



U.S. Environmental Protection Agency Applicability Determination Index

Control Number: 0300006

Category: NSPS
EPA Office: Region 10
Date: 08/01/2002
Title: Turbine Relocations and Impacts on NSPS Applicability
Recipient: Jordan Jacobson
Author: Jeff KenKnight

Subparts: Part 60, A, General Provisions
Part 60, GG, Stationary Gas Turbines

References: 60.14(e)(6)
60.2
60.330

Abstract:

Q1: Are turbines that were manufactured before October 3, 1977, but that did not begin operation on the TAPS pump stations until after October 3, 1977, subject to NSPS Subpart GG, no matter when they were purchased by Alyeska from the manufacturer or other owner?

A1: No. These stationary gas turbines, that are purchased in completed form, are not subject to NSPS GG provided they were not "modified" or "reconstructed" as defined in NSPS Subpart A, on or after October 3, 1977.

Q2: Do the requirements of subparts A and GG follow a new turbine wherever it is operated on the TAPS?

A2: Yes. The requirements of subparts A and GG follow a turbine constructed, modified or reconstructed after October 3, 1977, regardless of where the turbine is relocated to, but do not apply to the equipment that is powered by the turbine (such as a generator or a pump).

Q3: Do the Alyeska turbines that were manufactured before October 3, 1977 become subject to NSPS GG if they are relocated between TAPS pump stations as a pool of identical turbines to allow for maintenance of turbines?

A3: No. The relocation of a turbine as part of a pool of identical turbines would not make the turbine subject to NSPS subpart GG if the turbine is not "modified" or "reconstructed," as those terms are defined in 40 CFR subpart A, as a result of the relocation. Certain requirements are required in the Title V permit.

Q4: Does a turbine that is not subject to NSPS subpart GG become subject to NSPS subpart GG if it is rotated into a location to replace a turbine that is subject to NSPS subpart GG?

A4: No. As discussed above, a relocation of an affected facility is not, by itself, a modification.

Letter:

August 1, 2002

Reply To
Attn Of: OAQ-107

Jordan E. Jacobson
Counsel
Alyeska Pipeline Service Company
1835 South Bragaw Street
Anchorage, Alaska 99512

Re: 40 CFR part 60, Subpart GG, Applicability Determination

Dear Mr. Jacobson:

The purpose of this letter is to respond to your letter of December 18, 2001, asking several questions relating to the applicability of New Source Performance Standard (NSPS) subparts A and GG (Standards of Performance for Stationary Gas Turbines) to turbines used in the operation of the Trans-Alaska Pipeline System (TAPS) pump stations. NSPS subpart GG applies to all stationary gas turbines with a heat input at peak load equal to or greater than 10.7 gigajoules (10 mil. Btu) per hour, based on the lower heating value of the fuel fired, that commenced construction, modification or reconstruction after October 3, 1977. See 40 CFR 60.330.

Your letter correctly states that the State of Alaska does not have federal delegation of NSPS subpart GG, and you therefore appropriately directed your applicability determination to EPA. Authority to issue determinations pertaining to applicability of a source to 40 CFR part 60 has been delegated to the Unit Managers in EPA Region 10's Office of Air Quality.

Background

Alyeska is the operator of TAPS on behalf of the pipeline owner companies, crude oil pipeline common carriers. The TAPS pipeline transports crude oil through the pipeline by pumps that are associated with pump stations. According to Alyeska, the pump stations at issue, including the major equipment and emission sources "commenced construction," as defined in NSPS subpart A, prior to October 3, 1977. The pump stations employ turbines that provide mechanical power for a number of tasks, such as powering pumps and electric generators. The turbines are removed from their operating locations periodically for maintenance and a turbine from the TAPS inventory of the same turbine family is substituted as a replacement. The equipment powered by the turbine (such as the pump or the electric generator) remains in place. In other words, there are a number of turbines, both in use and in inventory, that are moved around the TAPS from location to location.

