

MARYLAND DEPARTMENT OF THE ENVIRONMENT

**AIR AND RADIATION ADMINISTRATION
APPLICATION FOR A PERMIT TO CONSTRUCT**

DOCKET #15-23

COMPANY: Journey Pet Services

LOCATION: 10800 Laurel Hill Drive
Frostburg, Maryland 21532

APPLICATION: Installation of one (1) pet crematory

<u>ITEM</u>	<u>DESCRIPTION</u>
1	Notice of Application and Opportunity to Request an Informational Meeting
2	Environmental Justice (EJ) Information - EJ Fact Sheet and MDE Score and Screening Report
3	Permit to Construct Application Forms - Form 5, Form 6, Form 10, Form 5EP; Evidence of Workman's Compensation Insurance; Material balance data and emissions calculations, testing data and modeling report
4	Zoning Approval

**DEPARTMENT OF THE ENVIRONMENT
AIR AND RADIATION ADMINISTRATION**

**NOTICE OF APPLICATION AND
OPPORTUNITY TO REQUEST AN INFORMATIONAL MEETING**

The Maryland Department of the Environment, Air and Radiation Administration (ARA) received a permit-to-construct application from Journey Pet Services on August 29, 2023, for a pet crematory. The proposed installation will be located at 10800 Laurel Hill Drive, Frostburg, Maryland 21532.

In accordance with HB 1200/Ch. 588 of 2022, the applicant provided an environmental justice (EJ) Score for the census tract in which the project is located using the Maryland EJ mapping tool. The EJ Score, expressed as a statewide percentile, was shown to be 27.9%, which the Department has verified. This score considers three demographic indicators, minority population above 50%, poverty rate above 25% and limited English proficiency above 15%, to identify underserved communities. Multiple environmental health indicators are used to identify overburdened communities.

Copies of the application, the EJ mapping tool screening report (which includes the score), and other supporting documents are available for public inspection on the Department's website at <https://mde.maryland.gov/programs/Permits/AirManagementPermits/Pages/index.aspx> (click on Docket Number 15-23). Any applicant-provided information regarding a description of the indicators contributing to that EJ score can also be found at the listed website. Such information has not yet been reviewed by the Department. A review of the submitted information will be conducted when the Department undertakes its technical review of all documents included in the application.

Pursuant to the Environment Article, Section 1-603, Annotated Code of Maryland, the Department will hold an informational meeting to discuss the application and the permit review process if the Department receives a written request for a meeting within 10 working days from the date of the second publication of this notice. A requested informational meeting will be held virtually using teleconference or internet-based conferencing technology unless a specific request for an in-person informational meeting is received. All requests for an informational meeting should be directed to the attention of Ms. Shannon Heafey, Air Quality Permits Program by email to shannon.heafey@maryland.gov or by mail to the Air and Radiation Administration, 1800 Washington Boulevard, Baltimore, Maryland 21230.

Further information may be obtained by calling Ms. Shannon Heafey at 410-537-4433.

Christopher R. Hoagland, Director
Air and Radiation Administration



The Applicant's Guide to Environmental Justice and Permitting

What You Need to Know

This fact sheet is designed to provide guidance to applicants on incorporating environmental justice screening requirements pursuant to House Bill 1200, effective October 1, 2022.

What is Environmental Justice?

The concept behind the term environmental justice (EJ) is that regardless of race, color, national origin, or income, all Maryland residents and communities should have an equal opportunity to enjoy an enhanced quality of life. How to assess whether equal protection is being applied is the challenge.

Communities surrounded by a disproportionate number of polluting facilities puts residents at a higher risk for health problems from environmental exposures. It is important that residents who may be adversely affected by a proposed source be aware of the current environmental issues in their community in order to have meaningful involvement in the permitting process. Resources may be available from government and private entities to ensure that community health is not negatively impacted by a new source located in the community.

Extensive research has documented that health disparities exist between demographic groups in the United States, such as differences in mortality and morbidity associated with factors that include race/ethnicity, income, and educational attainment. House Bill 1200 adds to MDE's work incorporating diversity, equity and inclusion into our mission to help overburdened and underserved communities with environmental issues.

What is House Bill 1200 and what does it require?

Effective October 1, 2022, House Bill 1200 requires a person applying for a permit from the Department under §1-601 of the Environment Article of the Annotated Code of Maryland or any permit requiring public notice and participation to include in the application an EJ Score for the census tract where the applicant is seeking the permit; requiring the Department, on receiving a certain permit application to review the EJ Score; and requiring notices to include information related to EJ Scores and generally relating to environmental permits and environmental justice screenings.

What is a "Maryland EJ Tool"?

The term "Maryland EJ Tool" means a publicly available state mapping tool that allows users to: (1) explore layers of environmental justice concern; (2) determine an overall EJ score for census tracts in the state; and (3) view additional context layers relevant to an area. The MDE EJ Screening Tool is considered a Maryland EJ Tool.

What is an "EJ Score"?

The term "EJ Score" means an overall evaluation of an area's environment and environmental justice indicators, as defined by MDE in regulation, including: (1) pollution burden exposure; (2) pollution burden environmental effects; (3) sensitive populations; and (4) socioeconomic factors.

The MDE EJ Screening Tool considers three demographic indicators, minority population above 50%, poverty rate above 25% and limited English proficiency above 15%, to identify underserved communities, and multiple environmental health indicators to identify overburdened communities. The tool uses these indicators to calculate a



Maryland
Department of
the Environment

The Applicant's Guide to Environmental Justice and Permitting

What You Need to Know

Final EJ Score Percentile, statewide. It is that score, linked to the census tract where the project is to be located, that needs to be reported to MDE as part of your permit application.

What does the application require?

The link for the MDE EJ Screening Tool is located on the Department's website, www.mde.maryland.gov. Click on the Environmental Justice header at the top of the Department's home page, then select EJ Screening Tool from the menu on the left. Click on Launch the EJ Screening Tool. After you open the tool, click okay on the opening screen. At the top right, please click the first button for the MDE Screening Report. Input the address of the proposed installation in the address bar. Click on the Report button. Once the report has been generated select the print icon and save it in a .pdf format.

The applicant needs to include the MDE Screening Report with the EJ Score from the MDE EJ Screening Tool as part of the permit application upon submission. An application will not be considered complete without the report.

The applicant is encouraged to provide the Department with a discussion about the environmental exposures in the community. This will provide pertinent information about how the applicant should proceed with engaging with the community. Residents of a community with a high indicator score and a high degree of environmental exposure should be afforded broader opportunities to participate in the permit process and understand the impacts a project seeking permit approval may have on them.

Questions

For air quality permits, please call 410-537-3230.

For water permits, please call 410-537-4145.

For land permits pertaining to Solid Waste, please call 410-537-3098. For land permits pertaining to Oil Control, please call 410-537-3483.

For land permits pertaining to Animal Feeding Operations, please call 410-537-4423.

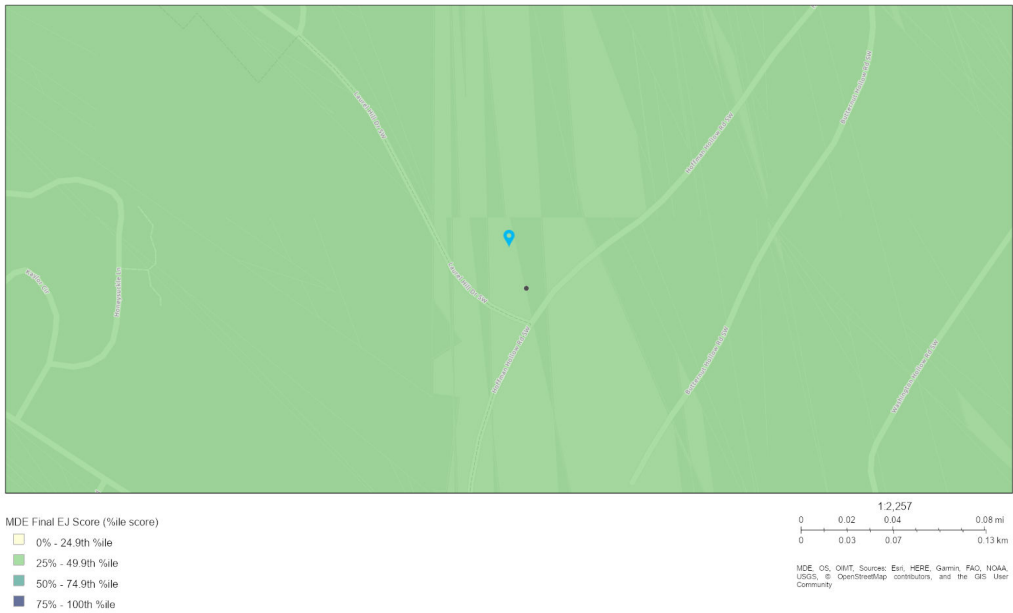
For land permits pertaining to Biosolids, please call 410-537-3403.



MDE Screening Report

Area of Interest (AOI) Information

Oct 3 2023 14:14:56 Eastern Daylight Time



Summary

Name	Count	Area(mi²)	Length(mi)
MDE Final EJ Score (%ile score)	1	N/A	N/A
Overburdened Communities Combined Score	1	N/A	N/A
Overburdened Pollution Environmental Score (%ile score)	1	N/A	N/A
Overburdened Exposure Score (%ile score)	1	N/A	N/A
Overburdened Sensitive Population (%ile score)	1	N/A	N/A
Socioeconomic/Demographic Score 2020 (Percentile score) (Underserved Community)	1	N/A	N/A
Air Emissions Facilities	0	N/A	N/A
Sulfur Dioxide (2010)	0	N/A	N/A
Ozone (2015)	1	N/A	N/A
Fine Particles (2012)	1	N/A	N/A
Biosolids FY 2020 and Current Permit Details	0	N/A	N/A
Biosolids FY2010 - 2014 Permit Details	0	N/A	N/A
Biosolids FY2009 Expired Permit Details	0	N/A	N/A
Biosolids FY 2020 and Current Permits Distribution By Acreage	1	N/A	N/A
Biosolids FY2015 - 2019 Permits Distribution By Acreage	1	N/A	N/A
Biosolids FY2010 - 2014 Permits Distribution By Acreage	1	N/A	N/A
Biosolids FY2009 Permits Expired Distribution By Acreage	1	N/A	N/A
Biosolids FY 2020 and Current Permit Distribution By Percent Coverage	1	N/A	N/A
Biosolids FY2015 - 2019 Permit Distribution By Percent Coverage	1	N/A	N/A
Biosolids FY2010 - 2014 Permit Distribution By Percent Coverage	1	N/A	N/A
Biosolids FY2009 Expired Permit Distribution By Percent Coverage	1	N/A	N/A
Concentrated Animal Feeding Operations (CAFOs)	0	N/A	N/A
Composting Facilities	0	N/A	N/A
Food Scrap Acceptors	0	N/A	N/A
Landfills	0	N/A	N/A
Correctional Facilities	0	N/A	N/A
Industrial Food Suppliers	0	N/A	N/A
Residential Colleges	0	N/A	N/A
Non-Residential Colleges	0	N/A	N/A
Hospitals	0	N/A	N/A
High Schools	0	N/A	N/A
Grocery Stores	0	N/A	N/A
10 Miles from Landfill	2	N/A	N/A
10 Miles from Composting Facility	1	N/A	N/A
General Composting Facilities Tier 2 (MD)	0	N/A	N/A
Commercial Anaerobic Digester (MD)	0	N/A	N/A
Out of State Facilities	0	N/A	N/A
30 mile buffer (Maryland)	0	N/A	N/A
30 Mile Buffer (Out of State)	1	N/A	N/A
Land Restoration Facilities	0	N/A	N/A
Determinations (points)	0	N/A	N/A
Determinations (areas)	0	N/A	N/A
Entities	0	N/A	N/A
Active Coal Mine Sites	0	N/A	N/A
Historic Mine Facilities	0	N/A	N/A

All Permitted Solid Waste Acceptance Facilities	0	N/A	N/A
Municipal Solid Waste Acceptance Facilities	0	N/A	N/A
Maryland Dam Locations	0	N/A	N/A
Maryland Pond Locations	0	N/A	N/A
Surface Water Intakes	0	N/A	N/A
Wastewater Discharge Facilities	0	N/A	N/A
Drinking Water	0	N/A	N/A
Clean Water	0	N/A	N/A

MDE Final EJ Score (%ile score)

#	Census tract identifier	Geographic Area Name	Total Population	Final EJ Score Percent (for this tract)	Final EJ Score Percentile (Distribution across Maryland)	Area(mi²)
1	24001001700	Census Tract 17, Allegany County, Maryland	4278	25.95	27.89	N/A

Overburdened Communities Combined Score

#	GEOID20	Geographic_Area_Name	TotalPop	Overburd_Exposure_Percent	Overburd_Exposure_Percentile	Overburd_Poll_Environment_Percent	Overburd_Poll_Environment_Percentile	Sensitive_Population_Percent
1	24001001700	Census Tract 17, Allegany County, Maryland	4,278	31.69	1.03	5.99	39.92	66.95

#	Sensitive_Population_Percentile	OverburdenedAllPercent	OverburdenedAllPercentile	Area(mi²)
1	66.58	37.73	50.17	N/A

Overburdened Pollution Environmental Score (%ile score)

#	GEOID20	Geographic_Area_Name	RentalsOccupiedPer79Percent	Percentile	PercentRMP	PercentRMPEJ	PercentHazWaste	PercentHazWaste EJ
1	24001001700	Census Tract 17, Allegany County, Maryland	18.18	66.37	0.97	2.69	0.51	6.54

#	PercentSuperFund NPL	PercentSuperFund NPLEJ	PercentHazWW	PercentHazWWEJ	BrownFPercent	Percentile_1	PercentPowerPlants	Percentile_12
1	6.13	17.79	9.92	10.91	0.00	0.00	0.00	0.00

#	PercentCAFOS	Percentile_12_13	PercentActiveMines	Percentile_12_13_14	PollutionEnvironmentalPercent	PollnEnvironmentalPercentile	Area(mi²)
1	0.00	0.00	18.18	99.32	5.99	39.92	N/A

Overburdened Exposure Score (%ile score)

#	GEOID20	Geographic_Area_Name	Total_Pop	PercentNATA_Cancer	Percentile_NATA_Cancer	PercentNATA_Res p_HI	Percentile_NATA_Resp_HI	PercentNATA_Diesel
1	24001001700	Census Tract 17, Allegany County, Maryland	4,278.00	40.00	9.02	40.00	5.00	10.23

#	Percentile_NATA_Diesel	PercentNATA_PM25	PercentileNATA_PM25	PercentOzone	PercentileOzone	PercentTraffic	PercentileTraffic	PercentTRI
1	4.63	75.48	4.28	85.54	9.70	2.28	12.50	0.00

#	PercentileTRI	PercentHazWasteLF	Percentile_HazWasteLF	PollutionExposurePercent	PollutionExposurePercentile	Area(mi²)
1	0.00	0.00	0.00	31.69	1.03	N/A

Overburdened Sensitive Population (%ile score)

#	GEOID20	Geographic_Area_Name	PerAsthma	PercentileAst	PerMyo	PercentileMyo	PerLow	PercentileLow
1	24001001700	Census Tract 17, Allegany County, Maryland	76.50	76.56	84.80	79.63	24.80	29.87

#	PercentBroad	PercentileBroad	PercentSens	PercentileSens	Area(mi²)
1	17.20	84.69	50.83	67.69	N/A

Socioeconomic/Demographic Score 2020 (Percentile score) (Underserved Community)

#	Census tract identifier	Geographic Area Name	Total Population	Percent Poverty	Percent Minority	Percent Limited English Proficiency	Demographic Score (Percent for this tract)	Demographic Score (Percentile Distribution across Maryland)	Area(mi²)
1	24001001700	Census Tract 17, Allegany County, Maryland	4,278	39.91	6.01	0.00	15.31	33.45	N/A

Ozone (2015)

#	STATEFP10	COUNTYFP10	COUNTYNS10	GEOID10	NAME10	Ozone NAA Area	8-Hr Ozone (2015) Designation	8-HR Ozone (2015) Classification	8-Hr Ozone (2015) Status	Area(mi²)
1	24	001	01713506	24001	Allegany	No Data	Attainment/Unclassifiable	No Data	No Data	N/A

Fine Particles (2012)

#	STATEFP10	COUNTYFP10	COUNTYNS10	GEOID10	NAME10	PM2.5 (2012) Status	Area(mi²)
1	24	001	01713506	24001	Allegany	Attainment/Unclassifiable	N/A

Biosolids FY 2020 and Current Permits Distribution By Acreage

#	County Name	FY2020andAfter	Area(mi²)
1	Allegany	1,329.50	N/A

Biosolids FY2015 - 2019 Permits Distribution By Acreage

#	County Name	FY2015to2019	Area(mi²)
1	Allegany	244.70	N/A

Biosolids FY2010 - 2014 Permits Distribution By Acreage

#	County Name	FY2010to2014	Area(mi²)
1	Allegany	241.00	N/A

Biosolids FY2009 Permits Expired Distribution By Acreage

#	County Name	FY2009	Area(mi²)
1	Allegany	200.30	N/A

Biosolids FY 2020 and Current Permit Distribution By Percent Coverage

#	County Name	FY2020andAfter	Area(mi²)
1	Allegany	1,329.50	N/A

Biosolids FY2015 - 2019 Permit Distribution By Percent Coverage

#	County Name	FY2015to2019	Area(mi²)
1	Allegany	244.70	N/A

Biosolids FY2010 - 2014 Permit Distribution By Percent Coverage

#	County Name	FY2010to2014	Area(mi²)
1	Allegany	241.00	N/A

Biosolids FY2009 Expired Permit Distribution By Percent Coverage

#	County Name	FY2009	Area(mi²)
1	Allegany	200.30	N/A

10 Miles from Landfill

#	County	Type	Facility_N	ADDRESS	FILL	SITE__ACRE	AI_No_	Owner_Type
1	ALLEGANY	WMF	Mountainview MunicipalLF	13300 New George's Creek Rd, Frostburg MD 21532.	40	396.00	19,953.00	PRI
2	ALLEGANY	WPT	Western MarylandPF&TS	13810 Hazmat Drive, Cumberland MD 21502.	-	5.85	63,586.00	PRI

#	MD_GRID__E	PERMITNUMB	EXPIRATION	Area(mi²)
1	261 /654	2011-WMF-0010	4/12/2016, 8:00 PM	N/A
2	801 /710	2014-WPT-0632	10/29/2019, 8:00 PM	N/A

10 Miles from Composting Facility

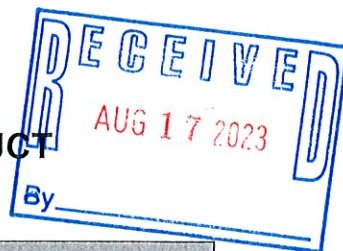
#	County	Facility	Address	Accepts_Fo	Location_o	Area(mi²)
1	No Data	Allegany County Compost Site	11700 Pittsburgh PLate Glass Road, Cumberland, MD 21502	No	11700 Pittsburgh Plate Glass Rd, Cumberland, MD 21502	N/A

30 Mile Buffer (Out of State)

#	FacilityName	Contact	Area(mi²)
1	Hillcrest Saylor Dairy Farms, LLC	https://files.dep.state.pa.us/Waste/Bureau%20of%20Waste%20Management/WasteMgtPortalFiles/PA_Permitted_Food_Waste_Composting_Facilities.pdf	N/A



AIR QUALITY PERMIT TO CONSTRUCT APPLICATION CHECKLIST



OWNER OF EQUIPMENT/PROCESS	
COMPANY NAME:	Journey Pet Services
COMPANY ADDRESS:	10800 Laurel Hill Dr., Frostburg, MD 21532
LOCATION OF EQUIPMENT/PROCESS	
PREMISES NAME:	Journet Pet Services
PREMISES ADDRESS:	10800 Laurel Hill Drive, Frostburg, MD 21532
CONTACT INFORMATION FOR THIS PERMIT APPLICATION	
CONTACT NAME:	Caleb Hill
JOB TITLE:	Owner
PHONE NUMBER:	301-689-3599
EMAIL ADDRESS:	caleb@journeypetservices.com
DESCRIPTION OF EQUIPMENT OR PROCESS	
Pet Crematory	

Application is hereby made to the Department of the Environment for a Permit to Construct for the following equipment or process as required by the State of Maryland Air Quality Regulation, COMAR 26.11.02.09.

Check each item that you have submitted as part of your application package.

- ☐ Application package cover letter describing the proposed project
- ☒ Complete application forms (Note the number of forms included or NA if not applicable.)
 - No. X Form 5
 - No. Form 5T
 - No. X Form 5EP
 - No. X Form 6
 - No. X Form 10
 - No. Form 11
 - No. Form 41
 - No. Form 42
 - No. Form 44
- ☒ Vendor/manufacturer specifications/guarantees
- ☒ Evidence of Workman's Compensation Insurance
- ☒ Process flow diagrams with emission points
- ☒ Site plan including the location of the proposed source and property boundary
- ☒ Material balance data and all emissions calculations
- ☒ Material Safety Data Sheets (MSDS) or equivalent information for materials processed and manufactured.
- ☐ Certificate of Public Convenience and Necessity (CPCN) waiver documentation from the Public Service Commission ⁽¹⁾
- ☐ Documentation that the proposed installation complies with local zoning and land use requirements ⁽²⁾

⁽¹⁾ Required for emergency and non-emergency generators installed on or after October 1, 2001 and rated at 2001 kW or more.

⁽²⁾ Required for applications subject to Expanded Public Participation Requirements.

MARYLAND DEPARTMENT OF THE ENVIRONMENT

1800 Washington Blvd ▪ Baltimore, Maryland 21230
(410) 537-3230 ▪ 1-800-633-6101 ▪ www.mde.state.md.us

Air and Radiation Management Administration ▪ Air Quality Permits Program



APPLICATION FOR PROCESSING/MANUFACTURING EQUIPMENT

Permit to Construct ☐

Registration Update ☐

Initial Registration ☐

1A. Owner of Equipment/Company Name

Journey Pet Services

Mailing Address

10800 Laurel Hill Dr.

Street Address

Frostburg

MD

21532

City

State

Zip

Telephone Number

(301) 689-3599

Signature

C. Hill

Caleb Hill - Owner

Print Name and Title

DO NOT WRITE IN THIS BLOCK
2. REGISTRATION NUMBER

County No.

--	--

1-2

Premises No.

--	--	--	--

3-6

Registration Class

--

7

Equipment No.

--	--	--	--

8-11

Data Year

--	--

12-13

Application Date

8/15/23

Date

1B. Equipment Location and Telephone Number (if different from above)

10800 Laurel Hill Drive

Street Number and Street Name

Frostburg

MD
State

21532

Zip

(301) 689-3599

Telephone Number

Premises Name (if different from above)

3. Status (A= New, B= Modification to Existing Equipment, C= Existing Equipment)

Status

A

15

New Construction
Begun (MM/YY)

0	6	2	3
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16-19

New Construction
Completed (MM/YY)

1	0	2	3
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20-23

Existing Initial
Operation (MM/YY)

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20-23

4. Describe this Equipment: Make, Model, Features, Manufacturer (include Maximum Hourly Input Rate, etc.)

B&L Cremation Systems Inc, BLP-750M5 Animal Crematory

5. Workmen's Compensation Coverage

Q967900237

Binder/Policy Number

12/29/23

Expiration Date

Company

NOTE: Before a Permit to Construct may be issued by the Department, the applicant must provide the Department with proof of worker's compensation coverage as required under Section 1-202 of the Worker's Compensation Act.

