

"We take the Payne out of your site projects."

RFP No.: 00318

### **HURRICANE VEGATATIVE DEBRIS BURN**

FOR

CITY CLERK'S OFFICE
CITY OF KEY WEST
1300 WHITE ST
KEY WEST, FL 33040

**Bid Due Date** 

**NOVEMBER 13, 2017** 

3:00 P.M. LOCAL TIME









### Payne's Environmental Services, LLC

5617 Causeway Blvd, Tampa, FL 33619 office: 813-677-6822 fax: 866-467-9029

paynestrees@cs.com

www.paynesenvironmental.com

### **TABLE OF CONTENTS**

### **PROPOSAL**

INTRODUCTION TO: PAYNE'S ENVIROMENTAL SERVICES, LLC

TAB 1.....Company Profile

TAB 2.....Executive Summary

TAB 3.....Organizational Chart

TAB 4..... Certifications A / Resumes B

TAB 5.....Letters of Recommendations

TAB 6..... Description of Services A / Safety Plan B

### PART 1 - PROPOSAL REQUIREMENTS AND FORMS

INVITATION TO BID

INSTRUCTIONS TO BIDDERS

PROPOSAL

FLORIDA BID BOND

ANTI-KICKBACK AFFIDAVIT

FLORIDA STATUES, ON PUBLIC ENITY CRIMES

INDEMNIFICATION FORM

DOMESTIC PARTNERSHIP AFFIDAVIT

CONE OF SILENCE AFFIDAVIT

CERTIFICATION REGUARDING LOBBYING

BIDDERS'S CHECKLIST

### PART 2 - CONTRACT

OWNER-CONTRACTOR AGREEMENT FLORIDA PERFORMANCE BOND FLORIDA PAYMENT BOND

PART 3 – PHOTOGRAPHS AND SITE LOCUS

PART 4 – HURRICANE IRMA EMERGENCY AUTHORIZATION

### **PROPOSAL**

### ADDENDUM 2 REVISION

NOTE TO BIDDER: Use preferably BLACK ink for completing this Proposal form.

To:

The City of Key West

Address:

1300 White St, Key West, Florida 33040

Project Title:

HURRICANE IRMA VEGETATIVE DEBRIS BURN

Bidder's contact person for additional information on this Proposal:

Company Name: Payne's Environmental Services, LLC

Contact Name & Telephone #: Terrence Payne (813)390-9720

Email Address: paynestrees @cs.com

### BIDDER'S DECLARATION AND UNDERSTANDING

The undersigned, hereinafter called the Bidder, declares that the only persons or parties interested in this Proposal are those named herein, that this Proposal is, in all respects, fair and without fraud, that it is made without collusion with any official of the Owner, and that the Proposal is made without any connection or collusion with any person submitting another Proposal on this Contract.

The Bidder further declares that he has carefully examined the Contract Documents for the construction of the project, that he has personally inspected the site, that he has satisfied himself as to the quantities involved, including materials and equipment, and conditions of work involved, including the fact that the description of the quantities of work and materials, as included herein, is brief and is intended only to indicate the general nature of the work and to identify the said quantities with the detailed requirements of the Contract Documents, and that this Proposal is made according to the provisions and under the terms of the Contract Documents, which Documents are hereby made a part of this Proposal.

### CONTRACT EXECUTION AND BONDS

The Bidder agrees that if this Proposal is accepted, he will, within 10 days, not including Sundays and legal holidays, after Notice of Award, sign the Contract in the form annexed hereto, and will at that time, deliver to the Owner examples of the Performance Bond and Payment Bond required herein, and evidence of holding required licenses and certificates, and will, to the extent of his Proposal, furnish all machinery, tools, apparatus, and other means of construction and do the work and furnish all the materials necessary to complete all work as specified or indicated in the Contract Documents.

### START OF CONSTRUCTION AND CONTRACT COMPLETION TIME

The Bidder further agrees to begin work within 14 calendar days after the date of the initial Notice to Proceed and to complete the project, in all respects within \_\_\_\_\_\_ calendar days (Bidder to provide).

### LIQUIDATED DAMAGES

In the event the Bidder is awarded the Contract and shall fail to complete the work within the time limit or extended time limit agreed upon, as more particularly set forth in the Contract Documents, liquidated damages shall be paid to the Owner at the rate of \$3,700.00 per day (not to exceed 10% percent of the lump sum base bid) for all work awarded until the work has been satisfactorily completed as provided by the Contract Documents. Sundays and legal holidays shall be excluded in determining days in default.

### ADDENDA

(Bidder shall insert No. of each Addendum received) and agrees that all addenda issued are hereby made part of the Contract Documents, and the Bidder further agrees that his Proposal(s) includes all impacts resulting from said addenda.

### SALES AND USE TAXES

The Bidder agrees that all federal, state, and local sales and use taxes are included in the stated bid prices for the work.

### **LUMP SUM ITEMS**

The Bidder further proposes to accept as full payment for the work proposed herein the amounts computed under the provisions of the Contract Documents and based on the following lump sum amounts. The Bidder agrees that the lump sum represent a true measure of the labor and materials required to perform the work, including all allowances for overhead and profit for each type and unit of work called for in these Contract Documents.

### **TOTAL LUMP SUM BASE BID:**

SOne Million, Four Hundred Thirty-three Thousandbollars & no

Cents (4) amount written in words \$1,433,000.

Payment for materials and equipment authorized by the Owner in a written Change Order but not listed in the above Proposal will be provided at the suppliers invoice plus 10 %.

### BASE BID ADD OR DEDUCT ALTERNATES

NOTE: OWNER HAS THE RIGHT TO ACCEPT OR REJECT ANY, ALL, OR NO BID ALTERNATE ITEMS. THE TOTAL OF BASE BID PLUS THE SUM OF OWNER SELECTED BID ALTERNATES WILL BE A BASIS OF EVALUATING LOW BIDDER AND BASIS OF AWARD.

1.	Additive Alternate	No.1: Provide \$10,000,000 Umbrella Insurar	nce Coverage.
	1	LS	\$7.77
2.	Additive Alternate	No.2: Provide \$5,000,000 Pollution Liability	y Insurance Coverage.
	1	LS	\$ 7,77

### **EXPERIENCE**

The Bidder shall submit with an experience record with the Bid showing his experience and expertise in vegetative debris burning and disposal. Such experience record shall provide up to <u>five</u> current or recent projects of similar work, and preferably in the State of Florida. For each project the following information shall be provided:

- 1. Description and location of work.
- 2. Quantity burned and contract amount.
- 3. Dates work was performed.
- 4. Owner.
- 5. Name of Owner's contact person and phone number.

The Bidder has the option to submit a 1-2 page qualifications summary in additional to the above experience record.

The Bidder shall submit a draft project-specific Burn Plan with the Proposal. SUBCONTRACTORS

The Bidder further proposes that the following subcontracting firms or businesses will be awarded subcontracts for the following portions of the work in the event that the Bidder is awarded the Contract:

Name	d Subcontractors		
Trade		Percent of	Total Base Bid
Street	City	State	Zip

Name							
Trade		Perce	Percent of Total Base Bid				
Street	City	State	Zip				
SURETY							
The Prosure				_ whose address is			
7217 Benjan	nin Rd.,	Tampa City	State	33434 Zip			
BIDDER							
The name of the Bidder s	ubmitting this Proposa	l is					
Payne's Envi	ronmental Se	ervices, Ll	C	_ doing business at			
5417 CAUSEWA Street	y Blvd,	<i>Tampa</i> City	, <i>FL</i> State	334.19 Zip			
which is the address to whe	nich all communication	s concerned with t	his Proposal an	d with the Contract			
The names of the principa or of all persons interested	l officers of the corpor I in this Proposal as pri	ration submitting the	his Proposal, or ows:	of the partnership,			
Annette Payne,	CEO	Terry A.	Payne, C	CFO			
Terrence E. Pay	ne, President	-	=				
Janet B. Schind	ler Oper, Mar.		a				

If Sole Proprietor or Partnership

IN WITNESS hereto the undersigned has set his (its) hand this 13th day of window 2017.

Signature of Bidder

PRESIDENT Title

### If Corporation

IN WITNESS WHEREOF the undersigned corporation has caused this instrument to be executed and its seal affixed by its duly authorized officers this 13th day of 2017.

Payme's Engroomental Seal Serves LL (
Name of Corporation

Title Posses

Attack Dalet Mas

Sworn and subscribed before this 13th day of Hovember, 2017

NOTARY PUBLIC, State of Horida, at Large

My Commission Expires: 112712024

\*\*\*\*\*\*\*

Margaret K. Stoulil NOTARY PUBLIC STATE OF FLORIDA Comm# GG054347 Expires 1/27/2021

### **EXPERIENCE**

### 5 Current or Recent Companies Showing the Companies Experience and Expertise



- 1. Description and location of work: Aristocrat Apartments, City of Tampa
- 2. Quantity burned and contract amount: 10 acres, \$45,000.
- 3. Dates work was performed: July 2017
- 4. Owner:
- **BRIKEN CONSTRUCTION**
- 5. Name of Owners contact person and phone Number: TOM KING- PRESIDENT (813-927-2381)



- 1. Description and location of work: MULTI-FAMILY HOUSING PROJECTS
- 2 Owner
- JMJ Site Development, Inc.
- 3. Dates work was performed: July 2017
- 4. Quantity burned and contract amount: 20 acres, \$90,000.
- 5. Dates work was performed: 2016 & 2017
- 6. Name of Owners contact person and phone Number: Jeff M. Joaquin (813-927-2428)



- 1. Description and location of work: MULTI-FAMILY HOUSING PROJECTS
- 2. Quantity burned and contract amount: 100 ACRES+ \$1,000,000.+
- 3. Dates work was performed: 2015, 2016, 2017
- 4. Owner:
- **CENTRAL SITE DEVELOPMENT**
- 5. Name of Owners contact person and phone Number: ALEX ELIALLARD PM (863-430-9984)

- 1. Description and location of work: DOT
- 2. Quantity burned and contract amount: 20 ACRES \$85,000.
- 3. Dates work was performed: 2012
- 4. Owner:
- LANE CONSTRUCTION
- 5. Name of Owners contact person and phone Number: TONY HART-P.M. (863-860-8347)



- 1. Description and location of work: DOT
- 2. Quantity burned and contract amount: 5 ACRES
- 3. Dates work was performed: 2016
- 4. Owner:
- RE BECKMER CONSTRUCTION
- 5. Name of Owners contact person and phone Number: RE BECKNER-PRESIDENT (727-639-4624)



- 1. Description and location of work: MULTI FAMILY SITE PROJECTS
- 2. Quantity burned and contract amount: 1,000. ACRES+ \$2,000,000.+
- 3. Dates work was performed:2014,2015,2016,2017
- 4. Owner:
  - **RIPA & ASSOCIATES. LLC**
- 5. Name of Owners contact person and phone Number: John L. Flinn, Jr. (813-623-6777)
- City o

City of Tampa Fire Marshall

Fire Inspector (Jonny Primus)

**Office Phone Number (813-842-0206)** 

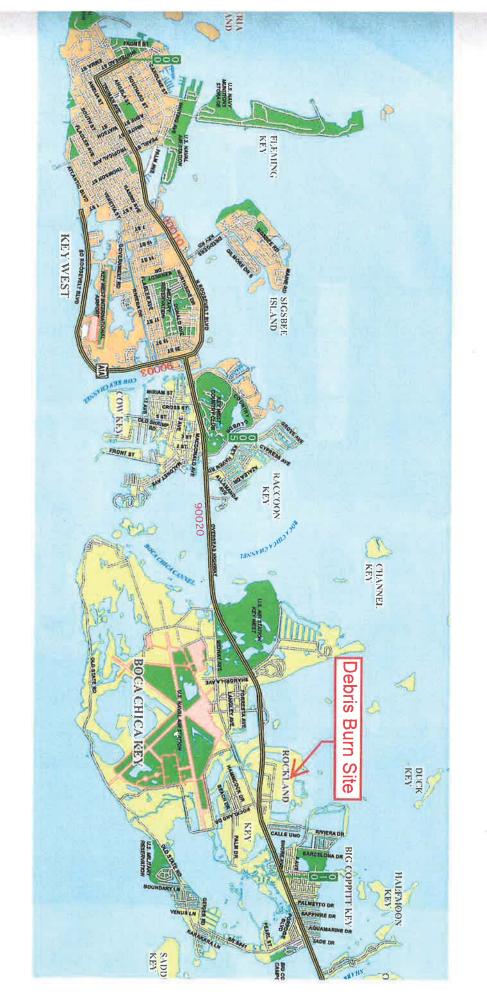
The City Fire Marshall has performed Pre and Post work inspections on Hundreds of Jobs. All work was performed without any incidents or complaints.



### Florida Department of Agriculture and Consumer Services Florida Forest Service

### **BURN PLAN FOR PILE BURNERS**

Burner's Customer Num	nber:			Authoriza	tion Num	ber:	TBD	
Burn Location: Rockla	and Key TD	SA						
County: Monroe		Section: Towns		Township	: 1			Range:
Type of Pile(s) to be Burned		☐ Agricultural						Land Clearing
Start Date and Time		Date: TBD			Time:	TBD		
Expected End Date and	Time	Date: TBD Time: TBD						
Fuel Type		vegetative debris						
Fuel Condition		Dry					y.	
Soil Type		⊠ Sandy	☐ Org	ganic				Other
Soil Moisture		☐ High	⊠ Me	dium			<u></u> ι	_ow
Equipment Needs		Wheel Loader and Excavator						
Personnel Need		3						
Meet Legal Setbacks		Yes						
Passed Smoke Screeni	ng	Yes						
Possible Smoke-Sensit	ive Areas	None noted						
Adjacent Landowners to notify		Yes						
Special Precautions		None noted						
		WEATHER	FACTO	RS				
		Acceptable Range	N/	lin		Prefe	rred Va	alue Actual Value
Humidity (%)	TBD	Max	IV	IHI			11.55	
Temperature								
Wind Speed/Direction								
Dispersion Index								
Drought Index								
Days Since Rain								
Wind Direction Restriction or Other Restrictions	TBD		1)		1			
		SMOKE SCREENING	8 & MAP	ATTACHE	ĒD			
Prescription Done by:	Terry E. F	Payne			Certi			er: P2012-0767
Title: President					Date	11/	12/201	17
Certified Pile Burner Sig	gnature	155						



ITB-002 Hurricane Irma - Vegetative Debris Burn Project





City of Key West Hurricane Irma - Vegetative Debris Burn Project



Client#: 24166

**PAYNENV** 

ACORD.

### CERTIFICATE OF LIABILITY INSURANCE

DATE (MM/DD/YYYY) 11/10/2017

THIS CERTIFICATE IS ISSUED AS A MATTER OF INFORMATION ONLY AND CONFERS NO RIGHTS UPON THE CERTIFICATE HOLDER. THIS CERTIFICATE DOES NOT AFFIRMATIVELY OR NEGATIVELY AMEND, EXTEND OR ALTER THE COVERAGE AFFORDED BY THE POLICIES BELOW. THIS CERTIFICATE OF INSURANCE DOES NOT CONSTITUTE A CONTRACT BETWEEN THE ISSUING INSURER(S), AUTHORIZED REPRESENTATIVE OR PRODUCER, AND THE CERTIFICATE HOLDER.

IMPORTANT: If the certificate holder is an ADDITIONAL INSURED, the policy(les) must be endorsed. If SUBROGATION IS WAIVED, subject to the terms and conditions of the policy, certain policies may require an endorsement. A statement on this certificate does not confer rights to the certificate holder in lieu of such endorsement(s).

	DDUCER	CONTACT Joy Fra	ncis			Т
	nier Upshaw, Inc.	PHONE (A/C, No, Ext): 813 38	7 1889	FAX (A/C, No):	863 682 6292	
	15 US Hwy 98 South	E-MAIL Joy.Fra	ncis@lanie	rupshaw.com		
P.0	O. Box 468	nabitudo.		FORDING COVERAGE	NAIC #	_
La	keland, FL 33802	INSURER A : Progressive		ONDING GOVERNOE	Texto #	-
INSI	URED	INSURER B : American in				-
1	Payne's Environmental Services	INSURER C : Commerce 8				=
I.	5617 Causeway Blvd.		madely madranes			
1	Tampa, FL 33619	INSURER D :				=
		INSURER E :				H
<u></u>	OVERAGES CERTIFICATE NUMBER:	INSURER F:		REVISION NUMBER:		_
_	THIS IS TO CERTIFY THAT THE POLICIES OF INSURANCE LISTED BELOW HA	VE REEN ISSUED TO			POLICY PERIOD	
	NDICATED. NOTWITHSTANDING ANY REQUIREMENT, TERM OR CONDITION O					
	CERTIFICATE MAY BE ISSUED OR MAY PERTAIN, THE INSURANCE AFFORDE				ALL THE TERMS,	
INSR	EXCLUSIONS AND CONDITIONS OF SUCH POLICIES. LIMITS SHOWN MAY HAVE ADDLISUED.					-
LTR	TYPE OF INSURANCE INSR WVD POLICY NUMBER	(MM/DD/YYYY)	POLICY EXP (MM/DD/YYYY)	LIMIT		_
1	COMMERCIAL GENERAL LIABILITY			DAMAGE TO PENTED	\$	_
1	CLAIMS-MADE CCUR			DAMAGE TO RENTED PREMISES (Ea occurrence)	\$	_
l				MED EXP (Any one person)	\$	_
1			1	PERSONAL & ADV INJURY	\$	
1	GEN'L AGGREGATE LIMIT APPLIES PER:			GENERAL AGGREGATE	\$	
1	POLICY JECT LOC			PRODUCTS - COMP/OP AGG	\$	
_	OTHER:				\$	
Α	AUTOMOBILE LIABILITY 028099781	12/17/2016	12/17/2017	COMBINED SINGLE LIMIT (Ea accident)	\$1000000	
1	ANY AUTO		1 1	BODILY INJURY (Per person)	\$	
1	ALL OWNED X SCHEDULED AUTOS			BODILY INJURY (Per accident)	\$	
1	X HIRED AUTOS X NON-OWNED AUTOS			PROPERTY DAMAGE (Per accident)	\$	
				0	\$	
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1	X EXCESS LIAB CLAIMS-MADE			AGGREGATE	\$2,000,000	
	DED RETENTION\$				\$	
Α	WORKERS COMPENSATION AVWCFL2637352017	10/02/2017	10/02/2018	X PER OTH-		
1	ANY PROPRIETOR/PARTNER/EXECUTIVE	13.32	10/02/2010	E.L. EACH ACCIDENT	\$500,000	
	(Mandatory in NH)			E.L. DISEASE - EA EMPLOYEE		
	Îf yes, describe under DESCRIPTION OF OPERATIONS below			E.L. DISEASE - POLICY LIMIT	s500,000	-
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** \	Workers Compensation - Blanket Waiver of Subrogation **	one, may be attached if the	ore apace is requi	ileu)		
1	,					- 1
L						
CE	RTIFICATE HOLDER	CANCELLATION				

**City of Key West** 1300 White Street Key West, FL 33040

SHOULD ANY OF THE ABOVE DESCRIBED POLICIES BE CANCELLED BEFORE THE EXPIRATION DATE THEREOF, NOTICE WILL BE DELIVERED IN ACCORDANCE WITH THE POLICY PROVISIONS.

AUTHORIZED REPRESENTATIVE

© 1988-2014 ACORD CORPORATION. All rights reserved.





### CERTIFICATE OF LIABILITY INSURANCE

D2KKERSTING

DATE (MM/DD/YYYY) 11/10/2017

THIS CERTIFICATE IS ISSUED AS A MATTER OF INFORMATION ONLY AND CONFERS NO RIGHTS UPON THE CERTIFICATE HOLDER. THIS CERTIFICATE DOES NOT AFFIRMATIVELY OR NEGATIVELY AMEND, EXTEND OR ALTER THE COVERAGE AFFORDED BY THE POLICIES BELOW. THIS CERTIFICATE OF INSURANCE DOES NOT CONSTITUTE A CONTRACT BETWEEN THE ISSUING INSURER(S), AUTHORIZED REPRESENTATIVE OR PRODUCER, AND THE CERTIFICATE HOLDER.

REPRESENTATIVE OR PRODUCER, AND THE CERTIFICATE HOLDER.

IMPORTANT: If the certificate holder is an ADDITIONAL INSURED, the policy(ies) must have ADDITIONAL INSURED provisions or be endorsed.

If SUBROGATION IS WAIVED, subject to the terms and conditions of the policy, certain policies may require an endorsement. A statement on

PRO	nls certificate does not confer rights  DUCER License # L077730	to the cer	tificate holder in lieu of s	CONTACT Kelly Ke	rsting			
AssuredPartners of Florida, Tampa 1600 West Cypress Street #550				PHONE (A/C, No, Ext): (813)	165-7939	FAX (A/C, No)	(813)	983-2958
Fam	pa, FL 33607					uredpartners.com		
	NA 1307			INS	BURER(S) AFFOR	RDING COVERAGE		NAIC#
				INSURER A : Security National Insurance Company				33120
NSURED				INSURER B:	•			1
	Payne's Environmental Ser	vices LL(		INSURER C :				
	5617 Causeway Blvd			INSURER D :				
	Tampa, FL 33619			INSURER E :				
				INSURER F:				
CO	VERAGES CEF	RTIFICAT	E NUMBER:			REVISION NUMBER:		
C	HIS IS TO CERTIFY THAT THE POLICI IDICATED. NOTWITHSTANDING ANY I ERTIFICATE MAY BE ISSUED OR MAY XCLUSIONS AND CONDITIONS OF SUCH	REQUIREM PERTAIN	MENT, TERM OR CONDITION. I, THE INSURANCE AFFOR	ON OF ANY CONTRA RDED BY THE POLIC	CT OR OTHER IES DESCRIB	R DOCUMENT WITH RESP SED HEREIN IS SUBJECT	ECT TO	O WHICH THIS
NSR LTR	TYPE OF INSURANCE	ADDL SUB	POLICY NUMBER	POLICY EFF (MM/DD/YYYY)	POLICY EXP (MM/DD/YYYY)	LIMI	TS	
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						MED EXP (Any one person)	5	5,000
						PERSONAL & ADV INJURY	s	1,000,000
	GEN'L AGGREGATE LIMIT APPLIES PER:					GENERAL AGGREGATE	s	2,000,000
	X POLICY X PRO-					PRODUCTS - COMP/OP AGG	1	2,000,000
	OTHER:					THOSEOTO COMITO TAGO	s	
	AUTOMOBILE LIABILITY					COMBINED SINGLE LIMIT (Ea accident)	s	
	ANY AUTO					BODILY INJURY (Per person)	s	
	OWNED SCHEDULED AUTOS ONLY					BODILY INJURY (Per accident)		
	HIRED NON-OWNED AUTOS ONLY					PROPERTY DAMAGE (Per accident)	\$	
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	UMBRELLA LIAB OCCUR					EACH OCCURRENCE	s	
	EXCESS LIAB CLAIMS-MADE					AGGREGATE	s	
	DED RETENTION \$						S	
	WORKERS COMPENSATION AND EMPLOYERS' LIABILITY					PER OTH-		
	ANY PROPRIETOR/PARTNER/EXECUTIVE	N/A				E.L. EACH ACCIDENT	s	
	OFFICER/MEMBER EXCLUDED?	N/A				E.L. DISEASE - EA EMPLOYEE	s	
	If yes, describe under DESCRIPTION OF OPERATIONS below					E.L. DISEASE - POLICY LIMIT	\$	
DES	CRIPTION OF OPERATIONS / LOCATIONS / VEHIC	LES (ACOF	tD 101, Additional Remarks Sched	ule, may be attached If mor	e space is requir	red)		
CEI	RTIFICATE HOLDER			CANCELLATION				
	City of Key West 1300 White Street Key West, FL 33040				N DATE TH	ESCRIBED POLICIES BE C EREOF, NOTICE WILL Y PROVISIONS.		
	Ney West, FL 33040			AUTHORIZED REPRESE	NTATIVE			
				Calle Miles				

	Company Profile				
Firm Name:	Payne's Environmental Services, LLC.				
Principals	Annette Payne / Terrence Payne				
Business Address:	(Corporate) 5617 Causeway Blvd Tampa, FL 33619	paynestrees@cs.com www.paynesenvironmental.com			
Telephone Numbers:	813-677-6822 Office 813-390-9720 Cell 866-467-9029 Fax				
Number of Employees	25 (includes officers), 4 at Corporate Headqu	arters			
FEIN	27-1037046				
Payne's Environmental Leaders	Annette Payne, CEO Terrence E. Payne, President Janet B Schindler, Operations Manager Terry A. Payne, CFO				
	Daily Operations Personnel				
Project Managers/Supervisors  Ronnie Sewell Shayne Knitz Jeff Nance Pete Gonzales					
Support Staff	Savannah Busciglio, Administrative Assistant				

### **Executive Summary**



Payne's Environmental Services, LLC is a Minority Women Owned Small Business with an *SBE / WMBE certification from the Hillsborough Public School System*, *The State of Florida and The City of Tampa*. Terry Payne and key personnel have worked together in response to tree services and pile burning throughout Tampa and surrounding areas for Governmental agencies and both residential and commercial businesses. Payne's Environmental specializes in professional, safety-oriented tree removal, stump grinding / excavation, Burning, Box Burning, Pit Burning and every aspect of arboriculture. With a

certified arborist on staff (FL6027A) and 2 Certified Pile Burners Experts (Terry E. Payne and Terry A. Payne) and years of industry experience, and 21 highly skilled dedicated tree men and Certified Pile Burners Experts, Payne's has the skill to perform from the most delicate tree service to the most dangerous, and to do it within the International Society of Arboriculture ANSI A300 & (TCIA) guidelines on safety and pruning practices. In an emergency situation this highly skilled and professional team can provide land clearing, tree removal/trimming, and demolition, burning by incineration, Box Burning and disaster recovery in a moment's notice.

Terry Payne has performed in excess of 500 Risk Analyses predominately on trees and Pile Burning within the Hillsborough area. Our consultancy department uses research and diagnostic equipment to provide services for the general public, homeowners associations, commercial companies, municipalities and property managers.

Payne's works hard to ensure that safety, quality and professionalism are maintained on every job site. Additionally, Payne's Environmental takes pride in finishing all work in a timely manner. Please accept the following information on our company for contact purposes, we are available 7 days a week 24 hours a day, feel free to visit our website at: <a href="https://www.paynesenvironmental.com">www.paynesenvironmental.com</a>



Payne's Environmental Services, LLC is a certified SBE / WMBE

Performing tree service since and Box Burning since 2002 in the State of FLORIDA

Corporate Office: 813.677.6822

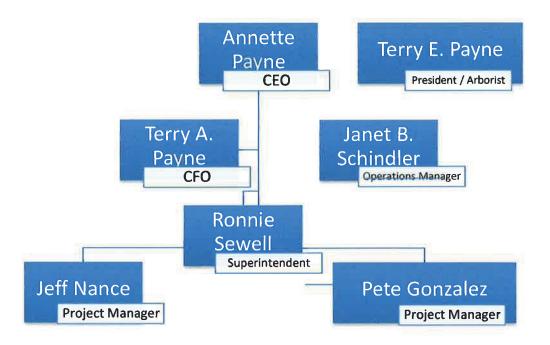
Corporate Email: paynestrees@cs.com

**24** hr Emergency: 813.390.9720

Email: terry@paynesenvironmental.com

Janet B Schindler: 813.677.6822 – Operations Manager

Terry Payne: 813.390.9720 – Arborist / Authorized Contact





Payne's
Environmental
On Site Box
Burning as of
November 12,
2017



BUREAU OF FIRE STANDARDS AND TRAINING Hereby Awards This  Certificate of Compliance  to  TERRANCE EARL PAYNE  Lesued this
---









Board of County Commissioners Economic Development Department Minority and Disadvantaged Business Development

### **Minority/Woman Business Certification**

Paynes Environmental Services, LLC

HC-1935/16

Valid from September 30, 2016 - September 30, 2018

Approved Lines of Business;

Land Clearing, Subcontractor - Construction (Non Professional), Tree Trimming Services

Theresa Kempa

Minority and Disadvantaged Business Manager Economic Development Department

https://ampe.diversitysoftware.com/FrontPage/VendorMain.asp?XID×6711

### Minority Business Certification

# Payne's Environmental Services, LLC

287 and 295.187, Florida Statutes, for a period from: is certified under the provisions of

to 10/25/2019

office of supplier

Florida Department of Management Services Erin Rock, Secretary

Office of Supplier Diversity - 4050 Explanade Way, Suite 380 - Tallahassee, FL 32399 + 850-487-0915 - www.dms.myflorida.com/oxd



### **Minority and Small Business Development**

Certification Program

This is to certify that in accordance with City of Tampa Ordinance 2008-89

Paynes Environmental Services, LLC

is hereby certified as a

**Small Local Business Enterprise (SLBE)** 

in the following specialty(les)

Land Clearing, Tree Trimming, Subcontractor (Non-professional)

This certification is valid from October 4, 2016 to September 30, 2018

Updates for recertification are required prior to the expiration date listed above. If at any time changes are made in your firm that are not in concert with our eligibility requirements, you agree to report those changes to us for evaluation. The City of Tampa reserves the right to terminate this certification at anytime it determines eligibility requirements are not being met.

Gregory K. Hart, Manager

Minority and Small Business Development

https://kampa.dversilysoftware.com/FrontPage/VondorMain.asp?XID=8711

	Ruben H. Torres  Wynn B Gordy, EMT - P, I/C  Dr. Robert E. Zéigler  Dean of Adult and Continuing Education  Nation  Na	April , 199200	tency for	upon recommendation of the Adult and Continuing Education Faculty and Administration has awarded 62.7 CEU's to	SAN ANTONIO COLLEGE  A College of the Alamo Community College District	
--	--	----------------	-----------	--	--	--



## DEPARTMENT OF THE ARMY

THIS IS TO CERTIFY THAT THE SECRETARY OF THE ARMY HAS AWARDED

### THE ARMY ACHIEVEMENT MEDAL

SPECIALIST TERRANCE E. PAYNE, UNITED STATES ARMY BROOKE ARMY MEDICAL CENTER, FORT SAM HOUSTON, TEXAS

TO

FOR meritorious achievement in being selected as the Brooke Army Medical Center Soldier of the Year for selection by a board of Senior Noncommissioned Officers. His outstanding achievement reflects distinct credit on him. Brooke Army Medical Center, and the United States Army. 1998. Specialist Payne's military appearance, proficiency, and general military knowledge led to his

FROM TJANUARY 1999 TO 8 JANUARY 1999

THIS 29TH DAY OF MARCH 1999

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## DEPARTMENT OF THE ARMY

THIS IS TO CERTIFY THAT THE SECRETARY OF THE ARMY HAS AWARDED THE ARMY COMMENDATION MEDAL

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FOR MIRITORIOUS SERVICE AS AN EMERGENCY TREATMENT NONCOMMISSIONED OFFICER WHILE ASSIGNED TO THE TRAUMATRIAGE ELEMENT. SERGEANT PAYNE'S CONTRIBUTIONS AND OUTSTANDING

127 FORWARD SURGICAL TEAM

SERGEANT TERRANCE PAYNE

REFLECT GREAT CREDIT L'PON HIM. THE 12<sup>PR</sup> MEDICAL COMMAND, AND THE UNITED STATES ARMY PERFORMANCE TO DUTY IS IN KEEPING WITE THE FINEST TRADITIONS OF MILITARY SERVICE AND

FROM 17 APRIL 2000 TO 2 APRIL 2001

THIS 13TH DAY OF MARCH 2001

Permanent Order No. 072-16

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### DEPARTMENT OF THE ARMY

THIS IS TO CERTIFY THAT THE SECRETARY OF THE ARMY HAS AWARDED

### THE ARMY COMMENDATION MEDAL

SPECIALIST TERRANCE E. PAYNE, UNITED STATES ARMY
BROOKE ARMY MEDICAL CENTER, FORT SAM HOUSTON, TEXAS
meritorious service while assigned to the Department of Nursing. Specialist Payne's
professionalism and commitment to excellence were instrumental to the success of his section

70

FOR

and this department. His efforts reflect great credit on him, the Army Medical Department and the United States Army.

FROM 26 SEPTEMBER 1997 TO 20 APRIL 2000

THIS 25TH DAY OF FEBRUARY 2000

25 February 2000

Brooke Army Medical Center
Fort Sam Houston, Texas
Permanent Order 056-11



Commanding

OGDEN DEWITT
Brigadier General, MC

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# TEXAS DEPARTMENT OF HEALTH

Certifies That

### Terrance Payne

meets the requirements for certification as

Emergency Medical Technician - Paramedic

Personnel ID 130626 - Document i 10446 Expires 04/30/2004 WILLIAM R ARCHER III, M.D. COMBUSSIONER OF HEALTH

KATHRYN C. PERKDIS
BUREAU OF EMERGENCY MANAGEMENT

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Hational Registry of Emergency Medical Technicians...

Aereby certifies

Terrance E. Papne

Amergency Medical Technician - Masic

duly registered together with all the rights, and privileges appertaining thereto in consideration of the satisfactory completion of the prescribed educational and chrical requirements.

In Testimony Whereof, the seal of the National Registry of Emergency Medical Technicians and the signatures as authorized by the Board of Directors are hereunto affixed.

shir leventh day of June 19 99 A.D.

Record of June 19 99 A.D.

Exercise Director of the state o

& National Registry of Emergency Medical Technicises, Inc.

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### Governor's Hurricane Conference Fort Landerdale, Florida May 10-13, 2009 23rd Annual

TS RM3. FEDERAL EMERGENCY MANAGEMENT AGENCY (FEMA) - PUBLIC ASSISTANCE REIMBURSMENT MADE EASY (6.0 CREDIT HOURS)

Training Session

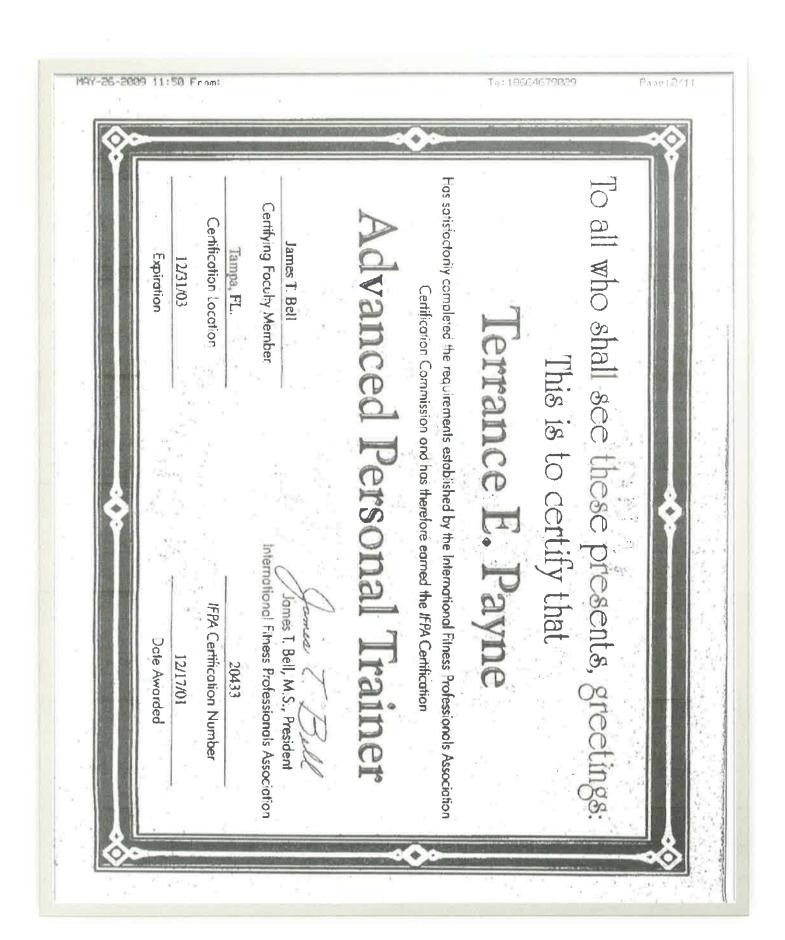
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# 2013 (All Contractors) Part II Safety Training CERTIFICATE of COMPLETION has completed the following: Gary Cooper This is to certify that 8/9/2013

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# CERTIFICATE of COMPLETION

This is to certify that

# Gary Cooper

has completed the following:

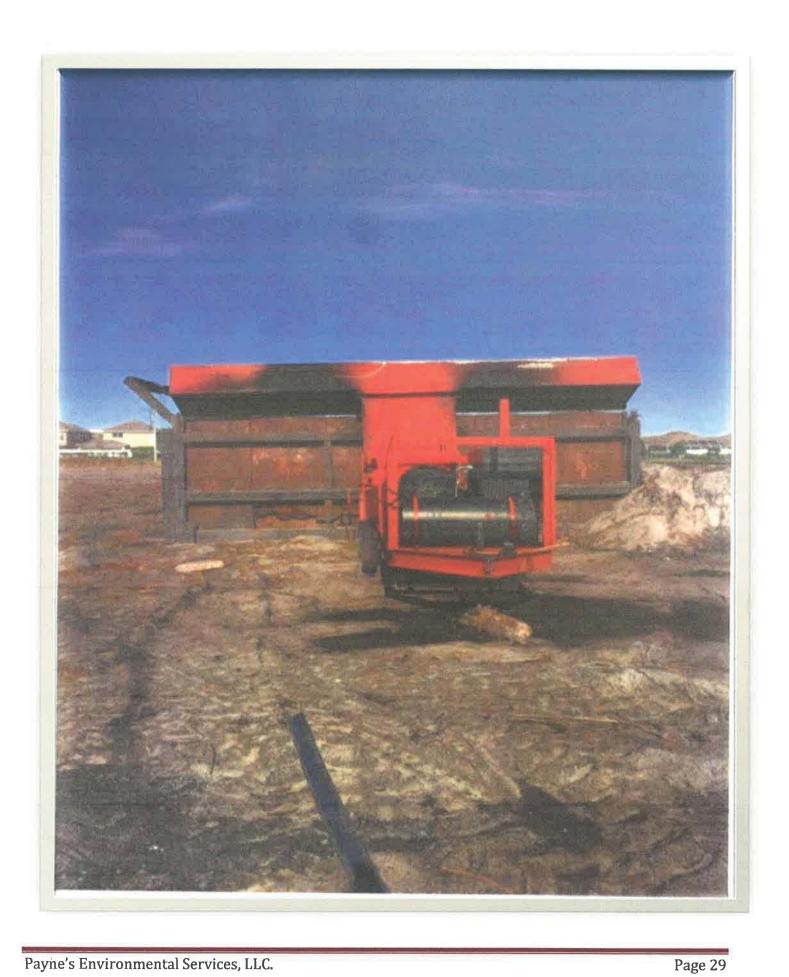
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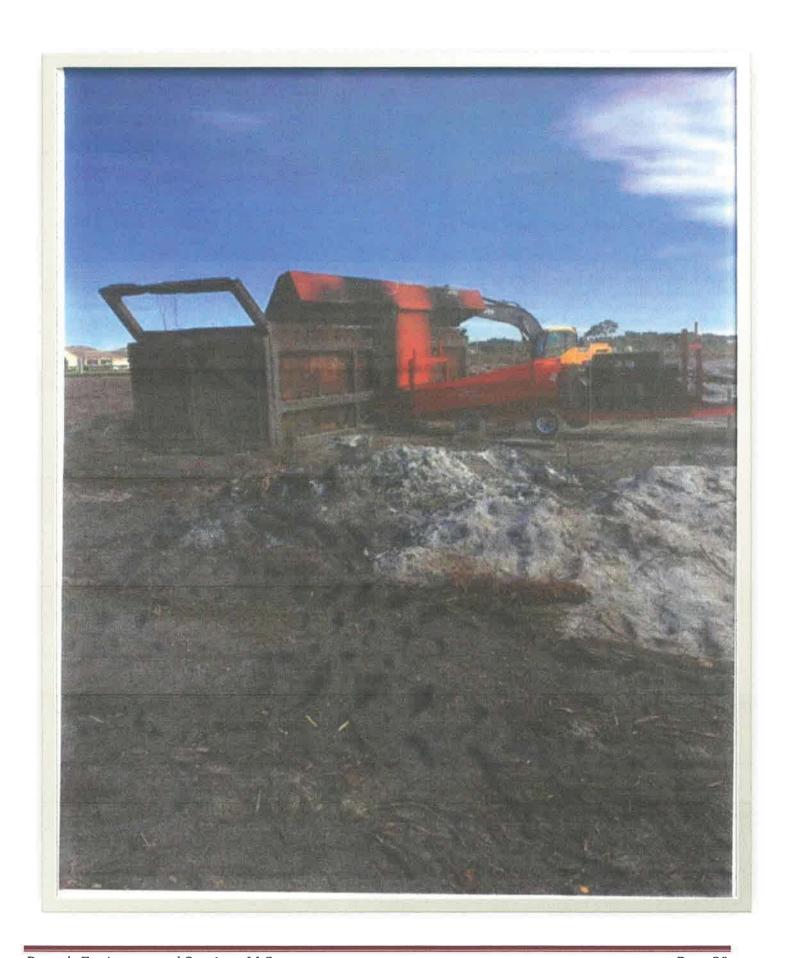
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AIR BURNERS, INC. 4390 Cargo Way Palm City, FL 34990 USA

> 772-220-7303 Fax 772-220-7302

E Mail: info@airburners.com

www.AirBurners.com

### Appendix 1

How to extract data from Air-Tec FireBox Report dated March 2003 and convert to emission rates for Carbon Monoxide, Oxides of Sulfur and Oxides of Nitrogen expressed in pounds per one (1) ton (US) of wood waste combusted in FireBox

### Overview:

The data in the Test Report is shown in the metric system. Emission rates are expressed in kg/hr. in the middle section of Summary Table on Page 1. The volume of wood waste combusted is expressed in mt (tonnes) in the middle paragraph on Page 10.

