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**PROPOSED AMENDMENTS TO
RULE 2.3, RINGELMANN CHART
RULE 2.11, PARTICULATE MATTER CONCENTRATION
RULE 2.12, SPECIFIC CONTAMINANTS**

**AND REPEAL OF
RULE 2.4, EXEMPTIONS
RULE 2.7, WET PLUMES**

FINAL STAFF REPORT

December 29, 2009

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Table of Contents

Page

I. EXECUTIVE SUMMARY 3

 A. BACKGROUND 4

II. DISCUSSION OF PROPOSED RULE 2.3, 2.11, AND 2.12 AMENDMENTS 4

III. COMPARISON TO OTHER APPLICABLE REGULATIONS AND REQUIREMENTS .. 6

IV. IMPACTS OF THE PROPOSED RULE AMENDMENTS 7

V. ENVIRONMENTAL IMPACTS OF METHODS OF COMPLIANCE 8

VI. REGULATORY FINDINGS 9

VII. PUBLIC COMMENTS AND STAFF RESPONSES 10

ATTACHMENT A PROPOSED AMENDMENTS TO RULE 2.3, RINGELMANN CHART,
RULE 2.11 PARTICULATE MATTER CONCENTRATION, AND 2.12
SPECIFIC CONTAMINANTS; STRIKE-OUT UNDERLINE VERSIONS

ATTACHMENT B NOTICE OF EXEMPTION FROM CEQA GUIDELINES

ATTACHMENT C RESOLUTION NO. 10-01

ATTACHMENT D WRITTEN COMMENTS RECEIVED

I. EXECUTIVE SUMMARY

On January 13, 2010, the Yolo-Solano Air Quality Management District (District) Board of Director's will consider the proposed amendments to Rule 2.3, 2.11, and 2.12, and the recommended repeal of Rules 2.4 and 2.7. The rules apply to any source of visible emissions and particulate emission concentration within the District. The proposed rule amendments are the first in a series of particulate matter regulation changes that will be developed in the next few years as part of the State mandated "all feasible measures" requirement for air districts that do not meet the State particulate matter standard, which includes Yolo-Solano AQMD. These revisions were identified by the Board for future adoption during a July 2005 public hearing as required by Senate Bill (SB) 656 to adopt the list of measures for particulate matter reduction as required by California Health and Safety Code (CH&SC) §39614.

These particular rules were identified as one of the first to be considered because compliance can be achieved without additional emission controls. Ordinary and customary maintenance procedures already utilized by our sources should result in compliance, as has been shown by new and modified permit holders who have already been required to comply with these lower limits. In addition, these proposed limits are already in place throughout much of California.

The main amendments to the rules are:

- 1) For Rule 2.3, Ringelmann Chart
 - a. visible emissions limit was lowered from that which is equal to No. 2 on the Ringelmann Chart (40% opacity), to that which is equal to No. 1 (20%) on the Ringelmann Chart.
 - b. exemptions listed in existing District Rules 2.4, Exemptions and 2.7, Wet Plumes were incorporated into Rule 2.3.
 - c. new exemptions added which are consistent with exemptions contained in the CH&SC.
- 2) For Rule 2.11, Particulate Matter Concentration and Rule 2.12, Specific Contaminants, the particulate matter concentration was lowered from 0.3 grains per cubic foot of gas to 0.1 grains per cubic foot of gas.

Minor proposed amendments include changing the format of these three rules to reflect the current rule formatting, i.e. include an Index, add the General, Definitions, and Standards sections.

The District is also proposing the repeal of Rules 2.4, Exemptions and 2.7, Wet Plumes because all of the listed exemptions will now appear in associated Rule 2.3.

The District does not expect the proposed rule changes to have either a significant nor a detrimental effect on the environment. Therefore, staff has prepared a Notice of Exemption (NOE) to satisfy the California Environmental Quality Act (CEQA) requirements. The NOE states that the adoption of these proposed rule amendments is exempt from the requirements of CEQA pursuant to Section 15308, Actions by Regulatory Agencies for Protection of the Environment

A. BACKGROUND

Rule 2.3, Ringelmann Chart

The proposed amendment lowers the allowable visible emission levels of most pollution emitting devices to Ringelmann No.1 (20% opacity) from our current limit of Ringelmann No. 2 (40% opacity) which was adopted in 1972. The opacity percentage and Ringelmann number are measures of the amount of light prevented from passing through a plume. Light colored plumes such as dust from a cement silo are typically expressed in opacity while dark colored smoke plumes are expressed as Ringelmann numbers.

The vast majority of California businesses have been limited to 20% opacity for well over 10 years and the proposed limit is already in place in many of the other air districts. Visible emissions of air pollution occur as point source emissions and fugitive emissions from a wide variety of activities, such as conveying, crushing, cutting, grinding, screening, etc.

Rules 2.11, Particulate Matter Concentration and 2.12, Specific Contaminants

These rules limit the particulate matter concentrations that any given process may emit. Like Rule 2.3, the limits would be lowered to match those that have been in place in many other California districts for many years.

The current rules limit the particulate matter emissions to 0.3 grain per cubic foot of gas calculated to 12 percent of carbon dioxide (CO₂) at standard conditions. EPA emission factors indicate that liquid and gas-fueled boilers and gas turbines already comply with the proposed lower limit of 0.1 grain per cubic foot emission limit contained in the "all feasible measure" list.

II. DISCUSSION OF PROPOSED RULE AMENDMENTS

Listed below are descriptions of the proposed amendments to:

Rule 2.3, Ringelmann Chart.

Section 100 General

Section 101 - Purpose: The purpose of this rule is to limit the emission of visible air contaminants to the atmosphere.

Section 102 - Applicability: This rule applies to any source operation which emits or may emit air contaminants.

Section 110 - Exemptions - General: This section was added to the rule to incorporate all of the exemptions listed in the CH&SC, which includes the exemptions previously listed in Rules 2.4 and 2.7.

