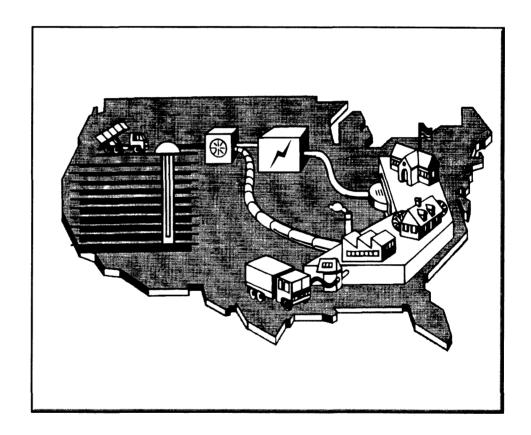


# **EPA** Landfill Gas-to-Energy Project **Opportunities**

## **Landfill Profiles for the State of Virginia**





## **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.



Current projects illustrate the wide range of successful project development options.

**Exhibit 1: Virginia MSW Landfill Summary** 

Category	No. of	Est. Capacity Potential		Est. CH4	Methane Re		CO2 Equivalent of CH4		
	Landfills	Electricity (MW)	Gas Capacity (mmBtu/hr)	Generation (mmscf/d)	(tons/yr)		Reduction (tons/yr)		
				-	Potential	Current	Potential	Current	
Current	9	69	688	22	127,272	44,865	2,672,702	942,167	
Candidate	17	57	570	18	105,463	5,782	2,214,729	121,414	
Shutdown	2	3	26	1	4,789	5,011	100,559	105,227	
Other	6	2	24	1	4,388	0	92,148	0	
Unknown WIP	6								
Total	40	131	1,308	42	241,911	55,658	5,080,137	1,168,808	

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

Category		Electricity Generation Project						Direct Use Project					
	CC	CO2 (tons/yr)		SO2 (tons/yr)		CO2 (tons/yr)			SO2 (tons/yr)		yr)		
	Coal	Oil	Natural Gas	Coal	Oil	Natural Gas	Coal	Oil	Natural Gas	Coal	Oil	Natural Gas	
Current	543,811	446,336	300,122	3,437	2,873	0	383,261	314,563	211,516	3,487	1,833	2	
Candidate	449,098	368,599	247,851	2,839	2,372	0	317,588	260,662	175,273	2,890	1,519	2	
Shutdown	20,521	16,843	11,325	130	108	0	14,420	11,835	7,958	131	69	0	
Other	18,153	14,899	10,019	115	96	0	13,214	10,846	7,293	120	63	0	
Unknown WIP							-						
Total	1,031,584	846,677	569,318	6,520	5,450	0	728,483	597,906	402,040	6,629	3,484	4	

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

Category	Landfill Name		WIP		Landfill	LFG Collected		Status of LFGTE
		<2.5 million tons	2.5 to 4 million tons	>4 million tons	Operating in 1998		Utilization Project	Project
Current	1-95 Lorton LF						<b>✓</b>	Operational
Current	1-95 Lorton LF			<b>V</b>			~	Operational
Current	1-95 Lorton LF			~		<b>V</b>		Operational
Current	Big Bethel LF				✓			Construction
Current	Big Bethel LF				✓		~	Operational
Current	Independent Hill LF Prince William				<b>✓</b>			Construction
Current	Old Dominion Landfill					<b>V</b>	<b>✓</b>	Operational
Current	SPSA Regional LF			~	<b>✓</b>		~	Operational
Current	SPSA Regional LF			V	<b>V</b>	<u> </u>	<b>V</b>	Operational
Candidate	Albemarle Ivy SF		✓		<b>✓</b>			Potential
Candidate	Atlantic Waste Disposal SLF							Potential
Candidate	Charles City County SLF			V	<b>✓</b>			Planned
Candidate	Danville City SLF		✓		<b>✓</b>			Potential
Candidate	Frederick County Winchester SLF		✓		<b>y</b>			Potential
Candidate	Greene County							Planned
Candidate	Loudoun County LF	<b>V</b>			<b>V</b>	Ш		Unknown
Candidate	Lynchburg City LF	<b>V</b>						Planned
Candidate	Maplewood Recycling and Waste Dispo			<b>Y</b>	~			Planned
Candidate	Martinsville City LF	<b>V</b>			~			Potential
Candidate	Newport News LF	<b>V</b>						Unknown
Candidate	Newport News Solid Waste Disposal F	<b>V</b>						Planned
Candidate	Nuckols Road LF		~			<b>V</b>		Planned
Candidate	Petersburg City LF	<b>V</b>			✓			Unknown
Candidate	Shoosmith Richmond Area LF		~	U	✓			Planned
Candidate	Smith Gap Regional Landfill			V				Potential
Candidate	Virginia Beach LF #2 Mount Trashmore			V	<b>V</b>	<b>Y</b>		Planned
Shutdown	Carver Heights Landfill Gas Project	V				<u> </u>		Shutdown
Shutdown	Dinwiddie County Landfill Gas Project	<b>V</b>				<b>V</b>		Shutdown
Other	Bedford City Hylton Site	<b>V</b>			~			Unknown
Other	Bedford County SLF	V			<b>V</b>			Unknown
Other	Chesterfield County Northern Area LF	<b>✓</b>	Ш		<b>V</b>			Unknown
Other	Franklin County SLF	V			✓			Unknown
Other	Orange County LF	<b>V</b>			V			Unknown
Other	Stafford County LF	<b>V</b>			<b>Y</b>			Unknown
Unknown WIP	Amelia County SLF	Ш	Ш		<b>V</b>			Unknown
Unknown WIP	Frederick County SLF				<b>V</b>			Unknown
Unknown WIP	Lynchburg City SLF				<b>V</b>			Unknown
Unknown WIP	Madison District LF				<b>V</b>			Unknown
Unknown WIP	Rutrough Road Landfill			†				Unknown

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

Category	Landfill Name	WIP			Landfill	LFG Collected		Status of LFGTE
		<2.5 million tons	2.5 to 4 million tons	>4 million tons	Operating in 1998		Utilization Project	Project
Unknown WIP	Woods Road SLF				>			Unknown

VA - 4

	<del> </del>		1-95 Lorton	LF		Landfill Cate	gory: Current
		A. (	GENERAL LANDFILL	INFORMAT	ION		
Landfill Owner:				Annual Accep	tance Rate	(tons):	286,000
Landfill Owner Type:	Public		,	Year Annual A	Acceptance	Rate Reported:	
Alternative Landfill Nam	ne: 195 Re	source Recove	ry LF	Design Capac	ty (tons):		
City:	Fairfax			Acres Current	ly Landfille	d (acres):	300
County:	Fairfax			Average Dept	n (feet):		100
State:	VA		,	Waste-in-Plac	e (tons):	·	
Year Open:	1973			1998 Waste-in	-Place (ton	s):	29,034,133
Year Closed:	1995				-		
			B. LANDFILL GAS CO				
Estimated Methane Gene		:f/d):		7.84			
LFG Collection System S			O <sub>I</sub>	perational			
Current LFG Collected (				3.3			
Collection and Treatmen	t System Req	uired Under NS		No	•		
			C. LANDFILL GAS U	HEIZAHON	1		
Current Utilization:	_						
Utilization System S		Operationa					
Utilization System 7		Reciprocat	ing Engine				
Utilization System S		1991					
Electric Utility Prov							
Natural Gas Provide	` '						
Energy Purchaser(s)	):	Virginia El	lectric & Power Co				
Capacity:		Electric	city Generation Project (M	1W) (	)R	Direct Use Project (mml	Btu/hr)
Estimated Potential	Capacity:			25			245
Current Capacity:				3.2			69
Planned Capacity:							
Heilitias in Country		Northam V	Vincinia Flan Coon, South	D	A d: 3/:-	rainia Elagaia & Danna Ca	
Utilities in County:			IROMENTAL BENEFI			rginia Electric & Power Co	)
		D. EINY	T		ZATION		
Methane Reduction (tons.	A).		FO	tential	15 252	Currer	12,720
	•	<b>4</b> ).			45,352		
CO2 Equivalent of CH4	Keauction (to	ns/yr): 		·	952,394		267,110
Emissions Avoided by Fo	ssil Fuel Dis	placement:	Electricity Gen	eration Projec	:t	Direct Use P	roject
,	•		CO2 (tons/yr)	SO2 (to		CO2 (tons/yr)	SO2 (tons/yr)
		Coal:	193,373		1,222	136,572	1,243
		Fuel Oil:	158,712		1,022	112,092	653
	A	latural Gas:	106,720				033
		aturat Gas.	_i		0	75,372	1
		Landfil	E. CONTACT INFO	RMATION	*	Landfill Operator	Z de la companya de l
Contact Name: E	arl Delauder					- Danier Operator	
! -				•		<u> </u>	
Mailing Address: 9	850 Furnace I	Road		12000 Suite		ent Center Pkwy	
Phone Number: 7	02 600 1702						
i none rannoci.	03-690-1703			703-6	90-1525		
Fax Number:							
* Itallicized indicates vali	ues estimated	by EPA.	De	cember 5, 199	8	State: VA	Page: 1
		·	DC		~	State. VA	- 460.
STAR Version	11.07 LMOP						

·		1-95 Lorton		Landfill Ca	tegory: Curren
	A. (	GENERAL LANDFILL	INFORMATION		
Landfill Owner:		A	Annual Acceptance Rat	e (tons):	286,000
Landfill Owner Type:	Public	Y	Year Annual Acceptanc	ce Rate Reported:	1998
Alternative Landfill Name:	I 95 Resource Recover	ry LF [	Design Capacity (tons):		
City:	Fairfax	A	Acres Currently Landfil	lled (acres):	300
County:	Fairfax		Average Depth (feet):		100
State:	VA		1998 Waste-in-Place (t	ons):	18,072,000
Year Open:	1973	1	998 Waste-in-Place (to	ons):	18,072,000
Year Closed:	1995		·		
		B. LANDFILL GAS CO	DLLECTION ,		
Estimated Methane Generat	tion (mmscf/d):		5.04		
LFG Collection System Stat	•				
Current LFG Collected (mm			1.44		
Collection and Treatment Sy	· ·	SPS/EG:	No		
	,	C. LANDFILL GAS UI	TILIZATION		
Current Utilization:					
	Omanationa	1			
Utilization System Stat	-				
Utilization System Typ Utilization System Star		illai			
*					
Electric Utility Provide					
Natural Gas Provider(s)		anti- 0 Danie Ca			
Energy Purchaser(s):	virginia El	ectric & Power Co			
Capacity:	Electric	city Generation Project (M	W) OR	Direct Use Project (m	mBtu/hr)
Estimated Potential Ca	pacity:		16		158
Estimated Potential Carrent Capacity:	pacity:		16		158 30
	pacity:		16		
Current Capacity:		Griginia Elec Coop; Southe		Virginia Electric & Power	30
Current Capacity: Planned Capacity:	. Northern V	irginia Elec Coop; Southe	astern Power Admin; V		30
Current Capacity: Planned Capacity:	. Northern V	ROMENTAL BENEFIT	astern Power Admin; V	<b>V</b>	30 Co
Current Capacity: Planned Capacity: Utilities in County:	Northern V	ROMENTAL BENEFIT	astern Power Admin; VES OF UTILIZATION	<b>V</b>	Co rrent
Current Capacity: Planned Capacity: Utilities in County:  Methane Reduction (tons/yr,	Northern V  D. ENVI	ROMENTAL BENEFIT	astern Power Admin; Vers OF UTILIZATION tential 29,141	<b>V</b>	30 Co rent 5,550
Current Capacity: Planned Capacity: Utilities in County:	Northern V  D. ENVI	ROMENTAL BENEFIT	astern Power Admin; VES OF UTILIZATION	<b>V</b>	Co rrent
Current Capacity: Planned Capacity: Utilities in County:  Methane Reduction (tons/yr, CO2 Equivalent of CH4 Red	Northern V  D. ENVI  ): duction (tons/yr):	ROMENTAL BENEFIT	astern Power Admin; Vers OF UTILIZATION tential  29,141 611,969	<b>V</b>	30 Co rent 5,550 116,556
Current Capacity: Planned Capacity: Utilities in County:  Methane Reduction (tons/yr, CO2 Equivalent of CH4 Red	Northern V  D. ENVI  ): duction (tons/yr):	ROMENTAL BENEFIT	astern Power Admin; Vers OF UTILIZATION tential  29,141 611,969	Cur	30 Co rent 5,550 116,556
Current Capacity: Planned Capacity: Utilities in County:  Methane Reduction (tons/yr, CO2 Equivalent of CH4 Red	Northern V  D. ENVI  ): duction (tons/yr): I Fuel Displacement:	ROMENTAL BENEFIT  Pol  Electricity Gene  CO2 (tons/yr)	eastern Power Admin; VES OF UTILIZATION tential 29,141 611,969 teration Project SO2 (tons/yr)	Direct Use  CO2 (tons/yr)	30  Co  rent 5,550 116,556 e Project SO2 (tons/yr)
Current Capacity: Planned Capacity: Utilities in County:  Methane Reduction (tons/yr, CO2 Equivalent of CH4 Red	Northern V  D. ENVI  ): duction (tons/yr): I Fuel Displacement:  Coal:	Electricity Gene CO2 (tons/yr)	rastern Power Admin; Vers OF UTILIZATION tential 29,141 611,969 eration Project SO2 (tons/yr) 788	Direct Use CO2 (tons/yr) 87,755	30  Co  rent 5,550 116,556 e Project SO2 (tons/yr) 799
Current Capacity: Planned Capacity: Utilities in County:  Methane Reduction (tons/yr, CO2 Equivalent of CH4 Red	Northern V  D. ENVI  ): duction (tons/yr): I Fuel Displacement:	ROMENTAL BENEFIT  Pol  Electricity Gene  CO2 (tons/yr)	eastern Power Admin; VES OF UTILIZATION tential 29,141 611,969 teration Project SO2 (tons/yr)	Direct Use  CO2 (tons/yr)	30  Co  rent 5,550 116,556 e Project SO2 (tons/yr)
Current Capacity: Planned Capacity: Utilities in County:  Methane Reduction (tons/yr, CO2 Equivalent of CH4 Red	Northern V  D. ENVI  ): duction (tons/yr): I Fuel Displacement:  Coal:	Electricity Gene CO2 (tons/yr)	rastern Power Admin; Vers OF UTILIZATION tential 29,141 611,969 eration Project SO2 (tons/yr) 788	Direct Use CO2 (tons/yr) 87,755	30  Co  rent 5,550 116,556 e Project SO2 (tons/yr) 799
Current Capacity: Planned Capacity: Utilities in County:  Methane Reduction (tons/yr, CO2 Equivalent of CH4 Red	Northern V  D. ENVI  ): duction (tons/yr):  I Fuel Displacement:  Coal: Fuel Oil:	Electricity Gene CO2 (tons/yr) 124,706 102,353	eastern Power Admin; Vers OF UTILIZATION tential 29,141 611,969 eration Project SO2 (tons/yr) 788 659 0	Direct Use CO2 (tons/yr) 87,755 72,026	30  Co  rent 5,550 116,556 2 Project SO2 (tons/yr) 799 420
Current Capacity: Planned Capacity: Utilities in County:  Methane Reduction (tons/yr, CO2 Equivalent of CH4 Red	Northern V  D. ENVI  ): duction (tons/yr):  I Fuel Displacement:  Coal: Fuel Oil:	Electricity General CO2 (tons/yr) 124,706 102,353 68,823 E. CONTACT INFOR	eastern Power Admin; Vers OF UTILIZATION tential 29,141 611,969 eration Project SO2 (tons/yr) 788 659 0	Direct Use CO2 (tons/yr) 87,755 72,026	30  Co  rent 5,550 116,556 e Project SO2 (tons/yr) 799 420
Current Capacity: Planned Capacity: Utilities in County:  Methane Reduction (tons/yr, CO2 Equivalent of CH4 Red Emissions Avoided by Fossions	Northern V  D. ENVI  ): duction (tons/yr):  I Fuel Displacement:  Coal: Fuel Oil: Natural Gas:	Electricity General CO2 (tons/yr) 124,706 102,353 68,823 E. CONTACT INFOR	eastern Power Admin; Vers OF UTILIZATION tential 29,141 611,969 eration Project SO2 (tons/yr) 788 659 0	Direct Use CO2 (tons/yr) 87,755 72,026 48,431	30  Co  rent 5,550 116,556 e Project SO2 (tons/yr) 799 420
Current Capacity: Planned Capacity: Utilities in County:  Methane Reduction (tons/yr, CO2 Equivalent of CH4 Rea Emissions Avoided by Fossion Contact Name: Earl	Northern V  D. ENVI  ): duction (tons/yr): I Fuel Displacement:  Coal: Fuel Oil: Natural Gas:  Landfill  Delauder	Electricity General CO2 (tons/yr) 124,706 102,353 68,823 E. CONTACT INFOR	eration Project SO2 (tons/yr) 788 659 0 RMATION	Direct Use CO2 (tons/yr) 87,755 72,026 48,431  Landfill Operator	30  Co  rent 5,550 116,556 e Project SO2 (tons/yr) 799 420
Current Capacity: Planned Capacity: Utilities in County:  Methane Reduction (tons/yr, CO2 Equivalent of CH4 Rea Emissions Avoided by Fossion Contact Name: Earl	Northern V  D. ENVI  ): duction (tons/yr):  I Fuel Displacement:  Coal: Fuel Oil: Natural Gas:  Landfill	Electricity General CO2 (tons/yr) 124,706 102,353 68,823 E. CONTACT INFOR	rastern Power Admin; Vers OF UTILIZATION tential  29,141 611,969 eration Project SO2 (tons/yr) 788 659 0  RMATION	Direct Use CO2 (tons/yr) 87,755 72,026 48,431	30  Co  rent 5,550 116,556 e Project SO2 (tons/yr) 799 420
Current Capacity: Planned Capacity: Utilities in County:  Methane Reduction (tons/yr, CO2 Equivalent of CH4 Red Emissions Avoided by Fossions  Contact Name: Earl Mailing Address: 9850	Northern V  D. ENVI  Landfill  Delauder  D Furnace Road	Electricity General CO2 (tons/yr) 124,706 102,353 68,823 E. CONTACT INFOR	eastern Power Admin; Vers OF UTILIZATION tential  29,141 611,969 eration Project SO2 (tons/yr) 788 659 0  RMATION  12000 Governi Suite 324	Direct Use CO2 (tons/yr) 87,755 72,026 48,431  Landfill Operator	30  Co  rent 5,550 116,556 e Project SO2 (tons/yr) 799 420
Current Capacity: Planned Capacity: Utilities in County:  Methane Reduction (tons/yr, CO2 Equivalent of CH4 Red Emissions Avoided by Fossions Contact Name: Earl Mailing Address: 9850	Northern V  D. ENVI  ): duction (tons/yr): I Fuel Displacement:  Coal: Fuel Oil: Natural Gas:  Landfill  Delauder	Electricity General CO2 (tons/yr) 124,706 102,353 68,823 E. CONTACT INFOR	rastern Power Admin; Vers OF UTILIZATION tential  29,141 611,969 eration Project SO2 (tons/yr) 788 659 0  RMATION	Direct Use CO2 (tons/yr) 87,755 72,026 48,431  Landfill Operator	30  Co  rent 5,550 116,556 e Project SO2 (tons/yr) 799 420
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			1-95 Lorton	LF	Landfill Ca	tegory: Current		
		A. G	ENERAL LANDFILL	INFORMATION				
Landfill Owner:				Annual Acceptance Rate	(tons):	286,000		
Landfill Owner Type:	Public			Year Annual Acceptance	Rate Reported:	1998		
Alternative Landfill Na	me: 195 Re	source Recovery	y LF	Design Capacity (tons):				
City:	Fairfax			Acres Currently Landfilled (acres):				
County:	Fairfax			Average Depth (feet):		100		
State:	VA			1998 Waste-in-Place (to	18,072,000			
Year Open:	1973			1998 Waste-in-Place (toi	ıs):	18,072,000		
Year Closed:	1995							
		]	B. LANDFILL GAS CO	DLLECTION				
Estimated Methane Ger		f/d):		5.04				
LFG Collection System								
Current LFG Collected	•			3.3				
Collection and Treatme	nt System Req			No				
			C. LANDFILL GAS U	TILIZATION				
Current Utilization:			•					
Utilization System	Status:	Operational						
Utilization System	Type:	Reciprocating	ng Engine					
Utilization System	Start Year:	1993						
Electric Utility Pro	ovider(s):							
Natural Gas Provid								
Energy Purchaser(	s):	Virginia Ele	ctric & Power Co					
Capacity:		Electrici	ty Generation Project (N	1W) OR	Direct Use Project (mr	nBtu/hr)		
Estimated Potentia	al Capacity:			16		158		
Current Capacity:	и Сирисиу.			3.2		69		
Planned Capacity:		•				07		
Utilities in County:		Northern Vi	rginia Elec Coon: South	agetern Power Admin V	rginia Electric & Power (			
Ounites in County.			-	rs of utilization	inginia Licetile & Fower			
<u> </u>			Po	tential	Curr	and the second s		
Methane Reduction (tor	15/vr):			29,141		12,720		
CO2 Equivalent of CH4	=	ns/vr)·	İ	611,969		267,110		
Emissions Avoided by F	Fossil Fuel Dis <sub>l</sub>	olacement:	Electricity Gen	eration Project	Direct Use	Project		
			CO2 (tons/yr)	SO2 (tons/yr)	CO2 (tons/yr)	SO2 (tons/yr)		
		Coal:	124,706	788	87,755	799		
		Fuel Oil:	102,353	659	72,026	420		
		atural Gas:	68,823	0	48,431	0		
			E. CONTACT INFO	RMATION	1011			
		Landfill	Owner		Landfill Operator			
Contact Name:	Earl Delauder							
Mailing Address:	9850 Furnace	Road		12000 Governm	ent Center Pkwy			
-				Suite 324	Ž			
Phone Number:	703-690-1703			703-690-1525				
·	, 03 070-1703			705-070-1525				
Fax Number:				1				
* Itallicized indicates va	lues estimated	by EPA.	De	cember 5, 1998	State: VA	Page: 3		
		•		*				

