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Thomas J. Christofk, Air Pollution Control Officer

MEMORANDUM

TO: Board of Directors, Placer County Air Pollution Control District

FROM: Don Duffy, Associate Air Quality Engineer

AGENDA DATE: October, 9, 2008

SUBJECT: Adoption of Rule 515, Stationary Rail Yard Control Emission Reduction Credits

(Action/Public Hearing)

Action Requested:

1) Conduct a Public Hearing regarding the proposed adoption of new Rule 515, <u>Stationary Rail</u> Yard Control Emission Reduction Credits

2) Approve and adopt all Findings and Recommendations found in the attached Attachment 2, and approve Resolution #08-09 (Attachment #1), thereby adopting Rule 515, Stationary Rail Yard Control Emission Reduction Credits

Background:

Placer County Air Pollution Control District has been working since 2004 to reduce emissions and health risk from the J. R. Davis Rail Yard in Roseville, CA. Among other things, the District initiated and led a project to demonstrate the use of traditional stationary control devices to clean up emissions from locomotives. This Advanced Locomotive Emission Control System (ALECS) project was completed last year with the issuance of the final report on April 2, 2007. A Phase II ALECS project is currently under way for durability testing of the emissions capture equipment. In looking forward toward implementation of ALECS, or similar equipment in the rail yard, the District is exploring a number of funding options to provide incentive to the Railroad Company to move in this direction. Some possibilities are state funding through the Goods Movement Program and/or the Air Quality Improvement Program, or the District's Clean Air Grant Program. Another funding option may be the sale of emission reduction credits (ERCs) generated by installation of these control devices in the rail yard. This proposed Rule 515 would be the protocol for quantifying, certifying, and banking these ERCs.

These emission reductions would be generated from mobile vehicles (locomotives) and the District's ERC rule (Rule 504) does not have provision for generating ERCs from mobile sources. Staff has been working with the California Air Pollution Control Officers Association (CAPCOA), the U. S. Environmental Protection Agency (EPA), and the California Air Resources Board (ARB) since mid-2004 on a class of ERCs called "non-traditional ERCs" with the rail yard application in mind. Staff has worked extensively with EPA over the past year to

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develop a rule that could receive EPA and ARB approval for incorporation into the State Implementation Plan (SIP).

Discussion:

Placer County Air Pollution Control District proposes to adopt a SIP approvable rule that provides opportunities to generate surplus PM₁₀/PM_{2.5}, NOx, SOx, and/or ROC emission reduction credits (ERC) that are federally recognized for use in the Non-attainment New Source Review Program through the addition of stationary control equipment to treat locomotive diesel engine exhaust.

The rule will apply to persons who voluntarily install stationary emission control equipment in rail yards or other locations where locomotive diesel engines may be running while stationary in a defined location, to generate surplus emission reduction credits for use in Non-attainment New Source Review. Control equipment could include, but is not limited to, Selective Catalytic Reduction (SCR), Diesel Oxidation Catalysts (DOC), Diesel Particulate Filters (DPF), and/or various types of scrubbers.

Rule 515 has a number of unique provisions in order to quantify the ERCs and assure that emission reductions continue indefinitely. ERCs generated in accordance with the rule will meet the five mandatory requirements for ERCs: enforceable, permanent, quantifiable, real, and surplus.

<u>Permit to Operate:</u> Since the stationary rail yard control devices are emissions control equipment, an Authority to Construct and a Permit to Operate will be required pursuant to Rule 501, <u>General Permit Requirements.</u> The permit will require continuous emission monitors (CEMS) for each pollutant for which an ERC is to be generated with measurement of emission concentration before and after the control device. The permit will be amended at the time of ERC issuance to include enforceable conditions that ensure compliance with the applicable portions of Rule 515. Specifically, permit amendments will include:

- Add a condition requiring a specified minimum quantity of emissions to be removed from the exhaust stream per quarter
- Add conditions that ensure compliance with applicable portions of Rule 515 regarding monitoring, testing, recordkeeping and reporting
- Add a statement that any quarterly emission reduction shortfall constitutes a violation for each day of the compliance period
- Add a condition that requires any emission reduction shortfall be made up within four quarters

<u>ERC Application Procedures:</u> The application may be for one or more affected pollutants. The application is to contain emissions data from a certified CEMS for a minimum of four consecutive calendar quarters. The applicant shall supply an analysis of historical locomotive

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activity to show reasonable expectation that the emission reductions can be achieved. The applicant shall also provide an analysis of expected future emission reductions as the locomotive fleet is upgraded with lower-emitting locomotives.

