

TCEQ MASTER CONTROL STRATEGY LIST
Area Sources

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Agricultural Operations

- 1 Livestock waste (example, dairies)
Waste must be transported out of the district, controlled, processed, or spread.
- 2 Invest in pollution control technology at feedlots and animal waste lagoons and invest in altering livestock diets to reduce methane production
- 3 Pesticide emission reduction
Explore approaches to further reduce volatile emissions from pesticides based on regional need.
- 4 Agricultural pesticide reformulation; Reformulation
California FIP Rule for agricultural pesticide emissions reduction by reformulation of pesticides to reduce VOCs and by encouraging better pesticide management practices by working with local agricultural agencies and rewarding good practices or innovation.
- 5 Agricultural pesticide application
Restrictions on use of highly volatile herbicides at certain times of year. 100 km range.
- 6 Agriculture process emission reductions
May include urban area lawn & garden fertilizer application control programs limiting/restricting nitrogen fertilizer application on ozone action days.

Asphalt Paving/Roofing

- 7 Cutback asphalt; Control Measure: Switch to emulsified asphalt
Conventional cutback asphalt releases VOCs for over a year after application. Develop state rule (revise existing rules) that would prohibit the sale or transport of conventional cutback asphalt. Encourage the use of low-emission emulsion asphalt and hot-mix asphalt by reducing VOC upper limit in the definition of "exempt cut-back asphalt" as lower emission asphalt becomes available. This is for 100 km range.
- 8 Adopt South Coast Air Quality Mangement District 1108.1 VOC content limit (50% reduction) for emulsified asphalt
- 9 Use non-VOC parking lot sealers
- 10 Cutback asphalt application
Additional controls on equipment used for commercial roofing, et cetera.
- 11 Asphalt Roofing
There are two variations to this strategy: a) Require asphalt kettles to have close fitting lids and limit the temperature at which such kettles may operate; and/or b) Require afterburners on all kettles, virtually eliminating VOC emissions.

Coatings and Solvents - Architectural

- 12 TiO₂ Coatings
Titanium dioxide is a photo catalyst, which speeds oxidation on its surface in the presence of UV light. When the surface of TiO₂ is exposed to UV light, reactive oxygen is created. Reactive oxygen has high oxidation efficiency and oxidizes NO_x into nitric acid ions. The resultant nitric acid is then washed away by rain. Any remaining nitric acid ions are neutralized by the alkalinity of the concrete.
- 13 Architectural and industrial maintenance (AIM) coatings controls
The rule would regulate the use of certain surface coatings (e.g., paints) applied by industry, contractors and homeowners to coat houses, buildings, industrial equipment, etc. Because users of these coatings are small and widespread, requiring the use of add-on control devices is technically and economically infeasible. Reductions in VOC emissions would therefore need to be obtained through product reformulation.
- 14 Adopt the federal rule for architectural and industrial maintenance and surface coating controls
- 15 Further emission reductions from architectural coatings and cleanup solvents
This control measure proposes to achieve additional VOC emission reductions from architectural coating categories and thinning and clean-up solvents.

Coatings and Solvents - Auto Body

- 16 Auto body refinishing and coatings controls
This is based on the EPA's proposed standards to reduce VOC from coatings and increasing the efficiency of spray nozzles in applying coatings. The current rule could be made stricter and made similar to other states' rules.

Coatings and Solvents - General

- 17 Water dispersible chemical agent resistant coating (Pennsylvania Army National Guard)
Replacing solvent-borne coating with new water dispersible Chemical Agent Resistant Coatings (CARC) for routine surface coating operations.
- 18 Additional VOC emission reductions from industrial coatings and solvent operations
Additional reductions through a comprehensive review consisting of a comparison of VOC limits adopted by other air districts in California and survey of recent Best Available Control Technology.

