

F₁A RECEIPT 534472
JUL 2 2012

ANIMAL CREMATORY
AIR GENERAL PERMIT REGISTRATION FORM

Part II. Notification to Permitting Office
(Detach and submit to appropriate permitting office; keep copy onsite)

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

RECEIVED

Registration Type

0090004-007

JUL 03 2012

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).

DIVISION OF AIR
RESOURCE MANAGEMENT

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)(c), 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.)

Central Brevard Humane Society

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.)

Central Brevard Humane Society

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

Street Address: 1020 Cox Road

City: Cocoa

County: Brevard

Zip Code: 32926 - 4237

Facility Start-Up Date (Estimated start-up date of proposed new facility.) (N/A for existing facilities)
The facility currently operates an AI80 animal crematory under permit 0090004.

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: Theresa Clifton, Executive Director

Owner/Authorized Representative Mailing Address

Organization/Firm: Central Brevard Humane Society

Street Address: 1020 Cox Road

City: Cocoa

County: Brevard

Zip Code: 32926

Owner/Authorized Representative Telephone Numbers

Telephone: 407-636-3343

Fax: 407-636-0127

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: Same as Above

Facility Contact Mailing Address

Organization/Firm: Same as Above

Street Address:

City:

County:

Zip Code:

Facility Contact Telephone Numbers

Telephone: Same As Above

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

6/26/12
Date

Design Calculations

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

- Manufacturer's design calculations attached.
- Registration is not for proposed new animal crematory unit(s).

Description of Facility

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

The facility is installing a refurbished CB400 animal cremator manufactured by Crawford Equipment and Engineering. The serial number for this animal crematory is 146CB40032502. Keller Mechanical & Engineering of Lakeland, Florida is doing the installation and commissioning of the CB400 Animal Crematory. After this addition, the Humane Society will be operating two (2) animal cremators at this location. The equipment is rated at 100 lbs/hr hour or 400 pounds per 4 to 5 hour batch of animal remains. The primary chamber burner is rated at 500,000 Btu/hr and the secondary chamber burner is rated at 1,000,000 Btu/hr, for a total of 1,500,000 Btu/hr. The fuel to be used is Natural Gas. Control of air pollution is achieved through the design of the KM800 crematory, including its ability to operate the secondary chamber between 1600 - 1850 degrees Fahrenheit at a residence time in excess of 1.0 second. The design also includes fully automatic PLC based controls, independent fuel/air systems, preheated combustion air, secondary chamber temperature monitor and recorder, primary burner temperature interlock (prevents primary burner from firing prior to the secondary chamber reaching 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. No objectionable odors or visible emissions are expected from this crematorium in excess to the requirements of the general permit.

Attachment 1
Retention Time Calculation

CB400 100 lb/hr, 1800F Heat and Mass Balance

Heat and Mass Balance		Basis one Hour		Waste Type and Description - Generalities					
Enter the following:		This Run	0-Trash	1-Rubbish	3-Garbage	4-Animal	MSW		
Percent Carbon Combustion		95	95	95	95	95	95	95	95
Feed Compos. %	Carbon	7	47	33	12	7	25		
	Hydrogen	2	6	5	3	2	4		
	Oxygen	6	30	26	10	6	20		
	Water	82	10	25	70	82	30		
	Chlorine	0	2	1	0.4	0	1		
	Sulfur	0.1	0.1	0.1	0.1	0.1	0.1		
	Nitrogen	0.4	0.2	0.2	0.2	0.4	0.5		
	Ash	2.5	4.70	9.70	4.30	2.5	19.4		
Stated HHV of waste feed, Btu/lb		1000	8500	6500	2500	1000	5000		
Calculated LHV by Dulong's eq, Btu/lb		630	7147	4909	1644	630	3679		
& subtracting heat to vaporize water									
Density of Waste, lb/cu ft		55	10	10	35	55	25		
Heat value of waste, Btu/cu ft		55000							
			Paper, carboard, wood-10%plastics	paper, rags, cartons floor sweepings	Food wastes, paper resta/hotels/clubs	All animal & human tissue; labs; hosp.	Municipal Solid		
<Typical Ranges->									
Percent carbon combustion		95	95-98%						
Percent Excess Air		150	40-150% Excess Air (=140-250% total air) for solid waste						
Percent of Total Air		100							
Feed rate Lbs per hour		400							
Target Comb gas temp. deg F		1800	1700-2200						
Target stack gas temp. deg F		1500	300-600						
True heat loss, %		5	Losses (2-6%) due to rad./cond./conv. Does not reflect HHV-LHV differences or delta H H2O vapz.						
O2 Req. for	3.48 lbmol/hr								
Dry air req	478 lb/hr								
		CO2	HCl	SO2	H2O				
Moles from combustion		2.22	0.00	0.01	4.00				
Moles from evap					18.22				
Actual O2 in inlet air	lbmol/hr	3.48				Humidity Input			
Water vapor in Air		0.008	lbs water/ lbs dry air		0.21	lbmol/hr			
Tot. dry air, lbmol/hr	16.57				4	lb/hr			
	lb/hr	478							
		CO2	HCl	SO2	N2	O2	H2O		
Total moles before aux fuel		2.22	0.00	0.01	13.14	0.00	22.43		
Total flue gas, wet		37.80	lbmol/hr		870	lb/hr			
Total flue gas, dry		15.37	lbmol/hr		466	lb/hr			
Mole Weight, wet/dry		23.02	30.34						
Temperature with no heat added, deg F			793						
Heat needed BTUs/Hour			3.38E+05						
If heat needed is positive, then add methane fuel:									
Heat balance calculations, based on LHVs and net available heat for methane									
T (w/o) fuel	793	deg F							

