



Commonwealth of Massachusetts
Executive Office of Energy & Environmental Affairs

Department of Environmental Protection

Northeast Regional Office • 205B Lowell Street, Wilmington MA 01887 • 978-694-3200

DEVAL L. PATRICK
Governor

TIMOTHY P. MURRAY
Lieutenant Governor

RICHARD K. SULLIVAN JR.
Secretary

KENNETH L. KIMMELL
Commissioner

Please note that some provisions of this approval are shown in strikeout for the sole purpose of showing what provisions are not incorporated into the Massachusetts Regional Haze State Implementation Plan (SIP). The provisions in strikeout remain a part of the approval and continue to be state enforceable.

March 27, 2012

Mr. Lamont W. Beaudette
Dominion Energy Salem Harbor, LLC.
Salem Harbor Station
24 Fort Avenue
Salem, MA 01970

RE: **SALEM** – Metropolitan Boston /
Northeast Region
310 CMR 7.29
Power Plant Emission Standards
Application No. NE-12-003
Transmittal No. X241756
FINAL AMENDED
EMISSION CONTROL PLAN APPROVAL

Dear Mr. Beaudette:

The Metropolitan Boston/Northeast Region of the Department of Environmental Protection, Bureau of Waste Prevention ("MassDEP"), has reviewed your proposal, received January 31, 2012, to amend the 310 CMR 7.29 Emission Control Plan (ECP) included with the Administrative Consent Order (ACO-NE-03-7001) of June 19, 2003. The ECP concerns 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 at the Dominion Energy Salem Harbor, LLC. - Salem Harbor Station (ORIS Code: 01626) facility ("the facility" or "the affected facility") located at 24 Fort Avenue in Salem, Massachusetts. Your proposal to amend the ECP was submitted as required per 310 CMR 7.29(6)(a)4. for the incorporation of strategies to maintain compliance with 310 CMR 7.29 and in order for the Commonwealth to meet its obligation under Section 169A of the Clean Air Act to address regional haze, as described in MassDEP's Regional Haze State Implementation Plan. This submittal for amendment of the ECP bears the signature of Mr. Lamont W. Beaudette as the company contact responsible for compliance with 310 CMR 7.29.

LEGAL AUTHORITY

MassDEP has adopted 310 CMR 7.29 - a regulation to lower emissions of sulfur dioxide (SO₂), carbon dioxide (CO₂), nitrogen oxides (NO_x), and mercury (Hg) from certain power plants, and to establish a framework for reductions in emissions of carbon monoxide (CO) 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, establishing maximum output-based emission rates or minimum removal efficiencies for Hg, and establishing a cap on CO₂ and Hg emissions from affected facilities. The CO₂ emissions standards do not apply to CO₂ emissions after December 31, 2008. The regulations do not impose CO and PM_{2.5} emission standards at this time but indicate that development of emission standards is reserved.

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). The facility must amend its Operating Permit Application to include the ECP Approval.

MassDEP issued a Draft Amended ECP Approval on February 17, 2012. Pursuant to 310 CMR 7.29(6)(h)1., public notice of this Draft Amended ECP Approval was published in accordance with M.G.L. c. 30A in The Salem News on February 24, 2012, followed by a 30-day public comment period. As such, the public comment period ended on March 26, 2012. During the public comment period, no comments were received.

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

* **Legend to Abbreviated Terms within Tables 1 through 6:**

EU # = Emission Unit Number
NO_x = Nitrogen Oxides
SO₂ = Sulfur Dioxide
Hg = Mercury
CO = Carbon Monoxide
CO₂ = Carbon Dioxide
PM_{2.5} = Fine Particulate Matter
MMBTU/HR = fuel heat input in million British Thermal Units per hour
MW (NET) = net electrical output in Megawatts
lbs/MWh = pounds per Megawatt-hour of net electrical output
lbs/GWh = pounds per Gigawatt-hour of net electrical output
ACO = Administrative Consent Order
GHG = Greenhouse Gas
No. = Number
≤ = Less than or equal to
≥ = Greater than or equal to

