THE COUNTY COMMISSIONERS
OF DAVIS COUNTY, UTAH

ENHANCED VEHICLE EMISSION INSPECTION MAINTENANCE PROGRAM ORDINANCE

October 9, 1996

DAVIS COUNTY ORDINANCE # 07-96

ENHANCED VEHICLE EMISSIONS INSPECTION/MAINTENANCE PROGRAM

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1.0 DEFINITIONS.

For the purpose of this Ordinance, the following terms, phrases, and words shall have the following meanings, unless otherwise defined:

1.1 Accreditation: Certification that the instrument and instrument manufacturer meet the operating criteria, specifications and requirements of the Environmental Health and Laboratory Division of the Davis County Health Department;

1.2 Accuracy: The degree by which an instrument is able to determine the true concentration of pollutants of interest;

1.3 Air Intake Systems: Systems that allow for the induction of ambient air, including preheated air into the engine combustion chamber for the purpose of mixing with a fuel for combustion;

1.4 AIR System: (Air Injection Reaction) A system for providing supplementary air into a vehicle's exhaust system to promote further oxidation of HC and CO gases and to assist catalytic reaction;

1.5 Analyzer: An engine exhaust gas analyzer. A computerized exhaust analyzer approved by the Division for use in the areas of Utah requiring inspections as specified in Section 41-6-163.6 and 41-6-163.7, Utah Code Annotated, 1953, as amended;

1.6 "ASE" means the National Institute for Automotive Service Excellence;

1.7 Audit means a periodic quality assurance check performed by the Division, on equipment and personnel regulated under this Ordinance;

1.8 Auditor means an employee of the Division who performs audits referred to as a Compliance Officer at times;

1.9 Bar 90: Refers to California Bureau of Automotive Repair Exhaust Gas Analyzer Specifications, which became effective in 1990;

1.10 Basic Engine Systems: Parts or assemblies that provide efficient conversion of a compressed air/fuel charge into useful power, including but not limited to, valve train mechanisms, cylinder head to block integrity, piston-ring-cylinder sealing integrity and post-combustion emissions control device integrity;

1.11 Bench: The main sample processing assembly of an engine exhaust gas analyzer including detectors, sampling tubes, processor boards, infrared sources and power supply; etc.;

1.12 Calibration: The process of establishing or verifying the accuracy of an exhaust gas analyzer to perform a consistent evaluation of engine exhaust by using different calibration gases having precisely known concentrations;

1.13 Calibration Gases: Gases of accurately known concentration that are used as references for establishing or verifying the calibration curve and accuracy of an exhaust gas analyzer and are approved by the Division for use. May also be referred to as a span gas;

1.14 Carbon Monoxide: A colorless, odorless, asphyxiating gas produced by the incomplete burning of fuels. Carbon Monoxide may be referred to in this Ordinance as CO.

1.15 Catalytic Converter: A post-combustion device that oxidizes HC and CO gases and/or reduces oxides of nitrogen gases;

1.16 Certificate: A Certificate of Compliance or Certificate of Waiver;

1.17 Certificate of Compliance: A document used in the Vehicle Emissions Inspection/Maintenance Program to certify that a vehicle meets all applicable requirements of the program;

1.18 Certification: Assurance by an authorized source, whether it be a laboratory, the manufacturer, the state, or the Division, that a specific product or statement is in fact true and meets all requirements;

1.19 Certified Emissions Repair Facility: means a business permitted by the Division which engages in emissions related repairs to vehicles, and which meets the requirements of Section 17.0 of this Ordinance;

1.20 Certified Emissions Repair Technician (Technician): A person who has successfully

completed all permit requirements and has been issued a current, valid permit by the Division. A person permitted by the Division who diagnoses emissions related faults, and supervises or performs emissions related repairs and adjustments to bring vehicles into compliance with the requirements of this Ordinance;

1.21 Certified Emission Tester (Tester): A person who has successfully completed all permit requirements and has been issued a current, valid permit by the Division. A person permitted by the Division who tests (inspects) vehicles in a Division permitted Enhanced Basic I/M Program Station to determine their compliance with vehicle emission standards;

1.22 Chemiluminescent analyzer: means an analyzer which measures the intensity of chemiluminescent radiation from the reaction of nitric oxide with ozone and, when used in conjunction with a nitrogen dioxide converter, permits the measurement of oxides of nitrogen.

1.23 CO: Carbon monoxide;

1.24 Compliance: Verification that certain submission data and hardware submitted by a manufacturer for accreditation consideration, meets all required accreditation requirements; Also generally means to conform to the requirements of this Ordinance and other laws;

1.25 Composite exhaust emission test: means the entire loaded mode exhaust emissions test, consisting of Phase 1 and Phase 2;

1.26 Constant volume sampler (CVS): means a device which is used for collecting samples of diluted exhaust gas and which maintains a constant flow rate of exhaust gas and dilution air;

1.27 County: Davis County, Utah;

1.28 CURB IDLE: The manufacturer's specified idle speed for the specific Motor Vehicle being tested.

1.29 Cutpoints: The maximum allowable concentration of carbon monoxide (CO), hydrocarbons (HC), and nitrogen oxides (NO_x) for a given weight class and model year of a motor vehicle, as determined by the Division, using an approved exhaust gas analyzer or constant volume sampler;

1.30 DC98 Analyzer: A computerized exhaust analyzer approved by the Division for use in the areas of Utah requiring Inspections as specified in Section 41-6-163.6 and 41-6-163.7, Utah Code Annotated, 1953, as amended.

1.31 Dedicated Printer: The printer on the approved analyzer which is used solely to print certificates;

1.32 Director: The Director of the Environmental Health and Laboratory Division of the Davis County Health Department or his/her authorized representative;

1.33 Division: The Environmental Health and Laboratory Division of the Davis County Health Department;

1.34 Domiciled: County in which primary residence is located.

1.35 Drift: The amount the analyzer reading changes expressed as a percentage of full scale over a period of time. Zero Drift refers to no change of the zero reading in the zero mode. Span Drift refers to the amount of change in reading of hydrocarbons or carbon monoxide when the analyzer is in the span mode;

1.36 Dynamometer: means a power absorption unit which allows the road operation of a vehicle to be simulated by reproducing the inertia and road load power developed by the vehicle;

1.37 EGR System: The Exhaust Gas Recirculation System - An emissions control system that recycles or recirculates a portion of the exhaust gases back to the engine combustion chambers primarily to reduce oxides of Nitrogen emissions;

1.38 Emissions Control Systems: Parts, assemblies or systems originally installed by the manufacturer in or on a vehicle for the sole or primary purpose of reducing emissions;

1.39 Emissions control device: means a design element or device installed on a motor vehicle by the vehicle manufacturer to comply with the standards of the Clean Air Act, 42 USC, Section 7521, including, but not limited to, the oxygen sensor, catalytic converter, and the fuel inlet restrictor; and devices integral to the exhaust gas recirculation (EGR) system, the evaporative emissions control system, the positive crankcase ventilation (PCV) system, the air injection system, the fuel metering system, and the ignition system;

1.40 Emissions related recall: means a manufacturer plan to remedy vehicle emissions related defects or nonconformity with new vehicle emissions standards through either a voluntary emissions recall as defined in 40 CFR, Section 85.1902 (d), 1992 edition, or a remedial plan determination made pursuant to the Clean Air Act, 42 USC, Section 7541;

1.41 Emissions related repair: means the inspection, adjustment, repair, or replacement of motor vehicle engine systems, subsystems, or components necessary to bring a vehicle into compliance with the emissions standards set forth in this Ordinance;

1.42 Emission(s) Standard (Cut point): means a requirement that limits the quantity, quality, rate, or concentration of emissions from a vehicle;

1.43 Emissions: Substances expelled into the atmosphere from any opening down-stream of the

exhaust valve of a Motor Vehicle; particularly, air contaminants produced by combustion and/or incomplete combustion. Also hydrocarbon evaporation from the fuel system and the crankcase and particulate material from the crankcase.

1.44 Emissions Control Systems: Parts, assemblies or systems originally installed by the manufacturer in or on a vehicle for the purpose of reducing Emissions.

1.45 Engine Exhaust Gas Analyzer: An instrument that is capable of measuring the concentrations of certain air contaminants in the exhaust gas emanating from a motor vehicle which is approved by the Division for this use in accordance with this Ordinance as an official test instrument;

1.46 Engine Switching: Situation where one engine is removed from a vehicle and is not replaced by an engine that is identical to the original engine.

1.47 E.P.A.: United States Environmental Protection Agency

1.48 Enhanced Basic I/M Inspections or Testing: Consists of a Two-speed idle test, fuel cap pressure test, fuel system pressure test, and in selected vehicles a EGR valve function test as approved by the Division applicable to motor vehicles of model years and vehicle weight classifications specified by this Ordinance and the Division;

1.49 Enhanced Basic I/M Program Station: A stationary Vehicle Emissions Inspection and Maintenance Station that qualifies and has a valid permit, issued by the Division, to operate as an emissions inspection and maintenance station in the Vehicle Emissions Inspection/Maintenance Program performing Enhanced Basic I/M inspections and Enhanced Basic Emission test failure repairs;

1.50 Enhanced I/M Inspections or Testing: Consists of testing by the Division in which mass emissions are measured from a vehicle operated under load over a drive cycle as defined by EPA Technical Guidance document EPA-AA-EPSD-IM-93-1, April 1994 or some acceptable modification of those defined proceedures. As many as one half of all 1981 and newer vehicles may be subject to this testing procedure annually except diesel powered vehicles;

1.51 Enhanced I/M Program Station: A Vehicle Emissions Inspection Station operated by the Division to perform Enhanced I/M inspections;

1.52 Evaporative Control System: An emissions control system that prevents the escape of fuel vapors from the fuel tank or air cleaner and stores them in a charcoal canister to be burned in the combustion chamber;

1.53 Exemption Form: A document used to verify that a vehicle is exempt from the testing and repair/adjustment requirements of this Ordinance;

1.54 Exhaust Gas Analyzer: An Instrument meeting the DC98 Certification requirements that is capable of measuring the concentrations of certain air contaminants in the exhaust gas emanating from a Motor Vehicle when approved by the Division for use in accordance with this Ordinance as an official test Instrument.

1.55 Farm Truck: A truck registered as a Farm Truck under the provisions of the Utah State Statute.

1.56 Federal Installation: Any property or facility subject to the jurisdiction of any department, agency, or instrumentality of the executive, legislative, and judicial branches of the Federal government.

1.57 Flame ionization detector: means an analyzer which uses a hydrogen-air flame detector to produce a signal proportional to the mass flow rate of hydrocarbons;

1.58 Fleet Inspection Station: A corporation or other business entity permitted by the Division to perform the functions of the Inspection program for a privately owned fleet of ten or more Motor Vehicles, including Emissions related repairs, as well as the Inspection.

1.59 Fuel Control Systems: Mechanical, electromechanical, galvanic or electronic parts or assemblies that regulate the air/fuel ratio in an engine to provide a combustible charge;

1.60 Fuel Filler Neck Restrictor: The obstruction, installed by the vehicle manufacturer, in the gas tank filler neck that prevents the introduction of a "leaded gasoline" nozzle;

1.61 Gas Span Check: The checking and adjustment, as necessary, of an exhaust gas analyzer to correspond with known concentrations of HC, NO_x and CO span gases;

1.62 Gas Calibration Check: A procedure using known concentrations of HC, NO_x and CO span gases to verify the accuracy of an analyzer in measuring HC, NO_x and CO;

1.63 Gaseous Fuel: Means, but is not limited to, petroleum gases and natural gases in liquefied or gaseous forms;

1.64 Gross Vehicle weight rating (GVWR): means the total vehicle weight, including load, as designated by the vehicle manufacturer;

1.65 HC: Hydrocarbons.

1.66 Hang-up: A situation in which hydrocarbons cling to the surface of the sampling and analyzer systems in contact with the exhaust gas sample stream resulting in errors in HC readings;

1.67 Hexane Equivalency Value: The value derived from multiplying the propane equivalency factor (P.E.F.), as labeled on the analyzer, by the concentration of propane recorded on the

calibration gas cylinder that is used to determine the proper HC reading when calibration/span gas is introduced into the analyzer bench;

1.68 High Altitude Specifications: Tune-up specifications that have been provided by the manufacturer to the Environmental Protection Agency for cars operating above 4,000 feet above sea level;

1.69 Hydrocarbons: Unburned or incompletely burned fuel. Hydrocarbons may be referred to in this Ordinance as HC.

1.70 I/M Program Station: means a Enhanced Basic I/M or Enhanced I/M Station permitted and operated as required by this Ordinance;

1.71 Idle Mode: A condition where the vehicle engine is warm and running at the rate specified by the manufacturer's curb idle, where the engine is not propelling the vehicle, and where the throttle is in the closed or idle stop position. This condition must be achieved without placing a load on the vehicle to decrease the RPM to the specified rate;

1.72 Ignition Systems: Parts or assemblies that are designed to cause and time the ignition of a compressed air/fuel charge;

1.73 I/M Clearance: A stamp placed on the Motor Vehicle Registration form by an employee of the Davis County Assessor's office or the Division indicating that the Motor Vehicle represented by the Registration form is in Compliance with the Inspection program requirements in that the motorist has presented a valid Certificate of Compliance or Certificate of Compliance - Waiver for the Motor Vehicle and paid applicable fees.

1.74 Inspection: An official vehicle emissions test performed for the purpose of issuing a Certificate of Compliance or Waiver carried out in compliance with this Ordinance;

1.75 Inspection Area: The area that is occupied by the analyzer, sample hose, and the vehicle being inspected;

1.76 Inspection Report (VIR): A document used to record information generated by the Inspector/Mechanic during an Emissions Inspection other than a Certificate of Compliance.

1.77 Inspector: An employee of the Division authorized to perform inspections;

1.78 Instrument: The complete analyzer system that samples and displays the concentration of pollutant hydrocarbon and carbon monoxide gas. The instrument includes the sample handling system, the exhaust gas analyzer and the enclosure cabinet;

1.79 Loaded vehicle weight (LVW): means the weight of the vehicle in operational status and the

weight of fuel at nominal tank capacity, plus 300 pounds;

1.80 Lock-out: When the DC98 Analyzer automatically prohibits access to the testing portion of the DC98 Analyzer.

1.81 Misfueling: means the introduction of improper fuel into a vehicle as prohibited under the Clean Air Act, 42 USC, Section 7545;

1.82 Model year: means the vehicle model year as designated by the manufacturer or the model year designated by the Division for a vehicle constructed by other than the original manufacturer;

1.83 Motor Vehicle: A self-propelled motorized vehicle with an internal combustion powered engine which is licensed for operation on public roads and/or streets. Motor Vehicles exempted from the inspection requirements of this Ordinance are listed in Section 6.6 of this Ordinance, the term "vehicle" is synonymous with motor vehicle for the purposes of this Ordinance;

1.84 Motorcycle: Every motor vehicle having a saddle for the use of the rider and designed to travel with not more than three wheels in contact with the ground, but excluding a tractor;

1.85 New Motor Vehicle: A Motor Vehicle whose equitable or legal title has never been transferred to a Person who in good faith purchases the Motor Vehicle for purposes other than resale.

1.86 Non-dispersive infrared analyzer: means an analyzer which uses the non-dispersive infrared analytical technique to measure components of motor vehicle exhaust;

1.87 Off-highway Vehicles: A vehicle licensed or allowed to operate exclusively off highways;

1.88 On board diagnostics: means an emissions control diagnostics system installed on a vehicle as required by the Clean Air Act, 42 USC, Section 7521(m), which identifies deterioration or malfunction of vehicle systems and stores the information for retrieval;

1.89 Ordinance: The total of this document, including any appendices approved by the Davis County Commission.

1.90 Original Condition: The condition of the emission control system(s) as installed by the manufacturer, but not necessarily to the original level of effectiveness;

1.91 PCV System: Positive Crankcase Ventilation System - an emissions control system which returns crankcase vapors and blow-by gases to the combustion chamber to be burned;

1.92 Person: An individual, corporation, association, firm, partnership, joint stock company, public or municipal corporation, political subdivision, the state or any agency thereof, or the federal government or any agency thereof.

1.93 Phase: means a portion of the enhanced exhaust emissions test. Phase 1 is seconds 0 through 93 of the test, and Phase 2 is seconds 94 through 240 of the test;

1.94 Primary Residence: Is a place where an individual permanently resides, maintains a permanent residence more than six months during a calendar year, or where an individual lives more than six months during a calendar year. Other tests may include where a person votes, spouse resides, children attend school, is employed, identifies as an address on a drivers licence, holds a resident hunting or fishing licence, etc.;

1.95 Prompts: Instructions and/or data fields requiring data input to the DC98 Analyzer from an Inspector/Mechanic performing an Emissions Inspection.

1.96 Publicly-owned vehicles: A motor vehicle owned by a government entity, including but not limited to the federal government or any agency thereof, the State of Utah or any agency or political subdivision thereof;

1.97 Referee inspection: means an emissions inspection conducted by the Division for the purpose of resolving disputes or gathering data;

1.98 Registered or Registration: The process by which a Motor Vehicle receives a license so that it can be legally operated on public streets and highways.

1.99 Response Time: The period of time in seconds for an instrument to measure and display a pollutant concentration after a concentration of gases is introduced or removed from the sample probe;

1.100 Safety Inspection: An evaluation of a vehicle's relative safety as required by 41-6-158 U.C.A., 1953.

1.101 Smoker: Vehicles emitting excessive visible Emissions. (In excess of 20% opacity using E.P.A. Method 9 or other acceptable standard as determined by the Division.)

1.102 Span Gases: Same as calibration gases (see Section 1.10);

1.103 Stabilization: The process of bringing an instrument into equilibrium with the ambient environment and operating conditions;

1.104 Station: An I/M Program Station including all station personnel, employees, and owner(s);

1.105 Tampering: The intentional or accidental altering or removal of emission control devices, and/or Emissions-related equipment. Also, the use of fuels other than those required by the manufacturer's specification as found in the Motor Vehicle's owners manual. Also, engine modifications which may include, but not limited to, exhaust systems, Air Intake Systems, Ignition

Systems, internal engine modifications, Engine Switching, etc.

1.106 Technical Bulletin: A document, issued to Certified Emissions Repair Technicians, Certified Emissions Testers and/or I/M Program Stations by the Division to update, clarify or establish policies and/or procedures for their implementation in the Vehicle Emissions Inspection/Maintenance Program;

1.107 Technician/Tester: Either a Certified Emissions Tester or a Certified Emission Repair Technician who is permitted under the provisions of this Ordinance to perform Enhanced Basic Emission tests and other functions defined in this Ordinance;

1.108 Temporary Waiver: A waiver that may be issued by the Director which will allow the temporary registration of a vehicle based upon a vehicle owner's compliance with the conditions of the waiver;

1.109 Training Program: A formal program administered, conducted, or approved by the Division for the education of Certified Emission Repair Technicians and Certified Emission Testers in emission control technology, inspection procedures, diagnosis and repair of emissions related problems, I/M Program policies, procedures, and this Ordinance; Also training and education required by the Division in order to obtain or maintain a permit conducted by the Division and /or educational institutions;

1.110 Vehicle Emissions Inspection/Maintenance Program: The program established by the Division pursuant to Section 41-6-163.6, Utah Code Annotated 1953, as amended;

1.111 Waiver Authorization: A document prepared and signed by a Technician/Tester, used in the Vehicle Emissions Inspection/Maintenance Program to certify that the vehicle has qualified for a waiver which may be issued by the Division.

1.112 Waiver or Certificate of Waiver: A document used to verify that a vehicle has met the repair or adjustment requirements of the I/M Program Ordinances even though specific emission standards have not been met;

1.113 Waiver Referral Form: A document prepared and signed by a Technician/Tester used in the program to certify that the vehicle has qualified for a waiver which may be issued by the Division.

2.0 PURPOSE.

It is the purpose of this Ordinance to reduce air pollution levels by requiring inspections of in-use motor vehicles and by requiring emission related repairs/adjustments for those vehicles that fail to meet prescribed standards so as to:

2.1 Protect and promote the public health, safety and welfare;

2.2 Improve air quality;

2.3 Reduce the aesthetic affront of visible air pollution;

2.4 Comply with federal requirements contained in the Clean Air Act Amendments of 1990, PL 101-549;

2.5 Comply with the law enacted by the Legislature of the State of Utah, Sections 41-6-163.6 Utah Code Annotated, 1953, as amended.

3.0 JURISDICTION OF THE DIVISION.

All aspects of the Vehicle Emissions Inspection/Maintenance Program within Davis County enumerated in Section 2.0 shall be subject to the direction and control of the Division.

4.0 POWERS AND DUTIES.

4.1 The Division, by the Director, shall be responsible for the enforcement and administration of this Ordinance and any other powers vested in it by law and shall:

4.1.1 Require the submission of information, reports, plans, and specifications from I/M Program Stations and Technician/Testers as necessary to implement the provisions, requirements, and standards of this Ordinance;

4.1.2 Issue permits, certifications, and charge fees as necessary to implement the provisions, requirements and standards of this Ordinance;

4.1.3 Perform inspections (audits) of any I/M Program Station, issue orders and/or notices, hold hearings, and levy administrative penalties, as necessary to effect the purposes of this Ordinance;

4.1.4 Take samples and make analyses required to ensure that the provisions of this Ordinance are met; and

4.1.5 Make policies and procedures necessary to ensure that the provisions of this Ordinance are met and that the purposes of this Ordinance are accomplished.

