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**RESPONSES TO FREQUENTLY ASKED QUESTIONS**

**Final Rulemaking**

**Additional RACT Requirements for Major Sources of NOx and VOCs**

***25 Pa. Code* Chapters 121 and 129  
46 Pa. B. 2036 (April 23, 2016)**

**The final-form regulation amends 25 Pa. Code Chapter 129 to adopt presumptive reasonably available control technology (RACT) requirements and RACT emission limitations for certain major stationary sources of oxides of nitrogen (NOx) and volatile organic compound (VOC) emissions (hereinafter RACT II). The final-form rulemaking also provides for a petition process for an alternative compliance schedule, a facility-wide or system-wide NOx emissions averaging plan, an alternative RACT proposal petition process, and compliance demonstration and recordkeeping requirements. The final-form rulemaking also amends § 121.1 to revise or add terms to support interpretation of the RACT final-form regulation. In May 2016, the regulation was submitted to the U.S. Environmental Protection Agency for approval as a revision to the State Implementation Plan.**

**General:**

1. **Question:** *Do the Ozone Transport Region (OTR) states have similar RACT II regulations and did the Department collaborate with the other OTR states for Reasonably Available Control Technology (RACT) regulation consistency?*

**DEP Response:** The Pennsylvania Department of Environmental Protection (PADEP or Department) reviewed and considered RACT regulations from various states when evaluating what constitutes reasonably available control technology for the types of sources affected by the final rulemaking. Source categories in Pennsylvania are diverse with numerous individual sources having varying characteristics. The Department evaluated these source categories and determined that the presumptive RACT requirements and emission limitations included in the final-form regulation are appropriate.

1. **Question:** *What is the implication of changing the VOC definition in the revised rule?*

**DEP Response:** The definition of volatile organic compound (VOC) contained in 25 Pa. Code §121.1 was not revised. Since the Department’s VOC definition incorporates the U.S. Environmental Protection Agency’s (EPA) VOC definition in 40 CFR §51.100, any amendment of the EPA definition of VOC is automatically incorporated in the *Pennsylvania Code* and effective on the same effective date as the Part 51 amendment.

1. **Question:** *Will the Department publish a technical guidance document that includes the Department’s interpretations of certain rule provisions?*

**DEP Response:**  This FAQ document should address all implementation issues, including interpretation of the RACT II rule provisions. This document will be updated periodically to address additional implementation issues.

1. **Question:** *Can you buy or sell excess NOx or VOC emissions reduction credits (ERCs) to comply with RACT?*

**DEP Response:**  Emission reduction credit (ERC) is defined as, “A permanent, enforceable, quantifiable and **surplus** [emphasis added] emissions reduction which can be considered as a reduction for the purpose of offsetting emissions increases.” An owner or operator cannot buy NOx ERCs to comply with RACT and cannot generate NOx ERCs by complying with RACT unless the reductions are generated from the over-control of NOx or VOC emissions.

In accordance with 25 Pa. Code §127.206(c), ERCs shall be proportionally reduced prior to use in a plan approval in an amount equal to the reductions that the generating facility is or would have been required to make in order to comply with new RACT requirements which apply to the generating facility after the ERCs were created. ERCs that have been used in a plan approval or will be used in a plan approval by no later than January 1, 2017, for a new source or modification of an existing source will not be affected by the new RACT requirements.

1. **Question:** *Is the DEP regional office responsible to send other states’ notices or is the applicant?*

**DEP Response:** As required under 25 Pa. Code § 127.522 (Operating permit application review by the EPA and affected states), the Department provides notice of each proposed permit to a State within 50 miles of the Title V facility and any contiguous state whose air quality may be affected on or before the time that the Department provides this notice to the public. The notices are provided by DEP’s Regional Air Program Managers.

**Applicability:**

1. **Question:** *If multiple processes/equipment which have separate stacks are under one Source ID in a facility’s operating permit, can they be evaluated individually for exemption/applicability under RACT II?  A common example of this is a group of space heaters under one Source ID which collectively could not be exempted or limited to a default of good operating practices.*

**DEP Response:** Such an evaluation will be made on a case-by-case basis. These sources will generally be evaluated individually to determine their potential-to-emit with regard to applicability and eligibility for presumptive requirements, unless the exhaust from multiple units is diverted to a single stack.

1. **Question:** *What is the department’s stance on presumptive RACT for process heaters between 20 and 50 MMBtu/hr and for furnaces greater than 50 MMBtu/hr? Specifically, since neither of the categories have a presumptive standard, will the Department consider allowing facilities to demonstrate RACT using presumptive limits for combustion sources of the same size categories described above?*

**DEP Response:** No presumptive RACT requirements are included for process heaters with a rated heat input equal to or greater than 20 million Btu/hour and less than 50 million Btu/hour and furnaces with a rated heat input equal to or greater than 20 million Btu/hour. Therefore, these units will require a case-by-case RACT evaluation.

