1520 W. Cameron Ave., Suite 103 ◆ West Covina, CA 91790
Ph. 626-962-4436 ◆ Fx. 626-962-4437 ◆ www.globalenvirotraining.com

Combustion By-Product / Testing / Analysis

Jobsite:

CALIFORNIA STATE UNIVERSITY LOS ANGELES (CSULA)
LUCKMAN THEATRE
5151 STATE UNIVERSITY DR.
LOS ANGELES, CA 90032

Prepared For:

MS. BARBARA L. QUEEN
CALIFORNIA STATE UNIVERSITY LOS ANGELES (CSULA)
5151 STATE UNIVERSITY DR.
LOS ANGELES, CA 90032

January 16, 2025

PROJECT №. **E225-004**

Mario Virgen
President

TABLE OF CONTENTS

Barbara L. Queen
Planning, Design & Construction
California State University, Los Angeles (CSULA)
5151 University Dr.
Los Angeles, CA 90032

Re: Combustion By-Product Testing
California State University, Los Angeles (CSULA)
Luckman Theatre
5151 University Dr.
Los Angeles, CA 90032

GETC Project №. E225-004

Dear Ms. Queen,

Global Environmental Training & Consulting (GETC) performed Ambient Air Testing for Combustion By-Product (Char, Soot, & Ash) at the above referenced property. GETC has reviewed the results from the accredited laboratory and based on the samples taken on January 14, 2025, throughout Luckman Theatre, results have concluded that all areas identified are below the outside background sample for Combustion By-Products.

Thank you for choosing GETC as the consultant for this project. If you have any questions, or if we can be of service again in the future, please do not hesitate to contact our office at (626) 962-4436.

Respectfully submitted,

Global Environmental Training & Consulting, Inc.
Mario Virgen, I.H.
President

Enclosures

1.0 EXECUTIVE SUMMARY

1.1 GENERAL INFORMATION

Global Environmental Training and Consulting, Inc. (GETC) was retained by the California State University, Los Angeles (CSULA) to conduct Ambient Air Quality Testing for Combustion By-Products at Luckman Theatre located at 5151 University Dr., in Los Angeles, California.

Carbon Black is a fine-grained solid residue that results from incomplete combustion of hydrocarbons. This testing is designed for analysis of fire residues for presence of analytes of interest (Char, Black Carbon/Soot, & Ash). The results of this test offer the client valuable information related to the extent of contamination produced by a fire from a residence or wildfire. These results can be used for cleaning assessment.

The sample collection was performed by GETC Industrial Hygienist Mr. Chris Virgen.

1.2 TASKS

GETC Performed Ambient Air Quality Testing for Combustion By-Product that included the following tasks:

- Collect Air Samples using Allergenco Cassettes within Luckman Theatre (9 Total) – For Combustion By-Product Analysis.
- Air Samples were collected following the ASTM D6602-13 Standards, "Standard Practices for sampling and testing of possible Carbon Black Fugitive Emissions or Environmental Particulates."

SAMPLING TABLE
COMBUSTION BY-PRODUCT
(CHAR, SOOT, & ASH)

LUCKMAN THEATRE					
SAMPLE NO.	LOCATION	CHAR PARTICULATES	SOOT PARTICULATES	ASH	TOTAL
01	N THEATRE SEATING	20	0	27	47
02	S THEATRE SEATING	33	7	47	87
03	THEATRE SEATING	13	0	20	33
04	BEHIND STAGE WALKWAY	753	47	93	893
05	REHEARSAL ROOM A	53	7	27	87
06	REHEARSAL ROOM B	40	0	53	93
07	STAFF ROOM	47	7	20	74
08	WOMEN'S CHORUS DRESSING ROOM	120	27	127	274
09	**OUTSIDE (CONTROL)**	22,787	127	253	23,167

2.0 METHODOLOGY

This section includes the description of the methodologies used to perform the Combustion By-Product Sampling and Analysis. These methodologies include air sampling analysis.

2.1 AIR SAMPLING

- Collect and submit for analysis samples for Combustion By-Product from within Luckman Theatre.

