FEA Receipt 495686 APR 16 2009

HUMAN 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)*

0190079-001

Registration Type

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.)
Broadus-Raines Family Funeral Home, Inc.

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.)
Clay Crematory

Facility Location (Provide the physical location of the facility, not necessarily the mailing address.)
Street Address:3149 CR 215
City:Middleburg County:Clay Zip Code:32068

Facility Start-Up Date (Estimated start-up date of proposed **new** facility.) (N/A for existing facility)
August 2009

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: David L. Broadus, President

Owner/Authorized Representative Mailing Address
Organization/Firm: Broadus-Raines Family Funeral Home, Inc.
Street Address: 501 Spring Street
City: Green Cove Springs County: Clay Zip Code: 32043

Owner/Authorized Representative Telephone Numbers
Telephone: 904-284-4000 Fax: 904-284-1888
Cell phone (optional):

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:

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.

Dlh B. Q, P.E. 4/15/09

Signature Date

Design Calculations

If this is an initial registration for a proposed new human 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. - See Attachment 1

☐ Registration is not for proposed new human 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.

This facility fully complies with the eligibility criteria referenced on 62-210.310(2)(a) FAC. The crematory is the only air pollution source at this facility.

Process Description – Broadus Raines Family Funeral Home, Inc. d/b/a Clay Crematory proposes to install a new natural gas fired US Cremation Equipment Model "CLASSIC" human crematory for use at a new facility in Larimer County. Technical literature and engineering drawings for the "CLASSIC" are included on this application. The "CLASSIC" is a multi-chamber unit having an average 200 lbs/hr or 1 body per cremation cycle (approximately 1,000 Btu/lb). The primary chamber burner is rated at 500,000 Btu/hr, and the secondary chamber burner is rated at 1,500,000 Btu/hr, for a total of 2,000,000 Btu/hr.

SEE NEXT PAGE FOR DOCUMENT CORRECTION AS AN ADDENDUM TO THIS DOCUMENT. A.D.

Control of air pollution is achieved through the design of the "CLASSIC" crematory, including its ability to operate the secondary chamber between 1600 - 1850 degrees Fahrenheit at a residence time in excess of 1.0 seconds. The residense time was measured and is greater than 1 second at 1800F. See Attachment 1 for compliance test report on an identical unit. The design also includes fully automatic PLC based controls, independent fuel/air systems, preheated combustion air, secondary chamber temperature monitor an recorder, primary burner temperature interlock (prevents primary burner from firing prior to the secondary chamber reaching it's set point temperature), UV continuous scanning flame detectors on burners, and an opacity sensor which can temporarily suspends operation of the primary chamber burner. Air pollution control is demonstrated through identical source testing.

* ADDENDUM TO ORIG. DOCUMENT
RECEIVED ON 04/16/09, #0190079-001

Design Calculations

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☒ Manufacturer's' design calculations attached. - See Attachment 1

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Process Description – Broadus Raines Family Funeral Home, Inc. d/b/a Clay Crematory proposes to install a new natural gas fired US Cremation Equipment Model "CLASSIC" human crematory for use at a new facility in Clay County. Technical literature and engineering drawings for the "CLASSIC" are included on this application. The "CLASSIC" is a multi-chamber unit having an average 200 lbs/hr or 1 body per cremation cycle (approximately 1,000 Btu/lb). The primary chamber burner is rated at 500,000 Btu/hr, and the secondary chamber burner is rated at 1,500,000 Btu/hr, for a total of 2,000,000 Btu/hr.

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Dibble, Dickson

From: Luis Llorens [ai@cfl.rr.com]
Sent: Thursday, April 23, 2009 10:55 AM
To: Dibble, Dickson
Subject: Broadus Raines

Dear Dickson:

Attached is the requested revised application.

Luis

PS: The Larimer County mentioned is in Colorado and not NC !

HUMAN CREMATORY
AIR GENERAL PERMIT REGISTRATION FORM

Part II. Notification to Permitting Office

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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

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.)
Broadus-Raines Family Funeral Home, Inc.

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.)
Clay Crematory

Facility Location (Provide the physical location of the facility, not necessarily the mailing address.)
Street Address:3149 CR 215
City:Middleburg County:Clay Zip Code:32068

Facility Start-Up Date (Estimated start-up date of proposed **new** facility.) (N/A for existing facility)
August 2009

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: David L. Broadus, President

Owner/Authorized Representative Mailing Address
Organization/Firm: Broadus-Raines Family Funeral Home, Inc.
Street Address: 501 Spring Street
City: Green Cove Springs County: Clay Zip Code: 32043

Owner/Authorized Representative Telephone Numbers
Telephone: 904-284-4000 Fax: 904-284-1888
Cell phone (optional):

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:

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 Date

Department of Environmental Protection

Division of Air Resource Management

HUMAN 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)(c) for human 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 human crematories may register to use the air general permit at Rule 62-210.310(5)(c), 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)(c), 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)(c), F.A.C.

(c) Air General Permit for Facilities Comprising Human Crematories.

1. A facility comprising one (1) or more human 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.

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(5), F.A.C.

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

Rule 62-296.401(5), F.A.C.

(5) Human Crematories.

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

(b) Emission Limiting Standards.

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

(a) Particulate matter emissions shall not exceed 0.080 grains per dry standard cubic foot of flue gas, corrected to 7% O_2.

(b) Carbon monoxide (CO) emissions shall not exceed 100 parts per million by volume, dry basis, corrected to 7% O_2 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 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(5)(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 unit 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. Human crematory units shall cremate only human or fetal remains with appropriate containers. The remains may be clothed. The 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. No other material, including biomedical waste as defined in Rule 62-210.200, F.A.C., shall be incinerated.

(e) Equipment Maintenance. All human 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 or efficiency 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 of one (1) adult-sized cadaver.

(h) Frequency of Testing.

1. The owner or operator of any human 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 human crematory unit 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 human crematory unit 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.

(i) Continuous Monitoring Requirements. Each 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 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

"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.

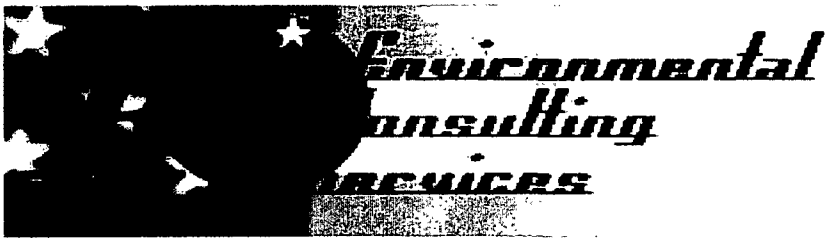
"Department" or "DEP" - The State of Florida Department of Environmental Protection.

"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).

"Human Crematory" - Any combustion apparatus used solely for the cremation of either human or fetal remains

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



General Permit Application
Human Crematory

Prepared for:

Broadus-Raines Family Funeral Home, Inc.
(dba Clay Crematory)
501 Spring Street
Green Cove Springs, FL 32043
Clay County

Prepared By:

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Date: April 2009

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Application Contents

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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

HUMAN 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)(c) for human 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 human crematories may register to use the air general permit at Rule 62-210.310(5)(c), 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)(c), 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)(c), F.A.C.

(c) Air General Permit for Facilities Comprising Human Crematories.

1. A facility comprising one (1) or more human 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.

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(5), F.A.C.

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

Rule 62-296.401(5), F.A.C.

(5) Human Crematories.

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

(b) Emission Limiting Standards.

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

(a) Particulate matter emissions shall not exceed 0.080 grains per dry standard cubic foot of flue gas, corrected to 7% O_2.

(b) Carbon monoxide (CO) emissions shall not exceed 100 parts per million by volume, dry basis, corrected to 7% O_2 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 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(5)(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 unit 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. Human crematory units shall cremate only human or fetal remains with appropriate containers. The remains may be clothed. The 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. No other material, including biomedical waste as defined in Rule 62-210.200, F.A.C., shall be incinerated.

(e) Equipment Maintenance. All human 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 or efficiency 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 of one (1) adult-sized cadaver.

(h) Frequency of Testing.

1. The owner or operator of any human 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 human crematory unit 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 human crematory unit 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.

(i) Continuous Monitoring Requirements. Each 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 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

"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.

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"Human Crematory" - Any combustion apparatus used solely for the cremation of either human or fetal remains

"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

SOURCE TEST REPORT
FOR
PARTICULATE, CARBON MONOXIDE, AND VISIBLE EMISSIONS

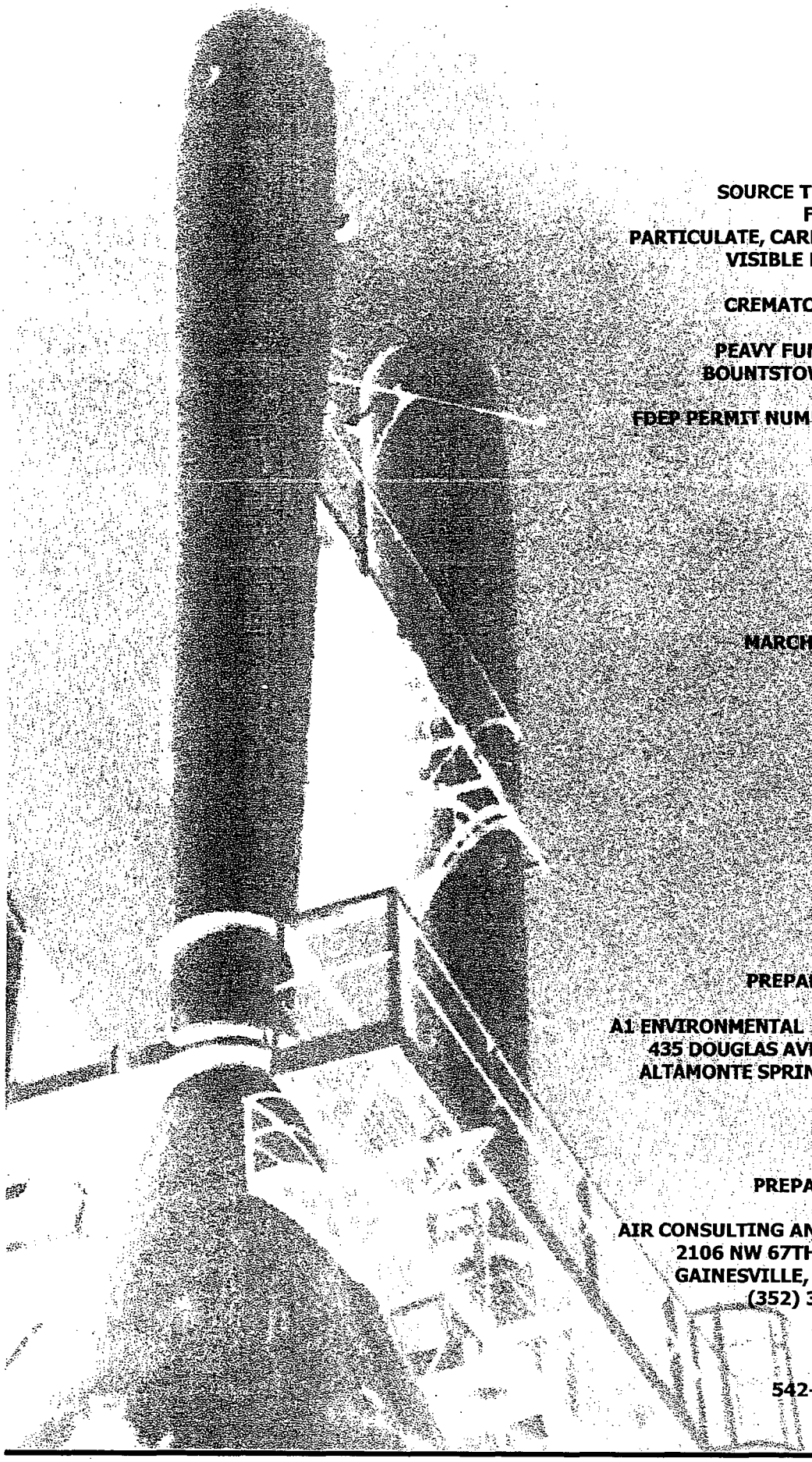
CREMATORY OUTLET

PEAVY FUNERAL HOME
BOUNTSTOWN, FLORIDA

FDEP PERMIT NUMBER 0130010-001-AC

ACE
AIR CONSULTING
& ENGINEERING, INC.

2106 N.W. 67th Place • Suite 4 • Gainesville, Florida • 32653
(352) 335-1889 FAX (352) 335-1891



SOURCE TEST REPORT
FOR
PARTICULATE, CARBON MONOXIDE, AND VISIBLE EMISSIONS

CREMATORY OUTLET

PEAVY FUNERAL HOME
BOUNTSTOWN, FLORIDA

FDEP PERMIT NUMBER 0130010-001-AC

MARCH 29, 2007

PREPARED FOR:

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542-07-01

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ACE
AIR CONSULTING
& ENGINEERING, INC.

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(352) 335-1889 FAX (352) 335-1891

REPORT CERTIFICATION

To the best of my knowledge, all applicable field and analytical procedures comply with the Florida Department of Environmental Protection requirements and all test data and plant operating data are true and correct.

Dagmar Fick

Dagmar Fick, Staff Engineer

4/12/07

Date

1.0 INTRODUCTION

On March 29, 2007, Air Consulting and Engineering, Inc. (ACE) conducted Particulate Matter (PM) and Carbon Monoxide (CO) emissions testing on the outlet stack of the crematory at Peavy Funeral Home in Blountstown, Florida. Mr. Luis Lloréns of A1 Environmental Consulting Services performed the visible emissions test.

United States Environmental Protection Agency (EPA) reference method 5 (PM), EPA Method 10 (CO) and EPA Method 9 (VE) were performed to satisfy conditions of Florida Department of Environmental Protection (FDEP) permit 0130010-001-AC.

2.0 SUMMARY AND DISCUSSION OF RESULTS

Emission results and flue gas parameters for the unit are summarized in Table 1. The unit was in compliance with permit conditions.

PM results averaged 0.0448 grains per dry standard cubic foot (gr/dscf) of flue gas corrected to 7% Oxygen (O_2) (0.0579 gr/dscf @ 12% CO_2), which is within the allowable limit of 0.08 gr/dscf at 7% O_2. The average residence time result of the Secondary Chamber resulted in 1.29 seconds (see Appendix G for RT calculations).

CO emissions averaged 3.49 ppm at 7% O_2 (4.68 ppm @ 12% CO_2), which is also within the permitted standard of 100 ppm at 7% O_2.

Visible emissions, performed concurrently with Run 2, averaged 0.0 percent opacity for the highest six-minute period of the one-hour test (see Appendix F for VE data and observer's certification). Emissions are within the allowable limit of 5 percent opacity with a permitted opacity of 20% for 3 minutes per hour.

PM emissions summaries, field data sheets and laboratory data are presented in Appendices A, B and C. CO emission summaries and data logger copies are in Appendix D.

Table 1. Particulate and Carbon Monoxide Emissions
Crematory Exhaust
Peavy Funeral Home
Blountstown, Florida
March 29, 2007

Run Number	Time	Flow Rate dscfm	Oxygen %	CO2 %	Particulate Emissions gr/dscf	gr/dscf @7% O2	gr/dscf @12% CO2	lbs/hr	CO Emissions ppm	ppm @7% O2	ppm @12% CO2	Residence Time sec
1	1220-1323	1545	15.3	3.6	0.0184	0.0453	0.0606	0.243	2.18	5.23	7.20	1.33
2	1418-1520	1475	14.5	4.3	0.0214	0.0462	0.0592	0.271	1.47	3.09	4.05	1.34
3	1559-1703	1485	13.8	4.9	0.0219	0.0428	0.0538	0.279	1.13	2.16	2.78	1.19
Average	---	1502	14.5	4.3	0.0206	0.0448	0.0579	0.264	1.59	3.49	4.68	1.29

concentration @ 7% O2 = concentration x (20.9-7)/(20.9-%O2)

Allowable Emissions

PM = 0.080 gr/dscf @7% O2
CO = 100 ppm @7% O2

3.0 PROCESS DESCRIPTION AND OPERATION

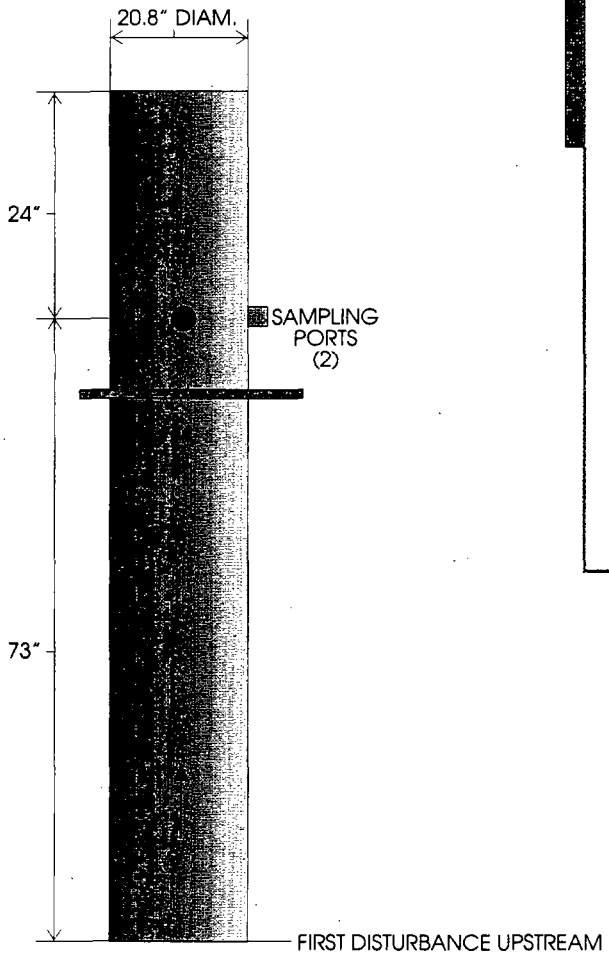
Peavy Funeral Home owns and operates a human crematory, Model "Classic" manufactured by US Cremation Equipment. Both the primary and secondary combustion chambers are fired with natural gas and have a total design heat input of 2.0 MMBTUH. Emissions are controlled by the afterburner. The Secondary Combustion Chamber (SCC) of each crematory volume is 71 cubic feet.

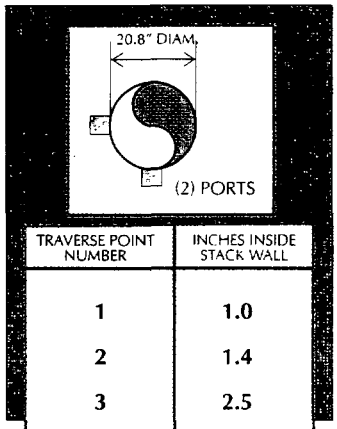
During the compliance test, the incinerator was charged with human remains, weighing 175, 160 and 150 lbs. The Secondary Chamber Residence Time was calculated to be 1.33, 1.34 and 1.19 seconds at 1700 to 1825° F.

Residence time calculations, crematory temperature chart and load are presented in Appendix G.

4.0 SAMPLING POINT LOCATION

The outlet stack schematic and sampling point location are provided in Figure 1. The three crematories are identical.





TRAVERSE POINT NUMBER	INCHES INSIDE STACK WALL
1	1.0
2	1.4
3	2.5
4	3.7
5	5.2
6	7.4
7	13.4
8	15.6
9	17.1
10	18.3
11	19.4
12	20.4

NOTE: NOT TO SCALE.

SOURCE: AIR CONSULTING & ENGINEERING, INC. (420A1 4/13/07)

FIGURE 1.
SAMPLING POINT LOCATION
CREMATORY EXHAUST
PEAVY FUNERAL HOME
BLOUNTSTOWN, FLORIDA

5.0 FIELD AND ANALYTICAL PROCEDURES

5.1 Particulate Matter Sampling and Analysis--EPA Method 5 (Quartz Probe)

Particulate matter samples were collected by the particulate matter emission measurement method specified by the United States Environmental Protection Agency. A schematic diagram of the sampling train used is shown in Figure 2. All particulate matter captured from the nozzle to, and including, the filter was included in the calculation of the emission rate of particulate matter.

PREPARATION OF EQUIPMENT

1. FILTERS - Gelman type "A" filters, or their equivalents, were inspected, numbered, and placed in a drying oven for two hours at 105 degrees C, removed and placed in a standard desiccator containing indicating silica gel, allowed to cool for two hours, and weighed to the nearest 0.1 mg. The filters were then re-desiccated for a minimum of six hours and weighed to a constant weight (less than 0.5 mg change from previous weighing). The average of the two constant weights was used as the tare weight.

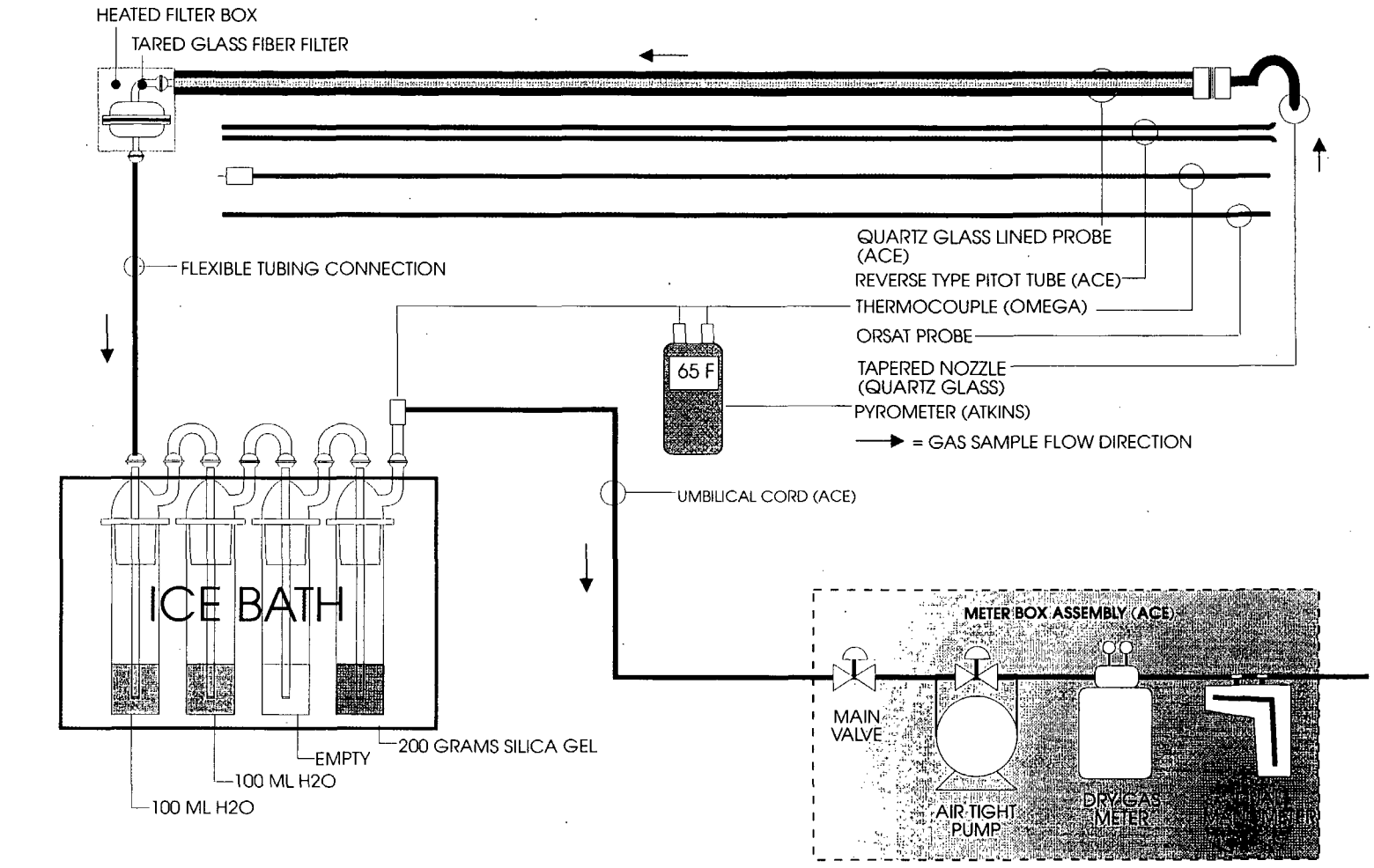
2. NOZZLE, FILTER HOLDER, AND SAMPLING PROBE - The nozzle, filter holder, and sampling probe were washed vigorously with soapy water and brushes, rinsed with acetone and distilled water, and dried prior to the test program. All openings on the sampling equipment were sealed while in transit to the test site.

3. IMPINGERS - The Greenburg-Smith impingers were cleaned with a warm soapy water solution and brushes, rinsed with distilled water and acetone, and dried. The impingers were sealed tightly during transit.

TEST PROCEDURE

Prior to performing the actual particulate matter sample runs, certain stack and stack gas parameters were measured. These preliminary measurements included the average gas temperature, the stack gas velocity head, the stack gas moisture content, and the stack dimensions at the point where the tests were being performed. The stack gas temperature was determined by using a bi-metallic thermocouple and calibrated pyrometer. Velocity head measurements were made with calibrated type "S" pitot tube and an inclined manometer. Velocity head measurements of 0.05 inches H_2O or less were measured utilizing a micromanometer.

The sampling traverse points were selected so that a representative sample could be extracted from the gas stream. The traverse points were located in the center of equal areas, the number of which were dependent upon the distance upstream and downstream from flow disturbances (per EPA Method 1; see Figure 1).



SOURCE: AIR CONSULTING & ENGINEERING, INC. (5QUARTZ) 8/16/95

FIGURE 2.

EPA METHOD 5 SAMPLING SCHEMATIC
(DETERMINATION OF PARTICULATE EMISSIONS
FROM STATIONARY SOURCES-QUARTZ GLASS PROBE)

Each particulate matter test run consisted of sampling for a specific amount of time at each traverse point. The type "S" pitot tube was connected to the sampling probe so that an instantaneous velocity head measurement could be made at each traverse point while making the test run, the stack gas temperature was also measured at each point (per EPA Method 2). Nomographs were used to calculate the isokinetic sampling rate at each traverse point during each test run.

