

**MARYLAND DEPARTMENT OF THE ENVIRONMENT**

1800 Washington Boulevard ● Baltimore Maryland 21230  
(410) 537-3000 ● 1-800-633-6101 ● <http://www.mde.state.md.us>

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**MARYLAND CO<sub>2</sub> BUDGET TRADING PROGRAM**  
**COMAR 26.09.03**

Instructions for Submitting Applications for Offsets Projects

**Consistency Applications**

1. Complete and sign Section I - Consistency Application.
2. Attach all required documentation in Section I, including reports, diagrams, statements, specifications, plans, calculations, and certifications.
3. Check the box on Section II – Independent Verifier Report for Consistency Application.
4. Complete and sign Section II – Independent Verifier Report.
5. Attach all required documentation in Section II, including reports, diagrams, statements, specifications, plans, calculations, and certifications.
6. Submit to the Department: 1) hard copies of all required documentation and 2) electronic copies of all required documentation on a CD or DVD. Identify the offset project name and I.D. code on the face of the CD or DVD. Mail original applications and documentation to:

Maryland Department of the Environment  
Air Quality Planning Program, Offsets  
1800 Washington Boulevard  
Baltimore MD 21230

**Monitoring and Verification Applications**

1. Check the box on Section II – Independent Verifier Report for Monitoring and Verification.
2. Complete and sign Section II – Independent Verifier Report.
3. Attach all required documentation in Section II, including reports, diagrams, statements, specifications, plans, calculations, and certifications.
4. Complete and sign Section III – Monitoring and Verification.
5. Attach all required documentation in Section III, including reports, diagrams, statements, specifications, plans, calculations, and certifications.
6. Submit to the Department: 1) hard copies of all required documentation and 2) electronic copies of all required documentation on a CD or DVD. Identify the offset project name and I.D. code on the face of the CD or DVD. Mail original applications and documentation to:

Maryland Department of the Environment  
Air Quality Planning Program, Offsets  
1800 Washington Boulevard  
Baltimore MD 21230

- For offsets projects commenced before January 1, 2009, a consistency application must be submitted by June 30, 2009.
- For offsets projects commenced on or after January 1, 2009, a consistency application must be submitted within 6 months after the commencement of the offset project.
- Contact Scott Zacharko, Air Quality Planning Program at (410) 537-4177 with questions or for further guidance.



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**MARYLAND CO<sub>2</sub> BUDGET TRADING PROGRAM  
 COMAR 26.09.03**

<i>COATS Offset Project Name</i>	<i>COATS Offset Project I.D. Code</i>
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**Landfill Methane Capture and Destruction Offset Application  
 Section I – Consistency Application**

**An indication of “Yes” to any of the following will deem the project ineligible under COMAR 26.09.03.**

<b><i>Eligibility Requirements</i></b>		
<b>E.1</b>	Did the offset project initially commence before December 20, 2005? <small>COMAR 26.09.03.02A</small>	<input type="checkbox"/> Yes <input type="checkbox"/> No
<b>E.2</b>	Is the offset project required by a local, state, or federal law, regulation or administrative or judicial order? <small>COMAR 26.09.03.02D(2)</small>	<input type="checkbox"/> Yes <input type="checkbox"/> No
<b>E.3</b>	Does the offset project include an electric generation component that is additionally being used for compliance with a renewable energy portfolio standard or other regulatory requirement? <small>COMAR 26.09.03.02D(4)</small>	<input type="checkbox"/> Yes <input type="checkbox"/> No
<b>E.4</b>	Does the offset project receive funding or other incentives provided through the Strategic Energy Investment Fund? <small>COMAR 26.09.03.02D(5)</small>	<input type="checkbox"/> Yes <input type="checkbox"/> No
<b>E.5</b>	Is the offset project awarded credits or allowances under any other mandatory or voluntary greenhouse gas program? <small>COMAR 26.09.03.02D(6)</small>	<input type="checkbox"/> Yes <input type="checkbox"/> No
<b>E.6</b>	Landfill is subject to New Source Performance Standards (NSPS), 40 CFR Part 60, Subpart Cc and Subpart WWW <small>COMAR 26.09.03.03B</small>	<input type="checkbox"/> Yes <input type="checkbox"/> No

**An indication of “No” to the following will deem the project ineligible under COMAR 26.09.03.**

<b><i>Eligibility Requirements</i></b>		
<b>E.7</b>	Does the offset project employ a landfill gas collection system that provides continuous metering and data computation of landfill gas volumetric flow rate and CH <sub>4</sub> concentration? <small>COMAR 26.09.03.03F(1)</small>	<input type="checkbox"/> Yes <input type="checkbox"/> No



<i>COATS Offset Project Name</i>	<i>COATS Offset Project I.D. Code</i>
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**Complete the following information (all fields are required):**

<b><i>Project Sponsor Information</i></b>			
<i>Organization Name</i>		<i>Project Sponsor Name</i>	
<i>Street Address</i>			
<i>City</i>	<i>State/Province</i>	<i>Postal Code</i>	<i>Country</i>
<i>Telephone and Facsimile Transmission Number</i>		<i>E-Mail Address</i>	
<i>COATS General Account Number</i>		<i>Offset Project Date of Commencement</i> <small>See COMAR 26.09.03.02G(2)</small>	

<b><i>Point of Contact Information</i></b>			
<i>Point of Contact Name</i>			
<i>Street Address</i>			
<i>City</i>	<i>State/Province</i>	<i>Postal Code</i>	<i>Country</i>
<i>Telephone and Facsimile Transmission Number</i>		<i>E-Mail Address</i>	



<i>COATS Offset Project Name</i>	<i>COATS Offset Project I.D. Code</i>
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<b><i>Landfill Location and Refuse Disposal Permit Number</i></b>			
<i>Landfill Organization Legal Name</i>			
<i>Physical Street Address</i>			
<i>City</i>	<i>State/Province</i>	<i>Postal Code</i>	<i>Country</i>
<i>State Refuse Disposal Permit Number</i>			

**All applicants must provide the following information as attachments to this application. Each attachment must be identified by attachment number as provided below, as well as the offset project name and offset project I.D. code.**

