



COMMONWEALTH OF MASSACHUSETTS
EXECUTIVE OFFICE OF ENERGY & ENVIRONMENTAL AFFAIRS
DEPARTMENT OF ENVIRONMENTAL PROTECTION
WESTERN REGIONAL OFFICE
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DEVAL L. PATRICK
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Secretary

LAURIE BURT
Commissioner

May 15, 2009

Mr. John S. Murray
Station Manager
Mt. Tom Generating Company, LLC
200 Northampton Street
Holyoke, MA 01040

RE: **Holyoke**
Western Region
310 CMR 7.29
Power Plant Emission Standards
Application No. 1-E-01-072
Transmittal No. W025214

AMENDED EMISSION CONTROL PLAN

Dear Mr. Murray:

The Western Region of the Department of Environmental Protection, Bureau of Waste Prevention (MassDEP), has reviewed your Amended Emission Control Plan (ECP) application dated November 6, 2008, including the December 1, 2004 ECP modification application. MassDEP originally issued the ECP on June 7, 2002. This Amended ECP application was submitted in accordance with 310 CMR 7.29(6)(a)(4) to incorporate the Turbosorp® emissions control system and approve the use of coal with higher ash content in accordance with 310 CMR 7.05(3)(c) and higher sulfur content in accordance with 310 CMR 7.05(1)(b)3. This modification will require more stringent emission limits for particulate matter (PM) than previously required and actual stack emissions of sulfur dioxide (SO₂) lower than the requirements of 310 CMR 7.29. MassDEP's Amended ECP Final Approval includes these limits as enforceable permit requirements.

This amended approval describes how emission limitations and compliance schedules for the control of certain designated pollutants contained in 310 CMR 7.29, "Emission Standards for Power Plants," will be implemented for equipment and processes located at the Mt. Tom Generating Company, LLC., Mt. Tom Station facility (ORISP 01606, hereinafter Mt. Tom) on Northampton Street in Holyoke, Massachusetts. This application for the approval of the ECP bears the signature of John P. Campbell, Sr. Vice President - Asset Operations as the company contact responsible for compliance with 310 CMR 7.29.

AMENDED ECP SUMMARY

The amended ECP application includes Mt. Tom's mercury (Hg) emission control plan, proposes the utilization of a Turbosorp® control device for the reduction of Hg and SO₂ to meet the requirements of 310 CMR 7.29, and requests approval to burn coal with a 12 percent ash content and a sulfur content of up to 3 lb/MMBtu heat release potential on a 30-day rolling average.

Mt. Tom is in the process of installing a Babcock Power Environmental Turbosorp® dry scrubber system that was approved by the MassDEP on December 31, 2007 (1-P-07-049) to control emissions of SO₂ and Hg from the boiler. The Turbosorp system is being installed downstream from the electrostatic precipitator and upstream from the existing facility stack. Gases that exit the precipitator first enter the "Turbosorp" tower. Within the tower, the flue gas is cooled with water, then a fluidized bed of hydrated lime, PAC, B-PAC and/or sodium tetrasulfide reacts with the flue gas. The sorbent is captured along with the particulate matter in the baghouse portion of the system.

Mt. Tom is stating that with the installation of the Turbosorp® dry scrubber system to control emissions, the station will be able to utilize domestic sources of coal which typically have higher sulfur and higher ash content. Mt. Tom is proposing to utilize coals that contain up to 12 percent ash and 3 lb/MMBtu sulfur content and utilize controls to achieve lower stack emissions than required under 310 CMR 7.29. MassDEP agrees that the combustion of coals with lower stack emissions is beneficial to the environment and approves the use of coal with ash content up to 12 percent by weight and sulfur content up to 3 lb/MMBtu, provided that Mt. Tom meets the emission limits contained in Table 2 of this Approval and also revises their Title V Operating Permit renewal application to include a limit of 0.025 lb/MMBtu for PM (including condensables, based on concurrent BACT determination on similar project at Brayton Point Station Unit 3). Mt. Tom will use all reasonable efforts to meet the 0.025 lb/MMBtu PM emission limit, including, but not limited to, proper maintenance of the proposed baghouse filters in accordance with manufacturer's recommendations. A stack test will be performed within twelve months of installation of the Turbosorp® system. If the stack tests show the proposed limit cannot be met, Mt. Tom will re-visit the emission limit with DEP.