The gases sampled passed through the following components: a stainless steel nozzle and quartz glass probe; a glass fiber filter, two impingers each with 100 ml of distilled water; one impinger dry; one impinger with 200 grams of silica gel; a flexible sample line; an air-tight pump; a dry test meter; and a calibrated orifice. The second impinger had a standard tip, while the first, third, and fourth impingers had modified tips with a 0.5 inch I.D. opening. Sample recovery was accomplished by the following procedures:

1. The pre-tared filter was removed from its holder and placed in Container 1 and sealed. (This is usually performed in the lab.)

2. All sample-exposed surfaces prior to the filter were washed with acetone and placed in Container 2, sealed and the liquid level marked.

3. The volume of water from the first three impingers was measured for the purpose of calculating the moisture in the stack gas and then discarded (per EPA Method 4).

4. The used silica gel from the fourth impinger was transferred to the original tared container and sealed.

LABORATORY ANALYSIS

The three sample containers from each sample run were analyzed according to the following procedures:

1. The filter was dried at 105 degrees C for three hours, desiccated for a minimum of one hour, and weighed to the nearest 0.1 mg. A minimum of two such weighings six hours apart was made to determine constant weight.

2. The acetone from Container 2 was transferred to a tared beaker and evaporated to dryness at ambient temperature and pressure, desiccated for 24 hours, and weighed to the nearest 0.1 mg. A minimum of two such weighings six hours apart were made to determine constant weight.

3. The used silica gel in its tared container was weighed to the nearest 0.1 gram.

The total sample weight included the weight of material collected on the filter plus the weight of material collected in the nozzle, sampling probe and front half of the filter holder.

DATA

The field data sheets, calculation sheets, and nomenclature definitions are included in the appendix of this report.

5.2 CO_2 and O_2 Sampling and Analysis--EPA Method 3

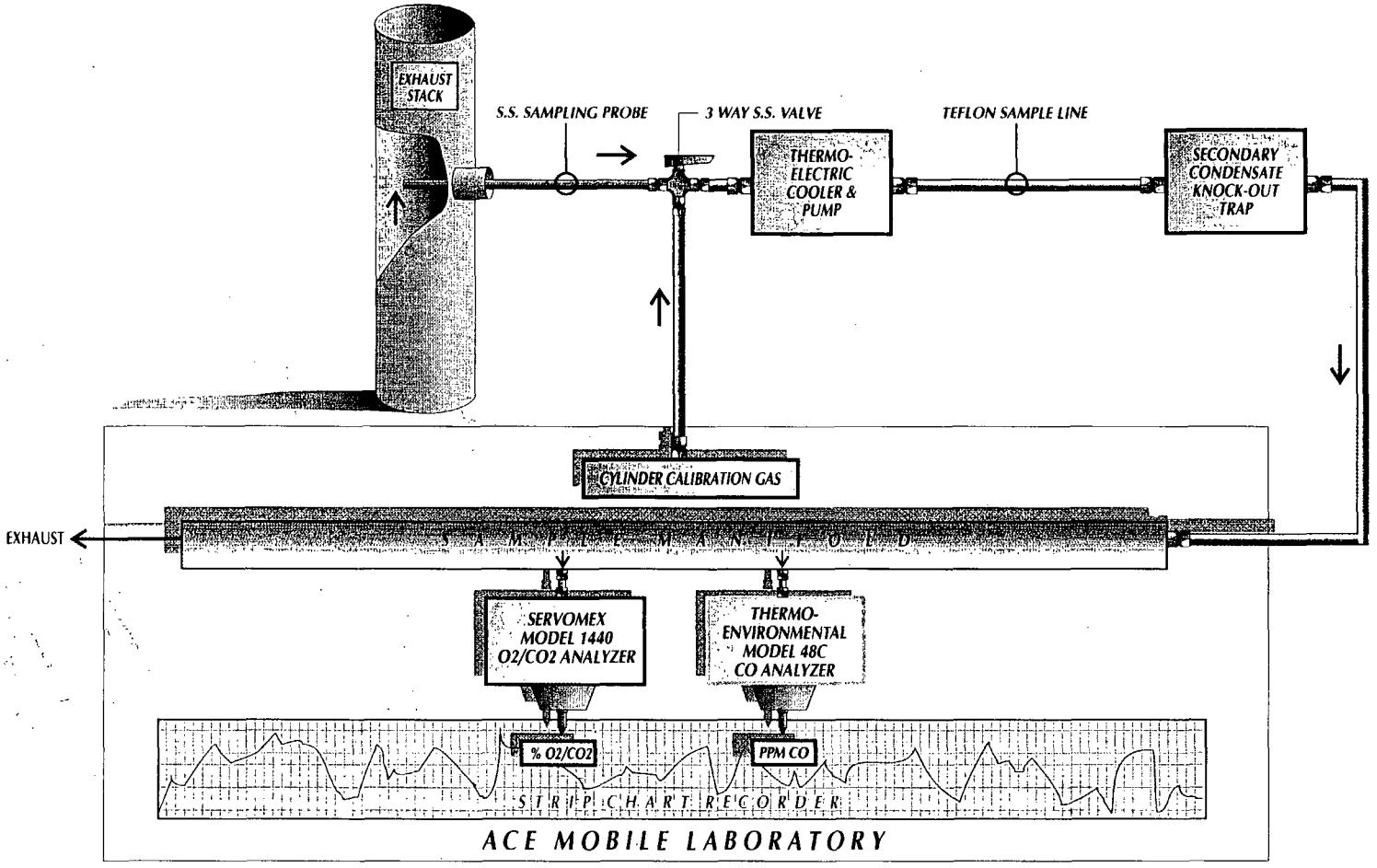
CO_2 and O_2 samples were collected by an integrated bag system. The sampling system consisted of a stainless steel probe, sample line from probe to a condenser, a small vacuum pump with a rotometer, and a TEDLAR bag.

The sampling procedure consists of the following leak-check and sampling techniques. Prior to sampling, the bag was leak-checked at 2 to 4 inches of water. The inlet to the condenser was plugged and a vacuum of 10 inches of Hg was pulled. The outlet of the pump was then plugged and the pump shut off. The vacuum held steady for at least 30 seconds. The sample line was then purged with flue gas and the bag was connected. Sampling was conducted at an appropriate constant rate at the same points and for the same length of time as the particulate sampling. At the conclusion of the run, the pump was shut off and the bag secured.

After leak checking the orsat gas analyzer, the average value for each gas was determined. The gas was measured until two values were obtained that fell within the specified variance of the gas tested. Data were recorded on the field data sheet and the bag was evacuated for the next sample run.

5.3 Determination of Carbon Monoxide Emissions from Stationary Source --EPA Method 10

The sampling system is shown in Figure 3. A sample was drawn from the stack at a rate of approximately 2 SCFH. A stainless steel probe assembly was followed by a three-way stainless steel valve. The sample was pumped through an ice-cooled condensate trap followed by a 3/8" O.D. TEFLON sampling line. Calibration gases were introduced at the sampling interface (the three way valve) through another 3/8" O.D. TEFLON line. The sample pump delivered gases to a manifold system where one flow



SOURCE: AIR CONSULTING & ENGINEERING, INC. (CO/CO2/O2 CEM 4/12/07)

FIGURE 3.
EPA METHODS 3A AND 10 CEM SAMPLING SCHEMATIC
(DETERMINATION OF OXYGEN, CARBON
DIOXIDE, AND CARBON MONOXIDE
EMISSIONS FROM STATIONARY SOURCES

is divided between a Servomex 1440 O_2/CO_2 analyzer and a Thermo Electron Model 48C CO analyzer (NDIR with gas filter correlation). Excess flow is dumped to ambient. All instrument responses were recorded on strip chart recorders. The sampling system yields O_2, and CO, concentrations on a dry gas basis.

Calibration gases consisted of CO, and O_2 standards in nitrogen. All calibration gases were certified NBS traceable, Protocol 1.

5.4 Visible Emissions Testing--EPA Method 9

The visible emission tests were performed in accordance with EPA Method 9. The observers maintain semi-annual FDEP certification for the performance of visible emission tests and attend the classroom lecture as required.

All procedures listed in Method 9 were followed including observer's position relative to the sun, distance from the stack, and line of sight. These items are noted on the visible emission data sheet. Observations were made at 15-second intervals and recorded to the nearest five percent. The final opacity was determined by calculating the average of the highest consecutive 24 readings of the observation period.

APPENDIX A

COMPLETE EMISSION DATA WITH SAMPLE CALCULATIONS

AIR CONSULTING and ENGINEERING, INC.
COMPLETE EMISSION DATA

COMPANY NAME:	PEAVY FUNERAL HOME
LOCATION:	BLOUNTSTOWN, FLORIDA
SOURCE:	INCINERATOR EXAUST STACK
DATE:	3-29-2007

RUN NUMBER:	1		IMPINGER ml.	32.0
BEGIN TIME (hour : minute):	12:20 PM		SILICA GEL. gms.	4.7
END TIME (hour : minute):	1:23 PM		% O2:	15.26
TOTAL RUN TIME:	60	MINUTES	% CO2:	3.64
BAROMETRIC PRESSURE:	30.14	inches Hg.	"F" FACTOR:	NA
STACK PRESSURE:	30.14	inches Hg.		
NOZZLE DIAMETER:	0.375	INCHES		
METER CORR. FACTOR:	1.009		PARTICULATE DATA	
FINAL METER:	228.452	CUBIC FT.		
INITIAL METER:	197.850	CUBIC FT.		
STACK AREA:	2.357	SQ. FT.	FILTER mg.:	11.6
PITOT Cp:	0.84		WASH mg.:	24.6

EMISSION RESULTS

NOZZLE AREA (SQ. FT.):	0.000767	VOLUMETRIC FLOW(ACFM):	4129
AVG. SQ. RT. VEL. HEAD:	0.3255	VOLUMETRIC FLOW(WVSCFM):	88
		VOLUMETRIC FLOW(DSCFM):	1545
AVG. STACK TEMP. (F):	884.8	VOLUMETRIC FLOW(ACFMD):	3907
AVG. METER TEMP. (F):	81.3		
AVG. ORIFICE DIFFERENTIAL:	0.770	**PARTICULATE EMISSION DATA:**	
METER ACF:	30.602		
METER SCF:	30.388	POUNDS PER HOUR:	0.243
MEASURED SCF MOISTURE:	1.727	POUNDS PER SCF.:	2.63E-06
MEASURED MOISTURE %:	5.38	GRAINS PER SCF.:	0.0184
STACK TEMP. (deg. C):	473.8	GRAINS PER SCF @ 7% O2:	0.0453
VAPOR PRESSURE:	11388.6	GRAINS PER SCF @ 50% E.A.:	0.0427
SATURATION MOISTURE %:	NA	GRAINS PER SCF @ 12% CO2:	0.0606
PERCENT WATER VAPOR:	5.38		
GAS MOLECULAR WT.(dry):	29.19		
GAS MOLECULAR WT.(wet):	28.59		
PERCENT EXCESS AIR:	248.114		
AVERAGE VELOCITY(FPS):	29.2		
MMBTUH(if applicable):	NA		
PERCENT ISOKINETIC:	100.78		

AIR CONSULTING and ENGINEERING, INC.
COMPLETE EMISSION DATA

COMPANY NAME:	PEAVY FUNERAL HOME
LOCATION:	BLOUNTSTOWN, FLORIDA
SOURCE:	INCINERATOR EXAUST STACK
DATE:	3-29-2007

RUN NUMBER:	2		IMPINGER ml.	40.0
BEGIN TIME (hour : minute):	2:18 PM		SILICA GEL. gms.	4.3
END TIME (hour : minute):	3:20 PM		% O2:	14.45
TOTAL RUN TIME:	60	MINUTES	% CO2:	4.34
BAROMETRIC PRESSURE:	30.14	inches Hg.	"F" FACTOR:	NA
STACK PRESSURE:	30.14	inches Hg.		
NOZZLE DIAMETER:	0.375	INCHES		
METER CORR. FACTOR:	1.009		PARTICULATE DATA	
FINAL METER:	259.270	CUBIC FT.		
INITIAL METER:	228.650	CUBIC FT.		
STACK AREA:	2.357	SQ. FT.	FILTER mg.:	16.6
PITOT Cp:	0.84		WASH mg.:	25.5

EMISSION RESULTS

NOZZLE AREA (SQ. FT.):	0.000767	VOLUMETRIC FLOW(ACFM):	4031
AVG. SQ. RT. VEL. HEAD:	0.3158	VOLUMETRIC FLOW(WVSCFM):	101
		VOLUMETRIC FLOW(DSCFM):	1475
AVG. STACK TEMP. (F):	899.3	VOLUMETRIC FLOW(ACFMD):	3772
AVG. METER TEMP. (F):	82.6		
AVG. ORIFICE DIFFERENTIAL:	0.719	**PARTICULATE EMISSION DATA:**	
METER ACF:	30.62		
METER SCF:	30.328	POUNDS PER HOUR:	0.271
MEASURED SCF MOISTURE:	2.085	POUNDS PER SCF.:	3.06E-06
MEASURED MOISTURE %:	6.43	GRAINS PER SCF.:	0.0214
STACK TEMP. (deg. C):	481.8	GRAINS PER SCF @ 7% O2:	0.0462
VAPOR PRESSURE:	11976.5	GRAINS PER SCF @ 50% E.A.:	0.0438
SATURATION MOISTURE %:	NA	GRAINS PER SCF @ 12% CO2:	0.0592
PERCENT WATER VAPOR:	6.43		
GAS MOLECULAR WT.(dry):	29.27		
GAS MOLECULAR WT.(wet):	28.55		
PERCENT EXCESS AIR:	206.740		
AVERAGE VELOCITY(FPS):	28.5		
MMBTUH(if applicable):	NA		
PERCENT ISOKINETIC:	105.32		

AIR CONSULTING and ENGINEERING, INC.
COMPLETE EMISSION DATA

COMPANY NAME:	PEAVY FUNERAL HOME
LOCATION:	BLOUNTSTOWN, FLORIDA
SOURCE:	INCINERATOR EXAUST STACK
DATE:	3-29-2007

RUN NUMBER:	3		IMPINGER ml.	46.0
BEGIN TIME (hour : minute):	3:59 PM		SILICA GEL. gms.	4.3
END TIME (hour : minute):	5:03 PM		% O2:	13.78
TOTAL RUN TIME:	60	MINUTES	% CO2:	4.89
BAROMETRIC PRESSURE:	30.14	inches Hg.	"F" FACTOR:	NA
STACK PRESSURE:	30.14	inches Hg.		
NOZZLE DIAMETER:	0.375	INCHES		
METER CORR. FACTOR:	1.009		PARTICULATE DATA	
FINAL METER:	290.253	CUBIC FT.		
INITIAL METER:	259.500	CUBIC FT.		
STACK AREA:	2.357	SQ. FT.	FILTER mg.:	32.3
PITOT Cp:	0.84		WASH mg.:	10.9

EMISSION RESULTS

NOZZLE AREA (SQ. FT.):	0.000767	VOLUMETRIC FLOW(ACFM):	4400
AVG. SQ. RT. VEL. HEAD:	0.3323	VOLUMETRIC FLOW(WVSCFM):	116
		VOLUMETRIC FLOW(DSCFM):	1485
AVG. STACK TEMP. (F):	1001.1	VOLUMETRIC FLOW(ACFMD):	4082
AVG. METER TEMP. (F):	84.1		
AVG. ORIFICE DIFFERENTIAL:	0.767	**PARTICULATE EMISSION DATA:**	
METER ACF:	30.753		
METER SCF:	30.382	POUNDS PER HOUR:	0.279
MEASURED SCF MOISTURE:	2.368	POUNDS PER SCF.:	3.13E-06
MEASURED MOISTURE %:	7.23	GRAINS PER SCF.:	0.0219
STACK TEMP. (deg. C):	538.4	GRAINS PER SCF @ 7% O2:	0.0428
VAPOR PRESSURE:	16389.2	GRAINS PER SCF @ 50% E.A.:	0.0408
SATURATION MOISTURE %:	NA	GRAINS PER SCF @ 12% CO2:	0.0538
PERCENT WATER VAPOR:	7.23		
GAS MOLECULAR WT.(dry):	29.33		
GAS MOLECULAR WT.(wet):	28.51		
PERCENT EXCESS AIR:	179.168		
AVERAGE VELOCITY(FPS):	31.1		
MMBTUH(if applicable):	NA		
PERCENT ISOKINETIC:	104.79		

AIR CONSULTING and ENGINEERING, INC.

COMPANY NAME: PEAVY FUNERAL HOME
LOCATION: BLOUNTSTOWN, FLORIDA
SOURCE: INCINERATOR EXAUST STACK
DATE: 3-29-2007
RUN NUMBER: 1 **FROM:** 12:20 **TO:** 13:23

SOURCE PARAMETER ENTRIES

PORT-POINT	"inches"	VELOCITY HEAD	ORIFICE CALC.	DELTA P ACTUAL	STACK TEMP. F	METER TEMP.F
1 - 1	20.35	0.20	1.42	1.42	865	77
1 - 2	19.40	0.16	1.13	1.13	920	77
1 - 3	18.33	0.11	0.78	0.78	938	77
1 - 4	17.10	0.11	0.78	0.78	936	78
1 - 5	15.59	0.13	0.92	0.92	927	79
1 - 6	13.40	0.25	1.77	1.77	919	79
1 - 7	7.39	0.11	0.78	0.78	900	80
1 - 8	5.20	0.09	0.64	0.64	901	80
1 - 9	3.69	0.09	0.64	0.64	874	80
1 - 10	2.46	0.10	0.71	0.71	760	81
1 - 11	1.39	0.08	0.57	0.57	797	81
1 - 12	0.44	0.07	0.50	0.50	795	81
2 - 1		0.09	0.64	0.64	889	82
2 - 2		0.10	0.71	0.71	943	82
2 - 3		0.10	0.71	0.71	947	82
2 - 4		0.11	0.78	0.78	937	83
2 - 5		0.10	0.71	0.71	935	83
2 - 6		0.10	0.71	0.71	920	83
2 - 7		0.09	0.64	0.64	899	84
2 - 8		0.08	0.57	0.57	891	84
2 - 9		0.08	0.57	0.57	889	84
2 - 10		0.08	0.57	0.57	852	84
2 - 11		0.09	0.64	0.64	805	85
2 - 12		0.09	0.64	0.64	797	85
AVERAGES:		0.109		0.770	884.83	81.29

AIR CONSULTING and ENGINEERING, INC.

COMPANY NAME: PEAVY FUNERAL HOME
LOCATION: BLOUNTSTOWN, FLORIDA
SOURCE: INCINERATOR EXAUST STACK
DATE: 3-29-2007
RUN NUMBER: 2 **FROM:** 14:18 **TO:** 15:20

SOURCE PARAMETER ENTRIES

PORT-POINT	"inches"	VELOCITY HEAD	ORIFICE CALC.	DELTA P ACTUAL	STACK TEMP. F	METER TEMP.F
1 - 1	20.35	0.10	0.72	0.72	963	80
1 - 2	19.40	0.09	0.64	0.64	958	81
1 - 3	18.33	0.09	0.64	0.64	950	81
1 - 4	17.10	0.08	0.57	0.57	922	81
1 - 5	15.59	0.08	0.57	0.57	906	81
1 - 6	13.40	0.09	0.64	0.64	876	81
1 - 7	7.39	0.08	0.57	0.57	853	81
1 - 8	5.20	0.08	0.57	0.57	863	81
1 - 9	3.69	0.08	0.57	0.57	862	82
1 - 10	2.46	0.09	0.64	0.64	859	82
1 - 11	1.39	0.09	0.64	0.64	859	82
1 - 12	0.44	0.09	0.64	0.64	855	83
2 - 1		0.11	0.79	0.79	931	83
2 - 2		0.10	0.72	0.72	951	83
2 - 3		0.11	0.79	0.79	944	83
2 - 4		0.10	0.72	0.72	936	83
2 - 5		0.12	0.86	0.86	938	84
2 - 6		0.11	0.79	0.79	925	84
2 - 7		0.10	0.72	0.72	900	84
2 - 8		0.10	0.72	0.72	879	84
2 - 9		0.13	0.93	0.93	872	84
2 - 10		0.13	0.93	0.93	865	85
2 - 11		0.13	0.93	0.93	859	85
2 - 12		0.13	0.93	0.93	857	85
AVERAGES:		0.100		0.719	899.29	82.63

AIR CONSULTING and ENGINEERING, INC.

COMPANY NAME: PEAVY FUNERAL HOME
LOCATION: BLOUNTSTOWN, FLORIDA
SOURCE: INCINERATOR EXAUST STACK
DATE: 3-29-2007
RUN NUMBER: 3 **FROM:** 15:59 **TO:** 17:03

SOURCE PARAMETER ENTRIES

PORT-POINT	"inches"	VELOCITY HEAD	ORIFICE CALC.	DELTA P ACTUAL	STACK TEMP. F	METER TEMP.F
1 - 1	20.35	0.15	1.04	1.04	1008	82
1 - 2	19.40	0.14	0.97	0.97	1015	82
1 - 3	18.33	0.14	0.97	0.97	1016	82
1 - 4	17.10	0.12	0.83	0.83	1015	82
1 - 5	15.59	0.12	0.83	0.83	1045	83
1 - 6	13.40	0.12	0.83	0.83	1044	83
1 - 7	7.39	0.11	0.76	0.76	1042	83
1 - 8	5.20	0.10	0.69	0.69	1031	83
1 - 9	3.69	0.10	0.69	0.69	1025	84
1 - 10	2.46	0.10	0.69	0.69	1006	84
1 - 11	1.39	0.10	0.69	0.69	1020	84
1 - 12	0.44	0.10	0.69	0.69	1024	84
2 - 1		0.12	0.83	0.83	999	84
2 - 2		0.11	0.76	0.76	986	84
2 - 3		0.11	0.76	0.76	1023	85
2 - 4		0.10	0.69	0.69	998	85
2 - 5		0.11	0.76	0.76	1003	85
2 - 6		0.11	0.76	0.76	985	85
2 - 7		0.10	0.69	0.69	960	85
2 - 8		0.10	0.69	0.69	959	85
2 - 9		0.10	0.69	0.69	956	86
2 - 10		0.10	0.69	0.69	953	86
2 - 11		0.10	0.69	0.69	950	86
2 - 12		0.10	0.69	0.69	963	86
AVERAGES:		0.111		0.767	1001.08	84.08

AIR CONSULTING and ENGINEERING, INC.
SAMPLE CALCULATIONS

PEAVY FUNERAL HOME
BLOUNTSTOWN, FLORIDA
INCINERATOR EXAUST STACK
3-29-2007

RUN NUMBER: 1

NOZZLE AREA SQ.FT.:
An=Pi*(Rn)E2 = Pi*(Dn/2)E2 = Pi*[(Dn/2)E2]*[(1ft/12in)E2]
=Pi*(Dn)E2 / (576) = (3.1416)*[(0.375)E2]/(576)
= 0.000767

METER ACTUAL CU. FEET:
Vm = (Vm final) - (Vm initial)
= (228.452) - (197.85)
= 30.602

METER STANDARD CU. FEET:
VMstd=(K1)*(Vm)*(Y)*{(Pbar)+[(DHavg)/(13.6)]}/[(TMavg)+(460)]
= (17.64)*(30.602)*(1.0091)*{(30.14)+[(0.77)/(13.6)]}/[(81.3)+(460)]
= 30.388

MEASURED SCF MOISTURE:
VWstd=(K2)*(Vlc)
= (0.04707)*(32 + 4.7)
= 1.727

MEASURED % MOISTURE:
Bwm%={(VWstd)/[(VMstd)+(VWstd)]}*100%
= {(1.727)/[(30.388)+(1.727)]}*100%
= 5.38%

STACK TEMP. Deg C
Tsc=[(TSavg)-32]*5/9
= [(884.8)-32]*5/9
= 473.8

VAPOR PRESSURE (in Hg):
Pv={2.718E[18.6866-0.00244*(273+(Tsc))-4509.47/(273+(Tsc))-
149541/((273+(Tsc))E2)]}/3.375
= {2.718E[18.688-0.00244*(273+(473.8))-4509.47/(273+(473.8))-
149541/((273+(473.8))E2)]}/3.375
= 11388.62

SATURATION MOISTURE %:
Bwsat%=NA
NA
NA

PERCENT WATER VAPOR:
Bwo% = Bwm% IF Bwm% < Bwsat%
Bwo% = Bwsat% IF Bwsat% < Bwm%
= 5.38

GAS MOLECULAR WT.(dry):
Md = [(0.440)*(%CO2)]+[(0.320)*(%O2)]+{(0.280)*[(%N2)+(%CO)]}
= [(0.440)*(%CO2)]+[(0.320)*(%O2)]+{(0.280)*[(100)-(%CO2)-(%O2)]}
= [(0.440)*(3.64)]+[(0.032)*(15.26)]+{(0.280)*(81.1)]}
= 29.2

GAS MOLECULAR WT.(wet):
Ms= {(Md)*[1-(Bwo%/100)]}+[(18.0)*(Bwo%/100)]
= {(29.2)*[1-(0.0538)]}+[(18.0)*(0.0538)]
= 28.59

PERCENT EXCESS AIR:
%EA={(%O2)/{[(0.264)*(%N2)]-(%O2)}}*(100%)
= {(15.26)/{[(0.264)*(81.1)]-(15.26)}}*(100%)
= 248.11

AVERAGE VELOCITY(FPS): VSavg=(85.48)*(Cp)*(ASRVH)*{[(TSavg)+(460)]/[(Ms)*(Ps)]}E1/2
= (85.48)*(0.84)*(0.33)*{[(884.8)+(460)]/[(28.6)*(30.138)]}E1/2
= 29.2

PERCENT ISOKINETIC: %Iso={(K4)*(TSavg+460)*(VMstd)/{(Ps)*(Vs)*(An)*(time)*[1-(Bwo%/100)]}}
*100

={ (0.09450)*(884.8+460)*(30.388)/{(30.138)*(29.2)*(0.000767)*(60)*[1-(5.38/100)]} }*100%
= 100.8

VOLUMETRIC FLOW(ACFM): QS=(VSavg)*(As)*(60)
= (29.2)*(2.357)*(60)
= 4129.5

VOLUMETRIC FLOW(WVSCFM): WVSCFM=(QS)*(17.64)*(Bwo%/100)*(Ps)/(TSavg+460)
= (4129.5)*(17.64)*(5.38/100)*(30.138)/(884.8+460)
= 87.8

