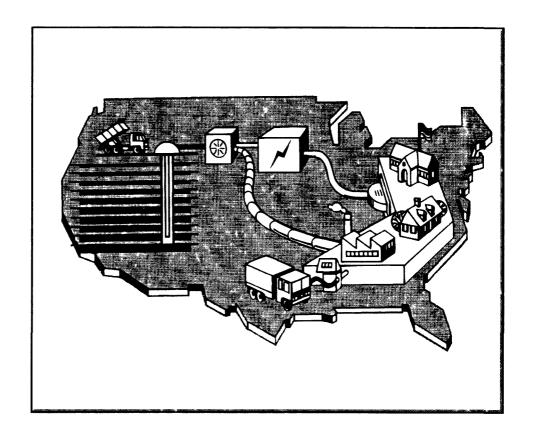


# **EPA** Landfill Gas-to-Energy Project **Opportunities**

# Landfill Profiles for the State of Oklahoma





## **EPA Landfill Methane Outreach Program**



The EPA Landfill Methane Outreach Program, a key component of the United State's *Climate Change Action Plan*, encourages the use of landfill gas (LFG) as an energy resource. EPA assists utilities,

municipal and private landfill owners and operators, tribes, and state agencies in reducing methane emissions from landfills through the development of profitable landfill energy recovery projects. Methane captured from landfills can be transformed into a cost-effective fuel source for electricity, heat, boiler and vehicular fuel, or sale to a pipeline. EPA estimates there are approximately 200 landfill methane recovery projects in the U.S. and that up to 750 landfills could install economically viable landfill energy projects.

The Landfill Methane Outreach Program includes five important components: the State Ally, Energy Ally, Industry Ally, Community Partner, and Endorser programs. EPA establishes separate alliances with state agencies, energy providers (including investor-owned, municipal and other public power utilities and cooperatives), key trade and public sector associations, members of the landfill gas development industry (including developers, engineers, equipment vendors, and others) and local communities, municipalities and landfill owner/operators through a Memorandum of Understanding (MOU). By signing the MOU, each Ally/Partner acknowledges a shared commitment to the promotion of landfill gas-to-energy recovery at solid waste landfills, recognizes that the widespread use of landfill gas will reduce emissions of methane and other gases, and commits to undertake activities to enhance development of this resource. In return, EPA agrees to provide landfill gas-to-energy project assistance and public recognition of the Allies' and Partners' participation in the program.

#### Introduction

Since 1994 the U.S. EPA's Landfill Methane Outreach Program (LMOP) has participated in an ongoing effort to gather information on Municipal Solid Waste landfills (MSW). A key component of the LMOP is to provide MSW landfill owners and operators, project developers, utilities, and other potential project participants with information on MSW landfills that may offer attractive energy development opportunities. This document presents state specific landfill information, hereinafter referred to as the landfill profiles. These profiles are useful to evaluate the potential for developing landfill gas-toenergy projects (LFGTE). EPA assembled this information from state and local sources as well as various national solid waste publications, landfill owners and operators, and project developers.

The EPA has prepared a separate document to describe the methodology used to develop the state-specific landfill profiles and estimate the benefits of using LFGTE as an energy source. The document, Landfill Gas-to-Energy Project Opportunities, Background Information on Landfill Profiles, contains background information on gas collection and use, describes the data fields according to the five sections listed on the landfill profiles, and where applicable, illustrates calculations and default values used to derive estimates. EPA strongly recommends that users read the document prior to using the landfill profiles. Users can obtain the document by calling the LMOP hotline at 1-888-STAR-YES.

#### **Data Sources**

- EPA-ORD Landfill Gas Utilization-Survey (Thorneloe, 1997)
- Directory and Atlas of Solid Waste Disposal Facilities (SWA, 1994)
- Implementation Guide for Landfill Gas Recovery Projects in the Northeast (SCS, 1994)
- Landfill Gas-to-Energy 1994-1995 Activity Report (SWT, 1994)
- Methane Recovery from Landfill Yearbook (GAA, 1994)
- · Project developers, landfill owners, and operators
- · State and local records
- Survey of Landfill Gas Generation Potential (EPRI, 1992)
- · U.S. Landfill Directory (SWANA, 1992)

#### **Landfill Classification**

To facilitate the use of available landfill information. EPA has categorized the landfills into five categories: Current Project, Candidate Project, Shutdown, Other, and Unknown waste-in-place (WIP). These categories are based on the status of the landfill's LFGTE project(s) and WIP. The generation of methane is a function of many factors, the most critical being the amount of waste-in-place and the number of years the waste has been in the landfill. Peak methane generation occurs soon after closure; therefore, the longer the landfill has been closed, the less attractive it becomes for methane recovery. Based on the general timing of peak methane generation, EPA assumes that landfills that ceased accepting waste prior to 1993 have a low probability of generating enough methane to make a gas recovery project economical. Consequently, landfills need to be operating in 1993 to be considered as having a Candidate Project.

#### **Landfill Categorizes**

#### **Current Project:**

 Landfill with operational LFGTE project or landfill with LFGTE project under construction.

#### **Candidate Project:**

- Landfill with a potential or planned LFGTE utilization project; or
- Landfill is currently operating or closed after 1993; and has more than 1,000,000 tons of municipal solid waste-inplace.<sup>2</sup>

#### Shutdown:

Landfill with shutdown LFGTE project.

#### Other:

 Landfill has less than 1,000,000 tons of municipal solid waste-in-place with no current or planned LFGTE project.
 Unknown WIP:

 Landfill with insufficient data to determine the waste-inplace.

### **State Summary**

State-specific landfill profile information is summarized in three exhibits. Exhibit 1 presents a summary of the state-specific potential for LFG utilization energy by landfill category. Exhibit 2 summarizes the emissions avoided by fossil fuel displacement for electricity generation and direct use projects. Exhibit 3 presents an index of the state-specific MSW landfills, referenced by category, landfill name and general characteristics.

<sup>&</sup>lt;sup>2</sup> By modeling the relationship between WIP and methane generation, a cut-off of 1,000,000 tons of WIP was established; landfills having at least 1,000,000 tons of WIP are considered candidate landfills.



<sup>&</sup>lt;sup>1</sup> Current projects illustrate the wide range of successful project development options.

Exhibit 1: Oklahoma MSW Landfill Summary

Category	No. of	andfills Generation		Methane Re		CO2 Equivalent of CH4		
	Landfills	Electricity (MW)	Gas Capacity (mmBtu/hr)	· · · · · · · · · · · · · · · · · · · ·		/yr)	Reduct (tons/	
					Potential	Current	Potential	Current
Current	1	5	48	2	8,952	0	187,998	0
Candidate	12	57	566	18	104,648	9,251	2,197,612	194,263
Other	5	7	67	2	12,429	0	261,007	0
Total	18	68	681	22	126,029	9,251	2,646,617	194;263

**Exhibit 2: Potential Oklahoma Emissions Avoided by Fossil Fuel Displacement** 

Category		Electi	ricity Gen	eration P	roject		Direct Use Project					
	CC	)2 (tons/	yr)	SC	)2 (tons/	yr)	CC	)2 (tons/	yr)	SO	2 (tons/	yr)
	Coal	Oil	Natural Gas	Coal	Oil	Natural Gas	Coal	Oil	Natural Gas	Coal	Oil	Natural Gas
Current	37,885	31,095	20,908	240	200	. 0	26,959	22,126	14,878	245	129	` 0
Candidate	447,519	367,304	246,980	2,829	2,364	0	315,134	258,648	173,918	2,868	1,507	2
Other	53,671	44,051	29,620	339	284	0	37,428	30,719	20,656	341	179	0
Total	539,076	442,449	297,509	3,407	2,848	0	379,521	311,493	209,452	3,453	1,815	2

### **Exhibit 3: Index of Landfills in Oklahoma**

Category	Landfill Name		WIP		Landfill	LFG Collected	LFG	Status of LFGTE
		<2.5 million tons	2.5 to 4 million tons	>4 million tons	Operating in 1998		Utilization Project	Project
Current	New Castle LF			•	✓		V	Operational
Candidate	51st Street LF			<b>V</b>				Unknown
Candidate	Broken Arrow LF			<b>✓</b>				Planned
Candidate	Canadian County SWDA LF	<b>V</b>			<b>V</b>			Unknown
Candidate	East Oak SLF/Mosley Road LF			<b>V</b>	<b>✓</b>			Potential
Candidate	Enid Municipal LF		<b>V</b>		<b>V</b>	LJ LJ		Unknown
Candidate	Lawton LF		~		<b>V</b>			Unknown
Candidate	Muskogee Community LF		<b>V</b>		<b>V</b>			Unknown
Candidate	NW Oklahoma SWDA LF	<b>V</b>		Ü	<b>V</b>			Unknown
Candidate	Oklahoma LF			✓	<b>Y</b>			Planned
Candidate	Pottawatomie County LF	~			✓			Unknown
Candidate	Quarry LF			~	V			Planned
Candidate	Southern OK Regional Disposal LF	~			<b>V</b>	U		Unknown
Other	51 B LF	<b>V</b>			~			Unknown
Other	Absolute Waste Systems LF	~			✓			Unknown
Other	Cherokee Nation SLF	~			✓			Unknown
Other	Great Plains LF	✓			✓			Unknown
Other	Longview Waste Systems LF	V			V			Unknown

