AGENDA:
PCAPCD Board of Directors Meeting
Thursday, October 11, 2012, 2:30 P.M.
Placer County Board of Supervisors' Chambers
175 Fulweiler Avenue, Auburn, California

Call to Order

Flag Salute

Roll Call / Determination of a Quorum

Approval of Minutes: August 9, 2012, Regular Board Meeting

Public Comment: Any person desiring to address the Board on any item not on the agenda may do so at this time. No action will be taken on any issue not currently on the agenda.

Public Hearing/Action: Item 1

1. **Amendment of two District Rules: Rule 235, Adhesives, and Rule 239, Graphic Arts Operations:** Conduct a public hearing and consider adoption of Resolutions #12-10 and #12-11 approving the amendment of Rule 235, Adhesives, and Rule 239, Graphic Arts Operations.

Information: Item 2

2. **Briefing on the District's CEQA Handbook:** Staff will provide a presentation on the District's CEQA Handbook.

Air Pollution Control Officer Report *(Verbal reports and/or handouts will be provided)*

a. Presentation of Employee Commendation
b. Facilities update
c. Fiscal Update

Adjournment

Next Regularly Scheduled Board Meeting: Thursday, December 13, 2012 2:30 PM

Opportunity is provided for the members of the public to address the Board on items of interest to the public, which are within the jurisdiction of the Board. A member of the public wanting to comment upon an agenda item that is not a Public Hearing item should submit their name and identify the item to the Clerk of the Board.
Placer County Air Pollution Control District is committed to ensuring that persons with disabilities are provided the resources to participate fully in its public meetings. If you require disability-related modifications or accommodations, please contact the Clerk of the Board. All requests must be in writing and must be received by the Clerk five business days prior to the scheduled meeting for which you are requesting accommodation. Requests received after such time will be accommodated only if time permits.

District Office Telephone – (530) 745-2330

The minutes of the August 9, 2012 Board Meeting will be posted after their approval by the Board at their October 11, 2012 meeting.

Placer County
AIR POLLUTION CONTROL DISTRICT

Board Agenda

Public Hearing/Action

Agenda Date: October 11, 2012

Prepared By: Bruce Springsteen, Compliance and Enforcement Manager

Topic: Adoption of Amended Rule 235, Adhesives, and Rule 239, Graphic Arts Operations. (Public Hearing/Action)

Action Requested:

1) Conduct a Public Hearing regarding the proposed adoption of amended Rule 235, Adhesives, and Rule 239, Graphic Arts Operations.

2) Adopt Resolutions #12-10 (Attachment #1) and #12-11 (Attachment #2), thereby approving the amended rules as revisions to the District Rules and Regulations and to the State Implementation Plan; and approving all of the required "Findings and Recommendations" found in the Staff Reports (Attachments #3 and #4).

Discussion:

The District is proposing amendments to two (2) rules which limit volatile organic compound (VOC) emissions:

- Rule 235, Adhesives, was last amended by the District on April 8, 2004. Today's proposed amendments are based on the U.S. EPA's "Control Techniques Guidelines for Miscellaneous Industrial Adhesives," (EPA 453/R-08-005), dated September 2008, and establishes consistency with other local Air District rules.

- Rule 239, Graphic Arts Operations, was last amended by the District on April 8, 2004. Today's proposed amendments are based on the U.S. EPA's "Control Techniques Guidelines for Offset Lithographic Printing and Letterpress Printing," (EPA-453/R-06-002), dated September 2006, and establish consistency with other local Air District rules.

The rule amendments are required as part of the District's State Implementation Plan (SIP) commitment to implement measures to reduce sources of ozone precursors; and associated requirements to implement Best Available Retrofit Control Technology under California Health and Safety Code Section 40919, and "every feasible measure" under California Health and Safety Code Section 40914. These result from the District's non-attainment designation for ground level ozone.

The proposed amended rules, background documents, and letters requesting comments were mailed to all impacted sources, including those with District permits to operate as well as other affected sources known to the District. A public notice of the scheduled public hearing was published in the Auburn Journal on September 9, 2012. The public notice, proposed

amended rules, and background documents were posted on the District website.
The District has worked closely with the U.S. EPA, California Air Resources Board, and affected sources during development of the amended rules to ensure that once adopted, the rules will receive approval into the SIP. The District received comments from the U.S. EPA on the amended rules. The comments, attached to the staff reports, have been addressed in the final proposed amendments.

Fiscal Impact:

The cost effectiveness of the proposed rule amendments have been determined to be acceptable by the U.S. EPA, and other Air Districts that have implemented the control Techniques Guidelines (CTG) requirements. The Rule 235, Adhesives, amendments are not projected to result in economic hardship to any adhesives users or manufacturer within the District, including one (1) facility with a District permit to operate. The Rule 239, Graphic Arts Operations, amendments are not projected to result in economic hardship to any graphic arts operations within the District, including seven (7) shops with District permits to operate.

Recommendation:

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

The District recommends and requests that the Board:

1) Approve all the Findings found in the Staff reports of Attachments #3 and #4.

2) Adopt Resolutions #12-10 (Attachment #1) and #12-11 (Attachment #2), thereby approving amended Rule 235 and Rule 239 as revisions to the District Rules and Regulations and to the State Implementation Plan.

Attachment(s)
#1: Resolution #12-10, Adoption of Amended Rule 235, Adhesives
#2: Resolution #12-11, Adoption of Amended Rule 239, Graphic Arts Operations
#3: Staff Report for Amended Rule 235, Adhesives
#4: Staff Report for Amended Rule 239, Graphic Arts Operations

ATTACHMENT #1

Subject:

Resolution #12-10, Adoption of Amended Rule 235

Placer County
AIR POLLUTION CONTROL DISTRICT

Board Resolution:

Resolution # 12-10

Before the Placer County Air Pollution Control District Board of Directors

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In the Matter Of: Adopt a resolution to approve the Amendment of the Placer County Air Pollution Control District's Rule 235, Adhesives, as shown in Exhibit 1.

The following **RESOLUTION** was duly passed by the Placer County Air Pollution Control District Board of Directors at a regular meeting held on **October 11, 2012,** by the following vote:

Ayes: Holmes, M._____ Barkle _____ Nader_____ Weygandt_____ Ucovich _____

Holmes, J. _____ Hill_____ Montgomery _____ Garcia _____

Noes: Holmes, M._____ Barkle _____ Nader_____ Weygandt_____ Ucovich _____

Holmes, J. _____ Hill_____ Montgomery _____ Garcia _____

Abstain: Holmes, M._____ Barkle _____ Nader_____ Weygandt_____ Ucovich _____

Holmes, J. _____ Hill_____ Montgomery _____ Garcia _____

Signed and approved by me after its passage:

_____ Chairperson

_____ Attest: Clerk of said Board

WHEREAS, the Board of Directors of the Placer County Air Pollution Control District is authorized to adopt rules and regulations and do such acts as may be necessary or proper to execute the powers and duties granted by Health and Safety Code Sections 40001, 40702, 40716, 41010, and 41013 (Health and Safety Code Section 40727(b)(2)); and

WHEREAS, the Board of Directors of the Placer County Air Pollution Control District has determined that the meaning of the amended rule can be easily understood by the persons directly affected by it (Health and Safety Code Section 40727(b)(3)); and

WHEREAS, the Board of Directors of the Placer County Air Pollution Control District has determined that the amended rule is in harmony with, and not in conflict with or contradictory to, existing statutes, court decisions, or state or federal regulations (Health and Safety Code Section 40727(b)(4)); and

WHEREAS, the Board of Directors of the Placer County Air Pollution Control District has maintained records of the rulemaking proceedings (Health and Safety Code Section 40728); and

WHEREAS, the Board of Directors of the Placer County Air Pollution Control District held a duly noticed public hearing on October 11, 2012, that was noticed in newspapers of general circulation in the District no less than 30 days in advance of said hearing, and the Board has considered public comments on the proposed amended rule with evidence having been received and this Board having duly considered the evidence (Health and Safety Code Sections 40725 40726, and 40920.6); and

WHEREAS, the District Board has made the findings pursuant to Health and Safety Code Section 40727, of necessity, authority, clarity, consistency, non-duplication, and reference in regard to the proposed amended rule and,

WHEREAS, the District has considered the relative cost effectiveness of the measure as well as other factors, as required by Health and Safety Code Section 40922, and made reasonable efforts to determine the direct costs expected to be incurred by regulated parties pursuant to Health and Safety Code Section 40703; and

WHEREAS, the District finds that the proposed rule amendment is exempt from the California Environmental Quality Act (CEQA) because (1) it can be seen with certainty that there is no possibility that the activity in question may have a significant adverse effect on the environment (CEQA Guidelines §15061(b)(3)) and (2) it is as an action by a regulatory agency for protection of the environment (Class 8 Categorical Exemption, CEQA Guidelines §15308); and

WHEREAS, portions of the Placer County Air Pollution Control District (PCAPCD) have been designated as "severe" non-attainment areas for the federal 8-hour ozone standard, and as non-attainment for the 1-hour ozone standard, pursuant to the Federal Clean Air Act Amendments of 1990 (FCAA): and

WHEREAS, The FCAA requires the submittal of VOC Reasonably Available Control Technology (RACT) rules for non-attainment areas covering all Major Stationary Sources of VOC and the State Clean Air Act requires the adoption of all feasible measures; and

WHEREAS, The Board of Directors of the PCAPCD determined in the 2011 RACT SIP Update Analysis that there were non-Major Stationary Sources of VOC in the PCAPCD in the categories of Adhesives Operations for which a control measure was required to comply with requirements

of California Health and Safety Code Sections 40001 and 40910, and with Title 1, Part D, Subpart 2, Section 182(b)(2), of the 1990 Federal Clean Air Act Amendments for the submittal of Reasonable Available Control Technology (RACT); and

NOW THEREFORE BE IT RESOLVED, that this Board approves the amendments to Rule 235, Adhesives, as shown in Exhibit 1.

BE IT FURTHER RESOLVED AND ORDERED that the Air Pollution Control Officer is hereby authorized and directed to submit Rule 235, in the form required, to the California Air Resources Board, on behalf of the Placer County Air Pollution Control District, and to perform such acts as are necessary to carry out the purpose of this resolution.

BE IT FURTHER ORDERED that the Air Pollution Control Officer is hereby authorized and directed to request that amended Rule 235 be adopted by the California Air Resources Board into the State Implementation Plan (SIP) and that approval of the revision to the SIP be requested of the United States Environmental Protection Agency on behalf of the Placer County Air Pollution Control District.

Exhibit 1, Clean Copy of Amended Rule 235, Adhesives

EXHIBIT 1

Clean Copy of Rule 235, Adhesives

RULE 235 ADHESIVES

Adopted 06-08-95
(Amended 04-10-97, 04-08-04, 10-11-12)

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100 GENERAL

101 PURPOSE: To limit emissions of volatile organic compounds (VOCs) from the application of commercial and industrial adhesive or sealant products, and from related solvents and strippers.

102 APPLICABILITY: The provisions of this rule apply to any person who uses, applies or solicits the use or application of any adhesive or sealant product or associated solvent; or any person who supplies, sells, offers for sale, manufacturers or distributes for use or application within the District, any adhesive or sealant product or associated solvent.

103 SEVERABILITY: If any section, subsection, sentence, clause, phrase, or portion of this rule is, for any reason, held invalid, unconstitutional, or unenforceable by any court of competent jurisdiction, that portion shall be deemed as a separate, distinct, and independent provision, and the holding shall not affect the validity of the remaining portions of the rule.

104 EXEMPTIONS

104.1 Aerosol Cleaning Solvents: The requirements of Section 303 shall not apply to the use of aerosol cleaning solvents at the stationary source provided that the total usage of the aerosol cleaning solvents does not exceed 160 fluid ounces per day, averaged over a calendar month.

104.2 Consumer Products Contact Adhesives: The requirements of Section 302 shall not apply to contact adhesives subject to the Consumer Product Safety Commission regulations in 16 Code of Federal Regulations, Part 1302, provided that adhesives are sold in packages of 128 fluid ounces or less and have a flash point greater than 20°F as determined pursuant to those regulations, and that are used at a home, a construction site, or at any location other than a stationary source.

104.3 Cyanoacrylate Adhesives: The requirements of this rule shall not apply to cyanoacrylate adhesives.

104.4 Equipment Cleanup: The VOC requirements in Section 304 shall not apply to ethyl acetate used to clean adhesive application equipment when:

104.4.1 The equipment is used in the manufacturing of transdermal drug delivery products, and

104.4.2 Fewer than 3 gallons per day of ethyl acetate, averaged over a calendar month, are used.

104.5 Household Adhesives: The requirements of this rule shall not apply to household adhesives that are regulated by the State of California and that are defined in Section 232.

104.6 Low Usage: The requirements of Sections 302, 303 and 304.1 shall not apply to the materials used by the stationary source, if the total combined volume of these materials used at the stationary source does not exceed 55 gallons during any calendar year. Commercial and industrial operations that use such materials and that are exempted pursuant to this section shall comply with Section 501.

104.7 Low VOC Materials: The requirements of this rule shall not apply to materials containing 20 grams/liter or less (0.17 pounds/gallon) of VOC actual content.

104.8 Materials Regulated Under Other District Rules: The requirements of this rule shall not apply to any material specifically regulated under any of the other District's Rules.

104.9 Medical Equipment Manufacturing: The requirements of this rule shall not apply to solvent welding operations used in the manufacturing of medical devices, including, but not limited to, catheters, heart valves, blood cardioplegia machines, tracheotomy tubes, blood oxygenators, and cardiatory reservoirs.

104.10 Research and Development Operations: Except for the work practices required pursuant to Section 305, Sections 302, 303 and 304.1 shall not apply to the testing and evaluation of materials in research and development laboratories, quality assurance laboratories, or analytical laboratories, provided that these sources maintain records that comply with Section 501.

104.11 Small Container: The requirements of this rule shall not apply to materials sold or supplied in non-reusable containers that are designed to hold no more than 8 fluid ounces of materials.

104.12 Tire Repair: The requirements of this rule shall not apply to materials used for tire repair if such products are labeled by the manufacturer: "For Tire Repair Only."

104.13 Undersea Weapons: The requirements of this rule shall not apply to the manufacture, maintenance, or repair of undersea-based weapon systems.

104.14 Ultraviolet Light-Cured Adhesives: The requirements of this rule shall not apply to reactive adhesives that are cured through the application of ultraviolet light, electron beam, visible light, radio frequency, or microwaves.

200 DEFINITIONS

201 ACRYLONITRILE-BUTADIENE-STYRENE (ABS) WELDING ADHESIVE: Any adhesive intended by the manufacturer to weld ABS pipe. ABS pipe is made by reacting monomers of acrylonitrile, butadiene, and styrene and is normally identified with an "ABS" marking.

202 ADHESIVE: Any substance that is applied for the purpose of bonding two surfaces together other than by mechanical means.

203 ADHESIVE OR SEALANT PRODUCT: Any adhesive, adhesive primer, aerosol adhesive, aerosol adhesive primer, sealant, or sealant primer, as sold by the manufacturer or as applied.

204 ADHESIVE PRIMER: A coating applied to a substrate, prior to the application of an adhesive, to provide a bonding surface.

205 AEROSOL ADHESIVE or ADHESIVE PRIMER: An adhesive or adhesive primer packaged as an aerosol product in which the spray mechanism is permanently housed in a non-refillable can designed for handheld application without the need for ancillary hoses or spray equipment. Aerosol adhesives include special purpose spray adhesives, mist spray adhesives, and web spray adhesives, as defined in the California Air Resources Board consumer products regulation found in Title 17 of the California Code of Regulations, beginning at Section 94507.

206 AEROSOL CLEANING SOLVENT: A material used as a surface preparation solvent, a cleanup solvent, or as a stripper and packaged as an aerosol product in which the spray mechanism is permanently housed in a non-refillable can designed for handheld application without the need for ancillary hoses or spray equipment.

207 AIRLESS SPRAY: A spray method in which a pump forces the adhesive through an atomizing nozzle at high pressure (1,000 to 6,000 pounds per square inch, gauge, (psig)).

208 APPLICATION EQUIPMENT: A device such as a spray gun, pot, hose, brush, roller, electrostatic sprayer, non-propellant spray bottle, or squeegee, used to apply an adhesive or sealant product, a surface preparation solvent, a cleanup solvent, or a stripper.

209 ARCHITECTURAL: Pertaining to stationary structures, including mobile homes, and their appurtenances. Appurtenances to an architectural structure include, but are not limited to: hand railings, cabinets, bathroom and kitchen fixtures, fences, rain gutters and downspouts, and windows.

210 AUTOMOTIVE GLASS ADHESIVE PRIMER: An adhesive primer labeled by the manufacturer to be applied to automotive glass prior to installation of the glass using an adhesive/sealant. This primer improves the adhesion to pinch weld and blocks ultraviolet light.

211 CERAMIC TILE ADHESIVE: Any adhesive intended by the manufacturer for the installation of ceramic tiles.

212 CHLORINATED POLYVINYL CHLORIDE (CPVC) WELDING ADHESIVE: Any adhesive intended by the manufacturer to weld CPVC plastic pipe.

213 CHLORINATED POLYVINYL CHLORIDE (CPVC) PLASTIC: CPVC plastic is a polymer of the monomer that contains 67 percent chlorine and is normally identified with a CPVC marking.

214 CLEANUP SOLVENT: A VOC-containing material used to:

214.1 Remove a loosely held uncured (i.e., not dry to the touch) adhesive or sealant from a substrate, or

214.2 Clean equipment that was used to apply an adhesive or sealant product.

215 CLOSED CONTAINER: A covered receptacle, which has no visible gaps where the cover and the main body of the receptacle meet.

216 COMPUTER DISKETTE JACKET MANUFACTURING ADHESIVE: Any adhesive intended by the manufacturer to bond the fold-over flaps to the body of a vinyl computer diskette jacket.

217 CONTACT ADHESIVE: An adhesive, also known as Contact Bond Adhesive, that is intended by the manufacturer for application to both surfaces to be bonded together, is allowed to dry before the two surfaces are placed in contact with each other, forms an immediate bond that is impossible, or difficult, to reposition after both adhesive-coated surfaces are placed in contact with each other, and does not need sustained pressure or clamping of surfaces after the adhesive-coated surfaces have been brought together using sufficient momentary pressure to establish full contact between both surfaces. Contact adhesive does not include rubber cements that are primarily intended for use on paper substrates. Contact adhesive also does not include vulcanizing fluids that are designed and labeled for tire repair only.

218 CONTROL DEVICE: Equipment that is utilized as part of an emission control system, and which destroys, absorbs or otherwise eliminates or reduces the emission of Volatile Organic Compounds from adhesive/sealant operations.

219 COVE BASE INSTALLATION ADHESIVE: Any adhesive intended by the manufacturer for the installation of cove base (or wall base), which is generally made of vinyl or rubber, onto a wall or vertical surface at floor level.

220 CURED: Dry to the touch.

221 CYANOACRYLATE ADHESIVE: An adhesive with a cyanoacrylate content of at least 95% by weight.

222 DRYWALL: The installation of gypsum drywall to studs or solid surfaces.

223 ENCLOSED GUN CLEANER:

223.1 A device that is used for the cleaning of spray guns, pots, cups, and hoses, that has a closed solvent container, is not open to the ambient air when in use, and has a mechanism to force the cleanup material through the gun while the cleaner is in operation; or

223.2 A device that is used for the cleaning of spray guns, pots, cups, and hoses, that has a closed solvent container, uses non-atomized solvent flow to flush the spray equipment, and collects and returns the discharged solvent to the closed container.

224 ETHYLENE PROPYLENE DIENE MONOMER (EPDM) ROOF MEMBRANE: A prefabricated sheet of elastomeric material composed of ethylene propylene diene monomer and that is field applied to a building roof using one layer of membrane material.

225 EXEMPT COMPOUNDS: For the purposes of this rule, "Exempt Compounds" are as defined in Rule 102, Definitions.

226 FIBERGLASS: A fiber made of fine filaments of glass that is similar in appearance to wool or cotton fiber.

227 FLEXIBLE VINYL: A nonrigid polyvinyl chloride plastic with at least five percent, by weight, of plasticizer content, as determined per Section 502.8.

228 FLEXIBLE VINYL ADHESIVE: An aerosol adhesive designed to bond flexible vinyl to substrates.

229 HAND APPLICATION METHODS: The application of an adhesive or sealant product by manually held equipment. Such equipment includes: paint brushes, hand rollers, trowels, spatulas, daubers, rags, sponges, and mechanically or pneumatically driven syringes that do not atomize the applied products.

230 HIGH PRESSURE LAMINATE: Sheets of materials, consisting of paper, fabric, or other core material that have been laminated at temperatures exceeding 265 degrees F, and at pressures between 1,000 and 1,400 pounds per square inch.

231 HIGH-VOLUME LOW-PRESSURE (HVLP) APPLICATION EQUIPMENT: Spray equipment, permanently labeled as such, used to apply coating by means of a spray gun which is designed to be operated and which is operated between 0.1 and 10.0 psig air atomized pressure, measured dynamically at the center of the air cap and at the air horns.

232 HOUSEHOLD ADHESIVE: An adhesive subject to, the Air Resources Board consumer products regulation, Sections 94507-94517, Title 17, California Code of Regulations. Household adhesives do not include units of product, less packaging, that weigh more than one pound or contain more than 16 fluid ounces.

233 INDOOR CARPET ADHESIVE: An adhesive intended by the manufacturer to be used during the installation of a carpet that is in an enclosure and is not exposed to ambient weather conditions during normal use.

234 INDOOR FLOOR COVERING ADHESIVE: Any adhesive intended by the manufacturer for the installation of wood flooring, carpet, resilient tile, vinyl tile, vinyl backed carpet, resilient sheet and roll, or artificial grass. Such installed materials are in an enclosure and are not exposed to ambient weather conditions during normal use. Adhesives used to install ceramic tile and perimeter bonded sheet flooring with vinyl backing onto a non-porous substrate, such as flexible vinyl, are excluded from this category.

235 KEY SYSTEM OPERATING PARAMETER: A variable that is critical to the operation of an emission control system and that ensures both operation of the system within the system manufacturer's specifications, and compliance with the control equipment efficiency and emission collection system efficiency standard required by Section 306. Such variables may include, but are not limited to, hours of operation, temperature, flow rate, and pressure.

236 LEAK: A visible liquid solvent loss or a solvent vapor (mist) loss from unintended openings in a container.

237 LOW-SOLIDS MATERIAL: A material containing no more than 120 grams of solids per liter (1.0 pound of solids per gallon) of product.

238 MARINE DECK SEALANT/SEALANT PRIMER: Any sealant or sealant primer intended by the manufacturer to seal gaps on wooden marine decks.

239 MATERIAL: Any material containing VOC including but not limited to, an adhesive, adhesive primer, aerosol adhesive, aerosol adhesive primer, sealant, sealant primer, catalyst, colorant, stripper, or solvents used in cleaning.

240 METAL TO URETHANE/RUBBER MOLDING OR CASTING ADHESIVE: Any adhesive intended by the manufacturer to bond metal to high-density or elastomeric urethane or molded rubber materials, in heater molding or casting processes, to fabricate products such as rollers for computer printers or other paper handling equipment.

241 MOTOR VEHICLE: Any self-propelled vehicle, including, but not limited to cars, trucks, buses, golf carts, vans, motorcycles, tanks, and armored personnel carriers.

242 MOTOR VEHICLE ADHESIVE: An adhesive, including glass bonding adhesive, used at a facility that is not an automobile or light-duty truck assembly coating facility, applied for the purpose of bonding two vehicle surfaces together without regard to the substrates involved.

243 MOTOR VEHICLE WEATHERSTRIP ADHESIVE: An adhesive, used at a facility that is not an automobile or light-duty truck assembly coating facility, applied to weather stripping materials for the purpose of bonding the weather strip material to the surface of the vehicle.

244 MULTIPURPOSE CONSTRUCTION ADHESIVE: Any adhesive intended by the manufacturer for the installation or repair of various construction materials, including, but not limited to, drywall, subfloor, panel, fiberglass reinforced plastic, ceiling tile, and acoustical tile.

245 NONCOMPLIANT MATERIAL: A material that:

245.1 Exceeds the VOC content limits specified in Sections 302, 303, and 304.1, and is not exempt pursuant to Section 104 and which is not used with emission control equipment pursuant to Section 306; or

245.2 Exceeds the VOC content limit and/or composite vapor pressure limit, as applicable, in Section 304.1 and which is not used with emission control equipment pursuant to Section 306.

246 NON-MEMBRANE ROOF ADHESIVE/SEALANT: Any adhesive or sealant intended by the manufacturer for the installation or repair of non-membrane roofs, but is not intended for the installation of prefabricated single-ply roof membrane. With regard to non-membrane roof installation/repair adhesives, this category includes plastic or asphalt roof cement, asphalt roof coatings, and cold application cement.

247 NON-POROUS MATERIAL: A material which does not have tiny openings, often microscopic, to allow the absorption or discharge of fluids.

248 OUTDOOR FLOOR COVERING ADHESIVE: Any adhesive intended by the manufacturer for the installation of floor covering that is not in an enclosure and is exposed to ambient weather conditions during normal use. Outdoor floor covering installation does not include ceramic tile installation or subfloor installation.

249 PANEL: The installation of plywood, pre-decorated hardboard, tile board, fiberglass reinforced plastic, and similar pre-decorated or non-decorated panels to studs or solid surfaces.

250 PERIMETER BONDED SHEET FLOORING ADHESIVE: The installation of sheet flooring with vinyl backing onto a nonporous substrate using an adhesive designed to be applied only to a strip of up to four inches wide around the perimeter of the sheet flooring.

251 PLASTIC: A synthetic material chemically formed by the polymerization of organic (carbon-based) substances.

252 PLASTIC CEMENT WELDING ADHESIVE: Any adhesive made of resins and solvents that is formulated to dissolve the surfaces of plastic, except ABS, PVC, and CPVC plastic, to form a bond between mating surfaces.

253 PLASTIC CEMENT WELDING ADHESIVE PRIMER: Any primer intended by the manufacturer to prepare plastic substrates prior to bonding or welding.

254 PLASTIC FOAM: A foam constructed of plastic material.

255 PLASTICIZER: A material, such as a high boiling point organic solvent, that is incorporated into a vinyl to increase its flexibility, workability, or distensibility, as determined by ASTM Method E-260-96.

256 POLYVINYL CHLORIDE (PVC) WELDING ADHESIVE: Any adhesive intended by the manufacturer to weld PVC plastic pipe.

257 POROUS MATERIAL: A material whose surface is permeable to liquids; such materials include, but are not limited to, paper and cardboard. For purposes of this rule, porous material does not include wood.

258 PROPELLANT: A fluid under pressure that expels the contents of a container when a valve is opened.

259 REACTIVE ADHESIVE: An adhesive containing 20 grams or less per liter (0.17 lbs/gal) of VOCs actual content, that cures upon exposure to ultraviolet light, electron beam, visible light, radio frequency, or microwave.

260 REINFORCED PLASTIC COMPOSITE: A composite material consisting of plastic reinforced with fibers.

261 **ROADWAY SEALANT:** Any sealant intended by the manufacturer to be applied to public streets, highways, and related surfaces such as curbs, berms, driveways, and parking lots.

262 **RUBBER:** Any natural or manmade rubber substrate, including, but not limited to: styrene-butadiene rubber, polychloroprene (neoprene), butyl rubber, nitrile rubber, chlorosulfonated polyethylene, and ethylene propylene diene terpolymer.

263 **RUBBER FLOORING:** Flooring material in which both the back and the top surface are made of synthetic rubber, and which may be in sheet or tile form.

264 **RUBBER VULCANIZATION BONDING:** The bonding of rubber to metal, rubber, or polyester or nylon fabrics during one or more of the following vulcanization processes:

264.1 Molded vulcanization: The application of heat and pressure to uncured rubber in a mold;

264.2 Sheet-applied vulcanization: The application of heat after rubber stock sheets have been adhered to the walls of tanks, tankers, elbow joints, protective earthquake building pads, or rail cars; or the application of heat after one or more layers of rubber stock sheets have been built up to form a rubber product;

264.3 Cold vulcanization: The chemical reaction of an adhesive with rubber stock sheets that are adhered to earthmoving equipment, other high impact/abrasion devices, or industrial belting devices, without the application of heat or pressure. Rubber vulcanization bonding does not include tire retreading.

265 **SEALANT:** Any material with adhesive properties that is applied as a rope or bead and that is formulated for use primarily to fill, seal, waterproof, or weatherproof gaps or joints between two surfaces. Sealants include caulks. Sealants do not include sealers that are applied as continuous coatings.

266 **SEALANT PRIMER:** Any material intended by the manufacturer for application to a substrate, prior to the application of a sealant, to enhance the bonding surface.

267 **SHEET RUBBER LINING INSTALLATION:** The process of applying sheet rubber liners by hand to metal or plastic substrates to protect the underlying substrate from corrosion or abrasion. These operations also include laminating sheet rubber to fabric by hand.

268 **SINGLE-PLY ROOF MEMBRANE:** A prefabricated single sheet of rubber, normally ethylene-propylenediene terpolymer, that is field applied to a building roof using one layer of membrane material. For the purposes of this rule, single-ply roof membrane does not include membranes prefabricated from ethylene-propylene diene monomer (EPDM).

269 **SINGLE-PLY ROOF MEMBRANE ADHESIVE:** An adhesive intended by the manufacturer, and so labeled, for use in the installation or repair of single-ply roof membrane. Installation includes, as a minimum, attaching the edge of the membrane to the edge of the roof and applying flashings to vents, pipes and ducts that protrude through the membrane. Repair includes gluing the edges of torn membrane together, attaching a patch over a hole and reapplying flashings to vents, pipes or ducts installed through the membrane.

270 **SINGLE-PLY ROOF MEMBRANE ADHESIVE PRIMER:** A primer intended by the manufacture for use to clean and promote adhesion of the single-ply roof membrane seams or splices prior to bonding, and labeled as such.

271 **SINGLE-PLY ROOF MEMBRANE SEALANT:** A sealant intended by the manufacturer to be used for the installation or repair of single-ply roof membrane to the edge of the roof and applying flashings to vents, pipes, or ducts that protrude through the membrane.

272 SOLID MATERIAL: The nonvolatile portion of an adhesive or sealant product, surface preparation solvent, cleanup solvent, or stripper that remains after heating a sample of the product at 110°C for one hour.

273 SOLVENT WELDING: The softening of the surfaces of two substrates by wetting them with a solvent and/or adhesive, and joining them together with a chemical and/or physical reaction(s) to form a fused union.

274 STATIONARY SOURCE: Any building, structure, facility, or emissions unit which emits or may emit any pollutant directly or as a fugitive emission. This includes all pollutant-emitting activities which:

274.1 Belong to the same industrial grouping, and

274.2 Are located on one property or on two or more contiguous properties, and

274.3 Are under the same or common ownership, operation, or control or which are owned or operated by entities, which are under common control.

Pollutant-emitting activities shall be considered as part of the same industrial grouping if they:

274.4 Belong to the same two-digit standard industrial classification code, or

274.5 Are part of a common production process. (Common production process includes industrial processes, manufacturing processes and any connected processes involving a common material.)

275 STRIPPER: A liquid used to remove cured adhesives and/or cured sealants.

276 STRUCTURAL GLAZING ADHESIVE: Any adhesive intended by the manufacturer to adhere glass, ceramic, metal, stone, or composite panels to exterior building frames.

277 STRUCTURAL WOOD MEMBER ADHESIVE: An adhesive intended by the manufacturer to be used for the construction of a load bearing joint in wooden joists, trusses, or beams.

278 SUBFLOOR: The installation of subflooring material, typically plywood, over flooring joists. Subfloor installation includes the construction of any load bearing joints in joists or trusses. Subflooring is covered by a finished surface material.

279 SUBSTRATE: The material onto which an adhesive or sealant product, surface preparation solvent, cleanup solvent, or stripper is applied.

280 SURFACE PREPARATION SOLVENT: Any VOC-containing material used to remove contaminants such as dust, soil, oil, grease, etc., from a substrate prior to the application of an adhesive or sealant product.

281 THIN METAL LAMINATING ADHESIVE: Any adhesive intended by the manufacturer to bond multiple layers of metal to metal or metal to plastic in which the thickness of the bond line(s) is less than 0.025 mils (0.000025 inches).

282 TIRE REPAIR: To mend a hole, tear, fissure, blemish, or defect in a tire casing by grinding and/or gouging, applying adhesive, and attaching replacement rubber.

283 TIRE RETREAD ADHESIVE: An adhesive applied to the back of precured tread rubber and to the casing and cushion rubber. Tire retread adhesive may also be used to seal buffed tire casings to prevent oxidation while the tire is being prepared for a new tread.

284 TOP AND TRIM ADHESIVE: An adhesive intended by the manufacturer to be used for installing automotive or marine trim, including, but not limited to headliners, vinyl tops, vinyl trims, sunroofs, dash covering, door covering, floor covering, panel covering and upholstery.

285 TRAFFIC MARKING TAPE ADHESIVE PRIMER: An adhesive primer intended by the manufacturer to be applied to surfaces prior to the installation of traffic marking tape. Traffic marking tape is a pre-formed reflective film intended by the manufacturer to be applied to public streets, highways, and other surfaces including, but not limited to, curbs, berms, driveways, and parking lots. It is not one of the "Traffic Coatings" included in and defined in Rule 218, ARCHITECTURAL COATINGS.

286 VCT AND ASPHALT TILE ADHESIVE: An adhesive intended by the manufacturer for the installation of vinyl composite tile or asphalt tile flooring.

287 VOC COMPOSITE PARTIAL PRESSURE: The VOC composite partial pressure is the sum of the partial pressures of the compounds defined as VOCs, and shall be calculated by the following equation:

$$PP_c = \frac{\sum_{i=1}^{n} \frac{(W_i)(VP_i)}{MW_i}}{\frac{W_w}{MW_w} + \sum_{e=1}^{n} \frac{W_e}{MW_e} + \sum_{i=1}^{n} \frac{W_i}{MW_i}}$$

Where: PP_c = VOC composite partial pressure at 20°C, in mm Hg.
W_i = Weight of the "i"th VOC compound, in grams, as determined by ASTM E 260-96
W_w = Weight of water, in grams as determined by ASTM D 3792-99.
W_e = Weight of the "e"th exempt compound, in grams, as determined
MW_i = Molecular weight of the "i"th VOC compound, in grams per g-mole, as given in chemical reference literature.
MW_w = Molecular weight of water, 18 grams per g-mole.
Mw_e = Molecular weight of the "e"th exempt compound, in grams per g-mole, as given in chemical reference literature.
Vp_i = Vapor pressure of the "i"th VOC compound at 20°C, in mm Hg, as determined by Section 502.10 of this rule.

288 VOLATILE ORGANIC COMPOUND (VOC): Any chemical compound containing at least one atom of carbon, except for the exempt compounds listed in Rule 102, DEFINITIONS.

289 VOC CONTENT:

289.1 VOC Regulatory Content: The weight of VOC per combined volume of VOC and material, calculated with the following equation:

VOC Regulatory Content = (Ws – Ww – Wec) / (Vm – Vw – Vec)

289.2 VOC Actual Content: The weight of VOC per volume of material, calculated with the following equation:

VOC Actual Content = (Ws – Ww – Wec) / Vm

Where:

Ws = Weight of volatile compounds in grams
Ww = Weight of water in grams
Wec = Weight of exempt compounds in grams

Vm = Volume of material in liters
Vw = Volume of water in liters
Vec = Volume of exempt compounds, as defined in Rule 102, DEFINITIONS, in liters

289.3 Percent of VOC by Weight: The ratio of the weight of the VOC to the weight of the material, expressed as a percent. The percent of VOC by weight shall be calculated as follows:

$$Percent\ of\ VOC\ by\ Weight = \frac{W_{voc}}{W_p}\ x\ 100$$

Where: W_{voc} = Weight of VOCs in grams
W_p = Weight of material in grams

290 WATERPROOF RESORCINOL GLUE: A two-part resorcinol resin based adhesive designed for applications where the bond line must be resistant to conditions of continuous immersion in fresh or salt water.

291 WIPE CLEANING: The method of cleaning a surface by physically rubbing it with a material such as a rag, paper, abrasive pad, brush, or a cotton swab moistened with a solvent.

292 WOOD FLOORING: A wood floor surface, which may be in the form of parquet tiles, planks, or strip-wood.

300 STANDARDS

301 MATERIAL APPLICATION METHODS:

301.1 A person shall not use any methods to apply any adhesive or sealant product except the following:

301.1.1 Hand application

301.1.2 Dip coat

301.1.3 Flow coat

301.1.4 Brush or roll coat

301.1.5 Electrodeposition

301.1.6 Electrostatic spray

301.1.7 High-volume low-pressure (HVLP) application equipment

301.1.8 Aerosol cans

301.1.9 Airless spray, air-assisted airless spray, air-atomized spray, only for applying adhesives and sealants with a viscosity greater than 200 centipoise, or for applying contact adhesives

301.1.10 Any other equivalent method approved in writing by the Air Pollution Control Officer and submitted to and approved by the United States Environmental Protection Agency.

301.2 A person shall not use any methods to apply any surface preparation solvent, cleanup solvent, or stripper except the following:

301.2.1 Wipe cleaning.

301.2.2 Non-propellant spray bottles or containers.

301.2.3 An enclosed gun cleaner as defined by Section 223.

301.2.4 Soaking application equipment parts in a closed container.

302 VOC CONTENT LIMITS, ADHESIVES, ADHESIVE PRIMERS, SEALANTS AND SEALANT PRIMERS:

302.1 No person shall apply a material that has a VOC regulatory content, or a VOC actual content for low-solids material only, in excess of the following limits. VOC regulatory and VOC actual shall be calculated pursuant to Section 289.1 and Section 289.2, respectively, as applied including thinners, reducers, hardeners, retarders, catalysts, and additives.

TABLE 302-1
VOC CONTENT LIMITS

Product Category	VOC Content g/l (lb/gal)
Architectural Adhesives Products:	
Multipurpose Construction	200 (1.7)
Ceramic Title	130 (1.1)
Cove Base	150 (1.3)
Dry Wall and/or Panel	50 (0.4)
Flooring:	
Outdoor Floor Covering	250 (2.1)
Indoor Floor Covering	150 (1.3)
Ceramic Tile	130 (1.1)
Indoor Carpet or Carpet Pad	150 (1.3)
Rubber Flooring	150 (1.3)
Perimeter Bonded Sheet Vinyl Flooring	660 (5.5)
Subfloor	50 (0.4)
VCT and Asphalt Tile	50 (0.4)
Roofing:	
Single-Ply Roof Membrane	250 (2.1)
Non-Membrane Roof	300 (2.5)
Structural Glazing	100 (0.8)
Structural Wood Member Glazing	140 (1.2)
Plastic Welding:	
ABS Welding	400 (3.3)
CPVC Welding	490 (4.1)
PVC Welding	510 (4.3)
Plastic Cement Welding Primer	400 (3.3)
Other Plastic Cement Welding	450 (3.8)
Specialty:	
Contact Adhesive including Specialty Substrates	200 (1.7)
Rubber Vulcanization Bonding	850 (7.1)
Tire Retread	100 (0.8)
Motor Vehicle	250 (2.1)
Motor Vehicle Weather Strip	750 (6.3)

TABLE 302-1 VOC CONTENT LIMITS	
Product Category	**VOC Content g/l (lb/gal)**
Top and Trim	540 (4.5)
Thin Metal Laminating	780 (6.5)
Computer Diskette Jacket Manufacturing	850 (7.1)
Metal to Urethane/Rubber Molding or Casting	250 (2.1)
Waterproof Resorcinol Glue	170 (1.4)
Adhesive Primers:	
Automotive Glass	700 (5.8)
Single-Ply Roof Membrane	250 (2.1)
Traffic Marking Tape	150 (1.3)
Other	250 (2.1)
Sealants:	
Architectural	250 (2.1)
Marine Deck	760 (6.3)
Non-Membrane Roof	300 (2.5)
Roadway	250 (2.1)
Single-Ply Roof Membrane	450 (3.8)
Other	420 (3.5)
Sealant Primers:	
Architectural - Non-Porous	250 (2.1)
Architectural - Porous	775 (6.5)
Marine Deck	760 (6.3)
Other	750 (6.3)

302.2 The standards in Table 302-2 apply to applications not specifically identified in Table 302-1. In Table 302-2, if an adhesive is used to bond two different types of substrates with different VOC limits, then the higher of the two VOC limits shall apply.

TABLE 302-2 VOC CONTENT LIMITS FOR ADHESIVE APPLICATIONS ONTO SUBSTRATES	
Substrate	**VOC Content g/l (lb/gal)**
Flexible Vinyl	250 (2.1)
Fiberglass	200 (1.7)
Metal	30 (0.3)
Porous Material (except wood)	120 (1.0)
Plastic Foam	80 (0.7)
Wood	30 (0.3)
Reinforced Plastic Composite	200 (1.7)
Rubber	250 (2.1)
Other	250 (2.1)

303 VOC CONTENT LIMITS FOR AEROSOL ADHESIVES

303.1 A person shall not use an aerosol adhesive unless the adhesive complies with the VOC limit specified in the California Air Resources Board consumer products regulation found in Title 17 of the California Code of Regulations, sections 94507

– 94517, and listed in the table below, in percent by weight, as determined by Sections 289.3 and 502.2.

TABLE 303-1 VOC CONTENT LIMITS FOR AEROSOL ADHESIVES	
Type of Aerosol Adhesive	**VOC % by Weight**
Adhesives – Aerosol:	
Mist Spray Adhesives	65%
Web Spray Adhesives	55%
Special Purpose Spray Adhesives:	
Mounting, Automotive Engine Compartment, and Flexible Vinyl Adhesives	70%
Polystyrene Foam and Automobile Headliner Adhesives	65%
Polyolefin and Laminate Repair/Edgebanding Adhesives	60%

303.2 No person shall manufacture for use in the District any aerosol adhesive which contains methylene chloride, perchloroethylene, or trichloroethylene, except that an aerosol adhesive manufactured before January 1, 2002 may be sold, supplied, or offered for sale until January 1, 2005, as long as the product container or package displays the date on which the product was manufactured, or a code indicating such date.

304 VOC CONTENT LIMITS, SURFACE PREPARATION, CLEANUP, AND STRIPPER SOLVENTS: A person shall comply with the following requirements:

304.1 Materials used for surface preparation, cleaning, or stripping shall not exceed the VOC actual content or the VOC composite partial pressure limits specified in the table below. Where VOC limits are shown as both VOC actual content (grams/liter) and VOC composite partial pressure, either may be used as the content limit for the specific application shown. The VOC actual content shall be calculated pursuant to Section 289.2. The composite partial pressure shall be determined using Section 502.9.

TABLE 304-1 VOC CONTENT LIMITS FOR SURFACE PREPARATION, CLEANUP, AND STRIPPER SOLVENTS		
Adhesive or Sealant Product Activity For Which the Solvent Is Used	**Actual VOC Content g/l (lb/gal)**	**VOC Composite Partial Pressure Millimeters of Mercury at 20°C (68°F)**
Substrate Preparation		
Single-Ply Roof Membrane Installation/Repair	--	45
Electrical Apparatus Components and Electronic Components	500 (4.2)	18
Medical Devices and Pharmaceuticals	800 (6.7)	33
Other Substrates	70 (0.6)	--
Cleanup		
Application Equipment		
Spray Gun in an Enclosed Gun Cleaner	--	45
Soaking in a Closed Container	--	9.5
Other	70 (0.6)	--

Other (Not Application Equipment)	--	45
Solvent Stripping Activity		
Wood Substrates	350 (2.9)	2
Other	--	9.5

304.2 A person applying any surface preparation solvent, cleanup solvent, or any stripper must use only the following methods:

304.2.1 Wipe cleaning.

304.2.2 Non-propellant spray bottles or containers.

304.2.3 An enclosed gun cleaner as defined by Section 223.

304.2.4 Soaking application equipment parts in a closed container provided that the container does not exceed five gallons in size and the container is kept tightly covered at all times except when accessing the container.

305 WORK PRACTICES FOR ADHESIVE PRODUCTS, SEALANT PRODUCTS, AND SOLVENT CLEANING MATERIALS: A person applying any adhesive products, sealant products, surface preparation, solvent cleaning, cleanup solvent, or any stripper shall comply with the following:

305.1 Closed containers or pipes shall be used for the disposal of all VOC-containing cloth, sponges, papers, or other materials used for solvent cleaning.

305.2 All VOC-materials shall be stored in closed containers except when adding, removing, or mixing contents.

305.3 Minimize spills of all VOC-containing materials.

305.4 Convey all VOC-containing materials from one location to another in closed containers or pipes.

305.5 Minimize VOC emission from cleaning of application, storage, mixing, and conveying equipment by ensuring that equipment cleaning is performed without atomizing the cleaning solvent and all spent solvent is captured in closed containers.

306 EMISSION CONTROL EQUIPMENT: As an alternative to utilizing materials that comply with the VOC limits in Sections 302 through 304.1, a person may use approved air pollution control equipment provided that the following conditions are met:

306.1 The air pollution control equipment is approved by the Air Pollution Control Officer pursuant to Rule 501, GENERAL PERMIT REQUIREMENTS, and

306.2 The air pollution control equipment is designed and operated with:

306.2.1 A control equipment efficiency of at least 95 percent on a mass basis, as determined pursuant to Sections 404 and 502.5, and

306.2.2 An emission collection efficiency of at least 90 percent on a mass basis, as determined pursuant to Section 502.6.

306.3 Submit an Operation and Maintenance Plan to the Air Pollution Control Officer for approval at least 90 days in advance of the date on which VOC emission control system is to be used in lieu of compliance with VOC content limitations. The plan

shall specify operation and maintenance procedures that demonstrate continuous operation and compliance of the emissions control equipment during periods of emissions-producing operations. The Plan shall specify key system operating parameters necessary to determine compliance with this rule and describe in detail procedures to maintain the approved control equipment. The plan shall also specify which records must be kept to document these operations and maintenance procedures. The records shall comply with the requirements of Section 501. This Plan shall be implemented upon approval by the Air Pollution Control Officer.

400 ADMINISTRATIVE REQUIREMENTS

401 PROHIBITION OF SALE: A person shall not supply, sell, solicit, or offer for sale, any noncompliant materials as defined in Section 245. The prohibition in this section shall apply to any material, which will be applied at any physical location within the District.

402 PROHIBITION OF SPECIFICATION: No person shall solicit, require the use of, or specify the application of any material subject to this rule, if the use or application would violate this rule. The prohibition in this section shall also apply to all written or oral contracts under the terms of which any such product or solvent is to be applied within the District.

403 HVLP MARKING: A person shall not sell, offer for sale, or distribute for use within the District any HVLP gun without a permanent marking, or accurate information provided on company letterhead or in the form of technical literature clearly identifying the spray gun manufacturer, salesperson or distributer, denoting the maximum inlet air pressure in psig at which the gun will operate within the parameters specified in Section 231.

404 CALCULATION FOR DETERMINING PERCENT CONTROL EFFICIENCY AND VOC MASS EMISSION RATE: The VOC mass emission rate shall be calculated both upstream and downstream of the emissions control device and shall be based on the VOC mass concentration and volumetric flowrate, pursuant to Section 502.5 and the following equations:

404.1 <u>VOC Mass Emission Rate:</u>

$$M = (Q) * (C) * (60 \frac{m}{hr}) \ (calculated\ upstream\ and\ downstream)$$

Where: M = VOC mass emission rate (upstream and downstream), in lb/hr.
Q = the volumetric flowrate at the inlet (upstream) or exhaust stack outlet (downstream), in standard cubic feet per minute as determined by Section 502.5.
C = the VOC mass concentration at the inlet (upstream) or outlet (downstream), in pounds per standard cubic feet, as determined pursuant to Section 502.5.

404.2 The percent control efficiency is calculated as follows:

$$\%CE = \left(\frac{M_u - M_d}{M_u} \right) * 100$$

Where: CE = control efficiency.
M_u = the upstream VOC mass emission rate, in lb/hr.
M_d = the downstream VOC mass emission rate, in lb/hr.

405 LABELING REQUIREMENTS: Any material subject to this rule shall be labeled pursuant to Sections 405.1 through 405.4 as appropriate.

405.1 VOC Content: Each container of any material subject to this rule shall display the maximum VOC regulatory content, or the maximum VOC actual content for solvents and low-solids products, expressed in grams per liter or pounds per gallon.

405.2 For Materials Subject to Section 304.1: Manufacturers of any solvents subject to this rule shall indicate on the solvent container, or on a separate product data sheet or material safety data sheet, the name of the solvent, manufacturer's name, the maximum VOC actual content, density of the solvent, and the total VOC composite partial pressure of the material. The VOC actual content shall be displayed as grams per liter or pounds per gallon. The composite partial pressure shall be displayed in millimeters of mercury at 20 ^{o}C (68 ^{o}F) as determined pursuant to Section 502.9.

405.3 Thinning Recommendation: Each container of adhesive product or sealant product subject to this rule shall display a statement of a manufacture's recommendations regarding thinning, or reducing, or mixing of the adhesive product with any other VOC containing material. Mixing recommendations shall specify a ratio which results in a compliant, as applied, adhesive product, or sealant product.

405.4 Labeling Requirements for Aerosol Adhesives: All aerosol adhesives regulated under Section 303 shall comply with the labeling requirements, applicable to aerosol adhesives, specified in the California Air Resources Board consumer products regulation found in Title 17 of the California Code of Regulations.

500 MONITORING AND RECORDS

501 RECORDKEEPING: In addition to any applicable recordkeeping requirements of either Rule 502, NEW SOURCE REVIEW, Rule 507, FEDERAL OPERATING PERMIT PROGRAM, Rule 511, POTENTIAL TO EMIT, or any other District rule which may be applicable, any person applying adhesive or sealant products, surface preparation solvents, cleanup solvents, or strippers subject to any provision of this rule shall maintain the following records, for non-exempt materials in order to evaluate compliance:

501.1 Product Data: A list of currently used adhesive or sealant products, surface preparation solvents, cleanup solvents, or strippers shall be provided and maintained. The list shall include all of the following items for each material used:

501.1.1 The material's manufacturer, product name, and product number or code.

501.1.2 Classification according to the terminology used in Sections 302, 303, and 304. of this rule (e.g.,"PVC Welding Adhesive", "Adhesive Applied to Metal", "Substrate Preparation", "Medical Devices", etc.).

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501.1.3 The material's VOC regulatory content, or VOC actual content, or weight percentage of volatiles, determined according to Sections 289.1, 289.2, and 289.3, when used in the mixing ratios recommended by the manufacturer. Labeling of aerosol adhesive containers shall comply with the requirements of Section 405.4.

501.1.4 The actual mixing ratio, if different from the manufacturer's recommendation, used in applying the material.

501.2 Product Usage and Frequency: Any person using materials regulated by this rule shall record and maintain records of the monthly usage of each individual material as listed pursuant to Section 501.1.

501.3 Emission Control Equipment Records:

501.3.1 A person using emission control equipment as a means of alternate compliance pursuant to Section 306, shall maintain records on a daily basis, showing the type and volume of coatings and solvents used.

501.3.2 A person using emission control equipment as a means of alternate compliance with this rule pursuant to Section 306, shall maintain daily records of key system operating and maintenance procedures which will demonstrate continuous operation and compliance of the emission control system during periods of emission-producing activities. Key system operating parameters are those necessary to ensure compliance with the requirements of Section 306, and are defined in Section 235.

501. 4 Retention of Records: All records required by this rule shall be retained for at least three years, except for sources subject to Rule 507, FEDERAL OPERATING PERMIT PROGRAM, which shall be retained for at least five years. Such records shall be made available to the Air Pollution Control Officer upon request.

502 TEST METHODS:

502.1 Determination of VOC Content: Except as provided in Sections 502.2 and 502.3, VOC content of non-aerosol adhesive or sealant products, surface preparation solvents, cleanup solvents, or strippers shall be determined in accordance with United States Environmental Protection Agency (U.S. EPA) Method 24 or U.S. EPA Method 24A.

502.2 Determination of VOC Content of Aerosol Adhesives Primers: The VOC content of aerosol adhesive primers shall be determined using South Coast Air Quality Management District Test Method 305, “Determination of Volatile Organic Compounds (VOC) in Aerosol Applications,” California Air Resources Board Method 310, “Products and Reactive Organic Compounds (VOC) in Consumer Products,” or equivalent methods approved by the U.S. EPA.

502.3 Determination of VOC Content of Plastic Welding Cement Adhesive/Primer: The VOC content of ABS, CPVC, PVC, or other plastic welding cement adhesive or any plastic welding cement primer shall be determined by using the South Coast Air Quality Management District’s “Determination of Volatile Organic Compounds (VOC) in Materials Used for Pipes and Fittings”, Method 316A.

502.4 Determination of Compounds Exempt From VOC Definition: Exempt compounds referenced in Section 225 and listed in Rule 102, DEFINITIONS, shall be determined in accordance with ASTM Method D4457-85, “Test Method for Determination of Dichloromethane and 1,1,1-Tricholoroethane in Paints and Coatings by Direct Injection into a Gas Chromatograph,” or California Air Resources Board Method 432, “Determination of Dichloromethane and 1,1,1-Trichoroethane in Paint and Coatings.” If any of the perfluorocarbons or volatile cyclic and linear methyl siloxanes are being claimed as exempt compounds, the person making the claim must state in advance which compounds are present, and the U.S. EPA approved test method used to make the determination of these compounds.

502.5 Determination of Control Efficiency: Control efficiency of emissions control equipment shall be determined in accordance with U.S. EPA Method 18, 25, or 25A; or U.S. EPA 2 or 2C (whichever is applicable). The U.S. EPA Method 18 or CARB Method 422 "Determination of Volatile Organic Compounds Emissions from Stationary Sources" shall be used to determine emissions of exempt compounds.

502.6 Determination of Collection Efficiency: Efficiency of the collection system shall be determined in accordance with the U.S. EPA "Guidelines for Determining Capture Efficiency, January 9, 1995". Individual collection efficiency test runs subject to the U.S. EPA technical guidelines shall be determined by:

502.6.1 Applicable U.S. EPA Methods 204, 204A, 204B, 204C, 204E, and/or 204F; or

502.6.2 The South Coast Air Quality Management District "Protocol for Determination of Volatile Organic Compound (VOC) Capture Efficiency"; or

502.6.3 Any other method approved by the U.S. EPA, the California Air Resources Board, and the Air Pollution Control Officer.

502.7 Determination of VOC Content of Emissions: The VOC content of emissions shall be determined by U.S. EPA Method 18.

502.8 Determination of Plasticizer Content: The test method used to determine plasticizer content of flexible vinyls shall be ASTM Method E260-96, "General Gas Chromatography Procedures".

502.9 Determination of VOC Composite Partial Pressure: VOC composite partial pressure shall be determined in accordance with ASTM Method E260-96 for organic compounds, and ASTM Method D3792-86, "Test Method for Water and Water Reducible Paints by Direct Injection into a Gas Chromatograph", and Sections 288, and 502.10 of this rule.

502.10 Determination of Vapor Pressure: Vapor pressure of a VOC shall be determined in accordance with ASTM Method D2879-10, "Test Method for Vapor Pressure-Temperature Relationship and Initial Decomposition Temperature or Liquids by Isoteniscope", or may be obtained from standard reference texts, such as:

502.10.1 "The Vapor Pressure of Pure Substances", Boublik, Fried, and Hala; Elsevier Scientific Publishing Company, New York.

502.10.2 "Perry's Chemical Engineer's Handbook", McGraw-Hill Book Company.

502.10.3 "CRC Handbook of Chemistry and Physics", Chemical Rubber Publishing Company.

502.10.4 "Lange's Handbook of Chemistry", John Dean, editor, McGraw-Hill Book Company.

502.11 Determination of VOC Content of Cyanoacrylate Adhesives: The VOC content of cyanoacrylate adhesives shall be determined by the South Coast Air Quality Management District's Method 316B.

502.12 Determination of Viscosity: The viscosity shall be determined by ASTM Method D1084-88, "Standard Test Methods for Viscosity of Adhesives".

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ATTACHMENT #2

Subject:

Resolution #12-11, Adoption of Amended Rule 239

Placer County
AIR POLLUTION CONTROL DISTRICT

Board Resolution:

Resolution # 12-11

Before the Placer County
Air Pollution Control District Board of Directors

In the Matter Of: Adoption of Resolution #12-11, thereby approving the Placer County Air Pollution Control District's proposed amended Rule 239, Graphic Arts Operations, as shown in Exhibit 1.

The following **RESOLUTION** was duly passed by the Placer County Air Pollution Control District Board of Directors at a regular meeting held on **October 11, 2012,** by the following vote:

Ayes: Holmes, M._____ Barkle _____ Nader_____ Weygandt_____ Ucovich _____

Holmes, J. _____ Hill_____ Montgomery _____ Garcia _____

Noes: Holmes, M._____ Barkle _____ Nader_____ Weygandt_____ Ucovich _____

Holmes, J. _____ Hill_____ Montgomery _____ Garcia _____

Abstain: Holmes, M._____ Barkle _____ Nader_____ Weygandt_____ Ucovich _____

Holmes, J. _____ Hill_____ Montgomery _____ Garcia _____

Signed and approved by me after its passage:

_____ Chairperson

_____ Attest: Clerk of said Board

WHEREAS, the Board of Directors of the Placer County Air Pollution Control District is authorized to adopt rules and regulations and do such acts as may be necessary or proper to execute the powers and duties granted by Health and Safety Code Sections 40001, 40702, 40716, 41010, and 41013 (Health and Safety Code Section 40727(b)(2)); and

WHEREAS, the Board of Directors of the Placer County Air Pollution Control District has determined that the meaning of the amended rule can be easily understood by the persons directly affected by it (Health and Safety Code Section 40727(b)(3)); and

WHEREAS, the Board of Directors of the Placer County Air Pollution Control District has determined that the amended rule is in harmony with, and not in conflict with or contradictory to, existing statutes, court decisions, or state or federal regulations (Health and Safety Code Section 40727(b)(4)); and

WHEREAS, the Board of Directors of the Placer County Air Pollution Control District has maintained records of the rulemaking proceedings (Health and Safety Code Section 40728); and

WHEREAS, the Board of Directors of the Placer County Air Pollution Control District held a duly noticed public hearing on October 11, 2012, that was noticed in newspapers of general circulation in the District no less than 30 days in advance of said hearing, and the Board has considered public comments on the proposed amended rule with evidence having been received and this Board having duly considered the evidence (Health and Safety Code Sections 40725 40726, and 40920.6); and

WHEREAS, the District Board has made the findings pursuant to Health and Safety Code Section 40727, of necessity, authority, clarity, consistency, non-duplication, and reference in regard to the proposed amended rule and,

WHEREAS, the District has considered the relative cost effectiveness of the measure as well as other factors, as required by Health and Safety Code Section 40922, and made reasonable efforts to determine the direct costs expected to be incurred by regulated parties pursuant to Health and Safety Code Section 40703; and

WHEREAS, the District finds that the proposed rule amendment is exempt from the California Environmental Quality Act (CEQA) because (1) it can be seen with certainty that there is no possibility that the activity in question may have a significant adverse effect on the environment (CEQA Guidelines §15061(b)(3)) and (2) it is as an action by a regulatory agency for protection of the environment (Class 8 Categorical Exemption, CEQA Guidelines §15308); and

WHEREAS, portions of the Placer County Air Pollution Control District (PCAPCD) have been designated as "severe" non-attainment areas for the federal 8-hour ozone standard, and as non-attainment for the 1-hour ozone standard, pursuant to the Federal Clean Air Act Amendments of 1990 (FCAA): and

WHEREAS, The FCAA requires the submittal of VOC Reasonably Available Control Technology (RACT) rules for non-attainment areas covering all Major Stationary Sources of VOC and the State Clean Air Act requires the adoption of all feasible measures; and

WHEREAS, The Board of Directors of the PCAPCD determined in the 2011 RACT SIP Update Analysis that there were non-Major Stationary Sources of VOC in the PCAPCD in the categories of Graphic Arts Operations for which a control measure was required to comply with

requirements of California Health and Safety Code Sections 40001 and 40910, and with Title 1, Part D, Subpart 2, Section 182(b)(2), of the 1990 Federal Clean Air Act Amendments for the submittal of Reasonable Available Control Technology (RACT); and

NOW THEREFORE BE IT RESOLVED, that this Board approves the amendments to Rule 239, Graphic Arts Operations, as shown in Exhibit 1.