1. **Question:** *Does a flare (not exemptible), which is both a control device for VOC and an air emission unit (source) for NOx, require a RACT evaluation?*

**DEP Response:** Yes, the flare is a source of NOx emissions and therefore is subject to RACT requirements. However, the presumptive RACT requirements included in 25 Pa. Code §129.97(c) are applicable to flares that control VOC emissions.

1. **Question:** *There is no definition of a combined heat and power combustion turbine in the RACT II regulation.  A client has a natural gas fired combustion turbine (greater than 1,000 hp and less than 180 MW) that was designed and installed over 20 years ago, but for which they use the hot exhaust to aid in drying their product.  As a simple cycle combustion turbine, they are allowed under RACT 150 ppmvd NOx and 9 ppmvd VOC.  As a combined heat and power combustion turbine under RACT they are allowed 42 ppmvd NOx and 5 ppmvd VOC.  They are not a modern combined heat and power turbine, but seem to meet a general definition of combined heat and power.  Since this is actually a simple cycle turbine for which the hot exhaust is utilized, this older combustion turbine does not appear to be the same type of heat and power combustion turbine for which PADEP intended their presumptive limit under the RACT II regulations.  Please confirm whether this source can be submitted as a simple cycle turbine.*

**DEP Response:** Such an evaluation will be made on a case-by-case basis. It is possible that the source described above could be considered as a simple cycle turbine.

1. **Question:** *For a turbine located at a major source of NOx and minor source of VOC, please confirm that the turbine would not be subject to the turbine VOC presumptive RACT limits in 25 Pa. Code §129.97.*

**DEP Response:**  The turbine would only be subject to the presumptive NOx RACT limit. The turbine would not be subject to the VOC presumptive RACT limits in 25 Pa. Code §129.97 for turbines because it is not a major VOC-emitting source.

1. **Question:** *If a major NOx-emitting facility has a NOx PAL, is it subject to the RACT II requirements, presumptive limits, etc.?*

**DEP Response:** Yes, a plant-wide applicability limit (PAL) provides relief only for nonattainment new source review (NNSR) purposes.

**Source Rating:**

1. **Question:** *Can an owner or operator take a heat input or power output permit restriction on a source in order to avoid tighter presumptive emission limitations? Is a heater limited by permit to be under 50 MMBtu/hr (but capable of burning more) subject to presumptive RACT for sources over 50 MMBtu/hr?*

**DEP Response:** A permit restriction on heat input or power output is not sufficient. Any de-rating of a source must be physical and permanent for the purposes of presumptive RACT emission limitations. The de-rating of the source must be included in a DEP-issued operating permit before January 1, 2017. Any physical change would trigger NSR applicability analysis.

1. **Question:** *At what conditions is the power output of a turbine determined?*

**DEP Response:** Power output, for RACT applicability purposes, is determined at International Organization for Standardization (ISO) conditions.

1. **Question:** *Does the rating for combined cycle combustion turbines cover the entire unit, including the duct burners?*

**DEP Response:** Yes, the entire unit must be considered to determine source rating.

**Enforceable Restrictions:**

1. **Question:** *Is the major source potential-to-emit based on the facility as a whole or each emission unit?*

**DEP Response:** The potential-to-emit (PTE) thresholds described in the definitions of

*Major NOx-emitting facility* and *Major VOC-emitting facility* contained in 25 Pa. Code §121.1 apply to a facility as a whole.

1. **Question:** *If a facility wants to take a permit limit below the RACT NOx and/or VOC applicability threshold, will the limit need to be federally enforceable by Jan.1, 2017? What happens if an amended operating permit incorporating a limit is not issued final by January 1, 2017?*

**DEP Response:** In accordance with 25 Pa. Code §129.96(d), an owner or operator of a facility seeking to become a minor facility for NOx and/or VOC to avoid RACT II requirements must have practically enforceable emission limitations in a DEP-issued plan approval or operating permit before January 1, 2017. After this date, the owner or operator of a major NOx and/or VOC facility is required to be in compliance with the RACT regulation.

1. **Question:** *If the owner/operator of an affected source elects to comply with a presumptive RACT requirement of 5 tpy of NOx PTE, must the federally enforceable 5 tpy limit be incorporated in a permit by Jan. 2017?*

**DEP Response:** If a source has a NOx PTE of greater than 5 tons per year (TPY), then the owner or operator must have a federally enforceable 5 TPY limit by January 1, 2017, in order to fall into that presumptive NOx RACT requirement category.  However, if the source has a natural or uncontrolled PTE of 5 TPY or less, then a specific NOx emission limitation is not required.  In this case, the owner or operator would need to keep records to show the PTE calculation for the source and be made available to the Department upon request.

1. **Question:** *If the owner or operator of a major facility wants to be a minor facility by reducing emissions from one or more sources and bring down facility TPY emissions below major source thresholds, how would the new limits (or limitations) be established in revised Operating Permits, by minor modification administrative amendment, or significant modification?*

**DEP Response:** PTE restrictions may be incorporated into the permit through the minor modification or significant modification permitting procedures, as appropriate. The administrative amendment process cannot be used to incorporate these restrictions.  Additionally, if a plan approval is to be issued for other reasons, the PTE restrictions will be incorporated into the plan approval.

