

**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(4)(o), F.A.C. (\$100 as of the effective date of this form)

0310439-006

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):
0310439-005-AG
- 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.)

James A. Hughey, Jr.

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.)

Jacksonville Pet Crematory, Inc.

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

Street Address: 1815 Corporate Square Boulevard

City: Jacksonville

County: Duval

Zip Code: 32216

RECEIVED
JUN 19 2007

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

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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: James A. Hughey, Jr. Owner

Owner/Authorized Representative Mailing Address

Organization/Firm: Jacksonville Pet Crematory, Inc

Street Address: 1815 Corporate Square Boulevard

City: Jacksonville

County: Duval

Zip Code: 32216

Owner/Authorized Representative Telephone Numbers

Telephone: (904) 731 - 3868

Fax: mail only:jimmyhughey@bellsouth.net

Cell phone (optional): (904) 838 - 0213

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:

Facility Contact Mailing Address

Organization/Firm:

Street Address:

City:

County:

Zip Code:

Facility Contact Telephone Numbers

Telephone:

Fax:


Cell phone (optional):

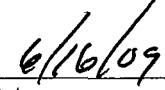
Owner/Authorized Representative Statement

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.


Signature


Date

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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.

See attached process flow diagram and equipment specifications for the installation of a new Matthews Cremation Division Ener-Tek at the proposed facility and the two existing cremation units which are a Matthews Cremation Division Power Pak II and a B & L BLP-500

SPECIFICATIONS - Ener-Tek

1. Equipment Type IE43-ET
 - A. Underwriters Laboratories Listing No. MH14647

2. Dimensions
 - A. Footprint 12' - 4" x 7' - 4"
 - B. Maximum Length 13' - 2½"
 - C. Maximum Width 8' - 7"
 - D. Maximum Height 9' - 6¾"
 - E. Chamber Loading Opening 33" H x 36" W (into chamber)

3. Weight 36,000 lbs.

4. Utility/Air Requirements
 - A. Gross Gas Input, Natural or LP Gas 2.7 million BTU/hr. maximum
 - Running Gas Pressure, Natural Gas 7 inches w.c. or greater
 - Running Gas Pressure, LP Gas 11 inches w.c. or greater
 - B. Electrical Supply 230 volt, 3Ø or 1Ø, 60 hz (other available)
 - C. Air Supply 3,000 cfm

5. Incineration Capacity 250 lbs./hr.

6. Typical Loading Capacity of Waste Types
 - A. Type 4 Material 750 lbs.

7. Construction and Safety Standards Incineration Institute of America, Underwriters Laboratories, Canadian Standards Association

8. Steel Structure Construction
 - A. Frame 2" square tubing
 - B. Front/Rear Plates 3/8" plate
 - C. Floor Plates 3/16" plate
 - D. Outer Side Casing 12 gauge plate
 - E. Inner Side Casing 12 gauge plate

9. Stack Construction (3 wall)
 - A. Inner Wall 12 gauge type 304 s.s., welded seams
 - B. Middle Wall 2" insulating block
 - C. Outer Wall 22 gauge galvanized steel, screwed seams

10. Draft Nozzle Construction Schedule 40 type 316 s.s., welded connections

11. Main Chamber Door Construction
 - A. Steel Shell 3/16" steel, welded with reinforcement
 - B. Outer Refractory 1" insulating block
 - C. Inner Refractory 4½" insulating firebrick

12. Primary Chamber Wall Construction
 - A. Outer Casing Wall 12 gauge plate
 - B. Inner Frame/Air Compartment 2" air compartment

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SPECIFICATIONS - Ener-Tek

- | | |
|--|--|
| C. Inner Casing Wall | 12 gauge plate |
| D. Outer Refractory Wall | 5" insulating block (minimum) |
| E. Inner Refractory Wall | 4½" firebrick |
| 13. Secondary Chamber Wall Construction | |
| A. Outer Casing Wall | 12 gauge plate |
| B. Inner Frame/Air Compartment | 2" air compartment |
| C. Inner Casing Wall | 12 gauge plate |
| D. Outer Refractory Wall | 6" insulating block |
| E. Inner Refractory Wall | 4½" firebrick |
| 14. Refractory Temperature Ratings | |
| A. Standard Firebrick | 3,100° F. |
| B. Insulating Firebrick..... | 2,600° F. |
| C. Castable Refractory (Hearth) | 2,550° F. |
| D. Castable Refractory | 2,550° F. |
| E. Insulating Block..... | 1,900° F. |
| F. Bonding Mortar | 3,200° F. |
| 15. Chamber Volumes (not including external flues, stacks or chimneys) | |
| A. Primary Chamber..... | 82 cubic feet |
| B. Secondary Chamber..... | 125 cubic feet |
| 16. Emission Control Features | |
| A. Secondary Chamber with Afterburner..... | Included |
| B. Opacity Monitor and Controller with Visual and Audible Alarms..... | Included |
| C. Auxiliary Air Control System..... | Included |
| D. Microprocessor Temperature Control System..... | Included |
| 17. Operating Temperatures | |
| A. Primary Chamber..... | 1,400° F. – 2,000° F. |
| B. Secondary Chamber..... | 1,400° F. - 1,800° F. (as required) |
| 18. Secondary Chamber Retention Time | |
| A. Type 4 Material | 250 lbs./hr. |
| Retention Time | > 1 second |
| 19. Ash Removal | |
| | Door functions as a heat shield. Sweep out beneath rear door into hopper which fills collection pan. |
| 20. Safety Interlocks | |
| A. High Gas Pressure | Optional |
| B. Low Gas Pressure | Optional |
| C. Blower Air Pressure | Included |
| D. Door Position | Included |
| E. Opacity | Included |
| F. Motor Starter Function | Included |
| G. Chamber Temperature | Included |

SPECIFICATIONS - Ener-Tek

- H. Motor Overload..... Included
- I. Flame Quality..... Included
- J. Burner Safe Start..... Included

- 22. Burner Description..... The nozzle mix burners used on this cremation equipment are industrial quality and designed for incinerator use.

- 23. Ultraviolet Flame Detection..... Ultraviolet flame detection has proven to be the most reliable means of flame safety. The system is completely sealed in a quartz capsule to eliminate problems, caused by moisture and dust created in the cremation process, which effect flame rod detectors.

- 24. Operating Panel Indicating Lights
 - A. Safe Run..... Included
 - B. Door Closed..... Included
 - C. Pollution Alarm..... Included
 - D. Afterburner On (Secondary Burner)..... Included
 - E. Cremation Burner On (2)..... Included
 - F. Temperature Control..... Included
 - G. Afterburner (Secondary Burner) Reset..... Included
 - H. Cremation Burners Reset (2)..... Included
 - I. Hearth Air..... Included
 - J. Throat Air..... Included

- 25. Automatic Timer Functions
 - A. Master Cycle..... Included
 - B. Afterburner (Secondary Burner)..... Included
 - C. Cremation Burner (2)..... Included
 - D. Hearth Air..... Included
 - E. Throat Air..... Included
 - F. Pollution Monitoring..... Included
 - G. Afterburner (Secondary Burner) Prepurge..... Included
 - H. Cremation Burner Prepurge (2)..... Included
 - I. Cool Down..... Included

- 26. Exterior Finish
 - A. Primer..... 2 coats rust inhibiting
 - B. Finish..... 2 coats textured finish

- 27. Start-Up and Training..... Startup of cremation equipment and training of operators to properly operate and maintain the equipment is performed on-site under actual operating conditions. Included is a comprehensive owner's manual, with details on the equipment, its components and proper operation.

SPECIFICATIONS - Ener-Tek

- 28. Environmental Submittals Complete technical portion of state environmental permits. Engineering calculations, technical data, existing stack test results and equipment blueprints provided.

CREMATOR MASS BALANCE

Matthews Cremation Division
 (formerly Industrial Equipment & Engineering Co.)
 ENER-TEK IV Model IE43-ET
 Crematory Incinerator, Fired on Natural Gas

12-Jun-09

THESE CALCULATIONS HAVE BEEN PREPARED TO EVALUATE THE COMBUSTION PROCESS IN THE ENER-TEK IV CREMATORY INCINERATOR

Firing Rate 250 lb/hr = 63 % of 400 lbs/hr Rated Capacity)
 Excess Air 36 %

THE INCINERATOR INSTITUTE OF AMERICA HAS PUBLISHED THE FOLLOWING SPECIFICATIONS COVERING AVERAGE WASTES.

| WASTE TYPE | TYPE 0 | TYPE 4 |
|------------------------------------|--------|--------|
| BTU PER POUND | 8500 | 1000 |
| POUND ASH PER POUND WASTE | 0.05 | 0.05 |
| POUND MOISTURE PER POUND WASTE | 0.1 | 0.85 |
| POUND COMBUSTIBLES PER POUND WASTE | 0.85 | 0.1 |
| HOURLY CONSUMPTION OF WASTE (LBS) | 5.0 | 245.0 |

| SPECIFICATIONS | | |
|---|-------------|--------------------------|
| PRI. CREMATION BRNR FUEL CONSUMPTION (MMBTU/HR) | 0.45 | 0.7 MMBTU /HR UL RATING |
| SEC. CREMATION BRNR FUEL CONSUMPTION (MMBTU/HR) | 0.45 | 0.45 MMBTU /HR UL RATING |
| PRIMARY CHAMBER VOLUME (CU.FT) | 82 | |
| HEARTH AREA (SQ.FT) | 26.4 | |
| AFTER BURNER FUEL CONSUMPTION (MMBTU/HR) | 1.2 | |
| ADDITIONAL COMBUSTION AIR SUPPLIED | | |
| THROAT AIR (SCFM) | 150 | 3 " w.c. @ test tap |
| HEARTH AIR (SCFM) | 100 | 4 " w.c. @ test tap |
| SEC. CHAMBER OPERATING TEMPERATURE (°F) | 1800 | |
| SECONDARY CHAMBER VOLUME (CU. FT) | 125 | |
| SEC. CHAMB. CROSS-SECTIONAL AREA (SQ. FT) | 4 | |
| FLAME PORT AREA (SQ. FT) | 9 | |

1. TOTAL FLUE PRODUCTS

A. PRI. CREMATION BRNR NATURAL GAS USAGE

$$\frac{450000 \text{ BTU/HR}}{1000 \text{ BTU/CF}} = 450 \text{ CFH} = 8 \text{ CFM}$$

B. COMBUSTION AIR FOR PRI. CREMATION BRNR

$$\frac{450 \text{ CF}}{\text{HR}} \times \frac{2 \text{ CF O}_2}{\text{CF}} \times \frac{1 \text{ CF AIR}}{0.21 \text{ CF O}_2} = 4327 \text{ CFH} = 72 \text{ CFM (Stoichiometric)}$$

$$1658.5 \times 5.3 \text{ SI} \times 0.78 \times 1.05 = 4848 \text{ CFH} = 81 \text{ CFM (Actual)}$$

C. SEC. CREMATION BRNR NATURAL GAS USAGE

$$\frac{450000 \text{ BTU/HR}}{1000 \text{ BTU/CF}} = 450 \text{ CFH} = 8 \text{ CFM}$$

D. COMBUSTION AIR FOR SEC. CREMATION BRNR

$$\frac{450 \text{ CF}}{\text{HR}} \times \frac{2 \text{ CF O}_2}{\text{CF}} \times \frac{1 \text{ CF AIR}}{0.21 \text{ CF O}_2} = 4327 \text{ CFH}$$

$$= 72 \text{ CFM (Stoichiometric)}$$

$$1658.5 \times 5.3 \text{ SI} \times 0.78 \times 1 \times 0.5 = 4848 \text{ CFH}$$

$$= 81 \text{ CFM (Actual)}$$

E. AFTER BURNER NATURAL GAS USAGE

$$\frac{1200000 \text{ BTU/HR}}{1000 \text{ BTU/CF}} = 1200 \text{ CFH}$$

$$= 20 \text{ CFM}$$

F. COMBUSTION AIR FOR AFTER BURNER

$$\frac{1200 \text{ CF}}{\text{HR}} \times \frac{2 \text{ CF O}_2}{\text{CF}} \times \frac{1 \text{ CF AIR}}{0.21 \text{ CF O}_2} = 11538 \text{ CFH}$$

$$= 192 \text{ CFM (Stoichiometric)}$$

$$1658.5 \times 5.3 \text{ SI} \times 0.78 \times 1 \times 2.5 = 10841 \text{ CFH}$$

$$= 181 \text{ CFM (Actual)}$$

G. PRODUCTS FROM TYPE 0 WASTE (CONTAINER)

$$0.95 \text{ LBS/LB BURNED} \times 5 \text{ LB/HR BURN RATE} = 5 \text{ LBS/HOUR}$$

$$= 63 \text{ CFH}$$

$$= 1 \text{ CFM}$$

H. PRODUCTS FROM TYPE 4 WASTE (TISSUE)

$$0.95 \text{ LBS/LB WASTE} \times 245 \text{ LB/HR BURN RATE} = 233 \text{ LBS/HOUR}$$

$$= 3098 \text{ CFH}$$

$$= 52 \text{ CFM}$$

I. ADDITIONAL COMBUSTION AIR (HEARTH & THROAT AIR)

$$\frac{9000 \text{ CFH}}{6000 \text{ CFH}} = 150 \text{ CFM}$$

$$= 100 \text{ CFM}$$

$$= 125 \text{ CFM/CREMATION}$$

J. TOTAL FLUE PRODUCTS

$$= \underline{\underline{555 \text{ SCFM}}}$$

2. VELOCITY AND TIME CALCULATIONS

A. TOTAL PRODUCTS ACFM @ 1800 °F

$$\frac{2260 \text{ °RANKINE}}{530 \text{ °RANKINE}} \times 555.0 \text{ CFM} = 2366 \text{ ACFM}$$

B. RETENTION TIME

$$\frac{125 \text{ CU. FT}}{2366 \text{ ACFM}} \times \frac{60 \text{ SECONDS}}{1 \text{ MINUTE}} = 3.2 \text{ SECONDS}$$

C. VELOCITY IN FLAME PORT

$$\frac{2366 \text{ ACFM}}{9 \text{ SQ. FT}} \times \frac{1 \text{ MINUTE}}{60 \text{ SECONDS}} = 4.4 \text{ FEET/SECOND}$$

E. VELOCITY IN SECONDARY CHAMBER

$$\frac{2366 \text{ ACFM}}{4 \text{ SQ. FT}} \times \frac{1 \text{ MINUTE}}{60 \text{ SECONDS}} = 9.9 \text{ FEET/SECOND}$$

PROJECT PARTICIPANTS AND CERTIFICATION

QUALITY VAULTS
IE43-ET HUMAN CREMATORY
Ocoee, Florida

March 15, 2002

Project Participants:

| | |
|--------------------|---|
| Byron Nelson | Conducted the field testing. |
| Kenneth M. Roberts | |
| Mark S. Gierke | |
| Terry Wilson | |
| Glen Jackson | |
| Kenneth M. Roberts | Performed the visible emissions evaluation. |
| Kenneth M. Roberts | |
| Mark S. Gierke | Performed laboratory analyses. |
| Kenneth M. Roberts | Computed test results. |
| Kenneth M. Roberts | Prepared the final test report. |

Certification:

I certify that to my knowledge all data submitted in this report is true and correct.



