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§ 92.303 General provisions.

(a) Participation in the averaging, banking and trading program is voluntary. A manufacturer or remanufacturer may choose to involve some or all of its families in any or all aspects of the program.

(b) An engine family is eligible to participate in the certification averaging, banking, and trading program for NO_X and PM emissions if it is subject to regulation under this part with certain exceptions specified in paragraph (c) of this section. No averaging, banking and trading program is available for meeting the HC, CO, or smoke emission standards of this part.

(c) Locomotives and locomotive engines may not participate in the certification averaging, banking, and trading program if they are exported. Only locomotive and locomotive engines certified under this part are eligible for inclusion in this certification averaging, banking, and trading program.

(d) Averaging involves the generation of credits by a manufacturer or remanufacturer for use by that same manufacturer or remanufacturer in the same calendar year. A manufacturer or remanufacturer may use averaging during certification to offset an emission exceedance of an engine family caused by an FEL above the applicable emission standard, subject to the provisions of this subpart.

(e) Banking involves the generation of credits by a manufacturer or remanufacturer in a given calendar year for use in a subsequent model year. A manufacturer or remanufacturer may bank actual credits only after the end of the calendar year and after EPA has reviewed the manufacturer's or remanufacturer's end-of-year reports. During the calendar year and before submittal of the end-of-year report, credits originally designated in the certification process for banking will be considered reserved and may be redesignated for trading or averaging in the end-of-year report. Credits declared for banking from the previous calendar year that have not been reviewed by EPA may be used in averaging or trading transactions. However, such credits may be revoked at a later time following EPA review of the end-of-year report or any subsequent audit actions.

(f) Trading involves the sale of banked credits for use in certification of new locomotives and new locomotive engines under this part. Only banked credits may be traded; reserved credits may not be traded.

(g) Credit transfer involves the conveying of control over credits, as defined in § 92.302. Transferred credits can be used in averaging or in subsequent transfers. Transferred credits may also be reserved for later banking. Transferred credits may not be traded unless they have been previously banked.

§ 92.304 Compliance requirements.

(a) Manufacturers or remanufacturers wishing to participate in certification averaging, banking and trading programs shall select a FEL for each engine family they wish to include. The level of the FEL shall be selected by the manufacturer or remanufacturer, subject to the upper limits described in paragraph (k) of this section. An engine family certified to an FEL is subject to all provisions specified in this part, except that the applicable FEL replaces the applicable NO_X and PM emission standard for the family participating in the averaging, banking, and trading program.

(b) A manufacturer or remanufacturer may certify one or more engine families at FELs above or below the applicable emission standard, provided the summation of the manufacturer's or remanufacturer's projected balance of all credit transactions in a given calendar year is greater than or equal to zero, as calculated for each family under § 92.305 and reported under § 92.309.

(c) Manufacturers and remanufacturers certifying engine families with FELs exceeding the applicable emission standard shall obtain emission credits in amounts sufficient to address the shortfall. Credits may be obtained from averaging, banking, trading or transfer, subject to the restrictions described in this subpart.

(d) Manufacturers and remanufacturers certifying engine families with FELs below the applicable emission

standard may generate emission credits to average, bank, trade, or transfer, or a combination thereof.

(e) Credits may only be used for certification; they may not be used to remedy a violation of the FEL determined by production line or in-use testing. Credits may be used to allow subsequent production of engines for an engine family failing production line testing if the manufacturer elects to recertify to a higher FEL

(f) If an FEL is changed after initial certification in any given model year, the manufacturer/remanufacturer must conduct production line testing to verify that the emission levels are achieved.

(g) Manufacturers and remanufacturers participating in the averaging, banking and trading program must demonstrate compliance with the applicable emission standards at the end of the model year. Manufacturers and remanufacturers that have certified engine families to FELs above the applicable emission standards and do not have sufficient emission credits to offset the difference between the emission standard and the FEL for such engine family(ies) will be in violation of the conditions of the certificate of conformity for such engine family(ies). The certificates of conformity may be voided *ab initio* for those engine families.

(h) In the event of a negative credit balance resulting from a credit trade or transfer, both the buyer(s) and the seller(s) are liable, except in cases involving fraud. Certificates of all engine families participating in a negative trade may be voided *ab initio*.

(1) Where a buyer of credits is not responsible for causing the negative credit balance, it is only liable to supply additional credits equivalent to any amount of invalid credits that it used.

(2) Credit holders responsible for the credit shortfall may be subject to the requirements of § 92.309(g)(3).

(i) Averaging sets. This subpart includes separate programs for compliance with each type of cycle-weighted standards in § 92.8 (i.e., line-haul and switch). Credits generated over the line-haul duty-cycle may not be used for compliance with the switch duty-cycle, and credits generated over the switch duty-cycle may not be used for compliance with the line-haul duty-cycle.