BE IT FURTHER RESOLVED AND ORDERED that the Air Pollution Control Officer is hereby authorized and directed to submit Rule 239, in the form required, to the California Air Resources Board, on behalf of the Placer County Air Pollution Control District, and to perform such acts as are necessary to carry out the purpose of this resolution.

BE IT FURTHER ORDERED that the Air Pollution Control Officer is hereby authorized and directed to request that amended Rule 239 be adopted by the California Air Resources Board into the State Implementation Plan (SIP) and that approval of the revision to the SIP be requested of the United States Environmental Protection Agency on behalf of the Placer County Air Pollution Control District.

Exhibit 1: Clean Copy of Amended Rule 239, Graphic Arts Operations

EXHIBIT 1

Clean Copy of Rule 239, Graphic Arts Operations

RULE 239 GRAPHIC ARTS OPERATIONS

Adopted 11-03-94
(Amended 6-08-95, 2-13-97, 8-14-97, 04-08-04, 10-11-12)

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100 GENERAL

101 PURPOSE: To limit the emissions of volatile organic compounds from graphic arts operations.

102 APPLICABILITY: The provisions of this rule apply to all graphic arts operations within the District; or any person who supplies, sells, offers to sell, applies, or manufactures, within the District, any graphic arts materials.

103 SEVERABILITY: If a court of competent jurisdiction issues an order that any provision of this rule is invalid, it is the intent of the Board of Directors of the District that other provisions of this rule remain in full force and effect, to the extent allowed by law.

104 EXEMPTIONS:

104.1 General:

The requirements of this rule, with the exception of Sections 303 and 501.1 to 501.3, shall not apply to any graphic arts operation at a stationary source which either:

104.1.1 Has total VOC emissions of less than or equal to 60 pounds per calendar month from all graphic arts operations and cleaning materials; or

104.1.2 Receives a permit that limits the potential to emit, as calculated pursuant to Rule 502, NEW SOURSE REVIEW, to less than or equal to 175 pounds of volatile organic compounds per calendar month from all graphic arts operations and cleaning materials.

104.2 Stripping of Cured Inks, Coatings, or Adhesives: The requirements of Section 303.1 shall not apply to materials used for the stripping of cured inks, cured coatings, or cured adhesives.

104.3 Exemption from Rule 219: The provisions of Rule 219, ORGANIC SOLVENTS, shall not apply to Graphic Arts Operations as defined in Rule 239, Section 223.

104.4 Business and Personal Printers: This rule shall not apply to business and personal printers such as ink jets, bubble jets, and laser jets.

104.5 Prepress Operations: This rule shall not apply to prepress operations associated with printing plate making including the cleaning or processing of film photo processors, color scanners, plate processors, film cleaning, and plate photo developers.

104.6 Aerosol Adhesives – Screen Printing: The requirements in Section 301 of this rule shall not apply to aerosol adhesives used by screen printing operations provided that the aerosol adhesives comply with the VOC limits for aerosol adhesives in Rule 235, ADHESIVES.

104.7 Aerosol Adhesives – Graphic Arts Operations: The requirements of this rule shall not apply to aerosol adhesives used by graphic arts operations other than screen printing provided that the VOC emissions from the facility are less than 660 pounds per calendar month from all graphic arts operations and provided

that the aerosol adhesives comply with the VOC limits for aerosol adhesives in Rule 235, ADHESIVES.

104.8 Fountain Solutions: The requirements of Sections 301.2 and 301.4 shall not apply to fountain solutions provided that the total VOC emissions from all offset lithographic printing operations including related cleaning activities at a stationary source prior to controls do not exceed 450 pounds per calendar month.

104.9 Blanket Repair Materials: The requirements of this rule shall not apply to blanket repair materials used in containers of four ounces or less.

104.10 Heatset Web Offset Lithographic Printing and Heatset Web Letterpress Printing:

104.10.1 The requirements of Section 302.1 shall not apply to a heatset web offset lithographic printing press or a heatset web letterpress printing press with potential to emit from the drying oven, prior to emissions control equipment, less than 25 tons per year of VOC from heatset inks.

104.10.2 The requirements of Section 302.1 shall not apply heatset web offset lithographic printing press or a heatset web letterpress printing press used for book printing or to a press with maximum web width of 22 inches or less.

200 DEFINITIONS

201 ADHESIVE: Any substance that is applied for the purpose bonding two surfaces together other than by mechanical means.

202 AEROSOL ADHESIVE: An adhesive packaged as an aerosol product in which the spray mechanism is permanently housed in a non-refillable can designed for handheld application without the need for ancillary hoses or spray equipment. Aerosol adhesives include special purpose spray adhesives, mist spray adhesives, and web spray adhesives, as defined in the California Air Resources Board consumer products regulation found in Title 17 of the California Code of Regulations, beginning at Section 94507.

203 ALCOHOL: An organic chemical known as a monohydric alcohol, in which one hydroxyl (OH) group is attached to a carbon atom in place of a hydrogen atom. Common examples include, and are not limited to, methanol, ethanol, isopropyl alcohol, and pentanol.

204 APPLICATION EQUIPMENT: A device used to apply adhesive, coating, or ink materials.

205 BLANKET: Any rubber or synthetic rubber mat used in offset-lithography to transfer or "offset" an image from a planographic printing plate to paper or other substrate.

206 BLANKET REPAIR MATERIAL: The material used in offset printing to correct low spots in the press blanket.

207 BLANKETWASHES: Cleaning materials used to clean the rubber-surface fabric used to transfer the image from the plate to the substrate.

208 CLOSED CONTAINER: A container which has a cover that meets with the main body of the container without any visible gaps between the cover and the main body of the container.

209 COATING: A layer of material, excluding adhesives, applied across the entire width of a substrate. Examples in printing, are an emulsion, varnish or lacquer applied over a printed surface, and, in platemaking, the light-sensitive polymer or mixture applied to a metal plate.

210 COLD BENDING: A process which subjects the printed color, design, alphabet, symbol, or numeral on a printed object to permanent bending through the application of force.

211 CONTROL DEVICE: Equipment such as an incinerator or adsorber used to prevent air pollutants from reaching the ambient air.

212 CONVERTING OPERATION: Coating, waxing, laminating, extrusion coating and printing, for fabrication of base materials. The base materials are then used to produce wraps, bags, and other preformed packages.

213 CURED INK, CURED COATING, OR CURED ADHESIVES: An ink, coating, or adhesive, which is dry to the touch.

214 DRYING OVEN: An oven used to hasten the process of drying printed or coated material.

215 ELECTRONIC CIRCUIT: A product, which consists of a substrate and circuitry, created by screen printing a conductive ink on the substrate.

216 EMBOSSING: A process performed after printing to stamp a raised or depressed image (artwork or type) into the surface of the paper, using engraved metal embossing dies, extreme pressure and heat.

217 EXEMPT COMPOUNDS: For the purposes of this rule, Exempt Compounds are as defined in Rule 102, DEFINITIONS.

218 EXTREME PERFORMANCE INK/COATING: An ink or coating, used in screen printing on a non-porous substrate that is designed to resist or withstand any of the following:

218.1 Five or more years of outdoor exposure;

218.2 Exposure to industrial-grade chemicals, solvents, acids, detergents, oil products (including fuels), cosmetics, temperatures exceeding 76^{o}C (170^{o}F), vacuum forming, embossing or molding.

219 FLEXIBLE PACKAGING INDUSTRY: Establishments that convert materials consisting of light gauge papers, plastic films, cellulosic films such as cellophane, thin gauge metal sheets such as aluminum foil or steel foil, and combinations thereof into a variety of product packages.

220 FLEXOGRAPHIC PRINTING: A printing operation utilizing a flexible rubber or other elastomeric plate in which the image area is raised relative to the nonimage area.

221 FOUNTAIN SOLUTION: The solution applied to the image plate to maintain the hydrophilic properties of the nonimage areas and to keep the nonimage area free from

ink. Fountain solution is primarily water, and contains at least one of the following materials:

217.1 Etchants such as mineral salts

221.2 Hydrophilic gums

221.3 VOC additives to reduce the surface tension of the solution.

222 FUGITIVE EMISSIONS: Uncollected emissions of VOC from any portion of Graphic Arts Operations as defined in Section 223, other than the drying oven.

223 GRAPHIC ARTS OPERATIONS: Any gravure, screen printing, flexographic, lithographic, or letterpress printing operation, or any coating or laminating operation that manufactures flexible packaging material for the packaging industry. Equipment which has both coating and printing units is considered to be performing a graphic arts operation. Coating operations, which are performed by a machine having only coating units and no printing units, are not graphic arts operations except for flexographic printing operations.

224 GRAVURE PRINTING: An intaglio printing operation in which the image area is etched below the surface of the printing plate and is transferred directly to the substrate when the substrate is pressed against the plate by an impression roller.

225 HEATER or DRYER: A hot air, high velocity system used to dry inks on printed or coated substrate.

226 HEAT BENDING: A process, which subjects the printed color, design, alphabet, symbol, or numeral on a printed object to permanent bending through the application of heat and force.

227 HEATSET INK: A printing ink used on continuous web-feed printing presses that are equipped with dryers or ovens. The ink dries or sets by heat induced evaporation of the ink oils and subsequent chilling of the ink by chill rolls.

228 INK JET: A digital printing technology in which ink is ejected through printheads onto a substrate to create an image.

229 INFLATING: A process of filling a printed object with air or gas which results in the swelling of the printed area.

230 LAMINATING OPERATIONS: A process of composing two or more layers of material to form a single multiple-layer sheet by using adhesive as the bonding agent.

231 LETTERPRESS PRINTING: A printing operation in which the image area is raised relative to the non-image area and the ink is transferred to the paper directly from the image surface.

232 LINE: The minimum equipment which is required for the application and/or curing of inks and/or coatings on a substrate, including the ink and/or coating applicators and heating oven(s) and associated ink and coating mixing equipment.

233 LITHOGRAPHIC PRINTING: A printing operation in which the image and non-image areas exist in the same plane. The non-image area is treated chemically so that only the image areas will be printed onto the substrate. This printing process differs from

other printing processes where the image is typically printed from a raised or recessed surface.

234 MAINTENANCE CLEANING: A solvent cleaning operation or activity carried out to keep tools, machinery, or general work areas in clean and good operational condition.

235 MATERIAL: Any material containing VOC including but not limited to coating, adhesive, inks (e.g., printing ink, metallic ink, ultraviolet ink), fountain solutions, thinners, reducers, catalysts, colorants, or solvents used in cleaning.

236 MECHANICALLY FORMED PRODUCTS: Screen printed products made of plastic substrates, which are subjected to vacuum-forming, embossing, inflating, heat bending, or cold bending processes after the screen printing operation.

237 METALLIC INK: An ink that contains greater than 50 grams of metal per liter (0.4 lb/gal) of ink.

238 METERING ROLLER: A roller to transfer and meter fountain solution to maintain hydrophilic properties.

239 NONCOMPLIANT MATERIAL: A material that:

239.1 Exceeds the VOC content limits specified in Section 301, and is not exempt pursuant to Section 104, and does not use emission control equipment pursuant to Section 302; or

239.2 Exceeds the VOC content limit and/or composite vapor pressure limit, as applicable, in Section 303.

240 NON-HEATSET INK: An ink that sets and dries by absorption into the substrates, and hardens by ambient air oxidation that may be accelerated by the use of infrared light sources. For purposes of this definition ultraviolet and electron-beam curable inks are examples of non-heatset inks

241 NON-POROUS SUBSTRATE: Any substrate whose surface prevents penetration by water, including but not limited to foil, polyethylene, polypropylene, cellophane, paper or paperboard coated with a non-porous metalized polyester, nylon and polyethylene terephthalate (mylar). Clay-coated printing paper as defined by the American Paper Institute Classification System, and paperboard coated with clay to prevent water penetration shall be considered non-porous substrates.

242 OFFSET PRINTING: A lithographic printing operation in which the image area is transferred, or offset, to another surface, and then printed onto the substrate. Typically, the ink is offset from a plate to a rubber blanket, and then from the blanket to the substrate.

243 OVERLAY: A screen printed product made of polycarbonate, polyester, or clear vinyl plastic substrate which activates the circuitry on an electronic circuit underneath it when pressed against the electronic circuit. Overlays and electronic circuits are used in membrane switches of products such as computer keyboards, calculators, control panels, and home appliances.

244 PREPRESS OPERATIONS: Operations associated with printing plate making including but not limited to, film photo processors and plate photo processors, color scanners, film cleaning, or plate developers.

245 **PRINTING:** Any graphic arts operation that imparts color, design, alphabet, or numerals on a substrate.

246 **PRINTING INK:** A pigmented fluid or viscous material used in printing.

247 **PROOF PRESS:** A press used exclusively to check the quality of print, color reproduction, and editorial content.

248 **REFRIGERATED CHILLER:** A device that continuously maintains and supplies fountain solution to a holding tray at a temperature of 55 degrees Fahrenheit or less when measured at the supply tank, thereby reducing evaporative emissions of VOCs in fountain solution.

249 **REMOVABLE PRESS COMPONENT:** A part, component, or accessory of a press that is physically attached to the press but is disassembled and removed from the press prior to being cleaned. Rollers, blankets, metering rollers, fountains, impression cylinders and plates shall not be considered as removable press components.

250 **REPAIR CLEANING:** Cleaning of equipment parts as part of a repair operation or as part of a scheduled maintenance procedure during which the parts are not removed from the equipment and power to the printing equipment has been turned off and secured.

251 **ROLLER WASH:** Solvent used to clean the metal ink rollers on a printing press.

252 **SCREEN PRINTING:** A printing operation in which the printing ink passes through a refined form of stencil to a web or fabric. The stencil openings determine the form and dimension of the imprint.

253 **SIGN INK/COATING:** A printing ink or coating used in screen printing indoor and outdoor signs (excluding structural components) and murals, including lettering enamels, poster colors, copy blockers, and bulletin enamels.

254 **SOLVENT CLEANING:** The removal of loosely held uncured adhesives, uncured inks, uncured coatings, and contaminants including, but not limited to, dirt, soil, and grease from equipment, substrate, and general work areas.

255 **SPECIALTY FLEXOGRAPHIC PRINTING:** Flexographic printing on polyethylene, polyester and foil substrates for food packaging, health care products, fertilizer bags, or liquid-tight containers.

256 **STANDARD INDUSTRIAL CLASSIFICATION (SIC):** Number codes created by the U. S. Government Office of Management and Budget (OMB) to classify establishments by type of economic activity.

257 **STATIONARY SOURCE:** Any building, structure, facility, or emissions unit which emits or may emit any affected pollutant directly or as a fugitive emission.

257.1 Building, structure, facility, or emissions unit includes all pollutant emitting activities which:

257.1.1 Belong to the same industrial grouping, and

257.1.2 Are located on one property, or two or more contiguous properties, and

257.1.3 Are under the same or common ownership, operation, or control, or which are owned or operated by entities which are under common control.

257.2 Pollutant emitting activities shall be considered as part of the same industrial grouping if:

257.2.1 They belong to the same two-digit Standard Industrial Classification (SIC) code, or

257.2.2 They are part of a common production process, which includes industrial processes, manufacturing processes and any connected processes involving a common material.

258 STRIPPING: The removal of cured inks, cured coatings, or cured adhesives.

259 SUBSTRATE: The surface to which a printed image is applied. Substrates include, but are not limited to, paper, plastic, metal, wood, ceramic, and fabric.

260 ULTRAVIOLET INK: Ink which dries by polymerization reaction induced by ultraviolet energy.

261 VACUUM-FORMING: A process which imparts a desired shape to a printed object by subjecting the screen printed area of the object to a vacuum.

262 VOC COMPOSITE PARTIAL PRESSURE: The sum of the partial pressures of the compounds defined as VOCs. VOC composite partial pressure shall be calculated by the following equation:

$$PP_c = \frac{\sum_{i=1}^{n} \frac{(W_i)(VP_i)}{MW_i}}{\frac{W_w}{MW_w} + \sum_{e=1}^{n} \frac{W_e}{MW_e} + \sum_{i=1}^{n} \frac{W_i}{MW_i}}$$

Where: PP_C = VOC composite partial pressure at 20°C, in mm Hg.
W_i = Weight of the "i"th VOC compound, in grams, as determined by ASTM E 260-96.
W_w = Weight of water, in grams as determined by ASTM D 3792-99.
W_e = Weight of the "e"th exempt compound, in grams, as determined by ASTM E 260-96.
MW_i = Molecular weight of the "i"th VOC compound, in grams per g-mole, as given in chemical reference literature.
MW_w = Molecular weight of water, 18 grams per g-mole.
MW_e = Molecular weight of the "e"th exempt compound, in grams per g-mole, as given in chemical reference literature.
VP_i = Vapor pressure of the "i"th VOC compound at 20°C, in mm Hg, as determined by Section 502.7 of this rule.

263 VOLATILE ORGANIC COMPOUNDS (VOC): Any chemical compound containing at least one atom of carbon except for the Exempt Compounds listed in Rule 102, DEFINITIONS.

264 VOC CONTENT:

264.1 VOC Regulatory Content: The weight of VOC per combined volume of VOC and material, calculated with the following equation:

VOC Regulatory Content = (Ws – Ww – Wec) / (Vm – Vw – Vec)

264.2 VOC Actual Content: The weight of VOC per volume of material, calculated with the following equation:

VOC Actual Content = (Ws – Ww – Wec) / Vm

Where:

Ws	=	Weight of volatile compounds in grams
Ww	=	Weight of water in grams
Wec	=	Weight of exempt compounds in grams
Vm	=	Volume of material in liters
Vw	=	Volume of water in liters
Vec	=	Volume of exempt compounds, as defined in Rule 102, DEFINITIONS, in liters

264.3 Percent of VOC by Weight: The ratio of the weight of the VOC to the weight of the material, expressed as a percent. The percent of VOC by weight shall be calculated as follows:

$$Percent\ of\ VOC\ by\ Weight = \frac{W_{voc}}{W_p}\ x\ 100$$

Where: Wvoc = Weight of VOCs in grams
Wp = Weight of material in grams.

265 WATER SLIDE DECALS: Decals which are screen printed onto treated paper stock, and are removable from the stock by the dissolution of an underlying, water-soluble adhesive or a similar carrier.

266 WEB: A continuous sheet of substrate that is printed on web-fed printing presses.

267 WEB-FEED: An automatic system on a printing press, which supplies a web substrate for printing from a continuous roll or web or from an extrusion conversion process.

268 WIPE CLEANING: The method of cleaning a surface by physically rubbing the surface with a material such as a rag, paper, or a sponge moistened with a solvent.

300 STANDARDS

301 VOC CONTENT LIMITS FOR MATERIALS USED IN GRAPHIC ARTS OPERATIONS: Except for graphic arts operations exempt pursuant to Section 104, no person shall apply any material with a VOC content in excess of the limits specified below. The VOC content of the material as applied (including thinners, reducers, hardeners, retarders, catalysts, and additives) shall be determined pursuant to Section 502.1.

301.1 VOC Content for Inks, Coatings, and Adhesives:

Material Type	VOC Regulatory Content g/l (lb/gal)
General	
Printing Ink	300 (2.5)
Adhesive	150 (1.25)
Coating	300 (2.5)
Screen Printing	
Printing Ink	400 (3.3)
Adhesive	150 (1.25)
Coating	400 (3.3)
Electronic Circuit	800 (6.7)
Extreme Performance Ink/Coating	400 (3.3)
Metallic Ink	400 (3.3)
Sign Ink/Coating	400 (3.3)
Mechanically Formed Products	800 (6.7)
Overlays	800 (6.7)
Web-Fed Wallpaper	300 (2.5)
Water Slide Decals	800 (6.7)

301.2 VOC Content for Fountain Solution Materials:

Material Type	VOC Content (% by Weight)
Heatset Web Offset Lithographic	
Containing alcohol	
Chilled using refrigerator chiller	3
Non-chilled	1.6
Containing no alcohol	5
Coldset Web Offset Lithographic	5
Sheet-fed Offset Lithographic (with maximum sheet size greater than 11 x 17 inches)	
Containing alcohol and chilled using refrigerator chiller	8.5
Other	5
All Other Presses	
Chilled using refrigerator chiller	10
Non-chilled	8

301.3 Temperature Gauge Requirements Refrigerated Chiller: The refrigerated chiller shall be equipped with a temperature gauge. The temperature of the fountain solution shall be maintained at 55^{o}F or less.

301.4 Coldset Web Offset Lithographic Fountain Solution: Fountain solutions containing alcohol shall not be used in coldest web offset lithographic printing operations.

302 EMISSION CONTROL EQUIPMENT:

302.1 Heatset Web Offset Lithographic or Letterpress: A person using heatset web offset lithographic or letterpress printing operation that prior to controls has a potential to emit of greater than 25 tons of VOC emissions per year shall use an add-on control device, on the dryers, that satisfies the following:

302.1.1 The air pollution control equipment is approved by the Air Pollution Control Officer, pursuant to Rule 501, GENERAL PERMIT REQUIREMENTS, and

302.1.2 The air pollution control equipment is designed and operated with an overall (control and capture) efficiency, as determined in Sections 502.4 and 502.5 that satisfies one of the following conditions, whichever is applicable:

302.1.2.1 90% overall control and capture efficiency, by weight, if the heatset web offset Lithographic or Letterpress printing control device installed prior to October 11, 2012.

302.1.2.2 95% overall control and capture efficiency, by weight, if the if the heatset web offset Lithographic or letterpress printing control device installed after October 11, 2012.

302.1.3 As an alternative to Section 302.1.2, the mass concentration at the outlet of the air pollution control equipment, determined pursuant to Section 502.4, is less than or equal to 20 ppmv as hexane on a dry basis.

302.2 Alternative Emissions Control Equipment: As an alternative of complying with the VOC content limit of Section 301, a person may use air pollution control equipment provided the following conditions are met:

302.2.1 The air pollution control equipment is approved by the Air Pollution Control Officer pursuant to Rule 501, GENERAL PERMIT REQUIREMENTS.

302.2.2 During any period of continuous operation, not to exceed 24 hours, the air pollution control equipment shall have an overall capture and control efficiency of at least 80 percent, by weight, for flexible packaging printing, and at least 70 percent, by weight, for other types of printing operations.

302.2.3 The capture system shall vent all drying oven exhaust to the control device and shall have one or more inlets for collection of fugitive emissions.

302.2.4 The air pollution control system shall reduce VOC emissions, at all the times, to a level that is not greater than the VOC emissions limits which would have been achieved through the use of complaint materials as per Sections 301.

302.2.5 Submit an Operation and Maintenance Plan to the Air Pollution Control Officer at least 90 days in advance of the date on which VOC emission control system is to be used in lieu of compliance with VOC limitations. The plan shall specify operation and maintenance procedures that demonstrate continuous operation and compliance of the emissions control equipment during periods of emissions-producing operations. The Plan shall specify key system operating parameters such as temperatures, pressures,

and/or flow rates, as necessary to determine compliance with this rule and shall describe detailed procedures to maintain the approved emission control equipment. The Plan shall specify which records must be kept to document these operating and maintenance procedures. These records shall comply with the requirements of Sections 501.4, and 501.5. The Plan shall be implemented upon approval of the Air Pollution Control Officer.

302.2.6 Submit an application for an Authority to Construct, pursuant to Rule 501, General Permit Requirements.

303 CLEANING AND STORAGE REQUIREMENTS: Any person using cleanup solvents for graphic arts operations shall comply with the following requirements:

303.1 Materials used for solvent cleaning shall not exceed the VOC and/or composite vapor pressure limits specified in the table below. The VOC content of the material as applied shall be determined pursuant to Section 502.1. The composite partial pressure shall be determined using Section 502.6.

VOC CONTENT OF SOLVENT CLEANING MATERIALS			
Material Type	**Actual VOC Content g/l (lb/gal)**		**VOC Composite Partial Pressure Millimeters of Mercury at 20°C (68°F)**
General (e.g., maintenance, repair, solvent, wipe) Cleaning	72 (0.60)		
Application Equipment Cleaning			
General (not specifically listed below)	100 (0.83)	AND	3
Lithographic and Letter Press Printing, Blanket and Roller Washes, and Other On-Press Components	300 (2.5)	OR	10
Lithographic and Letter Press Printing, Other Cleaning	300 (2.5)	OR	10
Screen Printing	300 (2.5)	OR	10
Flexographic Printing	100 (0.83)	AND	3
Specialty Flexographic Printing	670 (5.6)	AND	10
Ultraviolet Inks (Except Screen Printing)	670 (5.6)	AND	10

303.2 Closed containers shall be used for the disposal of all VOC-containing cloth, sponges, papers, or other materials used for solvent cleaning.

303.3 All VOC-materials shall be stored in closed containers when not in use.

303.4 These cleanup solvent cleaning material limits shall supercede the requirements of Rule 240, SURFACE PREPARATION AND CLEANUP, for the cleaning of application equipment.

304 PROHIBITION OF SALE: A person shall not supply, sell, solicit, or offer for sale, any noncompliant material as defined in Section 239 for use in graphic arts operations. The prohibition in this section shall apply to any graphic arts material which will be applied at any physical location within the District.

305 SURFACE PREPARATION AND REPAIR AND MAINTENANCE SOLVENT CLEANING: Solvents used to clean substrates during the manufacturing process, or used for surface preparation before coating, adhesive, or ink application, and solvents used for repair or maintenance cleaning, are subject to the requirements of Rule 240, SURFACE PREPARATION AND CLEANUP.

400 ADMINISTRATIVE REQUIREMENTS

401 PRODUCT INFORMATION REQUIREMENTS FOR SELLERS: Any person who sells any material subject to this rule shall make available to the purchaser at the time of sale the following information:

401.1 The material type by name, product code identification number, and manufacturer;

401.2 For Materials Subject to Section 301.1: The maximum VOC regulatory content of the material (adhesive, ink and coating), expressed in grams per liter or pounds of per gallon as determined pursuant to Section 502.1;

401.3 For Materials Subject to Section 301.2: The maximum weight percentage of VOC of the fountain solution as determined pursuant to Section 264.3;

401.4 For Materials Subject to Section 303.1: The maximum VOC content and the total VOC composite partial pressure of the material. The VOC content shall be expressed as grams per liter or pounds per gallon) as determined pursuant to Section 502.1. The composite vapor pressure shall be displayed in millimeters of mercury at 20^{o}C (68^{o}F) as determined pursuant to Section 502.6; and

401.5 For all materials subject to Sections 301 and 303.1: Recommendations regarding thinning, reducing, or mixing with any material.

402 CALCULATION FOR DETERMINING PERCENT CONTROL EFFICIENCY AND VOC MASS EMISSION RATE: The VOC mass emission rate shall be calculated both upstream and downstream of the emissions control device based on the VOC mass concentration and volumetric flowrate, pursuant to Section 502.5 and the equations on the following page:

402.1 VOC Mass Emission Rate:

$$M = (Q) * (C) * (60 \frac{\min}{hr})$$ (calculated upstream and downstream)

Where:

M = VOC mass emission rate (upstream and downstream, in lb/hr.

Q = the volumetric flowrate at the inlet (upstream) or exhaust stack outlet (downstream), in standard cubic feet per minute as determined by Section 502.4.

C = the VOC mass concentration at the inlet (upstream) or outlet (downstream), in pounds per standard cubic feet, as determined pursuant to Section 502.4.

402.2 The percent control efficiency is calculated as follows:

$$\%CE = \left(\frac{M_u - M_d}{M_u} \right) * 100$$

Where:

CE = control efficiency.
M_u = the upstream VOC mass emission rate, in lb/hr.
M_d = the downstream VOC mass emission rate, in lb/hr.

403 CALCULATION FOR DETERMINING VOC EMISSIONS FOR STATIONARY SOURCES INCLUDING THOSE EXEMPT PURSUANT TO SECTION 104.1

403.1 The total VOC emissions from materials shall be determined as follows:

$$E = \sum (E_1 + E_2)$$

Where:

E = Total VOC emissions (lbs-VOCs/month)
E_1 = VOC emissions from ink usage ((lbs-VOCs/month), as calculated in Section 403.2
E_2 = VOC emissions from material (except Inks) usage (lbs-VOCs/month), as calculated in Section 403.3

403.2 <u>VOC Emissions from Ink Usage:</u>

$$E_1 = U_1 * P_1 * (1 - R)$$

Where:

E_1 = VOC emissions from ink usage (lbs-VOCs/month)
U_1 = ink usage as applied (gallons/month). This equals the ink usage in pounds per month divided by the density of the ink.
P_1 = VOC content (lbs-VOC/gallon), applied as, determined pursuant to Section 502.1
R = ink retention factor (20% for heat-set lithographic printing, 95% for non-heat set lithographic printing, and 0% for all other printing operations)

403.3 <u>VOC Emissions from Material (except Inks) Usages:</u>

$$E_2 = \sum_{i=1}^{n} (U_i) * (V_i)$$

Where:

E_2 = VOC emissions from materials (except inks) used (lbs-VOCs/month)
U_i = material usage, as applied, (gallons/month)
V_i = VOC content in the material (lbs-VOC/gal), as applied, as determined pursuant to Section 502.1

500 MONITORING AND RECORDS

501 RECORDKEEPING: In addition to any existing permit conditions issued pursuant to Rule 501, GENERAL PERMIT REQUIREMENTS, any person subject to this rule, including operations claiming exemption under Section 104.1, shall comply with the following requirements:

501.1 List of Materials: A list shall be maintained of all materials currently used and/or stored at the site. The list shall include the following information:

501.1.1 Material type (e.g., adhesive, coating, ink, fountain solution, extreme performance ink/coating, or cleanup solvent) by name, product code identification number, and manufacturer, and the appropriate material type category as designated in Sections 301 and 303.1 as applicable.

501.1.2 The VOC regulatory content of the materials (e.g., adhesive, coating, or ink) listed in Section 301.1, expressed in grams per liter or pounds per gallon.

501.1.3 The weight percentage of volatiles of the fountain solution listed in Section 301.2

501.1.4 The VOC actual content of the cleaning materials listed in Section 303, expressed in grams per liter or pounds per gallon.

501.1.5 The VOC composite partial pressure for materials listed in Section 303.1, if applicable. The composite partial pressure shall be calculated pursuant to Section 262.

501.1.6 The actual mixing ratio used for the material, as applied.

501.1.7 For inks, the density of the ink in lbs/gallon.

501.1.8 For aerosol adhesives exempt pursuant to Section 104.7, records of VOC content in the aerosol adhesive. The VOC content shall be recorded as percent by weight. The record shall also include the type of operation (i.e., substrate, purpose) for which the aerosol adhesive is used.

501.1.9 Identification of each material type exceeding the VOC limits specified in Sections 301 and 303.1. or the composite vapor pressure specified in Section 303.1.

501.2 Product Information: The information listed under Sections 401.1 through 401.5 shall be maintained on-site and made available to the Air Pollution Control Officer upon request.

501.3 Usage Records: Any person within the District using materials regulated by this rule shall update and maintain the calendar monthly records as required by this rule as follows:

501.3.1 Records of total applied volume in gallons or weight in pounds (weight allowed for ink only) for each material (including thinners, reducers, hardeners, retarders, catalysts, fountain solutions and cleaning materials), specified by material type as listed in Sections 301 and 303.1, and VOC emissions from each material type.

501.3.2 For graphic arts operations exempt pursuant to Sections 104.1, or 104.7, records of total VOC emissions from all materials (including thinners, reducers, hardeners, retarders, and catalysts) used for each calendar month in pounds. The records shall be determined using emission calculations specified in Section 403.

501.3.3 For graphic arts operations exempt pursuant to Section 104.8, records of total VOC emissions from all offset lithographic printing operations, including related cleaning activities.

501.3.4 For graphic arts operations exempt pursuant to Section 104.10, records of total VOC emissions from heatset web offset lithographic printing and heatset web letterpress printing.

501.3.5 Records of total applied volume for each material exceeding the VOC limits specified in Sections 301 and 303.1 by name, product code identification number, manufacturer, and material type.

501.4 Emission Control Equipment: Any person using emission control equipment pursuant to Section 302 as a means of complying with this rule shall maintain on a daily basis:

501.4.1 Such records as required by the Operation and Maintenance Plan in Section 302.2.5; and

501.4.2 Records of applied volume in gallon or by weight in pounds (weight allowed for ink only); and

501.4.3 Records of test reports conducted pursuant to Section 502.

501.5 Duration of Records: All records required by this rule shall be retained on-site for at least two years, except for sources subject to Rule 507, FEDERAL OPERATING PERMIT PROGRAM, which shall be retained for at least five years. Such records shall be made available to the Air Pollution Control Officer upon request.

502 TEST METHODS

502.1 Determination of VOC Content: VOC content of the material (except as provided for in Section 502.2), as applied including thinners, reducers, hardeners, retarders, and catalysts, shall be determined in accordance with EPA Method 24, Section 264.1 and Section 502.3, for VOC regulatory content, or with EPA Method 24 and Section 264.2, for VOC actual content.

502.2 Analysis of Samples, Non-Heatset Polymerizing Lithographic Or Letterpress Inks: Measurement of the volatile content shall be made in accordance with EPA Method 24. All components of the sample must be weighed in the proper proportion into the analysis container and mixed together, with the mixture then being allowed to stand for at least one hour, but no more than 24 hours, prior to being oven-dried at 110^{o}C for 1 hour.

502.3 Determination of Exempt Compounds: Compounds exempt pursuant to Section 213, shall be determined in accordance with ASTM D4457-91, "Test Method for Determination of Dichloromethane and 1,1,1-tricholoethane in Paints and Coatings by Direct Injection into a Gas Chromatograph", or CARB Method 432, "Determination of Dichloromethane and 1,1,1-tricholoethane in Paints and Coatings". If any of the perfluorocarbons are being claimed as exempt compounds, the person making the claim must state in advance which compounds are present, and the EPA-approved test method used to make the determination of these compounds.

502.4 Determination of Control Equipment Efficiency: Efficiency of the emission control equipment shall be based upon test measurements made in accordance with:

502.4.1 USEPA Method 18, 25 or 25A, for VOC concentration, and

502.4.2 USEPA Method 2 or 2C for flow rates, as applicable, and calculated in accordance with Section 402.

502.5 Determination of Capture Efficiency: Capture efficiency shall be determined in accordance with U.S. EPA technical guideline Document, *Guidelines for Developing Capture Efficiency dated January 9, 1995*.

Individual capture efficiency test runs subject to U.S. EPA technical guidelines shall be determined by:

502.5.1 Applicable U.S. EPA methods 204, 204A, 204B, 204C, 2404D, 204E, and/or 204F; or

502.5.2 Any other method approved by the U.S. EPA, the California Air Resources Board, and the Air Pollution Control Officer.

502.6 Determination of VOC Composite Partial Pressure: VOC composite partial pressure shall be determined in accordance with Section 262 and Section 502.7.

502.7 Determination of Vapor Pressure: Vapor pressure of a VOC shall be determined in accordance with ASTM Method D2879-97, "Test Method for Vapor Pressure-Temperature Relationship and Initial Decomposition Temperature of Liquids by Isoteniescope", or may be obtained from the most current edition of a published source, including, but not limited to:

502.7.1 *The Vapor Pressure of Pure Substances*, Boublik, Fried, and Hala; Elsevier Scientific Publishing Company, New York.

502.7.2 *Perry's Chemical Engineer's Handbook*, McGraw-Hill Book Company.

502.7.3 *CRC Handbook of Chemistry and Physics*, Chemical Rubber Publishing Company.

502.7.4 *Lange's Handbook of Chemistry*, John Dean, editor, McGraw-Hill Book Company.

Not withstanding the provisions of this section, the Air Pollution Control Officer may require the use of a vapor pressure determined in accordance with ASTM Method D2879-97 for determining compliance with this rule.

502.8 Determination of Metal Content in Inks**:** The metal content of metallic inks shall be determined in accordance with the South Coast Air Quality Management District's Method 318, "Determination of Weight Percent Elemental Metals in Coatings by X-ray Diffraction". Use of this method for determining the content of metals other than aluminum in metallic inks shall be subject to approval by the U.S. EPA, the California Air Resources Board, and the Air Pollution Control Officer.

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ATTACHMENT #3

Staff Report

Amendment of Rule 235, Adhesives

PLACER COUNTY
AIR POLLUTION CONTROL DISTRICT

STAFF REPORT

RULE 235

ADHESIVES

PROPOSED RULE AMENDMENTS

October 11, 2012

BACKGROUND

The Placer County Air Pollution Control District (District) jurisdiction is Placer County. Placer County is located in northern California, bordering Sacramento County to the west and the State of Nevada on the east. Placer County is divided into three different air basins: the Sacramento Valley Air Basin (SVAB); the Mountain Counties Air Basin (MCAB); and the Lake Tahoe Air Basin (LTAB). The portions of Placer County in the SVAB and MCAB are included in the Sacramento Federal Ozone Non-Attainment Area (SFONA). The` SFONA has been classified as "severe" non-attainment for the National Ambient Air Quality Standard (NAAQS) for eight-hour ozone, as well as non-attainment with the State of California Ambient Air Quality Standard for ozone. The U.S. Environmental Protection Agency's (EPA) Phase 2 Ozone Rule, contained in 40 CFR 51.912 and 70 FR 71612, in accordance with Clean Air Act (CAA) Amendments of 1990, Sections 182(b)(2) and 182(f), requires that areas that are classified as moderate non-attainment or higher must demonstrate in a State Implementation Plan (SIP) that their rules fulfill Reasonably Available Control Technology (RACT) requirements for volatile organic compound (VOC) and nitrogen oxides (NOx) which are ozone precursors. The implementation of RACT requires, at a minimum, District rules covering source categories with RACT guidance documents, which include all EPA-issued Control Techniques Guidelines (CTG's), where there are such sources that operate in the District.

District Rule 235, Adhesives, limits VOC emissions from adhesive and sealant products application and associated solvent cleaning operations. The Rule was originally adopted on June 8, 1995, and approved into the SIP on July 18, 1996 (61 FR 37390). Rule 235 was later amended on April 10, 1997, and last amended on April 8, 2004. Neither of these rule versions has been approved into the SIP. In September 2008, the EPA issued a CTG for Miscellaneous Industrial Adhesives (EPA-453/R-08-005). The 2004 version of our Rule did not meet all the CTG requirements, as per EPA's comments received by the District on August 31, 2010. Thus, the District is proposing amendments to Rule 235 to meet RACT SIP obligations through implementation of all CTG requirements.

The proposed Rule amendments affect all those who buy, sell, offer to sale, or apply adhesive, adhesive primer, sealant and sealant primer products within the District. This includes a wide range of businesses, wholesale and retail stores, individuals, and permitted stationary sources.

Additionally, the District has one (1) permitted non-major source in the category of Adhesives manufacturing. The business name for this source is:

- H.B. Fuller Company

DISCUSSION

Rule 235 amendments were made based on: (1) EPA's 2008 CTG for adhesives; (2) EPA's comments that were received on August 31, 2010, in response of our submittal of the current April 2004 version of Rule 235 for SIP approval; and (3) Establishment of consistency with other local Air Districts' adhesives and sealants rules.

The District reviewed Adhesives and Sealants Rules of other local Air Districts, including:

- El Dorado, Rule 236, Adhesives, last amended on July 25, 1995.
- Sacramento, Rule 460, Adhesives and Sealants, last amended on November 11, 2000.
- San Joaquin, Rule 4653, Adhesives and Sealants, last amended on September 16, 2010.
- Yolo-Solano, Rule 2.33, Adhesive Operations, last amended May 14, 2008.

We also reviewed rules from:

- San Diego, Rule 67.21, Adhesive Material Application Operations, last amended on May 14, 2008.

- South Coast, Rule 1168, Adhesive Material Application Operations, last amended on January 7, 2005.

These Districts are designated as non-attainment areas for the Federal national ambient air quality standard for ozone. Thus, they also are required to implement CTGs in their rules.

Proposed Rule amendments, in underline/strikeout format, are shown in Attachment #1. Specific changes to the Rule include:

Section 100. General

Section 102. Applicability. Subsections 102.1 and 102.2 are consolidated into one section.

Section 104.2 Exemptions. The exemption for contact adhesives is modified to be consistent with the requirements of the EPA Consumer Product Safety Commission regulations contained in the U.S. Code of Federal Regulations, Title 16, Part 1302. Additions include a flash point requirement and clarification that the exemption only applies to consumer products contact adhesives that are used at a home, construction site, or at any location other than a stationary source.

Section 104.8. Exemptions. An exemption is added to exclude all adhesive materials that fall under other District rules.

Section 200. Definitions

Definitions that are eliminated include: Aerosol adhesive primer, Low-volume low-pressure (LVLP) application equipment, PolyVinyl Chloride (PVC) welding sealant, Volatile organic compound (VOC) as applied, Volatile organic compound (VOC) as supplied. Additionally, Solvent Welding definition is mistakenly listed twice; therefore, one of the definitions was deleted.

Definitions that are added include: Airless spray, Ethylene propylene diene monomer (EPDM), Motor vehicle, Motor vehicle adhesive, Motor vehicle weatherstrip adhesive, Perimeter bonded sheet flooring installation adhesive, Plastic foam, Reinforced plastic composite, Single-ply roof membrane adhesive, Single-ply roof membrane adhesive primer, Single-ply roof membrane sealant, Sheet rubber lining installation, VOC content, Indoor carpet adhesive, VCT and asphalt tile adhesive, Structural wood member adhesive, Rubber vulcanization bonding, Top and trim adhesive.

Definitions that are amended include: Adhesive, Architectural sealant/primer, Aerosol adhesive or Adhesive primer, Aerosol cleaning solvent, Contact adhesive, Cyanoacrylate adhesive, High-volume low-pressure (HVLP) application equipment, Household adhesive, Key system operating parameter, Indoor floor covering installation adhesive, Plastic cement welding adhesive, Porous material, Single-ply roof membrane.

Section 300. Standards

Section 301. Material Application Methods. Changes to the section include:

- Subsection 301.1.8, Low-volume low-pressure (LVLP), is removed because it is not allowed by the CTG.

- Subsections 301.1.10, 301.1.11, and 301.1.12 are consolidated into one subsection. Additionally, allowing the use of those methods for adhesives and sealants product with viscosity of 200 centipoise or greater is added.

Section 302. VOC Content Limits. Changes to the section include:

- The following new adhesives sub-categories, and appropriate VOC content limits, is added, used by the CTG and/or other Air Districts rules:

  - Indoor Carpet or Carpet Pad
  - Rubber Flooring
  - Subfloor Installation
  - VCT and Asphalt Tile Installation
  - Structural Wood Member Glazing
  - Rubber Vulcanization Bonding
  - Motor Vehicle
  - Motor Vehicle Weatherstrip
  - Top and Trim
  - Ceramic Tiles
  - Dry Wall and/or Panel
  - Plastic Foam
  - Wood
  - Reinforced Plastic Composite

- PVC Welding Sealant sub-category and VOC content limit is eliminated. The limit expired on April 8, 2002. This product is now included in the "other" sub-category.

- Adhesive primers sub-categories – Automotive Glass, Plastic Cement Welding, Single-Ply Roof Membrane, Traffic Marking Tape, and Other – as listed in Table 302-2 are moved to Table 302-1. Table 302-2 is deleted.

- Contact adhesive sub-categories as listed in Table 302-3 are moved to Table 302-1. Table 302-3 is deleted.

- Sealant sub-categories – Architectural, Marine Deck, Non-membrane Roof Installation/Repair, Roadway Sealant, Single-Ply Roof Membrane Sealant, and Other – as listed under Table 302-4 are moved to Table 302-1. Table 302-4 is deleted.

- Sealant primers categories – Architectural-Non-Porous, Architectural–Porous, Marine Deck, and Other, listed in Table 302-5 are moved to Table 302-1. Table 302-5 is deleted.

- A few VOC content limits that were provided in pounds per gallon are corrected.

Section 303. Content Limits, Aerosol Adhesives and Adhesive Primers. The title of this section is changed to VOC Content Limits for Aerosol Adhesives. Aerosol Adhesive Primers are eliminated from the title since there are no applicable VOC content limits for aerosol adhesives primers. Also, the following has been added to cite the origin of the standards provided for aerosol adhesives: "in the Air Resources Board consumer products regulation found in Title 17 of the California Code of Regulations, sections 94507 – 94517, and listed."

Section 304. VOC Content Limits, Surface Preparation, Cleanup and Stripping Solvents. Changes to this section include:

- The sub-category titles are modified to add clarity.
- The VOC content limit of Electronic Components and Medical Devices sub-categories are revised to be as stringent as that for the same sub-categories in District Rule 240, Surface Preparation and Cleanup.
- The VOC content for Soaking Application Equipment in a Closed Container sub-category was corrected to 9.5 instead of .5 Partial Pressure Millimeters of Mercury at 20°C. The 9.5 mm Hg composite partial pressure limit was the maximum allowable limit for this sub-category in our 1995 version of the Rule that was approved into the SIP on July 18, 1996. Therefore, the .5 mm Hg is believed to be a mistake occurred during the last amendment process of the Rule in 2004.

Section 305. Work Practices for Adhesive Products, Sealant Products and Solvent Cleaning Materials. New provisions have been added for work practices requirements to meet those contained in the CTG.

Section 400. Administrative Requirements

Section 404. Operation and Maintenance Plan. This section is moved to Section 306.3.

Section 405. Calculation for Determining VOC Content of Material Excluding Water and Exempt Compounds. This section is moved to Subsection 290.1.

Section 406. Calculation for Determining VOC Content of Material Including Water and Exempt Compounds. This section is moved to Subsection 290.2.

Section 407. Calculation of Percent of VOC by Weight. This section is moved to Subsection 290.3.

Section 403. Labeling Requirements for Aerosol Adhesives. This section is moved to Section 405.

Section 403. HVLP Marking. New requirements for HVLP marking are added to Section 403.

Section 409. Calculation for VOC Composite Partial Pressure. This section is moved to Section 288.

Section 410. Product Information Requirements for Sellers. The title of this section is changed to Labeling Requirements, and new provisions are added to this section.

Section 500. Monitoring and Record

Section 502.5. Determination of Control Efficiency. Test methods to measure emissions of exempt compounds are added.

Section 502.12. Determination of Viscosity. Test methods to measure viscosity of adhesives are added.

Further, applicable test methods references are updated to the most approved current versions.

Miscellaneous

Additional miscellaneous changes are made for readability and conformance with the CTG which have no impact on the compliance requirements of the Rule.

ANALYSIS

The following Analysis and the subsequent Findings are intended to address the requirements set forth in the California Health and Safety Code relating to adoption of a new or amended 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". The compliance costs of the proposed rule amendments are associated with purchasing adhesives and sealant products with complaint VOC content limits and meeting new work practices. Products that meet proposed adhesive and sealant VOC content limits are well-established to be readily available at the same price points as adhesives products that will become non-complaint when the proposed amendments will become effective on October 11, 2012. Thus, staff concludes there will be no significant adverse impacts on the profitability of business affected by the Rule. The cost effectiveness is acceptable by the EPA and other Air Districts that have already implemented the CTG requirements.

2. Socioeconomic Impact

H&S Section 40728, in relevant part, requires the Board to consider the socioeconomic impact of any new or amended rule if air quality or emission limits are significantly affected. Numerous existing adhesive operations are already operating in compliance with the amended rule standards.

3. Environmental Review and Compliance

California Public Resources Code Section 21159 requires an environmental analysis of the reasonably foreseeable methods of compliance should be conducted. Compliance of the proposed rule amendment is expected to be achieved by the replacement of current coating products with compliant compounds. Application of these compliant compounds will generally result in less VOC emissions from the coating activities. Therefore, the proposed rule amendment will reduce emissions from sources and will not cause any significant adverse effects on the environment. Staff has concluded that no adverse environmental impacts will be caused by compliance with the proposed rule amendment.

According to the above conclusion, Staff finds that the proposed rule amendment is exempt from the California Environmental Quality Act (CEQA) because: (1) it can be seen with certainty that there is no possibility that the activity in question may have a significant adverse effect on the environment (CEQA Guidelines §15061(b)(3)), and (2) it is as an action by a regulatory agency for protection of the environment (Class 8 Categorical Exemption, CEQA Guidelines §15308).

FINDINGS

A. **Necessity**: The adoption of proposed amended Rule satisfies the objective of the District to implement "Control Techniques Guidelines" for the reduction of VOCs to achieve attainment with ambient air standards for ozone, and meets the District's requirements to

implement “every feasible measure” and “Best Available Retrofit Control Technology” as required under California Health and Safety Code Sections 40919 and 40914.

B. **Authority**: California Health and Safety Code, Sections 40000, 40001, 40701, 40702, 40716, 41010, and 41013, are provisions of law that provide the District with the authority to adopt this proposed amended Rule.

C. **Clarity:** There is no indication, at this time, that the proposed amended Rule is written in such a manner that persons affected by the Rule cannot easily understand them.

D. **Consistency:** The proposed amended Rule 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 proposed amended Rule 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 the District in interpreting this proposed amended Rule are incorporated into this analysis and this finding by reference.

SUMMARY

Rule 235, Adhesives, has been amended to address control guidance contained in the U.S. EPA’s CTG for Miscellaneous Industrial Adhesives issued in 2008 (EPA-453/R-08-005).

ATTACHMENT #1

Subject:

District response to the U.S. EPA comments on

Rule 235, Adhesives

From:	Bruce Springsteen
To:	Margie Koltun
Subject:	FW: EPA comments on Placer Rules 235 and 239
Date:	Wednesday, October 03, 2012 9:22:33 AM

From: Andrew Steckel [mailto:Steckel.Andrew@epamail.epa.gov]
Sent: Friday, September 07, 2012 9:07 AM
To: Todd Nishikawa; mguzzett@arb.ca.gov; Bruce Springsteen
Cc: Adrianne Borgia
Subject: EPA comments on Placer Rules 235 and 239

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

September 07, 2012

Transmittal of EPA Rule Review Comments

To: Todd Nishikawa, Placer County Air Pollution Control District
tnishika@placer.ca.gov

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

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

Re: PCAPCD Rule 235, Adhesives; and Rule 239, Graphic Arts Operations, draft revisions dated October 11, 2012

We are providing comments based on our preliminary review of the draft rules identified above. Please direct any questions about our comments to me at (415) 947-4115 or to Adrianne Borgia at (415) 972-3576.

Rule 235, Adhesives

1. Table 302-1 limits "Subfloor Installation and VCT" and "Asphalt Tile Installation" to 200 and 150 g/l respectively. These categories have no analogous CTG or CARB category limits, but both South Coast Air Quality Management District (SCAQMD) Rule 1168, and San Joaquin Valley Unified Air Pollution Control District (SJVUAPCD) Rule 4653 have 50 g/l limits for both categories. Please consider reducing these limits in Rule 235 to 50 g/l.

2. Table 302-2 limits "Plastic Foam," to 120 g/l. This category has no analogous CTG or CARB category limits, but SJVUAPCD Rule 4653 has a 50 g/l limit effective in 2012, and Antelope Valley Air Quality Management District (AVAQMD) Rule 1168 has an 80 g/l limit. Please consider reducing this limit to 50 g/l.

3. Table 304-1 limits solvent for surface preparation for electronic components to 900 g/l. However, SCAQMD Rule 1168 and PCAPCD Rule 240, Surface Preparation and Cleanup, have limits of 100 g/l and 500 g/l respectively for this category. Please consider reducing this limit.

4. To improve enforceability, please revise references to approved ASTM, State and local test methods consistent with EPA's Little Bluebook," page 13:
    - In Subsection 502.2, add the title to SCAQMD method 305, "Determination of Volatile Organic Compounds (VOC) in Aerosol Applications" and delete "for aerosol coatings". Correct the title of CARB method 310 to " Products and Reactive Organic Compounds (VOC) in Consumer Products."
    - In Subsection 502.4, the title for ASTM D4457-85 should be included:" Test Method for Determination of Dichloromethane and 1,1,1-Trichloroethane in Paints and Coatings by Direct Injection into a Gas Chromatograph." Similarly, the title for the CARB method 432 should be added: "Determination of Dichloromethane and 1,1,1-Trichloroethane in Paints and Coatings."
    - In Subsection 502.9, the title for ASTM D3792-71, -91 should be included: "Test Method for Water and Water Reducible Paints by Direct Injection into a Gas Chromatograph." Please note that only the 1971 and 1991 versions of this method have been approved by the EPA.
    - In Subsection 502.10, the title for ASTM D2879 should be included: "Test Method for Vapor Pressure-Temperature Relationship and Initial Decomposition Temperature of Liquids by Isoteniscope." Please note that only the 1983, 1996, 1997 and 2010 versions of this method have been approved by the EPA.

5. We also note the following typos and editorial clarifications that do not impact the rule's approvability:

- Subsection 207 - Correct the spelling of "Airless."
- Subsection 224 - Revise to "... and that is field applied to a building roof using one layer **of** membrane material."
- Subsection 235 - For clarity and consistency, instead of, "overall efficiency," please use the terminology of Section 306: "Control Equipment Efficiency" and "Emission Equipment Efficiency."
- Subsection 252 - Consider revising the definition similar to SCAQMD Rule 1168: "...solvents which are used to dissolve the surfaces of plastic, **except ABS, PVC and CPVC plastic**, to form a bond..."
- Subsections 272 and 274 - Delete one of these definitions of "Solvent Welding, " and adjust the subsection numbering.
- Subsection 285 - Correct "vinyl tips" to vinyl tops."
- Subsection 301.1.9 - Consider allowing airless sprayers only for adhesives and sealants with viscosity of 200 centipoise or greater, similar to SCAQMD Rule 1168.
- Subsection 405 - Correct the spelling of "Requirements."
- Subsection 502 - Consider defining "EPA" in the first instance (502.1) and using the acronym EPA thereafter.
- Subsection 502.3 - The number for the SCAQMD method is Method 316A instead of 316a.
- Subsection 502.8 and 502.9 - Verify that you intended to reference both the 1991 and 1996 versions of ASTM E260, "General Gas Chromatography Procedures."
- Staff Report "Discussion" section - please correct SCAQMD Rule from 67.21 to 1168. Also, the last bullet in the description of changes under Section 302 should be moved to Section 304.

Rule 239, Graphic Arts Operations

1. The exemptions for Fountain Solutions (Subsection 104.8) over 450 pounds per calendar month and for Heatset Web Offset printing (Subsection 104.10) under 25 tons per year should be clearly enforceable. Please ensure that Section 501.3 requires adequate usage records to

ensure compliance.

2. Consider using SCAQMD's Rule 1171, Solvent Cleaning Operations, VOC limits, which are considerably lower, for the solvent categories.

3. To improve enforceability, please revise references to approved ASTM, State and local test methods consistent with EPA's Little Bluebook," page 13:
    - In Subsection 502.3, the title for ASTM D4457-91 should be included:" Test Method for Determination of Dichloromethane and 1,1,1-Trichloroethane in Paints and Coatings by Direct Injection into a Gas Chromatograph." Similarly, the title for the CARB method 432 should be added: "Determination of Dichloromethane and 1,1,1-Trichloroethane in Paints and Coatings."
    - In Subsection 502.7, the title for ASTM D2879-97 should be included: "Test Method for Vapor Pressure-Temperature Relationship and Initial Decomposition Temperature of Liquids by Isoteniscope."

4. We also note the following typos and editorial clarifications that do not impact the rule's approvability:
    - Consider using the same definitions that were used in Rule 235 for "Adhesive" in Subsection 201 and "Aerosol Adhesive" in Subsection 202.
    - Subsection 301.1 table - Reformat so Extreme Performance Ink/Coating is on one line and the subsequent material types line up correctly with the respective VOC regulatory content.
    - Subsections 401.1, 501.1.1 and 501.3.3 - Define "code" used in the term, "name/code/manufacturer."
    - Subsection 403.1 - Define the factors E, E_1 and E_2 used in the calculation.
    - Subsection 501.1.8 - consider revising the referenced section to 104.6 **and** **104.7** to include both exempt aerosol adhesives.
    - Staff Report, "Discussion" section - Correct SDCAPCD Rule from 67.17 to 67.16. Also, in the description of changes under Section 304, the partial pressure limit should be 670, not 660, g/l.

District response to comments from EPA on Rule 235, through e-mail from Andrew Steckel to Bruce Springsteen dated September 7, 2012

1. Table 302-1 limits "Subfloor Installation and VCT" and "Asphalt Tile Installation" to 200 and 150 g/l respectively. These categories have no analogous CTG or CARB category limits, but both South Coast Air Quality Management District (SCAQMD) Rule 1168, and San Joaquin Valley Unified Air Pollution Control District (SJVUAPCD) Rule 4653 have 50 g/l limits for both categories. Please consider reducing these limits in Rule 235 to 50 g/l.

   District response: VOC content limits for both categories are proposed to 50 g/l, as suggested by EPA.

2. Table 302-2 limits "Plastic Foam," to 120 g/l. This category has no analogous CTG or CARB category limits, but SJVUAPCD Rule 4653 has a 50 g/l limit effective in 2012, and Antelope Valley Air Quality Management District (AVAQMD) Rule 1168 has an 80 g/l limit. Please consider reducing this limit to 50 g/l.

   District response: VOC content limit is proposed to 80 g/l. This limit is as stringent as the same category in AVAQMD Rule 1168.

3. Table 304-1 limits solvent for surface preparation for electronic components to 900 g/l. However, SCAQMD Rule 1168 and PCAPCD Rule 240, Surface Preparation and Cleanup, have limits of 100 g/l and 500 g/l respectively for this category. Please consider reducing this limit.

   District response: This VOC limit is proposed to 500 g/l, as suggested by EPA.

4. To improve enforceability, please revise references to approved ASTM, State and local test methods consistent with EPA's Little Bluebook," page 13:

   - In Subsection 502.2, add the title to SCAQMD method 305, "Determination of Volatile Organic Compounds (VOC) in Aerosol Applications" and delete "for aerosol coatings". Correct the title of CARB method 310 to " Products and Reactive Organic Compounds (VOC) in Consumer Products."
   - In Subsection 502.4, the title for ASTM D4457-85 should be included:" Test Method for Determination of Dichloromethane and 1,1,1-Trichloroethane in Paints and Coatings by Direct Injection into a Gas Chromatograph." Similarly, the title for the CARB method 432 should be added: "Determination of Dichloromethane and 1,1,1-Trichloroethane in Paints and Coatings."
   - In Subsection 502.9, the title for ASTM D3792-71, -91 should be included: "Test Method for Water and Water Reducible Paints by Direct Injection into a Gas Chromatograph." Please note that only the 1971 and 1991 versions of this method have been approved by the EPA.
   - In Subsection 502.10, the title for ASTM D2879 should be included: "Test Method for Vapor Pressure-Temperature Relationship and Initial Decomposition

Temperature of Liquids by Isoteniscope." Please note that only the 1983, 1996, 1997 and 2010 versions of this method have been approved by the EPA.

