

From: Luis Linares [mailto:llinares@aienv.com]
Sent: Tuesday, December 22, 2010 2:13 PM
To: Parsons, Joe
Cc: 'Bob Baker'; 'Chris'
Subject: Citrus County Animal Control BOD (P2072)

Tuesday, December 22, 2010

Joe Parsons
FL Dept. of Environmental Protection
Southeast District Office
11081 North Tequesta Parkway
Temple Terrace, FL 33607
Joe.Parsons@dep.state.fl.us

RE: Citrus County Animal Services- Citrus County
Facility ID: 0170172-001-A/C

Dear Mr. Parsons:

AI Environmental Consulting Services, Inc. is providing DEP with written notification of formal compliance testing for volatile organics (DPA Method 9) for the above referenced resource.

The test is scheduled for Thursday, January 14, 2011 at 9:00 am.

The site contact is Charles Ochoa and can be reached at 352-820-6600. If you have any questions please contact me at (907) 974-3821 or my cell phone at (407) 931-0945.

Respectfully submitted,
AI ENVIRONMENTAL CONSULTING SERVICES, INC.

Luis Linares
President/Project Manager

Cc: Charles Ochoa, Director of Maintenance
Citrus County Animal Services
PO Box 143
Leesboro, Florida 34461

Keller Mechanical & Engineering, Inc.

KM SERIES SOLID WASTE INCINERATOR SPECIFICATIONS

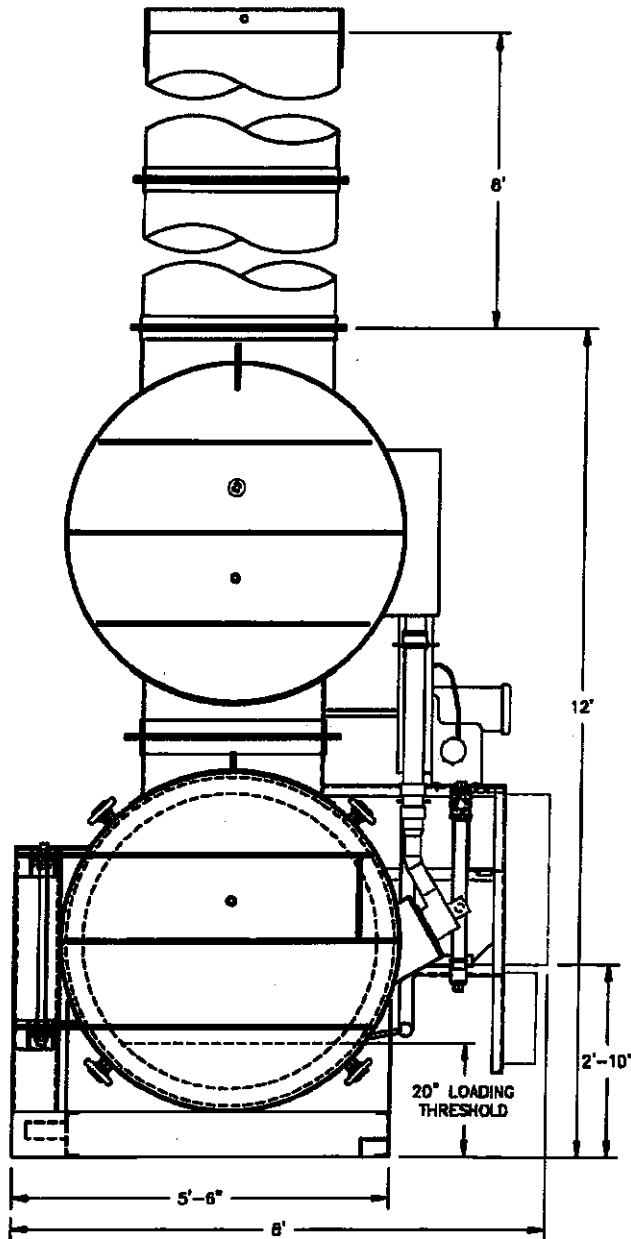
	UNITS	KM800
PRIMARY CHAMBER		
Chamber Volume	Cu. Ft.	74
Primary Burner	Btu's/hr	500,000
	Firing	Hi/Low
Burner Control	Rate	On/Off
Dia. O.D.	Inches	60
Dia. I.D.	Inches	49
Length Outside	Inches	72
Length Inside	Inches	67
Loading Door Dia	Inches	60
Nominal Hearth Area	Sq. Ft.	19
Metal Thickness	Inches	0.25
Refractory Thickness	Inches	4.5
	Degrees	
Refractory Rating	f.	2800
Insulation Thickness	Inches	1
	Degrees	
Insulation Rating	f.	1900
Aproximate Wieght	Lbs.	8500
	Degrees	
Operating Temp.	f.	1200/1600
 SECONDARY CHAMBER		
Chamber Volume	Cu. Ft.	55
Primary Burner	Btu's/hr	1,500,000
	Firing	Full
Burner Control	Rate	Modulation
Dia. O.D.	Inches	60
Dia. I.D.	Inches	49
Length Outside	Inches	60
Length Inside	Inches	50
Residence Time	Seconds	>1
Metal Thickness	Inches	0.25
Refractory Thickness	Inches	4.5
	Degrees	
Refractory Rating	f.	2800
Insulation Thickness	Inches	1
	Degrees	
Insulation Rating	f.	1900
Aproximate Wieght	Lbs.	6500
	Degrees	
Operating Temp.	f.	1600/1900
 SYSTEM CAPACITY		
Batch Load Rate	Lbs	800
Combustion Cycle Time	Hrs.	4 to 6

Keller Mechanical & Engineering, Inc.

