

ISSUE PAPER

Department of Environmental Conservation
Division of Air Quality, Air Permits Program
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Off Permit Change Notice

Issue: Does an owner or operator (client) need to provide contemporaneous notice to replace an existing emissions unit or major component under their air quality control operating permit? Does replacement affect federal standard applicability?

Short Answer: If the replacement unit is a significant emissions unit, then the client is required to submit an off permit change notice.

Existing federal guidance does not provide an explicit explanation whether unit replacement or major component replacement triggers rule applicability. The federal regulations discuss new source applicability through modification or reconstruction under New Source Performance Standards 40 CFR 60 Subpart A, 60.14 and 60.15 respectively; and through reconstruction under National Emission Standards for Hazardous Air Pollutants 40 CFR 63 Subpart A, 63.2 (definitions—“construction” and “reconstruction”) and 63.9 Notifications. 40 CFR 63.2 indicates that relocation of a source constitutes reconstruction if it also meets the tests under the “reconstruction” definition.

Background: For many reasons including ease of maintenance or repairs, the client elects to remove an existing unit, either damaged or due for overhaul, and replace it directly with another unit from a vendor or an equipment “pool”. This saves the client the down-time necessary to repair or maintain the replaced equipment on-site, which can be done in most instances more efficiently off-site at the vendors repair facility.

Permit staff and compliance inspectors need to know during off permit change review whether a replacement unit (e.g. engine, turbine, or boiler) swap-out triggers a different federal emission standard, a Title I permit, or an operating permit revision. Each operating permit issued after October 1, 2004 contains a standardized condition requiring notification unless the unit is an insignificant emissions unit.

The regulatory basis for this obligation is set out in 40 CFR 71.6(a)(12)(ii) incorporated by reference under 18 AAC 50.040(j), except that the list of insignificant changes requiring no notice are listed in 18 AAC 50.326(d) – (i), not the CFR chapter. Staff reviewed the preamble to the 1992 federal rulemaking for 40 CFR 71.6 and 40 CFR 70.6 for the regulatory basis for this obligation. It is best stated on page 32269 of FR Volume 57, No. 140.

...EPA believes that it is critical that the permitting authority and EPA should receive contemporaneous written notification for these types of changes. This notice will provide a record of activity at the facility without inhibiting the source's ability to make the changes. If notification were not required, sources could make substantial changes without notifying the permitting authority or EPA of changes that might implicate Federal requirements.

Action: We expect contemporaneous notice of significant emission unit replacement as required under the standardized notification condition.

Additional Discussion: In the past, clients assumed that replacement of significant emitting units with like-kind units (same configuration and same application) required no concurrent notification because the past actual and projected actual emissions are less than the emissions based IEU thresholds in 18 AAC 50.326(e), such as 2 tons of NO_x, and 5 tons of SO₂ and CO. This interpretation is inconsistent with the plain language of the operating permit and 18 AAC 50.326(e). The regulatory classification applies to an emission unit, not to the emission changes between the replaced and replacement units.

Regarding changes in applicable federal requirements, clients also focus solely on an emission rate increase (modification) or projects that exceed fifty percent of the cost of a new affected facility (reconstruction) as triggers for off-permit notices. However, the replacement unit's pedigree impacts that unit's applicability under one or more federal standard. For example, the most recent of the unit's construction, modification or reconstruction dates may implicate a different new source performance standard than the replaced unit.

Regarding changes and Title I applicability, clients may also consider this routine maintenance, repair, and replacement (MRRR) rather than a physical change or a change in the method of operations. Court decisions have vacated EPA's October 23, 2003 equipment replacement provision (ERP) rule of NSR reform. This ERP attempted to clarify these activities. Presently local and State agencies may use the WEPCO "multi-factor test to determine whether the change is MRRR: A) Nature and extent; B) Frequency; C) Purpose; and D) Cost.

Permit Precedents

Based on review of precedents, we located one operating permit that specifically handles emission unit replacement as an off-permit change requiring a notice. U.S. EPA has issued a tribal lands Title V permit to ConocoPhillips Company Argenta Compressor Station. In the off-permit notice change, EPA has expanded the notification of a replacement engine to also require:

- (i) Make, model number, serial number, horsepower rating and configuration of the existing engine and the replacement engine;
- (ii) Manufacture date, commence construction date (per the definitions in 40 CFR 60.4230(a) and 63.2), and installation date of the replacement engine at the facility;
- (iii) If applicable, documentation of the cost to rebuild a replacement engine versus the cost to purchase a new engine in order to support claims that an engine is not "reconstructed", as defined in 40 CFR 60.15 and 40 CFR 63.2.
- (iv) 40 CFR part 60, subpart IIII (CI Engine NSPS) non-applicability documentation as appropriate;
- (v) 40 CFR part 60, subpart JJJJ (SI Engine NSPS) non-applicability documentation as

appropriate;