4.2 The Division may suspend, revoke, or deny a permit of a Enhanced Basic I/M Program Station and/or require the surrender of the permit and unused Certificates of Compliance of such Enhanced Basic I/M Program Station upon showing that:

4.2.1 A vehicle was inspected and issued a Certificate by a Enhanced Basic I/M Program Station when the vehicle did not, at the time of inspection, comply with all applicable policies, procedures, Technical Bulletins, standards and this Ordinance;

4.2.2 A vehicle was inspected and rejected by an Enhanced Basic I/M Program Station when, in fact, the vehicle was determined, by the Director, to be in such condition that it did comply with the requirements of this Ordinance;

4.2.3 A vehicle was inspected and was passed for the tampering inspection as detailed in Section 9.10 of this Ordinance did not at the time of inspection comply with the requirements of the Section 9.10 tampering inspection;

4.2.4 The Enhanced Basic I/M Program Station is not open and available to perform inspections during a major portion of the normal business hours of 8:00 AM to 5:00 PM Mondays through Fridays (except Enhanced Basic I/M Program Stations which test only their own vehicles);

4.2.5 The Enhanced Basic I/M Program Station has violated any provision of this Ordinance, or any Rule, Ordinance, or Division policy properly promulgated for the operation of an Enhanced Basic I/M Program Station;

4.2.6 The Enhanced Basic I/M Program Station was not equipped as required by Section 8.0 of this Ordinance;

4.2.7 The Enhanced Basic I/M Program Station is not operating at the location specified on the permit;

4.2.8 An official inspection was performed by a person not having a permit to perform official inspections or a non-permitted person has gained access to the official testing portion of the analyzer or a non-permitted person signed a Certificate;

4.2.9 The computerized analyzer has been tampered with or altered in any way contrary to the certification and maintenance requirements of the analyzer;

4.2.10 The Enhanced Basic I/M Program Station management or employee denies access to a representative of the Division to conduct an audit/inspection or other necessary business during regular business hours; or

4.2.11 In accordance with Sections 41-6-163.6 and 41-6-163.7 Utah Code Annotated, 1953, as amended, an emissions inspection for a Weber, Salt Lake, or Utah County resident was performed but not as required by the Regulations/Ordinances adopted by the applicable county.

4.3 The Division may suspend, revoke, or deny the certificate of a Certified Emissions Repair Technician or Certified Emission Tester and require the surrender of this certificate upon showing that:

4.3.1 The Certified Emissions Repair Technician or Certified Emission Tester caused a Certificate of Compliance to be issued without an approved inspection being made;

4.3.2 The Certified Emissions Repair Technician or Certified Emission Tester denied the issuance of a Certificate of Compliance to a vehicle that, at the time of the inspection, complied with the law for issuance of said certificate;

4.3.3 The Certified Emissions Repair Technician or Certified Emissions Tester issued a Certificate of Compliance to a vehicle that, at the time of issuance, was in such condition that it did not comply with this Ordinance;

4.3.4 The Certified Emissions Repair Technician or Certified Emissions Tester inspected and recorded pass on the tampering inspection for a vehicle that did not at the time of inspection comply with the tampering requirements of the tampering inspection detailed in Section 9.10, regardless of whether a Certificate of Compliance was issued or not;

4.3.5 Inspections were performed by the Certified Emissions Repair Technician or Certified Emissions Tester, but not in accordance with applicable policies, procedures, Technical Bulletins, and this Ordinance;

4.3.6 The Certified Emissions Repair Technician or Certified Emissions Tester allowed a non-certified person to perform an official I/M test or gain access to the official testing portion of the analyzer;

4.3.7 The Certified Emissions Repair Technician or Certified Emissions Tester signed an inspection form or certificate stating that he/she had performed the emissions test when, in fact, he/she did not;

4.3.8 The Certified Emissions Repair Technician or Certified Emissions Tester performed a Weber, Salt Lake, or Utah County test as required by Sections 41-6-163.6 and 41-6-163.7; Utah Code Annotated, 1953, as amended, but did not perform it as required by the Ordinances or Regulations governing such testing in these counties if reciprocity with other Counties is in effect; and/or

4.3.9 The Certified Emissions Repair Technician or Certified Emissions Tester signed a certificate prior to a test being performed and prior to the certificate being printed by the dedicated printer.

4.4 The Division shall respond, according to the policies and procedures of the Division, to public

complaints regarding the fairness and integrity of inspections they receive and shall provide a method that inspection results may be challenged if there is a reason to believe them to be inaccurate.

5.0 SCOPE.

It shall be unlawful for any person to fail to comply with any policy, procedure, Technical Bulletin, standard or regulation promulgated by the Division, unless expressly waived by this Ordinance.

6.0 GENERAL PROVISIONS.

Subject to the exceptions in Section 6.6 and pursuant to the schedule in Section 6.1, individuals with their primary residence in Davis County must register their motor vehicles in Davis County and motor vehicles that are or will be registered in Davis County, shall be subject to an annual exhaust gas emission inspection performed by an Enhanced or Enhanced Basic I/M Program Station as specified in this Ordinance or other entity approved by the Director.

6.0.1 Vehicles that are principally operated within Davis County must comply with the emission control requirements of this ordinance. "Principally Operated" means that over fifty percent (50%) of the miles operated or time the vehicle is operated it is in Davis County.

6.0.2 It is unlawful for any person with a primary residence in Davis County to register a vehicle in any other place than Davis County.

6.1 Beginning April 1, 1984, a Certificate of Compliance or Waiver, or evidence that the motor vehicle is exempt from the Inspection/Maintenance Program requirements (as defined in Section 6.6) shall be presented to the County Assessor or the Utah State Tax Commission and the Air Pollution Control Fee paid (See Section 6.9.4) as conditions precedent to annual registration or annual renewal of registration of a motor vehicle.

6.1.1 Beginning January 1, 1998, all 1968 and newer model year vehicles shall be subject to an Enhanced I/M inspection either at the County operated Enhanced I/M Program Station or at an Enhanced Basic I/M Program Station.

6.1.2 The beginning date noted in Section 6.1.1 of this Ordinance may be postponed by the Director if sufficient facilities or equipment to perform the testing are not available at the time the testing should begin. The Director may delay the start-up date until such time as the equipment and testing facilities become available and may provide for a phase in of the program based on the availability of the facilities and equipment. In such an event, the current emissions testing program shall continue in full force.

6.1.3 Using criteria established by the Division and enacted as Appendix E of this Ordinance, up to one half of the 1981 model year and newer Vehicles registered in Davis County in any given year may be required to be tested in a County operated Enhanced I/M Program Station

and the remainder of the vehicles shall be tested in the Enhanced Basic I/M Program Stations.

6.1.4 Those vehicles with Onboard Diagnostics II (OBD II) capability will be tested at locations approved by the Division. The model year vehicles required to be tested by OBD II will be identified in Appendix E.

6.2 If Section 41-6-158 of the Utah Code Annotated, 1953, as amended, concerning safety inspections is in effect, the official vehicle emissions inspection shall occur and a Certificate of Compliance or Waiver shall be issued within the same time period as applicable in Section 41-6-158.

6.3 If Section 41-6-158 of the Utah Code Annotated, 1953, as amended, concerning safety inspections is not in effect, the official vehicle emissions inspection shall occur and a Certificate of Compliance or Waiver shall be issued within two months prior to the date of the motor vehicle registration.

6.4 A Certificate issued to a dealer licensed with the State of Utah and issued in the dealer's name, shall be valid for registration purposes for a period of six months as specified in Section 41-3-28.5, Utah Code Annotated, 1953, as amended. The purchaser's name, address, and phone number shall be recorded by the Dealer on the back of the Certificate.

6.5 Owners of publicly-owned vehicles shall comply with the inspection program requirements on an annual basis pursuant to a schedule determined by the Division. Federally-owned vehicles and vehicles of employees operated on a federal installation that do not require registration in the State of Utah shall comply with the emissions testing requirements on an annual basis pursuant to a schedule determined by the Division and as required by Section 118 of the Clean Air Act as amended in 1990.

6.6 Vehicle Exemption. The following vehicles are exempt from these Vehicle Emissions Inspection/Maintenance requirements:

6.6.1 All agricultural implements of husbandry and any motor vehicle that qualifies for an exemption as required by Section 41-6-163.6 Utah Code Annotated, 1953, as amended;

6.6.2 Any vehicle used for maintenance or construction and not designed or licensed to operate on the highway;

6.6.3 Any motorcycle or motor driven cycle (including vehicles which operate with an engine normally used in a motorcycle);

6.6.4 Any vehicle 1967 model year or older;

6.6.5 Any new vehicle being sold for the first time that has a valid MSO (Manufacturer's

Statement of Origin) form.

6.6.6 Any motor vehicle powered exclusively by a diesel-fueled engine (these vehicles are subject to testing under other Ordinances).

6.6.7 Any motor vehicle which qualifies and is operated as a vintage vehicle in accordance with Section 41-1a-226, Utah Code Annotated, 1953, as amended and is 1067 model year or older.

6.7 It shall be the responsibility of the Certified Emissions Repair Technician or Certified Emissions Tester to inform the owner/operator of the vehicle that the vehicle is not required to have an official emission inspection for vehicle registration purposes if a vehicle exempted from the emissions testing requirement by Section 6.6 of this Ordinance is brought to the Certified Emission Repair Technician or Certified Emission Tester for an official emission test .

6.8 Official Signs for Enhanced Basic I/M Program Stations.

6.8.1 All Enhanced Basic I/M Program Stations, except those Enhanced Basic I/M Program Stations authorized to inspect only their own motor vehicles as a fleet inspection station, shall display in a conspicuous location on the premises an official sign provided or approved by the Division.

6.8.2 The exhaust emissions standards, as promulgated under authority of Section 12.0 of this Ordinance shall be posted in a conspicuous place on the Enhanced Basic I/M Program Station's premises, if required by the Division.

6.8.3 The Enhanced Basic I/M Program Station shall post on a clear and legible sign and in a conspicuous place at the station, the fees charged by that station for the performance of the emissions inspection and the I/M Program adjustments. Block lettering of the fee shall be a minimum size as determined by the Division.

6.8.4 The signs required by Sections 6.8.1, 6.8.2, and 6.8.3 shall be located so as to be easily in the public view.

6.9 Equipment Available for Inspection at Enhanced Basic I/M Inspection Stations.

6.9.1 Required references, tools and equipment as noted in Section 8.1.4, supplies, records, unused Certificates of Compliance, other required forms, records of completed inspections, and duplicate copies of Certificates of Compliance issued shall be kept at the Enhanced Basic I/M Program Station at all times and shall be available for inspection and collection by the Division at any time the Enhanced Basic I/M Program Station is open for business. Inspection records must be retained for a minimum of 18 months from the date of the original test.

6.9.2 A periodic inspection and audit shall be made by a Division representative to verify compliance with this Ordinance for each Enhanced Basic I/M Program Station. As part of the periodic inspection and audit of the Enhanced Basic I/M Program Station the Division representative shall, as applicable, observe the performance of a gas calibration and leak check performed by the Certified Emissions Repair Technician or Certified Emissions Tester, examine leak check and gas calibration records, and examine inspection records and Certificates of Compliance as well as other required reports, forms, or records to see that the use of these items are in compliance with this Ordinance and the policies and procedures of the Divsion.

> **6.9.2.1** During the time of the inspection and audit by the Division, the Division representative shall have exclusive access to the approved emissions testing analyzer(s).
>
> **6.9.2.2** The Division representative may check the accuracy of the analyzer using Division gas to verify that the analyzer is reading within the tolerances established by the Division. Analyzers not reading within the tolerances shall be recalibrated to acceptable tolerances or placed "out of service".

6.9.3 The fees assessed upon Enhanced Basic I/M Program Stations, Certified Emissions Repair Technicians and Certified Emissions Testers shall be determined according to a fee schedule adopted by the Davis County Commission. The fee schedule is referenced in Appendix B to this Ordinance and may be amended by the Davis County Commission as the Commission deems necessary to accomplish the purposes of this Ordinance.

6.9.4 An Air Pollution Control Fee of one dollar ($1.00) is hereby assessed upon every motor vehicle registered in Davis County annually at the time of registration of the vehicle, including those vehicles that are exempted from the inspection requirements of this Ordinance by Section 6.6.

6.9.5 Those Enhanced Basic and Enhanced I/M Program Stations participating in the program hereunder may charge fees for the required service. Those fees may not exceed, for each vehicle inspected, the following amounts:

> **6.9.5.1** Emissions inspections are not to exceed the amount specified in Appendix B. If a vehicle fails the inspection, the owner is entitled to one free reinspection if he/she returns to the inspection station that performed the original inspection within fifteen (15) days for an Enhanced Basic I/M Program Station or thirty (30) days for the County Operated Enhanced I/M Program Station from the date of the initial inspection. The station shall extend the free reinspection time to accommodate the vehicle owner if the station is unable to schedule the retest of the vehicle within the time period. The emissions inspection fee shall be the same whether the vehicle passes or fails the emission test.

6.9.5.2 At the request of the Division, an Enhanced Basic I/M Program Station shall extend the free retest time for vehicle owners who were unable to complete emissions repairs because of the unavailability of parts to make the necessary repairs.

6.9.5.3 Duplicate Certificates of Compliance issued to a vehicle owner/operator, shall not exceed $3.00.

6.10 These fees are subject to change and may be amended as deemed necessary by the Davis County Commission and are enumerated in Appendix B of this Ordinance.

6.11 If a vehicle fails the emissions test, and is within the time and mileage requirements of the federal emissions warranty contained in the Federal Clean Air Act, the Certified Emissions Repair Technician or Certified Emissions Tester shall inform the owner/operator that he/she may qualify for warranty coverage of emission related repairs as provided by the vehicle manufacturer and mandated by the Federal Environmental Protection Agency. The Certified Emissions Repair Technician or Certified Emissions Tester shall provide the owner with a copy or copies of the applicable emissions warranty pamphlets approved by the Division. The Enhanced Basic I/M Program Station shall display in an area readily accessible to the public any informational pamphlets required by the Division.

6.12 All Permits and Certificates issued under the provisions of this Ordinance remain the property of the Division. Only their use is tendered on the condition that the user complies with the requirements of this Ordinance.

7.0 STANDARDS AND SPECIFICATIONS FOR EXHAUST GAS ANALYZERS AND SPAN GASES FOR EQUIPMENT USED TO PERFORM ENHANCED BASIC TESTING.

7.1 DC98 Exhaust Gas Analyzer: Specifications for the DC98 Analyzer are contained in Appendix A of this Ordinance.

7.1.1 Emissions inspection required by this ordinance for vehicles subject to Enhanced Basic I/M inspections shall be performed using only instruments approved by the Division.

7.1.2 Any analyzer used by an Enhanced Basic I/M Program Station shall be registered with and approved by the Division and, if required, shall bear a registration sticker issued by the Division. Registration stickers are not transferable or assignable. Any new or used exhaust gas analyzer put in use after Enhanced Basic I/M Program Station approval must be approved by the Division before use. Analyzers used temporarily during times of breakdown or repair of the registered analyzer do not require a registration sticker but shall meet all other requirements of this section including the approval of the Division before use.

7.1.2.1 The analyzer printers shall be maintained in such a manner that the printing of the Certificate and inspection report shall be clearly visible on all copies. If any

printer fails to properly function, then the Enhanced Basic I/M Program Station shall discontinue testing until the required repairs have been performed.

7.1.3 Propane Equivalency Factor (P.E.F.): Each instrument shall be labeled with a valid propane equivalency factor, shown with an accuracy of at least two decimal places, (i.e., 0.52). P.E.F. confirmation shall be made on each assembled analyzer by measuring both N-hexane and propane values on assembly line quality checks. If the analyzer bench is replaced, then a new P.E.F. label applicable to the replacement bench shall be appropriately attached to the analyzer.

7.1.4 Running Changes: Any changes to the design characteristics or component specifications that may affect the performance of an exhaust gas analyzer to be used as an official test instrument in the Davis County I/M Program shall be approved by the Division. It shall be the instrument manufacturer's responsibility to confirm that the changes have no detrimental effect on the performance of the exhaust gas analyzer.

7.1.4.1 It shall be illegal for any person to modify the hardware or software of an approved emissions analyzer without written application and formal written approval by the Division.

7.1.5 Required Upgrade of the UTAH91 Analyzer: Beginning January 1, 1998, All UTAH91 Analyzers continuing to be used in the DC98 program and all analyzers brought into the program shall be upgraded with such hardware and software changes as specified by the Division as to make them capable of real time data transmission, Nitrogen Oxide emission control equipment function testing data managment, upgraded bench and printing capability and other upgrades deemed necessary by the Division. Upgraded analyzers will then be called DC98 Analyzers.

7.1.6 Calibration/Span Gases

7.1.6.1 General: The instrument manufacturer and/or his designated marketing vendors shall, on request, supply at a reasonable cost, span gases approved by the Division to any ultimate purchaser of his unit. Each new or used instrument sold by the instrument manufacturer or marketing vendor shall have approved full span gas containers installed and operational at the time of delivery. The Division shall establish necessary procedures for approving span/calibration gases.

7.1.6.2 Span Gas Blends: The span gases supplied to any Enhanced Basic I/M Program Station shall conform to the specifications of the Division. All span/calibration gases shall meet all Federal requirements for the emissions warranty coverage. Two span/calibration gases shall be used to perform analyzer calibration. Both a low range and a mid to high range gas approved by the Division shall be used. Only gas blends supplied by Division approved blenders shall be used to calibrate

official I/M test analyzers.

7.1.7 Documentation, Logistics, and Warranty Requirements.

7.1.7.1 An instruction manual shall accompany each exhaust gas analyzer and shall contain at least the following information for the analyzer:

(a) A complete technical description;

(b) The functional mechanical and electrical schematics;

(c) The accessories and options that are included and/or available;

(d) The model number, identification marking and location;

(e) Operating maintenance including daily, weekly, and monthly, accommodations and procedures for maintaining sample system integrity including, but not limited to, leaks, hang-up, calibration and filters. The services to be performed only by the manufacturer shall be clearly identified;

(f) Field calibration procedures (i.e., Division Inspection procedure with separate gas supply);

(g) Cal-port gas inlet calibration, zero, and span instructions;

(h) Information concerning the nearest service facility where equipment can be serviced; and

(i) The warranty provisions for the analyzer, including a list of warranty repair facilities by name, address and telephone number.

(j) The analyzer shall be maintained in accordance with the manufacturer's recommended maintenance schedule and records of this maintenance service shall be maintained for examination by the Division.

7.2 The Division shall use and require for use in the calibration of exhaust gas analyzers, calibration/span gases and containers meeting the guidelines contained in Section 7.1.6.

7.3 Gas Span and Leak Check:

7.3.1 A Certified Emissions Repair Technician or Certified Emissions Tester shall perform a gas calibration of the exhaust gas analyzer, with an approved calibration/span gas, within three (3) days prior to performing any emissions test, and a leak check within twenty-four

(24) hours prior to performing any emissions test. The gas calibration and leak check must be performed in accordance with the analyzer specifications as referenced in Appendix A.

7.3.2 All gas calibration and leak check records shall be retained and made available to the Division representatives for review and verification that the appropriate gas span and leak checks are being performed.

7.3.3 The analyzer instruction manual and other Division approved information shall be reviewed by the Certified Emissions Repair Technician or Certified Emissions Tester to ensure that proper procedures are being used for performing the gas calibration check.

7.4 At any time where the analyzer requires repairs in order to be used in accordance with this Ordinance, the Enhanced Basic I/M Program Station shall notify the Division that the analyzer is "Out-of-Service" and shall again notify the Division after repairs are made and before testing is resumed.

7.5 An NCR type "carbonless" two-part 8 inch by 11 inch form shall be used on the non-dedicated printer for printing the inspection report and other reports required by the Division unless otherwise determined by the Division.

8.0 PERMIT REQUIREMENTS OF THE ENHANCED BASIC INSPECTION/MAINTENANCE PROGRAM STATION.

8.1 Permit Required.

8.1.1 No person shall in any way represent any place as an Enhanced Basic I/M Program Station unless the station is operated with a valid permit issued by the Division. The permit is tendered on the condition that the permittee has knowledge of the requirements of this ordinance and agrees to comply with the provisions of this ordinance and any other applicable law or standard in order to maintain the permit.

8.1.2 The Director is authorized under the provisions of this Ordinance to issue or deny permits which allow persons and facilities to perform emissions inspections of vehicles and to issue Certificates of Compliance and Waiver.

8.1.3 No permit for any Enhanced Basic I/M Program Station may be assigned, transferred, or used by any person other than the original owner identified on the permit application for that specific Enhanced Basic I/M Program Station. THE PERMIT SHALL BE POSTED IN A CONSPICUOUS PLACE WITHIN PUBLIC VIEW ON THE PREMISES.