VOLUMETRIC FLOW(DSCFM): QSstd=(QS)*(17.64)*[1-(Bwo%/100)]*(Ps)/(TSavg+460)
= (4129.5)*(17.64)*[1-(5.38/100)]*(30.138)/(884.8+460)
= 1544.6

PARTICULATE EMISSION DATA:

POUNDS PER HOUR: lb/Hr=(mg)*(QSstd)*(60)/[(VMstd)*(453600)]
= (36.2)*(1544.6)*(60)/[(30.388)*(453600)]
= 0.243

POUNDS PER SCF.: lb/SCF=(lb/Hr)/[(60)*(QSstd)]
= (0.243/[(60)*(1544.6)]
= 0.000003

GRAINS PER SCF.: Gr/SCF=(lb/SCF)*(7000)
= (0.000003)*(7000)
= 0.018

GRAINS PER SCF @ 7% O2: =(Gr/SCF)*(20.9-7.0)/[(20.9)-(%O2)]
= (0.018)*(13.9)/[(20.9)-(15.26)]
= 0.045

GRAINS PER SCF @ 50% E.A.: =(Gr/SCF)*[(100)+(%EA)]/(150)
= (0.018)*[(100)+(248.11)]/(150)
= 0.043

POUNDS PER MMBTU: NA
NA
NA

AIR CONSULTING and ENGINEERING, INC.
NOMENCLATURE

%CO - Percent Carbon Monoxide.
%CO2 - Percent Carbon Dioxide.
%EA - Percent excess air.
%Iso - Percent isokenetics.
%N2 - Percent Nitrogen.
%O2 - Percent Oxygen.
An - Area of the nozzle, square feet.
As - Stack area, square feet.
ASRVH - Average of the square roots of the velocity heads.
Bwm% - Percent water vapor as measured.
Bwo% - Percent water vapor.
Bwsat% - Percent water vapor at saturation.
C3H8 - Propane.
CH4 - Methane.
CO - Carbon Monoxide
CO - Carbon Monoxide.
CO2 - Carbon Dioxide
Cp - Pitot coefficient.
Cso2 - Concentration of Sulfur Dioxide, pounds per dry standard cubic foot.
DHavg - Average meter orifice pressure differential.
Dn - Nozzle diameter.
E - Denotes exponent.
F - Fuel factor,standard cubic feet per million BTU.
Gr/SCF - Grains per dry standard cubic foot.
Hr - Hour.
K1 - A constant =17.64.
K2 - A constant = 0.04707.
K4 - A constant = 0.09450.
lb - pound.
lb/Hr - pounds per hour.
lb/MMBTU - Pounds per million British Thermal Units.
lb/SCF - Pounds per dry standard cubic foot.
Md - Molecular weight of dry stack gas.
mg - Mass of filter and dried probe wash, milligrams.
MMBTU - million British Thermal Units.
Ms - Molecular weight of wet stack gas.
NOx - Oxides of Nitrogen.
Pbar - Barometric pressure, inches of Mercury.
Pi - A constant = 3.14159....
PPM - Parts per million.
Ps - Stack pressure, inches Mercury.
Pv - Vapor pressure of water at stack temperature, inches Mercury.
Qs - Volumetric flow rate, actual cubic feet per minute.
QSstd - Volumetric flow rate, dry standard cubic feet per minute.
Rn - Nozzle radius, inches.
SCF - Standard cubic feet.
SO2 - Sulfur Dioxide.
TMavg - Average meter temperature, degrees Farenheit.
TSavg - Average stack temperature, degrees Farenhiet.
Tsc - Average stack temperature, degrees Celcious.
Vlc - Volume of moisture collected in the impingers and silica gel, milliliters.
Vm - Metered volume, actual cubic feet.
Vm final - Final meter reading, actual cubic feet.
Vm initial - Initial meter reading, actual cubic feet.
VMstd - Metered volume corrected to standard conditions, standard cubic feet.
VOC - Volitile organic compounds.
VSavg - Average stack velocity, feet per second.
VWstd - Standard volume of water vapor, standard cubic feet.
WVSCFM - Volumetric flow rate of water vapor, standard cubic feet per minute.
Y - Meter correction factor.

APPENDIX B

FIELD DATA SHEETS

AIR CONSULTING & ENGINEERING, INC.

PARTICULATE LAB DATA ANALYSIS

CLIENT / SOURCE IDENTIFICATION: Peavey Funeral Home, Omega Incinerator

BALANCE CHECK:

1ST GROSS WT. - 0.0 0.0 0.6 0.5001 10.0 10.0001 100.0 99.9999 DATE 4-2-07 TIME 0815 %RH 38 TEMP 69 BY: (INIT.) CR

2ND GROSS WT. - 0.0 0.0 0.6 0.5000 10.0 10.0000 100.0 99.9998 DATE 4-2-07 TIME 1455 %RH 37 TEMP 68 BY: (INIT.) CR

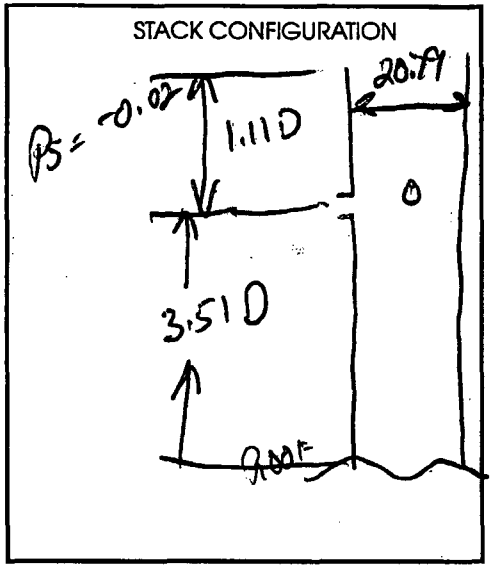
RUN I.D.	FILTER/ CONT. NO.	VOLUME (ml)	1ST GROSS WT. (gm)	2ND GROSS WT. (gm)	AVG. GROSS WT. (gm)	TARE WT. (gm)	SUB NET WT. (gm)	BLANK (gm)	NET WT. (mg)
1	3077	N/A	0.4533	0.4531	0.4532	0.4416	0.0116		11.6
2	3079	↓	0.4592	0.4591	0.4592	0.4426	0.0166		16.6
3	3078	↓	0.4725	0.4727	0.4726	0.4403	0.0323		32.3
1	A-8	135	114.9567	114.9564	114.9566	114.9320	0.0246		24.6
2	A-9	165	115.3891	115.3890	115.3891	115.3636	0.0255		25.5
3	A-10	120	114.9598	114.9596	114.9597	114.9488	0.0109		10.9
BLANK	3193	N/A	0.4464	0.4462	0.4463	0.4463	0.0000		0.0
BLANK	A-7	200	116.6020	116.6018	116.6019	116.6011	0.0008		0.8

NOTES:

PLANT Perry Funeral Home
SOURCE Omega Cremation
PLANT LOCATION Bloomstown, FL
TYPE OF SAMPLING TRAIN EPA M5
TYPE OF SAMPLES P.M.
DATE 3-29-2007 RUN NUMBER ~~2~~ 1
TIME START 12:20 TIME END 13:23
SAMPLE TIME 2.5 / 24 (MIN/PT)= 60 TOTAL MIN
ASSUMED MOISTURE(%) 7 FDA 93
NOMOGRAPH Cf 7.086 PITOT Cf 0.84
Pb ("Hg) 30.14 Ps ("Hg) 30.138
WEATHER Broken TEMP (F) 75
METER BOX NO. 1 H 1.0297 Y 1.0091
NOZZLE IDENTIFICATION NO.
NOZZLE CAL 0.375 / 0.375 / 0.376 = 0.375
STACK DIMENSIONS 20.79
STACK AREA (FT2) 2.357 EFFECTIVE (FT2) 2.357
STACK DIAMETERS:(UPSTREAM) 3.5' (DOWNSTREAM) 1.15
PORT SIZE 4" NIPPLE LENGTH 5"
STACK HEIGHT (FT) ~20 UMBILICAL LENGTH 100FT
AGENCY OBSERVER(S) NONE
TEST COORDINATOR(S)
V. E. OBSERVER LUIS LLORENS

ACE
AIR CONSULTING & ENGINEERING, INC.
2106 NW 67TH PLACE SUITE 4
GAINESVILLE, FLORIDA 32653
(352) 335-1889 - OFFICE / (352) 335-1891 - FAX

STACK CONFIGURATION



REMARKS: Impinger water clear
71 CF AFTERBURNER

TEST ID P.M.-2_3-29-2007
PAGE 1 OF 2
MATERIAL PROCESSING RATE
GAS METER READINGS: FINAL 228.452 (FT3)
INITIAL 197.850 (FT3)
NET 30.602 (FT3)
FILTER NO. 3077 IMP. VOL.GAIN 32 (ml)
SILICA GEL NO. 401 WT. GAIN 4.7 (ml)
TOTAL CONDENSATE 36.7 (ml)

ORSAT

	1	2	3	4	AVG.
%CO2					
%O2					
%CO					
%N2					

Fo= Fo RANGE= ORSAT ANALYZER
LEAK CHECKS
PRE 0 CFM 16 ("Hg) POST 0 CFM 7 ("Hg)
METER BOX/PUMP Ok GAS SYSTEM — ORSAT BAG —
PITOT TUBE NO. 43 PRE-TEST LEAK CHECK Ok
POST TEST (+) 4.5 / 4.5 "H20 (15 SECONDS)
POST TEST (-) 3.7 / 3.7 "H20 (15 SECONDS)
PYROMETER NUMBER ACE-1
BOX OPERATOR BEN PROBE HOLDER LANE

PORT & TRAVERSE PT. NUMBER	COMMENTS	CLOCK TIME	GAS METER READING (FT3)	STACK VELOCITY HEAD	METER ORIFICE PRESS. DIFF.("H2O) CALC.	METER ORIFICE PRESS. DIFF.("H2O) ACTUAL	STACK GAS TEMP (F)	SAMPLE BOX TEMP (F)	LAST IMPINGER TEMP (F)	DRY GAS METER TEMP (F)	VACUUM ON SAMPLE TRAIN ("Hg)
1-1			199.60	0.20	1.42	1.42	865	252	69	77	3
2	5	12:25	201.20	0.16	1.13	1.13	920	246	56	77	2
3			202.50	0.11	0.78	0.78	938	244	56	77	2
4	10	30	203.80	0.11	0.78	0.78	936	243	56	78	2
5			205.2	0.13	0.92	0.92	927	238	57	79	3
6	15	35	207.09	0.25	1.77	1.77	919	233	57	79	5

ACE AIR CONSULTING & ENGINEERING, INC.

Run #1
3-29-07

TEST ID P.M.-2-3-29-2007

PAGE 2 OF 2

PORT & TRAVERSE PT. NUMBER	COMMENTS	CLOCK TIME	GAS METER READING (FT3)	STACK VELOCITY HEAD	METER ORIFICE PRESS. DIFF.("H2O)		STACK GAS TEMP (F)	SAMPLE BOX TEMP (F)	LAST IMPINGER TEMP (F)	DRY GAS METER TEMP (F)	VACUUM ON SAMPLE TRAIN ("Hg)
					CALC.	ACTUAL					
1-7			208.45	0.11	0.78	0.78	900	232	57	80	3
8	20	12:40	209.625	0.09	0.64	0.64	901	236	57	80	3
9			210.85	0.09	0.64	0.64	874	242	58	80	3
10	25	45	212.10	0.10	0.71	0.71	760	249	59	81	3
11			213.2	0.08	0.57	0.57	797	253	59	81	3
12	30	50	214.244	0.07	0.50	0.50	795	248	59	81	3
2-1	12:53		215.4	0.09	0.64	0.64	889	249	64	82	3
2	35	12:58	216.675	0.10	0.71	0.71	943	251	60	82	3
3			217.90	0.10	0.71	0.71	2947	251	60	82	3
4	40	13:03	219.175	0.11	0.78	0.78	937	251	60	83	3
5			220.42	0.10	0.71	0.71	935	251	60	83	3
6	45	08	221.645	0.10	0.71	0.71	920	250	61	83	3
7			222.8	0.09	0.64	0.64	899	249	62	84	3
8	50	13	22393	0.08	0.57	0.57	891	247	63	84	2
9			225.0	0.08	0.57	0.57	889	247	63	84	2
10	55	18	226.0	0.08	0.57	0.57	852	243	63	84	2
11			227.25	0.09	0.64	0.64	805	246	63	85	2
12	60	23		0.09	0.64	0.64	797	251	64	85	2
			Avg	0.109		0.770	864.88			81.29	

PLANT Petty Funeral Home

SOURCE Omega Crematory

PLANT LOCATION Blountstown, FL

TYPE OF SAMPLING TRAIN EPA M5

TYPE OF SAMPLES P.M.

DATE 3-29-2007 RUN NUMBER 2

TIME START 14:18 TIME END 15:20

SAMPLE TIME 2.5 / 24 (MIN/PT)= 60 TOTAL MIN

ASSUMED MOISTURE(%) 6 FDA 94

NOMOGRAPH Cf 7.156 PITOT Cf 0.84

Pb ("Hg) 30.14 Ps ("Hg) 30.138

WEATHER Broken TEMP (F) 80

METER BOX NO. 1 H 1.6297 Y 1.0091

NOZZLE IDENTIFICATION NO. QTZ 3/8

NOZZLE CAL 0.375 / 0.375 / 0.376 = 0.375

STACK DIMENSIONS 20.79

STACK AREA (FT2) 2.357 EFFECTIVE (FT2) 2.357

STACK DIAMETERS:(UPSTREAM) 3.51 (DOWNSTREAM) 1.15

PORT SIZE 4" NIPPLE LENGTH 5"

STACK HEIGHT (FT) ~20 UMBILICAL LENGTH 100FT

AGENCY OBSERVER(S) NONE

TEST COORDINATOR(S)

V. E. OBSERVER ~~Louise~~ LUIS LLORENS

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& ENGINEERING, INC.
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(352) 335-1889 - OFFICE / (352) 335-1891 - FAX

STACK CONFIGURATION

REMARKS: Employee under Clean

TEST ID P.M.-2-3-29-2007

MATERIAL PROCESSING RATE

GAS METER READINGS: FINAL 259.270 (FT3)

INITIAL 228.650 (FT3)

NET 30.620 (FT3)

FILTER NO. 3079 IMP. VOL.GAIN 40 (ml)

SILICA GEL NO. 538 WT. GAIN 4.3 (ml)

TOTAL CONDENSATE 44.3 (ml)

ORSAT

	1	2	3	4	AVG.
%CO2					
%O2					
%CO					
%N2					

Fo= Fo RANGE= ORSAT ANALYZER

LEAK CHECKS

PRE 0 CFM 15 ("Hg) POST 0 CFM 5 ("Hg)

METER BOX/PUMP OK GAS SYSTEM — ORSAT BAG —

PITOT TUBE NO. 43 PRE-TEST LEAK CHECK OK

POST TEST (+) 4.6 / 4.6 "H20 (15 SECONDS)

POST TEST (-) 3.7 / 3.7 "H20 (15 SECONDS)

PYROMETER NUMBER ACE-1

BOX OPERATOR BELL PROBE HOLDER LANE

PORT & TRAVERSE PT. NUMBER	COMMENTS	CLOCK TIME	GAS METER READING (FT3)	STACK VELOCITY HEAD 0.10	METER ORIFICE PRESS. DIFF.("H2O) CALC.	METER ORIFICE PRESS. DIFF.("H2O) ACTUAL	STACK GAS TEMP (F)	SAMPLE BOX TEMP (F)	LAST IMPINGER TEMP (F)	DRY GAS METER TEMP (F)	VACUUM ON SAMPLE TRAIN ("Hg)
1-1			229.8	0.01	0.72	0.72	963	249	61	80	2
2	5	14:23	231.0	0.09	0.64	0.64	958	250	55	81	2
3			232.2	0.09	0.64	0.64	950	291	52	81	2
4	10	28	233.3	0.08	0.57	0.57	922	253	51	81	2
5			234.5	0.08	0.57	0.57	906	251	51	81	2
6	15	33	235.5	0.09	0.64	0.64	876	250	52	81	2

ACE AIR CONSULTING & ENGINEERING, INC.

Rev 2
3-29-07

TEST ID _____

PAGE 2 OF 2

PORT & TRAVERSE PT. NUMBER	COMMENTS	CLOCK TIME	GAS METER READING (FT3)	STACK VELOCITY HEAD	METER ORIFICE PRESS. DIFF.("H2O)		STACK GAS TEMP (F)	SAMPLE BOX TEMP (F)	LAST IMPINGER TEMP (F)	DRY GAS METER TEMP (F)	VACUUM ON SAMPLE TRAIN ("Hg)
					CALC.	ACTUAL					
1-7			236.70	0.08	0.57	0.57	853	250	53	81	2
8	20		237.8	0.08	0.57	0.57	863	250	55	81	2
9			238.95	0.08	0.57	0.57	862	250	55	82	2
10	25		240.17	0.09	0.64	0.64	859	249	56	82	2
11			241.40	0.09	0.64	0.64	859	250	56	82	2
12	30		242.617	0.09	0.64	0.64	855	249	56	83	2
2-1	14:53		243.90	0.11	0.79	0.79	931	250	65	83	3
2	35	14:58	245.20	0.10	0.72	0.72	951	251	55	83	3
3			246.6	0.11	0.79	0.79	944	247	54	83	~~3~~ 3
4	40	15:03	247.9	0.10	0.72	0.72	936	249	55	83	~~4~~ 4
5			249.3	0.12	0.86	0.86	938	248	53	84	4
6	45	08	250.66	0.11	0.79	0.79	925	255	54	84	4
7			252.0	0.10	0.72	0.72	900	245	53	84	4
8	50		253.3	0.10	0.72	0.72	879	249	53	84	4
9		13	254.8	0.13	0.93	0.93	872	245	54	84	4
10	55		256.3	0.13	0.93	0.93	865	242	55	85	4
11		18	257.73	0.13	0.93	0.93	859	245	55	85	4
12	60			0.13	0.93	0.93	857	256	55	85	4
			Avgs	0.10		0.719	899.58			82.63	

0.52

PLANT Perry Funeral Home

SOURCE Omega Crematory

PLANT LOCATION Bloomstown, FL

TYPE OF SAMPLING TRAIN EPA M5

TYPE OF SAMPLES PM

DATE 3-29-07 RUN NUMBER 3

TIME START 15:59 TIME END 17:03

SAMPLE TIME 2.5 / 24 (MIN/PT)= 60 TOTAL MIN

ASSUMED MOISTURE(%) 7 FDA 93

NOMOGRAPH Cf 6.92 PITOT Cf 0.84

Pb ("Hg) 30.14 Ps ("Hg) 30.138

WEATHER Broken TEMP (F) 82

METER BOX NO. 1 H 1.6297 Y 1.0091

NOZZLE IDENTIFICATION NO. QTZ 3/8

NOZZLE CAL 0.375 / 0.375 / 0.376 = 0.375

STACK DIMENSIONS 20.79

STACK AREA (FT2) 2.357 EFFECTIVE (FT2) 2.357

STACK DIAMETERS:(UPSTREAM) 3.51 (DOWNSTREAM) 1.15

PORT SIZE 4" NIPPLE LENGTH 5"

STACK HEIGHT (FT) ~20 UMBILICAL LENGTH 100FT

AGENCY OBSERVER(S) NONE

TEST COORDINATOR(S)

V. E. OBSERVER ~~Louisa~~ LUIS LLORENS

ACE AIR CONSULTING & ENGINEERING, INC.
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(352) 335-1889 - OFFICE / (352) 335-1891 - FAX

STACK CONFIGURATION

Impinger water Clear

REMARKS: Have NO control OF Filter Box Temp. Ran After Burn @ 1800° From 16:04 TO 16:09

TEST ID PM-2-3-29-2007

PAGE 1 OF 2

MATERIAL PROCESSING RATE

GAS METER READINGS: FINAL 290.253 (FT3)

INITIAL 259.500 (FT3)

NET 30.753 (FT3)

FILTER NO. 3078 IMP. VOLGAIN 46 (ml)

SILICA GEL NO. 460 WT. GAIN 4.2 (ml)

TOTAL CONDENSATE 50.2 (ml)

ORSAT

	1	2	3	4	AVG.
%CO2					
%O2					
%CO					
%N2					

Fo= Fo RANGE= ORSAT ANALYZER

LEAK CHECKS

PRE 0 CFM 15 ("Hg) POST 0 CFM 5 ("Hg)

METER BOX/PUMP OK GAS SYSTEM ~ ORSAT BAG ~

PITOT TUBE NO. 43 PRE-TEST LEAK CHECK OK

POST TEST (+) 3.7 / 3.7 "H20 (15 SECONDS)

POST TEST (-) 4.2 / 4.2 "H20 (15 SECONDS)

PYROMETER NUMBER ACE-1

BOX OPERATOR BEN PROBE HOLDER Lane

PORT & TRAVERSE PT. NUMBER	COMMENTS	CLOCK TIME	GAS METER READING (FT3)	STACK VELOCITY HEAD	METER ORIFICE PRESS. DIFF.("H2O) CALC.	METER ORIFICE PRESS. DIFF.("H2O) ACTUAL	STACK GAS TEMP (F)	SAMPLE BOX TEMP (F)	LAST IMPINGER TEMP (F)	DRY GAS METER TEMP (F)	VACUUM ON SAMPLE TRAIN ("Hg)
1-1			261.05	0.15	1.04	1.04	1008	265	67	82	3
2	5	16 04	262.6	0.14	0.97	0.97	1015	270	61	82	3
3			264.2	0.14	0.97	0.97	1016	279	58	82	3
4	10	09	266.8	0.12	0.83	0.83	1015	260	60	82	3
5			268.17	0.12	0.83	0.83	1045	260	61	83	3
6	15	14	?	0.12	0.83	0.83	1044	256	60	83	3

289.5

ACE AIR CONSULTING & ENGINEERING, INC.

Run 3
3-29-07

TEST ID _____

PAGE 2 OF 2

PORT & TRAVERSE PT. NUMBER	COMMENTS	CLOCK TIME	GAS METER READING (FT3)	STACK VELOCITY HEAD	METER ORIFICE PRESS. DIFF.("H2O)		STACK GAS TEMP (F)	SAMPLE BOX TEMP (F)	LAST IMPINGER TEMP (F)	DRY GAS METER TEMP (F)	VACUUM ON SAMPLE TRAIN ("Hg)
					CALC.	ACTUAL					
1-7		19	269.5	0.11	0.76	0.76	1042	248	66	83	3
8	20	16:19	270.8	0.10	0.69	0.69	1031	246	61	83	3
9		24	272.0	0.10	0.69	0.69	1025	243	62	84	3
10	25	16:24	273.2	0.10	0.69	0.69	1006	245	62	84	3
11			274.4	0.10	0.69	0.69	1020	247	63	84	3
12	30	16:29	275.585	0.10	0.69	0.69	1024	249	63	84	3
2-1	16:33	16	276.85	0.12	0.83	0.83	999	259	69	84	4
2	35	16:38	278.1	0.11	0.76	0.76	996	249	8262	84	3
3			279.35	0.11	0.76	0.76	1023	250	62	85	3
4	40	43	280.5	0.10	0.69	0.69	998	245	62	85	3
5			281.6	0.11	0.76	0.76	1003	248	62	85	3
6	45	48	282.8	0.11	0.76	0.76	985	250	63	85	3
7			284.05	0.10	0.69	0.69	960	247	61	85	4
8	50	53	285.25	0.10	0.69	0.69	959	250	62	85	4
9			286.45	0.10	0.69	0.69	956	250	59	86	4
10	55	58	287.7	0.10	0.69	0.69	953	249	59	86	4
11			288.99	0.10	0.69	0.69	950	248	60	86	4
12	60	03		0.10	0.69	0.69	963	249	60	86	4

APPENDIX C

LABORATORY DATA

APPENDIX D

CO EMISSION SUMMARY AND DATA LOGGER COPIES

AIR CONSULTING AND ENGINEERING, INC.
2106 NW 67th Place, Suite 4, Gainesville, Florida 32653