### A. Collection (Extraction) of Data

Amount of wood waste combusted:

Feed rates varied from 4 - 8 tonnes per hour of wet wood with moisture contents between 20 - 30%."

2. Selected Emission Rates

Emission Rates (Kg/hr.)

a) Carbon Monoxide

1.83

b) Sulphur Oxides

0.0094

c) Nitrogen Oxides (as NO<sub>2</sub>) 0.12

### **B.** Conversions

1. Amount of wood waste combusted:

Feed rates varied from 4 - 8 tonnes per hour. 1 mt (tonne) = 1000kg. 1 short (US) ton (t) = 0.907 mt

1 mt = 1.102 short tons (t)

4 mt = 4 × 1.102 t = 4.408 t ~ 4.4 t

 $8 \text{ mt} = 8 \times 1.102 \text{ t} = 8.816 \text{ t} \sim 8.8 \text{ t}$ 

Average throughput per hour:  $(4.4 + 8.8) \div 2 = 6.6 \text{ t}$ 

### 2. Selected Emission Rates

a) Carbon Monoxide

1.83 kg/hr. or 1.83kg per 6.6 t

What is the Carbon Monoxide emission rate in lbs. for 1 t wood waste combusted?

1 kg = 2.204 lbs

6.6 t wood combusted =  $1.83 \text{ kg} = 1.83 \times 2.204 = 4.033 \text{ lbs.}$ 1 t wood waste combusted =  $4.033 \div 6.6 = 0.611 \text{ lbs.}$ 

The Carbon Monoxide emission rate from the combustion of one (1) ton of wood waste is 0.611 lbs.

b) Sulfur Oxides

0.0094 kg/hr. or 0.0094kg per 6.6 t

What is the Sulfur Oxides emission rate in lbs. for 1 t wood waste combusted?

1 kg = 2.204 lbs.

6.6 t wood combusted = 0.0094kg =  $0.0094 \times 2.204 = 0.0207$  lbs. 1 t wood waste combusted =  $0.0207 \div 6.6 = 0.00313$  lbs.

The Sulfur Oxides emission rate from the combustion of one (1) ton of wood waste is 0.00313 lbs.

c) Nitrogen Oxides

0.12 kg/hr. or 0.12kg per 6.6 t

What is the Nitrogen Oxides emission rate in lbs. for 1 t wood waste combusted?

1 kg = 2.204 lbs.

6.6 t wood combusted =  $0.12 \text{kg} = 0.12 \times 2.204 = 0.26 \text{ lbs}$ . 1 t wood waste combusted =  $0.26 \div 6.6 = 0.03 \text{ lbs}$ .

The Sulfur Oxides emission rate from the combustion of one (1) ton of wood waste is 0.03 lbs.

### C. Summary

Emission Rates in lbs. per 1 ton of wood waste combusted:

Carbon Monoxide 0.611 lbs. per 1 ton Sulfur Oxides 0.00313 lbs. per 1 ton Nitrogen Oxides 0.03 lbs. per 1 ton

### D. Addendum 1 (Additional Emission Rates)

a) Particulates (PM)

0.40 kg/hr. or 0.40kg per 6.6 t

What is the Particulate emission rate in lbs. for 1 t wood waste combusted?

1 kg = 2.204 lbs

6.6 t wood combusted =  $0.40 \text{kg} = 0.40 \times 2.204 = 0.88 \text{ lbs.}$ 1 t wood waste combusted =  $0.88 \div 6.6 = 0.13 \text{ lbs.}$ 

The Particulate emission rate from the combustion of one (1) ton of wood waste is 0.13 lbs.

b) Total Hydrocarbons

0.34 kg/hr. or 0.34kg per 6.6 t

What is the Total Hydrocarbons emission rate in lbs. for 1 t wood waste combusted?

1 kg = 2.204 lbs.

6.6 t wood combusted = 0.34kg =  $0.34 \times 2.204 = 0.74$  lbs.

1 t wood waste combusted =  $0.74 \div 6.6 = 0.11$  lbs.

The Total Hydrocarbons emission rate from the combustion of one (1) ton of wood waste is 0.11 lbs.

### E. Addendum 1 Summary (All Emission Rates of the Test)

Particulate	0.13	lbs. per 1 ton
Carbon Monoxide	0:611	lbs. per 1 ton
Total Hydrocarbons	0.11	lbs. per 1 ton
Sulfur Oxides	0.00313	lbs. per 1 ton
Nitrogen Oxides	0.03	lbs. per 1 ton

### F. Addendum 2 (Biogenic CO<sub>2</sub> Emissions Calculation and Discussion)

Combusting wood waste (woody biomass) in an Air Burners FireBox is carbon neutral pursuant to the EPA and IPCC, because of its zero carbon footprint. Virtually only Biogenic CO<sub>2</sub> is released:

In case of an ideal combustion, the only resultants from the burn process are  $CO_2$  and  $H_2O$  that is Carbon Dioxide and gaseous water:

$$4(C_6H_9O_4)+Heat+25(O_2)=24(CO_2)+18(H_2O)$$

From a practical view point this means that, if wood were burned with just the right amount of heat and oxygen, then there would be no emissions of smoke or Black Carbon, as well as no such gases as Carbon Monoxide or organic gases, such as Methane, only CO<sub>2</sub> and H<sub>2</sub>O would escape.

Combustion Efficiency (CE) is the quotient or ratio of the carbon in the released CO<sub>2</sub> compared to the carbon contained in all of the emissions from combustion or the totality of emissions, including PM:

Where, in the divisor after the  $CO_2$  and CO,  $CH_4+C_2H_2+...$ , etc. represent the total of the carbon contained in organic gases, and the C at the end the carbon in particulate compounds (called BC, PM, soot or smoke).

If the combustion were perfect, the only gas produced would be CO<sub>2</sub>, and the combustion efficiency (CE) would be 100%, because CE=CO<sub>2</sub>/CO<sub>2</sub>=1 or 100%.

As the quantity of carbon (C or actually BC) plus the carbon of the organic chemical compounds, such as Ethyne ( $CH_2H_2$ ), being the yield of incomplete combustion, increases, the CE in turn decreases. The lower the CE, the more smoke, PM or Black Carbon is released along with the other gaseous compounds. An acceptable clean burn would have a CE in the very high nineties, such as 98% or 99%.

### Calculation of Biogenic CO<sub>2</sub> from Biomass Combustion in FireBox

How to Calculate (Biogenic) CO<sub>2</sub> Emissions Factor for the Combustion of 1t Wood

CO<sub>2</sub> produced from the operation (assuming combustion efficiency (CE) of about 98%+ and a carbon content of the waste of about 50% (the rest being water and other substances) would be approximately 1,800kg (3,968 lbs.) per metric tonne (mt) or per 1,000kg (2,200 lbs.). That would equate to about 980 m<sup>3</sup> of CO<sub>2</sub> gas all of which would be biogenic CO<sub>2</sub>.

Total CO<sub>2</sub> emissions per mt would be approx. 1.8mt per mt of wood burned or 1.98 short tons (t) or 3,968 lbs. (See also Appendix 5)

### CO<sub>2</sub> Emissions Estimate Calculation (1t of Wood):

Assumption: CO<sub>2</sub> (biogenic) from 1mt wood combustion in Air Burners FireBox at near CE of 99%.

$$C + O_2 -> CO_2$$

C = Carbon has an atomic weight (molar mass) of 12g.  $O_2 = 2$  Oxygen atoms have an atomic weight (molar mass) of 32g

CO<sub>2</sub> has a molar mass of 12+32 = 44 g per mole

1 ton (1t) of C would equate to  $44 \div 12 = 3.666t$  of  $CO_2$ 

As the wood contains only approximately 50% carbon, 1,000kg (1mt) of wood waste combusted will release  $\approx 3.666$ mt  $\div 2 = 1.833$ mt of CO<sub>2</sub>.

Rounded, that is 1.8mt = 1.98 short tons (t or US ton) or 3,968 lbs of  $CO_2$ .

### Conclusion:

Combusting 1 mt of wood will result in the release of approx. 1,800kg of  $CO_2$  or combusting 1 short ton (t or US ton) of wood will result in the release of approx. 3,607 lbs. of  $CO_2$ .

\* \* \* \*

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### **REGULATING AIR CURTAIN BURNERS**

### INTRODUCTION

This brochure is intended to provide guidance and insight to the purpose, the benefits and the regulations concerning Air Curtain Burners.

Air Curtain Burners, also known as Air Curtain Incinerators are machines designed as an environmentally friendly alternative to open burning or grinding of wood and other vegetative waste. Air Burners, Inc. are the originators and the leading manufacturers of air curtain machines. This brochure will give you a brief overview of the principles behind the Air Curtain machine and it will provide guidance to more in-depth information regarding the environmental benefits of these machines, official testing results and the Federal regulations governing the use of these machines.

The first question you might ask; why should I be interested in Air Curtain Burners? As most environmentally concerned people know, Black Carbon is one of the most significant components of climate change. Most of the scientific community now consider Black Carbon the number two concern behind CO2. (see www.StopBlackCarbon.com for more detailed information) Black Carbon has risen in attention not only because of its effect in the atmosphere, but also because of all the climate change contributors, Black Carbon is the one we can correct the quickest. Compared to CO2 with an atmospheric life of 100 years, Black Carbon's life span seldom exceeds 5 years. Air Curtain Burners are the only machines available today that were designed specifically to eliminate Black Carbon.

The common process of grinding wood and other vegetative waste is one of the worst contributors to climate change with large releases of both non-biogenic CO2 and Black Carbon both from the large engines and from the grinding process. (see www.WoodWasteBurners.com for an environmental comparison of grinding vs. Air Curtain Burners) Grinding is a "process" it is not an "end solution." Open burning, landfill and Air Curtain Burners are end solutions, and Air Curtain Burners have the lowest impact on the environment.

If you are considering regulations for your state, county and/or town regarding Air Curtain Burners we would suggest you consider two levels of permitting: 1) Temporary and 2) Stationary.

- 1) Temporary Use As an alternative to open burning and to encourage a move away from open burning, allow permits under a similar system as was used for open burning. This generally means a local permit easily and quickly obtained from a local authority such as the fire department or the forestry department. Typical applications would be for land clearing, forest fuels reduction, pipeline clearing, roads and parks cleanup, invasive species removal, etc. Typically these machines would not be allowed to operate at a location for more than 6 months.
- 2) Stationary Use These applications would include county landfill, parks, transfer stations, industrial sites, etc. These applications would require Title V permitting through the State air quality office. The Code of Federal Regulations provides for a simplified system to allow an abbreviated Title V permit for these applications as Air Curtain Burners are exempt from all performance requirements except opacity (EPA method 9). The combustion of clean vegetative waste is considered carbon neutral, therefore the concern in permitting a stationary unit should be 1) Particulate release and 2) local effects or impacts.

Air Curtain Burners are a well proven technology that when implemented can significantly reduce your Black Carbon and provide you a means to reduce open burning. They are also the most cost effective "end solution" for wood and vegetative waste. In these times of difficult municipal budgets, communities can benefit by reducing their load on the local landfills and at the same time take one more step forward in the battle on climate change. The following sections will provide you more details on the machines and the federal regulations. You can find addition resources at www.AirBurners.com or by calling our offices.



### PRINCIPLE OF OPERATION

Air Curtain Burners were designed principally as a pollution control device. The primary objective of an air curtain machine is to reduce the particulate matter (PM) or smoke, that results from burning clean wood waste. It is sometimes hard to visualize without seeing a machine in operation (see video at: www.AirBurners.com), but the machines do not burn anything, rather they control the results of something burning. You could look at it as a pollution control device for open burning. Clean wood waste is loaded into the FireBox, an accelerant like diesel is poured onto the wood and the pile is ignited. Once the fire is ignited the vegetative waste burns naturally, no additional fuels are used. Very similar to starting a campfire. The air curtain is not fully-engaged until the fire has grown in strength or the air curtain may blow the fire out. Once the fire has reached suitable strength, usually in 15 to 20 minutes, the air curtain is engaged. The air curtain then runs at steady-state throughout the burning operations and the waste wood is loaded at a rate consistent with the rate of burn.

### **Principle**

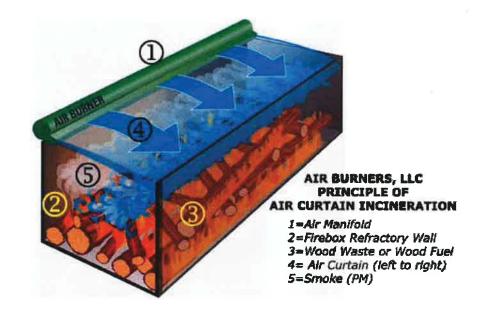
The purpose of the air curtain is to stall or slow down the smoke particles on their way out of the FireBox. In doing this the particles (PM) are subjected to the highest temperatures in the FireBox. Stalling the smoke particles in this region just under the air curtain causes them to re-burn, further reducing their size to an acceptable limit. The result is a very clean burn with opacities well under 10 on the Ringelmann scale (as compared to open burning which typically can run at 80 to 100 on the Ringelmann scale).

### Operation

You can see in the picture to the right two standard Air Burners FireBoxes completely full and burning while in the background a pile of wood is open burned. This is a photograph taken by BC Hydro in Canada at one of their hydro-electric dams during the first test of the Air Burners machines. The wood is regularly removed from the water intakes.

The wood pile that is open burning continued to burn for several days.

That open burning pile could have been eliminated with the FireBox in less than 2 hours with significantly less impact on the environment.





### **REGULATIONS**

### Air Curtain Burners are typically regulated in two ways:

- 1) under the States authority for control of open burning,
- 2) by an abbreviated Title V permit in accordance with 40 CFR part 60.

### 1) Alternative to open burning - Temporary site location

Air Curtain Burners are a "tool" to help regulators move away from hazardous practices such as open burning and grinding. They are a sound alternative to open burning and the process of grinding and hauling of wood and vegetative waste. In both cases Air Curtain Burners are significantly better for the environment, and they offer the user a significant reduction in overall cost for waste disposal as well, everyone benefits. (see white paper ACB vs. Grinders by visiting <a href="https://www.WoodWasteBurner.com">www.WoodWasteBurner.com</a>)

The authority to regulate open burning resides with the States, most States familiar with Air Curtain machines permit the use of these machines using the same process as is used to permit open burning. In some areas burning is only allowed if an air curtain machine is used. An applicant would typically apply for their permit at either the local fire department or the local office of the State Forestry Department. In these instances the air curtain machine will be temporarily located at a site for no more than 6 months and must meet the Federal guidelines for air quality as defined in 40 CFR 60.

### 2) Title V permit - Stationary site location

If an air curtain machine is to be used at a stationary site then an abbreviated Title V permit is required in accordance with 40 CFR 60. In the Federal regulations Air Curtain Burners burning clean wood and vegetative waste as defined by these regulations are required only to meet the EPA Method 9 type opacity test. The reasoning behind this is twofold; first, the contributions to the atmosphere from the burning of clean wood and vegetative wastes are well know as it is a natural process that is part of the Earth's carbon cycle. As Air curtain machines do not use any supplementary fuels to support combustion then the combustion in an Air Curtain machine is well understood and is considered "carbon neutral." Second, the purpose of an Air Curtain machine is to reduce particulate matter (PM) therefore the most applicable test is a visual opacity test. Air Curtain machines are required to meet a maximum 10 percent opacity reading for steady state operation. This is of course significantly better than any type of open burning which regularly runs 80 to 100 percent opacity. Even whole log grinding operation can't meet the ten percent opacity limits.

### Typical results for an Air Burners FireBox

Listed below are typical test results for an Air Burners, Inc. air curtain FireBox. These test result have been generated during various testing programs that include the US EPA, the USDA Forest Service, the US Military and company hired consultants. Some of these test results are available on our website at; www.AirBurners.com and we can provide more details upon request. Air Burners is proud to be a CRADA partner with the USEPA. We regularly participate in training and test program with environmental agencies to help create a better understanding of the use and benefit of an Air Curtain Burner from Air Burners.

USDA Forest Service	CO2	СО	CH4	NMHC	PM2.5	CE
lbs per ton of waste burned	(lbs/ton of waste)	(lbs/ton of waste)	(1bs/ton of waste)	(lbs/ton of waste)	(lbs/ton of waste)	%
Air Curtain Burner Test Results	3616	2.6	1.4	1.1	1.1	99

### **Federal Regulations Concerning Air Curtain Incinerators**

CODE of FEDERAL REGULATIONS (CFR)

Title 40 - Protection of the Environment

Chapter 1 – Environmental protection

Sub Chapter C - Air programs

Part 60 – Standards of performance for new stationary sources

Sub Part CCCC (CSWI) and/or Sub part EEEE (OSWI)

The following pages will provide some excepts from 40 CFR 60

Sub Part CCCC (CSWI)

Sub part EEEE (OSWI)



### **EXCEPTS FROM 40 CFR PART 60**

### Sub Part CCCC (CSWI)

### § 60.2020 What combustion units are exempt from this subpart?

This subpart exempts fifteen types of units described in paragraphs (a) through (o) of this section.

Note: We only included the paragraphs between (a) and (q) that are applicable to Air Curtain Incinerators.

- (i) Air curtain incinerators. Air curtain incinerators that burn only the materials listed in paragraphs (i)(1) through (3) of this section are only required to meet the requirements under "Air Curtain Incinerators" (§§ 60.2245 through 60.2260).
- (1) 100 percent wood waste.
- (2) 100 percent clean lumber.
- (3) 100 percent mixture of only wood waste, clean lumber, and/or yard waste.

### AIR CURTAIN INCINERATORS

### § 60.2245 What is an air curtain incinerator?

- (a) An air curtain incinerator operates by forcefully projecting a curtain of air across an open chamber or open pit in which combustion occurs. Incinerators of this type can be constructed above or below ground and with or without refractory walls and floor. (Air curtain incinerators are not to be confused with conventional combustion devices with enclosed fireboxes and controlled air technology such as mass burn, modular, and fluidized bed combustors.)
- (b) Air curtain incinerators that burn only the materials listed in paragraphs (b)(1) through (3) of this section are only required to meet the requirements under "Air Curtain Incinerators" (§§ 60.2245 through 60.2260).
- (1) 100 percent wood waste.
- (2) 100 percent clean lumber.
- (3) 100 percent mixture of only wood

waste, clean lumber, and/or yard waste.

### § 60.2250 What are the emission limitations for air curtain incinerators?

- (a) Within 60 days after your air curtain incinerator reaches the charge rate at which it will operate, but no later than 180 days after its initial startup, you must meet the two limitations specified in paragraphs (a)(1) and (2) of this section.
  - (1) The opacity limitation is 10 percent (6-minute average), except as described in paragraph (a)(2) of this section.
  - (2) The opacity limitation is 35 percent (6-minute average) during the startup period that is within the first 30 minutes of operation.
- (b) Except during malfunctions, the requirements of this subpart apply at all times, and each malfunction must not exceed 3 hours.

### § 60.2250 What are the emission limitations for air curtain incinerators?

Within 60 days after your air curtain incinerator reaches the charge rate at which it will operate, but no later than 180 days after its initial startup, you must meet the two limitations specified in paragraphs (a) and (b) of this section.

- (a) Maintain opacity to less than or equal to 10 percent opacity (as determined by the average of three 1-hour blocks consisting of ten 6-minute average opacity values), except as described in paragraph (b) of this section.
- (b) Maintain opacity to less than or equal to 35 percent opacity (as determined by the average of three 1-hour blocks consisting of ten 6-minute average opacity values) during the startup period that is within the first 30 minutes of operation.

### § 60.2255 How must I monitor opacity for air curtain incinerators?

- (a) Use Method 9 of appendix A of this part to determine compliance with the opacity limitation.
- (b) Conduct an initial test for opacity as specified in § 60.8.
- (c) After the initial test for opacity, conduct annual tests no more than 12 calendar months following the date of your previous test.

### § 60.2260 What are the recordkeeping and reporting requirements for air curtain incinerators?

- (a) Prior to commencing construction on your air curtain incinerator, submit the three items described in paragraphs (a)(1) through (3) of this section
- (1) Notification of your intent to construct the air curtain incinerators.
- (2) Your planned initial startup date.
- (3) Types of materials you plan to burn in your air curtain incinerator.
- (b) Keep records of results of all initial and annual opacity tests onsite in either paper copy or electronic format, unless the Administrator approves another format, for at least 5 years.
- (c) Make all records available for submittal to the Administrator or for an inspector's onsite review.
- (d) You must submit the results (each 6-minute average) of the initial opacity tests no later than 60 days following the initial test. Submit annual opacity test results within 12 months following the previous report.
- (e) Submit initial and annual opacity test reports as electronic or paper copy on or before the applicable submittal date.
- (f) Keep a copy of the initial and annual reports onsite for a period of 5 years.

### Sub part EEEE (OSWI)

### § 60.2887 What combustion units are excluded from this subpart?

This subpart excludes the types of units described in paragraphs (a) through (q) of this section, as long as you meet the requirements of this section.

Note: We only included the paragraphs between (a) and (q) that are applicable to Air Curtain Incinerators.

(o) Temporary-use incinerators and air curtain incinerators used in disaster recovery.

Your incineration unit is excluded if it is used on a temporary basis to combust debris from a disaster or emergency such as a tornado, hurricane,

flood, ice storm, high winds, or act of bioterrorism and you comply with the requirements in § 60.2969.

(p) Units that combust contraband or prohibited goods.

Your incineration unit is excluded if the unit is owned or operated by a government agency such as police, customs, agricultural inspection, or a similar agency to destroy only illegal or prohibited goods such as illegal drugs, or agricultural food products that can not be transported into the country or across State lines to prevent biocontamination. The exclusion does not apply to items either confiscated or incinerated by private, industrial, or commercial entities.

### § 60.2888 Are air curtain incinerators regulated under this subpart?

- (a) Air curtain incinerators that burn less than 35 tons per day of municipal solid waste or air curtain incinerators located at institutional facilities burning any amount of institutional waste generated at that facility are subject to all requirements of this subpart, including the emission limitations specified in table 1 of this subpart.
- (b) Air curtain incinerators that burn only less than 35 tons per day of the materials listed in paragraphs (b)(1) through (4) of this section collected from the general public and from residential, commercial, institutional, and industrial sources; or, air curtain incinerators located at institutional facilities that burn only the materials listed in paragraphs (b)(1) through (4) of this section generated at that facility, are required to meet only the requirements in

§§ 60.2970 through 60.2974 and are exempt from all other requirements of this subpart.

- (1) 100 percent wood waste.
- (2) 100 percent clean lumber.
- (3) 100 percent yard waste.
- (4) 100 percent mixture of only wood waste, clean lumber, and/or yard waste.

For additional information please visit

### www.AirBurners.com

Air Burners, Inc.

4390 Cargo Way Palm City, FL 34990

Phone: 772-220-7303



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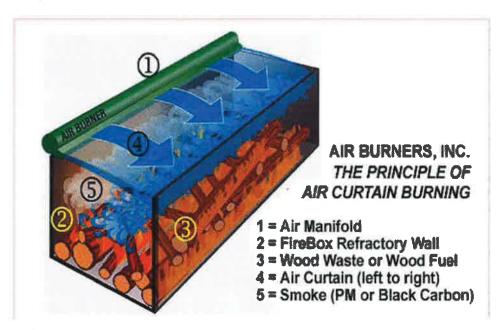


### THE PRINCIPLE OF AIR CURTAIN BURNING

Air Curtain Burners, also called FireBoxes, were designed principally as a pollution control device. The primary objective of an air curtain machine is to reduce the particulate matter (PM) or smoke, which results from burning clean wood waste. It is sometimes hard to visualize without seeing a machine in operation, but the machines do not burn anything, rather they control the results of something burning.

You could look at it as a pollution control device for open burning. Clean wood waste is loaded into the FireBox, and an accelerant such as Diesel fuel is poured onto the wood and the pile is ignited. This is very similar to starting a campfire. The air curtain is not engaged until the fire has grown in strength or the air curtain may blow the fire out. Once the fire has reached suitable strength, usually in 15 to 20 minutes, the air curtain is engaged. The air curtain then runs at steady state throughout the burn operation and the waste wood is loaded at a rate consistent with the rate of burn. Our smallest machine will burn at a rate of 1 to 2 ton per hour, our largest machine can burn in excess of 10 tons per hour.

### The Principle



The purpose of the air curtain is to stall or slow down the smoke particles on their way out of the FireBox. In doing this the particles are subjected to the highest temperatures in the FireBox. Stalling the smoke particles in this region just under the air curtain causes them to re-burn, further reducing their size to an acceptable limit. The result is a very clean burn with opacities well under 10% per EPA Method 9 Testing (as compared to open burning which typically can run at 80% to 100% opacity).

### **Operation**

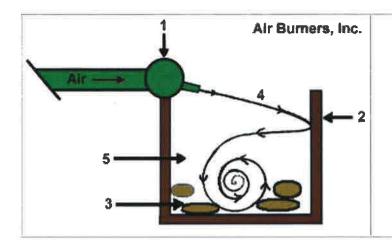
The picture to the right shows an Air Burners FireBox S-327 completely full and burning while in the background a pile of wood is open burned.

The wood pile that is open burning, continued to burn for several days. That entire pile could have been eliminated with the FireBox in less than 2 hours. For proper operation,

the air curtain machine



has to be designed to provide a curtain of air over the fire that has a mass flow and velocity that are in balance with the potential mass flow and velocity of the burning wood waste. If the air curtain velocity is too high, the FireBox can become over pressurized and over agitated. The higher pressure will lift the curtain and cause it to become ineffective. The over-agitation will cause embers and ash to be blown out of the FireBox or pit past the ineffective air curtain at a significantly higher rate than normal. If the mass flow of the curtain is too low then the unburned particles (smoke) will penetrate the curtain on the high velocity of the hot gasses being generated from the burning wood.



Air Curtain Burners do not burn anything.

They control the results of something burning.

### "The Wood Waste is the Fuel"

- 1 Air curtain machine manifold and nozzles directing high velocity air flow over and into refractory lined fire box or earthen trench.
- 2 Refractory lined wall as on the S-Series machines, or earthen wall as used with the T-Series trench burners.
- 3 Wood waste material to be burned.
- 4 Initial airflow forms a high velocity "air curtain" over fire.
- 5 Continued air flow over-oxygenates the fire keeping temperatures high. Higher temperatures provide near 100% combustion efficiency and that results in a cleaner and more complete burn.

See 70 sec. Streaming Video Clip of an operating FireBox here: http://www.airburners.com/video/s217video.html

### **RECYCLING**

The ash from typical wood waste is a very useful soil additive and as such offers a commodity that can be marketed to plant nurseries, farms, etc. as a potting soil additive. Recycling our resources is not only socially and politically imperative, but it often reaps the additional benefit of tax incentives or tax credits. Solid waste landfills are diminishing rapidly, and

permits are difficult to secure for new sites. The Air Burners System provides an affordable and environmentally sound alternative to grinding and the indiscriminate depositing of woody debris into landfills.

### **Related Reports**

**Disposal of Woody Debris by Fire** with perfect combustion efficiency releases no Black Carbon and virtually only Biogenic CO2, making this process carbon neutral. CLICK HERE: www.stopblackcarbon.com

Air Curtain Burner vs. Wood Grinder - Disposal of Wood Waste
A Comparison of Critical Emissions and Basic Economic Parameters from Two
Disposal Methods CLICK HERE: www.woodwasteburner.com

Disposal of Trees Affected by the Pine Beetle - The Dilemma and why Air Curtain Burners Should Be Used. CLICK HERE: www.forestwellness.com

### To our clients: Do you need permitting help?

As our machines are pollution control devices to make open burning of vegetative (wood) waste cleaner and as they are not incinerators, usually an "open-burn permit" from the local Fire Marshal or Forest Service Office will suffice.

If you need help, contact us by email.

### To State Air Quality Permitting Officers:

Please, <u>email</u> us should you wish to receive emissions data on our machines or any other regulatory compliance related information.

Thank you.

### AIR BURNERS, INC.

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### Woody Debris Disposal by Fire

### **Combustion Efficiency and Black Carbon**

Why Air Curtain Burners should be used to help reduce Greenhouse Gas emissions

### Introduction

Greenhouse Gas emissions from anthropogenic (man-made) sources are undesirable under any circumstance. The most critical gases are carbon dioxide ( $CO_2$ ), Methane ( $CH_4$ ) and Black Carbon (C) where Black Carbon or BC is actually an aerosol, a solid rather than a gas, as are the other two examples. We perceive the negative effect of Greenhouse Gases, especially the much mentioned  $CO_2$ , by their apparent harmful effects they have on earth, and the atmosphere near the earth perceived as "Global Warming". There is an ongoing controversy as to what constitutes Global Warming, but what is certain is the detrimental effect that Black Carbon has on the alarming rate by which the polar ice caps and glaciers have melted in recent decades, as well as the undisputed fact that Black Carbon contributes in some recognizable way to a warming of the earth which could well be Global Warming by converting sunlight to infrared heat while the particles reside in the atmosphere relatively close to earth.

As Black Carbon is a byproduct of the combustion of fossil fuel, biofuel or biomass (woody debris), optimizing the combustion process will reduce the amount of Black Carbon released. Black Carbon is the same as soot, black smoke or particulate matter (PM) from a burning process. Furthermore and importantly, as Black Carbon is not a gas, but a solid substance that is temporarily suspended in the near atmosphere, it has the tendency to fall back (gravitate back) onto earth in a relatively very short time span often as short as months and weeks which translates into near immediate positive results on earth, once the black carbon emissions are effectively mitigated.

### Black Carbon and Biomass Combustion

Black Carbon matter is carbon (C) in form of smoke, soot, or particulate matter (PM) from a combustion process. BC results from the <u>incomplete</u> combustion of fossil fuels, biofuel, or biomass, includ-

ing wood waste and agricultural green waste. The black exhaust from a truck, bus, locomotive, airplane or marine vessel is Black Carbon from the incomplete combustion of Diesel (fossil) fuel. The smoke from a wood stove, camp fire or forest fire is pure Black Carbon from biomass burning. Most of the Black Carbon is anthropogenic in nature which means it derives from human activity. BC from a forest fire or volcano would not be anthropogenic.

The cleanliness of a burning process of waste material is often gauged by the opacity level of the effluent (smoke) where 100% would be total black smoke and 0% would be none. It must be noted that in the field, visible smoke or PM may also include some dust or fly ash particles close to the combustion source.

If an incomplete combustion has an undesirable effect, then a "complete" combustion of at least wood waste or biomass should be acceptable or actually desirable. But how can we achieve that? A basic understanding of the make-up of wood and what happens when it burns will help shed light on this question.

Byram<sup>1</sup> suggested a chemical model for wood as  $C_6H_9O_4$ , an (organic) molecule mainly made up of carbon, hydrogen and oxygen.

In case of an ideal combustion, the only resultants from the burn process are  $CO_2$  and  $H_2O$  that is Carbon Dioxide and gaseous water:

$$4(C_6H_9O_4)+Heat+25(O_2)=24(CO_2)+18(H_2O)$$

From a practical view point this means that, if wood were burned with just the right amount of heat and oxygen, then there would be no emissions of smoke or Black Carbon, as well as no such gases as Carbon Monoxide or organic gases, such as Methane, only  $CO_2$  and  $H_2O$  would escape.

Let us examine what the circumstances of an incomplete combustion are: If the amount of available oxygen is less than perfect and decreases and/or if the available heat energy is reduced, then CO (carbon monoxide), CH<sub>4</sub> (methane), and NMHC (non-methane hydrocarbons) are produced. Additionally, unburned carbon particulates escape with the produced hot gases upwards into the atmosphere as smoke, soot or Black Carbon. The worse the combustion efficiency, the more BC or black smoke is released along with the carbon contained in organic gases. Of course, only the Black Carbon (BC as PM) is visible to the naked eye.

Combustion Efficiency (CE) is the quotient or ratio of the carbon in the released CO<sub>2</sub> compared to the carbon contained in all of the emissions from combustion or the totality of emissions, including PM:

Where, in the divisor after the  $CO_2$  and CO,  $CH_4+C_2H_2+...$ , etc. represent the total of the carbon contained in organic gases, and the C at the end the carbon in particulate compounds (called BC, PM, soot or smoke).

If the combustion were perfect, the only gas produced would be  $CO_2$ , and the combustion efficiency (CE) would be 100%, because  $CE=CO_2/CO_2=1$  or 100%.

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### Sources of Black Carbon Released as "Greenhouse Gas" Biogenic versus Non-biogenic Carbon

The basic make-up of Black Carbon is just that, Carbon, and it is the same whether anthropogenic or not, whether emitted for example, from a bus, factory chimney, forest fire or agricultural burn. The reduction of emissions from any of such sources will have a positive result and reduce the harmful effects of Black Carbon as a Greenhouse Gas. All sources should be vigorously examined and limits on emissions imposed, limits that are scientifically, economically and socially reasonable and achievable.

Even though all Black Carbon is basically the same from a chemical perspective, there is one significant and very important difference between the perceived overall harmful effect of two distinct classifications of sources: BC from the combustion of hydrocarbons, such as coal or petroleum and, on the other hand, "biogenic" Black Carbon from the combustion of biomass, such as wood waste, forest slash, or agricultural green waste. We have shown that especially at ideal CE of 100%, a large amount of  $CO_2$  is released from any combustion process.  $CO_2$  is classified as a serious Greenhouse Gas by the Intergovernmental Panel on Climate Change (IPCC) and deserves serious attention. It is for this reason that it is important to understand the significant nature of biogenic  $CO_2$ .

The adjective biogenic is derived from "biogenisis" meaning the production of a (new) life form or a chemical compound by a living organism. The original Greek word for biogenisis stands for 'life source" or "life origin" and described the (philosophical or theological) notion that one life form can only be derived from another life form or living being and, of course, it did not include the modern scientific interpretation of biogenic organic or inorganic matter that is a chemical compound. An example of a chemical compound that is biogenic is carbon sequestered in some form in a plant, such as woody biomass, no matter whether the plant is alive or not.

This carbon was stored in the plant (i.e. tree) for a relatively short period of time over the life of the tree or other plant and, through the natural biogenic process of photosynthesis, this carbon was absorbed from the  $CO_2$  in the air surrounding the plant in exchange for which oxygen was released, oxygen which is needed to make most life on earth possible. The carbon was sequestered in the wood while the tree was alive and growing, and the same carbon was returned to the atmosphere in the combustion process, making this burn process "carbon neutral" or giving it a net zero carbon footprint.

The biomass burning process does not free up any  $CO_2$  that did not already exist in the atmosphere near earth prior to the tree's life cycle. Its biogenicity stems from the fact that the carbon of the released  $CO_2$  molecule was taken from the surrounding  $CO_2$  while the plant was alive at which time it was converted into carbon (seques-

tered in the plant) and simultaneously, life sustaining oxygen was released into the atmosphere.

In contrast thereto, the carbon that is converted into  $CO_2$  from combustion processes of hydrocarbons, such as petroleum or coal was sequestered deep in the earth for millions of years. It would not escape naturally ever at any appreciable rate, and combusting these hydrocarbons in Diesel engines or turbines, etc. puts vast quantities of additional  $CO_2$  into the atmosphere as a pollutant and true "Greenhouse Gas". This  $CO_2$  is non-biogenic.

Finally, if biomass, for example, trees in the forest killed by beetles, were allowed to decompose or rot naturally, large amount of biogenic  $CO_2$  would also be released, though some carbon would be sequestered in the soil, and that is a good thing; but additionally  $CH_4$  or Methane would be released in fairly large quantities (as is sadly also the case with routine commercial composting or useless mulch piles gone septic). Methane is a Greenhouse Gas that is much more harmful than  $CO_2$ , because methane is over 20 times more effective in trapping heat in the atmosphere than  $CO_2$  over a 100-year period<sup>2</sup>.

Doing nothing at all with massive amounts of woody debris, including chips and mulch at landfills, on woodlands and forests is certainly not a better idea with respect to potential Greenhouse Gas emissions. This issue is actually of great concern, as presently there are millions of dead trees killed by beetle infestations slowly decomposing in North America, if not dealt with by disposal technology in due course.

### The Nature of Black Carbon and Its Effects on Earth

Black Carbon is a solid carbon particle, however small it may be. It is considered an aerosol due to its very small size, as it remains suspended in the air for some time, and it is carried by air movement or turbulence into higher layers of our atmosphere. Because BC is a solid element and not a gas, it eventually gravitates back to earth and falls onto its surface throughout the world.

While suspended in the atmosphere, the carbon particles absorb sunrays and release infrared rays as heat that raise the temperature of the layers in the atmosphere where they reside thus contributing to the warming of the planet. As they fall back onto earth, the Black Carbon causes reduction of "albedo", the ability of an object or particle, such as snow or ice crystals, to reflect sunlight (heat). When BC is deposited on snow and ice, it accelerates the melting of the snow, ice, or

glaciers in areas where typically no appreciable reduction of frozen mass occurs naturally. The perma-snow and perma-ice regions of the polar ice caps and the snow caps of the Himalayan Mountains are examples. The BC on the ice or snow absorbs heat from the sun and transfers it to the ice or snow surface thereby speeding up the melting process. Naturally, the ice crystals, because of their albedo, reflect a large amount of the heat from the sun's rays back into the atmosphere, and this keeps the ice crystals from melting rapidly or melting at all.

Black Carbon is a potent climate forcing agent, estimated to be the second largest contributor to Global Warming after Carbon Dioxide ( $CO_2$ ). Because BC remains in the atmosphere only for a few weeks to a few years (depending on its particle size), reducing Black Carbon emissions may be the fastest means of slowing climate change in the near-term.  $CO_2$  in contrast has an atmospheric lifetime of more than 100 years. Reducing  $CO_2$  emissions today would have a positive effect on earth a hundred years in the future, and today's population would never benefit from its  $CO_2$  mitigation efforts.

Concentrating on the immediate reduction of Black Carbon is a high priority for the IPCC<sup>3</sup>. As fossil fuel and biofuel combustion releases a high level of BC, Greenhouse Gas mitigation actions are first directed at sources that use fossil fuels, such as marine vessels, trucks, buses, locomotives, aircraft and other fossil fuel powered systems. The burning of (woody) biomass can be significantly curbed in forestry and agricultural industries, but not easily relative to certain other sources, such as the myriad of wood stoves and wood cooking implements in developing countries and, of course, the periodic forest fires some of which are of gigantic magnitude and gaseous emissions from volcanoes.

### **Environmentally Responsible Reduction of Wood Waste**

Greenhouse Gas mitigation efforts are primarily directed at regulating the emissions from engines and combustion facilities that consume fossil fuels and not enough concern is directed at controlling planned or deliberate open pile or broadcast burning of biomass or woody debris in forestry, agriculture and land clearing. Little can be done to reduce emissions from natural wildfires and from wood stoves in developing countries. Much can be accomplished, however, by banning deliberate open burning of wood waste in forestry, agriculture and even industrial wood processing in favor of technology: the use of air curtain burners.

Air curtain burners or FireBox burners<sup>4</sup> are machines designed as pollution control devices to overcome the detriment of open (pile) burning: the release of excessive amounts of Black Carbon or smoke. Air Curtain FireBoxes by virtue of their design achieve nearly 100% combustion efficiency and by definition, they release almost no Black Carbon<sup>5</sup>.

They release  $CO_2$ , but as we have shown above, the carbon in that  $CO_2$  is biogenic as it was previously, that is during the life of the tree or plant, converted from surrounding  $CO_2$  into carbon in the wake of which oxygen was freed. The biomass burning in the air curtain burner, therefore, is <u>carbon neutral</u>. No additional  $CO_2$  was turned into a Greenhouse Gas that was not already present in the surroundings. This is not the case regarding the  $CO_2$  escaping the exhaust of a Diesel powered bus, for example, where  $CO_2$  is released that was <u>not</u> present prior to fueling the combustion.

Air Curtain Burners not only eliminate wood waste in an environmentally responsible way, but also efficiently and cost effectively. They are portable, easy to operate and affordable and less expensive to operate, compared with any other disposal method for wood waste that could be an alternative to open burning of biomass. They meet applicable US EPA regulations and have been used for many years worldwide. Some FireBox models even convert the BTU content of the biomass from the combustion process into electricity that can be sold back to the power company or used on-site<sup>6</sup>, or the energy could be used to heat a greenhouse or shop building. No special pre-processing of the wood waste is required, such as chipping the waste to a specified size, a mandatory requirement for traditional stationary biomass cogeneration plants. For more information on air curtain burner technology, go to <a href="https://www.aircurtaintechnology.com">www.aircurtaintechnology.com</a>.

### **Summary**

Carbon Dioxide and Black Carbon (smoke) are understood to be undesirable Greenhouse Gases and efforts must be implemented worldwide to reduce the emissions of them. Black Carbon is the result of incomplete combustion of fossil fuels and (woody) biomass. Carbon Dioxide is released by any combustion process.

Carbon Dioxide remains in the atmosphere for more than 100 years whereas Black Carbon stays there for only days or a few weeks. Curbing emissions of Black Carbon would have a very near term effect on earth and would slow down the melting of the polar ice cap and

glaciers in high mountain ranges and have some positive effect on Global Warming.

The sources of Black Carbon are Diesel trucks, ships and similar devices that burn fossil fuels, as well as the combustion of biomass. Most such sources emit BC, because of an inherent incomplete combustion process yielding low combustion efficiency. The burning of woody debris is a very large contributor worldwide to the overall emissions of Black Carbon. Although not all burning of biomass can be controlled, there will be wildfires and cooking stoves in many areas of the world, the BC from widespread deliberate or planned woody debris burning for agricultural clearing and in forestry can be reduced by modern technology.