1. EQUIPMENT DESCRIPTION

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

Table 1 *				
EU #	DESCRIPTION OF EMISSION UNIT	EU DESIGN CAPACITY		POLLUTION CONTROL MEASURES (PCM)
		(MMBTU/HR)	MW (NET)	
EU 1	Babcock & Wilcox Model No. RB103 Water Tube Boiler	954	84	Low NO _x Burners (LNB)
				Selective Non-Catalytic Reduction (SNCR)
				Combustion Tuning and Controls
				Electrostatic Precipitators
				Management of Lower Sulfur Fuels
EU 2	Babcock & Wilcox Model No. RB103 Water Tube Boiler	966	81	Selective Non-Catalytic Reduction (SNCR)
				Combustion Tuning and Controls
				Electrostatic Precipitators
				Management of Lower Sulfur Fuels
EU 3	Babcock & Wilcox Model No. RB284 Water Tube Boiler	1,696	150	Low NO _x Burners with Overfire Air
				Selective Non-Catalytic Reduction (SNCR)
				Reagent (Calcium Bromide) Injection System [application for proposal under review, Transmittal No. X250364]
				Combustion Tuning and Controls
				Electrostatic Precipitators
				Management of Lower Sulfur Fuels
EU 4	Riley Stoker Model No. 1SR Water Tube Boiler	4,800	440	Low NO _x Burners
				Selective Non-Catalytic Reduction (SNCR) [application for proposal under review, Application No. MBR-11-COM-004, Transmittal No. X238706]
				Combustion Tuning and Controls
				Electrostatic Precipitators
				Management of Lower Sulfur Fuels

2. APPLICABLE REQUIREMENTS

A. EMISSION LIMITS AND RESTRICTIONS

The facility owner/operator shall comply with the emission limits/restrictions as contained in Table 2 below. The schedule for compliance with these emission limitations is contained in Section 3. Compliance Schedule of this ECP Approval.

Table 2 *			
EU #	POLLUTANT	EMISSION LIMIT/STANDARD	APPLICABLE REGULATION/ APPROVAL NUMBER, AND/OR ADMINISTRATIVE CONSENT ORDER
EU 1, EU 2, EU 3, EU 4	NO _x	≤ 1.5 lbs/MWh calculated over any consecutive 12 month period, recalculated monthly ¹	310 CMR 7.29(5)(a)1.a. ACO-NE-03-7001 ACO-NE-03-7001-AMEND#1
		≤ 3.0 lbs/MWh calculated over any individual calendar month ¹	310 CMR 7.29(5)(a)1.b. ACO-NE-03-7001 ACO-NE-03-7001-AMEND#1
	SO ₂	≤ 6.0 lbs/MWh calculated over any consecutive 12 month period, recalculated monthly ^{1, 2}	310 CMR 7.29(5)(a)2.a. ACO-NE-03-7001 ACO-NE-03-7001-AMEND#1
		≤ 3.0 lbs/MWh calculated over any consecutive 12 month period, recalculated monthly ^{1, 2, 3}	310 CMR 7.29(5)(a)2.b.i. ACO-NE-03-7001 ACO-NE-03-7001-AMEND#1
		≤ 6.0 lbs/MWh calculated over any individual calendar month ^{1, 2, 3}	310 CMR 7.29(5)(a)2.b.ii. ACO-NE-03-7001 ACO-NE-03-7001-AMEND#1
EU 1, EU 2, EU 3	Hg	≤ 21.2 pounds per calendar year ^{1, 4}	310 CMR 7.29(5)(a)3.c.
		≥ 85% removal efficiency calculated on a rolling 12 month basis; or, ≤ 0.0075 lbs/GWh calculated on a rolling 12 month basis ^{1, 5, 6}	310 CMR 7.29(5)(a)3.e.i. or 310 CMR 7.29(5)(a)3.e.ii.
		Effective October 1, 2012, ≥ 95% removal efficiency calculated on a rolling 12 month basis; or, ≤ 0.0025 lbs/GWh calculated on a rolling 12 month basis ^{1, 5, 6}	310 CMR 7.29(5)(a)3.f.i. or 310 CMR 7.29(5)(a)3.f.ii.
EU 1	CO	Reserved ⁷	310 CMR 7.29(5)(a)4.
EU 2	CO ₂	≤ 4,286,053 tons in the calendar year ^{1, 8, 9}	310 CMR 7.29(5)(a)5.a.
EU 3		≤ 1800 lbs/MWh in the calendar year ^{1, 10}	310 CMR 7.29(5)(a)5.b.
EU 4	PM _{2.5}	Reserved ⁷	310 CMR 7.29(5)(a)6.