LEGAL AUTHORITY

MassDEP has adopted 310 CMR 7.29 - a regulation to lower emissions of sulfur dioxide (SO₂), carbon dioxide (CO₂), and nitrogen oxides (NO_x) from certain power plants, and to establish a framework for reductions in emissions of carbon monoxide (CO), mercury (Hg), and fine particulate matter (PM 2.5) - pursuant to the Massachusetts General Laws, Chapter 111, Sections 142 A-M.

Regulation 310 CMR 7.29 requires any person who owns, leases, operates or controls an affected facility to comply with 310 CMR 7.29 in its entirety. An affected facility means a facility which emitted greater than 500 tons of SO₂ and 500 tons of NO_x during any of the calendar years 1997, 1998, or 1999, and which includes a unit which is a fossil fuel fired boiler or indirect heat exchanger that: (1) is regulated by 40 CFR Part 72 (the Federal Acid Rain Program); (2) serves a generator with a nameplate capacity of 100 megawatts (MW) or more; (3) was originally permitted prior to August 7, 1977; and (4) had not subsequently received a Plan Approval pursuant to 310 CMR 7.00: Appendix A or a Permit pursuant to the regulations for Prevention of Significant Deterioration, 40 CFR Part 52, prior to October 31, 1998.

The purpose of 310 CMR 7.29 is to control emissions of NO_x, SO₂, Hg, CO, CO₂, and PM 2.5 (together, "pollutants") from affected electric generating facilities in Massachusetts. 310 CMR 7.29 accomplishes this by establishing maximum output-based emission rates for NO_x, SO₂, and CO₂, and establishing a cap on CO₂ and Hg emissions from affected facilities. Emission limits for CO and PM 2.5 have not been addressed at this time.

Applicable requirements and limitations contained in 310 CMR 7.29 shall not supersede, relax or eliminate any more stringent conditions or requirements (e.g. emission limitation(s), testing, record keeping, reporting, or monitoring requirements) established by regulation or contained in a facility's previously issued source specific Plan Approval(s) or Emission Control Plan(s).

On December 7, 2007, Mt. Tom entered into an Administrative Consent Order (ACOP-WE-07-7009) to install and commence operation of the Turbosorp® system in order to meet the SO₂ and Hg emission rate specified under 310 CMR 7.29 (5) 2 and 3 respectively, without using Massachusetts SO₂ Early Reduction Credits. The Consent Order also requires Mt. Tom to meet an average Hg emission rate of 0.0075 lb/GWh for the period of January 1, 2008 through September 30, 2012. If Mt. Tom fails to meet this rate then an offset of the excess emission shall be provided from offsite Hg reductions at a 20 to 1 ratio.

Pursuant to 310 CMR 7.05(3)(c) and 310 CMR 7.05(1)(b)3., MassDEP may approve the use of a solid fuel with a higher sulfur content than those contained in Table 1 of 310 CMR 7.05(1) and an ash content higher than 9 percent provided that this would not cause any applicable air pollution control regulations or ambient air quality standards to be violated. This approval meets this standard due to the reduction in emissions. In accordance with 310 CMR 7.05(3)(c)3. and 310 CMR 7.05(1)(b)3, Mt. Tom must agree to the new fuel sulfur and ash content and emission limits (limits for Hg, SO₂, and PM) before using the fuel referenced in this approval. Mt. Tom must notify MassDEP 30 days prior to burning fuel with a sulfur content greater than 1.21 lb/MMBtu or an ash content of greater than 9% on a rolling 12 month average. The lower emission limits noted in this Amended ECP Final Approval will become effective when MassDEP is notified of this fuel change.

On April 7, 2009 MassDEP issued for public comment an Amended ECP Draft Approval. A Public Notice on the proposed approval of the Amended ECP Draft Approval was published in the Springfield Republican on April 7, 2009. No oral or written public comments were received during the public comment period.

