UTAH STATE IMPLEMENTATION PLAN

SECTION X

VEHICLE INSPECTION AND MAINTENANCE PROGRAM

Part F

Cache County

Adopted by the Utah Air Quality Board
November 6, 2013

Table of Contents

1. Applicability 1
2. Description of Cache I/M Programs 1
3. I/M SIP Implementation 3

SECTION X Part F
Cache County Emission Inspection/ Maintenance Program
APPENDICES

1. Cache County Emission Inspection/ Maintenance Program Ordinance 2013-04
2. Bear River Health Department Regulation 2013-1

UTAH STATE IMPLEMENTATION PLAN
SECTION X, PART F
VEHICLE INSPECTION AND MAINTENANCE (I/M) PROGRAM

1. Applicability

Cache County I/M program requirements: Cache County was designated nonattainment for the $PM_{2.5}$ National Ambient Air Quality Standard (NAAQS) on December 14, 2009 (74 FR 58688, November 13, 2009). Accordingly, Cache County must implement control strategies to attain the $PM_{2.5}$ NAAQS. A motor vehicle emission inspection and maintenance (I/M) program has been identified by the $PM_{2.5}$ State Implementation Plan (SIP) as a necessary control strategy to attain the $PM_{2.5}$ NAAQS as expeditiously as practicable. Therefore, pursuant to Utah Code Annotated 41-6a-1642, Cache County must implement an I/M program that complies with the minimum requirements of 40 CFR Part 51 Subpart S. Cache County will implement its I/M program county-wide. Parts A and F of Section X demonstrate compliance with 40 CFR Part 51 Subpart S for Cache County.

2. Description of Cache I/M Programs

Below is a summary of Cache County's I/M program. Section X, Part F Appendices 1 and 2 contain the essential documents for Cache County's I/M program.

Network Type: Cache County's I/M program will comprise of a decentralized test-and-repair network.

Test Convenience: Cache County will make every effort to ensure that its citizens will have stations conveniently located throughout Cache County. Specific operating hours are not specified by the county; however, its Regulation requires that stations be open and available to perform inspections during a major portion of normal business hours of 8:00 a.m. to 5:00 pm Mondays through Fridays.

Subject fleet: All model year 1969 and newer vehicles registered or principally-operated in Cache County are subject to the I/M program except for exempt vehicles.

Station/inspector Audits: Cache County's I/M program will regularly audit all permitted I/M inspectors and stations to ensure compliance with county I/M ordinances, regulations, and policies. Particular attention will be given to identifying and correcting any fraud or incompetence with respect to vehicle emissions inspections. Compliance with recordkeeping, document security, analyzer maintenance, and program security requirements will be scrutinized. The Cache County I/M program will have an active covert compliance program to minimize potential fraudulent testing.

Waivers: Cache County's I/M program allows for the issuance of waivers under limited circumstances. The procedure for issuing waivers is specified in Cache County's I/M regulation provided in Section 9.6 of Appendix 2 of this part of the SIP and meets the minimum waiver issuance criteria specified in 40 CFR Subparts 51.360.

Test frequency: Vehicles less than six years old as of January 1 on any given year will be exempt from an emissions inspection. All model year 1969 and newer vehicles are subject to a biennial test.

Test Equipment: Specifications for the I/M test procedures, standards and analyzers are described in Cache County's I/M regulation provided in Appendix 2. Specifications for the test procedure and equipment were developed according to good engineering practices to ensure test accuracy. Analyzer calibration specifications and emissions test procedures meet the minimum standards established in Appendix A of the EPA's I/M Guidance Program Requirements, 40 CFR Part 51 Subpart S.

Test Procedures:

- The following vehicles are subject to an on-board diagnostic (OBD) II inspection:
    - 1996 and newer light duty vehicles[1] and
    - 2008 and newer medium duty vehicles[2]
- The following vehicles are subject to a two-speed idle test that is compatible with Section VI (Preconditioned Two Speed Idle Test) in Appendix B of the EPA I/M Guidance Program Requirements, 40 CFR 51, Subpart S:
    - 1995 and older vehicles,
    - 1996 to 2007 medium and heavy duty vehicles[3] and
    - 2008 and newer heavy duty vehicles.

