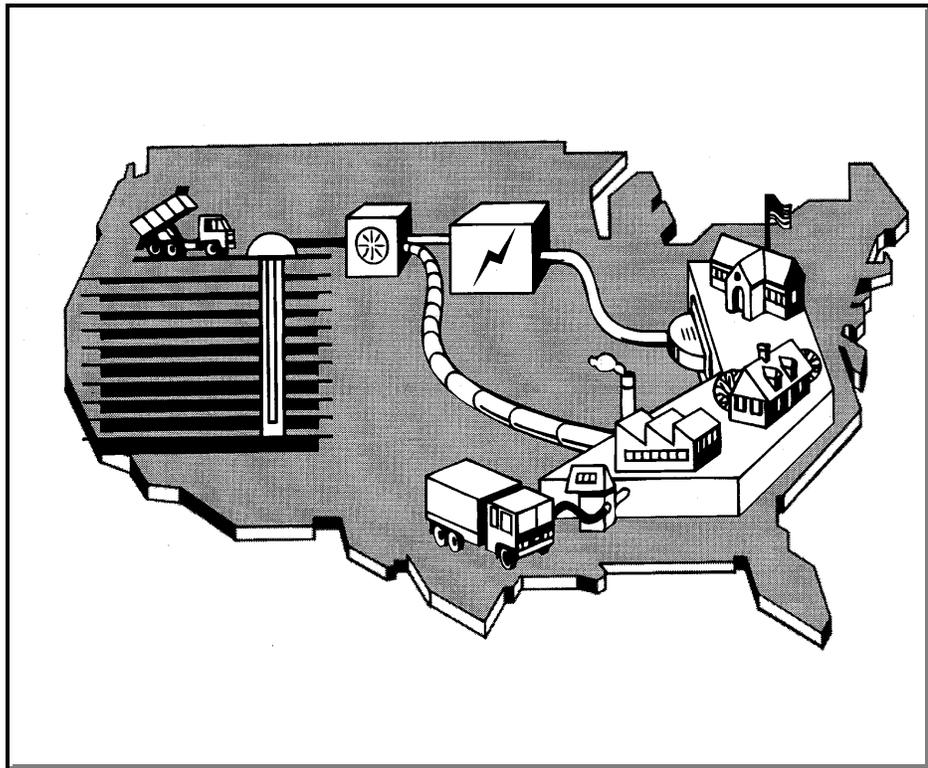




Landfill Gas-to-Energy Project Opportunities

Landfill Profiles for the State of Maryland



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-to-energy 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,¹ 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-in-place.²

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-in-place.

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.

¹ Current projects illustrate the wide range of successful project development options.

² 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.



Exhibit 1: Maryland MSW Landfill Summary

Category	No. of Landfills	Est. Capacity Potential		Est. CH4 Generation (mmscf/d)	Methane Reduction (tons/yr)		CO2 Equivalent of CH4 Reduction (tons/yr)	
		Electricity (MW)	Gas Capacity (mmBtu/hr)		Potential	Current	Potential	Current
Current	4	20	204	7	37,705	10,407	791,797	218,543
Candidate	13	52	523	17	96,776	0	2,032,300	0
Shutdown	1	2	24	1	4,487	3,469	94,225	72,849
Other	20	16	164	5	30,359	0	637,550	0
Unknown WIP	2							
Total	40	91	915	29	169,327	13,876	3,555,871	291,392

Exhibit 2: Potential Maryland Emissions Avoided by Fossil Fuel Displacement

Category	Electricity Generation Project						Direct Use Project					
	CO2 (tons/yr)			SO2 (tons/yr)			CO2 (tons/yr)			SO2 (tons/yr)		
	Coal	Oil	Natural Gas	Coal	Oil	Natural Gas	Coal	Oil	Natural Gas	Coal	Oil	Natural Gas
Current	161,012	132,152	88,861	1,018	851	0	113,542	93,190	62,662	1,033	543	1
Candidate	412,002	338,153	227,378	2,604	2,177	0	291,428	239,191	160,835	2,652	1,394	2
Shutdown	18,943	15,547	10,454	120	100	0	13,512	11,090	7,457	123	65	0
Other	128,652	105,592	71,001	813	679	0	91,423	75,036	50,455	832	437	0
Unknown WIP												
Total	720,609	591,443	397,694	4,555	3,807	0	509,905	418,507	281,410	4,640	2,439	3

Exhibit 3: Index of Landfills in Maryland

Category	Landfill Name	WIP			Landfill Operating in 1998	LFG Collected	LFG Utilization Project	Status of LFGTE Project
		<2.5 million tons	2.5 to 4 million tons	>4 million tons				
Current	Brown Station Road LF	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Operational
Current	Brown Station Road LF	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Operational
Current	Gude LF	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Operational
Current	Oaks SLF	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Construction
Candidate	Alpha Ridge SLF	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Unknown
Candidate	Eastern SLF	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Unknown
Candidate	Fort Meade SLF	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	None
Candidate	Hog Hill/Central SLF	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	None
Candidate	Millersville SLF	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Planned
Candidate	Mountainview SLF	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Unknown
Candidate	Newland Park SLF	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Unknown
Candidate	Pisgah SLF	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	None
Candidate	Quarantine Road SLF	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Unknown
Candidate	Reichs Ford SLF	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Unknown
Candidate	Resh Road II SLF	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Unknown
Candidate	Saint Andrews SLF	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	None
Candidate	Sandy Hill SLF	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Planned
Shutdown	Pennington Avenue	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Shutdown
Other	Annapolis SLF	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Unknown
Other	Appeal SLF	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Unknown
Other	Barstow SLF	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Unknown
Other	Beulah SLF	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Unknown
Other	Bowley's Lane LF	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	None
Other	Central SLF	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Unknown
Other	Centreville SLF	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Unknown
Other	Charles County #2/Pisgah LF	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Unknown
Other	Hancock SLF	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Unknown
Other	Harford Waste Disposal Center	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Unknown
Other	Hobbs Road SLF	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	None
Other	Hoods Mill Road SLF	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Unknown
Other	Midshore Regional SLF	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Unknown
Other	Nicholson SLF	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Unknown
Other	Northern SLF	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Unknown
Other	Price Chapel SLF	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Unknown
Other	Round Glade SLF	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Unknown
Other	Sudley Road SLF	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Unknown
Other	Vale Summit SLF	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	None
Other	Westover/Ring SLF	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Unknown
Unknown WIP	Fort Detrick SLF	<input type="checkbox"/>	Unknown					

