



**COUNTY OF SAN DIEGO**  
**AIR POLLUTION CONTROL DISTRICT**

**BOARD OF SUPERVISORS**

GREG COX  
First District

DIANNE JACOB  
Second District

PAM SLATER-PRICE  
Third District

RON ROBERTS  
Fourth District

BILL HORN  
Fifth District

**DATE:** August 6, 2008

**TO:** San Diego County Air Pollution Control Board

**SUBJECT:** PROPOSED NEW RULE 27.1 – FEDERAL REQUIREMENTS FOR THE SAN DIEGO COUNTY AIR POLLUTION CONTROL DISTRICT'S ALTERNATIVE MOBILE SOURCE EMISSION REDUCTION PROGRAM (District: All)

**SUMMARY:**

**Overview**

The federal Clean Air Act requires that the Air Pollution Control District New Source Review rules address increases in emissions from large new or modified sources by providing offsetting emission reductions. Federal, State, and local rules and regulations have reduced the availability and increased the cost of offsets from stationary sources. Consequently, there is substantial interest in making mobile source emission reduction credits available for use as federal emission offsets.

Adoption by the Air Pollution Control Board is requested for proposed new Rule 27.1 – Federal Requirements for the San Diego County Air Pollution Control District's Alternative Mobile Source Emission Reduction Program. In addition, authorization by the Air Pollution Control Board is requested to submit proposed new Rule 27.1 to the Environmental Protection Agency for approval and inclusion in the State Implementation Plan.

Proposed Rule 27.1 will allow use of already created mobile source emission reduction credits that were under a specified Air Pollution Control District alternative mobile source emission reduction program to be used as federal new source review offsets.

Proposed new Rule 27.1 and the underlying alternative mobile source emission reduction program have been requested by business to provide flexibility in creating emission offsets and improve offsets availability and cost-effectiveness.

**Recommendation(s)**

**CHIEF ADMINISTRATIVE OFFICER**

1. Find that it is certain there is no possibility that the proposed new Rule 27.1 may have a significant adverse effect on the environment, and that this action is exempt from the provisions of California Environmental Quality Act (CEQA) pursuant to California Code of Regulations, Title 14, Section 15061(b)(3).

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2. Find that an assessment of the socioeconomic impact of the adoption of the proposed new Rule 27.1 is not required by Section 40728.5 of the State Health and Safety Code because the adoption of the proposed new Rule 27.1 will not significantly affect air quality emissions or emission limitations.
3. Adopt a resolution titled Resolution Adopting Rule 27.1 into Regulation II of the Rules and Regulations of the San Diego County Air Pollution Control District.

**Fiscal Impact**

Proposed new Rule 27.1 will not have a fiscal impact on the Air Pollution Control District. There is no change in the Air Pollution Control District enforcement obligations from the existing underlying alternative mobile source emission reduction program, which remains in effect and is enforced by the Air Pollution Control District.

**Business Impact Statement**

The proposed rule is necessary to allow mobile source emission reduction credits already created under the existing Alternative Program to be used as federal new source review offsets. The proposed new rule will not adversely impact the business community.

**Advisory Board Statement**

There was no quorum at the June 11, 2008, meeting of the District Advisory Committee. Members present recommended adopting proposed new Rule 27.1.

**BACKGROUND:**

The federal Clean Air Act requires the Air Pollution Control District (District) to have New Source Review (NSR) rules to address significant increases from major sources of air pollution. One NSR provision requires that emissions from new or modified sources with a potential to emit 50 tons or more of oxides of nitrogen (NOx) per year offset emission increases by providing actual emission reductions that are 20% greater than the emission increase (1.2 to 1.0 offset ratio). NOx is a precursor to Ozone. The primary user of NOx emission offsets in San Diego are new electrical generating power plants, which generate power more efficiently and with lower associated emissions than the older power plants in the county.

To satisfy the offset provisions of federal NSR, actual emission reductions that meet federal requirements for offsetting emission increases must be provided. The actual emission reductions must be quantifiable, valid for the life of the project that is being offset, and surplus to all emission reductions required by federal, State, and District rules and regulations. In addition, the actual emission reductions must be federally enforceable. Persons needing emission offsets may obtain them by the purchase of transferable banked emission reduction credits that the District has certified as representing actual emission reductions that meet the federal requirements, the

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requirements, the credits having been previously created and banked by the actions of a third party.

The increasing stringency of federal, State, and District rules for stationary sources have made it difficult to identify cost-effective and surplus actual emission reductions from stationary sources. The limited supply of cost-effective emission offsets could significantly increase cost and adversely impact business expansion plans in San Diego. This includes the construction of newer, more efficient power plants that provide an overall environmental benefit.

To address this issue, on November 29, 2004 (APCB #1), the Air Pollution Control Board (Board) adopted Rule 27 – Banking of Mobile Source Emission Reduction Credits – to allow creation of short-term mobile source emission reduction credits (MERCs) from mobile sources. Although credits created through Rule 27 are useful in providing offsets for short-term or medium-term projects, they have not proved useful for offsetting normal industrial projects, which typically have lifetimes of 20 years or more. In recognition that additional flexibility in creating MERCs was needed beyond the specified programs, Rule 27 contains a provision, Subsection (c)(1)(vi), which authorizes the District to establish alternative MERC programs with the concurrence of the Air Resources Board (ARB).

As authorized by Rule 27(c)(1)(vi) and at the request of business, on September 8, 2000, the District, with the concurrence of ARB, established an Alternative MERC Program that allows the owners of certain existing mobile sources powered with diesel engines to voluntarily create and bank long-term MERCs for NO<sub>x</sub> by replacement of existing diesel-fueled vehicles with natural gas-fueled vehicles or replacement of existing diesel engines with low-emitting diesel engines (marine vessels only).

The Alternative Program allows creation of MERCs with sufficient lifetimes to be used to offset emission increases from typical new or modified stationary sources. The Alternative Program only allows the creation of MERCs for NO<sub>x</sub> and does not allow those credits to be used as interpollutant offsets (e. g., to offset emission increases of volatile organic compounds).

To date, approximately 78.6 tons of MERCs for NO<sub>x</sub> have been created and banked under the Alternative Program. Because the District’s NSR rules require federal offsets at a ratio of 1.2-to-1.0, there remains a net air quality benefit even after those credits are used to provide offsets. In addition, MERCs created thus far have provided an ancillary benefit of reducing diesel particulate emissions, a known human carcinogen. Thus, Rule 27.1 would promote, rather than conflict with or obstruct air quality plan implementation by the District.

Therefore, at the further request of business, the District now proposes to adopt new Rule 27.1, which incorporates certain specific elements of the Alternative Program with additions and revisions as necessary to satisfy EPA requirements and submit the adopted rule through ARB to EPA for EPA approval and inclusion into the State Implementation Plan (SIP). Since the time the Alternative Program was established the District has worked closely with EPA staff to

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determine the necessary elements of the Alternative Program for inclusion in the SIP and any revisions or additions to those elements.

On May 7, 2008, the District held a public workshop to discuss and receive comments on the proposed amended rule. No significant issues were raised.

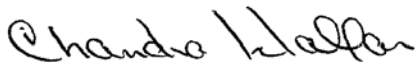
**Environmental Statement**

An Environmental Impact Report (EIR) was prepared and certified for the Alternative Program pursuant to the provisions of the CEQA at the time the Alternative Program was established. The EIR determined that there was no significant impact from the creation or use of MERCs under the Alternative Program. The Alternative Program remains fully in effect. Proposed new Rule 27.1 places additional requirements on the use of MERCs generated under the Alternative Program (EPA approval of any MERC that is used) further ensuring there is no significant environmental impact. Therefore, it can be seen with certainty that there is no significant adverse environmental impact from adopting proposed new Rule 27.1.

**Linkage to the County of San Diego’s Strategic Plan**

The County's five-year strategic plan includes an Environment Initiative to ensure environmental preservation and enhance quality of life. Rule 27.1 provides a net air quality benefit. The amended rule appropriately balances air quality preservation, public health protection, and economic development needs.

Respectfully submitted,



CHANDRA L. WALLAR  
Deputy Chief Administrative Officer



ROBERT KARD  
Air Pollution Control Officer

**ATTACHMENT(S)**

Attachment A – Resolution Adopting Rule 27.1 into Regulation II of the Rules and Regulations of the San Diego County Air Pollution Control District.

Attachment B – Comparative Analysis

Attachment C – Workshop Report

Attachment D – Alternative Program

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**AGENDA ITEM INFORMATION SHEET**

**CONCURRENCE(S)**

|   |   |   |
|---|---|---|
| <b>COUNTY COUNSEL REVIEW</b>                            | <input checked="" type="checkbox"/> Yes |   |
| Written disclosure per County Charter §1000.1 required? | <input type="checkbox"/> Yes            | <input checked="" type="checkbox"/> No  |
| <b>GROUP/AGENCY FINANCE DIRECTOR</b>                    | <input type="checkbox"/> Yes            | <input checked="" type="checkbox"/> N/A |
| <b>CHIEF FINANCIAL OFFICER</b>                          | <input type="checkbox"/> Yes            | <input checked="" type="checkbox"/> N/A |
| Requires Four Votes                                     | <input type="checkbox"/> Yes            | <input checked="" type="checkbox"/> No  |
| <b>GROUP/AGENCY INFORMATION TECHNOLOGY DIRECTOR</b>     | <input type="checkbox"/> Yes            | <input checked="" type="checkbox"/> N/A |
| <b>COUNTY TECHNOLOGY OFFICE</b>                         | <input type="checkbox"/> Yes            | <input checked="" type="checkbox"/> N/A |
| <b>DEPARTMENT OF HUMAN RESOURCES</b>                    | <input type="checkbox"/> Yes            | <input checked="" type="checkbox"/> N/A |

**Other Concurrence(s):** N/A

**ORIGINATING DEPARTMENT:** Air Pollution Control District, County of San Diego

**CONTACT PERSON(S):**

|                                    |       |
|------------------------------------|-------|
| <u>ROBERT KARD</u>                 | _____ |
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| <u>O-176</u>                       | _____ |
| Mail Station                       | _____ |
| <u>Robert.Kard@sdcounty.ca.gov</u> | _____ |
| E-mail                             | _____ |

**AUTHORIZED REPRESENTATIVE:** \_\_\_\_\_  
ROBERT KARD  
Air Pollution Control Officer

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**AGENDA ITEM INFORMATION SHEET**

(continued)

**PREVIOUS RELEVANT BOARD ACTIONS:**

November 29, 2004 (APCB #1), Adoption of New Rule 27 – Mobile Source Emission Reduction Credits, and Amendments to Existing Rule 21 – Permit Conditions.

**BOARD POLICIES APPLICABLE:**

N/A

**BOARD POLICY STATEMENTS:**

N/A

**CONTRACT AND/OR REQUISITION NUMBER(S):**

N/A

Re Rules and Regulations of the)  
Air Pollution Control District . . )  
of San Diego County . . . . . )

**RESOLUTION ADOPTING NEW RULE 27.1 – FEDERAL REQUIREMENTS FOR THE  
SAN DIEGO COUNTY AIR POLLUTION CONTROL DISTRICT’S ALTERNATIVE  
MOBILE SOURCE EMISSION REDUCTION PROGRAM APPROVED ON  
SEPTEMBER 8, 2000, INTO REGULATION II OF THE RULES AND REGULATIONS  
OF THE SAN DIEGO COUNTY AIR POLLUTION CONTROL DISTRICT**

On motion of Member Slater-Price, seconded by Member Jacob, the following resolution is adopted:

**WHEREAS**, the San Diego County Air Pollution Control Board, pursuant to Section 40702 of the Health and Safety Code, adopted Rules and Regulations of the Air Pollution Control District of San Diego County; and

**WHEREAS**, said Board now desires to amend said Rules and Regulations; and

**WHEREAS**, notice has been given and a public hearing has been held relating to the amendment of said Rules and Regulations pursuant to Section 40725 of the Health and Safety Code; and

**WHEREAS**, pursuant to section 40727 of the Health and Safety Code, the San Diego County Air Pollution Control Board makes the following findings:

- (1) (Necessity) The adoption of proposed new Rule 27.1 is necessary in order to increase the cost-effectiveness and supply of actual emission reductions for use as federal New Source Review offsets;
- (2) (Authority) The adoption of proposed new Rule 27.1 is authorized by Health and Safety Code sections 40001, 40702, 40709;
- (3) (Clarity) The proposed new Rule 27.1 can be easily understood by persons directly affected by it;
- (4) (Consistency) The adoption of proposed new Rule 27.1 is in harmony with, and not in conflict with or contrary to, existing statutes, court decisions, and State and federal regulations;
- (5) (Non-duplication) The adoption of proposed new Rule 27.1 will not duplicate existing District or federal requirements;

- (6) (Reference) The adoption of proposed new Rule 27.1 is necessary to implement Health and Safety Code section 40709 et seq. that requires the establishment of a banking system for emission reductions to be used to offset future emission increases.