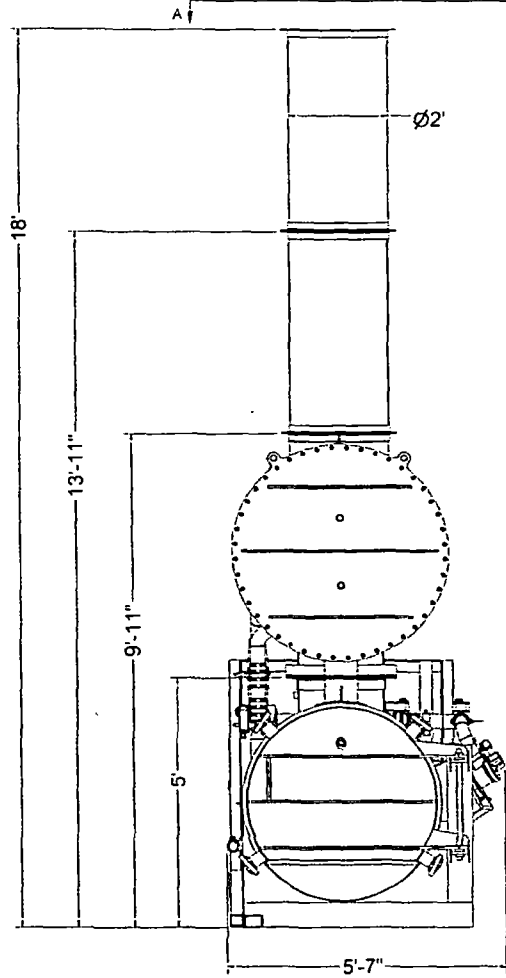
CB400 100 lb/hr, 1800F Heat and Mass Balance

Ht need	337711 Btu/hr																			
NAH	190975 Btu/lbmol	Net Avail heat of methane at T= target temp																		
Fuel need	1.77 lbmol/hr																			
Mol O2	3.71 lbmol/hr	(includes 10% excess air at burner)																		
Air added	510 lb/hr																			
If heat needed shows negative, then add cooling air:																				
Heat in actual flue gas		233304.8	btu/hr																	
Mass cooling air		-738	lb/hr																	
Moles of air added (to cool or burn gas)		17.68																		
			Inlet air	Inlet air	Inlet air	Fr Humid	Fr Comb	Fr Comb	Fr Comb											
			MWwet	Moles O2	Moles N2	Mol H2O	Mol CO2	Mol H2O	Mol O2											
			28.70	3.71	13.97	0.23	1.77	3.54	-3.54											
Stack gas lb mol/hr, wet		57.48																		
Stack gas lb mol/hr, dry		31.28																		
			CO2	HCl	SO2	N2	O2	H2O	Total											
Total	Moles out stack		3.99	0.00	0.01	27.11	0.18	26.20	57.48											
	Pounds		175.34	0.00	0.80	759.06	5.66	471.56	1412											
	Vol % dry		12.74	0.00	0.04	86.66	0.57													
	Mole wt of flue gas, wet		24.57																	
	Actual flu gas, acfm		1,581	at	1800 deg F															
	Actual flue gas, acfm		1,371	at	1500 deg F															
	Retention Time (1800F)=	28cf SCC/1581 ACFM X 60 = 1.06 Seconds																		
	scfm	370 For this cell, Std Temp == 70																		
Mass Balance: Pounds per hour																				
	In	Out																		
Feed	400	Ash out 11																		
Air	996	flue gas 1412																		
Fuel	28																			
Total	1424	Total 1424																		
Error in Mass Balance, %																				
		-0.01%																		
Heat Balance: BTUs per hour																				
	In	Out																		
Feed	2.54E+05	Ash 5.95E+03																		
Fuel	6.12E+05	Flue Gas 8.20E+05																		
Air(h2o)	4.05E+03	Loss 4.33E+04																		
Total	8.70E+05	Total 8.69E+05																		
Error in heat balance, %																				
		-0.15%																		
	Maximum Heat available in flue gas BTUs/Hour	1.41E+05																		