Exhibit 3: Index of Landfills in Maryland

Category	Landfill Name	WIP			Landfill Operating in 1998	LFG Collected	LFG Utilization Project	Status of LFGTE Project
		<2.5 million tons	2.5 to 4 million tons	>4 million tons				
Unknown WIP	Snow Hill SLF	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Unknown

A. GENERAL LANDFILL INFORMATION

Landfill Owner:		Annual Acceptance Rate (tons):	184,392
Landfill Owner Type:	Public	Year Annual Acceptance Rate Reported:	1993
Alternative Landfill Name:		Design Capacity (tons):	6,290,000
City:	Marriottsville	Acres Currently Landfilled (acres):	79
County:	Howard	Average Depth (feet):	
State:	MD	1994 Waste-in-Place (tons):	3,518,784
Year Open:	1980	1998 Waste-in-Place (tons):	4,256,352
Year Closed:	2008		

B. LANDFILL GAS COLLECTION

Estimated Methane Generation (mmscf/d):	1.51
LFG Collection System Status:	None
Current LFG Collected (mmscf/d):	0.0
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)

Estimated Potential Capacity:	5	47
Current Capacity:		
Planned Capacity:		0

Utilities in County: Baltimore Gas & Electric Co

D. ENVIRONMENTAL BENEFITS OF UTILIZATION

	<i>Potential</i>		<i>Current</i>	
<i>Methane Reduction (tons/yr):</i>	8,711		0	
<i>CO2 Equivalent of CH4 Reduction (tons/yr):</i>	182,929		0	
<i>Emissions Avoided by Fossil Fuel Displacement:</i>	<i>Electricity Generation Project</i>		<i>Direct Use Project</i>	
	<i>CO2 (tons/yr)</i>	<i>SO2 (tons/yr)</i>	<i>CO2 (tons/yr)</i>	<i>SO2 (tons/yr)</i>
<i>Coal:</i>	37,096	235	26,232	239
<i>Fuel Oil:</i>	30,447	196	21,530	126
<i>Natural Gas:</i>	20,473	0	14,477	0

E. CONTACT INFORMATION

	Landfill Owner	Landfill Operator
Contact Name:	John O'Hara	John O'Hara, Chief
Mailing Address:	Environmental Services Dept. 3400 Courthouse Drive	Bureau of Environ. Services 3430 Courthouse Drive
Phone Number:	410-313-6444	410-313-2388
Fax Number:		

* *Italicized indicates values estimated by EPA.*

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A. GENERAL LANDFILL INFORMATION

Landfill Owner:		Annual Acceptance Rate (tons):	260,000
Landfill Owner Type:	Public	Year Annual Acceptance Rate Reported:	1998
Alternative Landfill Name:		Design Capacity (tons):	15,400,000
City:	Upper Marlboro	Acres Currently Landfilled (acres):	150
County:	Prince George's	Average Depth (feet):	55
State:	MD	1998 Waste-in-Place (tons):	3,739,287
Year Open:	1968	1998 Waste-in-Place (tons):	3,739,287
Year Closed:	2015		

B. LANDFILL GAS COLLECTION

Estimated Methane Generation (mmscf/d):	1.37
LFG Collection System Status:	Operational
Current LFG Collected (mmscf/d):	1.1
Collection and Treatment System Required Under NSPS/EG:	No

C. LANDFILL GAS UTILIZATION

Current Utilization:			
Utilization System Status:	Operational		
Utilization System Type:	Direct Thermal		
Utilization System Start Year:	1988		
Electric Utility Provider(s):			
Natural Gas Provider(s):			
Energy Purchaser(s):	Potomac Electric Power Company, Prince Ge		
Capacity:	Electricity Generation Project (MW)	OR	Direct Use Project (mmBtu/hr)
Estimated Potential Capacity:	4		43
Current Capacity:	2.55		23
Planned Capacity:			

Utilities in County: Baltimore Gas & Electric Co; Potomac Electric Power Company; Southern Maryland El Coop Inc

D. ENVIRONMENTAL BENEFITS OF UTILIZATION

	<i>Potential</i>		Current	
<i>Methane Reduction (tons/yr):</i>	7,946		4,240	
<i>CO2 Equivalent of CH4 Reduction (tons/yr):</i>	166,872		89,036	
<i>Emissions Avoided by Fossil Fuel Displacement:</i>	<i>Electricity Generation Project</i>		<i>Direct Use Project</i>	
	<i>CO2 (tons/yr)</i>	<i>SO2 (tons/yr)</i>	<i>CO2 (tons/yr)</i>	<i>SO2 (tons/yr)</i>
<i>Coal:</i>	33,939	215	23,929	218
<i>Fuel Oil:</i>	27,856	179	19,640	115
<i>Natural Gas:</i>	18,730	0	13,206	0

E. CONTACT INFORMATION

	Landfill Owner	Landfill Operator
Contact Name:	Alan Jones	Bob Fletcher
Mailing Address:	Inglewood Center III 9400 Peppercorn Place	Inglewood Center III 9400 Peppercorn Place
Phone Number:	301-883-5830	301-883-5830
Fax Number:		



