This is Grunow – (18) above refers to Capture System and we often refer to Capture Efficiency.  Should we consolidate these terms?

With George’s help we found collection efficiency is used in 234 (NO) and 236. The rule in 234 where collection efficiency shows up is proposed to be deleted, so it would disappear from 234. With this minimal and specific usage it might be best to leave the definition in 236.

JSI:  Collection efficiency is used in 236 (asphalt plants) and 240.   Need to keep in Division 200 (NO) but look at combining in the future.

200(18) "Capture system" means the equipment (including but not limited to hoods, ducts, fans, and booths) used to contain, capture and transport a pollutant to a control device.

236(6) "Collection Efficiency" means the overall performance of the air cleaning device in terms of ratio of material collected to total weight of input to the collector.

240(5) "Collection Efficiency" means the overall performance of the air cleaning device in terms of ratio of weight of material collected to total weight of input to the collector.

| **Division** | **Rule number** | **Rule language** |
| --- | --- | --- |
|  | **200(18)** | "Capture system" means the equipment (including but not limited to hoods, ducts, fans, and booths) used to contain, capture and transport a pollutant to a control device.  |
|  | **200(44)(a)** | Except as provided in subsection (b) of this section, "Emission Limitation" and "Emission Standard" mean a requirement established by a State, local government, or the EPA which limits the quantity, rate, or concentration of emissions of air pollutants on a continuous basis, including any requirements which limit the level of opacity, prescribe equipment, set fuel specifications, or prescribe operation or maintenance procedures for a source to assure continuous emission reduction. (b) As used in OAR 340-212-0200 through 340-212-0280, "Emission limitation or standard" means any applicable requirement that constitutes an emission limitation, emission standard, standard of performance or means of emission limitation as defined under the Act. An emission limitation or standard may be expressed in terms of the pollutant, expressed either as a specific quantity, rate or concentration of emissions (e.g., pounds of SO2 per hour, pounds of SO2 per million British thermal units of fuel input, kilograms of VOC per liter of applied coating solids, or parts per million by volume of SO2) or as the relationship of uncontrolled to controlled emissions (e.g., percentage capture and destruction efficiency of VOC or percentage reduction of SO2). An emission limitation or standard may also be expressed either as a work practice, process or control device parameter, or other form of specific design, equipment, operational, or operation and maintenance requirement. For purposes of 340-212-0200 through 340-212-0280, an emission limitation or standard does not include general operation requirements that an owner or operator may be required to meet, such as requirements to obtain a permit, to operate and maintain sources in accordance with good air pollution control practices, to develop and maintain a malfunction abatement plan, to keep records, submit reports, or conduct monitoring.  |
|  | **200(75)** | "Monitoring" means any form of collecting data on a routine basis to determine or otherwise assess compliance with emission limitations or standards. Monitoring may include record keeping if the records are used to determine or assess compliance with an emission limitation or standard (such as records of raw material content and usage, or records documenting compliance with work practice requirements). Monitoring may include conducting compliance method tests, such as the procedures in appendix A to 40 CFR part 60, on a routine periodic basis. Requirements to conduct such tests on a one-time basis, or at such times as a regulatory authority may require on a non-regular basis, are not considered monitoring requirements for purposes of this definition. Monitoring may include one or more than one of the following data collection techniques as appropriate for a particular circumstance: (a) Continuous emission or opacity monitoring systems. (b) Continuous process, capture system, control device or other relevant parameter monitoring systems or procedures, including a predictive emission monitoring system. (c) Emission estimation and calculation procedures (e.g., mass balance or stoichiometric calculations). (d) Maintaining and analyzing records of fuel or raw materials usage. (e) Recording results of a program or protocol to conduct specific operation and maintenance procedures. (f) Verifying emissions, process parameters, capture system parameters, or control device parameters using portable or in situ measurement devices. (g) Visible emission observations and recording. (h) Any other form of measuring, recording, or verifying on a routine basis emissions, process parameters, capture system parameters, control device parameters or other factors relevant to assessing compliance with emission limitations or standards.  |
|  | **200 acronyms(81)** | "PCDE" means pollution control device collection efficiency. |