8.1.4 Application for an Enhanced Basic I/M Program Station permit shall be made to the Division upon a form provided by the Division. No permit shall be issued unless the Director

finds that the facilities, tools and equipment of the applicant comply with the requirements of this ordinance and that competent personnel, permitted under the provisions of Section 11.0, are employed and will be available to make inspections and adjustments, and the operation thereof will be properly conducted in accordance with this Ordinance.

8.1.4.1 An Enhanced Basic I/M Program Station shall immediately cease testing and notify the Division if the station does not have a Certified Emissions Repair Technician or Certified Emissions Tester employed. If a Certified Emissions Repair Technician or Certified Emissions Tester is not employed at that Enhanced Basic I/M Program Station within 60 days of notification then all unused Certificates of Compliance must be returned to the Division.

8.1.4.2 An Enhanced Basic I/M Program Station shall comply with all the terms stated in the permit application and all the requirements of this Ordinance.

8.1.4.3 As a condition for permitting all Enhanced Basic I/M Program Stations, the following tools shall be available for performance of the inspection and maintenance of motor vehicles:

(a) A Division approved exhaust gas analyzer;

(b) A handbook, approved by the Division, that includes high altitude specifications;

(c) An accurate tachometer with a suitable pickup that allows for proper testing and adjustment of the vehicle to be tested;

(d) An accurate dwell meter;

(e) An ignition timing light;

(f) A propane enrichment kit for idle mixture adjustment;

(g) Reference manuals approved by the Division that contain idle speed, idle mixture, timing, dwell, fast idle speed specifications, and information covering the emissions control systems for the model years and makes of vehicles involved in the Vehicle Emissions Inspection/Maintenance Program;

(h) Sufficient hand tools for proper performance of the inspection and maintenance of the vehicle;

(i) A Division approved calibration/span gas and equipment for performing the gas calibration/span check;

(j) A suitable non-reactive tail pipe extender or probe adapter for inspecting vehicles with screened or baffled exhaust systems;

(k) The analyzer manufacturer's maintenance and calibration manual which must be retained in the inspection area;

(l) All forms, Technical Bulletins, and other information materials provided by the Division;

(m) An approved adaptor for testing dual-exhaust vehicles.

(n) An approved fuel inlet restrictor gauge.

(o) A Division approved device for conducting a Division approved fuel cap pressure check.

(p) A Division approved device for conducting the Environmental Protection Agency approved fuel system pressure check.

(q) A Division approved device or devices capable of determining the operational capability of a vehicle's Exhaust Gas Recirculation Valve (EGR) and its attendant relays, hoses, and valves.

(r) A Division approved modem and other ancillary devices, connections, phone lines, and software providing Division approved real time data monitoring.

8.1.5 All facets of the official Enhanced Basic I/M Program shall be performed by the Certified Emissions Repair Technician or Certified Emissions Tester including:

8.1.5.1 Analyzer preparation, calibration checks, leak checks and real time data link function;

8.1.5.2 Exhaust gas sampling and analysis for purposes of an official emissions test for issuance of a Certificate of Compliance;

8.1.5.3 The five parameter adjustments (if required by the Division);

8.1.5.4 Preparation of reports, forms, and certificates.

8.1.5.5 Accessing the official emissions testing section of the analyzer,

8.1.5.6 Performing fuel cap pressure tests, fuel system pressure tests, and EGR valve functional test; and

8.1.5.7 All other aspects of the official emissions test including but not limited to: the tampering inspection, inserting the exhaust probe, hooking up the tachometer, entering data into the analyzer, preconditioning the vehicle, and signing certificates and inspection forms.

8.2 An Enhanced Basic I/M Program Station shall be kept in good repair and in a safe condition for inspection purposes free of obstructions and hazards. The Division shall determine if the Enhanced Basic I/M Station is designed, constructed and operated in a manner that provides a safe work environment and that the public is safeguarded.

8.3 Permit Duration and Renewal.

8.3.1 The permit for Enhanced Basic I/M Program Stations shall be issued annually and shall expire one year from the date of issuance. The permit shall become renewable sixty days prior to the date of expiration.

8.3.2 It is the responsibility of the owner/operator of the Enhanced Basic I/M Program Station to pursue the permit renewal through appropriate channels.

8.3.3 Enhanced Basic I/M Program Station to hold Division Harmless: In making application for a permit or for its renewal, such action shall constitute a declaration by the applicant that the Division shall be held harmless from liability incurred due to any action or inaction of an Enhanced Basic I/M Program Station's owners or their employees.

9.0 INSPECTION PROCEDURE FOR ENHANCED BASIC I/M PROGRAM INSPECTIONS.

9.1 The official emissions inspection shall be solely performed by a Certified Emissions Repair Technician or Certified Emissions Tester who has been permitted at the Enhanced Basic I/M Program Station where the inspection is being performed and Division approved inspection procedures are to be followed.

9.2 If the Certified Emissions Repair Technician or Certified Emissions Tester is unable, unqualified, or unwilling to make the required repairs or adjustments, should the vehicle fail the emissions test, he/she shall notify the owner/operator of the vehicle before the emissions test is administered.

9.3 The entire inspection shall take place within the reach of the analyzer hose.

9.4 The temperature of the inspection area shall be between 41° Fahrenheit and 110° Fahrenheit during the inspection.

9.5 The analyzer shall be kept in an area that provides adequate protection from the weather, wind, and extreme temperatures.

9.6 The electrical supply to the analyzer shall be able to meet the analyzer manufacturer's requirements for voltage and frequency stability, real time data links shall be connected and functioning.

9.7 The Certified Emissions Repair Technician or Certified Emission Tester shall not inspect or test any motor vehicle with a mechanical condition which may cause injury to inspection personnel or damage to the Enhanced Basic I/M Program Station or test equipment or which may affect the validity of the test, until such condition is corrected. Such conditions include, but are not limited to: coolant, oil, or fuel leaks, low oil or low fluid levels, and high visible emissions (smoker).

9.8 Any time an engine stalls during an emissions test, the test shall be restarted. If a Certified Emissions Repair Technician or Certified Emissions Tester cannot complete a test because of continuous stalling, fluctuating RPM measurements, or RPM measurements that are not within the Division and manufacturers specified parameters, then these problems shall be corrected before the test is continued.

9.9 The Technician/Tester shall verify the vehicle license plate and vehicle identification numbers by comparing the information on the vehicle's registration with those on the vehicle and shall accurately record them on the DC98 analyzer.

9.9.1 The Technician/Tester shall verify the owner's name and address and enter this information into the analyzer from the registration card. The Technician/Tester shall determine and enter the county in which the vehicle is registered.

9.9.2 The Technician/Tester shall enter completely and accurately all the information required as part of the data entry procedure for the official vehicle emissions test on the approved DC98 analyzer including accessing the Division approved real time data link.

9.10 The Technician/Tester shall:

9.10.1 Examine the emissions/tune-up specification decal (sticker) under the hood and check an approved reference manual to determine if the vehicle was manufactured with a catalytic converter, air injection reaction (AIR) system, Fuel Restrictor and other air polution control devices.

9.10.2 On 1984 and newer vehicles visually inspect for the presence and apparent operability of the AIR System, catalytic converter, fuel restrictor, EGR System, Evaporative Control System, PCV System, and gas tank cap in accordance with Division procedures and record the information in the emissions analyzer. If these parts or systems have been removed or are inoperable, the owner shall repair or replace the parts or systems before the emissions test

may be continued.

9.10.3 On 1983 and older vehicles visually inspect for the presence and apparent operability of the AIR system, catalytic converter, and fuel filler neck restrictor or other air pollution control equipment required on the vehicle in accordance with Division procedures, and record the information in the emissions analyzer. If these parts or systems have been removed or are inoperable, the owner shall repair or replace the parts or systems before an emissions waiver may be issued.

9.10.3.1 The Technician/Tester shall use a Division approved non-sparking inlet test gauge that has a outside diameter equal to that of a leaded fuel pump nozzle (range of 0.950 +.005 inches) to test for tampering with the fuel restrictor on all vehicles originally equipped with a catalytic converter. The inlet test gauge shall be kept so as to be readily available at all times. If the gauge can penetrate the fuel restrictor, then the fuel restrictor fails.

9.10.3.2 A tampered fuel restrictor requires that the fuel restrictor be repaired and that the catalytic converter be replaced unless otherwise determined by the Division.

9.11 The analyzer shall be warmed up and stabilized and real time data links established prior to performing any inspection.

9.12 Each vehicle shall be checked to determine that it is at normal operating temperature by feeling the top radiator hose or by checking the temperature gauge. Each vehicle shall be at normal operating temperature before performing the emissions inspection.

9.13 The inspection shall be performed with the transmission in 'park' or 'neutral' and with all accessories off and the emergency brake applied.

9.14 The analyzer probe shall be inserted into the exhaust pipe at least twelve inches or as recommended by the analyzer manufacturer, whichever is greater.

9.15 If a baffle or screen prevents probe insertion of at least twelve inches, a suitable probe adapter or snug fitting, non-reactive hose which effectively lengthens the exhaust pipe shall be used.

9.16 For all vehicles equipped with a multiple exhaust system that does not originate from a common point, both sides shall be tested simultaneously with an approved adaptor.

9.17 When inspecting a vehicle under windy conditions, the tailpipe shall be shielded from the wind with a suitable cover.

9.18 For All Vehicles subject to Enhanced Basic I/M Inspection:

9.18.1 The tachometer shall be properly attached;

9.18.2 The vehicle shall be tested according to the testing sequence as detailed in the Analyzer specifications referenced in Appendix A as programmed into the analyzer testing sequence. Vehicles failing because of excessive exhaust dilution shall repair the dilution problem prior to continuing the emission test. The dilution standard shall be contained in the analyzer specifications as referenced in Appendix A and adjusted when the Division determines by analysis that an adjustment is necessary to yield a more accurate level of emissions readings.

9.19 A gascap pressure test shall be performed acording to specifications established by the Division and detailed in appendix F.

9.20 A fuel system pressure test shall be performed according to specifications established by the Division and detailed in appendix F.

9.21 An EGR valve functional test performed according to specifications established by the Division and detailed in appendix F.

9.22 A Certificate of Compliance shall be issued if:

9.22.1 The vehicle emissions levels are the same as or less than the applicable emissions standards; and

9.22.2 For 1984 and newer model year vehicles, the vehicle passes the visual tampering inspection described in Section 9.10.

9.22.3 The vehicle passes the fuel cap pressure test, fuel system pressure test, and the EGR functional test according to standards established by the Division and detailed in Appendix F.

9.23 All testing procedures for restart testing, second chance testing, etc, shall be followed as contained in the analyzer specifications referenced in Appendix A.

9.24 If the vehicle fails the initial emissions inspection a Certificate of Compliance shall be issued if all of the following requirements are met:

9.24.1 The vehicle is re-tested;

9.24.2 The vehicle emission levels are the same as or less than the applicable emissions standards and passes the fuel cap pressure test, fuel system pressure test and EGR valve function test; and

9.24.3 For 1984 and newer model year vehicles, the vehicle passes the visual tampering inspection as provided for in Section 9.10.

9.25 A Certificate of Waiver shall be issued only under the following conditions:

9.25.1 A Certificate of Waiver shall be issued for 1983 and older model year vehicles if all of the following requirements are met:

9.25.1.1 Air pollution control devices (catalytic converter, fuel filler neck restrictor, AIR system and other Emission control systems and devices) are in place and apparently operable on the vehicle as specified in Section 9.10. If the systems and/or devices have been removed or rendered inoperable, they shall be replaced or repaired before a Waiver is granted. Also, fuel cap pressure test, fuel system pressure test and EGR valve function test failures must be repaired prior to issuance of a waiver;

9.25.1.2 The vehicle continues to exceed applicable emission standards after $250 (two hundred and fifty dollars) plus any additional amount specified in Appendix B. has been spent on acceptable emissions related repairs and if required by the Division, the adjustments required by Section 14.0 have been performed by a Certified Emissions Repair Facility or an Enhanced Basic I/M Program Station (permitted under Sections 8.0 or 17.0) as part of the acceptable emissions related repairs. Proof of repair costs for the vehicle shall be provided to the Technician/Tester conducting the testing in the form of an itemized bill, invoice, work order, manifest or statement in which emissions related parts are specifically identified. Labor performed by non-permitted facilities does not count as acceptable emissions repair costs for purposes of obtaining a waiver; and

9.25.1.3 A waiver has not been issued for the vehicle in the previous year.

9.25.2 A Certificate of Waiver shall be issued for 1984 vehicles if all of the following requirements are met:

9.25.2.1 Air pollution control devices applicable and specified in Section 9.10 of this ordinance are in place and operable on the vehicle. If the devices have been removed or rendered inoperable, they shall be replaced or repaired before a Waiver is granted Also, fuel cap pressure test, fuel system pressure test and EGR valve function test failures must be repaired prior to issuance of a waiver;

9.25.2.2 The vehicle continues to exceed applicable emission standards after $450 (four hundred and fifty dollars) plus any additional amount specified in Appendix B has been spent on acceptable emissions related repairs performed by a Certified Emissions Repair Facility or an Enhanced Basic I/M Program Station (permitted

under Sections 8.0 or 17.0) as part of the acceptable emissions related repairs. Proof of repair costs shall be provided for the vehicle to the Technician/Tester conducting the testing in the form of an itemized bill, invoice, work order, manifest or statement in which emissions related parts are specifically identified. Labor performed by non-permitted facilities does not count as acceptable emissions repair costs for purposes of obtaining a waiver;

9.25.2.3 A waiver has not been issued for the vehicle in the previous year; and

9.25.2.4 The vehicle is not within the time and mileage requirements of the federal emissions warranties. Any vehicle that is within the time and mileage requirements of the federal emissions warranties shall not be eligible for an emissions repair waiver, but shall be required to pass the emissions standards.

9.25.3 Any vehicle that experiences any increase in all emissions levels shall not be eligible for an emissions repair waiver regardless of the amount spent in attempting to repair the vehicle.

9.25.4 As used in Sections 9.25.1.2 and 9.25.2.2, acceptable emissions related repairs:

9.25.4.1 Refers to those expenditures and costs associated with the adjustment, maintenance, and repair of the motor vehicle which are directly related to reduction of exhaust emissions necessary to comply with the applicable emissions standards, cut points, and procedures;

9.25.4.2 Does not include adjustments, maintenance, or repairs performed prior to the official emissions test;

9.25.4.3 Does not include the fee paid for the test;

9.25.4.4 Does not include costs associated with the repairs or replacements required by Section 9.10 or the replacement, and/or repair of air pollution control equipment on the vehicle if the need for such adjustment, maintenance, replacement, or repair is due to disconnection of, tampering with, or abuse of the emissions control systems;

9.25.4.5 Does not include repairs performed to the vehicle's exhaust system to correct problems with excessive exhaust dilution;

9.25.4.6 Refers to repairs, maintenance, and diagnostic evaluations of the following systems, if done according to manufacturer's specifications, to the extent that the purpose is to reduce exhaust emissions:

(a) Air Intake Systems;

(b) Ignition Systems;

(c) Fuel Control Systems;

(d) Emissions Control Systems except as noted in Section 9.22.4.4; and

(e) Basic Engine Systems.

9.26 Information regarding all performed repairs shall be entered into the appropriate data base of the analyzer prior to the vehicle being retested.

9.27 Certificates of Waiver shall only be issued by the Division unless the Division determines other acceptable methods of issuing the Waivers. A waiver shall only be issued after determining that the vehicle complies with the requirements of this Section for waiver issuance.

9.28 Prior to referring the owner to the Division for determining waiver eligibility, the Certified Emissions Tester or Certified Emission Repair Technician shall verify that the repair and eligibility requirements of this Section have been met and shall provide the vehicle owner with the required referral form.

9.29 The Certificate and Inspection records shall be completed accurately, signed immediately and filed and distributed, as required by the Division. The customer shall be given the appropriate copy.

9.30 Copies of Certificates and Inspection records shall be kept on file at the Enhanced Basic I/M Program Station for a minimum of eighteen (18) months.

9.31 Vehicles capable of being operated on both gaseous and liquid petroleum fuels shall be tested for both fuels in accordance with the DC98 analyzer specifications as referenced in Appendix A to this Ordinance.

9.32 When a vehicle owner requests an emissions test, the Technician/Tester shall perform the inspection in the testing mode of the approved DC98 analyzer. Performing a screening test in the manual mode of the approved DC98 analyzer or on a non-approved analyzer shall be a violation of this ordinance if the vehicle owner requested an emissions test. No adjustments or repairs shall be made prior to a requested I/M inspection.

10.0 General Requirements for Division Operated Enhanced I/M Inspections and Preparation for Inspection.

10.1 General Requirements. The Division shall comply with all the requirements of USEPA's

Technical Guidance Document #EPA-AA-EPSD-IM-93-1, April 1994, hereby adopted by reference, pertaining to equipment, personnel, testing procedures, etc as determined to be applicable by the Division. The Division shall also comply with all the related requirements of 40 CFR Part 51 VII, which is hereby incorporated by reference, as determined by the Division.

10.1.1 The Inspector shall reject from inspection a vehicle which has not had repairs performed as required by an emissions related recall notice, as specified in Section 10.37 of this Ordinance.

10.1.2 Unless a fast pass procedure is used, once an official test is initiated, the inspector shall conduct the test in its entirety.

10.1.3 If a vehicle stalls during a test, the inspector shall void the test.

10.1.4 The inspector shall repeat a test which is void for a reason other than unsafe condition, except that if a vehicle stalls more than three times, the inspector shall reject the vehicle from inspection.

10.1.5 The inspector shall check the vehicle registration date to insure that a valid test for registration purposes can be performed unless a referee test is being performed..

10.2 Vehicle Preparation.

10.2.1 Prior to vehicle inspection, the inspector shall visually check the vehicle for a condition which has potential to cause injury, damage the Enhanced I/M Program Station or the test equipment, or invalidate the inspection, including, but not limited to: overheating; leaks of coolant, oil, or fuel; excessively worn or deflated tires; the use of a space saver spare tire on a drive axle; visible tailpipe emissions other than steam; or a missing, damaged, or leaking exhaust system. If the Division administers a Utah State Safety Inspection to the vehicle, the provisions of this section are deemed satisfied.

10.2.1.1 The inspector shall check the vehicle for exhaust system leaks by a procedure approved by the Division.

10.2.1.2 If an unsafe condition is found, the inspector shall reject the vehicle from testing.

10.2.1.3 If an unsafe condition develops during a test, the inspector shall abort the inspection.

10.3 Vehicles capable of being operated on both gaseous and liquid petroleum fuels shall be tested for both fuels.

10.4 The inspector shall on 1984 and newer vehicles, visually inspect for the presence and apparent operability of the AIR System, catalytic converter, fuel restrictor, EGR System, Evaporative Control System, PCV System, and gas tank cap in accordance with Division procedures and record the information in the emissions analyzer. If these parts or systems have been removed or are inoperable, the owner shall repair or replace the parts or systems before the emissions test may be continued.

10.4.1 1983 or older model year vehicles may receive a test deemed appropriate by the Division, but those vehicles found to be tampered shall not qualify for a waiver until the tampering is repaired and the other requirements for a waiver are met.

10.5 The inspector shall direct the vehicle operator to shift the transmission to park or neutral and to set the parking brake, and request that all vehicle occupants exit the vehicle and proceed to the customer waiting area. If the vehicle engine has been shut off, the inspector shall ensure that the engine is restarted as soon as possible and is running at least 30 seconds prior to the initiation of inspection procedures. The inspector shall ensure that all vehicle accessories are turned off and precondition the vehicle as specified by the Division.

10.6 The inspector shall ensure that the vehicle is at normal operating temperature. A touch-test of the upper radiator hose or a visual check of the vehicle dashboard temperature gauge is acceptable.

10.7 Exhaust Emissions.

10.7.1 Dynamometer.

10.7.1.1 The inspector shall check the dynamometer and CVS to ensure that they are in a warmed up condition for official testing, safety monitoring equipment is functional and that all data links are up and functional.

10.7.1.2 The inspector shall maneuver the vehicle onto the dynamometer, position the drive wheels on the dynamometer rolls, and rotate the rollers until the vehicle stabilizes laterally on the dynamometer. Wet drive wheel tires will be dried to prevent slippage as necessary.

10.7.1.3 The inspector shall position and activate the cooling equipment to direct air to the vehicle cooling system, but not at the vehicle catalytic converter.

10.7.1.4 The inspector shall activate the vehicle restraint system and restrain the vehicle.

10.7.1.5 The inspector shall position the exhaust gas collection system to ensure complete capture of the entire exhaust stream.

10.7.1.6 The inspector will test the vehicle with dynamometer power absorption and

inertia weight settings automatically determined by the test equipment from a look-up table based on the vehicle information in the database.

(a) Except as provided in Section 10.7.1.6(e) of this Ordinance, the inspector will test a vehicle not listed in the look-up table using the applicable default power absorption and inertia weight settings specified in Section 10.7.1.6(b) or (c) of this Ordinance.