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- 19 Catalyst-surface coating technology programs
Proposes to reduce ozone and carbon monoxide emissions through a regional-scale use of ozone destroying catalyst coatings.
- 20 Reactivity-based controls
Because different chemicals used in coatings and solvents exhibit different reactivity rates in forming ozone, reformulation based on lower reactive compounds needs to be evaluated and considered in future rulemakings in order to provide a viable compliance option. Further study would also be required to evaluate the reactivity of different compounds under various meteorological conditions.
- 21 Adopt more stringent VOC limits (21% reduction beyond Federal Part 59 limits) for architectural and industrial maintenance (AIM) coatings based on Ozone Transport Commission (OTC) Model Rule and Wisconsin NR433.17

Coatings and Solvents - Metal

- 22 Sheet, strip and coil surface coating
For the coating of metal sheet, strip, and coils, low VOC coatings would be used and/or the addition of control devices for preventing airborne emissions. The current rule could be made stricter and made similar to other states' rules.
- 23 Coil, leather, large appliance, metal, furniture, aerospace, automotive, brake shoe and can coatings
- 24 Furniture and fixtures surface coating (metal furniture scc)
For the coating of metal furniture, low VOC coatings would be used and/or the addition of control devices for preventing airborne emissions. The current rule could be made stricter and made similar to other states' rules. Since this rule would affect area sources, the coating limits would need to be set at an achievable level so that add-on controls would not be necessary.
- 25 Machinery & equipment, miscellaneous metal parts & products surface coating; Maximum Achievable Control Technology (MACT) Standard
For the coating of various metal parts, low VOC coatings would be used and/or the addition of control devices for preventing airborne emissions. The current rule could be made stricter and made similar to other states' rules. 100 km range.

Coatings and Solvents - Other Material

- 26 Paper, fabric, vinyl and other plastic parts coatings

Coatings and Solvents - Wood

- 27 Require the use of reformulated product for the series of coating steps & application methods used in finishing wood products

Consumer Products

- 28 Set New Consumer Products VOC Limits for 2006 CONS-1 (CARB)
Set New Consumer Products VOC Limits for 2006.
- 29 The region should seek to obtain legal authority to regulate consumer products
- 30 Set New Consumer Products VOC Limits for 2008-2010 CONS-2(CARB)
Set New Consumer Products VOC Limits for 2008-2010.
- 31 Adopt South Coast Air Quality Management District Phase III VOC limits in addition to Ozone Transport Commission Model Rule
- 32 California consumer product rules
California Air Resources Board's Consumer Products Long-Term Limits Rule measures depend on future technological innovation and market incentive methods developed and implemented before 2010.
- 33 Consumer products (personal care products); Federal consumer solvent rule (V24901*); California Air Resources Board consumer products mid-term limits (V24902*)
California Air Resources Board's Consumer Products Long-Term Limits Rule measures depend on future technological innovation and market incentive methods developed and implemented before 2010.
- 34 Substitute cleaner "green" products for traditional cleaning products
- 35 Consumer products (household products); Federal consumer solvent rule (V24901*); California Air Resources Board consumer products mid-term limits (V24902*)
California Air Resources Board's Consumer Products Long-Term Limits Rule measures depend on future technological innovation and market incentive methods developed and implemented before 2010.
- 36 Reformulation of products like paints, cleaners, etc.
- 37 Commercial and consumer products requirements (coatings and related products; adhesives and sealants; miscellaneous); SCC 2460500000, 2460600000, 2460900000
Reduce VOCs emitted from consumer products in homes and institutions. Reductions are achieved by reformulation of the products. "Consumer product" means a chemically formulated product used by household and institutional consumers (i.e. detergents; cleaning compounds; home, lawn, and garden products; disinfectants; sanitizers; aerosol paints; and automotive specialty products; but does not include other paint products, furniture coatings, or architectural coatings).
- 38 Windshield washer fluid
Limit automotive windshield washer fluid to 23.5 weight-% VOC. Federal requirement was 35% weight-% VOC, so Texas could take credit for the difference between 23.5 and 35 weight-%. Therefore, Texas is taking VOC emission reduction credit for this difference. Texas has incorporated an 80% rule effectiveness for its windshield washer fluid rule.