6A. Number of Pieces of Identical Equipment Units to be Registered/Permitted at this Time One

6B. Number of Stack/Emission Points Associated with this Equipment One



7. Person Installing this Equipment (if different from Number 1 on Page 1)

Name _____ Title _____
Company _____
Mailing Address/Street _____
City/Town _____ State _____ Telephone (____) _____

8. Major Activity, Product or Service of Company at this Location

Pet Cremations

9. Control Devices Associated with this Equipment

None

☒ 24-0

Simple/Multiple Cyclone	Spray/Adsorb Tower	Venturi Scrubber	Carbon Adsorber	Electrostatic Precipitator	Baghouse	Thermal/Catalytic Afterburner	Dry Scrubber
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
24-1	24-2	24-3	24-4	24-5	24-6	24-7	24-8

Other

☐

Describe _____

24-9

10. Annual Fuel Consumption for this Equipment

OIL-1000 GALLONS	SULFUR %	GRADE	NATURAL GAS-1000 FT ³	LP GAS-100 GALLONS	GRADE
<input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/>	<input type="text"/> <input type="text"/>	<input type="text"/>	<input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/>	<input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/>	<input type="text"/>
26-31	32-33	34	35-41	42-45	
COAL - TONS	SULFUR %	ASH%	WOOD-TONS	MOISTURE %	
<input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/>	<input type="text"/> <input type="text"/> <input type="text"/>	<input type="text"/> <input type="text"/> <input type="text"/>	<input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/>	<input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/>	
46-52	53-55	56-58	59-63	64-65	

OTHER FUELS	<input type="text"/>	ANNUAL AMOUNT CONSUMED	OTHER FUEL	<input type="text"/>	ANNUAL AMOUNT CONSUMED
(Specify Type)	66-1	(Specify Units of Measure)	(Specify Type)	66-2	(Specify Units of Measure)
1= Coke 2= COG 3=BFG 4=Other					

11. Operating Schedule (for this Equipment)

Continuous Operation	Batch Process	Hours per Batch	Batch per Week	Hours per Day	Days Per Week	Days per Year
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="text"/> <input type="text"/>	<input type="text"/>	<input type="text"/> <input type="text"/>	<input type="text"/>	<input type="text"/> <input type="text"/> <input type="text"/>
67-1	67-2	68-69		70-71	72	73-75
Seasonal Variation in Operation:						
No Variation	Winter Percent	Spring Percent	Summer Percent	Fall Percent	(Total Seasons= 100%)	
<input checked="" type="checkbox"/>	<input type="text"/> <input type="text"/>	<input type="text"/> <input type="text"/>	<input type="text"/> <input type="text"/>	<input type="text"/> <input type="text"/>		
76	77-78	79-80	81-82	83-84		



12. Equivalent Stack Information- is Exhaust through Doors, Windows, etc. Only? (Y/N)

☒ N

85

If not, then

Height Above Ground (FT)

Inside Diameter at Top

Exit Temperature (°F)

Exit Velocity (FT/SEC)

25

86-88

2'

89-91

1000

92-95

18

96-98

NOTE:

Attach a block diagram of process/process line, indicating new equipment as reported on this form and all existing equipment, including control devices and emission points.

13. Input Materials (for this equipment only)

Is any of this data to be considered confidential? ☒ N (Y or N)

INPUT RATE

NAME	CAS NO. (IF APPLICABLE)	PER HOUR	UNITS	PER YEAR	UNITS
1. Deceased Pets		150	lbs	273	tons
2.					
3.					
4.					
5.					
6.					
7.					
8.					
9.					

TOTAL

14. Output Materials (for this equipment)

Process/Product Stream

OUTPUT RATE

NAME	CAS NO. (IF APPLICABLE)	PER HOUR	UNITS	PER YEAR	UNITS
1. Bone Fragments		7.5	lbs	55	tons
2.					
3.					
4.					
5.					
6.					
7.					
8.					
9.					

TOTAL

15. Waste Streams- Solid and Liquid

OUTPUT RATE

NAME	CAS NO. (IF APPLICABLE)	PER HOUR	UNITS	PER YEAR	UNITS
1.					
2.					
3.					
4.					
5.	N/A				
6.					
7.					
8.					
9.					

TOTAL



16. Total Stack Emissions (for this equipment only) in Pounds Per Operating Day

Particulate Matter					
		3	.	5	0

99-104

Oxides of Sulfur					
		1	.	6	3

105-110

Oxides of Nitrogen					
		2	.	7	0

111-116

Carbon Monoxide					
		2	.	2	1

177-122

Volatile Organic Compounds					
		0	.	2	

123-128

PM-10					
		3	.	5	0

129-134

17. Total Fugitive Emissions (for this equipment only) in Pounds Per Operating Day

Particulate Matter					

135-139

Oxides of Sulfur					

140-144

Oxides of Nitrogen					

145-149

Carbon Monoxide					

150-154

Volatile Organic Compounds					

155-159

PM-10					

160-164

Method Used to Determine Emissions (1= Estimate 2= Emission Factor 3= Stack Test 4= Other)

TSP
2

165

SOX
2

166

NOX
2

167

CO
2

168

VOC
2

169

PM10
2

170

AIR AND RADIATION MANAGEMENT ADMINISTRATION USE ONLY**18. Date Rec'd. Local****Date Rec'd. State****Return to Local Jurisdiction**

Date _____ By _____

Reviewed by Local Jurisdiction

Date _____ By _____

Reviewed by State

Date _____ By _____

19. Inventory Date**Month/Year**

--	--	--	--

171-174

Equipment Code

--	--	--

175-177

SCC Code

--	--	--	--	--	--	--	--

178-185

20. Annual**Operating Rate**

--	--	--	--	--	--

186-192

Maximum Design**Hourly Rate**

--	--	--	--	--	--

193-199

Permit to Operate**Month**

--	--

200-201

Transaction Date**(MM/DD/YR)**

--	--	--	--	--	--

202-207

Staff Code

--	--	--

208-210

VOC Code

--	--

211 212

SIP Code

--	--

213 214

Regulation Code

--	--	--	--

215-218

Confidentiality

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219

Point Description

--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

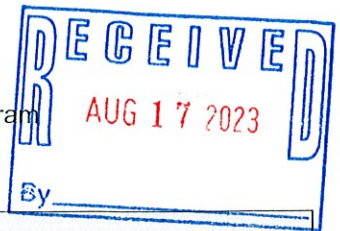
220-238

Action

--

239

A: Add
C: Change



FORM 5EP: Emission Point Data

Complete one (1) Form 5EP for EACH emission point (stack or fugitive emissions) related to the proposed installation.

Applicant Name: Journey Pet Services

1. Emission Point Identification Name/Number

List the applicant assigned name/number for this emission point and use this value on the attached required plot plan:
ST-04

2. Emission Point Description

Describe the emission point including all associated equipment and control devices:

Pet Crematory Stack

3. Emissions Schedule for the Emission Point

Continuous or Intermittent (C/I)?	I	Seasonal Variation Check box if none: <input checked="" type="checkbox"/> Otherwise estimate seasonal variation:	
Minutes per hour:		Winter Percent	
Hours per day:	10	Spring Percent	
Days per week:	7	Summer Percent	
Weeks per year:	52	Fall Percent	

4. Emission Point Information

Height above ground (ft):	25	Length and width dimensions at top of rectangular stack (ft):	Length:		Width:	
Height above structures (ft):	4'					
Exit temperature (°F):	1000	Inside diameter at top of round stack (ft):			2.0	
Exit velocity (ft/min):	18	Distance from emission point to nearest property line (ft):			100	
Exhaust gas volumetric flow rate (acfm):	2400	Building dimensions if emission point is located on building (ft)	Height 14	Length 50	Width 32	

5. Control Devices Associated with the Emission Point

Identify each control device associated with the emission point and indicate the number of devices. **A Form 6 is also required for each control device.** If none check none:

<input checked="" type="checkbox"/> None	<input type="checkbox"/> Thermal Oxidizer	No. _____
<input type="checkbox"/> Baghouse	<input type="checkbox"/> Regenerative	No. _____
<input type="checkbox"/> Cyclone	<input type="checkbox"/> Catalytic Oxidizer	No. _____
<input type="checkbox"/> Elec. Precipitator (ESP)	<input type="checkbox"/> Nitrogen Oxides Reduction	No. _____
<input type="checkbox"/> Dust Suppression System	<input type="checkbox"/> Selective	<input type="checkbox"/> Non-Selective
<input type="checkbox"/> Venturi Scrubber	<input type="checkbox"/> Catalytic	<input type="checkbox"/> Non-Catalytic
<input type="checkbox"/> Spray Tower/Packed Bed	<input type="checkbox"/> Other	No. _____
<input type="checkbox"/> Carbon Adsorber	Specify:	
<input type="checkbox"/> Cartridge/Canister		
<input type="checkbox"/> Regenerative		

[illegible]

(Attach additional sheets as necessary.)

MARYLAND DEPARTMENT OF THE ENVIRONMENT

1800 Washington Blvd ▪ Baltimore, Maryland 21230
(410) 537-3230 ▪ 1-800-633-6101 ▪ www.mde.state.md.us



Air and Radiation Management Administration ▪ Air Quality Permits Program

APPLICATION FOR PERMIT TO CONSTRUCT GAS CLEANING OR EMISSION CONTROL EQUIPMENT

1. Owner of Installation Journey Pet Services		Telephone No. 301-689-3599	Date of Application June 2023
2. Mailing Address 10800 Laurel Hill Dr.		City Frostburg	Zip Code 21532
		County Allegany	
3. Equipment Location 10800 Laurel Hill Drive		City/Town or P.O. Frostburg	County Allegany
4. Signature of Owner or Operator		Title Owner	Print or Type Name Calbe Hill
5. Application Type:		Alteration <input type="checkbox"/>	New Construction <input checked="" type="checkbox"/>
6. Date Construction is to Start: 06/2023		Completion Date (Estimate): 10/2023	
7. Type of Gas Cleaning or Emission Control Equipment:			
Simple Cyclone <input type="checkbox"/> Multiple Cyclone <input type="checkbox"/> Afterburner <input checked="" type="checkbox"/> Electrostatic Precipitator <input type="checkbox"/>			
Scrubber <input type="checkbox"/> _____ (type) Other <input type="checkbox"/> _____ (type)			
8. Gas Cleaning Equipment Manufacturer B&L Cremation Systems inc		Model No. BLP750M5	Collection Efficiency (Design Criteria)
9. Type of Equipment which Control Equipment is to Service: Pet Crematory			
10. Stack Test to be Conducted:			
Yes <input type="checkbox"/> No <input type="checkbox"/> _____ (Stack Test to be Conducted By) _____ (Date)			
11. Cost of Equipment _____			
Estimated Erection Cost _____			

12. The Following Shall Be Design Criteria:

	<u>INLET</u>	<u>OUTLET</u>
Gas Flow Rate	_____ ACFM*	_____ ACFM*
Gas Temperature	_____ °F	_____ °F
Gas Pressure	_____ INCHES W.G.	_____ INCHES W.G.
PRESSURE DROP _____		
Dust Loading	_____ GRAINS/ACFD**	_____ GRAINS/ACFD**
Moisture Content	_____ %	_____ %
OR		
Wet Bulb Temperature	_____ °F	_____ °F
Liquid Flow Rate (Wet Scrubber)	_____ GALLONS/MINUTE	
(WHEN SCRUBBER LIQUID OTHER THAN WATER INDICATE COMPOSITION OF SCRUBBING MEDIUM IN WEIGHT %)		
*= ACTUAL CUBIC FEET PER MINUTE **= ACTUAL CUBIC FEET DRY		

WHEN APPLICATION INVOLVES THE REDUCTION OF GASEOUS POLLUTANTS, PROVIDE THE CONCENTRATION OF EACH POLLUTANT IN THE GAS STREAM IN VOLUME PERCENT. INCLUDE THE COMPOSITION OF THE GASES ENTERING THE CLEANING DEVICE AND THE COMPOSITION OF EXHAUSTED GASES BEING DISCHARGED INTO THE ATMOSPHERE. USE AVAILABLE SPACE IN ITEM 15 ON PAGE 3.

13. Particle Size Analysis

<u>Size of Dust Particles Entering Cleaning Unit</u>	<u>% of Total Dust</u>	<u>% to be Collected</u>
0 to 10 Microns	_____	_____
10 to 44 Microns	_____	_____
Larger than 44 Microns	_____	_____

14. For Afterburner Construction Only:

Volume of Contaminated Air _____ CFM (DO NOT INCLUDE COMBUSTION AIR)

Gas Inlet Temperature _____ °F

Capacity of Afterburner _____ 1.5 MM BTU/HR

Diameter (or area) of Afterburner Throat _____ 3.2 ft

Combustion Chamber _____ 36 ft Operating Temperature at Afterburner _____ °F
(diameter) (length)

Retention Time of Gases _____ One Second



15. Show Location of Dust Cleaning Equipment in the System. Draw or Sketch Flow Diagram Showing Emission Path from Source to Exhaust Point to Atmosphere.

Enclosed from Diagram

Date Received: Local _____ State _____

Acknowledgement Date: _____

By _____

Reviewed By:

Local _____

State _____

Returned to Local:

Date _____

By _____

Application Returned to Applicant:

Date _____

By _____

REGISTRATION NUMBER OF ASSOCIATED EQUIPMENT:

--	--	--	--

PREMISES NUMBER:

--	--

--	--	--	--

Emission Calculations Revised By _____ Date _____



MARYLAND DEPARTMENT OF THE ENVIRONMENT

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Air and Radiation Management Administration ▪ Air Quality Permits Program

APPLICATION FOR INCINERATORS

Permit to Construct ☒ Registration ☐

		DO NOT WRITE IN THIS SPACE
1. Owner of Installation or Company Name Journey Pet Services	Date of Application July 2023	Date Rec. Local _____ Date Red. State _____
Mailing Address 10800 Laurel Hill Dr.	Telephone 301-689-3599	Acknowledgement Sent Date _____ By _____
City Frostburg	State MD	Reviewed Name _____ Date _____
Zip Code 21532		Local State _____
2A. Premises Name if Different from Above		Returned to Local Jurisdiction Date _____ By _____
2B. Incinerator Location if Different From Above (give Street Address, City, County and Zip Code): 10800 Laurel Hill Drive, Frostburg, MD 21532		Application Returned to Applicant Date _____ By _____
3. Owner, Agent or Authorized Company Official Caleb Hill (Print/Type Name) (Signature) 10800 Laurel Hill Dr., Frostburg, MD 21532 (Mailing Address, City/Town, State, Zip Code)		Premises Number 1 2 3 4 5 6 Registration Number 7 8 9 10 11 12 13
4A. New Construction Only Begin June 2023 Date Construction Completed Oct 2023	4B. Existing Installation Initial Operation Date _____ (14-15)	
5. Installation or Contractor (New or Replacement Only) (Name or Company Title) See above (Mailing Address, City/Town, State, Zip Code, Telephone Number)		
6. Equipment Manufacturer B&L Cremation Systems Inc	Manufacturer's Serial or Catalog No. BLP-750M5	7. Total Number of Incinerators of Identical Design and Capacity at this Location: One
8. Major Activity at this Location-Auto Dealer, Hospital, Apartment House, etc. Pet Crematory	9. Rated Capacity of Incinerator in lb/hr: 150 16-19	
10. Incinerator Type (Mark only one with X) Single Chamber <input type="radio"/> Multiple Chamber <input checked="" type="radio"/> Auxiliary Burner <input type="radio"/> Other <input type="radio"/> 20-1 20-2 21 22 Specify _____		
11. Frequency of Burning Hours/Day 1 0 Days/Year 3 6 5 23 24 25 26 27	12. Amount of Waste Burned Per Operating Day: 1500 Units: tons <input type="checkbox"/> lbs. <input checked="" type="checkbox"/> gal. <input type="checkbox"/> 32-1 32-2 32-3	
13. Method of Charging Waste into Unit: Manual <input checked="" type="checkbox"/> Automatic <input type="checkbox"/>		



14. Type of Waste/Refuse Incinerated. Mark major type with X -- all others with Check ✓.

Trash ☐ 33 Refuse ☐ 34 Refuse ☐ 35 Garbage ☒ 36 Animal or ☐ 37 Municipal ☐ 38 Infectious/
100% Dry 20% Garbage 50% Garbage Garbage Animal Parts Refuse Refuse Pathological

Does this waste contain
Carcinogenic or Toxic Material? Y/N Industrial Process Waste ☐ 40 Other ☐ 41

15. Total Annual Auxiliary Fuels Used
Oil _____ (gallons) _____ Natural Gas 10,520,000 (ft³)
42-47 (Grade) 48 49-55
LP Gas _____ (gallons) Other ☐ 90-92 specify fuel & units required
56-59

16. Stack Information: Height Above Ground (ft) _____ Inside Diameter at Top (in) _____
94-96 97-99
Exit Temperature (°F) _____ Gas Exit Velocity (ft/min) _____
100-103 104-107

17. Emission Control Devices

Gas Cleaning Form AMA-6 Must be Completed for Each Device Used and Attached to this Application.

None ☐ 108 Settling Chamber ☐ 109 Simple ☐ 110 Multiple ☐ 111 Scrubber ☐ 112 Venturi ☐ 113 Electrostatic ☐ 114 Bag- ☐ 115 After- ☐ 116
or Baffles Cyclone Cyclone Scrubber Scrubber Precipitator house burner
Other ☐ 117-118 Specify Type

DO NOT WRITE BELOW THIS LINE

18. Actual Stack Emissions in Pounds per Operating Day

Particulate Matter ☐ ☐ ☐ ☐ ☐ ☐ 119 124 Oxides of Sulfur ☐ ☐ ☐ ☐ ☐ ☐ 125 130 Oxides of Nitrogen ☐ ☐ ☐ ☐ ☐ ☐ 131 136
Carbon Monoxide ☐ ☐ ☐ ☐ ☐ ☐ 137 142 Volatile Organic Compounds ☐ ☐ ☐ ☐ ☐ ☐ 143 148

Other Pollutants Specify _____ Type/Amount

19. Inventory Date ☐ ☐ ☐ ☐ ☐ ☐
180 183

20. Method Used to Determine Emissions

	Estimate	Emission Factor	Stack Test	Other		Estimate	Emission Factor	Stack Test	Other
Particulate matter	<input type="checkbox"/> 184-1	<input type="checkbox"/> -2	<input type="checkbox"/> -3	<input type="checkbox"/> -4	Oxides of Sulfur	<input type="checkbox"/> 185-1	<input type="checkbox"/> -2	<input type="checkbox"/> -3	<input type="checkbox"/> -4
Oxides of Nitrogen	<input type="checkbox"/> 186-1	<input type="checkbox"/> -2	<input type="checkbox"/> -3	<input type="checkbox"/> -4	Carbon Monoxide	<input type="checkbox"/> 187-1	<input type="checkbox"/> -2	<input type="checkbox"/> -3	<input type="checkbox"/> -4
Volatile Organics	<input type="checkbox"/> 188-1	<input type="checkbox"/> -2	<input type="checkbox"/> -3	<input type="checkbox"/> -4					

21. Premises Information

Premises Name _____

Census Tract ☐ ☐ ☐ ☐ ☐ ☐ 243 248 SIC No. ☐ ☐ ☐ ☐ ☐ ☐ 249 252 MD Grid East ☐ ☐ ☐ ☐ ☐ ☐ 253 256 MD Grid North ☐ ☐ ☐ ☐ ☐ ☐ 257 259
Owner Private ☐ Local ☐ State ☐ Federal ☐
260-0 260-1 260-2 260-3 Date Completed _____
Completed By _____



B&L Cremation Systems, Inc.

Total Emission Rate = Incinerator Burn Rate X Emission Factor

Compound	CAS #	SCC	Amount lbs.	Cremations per year	Total lbs/yr	Total tons/yr
POLLUTANT	SCC	CAS	FACTOR	CREMATIONS	Lbs/yr	T/yr
1,2,3,7,8,9-Hexachlorodibenzodioxin	31502101	31502101	4.92E-10	1	4.92E-10	2.46E-13
Indeno(1,2,3-cd)pyrene	31502101	193-39-5	< 1.540E-8	1	1.54E-08	7.70E-12
Hydrogen fluoride	31502101	7664-39-3	6.55E-04	1	6.55E-04	3.28E-07
Hydrogen chloride	31502101	7647-01-0	7.20E-02	1	7.20E-02	3.60E-05
Hexachlorodibenzofurans, total	31502101		1.09E-08	1	1.09E-08	5.45E-12
2,3,4,6,7,8-Hexachlorodibenzofuran	31502101	60851-34-5	3.44E-10	1	3.44E-10	1.72E-13
1,2,3,7,8,9-Hexachlorodibenzofuran	31502101	72918-21-9	1.67E-09	1	1.67E-09	8.35E-13
1,2,3,6,7,8-Hexachlorodibenzofuran	31502101	57117-44-9	8.52E-10	1	8.52E-10	4.26E-13
Dibenzo(a,h)anthracene	31502101	53-70-3	< 1.270E-8	1	1.27E-08	6.35E-12
Hexachlorodibenzodioxins, total	31502101	34465-46-8	5.66E-09	1	5.66E-09	2.83E-12
Molybdenum	31502101	7439-98-7	< 1.670E-5	1	0.0000167	8.35E-09
1,2,3,6,7,8-Hexachlorodibenzodioxin	31502101	57653-85-7	3.97E-10	1	3.97E-10	1.985E-13
1,2,3,4,7,8-Hexachlorodibenzodioxin	31502101	39227-28-6	2.75E-10	1	2.75E-10	1.375E-13
Heptachlorodibenzofurans, total	31502101		< 5.410E-9	1	5.41E-09	2.705E-12

1,2,3,4,7,8,9-Heptachlorodibenzofuran	31502101	55673-89-7	< 2.780E-10		1		2.78E-10	1.39E-13
1,2,3,4,6,7,8-Heptachlorodibenzofuran	31502101	67562-39-4	< 4.570E-9		1		4.57E-09	2.285E-12
Heptachlorodibenzofuran	31502101		8.14E-09		1		8.14E-09	4.07E-12
1,2,3,4,6,7,8-Heptachlorodibenzofuran	31502101	35822-46-9	3.79E-09		1		3.79E-09	1.895E-12
Fluorene	31502101	86-73-7	4.17E-07		1	0.000000417		2.085E-10
Fluoranthene	31502101	206-44-0	2.05E-07		1	0.000000205		1.025E-10
1,2,3,4,7,8-Hexachlorodibenzofuran	31502101	70648-26-9	9.53E-10		1			4.765E-13
Polychlorinated dibenzo-p-dioxins, total	31502101		2.35E-08		1			
Zinc	31502101	7440-66-6	3.53E-04		1	0.000353		1.765E-07
Vanadium	31502101	7440-62-2	5.79E-05		1	0.0000579		2.895E-08
Thallium	31502101	7440-28-0	< 8.520E-5		1	0.0000852		4.26E-08
Tetrachlorodibenzofurans, total	31502101		1.10E-08		1			
2,3,7,8-Tetrachlorodibenzofuran	31502101	51207-31-9	5.19E-10		1			
Tetrachlorodibenzofuran	31502101						5.19E-10	2.595E-13
Tetrachlorodibenzofuran	31502101		1.41E-09		1			
2,3,7,8-Tetrachlorodibenzofuran	31502101	1746-01-6	7.94E-11		1			
Silver	31502101	7440-22-4	7.30E-06		1	0.0000073		3.65E-09
Selenium	31502101	7782-49-2	< 4.360E-5		1	0.0000436		2.18E-08
Pyrene	31502101	129-00-0	1.62E-07		1	0.000000162		8.1E-11
Lead	31502101	7439-92-1	6.62E-05		1	0.0000662		3.31E-08

Polychlorinated dibenzofurans, total	31502101		< 3.530E-8	1	1	3.53E-08	1.765E-11
Mercury	31502101	7439-97-6	3.29E-03	1	1	0.00329	0.000001645
PM, filterable	31502101		8.50E-02	1	1	0.085	0.0000425
PM, filterable	31502101		5.59E-05	1	1	0.0000559	2.795E-08
Phenanthrene	31502101	85-01-8	2.29E-06	1	1	0.00000229	1.145E-09
Pentachlorodibenzofurans, total	31502101		6.44E-09	1	1	6.44E-09	3.22E-12
2,3,4,7,8-Pentachlorodibenzofuran	31502101	57117-31-4	< 8.850E-10	1	1	8.85E-10	4.425E-13
1,2,3,7,8-Pentachlorodibenzofuran	31502101	57117-41-6	< 2.940E-10	1	1	2.94E-10	1.47E-13
1,2,3,7,8-Pentachlorodibenzop-dioxin	31502101	40321-76-4	2.33E-10	1	1	2.33E-10	1.165E-13
Octachlorodibenzop-dioxins, total	31502101	3268-87-9	6.07E-09	1	1	6.07E-09	3.035E-12
Nickel	31502101	7440-02-0	3.82E-05	1	1	0.0000382	1.91E-08
Octachlorodibenzofurans, total	31502101	39001-02-0	1.62E-09	1	1	1.62E-09	8.1E-13
Polycyclic aromatic hydrocarbons (PAH)	31502101		3.76E-06	1	1	0.00000376	1.88E-09
Benzo (a) anthracene	31502101	56-55-3	< 9.760E-9	1	1	9.76E-09	4.88E-12
Copper	31502101	7440-50-8	2.74E-05	1	1	0.0000274	1.37E-08
Pentachlorodibenzop-dioxins, total	31502101		2.17E-09	1	1	2.17E-09	1.085E-12
Acenaphthene	31502101	83-32-9	1.11E-07	1	1	0.000000111	5.55E-11

Acenaphthylene	31502101	208-96-8	1.22E-07	1	0.000000122	6.1E-11
Anthracene	31502101	120-12-7	3.24E-07	1	0.000000324	1.62E-10
Antimony	31502101	7440-36-0	< 3.020E-5	1	0.0000302	1.51E-08
Barium	31502101	7440-39-3	2.40E-05	1	0.000024	0.000000012
Benzo (a) pyrene	31502101	50-32-8	< 2.910E-8	1	2.91E-08	1.455E-11
Chromium	31502101	7440-47-3	2.99E-05	1	0.0000299	1.495E-08
Cobalt	31502101	7440-48-4	< 1.750E-6	1	0.00000175	8.75E-10
Chrysene	31502101	218-01-9	< 5.400E-8	1	0.000000054	2.7E-11
Arsenic	31502101	7440-38-2	< 3.000E-5	1	0.00003	0.000000015
Chromium (VI)	31502101	18540-29-9	1.35E-05	1	0.0000135	6.75E-09
Benzo (b) fluoranthene	31502101	205-99-2	< 1.590E-8	1	1.59E-08	7.95E-12
Cadmium	31502101	7440-43-9	1.11E-05	1	0.0000111	5.55E-09
Beryllium	31502101	7440-41-7	1.37E-06	1	0.00000137	6.85E-10
Benzo (k) fluoranthene	31502101	207-08-9	< 1.420E-8	1	1.42E-08	7.1E-12
Benzo (g,h,i) perylene	31502101	191-24-2	< 2.910E-8	1	2.91E-08	1.455E-11
					1.62E-01	

Total Tons/yr.

