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Greenlawn Cemetery
Company

Bedington

id 003-00023

R13-2212D

Lee
Martin



Valley Pet, Inc.

127 Britner Avenue, Williamsport, Maryland 21795
(Phone) 301-582-3320 ♦ (Toll free) 800-962-1467 ♦ (Fax) 301-582-3350
www.valleypet.net

August 29, 2016

West Virginia
Department of Environmental Protection
Division of Air Quality
601 57th Street, SE
Charleston, WV 25304

Please find enclosed our application, the original and two copies, for a permit to install a crematory unit. Our plant ID No. is 003-00023 and our permit No. is R13-2212B. This new crematory is to replace our Emission Unit ID #1 which is being removed by the contractor.

Our crematory sits in the middle of a ninety-five acre apple orchard with no close buildings or roads.

Should you have any questions about our application, please contact us.

Thank You,



Todd M. Snook
Vice President





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): Greenlawn Cemetery Co., Inc.		2. Federal Employer ID No. (FEIN): 52-0337360	
3. Name of facility (if different from above): Valley Pet		4. The applicant is the: <input type="checkbox"/> OWNER <input type="checkbox"/> OPERATOR <input checked="" type="checkbox"/> BOTH	
5A. Applicant's mailing address: 127 Britner Avenue Williamsport, MD 21795		5B. Facility's present physical address: 3955 Hammonds Mill Road Hedgesville, WV 25427	
6. West Virginia Business Registration. Is the applicant a resident of the State of West Virginia? <input type="checkbox"/> YES <input checked="" 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: N/A			
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: Have owned the property since 1995 - 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.): Pet Crematory		10. North American Industry Classification System (NAICS) code for the facility: 812220	
11A. DAQ Plant ID No. (for existing facilities only): 003 - 00023		11B. List all current 45CSR13 and 45CSR30 (Title V) permit numbers associated with this process (for existing facilities only): R13-2212B	

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**.

12.B. New site address (if applicable):
3955 Hammonds Mill Road
Hedgesville, WV 25427

12C. Nearest city or town:
Hedgesville

12D. County:
Berkeley

12.E. UTM Northing (KM): 4387.058

12F. UTM Easting (KM): 247.62

12G. UTM Zone: 18N

13. Briefly describe the proposed change(s) at the facility:
Install one new pet cremation unit to replace an existing cremation unit

14A. Provide the date of anticipated installation or change: 12 / 15 / 16
- 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:
1 / 1 / 17

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 Todd M. Snook (Please use blue ink) DATE: 8/30/2016 (Please use blue ink)

35B. Printed name of signee: **Todd M. Snook** 35C. Title: **Vice President**

35D. E-mail: todd@valleypet.net	36E. Phone: 301-582-3320	36F. FAX: 301-582-3350
36A. Printed name of contact person (if different from above):		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 checked="" 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.

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

ISSUED TO:
**GREEN LAWN CEMETERY COMPANY
127 BRITNER AVE
WILLIAMSPORT, MD 21795-1556**

BUSINESS REGISTRATION ACCOUNT NUMBER: 1030-6874

This certificate is issued on: 06/8/2011

*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.**

WEST VIRGINIA DEPARTMENT
OF ENVIRONMENTAL PROTECTION
DIVISION OF AIR QUALITY



Company, Facility/Source

GREEN LAWN CEMETERY COMPANY
BEDINGTON SITE (VALLEY PET)

DAQ Company ID No.: 00300023
Class: 9B

Amount Paid: \$200.00
Received: 7/19/2016

Mailing Information

TODD M. SNOOK
GREENLAWN CEMETERY COMPANY
127 BRITNER AVENUE
WILLIAMSPORT MD 21795

Certificate to Operate

Operating Year

July 1, 2016 - June 30, 2017

Note: Your renewal will be added by 07/01/17 and is due to be returned by 07/31/17.

