



BWP AQ 30 CO₂ Budget Emission Control Plan Instructions & Supporting Materials

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Introduction

MassDEP *Emission Control Plan Applications*, as well as *Instructions & Support Materials*, are available for download from the MassDEP Web site at mass.gov/dep in two file formats: Microsoft Word™ and Adobe Acrobat PDF™. Either format allows documents to be printed.

Instructions & Support Materials files in Microsoft Word™ format contain a series of documents that provide guidance on how to prepare an emission control plan application. Although we recommend that you print out the entire package, you may choose to print specific documents by selecting the appropriate page numbers for printing.

Emission Control Plan Applications in Microsoft Word™ format must be downloaded separately. Users with Microsoft Word™ 97 or later may complete these forms electronically.

Emission Control Plan packages in Adobe Acrobat PDF™ format combine *Emission Control Plan Applications* and *Instructions & Support Materials* in a single document. Adobe Acrobat PDF™ files may only be viewed and printed without alteration. *Emission Control Plan Applications* in this format may not be completed electronically.



BWP AQ 30 CO₂ Budget Emission Control Plan Fact Sheet

1. What is the purpose of the Emission Control Plan?

The purpose of MassDEP regulation 310 CMR 7.70 is to establish the Massachusetts CO₂ Budget Trading Program, which is designed to stabilize and then reduce anthropogenic emissions of CO₂, a greenhouse gas, from CO₂ Budget sources in an economically efficient manner. The CO₂ Budget Trading Program will regulate CO₂ emissions beginning on January 1, 2009. 310 CMR 7.70(8) requires all affected units to determine and report CO₂ mass emissions from certified systems beginning January 1, 2009. To ensure that the CO₂ mass emissions are determined accurately and consistently, 310 CMR 7.70 requires submission of a CO₂ Budget Emission Control Plan (ECP), which contains an emissions and an energy output monitoring plan.

2. Who must apply?

All facilities subject to 310 CMR 7.70(1)(d) must apply for a CO₂ Budget ECP approval. Facilities subject to 310 CMR 7.70 (1) (d) include any fossil fuel-fired stationary boiler, combustion turbine, or combined cycle system that, at any time on or after January 1, 2005, serves an electricity generator with a nameplate capacity equal to or greater than 25 MWe. Any source that includes one or more such units shall be a CO₂ Budget source.

3. What category should I apply under?

The CO₂ Budget ECP category is BWP AQ 30. BWP AQ 30 is intended for all CO₂ Budget sources subject to 310 CMR 7.70.

4. What are the application deadlines?

The deadline for submittal to the MassDEP of a complete CO₂ Budget ECP application under 310 CMR 7.70(3)(c) is August 1, 2008 or 12 months before the date on which the CO₂ Budget source, or a new unit at the source, commences operation, whichever is later.

As required by 310 CMR 7.70(2)(a)4., no CO₂ Budget ECP approval shall be issued, and no CO₂ Allowance Tracking System account shall be established for a CO₂ Budget source until MassDEP has received a complete account certificate of representation under 310 CMR 7.70(2)(d) for a CO₂ authorized account representative of the source and the CO₂ Budget units at the source. The CO₂ Budget Trading Program certificate of representation form has been included in the CO₂ Budget ECP application form.

If the CO₂ Budget source is required to have an Operating Permit under 310 CMR 7.00: Appendix C, such Operating permit shall be modified in accordance with the procedures in 310 CMR 7.00: Appendix C(8).

5. What are the application fees and timelines?

BWP AQ 30 is not subject to 310 CMR 4.00 and therefore is not subject to fees and timelines established under that regulation.

6. How do I find my Facility AQ ID number, my ORIS ID number, and my CO₂ Budget Trading Program Compliance Account number?

The Facility AQ ID number can be found on your MassDEP Source Registration Form.



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The Office of Regulatory Information Systems Identification (ORIS ID) number is issued by the Energy Information Agency (EIA).

CO₂ Budget Trading Program Compliance Account numbers may not be available by August 1, 2008 and therefore CO₂ Budget Trading Program Compliance Account numbers do not need to be submitted with the CO₂ Budget ECP applications submitted by August 1, 2008. Please note that submission of this CO₂ Budget ECP application is not considered to be an application to open a compliance account. A process for establishing a compliance account is being developed and will be made available as soon as possible.

7. How do I submit a complete plan application?

For a complete CO₂ Budget ECP, an applicant must submit the MassDEP Transmittal form (available from <http://mass.gov/dep/service/online/trasmfrm.shtml>), the BWP AQ 30 CO₂ Budget Emission Control Plan Application form, and all applicable additional requirements stated in Sections E (CO₂ Budget Program Emissions Control Plans), F (Requirements for Energy Output Monitoring Plans), and H (Requirements for Eligible Biomass Monitoring Plans) of the Application form. As there is no application fee for this permit, do not check a box in section F of the MassDEP Transmittal form. All hardcopy submittals should be sent to the primary permit and reserve copy locations provided in Question 20 below. An electronic copy of the application **must** be submitted as a Word file, and may also be submitted as an Adobe pdf file, to MassDEP via email to: Patricio.Silva@state.ma.us.

The completed CO₂ Budget ECP must be submitted by the source's CO₂ authorized account representative. Note that for sources subject to the Clean Air Interstate Rule (CAIR) NO_x Ozone Season program under 310 CMR 7.32 and/or the federal Acid Rain Program (ARP) under 40 CFR Part 72, the CO₂ authorized account representative must be the same person as the CAIR and/or ARP designated representative; the alternate CO₂ authorized account representative must be the same person as the alternate CAIR and/or ARP designated representative.

8. How do I decide which monitoring plan option applies to each CO₂ Budget unit?

Please see Tables 1 and 2 below, and also the explanation in Options A through D in the application, to determine which type(s) of monitoring plans must be submitted with this ECP application. Use Table 2 only if you are revising an existing CO₂ Budget ECP approval. Ensure that each CO₂ Budget unit is listed only once under Options A through D in the application.