Kenneth M. Roberts, QEP

EMISSIONS TEST SUMMARY

Company: **QUALITY VAULTS**
 Source: **IE43-ET HUMAN CREMATORY**

| | Run 1 | Run 2 | Run 3 | |
|---|---------|---------|---------|----------------|
| Date of Run | 3/15/02 | 3/15/02 | 3/15/02 | |
| Start Time (24-hr. clock) | 0941 | 1258 | 1536 | |
| End Time (24-hr. clock) | 1046 | 1400 | 1638 | |
| Vol. Dry Gas Sampled Meter Cond. (DCF) | 39.900 | 40.380 | 36.919 | |
| Gas Meter Calibration Factor | 1.000 | 1.000 | 1.000 | |
| Barometric Pressure at Barom. (in. Hg.) | 30.14 | 30.14 | 30.18 | |
| Elev. Diff. Manom. to Barom. (ft.) | 0 | 0 | 0 | |
| Vol. Gas Sampled Std. Cond. (DSCF) | 38.950 | 38.504 | 35.131 | |
| Vol. Liquid Collected Std. Cond. (SCF) | 3.046 | 4.144 | 4.064 | |
| Moisture in Stack Gas (% Vol.) | 7.3 | 9.7 | 10.4 | |
| Molecular Weight Dry Stack Gas | 29.81 | 29.62 | 29.58 | |
| Molecular Weight Wet Stack Gas | 28.96 | 28.49 | 28.38 | |
| Stack Gas Static Press. (in. H ₂ O gauge) | -0.02 | -0.03 | -0.04 | |
| Stack Gas Static Press. (in. Hg. abs.) | 30.14 | 30.14 | 30.18 | |
| Average Square Root Velocity Head | 0.180 | 0.186 | 0.166 | |
| Average Orifice Differential (in. H ₂ O) | 1.179 | 1.216 | 0.953 | |
| Average Gas Meter Temperature (°F) | 86.4 | 99.5 | 101.0 | |
| Average Stack Gas Temperature (°F) | 1196.5 | 1246.0 | 1223.9 | |
| Pitot Tube Coefficient | 0.84 | 0.84 | 0.84 | |
| Stack Gas Vel. Stack Cond. (ft./sec.) | 17.85 | 18.83 | 16.73 | |
| Effective Stack Area (sq. ft.) | 2.18 | 2.18 | 2.18 | |
| Stack Gas Flow Rate Std. Cond. (DSCFM) | 696 | 694 | 621 | |
| Stack Gas Flow Rate Stack Cond. (ACFM) | 2,336 | 2,465 | 2,189 | |
| Net Time of Run (min.) | 60 | 60 | 60 | |
| Nozzle Diameter (in.) | 0.593 | 0.593 | 0.593 | |
| Percent Isokinetic | 106.2 | 105.3 | 107.4 | |
| Oxygen (%) | 11.3 | 12.1 | 11.5 | |
| Particulate Collected (mg.) | 42.4 | 34.4 | 49.6 | |
| | | | | <u>Average</u> |
| Particulate Emissions (gr./DSCF) | 0.017 | 0.014 | 0.022 | 0.017 |
| Particulate Emissions (gr./DSCF @ 7% O ₂) | 0.024 | 0.022 | 0.032 | 0.026 |
| Particulate Emissions (lb./hr.) | 0.100 | 0.082 | 0.116 | 0.099 |
| CO Emissions (ppm) | 5.08 | 4.17 | 5.25 | 4.83 |
| CO Emissions (ppm @ 7% O ₂) | 7.33 | 6.56 | 7.74 | 7.21 |
| CO Emissions (lb./hr.) | 0.015 | 0.013 | 0.014 | 0.014 |
| NO _x Emissions (ppm) | 130.3 | 302.3 | 190.2 | 207.6 |
| NO _x Emissions (lb./hr.) | 0.65 | 1.50 | 0.85 | 1.00 |
| VOC Emissions (ppm) | 8.00 | 0.38 | 1.58 | 3.32 |
| VOC Emissions (lb./hr.) | 0.041 | 0.002 | 0.008 | 0.017 |
| SO ₂ Collected (mg) | 12.0 | 56.5 | 36.0 | 34.8 |
| SO ₂ Emissions (lb./hr.) | 0.057 | 0.134 | 0.084 | 0.092 |
| HCL Collected (mg) | 0.1 | 4.2 | 3.3 | 2.5 |
| HCL Emissions (lb./hr.) | 0.002 | 0.094 | 0.067 | 0.054 |

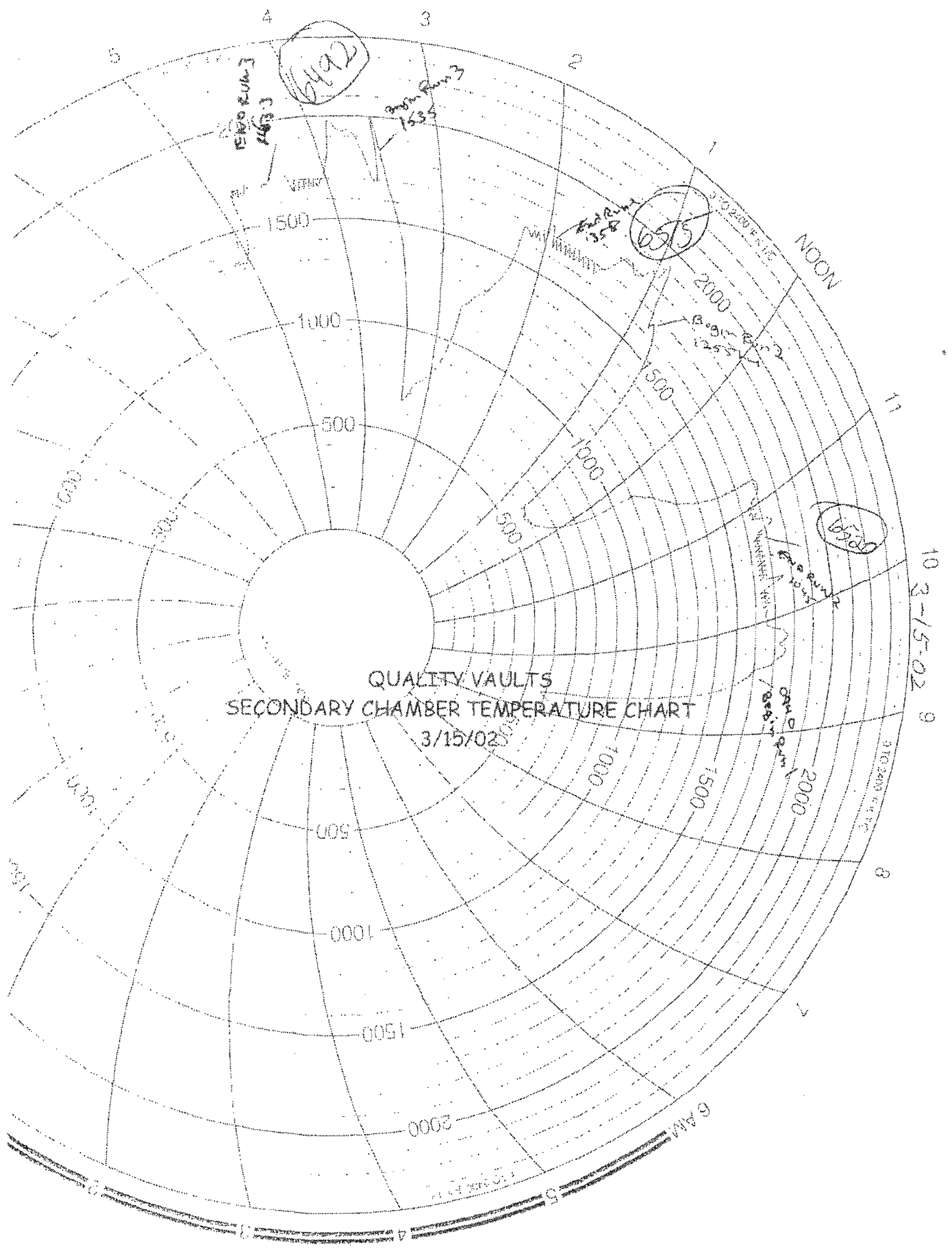
Note: Standard conditions 68°F, 29.92 in. Hg

HCl EMISSIONS TEST SUMMARY

Company: QUALITY VAULTS
 Source: IE43-ET HUMAN CREMATORY

| | Run 1 | Run 2 | Run 3 |
|---|------------|------------|------------|
| Date of Run | 03/15/2002 | 03/15/2002 | 03/15/2002 |
| Start Time (24-hr. clock) | 0940 | 1255 | 1535 |
| End Time (24-hr. clock) | 1045 | 1400 | 1639 |
| Vol. Dry Gas Sampled Meter Cond. (DL) | 120.890 | 121.480 | 120.340 |
| Gas Meter Calibration Factor | 0.980 | 0.980 | 0.980 |
| Barometric Pressure at Barom. (in. Hg.) | 30.14 | 30.14 | 30.18 |
| Moisture in Stack Gas (% vol.) | 7.3 | 9.7 | 10.4 |
| Elev. Diff. Manom. to Barom. (ft.) | 0 | 0 | 0 |
| Vol. Gas Sampled Std. Cond. (DSCF) | 4.15822 | 4.11255 | 4.03851 |
| Average Gas Meter Temperature (°F) | 75.2 | 83.8 | 89.3 |
| Stack Gas Flowrate (DSCFM) | 696 | 694 | 621 |
| Net Time of Run (min.) | 60 | 60 | 60 |
| HCl Collected (mg) | 0.1 | 4.2 | 3.3 |
| HCl Emissions (lb./hr.) | 0.0022 | 0.0937 | 0.0671 |
| Avg. HCl Emissions (lb./hr.) | 0.0544 | | |

Note: Standard conditions 68 F, 29.92 in. Hg



QUALITY VAULTS
 SECONDARY CHAMBER TEMPERATURE CHART
 3/15/02

2492

6575

6580

Room Run 1
 1533

Room Run 3
 1533

Room Run 2
 1533

Room Run 2
 1533

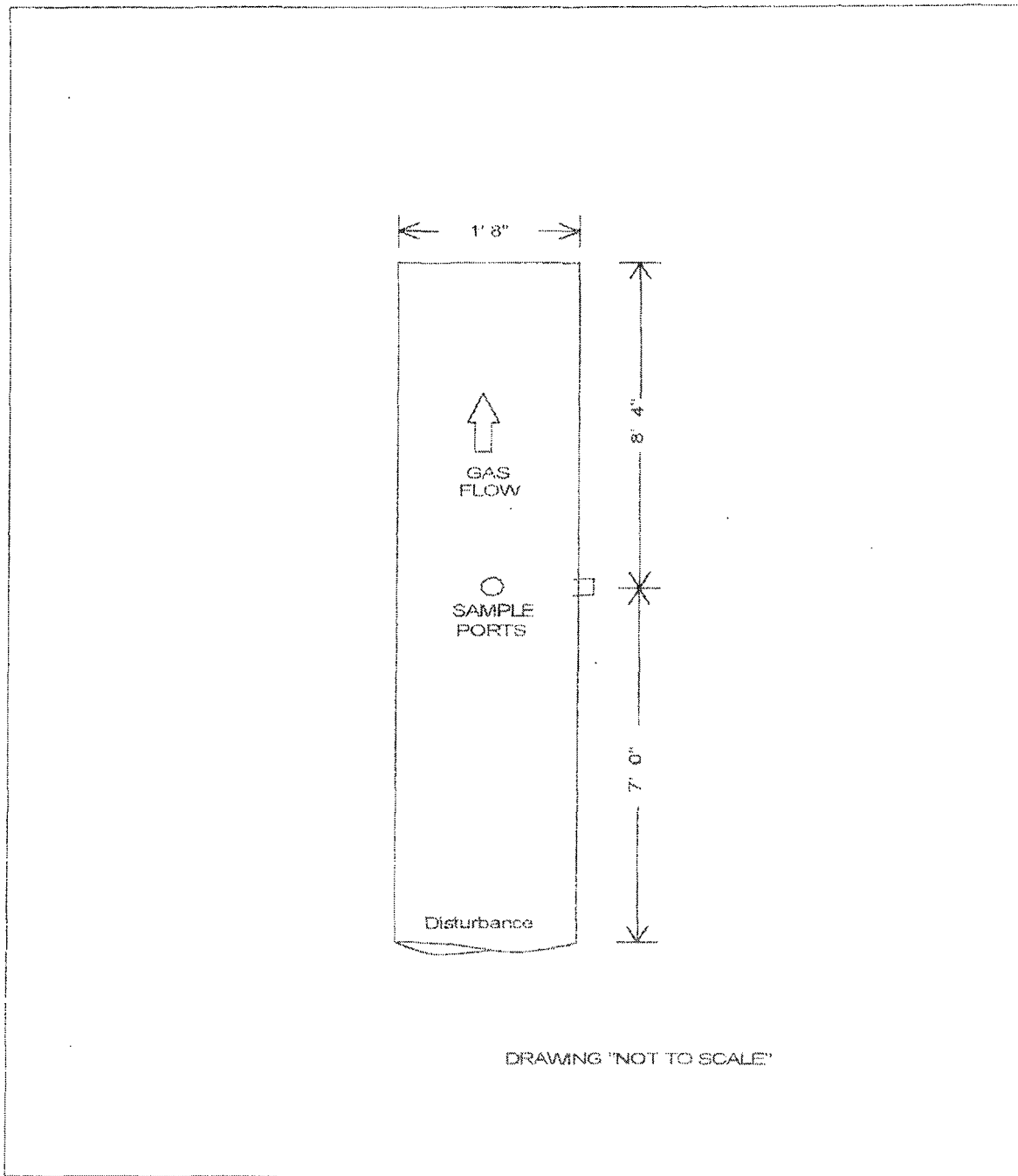
Room Run 2
 1533

Room Run 2
 1533

NOON

10 3-15-02 9

6 AM



Stack dimensions and sample port locations, Quality Vaults, human crematory, Ocoee, Florida.