Marian		···-		Albemarle Iv	-	<del></del>	Landfill Ca	tegory: Candidate
Landfill Name: Type:   Public   Year Annual Acceptance Nate Reported:			A. GE	NERAL LANDFILL	INFORMAT	TION		
Alternative Landfill Name   Rivanna Solid Waste Authority LF   Design Capacity (cons)   City   Charlottes ville   Acres Currently Landfilled (acres)   County   Albernarie   Average Depth (deet)   County   Average Depth (deet)   County   Capacity   County   Capacity   County   Capacity   County   Capacity	Landfill Owner:				Annual Acce	ptance Rate	(tons):	104,962
City:	Landfill Owner Type:	Public		,	Year Annual	Acceptance	Rate Reported:	
Average Depth (feet):   State:   VA   Waste-in-Place (tons):   2,519,088	Alternative Landfill N	lame: Rivann	a Solid Waste Au					1
State	=						ed (acres):	
Year Closed:   1973   1998 Waste-in-Place (tons):   2,519,088	<del>-</del>		arle					
Setimated Methane Generation (mmscfd):   1.06								, ,
### B. LANDFILL GAS COLLECTION  Estimated Methane Generation (mmscfid):  Current LFG Collection System Status:  Current LFG Collection and Treatment System Required Under NSPS/EG:  **C. LANDFILL GAS UTILIZATION  **CUrrent Utilization:**  Utilization System Status:  Utilization System Status:  Utilization System Status:  Electric Utility Provider(s):  Energy Purchaser(s):  Capacity:  Estimated Protential Capacity:  Utilization Capacity:  Utilization System Status:  D. ENVIRONENTAL BENEFITS OF UTILIZATION  **Total Unity:**  **Total Unity:**  **Contral Virginia Electric Coop: Rappahannock Electric Coop: Southeastern Power Admin; Virginia Electric Coop: Rappahannock Electric Coop: Southeastern Power Admin; Virginia Electric Coop: Rappahannock Electric Coop: Southeastern Power Admin; Virginia Electric Coop: Rappahannock Electric Coop: Southeastern Power Admin; Virginia Electric Coop: Rappahannock Electric Coop: Southeastern Power Admin; Virginia Electric Coop: Rappahannock Electric Coop: Southeastern Power Admin; Virginia Electric Coop: Rappahannock Electric Coop: Southeastern Power Admin; Virginia Electric Coop: Rappahannock Electric Coop: Southeastern Power Admin; Virginia Electric Coop: Rappahannock Electric Coop: Southeastern Power Admin; Virginia Electric Coop: Rappahannock Electric Coop: Southeastern Power Admin; Virginia Electric Coop: Rappahannock Electric Coop: Southeastern Power Admin; Virginia Electric Coop: Rappahannock Electric Coop: Southeastern Power Admin; Virginia Electric Coop: Rappahannock Electric Coop: Southeastern Power Admin; Virginia Electric Coop: Rappahannock Electric Coop: Southeastern Power Admin; Virginia Electric Coop: Rappahannock Electric Coop: Southeastern Power Admin; Virginia Electric Coop: Rappahannock Electric Coop: Southeastern Power Admin; Virginia Electric Coop: Rappahannock Electric	•				1998 Waste-ii	n-Place (tor	ns):	2,519,088
Estimated Methane Generation (mmscffd): LFG Collection System Status: Collection and Treatment System Required Under NSPS/EG: No  Current LFG Collection (mmscfd): Current Utilization System Status: Utilization System Stary Paea: Electric Utility Provider(s): Natural Gas Provider(s): Energy Purchaser(s):  Capacity: Electricity Generation Project (MW) OR Direct Use Project (mmBtu/hr)  Estimated Potential Capacity: Current Capacity: Planned Capacity: Utilities in County: Central Virginia Electric Coop: Rappahannock Electric Coop: Southeastern Power Admin; Virginia E  Entimated Potential Capacity: D: ENVIROMENTAL BENEFITS OF UTILIZATION  Forential Methane Reduction (tons/yr): 128,978 0  CO2 Equivalent of CH4 Reduction (tons/yr): Emissions Avoided by Fossil Fuel Displacement:  Electricity Generation Project CO2 (tons/yr) SO2 (tons/yr) SO2 (tons/yr) SO2 (tons/yr) SO2 (tons/yr) SO2 (tons/yr) SO2 (tons/yr) CO3 (tons/yr) SO3 (tons/yr)  Landfill Owner  E. CONTACT INFORMATION Landfill Owner  E. CONTACT Walker Mailing Address: 401 McIntyre Road Phone Number: Steve Chitzy Mailing Address: 401 McIntyre Road Phone Number: Steve Chitzy Mailing Address: 401 McIntyre Road Phone Number: Steve Chitzy Mailing Address: 401 McIntyre Road Phone Number: Steve Chitzy Mailing Address: 401 McIntyre Road Phone Number: Steve Chitzy Mailing Address: 401 McIntyre Road Phone Number: Steve Chitzy Mailing Address: 401 McIntyre Road Phone Number: Steve Chitzy	Year Closed:	2013	The state of the s	TANDENT CASCO	NI POTIO		· , · · · · · · · · · · · · · · · · · ·	
LPG Collection System Status: Current LPG Collected (mmscftd): Capacity:  Capacity:  Central Virginia Electric Coop: Rappahannock Electric Coop: Southeastern Power Admin; Virginia E  Estimated Patential Capacity: Planned Capacity:  Utilities in County:  Central Virginia Electric Coop: Rappahannock Electric Coop: Southeastern Power Admin; Virginia E  Estimated Patential Capacity:  Utilities in County:  Central Virginia Electric Coop: Rappahannock Electric Coop: Southeastern Power Admin; Virginia E  Estimated Patential Capacity:  Utilities in County:  Central Virginia Electric Coop: Rappahannock Electric Coop: Southeastern Power Admin; Virginia E  Estimated Patential Capacity:  Utilities in County:  Central Virginia Electric Coop: Rappahannock Electric Coop: Southeastern Power Admin; Virginia E  Electricity Generation Project  CO2 Equivalent of CH4 Reduction (tons/yr):  128,778  Co2 Equivalent of CH4 Reduction (tons/yr):  Emissions Avoided by Fossil Fuel Displacement:  Co2 (tons/yr)  Co3 (tons/yr)  Co4 (tons/yr)  Co5 (tons/yr)  Co5 (tons/yr)  Co5 (tons/yr)  Co6 (tons/yr)  Co7 (tons/yr)  Co7 (tons/yr)  Co8 (tons/yr)  Co8 (tons/yr)  Co9 (tons/yr)  Co9 (tons/yr)  Co1 (tons/yr)  Co1 (tons/yr)  Co1 (tons/yr)  Co7 (tons/yr)  Co7 (tons/yr)  Co8 (tons/yr)  Co8 (tons/yr)  Co9 (tons/yr)			В	. LANDFILL GAS CC	PLLECTION	Y		
Current LFG Collected (mmscl/d): Collection and Treatment System Required Under NSPS/EG: No  Current Utilization: Utilization System Status: Utilization System Status: Utilization System Staty Current Utilization System Staty Collective Unknown Utilization System Staty Vear: Electric Utility Provider(s): Energy Purchaser(s):  Capacity:  Electricity Generation Project (MW)  Estimated Potential Capacity: Current Capacity: Planned Capacity: Utilities in County:  Central Virginia Electric Coop; Rappahannock Electric Coop; Southeastern Power Admin; Virginia E  ### D. ENVIROMENTAL BENETITS OF UTILIZATION  #### Potential #### Current ### Current ####  Current ##### Current ##### Current ##### Current ###### Current ##### Current ###### Current ####################################			f/d):		1.06			
Collection and Treatment System Required Under NSPS/EG: No  C. LANDFILL GAS UTILIZATION  Current Utilization System Status: Potential Utilization System Start Year: Unknown Utilization System Start Year: Electric Utility Provider(s): Natural Gas Provider(s): Energy Purchaser(s):  Capacity: Electric Utilization System Start Year: Estimated Potential Capacity: Planned Capacity: Utilities in County: Central Virginia Electric Coop: Rappahannock Electric Coop: Southeastern Power Admin; Virginia E  **D. ENVIROMENTAL BENEFITS OF UTILIZATION**  **Potential**  Methane Reduction (tons/yr): CO2 Equivalent of CH4 Reduction (tons/yr): Emissions Avoided by Fossil Fuel Displacement:  **Electric Utilization Project** CO2 (tons/yr) SO2 (tons/yr) CO3 (tons/yr) CO3 (tons/yr) CO4 (tons/yr) CO5 (tons/yr) SO2 (tons/yr) CO6 (tons/yr) SO2 (tons/yr) CO7 (tons/yr) CO7 (tons/yr) CO8 (tons/yr) CO8 (tons/yr) CO9 (tons/yr) CO1 (tons/yr) CO2 (tons/yr) CO3 (tons/yr) CO3 (tons/yr) CO3 (tons/yr) CO4 (tons/yr) CO5 (tons/yr) CO6 (tons/yr) CO7 (tons/yr) CO7 (tons/yr) CO8 (tons/yr) CO8 (tons/yr) CO9 (							•	
Current Utilizations Utilization System Status: Utilization System Type: Utilization System Type: Utilization System Start Year: Electric Utility Provider(s): Energy Purchaser(s):  Capacity:  Estimated Potential Capacity: Current Capacity: Planned Capacity: Utilities in County:  Central Virginia Electric Coop; Rappahannock Electric Coop; Southeastern Power Admin; Virginia E  **D-ENVIROMENTAL BENEFITS OF UTILIZATION**  **Potential**  **Current**  **Methane Reduction (tons/yr): **CO2 Equivalent of CH4 Reduction (tons/yr): **Electricity Generation Project CO2 Equivalent of CH4 Reduction (tons/yr):  **Electricity Generation Project CO2 (tons/yr) **SO2 (tons/yr) **CO2 (tons/yr) **SO3 tons/yr) **Co2 (tons/yr) **CO2 (tons/yr) **SO3 tons/yr) **CO3 (tons/yr) **CO2 (tons/yr) **CO3 tons/yr)		•						
Current Utilization:  Utilization System Status:  Utilization System Status:  Utilization System Status:  Utilization System Status:  Utilization System Statu Year:  Electric Utility Provider(s):  Natural Gas Provider(s):  Energy Purchaser(s):  Capacity:  Estimated Potential Capacity:  Current Capacity:  Planned Capacity:  Utilities in County:  Central Virginia Electric Coop; Rappahannock Electric Coop; Southeastern Power Admin; Virginia E		ent System Req						
Utilization System Status: Determinal 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)  Estimated Potential Capacity: 33  Current Capacity: Planned Capacity: Utilities in County: Central Virginia Electric Coop; Rappahannock Electric Coop; Southeastern Power Admin; Virginia Electric Coop; Rappahannock Electric Coop; Southeastern Power Admin; Virginia Electric Coop; Rappahannock Electric Coop; Southeastern Power Admin; Virginia Electric Coop; Rappahannock Electric Coop; Southeastern Power Admin; Virginia Electric Coop; Rappahannock Electric Coop; Southeastern Power Admin; Virginia Electric Coop; Rappahannock Electric Coop; Southeastern Power Admin; Virginia Electric Coop; Rappahannock Electric Coop; Southeastern Power Admin; Virginia Electric Coop; Southeastern Power Admin; Virginia Electric Coop; Rappahannock Electric Coop; Southeastern Power Admin; Virginia Electric Coop; Southeastern Power Admin; Virginia Electric Coop; Southeastern Power Admin; Virginia Electric Coop; Rappahannock Electric Coop; Southeastern Power Admin; Virginia Electric C			C	. LANDFILL GAS U	<b>FILIZATIO</b>	N .		
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)  Estimated Potential Capacity: Planned Capacity: Planned Capacity:  Utilities in County: Central Virginia Electric Coop; Rappahannock Electric Coop; Southeastern Power Admin; Virginia E  **D.EXVIROMENTAL BENEFITS OF UTILIZATION**  **Determination**  **Potential**  **Methane Reduction (tons/yr): CO2 Equivalent of CH4 Reduction (tons/yr):  **Emissions Avoided by Fossil Fuel Displacement:  **Electricity Generation Project* CO2 (tons/yr) SO2 (tons/yr) SO2 (tons/yr) SO2 (tons/yr) SO2 (tons/yr) SO2 (tons/yr) SO2 (tons/yr) CO2 (tons/yr) SO3 (tons/yr) CO3 (tons/yr) SO3 (tons/yr)  **Contact Name: Steve Chitzy Mailing Address: 401 McIntyre Road  **PO Box 979  **Phone Number: 804-977-2970 ext. 129  **Pone Number: 804-977-2970 ext. 129  **Pone Number: 804-977-2976 ext. 129	Current Utilization:							
Utilization System Start Year: Electric Utility Provider(s): Natural Gas Provider(s): Energy Purchaser(s):  Capacity:  Estimated Potential Capacity: Planned Capacity:  Utilities in County:  Central Virginia Electric Coop: Rappahannock Electric Coop: Southeastern Power Admin; Virginia E  **D.ENVIROMENTAL BENEFITS OF UTILIZATION**  Potential  Rethane Reduction (tons/yr):  CO2 Equivalent of CH4 Reduction (tons/yr):  Emissions Avoided by Fossil Fuel Displacement:  Co2 (tons/yr)  Co3 (tons/yr)  Co4 (tons/yr)  Co5 (tons/yr)  Co5 (tons/yr)  Co6 (tons/yr)  Co7 (t	Utilization System	m Status:	Potential					
Electric Utility Provider(s): Natural Gas Provider(s): Energy Purchaser(s):  Capacity:  Estimated Potential Capacity: Planned Capacity: Utilities in County:  Central Virginia Electric Coop; Rappahannock Electric Coop; Southeastern Power Admin; Virginia E  Potential Methane Reduction (tons/yr): CO2 Equivalent of CH4 Reduction (tons/yr):  Co3  Emissions Avoided by Fossil Fuel Displacement: CO2 (tons/yr)  Co3  Enural Virginia Electric Coop; Rappahannock Electric Coop; Southeastern Power Admin; Virginia E  Potential Current 6,142 0 CO2 Equivalent of CH4 Reduction (tons/yr): CO2 Equivalent of CH4 Reduction (tons/yr): CO3 (tons/yr) SO2 (tons/yr) SO2 (tons/yr) SO2 (tons/yr) SO2 (tons/yr) SO2 (tons/yr) SO3 Co3  Enural Virginia Electric Coop; Rappahannock Electric Coop; Southeastern Power Admin; Virginia E  Current Current Co1 Equivalent of CH4 Reduction (tons/yr):  Enural Virginia Electric Coop; Rappahannock Electric Coop; Southeastern Power Admin; Virginia E  Current Co2 Equivalent of CH4 Reduction (tons/yr):  Electricity Generation Project CO2 (tons/yr) SO2 (tons/yr) SO2 (tons/yr) SO2 (tons/yr) SO2 (tons/yr) SO3 Cons/yr) Co3 Co3 Co3 Co3 Co4 Co5	Utilization System	m Type:	Unknown					
Natural Gas Provider(s): Energy Purchaser(s):           Capacity:         Electricity Generation Project (MW)         OR         Direct Use Project (mmBtu/hr)           Estimated Potential Capacity: Current Capacity: Planned Capacity: Potential Current Power Admin; Virginia E           D. ENVIROMENTAL BENEFITS OF UTILIZATION           Potential Current Current Potential Current Potential Current Potential Project CO2 Equivalent of CH4 Reduction (tons/yr): Possil Fuel Displacement: Electricity Generation Project CO2 (tons/yr) Possil Fuel Displacement: Poject CO2 (tons/yr) Poject P	Utilization System	m Start Year:						
Energy Purchaser(s):   Capacity:   Electricity Generation Project (MW)   OR   Direct Use Project (mmBtu/hr)	Electric Utility Pr	rovider(s):						
Capacity: Electricity Generation Project (MW) OR Direct Use Project (mmBtu/hr)  Estimated Potential Capacity: 3 Current Capacity: 33 Utilities in County: Central Virginia Electric Coop; Rappahannock Electric Coop; Southeastern Power Admin; Virginia E  D. ENVIROMENTAL BENEFITS OF UTILIZATION  Potential Current  Methane Reduction (tons/yr): 6,142 CO2 Equivalent of CH4 Reduction (tons/yr): 128,978 O  Emissions Avoided by Fossil Fuel Displacement: Electricity Generation Project CO2 (tons/yr) SO2 (tons/yr) CO2 (tons/yr) SO2 (tons/yr) CO3 (tons/yr) SO2 (tons/yr) CO4: 26,046 165 18,495 168 Fuel Oil: 21,378 138 15,180 89 Natural Gas: 14,375 0 10,207 0  E. CONTACT INFORMATION  Landfill Owner Landfill Operator  Contact Name: Steve Chitzy Leonard Walker Mailing Address: 401 McIntyre Road PO Box 979  Phone Number: 804-977-2970 ext. 129  Respectively. SO2 (tons/yr) SO3 (tons/yr) Respectively. SO4 (tons/yr) Respectively. SO4 (tons/yr) Respectively. SO5 (tons/yr) Respectively. Respe	Natural Gas Prov	rider(s):						
Estimated Potential Capacity: Current Capacity: Planned Capacity:  Utilities in County:  Central Virginia Electric Coop; Rappahannock Electric Coop; Southeastern Power Admin; Virginia E  D. ENVIROMENTAL BENEFITS OF UTILIZATION  Potential  Current  Methane Reduction (tons/yr): 6,142 0 CO2 Equivalent of CH4 Reduction (tons/yr): 128,978 0  Emissions Avoided by Fossil Fuel Displacement: CO2 (tons/yr)  Coal: 26,046 165 18,495 168 Fuel Oil: 21,378 138 15,180 89 Natural Gas: 14,375 0 10,207 0  E. CONTACT INFORMATION  Landfill Owner  Landfill Owner  Contact Name: Mailing Address: 401 McIntyre Road PO Box 979  Phone Number:  804-977-2970 ext. 129 804-977-2976 Fax Number:	Energy Purchases	r(s):						
Estimated Potential Capacity: Current Capacity: Planned Capacity:  Utilities in County:  Central Virginia Electric Coop; Rappahannock Electric Coop; Southeastern Power Admin; Virginia E  D. ENVIROMENTAL BENEFITS OF UTILIZATION  Potential  Current  Methane Reduction (tons/yr): 6,142 0 CO2 Equivalent of CH4 Reduction (tons/yr): 128,978 0  Emissions Avoided by Fossil Fuel Displacement: CO2 (tons/yr)  Coal: 26,046 165 18,495 168 Fuel Oil: 21,378 138 15,180 89 Natural Gas: 14,375 0 10,207 0  E. CONTACT INFORMATION  Landfill Owner  Landfill Owner  Contact Name: Mailing Address: 401 McIntyre Road PO Box 979  Phone Number:  804-977-2970 ext. 129 804-977-2976 Fax Number:	Canacity:		Electricity	v Generation Project (M	IW)	∩R	Direct Use Project (m	nRtu/hr)
Current Capacity:   Planned Capacity:			Electrick	Generation Project (iv				
Discrete   Contact Name:   Steve Chitzy   Methane:   Steve Chitzy   Steve Chitz					3			33
	- ·							
D. ENVIROMENTAL BENEFITS OF UTILIZATION	Planned Capacity	<b>'</b> :						
Potential	Utilities in County:		Central Virgi	nia Electric Coop; Rapp	ahannock El	ectric Coop	; Southeastern Power Ad	min; Virginia E
Potential			D ENVIR	OMENTAL RENEEL	rs of little	IZATION		_
Methane Reduction (tons/yr):         6,142         0           CO2 Equivalent of CH4 Reduction (tons/yr):         128,978         0           Emissions Avoided by Fossil Fuel Displacement:         Electricity Generation Project CO2 (tons/yr)         Direct Use Project CO2 (tons/yr)         SO2 (tons/yr)           Coal:         26,046         165         18,495         168           Fuel Oil:         21,378         138         15,180         89           Natural Gas:         14,375         0         10,207         0           E. CONTACT INFORMATION           Contact Name:         Steve Chitzy         Leonard Walker           Mailing Address:         401 McIntyre Road         PO Box 979           Phone Number:         804-977-2976 ext. 129         804-977-2976           Fax Number:         804-977-2976			D. DIVIER			izarion		
CO2 Equivalent of CH4 Reduction (tons/yr):   128,978   0				Po	tential		Curr	
Emissions Avoided by Fossil Fuel Displacement:    Electricity Generation Project   CO2 (tons/yr)   SO2 (tons/y		•						
CO2 (tons/yr)   SO2 (tons/yr)   SO3 (tons/yr	CO2 Equivalent of Ch	14 Reduction (to	ns/yr):			128,978		0
CO2 (tons/yr)   SO2 (tons/yr)   SO3 (tons/yr	Emissions Avoided by	Fossil Fuel Disi	placement:	Electricity Gen	eration Proje	ct	Direct Use	Proiect
Coal:         26,046         165         18,495         168           Fuel Oil:         21,378         138         15,180         89           Natural Gas:         14,375         0         10,207         0           E. CONTACT INFORMATION           Landfill Owner         Landfill Operator           Contact Name:         Steve Chitzy         Leonard Walker           Mailing Address:         401 McIntyre Road         PO Box 979           Phone Number:         804-977-2970 ext. 129         804-977-2976           Fax Number:         804-977-2976		•		•	•			•
Fuel Oil:         21,378         138         15,180         89           Natural Gas:         14,375         0         10,207         0           E. CONTACT INFORMATION           Landfill Owner         Landfill Operator           Contact Name:         Steve Chitzy         Leonard Walker           Mailing Address:         401 McIntyre Road         PO Box 979           Phone Number:         804-977-2970 ext. 129         804-977-2976           Fax Number:         804-977-2976			Carl	·	•	•		•
Natural Gas: 14,375 0 10,207 0  E. CONTACT INFORMATION  Landfill Owner Landfill Operator  Contact Name: Steve Chitzy Leonard Walker  Mailing Address: 401 McIntyre Road PO Box 979  Phone Number: 804-977-2970 ext. 129 804-977-2976  Fax Number:			Coal.	20,040		103	18,493	108
E. CONTACT INFORMATION  Landfill Owner Landfill Operator  Contact Name: Steve Chitzy Leonard Walker  Mailing Address: 401 McIntyre Road PO Box 979  Phone Number: 804-977-2970 ext. 129 804-977-2976  Fax Number:			Fuel Oil:	21,378		138	15,180	89
Landfill Owner Landfill Operator  Contact Name: Steve Chitzy Leonard Walker  Mailing Address: 401 McIntyre Road PO Box 979  Phone Number: 804-977-2970 ext. 129  Fax Number: 804-977-2976		Λ	latural Gas:	14,375	-	0	10,207	0
Landfill Owner Landfill Operator  Contact Name: Steve Chitzy Leonard Walker  Mailing Address: 401 McIntyre Road PO Box 979  Phone Number: 804-977-2970 ext. 129  Fax Number: 804-977-2976	-			E. CONTACT INFO	RMATION			
Contact Name: Steve Chitzy Leonard Walker  Mailing Address: 401 McIntyre Road PO Box 979  Phone Number: 804-977-2970 ext. 129  Fax Number: 804-977-2976	,		Landfill C			······································	Landfill Operator	
Mailing Address: 401 McIntyre Road PO Box 979  Phone Number: 804-977-2970 ext. 129 804-977-2976  Fax Number:	Contact Name:	Stava Chitzy			Laon	ord Walker		
Phone Number: 804-977-2970 ext. 129 804-977-2976 Fax Number:								
Fax Number:	Mailing Address:	401 McIntyre	Road		PO E	Box 979		
Fax Number:					į			
	Phone Number:	804-977-2970	ext. 129		804-	977-2976		
	Fax Number:				j			
* Itallicized indicates values estimated by EPA. December 5, 1998 State: VA Page: 4						<del></del>		
	* Itallicized indicates v	values estimated	by EPA.	De	cember 5, 19	98	State: VA	Page: 4

