



Florida Department of Environmental Protection

Bob Martinez Center
2600 Blair Stone Road
Tallahassee, Florida 32399-2400

Charlie Crist
Governor

Jeff Kottkamp
Lt. Governor

Michael W. Sole
Secretary

October 30, 2007

Mr. Jeffrey Dean
Dean-Lopez Crematory, Incorporated
31140 Overseas Highway
Big Pine Key, Florida 33043

Dear Mr. Dean:

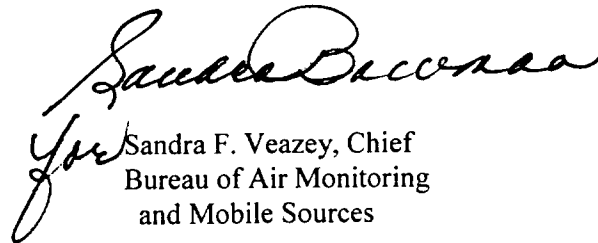
This is to acknowledge that your notification of intent to use the authority of Rule 62-210.310 to operate your facility was received on September 28, 2007. We have assigned ARMS # 0870059-005 to this facility.

As you know, pursuant to Florida Statutes section 403.814, authority to operate under general permits commences thirty days after receipt of the registration form unless you have been notified by this office that your facility has not shown entitlement to operate pursuant to the rule provisions.

For your information, authority to operate pursuant to Rule 62-210.310 expires after 5 years. Therefore, a new registration form must be received no later than 5 years after the date your notice was received as indicated above. If your general permit rule conditions require testing, such testing must be completed within the time frame specified in the rule.

If you have any additional questions, please contact Dickson Dibble at 850/921-9586.

Sincerely,



Sandra F. Veazey, Chief
Bureau of Air Monitoring
and Mobile Sources

SFV/pg

cc: Mr. Sherrill Culliver, South District

HUMAN CREMATORY AIR GENERAL PERMIT REGISTRATION FORM

Part II. Notification to Permitting Office

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

Instructions: To give notice to the Department of an eligible facility's intent to use this air general permit, the owner or operator of the facility must detach and complete this part of the Air General Permit Registration Form and submit it to the appropriate Department of Environmental Protection or local air pollution control program office which has permitting authority. Please type or print clearly all information, and enclose the appropriate air general permit registration processing fee pursuant to Rule 62-4.050(4)(o), 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 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.

Bureau of Air
R. Mobile Sources
Monitoring
OCT 03 2007

0870059-005
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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):
0870059-004-AC
- 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.)
DEAN-LOPEZ 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.)
BIG PINE KEY

Facility Location (Provide the physical location of the facility, not necessarily the mailing address.)
Street Address: 31140 OVERSEAS HIGHWAY
City: BIG PINE KEY County: MONROE Zip Code: 33043

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

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: JEFFREY DEAN, OWNER

Owner/Authorized Representative Mailing Address
Organization/Firm: DEAN-LOPEZ CREMATORY, INC.
Street Address: 31140 OVERSEAS HIGHWAY
City: PIG PINE KEY County: MONROE Zip Code: 33043

Owner/Authorized Representative Telephone Numbers
Telephone: 305-294-1066 Fax:
Cell phone (optional): 305-896-6335

Facility Contact (If different from Owner/Authorized Representative)

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

Facility Contact Mailing Address
Organization/Firm:
Street Address:
City: County: Zip Code:

Facility Contact Telephone Numbers
Telephone: Fax:
Cell phone (optional):

Owner/Authorized Representative Statement

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

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

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

Jeffrey Dean
Signature

9/26/07
Date

Design Calculations

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

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

Description of Facility

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

This registration is for an existing Matthews Cremation Group IE43-PP11 human crematory that has been refurbished by B&L Cremation Systems, Inc. A construction permit was issued to this facility in October 2004. This crematory is now in operation and therefore is registering to use the General Permit.

This crematory is designed to burn human remains at the average incineration rate of 100 pounds per hour. The incinerator consists of primary and secondary (afterburner) chambers, each fired on natural gas. Emissions are controlled by the afterburner, which maintains a minimum secondary chamber combustion zone temperature of 1600°F prior to and during combustion of material in the primary chamber. The secondary chamber is designed to ensure one second residence time at a gas temperature of 1800°F, and is equipped with a continuous temperature monitor and recorder. The unit is equipped with an opacity monitor that shuts down the cremation burner if excess emissions are encountered in the stack.



Systems, Inc.

7205 - 114th Avenue North • Largo, Florida 33773
1-800-622-5411 • 727-541-4666 • facsimile 727-547-0669
e-mail: blcremsys@aol.com • www.blcremationsystems.com

VISIBLE OPACITY MONITOR (VOM-1)



APPLICATION: monitoring control used on retorts to warn operators and shut down processes based on opacity.