Test procedures are outlined in Appendix 2 of this part of the SIP

1 Light duty vehicles have a Gross Vehicle Weight of 8500 lbs or less.
2 Medium duty vehicles have a Gross Vehicle Weight greater than 8500 lbs but less than 14,000 lbs
3 Heavy Duty vehicles have a Gross Vehicle Weight greater 14,000 lbs

3. I/M SIP Implementation

The I/M program ordinance, regulations, policies, procedures, and activities specified in this I/M SIP revision shall be implemented by January 1, 2014 and shall continue until a maintenance plan without an I/M program is approved by EPA in accordance with Section 175 of the Clean Air Act.

APPENDIX 1

Cache County
Emission Inspection/ Maintenance Program
Ordinance 2013-04

Planning

CACHE COUNTY ATTORNEY

James M. Swink
Cache County Attorney

Donald G. Linton
Chief Deputy

Tony C. Baird
Chief Prosecutor

UTAH DEPARTMENT OF ENVIRONMENTAL QUALITY
JUN 14 2013
DIVISION OF AIR QUALITY

Barbara K. Lachmar
Spencer D. Walsh
Andrew E. McAdams
Jacob C. Gordon
Denise Ciebien
Daniel V. Major
Deputy County Attorneys

Terryl Warner
Jenny Nielsen
Joan Liquin
Victim Advocates

199 North Main Street
Logan, Utah 84321
(435) 755-1860
Fax: (435) 755-1969 or (435)755-1970
E-mail: (first initial)(last name)@cacheattorney.org

June 12, 2013

Bryce Bird
Utah Division of Air Quality
PO Box 144820
Salt Lake City, UT 84114-4820

RE: Cache County Motor Vehicle Inspection/Maintenance Ordinance

Dear Mr. Bird,

The Cache County Motor Vehicle Inspection/Maintenance Ordinance (hereinafter "Ordinance") is being submitted to the Air Quality Board to be adopted as part of the Utah State Air Quality Plan. This Ordinance was adopted by the Cache County Council on March 12, 2013, with an effective date of March 27, 2013. (See Ordinance attached hereto for reference).

The Cache County Attorney's Office assisted the Bear River Health Department and the Cache County Council in the creation of the Ordinance. In doing so, the Cache County Attorney's Office referred to, *inter alia*, Utah Code Ann. § 41-6a-1642, as amended, and the Ordinance was adopted, in part, in accordance with this statute.

Pursuant to the provisions of Utah Code Ann. § 41-6a-1642, it is the opinion of the Cache County Attorney's Office that the Ordinance is applicable to the entire County – including incorporated as well as non-incorporated areas, and that the Ordinance is in full compliance with Utah Code Ann. § 41-6a-1642. If you have any further questions or concerns, please do not hesitate to call our office at the telephone number indicated above.

Sincerely,

Donald G. Linton
Chief Deputy Cache County Attorney

attachment
cc: Amanda Smith
Lloyd Berentzen

ORDINANCE 2013-04

IMPLEMENTATION OF A VEHICLE EMISSIONS AND MAINTENANCE PROGRAM IN CACHE COUNTY

1.0 PURPOSE

The purpose of this ordinance to reduce air pollution levels in Cache County by requiring emission inspections of on-road motor vehicles and by requiring emission related repairs and/or adjustments for those vehicles that fail to meet the prescribed standards so as to:

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

1.2 Improve air quality;

1.3 Comply with the federal regulations contained in 40 CFR part 51 subpart S;

1.4 Comply with the law enacted by the Legislature of the State of Utah, Section 41-6a-1642 Utah Code Annotated, 1953, as amended.

2.0 POWERS AND DUTIES

2.1 The Cache County Council (hereafter, "Council") has authority to implement a vehicle emission inspection and maintenance program under Section 41-6a-1642, Utah Code Annotated, 1953, as amended.

2.2 The Council is presently required by the EPA and the State of Utah to implement a vehicle emission inspection and maintenance program.

2.3 The Council hereby delegates its authority as an administrative body under Section 41-6a-1642, Utah Code Annotated, 1953, as amended, to the Bear River District Board of Health (hereafter "Board"), to address all issues pertaining to the adoption and administration of the vehicle emission inspection and maintenance program.