<b><i>Attachment Number:</i></b>	
<b>I.1</b>	A detailed narrative of the actions to be taken as part of the offset project, including an explanation of how the projected reduction or avoidance of atmospheric loading, or the sequestration of carbon is to be quantified, monitored, and verified. COMAR 26.09.03.02H(1)(b), COMAR 26.09.03.02H(1)(e), COMAR 26.09.03.03C
<b>I.2</b>	Documentation that the offset project meets applicable Eligibility Requirements (E.1 through E.7 on page 1 of this application) and baseline emissions. COMAR 26.09.03.02H(1)(c)
<b>I.3</b>	The emissions baseline determination, unless otherwise requested in COMAR 26.09.03.03D. COMAR 26.09.03.02H(1)(d)
<b>I.4</b>	A statement and certification report certifying that all offset projects for which the project sponsor has received CO <sub>2</sub> offset allowances under the project sponsor's ownership or control are in compliance with all applicable requirements in all participating states. COMAR 26.09.03.02H(1)(g)
<b>I.5</b>	A statement regarding the adequacy of the monitoring and verification plan and other evaluations and statements as required by the Department. COMAR 26.09.03.02H(1)(j)
<b>I.6</b>	Disclosure of any voluntary or mandatory programs to which greenhouse gas emissions data related to the offset project has been or will be reported. COMAR 26.09.03.02H(1)(k)
<b>I.7</b>	For offset projects located in a state or United States jurisdiction that is not a participating state, a demonstration that the project sponsor has complied with all requirements of the cooperating regulatory agency in the state or United States jurisdiction where the offset project is located. COMAR 26.09.03.02H(1)(l)
<b>I.8</b>	The name, address, email address, telephone number, and facsimile transmission number of the: <ul style="list-style-type: none"> <li>• Owner and operator of the offset project</li> <li>• Owner and operator of the landfill where the offset project will occur</li> </ul> COMAR 26.09.03.03C(1), COMAR 26.09.03.03C(3)



<i>COATS Offset Project Name</i>	<i>COATS Offset Project I.D. Code</i>
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<b>Attachment Number:</b>	
<b>I.9</b>	Specifications of the landfill where the offset project will occur, including waste in place, and specifications of the equipment to be installed including a technical schematic of the offset project. COMAR 26.09.03.03C(2), COMAR 26.09.03.03C(4)
<b>I.10</b>	A monitoring and verification plan that includes a quality assurance and quality control program associated with equipment used to determine landfill gas volumetric flow rate and CH <sub>4</sub> composition. COMAR 26.09.03.03F(2)

<b>Consistency Application Agreement</b>	
<p>“The undersigned project sponsor recognizes and accepts that the application for, and the receipt of, CO<sub>2</sub> offset allowances under the CO<sub>2</sub> Budget Trading Program is predicated on the project sponsor complying with all applicable requirements. I have been granted all the necessary authority to carry out the duties and responsibilities for the offset project under this subtitle. I understand that eligibility for the award of CO<sub>2</sub> offset allowances is contingent on meeting all applicable requirements. I authorize the Department or its agent to audit this offset project for purposes of verifying that the offset project, including the monitoring and verification plan, has been implemented as described in this application. I understand that the Department’s right to audit shall include the right to enter the physical location of the offset project. I submit to the legal jurisdiction of the State.”</p> <p>COMAR 26.09.03.02H(1)(f)</p>	

<b>Access Agreement Statement</b>	
<p>“The undersigned project sponsor agrees to provide the Department access to the physical location of the offset project to inspect for compliance. For offset projects located in any state or other U.S. jurisdiction that is not a participating state, the undersigned project sponsor agrees to provide the cooperating regulatory agency with access to the physical location of the offset project to inspect for compliance.”</p> <p>COMAR 26.09.03.02F(1)</p>	

<b>Statement of Truth, Accuracy, and Completeness</b>	
<p>“I certify, under penalty of law, that this document and all attachments were prepared under my direction or supervision and in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person(s) who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.”</p> <p>COMAR 26.09.03.02H(1)(i)</p>	

<b>Signature of Applicant (Project Sponsor)</b>	<b>Date</b>
<b>Applicant’s (Project Sponsor’s) Name (Print)</b>	<b>Title</b>

For questions regarding this application form, please contact the Department at (410) 537-3240



<i>COATS Offset Project Name</i>	<i>COATS Offset Project I.D. Code</i>
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**Landfill Methane Capture and Destruction Offset Application  
Section II – Independent Verifier Report**

The following information is being provided for:	<input type="checkbox"/> Consistency Application <input type="checkbox"/> Monitoring and Verification
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**Complete the following information (all fields are required):**

<b><i>Independent Verifier Information (Required for Consistency Application and Monitoring and Verification Report)</i></b>			
<i>Independent Verifier Organization Legal Name</i>			
<i>Independent Verifier Point of Contact</i>			
<i>Physical Street Address</i>			
<i>City</i>	<i>State/Province</i>	<i>Postal Code</i>	<i>Country</i>
<i>Telephone Number</i>		<i>E-Mail Address</i>	

**All applicants must provide the following information as attachments to this application. Each attachment must be identified by attachment number as provided below, as well as the offset project name and offset project I.D. code.**

<b><i>Attachment Number, (if submitting for Consistency Application):</i></b>	
<b>II.1</b>	A verification report. COMAR 26.09.03.02H(1)(h)
<b><i>Attachment Number, (if submitting for Monitoring and Verification):</i></b>	
<b>II.2</b>	Verification that measuring and monitoring equipment is maintained, operated, and calibrated based on manufacturer recommendations. COMAR 26.09.03.03F(3)(a)
<b>II.3</b>	Verification of maintenance records for audit purposes. COMAR 26.09.03.03F(3)(b)



<i>COATS Offset Project Name</i>	<i>COATS Offset Project I.D. Code</i>
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<b><i>Certification Statement</i></b>
“I certify, under penalty of law, that I, the independent verifier, have reviewed the entire application and evaluated the report in relation to all applicable requirements and any applicable guidance issued by the Department.” COMAR 26.09.03.02H(1)(h)

<b><i>Statement of Truth, Accuracy, and Completeness</i></b>
“I certify, under penalty of law, that this document and all attachments were prepared under my direction or supervision and in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person(s) who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.” COMAR 26.09.03.02H(1)(i)

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**Signature of Independent Verifier** **Date**

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**Independent Verifier’s Name (Print)** **Title**

For questions regarding this application form, please contact the Department at (410) 537-3240

<i>COATS Offset Project Name</i>	<i>COATS Offset Project I.D. Code</i>
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**Landfill Methane Capture and Destruction Offset Application  
Section III – Monitoring and Verification**

**Complete the following information (all fields are required):**

<b><i>Project Sponsor Information</i></b>			
<i>Organization Name</i>		<i>Project Sponsor Name</i>	
<i>Street Address</i>			
<i>City</i>	<i>State/Province</i>	<i>Postal Code</i>	<i>Country</i>
<i>Telephone and Facsimile Transmission Number</i>		<i>E-Mail Address</i>	
<i>COATS General Account Number</i>		<i>Offset Project Date of Commencement</i> <small>See COMAR 26.09.03.02G(2)</small>	