**WHEREAS**, the Air Pollution Control Board further finds pursuant to Health and Safety Code section 40001 that proposed new Rule 27.1 will facilitate the attainment of ambient air quality standards; and

**WHEREAS**, the Air Pollution Control Board further finds that an assessment of socioeconomic impacts of the proposed new Rule 27.1, as required by Section 40728.5 of the State Health and Safety Code, is not required; and

**WHEREAS**, the Air Pollution Control Board further finds that an analysis comparing proposed new Rule 27.1 with applicable requirements of federal and local regulations has been prepared pursuant to the State Health and Safety Code Section 40727.2.

**NOW THEREFORE IT IS RESOLVED AND ORDERED** by the San Diego County Air Pollution Control Board that the Rules and Regulations of the Air Pollution Control District of San Diego County be and hereby are amended as follows:

1. Proposed new Rule 27.1 is to read as follows:

**RULE 27.1 FEDERAL REQUIREMENTS FOR THE SAN DIEGO COUNTY AIR POLLUTION CONTROL DISTRICT'S ALTERNATIVE MOBILE SOURCE EMISSION REDUCTION PROGRAM APPROVED ON SEPTEMBER 8, 2000 (date of adoption)**

**(a) APPLICABILITY**

(1) The requirements of this rule shall apply to owners of mobile sources that form the basis of a mobile source emission reduction credit (MERC) created under the San Diego County Air Pollution Control District's (District) program entitled, "Alternative Mobile Source Emission Reduction Program for Replacing Medium and Heavy Heavy-Duty Diesel Powered Vehicles and Repowering of Marine Vessels under Rule 27(c)(1)(vi)" as approved on September 8, 2000, hereinafter referred to as the "Alternative Program," and to the use of such credits by owners or operators of stationary sources to satisfy federal New Source Review (NSR) offset requirements. The following portions of the Alternative Program are incorporated herein by reference in their entirety:

- (i) Sections (d), (e), (h), and (o);
- (ii) Subsections (f)(1) and (f)(2); and



(iii) Subsections (c)(2), (c)(4), (c)(5), (c)(6), (c)(11), (c)(16), (c)(20), (c)(30), (c)(32), (c)(36), (c)(39), and (c)(40).

(2) Owners of the mobile sources that form the basis of a MERC shall satisfy all applicable requirements before a MERC is eligible to be used as a NSR offset.

**(b) CONDITIONS FOR USE AS NSR OFFSETS**

MERCs created under the Alternative Program shall be eligible for use to meet federal requirements only if all of the following conditions are satisfied:

- (1) The owner of the mobile source that generates the credit applied for the credit;
- (2) Credit has been granted only for emission reductions of oxides of nitrogen (NOx) determined according to Sections (d) and (e) of the Alternative Program;
- (3) The credit is generated by mobile sources that operate solely in San Diego County or Near-Shore San Diego Coastal Waters;
- (4) The credit is generated by one of the following mobile source emission reduction projects:
  - (i) Replacement of existing medium heavy-duty (MHD) vehicles that are powered with diesel-fueled compression-ignition engines with new MHD vehicles powered with spark-ignition or compression-ignition engines that are fueled with gaseous fuel;
  - (ii) Replacement of existing heavy heavy-duty (HHD) vehicles in refuse collection applications that are powered with diesel-fueled compression-ignition engines with new HHD vehicles powered with spark-ignition or compression-ignition engines that are dual fueled or fueled with gaseous fuel; or
  - (iii) Repowering of marine vessels that are powered with diesel-fueled compression-ignition engines with new compression-ignition engines that are fueled with diesel or an alternative clean fuel;
- (5) The credit is not used to satisfy any federal requirement except to provide NSR offsets for NOx emission increases as set forth at Clean Air Act §173;
- (6) The credit is not used as an interpollutant offset;
- (7) The credit is valid for the lifetime of the project for which it is surrendered to provide federal NSR offsets; and
- (8) The credit is only used pursuant to written authorization from the Air Division Director, United States Environmental Protection Agency, Region IX, to the Air Pollution

Control Officer, or their legal successors, finding that the credit is based on emission reductions that are real, quantifiable, surplus, permanent, and enforceable.

(c) **DEFINITIONS**

Terms used in this rule or in the incorporated portions of the Alternative Program but not defined in this Section (c) or in the incorporated portions of the Alternative Program shall have the same meaning as in Rule 2 - Definitions.

(1) "**Activity Metric**" means a parameter that is representative of the extent of a mobile source's use and, in conjunction with an emission factor, used to quantify emission reductions during a period of time. Activity metrics are vehicle miles traveled (VMT), volume or mass of fuel burned, or time of operation.

(2) "**Approved Enhanced Maintenance Program**" means a maintenance program approved by the California Air Resources Board that allows a higher baseline emission factor to be used in creating a MERC pursuant to Subsection (d) of the Alternative Program including any recordkeeping and reporting requirements of that program that are in addition to, or in more specificity, to those already required by this rule.

(3) "**Baseline Activity Level**" means the quantity of an activity metric used to quantify annual emissions generated within the District or Near-Shore San Diego County Waters by a mobile source during a baseline period.

(4) "**Compression-Ignition**" means relating to a type of engine with operating characteristics that are significantly similar to the theoretical Diesel combustion cycle. The absence of a throttle to regulate intake air flow for controlling power during normal operation is indicative of a compression-ignition engine.

(5) "**Diesel Fuel**" means any fuel that is commonly or commercially known, sold, or represented as diesel fuel No. 1-D or No. 2-D.

(6) "**Dual-Fuel Vehicle**" means a vehicle designed to be operated simultaneously on gaseous fuel and diesel fuel, or diesel fuel alone.

(7) "**Equivalent Mobile Sources**" means a group of mobile sources owned by the same person or persons for which a single MERC certificate has been issued representing the combined emission reductions of all the mobile sources in the group.

(8) "**Gaseous Fuel**" means fuel existing as a gas at standard conditions including, but not limited to, natural gas, methane, ethane, propane, butane, and gases stored as a liquid at high pressure such as liquefied petroleum gas.

(9) "**Heavy-Duty Vehicle**" means any motor vehicle having a manufacturer's gross weight rating greater than 6,000 pounds, except passenger cars.

(10) **"Heavy Heavy-Duty Vehicle"** means a heavy-duty vehicle that is propelled by a heavy heavy-duty engine as defined in 40 CFR § 86.085-2, as amended November 16, 1983.

(11) **"Low NOx Rebuild Engine"** means a Low NOx Rebuild Engine, as defined in the applicable Settlement Agreement.

(12) **"Low NOx Rebuild Kit"** means a Low NOx Rebuild Kit, as defined in the applicable Settlement Agreement.

(13) **"Low NOx Rebuild Program"** means the Low NOx Rebuild Program, as described in the applicable Settlement Agreement, except that the date by which a vehicle must be equipped with a Low NOx Rebuild Kit is modified under this alternative program to the sooner of the date an engine is deployed outside of San Diego County or the date the accumulated mileage or service event criteria specified in the applicable Settlement Agreement is satisfied.

(14) **"Medium Heavy-Duty Vehicle"** means a heavy-duty vehicle that is propelled by a medium heavy-duty engine, as defined in 40 CFR § 86.085-2, as amended November 16, 1983.

(15) **"MERC Activity Monitoring Period"** means the ten year period that a MERC is subject to activity monitoring. The MERC activity monitoring period begins on the first day of the first calendar quarter following the date the MERC is granted by the District.

(16) **"MERC Creation Date"** means the date on which the action is taken to create the emission reductions on which the MERC is based. For replacement of medium or heavy heavy-duty diesel powered vehicles, the MERC creation date is the date that the replacement vehicle is delivered to the owner of the vehicle that is being replaced. For repowering of marine vessels, the MERC creation date is the date that the vessel first takes to sea under the power of the replacement engine.

(17) **"MERC Project"** means one or more MERCs that are based on equivalent mobile sources.

(18) **"Mobile Sources that Form the Basis of the MERC "** means the mobile source, or group of equivalent mobile sources, that generates the emission reductions that are represented by the MERC, including all subsequent replacements or repowerings of those mobile sources.

(19) **"Near-Shore San Diego Coastal Waters"** means the area of water lying within all harbors, bays, inlets, and estuaries in the jurisdiction of the San Diego County Air Pollution Control District, and the area of water bounded by latitude N 33° 20' 10" on the north and by the oceanward extension of the United States-Mexico International Boundary on the south, and lying within 25 English statute miles oceanward of lines drawn in front of all harbors along the outermost works and installations thereof; 25 English statute miles oceanward of lines drawn from headland to headland across the mouth of each bay, inlet,

and estuary, regardless of the length of lines; and, where there are no harbors, bays, estuaries, or inlets, 25 miles oceanward of the lowest low-water mark on the shore.

(20) **"Ongoing Activity Metric"** means an activity metric that is not expected to change in magnitude between baseline operations and projected operations in a MERC Project, if the nature and operational mode of a mobile source's use does not change. Ongoing activity metrics include hours of operation and vehicle miles traveled.

(21) **"Projected Activity Level"** means the quantity of an activity metric that is used to quantify forecast annual emissions generated within the District or Near-Shore San Diego County Waters by a mobile source during its use in a proposed MERC Project.

(22) **"Settlement Agreement"** means one of the following, as applicable: Settlement Agreement Between the California Air Resources Board and Caterpillar Inc., as signed on December 15, 1998; Settlement Agreement Between the California Air Resources Board and Cummins Engine Company, Inc., as signed on December 15, 1998; Settlement Agreement Between the California Air Resources Board and Detroit Diesel Corporation, as signed on December 15, 1998; Settlement Agreement Between the California Air Resources Board and Mack Truck, Inc. & Renault V. I., s. a., as signed on December 15, 1998; Settlement Agreement Between the California Air Resources Board and Volvo Truck Corporation, as signed on December 15, 1998; or Settlement Agreement Between the California Air Resources Board and Navistar International Transportation Company, as signed on October 22, 1998.

**(d) DISPOSAL OF ORIGINAL ENGINES**

In all cases, the original engine of a mobile source that is repowered or replaced as part of a MERC project shall not be operated in San Diego County and shall be permanently removed from San Diego County or destroyed. For engines that are destroyed, the engines must be destroyed and disposed of in a manner that complies with all applicable federal, State, and local laws. For engines that are not destroyed, the engine shall be disposed of as specified in Subsections (d)(1) and (d)(2).