Instrumental Reference Method On-Line Data **224.43**

OMEGA CREMATORY OUTLET PEAVY FUNRAL HOME BLOUNTSTOWN, FLORIDA

	Parameter	O2	CO2	ML CO	48H CO	CO@7%O2	CO@12%CO2	NA#	NA#	Comments	Comment2
	Units	%V,d	%V,d	ppmVd	ppm	ppmVd	ppmVd	ppmVd	@15%O2		
29-Mar-07	10:49:08	14.11	4.57	14.66	14.38	29.51	5.47	NA#	NA#	RUN 0	
29-Mar-07	10:50:08	14.02	4.63	14.10	14.39	29.11	5.54	NA#	NA#	RUN 0	
29-Mar-07	10:51:43	14.06	4.61	14.41	14.54	29.54	5.59	NA#	NA#	RUN 0	
29-Mar-07	10:52:09	13.91	4.71	16.97	16.18	32.17	6.35	NA#	NA#	RUN 0	
29-Mar-07	10:53:09	13.78	4.87	16.33	15.69	30.70	6.35	NA#	NA#	RUN 0	
29-Mar-07	10:54:09	13.72	4.84	13.79	13.83	26.79	5.58	NA#	NA#	RUN 0	
29-Mar-07	10:55:08	13.87	4.73	15.26	14.85	29.38	5.86	NA#	NA#	RUN 0	
29-Mar-07	10:56:09	13.93	4.69	15.24	15.12	30.16	5.91	NA#	NA#	RUN 0	
29-Mar-07	10:57:08	13.99	4.65	13.25	13.60	27.35	5.27	NA#	NA#	RUN 0	
29-Mar-07	10:58:09	13.91	4.70	13.58	13.41	26.68	5.25	NA#	NA#	RUN 0	
29-Mar-07	10:59:08	13.89	4.71	12.55	12.75	25.30	5.01	NA#	NA#	RUN 0	
29-Mar-07	11:00:09	13.73	4.87	12.76	12.63	24.57	5.11	NA#	NA#	RUN 0	
29-Mar-07	11:01:08	12.75	5.55	5.83	7.01	11.99	3.27	NA#	NA#	RUN 0	
29-Mar-07	11:02:09	12.95	5.37	3.39	3.59	6.29	1.60	NA#	NA#	RUN 0	
29-Mar-07	11:03:08	13.56	4.93	15.26	14.92	28.44	6.10	NA#	NA#	RUN 0	
Average:	**11:03:48**	**13.55**	**4.92**	**8.19**	**8.85**	**17.34**	**3.53**	**#DIV/0!**	**#DIV/0!**	**RUN 0**	
Maximum	11:03:48	14.11	5.55	16.97	16.18	32.72	6.35	0.00	0.00	RUN 0	
Minimum	11:03:48	12.56	4.57	0.77	2.12	3.66	0.93	0.00	0.00	RUN 0	
Std Dev	11:03:48	0.45	0.28	6.51	5.79	11.79	2.23	#DIV/0!	#DIV/0!	RUN 0	
29-Mar-07	11:09:35	5.97	13.73	0.46	1.14	1.06	1.31	NA#	NA#	Cal:6.02/14.06 O2/CO2	
29-Mar-07	11:09:45	5.97	13.73	0.83	0.31	0.29	0.36	NA#	NA#	Cal:6.02/14.06 O2/CO2	
29-Mar-07	11:09:55	5.97	13.73	0.31	0.68	0.63	0.78	NA#	NA#	Cal:6.02/14.06 O2/CO2	
29-Mar-07	11:10:05	5.97	13.73	0.01	1.08	1.01	1.24	NA#	NA#	Cal:6.02/14.06 O2/CO2	
Average:	**11:10:09**	**5.97**	**13.73**	**0.40**	**0.80**	**0.75**	**0.92**	**#DIV/0!**	**#DIV/0!**	**Cal:6.02/14.06 O2/CO2**	
Gas Value:	11:10:09	6.02	14.06	0	NA#	NA#	#N/A	#N/A	#N/A	6.02/14.06 O2/CO2	
Diff%ofSpan	11:10:09	-0.19%	-1.64%	0.40%	#N/A	#N/A	#N/A	#DIV/0!	#DIV/0!		
29-Mar-07	11:14:08	0.03	0.11	28.27	29.04	19.34	0.27	NA#	NA#	Cal:27.75 CO	
29-Mar-07	11:14:17	0.03	0.10	28.43	28.90	19.24	0.25	NA#	NA#	Cal:27.75 CO	
29-Mar-07	11:14:27	0.03	0.10	27.40	27.91	18.59	0.23	NA#	NA#	Cal:27.75 CO	
29-Mar-07	11:14:37	0.03	0.09	28.25	27.06	18.02	0.20	NA#	NA#	Cal:27.75 CO	
Average:	**11:14:37**	**0.03**	**0.10**	**28.09**	**28.23**	**18.80**	**0.24**	**#DIV/0!**	**#DIV/0!**	**Cal:27.75 CO**	
Gas Value:	11:14:37	0	NA#	27.75	27.75	NA#	#N/A	#N/A	#N/A	27.75 CO	
Diff%ofSpan	11:14:37	0.11%	#N/A	0.34%	0.05%	#N/A	#N/A	#DIV/0!	#DIV/0!		
29-Mar-07	12:22:07	14.44	4.09	1.71	2.41	5.18	0.82	NA#	NA#	RUN 1	PT 1
29-Mar-07	12:23:07	14.47	4.08	1.70	2.23	4.85	0.75	NA#	NA#	RUN 1	PT 1
29-Mar-07	12:24:07	14.39	4.11	1.62	2.20	4.69	0.76	NA#	NA#	RUN 1	PT 1
29-Mar-07	12:25:07	14.49	4.05	1.82	2.26	4.90	0.76	NA#	NA#	RUN 1	PT 1
29-Mar-07	12:26:07	14.55	4.02	1.95	1.90	4.24	0.63	NA#	NA#	RUN 1	PT 1
29-Mar-07	12:27:07	14.59	4.00	1.74	2.02	4.50	0.68	NA#	NA#	RUN 1	PT 1
29-Mar-07	12:28:07	14.55	4.02	1.59	2.34	5.11	0.79	NA#	NA#	RUN 1	PT 1

AIR CONSULTING AND ENGINEERING, INC.
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BIAS CORRECTION AND EMISSION RESULTS
OMEGA CREMATORY OUTLET
PEAVY FUNRAL HOME
BLOUNTSTOWN, FLORIDA
MARCH 29, 2007

Run Number: 1 %RH: 43.9 %
Time: 12:22:07 13:21:07 AMB TEMP: 87.4 DEG. F

Parameter	Cal. Gas Value	Initial Span Values Bias	Initial Span Values Zero	Final Span Values Bias	Final Span Values Zero	Average Bias Bias	Average Bias Zero	Run Average	Corrected Run Avg	Corrected to 7% O2	Corrected to 12% CO2
O2	6.02	5.97	0.03	5.97	0.03	5.97	0.03	15.10	15.26		
CO2	14.06	13.73	0.10	13.78	0.09	13.75	0.09	3.63	3.64		
CO	27.750	28.227	0.803	27.59	0.31	27.91	0.56	2.71	2.18	5.23	7.20

Run Number: 2 %RH: 37.9 %
Time: 14:20:02 15:20:02 AMB TEMP: 88.8 DEG. F

Parameter	Cal. Gas Value	Initial Span Values Bias	Initial Span Values Zero	Final Span Values Bias	Final Span Values Zero	Average Bias Bias	Average Bias Zero	Run Average	Corrected Run Avg	Corrected to 7% O2	Corrected to 12% CO2
O2	6.02	5.97	0.03	5.97	0.03	5.97	0.03	14.29	14.45		
CO2	14.06	13.78	0.09	13.71	0.08	13.74	0.08	4.30	4.34		
CO	27.750	27.59	0.31	27.54	1.16	27.56	0.74	2.16	1.47	3.09	4.05

Run Number: 3 %RH: 34.4 %
Time: 16:01:03 17:00:03 AMB TEMP: 88.1 DEG. F

Parameter	Cal. Gas Value	Initial Span Values Bias	Initial Span Values Zero	Final Span Values Bias	Final Span Values Zero	Average Bias Bias	Average Bias Zero	Run Average	Corrected Run Avg	Corrected to 7% O2	Corrected to 12% CO2
O2	6.02	5.97	0.03	5.96	0.03	5.97	0.03	13.62	13.78		
CO2	14.06	13.71	0.08	13.68	0.09	13.69	0.09	4.82	4.89		
CO	27.750	27.54	1.16	27.72	0.31	27.63	0.74	1.83	1.13	2.16	2.78

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Instrumental Reference Method On-Line Data **224.43**

OMEGA CREMATORY OUTLET PEAVY FUNRAL HOME BLOUNTSTOWN, FLORIDA

	Parameter	O2	CO2	ML CO	48H CO	CO@7%O2	CO@12%CO2	NA#	NA#	Comments	Comment2
	Units	%V,d	%V,d	ppmVd	ppm	ppmVd	ppmVd	ppmVd	@15%O2		
29-Mar-07	12:29:07	14.63	3.98	1.84	2.76	6.14	0.91	NA#	NA#	RUN 1	PT 1
29-Mar-07	12:30:07	14.66	3.97	1.49	2.26	5.11	0.74	NA#	NA#	RUN 1	PT 1
29-Mar-07	12:31:07	14.71	3.93	1.68	2.67	6.04	0.87	NA#	NA#	RUN 1	PT 1
29-Mar-07	12:32:07	14.76	3.90	1.62	2.84	6.44	0.93	NA#	NA#	RUN 1	PT 1
29-Mar-07	12:33:07	14.78	3.87	2.14	2.44	5.53	0.79	NA#	NA#	RUN 1	PT 1
29-Mar-07	12:34:07	14.76	3.87	1.93	2.78	6.31	0.90	NA#	NA#	RUN 1	PT 1
29-Mar-07	12:35:07	14.88	3.79	1.95	3.06	7.10	0.96	NA#	NA#	RUN 1	PT 1
29-Mar-07	12:36:07	14.89	3.79	1.66	2.78	6.47	0.87	NA#	NA#	RUN 1	PT 1
29-Mar-07	12:37:07	14.92	3.77	1.66	2.52	5.91	0.79	NA#	NA#	RUN 1	PT 1
29-Mar-07	12:38:07	14.99	3.73	3.68	3.77	8.88	1.19	NA#	NA#	RUN 1	PT 1
29-Mar-07	12:39:07	15.01	3.69	10.38	12.15	28.65	3.74	NA#	NA#	RUN 1	PT 1
29-Mar-07	12:40:22	15.05	3.67	2.58	3.01	7.08	0.94	NA#	NA#	RUN 1	PT 1
29-Mar-07	12:41:07	15.18	3.55	1.74	2.54	6.22	0.75	NA#	NA#	RUN 1	PT 1
29-Mar-07	12:42:13	15.22	3.57	1.55	2.76	6.78	0.82	NA#	NA#	RUN 1	PT 2
29-Mar-07	12:43:07	15.30	3.51	1.46	2.20	5.46	0.65	NA#	NA#	RUN 1	PT 2
29-Mar-07	12:44:07	15.14	3.60	0.93	2.41	5.87	0.73	NA#	NA#	RUN 1	PT 2
29-Mar-07	12:45:07	15.14	3.60	1.56	3.10	7.55	0.93	NA#	NA#	RUN 1	PT 2
29-Mar-07	12:46:07	15.17	3.60	1.33	3.00	7.32	0.90	NA#	NA#	RUN 1	PT 2
29-Mar-07	12:47:07	15.18	3.57	1.23	2.60	6.29	0.79	NA#	NA#	RUN 1	PT 2
29-Mar-07	12:48:07	15.09	3.65	1.20	2.10	5.03	0.64	NA#	NA#	RUN 1	PT 2
29-Mar-07	12:49:07	15.23	3.54	1.29	2.95	7.21	0.87	NA#	NA#	RUN 1	PT 2
29-Mar-07	12:50:07	15.16	3.60	1.28	2.37	5.77	0.70	NA#	NA#	RUN 1	PT 2
29-Mar-07	12:51:08	15.25	3.53	1.56	2.45	6.16	0.71	NA#	NA#	RUN 1	PT 2
29-Mar-07	12:52:07	15.24	3.53	1.59	2.43	6.01	0.72	NA#	NA#	RUN 1	PT 2
29-Mar-07	12:53:08	15.28	3.50	1.15	1.82	4.49	0.54	NA#	NA#	RUN 1	PT 2
29-Mar-07	12:54:10	15.34	3.47	1.19	2.01	4.98	0.59	NA#	NA#	RUN 1	PT 2
29-Mar-07	12:55:08	15.19	3.56	1.45	1.69	4.13	0.50	NA#	NA#	RUN 1	PT 2
29-Mar-07	12:56:07	15.21	3.50	1.69	2.50	6.18	0.73	NA#	NA#	RUN 1	PT 2
29-Mar-07	12:57:14	15.07	3.68	2.34	2.92	7.02	0.89	NA#	NA#	RUN 1	PT 2
29-Mar-07	12:58:07	15.18	3.56	2.13	3.13	7.64	0.93	NA#	NA#	RUN 1	PT 2
29-Mar-07	12:59:07	15.21	3.54	2.18	2.67	6.55	0.79	NA#	NA#	RUN 1	PT 2
29-Mar-07	13:00:07	15.30	3.49	1.81	2.94	7.38	0.85	NA#	NA#	RUN 1	PT 2
29-Mar-07	13:01:07	15.29	3.49	2.18	2.68	6.68	0.78	NA#	NA#	RUN 1	PT 2
29-Mar-07	13:02:07	15.14	3.57	2.89	3.75	9.05	1.12	NA#	NA#	RUN 1	PT 3
29-Mar-07	13:03:07	15.24	3.53	3.19	3.53	8.79	1.03	NA#	NA#	RUN 1	PT 3
29-Mar-07	13:04:07	15.32	3.47	2.84	3.24	8.11	0.94	NA#	NA#	RUN 1	PT 3
29-Mar-07	13:06:00	15.53	3.29	2.64	2.46	6.38	0.67	NA#	NA#	RUN 1	PT 3
29-Mar-07	13:06:07	14.85	3.76	1.95	2.62	6.03	0.82	NA#	NA#	RUN 1	PT 3
29-Mar-07	13:07:08	15.39	3.42	1.54	2.40	6.09	0.68	NA#	NA#	RUN 1	PT 3
29-Mar-07	13:08:07	15.19	3.53	1.59	2.98	7.35	0.87	NA#	NA#	RUN 1	PT 3
29-Mar-07	13:09:07	15.34	3.45	1.42	2.27	5.75	0.65	NA#	NA#	RUN 1	PT 3

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Summary of Emissions Test Run Averages

IDLE

BLOUNTSTOWN, FLORIDA

OMEGA CREMATORY OUTLET — PEAVY FUNRAL HOME — BLOUNTSTOWN, FLORIDA

Date	Start Time	End Time	O2 %V,d	CO2 %V,d	ML CO ppmVd	48H CO ppm	CO@7%O2 ppmVd	CO@12%CO2 ppmVd	NA# ppmVd	NA# @15%O2	Comments
	Instantaneous:		**20.48**	**0.04**	**1.67**	**3.44**	**114.70**	**0.01**	**NA#**	**NA#**	
03/29/07	17:11:07	17:11:28	0.03	0.09	28.52	27.72	18.46	0.21	#DIV/0!	#DIV/0!	Cal:27.75 CO
03/29/07	9:09:51	9:10:12	20.87	0.04	0.15	1.95	0.10	0.00	0.1003	27.6681	Cal:20.9 O2
03/29/07	9:14:49	9:15:09	13.94	6.00	0.21	0.75	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	Cal:13.94/5.92 O2/CO2
03/29/07	9:19:23	9:19:44	6.06	14.08	0.16	0.82	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	Cal:6.02/14.06 O2/CO2
03/29/07	9:24:09	9:24:39	0.15	0.01	27.85	27.77	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	Cal:27.75 CO
03/29/07	9:29:29	9:29:50	0.13	0.00	80.54	81.40	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	Cal:81.8 CO
03/29/07	9:32:50	9:33:20	0.02	0.00	28.34	29.29	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	Cal:27.75 CO
03/29/07	9:37:10	9:37:30	0.02	-0.01	210.60	614.28	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	Cal:624 CO
03/29/07	9:46:43	9:47:18	0.00	0.00	28.79	28.69	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	Cal:27.75 CO
03/29/07	9:52:31	9:53:01	5.95	13.74	0.44	1.61	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	Cal:6.02/14.06 O2/CO2
03/29/07	**10:34:08**	**11:03:08**	**13.55**	**4.92**	**8.19**	**8.85**	**17.34**	**3.53**	**#DIV/0!**	**#DIV/0!**	**RUN 0**
03/29/07	11:09:35	11:10:05	5.97	13.73	0.40	0.80	0.75	0.92	#DIV/0!	#DIV/0!	Cal:6.02/14.06 O2/CO2
03/29/07	11:14:08	11:14:37	0.03	0.10	28.09	28.23	18.80	0.24	#DIV/0!	#DIV/0!	Cal:27.75 CO
03/29/07	**12:22:07**	**13:21:07**	**15.10**	**3.63**	**1.86**	**2.71**	**6.53**	**0.82**	**#DIV/0!**	**#DIV/0!**	**RUN 1**
03/29/07	13:26:47	13:27:07	5.97	13.78	0.53	0.31	0.29	0.36	#DIV/0!	#DIV/0!	Cal:6.02/14.06 O2/CO2
03/29/07	13:31:13	13:31:43	0.03	0.09	28.10	27.59	18.37	0.20	#DIV/0!	#DIV/0!	Cal:27.75 CO
03/29/07	**14:20:02**	**15:20:02**	**14.29**	**4.30**	**1.59**	**2.16**	**4.66**	**0.76**	**#DIV/0!**	**#DIV/0!**	**RUN 2 PT2**
03/29/07	15:25:11	15:25:41	5.97	13.71	0.21	1.16	1.08	1.33	#DIV/0!	#DIV/0!	Cal:6.02/14.06 O2/CO2
03/29/07	15:31:06	15:31:36	0.03	0.08	28.32	27.54	18.34	0.18	#DIV/0!	#DIV/0!	Cal:27.75 CO
03/29/07	**16:01:03**	**17:00:03**	**13.62**	**4.82**	**1.30**	**1.83**	**3.65**	**0.72**	**#DIV/0!**	**#DIV/0!**	**RUN 3 PT 2**
03/29/07	17:06:53	17:07:13	5.96	13.68	0.01	0.31	0.29	0.35	#DIV/0!	#DIV/0!	Cal:6.02/14.06 O2/CO2
03/29/07	17:11:07	17:11:28	0.03	0.09	28.52	27.72	18.46	0.21	#DIV/0!	#DIV/0!	Cal:27.75 CO

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Current: **14:16:58** Countdown **NA** Run Interval: **1 minute** Cal Interval: **10 seconds** **IDLE**

Instrumental Reference Method On-Line Data **224.43**

OMEGA CREMATORY OUTLET PEAVY FUNRAL HOME BLOUNTSTOWN, FLORIDA

	Parameter	O2	CO2	ML CO	48H CO	CO@7%O2	CO@12%CO2	NA#	NA#	Comments	Comment2
	Units	%V,d	%V,d	ppmVd	ppm	ppmVd	ppmVd	ppmVd	@15%O2		
INSTANTANEOUS:		**20.48**	**0.04**	**1.67**	**3.44**	**114.70**	**0.01**	**NA#**	**NA#**		
Interval Average:		**20.48**	**0.04**	**1.67**	**3.44**	**114.70**	**0.01**	**NA#**	**NA#**	**Cal:27.75 CO**	
Average So Far		**0.03**	**0.09**	**28.52**	**27.72**	**18.46**	**0.21**	**#DIV/0!**	**#DIV/0!**		
29-Mar-07	9:09:51	20.87	0.04	0.24	1.59	0.16	0.00	0.16	37.56	Cal:20.9 O2	
29-Mar-07	9:10:01	20.88	0.04	0.12	1.61	0.08	0.00	0.08	27.39	Cal:20.9 O2	
29-Mar-07	9:10:12	20.87	0.04	0.09	2.66	0.06	0.00	0.06	18.06	Cal:20.9 O2	
Average:	**9:10:13**	**20.87**	**0.04**	**0.15**	**1.95**	**0.10**	**0.00**	**0.10**	**27.67**	**Cal:20.9 O2**	
Gas Value:	9:10:13	20.9	NA#	NA#	NA#	NA#	#N/A	#N/A	#N/A	20.9 O2	
Diff%ofSpan	9:10:13	-0.11%	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A		
29-Mar-07	9:14:49	13.95	6.00	0.18	0.36	NA#	NA#	NA#	NA#	Cal:13.94/5.92 O2/CO2	
29-Mar-07	9:15:00	13.95	6.00	0.16	1.38	NA#	NA#	NA#	NA#	Cal:13.94/5.92 O2/CO2	
29-Mar-07	9:15:09	13.94	6.00	0.28	0.50	NA#	NA#	NA#	NA#	Cal:13.94/5.92 O2/CO2	
Average:	**9:15:14**	**13.94**	**6.00**	**0.21**	**0.75**	**#DIV/0!**	**#DIV/0!**	**#DIV/0!**	**#DIV/0!**	**Cal:13.94/5.92 O2/CO2**	
Gas Value:	9:15:14	13.94	5.92	0	NA#	NA#	#N/A	#N/A	#N/A	13.94/5.92 O2/CO2	
Diff%ofSpan	9:15:14	0.02%	0.39%	0.21%	#N/A	#N/A	#DIV/0!	#DIV/0!	#DIV/0!		
29-Mar-07	9:19:23	6.06	14.08	0.07	0.68	NA#	NA#	NA#	NA#	Cal:6.02/14.06 O2/CO2	
29-Mar-07	9:19:33	6.06	14.08	0.09	1.40	NA#	NA#	NA#	NA#	Cal:6.02/14.06 O2/CO2	
29-Mar-07	9:19:44	6.06	14.08	0.33	0.38	NA#	NA#	NA#	NA#	Cal:6.02/14.06 O2/CO2	
Average:	**9:19:47**	**6.06**	**14.08**	**0.16**	**0.82**	**#DIV/0!**	**#DIV/0!**	**#DIV/0!**	**#DIV/0!**	**Cal:6.02/14.06 O2/CO2**	
Gas Value:	9:19:47	6.02	14.06	0	NA#	NA#	#N/A	#N/A	#N/A	6.02/14.06 O2/CO2	
Diff%ofSpan	9:19:47	0.15%	0.11%	0.16%	#N/A	#N/A	#DIV/0!	#DIV/0!	#DIV/0!		
29-Mar-07	9:24:09	0.15	0.01	28.65	28.58	NA#	NA#	NA#	NA#	Cal:27.75 CO	
29-Mar-07	9:24:19	0.15	0.01	27.71	27.69	NA#	NA#	NA#	NA#	Cal:27.75 CO	
29-Mar-07	9:24:30	0.15	0.01	27.57	27.42	NA#	NA#	NA#	NA#	Cal:27.75 CO	
29-Mar-07	9:24:39	0.15	0.01	27.47	27.41	NA#	NA#	NA#	NA#	Cal:27.75 CO	
Average:	**9:24:44**	**0.15**	**0.01**	**27.85**	**27.77**	**#DIV/0!**	**#DIV/0!**	**#DIV/0!**	**#DIV/0!**	**Cal:27.75 CO**	
Gas Value:	9:24:44	0	NA#	27.75	27.75	NA#	#N/A	#N/A	#N/A	27.75 CO	
Diff%ofSpan	9:24:44	0.60%	#N/A	0.10%	0.00%	#N/A	#DIV/0!	#DIV/0!	#DIV/0!		
29-Mar-07	9:29:29	0.13	0.00	81.16	81.21	NA#	NA#	NA#	NA#	Cal:81.8 CO	
29-Mar-07	9:29:39	0.14	0.00	80.18	81.51	NA#	NA#	NA#	NA#	Cal:81.8 CO	
29-Mar-07	9:29:50	0.13	0.00	80.27	81.50	NA#	NA#	NA#	NA#	Cal:81.8 CO	
Average:	**9:29:53**	**0.13**	**0.00**	**80.54**	**81.40**	**#DIV/0!**	**#DIV/0!**	**#DIV/0!**	**#DIV/0!**	**Cal:81.8 CO**	
Gas Value:	9:29:53	0	NA#	81.8	81.8	NA#	#N/A	#N/A	#N/A	81.8 CO	
Diff%ofSpan	9:29:53	0.54%	#N/A	-1.26%	-0.04%	#N/A	#DIV/0!	#DIV/0!	#DIV/0!		
29-Mar-07	9:32:50	0.02	0.00	28.89	29.29	NA#	NA#	NA#	NA#	Cal:27.75 CO	
29-Mar-07	9:33:01	0.02	0.00	28.15	29.30	NA#	NA#	NA#	NA#	Cal:27.75 CO	
29-Mar-07	9:33:10	0.02	0.00	28.04	29.29	NA#	NA#	NA#	NA#	Cal:27.75 CO	

AIR CONSULTING AND ENGINEERING, INC.
2106 NW 67th Place, Suite 4, Gainesville, Florida 32653

Instrumental Reference Method On-Line Data **224.43**

OMEGA CREMATORY OUTLET PEAVY FUNRAL HOME BLOUNTSTOWN, FLORIDA

Parameter		O2	CO2	ML CO	48H CO	CO@7%O2	CO@12%CO2	NA#	NA#	Comments	Comment2
Units		%V,d	%V,d	ppmVd	ppm	ppmVd	ppmVd	ppmVd	@15%O2		
29-Mar-07	9:33:20	0.02	0.00	28.31	29.28	NA#	NA#	NA#	NA#	Cal:27.75 CO	
Average:	**9:33:20**	**0.02**	**0.00**	**28.34**	**29.29**	**#DIV/0!**	**#DIV/0!**	**#DIV/0!**	**#DIV/0!**	**Cal:27.75 CO**	
Gas Value:	9:33:20	0	NA#	27.75	27.75	NA#	#N/A	#N/A	#N/A	27.75 CO	
Diff%ofSpan	9:33:20	0.09%	#N/A	0.59%	0.15%	#N/A	#DIV/0!	#DIV/0!	#DIV/0!		
29-Mar-07	9:37:10	0.02	-0.01	210.56	615.12	NA#	NA#	NA#	NA#	Cal:624 CO	
29-Mar-07	9:37:20	0.02	-0.01	210.62	614.33	NA#	NA#	NA#	NA#	Cal:624 CO	
29-Mar-07	9:37:30	0.02	-0.01	210.62	613.39	NA#	NA#	NA#	NA#	Cal:624 CO	
Average:	**9:37:32**	**0.02**	**-0.01**	**210.60**	**614.28**	**#DIV/0!**	**#DIV/0!**	**#DIV/0!**	**#DIV/0!**	**Cal:624 CO**	
Gas Value:	9:37:32	0	NA#	624	624	NA#	#N/A	#N/A	#N/A	624 CO	
Diff%ofSpan	9:37:32	0.09%	#N/A	-413.40%	-0.97%	#N/A	#DIV/0!	#DIV/0!	#DIV/0!		
29-Mar-07	9:46:43	-0.01	0.00	28.86	29.26	NA#	NA#	NA#	NA#	Cal:27.75 CO	BIAS
29-Mar-07	9:47:16	-0.01	0.00	28.95	28.54	NA#	NA#	NA#	NA#	Cal:27.75 CO	
29-Mar-07	9:47:17	-0.01	0.00	28.85	28.44	NA#	NA#	NA#	NA#	Cal:27.75 CO	
29-Mar-07	9:47:18	0.02	0.00	28.50	28.54	NA#	NA#	NA#	NA#	Cal:27.75 CO	
Average:	**9:47:19**	**0.00**	**0.00**	**28.79**	**28.69**	**#DIV/0!**	**#DIV/0!**	**#DIV/0!**	**#DIV/0!**	**Cal:27.75 CO**	
Gas Value:	9:47:19	0	NA#	27.75	27.75	NA#	#N/A	#N/A	#N/A	27.75 CO	
Diff%ofSpan	9:47:19	0.00%	#N/A	1.04%	0.09%	#N/A	#DIV/0!	#DIV/0!	#DIV/0!		
29-Mar-07	9:52:31	5.95	13.74	0.37	1.60	NA#	NA#	NA#	NA#	Cal:6.02/14.06 O2/CO2	
29-Mar-07	9:52:41	5.95	13.74	0.41	1.60	NA#	NA#	NA#	NA#	Cal:6.02/14.06 O2/CO2	
29-Mar-07	9:52:51	5.95	13.75	0.42	1.62	NA#	NA#	NA#	NA#	Cal:6.02/14.06 O2/CO2	
29-Mar-07	9:53:01	5.95	13.75	0.58	1.62	NA#	NA#	NA#	NA#	Cal:6.02/14.06 O2/CO2	
Average:	**9:53:09**	**5.95**	**13.74**	**0.44**	**1.61**	**#DIV/0!**	**#DIV/0!**	**#DIV/0!**	**#DIV/0!**	**Cal:6.02/14.06 O2/CO2**	
Gas Value:	9:53:09	6.02	14.06	0	NA#	NA#	#N/A	#N/A	#N/A	6.02/14.06 O2/CO2	
Diff%ofSpan	9:53:09	-0.27%	-1.58%	0.44%	#N/A	#N/A	#DIV/0!	#DIV/0!	#DIV/0!		
29-Mar-07	10:34:08	12.56	5.55	1.05	2.46	4.10	1.14	NA#	NA#	RUN 0	
29-Mar-07	10:35:08	12.88	5.38	0.94	2.12	3.66	0.95	NA#	NA#	RUN 0	
29-Mar-07	10:36:08	12.96	5.26	0.84	2.66	4.72	1.16	NA#	NA#	RUN 0	
29-Mar-07	10:37:09	13.12	5.13	0.91	2.17	3.90	0.93	NA#	NA#	RUN 0	
29-Mar-07	10:38:08	13.13	5.15	1.09	2.17	3.85	0.95	NA#	NA#	RUN 0	
29-Mar-07	10:39:09	13.06	5.18	1.10	2.31	4.10	1.00	NA#	NA#	RUN 0	
29-Mar-07	10:40:14	13.50	4.87	0.77	2.38	4.49	0.96	NA#	NA#	RUN 0	
29-Mar-07	10:41:08	13.43	4.90	1.02	2.64	4.91	1.08	NA#	NA#	RUN 0	
29-Mar-07	10:42:08	13.38	5.00	0.81	2.47	4.59	1.03	NA#	NA#	RUN 0	
29-Mar-07	10:43:31	13.27	5.06	0.77	2.84	5.17	1.20	NA#	NA#	RUN 0	
29-Mar-07	10:44:13	13.60	4.84	2.14	3.74	7.14	1.51	NA#	NA#	RUN 0	
29-Mar-07	10:45:08	13.55	4.90	3.17	4.44	8.41	1.81	NA#	NA#	RUN 0	
29-Mar-07	10:46:08	13.76	4.79	5.63	6.69	13.19	2.64	NA#	NA#	RUN 0	
29-Mar-07	10:47:29	13.99	4.70	12.49	13.52	27.21	5.29	NA#	NA#	RUN 0	
29-Mar-07	10:48:08	14.07	4.58	15.45	16.08	32.72	6.15	NA#	NA#	RUN 0	