Table 1: Submission of Monitoring Plans with ECP due on or before August 1, 2008, or 12 months before a new CO₂ Budget unit commences operation, whichever is later

Monitoring Plan Options for CO ₂ Budget unit's Initial BWP AQ30 ECP Application	Energy Output Monitoring			
	Acid Rain Program Units		Non-Acid Rain Program Units	
	New unit, or proposing changes to 310 CMR 7.28 or 7.32 ECP Approval?			
	No	Yes	No	Yes



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CO ₂ Emissions Monitoring per 40 CFR Part 75 excluding equation G-1	Certified CO ₂ monitoring system or long-term cold storage or new unit	Option A	Option B		
	Adding CO ₂ monitoring system or new unit			Option C	Option D

Note: Gray shaded areas in Table 1 indicate situations that do not exist in Massachusetts.

Table 2: Submission of Monitoring Plans to amend an existing CO₂ Budget ECP approval

Monitoring Plan Options to amend CO ₂ Budget unit's BWP AQ30 ECP Approval		Energy Output Monitoring			
		Acid Rain Program Units		Non-Acid Rain Program Units	
		Changes to 310 CMR 7.70 ECP Approval?			
		No	Yes	No	Yes
CO ₂ Emissions Monitoring per 40 CFR Part 75 excluding equation G-1	Certified CO ₂ monitoring system		Option B		Option B
	Changing CO ₂ monitoring methodology		Option B	Option C	Option D

Note: Gray shaded areas in Table 2 indicate situations that do not require submission of an ECP application.

9. What other information should be considered when applying?

Emissions monitoring – ARP units do not need to submit emissions monitoring plans or emissions certification documents.

Petitions for Emissions Monitoring Plans – A CO₂ authorized account representative who proposes to submit a petition for any variance to 40 CFR Part 75, or whose CO₂ Budget unit has already received a petition approval from US EPA under 40 CFR Part 75, but that has not received an approval pursuant to 310 CMR 7.70, must submit the petition, and any approval received. Option E must be completed in the application.



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Long-term Cold Storage¹ – You must have a certified emissions monitoring system that meets the requirements of 310 CMR 7.70(8)(a)1.a through 1.c (that does not use equation G-1 to calculate CO₂ emissions) by January 1, 2009. However, a unit is considered to meet these requirements if the monitoring system is uncertified, the unit is not going to operate before January 1, 2009, and notification has been provided to US EPA that the unit is a ‘long-term cold storage unit’ (shut down for at least two years) in accordance with 40 CFR 75.61(a)(7). In addition, under 40 CFR 75.64, no quarterly reports will need to be submitted for these units until they recommence operation.

Energy Output Monitoring – Documentation does not need to be submitted with the application if no changes are being proposed to the energy output monitoring documentation that was:

1. submitted with the CO₂ Budget unit’s CAIR ECP application; or
2. approved under the CO₂ Budget unit’s 310 CMR 7.28 ECP approval net output tables I (and II for cogenerators), and no changes were proposed in a CAIR ECP application.

Eligible Biomass – A CO₂ authorized account representative of a CO₂ Budget unit that co-fires eligible biomass as a compliance mechanism under 310 CMR 7.70 must submit documentation pursuant to 310 CMR 7.70(8)(g) and the requirements of Section H of the Application. Option F must be completed in the application. See also Question 18 below.

10. Who should I send my CO₂ emissions monitoring and testing data and electronic monitoring plans to?

The US EPA is the Department’s agent for these purposes. You can find the appropriate US EPA contact at: <http://www.epa.gov/airmarkets/business/industry/contacts.html>.

11. Do I need to send the CO₂ account certificate of representation to US EPA?

No. The CO₂ authorized account certificate of representation form has been included in the ECP application in Section B. This form must be signed by the CO₂ authorized account representative (CO₂ AAR) and, if any, the alternate CO₂ authorized account representative (CO₂ AAAR). Note that for sources subject to the Clean Air Interstate Rule (CAIR) NOx Ozone Season program under 310 CMR 7.32 and/or the federal Acid Rain Program (ARP) under 40 CFR Part 72, the CO₂ authorized account representative must be the same person as the CAIR and/or ARP designated representative; the alternate CO₂ authorized account representative must be the same person as the alternate CAIR and/or ARP designated representative. No additional account certificate of representation form needs to be submitted to US EPA for the purposes of 310 CMR 7.70. Please contact the MassDEP if you wish to change either the CO₂ AAR or CO₂ AAAR. Any changes made to either the CO₂ AAR or the CO₂ AAAR, must correspond to respective changes made with US EPA to the ARP and CAIR designated representatives.

12. When do I submit my electronic monitoring plan to US EPA?

40 CFR 75.62(a)(1) states that the authorized account representative for an affected unit “shall submit a complete electronic, up to date monitoring plan file... no later than 21 days prior to the initial certification tests; at the time of each certification or recertification application submission; and (prior to or concurrent with) the submittal of the electronic quarterly report where an update of the electronic monitoring plan information is required...”

An updated electronic monitoring plan will be required for non-ARP CO₂ Budget units to begin reporting CO₂ emissions to US EPA. US EPA will not be able to accept any CO₂ electronic monitoring plans for non-ARP

¹ *Long-term cold storage* means the complete shutdown of a unit intended to last for an extended period of time (at least two calendar years) where notice for long-term cold storage is provided under 40 CFR 75.61(a)(7). (40 CFR 72.2 Definitions)



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CO₂ Budget units before January 1, 2009, so please plan to submit your monitoring plan at the time of the first quarterly submittal (due April 30, 2009).