SOUTHERN ENVIRONMENTAL SCIENCES, INC.

1204 North Wheeler Street, Plant City, Florida 33566 (813)752-5014

VISIBLE EMISSIONS EVALUATION

| | |
|--|---|
| COMPANY <i>Quality Vaults</i> | |
| UNIT <i>Crematory Incinerator</i> | |
| ADDRESS <i>Bluford Ave.</i> | |
| <i>Ocoee, FL</i> | |
| PERMIT NO. | COMPLIANCE? YES <input checked="" type="checkbox"/> NO <input type="checkbox"/> |
| AIRS NO. | EU NO. <i>001</i> |
| PROCESS RATE <i>Cont = 55lb / body = 210</i> | PERMITTED RATE <i>Adult size human body</i> |
| PROCESS EQUIPMENT <i>IEE Energetex model Incinerator</i> | |
| CONTROL EQUIPMENT <i>1600° A Starburner</i> | |
| OPERATING MODE <i>Propane</i> <i>Gas Fuel</i> | AMBIENT TEMP. (°F) START <i>83°</i> STOP <input checked="" type="checkbox"/> |
| HEIGHT ABOVE GROUND LEVEL START <i>25'</i> STOP <input checked="" type="checkbox"/> | HEIGHT REL. TO OBSERVER START <i>25'</i> STOP <input checked="" type="checkbox"/> |
| DISTANCE FROM OBSERVER START <i>25'</i> STOP <input checked="" type="checkbox"/> | DIRECTION FROM OBSERVER START <i>0°</i> STOP <input checked="" type="checkbox"/> |
| EMISSION COLOR <i>None</i> | PLUME TYPE <i>W/F</i> CONTIN. <input type="checkbox"/> INTERMITTENT <input type="checkbox"/> |
| WATER DROPLETS PRESENT NO <input checked="" type="checkbox"/> YES <input type="checkbox"/> | IS WATER DROPLET PLUME ATTACHED <input type="checkbox"/> DETACHED <input checked="" type="checkbox"/> |
| POINT IN THE PLUME AT WHICH OPACITY WAS DETERMINED START <i>Stack Exit</i> STOP <input checked="" type="checkbox"/> | |
| DESCRIBE BACKGROUND START <i>Sky / Trees</i> STOP <input checked="" type="checkbox"/> | |
| BACKGROUND COLOR START <i>Blue/Clear</i> STOP <input checked="" type="checkbox"/> | SKY CONDITIONS START <i>Clean</i> STOP <input checked="" type="checkbox"/> |
| WIND SPEED (MPH) START <i>2-5</i> STOP <input checked="" type="checkbox"/> | WIND DIRECTION START <i>SE</i> STOP <input checked="" type="checkbox"/> |
| AVERAGE OPACITY FOR HIGHEST PERIOD | RANGE OF OPAC. READINGS MIN. MAX. |
| SOURCE LAYOUT SKETCH DRAW NORTH ARROW | |
| | |
| COMMENTS | |

| OBSERVATION DATE | | START TIME | | | | STOP TIME | | | |
|--|---|--------------|----|----|-----|-------------|----|----|----|
| <i>3/15/02</i> | | <i>12:55</i> | | | | <i>1:55</i> | | | |
| SEC | 0 | 15 | 30 | 45 | SEC | 0 | 15 | 30 | 45 |
| MIN | | | | | MIN | | | | |
| 0 | 0 | 0 | 0 | 0 | 30 | 0 | 0 | 0 | 0 |
| 1 | 0 | 0 | 0 | 0 | 31 | 0 | 0 | 0 | 0 |
| 2 | 0 | 0 | 0 | 0 | 32 | 0 | 0 | 0 | 0 |
| 3 | 0 | 0 | 0 | 0 | 33 | 0 | 0 | 0 | 0 |
| 4 | 0 | 0 | 0 | 0 | 34 | 0 | 0 | 0 | 0 |
| 5 | 0 | 0 | 0 | 0 | 35 | 0 | 0 | 0 | 0 |
| 6 | 0 | 0 | 0 | 0 | 36 | 0 | 0 | 0 | 0 |
| 7 | 0 | 0 | 0 | 0 | 37 | 0 | 0 | 0 | 0 |
| 8 | 0 | 0 | 0 | 0 | 38 | 0 | 0 | 0 | 0 |
| 9 | 0 | 0 | 0 | 0 | 39 | 0 | 0 | 0 | 0 |
| 10 | 0 | 0 | 0 | 0 | 40 | 0 | 0 | 0 | 0 |
| 11 | 0 | 0 | 0 | 0 | 41 | 0 | 0 | 0 | 0 |
| 12 | 0 | 0 | 0 | 0 | 42 | 0 | 0 | 0 | 0 |
| 13 | 0 | 0 | 0 | 0 | 43 | 0 | 0 | 0 | 0 |
| 14 | 0 | 0 | 0 | 0 | 44 | 0 | 0 | 0 | 0 |
| 15 | 0 | 0 | 0 | 0 | 45 | 0 | 0 | 0 | 0 |
| 16 | 0 | 0 | 0 | 0 | 46 | 0 | 0 | 0 | 0 |
| 17 | 0 | 0 | 0 | 0 | 47 | 0 | 0 | 0 | 0 |
| 18 | 0 | 0 | 0 | 0 | 48 | 0 | 0 | 0 | 0 |
| 19 | 0 | 0 | 0 | 0 | 49 | 0 | 0 | 0 | 0 |
| 20 | 0 | 0 | 0 | 0 | 50 | 0 | 0 | 0 | 0 |
| 21 | 0 | 0 | 0 | 0 | 51 | 0 | 0 | 0 | 0 |
| 22 | 0 | 0 | 0 | 0 | 52 | 0 | 0 | 0 | 0 |
| 23 | 0 | 0 | 0 | 0 | 53 | 0 | 0 | 0 | 0 |
| 24 | 0 | 0 | 0 | 0 | 54 | 0 | 0 | 0 | 0 |
| 25 | 0 | 0 | 0 | 0 | 55 | 0 | 0 | 0 | 0 |
| 26 | 0 | 0 | 0 | 0 | 56 | 0 | 0 | 0 | 0 |
| 27 | 0 | 0 | 0 | 0 | 57 | 0 | 0 | 0 | 0 |
| 28 | 0 | 0 | 0 | 0 | 58 | 0 | 0 | 0 | 0 |
| 29 | 0 | 0 | 0 | 0 | 59 | 0 | 0 | 0 | 0 |
| Observer: <i>Kenneth M. Roberts</i> | | | | | | | | | |
| Certified by: <i>FOEP</i> Certified at: <i>Tampa</i> | | | | | | | | | |
| Date Certified: <i>2/20/02</i> Exp. Date: <i>8/20/02</i> | | | | | | | | | |
| I certify that all data provided to the person conducting the test was true and correct to the best of my knowledge: | | | | | | | | | |
| Signature: | | | | | | | | | |
| Title: | | | | | | | | | |

SPECIFICATIONS- Power-Pak II Pet

1. Equipment Type Matthews Cremation Division; Power-Pak II
 - A. Model No..... IE43-PPII
 - B. Underwriters Laboratories Listing and File No. Listing No. 87E8; File No. MH14647

2. Dimensions
 - A. Footprint 12' – 6 ½" x 6' – 8"
 - B. Maximum Length..... 14' - 6½"
 - C. Maximum Width 6' -5"
 - D. Maximum Height..... 8' - 4"
 - E. Chamber Loading Opening 25¾" H x 39" W (into chamber)

3. Weight 24,000 lbs.

4. Utility/Air Requirements
 - A. Gross Gas Input, Natural or LP Gas..... 2,400,000 BTU/hr. max.
 Running Gas Pressure, Natural Gas..... 7 inches w.c. or greater
 Running Gas Pressure, LP Gas..... 11 inches w.c. or greater
 - B. Electrical Supply..... 230 volt, 3Ø or 1Ø, 60 hz (other available)
 - C. Air Supply 2,500 cfm

5. Incineration Capacity
 - A. Type 4 Material 200 lbs./hr.

6. Typical Loading Capacity of Material
 - A. Type 4 Material 400 to 750 lbs.

7. Construction and Safety Standards..... Incineration Institute of America, Underwriters Laboratories

8. Steel Structure Construction
 - A. Frame 2" square tubing
 - B. Front/Rear Plates 3/8" plate
 - C. Floor Plates 3/16" plate
 - D. Outer Side Casing..... 12 gauge plate
 - E. Inner Side Casing..... 12 gauge plate

9. Stack Construction
 - A. Inner Wall 4 ½" insulating firebrick or castable
 - B. Outer Wall 12 gauge plate, type 304 s.s., welded seams

10. Draft Nozzle Construction..... Schedule 40 type 316 s.s. pipe

11. Main Chamber Door Construction
 - A. Steel Shell 3/16" steel, welded with reinforcement
 - B. Outer Refractory..... 1" insulating block
 - C. Inner Refractory..... 4½" insulating firebrick

12. Primary Chamber Wall Construction

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 1:19

SPECIFICATIONS- Power-Pak II Pet

- A. Outer Casing Wall 12 gauge plate
- B. Inner Frame/Air Compartment..... 2" air compartment
- C. Inner Casing Wall 12 gauge plate
- D. Outer Refractory Wall..... 5" insulating block
- E. Inner Refractory Wall..... 4½" firebrick

13. Secondary Chamber Wall Construction

- A. Outer Casing Wall 12 gauge plate
- B. Inner Frame/Air Compartment..... 2" air compartment
- C. Inner Casing Wall 12 gauge plate
- D. Outer Refractory Wall..... 6" insulating block
- E. Inner Refractory Wall..... 4½" firebrick

14. Refractory Temperature Ratings

- A. Standard Firebrick 3,100° F.
- B. Insulating Firebrick 2,600° F.
- C. Castable Refractory (Hearth) 2,800° F.
- D. Castable Refractory..... 2,550° F.
- E. Insulating Block 1,900° F.
- F. Bonding Mortar..... 3,200° F.

15. Chamber Volumes (not including external flues, stacks or chimneys)

- A. Primary Chamber..... 64 cubic feet
- B. Secondary Chamber..... 74 cubic feet

16. Emission Control Features

- A. Secondary Chamber with Afterburner Included
- B. Opacity Monitor and Controller with Visual and Audible Alarms..... Included
- C. Auxiliary Air Control System..... Included
- D. Microprocessor Temperature Control System..... Included

17. Operating Temperatures

- A. Primary Chamber..... 1,200° F. - 1,800° F.
- B. Secondary Chamber..... 1,400° F. - 1,800° F. (as required)

18. Secondary Chamber Retention Time

- A. Type 4 Material > 1 second

19. Ash Removal

Door functions as a heat shield. Sweep out beneath front door into a hopper that fills a collection pan.

20. Safety Interlocks

- A. High Gas Pressure Optional
- B. Low Gas Pressure..... Optional
- C. Blower Air Pressure..... Included
- D. Door Position..... Included
- E. Opacity Included

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 2003 JUN 19 PM 1:19
 2003 JUN 19 PM 1:19

SPECIFICATIONS- Power-Pak II Pet

- F. Motor Starter Function..... Included
- G. Chamber Temperature Included
- H. Motor Overload..... Included
- I. Flame Quality Included
- J. Burner Safe Start..... Included

22. Burner Description..... The nozzle mix burners used on this cremation equipment are industrial quality and designed for incinerator use.

23. Ultraviolet Flame Detection Ultraviolet flame detection has proven to be the most reliable means of flame safety. The system is completely sealed in a quartz capsule to eliminate problems, caused by moisture and dust created in the cremation process, which effect flame rod detectors.

24. Operating Panel Indicating Lights
- A. Safe Run Included
 - B. Door Closed Included
 - C. Pollution Alarm..... Included
 - D. Afterburner On (Secondary Burner) Included
 - E. Cremation Burners On..... Included
 - F. Low Fire Cremation Burner On..... Included
 - G. Afterburner (Secondary Burner) Reset..... Included
 - H. Cremation Burners Reset..... Included
 - I. Hearth Air Included
 - J. Throat Air Off..... Included

25. Automatic Timer Functions
- A. Master Cycle Included
 - B. Afterburner (Secondary Burner) Included
 - C. Cremation Burners Included
 - D. Low Fire Cremation Burner Included
 - E. Hearth Air Included
 - F. Throat Air..... Included
 - G. Pollution Monitoring..... Included
 - H. Afterburner (Secondary Burner) Prepurge Included
 - I. Cremation Burner Prepurge Included
 - J. Cool Down..... Included

26. Exterior Finish
- A. Primer..... 2 coats rust inhibiting
 - B. Finish..... 2 coats textured finish

27. Start-Up and Training..... Startup of cremation equipment and training of operators to properly operate and maintain the equipment is performed on-site under actual operating conditions. Included is a comprehensive owner's manual, with details on

01:11:10
 01:11:10
 01:11:10

SPECIFICATIONS- Power-Pak II Pet

the equipment, its components and proper operation.

- 28. Environmental Submittals..... Complete technical portion of state environmental permits. Engineering calculations, technical data, existing stack test results and equipment blueprints provided.

CREMATOR CLEARANCES

RECOMMENDED

MINIMUM

| | | |
|---------------|-------------------|--------------------|
| TOP: ② | 2 FEET [610 mm] | 6 INCHES [152 mm] |
| CABINET SIDE: | 4 FEET [1.22 m] | 4 FEET [1.22 m] |
| OTHER SIDE: | 2 FEET [610 mm] | 6 INCHES [152 mm] |
| FRONT: | 9 FEET [2.74 m] | 8 FEET [2.44 m] |
| REAR: | 3 FEET [0.91 m] | 32 INCHES [812 mm] |
| STACK: | 6 INCHES [152 mm] | 6 INCHES [152 mm] |

1. FOR CLEARANCES OTHER THAN THOSE SHOWN, OR FOR SPECIAL REQUIREMENTS, CONSULT YOUR MCD REP.

② FROM HIGHEST POINT ON UNIT.