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	Parameter	O2	CO2	ML CO	48H CO	CO@7%O2	O@12%CO2	NA#	NA#	Comments	Comment2
	Units	%V,d	%V,d	ppmVd	ppm	ppmVd	ppmVd	ppmVd	@15%O2		
29-Mar-07	13:10:07	15.32	3.44	1.60	1.84	4.53	0.54	NA#	NA#	RUN 1	PT 3
29-Mar-07	13:11:07	15.41	3.40	1.57	2.75	7.10	0.77	NA#	NA#	RUN 1	PT 3
29-Mar-07	13:12:07	15.42	3.40	1.56	2.45	6.29	0.69	NA#	NA#	RUN 1	PT 3
29-Mar-07	13:13:07	15.42	3.39	1.21	2.40	6.16	0.67	NA#	NA#	RUN 1	PT 3
29-Mar-07	13:14:07	15.41	3.40	1.20	1.95	4.85	0.56	NA#	NA#	RUN 1	PT 3
29-Mar-07	13:15:07	15.44	3.38	1.47	1.70	4.35	0.48	NA#	NA#	RUN 1	PT 3
29-Mar-07	13:16:07	15.40	3.39	1.55	2.30	5.83	0.66	NA#	NA#	RUN 1	PT 3
29-Mar-07	13:17:07	15.46	3.36	1.44	2.45	6.34	0.68	NA#	NA#	RUN 1	PT 3
29-Mar-07	13:18:07	15.50	3.35	1.05	2.09	5.46	0.57	NA#	NA#	RUN 1	PT 3
29-Mar-07	13:19:07	15.48	3.36	1.25	2.59	6.69	0.72	NA#	NA#	RUN 1	PT 3
29-Mar-07	13:20:07	15.45	3.37	1.15	2.49	6.40	0.70	NA#	NA#	RUN 1	PT 3
29-Mar-07	13:21:07	15.44	3.37	1.05	2.55	6.53	0.72	NA#	NA#	RUN 1	PT 3
Average:	**13:21:07**	**15.10**	**3.63**	**1.86**	**2.71**	**6.53**	**0.82**	**#DIV/0!**	**#DIV/0!**	**RUN 1**	
Maximum	13:21:07	15.53	4.11	10.38	12.15	28.65	3.74	0.00	0.00	RUN 1	
Minimum	13:21:07	14.39	3.29	0.93	1.69	4.13	0.48	0.00	0.00	RUN 1	
Std Dev	13:21:07	0.31	0.23	1.24	1.32	3.12	0.41	#DIV/0!	#DIV/0!	RUN 1	
29-Mar-07	13:26:17	6.91	12.71	0.46	0.32	0.35	0.35	NA#	NA#	Cal:6.02/14.06 O2/CO2	
29-Mar-07	13:26:28	5.98	13.76	0.76	0.01	0.01	0.01	NA#	NA#	Cal:6.02/14.06 O2/CO2	
29-Mar-07	13:26:37	5.98	13.77	0.57	-0.39	-0.37	-0.45	NA#	NA#	Cal:6.02/14.06 O2/CO2	
29-Mar-07	13:26:47	5.97	13.77	0.36	0.31	0.28	0.35	NA#	NA#	Cal:6.02/14.06 O2/CO2	
29-Mar-07	13:26:57	5.97	13.78	0.53	0.31	0.29	0.36	NA#	NA#	Cal:6.02/14.06 O2/CO2	
29-Mar-07	13:27:07	5.97	13.78	0.71	0.31	0.29	0.36	NA#	NA#	Cal:6.02/14.06 O2/CO2	
Average:	**13:27:11**	**5.97**	**13.78**	**0.53**	**0.31**	**0.29**	**0.36**	**#DIV/0!**	**#DIV/0!**	**Cal:6.02/14.06 O2/CO2**	
Gas Value:	13:27:11	6.02	14.06	0	NA#	NA#	#N/A	#N/A	#N/A	6.02/14.06 O2/CO2	
Diff%ofSpan	13:27:11	-0.18%	-1.41%	0.53%	#N/A	#N/A	#N/A	#DIV/0!	#DIV/0!		
29-Mar-07	13:31:13	0.03	0.10	27.81	27.36	18.22	0.22	NA#	NA#	Cal:27.75 CO	
29-Mar-07	13:31:23	0.03	0.09	28.39	27.38	18.24	0.21	NA#	NA#	Cal:27.75 CO	
29-Mar-07	13:31:33	0.03	0.08	28.22	27.41	18.26	0.19	NA#	NA#	Cal:27.75 CO	
29-Mar-07	13:31:43	0.03	0.08	27.99	28.20	18.78	0.18	NA#	NA#	Cal:27.75 CO	
Average:	**13:31:47**	**0.03**	**0.09**	**28.10**	**27.59**	**18.37**	**0.20**	**#DIV/0!**	**#DIV/0!**	**Cal:27.75 CO**	
Gas Value:	13:31:47	0	NA#	27.75	27.75	NA#	#N/A	#N/A	#N/A	27.75 CO	
Diff%ofSpan	13:31:47	0.12%	#N/A	0.35%	-0.02%	#N/A	#N/A	#DIV/0!	#DIV/0!		
29-Mar-07	14:20:02	12.31	6.14	3.46	1.93	3.14	0.99	NA#	NA#	RUN 2 PT2	
29-Mar-07	14:21:02	12.62	5.73	1.49	1.34	2.27	0.63	NA#	NA#	RUN 2 PT2	
29-Mar-07	14:22:02	12.84	5.47	1.52	1.11	1.93	0.50	NA#	NA#	RUN 2 PT2	
29-Mar-07	14:23:02	13.06	5.26	1.56	0.89	1.59	0.39	NA#	NA#	RUN 2 PT2	
29-Mar-07	14:24:02	13.25	5.10	1.49	1.61	2.93	0.69	NA#	NA#	RUN 2 PT2	
29-Mar-07	14:25:02	13.40	4.97	1.51	1.82	3.38	0.76	NA#	NA#	RUN 2 PT2	
29-Mar-07	14:26:02	13.54	4.87	1.44	2.36	4.47	0.96	NA#	NA#	RUN 2 PT2	
29-Mar-07	14:27:02	13.68	4.77	1.41	2.37	4.56	0.95	NA#	NA#	RUN 2 PT2	

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Parameter		O2	CO2	ML CO	48H CO	CO@7%O2	CO@12%CO2	NA#	NA#	Comments	Comment2
Units		%V,d	%V,d	ppmVd	ppm	ppmVd	ppmVd	ppmVd	@15%O2		
29-Mar-07	14:28:02	13.76	4.74	1.13	2.05	4.03	0.81	NA#	NA#	RUN 2 PT2	
29-Mar-07	14:29:02	13.78	4.71	1.70	1.77	3.49	0.69	NA#	NA#	RUN 2 PT2	
29-Mar-07	14:30:02	13.78	4.69	1.74	2.12	4.16	0.83	NA#	NA#	RUN 2 PT2	
29-Mar-07	14:31:02	13.91	4.61	1.47	1.96	3.92	0.75	NA#	NA#	RUN 2 PT2	
29-Mar-07	14:32:02	13.87	4.64	1.62	1.78	3.51	0.69	NA#	NA#	RUN 2 PT2	
29-Mar-07	14:33:02	13.77	4.69	1.45	2.05	3.93	0.81	NA#	NA#	RUN 2 PT2	
29-Mar-07	14:34:02	13.87	4.62	1.65	1.93	3.87	0.73	NA#	NA#	RUN 2 PT2	
29-Mar-07	14:35:02	13.90	4.59	1.56	1.85	3.71	0.71	NA#	NA#	RUN 2 PT2	
29-Mar-07	14:36:02	13.93	4.57	1.55	1.54	3.00	0.61	NA#	NA#	RUN 2 PT2	
29-Mar-07	14:37:02	13.85	4.64	1.69	1.79	3.42	0.72	NA#	NA#	RUN 2 PT2	
29-Mar-07	14:38:02	13.90	4.61	1.23	2.13	4.22	0.82	NA#	NA#	RUN 2 PT2	
29-Mar-07	14:39:02	13.92	4.59	1.47	1.91	3.70	0.75	NA#	NA#	RUN 2 PT2	
29-Mar-07	14:40:02	13.86	4.62	1.76	1.58	3.15	0.61	NA#	NA#	RUN 2 PT2	
29-Mar-07	14:41:02	14.17	4.45	1.88	2.12	4.42	0.79	NA#	NA#	RUN 2 PT2	
29-Mar-07	14:42:02	13.99	4.55	1.54	2.79	5.65	1.05	NA#	NA#	RUN 2 PT2	
29-Mar-07	14:43:03	13.99	4.56	1.73	2.09	4.27	0.79	NA#	NA#	RUN 2 PT2	
29-Mar-07	14:44:02	14.06	4.49	1.37	2.56	5.25	0.96	NA#	NA#	RUN 2 PT2	
29-Mar-07	14:45:02	14.23	4.35	1.51	2.24	4.62	0.82	NA#	NA#	RUN 2 PT2	
29-Mar-07	14:46:02	14.18	4.40	1.46	2.12	4.37	0.78	NA#	NA#	RUN 2 PT2	
29-Mar-07	14:47:02	14.20	4.40	1.66	2.91	6.05	1.07	NA#	NA#	RUN 2 PT2	
29-Mar-07	14:48:03	14.22	4.39	1.73	2.15	4.57	0.78	NA#	NA#	RUN 2 PT2	
29-Mar-07	14:49:02	13.96	4.54	1.84	2.95	5.88	1.13	NA#	NA#	RUN 2 PT2	
29-Mar-07	14:50:03	14.05	4.49	1.40	2.51	5.11	0.94	NA#	NA#	RUN 2 PT2	
29-Mar-07	14:51:02	13.98	4.54	1.82	2.61	5.27	0.99	NA#	NA#	RUN 2 PT2	
29-Mar-07	14:52:03	14.02	4.49	1.49	2.09	4.18	0.79	NA#	NA#	RUN 2 PT2	
29-Mar-07	14:53:02	13.97	4.53	1.64	2.38	4.75	0.91	NA#	NA#	RUN 2 PT2	
29-Mar-07	14:54:02	14.04	4.47	1.33	2.55	5.23	0.94	NA#	NA#	RUN 2 PT2	
29-Mar-07	14:55:02	14.06	4.45	1.51	2.60	5.31	0.96	NA#	NA#	RUN 2 PT2	
29-Mar-07	14:56:02	14.22	4.32	1.87	2.96	6.16	1.07	NA#	NA#	RUN 2 PT2	
29-Mar-07	14:57:02	14.35	4.23	1.76	1.86	3.98	0.65	NA#	NA#	RUN 2 PT2	
29-Mar-07	14:58:02	14.45	4.15	2.12	2.30	5.09	0.78	NA#	NA#	RUN 2 PT2	
29-Mar-07	14:59:02	14.48	4.12	2.06	2.50	5.41	0.86	NA#	NA#	RUN 2 PT2	
29-Mar-07	15:00:02	14.55	4.08	1.99	2.39	5.22	0.82	NA#	NA#	RUN 2 PT2	
29-Mar-07	15:01:02	14.67	3.99	1.98	2.16	4.78	0.73	NA#	NA#	RUN 2 PT2	
29-Mar-07	15:02:02	14.68	3.97	1.60	1.88	4.29	0.61	NA#	NA#	RUN 2 PT2	
29-Mar-07	15:03:02	14.72	3.96	1.50	1.75	4.00	0.57	NA#	NA#	RUN 2 PT2	
29-Mar-07	15:04:02	14.84	3.88	1.52	2.17	5.04	0.70	NA#	NA#	RUN 2 PT2	
29-Mar-07	15:05:18	14.72	3.96	1.74	1.98	4.42	0.66	NA#	NA#	RUN 2 PT2	
29-Mar-07	15:06:02	14.87	3.84	1.54	2.10	4.88	0.67	NA#	NA#	RUN 2 PT2	
29-Mar-07	15:07:02	14.75	3.89	1.36	2.21	5.05	0.71	NA#	NA#	RUN 2 PT2	
29-Mar-07	15:08:02	14.95	3.78	1.63	2.23	5.17	0.71	NA#	NA#	RUN 2 PT2	

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	Parameter	O2	CO2	ML CO	48H CO	CO@7%O2	CO@12%CO2	NA#	NA#	Comments	Comment2
	Units	%V,d	%V,d	ppmVd	ppm	ppmVd	ppmVd	ppmVd	@15%O2		
29-Mar-07	15:09:02	15.26	3.61	1.55	1.87	4.61	0.57	NA#	NA#	RUN 2 PT2	
29-Mar-07	15:10:02	15.24	3.56	1.27	2.48	6.12	0.73	NA#	NA#	RUN 2 PT2	
29-Mar-07	15:11:02	15.27	3.54	1.56	2.57	6.40	0.76	NA#	NA#	RUN 2 PT2	
29-Mar-07	15:12:02	15.40	3.45	1.28	2.12	5.48	0.60	NA#	NA#	RUN 2 PT2	
29-Mar-07	15:13:02	15.45	3.40	1.41	2.60	6.68	0.74	NA#	NA#	RUN 2 PT2	
29-Mar-07	15:14:02	15.50	3.37	1.37	2.28	5.89	0.64	NA#	NA#	RUN 2 PT2	
29-Mar-07	15:15:02	15.55	3.33	1.38	2.44	6.42	0.67	NA#	NA#	RUN 2 PT2	
29-Mar-07	15:16:02	15.57	3.31	1.35	2.34	6.26	0.64	NA#	NA#	RUN 2 PT2	
29-Mar-07	15:17:02	15.56	3.31	1.45	2.14	5.60	0.60	NA#	NA#	RUN 2 PT2	
29-Mar-07	15:18:02	15.60	3.29	1.38	2.56	6.76	0.70	NA#	NA#	RUN 2 PT2	
29-Mar-07	15:19:02	15.60	3.28	1.18	2.69	6.99	0.75	NA#	NA#	RUN 2 PT2	
29-Mar-07	15:20:02	15.65	3.25	1.44	2.39	6.41	0.64	NA#	NA#	RUN 2 PT2	
Average:	**15:20:02**	**14.29**	**4.30**	**1.59**	**2.16**	**4.66**	**0.76**	**#DIV/0!**	**#DIV/0!**	**RUN 2 PT2**	
Maximum	15:20:02	15.65	6.14	3.46	2.96	6.99	1.13	0.00	0.00	RUN 2 PT2	
Minimum	15:20:02	12.31	3.25	1.13	0.89	1.59	0.39	0.00	0.00	RUN 2 PT2	
Std Dev	15:20:02	0.77	0.62	0.32	0.41	1.20	0.15	#DIV/0!	#DIV/0!	RUN 2 PT2	
29-Mar-07	15:25:01	6.89	12.67	0.31	1.71	1.97	1.73	NA#	NA#	Cal:6.02/14.06 O2/CO2	
29-Mar-07	15:25:11	5.97	13.70	0.19	1.61	1.50	1.84	NA#	NA#	Cal:6.02/14.06 O2/CO2	
29-Mar-07	15:25:21	5.97	13.71	0.11	1.12	1.04	1.28	NA#	NA#	Cal:6.02/14.06 O2/CO2	
29-Mar-07	15:25:31	5.97	13.71	0.25	0.84	0.79	0.97	NA#	NA#	Cal:6.02/14.06 O2/CO2	
29-Mar-07	15:25:41	5.97	13.72	0.28	1.08	1.01	1.24	NA#	NA#	Cal:6.02/14.06 O2/CO2	
Average:	**15:25:44**	**5.97**	**13.71**	**0.21**	**1.16**	**1.08**	**1.33**	**#DIV/0!**	**#DIV/0!**	**Cal:6.02/14.06 O2/CO2**	
Gas Value:	15:25:44	6.02	14.06	0	NA#	NA#	#N/A	#N/A	#N/A	6.02/14.06 O2/CO2	
Diff%ofSpan	15:25:44	-0.19%	-1.75%	0.21%	#N/A	#N/A	#N/A	#DIV/0!	#DIV/0!		
29-Mar-07	15:30:46	0.03	0.10	28.76	27.54	18.34	0.22	NA#	NA#	Cal:27.75 CO	
29-Mar-07	15:30:57	0.03	0.09	28.32	26.73	17.80	0.21	NA#	NA#	Cal:27.75 CO	
29-Mar-07	15:31:06	0.03	0.09	28.57	27.55	18.35	0.20	NA#	NA#	Cal:27.75 CO	
29-Mar-07	15:31:16	0.03	0.08	28.06	27.54	18.35	0.19	NA#	NA#	Cal:27.75 CO	
29-Mar-07	15:31:26	0.03	0.08	28.63	27.55	18.35	0.18	NA#	NA#	Cal:27.75 CO	
29-Mar-07	15:31:36	0.03	0.07	28.00	27.51	18.32	0.17	NA#	NA#	Cal:27.75 CO	
Average:	**15:31:37**	**0.03**	**0.08**	**28.32**	**27.54**	**18.34**	**0.18**	**#DIV/0!**	**#DIV/0!**	**Cal:27.75 CO**	
Gas Value:	15:31:37	0	NA#	27.75	27.75	NA#	#N/A	#N/A	#N/A	27.75 CO	
Diff%ofSpan	15:31:37	0.12%	#N/A	0.57%	-0.02%	#N/A	#N/A	#DIV/0!	#DIV/0!		
29-Mar-07	16:01:03	12.09	6.10	4.42	1.81	2.87	0.92	NA#	NA#	RUN 3 PT 2	
29-Mar-07	16:02:04	12.23	5.88	1.59	1.55	2.49	0.76	NA#	NA#	RUN 3 PT 2	
29-Mar-07	16:03:03	12.35	5.76	1.56	1.84	2.99	0.88	NA#	NA#	RUN 3 PT 2	
29-Mar-07	16:04:03	12.60	5.59	1.14	2.10	3.51	0.97	NA#	NA#	RUN 3 PT 2	
29-Mar-07	16:05:04	12.74	5.51	1.30	0.59	1.00	0.27	NA#	NA#	RUN 3 PT 2	
29-Mar-07	16:06:04	12.63	5.57	1.45	0.81	1.35	0.37	NA#	NA#	RUN 3 PT 2	
29-Mar-07	16:07:03	11.69	6.09	0.96	0.51	0.86	0.24	NA#	NA#	RUN 3 PT 2	

AIR CONSULTING AND ENGINEERING, INC.
2106 NW 67th Place, Suite 4, Gainesville, Florida 32653

Instrumental Reference Method On-Line Data **224.43**

OMEGA CREMATORY OUTLET PEAVY FUNRAL HOME BLOUNTSTOWN, FLORIDA

Parameter		O2	CO2	ML CO	48H CO	CO@7%O2	O@12%CO2	NA#	NA#	Comments	Comment2
Units		%V,d	%V,d	ppmVd	ppm	ppmVd	ppmVd	ppmVd	@15%O2		
29-Mar-07	16:08:03	11.48	6.20	1.50	0.78	1.20	0.39	NA#	NA#	RUN 3 PT 2	
29-Mar-07	16:09:04	11.52	6.18	0.93	1.08	1.60	0.56	NA#	NA#	RUN 3 PT 2	
29-Mar-07	16:10:03	11.80	5.99	1.06	1.75	2.67	0.88	NA#	NA#	RUN 3 PT 2	
29-Mar-07	16:11:03	12.00	5.82	1.39	1.59	2.49	0.77	NA#	NA#	RUN 3 PT 2	
29-Mar-07	16:12:03	12.17	5.81	1.14	1.94	3.09	0.94	NA#	NA#	RUN 3 PT 2	
29-Mar-07	16:13:03	12.29	5.74	0.90	2.39	3.85	1.14	NA#	NA#	RUN 3 PT 2	
29-Mar-07	16:14:03	12.51	5.56	1.11	2.19	3.61	1.02	NA#	NA#	RUN 3 PT 2	
29-Mar-07	16:15:03	12.69	5.49	1.31	1.76	2.99	0.81	NA#	NA#	RUN 3 PT 2	
29-Mar-07	16:16:03	12.73	5.50	0.99	1.74	2.96	0.80	NA#	NA#	RUN 3 PT 2	
29-Mar-07	16:17:03	12.82	5.41	1.23	1.71	2.94	0.77	NA#	NA#	RUN 3 PT 2	
29-Mar-07	16:18:03	13.24	5.13	1.17	1.52	2.79	0.64	NA#	NA#	RUN 3 PT 2	
29-Mar-07	16:19:03	13.62	4.91	1.19	1.90	3.63	0.78	NA#	NA#	RUN 3 PT 2	
29-Mar-07	16:20:03	13.43	4.98	0.99	2.46	4.57	1.03	NA#	NA#	RUN 3 PT 2	
29-Mar-07	16:21:03	13.33	4.94	1.26	2.52	4.62	1.04	NA#	NA#	RUN 3 PT 2	
29-Mar-07	16:24:22	13.44	4.89	1.34	1.61	3.00	0.66	NA#	NA#	RUN 3 PT 2	
29-Mar-07	16:24:24	13.44	4.89	1.68	1.62	3.02	0.66	NA#	NA#	RUN 3 PT 2	
29-Mar-07	16:24:25	13.75	5.03	1.71	1.47	2.87	0.62	NA#	NA#	RUN 3 PT 2	
29-Mar-07	16:25:03	13.80	5.01	1.54	1.54	3.02	0.64	NA#	NA#	RUN 3 PT 2	
29-Mar-07	16:26:03	13.89	4.76	1.37	2.52	5.00	1.00	NA#	NA#	RUN 3 PT 2	
29-Mar-07	16:27:03	13.93	4.62	1.53	2.05	4.08	0.79	NA#	NA#	RUN 3 PT 2	
29-Mar-07	16:28:03	13.92	4.65	1.32	1.52	3.02	0.59	NA#	NA#	RUN 3 PT 2	
29-Mar-07	16:29:03	13.58	4.85	1.32	1.70	3.23	0.69	NA#	NA#	RUN 3 PT 2	
29-Mar-07	16:30:03	13.63	4.81	1.46	1.51	2.88	0.60	NA#	NA#	RUN 3 PT 2	
29-Mar-07	16:31:03	13.75	4.72	1.50	1.67	3.25	0.66	NA#	NA#	RUN 3 PT 2	
29-Mar-07	16:32:03	13.75	4.73	1.37	1.90	3.69	0.75	NA#	NA#	RUN 3 PT 2	
29-Mar-07	16:33:03	13.76	4.71	1.18	2.00	3.89	0.78	NA#	NA#	RUN 3 PT 2	
29-Mar-07	16:34:03	13.77	4.70	1.36	1.57	3.06	0.61	NA#	NA#	RUN 3 PT 2	
29-Mar-07	16:35:04	13.62	4.81	1.38	1.84	3.52	0.74	NA#	NA#	RUN 3 PT 2	
29-Mar-07	16:36:03	13.47	4.92	1.20	2.16	4.05	0.89	NA#	NA#	RUN 3 PT 2	
29-Mar-07	16:37:03	13.41	4.95	1.39	1.77	3.28	0.73	NA#	NA#	RUN 3 PT 2	
29-Mar-07	16:38:03	13.51	4.87	1.13	1.89	3.55	0.77	NA#	NA#	RUN 3 PT 2	
29-Mar-07	16:39:04	13.60	4.80	1.07	0.88	1.67	0.35	NA#	NA#	RUN 3 PT 2	
29-Mar-07	16:40:03	13.78	4.66	0.98	1.23	2.41	0.48	NA#	NA#	RUN 3 PT 2	
29-Mar-07	16:41:03	14.22	4.36	1.25	1.59	3.32	0.58	NA#	NA#	RUN 3 PT 2	
29-Mar-07	16:42:03	14.43	4.24	1.34	2.14	4.59	0.76	NA#	NA#	RUN 3 PT 2	
29-Mar-07	16:43:03	14.43	4.26	1.06	2.52	5.43	0.89	NA#	NA#	RUN 3 PT 2	
29-Mar-07	16:44:03	13.94	4.61	1.07	1.70	3.40	0.65	NA#	NA#	RUN 3 PT 2	
29-Mar-07	16:45:03	14.03	4.51	1.11	1.78	3.62	0.67	NA#	NA#	RUN 3 PT 2	
29-Mar-07	16:46:03	14.25	4.34	1.55	1.76	3.69	0.63	NA#	NA#	RUN 3 PT 2	
29-Mar-07	16:47:04	14.88	3.94	1.23	2.26	5.18	0.74	NA#	NA#	RUN 3 PT 2	
29-Mar-07	16:48:06	14.66	4.07	1.31	2.13	4.75	0.72	NA#	NA#	RUN 3 PT 2	

