10 CSR 10-5.380 Motor Vehicle Emissions Inspection

- (1) Applicability.
 - (A) Except as provided in subsection (1)(B) of this rule, subject vehicles include all vehicles operated on public roadways in the geographical area containing the City of St. Louis and the counties of St. Louis, St. Charles, and Jefferson and which are—
 - 1. Registered in the area with the state of Missouri Department of Revenue;
 - 2. Leased, rented, or privately owned and are not registered in the geographical area but are primarily operated in the area. A vehicle is primarily operated in the area if at least fifty-one percent (51%) of the vehicle's annual miles are in the area;
 - 3. Owned or leased by federal, state, or local government agencies, and are primarily operated in the geographical area, but are not required to be registered by the state of Missouri; or
 - 4. Owned, leased, or operated by civilian and military personnel on federal installations located within the geographical area, regardless of where the vehicles are registered.
 - (B) The following vehicles are exempt from this rule:
 - 1. Model year vehicles prior to 1971;
 - 2. Motor vehicles with a manufacturer's gross vehicle weight rating (GVWR) in excess of eight thousand five hundred (8,500) pounds;
 - 3. Diesel powered vehicles;
 - 4. Hydrogen powered vehicles;
 - 5. Vehicles powered solely by electric motors;
 - 6. Vehicles powered solely by alternative fuels without test procedures established by federal regulation;

- 7. Motorcycles and motortricycles;
- 8. New and unused motor vehicles, of model years of the current calendar year and of any calendar year within two (2) years of such calendar year, which have an odometer reading of less than six thousand (6,000) miles at the time of original sale by a motor vehicle manufacturer or licensed motor vehicle dealer to the first user;
- 9. Motor vehicles registered in the applicable area covered by this section of the rule which are domiciled and operated exclusively in an area of the state not subject to the provisions of this section of the rule for a duration covering the next twenty-four (24) months. The owner of the vehicle shall present the director a sworn affidavit that the vehicle will be based and operated outside the covered area;
- 10. Tactical military vehicles; and
- 11. Visitor, employee, or military personnel vehicles on federal installations provided appointments do not exceed sixty (60) calendar days per calendar year.
- (C) Starting July 1, 2000, owners of motor vehicles registered in Franklin County who choose to have their vehicles biennially emission inspected shall have their vehicles inspected at emission stations in the City of St. Louis or the counties of St. Louis, St. Charles, or Jefferson pursuant to this rule.

(2) Definitions.

- (A) Compliance cycle—The two (2)-year duration during which a subject vehicle in the enhanced emission inspection program area is required to comply with sections 643.300-643.355, RSMo.
 - 1. For private entity vehicles, the compliance cycle begins sixty (60) days prior to the subject vehicle's registration expiration.

- 2. For public entity vehicles, the compliance cycle begins on January 1 of each even-numbered calendar year.
- (B) Contractor—The state contracted company who shall implement and operate the centralized, enhanced motor vehicle emission inspection program as specified in sections 643.300-643.355, RSMo.
- (C) Control chart—The graphical presentation of the results of statistical process control methods applied to emission inspection test equipment and personnel for the purposes of assuring the quality control of each emission inspection performed. Such charts identify situations that are "out of control" and enable trend analysis useful to pinpointing the need for improvements in quality control. The U.S. Environmental Protection Agency (EPA)—defined control charts are listed in April 2000 IM240 & Evap Technical Guidance, 40 CFR part 85, subpart W, section 2234, subsection (g), which is incorporated by reference.
- (D) Department-The Missouri Depart-ment of Natural Resources.
- (E) Diagnostic Trouble Code (DTC)—An alphanumeric code consisting of five (5) characters which is stored by a vehicle's On-Board Diagnostics system if a vehicle malfunctions or deteriorates in such a way as to potentially raise the vehicle's tailpipe or evaporative emissions more than 1.5 times the federal test procedure certification limits.
- (F) Emission inspection—A series of tests performed on a vehicle in order to evaluate whether the mass or concentration of pollution that the vehicle emits exceeds a given standard or used to evaluate whether the vehicle's emission control components are present and properly functioning.
- (G) Gross Vehicle Weight Rating (GVWR)—The value specified by the manufacturer as the maximum design loaded weight of a single vehicle.

- (H) Hybrid Electric Vehicle (HEV)—Any vehicle that is designed with two (2) means of propulsion, one being a gasoline-powered internal combustion engine, the other being an electric motor powered by batteries.
- (I) Idle test—An engine exhaust emissions test in which the engine of a vehicle remains at a relatively uniform number of revolutions per minute.
- (J) Initial emission inspection—An emission inspection consisting of the test series that occurs the first time a vehicle is inspected in a compliance cycle.
- (K) Light Duty Truck (LDT)—Any motor vehicle rated at eight thousand five hundred (8,500) pounds GVWR or less which has a vehicle curb weight of six thousand (6,000) pounds or less and which has a basic vehicle frontal area of forty-five (45) square feet or less, which is:
 - 1. Designed primarily for purposes of transportation of property or is a derivation of such a vehicle;
 - 2. Designed primarily for transportation of persons and has a capacity of more than twelve (12) persons; or
 - 3. Available with special features enabling off-street or off-highway operation and use.
- (L) Light Duty Vehicle (LDV)—A passenger car or passenger car derivative capable of seating twelve (12) passengers or less that is rated at six thousand (6,000) pounds GVWR or less.
- (M) Malfunction Indicator Lamp (MIL)—A warning light located on the dashboard of vehicles equipped with On-Board Diagnostics systems indicating to the vehicle operator that the vehicle either has a malfunction or has deteriorated enough to cause at least one (1) DTC to be stored.
- (N) On-Board Diagnostics (OBD)—A vehicle emissions earlywarning system required by federal law to be installed on all light-duty 1996 and newer model year vehicles for

sale in the United States. The OBD system monitors sensors attached to all emission-control related components on a vehicle to ensure that the emission control system operates properly throughout a vehicle's lifetime.

- (O) On-Board Diagnostics (OBD) test—A test in which a vehicle's OBD system is connected to a hand-held tool or computer capable of determining:
 - 1. If the OBD system's readiness flags have been set;
 - 2. If the MIL is functioning correctly; and
 - 3. If the OBD system has stored any DTCs that are commanding the MIL to be illuminated.
- (P) Qualifying repair—Any repair or adjustment performed on a vehicle's emission control system after failing an initial emission inspection, that is reasonable to the test method failure. The qualifying repair must be performed within ninety (90) days of the date of initial emission inspection. The qualifying repair may consist of either—
 - 1. The parts costs, spent by a vehicle owner or charged to a vehicle owner by a repair technician, that are appropriate for the type of emission inspection failure; or
 - 2. The parts and recognized labor costs, charged to a vehicle owner by a Recognized Repair Technician, that are appropriate for the type of emission inspection failure.
- (Q) Readiness flag—A design feature of On-Board Diagnostics systems. If a readiness flag has been set, then the OBD system has completed a diagnostic check on that component. If a readiness flag has not been set, then the OBD system has not completed a diagnostic check on that component.

