

POLING-ST. CLAIR FUNERAL HOME, INC.

95 S. KANAWHA ST., BUCKHANNON, WV 26201

PHONE (304)472-1000 FAX (304)472-0365

WWW.POLINGSTCLAIR.COM

JEFFREY C. ST. CLAIR

PRESIDENT/ LICENSEE IN CHARGE

To whom it may concern,

We are submitting this air quality for the construction of a cremation unit from Matthews International in our existing garage.

Thank you,



Jeffrey C. St. Clair



Home » Latitude and Longitude of a Point



To find the latitude and longitude of a point Click on the map, Drag the marker, or enter the...

Address: 95 S Kanawha St, Buckhannon, WV 26 GO

Nearby Places of Interest Map Utilities: Measure Size, Get Address, Street View, Larger Map

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Latitude and Longitude of a Point



Clear / Reset Remove Last Blue Marker
Center Red Marker

Get the Latitude and Longitude of a Point

When you click on the map, move the marker or enter an address the latitude and longitude coordinates of the point are inserted in the boxes below.

Latitude: 38.987018

Longitude: -80.227502

	Degrees	Minutes	Seconds
Latitude:	38	59	13.2642
Longitude:	-80	13	39.0072

Show Point from Latitude and Longitude

Use this if you know the latitude and longitude coordinates of a point and want to see where on the map the point is.

Use: + for N Lat or E Long - for S Lat or W Long.

Example: +40.689060 -74.044636

Note: Your entry should not have any embedded spaces.

Decimal Deg. Latitude:

Decimal Deg. Longitude:

Show Point

Example: +34 40 50.12 for 34N 40' 50.12"

Degrees Minutes Seconds

Latitude:

Longitude:

Show Point



Site Map

Chuck Taylor Toolbox

Geographic/UTM Coordinate Converter

You can convert between geographic coordinates and Universal Transverse Mercator (UTM) coordinates using this form.

Note: This is a JavaScript-powered form. If you have difficulties using this form, check your browser's settings to make sure you have enabled JavaScript.

Programmers: The JavaScript source code in this document may be copied and reused without restriction.

If you have a Java 1.1-compliant browser, and especially if you need to use an ellipsoid model other than WGS84, you may want to try the [Coordinate and Datum Transformations tool](#).

Geographic (degrees decimal)	To/From	UTM
lon -80.227502	>>	x (easting) 566904.605400254
lat 38.987018	<<	y (northing) 4315619.727518371
		zone 17
		hemisphere <input checked="" type="radio"/> N <input type="radio"/> S

Geographic coordinates are entered and displayed in decimal degrees. Negative numbers indicate West longitudes and South latitudes. UTM coordinates are entered and displayed in meters. The ellipsoid model used for computations is WGS84.

Chuck Taylor – ([Copyright](#)) – ([Contact](#))

THE RECORD DELTA
P.O. BOX 550
BUCKHANNON, WV 26201
(304) 472-2800
FEIN NO. 363672215

* **Poling-St.Clair Funeral Home, Inc.**
95 S. Kanawha St.
Buckhannon, WV 26201

LEGAL ADVERTISEMENT INVOICE

ACCT. 2451 LEGAL #

DESCRIPTION Air Quality Permit Advertisement

PUBLICATION DATES	PUBLICATION COST
1/15/2016	\$ 91.77
	\$ -
	\$ -
	\$ -
	\$ -
	\$ -
	\$ -
	\$ -
AFFIDAVIT FEE	\$ 2.00
TOTAL	\$ 93.77

Legal Rate: .11 1/2 cents per word space for first publication
 75% of the first cost for each additional publication

Phone (304) 472-1000 FAX (304) 472-0365
 www.polingstclair.com
 Jeffrey C. St. Clair
 President/ Licensee In Charge

Per the USEPA, the Poling-St. Clair Funeral Home, Inc. at 95 S. Kanawha St. Buckhannon, WV 26201 in Upshur County, is August 1, 2016, is applying for an Air Quality Permit for the installation of a Cremation Unit. The projected start-up date for emissions information, see emissions chart below:

All-Regulated Pollutants Chemical Name/GAS (Speciate VOCs & HAPS)	Maximum Potential Uncontrolled	Maximum Potential Controlled	Emission Point or Phase (At exit conditions, Solid, Liquid Or Gas/Vapor)	Est. Method Used	Emission Concentration (ppmv or mg/m ³)
PM	0.525 0.9282	1.525 0.9282	SOLID	EE	0.06 ar/dscf
CO	0.75 1.404	0.75 1.404	GAS	EE	161.65 ppmv
VOC	0.225 0.4212	0.225 0.4212	GAS	EE	84.14 ppmv
SO2	0.188 0.351	0.188 0.351	GAS	EE	17.46 ppmv
NOx	0.225 0.4212	0.225 0.4212	GAS	EE	29.40 ppmv

For more information please contact us:

Address: Poling-St. Clair Funeral Home, Inc.
 95 S. Kanawha St. Buckhannon, WV 26201
 Phone: 304-472-1000
 Fax: 304-472-0365

(1-15-16)

WEST VIRGINIA, UPSHUR COUNTY, TO WIT:
 Subscribed and sworn before me this 25th
 day of January 2016.

Notary Public: Jewel Fisher
 My commission expires Jan. 3, 2017



POLING-ST. CLAIR FUNERAL HOME, INC.

95 S. KANAWHA ST., BUCKHANNON, WV 26201

PHONE (304)472-1000 FAX (304)472-0365

WWW.POLINGSTCLAIR.COM

JEFFREY C. ST. CLAIR

PRESIDENT/ LICENSEE IN CHARGE

Per the USEPA, the Poling-St. Clair Funeral Home, Inc. at 95 S. Kanawha St. Buckhannon, WV 26201 in Upshur County, WV(N 38.987018, W -80.227502), is applying for an Air Quality Permit for the installation of a Cremation Unit. The projected start-up date is August 1, 2016.

For emissions information, see emissions chart below:

All Regulated Pollutants - Chemical Name/CAS ³ (Speciate VOCs & HAPS)	Maximum Potential Uncontrolled Emissions ⁴		Maximum Potential Controlled Emissions ⁵		Emission Form or Phase (At exit conditions, Solid, Liquid or Gas/Vapor)	Est. Method Used ⁶	Emission Concentration ⁷ (ppmv or mg/m ³)
	lb/hr	ton/yr	lb/hr	ton/yr			
PM	0.525	0.9828	0.525	0.9828	SOLID	EE	0.06 gr/dscf
CO	0.75	1.404	0.75	1.404	GAS	EE	161.63 ppmv
VOC	0.225	0.4212	0.225	0.4212	GAS	EE	84.14 ppmv
SO2	0.188	0.351	0.188	0.351	GAS	EE	17.46 ppmv
NOx	0.225	0.4212	0.225	0.4212	GAS	EE	29.40 ppmv

For more information please contact us:

Address: Poling-St. Clair Funeral Home, Inc.

95 S. Kanawha St Buckhannon, WV 26201

Phone: 304-472-1000

Fax: 304-472-0365

**WEST VIRGINIA DEPARTMENT OF ENVIRONMENTAL PROTECTION
DIVISION OF AIR QUALITY**

45CSR13, 45CSR14, AND 45CSR19 PERMIT FORMS

GENERAL INSTRUCTIONS

Enclosed are forms and related information to be used in completing an application for a WV Rule 13 (45CSR13) permit. The enclosed checklist lists all required information for an application to be deemed administratively complete.

Application forms are to be completed for any facility which emits the following regulated pollutants: Carbon Monoxide (CO), Lead, Nitrogen Oxides (NO_x), Particulate Matter (PM), Particulate Matter less than 10 microns (PM₁₀), Sulfur Dioxide (SO₂), and Volatile Organic Compounds (VOCs) not listed as Hazardous Air Pollutants (HAPs) or Toxic Air Pollutants (TAPs) in accordance with Section §112 of the Clean Air Act or Rule 45CSR27.

As of January 2, 2011, pursuant to actions taken by the USEPA, Greenhouse Gases (GHGs) became subject to regulations for the purposes of major New Source Review (NSR) permitting. Go to <http://www.dep.wv.gov/daq/permitting/Documents/PotentialMajorSourceApplicabilityofGHGs.pdf> for details.

If assistance is needed in selecting the appropriate form, call (304) 926-0475 and ask to speak to a member of the Permitting Staff.

Per WV Rule 22 (45CSR22) filed on May 6, 1991, a minimum fee of \$1,000 must be submitted for each 45CSR13 permit application or \$300 for each Class II administrative update application filed with the West Virginia Division of Air Quality. Other additional charges may apply, depending on the nature of the application as outlined in Section 3.4.b. of Regulation 22 and shown below:

NSPS Requirements (40CFR60)	\$1,000
NESHAPS or Toxic Air Pollutant Requirements (40CFR 61, 63 and 45CSR27)	\$2,500
PSD or Nonattainment Review (45CSR14 and 45CSR19):	
(1) New Major Sources or	\$10,000
(2) Major Modifications	\$ 5,000

For Class II administrative updates and relocation and temporary permits, the applicant must place a Class I legal advertisement at the time the application is submitted, as well as provide proof of notification of the county clerk.

It may be beneficial to you, the applicant, to contact the Secretary of State's Office at (304) 558-6000 and request from the Administrative Law Section a copy of 45CSR13, 45CSR22 and 45CSR31 (<http://www.state.wv.us/csr/>).

The application shall be submitted to the DAQ in triplicate. Please see the **Precautionary Notice — Claim of Confidentiality**, for information entitled to confidential treatment as provided by West Virginia Legislative Rule 45CSR31, entitled “Confidential Information.”

If you have any questions concerning the forms, please contact a member of the permit work group at (304) 926-0475.

The completed permit applications should be sent to:

Assistant Director for Permitting
WV Department of Environmental Protection
Division of Air Quality
601 57th Street, SE
Charleston, WV 25304

**WEST VIRGINIA
STATE TAX DEPARTMENT
BUSINESS REGISTRATION
CERTIFICATE**

ISSUED TO:
**POLING-ST CLAIR FUNERAL HOME INC
95 S KANAWHA ST
BUCKHANNON, WV 26201-2639**

BUSINESS REGISTRATION ACCOUNT NUMBER: 1038-5428

This certificate is issued on: 07/6/2011

*This certificate is issued by
the West Virginia State Tax Commissioner
in accordance with Chapter 11, Article 12, of the West Virginia Code*

*The person or organization identified on this certificate is registered
to conduct business in the State of West Virginia at the location above.*

This certificate is not transferrable and must be displayed at the location for which issued.