Air curtain burners are based on such technology, because they burn wood waste with nearly 100% combustion efficiency in an economical manner. Wherever practical, all open pile burning should be banned in favor of the use of air curtain burners. For more information, access <a href="https://www.airburners.com">www.airburners.com</a>. Air curtain burners in forestry, agriculture and land clearing release biogenic Carbon Dioxide from near 100% combustion efficiency of the burn process, making this wood waste disposal process by fire carbon neutral and very environmentally friendly and desirable<sup>7</sup>.

By N. Fuhrmann, December 2010

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Norbert Fuhrmann is a free-lance writer and researcher. He holds an M.B.A. from the Crummer Graduate School of Business at Rollins College in Winter Park, Florida.

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The adjective biogenic is derived from "biogenisis" meaning the production of a (new) life form or a chemical compound by a living organism. The original Greek word for biogenisis stands for 'life source" or "life origin" and described the (philosophical or theological) notion that one life form can only be derived from another life form or living being and, of course, it did not include the modern scientific interpretation of biogenic organic or inorganic matter that is a chemical compound. An example of a chemical compound that is biogenic is carbon sequestered in some form in a plant, such as woody biomass, no matter whether the plant is alive or not.

This carbon was stored in the plant (i.e. tree) for a relatively short period of time over the life of the tree or other plant and, through the natural biogenic process of photosynthesis, this carbon was absorbed from the  $CO_2$  in the air surrounding the plant in exchange for which oxygen was released, oxygen which is needed to make most life on earth possible. The carbon was sequestered in the wood while the tree was alive and growing, and the same carbon was returned to the atmosphere in the combustion process, making this burn process "carbon neutral" or giving it a net zero carbon footprint.

The biomass burning process does not free up any  $CO_2$  that did not already exist in the atmosphere near earth prior to the tree's life cycle. Its biogenicity stems from the fact that the carbon of the released  $CO_2$  molecule was taken from the surrounding  $CO_2$  while the plant was alive at which time it was converted into carbon (seques-

tered in the plant) and simultaneously, life sustaining oxygen was released into the atmosphere.

In contrast thereto, the carbon that is converted into  $CO_2$  from combustion processes of hydrocarbons, such as petroleum or coal was sequestered deep in the earth for millions of years. It would not escape naturally ever at any appreciable rate, and combusting these hydrocarbons in Diesel engines or turbines, etc. puts vast quantities of additional  $CO_2$  into the atmosphere as a pollutant and true "Greenhouse Gas". This  $CO_2$  is non-biogenic.

Finally, if biomass, for example, trees in the forest killed by beetles, were allowed to decompose or rot naturally, large amount of biogenic  $CO_2$  would also be released, though some carbon would be sequestered in the soil, and that is a good thing; but additionally  $CH_4$  or Methane would be released in fairly large quantities (as is sadly also the case with routine commercial composting or useless mulch piles gone septic). Methane is a Greenhouse Gas that is much more harmful than  $CO_2$ , because methane is over 20 times more effective in trapping heat in the atmosphere than  $CO_2$  over a 100-year period<sup>2</sup>.

Doing nothing at all with massive amounts of woody debris, including chips and mulch at landfills, on woodlands and forests is certainly not a better idea with respect to potential Greenhouse Gas emissions. This issue is actually of great concern, as presently there are millions of dead trees killed by beetle infestations slowly decomposing in North America, if not dealt with by disposal technology in due course.

### The Nature of Black Carbon and Its Effects on Earth

Black Carbon is a solid carbon particle, however small it may be. It is considered an aerosol due to its very small size, as it remains suspended in the air for some time, and it is carried by air movement or turbulence into higher layers of our atmosphere. Because BC is a solid element and not a gas, it eventually gravitates back to earth and falls onto its surface throughout the world.

While suspended in the atmosphere, the carbon particles absorb sunrays and release infrared rays as heat that raise the temperature of the layers in the atmosphere where they reside thus contributing to the warming of the planet. As they fall back onto earth, the Black Carbon causes reduction of "albedo", the ability of an object or particle, such as snow or ice crystals, to reflect sunlight (heat). When BC is deposited on snow and ice, it accelerates the melting of the snow, ice, or

glaciers in areas where typically no appreciable reduction of frozen mass occurs naturally. The perma-snow and perma-ice regions of the polar ice caps and the snow caps of the Himalayan Mountains are examples. The BC on the ice or snow absorbs heat from the sun and transfers it to the ice or snow surface thereby speeding up the melting process. Naturally, the ice crystals, because of their albedo, reflect a large amount of the heat from the sun's rays back into the atmosphere, and this keeps the ice crystals from melting rapidly or melting at all.

Black Carbon is a potent climate forcing agent, estimated to be the second largest contributor to Global Warming after Carbon Dioxide ( $CO_2$ ). Because BC remains in the atmosphere only for a few weeks to a few years (depending on its particle size), reducing Black Carbon emissions may be the fastest means of slowing climate change in the near-term.  $CO_2$  in contrast has an atmospheric lifetime of more than 100 years. Reducing  $CO_2$  emissions today would have a positive effect on earth a hundred years in the future, and today's population would never benefit from its  $CO_2$  mitigation efforts.

Concentrating on the immediate reduction of Black Carbon is a high priority for the IPCC<sup>3</sup>. As fossil fuel and biofuel combustion releases a high level of BC, Greenhouse Gas mitigation actions are first directed at sources that use fossil fuels, such as marine vessels, trucks, buses, locomotives, aircraft and other fossil fuel powered systems. The burning of (woody) biomass can be significantly curbed in forestry and agricultural industries, but not easily relative to certain other sources, such as the myriad of wood stoves and wood cooking implements in developing countries and, of course, the periodic forest fires some of which are of gigantic magnitude and gaseous emissions from volcanoes.

### **Environmentally Responsible Reduction of Wood Waste**

Greenhouse Gas mitigation efforts are primarily directed at regulating the emissions from engines and combustion facilities that consume fossil fuels and not enough concern is directed at controlling planned or deliberate open pile or broadcast burning of biomass or woody debris in forestry, agriculture and land clearing. Little can be done to reduce emissions from natural wildfires and from wood stoves in developing countries. Much can be accomplished, however, by banning deliberate open burning of wood waste in forestry, agriculture and even industrial wood processing in favor of technology: the use of air curtain burners.

Air curtain burners or FireBox burners<sup>4</sup> are machines designed as pollution control devices to overcome the detriment of open (pile) burning: the release of excessive amounts of Black Carbon or smoke. Air Curtain FireBoxes by virtue of their design achieve nearly 100% combustion efficiency and by definition, they release almost no Black Carbon<sup>5</sup>.

They release  $CO_2$ , but as we have shown above, the carbon in that  $CO_2$  is biogenic as it was previously, that is during the life of the tree or plant, converted from surrounding  $CO_2$  into carbon in the wake of which oxygen was freed. The biomass burning in the air curtain burner, therefore, is <u>carbon neutral</u>. No additional  $CO_2$  was turned into a Greenhouse Gas that was not already present in the surroundings. This is not the case regarding the  $CO_2$  escaping the exhaust of a Diesel powered bus, for example, where  $CO_2$  is released that was <u>not</u> present prior to fueling the combustion.

Air Curtain Burners not only eliminate wood waste in an environmentally responsible way, but also efficiently and cost effectively. They are portable, easy to operate and affordable and less expensive to operate, compared with any other disposal method for wood waste that could be an alternative to open burning of biomass. They meet applicable US EPA regulations and have been used for many years worldwide. Some FireBox models even convert the BTU content of the biomass from the combustion process into electricity that can be sold back to the power company or used on-site<sup>6</sup>, or the energy could be used to heat a greenhouse or shop building. No special pre-processing of the wood waste is required, such as chipping the waste to a specified size, a mandatory requirement for traditional stationary biomass cogeneration plants. For more information on air curtain burner technology, go to www.aircurtaintechnology.com.

### Summary

Carbon Dioxide and Black Carbon (smoke) are understood to be undesirable Greenhouse Gases and efforts must be implemented worldwide to reduce the emissions of them. Black Carbon is the result of incomplete combustion of fossil fuels and (woody) biomass. Carbon Dioxide is released by any combustion process.

Carbon Dioxide remains in the atmosphere for more than 100 years whereas Black Carbon stays there for only days or a few weeks. Curbing emissions of Black Carbon would have a very near term effect on earth and would slow down the melting of the polar ice cap and

glaciers in high mountain ranges and have some positive effect on Global Warming.

The sources of Black Carbon are Diesel trucks, ships and similar devices that burn fossil fuels, as well as the combustion of biomass. Most such sources emit BC, because of an inherent incomplete combustion process yielding low combustion efficiency. The burning of woody debris is a very large contributor worldwide to the overall emissions of Black Carbon. Although not all burning of biomass can be controlled, there will be wildfires and cooking stoves in many areas of the world, the BC from widespread deliberate or planned woody debris burning for agricultural clearing and in forestry can be reduced by modern technology.

Air curtain burners are based on such technology, because they burn wood waste with nearly 100% combustion efficiency in an economical manner. Wherever practical, all open pile burning should be banned in favor of the use of air curtain burners. For more information, access <a href="https://www.airburners.com">www.airburners.com</a>. Air curtain burners in forestry, agriculture and land clearing release biogenic Carbon Dioxide from near 100% combustion efficiency of the burn process, making this wood waste disposal process by fire carbon neutral and very environmentally friendly and desirable<sup>7</sup>.

By N. Fuhrmann, December 2010

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# Air Curtain Burner vs. Wood Grinder

## Disposal of Wood Waste

A Comparison of Critical Emissions and Basic Economic Parameters from Two Disposal Methods

### A. Overview:

The purpose of this paper is to provide details concerning a better environmental and economic method for the disposal of wood and vegetative waste. Technical details will be provided for comparing two machines typically used for the disposal of wood and vegetative waste: the Air Curtain FireBox and the Diesel powered Wood Grinder. For the disposal of accumulated wood and vegetative waste, an Air Curtain Burner (ACB) "FireBox" is a better choice for protecting the environment and it is also the most economical choice.

- 1) The ACB FireBox is an "end solution" and actually eliminates the wood waste, while a grinder is just a "handling process" where 100 tons of wood is ground-up into 100 tons of mulch.
- 2) The FireBox uses the waste as its fuel, where the grinder uses hundreds of gallons of Diesel fuel to grind wood in to mulch.
- 3) The FireBox creates a small amount of natural clean ash that is good for the soil, the grinder creates a huge amount of mulch that is bad for the soil and must be transported off-site.
- 4) The FireBox has less impact on the environment; the grinder and associated transportation have a significantly negative impact on the environment.
- 5) The FireBox is significantly less costly to purchase and to operate than the grinder.
- 6) The FireBox can create energy from the waste, the grinder only consumes energy.

The Air Curtain FireBox follows the same natural process as has been happening on Earth for millions of years, but without the unwanted particulate matter or black carbon release. As we concern ourselves with the reduction of climate changing impacts on our environment, the FireBox is the best choice for immediate reduction in black carbon and non-biogenic CO2 emissions. This paper will provide more details in comparing the two machines and outlining the path to achieving significantly lower emissions today.

## **ENVIRONMENTAL**

### **B.** Comparison of Critical Pollutants

The following critical emission components will be compared: PM and CO<sub>2</sub>. These are emissions, either aerosol and gaseous, which are classified as harmful Greenhouse Gas Emissions within the framework of Global Warming and Climate Change discussions.



FireBox-No visible PM discharge

PM

PM or Particulate Matter from a combustion process is Black Carbon (BC) consisting of clusters of carbon molecules measured in microns i.e.  $10\mu$  (PM10) which are strictly regulated. Black Carbon emissions constitute an aerosol and not a gas, because BC consists of pure carbon



Grinder-Significant PM discharge

suspended in the atmosphere as tiny solids. BC tends to gravitate back to earth over time and is considered one of the most significant contributors to "Global Warming." While suspended in the atmosphere, the carbon particles absorb sunrays and release infrared rays as heat that raise the temperature of the layers in the atmosphere where they reside thus contributing to the warming of the planet. As they fall back onto earth, the Black Carbon causes reduction of "albedo", the ability of an object or particle, such as snow or ice crystals, to reflect sunlight (heat). When Black Carbon is deposited on snow and ice, it accelerates the melting of the snow, ice, or glaciers in areas where typically no appreciable reduction of frozen

mass occurs naturally. It adversely affects "Global Warming" which is most noticeable on earth in the permafrost regions but more significantly, its residence time in the atmosphere is very short measured in weeks and months.

Reducing Black Carbon would have a near immediate positive effect on Global Warming in contrast to  $CO_2$  which remains in the atmosphere for 100 years or more, and any  $CO_2$  mitigation efforts would yield results only for future generations. While we should work diligently towards the reduction of  $CO_2$ , immediate efforts should be made to mitigate or eliminate BC releases from combustion processes, whether from open burning or combustion of hydrocarbons in engines, due to the immediate positive impact on the effects of climate change. The Air Burners FireBox was designed specifically for the reduction of Black Carbon and it is a proven and effective tool for achieving the goal of Black Carbon reduction now.

In addition to PM from Diesel engine combustion, the grinding of wood waste and the subsequent handling, transporting and storage result in additional fugitive dust (PM) and these particles are predominantly raw wood aerosols. Raw wood particles are a known carcinogen with obvious health implications, especially to a population close to the source, such as the site operators. It is obvious that raw wood PM emissions from grinders must be minimized.

Strong regulations are being put in place to mitigate the raw wood PM release from grinders ie: California requires grinders to meet strict PM regulations in their Title V permits. In some areas like Martin County, Florida, buildings were constructed at great taxpayer expense to house the grinding operations in an effort to control the airborne particles. In many cases the Air Curtain FireBox is a better solution as it meets a much tighter PM standard than Grinders and does not emit raw wood particles.

With today's grinder technology it is very difficult to control PM emissions. The state of grinder technology today will only allow US authorities to regulate grinders to a maximum opacity of 20% whereas the limit for PM emissions from the air curtain burner is a maximum of 10% opacity. Opacity is a measurement of the density or thickness of a PM emission plume rising up from a stationary source. This means that it is recognized by the authorities that a FireBox will release much fewer particulate emissions when operated properly than is practical and achievable for the grinder.

The grindings also pose an extreme environmental hazard. There is a very limited market to recycle the wood grindings, first, for the grindings to be useful for gardening and landscaping they must be sorted to eliminate the spread and contamination of invasive species, second, the grinding will not eliminate any molds, fungi or diseases from destructive insect larvae, like longhorn beetle and third, with almost no recycling market the grindings are being piled at landfills and transfer stations across the country significantly increasing the occurrence of spontaneous combustion and the devastating environmental impact that follows.



PM-Mulch Fire in Florida caused by spontaneous combustion of wood grinding piles

# $CO_2$

The gaseous emission of concern emitted from both air curtain burners and grinders is the dangerous *non-biogenic*  $CO_2$ . We are using this as the standard for comparison as it is classified as the major undesirable Greenhouse Gas and it tends to be the common denominator when comparing emissions. Other releases from a process of incomplete combustion, such as organic gases ( $CH_4$ , etc.) are not addressed in this review, as their releases follow the same proportions as  $CO_2$  with regard to this FireBox-to-Grinder comparison study. *Biogenic*  $CO_2$  also does not enter the comparison, because Biogenic  $CO_2$  from wood is considered *carbon neutral* by the IPCC and USEPA and the biogenic carbon release ultimately is the same for the air curtain burner and the grinder. The following sections compare and explain the  $CO_2$  emissions.

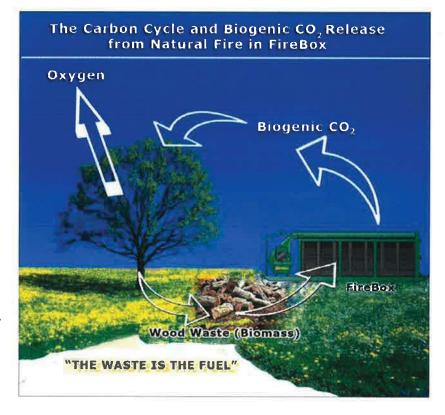
### C. Carbon Cycle

First we should understand "Biogenic  $CO_2$  and the Carbon Cycle, based on which the IPCC and other agencies have determined that the burning of woody biomass is CARBON NEUTRAL, that is the release of biogenic  $CO_2$  is not considered a bad Greenhouse Gas in contrast to the carbon dioxide that is released into the atmosphere from the combustion of hydrocarbons such as petroleum or Diesel fuel. That  $CO_2$  is formerly sequestered "bad" Non-biogenic  $CO_2$ . The carbon that is released in this case was sequestered deep inside the Earth and it would have remained there forever, were it not harvested by man and combusted in Diesel engines of trucks, grinders, ocean ships, airplanes, etc.

The Biogenic  $CO_2$  from Biomass burning represents carbon that was absorbed by trees and taken from the surrounding  $CO_2$  in the air as the result of nature's process of photo syntheses by which

life is sustained on Earth. The carbon portion of the  $CO_2$  remains sequestered in the woody tree or other vegetation and the oxygen is released into the surrounding atmosphere.

When the wood waste burns in the air curtain burner, as it would naturally in a wildfire, but at very high combustion efficiency in the ACB, the carbon from the woody biomass again combines with oxygen and forms  $CO_2$ . The cycle is complete. No additional  $CO_2$  was added to the atmosphere. The carbon cycle is depicted in the image to the right. The sequestered  $CO_2$  in the wood will eventually be released whether it is submitted to the ACB or the grinder or left to fall in the forest.



### D. Overview of Emissions from Air Curtain Burner and Grinder

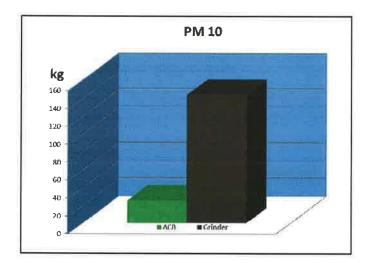
### 1. Air Curtain FireBox

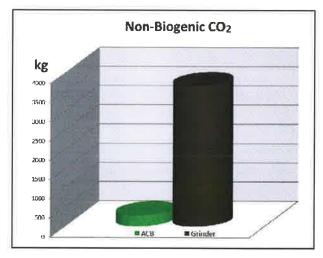
The air curtain burner selected for this comparison is a mid-size Model S-220. It is equipped with a small Diesel engine (59 hp) that powers the air fan. Emissions from the engine's exhaust will be considered.

The wood is burned inside the burn chamber where the wood waste is the <u>only</u> actual "fuel" that is combusted. PM emissions from the combustion process will be considered.

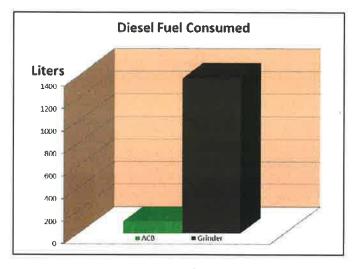
### 2. Wood Grinder

Grinders are powered by large Diesel engines, as large as 12 cylinders, 1000HP engines with high fuel consumption. Emissions from the engine exhaust will be considered. The wood waste grinding operations release PM in the form of wood dust (a) from the grinding process itself and (b) from the release of the chips or mulch from the machine via a conveyor belt or similar system. (c) Fugitive PM is released from the storage pile, the on-site staging by a machine (i.e., front-end loader) that pushes the material away from the conveyor belt outlet area, and also each time the material is loaded, transported and finally dumped at its ultimate disposal site, usually a landfill.





These charts graphically show the stark differences between two similar sized machines that can process 100 tons of wood and vegetative waste in one day. The quantitative details are defined on the following pages.



Page 5 of 13

# E. Quantitative Comparison of Selected Two Pollutants from FireBox and Grinder for 100 Ton of Wood Waste Disposal/Processing

- 1. Air Curtain Burner (ACB) 59HP S-220 by Air Burners, Inc.
- a. PM from ACB Diesel engine
- b. CO<sub>2</sub> from ACB Diesel engine
- c. PM from wood combustion (processing)
- 2. Grinder 400HP Generic Grinder
- a. PM from Grinder Diesel engine
- b. CO<sub>2</sub> from Grinder Diesel engine
- c. PM from wood chipping/grinding (processing)
- d. PM, fugitive releases from on-site handling
- e. PM from Truck Diesel engines
- f. CO<sub>2</sub> from Truck Diesel engines
- g. PM, fugitive releases from transporting and discharge
- h. PM, fugitive releases from remote/landfill site handling
- 3. Basic Specifications of Air Curtain Burner (FireBox)

Model: Air Burners, Inc. S-220

Engine: Kubota Model V2403-TE, 59 HP max.

Diesel fuel consumption: 8.5 L/hr average

FireBox through-put: 8 tons/hr (8000 kg/hr)

### 4. Basic Specifications of Wood Grinder

Model: Generic Model

Engine: Generic Diesel, 6 Cylinder, 400 HP max.

Diesel fuel consumption: 113.5 L/hr average

Grinder through-put: 16 tons/hr (16000 kg/hr)

### 5. Notes

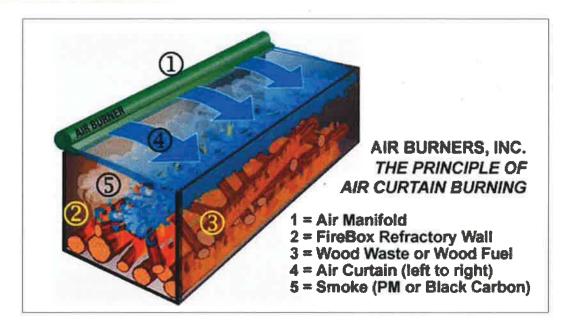
- a. The loading equipment, such as an excavator, is not included in the comparison, because both the FireBox and the Grinder are assumed to use the same or a similar loading machine, albeit the FireBox for 10 hours and the Grinder for 6¼ hours. This is balanced by the use of the equipment for removing the beneficial ash from the FireBox and for pushing the chips away from the grinder's conveyor belt discharge area, where the mulch has to be cleared out over a period of 6 hours, however, the ash can be removed from the FireBox in less than 15 minutes.
- b. Calculation of number of dump trucks required to transport 100 tons of wood waste ground into mulch:
  - 1) Weight: 100t fairly dry woody debris
  - 2) Typical grinding and mulch handling/spillage losses (wood dust and moisture) by weight 2% or  $\approx$ 2,000kg (2t)
  - 3) As  $1\text{m}^3$  of mulch has a weight of 290kg, 100t-2t=98t (198000kg) of wood material ground has a volume of  $198000/290=337\text{m}^3$
  - 4) 1 dump truck can hold (legally) heaped  $17m^3$  (no weight consideration needed, load weighs only  $\approx 5t$ )
  - 5) 337/17 trucks ≈20 dump trucks are required
- c. Assumption of travel distance to mulch disposal site is 40km one way, total travel distance for 20 loads would be 20x80km (roundtrip) or 1600km; at an average speed of 48km/hr, truck engines would release emissions for 1600/48=33 hrs for every 100 tons (100000kg) of ground wood waste hauled.
- d. The fugitive PM emissions from road dust caused by the trucks are ignored, but could be significant in rural areas with unpaved roadways.
- e. Emissions from the frequently needed Diesel fuel tanker to refuel the grinder and fleet of trucks are also ignored for this comparison.

Table on following page

Source	Pollutant	Units	Typical Emissions or Data		Air Burn- ers S-220 59HP	Wood Grinder 400HP
			АСВ	Grinder	100t Wood Waste	
Diesel Engine - Processing	PM10	kg/HP-hr	0.059	0.4	0.74kg	2.5kg
Wood Processing	PM10	kg/t	0.24kg/t	0.8kg/t		E 1 E E E
				Fed Limit	24kg	80kg
				0.9kg/t		
Handling of Chips on- site*	PM10	kg/t	0	0.1	0	10kg
Diesel Engine - Truck- ing 300 HP	PM10	kg/HP-hr	0	0.3kg	0	30kg
Handling of Chips Trucking*	PM10	kg/t	0	0.1kg/t	0	10kg
Handling of Chips Re- mote Discharge*	PM10	kg/t	0	0.08kg/t	0	8kg
			Elle es	Total PM10	24	140.5
Diesel Engine - Pro- cessing	CO₂ Non-	kg/L	2.67kg/L	2.67kg/L	283kg	1894kg
	biogenic					
Diesel Engine -	CO <sub>2</sub>	ka/l	0	2.67kg/l	0	1762kg
Trucking 300 HP	Non- biogenic	kg/L	0	2.67kg/L		
			Total Non-bi	ogenic CO <sub>2</sub>	283kg	3656kg
Diesel Engine – Pro- cessing Fuel Consumption	X <del>4</del> :	L	8.5/hr	113.5/hr	106L	709L
Truck -300HP Fuel Consumption			0	41L/hr 100km		660L
			Total	Diesel Fuel	106L	1369L
Wood Processing – Particulate EPA Limit	PM			_		
	Opacity	%	10	20	326	<b>:¥</b> 8
		Summary of	f Totals (rou	nded)		
TOTAL PM10						141 kg
TOTAL CO <sub>2</sub>		283 kg	3656 kg			
TOTAL Diesel Fuel Consumed					106 L	1369 L

### F. Brief Discussion of the Equipment and Operation

<u>Air Curtain Burners</u> are above ground refractory walled burn chambers that provide a high velocity curtain of air ("air curtain") over the top of the burn chamber. The air curtain acts like a lid trapping the PM rising from the fire with the intense hot gases and re-burning the PM until the particles are so small that they escape as a gas through the air curtain. (www.aircurtaintechnology.com).



The high velocity air curtain is created by an air fan powered by a small Diesel engine. Air curtain burners reach very high temperatures of 800°C -1200°C thereby achieving virtually a complete combustion of the wood waste. The residue consists of 2%-3% or less of residual ash that has beneficial use and is usually applied to the surrounding land. (97% to 98% of the wood waste is being totally eliminated. A larger FireBox, such as model S-327, has been designed to eliminate 10-12 tons per hour.

<u>Wood Grinders</u>, such as horizontal or tub grinders were designed to facilitate the transportation of wood debris, not to eliminate it. It was the objective to grind or chip the wood debris into smaller pieces so more weight would fit onto a truck for hauling it to a location for final disposal or storage. The function of the grinders therefore is to provide an interim process, not a final disposal solution. Grinders are powered by large high horse power Diesel engines that drive massive mechanisms which cut or hammer the wood debris into small pieces commonly referred to as chips or mulch. The mechanism is quite susceptible to breakdowns, because objects, such as chunks of stones or metal which often are inadvertently loaded with the wood waste cannot be tolerated well. Rocks, stones and metal are of no concern for the ACB. This is actually the main reason why it is so preferred for getting rid of root balls.

For a comparison of the commercial or cost related aspects of the two methods (next section), the most important single distinction is the fact that the air curtain burner offers an end solution for wood waste disposal whereas the grinder offers only an <u>interim process</u> facilitating the transport of the woody debris. This process does not eliminate the waste, as the air curtain burner does.

## **ECONOMICS**

#### G. Economics

One of the major benefits of the Air Curtain FireBox: it is a preferred environmental solution that provides an economic benefit to the operator. It is not often that you can have a machine that will benefit the environment and also provides an economic incentive for its use. The Air Burners FireBox is just that machine as demonstrated in the chart below.

Cost Comparison Example for the Disposal of 100 Tons of Wood Waste Air Curtain Burning vs. Grinding vs. Landfill Dumping							
	S-220 Air Curtain Burning	Grinding & Trucking Landfill Disposal	Direct Landfill Hauling & Disposal				
Operating Costs							
Fuel Cost: ACB 10 hours or 39 gals (106L) Grinder: 6 hours or 138 gals (500 L)	\$146	\$517	:=)				
Maintenance: S-220 \$0.75/hr Grinder \$16.00/hr	\$10	\$102	ye.;				
Hauling of Residual to Landfill 25 mile (40km) one way / 50 miles (80km) round trip @ \$4.00/mile with 20-ton Dump Truck	0	\$4,000 (20 Loads)	\$7,000 (35 Loads)				
Tipping Fees at Landfill or other Mulch Disposal Cost (\$10 per Ton)	0	\$980 (Note 4)	\$1,000				
Total Disposal Cost for 100 Tons (400 m³)	\$156	\$5,597	\$8,000				

#### NOTES:

- 1) Individual results may vary.
- 2) HP to fuel consumption approx. hp × 0.05=FC in UD Gals/hr.
- 3) Grinder: HP is 450, i.e. Vermeer HG4000. Diesel Fuel cost \$3.75/USgal.
- 4) It is assumed that chips cannot be reasonably sold for beneficial re-use.
- 5) Grinding process and mulch handling and transporting produces significant amounts of particulate matter (PM) in the form of wood dust (also PM) that can cause serious illness in exposed workers. Wood dust is a proven carcinogenic (cancer-causing). Mulch losses, in form of wood dust and spillage are approx. 2% or 2 tons in this example. Only 98 tons of wood chips are transported and dumped.
- 6) Air Curtain Burner residual is 2-3 tons of ash, is usually land-applied on site; Grinder output yields no weight reduction, but does provide significant volume reduction. In this example, waste is hauled by at least 20 trucks each carrying approximately 17m3 or 5-6 tons.
- 7) Direct hauling of land clearing wood waste to landfill will require approximately 35 trucks.
- 8) Loading cost is not considered, as the same machine would be used for any of the options.
- 9) The S-220 is a medium size above ground refractory walled firebox. Larger and smaller models are also available. See www.AirBurners.com

comparison of air curtain burners to grinders is really quite flawed: the FireBox offers an *end solution*; the waste is eliminated. The grinder in contrast thereto is only an *interim step*, a tool to facilitate the transport of the wood waste to the ultimate disposal location. Whenever the two methods are compared, whether from the standpoint of economics or environmental friendliness, the cost and the pollution from the transport vehicles must be factored into the equations. Only then a true and useful comparison can be drawn. The air curtain FireBox will be superior every time by margins so wide, that those voices wanting to argue the finer points of the above comparisons will be swiftly muted.

A quick discussion regarding the residual products of the two disposal methods is worthwhile. Forest fires burning vegetative waste represent a natural process that has been going on since the beginning of time. A lightning bolt strikes the ground, a wildfire starts and the forest floor is cleared of dead limbs, pathogens, insects and nutrient-robbing undergrowth. The ash becomes a beneficial soil amendment. The burning of wood waste in the FireBox replicates the burning of woody material by natural forest fires, but without the smoke, the FireBox ash becomes a beneficial soil amendment. Because the ashes have a high pH, they are also useful as an additive to the daily landfill cover at a commercial landfill site further augmenting the overall cost savings enjoyed by the use of the FireBox.

The mulch from the grinder, on the other side, more often than not poses a real commercial and environmental problem. The grinding and hauling is expensive, tipping fees can be high and the mulch hardly ever has a beneficial (commercial) use. Typical mulch grindings may include, seeds of invasive species plants, insect larvae, inorganics, mold spores and termites. The mulch is still a waste product, and it costs money to dispose of waste. For the environmentalist charged to safeguard our environment there are several concerns. First, a major problem across the US is the safety and pollution issue from the spontaneous combustion of larger mulch piles. They tend to smolder for many months with no good way to extinguish the fire. Second, the mulch will go septic from natural decomposition. That causes discharges of leachate that are undesirable, as they enter the ground drinking water table. Finally, mulch piles can attract rodents and other pests and when used as landscape material, the mulch can alter the ground ecosystem or even bring pests to homes, if scattered near them. The US Forest Service has long recognized the detrimental effect of mulch deposited on the forest floor and heavily restricts the amount of mulch that can remain from cutting operations.



H. Energy Recovery

### from the FireBox

The Air Burners FireBox has an optional heat recovery system that allows the operator to utilize waste heat for other purposes, such as kiln drying and heating facilities. In late 2012 the PowerGen FireBox will be available. Currently in testing this self-contained Biomass power generating system will produce electricity from the waste wood. In addition, the system is portable allowing users to "follow the waste", again reducing the environmentally damaging and costly transportation component. You can read more about this exciting new product on our website at <a href="https://www.powergenfirebox.com">www.powergenfirebox.com</a>.



### I. Conclusion

The Air Burners FireBox is a well proven and tested technology that delivers benefits to both the corporate budget and the environment. From an environmental standpoint we need to embrace technology that incentivizes the user to protect our environment. From a corporate budget standpoint you can purchase the FireBox for less than a competing grinder and you now have the "end solution".

A comparison of two common methods for the disposal of wood debris has been: (1) Air Curtain FireBox versus (2) grinder and associated trucking option where the ground mulch is hauled to a remote location for ultimate disposal.

The air curtain option is superior both from the economics of the operation and the protection of the environment. In every instance, grinding the waste and hauling it away will be considerably more costly and will release a higher level of undesirable pollutants. Protecting the environment and saving money is a winning combination.

### J. References

### 1. Diesel Engine Emissions Calculations:

US EPA AP42, Section 3.3 "Gasoline and Diesel Engines", Los Alamos National Laboratory (LANL/US Energy Dept.): "Air Curtain Destructors, General Description of Source Category".

### 2. Air Curtain Burner PM Emissions Calculations:

A) <u>USDA-Forest Service</u>: Reducing PM2.5 Emissions Through Technology, Results from a Recent Study Evaluating the Effectiveness of an Air Curtain Incinerator. Fountainhead Engineering: Air Burners S-327 Emissions Test Report US EPA Chalmette, Louisiana Air Curtain Burner Test (S-327)

### B) Grinder PM Emissions Calculations:

State of California BAAQMD Regulation 6-301 and BAAQMD Condition #6385 part 4. Ringelmann 1/20% opacity; BAAQMD Regulation 6-311: E=0.026(P^0.67) where E=allowable emission rate (PM, lb/hr) and P=wood process rate (lb/hr)

### C) Air curtain Burner Technical Data:

www.airburners.com

### D) Grinder Technical Data:

Generic literature accessible at www.google.com

### K. Appendix

- 1. Air Burners, Inc. FireBox Brochure
- 2. FireBox Specifications for S-327 and S-220
- 3. Air Burners, Inc. MSRP Price Sheet (US)

\* \* \* \* \*



"We take the Payne out of your site projects."

## Terry E. Payne

1311 US Highway 301 S Tampa, FL 33619 Phone: 813-677-6822

Email: PAYNESTREES@CS.COM

# Certified Arborist Certified Pile Burner

Education

**Arborist Certification** 

2007 - University of Florida - Hillsborough County Extension Office

**HAZMAT** 

2003 - Tampa Rescue

Safety Officer

1998 - Alamo Safety Officer Course - San Antonio, TX

**BMP Certification (Best Management Practices of Florida)** 

2011 State of Florida Course AS/Emergency Medicine

1998

**Paramedic** 

1998 - 2000 University of Texas UTSA

**Professional** 

2001 - Present

Payne's Environmental Services

Project Manager / Arborist / Certified Pile Burner

2005 - 2007

**Tampa General Hospital** 

**Aero Medical Transport** 

Flight Paramedic (Critical Care)

1997 – 2001

U.S. Army

**Combat Medic (Medical Non-Commissioned Officer)** 

Professional Contractors Affiliation NAGC – National Association of Government ISA – international Society of Arboriculture BMP – Best Management Practices of Florida

**Experience Cont...** 

**2001 – Present** (Hillsborough and Florida Counties)
Tree Pruning, Tree Removal, Pile Burning, Box Burning

Stump Grinding, Land Management

Land Clearing, Loading & Hauling of Debris

**Experience** 

**Emergency Disaster Response** 

Hurricane Clean-up

Hazardous Tree Removal & Debris

Debris Reduction, Pile Burning, Box Burning & Site Management

**Construction & Environmental Services** 

Land Clearing (500 + acres)

Structural Demolition Excavating Services

Environmental Clean-up & Restorative Services

Install Precast Concrete Wall System

**TV Appearances** 

**ABC Action News Hurricane Awareness Special (2008)** 

**Professional Guest speaker** 

Provided expertise on preparing for the upcoming hurricane season

**ABC Action News Charitable Story (2007)** 

Payne's Tree and Hauling donated time and planted trees for an elderly woman conned

by other company resulting in bankruptcy

Additional Certifications

FEMA Certifications

IS-00100.FW; Introduction to the Incident Command System

IS-00200.FW; Basic Incident Command System IS-700; National Incident Management System

**OSHA Certified** 

2008 - Aerial Lift operation, Construction Services

2004 Certificate of Recognition - City of Tampa (Mayor Iorio)

Provided services to Tampa during Hurricanes (Charley, Frances, Ivan, and Jeanne)

AWARDS: Soldier of the Year 1998 (Brooke Army Medical Center, Ft. Sam Houston, TX)



Payne's
Environmental
On Site Box
Burning as of
November 12,
2017



### Job Supervisor / Project Manager

### **Pete Gonzalez**

1311 US Highway 301 S
Tampa, FL 33619
Phone: 813-677-6822
Email: P.gonzalez@paynesenvironmental.com

### **SUMMARY:**

Remarkably strong and resourceful project manager with over nine years' experience in debris removal, tree trimming and management service.

### **Professional Experience**

Payne's Environmental Services, Tampa, FL 2009 - Present

### **Project Manager**

- Trim and prune trees using an aerial lift and through skilled climbing to provide clearance of streets, sidewalks, signs and lights as well as to ensure the continued health of the tree.
- Perform ground trimming.
- Identify equipment needs for each assigned project; clean and maintain climbing and trimming equipment.
- Operate tree trimming and maintenance equipment such as aerial boom trucks, chippers, stump grinders, dump trucks, and power tools such as chain saws.
- Remove fallen trees, stumps, fallen limbs and related debris resulting from storm damage and general conditions.
- Spray trees as needed.
- Plant, stake and maintain trees on city owned property and in the public right of way.
- Respond to requests and inquiries from the general public.
- Utilize proper safety precautions related to all work performed.
- Perform general park maintenance work when not to tree trimming duties.
- Build and maintain positive working relationships with coworkers, other city employees and the public using principles of good customer service.
- Perform related duties as assigned

### 2012 Hurricane Irene / Project manager

Carteret County, NC – Vegetative reduction & disposal

- Managed and recorded daily logs of debris pick-up.
- Coordinated weekly safety meetings.
- Supervised all C&D debris pick-up activity.
- Supervised all vegetative grinding activity.

### 2011 Alabama Tornado / Project manager

Jackson County Dekalb County, AL - Debris removal

- Coordinated debris pick-up with County Engineer.
- Maintained photographs of tree trimming.
- Managed and recorded daily logs of debris pick-up.
- Coordinated weekly safety meetings.
- Supervised all debris pick-up activity.
- Corresponded with home office regarding day to day progress and activity.
- Entered daily haul-in tickets using Microsoft Excel.
- Kept client updated daily with all debris removal activity.

### 2010 Deep Water Horizon BP Oil Spill

Pensacola Beach, FL / Project manager

- Coordinated oil pick-up with BP engineers.
- Maintained photographs Oil cleanup.
- Managed and recorded daily logs of cleanup.
- Coordinated weekly safety meetings.
- Corresponded with home office regarding day to day progress and activity.
- Entered daily haul-in tickets using Microsoft Excel.
- Kept client updated daily with all debris removal activity.



Payne's
Environmental
On Site Box
Burning as of
November 12,
2017



"We take the Payne out of your site projects."

### Annette Payne 2421 Arbor Wood Dr. Valrico, FL 33596 813-486-6847

Education

1998-2002 Bloomington High School

2002-2003—Hillsborough County Community College

2007-Present---University of Phoenix

### **Employment History**

CEO

### Payne's Environmental Services

Responsible for all functioning administrative tasks to include scheduling, customer service, accounts payable and receivable. Managed the preparation and maintenance of all employee records, payroll, and cash deposits. Managed customer complaints to achieve positive results and ensured a smooth working environment.

Claims Rep

### **Progressive Insurance Company**

Served as the first point of contact for inbound claim report phone calls. Gathered necessary information, reviewed policy detail, and scheduled callbacks from the assigned claim handler. Worked to provide excellent customer service in a team driven environment.

### **Professional Skills**

Microsoft Office Filing/Editing
Microsoft Windows PEM Software
Lotus 1-2-3 Filing/Editing
Microsoft Word Office Procedures
Microsoft Excel Typing (55+ wpm)
Business Math Business English
Customer Service Skills QuickBooks



### "We take the Payne out of your site projects."

### **Ronnie Sewell**

2321 Crosby Rd Valrico, FL 33596 Phone: 813-677-6822 Cell: 813-919-3455

Email: Paynestrees@cs.com

### **Qualifications:**

- Logging, land clearing, house demo, burning from 1985 to present
- > Active in the Agricultural Industries from 1980 to present

### **Education:**

> 1980 Brandon High School

### **Employment:**

Payne's Environmental Services LLC. 2006- present

- > Tree trimming, removal, stump grinding, land clearing, and landscaping
- ➤ GMR 1994-2006
- > Crane operator and foreman for large crew
- ➤ Southern Pine Timber Products 1996-2006
- > Supervisor in logging and timber procurement

### **Certifications:**

- ➤ OSHA Certified Aerial Lift operator
- ➤ Certified Line Clearance Top Climber
- > Certified Tree Climber





CG-CG09962 # CU-CG57369 PC-CG56774 Tile Protection System Co., books V

1409 Fech Boulevard, Suite 1 - Tampa, Rorlda 33619-7843 - (813) 623-6777 - Fax (813) 663-6724 - www.iiparampa.com

John L. Flinn, Jr. Ripa & Associates, LLC 1409 Tech Blvd, Suite 1 Tampa, FL 33619 11/9/17

To Whom It May Concern:

Please allow this to serve as a letter of recommendation for Payne's Environmental Services. It is both an honor and privilege to recommend the services of Payne's Environmental. They are our premier clearing contractor of choice, and have been over the past 12 years. I have been directly involved in overseeing the majority of projects that Payne's has performed for Ripa.

