

RECEIVED

DEC 09 2011

HUMAN CREMATORIES
AIR GENERAL PERMIT REGISTRATION INFORMATION DIVISION OF AIR
RESOURCE MANAGEMENT

Facility Identification Number - If known (seven digit number)

1050134: This December 2011 registration is for two (2) human crematory units – EU 001 (Crawford) & EU 002 (B&L).

1050134-008

Registration Type

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.
- 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):

1050134-007-AO, expiration date: 02/02/2012

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.)

Heath Funeral Chapel, 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 complete registration must be submitted for each.)

Heath Funeral Chapel, Inc.

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

Street Address: 328 South Ingraham Ave.

City: Lakeland

County: Polk

Zip Code: 33801

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

N/A

FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION
2011 DEC -6 PM 1:36
FINANCE & ACCOUNTING REVENUE 54166

Facility Contact – 1050134; December 2011

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

Print Name and Title: **William Schichtel, Vice President and Manager**

Facility Contact Telephone Numbers

Telephone: **(863) 682-0111**

Fax: **(863) 682-0939**

Cell phone: _____

E-mail: **heathfuneralchapel@yahoo.com**

Facility Contact Mailing Address

Organization/Firm: **Heath Funeral Chapel, Inc.**

Mailing Address: **328 South Ingraham Ave.**

City: **Lakeland**

County: **Polk**

Zip Code: **33801**

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

Name and Position Title

Print Name and Title: **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 Mailing Address

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

Mailing Address: **1204 North Wheeler Street**

City: **Plant City**

County: **FL**

Zip Code: **33563**

Government Facility Code (check only one)

- Facility not owned or operated by a federal, state, or local government.
- Facility owned or operated by the federal government.
- Facility owned or operated by the state.
- Facility owned or operated by the county.
- Facility owned or operated by the municipality.
- Facility owned or operated by a water management district.

FINANCE & ACCOUNTING
REVENUE

2011 DEC -6 PM 1:36

FLORIDA DEPARTMENT OF
ENVIRONMENTAL PROTECTION

Emission Unit Details – 1050134; December 2011

MANUFACTURER	MODEL NUMBER	SERIAL NUMBER	RATED CAPACITY
EU 001:			
Crawford Equipment & Engineering Co.	C-1000H	1C9122-0792-ULH	150 lb/hr (500 lb charge)
EU 002:			
B&L Cremation Systems, Inc.	Phoenix II-2	1089-881-08	150 lb/hr (1,000 lb/charge)

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.

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

***Notes:**

The Crawford unit (EU 001) began operation at this facility in 1992 and manufacturer design calculations are not readily available. Under existing Permit No. 1050134-007-AO, the Crawford unit has been operated as an animal crematory, but previously was operated as a human crematory. With this December, 2011 registration, the Crawford is being categorized once again as a human crematory unit.

The B&L unit began operation at this facility in 2008 and residence time calculations are attached.

Facility Fuel & Controls

The two (2) crematory units are designed to burn human remains at the average incineration rate of 150 pounds per hour (lb/hr). The incinerators include primary and secondary (afterburner) chambers, each fired with natural gas.

Emissions of both units are controlled by the afterburners, which maintain minimum secondary chamber combustion zone temperature of 1600°F prior to and during combustion of material in the primary chamber. The secondary chambers are designed to ensure one-second residence time at a gas temperature of 1800°F, and are both equipped with continuous temperature monitor and recorder, and a stack opacity monitoring system.

FLORIDA DEPARTMENT OF
 ENVIRONMENTAL PROTECTION
 2011 DEC -6 PM 1:36
 FINANCE & ACCOUNTING
 REVENUE

**Crematory
and
Opacity Monitor
Information
for
B&L Cremation Systems, Inc.
Model Phoenix II
Human Crematory Unit
EU 002**

FLORIDA DEPARTMENT OF
ENVIRONMENTAL PROTECTION

2011 DEC -6 PM 1:36

FINANCE & ACCOUNTING
REVENUE



Cremation
Systems, Inc.