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- 39 Adopt Ozone Transport Commission Model Rule with additional product coverage and more stringent VOC limits(14.2% reduction beyond Federal Part 59 rule, for a total reduction of 21.0% from uncontrolled emissions)
- 40 Adopt California Air Resources Board 2003 SIP requirements with additional products and more stringent VOC limits in addition to Ozone Transport Commission Model Rule (25% reduction beyond Federal Part 59 rule)

Control Technologies

- 41 Studies for ammonia volatilization; Current Selective Catalytic Reduction (SCR) methods create other problems such as trading NOx problems for ammonia
- 42 Refine the emission inventory and further control VOC emissions from miscellaneous chemical processes
Potential control methods include enhanced inspection and maintenance and other housekeeping work practices to reduce fugitive emissions from material transfer, storage, and processing. Process modification may also provide an effective control option to minimize or eliminate emission sources.
- 43 Adopt more stringent Reasonably Available Control Technologies (RACT) regulations (89% reduction from uncontrolled) based on South Coast Air Quality Management District 1145
- 44 Adopt Reasonably Available Control Technology (RACT) regulations (90% from uncontrolled), lower applicability thresholds, and extend geographic coverage to all counties
- 45 Extend the existing Illinois/Indiana/Wisconsin Reasonably Available Control Technology (RACT) regulations (55% reduction from uncontrolled, 24% reduction beyond Part 59 limits) to all counties
- 46 NOX Reasonably Available Control Technology (RACT) type limits for small-emitters
- 47 Advanced Low-VOC technologies
Use of the advanced low-VOC alternative technologies developed by the industry including: waterborne technologies, radiation-curing technologies, and high solids and powder coating technologies. The VOC-containing materials are used in a wide variety of industries which include: manufacturing and coating of metal, wood, plastic, and other products; printing operations such as lithography, flexography, screen printing, gravure and letterpress; cleaning operations at repair and maintenance facilities; and numerous industries where adhesives are used.

Degreasing

- 48 Adopt Chicago/Metro East cold cleaning regulations (66% reduction from uncontrolled) in all counties
- 49 Solvent cleaning and degreasing - Cold cleaning
- 50 Degreasing operations/surface cleaning controls (cold cleaning)
Use of low-VOC solvent for batch cold cleaning degreasing machines to clean contaminants from parts, products, tools, machinery, and equipment.
- 51 Solvent cleaning and degreasing - Wipe cleaning

Dry Cleaning

- 52 Naphtha dry cleaners controls
The proposed measure lowers the exemption level based on Naphtha consumption from 3,500 gallons per year to 2,000 gallons per year.
- 53 Petroleum dry cleaners and cleaning solvents
Implement contingency rule requiring that dry cleaning facilities must comply with dryer, filtration system, and fugitive emissions requirements. Establish compliance date for 30 TAC §§115.552 - 115.559 and expand to cover other 5 counties in Dallas-Fort Worth.

Electric Generating Utilities

- 54 NOx Reductions from electric generating facilities by co-generation/combined heat and power
Co-generation generates electricity and useful heat or steam in the same process.
- 55 NOx reductions from electric generating facilities by replacing existing electric generating facilities with combined cycle turbines or renewable energy
NOx reductions of 90% at electrical generating facilities are technically achievable through the use of Tier III controls (flue gas clean-up plus burner modifications). However, even greater reductions are achieved by retiring old, highly polluting generating facilities and replacing them with ultra-low emissions, natural gas combined-cycle combustion turbines, or zero-emissions renewable energy resources.

Emission Credits

- 56 Area source credits for energy conservation/efficiency
- 57 Area source credits for commercial and residential combustion equipment
- 58 Market based trading programs