CO₂ authorized account representatives for ARP CO₂ Budget units must submit and maintain the complete electronic, up to date, monitoring plan file with the US EPA pursuant to 40 CFR 75.62.

13. Does my CO₂ monitoring system need to be certified (or recertified)?

If you are proposing to use certain heat input methodologies (e.g., certified fuel flow meters, the long term fuel flow heat input method or Maximum Rated Hourly Heat Input Rate (MHHI) values previously approved under 310 CMR 7.28 and/or 310 CMR 7.32) for a non-ARP CO₂ Budget unit to calculate CO₂ emissions, then you must perform a Data Acquisition and Handling System (DAHS) verification and any other appropriate diagnostic test to ensure that the monitoring system accurately calculates CO₂ emissions from each fuel that is burned in the unit. DAHS verifications are diagnostic tests that do not require a Relative Accuracy Test Audit (RATA) and thus are not re-certification events² and do not need to be submitted. Certified fuel flow meters do not need to be recertified to begin reporting under 310 CMR 7.70.

No recertification is required under 310 CMR 7.70 for ARP units with monitoring systems that have been certified under 40 CFR 75.

CO₂ Budget units for which a new CO₂ or O₂ analyzer and/or stack flow monitor, or fuel flow meter, are being proposed to calculate CO₂ emissions, must certify their CO₂ monitoring system. Non-ARP CO₂ Budget unit certification test data must be submitted to MassDEP within 45 days after completing all CO₂ monitoring system tests.

14. How do I report a Low Mass Emissions (LME) unit under the CO₂ Budget Program?

For CO₂ Budget units subject to ARP and/or CAIR, LME unit status will continue to be determined by NO_x and/or SO₂ emissions pursuant to 40 CFR 75.19. Qualifying units must use the CO₂ emissions calculations for LME units under 40 CFR 75.19 for purposes of compliance with 310 CMR 7.70. No new qualifying information needs to be provided with this application for the CO₂ Budget Program. CO₂ Budget units that are subject to CAIR and that qualify for LME unit status will need to report CO₂ and NO_x emissions year round.

For CO₂ Budget units that are not subject to either ARP or CAIR, qualification for LME unit status will be determined pursuant to 310 CMR 7.70(8)(a)3.c.iii.

15. Where and when do I submit my quarterly electronic data reports?

All quarterly electronic data reports must be submitted to US EPA. An electronic data report must be submitted for each CO₂ Budget unit within 30 calendar days of the end of each of the four calendar quarters. CO₂ authorized account representatives for CO₂ Budget units that were only submitting an electronic data report during the ozone season for the NO_x Budget and CAIR Programs must begin submitting electronic data reports and reporting CO₂ and NO_x emissions year round for these units starting with the first calendar quarter of 2009.

16. How do I certify each quarterly emissions submittal as required by 310 CMR 7.70(2)(a)6?

² 40 CFR 75.20(b) "Any change to a flow monitor or gas monitoring system for which a RATA is not necessary shall not be considered a recertification event."



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When any submission is made to US EPA's Emissions Collection and Monitoring Plan System (ECMPS), the required certification language in 310 CMR 7.70(2)(a)5. will appear and must be accepted and agreed to by the submitter.

17. How do I certify that my energy output monitoring system(s) meets the accuracy requirements of 310 CMR 7.70(8)(h)4?

The CO₂ authorized account representative must complete and sign Section G of the application form to certify that the energy output monitoring system(s) meet the accuracy requirements of 310 CMR 7.70(8)(h)4. This section of the application form **must be completed** for each initial CO₂ Budget ECP application even if there are no proposed changes to an energy output system that has been previously approved under either 310 CMR 7.28 and/or 310 CMR 7.32. This section must also be completed for any proposed changes to an energy output monitoring system previously approved under 310 CMR 7.70.

18. I wish to co-fire biomass as a compliance mechanism – how should I complete the ECP application?

You must contact Patricio Silva at MassDEP to arrange a pre-application meeting to address site-specific issues before submitting the CO₂ Budget ECP application. Patricio Silva can be reached at 617-654-6575 or via email to: Patricio.Silva@state.ma.us.

19. Where and when do I submit my compliance certification reports?

Compliance certification reports shall be submitted, pursuant to 310 CMR 7.70(4), by March 1st following each relevant control period to Patricio Silva at the MassDEP Boston office. Annual energy output reports shall be submitted, pursuant to 310 CMR 7.70(8)(h)6.c., by March 1st following each calendar year to Patricio Silva at the MassDEP Boston office. Compliance certification and energy output reports must be submitted in both electronic and hardcopy format.

20. What is the Primary Permit Location? What is the Reserve Copy Location?

Primary Permit Location:

Department of Environmental Protection
Air Quality Section
_____ * Regional Office

Reserve Copy Location:

Department of Environmental Protection
Bureau of Waste Prevention, Attn: Patricio Silva
1 Winter Street
Boston, MA 02108

*Find your region: <http://mass.gov/dep/about/region/findyour.htm>

21. What is the annual compliance fee?

There is no annual compliance fee specifically for this program.

22. What are the regulations that apply to these permits? Where can I get copies?

These regulations include, but are not limited to:

Massachusetts Air Quality Regulations, 310 CMR 7.00.



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Bureau of Waste Prevention – Air Quality

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The state regulations may be purchased at:

State Bookstore (in State House)
Room 116
Boston, MA 02133
617-727-2834

State House West Bookstore
436 Dwight Street, Room 102
Springfield, MA 01103
413-784-1376

An unofficial copy of these regulations may also be obtained at <http://www.mass.gov/dep/air/laws/regulati.htm>

Federal Regulations:

Continuous Emission Monitoring Regulations, 40 CFR Part 75.