District response: As suggested by EPA, all applicable test methods references are updated to the most approved current versions.

5. We also note the following typos and editorial clarifications that do not impact the rule's approvability:
   - Subsection 207 - Correct the spelling of "Airless."
   - Subsection 224 - Revise to "... and that is field applied to a building roof using one layer of membrane material."
   - Subsection 235 - For clarity and consistency, instead of, "overall efficiency," please use the terminology of Section 306: "Control Equipment Efficiency" and "Emission Equipment Efficiency."
   - Subsection 252 - Consider revising the definition similar to SCAQMD Rule 1168: "...solvents which are used to dissolve the surfaces of plastic, except ABS, PVC and CPVC plastic, to form a bond..."
   - Subsections 272 and 274 - Delete one of these definitions of "Solvent Welding, " and adjust the subsection numbering.
   - Subsection 285 - Correct "vinyl tips" to vinyl tops."
   - Subsection 301.1.9 - Consider allowing airless sprayers only for adhesives and sealants with viscosity of 200 centipoise or greater, similar to SCAQMD Rule 1168.
   - Subsection 405 - Correct the spelling of "Requirements."
   - Subsection 502 - Consider defining "EPA" in the first instance (502.1) and using the acronym EPA thereafter.
   - Subsection 502.3 - The number for the SCAQMD method is Method 316A instead of 316a.
   - Subsection 502.8 and 502.9 - Verify that you intended to reference both the 1991 and 1996 versions of ASTM E260, "General Gas Chromatography Procedures."
   - Staff Report "Discussion" section - please correct SCAQMD Rule from 67.21 to 1168. Also, the last bullet in the description of changes under Section 302 should be moved to Section 304.

   District response: As suggested by EPA, all the above typos and editorial clarifications are corrected.

ATTACHMENT #2

Subject:

Strikeout Rule 235, Adhesives

RULE 235 ADHESIVES

Adopted 06-08-95
(Amended 04-10-97, 04-08-04,10-11-12)

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100 GENERAL

101 PURPOSE: To limit emissions of volatile organic compounds (VOCs) from the application of commercial and industrial adhesive or sealant products, and from related solvents and strippers.

102 APPLICABILITY: The provisions of this rule apply to any person who uses, applies or solicits the use or application of any adhesive or sealant product or associated solvent; or any person who supplies, sells, offers for sale, manufacturers or distributes for use or application within the District, any adhesive or sealant product or associated solvent.

~~102.1 Geographic: The provisions of this rule apply to all operations applying adhesives in Placer County~~

~~102.2 Business Category: This rule is applicable to any person who:~~

~~102.2.1 Manufactures, sells, offers for sale, or uses an adhesive or sealant product; or~~

~~102.2.2 Uses a surface preparation solvent, a cleanup solvent, or a stripper; or~~

~~102.2.3 Supplies an adhesive or sealant product to the person who applies the product (i.e., the product user); or~~

~~102.2.4 Solicits, requires the use of, or specifies the application of any adhesive or sealant product, surface preparation solvent, cleanup solvent or stripper, whether or not such material complies with this rule.~~

103 SEVERABILITY: If any section, subsection, sentence, clause, phrase, or portion of this rule is, for any reason, held invalid, unconstitutional, or unenforceable by any court of competent jurisdiction, that portion shall be deemed as a separate, distinct, and independent provision, and the holding shall not affect the validity of the remaining portions of the rule.

104 EXEMPTIONS

104.1 Aerosol Cleaning Solvents: The requirements of Section 303 shall not apply to the use of aerosol cleaning solvents at the stationary source provided that the total usage of the aerosol cleaning solvents does not exceed 160 fluid ounces per day, averaged over a calendar month.

104.2 Consumer Products Contact Adhesives: The requirements of Section 302 shall not apply to contact adhesives subject to the Consumer Product Safety Commission regulations in 16 Code of Federal Regulations, Part 1302, provided that adhesives are sold in packages of 128 fluid ounces or less and have a flash point greater than 20°F as determined pursuant to those regulations, and that are used at a home, a construction site, or at any location other than a stationary source.

104.3 Cyanoacrylate Adhesives: The requirements of this rule shall not apply to cyanoacrylate adhesives.

104.4 Equipment Cleanup: The VOC requirements in Section 304 shall not apply to ethyl acetate used to clean adhesive application equipment when:

104.4.1 The equipment is used in the manufacturing of transdermal drug delivery products, and

104.4.2 Fewer than 3 gallons per day of ethyl acetate, averaged over a calendar month, are used.

104.5 Household Adhesives: The requirements of this rule shall not apply to household adhesives that are regulated by the State of California and that are defined in Section ~~231~~232.

104.6 Low Usage: The requirements of Sections 302, 303 and 304.1 shall not apply to the materials used by the stationary source, if the total combined volume of these materials used at the stationary source does not exceed 55 gallons during any calendar year. ~~-~~Commercial and industrial operations that use such materials and that are exempted pursuant to this section shall comply with Section 501.

104.7 Low VOC Materials: The requirements of this rule shall not apply to materials containing 20 grams/liter or less (0.17 pounds/gallon) of VOC actual content~~, less water and exempt compounds, as applied~~.

104.8 Materials Regulated Under Other District Rules: The requirements of this rule shall not apply to any material specifically regulated under any of the other District's Rules. ~~by Rule 239, Graphic Arts Operations,~~

104.9 Medical Equipment Manufacturing: The requirements of this rule shall not apply to solvent welding operations used in the manufacturing of medical devices, including, but not limited to, catheters, heart valves, blood cardioplegia machines, tracheotomy tubes, blood oxygenators, and cardiatory reservoirs.

104.10 Research and Development Operations: Except for the work practices required pursuant to Section 305, Sections 302, 303 and 304.1 shall not apply to the testing and evaluation of materials in research and development laboratories, quality assurance laboratories, or analytical laboratories, provided that these sources maintain records that comply with Section 501.

104.11 Small Container: The requirements of this rule shall not apply to materials sold or supplied in non-reusable containers that are designed to hold no more than 8 fluid ounces of materials.

104.12 Tire Repair: The requirements of this rule shall not apply to materials used for tire repair if such products are labeled by the manufacturer: ~~-~~ "For Tire Repair Only."

104.13 Undersea Weapons: The requirements of this rule shall not apply to the manufacture, maintenance, or repair of undersea-based weapon systems.

104.14 Ultraviolet Light-Cured Adhesives: The requirements of this rule shall not apply to reactive adhesives that are cured through the application of ultraviolet light, electron beam, visible light, radio frequency, or microwaves.

200 DEFINITIONS

201 ACRYLONITRILE-BUTADIENE-STYRENE (ABS) WELDING ADHESIVE: Any adhesive intended by the manufacturer to weld ABS pipe. ABS pipe is made by reacting

monomers of acrylonitrile, butadiene, and styrene and is normally identified with an "AABS" marking.

202 **ADHESIVE:** Any substance that is ~~used to bond one surface to another surface by attachment.~~applied for the purpose of bonding two surfaces together other than by mechanical means.

203 **ADHESIVE OR SEALANT PRODUCT:** Any adhesive, adhesive primer, aerosol adhesive, aerosol adhesive primer, sealant, or sealant primer, as sold by the manufacturer or as applied.

204 **ADHESIVE PRIMER:** A coating applied to a substrate, prior to the application of an adhesive, to provide a bonding surface.

205 **AEROSOL ADHESIVE or ADHESIVE PRIMER:** An adhesive or adhesive primer ~~consisting of a mixture of rubber, resins, liquid and/or gaseous solvents, and propellants packaged in a hand-held, pressurized, non-refillable container. The container expels pressurized aerosol materials in a finely divided spray when a valve on the container is depressed.~~ packaged as an aerosol product in which the spray mechanism is permanently housed in a non-refillable can designed for handheld application without the need for ancillary hoses or spray equipment. Aerosol adhesives include special purpose spray adhesives, mist spray adhesives, and web spray adhesives, as defined in the California Air Resources Board consumer products regulation found in Title 17 of the California Code of Regulations, beginning at Section 94507.

~~**206** **AEROSOL ADHESIVE PRIMER:** A primer used exclusively to provide a bonding surface on substrates for subsequent application of aerosol adhesives. It consists of a mixture of liquid and/or gaseous materials and propellants packaged in a hand-held, pressurized, non-refillable container. The container expels pressurized aerosol primer materials in a finely divided spray when a valve on the container is depressed.~~

~~207~~206 **AEROSOL CLEANING SOLVENT:** A material used as a surface preparation solvent, a cleanup solvent, or as a stripper and ~~consisting of liquid and/or gaseous solvent and propellants packaged in a hand-held, pressurized, non-refillable container. The container expels pressurized aerosol materials in a finely divided spray when a valve on the container is depressed.~~packaged as an aerosol product in which the spray mechanism is permanently housed in a non-refillable can designed for handheld application without the need for ancillary hoses or spray equipment.

207 **AIRLESS SPRAY:** A spray method in which a pump forces the adhesive through an atomizing nozzle at high pressure (1,000 to 6,000 pounds per square inch, gauge, (psig)).

208 **APPLICATION EQUIPMENT:** A device such as a spray gun, pot, hose, brush, roller, electrostatic sprayer, non-propellant spray bottle, or squeegee, used to apply an adhesive or sealant product, a surface preparation solvent, a cleanup solvent, or a stripper.

209 **ARCHITECTURAL ~~SEALANT/PRIMER~~:** Pertaining ~~Any sealant or sealant primer intended by the manufacturer to be applied~~ to stationary structures, including mobile homes, and their appurtenances. Appurtenances to an architectural structure include, but are not limited to: hand railings, cabinets, bathroom and kitchen fixtures, fences, rain gutters and downspouts, and windows.

210 **AUTOMOTIVE GLASS ADHESIVE PRIMER:** An adhesive primer labeled by the manufacturer to be applied to automotive glass prior to installation of the glass using an

adhesive/sealant. ~~-~~This primer improves the adhesion to pinch weld and blocks ultraviolet light.

211 **CERAMIC TILE ~~INSTALLATION~~ ADHESIVE:** Any adhesive intended by the manufacturer for the installation of ceramic tiles.

212 **CHLORINATED POLYVINYL CHLORIDE (CPVC) WELDING ADHESIVE:** Any adhesive intended by the manufacturer to weld CPVC plastic pipe.

213 **CHLORINATED POLYVINYL CHLORIDE (CPVC) PLASTIC:** CPVC plastic is a polymer of the monomer that contains 67 percent chlorine and is normally identified with a CPVC marking.

214 **CLEANUP SOLVENT:** A VOC-containing material used to:

214.1 Remove a loosely held uncured (i.e., not dry to the touch) adhesive or sealant from a substrate, or

214.2 Clean equipment that was used to apply an adhesive or sealant product.

215 **CLOSED CONTAINER:** A covered receptacle, which has no visible gaps where the cover and the main body of the receptacle meet.

216 **COMPUTER DISKETTE JACKET MANUFACTURING ADHESIVE:** Any adhesive intended by the manufacturer to bond the fold-over flaps to the body of a vinyl computer diskette jacket.

217 **CONTACT ADHESIVE:** An adhesive, also known as Contact Bond Adhesive, that is intended by the manufacturer for application to both surfaces to be bonded together, is allowed to dry before the two surfaces are placed in contact with each other, forms an immediate bond that is impossible, or difficult, to reposition after both adhesive-coated surfaces are placed in contact with each other, and does not need sustained pressure or clamping of surfaces after the adhesive-coated surfaces have been brought together using sufficient momentary pressure to establish full contact between both surfaces. Contact adhesive does not include rubber cements that are primarily intended for use on paper substrates. Contact adhesive also does not include vulcanizing fluids that are designed and labeled for tire repair only.

~~An adhesive that forms an instantaneous bond that cannot be repositioned when substrates, on which the adhesive is applied and allowed to dry, are brought together using momentary pressure.~~

218 **CONTROL DEVICE:** Equipment that is utilized as part of an emission control system, and which destroys, absorbs or otherwise eliminates or reduces the emission of Volatile Organic Compounds from adhesive/sealant operations.

219 **COVE BASE INSTALLATION ADHESIVE:** Any adhesive intended by the manufacturer for the installation of cove base (or wall base), which is generally made of vinyl or rubber, onto a wall or vertical surface at floor level.

220 **CURED:** Dry to the touch.

221 **CYANOACRYLATE ADHESIVE:** An adhesive with a cyanoacrylate content of at least 95~~90~~% by weight ~~and which emits less than 20 grams per liter of VOC as determined pursuant to Section 502.11~~.

222 **DRYWALL ~~INSTALLATION~~:** The installation of gypsum drywall to studs or solid surfaces.

223 **ENCLOSED GUN CLEANER:**

223.1 A device that is used for the cleaning of spray guns, pots, cups, and hoses, that has a closed solvent container, is not open to the ambient air when in use, and has a mechanism to force the cleanup material through the gun while the cleaner is in operation; or

223.2 A device that is used for the cleaning of spray guns, pots, cups, and hoses, that has a closed solvent container, uses non-atomized solvent flow to flush the spray equipment, and collects and returns the discharged solvent to the closed container.

224 ETHYLENE PROPYLENE DIENE MONOMER (EPDM) ROOF MEMBRANE: A prefabricated sheet of elastomeric material composed of ethylene propylene diene monomer and that is field applied to a building roof using one layer of membrane material.

~~224~~225 EXEMPT COMPOUNDS: For the purposes of this rule, "Exempt Compounds" are as defined in Rule 102, Definitions.

~~225~~226 FIBERGLASS: A fiber made of fine filaments of glass that is similar in appearance to wool or cotton fiber.

~~226~~227 FLEXIBLE VINYL: A nonrigid polyvinyl chloride plastic with at least five percent, by weight, of plasticizer content, as determined per Section 502.8.

~~227~~228 FLEXIBLE VINYL ADHESIVE: An aerosol adhesive designed to bond flexible vinyl to substrates.

~~228~~229 HAND APPLICATION METHODS: The application of an adhesive or sealant product by manually held equipment. Such equipment includes: paint brushes, hand rollers, trowels, spatulas, daubers, rags, sponges, and mechanically or pneumatically driven syringes that do not atomize the applied products.

~~229~~230 HIGH PRESSURE LAMINATE: Sheets of materials, consisting of paper, fabric, or other core ~~material, that~~material that have been laminated at temperatures exceeding 265 degrees F, and at pressures between 1,000 and 1,400 pounds per square inch.

~~230~~231 HIGH-VOLUME LOW-PRESSURE (HVLP) APPLICATION EQUIPMENT: Spray e~~E~~quipment, permanently labeled as such, used to apply coating by means of a spray gun which is designed to be operated ~~,~~and which is operated between 0.1 and 10.0 ~~pounds per square inch gauge (~~psig~~)~~ air atomized pressure, measured dynamically at the center of the air cap and at the air horns.

~~231~~232 HOUSEHOLD ADHESIVE: An adhesive subject to ~~Title 17~~, the Air Resources Board consumer products regulation, Sections 94507-94517, Title 17, California Code of Regulations.~~, Sections 94507-94517 (Consumer Products).~~ Household adhesives do not include units of product, less packaging, that weigh more than one pound or contain more than 16 fluid ounces.

233 INDOOR CARPET ADHESIVE: An adhesive intended by the manufacturer to be used during the installation of a carpet that is in an enclosure and is not exposed to ambient weather conditions during normal use.

~~232~~234 INDOOR FLOOR COVERING ~~INSTALLATION~~ ADHESIVE: Any adhesive intended by the manufacturer for the installation of wood flooring, carpet, ~~carpet pads, rubber flooring,~~ resilient tile, vinyl tile, vinyl backed carpet, resilient sheet and roll, or artificial grass. ~~Such~~ installed materials are in an enclosure and are not exposed to ambient weather conditions during normal use~~. Indoor floor covering installation does not include ceramic tile installation or subfloor installation~~. Adhesives used to install ceramic tile and

perimeter bonded sheet flooring with vinyl backing onto a non-porous substrate, such as flexible vinyl, are excluded from this category.

~~233~~235 **KEY SYSTEM OPERATING PARAMETER:** A variable that is critical to the operation of an emission control system and that ensures both operation of the system within the system manufacturer's specifications, and compliance with the ~~overall~~ control equipment efficiency and emission collection system efficiency standard required by Section ~~305~~306. Such variables may include, but are not limited to, hours of operation, temperature, flow rate, and pressure.

~~234~~236 **LEAK:** A visible liquid solvent loss or a solvent vapor (mist) loss from unintended openings in a container.

~~235~~237 **LOW-SOLIDS MATERIAL:** A material containing no more than 120 grams of solids per liter (1.0 pound of solids per gallon) of product.

~~236 LOW-VOLUME LOW-PRESSURE (LVLP) APPLICATION EQUIPMENT: Spray coating application equipment with air pressure between 0.1 and 10.0 pounds per square inch gauge (psig) and air volume less than 15.5 cubic feet per minute (cfm) per spray gun and which operates at a maximum fluid delivery pressure of 50 psig.~~

~~237~~238 **MARINE DECK SEALANT/SEALANT PRIMER:** Any sealant or sealant primer intended by the manufacturer to seal gaps on wooden marine decks.

~~238~~239 **MATERIAL:** Any material containing VOC including but not limited to, an adhesive, adhesive primer, aerosol adhesive, aerosol adhesive primer, sealant, sealant primer, catalyst, colorant, stripper, or solvents used in cleaning.

~~239~~240 **METAL TO URETHANE/RUBBER MOLDING OR CASTING ADHESIVE:** Any adhesive intended by the manufacturer to bond metal to high-density or elastomeric urethane or molded rubber materials, in heater molding or casting processes, to fabricate products such as rollers for computer printers or other paper handling equipment.

241 **MOTOR VEHICLE:** Any self-propelled vehicle, including, but not limited to cars, trucks, buses, golf carts, vans, motorcycles, tanks, and armored personnel carriers.

242 **MOTOR VEHICLE ADHESIVE:** An adhesive, including glass bonding adhesive, used at a facility that is not an automobile or light-duty truck assembly coating facility, applied for the purpose of bonding two vehicle surfaces together without regard to the substrates involved.

243 **MOTOR VEHICLE WEATHERSTRIP ADHESIVE:** An adhesive, used at a facility that is not an automobile or light-duty truck assembly coating facility, applied to weather stripping materials for the purpose of bonding the weather strip material to the surface of the vehicle.

~~240~~244 **MULTIPURPOSE CONSTRUCTION ADHESIVE:** Any adhesive intended by the manufacturer for the installation or repair of various construction materials, including, but not limited to, drywall, subfloor, panel, fiberglass reinforced plastic, ceiling tile, and acoustical tile.

~~241~~245 **NONCOMPLIANT MATERIAL:** A material that:

~~241~~245.1 E~~e~~xceeds the VOC content limits specified in Sections 302, 303, and 304.1, and is not exempt pursuant to Section 104 and which is not used with emission control equipment pursuant to Section ~~305~~306; or

~~241~~245.2 E~~e~~xceeds the VOC content limit and/or composite vapor pressure limit, as applicable, in Section 304.1 and which is not used with emission control equipment pursuant to Section ~~305~~306.

~~242~~246 NON-MEMBRANE ROOF ~~INSTALLATION/REPAIR~~ ADHESIVE/SEALANT: Any adhesive or sealant intended by the manufacturer for the installation or repair of non-membrane roofs, but is not intended for the installation of prefabricated single-ply roof membrane. With regard to non-membrane roof installation/repair adhesives, this category includes plastic or asphalt roof cement, asphalt roof coatings, and cold application cement.

~~243~~247 ~~———~~NON-POROUS MATERIAL: A material which does not have tiny openings, often microscopic, to allow the absorption or discharge of fluids.

~~244~~248 OUTDOOR FLOOR COVERING ~~INSTALLATION~~ ADHESIVE: Any adhesive intended by the manufacturer for the installation of floor covering that is not in an enclosure and is exposed to ambient weather conditions during normal use. Outdoor floor covering installation does not include ceramic tile installation or subfloor installation.

~~245~~249 PANEL ~~INSTALLATION~~: The installation of plywood, pre-decorated hardboard, tile board, fiberglass reinforced plastic, and similar pre-decorated or non-decorated panels to studs or solid surfaces.

250 PERIMETER BONDED SHEET FLOORING ~~INSTALLATION~~ ADHESIVE: The installation of sheet flooring with vinyl backing onto a nonporous substrate using an adhesive designed to be applied only to a strip of up to four inches wide around the perimeter of the sheet flooring.

~~246~~251 ~~———~~PLASTIC: A synthetic material chemically formed by the polymerization of organic (carbon-based) substances.

~~247~~252 ~~———~~PLASTIC CEMENT WELDING ADHESIVE: Any adhesive made of resins and solvents that is formulated to dissolve the surfaces of plastic, except ABS, PVC, and CPVC plastic, to form a bond between mating surfaces.

~~248~~253 ~~———~~PLASTIC CEMENT WELDING ADHESIVE PRIMER: Any primer intended by the manufacturer to prepare plastic substrates prior to bonding or welding.

254 PLASTIC FOAM: A foam constructed of plastic material.

~~249~~255 PLASTICIZER: A material, such as a high boiling point organic solvent, that is incorporated into a vinyl to increase its flexibility, workability, or distensibility, as determined by ASTM Method E-260-96.

~~250~~256 POLYVINYL CHLORIDE (PVC) WELDING ADHESIVE: Any adhesive intended by the manufacturer to weld PVC plastic pipe.

~~**251 POLYVINYL CHLORIDE (PVC) WELDING SEALANT:** A sealant designed to adhere to polyvinyl chloride (PVC) by dissolving its surface and to fill or seal gaps between PVC surfaces or between PVC and other surfaces.~~

~~252~~257 POROUS MATERIAL: A material whose surface is permeable to liquids; such materials include, but are not limited to~~, foam~~, paper~~, corrugated~~ and card~~paper~~board~~, stone~~, ~~and wood~~ For purposes of this rule, porous material does not include wood.

~~253~~258 PROPELLANT: A fluid under pressure that expels the contents of a container when a valve is opened.

~~254~~259 **REACTIVE ADHESIVE:** An adhesive containing 20 grams or less per liter (0.17 lbs/gal) of VOCs actual content~~, less water and exempt compounds, as applied~~, that cures upon exposure to ultraviolet light, electron beam, visible light, radio frequency, or microwave.

260 **REINFORCED PLASTIC COMPOSITE:** A composite material consisting of plastic reinforced with fibers.

2~~55~~61 **ROADWAY SEALANT:** Any sealant intended by the manufacturer to be applied to public streets, highways, and related surfaces such as curbs, berms, driveways, and parking lots.

~~256~~262 **RUBBER:** Any natural or manmade rubber substrate, including, but not limited to: styrene-butadiene rubber, polychloroprene (neoprene), butyl rubber, nitrile rubber, chlorosulfonated polyethylene, and ethylene propylene diene terpolymer.

~~257~~263 **RUBBER FLOORING:** Flooring material in which both the back and the top surface are made of synthetic rubber, and which may be in sheet or tile form.

264 **RUBBER VULCANIZATION BONDING:** The bonding of rubber to metal, rubber, or polyester or nylon fabrics during one or more of the following vulcanization processes:

264.1 Molded vulcanization: The application of heat and pressure to uncured rubber in ~~—~~a mold;

264.2 Sheet-applied vulcanization: The application of heat after rubber stock sheets have been adhered to the walls of tanks, tankers, elbow joints, protective earthquake building pads, or rail cars; or the application of heat after one or more layers of rubber stock sheets have been built up to form a rubber product;

264.3 ~~Cold vulcanization~~Cold vulcanization: The chemical reaction of an adhesive with rubber stock sheets that are adhered to earthmoving equipment, other high impact/abrasion devices, or industrial belting devices, without the application of heat or pressure. Rubber vulcanization bonding does not include tire retreading.

~~258~~265 **SEALANT:** Any material with adhesive properties that is applied as a rope or bead and that is formulated for use primarily to fill, seal, waterproof, or weatherproof gaps or joints between two surfaces. Sealants include caulks. ~~-~~Sealants do not include sealers that are applied as continuous coatings.

~~259~~266 **SEALANT PRIMER:** Any material intended by the manufacturer for application to a substrate, prior to the application of a sealant, to enhance the bonding surface.

267 **SHEET RUBBER LINING INSTALLATION:** The process of applying sheet rubber liners by hand to metal or plastic substrates to protect the underlying substrate from corrosion or abrasion. These operations also include laminating sheet rubber to fabric by hand.

~~260~~268 **SINGLE-PLY ROOF MEMBRANE:** A prefabricated single sheet of rubber, normally ethylene-propylene diene terpolymer, that is field applied ~~in a single layer~~ to a building roof using one layer of membrane material. For the purposes of this rule, single-ply roof ~~(normally a flat roof)~~ membrane does not include membranes prefabricated from ethylene-propylene diene monomer (EPDM).

269 **SINGLE-PLY ROOF MEMBRANE ADHESIVE:** An adhesive intended by the manufacturer, and so ~~—~~labeled, for use in the installation or repair of single-ply roof membrane. Installation includes, as a minimum, attaching the edge of the membrane to the edge of the roof and applying flashings to vents, pipes and ducts that protrude

through the membrane. Repair includes gluing the edges of torn membrane together, attaching a patch over a hole and reapplying flashings to vents, pipes or ducts installed through the membrane.

270 **SINGLE-PLY ROOF MEMBRANE ADHESIVE PRIMER:** A primer intended by the manufacture for use to clean and promote adhesion of the single-ply roof membrane seams or splices prior to bonding, and labeled as such.

271 **SINGLE-PLY ROOF MEMBRANE SEALANT:** A sealant intended by the manufacturer to be used for the installation or repair of single-ply roof membrane to the edge of the roof and applying flashings to vents, pipes, or ducts that protrude through the membrane.

~~261 **SOLVENT WELDING:** The softening of the surfaces of two substrates by wetting them with a solvent and/or adhesive, and joining them together using a chemical and/or physical reaction(s) to form a fused union.~~

~~262~~272 **SOLID MATERIAL:** The nonvolatile portion of an adhesive or sealant product, surface preparation solvent, cleanup solvent, or stripper that remains after heating a sample of the product at 110°C for one hour.

~~263~~273 **SOLVENT WELDING:** The softening of the surfaces of two substrates by wetting them with a solvent and/or adhesive, and joining them together with a chemical and/or physical reaction(s) to form a fused union.

~~264~~274 **STATIONARY SOURCE:** Any building, structure, facility, or emissions unit which emits or may emit any pollutant directly or as a fugitive emission. This includes all pollutant-emitting activities which:

~~264~~274.1 Belong to the same industrial grouping, and

~~264~~274.2 Are located on one property or on two or more contiguous properties, and

~~264~~274.3 Are under the same or common ownership, operation, or control or which are owned or operated by entities, which are under common control.

Pollutant-emitting activities shall be considered as part of the same industrial grouping if they:

~~264~~274.4 Belong to the same two-digit standard industrial classification code, or

~~264~~274.5 Are part of a common production process. (Common production process includes industrial processes, manufacturing processes and any connected processes involving a common material.)

~~265~~275 ~~STRIPPER:~~ A liquid used to remove cured adhesives and/or cured sealants.

~~266~~276 **STRUCTURAL GLAZING ADHESIVE:** Any adhesive intended by the manufacturer to adhere glass, ceramic, metal, stone, or composite panels to exterior building frames.

2~~66~~77 **STRUCTURAL WOOD MEMBER ADHESIVE:** An adhesive intended by the manufacturer to be used for the construction of a load-bearing joint in wooden joists, trusses, or beams.

~~267~~278 **SUBFLOOR:** The installation of subflooring material, typically plywood, over flooring joists. Subfloor installation includes the construction of any load bearing joints in joists or trusses. Subflooring is covered by a finished surface material.

~~268~~279 **SUBSTRATE:** The material onto which an adhesive or sealant product, surface preparation solvent, cleanup solvent, or stripper is applied.

~~280~~269 **SURFACE PREPARATION SOLVENT:** Any VOC-containing material used to remove contaminants such as dust, soil, oil, grease, etc., from a substrate prior to the application of an adhesive or sealant product.

~~270~~281 **THIN METAL LAMINATING ADHESIVE:** Any adhesive intended by the manufacturer to bond multiple layers of metal to metal or metal to plastic in which the thickness of the bond line(s) is less than 0.025 mils (0.000025 inches).

~~271~~282 **TIRE REPAIR:** To mend a hole, tear, fissure, blemish, or defect in a tire casing by grinding and/or gouging, applying adhesive, and attaching replacement rubber.

~~270~~283 **TIRE RETREAD ADHESIVE:** An adhesive applied to the back of precured tread rubber and to the casing and cushion rubber. ~~-~~Tire retread adhesive may also be used to seal buffed tire casings to prevent oxidation while the tire is being prepared for a new tread.

2~~7~~284 **TOP AND TRIM ADHESIVE:** An adhesive intended by the manufacturer to be used for installing automotive or marine trim, including, but not limited to headliners, vinyl tops, vinyl trims, sunroofs, dash covering, door covering, floor covering, panel covering and upholstery.

~~273~~285 ~~———~~**TRAFFIC MARKING TAPE ADHESIVE PRIMER:** An adhesive primer intended by the manufacturer to be applied to surfaces prior to the installation of traffic marking tape. ~~-~~Traffic marking tape is a pre-formed reflective film intended by the manufacturer to be applied to public streets, highways, and other surfaces including, but not limited to, curbs, berms, driveways, and parking lots. It is not one of the "Traffic Coatings" included in and defined in Rule 218, ARCHITECTURAL~~rchitectural~~ COATINGS~~oatings~~.

286 **VCT AND ASPHALT TILE ADHESIVE:** An adhesive intended by the manufacturer for the installation of vinyl composite tile or asphalt tile flooring.

~~409~~287 ~~**CALCULATION FOR** **-**~~**VOC COMPOSITE PARTIAL PRESSURE:** The VOC composite partial pressure is the sum of the partial pressures of the compounds defined as VOCs, and shall be calculated by the following equation:

$$PP_c = \frac{\sum_{i=1}^{n} \frac{(W_i)(VP_i)}{MW_i}}{\frac{W_w}{MW_w} + \sum_{e=1}^{n} \frac{W_e}{MW_e} + \sum_{i=1}^{n} \frac{W_i}{MW_i}}$$

Where: PP_c = VOC composite partial pressure at 20°C, in mm Hg.
W_i = Weight of the "i"th VOC compound, in grams, as determined by ASTM E 260-96
W_w = Weight of water, in grams as determined by ASTM D 3792-99.
W_e = Weight of the "e"th exempt compound, in grams, as determined
MW_i = Molecular weight of the "i"th VOC compound, in grams per g-mole, as given in chemical reference literature.
MW_w = Molecular weight of water, 18 grams per g-mole.
Mw_e = Molecular weight of the "e"th exempt compound, in grams per g-mole, as given in chemical reference literature.
Vp_i = Vapor pressure of the "i"th VOC compound at 20°C, in mm Hg, as determined by Section 502.10 of this rule.

~~274~~288 **VOLATILE ORGANIC COMPOUND (VOC):** Any chemical compound containing at least one atom of carbon, except for the exempt compounds listed in Rule 102, DEFINITIONS~~efinitions~~.

289 ~~—~~VOC CONTENT:

289.1 VOC Regulatory Content: The weight of VOC per combined volume of VOC and material, calculated with the following equation:

VOC Regulatory Content = (Ws – Ww – Wec) / (Vm – Vw – Vec)

289.2 VOC Actual Content: The weight of VOC per volume of material, calculated with the following equation:

VOC Actual Content = (Ws – Ww – Wec) / Vm

Where:

Ws = Weight of volatile compounds in grams
Ww = Weight of water in grams
Wec = Weight of exempt compounds in grams
Vm = Volume of material in liters
Vw = Volume of water in liters
Vec = Volume of exempt compounds, as defined in Rule 102, DEFINITIONS~~efinitions~~, in liters

~~407~~289.3 ~~Calculation of~~ Percent of VOC by Weight: ~~The percent of VOC by weight is~~ T~~t~~he ratio of the weight of the VOC to the weight of the material~~the aerosol adhesive or aerosol adhesive primer as supplied by the manufacturer~~, expressed as a percent~~of VOC by weight~~. ~~The~~ The percent of VOC by weight shall be calculated as follows:

$$Percent\ of\ VOC\ by\ Weight = \frac{W_{voc}}{W_p}\ x\ 100$$

Where: W_{voc} = Weight of VOCs in grams
W_p = Weight of material~~the adhesive or adhesive primer, as supplied by the manufacturer,~~ in grams~~.~~

~~275 **VOLATILE ORGANIC COMPOUND (VOC) AS APPLIED:** A VOC as applied, means the VOC content of the material as applied including thinners, reducers, hardeners, retarders, catalysts and additives, and calculated pursuant to Section 502.1.~~

~~276 **VOLATILE ORGANIC COMPOUND (VOC) AS SUPPLIED:** A VOC as supplied, means the VOC content of the original material as supplied by the manufacturer, and calculated pursuant to Section 502.1.~~

~~277~~290 **WATERPROOF RESORCINOL GLUE:** A two-part resorcinol resin based adhesive designed for applications where the bond line must be resistant to conditions of continuous immersion in fresh or salt water.

~~278~~291 **WIPE CLEANING:** The method of cleaning a surface by physically rubbing it with a material such as a rag, paper, abrasive pad, brush, or a cotton swab moistened with a solvent.

~~279~~292 **WOOD FLOORING:** A wood floor surface, which may be in the form of parquet tiles, planks, or strip-wood.

300 STANDARDS

301 MATERIAL APPLICATION METHODS:

301.1 A person shall not use any methods to apply any adhesive or sealant product except the following:

301.1.1~~.~~ Hand application

301.1.2~~.~~ Dip coat

301.1.3~~.~~ Flow coat

301.1.4~~.~~ Brush or roll coat

301.1.5 ~~–~~Electrodeposition

301.1.6~~.~~ Electrostatic spray

301.1.7~~.~~ High-volume low-pressure (HVLP) application equipment

~~301.1.8. Low-volume low-pressure (LVLP) application equipment~~

301.1.~~9~~8 ~~—~~Aerosol cans

301.1.~~10~~9 ~~—~~Airless spray~~er~~, air-assisted airless spray, air-atomized spray, only for applying adhesives and sealants with a viscosity greater than 200 centipoise, or ~~(F~~for applying contact adhesives~~, only)~~

~~301.1.11 Air-assisted airless sprayer (For applying contact adhesives, only)~~

~~301.1.12. Air-atomized sprayer (For applying contact adhesives, only)~~

301.1.~~13~~10 Any other equivalent method approved in writing by the Air Pollution Control Officer and submitted to and approved by the United States Environmental Protection Agency.

301.2 A person shall not use any methods to apply any surface preparation solvent, cleanup solvent, or stripper except the following:

301.2.1 ~~———~~ ~~———~~Wipe cleaning.

301.2.2~~.~~ Non-propellant spray bottles or containers.

301.2.3 ~~—~~An enclosed gun cleaner as defined by Section 223.

301.2.4 ~~—~~Soaking application equipment parts in a closed container.

302 VOC CONTENT LIMITS, ADHESIVES, ADHESIVE PRIMERS, SEALANTS AND SEALANT PRIMERS:

302.1 ~~A~~ No person shall ~~not~~ apply a material that has a VOC regulatory content~~-~~, or a VOC actual content for low-solids material only, in excess of the following limits. VOC regulatory and VOC actual shall be calculated pursuant to Section 289.1 and Section 289.2, respectively, as applied including thinners, reducers, hardeners, retarders, catalysts, and additives.~~as applied, as determined per Section 502.1, , listed in the six tables listed in this section. the based on grams per liter of material or pounds per gallon of material including water and exempt compounds. For all other materials, the VOC content shall be calculated in grams~~

~~per liter of material or pounds per gallon of material, less water and exempt compounds.~~

TABLE 302-1 VOC CONTENT LIMITS ~~LIMITS~~ FOR ~~ADHESIVES~~	
Product Category~~Adhesive~~	~~Effective April 5, 2005~~ VOC Content ~~gm~~/l (lb/gal)
Architectural Adhesives Products:	
Multipurpose Construction ~~Adhesive~~	200 (1.~~6~~7)
Ceramic Title	130 (1.1)
Cove Base ~~Installation Adhesive~~	150 (1.~~2~~3)
Dry Wall and/or Panel	50 (0.4)
Flooring~~-~~:	
Outdoor Floor Covering ~~Installation Adhesive~~	250 (2.~~0~~1)
Indoor Floor Covering ~~Installation~~ Adhesive	150 (1.~~2~~3)
Ceramic Tile ~~Installation Adhesive~~	130 (1.1)
Indoor Carpet or Carpet Pad	150 (1.3)
Rubber Flooring	150 (1.3)
Perimeter Bonded Sheet Vinyl Flooring ~~Installation Adhesive~~	660 (5.~~5~~4)
Subfloor	50 (0.4)
VCT and Asphalt Tile	50 (0.4)
Roofing:	
Single-Ply Roof Membrane ~~Installation/Repair Adhesive~~	250 (2.~~0~~1)
Non-Membrane Roof ~~Installation/Repair Adhesive~~	300 (2.5)
Structural Glazing ~~Adhesive~~	100 (0.8)
Structural Wood Member Glazing	140 (1.2)
Plastic Welding:	
ABS Welding ~~Adhesive~~	400 (3.3)
CPVC Welding ~~Adhesive~~	490 (4.~~0~~1)
PVC Welding ~~Adhesive~~	510 (4.~~2~~3)
Plastic Cement Welding Primer	400 (3.3)
Other Plastic Cement Welding ~~Adhesive~~	450 (3.~~7~~8)
Specialty:	
Contact Adhesive including Specialty Substrates	200 (1.~~6~~7)
Rubber Vulcanization Bonding	850 (7.1)
Tire Retread ~~Adhesive~~	100 (0.8)
Motor Vehicle	250 (2.1)
Motor Vehicle Weather S~~s~~trip	750 (6.3)
Top and Trim	540 (4.5)
Thin Metal Laminating ~~Adhesive~~	780 (~~6.4~~6.5)
Computer Diskette Jacket Manufacturing ~~Adhesive~~	850 (~~6.9~~7.1)
Metal to Urethane/Rubber Molding or Casting ~~Adhesive~~	250 (2.~~0~~1)
Waterproof Resorcinol Glue	170 (1.4)
Adhesive Primers:	
Automotive Glass	700 (5.~~7~~8)
Single-Ply Roof Membrane	250 (2.~~0~~1)
Traffic Marking Tape	150 (1.~~2~~3)
Other	250 (2.~~0~~1)
Sealants:	
Architectural	250 (2.~~0~~1)
Marine Deck	760 (6.~~2~~3)
Non-M~~m~~embrane Roof	300 (2.5)

TABLE 302-1 VOC CONTENT LIMITS ~~LIMITS~~ ~~FOR ADHESIVES~~	
Product Category~~Adhesive~~	~~Effective April 5, 2005~~ VOC Content ~~gm/l~~ (lb/gal)
~~PVC Welding Sealant~~	~~Note 1~~
Roadway ~~Sealant~~	250 (2.~~0~~1)
Single-Ply Roof Membrane ~~Sealant~~	450 (3.~~7~~8)
Other	420 (3.~~4~~5)
Sealant Primers:	
Architectural - Non-Porous	250 (2.~~0~~1)
Architectural - Porous	775 (6.~~3~~5)
Marine Deck	760 (6.~~2~~3)
Other	750 (6.3~~1~~)

~~TABLE 302-2~~ ~~VOC CONTENT FOR ADHESIVE PRIMERS~~		
~~Adhesive Primer~~	~~Effective December 1, 1998 VOC Content gm/liter (lb/gal) less water and exempt compounds~~	~~Effective April 8, 2005 VOC Content gm/l (lb/gal)~~
~~Automotive Glass~~	~~700 (5.7)~~	~~700 (5.7)~~
~~Plastic Cement Welding~~	~~650 (5.3)~~	~~400 (3.3)~~
~~Single Ply Roof Membrane~~	~~250 (2.0)~~	~~250 (2.0)~~
~~Traffic Marking Tape~~	~~150 (1.2)~~	~~150 (1.2)~~
~~Other~~	~~250 (2.0)~~	~~250 (2.0)~~

~~TABLE 302-3~~ ~~VOC CONTENT FOR CONTACT ADHESIVES~~	
~~Product~~	~~VOC Content gm/liter (lb/gal)~~
~~Contact Adhesive including Specialty Substrates~~	~~200 (1.6)~~

~~TABLE 302-4~~ ~~VOC CONTENT FOR SEALANTS~~		
~~Type of Sealant~~	~~Effective December 1, 1998 VOC Content gm/liter (lb/gal) less water and exempt compounds~~	~~Effective April 8, 2005 VOC Content gm/l (lb/gal)~~
~~Architectural~~	~~250 (2.0)~~	~~250 (2.0)~~
~~Marine Deck~~	~~760 (6.2)~~	~~760 (6.2)~~
~~Non-membrane Roof Installation/Repair~~	~~300 (2.5)~~	~~300 (2.5)~~
~~PVC Welding Sealant~~	~~480 (3.9)~~	~~Note 1~~
~~Roadway Sealant~~	~~250 (2.0)~~	~~250 (2.0)~~

~~Single-Ply Roof Membrane Sealant~~	~~450 (3.7)~~	~~450 (3.7)~~
~~Other~~	~~420 (3.4)~~	~~420 (3.4)~~

~~Note 1: PVS Welding Sealant shall comply with the VOC content limitation for other sealant.~~

~~TABLE 302-5~~
~~VOC CONTENT FOR SEALANT PRIMERS~~

~~Type of Sealant Primer~~	~~**Effective December 1, 1998 VOC Content gm/liter (lb/gal) less water and exempt compounds**~~	~~**Effective April 8, 2005 VOC Content gm/l (lb/gal)**~~
~~Architectural - Non-Porous~~	~~250 (2.0)~~	~~250 (2.0)~~
~~Architectural - Porous~~	~~775 (6.3)~~	~~775 (6.3)~~
~~Marine Deck~~	~~760 (6.2)~~	~~760 (6.2)~~
~~Other~~	~~750 (6.1)~~	~~750 (6.1)~~

302.2~~:~~ The standards in Table 302-2 apply to applications not specifically identified in Table 302-1. ~~-~~In Table 302-2, if an adhesive is used to bond two different types of substrates with different VOC limits, then the higher of the two VOC limits shall apply.

TABLE 302-6~~2~~
VOC CONTENT LIMITS FOR ADHESIVE APPLICATIONS ONTO SUBSTRATES

~~The standards in this table apply to applications not specifically identified in Tables 302-1, 302-2, 302-3, 302-4, or 302-5. In this table, if an adhesive is used to bond two different types of substrates with different VOC limits, then the higher of the two VOC limits shall apply.~~

~~Type of~~ Substrate	**~~Effective April 8, 2005~~ VOC Content ~~gm~~/l (lb/gal)**
Flexible Vinyl	250 (2.~~0~~1)
Fiberglass	200 (1.~~6~~7)
Metal	30 (0.3~~2~~)
Porous Material (except wood)	120 (1.0)
Plastic Foam	80 (0.7)
Wood	30 (0.3)
Reinforced Plastic Composite	200 (1.7)
Rubber	250 (2.~~0~~1)
Other ~~Substrates~~	250 (2.1~~0~~)

303 VOC CONTENT LIMITS FOR~~,~~ AEROSOL ADHESIVES ~~AND ADHESIVE PRIMERS:~~

303.1 A person shall not use an aerosol adhesive ~~and adhesive primers~~ unless the adhesive complies with the VOC limit specified in the California Air Resources Board consumer products regulation found in Title 17 of the California Code of Regulations, sections 94507 – 94517, and listed in the table below, in percent by weight, as determined by Sections ~~407~~ 289.3 and 502.2.

Table TABLE 303.-1 MAXIMUM VOC CONTENT LIMITS FOR AEROSOL ADHESIVES AND ADHESIVE PRIMERS	
Type of Aerosol Adhesive	**VOC % by Weight**
Adhesives – Aerosol:	
—Mist Spray Adhesives	65%
—Web Spray Adhesives	55%
Special Purpose Spray Adhesives:	
—Mounting, Automotive Engine Compartment, and Flexible Vinyl Adhesives	70%
—Polystyrene Foam and Automobile Headliner Adhesives	65%
—Polyolefin and Laminate Repair/Edgebanding Adhesives	60%

303.2 No person shall manufacture for use in the District any aerosol adhesive which contains methylene chloride, perchloroethylene, or trichloroethylene, except that an aerosol adhesive manufactured before January 1, 2002 may be sold, supplied, or offered for sale until January 1, 2005, as long as the product container or package displays the date on which the product was manufactured, or a code indicating such date.

304 VOC CONTENT LIMITS, SURFACE PREPARATION, CLEANUP, AND STRIPPER SOLVENTS: A person shall comply with the following requirements:

304.1 Materials used for surface preparation, cleaning, or stripping shall not exceed the VOC actual content and or the VOC composite partialvapor pressure limits specified in the table below. Where VOC limits are shown as both VOC actual content (grams/liter) and VOC composite vapor partial pressure, either may be used as the content limit for the specific application shown. The VOC actual content of the material as applied shall be calculated determined pursuant to Section 502.1. 289.2. The composite partial pressure shall be determined using Section 502.9.

TABLE 304-1 VOC CONTENT OF LIMITS FOR SURFACE PREPARATION, CLEANUP, AND STRIPPER SOLVENTS Note: Where VOC limits are shown as both grams/liter and composite vapor pressure, either may be used as the content limit for the specific application shown.		
Adhesive or Sealant Product Activity For Which the Solvent Is Used	**Actual VOC Content g/l (lb/gal)** **gm/liter (lb/gal) less water and exempt compounds**	**VOC Composite Partial Pressure Millimeters of Mercury at 20°C (68°F)**
Substrate Preparation Activity		
Single-Ply Roof Membrane Installation/Repair	--	45
Electrical Apparatus Components and Electronic Components	500 (4.2)900 (7.53)	3318

Medical Devices and Pharmaceuticals	~~900~~ 800 (~~7.3~~6.7)	33
Other Substrates	70 (0.6)	--
Cleanup ~~Activity~~		
Application Equipment		
~~Cleaning a~~ Spray Gun in an Enclosed Gun Cleaner	--	~~less than~~ 45
Soaking ~~Application Equipment~~ in a Closed Container	--	9.5
~~Application Equipment - No Closed Container, No Enclosed Gun Cleaner~~Other	70 (0.6)	--
~~**Equipment Other Than Adhesive or Sealant Product Application Equipment**~~Other (Not Application Equipment)	--	~~less than~~ 45
Solvent Stripping Activity		
~~Adhesive or Sealant Products on~~ Wood Substrates	~~less than~~ 350 (2.9)	2
~~Adhesive or Sealant Products on Substrates~~ Other ~~Than Wood~~	~~--~~	9.5

304.2 A person applying any surface preparation solvent, cleanup solvent, or any stripper must use only the following methods:

304.2.1 Wipe cleaning.

304.2.2 Non-propellant spray bottles or containers.

304.2.3 An enclosed gun cleaner as defined by Section 223.

304.2.4 Soaking application equipment parts in a closed container provided that the container does not exceed five gallons in size and the container is kept tightly covered at all times except when accessing the container.

305 WORK PRACTICES FOR ADHESIVE PRODUCTS, SEALANT PRODUCTS, AND SOLVENT CLEANING MATERIALS: A person applying any adhesive products, sealant products, surface preparation, solvent cleaning, cleanup solvent, or any stripper shall comply with the following:

~~304.3~~305.1 Closed containers or pipes shall be used for the disposal of all VOC-containing cloth, sponges, papers, or other materials used for solvent cleaning.

~~304.4~~305.2 All VOC-materials shall be stored in closed containers ~~when not in use~~except when adding, removing, or mixing contents.

305.3 Minimize spills of all VOC-containing materials.

305.4 Convey all VOC-containing materials from one location to another in closed containers or pipes.

305.5 Minimize VOC emission from cleaning of application, storage, mixing, and conveying equipment by ensuring that equipment cleaning is performed without atomizing the cleaning solvent and all spent solvent is captured in closed containers.

~~305~~306 **EMISSION CONTROL EQUIPMENT:** As an alternative to utilizing materials that comply with the VOC limits in Sections 302 through 304.1, a person may use approved air pollution control equipment provided that ~~the equipment complies with~~ the following conditions are met:

~~305~~306.1 The air pollution control equipment is approved by the Air Pollution Control Officer pursuant to Rule 501, GENERAL~~eneral~~ PERMIT~~ermit~~ REQUIREMENTS~~equirements~~, and

~~305~~306.2 The air pollution control equipment is designed and operated with:

~~305~~306.2.1 A control equipment efficiency of at least 95 percent on a mass basis, as determined pursuant to Sections 40~~4~~8 and 502.5, and

~~305~~306.2.2 An emission collection efficiency of at least 90 percent on a mass basis, as determined pursuant to Section 502.6.

~~404~~306.3 ~~**OPERATION AND MAINTENANCE PLAN:** A person using emission control equipment pursuant to Section 305 shall~~ Submit an Operation and Maintenance Plan to the Air Pollution Control Officer for approval at least 90 days in advance of the date on which VOC emission control system is to be used in lieu of compliance with VOC content limitations. ~~for the emissions control device~~The~~is~~ plan shall specify operation and maintenance procedures that demonstrate continuous operation and compliance of the emissions control equipment during periods of emissions-producing operations. ~~-~~The~~is~~ Plan shall specify key system operating parameters necessary to determine compliance with this rule and describe in detail procedures to maintain the approved control equipment. ~~-~~The plan shall also specify which records must be kept to document these operations and maintenance procedures.~~-~~ The records shall comply with the requirements of Section 501~~ RECORDKEEPING~~. ~~-~~This Plan shall be implemented upon approval by the Air Pollution Control Officer.

400 ADMINISTRATIVE REQUIREMENTS

401 PROHIBITION OF SALE: A person shall not supply, sell, solicit, or offer for sale, any noncompliant materials as defined in Section 24~~5~~1. The prohibition in this section shall apply to any material, which will be applied at any physical location within the District.

402 PROHIBITION OF SPECIFICATION: No person shall solicit, require the use of, or specify the application of any material subject to this rule, if the use or application would violate this rule. The prohibition in this section shall also apply to all written or oral contracts under the terms of which any such product or solvent is to be applied within the District.

~~**403 LABELING REQUIREMENTS FOR AEROSOL ADHESIVES:** All aerosol adhesives regulated under Section 303 shall comply with the labeling requirements, applicable to aerosol adhesives, specified in the California Consumer Regulations.~~

403 ~~-~~HVLP MARKING: A person shall not sell, offer for sale, or distribute for use within the District any HVLP gun without a permanent marking, or accurate information provided on company letterhead or in the form of technical literature clearly identifying the spray gun manufacturer, salesperson or distributer, denoting the maximum inlet air pressure in psig at which the gun will operate within the parameters specified in Section 231.

~~**404 OPERATION AND MAINTENANCE PLAN:** A person using emission control equipment pursuant to Section 305 shall submit an Operation and Maintenance Plan for the emissions control device to the Air Pollution Control Officer for approval. This Plan shall specify operation and maintenance procedures that demonstrate continuous operation and compliance of the emissions control equipment during periods of emissions-~~

producing operations. This Plan shall specify key system operating parameters necessary to determine compliance with this rule and describe in detail procedures to maintain the approved control equipment. The plan shall specify which records must be kept to document these operations and maintenance procedures. The records shall comply with the requirements of Section 501- RECORDKEEPING. This Plan shall be implemented upon approval by the Air Pollution Control Officer.

405 CALCULATION FOR DETERMINING VOC CONTENT OF MATERIAL EXCLUDING WATER AND EXEMPT COMPOUNDS: For the VOC content as applied, the volume of material is defined as the volume of the original material plus any material (e.g., thinners, reducers, or catalysts) added to the original material. The weight of VOC per combined volume of VOC and material solids shall be calculated using the following equation:

$$G_1 = \frac{W_v - W_w - W_{ec}}{V_m - V_w - V_{ec}}$$

Where: G_1 = Weight of VOC per volume of material, less water and exempt compounds, in grams per liter
W_v = Weight of all volatile compounds, including any volatile materials added to the original material supplied by the manufacturer when calculating the VOC content as applied, in grams
W_w = Weight of water, in grams
W_{ec} = Weight of exempt compounds, in grams
V_m = Volume of material, in liters
V_w = Volume of water, in liters
V_{ec} = Volume of exempt compounds, in liters

406 CALCULATION FOR DETERMINING VOC CONTENT OF MATERIAL INCLUDING WATER AND EXEMPT COMPOUNDS: For the VOC content as applied, the volume of material is defined as the volume of the original material, plus any material added to the original material (e.g., thinners or reducers). For the VOC content as supplied, the volume of material is defined as the volume of the original material. The weight of VOC per total volume of material shall be calculated by the following equation:

$$G_2 = \frac{W_v - W_w - W_{ec}}{V_m}$$

Where: G_2 = Weight of VOC per total volume of material, in grams per liter
W_v = Weight of all volatile compounds, in grams
W_w = Weight of water, in grams
W_{ec} = Weight of exempt compounds, in grams
V_m = Volume of material, in liters

407 CALCULATION OF PERCENT OF VOC BY WEIGHT: The percent of VOC by weight is the ratio of the weight of the VOC to the weight of the aerosol adhesive or aerosol adhesive primer as supplied by the manufacturer, expressed as a percent of VOC by weight. The percent of VOC by weight shall be calculated as follows:

$$Percent\ of\ VOC\ by\ Weight = \frac{W_{voc}}{W_p}\ x\ 100$$

Where: W_{voc} = Weight of VOCs in grams
W_p = Weight of the adhesive or adhesive primer, as supplied by the manufacturer, in grams.

~~408~~404 CALCULATION FOR DETERMINING PERCENT CONTROL EFFICIENCY AND VOC MASS EMISSION RATE: The VOC mass emission rate shall be calculated both upstream and downstream of the emissions control device and shall be based on the VOC mass concentration and volumetric flowrate, pursuant to Section 502.5 and the following equations:

~~408~~404.1 VOC Mass Emission Rate:

$$M = (Q) * (C) * (60 \frac{m}{hr}) \ (calculated\ upstream\ and\ downstream)$$

Where: M = VOC mass emission rate (upstream and downstream), in lb/hr.
Q = the volumetric flowrate at the inlet (upstream) or exhaust stack outlet (downstream), in standard cubic feet per minute as determined by Section 502.5.
C = the VOC mass concentration at the inlet (upstream) or outlet (downstream), in pounds per standard cubic feet, as determined pursuant to Section 502.5.

~~408~~404.2 The percent control efficiency is calculated as follows:

$$\%CE = \left(\frac{M_u - M_d}{M_u} \right) * 100$$

Where: CE = control efficiency.
M_u = the upstream VOC mass emission rate, in lb/hr.
M_d = the downstream VOC mass emission rate, in lb/hr.

~~409 CALCULATION FOR VOC COMPOSITE PARTIAL PRESSURE: The VOC composite partial pressure is the sum of the partial pressures of the compounds defined as VOCs, and shall be calculated by the following equation:~~

$$PP_c = \frac{\sum_{i=1}^{n} \frac{(W_{i)}(VP_i)}{MW_i}}{\frac{W_w}{MW_w} + \sum_{e=1}^{n} \frac{W_e}{MW_e} + \sum_{i=1}^{n} \frac{W_i}{MW_i}}$$

~~Where: PP_c = VOC composite partial pressure at 20°C, in mm Hg.~~
~~W_i = Weight of the "i"th VOC compound, in grams, as determined by ASTM E 260-96~~
~~W_w = Weight of water, in grams as determined by ASTM D 3792-99.~~
~~W_e = Weight of the "e"th exempt compound, in grams, as determined~~
~~MW_i = Molecular weight of the "i"th VOC compound, in grams per g-mole, as given in chemical reference literature.~~
~~MW_w = Molecular weight of water, 18 grams per g-mole.~~
~~Mw_e = Molecular weight of the "e"th exempt compound, in grams per g-mole, as given in chemical reference literature.~~
~~Vp_i = Vapor pressure of the "i"th VOC compound at 20°C, in mm Hg, as determined by Section 502.10 of this rule.~~

~~410~~405 ~~PRODUCT INFORMATION REQUIREMENTS FOR SELLERS:~~LABELING REQUIREMENTS: ~~Any person who sells A~~any material subject to this rule shall be labeled pursuant to Sections 405.1 through 405.4 as appropriate.~~shall make available to the purchaser at the time of sale the following information:~~

~~410.1 The material type by name/code/manufacturer;~~

~~410~~405.1~~2~~ VOC Content: Each container of any material subject to this rule shall display the maximum VOC regulatory content, or the maximum VOC actual content for solvents and low-solids products, expressed in grams per liter or pounds per gallon.~~For materials subject to Section 302: The maximum VOC content of the material as applied. The VOC content shall be displayed as grams of VOC per liter of material (or pounds of VOC per gallon), excluding water and exempt compounds. For low solids materials, the VOC content shall be displayed as grams of VOC per liter of material (or pounds of VOC per gallon), including water and exempt compounds;~~

~~410.3 For aerosol adhesives regulated under Section 303: The maximum VOC content as applied. The VOC content shall be displayed as percent by weight;~~

~~410.4~~405.2 For M~~m~~aterials ~~s~~Subject to Section 304.1: Manufacturers of any solvents subject to this rule shall indicate on the solvent container, or on a separate product data sheet or material safety data sheet, the name of the solvent, manufacturer's name, t~~T~~he maximum VOC actual content, density of the solvent, and the total VOC composite partial pressure of the material~~ as applied~~. The VOC actual content shall be displayed as grams ~~of VOC~~ per liter ~~of material~~ (~~or~~ pounds ~~of VOC~~ per gallon~~), including water and exempt compounds as determined pursuant to Section 502.1~~. The composite ~~vapor~~ partial pressure shall be displayed in millimeters of mercury at 20 ^{o}C (68 ^{o}F) as determined pursuant to Section 502.9~~;~~.

~~410.5~~405.3 Thinning R~~r~~ecommendation: Each container of adhesive product or sealant product subject to this rule shall display a statement of a manufacture's recommendations regarding thinning, or reducing, or mixing of the adhesive product with any other VOC containing material. Mixing recommendations shall specify a ratio which results in a compliant, as applied, adhesive product, or sealant product.~~For all materials subject to Sections 302 and 304.1: Manufacturers' and Suppliers' recommendations regarding thinning, reducing, or mixing.~~

~~403~~5.4 ~~———~~Labeling R~~r~~equirements for A~~a~~erosol A~~a~~dhesives: All aerosol adhesives regulated under Section 303 shall comply with the labeling requirements, applicable to aerosol adhesives, specified in the California Air Resources Board consumer products regulation found in Title 17 of the California Code of Regulations.