2.2 SAMPLING PROCEDURES AND ANALYSIS

Sampling Procedure

The inspector collected Nine (9) air samples from Luckman Theatre. Methods & Equipment:

- Polarized Light Microscopy (PLM)
- epi-Reflected Light Microscopy (RLM)

The samples were numbered and shipped to a laboratory accredited under the American Industrial Hygiene Association (AIHA) and Environmental Proficiency Analytical Testing Program (EPAT).

Chain-of-Custody Procedures

Chain-of-Custody documents possession of the samples from the time they are collected until they have been analyzed and are stored. Custody documentation must be followed whenever materials are received, collected, transferred, stored, analyzed, or destroyed.

The original Chain-of-Custody is to accompany the materials at all times. Custody documentation will begin at the time a sample is collected. Each transferor should retain a copy of the Chain-of-Custody record.

Laboratory Quality Control Program

Pasteur Laboratory maintains an in-house quality control program. This program involves precision and accuracy controls, use of standard bulk reference materials, maintenance of national and state accreditation, participation in external and internal proficiency testing programs, and confirmation of analyst experience and qualification in compliance with specific internal training and competency requirements.

2.3 REPORT FORMAT

This report has been organized in a manner that presents the data in several forms to best suit the needs of the property. The "Executive Summary" provides a description of the facility and analytical results for each area tested. The Air Sampling Log, Appendix A, contains detailed information on the locations of areas sampled. The "Analytical Reports", Appendix B, is a listing of samples taken and their Combustion By-Product Content.

3.0 FINDINGS AND RECOMMENDATIONS

3.1 GENERAL SUMMARY

- Sampling Logs & COC in Appendix A.
- Complete lab analyses for Combustion By-Products are given in Appendix B.
- Sampling Scheme is given in Appendix C.

3.2 RECOMMENDATIONS

Since all indoor air samples are below the Outside (Control) sample, Global Environmental Training & Consulting, Inc. (GETC) has no recommendations at this time.

4.0 WARRANTY

The field and laboratory results reported herein are considered sufficient in detail and scope to determine the presence of airborne Combustion By-Product Compounds in Luckman Theatre. Global Environmental Training & Consulting, Inc. warrants that the findings contained herein have been prepared in general accordance with accepted professional practices at the time of its preparation as applied by similar professionals in the community. Changes in the state of the art or in applicable regulations cannot be anticipated and have not been addressed in the report.

The air sampling and analytical methods have been used to provide the client with information regarding the presence of Combustion By-Product Compounds existing in Luckman Theatre at the time of sampling. Test results are valid only for the areas tested. There is a distinct possibility that conditions may exist which could not be identified within the scope of the study of which were not apparent during the site visit.

No other warranties are implied or expressed.

APPENDIX A

AIR SAMPLING LOG

Chain of Custody / Microbiology Sample Log

Pasteur Laboratory
158 N. Glendora Ave., Suite S (2nd floor)
Glendora, CA 91741
Tel: (626) 963-8686
E-mail: microbiology99@aol.com

0052

Page 1 of 1

CONTACT INFORMATION

Company: Global Environmental Training & Consulting	Address: 1520 W. Cameron Ave., Suite 103, West Covina, CA
Contact: Mario Virgen / Miguel Virgen	Fax results Y / N — Fax & Invoice to: 626-962-4437
Phone: 626-962-4436	Email results Y / N — staff@globalenvirotraining.com

PROJECT INFORMATION

Project Name: CAL STATE UNIVERSITY LA
Project Number: E225-004 – Luckman Theatre
Sampling Date: 1/14/25

TURN AROUND TIME - (TAT)

93
SD - Same Day (+75%)
WH - Weekend/Holiday (+100%)

Rushes received after 2pm or on weekends, will be considered received the next business day.

