

F&A RECEIPT JAN 28, 2009

ANIMAL CREMATORY  
AIR GENERAL PERMIT REGISTRATION FORM

Part II. Notification to Permitting Office

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

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

Registration Type

Check one:

**INITIAL REGISTRATION** - Notification of intent to:

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

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

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

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

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

- ☐ All existing air operation permits for this facility are hereby surrendered upon the effective date of this air general permit; specifically permit number(s): \_\_\_\_\_  
☒ No air operation permits currently exist for this facility.

General Facility Information

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

AMERICAN PETS CREMATORY, INC

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

N/A

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

Street Address: 4165 NW 132 ST, BAY 27-28

City: OPA-LOCKA

County: DADE

Zip Code: 33056

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

04-1-09

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& Mobile Sources

0251306-001

**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: **PATRICIA V. CARBAJAL - PRESIDENT**

**Owner/Authorized Representative Mailing Address**

Organization/Firm: **Patricia Carbajal**

Street Address: **14207 SW 171 ST**

City: **MIAMI**

County: **DADE**

Zip Code: **33177**

**Owner/Authorized Representative Telephone Numbers**

Telephone:

Fax: **(305) 971-0239**

Cell phone (optional): **(786) 326-8727**

**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: **MATILDE ROSARIO FAJARD REINOSO - VICEPRES**

**Facility Contact Mailing Address**

Organization/Firm:

Street Address: **14207 SW 171 ST**

City: **MIAMI**

County: **DADE**

Zip Code: **33177**

**Facility Contact Telephone Numbers**

Telephone:

Fax:

Cell phone (optional):

**Owner/Authorized Representative Statement**

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

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

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

Signature

*Patricia V. Carbajal*

Date

**01-27-09**

### 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.

THIS IS JUST A CREMATION SITE.  
THE VETERINARIANS DELIVER THE ANIMALS FOR  
US TO CREMATE AND WE DELIVER BACK  
TO THEM INSIDE AN URN, FOR THEM  
TO DELIVER TO OWNERS.

# **EXECUTIVE SUMMARY FOR THE ARCHIVE PRESENTED BY AMERICAN PETS CREMATORY INC MIAMI USA**

## **1. DESCRIPTION OF THE CREMATORY**

Oven Incinerator, specially designed to destroy organic remains of domestic animals, with capacity of a body for cremation (90 minutes), provided with two chambers: the principal one for the cremation of corpses and a secondary, to neutralize gases and steams generated by the combustion, turning to the crematory in an equipment whose operation protects the environmental quality of its area of influence.

The equipment is designed to use GLP (Propane - butane). The temperature of operation in the Principal Chamber is of 1600°F and in the Chamber of Post-combustion is of 1,800°F.

The crematory possesses the following systems of operation:

- Board of Control
- Chamber of Ashes
- Chimney with protective mesh
- System of Gas treatment

## **2. DESCRIPTION OF THE PROCESS**

The crematories for incineration of pets have been developed to destroy, in rapid and effective form, bodies of entire animals in conditions of maximum hygiene and respecting the regulations as for the protection of the environment.

The crematories for pets, made by the company HINSA, use the "Ecological System of Gas treatment" (SETG), achieving this way the highest level of technical - operative reliability, for what, the emission to the atmosphere is innocuous and without smells. The ashes obtained in the process are passive and can be manipulated without risk.

## **PHASES OF THE PROCESS OF CREMATION**

Previous coordination of the service with the municipalities, veterinary clinics or owner of the pet.

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After resolved the service, the mentioned persons will take charge transporting the remains of the animal to AMERICAN PETS CREMATORY INC. place.

Later the body will be taken to the room of cremation.

The time of average operation of the Crematory is 90 minutes, time after which the corpse has been sublimated in 95 % of its composition and reduced to 5 %, changed the above mentioned in ashes, which will have to pass for a processor for its homogenization.

Finished the process, the ashes will be placed in an urn before chosen by the Client and in which they will be deposited for its later delivery.

Finally, previous communication with the Client, AMERICAN PETS CREMATORY INC will deliver the urn in the place that the Client requests.

