

# INTERNAL PERMITTING DOCUMENT TRACKING MANIFEST

Company Name Poling - St. Clair Funeral Home, Inc. - Beckhauw on Facility  
 Permitting Action Number B13-3796 Total Days 35 DAQ Days 0  
097-00070

**Permitting Action:**

- |   |   |                                      |
|---|---|--------------------------------------|
| <input type="radio"/> Permit Determination  | <input type="radio"/> Temporary               | <input type="radio"/> Modification   |
| <input type="radio"/> General Permit        | <input type="radio"/> Relocation              | <input type="radio"/> PSD (Rule 14)  |
| <input type="radio"/> Administrative Update | <input checked="" type="radio"/> Construction | <input type="radio"/> NNSR (Rule 19) |

**Documents Attached:**

- |   |  |
|---|--|
| <input checked="" type="checkbox"/> Engineering Evaluation/Memo   | <input checked="" type="checkbox"/> Completed Database Sheet |
| <input checked="" type="checkbox"/> Draft Permit                  | <input type="checkbox"/> Withdrawal                          |
| <input checked="" type="checkbox"/> Notice                        | <input type="checkbox"/> Letter                              |
| <input type="checkbox"/> Denial                                   | <input checked="" type="checkbox"/> Other (specify) _____    |
| <input type="checkbox"/> Final Permit/General Permit Registration | _____  |

Date	From	To	Action Requested
3/8	Caraline	Bev	Approval to go to notice
3/9	Bev	Caraline	See Comments - Address - Return
3/9	Caraline	Bev	Comments addressed approval to go to notice
3/10	Bev	Caraline	Go to Notice

NOTE: Retain a copy of this manifest for your records when transmitting your document(s).



**Permit / Application Information Sheet**  
**Division of Environmental Protection**  
**West Virginia Office of Air Quality**

<b>Company:</b>	POLING-ST. CLAIR FUNERAL HOME, INC.		<b>Facility:</b>	Buckhannon	
<b>Region:</b>	8	<b>Plant ID:</b>	097-00070	<b>Application #:</b>	13-3296
<b>Engineer:</b>	Griffith, Caraline		<b>Category:</b>		
<b>Physical Address:</b>	95 S. Kanawha Street Buckhannon WV 26201		<b>SIC:</b> [6531] REAL ESTATE - REAL ESTATE AGENTS AND MANAGER		
<b>County:</b>	Upshur		<b>NAICS:</b> [812220] Cemeteries and Crematories		
<b>Other Parties:</b>	PRES - St. Clair, Jeffrey 304-472-1000				

Information Needed for Database and AIRS
1. Need valid physical West Virginia address with zip
2. Air Program
3. Inspection result
4. Pollutant and class

Regulated Pollutants		
CO	Carbon Monoxide	0.060 TPY
PM10	Particulate Matter < 10 um	0.740 TPY
SO2	Sulfur Dioxide	0.350 TPY
VOC	Volatile Organic Compounds (Reactive organic gases)	0.420 TPY
NOX	Nitrogen Oxides (including NO, NO2, NO3, N2O3, N2O4, and N2O5)	0.420 TPY

Summary from this Permit 13-3296		
<b>Air Programs</b>		<b>Applicable Regulations</b>
SIP		04 06 13 22
<b>Fee Program</b>	<b>Fee</b>	<b>Application Type</b>
9B	\$1,000.00	CONSTRUCTION

**Notes from Database**

Activity Dates	
APPLICATION RECEIVED	02/02/2016
APPLICATION FEE PAID	02/04/2016
ASSIGNED DATE	02/04/2016
APPLICANT PUBLISHED LEGAL AD	02/15/2016
ADDITIONAL INFO REQUESTED	02/24/2016
ADDITIONAL INFO RECEIVED	03/08/2016
APPLICATION DEEMED COMPLETE	03/08/2016

**NON-CONFIDENTIAL**

Please note, this information sheet is not a substitute for file research and is limited to data entered into the AIRTRAX database.

Company ID: 097-00070  
 Company: POLING-ST. CLAIR FUNERAL HOME,  
 Printed: 03/08/2016  
 Engineer: Griffith, Caraline

# AIR QUALITY PERMIT NOTICE

## Notice of Intent to Approve

On February 2, 2016, Poling-St. Clair Funeral Home, Inc. applied to the WV Department of Environmental Protection, Division of Air Quality (DAQ) for a permit to Construct a human crematory located at 95 South Kanawha Street, Buckhannon, Upshur County, WV at latitude 39.98702 and longitude -80.2275. A preliminary evaluation has determined that all State and Federal air quality requirements will be met by the proposed facility. The DAQ is providing notice to the public of its preliminary determination to issue the permit as R13-3296.

The following potential emissions will be authorized by this permit action: Particulate Matter less than 10 microns, 0.74 tons per year (TPY); Particulate Matter, 0.74 TPY; Sulfur Dioxide, 0.35 TPY; Oxides of Nitrogen, 0.42 TPY; Carbon Monoxide, 0.06 TPY; Volatile Organic Compounds, 0.42 TPY.

Written comments or requests for a public meeting must be received by the DAQ before 5:00 p.m. on **KEYBOARD**(Day of Week, Month, Day, Year). A public meeting may be held if the Director of the DAQ determines that significant public interest has been expressed, in writing, or when the Director deems it appropriate.

The purpose of the DAQ's permitting process is to make a preliminary determination if the proposed Construction will meet all State and Federal air quality requirements. The purpose of the public review process is to accept public comments on air quality issues relevant to this determination. Only written comments received at the address noted below within the specified time frame, or comments presented orally at a scheduled public meeting, will be considered prior to final action on the permit. All such comments will become part of the public record.

Caraline Griffith  
WV Department of Environmental Protection  
Division of Air Quality  
601 57th Street, SE  
Charleston, WV 25304  
Telephone: 304/926-0499, ext. 1258  
FAX: 304/926-0478

Additional information, including copies of the draft permit, application and all other supporting materials relevant to the permit decision may be obtained by contacting the engineer listed above. The draft permit and engineering evaluation can be downloaded at:

[www.dep.wv.gov/daq/Pages/NSRPermitsforReview.aspx](http://www.dep.wv.gov/daq/Pages/NSRPermitsforReview.aspx)



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west virginia department of environmental protection

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Division of Air Quality  
601 57<sup>th</sup> Street SE  
Charleston, WV 25304  
Phone 304/926-0475 • FAX: 304/926-0479

Earl Ray Tomblin, Governor  
Randy C. Huffman, Cabinet Secretary  
www.wvdep.org

## ENGINEERING EVALUATION / FACT SHEET

### BACKGROUND INFORMATION

Application No.: R13-3296  
Plant ID No.: 097-00070  
Applicant: Poling-St. Clair Funeral Home, Inc.  
Facility Name: Buckhannon  
Location: Buckhannon, Upshur County, WV  
NAICS Code: 812220  
Application Type: Construction  
Received Date: February 2, 2016  
Engineer Assigned: Caraline Griffith  
Fee Amount: \$1000.00  
Date Received: February 4, 2016  
Completeness Date: March 8, 2016  
Due Date: June 6, 2016  
Newspaper: *The Record Delta*  
Applicant Ad Date: February 15, 2016  
UTMs: Easting: 566.904 km Northing: 4,315.619 km Zone: 17N  
Description: This construction permit application is for the installation and operation of a human crematorium at the Buckhannon facility.

### DESCRIPTION OF PROCESS

Poling-St. Clair Funeral Home, Inc. proposes to install a new natural gas fired Matthews International, Matthews Cremation Division, Model Power-Pak I human crematory for use at their facility. The Power-Pak I, is a multi-chamber unit having an average 150 lbs/hr or 750 lbs/maximum load (approx. 1,000 BTU/lb). The primary chamber burner is rated at 500,000 BTU/hr/burner and the secondary chamber burner is rated at 900,000 BTU/hr, for a total of 1,400,000 BTU/hr.

Control of air pollution is achieved through the design of the Power-Pak I cremation unit, including its ability to operate the secondary chamber between 1400-1800 degrees Fahrenheit at a retention time in excess of 1.0 second. The emissions controls features are a Secondary Chamber Afterburner and a Microprocessor Temperature Control System and UV flame detectors on burners.

Promoting a healthy environment.

Non-confidential

## SITE INSPECTION

On February 25, 2016, Mike Kolb, an inspector with the Enforcement and Compliance Section of the DAQ, conducted a site inspection of Poling - St. Clair Funeral home in Buckhannon WV. The Funeral Home is located at 95 S. Kanawha Street. Upon arriving he met with Mr. Jeffrey St. Clair and Mr. Codi Cabrera. They looked at google earth imagery and determined that the Funeral Home, Mr. Cabrera's house, and a few other structures occupy about half of the block. To the east south east is a school approximately 550 feet away, almost due south and 100 to 120 feet higher are some houses and a large water tank. The rest of the area around the Funeral home is a makeup of residential and fraternities along with a variety of different businesses (food, convenience, insurance offices and some churches). Mr. St. Clair stated that they had a town meeting ( also televised ) about the crematorium going in. He stated that a few concerns were brought up but have been addressed and that three newspaper ads were ran.

The crematorium will be constructed in an existing garage located behind the funeral home and that a new garage will be constructed to the north east of the funeral home.

### Directions to Facility:

From I-79, take Exit 99 to Buckhannon. Merge onto US 119 N/US-33 E and go for approx. 11.2 miles. Take the exit toward County Rd 12/Main Street and turn right onto Old Weston Rd. Go for 0.4 miles and continue onto W. Main Street. Turn right onto S. Locus Road, and then continue onto S. Kanawha Street. The destination is on your right.

## ESTIMATE OF EMISSIONS BY REVIEWING ENGINEER

With the submitted application, Poling-St. Clair Funeral Home, Inc. included a compliance test report of a Matthews International MCD IE43-PPI Human Cremator located in Apopka, Florida. The pollutants measured during the stack tests for the human cremator were filterable particulate matter, SO<sub>2</sub>, NO<sub>x</sub>, VOC, and CO. This demonstration was conducted using U.S. EPA Methods, 1-4, 3A, 5, 7E, 9, 10 and 202. On June 30, 2015, three test runs were done to calculate emissions. Average measured particulate matter rate between the three runs was 0.17 pounds per hour at 15% O<sub>2</sub>.

The only emission source will be the human crematory.

Pollutant	Emission Limitations lb/hr	Emission Limitations TPY
Particulate Matter (PM)	0.17	0.74
Nitrogen Oxides (NO <sub>x</sub> )	0.23	0.42
Carbon Monoxide (CO)	0.01	0.06
Sulfur Dioxide (SO <sub>2</sub> )	0.19	0.35
Volatile Organic Compounds (VOC)	0.23	0.42

#### REGULATORY APPLICABILITY

The following state regulations apply.

#### **45CSR4 – To Prevent and Control the Discharge of Air Pollutants Into the Open Air Which Causes or Contributes to an Objectionable Odor or Odors**

The purpose of this rule is to prevent and control any discharge that may cause or contribute to objectionable odors. The Poling-St. Clair Funeral Home, Inc. Buckhannon Facility should not emit any objectionable odors.