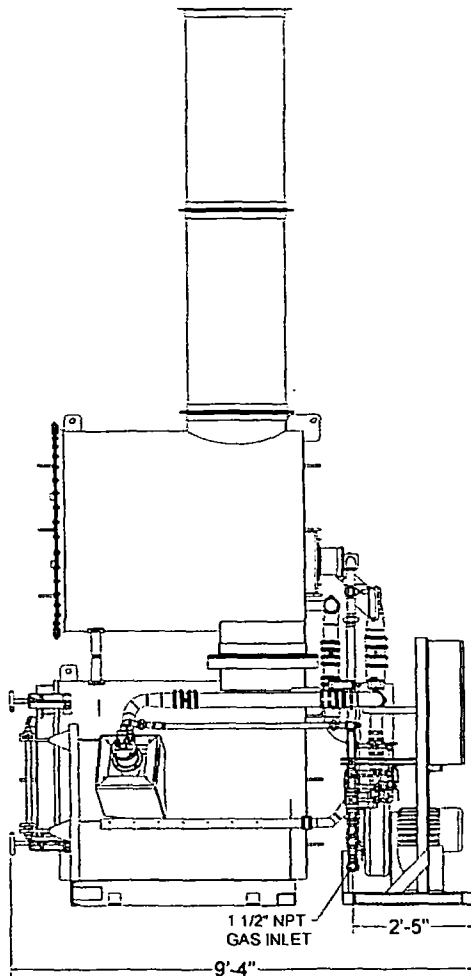
Attachment 2

Crawford Model CB400 Specifications & Engineering Drawings

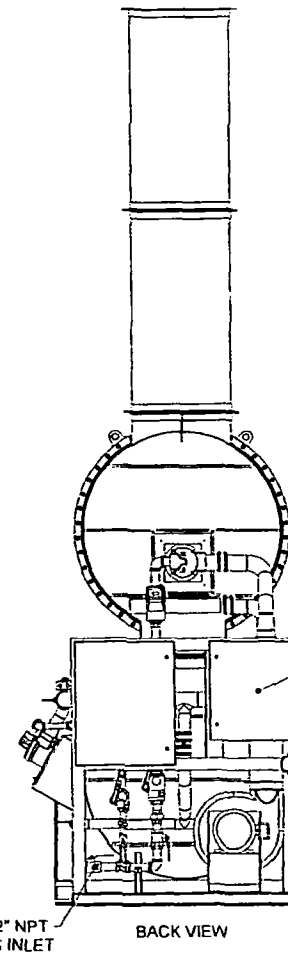
	Company	Animal Cremation	Human Cremation	Solid Waste	Environmental Products	S
CRAWFORD MODEL CB400 SPECIFICATIONS						
Print	Model:	CB400 (gas fired - std. / oil fire option - availab				
Information Request Form	Type:	Modular, multiple chambered, controlled air				
Home Page	Capacity ratings:	@: 5,500 Btu/lb. waste - 100 lb./hr.				
Random Load Crematory "C Series"	Batch load capacity:	17 cu. ft. (400 lbs. @ 25 lb./cu. ft. density)				
Batch Load Crematory "CB Series"	Overall dimensions:	9'-0" L x 5'-10" W x 10'-0" H (to top of SCC)				
Equipment Options	Stack:	Std. 8' (mounted on top of SCC - 18' el. from gr				
Accessories	Approx. system weight:	12,200 lbs.				
Features + Benefits	Required fuel (NG/LPG):	1.5 MMBtu/hr @ 11-14" w.c. @ 1.5" header				
CB400 Cut Sheet	Required electrical supply:	230/460 V, 3Ø, 60 Hz (50 Hz & alt. voltage ava 19/13 amp @ single point connection				
Drawings	Primary chamber volume:	35 cu. ft.				
Video	Hearth Area:	14 sq. ft.				
	Secondary chamber volume:	28.1 cu. ft.				
	Primary burner capacity:	500,000 Btu/hr. (modulated control)				
	Secondary burner capacity:	1,000,000 Btu/hr. (modulated control)				
	Charging/cleanout door:	37.5 in. i.d. opening (manual hinged type)				
	Combustion air supply:	500 scfm (std.- 3hp, 230/460 V, 3Ø)				
	Construction:	.250" A36 CS plate shells .250" x 3" FB reinforcement 6", 10.5# A36 channel skid frame 4" 3000°F cast refractory lining 1" 1900°F insulation				
	Stack:	24"od x 18"id x 48"L sections (qty. 2 std.) 10 ga. A36 CS shell 3" 2400°F LWI castable approx. weight - 150 lb./ft.				



FRONT VIEW



RIGHT VIEW

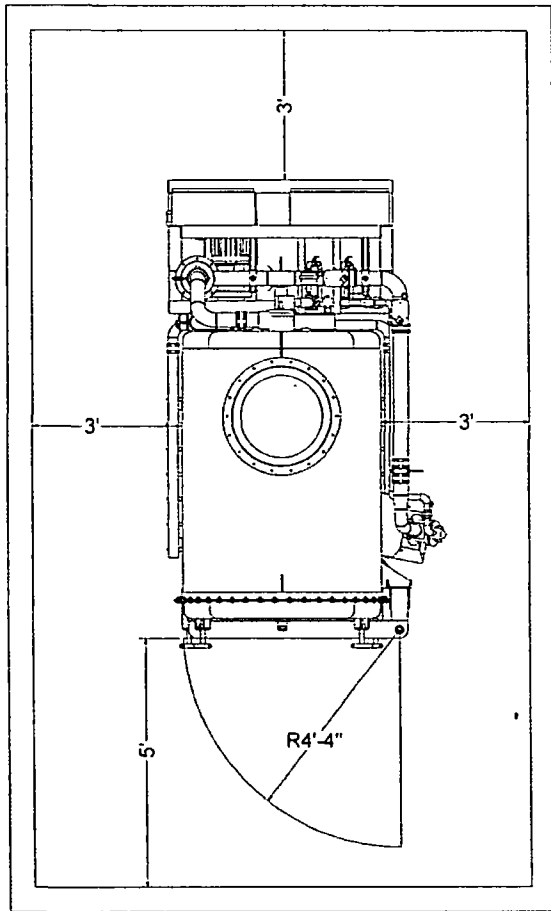


BACK VIEW

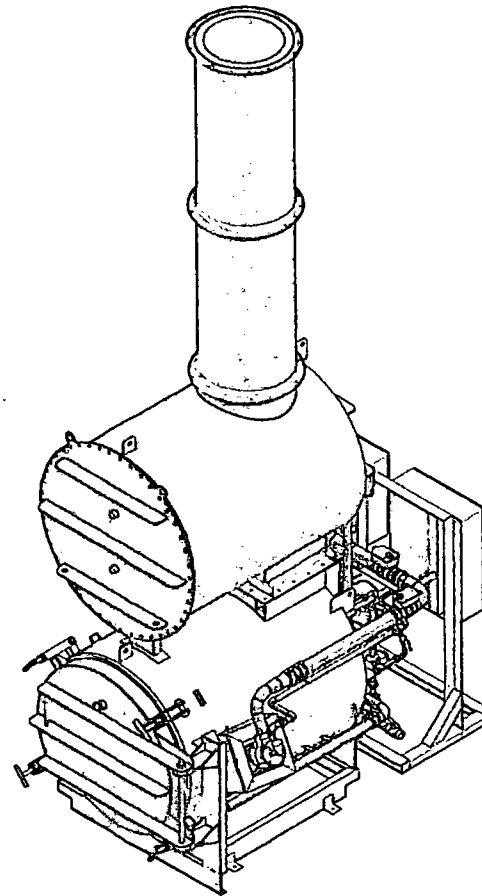
NOTE:
 ALL ILLUSTRATIONS COVER THE GENERAL APPEARANCE OF CRAWFORD INDUSTRIAL GROUP, LLC PRODUCTS AT THE TIME OF PUBLICATION AND WE RESERVE THE RIGHT TO MAKE CHANGES IN DESIGN AND CONSTRUCTION AT ANY TIME WITHOUT NOTICE.