- (R) Recognized labor costs—The labor costs that a Recognized Repair Technician charges for emission repair services rendered to a vehicle that fails its emission inspection;
- (S) Recognized Repair Technician-Any person who-
 - Is professionally engaged full-time in vehicle repair or employed by an ongoing business whose purpose is vehicle repair. A Recognized Repair Technician may only be recognized by the department at one place of employment;
 - 2. Has valid certifications from the National Institute for Automotive Service Excellence (ASE) in Electrical Systems (A6), Engine Performance (A8), and Advanced Engine Performance Specialist (L1) that have not expired;
 - 3. Has satisfactorily completed an independent or vehicle manufacturer's training course, approved by the department, or has passed a nationally-recognized test, approved by the department, which course or test covers the emissions test methods used, diagnosis of the causes for failures, and repair work most frequently done for vehicles failing the transient emission test. Recognized Repair Technicians whose recognition expires or is revoked by the department must comply with paragraph (2)(S)3. of this rule again before being re-recognized by the department;
 - 4. Has satisfactorily completed at least one (1) four (4)-hour continuing education course per calendar year offered by the department; and
 - 5. Has not been reported by the department to the Attorney General for unlawful merchandising practices according to subsection 643.330.5, RSMo.
- (T) Transient emission test—An engine exhaust emissions test in which the engine of a vehicle is put under changing load requirements intended to simulate actual driving conditions.

- (U) Unsafe condition—The mechanical and physical condition of a motor vehicle which an emission inspector believes has the potential to cause harm to persons, vehicles, or property during the course of an emission inspection.
- (V) Definitions of certain terms in this rule, other than those specified in this rule section, may be found in 10 CSR 10-6.020.
- (3) General Provisions.
 - (A) Subject Vehicle Compliance.
 - 1. Private entity vehicle compliance with emission standards.
 - A. Motor vehicles subject to this rule shall demonstrate compliance with emission standards in this rule. Such demonstration shall be made through the test methods specified in section (5) of this rule and be completed according to the compliance cycle specified in paragraph (2) (A)1., the inspection intervals specified in subsection (3) (B), and the inspection periods specified in subsection (3) (C) of this rule.
 - B. Completion of the emission inspection requirements is necessary for vehicle initial registration, registration renewal, or registration transfer.
 - C. Failure to complete a vehicle emission inspection during the compliance cycle or before vehicle registration shall be a violation of this rule. These violations are subject to penalties specified in subsection 643.355.5, RSMo.
 - 2. Public entity vehicle compliance with emission standards.
 - A. All subject vehicles owned by federal, state and local governments shall be emission inspected within the first twenty-four (24) months of the

- effective date of the enhanced emission inspection program.
- B. After the first compliance cycle, all subject vehicles owned by federal, state and local governments shall be emission inspected according to the compliance cycle specified in paragraph (2) (A) 2. and the inspection intervals specified in subsection (3) (B) of this rule.
- C. All federal agencies shall ensure employee and military personnel vehicles meet the requirements of this subsection according to the December 1999 Interim Guidance for Federal Facility Compliance With Clean Air Act Sections 118(c) and 118(d) and Applicable Provisions of State Vehicle Inspection and Maintenance Programs, which is incorporated by reference.
- D. All public entities shall provide department personnel access to vehicle parking lots, garages, and areas otherwise used to store vehicles in order to examine vehicles for the presence of windshield stickers.
- E. Failure to complete a vehicle emission inspection within the compliance cycle specified in paragraph (2)(A)2. of this rule shall be a violation of this rule. These violations are subject to penalties specified in subsection 643.355.5, RSMo.
- 3. Vehicle fleets of five hundred (500) vehicles or more.
 - A. Vehicle fleets of five hundred (500) vehicles or more may be officially emission inspected outside of the centralized emission inspection stations designated for the general public, if the fleet inspection facilities are approved by the department. Owners or operators of such vehicle fleets shall use the state contractor to conduct the emission inspections.

- B. Vehicle fleets using such inspection facilities shall be subject to the same inspection requirements as nonfleet vehicles.
- C. Fleet inspection facilities shall be subject to quality assurance evaluations at least as stringent as those performed at public inspection stations.
- D. Owners or operators may make repairs to fleet vehicles on-site.
- 4. Vehicle fleets of fewer than five hundred (500) vehicles. The department shall require operators of emission inspection facilities to accommodate fleets of ten (10) vehicles or greater with special hours, scheduling appointments during hours not open to the public, and providing a voucher payment system.
- (B) Emission Inspection Intervals.
 - 1. Vehicles subject to this rule, manufactured as an odd-numbered model year vehicle are required to be inspected by the enhanced emission inspection program in each odd-numbered calendar year. Subject vehicles manufactured as an even-numbered model year vehicle are required to be inspected by the enhanced emission inspection program in each even-numbered calendar year.
 - 2. At the time of registration transfer, subject vehicles are required by section 643.315.1, RSMo to be inspected by the enhanced emission inspection program, regardless of the vehicle model year. At the time of registration transfer, prior to the sale of a vehicle, sellers of vehicles are required to provide the purchaser with an emission inspection compliance certificate or compliance waiver that is valid for registering the vehicle according to inspection period requirements of subsection (3)(C) of this rule.

- (C) Emission Inspection Periods.
 - An emission inspection performed at an inspection station on a subject vehicle via the vehicle inspection process described in subsections
 (3)(F)-(I) of this rule is valid, for the purposes of obtaining registration or registration renewal, for a duration of sixty (60) days from the date of passing inspection or waiver issuance.
 - 2. Reinspections occurring fewer than ninety (90) days after the initial emission inspection are subject to subsections (3)(H) and (I) of this rule.
 - 3. Reinspections occurring more than ninety (90) days after the initial emission inspection shall be considered to be an initial emission inspection as defined in subsection (2)(J) and are subject to subsections (3)(F) and (G) of this rule.
 - 4. An emission inspection performed on a subject vehicle via the clean screening inspection process described in paragraph (3)(J)1. of this rule and subsection (3)(K) of this rule are valid, for the purposes of obtaining registration or registration renewal, for a duration of sixty (60) days from the date the clean screening inspection payment is processed.
- (D) Emission Inspection Fee.
 - 1. At the time of an initial emission inspection, the vehicle owner or driver shall pay twenty-four dollars (\$24) to the emission inspection station, payable by cash, check or credit card.
 - 2. This emission inspection fee shall include free reinspections, provided the vehicle owner or driver complies with all reinspection requirements as required in subsection (3)(H) of this rule, and the reinspections are conducted within thirty (30) days of the initial emission inspection.

- 3. If an emission inspection fee is required, the emission inspection fee shall be reduced on days of operation, other than the last three (3) days of operation in each calendar month, by an amount that corresponds with the time that the vehicle owner or driver is required to wait before the inspection begins. The emission inspection fee shall be reduced as follows:
 - A. If the wait time is greater than thirty (30) minutes, the fee shall be reduced by ten dollars (\$10); or
 - B. If the wait time is greater than one (1) hour, the fee shall be reduced by twenty dollars (\$20).
- 4. The fee for a clean screening inspection compliance certificate and windshield sticker shall be twenty-four dollars (\$24), payable by check, credit card or money order.
- 5. The fee reimbursed to the state by the contractor shall be two dollars and fifty cents (\$2.50) for each individual emission inspection fee paid by a vehicle owner or driver at an inspection station or for a clean screening compliance certificate. The fee shall be remitted to the Director of Revenue on a weekly basis. The Director of Revenue shall deposit the fee into the "Missouri Air Emission Reduction Fund" as established by section 643.350, RSMo.
- (E) Emission Test Equipment.
 - 1. Performance features of emission test equipment.

 Computerized test systems are required for performing any measurement on subject vehicles. The test equipment shall be certified to meet EPA requirements. Newly acquired emission test systems shall be subjected to department acceptance test procedures to ensure compliance with enhanced emission inspection program specifications.