2.4 The Council authorizes and directs the Board to adopt and promulgate rules and regulations to ensure compliance with EPA and State Implementation Plan requirements with respect to an emission inspection and maintenance program.

3.0 GENERAL PROVISIONS

3.1 The Board, in conjunction with its staff, will administer and enforce this ordinance.

3.2 The Board shall adopt vehicle emission and inspection rules and regulations which meet EPA and State Implementation Plan requirements.

3.3 The Council shall approve the initial Rules and Regulations established by the Board and all changes in Rules and Regulations.

4.0 GUIDELINES TO BE FOLLOWED BY THE BEAR RIVER BOARD OF HEALTH IN IMPLEMENTATING A VEHICLE EMISSION INSPECTION AND MAINTENANCE PROGRAM IN CACHE COUNTY

4.1 Vehicles registered in Cache County that are not exempt from the program (see 41-6a-1642(3), Utah Code Annotated) will be inspected on the following schedule:

4.1.1 Gasoline and natural gas powered vehicles model year 1969 and newer: No emissions inspection will be required for gasoline and natural gas powered vehicles that are six model years and newer as of January 1 of any given year. An emissions inspection will be required every other year for vehicles that are seven model years and older as of January 1 of any given year. Emissions testing on odd-numbered years for vehicles with odd-numbered model years and on even-numbered years for vehicles with even-numbered model years. No emissions inspection for vehicles model year 1968 and older.

4.1.2 Diesel powered vehicles model year 1998 and newer: No emissions inspection will be required for diesel powered vehicles that are six model years and newer as of January 1 of any given year. An emissions inspection will be required every other year for vehicles that are seven model years and older as of January 1 of any given year. Emissions testing on odd-numbered years for vehicles with odd-numbered model years and on even-numbered years for vehicles with even-numbered model years.

Diesel powered vehicles 2007 and newer will be tested using OBD technology. Diesel powered vehicles 1998-2006 will have a visual inspection to verify that proper emissions control devices are in place. Diesel powered vehicles 1997 and older are subject to the Bear River Health Department Smoking Vehicle Program.

4.2 A maximum fee for inspection shall be set by the Board and approved by the Council. Part of this fee will be retained by the entity which performs the test and part may be remitted to the Board as reimbursement for administering the program. The intent of the Council is that this fee be as low as possible, while still maintaining the financial viability of the program.

4.3. If a vehicle fails an emissions inspection, a waiver may be granted that will allow the vehicle to be registered that year. In order to qualify for a waiver, the vehicle owner/ operator must spend a minimum of $200.00 on emissions related repairs and meet any other requirements established by the Board. A waiver will be issued once during the lifetime of the vehicle. Any changes to the minimum required repair expenditure to qualify for the waiver shall be approved by the Council.

4.4 Emission inspections in Cache County will be conducted by private firms. The Board shall establish criteria to be used to identify how many and which firms are allowed to conduct inspections and the training that is required for certification.

4.5 To fund the administration of the emissions inspection and maintenance program and other air quality improvement programs, the Council authorizes an Air Pollution Control fee to be assessed upon every motorized vehicle registered in Cache County at the time of registration as provide by Section 41-1a-1223, Utah Code Annotated, 1953, amended.

4.5.1 The fee is set at $3.00 for each vehicle registration within the County under section 41-1a-215, Utah Code Annotated, 1953, as amended and at $2.25 for each vehicle registration within the county for a six month registration period under Section 41-1a-215.5, Utah Code, 1953 as amended.

4.5.2 Motor vehicle that are exempt from the registration fee, and commercial vehicles with an apportioned registration shall be exempt from this fee as per Section 41-1a-1223, Utah Code Annotated, 1953 as amended.

4.5.3 The fee shall be assessed beginning January 1, 2014.

5.0 REVIEW OF NEED FOR PROGRAM

The Council shall review the vehicle emissions and maintenance program at least every five years to evaluate the continuing need for the program.

6.0 EFFECTIVE DATE

This ordinance takes effect on March 27, 2013. Following its passage, but prior to the effective date, a copy of the Ordinance shall be deposited with the County Clerk and a short summary of the ordinance shall be published in a newspaper of general circulation within the County as required by law.

PASSED BY THE COUNTY COUNCIL OF CACHE COUNTY, UTAH THIS MARCH 12, 2013.

