MARYLAND DEPARTMENT OF THE ENVIRONMENT

AIR AND RADIATION ADMINISTRATION
APPLICATION FOR A PERMIT TO CONSTRUCT

DOCKET #14-21

COMPANY: Arlington Crematory, Inc.

LOCATION: 2313 51st Place, Hyattsville, MD 20781

APPLICATION: Installation of one (1) human crematory

ITEM	DESCRIPTION
1	Notice of Application and Informational Meeting
2	Permit to Construct Application Forms
3	Emissions Calculations
4	Manufacturer Specifications
5	Site Plans
6	Zoning Approval Letter

DEPARTMENT OF THE ENVIRONMENT
AIR AND RADIATION ADMINISTRATION

NOTICE OF APPLICATION AND INFORMATIONAL MEETING

The Maryland Department of the Environment, Air and Radiation Administration (ARA) received a permit-to-construct application from Arlington Crematory, Inc. on July 2, 2021, for the installation of one (1) human crematory. The proposed installation will be located at 2313 51st Place, Hyattsville, MD 20781.

An Informational Meeting will be held on October 26, 2021, at 6:30 PM at the Bladensburg Volunteer Fire Department located at 4213 Edmonston Road, Bladensburg, MD 20710.

Pursuant to the Environment Article, Section 1-603, Annotated Code of Maryland, the Informational Meeting has been scheduled so that citizens can discuss the application and the permit review process with the applicant and the Department.

The application and other supporting documents are available for public inspection on the Department's website. Look for Docket #14-21 at the following link:

https://mde.maryland.gov/programs/Permits/AirManagementPermits/Pages/index.aspx

The Department will provide an interpreter for deaf and hearing-impaired persons provided that a request is made for such service at least ten (10) days prior to the meeting.

Further information may be obtained by contacting Ms. Shannon Heafey by email at shannon.heafey@maryland.gov or by phone at 410-537-4433.

George S. Aburn, Jr., Director
Air and Radiation Administration

May 12, 2021

GROVE
SCIENTIFIC & ENGINEERING

Maryland Department of the Environment
Air Quality Permits Program
1800 Washington Blvd., Suite 720
Baltimore, MD 21230

RE: Air Construction Permit Application for Arlington Crematory, Inc.
US Cremation Equipment "CLASSIC X-Cel" Human Crematory

To whom it may concern:

Enclosed is one signed original of the air construction permit application for a new US Cremation Equipment Model "CLASSIC X-CEL" HUMAN CREMATORY for the above referenced facility. The application includes a source description with 7 Attachments and signed applications forms.

If you have any questions or need any additional information about this application, please email bruno@grovescientific.com or call 407-298-2282. Should you require any information regarding the facility, please contact Geary Powell at 301-772-6150.

Sincerely,
Grove Scientific & Engineering Company

Bruno A. Ferraro, CEP, QEP
President

Cc: Luis Llorens – US Cremation Equipment
Geary Powell – Owner, Arlington Chemical Company

6140 EDGEWATER DRIVE • SUITE F • ORLANDO, FLORIDA 32810-4810
PHONE (407)298-2282 • FAX (407)290-9038

THE LAW OFFICE OF MR MICHELEROSENFELD,LLC

May 18, 2021

Mr. Geary Powell
Arlington Crematory, Inc.
2313 51st Place
Hyattsville MC 20781

RE: MDE Crematory Application

Dear Mr. Powell:

Please confirm, by counter-signing below, that you grant to me power of attorney for the purpose of signing the necessary application forms and supporting documents (where required) related to an Air Quality Permit for construction and operation of a human crematory with Maryland's Department of the Environment.

Sincerely,

Michele McDaniel Rosenfeld

Michele McDaniel Rosenfeld

I GRANT TO MICHELE MCDANIEL ROSENFELD
POWER OF ATTORNEY TO THE EXTENT AUTHORIZED HEREIN.

William Powell

Geary Powell
Owner, Arlington Crematory, Inc.

May 18, 2021

Signature: William Powell
William Powell (May 18, 2021 11:30 EDT)

Email: arlington1924@yahoo.com

APPLICATION FOR AIR CONSTRUCTION/OPERATION PERMIT

ARLINGTON CREMATORY, INC.

HUMAN CREMATION FACILITY

2315 51ST PLACE

TUXEDO, PRINCE GEORGE'S COUNTY, MD 20781

May 2021

Prepared By:

GROVE SCIENTIFIC & ENGINEERING COMPANY

6140 EDGEWATER DRIVE, SUITE F

ORLANDO, FLORIDA 32810

407-298-2282

www.grovescientific.com

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ATTACHMENTS

1 – Application Forms

2 - Site Location Map & Site Plan

3 - US Cremation Equipment Model "Classic X-Cel" Human Crematory Specifications and Engineering Drawings

4 - Criteria Pollutants, TAPs Emission Calculations, and Ambient Impact Analysis

5– Results from Stack Test

6 – Process Flow Diagram

7 – Zoning Approval Letter

SOURCE DESCRIPTION

Background

Arlington Chemical Company proposes to install a new natural gas fired US Cremation Equipment Model X-Cel Classic human crematory for use at their cremation facility. The facility is currently permitted for and operates the following human crematory:

- US Cremation Model X-Cel Classic that was permitted in May 2019.

Technical literature and engineering drawings for the X-Cel human cremator are included on this application. The facility is located in an industrialized area in Prince George's County, at 2313 51st Place, Tuxedo, Maryland 20781. A location map and aerial are included in Attachment 2. A copy of the zoning approval letter is included in Attachment 3. The applicant (and owner) carries worker's compensation insurance coverage as required by Maryland law and has attached proof to this application. The proposed crematory will be installed in the same building as the existing crematory.

Operating Capacity and Limitation

The proposed crematory will operate at a capacity of 1 cremation per hour using an average body weight of 150 pounds. Equipment specifications are included in Attachment 4.

Distance(s) to Property Line

The building housing the proposed crematory is on the property line therefore all ground-level impacts will be considered in this analysis.

Physical dimensions of building housing the crematories

The building where the crematory will be located is rectangular in shape and is 24.4 ft wide by 40.3 ft long. This building height is 16 ft. There is a larger building within 2.6 feet of this building and will influence air dispersion and downwash so we have adjusted the building dimensions and height to account for this additional structure by adding the additional dimensions of the adjacent structure. This will result in an L-shaped building 85.4 feet wide by 96.9 feet long by 26 feet high. The stack is 18 feet to the nearest property line. The stack height of the proposed (and existing) crematory is 39 feet from grade.

Facility-wide Air Toxics Analysis - SCREEN Model

Emission factors were obtained from the MDE Toxytool 2015 spreadsheet. The Screen model was run for the X-cel as follows:

- a proposed stack height of 39 feet above ground level
- an emission rate of 1 lb/hr
- a building measuring 85.4 feet by 96.9 feet by 26 feet high
- a stack diameter of 0.508 meters (20 inches)
- an exit velocity of 23.27 ft/sec or 7.09 m/sec (average of 3 test runs from stack test dated May 1, 2017)
- average stack temperature of 863.7 °F or 735.2 °K

Output

The SCREEN model resulted in the highest ground level concentration of 15.63 ug/m3 at a distance of 55 meters from the stack.

Emission Factors and Analysis Discussion

Emission were calculated using the Toxytool 2015–TEQ-Light spreadsheet provided by MDE and are based on emission factors from AP-42 and FIRE for cremation. This tool also calculates the air toxics ground-level concentrations using data from the SCREEN3 model. A copy of this spreadsheet is included in Attachment 4. A copy of the stack test is included in Attachment 5. A flow diagram is included in Attachment 6.

Summary of T-BACT Analysis

The "CLASSIC X-Cel" HUMAN CREMATORY is designed with a secondary chamber. T-BACT is achieved by controlling the "CLASSIC X-Cel" HUMAN CREMATORY operating factors and establishing temperature and residence time requirements and other operating requirements that will ensure an efficient and clean burn. These factors and procedures are listed above. As the TAP emissions (concentrations) from human cremation are small as shown in FIRE v6.23 and the emission calculations herein, and the relatively low capital and operation cost of the T-BACT option in Table 1, T-BACT options that deal with add on air pollution control equipment such as a lime-injected fabric filter, or scrubber are not economically feasible or practical for a human crematory.

Table 1: Summary of T-BACT Demonstration

Emission Reduction Option	% Emission Reduction	Capital Cost	Annual Operating Cost	Notes
PVC plastic burning ban, 1800°F 2nd chamber, T_R >1.2 sec., 2nd chamber temp. monitor and recorder, natural gas fuel, operator training	>50	~$4,200.00	$18,957 to $24,000 *	The "CLASSIC X-Cel" HUMAN CREMATORY is designed with a secondary chamber

* Based on 8,760 hours per year

Control of air pollution is achieved through the design of the "CLASSIC X-Cel" crematory, including its ability to operate the secondary chamber between 1600 - 1850 degrees Fahrenheit at a residence time in excess of 1 to 2 seconds. The design also includes fully automatic PLC based

controls, independent fuel/air systems, preheated combustion air, secondary chamber temperature monitor an recorder, primary burner temperature interlock (prevents primary burner from firing prior to the secondary chamber reaching it's set point temperature), UV continuous scanning flame detectors on burners, and an opacity sensor which can temporarily suspends operation of the primary chamber burner. Air pollution control is demonstrated through identical source stack testing results.

PVC Plastic

Arlington Crematory, Inc. agrees to not knowingly burn PVC plastic in the human Crematory as an agreement made by signing this application. The facility will use cremation boxes and pouches that contain no halogenated compounds.

Fuel Consumption

The crematory is equipped with 2 natural gas burners; a 1.5 MMBtu/hr primary and 2.5 MMBtu/hr secondary burner. With a proposed operating schedule of 8 hr/day and 4000 hr/yr we can calculate potential fuel usage as follows;

1.5 + 2.5 MMBtu/hr = 4.0 MMBtu/hr max

(4.0 MMBtu/hr)(4000 hr/yr) = 16,000,000,000 Btu/yr

16,000,000,000 Btu/hr / 1000 Btu/CF = 16,000,000 CF/yr

Facility-Wide Emissions

This facility will operate 2 human crematories. The following burner ratings

were applied to the criteria pollutant spreadsheet in Toxytool 2015.

Model	Primary Burner (MMBtu/hr)	Secondary Burner (MMBtu/hr)
US Cremation Equipment "XCEL"	1.5	2.5
US Cremation Equipment "XCEL"	1.5	2.5
Total	3.0	5.0

Emissions are calculated in the Toxytool 2015 spreadsheet for both crematories and summarized below.

Pollutant	Factor AP-42 & FIRE (for cremation)	Factor AP-42 (for gas burners, per hour, per MMBTU)	Emission lb/yr	Emission lb/day	Emission lb/hour	Emission ton/year
PM (total)	0.09	0.01	2296.08	6.29	0.26	1.1480
PM (Cond.)		0.01	447.06	1.22	0.05	0.2235
PM (Filt)	0.09	0.00	1849.02	5.07	0.21	0.9245
PM10			0.00	0.00	0.00	0.0000
PM2.5			0.00	0.00	0.00	0.0000
SO2	0.16	0.00	3307.06	9.06	0.38	1.6535
NOx	0.26	0.10	12983.14	35.57	1.48	6.4916
CO	0.22	0.08	11008.24	30.16	1.26	5.5041
VOC (TOC)	0.22	0.01	4911.37	13.46	0.56	2.4557
Lead		0.00	0.04	0.00	0.00	0.0000
CO2		117.65	9411764.71	25785.66	1074.40	4705.8824
Methane		0.00	180.39	0.49	0.02	0.0902

Attachment 1

Application Forms

AIR QUALITY PERMIT TO CONSTRUCT APPLICATION CHECKLIST

OWNER OF EQUIPMENT/PROCESS	
COMPANY NAME:	Arlington Chemical Company Inc.
COMPANY ADDRESS:	2315 51st Place, Hyattsville, Md 20781
LOCATION OF EQUIPMENT/PROCESS	
PREMISES NAME:	Arlington Chemical Company Inc.
PREMISES ADDRESS:	2315 51st Place, Hyattsville, Md 20781
CONTACT INFORMATION FOR THIS PERMIT APPLICATION	
CONTACT NAME:	Geary Powell
JOB TITLE:	Owner, President
PHONE NUMBER:	301-772-6150
EMAIL ADDRESS:	arlington1924@yahoo.com
DESCRIPTION OF EQUIPMENT OR PROCESS	
US Cremation Model US 150 "Classic Plus" Human Crematory	

Application is hereby made to the Department of the Environment for a Permit to Construct for the following equipment or process as required by the State of Maryland Air Quality Regulation, COMAR 26.11.02.09.

Check each item that you have submitted as part of your application package.

☒ Application package cover letter describing the proposed project

☒ Complete application forms (Note the number of forms included or NA if not applicable.)

No. x Form 5
No. x Form 5T
No. _____ Form 5EP
No. _____ Form 6
No. x Form 10
No. _____ Form 11
No. _____ Form 41
No. _____ Form 42
No. _____ Form 44

☒ Vendor/manufacturer specifications/guarantees

☐ Evidence of Workman's Compensation Insurance (not required for owner/operator)

☒ Process flow diagrams with emission points

☒ Site plan including the location of the proposed source and property boundary

☐ Material balance data and all emissions calculations

☐ Material Safety Data Sheets (MSDS) or equivalent information for materials processed and manufactured.

☐ Certificate of Public Convenience and Necessity (CPCN) waiver documentation from the Public Service Commission (1)

☒ Documentation that the proposed installation complies with local zoning and land use requirements (2)

(1) Required for emergency and non-emergency generators installed on or after October 1, 2001 and rated at 2001 kW or more.

(2) Required for applications subject to Expanded Public Participation Requirements.

MARYLAND DEPARTMENT OF THE ENVIRONMENT
Air and Radiation Management Administration ▪ Air Quality Permits Program
1800 Washington Blvd ▪ Baltimore, Maryland 21230
(410) 537-3230 ▪ 1-800-633-6101 ▪ www.mde.state.md.us

APPLICATION FOR FUEL BURNING EQUIPMENT

Information Regarding Public Outreach

For Air Quality Permit to Construct applications subject to public review, applicants should consider the following information in the initial stages of preparing a permit application.

If you are not sure at the time you are applying for a permit whether public review of your application is required or for information on steps you can take to engage the surrounding community where your planned project will be located, please contact the Air Quality Permits Program at 410-537-3225 and seek their advice.

Communicating and engaging the local community as early as possible in your planning and development process is an important aspect of your project and should be considered a priority. Environmental Justice or "EJ" is a movement to inform, involve, and engage communities impacted by potential and planned environmental projects by affording citizens opportunities to learn about projects and discuss any concerns regarding impacts.

Although some permit applications are subject to a formal public review process prescribed by statute, the Department strongly encourages you to engage neighboring communities separate from and well ahead of the formal permitting process. Sharing your plans by way of community meetings, informational outreach at local gatherings or through local faith-based organizations can initiate a rewarding and productive dialogue that will reduce anxiety and establish a permanent link with your neighbors in the community.

All parties benefit when there is good communication. The Department can assist applicants in developing an outreach plan that fits the needs of both the company and the public.

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JUN 17 2021
By

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1800 Washington Blvd ▪ Baltimore, Maryland 21230
(410) 537-3230 ▪ 1-800-633-6101 ▪ www.mde.state.md.us
Air and Radiation Management Administration ▪ Air Quality Permits Program

Application for Incinerators

Permit to Construct ☒ Registration ☐

DO NOT WRITE IN THIS SPACE
Date Rec. Local / Date Rec. State
Acknowledgement Sent Date By
Reviewed Name Date
Local State
Returned to Local Jurisdiction Date By
Application Returned to Applicant Date By
Premises Number (1 2 3 4 5 6) Registration Number (7 8 9 10 11 12 13)

1. Owner of Installation or Company Name: Arlington Crematory, Inc.
Date of Application: 4/19/2021
Mailing Address: 2313 51st Place
Telephone: 301-772-6150
City: Tuxedo
State: MD
Zip Code: 20781

2A. Premises Name if Different from Above: Arlington Chemical, Inc.

2B. Incinerator Location if Different From Above (give Street Address, City, County and Zip Code):

3. Owner, Agent or Authorized Company Official
Michele Rosenfeld, Esq. POA for Geary Powell, Owner & President
(Print/Type Name) (POA enclosed with application cover letter)
(Signature)
2313 51st Place, Tuxedo, MD 20781
(Mailing Address, City/Town, State, Zip Code)

4A. New Construction Only
Begin_____
Date Construction Completed_____

4B. Existing Installation
Initial Operation Date
July 2018
(14-15)

5. Installation or Contractor (New or Replacement Only)
(Name or Company Title)
(Mailing Address, City/Town, State, Zip Code, Telephone Number)

6. Equipment Manufacturer / Manufacturer's Serial or Catalog No.
US Cremation Equipment Model US 200 "Classic X-CEL"

7. Total Number of Incinerators of Identical Design and Capacity at this Location: 1

8. Major Activity at this Location-Auto Dealer, Hospital, Apartment House, etc.
Embalming chemical blending & packaging for funeral Industry & human cremation

9. Rated Capacity of Incinerator in lb/hr: 150-400
16-19

10. Incinerator Type (Mark only one with X)
Single Chamber ☐ (20-1) Multiple Chamber ☒ (20-2) Auxiliary Burner ☐ (21) Other ☐ (22) _____ Specify

11. Frequency of Burning
Hours/Day 8 (23 24) Days/Year 365 (25 26 27)

12. Amount of Waste Burned Per Operating Day: 2,400
Units: tons ☐ (32-1) lbs. ☒ (32-2) gal. ☐ (32-3)

13. Method of Charging Waste into Unit: Manual ☒ Automatic ☐

Form number: 10
Revision date: 09/27/2002
TTY Users 1-800-735-2258

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14. Type of Waste/Refuse Incinerated. Mark major type with ✗ -- all others with Check ✓.

Trash 100% Dry [ ] 33 | Refuse 20% Garbage [ ] 34 | Refuse 50% Garbage [ ] 35 | Garbage [ ] 36 | Animal or Animal Parts [ ] 37 | Municipal Refuse [ ] 38 | Infectious/ Pathological [ ] 39

Does this waste contain Carcinogenic or Toxic Material? Y/N | Industrial Process Waste [ ] 40 _____ | Other [X] 41 human remains

15. Total Annual Auxiliary Fuels Used

Oil _____ (gallons) _____ (Grade) 48 | Natural Gas 16,000,00 0 (ft³)
42-47 49-55

LP Gas _____ (gallons) | Other [ ] _____ specify fuel & units required
56-59 90-92

16. Stack Information: Height Above Ground (ft) 39 (94-96) | Inside Diameter at Top (in) 20 (97-99)

Exit Temperature (°F) 863 (100-103) | Gas Exit Velocity (ft/min) 1,396.2 (104-107)

17. Emission Control Devices

Gas Cleaning Form AMA-6 Must be Completed for Each Device Used and Attached to this Application.

None [ ] 108 | Settling Chamber or Baffles [ ] 109 | Simple Cyclone [ ] 110 | Multiple Cyclone [ ] 111 | Scrubber [ ] 112 | Venturi Scrubber [ ] 113 | Electrostatic Precipitator [ ] 114 | Bag-house [ ] 115 | After-burner [ ] 116

Other [X] secondary combustion chamber 117-118 Specify Type

DO NOT WRITE BELOW THIS LINE

18. Actual Stack Emissions in Pounds per Operating Day

Particulate Matter [ ] (119-124) | Oxides of Sulfur [ ] (125-130) | Oxides of Nitrogen [ ] (131-136)

Carbon Monoxide [ ] (137-142) | Volatile Organic Compounds [ ] (143-148)

Other Pollutants Specify _____ Type/Amount

19. Inventory Date [ ] (180-183)

20. Method Used to Determine Emissions

	Estimate	Emission Factor	Stack Test	Other
Particulate matter	[ ] 184-1	[ ] -2	[ ] -3	[ ] -4
Oxides of Nitrogen	[ ] 186-1	[ ] -2	[ ] -3	[ ] -4
Volatile Organics	[ ] 188-1	[ ] -2	[ ] -3	[ ] -4
Oxides of Sulfur	[ ] 185-1	[ ] -2	[ ] -3	[ ] -4
Carbon Monoxide	[ ] 187-1	[ ] -2	[ ] -3	[ ] -4

21. Premises Information Premises Name _____

Census Tract [ ] (243-248) | SIC No. [ ] (249-252) | MD Grid East [ ] (253-256) | MD Grid North [ ] (257-259)

Owner: Private [ ] 260-0 | Local [ ] 260-1 | State [ ] 260-2 | Federal [ ] 260-3

Date Completed _____

Completed By _____

Form number: 10
Revision date: 09/27/2002
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Air and Radiation Management Administration ▪ Air Quality Permits Program

RECEIVED
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By

APPLICATION FOR PROCESSING/ MANUFACTURING EQUIPMENT

Permit to Construct ☒ Registration Update ☐ Initial Registration ☐

1A. Owner of Equipment/Company Name

Arlington Crematory, Inc.

Mailing Address

2313 51st Place
Street Address

Tuxedo | MD | 20781
City | State | Zip

Telephone Number

(301) 772-6150

Signature

Geary Powell, President
Print Name and Title

Date

DO NOT WRITE IN THIS BLOCK
2. REGISTRATION NUMBER

County No. (1-2) **Premises No.** (3-6)
Registration Class (7) **Equipment No.** (8-11)
Data Year (12-13)
Application Date

1B. Equipment Location and Telephone Number (if different from above)

Street Number and Street Name

City/Town | State | Zip | ( ) Telephone Number

Premises Name (if different from above)

3. Status (A= New, B= Modification to Existing Equipment, C= Existing Equipment)

Status	New Construction Begun (MM/YY)	New Construction Completed (MM/YY)	Existing Initial Operation (MM/YY)
A			12 18
15	16-19	20-23	20-23

4. Describe this Equipment: Make, Model, Features, Manufacturer (include Maximum Hourly Input Rate, etc.)

US Cremation Equipment Model US 150 "Classic Plus", see attached Spec Sheet

5. Workmen's Compensation Coverage not required for owner/operator
Binder/Policy Number | Expiration Date

Company

NOTE: Before a Permit to Construct may be issued by the Department, the applicant must provide the Department with proof of worker's compensation coverage as required under Section 1-202 of the Worker's Compensation Act.

6A. Number of Pieces of Identical Equipment Units to be Registered/Permitted at this Time 1

6B. Number of Stack/Emission Points Associated with this Equipment 1

7. Person Installing this Equipment (if different from Number 1 on Page 1)

Name _____ Title _____

Company _____

Mailing Address/Street _____

City/Town _____ State _____ Telephone (_____) _____

8. Major Activity, Product or Service of Company at this Location

Embalming chemical blending and packaging for funeral industry and cremation services.

9. Control Devices Associated with this Equipment

None ☐ 24-0

Simple/Multiple Cyclone	Spray/Adsorb Tower	Venturi Scrubber	Carbon Adsorber	Electrostatic Precipitator	Baghouse	Thermal/Catalytic Afterburner	Dry Scrubber
☐	☐	☐	☐	☐	☐	☐	☐
24-1	24-2	24-3	24-4	24-5	24-6	24-7	24-8

Other

☒ Describe Secondary combustion chamber

24-9

10. Annual Fuel Consumption for this Equipment

OIL-1000 GALLONS	SULFUR %	GRADE	NATURAL GAS-1000 FT^3	LP GAS-100 GALLONS	GRADE
			8,000		
26-31	32-33	34	35-41	42-45	

COAL- TONS	SULFUR %	ASH%	WOOD-TONS	MOISTURE %
46-52	53-55	56-58	59-63	64-65

OTHER FUELS (Specify Type) ☐ 66-1 ANNUAL AMOUNT CONSUMED (Specify Units of Measure)

OTHER FUEL (Specify Type) ☐ 66-2 ANNUAL AMOUNT CONSUMED (Specify Units of Measure)

1= Coke 2= COG 3=BFG 4=Other

11. Operating Schedule (for this Equipment)

Continuous Operation	Batch Process	Hours per Batch	Batch per Week	Hours per Day	Days Per Week	Days per Year
☐	☐		☐	8	7	365
67-1	67-2	68-69		70-71	72	73-75

Seasonal Variation in Operation:

No Variation	Winter Percent	Spring Percent	Summer Percent	Fall Percent	(Total Seasons= 100%)
☒					
76	77-78	79-80	81-82	83-84	

12. Equivalent Stack Innformation- is Exhaust through Doors, Windows, etc. Only? (Y/N) N (85)

If not, then	Height Avove Ground (FT)	Inside Diameter at Top	Exit Temperature (°F)	Exit Velocity (FT/SEC)
	39	20 in	863	23.3
	86-88	89-91	92-95	96-98

NOTE:
Attach a block diagram of process/process line, indicating new equipment as reported on this form and all existing equipment, including control devices and emission points.

13. Input Materials (for this equipment only)
Is any of this data to be considered confidential? [ ] (Y or N)

	NAME	CAS NO. (IF APPLICABLE)	INPUT RATE PER HOUR	UNITS	PER YEAR	UNITS
1.	human remains and container		150	lb	750	tons
2.						
3.						
4.						
5.						
6.						
7.						
8.						
9.						
TOTAL						

14. Output Materials (for this equipment)
Process/Product Stream

	NAME	CAS NO. (IF APPLICABLE)	OUTPUT RATE PER HOUR	UNITS	PER YEAR	UNITS
1.	ash					
2.						
3.						
4.						
5.						
6.						
7.						
8.						
9.						
TOTAL						

15. Waste Streams- Solid and Liquid

	NAME	CAS NO. (IF APPLICABLE)	OUTPUT RATE PER HOUR	UNITS	PER YEAR	UNITS
1.	ash					
2.						
3.						
4.						
5.						
6.						
7.						
8.						
9.						
TOTAL						

16. Total Stack Emissions (for this equipment only) in Pounds Per Operating Day

Particulate Matter	Oxides of Sulfur	Oxides of Nitrogen
6.29	9.06	35.57
99-104	105-110	111-116

Carbon Monoxide	Volatile Organic Compounds	PM-10
30.16	13.46	0.00
177-122	123-128	129-134

17. Total Fugitive Emissions (for this equipment only) in Pounds Per Operating Day

Particulate Matter	Oxides of Sulfur	Oxides of Nitrogen
135-139	140-144	145-149

Carbon Monoxide	Volatile Organic Compounds	PM-10
150-154	155-159	160-164

Method Used to Determine Emissions **(1= Estimate 2= Emission Factor 3= Stack Test 4= Other)**

TSP	SOX	NOX	CO	VOC	PM10
2	2	2	2	2	2
165	166	167	168	169	170

AIR AND RADIATION MANAGEMENT ADMINISTRATION USE ONLY

18. Date Rec'd. Local _____ **Date Rec'd. State** _____ **Return to Local Jurisdiction** **Date**_____ **By**_____

Reviewed by Local Jurisdiction Date_____ By_____ **Reviewed by State** Date_____ By_____

19. Inventory Date **Month/Year** (171-174) **Equipment Code** (175-177) **SCC Code** (178-185)

20. Annual Operating Rate (186-192) **Maximum Design Hourly Rate** (193-199) **Permit to Operate Month** (200-201) **Transaction Date (MM/DD/YR)** (202-207)

Staff Code (208-210) **VOC Code** (211 212) **SIP Code** (213 214) **Regulation Code** (215-218) **Confidentiality** (219)

Point Description (220-238) **Action** (239) A: Add C: Change

Form Number: 5
Rev. 9/27/2002
TTY Users 1-800-735-2258

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FORM 5T: Toxic Air Pollutant (TAP) Emissions Summary and Compliance Demonstration

Step 3: Best Available Control Technology for Toxics Requirement (T-BACT, COMAR 26.11.15.05)
In the following table, list all TAP emission reduction options considered when determining T-BACT for the proposed installation. The options should be listed in order beginning with the most effective control strategy to the least effective strategy. Attach supporting documentation as necessary.