500 MONITORING AND RECORDS

501 RECORDKEEPING:

In addition to any applicable record-keeping requirements of either Rule 502, NEW SOURCE REVIEW~~ew Source Review~~, Rule 507, FEDERAL~~ederal~~ OPERATING~~perating~~ PERMIT~~ermit~~ PROGRAM~~rogram~~, Rule 511, POTENTIAL TO~~otential to~~ EMIT~~mit~~, or any other District rule which may be applicable, any person applying adhesive or sealant products, surface preparation solvents, cleanup solvents, or strippers subject to any provision of this rule shall maintain the following records, for non-exempt materials in order to evaluate compliance:

501.1 Product Data: A list of currently used adhesive or sealant products, surface preparation solvents, cleanup solvents, or strippers shall be provided and maintained.~~–~~ The list shall include all of the following items for each material used:

501.1.1 The material's manufacturer, product name, and product number or code.

501.1.2 Classification according to the terminology used in Sections 302, 303, and 304. of this rule (e.g.,"PVC Welding Adhesive", "Adhesive Applied to Metal", "Substrate Preparation", "Medical Devices", etc.).

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501.1.3 The material's VOC regulatory content, or VOC ~~content~~actual content, or weight percentage of volatiles ~~as applied~~, determined according to Sections 289.1, 289.2, and 289.3, ~~405,406 and 407,~~ when used in the mixing ratios recommended by the manufacturer. Labeling of aerosol adhesive containers shall comply with the requirements of Section ~~403~~405.4.

501.1.4 The actual mixing ratio, if different from the manufacturer's recommendation, used in applying the material.

501.2 Product Usage and Frequency: Any person using materials regulated by this rule shall record and maintain records of the monthly usage of each individual material as listed pursuant to Section 501.1.

501.3 Emission Control Equipment Records:

501.3.1 A person using emission control equipment as a means of alternate compliance pursuant to Section ~~305~~306, shall maintain records on a daily basis, showing the type and volume of coatings and solvents used.

501.3.2 A person using emission control equipment as a means of alternate compliance with this rule pursuant to Section ~~305~~306, shall maintain daily records of key system operating and maintenance procedures which will demonstrate continuous operation and compliance of the emission control system during periods of emission-producing activities. ~~-~~Key system operating parameters are those necessary to ensure compliance with the requirements of Section ~~305~~306, and are defined in Section ~~233~~235.

501. ~~5~~4 Retention of Records: All records required by this rule shall be retained for at least three years, except for sources subject to Rule 507, FEDERAL~~ederal~~ OPERATING~~perating~~ PERMIT~~ermit~~ PROGRAM~~rogram~~, which shall be retained for at least five years.~~-~~ Such records shall be made available to the Air Pollution Control Officer upon request.

502 TEST METHODS:

502.1 Determination of VOC Content: Except as provided in Sections 502.2 and 502.3, VOC content of non-aerosol adhesive or sealant products, surface preparation solvents, cleanup solvents, or strippers shall be determined in accordance with United States Environmental Protection Agency (U.S. EPA) Method 24 or ~~United States Environmental Protection Agency~~U.S. EPA Method 24A.

502.2 Determination of VOC Content of Aerosol Adhesives Primers: The VOC content of aerosol adhesive primers shall be determined using South Coast Air Quality Management District Test Method 305 ~~for aerosol coatings~~, "Determination of Volatile Organic Compounds (VOC) in Aerosol Applications," California Air

Resources Board Method 310, "~~Determination of Volatile Organic Compounds (VOC) in Consumer Products~~Products and Reactive Organic Compounds (VOC) in Consumer Products,"~~,~~ or equivalent methods approved by the ~~United States Environmental Protection Agency~~U.S. EPA.

502.3 Determination of VOC Content of Plastic Welding Cement Adhesive/Primer: The VOC content of ABS, CPVC, PVC, or other plastic welding cement adhesive or any plastic welding cement primer shall be determined by using the South Coast Air Quality Management District's "Determination of Volatile Organic Compounds (VOC) in Materials Used for Pipes and Fittings", Method ~~316a~~316A.

502.4 Determination of Compounds Exempt From VOC Definition: Exempt compounds referenced in Section ~~224~~ 225 and listed in Rule 102, DEFINITIONS, shall be determined in accordance with ASTM Method D~~-~~4457-85, "Test Method for Determination of Dichloromethane and 1,1,1-Tricholoroethane in Paints and Coatings by Direct Injection into a Gas Chromatograph," or California Air Resources Board Method 432, "Determination of Dichloromethane and 1,1,1-Trichoroethane in Paint and Coatings." ~~-~~If any of the perfluorocarbons or volatile cyclic and linear methyl siloxanes are being claimed as exempt compounds, the person making the claim must state in advance which compounds are present, and the ~~United States Environmental Protection Agency~~U.S. EPA approved test method used to make the determination of these compounds.

502.5 Determination of Control Efficiency: Control efficiency of emissions control equipment shall be determined in accordance with ~~United States Environmental Protection Agency~~U.S. EPA Method 18, 25, or 25A; or ~~United States Environmental Protection Agency Method~~U.S. EPA 2 or 2C (whichever is applicable). The U.S. EPA Method 18 or CARB Method 422 "Determination of Volatile Organic Compounds Emissions from Stationary Sources" shall be used to determine emissions of exempt compounds.

502.6 Determination of Collection Efficiency: Efficiency of the collection system shall be determined in accordance with the ~~United States Environmental Protection Agency's~~U.S. EPA "Guidelines for Determining Capture Efficiency, January 9, 1995".~~-~~ Individual collection efficiency test runs subject to the ~~United States Environmental Protection Agency's~~U.S. EPA technical guidelines shall be determined by:

502.6.1 Applicable U.S. EPA M~~m~~ethods 204, 204A, 204B, 204C, 204E, and/or 204F; or

502.6.2 The South Coast Air Quality Management District "Protocol for Determination of Volatile Organic Compound (VOC) Capture Efficiency"; or

502.6.3 Any other method approved by the U.S. EPA, the California Air Resources Board, and the Air Pollution Control Officer.

502.7 Determination of VOC Content of Emissions: The VOC content of emissions shall be determined by ~~United States Environmental Protection Agency~~U.S. EPA Method 18.

502.8 Determination of Plasticizer Content: The test method used to determine plasticizer content of flexible vinyls shall be ASTM Method E260-~~73~~96, "General Gas Chromatography Procedures".

502.9 Determination of VOC Composite Partial Pressure: VOC composite partial pressure shall be determined in accordance with ASTM Method E260-~~91~~ 96 for organic compounds, and ASTM Method D~~-~~3792-86, "Test Method for Water and

Water Reducible Paints by Direct Injection into a Gas Chromatograph" ~~for water content as applicable~~, and Sections ~~409~~288, and 502.10 of this rule.

502.10 Determination of Vapor Pressure: Vapor pressure of a VOC shall be determined in accordance with ASTM Method D2879-~~86~~10, "Test Method for Vapor Pressure-Temperature Relationship and Initial Decomposition Temperature or Liquids by Isoteniscope", or may be obtained from standard reference texts, such as:

502.10.1 "The Vapor Pressure of Pure Substances", Boublik, Fried, and Hala; Elsevier Scientific Publishing Company, New York.

502.10.2 "Perry's Chemical Engineer's Handbook", McGraw-Hill Book Company.

502.10.3 "CRC Handbook of Chemistry and Physics", Chemical Rubber Publishing Company.

502.10.4 "Lange's Handbook of Chemistry", John Dean, editor, McGraw-Hill Book Company.

502.11 Determination o~~O~~f VOC Content o~~O~~f Cyanoacrylate Adhesives: The VOC content of cyanoacrylate adhesives shall be determined by the South Coast Air Quality Management District's Method 316B.

502.12 Determination of Viscosity: The viscosity shall be determined by ASTM Method D1084-88, "Standard Test Methods for Viscosity of Adhesives".

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ATTACHMENT #4

Subject:

Staff Report

Amendment of Rule 239, Graphic Arts Operations

PLACER COUNTY
AIR POLLUTION CONTROL DISTRICT

STAFF REPORT

RULE 239

GRAPHIC ARTS OPERATIONS

PROPOSED RULE AMENDMENTS

October 11, 2012

BACKGROUND

The Placer County Air Pollution Control District (District) jurisdiction is Placer County. Placer County is located in northern California, bordering Sacramento County to the west and the State of Nevada on the east. Placer County is divided into three different air basins: the Sacramento Valley Air Basin (SVAB); the Mountain Counties Air Basin (MCAB); and the Lake Tahoe Air Basin (LTAB). The portions of Placer County in the SVAB and MCAB are included in the Sacramento Federal Ozone Non-Attainment Area (SFONA). The SFONA has been classified as "severe" non-attainment for the National Ambient Air Quality Standard (NAAQS) for eight-hour ozone, as well as non-attainment with the State of California Ambient Air Quality Standard for ozone. The U.S. Environmental Protection Agency's (EPA) Phase 2 Ozone Rule, contained in 40 CFR 51.912 and 70 FR 71612, in accordance with Clean Air Act (CAA) Amendments of 1990, Sections 182(b)(2) and 182(f), requires that areas that are classified as moderate non-attainment or higher must demonstrate in a State Implementation Plan (SIP) that their rules fulfill Reasonably Available Control Technology (RACT) requirements for volatile organic compound (VOC) and nitrogen oxides (NOx) which are ozone precursors. The implementation of RACT requires, at a minimum, District rules covering source categories with RACT guidance documents, which include all EPA-issued Control Techniques Guidelines (CTG's), where there are such sources that operate in the District.

District Rule 239, Graphic Arts Operations, limits VOC emissions from graphic art operations in the District. The rule was originally adopted on November 3, 1994. It has been subsequently amended four times, with the latest on April 8, 2004. This latest version has not been SIP-approved. The most recent SIP approval was on November 13, 1998 (63 FR 63410) for the rule amended on February 13, 1997.

In September 2006, the EPA issued a CTG for graphic arts operations ("Control of Volatile Organic Compound Emissions from Offset Lithographic and Letterpress Printing", EPA-453/R-06-002). The current District Rule 239, adopted on April 8, 2004, does not fully address these requirements. Thus, the District is proposing amendments to Rule 239 to meet RACT SIP obligations through implementation of all CTG requirements.

The District has seven (7) permitted non-major sources in the category of graphic arts operations. The business names for these sources are:

- Auburn Journal
- Auburn Printers
- GKM Corporation
- J & M Printing
- Master Color
- Paul Baker Printing Company
- Sir Speedy Printing

This Staff Report addresses amendments that are proposed to Rule 239.

DISCUSSION

Rule 239 amendments were made based on a review of the CTG, and to establish consistency with local Air District rules. We reviewed local Air District rules including:

- Sacramento Metro AQMD Rule 450, Graphic Arts Operations, last amended on October 23, 2008.

- San Joaquin Valley APCD Rule 4607, Graphic Arts and Paper, Film, Foil and Fabric Coatings, last amended on December 18, 2008.

- El Dorado, Rule 231, Graphic Arts Operations, last amended on September 27, 1994.

We also reviewed rules from other Air Districts including:

- South Coast AQMD Rule 1130, Graphic Arts, last amended on October 8, 1999

- Bay Area AQMD Regulation 8, Rule 20, Graphic Arts Printing and Coating Operations, last amended on November 19, 2008.

- San Diego County APCD, Rule 67.16, Graphic Arts Operations, last amended on May 9, 2012.

- Ventura County APCD, Rule 74.19, Graphic Arts, last amended on June 14, 2011.

These Districts are designated as non-attainment areas for the Federal national ambient air quality standard for ozone. Thus, they also are required to implement CTGs in their rules.

Proposed Rule amendments, in underline/strikeout format, are shown in Attachment #1. Specific changes to the Rule include:

Section 100. General

Section 102. Applicability. Subsections 102.1 and 102.2 provisions are combined into one section.

Section 104. Exemptions. Changes to the section include:

Section 104.1. General. Section 104.1.1 expired on April 8, 2005, thus it is deleted. The phrase "after April 8, 2005" contained in Subsection 104.1.2 no longer applied and is removed.

Section 104.2. Proof Presses and/or Research and Test Development Operations. This section expired on April 8, 2005, thus it is deleted.

Section 104.7. Aerosol Adhesives – Graphic Arts Operations. For clarification, "other than screen printing" is added to specify that this exemption for aerosol adhesives is only applicable to graphic arts operations other than screen printing.

Section 104.2. Stripping of Cured Inks, Coatings, or Adhesives. A specific exemption is added for strippers, as contained in other District rules. This is consistent with (no change from) the requirements of the current existing rule which indirectly exempts strippers from VOC limits because there are no specific limits stated for strippers and strippers are not included in the Solvent Cleaner sub-categories.

Section 104.8. Fountain Solutions. As recommended by the CTG and contained in other District rules, an exemption from VOC content limits for fountain solutions is added when facility wide total potential to emit VOC emissions before control is less than 450 lb/month.

Section 104.5. Prepress Operations. For clarification, the cleaning or processing of color scanners, plate processors, film cleaning and plate developers is added to this exemption.

Section 104.9. Blanket Repair Materials. A small quantity exemption is added for blanket repair materials when used in containers of four ounces or less, as contained in other District rules.

Section 104.10. Heatset Web Offset Lithographic Printing and Heatset Web Letterpress Printing. This new section exempts these specific operations from needing add-on control requirements contained in new Section 302.1 when potential to emit VOC emissions are less than 25 tons per year.

Section 200. Definitions

Definitions that are eliminated include: lithographic and letter press printing, other cleaning, Volatile organic compound (VOC) as supplied, Volatile organic compound (VOC) as applied.

Definitions that are added include: Adhesive, Aerosol Adhesive, Alcohol, Blanket, Blanket repair material, Cured ink, cured coating, or cured adhesives, Heater or dryer, Ink jet, Removable press component, Stripping, Roller wash, VOC content.

Definitions that are amended include: Blanket and roller washes, Fugitive emissions, Graphic arts operations, Gravure printing, Lithographic printing, Metering roller, Noncompliant material, Offset printing, Prepress operations.

Section 300. Standards

Section 301. General Requirements. This section is deleted since it is redundant to other sections already contain in the rule.

Section 301. VOC Content Limits for Materials used in Graphic Arts Operations. This section was previously numbered Section 302. Additional changes to the section include:

- Section 301.1, VOC Content for Inks, Coatings, and Adhesives, The VOC content limit for the Sign Ink/Coating subcategory was reduced to from 500 g/l to 400 g/l. The VOC content limit for the Extreme Performance Ink/Coating subcategory was reduced from 800 g/l to 400 g/l. These changes are based on EPA recommendations and other Air District rules.

- Section 301.2, VOC Content for Fountain Solution Materials. Fountain solution category and subcategories are modified, and applicable VOC content limits are lowered, based on the CTG recommendations.

- Section 301.4. A new section that prohibits the use of fountain solutions containing alcohol on coldset web offset lithographic presses is added based on the CTG recommendations.

Section 303. Emission Control Equipment. This section has been renumbered to Section 302. Other changes to the section include:

- Section 302.1. Heatset Web Offset Lithographic or Letterpress. Add-on control requirements for this category are added to meet the CTG recommendations.

- Section 302.2. Alternative Emissions Control Equipment. A title is added to the section for clarification. Subsections 303.2.2 through 303.2.4 are added to specify combined overall capture and control system efficiency requirements rather than separate control and capture efficiency requirements, as required by the CTG. Subsections 303.2.1 and 303.2.1, which contained the current capture and control methods are deleted.

Section 304. Cleaning and Storage Requirements. This section is renumbered to Section 303. Changes to this section include:

- Section 303.1. For cleaning solvents, for a couple of subcategories, VOC content limits and VOC composite partial vapor pressure limits are lowered to 670 g/l and 10 mm Hg respectively. This is to meet CTG recommendations of VOC content of less than 70% by weight (equivalent to a VOC concentration of 670 g/l) and partial pressure of less than 10 mm Hg.

- Section 304.2. Lithographic and Letter Press Printing, Other Cleaning. This section, which restricts the quantity of monthly usage of "other" cleaning solutions in comparison to blanket and roller wash usage, is eliminated. This requirement effectively produces no benefit since the VOC content limit in g/l for "other" cleaners is identical to the limit for blanket and roller washes.

Section 400. Administrative Requirements

Section 401. Operation and Maintenance Plan. This section is moved to Section 302.2.5.

Section 402. Product Information Requirements for Sellers. The title of this section is changed to Labeling Requirements, and a new provision has been added to this section.

Section 403. Calculation for Determining VOC Composite Partial Pressure. This section is moved to Section 262.

Section 404. Calculation for Determining VOC content of Material Excluding Water and Exempt compounds. This section is moved to Section 264.1.

Section 405. Calculation for Determining VOC Content of Material Including Water and Exempt Compounds. This section is moved to Section 264.2.

Section 407. Calculation for Determining VOC Emissions for Stationary Sources Including those exempt pursuant to section 104.1, 104.2 and 104.7, Sections 104.2 is eliminated from the title since it expired on April 8, 2005.

Section 500. Monitoring and Record

Section 501. Recordkeeping. Recordkeeping requirement of the percentage of Lithographic and Letter Press, Other Cleaning materials requirement is deleted since it is no longer required by the Rule. Also, Subsections 501.3.3 and 501.3.4 are added to ensure adequate usage records.

Section 502. Test methods. Section 502.4, Determination of Control Efficiency, is deleted.

Further, applicable test methods references are updated to the most approved current versions.

Miscellaneous

Additional miscellaneous changes were made for readability and conformance with the CTG which have no impact on the compliance requirements of the Rule.

ANALYSIS

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 or amended 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". The compliance costs are associated with replacing existing graphic arts and cleaning products with VOC content that meets the amended rule limits, as well as new work practice and recordkeeping requirements. Graphics arts products that meet proposed VOC content limits are well-established to be readily available at the same price points as products that will become non-complaint when the proposed amendments will become effective on October 11, 2013. The cost effectiveness has been determined to be acceptable by the EPA and other Air Districts that have already implemented the CTG requirements. EPA concluded that CTG requirements actually produce a cost saving ranging from $700 to $1,500 per year for each printing operation. The graphic arts operations located within the District are not expected to be significantly affected (no adverse impacts on the profitably of business) by the proposed rule changes.

2. Socioeconomic Impact

H&S Section 40728, in relevant part, requires the Board to consider the socioeconomic impact of any new or amended rule if air quality or emission limits are significantly affected. Numerous existing graphic arts shop operations are already operating in compliance with the amended rule standards.

3. Environmental Review and Compliance

California Public Resources Code Section 21159 requires an environmental analysis of the reasonably foreseeable methods of compliance should be conducted. Compliance of the proposed rule amendment is expected to be achieved by the replacement of current graphic arts products with compliant compounds. Application of these compliant compounds will generally result in less VOC emissions from the graphic arts activities. Therefore, the proposed rule amendment will reduce emissions from sources and will not cause any significant adverse effects on the environment. Staff has concluded that no adverse environmental impacts will be caused by compliance with the proposed rule amendment.

According to the above conclusion, Staff finds that the proposed rule amendment is exempt from the California Environmental Quality Act (CEQA) because: (1) it can be seen with certainty that there is no possibility that the activity in question may have a significant adverse effect on the environment (CEQA Guidelines §15061(b)(3)), and (2) it is as an action by a regulatory agency for protection of the environment (Class 8 Categorical Exemption, CEQA Guidelines §15308).

FINDINGS

A. **Necessity**: The adoption of proposed amended Rule satisfies the objective of the District to implement "Control Techniques Guidelines" for the reduction of VOCs to achieve attainment with ambient air standards for ozone, and meets the District's requirements to implement "every feasible measure" and "Best Available Retrofit Control Technology" as required under California Health and Safety Code Sections 40919 and 40914.

B. **Authority**: California Health and Safety Code, Sections 40000, 40001, 40701, 40702, 40716, 41010, and 41013, are provisions of law that provide the District with the authority to adopt this proposed amended Rule.

C. **Clarity:** There is no indication, at this time, that the proposed amended Rule is written in such a manner that persons affected by the Rule cannot easily understand them.

D. **Consistency:** The proposed amended Rule 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 proposed amended Rule 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 the District in interpreting this proposed amended Rule are incorporated into this analysis and this finding by reference.

SUMMARY

Rule 239, Graphic Arts Operations, has been amended to address the control guidance contained in the U.S. EPA's CTG for Graphic Arts issued in September 2006 (EPA-453/R-06-002).

ATTACHMENT #1

Subject:

District response to the U.S. EPA comments on

Rule 239, Graphic Arts Operations

From:	Bruce Springsteen
To:	Margie Koltun
Subject:	FW: EPA comments on Placer Rules 235 and 239
Date:	Wednesday, October 03, 2012 9:22:33 AM

From: Andrew Steckel [mailto:Steckel.Andrew@epamail.epa.gov]
Sent: Friday, September 07, 2012 9:07 AM
To: Todd Nishikawa; mguzzett@arb.ca.gov; Bruce Springsteen
Cc: Adrianne Borgia
Subject: EPA comments on Placer Rules 235 and 239

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

September 07, 2012

Transmittal of EPA Rule Review Comments

To: Todd Nishikawa, Placer County Air Pollution Control District
tnishika@placer.ca.gov

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

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

Re: PCAPCD Rule 235, Adhesives; and Rule 239, Graphic Arts Operations, draft revisions dated October 11, 2012

We are providing comments based on our preliminary review of the draft rules identified above. Please direct any questions about our comments to me at (415) 947-4115 or to Adrianne Borgia at (415) 972-3576.

Rule 235, Adhesives

1. Table 302-1 limits "Subfloor Installation and VCT" and "Asphalt Tile Installation" to 200 and 150 g/l respectively. These categories have no analogous CTG or CARB category limits, but both South Coast Air Quality Management District (SCAQMD) Rule 1168, and San Joaquin Valley Unified Air Pollution Control District (SJVUAPCD) Rule 4653 have 50 g/l limits for both categories. Please consider reducing these limits in Rule 235 to 50 g/l.

2. Table 302-2 limits "Plastic Foam," to 120 g/l. This category has no analogous CTG or CARB category limits, but SJVUAPCD Rule 4653 has a 50 g/l limit effective in 2012, and Antelope Valley Air Quality Management District (AVAQMD) Rule 1168 has an 80 g/l limit. Please consider reducing this limit to 50 g/l.

3. Table 304-1 limits solvent for surface preparation for electronic components to 900 g/l. However, SCAQMD Rule 1168 and PCAPCD Rule 240, Surface Preparation and Cleanup, have limits of 100 g/l and 500 g/l respectively for this category. Please consider reducing this limit.

4. To improve enforceability, please revise references to approved ASTM, State and local test methods consistent with EPA's Little Bluebook," page 13:
    - In Subsection 502.2, add the title to SCAQMD method 305, "Determination of Volatile Organic Compounds (VOC) in Aerosol Applications" and delete "for aerosol coatings". Correct the title of CARB method 310 to " Products and Reactive Organic Compounds (VOC) in Consumer Products."
    - In Subsection 502.4, the title for ASTM D4457-85 should be included:" Test Method for Determination of Dichloromethane and 1,1,1-Trichloroethane in Paints and Coatings by Direct Injection into a Gas Chromatograph." Similarly, the title for the CARB method 432 should be added: "Determination of Dichloromethane and 1,1,1-Trichloroethane in Paints and Coatings."
    - In Subsection 502.9, the title for ASTM D3792-71, -91 should be included: "Test Method for Water and Water Reducible Paints by Direct Injection into a Gas Chromatograph." Please note that only the 1971 and 1991 versions of this method have been approved by the EPA.
    - In Subsection 502.10, the title for ASTM D2879 should be included: "Test Method for Vapor Pressure-Temperature Relationship and Initial Decomposition Temperature of Liquids by Isoteniscope." Please note that only the 1983, 1996, 1997 and 2010 versions of this method have been approved by the EPA.

5. We also note the following typos and editorial clarifications that do not impact the rule's approvability:

- Subsection 207 - Correct the spelling of "Airless."
- Subsection 224 - Revise to "... and that is field applied to a building roof using one layer **of** membrane material."
- Subsection 235 - For clarity and consistency, instead of, "overall efficiency," please use the terminology of Section 306: "Control Equipment Efficiency" and "Emission Equipment Efficiency."
- Subsection 252 - Consider revising the definition similar to SCAQMD Rule 1168: "...solvents which are used to dissolve the surfaces of plastic, **except ABS, PVC and CPVC plastic**, to form a bond..."
- Subsections 272 and 274 - Delete one of these definitions of "Solvent Welding, " and adjust the subsection numbering.
- Subsection 285 - Correct "vinyl tips" to vinyl tops."
- Subsection 301.1.9 - Consider allowing airless sprayers only for adhesives and sealants with viscosity of 200 centipoise or greater, similar to SCAQMD Rule 1168.
- Subsection 405 - Correct the spelling of "Requirements."
- Subsection 502 - Consider defining "EPA" in the first instance (502.1) and using the acronym EPA thereafter.
- Subsection 502.3 - The number for the SCAQMD method is Method 316A instead of 316a.
- Subsection 502.8 and 502.9 - Verify that you intended to reference both the 1991 and 1996 versions of ASTM E260, "General Gas Chromatography Procedures."
- Staff Report "Discussion" section - please correct SCAQMD Rule from 67.21 to 1168. Also, the last bullet in the description of changes under Section 302 should be moved to Section 304.

Rule 239, Graphic Arts Operations

1. The exemptions for Fountain Solutions (Subsection 104.8) over 450 pounds per calendar month and for Heatset Web Offset printing (Subsection 104.10) under 25 tons per year should be clearly enforceable. Please ensure that Section 501.3 requires adequate usage records to

ensure compliance.

2. Consider using SCAQMD's Rule 1171, Solvent Cleaning Operations, VOC limits, which are considerably lower, for the solvent categories.

3. To improve enforceability, please revise references to approved ASTM, State and local test methods consistent with EPA's Little Bluebook," page 13:
    - In Subsection 502.3, the title for ASTM D4457-91 should be included:" Test Method for Determination of Dichloromethane and 1,1,1-Trichloroethane in Paints and Coatings by Direct Injection into a Gas Chromatograph." Similarly, the title for the CARB method 432 should be added: "Determination of Dichloromethane and 1,1,1-Trichloroethane in Paints and Coatings."
    - In Subsection 502.7, the title for ASTM D2879-97 should be included: "Test Method for Vapor Pressure-Temperature Relationship and Initial Decomposition Temperature of Liquids by Isoteniscope."

4. We also note the following typos and editorial clarifications that do not impact the rule's approvability:
    - Consider using the same definitions that were used in Rule 235 for "Adhesive" in Subsection 201 and "Aerosol Adhesive" in Subsection 202.
    - Subsection 301.1 table - Reformat so Extreme Performance Ink/Coating is on one line and the subsequent material types line up correctly with the respective VOC regulatory content.
    - Subsections 401.1, 501.1.1 and 501.3.3 - Define "code" used in the term, "name/code/manufacturer."
    - Subsection 403.1 - Define the factors E, E_1 and E_2 used in the calculation.
    - Subsection 501.1.8 - consider revising the referenced section to 104.6 **and** **104.7** to include both exempt aerosol adhesives.
    - Staff Report, "Discussion" section - Correct SDCAPCD Rule from 67.17 to 67.16. Also, in the description of changes under Section 304, the partial pressure limit should be 670, not 660, g/l.

District response to comments from EPA on Rule 239, through e-mail from Andrew Steckel to Bruce Springsteen dated September 7, 2012

1. The exemptions for Fountain Solutions (Subsection 104.8) over 450 pounds per calendar month and for Heatset Web Offset printing (Subsection 104.10) under 25 tons per year should be clearly enforceable. Please ensure that Section 501.3 requires adequate usage records to ensure compliance.

   District response: Subsections 501.3.3 and 501.3.4 are added to Section 501, Recordkeeping, to ensure adequate usage records requirements, as suggested by EPA.

2. Consider using SCAQMD's Rule 1171, Solvent Cleaning Operations, VOC limits, which are considerably lower, for the solvent categories.

   District response: Since we believe that our current solvent cleaning VOC limits meet RACT, we have decided to not yet go to lower solvent VOC limits.

3. To improve enforceability, please revise references to approved ASTM, State and local test methods consistent with EPA's Little Bluebook," page 13:

   - In Subsection 502.3, the title for ASTM D4457-91 should be included:" Test Method for Determination of Dichloromethane and 1,1,1-Trichloroethane in Paints and Coatings by Direct Injection into a Gas Chromatograph." Similarly, the title for the CARB method 432 should be added: "Determination of Dichloromethane and 1,1,1-Trichloroethane in Paints and Coatings."
   - In Subsection 502.7, the title for ASTM D2879-97 should be included: "Test Method for Vapor Pressure-Temperature Relationship and Initial Decomposition Temperature of Liquids by Isoteniscope."

   District response: As suggested by EPA, all applicable test methods references are updated to the most approved current versions.

4. We also note the following typos and editorial clarifications that do not impact the rule's approvability:
   - Consider using the same definitions that were used in Rule 235 for "Adhesive" in Subsection 201 and "Aerosol Adhesive" in Subsection 202.
   - Subsection 301.1 table - Reformat so Extreme Performance Ink/Coating is on one line and the subsequent material types line up correctly with the respective VOC regulatory content.
   - Subsections 401.1, 501.1.1 and 501.3.3 - Define "code" used in the term, "name/code/manufacturer."
   - Subsection 403.1 - Define the factors E, E1 and E2 used in the calculation.
   - Subsection 501.1.8 - consider revising the referenced section to 104.6 and 104.7 to include both exempt aerosol adhesives.

- Staff Report, "Discussion" section - Correct SDCAPCD Rule from 67.17 to 67.16. Also, in the description of changes under Section 304, the partial pressure limit should be 670, not 660, g/l.

District response: As suggested by EPA, all the above typos and editorial clarifications are corrected.

ATTACHMENT #2

Subject:

Strikeout Rule 239, Graphic Arts Operations

RULE 239 GRAPHIC ARTS OPERATIONS

Adopted 11-03-94
(Amended 6-08-95, 2-13-97, 8-14-97, 04-08-04,10-11-12)

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500 MONITORING AND RECORDS

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502 TEST METHODS

100 GENERAL

101 PURPOSE: To limit the emissions of volatile organic compounds from graphic arts operations.

102 APPLICABILITY: The provisions of this rule apply to all graphic arts operations within the District; or any person who supplies, sells, offers to sell, applies, or manufactures, within the District, any graphic arts materials.

~~102.1 Geographic: The provisions of this rule apply to all graphic arts operations located in Placer County.~~

~~102.2 Operations: Except for the operations listed in Section 104, EXEMPTIONS, the provisions of this rule apply to all GRAPHIC ARTS OPERATIONS as defined in Section 219 and to any person who manufactures, sells, offers to sell, or supplies any graphic arts materials listed in Sections 301, 302, 304 and 305, STANDARDS. (GRAPHIC ARTS OPERATIONS are typically categorized under the Standard Industrial Classification (SIC) Codes of 27xx).~~

103 SEVERABILITY: If a court of competent jurisdiction issues an order that any provision of this rule is invalid, it is the intent of the Board of Directors of the District that other provisions of this rule remain in full force and effect, to the extent allowed by law.

104 EXEMPTIONS:

104.1 General:

~~104.1.1 Until April 8, 2005, the requirements of this rule, with the exception of Sections 302 and 501.1 to 501.3, shall not apply to any graphic arts operation at a stationary source which emits less than 660 pounds of volatile organic compounds per calendar month from all graphic arts operations, including cleaning materials, and excluding operations addressed in Section 104.2.~~

~~104.1.2 After April 8, 2005, T~~the requirements of this rule, with the exception of Sections ~~302~~ 303 and 501.1 to 501.3, shall not apply to any graphic arts operation at a stationary source which either~~:~~;

104.1~~.2~~.1 H~~h~~as ~~actual~~ total VOC emissions of less than or equal to 60 pounds per calendar month ~~of volatile organic compounds~~ from all graphic arts operations and cleaning materials; or

104.1~~.2~~.2 R~~r~~eceives a permit that limits the potential to emit, as calculated pursuant to Rule 502, NEW~~ew~~ SOURSE~~ource~~ REVIEW~~eview~~, to less than or equal to 175 pounds of volatile organic compounds per calendar month from all graphic arts operations and cleaning materials.

104.2 Stripping of Cured Inks, Coatings, or Adhesives: The requirements of Section 303.1 shall not apply to materials used for the stripping of cured inks, cured coatings, or cured adhesives.

~~104.2 Proof Presses and/or Research and Test Development Operations: Until April 8, 2005, this rule, with the exception of Sections 302 and 501.1-3, shall not~~

~~apply to any graphic arts operations used exclusively for research, laboratory analysis or determination of product quality and commercial acceptance, such as proof presses or other proofing systems, provided that total VOC emissions from all such equipment do not exceed 300 pounds per calendar month per stationary source. As noted above, this exemption shall expire April 8, 2005.~~

104.3 Exemption ~~From~~from Rule 219: The provisions of Rule 219, ORGANIC~~rganic~~ SOLVENTS~~olvents~~, shall not apply to Graphic Arts Operations as defined in Rule 239, Section 2234~~19~~.

104.4 Business and Personal Printers: This rule shall not apply to business and personal printers such as ink jets, bubble jets, and laser jets.

104.5 Prepress Operations: This rule shall not apply to prepress operations associated with printing plate making including the cleaning or processing of film photo processors, color scanners, plate processors, film cleaning, and plate photo developers~~processors~~.

104.6 Aerosol Adhesives – Screen Printing: The requirements in Section ~~302~~ 301 of this rule shall not apply to aerosol adhesives used by screen printing operations provided that the aerosol adhesives comply with the VOC limits for aerosol adhesives ~~under Section 300, - Standards,~~ in Rule 235, – ADHESIVES~~dhesives~~.

104.7 Aerosol Adhesives – Graphic Arts Operations: The requirements of this rule shall not apply to aerosol adhesives used by graphic arts operations other than screen printing provided that the VOC emissions from the facility are less than 660 pounds per calendar month from all graphic arts operations and provided that the aerosol adhesives comply with the VOC limits for aerosol adhesives ~~under Section 300, - Standards,~~ in Rule 235, – ADHESIVES~~dhesives~~.

104.8 Fountain Solutions: The requirements of Sections 301.2 and 301.4 shall not apply to fountain solutions provided that the total VOC emissions from all offset lithographic printing operations including related cleaning activities at a stationary source prior to controls do not exceed 450 pounds per calendar month.

104.9 Blanket Repair Materials: The requirements of this rule shall not apply to blanket repair materials used in containers of four ounces or less.

104.10 ~~———~~Heatset Web Offset Lithographic Printing and Heatset Web Letterpress Printing:

104.10.1 The requirements of Section 302.1 shall not apply to a heatset web offset lithographic printing press or a heatset web letterpress printing press with potential to emit from the drying oven, prior to emissions control equipment, less than 25 tons per year of VOC from heatset inks.

104.10.2 The requirements of Section 302.1 shall not apply heatset web offset lithographic printing press or a heatset web letterpress printing press used for book printing or to a press with maximum web width of 22 inches or less.

200 DEFINITIONS

201 ADHESIVE: Any substance ~~used to~~that is applied for the purpose bonding ~~one~~ two ~~surface~~ surfaces ~~to another surface by attachment~~together other than by mechanical means.

202 AEROSOL ADHESIVE: An adhesive packaged as an aerosol product in which the spray mechanism is permanently housed in a non-refillable can designed for handheld application without the need for ancillary hoses or spray equipment. Aerosol adhesives include special purpose spray adhesives, mist spray adhesives, and web spray adhesives, as defined in the California Air Resources Board consumer products regulation found in Title 17 of the California Code of Regulations, beginning at Section 94507.

~~An adhesive consisting of a mixture of rubber, resins, liquid and /or gaseous solvents, and propellants packaged in a hand-held, pressurized, non-refillable container. The container expels the pressurized aerosol materials in a finely divided spray when a valve on the container is depressed.~~

203 ALCOHOL: An organic chemical known as a monohydric alcohol, in which one hydroxyl (OH) group is attached to a carbon atom in place of a hydrogen atom. Common examples include, and are not limited to, methanol, ethanol, isopropyl alcohol, and pentanol.

~~203~~204 APPLICATION EQUIPMENT: A device used to apply adhesive, coating, or ink materials.

205 BLANKET: Any rubber or synthetic rubber mat used in offset-lithography to transfer or "offset" an image from a planographic printing plate to paper or other substrate.

206 BLANKET REPAIR MATERIAL: The material used in offset printing to correct low spots in the press blanket.

~~204~~207 BLANKET ~~AND ROLLER~~ WASHES: Cleaning materials ~~, which are~~ used to ~~remove~~ clean the ~~printing inks, oils, and paper pieces~~rubber-surface fabric used to transfer the image from the plate to the substrate. ~~from the blankets and rollers excluding metering rollers and plates.~~

~~205~~208 CLOSED CONTAINER: A container which has a cover that meets with the main body of the container without any visible gaps between the cover and the main body of the container.

~~206~~209 COATING: A layer of material, excluding adhesives, applied across the entire width of a substrate. Examples in printing, are an emulsion, varnish or lacquer applied over a printed surface, and, in platemaking, the light-sensitive polymer or mixture applied to a metal plate.

~~207~~210 COLD BENDING: A process which subjects the printed color, design, alphabet, symbol, or numeral on a printed object to permanent bending through the application of force.

~~208~~211 **CONTROL DEVICE:** Equipment such as an incinerator or adsorber used to prevent air pollutants from reaching the ambient air.

~~209~~212 **CONVERTING OPERATION:** Coating, waxing, laminating, extrusion coating and printing, for fabrication of base materials. The base materials are then used to produce wraps, bags, and other preformed packages.

213 **CURED INK, CURED COATING, OR CURED ADHESIVES:** An ink, coating, or adhesive, which is dry to the touch.

~~210~~214 **DRYING OVEN:** An oven used to hasten the process of drying printed or coated material.

~~211~~215 **ELECTRONIC CIRCUIT:** A product, which consists of a substrate and circuitry, created by screen printing a conductive ink on the substrate.

~~212~~216 **EMBOSSING:** A process performed after printing to stamp a raised or depressed image (artwork or type) into the surface of the paper, using engraved metal embossing dies, extreme pressure and heat.

~~213~~217 **EXEMPT COMPOUNDS:** For the purposes of this rule, Exempt Compounds are as defined in Rule 102, DEFINITIONS~~efinitions~~.

~~214~~218 **EXTREME PERFORMANCE INK/COATING:** An ink or coating, used in screen printing on a non-porous substrate~~,~~ that is designed to resist or withstand any of the following:

~~214.1~~ 218.1 F~~f~~ive or more years of outdoor exposure;

~~214.2~~218.2 E~~e~~xposure to industrial-grade chemicals, solvents, acids, detergents, oil products (including fuels), cosmetics, temperatures exceeding 76~~–~~^{o}C (170 ^{o}F), vacuum forming, embossing or molding.

~~215~~219 **FLEXIBLE PACKAGING INDUSTRY:** Establishments that convert materials consisting of light gauge papers, plastic films, cellulosic films such as cellophane, thin gauge metal sheets such as aluminum foil or steel foil, and combinations thereof into a variety of product packages.

~~216~~220 **FLEXOGRAPHIC PRINTING:** A printing operation utilizing a flexible rubber or other elastomeric plate in which the image area is raised relative to the nonimage area.

~~217~~221 **FOUNTAIN SOLUTION:** The solution applied to the image plate to maintain the hydrophilic properties of the nonimage areas and to keep the nonimage area free from ink.~~–~~ Fountain solution is primarily water, and contains at least one of the following materials:

217.1 E~~e~~tchants such as mineral salts

~~217~~221.2 H~~h~~ydrophilic gums

~~217~~221.3 VOC additives to reduce the surface tension of the solution.

~~218~~222 **FUGITIVE EMISSIONS:** Uncollected e~~E~~missions of VOC from any portion of Graphic Arts Operations as defined in Section 223~~19~~, other than the drying oven.

~~219~~223 **GRAPHIC ARTS OPERATIONS:** Any gravure, screen printing, flexographic, lithographic, or letterpress printing operation, or any coating or laminating operation that manufactures flexible packaging material for the packaging industry. ~~Processing equipment~~ Equipment which has both coating and printing units is considered to be performing a graphic arts operation. ~~–~~Coating operations, which are performed by a machine having only coating units and no printing units, are not graphic arts operations except for flexographic printing operations.

~~220~~224 **GRAVURE PRINTING:** ~~A~~ An intaglio printing operation ~~using a plate~~ in which the image area is etched below the surface of the printing plate and is transferred directly to the substrate when the substrate is pressed against the plate by an impression roller~~or engraved onto the surface~~.

225 **HEATER or DRYER:** A hot air, high velocity system used to dry inks on printed or coated substrate.

~~221~~226 **HEAT BENDING:** A process, which subjects the printed color, design, alphabet, symbol, or numeral on a printed object to permanent bending through the application of heat and force.

~~222~~227 **HEATSET INK:** A printing ink used on continuous web-feed printing presses that are equipped with dryers or ovens.~~–~~ The ink dries or sets by heat induced evaporation of the ink oils and subsequent chilling of the ink by chill rolls.

228 **INK JET:** A digital printing technology in which ink is ejected through printheads onto a substrate to create an image.

~~223~~229 **INFLATING:** A process of filling a printed object with air or gas which results in the swelling of the printed area.

~~224~~230 **LAMINATING OPERATIONS:** A process of composing two or more layers of material to form a single multiple-layer sheet by using adhesive as the bonding agent.

~~225~~231 **LETTERPRESS PRINTING:** A printing operation in which the image area is raised relative to the non-image area and the ink is transferred to the paper directly from the image surface.

~~226~~232 **LINE:** The minimum equipment which is required for the application and/or curing of inks and/or coatings on a substrate, including the ink and/or coating applicators and heating oven(s) and associated ink and coating mixing equipment.

~~227~~233 **LITHOGRAPHIC PRINTING:** A printing operation in which the image and non-image areas exist in the same plane. ~~–~~The non-image area is treated chemically so that only the image areas will be printed onto the substrate.~~–~~ This printing process differs from other printing processes where the image is typically printed from a raised or recessed surface.

~~228 LITHOGRAPHIC AND LETTER PRESS PRINTING, OTHER CLEANING: Cleaning of metering rollers and printing plates.~~

~~229~~234 **MAINTENANCE CLEANING:** A solvent cleaning operation or activity carried out to keep tools, machinery, or general work areas in clean and good operational condition.

~~230~~235 **MATERIAL:** Any material containing VOC including but not limited to coating, adhesive, inks (e.g., printing ink, metallic ink, ultraviolet ink), fountain solutions, thinners, reducers, catalysts, colorants, or solvents used in cleaning.

~~231~~236 **MECHANICALLY FORMED PRODUCTS:** Screen printed products made of plastic substrates, which are subjected to vacuum-forming, embossing, inflating, heat bending, or cold bending processes after the screen printing operation.

~~232~~237 **METALLIC INK:** An ink that contains greater than 50 grams of metal per liter (0.4 lb/gal) of ink.

~~233~~238 **METERING ROLLER:** A roller to transfer and meter fountain solution ~~water~~ to maintain hydrophilic properties.

~~234~~239 **NONCOMPLIANT MATERIAL:** A material that:

~~234~~239.~~2 1~~ ~~E~~exceeds the VOC content limits specified in Section ~~302~~301, and is not exempt pursuant to Section 104, and does not use emission control equipment pursuant to Section ~~303~~302; or

~~234~~239.2 E~~e~~xceeds the VOC content limit and/or composite vapor pressure limit, as applicable, in Section ~~302~~303~~, and does not use emission control equipment pursuant to Section 303~~.

~~235~~240 **NON-HEATSET INK:** An ink that sets and dries by absorption into the substrates, and hardens by ambient air oxidation that may be accelerated by the use of infrared light sources. For purposes of this definition ultraviolet and electron-beam curable inks are examples of non-heatset inks

~~236~~241 **NON-POROUS SUBSTRATE:** Any substrate whose surface prevents penetration by water, including but not limited to foil, polyethylene, polypropylene, cellophane, paper or paperboard coated with a non-porous ~~metallized~~metalized polyester, nylon and polyethylene terephthalate (mylar). ~~–~~Clay-coated printing paper as defined by the American Paper Institute Classification System, and paperboard coated with clay to prevent water penetration shall be considered non-porous substrates.

~~237~~242 **OFFSET PRINTING:** A lithographic printing operation in which the image area is transferred, or offset, to another surface, and then printed onto the substrate. Typically, the ink is offset from a plate to a rubber blanket, and then from the blanket to the substrate.

~~238~~243 **OVERLAY:** A screen printed product made of polycarbonate, polyester, or clear vinyl plastic substrate which activates the circuitry on an electronic circuit underneath it when pressed against the electronic circuit.~~–~~ Overlays and electronic circuits are used in membrane switches of products such as computer keyboards, calculators, control panels, and home appliances.

~~239~~244 **PREPRESS OPERATIONS:** Operations associated with printing plate making ~~using film photo~~ including but not limited to, film photo processors and plate photo processors, color scanners, film cleaning, or plate developers.

~~240~~245 **PRINTING:** Any graphic arts operation that imparts color, design, alphabet, or numerals on a substrate.

~~241~~246 **PRINTING INK:** A pigmented fluid or viscous material used in printing.

~~242~~247 **PROOF PRESS:** A press used exclusively to check the quality of print, color reproduction, and editorial content.

~~243~~248 **REFRIGERATED CHILLER:** A device that continuously maintains and supplies fountain solution to a holding tray at a temperature of 55 degrees Fahrenheit or less when measured at the supply tank, thereby reducing evaporative emissions of VOCs in fountain solution.

249 **REMOVABLE PRESS COMPONENT:** A part, component, or accessory of a press that is physically attached to the press but is disassembled and removed from the press prior to being cleaned. Rollers, blankets, metering rollers, fountains, impression cylinders and plates shall not be considered as removable press components.

~~244~~250 **REPAIR CLEANING:** Cleaning of equipment parts as part of a repair operation or as part of a scheduled maintenance procedure during which the parts are not removed from the equipment and power to the printing equipment has been turned off and secured.

251 **ROLLER WASH:** Solvent used to clean the metal ink rollers on a printing press.

~~245~~252 **SCREEN PRINTING:** A printing operation in which the printing ink passes through a refined form of stencil to a web or fabric. The stencil openings determine the form and dimension of the imprint.

~~246~~253 **SIGN INK/COATING:** A printing ink or coating used in screen printing indoor and outdoor signs (excluding structural components) and murals, including lettering enamels, poster colors, copy blockers, and bulletin enamels.

~~247~~254 **SOLVENT CLEANING:** The removal of loosely held uncured adhesives, uncured inks, uncured coatings, and contaminants including, but not limited to, dirt, soil, and grease from equipment, substrate, and general work areas.

~~248~~255 **SPECIALTY FLEXOGRAPHIC PRINTING:** Flexographic printing on polyethylene, polyester and foil substrates for food packaging, health care products, fertilizer bags, or liquid-tight containers.

~~249~~256 **STANDARD INDUSTRIAL CLASSIFICATION (SIC):** Number codes created by the U. S. Government Office of Management and Budget (OMB) to classify establishments by type of economic activity.

~~250~~257 **STATIONARY SOURCE:** Any building, structure, facility, or emissions unit which emits or may emit any affected pollutant directly or as a fugitive emission.

~~250~~257.1 Building, structure, facility, or emissions unit includes all pollutant emitting activities which:

~~250~~257.1.1 Belong to the same industrial grouping, and

~~250~~257.1.2 Are located on one property, or two or more contiguous properties, and

257.1.3 Are under the same or common ownership, operation, or control, or which are owned or operated by entities which are under common control.

257.2 Pollutant emitting activities shall be considered as part of the same industrial grouping if:

257~~0~~.2.1 They belong to the same two-digit Standard Industrial Classification (SIC) code, or

257~~0~~.2.2 They are part of a common production process, which includes industrial processes, manufacturing processes and any connected processes involving a common material.

258 STRIPPING: The removal of cured inks, cured coatings, or cured adhesives.

~~251~~259 SUBSTRATE: The surface to which a printed image is applied. ~~-~~Substrates include, but are not limited to, paper, plastic, metal, wood, ceramic, and fabric.

~~252~~260 ULTRAVIOLET INK: Ink which dries by polymerization reaction induced by ultraviolet energy.

~~253~~261 VACUUM-FORMING: A process which imparts a desired shape to a printed object by subjecting the screen printed area of the object to a vacuum.

~~254~~262 VOC COMPOSITE PARTIAL PRESSURE: The sum of the partial pressures of the compounds defined as VOCs. VOC composite partial pressure shall be calculated by the following equation:

$$PP_c = \frac{\sum_{i=1}^{n} \frac{(W_i)(VP_i)}{MW_i}}{\frac{W_w}{MW_w} + \sum_{e=1}^{n} \frac{W_e}{MW_e} + \sum_{i=1}^{n} \frac{W_i}{MW_i}}$$

Where: PP_C = VOC composite partial pressure at 20-^{o}C, in mm Hg.
W_i = Weight of the "i"th VOC compound, in grams, as determined by ASTM E 260-96.
W_w = Weight of water, in grams as determined by ASTM D 3792-99.
W_e = Weight of the "e"th exempt compound, in grams, as determined by ASTM E 260-96.
MW_i = Molecular weight of the "i"th VOC compound, in grams per g-mole, as given in chemical reference literature.
MW_w = Molecular weight of water, 18 grams per g-mole.
MW_e = Molecular weight of the "e"th exempt compound, in grams per g-mole, as given in chemical reference literature.
VP_i = Vapor pressure of the "i"th VOC compound at 20^{o}C, in mm Hg, as determined by Section 502.7 of this rule.

~~VOC composite partial pressure is calculated pursuant to Section 403.~~

~~255~~262~~3~~ VOLATILE ORGANIC COMPOUNDS (VOC): Any chemical compound containing at least one atom of carbon except for the Exempt Compounds listed in Rule 102, DEFINITIONS~~efinitions~~.

263~~4~~ ~~VOC CONTENT:~~

2634.1 VOC Regulatory Content: The weight of VOC per combined volume of VOC and material, calculated with the following equation:

VOC Regulatory Content = (Ws – Ww – Wec) / (Vm – Vw – Vec)

2634.2 VOC Actual Content: The weight of VOC per volume of material, calculated with the following equation:

VOC Actual Content = (Ws – Ww – Wec) / Vm

Where:

Ws = Weight of volatile compounds in grams
Ww = Weight of water in grams
Wec = Weight of exempt compounds in grams
Vm = Volume of material in liters
Vw = Volume of water in liters
Vec = Volume of exempt compounds, as defined in Rule 102, DEFINITIONSefinitions, in liters

264.3 Percent of VOC by Weight: The ratio of the weight of the VOC to the weight of the material, expressed as a percent. The percent of VOC by weight shall be calculated as follows:

$$Percent\ of\ VOC\ by\ Weight = \frac{W_{voc}}{W_p}\ x\ 100$$

Where: Wvoc = Weight of VOCs in grams
Wp = Weight of material in grams.

~~256 VOLATILE ORGANIC COMPOUND (VOC) AS APPLIED: A VOC as applied means the VOC content of the material as applied including thinners, reducers, hardeners, retarders, catalysts and additives calculated pursuant to Section 502.1.~~

~~257 VOLATILE ORGANIC COMPOUND (VOC) AS SUPPLIED: A VOC as supplied means the VOC content of the original material as supplied by the manufacturer calculated pursuant to Section 502.1.~~

~~258~~ 2645 **WATER SLIDE DECALS:** Decals which are screen printed onto treated paper stock, and are removable from the stock by the dissolution of an underlying, water-soluble adhesive or a similar carrier.

~~259~~2656 **WEB:** A continuous sheet of substrate that is printed on web-fed printing presses.

~~260~~2667 **WEB-FEED:** An automatic system on a printing press, which supplies a web substrate for printing from a continuous roll or web or from an extrusion conversion process.

~~261~~2678 **WIPE CLEANING:** The method of cleaning a surface by physically rubbing the surface with a material such as a rag, paper, or a sponge moistened with a solvent.

300 STANDARDS

~~301 GENERAL REQUIREMENTS: Any person operating equipment for GRAPHIC ARTS OPERATIONS as defined in Section 219, shall comply with one of the following requirements:~~

~~301.1 Use only low-VOC (Volatile Organic Compounds) inks, coatings, adhesives, and fountain solutions as specified in Section 302, of this rule; or~~

~~301.2 Install and operate on the line, approved emission control equipment pursuant to Section 303, with a control device efficiency of at least 95 percent on a mass basis, and a collection efficiency of at least 70% on a mass basis. (Note that the use of an approved emission control system does not eliminate the need to comply with the provisions of Section 304 of this rule.)~~

~~302~~301 **VOC CONTENT LIMITS FOR MATERIALS USED IN GRAPHIC ARTS OPERATIONS:** Except for graphic arts operations exempt pursuant to Section 104, no person shall apply any material with a VOC content in excess of the limits specified below. ~~–~~The VOC content of the material as applied (including thinners, reducers, hardeners, retarders, catalysts, and additives) ~~-~~shall be determined pursuant to Section 502.1.

~~302~~301.1 VOC Content for Inks, Coatings, and Adhesives:

Material Type	VOC Regulatory Content g~~m~~/l (lb/gal) ~~Less water and exempt compounds~~
General	
Printing Ink	300 (2.5)
Adhesive	150 (1.25)
Coating	300 (2.5)
Screen Printing	
~~g~~	400 (3.3)
~~———~~Printing Ink	150 (1.25)
~~———~~Adhesive	400 (3.3)
~~———~~Coating	800 (6.7)
~~———~~Electronic Circuit	~~800~~ 400 (~~6.7~~3.3)
~~———~~Extreme Performance	400 (3.3)
Ink/Coating	~~500~~ 400 (~~4.1~~3.3)
~~———~~Metallic Ink	
~~———~~Sign Ink/Coating	800 (6.7)
~~———~~Mechanically Formed Products	800 (6.7)
~~———~~Overlays	300 (2.5)
~~———~~Web-Fed Wallpaper	800 (6.7)
~~———~~Water Slide Decals	

~~———~~~~302~~301.2 VOC Content for Fountain Solution Materials:

Material Type	VOC Content (% by Weight) ~~VOC CONTENT gm/l (lb/gal) Including water and exempt compounds~~	
	~~Effective 8/14/97~~	~~Effective April 8, 2005~~
~~Fountain Solutions – Chilled Using Refrigerated Chiller~~	~~116 (0.97)~~	~~100 (0.83)~~
~~Fountain Solutions – Non-Chilled~~	~~116 (0.97)~~	~~80 (0.67)~~
Heatset Web Offset Lithographic Containing alcohol Chilled using refrigerator chiller Non-chilled C~~Heatset Web Offset Lithographic – c~~ontaining no alcohol		3 1.6 5
Coldset Web Offset Lithographic		5

Sheet-fed Offset Lithographic (with maximum sheet size greater than 11 x 17 inches): Containing alcohol and chilled using refrigerator chiller Other	 8.5 5
All Other Presses Chilled using refrigerator chiller Non-chilled	 10 8

~~302~~301.3 Temperature Gauge Requirements Refrigerated Chiller: The refrigerated chiller shall be equipped with a temperature gauge. The temperature of the fountain solution shall be maintained at 55 °F or less.

30~~2~~1.~~3~~4 Coldset Web Offset Lithographic Fountain Solution: Fountain solutions containing alcohol shall not be used in coldest web offset lithographic printing operations.

~~303~~302 EMISSION CONTROL EQUIPMENT:

302.1 ~~—~~Heatset Web Offset Lithographic or Letterpress: A person using heatset web offset lithographic or letterpress printing operation that prior to controls has a potential to emit of greater than 25 tons of VOC emissions per year shall use an add-on control device, on the dryers, that satisfies the following:

302.1.1 The air pollution control equipment is approved by the Air Pollution Control Officer, pursuant to Rule 501, GENERAL~~eneral~~ PERMIT~~ermit~~ REQUIREMENTS~~equirements~~, and

302.1.2 The air pollution control equipment is designed and operated with an overall (control and capture) efficiency, as determined in Sections 502.4 and ~~502.5, that~~502.5 that satisfies one of the following conditions, whichever is applicable:

302.1.2.1 ~~–~~90% overall control and capture efficiency, by weight, if the heatset web offset Lithographic or Letterpress printing control device installed prior to October 11, 2012.

302.1.2.2 ~~—~~95% overall control and capture efficiency, by weight, if the if the heatset web offset Lithographic or letterpress printing control device installed after October 11, 2012.

302.1.3~~—~~ As an alternative to Section 302.1.2, the mass concentration at the outlet of the air pollution control equipment, determined pursuant to Section 502.4, ~~-~~is less than or equal to 20 ppmv as hexane on a dry basis.

302.2 ~~—~~Alternative Emissions Control Equipment: As an alternative of complying with the VOC content limit of ~~to~~ Section~~s~~ 301 ~~and 302~~, a person may use air pollution control equipment provided the following conditions are met:~~ing it satisfies the following:~~

~~303~~302.2.1 The air pollution control equipment is approved by the Air Pollution Control Officer pursuant to Rule 501, GENERAL~~eneral~~ PERMIT~~ermit~~ REQUIREMENTS~~equirements~~.~~; and,~~

~~303~~302.2.2 During any period of continuous operation, not to exceed 24 hours, t~~T~~he air pollution control equipment shall have an overall capture and control efficiency of at least 80 percent, by weight, for flexible packaging printing, and at least 70 percent, by weight, for other types of printing operations~~; and,~~. ~~is designed and operated with~~

302.2.3 The capture system shall vent all drying oven exhaust to the control device and shall have one or more inlets for collection of fugitive emissions~~; and,~~.

302.2.4 The air pollution control system shall reduce VOC emissions, at all the times, to a level that is not greater than the VOC emissions limits which would have been achieved through the use of complaint materials as per Sections 301.

~~303.2.1 A control device efficiency of at least 95 percent on a mass basis, as determined pursuant to Sections 406 and 502.4, and~~

~~303.2.2 An emission collection efficiency of at least 70 percent on a mass basis, as determined pursuant to Section 502.5.~~

302.2.5~~401 OPERATION AND MAINTENANCE PLAN:Any person using existing emission control equipment pursuant to Section 302, as a means of complying with this rule, as provided in Section 301, must~~ Submit an Operation and Maintenance Plan ~~for the emission control equipment~~ to the Air Pollution Control Officer at least 90 days in advance of the date on which VOC emission control system is to be used in lieu of compliance with VOC limitations~~for approval.~~ ~~A person proposing to install new emission control equipment as a means of complying with this rule shall submit in addition to an Operation and Maintenance Plan, an application for an Authority to Construct, pursuant to Rule 501, General Permit Requirements.~~ The plan shall specify operation and maintenance procedures that demonstrate continuous operation and compliance of the emissions control equipment during periods of emissions-producing operations. The Plan shall specify key system operating parameters such as temperatures, pressures, and/or flow rates, as necessary to determine compliance with this rule and shall describe detailed procedures to maintain the approved emission control equipment. The Plan shall specify which records must be kept to document these operating and maintenance procedures. These records shall comply with the requirements of Sections 501.4, and 501.5. The Plan shall be implemented upon approval of the Air Pollution Control Officer.

302.2.6 Submit ~~in addition to an Operation and Maintenance Plan,~~ an application for an Authority to Construct, pursuant to Rule 501, General Permit Requirements.

~~304.1~~ ~~304~~303 **CLEANING AND STORAGE REQUIREMENTS:** Any person using cleanup solvents for graphic arts operations shall comply with the following requirements:

3034.1 Materials used for solvent cleaning shall not exceed the VOC and/or composite vapor pressure limits specified in the table below. The VOC content of the material as applied shall be determined pursuant to Section 502.1. The composite partial pressure shall be determined using Section 502.6.

