

**ANIMAL CREMATORY
AIR GENERAL PERMIT REGISTRATION FORM**

Part II. Notification to Permitting Office

(Detach and submit to appropriate permitting office; keep copy onsite)

Instructions: To give notice to the Department of an eligible facility's intent to use this air general permit, the owner or operator of the facility must detach and complete this part of the Air General Permit Registration Form and submit it to the appropriate Department of Environmental Protection or local air pollution control program office which has permitting authority. Please type or print clearly all information, and enclose the appropriate air general permit registration processing fee pursuant to Rule 62-4.050, F.A.C. (*\$100 as of the effective date of this form*)

Registration Type

1131133 - 001

Check one:

INITIAL REGISTRATION - Notification of intent to:

- Construct and operate a proposed new facility.
- Operate an existing facility not currently using an air general permit (e.g., a facility proposing to go from an air operation permit to an air general permit).

RE-REGISTRATION (for facilities currently using an air general permit) - Notification of intent to:

- Continue operating the facility after expiration of the current term of air general permit use.
- Continue operating the facility after a change of ownership.
- Make an equipment change requiring re-registration pursuant to Rule 62-210.310(2)(e), F.A.C., or any other change not considered an administrative correction under Rule 62-210.310(2)(d), F.A.C.

Surrender of Existing Air Operation Permit(s) - For Initial Registrations Only

If the facility currently holds one or more air operation permits, such permit(s) must be surrendered by the owner or operator upon the effective date of this air general permit. In such case, check the first box, and indicate the operation permits being surrendered. If no air operation permits are held by the facility, check the second box.

- All existing air operation permits for this facility are hereby surrendered upon the effective date of this air general permit; specifically permit number(s):

- No air operation permits currently exist for this facility.

General Facility Information

Facility Owner/Company Name (Name of corporation, agency, or individual owner who or which owns, leases, operates, controls, or supervises the facility.)

Forget Them Not Pet Crematory

Site Name (Name, if any, of the facility site; e.g., Plant A, Metropolis Plant, etc. If more than one facility is owned, a registration form must be completed for each.)

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Facility Location (Provide the physical location of the facility, not necessarily the mailing address.)

Street Address: 2346 New York Street

City: Jay

County: Santa Rosa

Zip Code: 32565

Facility Start-Up Date (Estimated start-up date of proposed **new** facility.) (N/A for existing facilities)

May - July 2013

Owner/Authorized Representative

Name and Position Title: (Person who, by signing this form below, certifies that the facility is eligible to use this air general permit.)

Print Name and Title: Lee Maskery, Owner

Owner/Authorized Representative Mailing Address

Organization/Firm: Forget Them Not Pet Crematory

Street Address: 2346 New York Street

City: Jay

County: Santa Rosa

Zip Code: 32565

Owner/Authorized Representative Telephone Numbers

Telephone: 850-736-2033

Fax:

Cell phone (optional): 850-619-8950

Email: leemaskery@yahoo.com

Facility Contact (If different from Owner/Authorized Representative)

Name and Position Title (Plant manager or person to be contacted regarding day-to-day operations at the facility.)

Print Name and Title: Same as Above

Facility Contact Mailing Address

Organization/Firm:

Street Address:

City:

County:

Zip Code:

Facility Contact Telephone Numbers

Telephone:

Fax:

Cell phone (optional):

Owner/Authorized Representative Statement

This statement must be signed and dated by the person named above as owner or authorized representative

I, the undersigned, am the owner or authorized representative of the owner or operator of the facility addressed in this Air General Permit Registration Form. I hereby certify, based on information and belief formed after reasonable inquiry, that the facility addressed in this registration form is eligible for use of this air general permit and that the statements made in this registration form are true, accurate and complete. Further, I agree to operate and maintain the facility described in this registration form so as to comply with all applicable standards for control of air pollutant emissions found in the statutes of the State of Florida and rules of the Department of Environmental Protection and revisions thereof.

I will promptly notify the Department of any changes to the information contained in this registration form.


Signature

4-24-2013.
Date

Design Calculations

If this is an initial registration for a proposed new animal crematory unit, provide design calculations to confirm a sufficient volume in the secondary chamber combustion zone to provide for at least a 1.0 second gas residence time at 1800 degrees F.

- Manufacturer's' design calculations attached. (Attachment 1 – Measured retention time)
- Registration is not for proposed new animal crematory unit(s).

Description of Facility

Below, or as an attachment to this form, provide a description of all crematory operations at the facility in sufficient detail to demonstrate the facility's eligibility for use of this air general permit and to provide a basis for tracking any future equipment or process changes at the facility. Describe all air pollutant-emitting processes and equipment at the facility, and identify any air pollution control measures or equipment used.

The facility plans to install an animal crematory manufactured by U.S. Cremation Equipment model US 75/300 fired with LPG. No serial number is available at the time of the application. The retention time of the US 75/300 animal crematory is greater than 1 second at 1800F. The US 75/300 is a multi-chamber unit having an average 75 lbs/hr animal (approximately 1,000 Btu/lb) cremation rate. The primary chamber burner is rated at 500,000 Btu/hr, and the secondary chamber burner is rated at 1,000,000 Btu/hr, for a total of 1,500,000 Btu/hr. The equipment is fired with natural gas. The design also includes fully automatic PLC based controls, independent fuel/air systems, preheated combustion air, secondary chamber temperature monitor and recorder, primary burner temperature interlock (prevents primary burner from firing prior to the secondary chamber reaching its set point temperature), UV continuous scanning flame detectors on burners, and an opacity sensor which can temporarily suspend operation of the primary chamber burner. . In Attachment 1 we have included a compliance test report for the US 75/300 which includes the measured retention time for this crematory.

In Attachment 2 the US 75/300 specifications are attached.

Emissions calculations are included in Attachment 3.



April 19, 2013

Florida Department of Environmental Protection
FDEP Receipts
PO Box 3070
Tallahassee, FL 32315-3070

**Re: General Permit Application
Forget Them Not Pet Crematory**

To whom it may Concern:

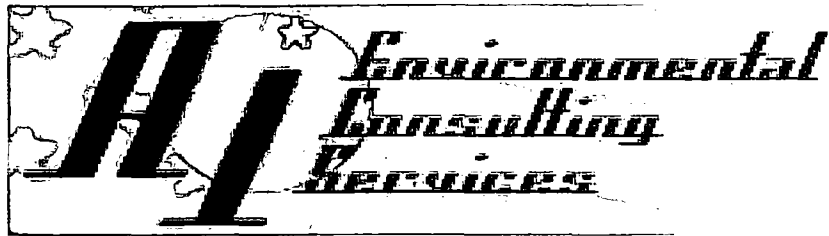
Enclosed is one (1) copy of the above referenced application along with a check made payable to the Florida Department of Environmental Protection in the amount of \$100.00 for the application fee.

I trust this application is complete; however, should you have any questions or need any additional information for issuing the general permit, please contact me at (407) 574-2021 or e-mail at AI@CFL.RR.COM.

Respectfully submitted,
AI ENVIRONMENTAL CONSULTING SERVICES

Luis Llorens
President/Project Manager

Enclosures: One (1) Application and check



***General Permit Application
Animal Crematory***

Prepared for:

***Forget Them Not Pet Crematory
2346 New York Street
Jay, FL. 32565***

Santa Rosa County

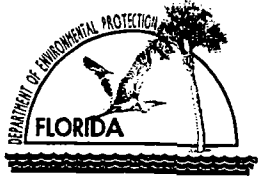
Prepared By:

***AI Environmental Consulting Services, Inc.
598 Northlake Blvd, Ste. 1016
Altamonte Springs, Florida 32701***

Date: April 2013

Application Contents

- Form 62-210.920(2)(c) General Permit Application
- Attachment 1 - Compliance Test Report
- Attachment 2 - Equipment Drawings and Brochures
- Attachment 3 - AP-42 Emissions Calculations
- Attachment 4 - Process Flow Diagram



Department of Environmental Protection

Division of Air Resource Management

ANIMAL CREMATORY AIR GENERAL PERMIT REGISTRATION FORM

Part I. Procedures and Conditions for Use of Air General Permit

The Department of Environmental Protection (“Department” or “DEP”) has established an “air general permit” at Florida Administrative Code (“F.A.C.”) Rule 62-210.310(5)(d) for animal crematories. An air general permit is an authorization by rule to construct or operate a specific type of air pollutant emitting facility. Use of such authorization by any individual facility does not require action by the Department. The terms and conditions of the air general permit are set forth in the rule, rather than in a separately issued air construction or air operation permit.

The owner or operator of an eligible facility comprising one or more animal crematories may register to use the air general permit at Rule 62-210.310(5)(d), F.A.C., by following the general procedures given at Rule 62-210.310(2), F.A.C., the text of which is provided below. The owner or operator shall notify the Department of the facility’s intent to use this general permit by submitting Part II of this registration form to the appropriate Department of Environmental Protection or local air pollution control program office which has permitting authority. Questions concerning this air general permit or the registration process may be directed to any such office or to the Department’s small business assistance program at 1-800-SBAP-HLP (1-800-722-7457).

The owner or operator of a facility who properly registers to use this air general permit, and who is not denied use of the air general permit by the Department, is authorized to construct and operate the facility in accordance with the general terms and conditions of Rule 62-210.310(3), F.A.C., and the specific terms and conditions of Rule 62-210.310(5)(d), F.A.C. The text of these two rules is also provided below, followed by definitions of words and phrases used in the rules and on this form. A facility using this air general permit shall not be entitled to use more than one air general permit for the facility.

Rule 62-210.310(2), F.A.C.

(2) General Procedures. This subsection sets forth general procedures for use of any of the air general permits provided at subsections 62-210.310(4) and (5), F.A.C.

(a) Determination of Eligibility. The owner or operator of a proposed new or existing facility shall determine the facility’s eligibility to use an air general permit under this rule. A facility is eligible to use an air general permit under this rule if it meets any specific eligibility criteria given in the applicable air general permit at subsection 62-210.310(4) or (5), F.A.C., and the following general criteria.

1. The facility shall not emit nor have the potential to emit 10 tons per year or more of any hazardous air pollutant, 25 tons per year or more of any combination of hazardous air pollutants, or 100 tons per year or more of any other regulated air pollutant; be collocated with, or relocated to, such a facility; or create such a facility in combination with any other collocated facilities, emissions units, or pollutant-emitting activities, including any such facility, emissions unit, or activity that is otherwise exempt from air permitting.

2. The facility shall not contain any emissions units or activities not covered by the applicable air general permit, except:

a. Units and activities that are exempt from permitting pursuant to subsection 62-210.300(3), F.A.C., or Rule 62-4.040, F.A.C.; and

b. Units and activities that are authorized by another air general permit where such other air general permit and the air general permit of interest specifically allow the use of one another at the same facility.

(b) Registration. The owner or operator who intends to construct or operate an eligible facility under the authority of an air general permit shall complete and submit the proper registration form to the Department for the specific air general permit to be used, as provided in subsection 62-210.920(1) or (2), F.A.C. The registration form shall be accompanied by the appropriate air general permit processing fee pursuant to Rule 62-4.050, F.A.C. (*\$100 as of the effective date of this form*)

1. Initial Registration. Registration of a facility which is not currently authorized to construct or operate under the terms and conditions of an air general permit is classified as an initial registration. Any existing, individual air operation permit(s) authorizing operation of the facility must be surrendered by the owner or operator, effective upon the first day of use of the air general permit.

2. Re-registration. Registration of a facility which is currently authorized to operate under the terms and conditions of an air general permit is classified as a re-registration. An owner or operator shall re-register the facility in the following cases:

- a. Impending expiration of the term for air general permit use;
- b. Change of ownership of all or part of the facility;
- c. Proposed new construction, modification, or other equipment change that requires registration pursuant to paragraph 62-210.310(2)(e), F.A.C.; and
- d. Any other change not considered an administrative correction under paragraph 62-210.310(2)(d), F.A.C.

(c) Use of Air General Permit.

1. Unless the Department denies use of the air general permit, the owner or operator of an eligible facility may use the air general permit for such facility 30 days after giving notice to the Department. The first day of the 30-day time frame, day one, is the date the Department receives the proper registration form and processing fee. The last day of the 30-day time frame, day 30, is the date the owner or operator may use the air general permit, provided there is no agency action to deny use of the air general permit.

2. To avoid lapse of authority to operate, an owner or operator intending to use, or continue to use, an air general permit must submit the proper registration form and processing fee at least 30 days prior to expiration of the facility's existing air operation permit or air general permit.

(d) Administrative Corrections. Within 30 days of any minor changes requiring corrections to information contained in the registration form, the owner or operator shall notify the Department in writing. Such changes shall include:

1. Any change in the name, address, or phone number of the facility or authorized representative not associated with a change in ownership or with a physical relocation of the facility or any emissions units or operations comprising the facility; or
2. Any other similar minor administrative change at the facility.

(e) Equipment Changes. The owner or operator shall maintain records of all equipment changes. In the case of installation of new process or air pollution control equipment, alteration of existing process or control equipment without replacement, or replacement of existing process or control equipment with equipment substantially different in terms of capacity, method of operation, material processed, or intended use than that noted on the most recent registration form, the owner or operator shall submit a new and complete air general permit registration form for the facility with the appropriate fee pursuant to Rule 62-4.050, F.A.C. to the Department, provided, however, that any change that would constitute a new major stationary source, major modification, or modification that would be a major modification but for the provisions of paragraph 62-212.400(2)(a), F.A.C., shall require authorization by air construction permit.

(f) Enforcement of Ineligibility. If a facility using an air general permit at any time becomes ineligible for the use of the air general permit, or if any facility using an air general permit is determined to have been initially ineligible for use of the air general permit, it shall be subject to enforcement action for constructing or operating without an air permit under subsection 62-210.300(1) or (2), F.A.C., or Chapter 62-213, F.A.C., as appropriate.

Rule 62-210.310(3), F.A.C.

(3) General Conditions. All terms, conditions, requirements, limitations, and restrictions set forth in this subsection are “general permit conditions” and are binding upon the owner or operator of any facility using an air general permit provided at subsection 62-210.310(4) or (5), F.A.C.

(a) The owner or operator’s use of an air general permit is limited to five (5) years. Prior to the end of the five (5) year term, the owner or operator who intends to continue using the air general permit for the facility shall re-register with the Department pursuant to subparagraph 62-210.310(2)(b)2., F.A.C. To avoid lapse of authority to operate, the owner or operator must submit the proper registration form and processing fee at least thirty (30) days prior to expiration of the facility’s existing air general permit. The air general permit re-registration form shall contain all current information regarding the facility.

(b) Use of an air general permit is not transferable and does not follow a change in ownership of the facility. Prior to any sale, other change of ownership, or permanent shutdown of the facility, the owner or operator is encouraged to notify the Department of the pending action. The new owner or operator who intends to continue using the air general permit for the facility shall re-register with the Department pursuant to subparagraph 62-210.310(2)(b)2., F.A.C...

(c) The air general permit is valid only for the specific type of facility and associated emissions units and pollutant-emitting activities indicated.

(d) The air general permit does not authorize any demolition or renovation of the facility which involves asbestos removal. The air general permit does not constitute a waiver of any of the requirements of Chapter 62-257, F.A.C., or 40 CFR Part 61, Subpart M, National Emission Standard for Asbestos, adopted and incorporated by reference at Rule 62-204.800, F.A.C.

(e) The general permit does not authorize any open burning.

(f) The owner or operator shall not circumvent any air pollution control device or allow the emission of air pollutants without the proper operation of all applicable air pollution control devices.

(g) The owner or operator shall maintain the authorized facility in good condition. Throughout the term of air general permit use, the owner or operator shall ensure that the facility maintains its eligibility to use the air general permit and complies with all terms and conditions of the air general permit.

(h) The owner or operator shall allow a duly authorized representative of the Department access to the facility at reasonable times to inspect and test, upon presentation of credentials or other documents as may be required by law, to determine compliance with the air general permit and Department rules.

(i) If, for any reason, the owner or operator of any facility operating under an air general permit does not comply with or will be unable to comply with any condition or limitation of the air general permit, the owner or operator shall immediately provide the Department with the following information:

1. A description of and cause of noncompliance; and
2. The period of noncompliance, including dates and times; or, if not corrected, the anticipated time the noncompliance is expected to continue, and steps being taken to reduce, eliminate, and prevent recurrence of the noncompliance.

(j) Use of an air general permit does not relieve the owner or operator of the facility from liability and penalties when the construction or operation of the authorized facility causes harm or injury to human health or welfare; causes harm or injury to animal, plant or aquatic life; or causes harm or injury to property. It does not allow the owner or operator to cause pollution in contravention of Florida law.

(k) The air general permit conveys no title to land or water, nor does it constitute state recognition or acknowledgment of title.

(l) The air general permit does not convey any vested rights or exclusive privileges, nor does it authorize any injury to public or private property or any invasion of personal rights. It does not authorize any infringement of federal, state, or local laws or regulations.

