



COMMONWEALTH OF MASSACHUSETTS  
EXECUTIVE OFFICE OF ENERGY & ENVIRONMENTAL AFFAIRS  
DEPARTMENT OF ENVIRONMENTAL PROTECTION  
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Commissioner

June 26, 2009

Attn: Jerry Leone  
Casella Waste Services of Ontario, LLC  
1879 Route 5 & 20  
Stanley, NY 14561

Re: 310 CMR 7.00 Appendix B(7)  
Transmittal # X226320  
Final Approval of  
BWP AQ 28 Application  
Verification of GHG Credits  
at Ontario County Landfill in Stanley, NY

Dear Mr. Leone:

The Massachusetts Department of Environmental Protection (MassDEP or the Department) hereby approves your Application for Verification of Greenhouse Gas (GHG) Credits (BWP AQ28), dated January 16, 2009. In accordance with the requirements of 310 CMR 7.00: Appendix B(7)(f), the Department conducted a 30-day public comment period on the Proposed Approval. The public comment period ended on April 27, 2009. No public comments were received during this public comment period.

The approval of your Application for Verification of GHG Credits (BWP AQ 28) creates 30,148 verified GHG Credits for emission reductions that occurred between January 1, 2008 and December 31, 2008 at Ontario County Landfill in Stanley, NY. Verified GHG Credits from this project can be used by affected facilities for compliance with the carbon dioxide (CO<sub>2</sub>) emissions standards of 310 CMR 7.29. These credits have been deposited into MA GHG Credit account MAGHG-N-10004; the GHG Credit Account Representative for this account is Timothy Cretney. Verified GHG Credits from this project can only be used by affected facilities for compliance with the CO<sub>2</sub> emissions standards of 310 CMR 7.29, or, if this project is not an offset project type listed under 310 CMR 7.70(10)(c)1.a.<sup>1</sup>, exchanged for CO<sub>2</sub> allowances in accordance with 310 CMR 7.00: Appendix B(7)(h).

Included as part of this approval of your January 16, 2009 Application for Verification of GHG Credits is the following:

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<sup>1</sup> Guidance documents and applications that will clarify exactly which landfill gas projects are allowable under 310 CMR 7.70(10) are under development in coordination with other RGGI states. MassDEP will consider these documents before finally determining whether this project is an offset project type listed under 310 CMR 7.70(10)(c)1.a.

This information is available in alternate format. Call Donald M. Gomes, ADA Coordinator at 617-556-1057. TDD# 1-866-539-7622 or 1-617-574-6868.

- (1) A description of your project.
- (2) A table showing the number of GHG Credits certified and verified for this project.
- (3) A list of relevant determinations that the Department has made in accordance with the requirements of 310 CMR 7.00: Appendix B(7).
- (4) An explanation of how the number of verified GHG Credits was calculated.

Note that your application is also incorporated, by reference, in this Final Approval.

**(1) Description of the Project**

As described in the application,

*The project entails the voluntary destruction of landfill methane at the Ontario County Landfill in Stanley, NY. Destruction occurs through active collection and flaring.*

**(2) Table showing number of GHG Credits**

	<b>Time Period</b>	<b>Number of Credits</b>	<b>Status</b>
Certified GHG Credits	May 7, 2007 through February 28, 2009	90,687	Conditional Approval June 23, 2008
Verified GHG Credits	May 7, 2007 through December 31, 2007	32,187	Final Approval June 23, 2008
Verified GHG Credits	January 1, 2008 through December 31, 2008	30,148	Final Approval June 26, 2009

**(3) A list of relevant determinations that the Department has made in accordance with the requirements of 310 CMR 7.00: Appendix B(7).** (Defined terms and language that is directly excerpted from regulations appear in italics.)

The Department has made the following determinations:

- The emission reductions are *Real*, in that there were actual reductions in emissions of methane, a greenhouse gas, from the Ontario County Landfill as a result of the project between January 1, 2008 and December 31, 2008. Methane was destroyed through combustion in a flare.
- The emission reductions were *Additional*, in that, according to the applicant, there was no legal requirement to destroy the methane gas that was destroyed by the flare between January 1, 2008 and December 31, 2008. According to the applicant, waste was first placed in the cell from which methane is being flared in December 2004, but flaring is

not required under current New Source Performance Standards (NSPS) until the sixth year following the initial placement of municipal solid waste into a new landfill cell.