7205 - 114th Avenue North • Largo, Florida 33773
1-800-622-5411 • 727-541-4666 • Facsimile 727-547-0669

TEMPERATURE CONTROL SEQUENCE

A type "K" thermocouple is placed 19³ ft. down stream of the flame tip to measure temperature, the signal is sent to the *main control panel* where it is received by a FUJI PYZ series temperature controller with digital readout and a DR4200 *temperature recorder*. The FUJI PYZ series temperature controller controls the temperature via a *motorized butterfly valve* located on the *afterburner inlet gas assembly*. Gas demand is controlled by temperature to maintain a steady temperature. The *ignition/cremation burner* is interlocked to the *afterburning temperature* by the FUJI PYZ series temperature controller set point. Combustion cannot start until *temperature set point* is reached. Alarm contacts in the FUJI PYZ series temperature controller are utilized for over (high) temperature conditions. 100° F over set point the *afterburner* will be in maximum low fire and the *ignition/cremation burner* will shut off. The *butterfly valve* located on the *secondary air inlet* is controlled by a separate temperature out put to add air to cool the system. At *set point* the unit will return to normal operation. An optimonitor smoke detector is placed on the stack and set at 10% opacity if emissions occur the alarm will sound; a visual *red warning lamp* located on the *control panel* will illuminate and the *primary burners* will shut off. The *excess air butterfly valve* will open to add air to the *secondary chamber* to oxidize the emissions. After a five (5) minute period the unit will revert to normal operation.

World's Largest Independent Cremation Equipment Manufacturer

FLORIDA DEPARTMENT OF
ENVIRONMENTAL PROTECTION
2011 DEC -6 PM 1:36
FINANCE & ACCOUNTING
REVENUE

**Residence Time Calculations
for
B&L Cremation Systems, Inc.
Model Phoenix II
Human Crematory Unit
EU 002**

FLORIDA DEPARTMENT OF
ENVIRONMENTAL PROTECTION

2011 DEC -6 PM 1:36

FINANCE & ACCOUNTING
REVENUE

**CALCULATIONS FOR PRODUCTS OF COMBUSTION
AND RESIDENCE TIME FOR 150 LB/hr
TYPE IV WASTE. B&L PHOENIX II SERIES CREMATORY**

NATURAL GAS

A. BASIS: 1 LB WASTE

- | | |
|---|--------------------------------------|
| <u>1. 1 lb waste X 1000 Btu/lb waste X 15 lbs air</u>
10,000 Btu | = 1.5 lbs air |
| <u>2. 1 lb waste X 0.10 lb combustible</u>
1 lb waste | = 0.10 lbs of combustibles |
| <u>3. 1 lb waste X 0.85 lb H2O X 1.6*</u>
1 lb waste | = 1.36 lbs of water |
| <u>4. 6,500 Btu aux fuel** X 10.0 cu ft air/cu ft fuel</u>
1,050 Btu/cu ft fuel X 13.35 cu ft air/lb air @ 70f | = 4.64 lbs of air for aux fuel |
| <u>5. 6,500 Btu aux fuel X 0.044 lb fuel/cu ft fuel</u>
1,050 Btu/cu ft fuel | = 0.11 lb of aux fuel |
| 6. Sum = PRODUCTS OF COMBUSTION (POC) | = 7.86 lbs POC per lb
waste @ 70f |

B. RESIDENCE TIME @ 1600 F

1. 7.86 lbs POC/lbs waste X 51.89 cu ft / lb POC @ 1600f X 150 lbs waste / hr
3600 sec/hr
- = 16.99 cu ft / sec @ 1600 f = 17.00 cu ft for 1 second residence time

RESIDENCE TIME @ 1800 F

2. 7.86 lbs POC/lbs waste X 56.93 cu ft /lb POC @ 1800f X 150 lbs waste / hr
3600 sec/hr
- = 18.64 cu ft / sec @ 1800f = 19.00 cu ft for 1 second residence time

* Correction multiplier for dry air and water vapor

** Fuel is natural gas

Referances: Incinerator institute of America.
North American Combustion Handbook
Eclipse Combustion Engineering guide

C. THERMOCOUPLE PLACEMENT.

Secondary chamber operating temperature at > or = to 1600f = 17.00 cu ft from flame tip.
1800f = 19.00 cu ft from flame tip.