#### **45CSR6 - To Prevent and Control Air Pollution From Combustion of Refuse**

The purpose of this rule is to prevent and control air pollution from combustion of refuse. The permittee has proposed to install and operate one human crematory. This rule defines incineration as the destruction of combustible refuse by burning in a furnace designed for that purpose. The proposed cremators are designed to destroy human and animal remains and associated containers through incineration. Thus, it meets this definition.

Per section 4.1, these crematories must meet the particulate matter limit by weight. The human crematory will have an allowable particulate matter emission rate of 0.407 pounds per hour (based on maximum design-incineration rate of 150 lb/hr). This allowable rate is higher than the estimated hourly potential of 0.17 lb/hr. Thus, the unit should meet this PM standard.

The crematory is subject to the 20% opacity (visible emission) limitation in section 4.3 of this rule. The opacity and the allowable limits should be met since the crematory is equipped with a secondary chamber with an afterburner, which is designed to reduce the particulate matter

and other pollutants entrained in the exhaust stream into products of complete combustion. It is estimated that at any given time during the incineration process the minimum retention time will be 2.0 seconds. The rule of thumb for nearly complete combustion is 1.0-second retention time in the secondary chamber. Thus, this particular crematory should meet the applicable limitations of this rule.

#### **45CSR13 - Permits for Modification, Modification, Relocation and Operation of Stationary sources of Air Pollutants, Notification Requirements, Administrative Updates, Temporary Permits, General Permits, and Procedures for Evaluation**

The potential-to-emit from the proposed crematory is below 6 pounds per hour and 10 tons per year for each of the criteria pollutants, which is less than the permit trigger level as defined in 45CSR§13-2.24.b. However, Rule 6 requires all incinerators to obtain a construction or modification permit regardless of size. Poling-St. Clair Funeral Home, Inc. has proposed to install one cremator, which is subject to Rule 6. Therefore, the facility is required to obtain a permit as required in 45CSR§6-6.1. and 45CSR§13-2.24.a. The facility has met the applicable requirements of this rule by publishing a Class I Legal Advertisement in *The Record Delta* on February 15, 2016, paid the \$1,000.00 application fee, and submitted a complete permit application.

As a result of this Construction, the Buckhannon facility will not be classified as a major source of hazardous air pollutants or major source under Title V. In addition, the emission unit is not subject to a New Source Performance Standard. Thus, the facility is not subject to Title V and will not be required to obtain an operating permit under 45CSR30. Therefore, the Buckhannon facility will remain classified as a "9B - Crematory Incinerator" source as defined in 45CSR22.

#### **45CSR22 Air Quality Management Fee Program**

This facility is a minor source and not subject to 45CSR30. Poling-St. Clair Funeral Home, Inc. is required to keep their Certificate to Operate current. They paid the \$1000 fee associated with a Rule 13 permit application.

#### **TOXICITY OF NON-CRITERIA REGULATED POLLUTANTS**

All HAPs have other non-carcinogenic chronic and acute effects. These adverse health effects may be associated with a wide range of ambient concentrations and exposure times and are influenced by source-specific characteristics such as emission rates and local meteorological conditions. Health impacts are also dependent on multiple factors that affect variability in humans such as genetics, age, health status (e.g., the presence of pre-existing disease) and lifestyle. As stated previously, *there are no federal or state ambient air quality standards for these specific chemicals*. The file contains summaries of the IRIS database information on hydrogen chloride and mercury. For a complete discussion of the known health effects, refer to the IRIS database located at [www.epa.gov/iris](http://www.epa.gov/iris).

## AIR QUALITY IMPACTS ANALYSIS

The writer deemed that an air dispersion modeling study or analysis was not necessary, because the proposed Modification does not meet the definition of a major source as defined in 45CSR14.

## MONITORING OF OPERATIONS

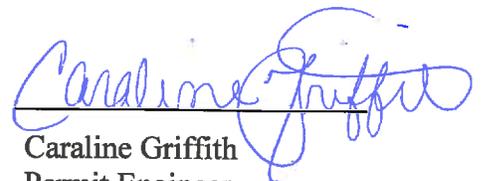
Poling-St. Clair Funeral Home, Inc. must monitor both the primary and secondary chamber temperatures. The temperature of the secondary chamber must be recorded. Other monitoring that is needed for this type of unit is the weight of each cremation.

Monitoring the secondary chamber temperature is an indicator that the temperature in the secondary chamber is sufficient to ensure complete combustion of the products of incomplete combustion such as particulate matter, carbon monoxide, and volatile organic compounds. The secondary chamber must be operated at a minimum temperature of 1,400<sup>0</sup>F, but no more than 1,800<sup>0</sup>F, which is suggested by the manufacturer.

To ensure compliance with the visible emission standard of Rule 6, the writer proposes requiring visible emission checks to be conducted once every quarter.

## RECOMMENDATION TO DIRECTOR

The information provided in the permit application and the conditions set forth in the permit indicates the Matthews Cremation Division IE43-PPI (Power Pak I) human cremator should meet all applicable state rules and federal regulations when operated. Therefore, the writer recommends that a Rule 13 Construction Permit should be granted to Poling-St. Clair Funeral Home, Inc. for their proposed human crematory at the Buckhannon facility.

  
Caraline Griffith  
Permit Engineer

3/9/16  
Date

Engineering Evaluation of R13-3296  
Poling-St. Clair Funeral Home, Inc.  
Buckhannon Facility  
Non-confidential

*West Virginia Department of Environmental Protection*  
Earl Ray Tomblin  
Governor

*Division of Air Quality*

Randy C. Huffman  
Cabinet Secretary

# Permit to Construct



**R13-3296**

*This permit is issued in accordance with the West Virginia Air Pollution Control Act (West Virginia Code §§22-5-1 et seq.) and 45 C.S.R. 13 – Permits for Construction, Modification, Relocation and Operation of Stationary Sources of Air Pollutants, Notification Requirements, Temporary Permits, General Permits and Procedures for Evaluation. The permittee identified at the above-referenced facility is authorized to construct the stationary sources of air pollutants identified herein in accordance with all terms and conditions of this permit.*

*Issued to:*

**Poling-St. Clair Funeral Home, Inc.  
Buckhannon  
097-00070**

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*William F. Durham  
Director*

*Issued: DRAFT*

Facility Location: 95 South Kanawha Street  
Buckhannon, Upshur County, West Virginia  
Mailing Address: 95 South Kanawha Street  
Buckhannon, WV 26201  
Facility Description: Human Crematorium  
NAICS Codes: 812220  
UTM Coordinates: 566.904 km Easting • 4,315.62 km Northing • Zone 17N  
Permit Type: Construction  
Description of Change: This permit is for the construction of a human crematory.

*Any person whose interest may be affected, including, but not necessarily limited to, the applicant and any person who participated in the public comment process, by a permit issued, modified or denied by the Secretary may appeal such action of the Secretary to the Air Quality Board pursuant to article one [ §§22B-1-1 et seq. ], Chapter 22B of the Code of West Virginia. West Virginia Code §§22-5-14.*

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*The source is not subject to 45CSR30.*

**Table of Contents**

**1.0. Emission Units.....4**

**2.0. General Conditions.....5**

    2.1. Definitions .....5

    2.2. Acronyms .....5

    2.3. Authority .....6

    2.4. Term and Renewal.....6

    2.5. Duty to Comply .....6

    2.6. Duty to Provide Information.....6

    2.7. Duty to Supplement and Correct Information .....7

    2.8. Administrative Update.....7

    2.9. Permit Modification.....7

    2.10. Major Permit Modification .....7

    2.11. Inspection and Entry .....7

    2.12. Emergency .....7

    2.13. Need to Halt or Reduce Activity Not a Defense.....8

    2.14. Suspension of Activities .....8

    2.15. Property Rights .....8

    2.16. Severability.....9

    2.17. Transferability .....9

    2.18. Notification Requirements.....9

    2.19. Credible Evidence .....9

**3.0. Facility-Wide Requirements .....10**

    3.1. Limitations and Standards .....10

    3.2. Monitoring Requirements.....10

    3.3. Testing Requirements .....10

    3.4. Recordkeeping Requirements .....11

    3.5. Reporting Requirements .....12

**4.0. Source-Specific Requirements .....14**

    4.1. Limitations and Standards .....14

    4.2. Monitoring Requirements .....15

    4.3. Testing Requirements .....15

    4.4. Recordkeeping Requirements.....15

    4.5. Reporting Requirements .....16

**APPENDIX A.....17**

**APPENDIX B.....18**

**APPENDIX C - MONTHLY/QUARTERLY OPACITY REPORT.....19**

**CERTIFICATION OF DATA ACCURACY.....20**

**1.0. Emission Units**

<b>Emission Unit ID</b>	<b>Emission Point ID</b>	<b>Emission Unit Description</b>	<b>Year Installed</b>	<b>Design Capacity</b>	<b>Control Device</b>
S1	E1	Matthews Cremation Division IE43-PPI (Power Pak I) Human Cremator	2016	150 lbs/hr	Secondary Chamber w/1.2 mmBTU/hr Burner

## 2.0. General Conditions

### 2.1. Definitions

- 2.1.1. All references to the “West Virginia Air Pollution Control Act” or the “Air Pollution Control Act” mean those provisions contained in W.Va. Code §§ 22-5-1 to 22-5-18.
- 2.1.2. The “Clean Air Act” means those provisions contained in 42 U.S.C. §§ 7401 to 7671q, and regulations promulgated thereunder.
- 2.1.3. “Secretary” means the Secretary of the Department of Environmental Protection or such other person to whom the Secretary has delegated authority or duties pursuant to W.Va. Code §§ 22-1-6 or 22-1-8 (45CSR§30-2.12.). The Director of the Division of Air Quality is the Secretary’s designated representative for the purposes of this permit.