REV	DATE	DESCRIPTION	NAME	SCALE	1	2

<small>DESIGNED BY</small> <small>DRAWN BY</small> <small>APP'D BY</small> <small>CHECK'D BY</small>	1/18/2004 L1187204	CRAWFORD INDUSTRIAL GROUP, LLC <small>8085 S. BOONVILLE RD. WILMINGTON, NC 27692 (703) 843-8000</small>
<small>TITLE</small> CB355W / CB400SW	<small>PROJ. NO.</small> 037450	<small>REV</small> 03
<small>DATE</small> 1/18/2004	<small>BY</small> [Signature]	<small>SCALE</small> 1" = 1"
<small>ISSUED TO</small> CRAWFORD INDUSTRIAL GROUP, LLC		
<small>REV</small> 03 CB355 GA		
<small>1 OF 2</small>		



VIEW A-A
RECOMMENDED CLEARANCES



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REV	DATE	DESCRIPTION	NAME	BY	CHK	SCALE	SHEET	OF
							2	2
DRAWN BY: JTL 1/13/2004				CRAWFORD INDUSTRIAL GROUP, LLC				
DESCRIPTION: CB35				4000 S BOWEN BLVD, ORLANDO, FL 32837 (407) 854-4400				
TITLE: CB35SW / CB400SW				H02E161 2/16/03				
THIS DRAWING IS THE PROPERTY OF CRAWFORD INDUSTRIAL GROUP, LLC. IT IS TO BE USED ONLY FOR THE SPECIFIC PROJECT AND FOR WHICH IT WAS PREPARED. IT IS NOT TO BE REPRODUCED OR TRANSMITTED IN ANY FORM OR BY ANY MEANS, ELECTRONIC OR MECHANICAL, INCLUDING PHOTOCOPYING, RECORDING, OR BY ANY INFORMATION STORAGE AND RETRIEVAL SYSTEM, WITHOUT THE WRITTEN PERMISSION OF CRAWFORD INDUSTRIAL GROUP, LLC.				CB35 GA				

Attachment 3

Emission Calculations based on AP-42 Table 2.1-12

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
100	8760	2.5	0.13	0.55	3	0.15	0.657	3	0.15	0.657

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

PM = 0.08 gr/dscf based on manufacturers warranty

CO is calculated as follows:

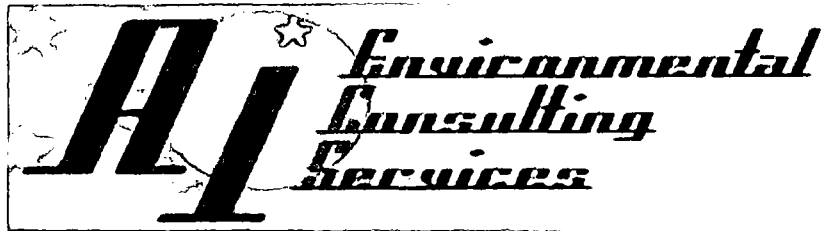
$$100 \text{ lb/hr} \times 1\text{E}+01 \text{ lb/ton} \times 1 \text{ ton}/2000 \text{ lbs} = 0.5 \text{ lbs/hr CO}$$

$$0.5 \text{ lb/hr CO} \times 8760 \text{ hrs/yr} \times 1 \text{ ton}/2000 \text{ lbs} = 2.19 \text{ TPY CO}$$

PM is calculated as follows:

$$100 \text{ lb/hr} \times 7\text{E}+00 \text{ lb/ton} \times 1 \text{ ton}/2000 \text{ lbs} = 0.35 \text{ lbs/hr PM}$$

$$0.35 \text{ lb/hr PM} \times 8760 \text{ hrs/yr} \times 1 \text{ ton}/2000 \text{ lbs} = 1.53 \text{ TPY PM}$$



***Air General Permit Re-Registration Application
Facility ID: 009004***

Prepared for:

***Central Brevard Humane Society
1020 Cox Road
Cocoa, Florida 32926-4237
Brevard County***

Animal Cremation Facility

Prepared By:

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

June 2012

Application Contents

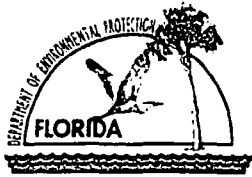
▶ DEP 62-210-920(10) Air General Permit Registration Form

Attachments

Attachment 1 Retention Time Calculation

Attachment 2 Crawford Model CB400 Specifications & Engineering Drawings

Attachment 3 Emission Calculations based on AP-42 Table 2.1-12



Department of Environmental Protection

Division of Air Resource Management

ANIMAL CREMATORY AIR GENERAL PERMIT REGISTRATION FORM

RECEIVED

JUL 03 2012

Part I. Procedures and Conditions for Use of Air General PERMIT REGISTRATION FORM DIVISION OF AIR RESOURCE MANAGEMENT

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

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

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

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

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

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

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

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

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

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

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

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

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

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

(c) Use of Air General Permit.

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

(6) Animal Crematories.

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

(b) Emission Limiting Standards.

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

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

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

(c) Operating Temperatures.

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

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

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

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

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

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

1. The reference test method for visible emissions shall be EPA Method 9.
2. The reference test method for carbon monoxide shall be EPA Method 10.
3. The reference test method for oxygen shall be EPA Method 3.
4. The reference test method for particulate matter emissions shall be EPA Method 5. The minimum sample volume shall be thirty (30) dry standard cubic feet.

5. Test procedures shall conform to the procedures specified in Rule 62-297.310, F.A.C. All test results shall be reported to the Department in accordance with the provisions of Rule 62-297.310, F.A.C.

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

(h) Frequency of Testing.

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

4. The owner or operator of any animal crematory unit with a capacity of 500 pounds per hour or more shall have performance tests conducted for visible emissions, carbon monoxide, and particulate matter prior to submitting the application for an initial air operation permit, and annually thereafter.