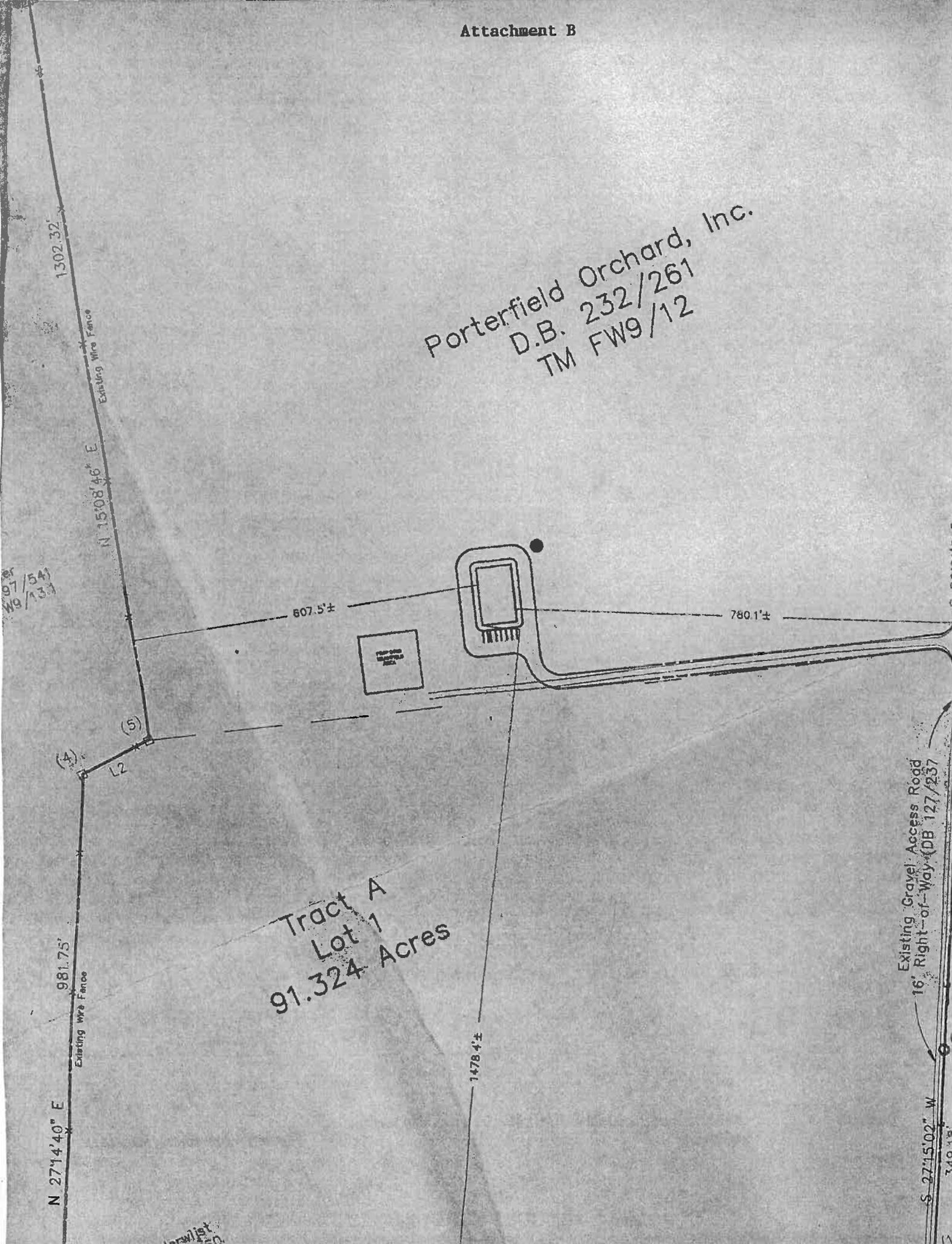
Pursuant to West Virginia Code 22-5-4 and Rule 45CSR22 "Air Quality Management Fee Program" the Division of Air Quality of the Department of Environmental Protection has hereby issued a certificate to operate for the operating year indicated above.