			Atlantic Waste D	isposal SLF		Landfill Categor	v: Candidate
		A. G	ENERAL LANDFILI	INFORMAT	ION		
Landfill Owner:	Atlantic	Waste Disposa	ıl	Annual Accep	tance Rate (ton	is):	
Landfill Owner Type:	Private	•		Year Annual A			
Alternative Landfill N	ame:			Design Capaci	ty (tons):	-	1,559,688
City:	Sussex			Acres Currentl	y Landfilled (a	icres):	206
County:	Sussex			Average Depth	(feet):		
State:	VA			Waste-in-Place	e (tons):		
Year Open:	1991			1998 Waste-in	-Place (tons):		
Year Closed:	1996						
		I	B. LANDFILL GAS C	OLLECTION			
Estimated Methane Ge	meration (mmsc)	f/d):					
LFG Collection System	· · · · · ·	,, u ).					
Current LFG Collected							
Collection and Treatm		ired Under NSF	PS/EG·	No			
	one System requ		C. LANDFILL GAS U			1.00	
Current Utilization:							
Utilization System	n Status:	Potential					
Utilization Syster		Unknown					
Utilization System							
Electric Utility Pr							
Natural Gas Provi							
Energy Purchaser	(s):						
Capacity:		Electrici	ty Generation Project (	MW) (	OR D	Pirect Use Project (mmBtu/	hr)
Estimated Potenti	ial Canacity						
Current Capacity:							
Planned Capacity							
	•						
Utilities in County:						ince George Electric Coop	; Southeas
		D. ENVIE	ROMENTAL BENEF	HS OF UTILI	ZATION		
			P	otential		Current	
Methane Reduction (to	•						
CO2 Equivalent of CH	4 Reduction (tor	ıs/yr):					
Emissions Avoided by	Fossil Fuel Disn	lacament:	Flactricity Ga	neration Projec		Direct Use Proje	ect
Emissions Avoided by	rossu ruei Disp	писетет.	CO2 (tons/yr)	SO2 (tor	į.	•	O2 (tons/yr)
			(10113/3//	502 (10)	37 97 )	CO2 (tottal yr)	02 (10/13/9/)
		Coal:					i
		Fuel Oil:					į
	Na	atural Gas:					
			E. CONTACT INFO	DMATION			
		Landfill (		ORWATION		Landfill Operator	
Contact Name:	Carlton Duddin	ıgs		į			
Mailing Address:	4451 Crossings			3474	Atlantic Lane		, ,
-	•						
Phone Number:	804-748-8690			: . RN1_8	34-8300		
	331 / 10-00/0			;	. 0500		
Fax Number:				,			
* Itallicized indicates v	alues estimated i	by EPA.	D	ecember 5, 199	8	State: VA Pag	e: 5