Table 2 Notes:

- In accordance with 310 CMR 7.29(5)(b)1., compliance with the emission standards in 310 CMR 7.29(5)(a) may be demonstrated by dividing the total emissions of each pollutant by the total net electrical output from all electric generating units subject to 40 CFR Part 72 located at the affected facility as of May 11, 2001 or repowered at the affected facility after May 11, 2001. ~~For demonstrating compliance with the Hg emissions standards in 310 CMR 7.29(5)(a)3., the person who owns, leases, operates or controls an affected facility shall include in the calculation only units that fire solid fossil fuel or ash, or that repowered a unit that fired solid fossil fuel or ash.~~
- In accordance with 310 CMR 7.29(5)(b)2., compliance with the SO₂ emission standards in 310 CMR 7.29(5)(a)2. may be demonstrated by using SO₂ reductions at the affected facility below historical actual emissions which were made after May 11, 2001, and prior to the earliest applicable date set in 310 CMR 7.29(6). The total amount of tons produced through early reductions each year is calculated by multiplying the facility's net electrical output for that year times (the historical actual emission rate minus that year's actual emission rate in lbs/MWh) divided by 2000. The amount of 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., compliance with the SO₂ emission standards in 310 CMR 7.29(5)(a)2.b. may be demonstrated by 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. In accordance with 310 CMR 7.29(5)(a)3.e., the Hg emission limit is based on the average annual emissions calculated using the results of the stack tests required in 310 CMR 7.29(5)(a)3.d.ii.. Total annual Hg emissions equal the total emissions from combustion of solid fossil fuel and re-burn of ash, where such ash was produced by the combustion of fossil fuel or ash at the facility. In accordance with 310 CMR 7.29(2), total Hg means the sum of particulate bound and vapor phase (elemental and oxidized) Hg in combustion gases or emitted to the atmosphere.~~
- ~~5. In accordance with 310 CMR 7.29(5)(a)3.e.i. and 310 CMR 7.29(5)(a)3.f.i., the Hg removal efficiency based on a Hg monitoring system shall be calculated based on the average historic Hg inlet emissions determined under 310 CMR 7.29(5)(a)3.d.ii. using the methodology approved by MassDEP in the monitoring plan required under 310 CMR 7.29(5)(a)3.g..~~
- ~~6. In accordance with 310 CMR 7.29(5)(a)3.e.ii. and 310 CMR 7.29(5)(a)3.f.ii., the Hg emission rate based on a Hg monitoring system shall be calculated using the Hg mass emissions methodology approved by MassDEP in the monitoring plan required under 310 CMR 7.29(5)(a)3.g..~~
- ~~7. MassDEP has reserved these areas in the regulations for further development.~~
- ~~8. In accordance with 310 CMR 7.29(5)(a)5.a., the CO₂ emission limit is based on historical actual emissions as defined in 310 CMR 7.29(2).~~
- ~~9. In accordance with MassDEP's Administrative Consent Order (ACO-NE-03-7001), the date for compliance with the CO₂ requirements found at 310 CMR 7.29(5)(a)5.a. shall be October 1, 2006. In accordance with 310 CMR 7.29(5)(a)5.c., compliance with 310 CMR 7.29(5)(a)5.a. may be demonstrated by using emission reductions, avoided emissions or sequestered emissions verified under 310 CMR 7.00: Appendix B(7) to offset emissions above the historical actual emissions, provided MassDEP determines such emission reductions, avoided emissions or sequestered emissions are real, additional, verifiable, permanent, and enforceable as defined in 310 CMR 7.00: Appendix B(7) or by using the GHG Expendable Trust under the conditions specified in 310 CMR 7.00: Appendix B(7)(d)5. The CO₂ emission standard under 310 CMR 7.29(5)(a)5.a. shall not apply to the emissions of CO₂ that occur after December 31, 2008.~~
- ~~10. In accordance with MassDEP's Administrative Consent Order (ACO-NE-03-7001), the date for compliance with the CO₂ requirements found at 310 CMR 7.29(5)(a)5.b. shall be October 1, 2008. In accordance with 310 CMR 7.29(5)(a)5.d., compliance with 310 CMR 7.29(5)(a)5.b. may be demonstrated by using emission reductions, avoided emissions or sequestered emissions verified under 310 CMR 7.00: Appendix B(7) to offset excess emissions, provided MassDEP determines such emission reductions, avoided emissions or sequestered emissions are real, additional, verifiable, permanent, and enforceable as defined in 310 CMR 7.00: Appendix B(7) or by using the GHG Expendable Trust under the conditions specified in 310 CMR 7.00: Appendix B(7)(d)5. Excess emissions are any emissions above the net electrical output of the facility times 1,800 lbs/MWh. The CO₂ emission standard under 310 CMR 7.29(5)(a)5.b. shall not apply to the emissions of CO₂ that occur after December 31, 2008.~~