IMPROVED RUGGED DESIGN

EASY TO INSTALL AND SUPPORT

UNAFFECTED BY AMBIENT LIGHT

EXTERNAL ADJUSTMENT

SPANS UP TO 6 FEET

VISIBLE LED LIGHT SOURCE

World's Largest Independent Cremation Equipment Manufacturer

B&L CREMATION SYSTEMS, INC.

GENERAL PURPOSE OPACITY MONITOR

SPECIFICATIONS

LIGHT SOURCE: Pulsed visible LED

SPECTRAL RESPONSE: Between 400nm and 500nm

ANGLE OF VIEW: Less than 4 degrees from axis

AMBIENT LIGHT: No measurable effect

MAXIMUM DISTANCE BETWEEN MONITOR AND REFLECTOR: 6 Feet

MONITOR TYPE: Retro reflective using a 3" reflector

ADJUSTMENT RANGE: 0 TO 100% opacity

ACCURACY: +/- 3% of full scale

POWER: 24 VAC, less than 10 VA

OUTPUT: Relay, DPDT, 5.0 A @ 102 VAC
LED indicator for sensitivity adjustment

TEMPERATURE: Storage: -7 degrees to 32 degrees C
Operating: -29 degrees to 66 degrees C

PHYSICAL: 8.000"H x 5.750"W x 3.375"D

ENCLOSURE: Meets NEMA 3, 4, and 12 specs

OPACITY MONITOR ADJUSTMENT PROCEDURE (NEW)

The following procedure may be necessary to be performed from time to time due to vibration on the top of the retort. This procedure is designed to be both simple and quick, and to insure the proper operation of your retort.

It is suggested that before starting this procedure be carefully read, and if you have any questions, call the service dept. at B&L Cremation Systems. A service technician will be happy to answer any questions or assist you with the alignment / adjustment of your opacity monitor.

The best time to perform this procedure is on a cool retort.

Please check the cleanliness of the opacity monitor lens and reflector. Inspect the reflector for any damage, replacing it as necessary.

You will need the following tools.

6" adjustable wrench

7/16" wrench

A Phillips screwdriver

A small straight slot screwdriver

6' to 8' step ladder

Step 1: Open the electrical cabinet located on your retort. Inside, locate the "C1 BLOWER" contactor. At the bottom of the contactor, from left to right, you will see a red "STOP" button. To the right of this is a blue "RESET" button. Above this is a "TEST" slot (see fig 1).

Step 2: Using a pen, push the test slot to the left until only black is visible. This will disable the main blower, allowing you to adjust the opacity monitor, and hear the internal relay click

Step 3: Turn on the retort with the main timer set to zero. The "Cool Down" lamp should be illuminated.

Step 4: Next, it will be necessary to get on top of the retort. Inspect the opacity monitor, locating the red alignment L.E.D. and the sensitivity adjustment (see fig. 2). The red L.E.D. should be lit, and by passing your hand in front of the lens, you should be able to hear the opacity monitor click. If you are experiencing minor nuisance tripping of the opacity system, turn the sensitivity adjustment COUNTERCLOCKWISE approximately 1/8 of a turn. This should correct the problem. Now press the round blue "RESET" button located on the "C1 BLOWER" contactor in the electrical cabinet. Your retort is now ready to operate. If, however, the red L.E.D. is not illuminated or you do not hear the clicking when you pass your hand in front of the monitor, proceed to step 5.

Step 5: Turn the sensitivity adjustment FULLY CLOCKWISE. Loosen the two mounting bolts holding the opacity monitor. By slowly moving the opacity monitor (left or right, forward or backward), obtain the maximum brightness possible for the L.E.D. Carefully tighten one of the mounting bolts, using shims as necessary, then snug the remaining bolt. Do NOT tighten this bolt. Turn the sensitivity adjustment COUNTERCLOCKWISE until the monitor clicks. Turn the sensitivity adjustment CLOCKWISE until you hear the monitor click again, then continue CLOCKWISE an additional 1/8 turn. The opacity monitor is now correctly set. Press the round blue "RESET" button on the "C1 BLOWER" contactor, completing the alignment procedure. Please note: if the circuit board is black, counterclockwise and clockwise are reversed. Counterclockwise will be clockwise and clockwise will be counterclockwise.

If the red L.E.D. does not illuminate, or if the monitor does not click, please contact the service department at B&L Cremation Systems to further assist you.