3. CONTROL CABINET MOUNTS ON UNIT'S LEFT OR RIGHT SIDES, OR REMOTELY. (SEE PLAN VIEW, SHEET 1).

4. REAR OF UNIT REFERS TO THE "BACK PLATE", RATHER THAN THE BACK OF THE "WHISPER SHIELD". (SEE PLAN VIEW, SHEET 1).

CREMATOR REQUIREMENTS

FUEL: A PRESSURE REGULATOR ADJUSTABLE TO 7" [178 mm] W.C. FOR NATURAL GAS, OR 11" [279 mm] W.C. FOR LP GAS.

CAPACITY: RANGES FROM 2.0 TO 3.0 MILLION BTU/HR [2.1 TO 3.1 MILLION KILOJOULES/HR] DEPENDING UPON AMOUNT OF BURNERS.

ELECTRICAL: 230 VOLT, 3Ø, (70A BREAKER) AND 115v (10A BREAKER), OR 230 VOLT, 1Ø, (100A BREAKER) AND 115v (10A BREAKER) 50/60 HERTZ

AIR: LOUVER NEAR THE REAR OF THE UNIT CAPABLE OF PASSING 2,500 CU FT/MIN [70.8 CU M/MIN] OF FREE AIR (36" X 36") [914 mm X 914 mm].

STACK INSTALLATION INSTRUCTIONS

1. APPLY A 1/2" THICK MORTAR JOINT TO EXPOSED REFRACTORY SURFACE IN STACK RING. LOWER THE BASE STACK SECTION (B) ONTO STACK RING (A) AND FASTEN WITH HARDWARE PROVIDED (NO MORE THAN (2) STACK SECTIONS SHALL BE LIFTED TOGETHER). REPEAT PROCESS FOR REMAINING STACK SECTIONS. IF SECTIONS OF VARYING LENGTHS ARE SUPPLIED, ASSEMBLE AS TO AVOID FLANGES & LIFTING EYES INTERFERING WITH RAIN COLLAR LOCATION.

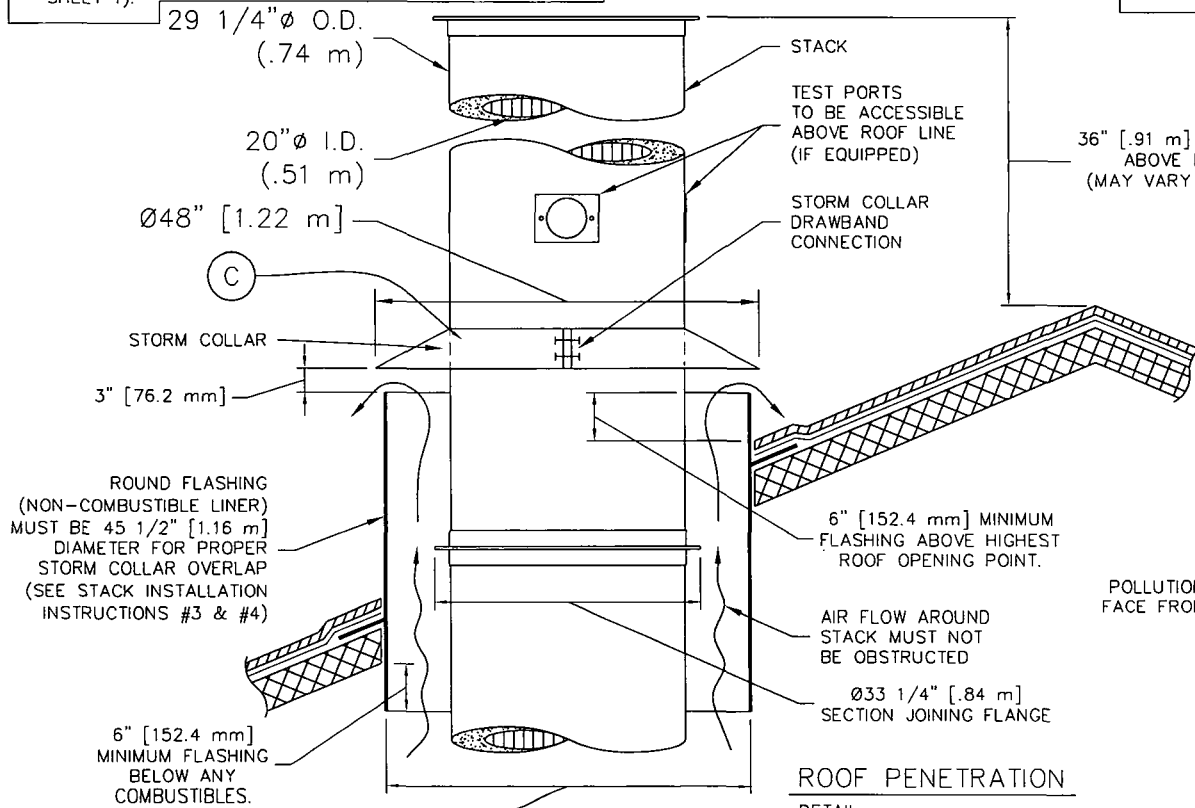
2. INSTALL STORM COLLAR ON STACK, 3" [72 mm] ABOVE NON-COMBUSTIBLE LINER (FLASHING), ALLOWING FOR PROPER VENTILATION (SEE DETAIL).

3. APPLY A 1/4" [6 mm] BEAD OF HIGH-TEMPERATURE SILICON SEALANT (PROVIDED BY MCD) TO THE JOINT BETWEEN THE STORM COLLAR (C) AND THE STACK (B).

4. STORM COLLAR IS FURNISHED BY MCD. THE NON-COMBUSTIBLE LINER (FLASHING) TO BE PROVIDED BY THE OTHERS.

5. IF FIFTY PERCENT OF THE STACK LENGTH IS ABOVE THE ROOF, GUY WIRES MAY BE REQUIRED. CONSULT WITH YOUR MCD REP.

6. RAIN CAP NOT REQUIRED.



36" [.91 m] MINIMUM STACK ABOVE ROOF PEAK (MAY VARY BY LOCATION).

(2) LIFTING EYES PER STACK SECTION

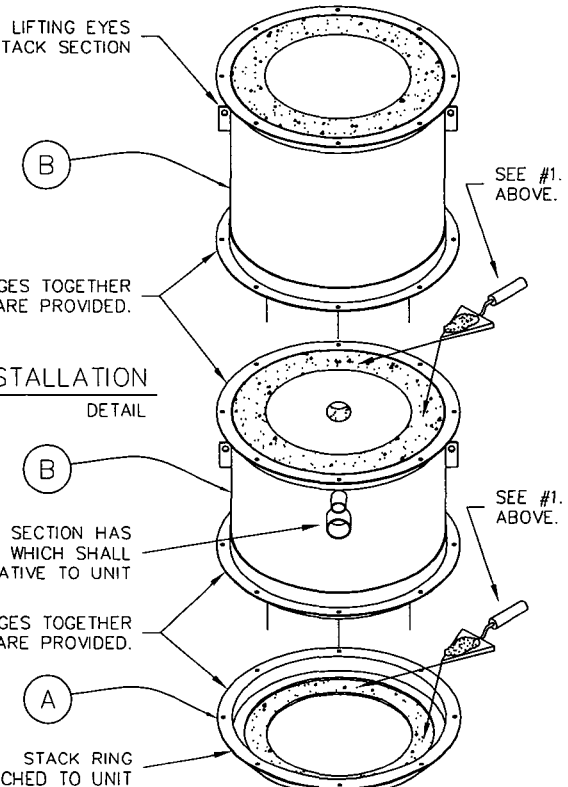
FASTEN FLANGES TOGETHER WITH HARDWARE PROVIDED.

STACK INSTALLATION DETAIL

STACK BASE SECTION HAS POLLUTION CONTROL PORTS WHICH SHALL FACE FRONT AND REAR RELATIVE TO UNIT

FASTEN FLANGES TOGETHER WITH HARDWARE PROVIDED.

STACK RING ATTACHED TO UNIT



Ø45 1/2" [1.16 m] REQUIRED FOR PROPER STACK CLEARANCE.



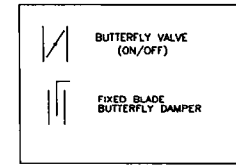
2045 Sprint Boulevard
Apopka, Florida 32703
USA

ENER-TEK IV

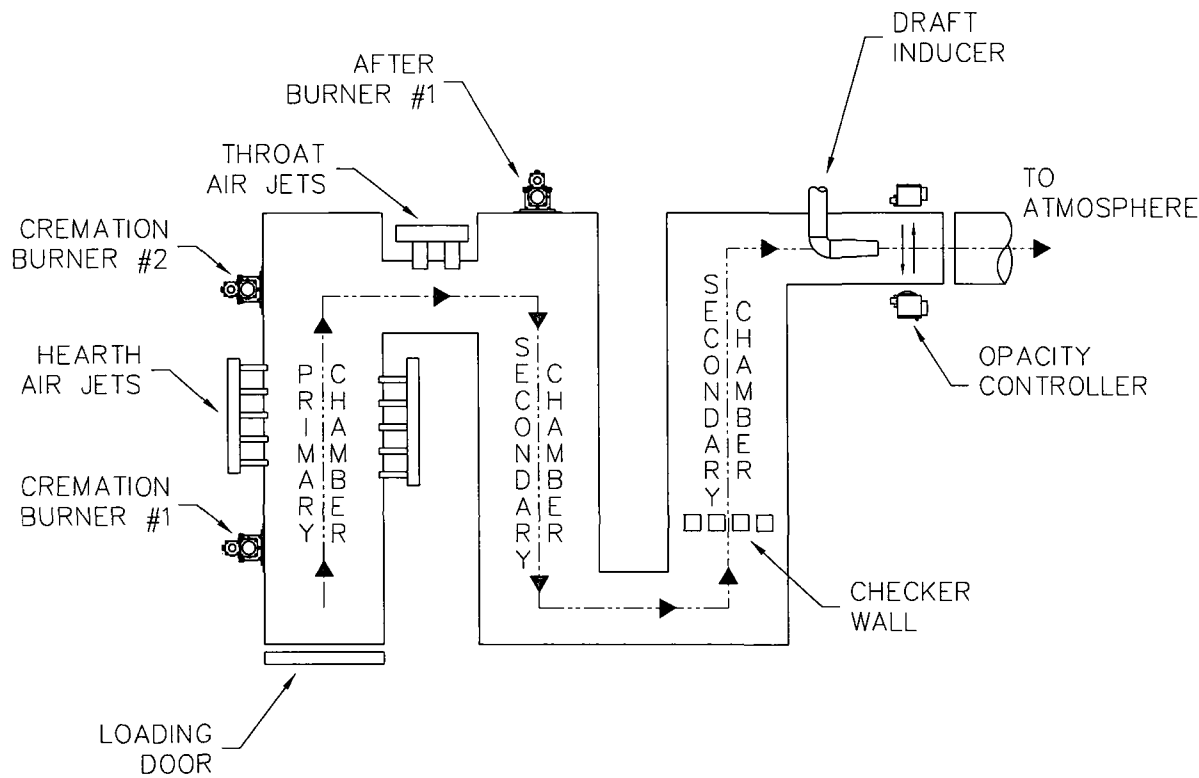
STACK DETAILS, CLEARANCES &
INSTALLATION INSTRUCTIONS.
REFRACTORY STACK DETAIL

| | | | |
|-----------|------------------------------|-------------|---------|
| DATE: | 08-18-05 | SCALE: | 1/2"=1' |
| DRAWN: | JG | PLOT SCALE: | 1:24 |
| APRVD: | | SHEET: | 2 OF 2 |
| DWG FILE: | E-T IV-MarketingStackRefS2R2 | | |
| DWG #: | 0000197 | | |