Sample ID	Sample Location	Sample Type	TAT (Above)	Flow Rate	Time	Total Volume	Fungi - SporeTrap Analysis	Fungi & Biological Particles	Fungi - Direct Microscopic Exam	Fungi - Standard Quant. Analysis	E. coli / Coliform Screen (MUG)	Bacteria - Quantitative Analysis
01	N° theatre seating											
02	S° Theatre seating											
03	Theatre Stage											
04	Behind Stage Walkway											
05	Rehearsal Room A											
06	Rehearsal Room B											
07	Staff Room											
08	Women's Chorus Dressing Room											
09	Outside/Control											

REQUESTED SERVICES (CHECK BOXES)

Non - Culturable: Spore Trap; Tape Swab Bulk
Culturable: Anderson, Swab, Water, Bulk, Dust, Soil, Contact Plate

NOTES:

X Ash, soot, & char

SAMPLE TYPE CODES

AP - Andersen Plate CP - Contact Plate
Z - Zefon Air-O-Cell All - AllergencoD
T - Tape S - Swab BL - Bulk
M2 - Allegro M2 - Multimold Cassette

RELINQUISHED BY	DATE	RECEIVED BY	DATE
	1/15/25		
	1-14-25		1/15/25

APPENDIX B

ANALYTICAL REPORTS

Char / Soot / Ash Particulate Report
(Aerosol Samples)
1/14/2025

Pasteur Laboratory
158 N. Glendora Ave., Suite S
Glendora, CA 91741
Tel: (626) 963-8686
E-mail: microbiology99@aol.com

Mario Virgen/Miguel Virgen
Global Environmental Training & Consulting
1520 W. Cameron Ave., Suite 103, West Covina, CA 91790
Tel: 626-962-4436 Fax: 626-962-4437
E-mail: staff@globalenvirotraining.com
Client's Project: Cal State University - Luckman Theatre- E225-004

Lab Reference No.: 00028-25-0052
Date Collected: January 14, 2025
Date Received: January 14, 2025
Date Analyzed: January 14, 2025
Sample(s) analyzed: 9

Laboratory Sample ID	12454			12455			12456			12457		
Client Sample ID	**01**			**02**			**03**			**04**		
Location	N Theatre seating			S Theatre seating			Theatre seating			Behind stage wallsway		
Volume (L)	150			150			150			150		
Background Debris*	Light			Light			Light			Moderate		
Sample Description	AllergencoD			AllergencoD			AllergencoD			AllergencoD		
	Raw cts	No. /m³	%	Raw ct	No. /m³	%	Raw cts	No. /m³	%	Raw cts	No. /m³	%
Char particulate:	3	20	42.55	5	33	37.93	2	13	39.39	113	753	84.32
Soot particulate	0	0	0.00	1	7	8.05	0	0	0.00	7	47	5.26
Ash:	4	27	57.45	7	47	54.02	3	20	60.61	14	93	10.41
Total numbers / m³	**47**			**87**			**33**			**893**		
Comments												
Limit of Detection	7			7			7			7		

*Background debris is an indication of amounts of biological and non-biological particulate matters present on the sample and is characterized as *very light, light, moderate, heavy* or *very heavy. Very h* eavy background debris may obscure particulate matters, reducing visibility during analysis. Consequently, counts from very heavy background debris should be considered minimal. *The laboratory and its personnel shall not be held liable for any misinformation provided to us by the client regarding these samples or for any misuse or interpretation of information supplied by us This report relates only to samples submitted and analyzed*

Sample(s) were analyzed by: P. Chakravarty, Ph.D., Sr. Environmental Microbiologist P. Chakravarty

Char / Soot / Ash Particulate Report
(Aerosol Samples)
1/14/2025

Pasteur Laboratory
158 N. Glendora Ave., Suite S
Glendora, CA 91741
Tel: (626) 963-8686
E-mail: microbiology99@aol.com

Mario Virgen/Miguel Virgen	Lab Reference No.: 00028-25-0052
Global Environmental Training & Consulting	Date Collected: January 14, 2025
1520 W. Cameron Ave., Suite 103, West Covina, CA 91790	Date Received: January 14, 2025
Tel: 626-962-4436 Fax: 626-962-4437	Date Analyzed: January 14, 2025
E-mail: staff@globalenvirotraining.com	
Client's Project: Cal State University - Luckman Theatre- E225-004	Sample(s) analyzed: 9