| **Compliance Assurance Monitoring**  | **340-212-0200(2)(a)**(F) | Emission limitations or standards for which an Oregon Title V Operating Permit specifies a continuous compliance determination method, as defined in OAR 340-200-0020. The exemption does not apply if the applicable compliance method includes an assumed control device emission reduction factor that could be affected by the actual operation and maintenance of the control device. For example a certain surface coating line is controlled by an incinerator whose continuous compliance is determined by calculating emissions on the basis of coating records and an assumed control device efficiency factor based on an initial performance test. In this example, OAR 340-212-0200 through 212-0280 apply to the control device and capture system, but not to the remaining elements of the coating line, such as raw material usage. |
| **Monitoring Design Criteria** | **340-212-0210(1)**(a) | The owner or operator must design the monitoring to obtain data for one or more indicators of emission control performance for the control device, any associated capture system and, if necessary to satisfy subsection (1)(b) of this rule, processes at a pollutant-specific emissions unit. Indicators of performance may include, but are not limited to, direct or predicted emissions (including visible emissions or opacity), process and control device parameters that affect control device (and capture system) efficiency or emission rates, or recorded findings of inspection and maintenance activities conducted by the owner or operator; |
|  | **340-212-0210(1)(b)** | The owner or operator must establish an appropriate range(s) or designated condition(s) for the selected indicator(s) such that operation within the ranges provides a reasonable assurance of ongoing compliance with emission limitations or standards for the anticipated range of operating conditions. Such range(s) or condition(s) must reflect the proper operation and maintenance of the control device (and associated capture system), in accordance with applicable design properties, for minimizing emissions over the anticipated range of operating conditions at least to the level required to achieve compliance with the applicable requirements. The reasonable assurance of compliance will be assessed by maintaining performance within the indicator range(s) or designated condition(s). The ranges must be established in accordance with the design and performance requirements in this rule and documented in accordance with the requirements in OAR 340-212-0220. If necessary to assure that the control device and associated capture system can satisfy this criterion, the owner or operator must monitor appropriate process operational parameters (such as total throughput where necessary to stay within the rated capacity for a control device). In addition, unless specifically stated otherwise by an applicable requirement, the owner or operator must monitor indicators to detect any bypass of the control device (or capture system) to the atmosphere, if such bypass can occur based on the design of the pollutant-specific emissions unit; |
|  | **340-212-0210(2)(d)(A)** | At a minimum, the owner or operator must design the period over which data are obtained and, if applicable, averaged consistent with the characteristics and typical variability of the pollutant-specific emissions unit (including the control device and associated capture system). Such intervals must be commensurate with the time period over which a change in control device performance that would require actions by owner or operator to return operations within normal ranges or designated conditions is likely to be observed; |
| **Submittal Requirements** | **340-212-0220** (2) | As part of the information submitted, the owner or operator must submit a justification for the proposed elements of the monitoring plans. If the performance specifications proposed to satisfy OAR 340-212-0210(2)(b) or (c) include differences from manufacturer recommendations, the owner or operator must explain the reasons for the differences. The owner or operator also must submit any data supporting the justification and may refer to generally available sources of information used to support the justification (such as generally available air pollution engineering manuals, or EPA or Department publications on appropriate monitoring for various types of control devices or capture systems). To justify the appropriateness of the monitoring elements proposed, the owner or operator may rely in part on existing applicable requirements that establish the monitoring for the applicable pollutant-specific emissions unit or a similar unit. If an owner or operator relies on presumptively acceptable monitoring, no further justification for the appropriateness of that monitoring should be necessary other than an explanation of the applicability of such monitoring to the unit in question, unless data or information is brought forward to rebut the assumption. Presumptively acceptable monitoring includes: |
|  | 220(2)(d) | Monitoring included for standards exempt from OAR 340-212-0200 through 340-212-0280 pursuant to OAR 340-212-0200(2)(a)(A) through (F) to the extent such monitoring is applicable to the performance of the control device (and associated capture system) for the pollutant-specific emissions unit; and |