This certificate shall be permanent until cessation of the business for which the certificate of registration was granted or until it is suspended, revoked or cancelled by the Tax Commissioner.

Change in name or change of location shall be considered a cessation of the business and a new certificate shall be required.

**TRAVELING/STREET VENDORS: Must carry a copy of this certificate in every vehicle operated by them.
CONTRACTORS, DRILLING OPERATORS, TIMBER/LOGGING OPERATIONS: Must have a copy of
this certificate displayed at every job site within West Virginia.**



STATE OF WEST VIRGINIA
State Tax Department, Tax Account Administration Div
P. O. Box 2666
Charleston, WV 25330-2666



Earl Ray Tomblin, Governor

Craig A. Griffith, Tax Commissioner

POLING-ST CLAIR FUNERAL HOME INC
95 S KANAWHA ST
BUCKHANNON WV 26201-2639

Letter Id: L0039453312
Issued: 07/06/2011
Account #: 1038-5428

00026102010000



RE: Business Registration Certificate

The West Virginia State Tax Department would like to thank you for registering your business. Enclosed is your Business Registration Certificate. This certificate shall be permanent until cessation of business or until suspended, revoked or cancelled. Changes in name, ownership or location are considered a cessation of business; a new Business Registration Certificate and applicable fees are required. Please review the certificate for accuracy.

This certificate must be prominently displayed at the location for which issued. Engaging in business without conspicuously posting a West Virginia Business Registration Certificate in the place of business is a crime and may subject you to fines per W.Va. Code § 11-9.

When contacting the State Tax Department, refer to the appropriate account number listed on the back of this page. The taxes listed may not be all the taxes for which you are responsible. Account numbers for taxes are printed on the tax returns mailed by the State Tax Department. Failure to timely file tax returns may result in penalties for late filing.

Should the nature of your business activity or business ownership change, your liability for these and other taxes will change accordingly.

To learn more about these taxes and the services offered by the West Virginia State Tax Department, visit our web site at www.wvtax.gov.

Enclosure

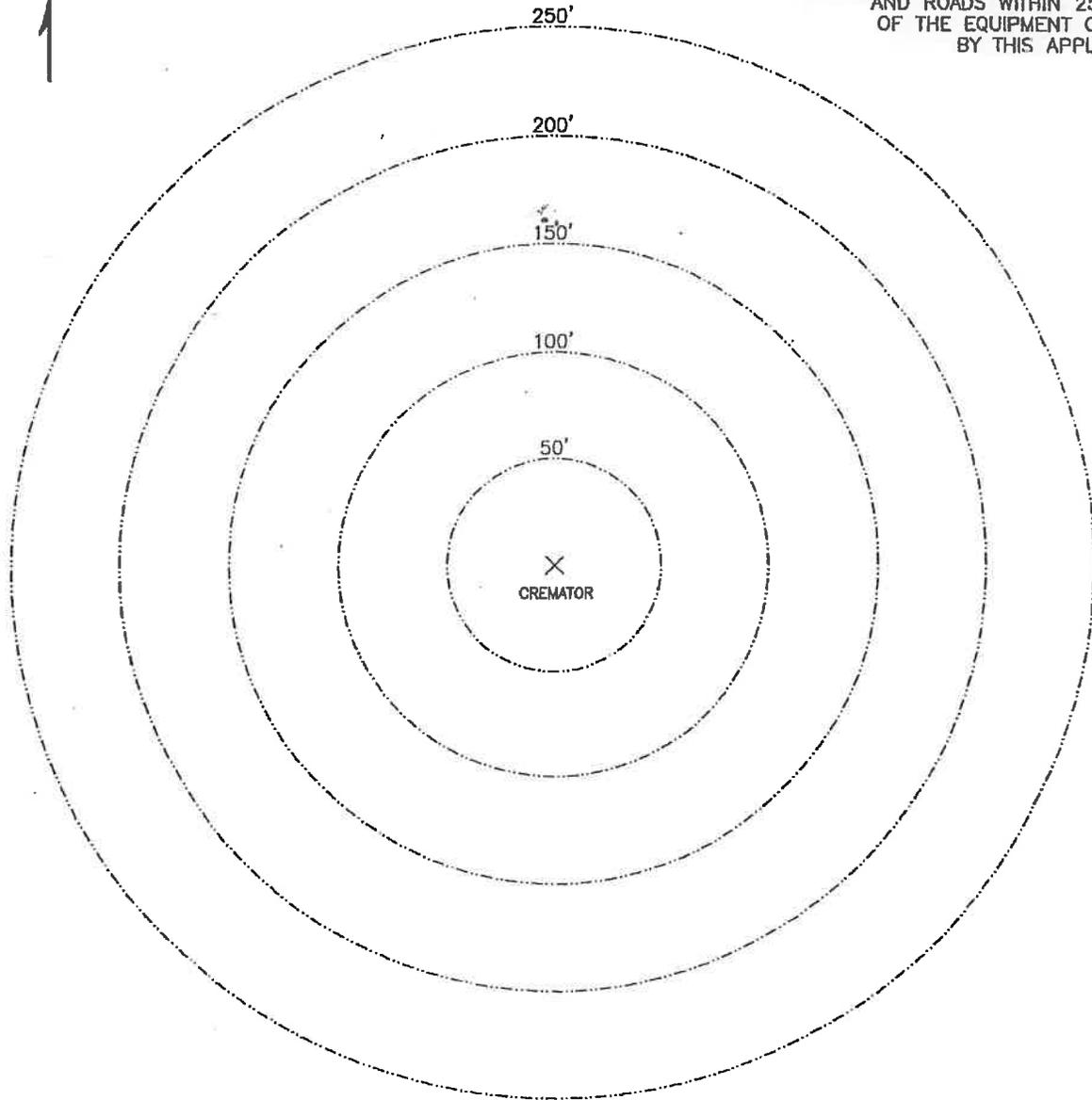
atL006 v.4

PLOT PLAN

NORTH



SHOW ALL SURROUNDING BUILDINGS
AND ROADS WITHIN 250 FEET
OF THE EQUIPMENT COVERED
BY THIS APPLICATION.



INSTRUCTIONS

1. INDICATE LOCATION AND TYPE OF BUILDING BY THE USE OF SMALL NUMBERED CIRCLES WITH THE DESCRIPTION BELOW.
2. SHOW ROADS AS LINES REPRESENTING THE ROAD EDGES. INDICATE STREET NAMES AND HIGHWAY NUMBERS.
3. SHOW WOODED OR CLEARED AREA BY APPROXIMATE BOUNDARY LINES AND THE WORDS "WOODS," "CLEARED," "CORNFIELD," ETC.

<u>STRUCTURE</u>	<u>DESCRIPTION</u>
(1)	House
(2)	Garage
(3)	Funeral Home
(4)	
(5)	
(6)	
(7)	
(8)	
(9)	
(10)	No longer there



Measure distance

Total distance: 250.33 ft (76.30 m)

PLOT PLAN - GUIDELINES

INSTRUCTIONS

Submit an accurately scaled plot plan(s) or plant map(s) with enough detail to show the locations of process equipment, stacks or vents, flares, storage tanks, plant roads, and haulways (indicate if paved (P) or unpaved (U)), stockpiles, material loading/unloading stations, major air pollution control equipment, wastewater treatment ponds, etc. The plant entrances/exits from the nearest state road should also be shown.

In general, a scale between 1" = 10' and 1" = 200' should be used, with the determining factor being the level of detail necessary to show process areas, major equipment, emission points, etc. An overall small scale plot plan (e.g., 1" = 300') should be submitted in addition to larger scale plot plans for process or activity areas (e.g., 1" = 50'), if the plant is too large to permit adequate detail on a single plot plan. Process or activity areas may be grouped for the enlargements as long as sufficient detail is shown.

Reference Coordinates and the elevation above mean sea level at those coordinates for the plant must be provided. These coordinates should generally be provided for a point inside the plant boundary near the center of the property and should be accurate to within fifty meters in UTM coordinates (see US Geological Survey topographical maps).

The following items should be clearly shown on the plot plan(s):

1. Plant Name
2. Scale
3. True North
4. Appropriate reference coordinates.
5. Appropriate elevations.
6. Plant road and haulway segments, stockpiles, solids loading/unloading facilities, parking lots, etc.
7. Process/activity area name(s) and/or ID(s).
8. Emission points with ID.



WEST VIRGINIA DEPARTMENT OF ENVIRONMENTAL PROTECTION
DIVISION OF AIR QUALITY

601 57th Street, SE
 Charleston, WV 25304
 (304) 926-0475
www.dep.wv.gov/daq

**APPLICATION FOR NSR PERMIT
 AND
 TITLE V PERMIT REVISION
 (OPTIONAL)**

PLEASE CHECK ALL THAT APPLY TO NSR (45CSR13) (IF KNOWN):

- CONSTRUCTION MODIFICATION RELOCATION
 CLASS I ADMINISTRATIVE UPDATE TEMPORARY
 CLASS II ADMINISTRATIVE UPDATE AFTER-THE-FACT

PLEASE CHECK TYPE OF 45CSR30 (TITLE V) REVISION (IF ANY):

- ADMINISTRATIVE AMENDMENT MINOR MODIFICATION
 SIGNIFICANT MODIFICATION

IF ANY BOX ABOVE IS CHECKED, INCLUDE TITLE V REVISION INFORMATION AS ATTACHMENT S TO THIS APPLICATION

FOR TITLE V FACILITIES ONLY: Please refer to "Title V Revision Guidance" in order to determine your Title V Revision options (Appendix A, "Title V Permit Revision Flowchart") and ability to operate with the changes requested in this Permit Application.