(vi) 40 CFR part 63, subpart ZZZZ (RICE MACT) non-applicability documentation for major sources, as appropriate;

(vii) PSD applicability/non-applicability documentation, as follows:

(A) If the existing source is a “major stationary source,” as defined in 40 CFR 52.21(b)(1):

(1) For each pollutant regulated under the Act (except pollutants regulated under section 112(b) of the Act), for which the PTE of the replacement engine is “significant” as defined in 40 CFR 52.21(b)(23), a demonstration, including all calculations, that a significant net emissions increase has not occurred, when all source wide contemporaneous and creditable emission increases and decreases, as defined in 40 CFR 52.21, are summed with the PTE of the replacement engine.

(2) For each pollutant regulated under the Act (except pollutants regulated under section 112(b) of the Act), for which the PTE of the replacement engine is not “significant,” documentation of the calculations and methods that were used to reach that conclusion.

(B) If the existing source is not a “major stationary source,” as defined in 40 CFR 52.21(b)(1), documentation with calculations to show that the PTE of the replacement engine, for each pollutant regulated under the Act (except pollutants listed in section 112(b) of the Act) is below the level defined as a major stationary source in 40 CFR 52.21(b)(1).

(iv) PTE of the replacement engine shall be determined based on the definition of PTE in 40 CFR 52.21(b)(4). If multiple engines are being replaced, then the PTE used above shall be the aggregated PTE of all replacement engines.

Using this precedent example, it is clear that EPA requires contemporaneous notice for unit replacement irrespective of the claim that the replacement is “like-in-kind.”

Affected Facilities and Relocation

U.S EPA has a long-standing guidance precedent by which a client may relocate an affected facility from one site to another without changing its affected facility applicability date—relocation of an affected facility is neither a modification nor reconstruction. Therefore, the NSPS pedigree follows the device. Although U.S. EPA has not yet established guidance for relocated MACT package boilers, turbines, or RICE engines, for those MACT standards based on construction, modification or reconstruction, we may infer an analogous interpretation as established for NSPS.

Further complicating turbine replacement and federal applicability is that EPA defines the affected facility different for Subpart GG and Subpart KKKK. Subpart KKKK also includes the support systems and ancillary components.

For GG:

Stationary gas turbine means any simple cycle gas turbine, regenerative cycle gas turbine or any gas turbine portion of a combined cycle steam/electric generating system that is not self-propelled. It may, however, be mounted on a vehicle for portability.

For KKKK:

Stationary combustion turbine means all equipment, including but not limited to the turbine, the fuel, air, lubrication and exhaust gas systems, control systems (except emissions control equipment), heat recovery system, and any ancillary components and subcomponents comprising any simple cycle stationary combustion turbine, any regenerative/recuperative cycle stationary combustion turbine, any combined cycle combustion turbine, and any combined heat and power combustion turbine based system. Stationary means that the combustion turbine is not self-propelled or intended to be propelled while performing its function. It may, however, be mounted on a vehicle for portability.

For internal combustion engines, 40 CFR 60 Subpart IIII, 60.4219 and Subpart JJJJ 60.4248 (definitions) clarifies the manufacture date for affected facilities as:

Date of manufacture means one of the following things:

- (1) For freshly manufactured engines and modified engines, date of manufacture means the date the engine is originally produced.
- (2) For reconstructed engines, date of manufacture means the date the engine was originally produced, except as specified in paragraph (3) of this definition.
- (3) Reconstructed engines are assigned a new date of manufacture if the fixed capital cost of the new and refurbished components exceeds 75 percent of the fixed capital cost of a comparable entirely new facility. An engine that is produced from a previously used engine block does not retain the date of manufacture of the engine in which the engine block was previously used if the engine is produced using all new components except for the engine block. In these cases, the date of manufacture is the date of reconstruction or the date the new engine is produced.

For an engine that is converted to a stationary engine after being placed into service as a non-road or other non-stationary engine, model year means the calendar year or new model production period in which the engine was manufactured (see “date of manufacture”).

Emission standards set out in Table 1 through 4 of Subpart IIII are based on model year.
Emission standards set out in Table 1 of Subpart JJJJ are based upon the manufacture date.

NESHAPS Subpart ZZZZ RICE emission standards for area and major sources do not have analogous definitions.