### **3. GENERATION OF EMISSIONS AND PERMISSABLE LIMITS EPA ELEMENTS TO EVALUATING IN GASEOUS EMISSION CONCENTRATION OF POLLUTION IN THE AIR**

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PARÁMETERS	EQUIP EMISIONS HINSA (mg/m <sup>3</sup> )	EPA REGULATIONS (mg/m <sup>3</sup> )
CO <sub>2</sub>	3.9	10
CO	0.1	100
O <sub>2</sub>	14.0	
N <sub>2</sub>	82.1	100.0
SO <sub>x</sub>	50.0	200.0
NO <sub>x</sub>	250.0	400.0
HAP's	5.0	20.0
VOC	0.05	30.0
DMW (g/g mole)	29.2	45.0

#### 4. TIME OF GAS RESIDENCE IN POST CHAMBER COMBUSTION

The gases that take place in the first chamber will be burned in the chamber of post combustion during a period of 1, 25 seconds.

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## **5. THE CONTAINER OF THE EQUIPMENT MUST NOT INCLUDE ANY MORE THAN 0.5 % GIVE PLASTIC FOAM**

We confirm you that we have contacted with our Agent of Customs, with the purpose that when we make the activities of packing of the equipment, this regulation is respected strictly.

## **6. PROGRAM OF MAINTENANCE OF THE OVEN CREMATORY**

Every 600 cremations there will be realized the standard maintenance of the equipment, who considers the following thing:

- external and internal Cleanliness
- Checkup of operability of burners
- Re-cured from refractory structure
- Tour of lines of fuel
- Checkup of board of control
- Cleanliness and lubricated of the system of the of access door.

## **7. PROCESSES OF OPERATION IN EMERGENCY CASES**

In case of operative fault, it will proceed to realize immediately the stop of the equipment.

The principal faults are:

- Faults of the burner of the Chamber of Post-combustion
- Faults of the burner of the Chamber of Incineration
- Cut of the supply of principal energy

Before the start of the equipment, after overcome the emergency, it will proceed to the complete inspection with the purpose of checking its correct functioning.

## **8. CONTROLS OF OPACITY INSTALLED IN THE EQUIPMENT CREMATORY.**

The gases generated in the first chamber will be controlling in the chimney, by means of an opacimeter that automatically will arrange on the burner of the crematory.

## **9. MONITORING CONTROL OF TEMPERATURE.**

In the Board of Control of the Oven is installed a temperature pyrometer, which will send information in graphical form on the temperatures that are registered in every chamber.

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## 10. METHOD APPLIED FOR DETERMINATION OF CONTROL OF EMISSION

Responsible Company: FER and PAS S.A.C.

### 10.1 DETERMINATION OF CARBON MONOXIDE

#### 10.1.1 APPLICATIVE NORMS

EPA 3 and EPA 10 A. Applicative Norms: Method EPA 10A

#### 10.1.2 PRINCIPLE

To take an integrated or continuous sample of gas of the point of sampling (emission), using an infrared analyzer not dispersive (AIND).

#### 10.1.3 RANGE AND SENSIBILITY

RANGE: Of 0 ppm to 1,000 ppm

SENSIBILITY: The minimal detectable concentration is 20 ppm in the mentioned range.

#### 10.1.4 PROCEDURE

The equipment is assembled, checking that all the connections are free of escapes. The probe is placed in the chimney in the point of sampling and to purge the line of sampling inside the analyzer. It is left to pass 5 minutes in order that the line becomes stable and then to register the reading of the analyzer. The content of CO<sub>2</sub> of the gas, it will be able to decide using the procedure of integrated sample of the Method EPA 3 or weighing the pipe of removal of CO<sub>2</sub> of ascarite (absorbent) and calculating the concentration of CO<sub>2</sub> of the volume of the sampled gas and the profit of the weight of the pipe.

#### 10.1.5 CALCULATION

Calculation of the concentration of carbon monoxide, using the equation 10-1 (raised to 4°).

$CCO_{CHIMNEY} = CCO_{AIND} (1 - F_{CO_2})$

Where:

$CCO_{CHIMNEY}$  = CO'S Concentration in chimney, ppm for volume (in dry base)

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CCO AIND = CO'S Concentration measured by AIND, ppm for volume (in dry base) Fco2 = volumetric Fraction of CO2 in the sample, this is, percentage of CO2 of Orsat's analysis divided by 100



### 10.1.6 ALTERNATIVE PROCEDURE

#### Trap of Interference:

The system of conditioning of samples described in the Method EPA 10, will be able to use as alternative to the traps of silica gel and ascarite.