		Big Bethe		Landfill Category: Current
	A	GENERAL LANDFILI	L INFORMATION	
Landfill Owner:	WMI		Annual Acceptance Rate	(tons):
Landfill Owner Type:	Private		Year Annual Acceptance	Rate Reported:
Alternative Landfill Name:	Big Bethel LF Big B	ethel LF SLF Incorporat	Design Capacity (tons):	
City:	Newport News		Acres Currently Landfille	ed (acres): 316
County:	Hampton		Average Depth (feet):	
State:	VA		Waste-in-Place (tons):	i
Year Open:	1988		1998 Waste-in-Place (tor	<i>1s)</i> :
Year Closed:	2000			
		B. LANDFILL GAS (	COLLECTION	
Estimated Methane General	tion (mmscf/d):			
LFG Collection System Star	•			
Current LFG Collected (mn				
Collection and Treatment S	•	ISPS/EG:	No	
		C. LANDFILL GAS I	JTILIZATION	Cast
Current Utilization:				
Utilization System Star	tus: Operation	nal .		
Utilization System Typ	-	Evaporation		
Utilization System Star		_ · uporumon		
Electric Utility Provide				
Natural Gas Provider(s				
Energy Purchaser(s):	·)·			
Energy Turemuser(b).				
Capacity:	Electr	ricity Generation Project (	MW) OR	Direct Use Project (mmBtu/hr)
Estimated Potential Co	apacity:			
Current Capacity:			ĺ	
Planned Capacity:				
Utilities in County:	Couthoos	ern Power Admin; Virgin	is Electric & Dower Co	
-				
	D. EN	VIROMENTAL BENEF	ITS OF UTILIZATION	
		F	Potential	Current
Methane Reduction (tons/yr				
CO2 Equivalent of CH4 Red	duction (tons/yr):			
Emissions Avoided by Fossi	il Fuel Displacement	Flectricity Ge	neration Project	Direct Use Project
Linissions Avoluca by 1 ossi	ii I uei Dispiacemeni.	CO2 (tons/yr)	SO2 (tons/yr)	CO2 (tons/yr) SO2 (tons/yr)
•		CO2 (tons yr)	502 (10113/3/)	502 (10113131)
•	Coal:			
	Fuel Oil:			
	Natural Gas:			•
	<u></u>	E. CONTACT INFO	ORMATION	
•	<u> </u>	ill Owner		Landfill Operator
Contact Name: M F				
			(00) 0	no. Donat
Mailing Address: 297	2 Armistead Avenue		6201 Powers Fer	пту коад
Di			Suite 150	
Phone Number: 804	-766-1092		804-723-5273	
Fax Number:				
* Itallicized indicates values	s estimated by FPA	r	December 5, 1998	State: VA Page: 6

•			Big Bethel LF			Landfill Categ	ory: Current
			A. GENERAL LANDFILL/INF	ORMATION			
Landfill Owner:	Sanifill		Anno	ual Acceptance Rate	(tons):		
Landfill Owner Type:	Private		Year	Annual Acceptance	Rate Reporte	ed:	1998
Alternative Landfill Name	:		Desi	gn Capacity (tons):			
City:	Newpor	t News	Acre	s Currently Landfille	ed (acres):		316
County:	Hampto	n	Aver	rage Depth (feet):			
State:	VA		1998	8 Waste-in-Place (to	ns):		
Year Open:	1988		1998	Waste-in-Place (ton	ıs):		
Year Closed:	2000						
			B. LANDFILL GAS COLL	ECTION			
Estimated Methane Genera	ation (mmscf	(/d)·					
LFG Collection System Sta		, u , .					
Current LFG Collected (m							
Collection and Treatment S	•	ired Under	NSPS/EG:	No			
	system stequ	ca ende	C. LANDFILL GAS UTIL				
o					<u> </u>		
Current Utilization:		~					!
Utilization System Sta		Constru	****				
Utilization System Ty	=		cating Engine				
Utilization System Sta		1998					
Electric Utility Provid							
Natural Gas Provider(	(s):						
Energy Purchaser(s):							
Capacity:		Elec	ctricity Generation Project (MW)	OR	Direct Use	Project (mmE	tu/hr)
	7						
Estimated Potential C Current Capacity:	арасну:						;
Planned Capacity:			0	095			
Franned Capacity.			· · · · · · · · · · · · · · · · · · ·	093			
Utilities in County:		Southea	stern Power Admin; Virginia Ele	ctric & Power Co			
	S4: 15 ( )	D. El	NVIROMENTAL BENEFITS (	F UTILIZATION		· · · · · · · · · · · · · · · · · · ·	42.652.334.4
			Potenti	al	<u> </u>	Curren	•
Methane Reduction (tons/y			Totenti	ш		Curren	
CO2 Equivalent of CH4 Re		٠					
CO2 Equivalent of CH4 Re	eauction (ton						
Emissions Avoided by Foss	sil Fuel Disp	lacement:	Electricity Generati	ion Project		Direct Use Pr	oject
			CO2 (tons/yr)	SO2 (tons/yr)	CO2 (	tons/yr)	SO2 (tons/yr)
		Coal:			1		
		Fuel Oil:			•		•
	No	atural Gas:			•		:
i			E. CONTACT INFORM	ATION	· · · · · · · · · · · · · · · · · · ·	13.3	
<u> </u>		Land	dfill Owner		Landfill	Operator	<u> </u>
Contact Name: M	Freeman			F			
	rreeman						
Mailing Address: 297	72 Armistead	i Avenue		6201 Powers Fer	ту Road		
!				Suite 150			
Phone Number: 804	4-766-1092			804-723-5273			
Fax Number:							
* Itallicized indicates value	s estimated l	by EPA.	Decemb	ber 5, 1998	Stat	e: VA l	Page: 7
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		Carver Heights Landfil	,		Landfill Cat	egory: Shutdown
	A. G	ENERAL LANDFILL	INFORMAT	ION		······
Landfill Owner:	Chesterfield County	A	Annual Accept	tance Rate	(tons):	
Landfill Owner Type:	Public			-	Rate Reported:	
Alternative Landfill Name:	Carver Heights LF		Design Capaci	-		
City:	Chester		Acres Currentl	•	ed (acres):	86
County:	Chesterfield		Average Depth			28
State:	VA		1994 Waste-ir	•	•	1,250,000
Year Open:	1962	I	1998 Waste-in	-Place (ton	ıs):	1,250,000
Year Closed:	1990					
		B. LANDFILL GAS CO	DLLECTION		<u>, ,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,</u>	
Estimated Methane Generati	on (mmscf/d):		0.67			
LFG Collection System Statu	is:	Op	erational			
Current LFG Collected (mms	scf/d):		0.9			
Collection and Treatment Sys	•		No			
		C. LANDFILL GAS UT	TILIZATION			
Current Utilization:						
Utilization System Statu	is: Shutdown					
Utilization System Type	: Reciprocati	ng Engine				
Utilization System Start	Year: 1994					
Electric Utility Provider	r(s):	•				
Natural Gas Provider(s)	:					
Energy Purchaser(s):	Virginia Ele	ectric & Power Co				
Canacitus	Electric	itu Cananatian Braicat (M	(W) C	)R	Direct Use Project (mm	Dtu/be
Capacity:		ity Generation Project (M		)K	Direct Use Project (mm	
Estimated Potential Cap	pacity:		2			21
Current Capacity:						
Planned Capacity:			1.6			19 .
Utilities in County:	Southeaster	n Power Admin; Southsid	le Electric Co	op Inc; Vir	ginia Electric & Power Co	)
-	D. FNVI	ROMENTAL BENEFIT	rs of little	ZATION		
					T T	
14 J D I - 2 / / / )		Pol	tential	2.000	Curre	
Methane Reduction (tons/yr).				3,869		3,469
CO2 Equivalent of CH4 Red	uction (tons/yr):			81,249		72,849
Emissions Avoided by Fossil	Fuel Displacement:	Electricity Gene	eration Projec	rt	Direct Use I	Project
ŕ	•	CO2 (tons/yr)	SO2 (tor		CO2 (tons/yr)	SO2 (tons/yr)
	Coal:	16,575		105	11,651	106
	Fuel Oil:	13,604		88	9,563	56
	Natural Gas:	9,147		0	6,430	0
	, 4.7°	E. CONTACT INFO	RMATION		. 1 . 2	
	Landfill	Owner			Landfill Operator	
Contact Name:			i			
Mailing Address:						
Mailing Address:						
Phone Number:			!			
Fax Number:			!			
* I				o	Canana 374	Dogge
* Itallicized indicates values o	-	Dec	cember 5, 199	δ	State: VA	Page: 8
STAR Version 1.0	) / LMOP					

Charles City County SLF Landfill Category: Candidate Z. 6 A. GENERAL LANDFILL INFORMATION Landfill Owner: 800,800 Annual Acceptance Rate (tons): Private Landfill Owner Type: Year Annual Acceptance Rate Reported: Alternative Landfill Name: Chambers Charles City LF; Chambers LF; C Design Capacity (tons): City: Charles City Acres Currently Landfilled (acres): 294 County: Charles City Average Depth (feet): State: 6.406.400 VA Waste-in-Place (tons): Year Open: 1989 1998 Waste-in-Place (tons): 6,406,400 Year Closed: 2011 B. LANDFILL GAS COLLECTION Estimated Methane Generation (mmscf/d): 2.06 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:** Planned Unknown **Utilization System Type:** Utilization System Start Year: 2000 Electric Utility Provider(s): Natural Gas Provider(s): Energy Purchaser(s): Capacity: Electricity Generation Project (MW) OR Direct Use Project (mmBtu/hr) Estimated Potential Capacity: 6 64 Current Capacity: Planned Capacity: **Utilities in County:** Southeastern Power Admin; Virginia Electric & Power Co D. ENVIROMENTAL BENEFITS OF UTILIZATION Current Potential Methane Reduction (tons/yr): 11,890 0 249,698 0 CO2 Equivalent of CH4 Reduction (tons/yr): Emissions Avoided by Fossil Fuel Displacement: **Electricity Generation Project** Direct Use Project CO2 (tons/yr) SO2 (tons/yr) SO2 (tons/yr) CO2 (tons/yr) Coal: 50,514 319 35,806 326 Fuel Oil: 171 41,459 267 29,388 Natural Gas: 27,878 0 19,761 0 E. CONTACT INFORMATION Landfill Owner Landfill Operator Contact Name: Lee Wilson William Cooksey Mailing Address: 8000 Chambers Road 8000 Chambers Road Phone Number: 804-966-7146 804-966-7146 Fax Number: State: VA \* Itallicized indicates values estimated by EPA. December 5, 1998 Page: 9 STAR Version 1.0 / LMOP

Danville City SLF Landfill Category: Candidate A. GENERAL LANDFILL INFORMATION Landfill Owner: 114,400 Annual Acceptance Rate (tons): Landfill Owner Type: **Public** Year Annual Acceptance Rate Reported: Alternative Landfill Name: Design Capacity (tons): Danville Acres Currently Landfilled (acres): City: County: Danville Average Depth (feet): State: VA Waste-in-Place (tons): 2,745,600 Year Open: 1973 1998 Waste-in-Place (tons): 2,745,600 Year Closed: B. LANDFILL GAS COLLECTION Estimated Methane Generation (mmscf/d): 1.12 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:** Potential Utilization System Type: Unknown Utilization System Start Year: Electric Utility Provider(s): Natural Gas Provider(s): Energy Purchaser(s): OR Capacity: Electricity Generation Project (MW) Direct Use Project (mmBtu/hr) Estimated Potential Capacity: 4 35 Current Capacity: Planned Capacity: **Utilities in County:** Southeastern Power Admin D. ENVIROMENTAL BENEFITS OF UTILIZATION **Potential** Current 0 Methane Reduction (tons/yr): 6,477 CO2 Equivalent of CH4 Reduction (tons/yr): 136,013 0 Emissions Avoided by Fossil Fuel Displacement: **Electricity Generation Project** Direct Use Project CO2 (tons/yr) SO2 (tons/yr) CO2 (tons/yr) SO2 (tons/yr) Coal: 27,625 175 19.504 178 Fuel Oil: 22,673 146 16,008 93 Natural Gas: 15,246 0 10,764 0 E. CONTACT INFORMATION Landfill Owner Landfill Operator Contact Name: Tom Spicer, City Manager PO Box 3300 Mailing Address: PO Box 3300 Phone Number: 804-799-5245 804-799-5100 Fax Number: \* Itallicized indicates values estimated by EPA. December 5, 1998 State: VA 10 Page:

		Dinwiddie County Landf	ill Gas Projec	ct	Landfill Car	tegory: Shutdown
	A. GI	ENERAL LANDFILL I	NFORMAT	ION		
Landfill Owner:	Dinwiddie County	A	nnual Accep	tance Rate (	tons):	
Landfill Owner Type:	Public	Y	ear Annual A	Acceptance I	Rate Reported:	
Alternative Landfill Name:	Dinwiddie County LF	D	esign Capaci	ty (tons):		
City:	Dinwiddie	Α	cres Current	ly Landfilled	d (acres):	10
County:	Dinwiddie	Α	verage Dept	h (feet):		30
State:	VA	1	994 Waste-ii	n-Place (ton	s):	450,000
Year Open:	1979	19	998 Waste-in	-Place (tons	·):	450,000
Year Closed:	1994					
	В	. LANDFILL GAS CO	LLECTION	8 (19 y )		9.46.31
Estimated Methane Generation	on (mmscf/d):		0.16			
LFG Collection System Statu	· ·	Ope	erational			
Current LFG Collected (mms			0.4			
Collection and Treatment Sys	tem Required Under NSP	S/EG:	No			
	, (C	LANDFILL GAS UT	ILIZATION	I		
Current Utilization:				and the second design of		
Utilization System Statu	s: Shutdown					
Utilization System Type		o Engine				
Utilization System Start		5 25				
Electric Utility Provider						
Natural Gas Provider(s):		·				
Energy Purchaser(s):		tric & Power Co				
Energy Turenasor(s).	ingima bioc					
Capacity:	Electricit	y Generation Project (M'	W) (	OR	Direct Use Project (mr	nBtu/hr)
Estimated Potential Cap	acity:		1			5
Current Capacity:						
Planned Capacity:			0.8			8
Utilities in County:	Prince Georg	e Electric Coop; Southea	stern Power	Admin; Sou	thside Electric Coop Inc	; Virginia Elec
	D. ENVIR	OMENTAL BENEFIT	S OF UTILI	ZATION		
		Pote	ential		Curr	ent
Methane Reduction (tons/yr):				920		1,542
CO2 Equivalent of CH4 Redu	1			19,310		32,378
	iction (tons/yr).			17,510		3 <b>2</b> ,310
Emissions Avoided by Fossil	Fuel Displacement:	Electricity Gene	ration Projec	et	Direct Use	Project
		CO2 (tons/yr)	SO2 (to	ıs/yr)	CO2 (tons/yr)	SO2 (tons/yr)
	Coal:	3,946		25	2,769	25
•	ļ	,			·	
	Fuel Oil:	3,239		21	2,273	13
	Natural Gas:	2,178		0	1,528	0
	1	E. CONTACT INFOR	MATION		<del></del>	ż
***************************************	Landfill C				Landfill Operator	
Contact Name:						
Contact Ivanic.			i :			
Mailing Address:						
į				•		
Phone Number:			804-4	69-4545		
Fax Number:			; ;			
an indition.						
* Itallicized indicates values e	stimated by EPA.	Dec	ember 5, 199	8	State: VA	Page: 11
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Frederick County Winchester SLF Landfill Category: Candidate A. GENERAL LANDFILL INFORMATION Landfill Owner: Annual Acceptance Rate (tons): 121,550 **Public** Landfill Owner Type: Year Annual Acceptance Rate Reported: Alternative Landfill Name: Design Capacity (tons): City: Winchester Acres Currently Landfilled (acres): Frederick County: Average Depth (feet): · State: VA Waste-in-Place (tons): 3,160,300 Year Open: 1971 1998 Waste-in-Place (tons): 3,160,300 Year Closed: 2013 **B. LANDFILL GAS COLLECTION** Estimated Methane Generation (mmscf/d): 1.23 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:** Potential Utilization System Type: Leachate Evaporation Utilization System Start Year: Electric Utility Provider(s): Natural Gas Provider(s): Energy Purchaser(s): Electricity Generation Project (MW) OR Direct Use Project (mmBtu/hr) Capacity: Estimated Potential Capacity: 4 38 Current Capacity: Planned Capacity: Utilities in County: Potomac Edison Co: Southeastern Power Admin D. ENVIROMENTAL BENEFITS OF UTILIZATION Potential Current Methane Reduction (tons/yr): 7,090 0 CO2 Equivalent of CH4 Reduction (tons/yr): 148,892 0 Emissions Avoided by Fossil Fuel Displacement: **Electricity Generation Project** Direct Use Project CO2 (tons/yr) SO2 (tons/yr) CO2 (tons/yr) SO2 (tons/yr) Coal: 29,993 190 21,351 194 Fuel Oil: 24,617 159 17,524 102 Natural Gas: 16,553 0 11,783 0 E. CONTACT INFORMATION 74., Landfill Owner Landfill Operator Contact Name: Ed Strawsynder, Director of Public Works Mailing Address: 107 North Kent Street 9 North Loudoun Street 2nd floor Phone Number: 703-667-2365 Fax Number: December 5, 1998 \* Itallicized indicates values estimated by EPA. State: VA 12 Page:

		Greene County	Landfill Category: Candidate
	A. G	ENERAL LANDFILL INFORMATION	
Landfill Owner:	Greene County	Annual Acceptance Rate (	(tons):
Landfill Owner Type:	Public	Year Annual Acceptance	Rate Reported:
Alternative Landfill Name:	Greene County LF	Design Capacity (tons):	
City:	Stanardsville	Acres Currently Landfilled	d (acres):
County:	Greene	Average Depth (feet):	
State:	VA	Waste-in-Place (tons):	
Year Open:		1998 Waste-in-Place (tons	5):
Year Closed:		D. LANDEN I. CASCOLLECTION	
		B. LANDFILL GAS COLLECTION	
Estimated Methane Generation			
LFG Collection System Status		Planned	
Current LFG Collected (mmsc		00/FG	
Collection and Treatment Syst	-	PS/EG: No C. LANDFILL GAS UTILIZATION	
		C. LANDFILE GAS CHEIZATION	
Current Utilization:	TD1 1		
Utilization System Status		T. T.	
Utilization System Type:	Reciprocation	ng Engine	
Utilization System Start			
Electric Utility Provider(s)  Natural Gas Provider(s):	s):		
• * *			
Energy Purchaser(s):			
Capacity:	Electrici	ty Generation Project (MW) OR	Direct Use Project (mmBtu/hr)
Estimated Potential Capa	acity:		
Current Capacity:			
Planned Capacity:		.3	:
Utilities in County:	Central Virg	ginia Electric Coop; Rappahannock Electric Coop;	Southeastern Power Admin; Virginia E
	D. ENVI	ROMENTAL BENEFITS OF UTILIZATION	
		Potential	Current
Methane Reduction (tons/yr):			
CO2 Equivalent of CH4 Reduc	ction (tons/yr):		
-			
Emissions Avoided by Fossil F	uel Displacement:	Electricity Generation Project	Direct Use Project
		CO2 (tons/yr) SO2 (tons/yr)	CO2 (tons/yr) SO2 (tons/yr)
	Coal:		
	Fuel Oil:		
	Natural Gas:	_	
1.55		E-CONTA CE INCODA A TION	
<u> </u>	Landfill	Contact information Owner	Landfill Operator
Contact Name:	Langilli	!	Saturn Operator
i		,	ļ.
Mailing Address:			
Phone Number:		804-985-7803	
Fax Number:			
* Itallicized indicates values es	timated by EPA.	December 5, 1998	State: VA Page: 13

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			Independent Hill LF I			TT.	Landfill Categor	y: Current
·		A. Gl	ENERAL LANDFILL	INFORM	ATION		······································	
Landfill Owner:	Prince	William County		Annual Ac	ceptance Ra	ate (tons):		171,600
Landfill Owner Type:	Public			Year Annu	al Acceptar	nce Rate Report	ed:	
Alternative Landfill Na	me: Prince	William County	LF	Design Cap	pacity (tons	s):		!
City:	Prince '	William		Acres Curr	ently Landi	filled (acres):		860
County:	Prince '	William		Average D	epth (feet):			!
State:	VA			Waste-in-P	lace (tons):	:		
Year Open:	1971			1998 Wast	e-in-Place (	(tons):		!
Year Closed:	2021							
	<u>-</u>	В	. LANDFILL GAS C	OLLECTI	ON			
Estimated Methane Ge	neration (mmsc	f/d):						
LFG Collection System	n Status:							
Current LFG Collected	(mmscf/d):							
Collection and Treatme	ent System Requ	uired Under NSP	S/EG:	No				
		(	C. LANDFILL GAS U	TILIZATI	ON			
Current Utilization:								
Utilization System	Status:	Construction						
Utilization System		Reciprocatin	g Engine					
Utilization System		1998						
Electric Utility Pro								
Natural Gas Provi	• •							
Energy Purchaser		Northern Vir	ginia Electric Corp					1.
Capacity:		Electricit	y Generation Project (M	MW)	OR	Direct Us	e Project (mmBtu/	'hr)
Estimated Potenti	al Capacity:							A Company of the Comp
Current Capacity:								
Planned Capacity:				1.6				1
Trillia de Company		NI - 4b 37'-	- : : : Fl - : C : C - : 1			37' ' - ' - T'l	'- A Davis Ca	
Utilities in County:			ginia Elec Coop; South				1c & Power Co	
		D. ENVIR	OMENTAL BENEFI	15 OF U1	ILIZATIO	JN .		
			Po	otential			Current	
Methane Reduction (to	•							
CO2 Equivalent of CH	4 Reduction (to	ns/yr):						
Emissions Avoided by	Fossil Fuel Disa	nlacement:	Electricity Ger	neration Pr	oiect		Direct Use Proje	oct
Emissions Avoided by	ossii i uei Disp	лисетет.	CO2 (tons/yr)		(tons/yr)	CO2		SO2 (tons/yr)
			COL (tottaryt)	502	( consi yi j	002	1.01001 71 /	(ionsiyi)
		Coal:						
		Fuel Oil:						
	· N	latural Gas:						
			E. CONTACT INFO	)RMATIO	N			
		Landfill (	Calculation of the Calculation o	KWATIO	14		Operator	
Contact Name:	Thomas Smith		. 16 16	Tì	nomas Smit	h		
Mailing Add				İ				i į
Mailing Address:	43/9 Kidgewo	od Center Drive		43	79 Kiagew	ood Center Driv	ve	;
DI N. I				:				
Phone Number:	703-792-6254			70	3-792-6254	4		. ;
Fax Number:								 
* Itallicized indicates v	alues estimated	by EPA.	De	ecember 5,	1998	Sta	nte: VA Pag	ge: 14

				Loudoun Cou	inty LF		Landfil	ll Category: 🕔	Candidate
	7.70		A. GENER	AL LANDFILI	INFORMA	TION			
Landfill Owner:	Loudor	County			Annual Acc	eptance Rate	(tons):		57,200
Landfill Owner Type:	Public					•	Rate Reported:		,
Alternative Landfill N					Design Capa	-	p		
City:						ntly Landfille	ed (acres):		88
County:	Loudou	ın			Average De	•	-		
State:	VA				Waste-in-Pla	•		1.	,487,200
Year Open:	1971					in-Place (ton	s):		,487,200
Year Closed:	2010						•	-,	, ,
			B. LAN	DFILL GAS C	OLLECTIO	N			
Estimated Methane Ge		f/J).	and the state of t	and the second s	0.80	<u> </u>		<u> </u>	. Y . SW & # . Y Y
LFG Collection System		μα).			0.80				
Current LFG Collected									
Collection and Treatm		uired Linda	or NSPS/FG		No				
Concessor and Heatin	om oystem requ	anca Ond		DFILL GAS U		)N			
			C.LAI	WITE GAS C	TIDIZATIC	<i>7</i> 11			
Current Utilization:	C	•••							
Utilization System		Unkno		•					
Utilization System	• •	Unkno	own						
Utilization System									
Electric Utility Pr									
Natural Gas Prov									
Energy Purchaser	(8):								
Capacity:		El	ectricity Gene	eration Project (N	MW)	OR	Direct Use Projec	t (mmBtu/hr)	
Estimated Potenti	ial Capacity				3				25
Current Capacity:					J				<i>ب</i> يند
Planned Capacity					•				
ica cupacity	•					1	•		
Utilities in County:		North	ern Virginia E	lec Coop; South	eastern Powe	er Admin; Vi	rginia Electric & Po	wer Co	
		D. F	ENVIROME	NTAL BENEFI	TS OF UTI	LIZATION			
under de la la la la la la la la la la la la la	100 mt (m. ). visson (iz. 325 m. )(i			P	otential			Current	
Methane Reduction (to	ons/vr):					4,616			0
CO2 Equivalent of CH	•	ns/vr):				96,934			0
	. Meanchon (101					70,754			
Emissions Avoided by	Fossil Fuel Disp	olacement:		Electricity Ger	neration Proj	ect	Direct	Use Project	
				CO2 (tons/yr)	SO2 (1	ons/yr)	CO2 (tons/yr,	SO2	(tons/yr)
		Coa	<i>l</i> :	19,732		125	13,90	0	127
							ļ		
		Fuel Oi	t:	16,195		104	11,40	19	67
	N	atural Ga	s: ,	10,890		0	7,67	1	0
<u></u>			E. CO	ONTACT INFO	PRMATION	1.5		)	
<u> </u>	<u></u>	La	ndfill Owner				Landfill Operato	<u> </u>	
Contact Name:	Richard S. Wel	bber. Denz	artment Engin	eer	Roh	ert Montgom	<u> </u>		
		-	25		:		-		
Mailing Address:	750 Miller Driv	ve				Miller Drive			
	Suite 200				Suit	e 200			
Phone Number:	703-771-5200				703	-771-5200			
Fax Number:					;				
* Itallicized indicates v	alues estimated	by EPA.		De	ecember 5, 19	998	State: VA	Page:	15
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7									

<del>1 </del>		A. GE	Lynchburg Cit		ION	Landfill Cate	egory: Candidate			
Landfill Owner:	Lynchh	ourg City		annual Accep		(tone):	85,800			
Landfill Owner Type:	Public	oug City		-		Rate Reported:	63,600			
Alternative Landfill Nar				eai Ailliuai 7 Design Capac	-	Kate Reported.				
City:	Lyncht	niro		Acres Currently Landfilled (acres):						
County:	Lynchb	=		verage Dept	-	ou (ucros).				
State:	VA	, <b></b> 6		Vaste-in-Plac			1,544,400			
Year Open:	1979			998 Waste-in	, ,	15).	1,544,400			
Year Closed:	1995		•				-, ,			
		В	LANDFILL GAS CO	LLECTION						
Estimated Methane Gen	eration (mmsc	f/d):		0.81						
LFG Collection System		, ,-								
Current LFG Collected (										
Collection and Treatmer		uired Under NSPS	S/EG:	No						
			. LANDFILL GAS UT	ILIZATION	1					
Current Utilization:										
Utilization System	Status:	Planned								
Utilization System		Direct Therm	al							
Utilization System		2000								
Electric Utility Pro										
Natural Gas Provid										
Energy Purchaser(s	* *	Rock Tenn								
		****				<b></b>	- ·			
Capacity:		Electricity	Generation Project (M		OR T	Direct Use Project (mm				
Estimated Potential	l Capacity:			3			25			
Current Capacity:										
Planned Capacity:		•	·							
Utilities in County:		Appalachian 1	Power Company; South	eastern Powe	r Admin					
		D. ENVIR	OMENTAL BENEFIT	S OF UTIL	ZATION	100 A 100 A				
			The state of the s	ential		Curre	nt			
Methane Reduction (ton.	α <b>Δ</b> ιπ).		Foi	епни	4,701	Curre	0			
CO2 Equivalent of CH4	-	nchir):			98,711		0			
CO2 Equivalent of CH4	(10)	13/y/).			70,711					
Emissions Avoided by Fo	ossil Fuel Dis <sub>l</sub>	olacement:	Electricity Gene	ration Projec	ct	Direct Use I	Project			
			CO2 (tons/yr)	SO2 (to	ns/yr)	CO2 (tons/yr)	SO2 (tons/yr)			
		Coal:	19,732		125	14,155	129			
		Fuel Oil:	16,195		104	11,618	68			
	N	atural Gas:	10,890	•	0	7,812	0			
		7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7	E. CONTACT INFO	RMATION	K. 14.070					
			S. A.	the state of the s						
		Landfill O	S. A.			Landfill Operator				
Contact Name:	, City Manage		S. A.			Landfill Operator				
	_		S. A.	PO B	ox 60	Landfill Operator				
	, City Manage PO Box 60		S. A.	РО В	ox 60	Landfill Operator				
Mailing Address:	PO Box 60		S. A.	; ;		Landfill Operator				
Mailing Address:	_		S. A.	; ;	ox 60 347-1659	Landfill Operator				

		-	ewood Recycling and Was ENERAL LANDFILL 1		Landfill Co	ategory: Candidate
Landfill Owner:	<u> </u>		A	nnual Acceptance Rate	and the second s	1,430,000
Landfill Owner Type:	Private			ear Annual Acceptance	•	-,,
Alternative Landfill Na	ame: Chamb	ers Maplewood		esign Capacity (tons):	•	25,794,841
City:	Amelia	=		cres Currently Landfille	ed (acres):	404
County:	Amelia	l	A	verage Depth (feet):		
State:	VA		W	/aste-in-Place (tons):		5,720,000
Year Open:	1993		19	998 Waste-in-Place (tor	ıs):	5,720,000
Year Closed:	2011					
	<u> </u>	* ***	B. LANDFILL GAS CO	LLECTION	3.1.1	
Estimated Methane Ge	•	f/d):		1.88		
LFG Collection System						
Current LFG Collected						
Collection and Treatme	ent System Req			No		
		<u>. 150 (3 %)</u>	C. LANDFILL GAS UT	ILIZATION		
Current Utilization:						
Utilization Systen		Planned				
Utilization System		Unknown				
Utilization System						
Electric Utility Pr						
Natural Gas Provi	• •					
Energy Purchaser	(S):					
Capacity:		Electric	ity Generation Project (M	W) OR	Direct Use Project (m	mBtu/hr)
Estimated Potenti	al Capacity:			6		59
Current Capacity:						
Planned Capacity:						
Utilities in County:		Southeaster	n Power Admin; Southside	Electric Coop Inc; Vir	ginia Electric & Power (	Со
		D. ENVI	ROMENTAL BENEFIT	S OF UTILIZATION	V (1984)	1,000
			Pote	ential	Cur	rent
Methane Reduction (to	ns/yr):			10,875		0
CO2 Equivalent of CH	4 Reduction (to	ns/yr):		228,381		0
Emissions Avoided by	Fossil Fuel Dies	olacoment:	Electricity Gene	ration Project	Direct Use	Project
Linissions Avoided by I	rossu ruei Disį	лисетені.	CO2 (tons/yr)	SO2 (tons/yr)	CO2 (tons/yr)	SO2 (tons/yr)
		<i>C</i> 1		·		
		Coal:	46,567	294	32,750	298
		Fuel Oil:	38,220	246	26,879	157
	N	atural Gas:	25,700	0	18,074	0
411	s'		E. CONTACT INFOR	MATION	<del></del>	
····		Landfill	Owner		Landfill Operator	
Contact Name:	Lee Wilson			Ronald Beaton		
Mailing Address:	PO Box 168			PO Box 168		
Phone Number:	804-561-5787			804-561-5787		
:	55- 501-5161			304 301-3707		
Fax Number:				· ·		
* Itallicized indicates ve	alues estimated	by EPA.	Dec	ember 5, 1998	State: VA	Page: 17
	on 1.0 / LMOP	•		•	·	

