

Control Measures - DRAFT	Emissions Reductions	Comments	Measure to be used in Kansas or Missouri
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PHASE I Controls

La Cygne #1 - per permit already on file with KDHE	approx. 63.01 tpd of NOx (23,000 tpy); possibly up to 24,000 tpy	Anticipate controls to be in place by summer of 2007	Kansas
EGUs covered by CAIR that put on controls before the CAIR deadline	up to approx. 25.35 tpd of NOx (10,800 tpy)	Controls must be in place prior to the CAIR deadline of 2009 ozone season.	Missouri
Ethanol mandate waiver	approx. .77 - .42 tpd	By Governor's Executive Order	Missouri
Diesel idle reduction		Could be either done by each county or by each state for the counties in the nonattainment area.	Kansas and Missouri
EGUs not covered by CAIR or current agreements - In maintenance area	approx. 17.12 tpd of NOx (6250 tpy)	These EGUs do not fall under CAIR and would not be required to have any controls prior to Regional Haze deadlines	Kansas

PHASE II Controls

POINT

NOx

Cement Kiln Controls	approx. 0.8-1.0 tpd of NOx (300 tpy)	Reductions would be dependent on agreed upon controls from currently controlled process.	Missouri
Natural gas compressor engine modifications (RICE station engines)	approx 6.08 tpd of NOx (2219 tpy)	This source is located in Miami County, just south of Johnson County.	Kansas
Industrial boilers and process heaters	approx. 0.7 tpd of NOx (250 tpy)		Missouri
EGUs not covered by CAIR or current agreements - Outside maintenance area	approx. 23.59 tpd of NOx (8609 tpy)	This source is located in Linn County, south of Johnson County.	Kansas
EGUs not covered by CAIR or current agreements - In maintenance area	approx. 4.55 tpd of NOx (840 tpy)		Missouri

VOC

Lower threshold for major sources of emissions to 75 tpy		Would affect approx. 3 sources on the Missouri side and approx. 6 in Kansas	Kansas and Missouri
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VOC and NOx

Emissions offsets for all point sources 1.1:1.0		Reductions would be dependent on the amount of expansion and new sources interested in building in affected counties	Kansas and Missouri
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AREA

NOx

Emissions reductions at local rail companies (auxiliary controls)	approx. 11.44 tpd of NOx (4177 tpy)	Smart Start and APU's. Not sure of cost per ton with Smart Start or APUs. The states are in discussions on emissions controls	Kansas and Missouri
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VOC

VOC control for 46 Architectural and Industrial Maintenance coatings, includes Traffic coatings	2.688 VOC tpd	Approx. 21% beyond federal rule	Kansas and Missouri
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MOBILE

NOx

Diesel Chip Reflashing		May only be able to make this a volunteer program. Estimated cost of \$0 per ton if no fuel penalty considered. With 2% fuel penalty, \$1,800 to \$2,500 per ton.	Kansas and Missouri
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VOC

Gas cap testing program	0.21 - .4 VOC tpd	Regulation would be for Missouri counties only	Missouri
Eliminate 1 psi fuel waiver for 10% ethanol fuel		Dependent on if EPA will permit this type of action	Kansas and Missouri

Potential Voluntary Measures

POINT

- Have industrial sources for NOx and VOCs work with the state
- Analysis of present site deterioration and enforcement
- Time of day and date shifting at point sources
- Expand testing for pollutant build ups in facilities
- Energy audits on electric and natural gas facilities

AREA

- Discourage use of solvents and non latex paints on high ozone days
- Paint exposed surfaces of buildings with reflective paint
- HVAC repairs and maintenance
- Energy saving projects affecting local combustion sources
- Reduce energy by requiring the selling of more efficient heating and ac units
- Fuel alternatives for stationary equipment
- Incentives for retrofit of generators for peak power units

OFFICE

- Teleworking and compressed workweeks
- Energy fund for schools, hospitals, state buildings
- E government and improved accessibility to services
- Staff travel times and delivery streamlining
- Employer tax incentives or credits for telecommuting or alternatives
- Delay running errands to evening
- Bring lunch or walk to lunch
- Limit morning meetings
- Direct Deposit of paychecks
- Turning off lights and computers daily in county offices
- Add ozone as a topic of business new employee training
- Change planning and business codes to reflect latest technology in AQ
- Reusable cafeteria dining material in schools
- Menus of restaurants that deliver in county break rooms
- Include vehicle fuel economy and emissions ratings in procurement

LAWN and GARDEN

- Incentives for electric mowers
- Smart land use / Urban design solutions
- Urban Reforestation
- Equipment and contract specifications
- Land use alternatives
- Landfill (off road) vehicles replacement
- Tree planting
- Continue to maintain tree coverage in watershed areas
- Reduce energy use through composting and recycling
- Landscape training on air quality
- Reschedule lawn and garden and paving
- Service contract specifications
- Incentive contract bids
- Gas powered / 2 cycle engine buyouts
- Restrict public works moving time and equipment used
- Set times for mowing and landscaping
- Develop air quality best management practices for major construction projects
- Preference to low emitting bidders
- Plant 500 hardwood trees
- State right of way landscaping, less mowing

