

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) FOOD COURT 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

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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)

Food Court 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 the Food Court, 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,

Much

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 the Food Court 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 the Food Court (5 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)

| FOOD COURT    |                   |                      |                      |     |        |  |  |  |  |  |  |
|---------------|-------------------|----------------------|----------------------|-----|--------|--|--|--|--|--|--|
| SAMPLE<br>NO. | LOCATION          | CHAR<br>PARTICULATES | SOOT<br>PARTICULATES | ASH | TOTAL  |  |  |  |  |  |  |
| 01            | OUTSIDE (CONTROL) | 33,420               | 240                  | 273 | 33,933 |  |  |  |  |  |  |
| 02            | DINING AREA       | 4,747                | 27                   | 153 | 4,927  |  |  |  |  |  |  |
| 03            | KITCHEN           | 80                   | 0                    | 47  | 127    |  |  |  |  |  |  |
| 04            | UNIVERSITY CLUB   | 207                  | 0                    | 20  | 227    |  |  |  |  |  |  |
| 05            | UAS OFFICE        | 960                  | 20                   | 73  | 1,053  |  |  |  |  |  |  |

## 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 the Food Court.

# 2.2 SAMPLING PROCEDURES AND ANALYSIS

# Sampling Procedure

The inspector collected Five (5) air samples from the Food Court. 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 the Food Court. 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 the Food Court 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

E-mail: microbiology99@aol.com Tel: (626) 963-8686

0

Swab Water, Bulk, Dust, Soil, Anderson, Swab,

Spore Trap

Tape

Culturable

Non - Culturable

Contact Plate

BUK

NOTES:

REQUESTED SERVICES

(CHECK BOXES)

4002 NST X

| T   | *13<br>===   |                                       | <i>\</i>                       |                       | 7                                     |                                    |                               | t .                          | V                         |         | <u> </u>         | <br>  |                 |  |   |   |   |   |   |   | <br> |      |   |   | 1  |                                      | 11     |  |                        |   |
|---|--|---------------------------------------|--------------------------------|-----------------------|---------------------------------------|------------------------------------|-------------------------------|------------------------------|---------------------------|---------|------------------|-------|-----------------|--|---|---|---|---|---|---|------|------|---|---|----|--------------------------------------|--------|--|------------------------|---|
| Sacteria - Quantitative Analysis                                    |  |                                       |                                |                       |                                       |                                    |                               | <u> </u>                     | -                         | -       | -                | -     |                 |  | _ |   |   |   |   |   |      |      |   |   |    | 7                                    | -      |  |                        |   |
| Fungi - Standard Quant. Analysis<br>E. coli \ Coliform Screen (MUG) |  |                                       |                                |                       |                                       |                                    |                               |                              |                           |         | -                |       |                 |  |   | - |   |   |   |   |      | DATE |   |   |    | /                                    |        |  |                        |   |
|   |  | ı                                     |                                |                       |                                       |                                    |                               |                              | & ign                     |         |                  |       |                 | 1  | 1 |   | 1 |   |   |   |      |      |   |   |    | BY                                   |        |  |                        | = |
| <del></del>   |  | <b></b> ,                             |                                | sisy                  | lsn/                                  | / de                               | ıTəı                          | lodS                         | - ign                     | пЭ      |                  | <br>- | -               | +  | + | + | - | + | - | - |      | +    | + | + | +  | RECEIVED                             | *** (  | alegratii <sup>a</sup><br>etselleyte a | 1                      |   |
| <del></del>   |  | ovina, CA                             | -4437                          | J.com                 |                                       | ed after 2pm                       | received the                  | fay.                         | Total                     | Volume  |                  |       |                 |  |   |   |   |   |   |   |      |      |   |   |    | RECE                                 |        | , ex <sup>2</sup>                      |                        |   |
| - o-  | ,  | Suite 103, West Covina, CA            | Fax & Invoice to: 626-962-4437 | TIEN ABOUND TIME /TAT | H   -     H                           | Rushes received after 2pm          | or on weeker<br>considered re | next business day.           | Time                      |         |                  |       |                 |  |   |   |   |   |   |   |      |      |   |   |    | DATE                                 | 111965 |  |                        | - |
| Page_   |  |                                       | Fax & Invoic                   | Statil@globa          | CAICON                                |                                    |                               | Π                            | Flow                      | Rate    |                  |       |                 |  |   |   |   |   |   |   |      |      |   |   |    | DBY                                  |        |  |                        | = |
|   |  | Address: 1520 W. Cameron Ave.,        | sults Y / N                    | TIENAL                |                                       |                                    | sp - Same Day (+75%)          | WH - Weekend/Holiday (+100%) | TAT                       | (Above) |                  |       |                 |  |   |   |   |   |   |   |      |      |   |   |    | RELINQUISHED BY                      | J.     |  |                        |   |
|   | NO   | Address:                              | Fax results Y / N              |                       |                                       | 93                                 | sp - Sa                       | WH - We                      | Sample                    | Type    | _                |       |                 |  |   |   |   |   |   |   |      |      |   |   | 70 | RELI                                 |        |  |                        | 1 |
|   | Company: Global Environmental Training & Contact INFORMATION | Contact: Mario Virgen / Minnel Virgen | Phone: 626-962-4436            | PROJECT INFORMATION   | Project Name: CAL STATE UNIVERSITY LA | Project Number: E225-004 FOOT CONT |                               |                              | Sample ID Sample Location |         | Director Control |       | Whiveverty club | J. J |   |   |   |   |   |   |      |      |   |   |    | AP - Anderson Diate OD Control Ports |        | - Tape S - Swab BI - Bulk              | pro M2 - Multimold Cas |   |