- A. Emission test equipment shall be capable of testing all subject vehicles and will be updated as needed to accommodate new technology vehicles as well as changes to the program.
- B. At a minimum, emission test equipment shall be:
 - (I) Automated to the highest degree commercially available to minimize the potential for intentional fraud and/or human error;
 - (II) Secure from tampering and/or abuse;
 - (III) Based upon written specifications; and
 - (IV) Capable of simultaneously sampling dual exhaust vehicles.
- 2. Functional characteristics of computerized test systems. The test system is composed of emission measurement devices and other motor vehicle test equipment controlled by a computer.
 - A. The test system shall automatically:
 - (I) Make pass/fail decisions for all
 measurements;
 - (II) Record test data to an electronic medium;

 - (IV) Perform electrical calibration and system integrity checks before each test, as applicable; and
 - (V) Initiate system lockouts for-
 - (a) Tampering with security aspects of the test system;

- (b) Failing to conduct or pass periodic calibration or leak checks;
- (c) Failing to conduct or pass the
 constant volume sampler flow rate
 check;
- (d) Failing to conduct or pass any of the dynamometer checks, including coastdown, roll speed and roll distance, power absorption capability, and inertia weight selection checks;
- (e) Failing to conduct or pass the
 pressure monitoring device check; and
- (f) A full data recording medium or one that does not pass a cyclical redundancy check.
- B. Test systems shall include a data link to the department computer as specified in the contract between the department and the contractor(s).
- C. The test system shall ensure accurate data collection by limiting, cross-checking, and/or confirming manual data entry.
- 3. Evaporative system pressure test equipment.

 Evaporative system pressure test equipment shall be as specified by EPA in April 2000 IM240 & Evap

 Technical Guidance, 40 CFR part 85, subpart W, section 2227, which is incorporated by reference.
- 4. Single-speed and two (2)-speed idle test equipment. Idle test equipment requirements shall be as specified by EPA in 40 CFR part 51, subpart S, Appendix A, section (I) and Appendix D, section (I), which are incorporated by reference.
- 5. Transient emission test equipment. Transient emission test equipment shall meet standards specified by EPA in April 2000 IM240 & Evap Technical Guidance, 40 CFR

- part 85, subpart W, section 2226, which is incorporated by reference.
- 6. On-Board Diagnostics (OBD) test equipment. OBD test equipment shall meet the standards specified by EPA in 40 CFR part 85, subpart W, section 2231, which is incorporated by reference.
- (F) Emission Inspection Procedures. The emission inspection shall meet the following requirements:
 - 1. Prior to entering the inspection station queuing area, the vehicle owner or driver shall be presented a time card for the verification of arrival time. Wait time shall be determined by the difference in time between the time of arrival and the time that emission inspection begins;
 - If a subject vehicle is targeted for a voluntary or mandatory manufacturer's emission recall notice issued after July 1, 1995, the vehicle owner or operator shall present to the emission inspection station proof of compliance with the recall notice;
 - 3. A vehicle shall not be inspected if all or part of the vehicle manufacturer's original exhaust system configuration is missing, leaking, or if the vehicle is in an unsafe condition as defined in subsection (2) (U) of this rule and determined by either the inspector or the department representative. If a motor vehicle is refused for inspection, then the station manager, assistant station manager, or department representative shall give the motorist a form that identifies the reasons for inspection refusal. The reasons for inspection refusal include, but are not limted to, the safety, driveability, and test procedure concerns as determined by the station manager, assistant station manager, or deparmtent representative. No fee shall be charged for this inspection;
 - 4. The vehicle owner or driver shall have access to an area in the inspection station that permits

- observation of the entire official inspection procedure of the vehicle being inspected. This access may be limited, but it shall not prevent observation;
- 5. Vehicles shall be inspected in as-received condition. An official inspection, once initiated, shall be performed in its entirety regardless of immediate outcome, except in the case of an invalid test condition, unsafe conditions, or test completion via fast pass algorithms;
- 6. The initial emission inspection shall be performed according to the test methods described in subsection (5)(A)-(G) of this rule without repair or adjustment at the emission inspection station prior to commencement of any tests, except as provided for in the evaporative system pressure test. Emission inspections performed within ninety (90) days of the initial emission inspection shall be considered a reinspection and are subject to provisions of subsection (3)(H) of this rule;
- 7. If a subject vehicle passes all emission inspection requirements within the compliance cycle described in subsection (2) (A) of this rule and the inspection period described in paragraph (3) (C) 1. of this rule according to the standards described in subsection (3) (G) of this rule, the emission inspection station shall issue the vehicle owner or driver a compliance certificate certifying that the vehicle has passed the emission inspection, and place a windshield sticker on the windshield of the subject vehicle according to subsection (4) (A) of this rule. The positioning of the windshield sticker on the windshield of the vehicle shall take place on the premises of the emission inspection station;
- 8. If a subject vehicle fails any of the test methods described in subsection (5)(A)-(G) of this rule, the emission inspection station shall provide the vehicle owner or driver with a vehicle test report indicating which test method(s) of the emission inspection that the vehicle failed, a repair facility performance

- report, a repair data sheet, and a copy of the customer complaint procedure according to subsection (4)(B) of this rule; and
- 9. If a subject vehicle fails any of the test methods described in subsections (5)(A)-(G) of this rule, the vehicle owner must have the vehicle repaired and complete a repair data sheet before submitting the vehicle for reinspection. The vehicle shall be reinspected according to the appropriate inspection period as determined by paragraphs (3)(C)2. and 3. of this rule and the reinspection procedures described in subsection (3)(H) of this rule.
- (G) Initial Emission Inspection Standards. Subject vehicles shall fail the emission inspection if the tailpipe emissions exceed the following measured values or if the vehicle does not meet the OBD test standards:
 - 1. Single-speed idle test standards for Light Duty Vehicles and Trucks.

Model Year	HC (PPM)	CO (%)
1971-1974	700	7.0
1975-1979	600	6.0
1980	300	3.0

- 2. Maximum exhaust dilution shall be measured as no less than six percent (6%) carbon monoxide (CO) plus carbon dioxide (CO $_2$) by volume on vehicles subject to a single-speed idle test as described in 40 CFR part 51, subchapter S, Appendix B, paragraph (I)(a)(3), which is incorporated by reference;
- 3. Phase-in transient emission test standards. For transient emission tests performed through the first twenty-four (24) months after the effective date of the enhanced emission inspection program, the following test standards, measured in grams per mile (gpm), apply to all subject vehicles:

A. Light Duty Vehicles.

Model Year	HC (GPM)	CO (GPM)	NO_x (GPM)
1981-1982	2.0	60	3.0
1983-1990	2.0	30	3.0
1991-1995	1.2	20	2.5
1996 and newer	0.8	15	2.0

B. Light Duty Trucks less than or equal to six thousand (6,000) pounds GVWR.

Model Year	HC (GPM)	CO (GPM)	NO_x (GPM)
1981-1983	7.5	100	7.0
1984-1987	3.2	80	7.0
1988-1990	3.2	80	3.5
1991-1995	2.4	60	3.0
1996 and newer	1.0	20	2.5

C. Light Duty Trucks greater than six thousand (6,000) pounds GVWR but less than or equal to eight thousand five hundred (8,500) pounds GVWR.

Model Year	HC (GPM)	CO (GPM)	NO _x (GPM)
1981-1983	7.5	100	7.0
1984-1987	3.2	80	7.0
1988-1990	3.2	80	5.0
1991-1995	2.4	60	4.5
1996 and newer	2.4	60	4.0

- 4. Final transient emission test standards. For transient emission tests performed after the first twenty-four (24) months of implementation of the enhanced emission inspection program, the following test standards, measured in grams per mile (gpm), apply to all subject vehicles:
 - A. Light Duty Vehicles.