1. **Question:** *Does an owner or operator of units which operate as backup units under the 5% annual capacity factor limit in 25 Pa. Code* §*129.97(c) need to have that limitation established as an enforceable permit limit prior to the January 2017 compliance date of the rule?*

**DEP Response:** The owner or operator of backup units opting to operate under the 5% annual capacity factor to meet the presumptive RACT requirements prescribed in §129.97(c) is not required to include the 5% annual capacity factor limit as an enforceable permit in the operating permit prior to the compliance date of the rule, which is January 1, 2017. However, if such a unit is found to be operating in excess of the 5% annual capacity factor after the compliance date of January 1, 2017, the unit will not be in compliance with the RACT final-form regulation.

**Emission Limits:**

1. **Question:** *The presumptive limits for reciprocating engines is in the form of VOC minus formaldehyde, while the limits for turbines are listed as VOC (as propane).  Are both limits excluding formaldehyde, or does the turbine limit include formaldehyde?*

**DEP Response:** The presumptive VOC limits for combustion turbines do include formaldehyde.

**Multiple Fuels:**

1. **Question:** *Fuels representing < 1% of a unit’s annual fuel consumptions on a heat-input basis are excluded from the requirement to determine the weighted average fuel limit.  In the example of a boiler that is a Gas 1 unit under the Boiler MACT but is permitted to fire oil during natural gas curtailment, when would the requirement to calculate the weighted average multiple fuel limit (average of fuel oil and natural gas presumptive limits) be triggered?*

**DEP Response:** The compliance date for the RACT II rule is January 1, 2017.

1. **Question:** *In such cases, should the owners and operator of facilities be tracking oil usage on a 12-month rolling basis and start using a multiple fuel limit if the 12-month average fuel oil consumption becomes > 1%?*

**DEP Response:** Yes, oil usage should be tracked on a 12-month rolling basis. The multiple fuel limit will apply if the 12-month average fuel oil consumption becomes > 1%.

1. **Question:** *Do they go back to the natural gas-only presumptive limit when the 12-month average fuel oil consumption becomes < 1% again?*

**DEP Response:** Yes, the natural gas-only presumptive limit will apply when the 12-month average fuel oil consumption is less than 1%.

1. **Question:** *For units firing multiple fuels required to stack test to demonstrate compliance, is stack testing required on each fuel every 5 years?*

**DEP Response:** Yes, stack testing is required on each fuel type every five years.

1. **Question:** *Is stack testing required for a fuel expected to represent more than 1% of the unit’s annual fuel consumption?*

**DEP Response:** Yes, stack testing is required for a fuel expected to represent more than 1% of the unit’s annual fuel consumption.

1. **Question:** *It appears that 25 Pa. Code §129.97(g) is not limited to combustion sources, so (g)(4) could be construed as applying to a fuel-burning process (but not a combustion unit, per se)?*
2. **Question:** *How do you determine the presumptive RACT limit when you burn two (2) fuels (e.g. oil and gas) at varying relative rates?*

**DEP Response:** The requirements of 25 Pa. Code §129.97(g)(4) apply in situations where a single unit subject to 25 Pa. Code §§129.97(g)(1) – (3) (i.e. combustion unit, process heater, or turbine) fires multiple fuels within a compliance period (30-day rolling average for units with CEMS or during a stack test for units without CEMS). This could apply for sources that fire multiple fuels simultaneously or sequentially.

1. **Question:** *I’ve read 25 Pa. Code §129.97 (g)(4)(i) several times, but don’t quite understand how to calculate or look up Ei. How is Ei calculated?*

**DEP Response:** In the equation, Ei is each presumptive RACT emission limitation given in 25 Pa. Code §§ 129.97(g)(1) – (3).  For example, for a boiler that fires both natural gas and #2 fuel oil within the compliance period, Ei would be 0.10 lb NOx/MMBtu for natural gas and 0.12 lb NOx/MMBtu for #2 fuel oil.

1. **Question:** *In 25 Pa. Code §129.97(c)(7), it states that fuel-burning equipment with an annual capacity factor < 5% is subject to work practices – i.e., are exempt from numerical emission limits. What about combustion sources with a capacity factor for a given fuel limited to < 5%?*

**DEP Response:** The presumptive RACT requirement of 25 Pa. Code §129.97(c)(7) specifies an annual capacity factor of 5%. This capacity factor takes into account all fuels fired by the fuel-burning unit. Should a unit subject to a presumptive RACT emission limit in 25 Pa. Code §129.97(g)(1) – (3) fire an alternate fuel that is greater than 1% of the unit’s annual fuel consumption on a heat-input basis, the provisions of 25 Pa. Code §129.97(g)(4) would apply to determine the applicable RACT emission limit. If such a unit does not show compliance with the presumptive emission limit through CEMS, a stack test would need to be conducted for each fuel fired by the unit.

