

Rule 1406

Generation of Emission Reduction Credits for Paving Unpaved Public Roads

(A) General

(1) Purpose

- (a) The purpose of this Rule is to establish the procedures to ensure that PM₁₀ Emission Reduction Credits issued for the voluntary paving of unpaved public roads are Enforceable, Permanent, Quantifiable, Real, and Surplus.

(2) Applicability

- (a) This Rule shall apply to applicants subject to the requirements of District Rule 1303(B) for PM₁₀, who elect to generate Paving Emission Reduction Credits (PERCs) from the voluntary paving of unpaved public roads within the District, when such paving has occurred after [adoption date].

(3) Interactions with Other District Rules

- (a) The provisions of District Rule 1402 Sections (D) and (E) do not apply to PERCs issued pursuant to this Rule.
- (b) If there is a conflict between the provisions of this Rule and those of District Rule 1402, the provisions of this rule shall apply.
- (c) PERCs may be used as offsets in accordance with the provisions of District Regulation XIII – *New Source Review* subject to the limitations contained in Subsection (C)(6) herein.

(B) Definitions

For the purpose of this Rule, the definitions contained in District Rule 1401 shall apply unless the term is otherwise defined herein.

- (1) “Degraded” – A Roadway Segment with a pavement condition score of less than 30% according to the pavement condition analysis criteria listed in the American Association of State Highway and Transportation Officials (AASHTO) *Pavement Management Guide*, 2012, as determined by a state or local government with maintenance jurisdiction over the Roadway Segment.
- (2) “Enforceable” – Independently verifiable, program violations are defined, those liable can be identified, and the Administrator of the United States Environmental Protection Agency (USEPA) and the APCO can apply penalties and secure appropriate corrective action where applicable.

- (3) “Paving Emissions Reduction Credits” (PERCs) – Emissions Reduction Credits issued pursuant to this rule for the voluntary paving of unpaved public roads and subject to the use limitations contained in Subsection (C)(6) herein.
- (4) “Permanent” – Continuing or enduring for the duration of the new or modified facility or emission unit requiring PM₁₀ offsets pursuant to District Regulation XIII – *New Source Review*.
- (5) “PM₁₀ Attainment Status Designation” – The attainment status for PM₁₀ as designated by the USEPA in 40 CFR §81.305 and the attainment status for Suspended Particulate Matter (PM₁₀) as designated by the California Air Resources Board (CARB) in 17 CCR §60205.
- (6) “Quantifiable” – Able to be reliably and replicably measured by adhering to the quantification protocol set forth in Section (C)(3).
- (7) “Real” – Able to be demonstrated to have actually occurred.
- (8) “Roadway Segment” – A section of roadway between two definitive points, including but not limited to intersections, road ends or other demarcation points, which define a change in the roadway structure. The length of such segments shall be expressed in miles and tenths of miles.
- (9) “Surplus” – The amount of emission reductions from the paving of unpaved public roads that are, at the time of generation of an ERC, not otherwise required by federal, state, or local law, not required by any legal settlement or consent decree, and not relied upon to meet any requirement related to the California State Implementation Plan (SIP). Examples of federal, state, and local laws, and of SIP-related requirements, include, but are not limited to, the following:
 - (a) The federally-approved California SIP;
 - (b) Other adopted State air quality laws and regulations not in the SIP, including but not limited to, any requirement, regulation, or measure that:
 - (1) the District or the State has included on a legally-required and publicly-available list of measures that are scheduled for adoption by the District or the State in the future; or
 - (2) is the subject of a public notice distributed by the District or the State regarding an intent to adopt such revision;
 - (c) Any other source- or source-category specific regulatory or permitting requirement, including, but not limited to, Reasonable Available Control Technology (RACT), New Source Performance Standards (NSPS), National Emission Standards for Hazardous Air Pollutants (NESHAP), Best Available Control Measures (BACM), Best Available Control Technology (BACT), and the Lowest Achievable Emission Rate (LAER); and,
 - (d) Any regulation or supporting documentation that is required by the federal Clean Air Act but is not contained or referenced in 40 C.F.R. Part 52,

including but not limited to: assumptions used in attainment and maintenance demonstrations (including Reasonable Further Progress demonstrations and milestone demonstrations), including any proposed control measure identified as potentially contributing to an enforceable near-term emissions reduction commitment; assumptions used in conformity demonstrations; and assumptions used in emissions inventories.