### 2.2. Acronyms

<b>CAAA</b>	Clean Air Act Amendments	<b>NO<sub>x</sub></b>	Nitrogen Oxides
<b>CBI</b>	Confidential Business Information	<b>NSPS</b>	New Source Performance Standards
<b>CEM</b>	Continuous Emission Monitor	<b>PM</b>	Particulate Matter
<b>CES</b>	Certified Emission Statement	<b>PM<sub>2.5</sub></b>	Particulate Matter less than 2.5 μm in diameter
<b>C.F.R. or CFR</b>	Code of Federal Regulations	<b>PM<sub>10</sub></b>	Particulate Matter less than 10μm in diameter
<b>CO</b>	Carbon Monoxide	<b>Ppb</b>	Pounds per Batch
<b>C.S.R. or CSR</b>	Codes of State Rules	<b>Pph</b>	Pounds per Hour
<b>DAQ</b>	Division of Air Quality	<b>Ppm</b>	Parts per Million
<b>DEP</b>	Department of Environmental Protection	<b>Ppmv or ppmv</b>	Parts per Million by Volume
<b>dscm</b>	Dry Standard Cubic Meter	<b>PSD</b>	Prevention of Significant Deterioration
<b>FOIA</b>	Freedom of Information Act	<b>Psi</b>	Pounds per Square Inch
<b>HAP</b>	Hazardous Air Pollutant	<b>SIC</b>	Standard Industrial Classification
<b>HON</b>	Hazardous Organic NESHAP	<b>SIP</b>	State Implementation Plan
<b>HP</b>	Horsepower	<b>SO<sub>2</sub></b>	Sulfur Dioxide
<b>lbs/hr</b>	Pounds per Hour	<b>TAP</b>	Toxic Air Pollutant
<b>LDAR</b>	Leak Detection and Repair	<b>TPY</b>	Tons per Year
<b>M</b>	Thousand	<b>TRS</b>	Total Reduced Sulfur
<b>MACT</b>	Maximum Achievable Control Technology	<b>TSP</b>	Total Suspended Particulate
<b>MDHI</b>	Maximum Design Heat Input	<b>USEPA</b>	United States Environmental Protection Agency
<b>MM</b>	Million	<b>UTM</b>	Universal Transverse Mercator
<b>MMBtu/hr or mmbtu/hr</b>	Million British Thermal Units per Hour	<b>VEE</b>	Visual Emissions Evaluation
<b>MMCF/hr or mmcf/hr</b>	Million Cubic Feet per Hour	<b>VOC</b>	Volatile Organic Compounds
<b>NA</b>	Not Applicable	<b>VOL</b>	Volatile Organic Liquids
<b>NAAQS</b>	National Ambient Air Quality Standards		
<b>NESHAPS</b>	National Emissions Standards for Hazardous Air Pollutants		

### **2.3. Authority**

This permit is issued in accordance with West Virginia Air Pollution Control Act W.Va. Code §§ 22-5-1. et seq. and the following Legislative Rules promulgated thereunder:

- 2.3.1. 45CSR13 – *Permits for Construction, Modification, Relocation and Operation of Stationary Sources of Air Pollutants, Notification Requirements, Temporary Permits, General Permits and Procedures for Evaluation;*

### **2.4. Term and Renewal**

- 2.4.1. This Permit shall remain valid, continuous and in effect unless it is revised, suspended, revoked or otherwise changed under an applicable provision of 45CSR13 or any other applicable legislative rule;

### **2.5. Duty to Comply**

- 2.5.1. The permitted facility shall be constructed and operated in accordance with the plans and specifications filed in Permit Application R13-3296 and any modifications, administrative updates, or amendments thereto. The Secretary may suspend or revoke a permit if the plans and specifications upon which the approval was based are not adhered to;  
**[45CSR§§13-5.11 and 10.3.]**
- 2.5.2. The permittee must comply with all conditions of this permit. Any permit noncompliance constitutes a violation of the West Virginia Code and the Clean Air Act and is grounds for enforcement action by the Secretary or USEPA;
- 2.5.3. Violations of any of the conditions contained in this permit, or incorporated herein by reference, may subject the permittee to civil and/or criminal penalties for each violation and further action or remedies as provided by West Virginia Code 22-5-6 and 22-5-7;
- 2.5.4. Approval of this permit does not relieve the permittee herein of the responsibility to apply for and obtain all other permits, licenses, and/or approvals from other agencies; i.e., local, state, and federal, which may have jurisdiction over the construction and/or operation of the source(s) and/or facility herein permitted.

### **2.6. Duty to Provide Information**

The permittee shall furnish to the Secretary within a reasonable time any information the Secretary may request in writing to determine whether cause exists for administratively updating, modifying, revoking, or terminating the permit or to determine compliance with the permit. Upon request, the permittee shall also furnish to the Secretary copies of records to be kept by the permittee. For information claimed to be confidential, the permittee shall furnish such records to the Secretary along with a claim of confidentiality in accordance with 45CSR31. If confidential information is to be sent to USEPA, the permittee shall directly provide such information to USEPA along with a claim of confidentiality in accordance with 40 C.F.R. Part 2.

## **2.7. Duty to Supplement and Correct Information**

Upon becoming aware of a failure to submit any relevant facts or a submittal of incorrect information in any permit application, the permittee shall promptly submit to the Secretary such supplemental facts or corrected information.

## **2.8. Administrative Update**

The permittee may request an administrative update to this permit as defined in and according to the procedures specified in 45CSR13.  
[45CSR§13-4.]

## **2.9. Permit Modification**

The permittee may request a minor modification to this permit as defined in and according to the procedures specified in 45CSR13.  
[45CSR§13-5.4.]

## **2.10 Major Permit Modification**

The permittee may request a major modification as defined in and according to the procedures specified in 45CSR14 or 45CSR19, as appropriate.  
[45CSR§13-5.1]

## **2.11. Inspection and Entry**

The permittee shall allow any authorized representative of the Secretary, upon the presentation of credentials and other documents as may be required by law, to perform the following:

- a. At all reasonable times (including all times in which the facility is in operation) enter upon the permittee's premises where a source is located or emissions related activity is conducted, or where records must be kept under the conditions of this permit;
- b. Have access to and copy, at reasonable times, any records that must be kept under the conditions of this permit;
- c. Inspect at reasonable times (including all times in which the facility is in operation) any facilities, equipment (including monitoring and air pollution control equipment), practices, or operations regulated or required under the permit;
- d. Sample or monitor at reasonable times substances or parameters to determine compliance with the permit or applicable requirements or ascertain the amounts and types of air pollutants discharged.

## **2.12. Emergency**

- 2.12.1. An "emergency" means any situation arising from sudden and reasonable unforeseeable events beyond the control of the source, including acts of God, which situation requires immediate corrective action to restore normal operation, and that causes the source to exceed a technology-based emission limitation under the permit, due to unavoidable increases in emissions attributable

to the emergency. An emergency shall not include noncompliance to the extent caused by improperly designed equipment, lack of preventative maintenance, careless or improper operation, or operator error.

- 2.12.2. Effect of any emergency. An emergency constitutes an affirmative defense to an action brought for noncompliance with such technology-based emission limitations if the conditions of Section 2.12.3 are met.
- 2.12.3. The affirmative defense of emergency shall be demonstrated through properly signed, contemporaneous operating logs, or other relevant evidence that:
- a. An emergency occurred and that the permittee can identify the cause(s) of the emergency;
  - b. The permitted facility was at the time being properly operated;
  - c. During the period of the emergency the permittee took all reasonable steps to minimize levels of emissions that exceeded the emission standards, or other requirements in the permit; and
  - d. The permittee submitted notice of the emergency to the Secretary within one (1) working day of the time when emission limitations were exceeded due to the emergency and made a request for variance, and as applicable rules provide. This notice must contain a detailed description of the emergency, any steps taken to mitigate emissions, and corrective actions taken.
- 2.12.4. In any enforcement proceeding, the permittee seeking to establish the occurrence of an emergency has the burden of proof.
- 2.12.5 The provisions of this section are in addition to any emergency or upset provision contained in any applicable requirement.

### **2.13. Need to Halt or Reduce Activity Not a Defense**

It shall not be a defense for a permittee in an enforcement action that it should have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this permit. However, nothing in this paragraph shall be construed as precluding consideration of a need to halt or reduce activity as a mitigating factor in determining penalties for noncompliance if the health, safety, or environmental impacts of halting or reducing operations would be more serious than the impacts of continued operations.

### **2.14. Suspension of Activities**

In the event the permittee should deem it necessary to suspend, for a period in excess of sixty (60) consecutive calendar days, the operations authorized by this permit, the permittee shall notify the Secretary, in writing, within two (2) calendar weeks of the passing of the sixtieth (60) day of the suspension period.

### **2.15. Property Rights**

This permit does not convey any property rights of any sort or any exclusive privilege.

**2.16. Severability**

The provisions of this permit are severable and should any provision(s) be declared by a court of competent jurisdiction to be invalid or unenforceable, all other provisions shall remain in full force and effect.

**2.17. Transferability**

This permit is transferable in accordance with the requirements outlined in Section 10.1 of 45CSR13. [45CSR§13-10.1.]

**2.18. Notification Requirements**

The permittee shall notify the Secretary, in writing, no later than thirty (30) calendar days after the actual startup of the operations authorized under this permit.

**2.19. Credible Evidence**

Nothing in this permit shall alter or affect the ability of any person to establish compliance with, or a violation of, any applicable requirement through the use of credible evidence to the extent authorized by law. Nothing in this permit shall be construed to waive any defense otherwise available to the permittee including, but not limited to, any challenge to the credible evidence rule in the context of any future proceeding.

### 3.0. Facility-Wide Requirements

#### 3.1. Limitations and Standards

- 3.1.1. **Open burning.** The open burning of refuse by any person, firm, corporation, association or public agency is prohibited except as noted in 45CSR§6-3.1.  
[45CSR§6-3.1.]
- 3.1.2. **Open burning exemptions.** The exemptions listed in 45CSR§6-3.1 are subject to the following stipulation: Upon notification by the Secretary, no person shall cause, suffer, allow or permit any form of open burning during existing or predicted periods of atmospheric stagnation. Notification shall be made by such means as the Secretary may deem necessary and feasible.  
[45CSR§6-3.2.]
- 3.1.3. **Asbestos.** The permittee is responsible for thoroughly inspecting the facility, or part of the facility, prior to commencement of demolition or renovation for the presence of asbestos and complying with 40 C.F.R. § 61.145, 40 C.F.R. § 61.148, and 40 C.F.R. § 61.150. The permittee, owner, or operator must notify the Secretary at least ten (10) working days prior to the commencement of any asbestos removal on the forms prescribed by the Secretary if the permittee is subject to the notification requirements of 40 C.F.R. § 61.145(b)(3)(i). The USEPA, the Division of Waste Management, and the Bureau for Public Health - Environmental Health require a copy of this notice to be sent to them.  
[40CFR§61.145(b) and 45CSR§34]
- 3.1.4. **Odor.** No person shall cause, suffer, allow or permit the discharge of air pollutants which cause or contribute to an objectionable odor at any location occupied by the public.  
[45CSR§4-3.1] *[State Enforceable Only]*
- 3.1.5. **Permanent shutdown.** A source which has not operated at least 500 hours in one 12-month period within the previous five (5) year time period may be considered permanently shutdown, unless such source can provide to the Secretary, with reasonable specificity, information to the contrary. All permits may be modified or revoked and/or reapplication or application for new permits may be required for any source determined to be permanently shutdown.  
[45CSR§13-10.5.]
- 3.1.6. **Standby plan for reducing emissions.** When requested by the Secretary, the permittee shall prepare standby plans for reducing the emissions of air pollutants in accordance with the objectives set forth in Tables I, II, and III of 45CSR11.  
[45CSR§11-5.2.]