Division of Air Quality
601 57th Street, SE
Charleston, WV 25304
Phone: 304-926-0499, extension 1227 or email airquality@wv.gov

Attachment B

Porterfield Orchard, Inc.
D.B. 232/261
TM FW9/12

Tract A
Lot 1
91.324 Acres

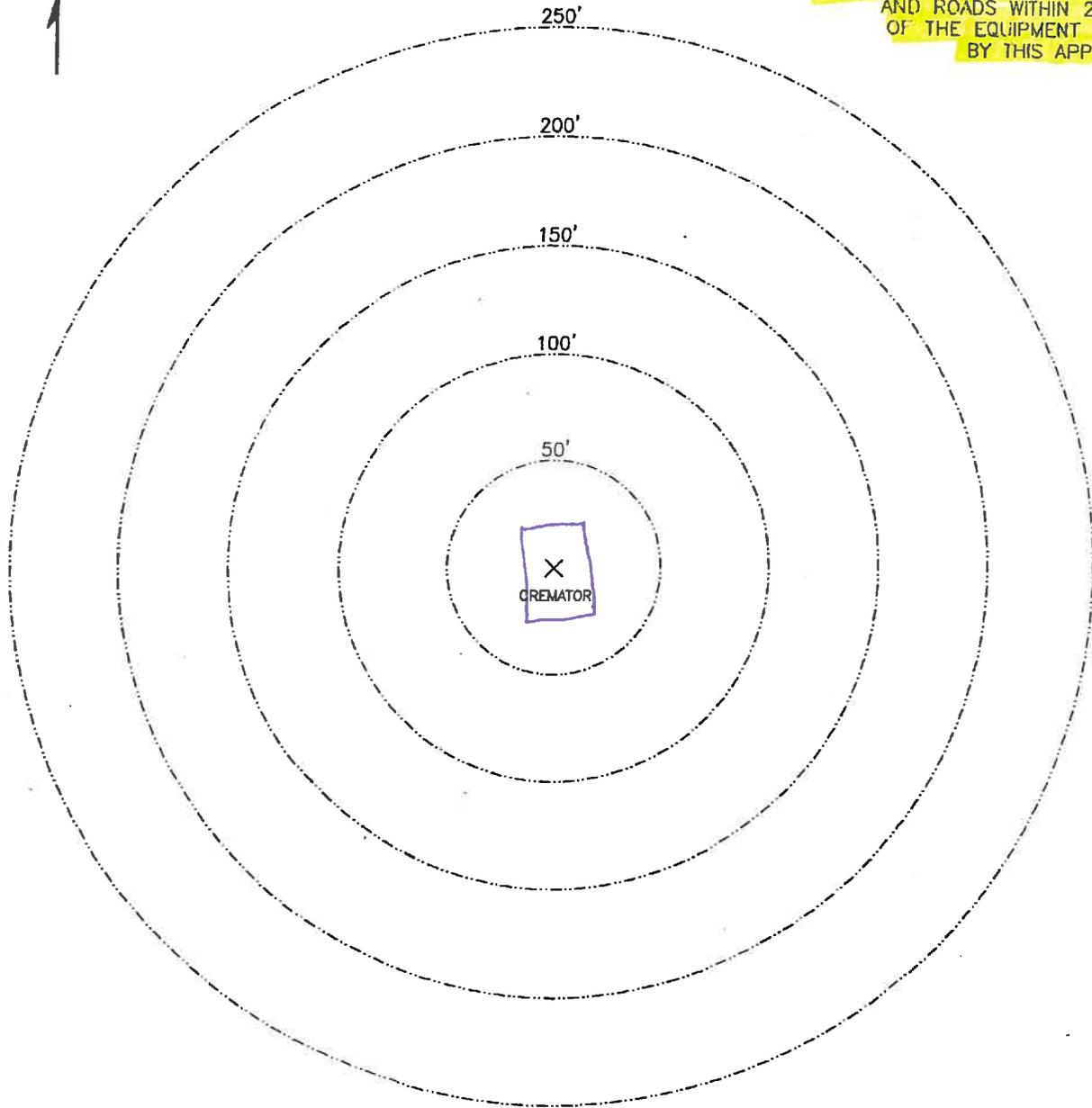


PLOT PLAN

NORTH



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



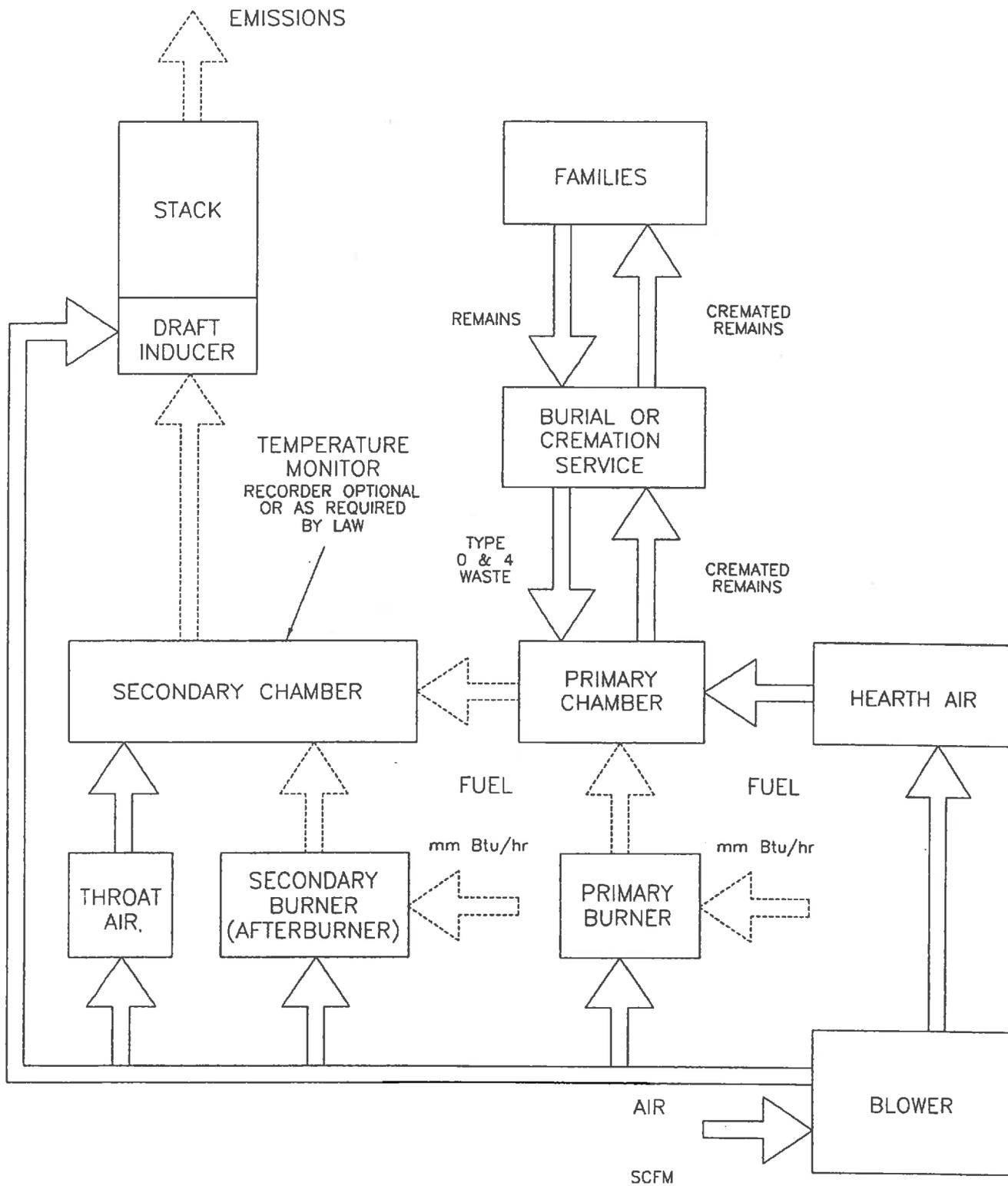
INSTRUCTIONS

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.