- The emission reductions are *Verifiable*, in that emission reductions were calculated based on daily direct measurements of flow and methane content.
- The emission reductions are *Permanent*, in that methane was destroyed in the combustion process.
- The emission reductions are *Enforceable*, in that, pursuant to 310 CMR 7.00: Appendix B(7)(g)8., violations of the requirements of 310 CMR 7.00: Appendix B(7) may be enforced against any person who applied for certification or verification of GHG Credits, an affected facility that purchases GHG Credits created by this project, or any combination thereof.
- The project commenced *on or after January 1, 2006*, in accordance with 310 CMR 7.00: Appendix B(7)(d)9., in that the first flare was installed in May of 2007.
- The applicant has specified *the best management practice (BMP) used to determine an emissions baseline*, in accordance with 310 CMR 7.00: Appendix B(7)(e)4.d., in that the January 16, 2009 Application for Verification includes the following statement: “The standard practice for LFG handling (for the first five years following initial placement of waste into new landfill cells) is to allow it to passively vent to the environment. There are no standard BMPs in this context that result in GHG reduction.” Furthermore, the applicant has indicated that, regardless of the status of the flaring project described in this application, landfill gas will be destroyed in an existing engine-generator set after February 28, 2009. Methane destruction that occurs after February 28, 2009 would represent normal BMP for this landfill and is therefore not eligible to create GHG Credits.
- The project does not present any potential project leakage.

#### **(4) Explanation of how the number of verified GHG Credits was calculated**

The number of GHG Credits was calculated using the following equation in accordance with MassDEP’s June 23, 2008 Final Approval letter:

$$\text{GHG Credits} = N_{\text{baseline}} - N_{\text{project}}$$

Where  $N_{\text{baseline}}$  = the number of tons of carbon dioxide equivalent ( $\text{CO}_2\text{e}$ ) emitted without the project, calculated thus:

$$N_{\text{baseline}} = N_{\text{CH}_4(\text{baseline})} \times 25 \times 0.90 \times 0.98$$

Where:

$N_{\text{CH}_4(\text{baseline})}$  = the number of tons of methane expected to enter the flare, or, in the case of verified emission reductions, determined to have entered the flare, as measured by flow and methane content meters.

25 = the global warming potential of methane.

0.90 = factor representing the estimated fraction of the methane that would not have eventually oxidized to CO<sub>2</sub> without the project. Methane that would eventually have oxidized to CO<sub>2</sub> is not counted as methane emissions for the purpose of determining the project baseline, because it would have been destroyed anyway. This factor is also included in the landfill gas section of the Massachusetts CO<sub>2</sub> Budget Trading Program regulations, 310 CMR 7.70(10)(e)1 c and d.

0.98 = factor representing the estimated combustion efficiency of the methane destruction technology. Methane that passes through the flare without being destroyed is not counted toward the project baseline, because the project will have no effect on these emissions. This factor is also included in the landfill gas section of the Massachusetts CO<sub>2</sub> Budget Trading Program regulations, 310 CMR 7.70(10)(e)1d.

And  $N_{\text{project}}$  = the number of tons of CO<sub>2e</sub> emitted with the project, calculated thus:

$$N_{\text{project}} = N_{\text{CO2(project)}}$$

$N_{\text{CO2(project)}}$  = the number of tons of carbon dioxide created through the combustion of methane, calculated thus:

$$N_{\text{CO2(project)}} = N_{\text{CH4(baseline)}} \times 0.90 \times 0.98 \times 2.75$$

Where:

2.75 = the number of tons of carbon dioxide created for each ton of methane that is combusted. 2.75 is the ratio of the molecular mass of carbon dioxide to the molecular mass of methane.

Data and calculations for this application are summarized in the following table:

	Verification (AQ28)
$N_{\text{CH4(baseline)}}$	1,536.24
$N_{\text{CO2(project)}}$	3726.15
$N_{\text{baseline}}$	33,874.06
$N_{\text{project}}$	3,726.15
<b>GHG Credits</b>	<b>30,147.91</b>

Should you have any questions concerning this Final Approval, please contact Loreen Kelley at [loreen.kelley@state.ma.us](mailto:loreen.kelley@state.ma.us) or (617) 574-6815.

Very truly yours,

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Nancy L. Seidman  
Deputy Assistant Commissioner  
Climate Strategies  
Bureau of Waste Prevention

cc: William Lamkin, MassDEP, BWP, NERO  
William Space, MassDEP, BWP, Boston  
Stacy DeGabriele, MassDEP, BWP, Boston  
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