KM SERIES SOLID WASTE INCINERATOR SPECIFICATIONS

	UNITS	KM800
PRIMARY CHAMBER		
Chamber Volume	Cu. Ft.	74
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	Degrees	
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Insulation Thickness	Inches	1
	Degrees	
Insulation Rating	f.	1900
Aproximate Wieght	Lbs.	8500
	Degrees	
Operating Temp.	f.	1200/1600
SECONDARY CHAMBER		
Chamber Volume	Cu. Ft.	55
Primary Burner	Btu's/hr	1,500,000
	Firing	Full
Burner Control	Rate	Modulation
Dia. O.D.	Inches	60
Dia. I.D.	Inches	49
Length Outside	Inches	60
Length Inside	Inches	50
Residence Time	Seconds	>1
Metal Thickness	Inches	0.25
Refractory Thickness	Inches	4.5
	Degrees	
Refractory Rating	f.	2800
Insulation Thickness	Inches	1
	Degrees	
Insulation Rating	f.	1900
Aproximate Wieght	Lbs.	6500
	Degrees	
Operating Temp.	f.	1600/1900
SYSTEM CAPACITY		
Batch Load Rate	Lbs	800
Combustion Cycle Time	Hrs.	4 to 6

KM800



FRONT ASSEMBLY VIEW

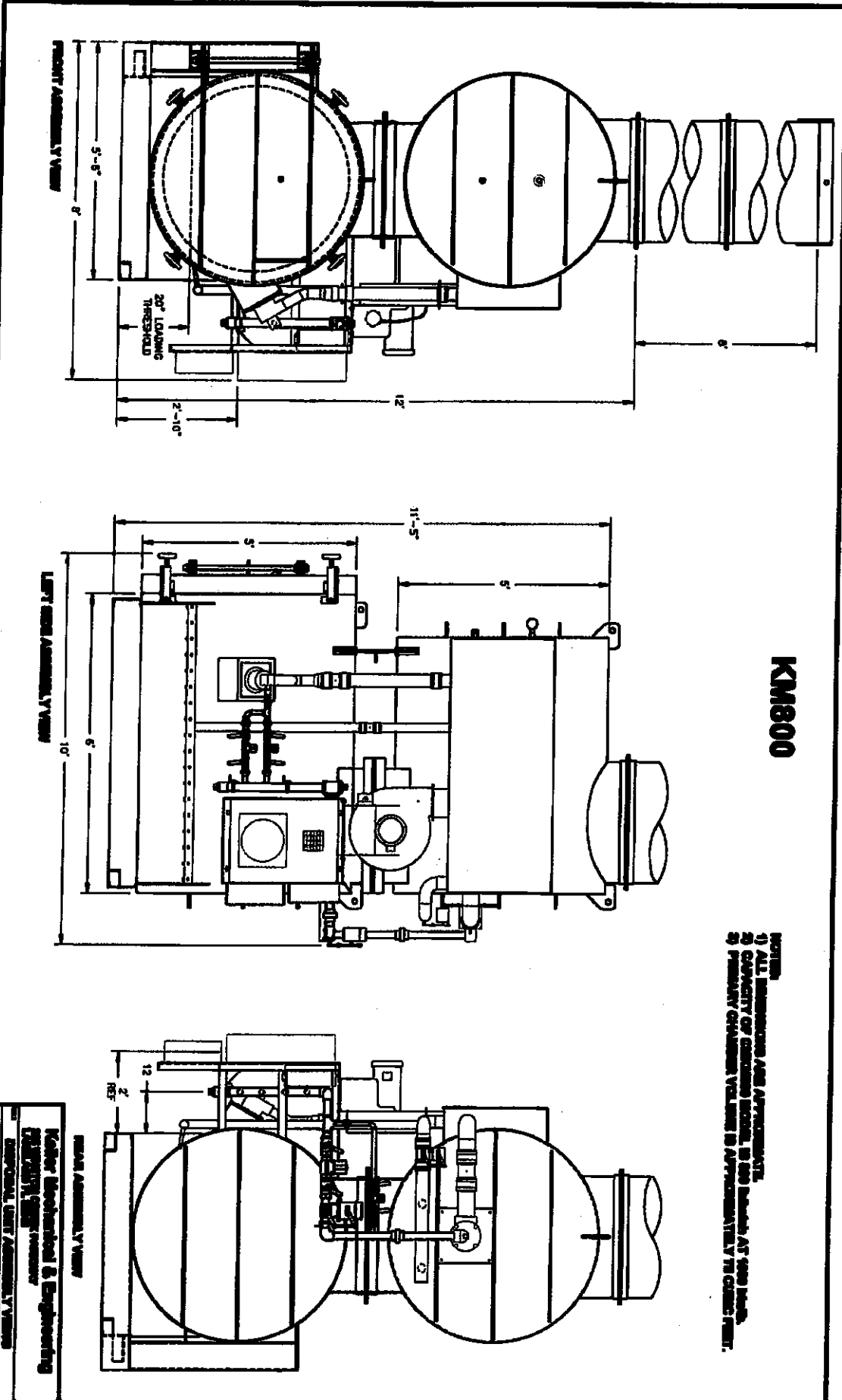
NOTES:

- 1) ALL DIMENSIONS ARE APPROXIMATE.
- 2) CAPACITY OF C800000 MODEL IS 800 lbs/batch AT 1000 lbs/b.
- 3) PRIMARY CHAMBER VOLUME IS APPROXIMATELY 75 CUBIC FEET.

Keller Mechanical & Engineering
 200 WASHINGTON CENTER PARKWAY
 LAKELAND FL 33878

TITLE: **DISPOSAL UNIT ASSEMBLY VIEWS**

DATE: 1/27/10	REV: 01	REV: 1 OF 1	REV: 0
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KM800

NOTES
 1) ALL DIMENSIONS ARE APPROXIMATE.
 2) CAPACITY OF CHAMBER SEALS IS 600 LITERS AT 1000 PSI.
 3) PRESSURE CHAMBER VOLUME IS APPROXIMATELY 170 GALLONS.