B. Light Duty Trucks less than or equal to six thousand (6,000) pounds GVWR.

Model Year	HC (GPM)	CO (GPM)	NO_x (GPM)
1981-1983	3.4	70	4.5
1984-1987	1.6	40	4.5
1988-1995	1.6	40	2.5
1996 and newer	0.8	13	1.8

C. Light Duty Trucks greater than six thousand (6,000) pounds GVWR but less than or equal to eight thousand five hundred (8,500) pounds GVWR.

Model Year	HC (GPM)	CO (GPM)	NO _x (GPM)
1981-1983	3.4	70	4.5
1984-1987	1.6	40	4.5
1988-1995	1.6	40	3.5
1996 and newer	0.8	15	2.0

5. Two (2)-speed idle test standards for Light Duty Vehicles and Trucks that cannot be tested with the transient emission test equipment.

Model Year	HC (PPM)	CO %
1981 and newer	220	1.2

6. Single-speed idle test standards for vehicles registered by the Department of Revenue as specially constructed vehicles.

Model Year	HC (PPM)	CO %
1971 and newer	500	5.0

7. On-Board Diagnostics (OBD) test standards for 1996 and newer model year Light Duty Vehicles and Trucks. 1996 and newer model year Light Duty Vehicles and Trucks shall fail the emission inspection if they do not meet the OBD test standards specified by EPA in 40 CFR part 85, section 2207, which is incorporated by reference.

- (H) Emission Reinspection Procedures.
 - 1. Emission reinspection fee.
 - A. To qualify for free reinspections, the vehicle owner or driver shall present the previous vehicle test report and the completed repair data sheet to the emission inspection station within thirty (30) calendar days of the initial emission inspection.
 - B. Reinspections occurring more than thirty (30) calendar days after the initial emission inspection shall only be performed upon payment of the emission inspection fee to the emission inspection station.
 - 2. Repair data sheet. For a reinspection, the vehicle owner or driver shall present the previous vehicle test report and the completed repair data sheet to the inspection station. Whether repairs were performed by the owner, a Recognized Repair Technician, or someone other than a Recognized Repair Technician, the repair data sheet must be completed and presented to the inspector at the emission inspection station prior to the start of the emission reinspection.
 - 3. Reinspection procedure for 1971-1995 model year subject vehicles and, before January 1, 2003, for 1996 and newer model year subject vehicles.
 - A. Vehicles that initially fail any of the test methods described in subsections (5)(A)-(G) of this rule shall be reinspected after repairs, using the test methods described in subsections (5)(A)-(F) of this rule to determine if the repairs were effective for correcting failures on the previous inspection, thereby reducing or preventing an increase in tailpipe or evaporative emissions.

- B. The reinspection shall be performed without repair or adjustment at the emission inspection station prior to tests, except as provided for in the evaporative system pressure test.
- 4. Reinspection procedure for 1996 and newer model year vehicles between January 1, 2003, and December 31, 2004.
 - A. Vehicles that fail the OBD test described in subsection (5)(E) of this rule and the transient emission test described in subsection (5)(C) of this rule shall be reinspected according to subsections (5)(A) and (5)(C)-(F) of this rule, to determine if the repairs were effective for correcting failures on the previous inspection, thereby reducing or preventing an increase in tailpipe or evaporative emissions.
 - B. The reinspection shall be performed without repair or adjustment at the emission inspection station prior to tests, except as provided for in the evaporative system pressure test.
- 5. Reinspection procedure for 1996 and newer model year vehicles after December 31, 2004.
 - A. Vehicles that fail the OBD test described in subsection (5)(E) of this rule shall be reinspected according to subsections (5)(A) and (5)(E)-(F) of this rule, to determine if the repairs were effective for correcting failures on the previous inspection, thereby reducing or preventing an increase in tailpipe or evaporative emissions.
 - B. The reinspection shall be performed without repair or adjustment at the emission inspection station prior to tests, except as provided for in the evaporative system pressure test.
- 6. If the subject vehicle passes a reinspection according to paragraphs (3)(H)3.-5. of this rule,

- then the procedures in paragraph (3)(F)7. of this rule shall be followed.
- 7. If the subject vehicle fails a reinspection according to paragraphs (3) (H) 3.-5. of this rule, the vehicle owner may either:
 - A. Have more repairs performed on the vehicle and bring the vehicle back for another reinspection; or
 - B. Apply for a compliance waiver according to the requirements in paragraphs (3)(I)1.-4. of this rule.
- (I) Emission Inspection Waivers.
 - 1. 1971-1995 model year vehicles, and, before January 1, 2005, 1996 and newer model year vehicles, shall be issued a compliance waiver under the following conditions:
 - A. The subject vehicle has failed the initial emission inspection, has had qualifying repairs, and has failed an emission reinspection;
 - B. The vehicle operator has taken the vehicle to an emission inspection station or a state quality assurance/waiver facility and presented to the station manager, assistant station manager, or the department representative the vehicle test report, stating that the vehicle presented has failed the initial emission inspection and all subsequent emission reinspections;
 - C. The subject vehicle has shown a reduction in tailpipe emissions according to the following requirements:
 - (I) The measured tailpipe emissions of the reinspection must show a reduction in the tailpipe emissions that caused the vehicle

- to fail the preceding emission inspection; and
- (II) The measured tailpipe emissions of the reinspection must not show an increase in any of the measured tailpipe emissions above the standards set in subsection (3)(G) of this rule;
- D. The subject vehicle has all of its emission control components correctly installed and operating as designed by the vehicle manufacturer.
 - (I) The station manager, assistant station manager, or department representative shall use the anti-tampering test method described in subsection (5)(G) of this rule to fulfill the requirement of this subparagraph.
 - (II) If the vehicle fails the anti-tampering test described in subsection (5)(G) of this rule, then the vehicle will be denied a compliance waiver;
- E. The vehicle operator has presented to the station manager, assistant station manager, or the department representative all itemized receipts of qualifying repairs. The qualifying repairs must meet the requirements of paragraph (3)(I)2. of this rule. The itemized receipts must meet the requirements of paragraph (3)(I)3. of this rule; and
- F. The station manager, assistant station manager, or the department representative has, to the extent practical, visually verified that repairs were made and parts were repaired/replaced as claimed.
- 2. Beginning January 1, 2005, 1996 and newer model year vehicles shall not be issued a compliance waiver.

- 3. The minimum amount spent on qualifying repairs shall:
 - A. Exceed two hundred dollars (\$200) for pre-1981 model year vehicles;
 - B. Exceed four hundred fifty dollars (\$450) for 1981 and all subsequent model year vehicles;
 - C. Be inclusive of parts costs paid for emission repair services. Recognized labor costs shall be applied toward a compliance waiver. For qualifying repairs performed by someone other than a Recognized Repair Technician, parts costs, but not labor costs, shall be applied toward a compliance waiver;
 - D. Not include the fee for an emission inspection;
 - E. Not include charges for obtaining a written estimate of needed repairs;
 - F. Not include charges for checking for the presence of emission control devices;
 - G. Not include costs for repairs performed on the vehicle before the initial emission inspection failure or more than ninety (90) days before the reinspection;
 - H. Not include expenses which are incurred for the repair of emission control devices which have been found to be tampered with, rendered inoperative, or removed; and
 - I. Not include costs for emissions repairs or adjustments covered by an automobile manufacturer's warranty, insurance policy, or contractual maintenance agreement. The emissions repair costs covered by warranty, insurance, or maintenance agreements shall be separated from other emissions repair costs and shall not be applied toward the compliance waiver minimum amount. The operator of a vehicle within the

statutory age and mileage coverage under subsection 207(b) of the federal Clean Air Act shall present a written denial of warranty coverage, with a complete explanation, from the manufacturer or authorized dealer in order for this provision to be waived.