A. GENERAL LANDFILL INFORMATION

Landfill Owner:		Annual Acceptance Rate (tons):	260,000
Landfill Owner Type:	Public	Year Annual Acceptance Rate Reported:	1998
Alternative Landfill Name:		Design Capacity (tons):	
City:	Upper Marlboro	Acres Currently Landfilled (acres):	150
County:	Prince George's	Average Depth (feet):	55
State:	MD	1998 Waste-in-Place (tons):	3,739,287
Year Open:	1968	1998 Waste-in-Place (tons):	3,739,287
Year Closed:	2015		

B. LANDFILL GAS COLLECTION

Estimated Methane Generation (mmscf/d):	1.37
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:	Operational		
Utilization System Type:	Reciprocating Engine		
Utilization System Start Year:	1988		
Electric Utility Provider(s):			
Natural Gas Provider(s):			
Energy Purchaser(s):	Potomac Electric Power Company, Prince Ge		
Capacity:	Electricity Generation Project (MW)	OR	Direct Use Project (mmBtu/hr)
Estimated Potential Capacity:	4		43
Current Capacity:	2.5		
Planned Capacity:			

Utilities in County: Baltimore Gas & Electric Co; Potomac Electric Power Company; Southern Maryland El Coop Inc

D. ENVIRONMENTAL BENEFITS OF UTILIZATION

	<i>Potential</i>		Current	
<i>Methane Reduction (tons/yr):</i>	7,946		0	
<i>CO2 Equivalent of CH4 Reduction (tons/yr):</i>	166,872		0	
<i>Emissions Avoided by Fossil Fuel Displacement:</i>	<i>Electricity Generation Project</i>		<i>Direct Use Project</i>	
	<i>CO2 (tons/yr)</i>	<i>SO2 (tons/yr)</i>	<i>CO2 (tons/yr)</i>	<i>SO2 (tons/yr)</i>
<i>Coal:</i>	33,939	215	23,929	218
<i>Fuel Oil:</i>	27,856	179	19,640	115
<i>Natural Gas:</i>	18,730	0	13,206	0

E. CONTACT INFORMATION

	Landfill Owner	Landfill Operator
Contact Name:	Alan Jones	Bob Fletcher
Mailing Address:	Inglewood Center III 9400 Peppercorn Place	Inglewood Center III 9400 Peppercorn Place
Phone Number:	301-883-5830	301-883-5830
Fax Number:		

* *Italicized indicates values estimated by EPA.*

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A. GENERAL LANDFILL INFORMATION

Landfill Owner:		Annual Acceptance Rate (tons):	254,154
Landfill Owner Type:	Public	Year Annual Acceptance Rate Reported:	1993
Alternative Landfill Name:		Design Capacity (tons):	12,927,415
City:	Towson	Acres Currently Landfilled (acres):	
County:	Baltimore	Average Depth (feet):	
State:	MD	1994 Waste-in-Place (tons):	3,508,308
Year Open:	1982	1998 Waste-in-Place (tons):	4,524,924
Year Closed:	2012		

B. LANDFILL GAS COLLECTION

Estimated Methane Generation (mmscf/d):	1.58
LFG Collection System Status:	Planned
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)
Estimated Potential Capacity:	5		49
Current Capacity:			
Planned Capacity:			

Utilities in County: Baltimore Gas & Electric Co; Potomac Edison Co

D. ENVIRONMENTAL BENEFITS OF UTILIZATION

	<i>Potential</i>		<i>Current</i>	
<i>Methane Reduction (tons/yr):</i>	9,108		0	
<i>CO2 Equivalent of CH4 Reduction (tons/yr):</i>	191,270		0	
<i>Emissions Avoided by Fossil Fuel Displacement:</i>	<i>Electricity Generation Project</i>		<i>Direct Use Project</i>	
	<i>CO2 (tons/yr)</i>	<i>SO2 (tons/yr)</i>	<i>CO2 (tons/yr)</i>	<i>SO2 (tons/yr)</i>
<i>Coal:</i>	38,675	245	27,428	250
<i>Fuel Oil:</i>	31,742	204	22,511	131
<i>Natural Gas:</i>	21,344	0	15,137	0

E. CONTACT INFORMATION

	Landfill Owner	Landfill Operator
Contact Name:	Steve Lippy	Stephen Lippy, P.E.
Mailing Address:	111 West Chesapeake Avenue	County Office Bldg., Room 223 111 West Chesapeake Avenue
Phone Number:	410-887-2009	410-887-2009
Fax Number:		

* *Italicized indicates values estimated by EPA.*

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A. GENERAL LANDFILL INFORMATION

Landfill Owner:		Annual Acceptance Rate (tons):	37,188
Landfill Owner Type:	Public	Year Annual Acceptance Rate Reported:	1993
Alternative Landfill Name:		Design Capacity (tons):	1,220,000
City:	Fort Meade	Acres Currently Landfilled (acres):	
County:	Anne Arundel	Average Depth (feet):	
State:	MD	1994 Waste-in-Place (tons):	1,074,376
Year Open:	1976	1998 Waste-in-Place (tons):	1,223,128
Year Closed:	2015		

B. LANDFILL GAS COLLECTION

Estimated Methane Generation (mmscf/d):	0.73
LFG Collection System Status:	None
Current LFG Collected (mmscf/d):	0.0
Collection and Treatment System Required Under NSPS/EG:	No

C. LANDFILL GAS UTILIZATION

Current Utilization:

Utilization System Status:	None
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:	2	23
Current Capacity:		
Planned Capacity:		0

Utilities in County: Baltimore Gas & Electric Co

D. ENVIRONMENTAL BENEFITS OF UTILIZATION

	<i>Potential</i>		Current	
<i>Methane Reduction (tons/yr):</i>		4,225		0
<i>CO2 Equivalent of CH4 Reduction (tons/yr):</i>		88,733		0
<i>Emissions Avoided by Fossil Fuel Displacement:</i>	<i>Electricity Generation Project</i>		<i>Direct Use Project</i>	
	<i>CO2 (tons/yr)</i>	<i>SO2 (tons/yr)</i>	<i>CO2 (tons/yr)</i>	<i>SO2 (tons/yr)</i>
<i>Coal:</i>	18,153	115	12,724	116
<i>Fuel Oil:</i>	14,899	96	10,443	61
<i>Natural Gas:</i>	10,019	0	7,022	0