<b><i>Point of Contact Information</i></b>			
<i>Point of Contact Name</i>			
<i>Street Address</i>			
<i>City</i>	<i>State/Province</i>	<i>Postal Code</i>	<i>Country</i>
<i>Telephone and Facsimile Transmission Number</i>		<i>E-Mail Address</i>	





<i>COATS Offset Project Name</i>	<i>COATS Offset Project I.D. Code</i>
----------------------------------	---------------------------------------

<b><i>Landfill Location and Refuse Disposal Permit Number</i></b>			
<i>Landfill Organization Legal Name</i>			
<i>Physical Street Address</i>			
<i>City</i>	<i>State/Province</i>	<i>Postal Code</i>	<i>Country</i>
<i>State Refuse Disposal Permit Number</i>			

**All applicants must provide the following information as attachments to this application. Each attachment must be identified by attachment number as provided below, as well as the offset project name and offset project I.D. code.**

<b><i>Attachment Number:</i></b>	
<b>III.1</b>	A statement regarding the adequacy of the monitoring and verification plan. COMAR 26.09.03.02H(j)
<b>III.2</b>	The name, address, email address, telephone number, and facsimile transmission number of the : <ul style="list-style-type: none"> <li>• Owner and operator of the offset project</li> <li>• Owner and operator of the landfill where the offset project will occur</li> </ul> COMAR 26.09.03.03C(1), COMAR 26.09.03.03C(3)
<b>III.3</b>	The emissions baseline determination, as per COMAR 26.09.03.03D. (Attach all calculations)
<b>III.4</b>	The emissions reductions calculations. (Attach all calculations) COMAR 26.09.03.03E
<b>III.5</b>	Annual monitoring and verification report that includes monthly volumetric flow rate and CH <sub>4</sub> concentration data, including documentation that the CH <sub>4</sub> was actually supplied to the combustion source. COMAR 26.09.03.03F(1)
<b>III.6</b>	An update on the monitoring and verification plan including: <ul style="list-style-type: none"> <li>• A quality assurance and quality control program associated with equipment used to determine landfill gas volumetric flow rate and CH<sub>4</sub> composition.</li> <li>• Provisions for ensuring that measuring and monitoring equipment is maintained, operated, and calibrated based on manufacturer recommendations.</li> <li>• Provisions for retention of maintenance records for audit purposes.</li> </ul> COMAR 26.09.03.03F(2), COMAR 26.09.03.03F(3)(a), COMAR 26.09.03.03F(3)(b)
<b>III.7</b>	Annual verification of landfill gas CH <sub>4</sub> composition through landfill gas sampling and independent laboratory analysis using applicable EPA laboratory test methods. COMAR 26.09.03.03F(4)



<i>COATS Offset Project Name</i>	<i>COATS Offset Project I.D. Code</i>
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<p><b><i>Statement of Truth, Accuracy, and Completeness</i></b></p> <p>"I certify, under penalty of law, that this document and all attachments were prepared under my direction or supervision and in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person(s) who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations."</p> <p>COMAR 26.09.03.02H(1)(i)</p>
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<hr/> <b>Signature of Project Sponsor</b>	<hr/> <b>Date</b>
<hr/> <b>Project Sponsor's Name (Print)</b>	<hr/> <b>Title</b>

For questions regarding this application form, please contact the Department at (410) 537-3240

TECHNICAL GUIDANCE DOCUMENT  
 LANDFILL METHANE CAPTURE AND DESTRUCTION  
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## GENERAL INSTRUCTIONS

The instructions for completing the offset project application are identified in the guidance document. It is necessary to read the entire guidance document to fully understand the requirements and instructions for completing the offset project application. In addition to the instructions below, the prospective Project Sponsor's application should be organized and numbered in the same order as provided in the guidance document.

Print or type all information where requested.

Attach all requested information to the application. Ensure each attachment is identified properly.

- Submit hard copies of all attached documents. The Project Sponsor and Independent Verifier signatures must be originals.
- Submit electronic copies of all attached documents on a CD or DVD. Ensure that all Microsoft Excel spreadsheets are non-encrypted and accessible by the Department. Spreadsheets and calculations in the .pdf format will not be accepted.

Upload all requested information to COATS. See [www.rggi.org](http://www.rggi.org) for instructions.

## SUGGESTED PROCESS

The following is the Department's suggested process for applicants:

1. Create a COATS Account at <https://rggi-coats.org/eats/rggi/>.
2. Complete the Consistency Application and Independent Verifier Report. Provide both hard copies and electronic copies of all documents.
3. Upload all requested information into COATS. This information will not be made publicly available until the Department determines the application's completeness.
4. The Department will make a completeness determination within 30 days of receipt of the application, at which point the offset project information uploaded to COATS will be made publicly available.
5. The Department will make a consistency determination within 60 days after the completeness determination.
6. Complete the Monitoring and Verification Report and the Independent Verifier Report. Provide both hard copies and electronic copies of all documents.
7. Allowances will be awarded at the discretion of the Department after approval of the Monitoring and Verification Report.
8. A Monitoring and Verification Report and Independent Verifier Report must be submitted annually to maintain eligibility.



**LANDFILL METHANE CAPTURE AND DESTRUCTION OFFSET PROJECT  
SECTION I – CONSISTENCY APPLICATION**

**For all fields where information must be provided, print of type all required information.**

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**COATS OFFSET PROJECT NAME**

- Provide the COATS offset project name, which is the same as the RGGI COATS General Account Name. The RGGI COATS general account is the RGGI COATS account into which any awarded CO<sub>2</sub> offset allowances related to the offset project will be transferred. Complete this field on every page of the offset project application.

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**COATS OFFSET PROJECT I.D. CODE**

- Provide the COATS offset project I.D. code, which is the alphanumeric code automatically generated when the Project Sponsor makes the initial entry of the offset project in the RGGI CO<sub>2</sub> Allowance Tracking System (RGGI COATS). See the RGGI COATS User's Guide at <http://www.rggicoats.org> for information about creating an offset project record. Complete this field on every page of the offset project application.