Target Pollutants	Emission Control Option	% Emission Reduction	Costs		T-BACT Option Selected? (yes/no)
			Capital	Annual Operating	
ex. ethanol and benzene	*Thermal Oxidizer*	*99*	*$50,000*	*$100,000*	*no*
ex. ethanol and benzene	*Low VOC materials*	*80*	*0*	*$100.000*	*yes*
see attached air toxics analysis					

(attach additional sheets as necessary)

Step 4: Demonstrating Compliance with the Ambient Impact Requirement (COMAR 26.11.15.06)
Each TAP not exempt in Step 2 must be individually evaluated to determine that the emissions of the TAP will not adversely impact public health. The evaluation consists of a series of increasingly non-conservative (and increasingly rigorous) tests. Once a TAP passes a test in the evaluation, no further analysis is required for that TAP. "Demonstrating Compliance with the Ambient Impact Requirement under the Toxic Air Pollutant (TAP) Regulations (COMAR 26.11.15.06)" provides guidance on conducting the evaluation. Summarize your results in the following table. Attach supporting documentation as necessary.

Toxic Air Pollutant (TAP)	CAS Number	Screening Levels ($\mu g/m^3$)			Premises Wide Total TAP Emissions		Allowable Emissions Rate (AER) per COMAR 26.11.16.02A		Off-site Concentrations per Screening Analysis ($\mu g/m^3$)			Compliance Method Used?
		1-hour	8-hour	Annual	(lb/hr)	(lb/yr)	(lb/hr)	(lb/yr)	1-hour	8-hour	Annual	AER or Screen
ex. ethanol	*64175*	*18843*	*3769*	*N/A*	*0.75*	*1500*	*0.89*	*N/A*	*N/A*	*N/A*	*N/A*	*AER*
ex. benzene	*71432*	*80*	*16*	*0.13*	*1.00*	*400*	*0.04*	*36.52*	*1.5*	*1.05*	*0.12*	*Screen*
see attached air toxics analysis												

(attach additional sheets as necessary)

If compliance with the ambient impact requirement cannot be met using the allowable emissions rate method or the screening analysis method, refined dispersion modeling techniques may be required. Please consult with the Department's Air Quality Permit Program prior to conducting dispersion modeling methods to demonstrate compliance.

MARYLAND DEPARTMENT OF THE ENVIRONMENT
Air and Radiation Management Administration • Air Quality Permits Program
1800 Washington Boulevard • Baltimore, Maryland 21230
(410)537-3225 • 1-800-633-6101• www.mde.maryland.gov

FORM 5T: Toxic Air Pollutant (TAP) Emissions Summary and Compliance Demonstration

Applicant Name: Arlington Crematory, Inc.

Step 1: Quantify premises-wide emissions of Toxic Air Pollutants (TAP) from new and existing installations in accordance with COMAR 26.11.15.04. Attach supporting documentation as necessary.

Toxic Air Pollutant (TAP)	CAS Number	Class I or Class II?	Screening Levels (µg/m³)			Estimated Premises Wide Emissions of TAP			
						Actual Total Existing TAP Emissions	Projected TAP Emissions from Proposed Installation	Premises Wide Total TAP Emissions	
			1-hour	8-hour	Annual	(lb/hr)	(lb/hr)	(lb/hr)	(lb/yr)
ex. ethanol	*64175*	*II*	*18843*	*3769*	*N/A*	*0.60*	*0.15*	*0.75*	*1500*
ex. benzene	*71432*	*I*	*80*	*16*	*0.13*	*0.5*	*0.75*	*1.00*	*400*
See attached source description									

(attach additional sheets as necessary.)

Note: Screening levels can be obtained from the Department's website (http://www.mde.maryland.gov) or by calling the Department.

Step 2: Determine which TAPs are exempt from further review. A TAP that meets either of the following Class I or Class II small quantity emitter exemptions is exempt from further TAP compliance demonstration requirements under Step 3 and Step 4.

Class II TAP Small Quantity Emitter Exemption Requirements (COMAR 26.11.15.03B(3)(a))
A Class II TAP is exempt from Step 3 and Step 4 if the Class II TAP meets the following requirements: Premises wide emissions of the TAP shall not exceed 0.5 pounds per hour, and any applicable 1-hour or 8-hour screening level for the TAP must be greater than 200 µg/m³.

Class I TAP Small Quantity Emitter Exemption Requirements (COMAR 26.11.15.03B(3)(b))
A Class I TAP is exempt from Step 3 and Step 4 if the Class I TAP meets the following requirements: Premises wide emissions of the TAP shall not exceed 0.5 pounds per hour and 350 pounds per year, any applicable 1-hour or 8-hour screening level for the TAP must be greater than 200 µg/m³, and any applicable annual screening level for the TAP must be greater than 1 µg/m³.

If a TAP meets either the Class I or Class II TAP Small Quantity Emitter Exemption Requirements, no further review under Step 3 and Step 4 are required for that specific TAP.

Attachment 2

Site Location Map & Site Plan


2313 51st Pl, Hyattsville, ...
2313 51st Pl
Hyattsville, MD 20781
Colmar Manor
Anacostia River Park
Fort Lincoln Cemetery
Baltimore Washington Parkway
Baltimore Washington Pkwy
New York Ave
New York Ave NE
Kenilworth Ave
Tuxedo Rd
John Hanson Hwy
Arbor St
57th Ave
57th Pl
59th Ave
59th Pl
Valley Way
Lake Ave
Dewey St
Tuxedo
Crest Ave
Euclid St
Cheverly Ave
Forest Rd
Landover Park
Legion Park
Hawthorne St
Greenleaf Rd
Cheverly Local Park
Parkway
Lydell Rd
Schuster Dr
Frolich Ln
52nd Ave
METRO-Cheverly
64th Ave
62nd Ave
61st Ave
Reed St
North Englewood Playground
N Englewood Dr
Jutewood Ave
Marblewood Ave
Addison Rd
Nye St
Oates St
Chapel Oaks
Chapelwood Ln
Elkwood Ln
Doewood Ln
Deanwood Park
Mann St
Duel Pl
Beaver Heights Ln
Antelope Ln
Minnesota Ave NE
Eastern Ave NE
Olive St NE
Olive St
S St
R St
Kenilworth Aquatic Gardens
LBJ Memorial Pond
Anacostia Ave NE
45th St NE
Polk St NE
Ord St NE
Nash St NE
Meade St NE
49th St NE
METRO-Deanwood
Washington
Kenilworth
50
201
295

Google Earth

Arlington Crematory Plot Plan

GROVE
SCIENTIFIC & ENGINEERING

Attachment 3

US Cremation Equipment Model "CLASSIC X-Cel" HUMAN CREMATORY Specifications, and Engineering Drawings

HUMAN CREMATION CHAMBER SPECIFICATION
Model US 200 *"Classic X-CEL"*

EQUIPMENT:

U.S. Cremation Equipment, a division of American Incinerators Corporation - Multiple Chambered Human Cremator; Natural Gas, Propane (LP) or Oil fired.

MANUFACTURER:

U.S. Cremation Equipment a division of American Incinerators Corporation.

CONSTRUCTION STANDARDS:

The cremator shall be constructed of U.L./CSA listed components and will meet or exceed nationally accepted incinerator construction standards as originally established per the Incinerator Institute of America (IIA) publication guidelines; i.e.:

A. Primary chamber will not exceed 60% of total furnace volumes. Flue connection shall not be considered part of furnace volume.

B. Flame supervision through continuous ultraviolet scanning flame detectors on all burners.

C. High temperature refractory construction with air-cooled walls to prevent excessive heat radiation.

D. Exhaust gas temperature reduction.

SAFETY CERTIFICATIONS

Underwriters Laboratories (UL) listed appliance File number MH47704.

CREMATOR DIMENSIONS:

Chamber volumes:	Primary - 114 CF (3.23 CM)
	Secondary - 101 CF (2.86 CM)
Primary Chamber:	101" L x 52" W x 39" H (2565 mm x 1321 mm x 991 mm)
Structural footprint:	169" L x 76" W (4293 mm x 1930 mm)
Over-all dimensions:	169" L x 87" W (W/ Control Panel) x 128" H
	(4293 mm L x 2210 mm W x 3251 mm H

POWER CHARGING DOOR:

Door Height:	42" (1067 mm)
Door Width:	55 ¼" (1403 mm)

PRIMARY CHAMBER OPENING:

Width: 52" (1321 mm)
Roof Arch Height: 39" (984 mm) @ High Point – 35" @ Low Point

OPERATING TEMPERATURE:

Temperatures are determined as a result of federal, state or local permitting authority operating standards.

Typical primary chamber setting: 1,000°F-1,200°F (538°C - 648°C)
Typical secondary chamber setting: 1,400°F-1,800°F (760°C - 982°C)

RETENTION TIME:

In excess of 2 seconds.

CAPACITY:

Single load capacity of 1200 lbs (544 kg) per cremation cycle. Burn Rate of 150-400 lbs/hr (68 - 181 kg)

DRAFT:

Induced via refractory lined draft inducer.

SHIPPING WEIGHT:

34,000 lbs. (15,422 kg)

EMISSIONS:

The U.S. Cremation Equipment cremator shall meet or exceed federal, state/province and local environmental regulations.

EMISSION CONTROL:

Secondary chamber equipped with one 2,500,000 BTU/HR burner. Also equipped with an electronic exhaust gas scanner system which temporarily suspends operation of the primary chamber burner if the opacity of the exhaust gases reaches the maximum locally authorized level.

STEEL CONSTRUCTION SPECIFICATIONS:

A. The structure to be heavy 3" steel angle, square tube; 3/8" steel plate, seal welded construction.

B. Subfloor to be 3/16" steel plate, seal welded construction.

C. The exterior shell to be 12 gauge steel removable panels.

D. Interior shell to be 10 gauge steel, seal welded construction.

INSULATION & REFRACTORY SPECIFICATIONS:

A. Hot Hearth: 3000°F (1650°C) abrasion resistant cast refractory monolithic cast 7"-13" thick, 1 ½ " recessed top and rounded, stressed arched bottom.

B. Chamber Floors: 3000°F (1650°C) abrasion resistant cast refractory, 5" thick on top of 2" 2400°F (1316°C) light weight insulating castable.

C. Chamber Ceilings: 3000°F (1650°C) cast refractory, monolithic cast, rounded, stressed arched, 5"-9" thick, topped by 2", 2400°F (1316°C) light weight insulating castable.

D. Interior Walls: 2800°F (1538°C) alumina-silicate firebrick, 2 1/2" x 4 1/2" x 9", all chambers are backed by 4" (102 mm) of 1900°F (1038°C) ceramic fiber insulation.

E. Stack: Lined with 2-3" (51 to 76 mm) of 2200°F (1205°C) insulating refractory.

SKIN TEMPERATURE CONTROL:

Integral dual casing, completely air-cooled design to prevent excessive heat radiation.

COMBUSTION EQUIPMENT:

A. Combustion Air - One (1) single or 3 phase, 220/460V, 17-15.5/7.6 amp, 7.5 hp air blower motor 1,700 CFM (158 CMM)

B. Primary Chamber - One 1,500,000 BTU/hr nozzle mix, gas-fired burner; Eclipse, North American, or equal.

C. Secondary Chamber - One, 2,500,000 BTU/hr modulating, nozzle mix, gas-fired burner. Eclipse, North American, or equal.

D. Burner Flame Safeguard - Control supervision on each burner via a flame safeguard relay and ultra-violet light detector.

E. Low Air Pressure Safety Switch - Interlocked to all burners.

EXHAUST GAS TEMPERATURE REDUCTION:

Hot air duct operating exit temperature: 900°F (482°C)

HOT AIR DUCT:

10 gauge carbon steel, high temperature 2-3" (50 – 75 mm)refractory lining, pre-drilled flanges,

24" (610 mm) Outside Diameter, 28" (710 mm) at flanges.

UTILITY REQUIREMENTS:

A. GAS:

1. Pressure:
   a) Natural Gas: 7-9" W.C. (178-228 mm)
   b) LP Gas (Propane): 11-14" W.C. (288-355 mm)

2. Flow Rate: 4,000,000 BTU/hr

B. ELECTRICAL:

Voltage:	208/230/360 Volts
Phase:	Single or 3 Phase
Frequency:	50/60Hz
Amperage:	40 Amp for 3; 70 Amp for single Phase

CREMATION CHAMBER LOADING/CLEAN-OUT DOOR:

Hydraulically operated, refractory lined, upward movement guillotine style door w/view port. It is a front loading-front cleanout design with cremated remains collection/ cooling hopper and removal system. The hydraulic system pump is a 1 HP with a capacity of 15 liters per minute or equivalent system.

CREMATION PROCESS CONTROL:

The cremation cycle is controlled by a programmable logic control (PLC) system. Visual confirmation of the system status is provided through a Color Touch Screen Panel which displays temperatures, elapsed time, burner operation and other functions. Continuous fuel and air modulation is automatically controlled by a time/temperature actuated system. Operator interface performed through the Color Touch Screen. A Temperature Chart Recorder (if applicable) is provided.

EXTERIOR FINISH:

The top and rear compartments are finished with two coats of high-temperature, textured, black polyurethane. The front and side panels are powder coated in a claret color. The cremator is trimmed in stainless steel.

TOOLS:

The tools consist of a steel wire brush and rake with long handles, and a short handle rake. A trigger Hand Magnet for removal of metal is also included.

THE CLASSIC

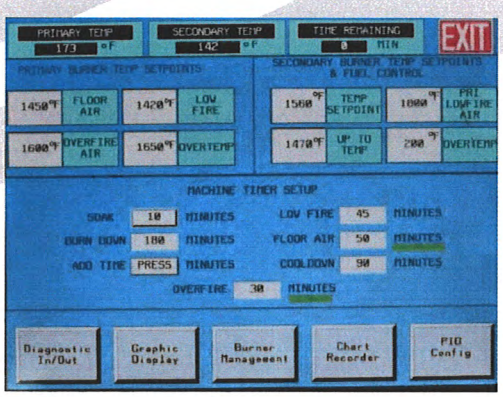
X-CEL

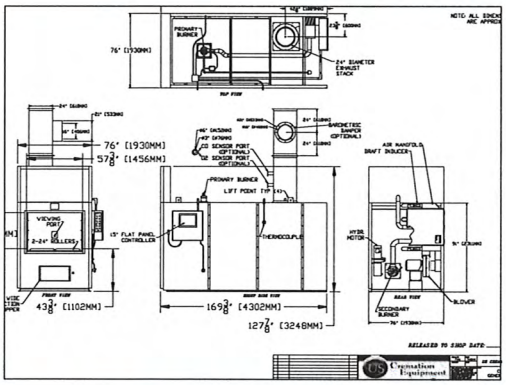
HIGH PERFORMANCE FOR HIGH-VOLUME FACILITIES

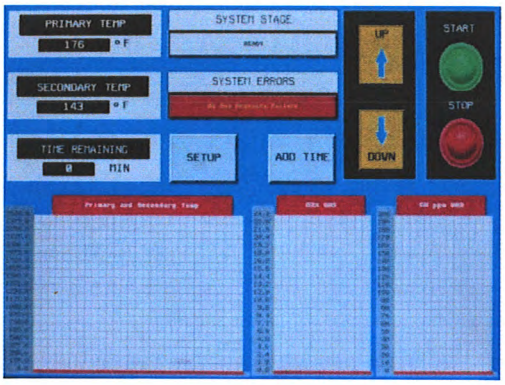
US CREMATION EQUIPMENT

UL LISTED

The newest model from U.S. Cremation Equipment – the Classic X-CEL – brings the highest level of efficiency to the cremation industry. The Classic X-CEL is designed for high volume and lower operational costs for that segment of the market experiencing substantially higher cremation rates. Utilizing the latest technology, the Classic X-CEL offers performance and equipment features not found in any other unit and is backed by a two-year limited warranty.







Standard features of the Classic X-CEL

- No cool-down between cycles
- Cremation of up to ten cases in a 12-hour workday
- Continuous operation over a 24-hour period
- Accommodation of cases in excess of 1000 pounds
- Cremation chamber accepting caskets/containers 52" wide
- Over fire air ports for improved performance
- Secondary chamber retention time over two seconds
- PLC control system with 15" touch screen interface
- Opacity monitoring and control system
- Underwriters Laboratories, Inc. (UL) listed

Classic X-CEL options

- Continuous Emission Monitoring (CEM) system
- Oxygen monitoring and modulation
- Remote monitoring and diagnostics
- Data logger and acquisition system
- Self-propelled mobile insertion machine

To learn why the Classic X-CEL is earning attention from the industry and satisfaction from its customers, contact the cremation professionals, 321.282.7357.

Assistance is always a phone call away.

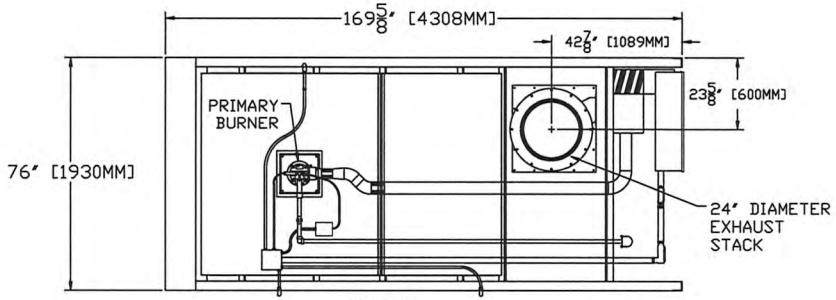
US Cremation Equipment

598 Northlake Blvd., Suite 1016 • Altamonte Springs, FL 32701 | 321.282.7357 | www.uscremationequipment.com

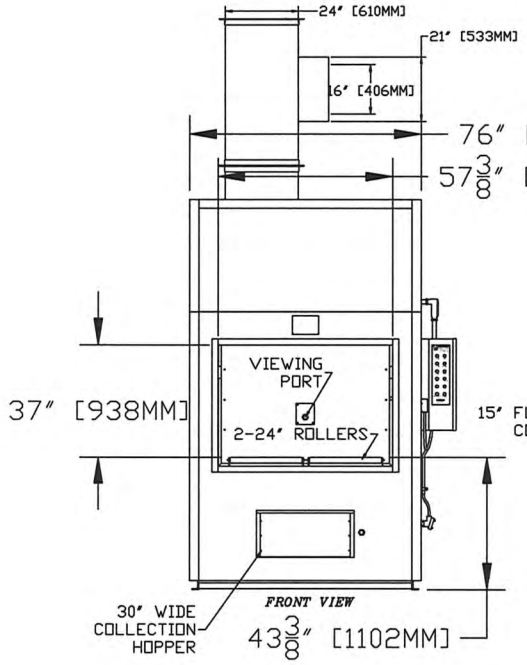
ITEM	QTY	DESCRIPTION

CLASSIC XL

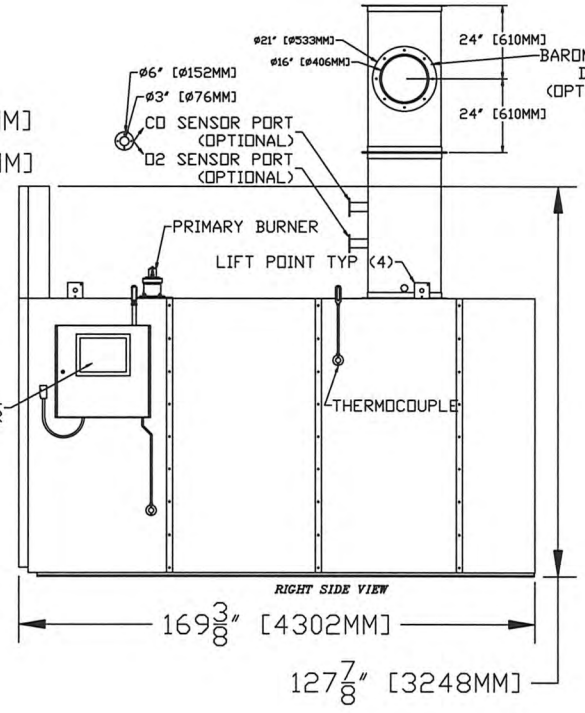
NOTE: ALL DIMENSIONS ARE APPROXMATE



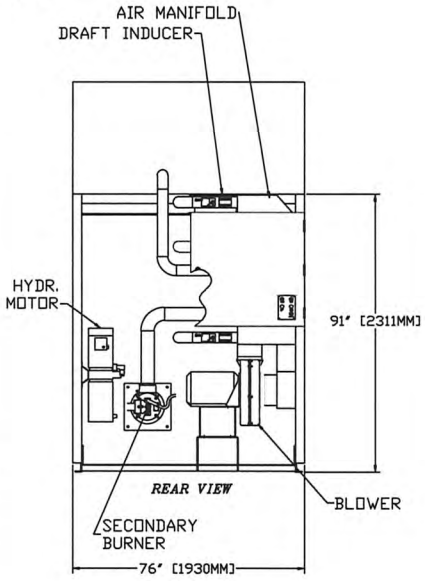
TOP VIEW



FRONT VIEW



RIGHT SIDE VIEW



REAR VIEW

RELEASED TO SHOP DATE: _____

NO.	DATE	DESCRIPTION	BY

US Cremation Equipment
A Division of Memorial Industries

DRAWN BY	DATE
TVA	7/18/11
CHECKED	DWG

THIS DRAWING IS THE PROPERTY OF US CREMATION EQUIPMENT AND IS NOT TO BE COPIED, REPRODUCED, LOANED OR DISCLOSED TO ANY OTHER PERSON OR COMPANY WITHOUT THE EXPRESS WRITTEN CONSENT OF US CREMATION EQUIPMENT

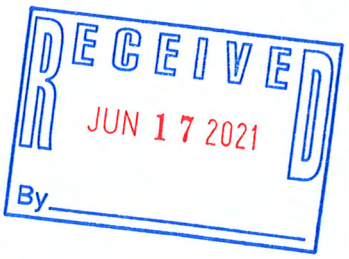
JOB NO.	610

US CREMATION EQUIPMENT

CLASSIC XL
GENERAL ASSEMBLY

MODEL NO.	PART NUMBER	REV	SHEET	REV
CLASSIC XL		D		

Attachment 4
Criteria Pollutants, TAPs Emission Calculations, and Ambient Impact Analysis



*** SCREEN3 MODEL RUN ***
*** VERSION DATED 13043 ***

C:\Users\Bruno\Dropbox (Grove Scientific)\Z CLIENT FILES\300000-Air Quality\AI

SIMPLE TERRAIN INPUTS:

SOURCE TYPE	=	POINT
EMISSION RATE (G/S)	=	0.125998
STACK HEIGHT (M)	=	11.8872
STK INSIDE DIAM (M)	=	0.5080
STK EXIT VELOCITY (M/S)	=	7.0917
STK GAS EXIT TEMP (K)	=	735.2056
AMBIENT AIR TEMP (K)	=	293.0000
RECEPTOR HEIGHT (M)	=	0.0000
URBAN/RURAL OPTION	=	URBAN
BUILDING HEIGHT (M)	=	7.9248
MIN HORIZ BLDG DIM (M)	=	32.6136
MAX HORIZ BLDG DIM (M)	=	97.5360

THE REGULATORY (DEFAULT) MIXING HEIGHT OPTION WAS SELECTED.
THE REGULATORY (DEFAULT) ANEMOMETER HEIGHT OF 10.0 METERS WAS ENTERED.

BUOY. FLUX = 2.699 M**4/S**3; MOM. FLUX = 1.293 M**4/S**2.

