**J.ADFn Requirements for a Carbon Adsorber where the Carbon Bed Total Mass Steam Flow Rate is used to demonstrate compliance (New Units)**

**Terms Last Revised: 3/18/2016**

**Use this term for new units or untested units where the monitored parameter limit/range, the carbon bed total mass steam flow rate, will be established in a future compliance demonstration.**

**Note:** The OAC rules do not restrict total mass steam flow rate from the carbon adsorber, for any carbon bed regeneration cycle, to not more than 10 percent below the minimum total mass steam flow rate measured during the most recent compliant stack test; however, the rules do require continuous monitoring of the total mass steam flow rate and record keeping and reporting of any mass steam flow rate that does/do not meet this requirement.

**Note:** This method of compliance is not available to coating or printing lines in OAC rule

**Note:** If the control requirements are for a HAP(s) or organic compounds instead of VOCs, you can search for (Find and Replace) VOC and replace each with HAP or OC.

**Note:** If adding the rule authority citations, remove those rules that do not apply and/or add the applicable rule authority for the terms; i.e., if the word “or” is included in the rule authority, one or more of the rules must be deleted, as only one of the choices should apply or be referenced in the permit.

**J.43.a Additional Terms and Conditions where meeting an emission limit using a Carbon Adsorber [OAC rule 3745‑31‑05(D) or (E)] and if TV [OAC rule 3745‑77‑07(C)(1)]**

* + - * 1. All of the VOC emissions from this emissions unit shall be vented to a carbon adsorber that shall meet the operational, monitoring, and record keeping requirements of this permit, when the emissions unit is in operation.

[OAC rule 3745‑31‑05(D) or (E)]

[OAC rule 3745‑77‑07(C)(1)] **if TV**

**OR if there is an option to use compliant materials without controls use this term instead:**

* + - * 1. Except where employing only compliant materials, all of the VOC emissions from this emissions unit shall be vented to a carbon adsorber that shall meet the operational, monitoring, and record keeping requirements of this permit, when the emissions unit is in operation.

[OAC rule 3745‑31‑05(D) or (E)]

[OAC rule 3745‑77‑07(C)(1)] **if TV**

**OR if controlling or including more than one emissions unit in the permitting section:**

* + - * 1. All of the VOC emissions from the emissions units listed above shall be vented to a carbon adsorber that shall meet the operational, monitoring, and record keeping requirements of this permit, when one or more of the emissions units are in operation.

[OAC rule 3745‑31‑05(D) or (E)]

[OAC rule 3745‑77‑07(C)(1)] **if TV**

**OR if there is an option to use compliant materials without controls use this term instead:**

* + - * 1. Except where employing only compliant materials, all of the VOC emissions from the emissions units listed above shall be vented to a carbon adsorber that shall meet the operational, monitoring, and record keeping requirements of this permit, when one or more of the emissions units are in operation.

[OAC rule 3745‑31‑05(D) or (E)]

[OAC rule 3745‑77‑07(C)(1)] **if TV**

**J.43.b Monitoring and Record keeping Requirements for a Carbon Adsorber** **where the Carbon Bed Total Mass Steam Flow Rate is used to demonstrate compliance** **[OAC rule 3745-21-09(B)(4)(b)(vii)(*a*)]; OR [OAC rule 3745‑31‑05(D) or (E)] *or* [OAC rule 3745‑31‑05(A)(3)] if BAT *and/or* [OAC rule 3745‑77‑07(C)(1)] if TV**

* + - 1. In order to maintain compliance with the applicable emission limitation(s) contained in this permit, the acceptable total mass steam flow rate from the carbon adsorber, for any carbon bed regeneration cycle, shall not be more than 10 percent below the minimum total mass steam flow rate for any regeneration cycle conducted during the most recent performance test that demonstrated the emissions unit(s) (controlled by the carbon adsorber) was/were in compliance. Until compliance testing has been conducted, the carbon adsorber shall be operated and maintained in accordance with the manufacturer's recommendations, instructions, and the operating manual.

[OAC rule 3745-21-09(B)(4)(b)(vii)(*a*)]

[OAC rule 3745‑31‑05(D) or (E)] **Director’s authority for special T&Cs for compliance**

[OAC rule 3745‑31‑05(A)(3)] **BAT**

[OAC rule 3745‑77‑07(C)(1)] **if TV**

[40 CFR 64.3] **Compliance Assurance Monitoring**

**J.43.c Monitoring and Record keeping Requirements for a Carbon Adsorber** **where the Carbon Bed Total Mass Steam Flow Rate is used to demonstrate compliance** **[OAC rule 3745-21-09(B)(4)(b)(vii)(a)] and [OAC rule 3745-21-09(B)(4)(d)]; OR [OAC rule 3745‑31‑05(D) or (E)]; OR [OAC rule 3745‑31‑05(A)(3)] for BAT; and/or [OAC rule 3745‑77‑07(C)(1)] if TV**