- 4. The vehicle operator shall present the original of all itemized repair receipts at an emission inspection station or a state quality assurance/waiver facility to demonstrate compliance with the qualifying dollar amount. The itemized repair receipt(s) shall:
 - A. Include the name of the repair facility and the model year, make, model and vehicle identification number of the vehicle being repaired;
 - B. Describe the diagnostic test(s) performed to identify the reason the vehicle failed an emission inspection, the emission repair(s) that were indicated by the diagnostic test(s), the emission repairs that were authorized by the vehicle owner or driver and performed by the repair technician, the vehicle part(s) that were serviced or replaced, and the diagnostic test(s) performed after the repairs were completed to verify that the vehicle's emissions were reduced or that the vehicle's emission control system is now operating as it was designed to operate by the manufacturer;
 - C. Clearly list the labor costs, if the vehicle was repaired by a repair technician, and parts costs separately for each repair. Unclear repair receipts that do not identify the vehicle that was repaired, do not itemize the actual cost of the parts that were serviced, do not list the labor costs separately from the parts costs, or contain fraudulent information or parts costs as determined by the station manager, assistant station manager, or department representative

- shall not be accepted for the purpose of obtaining a compliance waiver;
- D. Include the repair technician's name (printed or typed), signature and, if applicable, the Recognized Repair Technician ID number of the repair technician that performed the repair work; and
- E. Confirm that payment was collected for the services rendered and/or parts replaced as listed on the itemized repair receipt(s).
- 5. If the conditions of paragraphs (3)(I)1.-3. of this rule have been met, the station manager, the assistant station manager, or the department representative shall issue a compliance waiver and affix the windshield sticker to the vehicle. The windshield sticker shall meet the requirements of paragraph (4)(A)2. of this rule.
- 6. The department shall issue an emission inspection compliance certificate, with an indicator to show that the vehicle has received an out of area waiver to the vehicle owner or driver, and a windshield sticker shall be affixed to the subject vehicle, provided the vehicle owner or driver presents a completed, signed waiver affidavit to the department indicating that the vehicle will be operated exclusively in an area outside of the inspection area but within the state for a duration of at least the next twenty-four (24) months.
- 7. The department shall issue an emission inspection compliance certificate with an indicator to show that the vehicle has received a reciprocity waiver to the vehicle owner or driver, and a windshield sticker shall be affixed to the subject vehicle, provided the vehicle owner or driver presents proof, acceptable to the department, that the subject vehicle has successfully passed an emission inspection of another state within the previous twelve (12) months which

has been deemed equivalent to Missouri's emission inspection by the department.

- (J) Clean Screening Emission Inspection Requirements. Clean screening shall be used to exempt the cleanest subject vehicles from emission inspections at centralized emission inspection stations. All subject vehicles including federal, state, and local government agency vehicles shall be eligible for clean screening. Motorist participation shall be strictly voluntary.
 - 1. All clean screening plans must be approved by the state agency. Clean screening plans shall meet at least one (1) of the following requirements:
 - A. Remote Sensing Device (RSD) method. Remote sensing data collection shall occur during each month of the year, weather permitting, so that clean screening exemptions due to remote sensing are distributed throughout the year.
 - (I) Remote sensing units shall be designed, programmed, maintained, calibrated, and quality assured in keeping with good engineering practice.
 - (II) Two (2) valid RSD tests with all three (3) pollutants and appropriate speed and acceleration values on each test are required to exempt a vehicle with a clean screening determination. If a vehicle's record lacks any of the three (3) pollutant concentrations, that vehicle shall not be eligible for exemption based upon that record.
 - (III) The two (2) valid RSD tests must be recorded no more than twelve (12) months before the subject vehicle's registration expiration. RSD test results must be recorded on two (2) different days. If the vehicle database accumulates more than two (2) records during the twelve (12)-

- month period described in this part of the rule, the two (2) most recent tests must be used for clean screening evaluation.
- (IV) Remote sensing sites must be selected and rotated to achieve broad vehicle fleet coverage. Remote sensing sites must also be selected using good engineering practice in terms of traffic flow, road grade, acceleration, speed, and other appropriate items. Sites should be selected that avoid vehicles still in cold start mode.
- (V) Record gathering for more recent RSD data shall cease at least fifteen (15) days ahead of the beginning of each vehicle's compliance cycle. This cutoff allows time to match RSD tests, identify which vehicles can be exempted, and notify vehicle owners before the vehicle registration deadline according to subsections (4)(C) and (5)(H) of this rule.
- (VI) A two percent (2%) random sample of the vehicles that would be excused from an emission inspection at an inspection station based on the RSD method shall undergo the emissions inspection at an inspection station during the compliance cycle. To assure these vehicles are truly random and not specially altered for the emission inspection, owners of these vehicles shall not be informed of their vehicle's clean screening eligibility status;

B. Hybrid method.

(I) The EPA and the department shall approve the use of the Hybrid method used for clean screening.

- (II) One (1) valid RSD test with all three (3) pollutants and appropriate speed and acceleration values is required to exempt a vehicle with a clean screening determination. If a vehicle's record lacks any of the three (3) pollutant concentrations, that vehicle shall not be eligible for exemption based upon that record.
- (III) The one (1) valid RSD test must be recorded no more than twelve (12) months before the end of the subject vehicle's registration expiration. If the vehicle database accumulates more than one (1) record during the twelve (12)-month period described in this part, the most recent test must be used for clean screening evaluation.
- (IV) A Low Emitter Index (LEI) database shall be developed for the subject vehicles using sufficient information from both the Department of Revenue Division of Motor Vehicle and Drivers Licensing database and fleets in other states according to the EPA guidelines. The database shall have at least one (1) million vehicle records spanning a one (1) to two (2)-year duration.
- (V) The LEI database shall identify all subject vehicles required to undergo emission inspections grouped by engine family, defined as vehicle model year, make, model, engine size, and fuel metering system, and the probability that a particular vehicle in each grouping would fail the relevant emissions tests.
- (VI) The LEI database shall be updated on a regular interval with data gathered from the vehicles subject to this rule.

- (VII) Record gathering for more recent RSD data shall cease at least fifteen (15) days ahead of the beginning of each vehicle's compliance cycle. This cutoff allows time to identify which vehicles can be exempted, and notify vehicle owners before the vehicle registration deadline according to subsections (4)(C) and (5)(H) of this rule.
- (VIII) The one (1) valid RSD test described in part (3)(J)1.B.(II) of this rule shall be matched with a LEI database record that corresponds with the engine family of the subject vehicle. In order for a subject vehicle to be eligible to receive a clean screening notification document, both of the following conditions must be met:
 - (a) The RSD test must be below the clean screening standards described in subsection (3)(K) of this rule; and
 - (b) The LEI record must indicate that the subject vehicle has a low probability of failing the corresponding emission tests described in subsections (5)(A)-(E) of this rule.
- (IX) A two percent (2%) random sample of the vehicles that would be excused from an emission inspection at an inspection station based on the Hybrid method shall undergo the emissions inspection at an inspection station during the compliance cycle. To assure these vehicles are truly random and not specially altered for the emission inspection, owners of these vehicles shall not be informed of their vehicle's clean screening eligibility status.