OK - 3 December 05, 1998

			51st Street			Landfill C	ategory:	Candidate
		A. G	ENERAL LANDFILL	INFORMAT	ION		3	
Landfill Owner:	BFI			Annual Accep	tance Rate (	(tons):		325,189
Landfill Owner Type:					=	Rate Reported:		1990
Alternative Landfill N	lame:			Design Capaci	-			
City:				Acres Current	-	d (acres):		
County:	Wagon	er		Average Deptl				
State:	OK			Waste-in-Place				6,865,818
Year Open:	1983			1998 Waste-in	-Place (ton:	s):		6,865,818
Year Closed:	1994	4	B. LANDFILL GAS CO	OU ECTION				
			B. EANDFILE GAS CO		4.3		2 38	1000
Estimated Methane G		f/d):		2.17				
LFG Collection Syste								
Current LFG Collecte		wined Linder NCI	DS/EC.	No		•		
Collection and Treatm	iem System Req		-5/EG. C. LANDFILL GAS U		J			
	<u> </u>		C. DANDFILL GAS U	I ALIANIS I AUN	V. V. W. J.			
Current Utilization:	Ct-t-	T T1.						
Utilization System		Unknown						
Utilization System Utilization System		Unknown						
Electric Utility P								
Natural Gas Prov								
Energy Purchase	* *							
. Energy I dichase.	1(3).							
Capacity:		Electrici	ty Generation Project (N	1W) (	OR	Direct Use Project (n	nmBtu/hr	)
Estimated Potent	ial Capacity:			7				68
Current Capacity	:							
Planned Capacity	<b>/</b> :		•	4.28				32
Utilities in County:		East Cantral	Okla El Coop Inc; Lake	Pagion Flagts	ric Coon Inc	v Oklahoma Gas & Fla	atria Co:	Southw:
Othlites in County.			-		_		cuic Co,	Southw
		D. ENVII	ROMENTAL BENEFI	IS OF UTILI	ZATION		1.7%	
			Pa	tential		Cu	rrent	
Methane Reduction (to	-				12,570			0
CO2 Equivalent of CH	14 Reduction (to	ns/yr):		:	263,964			0
Emissions Avoided by	Fossil Fuel Dist	nlacement:	Electricity Gen	eration Projec	·t	Direct Us	e Project	
Emissions Avoided by	1 Ossii 1 uei Disj	лисетет.	CO2 (tons/yr)	SO2 (tor		CO2 (tons/yr)	-	2 (tons/yr)
		<i>C</i> ,		204 (10)			502	-
		Coal:	53,671		339	37,852		344
		Fuel Oil:	44,051		284	31,067		181
	N	atural Gas:	29,620		0	20,890		0
			E. CONTACT INFO	RMATION				
<u> </u>	<u></u>	Landfill			· · · · · · · · · · · · · · · · · · ·	Landfill Operator		
Contact Name:	Donald Fletche	er		Richa	rd Grotte			
				i		D 1		
Mailing Address:	1225 North 16	I East Avenue		4343	Will Rogers	s Parkway		
<b>D</b>		•						
Phone Number:				405-9	49-1962			
Fax Number:	:							
+ 1. 11· · · · · ·		L. CD4	-		.0	Service OV		
* Itallicized indicates v		•	De	cember 5, 199	ō	State: OK	Page:	I
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		A. GENERAL LAND	n Arrow LF	RMATION	Landfill Category:	Candidate
Landfill Owner:	BFI		<del></del>	l Acceptance Rate (	tons):	253,022
Landfill Owner Type:	Private			nnual Acceptance I		1995
Alternative Landfill N				Capacity (tons):	F · · · ·	
City:	Tulsa		_	Currently Landfilled	d (acres):	
County:	Wagoner			ge Depth (feet):	, ,	
State:	OK			in-Place (tons):		3,736,131
Year Open:	1976			Vaste-in-Place (tons	s):	4,091,953
Year Closed:	1998			·		
		B. LANDFILL G	AS COLLE	CTION	***************************************	
Estimated Methane G	eneration (mmscf/d):		1.	.46		
LFG Collection Syste	m Status:					
Current LFG Collecte	d (mmscf/d):					
Collection and Treatm	nent System Required Under	r NSPS/EG:		No		
		C. LANDFILL G	AS UTILIZ	ATION	· .	
Current Utilization:						
Utilization Syste	m Status: Planned	1				
Utilization Syste	- ·	n Btu				
Utilization Syste	m Start Year: 1998					
Electric Utility P	rovider(s):					
Natural Gas Prov	vider(s):					
Energy Purchase	r(s):					
Capacity:	Ele	ctricity Generation Pro	iect (MW)	OR	Direct Use Project (mmBtu/h	r) .
Estimated Poten				5	<b>3</b>	46
Current Capacity	• • •					40
Planned Capacity	•					
Trainied Capacit						
Utilities in County:	East Co	entral Okla El Coop Inc	; Lake Regio	n Electric Coop Inc	; Oklahoma Gas & Electric Co	; Southw
	D. E	NVIROMENTAL BE	NEFITS OF	UTILIZATION		
			Potential	'	Current	
Methane Reduction (t	ons/yr):			8,468		0
CO2 Equivalent of CI	H4 Reduction (tons/yr):			177,824		0
	E 45 10: 1	THE STATE OF THE S			D: .II D :	
Emissions Avoiaea by	Fossil Fuel Displacement:		ty Generation	-	Direct Use Projec	
		CO2 (tons	<i>vyr)</i> s	SO2 (tons/yr)	CO2 (tons/yr) SC	02 (tons/yr)
	Coal	: 36	5,307	230	25,500	232
	Fuel Oil	: 29	,799	192	20,929	122
	Natural Gas	20	0,037	0	14,073	0
		E. CONTACT	INFORMAT	rion :		: % : %
	Lan	dfill Owner	2.11 0201212		Landfill Operator	. 28
Contact Name:	Dennis Bollinger, Energy	Manager	1	Kip Smith		· · · · · · · · · · · · · · · · · · ·
Moiling Address	i			•	A	
Mailing Address:	757 N. Eldridge		:	1225 North 161 E	casi Avenue	
Dhana Musich	P.O. Box 3151		ļ			
Phone Number:	281-870-7801		;	918-664-8899		
Fax Number:	1		· :			
* Itallicized indicates	values estimated by EPA.		Decembe	r 5. 1998	State: OK Page	: 2
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			Canadian County S				Landfill Cat	egory: Candidate
	50	A. G	ENERAL LANDFILL	INFORMAT	ION			
Landfill Owner:	Canadi	an County	1	Annual Accep	tance Rate	(tons):		44,330
Landfill Owner Type:	Public		•	Year Annual A	Acceptance	Rate Report	ed:	1998
Alternative Landfill N	lame:		I	Design Capac	ity (tons):			
City:	El Rene	o	1	Acres Current	ly Landfille	ed (acres):		
County:	Canadi	an	1	Average Dept	h (feet):			
State:	OK		•	Waste-in-Plac	e (tons):			2,141,804
Year Open:	1974		i	1998 Waste-in	-Place (tor	ıs):		2,328,050
Year Closed:	2006							
		) jaga jaga j	B. LANDFILL GAS CO	DLLECTION	18 A 18	18.8 (200)	3.2	11.12 (1.24 ± 1.24
Estimated Methane G	eneration (mmsc	f/d):		1.01				
LFG Collection Syste	m Status:							
Current LFG Collecte	ed (mmscf/d):							
Collection and Treatm	nent System Requ	uired Under NSI	PS/EG:	No				
			C. LANDFILL GAS U	FILIZATION	l .	2 / <b>3</b> / 3 / 3		
Current Utilization:								
Utilization Syste	m Status:	Unknown						
Utilization Syste	m Type:	Unknown						:
Utilization Syste								
Electric Utility P								
Natural Gas Prov								
Energy Purchase								
	,							
Capacity:	- · · ·	Electrici	ty Generation Project (M	IW) (	OR .	Direct Use	Project (mn	nBtu/hr)
Estimated Potent	tial Capacity:			3				32
Current Capacity	<i>י</i> :							
Planned Capacity	y:			1.29				10
Utilities in County:		Caddo Elect	ric Coop Inc; Cimarron I	Electric Coope	erative; Ok	lahoma Elect	ric Coop Inc	; Oklahoma Ga
		D. ENVII	ROMENTAL BENEFIT	S OF UTIL	ZATION			
territorio de la compania de la comp			Po	tential			Curr	ent
Methane Reduction (to	anchirl:	•	10.	ш	5,859		Curr	0
CO2 Equivalent of CH	<del>-</del>	makir).			123,045			0
CO2 Equivalent of CI	14 Reduction (to	us/y/).			123,043			
Emissions Avoided by	Fossil Fuel Dist	olacement:	Electricity Gene	eration Projec	ct		Direct Use	Project
•			CO2 (tons/yr)	SO2 (to	ns/yr)	CO2	(tons/yr)	SO2 (tons/yr)
		Coal:	25,257		160		17,645	161
		Fuel Oil:	20,730					84
					133		14,482	
	N	atural Gas:	13,939		0		9,738	0
	**************************************		E. CONTACT INFO	RMATION		17	1.	13.8
		Landfill	Owner			Landfill	Operator	
Contact Name:	David Griesel			David	l Griesel			
Mailing Address:	PO Drawer 189	9		PO D	rawer 189			:
DV V	1 !							, 1 1
Phone Number:	405-263-4418			405-4	83-5402			
Fax Number:	·							·
* Itallicized indicates	values estimated	by EPA.	Dec	cember 5, 199	8	Sta	te: OK	Page: 3
(m. r	. 10411405	-		,				-