(1) For an original engine that is a Low NOx Rebuild Engine, the engine shall be sold and/or permanently relocated, separately or as part of a mobile source, to a location:

(i) Outside of California and Baja California, Mexico;

(ii) Within California but outside the boundaries of the South Coast Air Basin, provided that prior to beginning operations outside of San Diego County, the engine is equipped with a Low NOx Rebuild Kit in accordance with the applicable Low NOx Rebuild Program; or

(iii) Within the boundaries of the South Coast Air Basin, provided that prior to beginning operations outside of San Diego County, the engine is equipped with a Low NOx Rebuild Kit in accordance with the applicable Low NOx Rebuild Program, and

the mobile source's owner provides a demonstration approved by the Air Pollution Control Officer, the Air Resources Board, and the U. S. Environmental Protection Agency that the air quality of the South Coast Air Basin will not be degraded from the relocation and operation of the mobile source.

(2) For an original engine that is not a Low NO<sub>x</sub> Rebuild Engine, the engine shall be sold and/or permanently relocated, separately or as part of a mobile source, to a location:

(i) Outside of California and Baja California, Mexico;

(ii) Within California but outside the boundaries of the South Coast Air Basin; or

(iii) Within the boundaries of the South Coast Air Basin, provided that the engine was manufactured after October 1, 2002, and is certified to be in compliance with all applicable South Coast Air Quality Management District, State, and federal emission standards, and the mobile source's owner provides a demonstration approved by the Air Pollution Control Officer, the Air Resources Board, and the U. S. Environmental Protection Agency that the air quality of the South Coast Air Basin will not be degraded from the relocation and operation of the mobile source.

**(e) SUBSEQUENT REPLACEMENT OR REPOWERING OF MOBILE SOURCES THAT FORM THE BASIS OF MERC**

If a mobile source that forms the basis of a MERC granted under this Alternative Program is itself replaced or repowered at any time during the period of time a credit has been surrendered, or is eligible to be surrendered, to provide NSR offsets, the replacement or repowered mobile source must have an emission factor that is less than or equal to the smaller of the following two emission factors:

(1) The most stringent emission factor derived from any federal or California standard applicable to a new engine for the model year corresponding to the date of the replacement of the engine powering the replacement or repowered mobile source; or

(2) The emission factor of the mobile source that is replaced or repowered.

**(f) RECORDKEEPING AND REPORTING**

(1) For all replacement or repowered mobile sources that form the basis of a MERC, for 20 years following the first time the MERC is eligible to be surrendered to provide NSR offsets:

(i) The owner of the mobile source shall maintain calendar quarterly records of:

(A) Location(s) where the mobile source is parked, garaged, or docked when not in operation;

(B) Mobile source and mobile source engine identifications such as Vehicle Identification Number or Hull Number, engine manufacturer model designation, and engine serial number;

(C) Identification of key engine components such as turbocharger, injectors, fuel pump, and electronic control program version;

(D) Engine modifications;

(E) Sale, lease, accidental loss, repowering, or replacement, including the identity of the mobile source and mobile source engine involved, and the identity of any mobile source and mobile source engine replacing or repowering the mobile source;

(F) Source testing results and supporting information; and

(G) Engine maintenance.

(ii) On or before the last day of the month following each calendar quarter, the owner of the mobile source shall provide copies of the records specified in Subsections (f)(1)(i)(A) through (f)(1)(i)(F) for the preceding calendar quarter to the District and any owner of the MERC, or portion thereof, and any owner or operator of any stationary source for which the MERC, or a portion thereof, has been surrendered to provide a new source review offset.

(iii) For any mobile sources that are subject to an approved enhanced maintenance program, the owner of the mobile source shall provide records as specified in Subsection (f)(1)(ii), or more frequently if required by the approved enhanced maintenance program. In addition, the owner shall maintain any additional records in accordance with the approved enhanced maintenance program and provide copies of those records to the District and any owner of the MERC, or portion thereof, and any owner or operator of any stationary source for which the MERC, or a portion thereof, has been surrendered to provide a new source review offset.

(2) For all replacement or repowered mobile sources that form the basis of a MERC, beginning at the start of the MERC activity monitoring period and for each of the succeeding ten years, the owner of the mobile source or group of equivalent mobile sources shall maintain calendar quarterly records of:

(i) Activity level in a metric specified in the MERC, as approved by the Air Pollution Control Officer;

(ii) Fuel use;

(iii) Hours of operation for each mobile source in San Diego County; and

(iv) Number, duration, and nature of any trips outside of San Diego County and Near-Shore San Diego Coastal Waters for each mobile source.

On or before the last day of the month following each calendar quarter, the owner of the mobile source shall provide copies of these records for the preceding calendar quarter to the District and any owner of the MERC, or portion thereof, and the owner or operator of any stationary source for which the MERC, or a portion thereof, has been surrendered to provide a new source review offset. A cover letter signed by the owner of the mobile sources(s) must accompany the information and must state that the information is true, accurate, and complete.

(3) Beginning with the MERC creation date, for the period of time the MERC is eligible to be surrendered to provide NSR offsets, or would have been eligible for such surrender if it had not already been surrendered, the owner or operator of any mobile source that forms the basis of a MERC granted under this Alternative Program shall make the mobile source available for source testing upon written request of the Air Pollution Control Officer, the Air Resources Board, or the U. S Environmental Protection Agency.

(4) Each mobile source that forms the basis of a MERC shall be equipped with a nonresettable totalizing clock hour meter, a nonresettable totalizing odometer - except for marine vessels, and any other device specified by the Air Pollution Control Officer that is necessary to monitor ongoing emission reductions or mobile source employment.

(5) All records shall be maintained at the location the mobile source is parked, garaged, or docked, or, with the advanced written approval of the Air Pollution Control Officer, an alternative location. All records shall be maintained for a period of at least five years from the date of the record except that records required pursuant to Subsection (f)(2) shall be maintained for at least 15 years from the start of the on-going activity monitoring period.

**IT IS FURTHER RESOLVED AND ORDERED** that the subject amendments to Rule 27.1 of Regulation II shall take effect immediately upon adoption.

**PASSED AND ADOPTED** by the Air Pollution Control Board of the San Diego County Air Pollution Control District, State of California, this 6th day of August, 2008, by the following votes:

**AYES: Cox, Jacob, Slater-Price, Roberts, Horn**

STATE OF CALIFORNIA)  
County of San Diego)<sup>SS</sup>

I hereby certify that the foregoing is a full, true and correct copy of the Original Resolution entered in the Minutes of the Air Pollution Control Board.

THOMAS J. PASTUSZKA  
Clerk of the Air Pollution Control Board

By: *Catherine Santos*  
Catherine Santos, Deputy



Resolution No. 08-197  
Meeting date: 08/6/08 (AP1)



**COMPARATIVE ANALYSIS**

**PROPOSED NEW RULE 27.1 – FEDERAL REQUIREMENTS FOR THE  
SAN DIEGO COUNTY AIR POLLUTION CONTROL DISTRICT'S  
ALTERNATIVE MOBILE SOURCE EMISSION REDUCTION PROGRAM  
APPROVED ON SEPTEMBER 8, 2000**

**STATUTORY REQUIREMENTS**

Prior to adopting, amending, or repealing a rule or regulation, California Health and Safety Code Section 40727 requires findings of necessity, authority, clarity, consistency, non-duplication, and reference. As part of the consistency finding to ensure proposed rule requirements do not conflict with or contradict other Air Pollution Control District (District) or federal air pollution control requirements, Health and Safety Code Section 40727.2(a) requires the District to perform a written analysis identifying and comparing the air pollution control standards and other provisions of proposed new or amended rules with existing or proposed District rules and guidelines and existing federal rules, requirements, and guidelines applying to the same source category.

**COMPARATIVE ANALYSIS**

**Federal Air Pollution Control Requirements**

There is no applicable existing or proposed federal requirements for the source category addressed by proposed new Rule 27.1. The proposed new rule provides a mechanism that owners of mobile sources may use to create mobile emission reduction credits (MERCs) that are useable as federal new source review (NSR) emission offsets. The credits are created by replacing existing vehicles powered with diesel-fueled engines with new vehicles powered with natural-gas fueled engines or replacing diesel-fueled engines on marine vessels with new diesel-fueled engines. The rule does place some requirements on the disposal of the existing vehicles and engines. However, all federal requirements are only applicable to manufacturers of new diesel engines and are not applicable to in-use on-road vehicles or engines, or marine diesel engines.

**District Air Pollution Control Requirements**

Proposed new Rule 27.1 specifically only applies to owners of mobile sources that form the basis of a MERC created under the District's program titled, "Alternative Mobile Source Emission Reduction Program for Replacing Medium and Heavy Heavy-Duty Diesel Powered Vehicles and Repowering of Marine Vessels Under Rule 27 (c)(1)(vi)" (Alternative Program), as approved on September 8, 2000, and to persons using such MERCs to satisfy federal NSR offset requirements. Therefore, the only comparative analysis required for District rules is in reference to the Alternative Program. Proposed new Rule 27.1 incorporates some, but not all, of the elements of the Alternative Program and is proposed to be included in the State Implementation Plan (SIP). The Alternative Program is not being proposed for inclusion in the SIP. For reference, a copy of the Alternative Program is provided in Attachment D.

Pursuant to Health and Safety Code Section 40727.2(d), the elements that require review and comparison are provisions on emission limits, operating and work practice requirements and monitoring, recordkeeping, and reporting requirements. Both proposed new Rule 27.1 and the Alternative Program apply to the creation and use of MERCs under the Alternative Program. They both provide a mechanism for the creation and use of MERCs, but there is no emission limitations or operating and work practice standards in either measure. The substantive differences in the monitoring, recordkeeping, and reporting requirements are as follows:

- Proposed new Rule 27.1 requires that owners of the mobile sources generating MERCs maintain calendar quarterly records for 20 years of mobile source location, identification, sale, lease, loss, replacement, and repowering; engine identification, modifications, replacement, and maintenance; and, source test results. The Alternative Program requires the same records be maintained for the lesser of the lifetime of the credit or 20 years. [Rule 27.1(f)(1) and Alternative Program (n)(1)]
- Proposed new Rule 27.1 requires that the owners of the mobile sources generating the MERCs retain calendar quarterly records of mobile source activity levels (for example, fuel use and hours of operation) for 15 years from the beginning of the activity level monitoring period. The Alternative Program requires the same records be retained for five years from their date of creation. [Rule 27.1(f)(5) and Alternative Program (n)(8)]
- Proposed new Rule 27.1 does not address ongoing emission reduction calculation or reporting based on activity levels. For a person who uses a MERC created under the Alternative Program as an NSR offset, the Alternative Program requires the person to calculate ongoing emission reductions generated by the MERC, annually report them to the District, and notify the District of any emission reduction deficit resulting from insufficient activity levels during an emission reduction monitoring period. [Alternative Program (n)(3)]
- Proposed new Rule 27.1 does not address records of employment monitoring (the number of vehicles in service) for vehicles used to create MERCs. For the owner of a vehicle used to create a MERC under the Alternative Program, the Alternative Program requires calendar year employment monitoring records and an annual report of vehicle employment to the District and the owner or user of the applicable MERC. [Alternative Program (n)(4)]
- Proposed new Rule 27.1 does not address emission reduction deficits based on employment monitoring. For a person who uses a MERC as an NSR offset, the Alternative Program requires that the person notify the District of any emission reduction deficit from insufficient vehicle employment and provide a schedule to correct the deficit. [Alternative Program (n)(5)]

A further difference between proposed new Rule 27.1 and the Alternative Program is that proposed new Rule 27.1 requires written Environmental Protection Agency (EPA) approval prior to the use of a MERC to provide an NSR offset.

## **CONCLUSION**

The District has reviewed the provisions of proposed new Rule 27.1 and the Alternative Program, and prepared this written comparative analysis of the two measures pursuant to State Health and Safety Code Section 40727.2. The differences between the two measures are noted as required by Section 40727.2. The comparative analysis shows that, although proposed new Rule 27.1 requires EPA written approval prior to MERC use and requires longer record retention in some cases and omits some monitoring, recordkeeping, and reporting requirements contained in the Alternative Program, there are no conflicts or contradictions between proposed new Rule 27.1 and the Alternative Program.