1. **Question:** *Because it is difficult to predict with certainty the contribution to the total heat input from secondary fuel(s) on an annual basis, the company is requesting the Department’s concurrence that that the phrase “is excluded” can also mean “may be excluded.”*

**DEP Response:** Yes, the operator of the affected unit may choose not to exclude any fuel representing less than 1% of the unit’s annual fuel consumption on a heat-input basis.

1. **Question:** *The owners or operators of a source (that utilizes Department-certified CEMS) envision they will be excluding a fuel representing less than 1% of the unit’s annual fuel consumption on a heat-input basis when determining the applicable RACT multiple fuel emission limit. How should this information be communicated to the Department?*

**DEP Response:** The owners or operators of the source must include corroborating information in the cover letter of the quarterly emissions report if a Department-certified CEMS is utilized. The owners or operators of the source may petition the Department to include a fuel representing less than 1% of the unit’s annual fuel consumption in the emission limit.

**Emissions Averaging Plans:**

1. **Question:** *If the owner or operator of a facility would like to establish a NOx averaging plan pursuant to the provisions of 25 Pa. Code §129.98 but does not operate continuous emissions monitoring system (CEMS) on all sources to be included in the plan, how is stack test data utilized to demonstrate compliance in a NOx averaging plan?*
2. **Question:** *Is continuous monitoring required for averaging or is daily emission limit established by annual stack test?*

**DEP Response:** Sources without CEMS may be included in the averaging plan provided an adequate compliance demonstration could be conducted to ensure that the cumulative actual emissions will be less than the cumulative allowable emissions at all times. The acceptability of such a plan will depend on the variability of the NOx emissions from the sources proposed to be included in the plan. There may be more frequent stack testing and more rigorous periodic monitoring requirements. Should such an averaging plan be approved by DEP, the owner or operator should use the emission rate from the stack testing as the actual emissions in the averaging equation.

1. **Question:** *If an owner or operator of one of the sources to be averaged will be installing controls and petitions for an alternative compliance schedule (up to 3 years), but there are other sources to be averaged that are not installing controls, can the facility seek the compliance extension for all sources to be averaged (even those that are not installing controls)?*

**DEP Response:** No, the three years compliance demonstration timeline applies only for sources that will require the installation of an air cleaning device to comply with RACT emissions limits.

1. **Question:** *Can a NOx averaging plan include only a particular group of NOx sources in lieu of all NOx sources in a facility?*

**DEP Response:** The provisions of 25 Pa. Code §129.98 can be applied system-wide, facility-wide, or to a subset or smaller group of sources within a system or facility.

1. **Question:** *How is a 30-day rolling average under a NOx averaging plan adjusted for months where a plant is shutdown or where lower-than-normal production takes place?*

**DEP Response:** Emissions averaging is on a mass basis. The RACT II rule stipulates that cumulative actual emissions from the sources included in the averaging plan must be no greater than the cumulative allowable emissions for those sources on a 30-day rolling total basis.

1. **Question:** *Can units in a NOx averaging plan be subject to an alternative RACT II limit and/or compliance schedule?*

**DEP Response:** All sources included in an averaging plan must be subject to a presumptive numerical NOx RACT limit in 25 Pa. Code §129.97. However, an owner or operator may propose facility-wide or system-wide averaging as part of a case-by-case RACT proposal. Sources with an alternate compliance schedule can be included in an averaging plan provided that those sources are subject to interim NOx RACT emission limitations.

1. **Question:** *Will the Department be receptive to an averaging plan submitted as a back-up for compliance with RACT standards?*

**DEP Response:** Should an owner or operator elect to submit an averaging plan, compliance with the presumptive NOx RACT emission limitations would assure compliance with the approved NOx RACT averaging plan.

1. **Question:** *Can you do emissions averaging between any source categories? For example, if boilers are averaged with turbines, then with which presumptive limits does the owner or operator need to comply?  Boiler presumptive limits are in lbs/MMBtu and turbine presumptive limits are in ppm corrected to % O2.*

**DEP Response:** Yes, emissions averaging may be done across different source categories since the compliance demonstration for emissions averaging between sources is based on mass emissions.  The cumulative actual emissions from the sources included in the averaging plan must be no greater than the cumulative allowable emissions from the sources on a 30-day rolling basis.

**Case-by-Case RACT Proposals:**

1. **Question:** *If a source subject to 25 Pa. Code §§ 129.96 – 129.100 has no presumptive RACT requirement or emission limitation, must it be included in a case-by-case RACT proposal?*

**DEP Response:** Yes, the owner or operator is required to submit a case-by-case RACT proposal by October 24, 2016.

1. **Question:** *What is the cost-effectiveness threshold for NOx and VOC?*

**DEP Response:** There are no bright-line amounts for cost-effective control for case-by-case RACT that are appropriate in every situation. The presumptive RACT benchmarks are $2,800/ton NOx and $5,500/ton VOC. The RACT II preamble notes that a 25% buffer to the cost-effectiveness will not change the presumptive RACT determinations. This increases the presumptive benchmarks to 3,500/ton NOx and $7,000/ton VOC. The cost benchmarks for presumptive NOx RACT used by

other states are as follows: Wisconsin, $2,500 per ton NOx; Illinois, $2,500 - $3,000 per ton NOx; Maryland, $3,500 - $5,000 per ton NOx; Ohio, $5,000 per ton NOx; New York, $5,000 - $5,500 per ton NOx; New Jersey, did not consider any cost benchmark, however noted that costs of over $20,000 per ton NOx were considered reasonable for some source categories.