FLORIDA DEPARTMENT OF
 ENVIRONMENTAL PROTECTION
 2011 DEC -6 PM 1:36
 FINANCE & ACCOUNTING
 REVENUE

VE Test Reports

**September 7, 2011 Tests
Two (2) Crematory Units: EU 001 & EU 002**

FLORIDA DEPARTMENT OF
ENVIRONMENTAL PROTECTION

2011 DEC -6 PM 1:36

FINANCE & ACCOUNTING
REVENUE

Southern Environmental Sciences, Inc.

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

September 20, 2011

Submitted by email only

Ms. Danielle Henry
Environmental Compliance Manager
FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION
Southwest District Air Section
13051 N Telecom Parkway
Temple Terrace, Florida 33637-0926
Submitted via email: Danielle.D.Henry@dep.state.fl.us

Re: Owner/Company: Heath Funeral Chapel, Inc.
Site Name: Heath Funeral Chapel – Lakeland Facility
Address: 328 South Ingraham Ave, Lakeland, FL 33801
Permit ID No.: 1050134-007-AO

Ms. Henry:

Enclosed is one (1) copy of each of the two (2) visible emissions evaluations performed on the above referenced sources. Also enclosed are the corresponding temperature recording charts. The results of the testing were well within the allowable limits established by the permit for this facility.

Please feel free to call if you have any questions concerning the results.

Regards,

SOUTHERN ENVIRONMENTAL
SCIENCES, INC.



Dale A. Wingler
Environmental Specialist

cc: Mr. Bill Schichtel, Heath Funeral Chapel

FLORIDA DEPARTMENT OF
ENVIRONMENTAL PROTECTION
2011 DEC -6 PM 1:36
FINANCE & ACCOUNTING
REVENUE

Southern Environmental Sciences, Inc.

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

VISIBLE EMISSIONS EVALUATION

COMPANY Heath Funeral Chapel	
UNIT Human Crematory	
ADDRESS 328 S. Ingraham Ave Lakeland, FL 33801	
PERMIT NO. 1050134-007-A0	COMPLIANCE YES <input checked="" type="checkbox"/> NO <input type="checkbox"/>
AIRS NO. 1050134	EU NO. 002
PROCESS RATE Adult Size Body	PERMITTED RATE Adult size body
PROCESS EQUIPMENT B + L Phoenix II	
CONTROL EQUIPMENT Afterburner	
OPERATING MODE Natural Gas Fired	AMBIENT TEMP (°F) START ~75° STOP same
HEIGHT ABOVE GROUND LEVEL START ~25' STOP same	HEIGHT RELATIVE TO OBSERVER START ~20' STOP same
DISTANCE FROM OBSERVER START ~100' STOP same	DIRECTION FROM OBSERVER START ~320° STOP same
EMISSION COLOR None	PLUME TYPE CONTIN. <input type="checkbox"/> INTERMITTENT <input type="checkbox"/> N/A
WATER DROPLETS PRESENT? NO <input checked="" type="checkbox"/> YES <input type="checkbox"/>	IS WATER DROPLET PLUME ATTACHED <input type="checkbox"/> DETACHED <input type="checkbox"/> N/A
POINT IN PLUME AT WHICH OPACITY WAS DETERMINED START Stack Exit STOP same	
DESCRIBE BACKGROUND START clouds/sky STOP same	
BACKGROUND COLOR START green/blue STOP same	SKY CONDITIONS START scattered STOP same
WIND SPEED (MPH) START 10-3 STOP same	WIND DIRECTION START var STOP same
AVERAGE OPACITY FOR HIGHEST PERIOD 0%	RANGE OF OPACITY READINGS MIN. 0% MAX. 0%
<p>SOURCE LAYOUT SKETCH</p> <p style="text-align: right;">Draw North Arrow</p>	
COMMENTS S/N 1089-881-08	