Section 111 - Exemptions - Limited: This section was added to the rule to list sources of

emissions which are not exempt from opacity standards altogether, but are subject to a less restrictive opacity standard as listed in the CH&SC.

Section 200 Definitions

Section 201 - Definitions of abrasive blasting, carbonaceous material, obscurant, opacity, teepee burner, and visible air contaminants have been added for rule clarity.

Section 300 Standard

Section 301.1: The previous visible emission limit to Ringelmann 2 (40% opacity) has been retained for sources subject to the limited exemption.

Section 301.2: The rule amendment lowers the allowable visible emission limit to Ringelmann 1 (20% opacity) for all sources not listed under the general or limited exemptions.

Section 400 Monitoring

Section 401 - Test Method: EPA Test Method 9 has been listed as the proper test method to verify compliance with the rule. The rule itself does not specifically require testing of any source.

Rule 2.11, Particulate Matter Concentration

Section 100 General

Section 101 - Purpose: The purpose of this rule is to establish a particulate matter emission standard.

Section 102 - Applicability: This rule applies to any source operation which emits or may emit dust, fumes, or total suspended particulate matter.

Section 200 Definitions

Section 201 - A definition for particulate matter has been added for rule clarity.

Section 300 Standard

Section 301 - Requirement: The rule amendment lowers the allowable particulate matter emission limit to 0.1 grains per cubic foot of gas at dry standard conditions.

Section 400 Monitoring

Section 401 - Test Methods: Applicable EPA and CARB test methods have been listed for determination of exhaust stack gas velocity, exhaust stack gas moisture, and particulate matter emissions, which may be needed to determine compliance with the rule standard.

The rule does not specifically require testing of any source.

Rule 2.12, Specific Contaminants

Section 100 General

Section 101 - Purpose: The purpose of this rule is to establish particulate matter and sulfur compound emission standards.

Section 102 - Applicability: This rule applies to any source operation which emits or may emit gaseous sulfur compounds and combustion contaminants.

Section 110 - Exemptions: The provisions of this rule do not apply to the start of an operation or change in energy source, or during the time necessary to bring the combustion process up to the operating level..

Section 200 Definitions

Section 201 - A definition for combustion contaminants has been added for rule clarity.

Section 300 Standard

Section 301 - Requirement: The rule amendment lowers the allowable combustion contaminant emission limit to 0.1 grains per cubic foot of gas at dry standard conditions.

Section 400 Monitoring

Section 401 - Compliance Determination: A statement declaring that the CO₂ produced from combustion of any liquid or gaseous fuels shall be excluded from the calculation to 12 percent of CO₂ when measuring combustion contaminants from incinerators used to dispose of combustible refuse by burning has been moved from the standard section of the rule to the monitoring section.

Section 402 - Test Methods: Applicable EPA and CARB test methods have been listed for determination of exhaust stack gas velocity, exhaust stack gas moisture, and particulate matter emissions, which may be needed to determine compliance with the rule standard. The rule does not specifically require testing of any source.

III. COMPARISON TO OTHER APPLICABLE REGULATIONS AND REQUIREMENTS

CH&SC Section 40727.2 requires districts to perform a comparative alternative analysis of any new control standard. Specifically, the District is required to prepare a written analysis that identifies all existing federal air pollution control requirements including, but not limited to, emission control standards constituting best available control technology (BACT) that applies to the same equipment or source type as the rule or regulation proposed for adoption or modification by the District. In addition, the analysis shall identify any other District rule or regulation that applies to the same equipment or source type. The analysis

shall compare the following specific elements:

Existing BACT Requirements

The standards of all three of these rules are meant to apply generally to sources of visible emissions and gaseous sulfur compounds/particulate matter combustion contaminants and are not limited to any specific equipment or source type. Although there are many standards for specific source types in federal regulations, the District is unaware of any existing federal emission control standards constituting BACT which can be applied generally.

Comparison with State Requirements

CH&SC § 41701 sets a general standard that visible emissions from any source shall not be as dark or darker in shade as that designated as No. 2 on the Ringelmann Chart for a period or periods aggregating more than three minutes in any one hour. This is the same standard as that of the existing Rule 2.3 which the District is proposing to revise to a lower acceptable standard. The District believes that establishing a lower standard may aid in reaching and/or maintaining attainment status for criteria pollutants and may also lead to reductions in the emissions of toxic air contaminants. The CH&SC section does not prohibit the District from establishing a more stringent standard for visible emissions opacity except for specific sources of emissions, for which exceptions have been included in the amendments.

IV. IMPACTS OF THE PROPOSED RULE

Emissions Impacts

Visible emissions and combustion air contaminants are emitted in the form of smoke or dust as point source emissions or fugitive emissions from a wide variety of activities. For many of these sources, reductions in criteria pollutant and toxic air contaminant emissions should result from ordinary and customary maintenance procedures. Under the authority of District Rule 3.4 (New Source Review) the District has already been applying the proposed lower standards to any new or modified permitted source for some time so any emissions reductions would come from sources which have not modified a Permit to Operate (PTO) for a long period or sources which have not obtained a valid PTO.

Cost Effectiveness

CH&SC Section 40703 requires the District, in the process of the adoption of any regulation, to consider and make public its findings related to the cost effectiveness of a control measure. Cost effectiveness for rulemaking purposes is calculated by dividing the cost of air pollution controls required by the rule by the amount of air pollution reduced.

As discussed above, the proposed standards should be achievable through ordinary operation and maintenance procedures, therefore there are no costs of compliance expected and cost effectiveness evaluations are not required.

Socioeconomic Impacts

CH&SC Section 40728.5 (a) requires the District, in the process of the adoption of any rule or regulation, to consider the socioeconomic impact if air quality or emission limits may be significantly affected. However, districts with a population of less than 500,000 persons are exempt from the provisions of Section 40728.5 (a). The District's population is estimated to be approximately 325,000 and well below the 500,000 person threshold. Therefore, socioeconomic analyses for this rulemaking are not required.