**AIR POLLUTION CONTROL DISTRICT  
COUNTY OF SAN DIEGO**

**PROPOSED NEW RULE 27.1 – FEDERAL REQUIREMENTS FOR THE SAN DIEGO  
COUNTY AIR POLLUTION CONTROL DISTRICT’S ALTERNATIVE MOBILE  
SOURCE EMISSION REDUCTION PROGRAM APPROVED ON SEPTEMBER 8, 2000**

**WORKSHOP REPORT**

A workshop notice was mailed to all companies and government agencies in San Diego County that may be subject to the proposed new Rule 27.1 – Federal Requirements for the San Diego County Air Pollution Control District’s Alternative Mobile Source Emission Reduction Program Approved on September 8, 2000. Notices were also mailed to all Economic Development Corporations and Chambers of Commerce in San Diego County, the U.S. Environmental Protection Agency (EPA), the California Air Resources Board (ARB), and other interested parties.

The workshop was held on May 7, 2008, and was attended by nine people. The comments and District responses are provided below:

**1. WORKSHOP COMMENT:**

Does the phrase “owners of mobile sources that form the basis of a mobile source emission reduction credit (MERC)” refer to the owners of the physical mobile sources or the owners of the MERC generated by those mobile sources?

**DISTRICT RESPONSE:**

The phrase refers to the owners of the physical mobile sources.

**2. WORKSHOP COMMENT:**

Subsection (b)(8) of the proposed rule requires written EPA authorization before a MERC can be used. Can EPA approve the credits before they have approved the rule and incorporated it in the State Implementation Plan (SIP)?

**DISTRICT RESPONSE:**

Based on discussions with EPA staff, any approval of a MERC pursuant to Subsection (b)(8) cannot be final until the date the rule is formally incorporated into the SIP. However, EPA could review a MERC before that date and issue an approval contingent on their final approval of the rule and its incorporation in the SIP.

**3. WORKSHOP COMMENT:**

When will the proposed rule be incorporated in the SIP?

**DISTRICT RESPONSE:**

The District plans to submit the proposed rule for adoption to the San Diego Air Pollution Control Board (Board) in a public hearing as soon as possible. If the proposed rule is adopted by the Board, the adopted rule will subsequently be submitted to EPA, through ARB, for approval and incorporation into the SIP. The process to incorporate the rule into the SIP could be completed as quickly as three months from the date it is submitted to EPA based on discussions with EPA staff. However, both the Board adoption and EPA approval is contingent on their own considerations of the rule, including any public comments that might be received.

**4. WORKSHOP COMMENT:**

Can Subsection (b)(7) be clarified to indicate that, for a facility that has a permit condition requiring it to reduce emissions at some point in the future, the term “credit is valid for the lifetime of the project” can be interpreted to mean the credit need only be valid until the date emissions are limited in the future.

**DISTRICT RESPONSE:**

The District does not believe such a clarification is necessary. If a permit contains a practicably enforceable permit limit that, at some future date, reduces the potential to emit below an initially permitted level for the equipment covered by the permit, the District would consider one “project” to be operating the facility with the initial higher potential to emit and the operation after that future date at a lower potential to emit a second project. In this case, the lifetime of the first project would only be until the date the permit condition requires reducing the potential to emit. The lifetime of the second project would be considered unlimited.

In this situation, if emission offsets are required, sufficient emission reduction credits must be surrendered before the equipment begins operating that are valid for at least the lifetime of the first project to offset the initial higher potential to emit. Moreover, sufficient permanent emission reduction credits must be surrendered before the equipment begins operating to fully offset the second project. Some of the credits could fulfill the requirements for both projects if they were permanent.

For example, suppose an electrical generating plant has an initially permitted limit on oxides of nitrogen (NO<sub>x</sub>) emissions of 100 tons per year, but the plant’s permit contains a practicably enforceable condition requiring that NO<sub>x</sub> emissions be reduced to 50 tons per year 20 years after the plant begins operation. One-hundred twenty (120) tons of emission offsets would be required pursuant to new source review rules to offset the initial potential to emit of 100 tons for 20 years, and 60 tons of emission offsets would be required for all future operations after 20 years. Therefore, the plant owners would have to surrender a total of 120 tons of emission reduction

credits, either MERCs or traditional emission reduction credits, before the plant began operating. Of these credits, credits representing at least 60 tons of emission reductions would have to be permanent credits, while credits representing the remaining 60 tons of emission reductions could have a finite lifetime but would have to be valid for at least 20 years. All of these credits would be valid for the lifetime of the first project (offsetting 100 tons of NOx emissions for 20 years) and the permanent credits would be valid for offsetting the second project (offsetting 50 tons of emissions for the remainder of the plant's lifetime).

**5. WORKSHOP COMMENT:**

In Subsection (e)(1), does the term “most stringent emission factor” with respect to replacement engines mean the highest or lowest emission factor?

**DISTRICT RESPONSE:**

The most stringent emission factor is the lowest emission factor.

**6. WORKSHOP COMMENT:**

If an engine in one of the mobile sources forming the basis of a MERC is replaced with an engine with a lower emission factor, could additional MERC credits be generated?

**DISTRICT RESPONSE:**

Proposed new Rule 27.1 limits the types of projects that can be used to generate credits in Subsections (b)(4) to replacing existing medium heavy-duty (MHD) vehicles and existing heavy heavy-duty (HHD) vehicles in refuse collection applications that are powered with diesel-fueled compression-ignition engines with new vehicles powered with gaseous fuel, and the repowering of marine vessels that are powered with diesel-fueled compression-ignition engines with new compression-ignition engines that are fueled with diesel or an alternative clean fuel. No further MERC credits could be created by replacing engines (or vehicles) powering MHD or HHD vehicles in refuse collection that already form the basis of a MERC since those engines would already be gaseous-fueled and the project (replacing one gaseous-fueled engine with another) would not meet the criteria specified in Subsection (b)(4).

Potentially, an owner of the mobile source could apply for additional MERCs created by repowering a marine vessel that already forms the basis of a MERC with a lower emitting engine. However, only emission reductions that are surplus to existing or proposed federal or State regulations applicable to the marine engines used to repower the vessel at the time of that application could be claimed. In addition, any such credits would have to be approved before being used by EPA, pursuant to Subsection (b)(8) of the proposed new rule. Obtaining such an approval may be difficult, considering EPA's evolving position on the creation and use of MERCs in general.

**7. WORKSHOP COMMENT:**

Does the rule require records to be kept for 20 years or five years, and how would Rule 27.1 affect record retention required by the existing Alternative Program?

**DISTRICT RESPONSE:**

Subsection (f)(1) of proposed new Rule 27.1 requires calendar quarterly records for certain items or activities be collected and recorded for a period of 20 years from the date the MERC is eligible to be used to offset emissions. Each of these records must be retained for five years from the date they are created. The existing Alternative Program only requires that these same records be collected and recorded for the lesser of the lifetime of the credit or 20 years. They still have to be retained for a period of five years from the date of their creation. The more stringent requirement in proposed new Rule 27.1 would only affect MERCs with a lifetime less than 20 years.

Subsection (f)(2) of proposed new Rule 27.1 would require calendar quarterly records associated with activity monitoring be collected and recorded for a period of 10 years, which is the same requirement that is in the existing Alternative Program. However, the proposed new rule requires that all of these records be retained [Subsection (f)(5)] for a period of 15 years from the start of the activity monitoring period (or effectively until five years after the end of the 10-year activity monitoring period). The existing Alternative Program only requires that these records be retained for five years from the date of their creation.

**8. POSTWORKSHOP WRITTEN COMMENT:**

We are a holder of a MERC Certificate but we do not know the mobile sources for this MERC. The certificate was transferred to us by a third party entity. My understanding is that we do not have to do recordkeeping and reporting under this circumstance. If this is not true, what is our obligation under this new rule, if any?

**DISTRICT RESPONSE:**

You are correct that you are not required to do any recordkeeping or reporting by virtue of simply being the owner of the MERC since you do not own or operate any of the mobile sources that form the basis of the MERC. However, should you use the MERC (i.e., surrender it to provide NOx emission offsets pursuant to new source review requirements) within 10 years of its date of issuance, you would have to perform calculations to determine if the emission reductions represented by the MERC are actually being achieved by the mobile sources. These calculations would be based on the activity level monitoring that is required for the owners of the mobile source or sources forming the basis of the MERC. You should currently be receiving quarterly reports on the activity level monitoring from those owners.

**9. EPA COMMENT:**

The current proposed title of Rule 27.1 — "Federal Requirements for Owners Of Mobile Sources that Generate Credits Under the San Diego County Air Pollution Control District's 'Alternative Mobile Source Emission Reduction Program For Replacing Medium And Heavy Heavy-Duty Diesel Powered Vehicles and Repowering of Marine Vessels Under Rule 27(c)(1)(vi) as Approved on September 8, 2000, and Conditions For Use of Such Credits" is unreasonably long and cumbersome. This appears to be more a description of the rule, rather than a title. We recommend changing the rule title to "Alternative MERC Program" or some other short descriptive phrase, and then adding a definition for this term that consists of the current proposed rule title.

**DISTRICT RESPONSE:**

The District has changed the rule title to "Federal Requirements for the San Diego County Air Pollution Control District's Alternative Mobile Source Emission Reduction Program Approved on September 8, 2000."

**10. EPA COMMENT:**

Subsection (b)(5) contains a reference to Rule 20.3, Major Stationary Sources and PSD Stationary Sources, which is not approved into the San Diego SIP. We generally cannot approve rules that contain references to other non-SIP approved rules. To resolve this issue, EPA suggests deleting all of the language after "Clean Air Act §173."

**DISTRICT RESPONSE:**

The District agrees. Subsection (b)(5) as been revised accordingly.

**11. EPA COMMENT:**

Subsections (d)(1)(i) and (d)(2)(i) should be revised to properly identify "Baja California" as "Baja California, Mexico."

**DISTRICT RESPONSE:**

The District agrees. Subsections (d)(1)(i) and (d)(2)(i) have been revised accordingly.



**12. EPA COMMENT:**

We recommend revising sections (d)(1)(iii) and (d)(2)(iii) to clarify if the term "Air Pollution Control Officer" is the officer for the District or the South Coast Air Quality Management District.

**DISTRICT RESPONSE:**

The term "Air Pollution Control Officer" in Subsections (d)(1)(iii) and (d)(2)(iii) refers to the Air Pollution Control Officer of the San Diego County Air Pollution Control District. In addition, the District has added a reference to Rule 2 – Definitions in Section (c) for terms not otherwise defined in the rule, such as "Air Pollution Control Officer."

**13. EPA COMMENT:**

The last sentence in section (f)(1) states that "for any mobile sources that are subject to an approved enhanced maintenance program, the owner of the mobile source shall provide copies of these records in the manner specified in the enhanced maintenance program." EPA notes that the MERC certificates specifically excludes the submittal of maintenance records and instead requires them to be maintained on site. To clarify the language in this section, please provide a definition of what constitutes an "enhanced maintenance program," and revise the wording to clarify which records specifically need to be maintained for mobile sources subject to the enhanced maintenance program.

**DISTRICT RESPONSE:**

The District has clarified Section (f)(1) to indicate that an enhanced maintenance program might require additional recordkeeping and additional or more frequent reporting. In addition, a definition of the term "approved enhanced maintenance program" has been added to Section (c). The District notes that the MERC certificates applicable to the creation of MERCs partially based on an enhanced maintenance program require that the owner of the mobile source(s) that form the initial basis of the MERC to maintain the mobile source(s) in accordance with the maintenance and anti-tampering procedures of the enhanced maintenance program. For purposes of this rule and the Alternative Program, the District interprets the term "procedures" to include the additional recordkeeping and reporting required by the enhanced maintenance program.