AIR CONSULTING AND ENGINEERING, INC.
2106 NW 67th Place, Suite 4, Gainesville, Florida 32653

Instrumental Reference Method On-Line Data **224.43**

OMEGA CREMATORY OUTLET PEAVY FUNRAL HOME BLOUNTSTOWN, FLORIDA

	Parameter	O2	CO2	ML CO	48H CO	CO@7%O2	O@12%CO2	NA#	NA#	Comments	Comment2
	Units	%V,d	%V,d	ppmVd	ppm	ppmVd	ppmVd	ppmVd	@15%O2		
29-Mar-07	16:49:03	14.72	4.01	1.28	2.32	5.22	0.77	NA#	NA#	RUN 3 PT 2	
29-Mar-07	16:50:04	14.87	3.89	0.96	2.39	5.51	0.78	NA#	NA#	RUN 3 PT 2	
29-Mar-07	16:51:04	14.92	3.85	1.46	1.58	3.66	0.51	NA#	NA#	RUN 3 PT 2	
29-Mar-07	16:52:03	14.96	3.82	1.19	2.48	5.80	0.79	NA#	NA#	RUN 3 PT 2	
29-Mar-07	16:53:03	14.98	3.81	1.08	2.37	5.60	0.75	NA#	NA#	RUN 3 PT 2	
29-Mar-07	16:54:04	15.01	3.76	0.98	2.28	5.43	0.71	NA#	NA#	RUN 3 PT 2	
29-Mar-07	16:55:03	15.15	3.68	1.26	2.24	5.41	0.69	NA#	NA#	RUN 3 PT 2	
29-Mar-07	16:56:03	15.20	3.66	0.96	1.95	4.79	0.59	NA#	NA#	RUN 3 PT 2	
29-Mar-07	16:57:03	15.21	3.65	1.24	1.98	4.81	0.61	NA#	NA#	RUN 3 PT 2	
29-Mar-07	16:58:03	15.24	3.62	1.11	2.80	6.90	0.84	NA#	NA#	RUN 3 PT 2	
29-Mar-07	16:59:03	15.13	3.67	0.81	2.43	5.93	0.74	NA#	NA#	RUN 3 PT 2	
29-Mar-07	17:00:03	15.11	3.64	1.12	2.27	5.45	0.69	NA#	NA#	RUN 3 PT 2	
Average:	**17:00:03**	**13.62**	**4.82**	**1.30**	**1.83**	**3.65**	**0.72**	**#DIV/0!**	**#DIV/0!**	**RUN 3 PT 2**	
Maximum	17:00:03	15.24	6.20	4.42	2.80	6.90	1.14	0.00	0.00	RUN 3 PT 2	
Minimum	17:00:03	11.48	3.62	0.81	0.51	0.86	0.24	0.00	0.00	RUN 3 PT 2	
Std Dev	17:00:03	1.05	0.75	0.46	0.49	1.31	0.18	#DIV/0!	#DIV/0!	RUN 3 PT 2	
29-Mar-07	17:06:13	6.89	12.65	0.15	0.46	0.67	0.38	NA#	NA#	Cal:6.02/14.06 O2/CO2	
29-Mar-07	17:06:24	5.96	13.67	0.39	-0.90	-0.84	-1.03	NA#	NA#	Cal:6.02/14.06 O2/CO2	
29-Mar-07	17:06:33	5.96	13.67	0.04	-1.15	-1.07	-1.31	NA#	NA#	Cal:6.02/14.06 O2/CO2	
29-Mar-07	17:06:43	5.96	13.67	0.21	-0.24	-0.22	-0.27	NA#	NA#	Cal:6.02/14.06 O2/CO2	
29-Mar-07	17:06:53	5.96	13.68	-0.14	0.32	0.30	0.37	NA#	NA#	Cal:6.02/14.06 O2/CO2	
29-Mar-07	17:07:03	5.96	13.68	0.12	0.30	0.28	0.35	NA#	NA#	Cal:6.02/14.06 O2/CO2	
29-Mar-07	17:07:13	5.96	13.68	0.05	0.29	0.27	0.34	NA#	NA#	Cal:6.02/14.06 O2/CO2	
Average:	**17:07:15**	**5.96**	**13.68**	**0.01**	**0.31**	**0.29**	**0.35**	**#DIV/0!**	**#DIV/0!**	**Cal:6.02/14.06 O2/CO2**	
Gas Value:	17:07:15	6.02	14.06	0	NA#	NA#	#N/A	#N/A	#N/A	6.02/14.06 O2/CO2	
Diff%ofSpan	17:07:15	-0.24%	-1.92%	0.01%	#N/A	#N/A	#N/A	#DIV/0!	#DIV/0!		
29-Mar-07	17:11:07	0.04	0.10	28.59	27.42	18.27	0.23	NA#	NA#	Cal:27.75 CO	
29-Mar-07	17:11:17	0.03	0.09	28.15	28.34	18.88	0.22	NA#	NA#	Cal:27.75 CO	
29-Mar-07	17:11:28	0.03	0.09	28.82	27.38	18.24	0.20	NA#	NA#	Cal:27.75 CO	
Average:	**17:11:31**	**0.03**	**0.09**	**28.52**	**27.72**	**18.46**	**0.21**	**#DIV/0!**	**#DIV/0!**	**Cal:27.75 CO**	
Gas Value:	17:11:31	0	NA#	27.75	27.75	NA#	#N/A	#N/A	#N/A	27.75 CO	
Diff%ofSpan	17:11:31	0.14%	#N/A	0.77%	0.00%	#N/A	#N/A	#DIV/0!	#DIV/0!		

APPENDIX E

QUALITY ASSURANCE

DRY GAS METER CALIBRATION STANDARD

Air Consulting and Engineering, Inc. (ACE) uses a Precision Scientific model 63123 wet test meter (Serial Number PS 001105) as its dry gas meter calibration standard. The wet test meter has a one cubic foot per revolution capacity and is verified by water displacement annually. The latest verification occurred September 22, 2006

AIR CONSULTING AND ENGINEERING,INC. *WET TEST METER ANNUAL CALIBRATION*

DATE 9-22-06 CALIBRATED BY C. RESHARD WET TEST METER SERIAL NUMBER PSC01105

RANGE OF WET TEST METER FLOW RATE 0-120 (l/min) VOLUME OF TEST FLASK 28.32 (V_s) SATISFACTORY LEAK CHECK?

Ambient Temperature of Equilliberate Liquid In Wet Test Meter and Reservoir 60 (Deg. F)

TEST NUMBER	FINAL VOLUME (V_f), (l)	INITIAL VOLUME (V_i), (l)	TOTAL VOLUME (V_m), b (l)	FLASK VOLUME (V_s), (l)	PERCENT ERROR, c %
1	28.29	0.0	28.29	28.32	-0.11
2	28.30	0.0	28.30	28.32	-0.07
3	28.29	0.0	28.29	28.32	-0.11

CALCULATIONS:

b $V_m = V_f - V_i$.

c % Error = 100 $(V_m - V_s) / V_s$ = -0.09 (+/- 1%)

ACE AIR CONSULTING & ENGINEERING, INC.

WET TEST METER CALIBRATION

TEST #	FINAL V (VF) (L)	INIT V (VI) (L)	TOTAL V (VM) (L)	FLASK V (VS) (L)	% ERROR (+or - 1%)
1	28.29	0	28.29	28.32	-0.11
2	28.30	0	28.30	28.32	-0.07
3	28.29	0	28.29	28.32	-0.11
AVG.	28.29	0	28.29	28.32	-0.09

CALCULATIONS:

VM = VF - VI
% ERROR = 100 (VM - VS) / VS (+ OR - 1 %)

VF- VOLUME FINAL
VI - VOLUME INITIAL
VM - VOLUME METER
VS - VOLUME FLASK

% ERROR RANGE = 28.03 - 28.60

AIR CONSULTING AND ENGINEERING,INC.

ANNUAL METER CALIBRATION

DATE 1-18-07 CALIBRATED BY C. RESHARD LEAK CHECK 0.00 CFM at 15 ("Hg) _____

METER BOX NUMBER 1 BAROMETRIC PRESSURE (" Hg) 30.08

DRY GAS METER TEMPERATURE (F) 67 ASTM GLASS THERMOMETER TEMPERATURE (F) 67

HS	AVERAGE HD	GAS VOLUME, WET TEST METER			GAS VOLUME, DRY GAS METER			TEMP. WET METER (F)	TEMP. DRY METER (F)	TIME (MIIN)	TIMER (MIN)
		INITIAL	FINAL	ACTUAL (FT3)	INITIAL	FINAL	ACTUAL (FT3)				
-0.44	2.0	1,974	7,639	5.665	434.052	439.702	5.650	61	67	7	7
-0.25	0.5	8.497	13.901	5.404	440.573	445.956	5.383	61	68	13	13
-0.56	3.0	14.864	20.806	5.942	446.922	452.888	5.966	61	69	6	6
-0.30	1.0	21.406	26,642	5.236	453.502	458.752	5.250	61	70	9	9
-0.70	4.0	27.724	33.396	5.672	459.838	465.561	5.723	60	71	5	5
-0.33	1.5	34.136	39.742	5.606	466.303	471.957	5.654	60	72	8	8

RESULTS

	DELTA H@	SCFM	Y
	1.6576	0.8245	1.0093
	1.5676	0.4235	1.0161
	1.6541	1.0090	1.0039
	1.5947	0.5927	1.0121
	1.6681	1.1580	1.0023
	1.6362	0.7153	1.0107
MEAN:	1.6297		1.0091

ACCEPTABLE? (YES) / NO (CIRCLE) INITIALS SZ/ DATE 1-18-07

ACE AIR CONSULTING & ENGINEERING, Inc.

AIR CONSULTING AND ENGINEERING,INC.

POST TEST CALIBRATION

DATE 4-6-07 CALIBRATED BY C. Reshard PLANT Peavey Funeral Home SOURCE Incin. Outlet

METER BOX NUMBER 1 PYROMETER NUMBER 1 THERMOCOUPLE NUMBER 43

LEAK CHECK 0.00 CFM at 15 ("Hg) THERMOCOUPLE TEMP. ____ (F) / ASTM GLASS THERMOMETER ____ (F)

ACE Pb 30.06 ("Hg) / FLIGHT SVCS. Pb 30.06 ("Hg) METER TEMP. 62 (F) / ASTM GLASS THERMOMETER 62 (F)

ΔHS	AVERAGE ΔHD	GAS VOLUME, WET TEST METER			GAS VOLUME, DRY GAS METER			TEMP. WET METER (F)	TEMP. DRY METER (F)	TIME (MIIN)	MAX. VACUUM ("Hg)
		INITIAL	FINAL	ACTUAL (FT3)	INITIAL	FINAL	ACTUAL (FT3)				
-0.23	0.75	0.512	5.983	5.471	293.722	299.244	5.522	56	63	11	4
-0.23	0.75	5.983	11.427	5.444	299.244	304.764	5.520	56	66	11	4
-0.23	0.75	11.427	16.846	5.419	304.764	310.292	5.528	56	67	11	4

RESULTS

	DELTA H@	SCFM	Y
	1.6277	0.5113	1.0024
	1.6345	0.5088	1.0035
	1.6465	0.5065	0.9993
MEAN:	1.6363		1.0017

PRE TEST "Y" 1.0091

ACCEPTABLE? (YES) / NO (CIRCLE) INITIALS D.F DATE 4/6/07

ACE AIR CONSULTING & ENGINEERING, INC.

AIR CONSULTING AND ENGINEERING, INC. *PITOT TUBE CALIBRATION*

DATE CALIBRATED 01-Nov-06 CALIBRATED BY Rick Hyre PITOT TUBE NUMBER 43

IS PITOT TUBE ASSEMBLY LEVEL YES / NO (circle) ARE PITOT TUBE OPENING DAMAGED YES / NO (circle)

α_1 = 1.00 ° (<10°), α_2 = 1.50 ° (<10°), β_1 = 0.75 ° (<5°), β_2 = 0.50 ° (<5°)

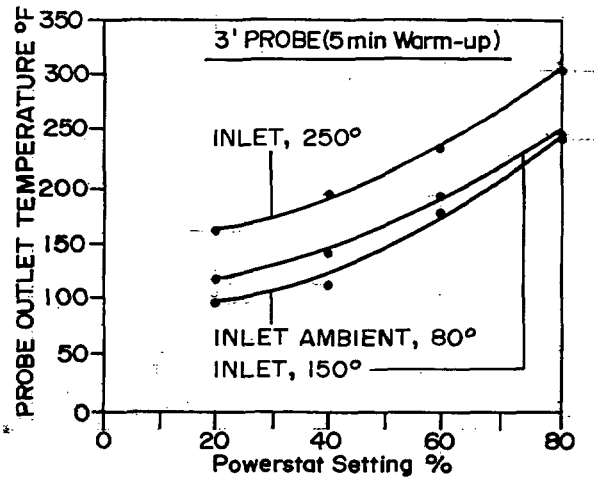
γ = 0.75 ° υ = 1.00 ° A = 1.036 in. = (Pa + Pb)

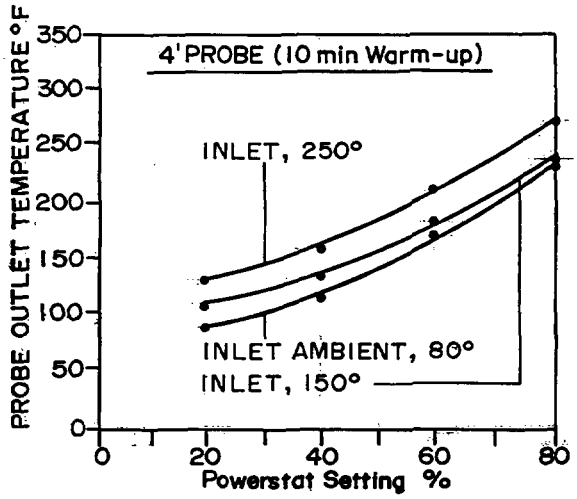
Z = A sin γ = 0.014 in.; <0.125 in.

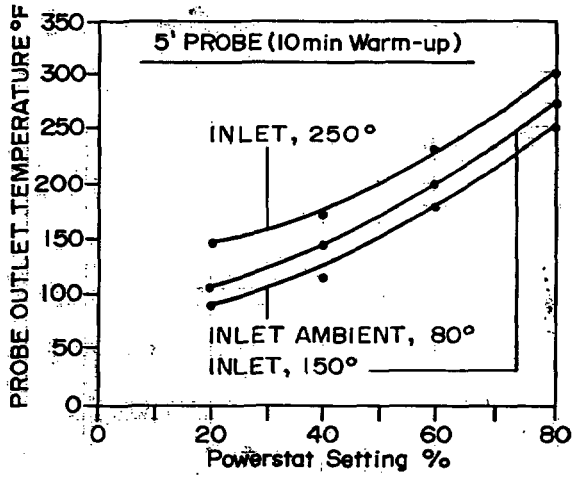
W = A sin υ = 0.018 in.; <0.031 in.

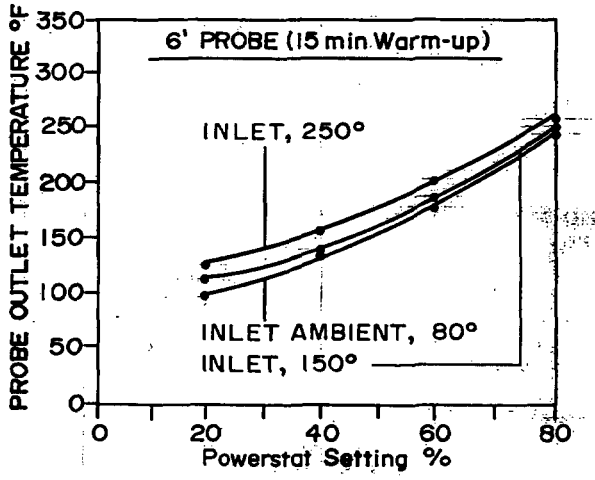
Pa 0.518 in. Pb 0.518 in. Dt 0.375 IN.

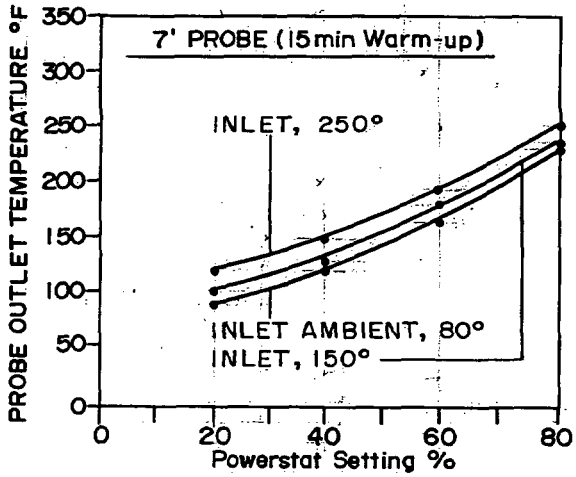
Was calibration required? YES / NO (circle)











NOTE: Flow rate held constant at 0.75; 50% change in flow rate has little effect on probe temperature.

PROBE GRAPH

AIR CONSULTING
and
ENGINEERING

ACE AIR CONSULTING & ENGINEERING, INC.
2106 NW 67TH PLACE SUITE 4
GAINESVILLE, FLORIDA 32653
(352) 335-1889 - OFFICE / (352) 335-1891 - FAX

SAMPLE RECOVERY AND CHAIN OF CUSTODY

PLANT Peavey Funeral Home
SOURCE Omega Incinerator
TEST DATE(S) 3-29-07

TYPE OF SAMPLE PM
SAMPLE RECOVERED BY SB/SL
PARTICULATE ANALYSIS BY CR

SAMPLE RECOVERY

RUN NUMBER	CONTAINER NUMBER	LIQUID LEVEL MARKED	COLOR	COMMENTS
1	3077	N/A	Lt. Brown	
2	3079	↓	↓	
3	3078	↓	↓	
1	A-8	135 ml/s	Clear	
2	A-9	155 ml/s	↓	
3	A-10	120 ml/s	↓	
ACETONE/ WATER BLANK	A-7	200 ml/s	Clear	
FILTER BLANK	3193	N/A	White	

SILICA GEL:	RUN NO.	CONT. NO.	FINAL WT. (g)	INIT. WT. (g)	NET WT. (g)	COLOR
	1	401	204.7	200.0	4.7	Blue/Pink
	2	538	204.3	200.0	4.3	↓
	3	460	204.2	200.0	4.2	↓
				200.0		
				200.0		
				200.0		
				200.0		
				200.0		

AIR CONSULTING AND ENGINEERING, INC.
2106 NW 67th Place, Suite 4, Gainesville, Florida 32653

REFERENCE METHOD INITIAL LINEARITY TEST RECORD
OMEGA CREMATORY OUTLET
PEAVY FUNRAL HOME
BLOUNTSTOWN, FLORIDA
MARCH 29, 2007

CALIBRATION ERROR

RM METHOD: 10
GAS I.D. CO
CEM: TE 48H
RANGE: 624 PPM

GAS VALUE	RESPONSE	DIFF.	% RANGE
624	614.28	-9.718	-1.557
81.8	81.40	-0.396	-0.064
27.75	29.29	1.537	0.246
0.00	0.75	0.749	0.120

RM METHOD: 3A
GAS I.D. O2
CEM: SVMX 1440
RANGE: 20.9 %

GAS VALUE	RESPONSE	DIFF.	% RANGE
20.9	20.87	-0.027	-0.131
13.94	13.94	0.005	0.022
6.03	6.06	0.029	0.139
0	0.02	0.022	0.108

RM METHOD: 3A
GAS I.D. CO2
CEM: SVMX 1440
RANGE: 14.06 %

GAS VALUE	RESPONSE	DIFF.	% RANGE
14.06	14.08	0.02	0.15
5.92	6.00	0.08	0.55
0	0.02	0.02	0.16

AIR CONSULTING AND ENGINEERING, INC.
2106 NW 67th Place, Suite 4, Gainesville, Florida 32653

ANALYZER DRIFT CALCULATIONS
OMEGA CREMATORY OUTLET
PEAVY FUNRAL HOME
BLOUNTSTOWN, FLORIDA
MARCH 29, 2007

Run Number	Parameter	Span	Cal. Gas Value	Initial Span Values		Final Span Values		% Drift over Run	
				Bias	Zero	Bias	Zero	Bias	Zero
1	O2	20.9	6.02	5.97	0.03	5.97	0.03	0.01	0.01
	CO2	14.02	14.02	13.73	0.10	13.78	0.09	0.33	-0.09
	CO	81.8	27.750	28.23	0.80	27.59	0.31	-0.78	-0.60
2	O2	20.9	6.02	5.97	0.03	5.97	0.03	-0.01	-0.01
	CO2	14.02	14.02	13.78	0.09	13.71	0.08	-0.48	-0.05
	CO	81.8	27.750	27.59	0.31	27.54	1.16	-0.06	1.04
3	O2	20.9	6.02	5.97	0.03	5.96	0.03	-0.05	0.03
	CO2	14.02	14.02	13.71	0.08	13.68	0.09	-0.25	0.09
	CO	81.8	27.750	27.54	1.16	27.72	0.31	0.21	-1.05

Airgas

Certificate of Analysis: EPA Protocol Gas Mixture

Airgas Specialty Gases
1075 Cinclare Drive
Port Allen, LA 70767
225.388.0900 Fax: 225.388.0959
www.airgas.com

Cylinder Number: CC47123 Reference Number: 83-124061139-1
Cylinder Pressure: 2000.6 PSIG Expiration Date: 4/3/2009
Certification Date: 4/3/2006 Laboratory: ASG - Port Allen - LA

Certified Concentrations

Component	Concentration	Accuracy	Analytical Principle	Procedure
CARBON MONOXIDE	27.75 PPM	+/- 1%	NonDispersive Infrared	G1
NITROGEN	Balance			

Certification performed in accordance with "EPA Traceability Protocol (Sept. 1997)" using the assay procedures listed. Analytical Methodology does not require correction for analytical interferences.

Notes:

Do not use cylinder below 150 psig. Approval Signature _____

Reference Standard Information

Type	Balance Gas	Component	Cyl.Number	Concentration
NTRM 82635	NITROGEN	CARBON MONOXIDE	XC018674B	24.33 PPM

Analytical Results

1st Component CARBON MONOXIDE

1st Analysis Date:	03/27/2006		
R 24.5	S 28.0	Z 0.3	Conc 27.77 PPM
S 28.1	Z 0.3	R 24.6	Conc 27.87 PPM
Z 0.3	R 24.6	S 28.0	Conc 27.77 PPM
			AVG: 27.80 PPM
2nd Analysis Date:	04/03/2006		
R 24.2	S 27.5	Z 0.1	Conc 27.73 PPM
S 27.4	Z 0.0	R 24.1	Conc 27.63 PPM
Z 0.1	R 24.1	S 27.5	Conc 27.73 PPM
			AVG: 27.69 PPM

Airgas

Airgas South
1620 Tampa East Blvd.
Tampa FL 33619
(813) 626-2905 Fax (813) 620-0150
www.airgas.com

Certificate of Analysis

Date of Analysis:	12/7/2005	Reference Number:	21-110922233-3
Customer Name:		Part Number:	X02NI99C15A2619
Grade of Product:	CERTIFIED STANDARD-SPEC		

Cylinder Number	Component	Requested Concentration	Actual Concentration
CC140062	CARBON MONOXIDE	90 PPM	81.8 PPM
	NITROGEN	Balance	Balance

Notes:

Relative Uncertainty of Analytical Value: +/- 2% of component or +/- 5% of component, if less than 50 PPM
Product composition verified by direct comparison to calibration standards traceable to NIST weights and/or NIST gas mixture reference materials

Approval Signature _____

Airgas

Airgas South
1620 Tampa East Blvd.
Tampa FL 33619
(813) 626-2905 Fax (813) 620-0150
www.airgas.com

Certificate of Analysis

Date of Analysis:	3/25/2005	Reference Number:	21-110813707-3
Customer Name:		Part Number:	X02NI99C15A1907
Grade of Product:	CERTIFIED STANDARD-SPEC		

Cylinder Number	Component	Requested Concentration	Actual Concentration
CC183447	CARBON MONOXIDE	600 PPM	615.148 PPM
	NITROGEN	Balance	Balance

Notes:

Relative Uncertainty of Analytical Value: +/- 2% of component or +/- 5% of component, if less than 50 PPM
Product composition verified by direct comparison to calibration standards traceable to NIST weights and/or NIST gas mixture reference materials

Approval Signature

Airgas

Airgas South
1620 Tampa East Blvd.
Tampa FL 33619
(813) 626-2905 Fax (813) 620-0150
www.airgas.com

Certificate of Analysis

Date of Analysis:	2/28/2005	Reference Number:	21-110798149-1
Customer Name:		Part Number:	X02NI99C15A10X1
Grade of Product:	CERTIFIED STANDARD-SPEC		

Cylinder Number	Component	Requested Concentration	Actual Concentration
SG9104857	CARBON MONOXIDE	650 PPM	633.099 PPM
	NITROGEN	Balance	Balance

Notes:

Relative Uncertainty of Analytical Value: +/- 2% of component or +/- 5% of component, if less than 50 PPM
Product composition verified by direct comparison to calibration standards traceable to NIST weights and/or NIST gas mixture reference materials

Approval Signature

Airgas

Airgas Specialty Gases
1075 Cinclare Drive
Port Allen, LA 70767
225.388.0900 Fax: 225.388.0959
www.airgas.com

Certificate of Analysis: EPA Protocol Gas Mixture

Cylinder Number:	CC135799	Reference Number:	83-124054755-6
Cylinder Pressure:	2000.6 PSIG	Expiration Date:	1/18/2009
Certification Date:	1/18/2006	Laboratory:	ASG - Port Allen - LA

Certified Concentrations

Component	Concentration	Accuracy	Analytical Principle	Procedure
OXYGEN	5.926 %	+/- 1%	Paramagnetic	G1
CARBON DIOXIDE	14.06 %	+/- 1%	NonDispersive Infrared	G1
NITROGEN	Balance			

Certification performed in accordance with "EPA Traceability Protocol (Sept. 1997)" using the assay procedures listed. Analytical Methodology does not require correction for analytical interferences.