OBSERVATION DATE		START TIME				STOP TIME					
9/7/11		9:37				10:37					
SEC	MIN	0	15	30	45	SEC	MIN	0	15	30	45
0	30	0	0	0	0	30	0	0	0	0	0
1	31	0	0	0	0	31	0	0	0	0	0
2	32	0	0	0	0	32	0	0	0	0	0
3	33	0	0	0	0	33	0	0	0	0	0
4	34	0	0	0	0	34	0	0	0	0	0
5	35	0	0	0	0	35	0	0	0	0	0
6	36	0	0	0	0	36	0	0	0	0	0
7	37	0	0	0	0	37	0	0	0	0	0
8	38	0	0	0	0	38	0	0	0	0	0
9	39	0	0	0	0	39	0	0	0	0	0
10	40	0	0	0	0	40	0	0	0	0	0
11	41	0	0	0	0	41	0	0	0	0	0
12	42	0	0	0	0	42	0	0	0	0	0
13	43	0	0	0	0	43	0	0	0	0	0
14	44	0	0	0	0	44	0	0	0	0	0
15	45	0	0	0	0	45	0	0	0	0	0
16	46	0	0	0	0	46	0	0	0	0	0
17	47	0	0	0	0	47	0	0	0	0	0
18	48	0	0	0	0	48	0	0	0	0	0
19	49	0	0	0	0	49	0	0	0	0	0
20	50	0	0	0	0	50	0	0	0	0	0
21	51	0	0	0	0	51	0	0	0	0	0
22	52	0	0	0	0	52	0	0	0	0	0
23	53	0	0	0	0	53	0	0	0	0	0
24	54	0	0	0	0	54	0	0	0	0	0
25	55	0	0	0	0	55	0	0	0	0	0
26	56	0	0	0	0	56	0	0	0	0	0
27	57	0	0	0	0	57	0	0	0	0	0
28	58	0	0	0	0	58	0	0	0	0	0
29	59	0	0	0	0	59	0	0	0	0	0

VISIBLE EMISSIONS EVALUATOR

Lynn Robinson

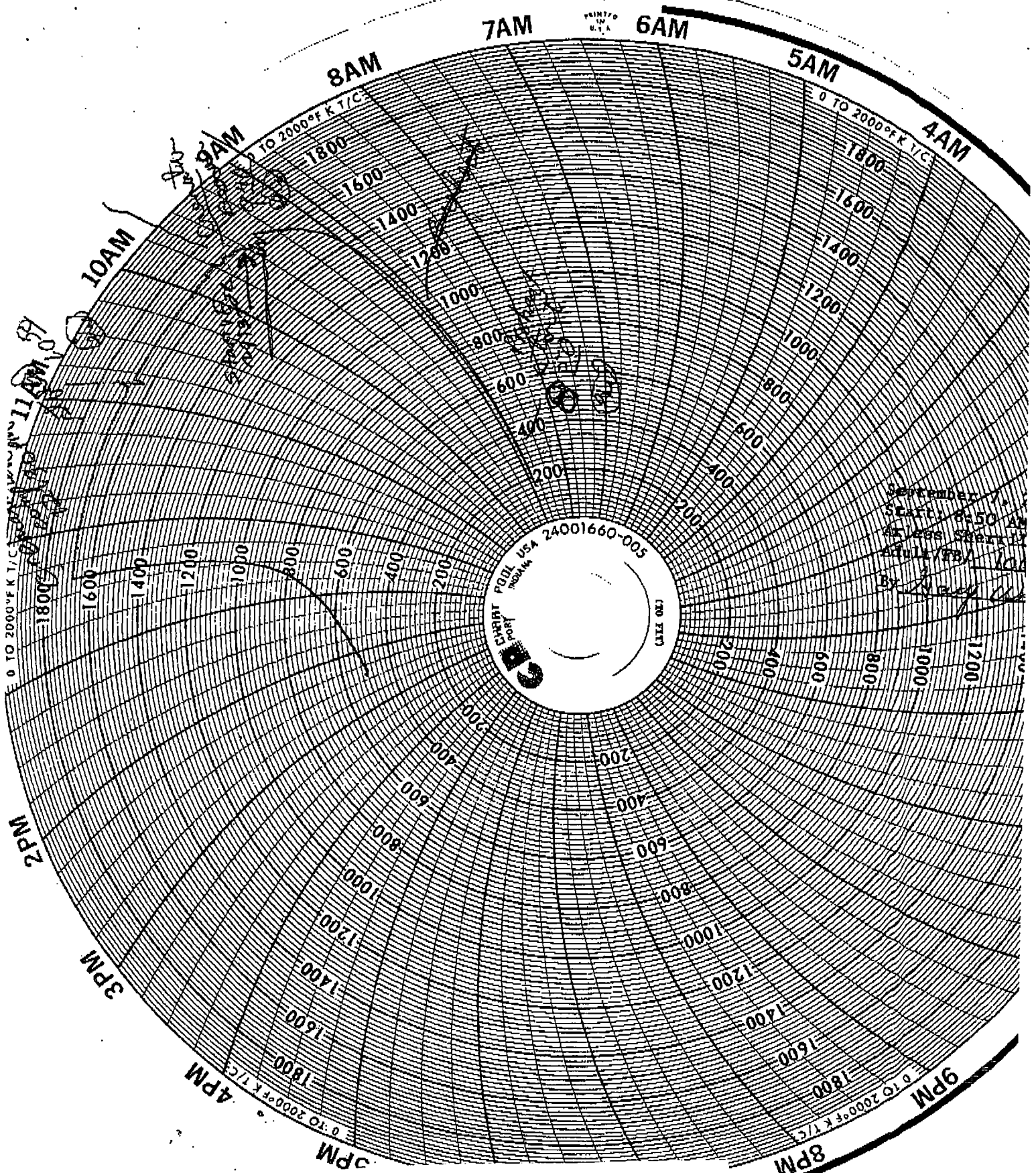
This Is To Certify That The Above Named Observer Has Met The Specifications Of Federal Reference Method 9 And Qualifies As A Visible Emissions Evaluator. Certification Test Conducted By Eastern Technical Associates Of Raleigh, N.C.