#### 3.2. Monitoring Requirements

*[Reserved]*

#### 3.3. Testing Requirements

- 3.3.1. **Stack testing.** As per provisions set forth in this permit or as otherwise required by the Secretary, in accordance with the West Virginia Code, underlying regulations, permits and orders, the permittee shall conduct test(s) to determine compliance with the emission limitations set forth in this permit and/or established or set forth in underlying documents. The Secretary, or his duly

authorized representative, may at his option witness or conduct such test(s). Should the Secretary exercise his option to conduct such test(s), the operator shall provide all necessary sampling connections and sampling ports to be located in such manner as the Secretary may require, power for test equipment and the required safety equipment, such as scaffolding, railings and ladders, to comply with generally accepted good safety practices. Such tests shall be conducted in accordance with the methods and procedures set forth in this permit or as otherwise approved or specified by the Secretary in accordance with the following:

- a. The Secretary may on a source-specific basis approve or specify additional testing or alternative testing to the test methods specified in the permit for demonstrating compliance with 40 C.F.R. Parts 60, 61, and 63 in accordance with the Secretary's delegated authority and any established equivalency determination methods which are applicable. If a testing method is specified or approved which effectively replaces a test method specified in the permit, the permit may be revised in accordance with 45CSR§13-4. or 45CSR§13-5.4 as applicable.
- b. The Secretary may on a source-specific basis approve or specify additional testing or alternative testing to the test methods specified in the permit for demonstrating compliance with applicable requirements which do not involve federal delegation. In specifying or approving such alternative testing to the test methods, the Secretary, to the extent possible, shall utilize the same equivalency criteria as would be used in approving such changes under Section 3.3.1.a. of this permit. If a testing method is specified or approved which effectively replaces a test method specified in the permit, the permit may be revised in accordance with 45CSR§13-4. or 45CSR§13-5.4 as applicable.
- c. All periodic tests to determine mass emission limits from or air pollutant concentrations in discharge stacks and such other tests as specified in this permit shall be conducted in accordance with an approved test protocol. Unless previously approved, such protocols shall be submitted to the Secretary in writing at least thirty (30) days prior to any testing and shall contain the information set forth by the Secretary. In addition, the permittee shall notify the Secretary at least fifteen (15) days prior to any testing so the Secretary may have the opportunity to observe such tests. This notification shall include the actual date and time during which the test will be conducted and, if appropriate, verification that the tests will fully conform to a referenced protocol previously approved by the Secretary.
- d. The permittee shall submit a report of the results of the stack test within sixty (60) days of completion of the test. The test report shall provide the information necessary to document the objectives of the test and to determine whether proper procedures were used to accomplish these objectives. The report shall include the following: the certification described in paragraph 3.5.1.; a statement of compliance status, also signed by a responsible official; and, a summary of conditions which form the basis for the compliance status evaluation. The summary of conditions shall include the following:
  1. The permit or rule evaluated, with the citation number and language;
  2. The result of the test for each permit or rule condition; and,
  3. A statement of compliance or noncompliance with each permit or rule condition.

[WV Code § 22-5-4(a)(14-15) and 45CSR13]

### **3.4. Recordkeeping Requirements**

- 3.4.1. **Retention of records.** The permittee shall maintain records of all information (including monitoring data, support information, reports, and notifications) required by this permit recorded

in a form suitable and readily available for expeditious inspection and review. Support information includes all calibration and maintenance records and all original strip-chart recordings for continuous monitoring instrumentation. The files shall be maintained for at least five (5) years following the date of each occurrence, measurement, maintenance, corrective action, report, or record. At a minimum, the most recent two (2) years of data shall be maintained on site. The remaining three (3) years of data may be maintained off site, but must remain accessible within a reasonable time. Where appropriate, the permittee may maintain records electronically (on a computer, on computer floppy disks, CDs, DVDs, or magnetic tape disks), on microfilm, or on microfiche.

- 3.4.2. **Odors.** For the purposes of 45CSR4, the permittee shall maintain a record of all odor complaints received, any investigation performed in response to such a complaint, and any responsive action(s) taken.

**[45CSR§4. State Enforceable Only.]**

### 3.5. Reporting Requirements

- 3.5.1. **Responsible official.** Any application form, report, or compliance certification required by this permit to be submitted to the DAQ and/or USEPA shall contain a certification by the responsible official that states that, based on information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate, and complete.

- 3.5.2. **Confidential information.** A permittee may request confidential treatment for the submission of reporting required by this permit pursuant to the limitations and procedures of W.Va. Code § 22-5-10 and 45CSR31.

- 3.5.3. **Correspondence.** All notices, requests, demands, submissions and other communications required or permitted to be made to the Secretary of DEP and/or USEPA shall be made in writing and shall be deemed to have been duly given when delivered by hand, or mailed first class with postage prepaid to the address(es) set forth below or to such other person or address as the Secretary of the Department of Environmental Protection may designate:

**If to the DAQ:**

Director  
WVDEP  
Division of Air Quality  
601 57<sup>th</sup> Street  
Charleston, WV 25304-2345

**If to the US EPA:**

Associate Director  
Office of Air Enforcement and Compliance  
Assistance  
(3AP20)  
U.S. Environmental Protection Agency  
Region III  
1650 Arch Street  
Philadelphia, PA 19103-2029

#### 3.5.4. Operating Fee

- 3.5.4.1. In accordance with 45CSR22 – Air Quality Management Fee Program, the permittee shall not operate nor cause to operate the permitted facility or other associated facilities on the same or contiguous sites comprising the plant without first obtaining and having in current effect a Certificate to Operate (CTO). Such Certificate to Operate (CTO) shall be renewed annually, shall be maintained on the premises for which the certificate has been issued, and shall be made immediately available for inspection by the Secretary or his/her duly authorized representative.

#### 4.0. Source-Specific Requirements

##### 4.1. Limitations and Standards

4.1.1. The Matthews Cremation Division IE43-PPI Human Cremator shall be operated in accordance with the following operational and emission limitations:

- a. The cremator (equipment ID. S1) shall be operated in such a manner that the emissions discharging from emission point 1E do not exceed the following limits for the respective pollutants.

Table #4.1.1.a. Emission Limits	
Pollutant	Hourly Emission Rate (lb/hr)
PM <sub>2.5</sub>	0.17
PM	0.17
NO <sub>x</sub>	0.23
CO	0.01

- b. The crematory shall be operated in accordance with the manufacturer's recommendations. The permittee shall not operate the cremator with an incineration rate of greater than 150 pounds per hour.
- c. The maximum charge rate of human remains and containers into the incinerator, 1S, shall not exceed 1,800 lbs in any twelve (12) hour period.
- d. The secondary combustion chamber of the cremator shall be maintained at a minimum temperature of 1400°F during the incineration cycle.
- e. The cremator shall incorporate instrumentation to provide a continuous readout indicating the secondary combustion chamber's gas temperature.
- f. This crematory shall only cremate human remains and the associated containers in which the remains are placed. Such containers shall only be made of wood or cardboard.
- g. The permittee shall use only supplement fuel for the operation of the cremator shall be natural gas.
- h. Visible particulate matter from emission point 1E shall not be greater than or equal to 20% opacity except for visible particulate matter emission less than 40% for a period or periods aggregating no more than 8 minutes per start-up.

[45CSR§§6-4.3 & 4.4]

4.1.2. **Operation and Maintenance of Air Pollution Control Equipment.** The permittee shall, to the extent practicable, install, maintain, and operate all pollution control equipment listed in Section 1.0 and associated monitoring equipment in a manner consistent with safety and good air pollution control practices for minimizing emissions, or comply with any more stringent limits set forth in this permit or as set forth by any State rule, Federal regulation, or alternative control plan approved by the Secretary.

[45CSR§13-5.11.]

## 4.2. Monitoring Requirements

- 4.2.1. For the purposes of demonstrating compliance with requirements of condition 4.1.1 of this permit, the permittee shall monitor the weight of the remains plus container, the date, and start/end times of each cremation. Records of such monitoring shall be maintained in accordance with 3.4.1 of this permit.

For S1 human cremator, temperature measurements shall be taken and recorded at a minimum of once every 15 minutes and calculate hourly average for the purpose of demonstrating compliance with the temperature requirement in Condition 4.1.1.b.

- 4.2.2. For the purpose of determining compliance with the opacity limits of condition 4.1.1.e, the permittee shall conduct visible emission checks and/or opacity monitoring and recordkeeping for all emission sources subject to an opacity limit.

The visible emission check shall determine the presence or absence of visible emissions. At a minimum, the observer must be trained and knowledgeable regarding the effects of background contrast, ambient lighting, observer position relative to lighting, wind, and the presence of uncombined water (condensing water vapor) on the visibility of emissions. This training may be obtained from written materials found in the References 1 and 2 from 40 CFR Part 60, Appendix A, Method 22 or from the lecture portion of the 40 CFR Part 60, Appendix A, Method 9 certification course.

Visible emission checks shall be conducted at least once per every three months (quarterly). These checks shall be performed at each source (stack, transfer point, fugitive emission source, etc.) for a sufficient time interval, but no less than one (1) minute, to determine if any visible emissions are present. Visible emission checks shall be performed during periods of normal facility operation and appropriate weather conditions.

## 4.3. Testing Requirements

*[Reserved]*

## 4.4. Recordkeeping Requirements

- 4.4.1. **Record of Monitoring.** The permittee shall keep records of monitoring information that include the following:
- a. The date, place as defined in this permit, and time of sampling or measurements;
  - b. The date(s) analyses were performed;
  - c. The company or entity that performed the analyses;
  - d. The analytical techniques or methods used;
  - e. The results of the analyses; and
  - f. The operating conditions existing at the time of sampling or measurement.
- 4.4.2. **Record of Maintenance of Air Pollution Control Equipment.** For all pollution control equipment listed in Section 1.0, the permittee shall maintain accurate records of all required pollution control equipment inspection and/or preventative maintenance procedures.

4.4.3. **Record of Malfunctions of Air Pollution Control Equipment.** For all air pollution control equipment listed in Section 1.0, the permittee shall maintain records of the occurrence and duration of any malfunction or operational shutdown of the air pollution control equipment during which excess emissions occur. For each such case, the following information shall be recorded:

- a. The equipment involved.
- b. Steps taken to minimize emissions during the event.
- c. The duration of the event.
- d. The estimated increase in emissions during the event.

For each such case associated with an equipment malfunction, the additional information shall also be recorded:

- e. The cause of the malfunction.
  - f. Steps taken to correct the malfunction.
  - g. Any changes or modifications to equipment or procedures that would help prevent future recurrences of the malfunction.
- 4.4.4. The permittee shall maintain records of the recorded data from the temperature measuring device and recording systems (chart recorder for 1S) in accordance with Condition 3.4.1. of this permit.
- 4.4.5. To determine compliance with Condition 4.1.1. of this permit, the permittee shall maintain a record of the daily amount (pounds) of human remains and containers loaded into the incinerator, and record this data on Appendix A of the permit.
- 4.4.6. To determine compliance with Condition 4.1.1. of this permit, the permittee shall maintain a record of the hours of operation of each incinerator, and record this data on Appendix B of the permit. Said records shall be maintained in accordance with Condition 3.4.1.
- 4.4.7. The permittee shall maintain records of all monitoring data required by Condition 4.2.2. documenting the date and time of each visible emission check, the emission point or equipment/source identification number, the name or means of identification of the observer, the results of the check(s), whether the visible emissions are normal for the process, and, if applicable, all corrective measures taken or planned. The permittee shall also record the general weather conditions (i.e. sunny, approximately 80 degrees Fahrenheit, 6 – 10 mph NE wind) during the visual emission check(s). A example form is supplied as Appendix C of this permit. Should a visible emission observation be required to be performed per the requirements specified in Method 9, the data records of each observation shall be maintained per the requirements of Method 9. For an emission unit out of service during the normal monthly evaluation, the record of observation may note “out of service” (O/S) or equivalent.