STRUCTURE DESCRIPTION

- (1)
- (2)
- (3) No Buildings or Roads
- (4)
- (5)
- (6) All Apple Orchard
- (7)
- (8)
- (9)
- (10)

PROCESS FLOW DIAGRAM CREMATOR



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)	Source	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.	Device Type	Short Term ²	Max (hr/yr)		lb/hr	ton/yr	lb/hr	ton/yr			
8S	Vertical Stack No Rain Cap	8E	IEB 32-5S	N/A	N/A	N/A	N/A	PM CO SO2 NOx	0.5838 0.3688 0.271 0.445	1.0928 0.6903 0.5078 0.833	0.5838 0.3688 0.271 0.445	1.0928 0.6903 0.5078 0.833	SOLID GAS GAS GAS	EE EE EE EE	0.06 gr/dscf 79.47 ppmv 25.26 ppmv 58.15 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 (e.g., 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 data 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).

Attachment L
Emission Unit Data Sheet
(INCINERATOR)

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

Equipment Information

1. Manufacturer: Matthews International	2. Model No. IEB 32-5S
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: 250 lb/hr Typical: 250 lb/hr Annual: 468 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: 77 (total) ft ³	9. Effective grate area: 14 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: 145 ft ³	15. Cross sectional area: 2.77 ft ²
16. Volume of gas through secondary combustion chamber: 3122 ACFM @ 1400 °F	17. Gas velocity through secondary combustion chamber: 19.3 ft/sec
18. Minimum gas temperature: 1400 °F	19. Minimum retention time of gas: 2.79 sec
20. Minimum distance of gas travel through secondary combustion chamber: 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: 17.6 ft/sec
---	--

Dampers

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

Combustion Air

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

32. Proposed type and fuel: Propane Gas (LP)	
33. Primary Burner Capacity: TJ-75 = 0.5 / TJ-50 = 0.4 (operating) MMBTU/hr Number: 5 Manufacture: Eclipse Model: TJ-75 (x1) and TJ-50 (x4) Estimated capacity: **See Capacity** BTU/hr Fuel: LP Gas How controlled? Timers Is there a temperature indicator? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	34. Secondary Burner Capacity: 1.2 (operating) MMBTU/hr Number: 2 Manufacture: Eclipse Model: TJ-200 Estimated capacity: **See Capacity** BTU/hr Fuel: LP Gas How controlled? Timers Is there a temperature indicator? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No How temperature recorded? Chart Recorder

Miscellaneous Devices and Controls

35. Automatic loading device. <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No If yes, describe.	36. Self closing doors. <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
37. Sparks arrestor <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	38. Flame failure protection equipment <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
39. Method of creating turbulence for combustion gases. Describe. Directional Changes, Baffle	40. Method of cleaning secondary or setting chamber. Describe. Cleanout Door
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	

Installation

42. Indoor Installation: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No If yes, describe method of supplying combustion air.	43. Outdoor Installation: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
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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	0.3688				0.6903	79.47
Hydrocarbons	N/A					
NO _x	0.445				0.833	58.15
Pb	N/A					
PM ₁₀	0.5838	0.06			1.0928	
SO ₂	0.271				0.5078	25.26
VOCs	N/A					
Other (specify)						

73. If an *Air Pollution Control Device* is not submitted, the emission rates should be the same as those reported home "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: 4.5 mmBTU/hr Typical: 4.3 mmBTU/hr Design: 4.5 mmBTU/hr	77. Fuel type: <input type="checkbox"/> Natural Gas <input type="checkbox"/> Coal <input type="checkbox"/> Fuel Oil, No. <input checked="" type="checkbox"/> Other, specify: LP Gas
78. Typical heating content of fuel: 2500 BTU/scf	79. Typical fuel sulfur content: Unknown wt. %
80. Typical fuel ash content: Unknown wt. %	81. Annual fuel usage: 160,992 Therms (estimated)
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.