Payne's Environmental has developed and implemented a custom and highly efficient process that allows them to incinerate land clearing & vegetative debris. This custom incinerator allows Payne's to climinate 90% of the emissions created during the burning process. This, combined with their staff's expertise, allows Payne's Environmental to burn where other contractors cannot. Payne's is a valuable member of our project team, allowing us to safely and efficiently get the job done on time.

In addition to their field capabilities and customized equipment, Payne's has developed invaluable relationships with local government agencies. Their relationships with FDEP, Hillsborough County Environmental Commission, and the Florida Forest Service has allowed us to deliver a level of customer service to our end customer that is second to none. These relationships allow for a seamless operation from start to finish, as well as an expedited problem-solving process when necessary. I would recommend Payne's services to any entity looking for a professional, courteous, and knowledgeable staff to complete any clearing project in a expedited manner.

Please feel free to contact me with any specific questions or if you require additional information.

Sincerely,

John L. Fline, Jr.

Vice President / Director of Project Management



CG-CG9082 - CU LUs7/62 PG-C066774 Fire Protection System Contractor V

1439 Fech Boulevard, Suite 1 • Tarman Florida 33619-7843 • (813) 623-6777 • Fax (813) 643-6774 • www.openfarest.com.

February 20, 2014

### To Whom It May Concern:

This letter is to serve as reference for the work performed by Payne's Environmental for RIPA & Associates. RIPA builds projects ranging from \$500,000 to \$20,000,000 and the successes of our projects rely largely on safety, competency and time management. I am happy to say that Payne's meets and exceeds those standards in relation to Arboriculture.

Payne's Environmental has been a sub-contractor for Ripa since 2008 and when contracted has played a vital role in our projects. Terry Payne, Certified Arborist personally monitors projects and gets involved so that all of the municipal tree codes are strictly followed. The work completed by Payne's is always of top quality even when given a moment's notice and completed on schedule keeping Ripa in compliance and maintaining a smooth operation.

I would confidently recommend Payne's Environmental for any Forestry related task. Payno's schedule is always accommodating and the job is always done right. Please feel free to contact me via small or at the number shown below for additional information, if needed.

Regards

Chris Lakace, President

email: claface@ripatampa.com

phone: 813-623-6777



JMJ Site Development, Inc. 7825 Lithia Pinecrest Road #1095 Lithia, Florida 33547

November 11, 2017

To Whom It May Concern:

As the President of JMJ Site Development Inc., I am pleased to recommend Payne's Environmental Services LLC for all clearing applications most specifically for their incinerator burning operations. JMJ had a 6.95 Acre site that we were building an LA Fitness facility on in New Tampa which was heavily laden with large oak trees and surrounded by wetlands on all sides. Payne's was efficient in their clearing and staging of the trees and their incinerator burning curtain was marveled by all those who watched their operation. The burning process was swift and efficient and left little organic refuse that needed to be hauled off to the appropriate dumping facilities.

In short, Payne's was professional, efficient and effective with their incinerator operation and we would highly recommend them for your project. Should you have any further questions in this regard, please do not he sitate to reach out to me at 813-927-2484...

Jeff M. Jonguin

President

JMJ Site Development Inc. CGC #1519567, CUC #1225117

"For what will it profit a man if he gains the whole world and forfeits his soul?" Matthew 16:26

P.O. Box 1095, Lithia, Florida 33547 (813) 927-2484



CG-CD2087 - CUIC/15/249 Tro-CD56/44 Fige-Protection System Conduction V

1409 Tech Baufevard, Solte: 1 + Tampa, Ficalda: 33519-7843 + (813): 573-5777 + Fax: (813): 563-5724 - www.nti-diagraphicans.

February 20, 2014

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I would confidently recommend Payne's Environmental for any Forestry related task. Payne's schedule is always accommodating and the job is always done right. Please feel free to contact me via email or at the number shown below for additional information, if needed.

Regards.

Chris LaFace, President

email: claface@ripatampa.com

phone: 813-623-6777



Feb 26, 2008

Payne's Environmental LLC 1311 US. Hwy 301 S. TAMPA, FL 33619

Dear Mr Payne,

I am writing to express my satisfaction with Payne's Environmental job performance related to the 2008 Ice storm debris clean-up. Although a sub-contractor Payne's environmental quickly responded with lightning speed to our needs as if they held the prime contract and provided our town with equipment and crews for the clean up process.

Approximately 120,000 cubic yards of debris were picked up off our streets. We have received numerous calls from residents complimenting their work. Payne's Environmental was responsible for tree trimming, tree removal, and debris pick up from the right of way.

I would hire your company again. Please feel free to use me as a reference 270-256-7232. Job well done

Respectfully

Brenda Ford

Project Supervisor Ohio County, KY

Commonwealth of Kentucky D.O.T

## **Letters or Recommendation**



Oct 16, 2011

Payne's Environmental Services 1131 U.S Highway 301 South Suite 1 Tampa, FL 33619

To whom it may concern:

I am writing this letter of recommendation for Payne's Environmental. I have been working at Lakeland Regional Airport since August 2011 as Project Manager for a large solar installation and needed to hire a professional tree contractor. After receiving proposals from 7 companies the choice was obvious to me as a construction professional. Payne's Environmental was chosen for the following reasons:

- 1] Competitive pricing
- 2] Complete proposal package
- 3] Proper Insurance
- 4] State of the art equipment
- 5] Qualified personnel
- 6] Safety Oriented with OSHA guidelines and practices in place
- 7] Attention to detail
- 8] Delivered all that was promised and then some
- 9] Environmentally conscious &
- 10] Extremely easy to work with

Terry performed all of the tasks beyond my expectations. Terry goes the extra mile. Terry seeks solutions and is results oriented. Terry made me feel at home and extremely comfortable making sure that I believed every dollar spent was well spent. Since our working relationship has developed Terry has landed a couple of more projects at the Airport. SunEdison has placed Payne's Environmental on our preferred contractor list and we look forward to having Terry work with us in upcoming projects in the Lakeland area or wherever we are.

I am available by phone to address any questions or qualifying information you may seek.

Respectfully;

Frank A. Bussi-Soutte Project Manager Utility PV SunEdison 443,821,5409

1515 Wazee St. Suito #380 Denver, CO 80202 (443) 821-5409 fbussisottile@sunedison.com



CG-C009062 CU-C057369 PC-C056774 Fire Protection System Contractor V

1409 Tech Boulevard, Suite 1 Tampa, FL 33515 (813) 623-6777 FAX (813)663-5724 www.ripatampa.com

January 6, 2011

Payne's Environmental Services, LLC 1311 U.S Highway 301 South Tampa, FL 33619

Subject: Letter of Recommendation

Please accept this letter of recommendation from Ripa & Associates on behalf of Payne's Environmental Services regarding municipal disaster management / Tree services. Payne's has been a valued subcontractor for Ripa & Associates for several years.

Ripa & Associates is a highly experienced and successful privately-owned construction company that provides civil and utility construction service to owners, developers and general contractors on their residential, commercial and industrial projects located throughout Central Florida. We regularly engage Payne's Environmental to perform both large and small scale clearing and grubbing projects for our site development projects.

Payne's environmental has performed at a consistently high level delivering prompt and professional work product and contracting services which in many cases are complex and challenging. We depend on Payne's as well to provide specialty clearing, Tree Trimming, Root Pruning, Tee Climbing, and other similar services which require a high level of competence and precision.

In our experience, we have been extremely satisfied with the professional and timely services provided by Payne's Environmental and would highly recommend Payne's to local municipalities, and Federal Government agencies for management tree services.

Please forward this letter of recommendation to any relevant parties and as always I remain available for any further personal discussions related to this recommendation at the provided contact number.

Regards.

David E Campo

Director of Corporate Development



4321 US 301 North Tampa, FL 3351 813-626-7368 or 888-709-NEFF FAX: 813-621-9284

December 29, 2010

To Whom it May Concern:

This letter serves as our positive recommendation for Payne's Environmental Services, LLC.

Payrie's Environmental has had an account with our company since 2009 and has always been an excellent customer. Neff Rental has the ability to provide Payrie's with any equipment needs that may arise in the accomplishment of any size site project.

We have never had an issue with their account and look forward to working together in the future. Please contact me with any questions.

Healthy Regards,



### VOLVO RENTS INDEPENDENTLY OWNED & OPERATED BY CASCO RENTAL, LLC LOCATED 517 SOUTH FALKENBURG, TAMPA FL. 33619 PHONE 813-655-7733 FAX 655-2722

December 14, 2010

To Whom It May Concern:

I would like to take an opportunity to offer a formal recommendation for Payne's Environmental Services located in Tampa, Florida.

They have had an account with our company for over a year and have been and continue to be an excellent customer.

There has never been an issue with their account. Payne's Environmental Services has access to rent any of our equipment.

If you have any questions, do not hesitate to contact me,

Best Regards,

le mett. Oshorn

Jeanette Osborn

Office Manager, Assistant Controller

Casco Rental - Volvo Rents Tampa

joshorma vienis us



8507 S, WINN RD | PO BOX 1000 WINN, MICHIGAN 48896 ( 989) 866-2381 | F. (989) 866-2280 | www.morbark.com.

February 24, 2014

To Whom It May Concern,

Morbark Model D76 Stump Grinder, s/n H791-0058 was specially designed for Payne Environmental. Morbark, Inc. fully intends to support this machine 100% for any service work that may arise in the future. We have a long standing relationship with Mr. Payne and will continue to support him with any equipment needs.

If you have any questions, please do not hesitate to call our office.

Best Regards,

Kevin Edwards Regional Sales Manager Morbark Inc. 800/831-0042

# **Membership & Organization**

Payne's Environmental Services, LLC are active members in many organizations. Below is a slight look at what makes us top performers in tree service.













**FEMA** 



# Types / Description of Services



#### Stump Removal & Grinding

Tree stump grinding is an essential step when providing tree removal services. A stump left behind will eventually rot away, which will leave weakened area in the ground. This is particularly hazardous if the area has been built upon or is in the vicinity of high pedestrian or vehicle traffic. Payne's Environmental has the experienced tree removal specialists to provide the tree stump grinding services that will leave your property safe. Our teams are specially trained in the proper use of heavy-duty equipment for the thorough grinding of tree stumps.

#### Tree Trimming

We understand that there's more to tree trimming than simply chopping off a few branches. Pruning should keep branches from damaging property or affecting wires, but it should also create a clean, well-maintained look for your property and should be performed according to specific tree trimming procedures to avoid the damage and safety hazards caused by freefalling branches and improper climbing methods. The experienced tree trimmers at Payne's Environmental follow a 1,000 page safety manual and perform all pruning according to OSHA and ANSI A300 guidelines, the safety and pruning practices outlined by the International Society of Arboriculture

#### Tree Removal

All Payne's Environmental employees are highly trained in tree removal, and we continue to keep them up to date with the latest regulations and techniques. In fact, we recently changed our uniforms from our signature red color to fluorescent orange to enhance the visibility of our workers and maintain OSHA compliance. We use only top-of-the-line equipment and assess the School Board's situation individually to ensure that what we use perfectly suits the job at hand.

• Emergency Debris / Tree Removal & Disposal / All Types of Burning
When hurricanes, floods, tornadoes, and other disasters have devastating effects,
comprehensive disaster recovery services from Payne's Environmental Services,
LLC are the quick and organized response communities need to get life back in
order. We can handle nearly every aspect of disaster clean up from the initial
roadway clearing to the hauling away of reduced debris and debris management to
tree cleanup. We have the fleet of trucks, manpower, Pit Burners, Box Burners,
loaders, lifts, tub grinders, and more to get the job done quickly and effectively.

#### Tree Climbing

We have been serving Florida with professional, safety-oriented tree climbing for many years, and our experienced team has the knowledge and state-of-the-art equipment to handle any tree climbing job of any size.

#### Tree Pruning

Tree pruning seems simple, but a tree that is trimmed without the proper knowledge of safe pruning practices and the particular characteristics of the tree's species can result in irreparable damage to the health of the tree. Payne's Environmental is the experienced tree pruning company that your School district trusts to prevent these kinds of unfortunate results. Our tree pruning service always adheres to International Society of Arboriculture's ANSI A300 guidelines, and we have the additional benefit of a certified arborist (FL6027A) on staff to ensure the life trees we service and even surrounding trees are not taken for granted.

# Safety & Health Plan



Payne's Environmental Services, LLC recognizes its responsibility to establish and maintain safety procedures for all activities. Protection of individuals, property and the environment is our priority and the primary purpose of our Health & Safety Program. This program applies to those persons and properties directly and indirectly involved in the activities of our Company; subcontracted personnel, the general public, Payne's Environmental site office location.

The plan provides guidelines for selected health and safety issues. Although every endeavor, both on and off-site, involves some degree of consideration for worker protection and safety, the objective of this plan is to provide direction in these areas in which this Company primarily operates.

To prevent injuries, acute and chronic health effects, the following general safe work practices are to be followed when dealing with known hazards. These general safe working practices should establish a pattern of general precautionary measures for reducing the risks associated with operation.

As with all Payne's Environmental programs, this Safety & Health Plan is designed to foster and support a safety attitude in every employee. The safety program places the responsibility for individual safety with the individual; and responsibility for supplying equipment, safeguards knowledge, and operating skills with our supervision.

Payne's Environmental Services, LLC employees are the most important, and costly of its investments. Protection of his investment by adherence to the policies in the Safety & Health Plan is a significant part of each employee's responsibility. Below is a group of bullet points that are found in our Safety & Health Plan's table of contents:

- Management Commitment
- Bucket Truck training
- Safety Organization
- Safety and Health Training
- Medical Surveillance Program
- Accident Investigation
- Hazard Communication Program
- Respiratory Protection Program
- Office and Shop Safety
- Used Oil Management Plan

- Traffic Work Zone Safety
- Emergency Action Plan
- Fall Protection

Safety Incentive Plan Hearing Conservation

- Het Work Procedures
- Chain Saw protection training
- Box Burning Safety Procedures
- Pit Burning Safety procedures
- Open Burning safety Procedures

Payne's Environmental Services, LLC personnel participate in a Health & Safety program that consists of training, medical monitoring and substance abuse monitoring.

The health and safety of our employees, subcontractors and clients is a top priority at Payne's Environmental. Payne's Environmental has an in-place and proven Safety & Health program that has been rigorously developed since our inception. Its effectiveness can be measured simply by statistics

A core component of the Payne's Environmental Safety & Health program is our comprehensive Medical Monitoring Program that exceeds industry standards and is aimed at ensuring long-term employee health. Payne's Environmental also utilizes a substance abuse monitoring system in order to maintain a drug and alcohol free workplace.

Prior to commencing any on-site work, Payne's Environmental Services, LLC prepares a Safety & Health Plan. The plan outlines procedures and preventative measures that will protect human health and the environment. Included are precautions to safeguard against fire, explosion and mechanical hazards which may exist during response, clean-up, remediation and disposal activities.

The objective is to prevent injuries, occupational illness and unwarranted property losses, and to comply with all applicable laws and regulations. Emphasis is placed on individual awareness, appropriate personal protective equipment (PPE) and baseline monitoring and decontamination procedures. The on-scene Safety Officer is responsible for enforcing strict adherence to the plan. Our Safety Plan includes maintenance of a certified drug and alcohol free workplace.

#### SITE-SPECIFIC HEALTH AND SAFETY PLAN (SSHP)

Payne's Environmental Services, LLC recognizes that each job site is unique. Therefore, a SSHP is developed with the objective of presenting a comprehensive set of engineering, administrative, and behavioral requirements to ensure safety during site operations. The plan covers the following topics:

- Site characteristics
- General safe work practices
- Level of personal protective equipment (PPE)
- On-site communications
- Site security and access control
- Use of control zones
- Site organization
- Emergency procedures
- Other site spedific issues

The plan is supplemented by daily toolbox safety briefings completed by site supervisors and safety personnel. These meetings are an integral part of assuring employees, subcontractors, and clients the safest working environment possible everyday.

#### **SAFETY**

When necessary, Payne's Environmental Services, LLC has a safety committee that meets once a week to discuss safety concerns, project performance, recent injuries, training, and future goals. The committee is comprised of corporate level management, including Payne's Environmental Services, LLC health and safety manager.

#### **DAILY MEETINGS**

Payne's Environmental Services, LLC holds safety meetings daily at each project site to discuss any physical or chemical hazards, equipment, and necessary personal protection that may be needed during the work day. Payne's Environmental project supervision conducts these meetings with direct guidance from the health and safety manager. The daily safety meetings ensure that our personnel are in compliance with state and federal regulations as well as Payne's Environmental safety guidelines.

#### **CONTINUOUS TRAINING**

Payne's Environmental Services, LLC understands that training is essential for our personnel, subcontractors, and vendors to work efficiently and safety on-site. We are committed to continuous health and safety training by providing our personnel with classes focusing on workplace hazards, safety practices, regulatory requirements, company policies, and proper use of equipment. These components help ensure that work is done safely and efficiently on project sites.

### Drug-free Workplace Program

- Payne's Environmental will publish a statement notifying employees that the unlawful manufacture, distribution, dispensing, possession, or use of a controlled substance is prohibited in the workplace and specifying the actions that will be taken against employees for violations of such prohibition.
- 2) Payne's Environmental will Inform employees about the dangers of drug abuse in the workplace, the business's policy of maintaining a drug-free workplace, any available drug counseling, rehabilitation, and employee assistance programs, and the penalties that may be imposed upon employees for drug abuse violations.
- 3) Give each employee engaged in providing the commodities or contractual services that are under bid a copy of the statement specified in subsection (1).
- 4) In the statement specified in subsection (1), notify the employees that, as a condition of working on the commodities or contractual services that are under bid, the employee will abide by the terms of the statement and will notify the employer of any conviction of, or plea of guilty of nolo contendere to, any violation of chapter 893 or of any controlled substance law of the United States or any state, for a violation occurring in the workplace no later than five (5) days after such conviction.
- 5) Impose a sanction on, or require the satisfactory participation in a drug abuse assistance or rehabilitation program if such is available in the employee's community, by any employee who is so convicted.
- 6) Make a good faith effort to continue to maintain a drug-free workplace through implementation of this section.

As the person authorized to sign the statement, I certify that this firm complies fully with the above

Approved by:

Date: November 1, 2017

Terry Payne, President



RFP No.: 003-18

# HURRICANE IRMA VEGETATIVE DEBRIS BURN

October 25, 2017

MAYOR: CRAIG CATES

**COMMISSIONERS:** 

SAM KAUFMAN

JIMMY WEEKLEY

RICHARD PAYNE

**BILLY WARDLOW** 

**CLAYTON LOPEZ** 

MARGARET ROMERO

PREPARED BY: City of Key West Engineering Services

Page 1

# CITY OF KEY WEST KEY WEST, FLORIDA

**CONTRACT DOCUMENTS** 

for

HURRICANE IRMA VEGETATIVE DEBRIS BURN

\*\*\*\*

\*\*\*\*

KEY WEST, FLORIDA OCTOBER 25, 2017

RFP No.: 003-18

Page 2

#### INFORMATION TO BIDDERS

SUBJECT:

REQUEST FOR PROPOSAL No. 003-18

HURRICANE IRMA VEGETATIVE DEBRIS BURN

**ISSUE DATE:** 

OCTOBER 25, 2017

MAIL OR SPECIAL

**DELIVERY REPONSES TO:** 

CITY CLERK'S OFFICE CITY OF KEY WEST

1300 WHITE ST

KEY WEST, FL 33040

**DELIVER BIDS TO:** 

SAME AS ABOVE

PROPOSALS MUST BE

RECEIVED:

**NOVEMBER 13, 2017** 

NOT LATER THAN:

3:00 P.M. LOCAL TIME

DAVID SERMACK PURCHASING AGENT CITY OF KEY WEST

#### TABLE OF CONTENTS

#### PART 1 - PROPOSAL REQUIREMENTS AND FORMS

INVITATION TO BID
INSTRUCTIONS TO BIDDERS
PROPOSAL
FLORIDA BID BOND
ANTI - KICKBACK AFFIDAVIT
FLORIDA STATUTES, ON PUBLIC ENTITY CRIMES
INDEMNIFICATION FORM
DOMESTIC PARTNERSHIP AFFIDAVIT
CONE OF SILENCE AFFIDAVIT
CERTIFICATION REGARDING LOBBYING
BIDDER'S CHECKLIST

#### PART 2 - CONTRACT

OWNER-CONTRACTOR AGREEMENT FLORIDA PERFORMANCE BOND FLORIDA PAYMENT BOND

#### PART 3 - PHOTOGRAPHS AND SITE LOCUS

PART 4 - HURRICANE IRMA EMERGENCY AUTHORIZATION

# PART 1 PROPOSAL REQUIREMENTS AND FORMS

#### **INVITATION TO BID**

Sealed proposals for the City of Key West RFP No. 002-18 HURRICANE IRMA VEGETATIVE DEBRIS BURN, addressed to the City of Key West, will be received at the Office of the City Clerk, 1300 White St., Key West Florida, 33040 until 3:00 pm on November 13, 2017 and then will be publicly opened and read. Proposals received after the time and date specified will not be considered.

Please submit one (1) one original and (2) two flash drives with one single PDF file of the entire proposal package. Proposal package is to be enclosed in a sealed envelope, clearly marked on the outside "HURRICANE IRMA DEBRIS BURN FRP 003-18" addressed and delivered to the City Clerk at the address noted above.

The City of Key West is soliciting proposals for the disposal of vegetative debris collected from Hurricane Irma. The City has secured use of a Temporary Debris Management Site (TDMS) located at Rockland Key/Toppino Industrial Drive, where approximately 120,000 cubic yards of collected vegetative debris has been placed on a 10-acre site. The disposal method at the TDMS will be use of Air Curtain technology to thoroughly burn the vegetative debris while minimizing particulate emission during the processing stage.

A mandatory Pre-Proposal Meeting will be held 11:00 a.m. on Tuesday November 7, 2017 at the City Manager's Conference Room, Key West City Hall, 1300 White Street, Key West, Florida. A site visit will follow.

Drawings and Specifications may be obtained from Demand Star by Onvia or City of Key West website www.cityofkeywest-fl.gov). For bid package access on Demand Star, please contact Onvia at www.demandstar.com or call 1-800-711-1712.

The successful Proposer (Bidder) may be required to furnish the necessary additional bond(s) for the faithful performance of the Contract, as prescribed in the Bidding Documents. The Bidder will be required to furnish documentation showing that he is in compliance with the licensing requirements of the State and the provisions of Chapter 66 section 87 of the Code of Ordinances of the City of Key West. Compliance with these provisions is required before the Contractor can enter into the agreement contained in the Contract Documents. Specifically, Bidder shall demonstrate that he holds, as a minimum, the following licenses and certificates required by State Statute and local codes.

EACH BID MUST BE SUBMITTED ON THE PRESCRIBED FORM AND ACCOMPANIED BY BID SECURITY AS PRESCRIBED IN THE INSTRUCTIONS TO BIDDERS, PAYABLE TO THE CITY OF KEY WEST, FLORIDA, IN AN AMOUNT NOT LESS THAN FIVE (5) PERCENT OF THE AMOUNT BID.

# THE BIDDER MUST BE A LICENSED CONTRACTOR BY THE STATE OF FLORIDA AND SUBMIT PROOF OF SUCH WITH THE BID.

The Bidder shall furnish documentation showing that he is in compliance with the licensing requirements of the provisions of Chapter 66 Section 87 of the Code of Ordinances of the City of Key West; within 10 days following the Notice of Award and must demonstrate that he holds at a minimum, the following licenses & certificates:

- A. City of Key West Business Tax License Receipt
- B. A valid Certificate of Competency issued by the Chief Building Official of Key West, Florida.

All bid bonds, contract bonds, insurance contracts, and certificates of insurance shall be either executed by or countersigned by a licensed resident agent of the Surety or Insurance Company having his place of business in the State of Florida, and in all ways complying with the insurance laws of the State of Florida. Further, the said Surety or Insurance Company shall be duly licensed and qualified to do business in the State of Florida.

Before a Contract will be awarded for the work contemplated herein, the CITY will conduct such investigation as is necessary to determine the performance record and ability of the apparent low Bidder to perform the size and type of work specified under this Contract. Upon request, the Bidder shall submit such information as deemed necessary by the CITY to evaluate the Bidder's qualifications.

For information concerning the proposed work or for appointment to visit the site of the proposed work, contact Gary Volenec, Engineering Services Department for the City of Key West at <a href="mailto:evolenec@cityotkeywest-fl.gov">evolenec@cityotkeywest-fl.gov</a>. All questions/information requests must be in writing.

As stated above at the time of the bid submittal the Bidder must provide satisfactory documentation of State Licenses. The Bidder shall furnish documentation showing that he is in compliance with the licensing requirements of County, and City licenses as would be required within ten days of the award. The successful Bidder must also be able to satisfy the City Attorney as to such insurance coverage and legal requirements as may be demanded by the Bid in question. The City may reject bids for any and/or all of the following reasons: (1) for budgetary reasons, (2) if the bidder misstates or conceals a material fact in its bid, (3) if the bid does not strictly conform to the law or is non-responsive to the bid requirements, (4) if the bid is conditional, (5) if a change of circumstances occurs making the purpose of the bid unnecessary to the City, or (6) if such rejection is in the best interest of the City. The City may also waive any minor formalities or irregularities in any bid.

#### \*\*\*\*

#### CONTRACT DOCUMENTS

#### A. FORMAT

The Contract Documents are divided into parts, divisions, and sections for convenient organization and reference. Generally, there has been no attempt to divide the sections into work performed by the various building trades, work by separate subcontractors, or work required for separate facilities in the project.

#### B. DOCUMENT INTERPRETATION

The separate sections contained within these Contract Documents are intended to be mutually cooperative and to provide all details reasonably required for the execution of the proposed work.

Should there be any doubt as to the meaning or intent of said Contract Documents, the Bidder should request of Gary Volenec (gvolenec@cityofkeywest-fl.gov) in writing (at least 2 working days prior to bid opening) an interpretation thereof. Any interpretation or change in said Contract Documents will be made only in writing in the form of Addenda to the documents which will be furnished to all registered holders of Contract Documents. Bidders shall submit with their Proposals, or indicate receipt of, all Addenda. The CITY will not be responsible for any other explanation or interpretations of said Documents.

#### GENERAL DESCRIPTION OF THE PROJECT

The City of Key West is soliciting proposals for the disposal of vegetative debris collected from Hurricane Irma. The City is leasing a Temporary Debris Management Site (TDMS) located at

Rockland Key/Toppino Industrial Drive, where approximately 120,000 cubic yards of collected vegetative debris has been placed on a 10-acre site. The disposal method at the TDMS will be use of Air Curtain technology to thoroughly burn the vegetative debris while minimizing particulate emission during the processing stage.

The Bidder will provide all equipment, labor, materials, insurance, permitting and supplies to set up and maintain a 24 hour 7 day a week basis burn operation until all the material is reduced to ash. The Bidder will be responsible for the removal and disposal of all ash generated at a permitted authorized site. The Bidder will equip and staff the project to complete all burn activities, ash removal and site restoration (rough grading).

Contractor shall make every effort to comply with Florida Administrative Code 62-210.300(3)26.g;, specifically, visible emissions from the air curtain incinerator shall not exceed ten percent (10%) opacity, six (6) minute average, except for up to thirty (30) minutes during periods of startup when visible emissions up to thirty-five percent (35) opacity, six (6) minute average, shall be allowed. Visible emissions limitations shall not be considered unit-specific applicable requirements.

The City will designate an area for temporary placement of Bidder's temporary worker travel trailers if required. An elevated trench (berms) will be required to accommodate the burn operations due to high groundwater table at the TDMS.

Contractor shall renew Florida Forest Service authorization to burn daily by telephone to the Big Pine Key office Joe Cangeni 305-896-2392 or Amy Pulley 904-626-8345. An onsite inspection by the Big Pine office required prior to burn commencement.

Notice to Proceed will be issued following execution of agreement (including City required forms) between City and accepted Bidder.

#### QUALIFICATION OF CONTRACTORS

The prospective Bidders must meet the statutorily prescribed requirements before award of Contract by the CITY. Bidders must hold or obtain all licenses and/or certificates as required by the State and Local Statutes in order to bid and perform the work specified herein.

#### 4. BIDDER'S UNDERSTANDING

Each Bidder must inform himself of the conditions relating to the execution of the work, and it is assumed that he will inspect the site and make himself thoroughly familiar with all the Contract Documents. Failure to do so will not relieve the successful Bidder of his obligation to enter into a Contract and complete the contemplated work in strict accordance with the Contract Documents. It shall be the Bidder's obligation to verify for himself and to his complete satisfaction all information concerning site and subsurface conditions.

The CITY will make available to prospective Bidders upon request and at the office of the CITY Engineer, prior to bid opening, any information that he may have as to subsurface conditions and surface topography at the worksite.

Each Bidder shall inform himself of, and the Bidder awarded a Contract shall comply with, federal, state, and local laws, statutes, and ordinances relative to the execution of the work. This requirement includes, but is not limited to, applicable regulations concerning minimum wage rates, nondiscrimination in the employment of labor, protection of public and employee safety and health, environmental protection, the protection of natural resources, fire protection, burning and non-burning requirements, permits, fees, and similar subjects.

#### TYPE OF PROPOSAL

#### A. LUMP SUM

Proposal cost for the work is to be submitted on a lump sum basis. All items required to complete the work specified but not included in the Proposal shall be considered incidental to those set forth in the Proposal.

#### PREPARATION OF BIDS

#### A. GENERAL

All blank spaces in the BID form must be filled in, as required, preferably in BLACK ink. All price information shall be shown in both words and figures where required. No changes shall be made in the phraseology of the forms. Written amounts shall govern in case of discrepancy between the amounts stated in writing and the amounts stated in figures. In case of discrepancy between individual lump sum prices and extended totals, unit prices shall prevail.

Any BID shall be deemed informal which contains omissions, erasures, alterations, or additions of any kind, or prices uncalled for, or in which any of the prices are obviously unbalanced, or which in any manner shall fail to conform to the conditions of the published Invitation to Bid. Only one BID from any individual, firm, partnership, or corporation, under the same or different names, will be considered. Should it appear to the CITY that any Bidder is interested in more than one Proposal for work contemplated; all Proposals in which such Bidder is interested will be rejected.

#### B. SIGNATURE

The Bidder shall sign his BID in the blank space provided therefore. If Bidder is a corporation, the legal name of the corporation shall be set forth above, together with the signature of the officer or officers authorized to sign Contracts on behalf of the corporation. If Bidder is a partnership, the true name of the firm shall be set forth above, together with the signature of the partner or partners authorized to sign Contracts in behalf of the partnership. If signature is by an agent, other than an officer of a corporation or a member of a partnership, a notarized power-of-attorney must be on file with the CITY prior to opening of Proposals or submitted with the Proposal, otherwise the Proposal will be regarded as not properly authorized.

#### C. SPECIAL BIDDING REQUIREMENTS

The Bidder's attention is brought to the hiring practices and licenses and permits of the City of Key West. These are defined in the addition to Article 39, ORDINANCES, PERMITS, AND LICENSES, as set forth in the Supplementary Conditions.

The Bidder shall submit an experience record with the Proposal showing his experience and expertise in vegetative debris burning and disposal. Such experience record shall provide five current or recent projects of similar work, and preferably in the State of Florida. For each project the following information shall be provided:

- 1. Description and location of work.
- 2. Quantity burned and contract amount.
- Dates work was performed.

- 1. Lump Sum Price
- 2. Time (calendar days) to Complete Project
- 3. Qualifications including experience performing similar burn projects in Florida.
- 4. Draft Site Specific Burn Plan
- 5. Cost effective options/alternatives to on-site burning.

#### 14. EXECUTION OF CONTRACT

The successful Bidder shall, within five (5) working days after receiving Notice of Award, sign and deliver to the CITY an original Contract and two (2) copies in the form hereto attached, together with the insurance certificate examples of the bonds as required in the Contract Documents and evidence of holding required licenses and certificates. Within five (5) working days after receiving the signed Contract from the successful Bidder, the City's authorized agent will sign the Contract. Signature by both parties constitutes execution of the Contract.

The contract shall be executed on the basis on available funding and respective lump sum fee.

#### CONTRACT BONDS

#### A. PERFORMANCE AND PAYMENT BONDS

The successful Bidder shall file with the CITY, at the time of delivery of the signed Contract, a Performance Bond and Payment Bond on the form bound herewith, each in the full amount of the Contract price in accordance with the requirements of Florida Statutes Section 255.05 or 713.23, as applicable, as security for the faithful performance of the Contract and the payment of all persons supplying labor and materials for the construction of the work, and to cover all guarantees against defective workmanship or materials, or both, during the warranty period following the date of final acceptance of The work by the CITY. The Surety furnishing this bond shall have a sound financial standing and a record of service satisfactory to the CITY, shall be authorized to do business in the State of Florida, and shall be listed on the current U.S. Department of Treasury Circular Number 570, or amendments thereto in the Federal Register, of acceptable Sureties for federal projects. The CONTRACTOR shall supply the OWNER with phone numbers, addresses, and contacts for the Surety and their agents. Pursuant to Section 255.05(7), Florida Statutes, in lieu of the bond required by law, the contractor may file with the city an alternative form of security in the form of cash, a money order, a certified check, a cashier's check or an irrevocable letter of credit.

#### B. POWER-OF-ATTORNEY

The Attorney-in-Fact (Resident Agent) who executes this Performance and Payment Bond in behalf of the Surety must attach a notarized copy of his power-of-attorney as evidence of his authority to bind the Surety on the date of execution of the bond. All Contracts, Performance and Payment Bonds, and respective powers-of-attorney will have the same date.

#### FAILURE TO EXECUTE CONTRACT AND FURNISH BOND

The Bidder who has a Contract awarded to him and who fails to promptly and properly execute the Contract or furnish the required Bonds shall forfeit the bid security that accompanied his bid, and the bid security shall be retained as liquidated damages by the CITY, and it is agreed that this said sum is a fair estimate of the amount of damages the CITY will sustain in case the Bidder fails to enter into a Contract or furnish the required Bonds. Bid security deposited in the form of cash, a certified check, or cashier's check shall be subject to the same requirement as a Bid Bond.

## 17. PERFORMANCE OF WORK BY CONTRACTOR

Each Bidder must furnish with his Proposal a list of the items that he will perform with his own forces and the estimated total cost of these items.

#### TIME OF COMPLETION

The time of completion of the work to be performed under this Contract is the essence of the Contract. Delays and extensions of time may be allowed in accordance with the provisions stated in the General Conditions.

When the Contractor receives a Notice to Proceed, he shall commence work within 14 calendar days and shall complete all work within the number of calendar days stipulated in their Proposal.

\*\*\*\*

#### **PROPOSAL**

NOTE TO BIDDER: Use preferably BLACK ink for completing this Proposal form.

To:

The City of Key West

Address:

1300 White St, Key West, Florida 33040

Project Title:

HURRICANE IRMA VEGETATIVE DEBRIS BURN

Bidder's contact person for additional information on this Proposal:

Company Name: Payne's Environmental Services, LLC

Contact Name & Telephone #: Terrence Payne - 813-677-6822

Email Address: paynestrees @cs.com

#### BIDDER'S DECLARATION AND UNDERSTANDING

The undersigned, hereinafter called the Bidder, declares that the only persons or parties interested in this Proposal are those named herein, that this Proposal is, in all respects, fair and without fraud, that it is made without collusion with any official of the Owner, and that the Proposal is made without any connection or collusion with any person submitting another Proposal on this Contract.

The Bidder further declares that he has carefully examined the Contract Documents for the construction of the project, that he has personally inspected the site, that he has satisfied himself as to the quantities involved, including materials and equipment, and conditions of work involved, including the fact that the description of the quantities of work and materials, as included herein, is brief and is intended only to indicate the general nature of the work and to identify the said quantities with the detailed requirements of the Contract Documents, and that this Proposal is made according to the provisions and under the terms of the Contract Documents, which Documents are hereby made a part of this Proposal.

#### CONTRACT EXECUTION AND BONDS

The Bidder agrees that if this Proposal is accepted, he will, within 10 days, not including Sundays and legal holidays, after Notice of Award, sign the Contract in the form annexed hereto, and will at that time, deliver to the Owner examples of the Performance Bond and Payment Bond required herein, and evidence of holding required licenses and certificates, and will, to the extent of his Proposal, furnish all machinery, tools, apparatus, and other means of construction and do the work and furnish all the materials necessary to complete all work as specified or indicated in the Contract Documents.

#### START OF CONSTRUCTION AND CONTRACT COMPLETION TIME

The Bidder further agrees to begin work within 14 calendar days after the date of the initial Notice to Proceed and to complete the project, in all respects within \_\_\_\_\_\_ calendar days (Bidder to provide).

#### LIQUIDATED DAMAGES

In the event the Bidder is awarded the Contract and shall fail to complete the work within the time limit or extended time limit agreed upon, as more particularly set forth in the Contract Documents, liquidated damages shall be paid to the Owner at the rate of \$3,700.00 per day (not to exceed 10% percent of the lump sum base bid) for all work awarded until the work has been satisfactorily completed as provided by the Contract Documents. Sundays and legal holidays shall be excluded in determining days in default.

#### **ADDENDA**

The Bidder hereby acknowledges that he has received Addenda No's. \_\_\_\_\_, 2

(Bidder shall insert No. of each Addendum received) and agrees that all addenda issued are hereby made part of the Contract Documents, and the Bidder further agrees that his Proposal(s) includes all impacts resulting from said addenda.

#### SALES AND USE TAXES

The Bidder agrees that all federal, state, and local sales and use taxes are included in the stated bid prices for the work.

#### LUMP SUM ITEMS

The Bidder further proposes to accept as full payment for the work proposed herein the amounts computed under the provisions of the Contract Documents and based on the following lump sum amounts. The Bidder agrees that the lump sum represent a true measure of the labor and materials required to perform the work, including all allowances for overhead and profit for each type and unit of work called for in these Contract Documents.

TOTAL LUMP SUM BASE BID:

Cents (4) amount written in words 41, 433,000.

Payment for materials and equipment authorized by the Owner in a written Change Order but not listed in the above Proposal will be provided at the suppliers invoice plus 10 %.

#### PROPOSAL (continued)

#### **EXPERIENCE**

The Bidder shall submit with an experience record with the Bid showing his experience and expertise in vegetative debris burning and disposal. Such experience record shall provide up to five current or recent projects of similar work, and preferably in the State of Florida. For each project the following information shall be provided:

- 1. Description and location of work.
- 2. Quantity burned and contract amount.
- Dates work was performed.
- 4. Owner.
- 5. Name of Owner's contact person and phone number.

The Bidder shall submit a draft project-specific Burn Plan with the Proposal.

#### SUBCONTRACTORS

The Bidder further proposes that the following subcontracting firms or businesses will be awarded subcontracts for the following portions of the work in the event that the Bidder is awarded the Contract:

Trade		Percent of Total Base Bio	
Street	City	State	Zip
Name			
Trade		Percent of Total Base Bid	
Street	City	State	Zip
Name			
Trade		Percent of Total Base Bid	
Street	City	State	Zip

#### PROPOSAL (continued)

If Sole Proprietor or Partnership IN WITNESS hereto the undersigned has set his (its) hand this 13th day of November 17. Signature of Bidder If Corporation IN WITNESS WHEREOF the undersigned corporation has caused this instrument to be executed and its seal affixed by its duly authorized officers this 13 day of 1048 mile 2017. (SEAL) YAYME'S SHEROMENTAE SERVICE, LLC Name of Corporation Sworn and subscribed before this Byh day of Hovenbuy, 20 17 NOTARY PUBLIC, State of Horida

My Commission Expires:

Margaret K. Stoulil NOTARY PUBLIC

Comm# GG054347 Expires 1/27/2021

#### FLORIDA BID BOND

	BOND NO
	AMOUNT: \$
KNOW ALL MEN BY THESE PRESENTS, that _	
hereinafter called the PRINCIPAL, and	
a corporation duly organized under the laws of the S	State of
having its principal place of business at	
	in the State of
and authorized to do business in the State of Florida	, as SURETY, are held and firmly bound unto
hereinafter CITY OF KEY WEST called the OBLIC	GEE, in the sum of
South and the second se	
for the payment for which we bind ourselves, our he assigns, jointly and severally, firmly by these present	
THE CONDITION OF THIS BOND IS SUCH THA	AT:
WHEREAS, the PRINCIPAL is herewith submitting IRMA DEBRIS BURN, said Bid Proposal, by reference	

#### FLORIDA BID BOND (continued)

WHEREAS, the PRINCIPAL contemplates submitting or has submitted a bid to the OBLIGEE for the furnishing of all labor, materials (except those to be specifically furnished by the CITY), equipment, machinery, tools, apparatus, means of transportation for, and the performance of the work covered in the Proposal and the detailed Specifications, entitled:

#### HURRICANE IRMA VEGETATIVE DEBRIS BURN

WHEREAS, it was a condition precedent to the submission of said bid that a cashier's check, certified check, or bid bond in the amount of 5 percent of the base bid be submitted with said bid as a guarantee that the Bidder would, if awarded the Contract, enter into a written Contract with the CITY for the performance of said Contract, within 10 working days after written notice having been given of the award of the Contract.

NOW, THEREFORE, the conditions of this obligation are such that if the PRINCIPAL within 10 consecutive calendar days after written notice of such acceptance, enters into a written Contract with the OBLIGEE and furnishes the Performance and Payment Bonds, each in an amount equal to 100 percent of the base bid, satisfactory to the CITY, then this obligation shall be void; otherwise the sum herein stated shall be due and payable to the OBLIGEE and the Surety herein agrees to pay said sum immediately upon demand of the OBLIGEE in good and lawful money of the United States of America, as liquidated damages for failure thereof of said PRINCIPAL.