#### 4.5. Reporting Requirements

- 4.5.1. Any exceedances of the allowable visible emission requirement set forth in 4.2.2. for any emission source discovered during observations using 40 CFR Part 60, Appendix A, Method 9 must be reported in writing to the Director of the Division of Air Quality as soon as practicable, but within ten (10) calendar days, of the occurrence and shall include, at a minimum, the following information: The results of the visible determination of opacity of emissions, the cause or suspected cause of the exceedances, and any corrective measures taken or planned.

**APPENDIX B**

**HOURS OF OPERATION**

Month \_\_\_\_\_ Year \_\_\_\_\_

<b>Day</b>	<b>Hours Operated</b>	<b>Day</b>	<b>Hours Operated</b>
	<b>Human Remains (1S)</b>		<b>Human Remains (1S)</b>
<b>1</b>		<b>17</b>	
<b>2</b>		<b>18</b>	
<b>3</b>		<b>19</b>	
<b>4</b>		<b>20</b>	
<b>5</b>		<b>21</b>	
<b>6</b>		<b>22</b>	
<b>7</b>		<b>23</b>	
<b>8</b>		<b>24</b>	
<b>9</b>		<b>25</b>	
<b>10</b>		<b>26</b>	
<b>11</b>		<b>27</b>	
<b>12</b>		<b>28</b>	
<b>13</b>		<b>29</b>	
<b>14</b>		<b>30</b>	
<b>15</b>		<b>31</b>	
<b>16</b>			



### CERTIFICATION OF DATA ACCURACY

I, the undersigned, hereby certify that, based on information and belief formed after reasonable inquiry, all information contained in the attached \_\_\_\_\_, representing the period beginning \_\_\_\_\_ and ending \_\_\_\_\_, and any supporting documents appended hereto, is true, accurate, and complete.

Signature<sup>1</sup>

(please use blue ink)

\_\_\_\_\_ Responsible Official or Authorized Representative

\_\_\_\_\_ Date

Name & Title

(please print or type)

\_\_\_\_\_ Name

\_\_\_\_\_ Title

Telephone No. \_\_\_\_\_

Fax No. \_\_\_\_\_

<sup>1</sup> This form shall be signed by a "Responsible Official." "Responsible Official" means one of the following:

- a. For a corporation: The president, secretary, treasurer, or vice-president of the corporation in charge of a principal business function, or any other person who performs similar policy or decision-making functions for the corporation, or a duly authorized representative of such person if the representative is responsible for the overall operation of one or more manufacturing, production, or operating facilities applying for or subject to a permit and either:
  - (i) the facilities employ more than 250 persons or have a gross annual sales or expenditures exceeding \$25 million (in second quarter 1980 dollars), or
  - (ii) the delegation of authority to such representative is approved in advance by the Director;
- b. For a partnership or sole proprietorship: a general partner or the proprietor, respectively;
- c. For a municipality, State, Federal, or other public entity: either a principal executive officer or ranking elected official. For the purposes of this part, a principal executive officer of a Federal agency includes the chief executive officer having responsibility for the overall operations of a principal geographic unit of the agency (e.g., a Regional Administrator of U.S. EPA); or
- d. The designated representative delegated with such authority and approved in advance by the Director.

## Griffith, Caraline F

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**From:** Griffith, Caraline F  
**Sent:** Tuesday, March 08, 2016 11:06 AM  
**To:** 'Poling St. Clair'  
**Cc:** McKeone, Beverly D  
**Subject:** WV DAQ NSR Permit Application Complete for Poling-St. Clair Funeral Home, Inc. - Buckhannon Facility

**RE: Application Status: Complete  
Poling-St. Clair Funeral Home, Inc. – Buckhannon Facility  
Permit Application R13-3296  
Plant ID No. 097-00070**

Mr. St. Clair:

Your application for a Construction permit for a crematorium was received by this Division on February 2, 2016 and assigned to the writer for review. Upon review of said application, it has been determined that the application is complete and, therefore, the statutory review period commenced on March 8, 2016.

**In the case of this application, the agency believes it will take approximately 90 days to make a final permit determination.**

This determination of completeness shall not relieve the permit applicant of the requirement to subsequently submit, in a timely manner, any additional or corrected information deemed necessary for a final permit determination.

Should you have any questions, please contact Caraline Griffith at (304) 926-0499 ext.1258 or reply to this email.

*Caraline Griffith*

Dept. of Environmental Protection  
Division of Air Quality  
601 57<sup>th</sup> Street SE  
Charleston, WV 25304  
Engineer Trainee  
[Caraline.F.Griffith@wv.gov](mailto:Caraline.F.Griffith@wv.gov)  
304-926-0499 x1258

## Griffith, Caraline F

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**From:** Tricoche, Michael <mtricoche@matthewsintl.com>  
**Sent:** Tuesday, March 08, 2016 10:50 AM  
**To:** Griffith, Caraline F  
**Cc:** polingstclair@gmail.com  
**Subject:** RE: Poling-St.Clair, WV

Caraline,  
Thank you for the follow up. Glad I was able to help. Take care.

Thanks!

**MICHAEL TRICOCHÉ**  
**ENGINEER**

 **Matthews**  
ENVIRONMENTAL SOLUTIONS  
O: 407.886.5533 x 6149 | F: 407.886.5990

---

**From:** Griffith, Caraline F [mailto:Caraline.F.Griffith@wv.gov]  
**Sent:** Tuesday, March 08, 2016 10:50 AM  
**To:** Tricoche, Michael  
**Subject:** RE: Poling-St.Clair, WV

Hi Michael,

This is EXACTLY what I was looking for! I really appreciate it.

Thank you so much!  
Caraline

**From:** Tricoche, Michael [mailto:mtricoche@matthewsintl.com]  
**Sent:** Tuesday, March 08, 2016 9:38 AM  
**To:** Griffith, Caraline F <Caraline.F.Griffith@wv.gov>  
**Subject:** Poling-St.Clair, WV

Caraline,  
As per our conversation this morning, please see attached the information you have requested. If the documents are acceptable or if they need to be updated in some way, please let me know. Thank you in advance for your response.

Thanks!

**MICHAEL TRICOCHÉ**  
**ENGINEER**

 **Matthews**  
ENVIRONMENTAL SOLUTIONS  
O: 407.886.5533 x 6149 | F: 407.886.5990

[mtricoche@matw.com](mailto:mtricoche@matw.com) | [MatthewsEnvironmentalSolutions.com](http://MatthewsEnvironmentalSolutions.com)

2045 Sprint Blvd. | Apopka, FL. 32703-7762

**Matthews Environmental Solutions and Matthews Memorialization are (MATW) Matthews International companies**

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Although we have taken all reasonable precautions to ensure no viruses are present in this e-mail, our company cannot accept responsibility for any loss or damage arising from its use and we therefore recommend you subject this email, and all attachments, to your virus checking procedures prior to use.

## Calculation Of Emissions

### Estimated Emission Calculation

Matthews Cremation Division (MCD)  
(formerly Industrial Equipment and Engineering Company (IEE))  
Crematory Incinerator Model IE43-PPI

Total Incinerator Burn Capacity: 150 lb/hr of remains (type 4) and associated containers (type 0)  
Flue gas flow rate = 632 dscfm 24 Hours/Day X 7 Days/Week X 52 Weeks/Year  
( 100 % Excess Air) = 8736 Hours/Year

**Total Emission Rate = Incinerator Burn Rate X Emission Factor**

#### Particulates (PM & PM<sub>10</sub>)

PM Emission rate taken from Blue Hill Stack Test Report = 0.17 lb/hr (PM Front Half avg. result from stack test report)  
= 0.7426 TPY

$$\frac{0.17 \text{ lb/hr X } 7.00\text{E}+03 \text{ gr/lb X}}{632 \text{ dscfm X } 60 \text{ min/hr}}$$

= 0.03 gr/dscf

#### Carbon Monoxide (CO)

5.2 ppm X 28.0 (MW) X 632 dscfm X 0

= 0.0143 lb/hr  
= 0.0626 TPY

5.2 ppmv (Concentration result taken from Blue Hill stack test)



**TEST REPORT**

**EMISSIONS COMPLIANCE TEST PROGRAM**

**BLUE HILL CEMETERY  
BRAINTREE, MA**

**AUGUST 26, 2015**

**PREPARED FOR:** Matthews International  
Cremation Division  
2045 Sprint Blvd  
Apopka, Florida 32703

**CONCERNING:** Blue Hill Cemetery  
700 West Street  
Braintree, MA 02184  
**Emissions Compliance Testing**  
Crematory Retort – EU 1  
Transmittal No. X227136  
Application No. 4I10027

**PREPARED BY:** CK Environmental, Inc.  
1020 Turnpike Street, Suite 8  
Canton, MA 02021  
  
CK Project No. 4877



### TEST REPORT REVIEW CERTIFICATION

We, the undersigned, hereby certify that we have personally reviewed and are knowledgeable of the information presented in the Test Report. We believe that all submitted information and calculations contained here in are true, accurate, and complete. CK has accreditation by the Stack Testing Accreditation Council (STAC) and operates in conformance with the ASTM D7036-04 requirements.

Prepared by:           *Ale Kuncaitis*            
Ale Kuncaitis, Project Engineer

Reviewed by:           *Kevin J. Kelley*            
Kevin Kelley, Project Manager, QSTI



## TEST SUMMARY

Facility Name: **Blue Hill Cemetery**  
700 West Street  
Braintree, MA 02184

Facility Contact: **Joe Walker, Operations**  
[jbwalker@bluehillcemetery.com](mailto:jbwalker@bluehillcemetery.com)  
781-843-4000

Consultant Name: **Matthews International**  
**Cremation Division**  
2045 Sprint Blvd  
Apopka, Florida 32703

Consultant Contact: **Michael Tricoche, Engineer**  
[mtricoche@matthewsintl.com](mailto:mtricoche@matthewsintl.com)  
407-886-5533 ext. 206-6149

Regulatory Agency: Massachusetts Department of Environmental Protection  
MassDEP Southeast Region  
**John Paino**  
20 Riverside Drive  
Lakeville, MA 02347  
[John.paino@state.ma.us](mailto:John.paino@state.ma.us)  
508-946-2744

Testing Organization: **CK Environmental**  
1020 Turnpike Street, Suite 8  
Canton, MA 02021  
781-828-5200

Project Manager: **Kevin J. Kelley, Project Manager**  
[Kkelley@ckenvironmental.com](mailto:Kkelley@ckenvironmental.com)  
339-237-2267

Sources tested: Crematory Retort EU 1 (IE43-PPI)

Pollutant(s) measured: PM (PM<sub>10</sub>/PM<sub>2.5</sub>), NO<sub>x</sub>, CO and Opacity

Method(s) used: 1, 2, 3A, 4, 5/202, 7E, 10 and 9

Test Date: June 30, 2015



## 1.0 INTRODUCTION

CK Environmental, Inc. (CK) was retained by Matthews International Cremation to conduct a compliance emission test program at the Blue Hill Cemetery located in Braintree, Massachusetts. The facility houses four crematory retorts. Three of the retorts (EU 2 – EU 4) are identical units and compliance with permitted emission limits was demonstrated by submittal of a recent test report from another facility. This test program was performed to ensure that the crematory retort (EU 1) is operating at or below the emission limits as established in the facilities Air Pollution Control Permit (Transmittal No. X227136, Application No. 4I10027) set forth by the Southeast Region, Massachusetts Department of Environmental Protection (MassDEP).