OPACITY MONITOR ADJUSTMENT PROCEDURE

FIGURE 1 "C1 BLOWER"

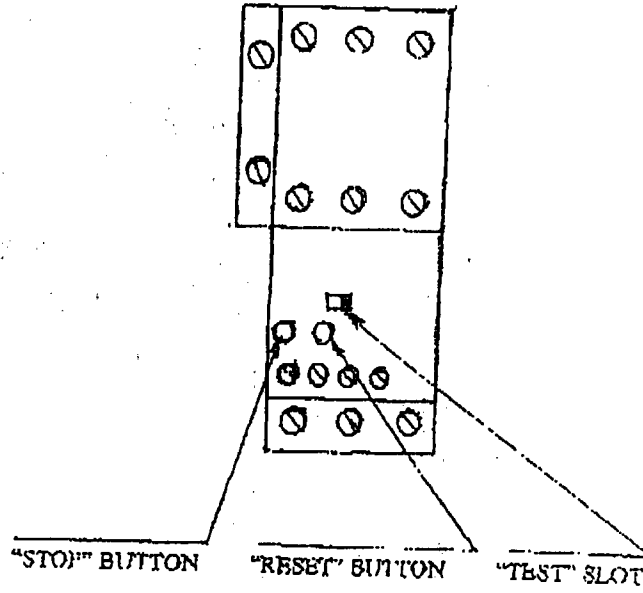
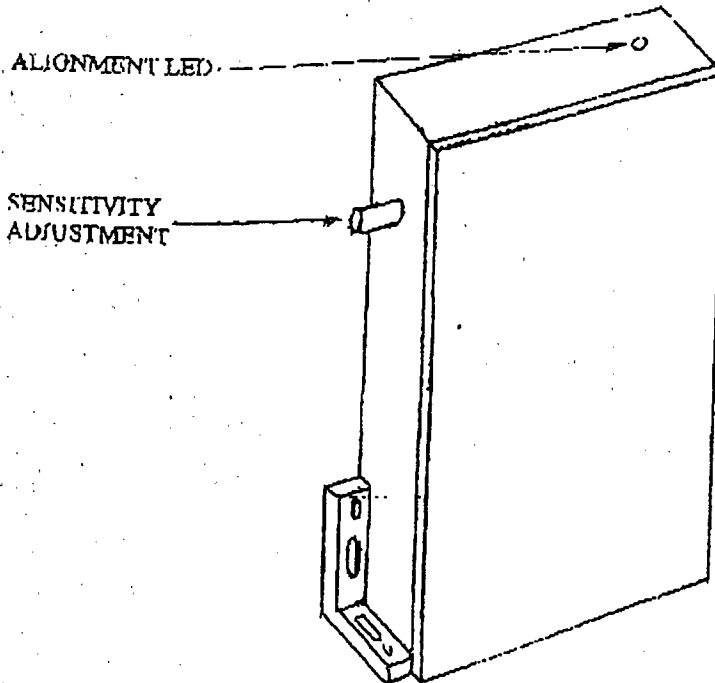


FIGURE 2, OPACITY MONITOR



**CALCULATIONS FOR PRODUCTS OF COMBUSTION
AND RESIDENCE TIME FOR
MATHEWS IE43-PPII,
LPG FIRED,
100 LB/HR, TYPE IV WASTE, HUMAN CREMATORY**

A. BASIS: 1 LB WASTE

1. $\frac{1 \text{ lb waste} \times 1000 \text{ Btu/lb waste}}{10,000 \text{ Btu} / 15 \text{ lb air}} = 1.5 \text{ lbs air}$
2. $\frac{1 \text{ lb waste} \times 0.10 \text{ lb combustible}}{\text{lb waste}} = 0.10 \text{ lbs of combustibles}$
3. $\frac{1 \text{ lb waste} \times 0.85 \text{ lb H}_2\text{O} \times 1.6^{(1)}}{\text{lb waste}} = 1.36 \text{ lbs of water}$
4. $\frac{6500 \text{ Btu aux fuel}^{(2)} \times 23.8 \text{ ft}^3 \text{ air/ft}^3 \text{ fuel}}{2550 \text{ Btu/ft}^3 \text{ fuel} \times 13.35 \text{ ft}^3 \text{ air/lb air}_{@70^\circ\text{F}}} = 4.54 \text{ lb of air for aux fuel}$
5. $\frac{6500 \text{ Btu aux fuel} \times 0.044 \text{ lb fuel/ft}^3 \text{ fuel}}{2550 \text{ Btu/ft}^3 \text{ fuel}} = 0.11 \text{ lb of aux. fuel}$
6. Sum = PRODUCTS OF COMBUSTION (POC) = 7.61 LBS POC PER
LB OF WASTE @ 70 °F