ROB449028	396701
Student ID Number	Certificate Number
8/10/2011	2/9/2012
Certification Date	Certification Expiration Date
TAMPA, FL	TMPFOS
Location	East Leffing

I certify that all data provided to the person conducting the test was true and correct to the best of my knowledge.

Signature: Title: **REVENUE ACCOUNTING**

FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION
 211DC-6 PH 7-36



HEATH FUNERAL CHAPEL, INC.
 HUMAN CREMATORY INCINERATOR
 SEPTEMBER 7, 2011

Southern Environmental Sciences, Inc.

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

VISIBLE EMISSIONS EVALUATION

COMPANY Heath Funeral Chapel	
UNIT Animal Crematory	
ADDRESS 328 S. Ingraham Ave. Lakeland, FL 33801	
PERMIT NO. 1050134-00740	COMPLIANCE YES <input checked="" type="checkbox"/> NO <input type="checkbox"/>
AIRS NO. 1050134	EU NO. 001
PROCESS RATE 457lb batch	PERMITTED RATE 500lb batch
PROCESS EQUIPMENT Crawford G1000	
CONTROL EQUIPMENT Afterburner	
OPERATING MODE Natural Gas Fired	AMBIENT TEMP (°F) START ~75° STOP same
HEIGHT ABOVE GROUND LEVEL START ~15' STOP same	HEIGHT RELATIVE TO OBSERVER START ~10' STOP same
DISTANCE FROM OBSERVER START ~100' STOP same	DIRECTION FROM OBSERVER START ~310° STOP same
EMISSION COLOR None	PLUME TYPE CONTIN. <input type="checkbox"/> INTERMITTENT <input type="checkbox"/> N/A
WATER DROPLETS PRESENT? NO <input checked="" type="checkbox"/> YES <input type="checkbox"/>	IS WATER DROPLET PLUME ATTACHED <input type="checkbox"/> DETACHED <input type="checkbox"/> N/A
POINT IN PLUME AT WHICH OPACITY WAS DETERMINED START Stack Exit STOP same	
DESCRIBE BACKGROUND START Roof STOP same	
BACKGROUND COLOR START grey STOP same	SKY CONDITIONS START scattered STOP same
WIND SPEED (MPH) START ~0-3 STOP same	WIND DIRECTION START var STOP same
AVERAGE OPACITY FOR HIGHEST PERIOD 0%	RANGE OF OPACITY READINGS MIN. 0% MAX. 0%
SOURCE LAYOUT SKETCH <div style="text-align: right; font-size: small;">Draw North Arrow</div>	
COMMENTS S/N 1C9122-0792-ULH	