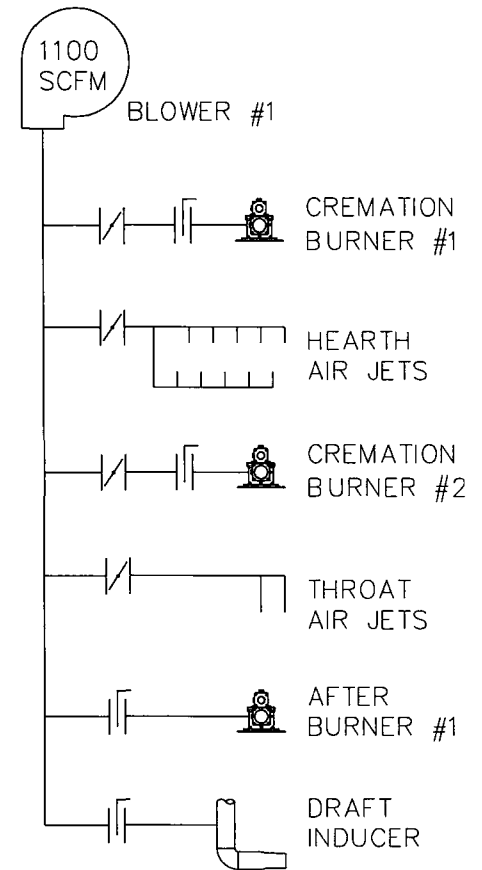
LEGEND OF SYMBOLS



FLOW DIAGRAM



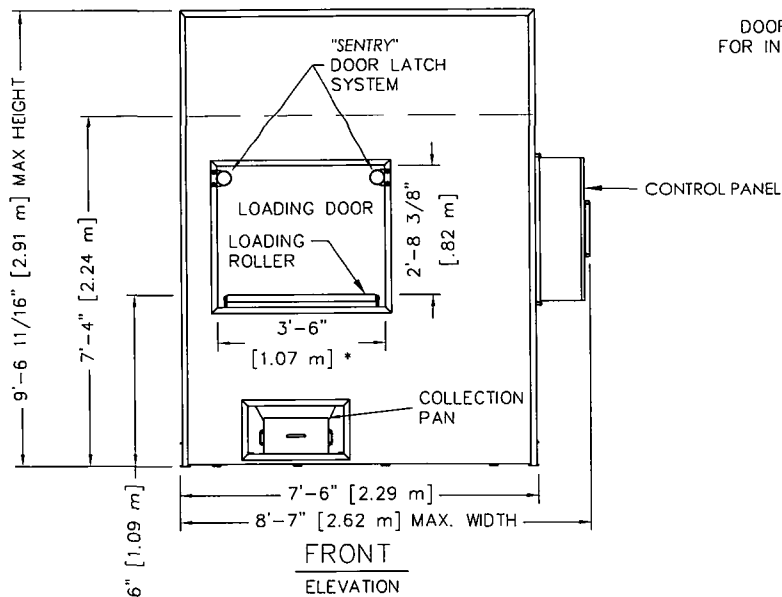
AIR SCHEMATIC



2045 Sprint Boulevard
Apopka, Florida 32703
USA

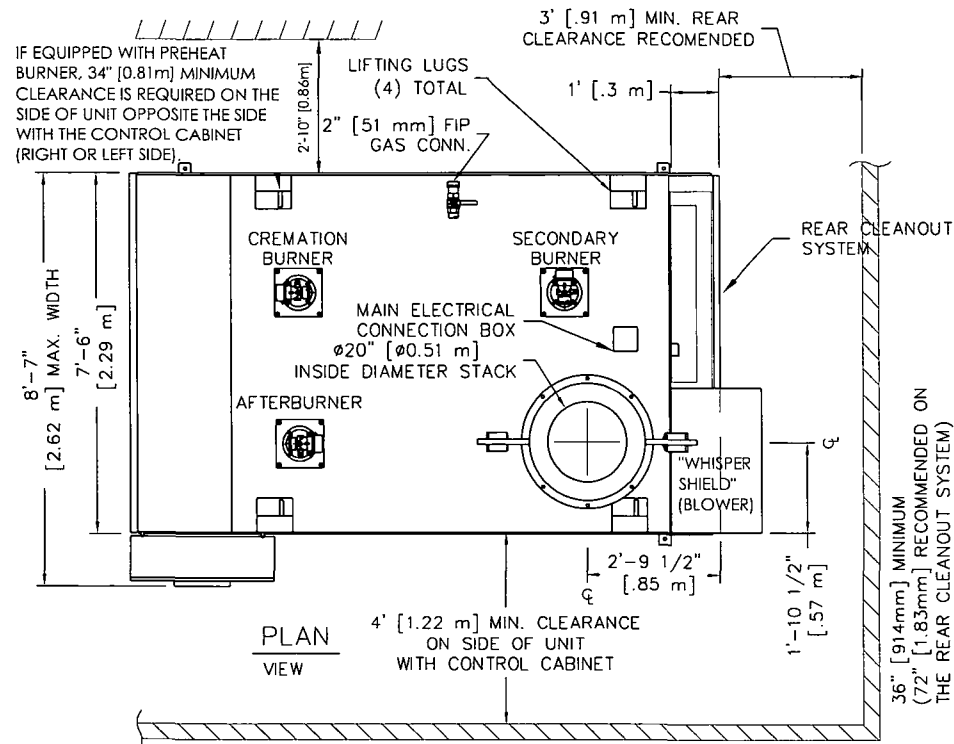
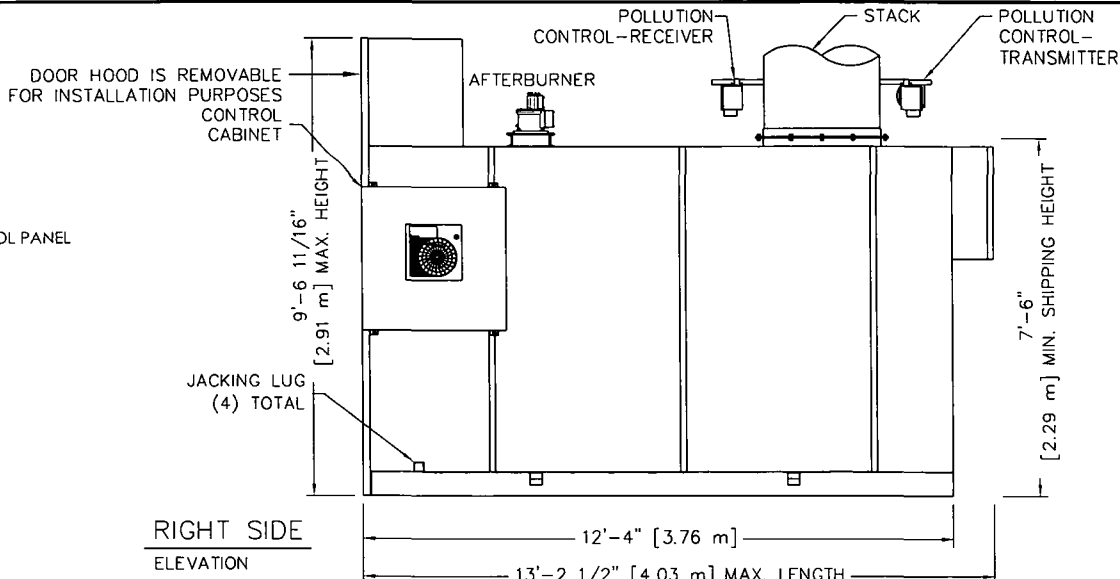
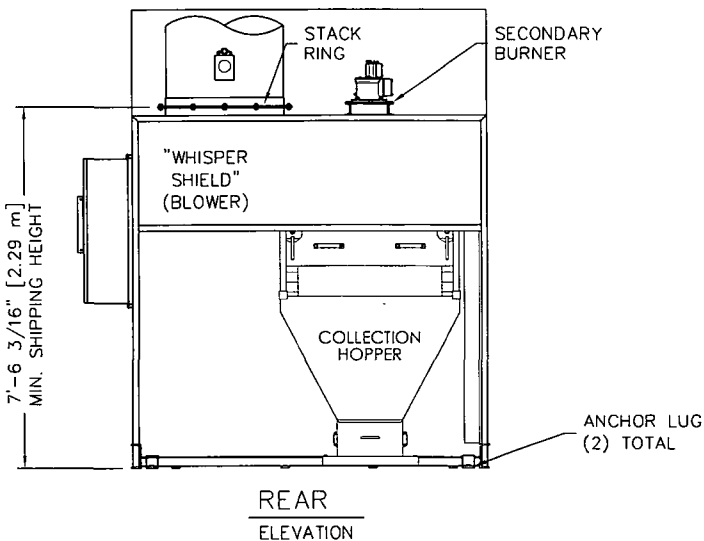
ENER-TEK
FLOW DIAGRAM
& AIR SCHEMATIC

| | | | |
|-----------|-------------------|-------------|---------|
| DATE: | 08-05-05 | SCALE: | 1/4"=1' |
| DRAWN: | JG | PLOT SCALE: | 1:48 |
| APRVD: | | SHEET: | 1 OF 1 |
| DWG FILE: | ETFlowDiaAirSchem | | |
| DWG #: | 0000638 | | |



NOTES:

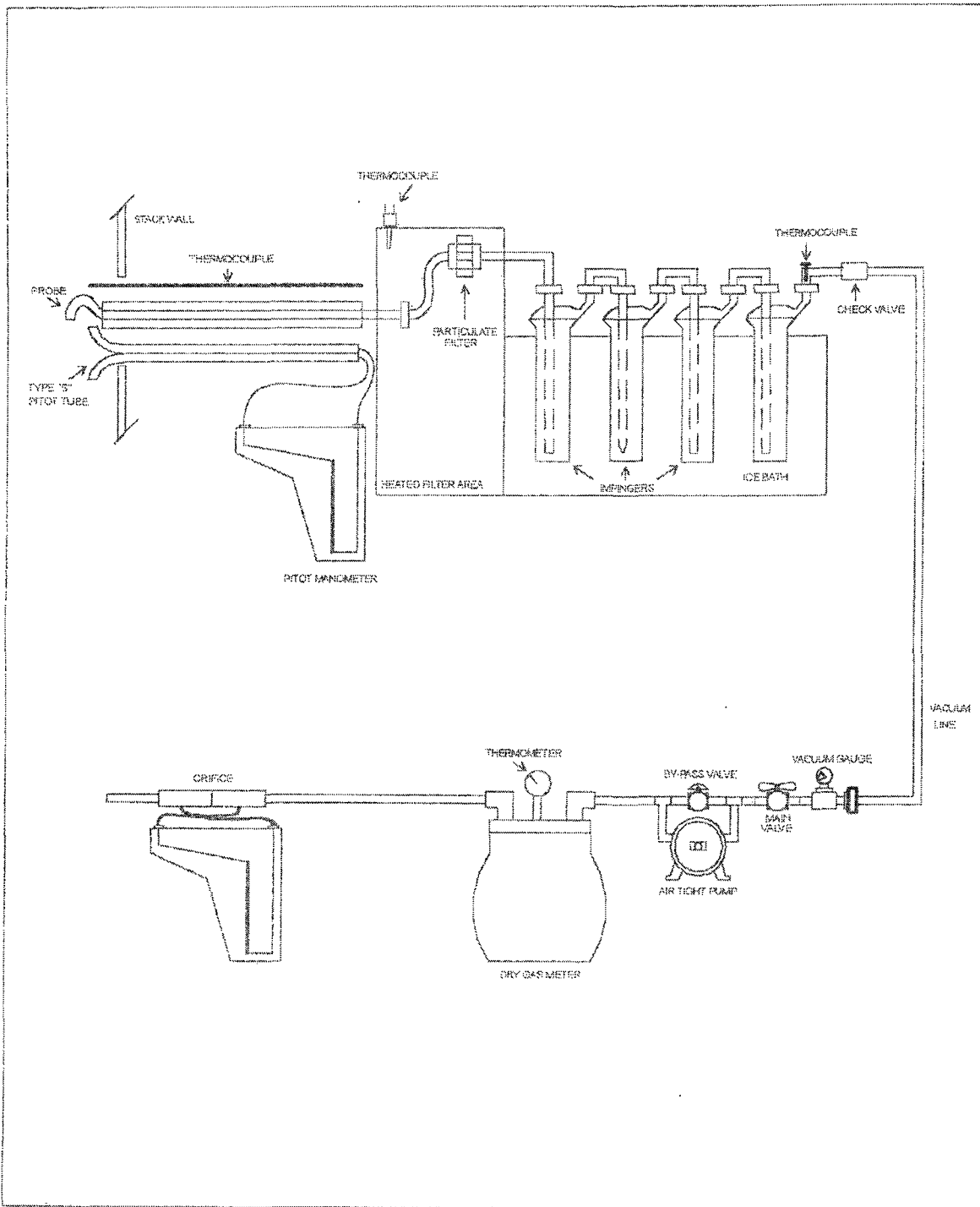
- 1) CONTROL CABINET CAN BE MOUNTED ON THE LEFT OR RIGHT SIDE, OR REMOTELY.
- 2) CHAMBER WIDTH IS 36" [0.91m].



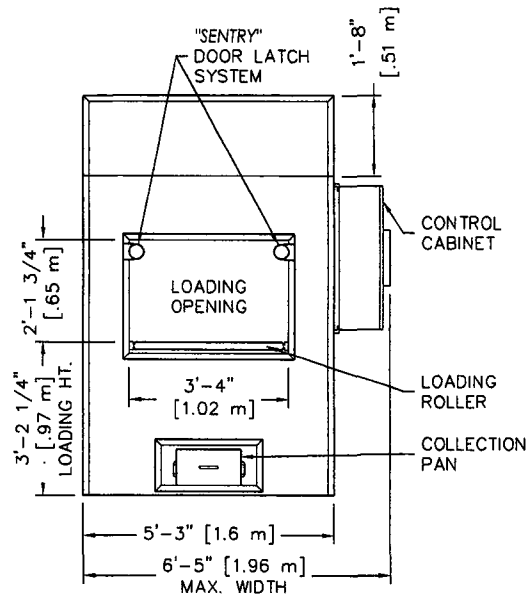
Matthews
CREMATION DIVISION
2045 Sprint Boulevard
Apopka, Florida 32703
USA

ENER-TEK IV
PLAN & ELEVATIONS INCL: CLEARANCES,
REQUIREMENTS & RECOMMENDATIONS

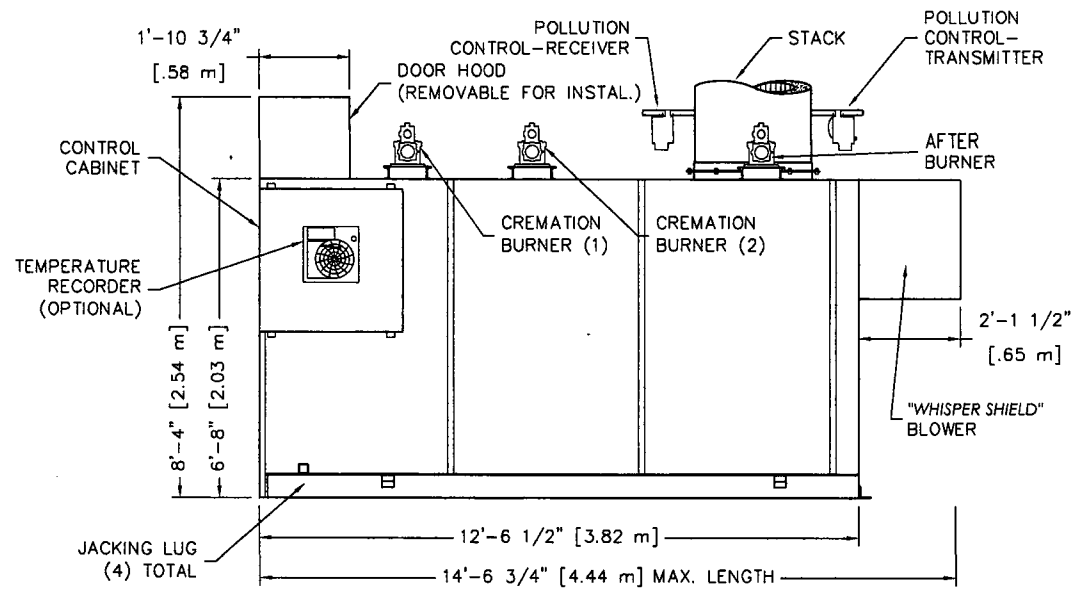
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|-----------|------------------------------|-------------|---------|
| DATE: | 10-26-06 | SCALE: | 1/4"=1' |
| DRAWN: | JG | PLOT SCALE: | 1:48 |
| APRVD: | | SHEET: | 1 OF: 2 |
| DWG FILE: | E-T IV-MarketingPlanElevS1R2 | | |
| DWG #: | 0000197 | | |



Method 5 Sampling Train.