# APPENDIX B ANALYTICAL REPORTS

# Char / Soot / Ash Particulate Report (Aerosol Samples)

1520 W. Cameron Ave., Suite 103, West Covina, CA 91790

1/14/2025

Global Environmental Training & Consulting

Tel: 626-962-4436 Fax: 626-962-4437

E-mail: staff@globalenvirotraining.com

Mario Virgen/Miguel Virgen



# **Pasteur Laboratory**

158 N. Glendora Ave., Suite S Glendora, CA 91741 Tel: (626) 963-8686

E-mail: microbiology99@aol.com

Lab Reference No.:

00028-25-0051

Date Collected:

January 14, 2025

Date Received:

January 14, 2025

Date Analyzed:

January 14, 2025

| Client's Project: Cal State Univ |            |            | - E225-  | 004      |            | Samp      | le(s) and | alyzed:   | 5       |   |         |             |  |  |
|----------------------------------|------------|------------|----------|----------|------------|-----------|-----------|-----------|---------|---|---------|-------------|--|--|
| Laboratory Sample ID             |            | 12449      |          |          | 12450      |           |           | 12451     |         | 12452<br><b>04</b>                      |         |             |  |  |
| Client Sample ID                 |            | 01         |          |          | 02         |           |           | 03        |         |   |         |             |  |  |
| Location                         | Ou         | tside / Co | ntrol    | ı        | Dining are | ea        |           | Kitchen   |         | University club  150  Light AllergencoD |         |             |  |  |
| Volume (L)                       |            | 150        |          |          | 150        |           |           | 150       |         |   |         |             |  |  |
| Background Debris*               |            | Heavy      |          |          | Moderate   | e         |           | Light     |         |   |         |             |  |  |
| Sample Description               | F          | llergenco  | D        |          | llergence  | DD.       | A         | llergenco | D       |   |         |             |  |  |
|                                  | Raw ct     | No./m°     | %        | Raw ct   | No./m°     | %         | Raw cts   | No. /m°   | %       | Raw ct                                  | No. /m° | %           |  |  |
| Char particulate:                | 5013       | 33,420     | 98.49    | 712      | 4747       | 96.35     | 12        | 80        | 62.99   | 31                                      | 207     | 91.19       |  |  |
|                                  |            |            |          |          |            |           |           |           |         |   |         |             |  |  |
| 3                                |            |            |          |          |            |           |           |           |         |   |         |             |  |  |
|                                  |            |            |          |          |            |           |           |           |         |   |         | <del></del> |  |  |
| Soot particulate                 | 36         | 240        | 0.71     | 4        | 27         | 0.55      | 0         | 0         | 0.00    | 0                                       | 0       | 0.00        |  |  |
| o o o o par modrado              |            | 240        | 0.71     |          | 21         | 0.55      | 0         |           | 0.00    | 0                                       | 0       | 0.00        |  |  |
|                                  |            |            |          |          |            |           |           |           |         |   |         | $\vdash$    |  |  |
|                                  |            |            |          |          |            |           |           |           |         |   |         |             |  |  |
|                                  |            |            |          |          |            |           |           |           |         |   |         |             |  |  |
|                                  |            |            |          |          |            |           |           |           |         |   |         |             |  |  |
| Ash:                             | 41         | 273        | 0.80     | 23       | 153        | 3.11      | 7         | 47        | 37.01   | 3                                       | 20      | 8.81        |  |  |
|                                  |            |            |          |          |            |           |           |           |         |   |         |             |  |  |
|                                  |            |            |          |          |            |           |           |           |         |   |         |             |  |  |
| Total numbers / m³               |            | 33,933     |          |          | 4,927      |           |           | 127       |         |   | 227     |             |  |  |
| Comments 35,933                  |            |            |          |          | 4,321      |           |           | 121       |         | 221                                     |         |             |  |  |
| Limit of Detection               | 1          | 7          |          |          | 7          |           |           | 7         |         |   | 7       | _           |  |  |
| *Background debris is an indica  | tion of an |            | hiologic | al and n |            | ical nart | iculate m |           | eent on | the can                                 |         | ic          |  |  |