OBSERVATION DATE		START TIME				STOP TIME					
9/7/11		9:15am				10:15					
SEC	MIN	0	15	30	45	SEC	MIN	0	15	30	45
0	30	0	0	0	0	30	0	0	0	0	0
1	31	0	0	0	0	31	0	0	0	0	0
2	32	0	0	0	0	32	0	0	0	0	0
3	33	0	0	0	0	33	0	0	0	0	0
4	34	0	0	0	0	34	0	0	0	0	0
5	35	0	0	0	0	35	0	0	0	0	0
6	36	0	0	0	0	36	0	0	0	0	0
7	37	0	0	0	0	37	0	0	0	0	0
8	38	0	0	0	0	38	0	0	0	0	0
9	39	0	0	0	0	39	0	0	0	0	0
10	40	0	0	0	0	40	0	0	0	0	0
11	41	0	0	0	0	41	0	0	0	0	0
12	42	0	0	0	0	42	0	0	0	0	0
13	43	0	0	0	0	43	0	0	0	0	0
14	44	0	0	0	0	44	0	0	0	0	0
15	45	0	0	0	0	45	0	0	0	0	0
16	46	0	0	0	0	46	0	0	0	0	0
17	47	0	0	0	0	47	0	0	0	0	0
18	48	0	0	0	0	48	0	0	0	0	0
19	49	0	0	0	0	49	0	0	0	0	0
20	50	0	0	0	0	50	0	0	0	0	0
21	51	0	0	0	0	51	0	0	0	0	0
22	52	0	0	0	0	52	0	0	0	0	0
23	53	0	0	0	0	53	0	0	0	0	0
24	54	0	0	0	0	54	0	0	0	0	0
25	55	0	0	0	0	55	0	0	0	0	0
26	56	0	0	0	0	56	0	0	0	0	0
27	57	0	0	0	0	57	0	0	0	0	0
28	58	0	0	0	0	58	0	0	0	0	0
29	59	0	0	0	0	59	0	0	0	0	0

VISIBLE EMISSIONS EVALUATOR

Lynn Robinson

This is To Certify That The Above Named Observer Has Met The Specifications Of Federal Reference Method 9 And Qualifies As A Visible Emissions Evaluator. Certification Test Conducted By Eastern Technical Associates Of Raleigh, N.C.

ROB449028	396701
Student ID Number	Certificate Number
8/10/2011	2/9/2012
Certification Date	Certification Expiration Date
TAMPA, FL	TMPF09
Location	Last Lecture

Lynn Robinson

I certify that all data provided to the person conducting the test was true and correct to the best of my knowledge:

Signature:

[Handwritten Signature]