- 2. An on-road testing program shall provide information about the emission performance of in-use subject vehicles by measuring on-road emissions through the use of remote sensing devices. The program shall collect and analyze on-road testing data. On-road testing is not required every season or on every vehicle but shall evaluate the emission performance of at least 0.5% of the subject fleet.
- (K) Clean Screening Emission Inspection Standards. Subject vehicles shall be eligible to receive a clean screening notification document according to paragraph (3)(J)1. and subsection (5)(H) of this rule if the on-road tailpipe emissions are equal to or below the following measured emission values:

 Model Year
 HC (PPM)
 CO (%)
 NOx (PPM)

 1971 and newer
 200
 0.5
 2000

- (L) Vehicle Registration. After a subject vehicle has passed the emission inspection according to either subsection (3)(F) or (H) of this rule, received a waiver according to subsection (3)(I) of this rule, or been clean screened according to subsection (3)(J) of this rule, the emission inspection compliance certificate issued by the emission inspection station or the clean screening compliance certificate mailed to the vehicle owner shall be submitted with registration documents by the vehicle owner or representative to the Missouri Department of Revenue at the time of vehicle registration.
- (M) Violations and Penalties. Persons violating this rule shall be subject to penalties contained in section 643.355, RSMo.
- (N) Quality Control.
 - 1. Quality control requirements for the contractor(s).
 - A. Contractor conduct.
 - (I) The department shall appoint only entities under contractual agreement with the

department to operate official emission inspection stations, which includes conducting emission inspections and issuing compliance certificates.

- (II) Conducting the business of the official emission inspection station shall be performed in such a way that it satisfies the intent of the enhanced emission inspection program by effectively identifying vehicles that fail to meet acceptable emission standards.
- (III) Failure to comply with the provisions of this rule and the contract shall be considered a violation of this rule and shall be sufficient cause for suspension of emission inspection privileges and authority to issue compliance certificates.

B. Emission inspectors.

- (I) The contractor shall provide to the department an education and training plan, to be approved by the department, for designated emission inspectors.
- (II) All contractor personnel who perform emission inspections at each emission inspection station shall be designated by the contractor as emission inspectors.
- (III) The contractor shall be responsible for the conduct of emission inspectors.
- (IV) Designation as an emission inspector may be suspended by a department quality assurance officer immediately at any time due to a violation of this rule or a provision of the contract.

- (V) The contractor shall maintain for the department a registry of designated emission inspectors, that at a minimum includes the inspector's name, beginning date of inspection duties, ending date of inspection duties and description of inspection performance.
- C. Inspection records.
 - (I) All inspection records, calibration records, and control charts shall be accurately created, recorded, and maintained by the contractor.
 - (II) The contractor and all employees of the contractor shall make available all records and information requested by the department and shall fully cooperate with department personnel and other authorized state representatives or agents who conduct audits and other quality assurance procedures.
 - (III) All contractors subject to this rule shall maintain emissions inspection records, including repair information as well as all inspection results.
 - (a) These records shall be kept for at least three (3) years after the date of an initial emissions inspection.
 - (b) These records shall be made available immediately upon request for review by department personnel.
 - (c) These records shall also be made available to the department on a continual basis through the use of an automated communication system approved by the department.

- 2. General requirements. General requirements for quality control practices for all test equipment shall be as follows:
 - A. At a minimum, the practices described in this section, in the contract, in 40 CFR part 51, subpart S, Appendix A, and in April 2000 IM240 & Evap Technical Guidance, 40 CFR part 85, subpart W, sections 2234 and 2235, which are incorporated by reference, shall be followed;
 - B. Preventive maintenance on all emission inspection equipment shall be performed on a periodic basis, as provided by the contract between the department and the contractor(s) and consistent with EPA and the equipment manufacturer's requirements;
 - C. To assure quality control, computerized analyzers shall automatically record quality control check information, lockouts, attempted tampering and any circumstances which require a service representative to work on the equipment;
 - D. To assure test accuracy, equipment shall be maintained according to demonstrated good engineering procedures;
 - E. Computer control of quality assurance checks and quality control charts shall be used whenever possible; and
 - F. The emission inspection station shall transmit the emission inspection results and the quality control results to the department as prescribed in the contract between the department and the contractor(s).
- 3. Evaporative system pressure test equipment quality control requirements. Calibration and maintenance procedures shall be as specified by EPA in April 2000 IM240 & Evap Technical Guidance, 40 CFR part 85,

- subpart W, section 2235, which is incorporated by reference.
- 4. Single-speed and two (2)-speed idle test equipment quality control requirements. Calibration and maintenance procedures shall be as specified by EPA in 40 CFR part 51, subpart S, Appendix A, paragraph (I), which is incorporated by reference.
- 5. Transient emission test equipment quality control requirements. Calibration and maintenance procedures shall be as specified by EPA in April 2000 IM240 & Evap Technical Guidance, 40 CFR part 85, subpart W, section 2234, which is incorporated by reference.
- (4) Reporting and Record Keeping.
 - (A) The contractor shall provide the owners or drivers of vehicles that pass the emission inspection, or are issued a compliance waiver, an emission inspection compliance certificate and windshield sticker. After the effective date of this rule, any revision to the contractor supplied forms shall be presented to the regulated community for a forty-five (45)-day comment period.
 - 1. The compliance certificate shall contain:
 - A. A vehicle description, including license plate number, vehicle identification number, vehicle make, vehicle model, vehicle model year, and odometer reading;
 - B. The date and time of inspection;
 - C. The identification number of the individual(s) performing the test and the location of the inspection station and lane number;
 - D. The applicable test standards;
 - E. The applicable test results, including exhaust quantities, OBD test results, and a pass

- indicator for the evaporative system pressure test;
- F. The results of the recall provisions check, if applicable, including the recall campaign number and the date the recall repairs were completed;
- G. A certification that tests were performed in accordance with the regulations;
- H. A waiver indicator, if applicable; and
- I. The statement: "This inspection is mandated by your United States Congress."

2. The windshield sticker shall:

- A. Be affixed by the emission inspector to each vehicle which is subject to and passes the emission inspection, or has been issued a waiver on the inside of the vehicle's front windshield in the lower left hand corner. A windshield sticker affixed to a vehicle that has been issued a waiver shall have a waiver indicator clearly visible on the sticker. Previous windshield stickers affixed to the windshield shall be removed. Destroyed, damaged, or lost windshield stickers can only be replaced after a satisfactory explanation of the details of the incident has been furnished to the department. Windshield stickers are valid for two (2) calendar years; and
- B. Contain the statement: "This inspection is mandated by your United States Congress."
- (B) The contractor shall provide the vehicle owner or driver of a vehicle that fails an emission inspection with a vehicle test report. Also provided shall be a repair facility performance report, a repair data sheet, and a copy of the customer complaint procedure. The contractor shall not refer vehicle owners to a particular repair station(s) that may or may not be included in the repair

facility performance report. After the effective date of this rule, any revision to the contractor supplied forms shall be presented to the regulated community for a forty-five (45)-day comment period.

