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BUREAU OF AIR REGULATION

ANIMAL CREMATORY
AIR GENERAL PERMIT
RE-REGISTRATION

Facility Identification Number (If known)

FDEP ID No. 1030136-009-AG Re-Registration for Pinellas Park facility: Facility has three (3) existing animal crematory units. One (1) new animal crematory unit will be installed; and One (1) existing animal crematory unit will be removed and installed at an animal crematory facility in Lee County (FDEP ID No. 0710207: Pet Angel World Services – Ft. Myers, FL).

Registration Type

1030136-010

Check one:

INITIAL REGISTRATION - Notification of intent to:

- Construct and operate a proposed new facility.
- Operate an existing permitted 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). 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. (See "Surrender of Existing Air Operation Permit(s)" below.)
- Operates an existing facility not currently permitted or using 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 Applicable

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

N/A

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.)

Pet Angel World Services, LLC
D/B/A: Pet Angel World Memorial Center

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

Pet Angel World Memorial Center – Pinellas Park

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

Street Address: 6225 72ND Ave. North

City: Pinellas Park

County: Pinellas

Zip Code: 33781-4149

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

N/A

FLORIDA DEPARTMENT OF
PROFESSIONAL REGULATION
2011 AUG 31 AM 11:25
FACILITY REGISTRATION
1030136-009-AG

Facility Contact

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

Print Name and Title: **Ms. Sharon Martinache, Regional Manager, Pet Angel World Services, LLC**

Facility Contact Telephone Numbers

Telephone: **(727) 548-1456**

Fax: **(727) 545-3141**

Cell phone: **(727) 612-1445**

E-mail: **sharon.martinache@petangelworldservices.com**

Facility Contact Mailing Address

Organization/Firm: **Pet Angel World Memorial Center** Street Address: **6225 72nd Ave. North**

City: **Pinellas Park** County: **Pinellas** Zip Code: **33781**

Other Contact/Representative (to serve as additional Department contact)

Name and Position Title

Print Name and Title: **Mr. Lynn Robinson, P.E., Permitting Manager**

Other Contact/Representative Telephone Numbers

Telephone: **(813) 752-5014**

Fax: **(813) 752-2475**

Cell phone: **(813) 957-8804**

E-mail: **lrobinson@sesfla.com**

Other Contact/Representative Representative Mailing Address

Organization/Firm: **Southern Environmental Sciences, Inc.**

Street Address: **1204 North Wheeler Street**

City: **Plant City**

County: **FL**

Zip Code: **33563**

FLORIDA DEPARTMENT OF
REGULATORY PROFESSIONS
2011 AUG 31 AM 11:26
PERMITS & REGULATIONS
REVENUE

Emission Unit Details

MANUFACTURER	MODEL NUMBER	SERIAL NUMBER	RATED CAPACITY
<i>New unit to be added*:</i>			
American Crematory Equipment Co. (EU 004)*	A-200P-4Q (Quad Chamber)	51711-A	200 lb/hr (500 lb/charge) (four primary chambers)
<i>Existing units to remain:</i>			
Industrial Equipment & Engineering Co. (Matthews Cremation Group) (EU 002)	IE43-Power- Pak II	0691201	150 lb/hr (350 lb/charge)
B&L Cremation Systems, Inc. (EU 003)	BLI 400/75 M	1230-1013-09	75 lb/hr (400 lb/charge) (four primary chambers)
<i>Existing unit to be removed:</i>			
Crawford Equipment & Engineering Co. (EU 001)	C500P	1CP8623-1286-S	75 lb/hr (150 lb/charge)

* **New Animal Crematory Unit:** See attached information on control features and residence time calculations.

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.

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

Helpful 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.

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CREMATORY
AND
OPACITY MONITOR
INFORMATION
FOR
AMERICAN CREMATORY EQUIPMENT CO.
MODEL A-200P-4Q
ANIMAL CREMATORY UNIT
EU 004

2011 AUG 31 AM 11:26
FIMMILE & COMPANY
REVENUE

FLORIDA DEPARTMENT OF

New Animal Crematory Unit (EU 004)
Pet Angel World Memorial Center – Pinellas Park, FL (Pinellas County)

Manufacturer: American Crematory Equipment Co.
Model: A-200P-4Q ("Quad Chamber")
Serial No.: 51711-A
Date of Manufacture: September 2011
Design: Four (4) Primary Chambers and One (1) Secondary Chamber
Rated Capacity:
200 lbs./hr. (50 lbs./hr., each of 4 primary chambers)
500 lbs. batch (125 lbs. batch, each of 4 primary chambers)
Heat Input Rating:
3.5mmBtu/hr. total
4 Primary Chamber burners @ 500,000 mmBtu/hr. each
1 Secondary Chamber Burner @ 1.5 mmBtu/hr.