Kellogg Mechanical & Engineering
 10000 15th Street
 Denver, CO 80202
 (303) 751-1111
 www.kelloggme.com

REVISIONS

NO.	DATE	DESCRIPTION
1	12/12/09	ISSUE FOR CONSTRUCTION

KELLER MECHANICAL SPECIFICATIONS MODEL KM800 (gas fired)

	Unit of Measure	KM800		Unit of Measure	KM800
Primary Chamber			Refractory Lined-Stack		
Chamber Volume	Cu. Ft.	74.3	48" Stack Sections	Sections	TBA
Primary Burner(s)	Btu's/hr	500,000	Metal Thickness	Inches	.102
Burner Control	Temp. Act.	Modulating	Stack Diameter - Outside	Inches	24
Diameter - Outside	Inches	60	Stack Diameter - Inside	Inches	18
Diameter - Inside	Inches	49.5	Refractory Thickness	Inches	3
Length - Outside	Inches	72	Refractory Rating	Deg. F	2,400
Length - Inside	Inches	67	Weight Each Section	Pounds	600
Loading/Clean Out Door	Inches	60			
Metal Thickness	Inches	.250	System Dimensions/Weight		
Refractory Thickness	Inches	4	Width	Inches	96
Refractory Temp. Rating	Deg. F	3,100 max	Length	Inches	120
Insulation Thickness	Inches	1	Height to Base of Stack	inches	144
Insulation Temp. Rating	Deg. F	1,900	Approx. Weight of Syst.	Pounds	16,200
Weight	Lbs	8,500			
Operating Temperature	Deg. F	1,200-1,400	Systems Capacity		
			Batch Load Rate	Lbs. (kg)	780 (360)
			Combustion Rate*	Lbs. (kg)/hr	195 (90)
			Waste Reduction Rate	Percent	95
Secondary Chamber			Utility Requirements		
Chamber Volume	Cu.Ft.	50.53	Fuel Connection	Inches	2
Secondary Burner, one (1)	Btu's/Hr.	1,000,000	Req. Fuel Flow Rate	Btu/hr.	2 mil.
Burner Control	Temp. act.	Modulating	Req. Pressure @ header	Inches W.C.	9 nat./11 LPG
Diameter - Outside	Inches	60	Combustion Air Motor	Hp	5
Diameter - Inside	Inches	49.5	115 Volt Electric Service	Amps	10
Length - Outside	Inches	60	208-230/460V 3 Ø Serv.	Amps	13-12/6
Length - Inside	Inches	50	380V, 50 Hz available		
Residence Time	Seconds	>1			
Metal Thickness	Inches	0.250			
Refractory Thickness	Inches	4			
Refractory Temp. Rating	Deg. F	3,100 max			
Insulation Thickness	Inches	1			
Insulation Temp. Rating	Deg. F	1,900			
Weight	Pounds	6,500			
Operating Temperatures	Deg. F	1,600-1,850			

*The rate of combustion is based on a waste stream with an average BTU value of 5,500 BTUs per pound & 20,000 Btu/c.f. PCC heat release. Specifications subject to change or modification without notice.

Attachment 3

*Emission Calculations based on AP-42 Table 2.1-12, Process Flow
Diagram*

Attachment 4

Area Map



Air General Permit Registration Form

Prepared for:

*Citrus County Animal Services
4030 South Airport Road
Inverness, Florida 34450*

Animal Cremation Facility

Prepared By:

*AI Environmental Consulting Services, Inc.
370 S. North Lake Blvd, Suite 1004
Altamonte Springs, Florida 3270*

October, 2009

VISIBLE EMISSIONS EVALUATION

COMPANY CITRUS COUNTY ANIMAL SERVICES	
UNIT	
ADDRESS 4030 S. ALAPIT RD MUNNERS 34450-8546	
PERMIT NO. 0170372	COMPLIANCE <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO
AIRS NO. 0170372	EU NO. 001
PROCESS RATE 200 LB/Hr	PERMITTED RATE 200 LB/Hr
PROCESS EQUIPMENT ANIMAL CREMATORY	
CONTROL EQUIPMENT AFTER BURNER	
OPERATING MODE Normal	AMBIENT TEMP (BF) START 45° STOP 45° F
HEIGHT ABOVE GROUND LEVEL START 18' STOP —	HEIGHT RELATIVE TO OBSERVER START 13' STOP —
DISTANCE FROM OBSERVER START 24' STOP —	DIRECTION FROM OBSERVER START 295° STOP 295°
EMISSION COLOR None	PLUME TYPE CONTIN. - N/A INTERMITTENT - —
WATER DROPLETS PRESENT? NO - N/A YES - —	IS WATER DROPLET PLUME ATTACHED - N/A
POINT IN PLUME AT WHICH OPACITY WAS DETERMINED START Stack Exit STOP —	
DESCRIBE BACKGROUND START SKY STOP —	
BACKGROUND COLOR START Blue STOP —	SKY CONDITIONS START Clear STOP —
WIND SPEED (MPH) START 0-2 STOP —	WIND DIRECTION START N STOP N
AVERAGE OPACITY FOR HIGHEST PERIOD MIN. — MAX. —	RANGE OF OPACITY READINGS MIN. — MAX. —
SOURCE LAYOUT SKETCH 	
COMMENTS	

OBSERVATION DATE		START TIME				STOP TIME			
01/14/10		0945				0956			
SEC	MIN				SEC	MIN			
	0	15	30	45		1	15	30	45
0	0	0	0	0	30				
1	0	0	0	0	31				
2	0	0	0	0	32				
3	0	0	0	0	33				
4	0	0	0	0	34				
5	0	0	0	0	35				
6	0	0	0	0	36				
7	0	0	0	0	37				
8	0	0	0	0	38				
9	0	0	0	0	39				
10	0	0	0	0	40				
11	0	0	0	0	41				
12					42				
13					43				
14					44				
15					45				
16					46				
17					47				
18					48				
19					49				
20					50				
21					51				
22					52				
23					53				
24					54				
25					55				
26					56				
27					57				
28					58				
29					59				