Incremental Cost Effectiveness

CH&SC Section 40920.6 requires an assessment of the incremental cost-effectiveness for proposed regulations relative to ozone, Carbon Monoxide (CO), Sulfur Oxides (SOx), Nitrogen Oxides (NOx), and their precursors. Incremental cost-effectiveness is defined as the difference in control costs divided by the difference in emission reductions between two potential control options that can achieve the same emission reduction goal of a regulation.

There are no costs of compliance expected for compliance with these proposed rules standards therefore incremental cost effectiveness evaluations are not required.

Impacts to the District

The District has already been requiring the lower standards from many permitted sources under the authority of Rule 3.4, therefore the proposed amendments will have little to no impact on staff workload. It is expected that any additional work load can be absorbed within the District's Engineering Division.

V. ENVIRONMENTAL IMPACTS OF METHODS OF COMPLIANCE

California Public Resource Code Section 21159 requires the District (at the time of adopting a rule requiring the installation of pollution control equipment, or a performance standard) to perform an environmental analysis of the reasonably foreseeable methods of compliance. The analysis must include the following information for the proposed amendments to Rule 2.3, 2.11, and 2.12:

- a. An analysis of the reasonably foreseeable environmental impacts of the methods of compliance.
- b. An analysis of the reasonably foreseeable mitigation measures.
- c. An analysis of the reasonably foreseeable alternative means of compliance with the rule or regulation.

Table 1 lists all reasonably foreseeable compliance methods, the environmental impacts of those methods, and measures that could be used to mitigate the environmental impacts.

TABLE 1. Environmental Impacts, Mitigation Measures, and Alternatives

Compliance Methods	Reasonably Foreseeable Environmental Impacts	Reasonably Foreseeable Mitigation Measures
1. Switch to alternate fuel.	Air Quality Impacts: Potentially decreased air pollution emissions.	Adoption of water conservation policies to mitigate increased use of water for water spray suppression, if different from existing practices. Hazardous waste disposal program necessary for disposal of toxic solid waste generated with use of control equipment.
2. Installation of control equipment (cyclone, baghouse, wet scrubber, etc.)	Water Impacts: Increased use of water for water spray suppression.	
3. Use of water or chemical suppressant sprays	Human Health Impacts: Potential decrease in emissions of toxic air contaminants resulting in improved human health in the District.	
4. Alternate operational practices (adjusting air/fuel mixture, altering airflow rate, etc.)	Solid Waste Disposal Impacts: Increased generation of solid waste with use of control equipment.	

This analysis demonstrates the adoption of amendments to Rule 2.3, 2.11, and 2.12 will not have a significant effect on the environment or humans due to unusual circumstances. In addition, these amendments to the proposed rules are an action taken to protect the environment. Therefore, staff have determined that the project is categorically exempt from the requirements of the California Environmental Quality Act (CEQA) pursuant to Section 15308, Actions by Regulatory Agencies for Protection of the Environment. Staff prepared a Notice of Exemption (NOE) to meet the CEQA Guidelines (Attachment B).

VI. REGULATORY FINDINGS

Section 40727(a) of the CH&SC requires that prior to adopting or amending a rule or regulation, an air district's board make findings of necessity, authority, clarity, consistency, nonduplication, and reference. The findings must be based on the following:

1. Information presented in the District's written analysis, prepared pursuant to CH&SC Section 40727.2;
2. Information contained in the rulemaking records pursuant to CH&SC Section 40728; and

3. Relevant information presented at the Board's hearing for adoption of the rule.

The required findings are:

Necessity: The rule amendment is required in order to meet the state's Best Available Retrofit Control Technology requirements (section 40919(a)(3) of the CH&SC) and to fulfill the District's Senate Bill (SB) 656 commitment. (CH&SC Section 40727 (b)(1)).

Authority: The District is authorized to adopt rules and regulations by CH&SC, Sections 40001, 40702, 40716, 41010 and 41013.

Clarity: District staff have reviewed the proposed rule amendments and determined that they can be easily understood by the affected sources. In addition, the record contains no evidence that persons directly affected by the rules cannot understand the rules. (CH&SC Section 40727(b)(3)).

Consistency: The proposed rule amendments do not conflict with and are not contradictory to, existing statutes, court decisions, or state or federal regulations. (CH&SC Section 40727(b)(4)).

Non-Duplication: The proposed rule amendments do not duplicate any state laws or regulations, regarding the attainment and maintenance of state and federal air quality limits. (CH&SC Section 40727(b)(5)).

Reference: The District must refer to any statute, court decision, or other provision of law that the District implements, interprets, or makes specific by adopting, amending or repealing rules.

VII. PUBLIC COMMENTS AND STAFF RESPONSES

Staff held a public workshop on October 9, 2009, to discuss the proposed amendments to Rule 2.3, 2.11, and 2.12. Notification was sent to surrounding Air Districts, City Managers within the District, building/planning/community development departments within the District, all city and county libraries within the District, all Board members, and all permitted sources. The workshop notice was published in the Vacaville Reporter (10/2), the Dixon Tribune (10/2), the Daily Democrat (10/2), the Davis Enterprise (10/2), the West Sacramento Press (10/7), and the Winters Express (10/8).

A copy of the public workshop notice, the draft staff report, and the proposed draft rule language for each affected rule, were posted on the District's web page. In response to the notice and workshop, the District received the following comments:

A. Public Workshop:

John Killey, the environmental specialist of Agrium U.S. Inc., was the only attendant at the public workshop. District staff will attempt to paraphrase the comments that were received during the workshop.

Comment 1. Mr. Killey stated that many Agrium permits already require particulate matter emissions be much less than the proposed emission limit of Rules 2.11 and 2.12.

Response 1. No changes to the proposed rule amendments will be made due to the comment.

Comment 2. Mr. Killey asked for confirmation of the new opacity standard, but did not voice any concern that Agrium could not comply with the lower opacity limit.

Response 2. Many Agrium permits are currently subject to the 40% opacity standard, but some permits (and portions or certain permitted operations) are currently limited to opacities of lower than 20% by federal regulations. The proposed rule revisions would lower the 40% standard to 20%, but the current limits which are lower than 20% will not change.