(b) Default power absorption and inertia weight settings for passenger vehicles:

Number of Cylinders	Actual Road Load Horsepower	Test Inertia Weight (Pounds)
3	8.3	2,000
4	9.4	2,500
5	10.3	3,000
6	10.3	3,000
8	11.2	3,500
10	11.2	3,500
12	12.0	4,000

(c) Default power absorption and inertia weight settings for vehicles with gross vehicle weight rating of 10,000 pounds or less, excluding passenger vehicles:

Number of Cylinders	Actual Road Load Horsepower	Test Inertia Weight
3	8.3	2,000
4	9.4	2,500
5	10.3	3,000
6	10.3	3,000
8	12.0	4,000
10	12.7	4,500
12	13.4	5,000

(d) The Division will maintain a record of the number of vehicles tested with a default setting, the type of setting, and the test lane.

(e) The Division may use additional default settings as deemed necessary.

10.8 Ambient Conditions. The Division will record the ambient temperature, absolute humidity, and barometric pressure either continuously during the driving cycle or as a single set of readings no more than 4 minutes before the start of the driving cycle.

10.9 Background Sample.

10.9.1 The Division shall sample, measure, and record background concentrations of hydrocarbons, carbon monoxide, oxides of nitrogen, and carbon dioxide in the Enhanced I/M Program Station.

10.9.1.1 The background concentrations will be sampled as specified in Section 10.22.3.5 of this Ordinance, for a minimum of 15 seconds, within 120 seconds of the start of the driving cycle.

10.9.1.2 The background concentrations shall be measured with the analyzers used to measure tailpipe emissions.

10.9.1.3 The background concentrations of each pollutant shall be recorded in the test record as average readings over 15 seconds.

10.9.2 The Division shall suspend official testing if the background concentration of a pollutant exceeds both the outside ambient air level of the pollutant and the following applicable level:

10.9.2.1 20 ppm hydrocarbons;

10.9.2.2 35 ppm of carbon monoxide; or

10.9.2.3 2 ppm of oxides of nitrogen.

10.9.3 The Division shall not resume official testing suspended under Section 10.9.2 of this Ordinance until the background concentration of the pollutant is equal to or below the specified level.

10.10 Exhaust Emissions Test

10.10.1 Driving Cycle.

10.10.1.1 Except as provided in Section 10.10.1.2 and 10.10.1.3 of this Ordinance, the inspector shall drive the vehicle over the following transient driving cycle, where time is in seconds and speed is in miles per hour:

Time	Speed	Time	Speed	Time	Speed	Time	Speed	Time	Speed
0	0.0	48	25.7	96	0.0	144	24.6	192	54.6
1	0.0	49	26.1	97	0.0	145	24.6	193	54.8
2	0.0	50	26.7	98	3.3	146	25.1	194	55.1
3	0.0	51	27.5	99	6.6	147	25.6	195	55.5
4	0.0	52	28.6	100	9.9	148	25.7	196	55.7
5	3.0	53	29.3	101	13.2	149	25.4	197	56.1
6	5.9	54	29.8	102	16.5	150	24.9	198	56.3
7	8.6	55	30.1	103	19.8	151	25.0	199	56.6
8	11.5	56	30.4	104	22.2	152	25.4	200	56.7
9	14.3	57	30.7	105	24.3	153	26.0	201	56.7
10	16.9	58	30.7	106	25.8	154	26.0	202	56.3
11	17.3	59	30.5	107	26.4	155	25.7	203	56.0
12	18.1	60	30.4	108	25.7	156	26.1	204	55.0
13	20.7	61	30.3	109	25.1	157	26.7	205	53.4
14	21.7	62	30.4	110	24.7	158	27.3	206	51.6
15	22.4	63	30.8	111	25.2	159	30.5	207	51.8
16	22.5	64	30.4	112	25.4	160	33.5	208	52.1
17	22.1	65	29.9	113	27.2	161	36.2	209	52.5
18	21.5	66	29.5	114	26.5	162	37.3	210	53.0
19	20.9	67	29.8	115	24.0	163	39.3	211	53.5
20	20.4	68	30.3	116	22.7	164	40.5	212	54.0
21	19.8	69	30.7	117	19.4	165	42.1	213	54.9
22	17.0	70	30.9	118	17.7	166	43.5	214	55.4
23	14.9	71	31.0	119	17.2	167	45.1	215	55.6
24	14.9	72	30.9	120	18.1	168	46.0	216	56.0
25	15.2	73	30.4	121	18.6	169	46.8	217	56.0
26	15.5	74	29.8	122	20.0	170	47.5	218	55.8
27	16.0	75	29.9	123	20.7	171	47.5	219	55.2
28	17.1	76	30.2	124	21.7	172	47.3	220	54.5
29	19.1	77	30.7	125	22.4	173	47.2	221	53.6
30	21.1	78	31.2	126	22.5	174	47.2	222	52.5
31	22.7	79	31.8	127	22.1	175	47.4	223	51.5
32	22.9	80	32.2	128	21.5	176	47.9	224	50.5
33	22.7	81	32.4	129	20.9	177	48.5	225	48.0
34	22.6	82	32.2	130	20.4	178	49.1	226	44.5
35	21.3	83	31.7	131	19.8	179	49.5	227	41.0
36	19.0	84	28.6	132	17.0	180	50.0	228	37.5
37	17.1	85	25.1	133	17.1	181	50.6	229	34.0
38	15.8	86	21.6	134	15.8	182	51.0	230	30.5
39	15.8	87	18.1	135	15.8	183	51.5	231	27.0
40	17.7	88	14.6	136	17.7	184	52.2	232	23.5
41	19.8	89	11.1	137	19.8	185	53.2	233	20.0
42	21.6	90	7.6	138	21.6	186	54.1	234	16.5
43	23.2	91	4.1	139	22.2	187	54.6	235	13.0
44	24.2	92	0.6	140	24.5	188	54.9	236	9.5
45	24.6	93	0.0	141	24.7	189	55.0	237	6.0
46	24.9	94	0.0	142	24.8	190	54.9	238	2.5
47	25.0	95	0.0	143	24.7	191	54.6	239	0.0

10.10.1.2 The inspector shall follow a driving trace which is an electronic, visual depiction of the time/speed relationship of the driving cycle.

10.10.1.3 Beginning with second 30 of the driving cycle, if the vehicle meets fast pass criteria for hydrocarbons, carbon monoxide, and oxides of nitrogen, the inspector may terminate the test as per the requirements of the Division.

10.10.1.4 The Division may use alternate testing criteria for vehicles with gross vehicle weight ratings over 10,000 pounds.

10.10.1.5 Shift Schedule.

(a)Except as provided in Section 10.10.1.5(b) of this Ordinance the inspector shall shift the gears of a vehicle with manual transmission according to the following schedule over the driving cycle, so that the shift occurs at the point in the driving cycle where the specified speed is attained, and using only the shifts applicable to the number of gears:

Shift Sequence (gear)	Speed (miles per hour)	Approximate Cycle Time (seconds)
1 - 2	15	9.3
2 - 3	25	47.0
Declutch	15	87.9
1 - 2	15	101.6
2 - 3	25	105.5
3 - 2	17	119.0
2 - 3	25	145.8
3 - 4	40	163.6
4 - 5	45	167.0
5 - 6	50	180.0
Declutch	15	234.5

(b)The Division may use alternate shift schedules if deemed necessary.

10.11 Exhaust Emissions Measurement.

10.11.1 The CVS shall automatically initiate exhaust emissions measurement at the start of the driving cycle.

10.11.2 The CVS shall sample and record dilute exhaust hydrocarbon, carbon monoxide,

carbon dioxide, and oxides of nitrogen emissions over the driving cycle by the following procedure:

10.11.2.1 Sample the analyzer voltage responses, constant volume sampler pressure, constant volume sampler temperature, dynamometer speed and dynamometer power at a frequency of no less than 5 Hertz, and average the analyzer voltage levels over 1 second intervals;

10.11.2.2 Properly time-correlate each analyzer signal and the constant volume sampler signals to the driving trace;

10.11.2.3 Convert the one-second average analyzer voltage levels to concentrations, correct the concentrations by subtracting the pre-test background concentrations, and convert the corrected concentrations to grams for each second of the driving cycle; and

10.11.2.4 If multiple analyzers are used:

(a) Simultaneously integrate each analyzer, using as the official measurements the integrated values from the analyzer which is lowest in range, except if the cumulative total duration of emissions concentrations exceeding the low range scale is more than 5 seconds, then use as the official exhaust emissions measurements the integrated values from the analyzer highest in range, and

(b) Read background concentrations by each analyzer, and use the reading made by the analyzer used to determine the official exhaust emissions measurements as the official background reading.

10.11.3 The Division will integrate and record negative second-by-second values as zero.

10.11.4 Alternative Ways to Pass. If a vehicle meets the composite exhaust emissions standard, or the composite fast pass exhaust emissions standard for oxides of nitrogen, but does not meet a composite exhaust emissions standard, or composite fast pass exhaust emissions standard for hydrocarbons or carbon monoxide, as specified in Appendix C (II), the Division may apply the Phase 2 exhaust emissions standards, and Phase 2 fast pass exhaust emissions standards when applicable, specified in Appendix C (II).

10.11.5 Second Chance Testing. For an initial inspection performed, the Division may immediately conduct a second chance exhaust emissions test on a vehicle if the vehicle:

10.11.5.1 Fails the exhaust emissions test, and the exhaust emissions of hydrocarbons, carbon monoxide, and oxides of nitrogen are not greater than 1.5 times the applicable exhaust emissions standards; and

10.11.5.2 Had been waiting in the test lane queue for more than 20 minutes.

10.12 Fast Pass Procedures.

10.12.1 The Division may apply fast pass exhaust emissions standards as specified in Appendix C for passenger vehicles of model year 1983 and newer. The Division may make a fast pass determination if the vehicle meets the composite fast pass exhaust emissions standard for oxides of nitrogen and meets the:

10.12.1.1 Composite fast pass exhaust emissions standard for both hydrocarbons and carbon monoxide;

10.12.1.2 Phase 2 fast pass exhaust emissions standard for both hydrocarbons and carbon monoxide;

10.12.1.3 Phase 2 fast pass exhaust emissions standards for hydrocarbons and the composite fast pass exhaust emissions standard for carbon monoxide; or

10.12.1.4 Composite fast pass exhaust emissions standard for hydrocarbons and the Phase 2 fast pass exhaust emissions standard for carbon monoxide.

10.12.2 The Division will continue to measure exhaust emissions until either a fast pass determination is made as specified in Section 10.12 of this Ordinance, or until the end of the driving cycle.

10.13 On Board Diagnostics Interrogation Procedure.

10.13.1 On Board Diagnostics Interrogation. For an inspection performed after December 31, 1996, a model year 1994 or newer vehicle equipped with on board diagnostics shall be subject to interrogation of the on board diagnostics system.

10.13.1.1 The inspector shall reject a vehicle from inspection if a component of the on board diagnostics system is missing or damaged.

10.13.1.2 Except as provided in Section 10.13.1.1 of this Ordinance, the inspector shall interrogate the on board diagnostics system following the test procedures specified by the Division and detailed in Appendix F of this Ordinance.

10.13.2 On Board Diagnostics Interrogation Standards. After December 31, 1995, the on board diagnostics system of a model year 1994 or later vehicle equipped with on board diagnostics shall not contain any fault codes related to the emissions control equipment or to the power train for the interrogation specified in this Ordinance. If the vehicle does contain a fault code it shall be failed and the appropriate repair made prior to continuing with

the test or other appropriate action will be taken as detailed in Appendix F of this Ordinance.

10.14 Failed Vehicle and Reinspection Procedures.

10.14.1 Failed Vehicle. The inspector shall provide the vehicle owner/operator with a report which documents the failure and provides information about possible causes of the failure.

10.14.2 Reinspection.

10.14.2.1 The inspector shall reject from reinspection a vehicle for which the documentation required in Section 10.38 of this Ordinance is not provided.

10.14.2.2 The inspector shall collect the documentation required in Section 10.38 of this Ordinance from the operator of each vehicle which is reinspected.

10.14.2.3 For reinspection, the inspector shall perform the same inspection procedures as the initial inspection and apply the same inspection standards, including the exhaust emissions, and the on board diagnostics interrogation, regardless of the reason for initial failure.

10.15 Dynamometer System Specifications.

10.15.1 General Requirements. The Division will use a dynamometer system which operates reliably during all ambient and climatic conditions that may be experienced in the inspection area.

10.15.2 Automatic Setting Selection.

10.15.2.1 The Division may use a dynamometer system capable of automatically selecting the proper horsepower and inertia settings based on vehicle parameters contained in or entered into the test system.

10.15.2.2 The Division will maintain look-up or equivalent tables for horsepower and inertia settings for tested vehicles.

10.15.3 Range and Curve of Power Absorber.

10.15.3.1 For vehicles up to 10,000 pounds gross vehicle weight rating, the Division will use a dynamometer with a range of power absorption at 50 miles per hour of 4 horsepower to at least 40 horsepower, adjustable in 0.1 horsepower increments, and accurate to ± 2 percent of point, whichever is greater.

10.15.3.2 If vehicles over 10,000 pounds gross vehicle weight up to 26,000 pounds

gross vehicle weight rating are tested on a dynamometer, the Division may use a dynamometer with a range of power absorption at 50 miles per hour of 4 horsepower to at least 75 horsepower, adjustable in 0.1 horsepower increments, and accurate to +0.25 horsepower or +2 percent of point, whichever is greater or devise an alternate testing scenario for those vehicles.

10.15.4 Rolls. The Division will use dynamometers equipped with twin rolls which:

10.15.4.1 Are coupled side to side and front to rear;

10.15.4.2 Are of diameter between 8.5 inches and 21.0 inches;

10.15.4.3 Are spaced to comply with the following equation to within +0.5 inches and -0.25 inches, where all units are in inches: Roll spacing = (24.375 + roll diameter) x sin (31.5153).

10.15.4.4 Accommodate tires with radii of 11 inches through 20 inches.

10.15.4.5 Accommodate an inside track width of 30 inches and an outside track width of 108 inches; and

10.15.4.6 Are of size, surface finish, and hardness to minimize tire slip on initial acceleration under all weather conditions, maintain accuracy of distance measurements, and minimize tire wear and noise.

10.16 Inertia.

10.16.1 The Division will use a dynamometer system with selectable inertia weight.

10.16.2 Except as provided in Section 10.16.3 of this Ordinance, the Division will ensure that a dynamometer employing mechanical inertia simulation meets the following requirements:

10.16.2.1 A dynamometer accommodating vehicles up to 10,000 pounds gross vehicle weight rating is equipped with mechanical inertia weights providing test inertias of 2,000 pounds through 5,500 pounds in increments no greater than 500 pounds;

10.16.2.2 If the Division uses a dynamometer accommodating vehicles up to 26,000 pounds gross vehicle weight rating, The dynamometer will be equipped with mechanical inertia weights providing test inertias of 2,000 pounds through 19,500 pounds in 500 pound increments;

10.16.2.3 The tolerance on the base inertia weight and each flywheel is ±1 percent of the specified test weight; and

10.16.2.4 A method independent from the inertia weight selection system identifies which flywheels are actually rotating and the actual inertia during the driving cycle.

10.16.3 The Division may use a dynamometer employing electrical inertia simulation, or a combination of electric and mechanical simulation.

10.17 Test Distance and Vehicle Speed.

10.17.1 The Division will use the total number of dynamometer roll revolutions to calculate the vehicle distance traveled, by measuring the actual roll distance for the composite driving cycle and for each phase of the driving cycle with a tolerance of ±0.01 mile. Pulse counters may be used to calculate the distance directly if there are at least 16 pulses per revolution.

10.17.2 The testing equipment will measure the roll speed with a tolerance of ±0.1 miles per hour using a roll speed measurement system capable of accurately measuring a ±3.3 miles per hour per second acceleration rate over a 2 second period with a starting speed of 10 miles per hour.

10.18 Vehicle Restraint. The Division will use a vehicle restraint system which:

10.18.1 Minimizes vertical and horizontal forces on the drive wheels such that exhaust emissions levels are not significantly affected;

10.18.2 Is automatically or semi-automatically deployed and stowed upon inspector initiation;

10.18.3 Permits unobstructed vehicle ingress and egress; and

10.18.4 Safely restrains the vehicle under all operating conditions without damaging the vehicle.

10.19 Vehicle Cooling. The Division will use a cooling system which prevents vehicle overheating during the inspection and which:

10.19.1 Directs air at 5,400 ±300 standard cubic feet per minute to the cooling system of the vehicle as measured within ±2 inches of the intake of the vehicle cooling system;

10.19.2 Is manually, automatically or semi-automatically positioned; and

10.19.3 Avoids cooling the catalytic converter.

10.20 Full-time Four Wheel Drive Vehicles. The Division will use equipment for testing full-time four wheel drive vehicles which:

10.20.1 Accommodates all vehicles up to 10,000 pound GVW of all wheel base lengths;

10.20.2 Maintains speed synchronization between the front and rear wheel rolls to within 0.2 miles per hour;

10.20.3 Applies the correct vehicle loading for the driving cycle; and

10.20.4 Does not damage the four wheel drive system during testing.

10.21 Augmented Braking.

10.21.1 If augmented braking is used, the Division will use a system which is fully automatic and automatically interlocked so that actuation is allowed only while the vehicle brakes are applied and simultaneous engine acceleration is prevented.

10.21.2 Augmented braking may only be used from seconds 85 through 95, and after second 223 of the driving cycle.

10.22 Constant Volume Sampler, Analysis System, and Inspector Control Specifications.

10.22.1 Constant Volume Sampler.

10.22.1.1 General Requirements. A constant volume sampler of the critical flow venturi type or the sub-sonic venturi type will be used to collect vehicle exhaust samples. The Division shall use a constant volume sampler system which conforms to the specifications of 40 CFR Section 86.109-90, which is incorporated here-in by reference, and which:

(a) Prevents condensation in the dilute sample over the range of ambient conditions experienced during testing. If heated lines are used to prevent condensation, the sample line and components will be heated to a minimum of 120^{0}F and a maximum of 250^{0}F. The temperature will be monitored during the driving cycle;

(b) Has sufficient flow capacity to maintain proper flow in the main venturi; and

(c) Uses materials which come into contact with exhaust gas which are unaffected by, and do not affect, the exhaust sample, such as stainless steel, silicon rubber, Teflon^{tm}, or Tedlar^{tm}.

10.22.2 Sample System. The testing equipment will use a sample system which:

10.22.2.1 Continuously collects a correctly proportioned volume of sample for analysis;

10.22.2.2 Automatically detects deterioration or malfunction of the exhaust sample collection system; and

10.22.2.3 Is continuously purged when not taking samples.

10.22.3 Mixing Tee. The testing equipment will use a mixing tee for diluting the vehicle exhaust with ambient air which:

10.22.3.1 Is placed at the vehicle tailpipe exit as specified in 40 CFR Section 86,109-90(a) (2) (iv);

10.22.3.2 Collects all of the exhaust from the exhaust systems of all types of tested vehicles;

10.22.3.3 Does not cause static pressure variations in the tailpipe greater than ± 5.0 inches of water;

10.22.3.4 Employs a device to positively locate the tee with respect to distance from the tailpipe so that the exhaust stream remains in the center of the mixing tee flow area, even if the vehicle moves laterally from one extreme position on the dynamometer to the other extreme position;

10.22.3.5 Collects the background sample within 12 lateral feet and 12 longitudinal feet of the tee's position during the driving cycle, and within approximately 4 vertical feet of the ground;

10.22.3.6 Collects a continuous dilute exhaust sample for integration in a manner equivalent to the procedures for collecting bag samples as described in 40 CFR Section 86.109-90; and

10.22.3.7 Collects all of the exhaust from each tailpipe of vehicles equipped with dual exhaust systems, and maintains equal flow from each tailpipe.

10.22.4 Analysis System.

10.22.4.1 General Requirements. The Division will use an analysis system which:

(a) Automatically samples, integrates, and records dilute exhaust hydrocarbons, carbon monoxide, carbon dioxide, and oxides of nitrogen upon initiation of the

transient driving cycle;

(b) Automatically determines the vehicle pass/fail status;

(c) Automatically prints a pass/fail report;

(d) Meets performance requirements, with respect to accuracy, precision, drift, interferences, and noise described for test instruments in 40 CFR Section 86 Subparts B, D, and N, 1992 edition, which is incorporated by reference, in the full range of operating conditions experienced in the Enhanced I/M Program Station;

(e) Uses materials which come into contact with exhaust gas which are unaffected by, and do not affect, the exhaust sample, such as stainless steel, silicon rubber, Teflon™, or Tedlar™;

(f) Is capable of reading a small volume sample bag, and may employ a portable pump for sampling the bag; and

(g) Has a filter element which is easily replaceable, ensures reliable sealing after a filter element change, and is heated if the sample line is heated.

10.22.4.2 Detection Methods and Instrument Ranges. The analysis instrument ranges of this subsection are based on the use of a constant volume sampler with flow capacity of 700 standard cubic feet per minute. The Division will adjust the ranges given in this subsection before the use of a constant volume sampler with flow capacity other than 700 standard cubic feet per minute may be used.

(a) The Division will use a flame ionization detector with an analysis range of at least 0 ppm carbon to 2,000 ppm carbon to determine hydrocarbon emissions.

(b) The Division will use a non-dispersive infrared analyzer with an analysis range of at least 0 ppm to 10,000 ppm (1 percent) to determine carbon monoxide emissions. If two analyzers are used, the Division will use one analyzer for the range of 0 ppm to 1,000 ppm, or 0 ppm to 2,000 ppm, and will use another analyzer for the range of 0 to 1 percent carbon monoxide.