(C) Requirements

(1) Applications

- (a) All applications for PERCs shall be submitted in writing and contain all the information required by the provisions of District Rule 1402 (B)(1)(b).
- (b) All applications for PERCs shall contain all of the following additional information:
 - (i) The name, address and telephone number of a responsible official for the applicant (the responsible official will be the addressee of all official correspondence regarding the application and PERCs;
 - (ii) The name and telephone number of a contact person for inquiries regarding the application and PERCs, if different than the responsible official;
 - (iii) Information identifying the particular new or modified facility or emissions unit requiring PM₁₀ offsets pursuant to District Regulation XIII – *New Source Review*.
 - (iv) Information sufficient to identify the source of the proposed PERCs, and the PM₁₀ Attainment Status Designation;
 - (v) Information sufficient to allow the calculations specified in this rule to be performed;
 - (vi) A statement from the applicant that the unpaved road(s) will be paved according to state or local government paving standards, as applicable;
 - (vii) A letter or agreement from the appropriate state or local government stating that each Roadway Segment:
 - a. Has been inspected;
 - b. Has been described as being either gravel- or non-gravel-surfaced;
 - c. Will be adopted into the state or local transportation network, if not already part of the network; and,
 - d. Will be maintained.
 - (viii) A statement from the applicant indicating that any necessary environmental review for the paving of each Roadway Segment required pursuant to the California Environmental Quality Act (CEQA) has been performed. Applicant shall provide a copy of such CEQA review upon District request.

- (c) All applications for PERCs shall also include a PERC Generation Plan that consists of the following:
 - (i) A list of unpaved roads proposed for paving, including: location; length(s); Roadway Segment identification(s); a map, diagram or aerial photograph with the specific segment(s) indicated;
 - (ii) Calculations that quantify vehicle miles traveled (VMT) for each Roadway Segment, including all supporting data from traffic counts performed pursuant to Section (C)(2); and,
 - (iii) Calculations that quantify emissions from each Roadway Segment before and after paving, including all results and supporting data from any source-specific testing performed pursuant to Section (F).
 - (d) No application for PERCs will be accepted until the applicable fees as specified in District Rule 313 are paid.
 - (e) Applications for PERCs may be withdrawn by the applicant in the same manner and pursuant to the same conditions as set forth in District Rule 1402(B)(1)(e).
- (2) Determination of VMT
- (a) VMT information required by subsection (C)(1)(c)(ii) shall be calculated using two separate traffic counts for each Roadway Segment, as follows:
 - (i) Each traffic count shall measure vehicular traffic over a 48-hour period, which may consist of two non-consecutive 24-hour periods.
 - a. For averaging within a traffic count, vehicular traffic shall be considered zero for each hour not monitored continuously during any given 24-hour period.
 - (ii) One traffic count shall be conducted on non-holiday weekdays, and one traffic count shall be conducted on a non-holiday weekend.
 - (iii) The VMT for each Roadway Segment shall be calculated by multiplying the time weighted average of the two separate traffic counts for that Roadway Segment by the Roadway Segment's length in miles to the nearest 1/10 of a mile.
- (3) Determination of Emissions
- (a) Emissions from unpaved and paved roads required by subsection (C)(1)(c)(iii) shall be calculated using the equations in Section (G), and as follows:
 - (i) The equations in Section (G) shall be used to determine the PM₁₀ emission factor (in terms of pounds per VMT) for each Roadway Segment in an unpaved and paved condition;
 - (ii) Any default values contained in Section (G) shall be used to calculate PM₁₀ emission factors, unless the applicant provides source specific values obtained in accordance with Section (F);

- (iii) The annual quantity of PM₁₀ emissions emitted from each Roadway Segment shall be calculated by multiplying the PM₁₀ emission factor by the annual VMT for each Roadway Segment as determined pursuant to subsection (C)(2); and,
 - (iv) The PM₁₀ emission reductions associated with paving an unpaved Roadway Segment shall be calculated as the difference, in tons per year, between the emissions from the road in the unpaved condition and the emissions from the road in the paved condition. Vehicle exhaust, brake wear and tire wear emissions cancel and are ignored for purposes of this calculation.
- (4) Procedure for Issuance of PERCs.
- (a) Determination of Completeness
 - (i) The APCO shall determine if the PERC application is complete or incomplete using the procedure set forth in District Rule 1402(B)(2) and determine that all additional information required pursuant to subsection (C)(1) has been provided.
 - (ii) The APCO shall use the procedure set forth in District Rule 1402(B)(2) to inform the applicant of the status of the application.
 - (b) Calculation of PERCs
 - (i) Upon the application being determined complete, the APCO shall calculate the amount of PERCs that may be generated for each Roadway Segment using the information provided in the PERC Generating Plan and the calculations set forth in Section (G).
 - (ii) The APCO shall determine whether to approve or disapprove the PERC Generation Plan in accordance with the standards set forth in Subsection (C)(5).
 - a. The APCO shall make this determination within thirty (30) days after the application for PERCs has been determined to be complete, or after such longer time as both the applicant and the APCO may agree upon in writing.
 - (iii) The APCO shall notify the applicant in writing of the determination.
 - a. If the determination is to approve the PERC Generation Plan, then the notice shall include the amount of PERCs that may be generated from each Roadway Segment; or
 - b. If the determination is to disapprove the PERC Generation Plan, then the notice shall include an explanation of the reason for the disapproval.
 - (c) Public Notice and Comment
 - (i) After the APCO has determined to approve the PERC Generation Plan the APCO shall publish a notice in at least one daily newspaper of general circulation within the District and shall send

a copy of the notice to USEPA, CARB and all persons who are included on a list of persons requesting notice, on file with the Clerk of the Board for the District.