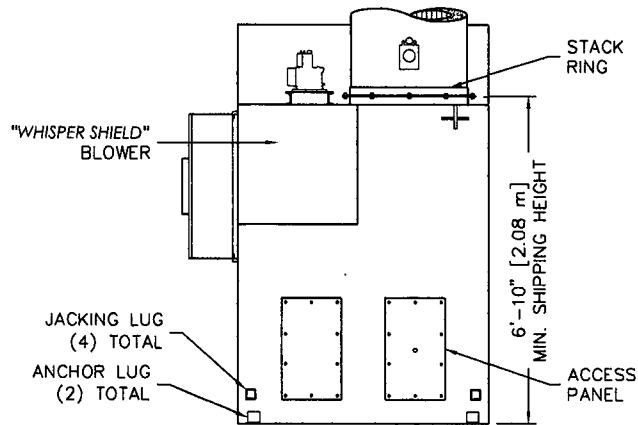
FRONT
ELEVATION



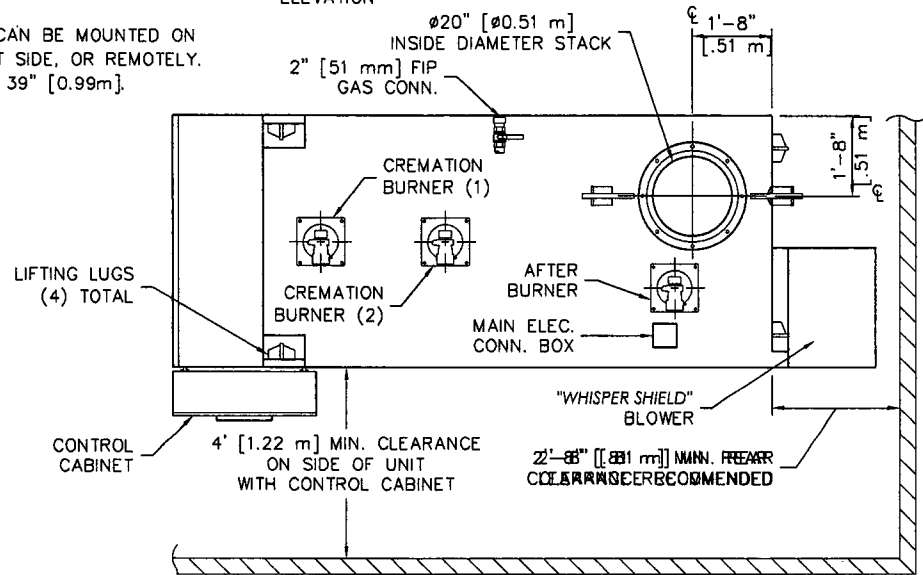
RIGHT SIDE
ELEVATION

NOTES:

- 1) CONTROL CABINET CAN BE MOUNTED ON THE LEFT OR RIGHT SIDE, OR REMOTELY.
- 2) CHAMBER WIDTH IS 39" [0.99m].



REAR
ELEVATION



PLAN
VIEW



2045 Sprint Boulevard
Apopka, Florida 32703
USA

POWER-PAK II (PET)

PLAN & ELEVATIONS INCL: CLEARANCES,
REQUIREMENTS & RECOMMENDATIONS

| | | | |
|-----------|-------------------------------|-------------|---------|
| DATE: | 10-26-06 | SCALE: | 1/4"=1' |
| DRAWN: | JG | PLOT SCALE: | 1:4 |
| APRVD: | | SHEET: | 1 OF 1 |
| DWG FILE: | PP11-Pet-MarketingPlanElevS1R | | |
| DWG #: | 00013 | | |

CREMATOR CLEARANCES

RECOMMENDED MINIMUM

| | | |
|---------------|-------------------|--------------------|
| TOP: ② | 2 FEET [610 mm] | 6 INCHES [152 mm] |
| CABINET SIDE: | 4 FEET [1.22 m] | 4 FEET [1.22 m] |
| OTHER SIDE: | 2 FEET [610 mm] | 6 INCHES [152 mm] |
| FRONT: | 9 FEET [2.74 m] | 8 FEET [2.44 m] |
| REAR: | 3 FEET [0.91 m] | 32 INCHES [812 mm] |
| STACK: | 6 INCHES [152 mm] | 6 INCHES [152 mm] |

- FOR CLEARANCES OTHER THAN THOSE SHOWN, OR FOR SPECIAL REQUIREMENTS, CONSULT YOUR MCD REP.
- FROM HIGHEST POINT ON UNIT.
- CONTROL CABINET MOUNTS ON UNIT'S LEFT OR RIGHT SIDES, OR REMOTELY. (SEE PLAN VIEW, SHEET 1).
- REAR OF UNIT REFERS TO THE "BACK PLATE", RATHER THAN THE BACK OF THE "WHISPER SHIELD". (SEE PLAN VIEW, SHEET 1).

CREMATOR REQUIREMENTS

FUEL: A PRESSURE REGULATOR ADJUSTABLE TO 7" [178 mm] W.C. FOR NATURAL GAS, OR 11" [279 mm] W.C. FOR LP GAS.

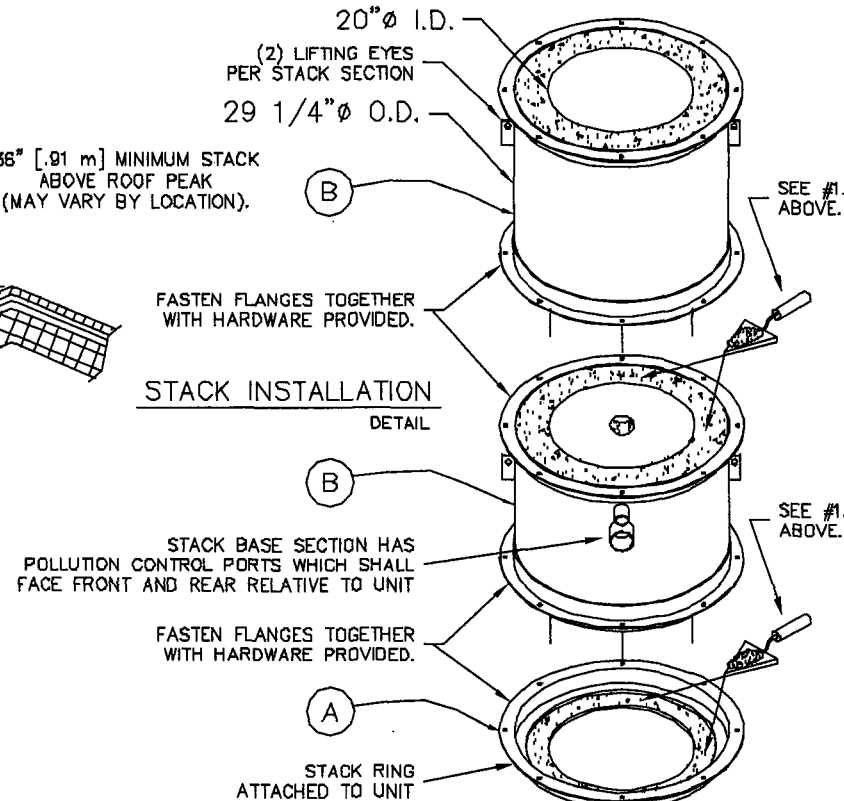
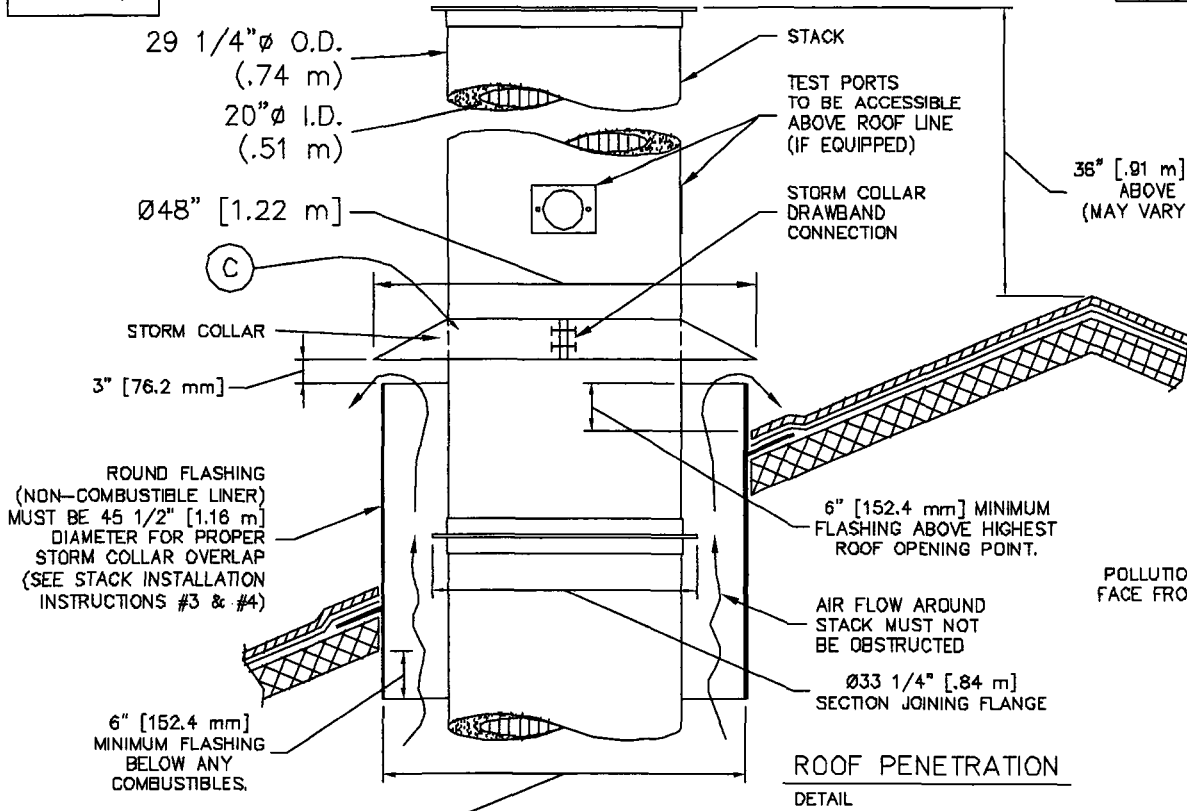
CAPACITY: RANGES FROM 2.0 TO 4.0 MILLION BTU/HR [2.1 TO 3.1 MILLION KILOJOULES/HR] DEPENDING UPON AMOUNT OF BURNERS.

ELECTRICAL: 230 VOLT, 3 ϕ , (40A BREAKER) AND 115v (10A BREAKER), OR 230 VOLT, 1 ϕ , (70A BREAKER) AND 115v (10A BREAKER) 50/60 HERTZ

AIR: LOUVER NEAR THE REAR OF THE UNIT CAPABLE OF PASSING 2,500 CU FT/MIN [70.8 CU M/MIN] OF FREE AIR (36" X 36") [914 mm X 914 mm].

STACK INSTALLATION INSTRUCTIONS

- APPLY A 1/2" THICK MORTAR JOINT TO EXPOSED REFRACTORY SURFACE IN STACK RING. LOWER THE BASE STACK SECTION (B) ONTO STACK RING (A) AND FASTEN WITH HARDWARE PROVIDED (NO MORE THAN (2) STACK SECTIONS SHALL BE LIFTED TOGETHER). REPEAT PROCESS FOR REMAINING STACK SECTIONS. IF SECTIONS OF VARYING LENGTHS ARE SUPPLIED, ASSEMBLE AS TO AVOID FLANGES & LIFTING EYES INTERFERING WITH RAIN COLLAR LOCATION.
- INSTALL STORM COLLAR ON STACK, 3" [72 mm] ABOVE NON-COMBUSTIBLE LINER (FLASHING), ALLOWING FOR PROPER VENTILATION (SEE DETAIL).
- APPLY A 1/4" [6 mm] BEAD OF HIGH-TEMPERATURE SILICON SEALANT (PROVIDED BY MCD) TO THE JOINT BETWEEN THE STORM COLLAR (C) AND THE STACK (B).
- STORM COLLAR IS FURNISHED BY MCD. THE NON-COMBUSTIBLE LINER (FLASHING) TO BE PROVIDED BY THE OTHERS.
- IF FIFTY PERCENT OF THE STACK LENGTH IS ABOVE THE ROOF, GUY WRES MAY BE REQUIRED. CONSULT WITH YOUR MCD REP.
- RAIN CAP NOT REQUIRED.



ϕ 45 1/2" [1.16 m] REQUIRED FOR PROPER STACK CLEARANCE.



2045 Sprint Boulevard
Apopka, Florida 32703
USA

POWER-PAK II (PET)

STACK DETAILS, CLEARANCES & INSTALLATION INSTRUCTIONS. REFRACTORY STACK DETAIL

| | | | |
|-----------|--------------------------------|-------------|---------|
| DATE: | 10-26-06 | SCALE: | 1/2"=1' |
| DRAWN: | JG | PLOT SCALE: | 1:2' |
| APRVD: | | SHEET: | 2 OF 2 |
| DWG FILE: | PPII-Pet-MarketingStackRefSZR4 | | |
| DWG #: | 000013 | | |

CREMATOR CLEARANCES

RECOMMENDED MINIMUM

| | | |
|---------------|-------------------|--------------------|
| TOP: (2) | 2 FEET [610 mm] | 6 INCHES [152 mm] |
| CABINET SIDE: | 4 FEET [1.22 m] | 4 FEET [1.22 m] |
| OTHER SIDE: | 2 FEET [610 mm] | 6 INCHES [152 mm] |
| FRONT: | 9 FEET [2.74 m] | 8 FEET [2.44 m] |
| REAR: | 3 FEET [0.91 m] | 32 INCHES [812 mm] |
| STACK: | 6 INCHES [152 mm] | 6 INCHES [152 mm] |

- FOR CLEARANCES OTHER THAN THOSE SHOWN, OR FOR SPECIAL REQUIREMENTS, CONSULT YOUR MCD REP.
- FROM HIGHEST POINT ON UNIT.
- CONTROL CABINET MOUNTS ON UNIT'S LEFT OR RIGHT SIDES, OR REMOTELY. (SEE PLAN VIEW, SHEET 1).
- REAR OF UNIT REFERS TO THE "BACK PLATE", RATHER THAN THE BACK OF THE "WHISPER SHIELD". (SEE PLAN VIEW, SHEET 1).