(c) The Division will use a non-dispersive infrared analyzer with an analysis range of at least 0 ppm to 40,000 ppm (4 percent) to determine carbon dioxide emissions.

(d) The Division will use a chemiluminescent analyzer with an analysis range of at least 0 ppm to 500 ppm to determine oxides of nitrogen emissions. The nitrogen oxide (NO) and nitrogen dioxide (NO_2) measurements will be summed to determine the oxides of nitrogen measurement.

10.22.5 System Response. The Division will use an analysis system which meets the following system response requirements:

10.22.5.1 Vehicle emissions measured by the integration system and from a bag sample simultaneously collected over the same integration period will agree within ±5 percent.

10.22.5.2 The system response time between a step change at the sample probe and a reading of 90 percent of the step change will be less than 10 seconds. An alternative response time may be used by the Division.

10.22.6 Integration. The Division will use an analysis system which meets the following integration requirements:

10.22.6.1 The analyzer voltage responses, constant volume sampler pressure, constant volume sampler temperature, dynamometer speed and dynamometer power will be sampled at a frequency of no less than 5 Hertz, and the analyzer voltage levels will be averaged over 1 second intervals.

10.22.6.2 Each analyzer signal and the constant volume sampler signals will be properly time-correlated to the driving trace.

10.22.6.3 The one-second average analyzer voltage levels will be converted to concentrations, the concentrations corrected by subtracting the pre-test background concentrations, the corrected concentrations converted to grams for each second, and negative second-by-second values integrated and recorded as zero.

10.22.6.4 If multiple analyzers are used:

(a)The integration system will simultaneously integrate each analyzer, and the official measurements will be the integrated values from the analyzer which is lowest in range, except if the cumulative total duration of emissions concentrations exceeding the low range scale is more than 5 seconds, then the integrated values from the analyzer highest in range shall be the official measurements.

(b)Background concentrations will be read by both analyzers, and the official background reading will be the reading made by the analyzer used to determine the official measurements.

10.23 Inspector Controls. The Division will use inspector controls which are convenient to operate from the driver's seat of the test vehicle, and provide for the inspector to:

10.23.1 Maneuver the vehicle onto and off the dynamometer without damage to the vehicle or console;

10.23.2 Activate and deactivate the vehicle restraint system;

10.23.3 Override the cooling system, if automatically activated;

10.23.4 Initiate the driving cycle,, if not automatically initiated;

10.23.5 Observe and verify the test vehicle identification parameters and inertia weight and power absorption settings;

10.23.6 Observe the driving trace which:

(a) Is an electronic, visual depiction of the time versus speed relationship of the driving cycle,

(b) Is of sufficient magnitude and detail so that the inspector may accurately track the driving trace and anticipate upcoming speed changes, and

(c) Clearly indicates gear shifts as specified in Section 10.10.1.5 of this Ordinance;

10.23.8 Observe indicated horsepower and vehicle speed;

10.23.9 Observe test time and coast-down time if not part of the video drivers aid; and

10.23.10 Abort a test.

10.24 On Board Diagnostics Interrogation Equipment Specifications.

10.24.1 On Board Diagnostics Interrogation Equipment. To perform the on board diagnostics interrogation, the Division will use testing equipment which is compatible with data collection, processing and other testing equipment.

10.25 Quality Assurance and Maintenance - General Requirements

10.25.1 The Division will develop, maintain, and modify a comprehensive quality assurance plan complying with the provisions of this Ordinance, and will implement the quality assurance plan after approval of the plan.

10.25.2 The Division will include the following information in the quality assurance plan:

10.25.2.1 Test assurance procedures to be conducted by the Division for each test.

10.25.2.2 Periodic quality assurance check procedures and precision check procedures to be conducted by the Division on the test equipment.

10.25.2.3 For each test assurance procedure, periodic quality assurance check, and precision check conducted by the Division:

(a)The primary standard to which each instrument, device, or material used for a week is traceable;

(b)The acceptable tolerance for each check;

(c)The corrective action to be taken for a check result outside of the acceptable tolerance; and

(d)The recheck procedure to follow corrective action;

10.25.2.4 Maintenance procedures to be conducted by the Division on the test equipment; and

10.25.2.5 Record keeping practices to be conducted by the Division.

10.25.3 If a test assurance procedure is failed, the Division will record the event and void the test.

10.25.4 If a periodic quality assurance check or precision check is failed, the Division will record the event, automatically prevent official testing, and take immediate corrective action.

10.25.5 Maintenance Log.

10.25.5.1 The Division will keep a maintenance log for each test system and record each maintenance event in the log.

10.25.5.2 The Division will keep each maintenance log for the duration of the vehicle emissions inspection program.

10.25.6 Blind Sample Program Participation. The Division will participate in a blind gas sample program, and should:

10.25.6.1 Analyze four samples each year;

10.25.6.2 Analyze a sample once each year in each test lane; and

10.25.6.3 Ensure that the blind sample vendor makes the results directly available

to the Division.

10.25.7 The Division will perform quality assurance audits.

10.26 Test Assurance Procedures.

10.26.1 Speed Excursions From the Driving Cycle.

10.26.1.1 Exceptions. A speed excursion from the driving cycle which is outside of the limits specified in Section 10.26.1.2 of this Ordinance is acceptable if the excursion is:

(a) No more than 2 seconds in duration;

(b) Below the required speed during an acceleration, if the vehicle is operated at maximum available power until the vehicle speed is within the specified limits; or

(c) Does not exceed 4 miles per hour, and occurs during one of the following decelerations:

(1) Between seconds 85 to 95, inclusive, or

(2) Between seconds 225 through 239, inclusive.

10.26.1.2 Except as provided in Section 10.26.1.1 of this Ordinance, the Division shall automatically void a test if an excursion from the driving cycle exceeds:

(a) An upper limit of 2 miles per hour higher than the highest point on the driving trace at the given time, within 1 second of the given time; or

(b) A lower limit of 2 miles per hour lower than the lowest point on the driving trace at the given time, within 1 second of the given time.

10.26.2 Speed Variations From the Driving Cycle. The Division will employ a method to ensure that excessive speed variations are avoided, including criteria for automatically voiding a test in which an excessive speed variation occurs.

10.26.3 Distance Criteria.

10.26.3.1 The Division will measure that actual distance traveled by the vehicle for the test and the equivalent vehicle speed.

10.26.3.2 The Division will void a test if the difference between the measured

distance traveled and the theoretical distance traveled exceeds ±0.05 miles.

10.26.4 Dynamometer Controller Check.

10.26.4.1 For each test vehicle, the Division will compare the measured horsepower integrated over seconds 55 to 81 of the driving cycle and divided by 26 seconds, and the measured horsepower integrated over seconds 189 to 201 of the driving cycle and divided by 12 seconds, to the theoretical horsepower calculated based on the observed speed over the same portion of the test.

10.26.4.2 The Division will void a test if the difference between theoretical horsepower and measured horsepower exceeds one of the following limits:

(a)±0.5 horsepower for vehicles of 8,500 pounds or less gross vehicle weight rating; or

(b)±2 horsepower for vehicles of greater than 8,500 pounds gross vehicle weight rating, if applicable.

10.26.4.3 Alternate dynamometer controller checks may be used after approval by the Division.

10.26.5 Inertia Weight Selection.

10.26.5.1 The Division will verify operation of the inertia weight selected for each test vehicle as specified in Section 10.16.2.4 of this Ordinance. If a system using electrical inertia simulation is used, the Division will employ an algorithm to identify the actual inertia force applied during the driving cycle.

10.26.5.2 The Division shall void a test if the difference between the observed inertia and the required inertia exceeds ±1.0 percent.

10.26.6 Constant Volume Sampler Operation.

10.26.6.1 The Division will verify constant volume sampler operation by one of the following methods:

(a)For a subsonic type constant volume sampler, verify the constant volume sampler operation throughout the test by monitoring the difference between upstream pressure and throat pressure; or

(b)For a critical flow type constant volume sampler, verify the constant volume sampler operation for each test by measuring the:

(1)Absolute pressure difference across the venturi, or

(2)The blower vacuum behind the venturi for minimum levels needed to maintain choke flow for the venturi design.

10.26.6.2 The Division will establish and use limits to satisfy the requirements of Section 10.26.6.1 of this Ordinance. The Division will void a test if the monitored pressure difference is outside the limits.

10.26.7 Fuel Economy.

10.26.7.1 The Division will determine fuel economy limits for each test inertia selection by:

(a)Using the lowest horsepower setting typically selected for the inertia weight to determine an upper test vehicle fuel economy limit;

(b)Using the highest horsepower setting typically selected for the inertia weight to determine a lower test vehicle fuel economy limit; and

(c) When the range between the lowest and highest horsepower setting is greater than 5 horsepower, determining two sets of fuel economy limits as specified in Section 10.26.7.1(a) and (b) of this Ordinance.

10.26.7.2 For each test, the Division will calculate the fuel economy of the test vehicle and compare to the upper and lower limits determined in Section 10.26.7.1 of this Ordinance for the test inertia and horsepower selected. The Division shall void a test if the measured fuel economy is greater than 1.5 times the upper limit.

10.27 Dynamometer Periodic Quality Assurance Checks

10.27.1 Coast Down Check.

10.27.1.1 The Division should conduct a coast down check once per week by a procedure equivalent to that described in 40 CFR Section 86.118-78, which is incorporated by reference, and should:

(a) If a vehicle is used to motor the dynamometer to the initial coast-down speed, lift the vehicle off the dynamometer prior to the start of the coast down procedure, and conduct the procedure without a vehicle on the dynamometer;

(b) Check the base dynamometer inertia and the base inertia plus each prime inertia weight flywheel;

(c) Use at least two horsepower settings for each inertia weight, within the normal range of inertia weight;

(d) Check coast down between the speeds of 55 to 45 miles per hour and between the speeds of 22 to 18 miles per hour;

(e) Use a clock which is routinely verified to be accurate to the nearest 0.01 seconds when summing 1,000 seconds;

(f) Provide for automatic computation of the coast down check results;

(g) Automatically record the coast down check results on electronic media with a date and time stamp.

10.27.1.2 The Division shall take corrective action if the difference between the measured coast down time and the theoretical coast down time exceeds one of the following values:

(a) For tests using inertia weights of less than 8,500 pounds:

(1) $\pm$ 1 second for the 55 to 45 miles per hour coast down check; or

(2) $\pm$7 percent on the 22 to 18 miles per hour coast down check.

(b) $\pm$10 percent for tests using inertia weights of 8,500 pounds or more.

10.27.2 Roll Speed Check.

10.27.2.1 The Division should check roll speed and roll counts once each day by a means external to the dynamometer rolls, such as a photo tachometer, and shall take corrective action for a deviation exceeding $\pm$0.2 miles per hour.

10.27.2.2 As an alternative to the roll speed check, the Division may use a redundant roll speed transducer independent of the primary transducer. The Division should check the accuracy of redundant systems by means external to the dynamometer once each month.

10.27.3 Full-time Four Wheel drive Dynamometer. For a dynamometer accommodating full-time four wheel drive vehicles, in addition to the checks required in Sections 10.27.1 and 10.27.2 of this Ordinance, the Division should check the speed synchronization between the front the rear rolls once each day, and shall take corrective action for a deviation exceeding $\pm$0.2 miles per hour.

10.28 Constant Volume Sampler Period Quality Assurance Checks.

10.28.1 Flow Calibration Check. The Division should calibrate the constant volume sampler flow at 6 months after the constant volume sampler is put into official use and once every 12 months thereafter, and following each repair, and should:

10.28.1.1 Calibrate the flow of a critical flow venturi at six flow rates, including the nominal, rated flow rate and a rate below the rated flow rate;

10.28.1.2 Calibrate the flow rate of a subsonic venturi at six flow rates, including the nominal, rated flow rate, a rate below the rated flow rate, and a rate above the rated flow rate; and

10.28.1.3 Use flow calibration points which cover the range of variation in flow experienced in testing.

10.28.2 System Check. The Division should check the constant volume sampler flow calibration at the nominal design flow once per day by a procedure that identifies deviations in flow from the true value and equivalent to the procedure in 40 CFR Section 86.119-90 (c), and shall take corrective action if a deviation in flow exceeds ± 4 percent.

10.28.3 Flow Passages Check. The Division will check flow passages to ensure proper sample flow.

10.28.3.1 The Division will check the sample probe, and clean it if necessary, once per month.

10.28.3.2 The Division will check critical flow venturi passages, and clean them if necessary, once per year.

10.28.4 Probe Flow Check. The Division will check the indicator identifying the presence of proportional probe flow once per day.

10.28.5 Leak Check. The Division will check the vacuum portion of the sample system for leaks once per day and following an action which violates the system integrity.

10.29 Analysis System Periodic Quality Assurance Checks.

10.29.1 Calibration Curve Limit Check. The Division will use a software algorithm to perform a zero and span adjustment and subsequent calibration curve adjustment, and will take corrective action if:

10.29.1.1 The adjustment of an up-scale span point exceeds a tolerance of ± 0.4 percent of point; or

10.29.1.2 A cumulative software up-scale, zero, or span adjustment differs by more than ±10 percent from the most recent calibration curve.

10.29.2 Daily Calibration Check. The Division will check the calibration curve for each analyzer each day prior to official testing by the following procedure:

10.29.2.1 Introduce a zero gas and adjust the analyzer if necessary to correctly read zero;

10.29.2.2 Introduce an up-scale span gas and adjust the analyzer if necessary within the tolerance of Section 10.29.1.2 of this Ordinance; and

10.29.2.3 Introduce a mid-scale span gas and ensure that the analyzer reads the gas to within 2.5 percent of point.

10.29.3 Spanning Frequency.

10.29.3.1 Except as specified in Section 10.29.3.2 of this Ordinance, the Division will check, and adjust as necessary, the zero and up-scale span points as specified in Section 10.29.2.1 and 10.29.2.2 of this Ordinance each day at 2 hour intervals following the daily calibration check of Section 10.29.2 of this Ordinance. Beginning with the first check after the daily calibration check, the Division shall cease official testing and take corrective action if the:

(a) Up-scale span point differs by more than ±2.0 percent from the previous check; or

(b) Zero point differs from the previous check by more than 2 ppm hydrocarbons, 1 ppm oxides of nitrogen, 10 ppm carbon monoxide, or 40 ppm carbon dioxide.

10.29.3.2 The Division may zero the analyzer prior to each test as an alternative to the span checks specified in Section 10.29.3 of this Ordinance.

10.29.4 Daily Cross Check. The Division will analyze a checking sample of gas each day following the daily calibration check of Section 10.29.2 of this Ordinance.

10.29.4.1 The Division will use a checking sample which differs from the calibration gas used for the daily calibration check.

10.29.4.2 The concentration of the checking sample of gas may be either in the lower end, the higher end, or near the middle of the range which corresponds to approximately 0.5 to 3 times the composite exhaust emissions standards in grams per mile for hydrocarbons, carbon monoxide, carbon dioxide, and oxides of nitrogen for

1984 and later model year gasoline-powered passenger vehicles, as specified in Appendix C of this Ordinance. The Division will select the checking sample concentration in a random manner such that an even distribution over the range is chosen over time.

10.29.4.3 The Division will use the same checking sample mixture for each analyzer.

10.29.4.4 The Division shall suspend official testing and take corrective action if the deviation in analysis of the concentration of the checking sample from the historical mean and standard deviation for the analyzers at the Enhanced I/M Program Station and for the analyzers at all stations exceeds 3 sigma.

10.29.5 Oxides of Nitrogen Convertor Check. The Division should check the convertor efficiency of the nitrogen dioxide to nitric oxide convertor once each week by a procedure equivalent to 40 CFR Section 86.123-78, which is incorporated by reference, except that the Division shall use nitric oxide gas with concentration in the range of 100 ppm to 300 ppm.

10.29.6 NO/NO_x Flow Balance. The Division should check the flow balance between the nitric oxide and oxides of nitrogen test modes once per week, and may combine the check with the oxides of nitrogen convertor check of Section 10.29.5 of this Ordinance.

10.29.7 Monthly Calibration Check.

10.29.7.1 The Division will verify the analyzer calibration curve monthly, and will:

(a) Consider the entire range of the analyzer as one curve, and if the analyzer has more than one measurement transducer, consider each transducer as an analyzer;

(b) Use at least 5 calibration points plus zero in the lower portion of the analyzer range, corresponding to an approximate average concentration of 2 grams per mile hydrocarbons, 30 grams per mile carbon monoxide, 3 grams per mile oxides of nitrogen, and 400 grams per mile carbon dioxide;

(c) If two analyzers are used in conjunction, one for the low range and the other for the high range, use at least 5 calibration points plus zero in the lower portion of the high range scale, corresponding to approximately 100 percent of the full-scale value of the low range analyzer;

(d) Use at least 5 calibration points to define the calibration curve above the 5 lower calibration points;

(e) Use the calibration zero gas to set the analyzer zero;

(f) Use a curve which is a polynomial of no greater order than 4th order; and

(g) Except as provided in Section 10.29.7.2 of this Ordinance, ensure that the curve fits that data within +2.0 percent at each calibration point as specified in 40 CFR Sections 86.121-90, 86.122-78, 86.123-78, and 86.124-78, which are incorporated by reference.

10.29.7.2 For the two lowest calibration points, the allowable curve fit required by Section 10.29.7.1(g) of this Ordinance may be 5% if the points are below a value corresponding to an average concentration of approximately 1 gram per mile of hydrocarbons, 15 grams per mile of carbon monoxide, 1.5 grams per mile of oxides of nitrogen, and 200 grams per mile of carbon dioxide.

10.29.7.3 The Division will use a confirming calibration standard which is between 40 percent and 80 percent of full scale and which is not used for curve generation. The Division shall take corrective action if the curve cannot be verified with a tolerance of ±2.5 percent.

10.29.8 Bag Sample Check.

10.29.8.1 The Division should collect vehicle exhaust in a sample bag simultaneously with the collection of the continuous exhaust sample during an exhaust emissions test once each calendar quarter, for each of Phase 1 and Phase 2 at a minimum, and analyze the bag sample with the test equipment at the conclusion of the test.

10.29.8.2 The Division shall take corrective action if the difference between the bag sample measurement and the continuous sample measurement exceeds ±10 percent.

10.29.9 Response Time Check.

10.29.9.1 The Division should check the response time of each analyzer, including the complete sample system from the sample probe to the analyzer, once each week, during the check for compliance with the bag sample check of Section 12.29.8 of this Ordinance, and after a repair or modification to the flow system.

10.29.9.2 The Division shall suspend official testing and take corrective action for a system response time which does not meet the requirements of Section 10.22.5 of this Ordinance.

10.29.10 Flame Ionization Detector Check.

10.29.10.1 The Division should check the flame ionization detector for proper peaking and characterization once each month and after each maintenance event,

using the analyzer manufacturer recommended procedures.

10.29.10.2 The Division should check the methane response of the flame ionization detector once each month with a concentration of approximately 50 ppm methane. The Division shall take corrective action if the methane response is outside the range of 1.0 through 1.3, calculated by the following equation:

$$\text{Ratio of methane} = \frac{\text{Flame ionization detector response (ppmC)}}{\text{response Cylinder methane (ppmC)}}$$

10.29.11 Integrator Check.

10.29.11.1 The Division should check the integrator once every 3 months, by simultaneously sampling, by the normal integration method and by the bag method, the emissions from a vehicle with exhaust emissions test values between 60 percent and 400 percent of the exhaust emissions standards for a model year 1984 gasoline-powered passenger vehicle, as established in Appendix C.

10.29.11.2 The Division will store the data from each of the normal integration and bag methods in a historical data base for determining normal and deviant performance for each test lane, for each Enhanced I/M Program Station, and for all Enhanced I/M Program Stations combined.

10.29.11.3 The Division shall take corrective action if a deviation between the integrator and the bag readings exceeds ± 10 percent.

10.29.12 Interference. The Division should check the carbon monoxide, carbon dioxide, and oxides of nitrogen analyzers for water interference prior to implementation and once each year under the environmental conditions experienced on a high ambient temperature summer day.

10.29.12.1 For analyzers used with a constant volume sampler of flow rate 700 standard cubic feet per minute or greater:

(a) For the carbon monoxide analyzer:

(1) A gas mixture of 4 percent CO_2 in N_2 bubbled through water with a saturated-mixture temperature of 40°C shall produce a response of no greater than 10 ppm at 40°C; and

(2) The allowable interference level shall be adjusted to coincide with the saturated-mixture temperature used, using a rejection ratio of 9,000 to 1.

(b) For the carbon dioxide analyzer:

(1) A calibration zero gas bubbled through water with a saturated-mixture temperature of 40°C shall produce a response of no greater than 40 ppm; and

(2) The allowable interference level shall be adjusted to coincide with the saturated-mixture temperature used, using a rejection ratio of 2,000 to 1.

(c) For the oxides of nitrogen analyzer:

(1) A calibration zero gas bubbled through water with a saturated-mixture temperature of 40^0 C shall produce a response of no greater than 1 ppm; and

(2) The allowable interference level shall be adjusted to coincide with the saturated-mixture temperature used, using a rejection ratio of 90,000 to 1.