Signed and sealed this	_ day of	, 2017.
PRINCIPAL		
		Ву
		SURETY
		ByAttorney-In-Fact
STATE OF	)	
COUNTY OF	: SS )	
		20

#### FLORIDA BID BOND (continued)

I, the undersigned hereby duly swom, depose and say that no portion of the sum herein bid will paid to any employees of the City of Key West as a commission, kickback, reward or gift, direct or indirectly by me or any member of my firm or by an officer of the corporation.				
Ву:				
Sworn and subscribed before me thisday of	, 2017.			
NOTARY PUBLIC, State ofat Large				
My Commission Expires:				

Air curtain burners or FireBox burners<sup>4</sup> are machines designed as pollution control devices to overcome the detriment of open (pile) burning: the release of excessive amounts of Black Carbon or smoke. Air Curtain FireBoxes by virtue of their design achieve nearly 100% combustion efficiency and by definition, they release almost no Black Carbon<sup>5</sup>.

They release  $CO_2$ , but as we have shown above, the carbon in that  $CO_2$  is biogenic as it was previously, that is during the life of the tree or plant, converted from surrounding  $CO_2$  into carbon in the wake of which oxygen was freed. The biomass burning in the air curtain burner, therefore, is <u>carbon neutral</u>. No additional  $CO_2$  was turned into a Greenhouse Gas that was not already present in the surroundings. This is not the case regarding the  $CO_2$  escaping the exhaust of a Diesel powered bus, for example, where  $CO_2$  is released that was <u>not</u> present prior to fueling the combustion.

Air Curtain Burners not only eliminate wood waste in an environmentally responsible way, but also efficiently and cost effectively. They are portable, easy to operate and affordable and less expensive to operate, compared with any other disposal method for wood waste that could be an alternative to open burning of biomass. They meet applicable US EPA regulations and have been used for many years worldwide. Some FireBox models even convert the BTU content of the biomass from the combustion process into electricity that can be sold back to the power company or used on-site<sup>6</sup>, or the energy could be used to heat a greenhouse or shop building. No special pre-processing of the wood waste is required, such as chipping the waste to a specified size, a mandatory requirement for traditional stationary biomass cogeneration plants. For more information on air curtain burner technology, go to www.aircurtaintechnology.com.

#### Summary

Carbon Dioxide and Black Carbon (smoke) are understood to be undesirable Greenhouse Gases and efforts must be implemented worldwide to reduce the emissions of them. Black Carbon is the result of incomplete combustion of fossil fuels and (woody) biomass. Carbon Dioxide is released by any combustion process.

Carbon Dioxide remains in the atmosphere for more than 100 years whereas Black Carbon stays there for only days or a few weeks. Curbing emissions of Black Carbon would have a very near term effect on earth and would slow down the melting of the polar ice cap and

glaciers in high mountain ranges and have some positive effect on Global Warming.

The sources of Black Carbon are Diesel trucks, ships and similar devices that burn fossil fuels, as well as the combustion of biomass. Most such sources emit BC, because of an inherent incomplete combustion process yielding low combustion efficiency. The burning of woody debris is a very large contributor worldwide to the overall emissions of Black Carbon. Although not all burning of biomass can be controlled, there will be wildfires and cooking stoves in many areas of the world, the BC from widespread deliberate or planned woody debris burning for agricultural clearing and in forestry can be reduced by modern technology.

Air curtain burners are based on such technology, because they burn wood waste with nearly 100% combustion efficiency in an economical manner. Wherever practical, all open pile burning should be banned in favor of the use of air curtain burners. For more information, access <a href="https://www.airburners.com">www.airburners.com</a>. Air curtain burners in forestry, agriculture and land clearing release biogenic Carbon Dioxide from near 100% combustion efficiency of the burn process, making this wood waste disposal process by fire carbon neutral and very environmentally friendly and desirable<sup>7</sup>.

By N. Fuhrmann, December 2010

#### References:

- 1. Byram, G.M., "Combustion of Forest Fuels", 1959, McGraw Hill
- 2. US EPA, "Methane", 2010, accessible at <a href="http://www.epa.gov/methane">http://www.epa.gov/methane</a>
- 3. IPPC, "IPCC, Changes in Atmospheric Constituents and in Radiative Forcing, in Climate Change", 2007, accessible at <a href="http://www.ipcc.ch/ipccreports/ar4-wq1.htm">http://www.ipcc.ch/ipccreports/ar4-wq1.htm</a>
- 4. Air Burners, LLC, "Above–Ground Air Curtain Burners (Fire-boxes)," accessible at <a href="http://www.airburners.com/ab-firebox.htm">http://www.youtube.com/watch?v=mo4K1dM2GH4</a>

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v1d



# Air Curtain Burner vs. Wood Grinder

# Disposal of Wood Waste

A Comparison of Critical Emissions and Basic Economic Parameters from Two Disposal Methods

#### A. Overview:

The purpose of this paper is to provide details concerning a better environmental and economic method for the disposal of wood and vegetative waste. Technical details will be provided for comparing two machines typically used for the disposal of wood and vegetative waste: the Air Curtain FireBox and the Diesel powered Wood Grinder. For the disposal of accumulated wood and vegetative waste, an Air Curtain Burner (ACB) "FireBox" is a better choice for protecting the environment and it is also the most economical choice.

- 1) The ACB FireBox is an "end solution" and actually eliminates the wood waste, while a grinder is just a "handling process" where 100 tons of wood is ground-up into 100 tons of mulch.
- 2) The FireBox uses the waste as its fuel, where the grinder uses hundreds of gallons of Diesel fuel to grind wood in to mulch.
- 3) The FireBox creates a small amount of natural clean ash that is good for the soil, the grinder creates a huge amount of mulch that is bad for the soil and must be transported off-site.
- 4) The FireBox has less impact on the environment; the grinder and associated transportation have a significantly negative impact on the environment.
- 5) The FireBox is significantly less costly to purchase and to operate than the grinder.
- 6) The FireBox can create energy from the waste, the grinder only consumes energy.

The Air Curtain FireBox follows the same natural process as has been happening on Earth for millions of years, but without the unwanted particulate matter or black carbon release. As we concern ourselves with the reduction of climate changing impacts on our environment, the FireBox is the best choice for immediate reduction in black carbon and non-biogenic CO2 emissions. This paper will provide more details in comparing the two machines and outlining the path to achieving significantly lower emissions today.

### **ENVIRONMENTAL**

#### **B.** Comparison of Critical Pollutants

The following critical emission components will be compared: PM and CO<sub>2</sub>. These are emissions, either aerosol and gaseous, which are classified as harmful Greenhouse Gas Emissions within the framework of Global Warming and Climate Change discussions.



FireBox-No visible PM discharge

PM

PM or Particulate Matter from a combustion process is Black Carbon (BC) consisting of clusters of carbon molecules measured in microns i.e.  $10\mu$  (PM10) which are strictly regulated. Black Carbon emissions constitute an aerosol and not a gas, because BC consists of pure carbon



Grinder-Significant PM discharge

suspended in the atmosphere as tiny solids. BC tends to gravitate back to earth over time and is considered one of the most significant contributors to "Global Warming." While suspended in the atmosphere, the carbon particles absorb sunrays and release infrared rays as heat that raise the temperature of the layers in the atmosphere where they reside thus contributing to the warming of the planet. As they fall back onto earth, the Black Carbon causes reduction of "albedo", the ability of an object or particle, such as snow or ice crystals, to reflect sunlight (heat). When Black Carbon is deposited on snow and ice, it accelerates the melting of the snow, ice, or glaciers in areas where typically no appreciable reduction of frozen

mass occurs naturally. It adversely affects "Global Warming" which is most noticeable on earth in the permafrost regions but more significantly, its residence time in the atmosphere is very short measured in weeks and months.

Reducing Black Carbon would have a near immediate positive effect on Global Warming in contrast to  $CO_2$  which remains in the atmosphere for 100 years or more, and any  $CO_2$  mitigation efforts would yield results only for future generations. While we should work diligently towards the reduction of  $CO_2$ , immediate efforts should be made to mitigate or eliminate BC releases from combustion processes, whether from open burning or combustion of hydrocarbons in engines, due to the immediate positive impact on the effects of climate change. The Air Burners FireBox was designed specifically for the reduction of Black Carbon and it is a proven and effective tool for achieving the goal of Black Carbon reduction now.

In addition to PM from Diesel engine combustion, the grinding of wood waste and the subsequent handling, transporting and storage result in additional fugitive dust (PM) and these particles are predominantly raw wood aerosols. Raw wood particles are a known carcinogen with obvious health implications, especially to a population close to the source, such as the site operators. It is obvious that raw wood PM emissions from grinders must be minimized.

Strong regulations are being put in place to mitigate the raw wood PM release from grinders ie: California requires grinders to meet strict PM regulations in their Title V permits. In some areas like Martin County, Florida, buildings were constructed at great taxpayer expense to house the grinding operations in an effort to control the airborne particles. In many cases the Air Curtain FireBox is a better solution as it meets a much tighter PM standard than Grinders and does not emit raw wood particles.

With today's grinder technology it is very difficult to control PM emissions. The state of grinder technology today will only allow US authorities to regulate grinders to a maximum opacity of 20% whereas the limit for PM emissions from the air curtain burner is a maximum of 10% opacity. Opacity is a measurement of the density or thickness of a PM emission plume rising up from a stationary source. This means that it is recognized by the authorities that a FireBox will release much fewer particulate emissions when operated properly than is practical and achievable for the grinder.

The grindings also pose an extreme environmental hazard. There is a very limited market to recycle the wood grindings, first, for the grindings to be useful for gardening and landscaping they must be sorted to eliminate the spread and contamination of invasive species, second, the grinding will not eliminate any molds, fungi or diseases from destructive insect larvae, like longhorn beetle and third, with almost no recycling market the grindings are being piled at landfills and transfer stations across the country significantly increasing the occurrence of spontaneous combustion and the devastating environmental impact that follows.



PM-Mulch Fire in Florida caused by spontaneous combustion of wood grinding piles

# $CO_2$

The gaseous emission of concern emitted from both air curtain burners and grinders is the dangerous *non-biogenic*  $CO_2$ . We are using this as the standard for comparison as it is classified as the major undesirable Greenhouse Gas and it tends to be the common denominator when comparing emissions. Other releases from a process of incomplete combustion, such as organic gases ( $CH_4$ , etc.) are not addressed in this review, as their releases follow the same proportions as  $CO_2$  with regard to this FireBox-to-Grinder comparison study. *Biogenic*  $CO_2$  also does not enter the comparison, because Biogenic  $CO_2$  from wood is considered *carbon neutral* by the IPCC and USEPA and the biogenic carbon release ultimately is the same for the air curtain burner and the grinder. The following sections compare and explain the  $CO_2$  emissions.

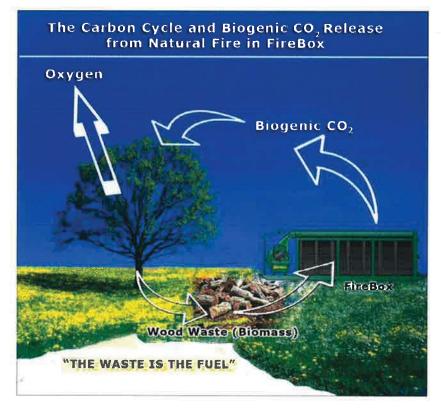
#### C. Carbon Cycle

First we should understand "Biogenic  $CO_2$  and the Carbon Cycle, based on which the IPCC and other agencies have determined that the burning of woody biomass is CARBON NEUTRAL, that is the release of biogenic  $CO_2$  is not considered a bad Greenhouse Gas in contrast to the carbon dioxide that is released into the atmosphere from the combustion of hydrocarbons such as petroleum or Diesel fuel. That  $CO_2$  is formerly sequestered "bad" Non-biogenic  $CO_2$ . The carbon that is released in this case was sequestered deep inside the Earth and it would have remained there forever, were it not harvested by man and combusted in Diesel engines of trucks, grinders, ocean ships, airplanes, etc.

The Biogenic  $CO_2$  from Biomass burning represents carbon that was absorbed by trees and taken from the surrounding  $CO_2$  in the air as the result of nature's process of photo syntheses by which

life is sustained on Earth. The carbon portion of the  $CO_2$  remains sequestered in the woody tree or other vegetation and the oxygen is released into the surrounding atmosphere.

When the wood waste burns in the air curtain burner, as it would naturally in a wildfire, but at very high combustion efficiency in the ACB, the carbon from the woody biomass again combines with oxygen and forms CO<sub>2</sub>. The cycle is complete. No additional CO<sub>2</sub> was added to the atmosphere. The carbon cycle is depicted in the image to the right. The sequestered CO<sub>2</sub> in the wood will eventually be released whether it is submitted to the ACB or the grinder or left to fall in the forest.



#### D. Overview of Emissions from Air Curtain Burner and Grinder

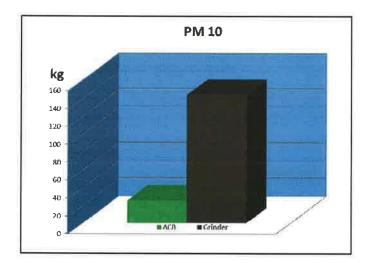
#### 1. Air Curtain FireBox

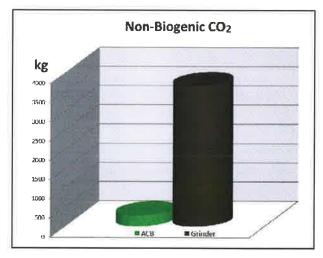
The air curtain burner selected for this comparison is a mid-size Model S-220. It is equipped with a small Diesel engine (59 hp) that powers the air fan. Emissions from the engine's exhaust will be considered.

The wood is burned inside the burn chamber where the wood waste is the <u>only</u> actual "fuel" that is combusted. PM emissions from the combustion process will be considered.

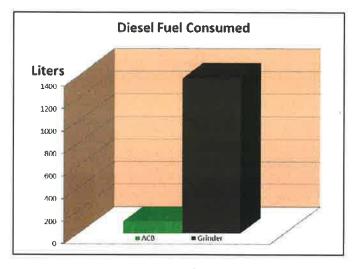
#### 2. Wood Grinder

Grinders are powered by large Diesel engines, as large as 12 cylinders, 1000HP engines with high fuel consumption. Emissions from the engine exhaust will be considered. The wood waste grinding operations release PM in the form of wood dust (a) from the grinding process itself and (b) from the release of the chips or mulch from the machine via a conveyor belt or similar system. (c) Fugitive PM is released from the storage pile, the on-site staging by a machine (i.e., front-end loader) that pushes the material away from the conveyor belt outlet area, and also each time the material is loaded, transported and finally dumped at its ultimate disposal site, usually a landfill.





These charts graphically show the stark differences between two similar sized machines that can process 100 tons of wood and vegetative waste in one day. The quantitative details are defined on the following pages.



Page 5 of 13

# E. Quantitative Comparison of Selected Two Pollutants from FireBox and Grinder for 100 Ton of Wood Waste Disposal/Processing

- 1. Air Curtain Burner (ACB) 59HP S-220 by Air Burners, Inc.
- a. PM from ACB Diesel engine
- b. CO<sub>2</sub> from ACB Diesel engine
- c. PM from wood combustion (processing)
- 2. Grinder 400HP Generic Grinder
- a. PM from Grinder Diesel engine
- b. CO<sub>2</sub> from Grinder Diesel engine
- c. PM from wood chipping/grinding (processing)
- d. PM, fugitive releases from on-site handling
- e. PM from Truck Diesel engines
- f. CO<sub>2</sub> from Truck Diesel engines
- g. PM, fugitive releases from transporting and discharge
- h. PM, fugitive releases from remote/landfill site handling
- 3. Basic Specifications of Air Curtain Burner (FireBox)

Model: Air Burners, Inc. S-220

Engine: Kubota Model V2403-TE, 59 HP max.

Diesel fuel consumption: 8.5 L/hr average

FireBox through-put: 8 tons/hr (8000 kg/hr)

#### 4. Basic Specifications of Wood Grinder

Model: Generic Model

Engine: Generic Diesel, 6 Cylinder, 400 HP max.

Diesel fuel consumption: 113.5 L/hr average

Grinder through-put: 16 tons/hr (16000 kg/hr)

#### 5. Notes

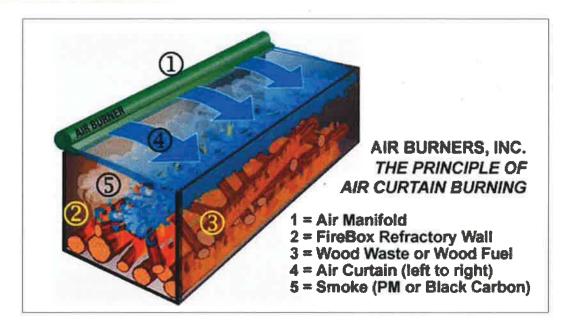
- a. The loading equipment, such as an excavator, is not included in the comparison, because both the FireBox and the Grinder are assumed to use the same or a similar loading machine, albeit the FireBox for 10 hours and the Grinder for 6¼ hours. This is balanced by the use of the equipment for removing the beneficial ash from the FireBox and for pushing the chips away from the grinder's conveyor belt discharge area, where the mulch has to be cleared out over a period of 6 hours, however, the ash can be removed from the FireBox in less than 15 minutes.
- b. Calculation of number of dump trucks required to transport 100 tons of wood waste ground into mulch:
  - 1) Weight: 100t fairly dry woody debris
  - 2) Typical grinding and mulch handling/spillage losses (wood dust and moisture) by weight 2% or  $\approx$ 2,000kg (2t)
  - 3) As  $1\text{m}^3$  of mulch has a weight of 290kg, 100t-2t=98t (198000kg) of wood material ground has a volume of  $198000/290=337\text{m}^3$
  - 4) 1 dump truck can hold (legally) heaped  $17m^3$  (no weight consideration needed, load weighs only  $\approx 5t$ )
  - 5) 337/17 trucks ≈20 dump trucks are required
- c. Assumption of travel distance to mulch disposal site is 40km one way, total travel distance for 20 loads would be 20x80km (roundtrip) or 1600km; at an average speed of 48km/hr, truck engines would release emissions for 1600/48=33 hrs for every 100 tons (100000kg) of ground wood waste hauled.
- d. The fugitive PM emissions from road dust caused by the trucks are ignored, but could be significant in rural areas with unpaved roadways.
- e. Emissions from the frequently needed Diesel fuel tanker to refuel the grinder and fleet of trucks are also ignored for this comparison.

Table on following page

Source	Pollutant	Units	Typical Emissions or Data		Air Burn- ers S-220 59HP	Wood Grinder 400HP
			АСВ	Grinder	100t Wood Waste	
Diesel Engine - Processing	PM10	kg/HP-hr	0.059	0.4	0.74kg	2.5kg
riocessing				0.8kg/t		E 1 E E E
Wood Processing	PM10	kg/t	0.24kg/t	Fed Limit	24kg	80kg
				0.9kg/t		
Handling of Chips on- site*	PM10	kg/t	0	0.1	0	10kg
Diesel Engine - Truck- ing 300 HP	PM10	kg/HP-hr	0	0.3kg	0	30kg
Handling of Chips Trucking*	PM10	kg/t	0	0.1kg/t	0	10kg
Handling of Chips Re- mote Discharge*	PM10	kg/t	0	0.08kg/t	0	8kg
			Elle es	Total PM10	24	140.5
Diesel Engine - Pro- cessing	CO₂ Non-	kg/L	2.67kg/L	2.67kg/L	283kg	1894kg
cessing	biogenic					
Diesel Engine -	CO <sub>2</sub>	ka/l		2.67kg/l	0	1762kg
Trucking 300 HP	Non- biogenic	kg/L	0	2.67kg/L		
			Total Non-bi	ogenic CO <sub>2</sub>	283kg	3656kg
Diesel Engine – Pro- cessing Fuel Consumption	X <del>4</del> :	L	8.5/hr	113.5/hr	106L	709L
Truck -300HP Fuel Consumption			0	41L/hr 100km		660L
			Total	Diesel Fuel	106L	1369L
Wood Processing – Particulate EPA Limit	PM			_		
	Opacity	%	10	20	326	<b>:¥</b> 8
		Summary of	f Totals (rou	nded)		
TOTAL PM10					25 kg	141 kg
TOTAL CO <sub>2</sub>			283 kg	3656 kg		
TOTAL Diesel Fuel Consumed				106 L	1369 L	

#### F. Brief Discussion of the Equipment and Operation

<u>Air Curtain Burners</u> are above ground refractory walled burn chambers that provide a high velocity curtain of air ("air curtain") over the top of the burn chamber. The air curtain acts like a lid trapping the PM rising from the fire with the intense hot gases and re-burning the PM until the particles are so small that they escape as a gas through the air curtain. (www.aircurtaintechnology.com).



The high velocity air curtain is created by an air fan powered by a small Diesel engine. Air curtain burners reach very high temperatures of 800°C -1200°C thereby achieving virtually a complete combustion of the wood waste. The residue consists of 2%-3% or less of residual ash that has beneficial use and is usually applied to the surrounding land. (97% to 98% of the wood waste is being totally eliminated. A larger FireBox, such as model S-327, has been designed to eliminate 10-12 tons per hour.

<u>Wood Grinders</u>, such as horizontal or tub grinders were designed to facilitate the transportation of wood debris, not to eliminate it. It was the objective to grind or chip the wood debris into smaller pieces so more weight would fit onto a truck for hauling it to a location for final disposal or storage. The function of the grinders therefore is to provide an interim process, not a final disposal solution. Grinders are powered by large high horse power Diesel engines that drive massive mechanisms which cut or hammer the wood debris into small pieces commonly referred to as chips or mulch. The mechanism is quite susceptible to breakdowns, because objects, such as chunks of stones or metal which often are inadvertently loaded with the wood waste cannot be tolerated well. Rocks, stones and metal are of no concern for the ACB. This is actually the main reason why it is so preferred for getting rid of root balls.

For a comparison of the commercial or cost related aspects of the two methods (next section), the most important single distinction is the fact that the air curtain burner offers an end solution for wood waste disposal whereas the grinder offers only an <u>interim process</u> facilitating the transport of the woody debris. This process does not eliminate the waste, as the air curtain burner does.

### **ECONOMICS**

#### **G.** Economics

One of the major benefits of the Air Curtain FireBox: it is a preferred environmental solution that provides an economic benefit to the operator. It is not often that you can have a machine that will benefit the environment and also provides an economic incentive for its use. The Air Burners FireBox is just that machine as demonstrated in the chart below.

Cost Comparison Example for the Disposal of 100 Tons of Wood Waste Air Curtain Burning vs. Grinding vs. Landfill Dumping					
	S-220 Air Curtain Burning	Grinding & Trucking Landfill Disposal	Direct Landfill Hauling & Disposal		
Operating Costs					
Fuel Cost: ACB 10 hours or 39 gals (106L) Grinder: 6 hours or 138 gals (500 L)	\$146	\$517	: <b>=</b> ]t		
Maintenance: S-220 \$0.75/hr Grinder \$16.00/hr	\$10	\$102	( <del>5</del> )		
Hauling of Residual to Landfill 25 mile (40km) one way / 50 miles (80km) round trip @ \$4.00/mile with 20-ton Dump Truck	0	\$4,000 (20 Loads)	\$7,000 (35 Loads)		
Tipping Fees at Landfill or other Mulch Disposal Cost (\$10 per Ton)	0	\$980 (Note 4)	\$1,000		
Total Disposal Cost for 100 Tons (400 m³)	\$156	\$5,597	\$8,000		

#### NOTES:

- 1) Individual results may vary.
- 2) HP to fuel consumption approx. hp × 0.05=FC in UD Gals/hr.
- 3) Grinder: HP is 450, i.e. Vermeer HG4000. Diesel Fuel cost \$3.75/USgal.
- 4) It is assumed that chips cannot be reasonably sold for beneficial re-use.
- 5) Grinding process and mulch handling and transporting produces significant amounts of particulate matter (PM) in the form of wood dust (also PM) that can cause serious illness in exposed workers. Wood dust is a proven carcinogenic (cancer-causing). Mulch losses, in form of wood dust and spillage are approx. 2% or 2 tons in this example. Only 98 tons of wood chips are transported and dumped.
- 6) Air Curtain Burner residual is 2-3 tons of ash, is usually land-applied on site; Grinder output yields no weight reduction, but does provide significant volume reduction. In this example, waste is hauled by at least 20 trucks each carrying approximately 17m3 or 5-6 tons.
- 7) Direct hauling of land clearing wood waste to landfill will require approximately 35 trucks.
- 8) Loading cost is not considered, as the same machine would be used for any of the options.
- 9) The S-220 is a medium size above ground refractory walled firebox. Larger and smaller models are also available. See www.AirBurners.com

comparison of air curtain burners to grinders is really quite flawed: the FireBox offers an *end solution*; the waste is eliminated. The grinder in contrast thereto is only an *interim step*, a tool to facilitate the transport of the wood waste to the ultimate disposal location. Whenever the two methods are compared, whether from the standpoint of economics or environmental friendliness, the cost and the pollution from the transport vehicles must be factored into the equations. Only then a true and useful comparison can be drawn. The air curtain FireBox will be superior every time by margins so wide, that those voices wanting to argue the finer points of the above comparisons will be swiftly muted.

A quick discussion regarding the residual products of the two disposal methods is worthwhile. Forest fires burning vegetative waste represent a natural process that has been going on since the beginning of time. A lightning bolt strikes the ground, a wildfire starts and the forest floor is cleared of dead limbs, pathogens, insects and nutrient-robbing undergrowth. The ash becomes a beneficial soil amendment. The burning of wood waste in the FireBox replicates the burning of woody material by natural forest fires, but without the smoke, the FireBox ash becomes a beneficial soil amendment. Because the ashes have a high pH, they are also useful as an additive to the daily landfill cover at a commercial landfill site further augmenting the overall cost savings enjoyed by the use of the FireBox.

The mulch from the grinder, on the other side, more often than not poses a real commercial and environmental problem. The grinding and hauling is expensive, tipping fees can be high and the mulch hardly ever has a beneficial (commercial) use. Typical mulch grindings may include, seeds of invasive species plants, insect larvae, inorganics, mold spores and termites. The mulch is still a waste product, and it costs money to dispose of waste. For the environmentalist charged to safeguard our environment there are several concerns. First, a major problem across the US is the safety and pollution issue from the spontaneous combustion of larger mulch piles. They tend to smolder for many months with no good way to extinguish the fire. Second, the mulch will go septic from natural decomposition. That causes discharges of leachate that are undesirable, as they enter the ground drinking water table. Finally, mulch piles can attract rodents and other pests and when used as landscape material, the mulch can alter the ground ecosystem or even bring pests to homes, if scattered near them. The US Forest Service has long recognized the detrimental effect of mulch deposited on the forest floor and heavily restricts the amount of mulch that can remain from cutting operations.



H. Energy Recovery

#### from the FireBox

The Air Burners FireBox has an optional heat recovery system that allows the operator to utilize waste heat for other purposes, such as kiln drying and heating facilities. In late 2012 the PowerGen FireBox will be available. Currently in testing this self-contained Biomass power generating system will produce electricity from the waste wood. In addition, the system is portable allowing users to "follow the waste", again reducing the environmentally damaging and costly transportation component. You can read more about this exciting new product on our website at <a href="https://www.powergenfirebox.com">www.powergenfirebox.com</a>.



#### I. Conclusion

The Air Burners FireBox is a well proven and tested technology that delivers benefits to both the corporate budget and the environment. From an environmental standpoint we need to embrace technology that incentivizes the user to protect our environment. From a corporate budget standpoint you can purchase the FireBox for less than a competing grinder and you now have the "end solution".

A comparison of two common methods for the disposal of wood debris has been: (1) Air Curtain FireBox versus (2) grinder and associated trucking option where the ground mulch is hauled to a remote location for ultimate disposal.

The air curtain option is superior both from the economics of the operation and the protection of the environment. In every instance, grinding the waste and hauling it away will be considerably more costly and will release a higher level of undesirable pollutants. Protecting the environment and saving money is a winning combination.

### J. References

### 1. Diesel Engine Emissions Calculations:

US EPA AP42, Section 3.3 "Gasoline and Diesel Engines", Los Alamos National Laboratory (LANL/US Energy Dept.): "Air Curtain Destructors, General Description of Source Category".

### 2. Air Curtain Burner PM Emissions Calculations:

A) <u>USDA-Forest Service</u>: Reducing PM2.5 Emissions Through Technology, Results from a Recent Study Evaluating the Effectiveness of an Air Curtain Incinerator.
Fountainhead Engineering: Air Burners S-327 Emissions Test Report
US EPA Chalmette, Louisiana Air Curtain Burner Test (S-327)

### B) Grinder PM Emissions Calculations:

State of California BAAQMD Regulation 6-301 and BAAQMD Condition #6385 part 4. Ringelmann 1/20% opacity; BAAQMD Regulation 6-311: E=0.026(P^0.67) where E=allowable emission rate (PM, lb/hr) and P=wood process rate (lb/hr)

### C) Air curtain Burner Technical Data:

www.airburners.com

### D) Grinder Technical Data:

Generic literature accessible at www.google.com

### K. Appendix

- 1. Air Burners, Inc. FireBox Brochure
- 2. FireBox Specifications for S-327 and S-220
- 3. Air Burners, Inc. MSRP Price Sheet (US)

\* \* \* \* \*



"We take the Payne out of your site projects."

### Terry E. Payne

1311 US Highway 301 S Tampa, FL 33619 Phone: 813-677-6822

Email: PAYNESTREES@CS.COM

## Certified Arborist Certified Pile Burner

Education

**Arborist Certification** 

2007 - University of Florida - Hillsborough County Extension Office

**HAZMAT** 

2003 - Tampa Rescue

Safety Officer

1998 - Alamo Safety Officer Course - San Antonio, TX

**BMP Certification (Best Management Practices of Florida)** 

2011 State of Florida Course AS/Emergency Medicine

1998

**Paramedic** 

1998 - 2000 University of Texas UTSA

**Professional** 

2001 - Present

Payne's Environmental Services

Project Manager / Arborist / Certified Pile Burner

2005 - 2007

**Tampa General Hospital** 

**Aero Medical Transport** 

Flight Paramedic (Critical Care)

1997 – 2001

U.S. Army

**Combat Medic (Medical Non-Commissioned Officer)** 

Professional Contractors Affiliation NAGC – National Association of Government ISA – international Society of Arboriculture BMP – Best Management Practices of Florida

**Experience Cont...** 

**2001 – Present** (Hillsborough and Florida Counties) Tree Pruning, Tree Removal, Pile Burning, Box Burning

Stump Grinding, Land Management

Land Clearing, Loading & Hauling of Debris

**Experience** 

**Emergency Disaster Response** 

Hurricane Clean-up

Hazardous Tree Removal & Debris

Debris Reduction, Pile Burning, Box Burning & Site Management

**Construction & Environmental Services** 

Land Clearing (500 + acres)

Structural Demolition Excavating Services

Environmental Clean-up & Restorative Services

Install Precast Concrete Wall System

**TV Appearances** 

**ABC Action News Hurricane Awareness Special (2008)** 

**Professional Guest speaker** 

Provided expertise on preparing for the upcoming hurricane season

**ABC Action News Charitable Story (2007)** 

Payne's Tree and Hauling donated time and planted trees for an elderly woman conned

by other company resulting in bankruptcy

Additional Certifications

**FEMA Certifications** 

IS-00100.FW; Introduction to the Incident Command System

IS-00200.FW; Basic Incident Command System IS-700; National Incident Management System

**OSHA Certified** 

2008 - Aerial Lift operation, Construction Services

2004 Certificate of Recognition - City of Tampa (Mayor Iorio)

Provided services to Tampa during Hurricanes (Charley, Frances, Ivan, and Jeanne)

AWARDS: Soldier of the Year 1998 (Brooke Army Medical Center, Ft. Sam Houston, TX)



Payne's
Environmental
On Site Box
Burning as of
November 12,
2017



### Job Supervisor / Project Manager

### **Pete Gonzalez**

1311 US Highway 301 S
Tampa, FL 33619
Phone: 813-677-6822
Email: P.gonzalez@paynesenvironmental.com

### **SUMMARY:**

Remarkably strong and resourceful project manager with over nine years' experience in debris removal, tree trimming and management service.

### **Professional Experience**

Payne's Environmental Services, Tampa, FL 2009 - Present

### **Project Manager**

- Trim and prune trees using an aerial lift and through skilled climbing to provide clearance of streets, sidewalks, signs and lights as well as to ensure the continued health of the tree.
- Perform ground trimming.
- Identify equipment needs for each assigned project; clean and maintain climbing and trimming equipment.
- Operate tree trimming and maintenance equipment such as aerial boom trucks, chippers, stump grinders, dump trucks, and power tools such as chain saws.
- Remove fallen trees, stumps, fallen limbs and related debris resulting from storm damage and general conditions.
- Spray trees as needed.
- Plant, stake and maintain trees on city owned property and in the public right of way.
- Respond to requests and inquiries from the general public.
- Utilize proper safety precautions related to all work performed.
- Perform general park maintenance work when not to tree trimming duties.
- Build and maintain positive working relationships with coworkers, other city employees and the public using principles of good customer service.
- Perform related duties as assigned

### 2012 Hurricane Irene / Project manager

Carteret County, NC – Vegetative reduction & disposal

- Managed and recorded daily logs of debris pick-up.
- Coordinated weekly safety meetings.
- Supervised all C&D debris pick-up activity.
- Supervised all vegetative grinding activity.

### 2011 Alabama Tornado / Project manager

Jackson County Dekalb County, AL - Debris removal

- Coordinated debris pick-up with County Engineer.
- Maintained photographs of tree trimming.
- Managed and recorded daily logs of debris pick-up.
- Coordinated weekly safety meetings.
- Supervised all debris pick-up activity.
- Corresponded with home office regarding day to day progress and activity.
- Entered daily haul-in tickets using Microsoft Excel.
- Kept client updated daily with all debris removal activity.

### 2010 Deep Water Horizon BP Oil Spill

Pensacola Beach, FL / Project manager

- Coordinated oil pick-up with BP engineers.
- Maintained photographs Oil cleanup.
- Managed and recorded daily logs of cleanup.
- Coordinated weekly safety meetings.
- Corresponded with home office regarding day to day progress and activity.
- Entered daily haul-in tickets using Microsoft Excel.
- Kept client updated daily with all debris removal activity.



Payne's
Environmental
On Site Box
Burning as of
November 12,
2017



"We take the Payne out of your site projects."

### Annette Payne 2421 Arbor Wood Dr. Valrico, FL 33596 813-486-6847

Education

1998-2002 Bloomington High School

2002-2003—Hillsborough County Community College

2007-Present---University of Phoenix

### **Employment History**

**CEO** 

### Payne's Environmental Services

Responsible for all functioning administrative tasks to include scheduling, customer service, accounts payable and receivable. Managed the preparation and maintenance of all employee records, payroll, and cash deposits. Managed customer complaints to achieve positive results and ensured a smooth working environment.

Claims Rep

### **Progressive Insurance Company**

Served as the first point of contact for inbound claim report phone calls. Gathered necessary information, reviewed policy detail, and scheduled callbacks from the assigned claim handler. Worked to provide excellent customer service in a team driven environment.

### Professional Skills

Microsoft Office Filing/Editing
Microsoft Windows PEM Software
Lotus 1-2-3 Filing/Editing
Microsoft Word Office Procedures
Microsoft Excel Typing (55+ wpm)
Business Math Business English
Customer Service Skills QuickBooks



### "We take the Payne out of your site projects."

### **Ronnie Sewell**

2321 Crosby Rd Valrico, FL 33596 Phone: 813-677-6822 Cell: 813-919-3455

Email: Paynestrees@cs.com

### **Qualifications:**

- Logging, land clearing, house demo, burning from 1985 to present
- Active in the Agricultural Industries from 1980 to present

### **Education:**

> 1980 Brandon High School

### **Employment:**

Payne's Environmental Services LLC. 2006- present

- > Tree trimming, removal, stump grinding, land clearing, and landscaping
- ➤ GMR 1994-2006
- > Crane operator and foreman for large crew
- ➤ Southern Pine Timber Products 1996-2006
- > Supervisor in logging and timber procurement

### **Certifications:**

- ➤ OSHA Certified Aerial Lift operator
- ➤ Certified Line Clearance Top Climber
- > Certified Tree Climber





CG-CHOVING # CTU-CHIST369 PC-CRIS6774 Tile Protection System Co., Locker V

1409 Fech Boulevard, Suite 1 - Tampa, Rorlda 33619-7843 - (813) 623-6777 - Fax (813) 663-6724 - www.iiparampa.com

John L. Flinn, Jr. Ripa & Associates, LLC 1409 Tech Blvd, Suite 1 Tampa, FL 33619 11/9/17

To Whom It May Concern:

Please allow this to serve as a letter of recommendation for Payne's Environmental Services. It is both an honor and privilege to recommend the services of Payne's Environmental. They are our premier clearing contractor of choice, and have been over the past 12 years. I have been directly involved in overseeing the majority of projects that Payne's has performed for Ripa.

Payne's Environmental has developed and implemented a custom and highly efficient process that allows them to incinerate land clearing & vegetative debris. This custom incinerator allows Payne's to climinate 90% of the emissions created during the burning process. This, combined with their staff's expertise, allows Payne's Environmental to burn where other contractors cannot. Payne's is a valuable member of our project team, allowing us to safely and efficiently get the job done on time.

In addition to their field capabilities and customized equipment, Payne's has developed invaluable relationships with local government agencies. Their relationships with FDEP, Hillsborough County Environmental Commission, and the Florida Forest Service has allowed us to deliver a level of customer service to our end customer that is second to none. These relationships allow for a seamless operation from start to finish, as well as an expedited problem-solving process when necessary. I would recommend Payne's services to any entity looking for a professional, courteous, and knowledgeable staff to complete any clearing project in a expedited manner.

Please feel free to contact me with any specific questions or if you require additional information.

Sincerely,

John L. Fline, Jr.

Vice President / Director of Project Management



CG-CG9082 - CU LUs7/62 PG-C066774 Fire Protection System Contractor V

1439 Fech Boulevard, Suite 1 • Tarman Florida 33619-7843 • (813) 623-6777 • Fax (813) 643-6774 • www.openfarest.com.

February 20, 2014

### To Whom It May Concern:

This letter is to serve as reference for the work performed by Payne's Environmental for RIPA & Associates. RIPA builds projects ranging from \$500,000 to \$20,000,000 and the successes of our projects rely largely on safety, competency and time management. I am happy to say that Payne's meets and exceeds those standards in relation to Arboriculture.

Payne's Environmental has been a sub-contractor for Ripa since 2008 and when contracted has played a vital role in our projects. Terry Payne, Certified Arborist personally monitors projects and gets involved so that all of the municipal tree codes are strictly followed. The work completed by Payne's is always of top quality even when given a moment's notice and completed on schedule keeping Ripa in compliance and maintaining a smooth operation.

I would confidently recommend Payne's Environmental for any Forestry related task. Payno's schedule is always accommodating and the job is always done right. Please feel free to contact me via small or at the number shown below for additional information, if needed.

Regards

Chris Lakace, President

email: claface@ripatampa.com

phone: 813-623-6777



JMJ Site Development, Inc. 7825 Lithia Pinecrest Road #1095 Lithia, Florida 33547

November 11, 2017

To Whom It May Concern:

As the President of JMJ Site Development Inc., I am pleased to recommend Payne's Environmental Services LLC for all clearing applications most specifically for their incinerator burning operations. JMJ had a 6.95 Acre site that we were building an LA Fitness facility on in New Tampa which was heavily laden with large oak trees and surrounded by wetlands on all sides. Payne's was efficient in their clearing and staging of the trees and their incinerator burning curtain was marveled by all those who watched their operation. The burning process was swift and efficient and left little organic refuse that needed to be hauled off to the appropriate dumping facilities.

In short, Payne's was professional, efficient and effective with their incinerator operation and we would highly recommend them for your project. Should you have any further questions in this regard, please do not he sitate to reach out to me at 813-927-2484...

Jeff M. Jonguin

President

JMJ Site Development Inc. CGC #1519567, CUC #1225117

"For what will it profit a man if he gains the whole world and forfeits his soul?" Matthew 16:26

P.O. Box 1095, Lithia, Florida 33547 (813) 927-2484



CG-CD2087 - CUIC/15/249 Tro-CD56/44 Fige-Protection System Conduction V

1409 Tech Baufevard, Solte: 1 + Tampa, Ficalda: 33519-7843 + (813): 573-5777 + Fax: (813): 563-5724 - www.nti-diagraphicans.

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Regards.

Chris LaFace, President

email: claface@ripatampa.com

phone: 813-623-6777



Feb 26, 2008

Payne's Environmental LLC 1311 US. Hwy 301 S. TAMPA, FL 33619

Dear Mr Payne,

I am writing to express my satisfaction with Payne's Environmental job performance related to the 2008 Ice storm debris clean-up. Although a sub-contractor Payne's environmental quickly responded with lightning speed to our needs as if they held the prime contract and provided our town with equipment and crews for the clean up process.

Approximately 120,000 cubic yards of debris were picked up off our streets. We have received numerous calls from residents complimenting their work. Payne's Environmental was responsible for tree trimming, tree removal, and debris pick up from the right of way.