CREMATOR REQUIREMENTS

FUEL: A PRESSURE REGULATOR ADJUSTABLE TO 7" [178 mm] W.C. FOR NATURAL GAS, OR 11" [279 mm] W.C. FOR LP GAS.

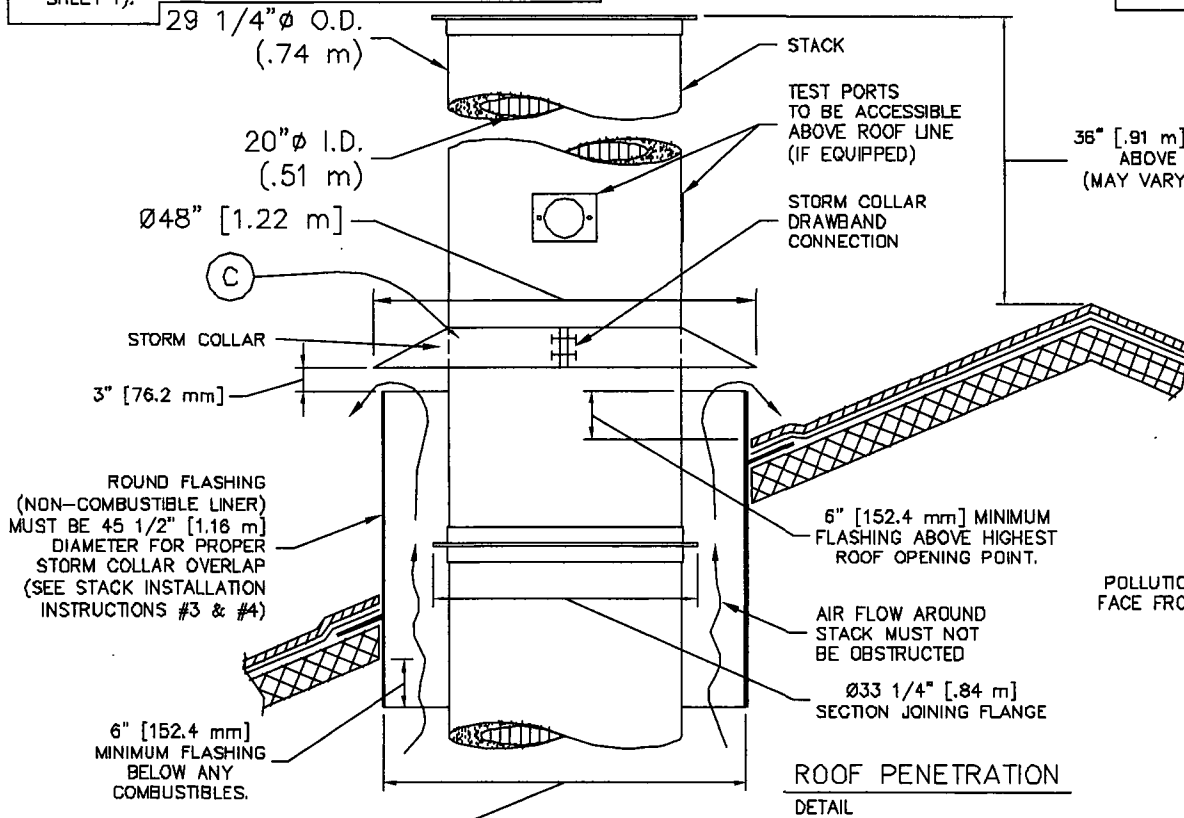
CAPACITY: RANGES FROM 2.0 TO 3.0 MILLION BTU/HR [2.1 TO 3.1 MILLION KILOJouLES/HR] DEPENDING UPON AMOUNT OF BURNERS.

ELECTRICAL: 230 VOLT, 3 ϕ , (70A BREAKER) AND 115v (10A BREAKER), OR 230 VOLT, 1 ϕ , (100A BREAKER) AND 115v (10A BREAKER) 50/60 HERTZ

AIR: LOUVER NEAR THE REAR OF THE UNIT CAPABLE OF PASSING 2,500 CU FT/MIN [70.8 CU M/MIN] OF FREE AIR (36" X 36") [914 mm X 914 mm].

STACK INSTALLATION INSTRUCTIONS

- APPLY A 1/2" THICK MORTAR JOINT TO EXPOSED REFRACTORY SURFACE IN STACK RING. LOWER THE BASE STACK SECTION (B) ONTO STACK RING (A) AND FASTEN WITH HARDWARE PROVIDED (NO MORE THAN (2) STACK SECTIONS SHALL BE LIFTED TOGETHER). REPEAT PROCESS FOR REMAINING STACK SECTIONS. IF SECTIONS OF VARYING LENGTHS ARE SUPPLIED, ASSEMBLE AS TO AVOID FLANGES & LIFTING EYES INTERFERING WITH RAIN COLLAR LOCATION.
- INSTALL STORM COLLAR ON STACK, 3" [72 mm] ABOVE NON-COMBUSTIBLE LINER (FLASHING), ALLOWING FOR PROPER VENTILATION (SEE DETAIL).
- APPLY A 1/4" [6 mm] BEAD OF HIGH-TEMPERATURE SILICON SEALANT (PROVIDED BY MCD) TO THE JOINT BETWEEN THE STORM COLLAR (C) AND THE STACK (B).
- STORM COLLAR IS FURNISHED BY MCD. THE NON-COMBUSTIBLE LINER (FLASHING) TO BE PROVIDED BY THE OTHERS.
- IF FIFTY PERCENT OF THE STACK LENGTH IS ABOVE THE ROOF, GUY WIRES MAY BE REQUIRED. CONSULT WITH YOUR MCD REP.
- RAIN CAP NOT REQUIRED.



36" [.91 m] MINIMUM STACK ABOVE ROOF PEAK (MAY VARY BY LOCATION).

(2) LIFTING EYES PER STACK SECTION

FASTEN FLANGES TOGETHER WITH HARDWARE PROVIDED.

STACK INSTALLATION

DETAIL

STACK BASE SECTION HAS POLLUTION CONTROL PORTS WHICH SHALL FACE FRONT AND REAR RELATIVE TO UNIT

FASTEN FLANGES TOGETHER WITH HARDWARE PROVIDED.

STACK RING ATTACHED TO UNIT

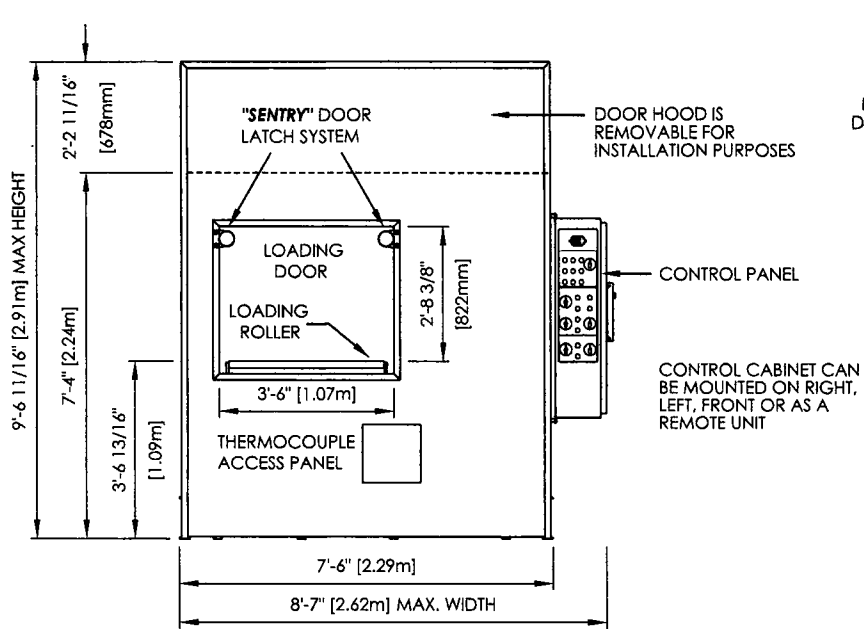


2045 Sprint Boulevard
Apopka, Florida 32703
USA

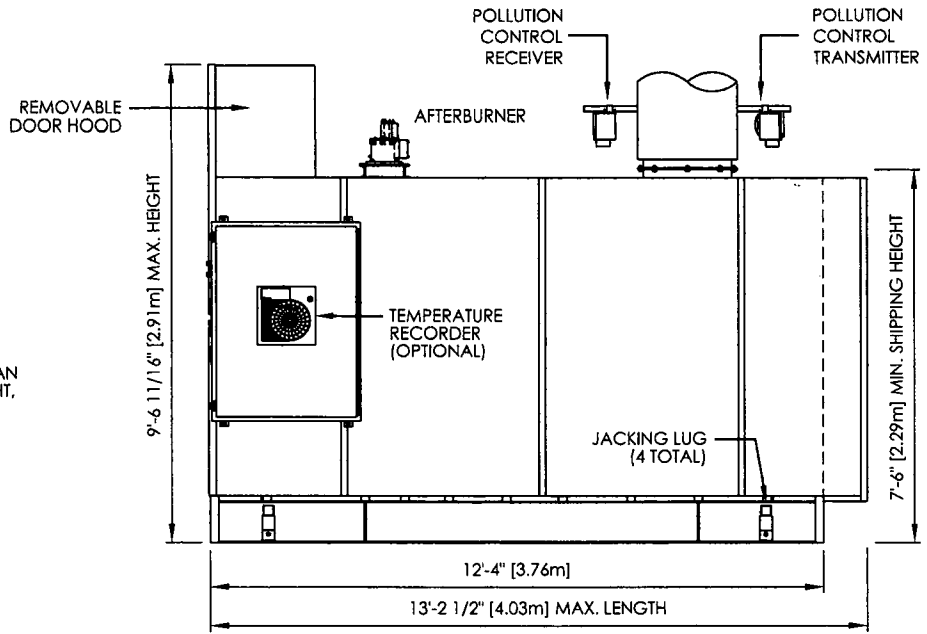
ENER-TEK IV

STACK DETAILS, CLEARANCES &
INSTALLATION INSTRUCTIONS.
REFRACTORY STACK DETAIL

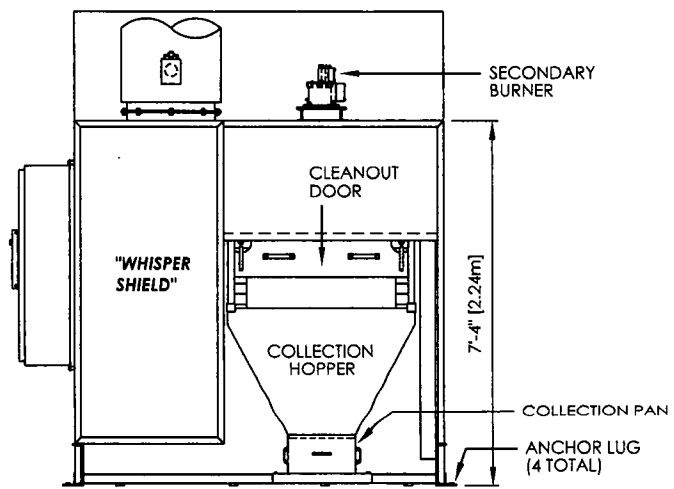
| | |
|---------------------------------------|------------------|
| DATE: 08-18-05 | SCALE: 1/2"=1' |
| DRAWN: JG | PLOT SCALE: 1:2' |
| APRVD: | SHEET: 2 OF: 2 |
| DWG FILE: E-T IV-MarketingStackRefS2R | |
| DWG #: | 000019 |



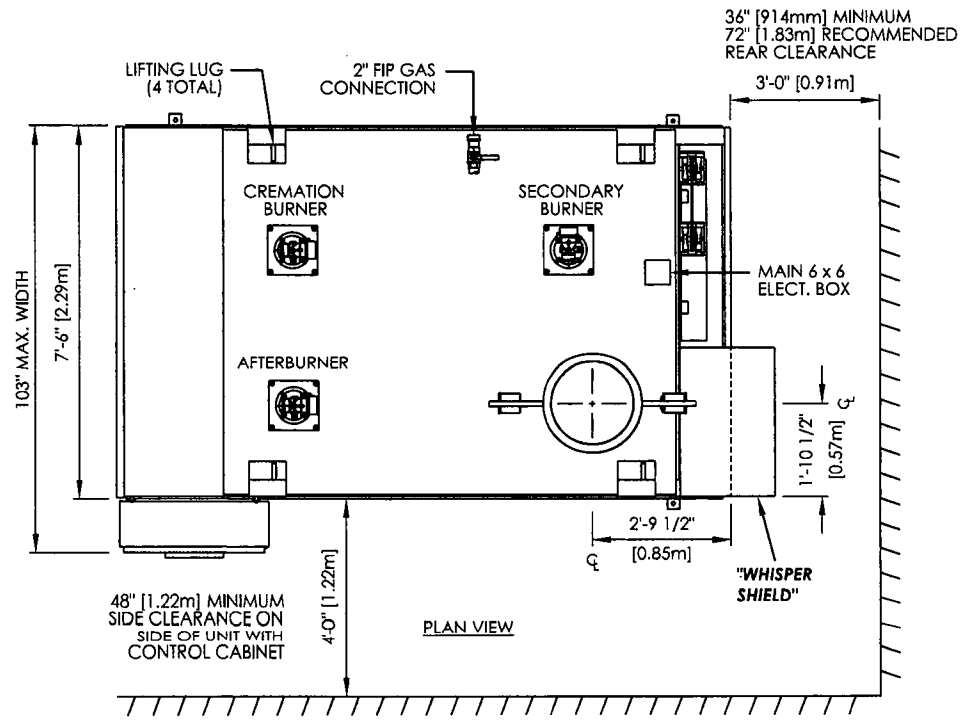
FRONT ELEVATION

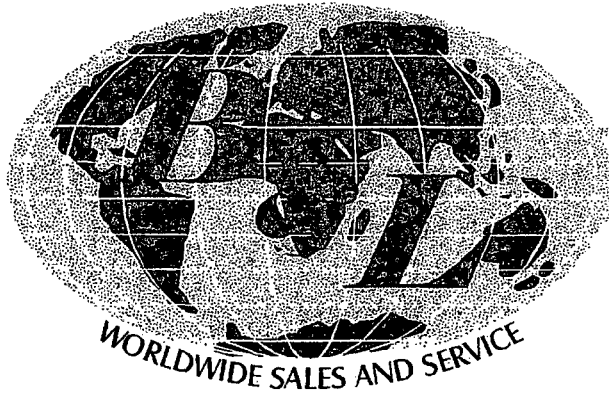


RIGHT SIDE ELEVATION



REAR ELEVATION





Cremation
Systems, Inc.