B. COMPLIANCE DEMONSTRATION

The facility owner/operator is subject to the monitoring/testing, record keeping, and reporting requirements as contained in Tables 3, 4 and 5 below and 310 CMR 7.29, as well as the applicable requirements contained in Table 2:

Table 3 *	
EU #	MONITORING/TESTING REQUIREMENTS
EU 1, EU 2, EU 3, EU 4	<p>In accordance with 310 CMR 7.29(7)(b)1., monitor actual emissions, expressed in tons, for SO₂, CO₂ and NO_x for each of the preceding 12 months. Actual emissions shall be monitored for individual units and as a facility total for all units included in the calculation demonstrating compliance. Actual emissions shall be monitored in accordance with 40 CFR Part 75 for SO₂, CO₂ and NO_x. MassDEP shall detail the monitoring methodology for CO and PM_{2.5} at the time regulations are promulgated by MassDEP for those pollutants.</p> <p>In accordance with 310 CMR 7.29(7)(b)2., monitor actual net electrical output for each of the preceding 12 months, expressed in megawatt-hours. Actual net electrical output shall be monitored for individual units and as a facility total for all units included in the calculation demonstrating compliance.</p> <p>Consistent with 310 CMR 7.29(7)(b)3., calculate the resulting output-based emission rates for each of the preceding 12 months, and each of the 12 consecutive rolling month time periods, expressed in pounds per megawatt-hour, for SO₂, CO₂ and NO_x. Output-based emission rates shall be calculated for individual units and as a facility total for all units included in the calculation demonstrating compliance.</p>
EU 1, EU 2, EU 3	<p>In accordance with 310 CMR 7.29(5)(a)3.e.i., total annual Hg emissions shall be monitored by conducting emissions testing at least every other calendar quarter from October 1, 2006 until a certified Hg monitoring system is used to demonstrate compliance with the standards in 310 CMR 7.29(5)(a)3.e. or f., and using a certified Hg monitoring system thereafter.</p> <p>In accordance with 310 CMR 7.29(5)(a)3.d.iii., stack tests for Hg shall consist at a minimum of three runs at full load on each unit firing solid fossil fuel or ash according to a testing protocol acceptable to MassDEP. Unless a Hg monitoring system that measures particulate-bound Hg, either combined with or separate from the measurement of vapor-phase Hg, is installed at a unit for purposes of determining compliance with the standards in 310 CMR 7.29(5)(a)3.e., e. and f., stack tests for Hg, and certification tests and Relative Accuracy Test Audits for Hg monitoring systems, shall determine total and particulate-bound Hg. Relative accuracy shall be calculated as specified by MassDEP.</p> <p>In accordance with 310 CMR 7.29(5)(a)3.g.i., by January 1, 2008, any person who owns, leases, operates or controls an affected facility which combusts solid fossil fuel or ash shall install, certify, and operate a Hg monitoring system to measure Hg stack emissions from each solid fossil fuel or ash-fired unit at a facility subject to 310 CMR 7.29. Any person required to install a Hg monitoring system shall meet the requirements of 310 CMR 7.29(5)(a)3.g.i. and iii..</p>