			Martinsville C			Landfill Car	tegory: Candidate
		A. (	SENERAL LANDFILL	INFORMAT	TION		
Landfill Owner:				Annual Accep	otance Rate	(tons):	92,950
Landfill Owner Type:	Public					Rate Reported:	
Alternative Landfill Na	ame:			Design Capac		•	
City:	Martins	ville		Acres Curren	•	ed (acres):	
County:	Martins	ville		Average Dept	•		
State:	VA			Waste-in-Plac			2,323,750
Year Open:	1972			1998 Waste-ii	` '	16).	2,323,750
Year Closed:	2272				(10.	,.	_,,
Tour Closed.			B. LANDFILL GAS C	OLLECTION	1		-
Estimated Methane Ge	neration (mmsc)	f/d):		1.01			
LFG Collection System	-	•					
Current LFG Collected							
Collection and Treatme	· ·	ired Under NS	PS/EG:	No			į
		· · · · · · · · · · · · · · · · · · ·	C. LANDFILL GAS U	TILIZATIO	N ·		
Current Utilization:			-				
Utilization System	Status:	Potential					
Utilization System		Unknown					
Utilization System							
Electric Utility Pro							
Natural Gas Provi							
Energy Purchaser							
6,	(-)-						
Capacity:		Electric	ity Generation Project (N	MW)	OR	Direct Use Project (mr	nBtu/hr)
Estimated Potentia	al Capacity:			3		•	32
Current Capacity:							
Planned Capacity:							
Utilities in County:	<u>-</u>	Southeaster	n Power Admin		1		
Cuntes in County.			ROMENTAL BENEFI	TS OF LETT	17 ATION		
		D. EINYI	T	<u> </u>	IZATION	_	
			Pe	otential		. Curr	<b>.</b>
Methane Reduction (to					5,853		0
CO2 Equivalent of CH-	4 Reduction (tor	ıs/yr):			122,913		0
Emissions Avoided by I	Fassil Fuel Disn	lacement:	Electricity Ger	aration Proje	ct	Direct Use	Project
Emissions Avoided by I	Ossii Tuei Disp	исетет.	CO2 (tons/yr)	SO2 (to		CO2 (tons/yr)	SO2 (tons/yr)
		_		302 (10	•		
		Coal:	25,257		160	17,625	160
		Fuel Oil:	20,730		133	14,466	84
	N	atural Gas:	13,939		0	9,727	0
	7. C		E. CONTACT INFO	RMATION	•		
		Landfill	Owner			Landfill Operator	
Contact Name:	Jeff Joyce, City	Manager					
Mailing Address:	PO Box 112			55 W	est Church	Street	
	· · · · -			,	** +*******		
Phone Number:	540-656-5177			1			
	5 <del>-1</del> 0-050-5177						
Fax Number:							
* Itallicized indicates ve	alues estimated	by EPA.	De	ecember 5, 19	98	State: VA	Page: 18

			Newport New	s LF		Landfill Categ	ory: Candidate
		A. (	GENERAL LANDFILL	NFORMAT	ION		
Landfill Owner:	City of	Newport News	A	Annual Accep	tance Rate	(tons):	0
Landfill Owner Type:	Public		Y	ear Annual.	Acceptance	Rate Reported:	1998
Alternative Landfill N	ame:		Γ	Design Capac	ity (tons):		
City:	Newpo	rt News	A	cres Current	ly Landfille	ed (acres):	50
County:			A	verage Dept	h (feet):		80
State:	VA			1998 Waste-i	n-Place (to	ns):	1,250,000
Year Open:	1984		1	998 Waste-ii	ı-Place (ton	s):	1,250,000
Year Closed:	1998						
	6.63		B. LANDFILL GAS CO	LLECTION	T Company		
Estimated Methane G	eneration (mmsc	·f/d):		0.74			
LFG Collection System		•					
Current LFG Collecte							
Collection and Treatm	ent System Req	uired Under NS	PS/EG:	No			
			C. LANDFILL GAS UI	ILIZATIO!	١ .		
Current Utilization:	<u> </u>	,				<u> </u>	
Utilization System	m Status:	Unknown					
Utilization System		Unknown					
Utilization System		Olikhown					
Electric Utility P							
Natural Gas Prov							
Energy Purchase	• •						
Lifetgy 1 dichases	1(3).						
Capacity:		Electric	ity Generation Project (M	<b>W</b> )	OR	Direct Use Project (mmB	tu/hr)
Estimated Potent	ial Capacity:			2			23 .
Current Capacity	= :			-			
Planned Capacity					i		
					1		
Utilities in County:							•
22.5		D. ENVI	ROMENTAL BENEFIT	S OF UTIL	IZATION	7233 A	1374
			Pot	ential		Current	
Methane Reduction (to	ons/vr):				4,265		0
CO2 Equivalent of CH	•	ns/vr):			89,567		0
	,				······		
Emissions Avoided by	Fossil Fuel Disp	placement:	Electricity Gene	ration Proje	ct	Direct Use Pro	oject
			CO2 (tons/yr)	SO2 (to	ns/yr)	CO2 (tons/yr)	SO2 (tons/yr)
		Coal:	18,153		115	12,844	117
		Fuel Oil:	14,899		96	10,542	61
•							
	N	latural Gas:	10,019		0	7,088	0
200	34.2		E. CONTACT INFO	RMATION			
and the dimensional and a second and a second and a second and a second and a second and a second and a second		Landfill	Owner	N. S. andrewsky, A. S.		Landfill Operator	
Contact Name:	David Sinclair			David	l Sinclair		
	!					n 1	
Mailing Address:	513 Oyster Poi	int Road		513 (	Dyster Point	Koad	
	i						
Phone Number:	757-886-7948			757-8	886-7948		
Fax Number:	1						
	i 	<del> </del>		<del> </del>			
* Itallicized indicates v	values estimated	by EPA.	Dec	ember 5, 199	98	State: VA F	Page: 19
STAR Vers	ion 1.0 / LMOP						

			ort News Solid Waste D		. •	Landfill Ca	tegory: Candidate
		A. G	ENERAL LANDFILL	INFORM	ATION		
Landfill Owner:				Annual Acc	ceptance Rate	(tons):	171,600
Landfill Owner Type:	Public			Year Annua	al Acceptance	Rate Reported:	
Alternative Landfill Nan	ne: Newpo	rt News City LF		Design Cap	acity (tons):		
City:	Newpo	rt News		Acres Curre	ently Landfille	ed (acres):	
County:	Newpo	rt News		Average De	epth (feet):		80
State:	VA			1998 Wast	e-in-Place (to	ns):	1,250,000
Year Open:	1984			1998 Waste	-in-Place (ton	ıs):	1,250,000
Year Closed:	1996						
			3. LANDFILL GAS CO	OLLECTIO	ON		
Estimated Methane Gene	eration (mmsc	·f/d):		0.74			
LFG Collection System		,		•			
Current LFG Collected (							
Collection and Treatmen	t System Req	uired Under NSF	PS/EG:	No			
			C. LANDFILL GAS U	TILIZATI	ON		
Current Utilization:							
Utilization System	Status:	Planned					
Utilization System		Reciprocation	o Engine				
Utilization System		1999	ig Eligino				
Electric Utility Prov		1,,,,					
Natural Gas Provide							
Energy Purchaser(s	* *						
Divigy 1 dichaser(s	,.						
Capacity:		Electrici	ty Generation Project (M	MW)	OR	Direct Use Project (mi	nBtu/hr)
Estimated Potential	Capacity:			2			23
Current Capacity:	- up usus,						
Planned Capacity:							
Utilities in County:			Power Admin; Virginia				
		D. ENVII	ROMENTAL BENEFT	TS OF UT	ILIZATION	1	
			Pa	otential		Curr	ent
Methane Reduction (tons	s/yr):				4,265		0
CO2 Equivalent of CH4	Reduction (to	ns/yr):			89,567		0
			_,				<u> </u>
Emissions Avoided by Fo	ossil Fuel Dis <sub>l</sub>	placement:	Electricity Gen		-	Direct Use	-
			CO2 (tons/yr)	SO2	(tons/yr)	CO2 (tons/yr)	SO2 (tons/yr)
		Coal:	18,153		115	12,844	117
		Fuel Oil:	14,899		96	10,542	61
	٨	latural Gas:	10,019		0	7,088	0
		annar das.		DACATECO		,,,,,,	
		Landfill	E. CONTACT INFO	KMATIU	ν	Landfill Operator	
Contact Name:		· · · · · · · · · · · · · · · · · · ·				Landin Operator	
Contact Name:	David Sinclair	, Solid Waste Ac	lministrator	Da	vid Sinclair		
Mailing Address: 2	2400 Washing	ton Avenue		24	00 Washingto	n Avenue	
Phone Number:	804-249-5700			80	4-249-5700		
Fax Number:							
* Itallicized indicates val	ues estimated	by EPA.	De	ecember 5,	1998	State: VA	Page: 20

Nuckols Road LF Candidate Landfill Category: A. GENERAL LANDFILL INFORMATION Landfill Owner: Henrico County Annual Acceptance Rate (tons): 114,400 Public Landfill Owner Type: Year Annual Acceptance Rate Reported: Alternative Landfill Name: Springfield Road LF #1 Design Capacity (tons): City: Richmond 92 Acres Currently Landfilled (acres): Henrico 70 County: Average Depth (feet): State: VA 1998 Waste-in-Place (tons): 2,745,600 Year Open: 1965 1998 Waste-in-Place (tons): 2,745,600 1990 Year Closed: B. LANDFILL GAS COLLECTION 1.04 Estimated Methane Generation (mmscf/d): LFG Collection System Status: Operational Current LFG Collected (mmscf/d): Collection and Treatment System Required Under NSPS/EG: No C. LANDFILL GAS UTILIZATION Current Utilization: **Utilization System Status:** Planned Utilization System Type: Unknown Utilization System Start Year: Electric Utility Provider(s): Natural Gas Provider(s): Energy Purchaser(s): Virginia Electric & Power Co Electricity Generation Project (MW) OR Direct Use Project (mmBtu/hr) Capacity: Estimated Potential Capacity: 3 32 Current Capacity: Planned Capacity: **Utilities in County:** Southeastern Power Admin; Virginia Electric & Power Co D. ENVIROMENTAL BENEFITS OF UTILIZATION **Potential** Current Methane Reduction (tons/yr): 5,990 0 CO2 Equivalent of CH4 Reduction (tons/yr): 125,782 0 Emissions Avoided by Fossil Fuel Displacement: **Electricity Generation Project** Direct Use Project CO2 (tons/yr) SO2 (tons/yr) CO2 (tons/yr) SO2 (tons/yr) Coal: 25,257 18,037 164 160 Fuel Oil: 20,730 133 14,804 86 Natural Gas: 13,939 0 9,954 0 E. CONTACT INFORMATION Landfill Operator Landfill Owner Contact Name: , Director Public Works 410 Dabbs House Road Parham and Hungary Springs Rd Mailing Address: PO Box 27032 Phone Number: 804-672-4393 804-672-4393 Fax Number: December 5, 1998 \* Itallicized indicates values estimated by EPA. State: VA Page: 21 STAR Version 1.0 / LMOP

		Old Dominion		Landfill Ca	ategory: Current
	A. G	ENERAL LANDFIL	L INFORMATION		
Landfill Owner:	BFI		Annual Acceptance Rate	(tons):	
Landfill Owner Type:	Private		Year Annual Acceptance	Rate Reported:	
Alternative Landfill Name:	Richmond Landfill Gas	Project; Richmond L	Design Capacity (tons):		
City:	Richmond		Acres Currently Landfille	ed (acres):	,
County:	Henrico		Average Depth (feet):		
State:	VA		Waste-in-Place (tons):		;
Year Open:			1998 Waste-in-Place (tor	ns):	i
Year Closed:					
		B. LANDFILL GAS (	COLLECTION		
Estimated Methane Generation	ı (mmscf/d):				
LFG Collection System Status:	:	(	Operational		
Current LFG Collected (mmsc	f/d):		0.9		
Collection and Treatment Syste	em Required Under NSF	PS/EG:	No		
		C. LANDFILL GAS	JTILIZATION	<u> </u>	. 25%
Current Utilization:					
Utilization System Status:	Operational				
Utilization System Type:	Reciprocatir	g Engine			
Utilization System Start Y					
Electric Utility Provider(s					
Natural Gas Provider(s):	•				
Energy Purchaser(s):	Virginia Ele	ctric & Power Co			
••	_				
Capacity:	Electrici	ty Generation Project (	MW) OR	Direct Use Project (m	mBtu/hr)
Estimated Potential Capa	city:		!		
Current Capacity:			2.9		19
Planned Capacity:					
Utilities in County:	Southeastern	Power Admin; Virgin	ia Electric & Power Co		
	D. ENVII	ROMENTAL BENEF	ITS OF UTILIZATION	Sec. 1753	
		I	Potential	Cur	rent
Methane Reduction (tons/yr):		_			
CO2 Equivalent of CH4 Reduc	tion (tons/vr)				
- Co 2 Equivalent of CITY Rouse					
Emissions Avoided by Fossil F	uel Displacement:	Electricity Ge	eneration Project	Direct Use	Project
		CO2 (tons/yr)	SO2 (tons/yr)	CO2 (tons/yr)	SO2 (tons/yr)
	Coal:				
	Fuel Oil:				
	Natural Gas:				
		E CONTACTINE	ODMATION		
	Landfill	E. CONTACT INF	UNIVIATION	Landfill Operator	
Control Norman	Landini			Landini Operator	
Contact Name:					
Mailing Address:					
Phone Number:	,				
Fax Number:					
* Itallicized indicates values es	timated by EPA		December 5, 1998	State: VA	Page: 22

Petersburg City LF Landfill Category: Candidate A. GENERAL LANDFILL INFORMATION Landfill Owner: City of Petersburg Annual Acceptance Rate (tons): 57,200 Landfill Owner Type: **Public** Year Annual Acceptance Rate Reported: Design Capacity (tons): Alternative Landfill Name: City: Petersburg Acres Currently Landfilled (acres): 75 County: Petersburg Average Depth (feet): State: ٧A Waste-in-Place (tons): 1,144,000 Year Open: 1977 1998 Waste-in-Place (tons): 1,144,000 Year Closed: 2002 B. LANDFILL GAS COLLECTION Estimated Methane Generation (mmscf/d): 0.71 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) 2 22 Estimated Potential Capacity: Current Capacity: Planned Capacity: **Utilities in County:** Southeastern Power Admin; Southside Electric Coop Inc; Virginia Electric & Power Co D. ENVIROMENTAL BENEFITS OF UTILIZATION Potential Current Methane Reduction (tons/vr): 4,108 0 CO2 Equivalent of CH4 Reduction (tons/vr): 86,276 0 Emissions Avoided by Fossil Fuel Displacement: Electricity Generation Project Direct Use Project CO2 (tons/yr) SO2 (tons/yr) SO2 (tons/yr) CO2 (tons/yr) 17,364 110 113 Coal: 12,372 Fuel Oil: 14,252 92 59 10,154 Natural Gas: 9,583 0 6,828 0 E. CONTACT INFORMATION Landfill Owner Landfill Operator Contact Name: Charles Dane Charles Dane 390 Industrial Drive 390 Industrial Drive Mailing Address: Phone Number: 804-733-2417 804-733-2417 Fax Number: December 5, 1998 \* Itallicized indicates values estimated by EPA. State: VA Page: 23 STAR Version 1.0 / LMOP