E. CONTACT INFORMATION

	Landfill Owner	Landfill Operator
Contact Name:		Carl Foy
Mailing Address:		Fort George G. Meade
Phone Number:		301-677-3827
Fax Number:		

* *Italicized indicates values estimated by EPA.*

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A. GENERAL LANDFILL INFORMATION

Landfill Owner:		Annual Acceptance Rate (tons):	
Landfill Owner Type:	Public	Year Annual Acceptance Rate Reported:	
Alternative Landfill Name:	Gude Power Station	Design Capacity (tons):	4,800,000
City:	Rockville	Acres Currently Landfilled (acres):	125
County:	Montgomery	Average Depth (feet):	95
State:	MD	1994 Waste-in-Place (tons):	4,800,000
Year Open:	1964	1998 Waste-in-Place (tons):	4,800,000
Year Closed:	1982		

B. LANDFILL GAS COLLECTION

Estimated Methane Generation (mmscf/d):	1.37
LFG Collection System Status:	Operational
Current LFG Collected (mmscf/d):	1.6
Collection and Treatment System Required Under NSPS/EG:	No

C. LANDFILL GAS UTILIZATION

Current Utilization:			
Utilization System Status:	Operational		
Utilization System Type:	Reciprocating Engine		
Utilization System Start Year:	1985		
Electric Utility Provider(s):			
Natural Gas Provider(s):			
Energy Purchaser(s):	Potomac Electric Power Company		
Capacity:	Electricity Generation Project (MW)	OR	Direct Use Project (mmBtu/hr)
Estimated Potential Capacity:	4		43
Current Capacity:	2.9		33
Planned Capacity:			

Utilities in County: A & N Electric Cooperative; Baltimore Gas & Electric Co; Choptank Electric Coop Inc; Potomac Edi

D. ENVIRONMENTAL BENEFITS OF UTILIZATION

	<i>Potential</i>		Current	
<i>Methane Reduction (tons/yr):</i>	7,938		6,167	
<i>CO2 Equivalent of CH4 Reduction (tons/yr):</i>	166,688		129,507	
<i>Emissions Avoided by Fossil Fuel Displacement:</i>	<i>Electricity Generation Project</i>		<i>Direct Use Project</i>	
	<i>CO2 (tons/yr)</i>	<i>SO2 (tons/yr)</i>	<i>CO2 (tons/yr)</i>	<i>SO2 (tons/yr)</i>
<i>Coal:</i>	33,939	215	23,903	218
<i>Fuel Oil:</i>	27,856	179	19,618	114
<i>Natural Gas:</i>	18,730	0	13,192	0

E. CONTACT INFORMATION

Landfill Owner		Landfill Operator
Contact Name:		Tom Kusterer
Mailing Address:		
Phone Number:		301-840-2370
Fax Number:		

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A. GENERAL LANDFILL INFORMATION

Landfill Owner:	Cecil County	Annual Acceptance Rate (tons):	67,718
Landfill Owner Type:	Public	Year Annual Acceptance Rate Reported:	1993
Alternative Landfill Name:	Cecil County Central LF	Design Capacity (tons):	6,000,000
City:	Elkton	Acres Currently Landfilled (acres):	50
County:	Cecil	Average Depth (feet):	
State:	MD	Waste-in-Place (tons):	1,286,642
Year Open:	1978	1998 Waste-in-Place (tons):	1,422,078
Year Closed:	2046		

B. LANDFILL GAS COLLECTION

Estimated Methane Generation (mmscf/d):	0.78
LFG Collection System Status:	None
Current LFG Collected (mmscf/d):	0.0
Collection and Treatment System Required Under NSPS/EG:	No

C. LANDFILL GAS UTILIZATION

Current Utilization:

Utilization System Status:	None
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:	2	24
Current Capacity:		
Planned Capacity:		0

Utilities in County: Choptank Electric Coop Inc; Conowingo Power Company; Southern Maryland El Coop Inc

D. ENVIRONMENTAL BENEFITS OF UTILIZATION

	<i>Potential</i>		<i>Current</i>	
<i>Methane Reduction (tons/yr):</i>	4,520		0	
<i>CO2 Equivalent of CH4 Reduction (tons/yr):</i>	94,912		0	
<i>Emissions Avoided by Fossil Fuel Displacement:</i>	<i>Electricity Generation Project</i>		<i>Direct Use Project</i>	
	<i>CO2 (tons/yr)</i>	<i>SO2 (tons/yr)</i>	<i>CO2 (tons/yr)</i>	<i>SO2 (tons/yr)</i>
<i>Coal:</i>	18,943	120	13,610	124
<i>Fuel Oil:</i>	15,547	100	11,171	65
<i>Natural Gas:</i>	10,454	0	7,511	0

E. CONTACT INFORMATION

	Landfill Owner	Landfill Operator
Contact Name:	Robert Campbell	Jim Kiethley
Mailing Address:	129 East Main County Office Building	758 E. Old Philadelphia Road
Phone Number:	410-996-5265	410-996-6275
Fax Number:	410-996-5210	410-996-6275

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A. GENERAL LANDFILL INFORMATION

Landfill Owner:	Anne Arundel County	Annual Acceptance Rate (tons):	90,000
Landfill Owner Type:	Public	Year Annual Acceptance Rate Reported:	1998
Alternative Landfill Name:	None	Design Capacity (tons):	11,900,000
City:	Severn	Acres Currently Landfilled (acres):	260
County:	Anne Arundel	Average Depth (feet):	75
State:	MD	1998 Waste-in-Place (tons):	6,300,000
Year Open:	1975	1998 Waste-in-Place (tons):	6,300,000
Year Closed:	2038		

