

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) BING ARNOLD CHILDREN'S CENTER 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)
Bing Arnold Children's Center
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 13, 2025, throughout Bing Arnold Children's Center, 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 Bing Arnold Children's Center 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 Bing Arnold Children's Center (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)

	BING AR	NOLD CHILDREN'S	CENTER		
SAMPLE NO.	LOCATION	CHAR PARTICULATES	SOOT PARTICULATES	ASH	TOTAL
01	OUTSIDE (CONTROL)	52,853	293	120	53,266
02	MULBERRY ROOM	5,540	100	140	5,780
03	MAGNOLIA ROOM	2,260	120	113	2,493
04	MAPLE ROOM	3,280	87	87	3,454
05	<b>EUCALYPTUS ROOM</b>	11,560	27	113	11,700
06	BAMBOO ROOM	1,393	20	52	1,466
07	BONSAI ROOM	3,420	13	47	3,480
08	BONSAI ROOM	2,227	13	33	2,273
09	BREAKROOM	773	13	53	839

#### 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 Bing Arnold Children's Center.

#### 2.2 SAMPLING PROCEDURES AND ANALYSIS

#### Sampling Procedure

The inspector collected Nine (9) air samples from Bing Arnold Children's Center. 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 Bing Arnold Children's Center. 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 Bing Arnold Children's Center 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

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Pasteur Laboratory	158 N. Glendora Ave., Suite S (2nd floor)	Glendora, CA 91741	Tel: (626) 963-8686 E-mail: microbiology99@aol.com		CONTACT INFORMATION	ing & Consulting	/ Miguel Virgen		PROJECT INFORMATION	A- Bing Aracld Childrans Cate		lary 13, 2025		Sample Location	Outside (Centra)	Mulberty Room	1.20	Mark Company	SWOOM NOOM	2		Son Sai Room	Y	Brank Koom							SAMPLE TYPE CODES		S - Swab BL - Bulk	M2 - Allegro M2 - Multimold Cassette
*						Company: Global Env	Contact: Mario Virgen / Miguel Virgen	Phone: 626-962-4436		Project Name: CSULA -	Project Number: E225-004	Sampling Date: January 13, 2025		Sample ID		20	53	700	50		00	00	000	5							AP - Andersen Plate	Z - Zefon Air-O-Cell	T-Tape S-S	M2 - Allegro M2 - N

# 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.: 00028-25-0044

Date Collected:

January 13, 2024

Date Received:

January 13, 2024

Date Analyzed:

January 13, 2024

Client's Project: CSULA- Bing Arnold Children's Center E225-004 Sample(s) analyzed: 9

Laterate Code LAB	11	The second second second	5113 00	TICH EZ	I SHARE THE RESERVE	Samp	ic(s) an	-	9				
Laboratory Sample ID	-	12395			12396			12397		12398			
Client Sample ID		01		<b> </b>	02			03		04			
Location	Ou	itside / co	ntrol	V	Aulberry F	Rm	М	agnolia R	lm	Maple Rm			
Volume (L)		150			150			150		150			
Background Debris*		Heavy			Moderat			Moderate		Moderate			
Sample Description	F	Allergence			Allergence		А	llergenco		AllergencoD			
	_	No./m°	%	Raw ct	No. /m°	%	Raw cts	No./m³	%	Raw cts	No. /m°	%	
Char particulate:	7928	52,853	99.22	831	5540	95.85	339	2,260	90.65	492	3280	94.96	
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Soot particulate	44	293	0.55	15	100	1.73	18	120	4.81	13	87	2.52	
	1500												
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			-	111									
Ash:	18	120	0.23	21	140	2.42	17	113	4.53	13	87	2.52	
								007450					
Total numbers / m³		53,266			5,780			2,493			3,454		
Comments	1	-,			3,.00			_,			<del>5,707</del>		
Limit of Detection		7			7			7	-		7		
*Background debris is an indica	tion of an	ounts of	hiologic:	al and n	on-hiolog	ical narti	iculato m	atters pro	sont on	the com			