(m) Use of the air general permit shall be effective until suspended, revoked, surrendered, expired, or nullified pursuant to this rule and Chapter 120, F.S.

(n) Use of the air general permit does not eliminate the necessity for the owner or operator to obtain any other federal, state or local permits that may be required, or relieve the owner or operator from the duty to comply with any federal, state or local requirements that may apply.

Rule 62-210.310(5)(d), F.A.C.

(d) Air General Permit for Facilities Comprising Animal Crematories.

1. A facility comprising one (1) or more animal crematories shall be eligible to use this air general permit provided it meets the general eligibility criteria of paragraph 62-210.310(2)(a), F.A.C., and no animal crematory unit at the facility exceeds a design capacity of 500 pounds per hour cremated.

2. A facility using this air general permit shall comply with the general conditions given at subsection 62-210.310(3), F.A.C., and the following specific conditions.

a. The facility shall comply with all applicable provisions of subsection 62-296.401(6), F.A.C.

b. The owner or operator may use an animal crematory air general permit and a human crematory air general permit at the same facility, provided all animal crematory units operate under a single animal crematory air general permit and all human crematory units operate under a single human crematory air general permit.

Rule 62-296.401(6), F.A.C.

(6) Animal Crematories.

(a) Applicability. The requirements of this subsection apply to all animal crematory units.

(b) Emission Limiting Standards.

1. Visible emissions shall not exceed five percent (5%) opacity, six (6) minute average, except that visible emissions not exceeding fifteen percent (15%) opacity shall be allowed for up to six (6) minutes in any one (1) hour period.

2. Particulate matter emissions shall not exceed 0.080 grains per dry standard cubic foot of flue gas, corrected to 7% O₂.

3. Carbon Monoxide (CO) emissions shall not exceed 100 parts per million by volume, dry basis, corrected to 7% O₂ on an hourly average basis.

(c) Operating Temperatures.

1. The owner or operator of any proposed new crematory unit which submits either a complete application for a permit to construct the a new unit or an initial air general permit registration for the new unit to the Department on or after August 30, 1989, shall provide design calculations to confirm a sufficient volume in the secondary chamber combustion zone to provide for at least a 1.0 second gas residence time at 1800 degrees Fahrenheit. This information shall be provided to the Department with the air construction permit application or air general permit registration form for the proposed new unit. The actual operating temperature of the secondary chamber combustion zone shall be no less than 1600 degrees Fahrenheit throughout the combustion process in the primary chamber. The primary chamber and stack volumes shall not be used in calculating this residence time. Except as provided in subparagraph 62-296.401(6)(c)2., F.A.C., cremation in the primary chamber shall not begin unless the secondary chamber combustion zone temperature is equal to or greater than 1600 degrees Fahrenheit.

2. The owner or operator of any crematory units for which construction began or for which a complete application for a permit to construct was received by the Department prior to August 30, 1989, shall maintain the actual operating temperature of the secondary chamber combustion zone at no less than 1400 degrees Fahrenheit throughout the combustion process in the primary chamber. Cremation in the primary chamber shall not begin unless the secondary chamber combustion zone temperature is equal to or greater than 1400 degrees Fahrenheit.

(d) Allowed Materials. Animal crematory units shall cremate only animal remains and, if applicable, the bedding associated with the animals and appropriate containers. Containers shall contain no more than 0.5 percent by weight chlorinated plastics as demonstrated by the manufacturer's data sheet. If containers are incinerated, documentation from the manufacturers certifying that they are composed of

0.5 percent or less by weight chlorinated plastics shall be kept on-file at the site for the duration of their use and for at least two (2) years after their use. Animal crematory units shall not cremate dead animals which were used for medical or commercial experimentation. No other material, including biomedical waste as defined in Rule 62-210.200, F.A.C., shall be incinerated.

(e) *Equipment Maintenance.* All animal crematory units shall be maintained in proper working order in accordance with the manufacturer's specifications to ensure the integrity and efficiency of the equipment. If a crematory unit contains a defect that affects the integrity of the unit, the unit shall be taken out of service. No person shall use or permit the use of that unit until it has been repaired or adjusted. Repair records on all crematory units shall be maintained onsite for at least two (2) years. A written plan with operating procedures for startup, shutdown and malfunction of each crematory unit shall be maintained and followed during those events. Each unit's burners shall be operated with a proper air-to-fuel ratio. If the unit so allows, the burners' flame characteristics shall be visually checked at least once during each operating shift and adjusted when warranted by the visual checks.

(f) *Test Methods and Procedures.* All emissions tests performed pursuant to the requirements of this subsection shall comply with the following requirements. All EPA reference test methods are described in 40 CFR Part 60, Appendix A, adopted and incorporated by reference at Rule 62-204.800, F.A.C.

1. The reference test method for visible emissions shall be EPA Method 9.
2. The reference test method for carbon monoxide shall be EPA Method 10.
3. The reference test method for oxygen shall be EPA Method 3.
4. The reference test method for particulate matter emissions shall be EPA Method 5. The minimum sample volume shall be thirty (30) dry standard cubic feet.
5. Test procedures shall conform to the procedures specified in Rule 62-297.310, F.A.C. All test results shall be reported to the Department in accordance with the provisions of Rule 62-297.310, F.A.C.

(g) *Operation During Emissions Test.* Testing of emissions shall be conducted with the unit operating at a capacity that is representative of normal operations and is not greater than the manufacturer's recommended capacity. The operating capacity shall be a batch load, in pounds, for a batch animal crematory unit and a charging rate, in pounds per hour, for a ram-charged animal crematory unit.

(h) *Frequency of Testing.*

1. The owner or operator of any animal crematory unit using an air general permit shall have a performance test conducted for visible emissions no later than thirty (30) days after the unit commences operation, and annually thereafter
2. The owner or operator of any animal crematory unit with a capacity of less than 500 pounds per hour and operating under the authority of an air construction permit or air operation permit shall have a performance test conducted for visible emissions prior to submitting the application for an initial air operation permit, and annually thereafter.
3. The owner or operator of any animal crematory unit with a capacity of less than 500 pounds per hour shall not be required to have performance tests conducted for carbon monoxide and particulate matter, except as provided at paragraph 62-297.310(7)(b), F.A.C.
4. The owner or operator of any animal crematory unit with a capacity of 500 pounds per hour or more shall have performance tests conducted for visible emissions, carbon monoxide, and particulate matter prior to submitting the application for an initial air operation permit, and annually thereafter.

(i) *Continuous Monitoring Requirements.* Each animal crematory unit shall be equipped and operated with a continuous monitor to record temperature at the point or beyond where 1.0 second gas residence time is obtained in the secondary chamber combustion zone in accordance with the manufacturer's instructions. In addition, each crematory unit installed after February 1, 2007, shall be equipped and operated with a pollutant monitoring system to automatically control combustion based on continuous in-stack opacity measurement. Such system shall be calibrated to restrict combustion in the primary chamber whenever any opacity exceeding fifteen percent (15%) opacity is occurring. A complete file of all temperature measurements; all continuous monitoring system, monitoring device, and performance testing measurements; all continuous monitoring system performance evaluations; all continuous monitoring system or monitoring device calibration checks; and all adjustments, preventive maintenance,

and corrective maintenance performed on these systems or devices, shall be recorded in a permanent legible form available for inspection. Continuous temperature monitoring documentation shall include operator name, operator indication of when cremation in the primary chamber was begun, date, time, and temperature markings. Pollutant monitoring system documentation shall include indication of when the opacity measurement system was cleaned and checked for proper operation in accordance with the manufacturer's recommended maintenance schedule. The file shall be retained for at least two (2) years following the recording of such measurements, maintenance, reports, and records

Rule 62-210.200, F.A.C., Definitions

"Animal Crematory" - Any combustion apparatus used solely for the cremation of animal remains.

"Biomedical Waste" - Any solid or liquid waste which may present a threat of infection to humans, including nonliquid-tissue, body parts, blood, blood products, and body fluids from humans and other primates; laboratory and veterinary wastes which contain human disease-causing agents; and discarded sharps. The following are also included:

1. Used absorbent materials saturated with blood, blood products, body fluids, or excretions or secretions contaminated with visible blood; and absorbent materials saturated with blood or blood products that have dried.
2. Non-absorbent, disposable devices that have been contaminated with blood, body fluids, or secretions or excretions visibly contaminated with blood, but have not been treated by a method listed in Section 381.0098, F.S., or a method approved pursuant to Rule 64E-16, F.A.C.

"Department" or "DEP" - The State of Florida Department of Environmental Protection.

"Emissions Unit" - Any part or activity of a facility that emits or has the potential to emit any air pollutant.

"Facility" - All of the emissions units which are located on one or more contiguous or adjacent properties, and which are under the control of the same person (or persons under common control).

"Owner" or "Operator" - Any person or entity who or which owns, leases, operates, controls or supervises an emissions unit or facility.

Attachment 1
Compliance Test Report

RETENTION TIME CALCULATION

CORRECTION FOR QUENCHED AIR AT OUTLET

PLANT: US Cremations
SOURCE: Model 75/300
LOCATION: Lakeland
DATE: 2/25/2011
Test: Run 3
CHARGE RATE: 75 lb

Stack Temperature °F 1087.44
Afterburner Temperature °F 1650.33
Ambient Temperature °F 85
Stack Flow Rate (scfm dry) 585

Secondary Chamber Percent Flow 64.04%
Secondary Chamber Flow (scfm dry) 374.7
Secondary Chamber Flow @ 1800 °F 1603.7
Secondary Chamber Volume (cu.ft.) 28.9
Retention Time @ 1800 °F 1.08

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

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

Secondary Chamber Flow @ 1800 °F = Secondary Chamber Flow (scfm dry) X (1800+460) / 528

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



Arlington Environmental Services, Inc.

Post Office Box 657 ~ Okeechobee, Florida 34973
605 SW Park Street, Suite 209 ~ Okeechobee, Florida 34974
Telephone (863) 467-0555 ~ Facsimile (863) 357-0810
www.arlingtonenvironmental.com

April 1, 2011

U.S. Cremation Equipment
598 South Northlake Boulevard, Suite 1016
Altamonte Springs, FL 32701

**RE: 115015AQB – Graceland Fairlawn Funeral Home
Emission Testing Report
Make: US Cremation Equipment
Model: 75/300**

To Whom It May Concern:

Emission testing for Particulate, Visible, and Carbon Monoxide, EPA Methods 1-5, 9, and 10, was conducted on February 25, 2011 on a surrogate unit as utilized at the above referenced facility. Upon request of the manufacturer the results from Methods 1-5, and 10 have been corrected to twelve percent (12%) Carbon Dioxide and fifty percent (50%) Excess Air. In addition the results were corrected to seven percent (7%) Oxygen. These results are presented in the attached Emissions Report.

Sincerely,

Noah A. Handley, P.E.
Vice President, Principal Engineer,
Arlington Environmental Services, Inc.

**Source Test Report for
Particulate, Visible, and
Carbon Monoxide Emissions**

EPA Methods 1-5, 9, and 10

Report 3494-S

**Conducted:
February 25, 2011**

**Prepared for:
US Cremation Equipment
Model 75/300
Illinois Identification No: 115015AQB**



**Prepared by:
Arlington Environmental Services, Inc.
Post Office Box 657
Okeechobee, FL 34973
(863) 467-0555**

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1.0 Introduction

Graceland Fairlawn Funeral Home operates an US Cremation Equipment Model 75/300 at their Animal Crematory located at 2091 North Oakland Avenue in Decatur, Illinois. On February 25, 2011, tests for particulate, visible, and carbon monoxide emissions were performed on the exhaust stack servicing the after burner system of a surrogate unit of the same make and model located at the US Cremation Equipment manufacturing facility in Lakeland, Florida.

The tests were performed in order to demonstrate compliance with Permit Number: 115015AQB issued by Illinois Environmental Protection Agency. During the compliance monitoring, only animal remains were processed to determine compliance with the standards for Particulate Matter, Visible Emissions, and Carbon Monoxide.

During the compliance monitoring period, records of the plant processing data were maintained by Luis Llorens, Project Manager, and are presented in Appendix C. In addition the EPA Method 9 testing was performed by Luis del Pino, a copy of their certification is included in Attachment F, Project Participants.

The results of these tests verify compliance with the above referenced permit and the Code of Federal Regulations for crematories.

2.0 Certification of Test Results

Permitted Facility: Graceland Fairlawn Funeral Home
US Cremation Equipment, Model 75/300
2091 North Oakland Avenue
Decatur, Illinois 62525

Testing Location: US Cremation Equipment
Model 75/300
Located at: 305 Winston Creek Parkway
Lakeland, FL 33810

Process Type: Animal Crematory

Rated Capacity: 75 lbs/hr

Report: 3494-S

Date: February 25, 2011


Allowable Particulate Emissions - 0.1 gr/dscf at 12% Carbon Dioxide (CO₂)
Actual Particulate Emissions - 0.0094 gr/dscf at 12% CO₂

Allowable Visible Emissions - 20%
Actual Visible Emissions - 0.0% (Highest Six Minute Average During All 3 Runs)

Allowable Carbon Monoxide Emissions - 500 ppm corrected to 50% Excess Air
Actual Carbon Monoxide Emissions - 28.93 ppm corrected to 50% Excess Air

All testing and analysis were performed in accordance with the Florida Department of Environmental Protection and the Code of Federal Regulations, 40, part 60.

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



William D. Arlington
Project Director

3.0 Allowable Emission Determination

The allowable emissions were determined in accordance with the code of federal regulations 40, part 60.926.401.

Substantiating data and calculations are presented in the Appendix D.

4.0 Cyclonic Flow Determination

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

5.0 Summary of Results
 US Cremation Equipment
 Model 75/300
 Report 3494-S

	Run 1	Run 2	Run 3	Average
Date	2/25/2011	2/25/2011	2/25/2011	
Start Time	13:28	15:15	16:51	
Stop Time	14:33	16:18	17:54	
Process Rate (tons/hr.)	75	69	75	73
Particulate Emission Rate (gr./dscf @ 12% CO ₂)	0.0129	0.0070	0.0083	0.0094
Allowable Particulate Emission Rate (gr./dscf @ 12% CO ₂)	0.1	0.1	0.1	0.1
Visible Emission Rate (highest six minute average)	0.0%	0.0%	0.0%	0.0%
Allowable Visible Emission Rate (highest six minute average)	20%	20%	20%	20%
Carbon Monoxide Emission Rate (PPM @ 50% Excess Air)	22.93	30.12	33.83	28.96
Allowable Carbon Monoxide Emission Rate (ppm @ 50% Excess Air)	500	500	500	500

6.0 Particulate Emission Results
 US Cremation Equipment
 Model 75/300
 Report 3494-S

	Run 1	Run 2	Run 3
Area (square feet)	1.53	1.53	1.53
Stack Pressure (inches Hg)	30.00	30.00	30.00
Meter Pressure (inches Hg)	30.12	30.14	30.15
Sample Volume (Std. Cu. Ft.)	43.208	45.925	48.157
Water Vapor (Cubic Feet)	3.89	3.79	4.95
Sample Moisture (percent)	8.26	7.62	9.32
Saturation Moisture (percent)	100.00	100.00	100.00
Molecular Weight (lbs/lb Mole wet)	28.38	28.43	28.28
Velocity (fpm)	1164	1192	1226
Volumetric Flow Rate (acfm)	1781	1824	1877
Volumetric Flow Rate (scfm)	536	555	582
Concentration (gr/dscf)	0.0049	0.0026	0.0032
Concentration Corrected to 7% O ₂ (gr/dscf)	0.0106	0.0057	0.0069
Concentration Corrected to 12% CO ₂ (gr/dscf)	0.0129	0.0070	0.0083
Mass Emission Rate (lbs./hr.)	0.02	0.01	0.02
Percent Isokinetic	96.40	99.04	98.98

6.0 Visible Emission Results

US Cremation Equipment

Model 75/300

Report 3494-S

	Run 1	Run 2	Run 3
Allowable Emission Rate (highest six minute average)	20%	20%	20%
Emission Rate (highest six minute average)	0.0%	0.0%	0.0%

7.0 Carbon Monoxide Emission Results
 US Cremation Equipment
 Model 75/300
 Report 3494-S

	Run1	Run 2	Run 3	Average
Date	2/25/2011	2/25/2011	2/25/2011	
Start Time	13:28	15:15	16:51	
Stop Time	14:33	16:18	17:54	
Percent Oxygen	14.53	14.59	14.38	
Percent Carbon Dioxide	4.56	4.43	4.73	
Carbon Monoxide (PPM)	11.00	14.35	16.57	
Carbon Monoxide Emissions Concentration Corrected to 7% O ₂ (PPM)	24.00	31.60	35.34	30.32
Percent Excess Air	212.71	214.87	206.27	211.28
Carbon Monoxide Emissions Corrected to 50% Excess Air (PPM)	22.93	30.12	33.83	28.96
Carbon Monoxide Allowable Corrected to 50% Excess Air (PPM)	500	500	500	500

8.0. Overview of Field and Analytical Procedures

8.1. EPA Method 1 - Sample and Velocity Traverses for Stationary Sources

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

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

8.2. EPA Method 2 - Determination of Stack Gas Velocity and Volumetric Flow Rate

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

Applicability - This method is applicable for measurement of the average velocity of a gas stream and for quantifying gas flow.