10.29.12.2 For an analyzer used with a constant volume sampler of flow rate less than 700 standard cubic feet per minute, the Division shall adjust the allowable interference responses proportionately downward.

10.30 On Board Diagnostics Interrogation Equipment Periodic Quality Assurance Checks.

10.30.1 On Board Diagnostics Interrogation Equipment. For the on board diagnostics interrogation equipment, the Division will follow the quality assurance procedures specified by the equipment manufacturer.

10.31 Overall System Performance Quality Assurance.

10.31.1 Emissions Levels.

10.31.1.1 On a monthly basis, the Division should monitor and record the average, median, 10th percentile, and 90th percentile values of the composite emissions of hydrocarbons, carbon monoxide, carbon dioxide, and oxides of nitrogen measured for each test lane, for each Enhanced I/M Program Station, and for all Enhanced I/M Program Stations combined; and

10.31.1.2 If a difference in the monthly average of a test lane from the Enhanced I/M Program Station average or from the combined Enhanced I/M Program Station average, or of an Enhanced I/M Program Station from the combined Enhanced I/M Program Station average, is greater than +10 percent, the Division shall conduct an investigation to determine whether the single test lane of facility has a systematic equipment operating error or difference. Where it can be determined that the averages of an Enhanced I/M Program Station are offset from the averages of other

Enhanced I/M Program Stations based on the mix of the vehicles tested, the offset shall be included in the calculation of the difference. If a systematic equipment or operating error or difference is found, the Division shall suspend official testing, initiate immediate corrective action, and resume testing when the situation is corrected.

10.31.1.3 The Division will adjust the monitoring period if necessary, to ensure that a reasonably random sample of vehicles is tested in each test lane.

10.31.2 Pass/Fail Statistics.

10.31.2.1 On a monthly basis, the Division will monitor and record the average number of passing vehicles and the average number of failing vehicles for each test lane, each Enhanced I/M Program Station, and all Enhanced I/M Program Stations combined.

10.31.2.2 If a difference in the monthly average of a test lane from the Enhanced I/M Program Station average or from the combined Enhanced I/M Program Station average, or of an Enhanced I/M Program Station from the combined Enhanced I/M Program Station average, is greater than +15 percent, the Division shall conduct an investigation to determine whether the single test lane or facility has a systematic equipment or operating error or difference. Where it can be determined that the averages of an Enhanced I/M Program Station are offset from the averages of other Enhanced I/M Program Stations based on the mix of the vehicles tested, the offset shall be included in the calculation of the difference. If a systematic equipment or operating error or difference is found, the Division shall suspend official testing, initiate immediate corrective action, and resume testing when the situation is corrected.

10.31.2.3 The Division will adjust the monitoring period if necessary to ensure that a reasonably random sample of vehicles is tested in each test lane.

10.32 Control Charts.

10.32.1 General Requirements.

10.32.1.1 The Division will use control charts and statistical process control theory to determine, forecast, and maintain performance of the inspection network.

10.32.1.2 The Division will maintain control charts for each test lane, each Enhanced I/M Program Station, and all Enhanced I/M Program Stations combined, and will track key system parameters, as determined by the Division. When a key system parameter approaches control chart limits, the Division will closely monitor

the system and initiate corrective action to prevent the system from exceeding control chart limits. If a key system parameter exceeds control chart limits, the Division shall suspend official testing, initiate immediate corrective action, and resume testing when the situation is corrected.

10.32.1.3 The Division will maintain control charts for each inspector. The Division will monitor performance near control chart limits and take corrective action as needed, which may include retraining or dismissal.

10.32.2 Control Charts for a Test Lane. In the test lane control charts, the Division will include parameters that permit the cause for abnormal performance of a test lane to be pinpointed to a system or component, including at a minimum the following information.

10.32.2.1 The number of voided tests, including test type and reason;

10.32.2.2 The difference between theoretical and measured coast-down times for the dynamometer;

10.32.2.3 The difference between theoretical and measured constant volume sampler flow;

10.32.2.4 For the analysis system:

(a) Except for the first check of the day, the up-scale span change from the last up-scale span, or the software correction to the calibration curve as a result of an up-scale span change;

(b) The difference between the analyzer response to the daily cross-check and the test gas concentration;

(c) The difference between the integrated measurements and the bag measurements,

(d) The system response time,

(e) The flame ionization detector methane response ratio; and

(f) The ambient background concentrations;

10.32.2.5 The emissions levels as required in Section 10.31.1 of this Ordinance;

10.32.2.6 The pass/fail statistics as required in Section 10.31.2 of this Ordinance; and

10.32.2.7 The difference between theoretical or measured values for other parameters measured during quality assurance procedures.

10.32.3 Control Charts for an Enhanced I/M Program Station. In the Enhanced I/M Program Station control charts, the Division will include the station averages of the control charts for each test lane at the Enhanced I/M Program Station.

10.32.4 Combined Control Charts for All Enhanced I/M Program Stations. In the combined control charts for all Enhanced I/M Program Stations, the Division will include averages of the control charts for each Enhanced I/M Program Station.

10.32.5 Control Charts for Individual Inspectors.

10.32.5.1 In the control charts for individual inspectors, the Division will include parameters that will allow the cause for abnormal performance to be evaluated, including the following at a minimum:

(a) The number of voided tests, overall and by test type and reason;

(b) The number of aborted tests, overall and by test type and reason;

(c) Data capture errors; and

(d) Record keeping errors, including accountability for certificates.

10.32.5.2 The Division will use the combined control charts for inspectors at each Enhanced I/M Program Station and at all Enhanced I/M Program Stations combined as references for comparison to control charts for individual inspectors.

10.33 Gas Specifications.

10.33.1 Flame Ionization Detector.

10.33.1.1 The Division will use propane for the flame ionization detector gas. A multi-component gas may also br used under circumstances determined by the Division.

10.33.1.2 The Division will use fuel for the flame ionization detector which is 40 percent ± 2 percent hydrogen, and the balance helium.

10.33.1.3 The Division will use zero grade air as the oxidizer for the flame ionization detector, which is artificial air containing 18 to 21 mole percent oxygen and the

balance nitrogen.

10.33.2 Calibration Gas. To generate and check a calibration curve, the Division will use a gas traceable to a National Institute of Standards and Technology standard reference material or certified reference material, to within 1 percent of the standard by gas comparison methods.

10.33.3 Calibration Zero Gas.

10.33.3.1 The Division will ensure that impurities in calibration zero gas do not exceed 0.1 ppm carbon, 0.5 ppm carbon monoxide, 1 ppm carbon dioxide, and 0.1 ppm oxides of nitrogen.

10.33.3.2 The Division will use calibration zero grade air for the calibration zero gas for the flame ionization detector.

10.33.3.3 For the calibration zero gases for the carbon monoxide, carbon dioxide, and oxides of nitrogen analyzers, the Division will use calibration zero grade nitrogen or calibration zero grade air.

10.33.4 Span Gas.

10.33.4.1 For an up-scale span adjustment, cross check, or mid-scale span check, the Division will use a gas which is traceable to a National Institute of Standards and Technology standard reference material or certified reference material, to within 2 percent of the standard by gas comparison methods.

10.33.4.2 The Division will use zero span gas for the working zero gas.

(a) Working zero grade air or calibration zero grade air will be used for the flame ionization detector zero span gas.

(b) Working zero grade nitrogen or air will be used for the carbon monoxide, carbon dioxide, and oxides of nitrogen analyzers zero span gases. Calibration zero grade nitrogen or air may also be used.

10.33.4.3 The Division will use an up-scale span gas with concentration corresponding to approximately 80 percent of full scale.

10.33.4.4 The Division will use a mid-scale span gas with concentration corresponding to approximately 15 percent of full scale.

10.33.4.5 The Division will verify a span gas concentration before the gas is placed

into service and immediately after a monthly calibration curve check. If the reading on the span gas exceeds the tolerance given in Section 10.33.4.1 of this Ordinance, the Division shall remove the system or gas from service until corrective action is taken.

10.33.5 Working Zero Gas. The Division will ensure that impurities in working zero grade gas do not exceed 1 ppm carbon, 2 ppm carbon monoxide, 400 ppm carbon dioxide, and 0.3 ppm oxides of nitrogen.

10.34 Enhanced I/M Program Station.

10.34.1 General Requirements.

10.34.1.1 The Division shall operate each Enhanced I/M Program Station.

10.34.1.2 The Division will perform quality assurance checks, program evaluation functions, and referee inspections.

10.34.1.3 The Division will collect and maintain inspection data and Enhanced I/M Program Station operation data in compliance with the provisions of this Ordinance.

10.34.1.4 Any person employed by the Division for Enhanced I/M Program Station operation, may not engage in any business or function which is a conflict of interest as defined in Davis County personnel policies.

10.34.2 Test Lanes.

10.34.2.1 The Division will ensure each test lane accommodates all tested vehicles up to and including 10,000 pounds gross vehicle weight rating, other than full-time four wheel drive vehicles.

10.34.2.2 The Division may provide a minimum of one test lane at each Enhanced I/M Program Station accommodating all tested vehicles over 10,000 pounds GVW up to and including 26,000 pounds gross vehicle weight rating and may devise an alternate testing requirement for those vehicles.

10.34.2.3 The Division will ensure a minimum of one test lane at each Enhanced I/M Program Station accommodates all tested vehicles with full-time four wheel drive up to 10,000 pounds gross vehicle weight.

10.34.3 Inspectors.

10.34.3.1 The Division will provide training which meets the provisions of this

Ordinance to each inspector before the inspector may perform inspections.

10.34.3.2 The Division will provide periodic in-service inspector training, over a period established by the Division.

10.34.3.3 The performance of an inspector may be periodically reviewed by the Division, either overtly or covertly. The Division shall ensure that any failure of an inspector to adequately implement the provisions of this Ordinance is corrected. Correction may include retraining or dismissal of the inspector.

10.34.3.4 The Division may develop, maintain, and modify an inspector training program, to include both classroom and hands-on training, with provisions for initial and periodic in-service training.

10.34.3.5 Inspectors or other employees of the Division who fraudulently test vehicles, provide safety inspections, provide certificates of compliance, waivers, vehicle registrations, registration stickers, and/or any other function, service and/ or commodity governed by this Ordinance are in violation of this Ordinance and any other applicable laws. They are also liable for the costs of the functions, services and/or commodities which are fraudulantly provided. They are also subject to termination in accordance with the Davis County Personnel Ordinance.

10.34.4 Record Keeping. The Division will maintain the following records, separately and in chronological order, for a minimum of three years:

10.34.4.1 Inspection records stored on computer readable media in a format established by the Division;

10.34.4.2 Equipment maintenance records in compliance with the provisions of this Ordinance; and

10.34.4.3 Results of periodic quality assurance checks in compliance with the provisions of this Ordinance, including:

(a) The test lane number, date, and start time,

(b) The concentration values of the calibration gases used to perform gas characterization, and

(c) Corrective action taken.

10.34.5 Fees

10.34.5.1 The Division shall collect the fee established in Appendix B from the vehicle owner for an initial inspection or a second or subsequent reinspection.

10.34.5.2 The Division shall accept payment of safety inspection, inspection, reinspection, permit fees, late fees and any other fees or charges for services or parts in cash or personal check, or with a major credit card if approved for use by the Division.

10.34.5.3 If a certificate is lost or damaged, a vehicle owner may obtain a duplicate certificate from the Division. The vehicle owner shall pay the fee established in Appendix B.

10.35 Technicians Vehicle Report.

10.35.1 The Division will issue a report containing information on test results of a vehicle which has failed an emissions inspection to a person seeking to have repairs performed on the vehicle.

10.35.2 The Division may make the report available electronically to repair facilities, providing read-only, convenient, and standardized access.

10.35.3 The Division may include the following information in the report:

10.35.3.1 The information specified in Section 10.39.2 of this Ordinance;

10.35.3.2 For an exhaust emissions failure, second-by-second emission levels in grams per second for each pollutant, and the corresponding average values for passing vehicles of the same model year, manufacturer, and engine family;

10.35.3.3 For an on board diagnostics interrogation failure, fault codes stored in the vehicle on board diagnostics system related to the emissions control equipment and to the power train.

10.36 Feedback Reports

10.36.1 The Division may make information electronically available on vehicles which have received emissions related repairs and have been submitted for reinspection, providing at a minimum, the information specified in Section 10.36.2 of this Ordinance.

10.36.2 The Division may provide a quarterly feedback report to certified emissions repair facilities which have performed emissions related repairs on vehicles submitted for reinspection. The report should include, for the reporting period, the following statistics on vehicles submitted for reinspection:

10.36.2.1 The total number;

10.36.2.2 The number failing the first reinspection;

10.36.2.3 The number receiving waivers after the first reinspection;

10.36.2.4 The reinspection failure rate;

10.36.2.5 The reinspection waiver rate; and

10.36.2.6 The multiple reinspection rate.

10.36.3 The Division may provide information on emissions reductions and energy savings on vehicles which have received emissions related repairs and have been submitted for reinspection on a monthly, quarterly and annual basis:

10.36.3.1 The quantity (tons or pounds) of hydrocarbon, carbon monoxide, and oxides of nitrogen emission reductions, for:

(a) All emissions related repairs;

(b) Repairs to passing vehicles;

(c) Repairs to waived vehicles; and

(d) Repairs to failed vehicles.

10.36.3.2 The fuel economy savings for each initial inspection failure type, for the categories of repairs specified in Section 10.36.3.1 of this Ordinance.

10.37 Compliance With Emissions Related Recalls.

10.37.1 The owner of a vehicle scheduled for inspection under this Ordinance shall have vehicle repairs performed as required by any emissions related recall notice before presenting the vehicle for inspection.

10.37.2 A vehicle found not to have had repairs performed as required by an emissions related recall notice will be rejected from inspection. The vehicle owner shall demonstrate compliance to the satisfaction of the Division before the vehicle is inspected.

10.38 Reinspection. The owner of a vehicle which has failed an inspection shall present the vehicle for reinspection after emissions related repairs have been performed on the vehicle.

10.38.1 The vehicle owner shall provide documentation, in a form prescribed by the Division, indicating all of the following information for the vehicle:

(a) The repairs which were performed;

(b) By whom the repairs were performed; and

(c) Any emissions related repairs recommended by the technician which were not performed.

10.38.2 A vehicle presented for reinspection without the documentation required in Section 10.38.1 of this Ordinance will be rejected from reinspection.

10.39 Certificates for Enhanced Emissions Testing.

10.39.1 General Requirements. A Certificate of Compliance may be issued by the Division.

10.39.2 A vehicle inspected at an Enhanced I/M Program Station and found to meet or exceed the requirements of this Ordinance shall be issued a Vehicle Inspection report (VIR) which contains the following information:

(a) The Enhanced I/M Program Station number, test lane number, and inspector identification number;

(b) The date of inspection;

(c) The exhaust emissions test start time and the time final exhaust emissions scores are determined;

(d) The vehicle identification number (VIN);

(e) The license plate number, if applicable;

(f) The gross vehicle weight rating, for a vehicle other than a passenger vehicle;

(g) The vehicle model year and vehicle make;

(h) Indication that the vehicle has full-time four wheel drive, if applicable:

(I) The odometer reading;

(j) The category of inspection performed (initial inspection, first reinspection, or subsequent reinspection);

(k) Indication if a second-chance emissions test was performed, as provided in Section 10.11.5 of this Ordinance if applicable;

(l) The fuel type of the vehicle;

(m) The overall pass/fail status for the inspection;

(n) The exhaust emissions test pass/fail status for hydrocarbons, carbon monoxide, oxides of nitrogen, and carbon monoxide plus carbon dioxide;

(o) The exhaust emissions measurements and the applicable standards for hydrocarbons, carbon monoxide, oxides of nitrogen, and carbon monoxide plus carbon dioxide, carried out to the appropriate number of significant digits as specified in Appendix C.

(r) The pass/fail status for the on board diagnostics interrogation and the applicable standard if applicable;

(s) The valid through date; and

(t) Any other information the Division may specify.

10.39.3 A vehicle owner shall ensure that the most recent inspection form copy is carried in the vehicle for which it was issued at all times.

10.39.4 Certificate of Compliance. If a vehicle inspected at a vehicle emissions Enhanced I/M Program Station meets all applicable standards of this Ordinance and the applicable standards specified in Appendix C during an inspection, the vehicle is considered to be in compliance for the assigned inspection cycle, and the Division will issue a Certificate of Compliance if the vehicle is to be registered at a location other than the Enhanced I/M Program Station, which includes a statement certifying that the inspection was performed in accordance with the provisions of this Ordinance. If the vehicle is registered at the Enhanced I/M Program Station, the statement shall be included on the VIR.

10.39.4.1 If a vehicle passes a reinspection, the change in:

(a) Fuel economy resulting from emissions related repairs; and

(b) Exhaust emissions, in pounds of pollutant per 10,000 miles of vehicle operation, resulting from emissions related repairs will be included on the VIR.

10.39.5 Notice of Failing Vehicle.

10.39.5.1 If a vehicle inspected at a Enhanced I/M Program Station does not meet

all applicable standards specified in this Ordinance during an inspection, the vehicle is considered not to be in compliance and the Division shall issue a notice of a failing vehicle which includes the following information:

(a) The type of failure and possible reasons for failure; and

(b) A statement indicating any availability of warranty coverage as provided by the Clean Air Act, 42 USC Section 7541.

10.39.5.2 If a vehicle fails the emissions test, and is within the time and mileage requirements of the federal emissions warranty contained in the Federal Clean Air Act, the inspector should inform the owner/operator that he/she may qualify for warranty coverage of emission related repairs as provided by the vehicle manufacturer and mandated by the Federal Environmental Protection Agency. The inspector may provide the owner with a copy or copies of the applicable emissions warranty pamphlets approved by the Division. The Division will display informational pamphlets in an area readily accessible to the public in the Enhanced I/M Program Station.

10.39.5.3 A vehicle that fails a Division operated test shall not use a certificate of compliance or waiver from and Enhanced Basic I/M Program Station or any other I/M Program to register the vehicle.

10.39.6 Certificate of Waiver.

10.39.6.1 A Certificate of Waiver may be issued to a 1981 or newer vehicle which continues to exceed the emissions cut points for the Enhanced I/M Inspection, if all of the following requirements are met:

(a) All applicable warranty coverage has been used, or the vehicle manufacturer or a dealer has issued written denial of the warranty coverage provided for vehicles by the Clean Air Act, 42 USC Section 7541;

(b) At least four hundred and fifty dollars ($450) or an additional amount as specified in Appendix B that is necessary to meet the Waiver Rate requirement of the applicable State Implementation Plan has been spent on acceptable emissions related repair costs performed by a Certified Emissions Repair Technician (certified under Section 16.0) for that specific vehicle, and if proof of repair costs for that specific vehicle have been provided to the Division in the form of an itemized bill, invoice, work order, manifest or statement in which emissions related parts are specifically identified.

(c) The vehicle has failed a reinspection;

(d) Air pollution control devices applicable and specified in Section 9.10 of this Ordinance are in place and operable on the vehicle. If the devices have been removed or rendered inoperable, they shall be replaced or repaired before a Waiver is granted; and

(e) A waiver has not been issued for the vehicle in the previous year.

(f) The owner exhibits satisfactory evidence, including repair receipts, to the Division that the minimum amount required by Section 10.39.6.1(b) has actually been expended for emissions related repairs within the ninety (90) days following the initial inspection failure.

10.39.6.2 The vehicle owner shall submit proof of expenditures for repairs as specified in Section 10.39.6.1 of this Ordinance with the waiver application in a form and content acceptable to the Division. Repair costs, including parts and labor, shall be limited to only those repairs necessary to bring the vehicle into compliance with applicable emissions standards and may not include:

(a) Costs determined to be necessary to correct tampering with or the removal of an emissions control device, or to repair damage resulting from misfueling; or

(b) Costs associated with the repair or replacement of the exhaust system or any of its components.

(c) Costs associated with the emissions test or any costs due to lost time, travel or inconvenience.

(d) Costs of labor performed in other than a Certified Emissions Repair Facility by or under the supervision of a Certified Emissions Repair Technician.

10.39.6.3 The Division shall evaluate each waiver application, examine the vehicle for verification of repairs and the presence of required emissions control devices, and may issue a certificate of waiver if the owner has acted in good faith to bring the vehicle into compliance and has in fact complied with the provisions of this Ordinance.

10.39.6.4 The Division may grant a time extension to a waiver applicant so that additional repairs may be obtained or to adequately evaluate and verify the contents of the waiver application.

10.39.6.5 A certificate of waiver may be issued only by the Division.

10.39.6.6 The Division may grant a time extension for a vehicle registered in the

County but operated in or assigned to an area outside of the County. The vehicle owner shall present the vehicle for inspection upon its return to the County.

10.39.6.7 The Division may enter into an agreement with the Utah Auto Dealers Association to facilitate testing and registration of vehicles recently purchased by Davis County residents from automobile dealerships outside of Davis County.

11.0 TESTING AND PERMITTING OF APPLICANTS FOR CERTIFIED EMISSIONS TESTERS AND CERTIFIED EMISSION REPAIR TECHNICIANS FOR ENHANCED BASIC I/M INSPECTIONS.