**Note:** **If the permittee has the option to use compliant materials where the control equipment is not required, the start of the last sentence in this term can be replaced with the following phrase:**

Following compliance testing, the permittee shall collect and record the following information each day the carbon adsorber is required to demonstrate compliance with the VOC limitation contained in this permit:

* + - 1. The permittee shall properly install, operate, and maintain a continuous monitor and recorder which measures and records the steam flow rate from the carbon adsorber when the emissions unit(s) is/are in operation, including periods of startup and shutdown. The monitoring and recording devices shall be capable of accurately measuring the steam flow rate. The monitor and recorder shall be installed, calibrated, operated, and maintained in accordance with the manufacturer's recommendations, instructions, and the operating manuals, with any modifications deemed necessary by the permittee. Following compliance testing, the permittee shall collect and record the following information each day the emissions unit(s) is/are in operation:
         1. the total mass steam flow rate from the carbon adsorber during each carbon bed regeneration cycle; and
         2. a log or record of the operating time for the capture (collection) system, carbon adsorber, monitoring equipment, and the associated emissions unit(s).

These records shall be maintained at the facility for a period of 5 years.

[OAC rule 3745-21-09(B)(4)(b)(i) & (vii)(*a*) and OAC rule 3745-21-09(B)(4)(d)]

[OAC rule 3745‑77‑07(C)(1)] **if TV**

[40 CFR 64.3, 40 CFR 64.7(c), and 40 CFR 64.9(b)] **Compliance Assurance Monitoring**

**OR** **if the emissions unit is not subject to OAC rule 3745-21-09, the downtime would be recorded instead of the operating time in “b” above:**

* + - * 1. a log of the downtime for the capture (collection) system, carbon adsorber, and monitoring equipment when the associated emissions unit(s) was/were in operation.

[OAC rule 3745‑31‑05(D) or (E)] **Director’s authority for special T&Cs for compliance**

[OAC rule 3745‑31‑05(A)(3)] **for BAT**

[OAC rule 3745‑77‑07(C)(1)] **if TV**

[40 CFR 64.3, 40 CFR 64.7(c), and 40 CFR 64.9(b)] **Compliance Assurance Monitoring**

**J.43.d Monitoring and Record keeping Requirements for Corrective Actions conducted in response to deviations from the limitation on the Carbon Bed Total Mass Steam Flow Rate** **[OAC rule 3745‑31‑05(D) or (E)]; and [OAC rule 3745‑77‑07(C)(1)] if TV**

**XXXX1:****for a modification to a parameter requirement specify either:**

minor permit modification **if this permit is for a Title V facility or**

administrative modification **if this permit is for a non-Title V facility**

* + - 1. Whenever the monitored mass steam flow rate from the carbon adsorber deviates from the range/limit established in accordance with this permit, the permittee shall promptly investigate the cause of the deviation. The permittee shall maintain records of the following information for each investigation:
         1. the date and time the deviation began;
         2. the magnitude of the deviation at that time;
         3. the date the investigation was conducted;
         4. the name(s) of the personnel who conducted the investigation; and
         5. the findings and recommendations.

In response to each required investigation to determine the cause of a deviation, the permittee shall take prompt corrective action to bring the operation of the control equipment within the acceptable range/limit specified in this permit, unless the permittee determines that corrective action is not necessary and documents the reasons for that determination and the date and time the deviation ended. The permittee shall maintain records of the following information for each corrective action taken:

* + - * 1. a description of the corrective action;
        2. the date corrective action was completed;
        3. the date and time the deviation ended;
        4. the total period of time (in minutes) during which there was a deviation;
        5. the readings for the mass steam flow rate from the carbon adsorber immediately after the corrective action was implemented; and
        6. the name(s) of the personnel who performed the work.

Investigation and records required by this paragraph do not eliminate the need to comply with the requirements of OAC rule 3745-15-06 if it is determined that a malfunction has occurred.

The mass steam flow rate range/limit is effective for the duration of this permit, unless revisions are requested by the permittee and approved in writing by the appropriate Ohio EPA District Office or local air agency. The permittee may request revisions to the permitted mass steam flow rate range/limit based upon information obtained during future performance tests that demonstrate compliance with the allowable VOC emission rate for the controlled emissions unit(s). In addition, approved revisions to the mass steam flow rate range/limit will not constitute a relaxation of the monitoring requirements of this permit and may be incorporated into this permit by means of a **[XXXX1]**.