8.09E-05

To: Ellen Pazos, B&L Cremation Systems, Inc
cc: Nicole Saniti & Megan Keyser, Trinity Consultants
From: Susan Barnes, Trinity Consultants
Date: August 4, 2023
RE: Journey Pet Services Crematory AERSCREEN Modeling

Summary

As requested by B&L Cremation Systems, Inc. (B&L), Trinity Consultants (Trinity) has completed AERSCREEN air dispersion modeling for criteria pollutants and toxic air pollutants (TAPs) emitted from the Journey Pet Services Crematory to demonstrate compliance with the National Ambient Air Quality Standards (NAAQS) and Maryland Department of the Environment (MDE) Toxic Air Pollutants Program (TAPs Program).

Journey Pet Services is proposing to install and operate a BLP-750M5 Animal Crematory and is evaluating compliance with ambient air quality standards associated with this project. Accordingly, Journey Pet Services has requested that Trinity conduct AERSCREEN modeling to assess the off-site impacts of this change.

The AERSCREEN modeling completed by Trinity demonstrates that the maximum estimated ambient concentrations of all criteria pollutants, including particulate matter with aerodynamic diameter less than or equal to 10 microns (PM₁₀), particulate matter with aerodynamic diameter less than or equal to 2.5 microns (PM_{2.5}), sulfur dioxide (SO₂), nitrogen oxides (NO_x), lead, carbon monoxide (CO), and TAPs emitted by the facility are less than the NAAQS and TAP limits. Therefore, Journey Pet Services is not expected to cause exceedance of the NAAQS or TAPs Program screening levels.

Air Dispersion Modeling Methodology and Inputs

The AERSCREEN air dispersion model was determined by B&L and Trinity to provide a reasonable and conservative estimate of off-site air quality impacts caused by Journey Pet Services. This section describes the inputs used in the modeling.

AERSCREEN Inputs

AERSCREEN modeling estimates off-site pollutant concentrations using physical stack parameters, building parameters, estimates of meteorological conditions, and information about the surrounding area. Much of the necessary information was provided to Trinity by B&L. Additional information was gathered by analyzing Journey Pet Services and the surrounding area using Google Earth. A complete list of parameters used in the AERSCREEN model is shown in Attachment 1.

Emission Rates

Journey Pet Services emits air pollutants from three crematory stacks. For the purposes of this analysis, Trinity has assumed that the emissions from the three stacks are emitted from a single stack, and that the emissions from a single cremation occur over the course of an hour. When modeling the emissions from a single stack, a linear relationship exists between the emission rates from the stack and the estimated

ambient concentrations of modeled pollutants. Therefore, AERSCREEN modeling was performed using a unit emission rate of 1 pound per hour, then predicted ambient concentrations of criteria pollutants and TAPs were calculated by multiplying the AERSCREEN results for the appropriate averaging periods by the known emission rate in pounds per hour of each pollutant. Trinity assumed that emission rates of PM₁₀ and PM_{2.5} were equivalent to potential emission rates for total PM. These predicted concentrations were then compared to the applicable NAAQS and TAP screening levels. Calculations of predicted ambient concentrations for each pollutant are detailed in Attachment 1.

Modeling Results

The completed AERSCREEN modeling demonstrates that off-site concentrations of all criteria pollutants and TAPs emitted from Journey Pet Services are not expected to exceed the NAAQS and TAP screening levels. Table 1 presents a comparison of the model predicted concentrations to the NAAQS. The comparison to TAP screening levels is provided in Attachment 1.

Table 1: Comparison of Model Results to NAAQS

Pollutant	Averaging Period	National Ambient Air Quality Standard (µg/m ³)	Predicted Maximum Off-site Concentration (µg/m ³)	NAAQS Exceeded?
PM ₁₀	24-Hour	150	1.65	NO
PM _{2.5}	24-Hour	35	1.65	NO
	Annual	12.0	0.28	NO
SO _x	1-Hour	196	1.28	NO
	3-Hour	1,300	1.28	NO
	24-Hour	365	0.77	NO
	Annual	80	0.13	NO
NO _x	1-Hour	188	2.13	NO
	Annual	100	0.21	NO
Lead	3-Month	0.15	0.00	NO
CO	1-Hour	10,000	1.74	NO
	8-Hour	40,000	1.74	NO

Attachment 1: AERSCREEN Inputs and Results

**B&L Cremation Systems
Woodbine Pet Crematory
AERSCREEN Inputs and Results**

AERSCREEN Inputs

Control Options

Land Use	Rural
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Source Parameters

Source Type	Point	
Emission Rate	1	lb/hr
Stack Height	25	ft
Stack Diameter	24	in
Stack Temperature	1,000	F
Exit Velocity	23.52	ft/s

Building Parameters

Height	14	ft
Length	50	ft
Width	32	ft
Max Dimension Angle to N	75	degrees
Angle from Center to Stack	150	degrees
Distance from Center to Stack	3	ft

Receptors

Min Distance to Ambient Air	100	ft
Max Distance to Probe	16,425	ft

Meteorology

Min Temperature	0	F
Max Temperature	100	F
Min Wind Speed	0.5	m/s
Anemometer Height	10	m
Surface Profile	Deciduous Forest	

AERSCREEN Results**Modeled Concentrations @ 1 lb/hr ($\mu\text{g}/\text{m}^3$)**

	Max 1-Hour	Scaled 3-Hour	Scaled 8-Hour	Scaled 24-Hour	Scaled Annual
Maximum Impact	6.734	6.734	6.061	4.041	0.6734
At Ambient Boundary	4.95	4.95	4.455	2.97	0.495

Criteria Pollutant Emission Rates (lb/hr)

		Source
PM ₁₀	0.35	Potential to Emit from Permit Application
PM _{2.5}	0.35	Potential to Emit from Permit Application
SO _x	0.16	Potential to Emit from Permit Application
NO _x	0.27	Potential to Emit from Permit Application
Lead	3.00E-04	Potential to Emit from Permit Application
VOC	0.02	Potential to Emit from Permit Application
CO	0.22	Potential to Emit from Permit Application

TAPS Emission Rates (lb/hr)

	Actual Emissions (lb/hr/unit)	Actual Emissions (lb/hr)	Source
Indeno(1,2,3-cd)pyrene	1.54E-08	4.62E-08	Provided by B&L
Hydrogen fluoride	6.55E-04	1.97E-03	Provided by B&L
Hydrogen chloride	7.20E-02	2.16E-01	Provided by B&L
Dibenzo(a,h)anthracene	1.27E-08	3.81E-08	Provided by B&L
Fluorene	4.17E-07	1.25E-06	Provided by B&L
Fluoranthene	2.05E-07	6.15E-07	Provided by B&L
Zinc	3.53E-04	1.06E-03	Provided by B&L
Vanadium	5.79E-05	1.74E-04	Provided by B&L
Thallium	8.52E-05	2.56E-04	Provided by B&L
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin	3.79E-09	1.14E-08	Provided by B&L
1,2,3,4,7,8-Heptachlorodibenzofuran	2.78E-10	8.34E-10	Provided by B&L
1,2,3,4,6,7,8-Heptachlorodibenzofuran	4.57E-09	1.37E-08	Provided by B&L
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin	4.92E-10	1.48E-09	Provided by B&L
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin	3.97E-10	1.19E-09	Provided by B&L
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin	2.75E-10	8.25E-10	Provided by B&L
2,3,4,6,7,8-Hexachlorodibenzofuran	3.44E-10	1.03E-09	Provided by B&L
1,2,3,7,8,9-Hexachlorodibenzofuran	1.67E-09	5.01E-09	Provided by B&L
1,2,3,6,7,8-Hexachlorodibenzofuran	8.52E-10	2.56E-09	Provided by B&L
1,2,3,4,7,8-Hexachlorodibenzofuran	9.53E-10	2.86E-09	Provided by B&L
2,3,4,7,8-Pentachlorodibenzofuran	8.85E-10	2.66E-09	Provided by B&L
1,2,3,7,8-Pentachlorodibenzofuran	2.94E-10	8.82E-10	Provided by B&L
1,2,3,7,8-Pentachlorodibenzo-p-dioxin	2.33E-10	6.99E-10	Provided by B&L
2,3,7,8-Tetrachlorodibenzofuran	5.19E-10	1.56E-09	Provided by B&L
2,3,7,8-Tetrachlorodibenzo-p-dioxin	7.94E-11	2.38E-10	Provided by B&L
Silver	7.30E-06	2.19E-05	Provided by B&L
Molybdenum	1.67E-05	5.01E-05	Provided by B&L
Selenium	4.36E-05	1.31E-04	Provided by B&L
Pyrene	1.62E-07	4.86E-07	Provided by B&L
Lead	6.62E-05	1.99E-04	Provided by B&L
Mercury	3.29E-03	9.87E-03	Provided by B&L
Phenanthrene	2.29E-06	6.87E-06	Provided by B&L
Nickel	3.82E-05	1.15E-04	Provided by B&L
Benz(a)anthracene	9.76E-09	2.93E-08	Provided by B&L
Copper	2.74E-05	8.22E-05	Provided by B&L
Acenaphthene	1.11E-07	3.33E-07	Provided by B&L
Acenaphthylene	1.22E-07	3.66E-07	Provided by B&L
Anthracene	3.24E-07	9.72E-07	Provided by B&L
Antimony	3.02E-05	9.06E-05	Provided by B&L
Barium	2.40E-05	7.20E-05	Provided by B&L
Benzo(a)pyrene	2.91E-08	8.73E-08	Provided by B&L
Chromium	2.99E-05	8.97E-05	Provided by B&L
Cobalt	1.75E-06	5.25E-06	Provided by B&L
Chrysene	5.40E-08	1.62E-07	Provided by B&L
Arsenic	3.00E-05	9.00E-05	Provided by B&L
Chromium VI	1.35E-05	4.05E-05	Provided by B&L
Benzo(b)fluoranthene	1.59E-08	4.77E-08	Provided by B&L
Cadmium	1.11E-05	3.33E-05	Provided by B&L
Beryllium	1.37E-06	4.11E-06	Provided by B&L
Benzo(k)fluoranthene	1.42E-08	4.26E-08	Provided by B&L
Benzo(ghi)perylene	2.91E-08	8.73E-08	Provided by B&L



Modeled Maximum Impact Concentrations By Pollutant (µg/m³)

	Max 1-Hour	Scaled 3-Hour	Scaled 8-Hour	Scaled 24-Hour	Scaled Annual
PM ₁₀	2.36	2.36	2.12	1.41	0.24
PM _{2.5}	2.36	2.36	2.12	1.41	0.24
SO _x	1.10	1.10	0.99	0.66	0.11
NO _x	1.82	1.82	1.64	1.09	0.18
Lead	0.00	0.00	0.00	0.00	0.00
VOC	0.13	0.13	0.12	0.08	0.01
CO	1.49	1.49	1.34	0.89	0.15

Modeled Maximum Impact Concentrations By Pollutant (µg/m³)

	Max 1-Hour	Scaled 3-Hour	Scaled 8-Hour	Scaled 24-Hour	Scaled Annual
Indeno(1,2,3-cd)pyrene	3.11E-07	3.11E-07	2.80E-07	1.87E-07	3.11E-08
Hydrogen fluoride	1.32E-02	1.32E-02	1.19E-02	7.94E-03	1.32E-03
Hydrogen chloride	1.45E+00	1.45E+00	1.31E+00	8.73E-01	1.45E-01
Dibenzo(a,h)anthracene	2.57E-07	2.57E-07	2.31E-07	1.54E-07	2.57E-08
Fluorene	8.42E-06	8.42E-06	7.58E-06	5.06E-06	8.42E-07
Fluoranthene	4.14E-06	4.14E-06	3.73E-06	2.49E-06	4.14E-07
Zinc	7.13E-03	7.13E-03	6.42E-03	4.28E-03	7.13E-04
Vanadium	1.17E-03	1.17E-03	1.05E-03	7.02E-04	1.17E-04
Thallium	1.72E-03	1.72E-03	1.55E-03	1.03E-03	1.72E-04
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin	7.66E-08	7.66E-08	6.89E-08	4.59E-08	7.66E-09
1,2,3,4,7,8,9-Heptachlorodibenzofuran	5.62E-09	5.62E-09	5.05E-09	3.37E-09	5.62E-10
1,2,3,4,6,7,8-Heptachlorodibenzofuran	9.23E-08	9.23E-08	8.31E-08	5.54E-08	9.23E-09
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin	9.94E-09	9.94E-09	8.95E-09	5.96E-09	9.94E-10
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin	8.02E-09	8.02E-09	7.22E-09	4.81E-09	8.02E-10
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin	5.56E-09	5.56E-09	5.00E-09	3.33E-09	5.56E-10
2,3,4,6,7,8-Hexachlorodibenzofuran	6.95E-09	6.95E-09	6.25E-09	4.17E-09	6.95E-10
1,2,3,7,8,9-Hexachlorodibenzofuran	3.37E-08	3.37E-08	3.04E-08	2.02E-08	3.37E-09
1,2,3,6,7,8-Hexachlorodibenzofuran	1.72E-08	1.72E-08	1.55E-08	1.03E-08	1.72E-09
1,2,3,4,7,8-Hexachlorodibenzofuran	1.93E-08	1.93E-08	1.73E-08	1.16E-08	1.93E-09
2,3,4,7,8-Pentachlorodibenzofuran	1.79E-08	1.79E-08	1.61E-08	1.07E-08	1.79E-09
1,2,3,7,8-Pentachlorodibenzofuran	5.94E-09	5.94E-09	5.35E-09	3.56E-09	5.94E-10
1,2,3,7,8-Pentachlorodibenzo-p-dioxin	4.71E-09	4.71E-09	4.24E-09	2.82E-09	4.71E-10
2,3,7,8-Tetrachlorodibenzofuran	1.05E-08	1.05E-08	9.44E-09	6.29E-09	1.05E-09
2,3,7,8-Tetrachlorodibenzo-p-dioxin	1.60E-09	1.60E-09	1.44E-09	9.63E-10	1.60E-10
Silver	1.47E-04	1.47E-04	1.33E-04	8.85E-05	1.47E-05
Molybdenum	3.37E-04	3.37E-04	3.04E-04	2.02E-04	3.37E-05
Selenium	8.81E-04	8.81E-04	7.93E-04	5.29E-04	8.81E-05
Pyrene	3.27E-06	3.27E-06	2.95E-06	1.96E-06	3.27E-07
Lead	1.34E-03	1.34E-03	1.20E-03	8.03E-04	1.34E-04
Mercury	6.65E-02	6.65E-02	5.98E-02	3.99E-02	6.65E-03
Phenanthrene	4.63E-05	4.63E-05	4.16E-05	2.78E-05	4.63E-06
Nickel	7.72E-04	7.72E-04	6.95E-04	4.63E-04	7.72E-05
Benz(a)anthracene	1.97E-07	1.97E-07	1.77E-07	1.18E-07	1.97E-08
Copper	5.54E-04	5.54E-04	4.98E-04	3.32E-04	5.54E-05
Acenaphthene	2.24E-06	2.24E-06	2.02E-06	1.35E-06	2.24E-07
Acenaphthylene	2.46E-06	2.46E-06	2.22E-06	1.48E-06	2.46E-07
Anthracene	6.55E-06	6.55E-06	5.89E-06	3.93E-06	6.55E-07
Antimony	6.10E-04	6.10E-04	5.49E-04	3.66E-04	6.10E-05
Barium	4.85E-04	4.85E-04	4.36E-04	2.91E-04	4.85E-05
Benzo(a)pyrene	5.88E-07	5.88E-07	5.29E-07	3.53E-07	5.88E-08
Chromium	6.04E-04	6.04E-04	5.44E-04	3.62E-04	6.04E-05
Cobalt	3.54E-05	3.54E-05	3.18E-05	2.12E-05	3.54E-06
Chrysene	1.09E-06	1.09E-06	9.82E-07	6.55E-07	1.09E-07
Arsenic	6.06E-04	6.06E-04	5.45E-04	3.64E-04	6.06E-05
Chromium VI	2.73E-04	2.73E-04	2.45E-04	1.64E-04	2.73E-05
Benzo(b)fluoranthene	3.21E-07	3.21E-07	2.89E-07	1.93E-07	3.21E-08
Cadmium	2.24E-04	2.24E-04	2.02E-04	1.35E-04	2.24E-05
Beryllium	2.77E-05	2.77E-05	2.49E-05	1.66E-05	2.77E-06
Benzo(k)fluoranthene	2.87E-07	2.87E-07	2.58E-07	1.72E-07	2.87E-08
Benzo(ghi)perylene	5.88E-07	5.88E-07	5.29E-07	3.53E-07	5.88E-08

Comparison With NAAQS ($\mu\text{g}/\text{m}^3$)

		Max 1-Hour	Scaled 3-Hour	Scaled 8-Hour	Scaled 24-Hour	Scaled 3-month	Scaled Annual
PM ₁₀	Modeled Concentration	--	--	--	1.41	--	--
	NAAQS	--	--	--	150	--	--
	Modeled < NAAQS?	--	--	--	Y	--	--
PM _{2.5}	Modeled Concentration	--	--	--	1.41	--	0.24
	NAAQS	--	--	--	35	--	12.0
	Modeled < NAAQS?	--	--	--	Y	--	Y
SO _x	Modeled Concentration	1.10	1.10	--	0.66	--	0.11
	NAAQS	196	1,300	--	365	--	80
	Modeled < NAAQS?	Y	Y	--	Y	--	Y
NO _x	Modeled Concentration	1.82	--	--	--	--	0.18
	NAAQS	188	--	--	--	--	100
	Modeled < NAAQS?	Y	--	--	--	--	Y
Lead	Modeled Concentration	--	--	--	--	0.00	--
	NAAQS	--	--	--	--	0.15	--
	Modeled < NAAQS?	--	--	--	--	Y	--
VOC	Modeled Concentration	--	--	--	--	--	--
	NAAQS	--	--	--	--	--	--
	Modeled < NAAQS?	--	--	--	--	--	--
CO	Modeled Concentration	1.49	--	1.34	--	--	--
	NAAQS	10,000	--	40,000	--	--	--
	Modeled < NAAQS?	Y	--	Y	--	--	--

Comparison With TAPs (µg/m³)

		Max 1-Hour	Scaled 3-Hour	Scaled 8-Hour	Scaled 24-Hour	Scaled 3-month	Scaled Annual
Indeno(1,2,3-cd)pyrene	Modeled Concentration	--	--	--	--	--	--
	Screening Level	--	--	--	--	--	--
	Modeled < Screening Level?	--	--	--	--	--	--
Hydrogen fluoride	Modeled Concentration	0.01	--	0.01	--	--	--
	Screening Level	16.37	--	4.09	--	--	--
	Modeled < Screening Level?	Y	--	Y	--	--	--
Hydrogen chloride	Modeled Concentration	1.45	--	1.31	--	--	0.15
	Screening Level	29.83	--	165.27	--	--	0.70
	Modeled < Screening Level?	Y	--	Y	--	--	Y
Dibenzo(a,h)anthracene	Modeled Concentration	--	--	--	--	--	--
	Screening Level	--	--	--	--	--	--
	Modeled < Screening Level?	--	--	--	--	--	--
Fluorene	Modeled Concentration	--	--	0.00	--	--	--
	Screening Level	--	--	20.00	--	--	--
	Modeled < Screening Level?	--	--	Y	--	--	--
Fluoranthene	Modeled Concentration	--	--	--	--	--	--
	Screening Level	--	--	--	--	--	--
	Modeled < Screening Level?	--	--	--	--	--	--
Zinc	Modeled Concentration	0.01	--	0.01	--	--	--
	Screening Level	1000.00	--	500.00	--	--	--
	Modeled < Screening Level?	Y	--	Y	--	--	--
Vanadium	Modeled Concentration	--	--	0.00	--	--	--
	Screening Level	--	--	0.50	--	--	--
	Modeled < Screening Level?	--	--	Y	--	--	--
Thallium	Modeled Concentration	--	--	0.00	--	--	--
	Screening Level	--	--	0.20	--	--	--
	Modeled < Screening Level?	--	--	Y	--	--	--
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin	Modeled Concentration	--	--	0.00	--	--	0.000000008
	Screening Level	--	--	0.26	--	--	0.000000003
	Modeled < Screening Level?	--	--	Y	--	--	Y
1,2,3,4,7,8,9-Heptachlorodibenzofuran	Modeled Concentration	--	--	--	--	--	0.000000001
	Screening Level	--	--	--	--	--	0.000000003
	Modeled < Screening Level?	--	--	--	--	--	Y
1,2,3,4,6,7,8-Heptachlorodibenzofuran	Modeled Concentration	--	--	--	--	--	0.000000009
	Screening Level	--	--	--	--	--	0.000000003
	Modeled < Screening Level?	--	--	--	--	--	Y
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin	Modeled Concentration	--	--	--	--	--	0.000000001
	Screening Level	--	--	--	--	--	0.000000003
	Modeled < Screening Level?	--	--	--	--	--	Y
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin	Modeled Concentration	--	--	0.00	--	--	0.000000001
	Screening Level	--	--	0.02	--	--	0.000000003
	Modeled < Screening Level?	--	--	Y	--	--	Y
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin	Modeled Concentration	--	--	--	--	--	0.000000001
	Screening Level	--	--	--	--	--	0.000000003
	Modeled < Screening Level?	--	--	--	--	--	Y
2,3,4,6,7,8-Hexachlorodibenzofuran	Modeled Concentration	--	--	--	--	--	0.000000001
	Screening Level	--	--	--	--	--	0.000000003
	Modeled < Screening Level?	--	--	--	--	--	Y
1,2,3,7,8,9-Hexachlorodibenzofuran	Modeled Concentration	--	--	--	--	--	0.000000003
	Screening Level	--	--	--	--	--	0.000000003
	Modeled < Screening Level?	--	--	--	--	--	Y
1,2,3,6,7,8-Hexachlorodibenzofuran	Modeled Concentration	--	--	--	--	--	0.000000002
	Screening Level	--	--	--	--	--	0.000000003
	Modeled < Screening Level?	--	--	--	--	--	Y