*** FULL METEOROLOGY ***

****
*** SCREEN AUTOMATED DISTANCES ***
****

*** TERRAIN HEIGHT OF 0. M ABOVE STACK BASE USED FOR FOLLOWING DISTANCES ***

DIST (M)	CONC (UG/M**3)	STAB	U10M (M/S)	USTK (M/S)	MIX HT (M)	PLUME HT (M)	SIGMA Y (M)	SIGMA Z (M)	DWASH
1.	0.000	0	0.0	0.0	0.0	0.00	0.00	0.00	NA
100.	12.47	3	3.0	3.1	960.0	26.41	21.97	20.43	HS
200.	10.66	4	2.0	2.1	640.0	33.49	31.40	27.89	HS
300.	8.547	6	1.0	1.1	10000.0	45.64	32.64	24.67	HS
400.	9.281	6	1.0	1.1	10000.0	45.64	41.98	29.47	HS
500.	8.899	6	1.0	1.1	10000.0	45.64	51.13	34.00	HS
600.	8.138	6	1.0	1.1	10000.0	45.64	60.05	38.27	HS
700.	7.318	6	1.0	1.1	10000.0	45.64	68.74	42.30	HS
800.	6.555	6	1.0	1.1	10000.0	45.64	77.20	46.13	HS
900.	5.881	6	1.0	1.1	10000.0	45.64	85.44	49.77	HS
1000.	5.299	6	1.0	1.1	10000.0	45.64	93.47	53.25	HS
1100.	4.799	6	1.0	1.1	10000.0	45.64	101.29	56.58	HS
1200.	4.369	6	1.0	1.1	10000.0	45.64	108.93	59.78	HS
1300.	3.999	6	1.0	1.1	10000.0	45.64	116.39	62.86	HS
1400.	3.678	6	1.0	1.1	10000.0	45.64	123.68	65.83	HS
1500.	3.399	6	1.0	1.1	10000.0	45.64	130.80	68.70	HS
1600.	3.154	6	1.0	1.1	10000.0	45.64	137.77	71.48	HS
1700.	2.938	6	1.0	1.1	10000.0	45.64	144.60	74.18	HS
1800.	2.747	6	1.0	1.1	10000.0	45.64	151.28	76.80	HS
1900.	2.577	6	1.0	1.1	10000.0	45.64	157.83	79.35	HS
2000.	2.425	6	1.0	1.1	10000.0	45.64	164.26	81.83	HS
2100.	2.288	6	1.0	1.1	10000.0	45.64	170.57	84.25	HS
2200.	2.165	6	1.0	1.1	10000.0	45.64	176.76	86.61	HS
2300.	2.053	6	1.0	1.1	10000.0	45.64	182.84	88.92	HS
2400.	1.951	6	1.0	1.1	10000.0	45.64	188.82	91.18	HS
2500.	1.859	6	1.0	1.1	10000.0	45.64	194.69	93.39	HS
2600.	1.774	6	1.0	1.1	10000.0	45.64	200.47	95.55	HS
2700.	1.696	6	1.0	1.1	10000.0	45.64	206.16	97.67	HS
2800.	1.624	6	1.0	1.1	10000.0	45.64	211.75	99.75	HS
2900.	1.557	6	1.0	1.1	10000.0	45.64	217.27	101.80	HS
3000.	1.496	6	1.0	1.1	10000.0	45.64	222.69	103.80	HS
3500.	1.246	6	1.0	1.1	10000.0	45.64	248.70	113.35	HS
4000.	1.064	6	1.0	1.1	10000.0	45.64	273.05	122.20	HS
4500.	0.9274	6	1.0	1.1	10000.0	45.64	295.98	130.49	HS
5000.	0.8207	6	1.0	1.1	10000.0	45.64	317.69	138.31	HS
5500.	0.7354	6	1.0	1.1	10000.0	45.64	338.34	145.73	HS
6000.	0.6656	6	1.0	1.1	10000.0	45.64	358.07	152.80	HS
6500.	0.6077	6	1.0	1.1	10000.0	45.64	376.96	159.56	HS
7000.	0.5588	6	1.0	1.1	10000.0	45.64	395.12	166.06	HS
7500.	0.5171	6	1.0	1.1	10000.0	45.64	412.61	172.32	HS
8000.	0.4810	6	1.0	1.1	10000.0	45.64	429.50	178.37	HS
8500.	0.4496	6	1.0	1.1	10000.0	45.64	445.85	184.22	HS
9000.	0.4220	6	1.0	1.1	10000.0	45.64	461.69	189.89	HS
9500.	0.3975	6	1.0	1.1	10000.0	45.64	477.07	195.41	HS
10000.	0.3756	6	1.0	1.1	10000.0	45.64	492.03	200.77	HS
15000.	0.2419	6	1.0	1.1	10000.0	45.64	623.72	248.16	HS
20000.	0.1781	6	1.0	1.1	10000.0	45.64	733.40	287.91	HS
25000.	0.1408	6	1.0	1.1	10000.0	45.64	829.21	322.81	HS
30000.	0.1165	6	1.0	1.1	10000.0	45.64	915.31	354.30	HS
40000.	0.9691E-01	4	1.0	1.0	320.0	55.09	1552.28	1553.21	HS
50000.	0.8617E-01	4	1.0	1.0	320.0	55.09	1745.79	1750.04	HS

```
MAXIMUM 1-HR CONCENTRATION AT OR BEYOND     1. M:
    55.    15.63        3     5.0    5.2  1600.0   18.05   12.32   11.34    HS

 DWASH=   MEANS NO CALC MADE (CONC = 0.0)
 DWASH=NO MEANS NO BUILDING DOWNWASH USED
 DWASH=HS MEANS HUBER-SNYDER DOWNWASH USED
 DWASH=SS MEANS SCHULMAN-SCIRE DOWNWASH USED
 DWASH=NA MEANS DOWNWASH NOT APPLICABLE, X<3*LB

**************************************
     *** REGULATORY (Default) ***
    PERFORMING CAVITY CALCULATIONS
  WITH ORIGINAL SCREEN CAVITY MODEL
          (BRODE, 1988)
**************************************


 *** CAVITY CALCULATION - 1 ***       *** CAVITY CALCULATION - 2 ***
  CONC (UG/M**3)      =    0.000        CONC (UG/M**3)      =    0.000
  CRIT WS @10M (M/S) =    99.99        CRIT WS @10M (M/S) =    99.99
  CRIT WS @ HS (M/S) =    99.99        CRIT WS @ HS (M/S) =    99.99
  DILUTION WS (M/S)  =    99.99        DILUTION WS (M/S)  =    99.99
  CAVITY HT (M)       =     7.99        CAVITY HT (M)       =     7.92
  CAVITY LENGTH (M)  =    41.87        CAVITY LENGTH (M)  =    28.13
  ALONGWIND DIM (M)  =    32.61        ALONGWIND DIM (M)  =    97.54

CAVITY CONC NOT CALCULATED FOR CRIT WS > 20.0 M/S.  CONC SET = 0.0

**************************************
      END OF CAVITY CALCULATIONS
**************************************


     ************************************
     *** SUMMARY OF SCREEN MODEL RESULTS ***
     ************************************

 CALCULATION         MAX CONC    DIST TO   TERRAIN
  PROCEDURE         (UG/M**3)    MAX (M)    HT (M)
--------------    -----------   ---------   -------
SIMPLE TERRAIN       15.63           55.        0.

**************************************************
** REMEMBER TO INCLUDE BACKGROUND CONCENTRATIONS **
**************************************************
```

Arlington Crematory Inc	Facility Name
Bruno Ferraro	Your Name
7-Apr-21	Date

Two Xcel Human crematories

HUMAN (number)	Animal (lbs)		Equivalent
2		Cremations per Hour	2.0
16		Cremations per 8-hour	16.0
20000		Cremations per year	20000.0

15.63 Screen3 maximum concentration (1 lb/hr emission rate) with stack height of 39 feet

Toxytool 2015

CAS	POLLUTANT	Emission Factor (EPA FIRE) (Pounds)	Emission Factor (as number) (Pounds)	MDE Screening Level 1-HOUR (ug/m3)	MDE Screening Level 8-HOUR (ug/m3)	MDE Screening Level Annual (ug/m3)	Screen3 Concentration 1-hour (ug/m3)	Screen3 Concentration 8-hour (ug/m3)	Screen3 Concentration Annual (ug/m3)	Screen3 Concentration as % of MDE Screening Level 1-hour	Screen3 Concentration as % of MDE Screening Level 8-hour	Screen3 Concentration as % of MDE Screening Level Annual
83329	Acenaphthene	1.11E-07	1.11E-07		2.03E+01	8.00E-02	3.47E-06	2.43E-06	3.17E-07		0.00	0.00
208968	Acenaphthylene	1.22E-07	1.22E-07		2.46E+01		3.81E-06	2.67E-06	3.48E-07		0.00	
120127	Anthracene	3.24E-07	3.24E-07		2.00E+01		1.01E-05	7.09E-06	9.25E-07		0.00	
7440360	Antimony	< 3.020E-5	3.02E-05		5.00E+00		9.44E-04	6.61E-04	8.62E-05		0.01	
7440382	Arsenic	< 3.000E-5	3.00E-05		1.00E-01	2.00E-04	9.38E-04	6.56E-04	8.56E-05		0.66	42.82
7440393	Barium	2.40E-05	2.40E-05		5.00E+00		7.50E-04	5.25E-04	6.85E-05		0.01	
56553	Benzo (a) anthracene	< 9.760E-9	9.76E-09				3.05E-07	2.14E-07	2.79E-08			
50328	Benzo (a) pyrene	< 2.910E-8	2.91E-08				9.10E-07	6.37E-07	8.31E-08			
205992	Benzo (b) fluoranthene	< 1.590E-8	1.59E-08				4.97E-07	3.48E-07	4.54E-08			
191242	Benzo (g,h,i) perylene	< 2.910E-8	2.91E-08		2.00E+01		9.10E-07	6.37E-07	8.31E-08		0.00	
207089	Benzo (k) fluoranthene	< 1.420E-8	1.42E-08				4.44E-07	3.11E-07	4.05E-08			
7440417	Beryllium	1.37E-06	1.37E-06		5.00E-04	4.00E-04	4.28E-05	3.00E-05	3.91E-06		6.00	0.98
7440439	Cadmium	1.11E-05	1.11E-05		2.00E-02	6.00E-04	3.47E-04	2.43E-04	3.17E-05		1.21	5.28
7440473	Chromium	2.99E-05	2.99E-05		5.00E+00		9.35E-04	6.54E-04	8.54E-05		0.01	
18540299	Chromium (VI)	1.35E-05	1.35E-05		1.00E-01	8.00E-05	4.22E-04	2.95E-04	3.85E-05		0.30	48.17
218019	Chrysene	< 5.400E-8	5.40E-08				1.69E-06	1.18E-06	1.54E-07			
7440484	Cobalt	< 1.750E-6	1.75E-06		2.00E-01		5.47E-05	3.83E-05	5.00E-06		0.02	
7440508	Copper	2.74E-05	2.74E-05		2.00E+00		8.57E-04	6.00E-04	7.82E-05		0.03	
53703	Dibenzo(a,h) anthracene	< 1.270E-8	1.27E-08				3.97E-07	2.78E-07	3.63E-08			
206440	Fluoranthene	2.05E-07	2.05E-07		8.20E+01		6.41E-06	4.49E-06	5.85E-07		0.00	
86737	Fluorene	4.17E-07	4.17E-07		2.00E+01		1.30E-05	9.12E-06	1.19E-06		0.00	
7647010	Hydrogen chloride	7.20E-02	7.20E-02	2.98E+01	1.65E+02	7.00E-01	2.25E+00	1.58E+00	2.06E-01	7.54	0.95	29.36
7664393	Hydrogen fluoride	6.55E-04	6.55E-04	1.64E+01	4.09E+00		2.05E-02	1.43E-02	1.87E-03	0.13	0.35	
193395	Indeno(1,2,3-cd)pyrene	< 1.540E-8	1.54E-08				4.81E-07	3.37E-07	4.40E-08			
7439921	Lead	6.62E-05	6.62E-05		5.00E-01		2.07E-03	1.45E-03	1.89E-04		0.29	
7439976	Mercury	3.29E-03	3.29E-03	3.00E-01	1.00E-01		1.03E-01	7.20E-02	9.39E-03	34.28	71.99	
7439987	Molybdenum	< 1.670E-5	1.67E-05		5.00E+00		5.22E-04	3.65E-04	4.77E-05		0.01	
7440020	Nickel	3.82E-05	3.82E-05		1.00E+00		1.19E-03	8.36E-04	1.09E-04		0.08	
85018	Phenanthrene	2.29E-06	2.29E-06		9.80E+00		7.16E-05	5.01E-05	6.54E-06		0.00	
129000	Pyrene	1.62E-07	1.62E-07		2.00E+01		5.06E-06	3.54E-06	4.62E-07		0.00	
7782492	Selenium	< 4.360E-5	4.36E-05		2.00E+00		1.36E-03	9.54E-04	1.24E-04		0.05	
7440224	Silver	7.30E-06	7.30E-06		1.00E-01		2.28E-04	1.60E-04	2.08E-05		0.16	
7440280	Thallium	< 8.520E-5	8.52E-05		2.00E-01		2.66E-03	1.86E-03	2.43E-04		0.93	
7440622	Vanadium	5.79E-05	5.79E-05		5.00E-01		1.81E-03	1.27E-03	1.65E-04		0.25	
7440666	Zinc	3.53E-04	3.53E-04	1.00E+03	5.00E+02		1.10E-02	7.72E-03	1.01E-03	0.00	0.00	
	PM, filterable	8.50E-02	8.50E-02				2.66E+00	1.86E+00	2.43E-01			
	Polycyclic aromatic hydrocarbons (PAH)	3.76E-06	3.76E-06				1.18E-04	8.23E-05	1.07E-05			
1746016	Total Dioxins & Furans - TEQ balanced		1.41E-09		8.20E-04	3.00E-08	4.40E-08	3.08E-08	4.02E-09		0.00	13.39

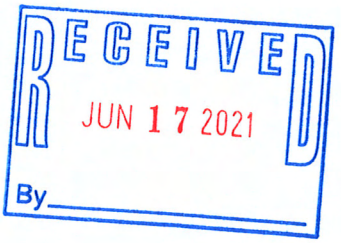
Arlington Crem: Arlington Crematory Inc
Bruno Ferraro
7-Apr-21 15-Feb-21
Toxytool 2015 Classic X-Cel

2	3 Primary Chamber Burner (MMBTU/hr)	2 crematories	1.5+1.5=3
2	5 Secondary Chamber Burner (MMBTU/hr)	2 crematories	2.5+2.5=5
4	8 Total Burner (MMBTU/hr)	both crematories	
20000	Cremations per year (from Toxics tab)	both crematories	

Pollutant	Factor AP-42 & FIRE (for cremation)	Factor AP-42 (for gas burners, per hour, per MMBTU)	Emission lb/yr	Emission lb/day	Emission lb/cremation	Emission lb/hour	Emission ton/year
PM (total)	0.09	0.01	2296.08	6.29	0.11	0.26	1.1480
PM (Cond.)		0.01	447.06	1.22	0.02	0.05	0.2235
PM (Filt)	0.09	0.00	1849.02	5.07	0.09	0.21	0.9245
PM10			0.00	0.00	0.00	0.00	0.0000
PM2.5			0.00	0.00	0.00	0.00	0.0000
SO2	0.16	0.00	3307.06	9.06	0.17	0.38	1.6535
NOx	0.26	0.10	12983.14	35.57	0.65	1.48	6.4916
CO	0.22	0.08	11008.24	30.16	0.55	1.26	5.5041
VOC (TOC)	0.22	0.01	4911.37	13.46	0.25	0.56	2.4557
Lead		0.00	0.04	0.00	0.00	0.00	0.0000
CO2		117.65	9411764.71	25785.66	470.59	1074.40	4705.8824
Methane		0.00	180.39	0.49	0.01	0.02	0.0902

Attachment 5

Results from Stack Tests



BEATTY ENVIRONMENTAL SERVICES, LLC

315 SE 20TH PL, CAPE CORAL, FL 33990
PHONE: (239) 246-3646
EMAIL: BEATTYENVIRONMENTAL12@GMAIL.COM

May 9, 2017

Luis Llorens
US Cremation Equipment
598 S. Northlake Blvd. Suite 1016
Altamonte Springs, Florida 32701

Re: US Cremation Equipment (XCEL)

Dear Mr. Llorens,

On May 1, 2017, EPA Methods 1-5, 9 and 10 for Particulate, Visible and Carbon Monoxide emissions were conducted on an US Cremation Equipment Model XCEL located at 4442 Holden Road in Lakeland, FL. The unit will be installed at Evans Eagle Vaults, Inc. located at 15 Graybill Road in Leola, PA 17540-7818. The following cremation unit was tested

- US Cremation Equipment XCEL

If you have any questions regarding the report please contact our office as soon as possible.

Sincerely,

Zachary Beatty

Zachary Beatty
Beatty Environmental Services, LLC

Electronic Copy to: US Cremation Equipment

Source Test Report for Particulate, Visible and Carbon Monoxide Emissions

EPA Method 1-5, 9 & 10

Report

17029-ST

Conducted:

May 1, 2017

Prepared for:

Evans Eagle Vaults, Inc.
15 Graybill Road
Leola, PA
&
US Cremation Equipment

By:

Beatty Environmental Services, LLC
315 SE 20th Pl
Cape Coral, FL 33990
(239) 246-3646

Table of Contents

1.0 Introduction

On May 1, 2017, EPA Methods 1-5, 9 & 10 for Particulate Matter (PM), Visible Emissions (VE) and Carbon Monoxide (CO) were performed on a U.S. Cremation Equipment Human Cremation retort Model XCEL, located at 4442 Holden Road in Lakeland, Florida. The cremation unit is being installed at Evans Eagle Vaults, Inc. located at 15 Graybill Road in Leola, PA.

During the testing period, Luis Llorens of U.S. Cremation Equipment maintained a log containing the emission control device and process data. This information is presented, along with the temperature chart, in Attachment C.

The results of this test verify compliance with the rules as set forth by Florida Department of Environmental Protection referenced under CFR Part 62-296.401 for incinerators.

2.0 Certification of Test Results

Facility Tested: US Cremation Equipment
4442 Holden Road
Lakeland Florida 33811

Type Process: Human Cremation-XCEL

Abatement Device: Afterburner

Report: 17029-ST

Date: May 1, 2017

Actual Particulate Emissions (gr/dscf @ 7% O_2) - 0.009
Allowable Particulate Emissions (gr/dscf @ 7% O_2) - 0.080

Actual Visible Emission - 0.00%
Allowable Visible Emission Rate (%) - 5.00%

Actual Carbon Monoxide Emissions (ppm @ 7% O_2) - 3.17
Allowable Carbon Monoxide Emissions (ppm @ 7% O_2) - 100

All testing and analysis was performed in accordance with 40 CFR Part 60.

I hereby certify that to my knowledge, all information and data submitted in this report is true and correct.

Daniel Beatty
Project Director

3.0 Allowable Emission Determination

The allowable emissions were determined by permit specific conditions.

Substantiating data and calculations are presented in the Appendix D.

4.0 Cyclonic Flow Determination

Due to the configuration of the system, cyclonic flow was considered to be non-existent at the sampling site.

5.0 Summary of Results
US Cremation Equipment
Model XCEL (Evans Eagle Vaults, Inc.)
17029-ST

	Run 1	Run 2	Run 3	Average
Date	5/1/2017	5/1/2017	5/1/2017	
Start Time	10:10	12:08	14:05	
Stop Time	11:15	13:12	15:10	
Process Rate (pounds/hr.)	179	165	190	178
Particulate Emission Rate (gr./dscf @ 7% O_2)	0.0060	0.0112	0.0106	0.009
Allowable Particulate Emission Rate (gr./dscf @7% O_2)	0.080	0.080	0.080	0.080
Visible Emission Rate (%) (highest six minute average)	0.00			0.00
Allowable Visible Emission Rate (%) (with up to 20% for 3 min. per hour)	5.00			5.00
Carbon Monoxide Emission Rate (ppm @7% O_2)	5.86	2.01	1.65	3.17
Allowable Carbon Monoxide Emission Rate (ppm @7% O_2)	100	100	100	100

6.0 Visible Emission Results
US Cremation Equipment
Model XCEL (Evans Eagle Vaults, Inc.)
17029-ST

Emission Point	Allowable Emission Rate (highest six minute average)	Emission Rate (highest six minute average)	Average Opacity
Exhaust Stack	5.00	0.00	0.00

7.0 Particulate Emission Results
US Cremation Equipment
Model XCEL (Evans Eagle Vaults, Inc.)
17029-ST

	Run 1	Run 2	Run 3
Area (square feet)	2.18	2.18	2.18
Stack Pressure (inches Hg)	30.10	30.10	30.10
Meter Pressure (inches Hg)	30.26	30.28	30.28
Sample Volume (Std. Cu. Ft.)	52.353	54.183	54.516
Water Vapor (Cubic Feet)	9.10	6.96	4.62
Sample Moisture (percent)	14.81	11.38	7.82
Saturation Moisture (percent)	100.00	100.00	100.00
Molecular Weight (lbs/lb Mole wet)	27.35	28.00	28.40
Velocity (fpm)	1372	1437	1379
Volumetric Flow Rate (acfm)	2993	3136	3008
Volumetric Flow Rate (scfm-dry)	872	941	953
Concentration (gr/dscf)	0.0027	0.0039	0.0037
Concentration@7% O2 (gr/dscf)	0.0060	0.0112	0.0106
Mass Emission Rate (lbs./hr.)	0.02	0.03	0.03
Percent Isokinetic	102.48	98.29	97.69

8.0 Carbon Monoxide Emission Results
US Cremation Equipment
Model XCEL (Evans Eagle Vaults, Inc.)
17029-ST

	Run1	Run 2	Run 3	Average
Date	5/1/2017	5/1/2017	5/1/2017	
Start Time	10:10	12:08	14:05	
Stop Time	11:15	13:12	15:10	
Percent Oxygen	14.5	16	16	
Carbon Monoxide (PPM)	2.70	0.71	0.58	
Carbon Monoxide Emissions (PPM @ 7% O_2)	5.86	2.01	1.65	3.17
Carbon Monoxide Allowable (PPM@ 7% O_2)	100	100	100	100

9.0 Overview of Field and Analytical Procedures

9.1 EPA Method 1 – Sample and Velocity Traverses for Stationary Sources

Principle – To aid in the representative measurement of pollutant emissions and/or total volumetric flow rate from a stationary source, a measurement site where the effluent stream is flowing in a known direction is selected and the cross-section of the stack is divided into a number of equal areas. A traverse point is then located within each of these equal areas. See Sampling Point Determination.

Applicability – This method is applicable to flowing gas streams in ducts, stacks and flues. This method cannot be used when: 1) flow is cyclonic or swirling 2) a stack is smaller than about 12 inches in diameter, or 0.071 cross-sectional area or 3) the measurement site is less than two stack or duct diameters downstream or less than a half diameters upstream from a flow disturbance. The procedures in this method were utilized in its entirety according to the procedures outlined in 40 CFR Part 60, Appendix A.

9.2 EPA Method 2 – Determination of Stack Gas Velocity and Volumetric Flow Rate

Principle - Type S Pitot Tube – The average gas velocity in a stack is determined from the gas density and from measurement of the average velocity head with a Type S pitot tube.

Applicability – This method is applicable for measurement of the average velocity of a gas stream and for quantifying gas flow. This procedure is not applicable at measurement sites which fail to meet the criteria of Method l. This method cannot be used for direct measurement in cyclonic or swirling gas streams. The procedures in this method were utilized in its entirety according to the procedures outlined in 40 CFR Part 60, Appendix A.

9.3 EPA Method 3 – Gas Analysis for the EPA Determination of Dry Molecular Weight

Principle – A gas sample is extracted from a stack by one of the following methods (1) A multi-point grab sampling method using an Orsat analyzer to analyze the individual grab sample obtained at each point; (2) a method for measuring either CO2 or O2 and using stoichiometric calculations to determine dry molecular weight; and (3) assigning a value of 30.0 for dry molecular weight, in lieu of actual measurements, for processes burning natural gas, coal, or oil.

Applicability – This method is applicable for determining carbon dioxide and oxygen concentrations and dry molecular weight of a sample from a gas stream of a fossil fuel combustion process. The method may also be applicable to other processes where it has been determined that compounds other than CO2, O2, CO, and nitrogen are not present in concentrations sufficient to affect the results. The procedures in this method were utilized in its entirety according to the procedures outlined in 40 CFR Part 60, Appendix A.

9.4 EPA Method 4 - Determination of Moisture Content in Stack Gases

Principle – A gas sample is extracted at a constant rate from the source; moisture is removed from the sample stream and determined either volumetrically or gravimetrically. A

Applicability – This method is applicable for determining the moisture content of stack gas. There are two procedures given to determine the moisture. The procedure for the reference method to determine the moisture content was used to calculate the emission data. The reference method was conducted simultaneously with the pollutant emission measurement run, pollutant emission rate, etc. for the run is based upon the results of the reference method or its equivalent. The procedures in this method were utilized in its entirety according to the procedures outlined in 40 CFR Part 60, Appendix A.

9.5 EPA Method 5 – Determination of Particulate Emissions from Stationary Sources

Principle – Particulate matter is withdrawn isokinetically from the source collected on a glass fiber filter maintained at a temperature in the range of 223-273 degrees F or such other temperature as specified by an applicable subpart of the standards or approved by the Administrator, US Environmental Protection Agency for a particular application. The particulate mass which includes any material that condenses at or

above the filtration temperature is determined gravimetrically after removal of uncombined water.

Applicability – This method is applicable for the determination of particulate emissions from stationary sources. The procedures in this method were utilized in its entirety according to the procedures outlined in 40 CFR Part 60, Appendix A.

Diagram of EPA Method 5 Sampling Train

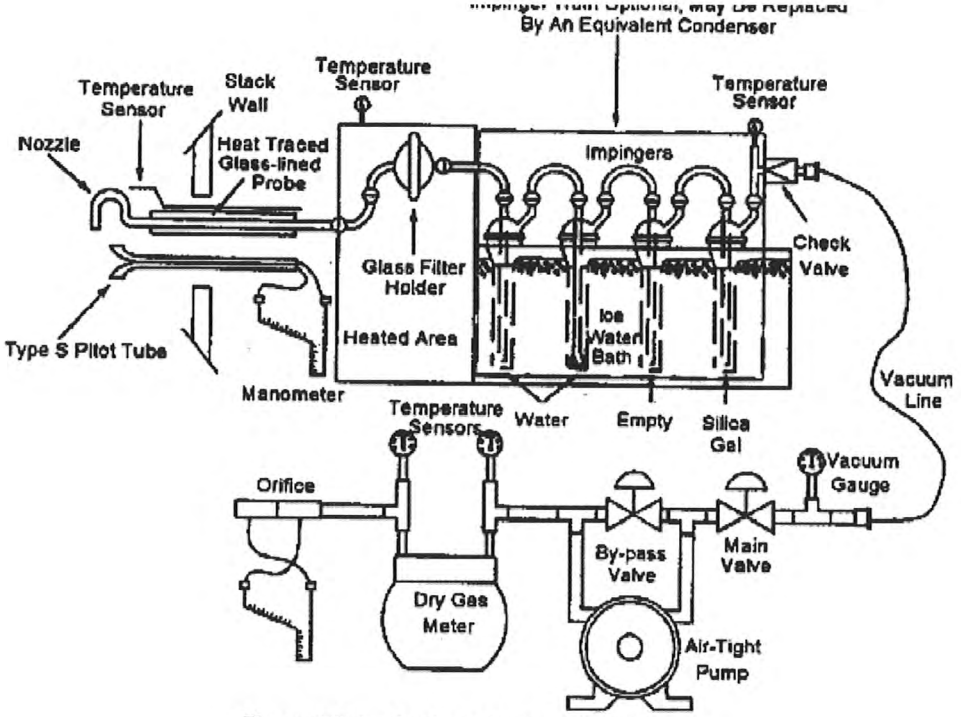


Figure F5-1. Particulate Sampling Train.