These may be purchased at:

U.S. Government Bookstore
Thomas P. O'Neill Building
Room 169
10 Causeway Street
Boston, MA 02222
617-720-4180

These regulations may be obtained through the federal government web site:

<http://www.gpoaccess.gov/cfr/index.html>



Massachusetts Department of Environmental Protection
Bureau of Waste Prevention – Air Quality

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Application Completeness Check List

- The MassDEP Transmittal Form (available from <http://mass.gov/dep/service/online/trasmfrm.shtml>) has been completed. As there is no application fee for this permit, do not check a box in section F of the MassDEP Transmittal form.
- All questions on the Application Form have been answered.
- The CO₂ authorized account representative, or the alternate CO₂ authorized account representative, has signed Sections B, D and G.
- All hardcopy information required in Sections E, F and H has been included in the application package.
- One original and one copy have been made of all of the required hardcopy application materials.
- One electronic copy of the completed application and attachments has been made as a Word file, and preferably also as an Adobe pdf file.

To submit the application package:

- Submit the electronic copies of the application to MassDEP by email to: Patricio.Silva@state.ma.us.
- Submit the original hardcopy application materials along with the Transmittal Form to:

Department of Environmental Protection
_____ * Regional Office
Air Quality Control

* Find your region: <http://mass.gov/dep/about/region/findyour.htm>

Note that there is no fee associated with this application.

- Submit one copy of all hardcopy application materials and a copy of the Transmittal Form to:

Department of Environmental Protection
Bureau of Waste Prevention, Attn: Patricio Silva
1 Winter Street
Boston, MA 02108



Massachusetts Department of Environmental Protection

Bureau of Waste Prevention

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CO₂ Budget Emission Control Plan

Transmittal # _____

Facility AQ ID # _____

Facility ORIS ID # _____

B. CO₂ Authorized Account Representative & Alternate Designation

Note that for sources subject to the Clean Air Interstate Rule (CAIR) NO_x Ozone Season program under 310 CMR 7.32 and/or the federal Acid Rain Program (ARP) under 40 CFR Part 72, the CO₂ authorized account representative must be the same person as the CAIR and/or ARP designated representative; the alternate CO₂ authorized account representative must be the same person as the alternate CAIR and/or ARP designated representative.

"I certify that I was selected as the CO₂ authorized account representative or alternate CO₂ authorized account representative, as applicable, by an agreement binding on the owners and operators of the CO₂ Budget source and each CO₂ Budget unit at the source. I certify that I have all necessary authority to carry out my duties and responsibilities under the CO₂ Budget Trading Program on behalf of the owners and operators of the CO₂ Budget source and of each CO₂ Budget unit at the source and that each such owner and operator shall be fully bound by my representations, actions, inactions, or submissions and by any decision or order issued to me by the Department or a court regarding the source or unit."

1. CO₂ Authorized Account Representative

_____ Name		
_____ Telephone Number	_____ Fax Number	_____ Email Address
_____ Signature		_____ Date (MM/DD/YYYY)

2. Alternate CO₂ Authorized Account Representative

_____ Name		
_____ Telephone Number	_____ Fax Number	_____ Email Address
_____ Signature		_____ Date (MM/DD/YYYY)

C. Standard Approval Requirements

The facility's CO₂ authorized account representative or alternate CO₂ authorized account representative must sign and date the application certification in Section D after reviewing 310 CMR 7.70(1)(e) Standard requirements and 310 CMR 7.70(3)(a) General CO₂ Budget emission control plan requirements (below). 310 CMR 7.70(1)(e) Standard requirements:

1. CO₂ budget emission control plan requirements.
 - a. The CO₂ authorized account representative of each CO₂ budget source shall:
 - i. Submit to the Department a complete CO₂ budget emission control plan under 310 CMR 7.70(3)(c) in accordance with the deadlines specified in 310 CMR 7.70(3)(b); and,
 - ii. Submit in a timely manner any supplemental information that the Department determines is necessary in order to review and approve or deny the CO₂ budget emission control plan.
 - b. The owners and operators of each CO₂ budget source and each CO₂ budget unit for the source shall have an approved CO₂ budget emission control plan and operate the CO₂ budget source and the CO₂ budget unit at the source in compliance with such approved CO₂ budget emission control plan.
2. Monitoring requirements.
 - a. The owners and operators and, to the extent applicable, the CO₂ authorized account representative of each CO₂ budget source and each CO₂ budget unit at the source shall comply with the monitoring requirements of 310 CMR 7.70(8).
 - b. The emissions measurements recorded and reported in accordance with 310 CMR 7.70(8) shall be used to determine compliance by the unit with the CO₂ requirements of 310 CMR 7.70(1)(e)3.



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C. Standard Approval Requirements (continued)

3. CO₂ requirements.

- a. The owners and operators of each CO₂ budget source and each CO₂ budget unit at the source shall hold CO₂ allowances available for compliance deductions under 310 CMR 7.70(6)(e), as of the CO₂ allowance transfer deadline, in the source's compliance account in an amount not less than the total CO₂ emissions for the control period from all CO₂ budget units at the source, as determined in accordance with 310 CMR 7.70(6) and (8).
- b. Each ton of CO₂ emitted in excess of the CO₂ budget emissions limitation shall constitute a separate violation of 310 CMR 7.70 and applicable state law.
- c. A CO₂ budget unit shall be subject to the requirements under 310 CMR 7.70(1)(e)3.a. on January 1, 2009 or the date on which the unit commences operation, whichever comes later.
- d. CO₂ allowances shall be held in, deducted from, or transferred among CO₂ Allowance Tracking System accounts in accordance with 310 CMR 7.70(5), (6), and (7), and 310 CMR 7.70(10)(g).
- e. A CO₂ allowance shall not be deducted in order to comply with the requirements under 310 CMR 7.70(1)(e)3.a. for a control period that ends prior to the year for which the CO₂ allowance was allocated. A CO₂ offset allowance shall not be deducted in order to comply with the requirements under 310 CMR 7.70(1)(e)3.a. beyond the applicable percent limitations set out in 310 CMR 7.70(6)(e)1.c.
- f. A CO₂ allowance under the CO₂ Budget Trading Program is a limited authorization by the Department or a participating state to emit one ton of CO₂ in accordance with the CO₂ Budget Trading Program. No provision of the CO₂ Budget Trading Program, the application for a CO₂ budget emissions control plan, or the approved CO₂ budget emissions control plan, or any provision of law shall be construed to limit the authority of the State to terminate or limit such authorization.
- g. A CO₂ allowance under the CO₂ Budget Trading Program does not constitute a property right.