B. LANDFILL GAS COLLECTION

Estimated Methane Generation (mmscf/d):	2.03
LFG Collection System Status:	Planned
Current LFG Collected (mmscf/d):	
Collection and Treatment System Required Under NSPS/EG:	Yes

C. LANDFILL GAS UTILIZATION

Current Utilization:			
Utilization System Status:	Planned		
Utilization System Type:	Unknown		
Utilization System Start Year:	2000		
Electric Utility Provider(s):	Baltimore Gas and Electric		
Natural Gas Provider(s):	Baltimore Gas and Electric		
Energy Purchaser(s):	Nevamar - plastic laminate manufacturer		
Capacity:	Electricity Generation Project (MW)	OR	Direct Use Project (mmBtu/hr)
Estimated Potential Capacity:	6		63
Current Capacity:			
Planned Capacity:			0

Utilities in County: Baltimore Gas & Electric Co

D. ENVIRONMENTAL BENEFITS OF UTILIZATION

	<i>Potential</i>		Current	
<i>Methane Reduction (tons/yr):</i>	11,733		0	
<i>CO2 Equivalent of CH4 Reduction (tons/yr):</i>	246,393		0	
<i>Emissions Avoided by Fossil Fuel Displacement:</i>	<i>Electricity Generation Project</i>		<i>Direct Use Project</i>	
	<i>CO2 (tons/yr)</i>	<i>SO2 (tons/yr)</i>	<i>CO2 (tons/yr)</i>	<i>SO2 (tons/yr)</i>
Coal:	49,724	314	35,332	322
Fuel Oil:	40,812	263	28,999	169
Natural Gas:	27,442	0	19,500	0

E. CONTACT INFORMATION

	Landfill Owner	Landfill Operator
Contact Name:	Bill Taylor	Molly Cannon
Mailing Address:	389 Burns Crossing Road	2664 Riva Road P.O. Box 2700
Phone Number:	410-222-6103	410-222-6103
Fax Number:		410-222-6105

* *Italicized indicates values estimated by EPA.*

A. GENERAL LANDFILL INFORMATION

Landfill Owner:	Chambers Waste Systems	Annual Acceptance Rate (tons):	125,570
Landfill Owner Type:		Year Annual Acceptance Rate Reported:	1993
Alternative Landfill Name:	Chambers of MD, Inc. SLF	Design Capacity (tons):	
City:	Frostburg	Acres Currently Landfilled (acres):	40
County:	Allegany	Average Depth (feet):	
State:	MD	1994 Waste-in-Place (tons):	501,140
Year Open:	1992	1998 Waste-in-Place (tons):	1,003,420
Year Closed:	2004		

B. LANDFILL GAS COLLECTION

Estimated Methane Generation (mmscf/d):	0.67
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:	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)
Estimated Potential Capacity:	2		21
Current Capacity:			
Planned Capacity:			

Utilities in County: Potomac Edison Co

D. ENVIRONMENTAL BENEFITS OF UTILIZATION

	<i>Potential</i>		<i>Current</i>	
<i>Methane Reduction (tons/yr):</i>		3,901		0
<i>CO2 Equivalent of CH4 Reduction (tons/yr):</i>		81,911		0
<i>Emissions Avoided by Fossil Fuel Displacement:</i>	<i>Electricity Generation Project</i>		<i>Direct Use Project</i>	
	<i>CO2 (tons/yr)</i>	<i>SO2 (tons/yr)</i>	<i>CO2 (tons/yr)</i>	<i>SO2 (tons/yr)</i>
<i>Coal:</i>	16,575	105	11,746	107
<i>Fuel Oil:</i>	13,604	88	9,640	56
<i>Natural Gas:</i>	9,147	0	6,482	0

E. CONTACT INFORMATION

Landfill Owner		Landfill Operator
Contact Name:		Frank Williams
Mailing Address:	P.O. Box 95	P.O. Box 95
Phone Number:	301-463-2894	301-463-2894
Fax Number:		

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A. GENERAL LANDFILL INFORMATION

Landfill Owner:		Annual Acceptance Rate (tons):	82,501
Landfill Owner Type:	Public	Year Annual Acceptance Rate Reported:	1993
Alternative Landfill Name:		Design Capacity (tons):	6,700,000
City:	Salisbury	Acres Currently Landfilled (acres):	125
County:	Wicomico	Average Depth (feet):	
State:	MD	1994 Waste-in-Place (tons):	2,765,002
Year Open:	1955	1998 Waste-in-Place (tons):	3,095,006
Year Closed:	2045		

B. LANDFILL GAS COLLECTION

Estimated Methane Generation (mmscf/d):	0.97
LFG Collection System Status:	None
Current LFG Collected (mmscf/d):	0.0
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)

Estimated Potential Capacity:	3	30
Current Capacity:		
Planned Capacity:		0

Utilities in County: Choptank Electric Coop Inc; Delmarva Power & Light Company

D. ENVIRONMENTAL BENEFITS OF UTILIZATION

	<i>Potential</i>		<i>Current</i>	
<i>Methane Reduction (tons/yr):</i>	5,610		0	
<i>CO2 Equivalent of CH4 Reduction (tons/yr):</i>	117,806		0	
<i>Emissions Avoided by Fossil Fuel Displacement:</i>	<i>Electricity Generation Project</i>		<i>Direct Use Project</i>	
	<i>CO2 (tons/yr)</i>	<i>SO2 (tons/yr)</i>	<i>CO2 (tons/yr)</i>	<i>SO2 (tons/yr)</i>
<i>Coal:</i>	23,678	150	16,893	154
<i>Fuel Oil:</i>	19,434	125	13,865	81
<i>Natural Gas:</i>	13,068	0	9,323	0