**14. EPA COMMENT:**

Section (f)(4) of the proposed rule states that "each mobile source that forms the basis of a MERC shall be equipped with a nonresettable totalizing clock hour meter, a nonresettable totalizing odometer — except for marine vessels, and any other device specified by the Air Pollution Control Officer that is necessary to monitor ongoing emission reductions or mobile source employment." It is not clear if the phrase "except for marine vessels" only applies to the requirement for the odometer or also the clock hour meter. We recommend revising this

language to clarify which types of mobile sources are to be equipped with which types of monitoring devices.

**DISTRICT RESPONSE:**

The District disagrees. The District believes that Section (f)(4) is clear as written since the phrase “—except for marine vessels” occurs inside the series rather than at the end of the series, and also is clearly included only with the series element concerning odometers. Marine vessels are not required to install odometers to comply with Section (f)(4).

**15. EPA POSTWORKSHOP COMMENT:**

As you are aware, the fundamental purpose of proposed Rule 27.1 is to ensure federal enforceability of the MERCs that were used for the Otay Mesa power plant project. We have determined that because the Authority to Construct (ATC) refers back to various portions of the "Alternative MERC Program...." as approved on September 8, 2000, and these portions are necessary to ensure compliance and thus enforceability, it will also be necessary to include these various portions into Rule 27.1. These portions may be included by inserting the text of the specific portions or by including them in the rule by reference, and including an Appendix to the rule—with the Appendix consisting of the Alternative MERC program.

Based on our review, we believe the following portions of the Alternative MERC program must be included in proposed Rule 27.1:

1. Section (c), to the extent necessary
2. All of Section (d)
3. All of Section (e)
4. Sections (f)(1) and (f)(2)
5. All of Section (h)
6. All of section (o)

**DISTRICT RESPONSE:**

The District agrees. Section (a) has been revised to incorporate the recommended portions of the Alternative Program by reference (i.e., portions of “Alternative Mobile Source Emission Reduction Program for Replacing Medium and Heavy Heavy-Duty Diesel Powered Vehicles and Repowering of Marine Vessels under Rule 27 (c)(1)(vi)” as approved on September 8, 2000).

**16. ARB COMMENT:**

There were no comments from ARB.

SAN DIEGO AIR POLLUTION CONTROL DISTRICT

ALTERNATIVE MOBILE SOURCE EMISSION REDUCTION  
PROGRAM FOR REPLACING MEDIUM AND HEAVY HEAVY-DUTY DIESEL  
POWERED VEHICLES AND REPOWERING OF MARINE VESSELS  
UNDER RULE 27(c)(1)(vi)

Except as provided for below all relevant provisions of Rule 27 are applicable to MERCs applied for and granted under this alternative program.

**(a) Applicability**

Mobile source emission reduction credits (MERCs) may be created under this alternative mobile source emission reduction program only if all of the following conditions are satisfied:

- (1) Application for the credit is made by the owner of the mobile source that generates the credit;
- (2) Credit is only granted for oxides of nitrogen (NO<sub>x</sub>);
- (3) The credit is generated by mobile sources that operate solely in San Diego County or Near-Shore San Diego Coastal Waters; and
- (4) The credit is generated by one of the following mobile source emission reduction projects:
  - (i) Replacement of existing medium heavy-duty (MHD) vehicles that are powered with diesel-fueled compression-ignition engines with new MHD vehicles powered with spark-ignition or compression-ignition engines that are fueled with gaseous fuel;
  - (ii) Replacement of existing heavy heavy-duty (HHD) vehicles in refuse collection applications that are powered with diesel-fueled compression-ignition engines with new HHD vehicles powered with spark-ignition or compression-ignition engines that are dual fueled or fueled with gaseous fuel; or
  - (iii) Repowering of marine vessels that are powered with diesel-fueled compression-ignition engines with new compression-ignition engines that are fueled with diesel or an alternative clean fuel.

**(b) Limitations on Use**

MERCs granted under this alternative program may only be used to provide offsets for NO<sub>x</sub> emission increases pursuant to Rule 20.3 (d)(5). These credits shall not be used as interpollutant offsets.

(c) **Definitions**

(1) **"Activity Metric"** means a parameter that is representative of the extent of a mobile source's use and, in conjunction with an emission factor, used to quantify emission reductions during a period of time. Activity metrics are vehicle miles traveled (VMT), volume or mass of fuel burned, or time of operation.

(2) **"Average Ongoing Emission Reductions"** means the average emission reductions generated during a period of time within the District or Near-Shore San Diego County Waters by a mobile source during its use in an existing MERC Project.

(3) **"Baseline Activity Level"** means the quantity of an activity metric used to quantify annual emissions generated within the District or Near-Shore San Diego County Waters by a baseline mobile source.

(4) **"Baseline Emission Factor"** means the emission factor used to quantify annual emissions generated within the District or Near-Shore San Diego County Waters by a baseline mobile source.

(5) **"Baseline Mobile Source"** means, for marine vessels, the existing marine vessel powered with the existing diesel-fueled compression-ignition engine or, for MHD and HHD vehicles, a new vehicle powered with a new diesel-fueled compression-ignition engine.

(6) **"Beginning of the MERC Activity Averaging Period"** means the first day of the MERC activity monitoring period unless the owners or operators of a stationary source that have surrendered the MERC, or a portion thereof, to provide new source review offsets elect to begin the activity averaging period on a later alternative date. To elect a later alternative beginning date, the stationary source owners or operators must notify the District in writing before the end of the first stationary source ongoing emission reduction monitoring year. Any alternative beginning date elected must be the first day of a calendar quarter following the beginning of the activity monitoring period and not later than the earlier of the beginning of the stationary source ongoing emission reduction monitoring period or two years after the beginning of the MERC activity monitoring period.

(7) **"Compression-Ignition"** means relating to a type of engine with operating characteristics that are significantly similar to the theoretical Diesel combustion cycle. The absence of a throttle to regulate intake air flow for controlling power during normal operation is indicative of a compression-ignition engine.

(8) **"Diesel Fuel"** means any fuel that is commonly or commercially known, sold, or represented as diesel fuel No. 1-D or No. 2-D.

(9) **"Dual-Fuel Vehicle"** means a vehicle designed to be operated simultaneously on gaseous fuel and diesel fuel or diesel fuel alone.

(10) **"Equivalent Mobile Sources"** means mobile sources owned by the same person or persons and having identical emission factors; full value credit discount factors; extended credit lifetimes; ongoing emission reduction monitoring periods; and baseline, projected, and ongoing activity metrics. Mobile sources with different emission factors and full value credit discount factors may be considered equivalent mobile sources if the Air Pollution Control Officer can determine an average full value credit for the group of mobile sources that is equivalent to the sum of the full value credit for the individual mobile sources.

(11) **"Equivalent-use-MERC Mobile Sources"** means mobile sources owned by the same person or persons and having identical emission factors; full value credit discount factors; and baseline, projected, and ongoing activity metrics and that form the initial basis of one or more MERCs. Mobile sources that form the initial basis of a MERC with different emission factors and full value credit discount factors may be considered equivalent-use-MERC mobile sources if the Air Pollution Control Officer can determine an average full value credit for the group of mobile sources that is equivalent to the sum of the full value credit for the individual mobile sources.

(12) **"Equivalent-use Mobile Sources"** means mobile sources owned by the same person or persons and that are used in the same or closely similar types of operations.

(13) **"Gaseous Fuel"** means fuel existing as a gas at standard conditions including, but not limited to, natural gas, methane, ethane, propane, butane, and gases stored as a liquid at high pressure such as liquefied petroleum gas.

(14) **Heavy-Duty Vehicle"** means any motor vehicle having a manufacturer's gross weight rating greater than 6000 pounds, except passenger cars.

(15) **"Heavy Heavy-Duty Vehicle"** means a heavy-duty vehicle that is propelled by a heavy heavy-duty engine as defined in 40 CFR § 86.085-2, as amended November 16, 1983.

(16) **"Last Stationary Source Ongoing Emission Reduction Monitoring Year"** means the stationary source activity monitoring year after which no MERCs that were surrendered to offset the source's emissions are subject to activity monitoring.

(17) **"Low NOx Rebuild Engine"** means a Low NOx Rebuild Engine as defined in the applicable Settlement Agreement.

(18) **"Low NOx Rebuild Kit"** means a Low NOx Rebuild Kit as defined in the applicable Settlement Agreement.

(19) **"Low NOx Rebuild Program"** means the Low NOx Rebuild Program as described in the applicable Settlement Agreement except that the date by which a vehicle must be equipped with a Low NOx Rebuild Kit is modified under this alternative program to the sooner of the date an engine is deployed outside of San Diego County or the date the accumulated mileage or service event criteria specified in the applicable Settlement Agreement is satisfied.

(20) **"Maximum Number of Calendar Quarters in the Ongoing Emission Reduction Average"** means 40 less the number of calendar quarters from the beginning of the MERC activity monitoring period to the beginning of the MERC activity averaging period.

(21) **"Medium Heavy-Duty Vehicle"** means a heavy-duty vehicle that is propelled by a medium heavy-duty engine as defined in 40 CFR § 86.085-2, as amended November 16, 1983.

(22) **"MERC Activity Monitoring Period"** means the ten year period that a MERC is subject to activity monitoring. The MERC activity monitoring period begins on the first day of the first calendar quarter following the date the MERC is granted by the District.

(23) **"MERC Creation Date"** means the date on which the action is taken to create the emission reductions on which the MERC is based. For replacement of medium or heavy heavy-duty diesel powered vehicles, the MERC creation date is the date that the replacement vehicle is delivered to the owner of the vehicle that is being replaced. For repowering of marine vessels, the MERC creation date is the date that the vessel first takes to sea under the power of the replacement engine.

(24) **"MERC Fractional Employment"** means the fraction of the mobile sources that form the initial basis of a MERC that are employed during a calendar year. The MERC fractional employment is identical for one or more MERCs if the mobile sources that initially form the basis of each of those MERCs belong to a group of equivalent-use-MERC mobile sources.

(25) **"MERC Fractional Employment in Primary Service"** means the fraction of the mobile sources that form the initial basis of a MERC that are used in primary service during a calendar year. The MERC fractional employment in primary service is identical for one or more MERCs if the mobile sources that initially form the basis of each of those MERCs belong to a group of equivalent-use-MERC mobile sources.

(26) **"MERC Project"** means one or more MERCs that are based on equivalent mobile sources.

(27) **"MERC Employment Monitoring Period"** means the time period a MERC is subject to employment monitoring. The MERC employment monitoring period begins on the first day of the first calendar year following the date the MERC is granted by the District and lasts until the end of the calendar year in which the MERC's unextended lifetime ends.

(28) **"Mobile Source Employment Monitoring Period"** means the time period that a mobile source owner must monitor the employment of mobile sources that form the initial basis of one or more MERCs. The mobile source employment monitoring period begins when the earliest MERC employment monitoring period begins and ends on the latest date that a MERC employment monitoring period ends.

(29) **"Mobile Sources that Form the Basis of the MERC "** means the mobile source, or group of equivalent mobile sources, that generates the emission reductions that are represented by the MERC, including all subsequent replacements or repowerings of those mobile sources.

(30) **"Mobile Sources that Form the Initial Basis of the MERC "** means the mobile source, or group of equivalent mobile sources, that generates the emission reductions that are represented by the MERC, not including any subsequent replacements or repowerings of those mobile sources unless the replacement or repowering is due to accident.

(31) **"Near-Shore San Diego Coastal Waters"** means the area water lying within all harbors, bays, inlets, and estuaries in the jurisdiction of the San Diego County Air Pollution Control District and the area of water bounded by latitude N 33° 20' 10" on the north and by the oceanward extension of the United States-Mexico International Boundary on the south and lying within 25 English statute miles oceanward of lines drawn in front of all harbors along the outermost works and installations thereof; 25 English statute miles oceanward of lines drawn from headland to headland across the mouth of each bay, inlet, and estuary, regardless of the length of lines; and, where there are no harbors, bays, estuaries, or inlets, 25 miles oceanward of the lowest low-water mark on the shore.