		A. GI	East Oak SLF/Mosle ENERAL LANDFILL			Landfill Cate	gory: Candidat
Landfill Owner:	WMI			Annual Acc	eptance Rate (t	ons):	457,600
Landfill Owner Type:	Private				l Acceptance R		1998
Alternative Landfill Na	me: Moslev	Road LF			acity (tons):		
City:		ma City			ntly Landfilled	(acres):	70
County:	Oklaho	=		Average De	-	<b>. ,</b> .	100
State:	ОК			Waste-in-Pl	=		6,589,455
Year Open:	1986				in-Place (tons	):	7,787,537
Year Closed:	2003				,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,		, , ,
		В	. LANDFILL GAS CO	DLLECTIC	N		
Estimated Methane Ge	neration (mmsc	f/d):		2.41			
LFG Collection System	Status:						
Current LFG Collected	(mmscf/d):			2.4			
Collection and Treatme	ent System Requ	uired Under NSP	S/EG:	Yes			
		(	C. LANDFILL GAS U	<b>FILIZATIO</b>	DN į		. 33
Current Utilization:							
Utilization System	Status:	Potential					
Utilization System	туре:	Unknown					
Utilization System	Start Year:						
Electric Utility Pro	ovider(s):	Oklahoma G	&E Co.				
Natural Gas Provi	der(s):						
Energy Purchaser	(s):	Williamson I	Natural Gas Pipeline, Cr	uchs El			
Capacity:		Electricit	y Generation Project (M	IW)	OR	Direct Use Project (mm)	Btu/hr)
Estimated Potenti	al Canacity:			8			75
Current Capacity:	и Сирисиу.			0			75
Planned Capacity:				4.91			38
Utilities in County:		Canadian Va	lley Flec Coop Inc. Cen	tral Rural F	lectric Coop: (	Cimarron Electric Cooper	ative: Edmon
Cunics in County.			OMENTAL BENEFI			Similarion Electric Cooper	ative, Lamon
			_	tential		Curre	nt
Methane Reduction (to	nchir):		10	iennai	13,933	Curren	9,251
CO2 Equivalent of CH	•	m c (A )			292,589		194,263
CO2 Equivalent of Ch	+ Keauciton (to	13/y/).			292,309		194,203
Emissions Avoided by I	Fossil Fuel Disp	olacement:	Electricity Gen	eration Pro	ject	Direct Use P	roject
			CO2 (tons/yr)	SO2 (	tons/yr)	CO2 (tons/yr)	SO2 (tons/yr)
		Coal:	59,196		374	41,957	382
		Fuel Oil:	48,585		313	34,436	201
	N	atural Gas:	32,669		0	23,155	0
		and a surround a substitution of the substitution and the substitution of the substitu	E. CONTACT INFO	RMATION	T :	and the second s	Alexander
		Landfill (	Jwner	<del></del>		Landfill Operator	
Contact Name:	Jim Meinholz			Jim	Meinholz		
Mailing Address:	3201 Mosley R	Road		320	1 Mosley Road	d	
1	Route 4, Box 3				ate 4, Box 310		
Phone Number:				1			
- 1	405-427-1112			403	5-427-1112		
Fax Number:							
;							
Itallicized indicates v	aluan antico - 4 - 1	hu EDA	D.	cember 5, 1	008	State: OK	Page: 4

		Enid Municip			Landfill C	ategory: Candidate
	A. G	ENERAL LANDFILL	INFORMA:	rion .		i sy Aran i San
City of	Enid		Annual Acce	otance Rate	(tons):	7,150
Public		,	Year Annual	Acceptance	Rate Reported:	1998
ame: City of	Enid LF	1	Design Capac	city (tons):		
Enid			Acres Curren	tly Landfille	d (acres):	106
Garfield	i		Average Dep	th (feet):		
OK		,	Waste-in-Plac	ce (tons):		2,392,871
1987			1998 Waste-i	n-Place (ton	s):	2,871,446
2017						
		B. LANDFILL GAS CO	DLLECTIO!	<b>V</b>		
neration (mmscj	f/d):		1.15			
n Status:						
(mmscf/d):						
ent System Requ	ired Under NSI	PS/EG:	No			
		C. LANDFILL GAS U	<b>FILIZATIO</b>	N. S. L.		
						<del></del>
n Status:	Unknown					
	•					
	· · · · · · · · · · · · · · · · · · ·					
(-).						
	Electrici	ty Generation Project (M	1W)	OR	Direct Use Project (m	nmBtu/hr)
al Capacity:			4			36
:			1.76			13
	Alfalfa Elec	tric Coop Inc; Central Ri	ural Electric (	Coop; Cimar	ron Electric Cooperativ	e; Kay Electric (
	D. ENVII	ROMENTAL BENEFI	IS OF UTIL	IZATION		
		Po	tential		Cur	rrent
ns/yr):				6,663		0
	ıs/yr):					0
Fossil Fuel Disp	lacement:	}	•		1	•
		CO2 (tons/yr)	SO2 (to	ns/yr)	CO2 (tons/yr)	SO2 (tons/yr)
	Coal:	28,414		180	20,064	183
	Fuel Oils	23 321		150	16 468	96
		i				
N	atural Gas:	15,681		0	11,073	0
· · · · · · · · · · · · · · · · · · ·	7.	E. CONTACT INFO	RMATION		: 1	***************************************
				* ***	Landfill Operator	
	Landfill	Owner				
Bill Beck	Landfill	Owner	Bruc	e Wright		
Bill Beck	Landfill	Owner		e Wright		
Bill Beck P.O. Box 1768	Landfill	Owner		e Wright Southgate F		
P.O. Box 1768	Landfill	Owner		_		
	Landfill	Owner	1313	_		
P.O. Box 1768	Landfill	Owner	1313	Southgate F		
	Public Ame: City of Enid Garfield OK 1987 2017  Imeration (mmsc) in Status: In Type: In Status: In Type: In Start Year: In Status: In Type: In Start Year: I	City of Enid Public ame: City of Enid LF Enid Garfield OK 1987 2017  meration (mmscf/d): In Status: In (mmscf/d): In Status: Unknown In Type: Unknown In Type: Unknown In Start Year: In S	City of Enid Public ame: City of Enid LF Enid Garfield OK 1987 2017  B. LANDFILL GAS CO meration (mmscf/d): In Status: It (mmscf/d): In Status: Unknown In Type: Unknown In Type: Unknown In Start Year: In Status: In Status: Unknown In Type: Unknown In Start Year: In Status: Unknown In Type: Unknown In Type: Unknown In Start Year: In Start Year: In Start Year: In Status: Unknown In Type: Unknown	City of Enid	City of Enid Annual Acceptance Rate Public Year Annual Acceptance Rate Public Year Annual Acceptance Rate Year Annual Acceptance Rate Year Annual Acceptance Rate Public Acres Currently Landfille Acres Currently Landfille Garfield Average Depth (feet):  OK Waste-in-Place (tons): 1987 1998 Waste-in-Place (tons): 1987 2017  B. LANDFILL GAS COLLECTION  meration (mmscf/d): 1.15 n Status: 1 (mmscf/d): ent System Required Under NSPS/EG: No  C. LANDFILL GAS UTILIZATION  In Status: Unknown In Start Year: ovider(s): ider(s): ider	City of Enid Annual Acceptance Rate (tons): Public Year Annual Acceptance Rate Reported: ame: City of Enid LF Design Capacity (tons): Enid Acres Currently Landfilled (acres): OK Waste-in-Place (tons): 1987 1998 Waste-in-Place (tons): 2017  B. LANDFILL GAS COLLECTION meration (mmscf/d): 1.15 1  status: 1 (mmscf/d): ent System Required Under NSPS/EG: No C. LANDFILL GAS UTILIZATION  In Status: Unknown In Type: Unknown In Type: Unknown In Start Year: ovider(s): ider(s): (s):  Electricity Generation Project (MW) OR Direct Use Project (nat Capacity: 1.76  Alfalfa Electric Coop Inc; Central Rural Electric Coop; Cimarron Electric Cooperative  D. ENVIROMENTAL BENEFITS OF UTILIZATION  Potential Customs/yr):  6,663 4 Reduction (tons/yr): Electricity Generation Project CO2 (tons/yr) SO2 (tons/yr)  Coal: 28,414 180 20,064 Fuel Oil: 23,321 150 16,468