Comment 3. Mr. Killey asked about exemptions from the opacity standard proposed for the amendment to Rule 2.3. He asked if the exemption for smoke from fires set or authorized by public officers for instruction in the methods of fighting fires would apply to Agrium. This exemption was one of several incorporated from the CH&SC.

Response 3. A typographical error resulted in such fires set on property used for industrial purposes being exempted for training of public employees when the exemption should have been written for employees in general. The proposed rule amendment language has been edited to make this correction.

Comment 4. Mr. Killey stated no objection to the format changes of all three rules to make their formats consistent with more modern District rules.

Response 4. No changes to the proposed rule amendments will be made due to the comment.

B. Written Comments:

Andrew Steckel of the United States Environmental Protection Agency (EPA) issued written comments via email on October 23, 2009. The comments and District responses are listed below:

Comment 5. Mr. Steckel suggested that the exemption to the new opacity standard applied to smoke from fires set or permitted by any public officer on property used for industrial purposes for training in the method of fighting fires was meant to read for the purpose of training employees in general rather than training public employees.

Response 5. The exemption has been edited in the proposed rule amendment language

to mention employees rather than public employees.

- Comment 6. Mr. Steckel commented that exemptions of sections 110.1d and 110.1e of the Draft Rule 2.3 amendment concerning setting of fires for firefighting reasons appeared redundant to the exemption of section 110.1a of the rule.
- Response 6. The District agrees and has deleted the mentioned sections from the rule language.
- Comment 7. Mr. Steckel commented that the exemption of section 110.1f of the Draft Rule 2.3 amendment concerning smoke from fires set for disease or pest prevention was not in similar rules from other air districts and seemed to be instead an agricultural burning requirement consideration.
- Response 7. The District contends this exemption already existed in District Rule 2.4. No change has been made to this portion of the proposed amendment.
- Comment 8. Mr. Steckel requested that the exemption of section 110.1g of the Draft Rule 2.3 amendment concerning smoke from fires set for remediation of an oil spill be removed or the District explain why it would not be considered a relaxation of a restriction.
- Response 8. The District contends this exemption, incorporated from the CH&SC, is already a part of state law. No change has been made to this portion of the proposed amendment.
- Comment 9. Mr. Steckel requested that the exemption of section 110.2 of the Draft Rule 2.3 amendment concerning orchard and citrus grove heaters be rewritten to state the relevant conditions of the CH&SC rather than reference them.
- Response 9. The exemption has been edited to directly state the requirements for orchard and citrus grove heaters.
- Comment 10. Mr. Steckel requested that the exemption of section 110.10 of the Draft Rule 2.3 amendment concerning abrasive blasting be removed or the District explain why it would not be considered a relaxation of a restriction.
- Response 10. The section of the CH&SC relating to abrasive blasting lists a 40% opacity condition for abrasive blasting conducted outside a permanent building. The District added the 40% opacity requirement to the standard section of the proposed rule amendment language and specifically tied such abrasive blasting to this opacity standard.
- Comment 11. Mr. Steckel commented that the District is prohibited from establishing more stringent restrictions on visible emissions from diesel auxiliary engines used exclusively with drinking water systems.

- Response 11. The exemption of section 110.12 of the Draft Rule 2.3 amendment has been stricken and section 111.3 of the Proposed Rule 2.3 amendment ties the operation of such engines to the 40% opacity requirement.
- Comment 12. Mr. Steckel questioned the exemptions from the opacity standard granted to teepee burners and burners used to produce energy and fired by forestry and agricultural residues.
- Response 12. The District has stricken sections 110.14 and 110.15 of the Draft Rule 2.3 amendment and has rewritten the exemptions into section 110.11 of the Proposed Rule 2.3 amendment to be more consistent with rules from other air districts.
- Comment 13. Mr. Steckel requested that the Rule 2.3 amendment contain definitions for visible air contaminants, obscurant, teepee burner, and abrasive blasting.
- Response 13. These definitions and a definition of carbonaceous relating to the exemptions of orchard and citrus grove heaters has been added to the Proposed Rule 2.3 amendment language.
- Comment 14. Mr. Steckel requested that EPA Method 9 be listed for the determination of opacity of emissions.
- Response 14. A Method 9 reference has been added to the Proposed Rule 2.3 amendment language.
- Comment 15. Mr. Steckel requested the District make clear in State Implementation Plan submittal documents that the Rules 2.4 and 2.7 are being rescinded because their conditions have been incorporated into Rule 2.3.
- Response 15. The District will make the reasons for the rescinding of Rule 2.4 and 2.7 clear.
- Comment 16. Mr. Steckel noted a misspelling of particulate in the Draft Rule 2.11 amendment language.
- Response 16. The misspelling has been corrected in the Proposed Rule 2.11 language.
- Comment 17. Mr. Steckel requested that EPA test methods for determination of exhaust stack gas velocity, stack gas moisture content, and particulate matter emissions be referenced in the rule language.
- Response 17. The Proposed Rule 2.11 amendment language has been edited to reference the relevant EPA and CARB test methods.
- Comment 18. Mr. Steckel requested consistency in spelling of sulfur in Rule 2.12.

Response 18. Proposed Rule 2.12 amendment language has been edited to make this change.

Comment 19. Mr. Steckel commented that the exemptions of section 110 of the Draft Rule 2.12 amendment do not appear in similar rules from other air districts and requested a change consistent with EPA policy.

Response 19. The exemptions from the rule already existed in original text of the rule. This rule revision simply places the language in separate exemption section in the rule format. No changes will be made due to this comment.

Comment 20. Mr. Steckel requested that the requirement relating or sulfur dioxide in the Draft Rule 2.12 amendment language be changed to sulfur compounds calculated as sulfur dioxide.

Response 20. The Proposed Rule 2.12 amendment language has been edited to make this change.

Comment 21. Mr. Steckel requested that the title particulate matter combustion contaminants be edited to simply combustion contaminants.

Response 21. The edit has been made to the Proposed Rule 2.12 amendment language.