11.1 Permit Required.

11.1.1 No person shall perform any part of the official emissions inspection for the issuance of a Certificate of Compliance unless the person possesses a valid Certified Emissions Tester or Certified Emission Repair Technician Permit issued by the Division.

11.1.2 Applications for a Certified Emissions Tester or Certified Emission Repair Technician Permit shall be made upon a form to be prescribed by the Division. No Permit shall be issued unless the applicant has shown adequate competence by successfully completing the written and practical portions of the Permit requirements as specified in this Ordinance.

11.1.3 An applicant shall comply with all of the terms stated in the permit application and with all the requirements of this Ordinance.

11.1.4 An applicant shall complete a Division approved training course and shall demonstrate knowledge and skill concerning the performance of emissions inspections and adjustment of vehicles to manufacturer's specifications. Such knowledge and skill shall be shown by passing:

11.1.4.1 A written qualification test including knowledge of the following:

(a) Operation and purposes of emission control systems;

(b) Relationship of HC, NO_x and CO to timing and carburetor adjustment;

(c) Adjustment to manufacturer's and high altitude specifications;

(d) Inspection procedures as outlined in this Ordinance;

(e) Operation of an exhaust gas analyzer including the performance of a gas calibration and leak check;

(f) The provisions of Section 207(b) warranty provisions of the Federal Clean Air Act; and

(g) Knowledge of the function of Onboard Diagnostics, pressure tests and NO_x emission control equipment functional tests.

(h) The provisions of this Ordinance and other Division policies and procedures.

11.1.4.2 A performance qualification test including the following:

(a) Visual inspection and knowledge of the function of the required emission control equipment;

(b) Demonstration of skill in the proper use, care, maintenance, and calibration and leak checking of approved analyzers;

(c) Demonstration of ability to conduct the emissions inspection including a pressure test and/or NO_x emissions control equipment functional test if required by the Division;

(d) Demonstration of ability to adjust the engine system to manufacturer's and high altitude specifications; and

(e) Demonstration of ability to accurately and legibly complete the inspection forms.

11.1.5 A signed Hands-on Performance check sheet shall be necessary for successful completion of the Performance Qualification Test. The Hands-on Performance check sheet shall be signed by an instructor or other person approved by the Division.

11.1.6 The Division may issue the applicable Permit to an applicant upon the applicant's demonstration that he/she has successfully completed the applicable requirements of Section 16.0 of this Ordinance.

11.1.7 The permit shall be valid only at the Enhanced Basic I/M Program Station or Certified Emission Repair Facility where the Certified Emissions Tester or Certified Emission Repair Technician is presently employed. If the permittee is later employed at another Enhanced Basic I/M Program Station or Certified Emission Repair Facility, he/she shall notify the Division of the employment change. He/she shall also be required to be permitted there prior to performing any emissions tests. A separate permit number may be issued for use at the additional Enhanced Basic I/M Program Station as determined by the Division. Also, an additional permit fee may be charged. That permit will expire on the same date as the original.

11.2 Requalification Requirements for All Certified Emissions Testers and Certified Emission Repair Technicians.

11.2.1 Upon determination, by the Director, of the necessity of updating the qualifications for Certified Emissions Testers and Certified Emission Repair Technicians, they shall be required to requalify.

11.2.2 Certified Emissions Testers and Certified Emission Repair Technicians shall requalify annually. Failure to requalify within the required period of time shall result in suspension or revocation of the permit as described in this Ordinance.

11.3 Permit Expiration.

11.3.1 All Permits shall be issued annually and shall expire one year from the date of issuance. A permit shall be renewable sixty days prior to the date of its expiration.

11.3.2 It is the responsibility of the permittee to pursue the renewal of the permit.

12.0 EMISSIONS STANDARDS FOR MOTOR VEHICLE EXHAUST GASES.

12.1 In order to obtain a valid emissions Certificate of Compliance, exhaust emissions from a motor vehicle subject to an annual exhaust gas emission inspection shall not exceed the maximum concentrations for carbon monoxide (CO), nitrogen oxides (NO_x) and hydrocarbons (HC) as adopted in Appendix C of this Ordinance.

12.2 Maximum concentration cut points shall be determined by the Director and ratified by the County Commission as needed, to meet the National Ambient Air Quality Standards established by the Environmental Protection Agency and the applicable State Implementation Plan (SIP) adopted by the Utah State Air Quality Board. The established cut points shall remain in effect until changed by order of the County Commission. Any change in cut points shall be effective upon the first day of any calendar month designated by the County Commission. The Director shall recommend cut points to the County Commission for adoption by considering the following factors:

12.2.1 To provide for the required stringency;

12.2.2 The existing ambient air quality;

12.2.3 The requirements for air quality currently in effect as promulgated by the Environmental Protection Agency, the Utah State Department of Environmental Quality, and the Division. The cut points established shall be part of an overall program in accordance with EPA guidelines to achieve the required tailpipe reduction of CO, NO_x and HC from motor vehicles measured from the date this program is implemented;

12.2.4 The general level of emission control technology on vehicles registered in the county.

12.2.5 Population growth and other factors which may reasonably be expected to impact CO, NO_x and HC concentrations in the atmosphere.

12.2.6 The likelihood of a particular cut point to achieve desired air quality goals.

12.2.7 To ensure compliance with the requirements of Section 41-6-163.6 and Section 41-6-163.7, Utah Code Annotated, 1953, as amended.

12.3 Upon determining the appropriate cut points, the Director shall cause notice thereof to be issued to each Enhanced Basic I/M Program Station and to the public by publication at least once in a newspaper of general circulation in the county at least thirty days prior to the effective date. Such notice shall indicate that written comment on the proposed cut point levels will be received by the Director until fifteen days prior to the effective date of the cut points. The Director shall consider any timely submitted written comment and, should good cause appear, may alter or suspend the proposed cut points as appropriate. Otherwise, the proposed cut points shall take effect on the date determined by the Director. The action of the Director must then be ratified by the Davis County Commission.

12.3.1 The cut points are referenced in Appendix C to this Ordinance and may be amended pursuant to the provisions of Section 12.0 of this Ordinance.

13.0 CERTIFICATES OF COMPLIANCE AND WAIVERS.

13.1 For all vehicles, if a part or parts necessary to bring a vehicle into compliance is/are not available by the time the vehicle's registration is due, the owner/operator may obtain a signed form to that effect from a manufacturer, dealer, or Technician who has verified the non-availability of the part(s). The owner/operator shall then take such proof to the Division. The Director may issue a Temporary Waiver, for a period of time and under such conditions as he/she has determined, so that the vehicle may be registered. The owner shall have until the expiration of the time period specified by the Director to complete the necessary repairs or replacement, and submit a Certificate of Compliance or Waiver to the Director to verify that the part(s) have been installed and that the vehicle is in compliance with all provisions of this Ordinance. The Director is under no obligation to issue these Waivers.

13.2 Under certain conditions as determined by the Director, the Director may issue a Temporary Waiver enabling a vehicle to be registered. The person to whom the Temporary Waiver is issued shall comply with the conditions of the Temporary Waiver as agreed upon by a signed affidavit. Failure to comply with the affidavit shall be considered a violation of this Ordinance. The Director is under no requirement or obligation to issue these waivers.

13.3 Any vehicle that experiences any increase in all emissions levels shall not be eligible for an emissions repair waiver regardless of the amount spent in attempting to repair the vehicle.

13.4 Information regarding all performed repairs shall be entered into the appropriate data base of the analyzer prior to the vehicle being retested.

13.5 Certificates of Waiver shall only be issued by the Division unless the Division determines other acceptable methods of issuing the Waivers. A waiver shall only be issued after determining that the vehicle complies with the requirements of this Section for waiver issuance.

13.6 Prior to referring the owner to the Division for determining waiver eligibility, the Certified Emissions Tester or Certified Emission Repair Technician shall verify that the repair and eligibility requirements of this Section have been met and shall provide the vehicle owner with the required waiver referral form.

13.7 No person shall make, issue or knowingly use any imitation or counterfeit of an official Certificate of Compliance or Waiver or any other official program documents.

13.7.1 No person shall knowingly use stolen or counterfeit certificates.

13.8 Certificates of Compliance shall be purchased only from the Division.

13.9 No refund or credit shall be allowed for unused certificates, except as provided in Section 13.16.

13.10 Purchase of Certificates of Compliance.

13.10.1 Certificates of Compliance shall be purchased in person. Sales shall only be made to a representative of the Enhanced Basic I/M Program Station possessing an acceptable form of identification.

13.10.2 Certificates of Compliance shall be sold at the cost adopted by the Davis County Commission and referenced in Appendix B, in lots to be determined by the Division. The Division may limit the number of certificates purchased to the number that the Division feels can be secured and stored safely.

13.10.3 Certificates of Compliance shall not be sold, loaned, transferred, or given to any other Enhanced Basic I/M Program Station, or any unauthorized individual. The Enhanced Basic I/M Program Station shall at all times account for all Certificates that have been purchased by the station.

13.11 Certificates of Compliance shall only be issued after being printed by the approved analyzer printer dedicated to the printing of certificates. Completion of certificates by handwritten information or the use of a non-dedicated printer by any person other than the Division or Director is strictly prohibited. The Certificates shall be signed only after being printed by the dedicated printer and shall be signed immediately after printing.

13.12 Certificates of Compliance and Waiver shall not be issued until an inspection has been performed as required by this Ordinance.

13.13 All unused Certificates of Compliance shall be kept in a secure place at all times to prevent loss or theft.

> **13.13.1** Certificates of Compliance shall be used in sequential order by Enhanced Basic I/M Program Stations.

13.14 Certificates of Compliance found to be missing, stolen, or unaccounted for, shall be reported to the Division within twenty-four hours and the Enhanced Basic I/M Program Station shall cease performing emissions tests until an investigation by the Division has been completed and the Division authorizes the Enhanced Basic I/M Program Station to again begin testing.

13.15 Enhanced Basic I/M Program Stations shall have Certificates of Compliance on hand at all times.

13.16 Upon final cancellation, suspension or revocation of the I/M Program Permit of any Enhanced Basic I/M Program Station, the station owner, manager or other responsible person shall immediately surrender all unused Certificates of Compliance to the Division. The Division shall receipt and refund the fee paid for unused Certificates of Compliance to the station owner according to the Davis County Auditor's procedures. Upon transfer or termination of business ownership, the Enhanced Basic I/M Program Station permit and all Certificates of Compliance shall be immediately forwarded to the Division. Any person acquiring a business that has been permitted as an Enhanced Basic I/M Program Station, is prohibited from using any Permit or emissions Certificates issued to the former business.

> **13.16.1** Any analyzer manufacturer or their authorized representative who repossesses or otherwise removes an approved I/M analyzer from an Enhanced Basic I/M Program Station shall immediately notify the Division and shall immediately forward any Certificates of Compliance that may still be in the analyzer to the Division.

14.0 ADJUSTMENT PROCEDURES.

14.1 The following adjustments may be required if deemed necessary by the Division to further control CO emissions. If required by the Division, the following adjustments shall be performed on all 1980 and older vehicles (where applicable) that fail the I/M test. These adjustments, if required, must be performed by a Certified Emissions Tester or Certified Emission Repair Technician before a vehicle will be eligible for an emissions waiver.

14.2 The high altitude specifications for idle speed, idle air/fuel mixture, ignition timing, and dwell, shall be determined for the purpose of adjustment. If no high altitude specifications are available, the Technician/Tester shall refer to the emissions tune-up specification decal in the engine

compartment or sea level specifications taken from a suitable reference manual for proper specifications. Fuel control systems designed with sealed, tamper-resistant adjustment screws for air/fuel mixture shall be adjusted according to manufacturer's specifications and resealed. On vehicles that have limiter caps on the fuel control systems, the limiter caps shall be removed and the air/fuel ratio adjusted to meet manufacturer's specifications and the proper limiter caps shall be reinstalled. The adjustment procedures shall be as follows:

14.2.1 Failed vehicle readings of CO and HC shall be recorded before any adjustments are made;

14.2.2 The dwell, if applicable, shall be checked with a dwell meter to determine if it is within the recommended tolerance of ± 2 degrees of specifications. The dwell shall be reset if it exceeds this tolerance.

14.2.3 The idle speed shall be checked with a tachometer to determine if it is within + 50 rpm of the manufacturer's specifications. If it is not, it shall be set to within ± 50 rpm of the manufacturer's specifications;

14.2.4 The ignition timing shall be checked, using a timing light or engine analyzer, to determine if it is within +4 degrees to -2 degrees of the recommended setting while the engine is idling at the specified speed. If the timing exceeds this tolerance, it shall be adjusted until it falls within +4 degrees to -2 degrees of the recommended setting;

14.2.5 The idle air/fuel ratio shall be adjusted according to manufacturer's suggested procedures and/or specifications using an infrared analyzer, propane enrichment kit, or tachometer;

14.2.6 The choke shall be checked and adjusted according to manufacturer's suggested procedures and/or specifications, if the choke is not sealed;

14.2.7 After completing the preceding steps, the idle speed shall be readjusted to manufacturer's specifications;

14.2.8 The performed adjustments shall be entered in the required data base of the analyzer if required by the Division.

14.2.9 If the adjustments are required by the Division, A maximum charge will be adopted as part of Appendix B of this Ordinance.

14.3 The Vehicle shall then be retested and if it continues to fail, other repairs shall be performed as necessary or waiver procedures should be followed if the vehicle qualifies.

15.0 ENGINE SWITCHING

15.1 Engine Switching shall be allowed only in accordance with E.P.A. policy.

15.2 Vehicles not meeting the requirements of Section 15 shall be deemed as tampered and dealt with in accordance with the Tampering provisions of this Ordinance.

15.3 All 1984 and newer vehicles with switched engines shall be verified to meet E.P.A. requirements by the Division prior to issuance of a Certificate of Compliance.

15.4 For 1968 to 1983 vehicles, having an engine other than the original engine and emission control configuration are deemed as tampered. These vehicles must meet the HC and CO standards for the Model Year of the vehicle in order to receive a Certificate of Compliance, and are not eligible for a Certificate of Compliance - Waiver, unless they are restored to the original engine and emission control configuration or a configuration approved by the Division.

16.0 Certified Emissions Tester and Certified Emission Repair Technician.

16.1 Certified Emissions Tester.

16.1.1 To qualify for this permit, an individual shall:

(a) Possess current, valid permit as an Inspector/Mechanic under Davis County ordinances in effect prior to the start up of the Enhanced I/M Testing Program;

(b) Complete Division required bridge course; or

(c) Meet all of the following requirements:

(1) Demonstrate 2 years full-time employment experience as an automotive technician performing emissions related repairs on on-road vehicles not powered by diesel fuel or electricity, except that a person with 2 full years of full-time education related to the repair of on-road vehicles not powered by diesel fuel or electricity need only demonstrate 1 year of the required employment; and

(2) Complete the Division required bridge course; and

(3) Comply with the applicable requirements of Section 11.0 of this Ordinance; and

(4) Meet any other requirements deemed by the Division to be essential to the purposes of this Ordinance.

16.1.2 After application, approval by the Division, and on payment of applicable fees, The Certified Emissions Tester Permit shall be issued to the applicant. The

Permit is valid for one year from its date of issue. It may be renewed beginning sixty (60) days prior to the expiration date. If the permit is allowed to expire, the Division may impose a penalty fee prior to renewal.

16.1.3 In order to qualify for renewal of a Certified Emissions Tester Permit, the permittee must have payed applicable fees, completed Division Approved yearly update schooling and any other requirements of this ordinance or the Division.

16.1.4 The permit fee schedule is found in Appendix B of this Ordinance.

16.2 Certified Emissions Repair Technician.

16.2.1 To qualify for this permit, an individual shall:

(a) Demonstrate 5 years full-time employment experience as an automotive technician performing emissions related repairs on on-road vehicles not powered by diesel fuel or electricity, except that a person with 2 full years of full-time education related to the repair of on-road vehicles not powered by diesel fuel or electricity need only demonstrate 4 years of the required employment; and

(b) Possess a valid Certified Emissions Tester Permit; and

(c) Possess all of the following current, valid ASE certifications:

(1) Engine Performance (A-8), and

(2) Advanced Engine Performance Specialist (L-1); and

(d) Complete 32 hour , Division approved Enhanced I/M Failure course

(e) Comply with the applicable requirements of Section 11.0 of this Ordinance;

(f) Meet any other requirements deemed by the Division to be essential to the purposes of this Ordinance.

16.2.2 In order to retain the Certified Emission Repair Technician Permit and to qualify for renewal, the permittee must maintain a current ASE L-1 Certification and complete yearly update schooling as required and approved by the Division.

16.2.3 An individual qualifying for a permit as specified in Section 16.2 of this Ordinance may submit an application to the Division. Upon approval of the application and payment of applicable fees, the Division shall issue the permit. The

permit is valid through the earliest of the following dates:

(a) Three (3) years from the date the permit is issued;

(b) The expiration date of the individual's ASE Engine Performance (A-8) certification; or

(c) The expiration date of the individual's ASE Advanced Engine Performance Specialist (L-1) certification.

16.2.4 The permit fee schedule is found in Appendix B of this Ordinance.

16.3 Permit Renewal.

16.3.1 An individual with current, valid permit as issued under Sections 16.1 and 16.2 of this Ordinance may apply for permit renewal beginning 60 days prior to permit expiration. If the permit is allowed to expire, the Division may impose a penalty fee prior to renewal.

16.3.2 To renew a permit, an individual shall:

(a) Submit an application to the Division; and

(b) Possess current, valid applicable ASE certifications as required by this Ordinance.

16.3.3 The permit renewed under this section is valid through the applicable date defined in Section 16.1.2 or 16.2.3 of this Ordinance.

16.3.4 The permit fee schedule is found in Appendix B of this Ordinance.

16.4 Suspension, Revocation, and Denial of Permit.

16.4.1 The Division may suspend, revoke, or deny renewal of a permit if the Certified Emission Repair Technician or Certified Emissions Tester:

(a) Knowingly communicates any false, inaccurate, or misleading information to any person or in any certificate, record, or document regarding the vehicle emissions inspection program;

(b) Fraudulently or deceptively obtains or attempts to obtain a permit;

(c) Fails an audit under this Ordinance;

(d) Conducts a fraudulent or in-accurate test;

(e) Consistently fails to repair failed vehicles; and/or

(f) Threatens, coerces, cajoles, offers a bribe, assaults, harangues, and/or stalks a Division employee pursuant to his/her duties with the Division.

16.4.2 An individual whose permit has been suspended may be subject to:

(a) Additional training or testing as approved by the Division before the permit is reinstated; or

(b) Revocation of a permit after repeated suspensions or when a suspension has exceeded 6 months.

(c) A permit may also be revoked for gross violations of this ordinance and for threatening, cajoling, harassing, stalking or assaulting an employee of the Division or any person having a vehicle tested or repaired subsequent to any requirement of this Ordinance.

16.4.3 An individual whose permit has been revoked may reapply for a permit according to the procedures of Section 16.1 or 16.2 of this Ordinance, as applicable, if:

(a) At least 90 days have elapsed since the revocation; and

(b) The individual has taken corrective action approved by the Division.

16.4.4 A penalty schedule in Appendix D of this Ordinance enumerates many of the actions the Division may take against persons permitted under this Ordinance.

16.5 Performance Audit. The Division shall conduct an audit of the performance of a Certified Emissions Repair Technician periodically. The audit will include an evaluation of vehicle repair history.

16.5.1 The repair history of a Certified Repair Technician may be made available to the public so that they may have the ability to determine which technicians are most likely to repair their vehicle.

17.0 Certified Emissions Repair Facility.

17.1 Initial Application and Permit.

17.1.1 To qualify for a permit a person shall:

(a) Submit an application to the Division;

(b) Maintain a repair facility capable of making emissions related adjustments and repairs;

(c) Possess all required equipment as listed in Section 17.4 of this Ordinance;

(d) Pass an audit as defined in Section 17.7 of this Ordinance; and

(e) Employ all required personnel as listed in Section 17.5 of this Ordinance.

(f) Meet any other requirements deemed by the Division to be essential to the purposes of this Ordinance.

17.1.2 Permit under this section must be renewed each anniversary of the date the permit was first obtained.

17.1.3 The permit fee schedule is found in Appendix B of this Ordinance.

17.2 Permit Renewal.

17.2.1 Beginning sixty (60) days prior to expiration of a permit, a person may apply for permit renewal. Upon approval of the completed application and payment of applicable fees, the Division may extend the permit for an additional 1 year period.

17.2.2 The Division may impose a penalty fee on a permit which expires prior to receipt of the application for renewal and payment of applicable fees.. After six (6) months, an unrenewed permit is deemed unredeemable and the person may reapply according to the procedures of Section 17.1 of this Ordinance.

17.2.3 The permit fee schedule is found in Appendix B of this Ordinance.

17.3 Suspension, Revocation, and Denial of Renewal of Permit.

17.3. The Division may suspend, revoke, or deny renewal of a permit under any of the following conditions:

(a) False, inaccurate, or misleading information is knowingly communicated to any person or in any certificate, record, or document regarding the vehicle emissions inspection program;

(b) The permit is obtained, or attempted to be obtained, fraudulently or deceptively;

(c) An audit under Section 17.7 of this Ordinance is failed; or

(d) Evidence is exhibited that vehicles repaired by the facility under this Ordinance have repeatedly failed reinspection.