[OAC rule 3745‑31‑05(D) or (E)]

[OAC rule 3745‑77‑07(C)(1)] **if TV**

[40 CFR 64.7(d) and 40 CFR 64.9(b)] **Compliance Assurance Monitoring**

**J.43.e Reporting Requirements, Quarterly Summaries for a Carbon Adsorber** **where the Carbon Bed Total Mass Steam Flow Rate is used to demonstrate compliance** **[OAC rule 3745-21-09(B)(4)(c)]**

* + - 1. The permittee shall submit quarterly summaries that identify:
         1. all carbon bed regeneration cycles, during which the total mass steam flow rate was more than 10 percent below the minimum total mass steam flow rate for any regeneration cycle conducted during the most recent performance test that demonstrated the emissions unit(s) was/were in compliance;
         2. any records of downtime (date and length of time) for the capture (collection) system, the carbon adsorber, and/or the monitoring equipment when the emissions unit(s) was/were in operation; and
         3. a log of the operating time for the capture system, carbon adsorber, monitoring equipment, and the emissions unit(s).

These quarterly reports shall be submitted by April 30, July 31, October 31, and January 31, and shall cover the records for the previous calendar quarters.

[OAC rule 3745-21-09(B)(4)(c)]

**J.43.f Reporting Requirements, Permit Evaluation Reports (PER) and/or Quarterly Reports for a Carbon Adsorber where the acceptable range/limit of** **the total Mass Steam Flow Rate was established** **based upon manufacturer’s specifications** **[OAC rule 3745‑15‑03(B), (C), and (D)] and [OAC rule 3745-77-07(C)(1)] if TV**

**Note: Please include any other specific permit or control requirements for the emissions units(s) in the quarterly deviation reports or PER**

**For TV facilities:**

**Enter the following deviations for [XXXX1] in the “Quarterly Deviation Reporting Requirements” term for PTIs (“RPT.1”):**

* + - * 1. each period of time (start time and date, and end time and date) when the total mass steam flow rate from the carbon adsorber was outside of the range specified by the manufacturer and/or outside of the acceptable range established during any required compliance demonstration;
        2. any period of time (start time and date, and end time and date) when the emissions unit(s) was/were in operation and the process emissions were not vented to the carbon adsorber;
        3. each incident of deviation described in “a” or “b” (above) where a prompt investigation was not conducted;
        4. each incident of deviation described in “a” or “b” where prompt corrective action, that would bring the emissions unit(s) into compliance and/or the mass steam flow rate into compliance with the acceptable range, was determined to be necessary and was not taken; and
        5. each incident of deviation described in “a” or “b” where proper records were not maintained for the investigation and/or the corrective action(s).

[OAC rule 3745‑15‑03(B)(1)(a) and OAC rule 3745‑15‑03(C); and OAC rule 3745-77-07(C)(1)]

[40 CFR Part 64.9(a)] **Compliance Assurance Monitoring**

**For FEPTIOs (for non-Title V sources only) where the carbon adsorber is used in the calculation of a synthetic minor limit and/or restricts the potential to emit gaseous (VOC, OC, HAP or other) emissions.**

**Enter the following deviations for [XXXX1] in the “Quarterly Deviation Reporting Requirements” term for FEPTIOs (“RPT.2”):**

* + - * 1. each period of time (start time and date, and end time and date) when the total mass steam flow rate from the carbon adsorber was outside of the range specified by the manufacturer and/or outside of the acceptable range established during any required compliance demonstration;
        2. any period of time (start time and date, and end time and date) when the emissions unit(s) was/were in operation and the process emissions were not vented to the carbon adsorber;

[OAC rule 3745‑15‑03(B)(1)(b) and OAC rule 3745‑15‑03(C)]

**Use this term for non-TV facilities (including FEPTIOs) and add the Permit Evaluation Reporting term (“RPT.3”) which this term references:**

* + - 1. The permittee shall identify in the annual permit evaluation report the following information concerning the operations of the carbon adsorber during the 12-month reporting period for this/these emissions unit(s):
         1. each period of time (start time and date, and end time and date) when the total mass steam flow rate from the carbon adsorber was outside of the range specified by the manufacturer and/or outside of the acceptable range established during any required compliance demonstration;
         2. any period of time (start time and date, and end time and date) when the emissions unit(s) was/were in operation and the process emissions were not vented to the carbon adsorber;
         3. each incident of deviation described in “a” or “b” (above) where a prompt investigation was not conducted;
         4. each incident of deviation described in “a” or “b” where prompt corrective action, that would bring the emissions unit(s) into compliance and/or the mass steam flow rate into compliance with the acceptable range, was determined to be necessary and was not taken; and
         5. each incident of deviation described in “a” or “b” where proper records were not maintained for the investigation and/or the corrective action(s), as identified in the monitoring and record keeping requirements of this permit.

[OAC rule 3745‑15‑03(B)(2) and OAC rule 3745‑15‑03(D)]