



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C. 20460

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OFFICE OF
AIR AND RADIATION

Mr. Robert D. Teetz
Alternate Authorized Account Representative
Environmental Engineering Department
175 East Old Country Road
Hicksville, NY 11801-4280

Re: Petition to Maintain Peaking Unit Status for Wading River Units UGT007,
UGT008, and UGT009

Dear Mr. Teetz:

The United States Environmental Protection Agency (EPA) has reviewed the April 19, 2002 petition of KeySpan Corporation (KeySpan) under §75.66(a) for Units UGT007, UGT008, and UGT009 at Keyspan's Wading River facility (Wading River), ORIS Code #007146. The petition requested that EPA allow KeySpan to maintain peaking status for three oil-fired simple cycle peaking combustion turbines that each exceeded the 10.0% three year average capacity factor specification required to qualify as a peaking unit. EPA's denies the petition for the reasons described below.

Background

KeySpan requested that EPA allow KeySpan to maintain the peaking unit status of the three 101.7 Mw oil-fired simple cycle combustion turbines at Wading River in Suffolk County, New York. These units have the option of reporting emissions either on an annual or an ozone season basis under §75.74(b) and have been reporting only for the ozone season.

Specific requirements for monitoring nitrogen oxides (NOx) mass emissions from peaking units are described in §75.71(d). Peaking units are given a choice of complying with the monitoring provisions for non-peaking units (§75.71(c)) or using the procedures in Appendix D and Appendix E of Part 75 to determine the NOx mass emissions for the units. Pursuant to §75.71(d)(2), if, after certification of an excepted monitoring system under Appendix E, the ozone season capacity factor of a unit reporting emissions on an ozone season basis exceeds 20.0 percent in any year or exceeds an average over three years of 10.0 percent, the owner or operator must meet the continuous emissions monitoring requirements of §75.71(c) by December 31 of the following year.

Capacity factors can be calculated on either electrical generation or on heat input. KeySpan submitted actual electrical generation data on an annual basis for each of the units, as well as a calculated value for the maximum annual capacity for each unit. The submission included data that were collected outside the ozone season and were not reported to EPA since these units only report for the ozone season. KeySpan stated that Units UGT007, UGT008, and UGT009 had actual average generation during 1999-2001 of 90,626 Mwhr, 96,593 Mwhr, and 89,459 Mwhr respectively. With a maximum annual capacity for each unit of 890,892 Mwhr, the corresponding three-year average annual capacity factors for the units were 10.17%, 10.84%, and 10.04% respectively.

However, based on only ozone season data, as required by §75.71(d)(2), the average ozone-season capacity factors for the units during 1999-2001 were 17.7%, 15.8%, and 13.5% respectively. Furthermore, the units' ozone-season capacity factors have generally been increasing each year, with only one unit's capacity factor for only one ozone season at or below 10%. Detailed results, based on the units' electronic data reports for the last three years, are shown in Table 1.

Table 1. Ozone Season Capacity Factors from Ozone Season Data in the Electronic Data Reports*

	Unit UGT007	Unit UGT008	Unit UGT009
1999 OS HI (mmBtu)	454,978.6	591,134.5	619,142.5
1999 OS Capacity Factor	10.6%	13.8%	14.5%
2000 OS HI (mmBtu)	736,009	649,560.7	393,032.4
2000 OS Capacity Factor	17.2%	15.4%	9.2%
2001 OS HI (mmBtu)	1,076,601	774,974.6	722,392.8
2001 OS Capacity Factor	25.2%	18.1%	16.9%
Average OS HI (mmBtu)	755,862.9	675,223.3	578,189.2
Average OS Capacity Factor	17.7%	15.8%	13.5%

* Note: maximum design capacity for the ozone season (4,274,208 mmBtu) was determined by multiplying 3,672 hours per ozone season and the maximum design heat input of 1,164 mmBtu/hr.

In support of its petition, KeySpan stated that:

- Electrical generation shortages on Long Island during the 1999-2001 period, coupled with the region's increasing energy demand, have forced the use of these units. Also, losses of other major electric generating units contributed to the need

for these units to operate during that period.