9.6 EPA Method 9 – Visual Determination of the Opacity of Emissions from Stationary Sources

Principle - The opacity of emissions from stationary sources is determine visually by a Qualified observer.

Applicability - This method is applicable for the determination of the opacity of emissions from stationary sources pursuant to 60.11(b) and for qualifying observers or visually determining the opacity of emissions.

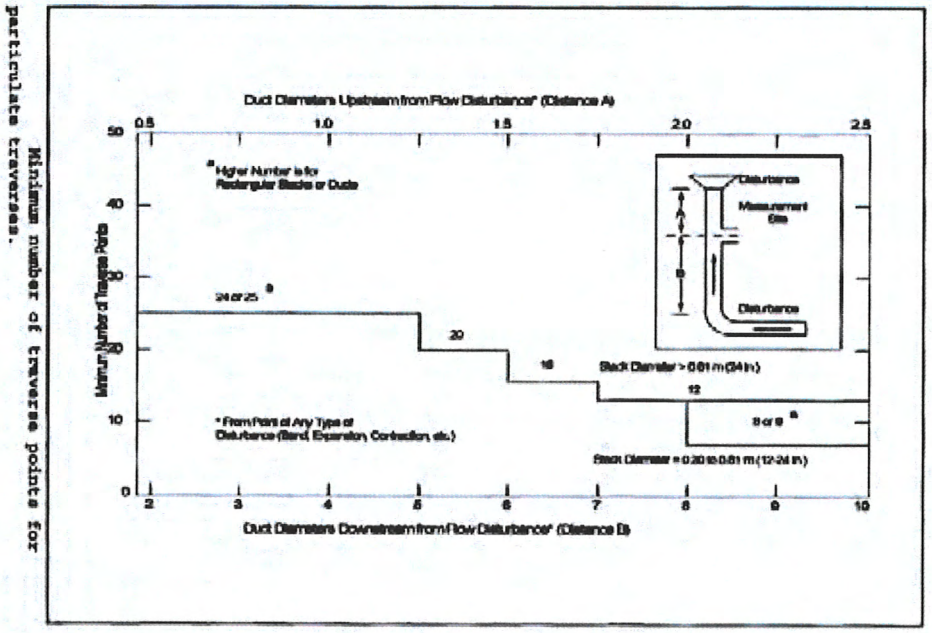
9.7 EPA Method 10 – Determination of Carbon Monoxide Emissions from Stationary Sources

Principle - An integrated or continuous gas sample is extracted from a sampling point and analyzed for carbon monoxide (CO) content. Performance specifications and test procedures are provided to ensure reliable data.

Applicability - This method is applicable for the determination of carbon monoxide emissions from stationary sources. The process will dictate whether a continuous or an integrated sample is required. If the process produces CO spikes that would exceed the span (as determined from the allowable), then an integrated procedure is required.

10.0 Sampling Point Determination Procedure

Minimum Number of Sampling Points Per Traverse



Circular Stacks

The number of sampling points is selected according to the above diagram, with the number of points equaling the next higher multiple of four.

Rectangular Stacks

The number of sampling points is determined using the matrix below.

Number of Traverse Points	Subarea Layout Matrix
9	3x3
12	4x3
16	4x4
20	5x4
25	5x5
30	6x5
36	6x6
42	7x6
49	7x7

10.1 Sampling Point Determination
US Cremation Equipment
Model XCEL (Evans Eagle Vaults, Inc.)
17029-ST

Stack Configuration	Circular
Diameter (inches)	20
Distance A - Ports to Downstream Disturbance (inches)	24
Distance A - Ports to Downstream Disturbance (diameters)	1.2
Distance B - Ports to Upstream Disturbance (inches)	120
Distance B - Ports to Upstream Disturbance (diameters)	6.0
Number of Test Ports	2
Wall or Port length	1
Number of Sampling Points per Traverse	12
Number of Points Sampled	24

Photograph of Stack

Traverse Point Location	
Traverse Point No.	Inches to Sample Point offset
1	1.4
2	2.3
3	3.4
4	4.5
5	6.0
6	8.1
7	13.9
8	16.0
9	17.5
10	18.6
11	19.7
12	20.6

11.0 Summary of Field and Laboratory Data
US Cremation Equipment
Model XCEL (Evans Eagle Vaults, Inc.)
17029-ST

	Run 1	Run 2	Run 3
Date	5/1/2017	5/1/2017	5/1/2017
Start Time	10:10	12:08	14:05
Stop Time	11:15	13:12	15:10
CP	0.84	0.84	0.84
Y	1.0076	1.0076	1.0076
^Ha (inches H2O)	1.6542	1.6542	1.6542
Diameter of Nozzle (inches)	0.6250	0.6250	0.6250
Stack Diameter or Equivalent (inches)	20.00	20.00	20.00
Static Pressure (inches H2O)	-0.06	-0.06	-0.06
Barometric Pressure (inches Hg)	30.10	30.10	30.10
Test Time (minutes)	60	60	60
Meter Volume (cubic feet)	52.219	54.737	55.338
Square Root ^P (inches H2O)	0.232	0.245	0.238
Orifice Pressure ^H (inches H2O)	2.221	2.408	2.389
Average Meter Temperature (Deg. F)	76.5	83.7	86.3
Average Stack Temperature (Deg. F)	1092.1	1107.8	1085.2
Particulate Sample Weight (grms)	0.0093	0.0138	0.0131
Water Collected (grms)	193.0	147.6	98.0
Percent CO2	2.5	4.0	4.0
Percent O2	14.5	16.0	16.0
Molecular Weight (lbs/lb Mole)	28.98	29.28	29.28
Nozzle Area (square feet)	0.00213	0.00213	0.00213

Attachment A - Field Data

Beatty Environmental Services, LLC

Particulate Field Data

Plant	US Cremation Equipment		Y_{qa}	1.0012	
Report	17029-ST-1		^Ha	1.6542	
Date	05/01/17		Dn	0.6250	
Operator	ZB		Diameter (in.)	20.0	
Time	Start - 10:10	End - 11:15	Traverses X Points	2 X 12	
K Factor	41.0		Static Pressure	-0.06	
Assumed Moisture %	12		Barometric Pressure (in. Hg)	30.10	
Dry Gas Meter No.	1		Test Time (min.)	60	
Nozzle ID No.	#20		Metered Volume	52.219	
Wet Bulb Temperature	NA		Avg. Sq Rt ^P	0.232	
Post Leak Check	.000 CFM @ 15" Hg.		Avg. ^H	2.221	
Cp Factor	0.84		Avg. Meter Temp.	76.5	
Y	1.0076		Avg. Stack Temp.	1092.1	

Traverse Point Number	Sampling Time (min.)	DG METER (cu.ft.) 169.414	Velocity Head ΔP(in. H_2O)	Pressure Orifice Meter ΔH(in. H2O)	Meter Temperature (°F)	Pump Vacuum (in. Hg)	Impinger Temperature (°F)	Filter Temperature (°F)	Stack Temperature (°F)
1	2.5	171.96	0.060	2.46	72	4.0	64	270	1102
2	2.5	174.45	0.065	2.67	72	5.0	52	267	1150
3	2.5	176.68	0.060	2.46	72	4.0	51	270	1153
4	2.5	178.76	0.060	2.46	72	4.0	51	270	1140
5	2.5	180.97	0.055	2.26	72	4.0	52	266	1142
6	2.5	183.11	0.055	2.26	73	4.0	51	270	1130
7	2.5	185.41	0.060	2.46	74	5.0	52	271	1110
8	2.5	187.71	0.060	2.46	74	5.0	51	266	1080
9	2.5	189.81	0.050	2.05	75	4.5	51	271	950
10	2.5	191.77	0.040	1.64	75	4.0	52	266	968
11	2.5	193.74	0.040	1.64	76	4.0	52	269	1000
12	2.5	195.57	0.040	1.64	76	4.0	52	271	950
1	2.5	197.91	0.065	2.67	77	5.0	57	270	1078
2	2.5	200.27	0.065	2.67	78	5.0	53	271	1180
3	2.5	202.72	0.065	2.67	78	5.0	54	270	1182
4	2.5	205.11	0.060	2.46	79	5.0	54	271	1184
5	2.5	207.39	0.060	2.46	79	5.0	54	264	1183
6	2.5	209.78	0.055	2.26	79	5.0	55	269	1185
7	2.5	211.91	0.060	2.46	80	5.0	55	266	1153
8	2.5	214.14	0.055	2.26	80	5.0	55	264	1102
9	2.5	216.31	0.050	2.05	81	4.5	55	266	1059
10	2.5	217.89	0.040	1.64	81	4.0	55	266	1018
11	2.5	219.71	0.040	1.64	81	4.0	55	259	1009
12	2.5	221.633	0.040	1.64	81	4.0	55	267	1002

Beatty Environmental Services, LLC

Particulate Field Data

Plant	US Cremation Equipment	Y_{qa}	1.0010
Report	17029-ST-2	^Ha	1.6542
Date	05/01/17	Dn	0.6250
Operator	ZB	Diameter (in.)	20.0
Time	Start - 12:08 End - 13:12	Traverses X Points	2 X 12
K Factor	40.0	Static Pressure	-0.06
Assumed Moisture %	15	Barometric Pressure (in. Hg)	30.10
Dry Gas Meter No.	1	Test Time (min.)	60
Nozzle ID No.	#20	Metered Volume	54.737
Wet Bulb Temperature	NA	Avg. Sq Rt ^P	0.245
Post Leak Check	.000 cfm @ 16" Hg.	Avg. ^H	2.408
Cp Factor	0.84	Avg. Meter Temp.	83.7
Y	1.0076	Avg. Stack Temp.	1107.8

Traverse Point Number	Sampling Time (min.)	DG METER (cu.ft.) 229.941	Velocity Head ΔP(in. H_2O)	Pressure Orifice Meter ΔH(in. H2O)	Meter Temperature (°F)	Pump Vacuum (in. Hg)	Impinger Temperature (°F)	Filter Temperature (°F)	Stack Temperature (°F)
1	2.5	232.27	0.060	2.40	80	4.0	65	250	1052
2	2.5	234.61	0.065	2.60	80	4.0	57	263	1134
3	2.5	237.03	0.070	2.80	80	5.0	56	253	1146
4	2.5	239.51	0.070	2.80	80	5.0	57	257	1152
5	2.5	241.94	0.070	2.80	81	5.0	57	257	1151
6	2.5	244.27	0.070	2.80	81	5.0	57	260	1150
7	2.5	246.45	0.060	2.40	81	4.5	56	260	1148
8	2.5	248.54	0.055	2.20	82	4.5	56	257	1108
9	2.5	250.64	0.050	2.00	82	4.5	57	253	1000
10	2.5	252.66	0.045	1.80	83	4.0	56	255	1006
11	2.5	254.55	0.040	1.60	83	4.0	56	268	1034
12	2.5	256.55	0.040	1.60	83	4.0	56	250	1028
1	2.5	258.71	0.055	2.20	84	5.0	60	270	1080
2	2.5	261.01	0.060	2.40	84	5.0	58	260	1178
3	2.5	263.36	0.065	2.60	85	5.5	58	251	1181
4	2.5	265.85	0.065	2.60	85	5.5	58	255	1187
5	2.5	268.33	0.070	2.80	85	6.0	58	270	1185
6	2.5	270.81	0.070	2.80	86	6.0	58	262	1181
7	2.5	273.50	0.070	2.80	86	6.0	59	267	1184
8	2.5	276.01	0.070	2.80	87	6.0	60	263	1175
9	2.5	278.15	0.060	2.40	87	6.0	60	253	1092
10	2.5	280.44	0.060	2.40	87	6.0	60	262	1024
11	2.5	282.61	0.055	2.20	88	5.5	60	256	1008
12	2.5	284.678	0.050	2.00	88	5.0	60	259	1004

Beatty Environmental Services, LLC

Particulate Field Data

Plant	US Cremation Equipment	Y_{qa}	0.9885
Report	17029-ST-3	^Ha	1.6542
Date	05/01/17	Dn	0.6250
Operator	ZB	Diameter (in.)	20.0
Time	Start - 14:05 End - 15:10	Traverses X Points	2 X 12
K Factor	42.0	Static Pressure	-0.06
Assumed Moisture %	11	Barometric Pressure (in. Hg)	30.10
Dry Gas Meter No.	1	Test Time (min.)	60
Nozzle ID No.	#20	Metered Volume	55.338
Wet Bulb Temperature	NA	Avg. Sq Rt ^P	0.238
Post Leak Check	.000 CFM @ 15" Hg.	Avg. ^H	2.389
Cp Factor	0.84	Avg. Meter Temp.	86.3
Y	1.0076	Avg. Stack Temp.	1085.2

Traverse Point Number	Sampling Time (min.)	DG METER (cu.ft.) 288.941	Velocity Head ΔP(in. H_2O)	Pressure Orifice Meter ΔH(in. H2O)	Meter Temperature (°F)	Pump Vacuum (in. Hg)	Impinger Temperature (°F)	Filter Temperature (°F)	Stack Temperature (°F)
1	2.5	291.45	0.065	2.73	84	4.5	67	270	1134
2	2.5	293.78	0.065	2.73	85	4.5	60	257	1146
3	2.5	296.25	0.065	2.73	84	4.5	59	257	1148
4	2.5	298.58	0.060	2.52	84	4.5	60	253	1140
5	2.5	300.91	0.060	2.52	84	4.5	60	260	1133
6	2.5	303.33	0.060	2.52	85	4.5	61	266	1081
7	2.5	305.57	0.055	2.31	85	4.5	61	261	1012
8	2.5	307.95	0.055	2.31	85	4.5	61	264	1001
9	2.5	310.21	0.050	2.10	85	4.0	61	263	1008
10	2.5	312.26	0.045	1.89	86	4.0	61	263	1010
11	2.5	314.26	0.045	1.89	86	4.0	62	265	1018
12	2.5	315.89	0.040	1.68	86	4.0	61	249	1001
1	2.5	318.03	0.050	2.10	86	4.0	64	258	1131
2	2.5	320.35	0.055	2.31	87	4.5	61	255	1179
3	2.5	322.71	0.060	2.52	87	5.0	61	262	1178
4	2.5	325.21	0.065	2.73	87	6.0	61	257	1187
5	2.5	327.65	0.065	2.73	87	6.0	61	257	1175
6	2.5	330.12	0.065	2.73	88	6.0	62	260	1172
7	2.5	332.56	0.065	2.73	87	6.0	62	268	1154
8	2.5	334.97	0.060	2.52	88	6.0	62	261	1010
9	2.5	337.36	0.055	2.31	88	5.5	62	262	1008
10	2.5	339.75	0.060	2.52	88	5.5	62	251	1004
11	2.5	342.11	0.050	2.10	89	5.0	62	259	1008
12	2.5	344.279	0.050	2.10	89	5.0	62	266	1006

Beatty Environmental Services, LLC
315 SE 20th Pl
Cape Coral, Florida 33990
(239) 246-3646
beattyenvironmental12@gmail.com

VISIBLE EMISSION OBSERVATION FORM

Method Used (Circle One): (Method 9) 203A 203B Report___

Company Name: US Cremation Equipment
Crematory Unit — AIRS: Not Assigned
Street Address: 4442 Holden Road
City: Lakeland — Zip Code: 33811
Phone No.: Luis Llorens 321-282-7357

Process — Unit #: Cremation — Operating Mode: 175 lbs
Control Equipment: After Burnes — Operating Mode: Normal ON

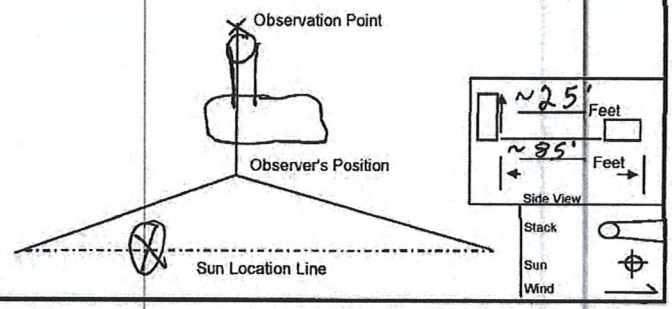
Describe Emission Point: Round Stack
Ht of Emis.Point: ~25' — Ht Rel to Observer: ~20'
Distance to Emis. Pt: ~85' — Direction to Emis. Pt (Degrees): ~255°

Vertical Angle to Obs.: <18° — Direction to Obs. Pt. (Degrees): ~255°
Distance and Direction to Obs. Pt from Emission Pt: ~1' above

Describe Emissions: None
Emission Color: NA — Water Droplet Plume: Attached Detached Non X

Describe Plume Background: Sky
Background Color: Gray — Sky Conditions: overcast
Wind Speed: 12-15 mpH — Wind Direction: SE
Ambient Temp: ~79°F — Wet Bulb Temp: ~ — % RH: ~74%

Source Layout Sketch — Draw North Arrow: ☐ TN ☐ MN



Latitude: 27° 59' 13" — Longitude: 82° 0' 17" — Declination:

Obsv. Descipt.: Crematory Exhaust Stack
Comments:

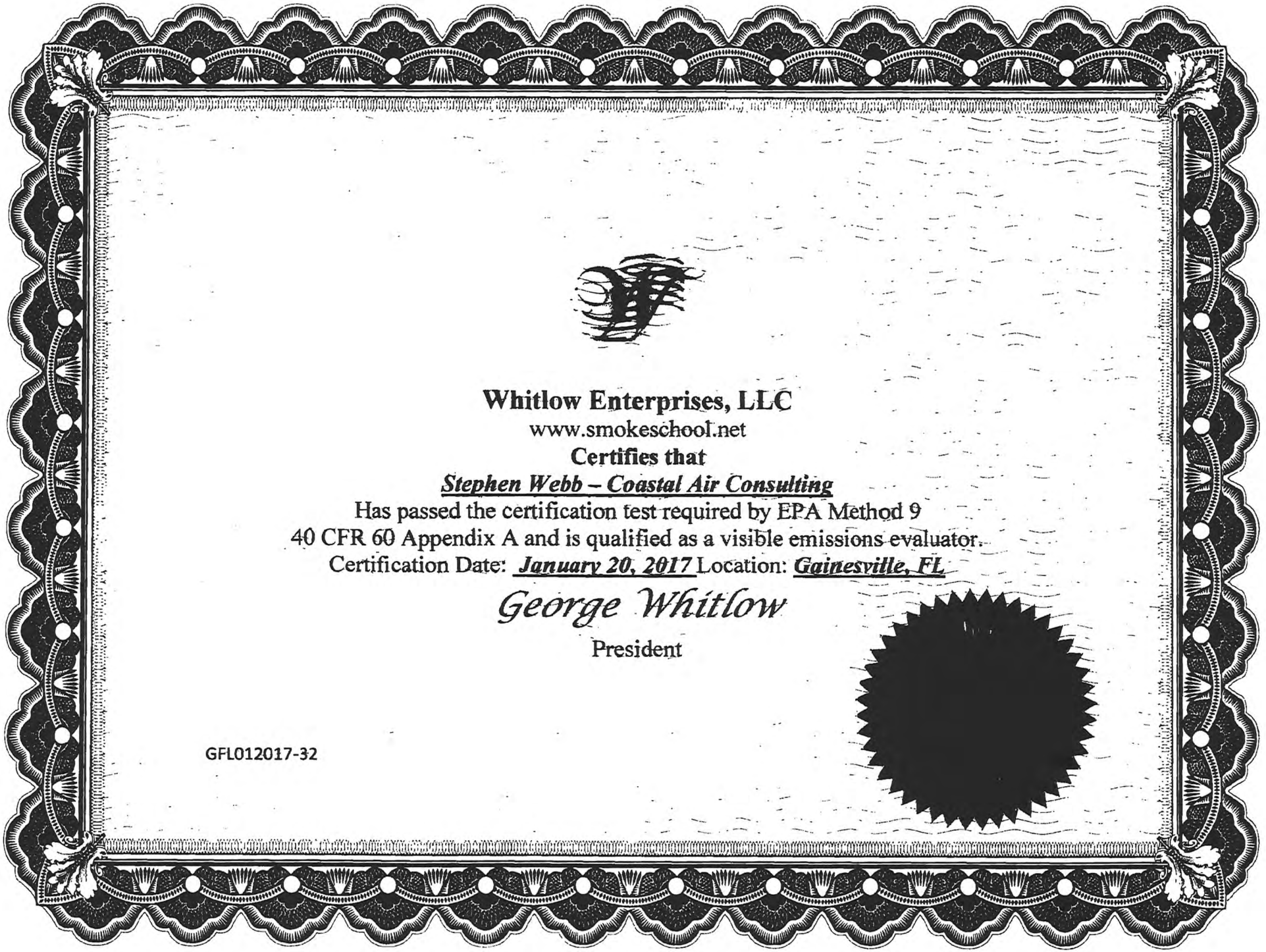
START — STOP —

Observation Date: 5-1-17 — Start Time: 1010 — Stop Time: 1110

Sec / Min	0	15	30	45	Sec / Min	0	15	30	45
1	0	0	0	0	31	0	0	0	0
2	0	0	0	0	32	0	0	0	0
3	0	0	0	0	33	0	0	0	0
4	0	0	0	0	34	0	0	0	0
5	0	0	0	0	35	0	0	0	0
6	0	0	0	0	36	0	0	0	0
7	0	0	0	0	37	0	0	0	0
8	0	0	0	0	38	0	0	0	0
9	0	0	0	0	39	0	0	0	0
10	0	0	0	0	40	0	0	0	0
11	0	0	0	0	41	0	0	0	0
12	0	0	0	0	42	0	0	0	0
13	0	0	0	0	43	0	0	0	0
14	0	0	0	0	44	0	0	0	0
15	0	0	0	0	45	0	0	0	0
16	0	0	0	0	46	0	0	0	0
17	0	0	0	0	47	0	0	0	0
18	0	0	0	0	48	0	0	0	0
19	0	0	0	0	49	0	0	0	0
20	0	0	0	0	50	0	0	0	0
21	0	0	0	0	51	0	0	0	0
22	0	0	0	0	52	0	0	0	0
23	0	0	0	0	53	0	0	0	0
24	0	0	0	0	54	0	0	0	0
25	0	0	0	0	55	0	0	0	0
26	0	0	0	0	56	0	0	0	0
27	0	0	0	0	57	0	0	0	0
28	0	0	0	0	58	0	0	0	0
29	0	0	0	0	59	0	0	0	0
30	0	0	0	0	60	0	0	0	0

Number of Readings Above 10 % were 0 — Average Opacity for Highest 6 Min Period: 0
Range of opacity Readings: Min 0 Max 0

Observers Name (Print): Stephen C. Webb
Observers Signature: Stephen C. Webb — Date: 5-1-17
Organization: Beatty Environmental Services, llc
Certified By: ~~ETA~~ Whitlow — Date: 1-20-17



Whitlow Enterprises, LLC

www.smokeschool.net

Certifies that

Stephen Webb – Coastal Air Consulting

Has passed the certification test required by EPA Method 9
40 CFR 60 Appendix A and is qualified as a visible emissions evaluator.