Comment 22. Mr. Steckel requested that EPA test methods for determination of exhaust stack gas velocity, stack gas moisture content, particulate matter emissions, and sulfur compounds concentration be referenced in the rule language.

Response 22. The Proposed Rule 2.12 amendment language has been edited to reference the relevant EPA and CARB test methods.

Subsequent to holding the public workshop and addressing the received comments, staff prepared a public hearing notice for the hearing which was to be held December 9, 2009. The notice was sent to all the same parties which received the public workshop notice. The hearing notice was published in the Daily Democrat (11/11), Vacaville Reporter (11/12), Davis Enterprise (11/12), the Winters Express (11/12), the Dixon Tribune (11/13), and the West Sacramento Press (11/18).

Because the above referenced notice dates did not meet 30 days for a December 9 hearing, the rule was delayed until the January meeting and the public hearing was re-noticed in the Daily Democrat (12/07), Vacaville Reporter (12/05), Davis Enterprise (12/04), the Winters Express (12/10), the Dixon Tribune (12/06), and the West Sacramento Press (12/09). A copy of the updated documents (the proposed staff report and proposed rule language) were posted on the District's webpage on December 3. The District received no more comments as a result of the additional notice.

ATTACHMENT A

**PROPOSED AMENDMENTS TO RULE 2.3, RINGELMANN CHART,
RULE 2.11, PARTICULATE MATTER CONCENTRATION,
RULE 2.12, SPECIFIC CONTAMINANTS;
STRIKE-OUT UNDERLINE VERSION**

RULE 2.3 RINGELMANN CHART

Adopted January 21, 1972

Revised January 13, 2010

INDEX

100 GENERAL

- 101 PURPOSE**
- 102 APPLICABILITY**
- 110 EXEMPTIONS - GENERAL**
- 111 EXEMPTIONS - LIMITED**

200 DEFINITIONS

- 201 ABRASIVE BLASTING**
- 202 CARBONACEOUS MATERIAL**
- 203 OBSCURANT**
- 204 OPACITY**
- 205 TEEPEE BURNER**
- 206 VISIBLE AIR CONTAMINANTS**

300 STANDARDS

- 301 REQUIREMENTS**

400 MONITORING

- 401 TEST METHOD**

100 GENERAL

- 101 PURPOSE: The purpose of this rule is to limit the emissions of visible air contaminants to the atmosphere.
- 102 APPLICABILITY: The provisions of this rule apply to any source operation which emits or may emit air contaminants.
- 110 EXEMPTIONS - GENERAL: The provisions of this rule shall not apply to the following:
- 110.1 Smoke from fires set by or permitted by any public officer, when such fire is, in his or her opinion, necessary for any of the following purposes:
- a. The prevention of a fire hazard which cannot be abated by any other means.
 - b. The instruction of public employees in the methods of fighting fires.
 - c. The instruction of employees in methods of fighting fire, when such fire is set, pursuant to permit, on property used for industrial purposes.
 - d. Disease or pest prevention, where there is an immediate need for and no reasonable alternative to burning.
 - e. The remediation of an oil spill pursuant to Section 8670.7 of the Government Code.
- 110.2 The use of orchard and citrus grove heaters that do not produce more than one gram per minute of unconsumed solid carbonaceous material.
- 110.3 Agricultural operations necessary for the growing of crops or raising of fowl or animals.
- 110.4 The use of other equipment in agricultural operations necessary for the growing of crops or raising of fowl or animals.
- 110.5 Other open outdoor fires set or permitted in accordance with Rule 2.8 or Rule 6.1.
- 110.6 Use of any aircraft to distribute seed, fertilizer, insecticides, or other agricultural aids over land devoted to the growing of crops or raising of fowl or animals.
- 110.7 Open outdoor fires used only for cooking of food for human beings or for recreational purposes.

110.8 Emissions from vessels using steam boilers during emergency boiler shutdowns for safety reasons, safety and operational tests required by governmental agencies, and where maneuvering is required to avoid hazards.

110.9 Emissions from vessels during a breakdown condition, as long as the discharge is reported in accordance with district requirements.

110.10 The use of visible emission generating equipment in training sessions conducted by governmental agencies necessary for certifying persons to evaluate visible emissions for compliance with Section 41701 of the California Health and Safety Code or applicable district rules and regulations.

110.11 In accordance with Section 41704 of the California Health and Safety Code, smoke emissions from burners used to produce energy and fired by (or teepee burners used for the disposal of) forestry and agricultural residues with or without supplementary fossil fuels when:

- a. The emissions result from the startup or shutdown of the combustion process or from the malfunction of the emission control equipment.
- b. The emissions do not exceed a period or periods of time aggregating more than 30 minutes in any 24 hour period.
- c. The emissions do not result from the failure to operate and maintain in good working order any emission control equipment.

110.12 The use of an obscurant for the purpose of training military personnel and the testing of military equipment by the United States Department of Defense on any military reservation.

111 EXEMPTIONS - LIMITED: The requirement of subsection 301.2 of this rule shall not apply to the following:

111.1 Abrasive blasting operations conducted outside of a permanent building.

111.2 Pile-driving hammers for no more than four minutes during the driving of a single pile.

111.3 Diesel auxiliary engines or generators used exclusively to operate a drinking water system, when operated under emergency circumstances, or operated no more than 30 minutes each week, or two hours each month, under non-emergency circumstances.

200 DEFINITIONS

- 201 ABRASIVE BLASTING: Propelling abrasive material against a surface with sufficient velocity to remove coatings and promote a uniform surface texture.
- 202 CARBONACEOUS MATERIAL: Substances composed of or containing carbon or carbon compounds.
- 203 OBSCURANT: A chemical discharged with the specific intent to hinder viewing of terrain or objects.
- 204 OPACITY: The degree to which emissions reduce the transmission of light and obscure the view of an object in the background.
- 205 TEEPEE BURNER: A free-standing conical metal structure used for the disposal of forestry and agricultural waste material.
- 206 VISIBLE AIR CONTAMINANT: Pollutants discharged into the atmosphere in the form of dust, smoke, or fumes.