Laboratory Sample ID	12458			12459			12460			12461		
Client Sample ID	**05**			**06**			**07**			**08**		
Location	Rehearsal Rm A			Rehearsal Rm B			Staff Rm			Women's Chorus dressing Rm		
Volume (L)	150			150			150			150		
Background Debris*	Light			Light			Light			Light		
Sample Description	AllergencoD			AllergencoD			AllergencoD			AllergencoD		
	Raw cts	No. /m³	%	Raw ct	No. /m³	%	Raw cts	No. /m³	%	Raw cts	No. /m³	%
Char particulate:	8	53	60.92	6	40	43.01	7	47	63.51	18	120	43.80
Soot particulate	1	7	8.05	0	0	0.00	1	7	9.46	4	27	9.85
Ash:	4	27	31.03	8	53	56.99	3	20	27.03	19	127	46.35
Total numbers / m³	**87**			**93**			**74**			**274**		
Comments												
Limit of Detection	7			7			7			7		

*Background debris is an indication of amounts of biological and non-biological particulate matters present on the sample and is characterized as *very light, light, moderate, heavy* or *very heavy. Very h* eavy background debris may obscure particulate matters, reducing visibility during analysis. Consequently, counts from very heavy background debris should be considered minimal. *The laboratory and its personnel shall not be held liable for any misinformation provided to us by the client regarding these samples or for any misuse or interpretation of information supplied by us.This report relates only to samples s* P. Chakravarty

Char / Soot / Ash Particulate Report
(Aerosol Samples)
1/14/2025

Pasteur Laboratory
158 N. Glendora Ave., Suite S
Glendora, CA 91741
Tel: (626) 963-8686
E-mail: microbiology99@aol.com

Mario Virgen/Miguel Virgen	Lab Reference No.: 00028-25-0052
Global Environmental Training & Consulting	Date Collected: January 14, 2025
1520 W. Cameron Ave., Suite 103, West Covina, CA 91790	Date Received: January 14, 2025
Tel: 626-962-4436 Fax: 626-962-4437	Date Analyzed: January 14, 2025
E-mail: staff@globalenvirotraining.com	
Client's Project: Cal State University - Luckman Theatre- E225-004	Sample(s) analyzed: 9