Certification Date: ***January 20, 2017*** Location: ***Gainesville, FL***

George Whitlow

President

GFL012017-32

US CREMATIONS

DATE: 5/1/2017
RUN: 1
UNIT: 1

AVG. ADJUSTED CO ppmvd @ 7% O2	2.70
CORRECTED O2 %	14.31
CORRECTED CO2 %	2.50
CORRECTED CO ppmvd	1.28

ANALYZER RESPONSE, SYSTEM BIAS AND SYSTEM DRIFT DATA

RANGE SETTING	CAL GASES	CERTIFIED GAS VALUE	ANALYZER VALUE	DIFFERENCE PPM	% SPAN	ANALYZER PRETEST VALUE	% SPAN	ANALYZER POSTTEST VALUE	% SPAN	% DRIFT	ANALYZER SERIAL #
		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
25	% O2	11.95	12.00	0.05	0.22	12.00	0.00	12.00	0.00	0.00	01420B153
		22.55	22.60	0.05	0.22						
		0.00	0.00	0.00	0.00	0.00	0.00	0.10	0.60	0.60	
20	% CO2	8.59	8.50	-0.09	-0.54	8.50	0.00	8.50	0.00	0.00	01410/B139
		16.74	16.70	-0.04	-0.24						
		0.00	0.00	0.00	0.0	0.00	0.0	0.10	0.5	0.5	
20	PPM CO	9.07	9.1	0.03	0.2	9.10	0.0	9.00	-0.5	-0.5	48C-68845-361
		18.20	18.30	0.10	0.5						
100	PPM CO	48.20	48.20	0.00	0.0	48.10	-0.1	48.10	-0.1	0.0	
		96.90	96.90	0.00	0.0						

UNCORRECTED RAW DATA

DATE & TIME	O2 %	CO2 %	CO PPM
5/1/2017 10:10	14.57	2.30	1.63
5/1/2017 10:11	14.48	2.40	2.50
5/1/2017 10:12	14.26	2.60	2.63
5/1/2017 10:13	14.46	2.35	1.50
5/1/2017 10:14	14.41	2.30	1.75
5/1/2017 10:15	14.40	2.30	0.50
5/1/2017 10:16	14.41	2.35	1.63
5/1/2017 10:17	14.41	2.30	0.38
5/1/2017 10:18	14.41	2.30	1.13
5/1/2017 10:19	14.41	2.30	0.38
5/1/2017 10:20	14.41	2.35	1.38
5/1/2017 10:21	14.45	2.35	0.00
5/1/2017 10:22	14.47	2.35	0.00
5/1/2017 10:23	14.46	2.35	0.00
5/1/2017 10:24	14.48	2.30	0.00
5/1/2017 10:25	14.45	2.30	0.13
5/1/2017 10:26	14.44	2.30	0.50
5/1/2017 10:27	14.46	2.30	0.13
5/1/2017 10:28	14.46	2.20	2.88
5/1/2017 10:29	14.47	2.20	0.00
5/1/2017 10:30	14.45	2.25	0.00
5/1/2017 10:31	14.43	2.30	1.00
5/1/2017 10:32	14.43	2.30	0.00
5/1/2017 10:33	14.44	2.20	0.00
5/1/2017 10:34	14.45	2.30	0.13
5/1/2017 10:35	14.54	2.15	1.00
5/1/2017 10:36	14.53	2.20	2.38
5/1/2017 10:37	14.47	2.30	4.00
5/1/2017 10:38	14.54	2.15	1.25
5/1/2017 10:39	14.53	2.15	0.13
5/1/2017 10:40	14.43	2.20	0.00
5/1/2017 10:41	14.37	2.40	0.00
5/1/2017 10:42	14.34	2.45	0.00
5/1/2017 10:43	14.31	2.50	0.75
5/1/2017 10:44	14.29	2.60	0.75
5/1/2017 10:45	14.28	2.65	0.00
5/1/2017 10:46	14.26	2.65	0.13
5/1/2017 10:47	14.27	2.70	0.00
5/1/2017 10:48	14.29	2.70	0.50
5/1/2017 10:49	14.29	2.85	5.38
5/1/2017 10:50	14.28	2.85	2.63
5/1/2017 10:51	14.27	2.70	2.63
5/1/2017 10:52	14.26	2.75	5.63
5/1/2017 10:53	14.27	2.75	4.13
5/1/2017 10:54	14.28	2.75	0.88
5/1/2017 10:55	14.23	2.75	5.63
5/1/2017 10:56	14.21	2.90	0.00
5/1/2017 10:57	14.19	3.00	0.88
5/1/2017 10:58	14.21	2.95	0.38
5/1/2017 10:59	14.22	2.90	0.00
5/1/2017 11:00	14.23	2.90	0.00
5/1/2017 11:01	14.23	2.95	0.00
5/1/2017 11:02	14.24	2.95	0.00
5/1/2017 11:03	14.27	2.90	2.88
5/1/2017 11:04	14.26	2.90	8.25
5/1/2017 11:05	14.27	2.90	0.50
5/1/2017 11:06	14.33	2.80	1.88
5/1/2017 11:07	14.39	2.75	1.63
5/1/2017 11:08	14.52	2.50	0.25
5/1/2017 11:09	14.43	2.35	1.25
5/1/2017 11:10	14.43	2.30	4.88

MEAN ANALYZER VALUES

Avg. % O2	14.37
Avg. % CO2	2.51
Avg. CO ppmvd	1.32

US CREMATIONS

DATE:	12/28/2015
RUN:	2
UNIT:	1

AVG. ADJUSTED CO ppmvd @ 7% O2	1.87
CORRECTED O2 %	15.62
CORRECTED CO2 %	4.08
CORRECTED CO ppmvd	0.71

ANALYZER RESPONSE, SYSTEM BIAS AND SYSTEM DRIFT DATA

RANGE SETTING	CAL GASES	CERTIFIED GAS VALUE	ANALYZER VALUE	DIFFERENCE PPM	% SPAN	ANALYZER PRETEST VALUE	% SPAN	ANALYZER POSTTEST VALUE	% SPAN	% DRIFT	ANALYZER SERIAL #
		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
25	% O2	11.95	12.00	0.05	0.22	12.00	0.00	12.00	0.00	0.00	01420B153
		22.55	22.60	0.05	0.22						
		0.00	0.00	0.00	0.00	0.10	0.60	0.10	0.60	0.00	
20	% CO2	8.59	8.50	-0.09	-0.54	8.50	0.00	8.40	-0.60	-0.60	01410/B139
		16.74	16.70	-0.04	-0.24						
		0.00	0.00	0.00	0.0	0.10	0.5	0.20	1.1	0.5	
20	PPM CO	9.07	9.10	0.03	0.2	9.00	-0.5	9.00	-0.55	0.0	48C-68845-361
		18.20	18.30	0.10	0.5						
100	PPM CO	48.20	48.20	0.00	0.0	48.10	-0.1	47.40	-0.83	-0.7	
		96.90	96.90	0.00	0.0						

UNCORRECTED RAW DATA

DATE & TIME	O2 %	CO2 %	CO PPM
5/1/2017 12:08	14.94	3.22	0.25
5/1/2017 12:09	14.88	2.82	0.38
5/1/2017 12:10	15.18	2.73	1.38
5/1/2017 12:11	15.28	2.53	2.25
5/1/2017 12:12	15.38	2.34	0.50
5/1/2017 12:13	15.46	2.16	0.13
5/1/2017 12:14	15.51	1.90	0.25
5/1/2017 12:15	15.61	1.73	3.63
5/1/2017 12:16	15.65	1.77	5.75
5/1/2017 12:17	15.71	1.89	1.00
5/1/2017 12:18	15.77	2.24	1.25
5/1/2017 12:19	15.77	2.53	0.38
5/1/2017 12:20	15.79	3.97	0.13
5/1/2017 12:21	15.81	4.46	0.38
5/1/2017 12:22	15.84	4.28	0.00
5/1/2017 12:23	15.86	3.79	0.00
5/1/2017 12:24	15.82	4.01	0.00
5/1/2017 12:25	15.77	4.52	0.00
5/1/2017 12:26	15.70	4.56	0.00
5/1/2017 12:27	15.69	4.57	0.00
5/1/2017 12:28	15.70	4.55	0.38
5/1/2017 12:29	15.66	4.59	1.25
5/1/2017 12:30	15.64	4.58	0.88
5/1/2017 12:31	15.62	4.63	0.13
5/1/2017 12:32	15.60	4.63	0.25
5/1/2017 12:33	15.56	4.65	0.50
5/1/2017 12:34	15.56	4.71	0.25
5/1/2017 12:35	15.41	4.83	0.13
5/1/2017 12:36	15.42	4.82	0.00
5/1/2017 12:37	15.41	4.82	0.00
5/1/2017 12:38	15.39	4.83	0.75
5/1/2017 12:39	15.36	4.80	1.75
5/1/2017 12:40	15.71	4.78	0.50
5/1/2017 12:41	15.57	4.79	2.38
5/1/2017 12:42	15.48	4.80	2.63
5/1/2017 12:43	15.59	4.77	2.38
5/1/2017 12:44	15.93	4.79	0.88
5/1/2017 12:45	15.46	4.79	0.13
5/1/2017 12:46	15.40	4.78	0.13
5/1/2017 12:47	15.39	4.74	0.25
5/1/2017 12:48	15.57	4.57	0.38
5/1/2017 12:49	15.68	4.56	0.75
5/1/2017 12:50	15.82	4.04	2.00
5/1/2017 12:51	16.53	3.65	1.13
5/1/2017 12:52	17.01	3.28	0.25
5/1/2017 12:53	17.49	3.04	0.13
5/1/2017 12:54	17.69	2.97	0.00
5/1/2017 12:55	17.06	3.61	0.13
5/1/2017 12:56	15.81	4.51	0.00
5/1/2017 12:57	15.71	4.56	0.13
5/1/2017 12:58	15.62	4.64	1.00
5/1/2017 12:59	15.51	4.72	1.25
5/1/2017 13:00	15.48	4.75	0.50
5/1/2017 13:01	15.46	4.76	0.25
5/1/2017 13:02	15.48	4.77	0.25
5/1/2017 13:03	15.49	4.76	0.50
5/1/2017 13:04	15.48	4.77	2.88
5/1/2017 13:05	15.46	4.79	2.38
5/1/2017 13:06	15.48	4.81	1.13
5/1/2017 13:07	15.48	4.81	1.50
5/1/2017 13:08	15.46	4.81	1.88

MEAN ANALYZER VALUES

Avg. % O2	15.69
Avg. % CO2	4.06
Avg. CO ppmvd	0.84

US CREMATIONS

DATE:	12/28/2015
RUN:	3
UNIT:	1

AVG. ADJUSTED CO ppmvd @ 7% O2	1.72
CORRECTED O2 %	16.22
CORRECTED CO2 %	4.29
CORRECTED CO ppmvd	0.58

ANALYZER RESPONSE, SYSTEM BIAS AND SYSTEM DRIFT DATA

RANGE SETTING	CAL GASES	CERTIFIED GAS VALUE	ANALYZER VALUE	DIFFERENCE PPM	% SPAN	ANALYZER PRETEST VALUE	% SPAN	ANALYZER POSTTEST VALUE	% SPAN	% DRIFT	ANALYZER SERIAL #
		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
25	% O2	11.95	12.00	0.05	0.22	12.00	0.00	12.00	0.00	0.00	01420B153
		22.55	22.60	0.05	0.22						
		0.00	0.00	0.00	0.00	0.10	0.60	0.10	0.60	0.00	
20	% CO2	8.59	8.50	-0.09	-0.54	8.40	-0.60	8.40	-0.60	0.00	01410/B139
		16.74	16.70	-0.04	-0.24						
		0.00	0.00	0.00	0.0	0.20	1.1	0.20	1.1	0.0	
20	PPM CO	9.07	9.10	0.03	0.2	9.00	-0.5	9.00	-0.5	0.0	48C-68845-361
		18.20	18.30	0.10	0.5						
100	PPM CO	48.20	48.20	0.00	0.0	47.40	-0.8	47.30	-0.9	-0.1	
		96.90	96.90	0.00	0.0						

UNCORRECTED RAW DATA

DATE & TIME	O2 %	CO2 %	CO PPM
5/1/2017 14:05	15.21	5.09	0.00
5/1/2017 14:06	15.43	4.96	0.38
5/1/2017 14:07	15.53	4.85	0.00
5/1/2017 14:08	15.65	4.78	0.00
5/1/2017 14:09	15.70	4.69	0.00
5/1/2017 14:10	15.86	4.60	0.13
5/1/2017 14:11	15.93	4.58	0.00
5/1/2017 14:12	15.89	4.59	0.13
5/1/2017 14:13	15.89	4.59	0.13
5/1/2017 14:14	15.88	4.57	0.13
5/1/2017 14:15	15.96	4.54	0.00
5/1/2017 14:16	15.92	4.53	0.00
5/1/2017 14:17	15.98	4.53	0.00
5/1/2017 14:18	15.91	4.55	0.88
5/1/2017 14:19	15.95	4.54	0.00
5/1/2017 14:20	15.91	4.54	0.00
5/1/2017 14:21	15.98	4.49	0.13
5/1/2017 14:22	15.95	4.53	0.00
5/1/2017 14:23	15.95	4.51	0.13
5/1/2017 14:24	15.97	4.40	0.00
5/1/2017 14:25	15.94	4.06	0.00
5/1/2017 14:26	15.99	4.09	0.00
5/1/2017 14:27	15.94	3.98	0.00
5/1/2017 14:28	15.72	4.68	0.50
5/1/2017 14:29	15.85	4.61	1.25
5/1/2017 14:30	15.89	4.58	2.00
5/1/2017 14:31	15.88	4.59	1.00
5/1/2017 14:32	15.88	4.59	0.75
5/1/2017 14:33	15.92	4.58	0.75
5/1/2017 14:34	15.99	4.55	0.75
5/1/2017 14:35	15.95	4.55	0.75
5/1/2017 14:36	15.99	4.54	1.25
5/1/2017 14:37	15.95	4.52	0.75
5/1/2017 14:38	15.96	4.52	2.50
5/1/2017 14:39	15.96	4.49	2.63
5/1/2017 14:40	16.04	4.44	2.38
5/1/2017 14:41	16.04	4.45	1.63
5/1/2017 14:42	17.75	2.97	1.25
5/1/2017 14:43	20.14	1.31	1.75
5/1/2017 14:44	20.04	1.49	1.75
5/1/2017 14:45	18.31	2.74	1.25
5/1/2017 14:46	17.83	3.11	0.88
5/1/2017 14:47	17.78	3.18	1.25
5/1/2017 14:48	17.71	3.21	1.63
5/1/2017 14:49	17.56	3.37	3.75
5/1/2017 14:50	16.68	4.04	2.75
5/1/2017 14:51	16.33	4.26	1.50
5/1/2017 14:52	16.21	4.34	0.75
5/1/2017 14:53	16.05	4.41	0.88
5/1/2017 14:54	16.08	4.42	1.50
5/1/2017 14:55	16.09	4.42	0.88
5/1/2017 14:56	16.09	4.43	0.38
5/1/2017 14:57	16.11	4.41	0.25
5/1/2017 14:58	16.12	4.39	0.25
5/1/2017 14:59	16.16	4.38	0.13
5/1/2017 15:00	16.16	4.37	0.13
5/1/2017 15:01	16.18	4.36	0.13
5/1/2017 15:02	16.16	4.35	0.13
5/1/2017 15:03	16.24	4.32	0.50
5/1/2017 15:04	16.23	4.31	0.75
5/1/2017 15:05	16.21	4.30	1.13

MEAN ANALYZER VALUES

Avg. % O2	16.29
Avg. % CO2	4.25
Avg. CO ppmvd	0.76

Attachment B - Laboratory Data

Particulate Laboratory Data
US Cremation Equipment
Model XCEL (Evans Eagle Vaults, Inc.)
17029-ST

Run 1

Filter Number	2400	
	Final Weight	0.3465 grams
	Tare Weight	0.3430 grams
	Difference	0.0035 grams
Beaker Number	1C	
	Final Weight	114.0614 grams
	Tare Weight	114.0553 grams
	Difference	0.0061 grams
Filter Blank Number	2412	
	Final Weight	0.3380 grams
	Tare Weight	0.3380 grams
	Difference	0.0000 grams
Acetone Wash Down		
	Volume of Rinse	140 mL
	Residue in Rinse (calculated)	2.53197E-06 mg/mg
	Total Residue in Rinse	0.00028 grams
Total Particulate Weight		**0.0093 grams**

Water Collected

	Final Impinger Water	382 mL
	Initial Impinger Water	200 mL
	Final Silica Weight	211.3 grams
	Silica Tare Weight	200.0 grams
Total Water Collected		**193.0 grams**

Analyst 

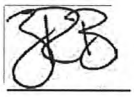
Particulate Laboratory Data
US Cremation Equipment
Model XCEL (Evans Eagle Vaults, Inc.)
17029-ST

Run 2

Filter Number	2401	
	Final Weight	0.3521 grams
	Tare Weight	0.3440 grams
	Difference	0.0081 grams
Beaker Number	2C	
	Final Weight	117.5142 grams
	Tare Weight	117.5082 grams
	Difference	0.0060 grams
Filter Blank Number	2412	
	Final Weight	0.3380 grams
	Tare Weight	0.3380 grams
	Difference	0.0000 grams
Acetone Wash Down		
	Volume of Rinse	130 mL
	Residue in Rinse (calculated)	2.53197E-06 mg/mg
	Total Residue in Rinse	0.00026 grams
Total Particulate Weight		**0.0138 grams**

Water Collected

	Final Impinger Water	336 mL
	Initial Impinger Water	200 mL
	Final Silica Weight	211.8 grams
	Silica Tare Weight	200.0 grams
Total Water Collected		**147.6 grams**

Analyst 

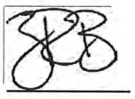
Particulate Laboratory Data
US Cremation Equipment
Model XCEL (Evans Eagle Vaults, Inc.)
17029-ST

Run 3

Filter Number	2402	
	Final Weight	0.3511 grams
	Tare Weight	0.3447 grams
	Difference	0.0064 grams
Beaker Number	3C	
	Final Weight	114.4588 grams
	Tare Weight	114.4518 grams
	Difference	0.0070 grams
Filter Blank Number	2412	
	Final Weight	0.3380 grams
	Tare Weight	0.3380 grams
	Difference	0.0000 grams
Acetone Wash Down		
	Volume of Rinse	130 mL
	Residue in Rinse (calculated)	2.53197E-06 mg/mg
	Total Residue in Rinse	0.00026 grams
Total Particulate Weight		**0.0131 grams**

Water Collected

	Final Impinger Water	285 mL
	Initial Impinger Water	200 mL
	Final Silica Weight	213.2 grams
	Silica Tare Weight	200.0 grams
Total Water Collected		**98.0 grams**

Analyst 

Acetone Blank Calculations

METHOD 5—DETERMINATION OF PARTICULATE MATTER EMISSIONS FROM STATIONARY SOURCES

7.2 Sample Recovery. Acetone, reagent grade, ≤0.001 percent residue, in glass bottles, is required. Acetone from metal containers generally has a high residue blank and should not be used. Sometimes, suppliers transfer acetone to glass bottles from metal containers; thus, acetone blanks shall be run prior to field use and only acetone with low blank values (≤0.001 percent) shall be used. In no case shall a blank value of greater than 0.001 percent of the weight of acetone used be subtracted from the sample weight.

Blank Analyzed By: Nicholas Decker

X._____

Constant Variables Used

Density of Acetone:	789.9 mg/ml
Quantity of Blank:	200ml

Beaker No.	1A
Initial Weight of Beaker	109.3142
Final Weight of Beaker	109.3146
Residue from Blank	**0.0004 g**
Conversion G>MG	0.4 mg

Beaker final weight - Beaker initial weight
.0004g
Residue from Blank multiplied by 1,000.
.4mg

Quantity of Blank	200 ml
Density of Acetone	789.9 mg/ml
Total mg of Acetone	**157980 mg of acetone**

Quantity of Blank x Density of Acetone

Total mg of Acetone	157980 mg
Acetone mg Residue	0.4 mg
Residue expressed as %	**0.000253197**

Total mg of Acetone / Acetone mg Residue
.000253197 %
Residue MUST be <.001%
☑ Pass ☐ Fail

Attachment C - Process Data

Beatty Environmental Services, LLC

Emission Control Device and Process Data Form

Company: US Cremation Equipment

Installation: Crematory

Type of Installation: XCEL For: Evans Funeral Home

Type of Material Processed: Pig Remains

Type of Fuel Used: Propane

Type of Pollution Control System: Afterburner

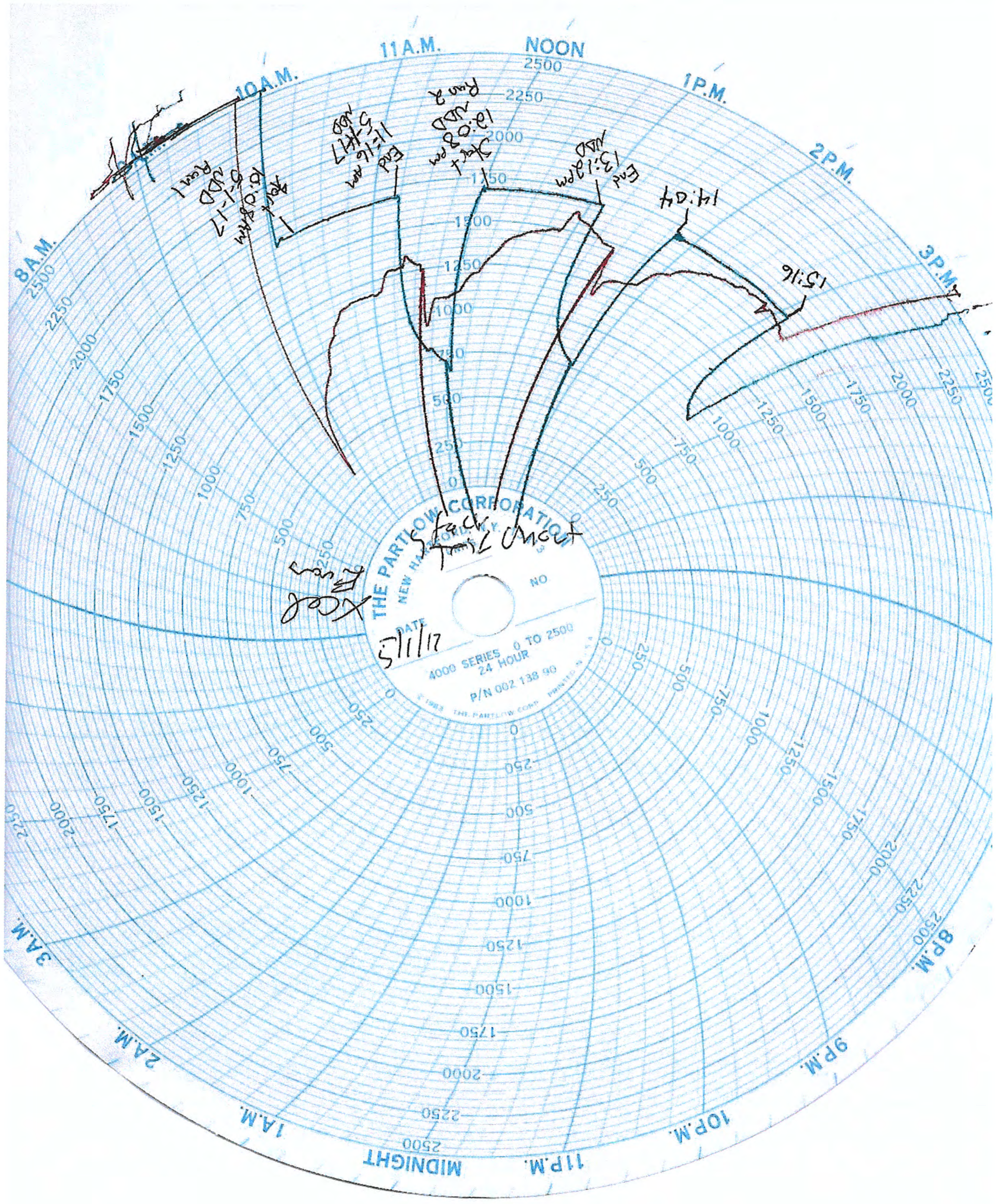
General Condition of Control Equipment: New

Run No.	1	2	3
Start Time	10:10 AM	12:08 PM	14:05 PM
Stop Time	11:15 AM	13:12 PM	15:10 PM
Fuel GPH	Propane	Propane	Propane
Date	05-01-2017	05-01-2017	05-01-2017
Pressure Drop(in.H20)	N/A	N/A	N/A
Process Rate LBS	179 lbs	165 lbs	190 lbs
Percent Recycle	N/A	N/A	N/A

Signature: _____ Title: President

Printed Name: Luis Llorens Report No. 17029-ST

*By signing above facility designee agrees that all information on this form is true and correct to the best of his/her knowledge.

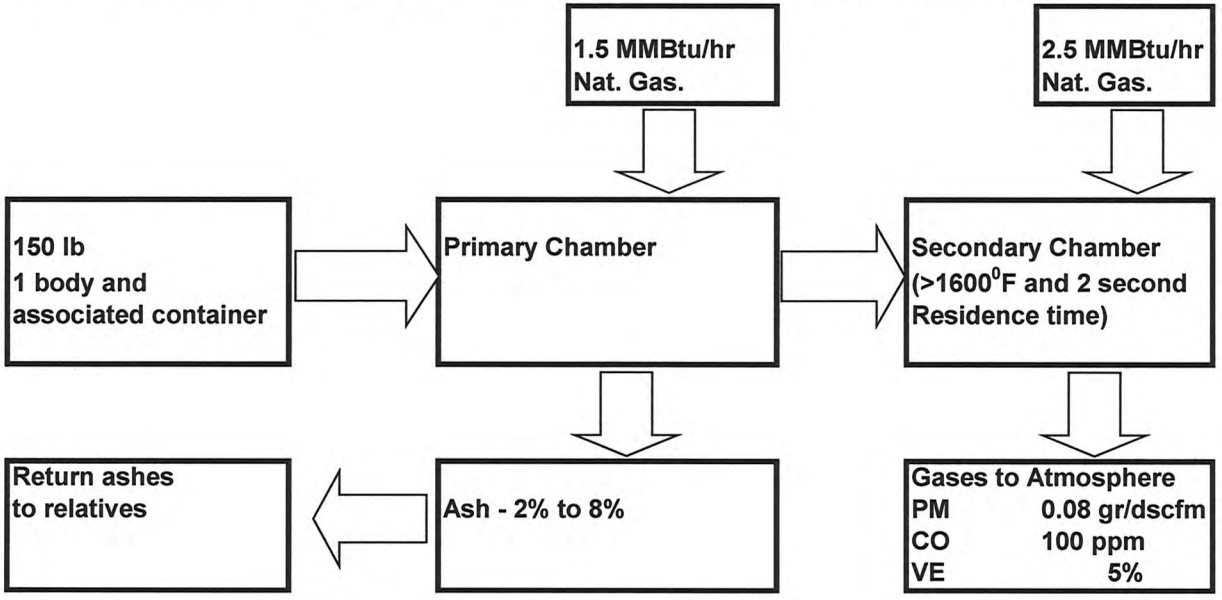


THE PARTLOW CORPORATION
NEW HARTFORD, N.Y.
DATE 5/1/17
NO
4000 SERIES 0 TO 2500
24 HOUR
P/N 002 138 90
8 A.M.
10 A.M.
11 A.M.
NOON
1 P.M.
2 P.M.
3 P.M.
8 P.M.
9 P.M.
10 P.M.
11 P.M.
MIDNIGHT
1 A.M.
2 A.M.
3 A.M.
Start 10:05 am 5-1-17 NDD Run 1
End 11:16 am 5-1-17 NDD
Start 12:08 pm NDD Run 2
End 13:12 pm NDD
14:04
15:16

Attachment 6

Process Flow Diagram

Arlington Crematory, Inc. Flow Diagram US Cremation Equipment Model X-Cel Classic



ATTACHMENT 7

ZONING APPROVAL LETTER

MARYLAND-NATIONAL CAPITAL PARK AND PLANNING COMMISSION
Prince George's County Planning Department

Planning Information Services
14741 Governor Oden Bowie Drive, Suite L2
Upper Marlboro, MD 20772

(301) 952-3208
(301)-952-3195
www.mncppc.org

March 18, 2021

Mr. Geary Powell
McKinley & Associates Real Estate LLC, Arlington Crematory, Inc.
2313 51st Place
Hyattsville, MD 20781

Re: 2313 51st Place, Hyattsville, MD 20871

Tax ID: 0185462 (Parcel 90)

In response to your request for information regarding the above-referenced property, we have researched our files/data base and present the following:

☑ Zoning Verification OR ☐ Buildable lots

1. The current zoning classification for the subject property is:
I-2 (Heavy Industrial) and DDOZ (Development District Overlay Zone)

Overlay District(s):
☑ Yes ☐ No
Tuxedo Road/Arbor Street/Cheverly Metro Area DDOZ, Subarea A as regulated by the Approved Sector Plan and Sectional Map Amendment for the Tuxedo Road/Arbor Street/Cheverly Metro Area, April 2005 (Sector Plan)

2. Record Lot(s): ☐ Yes Date: _____ ☐ No ☑ Not Applicable
An area of land designated as a separate parcel of land on a "Record Plat," or on a legally recorded deed (to land for which no "Subdivision" plat is required pursuant to the provisions of Subtitle 24) filed among the Land Records of Prince George's County, Maryland.