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**ELIGIBILITY REQUIREMENTS**

**Complete the Eligibility Requirements by indicating “Yes” or “No” to each requirement on the application. Indicating “Yes” to E.1 through E.6 or indicating “No” to E.7 will deem the project ineligible.**

- E.1 – Check the “No” box if the offset project was initially commenced on or after December 20, 2005. Offset projects commenced before December 20, 2005 are not eligible for the award of CO<sub>2</sub> offset allowances.
- E.2 – Check the “No” box if the offset project is not required by any local, state, or federal law, regulation or administrative or judicial order. Offset projects required by local, state, or federal law, regulation or administrative or judicial order are not eligible for the award of CO<sub>2</sub> offset allowances.
- E.3 – Check the “No” box if the offset project does not include an electric generation component that is additionally being used for compliance with a renewable energy portfolio standard or other regulatory requirement. If the offset project includes an electric generation component, CO<sub>2</sub> offset allowances may not be awarded if the project is additionally being used for compliance with a renewable portfolio standard or other regulatory requirement.
- E.4 – Check the “No” box if the offset project does not and will not receive funding or other incentives provided through the Strategic Energy Investment Fund. Offset projects are not eligible for the award of CO<sub>2</sub> offset allowances if funding or other incentives are received from the Strategic Energy Investment Fund or from any state fund resulting from the auction of CO<sub>2</sub> allowances.
- E.5 – Check the “No” box if the offset project is not awarded credits or allowances under any mandatory or voluntary greenhouse gas program. Offset projects that are awarded credits or allowances under mandatory or voluntary greenhouse gas programs are not eligible for the award of CO<sub>2</sub> offset allowances.
- E.6 – Check the “No” box if the offset project landfill is not subject to New Source Performance Standards (NSPS), 40 CFR Part 60, Subpart Cc and Subpart WWW. Offset projects with landfill subject to New Source Performance Standards (NSPS), 40 CFR Part 60, Subpart Cc and Subpart WWW are not eligible for the award of CO<sub>2</sub> offset allowances.



- E.7 – Check the “Yes” box if the offset project employs a landfill gas collection system that provides continuous metering and data computation of landfill gas volumetric flow rate and CH<sub>4</sub> concentration. Offset projects that do not employ a landfill gas collection system that provides continuous metering and data computation of landfill gas volumetric flow rate and CH<sub>4</sub> concentration are not eligible for the award of CO<sub>2</sub> offset allowances.

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## PROJECT SPONSOR INFORMATION

**Print or type all required information pertaining to the Project Sponsor in the spaces provided.**

- Organization Name and Project Sponsor Name: Provide the full legal name of the organization the Project Sponsor represents and the name of the Project Sponsor. If the Project Sponsor is representing him or herself, provide the name of the individual. The Project Sponsor is the person who is the Authorized Account Representative for the RGGI COATS general account.
- Street Address, City, State/Province, Postal Code, Country: In the appropriate areas, provide the full contact address of the organization the Project Sponsor represents.
- Telephone and Facsimile Transmission Number: Provide the primary contact telephone number and the facsimile transmission number for the Project Sponsor.
- E-Mail Address: Provide the primary contact E-mail address for the Project Sponsor.
- COATS General Account Number: Provide the COATS General Account Number established by the Project Sponsor in COATS. The Project Sponsor must establish a general account in the RGGI CO<sub>2</sub> Allowance Tracking System (RGGI COATS). For information about establishing a RGGI COATS general account, consult the RGGI COATS User’s Guide, available at <http://www.rggi-coats.org>.
- Offset Project Date of Commencement: Provide the date that the offset project initially commenced. For offset projects commenced between December 20, 2005 and December 31, 2008, the Consistency Application must be submitted by June 30, 2009. For offset projects commenced on or after January 1, 2009, the Consistency Application must be submitted within six months after the project is commenced.

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## POINT OF CONTACT INFORMATION

**Print or type all required information pertaining to the Point of Contact in the spaces provided.**

- Point of Contact Name: Provide the full legal name of the Point of Contact for the offset project.
- Street Address, City, State/Province, Postal Code, Country: In the appropriate areas, provide the full contact address for the Point of Contact for the offset project.
- Telephone and Facsimile Transmission Number: Provide the primary contact telephone number and the facsimile transmission number for the Point of Contact for the offset project.
- E-Mail Address: Provide the primary contact E-mail address for the Point of Contact for the offset project.



## LANDFILL LOCATION AND REFUSE DISPOSAL PERMIT NUMBER

**Print or type all required information pertaining to the Landfill in the spaces provided.**

- Landfill Organization Legal Name: Provide the full legal name of the organization claiming ownership of the landfill used in the offset project.
- Physical Street Address, City, State/Province, Postal Code, Country: In the appropriate areas, provide the complete physical address of the landfill used in the offset project.
- State Refuse Disposal Permit Number: Provide the current or last Refuse Disposal Permit Number for the site.

### ATTACHMENT NUMBER

**Attach all of the following requested information with the application. Clearly indicate the corresponding attachment number (i.e.: I.1, I.2, etc.), the offset project name, and the offset project I.D. on all attached documents.**

- I.1 – Attach a detailed description of the actions to be taken as part of the offset project. Include the type of project (flaring, electricity generation, or direct-use offset project) and explain how the reduction of atmospheric loading or the sequestration of carbon will be quantified, monitored, and verified.
- I.2 – Attach documentation verifying that each of the Eligibility Requirements and the baseline emissions has been met.
  - a. E.1 – Provide records verifying that the offset project commenced between December 20, 2005 and December 31, 2008, or that the offset project commenced on or after January 1, 2009.
  - b. E.2 – Provide records that verify that the offset project is not required pursuant to any local, state, or federal law, regulation, or administrative or judicial order.
  - c. E.3 – Provide records that verify that, if applicable, the electric generation component included in the offset project is not additionally being used for compliance with a renewable portfolio standard or other regulatory requirement.
  - d. E.4 – Provide records or statements that document the offset project has not and will not receive any funding or other incentives from the Strategic Energy Investment Fund (the Fund), incentives derived from the Fund, or any states' fund receiving proceeds resulting from the auction of CO<sub>2</sub> allowances.
  - e. E.5 – Provide records or statements that the offset project has not and will not be awarded credits or allowances under any other greenhouse gas program.
  - f. E.6 – Provide records, including state and federal identification numbers, that verify that the offset project complies with the following:
    - i. The landfill or landfill units from which the offset project will draw landfill gas is/are not subject to federal New Source Performance Standards (NSPS) for municipal solid waste landfills, 40 CF Part 60, Subpart Cc and Subpart WWW. Include:
      1. The initial design capacity report
      2. The current annual non-methane organic compound (NMOC) emission rate report