Control Features:

The secondary chamber burner process controller is programed with a set point of 1,650 degrees Fahrenheit and is equipped with an internal program to lock out the cremation burners in the primary chambers until such temperature is reached in the secondary chamber.

The retort will be equipped with a Honeywell DR 4300 continuous chart monitor to record the temperature in the secondary chamber at or beyond the point where 1.0 second gas residence time (at 1,800 degrees Fahrenheit) is obtained.

The retort is equipped with a pollution/opacity system located in the stack to ensure combustion is restricted in the event of opacity exceeding 15%. The system includes a Heat Timer, Model MLS transmitter and Model MLS-A receiver. If opacity exceeding 15% is detected in the stack, the cremation burners in the primary chambers are automatically shut down, the hearth air is modulated to closed position, the venturi mod motor is closed down to a minimum setting, and a delay timer is activated for a period of 3 minutes or longer. Once the opacity has cleared, the system returns to normal operating condition.

The four (4) primary chambers will be controlled by Honeywell UDC 1200 temperature controllers with fuel/air ratio control input to maintain set-point temperature. The primary chambers can be operated individually or all at the same time. Each primary chamber will have a thermocouple and temperature controller. The secondary chamber ("afterburner") will be controlled with a Honeywell UDC 1200 process/high limit temperature controller. The secondary chamber burner will be controlled in a fixed air throttle fuel configuration to maintain set-point temperature and maintain oxygen level in the secondary chamber to assist with the process incineration. The retort will be equipped with manual potentiometers for hearth air and throat air to assist in the cremation process.

FLORIDA DEPARTMENT OF
REVENUE
2011 AUG 31 AM 11:26
TAMPA ACCOUNTING

**RESIDENCE TIME CALCULATIONS
FOR
AMERICAN CREMATORY EQUIPMENT CO.
MODEL A-200P-4Q
ANIMAL CREMATORY UNIT
EU 004**

American CREMATORY EQUIPMENT CO.

"SERVICE IS EVERYTHING"

August 29, 2011

To Whom It May Concern:

Here are the calculations for the American Crematory Equipment Co. Model A-200P-4Q ("Quad Chamber") Animal Cremation Unit

Based on 3.5mm Btu/hr. maximum rated input, natural gas at 1050 Btu/cf.

Natural Gas volume 3,333 cfh

Flue products firing Stoichiometric 10:1 air/fuel ratio = 11.45 cf of

flue gas per cft of gas Total flue gas = 38,166 scfh/60 seconds per minute =636 scfm

Chamber Size:

Afterburner Firing Chamber 58" x 19.25" x 29"

Afterburner Chamber to Thermocouple position 132.5" x 19.25" x 21.5"

Total Chamber Area = 51.18 Cubic feet

$51.18 \text{ Cubic feet} / 636 \text{ scfm} = 0.0804 \text{ minutes} = 4.8 \text{ seconds}$

Volume expansion ratio of gases @ 1800 degrees F = 4.346

$636 \times 4.346 = 2,764 \text{ acfm}$

$51.18 \text{ cubic feet} / 2764 = 0.0185 \text{ minutes} = 1.11 \text{ seconds}$ to thermocouple where the temperature will be monitored by the chart recorder.

The total maximum input will be rated at 3.5mm Btu/hr.

4 Primary Chamber burners @ 500,000mm Btu/hr.

1 Secondary Chamber Burner @ 1.5mm Btu/hr.

Chamber Rated capacity is 500 lbs. which will be 125 lbs. per individual primary chamber

Incineration Rate will be approx. 200 lbs./hr. each individual primary chamber will be approx. 50 lbs./hr.

I approve the prior text regarding the components and how they will operate in the combustion process for this retort. Additionally the individual main chambers will be controlled by Honeywell udc 1200 temperature controllers with fuel/air ratio control input to maintain set point temperature. The chambers can be operated individually or all at the same time. Each primary chamber will have its own thermocouple and temperature controller. The Afterburner will also be controlled with a Honeywell udc 1200 process /high limit temperature controller. The After burner will be controlled in a fixed air throttle fuel configuration to maintain set point temperature and maintain oxygen level in the afterburner chamber to assist with the process incineration. The retort will be equipped with manual potentiometers for the hearth and throat air to assist in the cremation process as well.

I hope this was satisfactory



Mike Burwell

American Crematory Equipment Co.

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FLORIDA DEPARTMENT OF
HEALTH
2011 AUG 31 AM 11:26