Title

ME

6AM 5AM 4AM

3AM

8AM

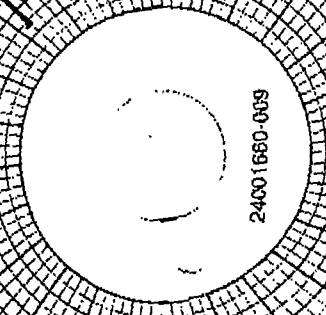
7AM

9AM

ENTERED

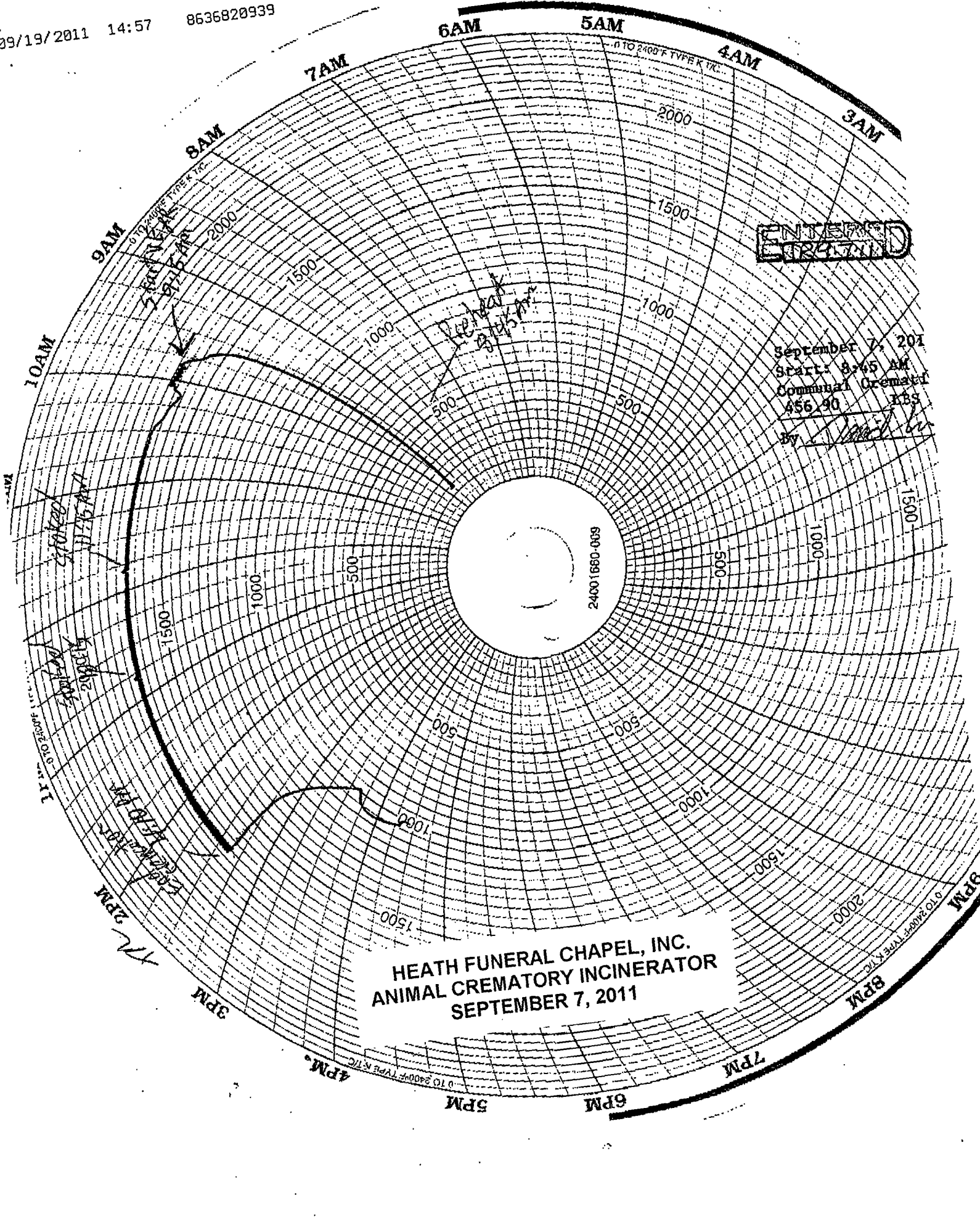
10AM

September 7, 2011
 Start: 8:05 AM
 Communal Cremation
 \$56.90
 By: [Signature]



HEATH FUNERAL CHAPEL, INC.
 ANIMAL CREMATORY INCINERATOR
 SEPTEMBER 7, 2011

Handwritten notes and signatures:
 - 2:00 PM
 - 3:00 PM
 - 4:00 PM
 - 5:00 PM
 - 6:00 PM
 - 7:00 PM
 - 8:00 PM
 - 9:00 PM
 - 10:00 PM
 - [Signatures]



0 TO 2400' TYPE K TIC

0 TO 2400' TYPE K TIC

0 TO 2400' TYPE K TIC

0 TO 2400' TYPE K TIC

5PM

6PM

7PM

8PM

9PM

3PM

4PM

11A

11B

11C

11D

11E

11F

11G

11H

11I

11J

11K

11L

11M

11N

11O

11P

11Q

11R

11S

11T

11U

11V

11W

11X

11Y

11Z

11AA

11AB

11AC

11AD

11AE

11AF

11AG

11AH

11AI

11AJ

11AK

11AL