3. If applicable, the amended design capacity report as described in the reporting requirements at 40 CFR Part 60.
  4. The results of calculations of estimated NMOC emissions (in megagrams per year) for the most recent year available
  5. Supporting data and calculations performed in accordance with the test methods and procedures specified at 40 CFR Part 60, Subpart WWW 60.754.
  6. The estimated date that the landfill will exceed the NSPS NMOC threshold
  7. The Tier type (i.e. Tier 1, Tier 2, or Tier 3) of emission rate estimates performed in accordance with the test methods and procedures specified at 40 CFR Part 60, Subpart WWW 60.754.
- g. E.7 – Provide records verifying that the offset project employs a landfill gas collection system that provides continuous metering and data computation of landfill gas volumetric flow rate and CH<sub>4</sub> concentration.
- h. Baseline Emissions – See Attachment Number I.3.
- I.3 – The emissions baseline will be determined in the Monitoring and Verification Report, as required by COMAR 26.09.03.03D.
  - I.4 – Attach a statement and certification report signed by the project sponsor to document that the offset project is in compliance with all applicable requirements of the refuse disposal permit for the landfill, COMAR 26.04.07, 40 CFR 258, COMAR 26.09.03 and the CO<sub>2</sub> Budget Trading Programs in all participating states.
  - I.5 – Attach a statement to document that the monitoring and verification plan has adequately met all of the Department requirements.
  - I.6 – Attach appropriate documentation if greenhouse gas emissions data related to the offset project have been or will be reported to any voluntary or mandatory programs, other than COMAR 26.09.01 to .04. For each program for which data have been or will be reported, provide the following:
    - a. Program name
    - b. Program type (voluntary or mandatory)
    - c. Program contact information (website or street address)
    - d. Categories of emissions data reported
    - e. Frequency of reporting
    - f. Commencement date of reporting
    - g. Reporting status (prior, current, future)

Attach a statement in place of the above information if no greenhouse gas emissions data have been or will be reported to any voluntary or mandatory programs, other than COMAR 26.09.01 to .04.

- I.7 – If the offset project is located in a state or United States jurisdiction that is not a participating state, attach documentation that demonstrates that the Project Sponsor has complied with all requirements of the cooperating regulatory agency in the state or United States jurisdiction where the offset project is located.
- I.8 – Attach documentation of the full legal name, address, email address, telephone number, and facsimile transmission number of both the owner and operator of the offset project, and the owner and operator of the landfill where the offset project will occur.





- I.9 – Attach documentation of specifications of the landfill where the offset project will occur. Include the following information:
  - a. Landfill Location and Specifications
    - i. Landfill location (city, state, zip code) and Refuse Disposal Permit Number
    - ii. Types of waste accepted (municipal solid waste, non-hazardous sludge, industrial waste, construction and demolition debris, medical waste, or specific other as stated in the Refuse Disposal Permit
    - iii. Opening year from landfill records
    - iv. Closing year (if applicable) or estimated date of closure from the annual solid waste tonnage report or approved closure plan
    - v. Total design waste capacity (specify cubic feet or tons) from the annual solid waste tonnage report
    - vi. Current area (specify hectares or acres) devoted to landfilling from the annual solid waste tonnage report, or if not available, from contour maps and filling plans
    - vii. Average waste depth (in feet) from the annual solid waste tonnage report, or if not available, from contour maps and filling plans
    - viii. Total waste in place from weigh scale records, most recent annual solid waste tonnage report, or other documented source
    - ix. Waste characteristics (food waste, wood, plastics, metal, paper, and specify other) represented as either percent of total mass or volume currently accepted, from weigh scale records of waste characterization and site-specific density records
    - x. Annual quantity of accepted waste (specify cubic feet or tons) for most recent year from weigh scale records, most recent annual solid waste tonnage report, or other documented source
    - xi. Average annual rainfall for location of landfill from NOAA's National Climatic Data Center (NCDC)
  - b. Equipment Specifications and Technical Schematic
    - i. Landfill gas collected equipment and landfill gas flow and composition monitoring equipment specifications including:
      - 1. Type(s) of equipment and manufacturer(s)
      - 2. Dates of installation
      - 3. Dates of initial calibration
      - 4. Design landfill gas flow capacity (standard cubic feet per minute)
      - 5. Installed landfill gas flow meter accuracy
      - 6. Methane concentration instrument thresholds (percent by volume) and methane concentration instrument precision and accuracy levels as specified by the manufacturer
    - ii. For on-site flare projects:
      - 1. Type of flare(s) (open, enclosed, or specify other) and manufacturer(s)
      - 2. Design capacity of flare flow rate in standard cubic feet per minute as specified by the manufacturer.



iii. For on-site or off-site electricity generation projects:

1. Type of electricity generation technology (reciprocating engine, gas turbine, cogeneration microturbine, steam turbine, combined cycle, organic Rankine cycle, or specify other)
2. Make (or model), manufacturer, and date of installation of combustion unit
3. Design electricity generation capacity of units of MWe as specified by the manufacturer
4. Heat rate of combustion (Btu/kWh), as specified by the manufacturer
5. Name, address, and point(s) of contact for each off-site purchaser of landfill gas

iv. For on-site or off-site direct use projects:

1. Type of direct-use project (boiler, direct thermal, leachate evaporation, high-Btu quality fuel, medium-Btu quality fuel, methanol synthesis, or specify other)
2. Make (or model), manufacturer and date of installation of combustion unit
3. Pipeline length, diameter, and material type as documented by the design plans referred to in the Refuse Disposal Permit
4. Name, address, and point(s) of contact for each off-site purchaser of landfill gas

- c. A technical schematic outlining the overall landfill gas capture and destruction system for the type of offset project (on-site flare, on-site electricity generation, or on-site or off-site direct use). The schematic must trace the landfill methane from the source to destruction by combustion.

- I.10 – Attach a monitoring and verification plan that includes a Quality Assurance/Quality Control (QA/QC) program for measuring equipment. Include the following information:
    - a. Procedures for recording names and contact information for: personnel responsible for recording measurements and data entry, QA/QC managers, and third party analytical laboratory
    - b. Procedures for designated personnel to keep landfill gas sales records (in MMBtu or standard cubic feet), electricity sales records, records of measured heat rate of combustion device if applicable, and records of newly installed equipment and retired equipment
    - c. Procedures for annual comparison of collected methane measured by monitoring equipment with calculated methane in landfill gas used to generate electricity or sold for direct use, noting and discrepancies
    - d. Calculation procedures for standardizing landfill gas flow that correct for documented site-specific temperature and pressure measurements. (This procedure is not necessary when using flow meters that automatically measure temperature and pressure and express landfill gas flow in standard cubic feet)
    - e. Description of the contents of an annual quality control report describing the procedures for QA/QC of landfill gas collection and monitoring equipment during the reporting period and a schedule for the annual completion of such report. The report should identify findings of quarterly reviews, difficulties encountered, and remedial actions taken.
- 



## PROJECT SPONSOR SIGNATURE

**Read and agree to the following by signing the Signature of Applicant.**

**An original signature is required for the following:**

- Consistency Application Agreement
- Access Agreement Statement
- Statement of Truth, Accuracy, and Completeness