(j) Cross tier credit exchanges. Cross tier credit exchanges for NO_X and PM emission credits may be exchanged between and among Tier 0, Tier 1, and Tier 2 engine families with the following exceptions:

(1) For 2005 and 2006 model year freshly manufactured locomotives, manufacturers may use PM credits for all of their freshly manufactured engine families. Manufacturers may use NO_X credits only for engine families that are projected to represent 75 percent or less of their total projected annual production of freshly manufactured locomotives. The remainder must comply with the Tier 2 NO_X emission standards without the use of credits.

(2) For 2007 and later model year freshly manufactured locomotives, manufacturers may use PM credits for all of their freshly manufactured engine families. Manufacturers may use NO_X credits only for engine families that are projected to represent 50 percent or less of their total projected annual production of freshly manufactured locomotives. The remainder must comply with the Tier 2 NO_X emission standards without the use of credits.

(3) Credits generated from remanufactured locomotives prior to January 1, 2002 and which are banked may only be used for compliance with the Tier 1 or later emission standards.

(k) Upper limits. The FELs for NO_X and PM for new locomotives and new locomotive engines certified to the Tier 1 and Tier 2 standards may not exceed the following values:

(1) Tier 1: the Tier 0 standards.

(2) Tier 2: the Tier 1 standards, except as noted in paragraph (j) of this section.

(l) Credit life shall be unlimited.

(m) Credits may be generated by any certifying manufacturer or remanufacturer and may be held by any of the following entities:

(1) Locomotive or locomotive engine manufacturers;

(2) Locomotive or locomotive engine remanufacturers;

(3) Locomotive or locomotive engine owners;

(4) Locomotive or locomotive engine operators; or

(5) Other entities after notification to EPA.

(n)(1) All locomotives that are certified to an FEL that is different from the emission standard that would otherwise apply to the locomotive or locomotive engine are required to comply with that FEL for the remainder of their service lives, except as allowed by § 92.8(a)(4)(iii) and this subpart.

(2) Manufacturers shall notify the purchaser of any locomotive engine that is certified to an FEL that is different from the emission standard that would otherwise apply that the locomotive or locomotive engine is required to comply with that FEL for the remainder of its service life.

(3) Remanufacturers shall notify the owner of any locomotive or locomotive engine that is certified to an FEL that is different from the emission standard that would otherwise apply that the locomotive (or the locomotive in which the engine is used) is required to comply with that FEL for the remainder of its service life.

[63 FR 18998, Apr. 16, 1998, as amended at 73 FR 59183, Oct. 8, 2008]

§ 92.305 Credit generation and use calculation.

(a) For each participating engine family, NO_X and PM emission credits (positive or negative) are to be calculated according to the following equation and rounded in accordance with ASTM E29–93a, to the nearest Megagram (Mg). Consistent units are to be used throughout the calculation.

(1) When useful life is expressed in terms of megawatt-hrs:

Credits for each engine family are calculated as: Emission credits=(Std − FEL) × (UL) × (Production) × (Fp) × (10^{-3} kW-Mg/MW-g).

(2) Where:

(i) Std=the applicable locomotive and locomotive engine NO_X and/or PM emission standard in grams per kilowatt-hour (exceptions: Std=0.43 g/kW-hr, for Tier 0 and Tier 1 PM line-haul credits; Std=0.59 g/kW-hr, for Tier 0 and Tier 1 PM switch credits; and Std=previous FEL in g/kW-hr, for locomotives that were certified to an FEL other than the standard during the previous useful life).

(ii) FEL=the family emission limit for the engine family in grams per kilowatt-hour. For Tier 1 and Tier 2 engine families, the FEL may not exceed the limit established in § 92.304(k) for each pollutant.

(iii) UL=the sales weighted average useful life in megawatt-hours, based on the sales weighted average horsepower of the engine family (or the subset of the engine family for which credits are being calculated), as specified in the application for certification.

(iv) Production=the number of locomotives or locomotive engines participating in the averaging, banking, and trading program within the given engine family during the calendar year (or the number of locomotives or locomotive engines in the subset of the engine family for which credits are being calculated). Quarterly production projections are used for initial certification. Actual applicable production/sales volumes are used for end-of-year compliance determination.

(v) F_p=the proration factor as determined in paragraph (c) of this section.

(b) When useful life is expressed in terms of miles or years, the useful life in terms of megawatt hours (UL) shall be calculated by dividing the useful life in miles by 100,000, and multiplying by the sales weighted average horsepower of the engine family. Credits are calculated using this UL value in the equations of paragraph (a) of this section.

(c) The proration factor is an estimate of the fraction of a locomotive's service life that remains as a function of age.

(1) The locomotive's age is the length of time in years from the date of original manufacture to the date at which the remanufacture (for which credits are being calculated) is completed, rounded to the next higher year.

(2) The proration factors for ages 1 through 32 are specified in Table D305–1 of this section. For locomotives or locomotive engines more than 32 years old, the proration factor for 32 year old locomotives shall be used.

(3) For replacement or repower engines, the proration factor is based on