		Max 1-Hour	Scaled 3-Hour	Scaled 8-Hour	Scaled 24-Hour	Scaled 3-month	Scaled Annual
1,2,3,4,7,8-Hexachlorodibenzofuran	Modeled Concentration	--	--	--	--	--	0.000000002
	Screening Level	--	--	--	--	--	0.000000003
	Modeled < Screening Level?	--	--	--	--	--	Y
2,3,4,7,8-Pentachlorodibenzofuran	Modeled Concentration	--	--	0.00	--	--	0.000000002
	Screening Level	--	--	0.04	--	--	0.000000003
	Modeled < Screening Level?	--	--	Y	--	--	Y
1,2,3,7,8-Pentachlorodibenzofuran	Modeled Concentration	--	--	--	--	--	0.000000001
	Screening Level	--	--	--	--	--	0.000000003
	Modeled < Screening Level?	--	--	--	--	--	Y
1,2,3,7,8-Pentachlorodibenzo-p-dioxin	Modeled Concentration	--	--	0.00	--	--	0.000000000
	Screening Level	--	--	0.01	--	--	0.000000003
	Modeled < Screening Level?	--	--	Y	--	--	Y
2,3,7,8-Tetrachlorodibenzofuran	Modeled Concentration	--	--	--	--	--	0.000000001
	Screening Level	--	--	--	--	--	0.000000003
	Modeled < Screening Level?	--	--	--	--	--	Y
2,3,7,8-Tetrachlorodibenzo-p-dioxin	Modeled Concentration	--	--	--	--	--	0.000000002
	Screening Level	--	--	--	--	--	0.000000003
	Modeled < Screening Level?	--	--	--	--	--	Y
Silver	Modeled Concentration	--	--	0.00	--	--	--
	Screening Level	--	--	0.10	--	--	--
	Modeled < Screening Level?	--	--	Y	--	--	--
Molybdenum	Modeled Concentration	--	--	0.00	--	--	--
	Screening Level	--	--	5.00	--	--	--
	Modeled < Screening Level?	--	--	Y	--	--	--
Selenium	Modeled Concentration	--	--	0.00	--	--	--
	Screening Level	--	--	2.00	--	--	--
	Modeled < Screening Level?	--	--	Y	--	--	--
Pyrene	Modeled Concentration	--	--	0.00	--	--	--
	Screening Level	--	--	20.00	--	--	--
	Modeled < Screening Level?	--	--	Y	--	--	--
Lead	Modeled Concentration	--	--	0.00	--	--	--
	Screening Level	--	--	0.50	--	--	--
	Modeled < Screening Level?	--	--	Y	--	--	--
Mercury	Modeled Concentration	0.07	--	0.06	--	--	--
	Screening Level	0.30	--	0.10	--	--	--
	Modeled < Screening Level?	Y	--	Y	--	--	--
Phenanthrene	Modeled Concentration	--	--	0.00	--	--	--
	Screening Level	--	--	9.80	--	--	--
	Modeled < Screening Level?	--	--	Y	--	--	--
Nickel	Modeled Concentration	--	--	0.00	--	--	--
	Screening Level	--	--	1.00	--	--	--
	Modeled < Screening Level?	--	--	Y	--	--	--
Benz(a)anthracene	Modeled Concentration	--	--	--	--	--	--
	Screening Level	--	--	--	--	--	--
	Modeled < Screening Level?	--	--	--	--	--	--
Copper	Modeled Concentration	--	--	0.00	--	--	--
	Screening Level	--	--	2.00	--	--	--
	Modeled < Screening Level?	--	--	Y	--	--	--
Acenaphthene	Modeled Concentration	--	--	0.00	--	--	--
	Screening Level	--	--	20.00	--	--	--
	Modeled < Screening Level?	--	--	Y	--	--	--
Acenaphthylene	Modeled Concentration	--	--	0.00	--	--	--
	Screening Level	--	--	24.64	--	--	--
	Modeled < Screening Level?	--	--	Y	--	--	--
Anthracene	Modeled Concentration	--	--	0.00	--	--	--
	Screening Level	--	--	20.00	--	--	--
	Modeled < Screening Level?	--	--	Y	--	--	--
Antimony	Modeled Concentration	--	--	0.00	--	--	--
	Screening Level	--	--	5.00	--	--	--
	Modeled < Screening Level?	--	--	Y	--	--	--

		Max 1-Hour	Scaled 3-Hour	Scaled 8-Hour	Scaled 24-Hour	Scaled 3-month	Scaled Annual
Barium	Modeled Concentration	--	--	0.00	--	--	--
	Screening Level	--	--	5.00	--	--	--
	Modeled < Screening Level?	--	--	Y	--	--	--
Benzo(a)pyrene	Modeled Concentration	--	--	--	--	--	--
	Screening Level	--	--	--	--	--	--
	Modeled < Screening Level?	--	--	--	--	--	--
Chromium	Modeled Concentration	--	--	0.00	--	--	--
	Screening Level	--	--	5.00	--	--	--
	Modeled < Screening Level?	--	--	Y	--	--	--
Cobalt	Modeled Concentration	--	--	0.00	--	--	--
	Screening Level	--	--	0.20	--	--	--
	Modeled < Screening Level?	--	--	Y	--	--	--
Chrysene	Modeled Concentration	--	--	--	--	--	--
	Screening Level	--	--	--	--	--	--
	Modeled < Screening Level?	--	--	--	--	--	--
Arsenic	Modeled Concentration	--	--	0.00	--	--	0.0001
	Screening Level	--	--	0.10	--	--	0.0002
	Modeled < Screening Level?	--	--	Y	--	--	Y
Chromium VI	Modeled Concentration	--	--	0.00	--	--	0.00003
	Screening Level	--	--	0.10	--	--	0.00008
	Modeled < Screening Level?	--	--	Y	--	--	Y
Benzo(b)fluoranthene	Modeled Concentration	--	--	--	--	--	--
	Screening Level	--	--	--	--	--	--
	Modeled < Screening Level?	--	--	--	--	--	--
Cadmium	Modeled Concentration	--	--	0.00	--	--	0.00002
	Screening Level	--	--	0.02	--	--	0.0005
	Modeled < Screening Level?	--	--	Y	--	--	Y
Beryllium	Modeled Concentration	--	--	0.00002	--	--	0.000003
	Screening Level	--	--	0.00050	--	--	0.000400
	Modeled < Screening Level?	--	--	Y	--	--	Y
Benzo(k)fluoranthene	Modeled Concentration	--	--	--	--	--	--
	Screening Level	--	--	--	--	--	--
	Modeled < Screening Level?	--	--	--	--	--	--
Benzo(ghi)perylene	Modeled Concentration	--	--	0.00	--	--	--
	Screening Level	--	--	20.00	--	--	--
	Modeled < Screening Level?	--	--	Y	--	--	--

**EMISSIONS TESTING
of the
FOSTER'S PET CREMATION SERVICE
B & L SYSTEMS, INC. BLP 750
ANIMAL CREMATORY INCINERATOR
Spring Hill, Florida**

March 9, 2004

FDEP Permit No.: 1010377-002-AO
EU No. 003
SES Reference No. 04S61

Conducted by:

SOUTHERN ENVIRONMENTAL SCIENCES, INC.
1204 North Wheeler Street
Plant City, Florida 33563
Phone (813) 752-5014, Fax (813) 752-2475

Project Participants

Mark S. Gierke
Dale A. Wingle
Travis B. Nelson

SOUTHERN ENVIRONMENTAL SCIENCES, INC.

EMISSIONS TESTING
of the
FOSTER'S PET CREMATION SERVICE
B & L SYSTEMS, INC. BLP 750
ANIMAL CREMATORY INCINERATOR
Spring Hill, Florida

March 9, 2004

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1.0 INTRODUCTION

Southern Environmental Sciences, Inc. conducted emissions testing of the Foster's Pet Cremation Service animal crematory on March 9, 2004. This facility is located at 15204 County Line Road, Spring Hill, Florida. Testing was conducted for particulates, carbon monoxide and visible emissions. Oxygen (O_2) concentrations were measured to correct emission rates to 7% O_2 . Testing was performed to determine if the plant was operating in compliance with requirements of the Florida Department of Environmental Protection (FDEP).

2.0 SUMMARY OF RESULTS

The facility was found to be in compliance with all applicable emission limiting standards. Results of the particulate and carbon monoxide testing are summarized in Table 1. Particulate emissions from this source are limited to a maximum allowable concentration of 0.080 grains per dry standard cubic foot (corrected to 7% O_2), and 0.30 pounds per hour. The average measured particulate concentration was 0.009 grains per dry standard cubic foot (corrected to 7% O_2), and 0.031 pounds per hour, well within the limit. The maximum allowable carbon monoxide emissions concentration from this source is 100 parts per million, dry basis (corrected to 7% O_2), and 0.17 pounds per hour. The average measured carbon monoxide emission concentration was 4.3 parts per million, dry basis (corrected to 7% O_2), and 0.01 pounds per hour, well within the allowable limit.

A visible emissions evaluation was performed over a one hour period. The average

TABLE 1. EMISSIONS TEST SUMMARY

	Run 2		Run 3
	Run 1		
Company: FOSTER'S PET CREMATION SERVICE			
Source: Animal Crematory Incinerator			
Date of Run	3/9/04	3/9/04	3/9/04
Process Rate (lbs/hr)	124	124	124
Start Time (24-hr. clock)	1135	1302	1425
End Time (24-hr. clock)	1238	1403	1526
Vol. Dry Gas Sampled Meter Cond. (DCF)	35.293	36.308	37.298
Gas Meter Calibration Factor	0.986	0.986	0.986
Barometric Pressure at Barom. (in. Hg.)	30.14	30.14	30.14
Elev. Diff. Manom. to Barom. (ft.)	0	0	0
Vol. Gas Sampled Std. Cond. (DSCF)	34.324	34.476	35.476
Vol. Liquid Collected Std. Cond. (SCF)	8.020	6.794	5.913
Moisture in Stack Gas (%)0 Vol.)	18.9	16.5	14.3
Molecular Weight Dry Stack Gas	29.04	29.12	29.30
Molecular Weight Wet Stack Gas	26.95	27.29	27.69
Stack Gas Static Press. (in. H2O gauge)	-0.01	-0.01	-0.01
Stack Gas Static Press. (in. Hg. abs.)	30.14	30.14	30.14
Average Square Root Velocity Head	0.164	0.175	0.178
Average Orifice Differential (in. H2O)	1.049	1.041	1.118
Average Gas Meter Temperature (°F)	80.6	93.7	92.9
Average Stack Gas Temperature (°F)	1240.3	1367.1	1359.6
Pitot Tube Coefficient	0.84	0.84	0.84
Stack Gas Vel. Stack Cond. (ft./sec.)	17.01	18.68	18.85
Effective Stack Area (sq. ft.)	1.77	1.77	1.77
Stack Gas Flow Rate Std. Cond. (DSCFM)	457	482	501
Stack Gas Flow Rate Stack Cond. (ACFM)	1,803	1,981	1,999
Net Time of Run (min.)	60	60	60
Nozzle Diameter (in.)	0.611	0.611	0.611
Percent Isokinetic	108.7	103.6	102.5

TABLE 1. EMISSIONS TEST SUMMARY (con't)

		Run 2	Run 3		
Company: FOSTER'S PET CREMATION SERVICE					
Source: Animal Crematory Incinerator					
		Run 1			
Date of Run	3/9/04	3/9/04	3/9/04		
Process Rate (lbs/hr)	124	124	124		
Start Time (24-hr. clock)	1135	1302	1425		
End Time (24-hr. clock)	1238	1403	1526		
Oxygen (%)	8.0	10.0	10.5		
				<u>Average</u>	
Particulate Collected (mg.)	34.0	11.1	7.4		
Particulate Emissions (gr./DSCF)	0.015	0.005	0.003	0.008	
Particulate Emissions (gr./DSCF @ 7% O ₂)	0.016	0.006	0.004	0.009	
Allowable Part. Emissions (gr/DSCF @ 7% O ₂)				0.080	
Particulate Emissions (lb./hr.)	0.060	0.021	0.014	0.031	
Allowable Part. Emissions (lb./hr.)				0.30	
CO Emissions (PPM)	3.08	2.25	5.00	4.3	
CO Emissions (PPM @ 7% O ₂)	3.3	2.9	6.7	4.3	
Allowable CO Emissions (PPM @ 7% O ₂)				100	
CO Emissions (lb./hr.)	0.006	0.005	0.011	0.007	
Allowable CO Emissions (lb./hr.)				0.12	

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

maximum six minute opacity was zero percent, well within the allowable limit of 5 percent.

3.0 PROCESS DESCRIPTION

The B & L Systems, Inc. Model BLP 750 Series crematory incinerator cremates animal remains in an environmentally acceptable manner. Emissions are controlled by an afterburner. The afterburner is preheated and maintained at a minimum operating temperature of 1600°F prior to ignition of the primary chamber. The unit is designed to be charged with a maximum of 750 pounds of animal remains and incinerate at a maximum rate of 150 pounds per hour with a maximum heat input of 2.00 MMBTU per hour (primary chamber 1.00 MMBTU per hour, secondary chamber 1.0 MMBTU/hr), each chamber fired exclusively on propane gas only. The time required for complete incineration depends upon the total weight of the waste. Process operational data was provided by facility personnel and is included in the appendix.

4.0 SAMPLING PROCEDURES

4.1 Methods

All sampling was performed using methods currently acceptable to the FDEP. Particulate sampling and analyses were conducted in accordance with EPA Method 5 Determination of Particulate Emissions from Stationary Sources, 40 CFR 60, Appendix A-3. Carbon monoxide emissions were conducted in accordance with EPA Method 10 - Determination of Carbon Monoxide Emissions from Stationary Sources, 40 CFR 60, Appendix A-4. The oxygen content of the stack gas was determined in accordance with EPA Method 3B Gas

Analysis for the Determination of Emission Rate Correction Factor or Excess Air, 40 CFR 60, Appendix A-2. The visible emissions evaluation was performed using procedures described in EPA Method 9 Visual Determination of the Opacity of Emissions from Stationary Sources, 40 CFR 60, Appendix A-4.

4.2 Sampling Locations

Locations of the sample ports and stack dimensions are shown in Figure 1. Particulate sampling was accomplished by conducting horizontal traverses through each of two ports located on the stack at a ninety degree angle from one another. Twenty four sample points were chosen in accordance with EPA Method 1 - Sample and Velocity Traverses for Stationary Sources, 40 CFR 60, Appendix A-1. Carbon monoxide and oxygen sampling were performed from the same sampling ports as the particulate sampling.

4.3 Sampling Trains

The particulate sampling train consisted of a Nutech Corporation 3 foot quartz lined probe and nozzle, a heated glass fiber filter and four impingers arranged as shown in Figure 2. Flexible tubing was used between the heated filter and the impingers. The first two impingers were each charged with 100 milliliters of water, the third served as a dry trap and the fourth impinger was charged with indicating silica gel desiccant. The impingers were cooled in an ice and water bath during sampling. A Nutech Corporation control console was used to monitor the gas flow rates and stack conditions during sampling.

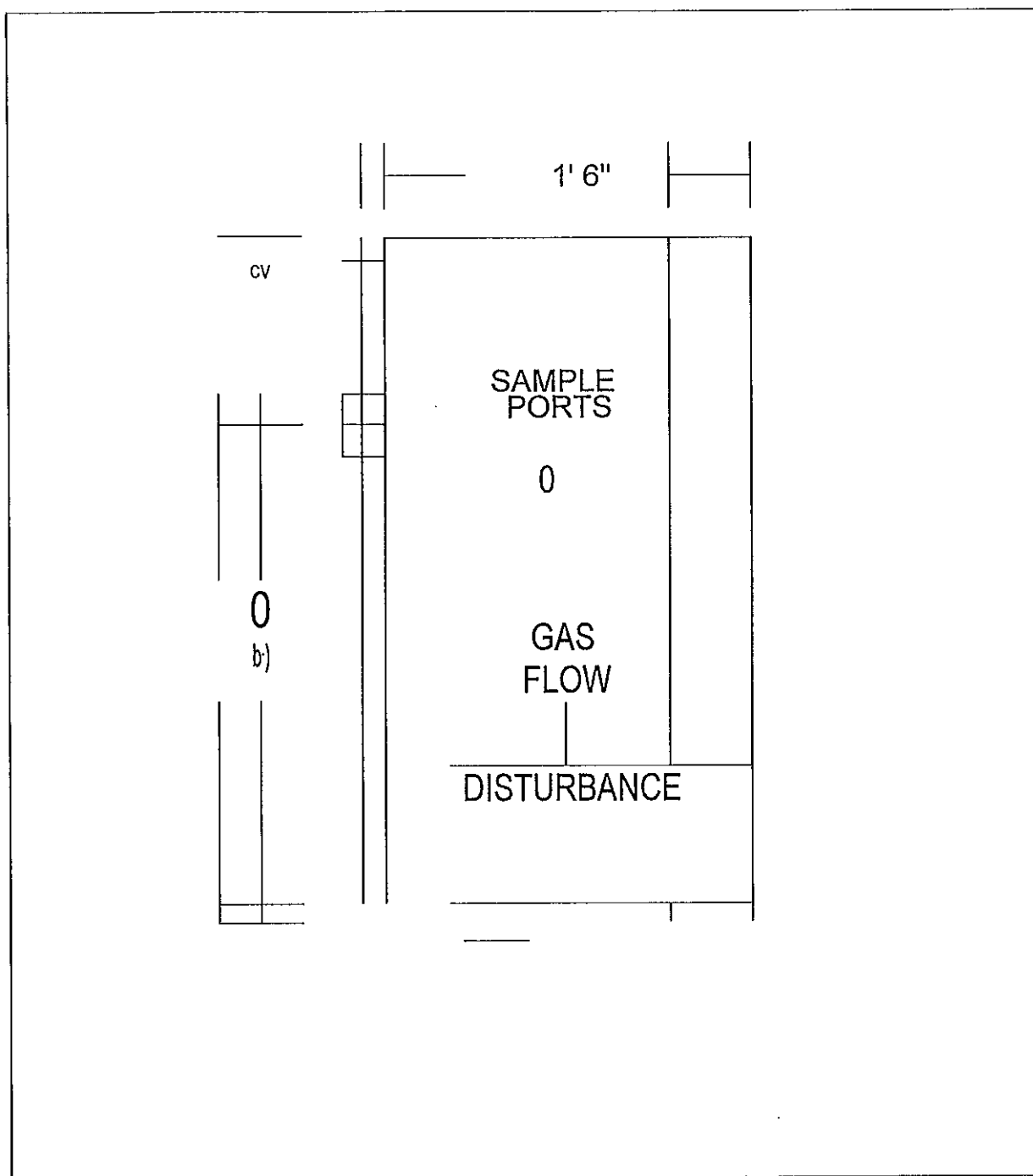
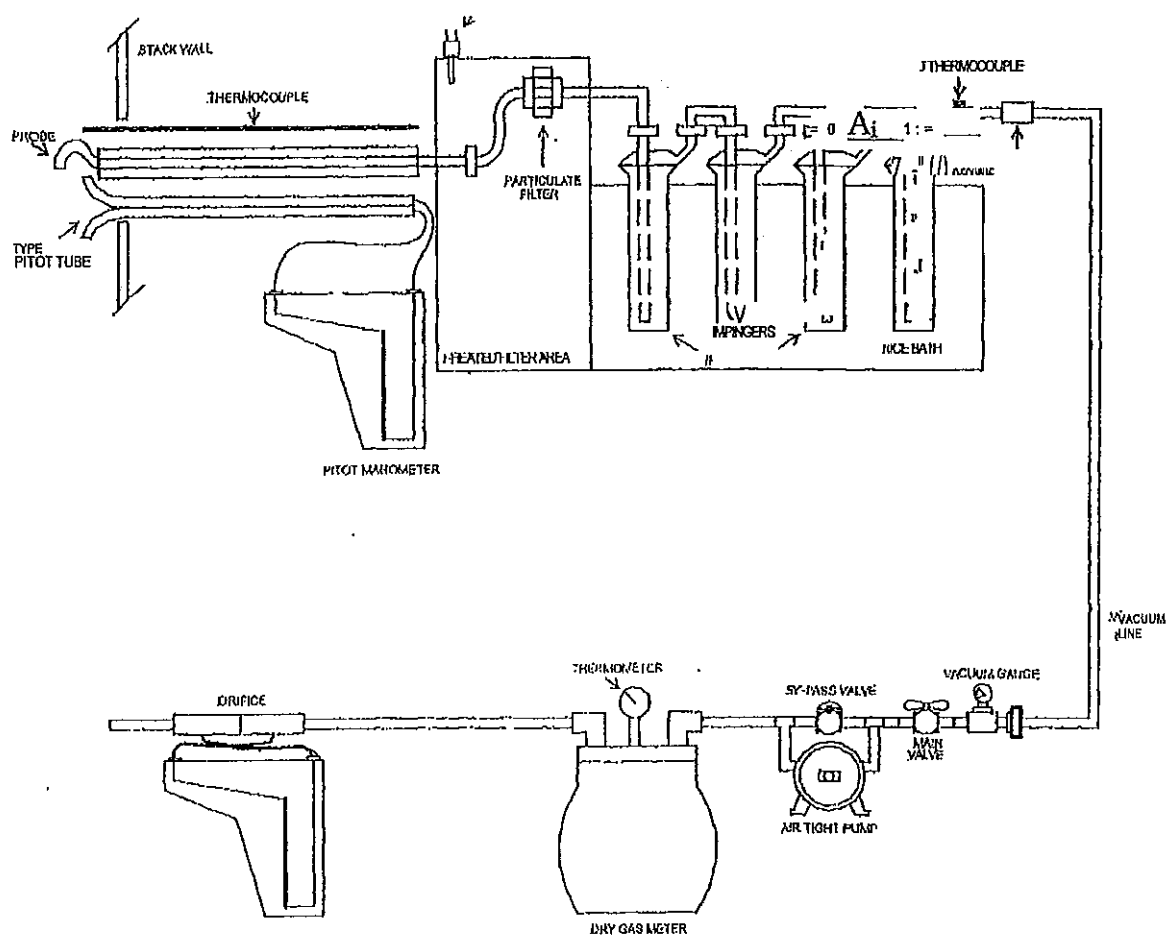


Figure 1. Stack Dimensions and Sample Port Locations, Foster's Pet Cremation Service, Animal Crematory Incinerator, Spring Hill, Florida.