Based upon the above, MassDEP has determined that the referenced Amended ECP application is administratively and technically complete and that the proposed modifications are in conformance with current air pollution control engineering practices and hereby issues this **Amended ECP Final Approval** for the proposed modifications of your power plant unit, with the conditions listed below.

1. EQUIPMENT DESCRIPTION

The following emission units (Table 1) are subject to and regulated by this **Amended ECP Final Approval**:

Table 1*				
EU #	DESCRIPTION OF EMISSION UNIT	EU DESIGN CAPACITY		POLLUTION CONTROL MEASURES (PCM) ¹
		(MMBTU/HR)	MW (NET)	
EU 1	Mt. Tom Unit 1 Riley Stoker Boiler	1,480	147	Turbosorp® control device
				Upgraded combustion controls and burner system
				Selective Catalytic Reduction (SCR)
				SO ₂ Early Reductions ²
				SO ₂ Allowances ³

Table 1 Notes:

1. Details of Mt. Tom's Pollution Control Measures including alternatives under consideration are described in Section E, F, and G of their original ECP application and their ECP modification application.
2. See Special Condition 2.
3. See Special Condition 3.

* Legend to Abbreviated Terms within Table 1:

EU# = Emission Unit Number
 MMBTU/HR = million British Thermal Units per hour
 MW (NET) = net electrical output in Megawatts
 SO₂ = Sulfur Dioxide

2. APPLICABLE REQUIREMENTS

A. EMISSION LIMITS AND RESTRICTIONS

Mt. Tom shall comply with the emission limits/restrictions as contained in Table 2 below. The schedule for compliance with these emission limitations is contained in Table 6 of this **Amended ECP Final Approval**.

Table 2 *				
EU #	RESTRICTION/ OPERATING PRACTICES	POLLUTANT	EMISSION LIMIT/STANDARD	APPLICABLE REGULATION AND/OR APPROVAL NUMBER
EU 1	NA	NO _x	Shall not exceed 1.5 lbs/MWh calculated over any consecutive 12 month period, recalculated monthly.	310 CMR 7.29(5)(a)1.a.
			Shall not exceed 3.0 lbs/MWh calculated over any individual month.	310 CMR 7.29(5)(a)1.b.
		SO ₂	Shall not exceed 6.0 lbs/MWh calculated over any consecutive 12 month period, recalculated monthly.	310 CMR 7.29(5)(a)2.a.
			Shall not exceed 3.0 lbs/MWh calculated over any consecutive 12 month period, recalculated monthly.	310 CMR 7.29(5)(a)2.b.i.
			Shall not exceed 6.0 lbs/MWh calculated over any individual month.	310 CMR 7.29(5)(a)2.b.ii.
			Shall not exceed 2.0 lbs/MWh calculated over any consecutive 12 month period, recalculated monthly.	Approval 1-E-01-072 ⁴
			Shall not exceed 3.0 lbs/MWh calculated over any individual month.	Approval 1-E-01-072 ⁴
			Hg	Shall achieve an average total mercury removal efficiency of 85 percent ² or greater; or shall have a facility average total mercury emission rate of 0.0075 lbs./GWh or less. ²
			Shall achieve an average total mercury removal efficiency of 95 percent ¹ or greater; or shall have a facility average total mercury emission rate of 0.0025 lbs./GWh or less.	310 CMR 7.29(5)(a)3.f.i. or ii.
		CO	Reserved. ³	310 CMR 7.29(5)(a)4.
		CO₂	Emissions of carbon dioxide from the affected facility in the calendar year, expressed in tons, from Part 72 units located at the affected facility shall not exceed historical actual emissions of 1,117,569 tons. ⁵	310 CMR 7.29(5)(a)5.a.
			Shall not exceed 1800 lbs/MWh in the calendar year.	310 CMR 7.29(5)(a)5.b.
		PM-2.5	Reserved. ³	310 CMR 7.29(5)(a)6.