1. **Question:** *What is the incremental cost for economically feasible NOx and VOC reductions?*

**DEP Response:** Incremental cost represents the additional cost for reducing emissions after one control technology has already been considered or applied. For example, the total control cost is the annualized cost to reduce emissions from an uncontrolled level to the level achieved by the control device being evaluated. The incremental cost is the cost to reduce the emissions from the level achieved by the first control device considered or already installed, to the new level achieved by the second device being evaluated. If there is no existing control device associated with the source, then total cost of control is the governing factor.

1. **Question:** *What are acceptable controls? If there are process analyzers or combustion analyzers on the stacks, will they be acceptable? Will such devices require Plan Approval?*

**DEP Response:** Process and/or combustion analyzers can be considered air cleaning devices as part of a facility’s combustion unit control strategy. An owner or operator seeking to establish a process and/or combustion analyzer as an air cleaning device would need to demonstrate how such a device effectively reduces NOx emissions from the unit. The installation of an air cleaning device may require a plan approval unless the source is exempted from permitting through the request for determination (RFD) process.

1. **Question:** *What is the appropriate permitting mechanism for a case-by-case RACT proposal?*

**DEP Response:** Case-by-case RACT proposals may be approved by the Department through a plan approval or significant operating permit modification. Case-by-case RACT proposals cannot be approved through minor operating permit modifications or administrative amendments.

**Compliance Timing:**

1. **Question:** *Is there any way that existing sites/units can change their compliance strategy AFTER the 6-month window of the rule being published by which they need to submit an averaging plan or case-by-case proposal?*

**DEP Response:** Yes. However, if the compliance strategy is switched from unit-by-unit to emissions averaging, the compliance on a unit-by-unit must be maintained until the averaging plan is approved.

1. **Question:** *For case-by-case RACT determinations, there is a 6-month timeline to submit the case-by-case proposal.  If there is any back and forth with the department, it is likely that the proposal will not be finalized until after the January 1, 2017, compliance date.  Does DEP expect/recommend an alternative compliance schedule petition with every case-by-case proposal?*

**DEP Response:** Please note that an alternate compliance schedule can only be approved by DEP if the owner or operator is proposing to install an air cleaning device. The case-by-case proposal must include interim emission limits in addition to final emission limits and, if applicable, an alternate compliance schedule. As provided in Section 129.99 (i)(2)(iv) of the RACT II final-form regulation, the proposed interim emission limitation “will be imposed on the affected air contamination source until compliance is achieved with the applicable RACT requirements or RACT emission limitation.”

1. **Question:** *If subject to presumptive RACT and need to obtain a plan approval in order to install controls, Section 129.97(k)(1)(v) indicates that a petition for alternate compliance schedule shall be submitted within 6 months of rule finalization and that the approved petition for an alternate compliance schedule shall be incorporated into the plan approval for the new control equipment. Can the proposed alternate schedule start with “plan approval issuance date” rather than a specific calendar date? If not, what happens if plan approval issuance or actual construction takes longer than the anticipated alternate schedule? Will the agency take enforcement action if the proposed schedule is not adhered to due to factors out of owner/operator’s control? There is a similar provision in Section 129.99(i) for sources submitting an alternative RACT proposal that requires installation of controls. What if the alternative RACT proposal is denied by DEP?*

**DEP Response:** The owner or operator may propose a final compliance date that is contingent upon the approval date of the alternative compliance schedule petition. If the owner or operator submits the petition simultaneously with the necessary complete plan approval application, the owner or operator may request that the Department render decisions on the petition and plan approval at the same time. The DEP will determine appropriate enforcement action on a case-by-case basis. If an alternative RACT proposal is denied by the Department, the owner or operator should seek an enforceable compliance schedule for demonstrating compliance with the RACT II final rulemaking.

1. **Question:** *Can we submit a petition for an extension under 25 Pa. Code §129.97(k) with the thought that the installation of natural gas at the plant is considered an “air cleaning device”?*

**DEP Response:** No, the petition process under 25 Pa. Code §129.97(k) is limited to the installation of an air cleaning device. Using an alternate fuel, such as natural gas, would not qualify as an “air cleaning device.”

1. **Question:** *In the interim period between January 1, 2017, and the date of issuance of a plan approval or operating permit modification incorporating alternate RACT emission limitations determined through the case-by-case process, is a facility subject to the published presumptive RACT emission limits?*

**DEP Response:** Yes, on or after January 1, 2017, the owner or operator must be in compliance with the presumptive RACT limits until the alternate RACT emission limitations are established.