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

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

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

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

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

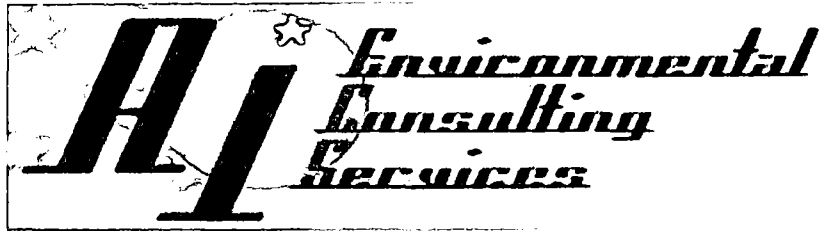
1. Used absorbent materials saturated with blood, blood products, body fluids, or excretions or secretions contaminated with visible blood; and absorbent materials saturated with blood or blood products that have dried.
2. Non-absorbent, disposable devices that have been contaminated with blood, body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

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

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

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

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



***Air General Permit Re-Registration Application
Facility ID: 009004***

Prepared for:

***Central Brevard Humane Society
1020 Cox Road
Cocoa, Florida 32926-4237
Brevard County***

Animal Cremation Facility

Prepared By:

***AI Environmental Consulting Services, Inc.
598 Northlake Blvd, Ste. 1016
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June 2012

Application Contents

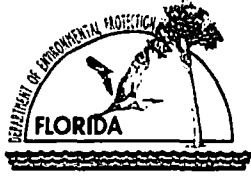
▶ DEP 62-210-920(10) Air General Permit Registration Form

Attachments

Attachment 1 Retention Time Calculation

Attachment 2 Crawford Model CB400 Specifications & Engineering Drawings

Attachment 3 Emission Calculations based on AP-42 Table 2.1-12



Department of Environmental Protection

Division of Air Resource Management

ANIMAL CREMATORY AIR GENERAL PERMIT REGISTRATION FORM

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

(c) Use of Air General Permit.

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

(6) Animal Crematories.

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

(b) Emission Limiting Standards.

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

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

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

(c) Operating Temperatures.

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

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

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

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

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

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

1. The reference test method for visible emissions shall be EPA Method 9.
2. The reference test method for carbon monoxide shall be EPA Method 10.
3. The reference test method for oxygen shall be EPA Method 3.
4. The reference test method for particulate matter emissions shall be EPA Method 5. The minimum sample volume shall be thirty (30) dry standard cubic feet.

5. Test procedures shall conform to the procedures specified in Rule 62-297.310, F.A.C. All test results shall be reported to the Department in accordance with the provisions of Rule 62-297.310, F.A.C.

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

(h) Frequency of Testing.

1. The owner or operator of any animal crematory unit using an air general permit shall have a performance test conducted for visible emissions no later than thirty (30) days after the unit commences operation, and annually thereafter

2. The owner or operator of any animal crematory unit with a capacity of less than 500 pounds per hour and operating under the authority of an air construction permit or air operation permit shall have a performance test conducted for visible emissions prior to submitting the application for an initial air operation permit, and annually thereafter.

3. The owner or operator of any animal crematory unit with a capacity of less than 500 pounds per hour shall not be required to have performance tests conducted for carbon monoxide and particulate matter, except as provided at paragraph 62-297.310(7)(b), F.A.C.

4. The owner or operator of any animal crematory unit with a capacity of 500 pounds per hour or more shall have performance tests conducted for visible emissions, carbon monoxide, and particulate matter prior to submitting the application for an initial air operation permit, and annually thereafter.

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

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

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

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

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

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

**ANIMAL CREMATORY
AIR GENERAL PERMIT REGISTRATION FORM**

Part II. Notification to Permitting Office

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

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

RECEIVED

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 change 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)(c), F.A.C., or any other change not considered an administrative correction under Rule 62-210.310(2)(d), F.A.C.

JUL 03 2012

DIVISION OF AIR
RESOURCE MANAGEMENT

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.)

Central Brevard Humane Society

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.)

Central Brevard Humane Society

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

Street Address: 1020 Cox Road

City: Cocoa

County: Brevard

Zip Code: 32926

Facility Start-Up Date (Estimated start-up date of proposed **new** facility.) (N/A for existing facilities)
The facility currently operates an A180 animal crematory under permit 0090004.

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: Theresa Clifton, Executive Director

Owner/Authorized Representative Mailing Address

Organization/Firm: Central Brevard Humane Society

Street Address: 1020 Cox Road

City: Cocoa

County: Brevard

Zip Code: 32926

Owner/Authorized Representative Telephone Numbers

Telephone: 407-636-3343

Fax: 407-636-0127

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: Same as Above

Facility Contact Mailing Address

Organization/Firm: Same as Above

Street Address:

City:

County:

Zip Code:

Facility Contact Telephone Numbers

Telephone: Same As Above

Fax:

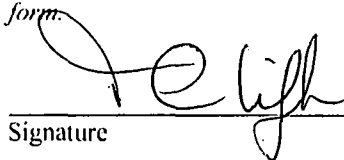
Cell phone (optional):

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

6/26/12

Date

Design Calculations

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

- Manufacturer's design calculations attached.
- Registration is not for proposed new animal crematory unit(s).

Description of Facility

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

The facility is installing a refurbished CB400 animal cremator manufactured by Crawford Equipment and Engineering. The serial number for this animal crematory is 146CB40032502. Keller Mechanical & Engineering of Lakeland, Florida is doing the installation and commissioning of the CB400 Animal Crematory. After this addition, the Humane Society will be operating two (2) animal cremators at this location. The equipment is rated at 100 lbs/hr hour or 400 pounds per 4 to 5 hour batch of animal remains. The primary chamber burner is rated at 500,000 Btu/hr and the secondary chamber burner is rated at 1,000,000 Btu/hr, for a total of 1,500,000 Btu/hr. The fuel to be used is Natural Gas. Control of air pollution is achieved through the design of the KM800 crematory, including its ability to operate the secondary chamber between 1600 - 1850 degrees Fahrenheit at a residence time in excess of 1.0 second. The design also includes fully automatic PLC based controls, independent fuel/air systems, preheated combustion air, secondary chamber temperature monitor and recorder, primary burner temperature interlock (prevents primary burner from firing prior to the secondary chamber reaching 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. No objectionable odors or visible emissions are expected from this crematorium in excess to the requirements of the general permit.