300 STANDARDS

301 REQUIREMENTS

301.1 A person shall not discharge into the atmosphere from any single source of emission listed under section 111 of this rule, any air contaminant, other than uncombined water vapor, for a period or periods aggregating more than three (3) minutes in any one (1) hour which is:

- a. As dark or darker in shade as that designated as No. 2 on the Ringelmann Chart, as published by the United States Bureau of Mines; or
- b. Of such opacity as to obscure an observer's view to a degree equal to or greater than does smoke described in subsection 301.1 a. of this rule.

301.2 Effective 6 months after the adoption of the revisions of this rule, a person shall not discharge into the atmosphere from any single source of emission whatsoever, any air contaminant, other than uncombined water vapor, for a period or periods aggregating more than three (3) minutes in any one (1) hour which is:

- a. As dark or darker in shade as that designated as No. 1 on the

Ringelmann Chart, as published by the United States Bureau of Mines; or

- b. Of such opacity as to obscure an observer's view to a degree equal to or greater than does smoke described in subsection 301.2 a. of this rule.

400 MONITORING

401 TEST METHOD: The opacity of visible emission shall be determined in accordance with EPA Test Method 9.

~~RULE 2.3. Ringelmann Chart. A person shall not discharge into the atmosphere from any single source of emission whatsoever, any air contaminant for a period or periods aggregating more than 3 minutes in any one hour which is:~~

- ~~a. As dark or darker in shade as that designated as No. 2 on the Ringelmann Chart, as published by the United States Bureau of Mines; or~~
- ~~b. Of such opacity as to obscure an observer's view to a degree equal to or greater than does smoke described in subsection a. of this rule.~~

~~RULE 2.4. Exceptions. The provisions of Rule 2.3 do not apply to:~~

- ~~a. Smoke from fires set by or permitted by any public officer, if such fire is set by or permission given in the performance of the official duty of such officer, and such fire in the opinion of such officer is necessary:
 - ~~1. For the purpose of the prevention of a fire or health hazard which cannot be abated by any other means; or~~
 - ~~2. Smoke from fires set pursuant to permit on property used for industrial purposes for the purpose of instruction of employees in methods of fighting fires.~~~~
- ~~b. Smoke from fires set pursuant to permit on property used for industrial purposes for the purpose of instruction of employees in methods of fighting fire.~~
- ~~c. Agricultural operations in the growing of crops or raising of fowl, animals or bees:~~
- ~~d. The use of an orchard or citrus grove heater which does not produce unconsumed solid carbonaceous matter at a rate in excess of one (1) gram per minute.~~
- ~~e. Other open outdoor fires set or permitted in accordance with Rule 2.8:~~

~~RULE 2.7. Wet Plumes. When the presence of uncombined water is the only reason for the failure of an emission to meet the limitation of Rule 2.3., that rule shall not apply. The burden of proof which establishes the application of the rule shall be upon the person seeking to come within its provisions.~~

RULE 2.11 PARTICULATE MATTER CONCENTRATION

Adopted June 19, 1974
Revised January 13, 2010

INDEX

100 GENERAL

101 PURPOSE

102 APPLICABILITY

200 DEFINITIONS

201 PARTICULATE MATTER

300 STANDARDS

301 REQUIREMENT

400 MONITORING

401 TEST METHODS

100 GENERAL

101 PURPOSE: The purpose of this rule is to protect the ambient air quality by establishing a particulate matter emission standard.

102 APPLICABILITY: This rule applies to any source operation which emits, or may emit dust, fumes, or total suspended particulate matter

200 DEFINITIONS

201 PARTICULATE MATTER: Any material which is emitted as liquid or solid particles, or gaseous material which becomes liquid or solid particles when collected at standard conditions.

300 STANDARD

301 REQUIREMENT: A person shall not release or discharge into the atmosphere from any single source operation, dust, fumes, or total suspended particulate matter emissions in excess of 0.1 grain per cubic foot of gas at dry standard conditions.

400 MONITORING

401 TEST METHODS:

401.1 The exhaust stack gas velocity shall be determined in accordance with EPA or CARB Test Method 2.

401.2 The exhaust stack gas moisture content shall be determined in accordance with EPA or CARB Test Method 4.

401.3 Determination of particulate matter emissions shall be conducted in accordance with EPA or CARB Test Method 5.

~~RULE 2.11. Particulate Matter. Except as otherwise permitted by law, no person shall release or discharge into the atmosphere, from any source, particulate matter in excess of 0.3 grains per cubic foot of exhaust volume as calculated standard conditions.~~

RULE 2.12 SPECIFIC CONTAMINANTS

Adopted January 21, 1972

Revised January 13, 2010

INDEX

100 GENERAL

101 PURPOSE

102 APPLICABILITY

110 EXEMPTION - TRANSITION

200 DEFINITIONS

201 COMBUSTION CONTAMINANTS

300 STANDARDS

301 REQUIREMENT

400 MONITORING

401 COMPLIANCE DETERMINATION

402 TEST METHODS

100 GENERAL

101 PURPOSE: The purpose of this rule is to protect the ambient air quality by establishing particulate matter combustion contaminants and sulfur compound emission standards.

102 APPLICABILITY: This rule applies to any source operation which emits, or may emit sulfur gaseous emissions and particulate matter combustion contaminants

110 EXEMPTIONS: The provisions of this rule shall not apply during the start of an operation or change in energy source, during the time necessary to bring the combustion process up to operating level.

200 DEFINITIONS

201 COMBUSTION CONTAMINANTS: Particulate matter discharged into the atmosphere from the burning of any kind of material containing carbon in a free or combined state.