~~(Table Continued on Next Page)~~

VOC CONTENT OF SOLVENT CLEANING MATERIALS

~~Note: Where VOC limits are shown as both grams/liter and composite vapor pressure, either may be used as the content limit for the specific application shown.~~

Material Type	Actual VOC Content g~~m~~/l (lb/gal) ~~Including Water and Exempt Compounds~~		VOC Composite Partial Pressure Millimeters of Mercury at 20~~-~~°C (68~~-~~°F)

VOC CONTENT OF SOLVENT CLEANING MATERIALS ~~Note: Where VOC limits are shown as both grams/liter and composite vapor pressure, either may be used as the content limit for the specific application shown.~~			
Material Type	**Actual VOC Content g~~m~~/l (lb/gal) ~~Including Water and Exempt Compounds~~**		**VOC Composite Partial Pressure Millimeters of Mercury at 20~~-~~°C (68~~-~~°F)**
General (e.g., maintenance, repair, solvent, wipe) Cleaning	72 (0.60)		
Application Equipment Cleaning			
~~1.~~ General (not specifically listed ~~—~~below)	100 (0.83)	AND	3
~~2.~~ Lithographic and Letter Press Printing, Blanket and Roller Washes, and Other On-Press Components	300 (2.5)	OR	10
~~3.~~ Lithographic and Letter Press Printing, ~~-~~Other Cleaning	300 (2.5)	OR	~~25~~10
~~4.~~ Screen Printing			
~~5.~~ Flexographic Printing	300 (2.5)	OR	10
~~6.~~ Specialty Flexographic Printing	100 (0.83)	AND	3
~~7.~~ Ultraviolet Inks (Except Screen Printing)	~~810 (6.8)~~670 (5.6)	AND	~~21~~10
	~~800 (6.7)~~670 (5.6)	AND	~~33~~10

~~304.2 Lithographic and Letter Press Printing, Other Cleaning: The total usage for this cleaning category shall not exceed 15 percent (by volume) of the total monthly usage of the Lithographic and Letter Press Printing, Blanket and Roller Washes category. The percentage of the solvents used for Lithographic and Letter Press Printing, Other Cleaning shall be calculated as follows:~~

$$\%\,Usage = \frac{G}{Y} * 100\%$$

~~Where: G = Total usage for Lithographic and Letter Press Printing, Other Cleaning materials (gal/month)~~

~~Y = Total material usage for Lithographic and Letter Press Printing, Blanket and Roller Washes (gal/month~~

303.2~~304.3~~ Closed containers shall be used for the disposal of all VOC-containing cloth, sponges, papers, or other materials used for solvent cleaning.

~~304.4~~ 303.3 All VOC-materials shall be stored in closed containers when not in use.

303.4~~304.5~~ These cleanup solvent cleaning material limits shall supercede the requirements of Rule 240, SURFACE~~urface~~ PREPARATION~~reparation~~ AND~~and~~ CLEANUP~~leanup~~, for the cleaning of application equipment.

~~305~~304 **PROHIBITION OF SALE:** A person shall not supply, sell, solicit, or offer for sale, any noncompliant material as defined in Section ~~234~~ 239 for use in graphic arts operations. The prohibition in this section shall apply to any graphic arts material which will be applied at any physical location within the District.

~~306~~305 **SURFACE PREPARATION AND REPAIR AND MAINTENANCE SOLVENT CLEANING:** Solvents used to clean substrates during the manufacturing process, or used for surface preparation before coating, adhesive, or ink application, and solvents used for repair or maintenance cleaning, are subject to the requirements of Rule 240, SURFACE~~urface~~ PREPARATION~~reparation~~ AND~~and~~ CLEANUP~~leanup~~.

400 ADMINISTRATIVE REQUIREMENTS

~~401 **OPERATION AND MAINTENANCE PLAN:** Any person using existing emission control equipment pursuant to Section 303, as a means of complying with this rule, as provided in Section 301 and 302, must submit, an Operation and Maintenance Plan for the emission control equipment to the Air Pollution Control Officer for approval. A person proposing to install new emission control equipment as a means of complying with this rule shall submit in addition to an Operation and Maintenance Plan, an application for an Authority to Construct, pursuant to Rule 501, General Permit Requirements. The Plan shall specify key system operating parameters such as temperatures, pressures, and/or flow rates, as necessary to determine compliance with this rule and shall describe detailed procedures to maintain the approved emission control equipment. The Plan shall also specify which records must be kept to document these operating and maintenance procedures. These records shall comply with the requirements of Sections 501.4, and 501.5. The Plan shall be implemented upon approval of the Air Pollution Control Officer.~~

~~402~~401 **PRODUCT INFORMATION REQUIREMENTS FOR SELLERS:** Any person who sells any material subject to this rule shall make available to the purchaser at the time of sale the following information:

~~402~~401.1 The material type by name, product ~~/~~code identification number, and ~~/~~manufacturer;

~~402~~401.2 For M~~m~~aterials S~~s~~ubject to Section ~~302~~301.1: The maximum VOC regulatory content of the material (adhesive, ink and coating)~~, as supplied.~~ , ~~The VOC content shall be~~ displayed as~~e~~xpressed in grams ~~of VOC~~ per liter ~~of material (~~or pounds of ~~VOC~~ per gallon as determined pursuant to Section 502.1;~~), excluding water and exempt compounds;~~

402401.3 For Mmaterials Ssubject to Section 302301.2: The maximum weight percentage of VOC content of the fountain solution, as supplied. The VOC content shall be displayed as grams per liter of material (or pounds of VOC per gallon), including water and exempt compounds as determined pursuant to Section 264.3502.1;

402401.4 For Mmaterials Ssubject to Section 304303.1: The maximum VOC content and the total VOC composite partial pressure of the material. as supplied. The VOC content shall be displayed expressed as grams of VOC per liter of material (or pounds of VOC per gallon), including water and exempt compounds as determined pursuant to Section 502.1. The composite vapor pressure shall be displayed in millimeters of mercury at 20°C (68°F) as determined pursuant to Section 502.67; and

402401.5 For all materials subject to Sections 3012 and 304303.1: Recommendations regarding thinning, reducing, or mixing with any material.

403 CALCULATION FOR DETERMINING VOC COMPOSITE PARTIAL PRESSURE: VOC composite partial pressure shall be calculated by the following equation:

$$PP_c = \frac{\sum_{i=1}^{n} \frac{(W_{i)}(VP_i)}{MW_i}}{\frac{W_w}{MW_w} + \sum_{e=1}^{n} \frac{W_e}{MW_e} + \sum_{i=1}^{n} \frac{W_i}{MW_i}}$$

Where: PP_c = VOC composite partial pressure at 20°C, in mm Hg.
W_i = Weight of the "i"th VOC compound, in grams, as determined by ASTM E 260-96.
W_w = Weight of water, in grams as determined by ASTM D 3792-99.
W_e = Weight of the "e"th exempt compound, in grams, as determined by ASTM E 260-96.
MW_i = Molecular weight of the "i"th VOC compound, in grams per g-mole, as given in chemical reference literature.
MW_w = Molecular weight of water, 18 grams per g-mole.
MW_e = Molecular weight of the "e"th exempt compound, in grams per g-mole, as given in chemical reference literature.
VP_i = Vapor pressure of the "i"th VOC compound at 20°C, in mm Hg, as determined by Section 502.7 of this rule.

404 CALCULATION FOR DETERMINING VOC CONTENT OF MATERIAL EXCLUDING WATER AND EXEMPT COMPOUNDS: For the VOC content as applied, the volume of material is defined as the volume of the original material plus any material (e.g., thinners, reducers, or catalysts) added to the original material. For the VOC content as supplied, the volume of material is defined as the volume of the original material. The weight of VOC per combined volume of VOC and material solids shall be calculated by the following equation:

$$G_1 = \frac{W_v - W_w - W_{ec}}{V_m - V_w - V_{ec}}$$

Where: G_1 = Weight of VOC per volume of material, less water and exempt compounds, in grams per liter

~~W_v = Weight of all volatile compounds, including any volatile materials added to the original material supplied by the manufacturer when calculating the VOC content as applied, in grams~~
~~W_w = Weight of water, in grams~~
~~W_{ec} = Weight of exempt compounds, in grams~~
~~V_m = Volume of material, in liters~~
~~V_w = Volume of water, in liters~~
~~V_{ec} = Volume of exempt compounds, in liters~~

~~**405 CALCULATION FOR DETERMINING VOC CONTENT OF MATERIAL INCLUDING WATER AND EXEMPT COMPOUNDS:** For the VOC content as applied, the volume of material is defined as the volume of the original material, plus any material added to the original material (e.g., thinners or reducers). For the VOC content as supplied, the volume of material is defined as the volume of the original material. The weight of VOC per total volume of material shall be calculated by the following equation:~~

$$G_2 = \frac{W_v - W_w - W_{ec}}{V_m}$$

~~Where: G_2 = Weight of VOC per total volume of material, in grams per liter~~
~~W_v = Weight of all volatile compounds, in grams~~
~~W_w = Weight of water, in grams~~
~~W_{ec} = Weight of exempt compounds, in grams~~
~~V_m = Volume of material, in liters~~

~~406~~402 **CALCULATION FOR DETERMINING PERCENT CONTROL EFFICIENCY AND VOC MASS EMISSION RATE:** The VOC mass emission rate shall be calculated both upstream and downstream of the emissions control device based on the VOC mass concentration and volumetric flowrate, pursuant to Section 502.5 and the equations on the following page:

~~406~~402.1 VOC Mass Emission Rate:

$$M = (Q) * (C) * (60 \frac{\min}{hr})$$ (calculated upstream and downstream)

Where:

M = VOC mass emission rate (upstream and downstream, in lb/hr.
Q = the volumetric flowrate at the inlet (upstream) or exhaust stack outlet (downstream), in standard cubic feet per minute as determined by Section 502.4.
C = the VOC mass concentration at the inlet (upstream) or outlet (downstream), in pounds per standard cubic feet, as determined pursuant to Section 502.4.

~~406~~402.2 The percent control efficiency is calculated as follows:

$$\%CE = \left(\frac{M_u - M_d}{M_u} \right) * 100$$

Where:

CE = control efficiency.
M_u = the upstream VOC mass emission rate, in lb/hr.
M_d = the downstream VOC mass emission rate, in lb/hr.

~~407~~403 CALCULATION FOR DETERMINING VOC EMISSIONS FOR STATIONARY SOURCES INCLUDING THOSE EXEMPT PURSUANT TO SECTION~~S~~ 104.1 ~~, 104.2 AND 104.7.~~

~~407~~403.1 The total VOC emissions from materials shall be determined as follows:

$$E = \sum (E_1 + E_2)$$

Where:

E = Total VOC emissions (lbs-VOCs/month)
E_1 = VOC emissions from ink usage ((lbs-VOCs/month), as calculated in Section 403.2
E_2 = VOC emissions from material (except Inks) usage (lbs-VOCs/month), as calculated in Section 403.3

~~407~~403.2 VOC Emissions from Ink Usage:

$$E_1 = U_1 * P_1 * (1 - R)$$

Where:

E_1 = VOC emissions from ink usage (lbs-VOCs/month)
U_1 = ink usage as applied (gallons/month). This equals the ink usage in pounds per month divided by the density of the ink.
P_1 = VOC content (lbs-VOC/gallon), applied as, determined pursuant to Section 502.1
R = ink retention factor (20% for heat-set lithographic printing, 95% for non-heat set lithographic printing, and 0% for all other printing operations)

~~407~~403.3 VOC Emissions from Material (except Inks) Usages:

$$E_2 = \sum_{i=1}^{n} (U_i) * (V_i)$$

Where:

E_2 = VOC emissions from materials (except inks) used (lbs-VOCs/month)
U_i = material usage, as applied, (gallons/month)
V_i = VOC content in the material (lbs-VOC/gal), as applied, as determined pursuant to Section 502.1

500 MONITORING AND RECORDS

501 RECORDKEEPING: In addition to any existing permit conditions issued pursuant to Rule 501, GENERALeneral PERMITermit REQUIREMENTSequirements, any person subject to this rule, including operations claiming exemption under Section 104.1, 104.2, and 104.7, shall comply with the following requirements:

501.1 List of Materials: A list shall be maintained of all materials currently used and/or stored at the site. The list shall include the following information:

501.1.1 Material type (e.g., adhesive, coating, ink, fountain solution, extreme performance ink/coating, or cleanup solvent) by name, product /code identification number, and /manufacturer, and the appropriate material type category as designated in Sections 302 301 and 304303.1 as applicable.

501.1.2 The actual VOC regulatory content of the materials (e.g., adhesive, coating, or ink) listed in Section 302301.1, expressed in grams per liter or pounds per gallon.as applied excluding water and exempt compounds.

501.1.3 The actual weight percentage of VOC content ofvolatiles of the fountain solution listed in Section 302301.2 as applied, including water and exempt compounds in grams per liter or pounds per gallon. The VOC content as provided by the manufacturer may be acceptable if the fountain solution is used as supplied

501.1.4 The actual VOC actual content of the cleaning materials listed in Section 304303, as applied including water and exempt compounds expressed in grams per liter or pounds per gallon.

501.1.5 The VOC composite partial pressure for materials listed in Section 304303.1, if applicable. The composite partial pressure shall be calculated pursuant to Sections 403 and 502.7. 262.

501.1.6 The actual mixing ratio used for the material, as applied.

501.1.7 For inks, the density of the ink in lbs/gallon.

501.1.8 For aerosol adhesives exempt pursuant to Section 104.76, records of VOC content in the aerosol adhesive. The VOC content shall be recorded as percent by weight. The record shall also include the type of operation (i.e., substrate, purpose) for which the aerosol adhesive is used.

501.1.9 Identification of each material type exceeding the VOC limits specified in Sections 302 301 and 304303.1. or the composite vapor pressure specified in Section 304.1303.1.

501.2 Product Information: The information listed under Sections ~~402~~401.1 through ~~402~~401.5 shall be maintained on-site and made available to the Air Pollution Control Officer upon request.

501.3 Usage Records: Any person within the District using materials regulated by this rule shall update and maintain the calendar monthly records as required by this rule as follows:

~~501.3.1 Monthly:~~

501.3.1~~.1~~ Records of total applied volume in gallons or weight in pounds (weight allowed for ink only) for each material (including thinners, reducers, hardeners, retarders, catalysts, fountain solutions and cleaning materials), specified by material type as listed in Sections ~~302~~ 301 and ~~304~~303.1, and VOC emissions from each material type.

501.3.~~1.2~~2 For graphic arts operations exempt pursuant to Sections 104.1~~,~~ ~~104.2~~, or 104.7, records of total VOC emissions from all materials (including thinners, reducers, hardeners, retarders, and catalysts) used for each calendar month in pounds. The records shall be determined using emission calculations specified in Section ~~407~~403.

501.3.3 For graphic arts operations exempt pursuant to Section 104.8, records of total VOC emissions from all offset lithographic printing operations, including related cleaning activities.

501.3.4 For graphic arts operations exempt pursuant to Section 104.10, records of total VOC emissions from heatset web offset lithographic printing and heatset web letterpress printing.

501.3.~~1.3~~5 Records of total applied volume for each material exceeding the VOC limits specified in Sections ~~302~~ 301 and ~~304~~303.1 by name, product ~~/~~code identification number, ~~/~~manufacturer, and material type.

~~501.3.1.4 Records showing the percentage of Lithographic and Letter Press, Other Cleaning materials (i.e., metering rollers and plates) as calculated pursuant to Section 304.2.~~

501.4 Emission Control Equipment: Any person using emission control equipment pursuant to Section ~~303~~302 as a means of complying with this rule shall maintain on a daily basis:

501.4.1 Such records as required by the Operation and Maintenance Plan in Section ~~401~~302.2.5; and

501.4.2 Records of applied volume in gallon or by weight in pounds (weight allowed for ink only); and

501.4.3 Records of test reports conducted pursuant to Section 502.

501.5 Duration of Records: All records required by this rule shall be retained on-site for at least two years, except for sources subject to Rule 507, FEDERALederal OPERATINGperating PERMITermit PROGRAMrogram, which shall be retained for at least five years. Such records shall be made available to the Air Pollution Control Officer upon request.

502 TEST METHODS

502.1 Determination of VOC Content: VOC content of the material (except as provided for in Section 502.2), as applied including thinners, reducers, hardeners, retarders, and catalysts, shall be determined in accordance with EPA Method 24, Section 404 264.1 and Section 502.3, for VOC regulatory contentif less water and exempt compounds, or with EPA Method 24 and Section 404264.2, for VOC actual content.if including water and exempt compounds.

502.2 Analysis of Samples, Non-Heatset Polymerizing Lithographic Or Letterpress Inks: Measurement of the volatile content shall be made in accordance with EPA Method 24. All components of the sample must be weighed in the proper proportion into the analysis container and mixed together, with the mixture then being allowed to stand for at least one hour, but no more than 24 hours, prior to being oven-dried at 110 °C for 1 hour.

502.3 Determination of Exempt Compounds: Compounds exempt pursuant to Section 213, shall be determined in accordance with ASTM D4457-91, "Test Method for Determination of Dichloromethane and 1,1,1-tricholoethane in Paints and Coatings by Direct Injection into a Gas Chromatograph", or CARB Method 432, "Determination of Dichloromethane and 1,1,1-tricholoethane in Paints and Coatings". If any of the perfluorocarbons are being claimed as exempt compounds, the person making the claim must state in advance which compounds are present, and the EPA-approved test method used to make the determination of these compounds.

502.4 Determination Of Control Efficiency: Control efficiency of the control equipment shall be determined in accordance with applicable EPA Methods 18, 25, 25A, EPA Method 2 or 2C; and Section 406. (1) U.S. EPA Method 18, 25 or 25A, for VOC concentration, and (2) U.S. EPA Method 2 or 2C for flow rates, as applicable, and calculated in accordance with Section 406.

502.5502.4 Determination Of of Control Equipment Efficiency: Efficiency of the emission control equipment shall be based upon test measurements made in accordance with:

502.54.1 USEPA Method 18, 25 or 25A, for VOC concentration, and

502.54.2 USEPA Method 2 or 2C for flow rates, as applicable, and calculated in accordance with Section 406402.

502.65 Determination of Collection Capture Efficiency: Collection Capture efficiency shall be determined in accordance with U.S. EPA technical guideline Document, *Guidelines for Developing Capture Efficiency dated January 9, 1995*.

Individual capture efficiency test runs subject to U.S. EPA technical guidelines shall be determined by:

502.~~6~~5.1 Applicable U.S. EPA methods 204, 204A, 204B, 204C, 2404D, 204E, and/or 204F; or

502.~~6~~5.2 Any other method approved by the U.S. EPA, the California Air Resources Board, and the Air Pollution Control Officer.

502.~~7~~6 Determination of VOC Composite Partial Pressure: VOC composite partial pressure shall be determined in accordance with Section ~~403~~ 262 and Section 502.~~8~~7.

502.~~8~~7 Determination of Vapor Pressure: Vapor pressure of a VOC shall be determined in accordance with ASTM Method D2879-97, "Test Method for Vapor Pressure-Temperature Relationship and Initial Decomposition Temperature of Liquids by Isoteniescope", or may be obtained from the most current edition of a published source, including, but not limited to:

502.~~8~~7.1 *The Vapor Pressure of Pure Substances*, Boublik, Fried, and Hala; Elsevier Scientific Publishing Company, New York.

502.~~8~~7.2 *Perry's Chemical Engineer's Handbook*, McGraw-Hill Book Company.

502.~~8~~7.3 *CRC Handbook of Chemistry and Physics*, Chemical Rubber Publishing Company.

502.~~8~~7.4 *Lange's Handbook of Chemistry*, John Dean, editor, McGraw-Hill Book Company.

Not withstanding the provisions of this section, the Air Pollution Control Officer may require the use of a vapor pressure determined in accordance with ASTM Method D2879-97 for determining compliance with this rule.

502.~~9~~8 Determination of Metal Content in Inks**:** The metal content of metallic inks shall be determined in accordance with the South Coast Air Quality Management District's Method 318, "Determination of Weight Percent Elemental Metals in Coatings by X-ray Diffraction". Use of this method for determining the content of metals other than aluminum in metallic inks shall be subject to approval by the U.S. EPA, the California Air Resources Board, and the Air Pollution Control Officer.

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Placer County
AIR POLLUTION CONTROL DISTRICT

Board Agenda Item

Information

Agenda Date: October 11, 2012

Prepared By: Yushuo Chang, Planning & Monitoring Section Manager

Topic: 2012 CEQA Air Quality Handbook

Discussion: As a public agency, the Placer County Air Pollution Control District (District) plays a role in the intergovernmental review process of land use projects under the California Environmental Quality Act (CEQA). In most cases the District acts as a "Commenting Agency" for land use projects that are distributed by the "Lead Agency" for review and comment. In carrying out its responsibilities under CEQA, the District has an internal process for reviewing and commenting on the environmental documents distributed by Lead Agencies. The District's comments relating to environmental documents are based on the professional expertise of District staff that address potential air quality concerns. The District's comments are presented to the Lead Agency within a specific timeframe.

The creation of a handbook arose from a prior commitment by District staff:

- December 11, 2008, meeting of the District Board: District staff provided your Board an overview of the District's existing CEQA review process that described how the District works with the local jurisdictions to provide professional assistance in the identification of air quality impacts associated with land use projects. The overview included staff recommended thresholds of significance, modeling tools, and mitigation identification. Additionally, District Staff committed to develop a handbook which could serve as an advisory tool for assessing air quality impacts of proposed projects in Placer County.
- June 10, 2010, meeting of the District Board: Your Board, at the request of the City of Roseville, addressed Roseville's concerns regarding District's existing recommended thresholds of significance within the District's CEQA review process which had been in place since 1996. District staff provided a detailed analysis including the foundation of recommended thresholds and the District's justification for its CEQA review practices. Your Board then directed staff to continue the use of the existing recommended thresholds of significance until such time as they may be replaced by the Indirect Source Rule (ISR)[1] or at such time as the District staff was prepared to recommend changes to thresholds associated with Greenhouse Gas and related SB375 work products.

The primary purpose of the CEQA Air Quality Handbook (Handbook) is to describe the District's existing review process related to the processing of CEQA documents when the District acts as a Commenting Agency for land use projects located within Placer County. The Handbook describes criteria used by the District in order to recommend to Lead Agencies when an air quality analysis should be prepared, what types of analyses should be performed, and what kinds of mitigation measures should be identified to reduce overall air quality impacts from proposed land use projects. These criteria include specific methods for calculating emissions, with references to applicable models, recommended thresholds for evaluating the level of significance, and mitigation strategies for mitigating a project's related air quality impacts. The Handbook does not propose any new standards, thresholds, or

1 It was a commitment of rule adoption for the Sacramento Regional 8-hour Ozone State Implementation Plan (SIP). Due to the concerns regarding the later legislative requirement and EPA rule implementation requirements, the Board of Directors took action to remove this commitment from the Sacramento Region Ozone SIP on August 11, 2011.

requirements beyond those previously presented to your Board at the December 2008, and June 2010, Board meetings, but rather describes the District's process for reviewing land use related air quality impacts using our existing criteria and recommended thresholds, as directed by your Board.

The Handbook has also been designed as an advisory tool to provide planning practitioners, environmental consultants, and land use developers with assessment strategies, tools, and step-by-step procedures for conducting a thorough analysis to evaluate air quality issues. Helpful navigation links, website "hyper-links", citations, references, and diagrams are located throughout the Handbook. It is the District's desire to provide a "user-friendly" document that not only allows the reader to navigate the Handbook for an understanding of the District's review process, but also provides planning practitioners the means to obtain useful information from public agencies and other resources. Furthermore, the Handbook also encourages land use planners, developers, and consultants to contact District planning staff for early consultation in the environmental review process. The Handbook and consultation with the District's staff will help to ensure that any proposed air quality analysis is appropriate and adequate for a given project. Knowing what is appropriate and adequate should result in less preparation and less review time, leading to a potential reduction in overall project costs.

The District released the 1st draft of the Handbook in October 2011, to all local jurisdictions throughout the County for review and comment. The District released the 2nd draft of the Handbook on August 3rd, 2012, for public review. The notice of release for the 2nd draft was mailed to interested stakeholders and a public meeting to present the Handbook was held on September 5, 2012. District staff has also met directly with the City of Roseville and the Building Industry Association regarding the draft Handbook. The strikeout version of the Handbook (Attachment #1) includes the modifications based on the comments and suggestions received for the 2nd draft (released on August 3rd, 2012). All comments provided to District staff by all local jurisdictions and interested parties, as well as District staff responses, are attached with the staff report (Attachment #2). The clean version of the Handbook, incorporating all revisions, (Attachment #3) will be posted on the District's CEQA website.

The Handbook will be updated, as needed, with new information such as; new state or local regulatory requirements, additional feasible mitigation measures, modeling tools for analyses, and useful resource documents prepared by other public agencies.

Fiscal Impacts: Environmental review of land use projects is a core program area of the District and any staff resource allocated to that program has been addressed in the District budget. There are no plans to increase staffing resources beyond the current allocations at this time.

Recommendation: None. This item is being presented to your Board as an information item that does not require action.

Attachment (s) **#1:** Strikeout Version of PCAPCD CEQA Air Quality Handbook.
#2: Staff Report
#3: Compact Disk with Clean Version of PCAPCD CEQA Air Quality Handbook and attachments to the Staff Report

ATTACHMENT #1

SUBJECT:

Strikeout Version

of

2012 Placer County Air Pollution Control District

CEQA Air Quality Handbook





CEQA Air Quality Handbook

Assessing and Mitigating Air Quality Impacts Under CEQA

Placer County
AIR POLLUTION CONTROL DISTRICT

October 11th ~~August 3rd~~, 2012

~~DRAFT~~

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Purpose Statement

The primary purpose of this handbook is to describe the District's existing review program related to the processing of CEQA documents associated with land use projects in Placer County. This document's focus is on the District's role as a commenting agency for land use projects. The handbook is also designed as an advisory document which recommends clearly defined uniform procedures for preparing the air quality analysis section of environmental documents for projects subject to CEQA. The handbook defines the criteria used by the District which recommends when an air quality analysis is necessary, the type of analysis that should be performed, and the kind of mitigation measures which could be used in order to reduce overall air quality impacts. These criteria include specific methods for calculating emissions, with references to applicable models, as well as mitigation strategies that developers can integrate into their projects in order to reduce air quality impacts. The goal of this document is to simplify the process of evaluating and mitigating potential air quality impacts from new development in Placer County.

The handbook offers step-by-step procedures for a thorough environmental impact analysis of adverse air emissions associated with land development in all jurisdictions within Placer County. In addition, the use of this document will simplify and help streamline the process of evaluating and mitigating air quality impacts from new development within the County thereby potentially reducing review time and overall project costs. The District invites CEQA practitioners and land use developers to contact District planning staff for consultation on the use of this handbook or for early review of a proposed project in order to ensure that air quality impacts are mitigated early in the process and at the least possible cost.

If you're uncertain whether or not you need further information on any of the topics covered in this handbook, please review the District's website at: http://www.placer.ca.gov/Departments/Air/CEQAHandbook.aspx or contact us directly at (530) 745-2330.

This handbook and associated appendices are subject to periodic revision. It is recommended that project proponents check the District website to ensure they have the most current copy of the handbook.

Our vision is to achieve and maintain clean air standards throughout Placer County. We strive towards this end by managing the County's air quality in a manner to protect and promote public health by controlling and seeking reductions of air pollutants while recognizing and considering the economic and environmental impacts.

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Acronyms & Abbreviations

AAQS	Ambient Air Quality Standards
ACM	Asbestos Containing Material
APCD	Air Pollution Control District
ATCM	Air Toxics Control Measure
BACT	Best Available Control Technology
CAPCOA	California Air Pollution Control Officer's Association
CARB	California Air Resources Board
CalEEMod	California Emissions Estimator Model
CEQA	California Environmental Quality Act
CNG	Compressed Natural Gas
CO	Carbon Monoxide
CO_2	Carbon Dioxide
District	Placer County Air Pollution Control District
DEIR	Draft Environmental Impact Report
DPM	Diesel Particulate Matter
EPA	United States Environmental Protection Agency
EIR	Environmental Impact Report
FCAA	Federal Clean Air Act
GHG	Greenhouse Gas
HRA	Health Risk Assessment
IPCC	Intergovernmental Panel on Climate Change
IS	Initial Study
ITE	Institute of Transportation Engineers
LOS	Level of Service
LTAB	Lake Tahoe Air Basin
MCAB	Mountain County Air Basin
MND	Mitigated Negative Declaration
ND	Negative Declaration
NAAQS	National Ambient Air Quality Standard
NESHAP	National Emission Standard for Hazardous Air Pollutants
NOP	Notice of Preparation
NOx	Oxides of Nitrogen
NSR	New Source Review
O_3	Ozone
Pb	Lead
PM_{10}	Particulate Matter (less than 10 microns)
ppm	Parts per million
ROG	Reactive Organic Gases
SIP	State Implementation Plan
SO_2	Sulfur Dioxide
SVAB	Sacramento Valley Air Basin
TAC	Toxic Air Contaminants
TOS	Threshold of Significance
VDEC	Verified Diesel Emission Control
VMT	Vehicle Miles Traveled
URBEMIS	Urban Emissions Model

Project Review & Analysis

Project Review & Analysis

1.1. What is CEQA?

The California Environmental Quality Act (CEQA), enacted in 1970, is the foundation of environmental law and policy in California. CEQA encourages the protection of all aspects of the environment (e.g., water quality, noise, land use, natural resources, transportation, energy, human health, and air quality) by requiring state and local agencies to prepare environmental impact analyses and to make decisions based on those studies' findings regarding the environmental effects of the proposed project and/or action. CEQA applies to projects undertaken by a government entity itself, or projects that are either funded by, or require an entitlement through a public agency that may cause either a direct physical change in the environment, or a reasonable indirect physical change in the environment[1]. The agency with primary responsibility for the preparation of an environmental document is known as the **lead agency**. As defined by CEQA, a lead agency means the public agency which has principal responsibility for carrying out or approving a project which may have a significant effect upon the environment[2]. Examples of lead agencies would include local city and county governments, local school districts, etc. During the preliminary review of the project, the lead agency must determine whether CEQA applies to the project being evaluated and whether the project is exempt from the provisions of CEQA. A project is only subject to CEQA if it involves the exercise of an agency's discretionary powers, and falls within the definition of a "project" as defined by CEQA Guidelines[3].

> *A "project" is an activity undertaken by an agency which must receive some discretionary approval (meaning that the agency has the authority to deny the requested permit or approval) from a government agency which may cause either a direct physical change in the environment or a reasonably foreseeable indirect change in the environment.*

Generally, the lead agency, in consultation with other relevant agencies, will prepare a preliminary analysis, known as an Initial Study, in order to determine which appropriate environmental document is needed. If the Initial Study concludes that the project may have a significant effect on the environment, an Environmental Impact Report (EIR) should be prepared; otherwise, a Negative Declaration (ND) or Mitigated Negative Declaration (MND) should be prepared.

Additionally, a lead agency is required to consult with some agencies, and is authorized to consult informally with other agencies depending on the agency's jurisdiction over resources affected by the proposed project[4]. The purpose of interagency consultation is to ensure that all affected agencies have a voice in the process.

For any given project many agencies and groups may be involved in the CEQA process. Agencies serve in different roles for different projects. When determining whether to prepare an EIR, the lead agency is required to formally consult with responsible and trustee/public agencies.

A **responsible agency**, as defined by CEQA, means a public agency, other than a lead agency, which has responsibility for carrying out or approving a project[5]. An example of a responsible agency would be a local water district, fire district, air district, etc. which issues permits for specific approvals related to that ~~agencies~~ agency's rules and requirements. A **trustee agency** means a state agency that has jurisdiction by law over natural resources affected by a project, that are held in trust for the people of the State of California[6]. Examples of trustee agencies would include the State Department of Fish and Game, State Department of Parks and Recreation, etc.

Comment [A1]: Rocklin (B-1)

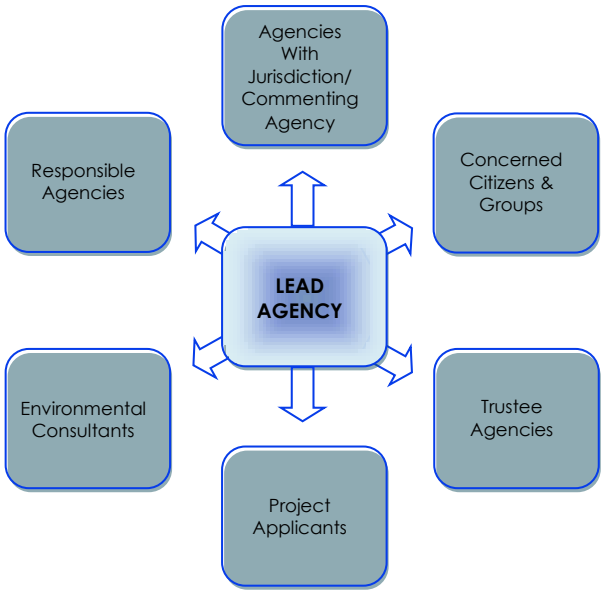

Figure 1-1: Participants in the CEQA Process

Agencies which have some jurisdiction over a specific aspect of a project, but do not fit into one of the two categories above are commonly known as **commenting agencies.** A commenting agency can be any state agency, board or commission, any county, city, regional agency, public district, or redevelopment agency or other public agency[7]. In most cases this is the role of the District. The following section describes the District's role in the CEQA process in more detail.

1.2. The Role of the District in CEQA

As a public agency, the District may act as a lead agency, responsible agency, or commenting agency. In most cases the District acts as a commenting agency for land use projects. As such, this document's primary focus is on the District's role as a commenting agency for land use projects.

Comment [A2]: AECOM (A-2a)

The District provides comments on environmental documents such as Notice of Preparations (NOP), Draft Environmental Impact Reports (DEIR), Final Environmental Impact Reports (FEIR), and Notice of Availabilities (NOA) submitted to the District by lead agencies and makes comments directly related to any environmental effects relating to air quality that the District has determined to be appropriate. If requested by the jurisdiction, the District may also submit informal comments on the Administrative Draft Environmental Impact Report (ADEIR).

The District takes its commenting role seriously under CEQA, and does its best to provide timely, detailed comments to assist the lead agency. Of course, it is then up to the lead agency to

incorporate such comments as it sees fit under its discretion as lead agency. The District makes itself available at all stages of environmental review as a resource for local governments within Placer County.

The District acts as a responsible agency when a project or a portion of a project is required to obtain a permit from the District. For example, if a regional shopping center is proposed, and part of the proposal included a gasoline service station which required approval of a permit by the District, then the District would be considered a responsible agency during the review process.

Comment [A3]: AECOM (2b)

Although rare, in some cases the District may act as a lead agency. The District can change from a responsible agency to a lead agency if a lead agency (1) fails to prepare an environmental analysis as required under CEQA, (2) the District determines that a subsequent EIR is required for the project, (3) the District determines that the adopted/certified EIR, MND, or ND was inadequate and/or the District did not receive any notice of the document when it was circulated, or (4) if a District and a City or County agree that the District should be the lead agency for a particular project.

The District regulates many sources of pollutants in the ambient air. The District is responsible to implement certain programs and regulations for controlling air pollutant emissions to improve air quality in order to attain federal and state ambient air quality standards. In addition to industrial sources, land use projects have the potential to generate air pollutants which result in adverse environmental impacts and are therefore subject to CEQA.

Under CEQA statutes and guidelines, lead agencies are encouraged to seek comments from responsible agencies and any public agency that has jurisdiction by law over resources that may be affected by a land use project[8]. For most development proposals this typically involves the District when projects include vehicle trip generation that is high enough to cause emission levels capable of hindering the District's efforts to attain and maintain the Federal and State ambient air quality standards. Other air quality impacts, such as those associated with greenhouse gasses, odors, and special health related impacts, are also considered during the environmental review phase of a project.

It is important to note that District comments made during the environmental review process are ***recommended*** to the lead agency. It is the lead agency's responsibility to incorporate all, some, or none of the District's recommendations on any given project.

The following figure illustrates in more detail what the District does.

Responsibilities of the District

Protect and promote public health by controlling and seeking reductions of air pollutants while recognizing and considering the economic and environmental impacts through the following efforts.

Regulate air pollutant emissions from stationary sources

- ✓ Evaluate emissions/potential emissions and establish permit limitations consistent with District rules, regulations and applicable laws
- ✓ Develop and maintain a vigilant inspection program
- ✓ Provide guidance on implementation of rules and regulations
- ✓ Establish partnerships with industry to promote reductions of emissions
- ✓ Adopt rules/regulations as necessary to further the goals of the District and to meet state and federal mandates

Seek quantitative reductions in amounts of air pollutants being released within the County

- ✓ Identify and regulate new sources of emissions
- ✓ Alleviate toxic and nuisance emission impacts upon the public
- ✓ Provide economic incentives for emission reductions
- ✓ Deter emission violations through the enforcement of District rules, and laws
- ✓ Increase resources applied to mitigation measures
- ✓ Provide public education about sources, effects, and methods of reduction
- ✓ Modify and/or incorporate new rules and regulations as appropriate

Respond to and investigate non-compliant events and sources of emissions in an efficient manner

- ✓ Initiate measures to allow sources to gain compliance
- ✓ Establish a hierarchical enforcement system that yields appropriate sanctions
- ✓ Partner with other agencies when feasible to assist in field response

Recommend effective planning measures

- ✓ Maintain and enhance a collection system regarding emission inventory and air shed properties throughout the basins
- ✓ Prepare and update air quality plans to maintain or achieve standards
- ✓ Review development plans for impacts on air quality when asked by Lead Agencies.
- ✓ Fulfill our duty as a Responsible Agency when required

Figure 1-2: Responsibilities of the District

1.3. Early Consultation

The District encourages local jurisdictions and project applicants to address air quality issues as early as possible in the project planning stage. Addressing land use and site design issues while a proposed project is still in the conceptual stage increases opportunities to incorporate project design features to minimize land use compatibility issues and air quality impacts. By the time a project enters the CEQA process, it is usually more costly and time-consuming to redesign the project to incorporate mitigation measures. Early consultation may be achieved by including a formal step in the jurisdiction's development review procedures or simply by discussing air quality concerns by making an initial contact with the District regarding a proposed development. Regardless of the specific procedures a local jurisdiction employs, the District encourages consultation in order to incorporate features into a project that minimize air quality impacts before significant resources (public and private) have been devoted to the project.

The following air quality considerations warrant particular attention during early consultation between lead agencies and project proponents:

- Land use and design measures to encourage alternatives to the automobile, conserve energy and reduce project emissions;
- Land use conflicts and exposure of sensitive receptors to odors, toxics and criteria pollutants;
- Applicable District rules, regulations and permit requirements; and
- Current District approaches to GHG analysis and mitigation.

1.4. Types of Projects Generally Reviewed by the District under CEQA

Any project which is subject to CEQA review by local jurisdictions can be forwarded to the District by the lead agency for screening to determine District involvement. In general, any proposed project with **short-term construction** emissions or **long-term operational** emissions as identified in this handbook should be submitted to the District for review. The project will be evaluated to determine the potential for significant air quality impacts, with further analysis or mitigation recommended if appropriate.

- ✓ See CHAPTER 3:~~CHAPTER 3:~~ for further detail on construction emissions.
- ✓ See CHAPTER 4: for further detail on operational emissions.

Types of projects generally subject to CEQA review include:

- ~~Discretionary Projects~~
  - General Plans
  - Specific Plans
  - Use Permits
  - Tentative Subdivision/Parcel Maps
  - Design Reviews (i.e., tiered from a previously approved specific plan)
  - Public Works Projects
  - Clearing or grading of land
  - Improvements to existing public structures
  - Enactment and amendment of zoning ordinances

Comment [A4]: Rocklin (B-2)

Comment [A5]: AECOM (A-4)

✓ See CHAPTER 5: for further detail on GHG emissions.

1.5. District Steps in Processing an Application

As mentioned previously, the vast majority of CEQA documents that are reviewed by the District are done so with the District taking the role as a "commenting agency." The following are the summary of internal steps that the District follows when acting as a commenting agency. ~~Mode~~More detailed discussion for each step is described in the following chapters.

Figure 1-3: District Steps in Reviewing Land Use Projects

Step 1: Initial Review of Project

When the District receives a Notice of Preparation or an application forwarded by the lead agency for a proposed project, where an environmental document (e.g., Initial Study) will be prepared, the District can assist the lead agency to evaluate potential air quality impacts associated with the project. Review of potential impacts that should be considered during the preparation of the Initial Study typically include verifying emission sources associated with the project, reviewing existing air quality conditions, and/or verifying potential conflicting neighboring land uses. The Initial Study should also consider all phases of project planning, construction and operational impacts, as well as cumulative impacts.

~~Substantial Evidence~~

~~For an Initial Study, this means enough relevant information and reasonable inferences from that information must be present in order to make a fair argument which consists of:~~

- ~~Reasonable assumptions predicated on facts~~
- ~~Expert opinion supported by facts~~
- ~~Facts~~

Step 2: Modeling Analysis

A good modeling analysis is the key foundation for providing scientific data and support for a project's related impact analysis and conclusions. Where there is the potential for a proposed project to generate substantial amounts of criteria pollutants or result in a potentially conflicting land use, a modeling analysis can be used to estimate the project's emissions and potential risk levels. The District will review the modeling analysis results provided by the lead agency to verify

Comment [A6]: Link to Chpt 5 added.

Comment [A7]: AECOM (A-5)
Rocklin (B-3)
Roseville (E-5a)

Comment [A8]: Staff addition.

Comment [A9]: Rocklin (D-4)

Comment [A10]: BIA (C-5)
Roseville (E-5b)

if the analysis is appropriate to determine the ~~level of significance for a project's~~project related air quality impacts.

When reviewing an air quality modeling analysis, District staff will review the associated sections or chapters of the environmental document (e.g., project description, land use, traffic analysis, and air quality) to verify the accuracy of modeling results and any environmental conclusions based on those results. District staff will also review the analysis to identify if all emission sources generated by the project, the existing air quality conditions, and neighboring land uses were considered. District staff may, at its discretion, also prepare an internal modeling analysis for projects under review to further assist the lead agency. This additional modeling analysis would be based on the project description and related information provided by the lead agency. If the preliminary information submitted by the applicant is not sufficient to perform the modeling analysis, the District may request that the lead agency obtain additional information from the applicant. If the additional requested information is not received, then the District will not be able to perform internal modeling. In such cases, the District may notate such in their comments related to the project.

- ✓ See CHAPTER 3:~~CHAPTER 3:CHAPTER 3:CHAPTER 3:CHAPTER 3:~~ and CHAPTER 4:~~CHAPTER 4:CHAPTER 4:CHAPTER 4:CHAPTER 4:~~ for additional information on analyzing air quality impacts.
- ✓ Free download of the model, user manual, and information on CalEEMod are available at www.caleemod.com.

Step 3: ~~Determining~~Comparing to Applicable Thresholds of Significance

The ~~determination~~ modeling analysis results are then compared to the applicable thresholds of significance ~~is one of the key decisions in the CEQA review process. The determination is based on comparing the~~ for project related construction and operational emissions ~~to the District's Project Level Thresholds of Significance.~~. For more information and discussion on applicable thresholds, please see CHAPTER 2:. If results demonstrate that project-related emissions ~~exceed the threshold (or other thresholds used~~ to be less than applicable thresholds, no mitigation measures would be required and a less-than-significant conclusion can be determined by the lead agency~~).~~. If the modeling results demonstrate the potential for the project-related emissions to exceed thresholds, the project related air quality impacts may be potentially significant~~. The District often assists the lead agency to verify if the proposed mitigation will reduce impacts to achieve a "less than significant" conclusion or would result in a "potentially significant" impact, depending on the level of effectiveness of the proposed mitigation measures forwarded by the lead agency. The District may also recommend additional~~ and mitigation measures ~~which have been implemented by similar neighboring projects, or where mitigation measures previously utilized by a similar project have been determined to be feasible in order to further reduce project-related emissions.~~should be implemented to reduce air quality impacts.

What is included in a good modeling analysis?

A modeling analysis is an air quality impact analysis based on scientific data which includes project specific data including, but not limited to:

- Timeframes for construction and operation;
- Reasonable assumptions with supporting citations;
- Description of energy source providers, land use and climate zone settings applicable to the project area; and
- Consistency with project specific data (e.g., VMT from the project's traffic study or water usage from the project's water study).

- ✓ See CHAPTER 2:~~CHAPTER 2:CHAPTER~~

Comment [A11]: BIA (7)

Comment [A12]: Roseville (E-5c)

Comment [A13]: Rocklin (D-5)

2:CHAPTER 2:CHAPTER 2: for additional information on "Thresholds of Significanceapplicable thresholds of significance."

Step 4: Identify Mitigation Measures

If theAs stated above, mitigation measures should be implemented when project-related emissions are identified to exceed the District's recommended Project-Level Thresholds of Significance (constructionapplicable thresholds. Proposed mitigation measures are then selected and operational emissions) and/or the Cumulative-Level Thresholds of Significance (operation emissions only), mitigation measures proposed within the environmental document will be evaluated by the District to helpdetermine if the project-related emissions can be reduced below applicable thresholds. The District may assist the lead agency to determine if they arethe mitigation is sufficient enough to demonstrate that project-related emissions can be reduced below the thresholds. The District will evaluate the effectiveness of the proposed on-site mitigation measures to verify that: 1) Constructionif the project related construction and operational emissions are reduced below the project-level threshold of 82 lbs per day (ROG, NOx, and PM), and 2) Operational emissions are reduced below the Cumulative-Level Thresholds of Significance of 10 lbs per day (ROG and NOx).applicable thresholds after mitigation implementation. If the District is concerned that the proposed mitigation is not sufficient enough to reduce criteria pollutants below the thresholds, the District will recommend to the lead agency that the project either implement additional on-site measures, or recommend that the project participate in the District's Off-Site Mitigation Program. More information on the programOff-Site Mitigation Program is available in APPENDIX H.

NOTE: When analyzing mitigation measures, it is the District's preference that lead agencies utilize on-site measures rather than offsite measures.

- ✓ See APPENDIX A for the District's "standard" construction mitigation measures;
- ✓ APPENDIX C for operational mitigation measures; and
- ✓ APPENDIX G for GHG mitigation measures.

Step 5: District's Response

The District will submit to the lead agency a comment letter summarizing the District's findings and any recommendations which may assist the lead agency to further reduce potential impacts associated with a project.

A Note about Modeling Tools

For the modeling application, the District recommends CalEEMod (California Emissions Estimator Model) as the software used in air quality modeling analysis. CalEEMod is a land use emissions computer model developed in collaboration with other air districts of California. It is designed to quantify potential direct criteria pollutants and greenhouse gas (GHG) emissions associated with the construction and operation of land uses such as residential and commercial facilities as well as indirect emissions, such as GHG emissions from energy production, solid waste handling, vegetation planting and/or removal, and water conveyance. In addition, CalEEMod calculates the benefits from implementing mitigation measures, including GHG mitigation measures, developed and approved by the California Air Pollution Control Officers Association (CAPCOA). Those using the model include environmental consultants/professionals, public agency land use

Comment [A14]: Rocklin (B-6)
BIA (C-8)

Comment [A15]: Placer (D-2)

Comment [A16]: AECOM (A-5)
Rocklin (D-7)
Roseville (E-5d)

Comment [A17]: Rocklin (D-8)

Comment [A18]: AECOM (A-19)
BIA (C-9)

planners, air quality Districts, CEQA/NEPA document reviewers, land use developers, and decision-makers.

~~Once the District's handbook is released,~~Currently, CAPCOA is upgrading the CalEEMod with the latest CARB Mobile Emission Model (EMFAC2011). Once CalEEMod has been updated, URBEMIS will no longer be recommended by the District due to outdated mobile source emission factors. However, for those projects where the NOP has been issued prior to the date of the release of the handbook, and/or projects that have been scoped to use URBEMIS prior to the release date of handbook, the District will recognize URBEMIS as the modeling tool for the project.

Comment [A19]: Rocklin (B-9)

For road construction projects, another model recommended by the District is the Sacramento Metropolitan Air Quality Management District (SMAQMD) ~~Roadway Construction Emissions Model~~Roadway Construction Emissions Model which ~~can be accessed via the SMAQMD website and is available to assess~~assesses the emissions of linear construction projects. This model can be accessed via the SMAQMD website at www.airquality.org . This model provides a more precise analysis of road construction, road widening, etc. than CalEEMod.

Comment [A20]: Placer (D-3)

1.6. Minimum Project Information Needed for District Review

As previously discussed, early consultation with the District can ensure the environmental document adequately addresses air quality issues. Also please note that the submittal of an incomplete application could result in further delays in project review.

Minimum Information Needed

In order to facilitate our review of the proposed project, the following minimum information should be provided:

a. Complete and accurate project description;

b. Modeling emission calculations for both construction and operational phase emissions; Temporary construction impacts, such as fugitive dust and combustion emissions from construction and grading activities should be quantified and mitigation measures proposed;

c. Relevant environmental documents previously associated with a project, including any previously prepared Initial Studies, NDs, MNDs, EIRs, etc; and

d. Other technical analyses that relate to air quality, including but not limited to traffic analysis, growth impact projections, land use elements, maps, health risk assessments, sensitive receptor locations etc.

1.7. Information to be Included in Environmental Documents

In addition to the "Minimum Information Needed" as described above, the District recommends that environmental documents should include air quality information within the following sections:

Environmental Setting

An Environmental Setting should be included when discussing air quality within an environmental document.

Within the "Environmental Setting" section of the document there should be a discussion of the physical environment conditions in the vicinity of the project. This environmental setting will normally constitute the baseline physical conditions by which a lead agency determines whether an impact is significant. In terms of air quality, this includes any existing sources of air pollution (i.e., an adjacent highway). ~~There should also be some discussion of any inconsistencies between the proposed project and any applicable general plan, community plan, or specific plan. In addition, the~~The environmental document should discuss pollutants which may be generated by the proposed project. Pollutants of concern when reviewing land use projects include carbon monoxide (CO), ozone(O_3), Nitrogen Oxides (NO_x), Reactive Organic Compounds (ROGs), sulfur dioxides (SO_2), particulate matter up to 10 microns and 2.5 microns in diameter (PM_{10} and $PM_{2.5}$, respectively), and lead (Pb). Toxic Air Contaminants (TAC) of concern includes emissions from stationary and on-road/off-road mobile sources, and naturally-occurring asbestos~~, and odors~~.

Comment [A21]: AECOM (A-6b)

There should also be some discussion within the environmental setting of any inconsistencies between the proposed project and any applicable general plan, community plan, or specific plan[9]. The lead agency may also consider adding discussion of consistency with policies and standards, as they relate to an applicable plan, within the regulatory setting.

What is a SIP?

- A SIP is a comprehensive plan that describes how an area will attain national ambient air quality standards.
- Local air Districts are required to prepare SIP elements and are given specific deadlines to submit them to ARB for review and approval.
- ARB forwards SIPS to the US EPA for approval and publication.

Comment [A22]: AECOM (A-6a)

Regulatory Setting

The District has responsibility for controlling air pollution emissions including "criteria air pollutants" and "toxic air pollutants" from direct sources (such as factories) and indirect sources (such as land-use projects) to improve air quality in order to attain federal and state ambient air quality standards.

As a part of the Sacramento federal ozone nonattainment area, the District works with the other local air Districts within Sacramento area to develop a regional air quality management plan under the Federal Clean Air Act (FCAA) requirement.

This management plan is called a State Implementation Plan (SIP) which describes and demonstrates how Placer County, as well as the Sacramento nonattainment area, would attain the required federal 8-hour ozone standard by the proposed attainment deadline. One of the proposed mitigation strategies in the SIP is to recommend and implement mitigation measures through the review of land use projects at the local level.

The Sacramento Regional 8-hour Ozone Attainment and Reasonable Further Progress Plan was prepared to meet requirements of the federal Clean Air Act for the 1997 8-hour ozone standard. This Sacramento Ozone SIP demonstrates how the region is going to reduce emissions and attain the 1997 ozone standard no later than 2018. After this SIP approval, EPA amended its 8-hour ozone standard in 2008, with implementation to begin in 2011. A new ozone SIP to meet the 2008 ozone standard will be prepared for the Sacramento nonattainment area.

Comment [A23]: Roseville (E-5e)

The U.S. EPA and the California Air Resources Board have set standards for allowable levels of criteria air pollutants in the air. Typically, the California standards (California Ambient Air Quality Standards, or CAAQS) are stricter and more health protective than the national standards (National Ambient Air Quality Standards, or NAAQS). States and localities are required to monitor the ambient concentrations of these pollutants. This information is used to determine if an area attains or violates a particular air quality standard.

- ✓ For the current attainment statuses in Placer County go to Table 1-1: Ambient Air Quality Standards & Designations~~Table 1-1: Ambient Air Quality Standards & Designations~~~~Table 1-1: Ambient Air Quality Standards & Designations~~~~Table 1-1: Ambient Air Quality Standards & Designations~~~~Table 1-1: Ambient Air Quality Standards & Designations~~.
- ✓ The most current state and federal air quality standards are available at: http://www.arb.ca.gov/desig/adm/adm.htm.
- ✓ The most current designations in California are available at: www.arb.ca.gov/desig/desig.htm.
- ✓ More information regarding the Sacramento Ozone SIP can be found at:

http://www.airquality.org/plans/federal/ozone/index.shtml

Table 1-1: Ambient Air Quality Standards & Designations

Ambient Air Quality Standards & Designations*									
Pollutants	Average Time	State Classification	State Attainment Status			Federal Classification	Federal Attainment Status		
			SVAB	MCAB	LTAB		SVAB	MCAB	LTAB
Ozone	1hr	0.09 ppm	N	N	A	None	--	--	--
	8 hr	0.070 ppm	N	N	N	0.075 ppm	N	N	U-A
Particulate Matter PM_{10}	24 hr	50 ug/m³	N	N	N	150 ug/m³	A	A	A
	Annual	20 ug/m³	N	N	N	None	--	--	--
Fine Particulate Matter $PM_{2.5}$	24 hr	No Separate State Standard	--	--	--	35 ug/m³	N	U	U
	Annual	12 ug/m³	A	U	A	15 ug/m³	A	U	U
Carbon Monoxide (CO)	1 hr	20 ppm	A	U	A	35 ppm	A	A	A
	8 hr	9 ppm	A	U	A	9 ppm	A	A	A
	Tahoe 8 hr	6 ppm	--	--	A	None	--	--	--
Nitrogen Dioxide (NO_2)	1 hr	0.18 ppm	A	A	A	100 ppb~~None~~	--	--	--
	Annual	0.030 ppm	--	--	--	0.053 ppm (100 ug/m³)	A	A	A
Sulfur Dioxide (SO_2)	1 hr	0.25 ppm	A	A	A	0.075 ppm (196 ug/m³)	--	--	--
	24 hr	0.04 ppm	A	A	A	0.14 ppm	A	A	A
	Annual	None	A	U	A	0.030 ppm	A	A	A
Lead	30 day average	1.5 ug/m³	A	A	A	None	--	--	--
	Calendar Quarter	None	--	--	--	1.5 ug/m³	A	A	A

Footnotes:
A=Attainment
N=Non-Attainment
U=Unclassified
U-A=Unclassified/Attainment

***Air Quality Statuses are based on the latest updates (June, 2012) from CARB website.**

Comment [A24]: AECOM (A-7)
PLACER (D-6)

Plans, Policies, Regulations, and Laws

Environmental documents should include a discussion of current District laws, regulations and policies. In order to accomplish both federal and state mandates, the District offers a review process for land use projects including 1) thresholds of significance based on modeling analysis, and 2) evaluation process including the identification of feasible mitigation measures.

Ambient Air Quality Standards

Ambient air quality standards (AAQS) define clean air, and are established to protect even the most sensitive individuals in our communities. An air quality standard defines the maximum amount of a pollutant that can be present in outdoor air without harm to the public's health. California law authorizes CARB to set ambient (outdoor) air pollution standards (California Health & Safety Code Section 39606) in consideration of public health, safety and welfare[10].

The District recommends the following language (or similar) for use within environmental documents when discussing the air basin in which the project is located.

Comment [A25]: Placer (D-7)

Sacramento Valley Air Basin (SVAB)
"The project site is located within the SVAB and is under the jurisdiction of the Placer County Air Pollution Control District. The SVAB is designated as nonattainment for federal and state ozone (O_3) standards, nonattainment for the federal particulate matter standard ($PM_{2.5}$) and state particulate matter standard (PM_{10})."

Mountain Counties Air Basin (MCAB)
"The project site is located within the MCAB and is under the jurisdiction of the Placer County Air Pollution Control District. The MCAB is designated as nonattainment for federal and state ozone (O_3) standards, nonattainment for the state particulate matter standard (PM_{10})."

Lake Tahoe Air Basin (LTAB)
"The project site is located within the LTAB and is under the jurisdiction of the Placer County Air Pollution Control District. The LTAB is designated nonattainment for the state particulate matter standard (PM_{10})."

Figure 1-4: Placer County Air Basins

1.8. Additional Analysis in Environmental Documents

As stated above, additional analysis may be recommended by the District to determine if potential impacts may occur.

a) Depending on the nature of the project, a thorough emission analysis should be performed on all relevant emission sources, using emission factors from the EPA document AP-42 "Compilation of Air Pollutant Emission Factors", the latest approved version of EMFAC, OFF-ROAD or other approved emission calculator tools. The emissions analysis should include calculations for estimated emissions of all criteria air pollutants and toxic air contaminants released from the anticipated land use mix on a quarterly and yearly basis. Documentation of emission factors and all assumptions as well as the modeling inputs and outputs (e.g., anticipated land uses, average daily trip rate from trip generation studies, etc.) should be provided in an appendix.

b) If a project has the potential to emit toxic or hazardous air pollutants including diesel exhaust, and is located in close proximity to sensitive receptors, impacts may be considered significant due to increased cancer risk for the affected population, even at very low levels of emissions. Such projects may be required to prepare a risk assessment to determine the potential level of risk associated with their operations. The District should be consulted on any project with the potential to emit toxic or hazardous air pollutants. Pursuant to the requirements of California Health and Safety Code Section 42301.6 (AB 3205) and Public Resources Code Section 21151.8, subd. (a)(2), any new school or proposed industrial or commercial project site located within 1000 feet of a school should be referred to the District for review.

c) CARB has determined that emissions from sources such as roadways and distribution centers (and to lesser extent gas stations), certain dry cleaners, marine ports and airports as well as refineries can lead to unacceptably high health risk from diesel particulate matter and other toxic air contaminants. If the proposed project is located in close proximity to any of the listed sources a health risk screening and/or assessment should be performed to assess risk to potential residence of the development. For additional information, please refer to the following:

   - ✓ CARB's Land use Handbook (2005): http://www.arb.ca.gov/ch/landuse.htm

d) A cumulative impact analysis should be done to evaluate the combined air quality impacts of this project and impacts from existing and proposed future development in the area.

e) Naturally-occurring asbestos (NOA) may exist at the site. A geological survey is required for the site if it is located in any of the District identified naturally-occurring asbestos areas. If naturally-occurring asbestos is found, the ~~DEIR~~environmental document should indicate that a plan will be developed to comply with the requirements listed in the Air Resources Board's Asbestos ATCM for Construction, Grading, Quarrying, and Surface Mining Operations. If a project is located in an identified NOA area and naturally-occurring asbestos is not present at the site, an exemption request will need to be filed with the District.

f) Mitigation measures relating to air quality should be implemented, as appropriate, as discussed in Chapters 3, 4, and 5 of this document.

g) If it is determined by the lead agency that an EIR is the appropriate environmental document then it should include a range of alternatives to the proposed project that could effectively minimize air quality impacts. Please note that impacts associated with

Comment [A26]: AECOM (A-8)

any "Alternatives" in a DEIR could be analyzed on a *qualitative* basis, while the proposed project (*i.e.*, Preferred Alternative) could be reviewed on a *quantitative* basis. All calculations and assumptions used should be fully documented in an appendix to the DEIR. The District recommends that the EIR consultant contact District staff if additional information and guidance is needed.