			Lawton LF			Landfill Ca	tegory: Candidate
			ENERAL LANDFILL I				
Landfill Owner:	City of L	awton		nnual Acceptan			120,000
Landfill Owner Type:	Public			ear Annual Acc	-	te Reported:	1998
Alternative Landfill Name:	•	Lawton LF		esign Capacity			
City:	Lawton	_		cres Currently l		acres):	120
County:	Comanch	he		verage Depth (1			80
State:	OK			Vaste-in-Place (1			2,950,368
Year Open:	1984		1	998 Waste-in-P	lace (10ns):		3,404,265
Year Closed:	2012	1.	B. LANDFILL GAS CO	LECTION	<del></del>		<del></del>
n			LANDFILL GAS CO		*		
Estimated Methane General	•	(d):		1.29			
LFG Collection System Stat							
Current LFG Collected (mm	-	J. I. J NOD	is rec	N7 -			
Collection and Treatment Sy	ystem Kequi		S/EG: C. LANDFILL GAS UT	No	, s		
Current Utilization:			J. LIMITORINE GAS CI	IDIDATION		ž	
<del> </del>		11-1					
Utilization System Stat Utilization System Typ		Unknown Unknown					
Utilization System Star		Ulikilowii					
Electric Utility Provide		Cotton Elect	<del>ri</del> a				
Natural Gas Provider(s		Cotton Electi	iic				
Energy Purchaser(s):	5).						
Energy I dichaser(s).							
Capacity:		Electricit	y Generation Project (M	W) OR	Г	Direct Use Project (mr	nBtu/hr)
				····			<del></del>
Estimated Potential Ca	apacity:			4	<u> </u>		40
Estimated Potential Ca Current Capacity:	apacity:						<u> </u>
	apacity:						<u> </u>
Current Capacity:	apacity:	Caddo Electi	ic Coop Inc; Cotton Elec	2.42		ce Co of Oklahoma; R	40
Current Capacity: Planned Capacity:			ic Coop Inc; Cotton Elec	4 2.42 tric Coop Inc; F	rublic Servic	ce Co of Oklahoma; R	40
Current Capacity: Planned Capacity:	apacity:		OMENTAL BENEFIT	4 2.42 tric Coop Inc; F	rublic Servic		40 19 Cural Electric Co
Current Capacity: Planned Capacity: Utilities in County:			OMENTAL BENEFIT	4 2.42  tric Coop Inc; F S OF UTILIZ,	Public Servic	ce Co of Oklahoma; R Curr	40 19 Cural Electric Co
Current Capacity: Planned Capacity: Utilities in County:  Methane Reduction (tons/yr	·):	D.ENVIR	OMENTAL BENEFIT	4 2.42 tric Coop Inc; F S OF UTILIZA ential	Public Service ATION 7,451		40 19 Cural Electric Co ent 0
Current Capacity: Planned Capacity: Utilities in County:	·):	D.ENVIR	OMENTAL BENEFIT	4 2.42 tric Coop Inc; F S OF UTILIZA ential	Public Servic		40 19 tural Electric Co
Current Capacity: Planned Capacity: Utilities in County:  Methane Reduction (tons/yr	r): duction (tons	<b>D. ENVIR</b> s/yr):	OMENTAL BENEFIT	4 2.42  tric Coop Inc; F S OF UTILIZA  ential  150  ration Project	7,451 6,467		40 19 Cural Electric Co ent 0
Current Capacity: Planned Capacity: Utilities in County:  Methane Reduction (tons/yr, CO2 Equivalent of CH4 Red	r): duction (tons	<b>D. ENVIR</b> s/yr):	OMENTAL BENEFIT Pot	4 2.42  tric Coop Inc; F S OF UTILIZ/	7,451 6,467	Сит	40 19 Cural Electric Co ent 0
Current Capacity: Planned Capacity: Utilities in County:  Methane Reduction (tons/yr, CO2 Equivalent of CH4 Red	r): duction (tons	<b>D. ENVIR</b> s/yr):	OMENTAL BENEFIT Pot  Electricity Gene	4 2.42  tric Coop Inc; F S OF UTILIZ/ ential  150  ration Project SO2 (tons/	7,451 6,467	Curr Direct Use	40 19 tural Electric Co ent 0 0
Current Capacity: Planned Capacity: Utilities in County:  Methane Reduction (tons/yr, CO2 Equivalent of CH4 Red	r): duction (tons	D.ENVIR s/yr): acement: Coal:	Electricity Gene CO2 (tons/yr) 31,571	4 2.42  tric Coop Inc; F S OF UTILIZ/ ential  150  ration Project SO2 (tons/)	7,451 5,467	Direct Use CO2 (tons/yr) 22,437	40 19 Rural Electric Corent 0 0 Project SO2 (tons/yr)
Current Capacity: Planned Capacity: Utilities in County:  Methane Reduction (tons/yr, CO2 Equivalent of CH4 Red	r): duction (tons il Fuel Displa	D.ENVIR  s/yr):  acement:  Coal:  Fuel Oil:	Electricity Gene CO2 (tons/yr) 31,571 25,912	4 2.42  tric Coop Inc; F S OF UTILIZ/ ential  150  ration Project SO2 (tons/)	7,451 6,467 000	Direct Use CO2 (tons/yr) 22,437 18,415	40 19 Cural Electric Co ent 0 0 Project SO2 (tons/yr) 204
Current Capacity: Planned Capacity: Utilities in County:  Methane Reduction (tons/yr CO2 Equivalent of CH4 Red Emissions Avoided by Fossi	c): duction (tons il Fuel Displa	DÆNVIR  s/yr):  acement:  Coal:  Fuel Oil:  tural Gas:	Electricity Gene CO2 (tons/yr) 31,571 25,912 17,424	4 2.42  tric Coop Inc; F S OF UTILIZ, ential  150  ration Project SO2 (tons/)	7,451 6,467 97) 00 67	Direct Use CO2 (tons/yr) 22,437 18,415 12,383	40 19 Rural Electric Co ent 0 0 Project SO2 (tons/yr) 204 107
Current Capacity: Planned Capacity: Utilities in County:  Methane Reduction (tons/yr, CO2 Equivalent of CH4 Red	r): duction (tons il Fuel Displa	D.ENVIR s/yr): acement: Coal: Fuel Oil: tural Gas:	Electricity Gene CO2 (tons/yr) 31,571 25,912 17,424 E. CONTACT INFOR	4 2.42  tric Coop Inc; F S OF UTILIZ, ential  150  ration Project SO2 (tons/)	7,451 6,467 97) 00 67	Direct Use CO2 (tons/yr) 22,437 18,415 12,383	40 19 Cural Electric Co ent 0 0 Project SO2 (tons/yr) 204
Current Capacity: Planned Capacity: Utilities in County:  Methane Reduction (tons/yr CO2 Equivalent of CH4 Red Emissions Avoided by Fossi	r): duction (tons il Fuel Displa Na	DÆNVIR  s/yr):  acement:  Coal:  Fuel Oil:  tural Gas:	Electricity Gene CO2 (tons/yr) 31,571 25,912 17,424 E. CONTACT INFOR	4 2.42  tric Coop Inc; F S OF UTILIZA  ential  150  ration Project	7,451 6,467 0	Direct Use CO2 (tons/yr) 22,437 18,415 12,383	40 19 Rural Electric Co ent 0 0 Project SO2 (tons/yr) 204 107
Current Capacity: Planned Capacity: Utilities in County:  Methane Reduction (tons/yr CO2 Equivalent of CH4 Red Emissions Avoided by Fossi	c): duction (tons il Fuel Displa	D.ENVIR s/yr): acement: Coal: Fuel Oil: tural Gas:	Electricity Gene CO2 (tons/yr) 31,571 25,912 17,424 E. CONTACT INFOR	4 2.42  tric Coop Inc; F S OF UTILIZ, ential  150  ration Project SO2 (tons/)	7,451 6,467 0	Direct Use CO2 (tons/yr) 22,437 18,415 12,383	40 19 Rural Electric Co ent 0 0 Project SO2 (tons/yr) 204 107
Current Capacity: Planned Capacity: Utilities in County:  Methane Reduction (tons/yr. CO2 Equivalent of CH4 Red Emissions Avoided by Fossi	r): duction (tons il Fuel Displa Na	DÆNVIR  s/yr):  acement:  Coal:  Fuel Oil:  tural Gas:	Electricity Gene CO2 (tons/yr) 31,571 25,912 17,424 E. CONTACT INFOR	4 2.42  tric Coop Inc; F S OF UTILIZ/ ential  150  ration Project	7,451 6,467 0	Direct Use CO2 (tons/yr) 22,437 18,415 12,383  Landfill Operator	40 19 Rural Electric Co ent 0 0 Project SO2 (tons/yr) 204 107
Current Capacity: Planned Capacity: Utilities in County:  Methane Reduction (tons/yr. CO2 Equivalent of CH4 Red Emissions Avoided by Fossi  Contact Name: Mailing Address:  Bruce 8902	ce Lukus 2 SW 11th S	DÆNVIR  s/yr):  acement:  Coal:  Fuel Oil:  tural Gas:	Electricity Gene CO2 (tons/yr) 31,571 25,912 17,424 E. CONTACT INFOR	4 2.42  tric Coop Inc; F S OF UTILIZ/ ential  150  ration Project SO2 (tons/)  1  RMATION  Dave Tr  8902 SV	7,451 6,467 0 0 uitt	Direct Use CO2 (tons/yr) 22,437 18,415 12,383  Landfill Operator	40 19 Rural Electric Co ent 0 0 Project SO2 (tons/yr) 204 107
Current Capacity: Planned Capacity: Utilities in County:  Methane Reduction (tons/yr. CO2 Equivalent of CH4 Red Emissions Avoided by Fossi  Contact Name: Mailing Address:  Bruce 8902	r): duction (tons il Fuel Displa Nat	DÆNVIR  s/yr):  acement:  Coal:  Fuel Oil:  tural Gas:	Electricity Gene CO2 (tons/yr) 31,571 25,912 17,424 E. CONTACT INFOR	4 2.42  tric Coop Inc; F S OF UTILIZ/ ential  150  ration Project	7,451 6,467 0 0 uitt	Direct Use CO2 (tons/yr) 22,437 18,415 12,383  Landfill Operator	40 19 Rural Electric Co ent 0 0 Project SO2 (tons/yr) 204 107
Current Capacity: Planned Capacity: Utilities in County:  Methane Reduction (tons/yr, CO2 Equivalent of CH4 Red Emissions Avoided by Fossi  Contact Name: Mailing Address:  Bruce 8902	ce Lukus 2 SW 11th S	DÆNVIR  s/yr):  acement:  Coal:  Fuel Oil:  tural Gas:	Electricity Gene CO2 (tons/yr) 31,571 25,912 17,424 E. CONTACT INFOR	4 2.42  tric Coop Inc; F S OF UTILIZ/ ential  150  ration Project SO2 (tons/)  1  RMATION  Dave Tr  8902 SV	7,451 6,467 0 0 uitt	Direct Use CO2 (tons/yr) 22,437 18,415 12,383  Landfill Operator	40 19 Rural Electric Co ent 0 0 Project SO2 (tons/yr) 204 107