This procedure is not applicable at measurement sites which fail to meet the criteria of Method 1. This method cannot be used for direct measurement in cyclonic or swirling gas streams. The procedures in this method were utilized in its entirety according to the procedures outlined in 40 CFR Part 60, Appendix A.

8.3. Method 3 - Gas Analysis for the EPA Determination of Dry Molecular Weight

Principle - A gas sample is extracted from a stack by one of the following methods 1) Single-point grab sampling 2) single-point, integrated sampling or 3) multi-point, integrated sampling, the gas sample is analyzed for percent CO₂, percent O₂, and if necessary for CO. For dry molecular weight determination, either an Orsat or a Fyrite analyzer may be used for the analysis.

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

8.4. EPA Method 4 - Determination of Moisture Content in Stack Gases

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

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

8.5. EPA Method 5 - Determination of Particulate Emissions from Stationary Sources

Principle - Particulate matter is withdrawn isokinetically from the source and collected on a glass fiber filter maintained at a temperature in the range of 120 - 248° For such other temperature as specified by an applicable subpart of the standards or approved by the Administrator, U.S. Environmental Protection Agency, for a particular application. The particulate mass which includes any material that condenses at or above the filtration temperature is determined gravimetrically after removal of uncombined water.

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

Diagram of EPA Method 5 Sampling Train

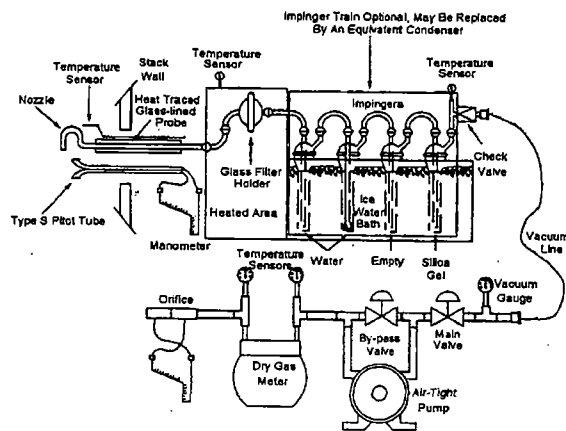


Figure F5-1. Particulate Sampling Train.

8.6. EPA Method 9 - Visual Determination of the Opacity of Emissions from Stationary Sources

Principle - The opacity of emissions from stationary sources is determined visually by a qualified observer.

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

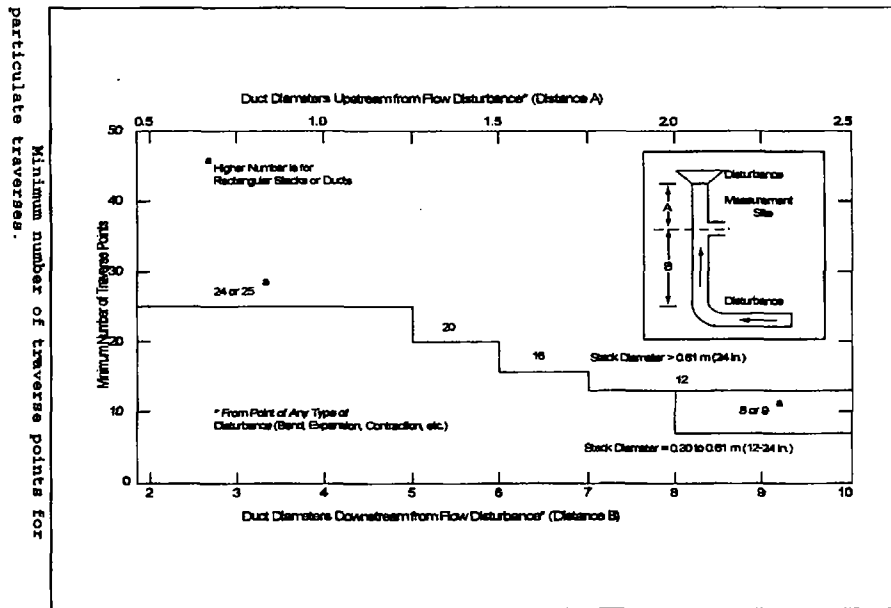
8.7. EPA Method 10 - Determination of Carbon Monoxide Emissions from Stationary Sources

Principle - An integrated or continuous gas sample is extracted from a sampling point and analyzed for carbon monoxide (CO) content using a Luft-type non-dispersive infrared analyzer or equivalent.

Applicability - This method is applicable for the determination of carbon monoxide emissions from stationary sources only when specified by the test procedures for determining compliance with new source performance standards. The procedures in this method were utilized in its entirety according to the procedures outlined in 40 CFR Part 60, Appendix A.

9.0 Sampling Point Determination

Minimum Number of Sampling Points Per Particulate Traverse



Circular Stacks

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

Rectangular Stacks

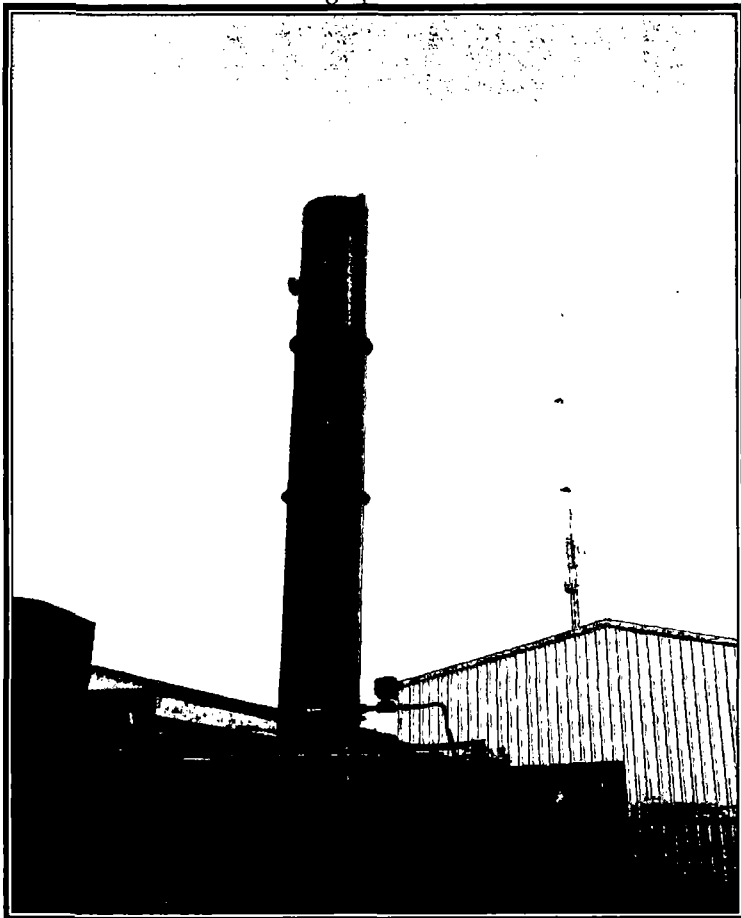
The number of sampling points is determined using the matrix below.

Number of Traverse Points	Subarea Layout Matrix
9	3 x 3
12	4 x 3
16	4 x 4
20	5 x 4
25	5 x 5
30	6 x 5
36	6 x 6
42	7 x 6
49	7 x 7

10.1 Sampling Points per Traverse
 US Cremation Equipment
 Model 75/300
 Report 3494-S

Stack Configuration	Circular
Diameter (inches)	16.75
Distance A - Ports to Downstream Disturbance (inches)	24
Distance A - Ports to Downstream Disturbance (diameters)	1.4
Distance B - Ports to Upstream Disturbance (inches)	132
Distance B - Ports to Upstream Disturbance (diameters)	7.9
Number of Test Ports	2
Wall or Port length	5.5
Number of Sampling Points per Traverse	10
Number of Points Sampled	20

Photograph of Stack



Traverse Point Location	
Traverse Point No.	Inches to Stack Wall
1	5.9
2	6.9
3	8.0
4	9.3
5	11.2
6	16.5
7	18.5
8	19.8
9	20.9
10	22.0

11.0 Summary of Field and Laboratory Data
 US Cremation Equipment
 Model 75/300
 Report 3494-S

	Run 1	Run 2	Run 3
Date	2/25/2011	2/25/2011	2/25/2011
Start Time	13:28	15:15	16:51
Stop Time	14:33	16:18	17:54
CP	0.84	0.84	0.84
Y	1.0030	1.0030	1.0030
ΔH_a (inches H ₂ O)	1.7369	1.7369	1.7369
Diameter of Nozzle (inches)	0.6253	0.6253	0.6253
Stack Diameter or Equivlant (inches)	16.75	16.75	16.75
Static Pressure (inches H ₂ O)	-0.04	-0.04	-0.04
Barometric Pressure (inches Hg)	30.00	30.00	30.00
Test Time (minutes)	60	60	60
Meter Volume (cubic feet)	44.544	47.307	49.483
Square Root ΔP (inches H ₂ O)	0.196	0.201	0.211
Orifice Pressure ΔH (inches H ₂ O)	1.628	1.845	2.047
Average Meter Temperature (Deg. F)	89.4	89.3	88.2
Average Stack Temperature (Deg. F)	1152.6	1147.3	1087.4
Particulate Sample Weight (grms)	0.0136	0.0077	0.0101
Water Collected (grms)	82.5	80.4	104.9
Percent CO ₂	4.6	4.4	4.7
Percent O ₂	14.5	14.6	14.4
Molecular Weight (lbs/lb Mole)	29.31	29.29	29.33
Nozzle Area (square feet)	0.00213	0.00213	0.00213

Attachment A - Field Data

US CREMATIONS

DATE: 2/25/2011
 RUN: 1
 UNIT: 1

AVG. ADJUSTED CO ppmvd @ 7% O2	24.01
CORRECTED O2 %	14.53
CORRECTED CO2 %	4.56
CORRECTED CO ppmvd	11.00

ANALYZER RESPONSE, SYSTEM BIAS AND SYSTEM DRIFT DATA

RANGE SETTING	CAL GASES	CERTIFIED GAS VALUE	ANALYZER VALUE	DIFFERENCE PPM	% SPAN	ANALYZER PRETEST VALUE	% SPAN	ANALYZER POSTTEST VALUE	% SPAN	% DRIFT	ANALYZER SERIAL #
25	% O2	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	014208153
		12.00	12.00	0.00	0.00	12.00	0.00	12.00	0.00	0.00	
		22.62	22.65	0.03	0.13						
20	% CO2	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	01410/8139
		8.91	9.00	0.09	0.52	9.00	0.00	9.00	0.00	0.00	
		17.27	17.30	0.03	0.17						
50	PPM CO	0.00	0.00	0.00	0.0	0.00	0.0	0.00	0.0	0.0	48C-68845-381
		24.7	24.8	0.10	0.2	24.60	-0.4	24.50	-0.6	-0.2	
		48.90	49.10	0.20	0.4						

UNCORRECTED RAW DATA

TIME	O2 %	CO2 %	CO PPM
13:28:00	15.16	4.25	16.00
13:29:00	15.01	4.28	10.05
13:30:00	14.96	4.31	12.60
13:31:00	14.90	4.37	11.65
13:32:00	14.81	4.41	6.35
13:33:00	14.79	4.38	6.00
13:34:00	14.81	4.39	6.00
13:35:00	14.80	4.39	6.70
13:36:00	14.78	4.41	8.20
13:37:00	14.78	4.42	12.15
13:38:00	14.74	4.46	12.45
13:39:00	14.69	4.49	11.55
13:40:00	14.66	4.51	11.60
13:41:00	14.63	4.55	10.85
13:42:00	14.57	4.57	8.15
13:43:00	14.55	4.59	9.55
13:44:00	14.51	4.63	11.15
13:45:00	14.46	4.70	11.50
13:46:00	14.33	4.78	7.55
13:47:00	14.29	4.78	8.00
13:48:00	14.29	4.76	9.55
13:49:00	14.34	4.72	10.60
13:50:00	14.36	4.71	10.70
13:51:00	14.37	4.72	10.85
13:52:00	14.33	4.79	10.15
13:53:00	14.24	4.79	6.60
13:54:00	14.27	4.75	8.30
13:55:00	14.33	4.74	9.35
13:56:00	14.27	5.01	16.50
13:57:00	13.91	5.25	18.80
13:58:00	13.67	5.29	12.55
14:04:00	14.44	4.89	8.10
14:05:00	14.28	4.75	10.20
14:06:00	14.38	4.76	8.20
14:07:00	14.34	4.79	10.90
14:08:00	14.35	4.69	12.30
14:09:00	14.46	4.64	8.05
14:10:00	14.51	4.60	7.05
14:11:00	14.57	4.54	7.10
14:12:00	14.69	4.40	9.35
14:13:00	14.86	4.40	11.35
14:14:00	14.78	4.48	16.05
14:15:00	14.77	4.47	11.20
14:16:00	14.65	4.73	9.15
14:17:00	14.29	4.76	8.80
14:18:00	14.46	4.57	10.10
14:19:00	14.52	4.73	11.85
14:20:00	14.31	4.78	10.30
14:21:00	14.26	4.76	9.65
14:22:00	14.30	4.69	11.05
14:23:00	14.40	4.64	13.95
14:24:00	14.44	4.61	13.45
14:25:00	14.48	4.56	14.90
14:26:00	14.55	4.53	19.35
14:27:00	14.58	4.50	19.25
14:28:00	14.62	4.47	15.10
14:29:00	14.64	4.45	8.95
14:30:00	14.68	4.42	9.60
14:31:00	14.71	4.41	10.75
14:32:00	14.73	4.40	13.35
14:33:00	14.71	4.39	15.70

* Port Change

MEAN ANALYZER VALUES

Avg. % O2	14.53
Avg. % CO2	4.61
Avg. CO ppmvd	10.94

US CREMATIONS

DATE: 2/25/2011
 RUN: 2
 UNIT: 1

AVG. ADJUSTED CO ppmvd @ 7% O2	31.60
CORRECTED O2 %	14.59
CORRECTED CO2 %	4.43
CORRECTED CO ppmvd	14.35

ANALYZER RESPONSE, SYSTEM BIAS AND SYSTEM DRIFT DATA

RANGE SETTING	CAL GASES	CERTIFIED GAS VALUE	ANALYZER VALUE	DIFFERENCE PPM	% SPAN	ANALYZER PRETEST VALUE	% SPAN	ANALYZER POSTTEST VALUE	% SPAN	% DRIFT	ANALYZER SERIAL #
25	% O2	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	01420B153
		12.00	12.00	0.00	0.00	12.00	0.00	12.00	0.00	0.00	
		22.62	22.65	0.03	0.13						
20	% CO2	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	01410/B139
		8.91	9.00	0.09	0.52	9.00	0.00	9.00	0.00	0.00	
		17.27	17.30	0.03	0.17						
50	PPM CO	0.00	0.00	0.00	0.0	0.00	0.0	0.00	0.0	0.0	48C-68845-361
		24.70	24.80	0.10	0.2	24.50	-0.8	24.40	46.8	-0.2	
		48.90	49.10	0.20	0.4						