Attachment 1
Retention Time Calculation

CB400 100 lb/hr, 1800F Heat and Mass Balance

Heat and Mass Balance		Basis one Hour		Waste Type and Description - Generalities					
Enter the following:		This Run	0-Trash	1-Rubbish	3-Garbage	4-Animal	MSW		
Percent Carbon Combustion		95	95	95	95	95	95		
Feed Compos. %	Carbon	7	47	33	12	7	25		
	Hydrogen	2	6	5	3	2	4		
	Oxygen	6	30	26	10	6	20		
	Water	82	10	25	70	82	30		
	Chlorine	0	2	1	0.4	0	1		
	Sulfur	0.1	0.1	0.1	0.1	0.1	0.1		
	Nitrogen	0.4	0.2	0.2	0.2	0.4	0.5		
	Ash	2.5	4.70	9.70	4.30	2.5	19.4		
Stated HHV of waste feed, Btu/lb		1000	8500	6500	2500	1000	5000		
Calculated LHV by Dulong's eq, Btu/lb & subtracting heat to vaporize water		630	7147	4909	1644	630	3679		
Density of Waste, lb/cu ft		55	10	10	35	55	25		
Heat value of waste, Btu/cu ft		55000							
			Paper, cardboard, wood-10%plastics	paper, rags, cartons floor sweepings	Food wastes, paper resta/hotels/clubs	All animal & human tissue; labs; hosp.	Municipal Solid		
<-Typical Ranges->									
Percent carbon combustion		95	95-98%						
Percent Excess Air		150	40-150% Excess Air (=140-250% total air) for solid waste						
Percent of Total Air		100							
Feed rate Lbs per hour		400							
Target Comb gas temp, deg F		1800	1700-2200						
Target stack gas temp, deg F		1500	300-600						
True heat loss, %		5	<--- Losses (2-6%) due to rad./cond./conv. Does not reflect HHV-LHV differences or delta H H2O vapz.						
O2 Req. for	3.48 lbmol/hr								
Dry air req	478 lb/hr								
		CO2	HCl	SO2	H2O				
Moles from combustion		2.22	0.00	0.01	4.00				
Moles from evap				18.22					
Actual O2 in inlet air		3.48 lbmol/hr	Humidity Input						
Water vapor in Air		0.008 lbs water/ lbs dry air			0.21 lbmol/hr				
Tot. dry air, lbmol/hr		16.57	4 lb/hr						
		478 lb/hr							
		CO2	HCl	SO2	N2	O2	H2O		
Total moles before aux fuel		2.22	0.00	0.01	13.14	0.00	22.43		
Total flue gas, wet		37.80 lbmol/hr			870 lb/hr				
Total flue gas, dry		15.37 lbmol/hr			466 lb/hr				
Mole Weight, wet/dry		23.02	30.34						
Temperature with no heat added, deg F		793							
Heat needed BTUs/Hour		3.38E+05							
If heat needed is positive, then add methane fuel:									
Heat balance calculations, based on LHVs and net available heat for methane									
dT (w/o) fuel		793 deg F							

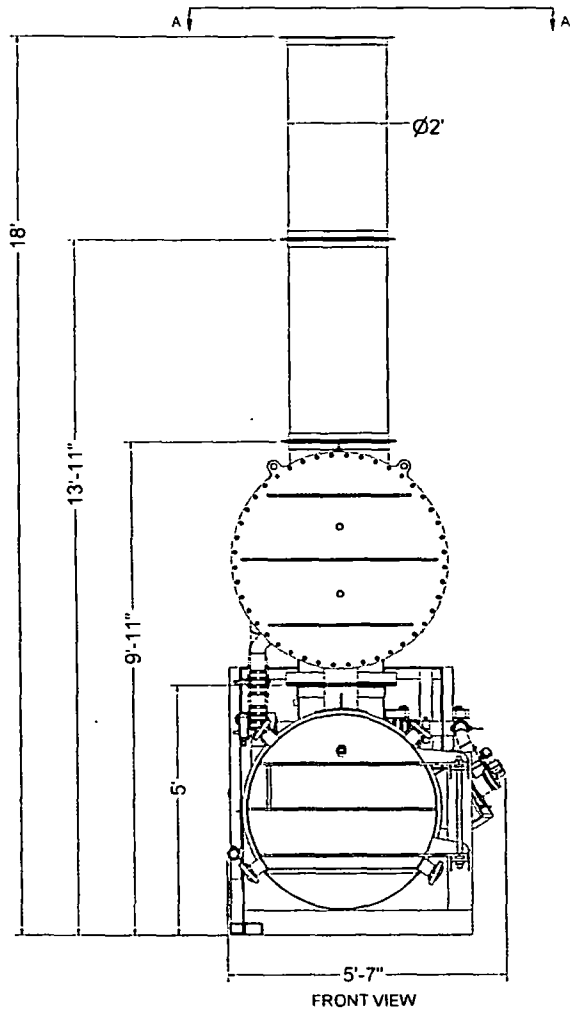
CB400 100 lb/hr, 1800F Heat and Mass Balance

Ht need	337711	Btu/hr												
NAH	190975	Btu/lbmol	Net Avail heat of methane at T= target temp											
Fuel need	1.77	lbmol/hr												
Mol O2	3.71	lbmol/hr	(includes 10% excess air at burner)											
Air added	510	lb/hr												
If heat needed shows negative, then add cooling air:														
Heat in actual flue gas	233304.8	btu/hr												
Mass cooling air	-738	lb/hr												
Moles of air added (to cool or burn gas)	17.68													
			Inlet air	Inlet air	Inlet air	Fr Humid	Fr Comb	Fr Comb	Fr Comb					
			MWwet	Moles O2	Moles N2	Mol H2O	Mol CO2	Mol H2O	Mol O2					
			28.70	3.71	13.97	0.23	1.77	3.54	-3.54					
Stack gas lb mol/hr, wet	57.48													
Stack gas lb mol/hr, dry	31.28													
			CO2	HCl	SO2	N2	O2	H2O	Total					
Total	Moles out stack		3.99	0.00	0.01	27.11	0.18	26.20	57.48					
	Pounds		175.34	0.00	0.80	759.06	5.66	471.56	1412					
	Vol % dry		12.74	0.00	0.04	86.66	0.57							
	Mole wt of flue gas, wet				24.57									
	Actual flu gas, acfm		1,581	at		1800	deg F							
	Actual flue gas acfm		1,371	at		1500	deg F							
	Retention Time (1800F)=		28cf SCC/1581 ACFM X 60 = 1.06 Seconds											
	scfm		370	For this cell, Std Temp == 70										
Mass Balance: Pounds per hour														
	In													Out
Feed	400													ash out
Air	996													flue gas
Fuel	28													
Total	1424													Total
Total	1424													1424
Error in Mass Balance, %			-0.01%											
Heat Balance: BTUs per hour														
	In													Out
Feed	2.54E+05													Ash
Fuel	6.12E+05													Flue Gas
Air(h2o)	4.05E+03													Loss
Total	8.70E+05													Total
Total	8.70E+05													8.69E+05
Error in heat balance, %			-0.15%											
Maximum Heat available in flue gas BTUs/Hour														1.41E+05