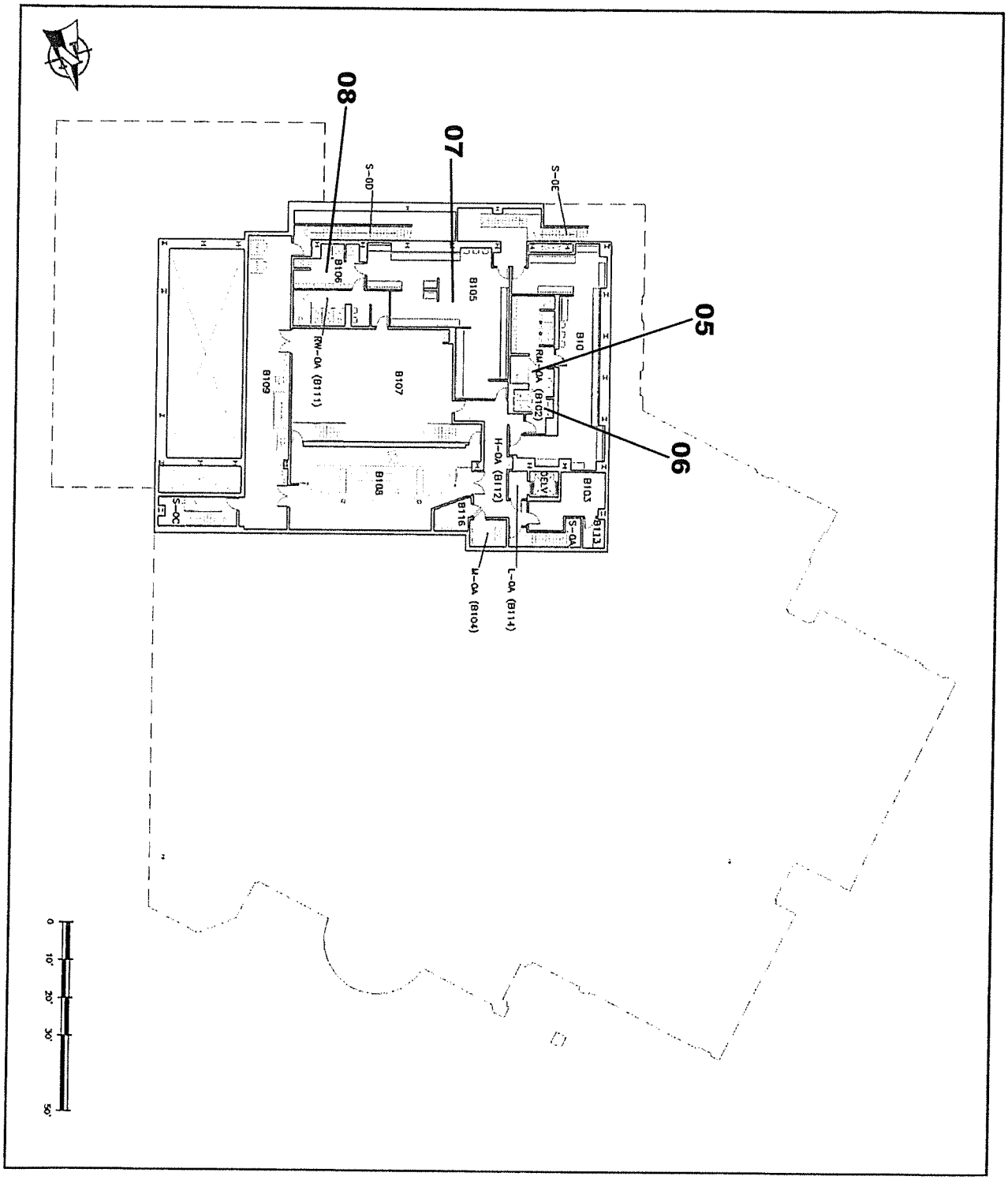
Laboratory Sample ID	12462											
Client Sample ID	**09**											
Location	Outside / Control											
Volume (L)	150											
Background Debris*	Heavy											
Sample Description	AllergencoD											
	Raw cts	No. /m³	%									
Char particulate:	3418	22,787	98.36									
Soot particulate	19	127	0.55									
Ash:	38	253	1.09									
Total numbers / m³	**23,167**											
Comments												
Limit of Detection	7			< #VALUE!			< #VALUE!			< #VALUE!		

*Background debris is an indication of amounts of biological and non-biological particulate matters present on the sample and is characterized as *very light, light, moderate, heavy* or *very heavy. Very h* eavy background debris may obscure particulate matters, reducing visibility during analysis. Consequently, counts from very heavy background debris should be considered minimal. *The laboratory and its personnel shall not be held liable for any misinformation provided to us by the client regarding these samples or for any misuse or interpretation of information supplied by us. This report relates only to samples s* P. Chakravarty

APPENDIX C

SAMPLING SCHEME

CAL STATE LA
PLANNING, DESIGN & CONSTRUCTION
LUCKMAN THEATRE
FIRST FLOOR
LAST UPDATED: 10-20-17
BLDG
29
0 10' 20' 30' 50'
01
02
03
04
09
0101
0102
0103
0104
0105
0106
0107
0108
0109
0110
0111
0113
0115
0116
0118
0119
0121
0122
0123
0125
0127
0132
0133
0134
0135
0136
0137
0139
0140
0143
0144
0145
0149
0150
0151
0152
0153
0154
0156
0157
0158
0159
0160
0162
0163
0164
0165
0166
0167
0169
0170
0172
0176
L-1A (0170)
L-1B (0114)
L-1B (0172)
L-1C (0137)
C-1A (0149)
C-1B (0155)
RM-1A (0150)
RM-1A (0152)
RR-1C (0153)
RR-1D (0154)
RR-1E (0161)
H-1B (0114)
H-1C (0107)
H-1C (0122)
H-1D (0116)
H-1E (0176)
H-1F (0139)
H-1J (0133)
RR-1A (0104)
RR-1B (0118)
E-1A (0144)
S-1B
S-1C
S-1D
S-1E
ELV
H-1A (0109)



29 BLDG

LUCKMAN THEATRE

BASEMENT

LAST UPDATED: 10-20-17

CAL STATE LA

PLANNING, DESIGN & CONSTRUCTION