UNCORRECTED RAW DATA

TIME	O2 %	CO2 %	CO PPM
15:15:00	13.83	5.17	14.70
15:16:00	13.77	5.20	15.30
15:17:00	13.78	5.13	17.90
15:18:00	13.93	4.96	13.90
15:19:00	14.12	4.87	11.55
15:20:00	14.21	4.81	11.30
15:21:00	14.35	4.59	13.70
15:22:00	14.66	4.47	18.45
15:23:00	14.75	4.50	16.60
15:24:00	14.66	4.59	16.45
15:25:00	14.57	4.61	19.65
15:26:00	14.54	4.59	16.55
15:27:00	14.51	4.74	15.25
15:28:00	14.27	4.83	17.10
15:29:00	14.19	4.80	17.95
15:30:00	14.24	4.75	20.40
15:31:00	14.31	4.71	23.45
15:32:00	14.37	4.64	23.10
15:33:00	14.45	4.58	22.50
15:34:00	14.51	4.56	14.55
15:35:00	14.54	4.54	11.75
15:36:00	14.53	4.55	11.10
15:37:00	14.57	4.51	11.65
15:38:00	14.62	4.44	12.85
15:39:00	14.69	4.42	19.75
15:40:00	14.70	4.41	16.75
15:41:00	14.73	4.39	16.65
15:42:00	14.76	4.36	16.25
15:43:00	14.81	4.34	15.60
15:44:00	14.83	4.32	18.35
15:45:00	15.28	2.54	17.75
15:49:00	14.54	4.58	9.25
15:50:00	14.51	4.57	7.90
15:51:00	14.50	4.56	8.75
15:52:00	14.54	4.52	14.25
15:53:00	14.59	4.50	14.50
15:54:00	14.61	4.49	11.15
15:55:00	14.62	4.48	11.90
15:56:00	14.64	4.47	9.55
15:57:00	14.65	4.45	10.10
15:58:00	14.68	4.44	9.05
15:59:00	14.69	4.44	10.50
16:00:00	14.69	4.43	10.35
16:01:00	14.71	4.41	11.05
16:02:00	14.74	4.39	12.45
16:03:00	14.75	4.40	12.70
16:04:00	14.74	4.41	8.45
16:05:00	14.76	4.38	7.55
16:06:00	14.78	4.38	11.45
16:07:00	14.78	4.37	17.85
16:08:00	14.81	4.34	22.45
16:09:00	14.83	4.34	14.40
16:10:00	14.83	4.34	9.80
16:11:00	14.84	4.32	9.40
16:12:00	14.86	4.33	11.20
16:13:00	14.85	4.31	12.60
16:14:00	14.88	4.31	9.50
16:15:00	14.87	4.31	10.35
16:16:00	14.89	4.31	19.35
16:17:00	14.89	3.62	19.15
16:18:00	14.83	3.81	10.60

* Port Change

MEAN ANALYZER VALUES

Avg. % O2	14.59
Avg. % CO2	4.47
Avg. CO ppmvd	14.20

US CREMATIONS

DATE: 2/25/2011
 RUN: 3
 UNIT: 1

AVG. ADJUSTED CO ppmvd @ 7% O2	35.34
CORRECTED O2 %	14.38
CORRECTED CO2 %	4.73
CORRECTED CO ppmvd	16.57

ANALYZER RESPONSE, SYSTEM BIAS AND SYSTEM DRIFT DATA

RANGE SETTING	CAL GASES	CERTIFIED GAS VALUE	ANALYZER VALUE	DIFFERENCE PPM	% SPAN	ANALYZER PRETEST VALUE	% SPAN	ANALYZER POSTTEST VALUE	% SPAN	% DRIFT	ANALYZER SERIAL #
25	% O2	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	01420B153
		12.00	12.00	0.00	0.00	12.00	0.00	11.90	-0.44	-0.44	
		22.62	22.65	0.03	0.13						
20	% CO2	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	01410/B139
		8.91	9.00	0.09	0.52	9.00	0.00	9.00	0.00	0.00	
		17.27	17.30	0.03	0.17						
50	PPM CO	0.00	0.00	0.00	0.0	0.00	0.0	0.00	0.0	0.0	48C-68845-381
		24.70	24.80	0.10	0.2	24.40	-0.8	24.50	-0.6	0.2	
		48.90	49.10	0.20	0.4						

UNCORRECTED RAW DATA

TIME	O2 %	CO2 %	CO PPM
16:51:00	13.17	5.54	11.30
16:52:00	13.26	5.47	17.25
16:53:00	13.38	5.41	16.30
16:54:00	13.51	5.34	16.05
16:55:00	13.63	5.27	16.40
16:56:00	13.74	5.20	12.65
16:57:00	13.83	5.17	18.95
16:58:00	13.86	5.17	12.75
16:59:00	13.86	5.14	9.80
17:00:00	13.91	5.11	12.60
17:01:00	13.94	5.08	13.90
17:02:00	13.99	5.03	12.00
17:03:00	14.06	5.00	11.40
17:04:00	14.07	5.01	13.45
17:05:00	14.06	4.99	16.90
17:06:00	14.08	4.96	18.40
17:07:00	14.11	4.94	22.50
17:08:00	14.13	4.91	20.05
17:09:00	14.16	4.90	20.15
17:10:00	14.16	4.89	18.70
17:11:00	14.19	4.86	14.35
17:12:00	14.23	4.83	11.75
17:13:00	14.26	4.84	20.90
17:14:00	14.26	4.79	13.45
17:15:00	14.32	4.76	11.60
17:16:00	14.36	4.74	9.30
17:17:00	14.38	4.72	12.55
17:18:00	14.41	4.68	21.10
17:19:00	14.48	4.65	19.70
17:20:00	14.49	4.28	15.00
17:21:00	14.44	4.51	17.45
17:25:00	14.49	4.94	12.15
17:26:00	14.15	4.96	15.40
17:27:00	14.12	4.93	20.85
17:28:00	14.18	4.77	16.55
17:29:00	14.46	4.59	14.55
17:30:00	14.63	4.57	17.65
17:31:00	14.59	4.69	21.50
17:32:00	14.51	4.59	14.20
17:33:00	14.64	4.58	13.55
17:34:00	14.58	4.61	15.20
17:35:00	14.65	4.49	23.65
17:36:00	14.73	4.57	23.45
17:37:00	14.65	4.52	18.75
17:38:00	14.73	4.53	14.45
17:39:00	14.67	4.53	14.35
17:40:00	14.77	4.42	20.40
17:41:00	14.81	4.56	21.90
17:42:00	14.67	4.46	16.50
17:43:00	14.83	4.49	15.80
17:44:00	14.67	4.56	13.55
17:45:00	14.74	4.41	14.20
17:46:00	14.81	4.56	20.30
17:47:00	14.61	4.59	22.00
17:48:00	14.71	4.40	17.45
17:49:00	14.86	4.48	13.45
17:50:00	14.72	4.57	19.45
17:51:00	14.63	4.54	19.10
17:52:00	14.79	4.35	20.70
17:53:00	14.95	4.63	20.75
17:54:00	14.63	4.31	10.15

MEAN ANALYZER VALUES

Avg. % O2	14.32
Avg. % CO2	4.78
Avg. CO ppmvd	16.40

RUN # 1

EPA VISIBLE EMISSION OBSERVATION FORM 1

Method Used (Circle One)
 (Method 9) 203A 203B Other _____

Company Name
 METRO PET CREMATORY - MODEL US 75/300

Facility Name
 KELLER MECHANICAL

Street Address
 305 WINSTON GREEK PARKWAY

CITY
 LAKELAND

State
 FL

Zip
 33810

Process
 ANIMAL CREMATION

Unit #
 1

Operating Mode
 NORMAL 75 LBS

Control Equipment
 AFTERBURNER

Operating Mode
 NORMAL

Describe Emission Point
 METAL STACK

Height of Emiss. Pt.
 Start 20 FT End 20 FT

Height of Emiss. Pt. Rel. to Observer
 Start 20 FT End 20 FT

Distance to Emiss. Pt.
 Start 60 FT End 60 FT

Direction to Emiss. Pt. (Degree)
 Start 0 End 0

Vertical Angle to Obs. Pt.
 Start 19° End 19°

Direction to Obs. Pt. (Degree)
 Start 0° End 0°

Distance and Direction to Observation Point from Emission Point
 Start N/A End N/A

Describe Emissions
 Start NINE End NONE

Emission Color
 Start N/A End N/A

Water Droplet Plume
 Attached Detached None

Describe Plume Background
 Start CLOUDS End CLOUDS

Background Color
 Start WHITE End WHITE

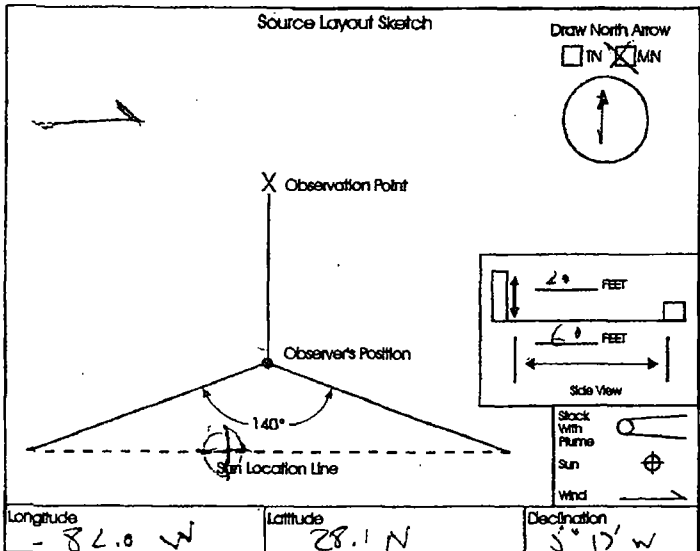
Sky Conditions
 Start SCATTERED End SCATTERED

Wind Speed
 Start 3-15 MPH End 3-15 MPH

Wind Direction
 Start W End W

Ambient Temp.
 Start 70°F End 75°F

Wet Bulb Temp.
 RH Percent 80%



Additional Information

Form Number _____ Page 1 of 2

Continued on VEO Form Number _____

Observation Date	Time Zone	Start Time	End Time						
02/25/11	EST	1:30 PM	2:00 PM	Sec	0	15	30	45	Comments
Min	0	15	30	45					
1	0	0	0	0					
2	0	0	0	0					
3	0	0	0	0					
4	0	0	0	0					
5	0	0	0	0					
6	0	0	0	0					
7	0	0	0	0					
8	0	0	0	0					
9	0	0	0	0					
10	0	0	0	0					
11	0	0	0	0					
12	0	0	0	0					
13	0	0	0	0					
14	0	0	0	0					
15	0	0	0	0					
16	0	0	0	0					
17	0	0	0	0					
18	0	0	0	0					
19	0	0	0	0					
20	0	0	0	0					
21	0	0	0	0					
22	0	0	0	0					
23	0	0	0	0					
24	0	0	0	0					
25	0	0	0	0					
26	0	0	0	0					
27	0	0	0	0					No OBJECTIONABLE
28	0	0	0	0					SMOKE OR ODORS
29	0	0	0	0					
30	0	0	0	0					

Observer's Name (Print)
 LUIS F. DEL PINO

Observer's Signature
 [Signature]

Date
 02/25/11

Organization
 AI-ENVIRONMENTAL

Certified By
 ETN 391226

Date
 02/02/11

RUN # 1

EPA VISIBLE EMISSION OBSERVATION FORM 1

Method Used (Circle One)
 Method 9 203A 203B Other: _____

Form Number _____ Page **2** Of **2**
 Continued on VEO Form Number _____

Company Name: **METZLO PET CREMATORY - MODEL VS 75/300**
 Facility Name: **KELLER MECHANICAL**
 Street Address: **305 WINSTON CREEK PKWY**
 City: **LAKELAND** State: **FL** Zip: **33810**

Process: **ANIMAL CREMATION** Unit #: **1** Operating Mode: **NORMAL 75 LBS**
 Control Equipment: **AFTERBURNER** Operating Mode: **NORMAL 1,650 °F**

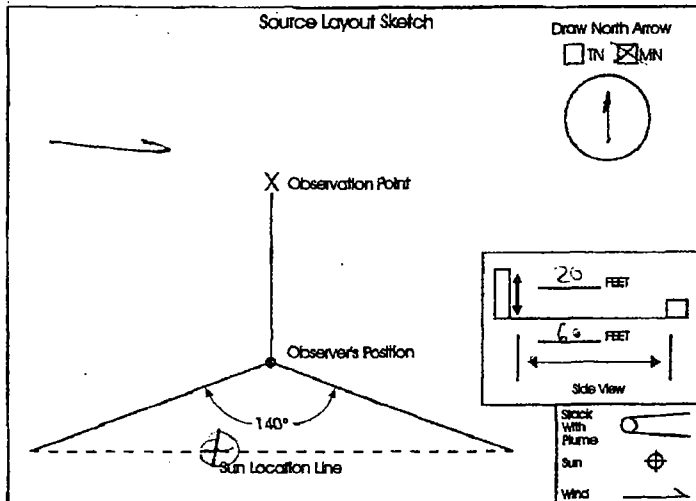
Describe Emission Point: **METAL STACK**

Height of Emiss. Pt. Start: **20 FT** End: **20 FT** Height of Emiss. Pt. Rel. to Observer Start: **20 FT** End: **20 FT**
 Distance to Emiss. Pt. Start: **60 FT** End: **60 FT** Direction to Emiss. Pt. (Degrees) Start: **0°** End: **0°**

Vertical Angle to Obs. Pt. Start: **5°** End: **19°** Direction to Obs. Pt. (Degrees) Start: **0°** End: **0°**
 Distance and Direction to Observation Point from Emission Point Start: **N/A** End: **N/A**

Describe Emissions: Start: **NONE** End: **NONE**
 Emission Color: Start: **N/A** End: **N/A** Water Droplet Plume: Attached Detached None

Describe Plume Background: Start: **CLOUDS** End: **CLOUDS**
 Background Color: Start: **WHITE** End: **WHITE** Sky Conditions: Start: **SCATTERED** End: **SCATTERED**
 Wind Speed: Start: **5-15 MPH** End: **5-15 MPH** Wind Direction: Start: **W** End: **W**
 Ambient Temp.: Start: **70° F** End: **75° F** Wet Bulb Temp.: _____ RH Percent: **80%**



Longitude: **-82.0 W** Latitude: **28.1 N** Declination: **5° 17' W**

Additional Information

Sec Mn	Observation Date: 02/25/11				Time Zone: EST	Start Time: 2:01 PM	End Time: 2:30 PM	Comments
	0	15	30	45				
1	0	0	0	0				
2	0	0	0	0				
3	0	0	0	0				
4	0	0	0	0				
5	0	0	0	0				
6	0	0	0	0				
7	0	0	0	0				
8	0	0	0	0				
9	0	0	0	0				
10	0	0	0	0				
11	0	0	0	0				
12	0	0	0	0				
13	0	0	0	0				
14	0	0	0	0				
15	0	0	0	0				
16	0	0	0	0				
17	0	0	0	0				
18	0	0	0	0				
19	0	0	0	0				
20	0	0	0	0				
21	0	0	0	0				
22	0	0	0	0				
23	0	0	0	0				
24	0	0	0	0				
25	0	0	0	0				
26	0	0	0	0				No OBJECTIONABLE
27	0	0	0	0				SAMPLE OF OBS
28	0	0	0	0				
29	0	0	0	0				
30	0	0	0	0				

Observer's Name (Print): **Luis F. DEL PINO**
 Observer's Signature: *[Signature]* Date: **02/25/11**
 Organization: **AI-ENVIRONMENTAL**
 Certified By: **ETA-391226** Date: **02/02/11**
 License No: **1405354201** FAX: **407-74-2456**

RUN # 2

EPA VISIBLE EMISSION OBSERVATION FORM 1

Method Used (Circle One)
 (Method 9) 203A 203B Other: _____

Company Name
 MUTRO PET CREMATORY - UNDER NO 20/300
 Facility Name
 KELLER MECHANICAL
 Street Address
 305 WINSTON CREEK PKWY
 City LAKELAND State FL Zip 33810

Process ANIMAL CREMATION Unit # 1 Operating Mode NORMAL (9 LL) (9 LL)
 Control Equipment AFTERBURNER Operating Mode NORMAL 1600 F

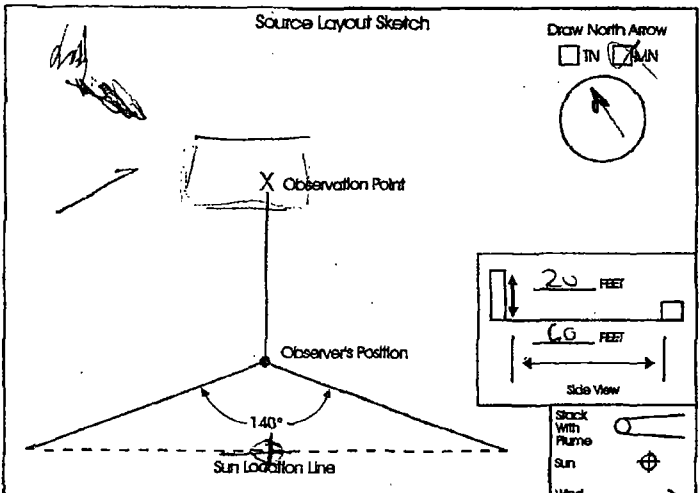
Describe Emission Point
 METAL STACK

Height of Emis. Pt. Start 20 FT End 20 FT Height of Emis. Pt. Rel. to Observer Start 20 FT End 20 FT
 Distance to Emis. Pt. Direction to Emis. Pt. (Degree) Start 60 FT End 60 FT Start 35° End 35°

Vertical Angle to Obs. Pt. Start 19° End 19° Direction to Obs. Pt. (Degree) Start 35° End 35°
 Distance and Direction to Observation Point from Emission Point Start N/A End N/A

Describe Emissions Start NONE End NONE
 Emission Color Start N/A End N/A Water Droplet Plume Attached Detached None