· •			Muskogee Comm			Landfill Co	ategory: Candidate
	<u> </u>	A. GE	NERAL LANDFILL	INFORMAT	TION		
Landfill Owner:	Waste N	Management, Inc.		Annual Acce	ptance Rate (t	ons):	226,974
Landfill Owner Type	: Private		,	Year Annual	Acceptance R	ate Reported:	1995
Alternative Landfill N	Name:		1	Design Capac	city (tons):		
City:				Acres Curren	tly Landfilled	(acres):	
County:	Muskog	gee		Average Dept	th (feet):		
State:	OK		7	Waste-in-Plac	ce (tons):		2,093,541
Year Open:	1987			1998 Waste-ii	n-Place (tons)	) <i>:</i>	2,512,252
Year Closed:	2002						
		В.	LANDFILL GAS CO	DLLECTION	V		
Estimated Methane C	Generation (mmscf.	f/d):		1.06			
LFG Collection Syste	em Status:						
Current LFG Collecte	ed (mmscf/d):						
Collection and Treatr	nent System Requ	iired Under NSPS	/EG:	No			
		C.	LANDFILL GAS U	FILIZATIO	N		
Current Utilization:							
Utilization Syste	em Status:	Unknown					
Utilization Syste	em Type:	Unknown					
Utilization Syste	em Start Year:						
Electric Utility F	Provider(s):						
Natural Gas Pro							
Energy Purchase	er(s):						
				****			
Capacity:		Electricity	Generation Project (M	1W)	OR	Direct Use Project (m	ımBtu/hr)
Capacity:  Estimated Poten	tial Capacity:	Electricity	Generation Project (N	1W) 3	OR	Direct Use Project (m	amBtu/hr)
Estimated Poten Current Capacity	y:	Electricity	Generation Project (M		OR	Direct Use Project (m	<del></del>
Estimated Poten	y:	Electricity	Generation Project (N		OR	Direct Use Project (m	<del></del>
Current Capacity	y:		Generation Project (M	3 2.15			33 16
Estimated Poten Current Capacity Planned Capacit	y:	Cookson Hills		3 2.15 Central Okla F	El Coop Inc; L		33 16
Estimated Poten Current Capacity Planned Capacit	y:	Cookson Hills	Elec Coop Inc; East C	3 2.15 Central Okla F	El Coop Inc; L	ake Region Electric C	33 16 Coop Inc; Oklaho
Estimated Poten Current Capacity Planned Capacit Utilities in County:	y: y:	Cookson Hills	Elec Coop Inc; East C	3 2.15 Central Okla F	El Coop Inc; L	ake Region Electric C	33 16 Coop Inc; Oklaho
Estimated Potent Current Capacity Planned Capacit Utilities in County:	y: y: tons/yr):	Cookson Hills	Elec Coop Inc; East C	3 2.15 Central Okla F	El Coop Inc; L IZATION 6,132	ake Region Electric C	33 16 Coop Inc; Oklaho rrent 0
Estimated Poten Current Capacity Planned Capacit Utilities in County:	y: y: tons/yr):	Cookson Hills	Elec Coop Inc; East C	3 2.15 Central Okla F	El Coop Inc; L	ake Region Electric C	33 16 Coop Inc; Oklaho
Estimated Poten Current Capacity Planned Capacit Utilities in County:  Methane Reduction (1) CO2 Equivalent of Co	y: y: tons/yr): H4 Reduction (ton	Cookson Hills  D. ENVIR(  as/yr):	Elec Coop Inc; East C	2.15 Central Okla E	El Coop Inc; L IZATION 6,132 128,766	ake Region Electric C	33 16 Coop Inc; Oklaho rrent 0
Estimated Poten Current Capacity Planned Capacit Utilities in County:  Methane Reduction (1) CO2 Equivalent of Co	y: y: tons/yr): H4 Reduction (ton	Cookson Hills  D. ENVIR(  as/yr):	Elec Coop Inc; East COMENTAL BENEFIT	2.15 Central Okla E	6,132 128,766	ake Region Electric C	33 16 Coop Inc; Oklaho rrent 0
Estimated Poten Current Capacity Planned Capacit Utilities in County:  Methane Reduction (1) CO2 Equivalent of Co	y: y: tons/yr): H4 Reduction (ton	Cookson Hills D. ENVIR(  ns/yr): placement:	Elec Coop Inc; East C  OMENTAL BENEFT  Po  Electricity Gen  CO2 (tons/yr)	3 2.15 Central Okla F TS OF UTIL Intential eration Proje	6,132 128,766 ect pns/yr)	Direct Use	33 16 Coop Inc; Oklaho rrent 0 0 e Project SO2 (tons/yr)
Estimated Poten Current Capacity Planned Capacit Utilities in County:  Methane Reduction (1) CO2 Equivalent of Co	y: y: tons/yr): H4 Reduction (ton	Cookson Hills D. ENVIR  as/yr): blacement:  Coal:	Elec Coop Inc; East C  MENTAL BENEFI  Po  Electricity Gen  CO2 (tons/yr)  26,046	3 2.15 Central Okla F TS OF UTIL Intential eration Proje	6,132 128,766 ect ons/yr)	Direct Use CO2 (tons/yr) 18,465	33 16 Coop Inc; Oklaho rrent 0 0 0 e Project SO2 (tons/yr) 168
Estimated Poten Current Capacity Planned Capacit Utilities in County:  Methane Reduction (1) CO2 Equivalent of Co	y: y: tons/yr): H4 Reduction (ton	Cookson Hills D. ENVIR(  ns/yr): placement:	Elec Coop Inc; East C  OMENTAL BENEFT  Po  Electricity Gen  CO2 (tons/yr)	3 2.15 Central Okla F TS OF UTIL Intential eration Proje	6,132 128,766 ect pns/yr)	Direct Use	33 16 Coop Inc; Oklaho rrent 0 0 e Project SO2 (tons/yr)
Estimated Poten Current Capacity Planned Capacit Utilities in County:  Methane Reduction (1) CO2 Equivalent of Co	y: y: tons/yr): H4 Reduction (ton	Cookson Hills D. ENVIR  as/yr): blacement:  Coal:	Elec Coop Inc; East C  MENTAL BENEFI  Po  Electricity Gen  CO2 (tons/yr)  26,046	3 2.15 Central Okla F TS OF UTIL Intential eration Proje	6,132 128,766 ect ons/yr)	Direct Use CO2 (tons/yr) 18,465	33 16 Coop Inc; Oklaho rrent 0 0 0 e Project SO2 (tons/yr) 168
Estimated Poten Current Capacity Planned Capacit Utilities in County:  Methane Reduction (1) CO2 Equivalent of Co	y: y: tons/yr): H4 Reduction (ton	Cookson Hills  D. ENVIRO  as/yr):  blacement:  Coal:  Fuel Oil:  atural Gas:	Elec Coop Inc; East Comental Benefit  Po  Electricity Gen  CO2 (tons/yr)  26,046  21,378	2.15 Central Okla E PS OF UTIL Intential eration Proje SO2 (to	6,132 128,766 10s/yr) 165 138 0	Direct Use CO2 (tons/yr) 18,465 15,155	33 16 Coop Inc; Oklaho Trent 0 0 0 e Project SO2 (tons/yr) 168 88
Estimated Poten Current Capacity Planned Capacit Utilities in County:  Methane Reduction (1) CO2 Equivalent of Co	y: y: tons/yr): H4 Reduction (ton	Cookson Hills  D. ENVIRO  as/yr):  blacement:  Coal:  Fuel Oil:  atural Gas:	Elec Coop Inc; East Comental Benefit  Po  Electricity Gen  CO2 (tons/yr)  26,046  21,378  14,375  E. CONTACT INFO	2.15 Central Okla E PS OF UTIL Intential eration Proje SO2 (to	6,132 128,766 ect ens/yr) 165 138 0	Direct Use CO2 (tons/yr) 18,465 15,155 10,191	33 16 Coop Inc; Oklaho Trent 0 0 0 e Project SO2 (tons/yr) 168 88
Estimated Potent Current Capacity Planned Capacit Utilities in County:  Methane Reduction (I CO2 Equivalent of Co Emissions Avoided by	y: y: tons/yr): H4 Reduction (ton	Cookson Hills D. ENVIRO  as/yr): clacement: Coal: Fuel Oil: atural Gas:	Elec Coop Inc; East Comental Benefit  Po  Electricity Gen  CO2 (tons/yr)  26,046  21,378  14,375  E. CONTACT INFO	2.15 Central Okla F CS OF UTIL Intential eration Proje SO2 (to	6,132 128,766 ect ens/yr) 165 138 0	Direct Use CO2 (tons/yr) 18,465 15,155 10,191  Landfill Operator	33 16 Coop Inc; Oklaho Trent 0 0 0 e Project SO2 (tons/yr) 168 88
Estimated Potent Current Capacity Planned Capacit Utilities in County:  Methane Reduction (I CO2 Equivalent of Co Emissions Avoided by	y: y: tons/yr): H4 Reduction (ton y Fossil Fuel Disp  No	Cookson Hills D. ENVIR  ns/yr): clacement: Coal: Fuel Oil: atural Gas: Landfill O	Elec Coop Inc; East Comental Benefit  Po  Electricity Gen  CO2 (tons/yr)  26,046  21,378  14,375  E. CONTACT INFO	2.15 Central Okla E CS OF UTIL Intential  eration Proje SO2 (to	6,132 128,766 ect ons/yr) 165 138 0	Direct Use CO2 (tons/yr) 18,465 15,155 10,191 Landfill Operator	33 16 Coop Inc; Oklaho Trent 0 0 0 e Project SO2 (tons/yr) 168 88
Estimated Poten Current Capacity Planned Capacit Utilities in County:  Methane Reduction (I CO2 Equivalent of Ci Emissions Avoided by	y: y: tons/yr): H4 Reduction (ton y Fossil Fuel Disp	Cookson Hills D. ENVIR  ns/yr): clacement: Coal: Fuel Oil: atural Gas: Landfill O	Elec Coop Inc; East Comental Benefit  Po  Electricity Gen  CO2 (tons/yr)  26,046  21,378  14,375  E. CONTACT INFO	2.15 Central Okla E CS OF UTIL Intential  eration Proje SO2 (to	6,132 128,766 ect ens/yr) 165 138 0	Direct Use CO2 (tons/yr) 18,465 15,155 10,191 Landfill Operator	33 16 Coop Inc; Oklaho Trent 0 0 0 e Project SO2 (tons/yr) 168 88
Estimated Poten Current Capacity Planned Capacit Utilities in County:  Methane Reduction (I CO2 Equivalent of Ci Emissions Avoided by  Contact Name: Mailing Address:	y: y: tons/yr): H4 Reduction (ton y Fossil Fuel Disp  Na  Mark Daniels 2801 South 54th	Cookson Hills D. ENVIR  ns/yr): clacement: Coal: Fuel Oil: atural Gas: Landfill O	Elec Coop Inc; East Comental Benefit  Po  Electricity Gen  CO2 (tons/yr)  26,046  21,378  14,375  E. CONTACT INFO	2.15 Central Okla E CS OF UTIL Intential  eration Proje SO2 (to	6,132 128,766 2ct 2000 165 138 0 2000 1000 1000 1000 1000 1000 1000 1	Direct Use CO2 (tons/yr) 18,465 15,155 10,191 Landfill Operator	33 16 Coop Inc; Oklaho Trent 0 0 0 e Project SO2 (tons/yr) 168 88
Estimated Poten Current Capacity Planned Capacit Utilities in County:  Methane Reduction (I CO2 Equivalent of Ci Emissions Avoided by	y: y: tons/yr): H4 Reduction (ton y Fossil Fuel Disp  No	Cookson Hills D. ENVIR  ns/yr): clacement: Coal: Fuel Oil: atural Gas: Landfill O	Elec Coop Inc; East Comental Benefit  Po  Electricity Gen  CO2 (tons/yr)  26,046  21,378  14,375  E. CONTACT INFO	2.15 Central Okla E CS OF UTIL Intential  eration Proje SO2 (to	6,132 128,766 ect ons/yr) 165 138 0	Direct Use CO2 (tons/yr) 18,465 15,155 10,191 Landfill Operator	33 16 Coop Inc; Oklaho Trent 0 0 0 e Project SO2 (tons/yr) 168 88
Estimated Poten Current Capacity Planned Capacit Utilities in County:  Methane Reduction (a CO2 Equivalent of Co Emissions Avoided by Contact Name: Mailing Address:	y: y: tons/yr): H4 Reduction (ton y Fossil Fuel Disp  Na  Mark Daniels 2801 South 54th	Cookson Hills D. ENVIR  ns/yr): clacement: Coal: Fuel Oil: atural Gas: Landfill O	Elec Coop Inc; East Comental Benefit  Po  Electricity Gen  CO2 (tons/yr)  26,046  21,378  14,375  E. CONTACT INFO	2.15 Central Okla E ES OF UTIL Intential  eration Proje SO2 (to	6,132 128,766 2ct 2000 165 138 0 2000 1000 1000 1000 1000 1000 1000 1	Direct Use CO2 (tons/yr) 18,465 15,155 10,191 Landfill Operator	33 16 Coop Inc; Oklaho Trent 0 0 0 e Project SO2 (tons/yr) 168 88
Estimated Poten Current Capacity Planned Capacit Utilities in County:  Methane Reduction (I CO2 Equivalent of Ci Emissions Avoided by Contact Name: Mailing Address:	y: y: y: tons/yr): H4 Reduction (ton y Fossil Fuel Disp  Na  Mark Daniels 2801 South 54th 918-682-7284	Cookson Hills D. ENVIR  as/yr):  Coal: Fuel Oil: atural Gas:  Landfill O	Electricity Gen CO2 (tons/yr) 26,046 21,378 14,375 E. CONTACT INFO wner	2.15 Central Okla E ES OF UTIL Intential  eration Proje SO2 (to	6,132 128,766 128,766 10s/yr) 165 138 0 1000 DeBose South 54th S	Direct Use CO2 (tons/yr) 18,465 15,155 10,191 Landfill Operator	33 16 Coop Inc; Oklaho Trent 0 0 0 e Project SO2 (tons/yr) 168 88