1.9. Use of a Previously Certified EIR (Tiering)

Tiering is defined as, "using the analysis of general matters contained in a broader EIR (such as one prepared for a general plan, specific plan, or a policy statement) with later EIRs and negative declarations on narrower projects; incorporating by reference the g*eneral dis*cussions from the broader EIR; and c*on*centrating the later EIR or negative declaration s*olely on the* issues specific to the later project[11]." A land use project may be required by the lead agency to implement mitigation measures which were identified by the previous certified EIR in order to mitigate impacts. However, the previous certified EIR could be outdated due to the time lag between its environmental analysis and newer more restricted ozone standards, emission analysis and impacts model updates. Mitigation measures initially identified in the original environmental document may not be sufficient to offset the project's related cumulative impacts in today's environment.

Section 15152. (f) of the CEQA Guidelines state that, "A later EIR shall be required when the Initial Study or other analysis finds that the later project may cause significant effects on the environment that were not adequately addressed in the prior EIR." It is the recommendation of the District that previously certified EIRs that have not addressed current, relevant air quality issues be used with caution by lead agencies. For example, EIRs certified prior to the adoption of AB32, September 2006, will likely be considered to be inadequate for any proposed "tiered" review in order to mitigate impacts associated with a project due to the fact that the older EIR could not have adequately addressed current law pertaining to greenhouse gases.

The District will review all projects which propose tiering off a previously certified EIR and will make recommendations to the lead agency whether or not the previously certified EIR adequately addresses all, pertinent air quality issues.

- ✓ See CHAPTER 5:~~CHAPTER 5:~~ for guidance on Greenhouse Gas "tiering" related to the adherence to approved Climate Action Plans.

1.10. Baseline Considerations

CEQA defines baseline as a description of the physical environmental conditions in the vicinity of the project, as they exist at the time the notice of preparation is published, or if no notice of preparation is published, at the time environmental analysis is commenced, from both a local and regional perspective. When a project involves a conversion or reduction in current emission rates, or the project already has permits related to emissions, the lead agency should plan to work with the District in developing a strategy related to baseline conditions and how such conditions are described within a project description. There is an ever changing landscape within the CEQA case law that makes this topic complicated. Beyond standard support, the District is also available to support lead agencies with determining whether a project falls within CEQA, or assisting with what type of review under CEQA may be needed in relation to the complicated baseline issues.

PM_{10}
CO_2
ROG
O_3
SF_6
NO_x
CO_2E
CH_4
N_2O
H_2O
CH_4
HFC
ROG
O_3
SF_6
NO_x
SF_6
NO_x
CO_2E
CH_4
PM_{10}
CO_2
ROG
O_3
SF_6

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Thresholds of Significance Under CEQA

Thresholds of Significance

Thresholds of Significance

2.1. Threshold Decision: Are Effects Potentially Significant?

Thresholds of Significance are used to determine the level of significance for air quality impacts from any given land use project. CEQA encourages each public agency to develop and publish thresholds of significance that the agency uses in the determination of the significance of environmental effects. The thresholds of significance should be supported by substantial, scientific evidence. CEQA does not, however, require commenting agencies, such as the District, to obtain legislative approval when recommending thresholds for possible use by lead agencies; nevertheless the District's Board of Directors is regularly consulted regarding recommended District thresholds. In setting these thresholds, the District considers both the health-based air quality standards as well as the attainment strategies developed in conjunction with the California Air Resources Board (CARB) and the U.S. Environmental Protection Agency (EPA).

Factors to Consider

- Direct effects
- Reasonably foreseeable indirect effects
- Expert disagreement
- "Considerable" contribution to cumulative effects
- Special thresholds for historical and archaeological resources

Comment [A27]: BIA (C-10)

2.2. Project Level Thresholds

Pollution can come from land use sources and stationary sources which are those sources typically associated with industrial-type uses such as factories, refrigeration units, gasoline service stations, etc. The District regulates and permits stationary sources through a program known as "New Source Review" (NSR). The NSR is a permitting program which was established by Congress as part of the 1977 Federal Clean Air Act Amendment which requires that stationary sources of air pollution shall receive permits before they start construction and/or use of the equipment. The NSR program has two objectives: 1) limiting the emission thresholds to ensure that air quality is not significantly degraded from the addition of new and modified industrial sources and 2) requiring Best Available Control Technology (BACT) to assure that any large new or modified stationary source within a given area will be as clean as possible.

Table 2-1: District Recommended Project-Level Thresholds of Significance

	Thresholds of Significance (lbs per day)		
	ROG	NO_x	PM_{10}
Construction Emissions	82	82	82
Operational Emissions	82	82	82

The District has concluded that the industrial pollutants described under the above NSR Program (stationary sources), are equally significant to those pollutants generated with land use projects (i.e., vehicle emissions).

The District has historically applied the concept of the NSR program to assist with the development of the thresholds for projects under the existing CEQA review program. The threshold of 82 lbs per day is based on 15 tons per year, which was set as the total emission threshold associated within the NSR program. Table 2-1: District Recommended Project-Level Thresholds of Significance~~Table 2-1: District Recommended Project-Level Thresholds of Significance~~ shows the current project-level thresholds of significance recommended ~~established~~ by the District related to the impacts of construction and operational emissions associated with a land use project.

Comment [A28]: Roseville (E-5f)

The District uses these thresholds to determine the level of significance for emissions associated with a project's construction emissions (e.g., demolishing, site preparation, earthmoving, and building) and operational emissions (e.g., space heating, motor vehicle trips, and landscaping maintenance). Mitigation measures are then suggested by the District to the lead agency to offset the project's related air quality impacts. On smaller projects, mitigation is used to offset impacts through a Mitigated Negative Declaration document. An EIR process may be recommended by the District to the lead agency if the project related emissions cannot be mitigated to a less than significant level and the project cannot achieve the thresholds described below.

NOTE: The figures in the following table are for reference purposes only, include only two types of land uses (single family residential and retail strip mall), and were calculated with specific criteria. Modeling results will likely vary depending on land use, project location, and other factors. This table should not be used in place of an air quality analysis to determine the level of impact.

Comment [A29]: Rocklin (B-10)
BIA (C-11)
Placer (D-8)

Table 2-2: Project Size as it relates to the 82 lbs per day Threshold (Unmitigated)

The size of land use project which meets the Threshold of 82 lbs per day (NOx only)[1]						
	2012	2015	2020	2025	2030	2035
Residential[2]	340 du	430 du	570 du	695 du	770 du	820 du
Retail[3]	130 ksf	160 ksf	205 ksf	245 ksf	275 ksf	295 ksf

1. CalEEMod 2011.1.1 version
2. Model settings: Placer County APCD, urban area, single family housing
3. Model settings: Placer County APCD, urban area, strip mall

Notes: du = dwelling units; ksf = thousand square feet; NOx = oxides of nitrogen; CalEEMod 2011.1.1 version

2.3. Cumulative Thresholds

Table 2-3: Cumulative-Level Threshold

	Cumulative Impact Threshold (lbs per day)	
	ROG	NO_x
Operational Emissions	10	10

In addition to reviewing the impacts associated with a project individually, CEQA requires that lead agencies review the project's possible environmental effects which are "individually limited but cumulatively considerable." CEQA defines "cumulatively considerable" as the incremental effects of an individual project when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects. Therefore, any land use ~~project's related~~project should be analyzed whether its emissions ~~would~~could be cumulatively considerable ~~if~~when the project contributes a net increase of emissions within Placer County ~~or within incorporated cities within the County~~.

Comment [A30]: Roseville (E-5g)

On June 10, 2010, the District's Board of Directors held a meeting to discuss cumulative thresholds for land use projects within Placer County under the California Environmental Quality

Act (CEQA). In their action, the Board stated that, as a policy, the Board supports the continued use of the 10 lbs per day staff recommended cumulative impact threshold.

Comment [A31]: Roseville (E-5h)

The District has historically recommended 10 lbs per day as the cumulative thresholds for land use projects in Placer County. It is very important to emphasize that the primary reason the District applies a "10 lbs per day" standard as the threshold for a project's cumulative impacts resulting from its ROG and NO_x emissions is because Placer County lies within the federal ozone nonattainment area. This threshold was established based on the NSR requirement, which requires that any stationary source that emits more than 10 lbs per day of ROG and NO_x must employ BACT. Therefore the District recommends any project which emits more than 10 lbs per day should implement mitigation measures to reduce cumulative impacts. Mitigation measures can include both on-site and off-site mitigation measures.

The District does not recommend the use of this cumulative threshold to determine the need for an EIR. Rather, this threshold is used by the District to recommend mitigation measures to offset the project's cumulative air quality impacts. Local governments acting as lead agencies have the responsibility to determine the type of environmental document that should be prepared and should determine when a project's impacts, even after complying with the District's offsite and/or fee programs, are potentially significant as defined under CEQA.

The following table represents the approximate size of a project which would exceed the District's "cumulative" threshold of 10 lbs per day which only applies to a project's operational emissions. This screening methodology may not be appropriate for larger projects which exceed 82 lbs per day. In addition please note that, depending on the location of the project as well as the projects proposed design features, different conclusions may be reached other than those listed below.

NOTE: The figures in the following tables are for reference purposes only, include only two types of land uses (single family residential and retail strip mall), and were calculated with specific criteria. Modeling results will likely vary depending on land use, project location, and other factors. This table should not be used in place of an air quality analysis to determine the project level of impact.

Comment [A32]: AECOM (A-11e)
Rocklin (B-11)

Table 2-4: Project Size as it relates to the 10 lbs per day Threshold (Unmitigated)

The size of land use project which meets the Threshold of 10 lbs per day (NOx only)[1]						
	2012	2015	2020	2025	2030	2035
Residential	40 du	50 du	69 du	84 du	94 du	100 du
Retail	15 ksf	19 ksf	25 ksf	30 ksf	33 ksf	35 ksf

1. CalEEMod 2011.1.1 version
2. Model settings: Placer County APCD, urban area, single family housing
3. Model settings: Placer County APCD, urban area, strip mall

Notes: du = dwelling units; ksf = thousand square feet; NOx = oxides of nitrogen; CalEEMod 2011.1.1 version

The District will recognize any threshold adopted by a lead agency pursuant to CEQA Section 15064.7 (b)(c) and will use the adopted threshold as the applicable threshold for the District's CEQA review process.

The following figure represents general steps for evaluating a project's air quality impacts and determining environmental significance.

Comment [A33]: Roseville (E-5i)

~~District~~ Significance Determination Flowchart

Perform analysis using acceptable methods. Compare project impacts with ~~District~~the applicable thresholds.

Either

District Recommended Threshold(s) of Significance		
Pollutant	Construction Threshold (lbs per day)	Operational Threshold (lbs per day)
ROG	82	82
NO_x	82	82
PM_{10}	82	82

Or

Threshold of Significance adopted by the Lead Agency pursuant to CEQA Section 15064.7 (b)(c).

Does the Project exceed the above thresholds of significance? → **NO** → **LESS-THAN-SIGNIFICANT IMPACT**

YES

Apply mitigation and calculate reductions. Compare mitigated impacts with the thresholds.

YES

Does the Project exceed thresholds of significance after mitigation? → **NO** → **LESS-THAN-SIGNIFICANT IMPACT WITH MITIGATION**

YES

SIGNIFICANT & UNAVOIDABLE

Figure 2-1: ~~District~~ Significance Determination Flowchart

2.4. Special Consideration for Projects

In addition to criteria pollutants, a project's impacts may warrant special consideration if one or more of the following conditions apply:

Construction Activities

a. If a project will result in release of diesel emissions in areas with potential for human exposure, even if overall emissions are low, factors that will be considered by District staff when determining significance of a project include the expected emissions from diesel equipment including operation time, location of the project, and distance to sensitive receptors.

b. Remodeling and demolition activities have potential negative air quality impacts, including issues surrounding proper demolition and disposal of asbestos containing material (ACM). Asbestos is listed as a toxic air contaminant by both CARB and by the U.S. Environmental Protection Agency (EPA). If a project involves demolition and disposal of asbestos containing material, the Demolition Permit issued by the Building Department is subject to the requirements stipulated in the National Emissions Standards for Hazardous Air Pollutants Information (NESHAP).

   For information regarding the remodel or demolition of a building or structure that may contain asbestos, please access the following links:

   - ✓ EPA Asbestos Laws and Regulations: http://www.epa.gov/asbestos/pubs/asbreg.html;
   - ✓ Code of Federal Regulations: 40 CFR Part 763 - Asbestos (pdf);
   - ✓ National Emission Standards for Hazardous Air Pollutants (NESHAPS): 40 CFR Part 61, Subpart M - National Emission Standards for Asbestos (pdf);
   - ✓ California Code of Regulations (CCR) Title 22 Social Security, Division 4.5: http://ccr.oal.ca.gov/linkedslice/default.asp?SP=CCR-1000&Action=Welcome.

c. Naturally-occurring asbestos (NOA) has been identified by CARB as a toxic air contaminant. Serpentine and ultramafic rocks are very common throughout California and may contain naturally-occurring asbestos. The District has identified areas throughout the county where NOA may be present. Under CARB's Asbestos Air Toxic Control Measure (ATCM) for Construction, Grading, Quarrying, and Surface Mining Operations, prior to any grading activities at a project site located in a potential NOA area, a geologic evaluation will be necessary to determine if naturally-occurring asbestos is present. If NOA is found at the site the applicant must comply with all requirements outlined in the Asbestos ATCM for Construction, Grading, Quarrying, and Surface Mining Operations. These requirements may include but are not limited to: 1) an Asbestos Dust Mitigation Plan which must be approved by the District before construction begins, and 2) an Asbestos Health and Safety Program (which may be required for some projects). In addition, the Air Resources Board adopted two statewide control measures which prohibits the use of serpentine or ultramafic rock for unpaved surfacing and controls dust

Comment [A34]: AECOM (A-12a)

emissions from construction, grading, and surface mining in areas with these rocks.

- ✓ More information about areas "Most Likely to Contain Naturally-Occurring Asbestos (NOA)" a fact sheet, information and maps may be found on the NOA web page of the Placer County Air Pollution Control District web site: http://www.placer.ca.gov/Departments/Air/NOA/NOAMapsAnd%20Resources.aspx.

Operational Activities

a) If a project has the potential to emit toxic or hazardous air pollutants and is located in close proximity to sensitive receptors, impacts may be considered significant due to increased cancer risk for the affected population. Such projects may be required to prepare a risk assessment to determine the potential level of risk associated with their operations[12]. A project which has the potential to emit toxic or hazardous air pollutants may be required to meet special requirements, including notification and consultation with the District prior to the adoption or certification of an environmental document[13].

b) If a project is located near an existing or planned sensitive receptor, such as a school, hospital or senior center, its health effects to the sensitive receptor should be carefully examined even if other criteria do not apply. The health effects of a project's emissions may be more pronounced if they impact a considerable number of children, elderly, or people with compromised respiratory or cardiac conditions. Potential sensitive receptor locations should be identified in the environmental documents for District staff evaluation.

c) If a project has the potential to cause an odor or other nuisance problem which could impact a considerable number of people, it should be carefully examined and disclosed in the environmental document.

d) If a project is likely to be a place where people live, play, or gather for long periods of time, it should be considered a receptor. Examples of receptors include residences, outdoor seating areas, schools and school yards, parks and play grounds, daycare centers, nursing homes, and medical facilities. When siting a new receptor, a lead agency shall examine existing or future proposed sources of TAC and/or $PM_{2.5}$ emissions that would adversely affect individuals within the project area. ~~The~~In general, the District recommends that all TAC and $PM_{2.5}$ sources including freeways and major roadways, located within a 1,000 foot radius of the project site be identified and described within the project description. A lead agency should enlarge the 1,000 foot radius on a case-by-case basis if an unusually large source (i.e., such as a rail yard) or sources of risk or hazard emissions that may affect a proposed project is beyond the recommended radius.

Comment [A35]: AECOM (A-12b)

e) Residential and other housing type projects located within, or near existing or planned TAC sources including freeways and major roadways should be analyzed for potential exposure to significant hazards from existing toxic sources. The effects of the potential exposure shall be mitigated to a level of insignificance in compliance with state and federal requirements[14].

f) School facilities, as well as certain project types near schools are subject to special requirements to ensure that potential health impacts resulting from exposure to hazardous materials, wastes, and substances will be carefully examined and disclosed in the environmental document[15]. Lead agencies are required to notify in writing and consult with the District prior to the adoption or certification of the environmental document[16].

- ✓ Additional information regarding Toxic Air Contaminants (TACs) can be found in CHAPTER 4:~~CHAPTER 4~~:

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Analyzing Construction Emissions

Analyzing Construction Emissions

3.1. Assessing Construction Impacts for Criteria Pollutants

Use of heavy equipment and earth moving operations during project construction can generate fugitive dust and engine combustion emissions that may have substantial temporary impacts on local air quality. Fugitive dust of concern is particulate matter that is less than ten microns in size (PM_{10}) and is not emitted from definable point sources such as industrial smokestacks. Sources include open fields, roadways, storage piles, earthwork, etc. Fugitive dust emissions results from land clearing, demolition, ground excavation, cut and fill operations and equipment traffic over temporary roads at the construction site.

Diesel exhaust is another emission that can have a significant effect on health. In July 1999, CARB listed the particulate fraction of diesel exhaust as a toxic air contaminant, identifying both chronic and carcinogenic public health risks. Heavy-duty construction equipment is usually diesel powered combustion emissions, such as nitrogen oxides (NO_x), reactive organic gases (ROG), and diesel particulate matter (diesel PM), and are most significant when using large, diesel-fueled scrapers, loaders, bulldozers, haul trucks, compressors, generators and other heavy equipment. Emissions from both fugitive dust and combustion sources can vary substantially from day-to-day depending on the level of activity, the specific type of operation, moisture content of soil, use of dust suppressants and the prevailing weather conditions.

3.2. Methods for Calculating Construction Emissions

When calculating emissions for construction operations (NO_x, ROG, DPM, GHG and fugitive PM), specific information about each activity and phase of the construction project is needed. Several methods are described below, each of which requires increasingly detailed information to produce more accurate results.

For proposed land use development projects, the District recommends using the currently accepted modeling analysis tools to quantify construction-related criteria air pollutants and precursors. All assumptions, estimates, and calculation methods must be provided if the District is required to review the project. Calculation of combustion and fugitive dust emissions from construction activities should include peak daily~~, annual and total~~ construction phase emissions of ROG, NOx, diesel PM, ~~GHG~~ and fugitive PM. Annual and total GHG emissions should also be included in the analysis. Both the duration of the construction activities and schedule of phases are required in the evaluation.

Comment [A36]: AECOM (A-13)

For all projects which exceed, or have potential to exceed the ~~District's~~applicable Project Level Threshold for criteria pollutants, the District encourages the following information to be included within the modeling output located in the appendix of the DEIR or other applicable section.

Comment [A37]: Roseville (E-5j)

- Summary table showing all construction emissions
- Modeling analysis output files which includes the following: a) detailed summer emissions report (both unmitigated and mitigated emissions) and b) detailed winter emissions report (both unmitigated and mitigated emissions)
- Detailed description of assumptions used for the calculations
- Construction fleet;
- Construction phase duration (user must specify the start and end dates for each phase);
- Daily disturbed acreage;
- Fugitive dust emission rate;
- Asphalt paving (if applicable);
- Construction workers' trips;
- Equipment fleet mix for various phases of construction:
- Construction vendors' trips; and,
- Architectural coating emissions.

NOTE: It may be necessary to calculate the project-related construction impacts without knowing the exact fleet of construction equipment involved in the project.

Depending on the type of modeling analysis utilized, the model may or may not automatically calculate off-site hauling trips and associated emissions. If not included as a default value, any soil or demolition materials which will need to be hauled off-site or any materials that will be imported, cubic yards of material and the number of truck trips will need to be entered into the model. In addition, the trip length associated with hauling will need to be entered into the model along with a detailed explanation of the trip length. Specific truck emission factors for the hauling fleet should be included in the simulation. If the specific fleet is unknown at the time of modeling, a defensible worst case set of hauling fleet emission factors shall be used. This hauling component is an important step and is often overlooked resulting in an under-estimation of emissions.

If more detailed information regarding the construction phase of the project is known, the construction phases and default values can be modified in this step to more accurately reflect the anticipated emissions from the project.

The construction calculator within CalEEMod allows for project specific equipment data to be used to calculate emissions. The use of the construction calculator is recommended when the actual fleet mix and construction schedule is known. The following variables can be defined for each piece of construction equipment:

- Equipment type;
- Quantity of equipment used;
- Horsepower rating;
- Load factor;
- Usage (hours/day);
- Engine model year;
- Engine deterioration (years and hours since last rebuild); and,
- Exhaust after-treatment devices such as VDEC (verified diesel emission control devices).

  - ✓ For further information on CalEEMod visit: http://www.caleemod.com
  - ✓ Sacramento Metro Air Quality Management District: "" Construction Mitigation Calculator. Cancel the user password prompt window to access the calculator.

3.3. Diesel Idling Restrictions for Construction Phases

The District recognizes the public health risk reductions that can be realized by idling limitations for on-road and off-road equipment. The following idling restricting measures are recommended for construction activity, including the use of both on-road (i.e., dump trucks) and off-road (i.e., backhoes) equipment:

Idling Restrictions for Construction Activity

- Off-road diesel equipment shall comply with the five minute idling restriction identified in Section 2449(d) (3) of the CARB's In-Use off-Road Diesel regulation: www.arb.ca.gov/regact/2007/ordiesl07/frooal.pdf. (pdf)
- The following local jurisdictions have specific code requirements for idling restrictions:
  - City of Auburn, City Code Section 71.78:
  - City of Lincoln, City Ordinance Code 789B;
  - Placer County, Code Section 10.14.040 requires an equipment operator of an off-road piece of equipment to not cause or allow an off-road piece of equipment to idle at any location for more than five consecutive minutes.
- Staging and queuing areas within 1,000 feet of sensitive receptors is not recommended;
- Diesel idling within 1,000 feet of sensitive receptors is not recommended;
- Use of alternative fueled equipment is recommended whenever possible;
- Signs that specify the no idling requirements must be posted and enforced at the construction site.

3.4. Developmental Burning During Construction

During construction, no open burning of removed vegetation shall be allowed unless permitted by the District. The District recommends that all removed vegetative material shall be either chipped on site or taken to an appropriate recycling site, or if a site is not available, a licensed disposal site.

3.5. Permits for Construction

Portable equipment and engines 50 horsepower (hp) or greater, used during construction activities will require either California statewide portable equipment registration (issued by the CARB) or an Air District permit. The following list is provided as a guide to equipment and operations that may have permitting requirements, but should not be viewed as exclusive:

- Power screens, conveyors, diesel engines, and/or crushers;
- Portable generators and equipment with engines that are 50 hp or greater;
- Construction related internal combustion engines;
- Unconfined abrasive blasting operations;
- Concrete batch plants;
- Rock and pavement crushing;
- Tub grinders; and,
- Trommel screens.

3.6. Greenhouse Gas Emissions

The District has not yet established significance thresholds for greenhouse gas (GHG) emissions from construction activities. Nonetheless, GHGs from construction projects should still be quantified and analyzed within the environmental document.

- ✓ See CHAPTER 5:~~CHAPTER 5:~~ for additional information on GHGs.

3.7. Steps in Determining Significance for Construction Emissions

The threshold criteria recommended by the District to determine the significance and appropriate mitigation level for project-related construction emissions from a project are presented in Table 2-1: District Recommended Project-Level Thresholds of Significance.

Comment [A38]: Staff addition for consistency with Chapter 4.

The following steps should be considered when determining the significance of construction related criteria pollutants and precursors:

Step 1: Emissions Quantification

The District recommends using the most current version of CalEEMod to quantify construction emissions for proposed land use development projects.

Step 2: Comparison of Unmitigated Emissions with Thresholds of Significance

Following quantification of project-related construction emissions, the maximum daily emissions of each criteria pollutant and precursor should be compared with the applicable ~~District recommended~~ thresholds of significance ~~(Table 2-1: Project-Level Thresholds of Significance)~~. For instance, with respect to PM_{10} and $PM_{2.5}$, compare the total amount of emissions from both exhaust and fugitive sources with the applicable threshold of significance. If construction-related emissions have been quantified using multiple models or model runs, calculate the criteria air pollutants and precursor levels from each where said activities would overlap. In cases where the exact timing of construction activities is not known, calculate any phases that could potentially overlap to be conservative.

Comment [A39]: Staff change for consistency with Chapter 4

If the maximum daily emissions of construction-related criteria air pollutants or precursors would not exceed any of the ~~Thresholds of Significance,~~applicable thresholds, the project would result in a less-than-significant impact to air quality (for construction impacts). If the maximum daily

emissions of construction-related criteria air pollutants or precursors would exceed ~~any applicable Threshold of Significance~~thresholds, the proposed project would result in a significant impact to air quality and would require mitigation measures for emission reductions.

Step 3: Evaluate Mitigation and Emission Reductions

For all proposed projects, the District recommends the implementation of all applicable mitigation measures and District Rules and Regulations associated with construction activity. Reduction measures should be included from the following sources: 1.) Measures included within the Project Description; 2.) Recommended measures within the CEQA-compliant environmental document; and 3.) Reduction measures as required by federal, state and local rules and regulations. Please note that implementation of mitigation measures will result in all measures being included as conditions of approval during the entitlement phase of project approval, which may also include a mitigation monitoring plan (MMP).

NOTE: It is up to each lead agency whether or not District rules or other local, state, and federal rules are considered within the baseline of a project, or used as mitigation for an identified impact.

Step 4: Comparison of Mitigated Emissions with Thresholds of Significance

Following quantification of project-related construction emissions in accordance with the above District recommended methods, compare the maximum daily amount of mitigated (with Mitigation Measures implemented) criteria air pollutants and precursors with the applicable ~~Thresholds of Significance. If~~thresholds. If the implementation of additional mitigation measures would reduce the total amount of construction-related criteria air pollutants and precursors to levels below ~~the applicable Thresholds of Significance~~thresholds, the impact to air quality would be reduced to a less-than-significant level. If mitigated levels of any criteria air pollutant or precursor still exceed ~~the applicable Threshold of Significance~~thresholds, the impact to air quality would remain significant and unavoidable.

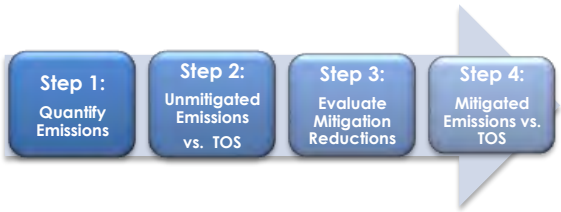


Figure 3-1: Steps in Determining Potential Significance

3.8. Guidance for Assessing Construction Impacts

Construction-related activities are those which are associated with the construction of a project or plan components. Construction activities are typically short-term or temporary in duration. However, project generated emissions could represent a significant impact with respect to air quality and/or global climate change. Construction related activities will result in the generation of criteria air pollutants including carbon monoxide (CO), particulate matter (PM_{10}, and $PM_{2.5}$),

Comment [A40]: Staff change for consistency with Chapter 4

Comment [A41]: Staff change for consistency.

reactive organic gases (ROG), nitrogen oxides (NO_X), and GHGs from exhaust, and fugitive dust. Sources of exhaust emissions could include on-road haul trucks, delivery trucks, worker commute motor vehicles, and off-road heavy-duty equipment. Sources of fugitive emissions (e.g., PM dust) could include construction related activities such as soil disturbance, grading, and material hauling.

Recommended mitigation measures for these types of impacts are provided in the appendix of this document. Not all of these measures may be applicable for every proposed project. In addition to the mitigation measures, please review the District's Rules and Regulations also provided in the appendix.

- ✓ APPENDIX A for District Construction Mitigation Measures
- ✓ APPENDIX B for District Construction Rules & Regulations

3.9. Additional Diesel Emission Control Strategies for Construction Equipment

If the estimated ozone precursor emissions from the actual fleet for a given construction phase are expected to exceed the District threshold of significance after the standard mitigation measures are factored into the estimation, additional diesel emission control strategies may be recommended to further reduce these impacts[17]. The control strategies should include the following but is not limited to:

- Further reducing emissions by expanding the use of Tier 3 and Tier 4 off-road and 2010 on-road compliant engines;
- Repowering equipment with the cleanest engines available; and
- Installing California Verified Diesel Emission Control Strategies.

  - ✓ These strategies are listed at: http://www.arb.ca.gov/diesel/verdev/vt/cvt.htm.

3.10. District Rules (Construction)

In addition to the District's recommended construction mitigation measures, there are District rules which are required for all projects whether or not construction-related emissions exceed the applicable ~~Thresholds of Significance~~thresholds.

District "Rules & Regulations" for construction provided in Appendix B applies to discretionary projects where a Grading Plan or Improvement Plans are required. Such rules ~~may not~~could be listed as "mitigation" in an environmental document, depending on the lead agencies' view of the need for mitigation for construction impacts. Regardless of the lead agencies' position on that matter, the District Rules & Regulations may also be required as conditions of approval during the entitlement process. If the lead agency uses District rules as mitigation within environmental documents, the lead agency would also be responsible for ensuring compliance with those laws as conditions of approval for the project and may develop an enforcement plan to ensure adherence to the project's mitigation monitoring plan.

Comment [A42]: Rocklin (B-12)

- ✓ See APPENDIX B for additional information on District construction rules.

3.11. Dust Control Plan

District Rule 228, Fugitive Dust, establishes standards to be met by activities generating fugitive dust. Rule 228 applies to all of Placer County and addresses fugitive dust generated by construction and grading activities, and by other land use practices including recreational uses.

Fugitive dust is particulate matter discharged into the atmosphere due to a man-made activity or condition. Examples of dust sources that are subject to the rule are excavating and trenching, drilling, boring, earthmoving and grading operations, pavement or masonry cutting operations, brush clearing, travel on unpaved roads within construction sites, and wind-blown dust from uncovered graded areas and storage piles.

Rule 228 establishes standards to be met by activities generating fugitive dust. Among the standards to be met is a prohibition on visible dust crossing the property boundary, generation of high levels of visible dust (dust sufficient to obscure vision by 40%), and controls on the track-out of dirt and mud on to public roads. The regulation also establishes minimum dust mitigation and control requirements.

Rule 228's minimum dust control practices must be used for all construction and grading activities. See the Fugitive Dust Control Requirements Fact Sheet.

When an area to be disturbed is greater than one acre, and if required by a Condition of Approval of a discretionary permit, a dust control plan (DCP) must be submitted to and approved by the District prior to any construction activities. The District has developed an application for this purpose. The dust control plan instructions contain a DCP Application form. Completion of this application and subsequent approval by the District will satisfy requirements to have a dust control plan. Failure to implement the plan is subject to enforcement through the Conditions of Approval, and by the District through Rule 228.

- ✓ For more detail, including an application form, please visit the District website: http://www.placer.ca.gov/Departments/Air/Dust%20Control%20Requirements.aspx

Analyzing Operational Emissions

Analyzing Operational Emissions

4.1. Assessing Operational Impacts for Criteria Pollutants

Operational air pollution emissions from development can result from a variety of sources, including motor vehicles, wood burning appliances, natural gas and electric energy use; combustion powered utility equipment, paints and solvents, equipment or operations used by various commercial and industrial facilities, construction/demolition equipment and operations, and various other sources.

The amount and type of emissions produced, and their potential to cause significant impacts, depends on the type and level of development proposed. The following sections describe the recommended methods generally used to calculate emissions from motor vehicles, congested intersections and roadways, non-vehicular sources associated with residential and commercial facilities, and industrial point and area sources.

Estimations submitted during the environmental review process that describe the project assessments should include spreadsheets with project calculations and a description of calculations so that the District can verify project quantification. The project report should clearly state assumptions and sample calculations. Electronic files for calculations, estimates, spreadsheets, etc. should be included with all submittals to the District.

4.2. Determining Motor Vehicle Emissions (Indirect Sources)

Motor vehicles are a primary source of long-term emissions from residential, commercial, institutional, and industrial land uses. These land uses often do not emit significant amounts of air pollutants directly, but cause or attract motor vehicle trips that do produce emissions. Such land uses are referred to as indirect sources. Motor vehicle emissions associated with indirect sources should be calculated for projects using the most current version of CalEEMod. CalEEMod incorporates the vehicle emission factors from the EMFAC model developed by the California Air Resources Board (CARB) and trip generation factors published by the Institute of Transportation Engineers (ITE). The latest version of CalEEMod can be found at: www.caleemod.com

CalEEMod modeling analyses submitted as part of a CEQA evaluation should include the following:

a. A summary report and detailed report for summer, winter and annual emissions;
b. The modeling analysis files associated with the reports;
c. The ~~District CEQA~~ applicable thresholds should be compared to the daily emission totals for "area" and "operational vehicle emissions";
d. When summarizing modeling analysis results in a summary table in the body of a CEQA document always list the pollutants in the order they are listed within the modeling output files for ease of review.

Comment [A43]: Roseville (E-5k)

4.3. Roadway and Intersection Emissions (Indirect Sources)

Screening for carbon monoxide (CO) impacts can be used to estimate whether or not a project traffic impact would cause a potential CO hotspot on any given intersection. If either of the following criteria is true of any intersection affected by the project traffic, the project can potentially exceed the CO standard:

- A traffic study for the project indicates that the peak-hour Level of Service (LOS) on one or more streets or at one or more intersections (both signalized and non-signalized) in the

project vicinity will be degraded from an acceptable LOS (e.g., A, B, C, or D) to an unacceptable LOS (eig.e., LOS E or F); or

- A traffic study indicates that the project will substantially worsen an already existing unacceptable peak-hour LOS on one or more streets or at one or more intersections in the project vicinity. "Substantially worsen" includes situations where delay would increase by 10 seconds or more when project-generated traffic is included.

If either of these criteria is true of any intersection affected by the project with traffic mitigation incorporated, the District would recommend the applicant/consultant conduct a CO dispersion modeling analysis using a program such as CALINE-4. The CALINE-4 dispersion model used to estimate local CO concentrations resulting from motor vehicle emissions was developed by California Department of Transportation (Caltrans) and is available from Caltrans Environmental Division's web page at http://www.dot.ca.gov/hq/env/air/main_sections/analysistools.htm.

CALINE-4 requires the user to supply certain input parameters. The inputs should be as recommended in the CO Protocol. If inputs other than those recommended in the Caltrans CO Protocol are used, they should be documented in the environmental document.

4.4. Toxic Air Contaminants (TACs) and Health Risk Assessments

Toxic Air Contaminants (TACs) are air contaminants not included in the California Ambient Air Quality Standards (CAAQS) but are considered hazardous to human health. TACs are defined by the California Air Resources Board (CARB) as those pollutants that "may cause or contribute to an increase in deaths or in serious illness, or which may pose a present or potential hazard to human health".

The health effects associated with TACs are generally assessed locally rather than regionally. TACs can cause long-term health effects such as cancer, birth defects, neurological damage, asthma, bronchitis or genetic damage; or short-term acute affects such as eye watering, respiratory irritation, running nose, throat pain, and headaches. For evaluation purposes, TACs are separated into carcinogens and non-carcinogens. Carcinogens are assumed to have no safe threshold below which health impacts would not occur, and the cancer risk is expressed as excess cancer cases per one million exposed individuals, typically over a lifetime of exposure.

TACs are primarily regulated through state and local risk management programs. These programs are designed to eliminate, avoid, or minimize the risk of adverse health effects from exposures to TACs. A chemical becomes a regulated TAC in California based on designation by the California Office of Environmental Health Hazard Assessment (OEHHA). As part of its

jurisdiction under the Air Toxics Hot Spots Program (Health and Safety Code Section 44360(b) (2), OEHHA derives cancer potencies and reference exposure levels (RELs) for individual air contaminants based on the current scientific knowledge that includes consideration of possible differential effects on the health of infants, children and other sensitive sub-populations, in accordance with the mandate of the Children's Environmental Health Protection Act[18]. In addition, the California Health and Safety Code, Section 42301.6, includes notification requirements for an application of a permit for a TAC source which is located within 1,000 feet of a school.

Common stationary source types of TAC emissions include gasoline stations, dry cleaners, and diesel backup generators that are subject to District permit requirements. The other, often more significant and common source type are mobile sources such as on-road motor vehicles on freeways and roads ~~(i.e. such as~~ trucks and cars~~)~~, and off-road sources such as construction equipment and trains. Because these common sources are prevalent in many communities, screening tools such as a Health Risk Assessment (HRA), for the evaluation of associated cumulative community risk and hazard impacts, should be considered. For rail yards and truck distribution centers, contact the District for additional information, as these are often more complex and require more advanced modeling techniques.

4.5. Health Risk Assessments (HRAs)

To determine the impact of TACs for CEQA purposes, health risk assessments may need to be prepared. As stated above, common sources of toxic emissions include, but are not limited to:

- Freeways and High Traffic Volume Roads
- Goods Distribution Centers
- Rail Yards
- Refineries
- Chrome Platers
- Dry Cleaners using Perchloroethylene
- Gasoline Dispensing Facilities

The CARB Handbook identifies the potential cancer risks at various distances from these sources and recommends buffer distances between those sources and receptors (see Table 4-1: CARB Recommended Minimum Separations for Sensitive Land Uses~~Table 4-1: CARB Recommended Minimum Separations for Sensitive Land UsesTable 4-1: CARB Recommended Minimum Separations for Sensitive Land UsesTable 4-1: CARB Recommended Minimum Separations for Sensitive Land UsesTable 4-1: CARB Recommended Minimum Separations for Sensitive Land Uses~~). For land use projects, the District recommends the California Air Pollution Control Officers Association's (CAPCOA) guidance on assessing the health risk impacts. The CAPCOA guidance document outlines recommended procedures to identify when a project should undergo further risk evaluation, how to conduct the HRA, how to engage the public, what to do with the results from the HRA, and what mitigation measures may be appropriate for various land use projects.

- ✓ For additional information, visit CAPCOA Guidance Document: Health Risk Assessments for Proposed Land Use Projects (pdf)
- ✓ See APPENDIX E on preparing HRAs for Land Use Projects

Table 4-1: CARB Recommended Minimum Separations for Sensitive Land Uses

Source Category	Advisory Recommendations
Freeways and High-Traffic Roads	Avoid siting new sensitive land uses within 500 feet of a freeway, urban roads with 100,000 vehicles/day, or rural roads with 50,000 vehicles/day[19].
Distribution Centers	Avoid siting new sensitive land uses within 1,000 feet of a distribution center (that accommodates more than 100 trucks per day, more than 40 trucks with operating transport refrigeration units (TRUs) per day, or where TRU unit operations exceed 300 hours per week).
	Take into account the configuration of existing distribution centers and avoid locating residences and other new sensitive land uses near entry and exit points.
Rail Yards	Avoid siting new sensitive land uses within 1,000 feet of a major service and maintenance rail yard.
	Within one mile of a rail yard, consider possible siting limitations and mitigation approaches.
Ports	Avoid siting of new sensitive land uses immediately downwind of ports in the most heavily impacted zones.
	Consult local air Districts or the CARB on the status of pending analyses of health risks.
Refineries	Avoid siting new sensitive land uses immediately downwind of petroleum refineries. Consult with local air Districts and other local agencies to determine an appropriate separation.
Chrome Platers	Avoid siting new sensitive land uses within 1,000 feet of a chrome plater.
Dry Cleaners Using Perchloroethylene	Avoid siting new sensitive land uses within 300 feet of any dry cleaning operation. For operations with two or more machines, provide 500 feet. For operations with 3 or more machines, consult with the local air District.
	Do not site new sensitive land uses in the same building with PCE dry cleaning operations.
Gasoline Dispensing Facilities	Avoid siting new sensitive land uses within 300 feet of a large gas station (defined as a facility with a throughput of 3.6 million gallons per year or greater). A 50 foot separation is recommended for typical gas dispensing facilities.

4.6. Common Odor Sources & Recommended Screening Distances

Certain projects such as sanitary landfills, paint and coating operations, and wastewater treatment facilities have the potential to cause significant odor impacts. Projects which include new development such as residential subdivisions or other sensitive receptor sites also have the potential to be affected by being located downwind of existing sources of odor. It is essential that odor issues be discussed early in the application process so that mitigation measures may be identified. Applications should include the distance of the nearest sensitive receptor site such as hospitals and K-8th grade school sites. The California Air Resources Board's 2005 document "Air

Quality & Land use Handbook: A Community Health Perspective" states that: "Complaints about odors are the responsibility of local air Districts and are covered under state law. The types of facilities that can cause odor complaints are varied and can range from small commercial facilities to large industrial facilities, and may include waste disposal and recycling operations. Odors can cause health symptoms such as nausea and headache. Facilities with odors may also be sources of toxic air pollutants. Some common sources of odors emitted by facilities are sulfur compounds, organic solvents, and the decomposition/digestion of biological materials. Because of the subjective nature of an individual's sensitivity to a particular type of odor, there is no specific rule for assigning appropriate separations from odor sources. Under the right meteorological conditions, some odors may still be offensive several miles from the source[20]."

The following District's Recommended Odor Screening Distances table lists suggested buffer distances for a variety of odor-generating facilities. However, as discussed above, the potential for a significant odor impact is dependent on a variety of factors. Therefore, the recommended screening distances should not be used as absolute thresholds to determine the significance of an odor impact.

Table 4-2: Odor Screening Distances*

Land Use/Type of Operation	Project Screening Distance
Wastewater Treatment Plant	2 miles
Wastewater Pumping Facilities	1 mile
Sanitary Landfill	2 miles
Transfer Station	1 mile
Composting Facility	1 mile
Petroleum Refinery	2 miles
Asphalt Batch Plant	2 miles
Chemical Manufacturing	2 miles
Fiberglass Manufacturing	1 mile
Painting/Coating Operations	1 mile
Rendering Plant	2 miles
Coffee Roaster	1 mile
Food Processing Facility	1 mile
Confined Animal Facility/Feed Lot/Dairy	1 mile
Green Waste and Recycling Operations	1 mile
Metal Smelting Plants	2 miles

*Source: SMAQMD: CEQA Guide to Air Quality Assessment, Chapter 7, Odors / Recommended Odor Screening Distances.

4.7. Residential/Commercial Facility Emission Sources (Area Sources)

Non-vehicular emission sources associated with most residential and commercial development include energy use to power lights, appliances, heating and cooling equipment, evaporative emissions from paints and solvents, fuel combustion by lawnmowers, leaf blowers and other small utility equipment, residential wood burning, household products, and other small sources. Collectively, these are referred to as "area sources" and are important from a cumulative standpoint even though they may appear insignificant when viewed individually. CalEEMod provides emission estimations from area sources based on land use types.

Within emission models one default area source value which could have a significant impact on project emissions is "hearth fuel combustion." This setting may need to be modified if, for instance, the project does not include wood-burning devices.

4.8. Industrial Emission Sources (Point Sources)

From an emissions standpoint, industrial facilities and operations are typically categorized as being "point" or "aggregated point" sources. Point sources are stationary and generally refer to a site that has one or more emission source at a facility with an identified location (e.g., power plant, refinery, etc.).

Aggregated point sources could include:

- Stationary or mobile and typically include categories of stationary facilities whose emissions are small individually, but may be significant as a group (e.g., gas stations, dry cleaners, etc);
- Sources whose emissions emanate from a broad area (e.g., fugitive dust from storage piles and dirt roads, landfills, etc.); and,
- Mobile equipment used in industrial operations (e.g., drill rigs, loaders, haul-trucks, etc.).

During the CEQA analysis, all air quality impacts are evaluated including the stationary point, area and mobile sources if they are part of the proposed land use projects. While a specific piece of equipment or process may be covered by a District permit it is not excluded from the CEQA evaluation process.

The District will typically issue "Authority to Construct" permits for stationary sources. These permits are required:

- Before installing new equipment or processes that may release or control air pollutants.
- Before modifying existing permitted equipment that may release or control air pollutants.
- When a permitted facility changes ownership.
- When a change in the methods and/or process rate of operation occurs at a permitted facility
- When a permitted facility wishes to modify a permit condition, including changing its permitted emissions.
- When new regulations are adopted or changed.

Depending on the type of pollutants emitted from a stationary source, a Health Risk Assessment (HRA) or a "T-Screen" evaluation (less detailed than an HRA) may be required as a part of the review process, depending on the scope and complexity of the proposal.

4.9. Significance Thresholds for Project-Level Operational Emissions

The threshold criteria ~~established~~recommended by the District to determine the significance and appropriate mitigation level for project-related operational emissions from a project are presented in Table 2-1: District Recommended Project-Level Thresholds of Significance.

Most of the long-term operational mitigation strategies suggested in this chapter focuses on methods to reduce vehicle trips and travel distance, including site design standards which encourage pedestrian and bicycle-friendly transit-oriented development. In addition, the recommendations include design strategies for residential and commercial buildings that address energy conservation and other concepts that reduce total project emissions. These recommendations are not all inclusive and are provided as examples among many possibilities.

4.10. Steps in Determining Significance (Operational)

The following steps should be considered when determining the significance of operational related criteria pollutants and precursors:

Step 1: Emissions Quantification

For operational impacts, the District recommends using the most current version of CalEEMod. CalEEMod uses the California Air Resource Board Mobile Emission Factor Software and ITE (Institute of Transportation Engineers) trip generation rates to calculate ROG, NO_x, carbon monoxide, particulate matter, carbon dioxide, and total vehicle trips.

For land use projects, CalEEMod quantifies emissions from area sources ~~(e.g.,~~such as natural gas fuel combustion for space and water heating, wood stoves and fireplace combustion, landscape maintenance equipment, consumer products, and architectural coating~~ and~~, as well as operational-related emissions ~~(~~from mobile sources~~).~~. Additional modeling may be required. Applicants should contact the District for additional information.

Comment [A44]: Staff Change

CalEEMod also quantifies potential criteria pollutant and greenhouse gas (GHG) emissions associated with construction and operation from a variety of land uses, such as residential and commercial facilities. The model quantifies direct emissions from construction and operation (including vehicle use), as well as indirect emissions, such as GHG emissions from energy production, solid waste handling, vegetation planting and/or removal, and water conveyance. In addition, CalEEMod calculates benefits from implementing mitigation measures, including GHG mitigation measures developed and approved by CAPCOA. This model is available for environmental consultants/professionals, public agency land use planners, air quality districts, CEQA/NEPA document reviewers, land use developers, and decision-makers and is free of charge.

- ✓ For more information and to download the software please go to: www.caleemod.com.

When a project involves a conversion or reduction in current emission rates, or the project already has permits related to emissions, the lead agency should plan to work with the District in developing a strategy related to baseline conditions and how such conditions are described within a project description. Refer to Section 1.10 for further information on baseline conditions.

Step 2: Comparison of Unmitigated Emissions with Thresholds of Significance

Calculate the estimated emissions for area, mobile, and stationary sources (if any) for each pollutant as explained above and compare the daily maximum emissions of each criteria pollutant and their precursors with the applicable thresholds. District Recommended Project-Level Thresholds of Significance. If any daily maximum operational-related criteria air pollutants or

Comment [A45]: Staff change made for consistency.

precursors do not exceed the threshold, the project would result in a less than significant impact to air quality. If the quantified emissions of operational-related criteria air pollutants or precursors do exceed the threshold, the proposed project may result in a significant impact to air quality.

Step 3: Mitigation Measures and Emission Reductions

Where operational-related emissions exceed the applicable *Thresholds of Significance*, lead agencies are responsible for implementing all feasible mitigation measures for operational emissions, as they deem necessary, to reduce the project's air quality impacts. Appendix C of this handbook contains numerous examples of mitigation measures and associated emission reductions that may be applied to projects. The project's mitigated emission estimates from mitigation measures included in the proposed project or recommended by the lead agency should be quantified and disclosed in the CEQA document. For all proposed projects, the District recommends the implementation of all ~~applicable~~feasible mitigation measures. Reduction measures should be included from the following sources: 1) Measures included within the Project Description; 2) Recommended measures within the CEQA-compliant environmental document; and 3) Reduction measures as required by federal, state and local rules and regulations.

Comment [A46]: BIA (C-12)

- See APPENDIX C: Recommended Mitigation Measures (Operational)~~Recommended Mitigation Measures (Operational);~~
- ✓ See APPENDIX D: District Rules and Regulations Recommended Mitigation Measures (Operational)~~Recommended Mitigation Measures (Operational);~~

Note: It is up to each lead agency whether or not District rules or other local, state, and federal rules are considered within the baseline of a project, or used as mitigation for an identified impact.

The District recommends the proposed mitigation measures to reduce operational emissions should be as detailed as possible and should clearly identify who is responsible for implementation, funding, monitoring, enforcement, and any required maintenance activities. In cases where operational emission reduction measures relate directly or indirectly to policies within a local jurisdiction's General or Community Plan, the District encourages discussion in the environmental document of the relationship between the General Plan or Community Plan policy and proposed reduction measures.

Mitigation measures incorporated into the environmental document should also be included as conditions of approval during the entitlement phase of project approval. In addition, any mitigation monitoring plan (MMP) should also be included as a condition of approval during the entitlement phase.

Step 4: Comparison of Mitigated Emissions with Thresholds of Significance

Compare the total daily mitigated emissions with the applicable thresholds—District Recommended Project-Level Thresholds of Significance~~District Recommended Project-Level Thresholds of Significance~~. If the implementation of mitigation measures, including off-site mitigation, would reduce all operational related criteria air pollutants and precursors to levels below ~~the Project-Level Thresholds of Significance,~~ thresholds, the impact to air quality would be reduced to a less than significant level.

Comment [A47]: Roseville (E-5m)

If mitigated levels of any criteria air pollutant or precursor would still exceed ~~the Project-Level Thresholds of Significance,~~thresholds, the impact to air quality would remain significant and unavoidable.

Figure 4-1: Steps in Determining Potential Significance

4.11. Mitigating Operational Impacts

Emissions from motor vehicles that travel to and from residential, commercial, and industrial land uses can generally be mitigated by reducing vehicle activity through site design (e.g., transit oriented design, infill, mixed use, etc.), implementing transportation demand management measures, using clean fuels and vehicles, and/or off-site mitigation. In addition, area source operational emissions from energy consumption from land uses can be mitigated by improving energy efficiencies, conservation measures and use of alternative energy sources. The mitigation measures in this section are intended to reduce emissions of ROG, NO_x, and Diesel PM (DPM). Greenhouse Gas mitigation measures will be discussed in Chapter 5. The following ~~three~~ categories best capture the types of mitigation measures that can reduce air quality impacts from project operations:

Comment [A48]: Placer (D-10)

Site Design Mitigation Measures

Site design and project layout can be effective methods of mitigating air quality impacts of development. Land use development that incorporates urban infill, higher density, mixed use and walk-able, bike-able, and transit oriented designs can significantly reduce vehicle activity and associated air quality impacts. As early as possible in the scoping phase of a project, the District recommends that developers contact their staff to discuss project layout and design factors which can influence indirect source emissions and reduce mobile source emissions.

Energy Efficiency Mitigation Measures

Residential and commercial energy use for lighting, heating and cooling is a significant source of direct and indirect air pollution nationwide. Reducing site and building energy demand will reduce emissions at the power plant source and natural gas combustion in homes and commercial buildings. The energy efficiency of both commercial and residential buildings can be improved by orienting buildings to maximize

natural heating and cooling.

Neighborhood Electric Vehicle (NEV) Route

Transportation Mitigation Measures

Vehicle emissions are often the largest continuing source of emissions from the operational phase of a development. Reducing the demand for single-occupancy vehicle trips is a simple, cost-effective means of reducing vehicle emissions. In addition, using cleaner fueled vehicles or retrofitting equipment with emission control devices can reduce the overall emissions without impacting operations. In today's marketplace, clean fuel and vehicle technologies exist for both passenger and heavy-duty applications.

- ✓ See APPENDIX C for an additional mitigation measures for operational impacts

Off-Site Mitigation

It is important for the developer, lead agency, and the District to work closely together whenever off-site mitigation is considered as a potential tool. Off-site emission reductions can be achieved through either stationary or mobile source reductions, but such reductions must relate to the on-site impacts from the project in order to provide proper nexus for the air quality mitigation under CEQA. For example, NO_x emissions from a large grading project could be reduced by re-powering heavy-duty diesel construction equipment used within the region (outside of the project site), thereby reducing the amount of NO_x generated from that equipment.

A policy was adopted by the District's Board of Directors in 2001 (amended in 2008) which established guidelines for the use of air quality mitigation funds (see APPENDIX H). Based on this policy, the District manages an off-site mitigation fee program to be utilized as an option for some development projects when the on-site mitigations are insufficient to offset their related impacts~~.~~ to below the applicable thresholds. The fee rate is based on the cost-effectiveness factor reported by the latest CARB Carl Moyer Program Guideline[21]; it may be adjusted to reflect emission reduction market conditions in the future. The current rate is $16,640 per ton of ozone precursor emission (either NO_x or ROG~~) for~~). For example, if the project's operational emissions are over the ~~10 lbs per day threshold,~~District's recommended cumulative thresholds, then the fee is calculated over a one year~~,~~ "ozone season" (183 days~~).~~) based on the fee rate and the emissions over the treshold. The applicant may: 1) expend these funds to implement District approved emission reduction projects in the general vicinity of the project site, or 2) pay the District to administer emission reduction projects in close proximity to the project. If the lead agency chooses to require a land use developer to pay an off-site mitigation fee, then the timeframe for the mitigation payment will be based on discussions between the lead agency and the District. The District recommends that payment be provided either prior to construction

Comment [A49]: AECOM (A-15)

or grading activities. The District is also open to other avenues for collection of fees such as "prior to final map for a subdivision" or "prior to building issuance for a commercial building permit."

Examples off-site mitigation strategies include, but are not limited to, the following:

- Fund a program to buy and scrap older heavy-duty diesel vehicles or equipment;
- Replace/repower transit buses;
- Replace/repower heavy-duty diesel school vehicles (e.g., bus, passenger or maintenance vehicles);
- Retrofit or repower heavy-duty construction equipment, or on-road vehicles;
- Repower or contribute to funding clean diesel locomotive main or auxiliary engines;
- Purchase VDECs (Verified Diesel Emission Control Strategy) for local school buses, transit buses or construction fleets;
- Install or contribute to funding alternative fueling infrastructure (e.g., fueling stations for Compressed Natural Gas (CNG) Liquefied Petroleum Gas~~,~~ ((LPG), conductive and inductive electric vehicle charging, etc.);
- Fund expansion of existing transit services; and,
- Replace/repower marine diesel engines.

NOTE: On-site mitigation measures are preferred over off-site mitigation measures.

Analyzing Greenhouse Gas Emissions

5.1. Greenhouse Gases (GHG)

Global Warming vs. Climate Change

Global Warming – An increase in GHG emissions leading to an increase in average global temperature.

Climate Change – A change in the statistical properties of the climate system when considered over long periods of time, regardless of cause.

Unlike criteria air pollutants, GHGs are global pollutants which are pollutants of regional and local concern. Whereas pollutants with localized air quality effects have relatively short atmospheric lifetimes (about 1 day), GHGs have long atmospheric lifetimes (1 year to several thousand years). GHGs persist in the atmosphere for long enough time periods to be dispersed around the globe. Similarly, impacts of GHGs are also borne globally. The quantity of GHGs that it takes to ultimately result in climate change is not precisely known; however, it is clear that the quantity is enormous, and no single project alone would measurably contribute to a noticeable incremental change in the global average temperature, or to global, local, or micro climate. Therefore, from the standpoint of CEQA, GHG impacts to global climate change are inherently cumulative.

Climate change is a global problem and could potentially impact the natural environment in California and the world in the following ways:

- ✓ Rising sea levels along the California coastline, particularly in San Francisco and the Sacramento–San Joaquin River Delta (Delta) due to ocean thermal expansion and melting of glacial ice, could cause flooding and saltwater intrusion in low-lying areas;
- ✓ Changing extreme-heat conditions, such as heat waves and very high temperatures, which could last longer and become more frequent;
- ✓ Increasing wildfire frequency and intensity;
- ✓ Increasing heat-related human deaths, infectious diseases, and increasing risk of respiratory problems caused by deteriorating air quality;
- ✓ Decreasing snow pack and stream flow in the Sierra Nevada Mountains, decreasing winter recreation opportunities and summer water supplies;
- ✓ Increasing severity of winter storms, causing higher peak stream flows and increased flooding;
- ✓ Changing growing season conditions that could affect California agriculture, causing variations in crop quality and yield; and
- ✓ Changing distribution of plant and wildlife species due to changes in temperature, competition from colonizing species, changes in hydrologic cycles, changes in sea levels, and other climate-related effects.

5.2. GHG & the Regulatory Environment

Lead agencies are required to prepare an EIR when they determine that a project will result in significant impacts. It is important that EIRs describe the existing ambient air quality in the project region, air quality standards which the project region should maintain, the rules and regulations that create those air quality standards, and the potential for the proposed project to contribute to violations of the applicable standards. The following list consists of the legislative actions which are applicable to land use projects pertaining to GHG emissions.

Executive Order S-3-05

In 2005, Governor Arnold Schwarzenegger signed Executive Order S-3-05 which established greenhouse gas (GHG) emission reduction targets for California, and directs the CAEPA to coordinate the oversight of efforts to achieve them. The targets established by Governor

Schwarzenegger call for a reduction of GHG emissions to 2000 levels by 2010; a reduction of GHG emissions to 1990 levels by 2020; and a reduction of GHG emissions to 80% below 1990 levels by 2050.

- ✓ For more information, go to: Executive Order S-3-05.

Assembly Bill 32

In September 2006, Governor Arnold Schwarzenegger signed Assembly Bill (AB) 32, the California Global Warming Solutions Act of 2006. AB 32 establishes regulatory, reporting, and market mechanisms to achieve quantifiable reductions in GHG emissions and a cap on statewide GHG emissions. AB 32 requires that statewide GHG emissions be reduced to 1990 levels by 2020. AB 32 also includes guidance to institute emission reductions in an economically efficient manner and conditions to ensure that businesses and consumers are not unfairly affected by the reductions. AB 32 demonstrates California's commitment to reducing the rate of GHG emissions and the state's associated contribution to climate change, without intent to limit population or economic growth.

- ✓ For more information on AB 32, visit CARB at: http://www.arb.ca.gov/cc/ab32/ab32.htm

Senate Bill 97

In 2007, Senate Bill (SB) 97 was enacted to amend the CEQA statute in order to establish that GHG emissions and their effects are a prominent environmental issue that requires analysis under CEQA. This bill directs the Office of Planning and Research (OPR) to prepare, develop, and transmit to the California Natural Resources Agency guidelines for the feasible mitigation of GHG emissions or the effects of GHG emissions. The Natural Resources Agency was required to certify or adopt those guidelines by January 1, 2010.

On March 18, 2010, the amendments to the state CEQA Guidelines for addressing greenhouse gas emissions, as required by Senate Bill 97 (Chapter 185, 2007) were enacted in order to provide guidance to public agencies regarding the analysis and mitigation of the effects of greenhouse gas emissions in draft CEQA documents. The Natural Resources Agency has completed the formal rulemaking process and the Office of Administrative Law has adopted the amendments.

