

TCEQ MASTER CONTROL STRATEGY LIST

Non-road Sources

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Category

ID Control Strategy

Non-road Sources

Aircraft /Air Traffic Management

- 1 Super 21 Aircraft fuel additive (ENTVA)
- 2 Aircraft vapor recovery
Require Phase II (aircraft fueling) vapour recovery for av gas and jet fuel.
- 3 Aircraft emission standards
- 4 Optimum flap retraction
- 5 Reduced landing flap
- 6 Reduced thrust takeoffs
- 7 Minimization of reverse thrust
- 8 Aircraft towing
- 9 Ordering lowest emission engines
- 10 Slot control
- 11 Communications, navigation, surveillance /air traffic management (CNS/ATM) free flight
- 12 Single-engine taxi for aircraft
- 13 Use electric or cleaner technology auxiliary power units (APUs) for gate electrification
- 14 New auxiliary power unit (APU) design
- 15 Use electric or cleaner technology auxiliary power units (APUs) for preconditioned air
- 16 De-icing operations
- 17 Reduce ground delays and gate holds
- 18 Ozone alert travel schedules
- 19 Ground support equipment (GSE) engine/unit retirement
- 20 Increased sharing of ground support equipment (GSE)
- 21 Require commercial airports to implement an alternative fuels plan governing tenants; Encourage electric ground support equipment and other alternative fuel vehicles
- 22 Study air transport patterns in Texas
- 23 Restrictions on use of ground support equipment at certain times of day/week/season
- 24 Aircraft movement control

Airport General Conformity

- 25 Changes in general conformity to make provisions more realistic; Allow equipment turnover to count
- 26 Modify regulations so credits can be generated for general conformity

Cleaner Equipment Requirements and Incentives

- 27 Texas Emissions Reduction Program (TERP); incentives for replacement, repair and retrofit of engines
SB 5 Voluntary Incentive Program
- 28 Enhanced Texas Emission Reduction Program (TERP)
- 29 Market-based incentives to promote lower-emitting light-duty vehicles
- 30 Replace gas golf carts with electric golf carts
- 31 Accelerated equipment turnover; Tier 2 or Tier 3 nonroad engines
- 32 Aftermarket Technology and Fuel Additive Research Program

Construction Equipment and Operations

- 33 Heavy-duty diesel ozone season operating restrictions
Four hour ban in AM during ozone season.
- 34 Monitoring of newly manufactured engines
- 35 Conditions of approval for new construction
- 36 Improve inventory of construction equipment; Log hours of actual equipment operation
- 37 Control clauses for construction contracts
- 38 Contract bidding; Give preference to companies that use environmentally-friendly equipment
- 39 Government construction incentives
- 40 Require half-day construction schedules
- 41 Develop air quality best management practices (BMPs); Use BMPs to manage emissions from construction sites, construction vehicles & wind-blown dust
- 42 Limitations on idling of heavy-duty construction equipment
- 43 Share construction equipment resources across jurisdictions
- 44 Tags to identify equipment as having clean emissions or not

Engine and Fuel Technology

- 45 Water injection for diesel engines
- 46 Alternative-fueled equipment for all equipment types
- 47 Alternative fuel heavy-duty equipment
- 48 Lean NOX catalyst
- 49 Early introduction of low-NOX engines
- 50 Selective catalytic reduction (SCR)

Engine Standards

- 51 Compression ignition standards for vehicles and equipment
Control of Emissions from New and In-Use Non-Road Compression-Ignition Engines. Standards for vehicles and equipment 40 CFR Part 89
- 52 Spark ignition standards for vehicles and equipment
Tier II standards for vehicles and equipment. This statewide rule places controls on non-road, large spark ignition engines. It requires manufacturers to ensure that all affected spark ignition engines are certified to California LSI standards.

Fuel Standards

- 53 Lower sulfur fuels
- 54 Federal Ultra Low-Sulfur Diesel (ULSD)
- 55 Reformulated fuels for off-road vehicles
- 56 Change fuel chemistry (aircrafts)
- 57 Texas Low Emission Diesel (TxLED)

General Operations Management

- 58 Discourage using off-road vehicles during high ozone alert says; possible legislative action
- 59 Developers should have to do an air quality impact study
- 60 Keep manufacturer warranties valid when performing equipment repairs and maintenance
- 61 Place work restrictions on the most polluting equipment. Allow low polluting equipment to work regular hours
- 62 Educational materials for contractors; Encourage them to develop ideas

Category**ID Control Strategy**

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Lawn and Garden Engines and Operations

- 63 Lawnmower exchange; Trade in old gas powered equipment for discounts on zero emission models
- 64 Lawnmower recycling programs (rebate program); replace gas mowers with electric
- 65 Promote use of cleaner lawn and garden equipment such as lower-emission four-stroke and electric-powered equipment
- 66 "Buy a Clunker" concept for small gas equipment
- 67 Disincentives such as fines if caught mowing during Ozone Alerts
- 68 Ban equipment such as two-stroke engines
- 69 No-mowing days
- 70 Grass cutting; Public works will delay cutting grass till 6 pm on ozone action days
- 71 Landscape ordinance for nonresidential areas

Locomotive Engines and Operations

- 72 Use of auxiliary power units (APUs) for locomotives operating; Controls for locomotives are pre-empted by Federal law, but voluntary controls might have some success
- 73 Accelerated purchase of Tier II locomotive engines
- 74 Electrification of rail switching yards
- 75 Efficiency improvements on In-Use Class 1 Rail Equipment (R11)
Class 1 railroads will need to identify and report on their programs of annual efficiency improvements starting in 2005.
- 76 Development of technologies that make shipping more efficient
- 77 Use liquefied natural gas (LNG) engines for locomotives
- 78 Selective catalytic reduction (SCR) for locomotives
- 79 Limitations on idling of locomotives
- 80 North American Free Trade Agreement (NAFTA) trucks; If goods are being shipped past a certain point along the border states, move the goods to rail before it reaches the border
- 81 Better design of intermodal facilities to promote efficiency
- 82 Remote sensing of locomotives
- 83 Use "clean trains" to ship goods into cities from surrounding break of bulk locations

Marine Engines

- 84 Recreational marine standards
(Evaporative emissions only)

Stationary Engines

- 85 Fuel alternatives for stationary equipment; Pumps, generators, et cetera
- 86 DriveMax programmable computer installed on diesel engines for tub grinders at mulching operations

Total	86
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