The test program determined the emission levels for particulate matter (PM/PM<sub>10</sub>), condensable particulate matter (CPM/PM<sub>2.5</sub>), nitrogen oxides (NO<sub>x</sub>), carbon monoxide (CO) and Opacity. The sampling and analytical procedures described in this document were conducted using procedures deemed acceptable by the MassDEP and the United States Environmental Protection Agency (USEPA).

Section 2.0 of this report contains a process description. Section 3.0 describes the test program. Section 4.0 describes the test locations. The test methodologies are described in Section 5.0. The CK quality assurance procedures are detailed in Section 6.0.

Kevin Kelley is the CK project manager for this test program. He was accompanied by a qualified staff of environmental engineers and technicians. Table 1-1 provides the contact information for all individuals responsible for this test program.

**Table 1-1**  
Project Contacts

<b>Company Name</b>	<b>Role</b>	<b>Contact</b>	<b>Telephone</b>
CK Environmental, Inc.	Testing Firm Project Manager	Kevin Kelley	(781) 828-5200
Blue Hill Cemetery	Facility Contact	Joe Walker	(781)-843-4000
Matthews International Cremation Division	Engineer	Michael Tricoche	(407)-886-5533 x149
Mass DEP	Regulator Contact	John Paino	(508)-946-2744



## 2.0 PROCESS DESCRIPTION

Blue Hill Cemetery installed and operates four retorts for the cremation of human remains only. This test program was only conducted on EU 1. As permitted by the facility air permit, a recent test report from another facility was submitted to demonstrate compliance of EU 2, EU 3, EU 4 (Matthews Crematory Incinerator Model IE43-SPP) with applicable emission limits.

EU 1 incinerator is Matthews Cremation Models IE43-PPI, Power Pak I (formerly known as IE43-PPII). They are equipped with primary and secondary combustion chambers. The primary chamber burners are Eclipse Model ThermJet 150, which have an energy input ratings of 700,000 Btu per hour. The secondary chamber burners are Eclipse Model ThermJet 150, which have energy input ratings of 1,200,000 Btu per hour. All burners utilize natural gas as fuel.

The exhaust gases from each unit are exhausted through a 20" diameter stacks. The stacks are vented vertically through the rooftop of the crematory building.

**Figure 2-1**  
Picture of Sampling Location



\* EU 1 is on the far left



### 3.1 TEST PROGRAM

#### 3.1 Objectives

Compliance emissions testing was conducted to quantify the emissions of nitrogen oxides (NO<sub>x</sub>), carbon monoxide (CO), particulate matter, including condensables, (PM/CPM) and opacity (visible emissions, VEs) from crematory retort, EU 1. Three 60-minute test runs were performed for each test parameter. Table 3-1 summarizes the parameters measured and the test methodologies utilized. Volumetric flow rate measurements, consisting of exhaust gas velocity, oxygen (O<sub>2</sub>) and carbon dioxide (CO<sub>2</sub>) concentrations, and exhaust gas moisture content was made concurrently with the pollutant measurements. Test results were reported as ppmv for NO<sub>x</sub> and CO and gr/dscf for PM/CPM.

Test runs were performed during the first hour of three burn cycles, the period of highest emissions. The facility operations personnel were responsible for recording all available pertinent process operating parameters throughout the emissions compliance testing.

#### 3.2 Test Matrix

Table 3-1 provides a summary of the parameters that was measured during this compliance program. The emission limits are given below.

**Table 3-1**  
Test Matrix

Pollutant	# of Runs	Sample Time (min)	USEPA Method(s)	Permit Limits
Flow & Moisture	3	60	1-4	NA
O <sub>2</sub> /CO <sub>2</sub>	3	60	3A	NA
Filterable Particulate Matter (PM)*	3	60	5	0.06 gr/dscf
Condensable Particulate Matter (PM <sub>10</sub> , PM <sub>2.5</sub> )*	3	60	202	0.06 gr/dscf
NO <sub>x</sub>	3	60	7E	20 ppmv
CO	3	60	10	100 ppmv
Opacity	3	60	9	≤5%, except >5% to <20% for ≤2 min/any 1 hr.

*\*Note: The Method 5 and Method 202 train was combined.*

#### 3.3 Deviations from Approved Test Program

All test methods and procedures used during this test program were conducted in accordance with EPA and MADEP-approved test protocol and test methodology.



### 3.4 Presentation of Results

**Table 3-2  
Test Matrix**

Test Run No.		Run 1	Run 2	Run 3	Average
Date		06/30/15	06/30/15	06/30/15	
Time	Start	8:33	11:22	14:01	
	Stop	9:38	12:27	15:05	
<b>Process Information</b>					
Batch Weight	lbs	142	174	140	152
<b>Sample Conditions</b>					
Volume	(dscf) <sup>a</sup>	72.605	69.878	76.718	73.067
Volume	(dscm) <sup>b</sup>	2.056	1.979	2.173	2.069
Isokinetics	(%)	98.8	94.8	94.3	95.99
<b>Stack Conditions</b>					
Flow Rate	(dscfm) <sup>c</sup>	610	611	675	632
Temperature	(°F)	969.4	1007.8	1022.8	1000.0
Moisture	(%)	15.4	13.6	12.2	13.7
Oxygen	(%)	9.6	9.8	10.1	9.8
Carbon Dioxide	(%)	7.3	7.7	7.8	7.6
Oxides of Nitrogen	(PPM)	60.5	52.6	49.7	54.3
Oxides of Nitrogen	PPM@15% O <sub>2</sub>	31.6	28.0	27.2	28.9
Carbon Monoxide	(PPM)	5.3	7.7	2.7	5.2
Carbon Monoxide	PPM@15% O <sub>2</sub>	2.8	4.1	1.5	2.8
<b>Particulate Matter Emissions</b>					
Total PM Catch	(mg)	87.1	263.2	141.7	144
Emission Rate - Front Half	(Grains/dscf)	0.018	0.045	0.028	0.031
	lb/hr	0.10	0.23	0.16	0.17
	tons/yr				0.73
Emission Rate - Front & Back	(Grains/dscf)	0.021	0.050	0.030	0.034
	lb/hr	0.108	0.260	0.175	0.18
	tons/yr				0.79
<b>Opacity</b>	(%)	0.0	0.0	0.0	0.0

a) dry standard cubic feet

b) dry standard cubic meters

c) dry standard cubic feet per minute

Visible Emission Observation Form

Run 1

SOURCE NAME		OBSERVATION DATE				START TIME				STOP TIME							
Blue Hills Cemetery		6/30/15				7:33				9:33							
ADDRESS		MIN				SEC				MIN				SEC			
100 West Street		0 15 30 45				0 15 30 45				0 15 30 45				0 15 30 45			
CITY	STATE	ZIP															
Braintree	MA	02184															
PHONE	SOURCE ID NUMBER																
	EU 1																
PROCESS EQUIPMENT		OPERATING MODE															
Crematory retort		Normal															
CONTROL EQUIPMENT		OPERATING MODE															
DESCRIBE EMISSION POINT																	
START Under stack STOP																	
HEIGHT ABOVE GROUND LEVEL		HEIGHT RELATIVE TO OBSERVER															
START 35' STOP SAME		START ~35' STOP SAME															
DISTANCE FROM OBSERVER		DIRECTION FROM OBSERVER															
START 150' STOP SAME		START West STOP SAME															
DESCRIBE EMISSIONS																	
START Gray heat plume STOP SAME																	
EMISSION COLOR		PLUME TYPE. CONTINUOUS <input checked="" type="checkbox"/> FUGITIVE <input type="checkbox"/> INTERMITTENT <input type="checkbox"/>															
START Gray STOP None																	
WATER DROPLETS PRESENT:		IF WATER DROPLET PLUME.															
NO <input checked="" type="checkbox"/> YES <input type="checkbox"/>		ATTACHED <input type="checkbox"/> DETACHED <input type="checkbox"/>															
POINT IN THE PLUME AT WHICH OPACITY WAS DETERMINED																	
START above stack STOP																	
DESCRIBE BACKGROUND																	
START Sky clear STOP Same																	
BACKGROUND COLOR		SKY CONDITIONS															
START blue STOP Same		START clear STOP Same															
WIND SPEED		WIND DIRECTION															
START Calm STOP Same		START NWS STOP Same															
AMBIENT TEMP.		WET BULB TEMP		RH. percent													
START 70° STOP Same				65%													
Source Layout Sketch			Draw North Arrow														
AVERAGE OPACITY FOR HIGHEST PERIOD <input type="checkbox"/>			NUMBER OF READINGS ABOVE % WERE <input type="checkbox"/>														
RANGE OF OPACITY READINGS MINIMUM <input type="checkbox"/>			MAXIMUM <input type="checkbox"/>														
OBSERVER'S NAME (PRINT)			Ale Kuncaitis														
OBSERVER'S SIGNATURE			DATE														
			6/30/15														
COMMENTS			ORGANIZATION														
picture taken of location			CK Environmental														
I HAVE RECEIVED A COPY OF THESE OPACITY OBSERVATIONS			CERTIFIED BY		DATE												
SIGNATURE			Morrison Environmental		4/2015												
TITLE			VERIFIED BY		DATE												