Section I. General

1. Name of applicant (as registered with the WV Secretary of State's Office): <i>Poling-St. Claire Funeral Home, Inc</i> <i>Jeffrey C. St. Claire Pres.</i>		2. Federal Employer ID No. (FEIN): <i>55-0635154</i>	
3. Name of facility (if different from above): <i>Poling-St. Claire Funeral Home, Inc.</i>		4. The applicant is the: <input type="checkbox"/> OWNER <input type="checkbox"/> OPERATOR <input checked="" type="checkbox"/> BOTH	
5A. Applicant's mailing address: <i>955 Kanawha St Buckhannon, WV 26201</i>		5B. Facility's present physical address: <i>955 Kanawha St Buckhannon, WV 26201</i>	
6. West Virginia Business Registration. Is the applicant a resident of the State of West Virginia? <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO - If YES, provide a copy of the Certificate of Incorporation/Organization/Limited Partnership (one page) including any name change amendments or other Business Registration Certificate as Attachment A. - If NO, provide a copy of the Certificate of Authority/Authority of L.L.C./Registration (one page) including any name change amendments or other Business Certificate as Attachment A.			
7. If applicant is a subsidiary corporation, please provide the name of parent corporation:			
8. Does the applicant own, lease, have an option to buy or otherwise have control of the proposed site? <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO - If YES, please explain: <i>OWNS</i> - If NO, you are not eligible for a permit for this source.			
9. Type of plant or facility (stationary source) to be constructed, modified, relocated, administratively updated or temporarily permitted (e.g., coal preparation plant, primary crusher, etc.): <i>Human Crematory</i>		10. North American Industry Classification System (NAICS) code for the facility: <i>812220</i>	
11A. DAQ Plant ID No. (for existing facilities only): <i>-</i>		11B. List all current 45CSR13 and 45CSR30 (Title V) permit numbers associated with this process (for existing facilities only):	

All of the required forms and additional information can be found under the Permitting Section of DAQ's website, or requested by phone.

12A.

- For **Modifications, Administrative Updates or Temporary permits** at an existing facility, please provide directions to the *present location* of the facility from the nearest state road;
- For **Construction or Relocation permits**, please provide directions to the *proposed new site location* from the nearest state road. Include a **MAP** as **Attachment B**.

See attached plot plan diagram.

12.B. New site address (if applicable):

95 S Kanawha St
Buckhannon, WV 26201

12C. Nearest city or town:

Buckhannon

12D. County:

Upshur

12.E. UTM Northing (KM): 4315.619

12F. UTM Easting (KM): 566.904

12G. UTM Zone: 17N

13. Briefly describe the proposed change(s) at the facility:
Install one human cremation unit

14A. Provide the date of anticipated installation or change: 07/01/2016

- If this is an **After-The-Fact** permit application, provide the date upon which the proposed change did happen: / /

14B. Date of anticipated Start-Up if a permit is granted:

08/01/2016

14C. Provide a **Schedule** of the planned **Installation of/Change** to and **Start-Up** of each of the units proposed in this permit application as **Attachment C** (if more than one unit is involved).

15. Provide maximum projected **Operating Schedule** of activity/activities outlined in this application:

Hours Per Day 12 Days Per Week 6 Weeks Per Year 52

16. Is demolition or physical renovation at an existing facility involved? YES NO

17. **Risk Management Plans.** If this facility is subject to 112(r) of the 1990 CAAA, or will become subject due to proposed changes (for applicability help see www.epa.gov/ceppo), submit your **Risk Management Plan (RMP)** to U. S. EPA Region III.

18. **Regulatory Discussion.** List all Federal and State air pollution control regulations that you believe are applicable to the proposed process (*if known*). A list of possible applicable requirements is also included in Attachment S of this application (Title V Permit Revision Information). Discuss applicability and proposed demonstration(s) of compliance (*if known*). Provide this information as **Attachment D**.

Section II. Additional attachments and supporting documents.

19. Include a check payable to WVDEP – Division of Air Quality with the appropriate **application fee** (per 45CSR22 and 45CSR13).

20. Include a **Table of Contents** as the first page of your application package.

21. Provide a **Plot Plan**, e.g. scaled map(s) and/or sketch(es) showing the location of the property on which the stationary source(s) is or is to be located as **Attachment E** (Refer to **Plot Plan Guidance**).

- Indicate the location of the nearest occupied structure (e.g. church, school, business, residence).

22. Provide a **Detailed Process Flow Diagram(s)** showing each proposed or modified emissions unit, emission point and control device as **Attachment F**.

23. Provide a **Process Description** as **Attachment G**.

- Also describe and quantify to the extent possible all changes made to the facility since the last permit review (if applicable).

All of the required forms and additional information can be found under the Permitting Section of DAQ's website, or requested by phone.

24. Provide **Material Safety Data Sheets (MSDS)** for all materials processed, used or produced as **Attachment H**.
 – For chemical processes, provide a MSDS for each compound emitted to **the air**.

25. Fill out the **Emission Units Table** and provide it as **Attachment I**.

26. Fill out the **Emission Points Data Summary Sheet (Table 1 and Table 2)** and provide it as **Attachment J**.

27. Fill out the **Fugitive Emissions Data Summary Sheet** and provide it as **Attachment K**.

28. Check all applicable **Emissions Unit Data Sheets** listed below:

<input type="checkbox"/> Bulk Liquid Transfer Operations	<input type="checkbox"/> Haul Road Emissions	<input type="checkbox"/> Quarry
<input type="checkbox"/> Chemical Processes	<input type="checkbox"/> Hot Mix Asphalt Plant	<input type="checkbox"/> Solid Materials Sizing, Handling and Storage Facilities
<input type="checkbox"/> Concrete Batch Plant	<input type="checkbox"/> Incinerator	<input type="checkbox"/> Storage Tanks
<input type="checkbox"/> Grey Iron and Steel Foundry	<input type="checkbox"/> Indirect Heat Exchanger	
<input type="checkbox"/> General Emission Unit, specify		

Fill out and provide the **Emissions Unit Data Sheet(s)** as **Attachment L**.

29. Check all applicable **Air Pollution Control Device Sheets** listed below:

<input type="checkbox"/> Absorption Systems	<input type="checkbox"/> Baghouse	<input type="checkbox"/> Flare
<input type="checkbox"/> Adsorption Systems	<input type="checkbox"/> Condenser	<input type="checkbox"/> Mechanical Collector
<input type="checkbox"/> Afterburner	<input type="checkbox"/> Electrostatic Precipitator	<input type="checkbox"/> Wet Collecting System
<input type="checkbox"/> Other Collectors, specify		

Fill out and provide the **Air Pollution Control Device Sheet(s)** as **Attachment M**.

30. Provide all **Supporting Emissions Calculations** as **Attachment N**, or attach the calculations directly to the forms listed in Items 28 through 31.

31. **Monitoring, Recordkeeping, Reporting and Testing Plans.** Attach proposed monitoring, recordkeeping, reporting and testing plans in order to demonstrate compliance with the proposed emissions limits and operating parameters in this permit application. Provide this information as **Attachment O**.

➤ Please be aware that all permits must be practically enforceable whether or not the applicant chooses to propose such measures. Additionally, the DAQ may not be able to accept all measures proposed by the applicant. If none of these plans are proposed by the applicant, DAQ will develop such plans and include them in the permit.

32. **Public Notice.** At the time that the application is submitted, place a **Class I Legal Advertisement** in a newspaper of general circulation in the area where the source is or will be located (See 45CSR§13-8.3 through 45CSR§13-8.5 and *Example Legal Advertisement* for details). Please submit the **Affidavit of Publication** as **Attachment P** immediately upon receipt.

33. **Business Confidentiality Claims.** Does this application include confidential information (per 45CSR31)?
 YES NO

➤ If YES, identify each segment of information on each page that is submitted as confidential and provide justification for each segment claimed confidential, including the criteria under 45CSR§31-4.1, and in accordance with the DAQ's *"Precautionary Notice – Claims of Confidentiality"* guidance found in the *General Instructions* as **Attachment Q**.

Section III. Certification of Information

34. **Authority/Delegation of Authority.** Only required when someone other than the responsible official signs the application. Check applicable **Authority Form** below:

<input checked="" type="checkbox"/> Authority of Corporation or Other Business Entity	<input type="checkbox"/> Authority of Partnership
<input type="checkbox"/> Authority of Governmental Agency	<input type="checkbox"/> Authority of Limited Partnership

Submit completed and signed **Authority Form** as **Attachment R**.

All of the required forms and additional information can be found under the Permitting Section of DAQ's website, or requested by phone.

35A. **Certification of Information.** To certify this permit application, a Responsible Official (per 45CSR§13-2.22 and 45CSR§30-2.28) or Authorized Representative shall check the appropriate box and sign below.

Certification of Truth, Accuracy, and Completeness

I, the undersigned **Responsible Official** / **Authorized Representative**, hereby certify that all information contained in this application and any supporting documents appended hereto, is true, accurate, and complete based on information and belief after reasonable inquiry I further agree to assume responsibility for the construction, modification and/or relocation and operation of the stationary source described herein in accordance with this application and any amendments thereto, as well as the Department of Environmental Protection, Division of Air Quality permit issued in accordance with this application, along with all applicable rules and regulations of the West Virginia Division of Air Quality and W.Va. Code § 22-5-1 et seq. (State Air Pollution Control Act). If the business or agency changes its Responsible Official or Authorized Representative, the Director of the Division of Air Quality will be notified in writing within 30 days of the official change.

Compliance Certification

Except for requirements identified in the Title V Application for which compliance is not achieved, I, the undersigned hereby certify that, based on information and belief formed after reasonable inquiry, all air contaminant sources identified in this application are in compliance with all applicable requirements.

SIGNATURE: <u>Jeffrey C. St. Claire</u> <small>(Please use blue ink)</small>		DATE: <u>12/27/15</u> <small>(Please use blue ink)</small>
35B. Printed name of signee: <u>Jeffrey C. St. Claire</u>		35C. Title: <u>President</u>
35D. E-mail: <u>Polingstclair@gmail.com</u>	36E. Phone: <u>304-472-1000</u>	36F. FAX: <u>304-472-0563</u>
36A. Printed name of contact person (if different from above): <u>Same</u>		36B. Title:
36C. E-mail:	36D. Phone:	36E. FAX:

PLEASE CHECK ALL APPLICABLE ATTACHMENTS INCLUDED WITH THIS PERMIT APPLICATION:

- | | |
|--|---|
| <input checked="" type="checkbox"/> Attachment A: Business Certificate | <input type="checkbox"/> Attachment K: Fugitive Emissions Data Summary Sheet |
| <input checked="" type="checkbox"/> Attachment B: Map(s) | <input checked="" type="checkbox"/> Attachment L: Emissions Unit Data Sheet(s) |
| <input type="checkbox"/> Attachment C: Installation and Start Up Schedule | <input type="checkbox"/> Attachment M: Air Pollution Control Device Sheet(s) |
| <input type="checkbox"/> Attachment D: Regulatory Discussion | <input checked="" type="checkbox"/> Attachment N: Supporting Emissions Calculations |
| <input checked="" type="checkbox"/> Attachment E: Plot Plan | <input type="checkbox"/> Attachment O: Monitoring/Recordkeeping/Reporting/Testing Plans |
| <input checked="" type="checkbox"/> Attachment F: Detailed Process Flow Diagram(s) | <input checked="" type="checkbox"/> Attachment P: Public Notice |
| <input type="checkbox"/> Attachment G: Process Description | <input type="checkbox"/> Attachment Q: Business Confidential Claims |
| <input type="checkbox"/> Attachment H: Material Safety Data Sheets (MSDS) | <input type="checkbox"/> Attachment R: Authority Forms |
| <input checked="" type="checkbox"/> Attachment I: Emission Units Table | <input type="checkbox"/> Attachment S: Title V Permit Revision Information |
| <input checked="" type="checkbox"/> Attachment J: Emission Points Data Summary Sheet | <input checked="" type="checkbox"/> Application Fee |

Please mail an original and three (3) copies of the complete permit application with the signature(s) to the DAQ, Permitting Section, at the address listed on the first page of this application. Please DO NOT fax permit applications.