Adjustments of Calculated Credits: After actual emission reductions indicated by the CEMS have been discounted by the applicant to provide for future lower-emitting locomotives and to provide a safety margin for possible decreased rail yard activity, the District shall transfer 5% of the proposed ERCs to the Priority Reserve Bank and reduce the proposed ERCs for NOx by an additional 10% to be retired for air quality benefit.

<u>Restrictions on use of ERCs</u>: The resulting ERC certificate for PM₁₀ or PM_{2.5} will contain a statement prohibiting use as offsets for diesel particulate matter. ERCs from locations in Federal Attainment Areas shall not be used for offsets in Federal Non-attainment Areas.

<u>Violations:</u> Rule 515 specifies that failure to provide the quarterly emission reduction incorporated into the permit to operate for the control device shall be a separate violation for each day of the quarter. The Rule states that any emission shortfall must be made up within four quarters of the shortfall occurrence. The rule also declares that unnecessary idling or load testing for the sole purpose of providing the quarterly emission reduction or make-up of a prior shortfall shall be a violation of the rule and the permit to operate.

Continuous Monitors: For each control device installed to generate ERCs, the applicant shall install, operate, maintain, certify, and quality-assure a CEMS. The CEMS shall measure and record both inlet and outlet concentrations of each ERC pollutant. A CEMS is also required to measure and record stack gas volumetric flow rate to allow calculation of pollutant mass. The CEMS shall meet the requirements of Title 40 of the Code of Federal Regulations, Part 60 (40 CFR 60). A CEMS certification test protocol shall be submitted to the District and EPA for approval prior to use in collection of pre-application data.

<u>Testing:</u> The CEMS shall be tested quarterly and annually in accordance with the requirements of 40 CFR 60 and a performance test shall be performed on the control devices once every five years.

<u>SIP Approval of Associated Rules:</u> Rule 515 can not be approved as a revision of the SIP until associated District rules are also SIP approved. The District intends to submit the associated rules for revision of the SIP at a later date.

Fiscal Impact:

Cost of Compliance: Rule 515 is not a control measure and has no cost of compliance.

Public Outreach:

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The public entities affected by the new rule consist mainly of railroads, utility companies, industrial companies interested in purchasing ERCs for offsets, and environmental organizations. The following events were conducted to notify the affected public and obtain public input on the proposed rules:

- Public notices of scheduled workshop and public hearing published in The Auburn Journal, The Press Tribune, and The Lincoln News Messenger in the period of August 24, 2008 through August 28, 2008
- Direct mailer to a mailing list developed from local utilities, Union Pacific Railroad, neighboring air districts, major and synthetic minor sources, and environmental organizations on approximately August 10, 2008
- Public notice, draft Rule 515, and a background document were posted on the District website on approximately August 10, 2008
- Public workshop conducted at DeWitt Center at 5:00 pm on September 10, 2008
- Public hearing conducted at the regular District Board of Directors meeting on October 9, 2008.

Public Comment:

The District received several comments on proposed Rule 515 from the ARB:

<u>Comment:</u> In the rule, measurement of PM_{10} needs to have an additional definition as to whether this includes just the filter catch (front half) or also includes the condensables (back half). Note that there is no current CEMS equipment available to measure the back half.

<u>Answer:</u> The intent is to measure only the filter catch, so District Staff agree that this needs to be specified. Rule 515 has been amended to specify PM measurement and testing to include front half only (sections 501.2 and 502.1).

<u>Comment:</u> Rule section 406.2 states that it is a violation for the operator of the control device to perform unnecessary idling or load testing for the sole purpose of providing emission reductions. How will this be enforced?

<u>Answer:</u> It would be impossible to know the intentions of the operator if locomotives were operated for the <u>sole</u> purpose of providing required emission reductions. However, if there were concerns that there may be a shortfall in delivered emission reduction, inspections could be increased at the end of a quarter to check for suspicious activity. Another possibility would be to look at the daily total of emission reductions and compare with average daily emission reductions over the quarter. If there were much higher values at the end of the quarter, this could indicate suspicious actions. The rule requires the CEMS to calculate daily emission reductions.

Comment: In definition of applicant (section 204 of the rule), remove the words "or an

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authorized agent". This would make it clear that only the railroad could be the applicant for ERCs.