- ✓ For more information, visit the Natural Resources Agency SB 97 Rulemaking webpage.

Senate Bill 375

In 2008, Senate Bill (SB) 375, was enacted which aligns regional transportation planning efforts, regional GHG reduction targets, and land use and housing allocation. SB 375 requires Metropolitan Planning Organizations (MPOs) to adopt a Sustainable Communities Strategy (SCS) or Alternative Planning Strategy (APS), which will prescribe land use allocation in that MPO's Regional Transportation Plan (RTP).

- ✓ For more information, visit the CARB Senate Bill (SB) 375 webpage.

Executive Order S-13-08

In November 2008, Governor Arnold Schwarzenegger issued Executive Order S-13-08 to enhance the state's management of climate impacts from sea level rise, increased temperatures, shifting precipitation, and extreme weather events. The Executive Order directs the state agencies to request that the National Academy of Sciences convene an independent panel to complete the first California Sea Level Rise Assessment Report. The agencies involved in the project include the California Resources Agency; the Department of

Water Resources; the California Coastal Commission; the California Ocean Protection Council; California State Parks; and the California Energy Commission (CEC). The Executive Order directs the California Office of Planning and Research (OPR) to provide state land-use planning guidance related to sea level rise and other climate change impacts. Therefore, the District recommends that lead agencies address the impacts of climate change on a proposed project and its ability to adapt to these changes in CEQA documents.

5.3. GHG Thresholds of Significance

The District currently has not established a Threshold of Significance for construction or operational related GHG emissions. However, the District does have a substantial amount of information to support a lead agency's effort in analyzing GHG impacts, and can suggest alternative thresholds that have been used in California. Some of these thresholds have been adopted or recommended by other lead agencies or air Districts, or recommended by other experts in the field. A lead agency could work with the District in determining which threshold would be best for a particular project. Alternatively, the lead agency could adopt its own thresholds, provided the decision is supported by substantial evidence. The lead agency should quantify and disclose GHG emissions that would occur during both stages (construction and operational phases of the project), and make a determination on the significance of the generated GHG emission impacts in relation to meeting AB 32 GHG reduction goals or other adopted GHG threshold of significance. CAPCOA's white paper: "CEQA and Climate Change" provides additional methods and concepts on the development of a threshold.

- ✓ CAPCOA Guidance- "CEQA and Climate Change: Evaluating and Addressing Greenhouse Gas Emissions from Projects Subject to CEQA," (pdf).

The District recommends that thresholds of significance for GHG emissions should be related to AB 32 GHG reduction goals. For example, a possible threshold of significance could be to determine whether a project's emissions would substantially hinder the State's ability to attain the goals identified in AB 32 (i.e., reduction of statewide GHG emissions to 1990 levels by 2020) from projected 2020 emissions). Another possible threshold option could include determining whether the project is consistent with the State's strategy to achieve the 2020 GHG emissions limit, as outlined in CARB's AB 32 Scoping Plan. The District also reminds CEQA practitioners that a lead agency's conclusions are to be supported by substantial evidence pursuant to Section 15384 of the CEQA Guidelines.

- ✓ For more information, see CEQA Guidelines Section 15384. (pdf)

5.4. GHGs & CEQA

The California Environmental Quality Act (CEQA) requires that lead agencies consider the reasonably foreseeable adverse environmental effects of projects they are considering for approval. GHG emissions have the potential to adversely affect the environment because they contribute, on a cumulative basis, to global climate change. For reasons stated above, global climate change has the potential to result in various impacts leading to adverse effects on air quality and other resources. Thus, GHG emissions require consideration in CEQA documents.

Tiering & Streamlining

The CEQA Guideline amendments pursuant to CEQA Guidelines Section 15183.5 (pdf) include the provision for tiering and streamlining the analysis of GHG emissions in CEQA documents. Under these provisions, lead agencies may analyze and mitigate the effects of greenhouse gas emissions at a programmatic level, such as in a general plan, a long range development plan, or a separate plan such as a Climate Action Plan, developed by a local jurisdiction to reduce greenhouse gas emissions. After an environmental document for one of these plans has been certified, project-specific CEQA documents may tier and/or incorporate by reference the programmatic review discussed above if the proposed project is consistent with the plan. Also, pursuant to CEQA Guideline Sections 15064(h)(3) and 15130(d), a lead agency may determine that a project's incremental contribution to a cumulative effect is not cumulatively considerable if the project complies with the requirements in a previously adopted plan or mitigation program under specified circumstances.

State CEQA Guidelines

The evaluation of GHG emissions pertains to the Amendments to the State CEQA Guidelines Addressing Analysis and Mitigation of Greenhouse Gas Emissions Pursuant to SB97 and modifications to the environmental checklist form (State CEQA Guidelines: Appendix G).

CEQA Guidelines

- ✓ Would the project generate GHG emissions, either directly or indirectly, that may have a significant impact on the environment?
- ✓ Would the project conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of GHGs?

10 Steps to Full Disclosure

In an effort to ensure full disclosure of GHG impacts as required by CEQA and other related Federal and State laws, the District recommends the following 10 steps when analyzing and discussing GHG emission impacts from land use projects in CEQA documents.

Comment [A50]: BIA (C-13)

10 Steps to Ensure Full Disclosure

Environmental Setting

Step 1 Describe the existing global context in which climate change impacts are occurring and are expected to occur in the future.
Step 2 Summarize the relevant state laws that address climate change (e.g. California Global Warming Solutions Act etc.).
Step 3 Describe any relevant statewide and/or regional GHG inventories to which the project would contribute.

Environmental Impacts

Step 4 Quantify the baseline GHG emissions.
Step 5 Quantify the project's direct and indirect GHG emissions including construction and operations.
Step 6 Make a significance determination. Discuss whether the project would enhance or impede the attainment of state GHG reduction targets and its relationship to local plans and policies.
Step 7 Describe the cumulative, global climate change impacts to which the project would contribute.
Step 8 Describe how the impacts of global climate change could impact the project.

Mitigation Measures

Step 9 Identify feasible mitigation measures that would reduce GHG emissions.

Quantify Reductions

Step 10 Quantify emission reductions after applying mitigation measures.

Figure 5-1: 10 Steps to Ensure Full Disclosure

Emissions Quantification

In accordance with federal, state and local regulations, the District recommends that air quality modeling analyses quantify all GHG emissions anticipated to be generated by the project, including the project's direct and indirect emissions of GHGs from construction and operations. Direct emissions include onsite combustion of energy, such as natural gas used in furnaces and boilers, emissions from industrial processes, and fuel combustion from mobile sources. Indirect emissions include off-site energy production and water consumption (energy for conveyance, treatment, distribution, and wastewater treatment), should also be quantified and disclosed in the environmental document.

GHG emissions from industrial sources should be calculated separately from the project's operational emissions. Permitted stationary sources may be subject to a different threshold than land use developments.

If the project includes existing emission sources, the District recommends subtracting these emissions from the new emissions generated by the proposed land use. This net calculation is permissible only if the existing emission sources were operational at the time that the Notice of Preparation (NOP) for the CEQA project was circulated (or in the absence of an NOP when environmental analysis begins), and would continue if the proposed redevelopment project is not approved. This net calculation is not suggested for emission sources that ceased to operate, or the land uses were vacated and/or demolished, prior to circulation of the NOP or the commencement of environmental analysis. This approach is consistent with the definition of baseline conditions pursuant to CEQA.

Emissions of greenhouse gases are typically expressed in a common metric, so that their impacts can be directly compared, as some gases are more potent (have a higher global warming potential or GWP) than others. The CEQA document should report the project's total GHG emissions in units of metric tons Carbon Dioxide Equivalent (CO_2e). The finite amount of a project's construction-related GHG emissions and the operational GHG emissions generated per year over the lifetime of the project should be disclosed separately. The District recommends using CalEEMod to estimate direct CO_2 emissions from area and mobile sources.

Global Warming Potentials (100 Year Time Horizon)

Gas	*GWP
Carbon Dioxide (CO_2)	1
Methane (CH_4)	25
Nitrous Oxide (N_2O)	298
Hydro fluorocarbon (HFC)	124-14,800
Per fluorocarbons (PFC)	7,390-12,200
Sulfur hexafluoride (SF_6)	22,800

*Expressed as parts per million

Figure 5-2: Equivalent CO_2 (CO_2e) [22]

In addition to the above estimations, the following are activities which need to be analyzed and quantified within the environmental document:

Construction Emissions

- Construction activities resulting in exhaust emissions of GHGs from fuel combustion for mobile heavy-duty diesel and gasoline-powered equipment, portable auxiliary equipment, material delivery trucks, and worker commuter trips;

Operational Emissions

- As shown in Figure 5-3, the transportation sector is the largest contributor of the State's total GHG emissions. This includes motor vehicle trips generated by the particular land use (i.e., vehicles arriving and leaving the project site), as well as those by residents, shoppers, workers, and vendors;
- Onsite fuel combustion for space and water heating, landscape maintenance equipment, and fireplaces/stoves; and
- Offsite emissions at utility providers associated with the project's electricity and water consumption and transport of waste.
- Other sources that may emit GHGs such as refrigerants leaking from cooling systems associated with commercial, industrial, and institutional land uses.

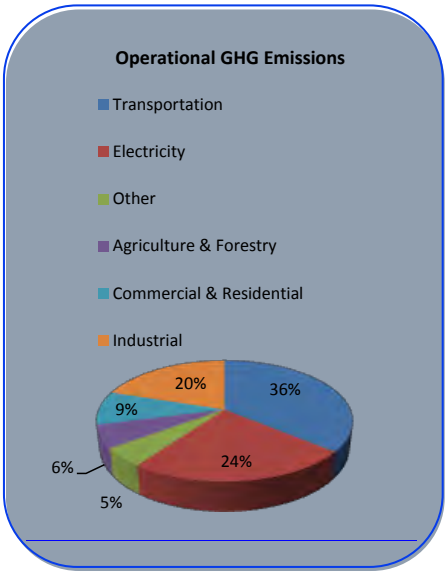


Figure 5-3: Greenhouse Gas Inventory[23]

5.5. GHG Analysis & Quantification Tools for Land Use Projects

Generally, the District believes that GHG emissions are best analyzed and mitigated at the program level; however, until more program level GHG analyses have been performed in Placer County, the District offers the recommendations contained in this chapter for addressing the GHG emissions associated with individual development projects.

The following resources are Greenhouse Gas analysis and modeling tools which are being provided to applicants for proposed land use and construction projects. Note that these tools may or may not be appropriate for the type or scope of certain project. The applicant should contact the District for any questions regarding the use of these resources.

Modeling Analysis Tools

- CalEEMod – Calculates emissions for land use and construction projects
- EMFAC2011 –Calculates emission factors from motor vehicles
- OFFROAD2007 –Calculates emission factors from off-road vehicles
- Roadway Construction Emissions Model (SMAQMD) –Calculates construction emissions from roadway projects.

Protocols

- California Climate Action Registry General Reporting Protocol, Version 3.1
- CARB/ICLEI/CCAR/Climate Registry Local Government Operations Protocol
- U.S. EPA Methodology from Inventory of U.S. Greenhouse Gas Emissions and Sinks: 1990-2009

- IPCC Guidance for national Greenhouse Gas Inventories

The following documents are available to assist with the various aspects of quantifying emissions and mitigation measure reductions.

- ✓ CAPCOA -Quantifying Greenhouse Gas Mitigation Measures (pdf);
- ✓ CAPCOA Guidance- "CEQA and Climate Change: Evaluating and Addressing Greenhouse Gas Emissions from Projects Subject to CEQA," (pdf);
- ✓ CAPCOA –Model Policies for Greenhouse Gases in General Plans; (pdf);
- ✓ California Natural Resources Agency Guidance -GHG emissions and CEQA; and
- ✓ California Air Resources Board's (CARB) Climate Change Scoping Plan;

5.6. GHG Mitigation Measures & Reduction Strategies

Where operational related emissions exceed an applicable Threshold of Significance, lead agencies are responsible for implementing all feasible mitigation measures to reduce the project's construction and operational related GHG emissions. The air quality analysis should quantify the reduction of emissions associated with any proposed mitigation measures and include this information in the environmental document.

The recent amendments to the CEQA Guidelines Section 15126.4(c) require lead agencies to consider feasible means of mitigating greenhouse gas emissions that may include, but not be limited to:

- *Measures in an existing plan or mitigation program, for the reduction of emissions that are required as part of the lead agency's decision, which provides specific requirements that will avoid or substantially lessen the potential impacts of the project;*
- *Reductions in emissions resulting from construction and operation of a project through implementation of project features, project design, or other measures, such as those described in CEQA Guidelines Appendix F: Energy Conservation, also available in pdf;*
- *Off-site measures, including offsets, that are not otherwise required, to mitigate a project's emissions;*
- *Measures that sequester greenhouse gases~~; and~~ [i.e., such as carbon credits]; and*
- *In the case of the adoption of a plan, such as a general plan, long range development plan, or ~~GHG~~ plans for the reduction ~~plan~~of GHG emissions, mitigation may include the identification of specific measures that may be implemented on a project-by-project basis. Mitigation may also include the incorporation of specific measures or policies found in an adopted ordinance or regulation that reduces the cumulative effect of emissions.*

CEQA does not require mitigation measures that are infeasible for specific legal, economic, technological, or other reasons. A lead agency is not responsible for wholly eliminating all GHG emissions from a project. The CEQA Guidelines state that lead agencies should try to mitigate to a level that is "less than significant" or, in the case of cumulative impacts, less than cumulatively considerable.

Comment [A51]: Rocklin (B-13)

Comment [A52]: Placer (D-12)
Staff -Brackets indicate where additional language was added

Comment [A53]: Rocklin (B-13)

The District recommends the proposed mitigation measures to reduce GHG emissions should be as detailed as possible and should clearly identify who is responsible for implementation, funding, monitoring, enforcement, and any required maintenance activities. In cases where GHG emission reduction measures relate directly or indirectly to policies within a local jurisdiction's General or Community Plan, the District encourages discussion in the environmental document of the relationship between the General Plan or Community Plan policy and proposed reduction measures.

As part of the Attorney General's efforts to work with agencies as they confront the challenge of addressing global warming, documentation has been prepared providing various mitigation measures that local agencies may consider to offset or reduce global warming impacts. Some of this information is included in the links below:

- ✓ CAPCOA Guidance: Quantifying Greenhouse Gas Mitigation Measures (pdf);
- ✓ California Attorney General's Office: Addressing Climate Change at the Project Level. Mitigation Measures (pdf);
- ✓ Governor's Office of Planning and Research (OPR): CEQA and Climate Change; and
- ✓ CAPCOA Guidance: "CEQA and Climate Change: Evaluating and Addressing Greenhouse Gas Emissions from Projects Subject to CEQA."

APPENDIX A. Recommended Mitigation Measures (Construction)

NOTE: Mitigation measures may be different than those listed here based on any agreement between the local jurisdiction and the District.

1. 1a. Prior to approval of Grading or Improvement Plans, (whichever occurs first), on project sites greater than one acre, the applicant shall submit a Construction Emission / Dust Control Plan to the Placer County Air Pollution Control District. If the District does not respond within twenty (20) days of the plan being accepted as complete, the plan shall be considered approved. The applicant shall provide written evidence, provided by the District, to the local jurisdiction (city or county) that the plan has been submitted to the District. It is the responsibility of the applicant to deliver the approved plan to the local jurisdiction. The applicant shall not break ground prior to receiving District approval, of the Construction Emission / Dust Control Plan, and delivering that approval to the local jurisdiction issuing the permit.

   1b. Include the following standard note on the Grading Plan or Improvement Plans, or as an attached form: The prime contractor shall submit to the District a comprehensive inventory (e.g., make, model, year, emission rating) of all the heavy-duty off-road equipment (50 horsepower of greater) that will be used in aggregate of 40 or more hours for the construction project. If any new equipment is added after submission of the inventory, the prime contractor shall contact the District prior to the new equipment being utilized. At least three business days prior to the use of subject heavy-duty off-road equipment, the project representative shall provide the District with the anticipated construction timeline including start date, name, and phone number of the property owner, project manager, and on-site foreman.

   Comment [A54]: Rocklin (B-14)

   1c. Prior to approval of Grading or Improvement Plans, whichever occurs first, the applicant shall provide a written calculation to the District for approval demonstrating that the heavy-duty (> 50 horsepower) off-road vehicles to be used in the construction project, including owned, leased and subcontractor vehicles, will achieve a project wide fleet-average of 20% of NO_x and 45% of DPM reduction as compared to CARB statewide fleet average emissions. Acceptable options for reducing emissions may include use of late model engines, low-emission diesel products, alternative fuels, engine retrofit technology, after-treatment products, and/or other options as they become available. The following link shall be used to calculate compliance with this condition and shall be submitted to the District as described above: Construction Emissions Mitigation.

2. Include the following standard note on the Improvement/Grading Plan, or as an attached form: During construction the contractor shall utilize existing power sources (e.g., power poles) or clean fuel (e.g., gasoline, biodiesel, natural gas) generators rather than temporary diesel power generators.

3. Include the following standard note on the Improvement/Grading Plan, or as an attached form: During construction, the contractor shall minimize idling time to a maximum of 5 minutes for all diesel powered equipment.

4. Prior to the approval of grading or improvement plans, the applicant shall retain a qualified geologist or geotechnical engineer to conduct additional geologic evaluations of the project site to determine the presence or absence of naturally-occurring asbestos onsite. These evaluations shall include the project site and each offsite parcel where infrastructure construction or installation would occur. These evaluations shall be completed and submitted to the District prior to issuance of any grading and/or improvement plans.

5. If naturally-occurring asbestos is located onsite, the following measures shall be implemented prior to the approval of a grading/improvement plans:

   ~~6.~~a. The applicant shall prepare an Asbestos Dust Mitigation Plan pursuant to CCR Title 17 Section 93105 ("Asbestos Airborne Toxic Control Measures for Construction, Grading, Quarrying, and Surface Mining Operations") and obtain approval by the Placer County APCD. The Plan shall include all measures required by the State of California and the Placer County APCD.

   ~~7.~~b. If asbestos is found in concentrations greater than 5 percent, the material shall not be used as surfacing material as stated in state regulation CCR Title 17 Section 93106 ("Asbestos Airborne Toxic Control Measure-Asbestos Containing Serpentine"). The material with naturally-occurring asbestos can be reused at the site for sub-grade material covered by other non-asbestos-containing material

   ~~8.~~c. Each subsequent individual lot developer shall prepare an Asbestos Dust Mitigation Plan when the construction area is equal to or greater than one acre.

   ~~9.~~d. The project developer and each subsequent lot seller must disclose the presence of this environmental hazard during any subsequent real estate transaction processes. The disclosure must include a copy of the CARB pamphlet entitled "Asbestos-Containing Rock and Soil –What California Homeowners and Renters Need to Know," or other similar fact sheet. (pdf)

~~10.~~6. Signs shall be posted in the designated queuing areas of the construction site to remind off-road equipment operators that idling is limited to a maximum of 5 minutes.

~~11.~~7. Idling of construction related equipment and construction related vehicles is not recommended within 1,000 feet of any sensitive receptor.

Comment [A55]: Rocklin B-15)

APPENDIX B. District Rules & Regulations (Construction)

District "Rules & Regulations" are required for all projects. While not specifically listed as "mitigation" in an environmental document, District Rules & Regulations may be required as conditions of approval during the entitlement process.

To be included as standard notes, or as an attached form, with all Improvement Plans, Grading Plans, and/or Design Review Permits, including those projects exempt by CEQA~~}~~.

NOTE: It is up to each lead agency whether or not District rules or other local, state, and federal rules are considered within the baseline of a project, or used as mitigation for an identified impact.

The following is an "all inclusive" list and may not be applicable to every project.

1. Construction equipment exhaust emissions shall not exceed District Rule 202 Visible Emissions limitations. Operators of vehicles and equipment found to exceed opacity limits are to be immediately notified by the District to cease operations and the equipment must be repaired within 72 hours. (Based on APCD Rule 202)

2. The contractor shall suspend all grading operations when fugitive dust exceeds District Rule 228 Fugitive Dust limitations. The prime contractor shall be responsible for having an individual who is CARB-certified to perform Visible Emissions Evaluations (VEE). This individual shall evaluate compliance with Rule 228 on a weekly basis. It is to be noted that fugitive dust is not to exceed 40% opacity and not go beyond the property boundary at any time. Lime or other drying agents utilized to dry out wet grading areas shall not exceed District Rule 228 - Fugitive Dust limitations. Operators of vehicles and equipment found to exceed opacity limits will be notified by the District and the equipment must be repaired within 72 hours. (Based on APCD Rule 228)

3. The prime contractor shall be responsible for keeping adjacent public thoroughfares clean of silt, dirt, mud, and debris, and shall "wet broom" the streets (or use another method to control dust as approved by the individual jurisdiction) if silt, dirt, mud or debris is carried over to adjacent public thoroughfares. (Based on APCD Rule 228 / section 401.5)

4. During construction, traffic speeds on all unpaved surfaces shall be limited to 15 miles per hour or less. (Based on APCD Rule 228 / section 401.2)

5. A) In order to minimize wind driven dust during construction, the prime contractor shall apply methods such as surface stabilization, establishment of a vegetative cover, paving, (or use another method to control dust as approved by the individual jurisdiction).

6. B) The prime contractor shall suspend all grading operations when wind speeds (including instantaneous gusts) are excessive and dust is impacting adjacent properties. (Based on APCD Rule 228 / section 402)

7. The contractor shall apply water or use other method to control dust impacts offsite. Construction vehicles leaving the site shall be cleaned to prevent dust, silt, mud, and dirt from being released or tracked off-site. (Based on APCD Rule 228 / section 401.1, 401.4)

8. During construction, no open burning of removed vegetation shall be allowed unless permitted by the District. (Based on District Regulation 3)

9. A person shall not discharge into the atmosphere volatile organic compounds (VOC's) caused by the use or manufacture of Cutback or Emulsified asphalts for paving, road construction or road maintenance, unless such manufacture or use complies with the provisions Rule 217. (Based on APCD Rule 217).

10. Any device or process that discharges 2 lbs per day or more of air contaminants into the atmosphere, as defined by Health and Safety Code Section 39013, may require a District permit. Permits may be required for both construction and operation. Developers/contractors should contact the District prior to construction and obtain any necessary permits prior to the issuance of a Building Permit. (Based on the California Health & Safety Code section 39013) http://www.leginfo.ca.gov/cgi-bin/displaycode?section=hsc&group=39001-40000&file=39010-39060

11. Prior to the approval of grading or improvement plans, the applicant shall retain a qualified geologist or geotechnical engineer to conduct additional geologic evaluations of the project site to determine the presence or absence of naturally-occurring asbestos onsite. These evaluations shall include the project site and each offsite parcel where infrastructure construction or installation would occur. These evaluations shall be completed and submitted to the District prior to issuance of any grading and/or improvement plans. In the event that naturally-occurring asbestos is located onsite, the following measures shall be implemented prior to the approval of grading/improvement plans:

    a. The applicant shall prepare an Asbestos Dust Mitigation Plan (pdf) pursuant to CCR Title 17 Section 93105 ("Asbestos Airborne Toxic Control Measures for Construction, Grading, Quarrying, and Surface Mining Operations") and obtain approval by the District. The Plan shall include all measures required by the State of California and the District.

    b. If asbestos is found in concentrations greater than 5 percent, the material shall not be used as surfacing material as stated in state regulation CCR Title 17 Section 93106 ("Asbestos Airborne Toxic Control Measure-Asbestos Containing Serpentine"). The material with naturally-occurring asbestos can be reused at the site for sub-grade material covered by other non-asbestos-containing material. (Based on District Rule 228 and Section 93105, Title 17, California Code of Regulations (CCR) by the California Air Resources Board per Health and Safety Code Section 39666).

APPENDIX C. Recommended Mitigation Measures (Operational)

NOTE: Mitigation measures may be different than those listed here based on any agreement between the local jurisdiction and the District.

1. Prior to building permit approval, the applicant shall show, on the plans submitted to the Building Department, provisions for construction of new residences, and where natural gas is available, the installation of a gas outlet for use with outdoor cooking appliances, such as a gas barbecue or outdoor recreational fire pits.

2. As mitigation for air quality impacts, a bike lane is required for this project. Prior to approval of a Grading Permit, Improvement Plans, or Design Review approval, the applicant shall show that a Class 1, 2, or 3 bicycle lane(s) is provided in areas as approved by the Engineering Division and/or the Department of Public Works (or similar divisions within each jurisdiction) , as defined elsewhere in these conditions of approval.

3. Wood burning appliances, including fireplaces and woodstoves, shall not be installed within any residential units associated with this project. Wording relating to this restriction shall be included within the project's CC&R's.

4. Prior to Design Review approval, the Site Plan shall show that the applicant has provided _____ (insert number of spaces here) preferential parking spaces for employees that carpool / vanpool / rideshare as required by the District. Such stalls shall be clearly demarcated with signage as approved by the Design Site Review Committee.

5. Diesel trucks shall be prohibited from idling more than five minutes, (Placer County) or ____ minutes (local jurisdictions). Prior to the issuance of a Building Permit, the applicant shall show on the submitted building elevations that all truck loading and unloading docks shall be equipped with one 110/208 volt power outlet for every two dock doors. Diesel Trucks idling for more than the allotted time shall be required to connect to the 110/208 volt power to run any auxiliary equipment. A minimum 2'x3' signage which indicates "Diesel engine Idling limited to a maximum of _____ minutes" shall be included with the submittal of building plans.

6. Prior to Design Review approval, the applicant shall show that on-site bicycle racks, as required by the District, shall be reviewed and approved by the Design Site Review Committee.

7. As required by the District, Landscape Plans submitted for Design Review shall include native drought-resistant species (plants, trees and bushes) in order to reduce the demand for irrigation and gas powered landscape maintenance equipment. In addition, a maximum of 25% lawn area will be allowed on site. As a part of the project design, the applicant shall include irrigation systems which efficiently utilize water (*e.g.*, prohibit systems that apply water to non- vegetated surfaces and systems which create runoff). In addition, the applicant shall install water-efficient irrigation systems and devices, such as soil moisture-based irrigation controls, rain "shut off" valves, or other devices as reviewed and approved by the Design Site Review Committee.

8. The proposed project exceeds the cumulative air quality thresholds as established by the District (a maximum of 10 lbs per day of ROG and/or NO_x). The estimated total amount of excessive ROG and Nox for this project is _____ lbs per day (equivalent to ___ tons per year). In order to mitigate the projects contribution to long-term emission of pollutants, the applicant shall include one of the following off-site mitigation measures:

a. Establish mitigation off-site within the same region (i.e., east or west Placer County) by participating in an offsite mitigation program, coordinated through the District. Examples include, but are not limited to: participation in a "Biomass" program that provides emissions benefits; retrofitting, repowering, or replacing heavy duty engines from mobile sources (e.g., busses, construction equipment, on road haulers); or other programs that the project proponent may propose to reduce emissions.

b. Participate in the District's Offsite Mitigation Program by paying the equivalent amount of money, which is equal to the projects contribution of pollutants (ROG and NO_x), which exceeds the cumulative threshold of 10 lbs per day. The estimated payment for the proposed project is $_____ based on $16,640 per ton for a one year period. The actual amount to be paid shall be determined, and satisfied per current California Air Resource Board guidelines, at the time of recordation of the Final Map (residential projects), or issuance of a Building Permit (non-residential projects).

c. Any combination of a, or b, as determined feasible by the Director of the District.

NOTE: The above mitigation measure(s) must be satisfied prior to (Choose one): [recordation of the Final Map, issuance of a Building Permit]. In addition, local jurisdictions shall work with the District in order to arrange a method of satisfying any Condition(s) of Approval associated with this mitigation measure.

APPENDIX D. District Rules & Regulations (Operational)

District "Rules & Regulations" are required for all projects. While not specifically listed as "mitigation" in an environmental document, District Rules & Regulations may be required as conditions of approval during the entitlement process.

(To be included as standard notes, or as an attached form, with all Building Permits, including those projects exempt by CEQA)

Comment [A56]: Rocklin (B-16)

NOTE: The following is an "all inclusive" list and may not be applicable to every building permit.

1. Prior to building permit approval, in accordance with District Rule 225, only U.S. EPA Phase II certified wood burning devices shall be allowed in single-family residences. The emission potential from each residence shall not exceed a cumulative total of 7.5 grams per hour for all devices. Masonry fireplaces shall have either an EPA certified Phase II wood burning device or shall be a U.L. Listed Decorative Gas Appliance. (Based on APCD Rule 225).

2. Wood burning or pellet appliances shall not be permitted in multi-family developments. Only natural gas or propane fired fireplace appliances are permitted. These appliances shall be clearly delineated on the Floor Plans submitted in conjunction with the Building Permit application. (Based on APCD Rule 225, section 302.2).

3. Stationary sources or processes (e.g., certain types of engines, boilers, heaters, etc.) associated with this project shall be required to obtain an Authority to Construct (ATC) permit from the District prior to the construction of these sources. In general, the following types of sources shall be required to obtain a permit: 1). Any engine greater than 50 brake horsepower, 2). Any boiler that produces heat in excess of 1,000,000 Btu per hour, or 3) Any equipment or process which discharges 2 lbs per day or more of pollutants. Note that equipment associated with residential structures containing no more than 1 to 4 residential units are exempt from this requirement. Developers / contactors should contact the District prior to construction for additional information. (Based on APCD Rule 501 and the California Health & Safety Code, Section 39013).

4. The demolition or remodeling of any structure may be subject to the National Emission Standard for Hazardous Air Pollutants (NESHAPS) for Asbestos. This may require that a structure to be demolished be inspected for the presence of asbestos by a certified asbestos inspector and that all asbestos materials are removed prior to demolition.

   - ✓ For more information, call the California Air Resources Board at (916) 916) 322-6036 or the US. EPA at (415) 947-8704. (Based on Calif. Code Regulations, Title 22): http://www.ciwmb.ca.gov/Regulations/Title14/ch35.htm
   - ✓ Code of Federal Regulations, Title 40: http://www.ncdot.org/doh/preconstruct/ps/word/SP2R10.doc (WORD doc).

5. For those projects which include stationary sources (e.g., gasoline dispensing facility, auto painting, dry cleaning, large HVAC units, etc.), the applicant shall obtain an Authority to Construct (ATC) permit prior to the issuance of a Certificate of Occupancy. NOTE: A third party detailed Health Risk Assessment may be required as a part of the permitting process.

6. To limit the quantity of volatile organic compounds in architectural coatings supplied, sold, offered for sale, applied, solicited for application, or manufactured for use within the District, all projects must comply with District Rule 218. (Based on APCD Rule 218)

7. In order to limit the emission of nitrogen oxides (NOx) from natural gas-fired water heaters, all projects that utilize gas fired water heaters must comply with Rule 246. (Based on District Rule 246).

   ✓ For complete listing of APCD Rules: http://www.placer.ca.gov/Departments/Air/Rules.aspx

APPENDIX E. Preparing a Health Risk Assessment for Land Use Projects

To determine the impact of TACs for CEQA purposes, health risk assessments should be prepared. As stated above, common sources of toxic emissions include:

- Freeways and High Traffic Volume Roads,
- Goods Distribution Centers,
- Rail Yards,
- Refineries,
- Chrome Platers,
- Dry Cleaners using Perchloroethylene, and
- Gasoline Dispensing Facilities.

Section 15126.2(a) requires environmental impacts to be identified for two types of projects. Projects that can cause an adverse health impact on the people already living or working nearby are known as Type A, or new sources. Projects, such as new residential developments, that will be located in an area that can cause adverse health impacts to those residents are known as Type B.

Comment [A57]: Rocklin (B-17)

Type A (new source)

Type B (new receptor)

When should a risk assessment be prepared?

There are four steps to determine if a risk assessment should be prepared for a project. The first step is to determine if a project is subject to CEQA. Second step – Determine if toxic substances will be emitted. Third step – Screening Assessment. Fourth step – Refined Assessment.

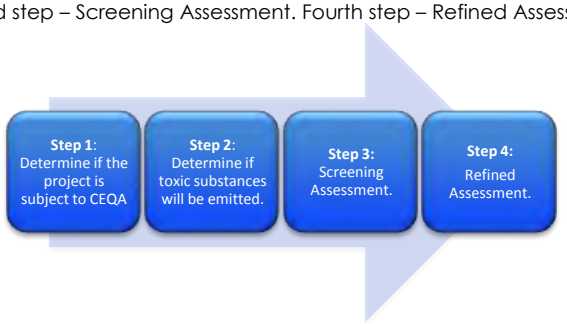


Figure I.1: Recommended Steps to determine if a Health Risk Assessment is needed for a project

Step 1 –Exempt Projects

- Statutorily exempt, for example:
  - Ministerial projects, such as issuance of building permits, or approval of final subdivision maps.
  - Issuance, modification, amendment, or renewal of Title V air quality permits.

- Categorically exempt, for example:
  - Actions by regulatory agencies for protection of the environment.
  - Cogeneration projects at existing facilities.

  ✓ See Section 4.0, Table 1 of the CAPCOA Guidelines for additional information.

Step 2 –Toxics Emitted

- Identify sources
  - Nearly all combustion processes, & mobile sources.
  - CARB Toxic Emission Inventory
  - EPA Toxic Release Inventory
- Identify toxic substances.
  - CARB Toxic Air Contaminant Identification List (http://www.arb.ca.gov/toxics/id/taclist.htm)
  - EPA List of Air Toxics (http://www.epa.gov/ttn/atw/nata2002/02pdfs/2002polls.pdf) (pdf)
- Many EPA, CARB, and district resources are available to indicate whether toxic substances will be released from a project.

Step 3 –Screening Tools

Various tools can be used to determine if a significant risk may result from project:

- Prioritization or other spreadsheet calculations.
- SCREEN3 modeling.
- CARB's 2005 AQ & LU Handbook.

Step 4 –Refined Assessment

If a significant risk may result from the project, refined modeling should be conducted to quantify the potential risks. The following are the recommended models based on the types of sources.

- Stationary Sources
  - AERMOD
  - ISCST3

- Road Vehicle Emissions
  - CAL3QHCR
  - AERMOD
  - ISCST3

  ✓ See ~~Attachment 1:~~Attachment 1 of ~~the~~ ~~*Technical Modeling and Risk Assessment Guidance of the*~~ CAPCOA Guidelines *(Technical Modeling and Risk Assessment Guidance)* for additional information. (pdf)

Comment [A58]: Staff change

What to do with results?

Suggested levels of significance:

Type A (new source) 	>10 per million cancer risk >1 Hazard Index
Type B (new receptor) 	>Contact the District for project specific guidance

Mitigation Measures

CEQA Guidelines Section 15364 requires all "Feasible" Measures must be applied within a reasonable period of time and account for economic, environmental, legal, social, and technological factors.

Emission reductions created by accelerating the implementation of Air Toxic Control Measures (ATCMs), or by expanding the applicability of ATCMs can be considered mitigation measures, if they are enforceable.

Project Placement

Project Placement is an effective way to mitigate risks. For Type A  , emission sources may be located further from receptors. For Type B  , receptors may be located further from emission sources.

Quantifiable & Unquantifiable

Mitigation measures can be quantifiable or unquantifiable. For example, a verified diesel particulate filter is a quantifiable measure. The planting of trees and shrubs along roadways; however, is an unquantifiable measure. Unquantifiable measures are measures based on limited data/studies indicating emission may be reduced, but information is insufficient to quantify the reductions at this time.

Mitigation Monitoring

The lead agency may need to require mitigation monitoring for the life of the project (CEQA Public Resources Code 21081.6). Examples of mitigation monitoring include:

- Vegetative barrier maintenance
- Diesel particulate filters maintenance
- Indoor air filtration systems maintenance

Public Participation Guidance

Public participation can be critical. Early community discussions can reduce the potential for disagreements or challenges that can delay or stop projects, even when a project can meet risk thresholds.

- ✓ For additional information see CARB's 2005 AQ & Land Use Handbook

Misc. Policy Issues

The CAPCOA Guidelines also includes discussion on these issues. Such policy issues include:

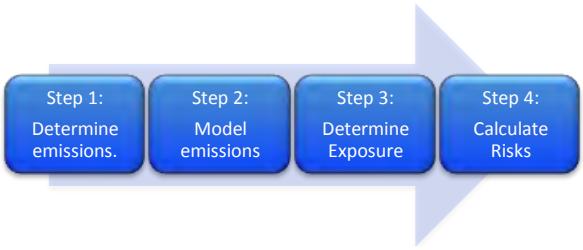
Smart Growth	• Sometimes infill (smart growth) results in residences being located in areas near existing sources of toxic emissions. An example includes residential units placed next to freeways or industrial sources.
Less than Lifetime Cancer Risk Exposures	• Inappropriate and appropriate risk calculations based on less than lifetime exposures. • For example, for residential receptors, an exposure period of 9 years with average residence ignores 50% of the population. • OEHHA "Hot Spots" Program Guidance: • Residential receptors -70 years • Worker receptors -40 years • Child exposure – 9 years (Contact District prior to using this factor, as new OEHHA Guidelines will account for the greater exposures to infants and children)
Mitigating Roadway Toxics	• Potential conflicts can occur when existing zoning allows houses adjacent to freeways regardless of risks.
Existing Background Risks	• Contact local air district
Inappropriate Discounting of Risks	• CAPCOA Guidelines are made available in order to minimize inappropriate risk assessment methodologies designed to downplay health impacts.
Misleading Comparison of Cancer Risks	• Contact local air district
Experts Disagree	• Section 15151 of the CEQA Guidelines states that disagreement among experts "does not make an EIR inadequate, but the EIR should summarize the main points of disagreement among experts."

Modeling and Risk Assessment Preparation Guidance Section

There are three basic procedures used to calculate risk. They include cancer risks, the chronic hazard index, and acute hazard index.

- Cancer Risk Calculation
- Acute and Chronic Hazard Index

Steps to Prepare a Risk Assessment



Step 1: Determining Emissions

Emissions will be determined by the types of sources and its associated emission factors.

Types of Sources:

Point Sources:
- Traditional stacks
- Single idling diesel truck

Area Sources:
- Truck Stops
- Construction Projects
- Quarries
- Evaporation ponds

Volume Sources:
- Roads and Railways
- Gas Stations
- Dry Cleaners
- Buildings with one open side

Emission factors:

Stationary Sources
- Emissions Factors (AP-42 and other sources)
- CARB Toxic Emission Inventory
- EPA Toxic Release Inventory

Mobile Onsite Sources
- CARB Off-Road Model
- CARB In-Use Off-Road Diesel Vehicle Emission Reporting database

Roadway Vehicles
- Caltrans Traffic Counts

- EMFAC Emissions Model

Step 2: Model Emissions

Modeling analysis includes the calculation of source emissions, application of models, preparation of model inputs, identification of geographical information, identification of locations for sources and receptors, preparation of meteorological data, and verification of output information. The CAPCOA Health Risk Assessment Guidance document provides a detailed discussion regarding the modeling analysis in its Attachment 1.

To streamline the modeling process, the District requires the modeling protocols to be submitted by the applicant or consultant for review before commencement of actual modeling runs.

Step 3: Determine Exposures (dose)

Exposure assessment determines the extent of human exposure including the identification of types of toxic substances and related health impact pathways and the calculation of exposure does. Dose can be determined for each Exposure Pathway (inhalation, dermal (skin) absorption, and ingestion).

- ✓ CAPCOA Guidelines defer to OEHHA procedures.

Step 4: Calculate Risk

For substances involving only the inhalation pathway, risks can be calculated based on the exposure concentration of air pollutant, breathing rate, exposure frequency, exposure duration, and averaged lifetime. For substances involving multiple pathways, risks can be calculated using CARB's HARP program.

When disclosing and mitigating for health risk impacts, all health risk must be disclosed. Further, all possible mitigation measures and degree of proposed mitigation implementation must be identified.

APPENDIX F. GHG Mitigation Measures Reduction Chart

This chart is being provided as a general reference for potential reductions of CO2 by applying specific mitigation measures to land use projects. The reductions listed in this chart are derived from an in-depth study by CAPCOA: "Quantifying Greenhouse Gas Mitigation Measures" (August, 2010). Other references are also listed. Please note that the reductions listed may or may not apply to all projects. It is very important that the generalized reductions listed in this chart should NOT be used in place of the more specific quantification.

It is highly recommended that the applicant contact the District in the early planning stages of a project to discuss GHG impacts and how to mitigate those impacts for any specific project.

	MEASURE	DESCRIPTION	% Reduction by Sector
		ENERGY	
E1	LEED Certified Building	All buildings within the project are classified as LEED Certified.	100%
E2	Meet Tier 1 or Tier 2 Building Requirements (CalGreen)	Meets CalGreen state energy standards.	Variable
E3	Install Solar Water Heater	Solar Water Heaters are installed in all homes or commercial structures w/i project.	70% more efficient (2)
E4	Energy Efficient Roofing (Energy Star)	"Energy Star" (or greater) roofing material on all structures w/I project	10-15% red. Peak Demand
E5	Install Tank less or Energy Efficient H20 Heaters	"Tank less" water heaters, or energy efficient water heaters with an external R value of 16, and an efficiency value of 0.65, installed in all homes or commercial structures within the project.	25-30% more efficient (900 lbs/yr)
E6	Install Shading Mechanism for Windows, Doors, etc	Shading mechanisms (i.e., canopies) for windows, doors are installed in all homes w/i project.	BMP (1)
E7	Whole Ceiling House Fans	Whole ceiling house fans are installed in all homes or commercial structures w/i project.	BMP(1)
E8	Efficient Indoor Lighting	Energy efficient indoor lighting installed in all homes or commercial structures w/i project.	BMP(1)
E9	Energy Star Appliances by Bldr.	"Energy Star" appliances (e.g., stoves, dishwashers, etc.) are installed by the builder in all homes w/i project.	2-4% (res)
E10	LED Traffic Lights	All traffic lights required to be installed with the project (on or off site)are to utilize LED	90% more efficient
E11	Install Efficient Street/Area Lights	All street/area lights required to be installed with the project are to be energy efficient.	16-40% more efficient
E12	Pre-Plumb for Solar Energy & design for load	All residences and commercial structures associated with the project are to be pre-plumbed and structurally engineered for future solar energy installation.	BMP(1)
E13	Energy Efficient AC Unit	AC unit which exceeds the Seasonal Energy Efficiency Ratio (SEER) by two points in effect at the time of the building permit submittal shall be installed in each residential dwelling.	BMP(1)
E14	HVAC Duct Sealing	Use mastic on all joints and seams and pressure balance the ductwork system.	30%
E15	Energy Efficient Heating	Include energy-efficiency heating and efficient ventilation methods on all new residential units. Furnaces to be low-NOx with an AFUE of 94 percent.	BMP(1)

E16	Programmable Thermostats	Install programmable thermostat timers in each residence or commercial structure w/l project.	BMP(1)
E17	Install Energy Efficient Boilers	Install energy efficient boilers associated with each land use.	2-18%
		WATER	
W1	Install Low Flow H20 Fixtures	Install low flow, toilets, showers, faucets, etc. in each residence or commercial structure w/l project.	BMP(1)
W2	Install H20 Saving Irrigation	Install H2O saving irrigation such as drip systems, rain shut off valves, etc. (excludes single family residential projects)	6%
W3	Use Reclaimed Water	Use reclaimed water for irrigation or other specific uses (excludes single family residential projects)	0-40%
		TRANSPORTATION	
T1	Bus Shelter	Provide bus shelters within close proximity to project.	0-15%
T2	Bike Lanes	Provide bike lanes which directly connect to regional bike system.	0-9%
T3	Bike Parking	Provide bike parking w/l project boundaries.	BMP(1)
		VEGETATION	
V1	Plant Shade Trees	Plant fast growing, broad leaf shade trees within 40' of the south side of a building & 60' of the west side of a building. (excludes single family residential projects)	BMP(1)
V2	Drought Tolerant Plants	At least 75% of all plant material shall be "draught tolerant."	BMP(1)
V3	Prohibit Gas Powered Landscape Equipment	Prohibit gas powered landscape equipment (electric only) within project boundaries. Include in CC&R's for Single Family Residential projects.	70%

BMP's: These mitigation measures are listed as BMPs since there is not adequate literature at this time to generalize the mitigation measure reductions. However, the project applicant may be able to provide the site specific information necessary to quantify a reduction.

Percentage reductions are not overall reductions in CO_2 for projects. For example, installation of a solar water heater does not reduce the overall project CO_2 emissions by 70%. Rather, there is an approximate 70% reduction of CO_2 by installing a solar water heater vs. a conventional water heater. The 70% reduction is only applicable to that specific measure, not the overall project.

More specific quantification tools, including rules for combining measures, may be found in CAPCOA's "Quantifying Greenhouse Gas Mitigation Measures" which provides mathematical formulas for each measure.

APPENDIX G. Mitigation Measures (Greenhouse Gases)

The District has not established a threshold for GHGs. The following mitigation measures are provided as general guidance for the types of measures that could potentially be proposed for land use projects. Please note that these measures may or may not be applicable to any specific project. This appendix is intended to be utilized as a "menu" of potential measures. Approximate reductions of CO2 for each measure are listed in Appendix F. The applicant should contact the District for specific information regarding applicable measures for each specific project.

Residential

1. Prior to the issuance of a Building Permit, the floor plans and/or exterior elevations submitted in conjunction with the Building Permit application shall show that the applicant has met all conditions required in order for each residence within the approved subdivision to be certified as a (choose one: Certified / Silver /Platinum) LEED building.

2. Prior to the issuance of a Building Permit, the floor plans and/or exterior elevations submitted in conjunction with the Building Permit application for each residence within the approved subdivision shall show that each residence shall meet CalGreen (choose one: Tier 1 / Tier 2) requirements in place at the time of Building Permit issuance.

3. Prior to the issuance of a Building Permit, the floor plans and/or exterior elevations submitted in conjunction with the Building Permit application for each residence within the approved subdivision shall show that each residence includes a complete solar water heating system.

4. Prior to the issuance of a Building Permit, the floor plans and exterior elevations submitted in conjunction with the Building Permit application, shall show that the applicant has installed _____ [insert number] solar panels or Photovoltaic roofing tiles on _____ [insert number] homes or structures throughout the project as follows: (describe lot numbers, locations, and/or building numbers and locations here).

5. Prior to the issuance of a Building Permit, the floor plans and/or exterior elevations submitted in conjunction with the Building Permit application for each residence within the approved subdivision shall show that each residence is "pre-plumbed" and structurally engineered for the future installation of a complete solar energy system.

6. Prior to the issuance of a Building Permit, the floor plans and/or exterior elevations submitted in conjunction with the Building Permit application for each residence within the approved subdivision shall show that each residence includes "Energy Star" rated (or greater) roofing materials.

7. Prior to the issuance of a Building Permit, the floor plans and/or exterior elevations submitted in conjunction with the Building Permit application for each residence within the approved subdivision shall show that each residence includes a "tank less" water heating system.

8. Prior to the issuance of a Building Permit, the floor plans and/or exterior elevations submitted in conjunction with the Building Permit application for each residence within the approved subdivision shall show that each residence includes a whole house ceiling fan.

9. Prior to the issuance of a Building Permit, the floor plans and/or exterior elevations submitted in conjunction with the Building Permit application for each residence within the approved subdivision shall show that each residence includes energy efficient lighting (both indoor and outdoor).

10. Prior to the issuance of a Building Permit, the floor plans and/or exterior elevations submitted in conjunction with the Building Permit application for each residence within the approved subdivision shall show that each residence includes "Energy Star" appliances (e.g., stoves, dishwashers, and any other appliances typically included with the initial installation by the builder).

11. Prior to the issuance of a Building Permit, the floor plans and/or exterior elevations submitted in conjunction with the Building Permit application for each residence within the approved subdivision shall show that each residence includes an energy efficient AC unit which exceeds the SEER ratio by a minimum of two points at the time of building permit issuance.

12. Prior to the issuance of a Building Permit, the floor plans and/or exterior elevations submitted in conjunction with the Building Permit application for each residence within the approved subdivision shall show that each residence includes HVAC duct sealing and that the ductwork shall be pressure balanced prior to the issuance of a certificate of occupancy.

13. Prior to the issuance of a Building Permit, the floor plans and/or exterior elevations submitted in conjunction with the Building Permit application for each residence within the approved subdivision shall show that each residence shall include an Energy efficient heating system. Furnaces are to be low NOX with an AFUE of 94 percent.

14. Prior to the issuance of a Building Permit, the floor plans and/or exterior elevations submitted in conjunction with the Building Permit application for each residence within the approved subdivision shall show that each residence shall only utilize programmable thermostat timers.

15. Prior to the issuance of a Building Permit, the floor plans and/or exterior elevations submitted in conjunction with the Building Permit application for each residence within the approved subdivision shall show that each residence shall only utilize low flow water fixtures such as low flow toilets, faucets, showers, etc.

16. Prior to approval of Improvement Plans the applicant shall only show "LED" type lights for all intersection traffic lights included on the Improvement Plans, including all on-site and off-site traffic lights.

17. Prior to approval of Improvement Plans the applicant shall only show energy efficient lighting for all street, parking, and area lighting associated with the project, including all on-site and off-site lighting.

18. Prior to approval of Improvement Plans the applicant shall include a bus shelter on the Improvement Plans located in the general vicinity as shown on the Site Plan approved for the project.

19. Prior to approval of Improvement Plans the applicant shall include a Class ___ bike lane on the Improvement Plans located in the general vicinity as shown on the Site Plan approved for the project.

Nonresidential

1. Prior to the issuance of a Building Permit, the floor plans and/or exterior elevations submitted in conjunction with the Building Permit application shall show that the applicant has met all conditions required in order for all structures within the proposed project to be certified as a (choose one: Certified / Silver /Platinum) LEED building.

2. Prior to the issuance of a Building Permit, the floor plans and/or exterior elevations submitted in conjunction with the Building Permit application shall include provisions for the installation of _____ (choose one: Solar panels / photovoltaic tiles) as indicated in the environmental document for the project.

3. Prior to the issuance of a Building Permit, the floor plans and/or exterior elevations submitted in conjunction with the Building Permit application shall show that the project includes a complete solar water heating system.

4. Prior to the issuance of a Building Permit, the floor plans and/or exterior elevations submitted in conjunction with the Building Permit application shall show that structures within the project are "pre-plumbed" and structurally engineered for the future installation of a complete solar energy system.

5. Prior to the issuance of a Building Permit, the floor plans and/or exterior elevations submitted in conjunction with the Building Permit application shall show that each structure within the project includes "Energy Star" rated (or greater) roofing materials.

6. Prior to the issuance of a Building Permit, the floor plans and/or exterior elevations submitted in conjunction with the Building Permit application shall show that each structure within the project includes energy efficient lighting (both indoor and outdoor).

7. Prior to the issuance of a Building Permit, the floor plans and/or exterior elevations submitted in conjunction with the Building Permit application shall show that each structure within the project includes an energy efficient AC unit which exceeds the SEER ratio by a minimum of two points at the time of building permit issuance.

8. Prior to the issuance of a Building Permit, the plans submitted in conjunction with the Building Permit application shall show that each structure within the project includes HVAC duct sealing and that the ductwork shall be pressure balanced prior to the issuance of a certificate of occupancy.

9. Prior to the issuance of a Building Permit, the floor plans and/or exterior elevations submitted in conjunction with the Building Permit application shall show that each structure within the project shall include an energy efficient heating system.

10. Prior to the issuance of a Building Permit, the plans submitted in conjunction with the Building Permit application shall show that each structure within the project shall only utilize programmable thermostat timers.

11. Prior to the issuance of a Building Permit, the plans submitted in conjunction with the Building Permit application shall show that each structure shall only utilize low flow water fixtures such as low flow toilets, faucets, showers, etc.

12. Prior to approval of Improvement Plans the applicant shall only show "LED" type lights for all intersection traffic lights included on the Improvement Plans, including all on-site and off-site traffic lights.

13. Prior to approval of Improvement Plans the applicant shall only show energy efficient lighting for all street, parking, and area lighting associated with the project, including all on-site and off-site lighting.

14. Prior to approval of Improvement Plans the applicant shall include a bus shelter on the Improvement Plans located in the general vicinity as shown on the Site Plan approved for the project.

15. Prior to approval of Improvement Plans the applicant shall include a Class ___ bike lane on the Improvement Plans located in the general vicinity as shown on the Site Plan approved for the project.

Guide to the Nonresidential CALGreen Code - *Second Edition*, November 2010

Comment [A59]: Placer (D-13)

APPENDIX H. 2001/2008 Air Quality Mitigation Funds Policy (Land Use)

BEFORE THE BOARD OF DIRECTORS,
PLACER COUNTY AIR POLLUTION CONTROL DISTRICT,
STATE OF CALIFORNIA

RESOLUTION NO. 01-06

In The Matter Of: Approval of a Policy Regarding Land Use Air Quality Mitigation Funds. A Policy Statement as Provided as Exhibit I.

The following *RESOLUTION* was duly passed by the Board of Directors, Placer County Air Pollution Control District, at a regular meeting held *April 17, 2001* by the following vote on roll call:

Ayes: YES

Noes: None

Signed and approved by me after its passage.

Chairman

Attest:

Clerk of said Board

WHEREAS, pursuant to Health and Safety Code Section 40000, within its jurisdictional area, the Placer County Air Pollution Control District has the responsibility for the control of air pollution from all sources, except emissions

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from motor vehicles; and

WHEREAS, Placer County Air Pollution Control District continues to strive to reduce emissions from all sources in order to meet both State and Federal ambient air quality standards; and

WHEREAS, the 1994 Regional Ozone Non-Attainment Plan committed to a one ton per day reduction in oxides of nitrogen emissions from land use projects; and

WHEREAS, California Environmental Quality Act Significance Thresholds and the mitigation of significant air emission impacts is a desirable and necessary means to achieve the necessary reductions; and

WHEREAS, the Placer County Air Pollution Control District, finds it desirable to mitigate the emission impacts to the extent practicable through implementation of offsite emission reductions where on-site emission reductions are not sufficient to offset a development project; and

WHEREAS, the Placer County Air Pollution Control District Board finds it prudent and desirable to establish guidelines for the District on the utilization of land use air quality mitigation funds.

IT IS HEREBY RESOLVED that the Placer County Air Pollution Control District Board does hereby approve a policy, as shown in Exhibit I, for the use of land use air quality mitigation funds that are received by the District.

The approved policy is provided as Exhibit I.

[T:\APC\BOARD\RESOLUT.ION\res01-06 Mitigation Fund Policy.wpd]

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PM_{10} CO_2 ROG O_3 SF_6 NO_x CO_2E CH_4 N_2O H_2O CH_4 HFC ROG O_3 CO_2 ROG SF_6 NO_x SF_6 NO_x CO_2E CH_4 PM_{10} O_3 SF_6 SF_6 NO_x

BEFORE THE BOARD OF DIRECTORS
PLACER COUNTY AIR POLLUTION CONTROL DISTRICT
STATE OF CALIFORNIA

RESOLUTION NO: 08-15

In the matter of: Adoption of Amendments to Placer County Air Pollution Control District's Policy Regarding Land Use Air Quality Mitigation Funds, as shown in Exhibit #I.

The following **RESOLUTION** was duly passed by the Board of Directors, Placer County Air Pollution Control District, at a regular meeting held **December 11, 2008** by the following vote:

Ayes: Holmes, M. ✓ Millward Absent Weygandt Absent Holmes, J. ✓ Blackmun Absent
Nakata ✓ Hill ✓ Uhler ✓ Gray ✓

Noes: Holmes, M.____ Millward ____ Weygandt____ Holmes, J. ____ Blackmun ____
Nakata____ Hill____ Uhler____ Gray____

Abstain: Holmes, M.____ Millward____ Weygandt____ Holmes, J. ____ Blackmun ____
Nakata____ Hill____ Uhler____ Gray____

Signed and approved by me after its passage.

Kent Nakata Chairperson

Attest:

Margie Kolton Clerk of said Board

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WHEREAS, the Placer County Air Pollution Control District is the commenting agency defined by the California Environmental Quality Act to recommend feasible mitigation measures to achieve necessary emission reduction from new land use developments in Placer County; and

WHEREAS, the Placer County Air Pollution Control District Board approved the Land Use Air Quality Mitigation Funds Policy on April 12, 2001 to provide an alternative for new land use development projects to offset the project related emissions when the on-site mitigation measures for the project are not sufficient to mitigate the total emissions resulting from the project; and

WHEREAS, the California Global Warming Solution Act of 2006 recognized the serious impacts resulting from global warming and created a framework for the reduction of greenhouse gases in California; and

WHEREAS, Senate Bill 97, of the State of California, provided a guidance on how green house gases should be addressed in certain California Environmental Quality Act documents; and

WHEREAS, the 2007 U.S. Supreme Court decision Massachusetts v. EPA in which the word "emissions", was determined to include greenhouse gases; and

WHEREAS, the Placer County Air Pollution Control District finds it desirable to mitigate the emission impacts to the extent practicable through implementation of offsite emission reductions only where on-site emission reductions are not sufficient to offset emissions resulting from new land use development project; and

WHEREAS, the Placer County Air Pollution Control District Board finds it prudent and desirable to include greenhouse gases within the definition of emissions within the Land Use Air Quality Mitigation Funds Policy and to provide an alternative for new land use developments offsetting the related emissions of greenhouse gases through the participation in the land use air quality mitigation program.

NOW, THEREFORE BE IT RESOLVED, that this Board approves and adopts the amendment of the Land Use Air Quality Mitigation Funds Policy, as shown in Exhibit #I. The existing Policy regarding the Land Use Air Mitigation Funds, as adopted on April 12, 2001, is replaced.

EXHIBIT 1 - POLICY

LAND USE AIR QUALITY MITIGATION FUNDS

It is the Policy of the Placer County Air Pollution Control District to receive and distribute air quality mitigation funds pursuant to the guidelines listed below. *These Guidelines do not supersede agreements made with applicants prior to adoption of this Policy.*

Guidelines

- The District shall continue to consider permanent on-site air quality mitigation the preferred method of reducing a project's emissions including criteria pollutants and green house gases (GHG) as defined by AB 32[1]. However, if sufficient measures cannot be implemented on-site to adequately reduce a project's emissions, then payment into the District's Offsite Air Quality Mitigation Fund is preferred. The District shall continue to allow new development projects to contribute into the District's Offsite Air Quality Mitigation Fund as a means to offset air quality impacts from their development.

- The District shall continue to calculate the amount of the payment for the criteria pollutants into the Offsite Air Quality Mitigation Fund as follows:

  Identifying the required emission reduction to the project's pollutants of concern (e.g. ozone precursor emissions over an ozone season of May-October) and applying a cost effectiveness factor (currently $14,300 per ton) to calculate the funds required to attain the reduction through an offsite emission reduction program. The cost effectiveness factor may be adjusted to reflect current emission reduction market conditions, as reported by the California Air Resources Board Carl Moyer Program Guideline.

  Sample Calculation: - A project of approximately 2000 homes is estimated to result in daily nitrogen oxide emissions of 430 pounds per day X 180 days per ozone season / 2000 pounds per ton X $14,300 per ton to reduce emissions through offsite program = $553,410

- The District will identify the required emission reduction for the project's related GHG emissions to mitigate the project related global warming impacts.