FOR AGENCY USE ONLY – IF THIS IS A TITLE V SOURCE:

- Forward 1 copy of the application to the Title V Permitting Group and:
- For Title V Administrative Amendments:
 - NSR permit writer should notify Title V permit writer of draft permit,
- For Title V Minor Modifications:
 - Title V permit writer should send appropriate notification to EPA and affected states within 5 days of receipt,
 - NSR permit writer should notify Title V permit writer of draft permit.
- For Title V Significant Modifications processed in parallel with NSR Permit revision:
 - NSR permit writer should notify a Title V permit writer of draft permit,
 - Public notice should reference both 45CSR13 and Title V permits,
 - EPA has 45 day review period of a draft permit.

All of the required forms and additional information can be found under the Permitting Section of DAQ's website, or requested by phone.

EQUIPMENT LIST FORM

Type Change, if any (New, Modification, or Removal)	Date of Change	Emissions Unit (Source)		Air Pollution Control Device		Emission Point	
		ID No. ¹	Source	ID No. ²	Device Type	ID No. ³	Emission Type ⁴
NEW		1S	MCD IE43-PPI		N/A	1E	VERTICAL STACK NO RAIN CAP

Include all process equipment that will be part of this permit application review, including previously unpermitted emissions units (sources) and air pollution control devices.

¹ Number as 1s, 2s, 3s . . . or other appropriate designation. Must match process flow diagram.
² Number as 1c, 2c, 3c . . . or other appropriate designation. Must match process flow diagram.
³ Number as 1e, 2e, 3e . . . or other appropriate designation. Must match process flow diagram.
⁴ Please add descriptors such as upward vertical stack, downward vertical stack, horizontal stack, relief vent, rain cap, etc.

**Attachment J
EMISSION POINTS DATA SUMMARY SHEET**

Table 1: Emissions Data															
Emission Point ID No. (Must match Emission Units Table & Plot Plan)	Emission Point Type ¹	Emission Unit Vented Through This Point (Must match Emission Units Table & Plot Plan)		Air Pollution Control Device (Must match Emission Units Table & Plot Plan)		Vent Time for Emission Unit (chemical processes only)		All Regulated Pollutants - Chemical Name/CAS ³ (Speciate VOCs & HAPs)	Maximum Potential Uncontrolled Emissions ⁴		Maximum Potential Controlled Emissions ⁵		Emission Form or Phase (At exit conditions, Solid, Liquid or Gas/Vapor)	Est. Method Used ⁶	Emission Concentration ⁷ (ppmv or mg/m ³)
		ID No.	Source	ID No.	Device Type	Short Term ²	Max (hr/yr)		lb/hr	ton/yr	lb/hr	ton/yr			
1S	Vertical Stack No Rain Cap	1E	PPI	N/A	N/A	N/A	N/A	PM CO VOC SO2 NOx	0.525 0.75 0.225 0.188 0.225	0.9828 1.404 0.4212 0.351 0.4212	0.525 0.75 0.225 0.188 0.225	0.9828 1.404 0.4212 0.351 0.4212	SOLID GAS GAS GAS GAS	EE EE EE EE EE	0.06 gr/dscf 161.63 ppmv 84.14 ppmv 17.46 ppmv 29.40 ppmv

The EMISSION POINTS DATA SUMMARY SHEET provides a summation of emissions by emission unit. Note that uncaptured process emission unit emissions are not typically considered to be fugitive and must be accounted for on the appropriate EMISSIONS UNIT DATA SHEET and on the EMISSION POINTS DATA SUMMARY SHEET. Please note that total emissions from the source are equal to all vented emissions, all fugitive emissions, plus all other emissions (e.g. uncaptured emissions). Please complete the FUGITIVE EMISSIONS DATA SUMMARY SHEET for fugitive emission activities.

- Please add descriptors such as upward vertical stack, downward vertical stack, horizontal stack, relief vent, rain cap, etc.
- Indicate by "C" if venting is continuous. Otherwise, specify the average short-term venting rate with units, for intermittent venting (i.e., 15 min/hr). Indicate as many rates as needed to clarify frequency of venting (e.g., 5 min/day, 2 days/wk).
- List all regulated air pollutants. Speciate VOCs, including all HAPs. Follow chemical name with Chemical Abstracts Service (CAS) number. LIST Acids, CO, CS₂, VOCs, H₂S, Inorganics, Lead, Organics, O₃, NO, NO₂, SO₂, SO₃, all applicable Greenhouse Gases (including CO₂ and methane), etc. DO NOT LIST H₂, H₂O, N₂, O₂, and Noble Gases.
- Give maximum potential emission rate with no control equipment operating. If emissions occur for less than 1 hr, then record emissions per batch in minutes (e.g. 5 lb VOC/20 minute batch).
- Give maximum potential emission rate with proposed control equipment operating. If emissions occur for less than 1 hr, then record emissions per batch in minutes (e.g. 5 lb VOC/20 minute batch).
- Indicate method used to determine emission rate as follows: MB = material balance; ST = stack test (give date of test); EE = engineering estimate; O = other (specify).
- Provide for all pollutant emissions. Typically, the units of parts per million by volume (ppmv) are used. If the emission is a mineral acid (sulfuric, nitric, hydrochloric or phosphoric) use units of milligram per dry cubic meter (mg/m³) at standard conditions (68 °F and 29.92 inches Hg) (see 45CSR7). If the pollutant is SO₂, use units of ppmv (See 45CSR10).

Table 2.1-12 (Metric And English Units). UNCONTROLLED EMISSION FACTORS FOR REFUSE COMBUSTORS OTHER THAN MUNICIPAL WASTE^a

*** VOC

EMISSION FACTOR RATING: D

Combustor Type	PM		SO _x		CO		Total Organic Compounds ^b		NO _x	
	kg/Mg	lb/ton	kg/Mg	lb/ton	kg/Mg	lb/ton	kg/Mg	lb/ton	kg/Mg	lb/ton
Industrial/commercial										
Multiple chamber	3.50 E+00	7.00 E+00	1.25 E+00	2.50 E+00	5.00 E+00	1.00 E+01	1.50 E+00	3.00 E+00	1.50 E+00	3.00 E+00
Single chamber	7.50 E+00	1.50 E+01	1.25 E+00	2.50 E+00	1.00 E+01	2.00 E+01	7.50 E+01	1.50 E+01	1.00 E+00	2.00 E+00
Trench										
Wood (SCC 5-01-005-10, 5-03-001-06)	6.50 E+00	1.30 E+01	5.00 E-02	1.00 E-01	ND	ND	ND	ND	2.00 E+00	4.00 E+00
Rubber tires (SCC 5-01-005-11, 5-03-001-07)	6.90 E+01	1.38 E+02	ND	ND	ND	ND	ND	ND	ND	ND
Municipal refuse (SCC 5-01-005-12, 5-03-001-09)	1.85 E+01	3.70 E+01	1.25 E+00	2.50 E+00	ND	ND	ND	ND	ND	ND
Flue-fed single chamber	1.50 E+01	3.00 E+01	2.50 E-01	5.00 E-01	1.00 E+01	2.00 E+01	7.50 E+00	1.50 E+01	1.50 E+00	3.00 E+00
Flue-fed (modified)	3.00 E+00	6.00 E+00	2.50 E-01	5.00 E-01	5.00 E+00	1.00 E+01	1.50 E+00	3.00 E+00	5.00 E+00	1.00 E+01
Domestic single chamber (no SCC)										
Without primary burner	1.75 E+01	3.50 E+01	2.50 E-01	5.00 E-01	1.50 E+02	3.00 E+02	5.00 E+01	1.00 E+02	5.00 E-01	1.00 E+00
With primary burner	3.50 E+00	7.00 E+00	2.50 E-01	5.00 E-01	Neg	Neg	1.00 E+00	2.00 E+00	1.00 E+00	2.00 E+00

^a References 116-123. ND = no data. SCC = Source Classification Code. Neg = negligible.

^b Expressed as methane.

**Attachment L
Emission Unit Data Sheet
(INCINERATOR)**

Control Device ID No. (must match List Form):

Equipment Information

1. Manufacturer: Matthews Cremation Division	2. Model No. IE43-PPI (Power Pak I)
3. On a separate sheet sketch or draw the proposed incinerator showing the location and dimensions (inside and out) of (1) the primary combustion chamber, (2) the secondary combustion chamber, (3) the flame port, (4) auxiliary burners, and (5) dampers with special emphasis on dimensions of the flame port and secondary combustion chambers (inside) . Also, sketch in the minimum distance the gas travels through the secondary combustion chamber.	
4. Rated capacity of the incinerator for the type of waste to be burned: Maximum: 150 lb/hr Typical: 150 lb/hr Annual: 657 tons/yr	
5. By what means is waste charged? <input checked="" type="checkbox"/> Batch <input type="checkbox"/> Continuous <input type="checkbox"/> Periodically	
6. Type: <input checked="" type="checkbox"/> Multiple Chamber <input type="checkbox"/> Single Chamber <input type="checkbox"/> Other, specify:	
7. Projected operating schedule: 12 hr/day 312 day/yr	

Primary Combustion Chamber

8. Volume: 64 ft ³	9. Effective grate area: 26.37 ft ²
10. Maximum temperature: 1800 °F	11. Burning rate: 6 lb/ft ² /hr
12. Heat release in primary chamber: 13000 BTU/hr/ft ³	13. Total heat release in incinerator: 15000 BTU/hr/ft ³

Secondary Combustion Chamber

14. Volume: 74 ft ³	15. Cross sectional area: 2.45 ft ²
16. Volume of gas through secondary combustion chamber: 2811 ACFM @ 1400 °F	17. Gas velocity through secondary combustion chamber: 19.2 ft/sec
18. Minimum gas temperature: 1400 °F	19. Minimum retention time of gas: 2.45 sec
20. Minimum distance of gas travel through secondary combustion chamber: 20 ft	21. Location of air admission: Draft Inducer at base of stack