Table 3 *	
EU #	MONITORING/TESTING REQUIREMENTS
EU 1, EU 2, EU 3	<p>In accordance with 310 CMR 7.29(5)(a)3.c.ii., when ash is re-burned at an affected facility, the associated mercury emissions shall be attributable to the affected facility at which the ash is re-burned. When ash produced by an affected facility is used in Massachusetts as a cement kiln fuel, as an asphalt filler, or in other high temperature processes that volatilize Hg:</p> <p>(a) the Hg content of the utilized ash shall be measured weekly using a method acceptable to MassDEP;</p> <p>(b) all of the Hg in the utilized ash shall be assumed to be emitted, unless it can be demonstrated with data acceptable to MassDEP that a lesser amount of Hg is emitted;</p> <p>(c) the associated Hg emissions shall be attributed to the affected facility from which the ash is shipped to the cement kiln, asphalt batching plant or other high temperature processing location.</p> <p>In accordance with 310 CMR 7.29(7)(b)1. And MassDEP's Amended Administrative Consent Order (ACO-NE-03-7001-AMEND#1), monitor actual emissions expressed in thousands of ounces for Hg, for each of the preceding four calendar quarters beginning October 1, 2005 and preceding 12 months beginning January 1, 2008. Actual emissions shall be monitored for individual units and as a facility total for all units included in the calculation demonstrating compliance. Actual emissions shall be monitored in accordance with 310 CMR 7.29(7)(b)1.b., c., and d. for Hg.</p> <p>In accordance with 310 CMR 7.29(7)(b)3., monitor output-based emission rates, expressed in pounds per gigawatt-hour, for Hg. Output-based emission rates shall be monitored for individual units and as a facility total for all units included in the calculation demonstrating compliance.</p> <p>In accordance with 310 CMR 7.29(7)(c), for units that apply carbon or other sorbent injection for Hg control, monitor the parameters stated in 310 CMR 7.29(7)(c)1., 2., 3., 4., 5., and 6. until such time as a Hg monitoring system is installed at that unit.</p> <p>In accordance with 310 CMR 7.29(7)(f), for units that apply technology other than carbon or other sorbent for Hg control, monitor the operating parameters proposed to and approved by MassDEP in the ECP application required under 310 CMR 7.29(6)(a)3. until such time as a Hg monitoring system is installed at that unit.</p>

Table 4 *	
EU #	RECORD KEEPING REQUIREMENTS
EU 1, EU 2, EU 3, EU 4	<p>In accordance with 310 CMR 7.29(7)(b)1., maintain a record of actual emissions, expressed in tons for SO₂, CO₂, and NO_x, for each of the preceding 12 months. Actual emissions shall be recorded for individual units and as a facility total for all units included in the calculation demonstrating compliance. Actual emissions provided under 310 CMR 7.29 shall be recorded in accordance with 40 CFR Part 75 for SO₂, CO₂, and NO_x. MassDEP shall detail the record keeping methodology for CO and PM_{2.5} at the time regulations are promulgated by MassDEP for those pollutants.</p> <p>In accordance with 310 CMR 7.29(7)(b)2., maintain a record of actual net electrical output for each of the preceding 12 months, expressed in megawatt-hours. Records of actual net electrical output shall be maintained for individual units and as a facility total for all units included in the calculation demonstrating compliance.</p> <p>In accordance with 310 CMR 7.29(7)(b)3., maintain a record of the resulting output-based emission rates for each of the preceding 12 months, and each of the 12 consecutive rolling month time periods, expressed in pounds per megawatt-hour for SO₂, CO₂, and NO_x. Output-based emission rates shall be recorded for individual emission units and as a facility total for all units included in the calculation demonstrating compliance.</p>

Table 4 *	
EU #	RECORD KEEPING REQUIREMENTS
EU 1, EU 2, EU 3, EU 4	In accordance with 310 CMR 7.29(7)(d), keep all measurements, data, reports and other information required by 310 CMR 7.29 on-site for a minimum of five years, or any other period consistent with the affected facility's Operating Permit.
EU 1, EU 2, EU 3	<p>Consistent with the requirements of 310 CMR 7.29(7), record any occurrences when emission rates of Hg are in excess of the emission limits/standards contained in Table 3.</p> <p>Consistent with the requirements of 310 CMR 7.29(5)(a)3.c. and d., maintain a record of all Hg stack testing performed at the facility.</p> <p>Consistent with the requirements of 310 CMR 7.29(5)(a)3.c.ii., when ash produced by an affected facility is used in Massachusetts as a cement kiln fuel, as an asphalt filler, or in other high temperature processes that volatilize Hg, maintain records of the Hg content of the utilized ash.</p> <p>In accordance with 310 CMR 7.29(7)(b)1. and MassDEP's Amended Administrative Consent Order (ACO-NE-03-7001-AMEND#1), maintain a record of actual emissions, expressed in thousandths of ounces for Hg, for each of the preceding four calendar quarters beginning October 1, 2005 and preceding 12 months beginning January 1, 2008. Actual emissions shall be recorded for individual units and as a facility total for all units included in the calculation demonstrating compliance. Actual emissions shall be recorded in accordance with 310 CMR 7.29(7)(b)1.b., c., and d. for Hg.</p> <p>In accordance with 310 CMR 7.29(7)(b)3., maintain a record of output-based emission rates, expressed in pounds per gigawatt-hour for Hg, for each of the preceding 12 months and each of the 12 consecutive rolling month time periods. Output-based emission rates shall be recorded for individual units and as a facility total for all units included in the calculation demonstrating compliance.</p> <p>In accordance with 310 CMR 7.29(7)(e), for units that apply carbon or other sorbent injection for Hg control, maintain records of the parameters stated in 310 CMR 7.29(7)(e)1., 2., 3., 4., 5., and 6. until such time as a Hg monitoring system is installed at that unit.</p> <p>In accordance with 310 CMR 7.29(7)(f), for units that apply technology other than carbon or other sorbent for Hg control, maintain records of the operating parameters proposed to and approved by MassDEP in the ECP application required under 310 CMR 7.29(6)(a)3. until such time as a Hg monitoring system is installed at that unit.</p>