Table 2 Notes:

1. ~~Removal efficiency shall be based on the average historic mercury inlet emissions determined under 310 CMR 7.29(5)(a)3.d.ii.~~
2. ~~ACOP WE-07-7009 requires Mt. Tom to meet this average rate of the period from January 1, 2008 through September 30, 2012. If Mt. Tom fails to meet this rate than an offset of the excess emission shall be provided from offsite Hg reductions at a 20 to 1 ratio pursuant to ACOP-WE-07-7009.~~
3. ~~MassDEP has reserved these areas in the regulations for further development.~~
4. SO₂ emissions are actual measured emissions from the facility. Mt. Tom shall not use any SO₂ early reductions or SO₂ allowances to achieve this emission rate.
5. ~~If MassDEP has received a technically complete Plan Approval application under 310 CMR 7.02 for a new or re-powered electric generating unit subject to 40 CFR Part 72 at an affected facility prior to May 11, 2001, then the emissions from the new or re-powered unit may be included in the calculation of historical actual emissions. The calculation of historical actual emissions which includes emissions from a new or re-powered unit shall not include emissions from any unit shutdown or removed from operation at the affected facility that is included in the technically complete Plan Approval application pursuant to 310 CMR 7.02. MassDEP is in the process of developing provisions for the quantification and certification of Greenhouse Gas (GHG) reductions for use in demonstrating compliance with the CO₂ emission limitations contained in 310 CMR 7.29. MassDEP will review and approve or deny proposals for off-site, sequestration, or non-contemporaneous reductions (i.e. early on-site reductions) of CO₂ or other GHG after adoption of amendments to 310 CMR 7.00, Appendix B, and other regulatory sections, if necessary.~~

* Legend to Abbreviated Terms within Table 2:

EU# = Emission Unit Number
lbs/MWh = pounds per Megawatt-hour of net electrical output
lbs/GWh = pounds per Gigawatt-hour of net electrical output
NO_x = Nitrogen Oxides
SO₂ = Sulfur Dioxide
Hg = Mercury
CO = Carbon Monoxide
CO₂ = Carbon Dioxide
PM 2.5 = Fine Particulate Matter
NA = not applicable

Table 5 *	
EU#	REPORTING REQUIREMENTS
EU 1	<p>By January 30 of the year following the earliest applicable compliance date for the affected facility under 310 CMR 7.29(6)(c), and January 30 of each calendar year thereafter, the company representative responsible for compliance shall submit a compliance report to MassDEP demonstrating the facility's compliance status with the emission standards contained in 310 CMR 7.29(5)(a) and in an approved Emission Control Plan. The report shall demonstrate the facility's compliance status with applicable monthly emission rates for each month of the previous calendar year, and each of the twelve previous consecutive 12-month periods. The compliance report shall include all statements listed in 310 CMR 7.29(7)(b)4.¹</p> <p>For the mercury standards at 310 CMR 7.29(5)(a)3.c., the compliance reports due January 30, 2007 and 2008 shall include the quarterly emissions for each quarter beginning October 1, 2006. For the mercury standards at 310 CMR 7.29(5)(a)3.c.e. and f., the compliance report due January 30, 2009 and each report thereafter shall demonstrate compliance with any applicable annual standard for the previous calendar year and with any applicable 12-month standard for each of the 12 previous consecutive 12-month periods.</p> <p>In accordance with 310 CMR 7.29(5)(a)3.g., certify each CEMS in accordance with the applicable quality assurance and quality control procedures contained in 40 CFR Part 60 Appendix F and continue to comply with the requirements of 40 CFR Part 60 Appendix F.</p> <p>In accordance with 310 CMR 7.29(5)(a)3.g., submit to the appropriate Department regional office by the 30th day of April, July, October, and January, a report detailing any of the following that have occurred within the previous calendar quarter, in the event none of the following items have occurred, such information shall be stated in the report:</p> <ul style="list-style-type: none"> • the date and time that any mercury CEMS stopped collecting valid data; • when it started to collect valid data again, except for zero and span checks; and • the nature and date of system repairs. <p>In accordance with 310 CMR 7.29(7)(a), for the mercury standards at 310 CMR 7.29(5)(a)3.c., the compliance reports due January 30, 2007 and 2008 shall include the quarterly emissions for each quarter beginning October 1, 2006. For the mercury standards at 310 CMR 7.29(5)(a)3.c., e., and f., the compliance report due January 30, 2009 and each report thereafter shall demonstrate compliance with any applicable annual standard for the previous calendar year and with any applicable 12-month standard for each of the 12 previous consecutive 12-month periods. The compliance report shall contain items listed in 310 CMR 7.29(7)(b).</p> <p>In accordance with 310 CMR 7.29(7)(g), any person subject to 310 CMR 7.29(5)(a)3. shall submit the results of all mercury emissions, monitor, and optimization test reports, along with supporting calculations, to the Department within 45 days after completion of such testing.</p> <p>MassDEP may verify the facility's compliance status by whatever means necessary, including but not limited to requiring the affected facility to submit information on actual electrical output of company generating units provided by the New England Independent System Operator (ISO), or any successor thereto.</p>
FACILITY	<p>Submit by January 15, April 15, July 15 and October 15 for the previous three months respectively, a 7.29 construction status report which identifies the construction activities which have occurred during the past three months, and those activities anticipated for the following three months, and progress toward achieving compliance with the implementation dates identified in Table 6 below.</p>