4. Excess emissions requirements. The owners and operators of a CO₂ budget source that has excess emissions in any control period shall:

- a. Forfeit the CO₂ allowances required for deduction under 310 CMR 7.70(6)(e)4.a., provided CO₂ offset allowances may not be used to cover any part of such excess emissions; and,
- b. Pay any fine, penalty, or assessment or comply with any other remedy imposed under 310 CMR 7.70(6)(e)4.b.

5. Recordkeeping and reporting requirements.

- a. Unless otherwise provided, the owners and operators of the CO₂ budget source and each CO₂ budget unit at the source shall keep on site at the source each of the following documents for a period of 10 years from the date the document is created. This period may be extended for cause, at any time prior to the end of 10 years, in writing by the Department.
 - i. The account certificate of representation for the CO₂ authorized account representative for the source and each CO₂ budget unit at the source and all documents that demonstrate the truth of the statements in the account certificate of representation, in accordance with 310 CMR 7.70(2)(d), provided that the certificate and documents shall be retained on site at the source beyond such 10-year period until such documents are superseded because of the submission of a new account certificate of representation changing the CO₂ authorized account representative.
 - ii. All emissions monitoring information, in accordance with 310 CMR 7.70(8) and 40 CFR 75.57.
 - iii. Copies of all reports, compliance certifications, and other submissions and all records made or required under the CO₂ Budget Trading Program.
 - iv. Copies of all documents used to complete an application for a CO₂ budget emissions control plan and any other submission under the CO₂ Budget Trading Program or to demonstrate compliance with the requirements of the CO₂ Budget Trading Program.
- b. The CO₂ authorized account representative of a CO₂ budget source and each CO₂ budget unit at the source shall submit the reports and compliance certifications required under the CO₂ Budget Trading Program, including those under 310 CMR 7.70(4).

6. Liability.

- a. No revision to a CO₂ budget emissions control plan shall excuse any violation of the requirements of the CO₂ Budget Trading Program that occurs prior to the date that the revision takes effect.



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C. Standard Approval Requirements (continued)

- b. Any provision of the CO₂ Budget Trading Program that applies to a CO₂ budget source (including a provision applicable to the CO₂ authorized account representative of a CO₂ budget source) shall also apply to the owners and operators of such source and of the CO₂ budget units at the source.
- c. Any provision of the CO₂ Budget Trading Program that applies to a CO₂ budget unit (including a provision applicable to the CO₂ authorized account representative of a CO₂ budget unit) shall also apply to the owners and operators of such unit.

7. Effect on other authorities.

- a. No provision of the CO₂ Budget Trading Program, a CO₂ budget emissions control plan application, or an approved CO₂ budget emissions control plan, shall be construed as exempting or excluding the owners and operators and, to the extent applicable, the CO₂ authorized account representative of a CO₂ budget source or CO₂ budget unit from compliance with any other provisions of applicable State and federal law and regulations.

310 CMR 7.70(3)(a) General CO₂ Budget emission control plan requirements: Each CO₂ Budget source shall have an approved CO₂ Budget emissions control plan issued by the Department pursuant to 310 CMR 7.70(1)(e)1. that contains all applicable CO₂ Budget Trading Program requirements under 310 CMR 7.70(3)(c). CO₂ Budget sources shall comply with the approved CO₂ Budget emission control plan.

D. CO₂ Budget Trading Program Certification

Pursuant to 310 CMR 7.70(2)(a)5., this form must be submitted, signed, and certified by the CO₂ authorized account representative or alternate CO₂ authorized account representative for each CO₂ Budget source on behalf of which the submission is made. The CO₂ authorized account representative (or alternate) must sign below to certify this submittal.

"I am authorized to make this submission on behalf of the owners and operators of the CO₂ budget sources or CO₂ budget units for which the submission is made. I certify under penalty of law that I have personally examined, and am familiar with, the statements and information submitted in this document and all its attachments. Based on my inquiry of those individuals with primary responsibility for obtaining the information, I certify that the statements and information are to the best of my knowledge and belief true, accurate, and complete. I am aware that there are significant penalties for submitting false statements and information or omitting required statements and information, including the possibility of fine or imprisonment."

CO₂ Authorized Account Representative or Alternate:

Name

Signature

Date (MM/DD/YYYY)

E. CO₂ Budget Program Emission Control Plan

Submitting Monitoring Plans

Please see Tables 1 and 2, and the explanation in Options A through D, on the following pages to determine which type(s) of monitoring plans must be submitted with this Emissions Control Plan (ECP) application. Ensure that each CO₂ Budget unit is listed only once under Options A through D below.



E. CO₂ Budget Program Emission Control Plan (continued)

Petitions for Emissions Monitoring Plans: A CO₂ authorized account representative who proposes to submit a petition, or whose CO₂ Budget unit has already received a petition approval from US EPA under 40 CFR Part 75, but that has not received an approval pursuant to 310 CMR 7.70, must check *Option E below*.