(32) **"Ongoing Activity Level"** means the quantity of an ongoing activity level metric used to quantify ongoing annual emissions by a mobile source during its use in an existing MERC Project.

(33) **"Ongoing Activity Metric"** means an activity metric that is not expected to change in magnitude between baseline operations and projected operations in a MERC Project, if the nature and operational mode of a mobile source's use does not change. Ongoing activity metrics include hours of operation and vehicle miles traveled.

(34) **"Primary Service"** means that a vehicle is dispatched on a daily basis unless unavailable for service due to scheduled and unscheduled maintenance.

(35) **"Projected Activity Level"** means the quantity of an activity metric that is used to quantify forecast annual emissions generated within the District or Near-Shore San Diego County Waters by a mobile source during its use in a proposed MERC Project.

(36) **"Projected Emission Factor"** means the emission factor used to quantify forecast annual emissions generated within the District or Near Shore San Diego County Waters by a mobile source during its use in a proposed MERC Project.

(37) **"Reserve Service"** means that a vehicle is normally active and available for service, but is only used in the event a primary service vehicle is unavailable.

(38) **"Settlement Agreement"** means one of the following, as applicable: Settlement Agreement Between the California Air Resources Board and Caterpillar Inc., as signed on December 15, 1998; Settlement Agreement Between the California Air Resources Board and Cummins Engine Company, Inc., as signed on December 15, 1998; Settlement Agreement

Between the California Air Resources Board and Detroit Diesel Corporation, as signed on December 15, 1998; Settlement Agreement Between the California Air Resources Board and Mack Truck Inc. & Renault V. I., s. a., as signed on December 15, 1998; Settlement Agreement Between the California Air Resources Board and Volvo Truck Corporation, as signed on December 15, 1998; or Settlement Agreement Between the California Air Resources Board and Navistar International Transportation Company, as signed on October 22, 1998.

(39) **"Stationary Source Ongoing Emission Reduction Monitoring Period"** means the period of time beginning on the first day of the first calendar quarter after the stationary source commences operations and ending on the last day of the last stationary source activity monitoring year.

(40) **"Stationary Source Ongoing Emission Reduction Monitoring Year"** means one of the successive yearly periods beginning the first day of the stationary source ongoing emission reduction monitoring period and ending on the last day of the last stationary source ongoing emission reduction monitoring year.

**(d) MERC Quantification**

(1) Full Value Credit Quantification

For each mobile source or group of equivalent mobile sources, the full value credit amount is calculated from the following equation:

$$C_f = kD_f(A_b F_b - A_p F_p)$$

where:

$C_f$  = the full value credit amount, in tons per year;

$k = 1.1023 \times 10^{-6}$ , the conversion factor for converting grams to tons;

$D_f$  = a full value credit discount factor, equal to 0.7 for the replacement of HHD vehicles in refuse collection applications with dual-fueled HHD vehicles and equal to 1.0 in all other cases;

$A_b$  = the annual average baseline activity level, in appropriate units;

$A_p$  = the annual average projected activity level, in appropriate units;

$F_b$  = the emission factor for the baseline mobile source as specified in Section (e), in grams per unit activity level; and

$F_p$  = the projected emission factor for the replacement mobile source, in grams per unit activity level.

(2) Baseline Activity Level Quantification



Average baseline activity levels shall be determined as specified in (d)(2)(i)–(d)(2)(ii). In addition, for HHD and MHD vehicles, the average baseline activity level shall be adjusted to account for decreases, but not increases, in the activity level that would have occurred for the baseline vehicles over the vehicles’ useful life, considering both primary and reserve service operational categories.

(i) Unless an alternative representative period is determined by the Air Pollution Control Officer with the concurrence of the Air Resources Board, the average baseline activity level shall be determined from the average activity level of the most representative two consecutive year period during the five year period preceding the application for a MERC.

(ii) If insufficient information is available to determine a representative activity level from a two year average in accordance with Subsection (d)(2)(i), the Air Pollution Control Officer with the concurrence of the Air Resources Board may specify a shorter period, but not less than one year.

(3) Projected Activity Level Quantification

Projected activity levels shall be forecast from average baseline activity levels as specified in (d)(3)(i)–(d)(3)(iii). In addition, for HHD and MHD vehicles, the average projected activity level shall be adjusted to account for decreases, but not increases, in the activity level that would have occurred for the baseline vehicles over the vehicles’ useful life considering both primary and reserve service operational categories.

(i) For baseline activity levels quantified in volume or mass of diesel fuel burned, the corresponding projected activity level shall be quantified by the volume or mass of fuel burned and determined by equating the work represented by lower heating value of the baseline activity level combined with the baseline engine efficiency and the lower heating value of the projected activity level combined with the projected engine efficiency.

(ii) For baseline activity levels quantified in vehicle miles traveled or hours of operation, the projected activity level shall be the same as the baseline activity level.

**(e) Emission Factors**

(1) Medium and Heavy Heavy-Duty Vehicles Emission Factors

(i) Baseline Emission Factors

(A) For MERC creation dates before October 1, 2002, the baseline emission factors used for the replacement of medium and heavy heavy-duty vehicles shall be the applicable emission factor in Table 1 or an emission factor obtained by converting the applicable emission factor to alternate emission factor units in accordance with Subsection (e)(1)(iii). The baseline emission factor for HHD vehicles with standard maintenance shall be used for replacement of HHD diesel powered vehicles unless an enhanced maintenance program for the replacement vehicles has been approved by

the Air Pollution Control Officer, the Air Resources Board, and the U.S. Environmental Protection Agency for the MERC Project. Enhanced maintenance programs are not applicable to MHD vehicles.

**Table 1. Medium and Heavy Heavy-Duty Vehicle Baseline Emission Factors.**

| Engine Type and Maintenance   | Emission Factor             |                           |                          |
|---|-----------------------------|---------------------------|--------------------------|
|   | Emission Factor, g/(bhp hr) | Emission Factor, g/gallon | Emission Factor, g/(VMT) |
| Heavy Heavy-Duty Vehicles in Refuse Collection Applications with Standard Maintenance | 4.4                         | 81.4                      | Not applicable           |
| Heavy Heavy-Duty Vehicles in Refuse Collection Applications with Enhanced Maintenance | 5.4                         | 99.9                      | Not applicable           |
| Medium Heavy-Duty Vehicles with Standard Maintenance                                  | 4.0                         | 74                        | 10.4                     |

(B) Notwithstanding Subsection (e)(1)(i)(A), the Air Pollution Control Officer with the concurrence of the Air Resources Board and the U. S. Environmental Protection Agency, may require use of alternative emission factors on a case-by-case basis, but not to exceed the values in Subsection (e)(1)(i)(A), Table 1.

(C) For MERC creation dates on or after October 1, 2002, the baseline emission factors used for the replacement of medium and heavy heavy-duty vehicles shall be determined on a case-by-case basis by the Air Pollution Control Officer with the concurrence of the Air Resources Board and U. S. Environmental Protection Agency, but not to exceed the values in Subsection (e)(1)(i)(A), Table 1.

(ii) Projected Emission Factors

For replacement of medium and heavy heavy-duty vehicles, the projected emission factors used shall be the applicable certified emission factors for the engine powering the replacement vehicle expressed in grams per brake horsepower hour or an emission factor obtained by converting the certified emission factor to alternate emission factor units in accordance with Subsection (e)(1)(iii).

(iii) Conversion of Emission Factor Units

Unless an alternative conversion factor is determined by the Air Pollution Control Officer with the concurrence of the Air Resources Board and U.S. Environmental Protection Agency to be more representative for a mobile source, the applicable certified emission factor expressed in grams of NOx emitted per brake horsepower hour shall be converted to emission factors expressed in the alternate units listed in Table 2 by multiplying by the applicable conversion factor.

**Table 2. Conversion Factors for Heavy- Duty Vehicle Emission Factors.**

| Alternate Emission Factor Units   | Conversion Factor: Multiply the Emission Factor in Grams of NO <sub>x</sub> Emitted per Brake Horsepower Hour by the Conversion Factor to Obtain the Emission Factor in Alternate Units |
|---|---|
| Grams of NO <sub>x</sub> Emitted per Gallon of Diesel Fuel Combusted              | 18.5  |
| Grams of NO <sub>x</sub> Emitted per Standard Cubic Feet of Natural Gas Combusted | 0.1342  |
| Grams of NO <sub>x</sub> Emitted per Gallon of Liquefied Natural Gas Combusted    | 11.07   |
| Grams of NO <sub>x</sub> Emitted per Vehicle Mile Traveled                        | 2.6   |

The conversion factor to obtain emission factors expressed in units other than those in Table 2 shall be determined on a case-by-case basis by the Air Pollution Control Officer with the concurrence of the Air Resources Board and the U. S. Environmental Protection Agency.

(2) Marine Vessel Repowering

(i) Baseline Emission Factors

For repowering marine vessels, the baseline emission factor shall be the emission factor expressed in grams per gallon of fuel combusted determined for each engine in the MERC Project by a source test conducted in accordance with a protocol approved by the Air Pollution Control Officer, but not to exceed 370 grams per gallon of fuel combusted.

(ii) Projected Emission Factors Without Clean Fuel Credit

For repowering marine vessels without clean fuel credit, the projected emission factors expressed in grams per gallon of fuel combusted shall be:

(A) Determined from the information submitted to the U. S. Environmental Protection Agency and used to obtain certification for that model engine(s) powering the vessel;

(B) If the engine(s) have not been certified, determined from the information for that model engine submitted to the U. S. Environmental Protection Agency to obtain certification; or

(C) Determined from a source test of a representative number of engines conducted in accordance with a protocol approved by the Air Pollution Control Officer.

(iii) Emission Factors With Clean Fuel Credit

An applicant for a MERC under this alternative program may request additional credit based on the use of an alternative clean fuel. A clean fuel credit shall only apply if the MERC contains practicably enforceable conditions to ensure that only the clean fuel will be used in the marine engines participating in the MERC Project.

For repowering marine vessels with a clean fuel credit, the projected emission factors expressed in grams per gallon of fuel combusted shall be determined from a source test of a representative number of engines conducted in accordance with a protocol approved by the Air Pollution Control Officer, the Air Resources Board, and the U. S. Environmental Protection Agency. In addition, the applicant must submit a plan with the written approval by the Air Pollution Control Officer, the Air Resources Board, and the U. S. Environmental Protection Agency that at a minimum:

- (A) Demonstrates, based on historical records, the fuel properties of the baseline fuel (the fuel currently being used);
- (B) Establishes the properties of the proposed fuel;
- (C) Quantifies the amount of fuel used;
- (D) Identifies source test protocols to quantify the emission reductions from using the clean fuel;
- (E) Identifies source data to be used to quantify the emission reductions from using clean fuel; and
- (F) Provides any other information necessary to determine that the emission reductions are real and surplus.

**(f) Credit Lifetime**

(1) Unextended Credit Lifetime for Medium and Heavy Heavy-Duty Vehicles

(i) For replacement of MHD and HHD diesel-fueled compression-ignition engine powered vehicles, the unextended credit lifetime equals the useful lifetime of a new diesel-fueled compression-ignition engine powered vehicle in similar service. Except as provided in Subsection (f)(1)(ii) the useful lifetime for MHD and HHD diesel-fueled compression-ignition engines powered vehicles are eight and ten years, respectively.