	In Favor	Against	Abstained	Absent
Potter		X		
Buttars		X		
White	X			
Petersen	X			
Robison	X			
Yeates		X		
Zilles	X			
Total	4	3		

STATE OF UTAH COUNTY CLERK STATE OF CACHE COUNTY

CACHE COUNTY

By: Val K. Potter

Val K. Potter, Chairman

ATTEST:

Jill N. Zollinger

Jill N. Zollinger, County Clerk

Publication Date: March 27, 2013

BEAR RIVER HEALTH DEPARTMENT

REGULATION NO. 2013-1

A REGULATION OF THE BEAR RIVER HEALTH DEPARTMENT FOR A VEHICLE EMISSIONS INSPECTION AND MAINTENANCE PROGRAM

Adopted by the Bear River Board of Health

May 9, 2013

Table of Contents

Sections		Page
1.0	Definitions	3
2.0	Purpose	7
3.0	Authority and Jurisdiction of the Department	7
4.0	Powers and Duties	7
5.0	Scope	10
6.0	General Provisions	10
7.0	Permit Requirements of the I/M Program Stations	14
8.0	Training and Certification of Inspectors	15
9.0	Inspection Procedure	18
10.0	Engine Switching	22
11.0	Specifications for Certified Testing Equipment and Calibration Gases	22
12.0	Quality Assurance	23
13.0	Cutpoint Standards for Motor Vehicle Exhaust Gases	24
14.0	Disciplinary Penalties and Right to Appeal	24
15.0	Penalty	25
16.0	Severability	26
17.0	Effective Date	26

Appendix A Fee Schedule

Appendix B Emission Cutpoints

Appendix C Penalty Schedule

Appendix D Test Procedures

Appendix E Technical Specifications and Calibration Gas

1.0 DEFINITIONS

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

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;

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;

Analyzer: See Exhaust Emissions Gas Analyzer;

Board: See Board of Health;

Board of Health: The Bear River Board of Health;

Cache County Council: The elected Cache County Council representatives;

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

Calibration Gases: Gases of accurately known concentration that are used as references for establishing or verifying the calibration curve and accuracy of an Exhaust Emissions Gas Analyzer and are approved by the Department for use.

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

Certificate of Compliance: A document used in the I/M Program to certify that a vehicle meets all applicable requirements of the program;

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

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

Certified Emissions Inspector: A person who has successfully completed all certification requirements and has been issued a current, valid Certified Emissions Inspector Certification by the Department;

Certified Testing Equipment: An official test instrument that has been approved by the Department to test motor vehicles for compliance with this Regulation; this includes the Analyzer as well as the OBD testing portion of the machine;

CO: Carbon monoxide;

Compliance: Verification that certain submission data and hardware submitted by a manufacturer for accreditation consideration, meets all required accreditation requirements;

Council: See Cache County Council;

County: Cache County, Utah;

Custom Vehicle: A motor vehicle that meets the requirements of Section 41-6a-1507, Utah Code Annotated, 1953 as amended;

Cutpoints: The maximum allowable concentration of carbon monoxide (CO) and hydrocarbons (HC) for a given weight class and model year of a motor vehicle, as provided by this Regulation, using an approved infrared Exhaust Emissions Gas Analyzer;

Department: The Bear River Health Department;

Director: The Director of the Bear River Health Department or his authorized representative;

DLC: Data Link Connector used in OBD applications is a 16 pin connector used by scan tools and other emission diagnostic equipment to communicate with the vehicle's computer for the purpose of collecting emissions related data;

DTC: Diagnostic Trouble Code is a standardized 5 digit code that is used to identify a specific fault that has occurred or is occurring in a vehicle;

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;

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;

Exhaust Emissions 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 Department for this use in accordance with this Regulation as an official test instrument;

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;

Gas Calibration Check: A procedure using known concentrations of HC and CO calibration gases to verify the accuracy of an Analyzer in measuring HC and CO;

HC: Hydrocarbons;

Idle: 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;

I/M Program: See Vehicle Emissions Inspection and Maintenance Program;

I/M Program Station: A stationary Vehicle Emissions Inspection and Maintenance Station that qualifies and has a valid permit, issued by the Department, to operate as an emissions inspection and maintenance station in the I/M Program;