**Recordkeeping/Compliance Demonstration:**

1. **Question:** *How can an owner or operator demonstrate that a source falls under one of the de minimis levels for RACT?*

**DEP Response:** The owner or operator must keep records sufficient to demonstrate how a particular source’s potential to emit NOx and/or VOC is calculated and the records must be made available to the Department, upon request.

1. **Question:** *Must an owner or operator have all of their compliance testing and records in place before the compliance deadline?*

**DEP Response:** Yes. Compliance testing and supporting documentation must be completed by January 1, 2017.

1. **Question:** *As a result of delays in the publication of RACT II and with a Jan. 1, 2017, fixed compliance date, will PADEP allow a waiver for compliance testing performed in 2015 but that may be greater than 12 months from final publication? Also, if source testing is delayed for compliance purposes by the late finalization of RACT II, will there be any extensions of the compliance demonstration that is needed by Jan. 1, 2017, because companies were unable to get testing completed by Jan. 1, 2017?*

**DEP Response:** A petition *cannot* be used to extend the deadline for a compliance demonstration, such as stack testing, when installation of an air cleaning device is not proposed by the owner or operator. Any Department enforcement action, including consent orders and agreements, will be determined on a case-by-case basis.

Any test waiver approval cannot be used to extend the deadline for stack testing for other fuels or sources.

1. **Question:** *How do you stack test when two or more sources (e.g., 2 heaters) combine into one stack? Same question if a CEMS is present?*

**DEP Response:** Source testing protocols must be approved by the Bureau of Air Quality’s Source Testing and Monitoring Division. Therefore, an owner or operator should contact the Source Testing and Monitoring Division regarding the test protocols.

If compliance with a presumptive RACT limit cannot be demonstrated for each individual source, the owner or operator may petition the Department to show compliance through an emissions averaging plan for the sources exhausting to a single stack. Otherwise, the owner or operator may submit a case-by-case RACT proposal to the appropriate DEP Regional Office by October 24, 2016.

1. **Question:** *For emissions units that qualify for the presumptive RACT requirements for sources below the 5 tpy NOx/2.7 tpy VOC thresholds, what would be required to demonstrate compliance?*
2. **Question:** *How does an owner or operator demonstrate compliance with good operating practices?*

**DEP Response:** In accordance with 25 Pa. Code §129.97(c), certain categories of sources, including a NOx air contamination source that has the potential to emit less than 5 tpy of NOx and a VOC air contamination source that has the potential to emit less than 2.7 tpy of VOC, is the installation, maintenance, and operation of the source in accordance with manufacturer’s specifications and with good operating practices. Owners and operators must keep records of what these specifications and operating practices are and how they complied with the specifications and operating practices, and the records must be made available to the Department upon request. The necessary compliance demonstration requirements will be included in the operating permit.

1. **Question:** *What if a source is subject to MACT (e.g., VOC MACT)?  Could the RACT proposal simply point to MACT compliance?*
2. **Question:** *Many emissions units subject to RACT II are also subject to other equally as stringent or in some cases more stringent Federal regulations (i.e., NESHAPS, NSPS, etc.). Can facilities rely on compliance with such Federal requirements as RACT II?*

**DEP Response:**  The owner or operator must demonstrate compliance with all applicable RACT requirements in 25 Pa. Code §§ 129.96 - 129.100. However, the owner or operator may propose a definitive determination that complying with other requirements, such as Maximum Achievable Control Technology (MACT) or New Source Performance Standards (NSPS), ensures compliance with the RACT II requirements.

1. **Question:**  *If all sources at a major NOx or VOC facility are subject to emission limits and meeting those limits, does the facility have to submit any documentation of compliance? Same question for a facility having only sources that are subject to presumptive RACT and meeting those requirements – do they have to submit any documentation?*

**DEP Response:**  The owner or operator of a facility that includes only sources that are subject to presumptive RACT requirements and/or presumptive RACT emission limitations that meet those requirements without the installation of control equipment needs only to keep records sufficient to show compliance with the requirements and/or emission limitations. This would include approved stack test results. The owner or operator shall provide these records to the Department upon request.

1. **Question:**  *If the source meets the RACT II emission limits or presumptive RACT requirements (e.g. tune-ups, oxygen trim system, etc.), do these requirements need to be incorporated in the Title V permit? If so, is a minor modification an acceptable mechanism for making such change or not?*

**DEP Response:**  All applicable requirements, including RACT II presumptive requirements and emission limitations, will be incorporated as applicable requirements into the subject Title V operating permit.  The RACT II provisions will be incorporated in Title V Permits according to the timeline prescribed in 25 Pa. Code §127.463. It is important to note that §127.463(e) requires compliance accordance to the timeframes regardless of whether the permit is required under this section.