I would hire your company again. Please feel free to use me as a reference 270-256-7232. Job well done

Respectfully

Brenda Ford

Project Supervisor Ohio County, KY

Commonwealth of Kentucky D.O.T

### **Letters or Recommendation**



Oct 16, 2011

Payne's Environmental Services 1131 U.S Highway 301 South Suite 1 Tampa, FL 33619

To whom it may concern:

I am writing this letter of recommendation for Payne's Environmental. I have been working at Lakeland Regional Airport since August 2011 as Project Manager for a large solar installation and needed to hire a professional tree contractor. After receiving proposals from 7 companies the choice was obvious to me as a construction professional. Payne's Environmental was chosen for the following reasons:

- 1] Competitive pricing
- 2] Complete proposal package
- 3] Proper Insurance
- 4] State of the art equipment
- 5] Qualified personnel
- 6] Safety Oriented with OSHA guidelines and practices in place
- 7] Attention to detail
- 8] Delivered all that was promised and then some
- 9] Environmentally conscious &
- 10] Extremely easy to work with

Terry performed all of the tasks beyond my expectations. Terry goes the extra mile. Terry seeks solutions and is results oriented. Terry made me feel at home and extremely comfortable making sure that I believed every dollar spent was well spent. Since our working relationship has developed Terry has landed a couple of more projects at the Airport. SunEdison has placed Payne's Environmental on our preferred contractor list and we look forward to having Terry work with us in upcoming projects in the Lakeland area or wherever we are.

I am available by phone to address any questions or qualifying information you may seek.

Respectfully;

Frank A. Bussi-Soutte Project Manager Utility PV SunEdison 443,821,5409

1515 Wazee St. Suito #380 Denver, CO 80202 (443) 821-5409 fbussisottile@sunedison.com



CG-C009062 CU-C057369 PC-C056774 Fire Protection System Contractor V

1409 Tech Boulevard, Suite 1 Tampa, FL 33515 (813) 623-6777 FAX (813)663-5724 www.ripatampa.com

January 6, 2011

Payne's Environmental Services, LLC 1311 U.S Highway 301 South Tampa, FL 33619

Subject: Letter of Recommendation

Please accept this letter of recommendation from Ripa & Associates on behalf of Payne's Environmental Services regarding municipal disaster management / Tree services. Payne's has been a valued subcontractor for Ripa & Associates for several years.

Ripa & Associates is a highly experienced and successful privately-owned construction company that provides civil and utility construction service to owners, developers and general contractors on their residential, commercial and industrial projects located throughout Central Florida. We regularly engage Payne's Environmental to perform both large and small scale clearing and grubbing projects for our site development projects.

Payne's environmental has performed at a consistently high level delivering prompt and professional work product and contracting services which in many cases are complex and challenging. We depend on Payne's as well to provide specialty clearing, Tree Trimming, Root Pruning, Tee Climbing, and other similar services which require a high level of competence and precision.

In our experience, we have been extremely satisfied with the professional and timely services provided by Payne's Environmental and would highly recommend Payne's to local municipalities, and Federal Government agencies for management tree services.

Please forward this letter of recommendation to any relevant parties and as always I remain available for any further personal discussions related to this recommendation at the provided contact number.

Regards.

David E Campo

Director of Corporate Development



4321 US 301 North Tampa, FL 3351 813-626-7368 or 888-709-NEFF FAX: 813-621-9284

December 29, 2010

To Whom it May Concern:

This letter serves as our positive recommendation for Payne's Environmental Services, LLC.

Payrie's Environmental has had an account with our company since 2009 and has always been an excellent customer. Neff Rental has the ability to provide Payrie's with any equipment needs that may arise in the accomplishment of any size site project.

We have never had an issue with their account and look forward to working together in the future. Please contact me with any questions.

Healthy Regards,



### VOLVO RENTS INDEPENDENTLY OWNED & OPERATED BY CASCO RENTAL, LLC LOCATED 517 SOUTH FALKENBURG, TAMPA FL. 33619 PHONE 813-655-7733 FAX 655-2722

December 14, 2010

To Whom It May Concern:

I would like to take an opportunity to offer a formal recommendation for Payne's Environmental Services located in Tampa, Florida.

They have had an account with our company for over a year and have been and continue to be an excellent customer.

There has never been an issue with their account. Payne's Environmental Services has access to rent any of our equipment.

If you have any questions, do not hesitate to contact me,

Best Regards,

le mett. Oshorn

Jeanette Osborn

Office Manager, Assistant Controller

Casco Rental - Volvo Rents Tampa

joshorma vienis us



8507 S, WINN RD | PO BOX 1000 WINN, MICHIGAN 48896 ( 989) 866-2381 | F. (989) 866-2280 | www.morbark.com.

February 24, 2014

To Whom It May Concern,

Morbark Model D76 Stump Grinder, s/n H791-0058 was specially designed for Payne Environmental. Morbark, Inc. fully intends to support this machine 100% for any service work that may arise in the future. We have a long standing relationship with Mr. Payne and will continue to support him with any equipment needs.

If you have any questions, please do not hesitate to call our office.

Best Regards,

Kevin Edwards Regional Sales Manager Morbark Inc. 800/831-0042

### **Membership & Organization**

Payne's Environmental Services, LLC are active members in many organizations. Below is a slight look at what makes us top performers in tree service.













**FEMA** 



### Types / Description of Services



### Stump Removal & Grinding

Tree stump grinding is an essential step when providing tree removal services. A stump left behind will eventually rot away, which will leave weakened area in the ground. This is particularly hazardous if the area has been built upon or is in the vicinity of high pedestrian or vehicle traffic. Payne's Environmental has the experienced tree removal specialists to provide the tree stump grinding services that will leave your property safe. Our teams are specially trained in the proper use of heavy-duty equipment for the thorough grinding of tree stumps.

### Tree Trimming

We understand that there's more to tree trimming than simply chopping off a few branches. Pruning should keep branches from damaging property or affecting wires, but it should also create a clean, well-maintained look for your property and should be performed according to specific tree trimming procedures to avoid the damage and safety hazards caused by freefalling branches and improper climbing methods. The experienced tree trimmers at Payne's Environmental follow a 1,000 page safety manual and perform all pruning according to OSHA and ANSI A300 guidelines, the safety and pruning practices outlined by the International Society of Arboriculture

### Tree Removal

All Payne's Environmental employees are highly trained in tree removal, and we continue to keep them up to date with the latest regulations and techniques. In fact, we recently changed our uniforms from our signature red color to fluorescent orange to enhance the visibility of our workers and maintain OSHA compliance. We use only top-of-the-line equipment and assess the School Board's situation individually to ensure that what we use perfectly suits the job at hand.

• Emergency Debris / Tree Removal & Disposal / All Types of Burning
When hurricanes, floods, tornadoes, and other disasters have devastating effects,
comprehensive disaster recovery services from Payne's Environmental Services,
LLC are the quick and organized response communities need to get life back in
order. We can handle nearly every aspect of disaster clean up from the initial
roadway clearing to the hauling away of reduced debris and debris management to
tree cleanup. We have the fleet of trucks, manpower, Pit Burners, Box Burners,
loaders, lifts, tub grinders, and more to get the job done quickly and effectively.

### Tree Climbing

We have been serving Florida with professional, safety-oriented tree climbing for many years, and our experienced team has the knowledge and state-of-the-art equipment to handle any tree climbing job of any size.

### Tree Pruning

Tree pruning seems simple, but a tree that is trimmed without the proper knowledge of safe pruning practices and the particular characteristics of the tree's species can result in irreparable damage to the health of the tree. Payne's Environmental is the experienced tree pruning company that your School district trusts to prevent these kinds of unfortunate results. Our tree pruning service always adheres to International Society of Arboriculture's ANSI A300 guidelines, and we have the additional benefit of a certified arborist (FL6027A) on staff to ensure the life trees we service and even surrounding trees are not taken for granted.

### Safety & Health Plan



Payne's Environmental Services, LLC recognizes its responsibility to establish and maintain safety procedures for all activities. Protection of individuals, property and the environment is our priority and the primary purpose of our Health & Safety Program. This program applies to those persons and properties directly and indirectly involved in the activities of our Company; subcontracted personnel, the general public, Payne's Environmental site office location.

The plan provides guidelines for selected health and safety issues. Although every endeavor, both on and off-site, involves some degree of consideration for worker protection and safety, the objective of this plan is to provide direction in these areas in which this Company primarily operates.

To prevent injuries, acute and chronic health effects, the following general safe work practices are to be followed when dealing with known hazards. These general safe working practices should establish a pattern of general precautionary measures for reducing the risks associated with operation.

As with all Payne's Environmental programs, this Safety & Health Plan is designed to foster and support a safety attitude in every employee. The safety program places the responsibility for individual safety with the individual; and responsibility for supplying equipment, safeguards knowledge, and operating skills with our supervision.

Payne's Environmental Services, LLC employees are the most important, and costly of its investments. Protection of his investment by adherence to the policies in the Safety & Health Plan is a significant part of each employee's responsibility. Below is a group of bullet points that are found in our Safety & Health Plan's table of contents:

- Management Commitment
- Bucket Truck training
- Safety Organization
- Safety and Health Training
- Medical Surveillance Program
- Accident Investigation
- Hazard Communication Program
- Respiratory Protection Program
- Office and Shop Safety
- Used Oil Management Plan

- Traffic Work Zone Safety
- Emergency Action Plan
- Fall Protection

Safety Incentive Plan Hearing Conservation

- Het Work Procedures
- Chain Saw protection training
- Box Burning Safety Procedures
- Pit Burning Safety procedures
- Open Burning safety Procedures

Payne's Environmental Services, LLC personnel participate in a Health & Safety program that consists of training, medical monitoring and substance abuse monitoring.

The health and safety of our employees, subcontractors and clients is a top priority at Payne's Environmental. Payne's Environmental has an in-place and proven Safety & Health program that has been rigorously developed since our inception. Its effectiveness can be measured simply by statistics

A core component of the Payne's Environmental Safety & Health program is our comprehensive Medical Monitoring Program that exceeds industry standards and is aimed at ensuring long-term employee health. Payne's Environmental also utilizes a substance abuse monitoring system in order to maintain a drug and alcohol free workplace.

Prior to commencing any on-site work, Payne's Environmental Services, LLC prepares a Safety & Health Plan. The plan outlines procedures and preventative measures that will protect human health and the environment. Included are precautions to safeguard against fire, explosion and mechanical hazards which may exist during response, clean-up, remediation and disposal activities.

The objective is to prevent injuries, occupational illness and unwarranted property losses, and to comply with all applicable laws and regulations. Emphasis is placed on individual awareness, appropriate personal protective equipment (PPE) and baseline monitoring and decontamination procedures. The on-scene Safety Officer is responsible for enforcing strict adherence to the plan. Our Safety Plan includes maintenance of a certified drug and alcohol free workplace.

### SITE-SPECIFIC HEALTH AND SAFETY PLAN (SSHP)

Payne's Environmental Services, LLC recognizes that each job site is unique. Therefore, a SSHP is developed with the objective of presenting a comprehensive set of engineering, administrative, and behavioral requirements to ensure safety during site operations. The plan covers the following topics:

- Site characteristics
- General safe work practices
- Level of personal protective equipment (PPE)
- On-site communications
- Site security and access control
- Use of control zones
- Site organization
- Emergency procedures
- Other site spedific issues

The plan is supplemented by daily toolbox safety briefings completed by site supervisors and safety personnel. These meetings are an integral part of assuring employees, subcontractors, and clients the safest working environment possible everyday.

### **SAFETY**

When necessary, Payne's Environmental Services, LLC has a safety committee that meets once a week to discuss safety concerns, project performance, recent injuries, training, and future goals. The committee is comprised of corporate level management, including Payne's Environmental Services, LLC health and safety manager.

#### **DAILY MEETINGS**

Payne's Environmental Services, LLC holds safety meetings daily at each project site to discuss any physical or chemical hazards, equipment, and necessary personal protection that may be needed during the work day. Payne's Environmental project supervision conducts these meetings with direct guidance from the health and safety manager. The daily safety meetings ensure that our personnel are in compliance with state and federal regulations as well as Payne's Environmental safety guidelines.

### **CONTINUOUS TRAINING**

Payne's Environmental Services, LLC understands that training is essential for our personnel, subcontractors, and vendors to work efficiently and safety on-site. We are committed to continuous health and safety training by providing our personnel with classes focusing on workplace hazards, safety practices, regulatory requirements, company policies, and proper use of equipment. These components help ensure that work is done safely and efficiently on project sites.

### Drug-free Workplace Program

- Payne's Environmental will publish a statement notifying employees that the unlawful manufacture, distribution, dispensing, possession, or use of a controlled substance is prohibited in the workplace and specifying the actions that will be taken against employees for violations of such prohibition.
- 2) Payne's Environmental will Inform employees about the dangers of drug abuse in the workplace, the business's policy of maintaining a drug-free workplace, any available drug counseling, rehabilitation, and employee assistance programs, and the penalties that may be imposed upon employees for drug abuse violations.
- 3) Give each employee engaged in providing the commodities or contractual services that are under bid a copy of the statement specified in subsection (1).
- 4) In the statement specified in subsection (1), notify the employees that, as a condition of working on the commodities or contractual services that are under bid, the employee will abide by the terms of the statement and will notify the employer of any conviction of, or plea of guilty of nolo contendere to, any violation of chapter 893 or of any controlled substance law of the United States or any state, for a violation occurring in the workplace no later than five (5) days after such conviction.
- 5) Impose a sanction on, or require the satisfactory participation in a drug abuse assistance or rehabilitation program if such is available in the employee's community, by any employee who is so convicted.
- 6) Make a good faith effort to continue to maintain a drug-free workplace through implementation of this section.

As the person authorized to sign the statement, I certify that this firm complies fully with the above

Approved by:

Date: November 1, 2017

Terry Payne, President



RFP No.: 003-18

### HURRICANE IRMA VEGETATIVE DEBRIS BURN

October 25, 2017

MAYOR: CRAIG CATES

**COMMISSIONERS:** 

SAM KAUFMAN

JIMMY WEEKLEY

RICHARD PAYNE

BILLY WARDLOW

**CLAYTON LOPEZ** 

MARGARET ROMERO

PREPARED BY: City of Key West Engineering Services

Page 1

### CITY OF KEY WEST KEY WEST, FLORIDA

**CONTRACT DOCUMENTS** 

for

HURRICANE IRMA VEGETATIVE DEBRIS BURN

\*\*\*\*

\*\*\*\*

KEY WEST, FLORIDA OCTOBER 25, 2017

RFP No.: 003-18

Page 2

### INFORMATION TO BIDDERS

SUBJECT:

REQUEST FOR PROPOSAL No. 003-18

HURRICANE IRMA VEGETATIVE DEBRIS BURN

ISSUE DATE:

OCTOBER 25, 2017

MAIL OR SPECIAL

**DELIVERY REPONSES TO:** 

CITY CLERK'S OFFICE CITY OF KEY WEST

1300 WHITE ST

KEY WEST, FL 33040

**DELIVER BIDS TO:** 

SAME AS ABOVE

PROPOSALS MUST BE

RECEIVED:

NOVEMBER 13, 2017

NOT LATER THAN:

3:00 P.M. LOCAL TIME

DAVID SERMACK PURCHASING AGENT CITY OF KEY WEST

### TABLE OF CONTENTS

### PART 1 - PROPOSAL REQUIREMENTS AND FORMS

INVITATION TO BID
INSTRUCTIONS TO BIDDERS
PROPOSAL
FLORIDA BID BOND
ANTI - KICKBACK AFFIDAVIT
FLORIDA STATUTES, ON PUBLIC ENTITY CRIMES
INDEMNIFICATION FORM
DOMESTIC PARTNERSHIP AFFIDAVIT
CONE OF SILENCE AFFIDAVIT
CERTIFICATION REGARDING LOBBYING
BIDDER'S CHECKLIST

### PART 2 - CONTRACT

OWNER-CONTRACTOR AGREEMENT FLORIDA PERFORMANCE BOND FLORIDA PAYMENT BOND

### PART 3 - PHOTOGRAPHS AND SITE LOCUS

PART 4 - HURRICANE IRMA EMERGENCY AUTHORIZATION

# PART 1 PROPOSAL REQUIREMENTS AND FORMS

### **INVITATION TO BID**

Sealed proposals for the City of Key West RFP No. 002-18 HURRICANE IRMA VEGETATIVE DEBRIS BURN, addressed to the City of Key West, will be received at the Office of the City Clerk, 1300 White St., Key West Florida, 33040 until 3:00 pm on November 13, 2017 and then will be publicly opened and read. Proposals received after the time and date specified will not be considered.

Please submit one (1) one original and (2) two flash drives with one single PDF file of the entire proposal package. Proposal package is to be enclosed in a sealed envelope, clearly marked on the outside "HURRICANE IRMA DEBRIS BURN FRP 003-18" addressed and delivered to the City Clerk at the address noted above.

The City of Key West is soliciting proposals for the disposal of vegetative debris collected from Hurricane Irma. The City has secured use of a Temporary Debris Management Site (TDMS) located at Rockland Key/Toppino Industrial Drive, where approximately 120,000 cubic yards of collected vegetative debris has been placed on a 10-acre site. The disposal method at the TDMS will be use of Air Curtain technology to thoroughly burn the vegetative debris while minimizing particulate emission during the processing stage.

A mandatory Pre-Proposal Meeting will be held 11:00 a.m. on Tuesday November 7, 2017 at the City Manager's Conference Room, Key West City Hall, 1300 White Street, Key West, Florida. A site visit will follow.

Drawings and Specifications may be obtained from Demand Star by Onvia or City of Key West website <a href="https://www.cityofkeywest-fl.gov">www.cityofkeywest-fl.gov</a>). For bid package access on Demand Star, please contact Onvia at <a href="https://www.demandstar.com">www.demandstar.com</a> or call 1-800-711-1712.

The successful Proposer (Bidder) may be required to furnish the necessary additional bond(s) for the faithful performance of the Contract, as prescribed in the Bidding Documents. The Bidder will be required to furnish documentation showing that he is in compliance with the licensing requirements of the State and the provisions of Chapter 66 section 87 of the Code of Ordinances of the City of Key West. Compliance with these provisions is required before the Contractor can enter into the agreement contained in the Contract Documents. Specifically, Bidder shall demonstrate that he holds, as a minimum, the following licenses and certificates required by State Statute and local codes.

EACH BID MUST BE SUBMITTED ON THE PRESCRIBED FORM AND ACCOMPANIED BY BID SECURITY AS PRESCRIBED IN THE INSTRUCTIONS TO BIDDERS, PAYABLE TO THE CITY OF KEY WEST, FLORIDA, IN AN AMOUNT NOT LESS THAN FIVE (5) PERCENT OF THE AMOUNT BID.

### THE BIDDER MUST BE A LICENSED CONTRACTOR BY THE STATE OF FLORIDA AND SUBMIT PROOF OF SUCH WITH THE BID.

The Bidder shall furnish documentation showing that he is in compliance with the licensing requirements of the provisions of Chapter 66 Section 87 of the Code of Ordinances of the City of Key West; within 10 days following the Notice of Award and must demonstrate that he holds at a minimum, the following licenses & certificates:

- A. City of Key West Business Tax License Receipt
- B. A valid Certificate of Competency issued by the Chief Building Official of Key West, Florida.

All bid bonds, contract bonds, insurance contracts, and certificates of insurance shall be either executed by or countersigned by a licensed resident agent of the Surety or Insurance Company having his place of business in the State of Florida, and in all ways complying with the insurance laws of the State of Florida. Further, the said Surety or Insurance Company shall be duly licensed and qualified to do business in the State of Florida.

Before a Contract will be awarded for the work contemplated herein, the CITY will conduct such investigation as is necessary to determine the performance record and ability of the apparent low Bidder to perform the size and type of work specified under this Contract. Upon request, the Bidder shall submit such information as deemed necessary by the CITY to evaluate the Bidder's qualifications.

For information concerning the proposed work or for appointment to visit the site of the proposed work, contact Gary Volenec, Engineering Services Department for the City of Key West at <a href="mailto:evolenec@cityotkeywest-fl.gov">evolenec@cityotkeywest-fl.gov</a>. All questions/information requests must be in writing.

As stated above at the time of the bid submittal the Bidder must provide satisfactory documentation of State Licenses. The Bidder shall furnish documentation showing that he is in compliance with the licensing requirements of County, and City licenses as would be required within ten days of the award. The successful Bidder must also be able to satisfy the City Attorney as to such insurance coverage and legal requirements as may be demanded by the Bid in question. The City may reject bids for any and/or all of the following reasons: (1) for budgetary reasons, (2) if the bidder misstates or conceals a material fact in its bid, (3) if the bid does not strictly conform to the law or is non-responsive to the bid requirements, (4) if the bid is conditional, (5) if a change of circumstances occurs making the purpose of the bid unnecessary to the City, or (6) if such rejection is in the best interest of the City. The City may also waive any minor formalities or irregularities in any bid.

#### \*\*\*\*

### CONTRACT DOCUMENTS

### A. FORMAT

The Contract Documents are divided into parts, divisions, and sections for convenient organization and reference. Generally, there has been no attempt to divide the sections into work performed by the various building trades, work by separate subcontractors, or work required for separate facilities in the project.

### B. DOCUMENT INTERPRETATION

The separate sections contained within these Contract Documents are intended to be mutually cooperative and to provide all details reasonably required for the execution of the proposed work.

Should there be any doubt as to the meaning or intent of said Contract Documents, the Bidder should request of Gary Volenec (gvolenec@cityofkeywest-fl.gov) in writing (at least 2 working days prior to bid opening) an interpretation thereof. Any interpretation or change in said Contract Documents will be made only in writing in the form of Addenda to the documents which will be furnished to all registered holders of Contract Documents. Bidders shall submit with their Proposals, or indicate receipt of, all Addenda. The CITY will not be responsible for any other explanation or interpretations of said Documents.

### GENERAL DESCRIPTION OF THE PROJECT

The City of Key West is soliciting proposals for the disposal of vegetative debris collected from Hurricane Irma. The City is leasing a Temporary Debris Management Site (TDMS) located at

Rockland Key/Toppino Industrial Drive, where approximately 120,000 cubic yards of collected vegetative debris has been placed on a 10-acre site. The disposal method at the TDMS will be use of Air Curtain technology to thoroughly burn the vegetative debris while minimizing particulate emission during the processing stage.

The Bidder will provide all equipment, labor, materials, insurance, permitting and supplies to set up and maintain a 24 hour 7 day a week basis burn operation until all the material is reduced to ash. The Bidder will be responsible for the removal and disposal of all ash generated at a permitted authorized site. The Bidder will equip and staff the project to complete all burn activities, ash removal and site restoration (rough grading).

Contractor shall make every effort to comply with Florida Administrative Code 62-210.300(3)26.g;, specifically, visible emissions from the air curtain incinerator shall not exceed ten percent (10%) opacity, six (6) minute average, except for up to thirty (30) minutes during periods of startup when visible emissions up to thirty-five percent (35) opacity, six (6) minute average, shall be allowed. Visible emissions limitations shall not be considered unit-specific applicable requirements.

The City will designate an area for temporary placement of Bidder's temporary worker travel trailers if required. An elevated trench (berms) will be required to accommodate the burn operations due to high groundwater table at the TDMS.

Contractor shall renew Florida Forest Service authorization to burn daily by telephone to the Big Pine Key office Joe Cangeni 305-896-2392 or Amy Pulley 904-626-8345. An onsite inspection by the Big Pine office required prior to burn commencement.

Notice to Proceed will be issued following execution of agreement (including City required forms) between City and accepted Bidder.

### QUALIFICATION OF CONTRACTORS

The prospective Bidders must meet the statutorily prescribed requirements before award of Contract by the CITY. Bidders must hold or obtain all licenses and/or certificates as required by the State and Local Statutes in order to bid and perform the work specified herein.

### 4. BIDDER'S UNDERSTANDING

Each Bidder must inform himself of the conditions relating to the execution of the work, and it is assumed that he will inspect the site and make himself thoroughly familiar with all the Contract Documents. Failure to do so will not relieve the successful Bidder of his obligation to enter into a Contract and complete the contemplated work in strict accordance with the Contract Documents. It shall be the Bidder's obligation to verify for himself and to his complete satisfaction all information concerning site and subsurface conditions.

The CITY will make available to prospective Bidders upon request and at the office of the CITY Engineer, prior to bid opening, any information that he may have as to subsurface conditions and surface topography at the worksite.

Each Bidder shall inform himself of, and the Bidder awarded a Contract shall comply with, federal, state, and local laws, statutes, and ordinances relative to the execution of the work. This requirement includes, but is not limited to, applicable regulations concerning minimum wage rates, nondiscrimination in the employment of labor, protection of public and employee safety and health, environmental protection, the protection of natural resources, fire protection, burning and non-burning requirements, permits, fees, and similar subjects.

### TYPE OF PROPOSAL

#### A. LUMP SUM

Proposal cost for the work is to be submitted on a lump sum basis. All items required to complete the work specified but not included in the Proposal shall be considered incidental to those set forth in the Proposal.

### PREPARATION OF BIDS

#### A. GENERAL

All blank spaces in the BID form must be filled in, as required, preferably in BLACK ink. All price information shall be shown in both words and figures where required. No changes shall be made in the phraseology of the forms. Written amounts shall govern in case of discrepancy between the amounts stated in writing and the amounts stated in figures. In case of discrepancy between individual lump sum prices and extended totals, unit prices shall prevail.

Any BID shall be deemed informal which contains omissions, erasures, alterations, or additions of any kind, or prices uncalled for, or in which any of the prices are obviously unbalanced, or which in any manner shall fail to conform to the conditions of the published Invitation to Bid. Only one BID from any individual, firm, partnership, or corporation, under the same or different names, will be considered. Should it appear to the CITY that any Bidder is interested in more than one Proposal for work contemplated; all Proposals in which such Bidder is interested will be rejected.

#### B. SIGNATURE

The Bidder shall sign his BID in the blank space provided therefore. If Bidder is a corporation, the legal name of the corporation shall be set forth above, together with the signature of the officer or officers authorized to sign Contracts on behalf of the corporation. If Bidder is a partnership, the true name of the firm shall be set forth above, together with the signature of the partner or partners authorized to sign Contracts in behalf of the partnership. If signature is by an agent, other than an officer of a corporation or a member of a partnership, a notarized power-of-attorney must be on file with the CITY prior to opening of Proposals or submitted with the Proposal, otherwise the Proposal will be regarded as not properly authorized.

### C. SPECIAL BIDDING REQUIREMENTS

The Bidder's attention is brought to the hiring practices and licenses and permits of the City of Key West. These are defined in the addition to Article 39, ORDINANCES, PERMITS, AND LICENSES, as set forth in the Supplementary Conditions.

The Bidder shall submit an experience record with the Proposal showing his experience and expertise in vegetative debris burning and disposal. Such experience record shall provide five current or recent projects of similar work, and preferably in the State of Florida. For each project the following information shall be provided:

- 1. Description and location of work.
- 2. Quantity burned and contract amount.
- Dates work was performed.

- 1. Lump Sum Price
- 2. Time (calendar days) to Complete Project
- 3. Qualifications including experience performing similar burn projects in Florida.
- 4. Draft Site Specific Burn Plan
- 5. Cost effective options/alternatives to on-site burning.

### 14. EXECUTION OF CONTRACT

The successful Bidder shall, within five (5) working days after receiving Notice of Award, sign and deliver to the CITY an original Contract and two (2) copies in the form hereto attached, together with the insurance certificate examples of the bonds as required in the Contract Documents and evidence of holding required licenses and certificates. Within five (5) working days after receiving the signed Contract from the successful Bidder, the City's authorized agent will sign the Contract. Signature by both parties constitutes execution of the Contract.

The contract shall be executed on the basis on available funding and respective lump sum fee.

### CONTRACT BONDS

### A. PERFORMANCE AND PAYMENT BONDS

The successful Bidder shall file with the CITY, at the time of delivery of the signed Contract, a Performance Bond and Payment Bond on the form bound herewith, each in the full amount of the Contract price in accordance with the requirements of Florida Statutes Section 255.05 or 713.23, as applicable, as security for the faithful performance of the Contract and the payment of all persons supplying labor and materials for the construction of the work, and to cover all guarantees against defective workmanship or materials, or both, during the warranty period following the date of final acceptance of The work by the CITY. The Surety furnishing this bond shall have a sound financial standing and a record of service satisfactory to the CITY, shall be authorized to do business in the State of Florida, and shall be listed on the current U.S. Department of Treasury Circular Number 570, or amendments thereto in the Federal Register, of acceptable Sureties for federal projects. The CONTRACTOR shall supply the OWNER with phone numbers, addresses, and contacts for the Surety and their agents. Pursuant to Section 255.05(7), Florida Statutes, in lieu of the bond required by law, the contractor may file with the city an alternative form of security in the form of cash, a money order, a certified check, a cashier's check or an irrevocable letter of credit.

### B. POWER-OF-ATTORNEY

The Attorney-in-Fact (Resident Agent) who executes this Performance and Payment Bond in behalf of the Surety must attach a notarized copy of his power-of-attorney as evidence of his authority to bind the Surety on the date of execution of the bond. All Contracts, Performance and Payment Bonds, and respective powers-of-attorney will have the same date.

### FAILURE TO EXECUTE CONTRACT AND FURNISH BOND

The Bidder who has a Contract awarded to him and who fails to promptly and properly execute the Contract or furnish the required Bonds shall forfeit the bid security that accompanied his bid, and the bid security shall be retained as liquidated damages by the CITY, and it is agreed that this said sum is a fair estimate of the amount of damages the CITY will sustain in case the Bidder fails to enter into a Contract or furnish the required Bonds. Bid security deposited in the form of cash, a certified check, or cashier's check shall be subject to the same requirement as a Bid Bond.

### PERFORMANCE OF WORK BY CONTRACTOR

Each Bidder must furnish with his Proposal a list of the items that he will perform with his own forces and the estimated total cost of these items.

### TIME OF COMPLETION

The time of completion of the work to be performed under this Contract is the essence of the Contract. Delays and extensions of time may be allowed in accordance with the provisions stated in the General Conditions.

When the Contractor receives a Notice to Proceed, he shall commence work within 14 calendar days and shall complete all work within the number of calendar days stipulated in their Proposal.

\*\*\*\*

### **PROPOSAL**

NOTE TO BIDDER: Use preferably BLACK ink for completing this Proposal form.

To:

The City of Key West

Address:

1300 White St, Key West, Florida 33040

Project Title:

HURRICANE IRMA VEGETATIVE DEBRIS BURN

Bidder's contact person for additional information on this Proposal:

Company Name: Payne's Environmental Services, LLC

Contact Name & Telephone #: Terrence Payne - 813-677-6822

Email Address: paynestrees @cs.com

### BIDDER'S DECLARATION AND UNDERSTANDING

The undersigned, hereinafter called the Bidder, declares that the only persons or parties interested in this Proposal are those named herein, that this Proposal is, in all respects, fair and without fraud, that it is made without collusion with any official of the Owner, and that the Proposal is made without any connection or collusion with any person submitting another Proposal on this Contract.

The Bidder further declares that he has carefully examined the Contract Documents for the construction of the project, that he has personally inspected the site, that he has satisfied himself as to the quantities involved, including materials and equipment, and conditions of work involved, including the fact that the description of the quantities of work and materials, as included herein, is brief and is intended only to indicate the general nature of the work and to identify the said quantities with the detailed requirements of the Contract Documents, and that this Proposal is made according to the provisions and under the terms of the Contract Documents, which Documents are hereby made a part of this Proposal.

### CONTRACT EXECUTION AND BONDS

The Bidder agrees that if this Proposal is accepted, he will, within 10 days, not including Sundays and legal holidays, after Notice of Award, sign the Contract in the form annexed hereto, and will at that time, deliver to the Owner examples of the Performance Bond and Payment Bond required herein, and evidence of holding required licenses and certificates, and will, to the extent of his Proposal, furnish all machinery, tools, apparatus, and other means of construction and do the work and furnish all the materials necessary to complete all work as specified or indicated in the Contract Documents.

### START OF CONSTRUCTION AND CONTRACT COMPLETION TIME

The Bidder further agrees to begin work within 14 calendar days after the date of the initial Notice to Proceed and to complete the project, in all respects within \_\_\_\_\_\_ calendar days (Bidder to provide).

### LIQUIDATED DAMAGES

In the event the Bidder is awarded the Contract and shall fail to complete the work within the time limit or extended time limit agreed upon, as more particularly set forth in the Contract Documents, liquidated damages shall be paid to the Owner at the rate of \$3,700.00 per day (not to exceed 10% percent of the lump sum base bid) for all work awarded until the work has been satisfactorily completed as provided by the Contract Documents. Sundays and legal holidays shall be excluded in determining days in default.

### **ADDENDA**

The Bidder hereby acknowledges that he has received Addenda No's. \_\_\_\_\_, 2

(Bidder shall insert No. of each Addendum received) and agrees that all addenda issued are hereby made part of the Contract Documents, and the Bidder further agrees that his Proposal(s) includes all impacts resulting from said addenda.

### SALES AND USE TAXES

The Bidder agrees that all federal, state, and local sales and use taxes are included in the stated bid prices for the work.

### LUMP SUM ITEMS

The Bidder further proposes to accept as full payment for the work proposed herein the amounts computed under the provisions of the Contract Documents and based on the following lump sum amounts. The Bidder agrees that the lump sum represent a true measure of the labor and materials required to perform the work, including all allowances for overhead and profit for each type and unit of work called for in these Contract Documents.

TOTAL LUMP SUM BASE BID:

Cents (4) amount written in words 41, 433,000.

Payment for materials and equipment authorized by the Owner in a written Change Order but not listed in the above Proposal will be provided at the suppliers invoice plus 10 %.

### PROPOSAL (continued)

#### **EXPERIENCE**

The Bidder shall submit with an experience record with the Bid showing his experience and expertise in vegetative debris burning and disposal. Such experience record shall provide up to five current or recent projects of similar work, and preferably in the State of Florida. For each project the following information shall be provided:

- 1. Description and location of work.
- 2. Quantity burned and contract amount.
- Dates work was performed.
- 4. Owner.
- 5. Name of Owner's contact person and phone number.

The Bidder shall submit a draft project-specific Burn Plan with the Proposal.

#### SUBCONTRACTORS

The Bidder further proposes that the following subcontracting firms or businesses will be awarded subcontracts for the following portions of the work in the event that the Bidder is awarded the Contract:

Trade		Percent of Total Base Bid		
Street	City	State	Zip	
Name				
Trade		Percent of Total Base Bid		
Street	City	State	Zip	
Name				
Trade		Percent of	Total Base Bid	
Street	City	State	Zip	

### PROPOSAL (continued)

If Sole Proprietor or Partnership IN WITNESS hereto the undersigned has set his (its) hand this 13th day of November 17. Signature of Bidder If Corporation IN WITNESS WHEREOF the undersigned corporation has caused this instrument to be executed and its seal affixed by its duly authorized officers this 13 day of 1048 mile 2017. (SEAL) YAYME'S SHEROMENTAE SERVICE, LLC Name of Corporation Sworn and subscribed before this Byh day of Hovenbuy, 20 17 NOTARY PUBLIC, State of Horida

My Commission Expires:

Margaret K. Stoulil NOTARY PUBLIC

Comm# GG054347 Expires 1/27/2021

## FLORIDA BID BOND

	BOND NO
	AMOUNT: \$
KNOW ALL MEN BY THESE PRESENTS, that _	
hereinafter called the PRINCIPAL, and	
a corporation duly organized under the laws of the S	State of
having its principal place of business at	
	in the State of
and authorized to do business in the State of Florida	, as SURETY, are held and firmly bound unto
hereinafter CITY OF KEY WEST called the OBLIC	GEE, in the sum of
South and the second se	
for the payment for which we bind ourselves, our he assigns, jointly and severally, firmly by these present	
THE CONDITION OF THIS BOND IS SUCH THA	AT:
WHEREAS, the PRINCIPAL is herewith submitting IRMA DEBRIS BURN, said Bid Proposal, by references	

#### FLORIDA BID BOND (continued)

WHEREAS, the PRINCIPAL contemplates submitting or has submitted a bid to the OBLIGEE for the furnishing of all labor, materials (except those to be specifically furnished by the CITY), equipment, machinery, tools, apparatus, means of transportation for, and the performance of the work covered in the Proposal and the detailed Specifications, entitled:

## HURRICANE IRMA VEGETATIVE DEBRIS BURN

WHEREAS, it was a condition precedent to the submission of said bid that a cashier's check, certified check, or bid bond in the amount of 5 percent of the base bid be submitted with said bid as a guarantee that the Bidder would, if awarded the Contract, enter into a written Contract with the CITY for the performance of said Contract, within 10 working days after written notice having been given of the award of the Contract.

NOW, THEREFORE, the conditions of this obligation are such that if the PRINCIPAL within 10 consecutive calendar days after written notice of such acceptance, enters into a written Contract with the OBLIGEE and furnishes the Performance and Payment Bonds, each in an amount equal to 100 percent of the base bid, satisfactory to the CITY, then this obligation shall be void; otherwise the sum herein stated shall be due and payable to the OBLIGEE and the Surety herein agrees to pay said sum immediately upon demand of the OBLIGEE in good and lawful money of the United States of America, as liquidated damages for failure thereof of said PRINCIPAL.

Signed and sealed this	_ day of	, 2017,
PRINCIPAL		
		Ву
		SURETY
		ByAttorney-In-Fact
STATE OF	)	
COUNTY OF	: SS )	
		20

## FLORIDA BID BOND (continued)

I, the undersigned hereby duly swom, depose and say that no portion of the sum herein bid will paid to any employees of the City of Key West as a commission, kickback, reward or gift, direct or indirectly by me or any member of my firm or by an officer of the corporation.		
Ву:	-	
Sworn and subscribed before me thisday of	, 2017.	
NOTARY PUBLIC, State ofat Large		
My Commission Expires:		

## ANTI-KICKBACK AFFIDAVIT

STATE OF	)	
COUNTY OF	)	
paid to any employees of the City o	orn, depose and say that no portion of the sur f Key West as a commission, kickback, rewa my firm or by an officer of the corporation.	m herein bid will be ard or gift, directly or
Ву:		
Sworn and subscribed before me thi	isday of	, 2017.
NOTARY PUBLIC, State of	at Large	
My Commission Expires:		
	the alle alle alle alle alle	

# SWORN STATEMENT UNDER SECTION 287.133(3)(A) FLORIDA STATUTES, ON PUBLIC ENTITY CRIMES

THIS FORM MUST BE SIGNED IN THE PRESENCE OF A NOTARY PUBLIC OR OTHER OFFICER AUTHORIZED TO ADMINISTER OATHS.

1.	This sworn statement is submitted with Bid or Proposal for Phyne's
	Environmental Services, LLC
2.	This sworn statement is submitted by Terrence E. Payne (name of entity submitting sworn statement)
	whose business address is 5617 CAUSEWAY Blvd
	Tampa, FL 33619
	and (if applicable) its Federal Employer Identification Number (FEIN) is
	27-1037046
	(If the entity has no FEIN, include the Social Security Number of the individual
	signing this sworn statement
3.	My name is Terrence E. Payne (please print name of individual signing)
	and my relationship to the entity named above is <b>President</b>
4.	I understand that a "public entity crime" as defined in Paragraph 287.133(1)(g), Florida Statutes, means a violation of any state or federal law by a person with respect to and directly related to the transaction of business with any public entity or with an agency or political subdivision of any other state or with the United States, including but not limited to, any bid or contract for goods or services to be provided to any public or an agency or political subdivision of any other state or of the United States and involving antitrust, fraud, theft,

5. I understand that "convicted" or "conviction" as defined in Paragraph 287.133(1)(b), Florida Statutes, means a finding of guilt or a conviction of a public entity crime, with or without an adjudication guilt, in any federal or state trial court of record relating to charges brought by indictment information after July 1, 1989, as a result of a jury verdict, nonjury

bribery, collusion, racketeering, conspiracy, material misrepresentation.

trial, or entry of a plea of guilty or nolo contendere.

## PUBLIC ENTITY CRIMES (continued)

- 6. I understand that an "affiliate" as defined in Paragraph 287.133(1)(a), Florida Statutes, means
  - a. A predecessor or successor of a person convicted of a public entity crime; or
  - b. An entity under the control of any natural person who is active in the management of the entity and who has been convicted of a public entity crime. The term "affiliate" includes those officers, directors, executives, partners, shareholders, employees, members, and agents who are active in the management of an affiliate. The ownership by one person of shares constituting controlling interest in another person, or a pooling of equipment or income among persons when not for fair market value under an arm's length agreement, shall be a prima facie case that one person controls another person. A person who knowingly enters into a joint venture with a person who has been convicted of a public entity crime in Florida during the preceding 36 months shall be considered an affiliate.
- 7. I understand that a "person" as defined in Paragraph 287.133(1)(8). Florida Statutes, means any natural person or entity organized under the laws of any state or of the United States with the legal power to enter into a binding contract and which bids or applies to bid on contracts for the provision of goods or services let by a public entity, or which otherwise transacts or applies to transact business with public entity. The term "person" includes those officers, directors, executives, partners, shareholders, employees, members, and agents who are active in management of an entity.
- 8. Based on information and belief, the statement which I have marked below is true in relation to the entity submitting this sworn statement. (Please indicate which statement applies).

Neither the entity submitting this sworn statement, nor any officers, directors, executives, partners, shareholders, employees, members, or agents who are active in management of the entity, nor any affiliate of the entity have been charged with and convicted of a public entity crime subsequent to July 1, 1989, AND (Please indicate which additional statement applies.)

There has been a proceeding concerning the conviction before a hearing of the State of Florida, Division of Administrative Hearings. The final order entered by the hearing officer did not place the person or affiliate on the convicted vendor list. (Please attach a copy of the final order.)

The person or affiliate was placed on the convicted vendor list. There has been a subsequent proceeding before a hearing officer of the State of

Florida, Division of Administrative Hearings. The final order entered by the hearing officer determined that it was in the public interest to remove the person or affiliate from the convicted vendor list. (Please attach a copy of the final order.)

#### PUBLIC ENTITY CRIMES (continued)

The person or affiliate has not been put on the convicted vendor list. (Please describe any action taken by or pending with the Department of General Services.)