Energy Efficiency - Buildings and Structures

- 59 Solar panels on rooftop particularly in new schools, retail and public buildings
- 60 Encourage residential swimming pools be covered when not in use
- 61 Memphis Light, Gas & Water Energy Audits of residential buildings "Energy Doctor Program"
- 62 Assess current building permit standards for energy-friendly designs
- 63 More reflective glass, efficient buildings, tougher energy use standards, white roofs on new houses, native plants, and add more trees (low VOC emitting species), xeriscaping/buffalo grass for reduced water use and less frequent mowing
- 64 Louisiana Department of Natural Resources Home Energy Rebate Option (HERO) for individual homes
Offers cash payment for residents who build new homes to high levels of energy efficiency or make energy improvements to existing homes.
- 65 Louisiana Department of Natural Resources energy fund for schools, hospitals and state buildings
Available to all publicly funded institutions implementing energy conservation measures under a performance-based energy efficiency contract.
- 66 Building efficiency and codes
Statewide adoption of the International Residential Code (IRC) and the International Energy Conservation Code (IECC) for residential, commercial, and industrial buildings was mandated by the 77th Texas Legislature under SB5. The resulting NOx reductions based on electricity and natural gas savings were calculated to be 0.72 tpd.
- 67 Cool cities approach to reduce heat build-up; Urban heat island initiatives
- 68 Use reflective paint on buildings to reduce Energy Consumption
- 69 Implement EPA's "Green Light" program
- 70 Encourage construction of energy efficient buildings; Retrofitting of public buildings
Additional advertisement and promotion to encourage citizens to prefer energy efficient building.

Energy Efficiency - Energy Production

- 71 Capture methane from landfills; Implement program to produce this green power
- 72 Require percentage of green power purchased for public facilities
- 73 Include a measure for stationary fuel cells, photo voltaic and wind power to meet new electric demand in SIP areas
(There is a measure for solar energy to produce electrical power (Measure 215M) but these other technologies are also available to produce electrical power.

Energy Efficiency - General Conservation

- 74 Timed lighting for parking lots, advertising, and building
- 75 Reducing energy use through recycling and composting
- 76 Turn off lights and computers
- 77 Explore strategies to reduce transmission line losses
- 78 Energy efficiency in PC networks written into code
Central Network System monitors and controls all systems on network to ensure maximum computer shutdown during non-use period.
- 79 Install workplace occupancy sensors to reduce energy

Energy Efficiency - Policies

- 80 Local energy efficiency policies
- 81 Efficiency based natural gas rates
Setting natural gas rates on an inverted block rate will reward conservation.
- 82 Mandatory municipal compliance with International Energy Conservation Codes (IECC) that establishes minimum design and construction parameters for energy-efficient buildings
This measure will require additional energy efficiency measures beyond SB 5, such as building design, revisions to codes and standards, and energy management programs for large commercial facilities.

Energy Efficiency - Products and Appliances

- 83 Buy in bulk; Less packaging

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- 84 Encourage companies to buy recycled/energy efficient products
- 85 Sales tax break for Energy Star Products; labels will help customers understand benefits
- 86 Purchase Energy Star products
- 87 Reuseable dining material
- 88 Appliance replacement
- 89 Reducing energy use through use of more efficient heating and air conditioning units

Food Processing and Cooking

- 90 Food product manufacturing and processing operations
Any facility that emits over 440 lbs of organic compound emissions per month and produces, formulates, configures food or food products, like spices, extracts, flavorings, and colorings. Exemption include wineries, bakeries, and breweries.
- 91 Commercial bakery controls
Control of VOC emissions from bread and snack food drying and commercial bakery operations, distilled spirit facilities, pharmaceutical products, explosives and propellant and reinforced plastic manufacturing, vinegar generators, and flexographic and rotogravure printing.
- 92 Chain drive charbroilers install catalytic oxidation equipment to control emissions
Controls PM and VOC emitted during cooking. Exemptions – charbroilers that cook less than 875 lbs of meat per week or emit less than 1 lb per day.
- 93 No charcoal barbecuing
- 94 Emission reductions from restaurant operations
Reduce PM emissions from charbroilers, which consist of three main components: a heating source, a high-temperature radiant surface, and a grill.