Notes:

Do not use cylinder below 150 psig.

Approval Signature Kim Parsola

Reference Standard Information

Type	Balance Gas	Component	Cyl.Number	Concentration
NTRM 82658	NITROGEN	OXYGEN	CC14334	9.72 %
NTRM 82745	NITROGEN	CARBON DIOXIDE	XC034304B	19.84 %

Analytical Results

1st Component OXYGEN

1st Analysis Date: 01/16/2006

R 9.73	S 5.94	Z 0.01	Conc 5.926 %
S 5.94	Z 0.01	R 9.73	Conc 5.926 %
Z 0.01	R 9.74	S 5.94	Conc 5.926 %
			AVG: 5.926 %

2nd Component CARBON DIOXIDE

1st Analysis Date: 01/16/2006

R 19.78	S 13.98	Z 0.02	Conc 14.02 %
S 14.04	Z 0.02	R 19.78	Conc 14.08 %
Z 0.02	R 19.78	S 14.04	Conc 14.08 %
			AVG: 14.06 %

Airgas

Certificate of Analysis: EPA Protocol Gas Mixture

Airgas Specialty Gases
1075 Cinclare Drive
Port Allen, LA 70767
225.388.0900 Fax 225.388.0959
www.airgas.com

Cylinder Number: CC6765@ Reference Number: 83-124051251-3
Cylinder Pressure: 2000.6 PSIG Expiration Date: 11/21/2008
Certification Date: 11/21/2005 Laboratory: ASG - Port Allen - LA

Certified Concentrations

Component	Concentration	Accuracy	Analytical Principle	Procedure
CARBON DIOXIDE	6.047 %	+/- 1%	FTIR	G1
OXYGEN	13.94 %	+/- 1%	Paramagnetic	G1
NITROGEN	Balance			

Certification performed in accordance with "EPA Traceability Protocol (Sept. 1997)" using the assay procedures listed. Analytical Methodology does not require correction for analytical interferences.

Notes:

Do not use cylinder below 150 psig. Approval Signature

Reference Standard Information

Type	Balance Gas	Component	Cyl.Number	Concentration
NTRM 82659a	NITROGEN	OXYGEN	XC024394B	22.6 %
NTRM 81674	NITROGEN	CARBON DIOXIDE	XC018732B	6.89 %

Analytical Results

1st Component CARBON DIOXIDE

1st Analysis Date: 11/21/2005

R 0.428	S 0.383	Z 0.001	Conc 6.050 %
S 0.382	Z 0.000	R 0.427	Conc 6.040 %
Z 0.000	R 0.426	S 0.382	Conc 6.050 %
			AVG: 6.047 %

2nd Component OXYGEN

1st Analysis Date: 11/21/2005

R 22.62	S 13.98	Z 0.08	Conc 13.94 %
S 13.98	Z 0.08	R 22.60	Conc 13.94 %
Z 0.06	R 22.62	S 13.98	Conc 13.94 %
			AVG: 13.94 %

Airgas

Certificate of Analysis: EPA Protocol Gas Mixture

Airgas Specialty Gases
1075 Cinclare Drive
Port Allen, LA 70767
(225) 388-0900
FAX: (225) 388-0959
www.airgas.com

Cylinder Number: CC68032
Reference Number: 83-124079789-1
Cylinder Pressure: 2000.6 PSIG
Expiration Date: 11/15/2009
Certification Date: 11/15/2006
Laboratory: ASG - Port Allen - LA

Certified Concentrations

Component	Concentration	Accuracy	Analytical Principle	Procedure
CARBON DIOXIDE	5.914 %	+/- 1%	NonDispersive Infrared	G1
OXYGEN	14.00 %	+/- 1%	Paramagnetic	G1
NITROGEN	Balance			

Certification performed in accordance with "EPA Traceability Protocol (Sept. 1997)" using the assay procedures listed. Analytical Methodology does not require correction for analytical interferences.

Notes:

Do not use cylinder below 150 psig.

Approval Signature

Reference Standard Information

Type	Balance Gas	Component	Cyl.Number	Concentration
NTRM 82659a	NITROGEN	OXYGEN	XC024405B	22.60 %
NTRM 81674	NITROGEN	CARBON DIOXIDE	XC018885B	6.89 %

Analytical Results

1st Component CARBON DIOXIDE

1st Analysis Date: 11/08/2006

R 6.98	S 5.98	Z 0.02	Conc 5.894 %
S 6.00	Z 0.02	R 6.98	Conc 5.914 %
Z 0.02	R 7.00	S 6.02	Conc 5.934 %
			AVG: 5.914 %

2nd Component OXYGEN

1st Analysis Date: 11/15/2006

R 22.64	S 14.02	Z 0.04	Conc 14.01 %
S 14.00	Z 0.04	R 22.52	Conc 13.99 %
Z 0.04	R 22.60	S 14.00	Conc 13.99 %
			AVG: 14.00 %

APPENDIX F

VISIBLE EMISSION DATA

EPA
VISIBLE EMISSION OBSERVATION FORM 1

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

Company Name: Peary Funeral Home
Facility Name: Omega Cremation
Street Address: 10367 NW Evans Ave
City: Lawtey | State: FL | Zip: 32079

Process: Human Cremation | Unit #: | Operating Mode:
Control Equipment: Afterburner | Operating Mode: 1600°F

Describe Emission Point: Round Black Stack on SW Corner
Height of Emiss. Pt. — Start: 13 End: 15
Height of Emiss. Pt. Rel. to Observer — Start: 15 End: 15
Distance to Emiss. Pt. — Start: 40 End: 40
Direction to Emiss. Pt. (Degrees) — Start: 90 End: 90°

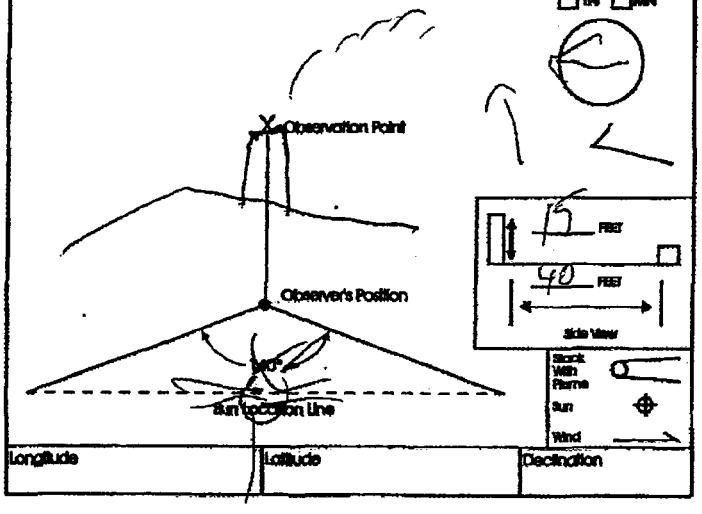
Vertical Angle to Obs. Pt. — Start: 25 End:
Direction to Obs. Pt. (Degrees) — Start: 90 End: 90°
Distance and Direction to Observation Point from Emission Point — Start: Left End: Left

Describe Emissions — Start: No visible Emissions End:
Emission Color — Start: N/A End:
Water Droplet Plume: Attached ☐ Detached ☐ None ☑

Describe Plume Background — Start: Sky End: Sky
Background Color — Start: Green/White End: Green/White
Sky Conditions — Start: Clear End: Clear
Wind Speed — Start: 0-5 mph End: 0-5 mph
Wind Direction — Start: SW End: SW
Ambient Temp. — Start: 95°F End: 90°F
Wet Bulb Temp.:
RH Percent:

Source Layout Sketch

Draw North Arrow: ☐ TN ☐ MN



Longitude | Latitude | Declination

Additional Information

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

Observation Date: 3/29/07 | Time Zone: | Start Time: 1:22 pm | End Time: 2:52

Min \ Sec	0	15	30	45	Comments
1	0	0	0	0	Daily Courtesy
2	0	0	0	0	VE's started
3	0	0	0	0	within 1 minute
4	0	0	0	0	Run 2
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	odors were
27	0	0	0	0	detected.
28	0	0	0	0	
29	0	0	0	0	
30	0	0	0	0	

Observer's Name (Print): Luis Llopes
Observer's Signature: | Date: 3/29/07
Organization: Air Environmental Consultants, Inc.
Certified By: DEP/ETA | Date:

VEOF1.1

EPA
VISIBLE EMISSION OBSERVATION FORM 1

Method Used (Circle One): (Method 9 — circled) 203A 203B Other: ______

Company Name	Peavy Funeral Home
Facility Name	Omega Crematory
Street Address	20367 NW Evans Ave
City	Blountstown
State	FL
Zip	32424

Process	Human Cremation	Unit #	
Operating Mode	160 lb/h		
Control Equipment	Afterburner	Operating Mode	1680°F

Describe Emission Point: Round Black Stack SW corner

Height of Emiss. Pt. Start: 15	End: 15	Height of Emiss. Pt. Rel. to Observer Start: 15	End: 15
Distance to Emiss. Pt. Start: 40	End: 40	Direction to Emiss. Pt. (Degrees) Start: 90	End: 90°
Vertical Angle to Obs. Pt. Start: 25°	End:	Direction to Obs. Pt. (Degrees) Start: 90°	End: 90°

Distance and Direction to Observation Point from Emission Point — Start: 1 ft up End: 1 ft up

Describe Emissions — Start: No visible Emission End:

Emission Color — Start: N/A End:

Water Droplet Plume — Attached ☐ Detached ☐ None ☑

Describe Plume Background — Start: Sky / white blue End:

Background Color — Start: Green/white End: Green

Sky Conditions — Start: Broke End: Broken

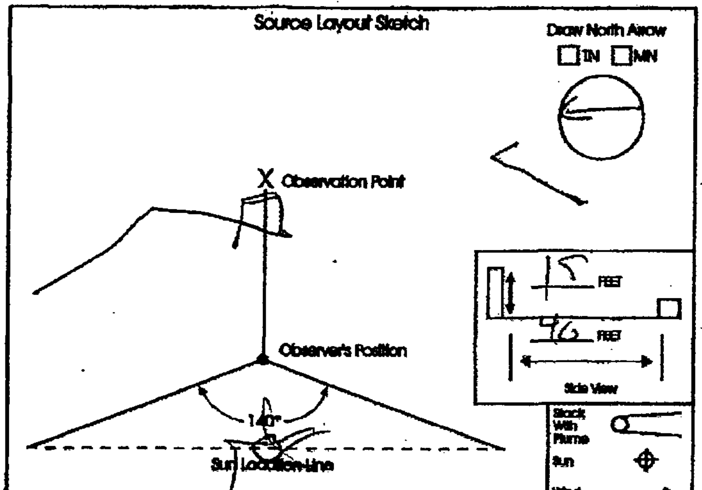
Wind Speed — Start: 0-5 End: 0-10 mph

Wind Direction — Start: SW End: S-SW

Ambient Temp. — Start: 90°F End: 90°F

Wet Bulb Temp.: RH Percent:

Source Layout Sketch



Longitude	Latitude	Declination

Additional Information

VEOF1.1

Form Number		Page	2	Of	2

Continued on VEO Form Number:

Observation Date	Time Zone	Start Time	End Time
3/29/07		2:52	3:22 pm

Min \ 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	No objectionable
25	0	0	0	0	odors were
26	0	0	0	0	detected
27	0	0	0	0	
28	0	0	0	0	
29	0	0	0	0	
30	0	0	0	0	

Observer's Name (Print)	Luis Llorens
Observer's Signature	[signature]
Date	3/29/07
Organization	A1 Environmental Consulting
Certified By	DEP / EPA
Date	2/07

Congratulations! Here is your wallet card signifying your successful Visible Emissions Evaluator certification on the date printed below. This certification is valid for six (6) months. To maintain continuous certification, you must re-certify before or on the expiration date. Please mark your calendar accordingly. We appreciate your business and look forward to serving your certification needs in the future. ETA can support your program with a wide range of environmental services from measurements to litigation support. Please give us a call if we can be of service.

EASTERN TECHNICAL ASSOCIATES

LUIS LLORENS

meets 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 reading exceeding 15% opacity was incurred during this certification test conducted by Eastern Technical Associates of Raleigh, NC. This certificate is valid six (6) months from date of issue and expires on the date below.

DATE OF SCHOOL	EXPIRATION DATE	LAST LECTURE
2/13/2007	8/15/2007	ORLS06

CERT NUMBER	STUDENT ID NUMBER	DEGREE
247924	LLOR70376	

NEW INFORMATION ON YOUR WALLET CARD

To serve our customers better, we have added your LAST LECTURE date for your convenience. The first 3 digits are the location, S for Spring or F for Fall, and the year. January - June are spring schools and July - December are fall schools

If you have questions or comments, please contact:

Debbie Scalise or Sheila Weathersbee

Customer Support

919-878-3185

www.eta-is-opacity.com

PO BOX 1009

GARNER, NC 27529-1009

VISIBLE EMISSIONS EVALUATOR

This is to certify that

Luis Llorens

met the specifications of Federal Reference Method 9 and qualified 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, North Carolina. This certificate is valid for six months from date of issue.

347924	*Tampa, Florida*	*February 13, 2007*
Certificate Number	Location	Date of Issue

Thomas Hoel
President

Michael W. Sandford
Director of Training

APPENDIX G

RESIDENCE TIME CALCULATION, CREMATORY TEMPERATURE CHART AND LOAD

AIR CONSULTING AND ENGINEERING, INC.
2106 NW 67th Place, Suite 4, Gainesville, Florida 32653

RESIDENCE TIME CALULATION - CORRECTION FOR QUENCHED AIR AT OUTLET

PLANT: Peavy Funeral home
SOURCE: Crematory Exhaust
LOCATION: Blountstown, Florida
DATE: March 29, 2007

SOURCE PARAMETERS

	OUTLET STACK	AMBIENT AIR	SECONDARY CHAMBER
STACK PRESSURE:	30.14		
STACK MOISTURE, %	5.38		
TEMPERATURE, F	884.8	75	1700
AIR FLOW, ACFMD	3906.9		
AIR FLOW, ACFM	4129.0		
H2O FLOW, ACFM	222.1402		
PRESSURE, PSI	14.85	14.85	14.85
AIR ENTHALPY, BTU/LB	328.6	127.9	549.4
H2O ENTHALPY BTU/LB	617.3	235.7	1060.6
SCC VOLUME, CuFT			71
HUMIDITY RATIO		0.028	

EQUATIONS

1. MASS = PVM/RT M = MOLECULAR WEIGHT
R = 1545 ft-lbf/lbm-mol-R

$$\text{MASS (lbm/min)} = \frac{(\text{psia})(\text{ACFMD})(\text{lbm/lbm-mol}) \times (144\ \text{sq.in/sq.ft})}{(1545\ \text{ft-lbf/lbm-mol} \times \text{R})(\text{Temp. R})}$$

2. HEAT LOSS FROM SCC = HEAT GAINED BY AMBIENT AIR
M(AIR,SCC) = M(AIR,STACK) - (M(AIR,AMB.)
M(H2O,SCC) = M(H2O,STACK) - M(H2O,AMB.)

OUTLET FLOWS

M(DRY AIR) =	116.52	lb/min
M(H2O) =	4.12	lb/min
M(TOTAL) =	120.64	lb/min

SCC DRY AIR

(M x ENTHALPY CHANGE)scc = (M x ENTHALPY CHANGE)amb.

H(Mscc) =	220.8	BTU/lbm
H(Mamb) =	200.7	BTU/lbm
M(amb) =	1.100	x M(scc)
M(scc) + M(amb) =	116.520	lb/min
M(scc)AIR =	55.482	lb/min

SCC H2O

M(scc)H2O + M(amb)H2O = M(outlet)H2O

M(amb.) H2O =	0.028	lb/lb dry air
M(amb.) AIR =	61.04	lb/min
M(amb.) H2O =	1.71	lb/min
M(scc) H2O =	2.41	lb/min

SCC VOLUMETRIC FLOW

V = MRT/PM	@	1700	F
		14.85	psi
AIR:	V =	2988.0	ACFM
H2O:	V =	208.7	ACFM
TOTAL SCC:	V =	3196.6	ACFM

SCC RESIDENCE TIME	RT =	1.33	SECONDS

AIR CONSULTING AND ENGINEERING, INC.
2106 NW 67th Place, Suite 4, Gainesville, Florida 32653

RESIDENCE TIME CALULATION - CORRECTION FOR QUENCHED AIR AT OUTLET

PLANT: Peavy Funeral home
SOURCE: Crematory Exhaust
LOCATION: Blountstown, Florida
DATE: March 29, 2007

SOURCE PARAMETERS

	OUTLET STACK	AMBIENT AIR	SECONDARY CHAMBER
STACK PRESSURE:	30.14		
STACK MOISTURE, %	6.43		
TEMPERATURE, F	899.6	80	1700
AIR FLOW, ACFMD	3772.0		
AIR FLOW, ACFM	4031.0		
H2O FLOW, ACFM	259		
PRESSURE, PSI	14.85	14.85	14.85
AIR ENTHALPY, BTU/LB	332.5	129.1	549.4
H2O ENTHALPY BTU/LB	625.5	237.9	1060.6
SCC VOLUME, CuFT			71
HUMIDITY RATIO		0.028	

EQUATIONS

1. MASS = PVM/RT M = MOLECULAR WEIGHT
R = 1545 ft-lbf/lbm-mol-R

$$\text{MASS (lbm/min)} = \frac{(\text{psia})(\text{ACFMD})(\text{lbm/lbm-mol}) \times (144\ \text{sq.in/sq.ft})}{(1545\ \text{ft-lbf/lbm-mol} \times \text{R})(\text{Temp. R})}$$

2. HEAT LOSS FROM SCC = HEAT GAINED BY AMBIENT AIR
M(AIR,SCC) = M(AIR,STACK) - (M(AIR,AMB.)
M(H2O,SCC) = M(H2O,STACK) - M(H2O,AMB.)

OUTLET FLOWS

M(DRY AIR) =	111.27	lb/min
M(H2O) =	4.75	lb/min
M(TOTAL) =	116.02	lb/min

SCC DRY AIR

(M x ENTHALPY CHANGE)scc = (M x ENTHALPY CHANGE)amb.

H(Mscc) =	216.9	BTU/lbm
H(Mamb) =	203.44	BTU/lbm
M(amb) =	1.066	x M(scc)
M(scc) + M(amb) =	111.273	lb/min
M(scc)AIR =	53.855	lb/min

SCC H2O

M(scc)H2O + M(amb)H2O = M(outlet)H2O

M(amb.) H2O =	0.028	lb/lb dry air
M(amb.) AIR =	57.42	lb/min
M(amb.) H2O =	1.61	lb/min
M(scc) H2O =	3.14	lb/min

SCC VOLUMETRIC FLOW

V = MRT/PM	@	1700	F
		14.85	psi
AIR:	V =	2900.3	ACFM
H2O:	V =	272.1	ACFM
TOTAL SCC:	V =	3172.5	ACFM

SCC RESIDENCE TIME	RT =	1.34	SECONDS

AIR CONSULTING AND ENGINEERING, INC.
2106 NW 67th Place, Suite 4, Gainesville, Florida 32653

RESIDENCE TIME CALULATION - CORRECTION FOR QUENCHED AIR AT OUTLET

PLANT: Peavy Funeral home
SOURCE: Crematory Exhaust
LOCATION: Blountstown, Florida
DATE: March 29, 2007

SOURCE PARAMETERS

	OUTLET STACK	AMBIENT AIR	SECONDARY CHAMBER
STACK PRESSURE:	30.14		
STACK MOISTURE, %	7.32		
TEMPERATURE, F	1001.1	82	1825
AIR FLOW, ACFMD	4082.0		
AIR FLOW, ACFM	4400.0		
H2O FLOW, ACFM	318		
PRESSURE, PSI	14.85	14.85	14.85
AIR ENTHALPY, BTU/LB	358.6	129.5	584.6
H2O ENTHALPY BTU/LB	676.6	238.8	1133.9
SCC VOLUME, CuFT			71
HUMIDITY RATIO		0.028	

EQUATIONS

1. MASS = PVM/RT M = MOLECULAR WEIGHT
R = 1545 ft-lbf/lbm-mol-R

$$\text{MASS (lbm/min)} = \frac{(\text{psia})(\text{ACFMD})(\text{lbm/lbm-mol}) \times (144\ \text{sq.in/sq.ft})}{(1545\ \text{ft-lbf/lbm-mol} \times \text{R})(\text{Temp. R})}$$

2. HEAT LOSS FROM SCC = HEAT GAINED BY AMBIENT AIR
M(AIR,SCC) = M(AIR,STACK) - (M(AIR,AMB.)
M(H2O,SCC) = M(H2O,STACK) - M(H2O,AMB.)

OUTLET FLOWS

M(DRY AIR) =	112.05	lb/min
M(H2O) =	5.42	lb/min
M(TOTAL) =	117.48	lb/min

SCC DRY AIR

(M x ENTHALPY CHANGE)scc = (M x ENTHALPY CHANGE)amb.

H(Mscc) =	226	BTU/lbm
H(Mamb) =	229.1	BTU/lbm
M(amb) =	0.986	x M(scc)
M(scc) + M(amb) =	112.053	lb/min
M(scc)AIR =	56.408	lb/min

SCC H2O

M(scc)H2O + M(amb)H2O = M(outlet)H2O

M(amb.) H2O =	0.028	lb/lb dry air
M(amb.) AIR =	55.64	lb/min
M(amb.) H2O =	1.56	lb/min
M(scc) H2O =	3.87	lb/min

SCC VOLUMETRIC FLOW

V = MRT/PM	@	1825	F
		14.85	psi
AIR:	V =	3213.6	ACFM
H2O:	V =	354.5	ACFM
TOTAL SCC:	V =	3568.1	ACFM

SCC RESIDENCE TIME	**RT =**	**1.19**	**SECONDS**

Friday, March 30, 2007

Dagmar Fick
Air Consulting and Engineering, Inc.
2106 NW 67th Place, Suite, Suite 4
Gainesville, Florida 32606

RE: **Peavy Funeral Home - Omega Crematory**
Permit Number: 0130010-001-AC

Dear Dagmar:

Enclosed is one copy of the compliance test results for the above referenced source. Also attached is the temperature strip chart. No visible emissions or objectionable odors were detected during the testing period.

The process rate was as follows:

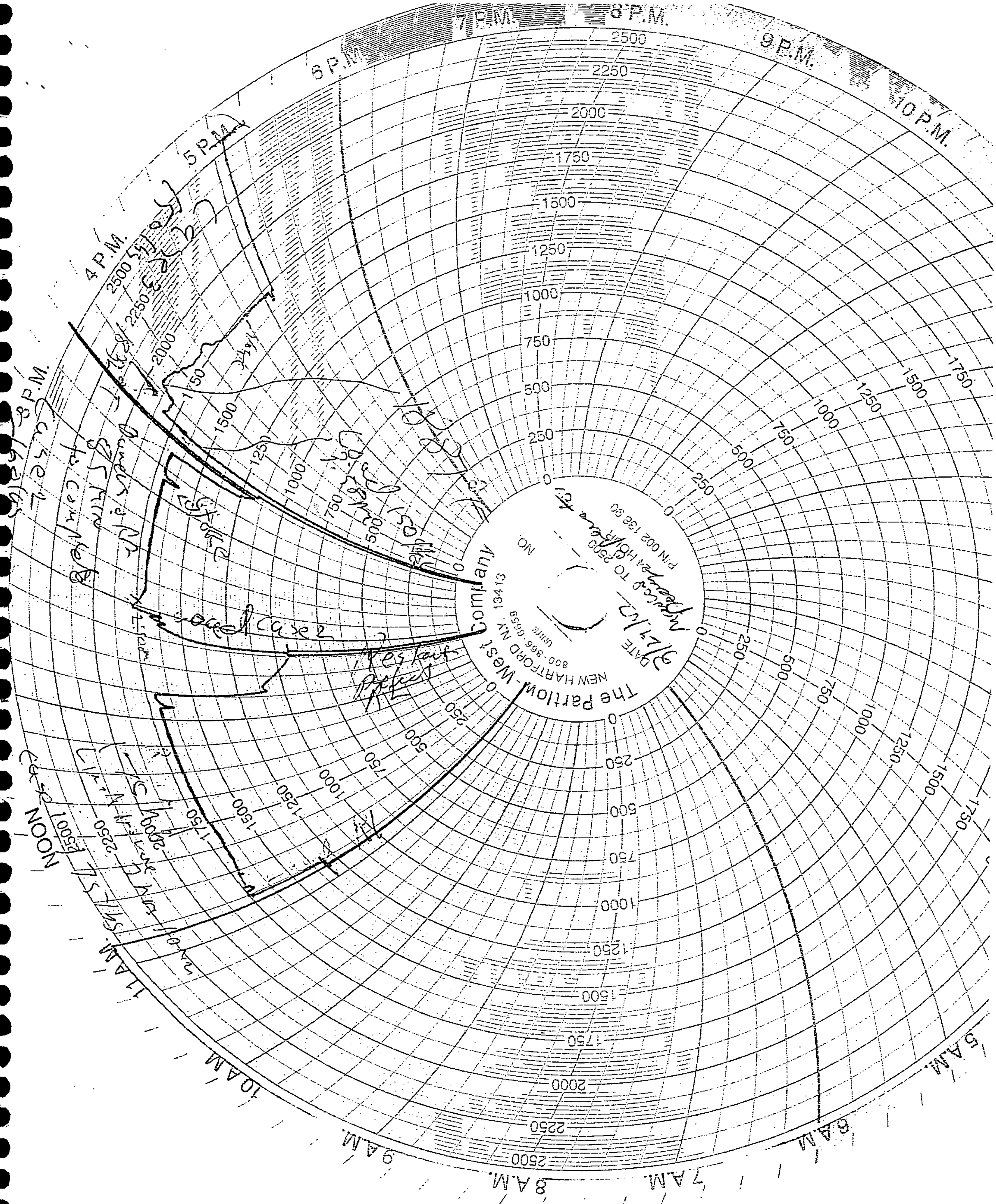
Run 1	175 lbs	
Run 2	160 lbs	
Run 3	150 lbs	+
AVG:	162 lbs	

If you have any question please contact me at (407) 574-2021.