Observers Signature: *Joseph Panetta*

Date: **1/14/10**

Observers Organization: Florida Department of Environmental Protection

Observer Name and Certified By: _____

EASTERN TECHNICAL ASSOCIATES

JOSEPH PANETTA

PAN716659 STUDENT ID NUMBER

met the specifications of Federal Reference Method 9 and qualifies as a visible emissions evaluator. Maximum deviation on white and black smoke did not exceed 7.5% opacity and no single error exceeding 15% opacity was incurred during the certification test conducted by Eastern Technical Associates of Raleigh, NC. This certificate is valid for six months from date of issue and expires on the date below.

TAMPA, FL 8/12/2009 375621
 SCHOOL LOCATION DATE OF SCHOOL CERT NUMBER
 TMPS09 2/11/2010
 LAST LECTURE CERTIFICATION EXP DATE BEARER

Inspection list for Crematories

Facility Name:

Citrus County Aiming Soss
017 0372

Facility ID No:

12/21/09
Joseph Paul

Crematory Unit Number

001

Crematory Unit Information:	
Emission Unit No.	(001) KM Series incinerator
Specifications:	Propane No model # or serial #
Thermocouple Location:	Diagram/Description: See ATTACHED Drawing
Afterburner Location:	Diagram/Description: See ATTACHED Drawing

Inspection list for Crematories

Facility Name:

Citrus Co. An Sves

Facility ID No:

017 0372

Chart and Digital Logic Controller:	
Chart Make & Model:	PANTLOW MRC 5000 Model # 511011 S/N 1521596-0001
Digital Logic Controller Make & Model:	PANTLOW 1160+ Model # 51100011
Chart Specifications:	0-2500
Digital Logic Controller Specifications:	P
Check for agreement between Chart & Digital Logic Controller	Agreement: YES Agreement: NO If NO, provide comments: N/A
Chart Calibration:	Date of Last Calibration: Calibration Performed by: N/A Results of Calibration:
Digital Logic Controller Calibration:	Date of Last Calibration: Calibration Performed by: N/A Results of Calibration:
Digital Logic Controller Bias	Details of Bias: N/A Chart Recorder reading at Bias determination:

Inspection list for Crematories

Facility Name:

Citrus Co. An-Sacs

Facility ID No:

017 0372

	<p>Comparison:</p> <p align="center">n/A</p> <p>If bias is found, request information of previous calibrations to determine when it was put in and by whom.</p> <p>Obtain copies of the recorder charts, during and after the check.</p>
Chart Recorder	<p>Scan in 2 years of temperature charts</p> <p align="center">n/A</p>
Unit Maintenance	
Date of Last Service	<p>New Installation n/A</p>
Name of Company Servicing Unit:	<p>Name/Address/Phone #/email and/or fax #</p> <p align="center">Keller Mechanical</p>
Description of repairs/adjustments:	<p align="center">n/A</p>
Maintenance Log:	<p>YES NO n/A</p>
Maintained Routinely:	<p>YES NO n/A</p> <p>If NO, provide comments.</p>

Inspection list for Crematories

Facility Name:

Citrus Co. Animal Soc

Facility ID No:

017 0372

Repair Records 62-296.401(5&6)(e), FAC:	2 years of records on-site: YES NO If NO, provide comments. n/a
62-210.310 (3), FAC - General Conditions:	
Permit	Issuance Date: 11/29/2009 Expiration Date: 11/29/2014
Owner:	Same as permit: <input checked="" type="radio"/> YES NO If NO, provide current owner information:
62-296.401(5&6), FAC - Specific Conditions Human and Animal Crematories	
Visible Emissions	n/a
Particulate Matter Emissions	n/a
Carbon Monoxide (CO) Emissions	n/a

Inspection list for Crematories

Facility Name:

Citrus Co. An. Svcs

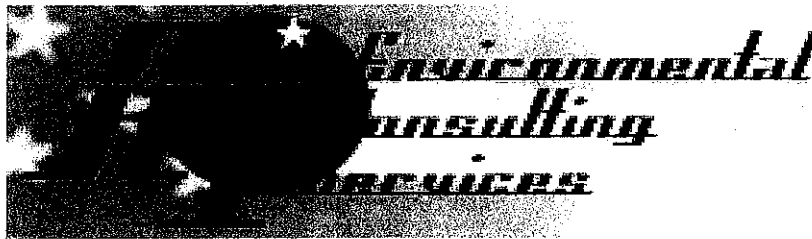
Facility ID No:

017 0372

Operating Temperatures	n/a
Allowed Material	n/a
Operating Procedures for start-up, shutdown and malfunction	n/a
Air-to-Fuel Ration	Propane

Retention Time Calculations and Thermocouple Location:

NOTE If the temperatures cannot be met at the point or beyond where 1.0 second gas residence time is obtained in the secondary chamber combustion zone, then both the closer thermocouple location and bias would compensate for it.