		A CE	NW Oklanoma		TION	Lanajili Cal	egory: Candidate
				- <u>-</u>			
Landfill Owner:		est Oklahoma So	lid Waste Authority		eptance Rate (t		39,305
Landfill Owner Type					Acceptance R	ate Reported:	1989
Alternative Landfill	Name:			Design Capa	-		
City:					ntly Landfilled	(acres):	
County:	Woodw	vard		Average Dep			
State:	OK			Waste-in-Pla	•		982,633
Year Open:	1972			1998 Waste-	in-Place (tons)	):	1,061,235
Year Closed:	2004		T AND DITT CAG	OOL L ECONO	87		
	<u> </u>		LANDFILL GAS	···	N		
Estimated Methane C	-	f/d):		0.69			
LFG Collection Syste							
Current LFG Collecte							•
Collection and Treatr				No			
	8,0	C	. LANDFILL GAS	UTILIZATIO	)N		
Current Utilization:							
Utilization Syste	em Status:	Unknown					
Utilization Syste	em Type:	Unknown					
Utilization Syste	em Start Year:						
Electric Utility I	Provider(s):						
Natural Gas Pro	vider(s):						
Energy Purchase	er(s):						
Capacity:		Electricity	Generation Project	(MW)	OR ·	Direct Use Project (mr	nBtu/hr)
Estimated Poten	tial Canacity:		-	. 2			22
Current Capacity		•					
Planned Capacit							
Utilities in County:			-	-	<u>-</u>	rthwestern Electric Coc	p Inc; Oklahom
		D. ENVIR	OMENTAL BENEI	TIS OF UIL	LIZATION		
			i	Potential		. Curr	ent
Methane Reduction (	-			·	3,986		0
CO2 Equivalent of C	H4 Reduction (to	ns/yr):			83,706		0
Emissions Avoided by	Fossil Fuel Disa	placement:	Flactricity G	eneration Proj	act	Direct Use	Project
Emissions Avoided by	y rossii ruei Disp	насетені.	CO2 (tons/yr)	-	ons/yr)	CO2 (tons/vr)	SO2 (tons/yr)
							•
		Coal:	17,364	}	110	12,003	109
		Fuel Oil:	14,252	!	92	9,852	57
	N	latural Gas:	9,583		0	6,624	0
- And Angelow Commence			E. CONTACT INF		1	·	·····
		Landfill O		URIVIATION	· · · · · · · · · · · · · · · · · · ·	Landfill Operator	<u></u>
Contact Name:	D. I. T. Salan	- Landini O			1.00 1.1.4	- Dandini Operator	
Contact Name.	Ralph Triplett				oh Triplett		
Mailing Address:	P.O. Box 427			P.O	. Box 427		
Phone Number:	405-256-8097			405	-256-8097		
Fax Number:	1						
* Itallicized indicates	values estimated	by EPA.	i	December 5, 1	998	State: OK	Page: 8