Train maintenance workers on procedures to conserve energy

MOBILE SOURCE / FUEL RELATED

Implement a high emitter identification, repair and enforcement process
Retrofit diesel vehicles with oxidation catalysts / particulate filters
Scrappage program for old or dirty cars
Mass transit improvement and incentives
Bike / pedestrian projects
Carpools/vanpools/rideshare
Economic incentives ex. Parking Cash Out
Park and ride / fringe parking
Promote alternative fuels
Clean fuels incentives
Clean fuels fleet program
Clean diesel for offroad vehicles
Green school bus program
Car care clinic
Transit oriented development
Grade separation of congested intersections
Traffic engineering
Delivery times outside of peak travel times
max vehicle occupancy / min vehicles at worksites
Reduce fuel consumption by X%
Accelerated fleet replacement cycle
Vehicle repair assistance
Limits on construction activities
Connected street system or pedestrian passthroughs
Incentives for fuels or technology to improve diesel operations
Signal system enhancements
Incident management / intelligent transportation system
Vehicle Emissions Inspection Program
National Low Emissions Vehicle Program
Discourage use of offroad vehicles on high ozone days
Shared parking facilities and connectivity
Using intelligent transport systems and message signs
Promote bus ridership for youth
Promote car tune ups, properly inflated tires
Vehicle driving trips
Do not use drive through services
Mass transit enhancements
Increase bicycle parking
Improve pedestrian and bike infrastructure
Repair hazards for nonmotorized transit
Truck Stop Electrification (TSE)
Traffic rerouting of trucks
Biodiesel
Promote route efficiency for delivery vehicles, trash, etc
Replace gas golf carts with electric
Bicycle tax break
Post signs in parking garages to discourage idling
Improve school bus routes
Restrict lower grades from driving to high school
Discourage overfilling of gas tanks
GPS / vehicles monitors for idling, miles driven
Restrict nonessential vehicle usage on high ozone days
Preferred parking for carpools
Close weigh stations on high ozone days
Discourage vehicle idling in weigh stations and rest areas
Ambulances supplied with electric power while in station
Accelerated replacement of on and off road diesel with new

Fuel - water emulsion use
Reflash heavy duty diesel truck computers
Voluntary partnership with ground freight
Implement a smoking vehicle plan
Gas cap replacement
Develop bike trail system in city

No idling for school buses
Fisher-Tropsch fuel use

PUBLIC INFORMATION / GOVERNMENTAL ROLE

Incentives for more efficient applications
Smog alert day voluntary use reductions
Public outreach / PSA
Promotion of energy conservation air quality benefits
Ozone Awareness / Action Program
Teacher training workshops and lesson plan materials
Home energy rebate program for green homes
Urban heat island / Cool Cities program
Broad based energy and resource efficiency programs
Incentive for adopting new technologies
Institute a good Air Quality seal for business
Promote solar use in homes
Develop air quality best management practices for major project
Smart Growth Audit
Infill Development
Use renewable resources where available
Construction of energy efficient buildings
Construction and use of energy efficient equipment
Promote the purchase of green, less polluting products
Air Quality poster contest for schools
Energy conservation and pollution reduction at home
Promote purchasing products with Energy Star (tax incentives?)
Knowledge based programs at local universities to develop energy reduction,
production strategies, etc that improve air quality
Best management practices for energy management
Encourage housing near large scale commercial
Allow/incentives for compact development and clustering
Encourage alternative modes of transportation in new developments
Encourage new development to connect transportation facilities together
Locate facilities near transit, bike, and pedestrian facilities
Locate facilities near mixed use development
Work with schools and government organizations on site selection
Economic development to reuse existing sites
Database of vacant, undeveloped property

Control Measures - Removed from list

Natural gas engines - 3-way catalysts for rich burning engines	Capture NMOC from landfills
Natural gas engines - Engine upgrades	Target highly reactive VOC compounds
Non MACT VOCs at agricultural plants	Automotive Plants
Establish RACT for new source categories	Additives for diesel fuel (cetane enhancement, etc)
NOx reduction for gas fired water heaters, boilers and process heaters	Off-road equipment fuel tanks
Chemical Plant Operations - Operational tuning and control technologies	Restrict use of E-10 / soydiesel during ozone season
Chemical Plant Operations - Options for Compressor engines, boilers	Consumer and Commercial product reformulation
Chemical Plant Operations - Enhanced leak detection repair (reduce HRVOC)	Establish/Amend RACT limits for HRVOCs
Regional NOx SIP on Kansas side	Non Road Large spark-ignition Engines
Substitution to lower volatility solvents, coatings and carriers	Electrification of rail switching yards
Switch airport ground service equipment to electric or cleaner fuels	Erect canopies over fuel facilities