Respectfully submitted,
AI ENVIRONMENTAL CONSULTING SERVICES, INC.

Luis Lloréns
President/Project Manager

435 Douglas Avenue, Suite 1505-B, Altamonte Springs, Florida 32714 – Phone: (407) 520-2021, FAX: (407) 574-2456
AI@CFL.RR.COM


The Partlow - West Company
NEW HARTFORD, NY 13413
800-866-6659
DATE
NO
P/N 002 138 90
0 TO 2500
24 HOUR
UNITS

APPENDIX H

PROJECT PARTICIPANTS

PROJECT PARTICIPANTS

Air Consulting and Engineering, Inc.

Richard Hyre
Field Testing

Steve Bell
Field Testing

Shane Lane
Field Testing

Dagmar Fick
Report Preparation

Gloria Gagich
Document Production

AI Environmental Consulting Services

Luis Lloréns
Visible Emission Observer
Project Coordinator

Peavy Funeral Home

Marlon Peavy
Production Records

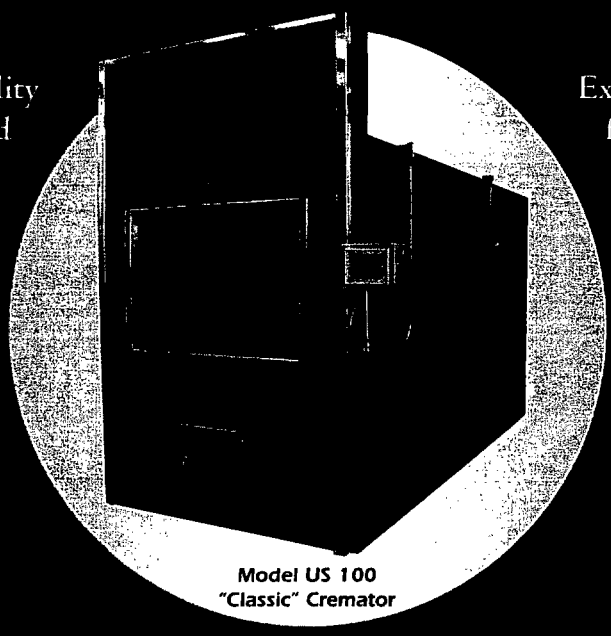
ACE

Attachment 2
Equipment Drawings and Brochures

The "Classic" Cremator

PERFORMANCE BEYOND EXPECTATIONS

BUILT to exacting quality and safety standards and backed by a two-year limited warranty, the fuel efficient "Classic" outperforms every other cremator in its price range. Take a look at some of the performance benefits the "Classic" offers!



Model US 100
"Classic" Cremator

Exceptional standard features combine with professional expertise to deliver the product and service you demand. Unsurpassed in customer support, you can rely on U. S. Cremation Equipment's "Classic" to provide years of trouble-free operation.

CLASSIC PERFORMANCE

- Cremate up to six bodies in a 10-hour work day
- Complete cremation every 60 - 90 minutes
- No cool down required between cremations
- Designed to cremate obese cases up to 800 lbs.
- Fully automatic PLC operating system

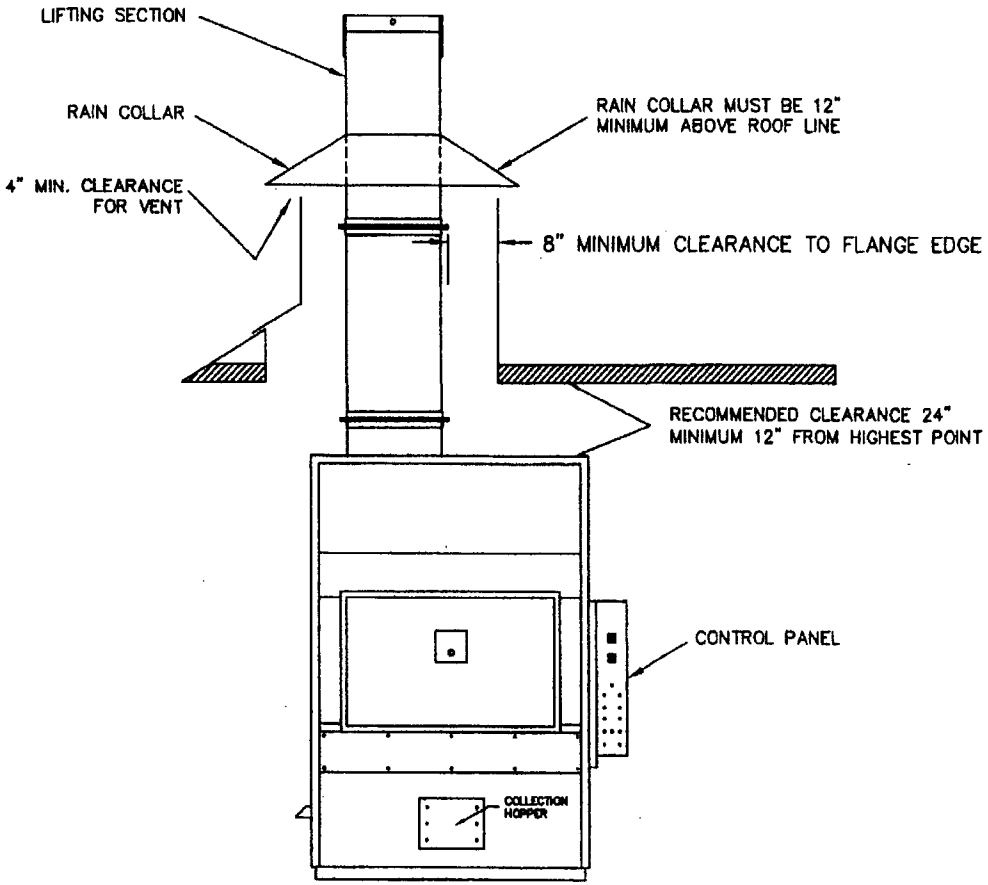
CLASSIC FEATURES

- Power charging door/dual hydraulic cylinders
- Primary chamber viewport
- Secondary chamber temperature recorder
- Color touch screen control – standard
- Powder coat finish with stainless steel trim

US Cremation Equipment
A Division of... Industries

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

RECOMMENDED CLEARANCES FOR CREMATOR STACK AND ROOF PENETRATION



FRONT VIEW

NOTES:
1) USE NON-COMBUSTIBLE LINER AND MATERIALS.
2) CONSULT LOCAL BUILDING CODES AND ORDINANCES FOR ANY RESTRICTIONS WHICH MAY APPLY.
3) NON-COMBUSTIBLE FLASHING TO BE PROVIDED BY OTHERS.
4) AIR LOUVER TO ALLOW APPROXIMATELY 2500 CFM FREE AIR.
5) GAS REGULATOR TO BE PROVIDED BY OTHERS FOLLOWING INSTALLATION MANUAL INSTRUCTIONS.

CLEARANCES:	RECOMMENDED	MINIMUM
REAR OF UNIT	36"	24"
SIDE	24"	24"
SIDE WITH CONTROL PANEL	36"	24"
TOP (AT HIGHEST POINT)	24"	12"
STACK (TO FLANGE EDGE)	10"	8"

44" MINIMUM DIAMETER OPENING REQUIRED FOR PROPER STACK CLEARANCE.

VENTING IS CRITICAL AND MANDATORY
CONSULT A QUALIFIED ENGINEER

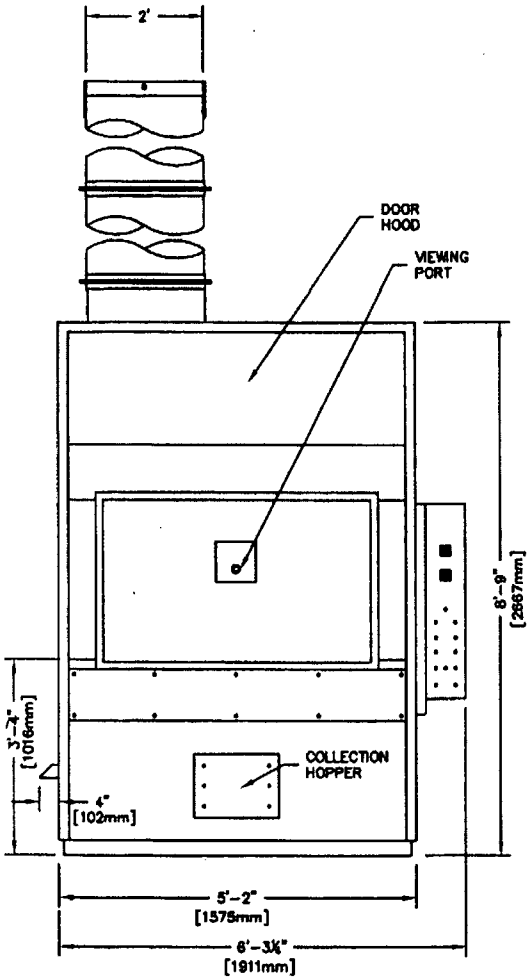
U.S. CREMATION EQUIPMENT

A DIVISION OF FLORIDA, U.S.A.

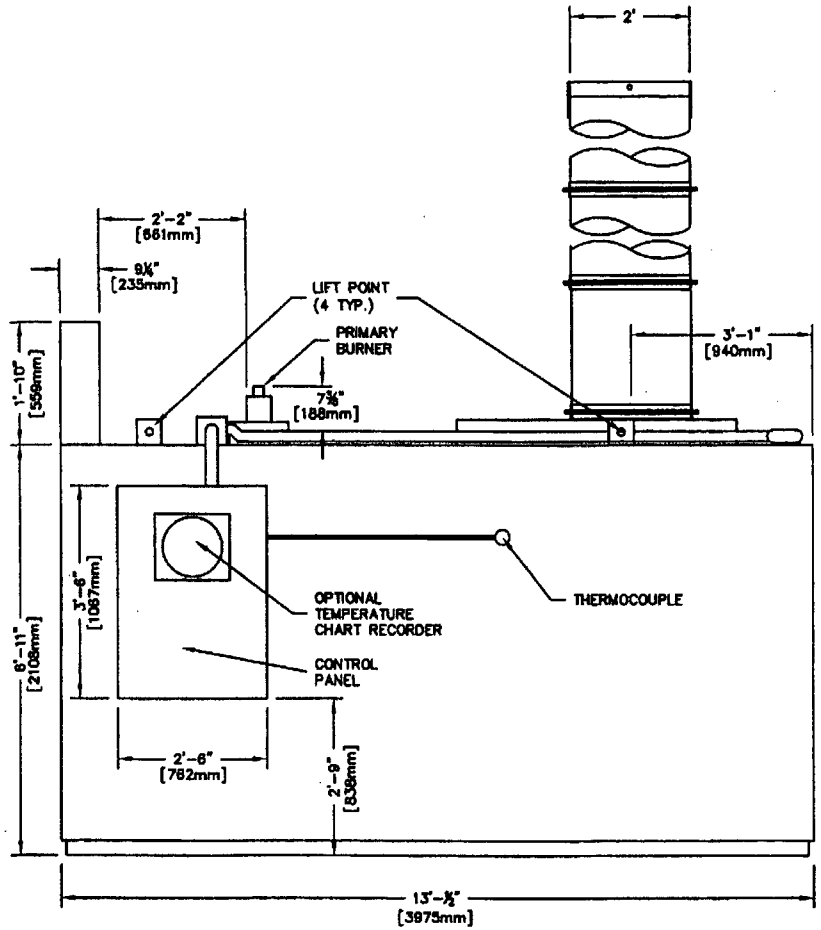
TITLE					
CLEARANCES FOR INSTALLATION					
DRAWN: TB	DATE: 9-26-06	DWG. NO.: 1001-09-06	SCALE: NTS	SHEET: 1 OF 1	REV.: 0

"CLASSIC"
MODEL US 100

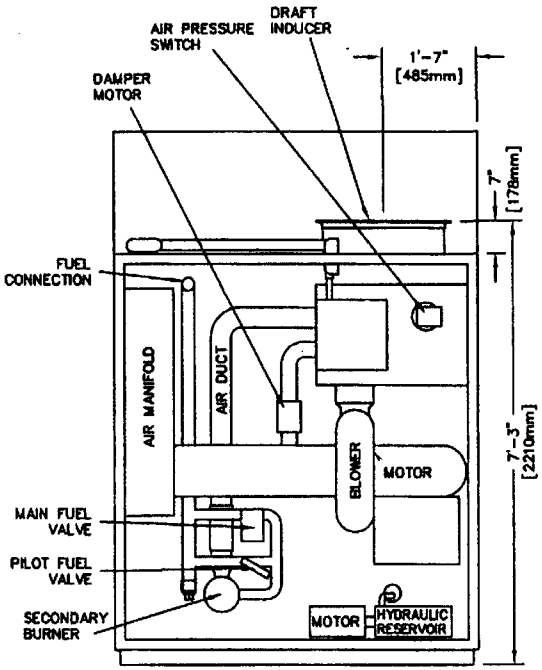
NOTE: ALL DIMENSIONS ARE APPROXIMATE.



FRONT VIEW



LEFT SIDE VIEW

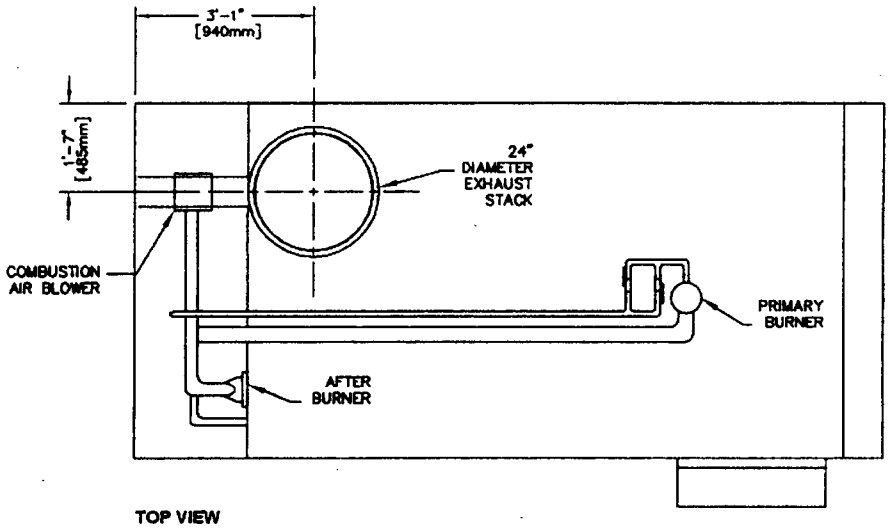


REAR VIEW

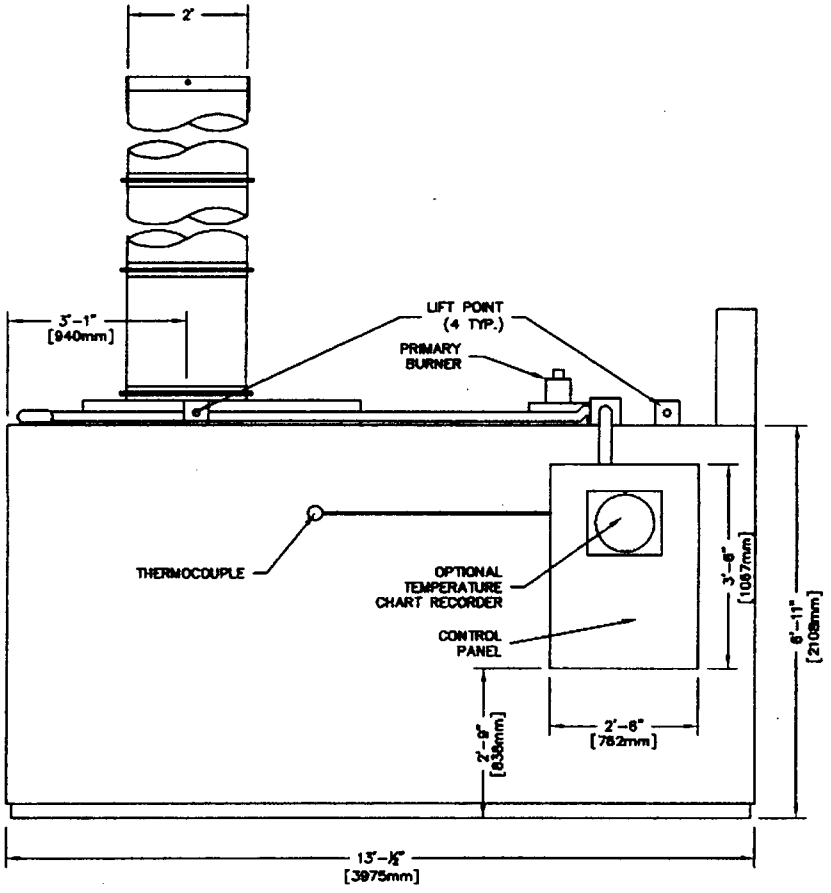
U.S. CREMATION EQUIPMENT
A DIVISION OF American Incinerators FLORIDA, U.S.A.

TITLE	CREMATORY UNIT ASSEMBLY VIEWS				
DRAWN TB	DATE 2/14/06	DWG. NO. 1002-04-06	SCALE NTS	SHEET 1 OF 1	REV. 0

"CLASSIC"
MODEL US 100



TOP VIEW



RIGHT SIDE VIEW

NOTES:
1. ALL DIMENSIONS ARE APPROXIMATE.
2. ALLOW MINIMUM 6" CLEARANCE FOR EXHAUST STACK.

U.S. CREMATION EQUIPMENT

A DIVISION OF American Incinerators FLORIDA, U.S.A.

TITLE					
CREMATORY UNIT ASSEMBLY VIEWS					
DRAWN TB	DATE 3/9/06	DWG. NO. 1002-03-06	SCALE NTS	SHEET 1 OF 1	REV. 0

US Cremation Equipment

A Division of... American Incinerators

HUMAN CREMATION CHAMBER SPECIFICATION

EQUIPMENT:

US Cremation Equipment a division of American Incinerators Co. - Multiple Chambered human Crematory, Natural Gas, Propane (LP) or Oil fired.

MANUFACTURER:

US Cremation Equipment a division of American Incinerators Corp.

CONSTRUCTION STANDARDS:

The American Incinerators cremation chamber 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.

INCINERATION CHAMBER DIMENSIONS:

Chamber volumes:	Primary - 73 CF Secondary - 71 CF
Structural footprint:	12'0" (L) x 5'0" (W)
Over-all dimensions:	12'7" (L) x 6'0" (W) x 9'2" (H) w/std. hyd. door

US Cremation Equipment

A Division of... American Incinerators

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
Typical secondary chamber setting:	1,400°F-1,800°F

RETENTION TIME:

In excess of 1 second.

CAPACITY:

One body and associated container per cremation cycle. 200 pounds per hour or 750 pounds per batch.

DRAFT:

Induced via refractory lined draft inducer.

SHIPPING WEIGHT:

24,500 lbs.

EMISSIONS:

The American Incinerators cremation chamber shall meet or exceed federal, state and local environmental regulations.

EMISSION CONTROL:

Secondary chamber equipped with one, 1,500,000 BTU/HR burner. Also equipped with an electronic exhaust gas scanner system which temporarily suspends operation of the primary chamber burner.

US Cremation Equipment

A Division of... American Incinerators

STEEL CONSTRUCTION SPECIFICATIONS:

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

B. Subfloors 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 refractory, 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. alumina-silicate firebrick, 2 1/2" x 4 1/2" x 9", all chambers are backed by 4" 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.

US Cremation Equipment

A Division of... American Incinerators

COMBUSTION EQUIPMENT:

A. Combustion Air - One, 3 phase, 208-230/460V, 17-15.5/7.6 amp 7 hp air-blower motor (1,400 CFM)

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

C. Secondary Chamber - One, 1,500,000 BTU/HR modulating, nozzle mix, gas-fired burner. Eclipse, North American, or equal.

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

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

EXHAUST GAS TEMPERATURE REDUCTION:

Hot air duct operating exit temperature: 900°F

HOT AIR DUCT:

10 gauge carbon steel, high temperature 2" refractory lining, pre-drilled flanges, 24" Outside Diameter, 28" at flanges.

UTILITY REQUIREMENTS:

A. GAS:

1. Pressure:

   a) Natural Gas: 7" to 9" W.C.
   b) Propane: 11" W.C.

2. Flow Rate: 2,000,000 BTU/HR

B. ELECTRICAL:

1. One, three phase, 208-230/460V, 17-15/8 amp connection for 5hp blower.

US Cremation Equipment

A Division of... American Incinerators

CREMATION CHAMBER LOADING/CLEAN-OUT DOOR:

Hydraulically operated, refractory lined, upward movement guillotine style door with gate 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 with stainless steel trim. Back of unit is coated with an epoxy type black coating.

Attachment 2
Emissions Calculations

Emission Calculations Based on AP-42 Table 2.1-12

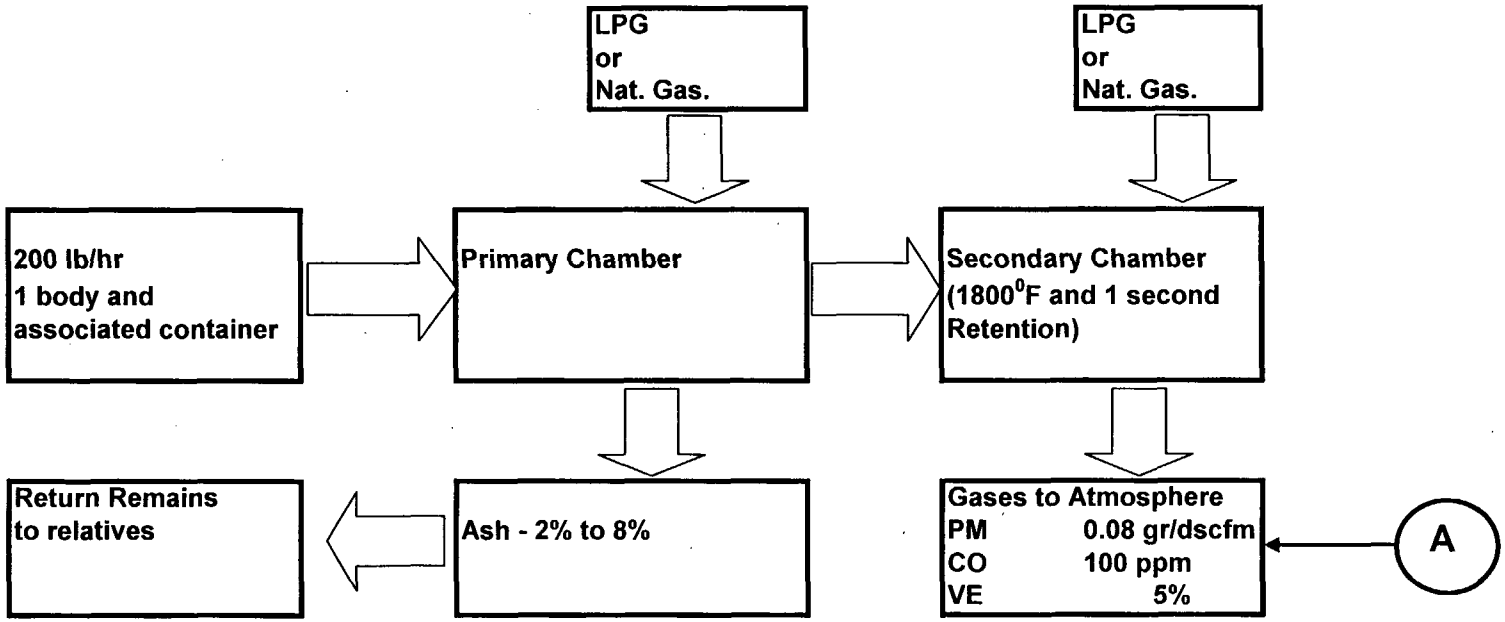
US Cremation Equipment
Model "Classic"

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
200	8760	2.5	0.25	1.095	3	0.3	1.314	3	0.3	1.314

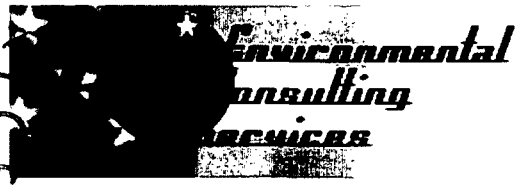
CO=100 PPM @ 7% O2 MAX, Actual CO Emissions Measured at 3.49 PPM
CO = 100 PPM X 28 MW X 1700 DSCFM X 2.595E-09 X 60 min/hr = 0.74 lb/hr CO
0.74 lb/hr CO X 8760 hrs/yr X 1 ton/2000 lb = 3.24 TPY CO

Actual Emissions were measured at 0.04 gr/dscfm at 7% O2
PM = 0.08 gr/dscf X 1 pound/7000 gr X 1700 DSCFM X 60 min/hr = 1.17 lb/hr PM
1.17 lb/hr PM X 8760 hrs/yr X 1 ton/2000 lb = 5.12 TPY PM

Attachment 4
Process Flow Diagram


LPG
or
Nat. Gas.
LPG
or
Nat. Gas.
200 lb/hr
1 body and
associated container
Primary Chamber
Secondary Chamber
(1800°F and 1 second
Retention)
Return Remains
to relatives
Ash - 2% to 8%
Gases to Atmosphere
PM 0.08 gr/dscfm
CO 100 ppm
VE 5%
A

495686 - APR16 2009



April 14, 2009

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

Re: General Permit Application
Broadus-Raines Family Funeral Home, Inc. dba Clay Crematory
Site Location: 3149 CR 215, Middleburg, Clay County

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

370 S. North Lake Blvd. Ste. 1004, Altamonte Springs, Florida 32701 - Phone: (407) 520-2021, FAX: (407) 574-2456
AI@CFL.RR.COM

Broadus-Raines Funeral Home
501 Spring Street
Green Cove Springs, FL 32043
www.broadusraines.com

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