<u>Answer:</u> District Staff disagree with this change. It is the intent of the District to allow flexibility for possible contractual arrangements concerning installation of control devices in rail yards. District Staff will assess these arrangements on a case by case basis once they are proposed. The District's intent with this rule is that the generator of ERCs has the clear responsibility and ability to stand behind any issued ERCs.

<u>Comment:</u> Suggested rewording of section 301.1 pertaining to the requirement to obtain a District permit for installation and operation of control devices in rail yards. The concern is that the section does not say who is to obtain the permit. The suggested rewording is: "The applicant shall obtain a permit pursuant to Rule 501, GENERAL PERMIT REQUIREMENTS to install a control device in rail yards for the purpose of reducing exhaust emissions from locomotive engines".

Answer: The rewording is accepted. The rule has been amended to contain this rewording.

Recommendation:

The purpose of the Board Hearing is to consider public testimony regarding the proposed new rule and to consider whether the proposed rule should be adopted.

Staff recommends and requests that the Board:

- (1) Approve and adopt all Findings and Recommendations found in Attachment #2, and
- (2) Adopt Resolution #08-09, Attachment #1 thereby adopting proposed Rule 515 as shown in Exhibit I

<u>Attachment</u> #1: Resolution #08-09, Adoption of Rule 515, <u>Stationary Rail Yard Control Emission Reduction Credits</u>

#2: Analysis and Findings

ATTACHMENT #1 SUBJECT

Resolution #08-09

EXHIBIT I

SUBJECT

Rule 515
<u>Stationary Rail Yard Control Emission Reduction Credits</u>

ATTACHMENT #2

SUBJECT

Analysis and Findings Required for Rule Adoption

Analysis and Findings

The following Analysis and the subsequent Findings are intended to address the requirements set forth in the Health and Safety Code relating to adoption of a new District Rule, as well as other State statutes referenced herein.

1. Cost-Effectiveness of a Control Measure

California Health & Safety Code (H&S) Section 40703 requires a District to consider and make public "the cost-effectiveness of a control measure". As the proposed rule is not a control measure, no analysis is needed.

However, proposed Rule 515 will have a direct cost impact on applicants for emission reduction credits for an application fee and an emission reduction analysis fee as specified in current Rule 601, <u>Fees</u>. The successful applicants for ERCs will gain a financial asset in the value of the ERCs. For example, recent sales of NOx ERCs have been in the range of \$25,000 per ton.

2. Socioeconomic Impact

H&S Section 40728, in relevant part, requires the Board to consider the socioeconomic impact of any new rule if air quality or emission limits are significantly affected. Proposed Rule 515 will not significantly affect air quality or emission limitations in Placer County. The emission reductions are voluntary and surplus and not required by any District control measure. The end result will be a slight emission reduction. The evaluation set forth in H&S Section 40728 is not needed.

3. California Environmental Quality Act (CEQA)

Proposed Rule 515, if utilized, may result in a slight reduction in emissions, and is not an activity that may cause a direct or reasonably foreseeable indirect physical effect in the environment therefore not considered a "project", as defined by Section 21065 of the California Public Resource Code and Section 15378(b)(4)&(5) of the CEQA guidelines. A CEQA analysis is therefore not necessary.

4. Findings

H&S Code Section 40727 requires the PCAPCD, before adopting, amending, or repealing a rule or regulation, to "make findings of necessity, authority, clarity, consistency, non-duplication, and reference. These proposed findings are as follows:

Analysis and Findings

- A. Necessity The adoption of proposed new Rule 515 is necessary to provide for an incentive for railroad companies to voluntarily install emission reduction devices in rail yards within the framework of California Health and Safety Code, Sections 40000, 40001, 40701, and 40702 because there is currently no rule at the District level that allows for this type of non-traditional ERC.
- B. Authority California Health and Safety Code, Sections 40000, 40001, 40701, and 40702 are provisions of law that provide the District with the authority to adopt this proposed Rule.
- C. Clarity There is no indication, at this time, that the proposed Rule is written in such a manner that persons affected by the Rule cannot easily understand them.
- D. Consistency The regulation is in harmony with, and not in conflict with or contradictory to, existing statutes, court decisions, or state or federal regulations.
- E. Non-duplication The regulation does not impose the same requirements as an existing state or federal regulation.
- F. Reference All statutes, court decisions, and other provisions of law used by PCAPCD in interpreting this regulation is incorporated into this analysis and this finding by reference.