Describe Plume Background Start SKY End SKY
 Background Color Start BLUE End BLUE Sky Conditions Start CLEAR End CLEAR
 Wind Speed Start 5-15 MPH End 5-15 MPH Wind Direction Start W End W
 Ambient Temp. Start 80° F End 80° F Wet Bulb Temp. RH Percent 85%



Longitude -82.0 W Latitude 28.1 N Declination 17° W

Additional Information

Form Number _____ Page 1 of 2
 Continued on VEO Form Number _____

Sec Min	Time Zone				Start Time	End Time	Comments
	0	15	30	45			
01	0	0	0	0	3:11 PM	3:43 PM	
02	0	0	0	0			
03	0	0	0	0			
04	0	0	0	0			
05	0	0	0	0			
06	0	0	0	0			
07	0	0	0	0			
08	0	0	0	0			
09	0	0	0	0			
10	0	0	0	0			
11	0	0	0	0			
12	0	0	0	0			
13	0	0	0	0			
14	0	0	0	0			
15	0	0	0	0			
16	0	0	0	0			
17	0	0	0	0			
18	0	0	0	0			
19	0	0	0	0			
20	0	0	0	0			
21	0	0	0	0			
22	0	0	0	0			
23	0	0	0	0			
24	0	0	0	0			
25	0	0	0	0			
26	0	0	0	0			
27	0	0	0	0			NO OBJECTIONABLE
28	0	0	0	0			SMOKE DISAPPEAR
29	0	0	0	0			
30	0	0	0	0			

Observer's Name (Print) Luis F. DEL PINO
 Observer's Signature [Signature] Date 02/25/11
 Organization AI-ENVIRONMENTAL
 Certified By ETA-391226 Date 02/02/11

RUN # 2

EPA VISIBLE EMISSION OBSERVATION FORM 1

Method Used (Circle One)
 Method 9 203A 203B Other: _____

Company Name
 METRO PET CREMATORY - MODEL VS 75/300
 Facility Name
 KELLER MECHANICAL
 Street Address
 305 WINSTON CREEK PIKWAY
 City
 LAKELAND State
 FL Zip
 33810

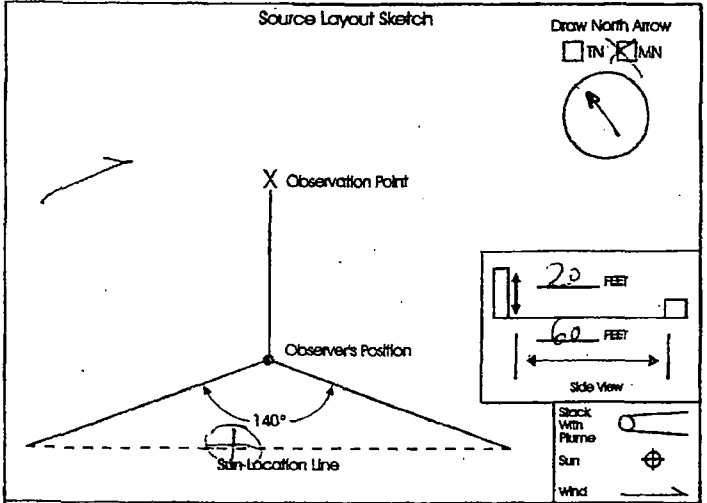
Process
 ANIMAL CREMATION Unit #
 1 Operating Mode
 NORMAL 69 LB
 Control Equipment
 AFTERBURNER Operating Mode
 NORMAL 1650 F

Describe Emission Point
 METAL STACK
 Height of Emiss. Pt.
 Start 20 FT End 20 FT Height of Emiss. Pt. Rel. to Observer
 Start 20 FT End 20 FT
 Distance to Emiss. Pt.
 Start 60 FT End 60 FT Direction to Emiss. Pt. (Degrees)
 Start 35° End 35°

Vertical Angle to Obs. Pt.
 Start 19° End 19° Direction to Obs. Pt. (Degrees)
 Start 35° End 35°
 Distance and Direction to Observation Point from Emission Point
 Start N/A End N/A

Describe Emissions
 Start NONE End NONE
 Emission Color
 Start N/A End N/A Water Droplet Plume
 Attached Detached None

Describe Plume Background
 Start SKY End SKY
 Background Color
 Start BLUE End BLUE Sky Conditions
 Start CLEAR End CLEAR
 Wind Speed
 Start 5-15 MPH End 5-15 MPH Wind Direction
 Start W End W
 Ambient Temp.
 Start 10 F End 80 F Wet Bulb Temp.
 RH Percent 85%



Longitude
 -82.0 W Latitude
 28.1 N Declination
 5° 17' W

Additional Information

Form Number _____ Page 2 of 2
 Continued on VEO Form Number _____

Observation Date	Time Zone	Start Time	End Time						
02/25/11	EST	3:46 PM	4:15 PM	Sec	0	15	30	45	Comments
1	0	0	0	0					
2	0	0	0	0					
3	0	0	0	0					
4	0	0	0	0					
5	0	0	0	0					
6	0	0	0	0					
7	0	0	0	0					
8	0	0	0	0					
9	0	0	0	0					
10	0	0	0	0					
11	0	0	0	0					
12	0	0	0	0					
13	0	0	0	0					
14	0	0	0	0					
15	0	0	0	0					
16	0	0	0	0					
17	0	0	0	0					
18	0	0	0	0					
19	0	0	0	0					
20	0	0	0	0					
21	0	0	0	0					
22	0	0	0	0					
23	0	0	0	0					
24	0	0	0	0					
25	0	0	0	0					
26	0	0	0	0	No OBJECTIONABLE				
27	0	0	0	0	Smoke or odors				
28	0	0	0	0					
29	0	0	0	0					
30	0	0	0	0					

Observer's Name (Print)
 LOUIS T. DEL PINO
 Observer's Signature
 [Signature] Date
 02/25/11
 Organization
 AI-ENVIRONMENTAL
 Certified By
 ETA-35126 Date
 02/02/11

RUN # 3

EPA VISIBLE EMISSION OBSERVATION FORM 1

Method Used (Circle One)
 Method 9 203A 203B Other: _____

Company Name: METAL PET CREMATORIAL - MODEL US 11/300
 Facility Name: KELLER MECHANICAL
 Street Address: 300 WINSTON CREEK PKWY
 City: LAKELAND State: FL Zip: 33810

Process: ANIMAL CREMATION Unit #: 1 Operating Mode: NORMAL 75 LB
 Control Equipment: AFTER BURNER Operating Mode: NORMAL 1,650 F

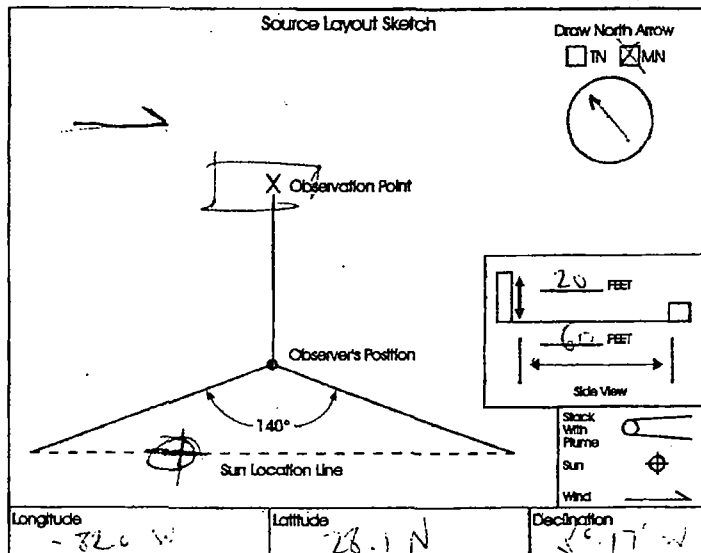
Describe Emission Point: METAL STACK

Height of Emiss. Pt. Start: 20 FT End: 20 FT Height of Emiss. Pt. Rel. to Observer Start: 20 FT End: 20 FT
 Distance to Emiss. Pt. Start: 60 FT End: 60 FT Direction to Emiss. Pt. (Degrees) Start: 35° End: 35°

Vertical Angle to Obs. Pt. Start: 19° End: 19° Direction to Obs. Pt. (Degrees) Start: 35° End: 35°
 Distance and Direction to Observation Point from Emission Point Start: N/A End: N/A

Describe Emissions
 Start: NONE End: NONE
 Emission Color: Start: N/A End: N/A Water Droplet Plume: Attached Detached None

Describe Plume Background
 Start: SKY End: SKY
 Background Color: Start: BLUE End: BLUE Sky Conditions: Start: CLEAR End: CLEAR
 Wind Speed: Start: 5-15 MPH End: 5-15 MPH Wind Direction: Start: W End: W
 Ambient Temp. Start: 60 F End: 80 F Wet Bulb Temp. RH Percent: 75%



Additional Information

Form Number: _____ Page: 1 of 2
 Continued on VEO Form Number: _____

Sec Min	Time Zone				Start Time	End Time	Comments
	0	15	30	45			
1	0	0	0	0	4:50 PM	5:20 PM	
2	0	0	0	0			
3	0	0	0	0			
4	0	0	0	0			
5	0	0	0	0			
6	0	0	0	0			
7	0	0	0	0			
8	0	0	0	0			
9	0	0	0	0			
10	0	0	0	0			
11	0	0	0	0			
12	0	0	0	0			
13	0	0	0	0			
14	0	0	0	0			
15	0	0	0	0			
16	0	0	0	0			
17	0	0	0	0			
18	0	0	0	0			
19	0	0	0	0			
20	0	0	0	0			
21	0	0	0	0			
22	0	0	0	0			
23	0	0	0	0			
24	0	0	0	0			
25	0	0	0	0			
26	0	0	0	0			NO OBJECTIONABLE
27	0	0	0	0			SMOKE OR ODORS
28	0	0	0	0			
29	0	0	0	0			
30	0	0	0	0			

Observer's Name (Print): LUC F. JELPINS
 Observer's Signature: [Signature] Date: 02/25/11
 Organization: A1 - ENVIRONMENTAL
 Certified By: CTA 391226 Date: 02/02/11

RUN # 3

EPA VISIBLE EMISSION OBSERVATION FORM 1

Method Used (Circle One)
 Method 9 203A 203B Other: _____

Company Name
 METAL PET CREMATORY - MODEL VS 75/360

Facility Name
 KELLEZ MECHANICAL

Street Address
 306 WINSTON CREEK PKWY

City State Zip
 LAKELAND FL 33810

Process Unit # Operating Mode
 ANIMAL CREMATION 1 NORMAL 75 LLs

Control Equipment Operating Mode
 AFTER BURNER NORMAL 1560°F

Describe Emission Point
 METAL STACK

Height of Emiss. Pt. Height of Emiss. Pt. Rel. to Observer
 Start 20 FT End 20 FT Start 20 FT End 20 FT

Distance to Emiss. Pt. Direction to Emiss. Pt. (Degrees)
 Start 60 FT End 60 FT Start 35° End 35°

Vertical Angle to Obs. Pt. Direction to Obs. Pt. (Degrees)
 Start 19° End 19° Start 35° End 35°

Distance and Direction to Observation Point from Emission Point
 Start End N/A N/A

Describe Emissions
 Start End NONE NONE

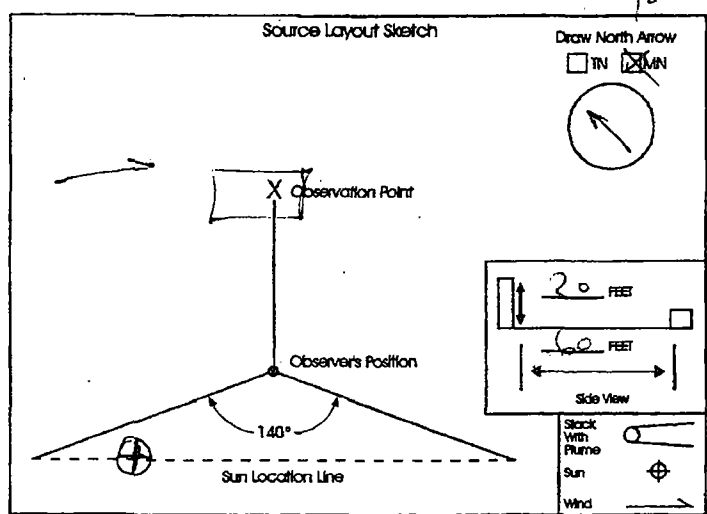
Emission Color Water Droplet Plume
 Start End N/A N/A Attached Detached None

Describe Plume Background
 Start End SKY SKY

Background Color Sky Conditions
 Start BLUE End BLUE Start CLEAR End CLEAR

Wind Speed Wind Direction
 Start 5-15 MPH End 5-15 MPH Start W End W

Ambient Temp. Wet Bulb Temp. RH Percent
 Start 80°F End 80°F 85%



Longitude Latitude Declination
 -82.0 W 28.1 N 5°17'W

Additional Information

Form Number Page 2 of 2

Continued on VEO Form Number

Observation Date	Time Zone	Start Time	End Time						
02/02/11	EST	2:21 PM	3:50 PM	Sec	0	15	30	45	Comments
Min	0	15	30	45					
1	0	0	0	0					
2	0	0	0	0					
3	0	0	0	0					
4	0	0	0	0					
5	0	0	0	0					
6	0	0	0	0					
7	0	0	0	0					
8	0	0	0	0					
9	0	0	0	0					
10	0	0	0	0					
11	0	0	0	0					
12	0	0	0	0					
13	0	0	0	0					
14	0	0	0	0					
15	0	0	0	0					
16	0	0	0	0					
17	0	0	0	0					
18	0	0	0	0					
19	0	0	0	0					
20	0	0	0	0					
21	0	0	0	0					
22	0	0	0	0					
23	0	0	0	0					
24	0	0	0	0					
25	0	0	0	0					NO OBJECTIONABLE
26	0	0	0	0					SMOKE OR ODORS
27	0	0	0	0					
28	0	0	0	0					
29	0	0	0	0					
30	0	0	0	0					

Observer's Name (Print) LOUIS F DEL PINO

Observer's Signature *[Signature]* Date 02/02/11

Organization AI-ENVIRONMENTAL

Certified By EIA-391226 Date 02/02/11

Attachment B - Laboratory Data

Particulate Laboratory Data
US Cremation Equipment
Model 75/300
Report 3494-S

Run 1

Filter Number	1566	
	Final Weight	0.3637 grams
	Tare Weight	0.3608 grams
	Difference	0.0029 grams
Beaker Number	1A	
	Final Weight	109.3256 grams
	Tare Weight	109.3144 grams
	Difference	0.0112 grams
Filter Blank Number	1572	
	Final Weight	0.3585 grams
	Tare Weight	0.3585 grams
	Difference	0.0000 grams
Wash Down Blank		
	Volume of Rinse	60 mls
	Solution of Residue	0.00000784 grams/mls
	Total Residue	0.0004704 grams/mls
Total Particulate Weight		0.0136 grams
Water Collected		
	Final Impinger Water	275 MLS
	Initial Impinger Water	200 MLS
	Final Silica Weight	207.6 GRAMS
	Silica Tare Weight	200.0 GRAMS
Total Water Collected		82.5 grams
Analyst	<u> <i>AT</i> </u>	

Particulate Laboratory Data
US Cremation Equipment
Model 75/300
Report 3494-S

Run 2

Filter Number	2A	
	Final Weight	0.3617 grams
	Tare Weight	0.3604 grams
	Difference	0.0013 grams
Beaker Number	2A	
	Final Weight	107.1887 grams
	Tare Weight	107.1818 grams
	Difference	0.0069 grams
Filter Blank Number	1572	
	Final Weight	0.3585 grams
	Tare Weight	0.3585 grams
	Difference	0.0000 grams
Wash Down Blank		
	Volume of Rinse	70 mls
	Solution Residue	0.00000784 grams/ml
	Total Residue	0.0005488 grams/ml
Total Particulate Weight		0.0077 grams
Water Collected		
	Final Impinger Water	273 MLS
	Initial Impinger Water	200 MLS
	Final Silica Weight	207.5 GRAMS
	Silica Tare Weight	200.0 GRAMS
Total Water Collected		80.4 grams

Analyst

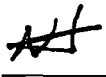
 AT

Particulate Laboratory Data
US Cremation Equipment
Model 75/300
Report 3494-S

Run 3

Filter Number	1568	
	Final Weight	0.3615 grams
	Tare Weight	0.3600 grams
	Difference	0.0015 grams
Beaker Number	3A	
	Final Weight	108.3688 grams
	Tare Weight	108.3596 grams
	Difference	0.0092 grams
Filter Blank Number	1572	
	Final Weight	0.3585 grams
	Tare Weight	0.3585 grams
	Difference	0.0000 grams
Wash Down Blank		
	Volume of Rinse	75 mls.
	Solution Residue	0.00000784 grams/ml.
	Total Residue	0.000588 grams
Total Particulate Weight		0.0101 grams
Water Collected		
	Final Impinger Water	297 mls.
	Initial Impinger Water	200 mls.
	Final Silica Weight	208.1 grams
	Silica Tare Weight	200.0 grams
Total Water Collected		104.9 grams