**LANDFILL METHANE CAPTURE AND DESTRUCTION OFFSET PROJECT  
SECTION II – INDEPENDENT VERIFIER REPORT**

**Check the Consistency Application box if the Independent Verifier Report is being submitted with the Consistency Application.**

**Check the Monitoring and Verification box if the Independent Verifier Report is being submitted with the Monitoring and Verification Report.**

**Print or type all required information in all required fields.**

**INDEPENDENT VERIFIER INFORMATION**

**Print or type all required information pertaining to the Independent Verifier in the spaces provided.**

- Independent Verifier Organization Legal Name: Provide the full legal name of the organization the Independent Verifier represents.
- Independent Verifier Point of Contact: Provide the full name of the Independent Verifier.
- Physical Street Address, City, State/Province, Postal Code, Country: In the appropriate areas, provide the point of contact address of the Independent Verifier.
- Telephone Number: Provide the primary telephone number for the point of contact of the Independent Verifier.
- E-Mail Address: Provide the E-mail address for the point of contact of the Independent Verifier.

**ATTACHMENT NUMBER**

**Attach the following requested information to the end of the application. Clearly indicate the corresponding attachment number (i.e.: II.1, II.2, etc.), the offset project name, and the offset project I.D. on all attached documents.**

**Attach II.1 if the information is being submitted with the Consistency Application.**

**Attach II.2 and II.3 if the information is being submitted with the Monitoring and Verification Report.**

- II.1 – Attach a verification report.
  - a. The verification report must document the following:
    - i. The verifier has reviewed the entire Consistency Application and evaluated the contents of the application in relation to the applicable requirements of COMAR 26.09.03.02.
    - ii. The verifier has evaluated the adequacy and validity of information supplied by the Project Sponsor to demonstrate that the offset project meets the applicable eligibility requirements of COMAR 26.09.03.02.



- iii. The verifier has evaluated the adequacy and validity of information supplied by the Project Sponsor to demonstrate baseline emissions, pursuant to the applicable requirements of COMAR 26.09.03.03D.
    - iv. The verifier has evaluated the adequacy of the monitoring and verification plan submitted pursuant to COMAR 26.09.03.03F.
  - b. The verification report must include the following contents:
    - i. Cover page with report title and date
    - ii. Table of contents
    - iii. List of acronyms and abbreviations
    - iv. Executive summary
    - v. Description of objective of report
    - vi. Identification of the client, including name, address, and other contact information
    - vii. Identification of the offset project
    - viii. Description of evaluation criteria (applicable regulatory provisions and documentation requirements specified in Consistency Application)
    - ix. Description of the review and evaluation process, including any site visits and interviews
    - x. Identification of individuals performing the verification work, including the verification team leader and key personnel, and contact information for the team leader
    - xi. Description of the materials provided to the verifier by the Project Sponsor
    - xii. Evaluation conclusions and findings, including level of assurance provided
- II.2 – Attach documentation verifying that measuring and monitoring equipment is maintained, operated, and calibrated based on manufacturer recommendations. Include the following:
  - a. Monthly records on landfill gas flow rate performance tests that ensure:
    - i. Flow readings are recorded at least every 15 minutes
    - ii. The accuracy of landfill gas flow meter readings is within +/- 5 percent of manufacturer specifications
    - iii. Methane concentration instrument manufacturer specifications for precision and accuracy are met
  - b. Maintenance schedules for landfill gas flow meter and methane concentration instrument (for permanent and/or portable equipment) are performed in accordance with manufacturer recommendations and specifications.
  - c. At least daily records of collected landfill gas flow rates and methane concentration.
  - d. Monthly records of the number of hours that the combustion device (e.g., flare, boiler, electricity generation unit) was not in operation.
  - e. Monthly records of the calculation of landfill gas flow rate standardization (in standard cubic feet per day) to correct for site-specific pressure and temperature measurements (this procedure is not necessary when using flow meters that automatically measure temperature and pressure and express landfill gas flow in standard cubic feet).
  - f. Annual records of the measured heat rate of combustion of the electric generation unit(s) (in Btu/kWh) in accordance with manufacturer specification for landfill gas, if applicable to the offset project.
  - g. Monthly records of the amount of landfill gas combusted (in standard cubic feet) in the combustion device.
  - h. Records of calibration procedures for landfill gas flow monitoring equipment as specified by the manufacturer.
  - i. Records of calibration procedures for permanent methane concentration measurement equipment as specified by the manufacturer.



- j. Calibration schedules for landfill gas flow meter and methane concentration instrument (for permanent and/or portable equipment) are maintained in accordance with manufacturer recommendations and specifications
- II.3 – Attach documentation verifying the recordkeeping protocol that will be used throughout the duration of the offset project. Include maintenance of an electronic index of all material to be collected and storage procedures to ensure maintenance of collected information in electronic and/or hardcopy form. Include the following:
  - a. Records of all installed equipment and retired equipment related to landfill gas collection system and landfill gas combustion.
  - b. Monthly landfill gas flow meter performance tests.
  - c. Monthly methane concentration instrument performance tests.
  - d. Maintenance schedules for landfill gas flow meter and methane concentration instrument.
  - e. QA/QC Program for Measuring Equipment
    - i. Names and contact information for personnel responsible for recording measurements, personnel responsible for data entry, QA/QC managers, and third-party analytical laboratory
    - ii. Annual QA/QC reports and the associated findings and remedial actions taken
    - iii. Annual comparison of collected methane as measured by monitoring equipment with calculated methane used to generate electricity or landfill gas sold, if applicable to the offset project.
  - f. Maintenance of Measuring and Monitoring equipment
    - i. Records of all installed equipment and retired equipment related to landfill gas collection system and landfill gas combustion
    - ii. Landfill gas flow meter performance tests for each month
    - iii. Methane concentration instrument performance tests for each month
    - iv. Maintenance schedules for landfill gas flow meter and methane concentration instrument
  - g. Operation of Measuring and Monitoring Equipment
    - i. Landfill gas sales records (in MMBtu or standard cubic feet of methane) or electricity sales records (in kWh) for each month, if applicable to the offset project
    - ii. Landfill gas flow meter reading in at least 15 minute intervals
    - iii. Methane concentration instrument reading in at least daily intervals
    - iv. Landfill gas collection system operating hours for each month
    - v. Combustion device operation hours for each month
    - vi. Landfill gas flow meter pressure and temperature measurements for each month
    - vii. Heat rate of combustion of electric generation unit(s) for reporting year, if applicable to the offset project
    - viii. Methane combustion data for combustion device in at least 15 minute intervals
  - h. Calibration of Measuring and Monitoring Equipment
    - i. Calibration procedures and schedules for landfill gas flow meter and methane concentration instrument (for permanent and/or portable equipment).