Comment:

3. Specific Use(s)/Regulation(s):

Permitted uses for the I-2/DDOZ may be found in Table 12-Part 3, Industrial Uses, of the Sector Plan. The use of a crematory is not specifically listed in this table. All uses not listed are prohibited. However, on 6/11/2015, Detailed Site Plan DSP-13015 was approved by the Prince George's County Planning Board (Board) to add "crematory" as a permitted use to Table 12-Part 3, Industrial Uses, of the Sector Plan. Therefore, the approval of DSP-13015 permits the use of a crematory on this property only, subject to the conditions as specified in the Board's decision (PGCPB Resolution No. 15-50, copy attached). **See page 3 for additional information.**

4. According to the current zoning ordinance and/or regulations applicable to the subject property, the **current use** of the property is classified as:

☑ Permitted by Right

☐ Permitted by Special Exception

☐ Legally Nonconforming

☐ Prohibited

Comment:

5. Conformance: According to the current zoning ordinance and/or regulations applicable to the subject property, the current use and/or structure is:

☑ Legally Conforming (in conformance with applicable zoning and subdivision regulations, or grandfathered). May rebuild in accordance with current regulations.

☐ Legally Nonconforming (not in conformance with applicable zoning and subdivision regulations, but legal and subject to conditions and/or requirements). See Rebuild (below).

☐ Nonconforming (not in conformance with applicable zoning and subdivision regulations). See Rebuild (below).

Comment:

Subject to DSP-13015 and subsequent revisions.

6. Rebuild: In the event of casualty, in whole or in part, the structure located on the subject property may be rebuilt in its current form in accordance with Section 27-243 of the current zoning ordinance:

☑ Yes ☐ No

Comment:

Subject to DSP-13015 and subsequent revisions.

7. Variances, special exceptions, and/or zoning conditions approved for the subject property:

☐ Variance ☐ Special Exception ☐ Zoning Conditions ☑ None

Comment:

8. Site Plan Information:

☑ An approved site plan for the subject property is on file.
Available plans must be requested, additional fees apply. Request plans at http://www.pgplanning.org/DocumentCenter/View/6884/Online-Information-Request-Form

☐ No site plan

List of approved plans and permits for subject property:

On 6/11/2015, Detailed Site Plan DSP-13015 was approved by the Prince George's County Planning Board to add "crematory" as a permitted use to Table 12-Part 3, Industrial Uses, of the Sector Plan.

On 7/23/2018, Permit #30394-2018-UOW was approved for a crematory.

Most recently, on 8/19/2020, DSP-13015-01 was approved by the Prince George's County Planning Director for minor site improvements, including a modification to the crematory stack to increase the height, as required by Maryland Department of the Environment, to relocate and increase the green area, and the inclusion of a gas meter and bollard, as required by Washington Gas.

Additional comments regarding the subject property:

Please be advised any additional improvements to the site may trigger the detailed site plan revision process.

Note: The Maryland-National Capital Park and Planning Commission's (Commission) role is to review permit applications for compliance with zoning and subdivision regulations. The full text of the Ordinance (Subtitle 27) is at: https://www.municode.com/library/md/prince_george's_county/codes/code_of_ordinances

Information regarding use and occupancy permits, building permits and outstanding violations may be obtained by contacting the Prince George's County Department of Permitting, Inspections, and Enforcement (DPIE) at 301-636-2000.

This information was researched on 3/18/21 , by the undersigned, per request and as a public service. The undersigned certifies that the above information contained herein is accurate to the best of our knowledge, information, and belief, and is based upon or relates to the information supplied by the requestor. The Department assumes no liability for errors and omissions. All information was obtained from public records, which may be inspected during regular business hours.

Sincerely,
Amber Krivitsky
Planning Information Services

MARYLAND-NATIONAL CAPITAL PARK AND PLANNING COMMISSION
Prince George's County Planning Department
Planning Information Services
14741 Governor Oden Bowie Drive, Suite L2
Upper Marlboro, MD 20772
(301) 952-3208
(301)-952-3195
www.mncppc.org

July 1, 2021

Mr. Geary Powell
McKinley & Associates Real Estate LLC, Arlington Crematory, Inc.
2313 51st Place
Hyattsville, MD 20781

Re: 2313 51st Place, Hyattsville, MD 20871

Tax ID: 0185462 (Parcel 90)

In response to your request for information regarding the above-referenced property, we have researched our files/data base and present the following:

☑ Zoning Verification OR ☐ Buildable lots

1. The current zoning classification for the subject property is:
I-2 (Heavy Industrial) and DDOZ (Development District Overlay Zone)

Overlay District(s):
☑ Yes ☐ No
Tuxedo Road/Arbor Street/Cheverly Metro Area DDOZ, Subarea A as regulated by the Approved Sector Plan and Sectional Map Amendment for the Tuxedo Road/Arbor Street/Cheverly Metro Area, April 2005 (Sector Plan)

2. Record Lot(s): ☐ Yes Date: _____ ☐ No ☑ Not Applicable
An area of land designated as a separate parcel of land on a "Record Plat," or on a legally recorded deed (to land for which no "Subdivision" plat is required pursuant to the provisions of Subtitle 24) filed among the Land Records of Prince George's County, Maryland.

Comment:

3. Specific Use(s)/Regulation(s):

Permitted uses for the I-2/DDOZ may be found in Table 12-Part 3, Industrial Uses, of the Sector Plan. The use of a crematory is not specifically listed in this table. All uses not listed are prohibited. However, on 6/11/2015, Detailed Site Plan DSP-13015 was approved by the Prince George's County Planning Board (Board) to add "crematory" as a permitted use to Table 12-Part 3, Industrial Uses, of the Sector Plan. Therefore, the approval of DSP-13015 permits the use of a crematory on this property only, subject to the conditions as specified in the Board's decision (PGCPB Resolution No. 15-50, copy attached). **See page 3 for additional information.**

4. According to the current zoning ordinance and/or regulations applicable to the subject property, the **current use** of the property is classified as:

☑ Permitted by Right

☐ Permitted by Special Exception

☐ Legally Nonconforming

☐ Prohibited

Comment:

5. Conformance: According to the current zoning ordinance and/or regulations applicable to the subject property, the current use and/or structure is:

☑ Legally Conforming (in conformance with applicable zoning and subdivision regulations, or grandfathered). May rebuild in accordance with current regulations.

☐ Legally Nonconforming (not in conformance with applicable zoning and subdivision regulations, but legal and subject to conditions and/or requirements). See Rebuild (below).

☐ Nonconforming (not in conformance with applicable zoning and subdivision regulations). See Rebuild (below).

Comment:

Subject to DSP-13015 and subsequent revisions.

6. Rebuild: In the event of casualty, in whole or in part, the structure located on the subject property may be rebuilt in its current form in accordance with Section 27-243 of the current zoning ordinance:

☑ Yes ☐ No

Comment:

Subject to DSP-13015 and subsequent revisions.

7. Variances, special exceptions, and/or zoning conditions approved for the subject property:

☐ Variance ☐ Special Exception ☐ Zoning Conditions ☑ None

Comment:

8. Site Plan Information:

☑ An approved site plan for the subject property is on file.
Available plans must be requested, additional fees apply. Request plans at http://www.pgplanning.org/DocumentCenter/View/6884/Online-Information-Request-Form

☐ No site plan

List of approved plans and permits for subject property:

On 6/11/2015, Detailed Site Plan DSP-13015 was approved by the Prince George's County Planning Board to add "crematory" as a permitted use to Table 12-Part 3, Industrial Uses, of the Sector Plan.

On 7/23/2018, Permit #30394-2018-UOW was approved for a crematory.

Most recently, on 8/19/2020, DSP-13015-01 was approved by the Prince George's County Planning Director for minor site improvements, including a modification to the crematory stack to increase the height, as required by Maryland Department of the Environment, to relocate and increase the green area, and the inclusion of a gas meter and bollard, as required by Washington Gas.

Additional comments regarding the subject property:

The approval of the use through DSP-13015 does not limit the number of crematories on the subject property. Therefore, the addition of a second crematory is an allowed use at the site. However, any site improvements relative to the installation of another crematory use (e.g., building additions, new smoke stack, etc.) may require additional DSP amendments.

Note: The Maryland-National Capital Park and Planning Commission's (Commission) role is to review permit applications for compliance with zoning and subdivision regulations. The full text of the Ordinance (Subtitle 27) is at: https://www.municode.com/library/md/prince_george's_county/codes/code_of_ordinances

Information regarding use and occupancy permits, building permits and outstanding violations may be obtained by contacting the Prince George's County Department of Permitting, Inspections, and Enforcement (DPIE) at 301-636-2000.

This information was researched on 7/1/21 , by the undersigned, per request and as a public service. The undersigned certifies that the above information contained herein is accurate to the best of our knowledge, information, and belief, and is based upon or relates to the information supplied by the requestor. The Department assumes no liability for errors and omissions. All information was obtained from public records, which may be inspected during regular business hours.

Sincerely,
Amber Krivitsky
Planning Information Services

Attachment D - Calculations for Run 1

CALCULATIONS FOR RUN 1
US Cremation Equipment
Model XCEL (Evans Eagle Vaults, Inc.)
17029-ST

STACK AREA

3.1416 x (Diameter / 24)^2

3.1416 X (20.00 /24)^2

2.18 SQ.FT.

STACK PRESSURE

BAROMETRIC PRESSURE + (STATIC PRESSURE/ 13.6)

30.10 + (-0.06 /13.6)

30.10 IN.HG

METER PRESSURE

BAROMETRIC PRESSURE + (ORIFICE PRESURE/13.6)

30.10 + (2.22 / 13.6)

30.26 IN.Hg

SAMPLE VOLUME

17.64 X (Y) X METER VOLUME X METER PRESSURE / (METER TEMP. + 460)

17.64 X 1.0076 X 52.219 X 30.26 / (76.5 + 460)

52.353 STD.CU.FT.

WATER VAPOR VOLUME

0.04715 X WATER COLLECTED

0.04715 X 193.0

9.10 STD.CU.FT.

SAMPLE MOISTURE

100 X WATER VAPOR VOLUME / (WATER VAPOR VOLUME + SAMPLE VOLUME)

100 X 9.10 / (9.10 + 52.353)

14.81 %

SATURATION MOISTURE

100 X (VAPOR PRESSURE @ STACK TEMP. / STACK PRESSURE)

100 X (79169.0296 / 30.10)

100.00 %

STACK MOISTURE FRACTION

(THE LESSER OF SAMPLE MOISTURE OR SATURATION MOISTURE) / 100

0.148

DRY MOLECULAR WEIGHT OF STACK GAS

(0.28 X (100-%N2)) + (0.44 X %CO2) + (0.32 X %O2)

(0.28 X (100 - (2.50 + 14.50))) + (0.44 X 2.50) + (0.32 X 14.50)

28.98

CALCULATIONS FOR RUN 1
US Cremation Equipment
Model XCEL (Evans Eagle Vaults, Inc.)
17029-ST

MOLECULAR WEIGHT OF STACK GAS

MOLECULAR WEIGHT X (1 - MOISTURE) + (18 X MOISTURE)

28.98 X (1 - 0.148) + (18 X 0.148)

27.35

STACK VELOCITY

85.49 X CP X 60 X SQ.(^P) X SQ.(STACK TEMP + 460)/SQ.(STACK PRESSURE X MOLECULAR WT.)

85.49 X 0.840 X 60 X 0.232 X SQ.(1092.1 + 460) / SQR(30.10 X 27.354)

1372 FPM

VOLUMETRIC FLOW RATE (ACFM)

STACK AREA X STACK VELOCITY

2.18 X 1372

2993 ACFM

VOLUMETRIC FLOW RATE (SCFM) DRY

17.64 X (ACFM) X STACK PRESSURE X (1-MOISTURE) / (STACK TEMP. + 460)

17.64 X 2993 X 30.10 X (1 - 0.148) / (1092.1 + 460)

872 SCFM (DRY)

CONCENTRATION (gr/dscf)

Total Particulate Weight X 15.43 / Sample Volume

0.0093 X 15.43 / 52.35

0.0027

CONCENTRATION@7% O2 (gr/dscf)

Concentration X 13.9 / (20.9 - %o2)

0.0027 X 13.9 / (20.9 - 14.500)

0.0060

MASS EMISSION RATE (LBS./HR.)

CONCENTRATION X (SCFM- DRY) X 60 / 7000

0.0027 X 872 X 60 / 7000

0.02 LBS/HR

PERCENT ISOKINETIC

.0945 X (STACK TEMP. + 460) X SAMPLE VOLUME X 60

. (STACK PRES. X VELOCITY X NOZZLE AREA X TEST TIME X (1-MOISTURE))

0.0945 X (1092.08 + 460) X 52.35 X 6O

30.10 X 1372 X 0.00213 X 60.00 X (1- 0.148)

102.48 %

RETENTION TIME CALCULATION

CORRECTION FOR QUENCHED AIR AT OUTLET

PLANT:	US Cremation Equipment (Run 1)
SOURCE:	XCEL
LOCATION:	4442 Holden Road Lakeland, Florida
DATE:	5/1/2017
STACK PRESSURE:	30.1
CHARGE RATE:	179 LBS

Stack Temperature ^{0}F	1092.1
Afterburner Temperature ^{0}F	1650
Ambient Temperature	78
Stack Flow Rate (scfm dry)	872
Secondary Chamber Volume (cu.ft.)	101
Secondary Chamber Percent Flow	64.51%
Secondary Chamber Flow (scfm dry)	562.5
Secondary Chamber Flow @ 1800^{0}F	2407.8
Secondary Chamber Flow @ 1600^{0}F	2194.7
Secondary Chamber Volume (cu.ft.)	101
Retention Time @ 1800^{0}F	**2.52**
Retention Time @ 1600^{0}F	**2.76**

Secondary Chamber Percent Flow = $\frac{\text{Stack Flow Rate X (Stack Temperature - Ambient Temperature)}}{\text{(Afterburner temperature - Ambient Temperature)}}$

Secondary Chamber Flow (scfm dry) = Stack Flow Rate (scfm dry) X Secondary Chamber Percent Flow

Secondary Chamber Flow @ 1800^{0}F = Secondary Chamber Flow (scfm dry) X (1800+460) / 528

Secondary Chamber Flow @ 1600^{0}F = Secondary Chamber Flow (scfm dry) X (1600+460) / 528

Retention Time @ 1800^{0}F = $\frac{\text{Secondary Chamber Volume (cu.ft.) X 60}}{\text{Secondary Chamber Flow @ 1800}^0\text{F}}$

Retention Time @ 1600^{0}F = $\frac{\text{Secondary Chamber Volume (cu.ft.) X 60}}{\text{Secondary Chamber Flow @ 1600}^0\text{F}}$

Attachment E - Calibration Data

LIQUID TECHNOLOGY CORPORATION

"INDUSTRY LEADER IN SPECIALTY GASES"

Certificate of Analysis

- Pure Gas -

Customer	Coastal Air Consulting (Deland, FL)
Date	November 23, 2016
Delivery Receipt	DR-64272
Product:	Nitrogen, CEM Grade
Lot Number:	LTL076-N2

Mixture Specifications

Cylinder Number EB-0015932

Components	Requested	Actual
Sulfur Dioxide	< 0.1 ppm	< 0.1 ppm
NOx	< 0.1 ppm	< 0.1 ppm
Carbon Monoxide	< 0.5 ppm	< 0.5 ppm
Carbon Dioxide	< 1.0 ppm	< 1.0 ppm
THC	< 0.1 ppm	< 0.1 ppm
Moisture	< 2.0 ppm	< 2.0 ppm
Oxygen	< 0.50 ppm	< 0.50 ppm
Nitrogen	99.9995%	99.9995%

Cylinder Data

Cylinder Valve:	CGA 580
Cylinder Volume:	140 Cubic Feet
Cylinder Pressure:	2000 psig, 70F
Expiration Date:	November 24, 2021

Certified by: Cole Dylewski

Cole Dylewski

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"INDUSTRY LEADER IN SPECIALTY GASES"

Certificate of Analysis

- EPA PROTOCOL GAS -

Customer	Coastal Air Consulting (Deland, FL)
Date	May 31, 2016
Delivery Receipt	DR-61745
Gas Standard	16.0 - 20.0 ppm NO, 16.0 - 20.0 ppm CO/Nitrogen
Final Analysis Date	May 24, 2016
Expiration Date	May 25, 2020

Analytical Data:

DO NOT USE BELOW 100 psig

EPA Protocol, Section No. 2.2, Procedure G-1 and/or G-2.

Reported Concentrations

Nitric Oxide: 17.2 ppm +/- 0.1 ppm (G-1)

Carbon Monoxide: 18.2 ppm +/- 0.1 ppm (G-1)

Nitrogen: Balance

Total NOx: 17.4 ppm

** NOx for Reference Use Only **

	Reference Standards		GMIS Traceability	
SRM/GMIS:	GMIS	GMIS	SRM-1683b	SRM-2635a
Cylinder Number:	CC-231360	EB-0056065	CAL-018172	CAL-016851
Concentration:	24.24 ppm NO	25.23 ppm CO	48.79 ppm NO	24.79 ppm CO
Expanded Uncertainty:	(+/- 0.08 ppm)	(+/- 0.23 ppm)	(+/- 0.34 ppm)	(+/- 0.15 ppm)
Expiration Date:	09/22/22	04/30/22	03/25/19	09/12/14
NIST Sample Number:	NA	NA	45-V-08	58-D-30

Certification Instrumentation

Component:	Nitric Oxide	Carbon Monoxide
Make/Model:	NEXUS 6700	NEXUS 6700
Serial Number:	APW1200289	APW1200289
Principal of Measurement:	FTIR	FTIR
Last Calibration:	April 29, 2016	May 06, 2016

Cylinder Data

Cylinder Number:	CC-505366	Cylinder Volume:	133 Cubic Feet
Cylinder Outlet:	CGA 660	Cylinder Pressure:	1900 psig, 70F

Analytical Uncertainty and NIST Traceability are in compliance with EPA-600/R-12/531.

Certified by: Cole Dylewski

Cole Dylewski

PGVP Vendor ID: E12016

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"INDUSTRY LEADER IN SPECIALTY GASES"

Certificate of Analysis

- EPA PROTOCOL GAS -

Customer	Coastal Air Consulting (Deland, FL)
Date	May 31, 2016
Delivery Receipt	DR-61745
Gas Standard	47.0 ppm NO, 47.0 ppm SO2, 47.0 ppm CO/Nitrogen
Final Analysis Date	May 24, 2016
Expiration Date	May 25, 2019

Analytical Data:

DO NOT USE BELOW 100 psig

EPA Protocol, Section No. 2.2, Procedure G-1 and/or G-2.

Reported Concentrations

Nitric Oxide: 48.4 ppm +/- 0.2 ppm (G-1)

Carbon Monoxide: 48.2 ppm +/- 0.4 ppm (G-1)

Sulfur Dioxide: 49.4 ppm +/- 0.3 ppm (G-1)

Nitrogen: Balance

Total NOx: 48.5 ppm

** NOx for Reference Use Only **

	Reference Standards			GMIS Traceability		
SRM/GMIS:	GMIS	GMIS	GMIS	SRM-1683b	SRM-2635a	SRM-1693a
Cylinder Number:	CC-231360	EB-0056065	EB-0014689	CAL-018172	CAL-016851	CAL-015255
Concentration:	24.24 ppm NO	25.23 ppm CO	50.97 ppm SO2	48.79 ppm NO	24.79 ppm CO	49.66 ppm SO2
Expanded Uncertainty:	(+/- 0.08 ppm)	(+/- 0.23 ppm)	(+/- 0.20 ppm)	(+/- 0.34 ppm)	(+/- 0.15 ppm)	(+/- 0.51 ppm)
Expiration Date:	09/22/22	04/30/22	03/07/20	03/25/19	09/12/14	06/01/16
NIST Sample Number:	NA	NA	NA	45-V-08	58-D-30	96-K-026

Certification Instrumentation

Component:	Nitric Oxide	Carbon Monoxide	Sulfur Dioxide
Make/Model:	NEXUS 6700	NEXUS 6700	NEXUS 6700
Serial Number:	APW1200289	APW1200289	APW1200289
Principal of Measurement:	FTIR	FTIR	FTIR
Last Calibration:	April 29, 2016	May 05, 2016	May 13, 2016

Cylinder Data

Cylinder Number:	EB-0039976	Cylinder Volume:	137 Cubic Feet
Cylinder Outlet:	CGA 660	Cylinder Pressure:	1950 psig, 70F

Analytical Uncertainty and NIST Traceability are in compliance with EPA-600/R-12/531.

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Certificate of Analysis

- EPA PROTOCOL GAS -

Customer	Coastal Air Consulting (Deland, FL)
Date	May 31, 2016
Delivery Receipt	DR-61745
Gas Standard	90.0 - 99.0 ppm NO, 90.0 - 99.0 ppm SO2, 90.0 - 99.0 ppm CO/Nitrogen
Final Analysis Date	May 24, 2016
Expiration Date	May 25, 2024

Analytical Data: **DO NOT USE BELOW 100 psig**

EPA Protocol, Section No. 2.2, Procedure G-1 and/or G-2.

Reported Concentrations

Nitric Oxide: 95.8 ppm +/- 0.3 ppm (G-1)

Carbon Monoxide: 96.9 ppm +/- 0.9 ppm (G-1)

Sulfur Dioxide: 96.7 ppm +/- 0.6 ppm (G-1)

Nitrogen: Balance

Total NOx: 95.9 ppm

** NOx for Reference Use Only **

	Reference Standards			GMIS Traceability		
SRM/GMIS:	GMIS	GMIS	GMIS	SRM-1683b	SRM-1678c	SRM-1693a
Cylinder Number:	ND-45700	EB-0017129	EB-0014689	CAL-018172	CAL-016939	CAL-015255
Concentration:	49.256 ppm NO	50.81 ppm CO	50.97 ppm SO2	48.79 ppm NO	49.07 ppm CO	49.66 ppm SO2
Expanded Uncertainty:	(+/- 0. ppm)	(+/- 0.42 ppm)	(+/- 0.20 ppm)	(+/- 0.34 ppm)	(+/- 0.19 ppm)	(+/- 0.51 ppm)
Expiration Date:	08/23/20	04/30/22	06/16/18	03/25/19	08/14/15	06/01/16
NIST Sample Number:	NA	NA	NA	45-V-08	4-K-33	96-K-026

Certification Instrumentation

Component:	Nitric Oxide	Carbon Monoxide	Sulfur Dioxide
Make/Model:	NEXUS 6700	NEXUS 6700	NEXUS 6700
Serial Number:	APW1200289	APW1200289	APW1200289
Principal of Measurement:	FTIR	FTIR	FTIR
Last Calibration:	April 29, 2016	May 06, 2016	May 13, 2016

Cylinder Data

Cylinder Number:	EB-0051481	Cylinder Volume:	137 Cubic Feet
Cylinder Outlet:	CGA 660	Cylinder Pressure:	1950 psig, 70F

Analytical Uncertainty and NIST Traceability are in compliance with EPA-600/R-12/531.

Certified by: Cole Dylewski

Cole Dylewski PGVP Vendor ID: E12016

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Certificate of Analysis

- EPA PROTOCOL GAS -

Customer	Coastal Air Consulting (Deland, FL)
Date	July 27, 2016
Delivery Receipt	DR-62606
Gas Standard	8.50% CO2, 12.00% Oxygen/Nitrogen
Final Analysis Date	July 11, 2016
Expiration Date	July 12, 2024

Analytical Data: **DO NOT USE BELOW 100 psig**

EPA Protocol, Section No. 2.2, Procedure G-1 and/or G-2.

Reported Concentrations

Carbon Dioxide: 8.59% +/- 0.08% (G-1)

Oxygen: 11.95 % +/- 0.06% (G-1)

Nitrogen: Balance

	Reference Standards:		GMIS Traceability	
SRM/GMIS:	GMIS	GMIS	SRM-1674b	SRM-2658a
Cylinder Number:	CC-166598	EB-0018701	FF-10623	CAL-016950
Concentration:	6.898% CO2	10.08% Oxygen	6.944% CO2	9.918% Oxygen
Expanded Uncertainty:	(+/- 0.027%)	(+/- 0.15%)	(+/-0.013%)	(+/- 0.022%)
Expiration Date:	04/02/22	04/17/22	06/17/19	06/01/17
NIST Sample Number:	NA	NA	7-H-08	72-D-43

Certification Instrumentation

Component:	Carbon Dioxide	Oxygen
Make/Model:	Nicolet 6700	Siemens Oxymat
Serial Number:	APW1100563	64 – 402
Principal of Measurement:	FTIR	Paramagnetic
Last Calibration:	June 16, 2016	June 20, 2016

Cylinder Data

Cylinder Number:	CC-251892	Cylinder Volume:	131 Cubic Feet
Cylinder Outlet:	CGA 590	Cylinder Pressure:	1875 psig, 70F

Analytical Uncertainty and NIST Traceability are in compliance with EPA-600/R-12/531.

Certified by: Cole Dylewski

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PGVP Vendor ID: E12016

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"INDUSTRY LEADER IN SPECIALTY GASES"

Certificate of Analysis

- EPA PROTOCOL GAS -

Customer	Coastal Air Consulting (Deland, FL)
Date	October 20, 2014
Delivery Receipt	DR-53649
Gas Standard	17.00% CO2, 22.50% Oxygen/Nitrogen - EPA PROTOCOL
Final Analysis Date	October 17, 2014
Expiration Date	October 18, 2022
Component	Carbon Dioxide, Oxygen
Balance Gas	Nitrogen

Analytical Data: **DO NOT USE BELOW 100 psig**

EPA Protocol, Section No. 2.2, Procedure G-1.

Reported Concentrations

Carbon Dioxide: 16.74% +/- 0.15%

Oxygen: 22.55% +/- 0.05%

Nitrogen: Balance

Reference Standards:			GMIS Traceability
SRM/GMIS:	GMIS	GMIS	SRM-1674b / SRM-2659a
Cylinder Number:	CC-252091	CC-159090	FF-10623 / CAL-015481
Concentration:	15.816% CO2 (+/- 0.003%)	20.81% Oxygen (+/- 0.15%)	6.944% CO2 (+/-0.013%) / 20.720% Oxygen (+/- 0.043%)
Expiration Date:	02/04/21	04/17/22	06/17/19 – 01/01/16
NIST Sample Number:	NA	NA	7-H-08 / 71-D-44

Certification Instrumentation

Component:	Carbon Dioxide	Oxygen
Make/Model:	Nicolet 6700	Siemens Oxymat
Serial Number:	APW1200289	64 - 402
Principal of Measurement:	FTIR	Paramagnetic
Last Calibration:	October 05, 2014	October 15, 2014

Cylinder Data

Cylinder Serial Number:	CC-233247	Cylinder Outlet:	CGA 590
Cylinder Volume:	136 Cubic Feet	Cylinder Pressure:	1925 psig, 70°F

Analytical Uncertainty and NIST Traceability are in compliance with EPA-600/R-12/531.