(ii) A longer useful lifetime for MHD and HHD diesel-fueled compression-ignition engine powered vehicles than that allowed in Subsection (f)(1)(i) may be allowed provided that the Air Pollution Control Officer determines that, based on historical records of similar vehicles in similar applications, including, but not limited to, records of vehicle sales and purchases, maintenance, annual fuel use, and annual miles traveled, a longer useful lifetime is more representative of the vehicle fleet for which the MERC Project is proposed.

(2) Unextended Credit Lifetime for Marine Vessels

For repowering of marine vessels, the unextended credit lifetime equals 30 years.

(3) Extended Credit Lifetime For Initial Credit

(i) The unextended credit lifetime may be extended to a longer lifetime provided that:

(A) The unextended credit life is at least 7.5 years; and

(B) The credit is discounted from the full credit value by application of the following equations:

$$C_d = D_l \times C_f$$

$$D_l = T_l / T_e$$

where:

$C_d$  = the discounted credit value for an extended lifetime, in tons per year;

$D_l$  = the lifetime discount factor, not to exceed one;

$C_f$  = the full value credit amount, in tons per year;

$T_l$  = the unextended credit lifetime, in years; and

$T_e$  = the extended credit lifetime factor, not to exceed 30, in years.

(ii) If all the requirements of Subsection (f)(3)(i) are satisfied the credit lifetime shall be:

(A) Equal to the extended lifetime factor ( $T_e$ ) if the extended lifetime factor is less than 30 years; or

(B) Unlimited and permanent if the extended lifetime factor is equal to 30 years.

Once a MERC for a mobile source has been granted the credit lifetime shall not be changed except by application of the credit owner as described in Subsection (f)(4).

#### (4) Change of Credit Lifetime After Credit is Granted

A MERC's existing credit lifetime may be changed to a new credit lifetime after the credit is granted by application of the credit owner.

(i) For credits with an existing extended credit lifetime less than 30 years, the discounted credit value shall be further discounted by the following equation:

$$C_{dn} = D_l \times C_{de}$$
$$D_l = (T_{ee} - T_u) / T_{en}$$

where:

$C_{dn}$  = the new discounted credit value for an extended lifetime, in tons per year;

$C_{de}$  = the existing discounted credit value for an extended lifetime, in tons per year;

$D_l$  = the new lifetime discount factor, not to exceed the value of the full credit value,  $C_f$ , calculated pursuant to Subsection (d)(1) divided by the original discounted credit value,  $C_{de}$ ;

$T_u$  = the time elapsed since the beginning of the credit lifetime, in years;

$T_{ee}$  = the existing extended credit lifetime in years, not to exceed 30, in years; and

$T_{en}$  = the new extended credit lifetime factor, not to exceed 30, in years.

(ii) For credits with an existing lifetime equal to the unextended credit lifetime, the procedure in Subsection (f)(4)(i) is applicable with the existing extended credit lifetime set equal to the unextended credit lifetime.

(iii) For credits with an existing credit lifetime that is unlimited and permanent, the procedure in Subsection (f)(4)(i) is applicable with the existing extended credit lifetime set equal to 30 years.

(iv) For all credits with lifetimes changed pursuant to Subsection (f)(4) (i)–(iii), if the new credit lifetime is an extended credit lifetime that is longer than the unextended credit lifetime, all the requirements of Subsection (f)(3) must be satisfied.

(v) If the new extended credit lifetime factor is equal to 30 years, the credit lifetime shall be deemed unlimited and permanent.

#### (5) Lifetime of Refunded Credits

Any MERCs refunded pursuant to Subsection (m) shall retain their original lifetime except that MERCs with a pre-surrender lifetime that was extended pursuant to Subsection (f)(3) or (f)(4) to be unlimited and permanent shall be deemed to be a MERC with a lifetime equal to thirty years less the number of days elapsed between the beginning of the original MERC lifetime

and the date the application required pursuant to Subsection (m) is deemed complete. The lifetime of refunded MERCs shall begin on one of the following dates, as applicable:

(i) For refunded MERCs with a pre-surrender lifetime that was not extended pursuant to Subsection (f)(3) or (f)(4) to be unlimited and permanent and for which the lifetime began less than one calendar year from the first day of the first calendar quarter following the MERC creation date, the refunded MERCs lifetime shall begin on the same date as the pre-surrender lifetime.

(ii) For refunded MERCs with a pre-surrender lifetime that was not extended pursuant to Subsection (f)(3) or (f)(4) to be unlimited and permanent and for which the lifetime began more than one calendar year from the first day of the first calendar quarter following the MERC creation date, the refunded MERCs lifetime shall begin one calendar year from the first day of the first calendar quarter following the MERC creation date.

(iii) For refunded MERCs with a pre-surrender lifetime that was extended pursuant to Subsection (f)(3) or (f)(4) to be unlimited and permanent, the refunded MERCs lifetime shall begin on the date the application for refund was deemed complete.

The applicant may apply to have any refunded MERCs' lifetime changed pursuant to Subsection (f)(4).

(6) Start of Credit Lifetime

For credits with an unlimited lifetime, the lifetime begins on the date the credit is issued to the mobile source owner. For credits with a limited lifetime, the credit lifetime shall begin the sooner of:

(i) Two calendar years from the first day of the first calendar quarter following the MERC creation date; or

(ii) The date the credit is surrendered to provide offsets for a stationary source.

**(g) Disposal of Original Engines**

In all cases, the original engine of a mobile source that is repowered or replaced shall not be operated in San Diego County and shall be permanently removed from San Diego County or destroyed. For engines that are destroyed, the engines must be destroyed and disposed of in a manner that complies with all applicable federal, state, and local laws. For engines that are not destroyed, the engine shall be disposed of as specified in Subsections (g)(1)–(g)(2).

(1) For an original engine that is a Low NO<sub>x</sub> Rebuild Engine, the engine shall be sold and/or permanently relocated, separately or as part of a mobile source, to a location:

(i) Outside of California and Baja California;

(ii) Within California but outside the boundaries of the South Coast Air Basin provided that, prior to beginning operations outside of San Diego County, the engine is equipped with a Low NOx Rebuild Kit in accordance with the applicable Low NOx Rebuild Program; or

(iii) Within the boundaries of the South Coast Air Basin provided that, prior to beginning operations outside of San Diego County, the engine is equipped with a Low NOx Rebuild Kit in accordance with the applicable Low NOx Rebuild Program and the mobile source's owner provides a demonstration approved by the Air Pollution Control Officer, the Air Resources Board, and the U. S. Environmental Protection Agency that the air quality of the South Coast Air Basin will not be degraded from the relocation and operation of the mobile source.

(2) For an original engine that is not a Low NOx Rebuild Engine, the engine shall be sold and/or permanently relocated, separately or as part of a mobile source, to a location:

(i) Outside of California and Baja California;

(ii) Within California but outside the boundaries of the South Coast Air Basin; or

(iii) Within the boundaries of the South Coast Air Basin provided that, the engine was manufactured after October 1, 2002, and is certified to be in compliance with all applicable South Coast Air Quality Management District, state, and federal emission standards and the mobile source's owner provides a demonstration approved by the Air Pollution Control Officer, the Air Resources Board, and the U. S. Environmental Protection Agency that the air quality of the South Coast Air Basin will not be degraded from the relocation and operation of the mobile source.

#### **(h) Ongoing Emission Reduction Monitoring and Correction**

(1) Average Ongoing Emission Reductions

For each MERC, or portion thereof, that is surrendered to provide offsets for a stationary source, the average ongoing emission reduction for the stationary source ongoing emission reduction monitoring year shall be calculated from the following equation:

$$E_O = \frac{4C_{ms}}{nD_1A_{of}} \sum_{i=1}^n A_{oi}$$

where:

$E_O$  = the average ongoing emission reduction, in tons per year;

$C_{ms}$  = the value of the MERC, or portion thereof, in tons per year;



$i$  = and index that labels individual calendar quarters in the MERC activity averaging period;

$n$  = the lesser of the maximum number of calendar quarters in the ongoing emission reduction average or the number of quarters that have elapsed from the beginning of the MERC activity averaging period to the end of the stationary source ongoing emission reduction monitoring year;

$D_l$  = the lifetime discount factor for the MERC determined in accordance with Subsection (f)(3) or (f)(4);

$A_{of}$  = the forecast annual average ongoing activity level of the mobile sources that form the basis of the MERC, in appropriate units; and

$A_{oi}$  = the  $i$ 'th quarter's ongoing activity level of the mobile sources that form the basis of the MERC, in the same units as the forecast annual average ongoing activity level.

Using an appropriate ongoing activity metric, the forecast annual average ongoing activity level shall be determined in the same manner as an annual average baseline activity level is determined pursuant to Subsection (d)(2).

### (2) Aggregate Average Ongoing Emission Reductions

For each stationary source ongoing emission reduction monitoring year, the aggregate average ongoing emission reductions shall be calculated by the following equation:

$$E_{oa} = \sum_{i=1}^m E_{oi}$$

where:

$E_{oa}$  = the aggregate average ongoing emission reductions, in tons per year;

$i$  = an index labeling individual MERCs;

$m$  = the total number of individual MERCs surrendered by a stationary source to provide new source review offsets;

$E_{oi}$  = the average ongoing emission reductions for  $i$ 'th MERC, calculated in accordance with Subsection (h)(1).

### (3) MERC Emission Reduction Deficit

For each stationary source ongoing emission reduction monitoring year, the MERC emission reduction deficit, if any, shall be calculated by the following equation:

$$E_{Md} = a(1.2E_{pte} - C_{ssa}) - E_{oa}$$

where:

$E_{Md}$  = the annual emission reduction deficit, in tons per year;

$a$  = the ongoing activity level compliance factor given in Table 3;

$E_{pte}$  = the stationary source's potential to emit determined pursuant to Rule 20.1 (c); and

$C_{ssa}$  = the aggregate value of the stationary source credits already surrendered to provide offsets for the stationary source, in tons per year.

**Table 3. Ongoing Activity Level Compliance Factor**

| Number of years that have elapsed since the start of a stationary source's activity level monitoring period | Compliance factor |
|---|-------------------|
| 1   | 0.0               |
| 2   | 0.8               |
| 3   | 0.9               |
| 4 or more   | 1.0               |

(4) MERC Emission Reduction Deficit Correction

From the end of the ongoing emission reduction monitoring year in which a deficit occurs, the owner or operator of a stationary source that has a positive emission reduction deficit shall comply with the following schedule to correct the deficit:

(i) Within 6 calendar months submit an application to the District to sufficiently limit the stationary source's potential to emit to reduce the deficit in the ongoing emission reduction monitoring year to zero; and

(ii) Within 12 calendar months accept practicably enforceable permit conditions that limit the stationary source's potential to emit or surrender sufficient additional stationary source emission reduction credits granted under Rules 26.1–26.10 or sufficient MERCs that have a permanent and unlimited lifetime to reduce the deficit in the ongoing emission reduction monitoring year to zero.

For the sole purpose of determining if a deficit for a stationary source ongoing emission reduction monitoring year has been corrected, MERCs that are surrendered to the District before the end of the subsequent stationary source ongoing emission reduction monitoring year and that have an ongoing activity level monitoring period that begins after the end of the year in which the deficit occurred shall be treated as stationary source credits surrendered with a value equal to the credit value divided by the lifetime discount factor for the MERC when determining an annual emission reduction deficit in accordance with Subsection (h)(3).

(i) **Reserved**

(j) **Mobile Source Employment Monitoring**

The requirements of this Section shall apply to all MERC Projects based on HHD and MHD vehicles and shall not apply to MERC Projects based on marine vessels.

(1) **MERC Fractional Employment**

For each calendar year and for each group of equivalent-use-MERC mobile sources, the MERC fractional employment for each MERC that is represented by those mobile sources is calculated by:

$$f_e = \frac{\sum_{i=1}^m N_{ei}}{\sum_{i=1}^m N_{eci}}$$

where:

$f_e$  = the MERC fractional employment;

$i$  = an index labeling individual MERCs;

$m$  = the number of individual MERCs that are subject to employment monitoring with mobile sources and that are initially based on any mobile source in the group;

$N_{ei}$  = the number of equivalent-use-MERC mobile sources that form the initial basis of the  $i$ 'th MERC that are employed in a calendar year.