- 1. The vehicle test report shall include:
 - A. A vehicle description, including license plate number, vehicle identification number, vehicle make, vehicle model, vehicle model year, and odometer reading;
 - B. The date and time of inspection;
 - C. The identification number of the individual(s) performing the test and the location of the inspection station and lane number;
 - D. The applicable test standards;
 - E. The applicable test results, including exhaust quantities, pass/fail results for the OBD test, pass/fail results for the evaporative system pressure test, and which emission control devices were passed, failed, or not applicable according to the anti-tampering test;
 - F. If the vehicle is subject to the OBD test described in subsection (5)(E) of this rule, the information required by 40 CFR part 85, subpart W, section 2223, which is incorporated by reference;
 - G. To the extent possible, a description of the nature of the failure and the components responsible, recommended repair and adjustment procedures, and an estimated cost for those repairs;
 - H. A statement indicating the availability of warranty coverage as required in section 207 of the Clean Air Act;

- I. The results of the recall provisions check, if applicable, including the recall campaign number and date the recall repairs were completed;
- J. A statement that the vehicle test report is not valid for vehicle registration purposes; and
- K. A statement that the vehicle may be reinspected for free according to subparagraph (3) (H)1.A. of this rule.
- 2. The repair facility performance report shall list facilities employing at least one (1) Recognized Repair Technician in the area which perform emission related repairs on vehicles and information on the results of emission repairs performed by these facilities. This information shall include:
 - A. Statistics on the number of vehicles submitted for an emission reinspection after repairs by the repair facility;
 - B. The percentage of vehicles repaired by the repair facility that passed a reinspection; and
 - C. The percentage of vehicles repaired by the repair facility that were granted compliance waivers.
- 3. A repair data sheet must be completed prior to an emission reinspection beginning. The repair data sheet shall include:
 - A. The total cost of repairs, divided into parts and labor costs;
 - B. The printed name and signature of the person who performed the repairs and, if applicable, the Recognized Repair Technician's ID number;
 - C. If applicable, the name of the repair facility and, if the repair facility employs a Recognized Repair Technician, the repair facility's ID number;

- D. The type of inspection failure the vehicle was being repaired for and the emission-related repairs performed;
- E. If applicable, the signature of the repair technician to indicate if all of the emission-related repairs that they recommended to the motorist were completed; and
- F. If applicable, the printed name and signature of the vehicle owner if the owner is seeking a compliance waiver.
- 4. The contractor shall collect all repair data sheets submitted at the emission inspection stations. The information contained on the repair data sheets shall be electronically entered into a database and made available to the department according to the contract.
- 5. The customer complaint procedure shall include the telephone number of the department's quality assurance facility. Any challenge regarding the performance or results of the emission inspection must be made in writing within ten (10) business days of the failure of the emission inspection.
- (C) The contractor shall send the owners of vehicles that pay for a clean screening inspection according to paragraph (3)(D)4. and subsection (5)(H) of this rule a clean screening inspection compliance certificate and windshield sticker.
 - 1. If the subject vehicle is eligible for clean screening via the RSD method described in subparagraph (3)(J)1.A. of this rule, the compliance certificate shall include the dates and locations of the two (2) valid test results. The RSD test results shall be compared to the clean screening test standards.
 - 2. If the subject vehicle is eligible for clean screening via the Hybrid method described in

subparagraph (3)(J)1.B. of this rule, the compliance certificate shall include the date and location of the one (1) valid RSD test result. The RSD test result shall be compared to the clean screening test standards.

3. The windshield sticker shall-

- A. Be affixed by the vehicle owners that pay for a clean screening inspection to the inside of the vehicle's front windshield in the lower left hand corner. A clean screening indicator shall be clearly visible on the sticker. Previous windshield stickers affixed to the windshield shall be removed. Destroyed, damaged, or lost windshield stickers can only be replaced after a satisfactory explanation of the details of the incident has been furnished to the department. Windshield stickers are valid for two (2) calendar years; and
- B. Contain the statement: "This inspection is mandated by your United States Congress."
- (D) Federal, state, and local government agencies shall provide documentation of compliance with this rule to the department. On a quarterly, or every three (3) months, basis, the agencies shall present a list of all vehicles owned by the agency or operated by agency personnel that are subject to this rule. These quarterly lists shall be submitted to the department by January 15, April 15, July 15, and October 15 for the corresponding preceding quarter. If the fifteenth is a weekend day or state holiday, the quarterly lists shall be submitted to the department by the following business day.

(5) Test Methods.

(A) Evaporative System Pressure Test. Until such time as the department approves an Evaporative System Pressure Test that is more comprehensive, non-intrusive, and is approved by the EPA, the evaporative system pressure test procedure shall be as follows:

- 1. A gas cap test, done to the extent practical, shall be performed on all 1981 and newer model year subject vehicles;
- 2. The gas cap test sequence shall consist of the following steps:
 - A. The gas cap shall be connected to the adapter of the test equipment;
 - B. The gas cap shall be pressurized with air to 30 \pm 0.5 inches of water; and
 - C. The gas cap leak rate shall be compared to an orifice with a flow rate of sixty (60) cubic centimeters per minute at thirty inches (30") of water;
- 3. Vehicles shall pass the gas cap test if the gas cap leak rate is less than or equal to a flow rate of sixty (60) cubic centimeters per minute.
- (B) Single-Speed Idle Test.
 - 1. Except as provided by subsection (5)(F) of this rule, single-speed idle tests shall be performed on pre-1981 model year subject vehicles and specially constructed vehicles described in paragraph (3)(G)6. of this rule in accordance with the procedures contained in 40 CFR part 51, subpart S, Appendix B, paragraph (I), which is incorporated by reference.
 - 2. If the measured emission values are equal to or below the appropriate standards spified in paragraphs (3)(G)1, and (3)(G)6. of this rule, respectively, then the subject vehicle shall pass the single-speed idle test.
- (C) Transient Emission Test.
 - 1. Except as provided by paragraphs (5)(C)4., (5)(C)7. and (5)(C)8. and subsection (5)(F) of this rule, transient emission tests shall be performed on 1981

and newer model year subject vehicles in accordance with the procedures contained in April 2000 IM240 & Evap Technical Guidance, 40 CFR part 85, subpart W, section 2221, which is incorporated by reference. The driving cycle shall include acceleration, deceleration, and idle operating modes as specified in April 2000 IM240 & Evap Technical Guidance, 40 CFR part 85, subpart W, subsection 2221(e).

- 2. The two hundred forty (240)-second sequence may end earlier using fast pass algorithms specified in April 2000 IM240 & Evap Technical Guidance, 40 CFR part 85, subpart W, paragraph 2205(a)(4), which is incorporated by reference.
- 3. To decrease the possibility of falsely failing a vehicle due to inadequate pre-conditioning, vehicles failing by two (2) times, or less, the applicable transient emission test standards described in paragraphs (3)(G)3. and (3)(G)4. of this rule will be retested immediately as specified in April 2000 IM240 & Evap Technical Guidance, 40 CFR part 85, subpart W, paragraph 2221(d)(1). The results of the first transient emission test shall be disregarded.
- 4. If a vehicle cannot be tested on standard transient test equipment because of vehicle design, vehicle condition, or equipment limitations, the vehicle will be tested using a two (2)-speed idle test, as defined in subsection (5) (D) of this rule.
- 5. The department shall determine the number and distribution of lanes necessary to test four (4) wheel drive vehicles and vehicles with traction control using the transient emission test.
- 6. If the measured emission values are equal to or below the appropriate standards specified in paragraphs (3)(G)3. and (3)(G)4. of this rule, then the subject vehicle shall pass the transient emission test.
- 7. Between January 1, 2003, and December 31, 2004, all 1996 and newer model year subject vehicles shall be