Eligible Biomass: A CO₂ authorized account representative of a CO₂ Budget unit that co-fires eligible biomass as a compliance mechanism under 310 CMR 7.70 must submit documentation in accordance with *Option F and Section H below*. Eligible biomass includes sustainably harvested woody and herbaceous fuel sources that are available on a renewable or recurring basis (excluding old-growth timber), including dedicated energy crops and trees, agricultural food and feed crop residues, aquatic plants, unadulterated wood and wood residues, animal wastes, other clean organic wastes not mixed with other solid wastes, and biogas derived from such fuel sources. Liquid biofuels do not qualify as eligible biomass. (310 CMR 7.70(1)(b) Definitions) MassDEP will determine whether the eligible biomass has been “Sustainably harvested.”

Long-term cold storage: A CO₂ authorized account representative of a CO₂ Budget unit that is not operating, that does not have a certified CO₂ monitoring system as of August 1, 2008, and for which CO₂ emissions will not be reported until the unit begins operating again must check Option A or B as appropriate, indicating that the unit meets the requirements of long-term cold storage under 40 CFR Part 75. Whenever a non-Acid Rain Program CO₂ Budget unit that has been placed into long-term cold storage is expected to resume operation, the CO₂ authorized account representative must submit a revised CO₂ Budget Program ECP application 45 calendar days prior to the planned date of recommencement of operation simultaneous with the notification requirement of 40 CFR 75.61(a)(7)(ii). Long-term cold storage means the complete shutdown of a unit intended to last for an extended period of time (at least two calendar years) where notice for long-term cold storage is provided under 40 CFR 75.61(a)(7). (40 CFR 72.2 Definitions)

Table 1: Submission of Monitoring Plans with ECP due on or before August 1, 2008, or 12 months before a new CO₂ Budget Unit commences operation, whichever is later

Monitoring Plan Options for CO ₂ Budget Unit's Initial BWP AQ30 ECP Application		Energy Output Monitoring			
		Acid Rain Program Units		Non-Acid Rain Program Units	
		New unit, or proposing changes to 310 CMR 7.28 or 7.32 ECP Approval?			
		No	Yes	No	Yes
CO ₂ Emissions Monitoring per 40 CFR Part 75 excluding equation G-1	Certified CO ₂ monitoring system or long-term cold storage or new unit	Option A	Option B		
	Adding CO ₂ monitoring system or new unit			Option C	Option D

Note: Gray shaded areas in Table 1 indicate situations that do not exist in Massachusetts.

Continued →



Massachusetts Department of Environmental Protection
 Bureau of Waste Prevention
BWP AQ 30
 CO₂ Budget Emission Control Plan

Transmittal # _____
 Facility AQ ID # _____
 Facility ORIS ID # _____

E. CO₂ Budget Program Emission Control Plan (continued)

Table 2: Submission of Monitoring Plans to amend an existing ECP approval

Monitoring Plan Options to Amend CO ₂ Budget Unit's BWP AQ30 ECP Approval		Energy Output Monitoring			
		Acid Rain Program Units		Non-Acid Rain Program Units	
		Changes to 310 CMR 7.70 ECP Approval?			
		No	Yes	No	Yes
CO ₂ Emissions Monitoring per 40 CFR Part 75 excluding equation G-1	Certified CO ₂ monitoring system		Option B		Option B
	Changing CO ₂ monitoring methodology		Option B	Option C	Option D

Note: Gray shaded areas in Table 2 indicate situations that do not require submission of an ECP application.

Detailed emissions monitoring plans that meet the requirements of 310 CMR 7.70(8) must be submitted in the manner prescribed in 40 CFR 75.53, including hardcopy and electronic submittal of CO₂ emission monitoring formula and methodology. However, please note that US EPA will not accept electronic CO₂ monitoring plans or emissions data from non-Acid Rain Program units until after January 1, 2009. (See Question #12 in the Instructions and Supporting Materials for additional information on electronic monitoring plans.)

Detailed energy output monitoring plans must be submitted in a manner that meets the requirements of 310 CMR 7.70(8)(h). (See Section F on Requirements for Energy Output Monitoring Plans and Diagrams below).

Detailed plans for eligible biomass monitoring must include the items in 310 CMR 7.70(8)(g) and Section H on Requirements for Eligible Biomass Monitoring Plans below.

All applicants must identify the appropriate unit ID numbers in Options A through F below. Be sure to attach any required materials to this application. Ensure that each CO₂ Budget unit is listed only once under Options A through D below.

- Option A: No Monitoring Plans need to be submitted** for a CO₂ Budget unit that is also subject to the federal Acid Rain Program and:
1. has a CO₂ emissions monitoring system that has been certified in accordance with the federal Acid Rain Program pursuant to 40 CFR Part 75 and
 - a. that meets the requirements of 310 CMR 7.70(8) including not using Equation G-1 from Appendix G of 40 CFR Part 75, and
 - b. an energy output monitoring system that has been approved pursuant to either 310 CMR 7.28 or 310 CMR 7.32 for which no changes are proposed; **or**
 2. for which written notice has been provided to US EPA as required by 40 CFR 75.61(a)(7)(i) that the unit is in long-term cold storage, and an energy output monitoring system has been approved pursuant to either 310 CMR 7.28 or 310 CMR 7.32 for which no changes are proposed.

Unit Identification Numbers for Option A.1:

Unit Identification Numbers for Option A.2:

 Unit ID Numbers

 Unit ID Numbers



Massachusetts Department of Environmental Protection

Bureau of Waste Prevention

BWP AQ 30

CO2 Budget Emission Control Plan

Transmittal #

Facility AQ ID #

Facility ORIS ID #

E. CO2 Budget Program Emission Control Plan (continued)

Option B: Only an Energy Output Monitoring Plan must be submitted for a CO2 Budget unit:

- 1. for which no changes are proposed to an emissions monitoring system that has been certified pursuant to the federal Acid Rain Program or approved pursuant to 310 CMR 7.70, and for which changes are proposed to an energy output monitoring system that has been previously approved under:
a. 310 CMR 7.28 NOx Budget Program,
b. 310 CMR 7.32 CAIR NOx Ozone Season program, or
c. 310 CMR 7.70 CO2 Budget Program;
or
2. for which written notice has been provided to US EPA as required by 40 CFR 75.61(a)(7)(i) that the unit is in long-term cold storage, and changes are proposed to an energy output monitoring system that has been previously approved under:
a. 310 CMR 7.28 NOx Budget Program,
b. 310 CMR 7.32 CAIR NOx Ozone Season program, or
c. 310 CMR 7.70 CO2 Budget Program;
or
3. which is a new Acid Rain Program unit that commences commercial operation on or after July 1, 2008.