## INDEPENDENT VERIFIER SIGNATURE

**Read and agree to the following by signing the Signature of Independent Verifier.**

**An original signature is required for the following:**

- Certification Statement
- Statement of Truth, Accuracy, and Completeness



**LANDFILL METHANE CAPTURE AND DESTRUCTION OFFSET PROJECT  
SECTION III – MONITORING AND VERIFICATION**

**For all fields where information must be provided, print or type all required information.**

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**PROJECT SPONSOR INFORMATION**

**Print or type all required information pertaining to the Project Sponsor in the spaces provided.**

- Organization Name and Project Sponsor Name: Provide the full legal name of the organization the Project Sponsor represents and the name of the Project Sponsor. If the Project Sponsor is representing him or herself, provide the name of the individual. The Project Sponsor is the person who is the Authorized Account Representative for the RGGI COATS general account.
  - Street Address, City, State/Province, Postal Code, Country: In the appropriate areas, provide the full contact address of the organization the Project Sponsor represents.
  - Telephone and Facsimile Transmission Number: Provide the primary contact telephone number and the facsimile transmission number for the Project Sponsor.
  - E-Mail Address: Provide the primary contact E-mail address for the Project Sponsor.
  - COATS General Account Number: Provide the COATS General Account Number established by the Project Sponsor in COATS. The Project Sponsor must establish a general account in the RGGI CO<sub>2</sub> Allowance Tracking System (RGGI COATS). For information about establishing a RGGI COATS general account, consult the RGGI COATS User's Guide, available at <http://www.rggi-coats.org>.
  - Offset Project Date of Commencement: Provide the date that the offset project initially commenced. For offset projects commenced between December 20, 2005 and December 31, 2008, the Consistency Application must be submitted by June 30, 2009. For offset projects commenced on or after January 1, 2009, the Consistency Application must be submitted within six months after the project is commenced.
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**POINT OF CONTACT INFORMATION**

**Print or type all required information pertaining to the Point of Contact in the spaces provided.**

- Point of Contact Name: Provide the full legal name of the Point of Contact for the offset project.
  - Street Address, City, State/Province, Postal Code, Country: In the appropriate areas, provide the full contact address for the Point of Contact for the offset project.
  - Telephone and Facsimile Transmission Number: Provide the primary contact telephone number and the facsimile transmission number for the Point of Contact for the offset project.
  - E-Mail Address: Provide the primary contact E-mail address for the Point of Contact for the offset project.
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## LANDFILL LOCATION AND REFUSE DISPOSAL PERMIT NUMBER

**Print or type all required information pertaining to the Landfill in the spaces provided.**

- Landfill Organization Legal Name: Provide the full legal name of the organization claiming ownership of the landfill used in the offset project.
- Physical Street Address, City, State/Province, Postal Code, Country: In the appropriate areas, provide the complete physical address of the landfill used in the offset project.
- State Refuse Disposal Permit Number: Provide the current or last Refuse Disposal Permit Number for the site.

### ATTACHMENT NUMBER

**Attach all of the following requested information to the end of the application. Indicate the corresponding attachment number (i.e.: III.1, III.2, etc.), the offset project name, and the offset project I.D. on all attached documents.**

**When submitting electronic copies of the following, ensure that all Microsoft Excel spreadsheets are non-encrypted and accessible by the Department. Files in the .pdf format will not be accepted.**

- III.1 – Attach a statement that the monitoring and verification plan has adequately met all Department requirements.
- III.2 – Attach documentation of the full legal name, address, email address, telephone number, and facsimile transmission number of both the owner and operator of the offset project, and the owner and operator of the landfill where the offset project will occur.
- III.3 – Attach calculations showing how the emissions baseline was determined. The emissions baseline represents the potential fugitive landfill emissions of methane (CH<sub>4</sub>) measured in tons of CO<sub>2</sub>e as represented by the CH<sub>4</sub> collected and metered for thermal destruction as part of the offset project. You must use the following formula:

a. 
$$Emissions (tons CO_2e) = \frac{(V \cdot M \cdot (1 - OX)) \cdot GWP}{2000}$$

b. Where:

- i. V = Volume of CH<sub>4</sub> collected, in cubic feet
- ii. M = Mass of CH<sub>4</sub> per cubic foot (0.04246 pounds per cubic feet default value at 1 atmosphere and 20° C)
- iii. OX = Oxidation factor (0.10), representing estimated portion of collected CH<sub>4</sub> that would have eventually oxidized to CO<sub>2</sub> if not collected
- iv. GWP = 23 for the CO<sub>2</sub>e global warming potential of CH<sub>4</sub>

- III.4 – Attach all emissions reductions calculations. These calculations must include:
  - a. CO<sub>2</sub>-equivalent emissions reductions (short tons).
  - b. Volume of methane collected (standard cubic feet).
  - c. Mass of methane per standard cubic foot.



- d. A spreadsheet documenting the data sources and calculations for the values, in accordance with the following:
- i. Calculations of CO<sub>2</sub>-equivalent emissions reductions that occurred during the reporting period, in accordance with the following equation:

$$1. \text{ Emissions (tons CO}_2\text{e)} = \frac{(V \cdot M \cdot (1 - OX) \cdot C_{ef} \cdot GWP)}{2000}$$

2. Where:

- a. V = Volume of methane recovered in standard cubic feet
- b. M = Mass of methane per standard cubic foot (lbs/sft<sup>3</sup>)
- c. OX = Oxidation factor (0.10)
- d. C<sub>ef</sub> = Combustion efficiency of methane control technology (0.98)
- e. GWP = CO<sub>2</sub>e global warming potential of methane (23)

ii. Calculations of volume of methane recovered during the reporting period as follows:

1. Daily methane recovery volume as measured in standard cubic feet of methane per day from the continuous monitoring system.
2. Sum the daily methane recovery volume for each month during the reporting period.
3. Adjust monthly methane recovery volume to account for recovered methane vented directly to the atmosphere rather than combusted and destroyed by the combustion device, during periods when the combustion device was inoperable.
4. Total the adjusted monthly volume of methane recovered during each month to obtain the total amount of annual methane recovered (in standard cubic feet of methane per year) from the landfill.

iii. Determine the values for mass of methane per standard cubic foot (lbs/sft<sup>3</sup>) as follows:

1. Use the default value of 0.04246 lbs/ft<sup>3</sup> at 1 atmosphere and 20° C or justify and document the use of any alternative value.