- (ii) The notice shall provide the following:
 - a. The name and address of the applicant;
 - b. The identifying information and location of the new or modified facility or emissions unit which will be using the proposed PERCs as offsets;
 - c. A list of unpaved roads proposed for paving pursuant to the PERC Generation Plan including location(s), PM₁₀ Attainment Status Designation, and length(s) of Roadway Segment(s);
 - d. The name, address and telephone number of a person from whom additional information may be obtained;
 - e. The amount of PERCs proposed to be issued for each Roadway Segment upon completion of paving; and
 - f. At least a thirty (30) day period in which interested persons may submit written comments to the District regarding the approval of the PERC Generation Plan and proposed issuance of PERCs.
 - (iii) The APCO shall accept all comments received during the comment period. The APCO shall consider and respond to all comments prior to the approval of the PERC Generation Plan.
 - (iv) The APCO shall include all comments and responses along with the records regarding the approval of the PERC Generation Plan and the issuance of the PERCs in the records of the new or modified facility or emissions unit which uses the PERCs as offsets.
- (d) Approval/Disapproval of PERC Generation Plan
- (i) Upon the expiration of the public comment period; after review and response of comments accepted, if any; and upon payment of the appropriate analysis fee, if any; the APCO shall approve or disapprove the PERC Generation Plan and notify the applicant of such action in writing.
- (e) Demonstration of Completion of Paving Proposed Roadway Segments
- (i) Upon completion of paving of any Roadway Segment(s) specified in a PERCs Generation Plan, the applicant shall submit a summary report to the APCO that identifies the Roadway Segment(s) paved, provides the date paving was completed, and includes a copy of the local or state government's report evaluating the post-paving condition of each Roadway Segment.

- (f) Issuance of PERCs
 - (i) After the applicant demonstrates the completion of paving of all Roadway Segments contained in the PERC Generation Plan, the APCO shall issue the PERCs by including the appropriate information on the registration list and issuing a certificate pursuant to the provisions of District Rule 1402(B)(6).
- (5) Standards for Granting PERCs
 - (a) The APCO shall only issue PERCs pursuant to this Rule, if the emission reductions are Real, Quantifiable, Permanent, Enforceable and Surplus.
 - (b) The APCO shall only issue PERCs pursuant to this rule for a particular new or modified facility or emissions unit as identified pursuant to Subsection (C)(1)(b)(iii) and requiring PM₁₀ offsets pursuant to District Regulation XIII – *New Source Review* in the amount determined necessary for construction of the new or modified facility or emissions unit pursuant to the provisions of District Rule 1305.
 - (c) The APCO shall only issue PERCs pursuant to this rule if necessary environmental review required pursuant to CEQA for the paving of each Roadway Segment had been performed as part of any of the following actions:
 - (i) A discretionary approval regarding land use or any other permit required for the particular proposed new or modified facility; or
 - (ii) The official action accepting the proposed roadway segment into the appropriate state or local transportation network; or
 - (iii) The approval of PERCs pursuant to this Rule.
- (6) Use of PERCs
 - (a) PERCs may only be used by the applicant to provide offsets for a new or modified facility or emissions unit as identified pursuant to Subsection (C)(1)(b)(iii) requiring PM₁₀ offsets pursuant to District Regulation XIII – *New Source Review*.
 - (b) PERCs may only be used by the applicant to provide offsets if the location of the Roadway Segment generating the PERCs is in an area which has a PM₁₀ Attainment Status Designation that has an equal or higher nonattainment classification than the location of the new or modified facility or emissions unit as identified pursuant to Subsection (C)(1)(b)(iii).
 - (b) If the amount of PERCs granted is greater than the amount of offsets required for the new or modified facility or emissions unit, the excess PERCs shall be retired no more than one (1) year after the startup of the new or modified facility or emissions unit.

- (c) If the amount of PERCs granted is less than the amount of offsets required for the new or modified facility or emissions unit, then prior to issuance of the permit to operate, the applicant shall either:
 - (i) Obtain additional ERCs or PERCs pursuant to the provisions of this rule and District Regulation XIII, sufficient to make up the shortfall; or
 - (ii) Accept operational limitations such that the permitted emissions of the new or modified facility or emissions unit are equivalent to the amount of offsets surrendered.