(e) A permit may also be revoked for gross violations of this ordinance by the owner or employees of a Certified Emission Repair Facility and for threatening, cajoling, harassing, stalking or assaulting an employee of the Division or any person having a vehicle tested or repaired subsequent to any requirement of this Ordinance.

17.3.2 The Division may reinstate a suspended permit upon compliance by the facility with the requirements of this Ordinance.

17.3.3 Upon revocation of a permit a person shall, within 10 business days, return to the Division all materials which were issued as a result of obtaining the permit, including any signs and documents, and remove any other materials which may lead the public to believe that the facility continues to be permitted.

17.3.4 A person whose permit has been revoked may reapply for a permit according to the procedures of Section 17.1 of this Ordinance if:

(a)At least 90 days have elapsed since the revocation; and

(b)Corrective action approved by the Division has been taken.

17.3.5 A penalty schedule in Appendix D of this Ordinance enumerates many of the actions the Division may take against persons permitted under this Ordinance.

17.4 Equipment and Tool Requirements.

17.4.1 A certified emissions repair facility shall maintain and update as required all of the following references, equipment and tools:

(a) Emissions diagnostic and repair information for affected model year vehicles, the most current of which applies to vehicles of model years no more than 2 years older than the current calendar year. The information may be stored on magnetic media if a device to read the media is maintained at the facility;

(b) Scanner capability to interrogate on board diagnostics of vehicles, the most current of which applies to vehicles of model years no more than 2 years older than the current calendar year;

(c) A voltmeter with AC and DC capability;

(d) A DC ammeter;

(e) An ohmmeter;

(f) An engine performance analyzer with a lab scape, or an oscilloscope;

(g) A pyrometer;

(h) A fuel or hydraulic pressure gauge;

(I) A vacuum gauge;

(j) A vacuum pump;

(k) A compression tester or cylinder leak down tester;

(l) A timing light with advance capability;

(m) An exhaust emissions analyzer which conforms, at a minimum, to the analyzer specifications of Appendix A;

(n) A tachometer;

(o) A dwell meter or duty cycle meter;

(p) Capability to access information via facsimile during operating hours;

(q) Division approved fuel system and fuel cap pressure testing equipment; and

(r) Division approved EGR valve function testing equipment.

(s) Sufficient communication links to comply with the Divisions real-time monitoring requirements.

17.5 Personnel Requirements.

17.5.1 A certified emissions repair facility shall ensure that only a Certified Emissions Repair Technician diagnoses emissions related faults, and supervises or performs emissions related repairs and adjustments to bring vehicles into compliance with the provisions of this Ordinance.

17.5.2 A certified emissions repair facility shall employ at least one full-time Certified Emissions Repair Technician at each certified emissions repair facility location and ensure that a Certified Emissions Repair Technician:

(a) Is routinely scheduled to work during the advertised operating hours of the facility; and

(b) Fills out completely the vehicle repair form and certifies by signature on the vehicle repair form that the repairs have been performed or supervised by a Certified Emissions Repair Technician.

17.6 Equipment Quality Assurance. For all equipment required under this Ordinance, a certified emissions repair facility shall follow, at a minimum, the manufacturer specifications for maintenance and calibration, and the procedures established by the Division.

17.7 Audits.

17.7.1 A certified emissions repair facility shall allow access to Division personnel to conduct audits of the facility. Audits will be conducted at random and with no prior notification.

17.7.2 An audit will include a review of vehicle repair history and checks of record keeping, equipment, calibration gas, and compliance with personnel requirements.

17.7.3 Audit failure is cause for suspension, revocation, denial or denial of renewal of a facility permit.

17.7.4 Uncooperative or abusive behavior by an employee, representative, or individual at a certified emissions repair facility is cause for audit failure.

17.7.5 A certified emissions repair facility shall not use any piece of equipment which fails an audit until a subsequent audit is passed.

17.7.6 A Certified Emissions Repair Technician shall be present for the audit. An audit is failed if a Certified Emissions Repair Technician who is present at the facility fails to commence the audit within 30 minutes of the arrival of an auditor.

17.7.7 The person responsible for a Certified Emissions Repair Facility shall allow further monitoring at the discretion of the Division to ensure quality control or to determine compliance with this Ordinance.

17.8 Record Keeping.

17.8.1 A certified emissions repair facility shall maintain the following records, separately and in chronological order, for a period of 3 years, at the facility or at an alternative location approved by the Division:

(a) Records of quality assurance procedures in compliance with the provisions of this Ordinance;

(b) Records of audits conducted by the Division; and

(c) Vehicle repair records of all vehicles repaired in the facility subsequent to an emissions test failure.

17.8.2 A certified emissions repair facility shall make the records available for inspection or for duplication upon request of the Division.

18.0 RIGHT TO APPEAL.

Within 10 calendar days after the Division has given a notice of violation(s), permit denial, revocation, or suspension, any person(s) aggrieved may request in writing a hearing before the Division. Only a written request for hearing shall be honored by the Division. The hearing shall take place within 10 calendar days after the request is received. A written notice of the Hearing Officer's final determination shall be given within 10 calendar days after adjournment of the hearing. The Hearing Officer may sustain, modify, enhance or reverse the action or order.

19.0 PENALTY.

19.1 Any person who violates any of the provisions of this Ordinance, either by failing to do those acts required herein or by doing a prohibited act, shall be punishable by a maximum fine of one thousand dollars ($1,000.00) or by imprisonment not to exceed six (6) months or by both such fine and imprisonment in the discretion of the court in addition to any administrative or civil penalties the Division deems appropriate.

19.2 Each day such violation is committed or permitted to continue shall constitute a separate violation.

19.2.1 The imposition of a penalty under the provisions of this Ordinance shall not prevent the revocation or suspension of any license or permit granted under the provisions or this Ordinance or preclude any other administrative or civil penalty.

19.3 The County Attorney, may initiate legal action, civil or criminal, requested by the Division to abate any condition that exists in violation of this Ordinance.

19.4 In addition to other penalties imposed by a court of competent jurisdictions, any person(s) found

guilty of violating any provision of this Ordinance shall be liable for all expenses incurred by the Division arising from the violation or enforcement of this Ordinance.

19.5 A Penalty Schedule for permit warning, suspension, or revocation shall be adopted as Appendix D or this Ordinance and may be amended by the Davis County Commission deemed necessary to accomplish the purposes of this Ordinance.

19.6 The Director may, at his/her discretion, negotiate monetary penalties in leu of some or all of the time of permit suspensions allowed in Appendix D of this Ordinance.

20.0 BACKSTOP PROVISIONS.

The backstop provisions in this program are to require additional model years (1981 model year and newer, up to one half of the fleet annually), if and when necessary, to be tested at an I/M240 centralized testing facility sufficient to meet and maintain the ambient air standards.

21.0 QUALITY ASSURANCE.

A minimum of one-tenth of one percent (0.1%) representative sample of the Davis County Vehicle Fleet will be tested in an I/M 240 lane prior to January 1, 1998 to be used for statistical analysis of the effectiveness of the DC98 Program.

22.0 SEVERABILITY.

If any provision, clause, sentence, or paragraph of this Ordinance or the application thereof to any person or circumstances shall be held to be invalid, such invalidity shall not affect the other provisions or applications of this Ordinance. The valid part of any clause, sentence, or paragraph of this Ordinance shall be given independence from the invalid provisions or application and to this end the provisions of this Ordinance are hereby declared to be severable.

23.0 AUDITING AND REPORTING.

The Division shall perform overt and covert audits of the Enhanced Basic I/M Program Stations and shall conform with the reporting requirements as contained in Part VII Environmental Protection Agency, 40 CFR Part 51.

24.0 EFFECTIVE DATE.

The Ordinance becomes effective on January 1, 1998 with the exception of the OBD II requirement which becomes effective January 1, 1997, and the Appendices to this Ordinance which become effective on the date(s) specified during the enactment of each appendix.

Passed this 9th day of October 1996.

Commissioner McConkie Voting - Absent

Commissioner Page Voting - I

Commissioner Stevenson Voting - I

Gayle Stevenson, Chairman
Davis County Commission

Attest:

Margene Isom
Clerk/Auditor

Approved as to Form:

Melvin Wilson
Davis County Attorney

APPENDIX A
DC98 ANALYZER SPECIFICATIONS

APPENDIX B
FEE SCHEDULE

The assessed fees assessed by the Division shall be:

Permitting of an Enhanced Basic I/M Program Station $250.00

Annual Renewal of Enhanced Basic I/M Program Station Permit $25.00

Annual Renewal of Expired Enhanced Basic I/M Program Station Permit $75.00

Permitting an Enhanced Basic I/M Program Station at a New Location $50.00

Permitting of a Certified Emission Repair Facility* $250.00

Renewal of a Certified Emission Repair Facility Permit* $25.00

Renewal of an expired Certified Emission Repair Facility Permit* $75.00

Clearing Technician/Tester Error Lockout (After 3rd/calendar year) $25.00

Permitting a Certified Emissions Tester $20.00

Annual Renewal of a Certified Emission Tester Permit $10.00

Annual Renewal of Expired Certified Emission Tester Permit $30.00

Permitting of a Certified Emission Repair Technician ** $30.00

Renewal of a Certified Emission Repair Technician Permit ** $20.00

Renewal of an Expired Certified Emission Repair Technician Permit ** $40.00

Emissions Certificate of Compliance $2.25

Emissions Inspection Fee (County) 15.00

Emissions Inspection Fee (Private) ..... up to $20.00

Additional Waiver Cost for 1983 and older vehicles $0.00

Additional Waiver Cost for 1984 and newer vehicles $0.00

Enhanced I/M Inspection $15.00

Safety Inspection $10.00

*Includes Enhanced Basic I/M Program Station Permit.
**Includes Tester Permit.

Effective Date To Be Determined by the Division

APPENDIX C
DAVIS COUNTY
EMISSION STANDARDS
CUT POINTS

MOTOR VEHICLE EMISSIONS INSPECTION/MAINTENANCE PROGRAM

The following schedule gives the maximum allowable concentrations for carbon monoxide (CO) and hydrocarbons (HC) for both cars and trucks as determined by an approved infrared gas analyzer using the prescribed procedures. The effective date for these cut points is JULY 1, 1995.

ALL PASSENGER VEHICLES
1978 AND OLDER LIGHT DUTY TRUCKS 6,000 POUNDS GVWR OR LESS
1979 TRUCKS AND NEWER 8,500 POUNDS GVWR OR LESS
MAXIMUM CONCENTRATION STANDARDS

MODEL YEAR	PERCENT CARBON MONOXIDE	PARTS / MILLION HYDROCARBONS
1968-1969	6.0	800
1970-1974	5.0	700
1975-1976	4.0	600
1977-1979	3.0	500
1980	2.0	300
1981 and newer	1.2	220

HEAVY DUTY TRUCKS AND VANS
1978 AND OLDER 6,001 AND OVER GVWR
1979 AND NEWER OVER 8,500 POUNDS GVWR
AND ALL 1967 AND OLDER VEHICLES
MAXIMUM CONCENTRATION STANDARDS

1969 and older	7.0	1500
1970-1978	5.0	1200
1979-1980	4.0	1000
1981 and newer	3.5	800

The minimum dilution factor must also be reached as part of the testing requirement. The dilution factor is contained in the analyzer specifications in Appendix A and is updated as deemed necessary.

NOTE: These should be considered as "cut points" for maximum allowable emissions levels. Vehicles must never be reset to these emission levels when readjustments are made, but rather shall be adjusted using manufacturer's specifications. By using manufacturer's specifications, the emissions levels should be well below the "cut points."

II. Exhaust Emissions Standards for Enhanced I/M inspections.

(1) If the corrected, composite emission rates calculated exceed standards for any exhaust component, additional analysis of test results shall look at the second phase of the driving cycle separately. Phase 2 shall include second 94 through second 239. Second-by-second emission rates in grams, and composite emission rates in grams per mile for Phase 2 and for the entire test shall be recorded for each gas. For any given exhaust component, if the composite emission level is equal to or below the composite standard or if the Phase 2 grams per mile emission level is equal to or below the applicable Phase 2 standard, then the vehicle shall pass the test for that exhaust component.

(2) Composite Exhaust Emissions Standards. Except as provided in Section II of this Appendix, exhaust emissions, in grams per mile traveled, of hydrocarbons (HC), carbon monoxide (CO), and oxides of nitrogen (NO_x) from a vehicle shall not exceed the following values for the composite exhaust emissions test specified in Section 10 of this Ordinance for the indicated vehicle type or vehicle weight:

(a) For an initial inspection performed the First Year of the Program:

(1) Light Duty Vehicles

Model Years	Hydrocarbons		Carbon Monoxide		Oxides of Nitrogen	
	Composite	Phase 2	Composite	Phase 2	Composite	Phase 2
1994+Tier1	0.80	0.50	15.0	12.0	2.0	{Reserved}
1991-1995	1.20	0.75	20.0	16.0	2.5	{Reserved}
1983-1990	2.00	1.25	30.0	24.0	3.0	{Reserved}
1981-1982	2.00	1.25	60.0	48.0	3.0	{Reserved}

(2) High-altitude Light Duty Vehicles

Model Years	Hydrocarbons	Carbon Monoxide	Oxides of Nitrogen

	Composite	Phase 2	Composite	Phase 2	Composite	Phase 2
1983-1984	2.00	1.25	60.0	48.0	3.0	{Reserved}
1982	2.00	1.25	75.0	60.0	3.0	{Reserved}

(3) Light Duty Trucks 1 (less than 6000 pounds GVWR)

Model Years	Hydrocarbons		Carbon Monoxide		Oxides of Nitrogen	
	Composite	Phase 2	Composite	Phase 2	Composite	Phase 2
1994+Tier1						{Reserved}
(<3750LVW)	0.80	0.50	15.0	12.0	2.0	{Reserved}
(>3750LVW)	1.20	0.63	20.0	16.0	2.5	{Reserved}
1991-1995	2.40	1.50	60.0	48.0	3.0	{Reserved}
1988-1990	3.20	2.00	80.0	64.0	3.5	{Reserved}
1981-1983	7.50	5.00	100	80.0	7.0	{Reserved}

(4) High-altitude Light Trucks 1 (less than 6000 pounds GVWR)

Model Years	Hydrocarbons		Carbon Monoxide		Oxides of Nitrogen	
	Composite	Phase 2	Composite	Phase 2	Composite	Phase 2
1991+	3.00	2.00	70.0	56.0	3.0	{Reserved}
1988-1990	4.00	2.50	90.0	72.0	3.5	{Reserved}
1984-1987	4.00	2.50	90.0	72.0	7.0	{Reserved}
1982-1983	8.00	5.00	130	104	7.0	{Reserved}

(5) Light Duty Trucks 2 (greater than 6000 pounds GVWR)

Model Years	Hydrocarbons	Carbon Monoxide	Oxides of Nitrogen

	Composite	Phase 2	Composite	Phase 2	Composite	Phase 2
1994+Tier1						{Reserved}
(<5750LVW)	1.00	0.63	20.0	16.0	2.5	
(>5750LVW)	2.40	1.50	60.0	48.0	4.0	{Reserved}
1991-1995	2.40	1.50	60.0	48.0	4.5	
1988-1990	3.20	2.00	80.0	64.0	5.0	{Reserved}
1984-1987	3.20	2.00	80.0	64.0	7.0	
1981-1983	7.50	5.00	100	80.0	7.0	{Reserved}{Reserved}
						{Reserved}{Reserved}

(6) High-altitude Light Trucks 2 (greater than 6000 pounds GVWR)

Model Years	Hydrocarbons		Carbon Monoxide		Oxides of Nitrogen	
	Composite	Phase 2	Composite	Phase 2	Composite	Phase 2
1991+	3.00	2.00	70.0	56.0	4.5	{Reserved}
1988-1990	4.00	2.50	90.0	72.0	5.0	
1984-1987	4.00	2.50	90.0	72.0	7.0	{Reserved}
1982-1983	8.00	5.00	130	104	7.0	{Reserved}
						{Reserved}

(b)For an initial inspection performed the Second Year of the Program and thereafter:

(1) Light Duty Vehicles

Model Years	Hydrocarbons	Carbon Monoxide	Oxides of Nitrogen

	Composite	Phase 2	Composite	Phase 2	Composite	Phase 2
1994+Tier1	0.60	0.40	10.0	8.0	1.5	{Reserved}
1983-1995	0.80	0.50	15.0	12.0	2.0	{Reserved}
1981-1982	0.80	0.50	30.0	24.0	2.0	{Reserved}

(2) High-altitude Light Duty Vehicles

Model Years	Hydrocarbons		Carbon Monoxide		Oxides of Nitrogen	
	Composite	Phase 2	Composite	Phase 2	Composite	Phase 2
1983-1984	1.20	0.75	30.0	24.0	2.0	{Reserved}
1982	1.20	0.75	45.0	36.0	2.0	{Reserved}

(3) Light Duty Trucks 1 (less than 6000 pounds GVWR)

Model Years	Hydrocarbons		Carbon Monoxide		Oxides of Nitrogen	
	Composite	Phase 2	Composite	Phase 2	Composite	Phase 2
1991+Tier1						{Reserved}
(<3750LVW)	0.60	0.40	10.0	8.0	1.5	{Reserved}
(>3750LVW)	0.80	0.50	13.0	10.0	1.8	{Reserved}
1988-1995	1.60	1.00	40.0	32.0	2.5	{Reserved}
1984-1987	1.60	1.00	40.0	32.0	4.5	{Reserved}
1981-1983	3.40	2.00	70.0	56.0	4.5	{Reserved}{Reserved}

(4) High-altitude Light Trucks 1 (less than 6000 pounds GVWR)

Model Years	Hydrocarbons	Carbon Monoxide	Oxides of Nitrogen

	Composite	Phase 2	Composite	Phase 2	Composite	Phase 2
1988+	2.00	1.25	60.0	48.0	2.5	{Reserved}
1984-1987	2.00	1.25	60.0	48.0	4.5	{Reserved}
1982-1983	4.00	2.50	90.0	72.0	4.5	{Reserved}

(5) Light Duty Trucks 2 (greater than 6000 pounds GVWR)

Model Years	Hydrocarbons		Carbon Monoxide		Oxides of Nitrogen	
	Composite	Phase 2	Composite	Phase 2	Composite	Phase 2
1994+Tier1						{Reserved}
(<5750LVW)	0.80	0.50	13.0	10.0	1.8	{Reserved}
(>5750LVW)	0.80	0.50	15.0	12.0	2.0	{Reserved}
1988-1995	1.60	1.00	40.0	32.0	3.5	{Reserved}
1984-1987	1.60	1.00	40.0	32.0	4.5	{Reserved}
1981-1983	3.40	2.00	70.0	56.0	4.5	{Reserved}

(6) High-altitude Light Trucks 2 (greater than 6000 pounds GVWR)

Model Years	Hydrocarbons		Carbon Monoxide		Oxides of Nitrogen	
	Composite	Phase 2	Composite	Phase 2	Composite	Phase 2
1988+	2.00	1.25	60.0	48.0	3.5	{Reserved}
1984-1987	2.00	1.25	60.0	48.0	4.5	{Reserved}
1982-1983	4.00	2.50	90.0	72.0	4.5	{Reserved}

APPENDIX D

PENALTY SCHEDULE

Violation	1st Occurrence	2nd Occurrence	3rd Occurrence	4th Occurrence
Failure to Inspect	Up To 6 month suspension (Station) Revocation (Technician/ Tester)	Revocation (Station & Technician/Tester)		
Non-certified I/M Technician/Tester or intentional pass of a failing vehicle	Up to 6 month suspension (Station & Technician/Tester)	Revocation (Station & Technician/Tester)		
Pass failed vehicle or recording pass for tampering on tampered vehicle	Up to 3 month suspension (Station & Technician/Tester)	Up to 6 month suspension (Station & Technician/Tester)	Revocation (Station & Technician/Tester)	
Fail passing vehicle	Up to 3 month suspension (Station & Technician/Tester)	Up to 6 month suspension (Station & Technician/Tester)	Revocation (Station & Technician/Tester)	

Inaccurate or incomplete data or performing unauthorized repairs	Formal Warning (Station &/or Technician/ Tester)	Up to 1 month suspension (Station & Technician/ Tester)	Up to 3 month suspension (Station & Technician/Tester)	Revocation (Station & Technician/ Tester)

Permit suspensions may be reduced in length by a negotiated consent agreement which may substitute monetary penalties for part or all of the suspension time. Negotiated Consent Agreements are applicable to all suspensions of permits issued under the provisions of this Ordinance.

These penalties apply to all permits issued pursuant to this Ordinance.

APPENDIX E

CRITERIA FOR DETERMINING VEHICLES REQUIRING ENHANCED I/M PROGRAM TESTING

During calendar year 1998, Vehicle model year 1986, 1989 and 1992 and 1994 and newer vehicles equipped with OBD II will be tested at the Enhanced I/M Program Station at 510 W. Old Mill Lane, Kaysville, Utah.

APPENDIX F

DESCRIPTION AND PERFORMANCE OF GAS CAP PRESSURE CHECK, FUEL SYSTEM PRESSURE CHECK AND NOx CONTROL EQUIPMENT FUNCTION TEST.