SOUTHERN ENVIRONMENTAL SOLUTIONS, INC.

THERMOCOUPLE

Figure 2. EPA Method 5 Sampling Train.



The carbon monoxide sampling train consisted of a stainless steel probe, teflon sample line, condenser, silica gel and carbon dioxide adsorbent tubes and a Thermo Environmental Instruments, Inc, Model 48 Gas Filter Correlation CO analyzer arranged as shown in Figure 3. The oxygen sampling train consisted of a probe, sample line, tedlar bag in a rigid container, valve, vacuum pump, and flow meter.

4.4 Sample Collection

Prior to particulate sampling, the pitot tubes were checked for leaks and the manometers were zeroed. A pretest leak check of the particulate sampling train was conducted by sealing the nozzle and applying a 15" Hg vacuum. A leak rate of less than 0.02 cubic feet per minute was considered acceptable. Particulate sample was collected isokinetically for two and one half minutes at each of the points sampled.

The carbon monoxide analyzer was calibrated immediately prior to the beginning of the test and checked after each run by introducing known gases into the instrument through the sampling train.

The tedlar bag used for obtaining an integrated oxygen sample was leak checked prior to the test by pressurizing it to 2 to 4 in. H₂O and allowing it to stand overnight. The bag was considered leak free if it remained inflated. A one hour integrated sample was obtained at a rate 0.5 liters per minute for each run.

Carbon monoxide and oxygen sampling were conducted simultaneously with particulate

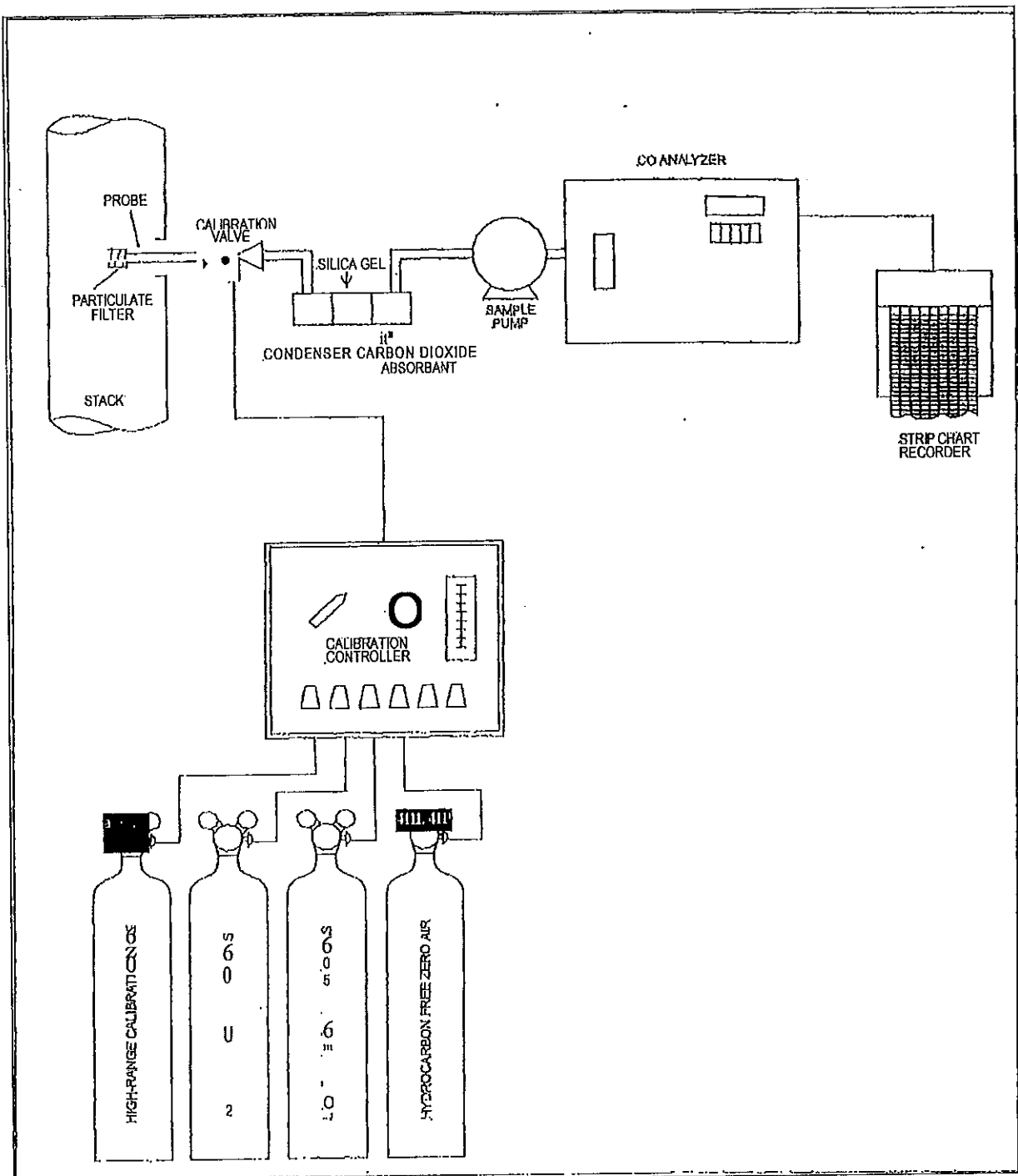


Figure 3. EPA Method 10 Sampling Train.

sampling.

4.5 Sample Recovery

A post test leak check of the particulate sampling train was performed at the completion of each run by sealing the nozzle and applying a vacuum equal to or greater than the maximum value reached during the sample period. A leak rate of less than 0.02 CFM or 4 percent of the average sampling rate (whichever was less) was considered acceptable. The nozzle and probe were then brushed and rinsed with reagent grade acetone and the washings were placed in clean polyethylene containers and sealed. The glass fiber filter was removed from the holder with forceps and placed in a covered petri dish for return to the laboratory. The front half of the filter holder was rinsed with acetone and the washings were added to the nozzle and probe wash. The contents of the first three impingers were measured volumetrically and the silica gel in the fourth impinger was weighed to the nearest 0.1 gram for determination of moisture content.

Two calculations of the moisture content of the stack gas were made for each run, one from the impinger analysis and one from the assumption of saturated conditions based upon the average stack gas temperature and a psychrometric chart as described in EPA Method 4, Determination of Moisture Content in Stack Gases, 40 CFR 60, Appendix A. The lower of the two values of moisture content was considered to be correct and was used in the emissions computations.

5.0 ANALYTICAL PROCEDURE

5 . 1

5.1 Pretest Preparation

The glass fiber filters for the particulate train were numbered, oven dried at 105°C for two to three hours, desiccated and weighed to a constant weight in preparation for the test. Results were recorded to the nearest 0.1 milligram. Filters were loaded into holders and a filter was set aside as a control blank. The impingers were charged as described in section 4.3 and the contents of the fourth impinger were weighed to the nearest 0.1 gram.

5.2 Analysis

Upon return to the laboratory, the particulate filters were removed from the containers with forceps, dried at 105°C for two to three hours, desiccated and weighed to a constant weight. Results were recorded to the nearest 0.1 milligram. The probe and nozzle washes and an acetone blank were measured volumetrically and transferred to clean, tared evaporating dishes and evaporated to dryness over low heat. The evaporating dishes were then oven dried at 105°C for two to three hours, desiccated and weighed to a constant weight. Results were recorded to the nearest 0.1 milligram. The total particulate reported is the sum of the filter weight gain and the weight gain of the evaporating dishes, corrected for the acetone blank.

APPENDIX

Project Participants

Certification

Visible Emissions Evaluation

Process Operational Data

Laboratory Data

Temperature Recording Chart

Field Data Sheets

CO Analyzer Strip Chart

Calibration Data

Calculations and Symbols

PROJECT PARTICIPANTS AND CERTIFICATION

FOSTER'S PET CREMATION SERVICE
B & L SYSTEMS, INC. BLP 750
ANIMAL CREMATORY INCINERATOR
Spring Hill, Florida

March 9, 2004

Project Participants:

Mark S. Gierke
Dale A. Wingler
Travis B. Nelson

Conducted the field testing.

Fred T. Smith II (Foster's Pet Cremation)

Provided process rates.

Mark S. Gierke

Performed visible emissions
evaluation.

Kenneth M. Roberts

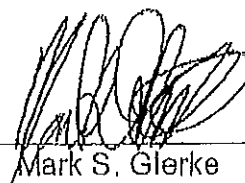
Performed laboratory analyses.

Dale A. Wingler

Prepared the final test report.

Certification:


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



Mark S. Gierke

SOUTHERN ENVIRONMENTAL SCIENCES, INC.
1204 North Wheeler Street, Plant City, Florida 33566 813/752-5014

VISIBLE EMISSIONS EVALUATION

COMPANY <u>U N I T a</u>	
ADDRESS <u>SP trt</u>	
PERMIT NO. <u>1277 002 #0</u>	COM/INCO YES <input checked="" type="checkbox"/> NO <input type="checkbox"/>
AIRS NO. <u>1010377</u>	EU NO. <u>00</u>
PROCESS RATE <u>10^{1b} 6¹⁷⁶¹</u> <u>o t i f b 5 l h r</u>	PERMITTED RATE <u>500 (</u> <u>15° t b s i h r</u>
PROCESS EQUIPMENT <u>6+1 6ocl is o c 0 N I</u>	
CONTROL EQUIPMENT <u>0.0, 1 y t / e</u> <u>V2 - Crit (o</u>	
OPERATING MODE <u>Nx1. Gx. 1-A</u>	AMBIENT TEMP. (°F) START <u>70</u> STOP <u>75</u>
HEIGHT ABOVE GROUND LEVEL START <u>1401</u>	HEIGHT REL. TO OBSERVER START <u>A,,,1,2,,,</u> STOP <u>..</u>
DISTANCE FROM OBSERVER START <u>1101</u> STOP <u>-y t r o, j 9</u>	DIRECTION FROM OBSERVER START <u>3, 7; ... 0</u> STOP <u>-) K... 4)</u>
EMISSION COLOR <u>K O t...1</u>	PLUME TYPE CONTIN. <input type="checkbox"/> INTERMITTENT <input type="checkbox"/>
WATER DROPLETS PRESENT NO <input checked="" type="checkbox"/> YES <input type="checkbox"/>	IS WATER DROPLET PLUME (71- ATTACHED <input type="checkbox"/> DETACHED <input type="checkbox"/>
POINT IN THE PLUME AT WHICH OPACITY WAS DETERMINED START <u>1-...eV</u> G: <u>K1-t-</u> STOP <u>6,,7</u>	
DESCRIBE BACKGROUND START <u>r...-y-</u> STOP (crit...)	
BACKGROUND COLOR START <u>114 "vic STOP 00-r y e--</u>	SKY CONDITIONS START <u>1..</u> 'it STOP
WIND SPEED IMPHI START <u>y - ID</u> STOP	WIND DIRECTION STOPS
AVERAGE OPACITY FOR <u>71</u> HIGHEST PERIOD <u>11 17,,</u>	RANGE OF OPAC. READINGS MIN. <u>0</u> MAX. <u>()</u>
SOURCE LAYOUT SKETCH <u>---11_</u>	0 DRAW NORTH ARROW Emission Point 
Sun * Wind	7
Plume and Stack	14 Observer's Position Sun Location Line Wes-c) <u>3</u>
COMMENTS <u>Sey2 c2)...it</u> <u>;()-2 . L. 17. , cl3</u>	

OBSERVATION DATE <u>3/9/04</u>					START TIME <u>1235</u>					STOP TIME <u>1235</u>				
SEC	0	15	30	45	SEC	0	15	30	45	SEC	0	15	30	45
MIN					MIN					MIN				
0					30					30				
1					31					31				
2					32					32				
3					33					33				
4					34					34				
5					35					35				
6					36					36				
7					37					37				
8					38					38				
9					39					39				
10					40					40				
11					41					41				
12					42					42				
13					43					43				
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26					56					56				
27					57					57				
28					58					58				
29					59					59				
Observer: <u>(1011 1235</u>														
Certified by: <u>111 1</u> Certified at: <u>111 1</u>														
Date Certified: <u>2/01</u> Exp. Date: <u>8/04</u>														
Signature: <u>See 111 1 (7)</u> <u>111 1</u> <u>111 1</u>														
Title: <u>111 1</u>														

PROCESS WEIGHT STATEMENT

DATE 3/ SAMPLING TIME : FROM 11:3-5 A.m. TO 3:27 P.M.

STATEMENT OF PROCESS WEIGHT

COMPANY	F0,5111 ¹ S 04-C m qrl rllc		
MA INCHES	C		
NUMBER OF INSPECTION	169,0/-1	4 1 0 6	R d
NUMBER OF INSPECTION	1411V	3 (g o	0
LOCATION OF INSPECTION	Spring Hill, FL		

DATA ON OPERATING CYCLE TIME

START OF OPERATION TIME	
END OF OPERATION TIME	
START OF INSPECTION TIME	
END OF INSPECTION TIME	
DESIGN PROCESS (RUNNING)	PROCESS WEIGHT DATA (INPUT)
	Product (Output)

1-07 165 lie 9T(1-1-1)

DATA ON ACTUAL

PROCESS RATE

MATERIAL	" "	R#1	124 lbs/hr
MATERIAL	" "	R#2	124 lbs/hr
MATERIAL	" "	R#3	124 lbs/hr
AVERAGE PROCESS WEIGHT			
PRODUCT			
PRODUCT			
PRODUCT			

DURING OPERATION CYCLE

firi; 02 qt. "It

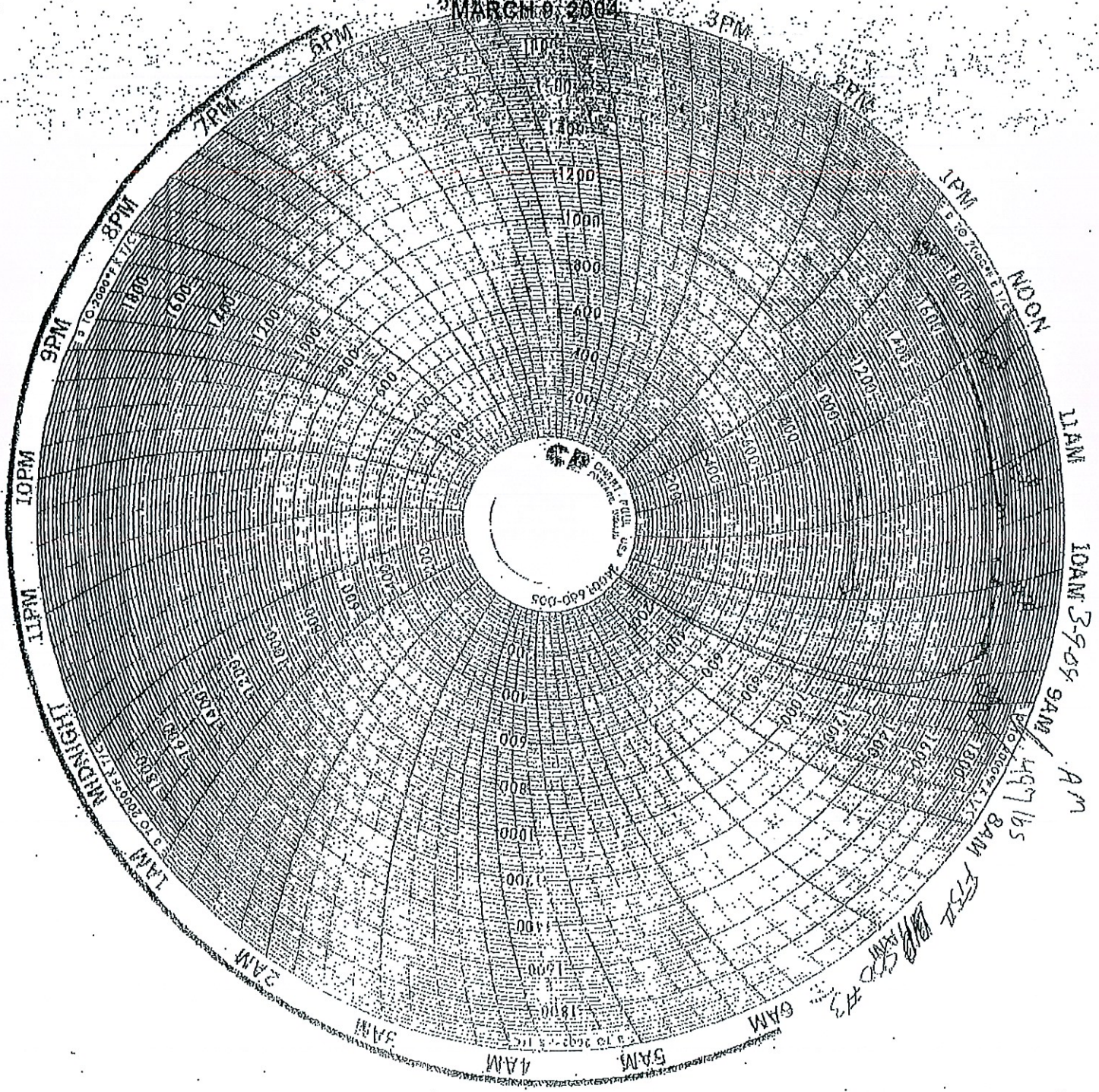
I certify that the above information is true and correct to the best of my knowledge.

Fred T. Smith
Name (PLEASE PRINT)

Operator Signature

FOSTER'S PET CREMATION SERVICE
ANIMAL CREMATORY INCINERATOR

MARCH 9, 2004



11AM
10AM 3-9-04 9AM
AM

497 lbs

8AM

11:50 AM
#3

6AM

5AM

4AM

3AM

2AM

1AM

MIDNIGHT

11PM

10PM

9PM

8PM

7PM

6PM

3PM

2PM

1PM

NOON

SOUTHERN ENVIRONMENTAL SCIENCES, INC.

PARTICULATE MATTER COLLECTED

Plant: FOSTER'S PET CREMATION SERVICE
 Unit No. ANIMAL CREMATORY INCINERATOR
 Test Date: 03/09/2004

Analyzed by: DW

Acetone blank container no. 106	Filter blank no. 7158
Acetone blank volume, ml. (Va) 200	Filter blank tare weight, g. 0.3691
Acetone blank final weight, g. 104.2163	Filter blank final weight, g. 0.3692
Acetone blank tare weight, g. 104.2159	Filter weight diff., g. 0.0001
Acetone blank weight diff., g. (ma) 0.0004	

Run No. 1
 Filter No. 7111
 Liquid lost during transport, ml. 0
 Acetone wash container no. 23
 Acetone wash volume, ml. (Vaw) 100
 Acetone wash residue, g. (We) 0.0002

	Final Weight	Tare Weight	Net Weight
1 (Filter)	0.3935	0.367	0.0265
2 (Wash)	100.6231	100.6154	0.0077
TOTAL			0.0342
Less acetone blank, g. (Wa)			0.0002
Weight of particulate matter, g.			0.0340

Run No. 2
 Filter No. 7113
 Liquid lost during transport, ml. 0
 Acetone wash container no. 43
 Acetone wash volume, ml. (Vaw) 95
 Acetone wash residue, g. (We) 0.0002

	Final Weight	Tare Weight	Net Weight
1 (Filter)	0.3686	0.3661	0.0025
2 (Wash)	108.7303	108.7215	0.0088
TOTAL			0.0113
Less acetone blank, g. (Wa)			0.0002
Weight of particulate matter, g.			0.0111

Run No. 3
 Filter No. 7117
 Liquid lost during transport, ml. 0
 Acetone wash container no. 4
 Acetone wash volume, ml. (Vaw) 105
 Acetone wash residue, g. (Wa) 0.0002

	Final Weight	Tare Weight	Net Weight
1 (Filter)	0.3695	0.3692	0.0003
2 (Wash)	103.1044	103.0971	0.0073
TOTAL			0.0076
Less acetone blank, g. (Wa)			0.0002
Weight of particulate matter, g.			0.0074

SOUTHERN ENVIRONMENTAL SCIENCES, INC.

MOISTURE COLLECTED

Plan: Foster's Crematory

Unit: Animal Incinerator
 Date: 3/9/04
 Run No.: 1

Impinger Number	1	2	3	4	Weighed by:
Final Weight (grams):	<u>260.0</u>	<u>100.0</u>	<u>0</u>	<u>261.0</u>	<u>[Signature]</u>
Initial Weight (grams):	<u>100.0</u>	<u>100.0</u>	<u>0</u>	<u>250.9</u>	<u>[Signature]</u>
Difference (grams):	<u>160.0</u>	<u>0</u>	<u>0</u>	<u>10.1</u>	
Total Condensate (grams):				<u>.VI</u>	

Unit: Animal Incinerator
 Date: 3/9/04
 Run No.: 2

Impinger Number	1	2	3	4	Weighed by:
Final Weight (grams):	<u>230.0</u>	<u>106.0</u>	<u>0</u>	<u>263.1</u>	<u>[Signature]</u>
Initial Weight (grams):	<u>100.9</u>	<u>100.0</u>	<u>0</u>	<u>245.8</u>	<u>[Signature]</u>
Difference (grams):	<u>113.0</u>	<u>6.0</u>	<u>0</u>	<u>8.1</u>	
Total Condensate (grams):				<u>144.1</u>	

Unit: Animal Incinerator
 Date: 3/9/04
 Run No.: 3

Impinger Number	1	2	3	4	Weighed by:
Final Weight (grams):	<u>210.0</u>	<u>106.0</u>	<u>0</u>	<u>255.0</u>	<u>[Signature]</u>
Initial Weight (grams):	<u>100.0</u>	<u>100.0</u>	<u>0</u>	<u>245.6</u>	<u>[Signature]</u>
Difference (grams):	<u>110.0</u>	<u>6.0</u>	<u>0</u>	<u>9.4</u>	

SOUTHERN ENVIRONMENTAL SCIENCES, INC.

Page

FIELD DATA SHEET

Company see ?'''') w/c/a
 Source _____
 Operator(s) _____
 Dimensions Diat-
 LxWO _____
 Static Press. ("H2O) 0.01
 Meter Box No. 002
 AH@ 1.726
 Meter Correction 986
 Factor .84
 Pitot Tube Cp Quartz
 Nozzle ID .611
 Nozzle Dia. (Inches) 3' Quartz
 Probe Length/Liner _____

f-

Run Number

Date

24 hr Time at Start

24 hr Time at End

Filter No(s).

Barometric Pressure ("Hg)

Elev Diff. Mano. To Barom. (Ft)

Ambient Temperature 1°F)

Meter

Assumptions

°A Moisture 14

Stack Temp. 1000/1

Meter Temp. 75

Md/Ms 1.65

K Factor 17/37.5i

Sample Train Leak Check:

Initial 0 22 CFM @ 15

Final b.clo CFM @ 10

Final Pitot Tube (-) +1

,as NapehIG

Initial Pitot Tube (-)

+1

"Hg

Moist. Collected - Imp. No. 1

Point No.	Sample Time (min.)	Meter Vol (mm)	Vel. Head (in)	Orifice Q/W (in)	Stack Temp. (°F)	Meter Temp. (°F)	Pitot Box Temp. (°F)	Exh Temp. (°F)	Pdmp Vacuum (in)	Other
1	02	C: 7.7	.01	17	OMNI	1111111111111111	MEM	22	(5)	
2	05	47.1	.01		e 3 Si	1111.111111111111				
3					3 33					
4										
5	40	11 11111								
6										
7	15	(1-9)								
8					73 Mill					
9	20				h M F /103					
10	D-6									
11	z	10 do								
12	176	EMI			ov,-- Mall 00					
13	10	11/5000000000000000			L, 1 SZE					
14	13.5	MEM								
15	33									
16					x--.5- /--3/					
17										
18										
19	1.5	11/10								
20	12	SEMI								
21		IW								

SOUTHERN ENVIRONMENTAL SCIENCES, INC.