## 10.2 DETERMINATION OF OXIDE OF NITROGEN

### 10.2.1 APPLICATIVE NORMS EPA 7.

Associative norm: ASTM D 1193:1977

### 10.2.2 PRINCIPLE

Takes a sample that contains oxides of nitrogen in a flask that, in turn, contains an absorbent solution diluted of sulphuric acid - peroxide of hydrogen and the oxides of nitrogen, except nitrous oxide, the measurement will be realized colored metrically, using the procedure of acid fenoldisulfónico (PDS).

### 10.2.3 PROCEDURE

To prepare the absorbent solution, add cautiously 2.8 ml of H2SO4 concentrate to 1 liter of water that should expire with the requirements established in the norm. To mix well and to add 6 ml of peroxide of hydrogen to 3 % , recently prepared from a solution of peroxide of hydrogen to 30 %. The absorbent solution must be used up to one week after its preparation. It is not necessary to exhibit to the extreme heat or to the direct light of the Sun.

### 10.2.4 Calculations

To realize the calculations, supporting at least the decimal additional one on the obtained information.

To round the numbers at the end of the calculation.

**Volume of the sample:** in dry base corrected to conditions standard.

$$\begin{aligned} VSC &= (Tstd/Pstd) (V1-Va) (Pf/Tf-Pi/Ti) \\ &= K1 (V1-25 \text{ ml}) (Pf/Tf-Pi/Ti) \end{aligned}$$

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Where:

VSC = Volume of the sample to conditions standard (in dry base), ml.

Tstd = absolute standard Temperature 293 °K (528 °R)

Pstd = absolute standard Pressure, 760 mm of Hg (29,92 inc of Hg).

V1 = Volume of the flask and of the valve, ml.

There goes = Volume of the absorbent solution, 25 ml.

Pf = absolute final Pressure of the flask, mm of Hg (inc of Hg).

Tf = absolute final Temperature of the flask, °K (°R)

Pi = absolute initial Pressure of the flask, mm of Hg (inc of Hg).

You = absolute initial Temperature of the flask, °K (°R)

K1 = 0,3858 °K/mm of Hg for metric units

= 17,64 °R/ inc of Hg for English units

### 10.3 DETERMINATION OF DIOXIDE OF NITROGEN

#### 10.3.1 APPLICATIVE NORMS

EPA 7. Associative norm: 40CFR of the EPA, Cap. 1, part 53.

#### 10.3.2 PRINCIPLE AND APPLICABILITY

The atmospheric concentrations of dioxide of nitrogen (NO<sub>2</sub>), are obtained indirectly measuring photo metrically the intensity of the light, to major lengths of wave to 600 nanometers, that ensue from the reaction quimiluminicente from the nitric oxide (NO) with the ozone (O<sub>3</sub>). The first NO<sub>2</sub> is reduced quantitatively to NO by means of a converter. NO, that commonly exists in the air together with the NO<sub>2</sub>, passes in altered across the converter. The latter measurement of is not reduced of the first measurement (NO + NO<sub>2</sub>), to obtain the final measurement of the NO<sub>2</sub>. The measurements of NO and of NO<sub>2</sub> + NO<sub>2</sub> they can be realized simultaneously by dual systems or cyclically by the same system, always when the duration of the cycle does not exceed of 1 minute.

#### 10.3.3 PROCEDURE

To assemble a system dynamic of calibration. Assure that all the meters of flow are calibrated under the conditions of use against a reliable standard, as a meter of bubble of soap or a meter of humid test. All the volumetric flows must be corrected 25°C and 760 mm of Hg.

They must take precautions to eliminate the O<sub>2</sub> and other pollutants of the regulator of pressure of NO and of the system of delivery before initiating the calibration to avoid some conversion of NO standard to NO<sub>2</sub>. To select the operative range of the analyzer of NO/NO<sub>x</sub>/ NO<sub>2</sub> to being calibrated.

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Connect the cables of exit of the recorder of the analyzer of NO/NO<sub>x</sub>/NO<sub>2</sub> to the terminals of entry of the graphical continuous recorder. The adjustments must be realized for appropriate readings of the constant graph. Determine the conditions of flow of the TFG, needed to fulfill the specification of dynamic parameter.

To graduate the extender generator and air flows of O<sub>3</sub> to obtain the flows determined in the equipment. The total flow of air must exceed the total demand of the analyzer connected to the manifold of the exit, to assure that it should not deposit air of the environment inside de 4l of the manifold. We allow that the analyzer should take air samples zero until stable answers are obtained of NO, NO<sub>2</sub> and NO<sub>2</sub>. Then that the answers have become stable, control of the analyzer graduates to zero.