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Air Quality Specialists

Visible Emission Observation Form

Run 2

SOURCE NAME <b>Blue Hill Cemetery</b>		OBSERVATION DATE <b>6/30/15</b>				START TIME <b>11:22</b>		STOP TIME <b>12:22</b>	
ADDRESS <b>700 West Street</b>		CITY <b>Braintree</b>		STATE <b>MA</b>	ZIP	PHONE		SOURCE ID NUMBER <b>EU 1</b>	
PROCESS EQUIPMENT <b>Cemetery rector</b>		OPERATING MODE		CONTROL EQUIPMENT		OPERATING MODE			
DESCRIBE EMISSION POINT START <b>circular stack</b> STOP		HEIGHT ABOVE GROUND LEVEL START <b>35'</b> STOP		HEIGHT RELATIVE TO OBSERVER START <b>35'</b> STOP		DISTANCE FROM OBSERVER START <b>100'</b> STOP		DIRECTION FROM OBSERVER START <b>W</b> STOP	
DESCRIBE EMISSIONS START <b>gray heat plume</b> STOP		EMISSION COLOR START <b>gray</b> STOP		PLUME TYPE. CONTINUOUS <input checked="" type="checkbox"/> FUGITIVE <input type="checkbox"/> INTERMITTENT <input type="checkbox"/>		WATER DROPLETS PRESENT: NO <input checked="" type="checkbox"/> YES <input type="checkbox"/>		IF WATER DROPLET PLUME. ATTACHED <input type="checkbox"/> DETACHED <input type="checkbox"/>	
POINT IN THE PLUME AT WHICH OPACITY WAS DETERMINED START <b>above stack</b> STOP		DESCRIBE BACKGROUND START <b>sky</b> STOP		BACKGROUND COLOR START <b>blue</b> STOP		SKY CONDITIONS START <b>partly cloudy</b> STOP		WIND SPEED START <b>14MPH</b> STOP	
WIND DIRECTION START <b>NW</b> STOP		AMBIENT TEMP. START <b>76</b> STOP		WET BULB TEMP		RH, percent			
Source Layout Sketch Draw North Arrow		X Emission Point		Observers Position		140°		300 Location Line	
Sun → Wind → Plume and Stack ←		AVERAGE OPACITY FOR HIGHEST PERIOD <b>5</b>		NUMBER OF READINGS ABOVE % WERE		RANGE OF OPACITY READINGS MINIMUM <b>0</b> MAXIMUM <b>5</b>		OBSERVER'S NAME (PRINT) <b>Ale Kuncaitis</b>	
COMMENTS <b>picture taken of location</b>		OBSERVER'S SIGNATURE <i>Ale Kuncaitis</i>		DATE <b>6/30/15</b>		ORGANIZATION <b>CK Environmental</b>		I HAVE RECEIVED A COPY OF THESE OPACITY OBSERVATIONS SIGNATURE <b>Morrison Environmental</b>	
TITLE		DATE		VERIFIED BY		DATE <b>4/2015</b>			

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check @ 1:15, :30  
wind @ 2:45

Visible Emission Observation Form

Run 3

SOURCE NAME		OBSERVATION DATE				START TIME				STOP TIME			
Blue Hill Cemetery		6/30/15				2:01				3:01			
ADDRESS		SEC		MIN		SEC		MIN		SEC		MIN	
700 West Street		0	15	30	45	0	15	30	45	0	15	30	45
		1	0	0	0	0	31	0	0	0	0	0	0
		2	0	0	0	0	32	0	0	0	0	0	0
CITY Braintree		3	0	0	0	0	33	0	0	0	0	0	0
STATE MA		4	0	0	0	0	34	0	0	0	0	0	0
ZIP		5	0	0	0	0	35	0	0	0	0	0	0
PHONE		6	0	0	0	0	36	0	0	0	0	0	0
SOURCE ID NUMBER		7	0	0	0	0	37	0	0	0	0	0	0
PROCESS EQUIPMENT Crematory retort		8	0	0	0	0	38	0	0	0	0	0	0
OPERATING MODE		9	0	0	0	0	39	0	0	0	0	0	0
CONTROL EQUIPMENT		10	0	0	0	0	40	0	0	0	0	0	0
OPERATING MODE		11	0	0	0	0	41	0	0	0	0	0	0
DESCRIBE EMISSION POINT		12	0	0	0	0	42	0	0	0	0	0	0
START Circular Stack STOP		13	0	0	0	0	43	0	0	0	0	0	0
HEIGHT ABOVE GROUND LEVEL		14	0	0	0	0	44	0	0	0	0	0	0
START 35' STOP		15	0	0	0	0	45	0	0	0	0	0	0
HEIGHT RELATIVE TO OBSERVER		16	0	0	0	0	46	0	0	0	0	0	0
START 35' STOP		17	0	0	0	0	47	0	0	0	0	0	0
DISTANCE FROM OBSERVER		18	0	0	0	0	48	0	0	0	0	0	0
START 100' STOP		19	0	0	0	0	49	0	0	0	0	0	0
DIRECTION FROM OBSERVER		20	0	0	0	0	50	0	0	0	0	0	0
START NW STOP		21	0	0	0	0	51	0	0	0	0	0	0
DESCRIBE EMISSIONS		22	0	0	0	0	52	0	0	0	0	0	0
START Great Plume STOP		23	0	0	0	0	53	0	0	0	0	0	0
EMISSION COLOR		24	0	0	0	0	54	0	0	0	0	0	0
START Gray STOP		25	0	0	0	0	55	0	0	0	0	0	0
PLUME TYPE CONTINUOUS <input checked="" type="checkbox"/>		26	0	0	0	0	56	0	0	0	0	0	0
FUGITIVE <input type="checkbox"/>		27	0	0	0	0	57	0	0	0	0	0	0
INTERMITTENT <input type="checkbox"/>		28	0	0	0	0	58	0	0	0	0	0	0
WATER DROPLETS PRESENT:		29	0	0	0	0	59	0	0	0	0	0	0
NO <input checked="" type="checkbox"/> YES <input type="checkbox"/>		30	0	0	0	0	60	0	0	0	0	0	0
IF WATER DROPLET PLUME:													
ATTACHED <input type="checkbox"/> DETACHED <input type="checkbox"/>													
POINT IN THE PLUME AT WHICH OPACITY WAS DETERMINED													
START Above Stack STOP													
DESCRIBE BACKGROUND													
START Sky Clear STOP Sky (partly cloudy)													
BACKGROUND COLOR													
START Blue STOP													
SKY CONDITIONS													
START Clear STOP													
WIND SPEED													
START 5 mph STOP													
WIND DIRECTION													
START South STOP													
AMBIENT TEMP													
START 78 STOP													
WET BULB TEMP													
RH, percent													
58% 10													
Source Layout Sketch		Draw North Arrow											
AVERAGE OPACITY FOR HIGHEST PERIOD		NUMBER OF READINGS ABOVE % WERE											
RANGE OF OPACITY READINGS		MINIMUM 0 MAXIMUM 0											
OBSERVER'S NAME (PRINT)		Ale Kuncaitis											
OBSERVER'S SIGNATURE		Ale Kuncaitis											
DATE		6/30/15											
ORGANIZATION		C.K. Environmental											
I HAVE RECEIVED A COPY OF THESE OPACITY OBSERVATIONS		CERTIFIED BY											
SIGNATURE		MORRISON ENV Eng, Inc.											
DATE		7/2015											
TITLE		DATE											

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Air Quality Specialists

## **Griffith, Caraline F**

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**From:** Griffith, Caraline F  
**Sent:** Friday, March 04, 2016 8:11 AM  
**To:** 'Poling St. Clair'  
**Cc:** McKeone, Beverly D  
**Subject:** WV DAQ Permit Application Incomplete for Poling-St. Clair Funeral Home, Inc. -  
Buckhannon Facility

**RE: Application Status: Incomplete  
Poling-St. Clair Funeral Home, Inc. – Buckhannon Facility  
Permit Application No. R13-3296  
Plant ID No. 097-00070**

Mr. St. Clair:

Your application for a Construction permit for a crematory was received by this Division on February 2, 2016 and assigned to the writer for review. Upon initial review of said application, it has been determined that the application as submitted is incomplete based on the following items:

1. Incorrect emissions calculations

Please address the above deficiencies in writing within fifteen (15) days of the receipt of this email. Application review will not commence until the application has been deemed to be technically complete. Failure to respond to this request in a timely manner may result in the denial of the application.

Should you have any questions, please contact Caraline Griffith at (304) 926-0499 ext. 1258 or reply to this email.

***Caraline Griffith***

Dept. of Environmental Protection  
Division of Air Quality  
601 57<sup>th</sup> Street SE  
Charleston, WV 25304  
Engineer Trainee  
[Caraline.F.Griffith@wv.gov](mailto:Caraline.F.Griffith@wv.gov)  
304-926-0499 x1258

## **Griffith, Caraline F**

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**From:** Kolb, Mike D  
**Sent:** Wednesday, March 02, 2016 11:19 AM  
**To:** Griffith, Caraline F  
**Cc:** Kolb, Mike D  
**Subject:** Poling-St. Clair Funeral Home

On February 25 at ~2:00pm I conducted a site inspection of Poling - St. Clair Funeral home in Buckhannon WV. The Funeral Home is located at 95 S. Kanawha Street. Upon arriving I met with Mr. Jeffrey St. Clair and Codi Cabrera. We looked at google earth imagery and determined that the Funeral, Codi's house and a few other structures occupy about half of the block. To the east south east is a school ~550 feet away, almost due south and ~100 to 120 feet higher are some houses and a large water tank. The rest of the area around the Funeral home is a makeup of residential and a frat house or two along with a variety of different businesses (food, convenience, insurance offices and some churches ). Mr. St. Clair stated that they had a town meeting ( also televised ) about the crematorium going in, he stated that a few concerns were brought up but have been addressed and that three newspaper ads were ran.

The crematorium will be constructed in an existing garage located behind the funeral home and that a new garage will be constructed to the north east of the funeral home. Housekeeping should not be an issue, they have put a deposit down and the unit itself will not be constructed until they have permit in hand. A new gas line will need to be constructed additionally before they could even supply enough gas to operate the unit. If you have any additional questions or comments please contact me.

Michael Kolb  
Compliance and Enforcement Section  
Division of Air Quality  
West Virginia Department of Environmental Protection  
601 57<sup>th</sup> Street  
Charleston, WV 25304  
Office: 304-926-0499 ext. 1690  
Fax: 304-926-0479  
[www.dep.gov](http://www.dep.gov)

## Griffith, Caraline F

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**From:** Griffith, Caraline F  
**Sent:** Wednesday, March 02, 2016 8:17 AM  
**To:** 'Poling St. Clair'  
**Subject:** Poling-St. Clair Funeral Home, Inc. - Emission Calculations

Good Morning Codi!

I hope you are doing well today! I was curious if you had gotten around to redoing the emission calculations for me where AP-42 was used and actual data needed to be used instead from a similar model? I have to have this to be able to deem the application complete by tomorrow, as well. If you need more time, that is completely fine. What will just happen is I will send an email stating the application is "incomplete", but that just halts the process for a bit until you can get it into me. After I receive it I can deem it "complete" and continue on to public notice on our end.

Just let me know!

Thank you so much,  
Caraline

*Caraline Griffith*

Dept. of Environmental Protection  
Division of Air Quality  
601 57<sup>th</sup> Street SE  
Charleston, WV 25304  
Engineer Trainee  
[Caraline.F.Griffith@wv.gov](mailto:Caraline.F.Griffith@wv.gov)  
304-926-0499 x1258

## Griffith, Caraline F

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**From:** Poling St. Clair <polingstclair@gmail.com>  
**Sent:** Wednesday, February 24, 2016 2:59 PM  
**To:** Griffith, Caraline F  
**Subject:** Re: Poling-St. Clair Funeral Home, Inc. - Buckhannon Facility - Process Description  
**Attachments:** DESCRIPTION OF PROCESS.docx

Please let me know if any changes are necessary.