Air General Permit Registration Form

Prepared for:

***Citrus County Animal Services
4030 South Airport Road
Inverness, Florida 34450***

Animal Cremation Facility

*Keller Mechanics
maintenance
Bud*

Prepared By:

***AI Environmental Consulting Services, Inc.
370 S. North Lake Blvd, Suite 1004
Altamonte Springs, Florida 3270***

*• Joe - EPA Penetta
(15 day notice)
30 day - visible
emissions test
then yearly
\$400 test / \$500
letmo.*

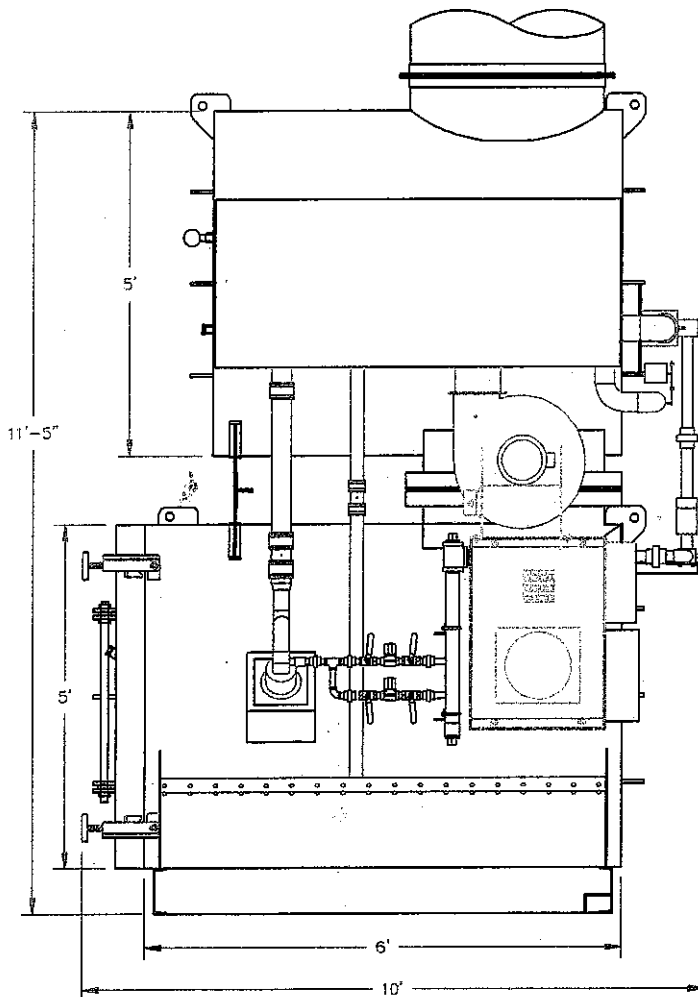
October, 2009

813/632-7600

X 105

*Dept of Environ
Protection*

KM800



LEFT SIDE ASSEMBLY VIEW

NOTES:

- 1) ALL DIMENSIONS ARE APPROXIMATE.
- 2) CAPACITY OF CMKM800 MODEL IS 800 lb/batch AT 1000 btu/lb.
- 3) PRIMARY CHAMBER VOLUME IS APPROXIMATELY 75 CUBIC FEET.

Keller Mechanical & Engineering
305 WINSTON CREEK PARKWAY
LAKELAND FL 33610

TITLE			
DISPOSAL UNIT ASSEMBLY VIEWS			
SCALE	DATE	DWG. NO.	SHEET NO.
NTS	2/27/05		1 OF 1

KELLER MECHANICAL SPECIFICATIONS MODEL KM800 (gas fired)

	Unit of Measure	KM800		Unit of Measure	KM800
Primary Chamber			Refractory Lined-Stack		
Chamber Volume	Cu. Ft.	74.3	48" Stack Sections	Sections	TBA
Primary Burner(s)	Btu's/hr	500,000	Metal Thickness	Inches	.102
Burner Control	Temp. Act.	Modulating	Stack Diameter - Outside	Inches	24
Diameter - Outside	Inches	60	Stack Diameter - Inside	Inches	18
Diameter - Inside	Inches	49.5	Refractory Thickness	Inches	3
Length - Outside	Inches	72	Refractory Rating	Deg. F	2,400
Length - Inside	Inches	67	Weight Each Section	Pounds	600
Loading/Clean Out Door	Inches	60			
Metal Thickness	Inches	.250	System Dimensions/Weight		
Refractory Thickness	Inches	4	Width	Inches	96
Refractory Temp. Rating	Deg. F	3,100 max	Length	Inches	120
Insulation Thickness	Inches	1	Height to Base of Stack	inches	144
Insulation Temp. Rating	Deg. F	1,900	Approx. Weight of Syst.	Pounds	16,200
Weight	Lbs	8,500			
Operating Temperature	Deg. F	1,200-1,400	Systems Capacity		
			Batch Load Rate	Lbs. (kg)	780 (360)
			Combustion Rate*	Lbs. (kg)/hr	195 (90)
			Waste Reduction Rate	Percent	95
Secondary Chamber			Utility Requirements		
Chamber Volume	Cu.Ft.	50.53	Fuel Connection	Inches	2
Secondary Burner, one (1)	Btu's/Hr.	1,000,000	Req. Fuel Flow Rate	Btu/hr.	2 mil.
Burner Control	Temp. act.	Modulating	Req. Pressure @ header	Inches W.C.	9 nat./11 LPG
Diameter - Outside	Inches	60	Combustion Air Motor	Hp	5
Diameter - Inside	Inches	49.5	115 Volt Electric Service	Amps	10
Length - Outside	Inches	60	208-230/460V 3 Ø Serv.	Amps	13-12/6
Length - Inside	Inches	50	380V, 50 Hz available		
Residence Time	Seconds	>1			
Metal Thickness	Inches	0.250			
Refractory Thickness	Inches	4			
Refractory Temp. Rating	Deg. F	3,100 max			
Insulation Thickness	Inches	1			
Insulation Temp. Rating	Deg. F	1,900			
Weight	Pounds	6,500			
Operating Temperatures	Deg. F	1,600-1,850			

*The rate of combustion is based on a waste stream with an average BTU value of 5,500 BTUs per pound & 20,000 Btu/c.f. PCC heat release. Specifications subject to change or modification without notice.