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 heavy 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

Page 1 of 1

# Char / Soot / Ash Particulate Report (Aerosol Samples)

1/14/2025

Global Environmental Training & Consulting

Mario Virgen/Miguel Virgen



# **Pasteur Laboratory**

158 N. Glendora Ave., Suite S Glendora, CA 91741 Tel: (626) 963-8686

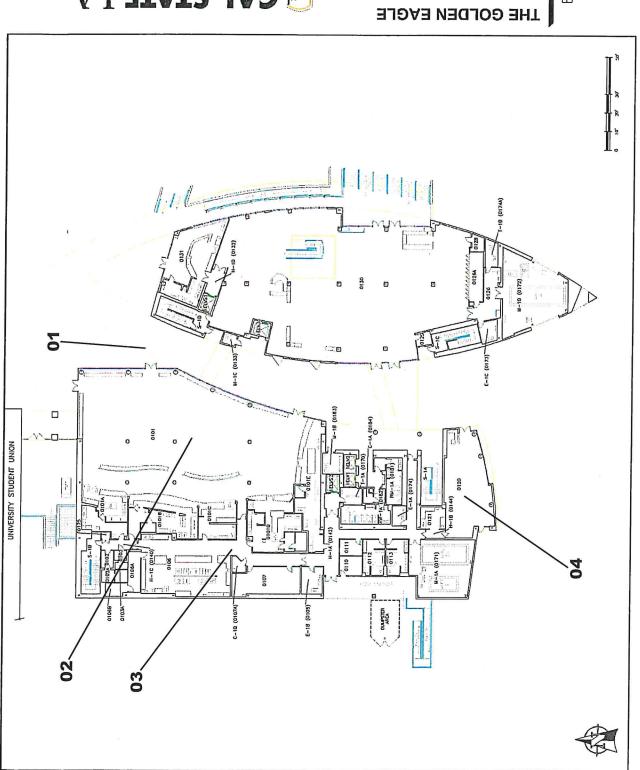
E-mail: microbiology99@aol.com

Lab Reference No.: 00028-25-0051
Date Collected: January 14, 2025
Date Received: January 14, 2025
Date Analyzed: January 14, 2025