|  | 220(3)(a) | Except as provided in section (4), the owner or operator must submit control device (and process and capture system, if applicable) operating parameter data obtained during the conduct of the applicable compliance or performance test conducted under conditions specified by the applicable rule. If the applicable rule does not specify testing conditions or only partially specifies test conditions, the performance test generally must be conducted under conditions representative of maximum emissions potential under anticipated operating conditions at the pollutant-specific emissions unit. Such data may be supplemented by engineering assessments and manufacturer's recommendations to justify the indicator ranges (or, if applicable, the procedures for establishing such indicator ranges). Emission testing is not required to be conducted over the entire indicator range or range of potential emissions; |
|  | **340-212-0220**(3)(b) | The owner or operator must document that no changes to the pollutant-specific emissions unit, including the control device and capture system, have taken place that could result in a significant change in the control system performance or the selected ranges or designated conditions for the indicators to be monitored since the performance or compliance tests were conducted. |
|  | **340-212-0220**(6) | (6) If a control device is common to more than one pollutant-specific emissions unit, the owner or operator may submit monitoring plans for the control device and identify the pollutant-specific emissions units affected and any process or associated capture device conditions that must be maintained or monitored in accordance with OAR 340-212-0210(1) rather than submit separate monitoring plans for each pollutant-specific emissions unit. |
|  | **340-212-0220**(7) | (7) If a single pollutant-specific emissions unit is controlled by more than one control device that is similar in design and operation, the owner or operator may submit monitoring plans that apply to all the control devices and identify the control devices affected and any process or associated capture device conditions that must be maintained or monitored in accordance with OAR 340-212-0210(1) rather than submit a separate description for each control device. |
|  | **340-212-**0250(4)(a) | Response to excursions or exceedances:(a) Upon detecting an excursion or exceedance, the owner or operator must restore operation of the pollutant-specific emissions unit (including the control device and associated capture system) to its normal or usual manner of operation as expeditiously as practicable in accordance with good air pollution control practices for minimizing emissions. The response must include minimizing the period of any startup, shutdown or malfunction and taking any necessary corrective actions to restore normal operation and prevent the likely recurrence of the cause of an excursion or exceedance (other than those caused by excused startup or shutdown conditions). Such actions may include initial inspection and evaluation, recording that operations returned to normal without operator action (such as through response by a computerized distribution control system), or any necessary follow-up actions to return operation to within the indicator range, designated condition, or below the applicable emission limitation or standard, as applicable; |
|  | **340-212-**0250(4)(b) | Determination of whether the owner or operator has used acceptable procedures in response to an excursion or exceedance will be based on information available, which may include but is not limited to, monitoring results, review of operation and maintenance procedures and records, and inspection of the control device, associated capture system, and the process; |
| **Hg Emission Standards** | **340-228-0606**(4)(b)(B) | (B) The mercury capture efficiency must be calculated using the Hg emissions determined using a mercury CEMS or sorbent trap monitoring system and the inlet mercury determined using the coal mercury content data obtained in accordance with subparagraph (4)(b)(A)(i) of this rule or the measured inlet mercury data obtained in accordance with subparagraph (4)(b)(A)(ii) of this rule and a calculation methodology approved by the Department. |
| **Quality Assurance and Operating Procedures for Sorbent Trap Monitoring Systems** | **340-228-0627**(5)(a)(A) | Sorbent Traps. The sorbent media used to collect Hg must be configured in a trap with three distinct and identical segments or sections, connected in series, that are amenable to separate analyses. Section 1 is designated for primary capture of gaseous Hg. Section 2 is designated as a backup section for determination of vapor-phase Hg breakthrough. Section 3 is designated for QA/QC purposes where this section must be spiked with a known amount of gaseous Hg0 prior to sampling and later analyzed to determine recovery efficiency. The sorbent media may be any collection material (e.g., carbon, chemically-treated filter, etc.) capable of quantitatively capturing and recovering for subsequent analysis, all gaseous forms of Hg for the intended application. Selection of the sorbent media must be based on the material’s ability to achieve the performance criteria contained in section (8) of this rule as well as the sorbent’s vapor phase Hg capture efficiency for the emissions matrix and the expected sampling duration at the test site. The sorbent media must be obtained from a source that can demonstrate the quality assurance and control necessary to ensure consistent reliability. The paired sorbent traps are supported on a probe (or probes) and inserted directly into the flue gas stream.  |
| **Flat Wood Coating** | **340-232-0220**  | (5) A capture system must be used in conjunction with the emission control systems in subsections (4)(b) and (c) of this rule. The design and operation of a capture system must be consistent with good engineering practice and shall be required to provide for an overall emission reduction sufficient to meet the emission limitations in section (3) of this rule. |