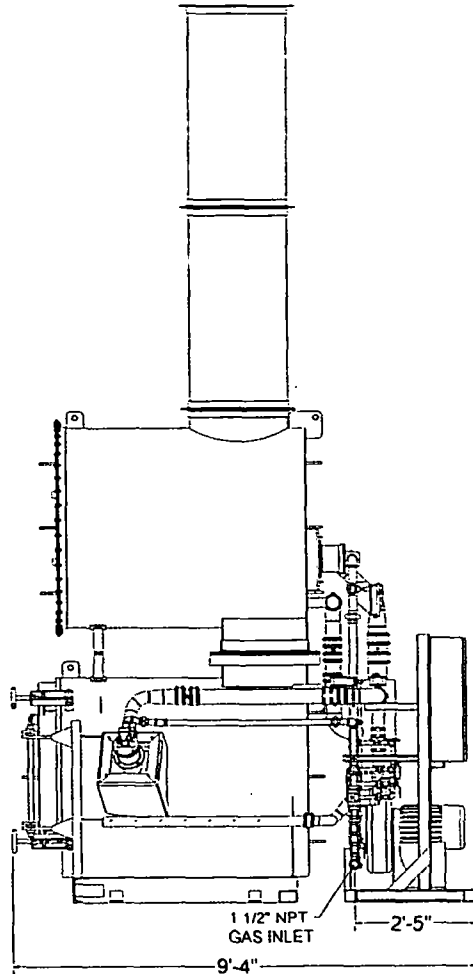
Attachment 2

Crawford Model CB400 Specifications & Engineering Drawings

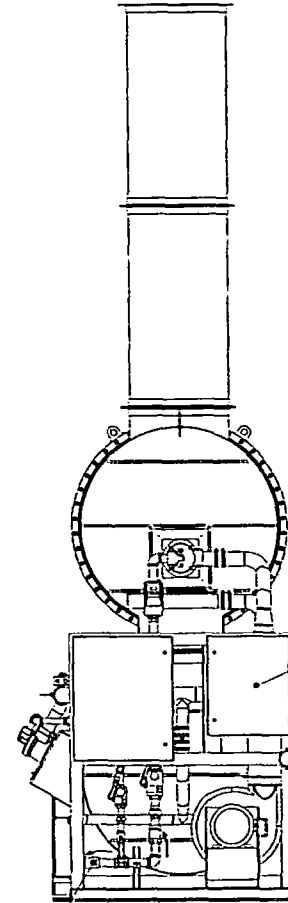
	Company	Animal Cremation	Human Cremation	Solid Waste	Environmental Products	5
CRAWFORD MODEL CB400 SPECIFICATIONS						
Print	Model:	CB400 (gas fired - std. / oil fire option - availab				
Information Request Form	Type:	Modular, multiple chambered, controlled air				
Home Page	Capacity ratings:	@ 5,500 Btu/lb. waste - 100 lb./hr.				
Random Load Crematory "C Series"	Batch load capacity:	17 cu. ft. (400 lbs. @ 25 lb./cu. ft. density)				
Batch Load Crematory "CB Series"	Overall dimensions:	9'-0" L x 5'-10" W x 10'-0" H (to top of SCC)				
Equipment Options	Stack:	Std. 8' (mounted on top of SCC - 18' el. from gr				
Accessories	Approx. system weight:	12,200 lbs.				
Features + Benefits	Required fuel (NG/LPG):	1.5 MMBtu/hr @ 11-14" w.c. @ 1.5" header				
CB400 Cut Sheet	Required electrical supply:	230/460 V, 3Ø, 60 Hz (50 Hz & alt. voltage ava 19/13 amp @ single point connection				
Drawings	Primary chamber volume:	35 cu. ft.				
Video	Hearth Area:	14 sq. ft.				
	Secondary chamber volume:	28.1 cu. ft.				
	Primary burner capacity:	500,000 Btu/hr. (modulated control)				
	Secondary burner capacity:	1,000,000 Btu/hr. (modulated control)				
	Charging/cleanout door:	37.5 in. i.d. opening (manual hinged type)				
	Combustion air supply:	500 scfm (std. - 3hp, 230/460 V, 3Ø)				
	Construction:	.250" A36 CS plate shells .250" x 3" FB reinforcement 6", 10.5# A36 channel skid frame 4" 3000°F cast refractory lining 1" 1900°F insulation				
	Stack:	24"od x 18"id x 48"L sections (qty. 2 std.) 10 ga. A36 CS shell 3" 2400°F LWI castable approx. weight - 150 lb./ft.				