300 STANDARD

301 REQUIREMENT: A person shall not discharge into the atmosphere from any single source of emission whatsoever, any one or more of the following contaminants, in any state or combination thereof, in excess of the following concentrations at the point of discharge:

- a. Sulfur compounds calculated as sulfur dioxide (SO₂) 0.2%, by volume at standard conditions.
- b. ~~Particulate Matter Combustion Contaminants: 0.31 grains per cubic foot of gas calculated to 12 percent of carbon dioxide (CO₂) at standard conditions, except during the start of an operation or change in energy source, during the time necessary to bring the combustion process up to operating level. In measuring the combustion contaminants from incinerators used to dispose of combustible refuse by burning, the carbon dioxide (CO₂) produced by combustion of any liquid or gaseous fuels shall be excluded from the calculation to 12 percent of carbon dioxide (CO₂).~~

400 MONITORING

401 COMPLIANCE DETERMINATION: In measuring the combustion contaminants from incinerators used to dispose of combustible refuse by burning, the carbon dioxide (CO₂) produced by combustion of any liquid or gaseous fuels shall be

excluded from the calculation to 12 percent of carbon dioxide (CO2).

402 **TEST METHODS:**

402.1 The exhaust stack gas velocity shall be determined in accordance with EPA or CARB Test Method 2.

402.2 The exhaust stack gas moisture content shall be determined in accordance with EPA or CARB Test Method 4.

402.3 Determination of particulate matter emissions shall be conducted in accordance with EPA or CARB Test Method 5.

402.4 Sulfur compound emissions shall be determined in accordance with EPA or CARB Test Method 8.

ATTACHMENT B

NOTICE OF EXEMPTION FROM CEQA GUIDELINES

ATTACHMENT C
RESOLUTION NO. 10-01

RESOLUTION NO. 10-01

**RESOLUTION AMENDING YOLO-SOLANO AIR QUALITY MANAGEMENT DISTRICT
RULES;**

- 2.3 RINGELMANN CHART**
- 2.11 PARTICULATE MATTER CONCENTRATION**
- 2.12 SPECIFIC CONTAMINANTS**

AND RESCINDING DISTRICT RULES;

- 2.4 EXCEPTIONS**
- 2.7 WET PLUMES**

WHEREAS, California Health and Safety Code section 40702 provides that an air quality management district shall adopt rules and regulations, and do such acts as may be necessary or proper to execute the powers and duties granted to, and imposed upon, the district by Division 26 of the Health and Safety Code; and

WHEREAS, Health and Safety Code section 40727 provides that before adopting, amending, or repealing a rule or regulation, a district board shall make findings of necessity, authority, clarity, consistency, nonduplication, and reference, based upon information developed pursuant to section 40727.2, information in the rulemaking record maintained pursuant to section 40728, and relevant information presented at the public hearing required by section 40725; and

WHEREAS, section 15308 of the California Environmental Quality Act (CEQA) Guidelines provides that actions taken by regulatory agencies as authorized by state law to assure the maintenance, restoration, or enhancement of the environment where the regulatory process involves procedures for protection of the environment, are categorically exempt from CEQA review (Class 8 Categorical Exemption); and

WHEREAS, California Health and Safety Code sections 39002 and 40000 provides that an air quality management district shall have the responsibility to control air pollution from all sources other than vehicular sources; and

WHEREAS, the amendments to District Rule 2.3, Ringelmann Chart; Rule 2.11, Particulate Matter Concentration; and Rule 2.12, Specific Contaminants are being proposed, and Rule 2.4, Exceptions and Rule 2.7 Wet Plumes, are being proposed for rescission, to reduce $PM_{2.5}$ and PM_{10} as required by Health and Safety Code section 39614;

NOW, THEREFORE, BE IT RESOLVED that the Board of Directors of the Yolo-Solano Air Quality Management District hereby finds, authorizes, directs and declares as follows:

1. The Board of Directors has considered and hereby adopts by reference the staff report prepared in this matter.
2. The Board of Directors makes the following findings pursuant to Health and Safety Code section 40727:
 - a. Necessity: Information in the District's rulemaking record maintained pursuant to Health and Safety Code section 40728 demonstrates a need for amending Rules 2.3, 2.11, 2.12, and rescinding Rule 2.4 and 2.7;
 - b. Authority: Health and Safety Code section 40702 permits the District to amend District Rules 2.3, 2.11, 2.12, and rescind Rules 2.4 and 2.7;
 - c. Clarity: District Rules 2.3, 2.11, 2.12 as amended are written so that their meaning can be easily understood by the persons directly affected by them;
 - d. Consistency: Amendments to District Rules 2.3, 2.11, 2.12, and rescission of Rule 2.4 and 2.7 are in harmony with, and not in conflict with or contradictory to, existing statutes, court decisions, or state or federal regulations;
 - e. Nonduplication: District Rules 2.3, 2.11, 2.12, as amended and the rescission of Rules 2.4 and 2.7 do not impose the same requirements as an existing state or federal regulation;
 - f. Reference: District Rules 2.3, 2.11, 2.12 are consistent with provisions of the Clean Air Act.
3. The Board of Directors finds that the District has complied with the procedural requirements set forth in Chapters 6 and 6.5 of Part 3 of Division 26 of the Health and Safety Code.
4. The Board of Directors finds that amending District Rules 2.3, 2.11, 2.12, and rescinding Rule 2.4 and 2.7 is an action taken by a regulatory agency as authorized by state law to assure the maintenance, restoration, or enhancement of the environment where the regulatory process involves procedures for protection of the environment, and is therefore categorically exempt from CEQA review as a Class 8 Categorical Exemption.
5. The Board of Directors hereby amends District Rule 2.3 Ringelmann Chart, 2.11 Particulate Matter Concentration, and 2.12 Specific Contaminants and rescinds Rules 2.4 Exceptions and 2.7 Wet Plumes as set forth in Exhibit 1 (Attachment A of the Staff Report), which is attached and incorporated by reference. The amendment is effective January 13, 2010.