Fuel Combustion

- 95 Additional regulations for units with annual capacity factor of 0.0383 or less
NOx emission specifications should be 0.060lb/MMBtu. Certain exemptions may apply.
- 96 Additional regulations for diesel engines placed into service before 10/01/01, not modified, reconstructed or relocated after 10/01/01
NOx emission specifications should be 11.0g/hp-hr. Certain exemptions may apply.
- 97 Additional regulations for all other diesel engines 50 hp and above, installed, modified, reconstructed or relocated after 10/01/01
NOx emission specifications should be between 2.8 g/hp-hr and 6.9 g/hp-hr, depending on horsepower and the year the engine was installed, modified, reconstructed or relocated. Certain exemptions may apply.
- 98 Additional regulations for stationary dual-fuel engines
NOx emission specifications should be 5.83g/hp-hr for all. Certain exemptions may apply.
- 99 Stationary Gas Turbines - Additional regulations can be adopted for minor sources of NOx emissions from stationary gas turbines greater than 1.0 megawatt placed into operation on or before 10/1/01 and all stationary gas turbines placed into operation after 10/1/01. The emission specifications for all stationary gas turbines should be 0.15 lb/MMBtu.
The TCEQ has an existing rule for NOx emission reductions from major sources in DFW non -attainment area (=50 tpy NOx). But no rule has proposed emission specifications for minor source of NOx in DFW. New rules can be proposed for NOx emission reductions from minor sources by extending 30 TAC §§117.471-117.481 for HGB area (< 25 tpy) to DFW 9 non-attainment counties depending on number of estimated units operated.
- 100 Industrial natural gas combustion; Manipulate the combustion process using low-NOx burners
- 101 Stationary internal combustion engines fired with fossil-derived fuel
Engines must meet a NOX limit of 25ppm or a 96% reduction if rich burn and 65ppm or a 90% reduction if lean burn. For waste-derived fuel a 140ppm limit if lean burn and 210 limit if rich burn applies.
- 102 Additional regulations for stationary gas-fired engines
NOx emission specifications should be 0.60g/hp-hr for landfill gas and 0.50 g/hp-hr for all others. Certain exemptions may apply.
- 103 Time shifting; performing tests of emergency generators early in morning
- 104 Cumulative impact
When a diesel or back up diesel generator is added in an area, the impact of the additional generator should be evaluate to determine the combined risk of all existing sources.

Fueling Activities

- 105 Gas can exchange event
- 106 Reduce VOC emissions from portable fuel containers
- 107 Adopt Ozone Transport Commission Model Rule for portable fuel containers (18% reduction by 2009, 54% reduction at full implementation in 2015)

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- 108 Refueling station sharing
- 109 Gasoline dispenser hoses
Reduce fuel permeation through hoses.
- 110 Emission control at gasoline dispensing facilities in Ellis, Johnson, Kaufman, Rockwall, and Parker counties
Stage II vapor recovery is not currently required in these counties. In lieu of adding Stage II controls to gasoline dispensing facilities (gdf), another approach may be to limit fugitive emissions at gdfs by requiring the installation of a commercially available standalone membrane processor coupled with a modified leak detection and repair (LDAR) program.
- 111 Stop at the click program
Distribute stickers for gas pumps that encourage individuals to stop at the click.
- 112 Locking gas nozzles in the morning
- 113 Stage I & II gasoline vapor recovery
If adopted, will require facilities that dispense more than 10,000 gallons of gasoline per month and are located in Ellis, Johnson, Kaufman, Parker, or Rockwall County to have Stage I controls installed no later than June 15, 2007.
- 114 Adopt CARB Enhanced Vapor Recovery Stage II requirements (95% control) in 8-hour nonattainment areas and adjacent counties in addition to on-board vapor recovery
- 115 Adopt California Air Resources Board Enhanced Vapor Recovery Stage I requirements (98% control) in 8-hour nonattainment areas and adjacent counties
- 116 Off-road equipment fuel tank (OREFT) program
- 117 Capture and control vapors from gasoline cargo tankers; Tank Purging
This measure would require that cargo tanks be purged using an approved method prior to any maintenance or repair being performed. Currently, there are three purging methods available.
- 118 Capture and control vapors from gasoline cargo tankers; Component Standards
The current procedure tests the pressure integrity of the cargo tank vapor recovery system as a whole but does not contain performance specifications or standards for the individual components of the system. This measure would include developing performance specifications and standards for individual components and methodology for testing and certifying these components.
- 119 Capture and control vapors from gasoline cargo tankers, Hose and fittings
This measure would require the vapor connections on fuel cargo tankers to be fitted with closure devices such as poppeted adapters or manually operated valves, and product and vapor recovery hoses to have poppeted caps or adapters. This measure would also require a monthly inspection and maintenance program to check the vapor connections and hoses on the fuel cargo tankers.
- 120 Underground storage tank (UST) remediation
- 121 Require that fixed roof storage tanks install seals to prevent escape of VOC vapors
- 122 Require air pollution control device (90% control) for underground storage tank vent