- emission inspected according to the OBD test procedures described in paragraph (5)(E)3. of this rule.
- 8. Beginning January 1, 2005, all 1996 and newer model year subject vehicles shall be emission inspected according to the OBD test procedures described in paragraph (5)(E)4. of this rule.
- (D) Two (2)-Speed Idle Test.
 - 1. Except as provided by subsection (5)(F) of this rule, two (2)-speed idle tests shall be performed on subject vehicles that cannot be tested by the transient emission test method in paragraph (5)(C) of this rule because of vehicle design, vehicle condition, or equipment limitations. The two (2)-speed idle test shall be performed in accordance with the procedures contained in 40 CFR part 51, subpart S, Appendix B, paragraph (II), which is incorporated by reference.
 - 2. If the measured emission values are equal to or below the standards specified in subsection (3)(G)5. of this rule, then the subject vehicle shall pass the two (2)-speed idle test.
- (E) On-Board Diagnostics (OBD) Test.
 - 1. All 1996 and later model year subject vehicles shall have the OBD systems interrogated.
 - 2. Prior to January 1, 2003, the OBD test described in 40 CFR part 85, subpart W, section 2222, which is incorporated by reference, and the OBD test standards specified in paragraph (3)(G)7. of this rule shall be performed on an advisory-only basis.
 - 3. Between January 1, 2003, and December 31, 2004, the OBD test shall be performed according to the following procedure:

- A. If the subject vehicle cannot be tested with the OBD test due to manufacturer design or the inability of the inspection equipment to communicate with the vehicle's OBD system, then the subject vehicle shall be tested with the transient emission test described in subsection (5) (C) of this rule;
- B. If the subject vehicle passes the OBD test described in 40 CFR part 85, subpart W, section 2222 according to the OBD test standards specified in paragraph (3)(G)7. of this rule during either an initial emission inspection or a reinspection, then the vehicle shall not be subject to the transient emission test described in subsection (5)(C) of this rule, and the procedures in paragraph (3)(F)7. of this rule shall be followed;
- C. If the subject vehicle fails the OBD test described in 40 CFR part 85, subpart W, section 2222 according to the OBD test standards specified in paragraph (3)(G)7. of this rule during either an initial emission inspection or a reinspection, then the vehicle shall be subject to the transient emission test described in subsection (5)(C) of this rule.
 - (I) If the subject vehicle passes the transient emission test, then the procedures in paragraph (3)(F)7. of this rule shall be followed.
 - (II) If the subject vehicle fails the transient emission test, then the procedures in paragraphs (3)(F)8., (3)(F)9. and (3)(H)4. of this rule shall be followed.
- 4. Beginning January 1, 2005, the OBD test shall be performed according to the following procedure:
 - A. If the subject vehicle cannot be tested with the OBD test due to manufacturer design, then the

- subject vehicle shall be tested with the transient emission test described in subsection (5)(C) of this rule.
- B. If the subject vehicle passes the OBD test described in 40 CFR part 85, subpart W, section 2222 according to the OBD test standards specified in paragraph (3)(G)7. of this rule, then the procedures in paragraph (3)(F)7. of this rule shall be followed.
- C. If the subject vehicle fails the OBD test described in 40 CFR part 85, subpart W, section 2222 according to the OBD test standards specified in paragraph (3)(G)7. of this rule, then the procedures in paragraphs (3)(F)8., (3)(F)9. and (3)(H)5. of this rule shall be followed.
- (F) Hybrid Electric Vehicle (HEV) Test. HEVs shall not be subject to the tailpipe emission tests described in subsections (5)(B)-(D) of this rule. HEVs shall only be subject to the test methods described in subsections (5)(A), (5)(E) and (5)(G)-(H) of this rule.
- (G) Anti-Tampering Test. Anti-tampering tests shall only be performed on 1971 and newer model year subject vehicles that have failed the initial emission inspection or have failed an emission reinspection that has caused the owner to apply for a compliance waiver. The antitampering test procedure shall be as follows:
 - 1. Anti-tampering tests shall be performed through direct observation or through indirect observation using a mirror, video camera or other visual aid. The emission inspector shall look for the presence of the positive crankcase ventilation valve on all 1971 model year vehicles, the exhaust gas recirculation valve on all 1972 and newer model year vehicles, and the catalytic converter system on all vehicles equipped by the manufacturer with such a system;

- 2. The emission inspector shall also look at the evaporative emission system, where practical. Vehicles shall fail the anti-tampering test if the canister is missing or obviously damaged, if the hoses are missing, damaged or obviously disconnected, or if the gas cap is missing;
- 3. Vehicles shall fail the anti-tampering test if the devices described in this subsection are part of the original certified configuration of the vehicle and are found to be missing, modified, disconnected, or improperly connected; and
- 4. Vehicles shall fail the anti-tampering test if the devices described in this subsection are found to be incorrect for the certified vehicle configuration. Aftermarket parts, as well as original equipment manufacturer parts, may be considered correct if they are proper for the certified vehicle configuration. Where EPA aftermarket approval or a self-certification program exists for a particular class of subject parts, vehicles shall fail the antitampering test if the part is not from an original equipment manufacturer or from an EPA approved or self-certified aftermarket manufacturer.

(H) Clean Screening Test.

- Owners of clean screening-eligible vehicles shall be notified by mail one (1) month prior to the vehicle's registration month.
- 2. If the subject vehicle is eligible for clean screening according to paragraph (3)(J)1. and subsection (3)(K) of this rule, the owner shall be mailed a clean screening notification document.
 - A. The notification shall be mailed to the subject vehicle owner's most current address on record.
 - B. If the subject vehicle owner responds to the clean screening notification and pays the inspection fee established in paragraph (3)(D)4.

- of this rule, then a compliance certificate and windshield sticker that meet the requirements of subsection (4)(C) of this rule shall be mailed to the subject vehicle owner.
- C. If the subject vehicle owner chooses not to respond to the clean screening notification, then the subject vehicle can comply with the emission inspection requirement according to subsection (3) (F) of this rule.
- (I) Evaporative System Purge Test. The department will approve an Evaporative System Purge Test when a non-intrusive procedure becomes available and is approved by the EPA. All 1981 and newer model year subject vehicles will be tested and required to meet the standards when the procedure is approved.

EPA Rulemakings

CFR: 40 C.F.R. 52.1320(c)

FRM: 68 C.F.R. 25414 (5/12/2003)

PRM: 68 C.F.R. 4842 (1/30/2003)

State Submission: 12/13/2002

State Final: 10 C.S.R. 10-5 (11/30/2002)

APDB File: MO-199

Description: The St. Louis area was redesignated to attainment with the 1-hour ozone

standard and this action fully approves the maintenance plan and a revision

to the St. Louis inspection and maintenance (I/M) program.

CFR: 40 C.F.R. 52.1320(c)

FRM: 65 C.F.R. 31480 (5/18/2000)

PRM: 65 C.F.R. 8060 (2/17/2000)

State Submission: 11/10/99

State Final: 10 C.S.R. 10-5 (12/30/99)

APDB File: MO-113

Description: This action approves the inspection and maintenance (I/M) program which is

applicable to the St Louis nonattainment area as a revision to the SIP.

CFR: 40 C.F.R. 52.1320(c)(51)(i)(A)

FRM: 50 FR 32411 (8/12/85)

PRM: 50 FR 5630 (2/11/85)

State Submission: 8/27/84

State Proposal: 8 MR 979 (9/1/83)
State Final: 9 MR 251 (1/3/84)

APDB File: MO-54

Description: The EPA approved the amended regulation (which was effectively the entire

rule) as part of the approval of the inspection and maintenance program. (NOTE: the EPA did not act on the rule when it was submitted as part of

the revised 1982 ozone SIP. See MO-35.)

Difference Between the State and EPA-Approved Regulation

None.