$N_{eci}$  = the number of equivalent-use-MERC mobile sources that form the initial basis of the  $i$ 'th MERC that were projected to be employed in the calendar year to calculate the full credit value.

In determining  $N_{ei}$  or  $N_{eci}$ , mobile sources employed for less than an entire calendar year shall be counted as a fraction. The fraction shall be determined by the dividing the sum of the number of calendar months the mobile source is in primary service status and the number of calendar months the mobile source is in reserve service status by 12.

(2) **MERC Fractional Employment in Primary Service**

For each calendar year and for each group of equivalent-use-MERC mobile sources, the MERC fractional employment in primary service for each MERC that is represented by those mobile sources is calculated by:

$$f_p = \frac{\sum_{i=1}^m N_{pi}}{\sum_{i=1}^m N_{pci}}$$

where:

$f_p$  = the MERC fractional employment in primary service;

$i$  = an index labeling individual MERCs;

$m$  = the number of individual MERCs that are subject to employment monitoring and that are initially based on any mobile source in the group;

$N_{pi}$  = the number of equivalent-use-MERC mobile sources that form the initial basis of the  $i$ 'th MERC that are employed in primary service in a calendar year.

$N_{pci}$  = the number of equivalent-use-MERC mobile sources that form the initial basis of the  $i$ 'th MERC that were projected to be employed in primary service in the calendar year to calculate the full credit value.

In determining  $N_{pi}$  or  $N_{pci}$ , mobile sources employed in primary service for less than an entire calendar year shall be counted as a fraction. The fraction shall be determined by the dividing the number of calendar months the mobile source is in primary service status by 12.

### (3) MERC Shortfall

In each calendar year during the mobile source employment monitoring period, for each group of equivalent-use-MERC mobile sources, a MERC shortfall occurs if:

- (i) The MERC fractional employment,  $f_e$ , is less than 0.8; or
- (ii) The MERC fractional employment in primary service,  $f_p$ , is less than 0.8.

### (4) MERC Shortfall Correction

From the end of the calendar year in which a MERC shortfall occurs for any group of equivalent-use-MERC mobile sources that form the initial basis of a MERC(s) that has been surrendered to provide new source review offsets for a stationary source, the owner or operator of the stationary source shall:

- (i) Within 3 calendar months, estimate the resulting MERC shortfall, and submit supporting documentation for the estimate to the district;
- (ii) Within 6 calendar months submit an application to the District to limit the stationary source's potential to emit to reduce the MERC shortfall to zero; and

(iii) Within 12 calendar months accept practicably enforceable permit conditions that limit the stationary source's potential to emit or surrender additional stationary source emission reductions credits granted under Rule 26.1–26.10 or sufficient MERCs to reduce the MERC shortfall to zero.

**(k) Subsequent Replacement or Repowering of Mobile Sources that Form the Basis of MERC**

If a mobile source that forms the basis of a MERC granted under this alternative program is itself replaced or repowered at any time during the credit lifetime, the replacement or repowered mobile source must have an emission factor that is less than or equal to the smaller of the following two emission factors:

(1) The emission factor derived from any federal or state standard applicable to a new engine powering the replacement or repowered mobile source; or

(2) The emission factor of the mobile source that is replaced or repowered.

**(l) Transference of MERCs**

MERCs granted under this emission reduction alternative program may be transferred in whole or in part by any means of written conveyance permitted by state law as specified in Rule 27 (c)(5) provided that the MERCs, under new ownership, meet all applicable criteria as set forth in this emission reduction alternative program and any applicable criteria of Rule 27. For purposes of this alternative program, the term "vehicle" in Rule 27 (c)(5) shall mean the same as the term "mobile source" as used in this alternative program. In addition to the information required by Rule 27 (c)(5), the baseline ongoing activity level and the lifetime discount factor shall be included on the portion of the credit transferred and portion retained, if any, by a credit owner.

**(m) Refunding Credits for Innovative Emission Controls**

MERCs surrendered to provide new source review offsets may be refunded to the stationary source owner provided that the following requirements are satisfied:

(1) The Air Pollution Control Officer, with the concurrence of the U. S. Environmental Protection Agency, determines that the project requiring new source review offsets has the potential to demonstrate innovative emission control technology that is a significant advance in emission control for a category of stationary sources;

(2) Within three calendar years after the facility commences operation, the owner or operator of the stationary source that surrendered the MERCs applies to the District for a refund of some or all of the MERCs, or portions thereof, used as offsets;

(3) The owner or operator of the stationary source demonstrates that the stationary source can achieve a permanent lower potential to emit such that offsets would not have been necessary if that lower potential to emit could have been demonstrated at the time the credits were surrendered;

(4) The owner or operator of the stationary source accepts practicably enforceable permit conditions that limit the source's potential to emit to the lower level; and

(5) The authority to construct granted for the project or the final determination of compliance for the project under Rule 20.5 contains conditions allowing a refund of MERCs in accordance with this Section.

**(n) Recordkeeping and Reporting**

(1) For all replacement or repowered mobile sources that form the basis of a MERC, for the lesser of the credit lifetime or 20 years, the owner of the mobile source shall maintain calendar quarterly records of:

(i) Location where the mobile source is parked, garaged, or docked when not in operation.

(ii) Mobile source and mobile source engine identifications such as Vehicle Identification Number or Hull Number, engine manufacturer model designation, and engine serial number;

(iii) Identification of key engine components such as turbocharger, injectors, fuel pump, and electronic control program version;

(iv) Engine modifications;

(v) Sale, lease, accidental loss, repowering, or replacement, including the identity of the mobile source and mobile source engine involved and the identity of any mobile source and mobile source engine replacing or repowering the mobile source;

(vi) Source testing results and supporting information; and

(vii) Engine maintenance.

Except for engine maintenance records, on or before the last day of the month following each calendar quarter, the owner of the mobile source shall provide copies of these records for the preceding calendar quarter to the District and any owner of the MERC, or portion thereof, and any owner or operator of any stationary source for which the MERC, or a portion thereof, has been surrendered to provide a new source review offset. In addition, for any mobile sources that are subject to an approved enhanced maintenance program, the owner of the mobile source shall provide copies of these records in the manner specified in the enhanced maintenance program.

(2) For all replacement or repowered mobile sources that form the basis of a MERC, beginning at the start of the MERC activity monitoring period and for each of the succeeding ten years, the owner of the mobile source or group of equivalent mobile sources shall maintain calendar quarterly records of:

- (i) Activity level in a metric specified in the MERC approval by the Air Pollution Control Officer;
- (ii) Fuel use;
- (iii) Hours of operation for each mobile source in San Diego County; and
- (iv) Number, duration, and nature of any trips outside of San Diego County and Near Shore San Diego Coastal Waters for each mobile source.

On or before the last day of the month following each calendar quarter, the owner of the mobile source shall provide copies of these records for the preceding calendar quarter to the District and any owner of the MERC, or portion thereof, and the owner or operator of any stationary source for which the MERC, or a portion thereof, has been surrendered to provide a new source review offset.

(3) Beginning with the start of the ongoing emission reduction monitoring period, the owner or operator of a stationary source that surrenders a MERC to provide new source review offsets shall, on or before the last day of the second calendar month following each stationary source ongoing emission reduction monitoring year:

- (i) For each ongoing emission reduction monitoring year, based on the quarterly activity levels submitted by the mobile source owners and the applicable calculation method specified in the alternative program, perform a calculation of the annual average and annual aggregate ongoing emission reductions and the ongoing emission reduction deficit for the MERCs used to offset the facility's emissions;

- (ii) Provide an annual report to the District that summarizes the annual average ongoing emission reductions for each MERC; aggregate ongoing emission reductions; and the ongoing emission reduction deficit and provides supporting calculations and documentation; and

- (iii) Notify the District if the calculated annual ongoing emission reduction deficit is positive and provide a compliance schedule to correct the ongoing emission reduction deficit in accordance with Subsection (h)(4).

(4) During the mobile source owner employment monitoring period, excluding marine vessels, for each mobile source that forms the initial basis of a MERC, the owner or operator shall maintain records of the nature and dates of changes in mobile source status from primary to reserve service or from reserve to primary service and the date any mobile source is sold, leased, replaced, repowered, lost by accident, or otherwise removed from the owner's fleet. In addition, the owner or operator shall maintain the following calendar year records:

- (i) For each mobile source in a group of equivalent-use–MERC mobile sources, records of the number of calendar months, or portions thereof, the mobile source was in primary service status and the number calendar months, or portions thereof, the mobile source was in reserve service status;
- (ii) For each group of equivalent-use–MERC mobile sources, records of the total number of mobile sources employed;
- (iii) For each group of equivalent-use–MERC mobile sources, the total number of mobile sources employed in primary service;
- (iv) For each MERC, records of the MERC fractional employment; and
- (v) For each MERC, records of the MERC fractional employment in primary service.

On or before January 31 of the following calendar year, the owner of the mobile source shall provide copies of these records for the preceding calendar year to the District and any owner of the MERC, or portion thereof, and the owner or operator of any stationary source for which the MERC, or a portion thereof, has been surrendered to provide a new source review offset.

(5) Beginning with the second calendar year following the calendar year that the facility commences operations, the owner or operator of a stationary source that surrenders a MERC to provide new source review offsets shall, on or before March 1 of each calendar year:

- (i) Based on information supplied by the mobile source owners for each MERC surrendered to the District to provide new source review offsets, notify the District if the MERC fractional employment is less than 0.8;
- (ii) Based on information supplied by the mobile source owners for each MERC surrendered to the District to provide new source review offsets, notify the District if the MERC fractional employment in primary service is less than 0.8; and
- (iii) If MERC fractional employment or fractional employment in primary service for any MERC is less than 0.8, provide a compliance schedule to correct the MERC(s) shortfall in accordance with Subsection (j)(4).

(6) For the duration of the credit lifetime, beginning with the MERC creation date, the owner or operator of any mobile source that forms the basis of a MERC granted under this alternative program shall make the mobile source available for source testing upon written request of the District, the Air Resources Board, or the U. S Environmental Protection Agency.

(7) Each mobile source that forms the basis of a MERC shall be equipped with a nonresettable totalizing clock hour meter, nonresettable totalizing odometer, or any other device specified by the Air Pollution Control Officer that is necessary to monitor ongoing emission reductions or mobile source employment.



(8) All records shall be maintained on-site or, with the advanced written approval of the Air Pollution Control Officer, an alternative location for a period of five years from the date of the record.

(9) The provisions of Rule 27 (d)(1) shall not apply to MERCs created under this alternative program.

**(o) Public Notice and Comment Period**

After receipt of a completed application for a MERC and after completing an evaluation of the application for compliance with applicable District rules and prior to approving granting of a MERC, the Air Pollution Control Officer shall cause to be published in at least one newspaper of general circulation within the District, and be sent to any individual submitting a written request to the Air Pollution Control Officer for notification, a notice stating the preliminary decision of the Air Pollution Control Officer to approve the creation of emission reduction credits and inviting written public comment for a thirty-day period following the date of publication. During or following this period, the Air Pollution Control Officer may elect to hold a public meeting to receive oral comments from the public.

The notice shall describe generally the nature and areas of operation of the mobile source that are the basis for the MERC and shall identify the location(s) where copies of the District evaluation, the MERC application, and related documents may be viewed. A copy of the notice, the District evaluation and the proposed MERC documents shall be provided to the U. S. Environmental Protection Agency and the Air Resources Board on or before commencement of the 30-day public comment period.

After considering all comments received, the Air Pollution Control Officer shall make a final decision within thirty days following the close of the comment period, or following a scheduled public meeting, if later.