22			ITNIIIIIIIIIIIIIIIIIIII)” sT	3y,5
23		7	1111211111111111	1111111111N111111	4.(-)
24	C7.S	--(Cl	11)5 Illaill	EMI	7.
		, b	0		

FIELD DATA SHEET

Company 1 - 4-15 d.c. Clerk, *Tim Starnice*
Source *Animal Clinic Tech*
Operator(s) *D. Wingle / T. Nelson*

Date _____

24 hr Time at End

Filter No(s).

Barometric Pressure ("Hg)

Elev Diff. Mano. To Barorn. (Ft)

Ambient Temperature 1°F)

Dimensions Did(

LxWD t i "

Static Press. (H₂O) - " 201

Meter Box No. 1002

Meter A.H@-1726

Meter Correction Factor 1.00

Pitot Tube C_p 0.84Nozzle ID. QuartzNozzle Dia. (Inches) 1.5

Probe Lengthliner. 3' Quartz

Assumptions

% Moisture

Stack Temp.

Meter Temp.

Md/Ms

K Factor

6. Sample Train Leak Check:

Initial 0,b0?

¹⁹⁹Hg

CFM

Final	co.	CFM
1	1	1
2	2	2
3	3	3
4	4	4
5	5	5
6	6	6
7	7	7
8	8	8
9	9	9
10	10	10
11	11	11
12	12	12
13	13	13
14	14	14
15	15	15
16	16	16
17	17	17
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33	33	33
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39	39	39
40	40	40
41	41	41
42	42	42
43	43	43
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67	67	67
68	68	68
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88	88	88
89	89	89
90	90	90
91	91	91
92	92	92
93	93	93
94	94	94
95	95	95
96	96	96
97	97	97
98	98	98
99	99	99
100	100	100

⁻Hg

Initial Pitot Tube (-)

/I+) _____

Final Pitot Tube (-)

Point No.	Sample Time (min.)	Meter Vol. Vm (ft.)	Vet. Head AP (H ₀)	Orifice Diff. AH (H ₀)	Stack Temp., Ts (OR)	Meter Temp., Tm (°F)	Hot Box Temp. (°F)	Exit Temp. (°F)	Pump Vacuum (H ₉)	Other
1	0	V i	a	h. -						
3	5	MIMI								
7										
5	10			(Af	MN					
6	11									
	15									
8	17.5	S 0		Lo.	13161	111E11	7EM			
9	20		t3	12-	1's to	1	MIMI	7-0		
11	25	=MI								
12	27.5									
13	30									
14	32.5			1111 11			PRUNE			
163	35	MEI	b35	/1"			17C			
is	37.5									
17	40	V								
19	42.5	(O 2)		1						
20	45	M E M								
21	47.5	INNI		MEI						
22	50		O'	INN	9%		7 all.	OEM		
23	52.5		0	IC	(377		IF	N M		

SOUTHERN ENVIRONMENTAL SCIENCES, INC.

1	720	1.5 75	.0))	111E1111=111/11 67		
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SOUTHERN ENVIRONMENTAL SCIENCES, INC.

22	-3	/ 5 ⁷ -(Di-	b	EMINIIIMIIII	U. V. Mill
23	Ro	T 56	q	to ME. 2CIMMINATI	
24	5 ⁷ C	EMI ios ERIMISEM 9c	IRMO	INI	'O PIM

$$0$$

GAS ANALYSIS DATA FORM

[illegible]

$\begin{matrix} x_U \\ 7 \\ al'0 \\ c,7i(7)2 \end{matrix}$					
$\begin{matrix} 4 \\ 2 \\ 5 \\ 2 \end{matrix}$	d	N		ap	J 0
$\begin{matrix} in \\ 4 \\ 3 \\ 2 \\ < \\ > \end{matrix}$	C.I)	(-			
$\begin{matrix} (i) \\ z \end{matrix}$	(f)	--			
$\begin{matrix} ru \\ t a \\ cr \end{matrix}$	(n9			
$\begin{matrix} cu' \\ z \end{matrix}$					
$\begin{matrix} m^0 \\ n \\ f \\ < \end{matrix}$.C)	l n			
$\begin{matrix} a \\ z \end{matrix}$		0			
$\begin{matrix} a \\ z \end{matrix}$					
$\begin{matrix} U) \end{matrix}$					

GAS ANALYSIS DATA FORM

[illegible]

Molecular Weight of Stock Gas (Dry Basis) (Mdl)	Multiplier	Average Net Volume	Actual Reading		Net	Actual Reading	Net	Average Net Volume	Multiplier	Molecular Weight of Stock Gas (Dry Basis) (Mdl)
			Actual Reading	Net						
44	4.5	10.0	4.5	4.5	4.5	4.5	4.5	10.0	4.5	44
28	14.5	10.0	14.5	14.5	14.5	14.5	14.5	10.0	14.5	28
28	14.5	10.0	14.5	14.5	14.5	14.5	14.5	10.0	14.5	28
TOTAL										

SOUTHERN ENVIRONMENTAL SCIENCES, INC.

GAS ANALYSIS DATA FORM

1	7 4. a)	0 ao o o cr) c a a) H (0	a a E H a) E E <
11	11	0	4
12	12	0	4
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16	16	0	4
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18	18	0	4
19	19	0	4
20	20	0	4
21	21	0	4
22	22	0	4
23	23	0	4
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25	25	0	4
26	26	0	4
27	27	0	4
28	28	0	4
29	29	0	4
30	30	0	4
31	31	0	4
32	32	0	4
33	33	0	4
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35	35	0	4
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90	90	0	4
91	91	0	4
92	92	0	4
93	93	0	4
94	94	0	4
95	95	0	4
96	96	0	4
97	97	0	4
98	98	0	4
99	99	0	4
100	100	0	4

$\frac{Y}{H} = 0$ $m = +, m, m$ $0 = 0$ $-6 = 0$ $2 = 0$ $3 = 0$					
$Q_3 = 0$ $T = 0$ $COZ = 0$ $Z = 0$	$/)$ $1:1)$	$\backslash i)$ c			$H^{\wedge} H$
co $7-6 = 2$ $u = 0$ $cc = 0$	$q)$ Z (J) $C P$	n $---$			
Z cn	$(1, n)$ (2)				
t cc	O	O	O	O	O


Date: (Pi) by: Ci

Nozzle ID	Run No.	D ₁ (INCHES)	D ₂ (INCHES)	D ₃ (INCHES)	AD (INCHES)	D _{AVG} (INCHES)
(7) „ .	i : 3		, 6 / 1	, 6 1	* o b c)	e G t (

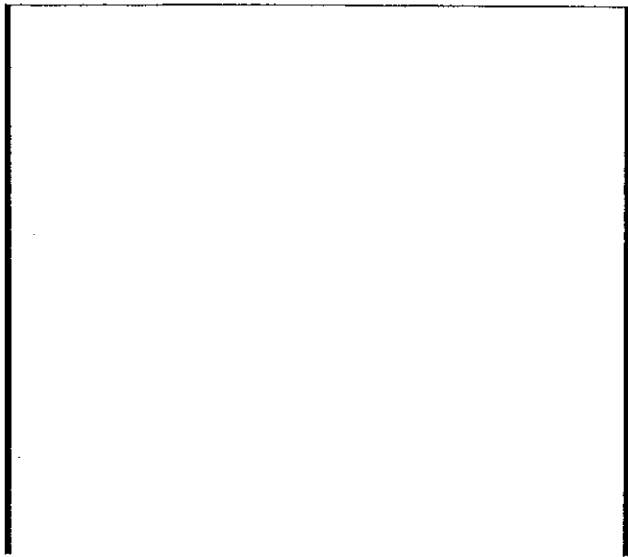
where:	D_1, D_2, D_3	Nozzle diameter measured on a different diameter (inches).
		Tolerance = 0.001 inches
	LD	Maximum difference in any two measurements (inches).
		Tolerance = 0.004 inches
	D,	Average of D_1, D_2, D_3 ¹

*****X*****

SAMPLE POINT LOCATIONS

<div style="text-align: center;">  </div>	
<div style="text-align: center;"> S o u r c e : </div>	
<div style="text-align: center;"> Date: 3 10 4 </div>	
<div style="text-align: center;"> Stack/Duct Dimensions: / </div>	
<div style="text-align: center;"> Port Length: </div>	
<div style="text-align: center;"> Points corrected for port length? </div>	
Yes	No No <input type="checkbox"/>
<div style="text-align: center;"> Sketch of Stack/Duct </div>	

[illegible]



A word cloud featuring the word "mum" in various sizes, orientations, and colors (black, red, blue). The words are arranged in a dense, overlapping pattern.

N

TRULLI e unumhummel

6 cm/hr

1111111111MM
 1111111111MM
 1111111111 - 11111111 2 III
 -3 11111111 III
 1111111111m11
 1111111111111111

11011111111 11111101111MNN IT UMMUMMUlp
HRIIMII MINIM MIUMr'
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[illegible]

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8107 (84) 1186

St. Bonita

WZP-ARMCO

5000

GOUTHEIM ENVIRONMENTAL SCIENCES, INC.

DRY GAS METER CALIBRATION

Meter Box Number: 002 Barometric Pressure: 29.99
Date: 07/03/2003 Wet Test Meter No.: P-576

Wet Test Meter Reading (ft. ³)	Dry Test Meter Reading (ft. ³)	Wet Test Meter Temperature (°F)	Dry Test Meter Temperature (°F)	Barometric Pressure (in. Hg)	Wet Test Meter Pressure (in. H ₂ O)	Dry Test Meter Pressure (in. H ₂ O)	Ratio of Accuracy (Y)
0.50	5.000	5.155	76.0	86.5	12.15	0.988	1.641
1.00	5.000	5.198	76.0	91.0	8.88	0.987	1.738
1.50	10.000	10.428	76.0	93.0	14.28	0.986	1.680
2.00	10.000	10.470	75.5	95.0	12.50	0.985	1.707
3.00	10.000	10.489	75.0	97.0	10.43	0.985	1.773
4.00	10.000	10.485	75.0	98.0	9.15	0.985	1.816
						0.986	1.726

Delta H@ Acceptable Range 1.926 to 1.526
Yi Acceptable Range 1.006 to 0.966

$$Y_i = \frac{V_w P_b (T_d + 460)}{V_d (P_b + \Delta H / 13.6) (T_w + 460)}$$

$$\Delta H@ = \frac{.0317 (\Delta H)}{P_b (T_d + 460)} \left[\frac{(T_w + 460) (\Theta) / V_w}{2} \right]$$

Where:

- V_w = Gas Volume passing through the wet test meter, ft.³.
- V_d = Gas Volume passing through the dry gas meter, ft.³
- T_w = Temperature of the gas in the wet test meter, deg F.
- T_d = Average temperature of the gas in the dry gas meter, deg F.
- Delta H = Pressure differential across orifice. in. H₂O.
- Y_i = Ratio of accuracy of wet test meter to dry gas-meter for each run.
- Y = Average ratio of accuracy of wet test meter to dry gas meter for all three runs; tolerance = pretest Y +/- 0.05Y.
- P_b = Barometric pressure, in. Hg
- Theta = Time of calibration-run, min. ____

SOUTHERN ENVIRONMENTAL SCIENCES, INC.

POSTTEST DRY GAS METER CALIBRATION FORM

Meter Box Number: 002 Wet Test Meter No.: P-576
 Date: 03/24/2004 Pretest Y: 0.986
 Barometric Pressure: 30.38 Calibrated by: TW

Time (min)	Wet Test Meter Reading (ft. ³)	Dry Test Meter Reading (ft. ³)	Wet Test Meter Temp (deg F)	Dry Test Meter Temp (deg F)	Pressure Differential (in. H ₂ O)	Barometric Pressure (in. Hg)	Ratio of Accuracy
2.00	10.000	10.363	71.5	78.0	12.57	10.00	0.972
2.00	10.000	10.503	71.0	86.0	12.62	10.00	0.974
2.00	10.000	10.632	71.0	93.0	12.67	10.00	0.975
Average							0.974

Acceptable Limits 0.937 to 1.035

$$Y_i = \frac{V_w P_b (T_d + 460)}{V_d (P_b + \Delta H / 13.6) (T_w + 460)}$$

Where:

- V_w** = Gas volume passing through the wet test meter, ft.³.
- V_d** = Gas volume passing through the dry gas meter, ft.³.
- T_w** = Temperature of the gas in the wet test meter, deg F.
- T_d** = Temperature of the inlet gas of the dry gas meter, deg F.
- T_{do}** = Temperature of the outlet gas of the dry gas meter, deg F.
- Delta H** = Pressure differential across orifice, in. H₂O.
- Y_i** = Ratio of accuracy of wet test meter to dry gas meter for each run.
- Y** = Average ratio of accuracy of wet test meter to dry gas meter for all three runs; tolerance = pretest Y +/- 0.05Y.
- P_b** = Barometric pressure, in. Hg
- Theta** = Time of calibration run, min.

THERMOMETER CALIBRATIONS

REF. TEMP. (deg F)	WET TEST METER (deg F)	DRY TEST METER (deg F)	WET TEST METER (deg F)	DRY TEST METER (deg F)
75.0	n/a	73.0	n/a	73.0
77.0	n/a	2.0	n/a	2.0

Quality Control Limits = +/- 5 Deg F

SOUTHERN ENVIRONMENTAL SCIENCES, INC.

TYPE S PITOT TUBE INSPECTION FORM

PITOT TUBE IDENTIFICATION	003INC	
PITOT TUBE LOCATION	03/31/03	
PITOT TUBE OPERATOR	T. Wilson	
PITOT TUBE INSPECTION DATE	<input checked="" type="radio"/> YES	NO
PITOT TUBE INSPECTION TIME	YES (explain please)	<input checked="" type="radio"/> NO

ANGLE	MEASUREMENT	LIMIT
α_1	2°	$< 10^\circ$
α_2	3°	$< 10^\circ$
β_1	3°	$< 5^\circ$
β_2	2°	$< 5^\circ$
γ	2°	
θ	3°	
A	.290 inches	
$z = A \sin \gamma$.010 inches	$< 1/8$ inch
$w = A \sin \theta$.015 inches	$< 1/32$ inch
P_a	.145 inches	
P_b	.145 inches	
D_t	.190 inches	

COMMENTS:

CALIBRATION DROUGHT	YES	<input checked="" type="radio"/> NO
---------------------	-----	-------------------------------------

SOUTHERN ENVIRONMENTAL SCIENCES, INC.

[illegible]

SOUTHERN ENVIRONMENTAL SCIENCES, INC.

PRESSURE MEASUREMENT DEVICE CALIBRATION FORM

Device Type	Magnehelic	Calibration Date	0410112003
Range	0 - .25" H ₂ O	Calibrated by	K. Roberts
Manufacturer	Dwyer	Reference Device	, Manometer
Serial No.	R991014CA18	Measurement Units	' H ₂ O

Device Reading	Reference Device Reading	% Difference*
0	0	0.00
0.059	0.06	-1.67
0.119	0.12	-0.83
0.18	0.18	0.00
0.249	0.25	-0.40

* % difference shall not exceed +/- 5%

SOUTHERN ENVIRONMENTAL SCIENCES, INC.

1204 North Wheeler Street St. Plant City, Florida 33563 (813) 752-5014

INSTRUMENT CALIBRATION

Er7	03/09/2004
4	FOSTER'S PET CREMATION SERVICE
7s" f.	BLP 500/150 ANIMAL CREMATORY
	CARBON MONOXIDE
	M. q TERKE

W a t t e	TECO	Yokogawa
16Tas-A0	48	
	18-27158-228	
	2 0 0	6CM/HR

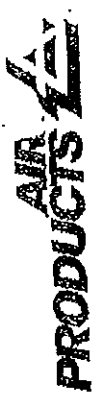
0:11:0VOMO.7	AIR PRODUCTS	AIR PRODUCTS	AIR PRODUCTS
SUPPLIER	SG9170323	SX32489	SG9162702
CYLINDER #	56.9	120.7	142.4
CONC. (PPM)	04/25/2004	01/06/2006	09/30/2006
EXPIRATION DATE			

OBSER#	C. No.	f.)	D FE
0	0		0.00
55.6	56.9		-0.65
122	120.7		0.65
142	142.4		-0.20

Regression Output:

abfifse6pf:	1.6234
rin of Y Est	1.9109
ar.40	1.0000
No. of Observations:	4
0.agt4aofl:Fr000001:	2
	1.0058
Std err of Coe	0.0029

Technical Information Call
800-752-1597



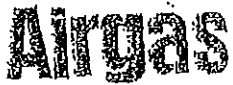
ISO CERTIFICATION: 9002

Products and Chemicals, Inc. * 12722 S. Wentworth Avenue, Chicago, IL 60628

CERTIFICATE OF ANALYSIS: EPA PROTOCOL GAS STANDARD

ANALYSIS OF GASEOUS CALIBRATION STANDARDS (PROCEDURE #G1)

H₂O 0.00%
 CH₄ 0.00%
 CO 0.00%
 CO₂ 0.00%
 C₂H₆ 0.00%
 C₃H₈ 0.00%
 iC₄H₁₀ 0.00%
 nC₄H₁₀ 0.00%
 iC₅H₁₂ 0.00%
 nC₅H₁₂ 0.00%
 iC₆H₁₄ 0.00%
 nC₆H₁₄ 0.00%
 iC₇H₁₆ 0.00%
 nC₇H₁₆ 0.00%
 iC₈H₁₈ 0.00%
 nC₈H₁₈ 0.00%
 iC₉H₂₀ 0.00%
 nC₉H₂₀ 0.00%
 iC₁₀H₂₂ 0.00%
 nC₁₀H₂₂ 0.00%
 iC₁₁H₂₄ 0.00%
 nC₁₁H₂₄ 0.00%
 iC₁₂H₂₆ 0.00%
 nC₁₂H₂₆ 0.00%
 iC₁₃H₂₈ 0.00%
 nC₁₃H₂₈ 0.00%
 iC₁₄H₃₀ 0.00%
 nC₁₄H₃₀ 0.00%
 iC₁₅H₃₂ 0.00%
 nC₁₅H₃₂ 0.00%
 iC₁₆H₃₄ 0.00%
 nC₁₆H₃₄ 0.00%
 iC₁₇H₃₆ 0.00%
 nC₁₇H₃₆ 0.00%
 iC₁₈H₃₈ 0.00%
 nC₁₈H₃₈ 0.00%
 iC₁₉H₄₀ 0.00%
 nC₁₉H₄₀ 0.00%
 iC₂₀H₄₂ 0.00%
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Airgas Specialty Gases
2722 South Wentworth Avenue
Chicago, IL 60628
773.785.3000 Fax: 773.185.1928
www.airgas.com

Certificate of Analysis: E.P.A. Protocol Gas Mixture

Certification performed in accordance with "EPA Traceability Protocol (Sept.1997)"
using assay procedures listed.

Cylinder No: SX32489 Order No: 1:57779-0a
Certification Date: 0116/200 Expiration Date: 01/12006
Part No: E02N199E15A0T00

3

Component	Certified Concentration	Unit of Measure	Accuracy	Procedure	Analytical principle
Carbon Monoxide	1:207	PPM	1%	G-1	NDR
Nitrogen	Balance				

Nox
(Reference Value Only)

Reference Standard Information

Type	Component	Concentration	Unit	Cylinder Number
NTRM	Carbon Monoxide	244.7	PPM	SG91595,19BAL

Analytical Data

Component 1 Carbon-Monoxide-

1st Analysis Date: 12/39/2002

Zero	<u>0.000</u>	Cand		Ref	<u>244.81</u>
Zero	<u>0.000</u>	Cand		Ref	
Zero	<u>0.000</u>	Cand	<u>120.700</u>	Ref	<u>244,800</u>

2nd Analysis Date: 01106/03

Zero	<u>0.000</u>	Cand	<u>120.800</u>	Ref	<u>244,000</u>
Zero		Cand	<u>120.800</u>	Ref	<u>1,244,800</u>
Zero	<u>0.000</u>	Cand	<u>120.900</u>	Ref	<u>244700</u>

Analyzed

Approved by: f/j -

Airgas Specialty Gases
 12722 South Wanhvorh Avenue
 Chicago, IL 60628
 773.785.3000 Fax: 773.765.1928
metr.airgas.com

Certificate of Analysis EPA Protocol Gas Mixture

Cylinder No:	SG9162702BAL	Reference Number:	54-ST9736-000
Cylinder Pressure:	2,013 psig	Expiration Date:	09/30/2006
Certification Date:	09/30/2003	Laboratory:	ASG - Chicago - IL

Certified Concentrations

Component	Concentration	Accuracy	Analytical Principle	Procedure
Carbon Monoxide	142.4PPM		NIR	al
Nitrogen	Balance			

Certification performed in accordance with "EPA Traceability Protocol (Sept. 1997)" using the assay procedures listed.
 Analytical Methodology does not require correction for analytical interferences.

Notes:

Do not use cylinder below 150 psig.

Approved for Release

Reference Standard Information

<u>Type</u>	<u>Component</u>	<u>Cyl. Number</u>	<u>Concentration</u>
NTRM	Carbon Monoxide	SG9159474BAL	244.7 PPM

Analytical Results

1st Component		Carbon Monoxide	
1st Analysis Date:		09/22/2003	
R	244.7	S	142.3
S	142.4	Z	0.0000
Z	0.0000	R	244.7
		S	142.4
		AVG:	142.4 PPM
2nd Analysis Date:		09/30/2003	
R	244.1	S	142.5
S	142.4	Z	0.0000
Z	0.0000	R	244.7
		S	142.5
		AVG:	142.5 PPM

CO EMISSION TEST CALCULATIONS

COMPANY: FOSTER'S PET CREMATION SERVICE
 SOURCE: B&L BLP 500/150 ANIMAL CREMATORY
 TEST DATE: 03/09/2004
 Data analyst: MG

Run No	Average			Stmk Flpwr rate (dstftin):	Emissions		
	00 (PPM)	02 (%O-	CO 7% 02 (PPM)		mg/m3	lbstft3	lb silt r
1	3.08	8.0	3.3	457	3.6	2.24E-007	0.006
2	2.25	10.0	2.9	482	2.6	1.64E-007	0.005
3	5.0	10.5	6.7	501	5.8	3.63E-007	0.011
Averages	3.44	9.5	4.3	480	4.0	2.50E-007	0.007

FORMULAS:

$$\text{CO @ 7\% O}_2 = \text{Actual CO} \times (14 / (21 - \% \text{O}_2))$$

$$\text{mg/m}^3 = \text{ppm} \times .041573 \times \text{molecular wt.}$$

$$\text{lb/ft}^3 = \text{mg/m}^3$$

$$35.31 \text{ ft}^3/\text{m}^3 \times 1000 \text{ mg/g} \times 453.59 \text{ gill}$$

where: Pstd = 29.92 "Hg
 Tstd = 528 deg R
 Molecular Weight of CO = 28

4

$$\text{lb/hr} = \text{lb/ft}^3 \times \text{flowrate} \times 60 \text{ min/hr}$$

SOUTHERN ENVIRONMENTAL SCIENCES, INC.