Most of the turbines were manufactured and began operation on the TAPS prior to October 3, 1977, the applicability date for NSPS subpart GG. Alyeska does also have some turbines manufactured after October 3, 1977. According to your letter, Alyeska has at all times treated these turbines manufactured after October 3, 1977, as subject to NSPS subparts A and GG regardless of where they are operated on the TAPS.

The turbines at issue in Alyeska's applicability determination request are those that were manufactured before October 3, 1977, but did not begin operating on the TAPS until after October 3, 1977, for one of several reasons:

-the turbines were purchased and maintained by Alyeska before October 3, 1977, but did not begin operation on the TAPS until after October 3, 1977. These turbines were held as spares and later rotated into service to replace operating turbines removed for maintenance;

- the turbines were not purchased by Alyeska until after October 3, 1977 and therefore did not begin operation on the TAPS until after October 3, 1977; or

-the turbines were purchased used by Alyeska after October 3, 1977 from another owner who bought them before October 3, 1977. Alyeska does not know whether they were placed into operation by the previous owner before October 3, 1977.

Question 1: Are the turbines that were manufactured before October 3, 1977 and purchased and maintained by Alyeska before October 3, 1977, but that did not begin initial operation on the TAPS until after October 3, 1977 because they were held as spares and later rotated into service, subject to NSPS subpart GG?

Question 2: Are the turbines that were manufactured before October 3, 1977, but were not purchased by Alyeska from the manufacturers until after October 3, 1977 (and therefore did not begin operation on the TAPS until after October 3, 1977), subject to NSPS subpart GG?

Question 3: Are the turbines that were manufactured before October 3, 1977, and purchased as used by Alyeska after October 3, 1977 from another owner who bought them before October 3, 1977, subject to NSPS subpart GG, even if they may not have been placed into operation by the previous owner before October 3, 1977?

Response 1, 2 and 3: In the case of stationary gas turbines that are mass-produced and purchased in completed form, EPA considers the manufacturer as the original owner or operator. Based on the information provided in your letter, the turbines you describe appear to fit this description. Therefore, these turbines are not subject to NSPS GG provided they were not "modified" or "reconstructed", as defined in NSPS subpart A, on or after October 3, 1977. See Letter from Edward E. Reich, EPA, to David, L. Mulliken, dated December 29, 1980 (Control Number GG06) (for purposes of subpart GG, EPA considers the manufacturer as the original owner or operator and hence subject to the standard; once the manufacturer has sold a turbine, it is no longer considered the owner or operator of that turbine).

Question 4: Do the requirements of NSPS subparts A and GG apply only to the turbine, as the "affected facility," so that a turbine that is subject to NSPS subparts A and GG is operated as a GG turbine no matter where it is operated on the TAPS? In other words, do the requirements of subparts A and GG follow the new turbine wherever it is operated on the TAPS?

Response 4: Under NSPS subparts A and GG, the turbine is the "affected facility," as defined in 40 CFR 60.2 and the requirements of subparts A and GG follow a turbine constructed, modified or reconstructed after October 3, 1977, regardless of where the turbine is relocated to. See 40 CFR 60.2 (definition of affected facility); 40 CFR 60.330 (applicability and designation of affected facility under subpart GG). The "affected facility" subject to NSPS subpart GG is the stationary gas turbine and does not include the equipment that is powered by the turbine (such as a generator or a pump).

Question 5: Do the Alyeska turbines that were manufactured before October 3, 1977 become subject to NSPS GG if they are treated as a pool of identical turbines and moved from location to location between TAPS pump stations to allow for maintenance of turbines?