Calculation Of Emissions

Matthews Environmental Solutions
(previously Matthews Cremation Division)
Crematory Incinerator Model IEB 32-5S

Total Incinerator Burn Capacity: 250 lb/hr of remains (type 4) and associated containers (type 0)
Flue gas flow rate = 1100 dscfm 12 Hours/Day X 6 Days/Week X 52 Weeks/Year
(100 % Excess Air) = 3744 Hours/Year

Total Emission Rate = Incinerator Burn Rate X Emission Factor

Sulfur Dioxide (SO₂)

$$\begin{array}{rcl} \frac{250 \text{ lb/hr X } 2.17 \text{ lb/ton X } 1 \text{ ton}}{2000 \text{ lbs}} & & = 0.271 \text{ lb/hr} \\ & & = 0.5078 \text{ TPY} \\ \frac{0.27125 \text{ lb/hr X } 4.54\text{E}+05 \text{ mg/lb X } 1 \text{ ppmv}}{1100 \text{ dscfm X } 60 \text{ min/hr X } 0.0283 \text{ m}^3/\text{ft}^3 \text{ X } 2.61 \text{ mg/m}^3} & & = 25.26 \text{ ppmv} \end{array}$$

Nitrogen Oxide (NO_x - as Nitrogen Dioxide)

$$\begin{array}{rcl} \frac{250 \text{ lb/hr X } 3.56 \text{ lb/ton X } 1 \text{ ton}}{2000 \text{ lbs}} & & = 0.445 \text{ lb/hr} \\ & & = 0.833 \text{ TPY} \\ \frac{0.445 \text{ lb/hr X } 4.54\text{E}+05 \text{ mg/lb X } 1 \text{ ppmv}}{1100 \text{ dscfm X } 60 \text{ min/hr X } 0.028 \text{ m}^3/\text{ft}^3 \text{ X } 1.88 \text{ mg/m}^3} & & = 58.15 \text{ ppmv} \end{array}$$

Particulates (PM & PM₁₀)

$$\begin{array}{rcl} \frac{250 \text{ lb/hr X } 4.67 \text{ lb/ton X } 1 \text{ ton}}{2000 \text{ lbs}} & & = 0.5838 \text{ lb/hr} \\ & & = 1.0928 \text{ TPY} \\ \frac{0.58375 \text{ lb/hr X } 7.00\text{E}+03 \text{ gr/lb X}}{1100 \text{ dscfm X } 60 \text{ min/hr}} & & = 0.06 \text{ gr/dscf} \end{array}$$

Carbon Monoxide (CO)

$$\begin{array}{rcl} \frac{250 \text{ lb/hr X } 2.95 \text{ lb/ton X } 1 \text{ ton}}{2000 \text{ lbs}} & & = 0.3688 \text{ lb/hr} \\ & & = 0.6903 \text{ TPY} \\ \frac{0.36875 \text{ lb/hr X } 4.54\text{E}+05 \text{ mg/lb X } 1 \text{ ppmv}}{1100 \text{ dscfm X } 60 \text{ min/hr X } 0.028 \text{ m}^3/\text{ft}^3 \text{ X } 1.14 \text{ mg/m}^3} & & = 79.47 \text{ ppmv} \end{array}$$

Notes:

1. Incinerator Emissions based on EPA emissions from Table 2.3-1 and 2.3-2 of AP-42 (5th Edition)
2. All conversion factors from AP-42 Appendix A.

CREMATOR MASS BALANCE
Matthews Cremation
IEB 32-5S

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 0	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	240

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)	145
SEC. CHAMB. CROSS-SECTIONAL AREA (SQ. FT)	2.7
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

$$500000 \text{ BTU/HR} \times 4.8\text{E-}05 \text{ LBS/BTU} = 24 \text{ LBS/HR}$$

B. COMBUSTION AIR FOR PRIMARY BURNER

$$\frac{500000 \text{ BTU/HR}}{100 \text{ BTU/CF AIR}} \times 5 \text{ Burner} \times 0.075 \text{ LB/CF AIR} = 1875 \text{ LBS/HR}$$