Table 5 Notes

1. If the ISO final settlement of actual electrical output is not available, the facility shall submit a compliance report based on provisional values of actual electrical output. Upon receiving certified ISO values of actual electrical output for all provisional months within the calendar year, the facility shall submit a revised compliance report within 30 days thereafter.

* Legend to Abbreviated Terms within Table 5: EU# = Emission Unit Number

4. SPECIAL CONDITIONS FOR ECP

1. MassDEP may verify compliance of 310 CMR 7.29(5) by whatever means necessary, including but not limited to: inspection of a unit's operating records; requiring the facility to submit information on actual electrical output of company generating units provided to that person by the New England Independent System Operator, or any successor thereto; testing emission monitoring devices; and, requiring the facility to conduct emissions testing under the supervision of MassDEP.
2. In accordance with 310 CMR 7.29(5)(b)2., the amount of SO₂ early reductions, with supporting information, shall be provided to MassDEP prior to use for compliance with 310 CMR 7.29(5)(a)2.a. Each ton of reduction may be used, once, to offset one ton of excess emissions from the facility. Excess emissions are any emissions above a level equal to the net electrical output of the facility times the applicable emission standard in 310 CMR 7.29(5)(a)2.
3. In accordance with 310 CMR 7.29(5)(b)3., when using SO₂ allowances created pursuant to 40 CFR Part 72 (the Federal Acid Rain Program), three allowances shall be used to offset each ton of excess emissions above the emission standard. Such SO₂ allowances shall be in addition to those allowances used by the facility to comply with the requirements of 40 CFR Part 72, and shall be transferred to MassDEP and retired for the benefit of the environment.
4. ~~MassDEP is not approving or denying any off-site or non-contemporaneous proposed CO₂ reduction measures at this time. 310 CMR 7.29(5)(a)5.c. and d. provide that compliance with the CO₂ emission limitations may be demonstrated by using offsite reductions or sequestration in addition to onsite reductions, as long as certain established conditions are met. However, while there is a provision for using early reductions of SO₂ to meet the SO₂ emissions limit in 310 CMR 7.29(5)(a)2.a., there is no similar regulatory provision for use of early reductions of CO₂ for compliance with 310 CMR 7.29(5)(a)5. MassDEP is in the process of developing provisions for the quantification and certification of Greenhouse Gas (GHG) reductions for use in demonstrating compliance with the CO₂ emission limitations contained in 310 CMR 7.29. MassDEP will review and approve or deny proposals for off-site, sequestration, or non-contemporaneous reductions (i.e. early on-site reductions) of CO₂ or other GHG after adoption of amendments to 310 CMR 7.00: Appendix B, and other regulatory sections, if necessary.~~