• III.5 – Attach an annual monitoring and verification report that includes the following:

- a. Monthly volumetric flow rate and CH<sub>4</sub> concentration data
  - i. Include documentation that the CH<sub>4</sub> was actually supplied to the combustion source
- b. Procedures for quantifying the annual volume of methane collected (in standard cubic feet)
  - i. Specify the data sources and calculations to be used
- c. Procedures for quantifying the mass of methane per cubic foot of methane
  - i. Specify whether the default value of 0.04246 lbs/ft<sup>3</sup> at 1 atmosphere and 20° C will be used, or
  - ii. Specify the procedures that will be used to:



1. Monitor temperature and pressure
  2. Derive an alternate representative temperature
- iii. Specify the data sources and value for the appropriate mass of CH<sub>4</sub> per standard cubic foot of methane (lbs/ft<sup>3</sup>)
- III.6 – Attach updated documentation for the monitoring and verification plan, including:
    - a. A quality assurance and quality control program associated with equipment used to determine landfill gas volumetric flow rate and CH<sub>4</sub> composition that includes:
      - i. Procedures for recording names and contact information for: personnel responsible for recording measurements and data entry, QA/QC managers, and third party analytical laboratory
      - ii. Procedures for designated personnel to keep landfill gas sales records (in MMBtu or standard cubic feet), electricity sales records, records of measured heat rate of combustion device if applicable, and records of newly installed equipment and retired equipment
      - iii. Procedures for annual comparison of collected methane measured by monitoring equipment with calculated methane in landfill gas used to generate electricity or sold for direct use, noting any discrepancies
      - iv. Calculation procedures for standardizing landfill gas flow that correct for documented site-specific temperature and pressure measurements. (This procedure is not necessary when using flow meters that automatically measure temperature and pressure and express landfill gas flow in standard cubic feet)
      - v. Description of the contents of an annual quality control report describing the procedures for QA/QC of landfill gas collection and monitoring equipment during the reporting period and a schedule for the annual completion of such report. The report should identify findings of quarterly reviews, difficulties encountered, and remedial actions taken.
    - b. Documentation verifying that measuring and monitoring equipment is maintained, operated, and calibrated based on manufacturer recommendations. Documentation must include:
      - i. Monthly records on landfill gas flow rate performance tests that ensure:
        1. Flow readings are recorded at least every 15 minutes
        2. The accuracy of landfill gas flow meter readings is within +/- 5 percent of manufacturer specifications
        3. Methane concentration instrument manufacturer specifications for precision and accuracy are met
      - ii. Maintenance schedules for landfill gas flow meter and methane concentration instrument (for permanent and/or portable equipment) are performed in accordance with manufacturer recommendations and specifications.
      - iii. At least daily records of collected landfill gas flow rates and methane concentration.
      - iv. Monthly records of the number of hours that the combustion device (e.g., flare, boiler, electricity generation unit) was not in operation.
      - v. Monthly records of the calculation of landfill gas flow rate standardization (in standard cubic feet per day) to correct for site-specific pressure and temperature measurements (this procedure is not necessary



when using flow meters that automatically measure temperature and pressure and express landfill gas flow in standard cubic feet).

- vi. Annual records of the measured heat rate of combustion of the electric generation unit(s) (in Btu/kWh) in accordance with manufacturer specification for landfill gas, if applicable to the offset project.
  - vii. Monthly records of the amount of landfill gas combusted (in standard cubic feet) in the combustion device.
  - viii. Records of calibration procedures for landfill gas flow monitoring equipment as specified by the manufacturer.
  - ix. Records of calibration procedures for permanent methane concentration measurement equipment as specified by the manufacturer.
  - x. Calibration schedules for landfill gas flow meter and methane concentration instrument (for permanent and/or portable equipment) are maintained in accordance with manufacturer recommendations and specifications.
- c. Recordkeeping protocol that will be used to maintain record keeping throughout the duration of the offset project, including maintenance of an electronic index of all material to be collected, and storage procedures to ensure maintenance of collected information in electronic and/or hardcopy form. Documentation must include:
- i. Records of all installed equipment and retired equipment related to landfill gas collection system and landfill gas combustion.
  - ii. Monthly landfill gas flow meter performance tests.
  - iii. Monthly methane concentration instrument performance tests.
  - iv. Maintenance schedules for landfill gas flow meter and methane concentration instrument.
  - v. QA/QC Program for Measuring Equipment
    - 1. Names and contact information for personnel responsible for recording measurements, personnel responsible for data entry, QA/QC managers, and third-party analytical laboratory
    - 2. Annual QA/QC reports and the associated findings and remedial actions taken
    - 3. Annual comparison of collected methane as measured by monitoring equipment with calculated methane used to generate electricity or landfill gas sold, if applicable to the offset project.
  - vi. Maintenance of Measuring and Monitoring equipment
    - 1. Records of all installed equipment and retired equipment related to landfill gas collection system and landfill gas combustion
    - 2. Landfill gas flow meter performance tests for each month
    - 3. Methane concentration instrument performance tests for each month
    - 4. Maintenance schedules for landfill gas flow meter and methane concentration instrument
  - vii. Operation of Measuring and Monitoring Equipment



1. Landfill gas sales records (in MMBtu or standard cubic feet of methane) or electricity sales records (in kWh) for each month, if applicable to the offset project
2. Landfill gas flow meter reading in at least 15 minute intervals
3. Methane concentration instrument reading in at least daily intervals
4. Landfill gas collection system operating hours for each month
5. Combustion device operation hours for each month
6. Landfill gas flow meter pressure and temperature measurements for each month
7. Heat rate of combustion of electric generation unit(s) for reporting year, if applicable to the offset project
8. Methane combustion data for combustion device in at least 15 minute intervals

viii. Calibration of Measuring and Monitoring Equipment

1. Calibration procedures and schedules for landfill gas flow meter and methane concentration instrument (for permanent and/or portable equipment).
- III.7 – Attach annual verification of landfill gas CH<sub>4</sub> composition through landfill gas sampling and independent laboratory analysis using applicable EPA laboratory test methods approved at <http://www.epa.gov/ttn/emc/promgate.html>. Document the process that will be used to perform annual third-party analysis of sampled landfill gas methane composition. Provide as an appendix to the M&V Plan a copy of the contract (with financial information redacted) for annual third-party laboratory analysis of sampled landfill gas. Document the protocol that will be used to ensure that the landfill gas samples will be taken at the same location as the landfill gas flow meter.

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**PROJECT SPONSOR SIGNATURE**

**Read and agree to the following by signing the Signature of Project Sponsor.**

**An original signature is required for the following:**

- Statement of Truth, Accuracy, and Completeness.