PASSED AND ADOPTED by the Board of Directors of the Yolo-Solano Air Quality Management District this 13th day of January, 2010, by the following vote:

Ayes:

Noes:

Absent:

Abstain:

Matt Rexroad, Chair
Board of Directors
Yolo-Solano Air Quality Management District

Attest:

Approved as to Form:

Kay Mahorney, Clerk
Board of Directors

Hope Welton, District Counsel

F:\RULES\Development\Rule2.3_2.11_2.12 Amendments\Resolution 10-01, Rules 2.3, 2.11, and 2.12 Amendments.wpd

ATTACHMENT D
WRITTEN COMMENTS RECEIVED



United States Environmental Protection Agency
Region IX
75 Hawthorne Street
San Francisco, CA 94105-3901

October 23, 2009

Transmittal of EPA Rule Review Comments

To: Paul Hensleigh, Yolo-Solano Air Quality Management District
phensleigh@ysaqmd.org

Mike Guzzetta, California Air Resources Board
mguzzett@arb.ca.gov

From: Andrew Steckel, Rulemaking Office Chief
steckel.andrew@epa.gov

Re: Rule 2.3 Ringlemann Chart (Draft 10/1/09)
Rule 2.4 Exceptions (Proposed Repeal 10/1/09)

Rule 2.7 Wet Plumes (Proposed Repeal 10/01/09)
Rule 2.11 Particulate Matter (Draft 10/1/09)
Rule 2.12 Specific Contaminants (Draft 10/1/09)

Thank you for the opportunity to review the proposed rule amendments for Yolo-Solano Air Quality Management District. We are providing comments based on our preliminary review of the draft rules identified above. We support the District's efforts to obtain additional emission reductions by setting more stringent standards for visible emissions, combustion contaminants and particulate matter as part of the process to comply with California Senate Bill 626. Please direct any questions about our comments to me at (415) 947-4115 or to Joanne Wells at (415) 947-4118.

Rule 2.3, Section 110.c. The preceding exemption (Section 110.b) also addresses the instruction of public employees in methods of fire fighting. We believe you intended Section 110.c to apply to "employees", not "public employees". A similar exemption is found in San Joaquin Valley APCD Rule 4101 Section 4.2.

Rule 2.3 Section 110.d & e. We did not find analogous exemptions in rules for other air districts and they seem redundant to the exemption in Section 110.a. Please remove these exemptions or explain why they are needed.

Rule 2.3 Section 110.f. We did not find this exemption in analogous rules for other air districts, and it seems more appropriately considered in agricultural burning requirements. Please remove this exemption or explain how it conforms with Clean Air Act Section 110(l) restrictions on SIP relaxations.

Rule 2.3 Section 110.g. We did not find this exemption in analogous rules for other air districts. Please remove this exemption or explain how it conforms with Clean Air Act Section 110(l) restrictions on SIP

relaxations.

Rule 2.3 Section 110.2. This exemption includes a reference to Section 41860 of the California Health and Safety Code. For clarity, we recommend stating the actual restriction for orchard and citrus heaters in the exemption and deleting the reference to the H&SC. For example, see exemption 102.4 listed in Sacramento AQMD Rule 401, titled Ringlemann Chart.

Rule 2.3 Section 110.10. Please remove this new new blanket exemption for abrasive blasting operations or explain how it conforms with Clean Air Act Section 110(l) restrictions on SIP relaxations. We did not find this exemption in rules for other air districts. The Bay Area AQMD (Regulation 12, Rule 4) and San Diego APCD (Rule 71) both have specific rules addressing emissions from abrasive or sand blasting operations. Requirements tailored to abrasive blasting operations could be listed as an additional standard in Section 300.

Rule 2.3 Section 110.12 This is a new exemption based on requirements found in California Health & Safety Code Section 41701.6, which states that the district can not impose a discharge requirement for visible emissions more stringent than Ringleman No. 2. along with the operational restrictions included in this new exemption. We recommend that the District remove this exemption and consider adding a new standard in Section 300 to restrict emissions from this source to not exceed Ringleman No. 2 as allowed by the CH&SC.

Rule 2.3 Sections 110.14, and 110.15. We recommend the District remove these exemptions if there are no relevant sources currently in the District and new sources would need to be permitted. We note that Feather River AQMD Rule 3.1 contains a similar exemption that combines these two exemptions and more clearly specifies relevant requirements.

Rule 2.3 Section 200 If these terms remain in the rule, please add definitions for visible air contaminants, obscurant, teepee burner and abrasive blasting, to clarify the requirements.

Rule 2.3 Other To improve rule clarity and enforceability, please add reference to EPA Method 9 for visual determination of the opacity of emissions.

Rules 2.4 and 2.7 Please ensure that the SIP submittal is clear that these rules are being rescinded because all their requirements have been integrated into Rule 2.3.

Rule 2.11 Table of Contents Note the typo: "Particulate" is spelled "Particulater".

Rule 2.11 Other To improve rule clarity and enforceability, please add reference to EPA Method 5 for Particulate Matter, EPA Method 2 for Stack gas velocity, and EPA Method 4 for Stack gas moisture .

Rule 2.12 Section 100.102 For consistency with other sections in this rule, you may want to change "sulphur" in this section to "sulfur."

Rule 2.12 Section 110 This exemption was not found in analogous rules for other air districts. Please revise this exemption consistent with national policy on excess emissions during start-up and shut-down. See *State Implementation Plans: Policy Regarding Excess Emissions During Malfunctions, Startup, and Shutdown*, memo from Steven Herman (OECA) and Robert Perciasepe (OAR), EPA, September 20, 1999.

Rule 2.12 Section 301 a. The proposed revision of "Sulfur compounds calculated as sulfur dioxide (SO₂)" to simply "Sulfur dioxide" appears to relax the requirement. Please remove this revision or demonstrate why it is needed and how it complies with Section 110(l) of the Clean Air Act.

Rule 2.12 Section 301 b. The title "Particulate Matter Combustion Contaminants" seems redundant since Combustion Contaminants is defined as Particulate Matter.

Rule 2.12 To improve rule clarity and enforceability, please add reference to EPA Method 5 for Particulate Matter, EPA Method 8 for Sulfur Compounds Concentration, EPA Method 2 for Stack gas velocity, and EPA Method 4 for Stack gas moisture.