Analyst

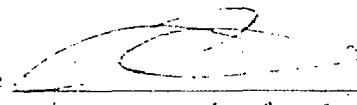


Attachment C - Process Data

Emission Control Device and Process Data

Company US Cremations
 Installation Crematory
 Date 2/25/11 Report No. 3494-S
 Type of Installation Pet Crematory
 Type of Material Processed Animal Remains
 Type(s) of Fuel Used Propane
 Type of Pollution Control System After burner
 General Condition of Control Equipment New

Run No.	1	2	3
Start Time	13:28	15:15	16:51
Stop Time	14:33	16:18	17:54
Fuel Used	—	—	—
Scrubber Water Flow Rate (GPM)	NA	NA	NA
Pressure Drop (in. H ₂ O)	NA	NA	NA
Total Operating temp.	1647	1648	1650
Process Rate <u>lb/hr</u>	75	69	75
Percent Recycle	NA	NA	NA

Signature  Title Project Manager
 Name Luis L. Corrales
(Please Print)

Attachment D - Calculations for Run 1

CALCULATIONS FOR RUN 1
 US Cremation Equipment
 Model 75/300
 Report 3494-S

STACK AREA

$$3.1416 \times (\text{Diameter} / 24)^2$$

$$3.1416 \times (16.75 / 24)^2$$

1.53 SQ.FT.

STACK PRESSURE

BAROMETRIC PRESSURE + (STATIC PRESSURE/ 13.6)

$$30.00 + (-0.04 / 13.6)$$

30.00 IN.HG

METER PRESSURE

BAROMETRIC PRESSURE + (ORIFICE PRESURE/13.6)

$$30.00 + (1.63 / 13.6)$$

30.12 IN.Hg

SAMPLE VOLUME

$$17.64 \times 1.0030 \times 44.544 \times 30.12 / (89.4 + 460)$$

43.208 STD.CU.FT.

WATER VAPOR VOLUME

0.04715 X WATER COLLECTED

$$0.04715 \times 82.5$$

3.89 STD.CU.FT.

SAMPLE MOISTURE

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

$$100 \times 3.89 / (3.89 + 43.208)$$

8.26%

SATURATION MOISTURE

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

$$100 \times (112,644 / 30.00)$$

100%

STACK MOISTURE FRACTION

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

0.083

DRY MOLECULAR WEIGHT OF STACK GAS

$$(0.28 \times (100 - (\%CO_2 + \%O_2))) + (0.44 \times \%CO_2) + (0.32 \times \%O_2)$$

$$(0.28 \times (100 - (4.56 + 14.53))) + (0.44 \times 4.56) + (0.32 \times 14.53)$$

29.31

CALCULATIONS FOR RUN 1

US Cremation Equipment

Model 75/300

Report 3494-S

MOLECULAR WEIGHT OF STACK GAS			
MOLECULAR WEIGHT X (1 - MOISTURE) + (18 X MOISTURE)			
29.31	X (1 -	0.083)	+ (18 X 0.083)
28.38			

STACK VELOCITY			
85.49 X CP X 60 X SQ.(^P) X SQ.(STACK TEMP + 460)/SQ.(STACK PRESSURE X MOLECULAR WT.)			
85.49 X 0.840 X 60 X	0.196	X SQ.(1152.6 + 460)	/ SQR(30.00 X 28.377)
1164 FPM			

VOLUMETRIC FLOW RATE (ACFM)			
STACK AREA X STACK VELOCITY			
1.53	X	1164	
1781 ACFM			

VOLUMETRIC FLOW RATE (SCFM) DRY			
17.64 X (ACFM) X STACK PRESSURE X (1-MOISTURE) / (STACK TEMP. + 460)			
17.64 X	1781	X 30.00	X (1 - 0.083) / (1152.6 + 460)
536 SCFM (DRY)			

PM CONCENTRATION (gr/dscf)			
Total Particulate Weight X 15.43 / Sample Volume			
0.0136	X 15.43 /	43.21	
0.0049			

PM CONCENTRATION CORRECTED TO 7% O2 (gr/dscf)			
PM Concentration X (%O2 (Air) - %O2 (Referenced)) / (%O2 (Air) - %O2 (Measured))			
0.0049	X (20.9 - 7) /	(20.9 - 14.53)	
0.0106			

PM CONCENTRATION CORRECTED TO 12% CO2 (gr/dscf)			
PM Concentration X (%CO2 (Air) - %CO2 (Referenced)) / (%CO2 (Air) - %CO2 (Measured))			
0.0049	X (0.03 - 12) /	(0.03 - 4.56)	
0.0129			

PM MASS EMISSION RATE (LBS./HR.)			
CONCENTRATION X (SCFM- DRY) X 60 / 7000			
0.0049	X	536	X 60 / 7000
0.02 LBS/HR			

CALCULATIONS FOR RUN 1
 US Cremation Equipment
 Model 75/300
 Report 3494-S

PERCENT ISOKINETIC

$$\frac{0.0945 \times (\text{STACK TEMP.} + 460) \times \text{SAMPLE VOLUME} \times 60}{(\text{STACK PRES.} \times \text{VELOCITY} \times \text{NOZZLE AREA} \times \text{TEST TIME} \times (1 - \text{MOISTURE}))}$$

$$\frac{0.0945 \times (1152.55 + 460) \times 43.21 \times 60}{30 \times 1164 \times 0.00213 \times 60 \times (1 - 0.083)}$$

96.40%

CARBON MONOXIDE EMISSIONS CORRECTED TO 7% O2 (PPM)

$$\text{CO Concentration} \times (\% \text{O}_2 (\text{Air}) - \% \text{O}_2 (\text{Referenced})) / (\% \text{O}_2 (\text{Air}) - \% \text{O}_2 (\text{Measured}))$$

$$11.00 \times (20.9 - 7) / (20.9 - 14.53)$$

24.00 PPM

PERCENT EXCESS AIR

$$\frac{100 \times (\% \text{O}_2 (\text{MEASURED}) - 0.5 \times \text{PPM}_{\text{CO}} \div 10,000\% / \text{PPM})}{0.264 \times (100 - (\% \text{O}_2 + \% \text{CO}_2 + \text{PPM}_{\text{CO}} \div 10,000\% / \text{PPM}) - (\% \text{O}_2 - 0.5 \times (\text{PPM}_{\text{CO}} \div 10,000\% / \text{PPM}))}$$

$$\frac{100 \times (14.53 - 0.5 \times (11 \div 10,000))}{0.264 \times (100 - (14.53 + 4.56 + (11 \div 10,000)) - (14.53 - 0.5 \times 11 \div 10,000))}$$

212.71%

CARBON MONOXIDE EMISSIONS CORRECTED TO 50% EXCESS AIR

$$\text{PPM}_{\text{CO}} (100 + \text{EXCESS AIR})$$

$$150$$

22.93 PPM

Attachment E - Calibration Data

ANNUAL METER CALIBRATION		METER NO. 002047		ORIFICE SET NO. JC40-73															
DATE	9/3/2010	Y=	1.0030	MAX % VARIATION	0.9480%	PASS													
BAROMETRIC PRESSURE	29.95	^Ha=	1.7369	MAX % VARIATION	2.9218%	PASS													
CRITICAL ORIFICE DATA																			
ORIFICE SERIAL NO.	ORIFICE K FACTOR	ACTUAL VACUUM	^H (IN H2O)	TIME (MIN.)	AMBIENT TEMP INITIAL	AMBIENT TEMP FINAL	METER TEMP INITIAL	METER TEMP FINAL	METER READING INITIAL	METER READING FINAL	VM (CU.FT.)	VM CORRECTED	Vcr STD	Vcr NOMINAL	Y	VARIATION	^H (IN. H2O)	VARIATION	
40	0.2435	23.5	0.31	10	93	93	95	95	24.900	28.143	3.2430	3.0894	3.1012	3.2461	1.0038	0.0000	1.7266	-0.0026	
40	0.2435	23.0	0.31	10	93	93	94	94	28.300	31.534	3.2340	3.0864	3.1012	3.2461	1.0048	0.0010	1.7297	0.0005	
40	0.2435	23.5	0.31	10	93	94	94	94	31.534	34.773	3.2390	3.0912	3.0998	3.2476	1.0028	-0.0010	1.7313	0.0021	
AVERAGE																1.0038	0.0038	1.7292	0.0045
48	0.3557	22.5	0.65	10	80	81	81	82	873.700	878.326	4.6260	4.5206	4.5823	4.6880	1.0136	0.0042	1.6995	0.0005	
48	0.3557	22.0	0.65	10	81	82	82	83	878.326	882.951	4.6250	4.5113	4.5781	4.6923	1.0148	0.0053	1.6996	0.0005	
48	0.3557	21.5	0.65	10	82	82	83	84	882.957	887.657	4.7000	4.5760	4.5759	4.6945	1.0000	-0.0095	1.6980	-0.0010	
AVERAGE																1.0095	0.0095	1.6990	0.0218
55	0.4616	21.5	1.15	10	83	84	84	85	888.500	894.618	6.1180	5.9529	5.9301	6.1005	0.9962	-0.0069	1.7855	-0.0022	
55	0.4616	21.0	1.15	10	84	85	87	87	901.700	907.708	6.0080	5.8192	5.9247	6.1061	1.0181	0.0151	1.7806	-0.0071	
55	0.4616	21.0	1.15	10	94	94	92	91	3.800	9.946	6.1460	5.9043	5.8736	6.1592	0.9948	-0.0082	1.7969	0.0092	
AVERAGE																1.0030	0.0030	1.7877	0.0292
63	0.5916	20.0	1.85	10	85	86	88	89	914.800	922.646	7.8460	7.5916	7.5863	7.8330	0.9993	-0.0019	1.7423	0.0005	
63	0.5916	20.0	1.85	10	86	86	89	89	922.646	930.473	7.8270	7.5664	7.5828	7.8366	1.0022	0.0010	1.7423	0.0005	
63	0.5916	20.0	1.85	10	86	86	89	90	930.473	938.307	7.8340	7.5662	7.5828	7.8366	1.0022	0.0010	1.7407	-0.0011	
AVERAGE																1.0012	0.0012	1.7418	0.0028
73	0.8234	17.5	3.50	10	90	91	89	89	970.400	981.243	10.8430	10.5242	10.5106	10.9519	0.9987	0.0011	1.7156	-0.0113	
73	0.8234	17.5	3.55	10	91	93	89	90	981.243	992.089	10.8460	10.5188	10.4963	10.9668	0.9979	0.0003	1.7433	0.0164	
73	0.8234	17.5	3.50	10	93	94	90	90	992.089	1002.949	10.8600	10.5215	10.4821	10.9817	0.9963	-0.0014	1.7218	-0.0051	
AVERAGE																0.9976	0.0024	1.7269	0.0058
SEMI ANNUAL CALIBRATION		DATE		3/20/2010		BAROMETRIC PRESSURE		30.07											
ORIFICE SERIAL NO.	ORIFICE K FACTOR	ACTUAL VACUUM	^H (IN H2O)	TIME (MIN.)	AMBIENT TEMP INITIAL	AMBIENT TEMP FINAL	METER TEMP INITIAL	METER TEMP FINAL	METER READING INITIAL	METER READING FINAL	VM (CU.FT.)	VM CORRECTED	Vcr STD	Vcr NOMINAL	Y	VARIATION	^H (IN. H2O)	VARIATION	
55	0.4616	21.0	1.15	10	77	77	78	78	842.763	848.905	6.1420	6.0727	5.9898	6.0639	0.9864	-0.0167	1.7783	0.0044	
55	0.4616	21.0	1.15	10	77	77	79	80	848.905	854.993	6.0880	6.0025	5.9898	6.0639	0.9979	-0.0052	1.7734	-0.0006	
55	0.4616	21.0	1.15	10	77	77	80	81	854.993	861.126	6.1330	6.0357	5.9898	6.0639	0.9924	-0.0106	1.7701	-0.0038	
AVERAGE																0.9922	-0.0108	1.7739	0.0213
METER COMPARISON CHECK (Yqa)		Y _{qa} =		(O / Vm) X sqrt(319 x Tm X 29 / (^Ha x (Pb + (Havg / 13.6) x Md)) X sqq ^H avg															
Y _{qa} =		Run 1	Run 2	Run 3	Average														
		0.9893	0.9917	0.9968	0.9926														
THERMOCOUPLE CALIBRATION		DATE		9/3/2010															
		ASTM THERMOMETER																	
		TC-1 (DEG F)		TC-2 (DEG F)															
ICE		29		32															
BOILING H2O		214		212															
OIL		364		362															
NOZZLE CALIBRATION		DATE		2/25/2011															
READINGS IN (IN.)		AVERAGE																	
#20	0.625	0.626	0.625	0.6253															
PITOT TUBE	CP=.84	ACCORDING TO DESIGN SPECIFICATIONS																	

Nozzle Calibration

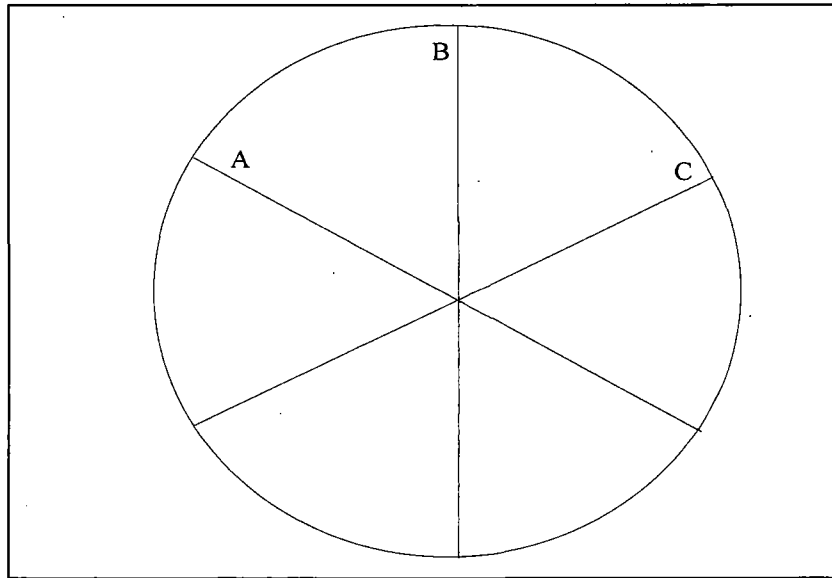
Nozzle ID #20

A = 0.625

B = 0.626

C = 0.625

Average 0.6253

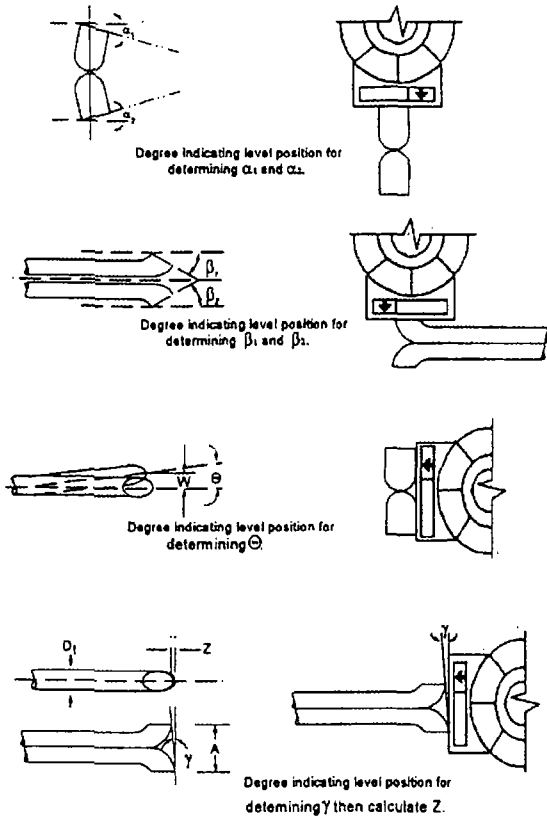


Calibration Date 2/25/2011

Calibrated by *AA*

PITOT CALIBRATION

(Type S Pitot Tube Inspection)



Level and Perpendicular?	Yes
Obstruction?	No
Damaged?	No
α_1 ($-10^\circ \leq \alpha_1 \leq +10^\circ$)	1
α_2 ($-10^\circ \leq \alpha_2 \leq +10^\circ$)	0
β_1 ($-5^\circ \leq \beta_1 \leq +5^\circ$)	0
β_2 ($-5^\circ \leq \beta_2 \leq +5^\circ$)	0
Y	2
θ	-1
$z = A \tan \gamma$ ($\leq 0.125^\circ$)	0.034
$w = A \tan \theta$ ($\leq 0.03125^\circ$)	-0.017
D_t ($3/16'' \leq D_t \leq +3/8''$)	0.375
A	0.960
$A/2 D_t$ ($1.05 \leq P_A / D_t \leq 1.51$)	1.280