(signature)

(date)

STATE OF POULDA COUNTY OF HILLS BOY THAN

PERSONALLY APPEARED BEFORE ME, the undersigned authority,

(name of individual signing) who, after first being sworn by me, affixed his/her

signature in the space provided above on this 3th day of Wovenclock, 2017.

My commission expires:

xpires: 1/71/303/

Margaret K. Stoull NOTARY PUBLIC STATE OF FLORIDA Comm# GG054347 Expires 1/27/2021

25

#### INDEMNIFICATION

To the fullest extent permitted by law, the CONTRACTOR expressly agrees to indemnify and hold harmless the City of Key West, their officers, directors, agents, and employees (herein called the "indemnitees") from liabilities, damages, losses and costs, including, but not limited to, reasonable attorney's fees and court costs, such legal expenses to include costs incurred in establishing the indemnification and other rights agreed to in this Paragraph, to persons or property, to the extent caused by the negligence, recklessness, or intentional wrongful misconduct of the CONTRACTOR, its Subcontractors or persons employed or utilized by them in the performance of the Contract. Claims by indemnitees for indemnification shall be limited to the amount of CONTRACTOR's insurance or \$1 million per occurrence, whichever is greater. The parties acknowledge that the amount of the indemnity required hereunder bears a reasonable commercial relationship to the Contract and it is part of the project specifications or the bid documents, if any.

The indemnification obligations under the Contract shall not be restricted in any way by any limitation on the amount or type of damages, compensation, or benefits payable by or for the CONTRACTOR under workers' compensation acts, disability benefits acts, or other employee benefits acts, and shall extend to and include any actions brought by or in the name of any employee of the CONTRACTOR or of any third party to whom CONTRACTOR may subcontract a part or all of the Work. This indemnification shall continue beyond the date of completion of the work.

CONTRACTOR	Payne's Environmental Services EAL:	
	54.17 CAUSEWAY Blvd, TAMPA, FL 336 Signature	19
	Terrence E. Payne	
	President	
	11/13/2017	

## EQUAL BENEFITS FOR DOMESTIC PARTNERS AFFIDAVIT

COUNTY OF HILLS BOTON (1)	
	hat the firm of ANNES LINGERMANNER SERVICES, LLC on the same basis as it provides benefits to ec. 2-799.
	By: Zapacia
Sworn and subscribed before me this  13 14 day of Hovenbey, 2017.  Margarul Should  NOTARY RUBLIC, State of Plorida at Large  My Commission Expires: 17712021	Margaret K. Stoulii NOTARY PUBLIC STATE OF FLORIDA Comm# GG054347 Expires 1/27/2021

\*\*\*\*

## CONE OF SILENCE AFFIDAVIT

COUNTY OF HILLS DIVINGIN )
I the undersigned hereby duly sworn depose and say that all owner(s), partners, officers, directors, employees and agents representing the firm of Paynus Environmental have read and
understand the limitations and procedures regarding communications concerning City of Key West issued

competitive solicitations pursuant to City of Key West Ordinance Section 2-773 Cone of Silence

(signature)

(date)

Sworn and subscribed before me this

STATE OF Porida

(attached).

1345 Day of Hoveniber, 2017.

NOTARY RUBLIC, State of FLORICA at Large

My Commission Expires: 1127 2021

Margaret K. Stoulll
NOTARY PUBLIC
STATE OF FLORIDA
Comm# GG054347
Expires 1/27/2021

## APPENDIX A, 44 C.F.R. PART 18 - CERTIFICATION REGARDING LOBBYING

(To be submitted with each bid or offer exceeding \$100,000)

The undersigned CONTRACTOR certifies, to the best of his or her knowledge, that:

1. No Federal appropriated funds have been paid or will be paid, by or on behalf of the undersigned, to any person for influencing or attempting to influence an officer or employee of an agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with the awarding of any Federal contract, the making of any Federal grant, the making of any Federal loan, the entering into of any cooperative agreement, and the extension, continuation, renewal, amendment, or modification of any Federal contract, grant, loan, or cooperative agreement.

- 2. If any funds other than Federal appropriated funds have been paid or will be paid to any person for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with this Federal contract, grant, loan, or cooperative agreement, the undersigned shall complete and submit Standard Form-LLL, "Disclosure Form to Report Lobbying," in accordance with its instructions.
- 3. The undersigned shall require that the language of this certification be included in the award documents for all sub-awards at all tiers (including subcontracts, subgrants, and contracts under grants, loans, and cooperative agreements) and that all subrecipients shall certify and disclose accordingly.

This certification is a material representation of fact upon which reliance was placed when this transaction was made or entered into. Submission of this certification is a prerequisite for making or entering into this transaction imposed by 31, U.S.C. § 1352 (as amended by the Lobbying Disclosure Act of 1995). Any person who fails to file the required certification shall be subject to a civil penalty of not less than \$10,000 and not more than \$100,000 for each such failure.

The CONTRACTOR Payne's Environmental Services, LLC certifies or affirms the truthfulness and accuracy of each statement of its certification and disclosure, if any. In addition, the Contractor understands and agrees that the provisions of 31 U.S.C. § 3801 et seq., apply to this certification and disclosure of any.

Signature of Contractor's Authorized Official

Terrence E. Payne President Name and Title of Contractor's Authorized Official

11/13/2017

### BIDDER'S CHECKLIST

(Note: The purpose of this checklist is to serve as a reminder of major items to be addressed in submitting a bid and is not intended to be all inclusive. It does not alleviate the Bidder from the responsibility of becoming familiar with all aspects of the Contract Documents and proper completion and submission of his bid.)

1.	All Contract Documents thoroughly read and understood.	[ '	<b>J</b> ]
2.	All blank spaces in Proposal filled in, using black ink.	[ •	<b>J</b> ]
3.	Addenda acknowledged.	[•	<b>√</b> ]
4.	Subcontractors are named as indicated in the Proposal.	[•	<b>V</b> 1
5.	Experience record included.	Ĺ	<b>√</b> ]
6.	Proposal signed by authorized officer and notorized.	[ \	<b>/</b> ]
7.	Bid Bond completed and executed, including power-of-attorney dated the same date as Bid Bond.	[,	<b>/</b> ]
8.	Bidder familiar with federal, state, and local laws, ordinances, rules and regulations affecting performance of the work.	[ •	<b>/</b> 1
9.	Bidder, if successful, able to obtain and/or demonstrate possession of required licenses and certificates within (10) ten calendar days after receiving a Notice of Award.	]	changed by Addendum
10.	BID submitted intact with the volume entitled "Bidding Requirements" and "Contract Forms", 1 original and 1 flash drive as stated in the invitation to bid.	I	]changed by Addendum
31.	Bid Documents submitted in scaled envelope and addressed and labeled in conformance with the instructions in the Invitation to Bid.	[ •	<b>/</b> ]

\*\*\*\*

## PART 2

## **CONTRACT**

#### OWNER-CONTRACTOR AGREEMENT

THIS AGREEMENT is made by and between the CITY OF KEY WEST, FLORIDA, a Florida municipal corporation, with a physical address of 1300 White Street, Key West, Florida 33040, hereinafter referred to as "CITY" and (Contractor), a Florida corporation, with an address of 54/7 Causeway Blod, Tampa, FL 334/9 hereinafter referred to as "CONTRACTOR".

WHEREAS, on September 10, 2017, Hurricane Irma made landfall in the Florida Keys, causing severe flooding and significant wind damage; leaving the CITY littered with debris; creating a public safety hazard; and

WHEREAS, the CITY desires to utilize the services of CONTRACTOR for services resulting from the Natural Disaster on a lump sum basis; and

WHEREAS, the CITY has reviewed the rates/estimate included herein and has determined they are a fair price for the services to be provided.

NOW THEREFORE, in consideration of the foregoing and mutual covenants contained in this agreement, the parties agree that:

CONTRACTOR agrees to provide the following services:

Disposal of vegetative debris collected from Hurricane Irma. The Bidder will provide all equipment, labor, materials, insurance, permitting and supplies to set up and maintain a 24 hour 7 day a week basis burn operation until all the material is reduced to ash. The Bidder will be responsible for the removal and disposal of all ash generated at a permitted authorized site. The Bidder will equip and staff the project to complete all burn activities, ash removal and site restoration (rough grading) within 90 days of Notice to Proceed issued by the City.

The CONTRACTOR shall be certified and licensed by the State of Florida and meet the requirements set forth by the CITY including CITY LICENSURE.

#### SPECIFIC PROVISIONS

THAT the parties hereby agree to the following specific provisions:

Commencement and Completion. This Agreement will become effective on the date this Agreement is executed, \_\_\_\_\_\_, 2017. The initial term of this Agreement shall be three (3) months.

#### INSURANCE

Contractor shall maintain limits no less than those stated below:

CONTRACTOR is to secure, pay for, and file with the City of Key West, prior to commencing any work under the Contract, all certificates for workers' compensation, public liability, and property damage liability insurance, and such other insurance coverages as may be required by specifications and addenda thereto, in at least the following minimum amounts with specification amounts to prevail if greater than

minimum amounts indicated. Notwithstanding any other provision of the Contract, the CONTRACTOR shall provide the minimum limits of liability insurance coverage as follows:

Auto Liability	\$1,000,000	Combined Single Limit
General Liability	\$2,000,000	Aggregate (Per Project)
	\$2,000,000	Products Aggregate
	\$1,000,000	Any One Occurrence
	\$1,000,000	Personal Injury
	\$ 300,000	Fire Damage/Legal
Additional Umbrella Liability	\$2,000,000	Occurrence / Aggregate

CONTRACTOR shall furnish an original Certificate of Insurance indicating, and such policy providing coverage to, City of Key West named as an additional insured on a PRIMARY and NON CONTRIBUTORY basis utilizing an ISO standard endorsement at least as broad as CG 2010 (11/85) or its equivalent, (combination of CG 20 10 07 04 and CG 20 37 07 04, providing coverage for completed operations, is acceptable) including a waiver of subrogation clause in favor of City of Key West on all policies. CONTRACTOR will maintain the General Liability and Umbrella Liability insurance coverages summarized above with coverage continuing in full force including the additional insured endorsement until at least 3 years beyond completion and delivery of the work contracted herein.

Notwithstanding any other provision of the Contract, the CONTRACTOR shall maintain complete workers' compensation coverage for each and every employee, principal, officer, representative, or agent of the CONTRACTOR who is performing any labor, services, or material under the Contract. Further, CONTRACTOR shall additionally maintain the following minimum limits of coverage:

Bodily Injury Each Accident	\$1,000,000
Bodily Injury by Disease Each Employee	\$1,000,000
Bodily Injury by Disease Policy Limit	\$1,000,000

CONTRACTOR's insurance policies shall be endorsed to give 30 days' written notice to the City of Key West in the event of cancellation or material change, using form CG 02 24, or its equivalent.

Certificates of Insurance submitted to the City of Key West will not be accepted without copies of the endorsements being requested. This includes additional insured endorsements, cancellation/material change notice endorsements, and waivers of subrogation. PLEASE ADVISE YOUR INSURANCE AGENT ACCORDINGLY.

CONTRACTOR will comply with any and all safety regulations required by any agency or regulatory body including but not limited to OSHA. CONTRACTOR will notify City of Key West immediately by telephone at (305) 809-3811 any accident or injury to anyone that occurs on the jobsite and is related to any of the work being performed by the CONTRACTOR.

As applicable, CONTRACTOR, prior to the commencement of the Work, shall obtain Professional Liability with minimum limits of \$1,000,000 for professional services rendered in accordance with this contract. The CONTRACTOR shall maintain such insurance for at least two (2) years from the termination of this contract and during this two (2) year period the CONTRACTOR shall use his/her/their best efforts to ensure that there is no change of the retroactive date on this insurance coverage. If there is a change that reduces or restricts the coverage carried during the contract, the CONTRACTOR shall notify City Risk Management within thirty (30) days of the change.

As applicable, the CONTRACTOR will be required to maintain Jones Act coverage that will respond to the Federal Jones Act (46 U.S.C.A subsection 688). The limits of such coverage shall be no less than \$1,000,000.

As applicable, the CONTRACTOR will be required to maintain USL&H coverage that will respond to the Federal Longshoremen and Harbor Workers Act (33 USC sections 901-950). The limits of such coverage shall be no less than \$1,000,000.

#### SURETY AND INSURER QUALIFICATIONS

All bonds, insurance contracts, and certificates of insurance shall be either executed by or countersigned by a licensed resident agent of the Surety or insurance company, having his place of business in the State of Florida, and in all ways complying with the insurance laws of the State of Florida. Further, the said Surety or Insurance Company shall be duly licensed and qualified to do business in the State of Florida. If requested, Contractor shall Provide Proof of Florida Licensure for all insurance companies. The City of Key West shall be named as Additional Insured on the insurance certificates.

#### INDEMNITY

To the fullest extent permitted by law, the CONTRACTOR expressly agrees to indemnify and hold harmless the City of Key West, their officers, directors, agents, and employees (herein called the "indemnitees") from liabilities, damages, losses and costs, including, but not limited to, reasonable attorney's fees and court costs, such legal expenses to include costs incurred in establishing the indemnification and other rights agreed to in this Paragraph, to persons or property, to the extent caused by the negligence, recklessness, or intentional wrongful misconduct of the CONTRACTOR, its Subcontractors or persons employed or utilized by them in the performance of the Contract. Claims by indemnitees for indemnification shall be limited to the amount of CONTRACTOR's insurance or \$1 million per occurrence, whichever is greater. The parties acknowledge that the amount of the indemnity required hereunder bears a reasonable commercial relationship to the Contract and it is part of the project specifications or the bid documents, if any. The indemnification obligations under the Contract shall not be restricted in any way by any limitation on the amount or type of damages, compensation, or benefits payable by or for the CONTRACTOR under workers' compensation acts, disability benefits acts, or other employee benefits acts, and shall extend to and include any actions brought by or in the name of any employee of the CONTRACTOR or of any third party to whom CONTRACTOR may subcontract a part or all the Work. This indemnification shall continue beyond the date of completion of the work.

#### LICENSES

## THE BIDDER MUST BE A LICENSED CONTRACTOR BY THE STATE OF FLORIDA AND SUBMIT PROOF OF SUCH WITH THE BID.

- a. Within 10 days of Notice of Award, the successful Bidder must represent that he holds all applicable, county, and City of Key West licenses and permits required to do business as a contractor with respect to the work described in the Contract Documents. Further, the successful Bidder must, within 10 days of Notice of Award, furnish documentation showing that, as a minimum, he has complied with the provisions of Chapter 18 of the Code of Ordinances of the City of Key West to enter the Agreement contained in the Contract Documents.
- b. Specifically, within 10 days after Notice of Award, the successful Bidder must demonstrate that he holds, as a minimum, the following licenses and certificates:
  - i. City of Key West Tax License Receipt;
  - A valid Certificate of Competency issued by the Chief Building Official of Key West, Florida
  - iii. A valid occupational license issued by the City of Key West, Florida

#### **GENERAL PROVISIONS**

THAT the parties hereby agree to the following general provisions:

Representations of Contractor: CONTRACTOR represents that is has sufficient manpower and technical expertise to perform the services contemplated by this Agreement in a timely and professional manner consistent with the standards of the industry in which CONTRACTOR operates, and that all technical personnel have State of Florida certification within their discipline(s). CONTRACTOR warrants that its services under this Agreement shall be performed in a thorough, efficient, and workmanlike manner, promptly and with due diligence and care, and in accordance with all applicable codes and laws.

Representations of the CITY: The CITY represents that it is duly organized and existing as a Municipal Corporation political subdivision of the State of Florida. Further, the CITY has the full power and authority to enter into the transactions contemplated by this Agreement and has the ownership and/or control over the property which is the subject of this Agreement or which shall be serviced thereby.

#### INDEPENDENT CONTRACTOR

It is specifically agreed that CONTRACTOR is deemed to be an independent CONTRACTOR for the purposes set forth in this subsection. Accordingly, it is further agreed that no agent, employee, or servant of CONTRACTOR shall be entitled to any benefits provided by the CITY to its employees, including but not limited to compensation insurance and unemployment insurance. CONTRACTOR will be responsible for its acts and for the acts of its agents, employees, servants and sub-CONTRACTOR's during the performance of this Agreement. Notwithstanding anything herein to the contrary, CONTRACTOR and its agents, servants, and/or employees, while acting within the scope of this Agreement shall be deemed to be an agent of the CITY for purposes of Florida Statute 768.28; however, the CITY shall not have to defend CONTRACTOR and/or its agents, servants, and employees in any action brought by the Florida Department of Professional Regulation or the Board as required by Florida Statute 468.619(5). Although CONTRACTOR is an independent CONTRACTOR, the work contemplated herein must meet the approval of the CITY and shall be subject to the CITY's general right of inspection to secure the satisfactory completion thereof. CONTRACTOR agrees to comply with all Federal, State and municipal laws, rules and regulations that are now or may in the future become applicable to CONTRACTOR, CONTRACTOR's business, equipment or personnel engaged in operations covered by this Agreement or accruing out of the performance of such operations. The CITY will not be held responsible for the collection of or the payment of taxes or contributions of any nature on behalf of CONTRACTOR.

CONTRACTOR agrees that it shall bear the responsibility for verifying the employment status, under the Immigration Reform and Control Act of 1986, of all persons it employs in the performance of this Agreement.

## ACCEPTANCE OF WORK PRODUCT, PAYMENT AND WARRANTY

Upon receipt of a periodic work product, together with an invoice sufficiently itemized to permit audit, the CITY will diligently review same. Payment, found to be due CONTRACTOR, will be paid to CONTRACTOR within 45 DAYS after the date of receipt of the invoice. CONTRACTOR warrants that the data utilized by CONTRACTOR (other than as provided by the CITY) is from a source, and collected using methodologies, which are generally recognized in \_CONTRACTOR's industry or profession to be a reliable basis and foundation for CONTRACTOR's work product. CONTRACTOR shall notify the CITY in writing should it appear, in CONTRACTOR's professional judgment that the data or information provided by the CITY for use in CONTRACTOR's work product is incomplete, defective or unreliable. CONTRACTOR guarantees to amend, revise or correct to the satisfaction of the CITY any error appearing in the work as a result of CONTRACTOR's, failure to comply with the warranties and representations contained herein. Neither inspection nor payment, including final payment by the CITY shall relieve CONTRACTOR from its obligations to do and complete the work product in accordance with this Agreement.

#### PUBLIC RECORDS

All records prepared or maintained by CONTRACTOR in accordance with the Scope of Services, shall be deemed to be public records. CONTRACTOR shall allow public access to such documents and materials in accordance with the provisions of Chapter 119, Florida Statutes. Should \_CONTRACTOR assert any exemptions to the requirements of Chapter 119 and related statutes, the burden of establishing such exemption, by way of injunctive or other relief as provided by law, shall be upon CONTRACTOR. The CITY reserves the right to unilaterally cancel this Agreement for refusal by \_CONTRACTOR to allow public access to all such documents, subject to the Provisions of Chapter 119, Florida Statutes, and made or received by CONTRACTOR in conjunction with this Agreement. All documents hereinabove referred to shall be maintained and kept for public inspection at the CITY of Key West City Hall.

#### MISCELLANANEOUS PROVISIONS

The parties hereby agree to the following miscellaneous provisions:

- a. <u>Discrimination</u>: That CONTRACTOR shall assure that no person shall be excluded, on the grounds of race, color, creed, national origin, handicap, age or scx, religion, ancestry, marital status, gender, gender identification, sexual orientation, and physical characteristics from participation in, denied the benefits of, or be otherwise subjected to discrimination in any activity under this Agreement. CONTRACTOR shall take all measures necessary to effectuate these assurances.
- b. <u>Severability</u>: That, should any term or provision of this Agreement be held, to any extent, invalid or unenforceable, as against any person, entity or circumstance during the term hereof, by force of any statute, law, or ruling of any forum of competent jurisdiction, such invalidity shall not affect any other term or provision of this Agreement, to the extent that the Agreement shall remain operable, enforceable and in full force and effect to the extent permitted by law.
- c. Entire Agreement: That this Agreement states the entire understanding between the parties and supersedes any written or oral representations, statements, negotiations or agreements to the contrary. CONTRACTOR recognizes that any representations, statements or negotiations made by the CITY staff do not suffice to legally bind the CITY in a contractual relationship unless they have been reduced to writing, authorized and signed by the authorized CITY representatives.
- d. <u>Construction</u>: Should any provision of this Agreement be subject to judicial interpretation, it is agreed that the court interpreting or considering such provision will not apply the presumption or rule of construction that the terms of this Agreement be more strictly construed against the party which itself or through its counsel or other agent prepared the same, as all parties hereto have participated in the preparation of the final form of this Agreement through review by their respective counsel, if any, and/or the negotiation of specific language and therefore the application of such presumption or rule of construction would be inappropriate and contrary to the intent of the parties.
- e. Attorney's Fees: In the event of any litigation to enforce the terms of this prevailing party shall be entitled to reasonable attorney's fees and costs which are directly attributed to such litigation both at the trial and appellate level.
- f. Waiver: The indulgence of either party with regard to any breach or failure to perform any provision of this Agreement shall not be deemed to constitute a waiver of the provision or any portion of this Agreement, either at the time the breach or failure occurs or at any time throughout the term of this Agreement. The review of, approval of, or payment for any of CONTRACTOR's work product, services, or materials shall not be construed to operate as a

waiver of any of the CITY's rights under this Agreement, or of any cause of action the CITY may have arising out of the performance of this Agreement.

- g. Force Majeure: Notwithstanding any provisions of this Agreement to the contrary, the parties shall not be held liable if failure or delay in the performance of this Agreement arises from fires, floods, strikes, embargos, acts of the public enemy, unusually severe weather, outbreak of war, restraint of government, riots, civil commotion, force majeure, act of God, or for any other cause of the same character which is unavoidable through the exercise of due care and beyond the control of the parties. This provision shall not apply if the "Scope of Work" of this Agreement specifies that performance by CONTRACTOR is specifically required during the occurrence of any of the events herein mentioned.
- Headings: All headings are for clarification only and are not to be used in any construction of this Agreement or any paragraph.
- i. <u>Binding Nature of Agreement</u>: This Agreement shall be binding upon the assigns of the parties hereto.
- j. Law: Venue: This Agreement is being executed in the CITY of Key West, Florida and shall be governed in accordance with the laws of the State of Florida. Venue for any action brought to enforce this agreement or for breach thereof shall lie in Monroe County, Florida

#### k. Termination for Cause or Convenience:

- 1) This contract may be terminated in whole or in part in writing by either party in the event of substantial failure by the other party to fulfill its obligations under this contract through no fault of the terminating party, provided that no termination may be effected unless the other party is given:
  - Not less than ten (10) calendar days written notice (delivered by certified mail, return receipt requested) of intent to terminate; and
  - ii. An opportunity for consultation with the terminating party prior to termination.
- 2) This contract may be terminated in whole or in part in writing by the local government for its convenience, provided that the other party is afforded the same notice and consultation opportunity specified in 1 (a) above. If termination for default is effected by the local government, an equitable adjustment in the price for this contract shall be made, but no amount shall be allowed for anticipated profit on unperformed services or other work, and any payment due to the CONTRACTOR at the time of termination may be adjusted to cover any additional costs to the local government because of the CONTRACTOR's default.
- 3) If termination for convenience is effected by the local government, the equitable adjustment shall include a reasonable profit for services or other work performed for which profit has not already been included in an invoice. For any termination, the equitable adjustment shall provide for payment to the CONTRACTOR for services rendered and expenses incurred prior to receipt of the notice of intent to terminate, in addition to termination settlement costs reasonably incurred by the CONTRACTOR relating to commitments (e.g., suppliers, subCONTRACTORs) which had become firm prior to receipt of the notice of intent to terminate.
- Upon receipt of a termination action under paragraphs (a) or (b) above, the CONTRACTOR shall
  - iii. promptly discontinue all affected work (unless the notice directs otherwise) and
  - iv. deliver or otherwise make available to the local government all data, drawings, reports specifications, summaries and other such information, as may have been

accumulated by the CONTRACTOR in performing this contract, whether completed or in process.

l. <u>Federal Regulations</u>: Federal regulations apply to all of the CITY of Key West contracts using Federal funds as a source for the solicitation of goods and services.

#### FEDERAL REQUIREMENTS

In addition to the terms of Appendix II to 2 C.F.R. Part 200, which are attached as Exhibit B and incorporated herein, the following Federal requirements also apply to this Emergency Agreement:

- a. ACCESS BY THE GRANTEE, SUBGRANTEE, FEDERAL GRANTOR AGENCY AND COMPTROLLER GENERAL: The CONTRACTOR shall allow access by the grantee, subgrantee, Federal grantor agency and Comptroller General of the United States, or any of their duly authorized representatives to any books, documents, papers, and records of the CONTRACTOR which are directly pertinent to that specific contract for the purpose of making audit, examination, excerpts and transcriptions.
- b. COPYRIGHTS: The Grantee is free to copyright original work developed in the course of or under the agreement. FEMA reserves a royalty-free, nonexclusive and irrevocable right to reproduce, publish, or otherwise use, and to authorize others to use the work for Government purposes. Publication resulting from work performed under this agreement shall include an acknowledgement of FEMA financial support, by granted number, and a statement that the publication does not constitute an endorsement by FEMA or reflect FEMA views.
- c. DISADVANTAGED BUSINESS ENTERPRISES (DBE) CONTRACTORS: The CONTRACTOR agrees to ensure that Disadvantage Business Enterprises as defined in 49 C.F.R. Part 23, as amended, have the maximum opportunity to participate in the performance of contracts and this agreement. In this regard, CONTRACTOR shall take all necessary and reasonable steps in accordance with 49 C.F.R. Part 23, as amended, to ensure that the Disadvantaged Business Enterprises have the maximum opportunity to compete for and perform contracts. The CONTRACTOR shall not discriminate on the basis of race, color, national origin or sex in the award and performance of federal assisted contracts.
- d. ENERGY POLICY AND CONSERVATION ACT: The CONTRACTOR shall comply with mandatory standards and policies relating to energy efficiency which are contained in the state energy conservation plan issued in compliance with the Energy Policy and Conservation Act (Pub. L. 94-163).
- e. EQUAL EMPLOYMENT OPPORTUNITY: During the performance of this contract, the CONTRACTOR agrees as follows:
  - i. The CONTRACTOR will not discriminate against any employee or applicant for employment because of race, color, religion, sex, or national origin. The CONTRACTOR will take affirmative action to ensure that applicants are employed, and that employees are treated during employment without regard to theirrace, color, religion, sex, or national origin. Such action shall include, but not be limited to the following: Employment, upgrading, demotion, or transfer; recruitment or recruitment advertising; layoff or termination; rates of pay or other forms of compensation; and selection for training, including apprenticeship. The CONTRACTOR agrees to post in conspicuous places, available to employees and applicants for employment, notices to be provided setting forth the provisions of this nondiscrimination clause.
  - The CONTRACTOR will, in all solicitations or advertisements for employees placed by or on behalf of the CONTRACTOR, state that all qualified applicants will receive

- considerations for employment without regard to race, color, religion, sex, or national origin.
- The CONTRACTOR will send to each labor union or representative of workers with which he has a collective bargaining agreement or other contract or understanding, a notice to be provided advising the said labor union or workers' representatives of the CONTRACTOR's commitments under this section, and shall post copies of the notice in conspicuous places available to employees and applicants for employment.
- The CONTRACTOR will comply with all provisions of Executive Order 11246 of September 24, 1965, and of the rules, regulations, and relevant orders of the Secretary of Labor.
- v. The CONTRACTOR will furnish all information and reports required by Executive Order 11246 of September 24, 1965, and by rules, regulations, and orders of the Secretary of Labor, or pursuant thereto, and will permit access to his books, records, and accounts by the administering agency and the Secretary of Labor for purposes of investigation to ascertain compliance with such rules, regulations, and orders.
- vi. In the event of the CONTRACTOR's noncompliance with the nondiscrimination clauses of this contract or with any of the said rules, regulations, or orders, this contract may be canceled, terminated, or suspended in whole or in part and the CONTRACTOR may be declared ineligible for further Government contracts or federally assisted construction contracts in accordance with procedures authorized in Executive Order 11246 of September 24, 1965, and such other sanctions as may be imposed and remedies invoked as provided in Executive Order 11246 of September 24, 1965, or by rule, regulation, or order of the Secretary of Labor, or as otherwise provided by law.
- vii. The CONTRACTOR will include the portion of the sentence immediately preceding paragraph (1) and the provisions of paragraphs (1) through (7) in every subcontract or purchase order unless exempted by rules, regulations, or orders of the Secretary of Labor issued pursuant to section 204 of Executive Order 11246 of September 24, 1965, so that such provisions will be binding upon each subCONTRACTOR or vendor. The CONTRACTOR will take such action with respect to any subcontract or purchase order as the administering agency may direct as a means of enforcing such provisions, including sanctions for noncompliance: Provided, however, That in the event a CONTRACTOR becomes involved in, or is threatened with, litigation with a subCONTRACTOR or vendor as a result of such direction by the administering agency the CONTRACTOR may request the United States to enter into such litigation to protect the interests of the United States.

#### viii. CONTRACTOR shall:

- 1. Place qualified small and minority businesses and women's business enterprises on solicitation lists.
- 2. Assure that small and minority businesses and women's business enterprises are solicited whenever they are potential sources.
- Divide work, when economically feasible, into smaller tasks to permit maximum participation by small and minority businesses, and women's business enterprises.
- 4. Establish delivery schedules, where the requirement permits, which encourage participation by small and minority businesses, and women's business enterprises.
- 5. Provide documentation of compliance with 1-4 above.

## f. CONTRACT WORK HOURS AND SAFETY STANDARDS ACT COMPLIANCE

 Overtime requirements. No contractor or subcontractor contracting for any part of the contract work which may require or involve the employment of laborers or mechanics shall require or permit any such laborer or mechanic in any workweek in which he or she is employed on such work to work in excess of forty hours in such workweek unless such laborer or mechanic receives compensation at a rate not less than one and one-half times the basic rate of pay for all hours worked in excess of forty hours in such workweek.

- ii. Violation; liability for unpaid wages; liquidated damages. In the event of any violation of the clause set forth in paragraph (1) of this section the contractor and any subcontractor responsible therefor shall be liable for the unpaid wages. In addition, such contractor and subcontractor shall be liable to the United States, for liquidated damages. Such liquidated damages shall be computed with respect to each individual laborer or mechanic, including watchmen and guards, employed in violation of the clause set forth in paragraph (1) of this section, in the sum of \$10 for each calendar day on which such individual was required or permitted to work in excess of the standard workweek of forty hours without payment of the overtime wages required by the clause set forth in paragraph (1) of this section.
- Withholding for unpaid wages and liquidated damages. The Federal Emergency Management Agency (FEMA) shall upon its own action or upon written request of an authorized representative of the Department of Labor withhold or cause to be withheld, from any moneys payable on account of work performed by the contractor or subcontractor under any such contract or any other Federal contract with the same prime contractor, or any other federally-assisted contract subject to the Contract Work Hours and Safety Standards Act, which is held by the same prime contractor, such sums as may be determined to be necessary to satisfy any liabilities of such contractor or subcontractor for unpaid wages and liquidated damages as provided in the clause set forth in paragraph (2) of this section.
- iv. <u>Subcontracts</u>. The contractor or subcontractor shall insert in any subcontracts the clauses set forth in paragraph (1) through (4) of this section and also a clause requiring the subcontractors to include these clauses in any lower tier subcontracts. The prime contractor shall be responsible for compliance by any subcontractor or lower tier subcontractor with the clauses set forth in paragraphs (1) through (4) of this section."

#### g CLEAN AIR ACT

 The contractor agrees to comply with all applicable standards, orders or regulations issued pursuant to the Clean Air Act, as amended, 42 U.S.C. § 7401 et seq.

The contractor agrees to report each violation to the City of Key West and understands and agrees that the City of Key West will, in turn, report each violation as required to assure notification to the Federal Emergency Management Agency, and the appropriate Environmental Protection Agency Regional Office.

The contractor agrees to include these requirements in each subcontract exceeding \$150,000 financed in whole or in part with Federal assistance provided by FEMA.

## h. FEDERAL WATER POLLUTION CONTROL ACT

i. The contractor agrees to comply with all applicable standards, orders or regulations issued pursuant to the Federal Water Pollution Control Act, as amended, 33 U.S.C. 1251 et seq.

The contractor agrees to report each violation to the City of Key West and understands and agrees that the City of Key West will, in turn, report each violation as required to assure notification to the Federal Emergency Management Agency, and the appropriate Environmental Protection Agency Regional Office.

The contractor agrees to include these requirements in each subcontract exceeding \$150,000 financed in whole or in part with Federal assistance provided by FEMA."

#### i. DEBARMENT AND SUSPENSION:

- This contract is a covered transaction for purposes of 2 C.F.R. pt. 180 and 2 C.F.R. pt. 3000. As such the CONTRACTOR is required to verify that none of the CONTRACTOR, its principals (defined at 2 C.F.R. § 180.995), or its affiliates (defined at 2 C.F.R. § 180.905) are excluded (defined at 2 C.F.R. § 180.935).
- The CONTRACTOR must comply with 2 C.F.R. pt. 180, subpart C and 2C.F.R. pt. 3000, subpart C and must include a requirement to comply with these regulations in any lower tier covered transaction it enters into.
- tii. This certification is a material representation of fact relied upon by (insert name of subrecipient). If it is later determined that the CONTRACTOR did not comply with 2 C.F.R. pt. 180, subpart C and 2 C.F.R. pt. 3000, subpart C, in addition to remedies available to (name of state agency serving as recipient and name of subrecipient), the Federal Government may pursue available remedies, including but not limited to suspension and/or debarment.
- iv. The bidder or proposer agrees to comply with the requirements of 2 C.F.R. pt. 180, subpart C and 2 C.F.R. pt. 3000, subpart C while this offer is valid and throughout the period of any contract that may arise from this offer. The bidder or proposer further agrees to include a provision requiring such compliance in its lower tier covered transactions.

#### j. BYRD ANTI-LOBBYING AMENDMENT.

Byrd Anti-Lobbying Amendment, 31 U.S.C. § 1352 (as amended)

- i. Contractors who apply or bid for an award of \$100,000 or more shall file the required certification. Each tier certifies to the tier above that it will not and has not used Federal appropriated funds to pay any person or organization for influencing or attempting influence an officer or employee of any agency, a member of Congress, officer or employee of Congress, or an employee of a member of Congress in connection with obtaining any Federal contract, grant, or any other award covered by 31 U.S.C. § 1352. Each tier shall also disclose any lobbying with non-Federal funds that takes place in connection with obtaining any Federal award. Such disclosures are forwarded from tier to tier up to the recipient.
- Attach Certification for Contracts, Grants, Loans, and Cooperative Agreements submitted with bid if exceeding \$100,000)

#### k. PROCUREMENT OF RECOVERED MATERIALS

- In the performance of this contract, the CONTRACTOR shall make maximum use of products containing recovered materials that are EPA- designated items unless the product cannot be acquired-
  - (i) Competitively within a timeframe providing for compliance with the contract performance schedule;
  - (ii) Meeting contract performance requirements; or
  - (iii) At a reasonable price.
- ii. Information about this requirement, along with the list of EPA- designate items, is available at EPA's Comprehensive Procurement Guidelines web site, https://www.epa.gov/smm/comprehensive-procurement-guideline-cpg-program."

RETENTION OF ALL RECORDS: The CONTRACTOR is required to retain all records for seven
 (7) years after grantees or subgrantees make final payments and all other pending matters are closed.

#### ADDITIONAL FEDERAL REQUIREMENTS

- a. REMEDIES In the event of a breach by CONTRACTOR of the terms and conditions of this Agreement CITY shall be entitled to recover any and all monetary damages arising therefrom including the recovery of reasonable attorney fees at all trial and appellate levels.
- b. ACCESS TO RECORDS
  - i. The CONTRACTOR agrees to provide (insert name of state agency or local or Indian tribal government), (insert name of recipient), the FEMA Administrator, the Comptroller General of the United States, or any of their authorized representatives access to any books, documents, papers, and records of the CONTRACTOR which are directly pertinent to this contract for the purposes of making audits, examinations, excerpts, and transcriptions.
  - ii. The CONTRACTOR agrees to permit any of the foregoing parties to reproduce by any means whatsoever or to copy excerpts and transcriptions as reasonably needed.
  - iii. The CONTRACTOR agrees to provide the FEMA Administrator or his authorized representatives access to construction or other work sites pertaining to the work being completed under the contract.
- b. DHS SEAL, LOGA AND FLAGS: the CONTRACTOR shall not use the DHS scal(s), logos, crests, or reproductions of flags or likenesses of DHS agency officials without specific FEMA pre-approval.
- c. COMPLIANCE WITH FEDERAL LAW, REGUATIONS AND EXECUTIVE ORDERS: This is an acknowledgement that FEMA financial assistance will be used to fund the contract only. The CONTRACTOR will comply will all applicable federal law, regulations, executive orders, FEMA policies, procedures, and directives.
- d. NO OBLIGATION: The Federal Government is not a party to this contract and is not subject to any obligations or liabilities to the non-Federal entity, CONTRACTOR, or any other party pertaining to any matter resulting from the contract."
- c. FRAUD AND FALSE OR FRAUDULENT OR RELATED ACTS: The CONTRACTOR acknowledges that 31 U.S.C. Chap. 38 (Administrative Remedies for False Claims and Statements) applies to the CONTRACTOR's actions pertaining to this contract.

IN WITNESS WHEREOF, the parties hereto have made and executed this Agreement as of the day and year last executed below.

(Contractor Principle, Title) CONTRACTOR	Date	
James K. Scholl, City Manager CITY OF KEY WEST	Date	

## FLORIDA PERFORMANCE BOND

BOND NO
AMOUNT: \$
KNOW ALL MEN BY THESE PRESENTS, that in accordance with Florida Statutes Section
255.05
with offices at
with offices at
a corporation duly organized and existing under and by virtue of the laws of the State of Florida, hereinafter called the SURETY, and authorized to transact business within the State of Florida, as SURETY, are held and firmly bound unto the CITY OF KEY WEST, hereinafter called the CITY (Obligee), in the sum of:
DOLLARS (\$), lawful money of the United States of America, for the payment of which, well and truly be made to the CITY, the CONTRACTOR and the SURETY bind themselves and each of their heirs, executors, administrators, successors, and assigns, jointly and severally, firmly by these presents as follows:
THE CONDITION OF THE ABOVE OBLIGATION IS SUCH THAT: WHEREAS, the CONTRACTOR has executed and entered into a certain Contract hereto attached, with the CITY, dated, 20, to furnish at his own cost, charges, and expense all the necessary materials, equipment, and/or labor in strict and express accordance with said Contract and the Contract Documents as defined therein, all of which is made a part of said Contract by certain terms and conditions in said Contract more particularly mentioned, which Contract, consisting of the various Contract Documents is made a part of this Bond as fully and completely as if said Contract Documents were set forth herein;
NOW THEREFORE, the conditions of this obligation are such that if the above bounden CONTRACTOR:
1. Shall in all respects comply with the terms and conditions of said Contract and his obligation there under, including the Contract Documents (which include the scope of work and conditions as prepared by the CITY, invitation to bid, instructions to bidders, the CONTRACTOR'S bid as accepted by the above CITY, the bid and contract performance and payment bonds, and all addenda, if any, issued prior to the opening of bids), being made a part of this bond by reference, at the times and in the manner prescribed in the contract; and

- 2. Promptly makes payments to all claimants, as defined in Section 255.05(1), Florida Statutes, supplying PRINCIPAL with labor, materials, or supplies, used directly or indirectly by PRINCIPAL in the prosecution of the work provided for in the contract; and
- 3. Pays CITY all losses, costs, expenses, damages, attorney's fees, including appellate proceedings, injury or loss of whatever kind and however arising including, without limitation, delay damages to which said CITY may be subject by reason of any wrongdoing, misconduct, want of care or skill, negligence, failure of performance, breach, failure to petition within the prescribed time, or default, including patent infringements, on the part of said CONTRACTOR, his agents or employees, in the execution or performance of said Contract; and
- 4. Performs the guarantee of all work and materials furnished under the contract for the time specified in the contract, then this obligation shall be void; otherwise, to remain in full force and effect for the term of said Contract.

AND, the said Surety for value received, hereby stipulates and agrees that no change involving any extension of time, or addition to the terms of the Contract Documents, or to the work to be performed, or materials to be furnished there under shall affect said obligation of said Surety on this Bond, and the said Surety does hereby waive notice of any such changes, extension of time, alterations, or additions of the terms of the Contract Documents, or to the work.

Any action instituted by a claimant under this bond for payment must be in accordance with the notice and time limitation provisions in Section 255.05(2), Florida Statutes.

IN WIT	NESS WHEREO	F, the abov	e parties bo	nded togethe	r have exec	uted this	instrument
this	day of				20 , the i	name and	corporate seal
	corporate party bei			those presen	nts duly sig	med by it	s undersigned

representative, pursuant to authority of its gover	ming body.
	CONTRACTOR
(SEAL) ATTEST	Ву:
	SURETY
(SEAL)	Ву:

ATTEST

## FLORIDA PAYMENT BOND

BOND NO
AMOUNT: \$
KNOW ALL MEN BY THESE PRESENTS, that in accordance with Florida Statutes Section
255.05,
with offices at
with offices at
corporation duly organized and existing under and by virtue of the laws of the State of
, hereinafter called the SURETY, and authorized to transact business within the State of Florida, as SURETY, are held and firmly bound unto CITY OF KEY WEST, hereinafter called the City (Obligee), in the sum of:
awful money of the United States of America, for the payment of which, well and truly be made to the CITY, and the CONTRACTOR and the SURETY bind themselves and each of their heirs, executors, administrators, successors, and assigns, jointly and severally, firmly by these presents as follows:
THE CONDITION OF THE ABOVE OBLIGATION IS SUCH THAT:
WHEREAS, the CONTRACTOR has executed and entered into a certain Contract for
attached hereto, with the CITY, dated
, 20, to furnish at his own cost, charges, and expense the necessary materials, equipment, and/or labor in strict and express accordance with said Contract and the plans, drawings (if any), and specifications prepared by the CITY, all of which is made a part of said Contract by certain terms and conditions in said Contract more particularly mentioned, which Contract, consisting of the various Contract Documents specifically mentioned herein and elative hereto, is made a part of this Bond as fully and completely as if said Contract Documents were set forth herein.