#### 10.3.4 Calculations of adjustment of control spam of NOX

When the control is regulated of spam of NO<sub>x</sub> of the analyzer, it is necessary to bear in mind the presence of any impurity of NO<sub>2</sub> in the standard cylinder of NO. The procedures to determine the quantity of impurity of NO<sub>2</sub>, in the standard cylinder of NO. The exact concentration of is not calculated from:

$$[NOX]OUT = \frac{FNOX([NO]STD + [NO_2]IMP)}{FNO + FO + FD}$$

Where:

[NO<sub>2</sub>] OUT NOX's Concentration diluted in the manifold of exit, in ppm

[NO<sub>2</sub>] IMP Concentration of impurity of NO<sub>2</sub>, in the standard cylinder of NO, in ppm.

FNO Flow of NO, in scm<sup>2</sup> / min

FO Air flow of the generator of O<sub>3</sub>, in scm / min FD Air flow thinner, in scm / min

#### 10.4 DETERMINATION OF DIOXIDE OF SULPHUR

##### 10.4.1 PROCEDURE APPLICATIVE

EPA 6. Associative procedure: Method EPA 5 (1999); Method EPA 8 (1999); ASTM D 1193 (1977).

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#### 10.4.2 Principle and Applicability

Extracts a gas sample of the point of sampling of the chimney and there separates the fog of the sulphuric acid (including trioxide of sulphur) and the dioxide of sulphur. The fraction of the latter is measured by means of the method of qualifications of the Bario-Torio.

IT has been determined that the minimal limit detected by the method is 3,4 milligrams (mg) of  $\text{SO}_2/\text{m}^3$ . In spite of the fact that no top limit has been established, the tests(proofs) have demonstrated that there can gather concentrations so high as 80,000  $\text{mg}/\text{m}^3$  of  $\text{SO}_2$  efficiently in two mike impactadores, each one containing 15 milliliters of peroxide of hydrogen to 3 %, to a rate of 1,0 Lpm in 20 minutes. Being based on theoretical calculations, the top limit of the concentration on a sample of 20 liters, it is of about 93,300  $\text{mg}/\text{m}^3$ .

The possible interferences owe to the free ammonium, cations hidrosolubles and fluorides. The cations and fluorides are removed by filters of glass fiber and a burbujeador of isopropanol and therefore they do not affect the analysis of  $\text{SO}_2$ .

The free ammonium interferes reacting with the  $\text{SO}_2$  to form sulfite particulates and reacting with the indicator.

#### 10.4.3 PROCEDURE OF ANALYSIS OF SAMPLE

Annotate the level of the liquid in the container and to confirm if some loss of the sample happened during the movement; to annotate this in the leaf (sheet) of information of the analysis. To transfer the content of the container of storage to a fiola (pipette) of 100 ml and to dilute exactly even 100 ml of water. Pipe tear an aliquot of 20 ml from this solution to a flask Erlenmeyer of 250 ml, adding 80 ml from isopropanol to 100 % and from two to four drops of indicator of Thorin and holder up to a final pink point using percolate of bario 0,01 N. To repeat and to divide equally the volumes of qualifications. To traverse a white with every series of samples. The replies between (among) qualifications must be between 1 % and 0, 2 ml, which is major.

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#### 10.4.4 CALCULATIONS. VOLUME OF THE SAMPLE OF DRY GAS

Corrected to conditions standard

$$V(\text{std}) = VY (T_{\text{std}}/T_m) (P_{\text{bar}}/P_{\text{std}}) = K1Y (V = P_{\text{bar}}/T_m)$$

Where:

$V(\text{std})$  = Volume of dry gas measured by the meter of dry gas, corrected to conditions standard, dscm (dsef).

$V$  = Volume of dry gas measured by the meter of dry gas, dcm (def).

$Y$  Factor of calibration of the meter of dry gas.

$T_{\text{std}}$  absolute standard Temperature, 293 °K (528 °R).

$T_m$  absolute average Temperature of the meter of dry gas °K (°R).

$P_{\text{bar}}$  barometric Pressure in the orifice of exit of the meter of dry gas, mm of Hg (inc. of Hg).

$P_{\text{std}}$  absolute standard Pressure, 760 mm Hg (29, 92 inc. of Hg)

$K1$  0,3858 °K/mm Hg for metric units 17,64 °R/inc. of Hg for English units



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Mechanical Engineer  
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JAN 27 2009

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