Certification

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

Certified by: *[Signature]* Date: 9/3/2010



LIQUID TECHNOLOGY CORPORATION

"INDUSTRY LEADER IN SPECIALTY GASES"

Certificate of Analysis

Customer Coastal Air Consulting (Deland, FL)
Date September 14, 2010
Delivery Receipt DR-30659
Product: Nitrogen, CEMS Grade
Lot Number: LTJ140-PG

Mixture Specifications

Cylinder Number EB-0026438

<u>Components</u>	<u>Requested</u>	<u>Actual</u>
Moisture	2.0 ppm	< 2.0 ppm
Hydrocarbons	0.1 ppm	< 0.1 ppm
Oxygen	1.0 ppm	< 1.0 ppm
Carbon Monoxide	1.0 ppm	< 1.0 ppm
Carbon Dioxide	1.0 ppm	< 1.0 ppm

Cylinder Data

Cylinder Valve: CGA 580
Cylinder Volume: 140 Cubic Feet
Cylinder Pressure: 2000 psig, 70°F
Expiration Date: September 14, 2013

Certified by:


Adam Strickland

"UNMATCHED EXCELLENCE"



LIQUID TECHNOLOGY CORPORATION

"INDUSTRY LEADER IN SPECIALTY GASES"

Certificate of Analysis

- EPA PROTOCOL GAS -

Customer Coastal Air Consulting (Deland, FL)
Date July 23, 2010
Delivery Receipt DR-30062
Gas Standard 12.0 ppm Nitric Oxide, 25.0 ppm Carbon Monoxide/Nitrogen
Final Analysis Date July 09, 2010
Expiration Date July 09, 2012 **DO NOT USE BELOW 150 psig**

Analytical Data:

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

Reported Concentrations:

Nitric Oxide: 11.8 ppm +/- 0.11 ppm

Carbon Monoxide: 25.4 ppm +/- 0.25 ppm

Nitrogen: Balance

Total NOx: 12.1 ppm

** Total NOx for Reference Use Only **

Reference Standards

SRM GMIS	GMIS	GMIS
Cylinder Number:	EB-0023453	CC-233168
Concentration:	24.16 ppm NO Nitrogen	50.67 ppm CO
Expiration Date:	05 24 12	02 12 12

Certification Instrumentation

Component:	Nitric Oxide	Carbon Monoxide
Make/Model:	Horiba - CLA 510	Nicolet-NEXUS 470
Serial Number:	43331870031	AEP99000154
Principal of Measurement:	Chemiluminescence	FTIR
Last Calibration:	June 14, 2010	July 07, 2010

Cylinder Data

Cylinder Number:	EB-0014644	Cylinder Volume:	140 Cubic Feet
Cylinder Outlet:	CGA 660	Cylinder Pressure:	2000 psig, 70°F
Expiration Date:	July 09, 2012		

Analytical Uncertainty and NIST Traceability are in compliance with EPA-600/R-97/121.

Certified by:

Adam Strickland

"UNMATCHED EXCELLENCE"



LIQUID TECHNOLOGY CORPORATION

"INDUSTRY LEADER IN SPECIALTY GASES"

Certificate of Analysis **- EPA PROTOCOL GAS -**

Customer Coastal Air Consulting (Deland, FL)
Date September 14, 2010
Delivery Receipt DR-30659
Gas Standard 23.5 ppm Nitric Oxide, 47.5 ppm Carbon Monoxide/Nitrogen
Final Analysis Date September 07, 2010
Expiration Date September 07, 2012 **DO NOT USE BELOW 150 psig**

Analytical Data:

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

Reported Concentrations:

Nitric Oxide: 21.7 ppm +/- 0.21 ppm
Carbon Monoxide: 48.9 ppm +/- 0.48 ppm

Nitrogen: Balance

Total NOx: 22.2 ppm

**** Total NOx for Reference Use Only ****

Reference Standards

SRM/GMIS	GMIS	GMIS
Cylinder Number:	EB-0023453	CC-233168
Concentration:	24.16 ppm NO/Nitrogen	50.67 ppm CO
Expiration Date:	05/24/12	02/12/12

Certification Instrumentation

Component:	Nitric Oxide	Carbon Monoxide
Make/Model:	Horiba CLA - 510	Horiba - VIA 510
Serial Number:	43331870031	UUBKWXVY
Principal of Measurement:	Chemiluminescence	NDIR
Last Calibration:	August 10, 2010	August 10, 2010

Cylinder Data

Cylinder Number:	EB-0026213	Cylinder Volume:	136 Cubic Feet
Cylinder Outlet:	CGA 660	Cylinder Pressure:	1950 psig, 70°F
Expiration Date:	September 07, 2012		

Analytical Uncertainty and NIST Traceability are in compliance with EPA-600/R-97/121.

Certified by:

Adam Strickland

"UNMATCHED EXCELLENCE"



LIQUID TECHNOLOGY CORPORATION

"INDUSTRY LEADER IN SPECIALTY GASES"

Certificate of Analysis - EPA PROTOCOL GAS -

Customer Coastal Air Consulting (Deland, FL)
Date September 14, 2010
Delivery Receipt DR-30659
Gas Standard 8.00-10.0% CO₂, 11.0-13.0% Oxygen/Nitrogen-EPA PROTOCOL
Final Analysis Date August 30, 2010
Expiration Date August 30, 2013

Component Carbon Dioxide, Oxygen
Balance Gas Nitrogen

Analytical Data: DO NOT USE BELOW 150 psig
EPA Protocol, Section No. 2.2, Procedure G-1

Reported Concentrations
Carbon Dioxide: 8.98% +/- 0.08%
Oxygen: 12.0% +/- 0.12%
Nitrogen: Balance

Reference Standards:

SRM/GMIS:	GMIS, GMIS	GMIS
Cylinder Number:	CC-159114/CC-165377	CC-231332
Concentration:	7.11% CO ₂ /N ₂ -10.05% CO ₂ /Nitrogen	10.1% Oxygen/Nitrogen
Expiration Date:	04/04/11 - 04/06/11	03/04/11

Certification Instrumentation


Component:	Carbon Dioxide	Oxygen
Make/Model:	Agilent 7890A	Servomex 244a
Serial Number:	CN10736166	1847
Principal of Measurement:	GC-TCD	Paramagnetic
Last Calibration:	August 10, 2010	August 10, 2010

Cylinder Data

Cylinder Serial Number:	EB-0026459	Cylinder Outlet:	CGA 590
Cylinder Volume:	139 Cubic Feet	Cylinder Pressure:	1850 psig, 70°F

Analytical Uncertainty and NIST Traceability are in compliance with EPA-600/R-97/121.

Certified by:


Adam Strickland

"UNMATCHED EXCELLENCE"

Liquid Technology Corporation

Industry Leader in Specialty Gases, Equipment and Service

Certificate of Analysis

- EPA PROTOCOL GAS -

Customer Coastal Air Consulting (Deland, Florida)
Date November 14, 2008
Delivery Receipt DR-23098
Gas Standard 17.0-18.0% CO₂, 22.0-23.0% Oxygen/Nitrogen-EPA PROTOCOL
Final Analysis Date November 14, 2008
Expiration Date November 14, 2011

Component Carbon Dioxide, Oxygen
Balance Gas Nitrogen

Analytical Data: **DO NOT USE BELOW 150 psig**
EPA Protocol, Section No. 2.2, Procedure G-1

Reported Concentrations

Carbon Dioxide: 17.27% +/- 0.17%

Oxygen: 22.62% +/- 0.22%

Nitrogen: Balance

Reference Standards:

SRM GMIS:	GMIS	GMIS GMIS
Cylinder Number:	CC-79616	CC-125554 CC-85469
Concentration:	17.4% CO ₂ Nitrogen	20.90% O ₂ N ₂ - 25.30% Oxygen/N ₂
Expiration Date:	12/01/12	04/02/11 - 08/09/10

Certification Instrumentation

Component:	Carbon Dioxide	Oxygen
Make/Model:	Hewlett Packard 5890 II	Servomex 244a
Serial Number:	3336A59393	1847
Principal of Measurement:	FID	Paramagnetic
Last Calibration:	November 05, 2008	November 10, 2008

Cylinder Data

Cylinder Serial Number: CC-231467 Cylinder Outlet: CGA 590
Cylinder Volume: 140 Cubic Feet Cylinder Pressure: 2000 psig, 70°F
Analytical Uncertainty and NIST Traceability are in compliance with EPA-600/R-97/121.

Certified by: 
Date: November 14, 2008

Unmatched Excellence

Liquid Technology Corporation

Industry Leader in Specialty Gases, Equipment and Service

Certificate of Analysis

- EPA PROTOCOL GAS -

Customer Coastal Air Consulting (Deland, Florida)
Date July 22, 2009
Delivery Receipt DR-25422
Gas Standard 100.0 ppm Carbon Monoxide/Nitrogen - EPA PROTOCOL
Final Analysis Date July 22, 2009
Expiration Date July 22, 2012

Component Carbon Monoxide
Balance Gas Nitrogen

Analytical Data:

DO NOT USE BELOW 150 psig

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

Replicate Concentrations

Carbon Monoxide: 102.0 ppm +/- 1.0 ppm

Nitrogen: Balance

Reference Standards:

SRM/GMIS: GMIS
Cylinder Number: CC-233156
Concentration: 104.91 ppm CO/Nitrogen
Expiration Date: April 16, 2011

Certification Instrumentation

Component: Carbon Monoxide
Make/Model: Nicolet - NEXUS 470
Serial Number: AEP99000154
Principal of Measurement: FTIR
Last Calibration: July 02, 2009

Cylinder Data

Cylinder Serial Number: CC-233184 Cylinder Outlet: CGA 350
Cylinder Volume: 140 Cubic Feet Cylinder Pressure: 2000 psig, 70°F

Analytical Uncertainty and NIST Traceability are in compliance with EPA-600/R-97/121.

Certified by:



Mike Duncan

Unmatched Excellence

Attachment F - Project Participants

Project Participants

Arlington Environmental Services, Inc.

William Arlington
Project Director

Rufus Roden
Field Technician

Noah Handley
Laboratory Analyst

Gina Meegan
Computer Analysis

US Cremation Equipment

Luis Llorens
Project Manager

Luis del Pino
Visible Emission Evaluator Certification Attached

VISIBLE EMISSIONS EVALUATOR

This is to certify that

LUIS DEL PINO

STUDENT ID NUMBER **DEL587412**

met the specifications of Federal Reference Method 9 and qualifies as a visible emissions evaluator. Maximum deviation on white and black smoke did not exceed 7.5% opacity and no single error exceeding 15% opacity was incurred during the certification test conducted by Eastern Technical Associates of Raleigh, NC. This certificate is valid for six months from date of issue.

391226

CERT NUMBER

2/2/2011

DATE OF SCHOOL

ORLANDO, FL

SCHOOL LOCATION

8/4/2011

CERTIFICATION EXP DATE

ORLS10

LAST LECTURE

Jody Monk

Director of Training

EASTERN TECHNICAL ASSOCIATES

LUIS DEL PINO

DEL587412 STUDENT ID NUMBER

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ORLANDO, FL

SCHOOL LOCATION

2/2/2011

DATE OF SCHOOL

391226

CERT NUMBER

ORLS10

LAST LECTURE

8/4/2011

CERTIFICATION EXP DATE

BEARER

Customer Support

Debbie Scalise

debbie@smokeschool.com

Want to know when we will be in your area? Join our emailing list at www.smokeschool.com

919-878-3188

Attachment G - Retention Time Calculations

RETENTION TIME CALCULATION

CORRECTION FOR QUENCHED AIR AT OUTLET

PLANT: US Cremations
SOURCE: Model 75/300
LOCATION: Lakeland
DATE: 2/25/2011
Test: Run 1
CHARGE RATE: 75 lb

Stack Temperature °F 1147.3
Afterburner Temperature °F 1646.4
Ambient Temperature °F 85
Stack Flow Rate (scfm dry) 539

Secondary Chamber Percent Flow 68.04%
Secondary Chamber Flow (scfm dry) 366.6
Secondary Chamber Flow @ 1800 °F 1569.0
Secondary Chamber Volume (cu.ft.) 28.9
Retention Time @ 1800 °F 1.11

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

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

Secondary Chamber Flow @ 1800 °F = Secondary Chamber Flow (scfm dry) X (1800+460) / 528

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

RETENTION TIME CALCULATION

CORRECTION FOR QUENCHED AIR AT OUTLET

PLANT: US Cremations
SOURCE: Model 75/300
LOCATION: Lakeland
DATE: 2/25/2011
Test: Run 2
CHARGE RATE: 69 lb

Stack Temperature °F	1147.3
Afterburner Temperature °F	1647.3
Ambient Temperature °F	85
Stack Flow Rate (scfm dry)	557
Secondary Chamber Percent Flow	67.99%
Secondary Chamber Flow (scfm dry)	378.9
Secondary Chamber Flow @ 1800 °F	1621.8
Secondary Chamber Volume (cu.ft.)	28.9
Retention Time @ 1800 °F	1.07

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

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

Secondary Chamber Flow @ 1800 °F = Secondary Chamber Flow (scfm dry) X (1800+460) / 528

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

RETENTION TIME CALCULATION

CORRECTION FOR QUENCHED AIR AT OUTLET

PLANT: US Cremations
SOURCE: Model 75/300
LOCATION: Lakeland
DATE: 2/25/2011
Test: Run 3
CHARGE RATE: 75 lb

Stack Temperature °F 1087.44
Afterburner Temperature °F 1650.33
Ambient Temperature °F 85
Stack Flow Rate (scfm dry) 585

Secondary Chamber Percent Flow 64.04%
Secondary Chamber Flow (scfm dry) 374.7
Secondary Chamber Flow @ 1800 °F 1603.7
Secondary Chamber Volume (cu.ft.) 28.9
Retention Time @ 1800 °F 1.08

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

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

Secondary Chamber Flow @ 1800 °F = Secondary Chamber Flow (scfm dry) X (1800+460) / 528

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

Attachment 2
Equipment Drawings and Brochures

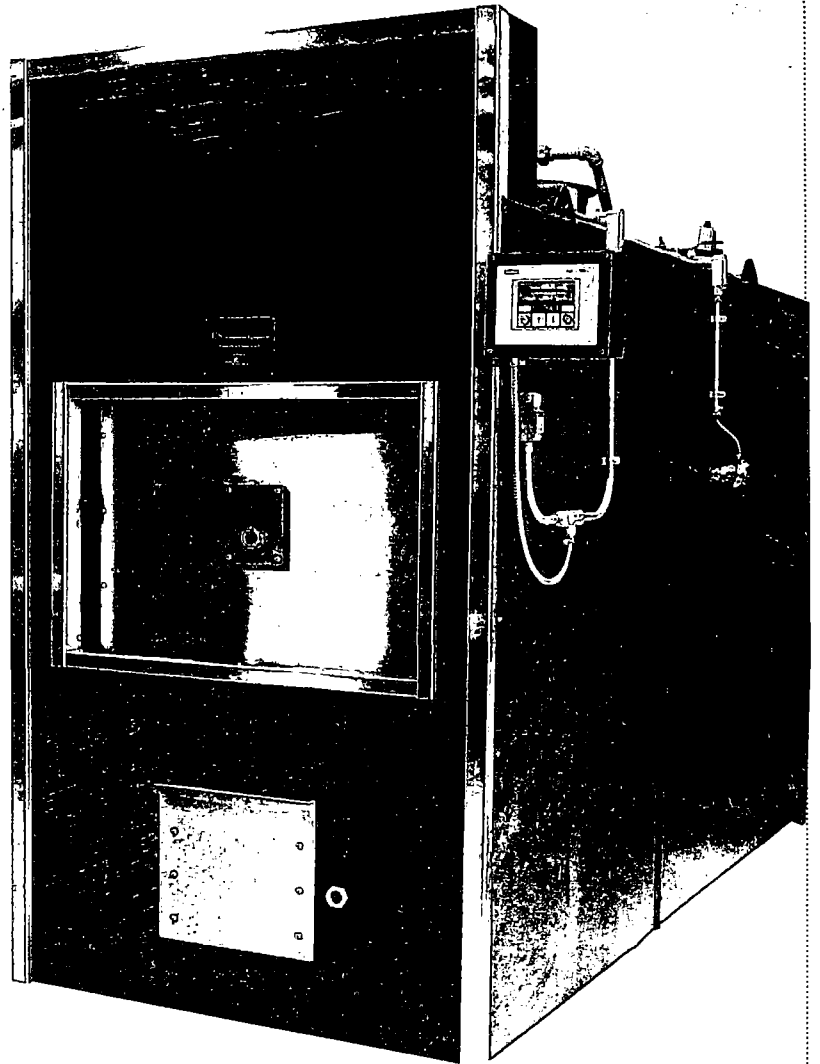
US 75/300 Animal Cremator

DESIGNED primarily for random-load individual pet cremations the 75/300 can also serve as a batch load incinerator.