| Rotogravure | **340-232-0230** | (2) A capture system must be used in conjunction with the emission control systems in subsection (1)(c) of this rule. The design and operation of a capture system must be consistent with good engineering practice, and shall be required to provide for an overall reduction in volatile organic compound emissions of at least:(a) 75.0 percent where a publication rotogravure process is employed;(b) 65.0 percent where a packaging rotogravure process is employed; or(c) 60.0 percent where a flexographic printing process is employed. |
|  | **232-0230(1)(c)(A)** | A carbon absorption system which reduces the volatile organic emissions from the capture system by at least 90.0 percent by weight; |
|  | **232-0230(2)** | A capture system must be used in conjunction with the emission control systems in subsection (1)(c) of this rule. The design and operation of a capture system must be consistent with good engineering practice, and shall be required to provide for an overall reduction in volatile organic compound emissions of at least: |
| **Bulk Gasoline Terminals** | **340-232-0100**  | **Testing Vapor Transfer and Collection Systems** |
|  | **340-232-0100(2)**  | The owner or operator of a vapor collection system subject to this regulation shall design and operate the vapor collection system and the gasoline loading equipment in a manner that prevents |
|  | **340-232-0100(3)**  | (3) The Department may, at any time, monitor a gasoline tank truck, vapor collection system, or vapor control system, by the methods on file with the Department, to confirm continuing compliance with section (1) or (2) of this rule. |
|  | **340-232-0100(4)(a)**  | (a) The owner or operator of a source of volatile organic compounds subject to this rule shall maintain records of all certification testing and repairs. The records must identify the gasoline tank truck, vapor collection system, or vapor control system; the date of the test or repair; and if applicable, the type of repair and the date of retest. The records must be maintained in a legible, readily available condition for at least two years after the date of testing or repair was completed; |
| **Loading Gasoline onto Marine Tank Vessels** | **340-232-0110(3)** | Vapor Collection System. The owner or operator of a marine terminal subject to this rule must equip each loading berth with a vapor collection system that is designed to collect all displaced VOC vapors during the loading of marine tank vessels. The owner or operator of a marine tank vessel subject to this rule must equip each marine tank vessel with a vapor collection system that is designed to collect all displaced VOC vapors during the loading of marine tank vessels. The collection system must be designed such that all displaced VOC vapors collected during any loading event are vented only to the control device. |
| **Aerospace Component Coating Operations** | **340-232-0170(9)(b)** | A vapor collection and disposal system; or |
| **Minimum Emission Standards****(sulfite)** | **340-234-0410(3)** | Mills of less than 110 tons of air dried unbleached pulp per day may be exempted from the limitations of section (2) of this rule provided that a minimum of 80 percent collection efficiency for sulphur dioxide (SO2) is maintained. |
| **Definitions**  | **340-236-0010(6)** | "Collection Efficiency" means the overall performance of the air cleaning device in terms of ratio of material collected to total weight of input to the collector.  |
| **Reporting (aluminum)** | **340-236-0150(1)(g)** | Changes in collection efficiency of any portion of the collection or control system that resulted from equipment or process changes. |
| **Hot Mix Asphalt Control Facilities Required** | **340-236-0410**  | (1) No person shall operate any hot mix asphalt plant, either portable or stationary, located within any area of the state outside special control areas unless all dusts and gaseous effluents generated by the plant are subjected to air cleaning device or devices having a particulate collection efficiency of at least 80 percent by weight.  |
| **Definitions** | **340-240-0030 (2)** | "Air Conveying System" means an air moving device, such as a fan or blower, associated ductwork, and a cyclone or other collection device, the purpose of which is to move material from one point to another by entrainment in a moving airstream.  |
| **Definitions** | **340-240-0030 (5)** | "Collection Efficiency" means the overall performance of the air cleaning device in terms of ratio of weight of material collected to total weight of input to the collector. |
| **Air Conveying Systems (Medford-Ashland AQMA Only)** | **340-240-0130**  | All air conveying systems emitting greater than ten tons per year of particulate matter to the atmosphere must, with the prior written approval of the Department, be equipped with a control system with collection efficiency of at least 98.5 percent.  |
| **Air Conveying Systems****(La Grande Urban Growth Area)** | **340-240-0350(2)** | All air conveying systems emitting greater than ten tons of particulate matter to the atmosphere during any 12-month period beginning on or after January 1, 1990 must be equipped with a control system with a collection efficiency of at least 98.5 percent or equivalent control as approved by the Department. |