1. **Question:**  *For RACT II compliance demonstration purposes, are facilities allowed to use portable analyzers or does a full stack test need to be performed?*

**DEP Response:**  25 Pa. Code §129.100 requires that compliance demonstration testing for an air contamination source without a CEMS must be conducted in accordance with a Department-approved emissions source test that meets the requirements of Chapter 139, Subchapter A (relating to sampling and testing methods and procedures). Section 2.10 of the Source Testing Manual states that portable analyzers, such as electrochemical cells, are not acceptable for compliance determinations.  Portable analyzers were not acceptable for the demonstration of compliance with RACT I and are therefore not acceptable for the RACT II compliance demonstrations.

1. **Question:** *Does a tune-up of a boiler count as demonstrating compliance for a boiler subject to 25 Pa. Code §129.97(b) if it occurs prior to the effective date of the rule?*

**DEP Response:**  The presumptive RACT requirement for a combustion unit with a rated heat input equal to or greater than 20 million Btu/hour and less than 50 million Btu/hour is the performance of a biennial tune-up conducted in accordance with the procedures in 40 CFR 63.11223. The boiler tune-up conducted in accordance with 40 CFR 63.11223 can be considered as a demonstration of compliance with 25 Pa. Code §129.97(b). If the tune-up had not been conducted in accordance with the procedures prescribed in 40 CFR 63.11223, a tune-up must be performed prior to January 1, 2017. In addition, the owner or operator must continue to fulfill any applicable presumptive RACT requirements contained in 25 Pa. Code §129.93 that they are subject to, including annual adjustment or tune-up of a combustion process.

1. **Question:** *What is the definition of an operating day as it applies to the rule?*

**DEP Response:** An operating day is a 24-hour period beginning at 12:00 midnight which the source operates at any time and produces emissions. This time period includes emissions that were generated during startups, shutdowns, or malfunctions.

1. **Question:** *Will there be a standard RACT II stack testing protocol that can be agreed to by the facility as long as the testing doesn’t require changes to that protocol?*

**DEP Response:** The Department has discussed the use of standard protocols for various regulatory requirements; however, the development of these is not likely to occur before the initial RACT II testing. Thus, a protocol will need to be submitted for each source to be tested. There is a provision in the Department’s Source Testing Manual that allows the owners or operators of the facility to reference a previously approved test protocol, provided they agree to meet all conditions of acceptance for the protocol and provided that nothing has changed since approval was granted (i.e. same relevant testing requirements, same process operating conditions, same testing subcontractor, etc.).

1. **Question:** *Under what operating level and conditions should source testing be conducted?*

**DEP Response:** Performance tests shall be conducted while the source is operating at maximum routine operating conditions or under such other conditions, within the capacity of the equipment, as may be requested by the Department [*25 Pa. Code §139.11(1)*]. Such conditions may be stipulated in a plan approval, permit, or order. Any questions pertaining to a specific source or situation should be directed to Department Source Testing Section staff or appropriate Department Regional Office staff.

**Continuous Emission Monitoring Systems (CEMS):**

1. **Question:** *Will the owners or operators of sources that operate Department-certified continuous emission monitoring systems (CEMS) be required to make changes to their CEMS to comply with the rule? Could this include the addition of new equipment?*

**DEP Response:** Yes. All underlying emission results, CEMS, and analyzers must conform to the requirements of Chapter 139, Subchapter C (which includes the Department’s Continuous Source Monitoring Manual) and as outlined in this rule. Additional equipment or analyzers may need to be installed to comply with the rule. The Department may approve the use of analyzers that have been “certified” under an applicable Federal program (i.e. 40 CFR Part 75, etc.). The Department will evaluate if/what additional testing may be required.

For an air contamination source without a Department-certified CEMS, monitoring and testing should be conducted in accordance with a Department-approved emissions source test that meets the requirements of Chapter 139, Subchapter A (relating to sampling and testing methods and procedures).

1. **Question:** *Can the owners or operators of a source that is subject to 40 CFR Part 75 (and therefore uses 40 CFR Part 75 data substitution) submit the verification documentation submitted and approved by EPA to satisfy the Department’s data acquisition and handling system verification requirement?*

**DEP Response:** No. Additional data acquisition and handling systemverifications will be required by the Department.

1. **Question:** *What changes must the owners or operators of applicable sources with Department-certified CEMS make to demonstrate compliance with the rule?*

**DEP Response:** A monitoring plan must be submitted in the Department’s CEM Data Processing System (CEMDPS) by the owner or operator of the facility. The monitoring plan should include any new emission and data availability standards required by the rule.

For a combustion unit or process heater with CEMS, the following should be included in the monitoring plan:

* New emission results and CEMS for hourly mass emissions (lbs), hourly heat input (MMBtu), and hourly emissions (lbs/MMBtu). A new emission result and CEMS for the hourly allowable emissions (lbs/MMBtu) should also be added for sources that have a variable emission standard. DEP software will calculate a 30-day rolling average emission rate in lbs/MMBtu from the hourly mass emissions (lbs) and hourly heat input (MMBtu) reported by the owner or operator of the facility each quarter and compare it to the applicable standard. DEP software will generate an allowable emission rate for sources that have a variable emission standard as per the instructions contained in the rule.