Certified by: Cole Dylewski

Cole Dylewski

PGVP Vendor ID: E12014

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"INDUSTRY LEADER IN SPECIALTY GASES"

Certificate of Analysis

- EPA PROTOCOL GAS -

Customer	Coastal Air Consulting (Deland, FL)
Date	April 08, 2016
Delivery Receipt	DR-61102
Gas Standard	9.00 ppm Nitric Oxide, 9.00 ppm Carbon Monoxide/Nitrogen
Final Analysis Date	April 08, 2016
Expiration Date	April 09, 2019

DO NOT USE BELOW 100 psig

Analytical Data:

EPA Protocol, Section No. 2.2, Procedure G-1.

Reported Concentrations

Nitric Oxide: 8.46 ppm +/- 0.08 ppm (G-1)

Carbon Monoxide: 9.07 ppm +/- 0.09 ppm (G-1)

Nitrogen: Balance

Total NOx: 8.82 ppm

** Total NOx for Reference Use Only **

Reference Standards

SRM/GMIS:	GMIS	GMIS
Cylinder Number:	ND-57318	CC-115999
Concentration:	9.372 ppm NO (+/- 0.08 ppm)	10.312 ppm CO (+/- 0.058 ppm)
Expiration Date:	04/26/23	03/07/20

Certification Instrumentation

Component:	Nitric Oxide	Carbon Monoxide
Make/Model:	Nicolet 6700	Nicolet 6700
Serial Number:	APW1100563	APW1100563
Principal of Measurement:	FTIR	FTIR
Last Calibration:	March 31, 2016	March 10, 2016

Cylinder Data

Cylinder Number:	CC-508364	Cylinder Volume:	136 Cubic Feet
Cylinder Outlet:	CGA 660	Cylinder Pressure:	1950 psig, 70°F
Expiration Date:	April 09, 2019		

Analytical Uncertainty and NIST Traceability are in compliance with EPA-600/R-12/531.

Certified by: Cole Dylewski

PGVP Vendor ID: E12016

GMIS Traceability	Nitric Oxide	Carbon Monoxide
SRM Number:	SRM-2628a	SRM-1677c
Cylinder Number:	CAL-016517	FF-2304
Cylinder Concentration:	10.07 ppm NO (+/- 0.10)	

ANNUAL METER CALIBRATION **METER NO. 002047** **ORIFICE SET NO. JC40-73**

DATE 8/30/2016 Y= 1.0076 MAX % VARIATION 1.7457% PASS

BAROMETRIC PRESSURE 29.91 ^Ha= 1.6542 MAX % VARIATION 2.8768% PASS

CRITICAL ORIFICE DATA

ORIFICE SERIAL NO.	ORIFICE K' FACTOR	ACTUAL VACUUM	^H (IN H2O)	TIME (MIN.)	AMBIENT TEMP INITIAL	AMBIENT TEMP. FINAL	METER TEMP. INITIAL	METER TEMP. FINAL	METER READING INITIAL	METER READING FINAL	VM (CU.FT.)	VM CORRECTED	Vcr STD	Vcr NOMINAL	Y	VARIATION	^H (IN. H2O)	VARIATION
40	0.2435	23.5	0.29	10	72	73	77	77	0.000	3.205	3.2050	3.1512	3.1561	3.1854	1.0016	-0.0017	1.6096	0.0015
40	0.2435	23.5	0.29	10	73	72	77	77	3.205	6.408	3.2030	3.1493	3.1561	3.1854	1.0022	-0.0010	1.6096	0.0015
40	0.2435	23.5	0.29	10	72	71	77	78	6.408	9.605	3.1970	3.1404	3.1591	3.1824	1.0059	0.0027	1.6051	-0.0030
AVERAGE															1.0032	0.0032	1.6081	0.0279
48	0.3557	22.0	0.62	10	71	72	78	78	10.100	14.728	4.6280	4.5456	4.6148	4.6488	1.0152	-0.0022	1.6066	0.0000
48	0.3557	22.0	0.62	10	72	73	78	79	14.728	19.346	4.6180	4.5315	4.6104	4.6531	1.0174	0.0000	1.6082	0.0015
48	0.3557	22.0	0.62	10	73	72	79	80	19.346	23.962	4.6160	4.5212	4.6104	4.6531	1.0197	0.0023	1.6052	-0.0015
AVERAGE															1.0175	0.0175	1.6067	0.0288
55	0.4616	20.5	1.10	10	71	72	79	80	24.200	30.279	6.0790	5.9611	5.9887	6.0328	1.0046	-0.0025	1.6879	0.0031
55	0.4616	20.5	1.10	10	71	71	80	80	30.279	36.351	6.0720	5.9488	5.9915	6.0300	1.0072	0.0001	1.6847	0.0000
55	0.4616	20.5	1.10	10	71	71	81	81	36.351	42.420	6.0690	5.9348	5.9915	6.0300	1.0095	0.0024	1.6816	-0.0031
AVERAGE															1.0071	0.0071	1.6848	0.0184
63	0.5916	19.0	1.80	10	73	74	80	81	42.600	50.434	7.8340	7.6810	7.6609	7.7463	0.9974	-0.0056	1.6847	-0.0021
63	0.5916	19.0	1.80	10	74	75	80	81	50.434	58.180	7.7460	7.5948	7.6537	7.7536	1.0078	0.0048	1.6879	0.0010
63	0.5916	19.0	1.80	10	75	75	81	81	58.180	65.960	7.7800	7.6211	7.6501	7.7572	1.0038	0.0008	1.6879	0.0011
AVERAGE															1.0030	0.0030	1.6868	0.0197
73	0.8234	16.0	3.50	10	75	75	82	84	66.200	77.000	10.8000	10.5842	10.6476	10.7967	1.0060	-0.0014	1.6880	0.0031
73	0.8234	16.0	3.50	10	75	75	85	85	77.000	87.810	10.8100	10.5552	10.6476	10.7967	1.0088	0.0014	1.6818	-0.0031
73	0.8234	16.0	3.50	10	75	76	84	85	87.810	98.620	10.8100	10.5649	10.6426	10.8017	1.0074	0.0000	1.6849	0.0000
AVERAGE															1.0074	0.0074	1.6849	0.0185

SEMI ANNUAL CALIBRATION DATE 2/24/2017 **BAROMETRIC PRESSURE** 29.81

ORIFICE SERIAL NO.	ORIFICE K' FACTOR	ACTUAL VACUUM	^H (IN H2O)	TIME (MIN.)	AMBIENT TEMP INITIAL	AMBIENT TEMP. FINAL	METER TEMP. INITIAL	METER TEMP. FINAL	METER READING INITIAL	METER READING FINAL	VM (CU.FT.)	VM CORRECTED	Vcr STD	Vcr NOMINAL	Y	VARIATION	^H (IN. H2O)	VARIATION
55	0.4616	20.5	1.1	10	68	66	69	71	565.000	571.065	6.0650	6.0338	5.9941	6.0072	0.9934	-0.0137	1.7093	0.0005
55	0.4616	20.5	1.1	10	66	69	71	72	571.065	577.132	6.0670	6.0188	5.9912	6.0101	0.9954	-0.0117	1.7061	-0.0027
55	0.4616	20.5	1.1	10	69	70	72	72	577.132	583.196	6.0640	6.0101	5.9799	6.0214	0.9950	-0.0121	1.7110	0.0022
AVERAGE or Max															0.9946	0.20%	1.7088	0.49%

METER COMPARISON CHECK (Yqa) Y_{qa} = (O / Vm) X sqr(.319 x Tm X 29 / (^Ha x (Pb + (Havg / 13.6) x Md)) X sqr ^H avg

	Run 1	Run 2	Run 3	Average
Y_{qa} =	1.0012	1.0010	0.9885	0.9969

THERMOCOUPLE CALIBRATION

DATE 8/30/2016

	TC-1 (DEG F)	ASTM THERMOMETER (DEG F)
ICE	31	32
BOILING H2O	212	213
OIL	407	407

NOZZLE CALIBRATION

DATE 5/1/2017

READINGS IN (IN.)				**AVERAGE**
20	0.625	0.625	0.625	0.6250

PITOT TUBE CP=.84 ACCORDING TO DESIGN SPECIFICATIONS

Beatty Environmental Stack Test Thermocouple Calibrations

Calibration Date : 5/1/2017
Calibration Device: ASTM Thermometer
Calibrated By:Nicholas Decker, Beatty Environmental Services, LLC

Device	Ambient Air
ASTM Thermometer	85
Dry Gas Meter Thermocouple	85
Filter Thermocouple	85
Filter Heater Thermocouple	86
Impinger Outlet Thermocouple	84
Stack Temp Thermocouple (3ft. 8in. Heated Probe)	85

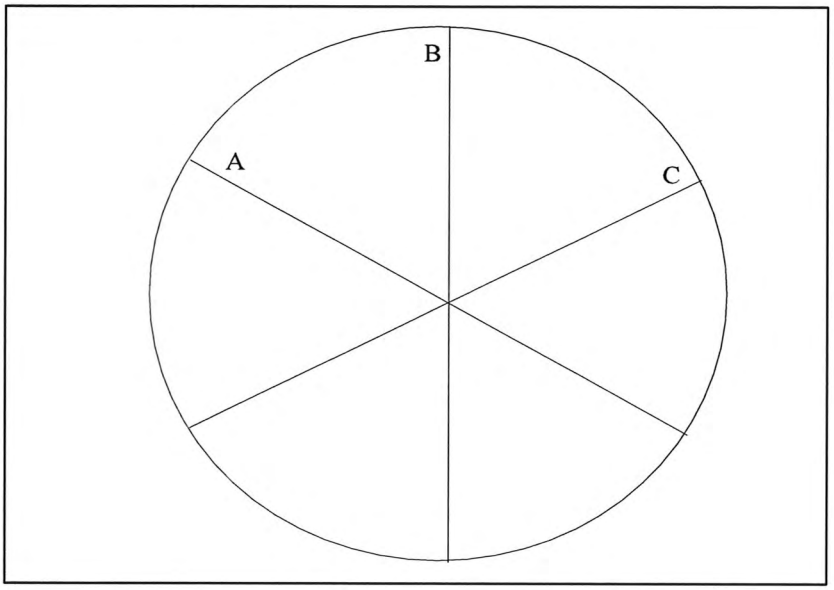
Analyst: 

10.5 Temperature Sensors. Use the procedure in Section 10.3 of Method 2 to calibrate in-stack temperature sensors. Dial thermometers, such as are used for the DGM and condenser outlet, shall be calibrated against mercury-in-glass thermometers. An alternative mercury-free NISTtraceable thermometer may be used if the thermometer is, at a minimum, equivalent in terms of performance or suitably effective for the specific temperature measurement application. As an alternative, the following single-point calibration procedure may be used. After each test run series, check the accuracy (and, hence, the calibration) of each thermocouple system at ambient temperature, or any other temperature, within the range specified by the manufacturer, using a reference thermometer (either ASTM reference thermometer or a thermometer that has been calibrated against an ASTM reference thermometer). The temperatures of the thermocouple and reference thermometers shall agree to within ±2 °F.

Nozzle Calibration

Nozzle ID 5/1/2017

A =	0.625
B =	0.625
C =	0.625
Average	0.6250

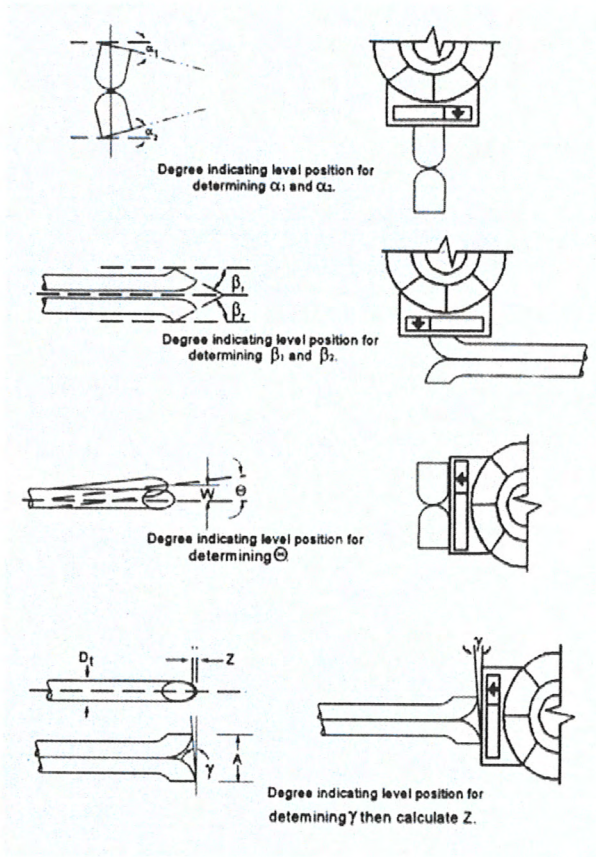


Calibration Date 5/1/2017

Calibrated by

PITOT CALIBRATION

(Type S Pitot Tube Inspection)



Level and Perpendicular?	Yes
Obstruction?	No
Damaged?	No
α_1 ($-10° \leq \alpha_1 \leq +10°$)	1
α_2 ($-10° \leq \alpha_2 \leq +10°$)	2
β_1 ($-5° \leq \beta_1 \leq +5°$)	2
β_2 ($-5° \leq \beta_2 \leq +5°$)	1
Y	-1
θ	1
$z = A \tan \gamma$ ($\leq 0.125°$)	-0.017
$w = A \tan \theta$ ($\leq 0.03125°$)	0.017
D_t ($3/16'' \leq D_t \leq +3/8''$)	0.375
A	0.964
$A/2\,D_t$ ($1.05 \leq P_A / D_t \leq 1.51$)	1.285

Certification

I hereby certify that type S pitot tube ID# P-5AC meets or exceeds all specifications, criteria and applicable design features, and is hereby assigned a pitot tube calibration factor of 0.84.

Certified by: Date 08/30/2016

Attachment F - Project Participants

Project Participants

Beatty Environmental Services, LLC

Daniel R. Beatty
Project Director

Nick Decker
Field Technician

Zachary Beatty
Field/Lab Manager

Coastal Air Consulting

Steve Webb
EPA Method 10 (CO) & Method 9 VE

US Cremation Equipment

Luis Llorens
President

Policy No.: 8005255

AVERY W HALL INSURANCE AGENCY INC
PO BOX 2317
SALISBURY MD 21802-2317

Chesapeake Employers Insurance™
Your workers' compensation specialist

Thank you for making Chesapeake Employers' Insurance Company your workers' compensation carrier of choice.

WORKERS COMPENSATION AND EMPLOYERS LIABILITY INSURANCE POLICY

In return for the payment of the premium and subject to all terms of this policy, we agree with you as follows:

GENERAL SECTION

A. **The Policy**

This policy includes at its effective date the Information Page and all endorsements and schedules listed there. It is a contract of insurance between you (the employer named in Item 1 of the Information Page) and us (the insurer named on the Information Page). The only agreements relating to this insurance are stated in this policy. The terms of this policy may not be changed or waived except by endorsement issued by us to be part of this policy.

B. **Who is Insured**

You are insured if you are an employer named in Item 1 of the Information Page. If that employer is a partnership, and if you are one of its partners, you are insured, but only in your capacity as an employer of the partnership's employees.

C. **Workers Compensation Law**

Workers Compensation Law means the workers or workmen's compensation law and occupational disease law of each state or territory named in Item 3.A. of the Information Page. It includes any amendments to that law which are in effect during the policy period. It does not include any federal workers or workmen's compensation law, any federal occupational disease law or the provisions of any law that provide nonoccupational disability benefits.

D. **State**

State means any state of the United States of America, and the District of Columbia.

E. **Locations**

This policy covers all of your workplaces listed in Items 1 or 4 of the Information Page; and it covers all other workplaces in Item 3.A. states unless you have other insurance or are self-insured for such workplaces.

PART ONE
WORKERS COMPENSATION INSURANCE

A. **How This Insurance Applies**

This workers compensation insurance applies to bodily injury by accident or bodily injury by disease. Bodily injury includes resulting death.

1. Bodily injury by accident must occur during the policy period.
2. Bodily injury by disease must be caused or aggravated by the conditions of your employment. The employee's last day of last exposure to the conditions causing or aggravating such bodily injury by disease must occur during the policy period.

B. **We Will Pay**

We will pay promptly when due the benefits required of you by the workers compensation law.

C. **We Will Defend**

We have the right and duty to defend at our expense any claim, proceeding or suit against you for benefits payable by this insurance. We have the right to investigate and settle these claims, proceedings or suits.

We have no duty to defend a claim, proceeding or suit that is not covered by this insurance.

D. **We Will Also Pay**

We will also pay these costs, in addition to other amounts payable under this insurance, as part of any claim, proceeding or suit we defend:

1. reasonable expenses incurred at our request, but not loss of earnings;
2. premiums for bonds to release attachments and for appeal bonds in bond amounts up to the amount payable under this insurance;
3. litigation costs taxed against you;
4. interest on a judgment as required by law until we offer the amount due under this insurance; and
5. expenses we incur.

E. **Other Insurance**

We will not pay more than our share of benefits and costs covered by this insurance and other

insurance or self-insurance. Subject to any limits of liability that may apply, all shares will be equal until the loss is paid. If any insurance or self-insurance is exhausted, the shares of all remaining insurance will be equal until the loss is paid.

F. **Payments You Must Make**

You are responsible for any payments in excess of the benefits regularly provided by the workers compensation law including those required because:

1. of your serious and willful misconduct;
2. you knowingly employ an employee in violation of law;
3. you fail to comply with a health or safety law or regulation; or
4. you discharge, coerce or otherwise discriminate against any employee in violation of the workers compensation law.

If we make any payments in excess of the benefits regularly provided by the workers compensation law on your behalf, you will reimburse us promptly.

G. **Recovery From Others**

We have your rights, and the rights of persons entitled to the benefits of this insurance, to recover our payments from anyone liable for the injury. You will do everything necessary to protect those rights for us and to help us enforce them.

H. **Statutory Provisions**

These statements apply where they are required by law.

1. As between an injured worker and us, we have notice of the injury when you have notice.
2. Your default or the bankruptcy or insolvency of you or your estate will not relieve us of our duties under this insurance after an injury occurs.
3. We are directly and primarily liable to any person entitled to the benefits payable by this insurance. Those persons may enforce our duties; so may an agency authorized by law. Enforcement may be against us or against you and us.
4. Jurisdiction over you is jurisdiction over us for purposes of the workers compensation law. We are bound by decisions against you under that law, subject to the provisions of this policy that are not in conflict with that law.
5. This insurance conforms to the parts of the workers compensation law that apply to:
   a. benefits payable by this insurance;
   b. special taxes, payments into security or other special funds, and assessments payable by us under that law.
6. Terms of this insurance that conflict with the workers compensation law are changed by this statement to conform to that law.

Nothing in these paragraphs relieves you of your duties under this policy.

PART TWO
EMPLOYERS LIABILITY INSURANCE

A. **How This Insurance Applies**

This employers liability insurance applies to bodily injury by accident or bodily injury by disease. Bodily injury includes resulting death.

1. The bodily injury must arise out of and in the course of the injured employee's employment by you.
2. The employment must be necessary or incidental to your work in a state or territory listed in Item 3.A. of the Information Page.
3. Bodily injury by accident must occur during the policy period.
4. Bodily injury by disease must be caused or aggravated by the conditions of your employment. The employee's last day of last exposure to the conditions causing or aggravating such bodily injury by disease must occur during the policy period.
5. If you are sued, the original suit and any related legal actions for damages for bodily injury by accident or by disease must be brought in the United States of America, its territories or possessions, or Canada.

B. **We Will Pay**

We will pay all sums that you legally must pay as damages because of bodily injury to your employees, provided the bodily injury is covered by this Employers Liability Insurance.

The damages we will pay, where recovery is permitted by law, include damages:

1. For which you are liable to a third party by reason of a claim or suit against you by that third party to recover the damages claimed against

such third party as a result of injury to your employee;

2. For care and loss of services; and
3. For consequential bodily injury to a spouse, child, parent, brother or sister of the injured employee; provided that these damages are the direct consequence of bodily injury that arises out of and in the course of the injured employee's employment by you; and
4. Because of bodily injury to your employee that arises out of and in the course of employment, claimed against you in a capacity other than as employer.

C. **Exclusions**

This insurance does not cover:

1. Liability assumed under a contract. This exclusion does not apply to a warranty that your work will be done in a workmanlike manner;
2. Punitive or exemplary damages because of bodily injury to an employee employed in violation of law;
3. Bodily injury to an employee while employed in violation of law with your actual knowledge or the actual knowledge of any of your executive officers;
4. Any obligation imposed by a workers compensation, occupational disease, unemployment compensation, or disability benefits law, or any similar law;
5. Bodily injury intentionally caused or aggravated by you;
6. Bodily injury occurring outside the United States of America, its territories or possessions, and Canada. This exclusion does not apply to bodily injury to a citizen or resident of the United States of America or Canada who is temporarily outside these countries;
7. Damages arising out of coercion, criticism, demotion, evaluation, reassignment, discipline, defamation, harassment, humiliation, discrimination against or termination of any employee, or any personnel practices, policies, acts or omissions;
8. Bodily injury to any person in work subject to the Longshore and Harbor Workers' Compensation Act (33 U.S.C. Sections 901 et seq.), the Nonappropriated Fund Instrumentalities Act (5 U.S.C. Sections 8171 et seq.), the Outer Continental Shelf Lands Act (43 U.S.C. Sections 1331 et seq.), the Defense Base Act (42 U.S.C. Sections 1651–1654), the Federal Mine Safety and Health Act (30 U.S.C. Sections 801 et seq. and 901–944), any other federal workers or workmen's compensation law or other federal occupational disease law, or any amendments to these laws;
9. Bodily injury to any person in work subject to the Federal Employers' Liability Act (45 U.S.C. Sections 51 et seq.), any other federal laws obligating an employer to pay damages to an employee due to bodily injury arising out of or in the course of employment, or any amendments to those laws;
10. Bodily injury to a master or member of the crew of any vessel, and does not cover punitive damages related to your duty or obligation to provide transportation, wages, maintenance, and cure under any applicable maritime law;
11. Fines or penalties imposed for violation of federal or state law; and
12. Damages payable under the Migrant and Seasonal Agricultural Worker Protection Act (29 U.S.C. Sections 1801 et seq.) and under any other federal law awarding damages for violation of those laws or regulations issued thereunder, and any amendments to those laws.

D. **We Will Defend**

We have the right and duty to defend, at our expense, any claim, proceeding or suit against you for damages payable by this insurance. We have the right to investigate and settle these claims, proceedings and suits.

We have no duty to defend a claim, proceeding or suit that is not covered by this insurance. We have no duty to defend or continue defending after we have paid our applicable limit of liability under this insurance.

E. **We Will Also Pay**

We will also pay these costs, in addition to other amounts payable under this insurance, as part of any claim, proceeding, or suit we defend:

1. Reasonable expenses incurred at our request, but not loss of earnings;
2. Premiums for bonds to release attachments and for appeal bonds in bond amounts up to the limit of our liability under this insurance;
3. Litigation costs taxed against you;
4. Interest on a judgment as required by law until we offer the amount due under this insurance; and
5. Expenses we incur.

F. **Other Insurance**

We will not pay more than our share of damages and costs covered by this insurance and other insurance or self-insurance. Subject to any limits of liability that apply, all shares will be equal until the loss is paid. If any insurance or self-insurance is exhausted, the shares of all remaining insurance and self-insurance will be equal until the loss is paid.

G. **Limits of Liability**

Our liability to pay for damages is limited. Our limits of liability are shown in Item 3.B. of the Information Page. They apply as explained below.

1. Bodily Injury by Accident. The limit shown for "bodily injury by accident—each accident" is the most we will pay for all damages covered by this insurance because of bodily injury to one or more employees in any one accident.

   A disease is not bodily injury by accident unless it results directly from bodily injury by accident.

2. Bodily Injury by Disease. The limit shown for "bodily injury by disease—policy limit" is the most we will pay for all damages covered by this insurance and arising out of bodily injury by disease, regardless of the number of employees who sustain bodily injury by disease. The limit shown for "bodily injury by disease—each employee" is the most we will pay for all damages because of bodily injury by disease to any one employee.

   Bodily injury by disease does not include disease that results directly from a bodily injury by accident.

3. We will not pay any claims for damages after we have paid the applicable limit of our liability under this insurance.

H. **Recovery From Others**

We have your rights to recover our payment from anyone liable for an injury covered by this insurance. You will do everything necessary to protect those rights for us and to help us enforce them.

I. **Actions Against Us**

There will be no right of action against us under this insurance unless:

1. You have complied with all the terms of this policy; and
2. The amount you owe has been determined with our consent or by actual trial and final judgment.

This insurance does not give anyone the right to add us as a defendant in an action against you to determine your liability. The bankruptcy or insolvency of you or your estate will not relieve us of our obligations under this Part.

PART THREE
OTHER STATES INSURANCE

A. **How This Insurance Applies**

1. This other states insurance applies only if one or more states are shown in Item 3.C. of the Information Page.
2. If you begin work in any one of those states after the effective date of this policy and are not insured or are not self-insured for such work, all provisions of the policy will apply as though that state were listed in Item 3.A. of the Information Page.
3. We will reimburse you for the benefits required by the workers compensation law of that state if we are not permitted to pay the benefits directly to persons entitled to them.
4. If you have work on the effective date of this policy in any state not listed in Item 3.A. of the Information Page, coverage will not be afforded for that state unless we are notified within thirty days.

B. **Notice**

Tell us at once if you begin work in any state listed in Item 3.C. of the Information Page.

PART FOUR
YOUR DUTIES IF INJURY OCCURS

Tell us at once if injury occurs that may be covered by this policy. Your other duties are listed here.

1. Provide for immediate medical and other services required by the workers compensation law.
2. Give us or our agent the names and addresses of the injured persons and of witnesses, and other information we may need.
3. Promptly give us all notices, demands and legal

papers related to the injury, claim, proceeding or suit.