B. RESIDENCE TIME @ 1800 °F

$$\frac{7.61 \text{ lb POC/lb waste} \times 56.93 \text{ ft}^3/\text{lb POC}_{@1800^\circ\text{F}} \times 150 \text{ lb waste/hr}}{3600 \text{ sec/hr}}$$

$$= 18 \text{ ft}^3/\text{sec}_{@1800^\circ\text{F}}$$

$$= 18 \text{ ft}^3 \text{ for 1 second residence time}$$

Thermocouple placement at: 20 ft³
Secondary chamber operating temperature ≥ 1600 °F

- (1) Correction multiplier for dry air and water vapor
 (2) Fuel is LPG

References: Incinerator Institute of America
 North American Combustion Handbook



**AIR GENERAL
PERMIT REGISTRATION
DEAN-LOPEZ CREMATORY, INC.
HUMAN CREMATORY**

Facility ID: 0870059
SES Reference No. 07P388

Prepared For: DEAN-LOPEZ CREMATORY, INC.
31140 Overseas Highway
Big Pine Key, Florida 33043

Prepared By: SOUTHERN ENVIRONMENTAL
SCIENCES, INC.
1204 North Wheeler Street
Plant City, Florida 33566

REGISTRATION FORM

**OPACITY
MONITOR INFORMATION**

RESIDENCE TIME CALCULATIONS

Southern Environmental Sciences, Inc.

1204 North Wheeler Street □ Plant City, Florida 33563 □ (813) 752-5014, Fax (813) 752-2475

September 20, 2007

Mr. Jeffrey Dean
Dean-Lopez Crematory, Inc.
31140 Overseas Highway
Big Pine Key, FL 33043

Re: Air General Permit Registration
Human Crematory

Dear Mr. Dean:

Attached for your review and signature are two copies the general permit registration for your crematory. You will need to sign and date the indicated copy and send it, along with a check in the amount of \$100.00, to:

Florida Department of Environmental Protection
Receipts
P. O. Box 3070
Tallahassee, Florida 32315-3070

The second copy contains your permit conditions and must be retained onsite.

The registration becomes effective 30 days after it is received in Tallahassee and is valid for five years. Since the crematory is already operating you must have a visible emissions (VE) test performed within 30 days after the effective date. A copy of that VE test and a corresponding copy of the afterburner temperature chart must be sent to the FDEP district office in Ft. Myers.

If you have any questions concerning the permit registration or we can be of any further assistance to you please do not hesitate to call.

Very Truly Yours,

SOUTHERN ENVIRONMENTAL
SCIENCES, INC.



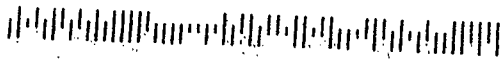
Kenneth M. Roberts, QEP
Vice President

KMR/mr

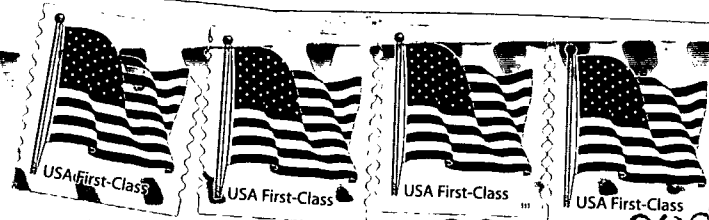
Bureau of Air Management
& Mobile Sources

OCT 03 2007

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SEP 26



SEP 26

DEAN-LOPEZ FUNERAL HOME

418 Simonton Street
Key West, FL 33040
(305) 294-1066

Florida Department of Environmental
Protection

P.O. Box 3070
Tallahassee, Florida 32315-3070

**Florida Department of Environmental Protection
Cash Receiving Application (CRA)
Cashlisting by Deposit #: 281184 thru 281184
Printed: 9/28/2007 4:29:10 PM - Page 11**

Cashlisting: **64307** Cashlist Area: **3755** Description: **DIV OF AIR RESOURCES MGMT.**
 Deposit No: **281184** Date Deposited: **09/28/2007** Contact: **PATTY ADAMS**

Object	Transmittal	Dep.DDN	Receipt Number	Pre- Numbered Receipt	Name	Check Number	Payment Amount	Reference Account	Payment Number	Remittance Number	Fund	
002272	45017	476986	601617		FLORIDA KEYS FUNERAL SERVICES	1020	\$100.00		841407	749895	PFTF	
Object Code 002272 Subtotal:							\$100.00					
002278	45017	476993	601624		MORAN ENVIRONMENTAL RECOVERY,	039906	\$100.00	45417	841430	749902	APCTF	
	45017	476995	601628		ABATEMENT & DEMOLITION SERVICE	09714	\$100.00	45938	841434	749906	APCTF	
	45017	476995	601628		ABATEMENT & DEMOLITION SERVICE	09714	\$100.00		841435	749906	APCTF	
Object Code 002278 Subtotal:							\$300.00					
Cashlisting 64307 Total:							\$400.00					