E. CONTACT INFORMATION

	Landfill Owner	Landfill Operator
Contact Name:	Rai Sharma	Rai Sharma, Director
Mailing Address:	P.O. Box 968	P.O. Box 968
Phone Number:	410-548-4810	410-548-4810
Fax Number:		

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A. GENERAL LANDFILL INFORMATION

Landfill Owner:	Montgomery County	Annual Acceptance Rate (tons):	437,030
Landfill Owner Type:	Public	Year Annual Acceptance Rate Reported:	1993
Alternative Landfill Name:		Design Capacity (tons):	7,000,000
City:	Laytonsville	Acres Currently Landfilled (acres):	150
County:	Montgomery	Average Depth (feet):	
State:	MD	1994 Waste-in-Place (tons):	6,874,060
Year Open:	1982	1998 Waste-in-Place (tons):	7,748,120
Year Closed:	1996		

B. LANDFILL GAS COLLECTION

Estimated Methane Generation (mmscf/d):	2.40
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:	Construction
Utilization System Type:	Gas Turbine
Utilization System Start Year:	1998
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:	8	75
Current Capacity:		
Planned Capacity:		

Utilities in County: A & N Electric Cooperative; Baltimore Gas & Electric Co; Choptank Electric Coop Inc; Potomac Edi

D. ENVIRONMENTAL BENEFITS OF UTILIZATION

	<i>Potential</i>		<i>Current</i>	
<i>Methane Reduction (tons/yr):</i>	13,875		0	
<i>CO2 Equivalent of CH4 Reduction (tons/yr):</i>	291,365		0	
<i>Emissions Avoided by Fossil Fuel Displacement:</i>	<i>Electricity Generation Project</i>		<i>Direct Use Project</i>	
	<i>CO2 (tons/yr)</i>	<i>SO2 (tons/yr)</i>	<i>CO2 (tons/yr)</i>	<i>SO2 (tons/yr)</i>
<i>Coal:</i>	59,196	374	41,781	380
<i>Fuel Oil:</i>	48,585	313	34,292	200
<i>Natural Gas:</i>	32,669	0	23,059	0

E. CONTACT INFORMATION

Landfill Owner		Landfill Operator
Contact Name:	Alan Bergsten	Robert Wilson, Manager
Mailing Address:		Solid Waste Disp. Operations 101 Monroe Street
Phone Number:	301-217-2770	301-840-2370
Fax Number:		



A. GENERAL LANDFILL INFORMATION

Landfill Owner:	City of Baltimore	Annual Acceptance Rate (tons):	
Landfill Owner Type:	Public	Year Annual Acceptance Rate Reported:	
Alternative Landfill Name:		Design Capacity (tons):	1,400,000
City:	Baltimore	Acres Currently Landfilled (acres):	60
County:	Baltimore City	Average Depth (feet):	
State:	MD	1994 Waste-in-Place (tons):	1,400,000
Year Open:	1976	1998 Waste-in-Place (tons):	1,400,000
Year Closed:	1981		

B. LANDFILL GAS COLLECTION

Estimated Methane Generation (mmscf/d):	0.78
LFG Collection System Status:	Shutdown
Current LFG Collected (mmscf/d):	0.9
Collection and Treatment System Required Under NSPS/EG:	No

C. LANDFILL GAS UTILIZATION

Current Utilization:			
Utilization System Status:	Shutdown		
Utilization System Type:	Unknown		
Utilization System Start Year:	1984		
Electric Utility Provider(s):			
Natural Gas Provider(s):			
Energy Purchaser(s):			
Capacity:	Electricity Generation Project (MW)	OR	Direct Use Project (mmBtu/hr)
<i>Estimated Potential Capacity:</i>	2		24
Current Capacity:			
Planned Capacity:			19

Utilities in County: Baltimore Gas & Electric Co

D. ENVIRONMENTAL BENEFITS OF UTILIZATION

	<i>Potential</i>		Current	
<i>Methane Reduction (tons/yr):</i>	4,487		3,469	
<i>CO2 Equivalent of CH4 Reduction (tons/yr):</i>	94,225		72,849	
<i>Emissions Avoided by Fossil Fuel Displacement:</i>	<i>Electricity Generation Project</i>		<i>Direct Use Project</i>	
	<i>CO2 (tons/yr)</i>	<i>SO2 (tons/yr)</i>	<i>CO2 (tons/yr)</i>	<i>SO2 (tons/yr)</i>
<i>Coal:</i>	18,943	120	13,512	123
<i>Fuel Oil:</i>	15,547	100	11,090	65
<i>Natural Gas:</i>	10,454	0	7,457	0

E. CONTACT INFORMATION

	Landfill Owner	Landfill Operator
Contact Name:		
Mailing Address:		
Phone Number:		401-239-7134
Fax Number:		

* *Italicized indicates values estimated by EPA.*

A. GENERAL LANDFILL INFORMATION

Landfill Owner:		Annual Acceptance Rate (tons):	72,970
Landfill Owner Type:	Public	Year Annual Acceptance Rate Reported:	1993
Alternative Landfill Name:		Design Capacity (tons):	1,500,000
City:		Acres Currently Landfilled (acres):	
County:	Charles	Average Depth (feet):	
State:	MD	1994 Waste-in-Place (tons):	1,500,000
Year Open:	1974	1998 Waste-in-Place (tons):	1,500,000
Year Closed:	1994		

B. LANDFILL GAS COLLECTION

Estimated Methane Generation (mmscf/d):	0.80
LFG Collection System Status:	None
Current LFG Collected (mmscf/d):	0.0
Collection and Treatment System Required Under NSPS/EG:	No

C. LANDFILL GAS UTILIZATION

Current Utilization:			
Utilization System Status:	None		
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:	3		25
Current Capacity:			
Planned Capacity:			0