KM800 200 lb/hr, 1800F Heat and Mass Balance

Heat and Mass Balance	Enter the following:	Basis one Hour	Waste Type and Description - Generalities					4-Animal	MSW
			0-Trash	1-Rubbish	3-Garbage	Food wastes, paper restat/hotels/clubs	All animal & human tissue; labs; hosp.		
Percent Carbon Combustion	Carbon	95	95	95	95	95	95	95	
Feed Compos. %	Hydrogen	33	47	33	33	12	7	25	
	Oxygen	3	6	5	3	2	2	4	
	Water	10	30	26	10	10	6	20	
	Chlorine	70	10	25	70	70	82	30	
	Sulfur	0.4	2	1	0.4	0.4	0	1	
	Nitrogen	0.1	0.1	0.1	0.1	0.1	0.1	0.1	
	Ash	0.2	0.2	0.2	0.2	0.2	0.4	0.5	
		4.3	4.70	9.70	4.30	4.30	2.5	19.4	
Stated HHV of waste feed, Btu/lb		2500	8500	6500	2500	2500	1000	5000	
Calculated LHV by Dulong's eq, Btu/lb		4437	7147	4909	1644	1644	630	3679	
& subtracting heat to vaporize water									
Density of Waste, lb/cu ft		23	10	10	35	35	55	25	
Heat value of waste, Btu/cu ft		57500							
			Paper, cardboard, wood-10%plastics	paper, rags, cartons floor sweepings	Food wastes, paper restat/hotels/clubs		All animal & human tissue; labs; hosp.	Municipal Solid	
				<-Typical Ranges->					
Percent carbon combustion		95							
Percent Excess Air		100							
Percent of Total Air		200							
Feed rate Lbs per hour		200							
Target Comb gas temp, deg F		1800							
Target stack gas temp, deg F		350							
True heat loss, %		5							
O2 Req. for	6.10 lbmol/hr								
Dry air req	837 lb/hr								
Moles from combustion		CO2	HCl	SO2	H2O				
Moles from evap		5.23	0.02	0.01	2.99				
					7.78				
Actual O2 in inlet air	lbmol/hr	12.20			Humidity Input				
Water vapor in Air	lbmol/hr	0.008			0.37 lbmol/hr				
Tot. dry air, lbmol/hr	58.10				7 lb/hr				
lb/hr	1676								
Total moles before aux fuel		CO2	HCl	SO2	N2	O2	H2O		
Total flue gas, wet		5.23	0.02	0.01	45.89	6.10	11.14		
Total flue gas, dry		68.38			1912				
Mole Weight, wet/dry		57.25			1711				
		27.96			29.89				
Temperature with no heat added, deg F					1.645				
Heat needed BTUs/Hour					8.64E+04				
If heat needed is positive, then add methane fuel:									
Heat balance calculations, based on LHVs and net available heat for methane									
T (w/o) fuel	1645 deg F								
Ht need	86410 Btu/hr								
NAH	190975 Btu/lbmol								
Fuel need	0.45 lbmol/hr								
Mol O2	0.95 lbmol/hr								
Air added	130 lb/hr								

KM800 200 lb/hr, 1800F Heat and Mass Balance

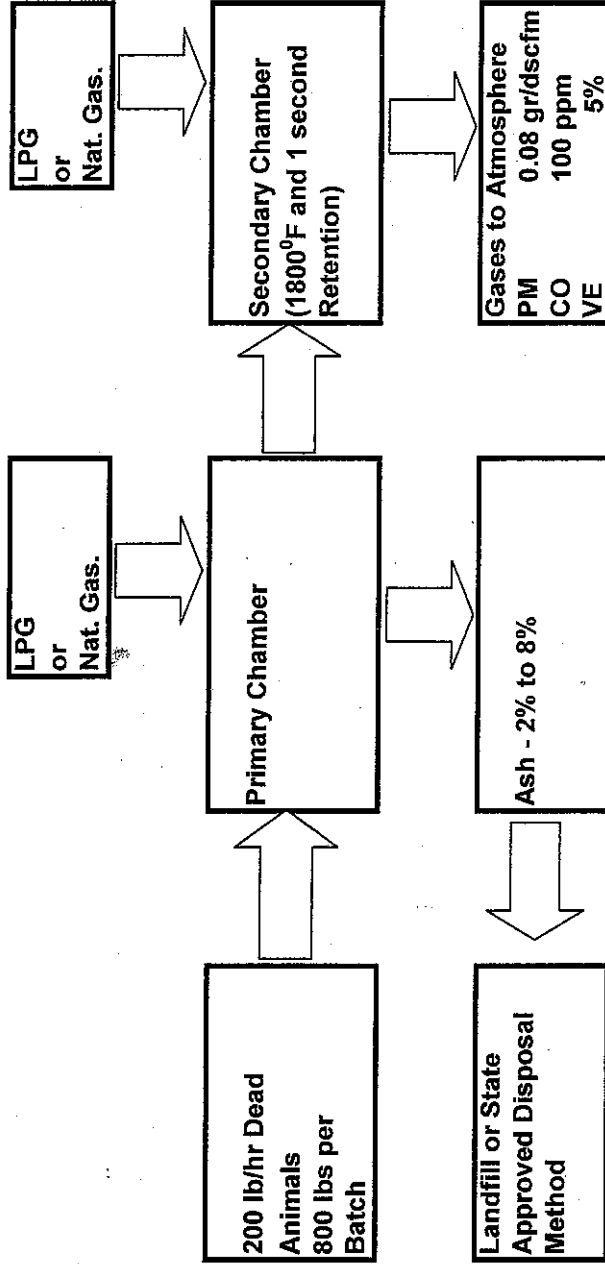
Heat in actual flue gas	836753.6 btu/hr																			
Mass cooling air	-189 lb/hr																			
Moles of air added (to cool or burn gas)	4.52																			
Stack gas lb mol/hr, wet	73.42																			
Stack gas lb mol/hr, dry	61.32																			
Total	5.68	CO ₂	HCl	SO ₂	N ₂	O ₂	H ₂ O	Total												
Moles out stack	0.02	0.01	0.01	0.40	1,385.03	196.67	12.10	73.42												
Pounds	249.81	0.82	0.04	0.01	80.67	10.02	217.83	2051												
Vol % dry	9.26																			
Mole wt of flue gas, wet	27.93																			
Actual flue gas, acfm	2,019	at	1800	deg F																
Actual flue gas acfm	723	at	350	deg F																
scfm	473	For this cell, Std Temp =	70																	
Mass Balance: Pounds per hour																				
In																				
Feed	200																			
Air	1814																			
Fuel	7																			
Total	2021																			
Error in Mass Balance, %	2.04%																			
Heat Balance: BTUs per hour																				
In																				
Feed	8.94E+05																			
Fuel	1.57E+05																			
Air(h2o)	1.42E+04																			
Total	1.07E+06																			
Error in heat balance, %	-1.85%																			
Maximum Heat available in flue gas BTUs/Hour	8.22E+05																			
Residence Time: 50.53 CF SCC/2019 ACFM at 1800F x 60 min/hr = 1.50 seconds																				