Response 5: Assuming the maintenance does not result in a "modification" or "reconstruction," as those terms are defined in 40 CFR subpart A, and, assuming that the turbines are not otherwise "modified" or "reconstructed," as those terms are defined in 40 CFR subpart A, as a result of the relocation of the turbines, relocation of a turbine as part of pool of identical turbines would not make the turbine subject to NSPS subpart GG. See 40 CFR 60.14(e)(6)(the relocation or change in ownership of an affected facility is not, by itself, a modification); see also Letter from Steven C. Riva, Chief, Permitting Section, Air Programs Branch, EPA Region 2, to Thomas Micali, Chief, Bureau of Operating Permits, Air Quality Permitting Program, New Jersey Department of Environmental Protection, dated April 1, 1999 (switching a pool of identical turbines among different generating stations to allow for the routine repair of malfunctioning units does not constitute a "modification" for purposes of NSPS provided the turbines are not otherwise modified or reconstructed); letter from R. Douglas Neeley, Chief, Air and Radiation Technology Branch, Air, Pesticides and Toxics Management Division, EPA Region 4, to Ronald W. Gore, Chief, Air Division, Alabama Department of Environmental Management, dated March 1, 1999 (Control Number 0000110) (subpart GG does not apply to turbines retrofitted with pollution control equipment or relocated to another facility if the cost for any repairs or maintenance undertaken as a result of relocation is less than 50% of the cost for comparable new turbines; assumes the retrofitting with pollution control equipment will not increase emissions).

The Title V permit can be written to reflect Alyeska's practice of maintaining a pool of turbines and moving turbines from location to location between TAPS pump stations to allow for maintenance of turbines by using the authority provided for reasonably anticipated operating scenarios in 40 CFR 70.6(a)(9). To do this, it is essential that the Title V permit require monitoring, recordkeeping, and reporting requirements to document that the turbines not subject to NSPS subpart GG can be clearly identified and that the relocation and replacement of such turbines from the pool does not constitute a "modification" or "reconstruction," as those terms are defined in NSPS subpart A. EPA therefore expects that the Title V permit issued for the TAPS will contain monitoring, recordkeeping, and reporting requirements along the lines of the following:

1. Inclusion in the permit of a complete list of all turbines maintained as part of the pool, with detailed information on the make, model, date of manufacture, serial number, maximum heat input, and location for each turbine. This must be made part of the Title V permit and updated with regard to the location of each turbine as its is moved along the TAPS.

2. A requirement to maintain, for each turbine, records of the maintenance/repairs/parts replacement, including the date and time of each servicing, the service performed, and the costs of the service.

3. A requirement to notify the permitting authority in writing no later than 7 days after any turbine from the pool is switched with another turbine from the pool.

4. A requirement to record in a log the following information each time a turbine is switched:

a. the date the switch occurred;

b. identification of the malfunctioning turbine and the substitute turbine by make, model, date of manufacture, serial number, maximum heat input, and location; and

c. a demonstration (such as mass balance) showing that the switch did not result in an increase of any pollutant or the emission of a new pollutant not previously emitted.

Question 6: Does a turbine that is not subject to NSPS subpart GG (because it was not constructed, modified or reconstructed after October 3, 1977) become subject to NSPS subpart GG if it rotated into a location to replace a turbine that is subject to NSPS subpart GG?

Response 6: A turbine that was not constructed, modified or reconstructed after October 3, 1977, as those terms are defined in 40 CFR subpart A, does not become subject to NSPS subpart GG simply because it is rotated into a location to replace a turbine that is subject to NSPS subpart GG. As discussed above, under NSPS subparts A and GG, the turbine is the "affected facility," as defined in 40 CFR 60.2, and a relocation of an affected facility is not, by itself, a modification.

Please note that the responses in this letter are limited to questions presented under NSPS subparts A and GG. Other CAA requirements may apply to these kinds of changes, such as major New Source Review or Prevention of Significant Deterioration. If you have any questions regarding the above, please feel free to contact me at (206) 553-6641 or contact Kai-Hon Shum at (206) 553-2117 for technical matters or Julie Vergeront at (206) 553-1497 for legal matters.

Sincerely,

/Signed/

Jeff KenKnight, Manager
Federal And Delegated Air Programs Unit Office of Air Quality

cc: John Kuterbach (ADEC)