For a combustion turbine with CEMS, the following should be included in the monitoring plan:

* A new emission result and CEMS for hourly concentration (PPM @ 15% O2). New emission results and CEMS for hourly allowable emissions (PPM @ 15% O2) and hourly heat input (MMBtu) should also be added for sources that have a variable emission standard. DEP software will calculate a 30-day rolling average emission rate in PPM @ 15% O2 from the hourly emissions data reported by the owner or operator of the facility each quarter and compare it to the applicable standard. DEP software will generate an allowable emission rate for sources that have a variable emission standard as per the instructions contained in the rule.

For a Portland cement kiln with CEMS, the following should be included in the monitoring plan:

* New emission results and CEMS for hourly mass emissions (lbs), hourly clinker production (tons), and hourly emissions (lbs/ton-clinker). DEP software will calculate a 30-day rolling average emission rate in lbs/ton-clinker from the hourly mass emissions (lbs) and hourly clinker production (tons) reported by the owner or operator of the facility each quarter and compare it to the applicable standard.

The owners or operators of applicable sources that submit a monitoring plan must also complete the certification process. This would entail the submittal of a test protocol, results of testing, results of any verification tests, and sample quarterly emissions report.

1. **Question:** *How should the owners or operators of applicable sources that utilize the CEMDPS demonstrate compliance on either a facility-wide or system-wide basis?*

**DEP Response:**

1. The following criteria must be met for the owners or operators of applicable sources to demonstrate compliance on a facility-wide basis utilizing the CEMDPS:
   * All underlying emission results, CEMS, and analyzers must conform to the requirements of Chapter 139, Subchapter C (which includes the Department’s Continuous Source Monitoring Manual) and as outlined by this rule.
   * The Department may approve the use of analyzers that have been “certified” under an applicable Federal program (i.e. 40 CFR Part 75, etc.). The Department will evaluate if/what additional testing may be required.
2. Those not meeting the requirements in paragraph A:
   * Submit a quarterly compliance report to the applicable DEP Regional Office to demonstrate compliance on a facility-wide basis.
3. All demonstrations of compliance on a system-wide basis should be submitted as a quarterly compliance report to the applicable DEP Regional Office. If more than one DEP Region is involved, a copy of the report must be submitted to all.
4. **Question:** *When would data substitution apply for CEMS associated with sources subject to the rule?*

**DEP Response:** Data substitution is required for invalid hours (for which monitoring is required) for combustion units, process heaters, and Portland cement kilns. For combustion turbines, if the emission standard is variable, data substitution is required for invalid hours (for which monitoring was required) for hourly concentration (PPM @ 15% O2), allowable PPM @ 15% O2, and hourly heat input (MMBtu). Data substitution is not required for invalid hours (for which monitoring is required) for hourly concentration (PPM @ 15% O2) when no variable emission standard exists.

1. **Question:** *What data validation criteria would apply to any CEMS utilized to demonstrate compliance with the rule?*

**DEP Response:** Data validation criteria as outlined in Chapter 139, Subpart C and the DEP Continuous Source Monitoring Manual, Revision No. 8, are applicable to CEMS under the rule.

1. **Question:** *How will the 30-day rolling average emission rate (lbs/ton-clinker) be calculated for Portland cement kilns?*

**DEP Response:** The owners or operators of the source will submit hourly mass emissions (lbs) and hourly clinker production (tons) to the Department each calendar quarter. Department software will identify the hourly mass emissions (lbs) and hourly clinker production (tons) that will be used to calculate the 30-day rolling average emissions rate (lbs/ton-clinker).

The total pounds of pollutant emitted from the Portland cement kiln for each operating hour of the current operating day and the previous 29 operating days will be summed. The total clinker production to the Portland cement kiln for each operating hour of the current operating day and the previous 29 operating days will be summed. The total pounds of pollutant emitted by the Portland cement kiln for the 30 operating days will be divided by the total clinker production to the Portland cement kiln for the 30 operating days to determine the 30-day rolling average emissions rate in lbs/ton-clinker.

Each operating day will have a 30-day rolling average emissions rate in lbs/ton-clinker. Department software will compare each of these operating day 30-day rolling average emissions rates in lbs/ton-clinker to the applicable standard.

**NNSR/PSD:**

1. **Question:** *When evaluating PSD/NNSR for installation of controls required to meet RACT II or for future projects post-RACT II implementation, can reductions realized from the RACT control project be considered creditable decreases in net emissions increase?  My understanding is that the baseline emissions would need to be adjusted to RACT II emission rates (i.e., cannot take credit for reductions that are required by RACT II only reductions beyond the RACT II level).  Please confirm.*

**DEP Response:** In accordance with 25 Pa. Code §127.207(1)(i), baseline emissions must be adjusted to accommodate the RACT requirements.

1. **Question:** *Also, is this true for BOTH NOx (NNSR) as well as NO2 (PSD)?*

**DEP Response:** Yes, the baseline actual emissions must be adjusted to address the applicable requirements including RACT II requirements.