Flame Port

22. Flame port area: 2.95 ft ²	23. Velocity through flame port: 15.9 ft/sec
---	--

Dampers

24. Type:	25. Number
26. Diameter: inches	27. Capacity: ACFM @ °F

Combustion Air

<p>28. Type of draft: <input type="checkbox"/> Natural <input type="checkbox"/> Sliding damper <input checked="" type="checkbox"/> Forced <input type="checkbox"/> Barometric damper <input type="checkbox"/> Induced Windshielding? <input type="checkbox"/> Yes <input type="checkbox"/> No</p>	<p>29. If draft is forced or induced, describe ID fans or blowers:</p> <table style="width: 100%; border: none;"> <tr> <td style="padding-right: 20px;">Number</td> <td style="padding-right: 20px;">1</td> <td></td> </tr> <tr> <td>HP rating</td> <td>5</td> <td>HP</td> </tr> <tr> <td>Rated flow</td> <td>2000</td> <td>ft³/min</td> </tr> <tr> <td>Rated speed</td> <td>3450</td> <td>RPM</td> </tr> <tr> <td>Fan rated draft</td> <td>6</td> <td>in. H₂O</td> </tr> <tr> <td>Volume</td> <td></td> <td>@ °F</td> </tr> </table>	Number	1		HP rating	5	HP	Rated flow	2000	ft ³ /min	Rated speed	3450	RPM	Fan rated draft	6	in. H ₂ O	Volume		@ °F
Number	1																		
HP rating	5	HP																	
Rated flow	2000	ft ³ /min																	
Rated speed	3450	RPM																	
Fan rated draft	6	in. H ₂ O																	
Volume		@ °F																	
<p>30. Theoretical air/refuse ratio: 0.75 lb air/lb refuse</p>																			
<p>31. Percent of total air applied as:</p> <table style="width: 100%; border: none;"> <tr> <td style="text-align: center;">100</td> <td style="text-align: center;">overfire air</td> </tr> <tr> <td style="text-align: center;">0</td> <td style="text-align: center;">underfire air</td> </tr> </table>		100	overfire air	0	underfire air														
100	overfire air																		
0	underfire air																		

Auxiliary Burners

<p>32. Proposed type and fuel: Natural Gas</p>	
<p>33. Primary Burner</p> <p>Capacity: 0.6 (operating) MMBTU/hr Number: 1 Manufacture: Eclipse Model: TJ-75 Estimated capacity: 600,000 BTU/hr Fuel: Nat Gas How controlled? Timers Is there a temperature indicator? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No How temperature recorded?</p>	<p>34. Secondary Burner</p> <p>Capacity: 1.2 (operating) MMBTU/hr Number: 1 Manufacture: Eclipse Model: TJ-150 Estimated capacity: 1,200,000 BTU/hr Fuel: Nat Gas How controlled? Timers Is there a temperature indicator? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No How temperature recorded? Chart Recorder</p>

Miscellaneous Devices and Controls

<p>35. Automatic loading device. <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No If yes, describe.</p>	<p>36. Self closing doors. <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No</p>
<p>37. Sparks arrestor <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No</p>	<p>38. Flame failure protection equipment <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No</p>
<p>39. Method of creating turbulence for combustion gases. Describe. Directional Changes, Baffle</p>	<p>40. Method of cleaning secondary or settling chamber. Describe. Cleanout Door</p>
<p>41. Other interlocking devices or controls. If yes, describe. <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Door limit switch to shut off cremation burner</p>	

Installation

<p>42. Indoor Installation: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No If yes, describe method of supplying combustion air.</p>	<p>43. Outdoor Installation: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No</p>
---	--

Emissions Stream

72. Emission rates:

Pollutant	Pounds per Hour lb/hr	grain/ACF	@ °F	PSIA	Tons per Year Tons/yr	Parts per Million ppm
CO	0.75				1.404	161.63
Hydrocarbons	0.225				0.4212	84.14
NO _x	0.225				0.4212	29.40
Pb	1E-04				0.0002	
PM ₁₀	0.525	0.06			0.9828	
SO ₂	0.188				0.351	17.46
VOCs	0.225				0.4212	84.14
Other (specify)						

73. If an *Air Pollution Control Device* is not submitted, the emission rates should be the same as those reported here "Maximum Potential and Maximum Actual Emissions" on the *Emission Points Data Summary Sheet*.

74. Emissions rates should be substantiated by submitting *stack test data* and/or *calculations*.

Fuel Usage Data

75. Estimated annual fuel cost: 10,000 \$	
76. Firing rate: Maximum: 1.9 mmBTU/hr Typical: 1.8 mmBTU/hr Design: 2.0 mmBTU/hr	77. Fuel type: <input checked="" type="checkbox"/> Natural Gas <input type="checkbox"/> Coal <input type="checkbox"/> Fuel Oil, No. <input type="checkbox"/> Other, specify:
78. Typical heating content of fuel: 1000 BTU/scf	79. Typical fuel sulfur content: Unknown wt. %
80. Typical fuel ash content: Unknown wt. %	81. Annual fuel usage: 74880 Therms
82. Please complete an <i>Air Pollution Control Device Sheet(s)</i> for the control(s) used on this Emission Unit, if applicable.	
83. Have you included the <i>air pollution rates</i> on the Emissions Points Data Summary Sheet? Yes	

84. Proposed Monitoring, Recordkeeping, Reporting, and Testing

Please propose monitoring, recordkeeping, and reporting in order to demonstrate compliance with the proposed operating parameters. Please propose testing in order to demonstrate compliance with the proposed emissions limits.

MONITORING PLAN: Please list (1) describe the process parameters and how they were chosen (2) the ranges and how they were established for monitoring to demonstrate compliance with the operation of this process equipment operation or air pollution control device.

Display of secondary chamber temperature to ensure proper operating temperature

TESTING PLAN: Please describe any proposed emissions testing for this process equipment or air pollution control device.

NONE

RECORDKEEPING: Please describe the proposed recordkeeping that will accompany the monitoring.

Chart Recorder would record secondary chamber temperature

REPORTING: Please describe the proposed frequency of reporting of the recordkeeping.

None unless requested by DEP

85. Please describe all operating ranges and maintenance procedures required by Manufacturer to maintain warranty.

No maintenance procedures required to maintain warranty. Operating temperature should be maintained below 2100F.

Attachment R
AUTHORITY OF CORPORATION
OR OTHER BUSINESS ENTITY (DOMESTIC OR FOREIGN)

TO: The West Virginia Department of Environmental Protection,
Division of Air Quality

DATE: January 13, 2016. _____

ATTN.: Director

Corporation's / other business entity's Federal Employer I.D. Number 55-0635154

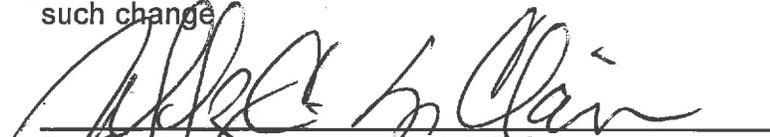
The undersigned hereby files with the West Virginia Department of Environmental Protection, Division of Air Quality, a permit application and hereby certifies that the said name is a trade name which is used in the conduct of an incorporated business or other business entity.

Further, the corporation or the business entity certifies as follows:

(1) Jeffrey C. St. Clair (is/are) the authorized representative(s) and in that capacity may represent the interest of the corporation or the business entity and may obligate and legally bind the corporation or the business entity.

(2) The corporation or the business entity is authorized to do business in the State of West Virginia.

(3) If the corporation or the business entity changes its authorized representative(s), the corporation or the business entity shall notify the Director of the West Virginia Department of Environmental Protection, Division of Air Quality, immediately upon such change.



President or Other Authorized Officer
(Vice President, Secretary, Treasurer or other
official in charge of a principal business function of
the corporation or the business entity)

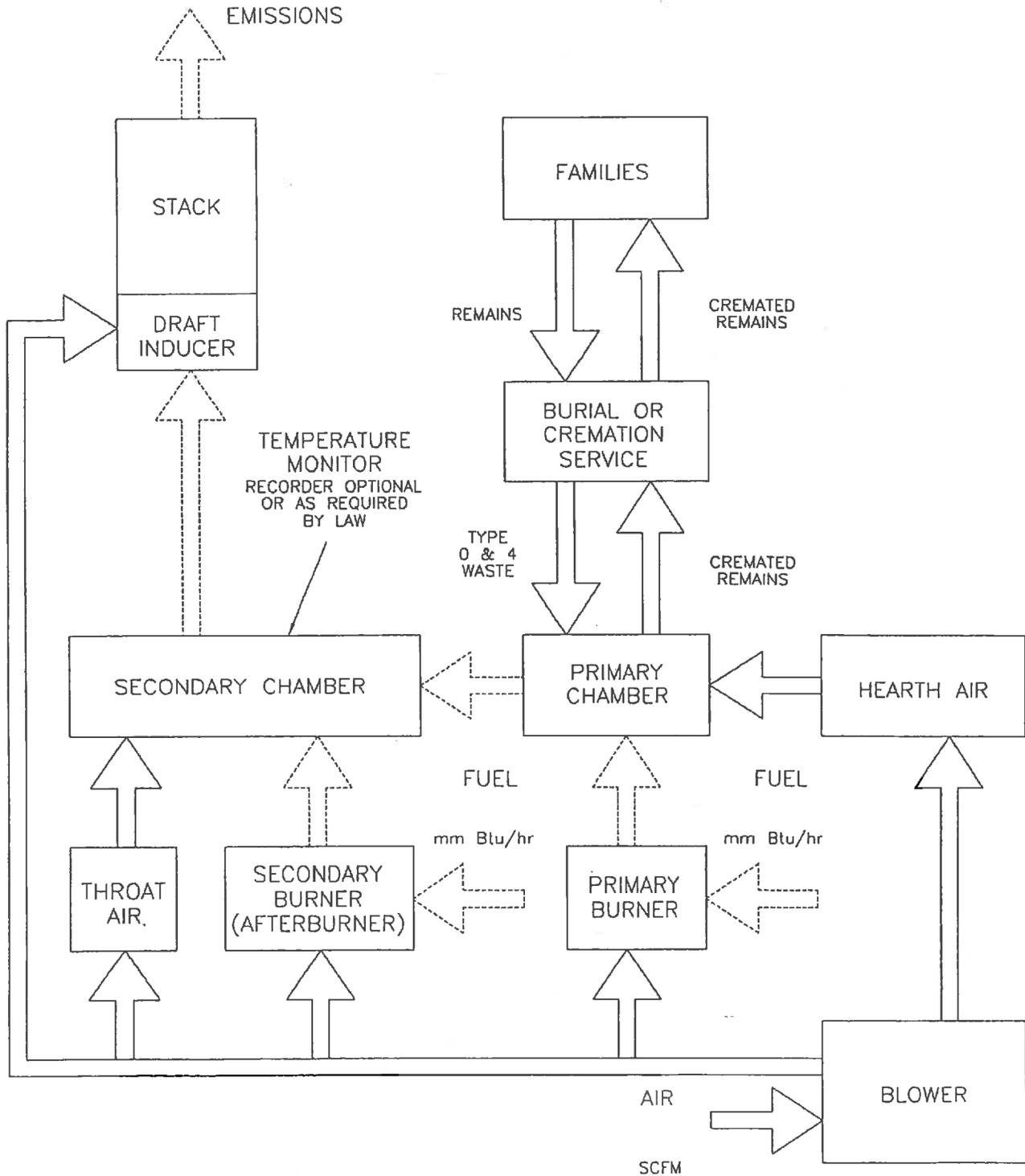
(If not the President, then the corporation or the business entity must submit certified minutes or bylaws stating legal authority of other authorized officer to bind the corporation or the business entity).