Utilities in County: Southern Maryland El Coop Inc

D. ENVIRONMENTAL BENEFITS OF UTILIZATION

	<i>Potential</i>		Current	
<i>Methane Reduction (tons/yr):</i>	4,635		0	
<i>CO2 Equivalent of CH4 Reduction (tons/yr):</i>	97,331		0	
<i>Emissions Avoided by Fossil Fuel Displacement:</i>	<i>Electricity Generation Project</i>		<i>Direct Use Project</i>	
	<i>CO2 (tons/yr)</i>	<i>SO2 (tons/yr)</i>	<i>CO2 (tons/yr)</i>	<i>SO2 (tons/yr)</i>
<i>Coal:</i>	19,732	125	13,957	127
<i>Fuel Oil:</i>	16,195	104	11,455	67
<i>Natural Gas:</i>	10,890	0	7,703	0

E. CONTACT INFORMATION

Landfill Owner		Landfill Operator
Contact Name:		Dennis Fleming
Mailing Address:		
Phone Number:		301-932-3440
Fax Number:		301-932-3447

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A. GENERAL LANDFILL INFORMATION

Landfill Owner:		Annual Acceptance Rate (tons):	489,600
Landfill Owner Type:	Public	Year Annual Acceptance Rate Reported:	1993
Alternative Landfill Name:	Quarantine Road LF (Ash & Debris)	Design Capacity (tons):	9,448,110
City:	Baltimore	Acres Currently Landfilled (acres):	156
County:	Baltimore City	Average Depth (feet):	
State:	MD	1994 Waste-in-Place (tons):	5,679,200
Year Open:	1985	1998 Waste-in-Place (tons):	7,637,600
Year Closed:	2014		

B. LANDFILL GAS COLLECTION

Estimated Methane Generation (mmscf/d):	2.37
LFG Collection System Status:	None
Current LFG Collected (mmscf/d):	0.0
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)

Estimated Potential Capacity:	7	74
Current Capacity:		
Planned Capacity:		0

Utilities in County: Baltimore Gas & Electric Co

D. ENVIRONMENTAL BENEFITS OF UTILIZATION

	<i>Potential</i>		<i>Current</i>	
<i>Methane Reduction (tons/yr):</i>	13,711		0	
<i>CO2 Equivalent of CH4 Reduction (tons/yr):</i>	287,933		0	
<i>Emissions Avoided by Fossil Fuel Displacement:</i>	<i>Electricity Generation Project</i>		<i>Direct Use Project</i>	
	<i>CO2 (tons/yr)</i>	<i>SO2 (tons/yr)</i>	<i>CO2 (tons/yr)</i>	<i>SO2 (tons/yr)</i>
<i>Coal:</i>	58,406	369	41,289	376
<i>Fuel Oil:</i>	47,937	309	33,888	198
<i>Natural Gas:</i>	32,234	0	22,787	0

E. CONTACT INFORMATION

	Landfill Owner	Landfill Operator
Contact Name:	Steve Blake	Ed May, Chief of Disposal
Mailing Address:	200 North Holiday Street Room 1002	Rm 1000, Abel Wolman Mun. Bldg 200 North Holiday Street
Phone Number:	410-396-8450	410-396-4572
Fax Number:	410-396-5674	410-396-5674

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A. GENERAL LANDFILL INFORMATION

Landfill Owner:		Annual Acceptance Rate (tons):	221,982
Landfill Owner Type:	Public	Year Annual Acceptance Rate Reported:	1993
Alternative Landfill Name:		Design Capacity (tons):	2,100,000
City:	Frederick	Acres Currently Landfilled (acres):	80
County:	Frederick	Average Depth (feet):	
State:	MD	1994 Waste-in-Place (tons):	3,443,964
Year Open:	1970	1998 Waste-in-Place (tons):	3,665,946
Year Closed:	1995		

B. LANDFILL GAS COLLECTION

Estimated Methane Generation (mmscf/d):	1.36
LFG Collection System Status:	Planned
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)
Estimated Potential Capacity:	4		42
Current Capacity:			
Planned Capacity:			

Utilities in County: Potomac Edison Co; Thurmont Municipal Light Co

D. ENVIRONMENTAL BENEFITS OF UTILIZATION

	<i>Potential</i>		<i>Current</i>	
<i>Methane Reduction (tons/yr):</i>	7,838		0	
<i>CO2 Equivalent of CH4 Reduction (tons/yr):</i>	164,594		0	
<i>Emissions Avoided by Fossil Fuel Displacement:</i>	<i>Electricity Generation Project</i>		<i>Direct Use Project</i>	
	<i>CO2 (tons/yr)</i>	<i>SO2 (tons/yr)</i>	<i>CO2 (tons/yr)</i>	<i>SO2 (tons/yr)</i>
<i>Coal:</i>	33,150	210	23,603	215
<i>Fuel Oil:</i>	27,208	175	19,372	113
<i>Natural Gas:</i>	18,295	0	13,026	0

E. CONTACT INFORMATION

	Landfill Owner	Landfill Operator
Contact Name:	Robert Hayes	Robert Hayes, Director
Mailing Address:	Winchester Hall 12 East Church Street	Winchester Hall 12 East Church Street
Phone Number:	301-694-1128	301-694-1129
Fax Number:		310-644-6850

* *Italicized indicates values estimated by EPA.*

A. GENERAL LANDFILL INFORMATION

Landfill Owner:	Washington County	Annual Acceptance Rate (tons):	127,989
Landfill Owner Type:	Public	Year Annual Acceptance Rate Reported:	1993
Alternative Landfill Name:	Washington County LF	Design Capacity (tons):	2,500,000
City:	Hagerstown	Acres Currently Landfilled (acres):	140
County:	Washington	Average Depth (feet):	
State:	MD	1994 Waste-in-Place (tons):	2,055,978
Year Open:	1982	1998 Waste-in-Place (tons):	2,567,934
Year Closed:	1999		

