



Massachusetts Department of Environmental Protection

Supplemental Transmittal Form

(to accompany supplemental material or payment to previously submitted DEP permit applications)

1. Transmittal Number	Obtain from the upper right hand corner of the original application's Transmittal Form:
	X266786

2. Facility Information	(a) Facility Name:	(b) Facility Address:
	Weymouth Compressor Station	50 Bridge Street
	(c) Facility Town/City	(d) Telephone Number:
	Weymouth, MA 02191	713-627-5400

3. Permit Information	(a) Permit Name:	(b) Permit Code: (from original application)
	Non-Major CPA Fuel and Non-Major CPA Process	BWP AQ 02

4. Reason For Supplemental Submission	<input type="checkbox"/>	(a) Response to Request for Additional information	<input type="checkbox"/>	(b) Response to Statement of Deficiency
	<input type="checkbox"/>	(c) Supplemental Fee Payment	<input type="checkbox"/>	(d) Withdrawal of Application
	<input type="checkbox"/>		<input type="checkbox"/>	
	<input checked="" type="checkbox"/>	(e) Other (please specify below): Transient event emissions information		

5. Form Prepared by	(a) Name of individual or firm preparing this submission:	(b) Affiliation with application, i.e. applicant, consultant to applicant:
	Algonquin Gas Transmission, LLC	Applicant
	(c) Contact Name:	(d) Contact Telephone #:
	Kathryn A. Brown	207-274-2607

ALGONQUIN GAS TRANSMISSION, LLC
890 Winter Street
Suite 300
Waltham, MA 02451

617.254.4050 main



January 27, 2017

Mr. Thomas Cushing
Permit Section Chief
MassDEP Southeast Regional Office
20 Riverside Drive
Lakeville, MA 02347

*RE: Non-Major Comprehensive Plan Approval Permit Application
Transmittal No. X266786
Application No. SE-15-027
Algonquin Gas Transmission, LLC*
Addendum Submittal - Transient Event Emissions from Proposed Taurus 60 Turbine

Dear Mr. Cushing:

Per your telephone discussion with Mr. Ralph Child on January 17, 2017, Algonquin Gas Transmission, LLC (Algonquin) is providing this letter to the Massachusetts Department of Environmental Protection (MassDEP) in support of your technical review of the referenced application for the Weymouth Compressor Station. In particular, this memo provides an explanation of emissions during “transient events” that may occur during the operation of a Solar Taurus 60 turbine. Additionally, this memo proposes emission and operating limits related to transient events for inclusion in the Non-Major Comprehensive Plan Approval (NMCPA) for the proposed Atlantic Bridge Project at the Weymouth Compressor Station.

Description of Transient Events

The Solar Taurus 60 turbine proposed for the Weymouth Compressor Station will be equipped with Solar’s SoLoNO_x[™] combustor technology and will achieve nitrogen oxide (NO_x) emissions of 9 parts per million by volume, dry basis (ppmvd) at 15 percent (%) oxygen (O₂). Emissions from the turbine are guaranteed by Solar during steady state operation at 50 – 100% load for all ambient temperatures above 0 °F. There are times when the turbine could operate outside the conditions upon which Solar has based its SoLoNO_x[™] combustor emissions guarantee: during startup; during shutdown; during low ambient temperature operation (i.e., below 0 °F); and during transient events. Transient events are infrequent periods of short duration when the turbine is operating outside of steady state or at less than 50% load, excluding startup, shutdown, or low temperature events. Solar programs the turbine monitoring system to measure numerous operating parameters in order to verify the turbine is achieving the conditions upon which the emissions guarantee is established. If the turbine monitoring system detects that these conditions are not achieved, the mode of the SoLoNO_x[™] combustor will indicate “inactive”.

Estimate of Transient Event Emissions

Algonquin proposes to estimate transient event emissions using engineering judgment based on guidance from Solar.

It should be noted that while the SoLoNO_x[™] combustor technology may not be fully effective during transient events, it is assumed the oxidation catalyst is operational and controls CO (95%) and VOC (50%). This control is taken into account in Table 1 below.

Table 1. Proposed Transient Event Emission Limits

Pollutant	Proposed Emission Limit
NO _x	18.6 lb/hr
CO	80.4 lb/hr
VOC	10.2 lb/hr

It is important to note that the proposed emission limits are reported on a pound per hour (lb/hr) basis per the request of the MassDEP. However, actual conditions would likely not result in transient events occurring for more than a few minutes.

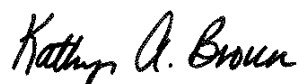
As previously discussed with the MassDEP, Algonquin has proposed the lb/hr emissions limits shown in Table 1 above for inclusion in the subject NMCPA for the Solar Taurus 60 turbine to be installed at the Weymouth Compressor Station for the Atlantic Bridge Project. Further, transient events will be limited to 125 hours per month as well as 125 hours per consecutive 12-month period. This limit does not include startup, shutdown, or low temperature events, which are permitted separately.

Update to NMCPA Application Materials

Based on the previous submittals for MassDEP for this permit application, no updates are required to the application forms with respect to this alternative operating scenario. Further, air dispersion modeling is typically not required for sources that are intermittent and operated only for short periods of time. The United States Environmental Protection Agency's required air dispersion models (AERSCREEN and AERMOD) are designed to represent impacts on a one hour average. Since the transient events generally occur for a matter of minutes, these regulatory air dispersion models do not accurately represent such sub-hourly events. Therefore, possible transient events have not been included in any of the modeling conducted for the Weymouth Compressor Station as part of the permit application submittal.

Should you have any further questions, please feel free to me at (207) 274-2607.

Sincerely,
SPECTRA ENERGY



Kathryn A. Brown
Consulting Scientist

Cc: Reagan Mayces, Spectra Energy
Barry Goodrich, Spectra Energy
Terry Doyle, Spectra Energy
David Cotter, Trinity Consultants
Ralph Child, Mintz, Levin, Cohn, Ferris, Glovsky and Popeo, P.C.