FRONT VIEW



RIGHT VIEW

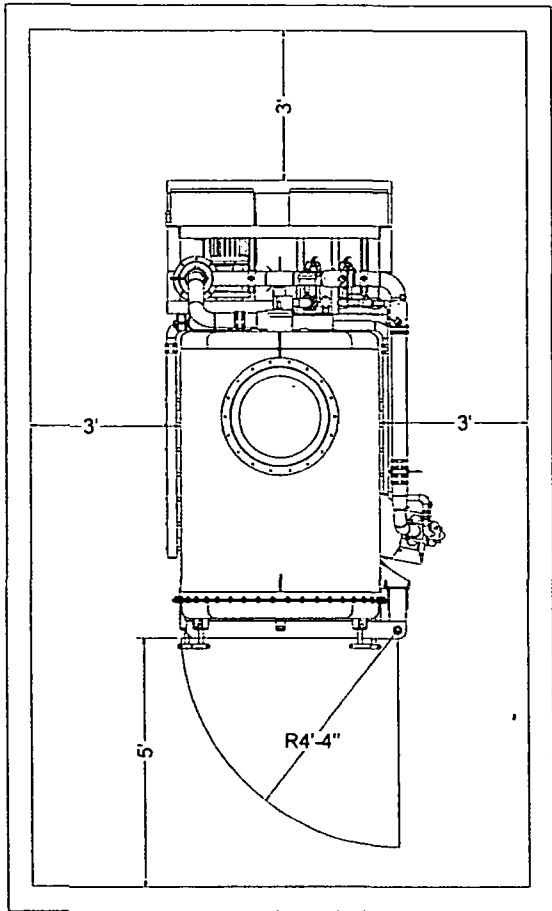


BACK VIEW

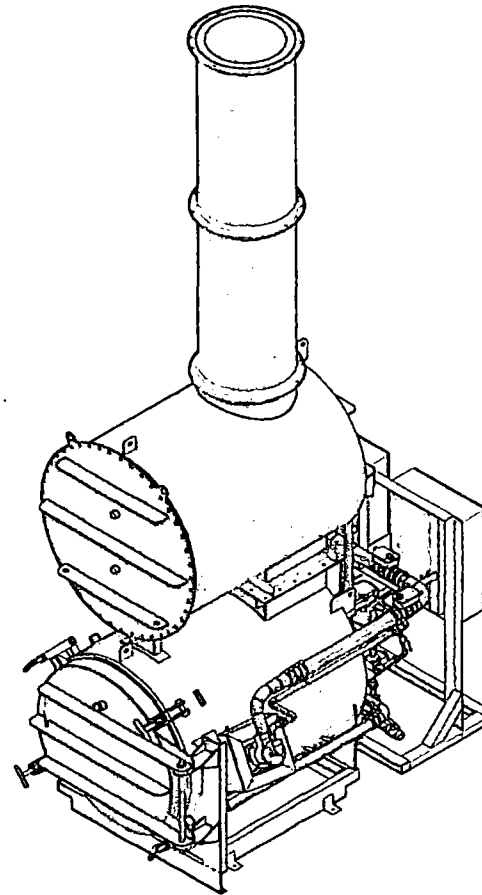
NOTE
 ALL ILLUSTRATIONS COVER THE GENERAL APPEARANCE OF CRAWFORD INDUSTRIAL GROUP, LLC
 PRODUCTS AT THE TIME OF PUBLICATION AND WE RESERVE THE RIGHT TO MAKE CHANGES IN
 DESIGN AND CONSTRUCTION AT ANY TIME WITHOUT NOTICE.

REV#		DATE	DESCRIPTION	NAME	BY	CHECKED	DATE	SHEET	OF
								1	2

PROJECT NO.	DATE	SCALE	CRAWFORD INDUSTRIAL GROUP, LLC
0114	11/2004		800 S. BENTLEY BL. HO. OHLANDS, CA 94963 (925) 885-8885
PROJECT NAME	TITLE	FIGURE NO.	DWG NO.
	CB35SW / CB400SW	03	CB35 GA



VIEW A-A
RECOMMENDED CLEARANCES



NOTE:
ALL ILLUSTRATIONS COVER THE GENERAL APPEARANCE OF CRAWFORD INDUSTRIAL GROUP, LLC
PRODUCTS AT THE TIME OF PUBLICATION AND WE RESERVE THE RIGHT TO MAKE CHANGES IN
DESIGN AND CONSTRUCTION AT ANY TIME WITHOUT NOTICE.

REV	DATE	DESCRIPTION	NAME	DRAWN: J11/2004 BY: J11/2004 CHECKED: J11/2004 TITLE: CB35SW / CB400SW PROJECT NO: CB35 GA SHEET 2 OF 2
				CRAWFORD INDUSTRIAL GROUP, LLC 200 S. BROADWAY BLVD. DUBLINO, VA 22624-0000 TEL: (540) 333-1111 FAX: (540) 333-1112 WWW.CRAWFORDINDUSTRIAL.COM

Attachment 3

Emission Calculations based on AP-42 Table 2.1-12

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
100	8760	2.5	0.13	0.55	3	0.15	0.657	3	0.15	0.657

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

PM = 0.08 gr/dscf based on manufacturers warranty

CO is calculated as follows:

$$100 \text{ lb/hr} \times 1\text{E}+01 \text{ lb/ton} \times 1 \text{ ton}/2000 \text{ lbs} = 0.5 \text{ lbs/hr CO}$$

$$0.5 \text{ lb/hr CO} \times 8760 \text{ hrs/yr} \times 1 \text{ ton}/2000 \text{ lbs} = 2.19 \text{ TPY CO}$$

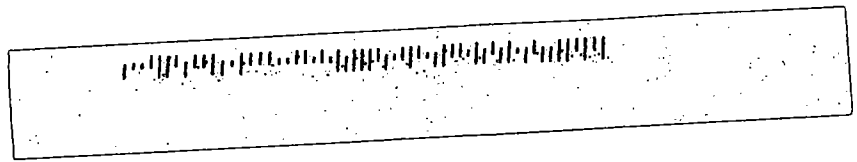
PM is calculated as follows:

$$100 \text{ lb/hr} \times 7\text{E}+00 \text{ lb/ton} \times 1 \text{ ton}/2000 \text{ lbs} = 0.35 \text{ lbs/hr PM}$$

$$0.35 \text{ lb/hr PM} \times 8760 \text{ hrs/yr} \times 1 \text{ ton}/2000 \text{ lbs} = 1.53 \text{ TPY PM}$$

Central Brevard Humane Society
1020 Cox Road
Cocoa, Florida 32926

65
2/21/00



Florida Dept. of Environmental Protection
FDEP Receipts
P.O. Box 3070
Tallahassee, FL 32315-3070