LOD F/cc	Fibers/cc
39284	51207030	02/05/19	1208.0	0.0	100	<7.0	0.002	< 0.002
39334	51207031	02/05/19	1208.0	0.0	100	<7.0	0.002	< 0.002
39298	51207032	02/05/19	1208.0	2.5	100	<7.0	0.002	< 0.002
37077	51207033	02/05/19	1208.0	0.5	100	<7.0	0.002	< 0.002
39295	51207034	02/05/19	1223.1	2.0	100	<7.0	0.002	< 0.002
39323	51207035	02/06/19	1208.0	0.0	100	<7.0	0.002	< 0.002
39296	51207036	02/06/19	1208.0	14.5	100	18.4	0.002	0.006
39293	51207037	02/06/19	1208.0	1.0	100	<7.0	0.002	< 0.002
39290	51207038	02/06/19	1208.0	1.5	100	<7.0	0.002	< 0.002
36933	51207039	02/06/19	1208.0	1.0	100	<7.0	0.002	< 0.002



Airborne Fiber Analysis

NIOSH 7400 Method, Issue 2, 15 August 1994, counting rules 'A'

Forensic Analytical Consulting Svcs
Mark A. Smith
2959 Pacific Commerce Drive

Rancho Dominguez, CA 90221

Client ID: LA05
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First Reported: 02/07/19

Job ID/Site: PJ40844; Roland Hall - Ambient Air Monitoring UCI Campus - Ring Road
Irvine CA 92697

FALI Job ID: LA05
Total Samples Submitted: 20
Total Samples Analyzed: 20

Sample ID	Lab Number	Date Collected	Volume (L)	Fibers	Fields	Fibers/mm ²	LOD F/cc	Fibers/cc
36916	51207040	02/06/19	1208.0	0.0	100	<7.0	0.002	< 0.002

Tiffani Ludd, Laboratory Supervisor, Rancho Dominguez Laboratory


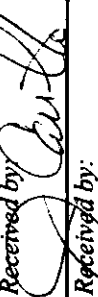
Intralaboratory Relative Standard Deviation (Sr) per 100 graticule fields: 5 to 20 fibers: 0.28; >20 to 50 fibers: 0.41; >50 fibers: 0.31

Analytical results and reports are generated by Forensic Analytical Laboratories Inc. (FALI) at the request of and for the exclusive use of the person or entity (client) named on such report. Results, reports or copies of same will not be released by FALI to any third party without prior written request from client. This report applies only to the sample(s) tested and results are based upon sample information provided by the client. Supporting laboratory documentation is available upon request. This report must not be reproduced except in full, unless approved by FALI. The client is solely responsible for the use and interpretation of test results and reports requested from Forensic Analytical. This report must not be used by the client to claim product endorsement by NVLAP or any other agency of the U.S. Government. FALI is not able to assess the degree of hazard resulting from materials analyzed. FALI reserves the right to dispose of all samples after a period of thirty (30) days, according to all state and federal guidelines, unless otherwise specified. Samples are not blank corrected unless otherwise noted. All samples were received in acceptable condition unless otherwise noted.

AIR SAMPLE REQUEST FORM

Client: LA05 FACS Los Angeles UC Irvine - EH&S Department	Sampled by: 75R PM: Mark Smith Date: 04/05/19	
Contact: Mark Smith Phone: (310) 668-5600	Special Instructions: E-mail results to E-mail results to msmith@forensicanalytical.com and mrvivas@forensicanalytical.com	
Site: Roland Hall - Ambient Air Monitoring	Turnaround Time: <input type="checkbox"/> < 12hr <input type="checkbox"/> Same-D <input type="checkbox"/> 1-Day <input checked="" type="checkbox"/> 2-Day <input type="checkbox"/> 3-Day <input type="checkbox"/> 5-Day <input type="checkbox"/> Other <input type="checkbox"/>	Due Date and Time:
Client No.: C15808:00003 FACS Job #: PJ40844	Analysis: <input checked="" type="checkbox"/> PC/M / TEM: <input type="checkbox"/> AHERA / <input type="checkbox"/> Yamate II / <input type="checkbox"/> NIOSH 7402 / <input type="checkbox"/> CARB-AHERA <input type="checkbox"/> Metals: Pb <input type="checkbox"/> Other:	
Calibration: <input checked="" type="checkbox"/> Rotometer / <input type="checkbox"/> Bubble Burette / <input type="checkbox"/> Dry Cell No.:	Code F: NO Analyzed by:	Date: Scope No.:

Sample No.	Sample Location	Type	Pump ID	LPM			Time On	Time Off	Total Volume	Fiber / Field	Fiber / CC
				Start	End	Average					
37012	Blank										
34993	Blank										
39476	Basement front of elev.	<input checked="" type="checkbox"/> B <input type="checkbox"/> R <input type="checkbox"/> C		15.1	15.1	15.1	2230	2350	1208		
36926	Basement W. hallway outside rm. B35	<input checked="" type="checkbox"/> B <input type="checkbox"/> R <input type="checkbox"/> C		15.1	15.1	15.1	2230	2350	1208		
35544	Basement E. hallway outside rm. B12A	<input checked="" type="checkbox"/> B <input type="checkbox"/> R <input type="checkbox"/> C		15.1	15.1	15.1	2231	2351	1208		
37009	1st floor S. hallway outside rm. 130	<input checked="" type="checkbox"/> B <input type="checkbox"/> R <input type="checkbox"/> C		15.1	15.1	15.1	2253	0013	1208		
39289	1st floor Elev. lobby W. end	<input checked="" type="checkbox"/> B <input type="checkbox"/> R <input type="checkbox"/> C		15.1	15.1	15.1	2254	0014	1208		
39360	1st floor E. hallway outside rm. 184	<input checked="" type="checkbox"/> B <input type="checkbox"/> R <input type="checkbox"/> C		15.1	15.1	15.1	2255	0015	1208		