EMISSIONS TEST CALCULATIONS

Plant:
Unit:
Run No:

FOSTER'S PET CREMATION SERVICE
ANIMAL CREMATORY INCINERATOR
2

Test Date:
Data Input By:

03/09/2004
DW

$$Pbar = (Pbar \text{ at barom.}) - (\text{Elev. diff. barom. to manom., ft.}) \times (.1/100)$$

$$30.14 \quad 0 \quad \times \quad (0.1/100) \quad \underline{30.14}$$

$$Pm = Pbar + \Delta H = 30.14 + 1.041 \quad \underline{30.22}$$

13.6

$$Vm(std) = (Vm) \times (Y) \times \frac{(Tstd, deg R) \times (Pm)}{(Tm, deg R) \times (Pstd)}$$

$$= 36.308 \quad 0.986 \quad \times \quad \frac{528}{553.7} \times \frac{30.22}{29.92} \quad \underline{34.476}$$

$$Vw(std) = Vic \times (.04715) = 144.1 \times 0.04715 \quad \underline{6.794}$$

$$Bws = \frac{Vw(std)}{Vw(std) + Vm(std)} = \frac{6.794}{6.794 + 34.476} \quad \underline{0.165}$$

$$Bws \text{ @ saturation} = 0.99$$

$$1 - Bws = \underline{0.835} \quad \text{USE} \quad BWS$$

LOWER

78 x 27.29

$$Md = 0.44(\%CO_2) + .32(\%O_2) + .28(\%N_2 + \%CO)$$

$$= .44 \times 4.5 + .32 \times 10 + 0.28$$

$$Ms = Md(1 - Bws) + 18(Bws) = 29.12 \quad 0.835 \quad 18 \quad \underline{0.165}$$

27.29

$$Ps = Pbar + (Pp, \text{ in. H}_2\text{O}) = 30.14 - 0.01 \quad \underline{30.14}$$

13.6 13.6

$$Vs = 85.49 \times (Cp) \times (\text{avg sqrt delta P}) \times \text{sqrt}[(Ts, -R)/(Ps)(Ms)]$$

$$\quad 85.49 \quad \times \quad 0.84 \quad \times \quad 0.175 \times \text{sqrt} \quad 1827.1 \quad 30.14$$

18.68

$$An = \frac{[(\text{Nozzle diam, in.}/12)^2 \times 3.14159]}{4} \quad \frac{0.611^2 / 12^2 \times 3.14159}{4} \quad \underline{0.00204}$$

$$\%I = (.09450) \times (Ts, \text{ dep R}) \times (Vm(std))$$

$$(Ps) \times (Vs) \times (An) \times (\text{Sample Time}) \times (1 - Bws)$$

$$\begin{array}{ccccccc} 0.0945 & \times & 1827.1 & \times & 34.476 & & \\ 30.14 & \times & 18.68 & \times & 0.0020361 & 60 & \times & 0.835 \\ \hline & & & & & & & \underline{103.6} \end{array}$$

SOUTHERN ENVIRONMENTAL SCIENCES, INC.

EMISSIONS TEST CALCULATIONS

Plant: FOSTER'S PET CREMATION SERVICE
 Unit: ANIMAL CREMATORY INCINERATOR
 Run No: 2

Test Date: 03/09/2004
 Data Input By: CAN

MISSISSMINENTr--=InaMMINSEMUL- It aMMISSESR

$$As = \frac{(Slack\ Diam... ft.)^2 \times 3.14}{4} = \frac{1.5^2 \times 3.14}{4}$$

$$As_{eff} = As \times \frac{(total\ No.\ pts. - No.\ neg.\ pts.)}{(Total\ No.\ pts.)} = 1.767146 \times \frac{241 - 0}{241} = 1.77$$

$$Q_{60}(As_{eff})(Vs) = 60 \times 1.77 \times 18.68 = 1.981$$

$$Q_{std} = \frac{(Q) \times (T_{std}) \times (Ps) \times (1-B)}{(Ts, degR) \times (P_{std})} = \frac{1980.505 \times 528 \times 30.139265 \times 0.83537}{1827.125 \times 29.92} = 482$$

$$Cs = \frac{(0.01543) \times (mn, mg)}{Vm(std)} = \frac{0.01543}{34.4759} = 0.00497$$

$$PMR = \frac{(Cs)(Q_{std})(60)}{7000} = \frac{0.0050 \times 481.60559 \times 60}{7000} = 0.02$$

Emissions calculations in emissions test summary may differ slightly from example calculations due to rounding of some numbers in example.

NOMENCLATURE USED IN
STACK SAMPLING CALCULATIONS

A_n	= Cross-sectional area of nozzle, ft^2
A_s	= Cross-sectional area of stack, ft^2
B_{ws}	Water vapor in gas stream, proportion by volume
C_p	= Pitot coefficient
C_s	= Pollutant concentration, gr/DSCF
F_d	= Ratio of gas generated to heat value of fuel, DSCF/mm BTU
ΔH	= Average pressure differential across orifice, in. H_2O
%I	Isokinetic variation, %
M_d	= Molecular weight of dry gas
M_t	= Total amount of pollutant collected, mg
M_s	= Molecular weight of stack gas
N	= Normality of barium perchlorate titrant
ΔP_{avg}	= Average of the square roots of the velocity heads
P_{bar}	= Barometric pressure at the sampling site, in. Hg
P	= Stack gas static pressure, in. H_2O
P_{rn}	= Absolute pressure at the dry gas meter, in. Hg
P_s	= Absolute stack pressure, in. Hg
PIMP	= Pollutant mass rate, lb/hr
P_{std}	= Standard absolute pressure, 29.92 in. Hg
t	= Total sampling time, minutes

**Southern Environmental
Sciences, Inc.**

1204 North Wheeler Street 0 Plant City, Florida
335662354 ☐ (613)752-5014

**NOMENCLATURE USED IN
STACK SAMPLING CALCULATIONS
(Continued)**

- Stack gas flowrate, ACFM
- $C_{i\text{std}}$ = Stack gas flowrate, DSCFM
- T_{ia} = Absolute average meter temperature, °R
- T_s — Absolute average stack gas temperature, °R
- T_{std} = Standard absolute temperature, 528 °R
- v_s = Volume of sample aliquot titrated, ml
- V_{ia} Liquid collected in impingers and silica gel, grams
- $V_{m,i}$ = Sample volume at meter conditions, DCF
- $V_{m(std)}$ = Sample volume at standard conditions, DSCF
- V_s Stack gas velocity, ft/sec
- V_{soln} = Total volume of solution, ml
- v_s = Volume of barium perchlorate titrant used for the sample, ml
- v_b = Volume of barium perchlorate titrant used for the blank, ml
- V_{wktai} = Volume of water vapor in sample corrected to standard conditions, SCE
- = Dry gas meter calibration factor
- 13.6 = Specific gravity of mercury



W. Robert Flanigan
Mayor

Commissioners

Donald L. Carter, Jr.
*Commissioner of
Finance*

Kevin G. Grove
*Commissioner of
Public Safety*

Nina Forsythe
*Commissioner of
Water, Parks and
Recreation*

Adam Ritchey
*Commissioner of
Public Works*

Elizabeth Stahlman
City Administrator

City of Frostburg

August 25, 2023

RE: Zoning Verification for 10800 Laurel Hill Drive, Frostburg, MD

To Whom This May Concern:

Thank you for your request for zoning verification related to the property noted above by address.

The subject property is located in the T-LI Technology and Light Industrial District. This zoning district is purposed to provide for commercial and light industrial uses which are compatible with residential, commercial and institutional uses in adjacent areas of the City. This district is designed to accommodate planned business parks or substantial tracts of land suitable for business and industry with a focus on the technology sector. This district shall provide for flexibility, but requires well-planned access and design. The appropriate zoning district regulations are enclosed with this letter.

Specifically, Journey Pet Services, an existing business under new ownership, is in conformance with the T-LI zoning regulations, after the Frostburg Planning Commission approved such a use as a principal permitted use within the district. There are no open zoning code violations for this property.

I will gladly assist with any further questions or concerns.

Very truly yours,

CITY OF FROSTBURG

By: Bethany Fife
Bethany Fife
Director of Community Development
301.689.6000, Ext. 110
bfife@frostburgcity.org

Sec. 3.11. - "T-LI" Technology/Light Industrial District.

- A. *Purpose.* To provide for commercial and light industrial uses which are compatible with residential, commercial and institutional uses in adjacent areas of the City. This district is designed to accommodate planned business parks or substantial tracts of land suitable for business and industry with a focus on the technology sector. This district shall provide for flexibility, but requires well-planned access and design.
- B. *Principal Permitted Uses and Structures.* The following principal uses and structures are permitted in the "T-LI" district:
- (1) Group homes consistent with Section 8.5.
 - (2) Treatment centers.
 - (3) Adult day care centers.
 - (4) Assisted living centers and nursing homes.
 - (5) Colleges, trade or hobby schools.
 - (6) Hospices and hospitals.
 - (7) Building material sales yard, including the sale of rock, sand, gravel, and the like, and tradesperson's equipment storage yard or headquarters.
 - (8) Contractor offices.
 - (9) Fitness centers.
 - (10) Medical laboratories.
 - (11) Wholesale business, warehouse, trucking terminals, and similar non-processing storage and distribution uses, but not including prohibited uses.
 - (12) Manufacturing, compounding, processing, or packaging of food and food products, and cosmetics, toiletries, and pharmaceuticals.
 - (13) Manufacturing, compounding or assembling of articles using the following or similar prepared materials: bone or shell, cellophane, fur, glass, leather, plastic, precious or semiprecious metals or stones, rubber, textiles or cloth products, tobacco, wood or wood products.
 - (14) Manufacturing of ceramic or glass products.
 - (15) Manufacturing or assembling from prepared materials of the following or similar items: musical instruments, clocks or watches, toys or novelties, electrical appliances, scientific or electronic devices, light sheet metal products, machine tool, office equipment.
 - (16) Incidental sales of products manufacturing or stored on the premises.
 - (17) Technological or communication based enterprises.
 - (18) Agriculture, limited to cropland, nurseries and greenhouses.

- C. *Special Exceptions.* The following principal uses are permitted as special exceptions after approval by the Board of Zoning Appeals:
- (1) Adult uses.
 - (2) Gambling establishments.
 - (3) Body art studios.
 - (4) Wind energy systems complying with regulations found in Section 8.8.
 - (5) Self-storage facilities, subject to the provisions set forth in Section 8.9.
 - (6) A use or structure that the applicant proves to the satisfaction of the Board of Zoning Appeals to be of the same general character as the above permitted uses and special exception uses, in accordance with the provisions of Section 1.18C(3), but not including uses that are specifically prohibited in this district.
- D. *Accessory Uses and Structures.* The following accessory uses and structures shall be permitted in the "T-LI" district:
- (1) Temporary buildings and structures in accordance with Section 6.6.
 - (2) Signs in accordance with Part 7 of this Ordinance.
 - (3) Accessory uses and structures that are clearly customarily accessory and directly incidental to the permitted principal uses and structures.
- E. *Lot, Yard and Height Requirements:* The following minimum requirements shall apply to all uses and structures in the "T-LI" district, except as superseded by more restrictive provisions of this Ordinance.

	Commercial Use
Minimum Lot Area	6,000 sq. ft.
Minimum Front Yard	30 ft.
Minimum Rear Yard	10 ft.
Minimum Side Yard	Adjoining a C district: None, or if side yard provided a minimum of 10 ft.; Adjoining a R district: 10 ft.
Minimum Lot Width	street line: 50 ft.; front building line: 50 ft.
Maximum Lot Coverage	80%

Maximum Height	4 stories/50 feet
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(Ord. No. 2018-02, §§ 2, 8, 9, 5-17-2018; Ord. No. 2019-04, § 1, 5-16-2019)

MARYLAND DEPARTMENT OF THE ENVIRONMENT

**AIR AND RADIATION ADMINISTRATION
APPLICATION FOR A PERMIT TO CONSTRUCT**

**SUPPLEMENT TO
DOCKET #15-23**

COMPANY: Journey Pet Services

LOCATION: 10800 Laurel Hill Drive
Frostburg, Maryland 21532

APPLICATION: Installation of one (1) pet crematory

<u>ITEM</u>	<u>DESCRIPTION</u>
1	Notice of Tentative Determination, Opportunity to Request a Public Hearing, and Opportunity to Submit Written Comments
2	Fact Sheet and Tentative Determination
3	Draft Permit to Construct and Conditions
4	Supplemental Information
5	Privilege Log – Not Applicable

**MARYLAND DEPARTMENT OF THE ENVIRONMENT
AIR AND RADIATION ADMINISTRATION**

**NOTICE OF TENTATIVE DETERMINATION, OPPORTUNITY TO REQUEST
A PUBLIC HEARING, AND OPPORTUNITY TO SUBMIT WRITTEN COMMENTS**

FIRST NOTICE

The Department of the Environment, Air and Radiation Administration (ARA) has completed its review of an application for a Permit to Construct submitted by Journey Pet Services on August 29, 2023, for a pet crematory. The proposed installation will be located at 10800 Laurel Hill Drive, Frostburg, Maryland 21532.

Pursuant to Section 1-604, of the Environment Article, Annotated Code of Maryland, the Department has made a tentative determination that the Permit to Construct can be issued and is now ready to receive public comment on the application. Copies of the Department's tentative determination, the application, the draft permit to construct with conditions, and other supporting documents are available for public inspection on the Department's website. Look for Docket # 15-23 at the following link:

<https://mde.maryland.gov/programs/Permits/AirManagementPermits/Pages/index.aspx>

In accordance with HB 1200/Ch. 588 of 2022, the applicant provided an environmental justice (EJ) Score for the census tract in which the project is located using the Maryland EJ Screening Tool. The EJ Score, expressed as a statewide percentile, was shown to be 28, which the Department has verified. This score considers three demographic indicators, minority population above 50%, poverty rate above 25% and limited English proficiency above 15%, to identify underserved communities. Multiple environmental health indicators are used to identify overburdened communities. The Department's review of the environmental and socioeconomic indicators contributing to that EJ score is included in the tentative determination that is available for public inspection.

Interested persons may request a public hearing and/or submit written comments on the tentative determination. Requests for a public hearing must be submitted in writing and must be received by the Department no later than 20 days from the date of this notice. A requested public hearing will be held virtually using teleconference or internet-based conferencing technology unless a specific request for an in-person public hearing is received. Written comments must be received by the Department no later than 30 days from the date of this notice.

Interested persons may request an extension to the public comment period. The extension request must be submitted in writing and must be received by the Department no later than 30 days from the date of this notice or within 5 days after the hearing (if a hearing is requested), whichever is later. The public comment period may only be extended one time for a 60-day period.

All requests for a public hearing, requests for an extension to the public comment period, and all written comments should be directed to the attention of Ms. Shannon Heafey, Air Quality Permits Program by email to shannon.heafey@maryland.gov or by mail to the Air and Radiation Administration, 1800 Washington Boulevard, Baltimore, Maryland 21230.

Further information may be obtained by calling Ms. Shannon Heafey at 410-537-4433.

Christopher R. Hoagland, Director
Air and Radiation Administration

**MARYLAND DEPARTMENT OF ENVIRONMENT
AIR AND RADIATION ADMINISTRATION**

**FACT SHEET AND TENTATIVE DETERMINATION
JOURNEY PET SERVICES**

PROPOSED INSTALLATION OF ONE (1) ANIMAL CREMATORY

I. INTRODUCTION

The Maryland Department of the Environment (the "Department") received an application from Journey Pet Services on August 29, 2023, for a Permit to Construct for the installation of one (1) B&L Cremation Systems BLP-750M5 animal crematory rated at 150 pounds per hour. The proposed installation will be located at 10800 Laurel Hill Drive, Frostburg, Maryland 21532.

A notice was placed in The Cumberland Times - News on November 27, 2023 and again on December 4, 2023 announcing an opportunity to request an informational meeting to discuss the application for a Permit to Construct. An informational meeting was not requested.

As required by law, all public notices were also provided to elected officials in all State, county, and municipality legislative districts located within a one-mile radius of the facility's property boundary.

The Department has reviewed the application and has made a tentative determination that the proposed facility is expected to comply with all applicable air quality regulations. A notice will be published to provide the public with opportunities to request a public hearing and to comment on the application, the Department's tentative determination, the draft permit conditions, and other supporting documents. The Department will not schedule a public hearing unless a legitimate request is received.

If the Department does not receive any comments that are adverse to the tentative determination, the tentative determination will automatically become a final determination. If adverse comments are received, the Department will review the comments, and will then make a final determination with regard to issuance or denial of the permit. A notice of final determination will be published in a newspaper of general circulation in the affected area. The final determination may be subject to judicial review pursuant to Section 1-601 of the Environment Article, Annotated Code of Maryland.

II. CURRENT STATUS AND PROPOSED INSTALLATION

A. Current Status

Journey Pet Services currently operates an existing pet cremation facility that includes the following permitted equipment:

- One (1) B&L Cremation Systems Model BLP500 pet crematory equipped with an afterburner, rated at 150 pounds per hour, fired with natural gas.
- One (1) Facultative Technologies Model ISI-60 animal crematory equipped with an afterburner, rated at 140 pounds per hour, fired with natural gas.

B. Proposed Modification

Journey Pet Services is proposing to install a new 150 pounds per hour, B&L Cremation Systems BLP-750M5 animal crematory, fired with natural gas, at their facility.

The B&L Cremation Systems BLP-750M5 animal crematory will be equipped with a secondary combustion chamber capable of meeting at least a 1.0 second retention time and a minimum operating temperature of 1600 °F. The B&L Cremation Systems BLP-750M5 animal crematory must be equipped with temperature sensors and monitors to continuously measure and record the temperature of the secondary combustion chamber. Exhaust gases must be vented out of a stack at a height of at least 25 feet from the ground to ensure proper dispersion of exhaust gases.

III. APPLICABLE REGULATIONS

The proposed installation is subject to all applicable Federal and State air quality control regulations, including, but not limited to the following:

- (a) COMAR 26.11.01.07C, which requires that the Permittee report to the Department occurrences of excess emissions.
- (b) COMAR 26.11.02.13A(1), which requires that the Permittee obtain from the Department, and maintain and renew as required, a valid State permit-to-operate.
- (c) COMAR 26.11.02.19C & D, which require that the Permittee submit to the Department annual certifications of emissions, and that the Permittee maintain sufficient records to support the emissions information presented in the submittals.
- (d) COMAR 26.11.06.08 and 26.11.06.09, which generally prohibit the discharge of emissions beyond the property line in such a manner that a nuisance or air pollution is created.
- (e) COMAR 26.11.08.04A(1), which prohibits the Permittee to cause or permit the discharge of emissions from any incinerator, other than water in an uncombined form which is greater than 20 percent opacity.

Exceptions. The requirements do not apply to emissions during start-up, or adjustments or occasional cleaning of control equipment if:

- (1) The visible emissions are not greater than 40 percent opacity; and
 - (2) The visible emissions do not occur for more than 6 consecutive minutes in any 60-minute period.
- (f) COMAR 26.11.08.05A(1) & A(3), which limits the concentration of particulate matter in any exhaust gases to not more than 0.10 grains per standard cubic foot of dry exhaust gas.
- (g) COMAR 26.11.15.05, which requires that the Permittee implement “Best Available Control Technology for Toxics” (T – BACT) to control emissions of toxic air pollutants.
- (h) COMAR 26.11.15.06, which prohibits the discharge of toxic air pollutants to the extent that such emissions would unreasonably endanger human health.

IV. GENERAL AIR QUALITY

The U.S. Environmental Protection Agency (EPA) has established primary and secondary National Ambient Air Quality Standards (NAAQS) for six (6) criteria pollutants, i.e., sulfur dioxide, particulate matter, carbon monoxide, nitrogen dioxide, ozone, and lead. The primary standards were established to protect public health, and the secondary standards were developed to protect against non-health effects such as damage to property and vegetation.

The Department utilizes a statewide air monitoring network, operated in accordance with EPA guidelines, to measure the concentrations of criteria pollutants in Maryland’s ambient air. The measurements are used to project statewide ambient air quality, and currently indicate that Allegany County complies with the NAAQS for sulfur dioxide, particulate matter, carbon monoxide, nitrogen dioxide, ozone, and lead.

With regard to toxic air pollutants (TAPs), screening levels (i.e., acceptable ambient concentrations for toxic air pollutants) are generally established at 1/100 of allowed worker exposure levels (TLVs)¹. The Department has also developed additional screening levels for carcinogenic compounds. The additional screening levels are established such that continuous exposure to the subject TAP at the screening level for a period of 70 years is expected to cause an increase in lifetime cancer risk of no more than 1 in 100,000.

¹ TLVs are threshold limit values (exposure limits) established for toxic materials by the American Conference of Governmental Industrial Hygienists (ACGIH). Some TLVs are established for short-term exposure (TLV – STEL), and some are established for longer-term exposure (TLV – TWA), where TWA is an acronym for time-weight average.

V. ENVIRONMENTAL JUSTICE ANALYSIS

The concept behind the term environmental justice (EJ) is that regardless of race, color, national origin, or income, all Maryland residents and communities should have an equal opportunity to enjoy an enhanced quality of life. How to assess whether equal protection is being applied is the challenge.

Communities surrounded by a disproportionate number of polluting facilities puts residents at a higher risk for health problems from environmental exposures. It is important that residents who may be adversely affected by a proposed source be aware of the current environmental issues in their community in order to have meaningful involvement in the permitting process. Resources may be available from government and private entities to ensure that community health is not negatively impacted by a new source located in the community.

Extensive research has documented that health disparities exist between demographic groups in the United States, such as differences in mortality and morbidity associated with factors that include race/ethnicity, income, and educational attainment.

The Maryland General Assembly passed HB 1200, effective October 1, 2022, that adds to MDE's work incorporating diversity, equity and inclusion into our mission to help overburdened and underserved communities with environmental issues. In accordance with HB 1200/Ch, 588 of 2022, the applicant provided an environmental justice (EJ) Score for the census tract in which the proposed source is located using the Maryland EJ Screening Tool. The EJ Score, expressed as a statewide percentile, was shown to be 28, which the Department has verified. This score considers three demographic indicators, minority population above 50%, poverty rate above 25% and limited English proficiency above 15%, to identify underserved communities. Multiple environmental health indicators are used to identify overburdened communities.

To account for other sources of pollution surrounding the proposed source, the Department conducted an additional EJ Score analysis to evaluate the impact of other sources located within 1 mile of the proposed source. The highest EJ Score in a census tract located within 1 mile of the proposed source, expressed as a statewide percentile, was shown to be 41.

An EJ Score of 41 indicates that the proposed installation is located in an area that is not disproportionately impacted by sources of pollution or at a higher risk of health problems from environmental exposures than other areas in Maryland. The Department has reviewed the air quality impacts from this proposed installation and has determined that the proposed installation will meet all applicable air quality standards.

VI. COMPLIANCE DEMONSTRATION AND ANALYSIS

The proposed installation must comply with all State imposed emissions limitations and screening levels, as well as the NAAQS. The Department has conducted an engineering and air quality review of the application. The emissions were projected based on U.S. EPA-approved emissions factors for crematory operations. The conservative U.S. EPA's SCREEN3 model was also used to project the maximum ground level concentrations from the proposed installation, which were then compared to the screening levels and the NAAQS.

- A. Estimated Emissions** - The maximum emissions of criterial pollutants from the proposed installation, including the proposed installation, are listed in Table I.
- B. Compliance with National Ambient Air Quality Standards** - The maximum ground level concentrations for particulate matter, sulfur dioxide, oxides of nitrogen, carbon monoxide, and volatile organic compounds based on the emissions from the proposed installation, are listed in column 2 of Table II. The combined impact of the proposed installation, and the ambient background concentration for each pollutant shown in column 3 of Table II, is less than the NAAQS for each pollutant shown in column 4.
- C. Compliance with Air Toxics Regulations** – The premises wide toxic air pollutants of concern that would be emitted from this facility are listed in column 1 of Table III. The predicted maximum off-site ambient concentrations of these toxic air pollutants are shown in column 4 of Table III, and in each case the maximum concentration is less than the corresponding screening level for the toxic air pollutant shown in column 3.