NOW THEREFORE, the conditions of this obligation are such that if the above bounden CONTRACTOR shall in all respects comply with the terms and conditions of said Contract and his obligation thereunder, including the Contract Documents, which include Scope of work and conditions prepared by the CITY, invitation to bid, instructions to bidders, the

CONTRACTOR'S bid as accepted by the CITY, the bid and contract and payment bonds, and all addenda, if any, issued prior to the opening of bids), and further that if said CONTRACTOR shall promptly make payments to all persons supplying materials, equipment, and/or labor, used directly or indirectly by said CONTRACTOR or subcontractors in the prosecution of the work for said contract is accordance with Florida Statutes, Section 255.05 or Section 713.23, then this obligation shall be void; otherwise to remain in full force and effect for the term of said contract, including and all guarantee periods as specifically mentioned in said Contract Documents.

AND, the said SURETY for value received, hereby stipulates and agrees that no change involving any extension of time, or addition to the terms of the Contract or to the work to be performed, or materials to be furnished thereunder, or in the Contract Documents and specifications accompanying the said contract shall affect said obligation of said SURETY on this Bond, and the said SURETY does hereby waive notice of any such changes, extension of time, alternations, or additions of the terms of the Contract, or to the work, to the Contract Documents, or to the specifications.

Claimant shall give written notice to the CONTRACTOR and the SURETY as required by Section 255.05 or Section 713.23, Florida Statutes. Any action instituted against the CONTRACTOR or SURETY under this bond for payment must be in accordance with the notice and time limitation provisions in Section 255.05(2) or Section 713.23, Florida Statutes.

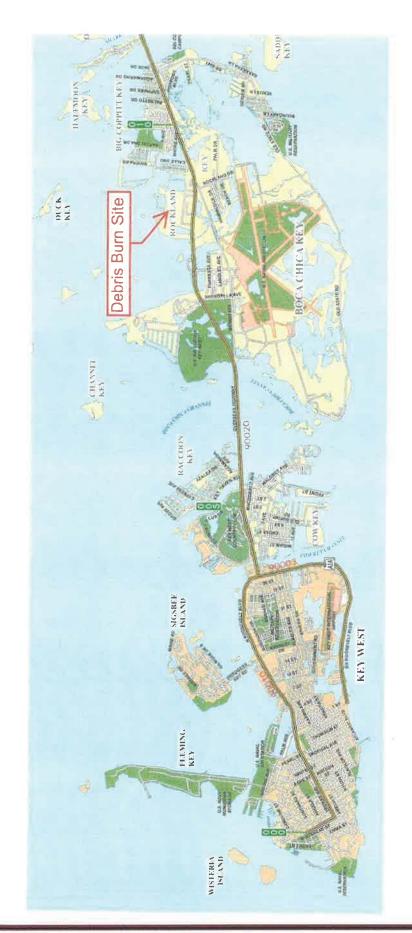
IN WITNESS WHEREOF, the above parties bounded together have executed this instrument

corporate	day of party being hereto tive, pursuant to auth	affixed and	those preser	_, the name and corporate seal of each nts duly signed by its undersigned
			CONT	TRACTOR
(SEAL)			Ву:	
ATTEST			SURE	TY
(SEAL)			Ву:	
ATTEST				

\* \* \* \* \* \*

## PART 3

**Photographs and Site Locus** 



ITB-002 Hurricane Irma - Vegetative Debris Burn Project



City of Key West Hurricane Irma - Vegetative Debris Burn Project



## PART 4

**Hurricane Irma Emergency Authorization** 

# STATE OF FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION

In re:

EMERGENCY AUTHORIZATION FOR REPAIRS, REPLACEMENT, RESTORATION, AND CERTAIN OTHER MEASURES MADE NECESSARY BY HURRICANE IRMA

OGC NO. 17-0989

## **EMERGENCY FINAL ORDER**

Under Sections 120.569(2)(n), 252.36, and 252.46, Florida Statutes, and upon consideration of the State of Florida Executive Order No. 17-235 and the following findings of fact, the State of Florida Department of Environmental Protection (Department) enters this Emergency Final Order (Order), including Findings of Fact and Conclusions of Law, in response to the imminent or immediate danger to the public health, safety, and welfare of the citizens of the State of Florida posed by Hurricane Irma (hereinafter "the Hurricane").

#### FINDINGS OF FACT

1. Hurricane Ima is a major Hurricane located east of the Leeward Islands with maximum sustained winds of 175 mph. The National Hurricane Center forecasts that the Hurricane will travel west into the Straits of Florida, with computer models predicting that the Hurricane will turn north and travel up the entire spine of Florida. The Hurricane poses a severe threat to the State of Florida and requires that timely precautions are taken to protect the communities and critical infrastructure and the general welfare of this State. The Hurricane is likely to cause significant impact and widespread damage throughout the State of Florida which shall constitute the area covered by this Emergency Final Order. This area shall herein be referred to as the "Emergency Area."

- 2. By State of Florida Executive Order No. 17-235, the Governor declared that a state of emergency exists throughout the State of Florida, based upon the serious threat to the public health, safety and welfare posed by the Hurricane.
- 3. The Department finds that the Hurricane creates a state of emergency threatening the public health, safety, welfare, and property throughout the Emergency Area. As a result of the emergency, immediate action by Florida's citizens and government may be necessary to repair, replace, and restore structures, equipment, surface water management systems, works, and other systems damaged by the Hurricane.
- 4. The Department finds that an emergency authorization is required to address the need for immediate action because the normal procedures for obtaining the necessary authorizations would not result in sufficiently timely action to address the emergency.
- 5. The Department finds that immediate, strict compliance with the provisions of the statutes, rules, or orders noted within this Order would prevent, hinder, or delay necessary action in coping with the emergency, and that the actions authorized under this order are narrowly tailored to address the immediate need for action and are procedurally appropriate under the circumstances.

# **CONCLUSIONS OF LAW**

- 1. Based on the findings recited above, it is hereby concluded that the emergency caused by the Hurricane poses an immediate danger to the public health, safety, or welfare and requires an immediate order of the Department.
- 2. Under State of Florida Executive Order No. 17-235, and Sections 120.569(2)(n), 252.36, and 252.46, Florida Statutes, the Secretary, or designee, of the Department is authorized to issue this Emergency Flnal Order.

 Suspension of statutes and rules as noted within this Order is required so as not to prevent, hinder, or delay necessary action in coping with the emergency.

# THEREFORE, IT IS ORDERED:

#### A. WASTE MANAGEMENT

Within the Emergency Area:

#### Storage Tank Systems

Owners and operators of storage tank systems, regulated under Chapters 62-761 and 62-762, Florida Administrative Code, and their licensed engineers and contractors, are authorized to make all necessary repairs to restore essential services and repair or replace (as necessary) all structures, equipment, and appurtenances of the systems to their pre-Hurricane permitted or registered condition without prior notice to the Department. Within thirty (30) days of commencing the work of such repair or replacement, however, the owner or operator shall notify the Department in writing, describing the nature of the work, giving its DEP Facility I.D. for the location, and providing the name, address, and telephone number of the representative of the owner or operator to contact concerning the work.

# Solid Waste Management

Department personnel or a delegated local program for staging areas (also referred to as DDMSs — Disaster Debris Management Sites) to be used for temporary storage and chipping, grinding or burning of Hurricane-generated debris. Field authorizations may be requested by providing a notice to the local office of the Department containing a description of the staging area design and operation, the location of the staging area, and the name, address, and telephone number of the site manager. Written records of all field

authorizations shall be created and maintained by Department staff. Field authorizations may include specific conditions for the operation and closure of the staging area, and may include a required closure date which extends beyond the expiration date of this Order. Staging areas shall avoid wetlands and other surface waters to the greatest extent possible; such areas that are used or affected must be fully restored upon cessation of use of the area. Staging areas must cease operation, and all Hurricane-generated debris must be removed from the site by the date specified in the field authorization. Failure to comply with the conditions of the field authorization, or failure to adequately close the site by the required closure date, may result in enforcement actions by the Department. Field authorizations issued prior to the effective date of this Order remain in effect but may be modified by the Department to Include conditions and closure dates as specified herein.

- b. Hurricane-generated vegetative debris which is managed at an authorized staging area may be disposed of in permitted lined or unlined landfills, permitted land clearing debris facilities, or permitted construction and demolition debris disposal facilities. Such vegetative debris may also be managed at a permitted waste processing facility or a registered yard trash processing facility in accordance with the terms of the applicable rules and permit conditions.
- c. Construction and demolition debris that is mixed with other Hurricanegenerated debris need not be segregated from other solid waste prior to disposal in a
  lined landfill. Construction and demolition debris that is either source-separated or is
  separated from other Hurricane-generated debris at an authorized staging area, or at
  another area specifically authorized by the Department, may be managed at a permitted
  construction and demolition debris disposal or recycling facility upon approval by the

Department of the methods and operational practices used to inspect the waste during segregation.

- d. Except as otherwise specifically provided herein, Hurricane-generated debris shall be disposed of in a Class I landfill or, except for asbestos-containing materials, in a waste-to-energy facility. Non-recyclables and residuals generated from segregation of Hurricane-generated debris shall also be disposed of in a Class I landfill or waste-to-energy facility.
- e. Ash residue generated from inclneration or burning of Hurricane-generated vegetative debris in accordance with Section B of this Order may be disposed of in a permitted disposal facility, or may be land spread in any areas approved by local government officials except in wellfield protection areas or water bodies.
- f. Ash from the combustion of other Hurricane-generated debris shall be disposed of in a Class I landfill. Metals or other non-combustible materials segregated from the ash residue may also be disposed of in an unlined, permitted landfill.
- g. Unsalvageable refrigerators and freezers containing solid waste such as rotting food that may create a sanitary nuisance may be disposed of in a Class I landfill; provided, however, that chlorofluorocarbons and capacitors must be removed and recycled to the greatest extent practicable using techniques and personnel meeting the requirements of 40 CFR Part 82.
- h. Permitted landfills, waste-to-energy facilities, and transfer stations which accept Hurricane-generated debris in accordance with the terms of this Order may accept Hurricane-generated debris for disposal or storage without the need to first modify existing solid waste permits or certifications. Operators of landfills shall seek

modifications of their existing permits to address any long-term impacts of accepting Hurricane-generated debris on operations and closure that are not addressed in existing permits. Long-term impacts are those, which will extend past the expiration date of this Order. The requests for modification shall be submitted as soon as possible, but no later than the expiration date of this Order. No permit fee will be required for any modifications necessitated solely by the Hurricane clean-up activities. This paragraph does not authorize the permanent lateral or vertical expansion of any facility beyond its permitted limits.

i. Domestic wastewater biosolids may be disposed of in Class I landfills even if such biosolids meet the definition of a liquid waste found in Rule 62-701.200(72), Florida Administrative Code, provided that such disposal is approved in advance by the Department and that the material is managed to the extent practicable so as to minimize liquid content, odors and runoff.

# Hazardous Waste Management

A blanket approval of time extensions under Chapter 62-730, Florida Administrative Code, is necessary within the Emergency Area for hazardous waste generators for the storage of their hazardous wastes on site, pending the cleanup any Hurricane damage and restoration of essential services. The rules authorize a thirty-day extension because of unforeseen and uncontrollable circumstances such as the Hurricane. Therefore, to avoid having to issue a potentially large number of individual approvals on a case-by-case basis and waste limited agency resources during the time of emergency, the Department authorizes a general extension of time of thirty days from the expiration of this Order for all

such hazardous waste generators for the storage of their hazardous wastes on site, in the counties within the Emergency Area.

# B. AIR RESOURCE MANAGEMENT

Within the Emergency Area:

# Air Curtain Incinerators

Local governments or their agents may conduct the burning of Hurricane-generated yard trash, other vegetative debris, and untreated wood from construction and demolition debris in air curtain incinerators in accordance with the provisions of Section 403.7071(6), Florida Statutes. In operating any air curtain incinerator pursuant to this Order, the pit width shall not exceed 12 feet, vertical side walls shall be maintained, and waste material shall not be toaded into the air curtain incinerator such that it protrudes above the level of the air curtain. Ash shall not be allowed to build up in the pit higher than one-third the pit depth or to the point where the ash begins to impede combustion, whichever level is lower. Refractory-lined air curtain incinerators may operate 24 hours per day. Air curtain incinerators without refractory-lined walls may operate 24 hours per day provided reasonable efforts are made to prevent nulsance smoke. Notwithstanding the provisions of this paragraph, the burning of asbestos-containing materials or hazardous waste is prohibited.

# Open Pile Burning

Only vegetative material can be burned on an open pile. Open pile burning of vegetative debris is managed under the authority of the Florida Forest Service in the Department of Agriculture and Consumer Services, and the Department will defer to decisions made by that agency, provided that burning does not occur in wetlands or other

surface waters. Open pile burning shall avoid adversely affecting wetlands and other surface waters to the greatest extent possible; any wetland or other surface water areas that are used or affected must be fully restored upon cessation of use of the area in consultation with the Department.

# Other Air Pollution Sources

The Department authorizes the minor repair of any previously permitted stationary source of air pollution that is damaged by the Hurricanes to restore it to its previously permitted condition without prior notice to the Department. Within thirty days of commencing such repairs, however, the permittee shall notify the Department in writing, stating the location and nature of the work and providing the name, address, and telephone number of the representative of the permittee to contact concerning the work. Minor repairs are repairs that would not constitute reconstruction under any definition of 40 CFR Part 60, 61 or 63 and that could not affect potential to emit any pollutant. Repairs that would constitute reconstruction under any definition of 40 CFR Part 60, 61 or 63, or repairs that could affect potential to emit any pollutant are not authorized by this Order.

#### Asbestos Clean-up

The Department waives the requirement for 10 day prior notification for emergency demolition or emergency cleanup of asbestos-containing material resulting from the Hurricane. Within one business day of commencing such demolition or cleanup, however, the person responsible for such work shall notify the Department in writing. The notification shall be consistent with the information on the Notice of Demolition or Asbestos Renovation, and shall include the location and nature of the work and the name, address, and telephone number of operator on the project. The procedures in 40 CFR 61 Subpart M for handling

Land Let

asbestos-containing material shall be complied with during demolition and cleanup. Asbestos-containing material shall be disposed of in a Class I or III landfill in accordance with Rule 62-701.520(3), Florida Administrative Code. Burning of asbestos containing material is prohibited

# C. WATER RESOURCE MANAGEMENT

Within the Emergency Area:

#### 1. Definitions

The following definitions apply to activities authorized under Section C of this Order:

- a. For purposes of subsection C.2. of this Order, the term "structures" includes:
- (1) utility infrastructure, including wastewater treatment plants, substations, lift stations, solid and hazardous waste facilities, utility lines (including transmission and distribution), poles, towers, support structures, cables, conduits, outfalls, intake structures, and pipelines;
- (2) roads, bridges, culverts, driveways, sidewalks, bike paths, and other similar public and private infrastructure;
- (3) public, private, and commercial habitable and non-habitable buildings, and structures ancillary to these buildings, such as garages, cabanas, storage sheds, bath houses, pools, and decks;
- (4) piers (including docks, boardwalks, observation platforms, boat houses, and gazebos), and pilings;
- (5) shore-stabilization structures, such as seawalls, bulkheads, revetments, breakwaters, and groins;
  - (6) fences, signs and billboards; and

Hurricane. This includes Department offices located outside the impacted area that perform any of their duties in the impacted area.

b. Any office of the Department not directly impacted by the Hurricane if that office has deployed staff to any Department district office or delegated local program specified above, or to any Water Management District office in an impacted area, to assist in Hurricane relief efforts or to supplement the normal staff in those impacted offices.

#### 8. Expiration Date

This Emergency Final Order shall take effect immediately upon execution by the Secretary of the Department, or designee, and shall expire on October 4, 2017, unless modified or extended by further order.

# Violation of Conditions of Emergency Final Order

Failure to comply with any condition set forth in this Order shall constitute a violation of a Department Final Order under Chapters 161, 253, 258, 373, 376, and 403, Florida Statutes, and enforcement proceedings may be brought in any appropriate administrative or judicial forum.

# Applicability to Delegated Programs

The provisions of this Order apply in those cases where a water management district, local government or other entity is acting for the Department in accordance with a delegation agreement, operating agreement, or contract. Such water management district, local government or other entity shall comply with the terms of this Order to the extent that it is acting as an agent of the Department. This Order does not apply in those cases where a water management district, local government or other entity is acting under its own independent authority.



#### THE CITY OF KEY WEST

Post Office Box 1409 Kev West, FL 33041-1409 (305) 809-3883

#### **ADDENDUM NO. 1**

# HURRICANE IRMA - VEGETATIVE DEBRIS BURN: RFP 003-18

This addendum is issued as supplemental information to the bid package for clarification of certain matters of both a general and a technical nature. The referenced Request for Proposal (RFP) package is hereby amended in accordance with the following items:

Replace pages 4 and 6 with attached.

All Bidders shall acknowledge receipt and acceptance of this Addendum No. 1 with Attachment by submitting the addendum with their proposal. Proposals submitted without acknowledgement or without this Addendum may be considered non-responsive.

Signature

Payne's Environmental Services, LLC.

Name of Business

#### TABLE OF CONTENTS

#### PART 1 - PROPOSAL REQUIREMENTS AND FORMS

REQUEST FOR PROPOSAL
INSTRUCTIONS TO BIDDERS
PROPOSAL
FLORIDA BID BOND
ANTI – KICKBACK AFFIDAVIT
FLORIDA STATUTES, ON PUBLIC ENTITY CRIMES
INDEMNIFICATION FORM
DOMESTIC PARTNERSHIP AFFIDAVIT
CONE OF SILENCE AFFIDAVIT
CERTIFICATION REGARDING LOBBYING
BIDDER'S CHECKLIST

#### PART 2 - CONTRACT

OWNER-CONTRACTOR AGREEMENT FLORIDA PERFORMANCE BOND FLORIDA PAYMENT BOND

#### PART 3 - PHOTOGRAPHS AND SITE LOCUS

PART 4 - HURRICANE IRMA EMERGENCY AUTHORIZATION

#### **INVITATION TO BID**

Sealed proposals for the City of Key West RFP No. 003-18 HURRICANE IRMA VEGETATIVE DEBRIS BURN, addressed to the City of Key West, will be received at the Office of the City Clerk, 1300 White St., Key West Florida, 33040 until 3:00 pm on November 13, 2017 and then will be publicly opened and read. Proposals received after the time and date specified will not be considered.

Please submit one (1) one original and (2) two flash drives with one single PDF file of the entire proposal package. Proposal package is to be enclosed in a sealed envelope, clearly marked on the outside "HURRICANE IRMA DEBRIS BURN RFP 003-18" addressed and delivered to the City Clerk at the address noted above.

The City of Key West is soliciting proposals for the disposal of vegetative debris collected from Hurricane Irma. The City has secured use of a Temporary Debris Management Site (TDMS) located at Rockland Key/Toppino Industrial Drive, where approximately 120,000 cubic yards of collected vegetative debris has been placed on a 10-acre site. The disposal method at the TDMS will be use of Air Curtain technology to thoroughly burn the vegetative debris while minimizing particulate emission during the processing stage.

A mandatory Pre-Proposal Meeting will be held 11:00 a.m. on Tuesday November 7, 2017 at the City Manager's Conference Room, Key West City Hall, 1300 White Street, Key West, Florida. A site visit will follow.

Drawings and Specifications may be obtained from Demand Star by Onvia or City of Key West website <a href="https://www.cityofkeywest-fl.gov">www.cityofkeywest-fl.gov</a>). For bid package access on Demand Star, please contact Onvia at <a href="https://www.demandstar.com">www.demandstar.com</a> or call 1-800-711-1712.

The successful Proposer (Bidder) may be required to furnish the necessary additional bond(s) for the faithful performance of the Contract, as prescribed in the Bidding Documents. The Bidder will be required to furnish documentation showing that he is in compliance with the licensing requirements of the State and the provisions of Chapter 66 section 87 of the Code of Ordinances of the City of Key West. Compliance with these provisions is required before the Contractor can enter into the agreement contained in the Contract Documents. Specifically, Bidder shall demonstrate that he holds, as a minimum, the following licenses and certificates required by State Statute and local codes.

EACH BID MUST BE SUBMITTED ON THE PRESCRIBED FORM AND ACCOMPANIED BY BID SECURITY AS PRESCRIBED IN THE INSTRUCTIONS TO BIDDERS, PAYABLE TO THE CITY OF KEY WEST, FLORIDA, IN AN AMOUNT NOT LESS THAN FIVE (5) PERCENT OF THE AMOUNT BID.

# THE BIDDER MUST BE A LICENSED CONTRACTOR BY THE STATE OF FLORIDA AND SUBMIT PROOF OF SUCH WITH THE BID.

The Bidder shall furnish documentation showing that he is in compliance with the licensing requirements of the provisions of Chapter 66 Section 87 of the Code of Ordinances of the City of Key West; within 10 days following the Notice of Award and must demonstrate that he holds at a minimum, the following licenses & certificates;

- A. City of Key West Business Tax License Receipt
- B. A valid Certificate of Competency issued by the Chief Building Official of Key West, Florida.



#### THE CITY OF KEY WEST

Post Office Box 1409 Key West, FL 33041-1409 (305) 809-3883

#### **ADDENDUM NO. 2**

#### HURRICANE IRMA - VEGETATIVE DEBRIS BURN: RFP 003-18

This addendum is issued as supplemental information to the bid package for clarification of certain matters of both a general and a technical nature. The referenced Request for Proposal (RFP) package is hereby amended in accordance with the following items:

#### Questions from prospective Proposers:

- 1) Does the Contract need to be signed and submitted in the proposal or post award?
  - a. Post Award
- 2) Are payment and performance bonds due post award?
  - a. Yes
- 3) Page 10 Section 9 of the RFP asks if a Key West Business License Tax Receipt is required post award?
  - a. As the project is located on Rockland Key, a Key West Business License Tax Receipt is not required; however, proposers should confirm with Monroe County any licensing requirements.
- 4) We are a Limited Liability Company. Which section do we fill out on page 18?
  - a. A Limited Liability Corporation is not considered a Sole Proprietor or Partnership; therefore, the Proposer would fill out the "If Corporation" section.
- 5) Page 32 states we need to submit 1 flash drive and p. 6 states we need to submit 2 flash drives. Which is correct?
  - a. Replace Item 10 of page 32 (Proposal) with:
    - i. Bid submitted intact with the volume entitled "Bidding Requirements" and "Contract Forms" one (1) ORIGINAL bid package and two (2) FLASH DRIVES as stated in the invitation to bid."
- 6) Would there be a prior Bid Tabulation for this Request for Proposal?
  - a. No, this is the first RFP for this project.
- 7) Would you please provide clarification of the requirements for the section (Contract Bonds: Performance and Payment Bonds)? We are not supplying materials for construction? With this in mind, the project would not involve guarantees against defective workmanship or materials for the construction of work. Nor, would we be providing a warranty period following the date of final acceptance. With this said, this section should be removed from the contract requirements.
  - a. No, as required by City purchasing ordinance, the winning Proposer shall provide all Bonds required by the Contract Documents.
- 8) Relative to previous experience, how far back can we go to achieve the requirements?
  - a. As far back as needed
- 9) Will liquidated damages be assessed if the Contractor does not meet the deadline they referenced in the proposal form?
  - a. Yes, \$3,700.00 per day
- 10) Can Contractor sub out 100% of the work?
  - a. Yes

Page 1 of 2

#### **Contract Documents**

#### 11) INVITATION TO BID

- a. In third paragraph (page 6), DELETE "approximately 120,000 cubic yards" and INSERT "approximately 102,024 cubic yards (as measured by FEMA monitors)"
- b. DELETE entire paragraph nine (last on page 6) and replace with the following: "Within 10 days following Notice of Award, Bidder shall furnish documentation showing that he is in compliance with applicable state and Monroe County licenses and certificates."
- c. Under Section 2. General Description of the Project (page 7), DELETE entire first paragraph and replace with the following:
  - "The City of Key West is soliciting proposals for the disposal of vegetative debris collected from Hurricane Irma. The City is leasing a Temporary Debris Management Site (TDMS) located at Rockland Key/Toppino Industrial Drive, where approximately 102,000 cubic yards of collected vegetative debris has been placed on a 10-acre site. The disposal method at the TDMS will be use of Air Curtain technology to thoroughly burn the vegetative debris while minimizing particulate emission during the processing stage. In the event non-burnable debris (e.g., white goods, solid waste) is encountered, Contractor shall segregate and place in a to be designated location on the Site."
- d. Under Section 6.C. Special Bidding Requirements, INSERT last sentence:
  "Bidders to submit a 1-2 page (maximum) qualification summary in addition project references with their proposal."
- e. Under Section 6.D. Attachments, DELETE "City of Key West Business License Receipt".

#### 9) PROPOSAL

a. DELETE entire "PROPOSAL" form (pages 14-18) and replace with revised "PROPOSAL" form attached to this ADDENDUM.

#### Attachments

- 1. PreBid Meeting Minutes
- 2. PreBid Meeting Attendance Sheet
  - a. The representative for Clean Air Combust was delayed by traffic and arrived after the meeting concluded. The City was notified of this delay prior to the PreBid meeting. As subsequently discussed at the meeting, Clean Air Combust will be permitted to submit a proposal in response to this RFP.

All Bidders shall acknowledge receipt and acceptance of this Addendum No. 2

with Attachment by submitting the addendum with their proposal. Proposals submitted without acknowledgement or without this Addendum may be considered non-responsive.

Signature

Payne's Environmental Services, LLC

Name of Business

#### **PROPOSAL**

#### ADDENDUM 2 REVISION

NOTE TO BIDDER: Use preferably BLACK ink for completing this Proposal form.

To:

The City of Key West

Address:

1300 White St, Key West, Florida 33040

Project Title:

HURRICANE IRMA VEGETATIVE DEBRIS BURN

Bidder's contact person for additional information on this Proposal:

Company Name: Payne's Environmental Services, LLC

Contact Name & Telephone #: Terrence E. Payne - 813 - 390 - 9720

Email Address: Paynestrees & Cs.com

#### BIDDER'S DECLARATION AND UNDERSTANDING

The undersigned, hereinafter called the Bidder, declares that the only persons or parties interested in this Proposal are those named herein, that this Proposal is, in all respects, fair and without fraud, that it is made without collusion with any official of the Owner, and that the Proposal is made without any connection or collusion with any person submitting another Proposal on this Contract.

The Bidder further declares that he has carefully examined the Contract Documents for the construction of the project, that he has personally inspected the site, that he has satisfied himself as to the quantities involved, including materials and equipment, and conditions of work involved, including the fact that the description of the quantities of work and materials, as included herein, is brief and is intended only to indicate the general nature of the work and to identify the said quantities with the detailed requirements of the Contract Documents, and that this Proposal is made according to the provisions and under the terms of the Contract Documents, which Documents are hereby made a part of this Proposal.

#### CONTRACT EXECUTION AND BONDS

The Bidder agrees that if this Proposal is accepted, he will, within 10 days, not including Sundays and legal holidays, after Notice of Award, sign the Contract in the form annexed hereto, and will at that time, deliver to the Owner examples of the Performance Bond and Payment Bond required herein, and evidence of holding required licenses and certificates, and will, to the extent of his Proposal, furnish all machinery, tools, apparatus, and other means of construction and do the work and furnish all the materials necessary to complete all work as specified or indicated in the Contract Documents.

#### BASE BID ADD OR DEDUCT ALTERNATES

NOTE: OWNER HAS THE RIGHT TO ACCEPT OR REJECT ANY, ALL, OR NO BID ALTERNATE ITEMS. THE TOTAL OF BASE BID PLUS THE SUM OF OWNER SELECTED BID ALTERNATES WILL BE A BASIS OF EVALUATING LOW BIDDER AND BASIS OF AWARD.

1	Additive Alternate No.	1.	Provide \$10	000 000	Limbralla	Incirrance	Covernos
Ι,	Muditive Miteriale Ivo.	١.	LIOVIGE DI	1,000,000	Umorena	msurance	Coverage

1 LS

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2. Additive Alternate No.2: Provide \$5,000,000 Pollution Liability Insurance Coverage.

1 LS

s 7.77

#### **EXPERIENCE**

The Bidder shall submit with an experience record with the Bid showing his experience and expertise in vegetative debris burning and disposal. Such experience record shall provide up to <u>five</u> current or recent projects of similar work, and preferably in the State of Florida. For each project the following information shall be provided:

- 1. Description and location of work.
- 2. Quantity burned and contract amount.
- 3. Dates work was performed.
- 4. Owner.
- 5. Name of Owner's contact person and phone number.

The Bidder has the option to submit a 1-2 page qualifications summary in additional to the above experience record.

The Bidder shall submit a draft project-specific Burn Plan with the Proposal. SUBCONTRACTORS

The Bidder further proposes that the following subcontracting firms or businesses will be awarded subcontracts for the following portions of the work in the event that the Bidder is awarded the Contract:

No intend	ed Subcontrac	tors	
Name			
Trade		Percent of	Total Base Bid
Street	City	State	Zip

#### START OF CONSTRUCTION AND CONTRACT COMPLETION TIME

The Bidder further agrees to begin work within 14 calendar days after the date of the initial Notice to Proceed and to complete the project, in all respects within \_\_\_\_\_\_ calendar days (Bidder to provide).

#### LIQUIDATED DAMAGES

In the event the Bidder is awarded the Contract and shall fail to complete the work within the time limit or extended time limit agreed upon, as more particularly set forth in the Contract Documents, liquidated damages shall be paid to the Owner at the rate of \$3,700.00 per day (not to exceed 10% percent of the lump sum base bid) for all work awarded until the work has been satisfactorily completed as provided by the Contract Documents. Sundays and legal holidays shall be excluded in determining days in default.

#### **ADDENDA**

The Bidder hereby acknowledges that he has received Addenda No's. 1, 2

(Bidder shall insert No. of each Addendum received) and agrees that all addenda issued are hereby made part of the Contract Documents, and the Bidder further agrees that his Proposal(s) includes all impacts resulting from said addenda.

#### SALES AND USE TAXES

The Bidder agrees that all federal, state, and local sales and use taxes are included in the stated bid prices for the work.

#### **LUMP SUM ITEMS**

The Bidder further proposes to accept as full payment for the work proposed herein the amounts computed under the provisions of the Contract Documents and based on the following lump sum amounts. The Bidder agrees that the lump sum represent a true measure of the labor and materials required to perform the work, including all allowances for overhead and profit for each type and unit of work called for in these Contract Documents.

#### TOTAL LUMP SUM BASE BID:

Sone Million Four Hundred Thirty-three Thousand Dollars & no
Cents (4) amount written in words \$1,433,000.00

Payment for materials and equipment authorized by the Owner in a written Change Order but not listed in the above Proposal will be provided at the suppliers invoice plus 10 %.

Name				
Trade		Percent	of Total Base	Bid
Street	City	State	Zip	
SURETY				
The Prosure Gi	roup Inc			_ whose address is
7217 Benjamin	Rd T	ampa	FL	<b>33434</b> Zip
BIDDER				
The name of the Bidder submitting	this Proposal is			
Payne's Environm	ental Se	rvices,	LC	_doing business at
5617 CAMSeWAY B	lvd	AMPA	FL .	334.19 Zip
which is the address to which all corshall be sent.				
The names of the principal officers or of all persons interested in this Pr	of the corporation oposal as princip	submitting this	s Proposal, or	of the partnership,
Annette Payne, CE	<u> </u>	Terry A.	Payne,	CFO
Terrence E Payne, Pre	esident _			
Janet B, Schindler, 9	oer. Mgr.			

If Sole Proprietor or Partnership

IN WITNESS hereto the	undersigned has set hi	s (its) hand this 134	D <sub>day or</sub> <b>Hovember</b>	017.
Signature of Dieder  PAESIO ENT  Title				
		orporation		
(SE WS	herized officers th	is day of	s instrument to be exec	uted and
ame of Comoration	TO SERVICES, LL	By JCF Title PRESIDENT Attest Dahet	Mos	
Sworn and subscribed b	pefore this 134h	day of Novel	nbu . 20 1 M	
NOTARY PUBLIC, Sta	te of Portacis: 1127 120	, at Large		
· · · · · · · · · · · · · · · · · · ·		STARY AND THE STARY	Margaret K. Stoulil NOTARY PUBLIC STATE OF FLORID Comm# GG054347	

Hurricane Irma - Vegetative Debris Burn

Bid Opening: November 13, 2017

Bidders Name	Phone Number	Company	Fmoil Addroce
		Gundano	Artitle Judge Co.
Kevin Carter	850-509-3398	Attack-One Fire	kevin@attack-one.com
David Knowles	352-427-1708	National Fire	nfcbusiness@gmail.com
Andrew Toppino	305-296-5606	CTS	atoppino@charleytoppino.com
Trey Fuzzell	707-489-3300	DRC	fuzzy@kdfllc.com
Kevin Rolison	512-944-8766	TFR	kevin@tfrinc.com
Richard Toppino	305-296-5606	CT&S	rtoppino@charlietoppino.com
Janet Schindler	813-677-6822	Paynes Environmental	paynestrees@cs.com
Gary Volenec	305-809-3967	CKW	gvolenec@cityofkeywest-fl.gov
Kreed Howell	305-809-3963	CKW	lhowell@cityofkeywest-fl.gov
Jim Bouquet	305-809-3962	CKW	jbouquet@cityofkeywest-fl.gov
Matt O'Connor	772-919-2464	Clean Air Combust	moconnor@cleanaircombust.com
		×	
	307		



THE CITY OF KEY WEST POST Office Box 1109 Key West, FL. 33041-1109 (305) x09-3700

# Hurricane Irma – Vegetative Debris Burn RFP 003-18 Sign-In Sheet - November 7, 2017

Tel. Number	1200 1509-3398	(352) 427-1708	MTOPPINO @ Churtey (305) 246-5806	(707) 489 3300	39 L8-126 (-6.5)	24 , 396-5626	Daynestree Oct. Com. 813, LTT-16822	gvolenece chystkeynest- 4.90 809-3967	Handle Hyotheywat-A (305, 809-3963
Emali Address	Kevine Attackdur.	NFC Business & Gmo, J. Com	MTOPPINO & CHUNTEY	\$ \$2221 PO KOF UC. (107) 489 3300	Kevin 2+frinc. com (512)944-8766	Pto 1 mos Charlet Taples , ON (326) 396-5606	Owneshreed CS.Ca	gvolenec@ cdyofke,	1 Handle By Otherwist
Сотрапу	Attack ONE FIRE	Dational Pire	Toppinois	DRC	TFR	2795	CHITE SAVICONNING	CKW	CFW
Attendees	Mewin Cotto	David Koules	3 Andrew Toppino	4 May Furrent	5 Kevin Rolison	6 LICHURY JOHNIN	a buse t Sepair llex	8 GARY VOLENEL	of Kiccel Howell

THE CITY OF KEY WEST

THE CITY OF KEY WEST
Post Office Box 1409 Key West, PL. 33011-1409 (305) 809-3700

Tel. Number	Cirporte, 201-404 (305-3962	( )	( )						
Email Address	toughet a								
Company	CKU)								
Attendees	10 Jun Bouguet	11	12	13	14	15	16	17	18



# Hurricane Irma – Vegetative Debris Burn RFP 003-18 Meeting Minutes November 7, 2017

Location:	Key West City Hall, 1300 White Street, Key West Florida 33040

Subject of Meeting: Mandatory Pre-Bidders Conference

Status of Minutes: Draft

Attendees Company
Kevin Carter Attack-One Fire
David Knowles National Fire

Andrew Toppino Charlie Toppino and Sons
Richard Toppino Charlie Toppino and Sons
Trey Fuzzell DRC

Kevin RobinsonTFRJanet SchindlerPaynes EnvironmentalMatt O'ConnorClean Air CombustGary VolenceCity of Key WestJim BouquetCity of Key West

Krecd Howell City of Key West

#### Distribution of Notes to:

Distribution of the minutes from this meeting will be issued via addendum no later than 5:00 p.m. November 9, 2017.



#### THE CITY OF KEY WEST

Post Office Box 1409 Key West #1 33041-1409 (305) 809-3-00

# Hurricane Irma - Vegetative Debris Burn RFP 003-18 Meeting Minutes November 7, 2017

The Pre-Bidders Meeting followed the agenda below and any deviations from these minutes will be addressed in Addendum 2.

#### 1. Introductions:

- a. Director of Engineering, James Bouquet, PE
- b. City Engineer, Gary Volenec, PE
- c. Attendee Introductions

#### 2. Request for Proposal critical milestones:

a. Deadline for Inquiries:

b. Final Addenda Issued:

c. Bids Due By:

November 8, 2017

November 9, 2017

ids Due By: 3:00 p.m., November 13, 2017

#### 3. Project Scope and Description:

- a. Location of TDMS:
  - i. Rockland Key / Toppino Industrial Drive.
- b. Disposal Method of approximately 102,024 cubic yards of vegetative debris:
  - i. Air Curtain in accordance with Emergency Authorization OGC No. 17-0989 (Part 4 of RFP).
  - ii. Contractor to submit Draft Site Specific Burn Plan
  - iii. Other
- c. Proposers/Contractors Requirements:
  - i. Provide all equipment, labor, materials, insurance, permitting and supplies.
  - ii. Removal and disposal of all ash generated to a permitted authorized site.
  - iii. Complete full site restoration (rough grading).
  - iv. Compliance with Florida Administrative Code 62-210.300(3)26.g.
  - v. Renew Florida Forest Service authorization to burn daily.

    Joe Cangeni 305-896-2392 and/or Amy Pulley 904-626-8345
  - vi. Bidders must hold or obtain all licenses and/or certificates as required by State Statutes
  - vii. Hours of Operation 24 hours 7 days a week until all materials have been removed from site.

#### 4. Instruction to Bidders / Proposal

- a. Type and Preparation of Proposals:
  - i. The cost for the work is to be submitted on a Lump Sum basis.



#### THE CITY OF KEY WEST

Post Office Box 1409 Key, West, T.L. 33041-1409 (Mrs.) 809-3700

- ii. Bidder shall submit an experience record with the Proposal showing their experience in vegetative debris burning. Provide five current or recent projects including the following information for each project:
  - 1. Description and location of work.
  - 2. Quantity burned and contract amount.
  - 3. Dates work was performed.
  - 4. Owner and Name of Owners contact person and telephone number.
- iii. Bidder shall complete and submit the following forms with his bid:
  - 1. Anti-Kickback Affidavit
  - 2. Public Entity Crimes Form
  - 3. Indemnification Form
  - 4. Domestic Partnership Affidavit
  - 5. Cone of Silence Affidavit
  - 6. Bidder's Checklist
- b. Submission of Bids:
  - ALL Bids shall be made on the Bid form provided with the RFP documents and contain;
    - 1. (1) Original bid package.
    - 2. (2) Flash Drives each with PDF file of the entire bid package.
  - Bids should be submitted in a sealed envelope, externally marked to indicate the Bidders name and Project name and number without being opened.
- 5. Contract Award -Per sections 12-14 in the Invitation to Bid section of the RFP documents.
- 6. Insurance and Bonds
  - a. Insurance limits as stated on draft Owner-Contractor Agreement.
    - i. Landowner may impose additional limits. Confirmed via addendum.
  - b. Performance and Payment Bonds
    - i. The successful Bidder shall file with the City, at the time of delivery of the signed Contract, a Performance and Payment Bond found on the form provided in the RFP documents and CKW Business License Tax Receipt. See section 15 in the Invitation to Bid section of the RFP documents.
- 7. Time of Completion
  - a. Subsequent to receiving a Notice to Proceed, the Contractor shall commence work within 14 calendar days and shall complete work within the number of calendar days stipulated in their Proposal. The City desires to expedite completion of the project and the number of calendar days proposed will be a strong factor in the basis of award.



# ANTI - KICKBACK AFFIDAVIT

STATE OF		
COUNTY OF HILLSED RUGH)		
I, the undersigned hereby duly sworn, de paid to any employees of the City of Key indirectly by me or any member of my fir	West as a commission,	kickback, reward or gift, directly or
Ву:	1	
Sworn and subscribed before me this	13 <sup>th</sup> day of/	Sovember, 2017.
NOTARY PUBLIC, State of F	at Large	
My Commission Expires: 9-10-25		? ( . ( )
	forest.	· Ochalles
	****	JANET B. SCHINDLER MY COMMISSION # GG127227 EXPIRES: September 10, 2021



# Letter of Intent to Bond

Date:

November 13, 2017

To:

City of Key West, as Obligee

**Project:** 

**Hurricane Irma Vegetative Debris Burn** 

Contractor:

Payne's Environmental Services, LLC

It is the purpose of this letter to formally relay our intention to execute and deliver to you, as Obligee, at the request of the Contractor, the required Bid Bond on behalf of the Contractor, in the amount of 5% of Total Amount Bid for the above referenced project. This letter of intent was issued due to a lack in time to underwrite and issue the original bid bond for this project.

These bonds will be issued through one of our carriers rated "A-" or better by A. M. Best and appears on the Department of the Treasury's Listing of Approved Sureties (Department Circular 570). Keep in mind, there is no liability assumed by issuance of this letter.

Please feel free to contact us with any questions.

Sincerely,

The ProSure Group, Inc.

David B. Shick

David B. Skick

President

Attorney-In-Fact for Surety