(7) Maintenance of PERCs

- (a) After paving a given Roadway Segment(s), the applicant shall, not less frequently than once every two years, obtain a copy of the local or state government's report evaluating the condition of the paved Roadway Segment(s), and determine if the report indicates that the Roadway Segment(s) is Degraded. The applicant shall submit a copy of the report, and a statement identifying any and all Degraded Roadway Segments, to the APCO within 60 days of receipt of the report. Failure to submit the periodic reports required by this section shall result in the Roadway Segment being classified as Degraded.
- (b) Within 12 months of the submittal to the APCO of a statement identifying a Degraded Roadway Segment(s), or failure of such submittal, the applicant shall provide replacement emission reductions by:
 - (i) Repaving the Degraded Roadway Segment(s) identified in Subsection (C)(7)(a) and submitting a summary report as detailed in Section (C)(4)(c); or,
 - (ii) Surrendering ERC certificates issued pursuant to this rule or generating additional PERCs pursuant to the provisions of this rule equivalent to the total emission reductions approved by the APCO for the Degraded Roadway Segment(s).

(D) Additional Requirements for Already Completed Paving Projects

- (1) Notwithstanding the provisions of Subsection (A)(2)(a) an applicant subject to the requirements of District Rule 1303(B) which has submitted an application and has completed the voluntary paving of an unpaved public road within the District between August 27, 2007 and [adoption date] may generate PERCs if they comply with the following provisions:
 - (a) Applicant has submitted all information and fees required by Subsection (C)(1) to the District prior to the paving of the roadway segment; and
 - (b) VMT and emissions were calculated and determined in accordance with the provisions of Subsections (C)(2) and (C)(3); and

- (c) The PERC Generation Plan was determined complete, calculated, noticed and approved pursuant to the provisions of Subsections (C)(4)(a-d); and
- (d) The applicant has provided demonstration of completion of paving in accordance with the provisions of Subsection (C)(4)(e);
- (2) The PERCs shall be issued pursuant to the provisions of District Rule 1402(B)(6) subject to standards of Subsection (C)(5).
- (3) The PERCs may only be used subject to the provisions of Subsection (C)(6).

(E) Recordkeeping

- (1) The owner or operator shall maintain any and all records required by this Rule for at least thirty (30) years after the date of each entry, and required records shall be provided to District, state or federal personnel upon request.

(F) Test Methods

- (1) Roadway Segment surface material silt content shall be determined by using the methodologies specified in Appendices C.1 and C.2 of USEPA AP-42 "Compilation of Air Pollutant Emission Factors" – Fifth Edition. If an applicant performs any silt content analysis, or has such analysis performed on its behalf, the applicant must use the silt content determined from that analysis to calculate PM₁₀ emissions.

(G) Emissions Calculation Equations

- (1) Equation 1 (from USEPA AP-42 §13.2.2) shall be used to estimate the quantity of PM₁₀ emissions from unpaved roads, using the default values provided below or a Roadway Segment-specific value for *s*, as determined by the applicable method specified in Section (E):

$$\text{Equation 1: } E_u = \frac{(k) \left(\frac{s}{12}\right)^a \left(\frac{S}{30}\right)^d}{\left(\frac{M}{0.5}\right)^c}$$

where:

E_u = the unpaved road PM₁₀ emission factor with units of pounds per vehicle mile traveled

k = empirical constant (1.8 for PM₁₀) for units of lbs per VMT

s = the surface material silt content with units percent (a default value equal to 6.2 for gravel roads and 11.0 for non-gravel roads)

a = empirical constant (1 for PM₁₀)

S = the mean vehicle speed with units of miles per hour (a default value equal to 20 mph for all unpaved roads)

d = empirical constant (0.5 for PM₁₀)

M = surface material moisture content with units percent (a default value equal to 1)

c = empirical constant (0.2 for PM_{10})

- (2) Equation 2 (from USEPA AP-42 §13.2.1) shall be used to estimate the quantity of PM_{10} emissions from re-suspension of loose material on a road surface due to vehicle travel on a dry paved Roadway Segment after paving:

Equation 2: $E_p = k(sL)^{0.91}(W)^{1.02}$

where:

E_p = the paved road PM_{10} emission factor with units pounds per vehicle mile traveled

k = empirical constant (0.0022 for PM_{10}) for units of lbs per VMT

sL = the road surface silt loading with units of grams per square meter (a default value equal to 2.4 for all paved roads)

W = average weight of vehicles traveling the road with units of tons (a default value equal to 3.0 for all unpaved roads)

- (3) Calculation of Quantity of PM_{10} emissions

- (a) The PM_{10} emission reductions associated with paving an unpaved Roadway Segment shall be calculated as the difference, in tons per year, between the emissions from the road in the unpaved condition and the emissions from the road in the paved condition pursuant to Subsection (C)(3).