Secretary

Poling-St. Clair Funeral Home, Inc.

Name of Corporation or business entity

PROCESS FLOW DIAGRAM CREMATOR



SPECIFICATIONS- Model Power-Pak I

1. Equipment Type..... Model Power-Pak I
 - A. Model No. IE43-PPI
 - B. Underwriters Laboratories Listing and File No. .. 87E8; MH14647
2. Dimensions
 - A. Footprint 12' – 6 ½" x 5' – 3" (3.82 m x 1.60 m)
 - B. Maximum Length..... 14' – 8" (4.47 m)
 - C. Maximum Width 6' -5" (1.96 m)
 - D. Maximum Height 8' - 4" (2.54 m)
 - E. Chamber Loading Opening 25 ¾" H x 39 ½" W (654 mm x 1003 mm)
3. Weight 23,400 lbs. (10,614 kg)
4. Utility/Air Requirements
 - A. Gross Gas Input, Natural or LP Gas..... 2,000,000 BTU/hr. (2,110,112 kJ/h)
3,000,000 BTU/hr. (3,165,168 kJ/h) if operating
temperature is greater than 1,600° F (871° C)
 - Running Gas Pressure, Natural Gas..... 11 inches (279.4 mm) water column or greater
 - Running Gas Pressure, LP Gas 11 inches (279.4 mm) water column or greater
 - B. Electrical Supply..... 230 volt, 3Ø or 1Ø, 50/60 hz (other available)
 - C. Air Supply..... 2,500 cfm (70.8 standard m³/min)
5. Incineration Capacity 150 lbs./hr. (68 kg/h)
6. Typical Loading Capacity of Waste Types..... 750 lbs. (340.2 kg)
7. Construction and Safety Standards..... Incineration Institute of America, Underwriters
Laboratories, Canadian Standards Association
8. Steel Structure Construction
 - A. Frame 2" (51 mm) square tubing
 - B. Front/Rear Plates..... 3/8" (9.5 mm) plate
 - C. Floor Plates..... 3/16" (5 mm) plate
 - D. Outer Side Casing..... 12 gauge (3 mm) plate
 - E. Inner Side Casing..... 12 gauge (3 mm) plate
9. Stack Construction
 - A. Inner Wall..... 3" (76 mm) castable
 - B. Outer Wall..... 12 gauge (3 mm) stainless steel sheet with
welded seams. (unlined stack available)
10. Draft Nozzle Construction..... Schedule 40 type 316 s.s. pipe, welded
connections
11. Main Chamber Door Construction
 - A. Steel Shell..... 3/16" (5 mm) steel, welded with reinforcement
 - B. Outer Refractory..... 1" (25 mm) insulating block
 - C. Inner Refractory 4½" (110 mm) insulating firebrick

SPECIFICATIONS- Model Power-Pak I

12. Primary Chamber Wall Construction
 - A. Outer Casing Wall 12 gauge (3 mm) sheet
 - B. Inner Frame/Air Compartment..... 2" (51 mm) air compartment
 - C. Inner Casing Wall..... 12 gauge (3 mm) sheet
 - D. Outer Refractory Wall..... 5" (127 mm) insulating block
 - E. Inner Refractory Wall 4½" (114 mm) firebrick

13. Secondary Chamber Wall Construction
 - A. Outer Casing Wall..... 12 gauge (3 mm) sheet
 - B. Inner Frame/Air Compartment..... 2" (51 mm) air compartment
 - C. Inner Casing Wall..... 12 gauge (3 mm) sheet
 - D. Outer Refractory Wall..... 6" (152 mm) insulating block
 - E. Inner Refractory Wall 4½" (114 mm) firebrick

14. Refractory Temperature Ratings
 - A. Standard Firebrick..... 3,100° F. (1704° C)
 - B. Insulating Firebrick..... 2,600° F. (1427° C)
 - C. Castable Refractory (Hearth)..... 2,550° F. (1399° C)
 - D. Castable Refractory 2,550° F. (1399° C)
 - E. Insulating Block..... 1,900° F. (1038° C)
 - F. Bonding Mortar 3,200° F. (1760° C)

15. Chamber Volumes (not including external flues, stacks or chimneys)
 - A. Primary Chamber 64 cubic feet (1.8 m³)
 - B. Secondary Chamber 74 cubic feet (2.1 m³)

16. Emission Control Features
 - A. Secondary Chamber with Afterburner Included
 - B. Opacity Monitor and Controller with Visual and Audible Alarms..... Optional Upgrade Package
 - C. Microprocessor Temperature Control System Included

17. Operating Temperatures
 - A. Primary Chamber 32° F. - 1,800° F. (0° C - 982° C)
 - B. Secondary Chamber 1,400° F. - 1,800° F. (760° C - 982° C) as required

18. Secondary Chamber Retention Time > 1 second

19. Ash Removal Door functions as a heat shield. Sweep out beneath front door into hopper that fills collection pan.

SPECIFICATIONS- Model Power-Pak I

- 20. Safety Interlocks
 - A. High Gas Pressure Optional
 - B. Low Gas Pressure..... Optional
 - C. Blower Air Pressure Included
 - D. Door Position Included
 - E. Opacity..... Optional Upgrade Package
 - F. Motor Starter Function..... Included
 - G. Chamber Temperature Included
 - H. Motor Overload Included
 - I. Flame Quality Included
 - J. Burner Safe Start Included

- 22. Burner Description The nozzle mix burners used on this cremation equipment are industrial quality and designed for incinerator use.

- 23. Ultraviolet Flame Detection Ultraviolet flame detection has proven to be the most reliable means of flame safety. The system is completely sealed in a quartz capsule to eliminate problems, caused by moisture and dust created in the cremation process, which effect flame rod detectors.

- 24. Operating Panel Indicating Lights
 - A. Safe Run Included
 - B. Door Closed Included
 - C. Pollution Alarm Optional Upgrade Package
 - E. Afterburner On (Secondary Burner)..... Included
 - H. Afterburner (Secondary Burner) Reset Included
 - I. Cremation Burner Reset..... Included
 - H. High Fire Cremation Burner Included
 - H. Low Fire Cremation Burner Included
 - J. Hearth Air..... Included
 - K. Throat Air Off Included

- 25. Automatic Timer Functions
 - A. Master Cycle Included
 - B. Hearth Air..... Optional Upgrade Package
 - C. Throat Air Optional Upgrade Package
 - D. Pollution Monitoring..... Optional Upgrade Package
 - E. Cremation Burner Hi - Low Optional Upgrade Package
 - F. Cool Down Included

- 26. Exterior Finish
 - A. Primer 2 coats rust inhibiting
 - B. Finish 2 coats textured finish

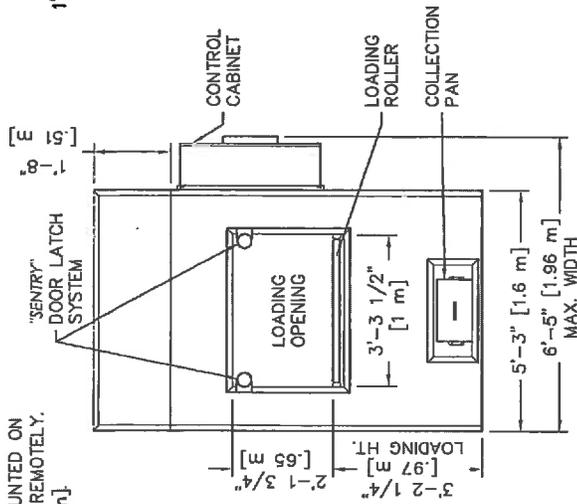
SPECIFICATIONS- Model Power-Pak I

- 27. Start-Up and Training..... Startup of cremation equipment and training of operators to properly operate and maintain the equipment is performed on-site under actual operating conditions. Included is a comprehensive owner's manual, with details on the equipment, its components and proper operation.

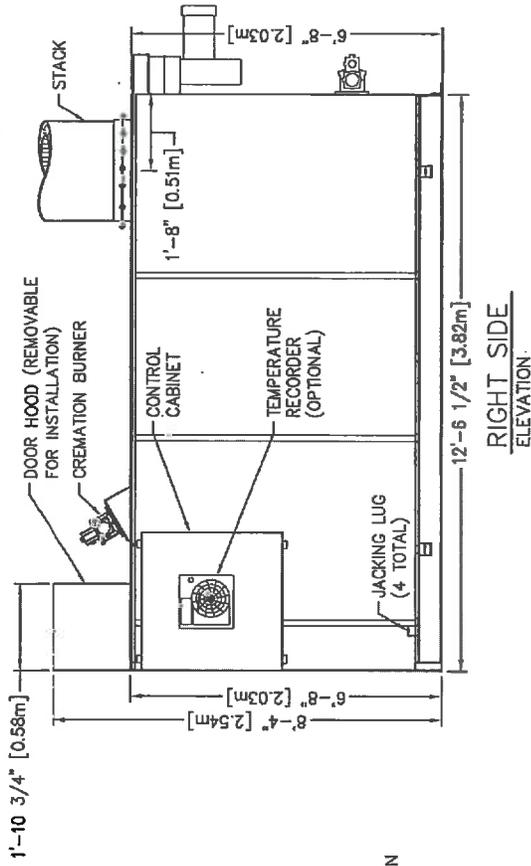
- 28. Environmental Submittals Complete technical portion of state environmental permits. Engineering calculations, technical data, existing stack test results and equipment blueprints provided.