C. MAXIMUM SECONDARY BURNER GAS USAGE

$$900000 \text{ BTU/HR} \times 4.8\text{E-}05 \text{ LBS/BTU} = 43 \text{ LBS/HOUR}$$

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)

$$1.70 \text{ LBS/LB WASTE} \times 240 \text{ LB/HR BURN RATE} = 408 \text{ LBS/HOUR}$$

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 = 3998 LBS/HOUR

2. VELOCITY AND TIME CALCULATIONS

A. SCFM CALCULATION (PRODUCTS ASSUMED TO HAVE DENSITY CLOSE TO AIR)

$$3998 \text{ LBS/HR} \times \frac{13.35 \text{ STD. CU. FT/LB}}{60 \text{ MIN/HR}} = 890 \text{ SCFM}$$

B. TOTAL PRODUCTS ACFM @ 1400 °F

$$\frac{1860 \text{ °RANKINE}}{530 \text{ °RANKINE}} \times 889.7 \text{ CFM} = 3122 \text{ ACFM}$$

C. RETENTION TIME

$$\frac{145 \text{ CU. FT}}{3122 \text{ ACFM}} \times \frac{60 \text{ SECONDS}}{1 \text{ MINUTE}} = 2.79 \text{ SECONDS}$$

Calculation Of GHG Emissions

Potential to Emit

Matthews Cremation Division (MCD)

Type Of Gas:	LP Gas	
Gas Heating Value:	92,000	Btu/gal
Heat Input Capacity of Cremation Unit:	4.50E+06	Btu/hr

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

$$= 4.50E+06 \text{ Btu/hr} \times 8760 \text{ hrs/yr} \times \frac{1 \text{ gal/Btu}}{92,000} = 428478 \text{ gal/yr}$$

$$\text{GHG (TPY)} = \text{Emission Factor (lb/1000 gal)} \times \text{Potential Throughput (gal/yr)} \times (1 \text{ ton}/2000 \text{ lbs})$$

Carbon Dioxide (CO2)

$$\frac{12500 \text{ lb}}{1000 \text{ gal}} \times \frac{428478.3 \text{ gal}}{\text{yr}} \times \frac{1 \text{ ton}}{2000 \text{ lbs}} = 2677.9891 \text{ TPY}$$

Nitrous Oxide (N2O)

$$\frac{0.9 \text{ lb}}{1000 \text{ gal}} \times \frac{428478.3 \text{ gal}}{\text{yr}} \times \frac{1 \text{ ton}}{2000 \text{ lbs}} = 0.1928152 \text{ TPY}$$

Methane (CH4)

$$\frac{0.2 \text{ lb}}{1000 \text{ gal}} \times \frac{428478.3 \text{ gal}}{\text{yr}} \times \frac{1 \text{ ton}}{2000 \text{ lbs}} = 0.0428478 \text{ TPY}$$

$$\text{CO}_2\text{e (TPY)} = (\text{CO}_2 \text{ TPY} \times \text{CO}_2 \text{ GWP}) + (\text{N}_2\text{O TPY} \times \text{N}_2\text{O GWP}) + (\text{CH}_4 \text{ TPY} \times \text{CH}_4 \text{ GWP})$$

$$= 2677.98913 \times 1 + 0.192815217 \times 310 + 0.0428478 \times 21$$

$$= 2738.661652 \text{ TPY}$$

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

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

EMISSION FACTOR RATING: D

ALL VOC

Combustor Type	PM		SO ₂		CO		Total Organic Compounds ^a		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 R
AUTHORITY OF CORPORATION
OR OTHER BUSINESS ENTITY (DOMESTIC OR FOREIGN)**

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

DATE: August 27, 2016

ATTN.: Director

Corporation's / other business entity's Federal Employer I.D. Number 52-0337360

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) Todd M. Snook (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.

Mary J. Snook

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).

Delma K. Pappas

Secretary

Greenlawn Cemetery Co., Inc. / Valley Pet, Inc.

Name of Corporation or business entity