Unit Identification Numbers for Option B.1.a:

Unit Identification Numbers for Option B.2.a:

Unit ID Numbers

Unit ID Numbers

Unit Identification Numbers for Option B.1.b:

Unit Identification Numbers for Option B.2.b:

Unit ID Numbers

Unit ID Numbers

Unit Identification Numbers for Option B.1.c:

Unit Identification Numbers for Option B.2.c:

Unit ID Numbers

Unit ID Numbers

Unit Identification Numbers for Option B.3:

Unit ID Numbers

Option C: Only an Emissions Monitoring Plan must be submitted for a non-Acid Rain Program CO2 Budget unit for which:

- 1. an Emissions Control Plan application is submitted by August 1, 2008, or changes to the emissions monitoring plan are proposed, and
2. an energy output monitoring plan has been approved pursuant to either 310 CMR 7.28, 310 CMR 7.32, or 310 CMR 7.70 and no changes are proposed.

Unit Identification Numbers for Option C:

Unit ID Numbers

Option D: Both an Emissions Monitoring Plan and an Energy Output Monitoring Plan must be submitted for a non-Acid Rain Program CO2 Budget unit:

- 1. that commences commercial operation on or after July 1, 2008, or
2. for which changes are proposed to the emissions monitoring plan, and the energy output monitoring plan previously approved under:
a. 310 CMR 7.28 NOx Budget Program,
b. 310 CMR 7.32 CAIR NOx Ozone Season program, or
c. 310 CMR 7.70 CO2 Budget Program.



Massachusetts Department of Environmental Protection

Bureau of Waste Prevention

BWP AQ 30

CO₂ Budget Emission Control Plan

Transmittal # _____

Facility AQ ID # _____

Facility ORIS ID # _____

E. CO₂ Budget Program Emission Control Plan (continued)

Unit Identification Numbers for Option D.1:

Unit Identification Numbers for Option D.2.a:

Unit ID Numbers

Unit ID Numbers

Unit Identification Numbers for Option D.2.b:

Unit Identification Numbers for Option D.2.c:

Unit ID Numbers

Unit ID Numbers

Option E: Petitions

1. Petitions and petition approvals must be submitted for CO₂ Budget units that have previously received a petition approval from US EPA under 40 CFR Part 75 so that MassDEP can determine whether the approval applies under 310 CMR 7.70.
2. New petitions may be submitted to US EPA and MassDEP for approval of an alternative to any requirement of 40 CFR Part 75, following the procedures of 40 CFR 75.66.

Unit Identification Numbers for Option E.1:

Unit Identification Numbers for Option E.2:

Unit ID Numbers

Unit ID Numbers

Option F: Eligible Biomass documentation must be submitted for a CO₂ Budget unit that co-fires eligible biomass as a compliance mechanism.

Unit Identification Numbers for Option F:

Unit ID Numbers

F. Requirements for Energy Output Monitoring Plans

If an energy output monitoring plan is being submitted with this application, please be sure to attach any required materials to this application. The energy output monitoring plan shall detail the method for quantification of net energy output, including:

A written description of the output system(s) including, at a minimum, any equations used to calculate output for each CO₂ Budget unit and a description of any inter-relationships between output monitoring systems. For net thermal output systems, descriptions and justifications of each useful load shall be included.

A detailed description of all **quality assurance/quality control** activities that will be performed to maintain the output system in accordance with 310 CMR 7.70(8)(h)5. CO₂ Budget sources relying upon ISO New England Operating Procedure 18, Metering and Telemetering Criteria, and future amendments, for quality assurance/quality control activities should cite the current version of OP 18 in effect at the time of application, but should not attach a copy to this application.

Documentation supporting any **missing data output** value(s) to be used during periods of invalid output data. The missing data output value shall be either zero or an output value that is likely to be lower than a measured value.



F. Requirements for Energy Output Monitoring Plans

For Net Electric Output Monitoring: For any CO₂ Budget unit monitoring net electric output, the **schematic diagram** shall contain and identify all CO₂ Budget units and all generators served by each CO₂ Budget unit and the relationship between CO₂ Budget units and generators. If a generator served by a CO₂ Budget unit is also served by a non-CO₂ Budget unit, the non-CO₂ Budget unit and its relationship to each generator shall be indicated on the diagram as well. The diagram shall identify each location where the net electric output is measured and shall include all electrical inputs and outputs to and from the CO₂ Budget source. If net electric output is determined using a billing meter, the diagram shall identify each billing meter used to determine net sales of electricity and shall show that all electricity measured at the point of sale is generated by the CO₂ Budget units. A **key** explaining all symbols and abbreviations used in the diagram must be attached.

For Net Thermal Output Monitoring: For any CO₂ Budget unit monitoring net thermal output, the **schematic diagram** shall include all steam or hot water coming into the net steam system, including steam from CO₂ Budget units and non-CO₂ Budget units, and all exit points of steam or hot water from the net steam system. In addition, each input and output stream shall have an estimated temperature, pressure and phase indicator, and an enthalpy value in Btu/lb. The diagram of the net steam system shall identify all useful loads, house loads, parasitic loads, any other steam loads and all boiler feedwater returns. The diagram shall represent all energy losses in the system as either usable or unusable losses. The diagram shall also indicate all flow meters, temperature or pressure sensors or other equipment used to calculate gross thermal output. If a sales agreement is used to determine net thermal output, the diagram shall show the monitoring equipment used to determine the sales of steam. A **key** explaining all symbols and abbreviations used in the diagram must be attached.