1 *Massachusetts v. EPA*, 549 U.S. 497 (2007)

DISTRICT POLICY 1 LAND USE AIR QUALITY MITIGATION FUND

- An emission reduction project is eligible for mitigation funding only if source of the emissions reduction (public or private project) is not required by existing State or federal law to reduce its emissions to the levels proposed by the project.
- For the criteria pollutants, the source of the emissions reduction should be located within Placer County and the source operates primarily within the non-attainment area classified by the National Ambient Air Quality Standards (NAAQS).
- For the criteria pollutants to be reduced that are of localized concern (particulate matter, carbon monoxide), it is preferred that the location of the emissions reduction be as close as possible to the project that is to be mitigated.
- For the GHG emissions, the source of the emissions reduction should be located within California to assist in achieving the objectives of the California Global Warming Solution Act of 2006 (AB 32).
- The type of emissions to be reduced (i.e. criteria pollutants and GHG) are of the same type as those emissions for which the Air Quality Mitigation Fee was paid.
- Leveraging of the mitigation funds to reduce the direct contribution of mitigation funds to achieve emission reductions is preferred.
- Examples of the types of emissions reduction projects that may be qualifying but not limited to:

  A. Provide monetary incentives to homeowners to replace high polluting non-EPA certified woodstoves with new EPA certified low emission wood, pellet or gas burning appliances.
  B. Purchase wood chippers for the California Department of Forestry and Fire Protection and or local fire departments to be used in a residential chipper program.
  C. Provide monetary incentives to local transit operators, public and private owners of heavy duty diesel on-road trucks and off-road equipment to replace older high emission diesel engines with new, low emission diesel or compressed/liquefied natural gas engines.
  D. Provide funding for regional air quality improvement programs such as the "Mow Down" program implemented by the Sacramento Metropolitan Air Quality Management District.
  E. Use as matching funds to obtain "Carl Moyer" funding for public and private air quality improvement projects.
  F. Provide monetary incentives to the agriculture industry to replace high polluting diesel powered water pumps with new cleaner burning diesel or natural gas powered agriculture pumps.

G. Alternative project designs or locations that conserve energy and water, projects that reduce vehicle miles traveled (VMT) by fossil-fueled vehicles, projects that contribute to established regional or programmatic mitigation strategies, and projects that sequester carbon to offset the emissions generating from the land use development project.

Amendment Adopted by the PCAPCD Board of Directors on December 11, 2008

DISTRICT POLICY 3 LAND USE AIR QUALITY MITIGATION FUND

PM_{10} CO_2 ROG O_3 SF_6 NO_x CO_2E CH_4 N_2O H_2O CH_4 HFC ROG O_3 CO_2 ROG SF_6 NO_x SF_6 NO_x CO_2E CH_4 PM_{10} O_3 SF_6 SF_6 NO_x

APPENDIX I. Glossary

Air Basin:	A land area with generally similar meteorological and geographic conditions throughout. To the extent possible, air basin boundaries are defined along political boundary lines and include both the source and receptor areas. California is currently divided into 15 air basins.
Air District:	A political body responsible for managing air quality on a regional or county basis. California is currently divided into 35 air Districts. (See also air pollution control District and air quality management District).
Air Pollutants:	Amounts of foreign and/or natural substances occurring in the atmosphere that may result in adverse effects to humans, animals, vegetation, and/or materials. (See also air pollution.)
Air Pollution:	Air pollution is the introduction of chemicals, particulate matter, or biological materials that cause harm or discomfort to humans or other living organisms, or cause damage to the natural environment or built environment, into the atmosphere.
Air Pollution Control District (District):	A county agency with authority to regulate stationary, indirect, and area sources of air pollution (e.g., power plants, highway construction, and housing developments) within a given county, and governed by a District air pollution control board composed of the elected county supervisors. (See also air quality management District).
Air Quality Management Plan (AQMP):	A plan prepared by an District / AQMD, for a county or region designated as a nonattainment area, for the purpose of bringing the area into compliance with the requirements of the national and / or California ambient air quality standards. AQMPs are incorporated into the State Implementation Plan (SIP).
Air Resources Board:	(See California Air Resources Board.)
Alternative Fuels:	Fuels such as methanol, ethanol, natural gas, and liquid petroleum gas that are cleaner burning and help to meet CARB's mobile and stationary emission standards. These fuels may be used in place of less clean fuels for powering motor vehicles. For more information, please visit our alternative fuels website.
Area Sources:	Those sources for which a methodology is used to estimate emissions. This can include area-wide, mobile and natural sources, and also groups of stationary sources (such as dry cleaners and gas stations). The California Clean Air Act requires air Districts to include area sources in the development and implementation of the AQMP. In the California emission inventory all sources which are not reported as individual point sources are included as area sources. The federal air toxics program defines a source that emits less than 10 tons per year of a single hazardous air pollutant (HAP) or 25 tons per year of all HAPs as an area source. For more information, please visit our area-wide source methodologies website.
Assembly Bill 32:	The California Global Warming Solution Act of 2006 and California Governor Schwarzenegger Executive Order S-3-05 (June 1, 2005), both requiring reductions of greenhouse gases in the State of California by 2020.
Atmosphere:	The gaseous envelope surrounding the Earth. The dry atmosphere consists almost entirely of nitrogen (78.1% volume mixing ratio) and oxygen (20.9% volume mixing ratio), together with a number of trace gases, such as argon (0.93% volume mixing ratio), helium and radioactively active greenhouse gases such as carbon dioxide (0.035% volume mixing ratio) and ozone. In addition, the atmosphere contains the greenhouse gas water vapor, whose

	amounts are highly variable but typically around 1% volume mixing ratio. The atmosphere also contains clouds and aerosols
Attainment Area:	A geographical area identified to have air quality as good as or better than, the national and / or California ambient air quality standards (NAAQS / CAAQS). An area may be an attainment area for one pollutant and a nonattainment area for others. For more information, please visit our area designations website.
Best Available Control Technology (BACT):	The most up-to-date methods, systems, techniques, and production processes available to achieve the greatest feasible emission reductions for given regulated air pollutants and processes. BACT is a requirement of NSR (New Source Review) and PSD (Prevention of Significant Deterioration). For more information, please go to our BACT website.
California Air Pollution Control Officers Association (CAPCOA):	A nonprofit association of the air pollution control officers from all 35 air quality agencies throughout California. CAPCOA was formed in 1975 to promote clean air and to provide a forum for sharing of knowledge, experience, and information among the air quality regulatory agencies around the state. CAPCOA is an organization of air quality professionals-- leaders in their field -- who promote unity and efficiency, and strive to encourage consistency in methods and practices of air pollution control. For more information, please go to CAPCOA's website.
CA Air Resources Board (CARB):	The State's lead air quality agency consisting of an eleven-member board appointed by the Governor and several hundred employees. CARB is responsible for attainment and maintenance of the state and federal air quality standards, and is fully responsible for motor vehicle pollution control. It oversees county and regional air pollution management programs.
CA Clean Air Act (CCAA):	A California law passed in 1988 which provides the basis for air quality planning and regulation independent of federal regulations. A major element of the Act is the requirement that local air Districts in violation of the CAAQS must prepare attainment plans which identify air quality problems, causes, trends, and actions to be taken to attain and maintain California's air quality standards by the earliest practicable date.
CalEEMod:	Quantifies potential criteria pollutant and greenhouse gas (GHG) emissions associated with construction and operation from a variety of land uses, such as residential and commercial facilities. The model quantifies direct emissions from construction and operation (including vehicle use), as well as indirect emissions, such as GHG emissions from energy production, solid waste handling, vegetation planting and/or removal, and water conveyance.
CALINE:	A model developed by the Air Resources Board that calculates carbon monoxide concentrations resulting from motor vehicle use.
California Environmental Quality Act (CEQA):	A California law that sets forth a process for public agencies to make informed decisions on discretionary project approvals. The process aids decision makers to determine whether any environmental impacts are associated with a proposed project. It requires environmental impacts associated with a proposed project to be eliminated or reduced, and that air quality mitigation measures are implemented.
Carbon Dioxide (CO_2):	The most common of the six primary GHGs. A naturally-occurring gas, and also a by-product of burning fossil fuels and biomass, as well as land-use changes and other industrial processes. It is the principal anthropogenic greenhouse gas that affects the Earth's radiative balance. It is the reference gas against which other greenhouse gases are measured and therefore has a Global Warming Potential of 1.

Carbon Dioxide Equivalent (CO_2e):	A metric used to compare emissions of various greenhouse gases. It is the mass of carbon dioxide that would produce the same estimated radiative forcing as a given mass of another greenhouse gas. Carbon dioxide equivalents are computed by multiplying the mass of the gas emitted by its global warming potential.
Carbon Monoxide (CO):	A colorless, odorless gas resulting from the incomplete combustion of hydrocarbon fuels. CO interferes with the blood's ability to carry oxygen to the body's tissues and results in numerous adverse health effects. Over 80 percent of the CO emitted in urban areas is contributed by motor vehicles. CO is a criteria air pollutant.
Climate Action Plan:	A set of strategies intended to guide community efforts for reducing greenhouse gas emissions which focuses on improving energy efficiency and conservation in homes and businesses, as well as strategies to reduce emissions from transportation sources.
Climate Change:	Climate change refers to a statistically significant variation in either the mean state of the climate or in its variability, persisting for an extended period (typically decades or longer). Climate change may be due to natural internal processes or external forcing, or to persistent anthropogenic changes in the composition of the atmosphere or in land use.
Criteria Air Pollutant:	An air pollutant for which acceptable levels of exposure can be determined and for which an ambient air quality standard has been set. Examples include: ozone, carbon monoxide, nitrogen dioxide, sulfur dioxide, and PM_{10} and $PM_{2.5}$. The term "criteria air pollutants" derives from the requirement that the U.S. EPA must describe the characteristics and potential health and welfare effects of these pollutants. The U.S. EPA and CARB periodically review new scientific data and may propose revisions to the standards as a result.
Direct Emissions:	Emissions from applicable sources that are owned or controlled by the reporting organization.
Dust:	Solid particulate matter that can become airborne.
EMFAC2007/EMFAC2010:	A software package used to calculate emission rates from all motor vehicles, such as passenger cars to heavy-duty trucks, operating on highways, freeways and local roads in California.
Emission Factor:	A unique value for determining an amount of a GHG emitted for a given quantity of activity data (e.g., million metric tons of carbon dioxide emitted per barrel of fossil fuel).
Federal Clean Air Act (FCAA):	A federal law passed in 1970 and amended in 1974, 1977 and 1990 which forms the basis for the national air pollution control effort. Basic elements of the act include national ambient air quality standards for major air pollutants, mobile and stationary control measures, air toxics standards, acid rain control measures, and enforcement provisions. For more information, please go to the Federal Clean Air Act
Fugitive Dust:	Dust particles that are introduced into the air through certain activities such as soil cultivation, or vehicles operating on open fields or dirt roadways. A subset of fugitive emissions.
Global Warming:	Global warming is an average increase in the temperature of the atmosphere near the Earth's surface and in the troposphere, which can contribute to changes in global climate patterns. Global warming can occur from a variety of causes, both natural and human induced. In common usage, "global warming" often refers to the warming that can occur as a result of increased emissions of greenhouse gases from human activities. Also see Climate Change

Greenhouse Gas:	Any gas that absorbs infrared radiation in the atmosphere. Greenhouse gases include, but are not limited to, water vapor, carbon dioxide (CO2), methane (CH4), nitrous oxide (N2O), hydro chlorofluorocarbons (HCFCs), ozone (O3), hydro fluorocarbons (HFCs), perfluorocarbons (PFCs), and sulfur hexafluoride (SF6).
Health Risk Assessment:	A document that identifies the risks and quantities of possible adverse health effects that may result from exposure to emissions of toxic air contaminants. A health risk assessment cannot predict specific health effects; it only describes the increased possibility of adverse health effects based on the best scientific information available.
Hot Spot:	(See toxic hot spot.)
Indirect Source:	Any facility, building, structure, or installation, or combination thereof, which generates or attracts mobile source activity that results in emissions of any pollutant (or precursor) for which there is a state ambient air quality standard. Examples of indirect sources include employment sites, shopping centers, sports facilities, housing developments, airports, commercial and industrial development, and parking lots and garages.
Indirect Source Review:	A major component of an indirect source control program which applies to new and modified indirect sources. Strategies for indirect source review include permit programs, review and comment on new and modified indirect source projects through the California Environmental Quality Act (CEQA) process, and coordination of air quality, transportation and land use policies through local government general plans. Indirect source review reduces emissions from new and modified sources through best available mitigation measures and additional offsite mitigation such as offsets and mitigation fee.
Metric Ton:	The tonne (t) or metric ton, sometimes referred to as a metric tonne, is an international unit of mass. A metric ton is equal to a Megagram (Mg), 1000 kilograms, 2204.6 pounds, or 1.1023 short tons.
Million Metric Tons (MMT):	Common measurement used in GHG inventories. It is equal to a Teragram (Tg).
Mobile Sources:	Sources of air pollution such as automobiles, motorcycles, trucks, off-road vehicles, boats, and airplanes
National Ambient Air Quality Standards (NAAQS):	Standards established by the United States EPA that apply for outdoor air throughout the country. There are two types of NAAQS. Primary standards set limits to protect public health and secondary standards set limits to protect public welfare. For more information, please go to our AAQS website.
New Source Review:	A Clean Air Act requirement that State Implementation Plans must include a permit review, which applies to the construction and operation of new and modified stationary sources in nonattainment areas, to ensure attainment of national ambient air quality standards. The two major requirements of NSR are Best Available Control Technology and Emission Offsets. For more information, please go to our New Source Review website.
Nitrogen Oxides (NO_x):	A powerful greenhouse gas with a global warming potential of 298 times that of carbon dioxide (CO2). Major sources of nitrous oxide include soil cultivation practices, especially the use of commercial and organic fertilizers, manure management, fossil fuel combustion, nitric acid production, and biomass burning. The GWP is from the IPCC's Fourth Assessment Report (AR4).
Nitrous Oxide (N_2O):	Is a chemical compound with the formula N_2O. At room temperature, it is a colorless non-flammable gas, used in surgery and dentistry for its anesthetic and analgesic effects. It is also used as an oxidizer in rocketry and in motor racing to increase the power output of engines, as well as a propellant.

Nonattainment Area:	A geographic area identified by the U.S. EPA and / or CARB as not meeting either NAAQS or CAAQS standards for a given pollutant. For more information, please view our designated areas website.
OFFROAD ~~2001~~2007:	A software package used to generate and calculate emissions inventory data for off-road mobile sources.
Ozone:	Ozone, the triatomic form of oxygen (O3), is a gaseous atmospheric constituent. In the troposphere, it is created both naturally and by photochemical reactions involving gases resulting from human activities (smog). Tropospheric ozone acts as a greenhouse gas. In the stratosphere, it is created by the interaction between solar ultraviolet radiation and molecular oxygen (O2). Stratospheric ozone plays a dominant role in the stratospheric radiative balance. Its concentration is highest in the ozone layer
Ozone Precursors:	Chemicals such as non-methane hydrocarbons and oxides of nitrogen, occurring either naturally or as a result of human activities, which contribute to the formation of ozone, a major component of smog.
Particulate Matter:	Any material, except pure water, that exists in the solid or liquid state in the atmosphere. The size of particulate matter can vary from coarse, wind-blown dust particles to fine particle combustion products. For more information, please take a look at our PM brochure.
$PM_{2.5}$:	Includes tiny particles with an aerodynamic diameter less than or equal to a nominal 2.5 microns. This fraction of particulate matter penetrates most deeply into the lungs. For more information, please go to our particulate matter website.
PM_{10}:	A criteria air pollutant consisting of small particles with an aerodynamic diameter less than or equal to a nominal 10 microns (about 1/7 the diameter of a single human hair). Their small size allows them to make their way to the air sacs deep within the lungs where they may be deposited and result in adverse health effects . PM_{10} also causes visibility reduction. For more information, please view our particulate matter brochure.
Precursor:	Compounds that change chemically or physically after being emitted into the air and eventually produce air pollutants. For example, organic compounds are precursors to ozone.
Reactive Organic Gasses (ROG):	A photo chemically reactive chemical gas composed of non-methane hydrocarbons that may contribute to the formation of smog. Also sometimes referred to as Non-Methane Organic Gases (NMOGs). (See also Volatile Organic Compounds and Hydrocarbons.)
Risk Assessment:	An evaluation of risk which estimates the relationship between exposure to a harmful substance and the likelihood that harm will result from that exposure.
Sensitive Receptors:	Facilities or land uses that include members of the population that are particularly sensitive to the effects of air pollutants, such as children, the elderly, and people with illnesses. Examples include schools, hospitals and residential areas.
Significance Threshold:	Under CEQA, every agency in the state "is encouraged to develop and publish thresholds of significance" against which to compare the environmental impacts of projects. A lead agency will normally consider the environmental impacts of a project to be significant if and only if they exceed established thresholds of significance.
Smog:	A combination of smoke and other particulates, ozone, hydrocarbons, nitrogen oxides, and other chemically reactive compounds which, under certain conditions of weather and sunlight, may result in a murky brown haze that causes adverse health effects. The primary source of smog in California is motor

	vehicles.
State Implementation Plan (SIP):	A plan prepared by states and submitted to U.S. EPA describing how each area will attain and maintain national ambient air quality standards. SIPs include the technical foundation for understanding the air quality (e.g., emission inventories and air quality monitoring), control measures and strategies, and enforcement mechanisms. (See also AQMP). For more information, please go to our SIP website.
Stationary Sources:	Non-mobile sources such as power plants, refineries, and manufacturing facilities which emit air pollutants.
Sulfur Dioxide (SO_2):	A compound composed of one sulfur and two oxygen molecules. Sulfur dioxide emitted into the atmosphere through natural and anthropogenic processes is changed in a complex series of chemical reactions in the atmosphere to sulfate aerosols. These aerosols are believed to result in negative radiative forcing (i.e., tending to cool the Earth's surface) and do result in acid deposition (e.g., acid rain).
Sulfur Hexafluoride (SF_6):	An inorganic, colorless, odorless, non-toxic and non-flammable greenhouse gas which is considerably higher than the density of air.
Toxic Air Contaminants (TAC):	An air pollutant, identified in regulation by the CARB, which may cause or contribute to an increase in deaths or in serious illness, or which may pose a present or potential hazard to human health. TACs are considered under a different regulatory process (California Health and Safety Code section 39650 et seq.) than pollutants subject to CAAQSs. Health effects to TACs may occur at extremely low levels, and it is typically difficult to identify levels of exposure which do not produce adverse health effects. For more information, please view our toxics website.
Toxic Hot Spot:	A location where emissions from specific sources may expose individuals and population groups to elevated risks of adverse health effects -- including but not limited to cancer -- and contribute to the cumulative health risks of emissions from other sources in the area. For more information, please go to our toxics hot spots website.
URBEMIS (URBan EMISsions):	Air quality model utilized in California for land use project related air quality impact analysis. URBEMIS includes emissions factors for estimating emission from construction activities, motor vehicles, and area sources resulting from the project.
U.S. Environmental Protection Agency (U.S. EPA):	The federal agency charged with setting policy and guidelines, and carrying out legal mandates for the protection of national interests in environmental resources. For more information, please go to the U.S. EPA website.
Vehicle Miles Travelled (VMT):	The miles traveled by motor vehicles over a specified length of time (e.g., daily, monthly or yearly) or over a specified road or transportation corridor.
Volatile Organic Compounds (VOCs):	Carbon-containing compounds that evaporate into the air (with a few exceptions). VOCs contribute to the formation of smog and/or may themselves be toxic. VOCs often have an odor, and some examples include gasoline, alcohol, and the solvents used in paints.

APPENDIX J. References

[1] CEQA Statute and Guidelines Section. 21065

[2] CEQA Statute and Guidelines Section. 21067

[3] CEQA Statute and Guidelines Section. 15378

[4] Public Resources Code Section. 21080.3

[5] CEQA Statute and Guidelines, Section 21069

[6] CEQA Statute and Guidelines, Section 21070

[7] CEQA Statute and Guidelines, Section 21063

[8] Public Resources Code 21153 and CEQA Guideline Sections 15086

[9] CEQA Statue and Guidelines, Section 15125

[10] California Air Resources Board, http://www.arb.ca.gov/research/aaqs/caaqs/caaqs.htm

[11] CEQA Statue and Guidelines, Section 15152 (a)

[12] Toxics "Hot Spots" Information and Assessment Act of 1987 §44362 (b)

[13] CEQA Statue Guidelines Section 15186

[14] CEQA Statute Guidelines Section 21159.21 (f)(2)

[15] CEQA Statute and Guidelines, Section 15186

[16] Health and Safety Code, Section 25502

[17] PM_{10} Source: EPA-AP-42 (January 1995) and Index of Methodologies by Major Category Section 7.7 Building Construction Dust, CARB, August 1997

[18] Senate Bill 25, Health and Safety Code Sections 39669.5 et seq.

[19] Rural area as defined in §50101 of the H&SC, an urban area as defined in §50104.7 of the H&SC

[20] Air Quality & Land use Handbook: A Community Health Perspective, pg. 34

[21] California Air Resources Board, Carl Moyer Fee available at http://www.arb.ca.gov/msprog/moyer/guidelines/current.htm

[22] Federal EPA. Fast Facts: Inventory of U.S. Greenhouse Gas Emissions data (2000-2009) http://www.epa.gov/climatechange/emissions/downloads11/GHG-Fast-Facts-2009.pdf

[23] California Air Resources Board Greenhouse Gas Inventory. http://www.arb.ca.gov/cc/inventory/inventory.htm (accessed October 14, 2011).

ATTACHMENT #2

SUBJECT:

Staff Report

PLACER COUNTY
AIR POLLUTION CONTROL DISTRICT

STAFF REPORT

Placer County Air Pollution Control District
California Environmental Quality Act (CEQA) Air Quality Handbook

October 11, 2012

BACKGROUND

Two of the Air Basins (Sacramento Valley and Mountain Counties Air Basins) within the Placer County Air Pollution Control District are located within the Sacramento Federal Ozone Nonattainment Area (SFONA). These are areas with air quality which does not currently meet the federal ozone standard. In addition, all three Air Basins within the District (including Lake Tahoe Air Basin) are designated as nonattainment for state ozone standards. These ozone standards were established by the United States Environmental Protection Agency (EPA) and the California Air Resources Board (CARB) in order to help achieve one of their primary goals: to "protect and enhance the quality of the Nation's air resources so as to promote the public health and welfare and the productive capacity of its population." Currently, the SFONA ranks as the sixth worst area in the nation for ozone air pollution[1]. Local air districts in California, including the Placer County Air Pollution Control District (District), have the primary responsibility under state law for the control of air pollution from all sources, other than the emissions of motor vehicles. Therefore, it is the District's responsibility to implement certain regulations and programs for controlling air pollutant emissions from industrial and other emission sources in order to improve air quality so that the District can attain federal and state ambient air quality standards.

The District believes that there is a nexus between air quality and how land is developed and utilized throughout Placer County. One of the District's goals and objectives contained within the District's mission statements is to "mitigate effects of growth through reviewing development plans for impacts on air quality and working toward mitigating those impacts through initiatives and programs that reduce emissions."[2] As a public agency, one way that the District supports this is to take an active part in the intergovernmental review process under California Environmental Quality Act (CEQA). The CEQA review program, one of the District's core programs, enables the District to fulfill its mission, as well as to improve Placer County's air quality as required under both federal and State Clean Air Acts.

Under CEQA, the District usually serves as a "Commenting Agency" in a role that reviews and comments on environmental documents prepared for discretionary development projects by Lead Agencies (Cities and County) within the District's jurisdiction[3]. Some of these projects may result in substantial air pollutant emissions causing adverse environmental impacts within the County as defined by CEQA As a part of the District's review program, the District evaluates air quality analysis and makes recommendations for reducing emissions of air pollutants in order to mitigate potential air quality impacts from land use projects. These recommendations are made based on the knowledge and expertise of staff, and are provided to the County, as well as incorporated cities within the County, relatively early in the planning process.

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1 American Lung Association, the State of the Air 2012, "Most Polluted Cities: Ozone". Information can be found at the following link: http://www.stateoftheair.org/2012/city-rankings/most-polluted-cities.html

2 The Mission statement with District Goals and Objectives was adopted on April 13, 2000, by the PCAPCD Board of Directors.

3 CEQA Guidelines §15044

DISCUSSION

At the December 11, 2008, meeting of the District Board of Directors, District staff provided the Board an overview of the District's existing CEQA review process and described how the District works with the local jurisdictions to provide professional assistance in the identification of air quality impacts associated with land use projects. The overview included the recommended thresholds of significance, modeling tools, and mitigation identification. As part of this discussion, District staff committed to develop a handbook to serve as an advisory tool for assessing air quality impacts of proposed projects in Placer County.

At the June 10, 2010, meeting of the District Board of Directors, the Board, at the request of the City of Roseville, addressed Roseville's concerns regarding District's existing recommended thresholds of significance which had been used for decades within the District's CEQA review program. District staff provided a detailed analysis including the foundation of recommended thresholds and the District's justification for its CEQA review practices. The Board of Directors considered the analysis presented by staff and directed staff to continue the use of the existing recommended thresholds of significance until such time as they may be replaced by a Indirect Source Rule (ISR)[4] as well as any thresholds developed in concert with Greenhouse Gas and related SB375 work products.

District Staff have completed the development of a Handbook. The primary purpose of the District's CEQA Air Quality Handbook (Handbook) is to describe the District's existing review process related to the processing of CEQA documents when the District acts as a Commenting Agency for land use projects located within Placer County. The Handbook describes criteria used by the District in order to recommend to Lead Agencies when an air quality analysis should be prepared, what types of analyses should be performed, and what kinds of mitigation measures should be identified to reduce overall air quality impacts from proposed land use projects. These criteria include specific methods for calculating emissions, with references to applicable models, recommended thresholds for evaluating the level of significance, and mitigation strategies for mitigating a project's related air quality impacts. The Handbook does not propose any new standards, thresholds, or requirements beyond those previously presented to your Board at the December 2008 and June 2010 Board meetings. The Handbook describes the District's process for reviewing land use related air quality impacts using existing criteria and recommended thresholds, as directed by the Board of Directors.

In addition to the description of the District's existing review process, the Handbook has been designed as an advisory tool to provide planning practitioners, environmental consultants and land use developers with assessment strategies, tools, and step-by-step procedures for conducting a thorough analysis to evaluate air quality issues. Helpful navigation links, website "hyper-links", citations, references, and diagrams are located throughout the Handbook. It is the District's desire to provide a "user-friendly" document that not only allows the reader to navigate the Handbook for an understanding of the District's review process, but also provides planning practitioners the means to obtain useful information from public agencies and other resources,

[4] On August 11, 2011, two indirect source rules (construction and operational) and one stationary source (asphaltic concrete product) were removed from the PCAPCD rule adoption commitment within the 2008 Sacramento Ozone SIP. Please see Attachment #3.

such as Environmental Protection Agency (EPA), California Air resources Board (CARB), California Air Pollution Control Officers Association (CAPCOA), in addition to the District, and using the modeling program CalEEMod, for the preparation of air quality analyses. The Handbook also encourages land use planners, developers, and consultants to contact District planning staff for early consultation in the environmental review process. The Handbook and consultation with the District's staff will help to ensure that any proposed air quality analysis is appropriate and adequate for a given project. In addition, knowing what is required should result in less preparation and less review time, leading to a potential reduction in overall project costs.

HANDBOOK CONTENT

The Handbook consists of five chapters: 1) Project Review & Analysis, 2) Recommended Thresholds of Significance, 3) Analyzing Construction Emissions, 4) Analyzing Operational Emissions, and 5) Analyzing Greenhouse Gas Emissions. In addition to the main content, the Handbook provides ten appendices including the lists of the District rules and regulations, recommended mitigation measures, the preparation for a health risk assessment for land use projects, and a copy of the District Policy regarding land use air quality mitigation funds. These chapters and appendices are designed to provide information to a wide spectrum of readers from citizens with very little CEQA knowledge and experience to skilled consultants who routinely conduct analyses and prepare all types of environmental documentation.

A summary of each chapter is provided below:

Chapter 1: Project Review & Analysis. This chapter consists of an introduction of the District's role under CEQA, a summary of air quality status in Placer County, and an overview of the District steps when reviewing a project. The main content in this chapter contains general information relating to the role of the District under CEQA, the current air quality status based on the federal and State ambient air quality standards, and how the District conducts a review for land use projects forwarded from a Lead Agency.

Chapter 2: Recommended Thresholds of Significance. This chapter focuses on the District recommended thresholds for criteria pollutants. The content provides the rationale and foundation as to how the District establishes recommended thresholds and how the District applies them in the process of reviewing a project's related air quality impacts. Although the thresholds recommended by Staff for CEQA documents have not been formally adopted by the Board of Directors, the Board took action in their June, 2010 Board meeting and directed Staff to continue the use of existing recommended thresholds until such time it may be replaced by any thresholds developed in concert with Greenhouse Gas and related SB375 work products. This chapter also clearly states that the District will recognize any threshold adopted by the Lead Agency during the review and analysis of a project as long as the adopted threshold meets the CEQA requirements[5].

Chapter 3: Analyzing Construction Emissions. This chapter provides a detailed description regarding the steps used by Staff to evaluate a projects related construction emissions. The content includes state and local regulatory requirements for construction activities, model selection and

[5] CEQA Guidelines §15064.7 (b) and (c)

emission calculation, impact determination, and feasible mitigation measures for construction impacts.

Chapter 4: Analyzing Operational Emissions. This chapter provides a detailed description regarding the steps used by Staff to evaluate project related operational emissions. The content also includes state and local regulatory requirements, model selection, emission calculations, impact determination, analysis for special projects, and feasible measures for operational impact mitigation.

Chapter 5: Analyzing Greenhouse Gas Emissions. This chapter provides a summary of federal and State regulations for GHG emissions, a discussion of GHG analysis under the 2010 CEQA Guidelines amendment[6], options for GHG thresholds, quantification models for GHG emission calculation, and useful tools for emission mitigation quantification. Currently, the District is working with other air districts in Sacramento Region in order to develop a regional GHG threshold. Until such a time as a regional threshold is developed and recommended, the District will use any GHG threshold selected by the Lead Agency, which meets CEQA requirements, when reviewing and commenting on project related GHG emission impacts.

PUBLIC OUTREACH

In October, 2011, the District released the 1st draft of the Handbook to all local jurisdictions throughout the County and solicited their review and comments. The review period was from October 21, 2011, to December 9, 2011. Three comment letters were received during the review period. District staff reviewed these comments and prepared responses back to each of the jurisdictions individually. Significant modifications were made to the Handbook based on the feedback and recommendations from local jurisdictions within the 2nd draft of the Handbook.

The 2nd draft of the Handbook was released on August 3, 2012, for the public review and comment. The review period for the 2nd draft of Handbook was from August 3, 2012, to September 14, 2012. The notice of release for the 2nd draft of the Handbook was mailed to local jurisdictions, environmental consultants, and other interested stakeholders. In addition, District staff created a webpage[7] containing related information such as a downloadable electric copy of the draft Handbook, a Q&A for the draft Handbook, information related to an upcoming public meeting, and Staff contact information. On September 5, 2012, Staff held a public meeting to present the Handbook, answer questions, and seek comments regarding the draft Handbook. In addition to this public meeting presentation, District staff has also met directly with one of the local jurisdictions (the City of Roseville) as well as a stakeholder (the Building Industry Association [BIA]) in order to discuss any concerns or comments related to the draft Handbook. Five comment letters were received during the review period. The attached strikeout version of Handbook includes modifications based on the comments that we received.

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6 As directed by SB97, the California Natural Resources Agency adopted Amendments to the CEQA Guidelines for greenhouse gas emissions on December 30, 2009. The Amendments is effective on March 18, 2010. The adopted Amendments can be downloaded at: http://ceres.ca.gov/ceqa/guidelines/

7 The draft CEQA Handbook website: http://www.placer.ca.gov/Departments/Air/CEQAHandbook.aspx

COMMENTS RECEIVED

There were a total of 8 comment letters received in response to both the 1st and 2nd draft of the Handbook. Comment letters for the 1st draft of Handbook were received from the City of Rocklin, the City of Roseville and the Placer County Planning Department, and comment letters for the 2nd draft of the Handbook were received from the City of Rocklin, the City of Roseville, Placer County Planning Department, BIA, and one consultant company (AECOM). District Staff reviewed the comments and provided responses for each comment separately.

The following section provides the District responses and detailed discussion regarding the most common comments received on the draft Handbook. All comments provided to the District by all local jurisdictions and interested parties for the 1st and 2nd drafts, as well as District staff responses, are attached within the staff report. (Attachment #1)

1. Request of formal adoption by the Board of Directors

The District's CEQA Handbook was a work product developed by staff and committed to the District's Board of Directors at the December 2008 Board meeting. One of the primary goals of the Handbook is to describe the District's existing process for the review of land use projects under CEQA which is to assist lead agencies with their review of land use projects and associated air quality impacts. At the June 11, 2010, Board meeting, the Board of Directors discussed the District's existing thresholds and took action to direct staff to continue using these thresholds during their review of land use projects. The proposed CEQA Handbook includes references to the existing thresholds and has been prepared in order to fulfill direction given to staff by the Board of Directors.

The commenter uses the CEQA Guideline §15064.7 (b) as a citation to request that the Handbook be adopted by the Board of Directors. However, this CEQA Guideline citation is not applicable to the District's Handbook. This particular CEQA Guideline section requires legislative action specifically for thresholds of significance adopted by a Lead Agency but not require such action for documents developed by a Commenting Agency. Due to the fact that the District is not proposing any new thresholds within the Handbook (the Districts' existing thresholds have been applied towards the CEQA review program since 1996), and because the Handbook describes the review process when the District acts as a Commenting Agency under CEQA (not as a Lead Agency), this citation is not relevant to whether or not the Board of Directors must formally adopt the Handbook.

In addition, the commenter mentions a recent court order from the Alameda County Superior Court to the Bay Area Air Quality Management District (BAAQMD) in support of a request that the District conduct a CEQA review of the Handbook prior to a formal action by the District Board of Directors. After carefully reviewing the Court findings, District Staff found that this citation is also not applicable to the District Handbook. The Court issued a judgment finding that the BAAQMD had failed to comply with CEQA when it adopted thresholds, and the Court then issued a writ of mandate ordering the BAAQMD to set aside the thresholds from its CEQA Guideline until the BAAQMD action complies with CEQA. The Court's finding is focused on the adoption of thresholds of significance which is an action subject to CEQA, whereas District staff is not requesting that the Board of Directors take any type of

action for the adoption of thresholds. Accordingly, this particular court case citation is not applicable. More information regarding this court order can be found on the BAAQMD website[8].

2. Whether the proposed Handbook will add to cost of doing business

The purpose of the District's Handbook is to describe how District staff reviews and processes land use projects under CEQA and to provide general recommendations to Lead Agencies in assessing air quality impact analysis for those projects. The Handbook does not propose any new rules, thresholds, or analyses beyond those which have already been established and are currently in place. There is nothing stated in the Handbook which would require a project to go through any specific study and analysis, or to prepare a specific type of environmental documents such as an EIR. Those are decisions made by the Lead Agency. The Handbook is simply an *advisory* document which was prepared to assist Lead Agencies in understanding the District's existing CEQA review program.

The District believes that the Handbook may actually *reduce* the amount of review time and resource expenses for Lead Agencies and developers, thereby reducing overall project costs. The Handbook provides a clear step-by-step process for reviewing land use development, scoping related data and studies, conducting modeling analyses, determining the project's related air quality impacts, and identifying applicable mitigation measures (if a project results in substantial air quality impacts), with an overall goal of preparing a defensible environmental document. The District encourages local jurisdictions and project applicants to discuss air quality issues with District Staff as early as possible in the project planning stage so the project's related air quality issues can be addressed appropriately (Section 1.3 "Early Consultation"). The District believes that the Handbook will reduce the need to re-analyze or to conduct additional analyses for associated air quality impacts by providing clear guidance early in the review process; it will ultimately reduce processing time and additional costs to the applicant.

3. Land use emission model: URBEMIS and CalEEMod

The URBEMIS (**Urb**an **Emis**sions) model was originally developed by CARB (the ownership has since been transferred to the CAPCOA) as a modeling tool to assist local public agencies with estimating air quality impacts from land use projects when preparing a CEQA document. The model was developed as a user-friendly computer program that estimates construction, area source, and mobile source air pollution emissions from a wide variety of land use development projects in California. However, URBEMIS cannot support new requirements regarding GHG emission calculation. It does not quantify GHG emissions from all GHG pollutants (i.e., methane and nitrous oxide are not quantified) and from indirect sources such as utility usage, waste handling, and water distribution. Its platform and built-in features do not satisfy requests to quantify the benefits from mitigation implementation. Currently, any application of URBEMIS will also be required to conduct additional analyses in order to provide the complete project's related GHG emissions for impact determination. Furthermore, CAPCOA does not have any plan to upgrade URBEMIS

[8] The BAAQMD CEQA Guidelines website: http://www.baaqmd.gov/Divisions/Planning-and-Research/CEQA-GUIDELINES.aspx

with the latest CARB mobile emission model (EMFAC 2011, which was released in October 2011.

CalEEMod (**Cal**ifornia **E**missions **E**stimator **Mod**el) is a new land use emission model which was developed in collaboration with the air districts of California and introduced in February 2011. It is designed to quantify potential direct criteria pollutants and greenhouse gas (GHG) emissions associated with the construction and operation of land uses such as residential and commercial facilities, as well as indirect emissions, such as GHG emissions from energy production, solid waste handling, vegetation planting and/or removal, and water conveyance. CalEEMod can calculate the benefits of land use projects from its special location and designed features as well as implementing mitigation measures including GHG mitigation measures which are developed and approved by CAPCOA. It is a model which integrates the latest data and factors to provide more accurate air pollutant emissions associated with land use development. CalEEMod is the model recommended in the Handbook for the air quality impact assessment.

Currently, CalEEMod is in the process of upgrading with the mobile source emission factors from EMFAC 2011. The District anticipates that the upgrade for CalEEMod will be accomplished by the end of 2012. Once CalEEMod is upgraded, it will contain CARB's latest on-road mobile emission factors to provide updated on-road mobile emission estimations with the factors recognized by associated statewide regulations (e.g., Low Carbon Fuel Standards and CARB Advanced Clean Cars program); the URBEMIS model will no longer be suitable to provide accurate emission estimation for mobile sources. The District will recommend that the upgraded CalEEMod be applied towards any new project which is initially received by the Lead Agencies once the newer CalEEMod model is released.

The District agrees with the comments that there should be a transition period for consultants to switch the modeling tool from URBEMIS to CalEEMod when CalEEMod is upgraded by the latest EMFAC model. For those projects where the air quality analysis has been done by URBEMIS, the results will be still valid. However, additional analysis should be conducted to provide more accurate estimations for a project's related air quality impacts. The District will respect decisions made by the Lead Agencies to determine whether the CalEEMod should be applied to upgrade any given project's air quality analysis.

4. CalEEMod vs. URBEMIS

A commenter raised a concern whether the new CalEEMod may produce higher emission estimations and will lead to greater mitigation requirements and much higher costs of compliance for projects throughout the County. The concern was from the comparison of the tables shown in the 1st draft and 2nd draft of Handbook.

Table 2-2 and 2-4 are prepared to show the sizes of projects related to 82 lbs/day and 10 lbs/day by build out year. The purpose of these tables is to provide very general information as to how the allowable size of projects will be changed based on the build out year. When the 1st draft Handbook was finished and distributed to local jurisdictions, CARB had not yet released EMFAC 2011. At that time, it was not clear when CAPCOA would be upgrading

the CalEEMod model. The 1st draft of the Handbook included URBEMIS as a recommended modeling tool for the analysis and the Table 2-2 and 2-4 were produced based on the URBEMIS modeling results. Since CAPCOA began upgrading CalEEMod with the EMFAC 2011 and decided to sunset URBEMIS, District Staff made the decision to recommend switching the modeling tool from URBEMIS to CalEEMod in the Handbook. Table 2-2 and 2-4 in the 2nd draft were updated based on CalEEMod modeling results.

CalEEMod website posts a technical paper which provides a more detailed discussion regarding the features and factors used in CalEEMod and the comparison of modeling results between the CalEEMod and URBEMIS[9]. The paper describes the updated data based on the latest survey information, the modification for emission calculations, the advanced method to provide more accurate local characteristics, the incorporation of statewide regulations requirement, and new features to enhance the ability to quantify benefits from proposed mitigation measures.

According to its analysis, the paper states that mobile source emissions from the CalEEMod may be higher than the results from the URBEMIS on selected land use categories because CalEEMod uses more conservative data for daily trip rates and the type of trips to estimate mobile source emissions. These data were selected by an oversight committee which consists of representatives from local air districts, CARB, EPA, environmental consulting firms, and local governments. The development of CalEEMod is intended to complete a comprehensive analysis of air quality by a standardized model which will provide more accurate and realistic results for the compliance with CEQA requirements based on the latest survey data, updated emission factors, and revised methodologies.

Many local air districts have recommended or announced the model transition from URBEMIS to CalEEMod for reviewing and preparing air impact assessments for land use projects. Those air districts include SCAQMD[10], SLOAPCD[11], SJVAPCD[12], and SMAQMD[13]. The District will recommend the use of CalEEMod when the upgraded CalEEMod is released. It is anticipated at the end of 2012 or early 2013.

5. The use of thresholds of significance in District review process

The purpose of the District's Handbook is to describe how District staff review and process land use projects under CEQA and provide general recommendations to Lead Agencies in assessing air quality impact analysis for those projects. Section 1.5 describes the District's internal review for a land use project and includes the statement that staff will review the air quality analysis based on the District recommended thresholds or any threshold adopted by the Lead Agency. Several comments request that the Handbook should make this statement

[9]Technical Paper- Methodology Reasoning and Policy Development of the California Emission Estimator Model http://www.caleemod.com/

[10] South Coast Air Quality Management District website: http://www.aqmd.gov/ceqa/models.html

[11] San Luis Obispo County Air Pollution Control District website: http://www.slocleanair.org/business/regulations.php

[12] San Joaquin Valley Air Pollution Control District announces the deadline of transition is on July 1, 2012. http://www.valleyair.org/workshops/postings/2012/3-21-12-CalEEMod/CalEEMod_Training_March2012_Announcement.pdf

[13] Sacramento Metropolitan Air Quality Management District announces the deadline of transition is on October 1, 2012. http://www.airquality.org/ceqa/index.shtml

more conspicuous and should be emphasized throughout the Handbook when the thresholds of significance are mentioned.

District staff believes that the discussion of Section 1.5 provides a clear statement that the District will respect and use any threshold adopted by the Lead Agency to review the distributed land use projects. In order to accommodate the comments regarding this matter, District staff adds a definition regarding the term "applicable thresholds" in Chapter 2, replaces any "thresholds" with "applicable thresholds", and modifies several discussions with the use of thresholds of significance in the Handbook. All changes and modification are presented in the strikeout version attached with the Board Memo.

In addition to the comments/suggestions directly on the content of the Handbook, some comments question the foundation of the District recommended cumulative thresholds of significance (10 lbs/day) and its application. While the focus of this agenda item is the Handbook and not the District's thresholds of significance, Staff would nevertheless like to provide the following responses for the clarification and further discussion on the received comments regarding this matter.

6. Justification of District's recommended thresholds

Some commenters questioned the basis for the District thresholds, and one[14] specifically argues that the District's approach of using the nonattainment status as the foundation to establish thresholds directly conflicts with the CEQA Guidelines section §15064(h)(4) which states: "*The mere existence of significant cumulative impacts caused by other projects alone shall not constitute substantial evidence that the proposed project's incremental effects are cumulative considerable*." and section §15065(a)(3) which states: "*cumulative considerable means that in incremental effects of an individual project are significant when viewed in connection with the effects of past projects, the effects of other current projects and the effects of probably future projects*". After carefully reviewing these comments, District Staff would argue that the commenter may have misinterpreted the District's responses dated March 2012, regarding the foundation and justification of recommended thresholds.

"Nonattainment" means that regional air pollutant concentration measurements are higher than the health-based standards established by federal and state regulations and potentially cause public health impacts. High air pollutant concentrations result from excessive air pollutant emissions emanated by either direct or indirect sources. When a nonattainment status is designated for a region, it means the regional emissions from all sources exceed the regional carrying capacities of the air shed and result in violations of federal and state air quality standards. As a result, air pollution emissions need to be reduced within the nonattainment area in order to reduce concentrations.

It is the District's position that any "nonattainment designation" is a significant environmental issue for air quality impacts because all sources, including direct and indirect sources, in the area contribute emissions that result in air quality deterioration. Therefore, nonattainment status should be addressed within environmental documents and can be used within the CEQA process as a basis to establish thresholds of significance. This position is

[14] Comment #1 in City of Roseville letter dated on September 20, 2012. Please see the attached copy.

affirmed by the requirement contained in CEQA Guideline "Environmental Checklist Form"[15] to evaluate air quality impacts.

The District has concluded that there is a nexus between direct emissions from stationary sources and indirect emissions associated with land use sources, and that the District threshold is justified. "Air pollution is air pollution." it is indistinguishable if the pollution is emitted by a stationary facility or vehicle activities resulting from a land use project. The impacts from either one or both categories will influence the region ability to attain health-based air quality standards. If the emissions from stationary sources needs to be addressed and mitigated as required through an NSR (New Source Review) permitting program, the emissions from land use related sources also need to be addressed and mitigated. The District does not recognize any fundamental difference in the emissions between these two types of sources. The District believes that using the emission control program for stationary sources (i.e., NSR program) is appropriate to establish the basis for significant criteria in order to evaluate a land use project's related air quality impacts.

Although the primary purpose of NSR program is to control emissions of new stationary sources so that neighborhoods near those sources will be as clean as possible, it also recognizes incremental emissions generated by new stationary sources because of regional growth. The program sets limitations of emissions for total maximum emissions (82 lbs per day) and Best Available Control Technology (BACT) requirements (10 lbs per day) for each facility or source based on the classification of the nonattainment status. As a result, the emissions from a new source should not cause significant contributions that could jeopardize the region's ability to attain state and federal air quality standards.

Under the NSR program, the limitations of emissions are established based on the classification of the nonattainment status (moderate, serious, severe, and extreme). Although the NSR program was established by the 1977 Federal Clean Air Act Amendment, California Health and Safety Code also requires the same emission limitations of the NSR program for nonattainment areas to attain the state air quality standards[16]. The NSR's limitations of emissions are not tied to any emission reduction identified by State Implementation Plan (SIP) prepared by any specific pollutant for a nonattainment area; it is an identifiable, quantifiable criteria based on generalized incremental effects.

CEQA Guidelines do not dictate what should or should not be used as a basis to establish thresholds of significance for air quality impacts. It establishes the principle that "a threshold of significance is an identifiable quantitative, qualitative or performance level of a particular environmental effect,…" and "…should be supported by substantial evidence" (CEQA Guidelines, §15064.7(a)&(b)). The District believes that the identification of the federal and state attainment status as well as NSR requirements are consistent with the intent of this principle established by CEQA. The District recognizes that the non-attainment status does not trigger a determination of significance under CEQA. Otherwise, the District would use a

[15] CEQA Guideline Appendix G "Environmental Checklist Form", Section III-Air Quality question (c). http://ceres.ca.gov/ceqa/guidelines/pdf/appendix_g-3.pdf

[16] Health and Safety Code §40918, 40919, 40920, and 40920.5.

"zero" threshold to determine significance. Instead, the District has concluded that 10 pounds per day properly reflects potential significance.

Although the District uses the NSR as the foundation to establish thresholds, using the NSR requirements is not the only factor used by the District to determine thresholds of significance for land use projects. District Staff conducted a justification analysis of this threshold that was provided to the Board of Directors in the June, 2010, Board meeting to evaluate the practicability of the District recommended thresholds (Attachment #2). In summary, the analysis showed that the application of both thresholds (82 lbs and 10 lbs per day) captures the maximum emissions (94% of total emissions), but impacts less than half of projects (43% of projects). The results presented by Staff indicated how the District recommended thresholds would achieve a balance between growth and emission reductions. The Board recognized and accepted this justification as being appropriate and directed staff to continue to apply the existing thresholds for land use projects during the environmental review process.

	ROG		NOx	
Threshold (lbs/day)	Project Captured	Emission Captured	Project Captured	Emission Captured
82 (project-level)	7%	65%	7%	63%
10 (cumulative)	43%	94%	44%	94%

As described above, the District's recommended thresholds have been reviewed by the Board and the Board is fully aware of the basis used in establishing the District recommended thresholds. The Board has recognized that 10 pounds per day properly reflects potential significance and directed Staff to continue the use of the existing 10 lbs/day cumulative threshold for mitigation recommendation.

In conclusion, the District uses the "nonattainment status" as a basis when considering whether the project should analyze its related air quality impacts and apply the emission limitation requirements from the NSR as the foundation for established thresholds for its land use review program, but does not rely solely on the nonattainment status to determine significance. The District's recommended thresholds (82 lbs per day and 10 lbs per day) are not exclusively based on nonattainment status, but also upon their relationship to NSR standards and upon the relationship of the thresholds to the cumulative total of land use projects - where a majority of emissions are enveloped when the recommended thresholds are used in determining project significance. The District concludes that there are no direct conflicts with the CEQA Guideline citations (§15064(h)(4) and §15065(a)(3)) provided by commenter regarding this issue.

7. Regional Consistency for Thresholds of Significance

Some of the submitted comments argue that the thresholds of significance used for CEQA documents should be related to "regional consistency" within the Sacramento nonattainment region. District staff recognizes there is no regional consistency between air districts in the Sacramento Region relating to the establishment of thresholds of significance. The following

table presents current thresholds of significance used by each air district in Sacramento Region:

Air Districts within Sacramento Ozone Nonattainment Area								
	Construction (lbs/day)			Operational (lbs/day)			Cumulative	
	ROG	NOx	PM10	ROG	NOx	PM10	ROG	NOx
El Dorado AQMD	82	82	AAQS[a]	82	82	AAQS[a]	less than significant if consistent with General Plan and Regional Ozone SIP	
Feather River AQMD	25	25	N/A	25[b]	25[b]	80	Standard mitigation measures for the project which has related emissions below 25 lbs/day	
Sacramento AQMD	N/A	85[c]	5% of CAAQS[a]	65	65	5% of CAAQS[a]	5-steps analysis including project-level thresholds, SIP and General Plan consistency	
Yolo-Solano AQMD	55	55	80	55	55	80	less than significant if consistent with General Plan and Regional Ozone SIP	
Placer County APCD	82	82	82	82	82	82	10 lbs/day[d]	10 lbs/day[d]

[a] State Ambient Air Quality Standards

[b] FRAQMD requires all projects paying a document reviewing fee ($15 per residential unit and $0.06 per s.f.)

[c] Sacramento AQMD has the mitigtion fee requirement if the project's construction or operational emissions exceeding the thresholds

[d] It is used to recommend additional mitigation measures only.

As shown in the above table, these five air districts are all located within the Sacramento ozone nonattainment area. However, each air district must take into account its own unique situation and the available resources to develop its own CEQA thresholds of significance. CEQA does not require that any review criteria, analysis, or decision associated with environmental documents be based on regional consistency. For example, a decision made by local jurisdictions regarding the type of environmental document (i.e., ND, MND, or EIR) for a land use project of a similar size may vary from jurisdiction to jurisdiction; there is no regional consistency between local jurisdictions within the Sacramento Region.

Although a regional inconsistency exists on the thresholds for criteria pollutants, all air districts within the Sacramento Region recognize and support an idea of a regional threshold in conjunction with other regional efforts, such as SB 375, to develop a regional threshold for GHG emission impact evaluation. The development of a regional GHG threshold is an on-going process it would provide an opportunity for all air districts within a region to reassess the feasibility of the own individual thresholds for criteria pollutants when a regional GHG thresholds of significance is established. The District continues to work with its partners on this issue.

8. Substitution of existing cumulative threshold

Some of the submitted comments suggested replacing the District's existing recommended cumulative threshold of 10 lbs/day to 65 lbs/day (which is the threshold adopted by SMAQMD in 2002). The commenter concluded that by making this change, the District will be in compliance with the CEQA Guidelines §15064(h)(4) requirement. District Staff disagree with this position. .

The SMAQMD 65 lbs/day thresholds was established by achieving the emission reduction commitment within the 1994 Sacramento 1-hour Ozone SIP in order to obtain emission reductions of one ton per day of both ROG and NOx through the implementation of land use and transportation emission controls[17]. The foundation of this 65 lbs/day threshold was established directly from the required emission reduction identified by the 1994 Ozone SIP. The District points out that that this comment appears to be in direct conflict with another comment from the same commenter: "*using the amount of emission reductions for a nonattainment area as the evidence to justify a cumulative thresholds if it is established by a regional emissions perspective is fundamentally inconsistent with CEQA Guidelines section §15064(h)(4)*"[18].

The SMAQMD 65 lbs/day threshold was developed based on the 1994 Ozone SIP requirement. Since 1994, EPA has amended ozone standards twice in 1997 and 2008. Therefore, the Sacramento ozone nonattainment area is facing a critical challenge to attain the most stringent ozone standard in the past decade. Using this threshold (65 lbs/day) developed by the old ozone SIP may not be applicable in today to address the request for mitigating air quality impacts from land use projects.

The District concludes that there is no need for any change in its cumulative threshold as it is consistent with CEQA.

9. Regional Ozone SIP consistency determination

One of the comments indicates that CEQA allows the Lead Agency to determine a project's incremental contribution to a cumulative effect is less cumulative considerable when the project complies with a previously approved plan or mitigation program, including any air quality attainment or maintenance plans. According to the commenter, the Handbook should recognize this section of the CEQA Guidelines and revise the Handbook to reflect that position. District Staff recognizes this citation and agrees that it can be one of options for the Lead Agency to make the determination whether a project's incremental effect could be less than cumulative considerable. However, as described below, District staff does not think it is necessary to revise the District's existing cumulative threshold to accommodate this option.

The Handbook states that the District will recognize any threshold adopted by a Lead Agency as long as it meets CEQA Guidelines sections §15064.7(b)&(c) and will apply that threshold for reviewing a project forwarded from the Lead Agency. As indicated in the discussion above, the Lead Agency can adopt "regional ozone SIP consistency", or other evidence based thresholds, and the District will apply those for the land use project review process. The Handbook has stated very clearly that 10 lbs/day District threshold is only used by the District to recommend additional mitigation measures; *this cumulative threshold is not used by the District to make any significance determination and will not be used to trigger the preparation of an EIR*. If a Lead Agency takes the District recommended mitigation measures into consideration, then CEQA Guidelines §15064(h)(2) is another option which

[17] Sacramento Metropolitan Air Quality Management District Board Memo for Agenda of March 28, 2002, dated March 1, 2002.

[18] Comment #1 in City of Roseville letter dated September 20, 2012. Please see the attached copy

allows a Lead Agency to make a determination that a project's incremental contribution to a significant cumulative impact will be rendered less than significant.

10. Approval of SIP Revision for ISR Commitment

One comment suggested that the District should no longer propose offsite CEQA mitigation because of the removal of some rule adoption commitments made by the District. The District disagrees.

On August 11, 2011, District staff submitted a request to the Board of Directors to consider the removal of several rule adoption commitments, including two ISR rule commitments (construction and operational ISR) from the Sacramento Ozone SIP. (Attachment #3) Originally, the District committed to establish these two rules within the Ozone SIP so that additional emission reductions could provide an adequate safety margin for attainment. Under the commitment these two rules as well as other rules committed in the ozone SIP must be adopted by each air district within a specific timeframe. Therefore, the potential emission reductions from these two rules were committed conservatively so the goal of attainment would be achieved but, at the same time, the rule implementation would not cause significant financial burden to the nonattainment area. However, since the approval of the SIP in 2009, several key reasons have led many air districts to reconsider the benefits for the implementation of these rules by a regulatory process, including Placer.

The reasons for the removal of the two ISR commitments were: 1) uncertainties as to whether or not they were still necessary based on Placer County emissions rates, 2) project cost impacts, and 3) potential new emission reductions could be difficult to achieve. These reasons were discussed in more detail within the staff report provided to the Board of Directors on August 11, 2011. In analyzing these issues staff considered the fact that the District has an existing CEQA review program to review and recommend mitigation measures back to the Lead Agency, which provide mitigation measures as recommendations. This allows for more flexibility for local jurisdictions rather than having the District establish regulatory mandated requirements that leave the local jurisdictions no choice but to comply. Also, staff recognized that implementation of these two ISR rules under the SIP would require the District to create an off-site mitigation program qualified by EPA. The requirements from EPA will impose added costs on developers and the District from additional administrative costs and potential mitigation fees to the existing off-site mitigation funding program managed by the District. Note that before the District's off-site mitigation program could be approved by EPA, the emission reductions generated by these two ISR rules would not be counted towards any "attainment" or "rate of reasonable further progress demonstration". This uncertainty may result in significant financial impacts for both the District and developers. The above concerns were recognized by the Board of Directors and the SIP revision was approved.

It is very important to emphasize that a main reason that the District felt comfortable in approving the removal of these rules was the fact that CEQA was still in place and would provide a framework for consideration of development on our local and regional air quality. In contrast to the argument made, it is even more important, not less so, that the District

continue to propose ways for local jurisdictions to use CEQA to improve air quality now that the District has taken steps to avoid establishing its own mandatory regulation.

Also, note that SMAQMD, which also approved the removal of removing these two ISR rule commitments, still retains the existing off-site mitigation program as an option for developers to mitigate related air quality impacts. For example, the SMAQMD has kept its off-site mitigation fee as an option for mitigating the construction emissions for both the project-level and cumulative impacts[19].

In summary the District does not agree with the Comment that the removal of rule requirements is a justification for the District becoming less engaged within the CEQA process.

CONCLUSION:

Attachment #1 contains all comments provided by local jurisdictions and interested parties for the 1st and 2nd drafts as well as District staff responses. Associated CEQA Guideline sections cited by comments are also attached within the Staff Report (Attachment #4).

District staff is presenting the draft Handbook for the Board of Directors information. The primary purpose of the Handbook is to describe the District's existing review process related to the processing of CEQA documents when the District acts as a Commenting Agency for land use projects located within Placer County. Environmental review of land use projects is a core program area of the District and any staff resources allocated to that program has been addressed in the District budget. The Handbook itself does not propose any new requirements. The District believes that the Handbook will reduce the need to re-analyze or conduct additional analyses for associated air quality impacts by providing clear guidance from the beginning of the review process, and will reduce processing time and additional costs to the applicant. The District will continue working with local jurisdictions in order to provide professional assistance for the review of CEQA documents and updating the Handbook as needed with new information such as new state or local regulatory requirements, additional feasible mitigation measures, modeling tools for analyses, and useful resource documents prepared by other public agencies.

ATTACHMENTS:

Attachment #1: All received comments and District responses *
Attachment #2: June 10, 2010, Board Memo *
Attachment #3: August 11, 2011, Board Memo *
Attachment #4: Associated CEQA Guideline citations *

* Due to the Volume of paper required to print all of these attachments, they have been copied onto the compact disk included with this packet which also contains the clean copy of the Handbook. The entire version of all documents can be found on the District website.

[19] Sacramento Metropolitan Air Quality Management District CEQA Mitigation fee: http://www.airquality.org/ceqa/mitigation.shtml#MitFees

Attachments 1-4 of the Staff Report and Attachment 3 to the CEQA Board item can be found as a link on the District web page under http://www.placer.ca.gov/Departments/Air/Board.aspx