Thank you,

Codi Cabrera

On Wed, Feb 24, 2016 at 2:22 PM, Griffith, Caraline F <[Caraline.F.Griffith@wv.gov](mailto:Caraline.F.Griffith@wv.gov)> wrote:

Hi Codi,

Here's an example of a Process Description from another crematory I just did not long ago. If you want to take a look at their whole application and my conversations with them and what I had them do, you can view that online at: <http://www.dep.wv.gov/daq/Pages/NSRPermitsforReview.aspx>

Brown Cremation Services, Inc. was the company and their application and permit and everything is online at that link.

### DESCRIPTION OF PROCESS

*Brown Cremation Services, Inc. proposes to install a new natural gas fired US Cremation Equipment Model Classic human crematory for use at their facility. The "CLASSIC" is a multi-chamber unit having an average 200 lbs/hr or 750 lbs/maximum load (approx. 1,000 BTU/lb). The primary chamber burner is rated at 500,000 BTU/hr/burner and the secondary chamber burner is rated at 1,500,000 BTU/hr, for a total of 2,000,000 BTU/hr (2.0 mmBTU/hr).*

*Control of air pollution is achieved through the design of the "CLASSIC" crematory, including its ability to operate the secondary chamber between 1600-1850 degrees Fahrenheit at a residence time in excess of 1.0 seconds. The design also includes fully automatic PLC based controls, independent fuel/air systems, preheated combustion air, secondary chamber temperature monitor and recorder, primary burner temperature interlock (prevents primary burner from firing prior to the secondary chamber reaching its set point temperature), UV continuous scanning flame detectors on burners, and an opacity sensor (electronic exhaust gas scanner system) which can temporarily suspend operation of the primary chamber burner.*

*The US 75/300 is a multi-chamber unit having an average 75 lbs/hr capacity. The primary chamber burner is rated at 500,000 BTU/hr, and the secondary chamber burner is rated at 1,000,000 BTU/hr, for a total of 1,500,000 BTU/hr (1.5 mmBTU/hr). Control of air pollution is achieved through the design of the US 75/300 crematory, including its ability to operate the secondary chamber between 1600-1850 degrees Fahrenheit at a residence time in excess of 1.0 second. The design also includes fully automatic PLC based controls, independent fuel/air systems, preheated combustion air, secondary chamber temperature monitor and recorder, primary burner temperature interlock (prevents primary burner from firing prior to the secondary chamber reaching its set point temperature), UV continuous scanning flame detectors on burners, and an opacity sensor which can temporarily suspend operation of the primary chamber burner.*

I hope this helps! Let me know if I can help you any more with this!

Best regards,

Caraline

***Caraline Griffith***

Dept. of Environmental Protection

Division of Air Quality

601 57<sup>th</sup> Street SE

Charleston, WV 25304

Engineer Trainee

[Caraline.F.Griffith@wv.gov](mailto:Caraline.F.Griffith@wv.gov)

[304-926-0499](tel:304-926-0499) x1258

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\*Poling-St. Clair Funeral Home, Inc.  
95 S. Kanawha St.  
Buckhannon, WV 26201  
304-472-1000  
[www.polingstclair.com](http://www.polingstclair.com)\*\*  
Jeffrey C. St. Clair  
Licensee In Charge\*

## DESCRIPTION OF PROCESS

Poling-St. Clair Funeral Home, Inc. proposes to install a new natural gas fired Matthews International, Matthews Cremation Division, Model Power-Pak I human crematory for use at their facility. The Power-Pak I, is a multi-chamber unit having an average 150 lbs/hr or 750 lbs/maximum load (approx. 1,000 BTU/lb). The primary chamber burner is rated at 500,000 BTU/hr/burner and the secondary chamber burner is rated at 900,000 BTU/hr, for a total of 1,400,000 BTU/hr.

Control of air pollution is achieved through the design of the Power-Pak I cremation unit, including its ability to operate the secondary chamber between 1400-1800 degrees Fahrenheit at a retention time in excess of 1.0 second. The emissions controls features are a Secondary Chamber Afterburner and a Microprocessor Temperature Control System and UV flame detectors on burners.

## **Griffith, Caraline F**

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**From:** Griffith, Caraline F  
**Sent:** Wednesday, February 24, 2016 9:40 AM  
**To:** 'polingstclair@gmail.com'  
**Subject:** RE: Poling-St. Clair Funeral Home, Inc. - Buckhannon Facility

Good Morning Again,

I was also reviewing your calculations and it looks like you used AP-42 emission factors. For cremators, these factors are inaccurate. You will need to use actual data and base your calculations off of similar cremator data for this model. Could you please redo these calculations and send me the results based off of actual data? Could you also send me actual test results from a similar cremator?

Thank you!  
Caraline

**From:** Griffith, Caraline F  
**Sent:** Wednesday, February 24, 2016 8:24 AM  
**To:** 'polingstclair@gmail.com' <polingstclair@gmail.com>  
**Subject:** Poling-St. Clair Funeral Home, Inc. - Buckhannon Facility

Good Morning!

I am almost ready to deem your application complete, however I am missing one bit of information. Could you please send me a Process Description for the crematory? That looks like the last piece of information I need.

Thank you!  
Caraline

*Caraline Griffith*

Dept. of Environmental Protection  
Division of Air Quality  
601 57<sup>th</sup> Street SE  
Charleston, WV 25304  
Engineer Trainee  
[Caraline.F.Griffith@wv.gov](mailto:Caraline.F.Griffith@wv.gov)  
304-926-0499 x1258



PM

CREMATOR

(gr)  
grains/dscf

$$1 \text{ lb} = 7000 \text{ grains}$$

$$Q = \text{avg. volumetric flow rate [scfm]} \cdot 60 \frac{\text{min}}{\text{hr}} = [\text{scf/hr}]$$

$$\text{PM emissions rate avg [gr/dscf]} \cdot Q [\text{scf/hr}] = \text{gr/hr}$$

$$\text{PM} = \frac{\text{gr}}{\text{hr}} \div 7000 \frac{\text{gr}}{\text{lb}} = \frac{\text{lb}}{\text{hr}} \text{ @ } X \% \text{ O}_2$$

~~1100 dscfm~~ ~~1100 dscfm~~

$$Q = 1100 \text{ dscfm} \cdot \frac{60 \text{ min}}{\text{hr}} = 66,000 \frac{\text{dscf}}{\text{hr}}$$

$$0.06 \cdot 66000 \frac{\text{dscf}}{\text{hr}} = 3960 \frac{\text{gr}}{\text{hr}}$$

$$3960 \div 7000 = 0.565 \frac{\text{lb}}{\text{hr}}$$

(from rule  
6)

$$\begin{aligned} \text{Emission limit} &= 5.43 \times 150 \frac{\text{lb}}{\text{hr}} \times \frac{1 \text{ ton}}{2000 \text{ lb}} \\ &= 0.407 \frac{\text{lb}}{\text{hr}} \end{aligned}$$

## Completeness Determination

- 1) Applicant's legal ad published?  Yes  No  
Date\* 2/14/16 Newspaper The Record Delta

\* The Class I legal advertisement must be placed in a newspaper certified to accept legal advertisements and must be published within 5 working days after receipt of the permit application or the application is considered incomplete.

Original Affidavit submitted?  Yes  No

Date received: 2/17/16

- 2) Application fee paid?  Yes  No Date 2/4/16 Amount 9,100  
Date \_\_\_\_\_ Amount \_\_\_\_\_

If more than the base fee is required, check all that apply?

NSPS, Subpart \_\_\_\_\_

- 3) Was original and two (2) copies of the application received?  Yes  No

- 4) Was application bound in some way and organized?  Yes  No

- 5) Was confidential business information properly identified?  Yes  No *N/A*

- 6) General Permit Application Form with signature received?  Yes  No

Date received: 2/2/16

- 7) Authority of Corporation required?  Yes  No

Date received: 2/2/16

- 8) Is the applicant registered with the Secretary of State's Office?  Yes  No

[www.wvsos.com/wvcorporations](http://www.wvsos.com/wvcorporations)

Date verified: \_\_\_\_\_ Registered Name \_\_\_\_\_

- 9) Was a copy of the applicant's current Business Registration Certificate included?

Yes  No Date received: 2/2/16

- 10) Is the applicant default with WV Workers Compensation System?  Yes  No

<http://intranet.state.wv.us/BEP/ucwcdef/default.htm> (User name: DEP, Password: DEP)

Date verified: \_\_\_\_\_

- 11) Process description, process flow diagram, and plot plan included?  Yes  No

Date received: \_\_\_\_\_

- 12) Were applicable technical forms completed and included?  Yes  No

Date received: 2/2/16

- 13) Emission estimates and supporting calculations included?  Yes  No

Date received: 2/2/16

**Griffith, Caraline F**

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**From:** Ward, Beth A  
**Sent:** Thursday, February 04, 2016 2:24 PM  
**To:** Griffith, Caraline F  
**Subject:** POLING-ST.CLAIR FUNERAL HOME INC PERMIT APPLICATION FEE

This is the receipt for payment received from:

POLING-ST.CLAIR FUNERAL HOME INC, BUCKHANNON, CHECK NUMBER 31218, CHECK DATE 02/01/2016, \$1000.00  
R13-3296 ID# 097-00070

OASIS Deposit CR 1600084316

Thank You!

*Beth Ward*

**WV DEPARTMENT OF ENVIRONMENTAL PROTECTION  
BTO FISCAL  
601 57<sup>TH</sup> STREET SE  
CHARLESTON, WV 25304  
(304) 926-0499 EXT 1846  
[beth.a.ward@wv.gov](mailto:beth.a.ward@wv.gov)**

## Adkins, Sandra K

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**From:** Adkins, Sandra K  
**Sent:** Thursday, February 04, 2016 12:06 PM  
**To:** 'polingstclair@gmail.com'  
**Cc:** McKeone, Beverly D; Griffith, Caraline F  
**Subject:** WV DAQ Permit Application Status for Poling-St. Clair Funeral Home, Inc.; Buckhannon

**RE: Application Status  
Poling-St. Clair Funeral Home, Inc.  
Buckhannon  
Plant ID No. 097-00070  
Application No. R13-3296**

Mr. St. Clair,

Your application for a construction permit for the Buckhannon facility was received by this Division on February 2, 2016, and was assigned to Caraline Griffith. The following item was not included in the initial application submittal:

**Original affidavit for Class I legal advertisement not submitted.**

*Must republish ad. Ad does not contain the basic information required by rule. Send copy of legal ad.*

*This item is necessary for the assigned permit writer to continue the 30-day completeness review.*

Within 30 days, you should receive a letter from Caraline stating the status of the permit application and, if complete, given an estimated time frame for the agency's final action on the permit.

Any determination of completeness shall not relieve the permit applicant of the requirement to subsequently submit, in a timely manner, any additional or corrected information deemed necessary for a final permit decision.

Should you have any questions, please contact the assigned engineer, Caraline Griffith, at 304-926-0499, extension 1258.