		A. G	New Cast ENERAL LANDFIL		ION		fill Category: Cu	ırrent
Landfill Owner:	A 11. A	erican Waste/A		Annual Accep		(tops):	360,	110
Landfill Owner Type:	Private	crican wasterA	med waste	•		Rate Reported:		995
Alternative Landfill Nam		le I F IISA W	aste Management LF	Design Capac	-	Kate Reported.	1:	773
City:	Newcasi		aste ivianagement Li	Acres Current	• •	d (acres):		
County:	McClair			Average Dept	•	d (deres).		
State:	OK			Waste-in-Plac			3,739,6	670
Year Open:	1986			1998 Waste-ir	` '	6).	4,419,6	
Year Closed:	2004			1770 Wasie W	r ruce (1011		1,112,	007
			B. LANDFILL GAS	COLLECTION	I.			- 1 × 1
Estimated Methane Gene	ration (mmscf	/d):		1.55				
LFG Collection System S	•							
Current LFG Collected (1								
Collection and Treatmen	•	ired Under NSI	PS/EG:	No				
			C. LANDFILL GAS	UTILIZATION	٧	A 400 P. C.		
Current Utilization:								
Utilization System S	Status:	Operational						
Utilization System 7	Гуре:	Direct Ther	nal					
Utilization System S								
Electric Utility Prov	ider(s):							
Natural Gas Provide								
Energy Purchaser(s)	:							
Capacity:		Flectrici	ty Generation Project	(MW)	OR	Direct Use Proje	ect (mmRtu/hr)	
	Ci			5			4	•
Estimated Potential Current Capacity:	Capacity:			4.0			3	-
Planned Capacity:				4.0			3	1
riainied Capacity.								
Utilities in County:		Oklahoma E	Electric Coop Inc; Okla	homa Gas & El	ectric Co; P	eoples Electric Co	op Inc; Purcell Public	С
		D. ENVII	ROMENTAL BENEF	ITS OF UTIL	IZATION			
				Potential			Current	
Methane Reduction (tons	/yr):				8,952			0
memme Reduction (tons			•		187,998			0
	Reduction (ton	s/yr):			,	1		•
CO2 Equivalent of CH4			El-minio C			Div	H During	_
CO2 Equivalent of CH4			· ·	eneration Proje	ct		ct Use Project	
CO2 Equivalent of CH4		lacement:	CO2 (tons/yr)	eneration Proje SO2 (to	ct ns/yr)	CO2 (tons/y	yr) SO2 (tons	r/yr)
CO2 Equivalent of CH4			· ·	eneration Proje SO2 (to	ct		yr) SO2 (tons	
		lacement:	CO2 (tons/yr)	eneration Proje SO2 (to	ct ns/yr)	CO2 (tons/y	959 SO2 (tons)	r/yr)
CO2 Equivalent of CH4	essil Fuel Disp	lacement:  Coal:	CO2 (tons/yr) 37,885	eneration Proje SO2 (to	ct ns/yr) 240	CO2 (tons/y	yr) SO2 (tons) 959	/yr) 245
CO2 Equivalent of CH4 I	essil Fuel Dispo	Coal: Fuel Oil: atural Gas:	CO2 (tons/yr) 37,885 31,095	eneration Proje SO2 (to	ct ns/yr) 240 200	CO2 (tons/y 26,9 22,1 14,8	yr) SO2 (tons) 959	/yr) 245 129
CO2 Equivalent of CH4 i	essil Fuel Dispo	Coal: Fuel Oil: atural Gas:	CO2 (tons/yr) 37,885 31,095 20,908 E. CONTACT INF	eneration Proje SO2 (to	ct ns/yr) 240 200	CO2 (tons/y 26,9 22,1 14,8	yr) SO2 (tons) 959 126 878	/yr) 245 129
CO2 Equivalent of CH4 Emissions Avoided by Fo	essil Fuel Dispo	lacement:  Coal:  Fuel Oil: atural Gas:	CO2 (tons/yr) 37,885 31,095 20,908 E. CONTACT INF	eneration Proje SO2 (to ORMATION	ct ns/yr) 240 200	CO2 (tons/y 26,9 22,1 14,8	yr) SO2 (tons) 959 126 878	/yr) 245 129
CO2 Equivalent of CH4  Emissions Avoided by Fo	ossil Fuel Dispo	lacement:  Coal:  Fuel Oil:  atural Gas:	CO2 (tons/yr) 37,885 31,095 20,908 E. CONTACT INF	eneration Proje SO2 (to ORMATION Mart	ct ns/yr) 240 200 0	CO2 (tons/y 26,9 22,1 14,8 Landfill Opera	yr) SO2 (tons) 959 126 878	Ayr) 245 129
CO2 Equivalent of CH4  Emissions Avoided by Fo  Contact Name:  Mailing Address:  7	Na Dean Matts	lacement:  Coal:  Fuel Oil:  atural Gas:	CO2 (tons/yr) 37,885 31,095 20,908 E. CONTACT INF	eneration Proje SO2 (to ORMATION Mart	ct ns/yr) 240 200 0	CO2 (tons/y 26,9 22,1 14,8 Landfill Opera	yr) SO2 (tons) 959 126 878	/yr) 245 129
CO2 Equivalent of CH4  Emissions Avoided by Form  Contact Name:  Mailing Address: 7	Na Dean Matts 540 SW 59th	lacement:  Coal:  Fuel Oil:  atural Gas:	CO2 (tons/yr) 37,885 31,095 20,908 E. CONTACT INF	eneration Proje SO2 (to ORMATION Mart	ct ns/yr) 240 200 0 v Poage North Portl	CO2 (tons/y 26,9 22,1 14,8 Landfill Opera	yr) SO2 (tons) 959 126 878	/yr) 245 129

		A. GENERAL	Oklahoma I		PION		Landfill Cat	egory: Candidate
Landfill Owner:	Allied Waste (old			Annual Acce		(tops):		676,284
Landfill Owner Type:	Private	LWS)		rinual Acce rear Annual	•		orted:	1995
Alternative Landfill Name:		Private			city (tons):	ortea.	1993	
City:	Oklahoma City			Acres Curren	-	ed (acres):		
County:	Oklahoma				=	cu (acies).		
State:	OKIAIIOIIIA				Average Depth (feet):			
Year Open:	1981				Waste-in-Place (tons):			10,401,150 11,701,296
Year Closed:	2022				<i>is)</i> .		11,701,290	
Teal Closed.	2022	B, LANDE	TLL GAS CO	LLECTIO!	<u> </u>			
Estimated Methane Genera	ution (mmscf/d):			3.41				
LFG Collection System Sta	•			J				
Current LFG Collected (mr								
Collection and Treatment S	•	r NSPS/FG		No				
Concetion and Treatment S	ystem Required Onde	C. LANDI	FILL GAS UT		N.			7 3
Current Utilization:	<u> </u>			<del></del>				
Utilization System Sta	itus: Planne	d						
Utilization System Ty		Thermal						
Utilization System Sta	=	Tiletillai						
Electric Utility Provid								
Natural Gas Provider(								
· ·	-	Oliver CM		A 1 1				
Energy Purchaser(s):	Conde	a/Vista, GM, and	Jor Campbell	Aspnai				
Capacity:	Ele	ctricity Generat	ion Project (M	W)	OR	Direct U	Jse Project (mm	nBtu/hr)
Estimated Potential C	anacity:			11				107
Current Capacity:	apacity.	•		• • •				107
Planned Capacity:								
Trainied Capacity.								
Utilities in County:	Canadi	an Valley Elec	Coop Inc; Cent	ral Rural Ele	ectric Coop;	; Cimarron	Electric Coope	rative; Edmon
	D. E	NVIROMENT	AL BENEFIT	S OF UTIL	IZATION			
			Pot	ential			Curre	ent
Methane Reduction (tons/y	r):				19,720			0
CO2 Equivalent of CH4 Re	duction (tons/yr):				414,128			0
	7F 15 1		" · · · · · · · · · · · · · · · · · · ·				D:	n · .
Emissions Avoided by Fossil Fuel Displacement:			Electricity Generation Project				Direct Use	-
		CC	02 (tons/yr)	SO2 (to	ons/yr)	CO	02 (tons/yr)	SO2 (tons/yr)
	Coal	<b>:</b>	84,453		534		59,385	540
	Fuel Oil	<b>:</b>	69,315		446		48,741	284
	Natural Gas	:	46,608		0		32,774	0
	100 March 100 Ma	E. CON	TACT INFO	RMATION	• \$			
	Lar	dfill Owner				Landf	ill Operator	
Contact Name: Dat	nny Muck, Landfill M	anager		Dani	ny Muck			
	·							
Mailing Address: 760	00 SW 15th Street			7600	SW 15th S	treet		
Phone Number: 40s	745 414				<b>-</b> 4-4			
1 none rumber. 405	5-745-4141			· 405-	745-4141			
Fax Number:				İ				
* Itallicized indicates value	s estimated by FPA	·····	Dec	cember 5, 19	98		State: OK	Page: 10
k	2		1000					