Pounds Incinerated Per Hour (Average)	Hours Per Year	SO ₂		NO _x		CO	
		lb/ton	TPY	lb/ton	TPY	lb/ton	TPY
200	8760	2.5	0.25	1.1	3	0.3	1.314

CO=100 PPM @ 7% O₂ based on manufacturers warranty

PM = 0.08 gr/dscf based on manufacturers warranty

Process Flow Diagram



305 Winston Creek Parkway
Lakeland, FL. 33810
863-686-0947 ph.
863-686-9870 fax
www.kellermechanical.com

**Keller Mechanical &
Engineering**

Fax

To: James

From: Bud Keller

Fax: 813-632-7668

Pages: (5) including the cover page

Phone:

Date: January 14, 2010

Attr:

cc:

Urgent **For Review** **Please Comment** **Please Reply** **Please Recycle**

• **Comments:**

D.E.P.
SOUTHWEST DISTRICT
JAN 14 2010
TAMPA

Keller Mechanical & Engineering, Inc.

KM SERIES SOLID WASTE INCINERATOR SPECIFICATIONS

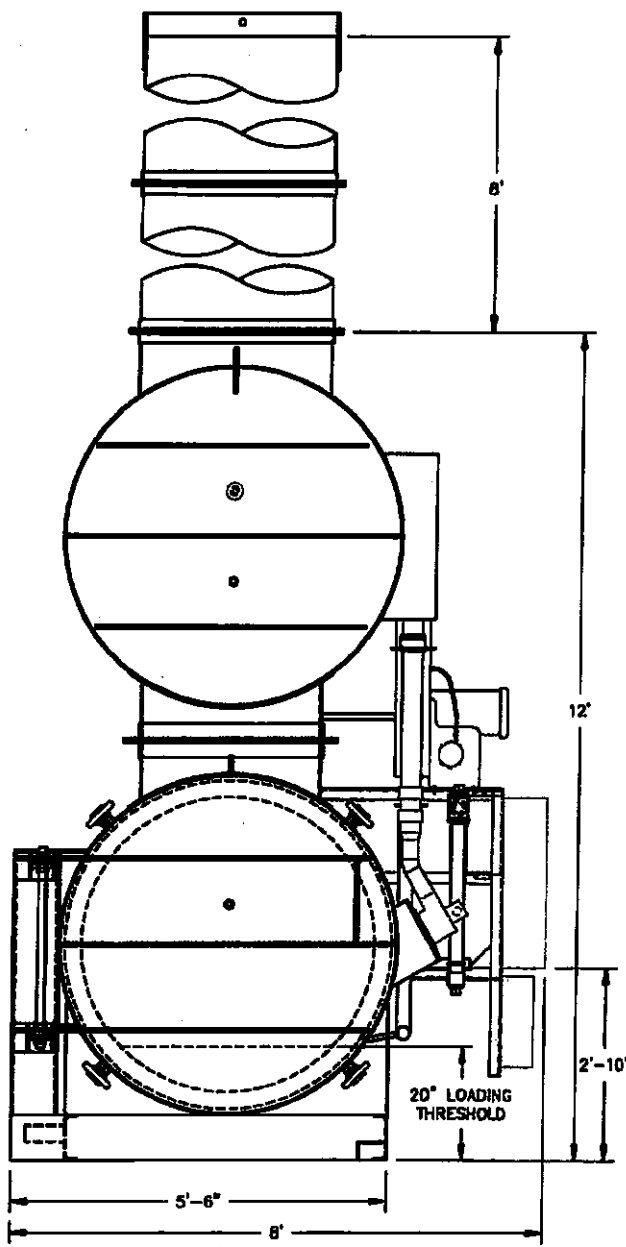
	UNITS	KM800
PRIMARY CHAMBER		
Chamber Volume	Cu. Ft.	74
Primary Burner	Btu's/hr	500,000
	Firing	Hi/Low
Burner Control	Rate	On/Off
Dia. O.D.	Inches	60
Dia. I.D.	Inches	49
Length Outside	Inches	72
Length Inside	Inches	67
Loading Door Dia	Inches	60
Nominal Hearth Area	Sq. Ft.	19
Metal Thickness	Inches	0.25
Refractory Thickness	Inches	4.5
	Degrees	
Refractory Rating	f.	2800
Insulation Thickness	Inches	1
	Degrees	
Insulation Rating	f.	1900
Approximate Weight	Lbs.	8500
	Degrees	
Operating Temp.	f.	1200/1600
SECONDARY CHAMBER		
Chamber Volume	Cu. Ft.	55
Primary Burner	Btu's/hr	1,500,000
	Firing	Full
Burner Control	Rate	Modulation
Dia. O.D.	Inches	60
Dia. I.D.	Inches	49
Length Outside	Inches	60
Length Inside	Inches	50
Residence Time	Seconds	>1
Metal Thickness	Inches	0.25
Refractory Thickness	Inches	4.5
	Degrees	
Refractory Rating	f.	2800
Insulation Thickness	Inches	1
	Degrees	
Insulation Rating	f.	1900
Approximate Weight	Lbs.	6500
	Degrees	
Operating Temp.	f.	1600/1900
SYSTEM CAPACITY		
Batch Load Rate	Lbs	800
Combustion Cycle Time	Hrs.	4 to 6