Land Use Measures

- 123 Auto restricted zones
- 124 Shaded parking areas
- 125 Sustainable development
- 126 Develop database on vacant, underutilized properties
- 127 Mixed-use development; Encourage home occupations
- 128 Allow two-story residential development
- 129 No-build zones
- 130 Cash incentives to foster jobs to housing balance
- 131 Land use/air quality guidelines
- 132 Incentives for cities with good development practices

Landfills and Composting

- 133 Co-composting operations to limit VOC and ammonia
Includes the mixing of biosolids or manure with bulking agents to produce compost. Exemptions include agricultural composting, greenwaste, composting, woodwaste composting, operations less than 1,000 tons per year.
- 134 Municipal solid waste landfills
30 TAC §§115.152 - 115.159 for control of VOC can be expanded to other 5 counties in Dallas-Fort Worth. 100 km range.

Miscellaneous

- 135 Air purifiers at strategic locations in metroplex
- 136 Indirect source program
Require new indirect sources to mitigate attracted emissions or pay mitigation fee. Fee used by air agency for mitigation projects.
- 137 Address pollution created by indoor activities which are vented outdoors
- 138 Adopt incentive programs in nonattainment areas to accelerate phase-in of compliant Perfluorocarbons (PFCs) (27% reduction in 2009, 54% at full implementation in 2012)

Nail Salons

- 139 Control Of VOC emissions from nail salons

Oil and Gas Production

- 140 Options for oil and gas compressor engine retrofits
Currently uncontrolled, small compressor engines would be required to install controls such as catalytic converters for NOx emission reductions.
- 141 Glycol dehydrators
May include requiring installation of condensers or other controls on select glycol dehydration units w/ potential to emit beyond a defined limit.
- 142 Other natural gas industry emissions reductions; Initiate or improve leak detection and repair programs
- 143 Emission reduction software implementation
Implementation of emission reduction assessment tool for NOx reduction from petroleum refining and chemical industries.
- 144 Oil & gas production components
Control fugitive emissions from production and processing components.

Painting

- 145 Paint, resin and adhesive manufacturing; adhesive application
- 146 Restrict painting on ozone action days
- 147 Restrict indoor & outdoor painting on Ozone Action Days
- 148 Require use of reformulated striping material products

Printing

- 149 Offset printing controls
- 150 Graphic arts: letterpress; Reformulation of material usage to limit the VOC content in inks, blanket and roller wash, and fountain solution
The proposed reformulation of material used in letterpress printing are as follows, a) Ink – 100 gm/l or 0.835 lb/gal VOC Content limit; b) Blanket and Roller Wash – 300 gm/l or 2.505 lb/gal VOC Content limit.
- 151 Graphic arts: screen reformulation of material usage to limit the VOC content in inks, blanket and roller wash, and fountain solution
The proposed reformulation of material used in screen printing are as follows, a) Ink – 200 gm/l or 1.67 lb/gal VOC Content limit; b) Blanket and Roller Wash – 300 gm/l or 2.505 lb/gal VOC Content limit.
- 152 Graphic arts: other reformulation of material usage to limit the VOC content in inks, blanket and roller wash, and fountain solution
The other printing facilities like book, digital, quick and manifold business form printing were assigned to lithographic printing category. The proposed reformulation of material used in other printing are as follows, a) Ink – 100 gm/l or 0.835 lb/gal VOC Content limit; b) Blanket and Roller Wash – 300 gm/l or 2.505 lb/gal VOC Content limit c) Fountain Solution – 80 gm/l or 0.662 lb/gal VOC Content limit.
- 153 Graphic arts: offset lithography; Reformulation of material usage to limit the VOC content in inks, blanket and roller wash, and fountain solution
The proposed reformulation of material used in lithography printing are as follows, a) Ink – 100 gm/l or 0.835 lb/gal VOC Content limit; b) Blanket and Roller Wash – 300 gm/l or 2.505 lb/gal VOC Content limit; c) Fountain Solution – 80 gm/l or 0.662 lb/gal VOC Content limit.
- 154 Graphic arts: flexography reformulation of material usage to limit the VOC content in inks, blanket and roller wash, and fountain solution
The proposed reformulation of material used in flexography printing are as follows, a) Ink – 100 gm/l or 0.835 lb/gal VOC Content limit; b) Blanket and Roller Wash – 300 gm/l or 2.505 lb/gal VOC Content limit.
- 155 Require the use of control devices and low vapor pressure VOC materials at certain print shops