Landfill Owner Type:   Public   Year Annual Acceptance Rate Reported:   Alternative Landfill Name:   Suffolk Regional LF   Design Capacity (tons):				SPSA Regional		Landfill Category	: Current
Landfill Owner Type:			A. G	ENERAL LANDFILL II	NFORMATION		
Alternative Landfill Name:   Suffolk Regional LF   Design Capacity (tons):   Acres Currently Landfilled (acres):   Acres Currently Landfilled (acres):   Acres Currently Landfilled (acres):   Acres Cepthic (feet):   State:   VA   1998 Waste-in-Place (tons):   6.7   Acres Cepthic (feet):   7.5   Acres Cep	Landfill Owner:	SPSA		A	nnual Acceptance Rat	e (tons):	410,000
City: Suffolk Acres Currently Landfilled (acres): Average Depth (feet): State: VA 1998 Waste-in-Place (tons): 6.2 Year Open: 1985 1998 Waste-in-Place (tons): 6.2 Year Open: 1985 1998 Waste-in-Place (tons): 6.2 Year Closed: 2015    B. LANDFILL GAS COLLECTION	Landfill Owner Type:	Public		Y	ear Annual Acceptanc	e Rate Reported:	1998
Average Depth (Feet):   State:	Alternative Landfill Na	me: Suffolk	Regional LF				
State: VA   1998 Waste-in-Place (tons):   6.7	City:	Suffolk		Α	cres Currently Landfil	led (acres):	308
Year Open: 1985   1998 Waste-in-Place (tons):   6	County:			Α	verage Depth (feet):		140
Setting   Sett	State:	VA		1	998 Waste-in-Place (to	ons):	6,357,700
Estimated Methane Generation (mmscfrd):  LFG Collection System Status: Collection and Treatment System Required Under NSPS/EG:  CLANDFILL GAS UTILIZATION  Current LFG Collected (mmscfd): CLANDFILL GAS UTILIZATION  Current Utilization: Utilization System Status: Operational Utilization System Status: Operational Utilization System Status: Operational Utilization System Status: Operational Utilization System Staty Year: Plactric Utility Provider(s): Virginia Power Natural Gas Provider(s): Natural Gas Provider(s): Ocamonwealth Gas Energy Purchaser(s): Virginia Power  Capacity: Electric Utility Provider(s): Virginia Power  Capacity: Electric Utility Provider(s): Ocurrent Capacity: Ocurrent Capacity: Planned Capacity: Planned Capacity: Southeastern Power Admin; Virginia Electric & Power Co  (D. ENVIROMENTAL BENEFITS OF UTILIZATION)  Methane Reduction (tons/yr): CO2 Equivalent of CH4 Reduction (tons/yr): CO2 Equivalent of CH4 Reduction (tons/yr): CO2 (tons/yr) SO2 (tons/yr) SO2 (tons/yr) SO2 (tons/yr) Coal: So5,514 319 35,589 Fuel Oit: Al4,459 267 29,210 Natural Gas: Contact Name: Landfill Owner  Landfill Owner  Contact Name: Dan Miles Mailing Address: 723 Woodlake Phone Number: 757-420-4700 757-420-4700	Year Open:	1985		19	998 Waste-in-Place (to	ons):	6,357,700
Estimated Methane Generation (mmscfid):  LFG Collection System Status:  Current LFG Collection (mmscfid):  Clifection and Treatment System Required Under NSPS/EG:  Yes  CL LANDFILL GAS UTILIZATION  Current Utilization:  Utilization System Status:  Operational  Utilization System Status:  Utilization System Status:  Operational  Utilization System Status:  Utilization System Start Year:  1995  Electric Utility Provider(s):  Commonwealth Gas  Energy Purchaser(s):  Capacity:  Electricity Generation Project (MW)  OR  Direct Use Project (mmBtu/hr)  Estimated Potential Capacity:  Current Capacity:  Utilities in County:  Southeastern Power Admin; Virginia Electric & Power Co  DENVIROMENTAL BENEFITS OF UTILIZATION  Potential  Methane Reduction (tons/yr):  CO2 Equivalent of CH4 Reduction (tons/yr):  Emissions Avoided by Fossil Fuel Displacement:  Electricity Generation Project  CO2 (tons/yr)  SO2 (tons/yr)  SO2 (tons/yr)  SO2 (tons/yr)  SO2 (tons/yr)  SO2 (tons/yr)  SO2 (tons/yr)  Landfill Owner  Landfill Owner  Landfill Operator  Contact Name:  Dan Miles  Mailing Address:  723 Woodlake  Phone Number:  757-420-4700  Total Marker Agent Survey Agent Survey Agent Survey Agent Survey Agent Survey Agent Survey Agent Survey Agent Survey Agent Survey Agent Survey Agent Survey Su	Year Closed:	2015					· <del></del>
LFG Collection System Status: Operational Current LFG Collected (immschid): 1.8 Collection and Treatment System Required Under NSPS/EG: Yes  C. LANDFILL GAS UTILIZATION  Current Utilization: Utilization System Status: Operational Utilization System Status: 1995 Electric Utility Provider(s): Virginia Power Natural Gas Provider(s): Commonwealth Gas Energy Purchaser(s): Virginia Power  Capacity: Electricity Generation Project (MW) OR Direct Use Project (immBtu/hr)  Estimated Potential Capacity: 3.2 Planned Capacity: Southeastern Power Admin; Virginia Electric & Power Co  Utilization System Status: Operational Estimated Potential Capacity: 3.2 Planned Capacity: Southeastern Power Admin; Virginia Electric & Power Co  D. ENVIROMENTAL BENEFITS OF UTILIZATION  Methane Reduction (tons/yr): 248,184  Emissions Avoided by Fossil Fuel Displacement: Electricity Generation Project CO2 (tons/yr) SO2 (tons/yr) SO3 (		A.A.Q.,	<u> </u>	B. LANDFILL GAS CO			
Current LFG Collected (mmscl/d): 1.8 Collection and Treatment System Required Under NSPS/EG: Yes  Current Utilization:  Utilization System Status: Operational Utilization System Status: 1995 Electric Utility Provider(s): Virginia Power Natural Gas Provider(s): Commonwealth Gas Energy Purchaser(s): Virginia Power  Capacity: Electricity Generation Project (MW) OR Direct Use Project (mmBtu/hr)  Estimated Potential Capacity: 3.2 Planned Capacity: Southeastern Power Admin; Virginia Electric & Power Co  Utilities in County: Southeastern Power Admin; Virginia Electric & Power Co  Utilities in County: Southeastern Power Admin; Virginia Electric & Power Co  Utilities in County: Southeastern Power Admin; Virginia Power Co  Utilities in County: Southeastern Power Admin; Virginia Power Co  Utilities in County: Southeastern Power Admin; Virginia Power Co  Utilities in County: Southeastern Power Admin; Virginia Power Co  Utilities in County: Southeastern Power Admin; Virginia Power Co  Utilities in County: Southeastern Power Admin; Virginia Power Co  Utilities in County: Southeastern Power Admin; Virginia Power Co  Utilities in County: Southeastern Power Admin; Virginia Power Co  Utilities in County: Southeastern Power Admin; Virginia Power Co  Utilities in County: Southeastern Power Co  Utilities in County: Southeastern Power Co  Utilities in County: Southeastern Power Co  Utilities in County: Southeastern Power Co  Utilities in County: Southeastern Power Co  Utilities in County: Southeastern Power Co  Utilities in County: Southeastern Power Co  Utilities in County: Southeastern Power Co  Utilities in County: Southeastern Power Co  Utilities in County: Southeastern Power Co  Utilities in County: Southeastern Power Co  Utilities in County: Southeastern Power Co  Utilities in County: Southeastern Power Co  Utilities in County: Southeastern Power Co  Utilities in County: Southeastern Power Co  Utilities in County: Southeastern Power Co  Utilities in County: Southeastern Power Co  Utilities in County: Southeastern Power Co  Uti			f/d):				
Collection and Treatment System Required Under NSPS/EG: Yes  CUTION CUTTON CUTT	<del>-</del>			Ope			
C. LANDFILL GAS UTILIZATION  Current Utilization:  Utilization System Status:     Operational     Utilization System Type: Reciprocating Engine     Utilization System Type: Reciprocating Engine     Utilization System Start Year: 1995     Electric Utility Provider(s): Virginia Power     Natural Gas Provider(s): Commonwealth Gas     Energy Purchaser(s): Virginia Power  Capacity: Electricity Generation Project (MW) OR Direct Use Project (mmBtu/hr)  Estimated Potential Capacity: 6 Current Capacity: 3.2 Planned Capacity:  Utilities in County: Southeastern Power Admin; Virginia Electric & Power Co  ENVIROMENTAL BENEFITS OF UTILIZATION  Potential  Current  Methane Reduction (tons/yr): 11.818     CO2 Equivalent of CH4 Reduction (tons/yr): 248.184  Emissions Avoided by Fossil Fuel Displacement: Electricity Generation Project     CO2 (tons/yr) SO2 (tons/yr) SO2 (tons/yr)  Coal: 50,514 319 35.589  Fuel Oil: 41,459 267 29,210  Natural Gas: 27.878 0 19,641  E. CONTACT INFORMATION  Landfill Owner Landfill Operator  Contact Name: Dan Miles  Mailing Address: 723 Woodlake  Phone Number: 757-420-4700 757-420-4700		•					
Current Utilization:  Utilization System Status: Operational Utilization System Type: Reciprocating Engine Utilization System Start Year: 1995 Electric Utility Provider(s): Virginia Power Natural Gas Provider(s): Commonwealth Gas Energy Purchaser(s): Virginia Power  Capacity: Electricity Generation Project (MW) OR Direct Use Project (mmBtu/hr)  Estimated Potential Capacity: 6 Current Capacity: 3.2 Planned Capacity: Southeastern Power Admin; Virginia Electric & Power Co  Utilities in County: Southeastern Power Admin; Virginia Electric & Power Co    D. ENVIROMENTAL BENEFITS OF UTILIZATION		-					<del>,</del>
Utilization System Status: Operational Utilization System Type: Reciprocating Engine Utilization System Start Year: 1995 Electric Utility Provider(s): Virginia Power Natural Gas Provider(s): Commonwealth Gas Energy Purchaser(s): Virginia Power  Capacity: Electricity Generation Project (MW) OR Direct Use Project (mmBtu/hr)  Estimated Potential Capacity: 6 Current Capacity: 3,2 Planned Capacity: 3,2 Planned Capacity: 11,818 Current  Utilities in County: Southeastern Power Admin; Virginia Electric & Power Co  D. ENVIROMENTAL BENEFITS OF UTILIZATION  Methane Reduction (tons/yr): 11,818 CO2 Equivalent of CH4 Reduction (tons/yr): 248,184  Emissions Avoided by Fossil Fuel Displacement: Electricity Generation Project CO2 (tons/yr) SO2 (tons/yr) CO2 (tons/yr) SO2 (tons/y	<u> </u>	<u>,                                    </u>		C. LANDFILL GAS UI	ILIZATION		<u>e<sup>s s</sup> </u>
Utilization System Type: Reciprocating Engine Utilization System Start Year: 1995 Electric Utility Provider(s): Virginia Power Natural Gas Provider(s): Commonwealth Gas Energy Purchaser(s): Virginia Power  Capacity: Electricity Generation Project (MW) OR Direct Use Project (mmBtu/hr)  Estimated Potential Capacity: 3.2 Planned Capacity: 3.2 Planned Capacity: 11.818 Current Capacity: Planned Capacity: 11.818 CO2 Equivalent of CH4 Reduction (tons/yr): 248.184  Emissions Avoided by Fossil Fuel Displacement: Electricity Generation Project CO2 (tons/yr) SO2 (tons/yr) SO3 (ton							
Utilization System Start Year: Electric Utility Provider(s): Virginia Power  Natural Gas Provider(s): Commonwealth Gas Energy Purchaser(s): Virginia Power  Capacity:  Estimated Potential Capacity: Current Capacity: Planned Capacity:  Utilities in County:  Southeastern Power Admin; Virginia Electric & Power Co  DENVIROMENTAL BENEFITS OF UTILIZATION  Potential Methane Reduction (tons/yr): CO2 Equivalent of CH4 Reduction (tons/yr):  Emissions Avoided by Fossil Fuel Displacement: CO2 (tons/yr) SO2 (tons/yr) SO3 (tons/yr) SO3 (tons/yr) SO3 (tons/yr) SO3 (tons/yr) SO4 (tons/yr) SO5 (tons/yr) SO5 (tons/yr) SO5 (tons/yr) SO6 (tons/yr) SO7 (tons/yr) SO8 (tons/yr) SO8 (tons/yr) SO9 (tons/y	•		-	·			
Electric Utility Provider(s): Natural Gas Provider(s): Commonwealth Gas Energy Purchaser(s): Virginia Power  Capacity: Electricity Generation Project (MW) OR Direct Use Project (mmBtu/hr)  Estimated Potential Capacity: 6 Current Capacity: 3.2 Planned Capacity: 3.2 Utilities in County: Southeastern Power Admin; Virginia Electric & Power Co  D. ENVIROMENTAL BENEFITS OF UTILIZATION  Methane Reduction (tons/yr): 11,818 CO2 Equivalent of CH4 Reduction (tons/yr): 248,184  Emissions Avoided by Fossil Fuel Displacement: Electricity Generation Project CO2 (tons/yr) SO2 (tons/yr) SO2 (tons/yr) SO2 (tons/yr)  Coal: 50,514 319 35,589 Fuel Oil: 41,459 267 29,210 Natural Gas: 27,878 0 19,641  E. CONTACT INFORMATION  E. CONTACT INFORMATION  Landfill Owner Landfill Operator  Contact Name: Dan Miles  Mailing Address: 723 Woodlake Phone Number: 757,420,4700		= =	=	g Engine			
Natural Gas Provider(s): Commonwealth Gas Energy Purchaser(s): Virginia Power  Capacity: Electricity Generation Project (MW) OR Direct Use Project (mmBtu/hr)  Estimated Potential Capacity: 6 Current Capacity: 3.2 Planned Capacity: 1.2 Utilities in County: Southeastern Power Admin; Virginia Electric & Power Co  **D.*ENVIROMENTAL BENEFITS OF UTILIZATION**  **Potential** **CO2 Equivalent of CH4 Reduction (tons/yr): 248.184  **Emissions Avoided by Fossil Fuel Displacement: Electricity Generation Project CO2 (tons/yr) SO2 (tons/yr) SO3 (tons/yr) S	•						
Energy Purchaser(s): Virginia Power  Capacity: Electricity Generation Project (MW) OR Direct Use Project (mmBtu/hr)  Estimated Potential Capacity: 6 Current Capacity: 3.2 Planned Capacity: Utilities in County: Southeastern Power Admin; Virginia Electric & Power Co    D. ENVIROMENTAL BENEFITS OF UTILIZATION			=				
Capacity: Electricity Generation Project (MW) OR Direct Use Project (mmBtu/hr)  Estimated Potential Capacity: 6 Current Capacity: 3.2 Planned Capacity:	* *				•		
Estimated Potential Capacity: Current Capacity: Planned Capacity: Utilities in County:  Southeastern Power Admin; Virginia Electric & Power Co  D; ENVIROMENTAL BENEFITS OF UTILIZATION  Potential  Current  Methane Reduction (tons/yr): CO2 Equivalent of CH4 Reduction (tons/yr):  Emissions Avoided by Fossil Fuel Displacement: CO2 (tons/yr) Co3: Co4: S05,514 S19 S02 (tons/yr) S02 (tons/yr) S02 (tons/yr) S03: Co4: S05,514 S19 S15,589 Fuel Oil: 41,459 S267 S29,210 Natural Gas: CO5,514 S19 S15,589 Fuel Oil: A1,459 S267 S29,210 Natural Gas: Dan Miles  E. CONTACT INFORMATION  Landfill Owner Landfill Operator  Contact Name: Dan Miles Mailing Address: 723 Woodlake Phone Number: 757-420-4700  757-420-4700	Energy Purchaser(s	s):	Virginia Pov	ver			
Current Capacity:   3.2	Capacity:		Electricit	ty Generation Project (MV	W) OR	Direct Use Project (mmBtu/h	ır)
Planned Capacity:	Estimated Potentia	ıl Capacity:			6		64
Utilities in County:  Southeastern Power Admin; Virginia Electric & Power Co  D. ENVIROMENTAL BENEFITS OF UTILIZATION  Potential  Current  Methane Reduction (tons/yr):	Current Capacity:				3.2		38
### Potential Current    Methane Reduction (tons/yr):	Planned Capacity:						
Potential   Current	Utilities in County:		Southeastern	Power Admin; Virginia l	Electric & Power Co		
Methane Reduction (tons/yr):         11,818           CO2 Equivalent of CH4 Reduction (tons/yr):         248,184           Emissions Avoided by Fossil Fuel Displacement:         Electricity Generation Project CO2 (tons/yr)         Direct Use Project CO2 (tons/yr)           Coal:         50,514         319         35,589           Fuel Oil:         41,459         267         29,210           Natural Gas:         27,878         0         19,641           E. CONTACT INFORMATION           Landfill Owner         Landfill Operator           Contact Name:         Dan Miles         Dan Miles           Mailing Address:         723 Woodlake Drive           723 Woodlake         757-420-4700         757-420-4700		8,775	D. ENVIR	OMENTAL BENEFIT:	S OF UTILIZATION	V	
Methane Reduction (tons/yr):         11,818           CO2 Equivalent of CH4 Reduction (tons/yr):         248,184           Emissions Avoided by Fossil Fuel Displacement:         Electricity Generation Project CO2 (tons/yr)         Direct Use Project CO2 (tons/yr)           Coal:         50,514         319         35,589           Fuel Oil:         41,459         267         29,210           Natural Gas:         27,878         0         19,641           E. CONTACT INFORMATION         Landfill Operator           Contact Name:         Dan Miles         Dan Miles           Mailing Address:         723 Woodlake Drive           Phone Number:         757-420-4700         757-420-4700				Pote	ential	Current	
CO2 Equivalent of CH4 Reduction (tons/yr):         248,184           Emissions Avoided by Fossil Fuel Displacement:         Electricity Generation Project CO2 (tons/yr)         Direct Use Project CO2 (tons/yr)           Coal:         50,514         319         35,589           Fuel Oil:         41,459         267         29,210           Natural Gas:         27,878         0         19,641           E. CONTACT INFORMATION           Landfill Owner         Landfill Operator           Contact Name:         Dan Miles           Mailing Address:         723 Woodlake           Phone Number:         757-420-4700         757-420-4700	Methane Reduction (ton	ıs/vr):					6,938
Emissions Avoided by Fossil Fuel Displacement:   Electricity Generation Project   CO2 (tons/yr)   SO2 (tons/		-	ns/vr):				145,696
CO2 (tons/yr)   SO2 (tons/yr)   CO2 (tons/yr)   SO2 (tons/yr							
Coal:   50,514   319   35,589     Fuel Oil:   41,459   267   29,210     Natural Gas:   27,878   0   19,641     E. CONTACT INFORMATION     Landfill Owner   Landfill Operator     Contact Name:   Dan Miles   Dan Miles     Mailing Address:   723 Woodlake     Phone Number:   757-420-4700   757-420-4700	Emissions Avoided by F	ossil Fuel Disp	olacement:	Electricity Gener	ration Project	Direct Use Projec	rt .
Fuel Oil:         41,459         267         29,210           Natural Gas:         27,878         0         19,641           E. CONTACT INFORMATION           Landfill Owner         Landfill Operator           Contact Name:         Dan Miles         Dan Miles           Mailing Address:         723 Woodlake Drive           723 Woodlake         757-420-4700         757-420-4700				CO2 (tons/yr)	SO2 (tons/yr)	CO2 (tons/yr) Se	02 (tons/yr)
Fuel Oil:         41,459         267         29,210           Natural Gas:         27,878         0         19,641           E. CONTACT INFORMATION           Landfill Owner         Landfill Operator           Contact Name:         Dan Miles         Dan Miles           Mailing Address:         723 Woodlake Drive           723 Woodlake         757-420-4700         757-420-4700			Coal:	50.514	319	35.589	324
Natural Gas: 27,878 0 19,641   E. CONTACT INFORMATION   Landfill Owner   Landfill Operator				,			170
E. CONTACT INFORMATION  Landfill Owner Landfill Operator  Contact Name: Dan Miles Dan Miles  Mailing Address: 723 Woodlake  Phone Number: 757-420-4700 757-420-4700							
Contact Name: Dan Miles Dan Miles  Mailing Address: 723 Woodlake  Phone Number: 757-420-4700 757-420-4700		<i>N</i>	atural Gas:			19,641	0
Contact Name: Dan Miles Dan Miles  Mailing Address: 723 Woodlake Drive  723 Woodlake  Phone Number: 757-420-4700 757-420-4700	1.00				MATION		
Mailing Address:			Landill	Jwner		Landfill Operator	
723 Woodlake Phone Number: 757-420-4700 757-420-4700	Contact Name:	Dan Miles			Dan Miles		
Phone Number: 757-420-4700 757-420-4700	Mailing Address:			•	723 Woodlake	Drive	
757-420-4700	_	723 Woodlake					
	Phone Number:	757-420-4700			757-420-4700		
	Fax Number:	.27 .20 1700			.5. 120 1700		
* Itallicized indicates values estimated by EPA. December 5, 1998 State: VA Page:	* Itallicized indicates va	lues estimated	by EPA.	Dece	ember 5, 1998	State: VA Page	e: 24