B. LANDFILL GAS COLLECTION

Estimated Methane Generation (mmscf/d):	1.07
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:	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)
Estimated Potential Capacity:	3		34
Current Capacity:			
Planned Capacity:			

Utilities in County: Hagerstown, City of, Light Dept; Potomac Edison Co; Williamsport Munic Elec Light System

D. ENVIRONMENTAL BENEFITS OF UTILIZATION

	<i>Potential</i>		<i>Current</i>	
<i>Methane Reduction (tons/yr):</i>	6,214		0	
<i>CO2 Equivalent of CH4 Reduction (tons/yr):</i>	130,496		0	
<i>Emissions Avoided by Fossil Fuel Displacement:</i>	<i>Electricity Generation Project</i>		<i>Direct Use Project</i>	
	<i>CO2 (tons/yr)</i>	<i>SO2 (tons/yr)</i>	<i>CO2 (tons/yr)</i>	<i>SO2 (tons/yr)</i>
<i>Coal:</i>	26,835	170	18,713	170
<i>Fuel Oil:</i>	22,025	142	15,359	90
<i>Natural Gas:</i>	14,810	0	10,327	0

E. CONTACT INFORMATION

	Landfill Owner	Landfill Operator
Contact Name:	Gregory Snook	Robert Davenport, Director of Landfills
Mailing Address:	100 West Washington	13300 Green Castle Pike
Phone Number:	301-791-3090	301-791-3101
Fax Number:		



A. GENERAL LANDFILL INFORMATION

Landfill Owner:	St. Mary's County	Annual Acceptance Rate (tons):	60,818
Landfill Owner Type:	Public	Year Annual Acceptance Rate Reported:	1993
Alternative Landfill Name:	St. Andrews Municipal Landfill	Design Capacity (tons):	1,600,000
City:	California	Acres Currently Landfilled (acres):	55
County:	St. Mary's	Average Depth (feet):	
State:	MD	Waste-in-Place (tons):	2,250,266
Year Open:	1960	1998 Waste-in-Place (tons):	2,371,902
Year Closed:	2007		

B. LANDFILL GAS COLLECTION

Estimated Methane Generation (mmscf/d):	0.90
LFG Collection System Status:	None
Current LFG Collected (mmscf/d):	0.0
Collection and Treatment System Required Under NSPS/EG:	No

C. LANDFILL GAS UTILIZATION

Current Utilization:

Utilization System Status:	None
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:	3	28
Current Capacity:		
Planned Capacity:		0

Utilities in County: Southern Maryland El Coop Inc

D. ENVIRONMENTAL BENEFITS OF UTILIZATION

	<i>Potential</i>		<i>Current</i>	
<i>Methane Reduction (tons/yr):</i>	5,186		0	
<i>CO2 Equivalent of CH4 Reduction (tons/yr):</i>	108,902		0	
<i>Emissions Avoided by Fossil Fuel Displacement:</i>	<i>Electricity Generation Project</i>		<i>Direct Use Project</i>	
	<i>CO2 (tons/yr)</i>	<i>SO2 (tons/yr)</i>	<i>CO2 (tons/yr)</i>	<i>SO2 (tons/yr)</i>
<i>Coal:</i>	22,100	140	15,616	142
<i>Fuel Oil:</i>	18,139	117	12,817	75
<i>Natural Gas:</i>	12,197	0	8,618	0

E. CONTACT INFORMATION

	Landfill Owner	Landfill Operator
Contact Name:	Daniel Ichniowski	Daniel Ichniowski, Director
Mailing Address:	Department of Public Works P.O. Box 508	P.O. Box 508
Phone Number:	301-863-8400	301-863-8400
Fax Number:		

* *Italicized indicates values estimated by EPA.*

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A. GENERAL LANDFILL INFORMATION

Landfill Owner:	P.G. County	Annual Acceptance Rate (tons):	312,973
Landfill Owner Type:	Public	Year Annual Acceptance Rate Reported:	1993
Alternative Landfill Name:	Sandy Hill Creative Disposal Project SLF	Design Capacity (tons):	5,300,000
City:	Bowie	Acres Currently Landfilled (acres):	
County:	Prince George's	Average Depth (feet):	
State:	MD	1994 Waste-in-Place (tons):	5,125,946
Year Open:	1978	1998 Waste-in-Place (tons):	6,064,865
Year Closed:	1997		

B. LANDFILL GAS COLLECTION

Estimated Methane Generation (mmscf/d):	1.97
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:	Direct Thermal		
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		62
Current Capacity:			
Planned Capacity:			

Utilities in County: Baltimore Gas & Electric Co; Potomac Electric Power Company; Southern Maryland El Coop Inc

D. ENVIRONMENTAL BENEFITS OF UTILIZATION

	<i>Potential</i>		Current	
<i>Methane Reduction (tons/yr):</i>	11,385		0	
<i>CO2 Equivalent of CH4 Reduction (tons/yr):</i>	239,091		0	
<i>Emissions Avoided by Fossil Fuel Displacement:</i>	<i>Electricity Generation Project</i>		<i>Direct Use Project</i>	
	<i>CO2 (tons/yr)</i>	<i>SO2 (tons/yr)</i>	<i>CO2 (tons/yr)</i>	<i>SO2 (tons/yr)</i>
<i>Coal:</i>	48,935	309	34,285	312
<i>Fuel Oil:</i>	40,164	259	28,140	164
<i>Natural Gas:</i>	27,007	0	18,922	0

E. CONTACT INFORMATION

Landfill Owner		Landfill Operator
Contact Name:	Dennis Bagley	Frank Quirus
Mailing Address:	14741 Owen Bodie Drive	P.O. Box 180 9500 Laurel-Bowie Road
Phone Number:	301-883-5975	301-464-8400
Fax Number:	301-883-7645	

* *Italicized indicates values estimated by EPA.*

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