VII. TENTATIVE DETERMINATION

Based on the above information, the Department has concluded that the proposed installation will comply with all applicable Federal and State air quality control requirements. In accordance with the Administrative Procedure Act, the Department has made a tentative determination to issue the Permit to Construct.

Enclosed with the tentative determination is a copy of the draft Permit to Construct.

TABLE I
PROJECTED MAXIMUM EMISSIONS FROM THE PROPOSED INSTALLATION

POLLUTANT	PROJECTED MAXIMUM EMISSIONS	
	(lbs/day)	(tons/year)
Oxides of Nitrogen (NO _x) (includes Nitrogen Dioxide – NO ₂)	20.1	3.7
Carbon Monoxide (CO)	16.8	3.1
Sulfur Dioxide (SO ₂)	4.0	0.7
Total Particulate Matter (PM) (includes PM-10 and PM-2.5)	6.4	1.2
Volatile Organic Compounds (VOC)	6.0	1.1

TABLE II
**PROJECTED IMPACT OF EMISSIONS OF CRITERIA POLLUTANTS FROM THE
PROPOSED INSTALLATION ON AMBIENT AIR QUALITY**

POLLUTANTS	MAXIMUM OFF-SITE GROUND LEVEL CONCENTRATIONS CAUSED BY EMISSIONS FROM PROPOSED PROCESS (µg/m ³)	BACKGROUND AMBIENT AIR CONCENTRATIONS (µg/m ³)*	NATIONAL AMBIENT AIR QUALITY STANDARDS (NAAQS) (µg/m ³)
Nitrogen Dioxide (NO ₂)	1-hour max → 9.0 annual avg → 0.7	1-hour max → 107 annual avg → 22	1-hour max → 188 annual avg → 100
Carbon Monoxide (CO)	1-hour max → 7.5 8-hour max → 5.2	1-hour max. → 3322 8-hour max. → 2406	1-hour max. → 40,000 8-hour max. → 10,000
Sulfur Dioxide (SO ₂)	1-hour max → 1.7 24-hour max → 0.7	1-hour max → 59 24-hour max → 10	1-hour max → 196 24-hour max → 366
Particulate Matter (PM ₁₀)	24-hour max → 0.95	24-hour max. → 53	24-hour max. → 150

*Background concentrations were obtained from Maryland air monitoring stations as follows:

NO₂ and PM₁₀ → Monitoring Station in Old Town, Baltimore City

CO and SO₂ → Monitoring Station in Essex, Baltimore County

TABLE III
PREDICTED MAXIMUM OFF-SITE AMBIENT CONCENTRATIONS FOR
TOXIC AIR POLLUTANTS EMITTED FROM THE FACILITY

Toxic Air Pollutant	PROJECTED WORST-CASE FACILITY-WIDE EMISSIONS (lbs/hr)	SCREENING LEVELS (µg/m³)	PREDICTED MAXIMUM OFF-SITE GROUND LEVEL CONCENTRATIONS (µg/m³)
Acenaphthene (CAS No. 83329)	0.0000003	20.3 (8-hr)	0.0000024 (8-hr)
Acenaphthylene (CAS No. 208968)	0.000002	24.6 (8-hr)	0.000015 (8-hr)
Acetaldehyde (CAS No. 75070)	0.0004	450 (1-hr) 2300 (8-hr) 5 (annual)	0.004 (1-hr) 0.003 (8-hr) 0.0003 (annual)
Anthracene (CAS No. 120127)	0.000001	20 (8-hr)	0.000007 (8-hr)
Antimony (CAS No. 7440360)	0.00009	5 (8-hr)	0.0007 (8-hr)
Arsenic (CAS No. 7440382)	0.0002	0.1 (8-hr) 0.002 (annual)	0.0014 (8-hr) 0.00016 (annual)
Barium (CAS No. 7440393)	0.000076	5 (8-hr)	0.0006 (8-hr)
Benzo (g,h,i) perylene (CAS No. 191242)	0.0000019	20 (8-hr)	0.000015 (8-hr)
Beryllium (CAS No. 7440417)	0.0000076	0.0005 (8-hr) 0.004 (annual)	0.00006 (8-hr) 0.000007 (annual)
Cadmium (CAS No. 7440439)	0.00065	0.02 (8-hr) 0.006 (annual)	0.005 (8-hr) 0.0006 (annual)
Chromium (CAS No. 7440473)	0.000088	5 (8-hr)	0.0007 (8-hr)
Chromium VI (CAS No. 18540299)	0.00004	0.01 (8-hr) 0.0008 (annual)	0.0003 (8-hr) 0.00004 (annual)
Cobalt (CAS No. 7440484)	0.00004	0.2 (8-hr)	0.0003 (8-hr)
Copper (CAS No. 7440508)	0.000086	2 (8-hr)	0.0006 (8-hr)
Fluoranthene (CAS No. 206440)	0.0000006	82 (8-hr)	0.000005 (8-hr)
Fluorene (CAS No. 86737)	0.0000012	20 (8-hr)	0.000009 (8-hr)
Formaldehyde (CAS No. 50000)	0.00001	20.3 (8-hr) 0.8 (annual)	0.0007 (8-hr) 0.00009 (annual)
Hydrogen Chloride (CAS No. 7647010)	0.89	29.8 (1-hr) 165 (8-hr)	9.46(1-hr) 6.62 (8-hr)
Hydrogen Fluoride (CAS No. 7664393)	0.0033	16.4 (1-hr) 4.1 (8-hr)	0.036 (1-hr) 0.025 (8-hr)
Lead (CAS No. 7439921)	0.0045	0.5 (8-hr)	0.034 (8-hr)
Molybdenum (CAS No. 7439987)	0.00005	5 (8-hr)	0.0004 (8-hr)
Nickel (CAS No. 7440020)	0.00011	1 (8-hr)	0.0008 (8-hr)
Phenanthrene (CAS No. 85018)	0.0000067	9.8 (8-hr)	0.00005 (8-hr)

Toxic Air Pollutant	PROJECTED WORST-CASE FACILITY-WIDE EMISSIONS (lbs/hr)	SCREENING LEVELS (µg/m³)	PREDICTED MAXIMUM OFF-SITE GROUND LEVEL CONCENTRATIONS (µg/m³)
Pyrene (CAS No. 129000)	0.00000048	20 (8-hr)	0.000004 (8-hr)
Selenium (CAS No. 7782492)	0.00013	2 (8-hr)	0.00099 (8-hr)
Silver (CAS No. 7440224)	0.000021	0.1 (8-hr)	0.00016 (8-hr)
Thallium (CAS No. 7440280)	0.00025	0.2 (8-hr)	0.0019 (8-hr)
Vanadium (CAS No. 7440622)	0.00017	0.5 (8-hr)	0.0013 (8-hr)
Zinc (CAS No. 7440666)	0.0012	1000 (1-hr) 500 (8-hr)	0.013 (1-hr) 0.009 (8-hr)
Total Dioxins and Furans (CAS No. 174016)	0.0000000041	0.0008 (8-hr)	0.00000003 (8-hr)

The values represent maximum facility-wide emissions of toxic air pollutants during any 1-hour period of facility operation.

The values are based on worst-case emissions from the proposed facility and were predicted by EPA's SCREEN3 model, which provides conservative estimations concerning the impact of pollutants on ambient air quality.

Wes Moore
Governor

Serena McIlwain
Secretary

Air and Radiation Administration
1800 Washington Boulevard, Suite 720
Baltimore, MD 21230

☒ Construction Permit

☐ Operating Permit

PERMIT NO. As Listed on Page 2

DATE ISSUED _____

PERMIT FEE \$1,500.00 (Paid)

EXPIRATION DATE In accordance with
COMAR 26.11.02.04B

LEGAL OWNER & ADDRESS

Journey Pet Services
10800 Laurel Hill Drive
Frostburg, Maryland 21532

Attention: Mr. Caleb Hill, Owner

SITE

Journey Pet Services
10800 Laurel Hill Drive
Frostburg, Maryland 21532
AI # 150359

SOURCE DESCRIPTION

Animal crematory. This permit authorizes the installation of one (1) animal crematory.

This permit supersedes all previous permits to construct issued to premises number 001-0367.

This source is subject to the conditions described on the attached pages.

Program Manager

Director, Air and Radiation Administration

**JOURNEY PET SERVICES
PERMIT-TO-CONSTRUCT CONDITIONS
PREMISES NO. 001-0367**

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Part A – General Provisions
Part B – Applicable Regulations
Part C – Construction Conditions
Part D – Operating Conditions
Part E – Notifications and Monitoring
Part F – Record Keeping and Reporting
Part G – Temporary Permit-To-Operate Conditions

This permit covers the following registered installations:

ARA Registration No.	Description	Installation Date
001-0367-1-0016	One (1) B & L Cremation Systems Model BLP500 pet crematory equipped with an afterburner, rated at 150 pounds per hour, fired with natural gas.	2016
001-0367-1-0017	One Facultative Technologies Model ISI-60 animal crematory equipped with an afterburner, rated at 140 pounds per hour, fired with natural gas	2016
001-0367-1-0018	One (1) B&L Cremation Systems BLP-750M5 animal crematory equipped with an afterburner, rated at 150 pounds per hour, fired with natural gas.	2024

Part A – General Provisions

- (1) The following Air and Radiation Administration (ARA) permit-to-construct application forms and supplemental information are incorporated into this permit by reference:
 - (a) All valid applications for Processing or Manufacturing Equipment (Form 5) received at the Department prior to issuance of this permit. This includes the Form 5 application received August 29, 2023, for the installation of one (1) B&L Cremation Systems BLP-750M5 animal crematory.
 - (b) All valid applications for Emission Point Data (Form 5 EP) received at the Department prior to issuance of this permit. This includes the Form 5EP application received August 29, 2023, for the installation of one (1) B&L Cremation Systems BLP-750M5 animal crematory.
 - (c) All valid applications for Incinerators (Form 10) received at the Department prior to issuance of this permit. This includes the Form

**JOURNEY PET SERVICES
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10 application received August 29, 2023, for the installation of one (1) B&L Cremation Systems BLP-750M5 animal crematory.

- (d) All valid applications for Gas Cleaning or Emission Control Equipment (Form 6) received at the Department prior to issuance of this permit. This includes the Form 6 application received August 29, 2023, for the installation of one (1) B&L Cremation Systems BLP-750M5 animal crematory.
- (e) All valid Supplemental Information proof of zoning, site plan, and process diagram received at the Department prior to issuance of this permit. This includes information received August 29, 2023, for the installation of one (1) B&L Cremation Systems BLP-750M5 animal crematory.
- (f) All valid Supplemental Information received at the Department prior to issuance of this permit. This includes the emission data, modeling and toxics reporting received August 29, 2023, for the installation of one (1) B&L Cremation Systems BLP-750M5 animal crematory.

If there are any conflicts between representations in this permit and representations in the applications, the representations in the permit shall govern. Estimates of dimensions, volumes, emissions rates, operating rates, feed rates and hours of operation included in the applications do not constitute enforceable numeric limits beyond the extent necessary for compliance with applicable requirements.

- (2) Upon presentation of credentials, representatives of the Maryland Department of the Environment (the "Department") and the Allegany County Health Department shall at any reasonable time be granted, without delay and without prior notification, access to the Permittee's property and permitted to:
 - (a) inspect any construction authorized by this permit;
 - (b) sample, as necessary to determine compliance with requirements of this permit, any materials stored or processed on-site, any waste materials, and any discharge into the environment;
 - (c) inspect any monitoring equipment required by this permit;
 - (d) review and copy any records, including all documents required to be maintained by this permit, relevant to a determination of compliance with requirements of this permit; and
 - (e) obtain any photographic documentation or evidence necessary to determine compliance with the requirements of this permit.

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- (3) The Permittee shall notify the Department prior to increasing quantities and/or changing the types of any materials referenced in the application or limited by this permit. If the Department determines that such increases or changes constitute a modification, the Permittee shall obtain a permit-to-construct prior to implementing the modification.
- (4) Nothing in this permit authorizes the violation of any rule or regulation or the creation of a nuisance or air pollution.
- (5) If any provision of this permit is declared by proper authority to be invalid, the remaining provisions of the permit shall remain in effect.
- (6) This permit supersedes all previous permits-to-construct issued to premises number 001-0367.
- (7) Subsequent to issuance of this permit, the Department may impose additional and modified requirements that are incorporated into a State permit-to-operate issued pursuant to COMAR 26.11.02.13.

Part B – Applicable Regulations

- (1) This source is subject to all applicable federal air pollution control requirements.
- (2) This source is subject to all applicable federally enforceable State air pollution control requirements including, but not limited to, the following regulations:
 - (a) COMAR 26.11.01.04A(1) which provides that the Department may request sufficient testing to determine compliance with air quality regulations.
 - (b) COMAR 26.11.01.07C, which requires that the Permittee report to the Department occurrences of excess emissions.
 - (c) COMAR 26.11.02.04B, which states that a permit to construct or an approval expires if, as determined by the Department:
 - (i) Substantial construction or modification is not commenced within 18 months after the date of issuance of the permit or approval, unless the Department specifies a longer period in the permit or approval;

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- (ii) Construction or modification is substantially discontinued for a period of 18 months after the construction or modification has commenced; or
 - (iii) The source for which the permit or approval was issued is not completed within a reasonable period after the date of issuance of the permit or approval.
- (d) COMAR 26.11.02.09A, which requires that the Permittee obtain a permit-to-construct if an installation is to be modified in a manner that would cause changes in the quantity, nature, or characteristics of emissions from the installation as referenced in this permit.
- (e) COMAR 26.11.08.04A(1), which prohibits the Permittee to cause or permit the discharge of emissions from any incinerator, other than water in an uncombined form which is greater than 20 percent opacity.

Exceptions. The requirements do not apply to emissions during start-up, or adjustments or occasional cleaning of control equipment if:

- (i) The visible emissions are not greater than 40 percent opacity; and
 - (ii) The visible emissions do not occur for more than 6 consecutive minutes in any 60-minute period.
- (f) COMAR 26.11.08.05A(1) & A(3) which requires the Permittee to limit the discharge of particulate matter to 0.10 grains per dry standard cubic foot or less when adjusted to 12 percent carbon dioxide.
- (3) This source is subject to all applicable State-only enforceable air pollution control requirements including, but not limited to, the following regulations:
- (a) COMAR 26.11.02.13A(1), which requires that the Permittee obtain from the Department, and maintain and renew as required, a valid State permit-to-operate.
 - (b) COMAR 26.11.02.19C & D, which require that the Permittee submit to the Department annual certifications of emissions, and that the Permittee maintain sufficient records to support the emissions information presented in such submittals.

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- (c) COMAR 26.11.06.08 and 26.11.06.09, which generally prohibit the discharge of emissions beyond the property line in such a manner that a nuisance or air pollution is created.
- (d) COMAR 26.11.15.05, which requires that the Permittee implement "Best Available Control Technology for Toxics" (T – BACT) to control emissions of toxic air pollutants.
- (e) COMAR 26.11.15.06, which prohibits the discharge of toxic air pollutants to the extent that such emissions would unreasonably endanger human health.

Part C – Construction Conditions

- (1) Except as otherwise provided in this part, the one (1) B&L Cremation Systems BLP-750M5 animal crematory rated at 150 pounds per hour, shall be constructed in accordance with specifications included in the incorporated applications and in accordance with the specifications provided by the vendor and manufacturer.
- (2) The crematory shall be designed to limit particulate matter emissions to no more than 0.10 grains per standard cubic foot dry, adjusted to 12 percent carbon dioxide.
- (3) The crematory shall be equipped with a secondary combustion chamber capable of achieving a retention time of at least 1.0 second, and an operating temperature of at least 1600 °F.
- (4) The crematory shall be equipped with temperature sensors and recorders to continuously monitor and record the temperature of the secondary combustion chamber during operation.
- (5) The exhaust gases from the crematory stack shall discharge through a stack at least 25 feet above the ground.

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Part D – Operating Conditions

- (1) Except as otherwise provided in this part, all registered equipment shall be operated in accordance with specifications included in the application and any operating procedures recommended by equipment vendors unless the Permittee obtains from the Department written authorization for alternative operating procedures.
- (2) The Permittee shall keep all of the animal crematories properly maintained and in good working condition so as to ensure full and continuous compliance with all applicable regulations
- (3) The Permittee shall comply with the following premises-wide operational limitations unless the Permittee can demonstrate, to the satisfaction of the Department, that compliance with all applicable air quality regulations and standards can be achieved at other conditions:
 - (a) Only animal remains shall be cremated.
 - (b) The Permittee shall not cremate more than 3520 lbs of animal remains in any 8-hour period.
 - (c) The Permittee shall not combust any halogenated plastics, including polyvinyl chloride (PVC) body bags or PVC pipes.
 - (d) The Permittee shall not combust any hazardous waste, or hospital, medical, and infectious waste as defined in COMAR 26.11.08.01B(18).
 - (e) The Permittee shall determine the weight of the remains to be cremated prior to each cremation.
 - (f) The Permittee shall utilize the secondary chamber of the incinerator to comply with the T-BACT requirements of COMAR 26.11.15.05.
 - (g) Prior to the initiation of cremation in the primary chamber, the secondary chamber shall be preheated until the gases leaving the secondary chamber attain a temperature of at least 1600 °F.
 - (h) While remains are being cremated, the Permittee shall maintain a secondary chamber temperature of at least 1600 °F.

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- (i) The Permittee shall set the recycle time for the cremation so that animal remains will not be cremated at a rate exceeding 232 pounds per hour in any crematory unit.
- (j) The exhaust gases from all crematory stacks shall discharge at least 25 feet above the ground.

Part E – Notifications and Monitoring

- (1) The Permittee shall notify the Department of the initial start-up date of the one (1) B&L Cremation Systems BLP-750M5 animal crematory within fifteen (15) days after the date.
- (2) While remains are cremated, the temperature of the flue gases at the outlet of the secondary combustion chambers shall be continuously monitored and recorded on a chart recorder or other continuous record keeping device. The records shall show the dates and times of all recorded temperature readings.

Part F – Record Keeping and Reporting

- (1) The Permittee shall maintain for at least five (5) years, and shall make available to the Department upon request, records of the following information for the animal crematory:
 - (a) Charts or other continuous records of the flue gas temperature at the outlet of the secondary combustion chambers. The records must show the date and start time of each cremation.
 - (b) A daily log of the following information:
 - (i) the date and start time of each cremation;
 - (ii) the approximate weight of each charge;
 - (iii) the total weight cremated per 8 hours; and
 - (iii) the duration of each cremation cycle.
- (2) The Permittee shall maintain at the facility for at least five (5) years, and shall make available to the Department upon request, records necessary to support

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annual certifications of emissions and demonstrations of compliance for toxic air pollutants. Such records shall include, if applicable, the following:

- (a) mass emissions rates for each regulated pollutant, and the total mass emissions rate for all regulated pollutants for each registered source of emissions;
- (b) accounts of the methods and assumptions used to quantify emissions;
- (c) all operating data, including operating schedules and production data, that were used in determinations of emissions;
- (d) amounts, types, and analyses of all fuels used;
- (e) any records, the maintenance of which is required by this permit or by State or federal regulations, that pertain to the operation and maintenance of continuous emissions monitors, including:
 - (i) all emissions data generated by such monitors;
 - (ii) all monitor calibration data;
 - (iii) information regarding the percentage of time each monitor was available for service; and
 - (iv) information concerning any equipment malfunctions.
- (f) information concerning operation, maintenance, and performance of air pollution control equipment and compliance monitoring equipment, including:
 - (i) identifications and descriptions of all such equipment;
 - (ii) operating schedules for each item of such equipment;
 - (iii) accounts of any significant maintenance performed;
 - (iv) accounts of all malfunctions and outages; and

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- (v) accounts of any episodes of reduced efficiency.
 - (g) limitations on source operation or any work practice standards that significantly affect emissions; and
 - (h) other relevant information as required by the Department.
- (3) The Permittee shall submit to the Department by April 1 of each year a certification of emissions for the previous calendar year. The certifications shall be prepared in accordance with requirements, as applicable, adopted under COMAR 26.11.01.05 – 1 and COMAR 26.11.02.19D.
- (a) Certifications of emissions shall be submitted on forms obtained from the Department.
 - (b) A certification of emissions shall include mass emissions rates for each regulated pollutant, and the total mass emissions rate for all regulated pollutants for each of the facility's registered sources of emissions.
 - (c) The person responsible for a certification of emissions shall certify the submittal to the Department in the following manner:

“I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.”
- (4) The Permittee shall submit to the Department by April 1 of each year a written certification of the results of an analysis of emissions of toxic air pollutants from the Permittee's facility during the previous calendar year. Such analysis shall include either:
- (a) a statement that previously submitted compliance demonstrations for emissions of toxic air pollutants remain valid; or

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- (b) a revised compliance demonstration, developed in accordance with requirements included under COMAR 26.11.15 & 16, that accounts for changes in operations, analytical methods, emissions determinations, or other factors that have invalidated previous demonstrations.
- (5) The Permittee shall report, in accordance with requirements under COMAR 26.11.01.07, occurrences of excess emissions to the Compliance Program of the Air and Radiation Administration.

Part G – Temporary Permit-to-Operate Conditions

- (1) This permit-to-construct shall also serve as a temporary permit-to-operate that confers upon the Permittee authorization to operate the one (1) B&L Cremation Systems BLP-750M5 animal crematory rated at for a period of up to 180 days after initiating operation of the first unit.
- (2) During the effective period of the temporary permit-to-operate the Permittee shall operate the new installation as required by the applicable terms and conditions of this permit-to-construct, and in accordance with operating procedures and recommendations provided by equipment vendors.
- (3) The Permittee shall submit to the Department an application for a State permit-to-operate no later than 60 days prior to expiration of the effective period of the temporary permit-to-operate.

MARYLAND DEPARTMENT OF THE ENVIRONMENT

AIR AND RADIATION ADMINISTRATION

SUPPLEMENTAL INFORMATION REFERENCES

The Code of Maryland Regulations (COMAR) is searchable by COMAR citation at the following Division of State Documents website:

<http://www.dsd.state.md.us/COMAR/ComarHome.html>

The Code of Federal Regulations (CFR), including New Source Performance Standards (NSPS) at 40 CFR, Part 60 and National Emission Standards for Hazardous Air Pollutants (NESHAP) at 40 CFR, Parts 61 and 63, is searchable by CFR citation at the following U.S. Government Publishing Office website:

<http://www.ecfr.gov>

Information on National Ambient Air Quality Standards (NAAQS) is located at the following U.S. Environmental Protection Agency (EPA) website:

<https://www.epa.gov/criteria-air-pollutants/naaqs-table>

Information on Maryland's Ambient Air Monitoring Program is located at the following Maryland Department of the Environment website:

<http://mde.maryland.gov/programs/Air/AirQualityMonitoring/Pages/index.aspx>

Information on the U.S. EPA's Screen3 computer model and other EPA-approved air dispersion models is located at the following U.S. EPA website:

http://www.epa.gov/scram001/dispersion_screening.htm

Information on the U.S. EPA TANKS Emission Estimation Software is located at the following U.S. EPA website:

<http://www.epa.gov/ttn/chief/software/tanks/index.html>

Information on the U.S. EPA Emission Factors and AP-42 is located at the following U.S. EPA website:

<https://www.epa.gov/air-emissions-factors-and-quantification/ap-42-compilation-air-emission-factors>