Table 5 *	
EU #	REPORTING REQUIREMENTS
EU 1, EU 2, EU 3, EU 4	<p>In accordance with 310 CMR 7.29(7)(a), the company representative responsible for compliance shall submit a compliance report to MassDEP by January 30 of each year and pursuant to the schedule stated in MassDEP's Amended Administrative Consent Order (ACO-NE-03-7001-AMEND#1) demonstrating the facility's compliance status with the emission standards contained in 310 CMR 7.29(5)(a) and in an approved ECP. The report shall demonstrate compliance with any applicable monthly emission rate for each month of the previous calendar year and with any applicable 12-month emission rate for each of the 12 previous consecutive 12-month periods. The compliance report shall contain all of the applicable SO₂, CO₂, and NO_x elements listed in 310 CMR 7.29(7)(b).</p> <p>In accordance with 310 CMR 7.29(5)(a)5.a., by September 1, 2009, any person who owns, leases, operates or controls an affected facility shall demonstrate to MassDEP that emissions of CO₂ from the affected facility in calendar years 2006, 2007, and 2008, expressed in tons, from Part 72 units located at the affected facility did not exceed historical actual emissions as defined in 310 CMR 7.29(2).</p>

Table 5 *	
EU #	REPORTING REQUIREMENTS
EU 1, EU 2, EU 3, EU 4	In accordance with 310 CMR 7.29(5)(a)5.b., by September 1, 2009, any person who owns, leases, operates or controls an affected facility shall demonstrate to MassDEP that the average emission rate of CO₂ from Part 72 units located at the affected facility did not exceed an emission rate of 1,800 lbs/MWh in calendar year 2008. The average emission rate is calculated by dividing the total number of pounds of CO₂ emitted by the affected facility in the calendar year by the net electrical output for the affected facility for the same calendar year.
EU 1, EU 2, EU 3	<p>In accordance with 310 CMR 7.29(5)(a)3.d.iii., the results of each stack test for Hg shall be reported to MassDEP within 45 days after conducting each stack test.</p> <p>In accordance with 310 CMR 7.29(5)(a)3.g.i., any person required to install a Hg monitoring system shall submit a monitoring plan for MassDEP approval and shall propose to amend the approved ECP in accordance with 310 CMR 7.29(6)(n)1. to incorporate the Hg monitoring approach at least 45 days prior to commencement of initial certification testing. In accordance with 310 CMR 7.29(5)(a)3.g.ii., affected facilities must include in their monitoring plan a proposed methodology to demonstrate compliance with the emission standards in 310 CMR 7.29(5)(a)3.e. and f.</p> <p>In accordance with 310 CMR 7.29(7)(i), any person subject to 310 CMR 7.29(5)(a)3. shall submit the results of all Hg emissions, monitoring, and optimization test reports, along with supporting calculations, to MassDEP within 45 days after completion of such testing.</p> <p>In accordance with 310 CMR 7.29(5)(a)3.c.ii.(iv), when ash produced by an affected facility is used in Massachusetts as a cement kiln fuel, as an asphalt filler, or in other high temperature processes that volatilize mercury, a proposal shall be submitted for MassDEP approval at least 45 days prior to such use, or at least 45 days prior to October 1, 2006, whichever is later, detailing the proposed measurement methods to be used to comply with 310 CMR 7.29(5)(a)3.c.ii.(i) and (ii).</p> <p>In accordance with 310 CMR 7.29(7)(a) and pursuant to the schedule stated in MassDEP's Amended Administrative Consent Order (ACO-NE-03-7001-AMEND#1), for the Hg standards at 310 CMR 7.29(5)(a)3.c., the compliance reports due by January 30 of 2007 and 2008 shall include the quarterly emissions for each quarter beginning October 1, 2005. In accordance with 310 CMR 7.29(7)(a), for the Hg 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 all of the applicable Hg elements listed in 310 CMR 7.29(7)(b).</p> <p>In accordance with 310 CMR 7.29(6)(a)3., any person who owns, leases, operates, or controls an affected facility which installs Hg control equipment that is not already contained in an ECP approval under 310 CMR 7.29 shall submit a Hg ECP amendment application under 310 CMR 7.29(6)(h) at least 90 days before intended installation and may not install such equipment until receiving approval of the revision.</p>