			SPSA Regiona			Landfill Car	egory: Curren
	1.02/5	A. G	ENERAL LANDFILL	INFORMAT	ION		
Landfill Owner:	SPSA		A	Annual Accep	tance Rate (t	ons):	410,000
Landfill Owner Type:	Public		,	Year Annual A	Acceptance R	ate Reported:	1998
Alternative Landfill Nar	ne: Suffoll	k Regional LF	I	Design Capac	ity (tons):		
City:	Suffoll	k	A	Acres Current	ly Landfilled	(acres):	308
County:			A	Average Depth (feet):			140
State:	VA			1998 Waste-i	n-Place (tons	):	6,357,700
Year Open:	1985		I	998 Waste-in	-Place (tons)	):	6,357,700
Year Closed:	2015						
		1	B. LANDFILL GAS.CC	LLECTION	l de se		
Estimated Methane Gen	•	cf/d):		2.04			
LFG Collection System							
Current LFG Collected (				1.8			
Collection and Treatmer	nt System Req	·		Yes			
	1111		C. LANDFILL GAS UI	TILIZATION	1		
Current Utilization:							
Utilization System		Operational					
Utilization System		Leachate Ev	aporation				
Utilization System		1995					
Electric Utility Pro		Virginia Pov					
Natural Gas Provid	` '	Commonwe					
Energy Purchaser(s	):	Virginia Pov	ver				
Capacity:		Electrici	ty Generation Project (M	W) (	OR	Direct Use Project (mr	nBtu/hr)
Estimated Potentia	l Capacity:			6			64
Current Capacity:		·					38
Planned Capacity:							
Utilities in County:		.L					
		D. ENVII	ROMENTAL BENEFIT	S OF UTIL	ZATION		
			Poi	tential		Curr	ent
Methane Reduction (ton	s/vr):				11,818		6,938
CO2 Equivalent of CH4	•	ons/yr):			248,184		145,696
Emissions Avoided by F	ossil Fuel Dis	placement:	Electricity Gene	•		Direct Use	-
			CO2 (tons/yr)	SO2 (to	ns/yr)	CO2 (tons/yr)	SO2 (tons/yr)
		Coal:	50,514		319	35,589	324
		Fuel Oil:	41,459		267	29,210	170
		latural Gas:	27,878		0	19,641	0
	43	, , , , , , , , , , , , , , , , , , ,	E, CONTACT INFO	RMATION			
		Landfill	Owner	<del></del>		Landfill Operator	
Contact Name:	Dan Miles			Dan M	Miles		
Mailina Addraga				723 V	Voodlake Dri	ve	
viaiting Address.	723 Woodlake	:					
=	25 11 0001						
				757-4	2()-47(X)		
	757-420-4700			757-4	20-4700		
Phone Number:	757-420-4700			757-4 cember 5, 199		State: VA	Page: 25

			Shoosmith Richmor			Landfill C	ategory:	Candidate
·		A. G	ENERAL LANDFILL	INFORMAT	TON	<del></del>		
Landfill Owner:				Annual Accep	tance Rate	(tons):		143,000
Landfill Owner Type:			•	Year Annual Acceptance Rate Reported:				
Alternative Landfill	Name:		Ī	Design Capac	ity (tons):			
City: Chester			1	Acres Current	ly Landfille	ed (acres):		150
County:	Chester	field	1	Average Dept	h (feet):			
State: VA		. ,	Waste-in-Place (tons):				3,003,000	
Year Open:	1976		i	1998 Waste-ir	ı-Place (ton	ıs):		3,003,000
Year Closed:								
		I	B. LANDFILL GAS CO	DLLECTION	I			
Estimated Methane C	Generation (mmsc)	f/d):		1.19				
LFG Collection Syste	<del>-</del>	•						
Current LFG Collecte								
Collection and Treatr	nent System Requ	ired Under NSP	S/EG:	No				
			C. LANDFILL GAS U	<b>FILIZATIO</b>	٧	4.		· · · · · · · · · · · · · · · · · · ·
Current Utilization:		<del></del>						
Utilization Syste	em Status	Planned						
Utilization Syste		Direct Thern	าลไ					
Utilization Syste		1999	141					
Electric Utility I		1,,,,						
Natural Gas Pro								
Energy Purchase	• •							
Energy 1 drendse								
Capacity:		Electricit	y Generation Project (M	(W)	OR	Direct Use Project (n	nmBtu/hi	•)
Estimated Poten	tial Capacity:			4				37
Current Capacity	- '							
Planned Capacit								
	<u> </u>				<u> </u>			
Utilities in County:		Southeastern	Power Admin; Southsid	de Electric Co	oop Inc; Vir	ginia Electric & Power	Co	
\$2.44 	1 12	D. ENVIR	ROMENTAL BENEFIT	IS OF UTIL	IZATION			
			Po	tential		Cu	rrent	
Methane Reduction (1	tons/yr):				6,857			0
CO2 Equivalent of C	· ·	ıs/yr):			144,005			0
	· · · · · · · · · · · · · · · · · · ·							
Emissions Avoided by	y Fossil Fuel Disp	olacement:	Electricity Gene	_		Direct Us	-	
			CO2 (tons/yr)	SO2 (to	ns/yr)	CO2 (tons/yr)	SO	2 (tons/yr)
		Coal:	29,203		185	20,650		188
		Fuel Oil:	23,969		154	16,949		99
	N	atural Gas:	16,117		0	11,397		0
			E. CONTACT INFO	DAGASTION				
	* *	Landfill (		RMATION	<del></del>	Landfill Operator	25.84	
Cartant Name	T	Landin				- Landini Operator		
Contact Name:	Tom Gorzycki			Jame	s McCook			
Mailing Address:	11800 Lewis R	oad		1180	0 Lewis Ro	ad		
	1			1				•
Phone Number:	804-748-5823			804-7	748-5823			
Fax Number:				į	•			
- 3.1.0001	İ					······································		
* Itallicized indicates	values estimated	by EPA.	De	cember 5, 199	98	State: VA	Page:	26

Landfill Category: Smith Gap Regional Landfill Candidate A. GENERAL LANDFILL INFORMATION 1 to 1 Landfill Owner: Roanoke Valley RA Annual Acceptance Rate (tons): 228,800 Landfill Owner Type: **Public** Year Annual Acceptance Rate Reported: Alternative Landfill Name: Roanoke Valley SLF Design Capacity (tons): City: Roanoke Acres Currently Landfilled (acres): County: Roanoke Average Depth (feet): State: VA Waste-in-Place (tons): 5,262,400 Year Open: 1974 5,262,400 1998 Waste-in-Place (tons): Year Closed: 1995 B. LANDFILL GAS COLLECTION Estimated Methane Generation (mmscf/d): 1.76 LFG Collection System Status: Current LFG Collected (mmscf/d): Collection and Treatment System Required Under NSPS/EG: No C. LANDFILL GAS UTILIZATION Current Utilization: Potential **Utilization System Status: Utilization System Type:** Reciprocating Engine Utilization System Start Year: AEP Electric Utility Provider(s): Natural Gas Provider(s): Energy Purchaser(s): **AEP** Capacity: Electricity Generation Project (MW) OR Direct Use Project (mmBtu/hr) Estimated Potential Capacity: 6 55 Current Capacity: Planned Capacity: Utilities in County: Appalachian Power Company; Craig-Botetourt Electric Coop; Southeastern Power Admin D. ENVIROMENTAL BENEFITS OF UTILIZATION Potential Current Methane Reduction (tons/yr): 10,199 0 CO2 Equivalent of CH4 Reduction (tons/yr): 214,171 0 Emissions Avoided by Fossil Fuel Displacement: Electricity Generation Project Direct Use Project CO2 (tons/yr) SO2 (tons/yr) CO2 (tons/yr) SO2 (tons/vr) 279 Coal: 43,410 274 30,712 Fuel Oil: 147 35,629 229 25,207 23,958 0 Natural Gas: 0 16,949 E. CONTACT INFORMATION Landfill Owner Landfill Operator Contact Name: John Hubbard 1020 Hollins Road Mailing Address: Phone Number: 540-857-5050 540-857-5050 Fax Number: \* Itallicized indicates values estimated by EPA. December 5, 1998 State: VA Page: 27 STAR Version 1.0 / LMOP

			'irginia Beach LF #2 N			Landfill Cat	egory: Candid		
		A. G	ENERAL LANDFIL	L INFORM	IATION				
Landfill Owner: Landfill Owner Type: Alternative Landfill Nam City:	'irginia Beach LF Nu	286,00							
County:	Virginia Beach Virginia Beach				Acres Currently Landfilled (acres):  Average Depth (feet):				
State:	VA			1994 Was	6,572,00				
Year Open: 1983				1998 Wasi	te-in-Place (tons)	) <u>:</u>	6,572,00		
Year Closed:	2015								
		1	B. LANDFILL GAS	COLLECT	ION				
Estimated Methane Gene	ration (mmscj	%d):		2.10					
LFG Collection System S	Status:		•	Operational					
Current LFG Collected (r	nmscf/d):			1.5					
Collection and Treatment	System Requ	ired Under NSF	PS/EG:	No					
		X	C. LANDFILL GAS	UTILIZAT	ION				
Current Utilization: Utilization System S Utilization System T Utilization System S Electric Utility Provi Natural Gas Provide Energy Purchaser(s)	Type: Start Year: sider(s): r(s):	Planned High Btu 1999							
Capacity:  Estimated Potential	Capacity:	Electrici	ty Generation Project	(MW) 7	OR	Direct Use Project (mn	nBtu/hr)		
Current Capacity: Planned Capacity:						31			
Utilities in County:		Southeastern	n Power Admin; Virgin	nia Electric	& Power Co				
		D. ENVII	ROMENTAL BENEF	ITS OF U	TILIZATION				
				Potential		Curro	ent		
Methane Reduction (tons)	/yr):				12,135		5,78		
CO2 Equivalent of CH4 I	Reduction (tor	ıs/yr):			254,841		121,41		
		•							
Emissions Avoided by Fossil Fuel Displacement:			Electricity Generation Project CO2 (tons/yr) SO2 (tons/yr)			Direct Use Project CO2 (tons/yr) SO2 (tons/yr)			
			•			•			
		Coal:	52,092		329	36,544	33		
Fuel Oil:			42,755	i	275	29,993	17		
Natural Gas:			28,749	)	0	20,168			
	%		E. CONTACT INF	ORMATIC	)N				
· · · · · · · · · · · · · · · · · · ·		Landfill				Landfill Operator			
Contact Name:	City Manager	<del></del>		:	***************************************				
,	Municipal Center				Department of Public Works				
Phone Number: 804-427-4242				. 80	04-430-2450				
Fax Number:									
* Itallicized indicates valu	ine netimated	by FDA	т	December 5,	1008	State: VA	Page: 2		
Å	ies esiimaiea i	oy er M.	1	occinier 3,	1 7 7 0	State. VA	Page: 2		