| 1520 W. Cameron Ave., S<br>Tel: 626-962-4436 Fax: 62<br>E-mail: staff@globalenviro | uite 103,<br>6-962-44<br>training.c | West C<br>37<br>om  | ovina, C                   |    | Date<br>Date | Received:<br>Analyzed: | Janu<br>Janu | ary 14,<br>ary 14,<br>ary 14, | 2025         |          |
|--|-------------------------------------|---|----------------------------|----|--------------|------------------------|--------------|-------------------------------|--------------|----------|
| Client's Project: Cal State Uni  | versity - Fo                        | The Real Property lies and the least lies and the lies and the least lies and the lies and | - Alterdance of the second | 04 | Sam          | ole(s) analyz          | ed: 5        |                               |              |          |
| Laboratory Sample ID   |                                     | 12453   |                            |    |              |                        |              |                               |              |          |
| Client Sample ID   |                                     | 05  |                            |    |              |                        |              |                               |              |          |
| Location   | Į                                   | JAS Offi  | ce                         |    |              |                        |              |                               |              |          |
| Volume (L)   |                                     | 150   |                            |    |              |                        |              |                               |              |          |
| Background Debris*   |                                     | Moderat   |                            |    |              |                        |              |                               |              |          |
| Sample Description   |                                     | llergenc  |                            |    |              |                        |              |                               |              |          |
|  | Raw cts                             | No. /m  | %                          |    |              |                        |              |                               |              |          |
| Char particulate:  | 144                                 | 960   | 91.17                      |    |              |                        |              |                               |              |          |
|  |                                     |   |                            |    |              |                        |              |                               |              |          |
|  |                                     |   |                            |    |              |                        |              |                               |              |          |
|  |                                     |   |                            |    |              |                        |              |                               |              | _        |
|  | The section                         |   |                            |    |              |                        |              | 1-                            |              | +        |
|  |                                     |   |                            |    |              |                        |              | 1                             | _            | +-       |
|  |                                     |   |                            |    |              |                        |              | 1-                            | +            | +        |
|  |                                     |   | $\vdash$                   |    |              | 1 -                    |              | -                             |              | +-       |
| Soot particulate   | 3                                   | 20  | 1.90                       |    |              | <b> </b>               |              | ╂──                           | -            | +        |
|  |                                     |   |                            |    |              | 1                      | _            | 1                             | -            | +        |
|  |                                     |   |                            |    | _            |                        |              | -                             |              | _        |
|  |                                     |   |                            |    |              |                        |              | ╂──                           | +            | +        |
|  |                                     |   |                            |    |              |                        |              | 1                             | <del> </del> | -        |
|  |                                     |   |                            |    |              | 1                      |              | <b> </b>                      | -            | +        |
| (6)  |                                     |   |                            |    |              |                        |              |                               |              |          |
|  |                                     |   |                            |    |              |                        |              |                               | +            | +-       |
|  |                                     |   |                            |    |              | 1                      |              | -                             | -            | +-       |
|  |                                     | -   |                            |    |              | -+-                    |              | -                             |              | +-       |
| Ash:   | 11                                  | 73  | 6.93                       |    | _            | 1                      |              | -                             |              |          |
|  |                                     |   |                            |    | _            |                        |              | ╟───                          | -            | -        |
|  |                                     |   |                            |    |              |                        |              |                               |              | _        |
|  |                                     |   |                            |    |              |                        |              |                               |              | $\vdash$ |
|  |                                     |   |                            |    |              |                        |              |                               |              | $\vdash$ |
|  |                                     |   |                            |    |              |                        |              |                               |              |          |
| Total numbers / m³   |                                     | 1.052   | L                          |    |              |                        |              |                               |              |          |
|  | -                                   | 1,053   |                            |    |              |                        |              |                               |              |          |
| Comments Limit of Detection  | -                                   | 7   |                            |    |              |                        |              |                               |              |          |
| *Background debris is an indica  | 11                                  |   |                            |    |              | <u> </u>               |              |                               |              |          |

\*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 see the considered minimal of the considered minimal.

# APPENDIX C SAMPLING SCHEME

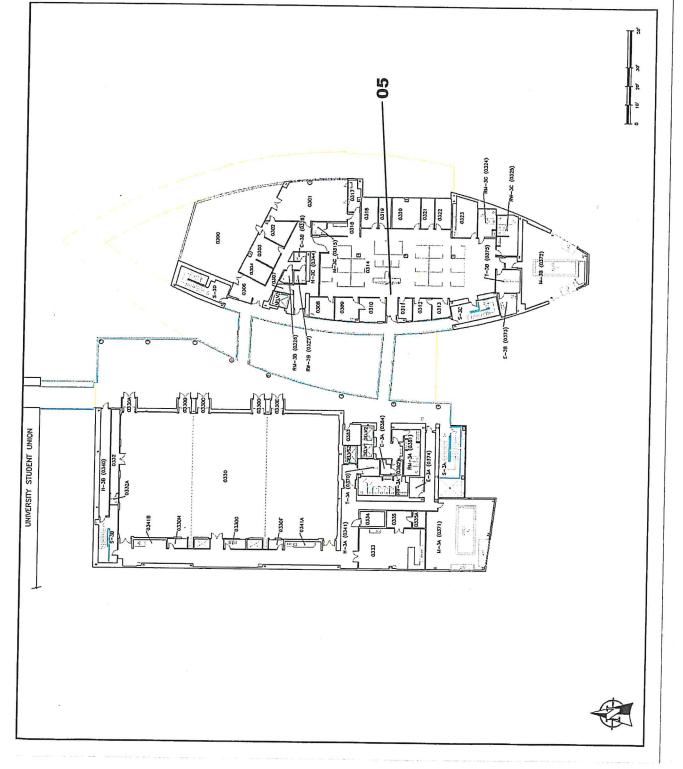




FIRST FLOOR



TI-51-6 :03TAD9U T2AJ





РГАИЛІИС, DESIGN & CONSTRUCTION

THE GOLDEN EAGLE

ဖ

C1-21-6 :03TAQQU T2AJ