Installation Manual

for

BLP-500/150

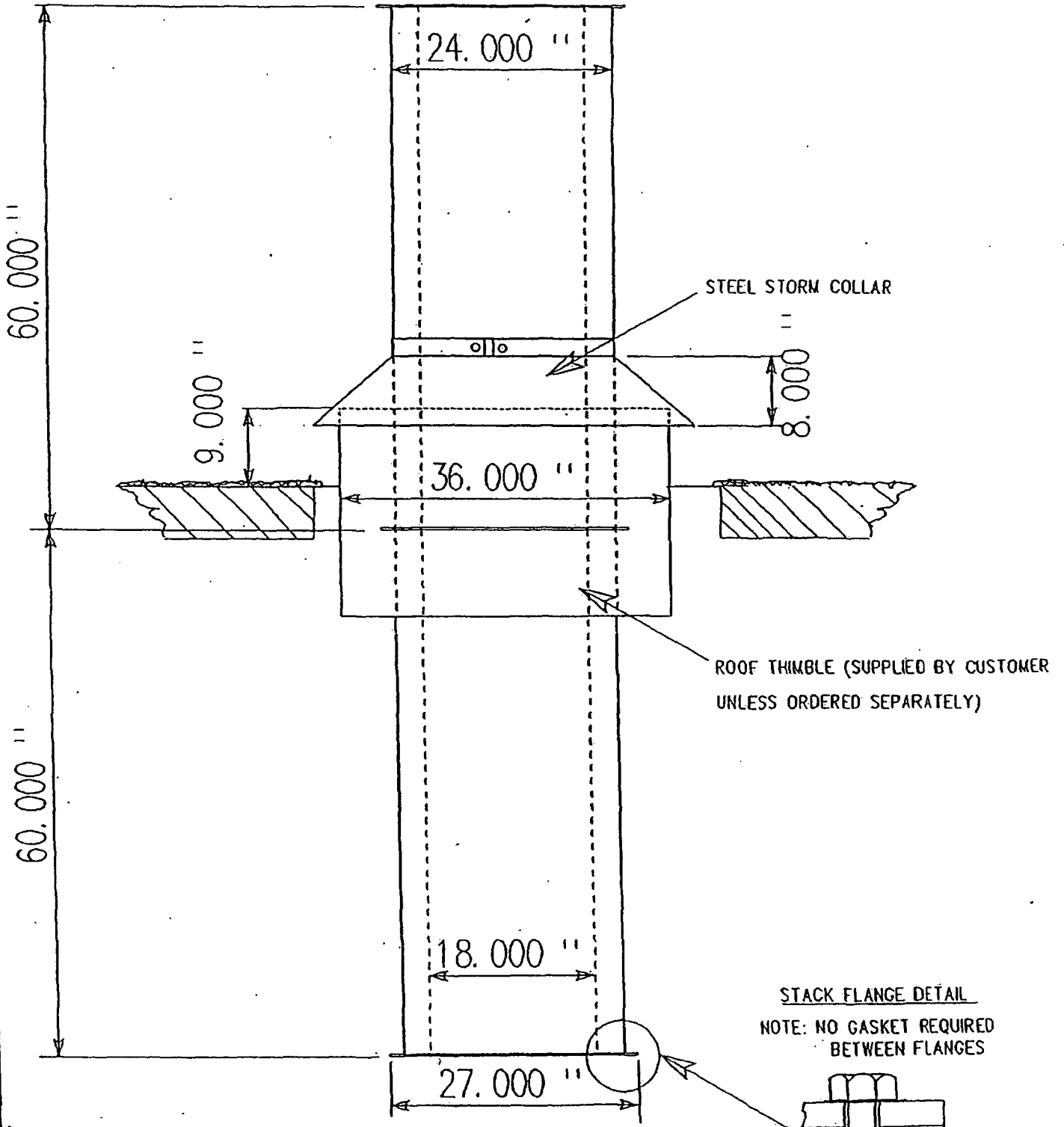
Animal Cremation Retort

NOTICE:

Specifications are subject to change without prior notice.
Please check with the factory on your specific order.

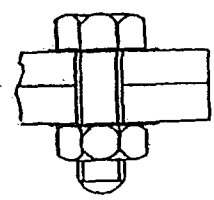
7205 - 114th Avenue North • Largo, Florida 33773
1-800-622-5411 • 727-541-4666 • Facsimile 727-547-0669
e-mail: blcremsys@aol.com • www.blcremationsystems.com

Drawing #6



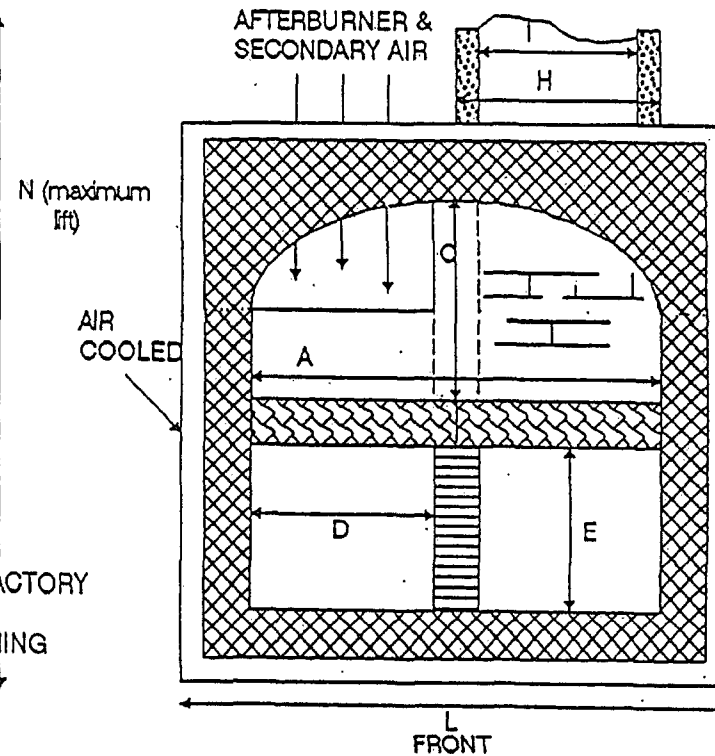
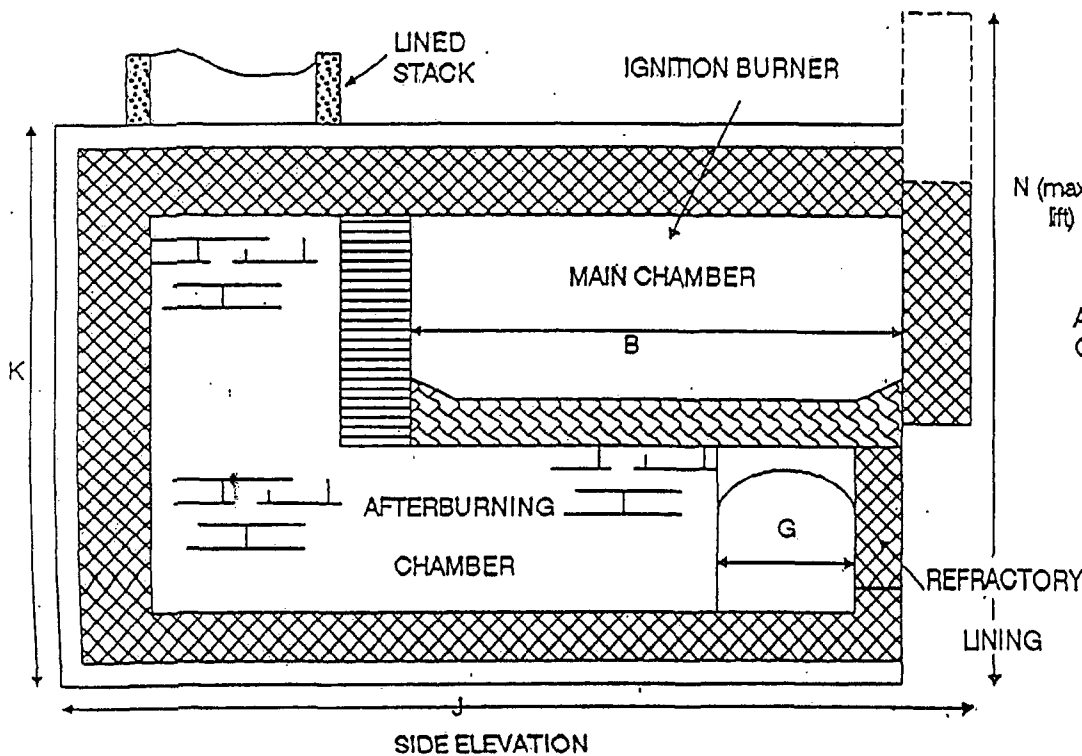
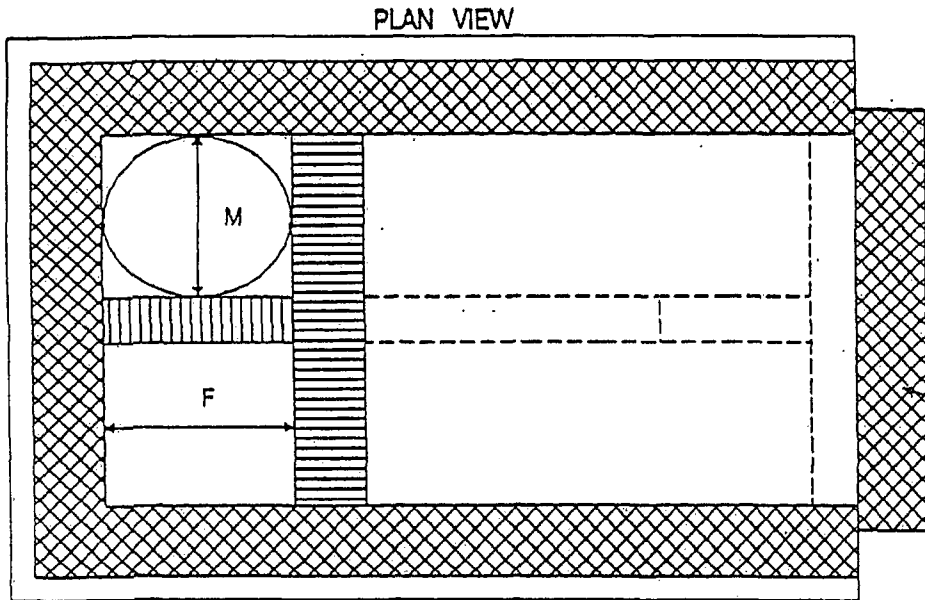
STACK AND ROOF DETAILS

STACK FLANGE DETAIL
NOTE: NO GASKET REQUIRED
BETWEEN FLANGES



| A | B | C | D | E | F | G | H | I | J | K | L | M | N |
|-----------------------------|----|----|----|----|----|----|----|----|-----|----|----|----|----|
| 40 | 77 | 30 | 20 | 20 | 24 | 20 | 24 | 18 | 126 | 72 | 66 | 20 | 96 |
| Burn Rate: 150 lbs/hr | | | | | | | | | | | | | |
| Model Number: BLP - 500/150 | | | | | | | | | | | | | |

B & L Cremation Systems
Pet
Cremator
Specifications
 1-800-622-5411



| U.S. Standard | Metric |
|---|--|
| Length: 126" | 3.2m |
| Width: 66" (76" With Control Panel) | 1.6m (1.9m With Control Panel) |
| Height: 96" (101" With Door Cap) | 2.4m (2.5m With Door Cap) |
| Weight: 19,000 lbs. | 8,618 Kg |
| Door Opening: | |
| Chamber Dimensions: | |
| Length: 77" | 1.9m |
| Width: 40" | 1.0m |
| Height: 32" | 0.8m |
| Power Requirements: 220V, Single Phase, 60 Cycle, 30 AMPS & 100 Volts-Single Phase 60 Cycle, 10 AMP | |
| Stack height: 24" O.D 20 ft minimum | 0.6m O.D 6.0m minimum |
| Gas Pressure: Natural Gas 7" W.C. Propane Gas 11" W.C. | Natural Gas 1.7 kPa W.C. Propane 2.7 kPa W.C. |
| Cremation Rate: 150 lbs/hour | 68 Kg/hour |
| Body Weight Capability: 500 lbs | 226 Kg |
| Burner Output: | |
| Maximum Input Rating 1,500,000 BTU's per hour | Maximum Input Rating 1,582,583 KJ per hour |
| Afterburner Maximum 1,000,000 BTU's per hour | Afterburner Maximum 1, 055,055 KJ per hour |
| Modulation Minimum 100,000 BTU's per hour | Modulation Minimum 105,505 KJ per hour |
| Cremation Burner 500,000 BTU's per hour | Cremation Burner 527,500 KJ per hour |
| Air Requirements: Outside air inlet louvers in the room located at or below burner height, capable of passing 2,500 CFM of free air | |

Features Common To The Above Unit

FULLY AUTOMATIC CONTROL SEQUENCE. Operation is made simple by the fully automatic control sequence. A microprocessor temperature controller, with a digital readout, ensures optimum control while providing the lowest fuel consumption. Visual verification of each stage is provided on the control panel. Operator override is achieved at a turn of a switch for semi-manual control.

HOT HEARTH DESIGN. First introduced by B & L, this design allows for wasted afterburning heat to be recycled through the floor, eliminating fluid problems, lowering fuel consumption and extending the hearth life.

MULTI-CHAMBER AIR CONTROLLED DESIGN. The entire combustion process is completed within the air controlled chambers, eliminating burning in the stack, allowing for 24-hour operation and providing for greater fuel efficiency over excess air designs.

POLLUTION MONITORING & CONTROL SYSTEM. This system constantly monitors the stack gases to prevent visible emissions. Integrated with the automatic system, this feature enables the unit to make all necessary adjustments automatically.

REFRACTORY LINED STACK. A three inch insulating liner is provided as a safety feature. While gases seldom exceed 1000° F, the liner reduces heat penetration under every condition, preventing the possibility of fire. A ten year warranty is offered on the stack liner.

LOW NOISE. The secondary combustion blower has been manufactured and installed to allow for low noise operation.