Keller Mechanical & Engineering, Inc.

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KM800

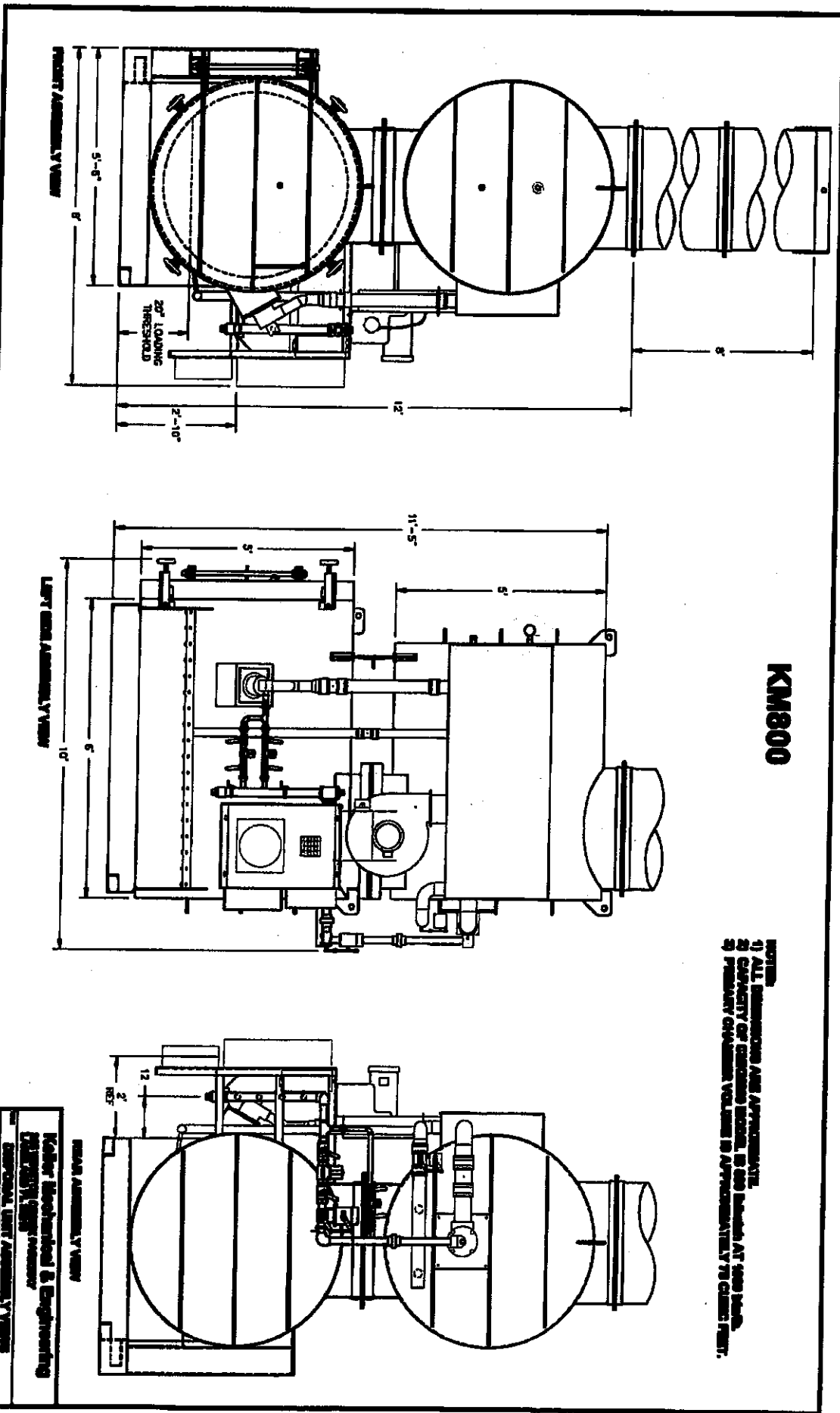


FRONT ASSEMBLY VIEW

NOTES:

- 1) ALL DIMENSIONS ARE APPROXIMATE.
- 2) CAPACITY OF CERKISSO MODEL IS 800 lb/batch AT 1800 lbs/ft.
- 3) PRIMARY CHAMBER VOLUME IS APPROXIMATELY 75 CUBIC FEET.

Keller Mechanical & Engineering			
300 WILSON CREEK PARKWAY LAKELAND FL 33005			
DISPOSAL UNIT ASSEMBLY VIEW			
DATE	REV	SCALE	SHEET
2/27/08	01	1/2"	1 of 1



KM800

NOTES

- 1) ALL DIMENSIONS ARE APPROXIMATE.
- 2) CAPACITY OF STORAGE TANKS IS NOT KNOWN AT THIS TIME.
- 3) PRESENT CHASSIS VOLUME IS APPROXIMATELY 70 CUBIC FEET.

Kobler Mechanical & Engineering
 MECHANICAL ENGINEERING
 SPECIAL UNIT ASSEMBLY VIEW
 1/24/74