RATED at 75 lbs/hr with a single load capacity of 300 lbs this compact and fuel efficient unit is ideal for animal clinics, animal hospitals, veterinarians, pet cemeteries, humane societies and pet cremation service facilities.

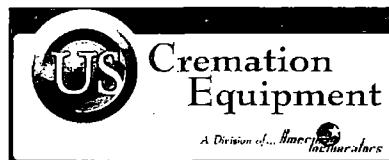
EQUIPPED with more standard features than any other animal cremator in its price and size range, the 75/300 easily outperforms competitive makes.

AUTOMATIC operation through a Programmable Logic Controller (PLC) with a Color Touch Screen Interface is standard.



"Whether a first time buyer, replacing or adding equipment... we're there before, during and most importantly after the sale. And, we wouldn't have it any other way." — Cal Wilkerson

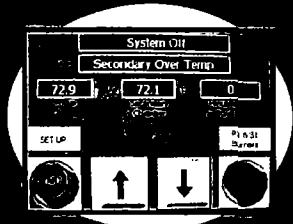
Model US 75/300
Animal Cremator



370 S. North Lake Blvd., Ste. 1004 • Altamonte Springs, FL 32701
Ph: 321.282.7357 • Fax: 321.282.7358 • www.uscremationequipment.com • E-mail: info@uscremationequipment.com

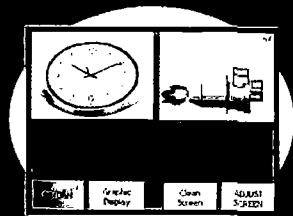
User-friendly Operating System W/Touch Screen

Operating conditions are displayed on various screens for monitoring and control during each stage of the cremation



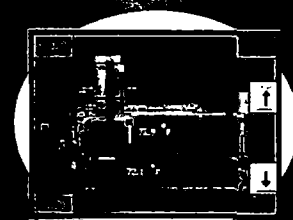
Main Screen

Displays Start, Stop and Advance cycle controls along with Door Up and Door Down. Also displays Stage of Process and Chamber temperatures



Time and Temperature Adjustment Screen

Elapsed time is displayed along with operating temperature and adjustment controls.



Temperature and Burner Status Screen

Displays High fire or Low fire, Off and Reset.

U.S. Cremation Equipment offers a complete line of cremation supplies, replacement parts for all makes, service, repairs, technical support, and training.

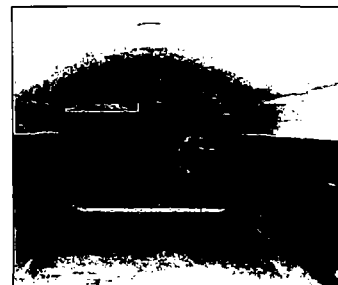
US MODEL 75/300 ANIMAL CREMATOR:

Nearly identical in features and performance to U.S. Cremation Equipment's "Classic" human cremator except for size, this front load/front cleanout unit offers increased productivity, faster cremation cycles and lower fuel consumption.

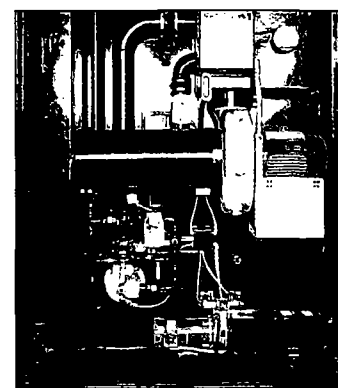
Complete combustion is achieved in the Pollution Control Chamber eliminating smoke and odor.

Features:

- Power Charging Door
- Primary Chamber View Port
- 3000° Hot Hearth
- Secondary Chamber View Ports
- Loading Cart
- PLC Operating System
- Color Touch Screen Interface
- Powder Coat Paint Exterior
- Refractory Lined Draft Inducer
- Refractory Lined Stack
- Opacity Sensor
- Operating Tools
- Two Year Limited Warranty



Temperature controlled chamber is sized to accommodate batch loads.



Rear Compartment houses major components for easy access and maintenance.

Model Specifics:

Height: 7'-6 3/4" (2.3m)
 Width: 4'-0" (1.22m)
 W/Color Touch Screen 4'-11" (1.5m)
 Length: 10'-8" (3.25m)
 Weight: 10,500 lbs (4762kg)
 Electrical: 208-220 Volts, 50/60 Hz,
 Single or 3 Phase

System Requirements:

Fuel: Natural Gas or LP (Propane) Gas
 (Diesel Fuel Available)
 Pressure: NG 7" to 9" (1778mm to 2286mm)
 W.C. LPG 11" (2794mm) W.C.
 Flow: 1,500,000 BTU/hr (connect to a 1 1/2" header)
 Make Up Air: 1700 CFM (48 CMM) 24" x 24"
 (6096mm x 6096mm)
 Clearances: 2 ft (6096mm) Top and Sides; 3 ft (9144mm) Rear



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 E-mail: info@uscremationequipment.com



ANIMAL CREMATION CHAMBER SPECIFICATION

Model US 75/300

EQUIPMENT:

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

MANUFACTURER:

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

CONSTRUCTION STANDARDS:

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

- A. Primary chamber will not exceed 60% of total furnace volumes. Flue connection shall not be considered part of furnace volume.
- B. Flame supervision through continuous ultraviolet scanning flame detectors on all burners.
- C. High temperature refractory construction with air-cooled walls to prevent excessive heat radiation.
- D. Exhaust gas temperature reduction.

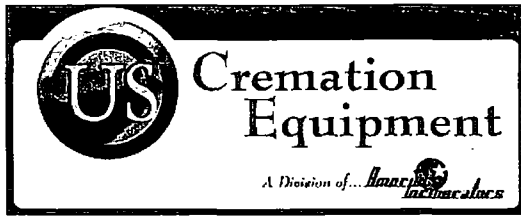
CREMATOR DIMENSIONS:

Chamber volumes:	Primary - 28.5 CF	(0.80 CM)
	Secondary - 28.9 CF	(0.82 CM)
Primary Chamber:	62" L x 30 1/2" W x 27 1/4" H	(1575 mm x 775 mm x 692 mm)
Structural footprint:	120" L x 48" W	(3048 mm x 1219 mm)
Over-all dimensions:	128" L x 48" W (59" W/Touch Screen) x 88 3/4" H	(3251 mm L x 1219 mm W (1499 mm W/Touch Screen) x 2254 mm H)

OPERATING TEMPERATURE:

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

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



RETENTION TIME:

In excess of 1 second.

CAPACITY RATING:

75 lb/hr for type 4 waste. Single load capacity of 300 lbs per cremation cycle

DRAFT:

Induced via refractory lined draft inducer.

SHIPPING WEIGHT:

10,500 lbs. (4762kg)

EMISSIONS:

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

EMISSION CONTROL:

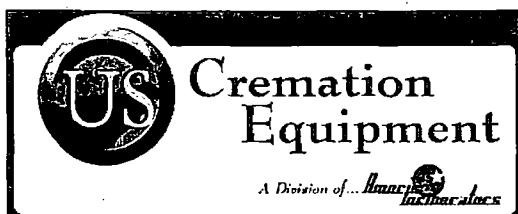
Secondary chamber equipped with one, 1,000,000 BTU/HR burner. Also equipped with an electronic exhaust gas scanner system which temporarily suspends operation of the primary chamber burner if the opacity of the exhaust gases reach 20%.

STEEL CONSTRUCTION SPECIFICATIONS:

- A. The structure to be heavy 3" steel angle , square tube; 3/8" steel plate, seal welded construction.
- B. Subfloor to be 3/16" steel plate, seal welded construction.
- C. The exterior shell to be 12 gauge steel removable panels.
- D. Interior shell to be 10 gauge steel, seal welded construction.

INSULATION & REFRACTORY SPECIFICATIONS:

- A. Hot Hearth: 3000°F abrasion resistant castable refractor monolithic cast 7" - 13" thick, 1 -1/2" recessed top and rounded, stressed arched bottom.



- B. Chamber Floors: 3000°F abrasion resistant castable refractory, 5" thick on top of 2" 2400°F light weight insulating castable.

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

- D. Interior Walls: 2800°F. castable refractory, 4 1/2" x 9", all chambers are backed by 2" of 1900°F ceramic fiber insulation

- E. Stack: Lined with 2" of 2200°F insulating refractory.

SKIN TEMPERATURE CONTROL:

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

COMBUSTION EQUIPMENT:

- A. Combustion Air - One (1) single phase, 208-230/460V, 17-15.5/7.6 amp, 5 hp air-blower motor (1200 CFM/34 CMM). Three Phase available.

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

- C. Secondary Chamber - One, 1,000,000 BTU/HR modulating, nozzle mix, gas-fired burner. Eclipse, North American, or equal.

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

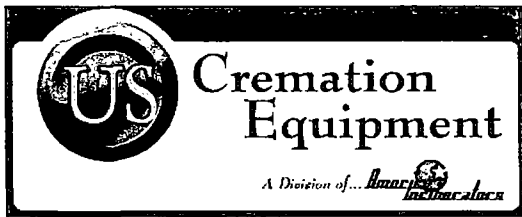
- E. Low Air Pressure Safety Switch - Interlocked to all burners.

EXHAUST GAS TEMPERATURE REDUCTION:

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

HOT AIR DUCT:

10 gauge carbon steel, high temperature 2" refractory lining, pre-drilled flanges, 20" Outside Diameter, 23" at flanges.



UTILITY REQUIREMENTS:

A. **GAS:**

1. Pressure:
 - a) Natural Gas: 7" to 9" W.C. (178 mm to 228 mm)
 - b) Propane: 11" W.C. (288 mm)
2. Flow Rate: 1,500,000 BTU/hr

B. **ELECTRICAL:**

1. One (1) single phase or 3 Phase, 208-230 Volts, 50/60 Hz for 5 hp air blower.

CREMATION CHAMBER LOADING/CLEAN-OUT DOOR:

Hydraulically operated, refractory lined, upward movement guillotine style door
W/Primary Chamber View Port

CREMATION PROCESS CONTROL:

The cremation cycle is controlled by a programmable logic control (PLC) system. A visual confirmation of the system status is provided through control panel indicator lights and digital temperature display. Continuous fuel and air modulation is automatically controlled by a time/temperature actuated system. Operator interface is through two sets of simple push button controls and panel timer.

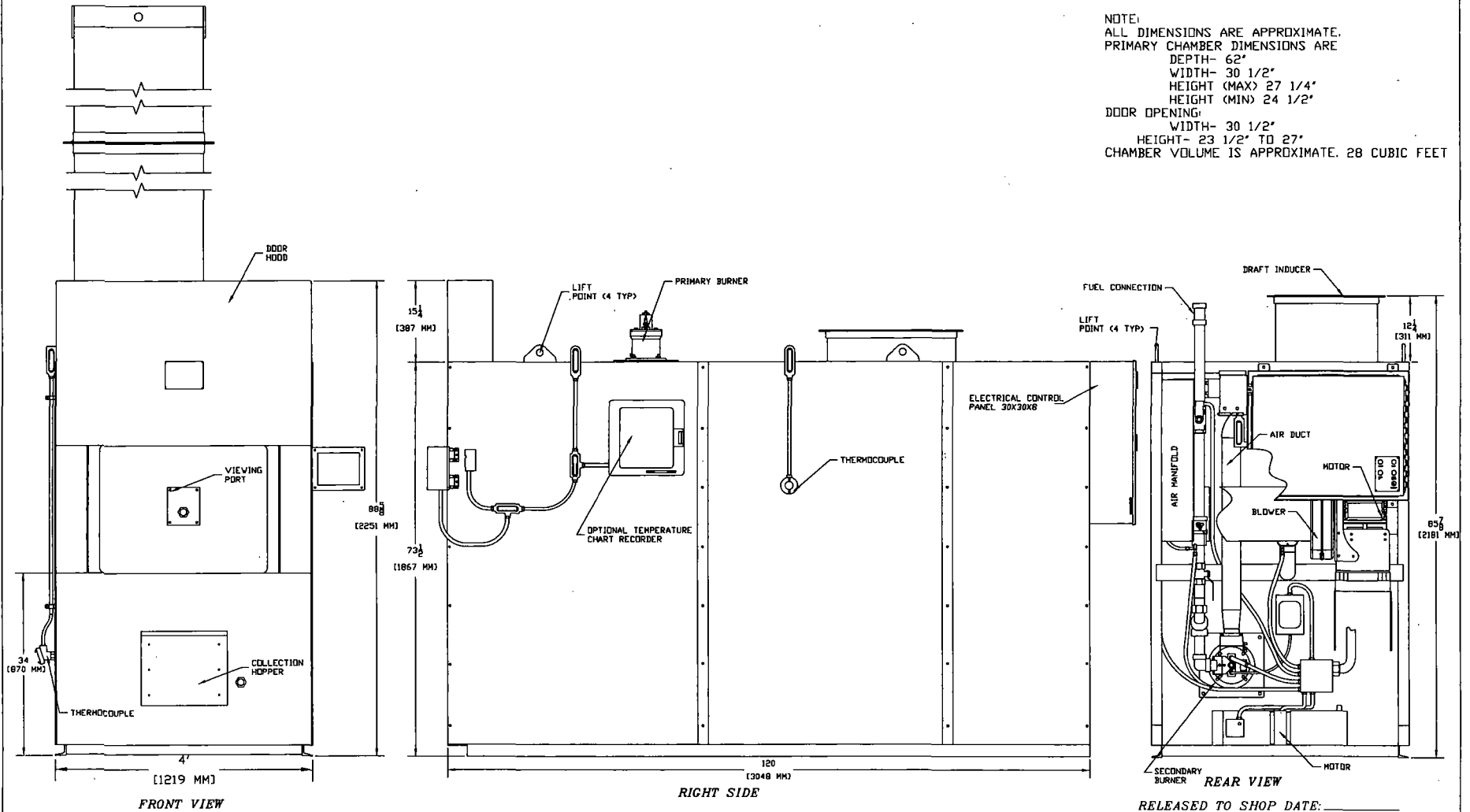
EXTERIOR FINISH:

The cremation chamber is finished with grey hi-resistance powder coating. Back and top of unit is coated with epoxy type black paint. Loading door is trimmed in stainless steel.

ANIMAL CREMATOR US MODEL US 75/300

ITEM	QTY	DESCRIPTION
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NOTE:
 ALL DIMENSIONS ARE APPROXIMATE.
 PRIMARY CHAMBER DIMENSIONS ARE
 DEPTH- 62"
 WIDTH- 30 1/2"
 HEIGHT (MAX) 27 1/4"
 HEIGHT (MIN) 24 1/2"
 DOOR OPENING:
 WIDTH- 30 1/2"
 HEIGHT- 23 1/2" TO 27"
 CHAMBER VOLUME IS APPROXIMATE. 28 CUBIC FEET



RELEASED TO SHOP DATE: _____

		US CREMATION EQUIPMENT ANIMAL CREMATOR FRONT, RIGHT & REAR VIEWS
614 US 75/300	614 US 75/300	614 US 75/300

Attachment 2
Emissions Calculations

US Cremation Equipment Model US 75/300 Animal Crematory

Equipment	Pounds Incinerated Per Hour (Average)	Hours Per Year	SO2 lb/ton	SO2 lb/hr	SO2 TPY	Nox lb/ton	Nox lb/hr	Nox TPY	TOC lb/ton	TOC lb/hr	TOC TPY	PM lb/hr	PM TPY	CO lb/hr	CO TPY
US 75/300	75	8760	2.5	0.09375	0.410625	3	0.1125	0.49275	3	0.1125	0.49275	0.26	1.14	0.38	1.66

CO=100 PPM @ 7% O2 based on manufacturers warranty

PM = 0.08 gr/dscf based on manufacturers warranty

US 75/300, CO is calculated as follows:

$$75 \text{ lb/hr} \times 1\text{E}+01 \text{ lb/ton} \times 1 \text{ ton}/2000 \text{ lbs} = 0.38 \text{ lbs/hr CO}$$

$$0.38 \text{ lb/hr CO} \times 8760 \text{ hrs/yr} \times 1 \text{ ton}/2000 \text{ lbs} = 1.66 \text{ TPY CO}$$

US 75/300, PM is calculated as follows:

$$75 \text{ lb/hr} \times 7\text{E}+00 \text{ lb/ton} \times 1 \text{ ton}/2000 \text{ lbs} = 0.26 \text{ lbs/hr PM}$$

$$0.26 \text{ lb/hr PM} \times 8760 \text{ hrs/yr} \times 1 \text{ ton}/2000 \text{ lbs} = 1.14 \text{ TPY PM}$$

Attachment 4
Process Flow Diagram

Process Flow Diagram