Table 5 Notes:

- 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.

3. COMPLIANCE SCHEDULE

The owner/operator of the affected facility shall ensure that it shall be in full compliance with the applicable requirements contained in Table 2 in accordance with the

schedule as specified in the Administrative Consent Order (ACO-NE-03-7001) signed on June 19, 2003, and as amended on May 23, 2005, and as stated within 310 CMR 7.29.

Furthermore, the affected facility owner/operator has proposed additional compliance strategies to comply with 310 CMR 7.29 and to provide the necessary NO_x and SO₂ emissions reductions in order for the Commonwealth to meet its obligation under Section 169A of the Clean Air Act to address regional haze, as described in MassDEP's Regional Haze State Implementation Plan.

Compliance with 310 CMR 7.29 will continue to be met by utilizing a combination of existing and new control strategies identified in Table 1, above. ~~In order to meet the regulatory Hg limits which are effective on October 1, 2012, the facility owner/operator has proposed using a combination strategy involving fuel mix optimization (for SO₂ compliance but this action will benefit Hg compliance as well) and installation of a Calcium Bromide injection system. In order to meet the 310 CMR 7.29 CO₂ emission targets, the Dominion Energy Salem Harbor, LLC facility owner/operator procured offset credits from both its Dominion Energy Brayton Point facility and third party contacts and paid into the Greenhouse Gas Expendable Trust.~~ In addition, EU 4 NO_x compliance options will be burner tuning/maintenance, which may include new atomizer nozzles and flame stabilizers, water injection technology (into fuel, flame zone, or furnace), or staged combustion and SNCR. These technologies or measures will be used singly or in combination as necessary to achieve compliance.

With respect to the obligations necessary to address regional haze, the facility owner/operator shall utilize a combination of NO_x and/or SO₂ emission caps on EU 1 and EU 2 and shall permanently shutdown EU 3 and EU 4 by June 1, 2014 (For the purposes of this ECP Approval "shutdown" means ceasing to operate these units as coal fired units. It does not preclude repowering of the units after receipt of the appropriate Approvals and/or permits from MassDEP (and other agencies as applicable).). Furthermore, the facility owner/operator shall not use SO₂ Early Reduction Credits or Federal Acid Rain Allowances for SO₂ compliance effective June 1, 2014. The emission unit specific requirements are contained in Section 4 of this ECP Approval.

4. SPECIAL CONDITIONS FOR ECP

1. In accordance with 310 CMR 7.29(7)(c), MassDEP may verify compliance by whatever means necessary, including but not limited to: inspection of a unit's operating records; requiring the person who owns, leases, operates or controls an affected facility to submit information on actual electrical output of company generating units provided to that person by the New England Independent System Operator (ISO); testing emission monitoring devices; and, requiring the person who owns, leases, operates or controls an affected facility to conduct emissions testing under the supervision of MassDEP.
2. In accordance with 310 CMR 7.29(4)(c), in case of imminent threat to the reliability of New England's electricity system, MassDEP may promulgate an emergency regulation as per M.G.L. c. 30A, §§ 2 and 3, to mitigate the emergency situation.
3. In accordance with 310 CMR 7.29(4)(b), any person subject to 310 CMR 7.29 shall comply with all other applicable regulations. 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. Regardless of MassDEP's determination, any person subject to 310 CMR 7.29 shall comply with all applicable federal requirements.