5. GENERAL CONDITIONS FOR ECP

1. The facility shall maintain continuous compliance at all times with the terms of this Amended ECP Final Approval and the applicable emission rates in 310 CMR 7.29.
2. This Amended ECP Final Approval may be suspended, modified, or revoked by MassDEP, if at any time the facility is violating any applicable Regulation(s) or condition(s) of this Final ECP Approval letter.
3. This Amended ECP Final Approval consists of Mt. Tom's application materials and this Amended ECP Final Approval letter. If conflicting information is found between these two documents, then the requirements of this Amended ECP Final Approval letter shall take precedence over the documentation in the application materials.
4. Should a condition of air pollution occur as a result of the operation of this unit, then

- the facility shall immediately take appropriate steps to abate said condition even though the facility is otherwise in compliance with this Amended ECP Final Approval.
5. This Amended ECP Final Approval does not negate the responsibility of the facility to comply with this or any other applicable federal, state, or local regulations now or in the future. Nor does this Amended ECP Final Approval imply compliance with any other applicable federal, state, or local regulations now or in the future.
 6. If provisions or requirements from any other regulation or permit conflict with a provision of 310 CMR 7.29, the more stringent of the provisions will apply unless otherwise determined by MassDEP in the affected facility's Operating Permit.
 7. Failure to comply with any of the above stated provisions will constitute a violation of the "Regulations", and can result in the revocation of the Amended ECP Final Approval granted herein.

~~6. MODIFICATION TO THE ECP~~

~~Amendments may be proposed to this approved Emission Control Plan. If MassDEP proposes to approve such amendments, or approve such amendments with conditions, then MassDEP will publish a notice of public comment on a **FINAL ECP Amended Approval**, in accordance with M.G.L. c. 30A. MassDEP will allow a 30-day public comment period following publication of the notice, and may hold a public hearing. Modifications to an affected facility's monitoring systems approved pursuant to the requirements of 40 CFR Part 72 are not subject to such public comment prior to approval. All terms and conditions of the Final ECP Approval shall remain in effect until otherwise modified by MassDEP in a Final ECP Approval.~~

~~7. MASSACHUSETTS ENVIRONMENTAL POLICY ACT~~

~~MassDEP has determined that the filing of an Environmental Notification Form (ENF) with the Secretary of Environmental Affairs, for air quality control purposes, was not required prior to this action by MassDEP. Notwithstanding this determination, the Massachusetts Environmental Policy Act (MEPA) and Regulation 301 CMR 11.00 Section 11.04, provide certain "Fall Safe Provisions" which allow the Secretary to require the filing of an ENF and/or Environmental Impact Report at a later time.~~

~~8. APPEAL OF APPROVAL~~

~~This Final ECP Approval is an action of MassDEP. If you are aggrieved by this action, you may request an adjudicatory hearing. A request for a hearing must be made in writing and postmarked within twenty-one (21) days of the date of issuance of this Approval.~~

~~Under 310 CMR 1.01(6)(b), the request must state clearly and concisely the facts which are the grounds for the request, and the relief sought. Additionally, the request must state why the Final ECP Approval is not consistent with applicable laws and regulations.~~

~~The hearing request along with a valid check payable to The Commonwealth of Massachusetts in the amount of one hundred dollars (\$100.00) must be mailed to:~~

~~The Commonwealth of Massachusetts
Department of Environmental Protection
P.O. Box 4062
Boston, MA 02211~~

~~The request will be dismissed if the filing fee is not paid, unless the appellant is exempt or granted a waiver as described below.~~

~~The filing fee is not required if the appellant is a city or town (or municipal agency), county, or district of the Commonwealth of Massachusetts, or a municipal housing authority.~~

~~MassDEP may waive the adjudicatory hearing filing fee for a person who shows that paying the fee will create an undue financial hardship. A person seeking a waiver must file, together with the hearing request as provided above, an affidavit setting forth the facts believed to support the claim of undue financial hardship.~~

Should you have questions concerning this matter or regarding the terms or conditions of this **Amended ECP Final Approval**, please do not hesitate to contact Marc Simpson in writing at 436 Dwight Street, Springfield, MA 01103 or by telephone at 413-755-2115.

Sincerely,



Marc Simpson
Permit Section Chief
Western Regional Office

ec: USEPA - Region 1, Air Permitting Program: Ida McDonnell
DEP/BWP-NERO: Edward J. Braczyk
DEP-Boston: Yi Tian