4. Cooperate with us and assist us, as we may request, in the investigation, settlement or defense of any claim, proceeding or suit.
5. Do nothing after an injury occurs that would interfere with our right to recover from others.
6. Do not voluntarily make payments, assume obligations or incur expenses, except at your own cost.

PART FIVE
PREMIUM

A. **Our Manuals**

All premium for this policy will be determined by our manuals of rules, rates, rating plans and classifications. We may change our manuals and apply the changes to this policy if authorized by law or a governmental agency regulating this insurance.

B. **Classifications**

Item 4 of the Information Page shows the rate and premium basis for certain business or work classifications. These classifications were assigned based on an estimate of the exposures you would have during the policy period. If your actual exposures are not properly described by those classifications, we will assign proper classifications, rates and premium basis by endorsement to this policy.

C. **Remuneration**

Premium for each work classification is determined by multiplying a rate times a premium basis. Remuneration is the most common premium basis. This premium basis includes payroll and all other remuneration paid or payable during the policy period for the services of:

1. all your officers and employees engaged in work covered by this policy; and
2. all other persons engaged in work that could make us liable under Part One (Workers Compensation Insurance) of this policy. If you do not have payroll records for these persons, the contract price for their services and materials may be used as the premium basis. This paragraph 2 will not apply if you give us proof that the employers of these persons lawfully secured their workers compensation obligations.

D. **Premium Payments**

You will pay all premium when due. You will pay the premium even if part or all of a workers compensation law is not valid.

E. **Final Premium**

The premium shown on the Information Page, schedules, and endorsements is an estimate. The final premium will be determined after this policy ends by using the actual, not the estimated, premium basis and the proper classifications and rates that lawfully apply to the business and work covered by this policy. If the final premium is more than the premium you paid to us, you must pay us the balance. If it is less, we will refund the balance to you. The final premium will not be less than the highest minimum premium for the classifications covered by this policy.

If this policy is canceled, final premium will be determined in the following way unless our manuals provide otherwise:

1. If we cancel, final premium will be calculated pro rata based on the time this policy was in force. Final premium will not be less than the pro rata share of the minimum premium.
2. If you cancel, final premium will be more than pro rata; it will be based on the time this policy was in force, and increased by our short-rate cancelation table and procedure. Final premium will not be less than the minimum premium.

F. **Records**

You will keep records of information needed to compute premium. You will provide us with copies of those records when we ask for them.

G. **Audit**

You will let us examine and audit all your records that relate to this policy. These records include ledgers, journals, registers, vouchers, contracts, tax reports, payroll and disbursement records, and programs for storing and retrieving data. We may conduct the audits during regular business hours during the policy period and within three years after the policy period ends. Information developed by audit will be used to determine final premium. Insurance rate service organizations have the same rights we have under this provision.

PART SIX
CONDITIONS

A. **Inspection**

We have the right, but are not obliged to inspect your workplaces at any time. Our inspections are not safety inspections. They relate only to the insurability of the workplaces and the premiums to be charged. We may give you reports on the conditions we find. We may also recommend changes. While they may help reduce losses, we do not undertake to perform the duty of any person to provide for the health or safety of your employees or the public. We do not warrant that your workplaces are safe or healthful or that they comply with laws, regulations, codes or standards. Insurance rate service organizations have the same rights we have under this provision.

B. **Long Term Policy**

If the policy period is longer than one year and sixteen days, all provisions of this policy will apply as though a new policy were issued on each annual anniversary that this policy is in force.

C. **Transfer of Your Rights and Duties**

Your rights or duties under this policy may not be transferred without our written consent.

If you die and we receive notice within thirty days after your death, we will cover your legal representative as insured.

D. **Cancelation**

1. You may cancel this policy. You must mail or deliver advance written notice to us stating when the cancelation is to take effect.
2. We may cancel this policy. We must mail or deliver to you not less than ten days advance written notice stating when the cancelation is to take effect. Mailing that notice to you at your mailing address shown in Item 1 of the Information Page will be sufficient to prove notice.
3. The policy period will end on the day and hour stated in the cancelation notice.
4. Any of these provisions that conflict with a law that controls the cancelation of the insurance in this policy is changed by this statement to comply with the law.

E. **Sole Representative**

The insured first named in Item 1 of the Information Page will act on behalf of all insureds to change this policy, receive return premium, and give or receive notice of cancelation.

Chesapeake Employers Insurance
Your workers' compensation specialist

WORKERS COMPENSATION AND EMPLOYERS' LIABILITY INSURANCE POLICY – INFORMATION PAGE

INSURER:
Chesapeake Employers' Insurance Company

8722 Loch Raven Boulevard
Towson, Maryland 21286-2235

POLICY NO: 8005255
- DM85
New Business
NCCI Company No: 61023
Account No:

ITEM 1. NAMED INSURED AND MAILING ADDRESS:
Arlington Crematory, Inc.
2313 51ST PL
HYATTSVILLE MD 20781-1302

PRODUCER NAME AND ADDRESS:
AVERY W HALL INSURANCE AGENCY INC
PO BOX 2317
SALISBURY MD 21802-2317

PRODUCER NO.: 30128

LEGAL ENTITY: CORPORATION
OTHER WORKPLACES NOT SHOWN ABOVE: (See Workers Compensation Classification Schedule)

ITEM 2. POLICY PERIOD: From: 01-01-2021 To: 01-01-2022
Effective 12:01 A.M. Standard Time at the Insured's mailing address.

ITEM 3. COVERAGE:

A. Workers Compensation Insurance: Part One of the policy applies to the Workers Compensation Law of the states listed here:
MD

B. Employers' Liability Insurance: Part Two of the policy applies to work in each state listed in Item 3.A. The limits of liability under Part Two are:

Bodily Injury by Accident:	$	500,000	each accident
Bodily Injury by Disease:	$	500,000	policy limit
Bodily Injury by Disease:	$	500,000	each employee

C. Other States Insurance: Part Three of the policy applies to the states, if any, listed here:
NONE

D. This Policy includes these Endorsements and Schedules:
See Schedule of Forms and Endorsements.

ITEM 4. PREMIUM: The premium for this Policy will be determined by our Manuals of Rules, Classifications, Rates and Rating Plans. All information required on the Workers Compensation Classification Schedule is subject to verification and change by audit.

Minimum Premium: $ 240
Audit Period: Annual

Total Estimated Annual Premium: $ 883

Issued At:
Date: 12-08-20

Countersigned by _____

Chesapeake Employers' Insurance Company

Policy Number
8005255

EXTENSION OF INFORMATION PAGE
WORKERS COMPENSATION CLASSIFICATION SCHEDULE

State of: **MARYLAND**

Named Insured **Arlington Crematory, Inc.**

Effective Date: **01-01-2021**
12:01 A.M., Standard Time

Agent Name **AVERY W HALL INSURANCE AGENCY INC**

Agent No. **30128**

Classification of Operation		Code No.	Premium Basis Total Estimated Annual Remuneration	Rate Per $100 of Remuneration	Estimated Annual Premium
0001-01Arlington Crematory, Inc. FEIN/TAX ID # 47-3163676 SIC CODE 2869 NAICS CODE 325199 2313 51ST PL HYATTSVILLE MD 20781-1302					
Crematory Operation & Drivers		9620	$ 75,000	.82	$ 615.00
Total Class Premium					$ 615.00
Increase Limits	1.008	9807			$ 5.00
Empl Minimum Difference		9848			$ 70.00
Total Subject Premium					$ 690.00
Total Modified Premium					$ 690.00
Standard Total					$ 690.00
Premium Discount	1.00	0064			$ 0.00
Expense Constant		0900			$ 155.00
Terrorism	.04	9740			$ 30.00
Catastrophe (Other Than Certified Acts of Terrorism)	.01	9741			$ 8.00
Total Estimated Premium					$ 883.00
Furlough Payroll	.00	0012			$ 0.00
Final Total					$ 883.00
Policy Total Estimated Cost					$ 883.00

Policy Number 8005255

Chesapeake Employers' Insurance Company

NCCI Carrier Code 61023

NAME AND LOCATION SCHEDULE

Named Insured Arlington Crematory, Inc.

Effective Date: 01-01-2021
12:01 A.M., Standard Time

Agent Name AVERY W HALL INSURANCE AGENCY INC

Agent No. 30128

State: MARYLAND

Arlington Crematory, Inc.
2313 51ST PL
HYATTSVILLE MD 20781-1302
Legal Entity: Corporation
FEIN/TAX ID # 47-3163676
SIC Code: 2869
NAICS Code: 325199
EMP : 2

Policy Number
8005255

SCHEDULE OF FORMS AND ENDORSEMENTS

Chesapeake Employers' Insurance Company

Named Insured Arlington Crematory, Inc. Effective Date: 01-01-2021
12:01 A.M., Standard Time

Agent Name AVERY W HALL INSURANCE AGENCY INC Agent No. 30128

WORKERS COMPENSATION FORMS AND ENDORSEMENTS

WC 19 06 01 G	10-17	MARYLAND CANCELLATION AND NONRENEWAL END
WC 99 00 00 A	03-17	TABLE OF CONTENTS
WC 99 03 26 B	08-17	LIMITED OTHER STATES INSURANCE ENDORSMNT
WC 00 00 00 C	01-15	INSURANCE POLICY
WC 00 00 01 A	05-88	WC INFORMATION PAGE
WC 89 04 15	07-97	WC CLASSIFICATION SCHEDULE
WC 00 00 01 A	05-88	SCHEDULE OF NAMES & LOCATIONS
WC 00 03 08	04-84	PARTNERS, OFFICERS, AND OTHERS EXCL ENDT
WC 00 04 14 A	01-19	90DAY REPORT-NOTIF CHANGE IN OWNERSHIP
WC 00 04 19	01-01	PREMIUM DUE DATE ENDORSEMENT
WC 00 04 21 D	01-15	CATASTROPHE (OTHER THAN CERT ACTS) ENDT
WC 00 04 22 B	01-15	TERRORISM RISK PGM REAUTH ACT DISCL ENDT
WC 19 06 02	01-14	MD NOTIF 45-DAY UNDERWRITING PERIOD ENDT
TRIA2015A	07-15	TERRORISM NOTICE - ISSUANCE
WC 99 50 05	01-16	NOTICE OF PRIVACY PRACTICES

PARTNERS, OFFICERS AND OTHERS EXCLUSION ENDORSEMENT

The policy does not cover bodily injury to any person described in the Schedule.

The premium basis for the policy does not include the remuneration of such persons.

You will reimburse us for any payment we must make because of bodily injury to such persons.

Schedule

Partners	Officers	Others
Geary Powell		
Phillip Powell		

This endorsement changes the policy to which it is attached and is effective on the date issued unless otherwise stated.

(The information below is required only when this endorsement is issued subsequent to preparation of the policy.)

Endorsement Effective 01/01/2021 Policy No. 8005255 Endorsement No.

Insured ARLINGTON CREMATORY, INC. Premium: Incl.

Insurance Company CHESAPEAKE EMPLOYERS' INSURANCE COMPANY Countersigned By

90-DAY REPORTING REQUIREMENT—NOTIFICATION OF CHANGE IN OWNERSHIP ENDORSEMENT

You must report any change in ownership to us in writing within 90 days of the date of the change. Change in ownership includes sales, purchases, other transfers, mergers, consolidations, dissolutions, formations of a new entity, and other changes provided for in the applicable experience rating plan. Experience rating is mandatory for all eligible insureds. The experience rating modification factor, if any, applicable to this policy, may change if there is a change in your ownership or in that of one or more of the entities eligible to be combined with you for experience rating purposes.

Failure to report any change in ownership, regardless of whether the change is reported within 90 days of such change, may result in revision of the experience rating modification factor used to determine your premium.

This reporting requirement applies regardless of whether an experience rating modification is currently applicable to this policy.

This endorsement changes the policy to which it is attached and is effective on the date issued unless otherwise stated.

(The information below is required only when this endorsement is issued subsequent to preparation of the policy.)

Endorsement Effective 01/01/2021 Policy No. 8005255 Endorsement No.

Insured ARLINGTON CREMATORY, INC. Premium: Incl.

Insurance Company CHESAPEAKE EMPLOYERS' INSURANCE COMPANY Countersigned By

PREMIUM DUE DATE ENDORSEMENT

This endorsement is used to amend:

Section D. of Part Five of the policy is replaced by this provision.

PART FIVE
PREMIUM

D. **Premium** is amended to read:

You will pay all premium when due. You will pay the premium even if part or all of a workers compensation law is not valid. **The due date for audit and retrospective premiums is the date of the billing.**

This endorsement changes the policy to which it is attached and is effective on the date issued unless otherwise stated.
(The information below is required only when this endorsement is issued subsequent to preparation of the policy.)

Endorsement Effective 01-01-21 Policy No. 8005255 Endorsement No.

Insured Arlington Crematory, Inc. Premium $ Incl.

Insurance Company Chesapeake Employers' Insurance Company

Countersigned By _____

CATASTROPHE (OTHER THAN CERTIFIED ACTS OF TERRORISM) PREMIUM ENDORSEMENT

This endorsement is notification that your insurance carrier is charging premium to cover the losses that may occur in the event of a Catastrophe (other than Certified Acts of Terrorism) as that term is defined below. Your policy provides coverage for workers compensation losses caused by a Catastrophe (other than Certified Acts of Terrorism). This premium charge does not provide funding for Certified Acts of Terrorism contemplated under the Terrorism Risk Insurance Program Reauthorization Act Disclosure Endorsement (WC 00 04 22 B), attached to this policy.

For purposes of this endorsement, the following definitions apply:

- Catastrophe (other than Certified Acts of Terrorism): Any single event, resulting from an Earthquake, Noncertified Act of Terrorism, or Catastrophic Industrial Accident, which results in aggregate workers compensation losses in excess of $50 million.
- Earthquake: The shaking and vibration at the surface of the earth resulting from underground movement along a fault plane or from volcanic activity.
- Noncertified Act of Terrorism: An event that is not certified as an Act of Terrorism by the Secretary of Treasury pursuant to the Terrorism Risk Insurance Act of 2002 (as amended) but that meets all of the following criteria:
  a. It is an act that is violent or dangerous to human life, property, or infrastructure;
  b. The act results in damage within the United States, or outside of the United States in the case of the premises of United States missions or air carriers or vessels as those terms are defined in the Terrorism Risk Insurance Act of 2002 (as amended); and
  c. It is an act that has been committed by an individual or individuals as part of an effort to coerce the civilian population of the United States or to influence the policy or affect the conduct of the United States Government by coercion.
- Catastrophic Industrial Accident: A chemical release, large explosion, or small blast that is localized in nature and affects workers in a small perimeter the size of a building.

The premium charge for the coverage your policy provides for workers compensation losses caused by a Catastrophe (other than Certified Acts of Terrorism) is shown in Item 4 of the Information Page or in the Schedule below.

Schedule

State	Rate	Premium
MD	.01	$ 8

This endorsement changes the policy to which it is attached and is effective on the date issued unless otherwise stated.
(The information below is required only when this endorsement is issued subsequent to preparation of the policy.)

Endorsement Effective 01-01-21 Policy No. 8005255 Endorsement No.

Insured Arlington Crematory, Inc. Premium $ Incl.

Insurance Company Chesapeake Employers' Insurance Company

Countersigned By _____

TERRORISM RISK INSURANCE PROGRAM REAUTHORIZATION ACT DISCLOSURE ENDORSEMENT

This endorsement addresses the requirements of the Terrorism Risk Insurance Act of 2002 as amended and extended by the Terrorism Risk Insurance Program Reauthorization Act of 2015. It serves to notify you of certain limitations under the Act, and that your insurance carrier is charging premium for losses that may occur in the event of an Act of Terrorism.

Your policy provides coverage for workers compensation losses caused by Acts of Terrorism, including workers compensation benefit obligations dictated by state law. Coverage for such losses is still subject to all terms, definitions, exclusions, and conditions in your policy, and any applicable federal and/or state laws, rules, or regulations.

Definitions

The definitions provided in this endorsement are based on and have the same meaning as the definitions in the Act .If words or phrases not defined in this endorsement are defined in the Act, the definitions in the Act will apply.

"Act" means the Terrorism Risk Insurance Act of 2002, which took effect on November 26, 2002, and any amendments thereto, including any amendments resulting from the Terrorism Risk Insurance Program Reauthorization Act of 2015.

"Act of Terrorism" means any act that is certified by the Secretary of the Treasury, in consultation with the Secretary of Homeland Security, and the Attorney General of the United States as meeting all of the following requirements:

a. The act is an act of terrorism.

b. The act is violent or dangerous to human life, property or infrastructure.

c. The act resulted in damage within the United States, or outside of the United States in the case of the premises of United States missions or certain air carriers or vessels.

d. The act has been committed by an individual or individuals as part of an effort to coerce the civilian population of the United States or to influence the policy or affect the conduct of the United States Government by coercion.

"Insured Loss" means any loss resulting from an act of terrorism (and, except for Pennsylvania, including an act of war, in the case of workers compensation) that is covered by primary or excess property and casualty insurance issued by an insurer if the loss occurs in the United States or at the premises of United States missions or to certain air carriers or vessels.

"Insurer Deductible" means, for the period beginning on January 1, 2015, and ending on December 31, 2020, an amount equal to 20% of our direct earned premiums, during the immediately preceding calendar year.

Limitation of Liability

The Act limits our liability to you under this policy. If aggregate Insured Losses exceed $100,000,000,000 in a calendar year and if we have met our Insurer Deductible, we are not liable for the payment of any portion of the amount of Insured Losses that exceeds $100,000,000,000; and for aggregate Insured Losses up to $100,000,000,000, we will pay only a pro rata share of such Insured Losses as determined by the Secretary of the Treasury.

Policyholder Disclosure Notice

1. Insured Losses would be partially reimbursed by the United States Government. If the aggregate industry Insured Losses exceed:
   a. $100,000,000, with respect to such Insured Losses occurring in calendar year 2015, the United States Government would pay 85% of our Insured Losses that exceed our Insurer Deductible.
   b. $120,000,000, with respect to such Insured Losses occurring in calendar year 2016, the United States Government would pay 84% of our Insured Losses that exceed our Insurer Deductible.
   c. $140,000,000, with respect to such Insured Losses occurring in calendar year 2017, the United States Government would pay 83% of our Insured Losses that exceed our Insurer Deductible.
   d. $160,000,000, with respect to such Insured Losses occurring in calendar year 2018, the United States Government would pay 82% of our Insured Losses that exceed our Insurer Deductible.

e. $180,000,000, with respect to such Insured Losses occurring in calendar year 2019, the United States Government would pay 81% of our Insured Losses that exceed our Insurer Deductible.

f. $200,000,000, with respect to such Insured Losses occurring in calendar year 2020, the United States Government would pay 80% of our Insured Losses that exceed our Insurer Deductible.

2. Notwithstanding item 1 above, the United States Government will not make any payment under the Act for any portion of Insured Losses that exceed $100,000,000,000.

3. The premium charge for the coverage your policy provides for Insured Losses is included in the amount shown in Item 4 of the Information Page or in the Schedule below.

Schedule

State	Rate	Premium
MD	.04	$ 30

This endorsement changes the policy to which it is attached and is effective on the date issued unless otherwise stated.
(The information below is required only when this endorsement is issued subsequent to preparation of the policy.)

Endorsement Effective 01-01-21 Policy No. 8005255 Endorsement No.

Insured Arlington Crematory, Inc. Premium $ Incl.

Insurance Company Chesapeake Employers' Insurance Company

Countersigned By _____

MARYLAND NOTIFICATION OF 45-DAY UNDERWRITING PERIOD ENDORSEMENT

This endorsement applies only to the insurance provided by the policy because Maryland is shown in Item 3.A. of the Information Page.

1. Your policy is subject to a 45-day underwriting period beginning on the effective date of coverage. In accordance with Md. Code Ann. Ins. §12-106, if we discover a material risk factor during the underwriting period, we may:
   a. Cancel this policy during the underwriting period if you do not meet our underwriting standards; or
   b. Recalculate your premium from the effective date of the policy if you meet our underwriting standards.

   A material risk factor means a risk factor that:
   - Was incorrectly recorded or not disclosed by the insured in an application for insurance;
   - Was in existence on the date of the application; and
   - Modifies estimated annual premium charged on the policy in accordance with the rates and supplementary rating information filed by the carrier

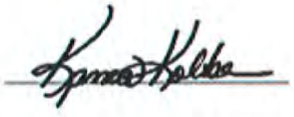
   A material risk factor does not include:
   - Information that constitutes a material misrepresentation; or
   - A change initiated by an insured, including any request by the insured that results in a change in coverage, change in deductible, or other change to a policy.
2. If we recalculate your premium because we discovered a material risk factor during the underwriting period, we will provide to you, by certificate of mailing or by delivery of electronic means in accordance with Md. Code Ann. Ins. § 27-601.2, written notice of the following information by no later than the end of the underwriting period:
   a. The amount of the recalculated premium;
   b. The reason for the increase or reduction in the premium; and
   c. Your right to cancel this policy and receive a pro rata refund of any premium paid by notifying us of the cancellation.
3. If you cancel this policy following receipt of a notice of recalculated premium, you will receive a pro rata refund of any premium paid, regardless of whether your policy is a retrospectively rated policy.
4. Nothing in this endorsement prohibits us from conducting an audit in accordance with the provisions of your policy or charging and collecting the final premium based on the results of the audit.
5. This endorsement does not apply if your policy is a renewal policy.

This endorsement changes the policy to which it is attached and is effective on the date issued unless otherwise stated.

(The information below is required only when this endorsement is issued subsequent to preparation of the policy.)

Endorsement Effective 01/01/2021 Policy No. 8005255 Endorsement No.

Insured ARLINGTON CREMATORY, INC. Premium: Incl.

Insurance Company CHESAPEAKE EMPLOYERS' INSURANCE COMPANY Countersigned By 

POLICYHOLDER DISCLOSURE
NOTICE OF TERRORISM
INSURANCE COVERAGE

Coverage for acts of terrorism is included in your policy.

You are hereby notified that under the Terrorism Risk Insurance Act, as amended in 2015, the definition of act of terrorism has changed. As defined in Section 102(1) of the Act: The term "act of terrorism" means any act or acts that are certified by the Secretary of the Treasury – in consultation with the Secretary of Homeland Security, and the Attorney General of the United States – to be an act of terrorism; to be a violent act or an act that is dangerous to human life, property, or infrastructure; to have resulted in damage within the United States, or outside the United States in the case of certain air carriers or vessels or the premises of a United States mission; and to have been committed by an individual or individuals as part of an effort to coerce the civilian population of the United States or to influence the policy or affect the conduct of the United States Government by coercion. Under your coverage, any losses resulting from certified acts of terrorism may be partially reimbursed by the United States Government under a formula established by the Terrorism Risk Insurance Act, as amended. However, your policy may contain other exclusions which might affect your coverage, such as an exclusion for nuclear events. Under the formula, the United States Government generally reimburses 85% through 2015; 84% beginning on January 1, 2016; 83% beginning on January 1, 2017; 82% beginning on January 1, 2018; 81% beginning on January 1, 2019 and 80% beginning on January 1, 2020, of covered terrorism losses exceeding the statutorily established deductible paid by the insurance company providing the coverage. The Terrorism Risk Insurance Act, as amended, contains a $100 billion cap that limits U.S. Government reimbursement as well as insurers' liability for losses resulting from certified acts of terrorism when the amount of such losses exceeds $100 billion in any one calendar year. If the aggregate insured losses for all insurers exceed $100 billion, your coverage may be reduced.

The portion of your annual premium that is attributable to coverage for acts of terrorism is .04 per $100 of total remuneration, and does not include any charges for the portion of losses covered by the United States government under the Act.

Name of Insurer:	Chesapeake Employers' Insurance Company
Application/Policy Number:	8005255
Named Insured:	ARLINGTON CREMATORY, INC.

TRIA2015A

NOTICE OF PRIVACY PRACTICES

Chesapeake Employers' Insurance Company (Chesapeake Employers) collects, shares, and maintains information that is necessary to provide the workers' compensation insurance coverage and services that you have requested. The information may include personal data about you that is not available to the general public. This information is called "nonpublic personal information."

This **NOTICE OF PRIVACY PRACTICES** explains the type of nonpublic personal information that we collect, how we collect it, when and with whom we may share it, and how we protect it. This notice is sent to current policyholders at least once per year at the address listed in Item 1 of the policy Information Page.

If we make material changes to our privacy practices, we will notify you as required by law.

PLEASE READ THIS NOTICE CAREFULLY TO UNDERSTAND WHAT WE DO

INFORMATION WE COLLECT

We collect and maintain nonpublic personal information about you in order to process and service your workers' compensation insurance coverage.

Information Collected	How We Collect It
Name(s), email and physical address(es), social security number(s), federal employer identification number, phone number(s), claims history and payroll information	From you when you apply for insurance, renew your policy or comply with a premium audit
Premium and claims history you may have had with other insurance carriers	From your independent insurance agent, if applicable
Credit history and other information about your credit worthiness	From financial reporting services
Information about your business and operations	From nonaffiliated service providers

INFORMATION WE DISCLOSE

We disclose nonpublic personal information about you as necessary in the ordinary course of administering your workers' compensation insurance coverage. ***Chesapeake Employers will not disclose nonpublic personal information except as permitted by law.***

Reasons We Share Your Information	With Whom We May Share It
In response to legal processes or as required by law	Workers' Compensation Commissions, law enforcement, government authorities, and other third parties
To resolve consumer disputes or inquiries	Insurance regulators
To provide information to insurance rate advisory organizations	National Commission on Compensation Insurance (NCCI)
To process online credit card and ACH payments	Third party payment processing centers
To investigate accidents and/or prevent potential fraud To collect premium audit information	Nonaffiliated service providers

HOW WE PROTECT YOUR INFORMATION

Protecting your nonpublic personal information is important to us. We restrict access to your information only to those persons who need it in order to administer or service your workers' compensation insurance coverage. These persons are required to take reasonable precautions to safeguard your information against unauthorized access, use and unlawful disclosure. In addition, we maintain physical, electronic, and procedural safeguards to protect your information.

If you have a concern about privacy or security at Chesapeake Employers, please contact our Compliance Department at the address or phone number listed below.

Chesapeake Employers' Insurance Company
8722 Loch Raven Boulevard • Towson, Maryland, 21286-2235 • 410-494-2000 • 1-800-264-4943 • www.ceiwc.com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