4. The facility owner/operator shall maintain continuous compliance at all times with the terms of the Administrative Consent Order (ACO-NE-03-7001) signed on June 19, 2003, including the amended Consent Order (ACO-NE-03-7001-AMEND#1) dated May 23, 2005, and this ECP Approval, consistent with the applicable emission rates in 310 CMR 7.29.
5. Should a condition of air pollution occur as a result of the operation of these units, then the facility owner/operator shall immediately take appropriate steps to abate said condition even though the facility is otherwise in compliance with the Administrative Consent Order (ACO-NE-03-7001) and its amendment (ACO-NE-03-7001-AMEND#1), this ECP Approval, and 310 CMR 7.29.
6. Effective immediately, the facility owner/operator shall ensure that NO_x emissions from EU 1 shall not exceed 276 tons per rolling 12 month period the calculation of which commences on 1/1/2012 and the first full 12 month demonstration shall be 1/1/2013.
7. Effective immediately, the facility owner/operator shall ensure that NO_x emissions from EU 2 shall not exceed 50 tons per rolling 12 month period the calculation of which commences on 1/1/2012 and the first full 12 month demonstration shall be 1/1/2013.
8. Effective immediately, the facility owner/operator shall ensure that SO₂ emissions from EU 2 shall not exceed 300 tons per rolling 12 month period the calculation of which commences on 1/1/2012 and the first full 12 month demonstration shall be 1/1/2013.
9. The facility owner/operator shall maintain adequate records onsite to document compliance with the requirements contained in Special Conditions 6., 7. and 8. above; and shall make said records available to MassDEP or USEPA personnel upon request.
10. Effective June 1, 2014, the facility owner/operator shall ensure that EU 3 and EU 4 shall cease operation, and shall be permanently shutdown, and rendered inoperable.
11. Effective June 1, 2014, the facility owner/operator is prohibited from utilizing SO₂ Early Reduction Credits or Federal Acid Rain Allowances for compliance with the SO₂ requirements of 310 CMR 7.29.

5. GENERAL CONDITIONS FOR ECP

1. This ECP 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 ECP Approval letter.
2. This ECP Approval letter consists of the facility owner/operator's Application materials, the Administrative Consent Order (ACO-NE-03-7001), and the Amended Consent Order (ACO-NE-03-7001-AMEND#1). If conflicting information is found between these documents, then the requirements of this ECP Approval letter shall take precedence over the documentation in the Application materials.
3. This ECP Approval does not negate the responsibility of the facility owner/operator to comply with this or any other applicable federal, state, or local regulations now or in

the future. Nor does this ECP Approval imply compliance with any other applicable federal, state, or local regulations now or in the future.

4. 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 owner/operator's Operating Permit.
5. Failure to comply with any of the above conditions will constitute a violation of the "Regulations", and can result in the revocation of the ECP Approval granted herein.

~~6. MODIFICATION TO THE ECP~~

~~In accordance with 310 CMR 7.29(h)1., 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 an Amended ECP 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. All terms and conditions of the Amended ECP Approval shall remain in effect until otherwise modified by MassDEP in a subsequent ECP Approval.~~

~~7. MASSACHUSETTS ENVIRONMENTAL POLICY ACT~~

~~MassDEP has determined that the filing of an Environmental Notification Form (ENF) with the Secretary of Energy & 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 "Fail 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 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 ECP 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 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 ECP Approval, please contact Edward J. Braczyk at (978) 694-3289 or Cosmo Buttaro at (978) 694-3281.

Sincerely,

This final document copy is being provided to you electronically by the Department of Environmental Protection. A signed copy of this document is on file at the DEP office listed on the letterhead.

Edward J. Braczyk
Environmental Engineer

This final document copy is being provided to you electronically by the Department of Environmental Protection. A signed copy of this document is on file at the DEP office listed on the letterhead.

James E. Belsky
Regional Permit Chief
Bureau of Waste Prevention

This final document copy is being provided to you electronically by the Department of Environmental Protection. A signed copy of this document is on file at the DEP office listed on the letterhead.

Cosmo Buttaro
Environmental Engineer

cc: City Hall, 93 Washington Street, Salem, MA 01970
Fire Headquarters, 48 Lafayette Street, Salem, MA 01970
Board of Health, 120 Washington Street, 4th Floor, Salem, MA 01970
Metropolitan Area Planning Council, 60 Temple Place, Boston, MA 02111
United States Environmental Protection Agency (USEPA) - New England Regional Office, 5 Post Office Square, Suite 100, Mail Code OEP05-2, Boston, Massachusetts 02109-3912, Attention: Manager – Air Permits Program
MassDEP/Boston (E-Copies): Yi Tian, Marc Wolman, Glenn Keith
MassDEP/NERO: Marc Altobelli (E-Copy & Hard Copy), Mary Persky (Hard Copy), Cosmo Buttaro