\*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 v 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)

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 00028-25-0044

Lab Reference No.: Date Collected:

January 13, 2024

Date Received:

January 13, 2024

Date Analyzed:

January 13, 2024

Client's Project: CSULA- Bi	ng Arnol	d Childre	en's Ce	nter E2	25-004	Samp	le(s) an	alyzed:	9				
Laboratory Sample ID		12399			12400	"	T T	12401			12402		
Client Sample ID		05			06			07		08			
Location	Et	ıcalyptus	Rm	Е	amboo F	lm.	Е	Bonsai Rn	n	Bonsai Rm			
Volume (L)		150			150			150		150			
Background Debris*		Moderate	9		Moderate	9		Moderate		Moderate			
Sample Description	A	Allergenco			llergence		А	llergenco	D	AllergencoD			
	Raw ct	No./m°	%	Raw ct	No./m°	%	Raw cts	No. /m°	%	Raw cts	No./m³	%	
Char particulate:	1734	11,560	98.80	209	1393	95.02	513	3,420	98.28	334	2227	97.98	
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Soot particulate	4	27	0.23	3	20	1.36	2	13	0.37	2	13	0.57	
												_	
											_		
												-	
Ash:	17	113	0.97	8	53	3.62	7	47	1.35	5	33	1.45	
												1.40	
					12		- 15						
Total numbers / m³		11,700			1,466			3,480			2,273		
Comments	1	. 1,7 00			1,700			3,400			2,213		
Limit of Detection		7			7			7			7		
*Background debris is an indica	tion of an	ounto of	hiologia	al and n						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 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 sp. Charactery

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

1/14/2025

Mario Virgen/Miguel Virgen



Tel: (626) 963-8686

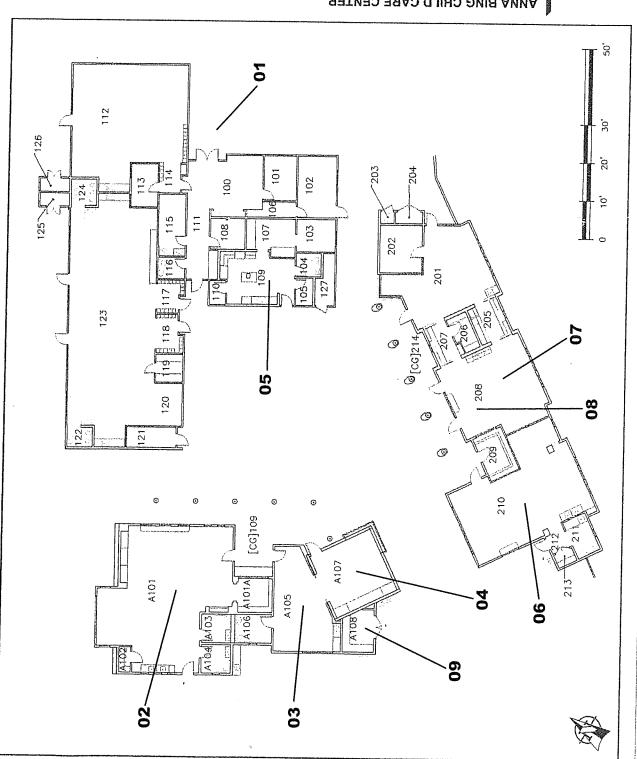
E-mail: microbiology99@aol.com

Lab Reference No.: 00028-25-0044 Date Collected: January 13, 2024

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Client Sample ID		09							1					
Location		Break R	m											
Volume (L)		150	-						1					
Background Debris*		Moderat							1		-			
Sample Description		llergenc							-					
	Raw cts	No./m	%											
Char particulate:	116	773	92.13											
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Soot particulate	2	13	1.55											
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\*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 sp. Character

# APPENDIX C SAMPLING SCHEME



ANNA BING CHILD CARE CENTER

FIRST FLOOR



PLANNING, DESIGN & CONSTRUCTION

CAL STATE LA

LAST UPDATED: 03-14-22