NOTES:

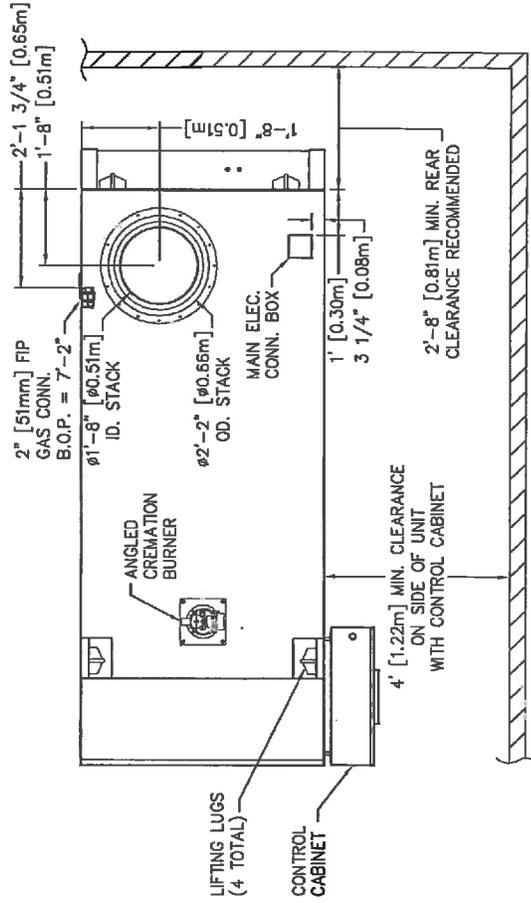
- CONTROL CABINET CAN BE MOUNTED ON THE LEFT OR RIGHT SIDE, OR REMOTELY.
- CHAMBER WIDTH IS 39" [0.99m]



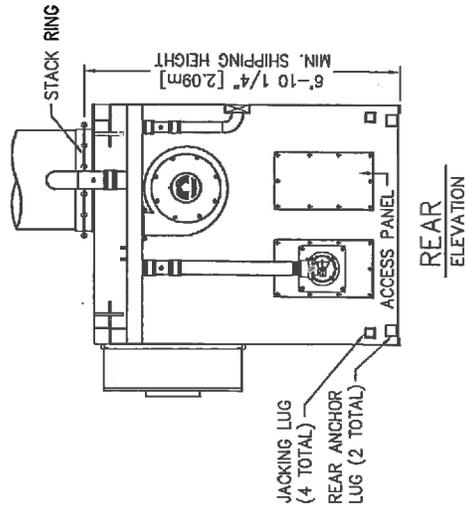
FRONT ELEVATION



RIGHT SIDE ELEVATION



PLAN VIEW



REAR ELEVATION

Mathews
CREMATION DIVISION
2045 Sprint Boulevard
Apopka, Florida 32703
USA

POWER-PAK I

PLAN & ELEVATIONS INCL: CLEARANCES, REQUIREMENTS & RECOMMENDATIONS

DRAWN BY:	JG	DATE:	03.20.2014	REVISION:	
APPROVED BY:		DATE:	12.09.2014	GENERAL MODIFICATIONS	2
SCALE:	1/4" = 1'-0"	SHEET:	1 OF 3	GENERAL MODIFICATIONS	3
DWG FILE:	PPI-MARKETING\PLANELEV\VR3_2004				
DWG NUMBER:	1 09-003				

CREMATOR CLEARANCES

RECOMMENDED	MINIMUM
TOP: 2 FEET [610 mm]	6 INCHES [152 mm]
CABINET SIDE: 4 FEET [1,22 m]	4 FEET [1,22 m]
OTHER SIDE: 2 FEET [610 mm]	6 INCHES [152 mm]
FRONT: 9 FEET [2,74 m]	8 FEET [2,44 m]
REAR: 3 FEET [0,91 m]	32 INCHES [812 mm]
STACK: 9 INCHES [229 mm]	9 INCHES [229 mm]

- FOR CLEARANCES OTHER THAN THOSE SHOWN, OR FOR SPECIAL REQUIREMENTS, CONSULT YOUR MCD REP.
- FROM HIGHEST POINT ON UNIT.
- CONTROL CABINET MOUNTS ON UNIT'S LEFT OR RIGHT SIDES, OR REMOTELY. (SEE PLAN VIEW, SHEET 1).
- REAR OF UNIT REFERS TO THE "BACK PLATE", RATHER THAN THE BACK OF THE "WHISPER SHIELD". (SEE PLAN VIEW, SHEET 1).

CREMATOR REQUIREMENTS

FUEL: A PRESSURE REGULATOR ADJUSTABLE TO 11" [279 mm] W.C. FOR NATURAL GAS, OR 11" [279 mm] W.C. FOR LP GAS.

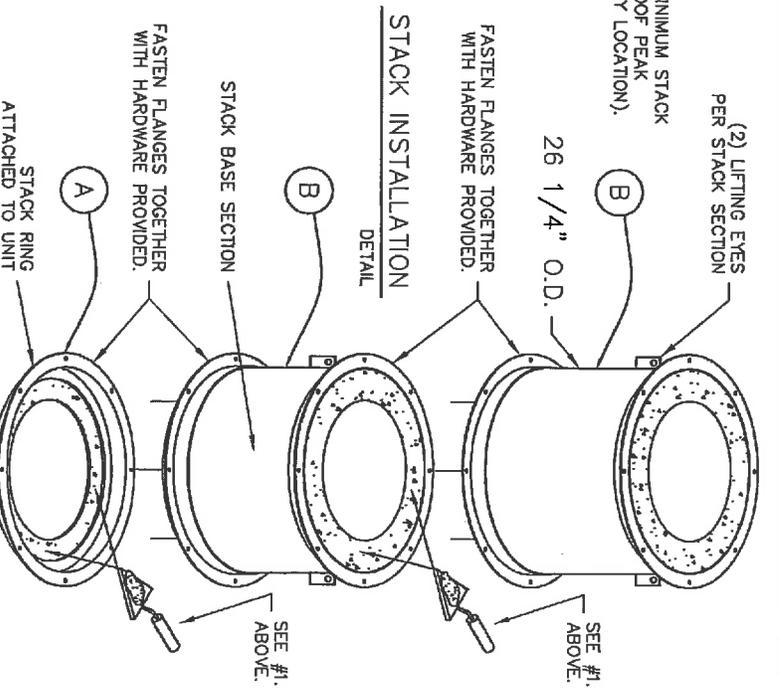
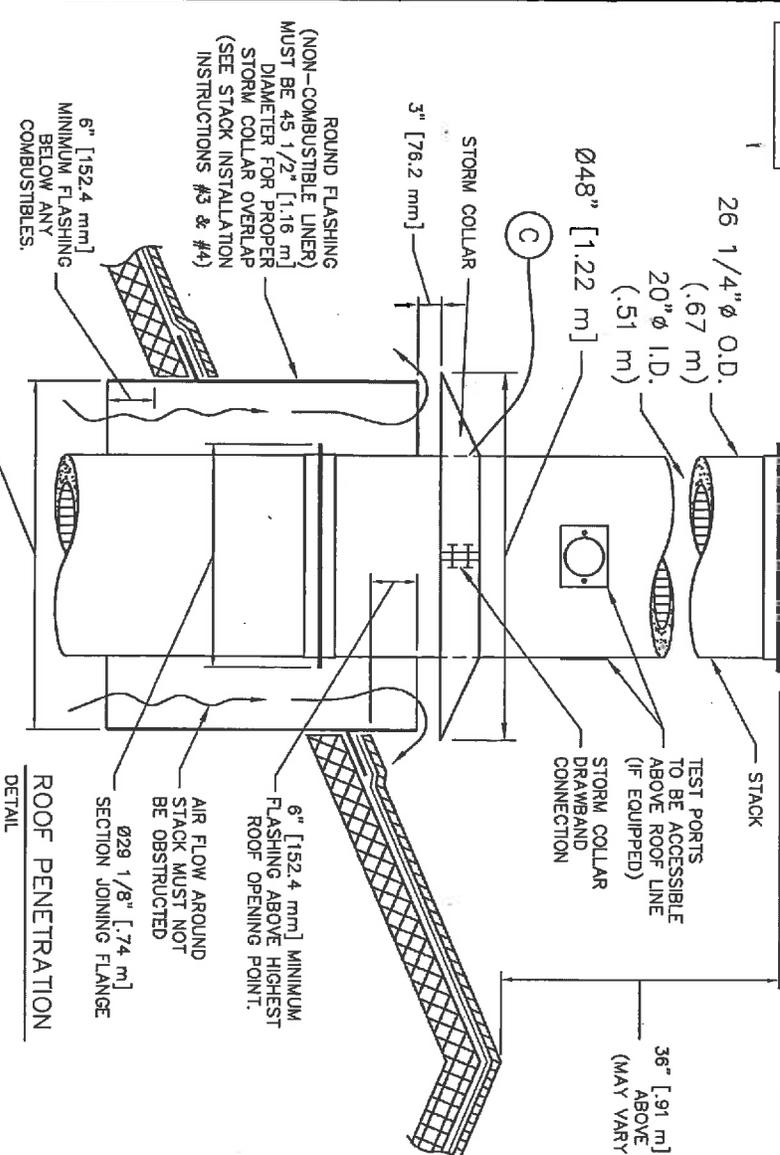
CAPACITY: RANGES FROM 2.0 TO 3.0 MILLION BTU/HR [2.1 TO 3.1 MILLION KILOJULES/HR] DEPENDING UPON AMOUNT OF BURNERS.

ELECTRICAL: 230 VOLT, 3Ø, (40A BREAKER) AND 115v (10A BREAKER), OR 230 VOLT, 1Ø, (70A BREAKER) AND 115v (10A BREAKER) 50/60 HERTZ

AIR: LOUVER NEAR THE REAR OF THE UNIT CAPABLE OF PASSING 2,500 CU FT/MIN [70.8 CU M/MIN] OF FREE AIR (36" X 36") [914 mm X 914 mm].