- KeySpan projected that 408 Mw of additional electric generation, comprised of 11 peaking units, will be installed on Long Island in 2002. Forty percent of this additional generation is being constructed by KeySpan, and the remainder is planned construction for other electricity generating companies. According to KeySpan, this increase in generation should significantly reduce reliance on the Wading River units. While there is uncertainty about the availability of the additional capacity in 2002, KeySpan projected that by 2003 the capacity factors for the Wading River units will drop to 4% or less.
- The Wading River units are the cleanest, simple cycle combustion turbines currently operated by KeySpan. The stack tests show that the NO_x emission rates from these units vary only a few percent from test to test. KeySpan has preferentially operated these units, in lieu of other older combustion turbines, to minimize KeySpan's system-wide NO_x emissions.

EPA's Determination

EPA denies KeySpan's petition requesting that EPA allow KeySpan to maintain peaking status of Wading River Units UGT007, UGT008, and UGT009. The Appendix E excepted monitoring methodology estimates emissions based on unit load, rather than measuring emissions through the use of continuous emission monitoring systems (CEMS). When EPA adopted the Appendix E methodology, the Agency stated that the methodology does not meet the criteria for an alternative monitoring system, which under section 412(a) must be shown to provide "information with the same precision, reliability, accessibility, and timeliness as that provided by CEMS (42 U.S.C. 7651k(a))." 58 Fed. Reg. 3500, 3644 (Jan. 11, 1993). In fact, as EPA noted, "no continuous alternative NO_x monitoring system has been field tested alongside a certified NO_x CEMS and shown to meet the equivalency criteria." *Id.* However, EPA found that the NO_x emissions from oil-fired and gas-fired peaking units were de minimis, i.e., "extremely low...both collectively and individually," and therefore use of the excepted Appendix E methodology was limited to those units. *Id.* EPA expressly rejected allowing the use of Appendix E by units with capacity factors above the 10%-three-year-average cutoff since the Agency did not consider NO_x emissions by such units to be de minimis. *Id.* at 3645.

Recently, EPA considered emission data for units that had switched from the use of the Appendix E methodology to CEMS over the past several years. 67 Fed. Reg. 40394, 40402 (June 12, 2002). While the Agency lacked data under Appendix E and from CEMS for simultaneous time periods, the analysis showed that quarterly emission rates were, on average, slightly higher when units used Appendix E rather than CEMS. However, because the analysis also showed there were situations where Appendix E values could be below CEMS values, EPA found that Appendix E monitoring "will not always produce conservative values" and so should remain constrained in its use. 67 Fed. Reg. 40403.

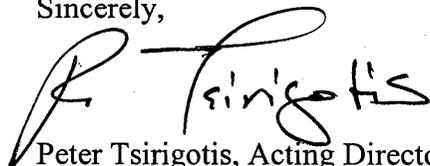
In this case, Units UGT007, UGT008, and UGT009 have been using Appendix E for

reporting emissions on an ozone season basis, not on an annual basis. EPA finds that these units have operated significantly above the ozone season capacity levels allowed for peaking units under §75.71(d)(2) during the past three years.¹ Moreover, as discussed above, the units' ozone season utilization has been generally increasing from year-to-year during this period. Section 75.71(d)(2) already provides some flexibility by limiting utilization based on a three-year average and setting a higher limit for any single year. Even so, the units did not meet the capacity factor requirements. Unit UGT007 exceeded the allowed three-year average by almost 80 percent, Units UGT008 exceeded the allowed level by almost 60 percent, and Unit UGT009 exceeded the allowed level by almost 40 percent. Finally, KeySpan's projections that new units may be installed and that utilization of Units UGT007, UGT008, and UGT009 may therefore decline in 2002 or later years are speculative and unsupported. For example, the fact that construction of new units is planned does not mean they will actually be completed and operated.

EPA concludes that the petition should be denied and that KeySpan must meet the monitoring requirements of §75.71(c) by December 31, 2002. If the required CEMS are not installed and certified by this date, KeySpan must report hourly NO_x mass emissions as the product of the maximum potential NO_x emission rate (MER) and the maximum hourly heat input of the unit (as defined in §72.2), starting with the first unit operating hour after the deadline and continuing until the CEMS are provisionally certified.

EPA's determination in this letter relies on the accuracy and completeness of KeySpan's April 19, 2002 submission and its 1999, 2000, and 2001 electronic data reports and is appealable under Part 78. If you have any questions regarding this correspondence, please contact Matthew Boze at (202) 564-1975.

Sincerely,



Peter Tsirigotis, Acting Director
Clean Air Markets Division

cc: Ann Zownir, USEPA Region 2
Dennis Sullivan, NYDEC
Ajay Shah - NYDEC Region 1, RAPCE
George Martin, KeySpan

¹ EPA also notes that even on an annual basis, the units have exceeded the allowed capacity levels.