Residential Fuel Combustion

- 156 Pilot lights on residential hot water heaters
This measure will involve replacing residential hot water heater pilot light ignition with electronic ignition systems.

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- 157 Pilot lights on gas stoves
This measure will involve replacing residential natural gas stove pilot light ignition with electronic ignition systems.
- 158 Emission Reductions from Wood-Burning Fireplaces and Wood Stoves (PM10) MSC-06
Reduce emissions from wood-burning fireplaces and wood stoves used in the Basin. The current emissions inventory for these units is about 5 tons per day. The measure proposes to further refine the emissions inventory, assess available emissions data and air quality impact for burning manufactured logs versus natural wood, consider control approaches (e.g., U.S. EPA certified wood stoves or fireplace inserts in new residential or public settings), develop incentive programs to encourage the replacement of old wood burning units, and strengthen public awareness and education programs.
- 159 Provide lower polluting alternatives for households and others selecting new combustion sources (electric vs. natural gas)

Vegetation

- 160 Preserve green space and replant cleared wooded areas
- 161 Use Buffalo Grass instead of Bermuda and St. Augustine grasses
- 162 There should be 100% mitigation of trees taken during development of land
- 163 Provide more protection for trees
- 164 Protect natural areas; Minimize use of motorized vehicles and pesticides
- 165 Strengthen the current tree ordinance to require more large trees established in new subdivision developments

Waste Burning and Disposal

- 166 Revise open burning regulations to prohibit residential burning of leaves and yard clippings; Also restrict the use of air curtain destructors on air quality action days
- 167 Mitigate impacts of fire
Encourage mulch clearing debris rather than burning it.
- 168 Stricter controls of illegal/unauthorized outdoor burning; Focus on issues dealing with illegal burning, tires, plastics, roofing materials and hazardous substances
- 169 Ban open burning on Ozone Alert Days (orange or above); Try to develop a policy with local governments to ban open burning where it is currently allowed

Water Heaters and Boilers

- 170 Boilers & Process Heaters
Additional regulations can be adopted for minor sources of NOx emissions from boilers and process heaters greater than 2.0 MMBtu/hr. The emission specifications for gas-fired boilers and process heaters should be 0.036lb/MMBtu, or 30 ppmv @ 3.0% O2, dry and 0.072lb/MMBtu, or 60 ppmv @ 3.0% O2, dry for liquid-fired boilers and process heaters. The following boilers and process heaters would be exempt: firing 1.8 billion Btu/yr or less, for > 2.0 MMBtu/hr but < 5.0 MMBtu/hr units and firing 9.0 billion Btu/yr or less, for = or > 5.0 MMBtu/hr units.
- 171 Consider a measure for small boilers and process heaters down to 5 MMBtu/hour measures in place
Several California Air Districts already have such measures.
- 172 Industrial LPG Boilers
Use of low NOx burners to reduce NOx emissions from small industrial boilers fueled by liquified petroleum gas (LPG).
- 173 RJ Reynolds-Tobaccoville-eliminate use of coal fired boilers during ozone season
- 174 Incentives for low NOX water heaters
- 175 New water heater NOX emission standards
- 176 Add process heaters to all Industrial, Commercial and Institutional (ICI) Boiler measures unless these measures are interpreted to include such equipment at refineries and other oil and gas production facilities, chemical plants, et cetera
California Air Districts address these sources separately.

Total	176
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