Relinquished by: 	Date & Time: 04/05/19 08:00	Received by: 	Date & Time: 04-06-19 8:00
Relinquished by:	Date & Time:	Received by:	Date & Time:

* B - Background R - Removal C - Clearance

AIR SAMPLE REQUEST FORM

Client: LA05 FACS Los Angeles UC Irvine - EH&S Department
 Contact: Mark Smith Phone: (310) 668-5600
 Site: Roland Hall - Ambient Air Monitoring
 Client No.: C15808:00003 FACS Job #: PJ40844
 Calibration: Rotometer / Bubble Burette / Dry Cell No.:
 Sampled by: TSS PM: Mark Smith Date: 02/05/19
 Special Instructions: E-mail results to E-mail results to msmith@forensicanalytical.com and mrivas@forensicanalytical.com
 Turnaround Time: < 12hr Same-D 1-Day 2-Day 3-Day 5-Day Other
 Analysis: PCM / TEM: AHERA / Yamate II / NIOSH 7402 / CARB-AHERA Metals: Pb Other:
 Code F: No Analyzed by: Date: Scope No.:

Sample No.	Sample Location	Type	Pump ID	LPM			Time On	Time Off	Total Volume	Fiber / Field	Fiber / CC
				Start	End	Average					
	Blank										
	Blank										
39265	2nd floor E. hallway out side rm. 211	<input checked="" type="checkbox"/> B <input type="checkbox"/> R <input type="checkbox"/> C		15.1	15.1	15.1	0022	0112	1208		
39284	2nd floor elev. lobby w. end.	<input checked="" type="checkbox"/> B <input type="checkbox"/> R <input type="checkbox"/> C		15.1	15.1	15.1	0023	0143	1208		
39334	2nd floor w. hallway out side rm. 2104	<input checked="" type="checkbox"/> B <input type="checkbox"/> R <input type="checkbox"/> C		15.1	15.1	15.1	0024	0144	1208		
39298	3rd floor w. hallway out side rm. 358	<input checked="" type="checkbox"/> B <input type="checkbox"/> R <input type="checkbox"/> C		15.1	15.1	15.1	0000	0120	1208		
37077	3rd floor elev. lobby ctr.	<input checked="" type="checkbox"/> B <input type="checkbox"/> R <input type="checkbox"/> C		15.1	15.1	15.1	0001	0121	1208		
39295	3rd floor E hallway out side rm. 307	<input checked="" type="checkbox"/> B <input type="checkbox"/> R <input type="checkbox"/> C		15.1	15.1	15.1	0001	0122	1208		
Relinquished by:				Received by:				Date & Time: 02-06-19 8:47			
Relinquished by:				Received by:				Date & Time: Condition Acceptable <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No			

* B - Background R - Removal C - Clearance

AIR SAMPLE REQUEST FORM

Client: LA05 FACS Los Angeles UC Irvine - EH&S Department	Sampled by: <u>TSR</u>	PM: Mark Smith	Date: <u>02/04/19</u>
Contact: Mark Smith	Phone: (310) 668-5600	E-mail results to E-mail results to msmith@forensicanalytical.com and mrivas@forensicanalytical.com	
Site: Roland Hall - Ambient Air Monitoring	Turnaround Time:	< 12hr <input type="checkbox"/> Same-D <input type="checkbox"/> 1-Day <input checked="" type="checkbox"/> 2-Day <input type="checkbox"/> 3-Day <input type="checkbox"/> 5-Day <input type="checkbox"/> Other <input type="checkbox"/>	Due Date and Time:
Client No.: C15808:00003	FACS Job #: PJ40844	Analysis: <input type="checkbox"/> PCM / TEM: <input type="checkbox"/> AHERA / <input type="checkbox"/> Yamate II / <input type="checkbox"/> NIOSH 7402 / <input type="checkbox"/> CARB-AHERA <input type="checkbox"/> Metals: Pb <input type="checkbox"/> Other:	
Calibration: <input checked="" type="checkbox"/> Rotometer / <input type="checkbox"/> Bubble Burette / <input type="checkbox"/> Dry Cell No.:	Code F: NO	Analyzed by:	Date:

Sample No.	Sample Location	Type	Pump ID	LPM		Time On	Time Off	Total Volume	Fiber / Field	Fiber / CC
				Start	Average					
	Blank									
	Blank									
39225	4 th floor E hallway outside rm. 411	B R C		15.1	15.1	0154	0314	1208		
39296	4 th floor elev. lobby	B R C		15.1	15.1	0155	0315	1208		
39295	4 th floor w. hallway outside rm. 438	B R C		15.1	15.1	0155	0315	1208		
39290	5 th floor w. hallway outside rm. 539	B R C		15.1	15.1	0300	0420	1208		
39293	5 th floor elev. lobby E. end	B R C		15.1	15.1	0300	0420	1208		
39296	5 th floor E. hallway outside rm. 510	B R C		15.1	15.1	0301	0421	1208		
Relinquished by: <u>[Signature]</u>		Date & Time: <u>02/04/19</u>		Received by: <u>[Signature]</u>		Date & Time: <u>02-04-19</u>		Condition Acceptable <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No		
Relinquished by:		Date & Time:		Received by:		Date & Time:		Scope No.:		

* B - Background R - Removal C - Clearance