Pottawatomie County LF Landfill Category: Candidate A. GENERAL LANDFILL INFORMATION Landfill Owner: BFI Annual Acceptance Rate (tons): 118,136 1995 Landfill Owner Type: Private Year Annual Acceptance Rate Reported: Design Capacity (tons): Alternative Landfill Name: Canadian Valley LF City: Shawnee Acres Currently Landfilled (acres): County: Pottawatomie Average Depth (feet): State: OK 1,526,225 Waste-in-Place (tons): 1,761,030 1984 Year Open: 1998 Waste-in-Place (tons): Year Closed: 2009 B. LANDFILL GAS COLLECTION Estimated Methane Generation (mmscf/d): 0.87 LFG Collection System Status: Current LFG Collected (mmscf/d): Collection and Treatment System Required Under NSPS/EG: No C. LANDFILL GAS UTILIZATION Current Utilization: **Utilization System Status:** Unknown Utilization System Type: Unknown Utilization System Start Year: Electric Utility Provider(s): Natural Gas Provider(s): Energy Purchaser(s): Capacity: Electricity Generation Project (MW) OR Direct Use Project (mmBtu/hr) 3 Estimated Potential Capacity: 27 Current Capacity: 13 Planned Capacity: 1.69 Canadian Valley Elec Coop Inc; Oklahoma Electric Coop Inc; Oklahoma Gas & Electric Co; Southwe Utilities in County: D. ENVIROMENTAL BENEFITS OF UTILIZATION Current Potential Methane Reduction (tons/vr): 5,021 0 0 CO2 Equivalent of CH4 Reduction (tons/yr): 105,437 Electricity Generation Project Direct Use Project Emissions Avoided by Fossil Fuel Displacement: CO2 (tons/yr) SO2 (tons/yr) SO2 (tons/yr) CO2 (tons/yr) Coal: 21,311 135 15,120 138 Fuel Oil: 17,491 113 12,409 72 Natural Gas: 11,761 0 8,344 0 E. CONTACT INFORMATION 1.4 1 Landfill Operator Landfill Owner Contact Name: Dennis Johnson Dennis Johnston P.O. Box 30596 P.O. Box 30596 Mailing Address: Phone Number: 406-834-2244 406-834-2244 Fax Number: 405-275-5369 December 5, 1998 State: OK 11 \* Itallicized indicates values estimated by EPA. Page: STAR Version 1.0 / LMOP

		Quarry I			Landfill Category	Candidate		
<u></u>	<i>I</i>	A. GENERAL LANDFILL	INFORMAT	ION				
Landfill Owner:	Waste Managemen	t, Inc.	Annual Accept	ance Rate (tons):		590,010		
Landfill Owner Type:	Public		Year Annual A	cceptance Rate R	eported:	1994		
Alternative Landfill Name:			Design Capaci	ty (tons):				
City:	Tulsa		Acres Currentl	y Landfilled (acre	s):			
County:	Tulsa		Average Depth					
State:	OK		Waste-in-Place	e (tons):		4,354,126		
Year Open:	1989		1998 Waste-in	-Place (tons):		5,442,657		
Year Closed:			·,·····					
<u> </u>	· · · · · · · · · · · · · · · · · · ·	B. LANDFILL GAS C	OLLECTION					
Estimated Methane Generati	on (mmscf/d):		1.81					
LFG Collection System Statu	IS:		Planned					
Current LFG Collected (mms	scf/d):							
Collection and Treatment Sy	stem Required Under	NSPS/EG:	No					
		C. LANDFILL GAS U	TILIZATION			10/2		
Current Utilization:								
Utilization System Statu	ıs: Planned							
Utilization System Type		'n						
Utilization System Start								
Electric Utility Provider								
Natural Gas Provider(s)								
Energy Purchaser(s):								
_ : 23								
Capacity:	Elec	tricity Generation Project (M	MW) C	OR Direc	ct Use Project (mmBtu/h	nr)		
Estimated Potential Cap	pacity:		6			57		
Current Capacity:								
Planned Capacity:								
Utilities in County:	Collins	ille Electric Dept; East Cen	tral Okla El Co	op Inc; Indian Ele	ctric Coop Inc; Oklahon	na Gas &		
	D. EN	IVIROMENTAL BENEFI	TS OF UTILI	ZATION	\$17.6			
		P	otential		Current			
Methane Reduction (tons/yr).	:			10,465		0		
CO2 Equivalent of CH4 Reduction (tons/yr):			2	219,769		0		
Emissions Avoided by Fossil Fuel Displacement:		1	Electricity Generation Project			Direct Use Project		
		CO2 (tons/yr)	SO2 (tor	ıs/yr)	CO2 (tons/yr) Se	O2 (tons/yr)		
	Coal:	44,989		284	31,515	287		
	Fuel Oil:	36,925		238	25,866	151		
	Natural Gas:	24,829		0	17,392	0		
		1	SPACE AND CONT			<u> </u>		
		E. CONTACT INFO	JKWATION	<u>*                                    </u>	ndfill Operator	- Pist		
	Lanc	inii Owner		La				
Contact Name: Aime	ee Toole		Aime	e Toole				
Mailing Address: 4041	North 141st East Ave	enue	4041	North 141st East A	Avenue			
			• !					
Phone Number: 918-4	437-7773		918-4	37-7773				
Fax Number:	-		: 220	-				
* Itallicized indicates values	estimated by EPA.	D	ecember 5, 199	8	State: OK Page	e: 12		

			Southern OK Region	•		Landfill (	Category: Candidate
		A. G	ENERAL LANDFIL	LINFORMAT	ION		<u> </u>
Landfill Owner:	Southe	rn Oklahoma Re	gional Disposal, Inc.	Annual Accep	tance Rate	(tons):	100,100
Landfill Owner Type		1					
Alternative Landfill	Name: Ardmo	re SLF		Design Capaci	-		
City:	_			Acres Current	-	d (acres):	
County:	Carter	•		Average Dept			1,195,397
State:	OK		Waste-in-Place (tons):				
Year Open:	1979			1998 Waste-in	-Place (ton	s):	1,328,220
Year Closed:	2002		D I AMBELLI CASA	OLIFOTION			77:6
<u> </u>	* <b>*</b> * * · ·		B. LANDFILL GAS			<u> </u>	
Estimated Methane		:f/d):		0.76			
LFG Collection Syst							
Current LFG Collect							
Collection and Treat	ment System Req			No	Ŧ		
			C. LANDFILL GAS	UTILIZATION	1		
Current Utilization:							
Utilization Syst		Unknown					
Utilization Syst		Unknown					
Utilization Syst							
Electric Utility							
Natural Gas Pro	7 ,						
Energy Purchas	er(s):						
Capacity:		Electrici	ity Generation Project (	(MW)	OR	Direct Use Project (	mmBtu/hr)
Estimated Poter	ntial Capacity:			2			24
Current Capacit	•			_			
Planned Capaci	-			1.02			8
	<u> </u>						
Utilities in County:		Cotton Elec	tric Coop Inc; Oklahon	na Gas & Electr	ic Co; Peop	les Electric Coop Inc;	Red River Valley
		D. ENVII	ROMENTAL BENEF	TTS OF UTIL	ZATION		Sec. 12
			1	Potential		Cı	ırrent
Methane Reduction (	tons/yr):				4,381		0
CO2 Equivalent of C	H4 Reduction (to	ns/yr):			91,997		0
	E .: E .: D:		FI			D:	
Emissions Avoided b	y Fossil Fuel Dis	placement:	1	eneration Projec		1	se Project
			CO2 (tons/yr)	SO2 (to	ns/yr)	CO2 (tons/yr)	SO2 (tons/yr)
		Coal:	18,943		120	13,192	120
		Fuel Oil:	15,547		100	10,828	63
	۸	latural Gas:	10,454		0	7,281	0
			ł		-	. ,	······································
F. F. J. Y.	Å.	Landfill	E. CONTACT INF	ORMALION	<u></u>	Landfill Operator	· · · · · · · · · · · · · · · · · · ·
Contact No.		Lanuill		· · · · · · · · · · · · · · · · · · ·		Candini Operator	
Contact Name:	Troy Duke			Troy	Duke		
Mailing Address:	P.O. Box 1088	3	P.O. Box 1088				
	2405 Cedar Ro	oad		2405	Cedar Road	I	
Phone Number:	405-226-1276			405-2	26-1276		
Fax Number:	t t						
T da INUIIIDEL				*·			
* Itallicized indicates	values estimated	by EPA.	Γ	December 5, 199	8	State: OK	Page: 13
STAR Vo	rsion 1.0 / I.MOP						