STACK INSTALLATION INSTRUCTIONS

- APPLY A 1/2" THICK MORTAR JOINT TO EXPOSED REFRACTORY SURFACE IN STACK RING. LOWER THE BASE STACK SECTION (B) ONTO STACK RING (A) AND FASTEN WITH HARDWARE PROVIDED (NO MORE THAN (2) STACK SECTIONS SHALL BE LIFTED TOGETHER). REPEAT PROCESS FOR REMAINING STACK SECTIONS. IF SECTIONS OF VARYING LENGTHS ARE SUPPLIED, ASSEMBLE AS TO AVOID FLANGES & LIFTING EYES INTERFERING WITH RAIN COLLAR LOCATION.
- INSTALL STORM COLLAR ON STACK, 3" [72 mm] ABOVE NON-COMBUSTIBLE LINER (FLASHING), ALLOWING FOR PROPER VENTILATION (SEE DETAIL).
- APPLY A 1/4" [6 mm] BEAD OF HIGH-TEMPERATURE SILICON SEALANT (PROVIDED BY MCD) TO THE JOINT BETWEEN THE STORM COLLAR (C) AND THE STACK (B).
- STORM COLLAR IS FURNISHED BY MCD. THE NON-COMBUSTIBLE LINER (FLASHING) TO BE PROVIDED BY THE OTHERS.
- IF FIFTY PERCENT OF THE STACK LENGTH IS ABOVE THE ROOF, GUY WIRES MAY BE REQUIRED. CONSULT WITH YOUR MCD REP.
- RAIN CAP NOT REQUIRED.



045 1/2" [116 mm] REQUIRED FOR PROPER STACK CLEARANCE.

ROOF PENETRATION DETAIL

POWER PAK I

Matthews
CREMATION DIVISION
2045 Sprint Boulevard
Apopka, Florida 32703
USA

STACK DETAILS, CLEARANCES & INSTALLATION INSTRUCTIONS.
REFRACTORY STACK DETAIL

DATE:	07-01-11	SCALE:	1/2"=1'
DRAWN:	JGogel	PLOT SCALE:	1:24
APRVD:		SHEET:	2 OF: 2
DWG FILE:	PP-MarketingStackRefrIS2		
DWG #:	0001045		

CREMATOR MASS BALANCE
Matthews Cremation
PPI

THESE CALCULATIONS HAVE BEEN PREPARED TO EVALUATE THE COMBUSTION PROCESS IN THIS UNIT.

THE INCINERATOR INSTITUTE OF AMERICA HAS PUBLISHED THE FOLLOWING SPECIFICATIONS COVERING AVERAGE WASTES.

WASTE TYPE	TYPE 9	TYPE 4
BTU PER POUND	8500	1000
POUND ASH PER POUND WASTE	0.05	0.05
POUND MOISTURE PER POUND WASTE	0.1	0.85
POUND COMBUSTIBLES PER POUND WASTE	0.85	0.1
HOURLY CONSUMPTION OF WASTE (LBS)	10	140

1. MASS OF PRODUCTS OF COMBUSTION FROM CONTAINER

A. COMBUSTION AIR

$$\frac{8500 \text{ BTU/LB}}{100 \text{ BTU/CF OF AIR}^*} \times 0.075 \text{ LB/CF OF AIR} = 6.38 \text{ LB/LB BURNED}$$

B. COMBUSTIBLES AND WATER VAPOR FROM CHART ABOVE = 0.95 LB/LB BURNED

C. TOTAL FLUE PRODUCT MASS PER LB BURNED = 7.33 LB/LB BURNED

2. MASS OF PRODUCTS OF COMBUSTION FROM BODY

A. COMBUSTION AIR

$$\frac{1000 \text{ BTU/LB}}{100 \text{ BTU/CF OF AIR}^*} \times 0.075 \text{ LB/CF OF AIR} = 0.75 \text{ LB/LB BURNED}$$

B. COMBUSTIBLES AND WATER VAPOR FROM CHART ABOVE = 0.95 LB/LB BURNED

C. TOTAL FLUE PRODUCT MASS PER LB BURNED = 1.70 LB/LB BURNED

SPECIFICATIONS	
PRIMARY BURNER FUEL CONSUMPTION (MMBTU/HR)	0.5
SECONDARY BURNER FUEL CONSUMPTION (MMBTU/HR)	0.9
ADDITIONAL SECONDARY AIR SUPPLIED (CFM)	200
SEC. CHAMBER OPERATING TEMPERATURE (°F)	1400
SECONDARY CHAMBER VOLUME (CU. FT)	74
SEC. CHAMB. CROSS-SECTIONAL AREA (SQ. FT)	2.44
FLAME PORT AREA (SQ. FT)	2.95
MIXING BAFFLES AREA (SQ. FT)	1.36

*AIR AT STANDARD CONDITIONS

3. TOTAL FLUE PRODUCTS

A. MAXIMUM PRIMARY BURNER GAS USAGE

$$500000 \text{ BTU/HR} \times 4.5E-05 \text{ LBS/BTU} = 22.5 \text{ LBS/HR}$$

B. COMBUSTION AIR FOR PRIMARY BURNER

$$\frac{500000 \text{ BTU/HR}}{100 \text{ BTU/CF AIR}} \times \frac{1}{\text{Burner}} \times 0.075 \text{ LB/CF AIR} = 375 \text{ LBS/HR}$$

C. MAXIMUM SECONDARY BURNER GAS USAGE

$$900000 \text{ BTU/HR} \times 4.5E-05 \text{ LBS/BTU} = 41 \text{ LBS/HOUR}$$

D. COMBUSTION AIR FOR SECONDARY BURNER

$$\frac{900000 \text{ BTU/HR}}{100 \text{ BTU/CF AIR}} \times \frac{1}{\text{Burner}} \times 0.075 \text{ LB/CF AIR} = 675 \text{ LBS/HOUR}$$

E. PRODUCTS FROM TYPE 0 WASTE (CONTAINER)

$$7.33 \text{ LBS/LB BURNED} \times 10 \text{ LB/HR BURN RATE} = 73 \text{ LBS/HOUR}$$

F. PRODUCTS FROM TYPE 4 WASTE (TISSUE)

$$1.70 \text{ LBS/LB WASTE} \times 140 \text{ LB/HR BURN RATE} = 238 \text{ LBS/HOUR}$$

G. ADDITIONAL SECONDARY CHAMBER COMBUSTION AIR (THROAT AIR)

$$12000 \text{ CF/HR}^* \times 0.075 \text{ LB/CF AIR} = 900 \text{ LBS/HOUR}$$

H. TOTAL FLUE PRODUCTS

$$= \underline{\underline{2324 \text{ LBS/HOUR}}}$$

2. VELOCITY AND TIME CALCULATIONS

A. SCFM CALCULATION

(PRODUCTS ASSUMED TO HAVE DENSITY CLOSE TO AIR)

$$2324 \text{ LBS/HR} \times \frac{13.35 \text{ STD. CU. FT/LB}}{60 \text{ MIN/HR}} = 517 \text{ SCFM}$$

B. TOTAL PRODUCTS ACFM @ 1400 °F

$$\frac{1860 \text{ °RANKINE}}{530 \text{ °RANKINE}} \times 517.1 \text{ CFM} = 1815 \text{ ACFM}$$

C. RETENTION TIME

$$\frac{74 \text{ CU. FT}}{1815 \text{ ACFM}} \times \frac{60 \text{ SECONDS}}{1 \text{ MINUTE}} = 2.45 \text{ SECONDS}$$

D. VELOCITY IN FLAME PORT

$$\frac{1815 \text{ ACFM}}{2.95 \text{ SQ. FT}} \times \frac{1 \text{ MINUTE}}{60 \text{ SECONDS}} = 10.3 \text{ FEET/SECOND}$$

E. VELOCITY AT MIXING BAFFLES

$$\frac{1815 \text{ ACFM}}{1.36 \text{ SQ. FT}} \times \frac{1 \text{ MINUTE}}{60 \text{ SECONDS}} = 22.2 \text{ FEET/SECOND}$$

F. VELOCITY IN SECONDARY CHAMBER

$$\frac{1815 \text{ ACFM}}{2.44 \text{ SQ. FT}} \times \frac{1 \text{ MINUTE}}{60 \text{ SECONDS}} = 12.4 \text{ FEET/SECOND}$$

Calculation Of GHG Emissions

Potential to Emit

Matthews Cremation Division (MCD)

Type Of Gas: Nat Gas
 Gas Heating Value: 1,000 Btu/cf
 Heat Input Capacity of Cremation Unit: 2.00E+06 Btu/hr

$$\text{Potential Throughput (cf / yr)} = \text{Heat Input Capacity (MMBtu/hr)} \times (8760 \text{ hrs/yr}) \times (1 / \text{Gas Heating Value})$$

$$= 2.00E+06 \text{ Btu/hr} \times 8760 \text{ hrs/yr} \times \frac{1 \text{ cf/Btu}}{1,000} = 1.8E+07 \text{ cf/yr}$$

$$\text{GHG (TPY)} = \text{Emission Factor (lb/E6 cf)} \times \text{Potential Throughput (cf/yr)} \times (1 \text{ ton}/2000 \text{ lbs})$$

Carbon Dioxide (CO2)

$$\frac{120000 \text{ lb} \times 17520000 \text{ cf}}{1.00E+06 \text{ cf}} \times \frac{1 \text{ ton}}{2000 \text{ lbs}} = 1051.2 \text{ TPY}$$

Nitrous Oxide (N2O)

$$\frac{2.2 \text{ lb} \times 17520000 \text{ cf}}{1.00E+06 \text{ cf}} \times \frac{1 \text{ ton}}{2000 \text{ lbs}} = 0.019272 \text{ TPY}$$

Methane (CH4)

$$\frac{2.3 \text{ lb} \times 17520000 \text{ cf}}{1.00E+06 \text{ cf}} \times \frac{1 \text{ ton}}{2000 \text{ lbs}} = 0.020148 \text{ TPY}$$

$$\text{CO2e (TPY)} = (\text{CO2 TPY} \times \text{CO2 GWP}) + (\text{N2O TPY} \times \text{N2O GWP}) + (\text{CH4 TPY} \times \text{CH4 GWP})$$

$$= 1051.2 \times 1 + 0.019272 \times 310 + 0.020148 \times 21$$

$$= 1057.597428 \text{ TPY}$$

Fluorinated Gases (i.e. Hydrofluorocarbons, Perfluorocarbons, Sulfur Hexafluoride) - N/A

Notes:

1. GWP values from Table A-1 of 40CFR 98, Subpart A
2. Gas CO2, N2O, CH4 emission factors based from AP42 Table 1.4-2 or Table 1.5-1