CO₂ Budget sources selling steam shall use billing meters to determine net steam output unless MassDEP approves an alternative method for quantification of net steam output. A CO₂ Budget source whose steam output is not measured by billing meters or whose steam output is combined with output from a non-CO₂ Budget unit prior to measurement by the billing meter shall propose an alternative method for quantification of net steam output to MassDEP. If data for steam output are not available, the CO₂ Budget source may report heat input providing useful steam output as a surrogate for steam output.

G. CO₂ Budget Trading Program Energy Output Monitoring Accuracy Certification

Pursuant to 310 CMR 7.70(8)(h)4., this form must be completed, signed, and certified by the CO₂ authorized account representative or alternate CO₂ authorized account representative for each CO₂ Budget source. The CO₂ authorized account representative (or alternate) must sign below to certify this submittal. This section must be completed even if no changes are proposed to an energy output monitoring plan that has been previously approved under 310 CMR 7.28 and/or 310 CMR 7.32.

- The energy output monitoring system for this CO₂ Budget source consists entirely of billing meters.
- The energy output monitoring system for this CO₂ Budget source includes non-billing meters that meet the accuracy requirements for non-billing meters at 310 CMR 7.70(8)(h)4.b.

"I am authorized to make this submission on behalf of the owners and operators of the CO₂ budget sources or CO₂ budget units for which the submission is made. I certify under penalty of law that I have personally examined, and am familiar with, the statements and information submitted in this document and all its attachments. Based on my inquiry of those individuals with primary responsibility for obtaining the information, I certify that the statements and information are to the best of my knowledge and belief true, accurate, and complete. I am aware that there are significant penalties for submitting false statements and information or omitting required statements and information, including the possibility of fine or imprisonment."

Name of CO₂ Authorized Account Representative or Alternate

Signature

Date (MM/DD/YYYY)



H. Requirements for Eligible Biomass Monitoring Plans

An Eligible Biomass Monitoring Plan shall be submitted with this ECP application for any of the units identified in Section E: Option F above as a CO₂ Budget unit that co-fires eligible biomass as a compliance mechanism. Attach any required materials to this application. The purpose of the Eligible Biomass Monitoring Plan is to enable the facility to accurately quantify the CO₂ emissions associated with combustion of eligible biomass, so that the associated CO₂ emissions may be deducted from the total stack emissions for which CO₂ allowances must be held.

The Eligible Biomass Monitoring Plan must describe:

1. The type(s) of eligible biomass that the unit(s) will burn;
2. The sources of the eligible biomass and documentation as to how the source(s) meet the criteria for eligible biomass;
3. The fuel sampling technology* to be employed;
4. The inputs (identified as Quarterly Reports: items 1 through 8, below) that are required to calculate total dry weight for each distinct type of eligible biomass fired, CO₂ emissions due to the firing of eligible biomass, and the heat input due to the firing of the eligible biomass;
5. The fuel sampling methodology* to be employed, including sampling frequency and the relationship to the time of fuel combustion, for each shipment of solid eligible biomass on an as-fired basis and each distinct type of eligible biomass; and
6. How input sampling shall be documented in the reports submitted to MassDEP each calendar quarter;
7. Any other information requested by MassDEP.

Quarterly Reports: The CO₂ authorized account representative of a CO₂ Budget unit that co-fires eligible biomass as a compliance mechanism under 310 CMR 7.70 shall submit a quarterly report to MassDEP for each calendar quarter. Reporting requirements are under development and are likely to include the following information:

1. For each shipment of solid eligible biomass fuel fired at the CO₂ budget unit, the total eligible biomass fuel input, on an as-fired basis, in pounds.
2. For each shipment of solid eligible biomass fuel fired at the CO₂ budget unit, the moisture content, on an as-fired basis, as a fraction by weight.
3. For each distinct type of gaseous eligible biomass fuel fired at the CO₂ budget unit, the density of the biogas, on an as-fired basis, in pounds per standard cubic foot.
4. For each distinct type of gaseous eligible biomass fuel fired at the CO₂ budget unit, the moisture content of the biogas, as a fraction by total weight.
5. For each distinct type of gaseous eligible biomass fuel fired at the CO₂ budget unit, the total eligible biomass fuel input, in standard cubic feet.
6. For each distinct type of eligible biomass fuel fired at the CO₂ budget unit, the dry basis carbon content of the fuel type, as a fraction by dry weight.
7. For each distinct type of eligible biomass fuel fired at the CO₂ budget unit, the dry basis higher heating value, in MMBtu per dry pound.
8. For each distinct type of eligible biomass fuel fired at the CO₂ budget unit, the total dry basis eligible biomass fuel input, in pounds.
9. The total amount of CO₂ emitted from the CO₂ budget unit due to firing eligible biomass fuel, in tons.
10. For each distinct type of eligible biomass fuel fired at the CO₂ budget unit, the total eligible biomass fuel heat input, in MMBtu.
11. The total amount of heat input to the CO₂ budget unit due to firing eligible biomass fuel, in MMBtu.
12. Description and documentation of monitoring technology employed, and description and documentation of fuel sampling methodology employed, including sampling frequency.
13. For each distinct type of eligible biomass fuel fired at the CO₂ budget unit, chemical analysis, including heating value and carbon content.

*Fuel sampling methods and fuel sampling technology shall be consistent with the "New York State Renewable Portfolio Standard Biomass Guidebook," dated May 2006 that can be found at: http://www.nyserda.org/rps/RPS_Biomass_Guide.pdf.