Inspection: An official vehicle emissions test performed for the purpose of issuing a Certificate of Compliance or Certificate of Waiver;

Inspector: A Certified Emissions Inspector;

MIL: Malfunction Indicator Light is an indicator located on the instrument panel that notifies the operator of an emissions fault;

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 Regulation are listed in Section 6.4 of this Regulation;

Non-certified Inspector: Any person who has not been certified by the Department to perform official emissions tests;

OBD: On Board Diagnostic refers to a vehicle's monitoring and diagnostic capabilities of its emissions systems;

PCV System: Positive Crankcase Ventilation System – an emissions control system which returns crankcase vapors and blowby gases to the combustion chamber to be burned;

Primary Residence: Is the place where an individual intends to permanently reside, maintains a permanent residence more than six (6) months during a calendar year, or where an individual lives more than six (6) months during a calendar year;

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;

Readiness: Readiness is used to identify the state of a vehicle's emissions monitors as they are tested. Readiness does not indicate whether the monitors passed or failed the test, it only indicates whether or not the test has been run for any particular monitor;

Station: An I/M Program Station;

Technical Bulletin: A document, issued to Certified Emissions Inspectors and/or I/M Program Stations by the Department to update, clarify or establish policies and/or procedures for their implementation in the I/M Program;

Training Program: A formal program administered, conducted, or approved by the Department for the education of emission inspectors in basic emission control technology, inspection procedures, diagnosis and repair of emissions related problems, I/M Program policies, procedures, and this Regulation;

Two-Speed Idle: A condition where the vehicle engine is warm and running at a high speed rate of 2200-2800 RPMs and then a low rate of 350-1200 RPMs;

Vehicle Emissions Inspection and Maintenance Program: The program established by the Department pursuant to Section 41-6a-1642 Utah Code Annotated, 1953, as amended, and Cache County Ordinance 2013-04;

Vintage Vehicle: A motor vehicle that meets the requirements of Section 41-21-1 Utah Code Annotated, 1953 as amended;

2.0 PURPOSE

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

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

2.2 Improve air quality;

2.3 Meet or exceed the minimum design and performance requirements for I/M Programs as defined in 40 CFR Part 51, Subpart S.

2.4 Comply with the law enacted by the Legislature of the State of Utah, Sections 41-6a-1642 Utah Code Annotated, 1953, as amended.

2.5 Comply with Cache County Ordinance 2013-04.

3.0 AUTHORITY AND JURISDICTION OF THE DEPARTMENT

3.1 Under Section 2.3 of Cache County Ordinance 2013-04, the Cache County Council delegates its authority as an administrative body under Section 41-6a-1642, Utah Code Annotated, 1953, as amended, to the Bear River Board of Health (hereafter Board), to address all issues pertaining to the adoption and administration of the Vehicle Emissions Inspection and Maintenance Program (hereafter I/M Program).

3.2 Under Section 2.4 of Cache County Ordinance 2013-04, the Council directs the Board to adopt and promulgate rules to ensure compliance with State Implementation Plan requirements with respect to an I/M Program.

3.3 The Board is authorized to make standards and regulations pursuant to Section 26A-1-121(1) of the Utah Code Annotated, 1953, as amended.

3.4 The Board is authorized to establish and collect fees pursuant to Section 26A-1-114(1)(h)(i) of the Utah Code Annotated, 1953, as amended.

3.5 All aspects of the I/M Program within Cache County enumerated in Section 2.0 of this Regulation shall be subject to the direction and control of the Bear River Health Department (hereafter Department).

4.0 POWERS AND DUTIES

4.1 The Department shall be responsible for the enforcement and administration of this Regulation and any other powers vested in it by law and shall:

4.1.1 Make policies and procedures necessary to ensure that the provisions of this Regulation are met and that the purposes of this Regulation are accomplished;

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

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

4.1.4 Perform 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 Regulation.

4.2 The Department may suspend, revoke, or deny a permit, subject to the Penalty Schedule in Appendix C, of an I/M Program Station and/or require the surrender of the permit of such I/M Program Station upon showing that:

4.2.1 A vehicle was inspected and issued a Certificate of Compliance by the station personnel that did not, at the time of inspection, comply with all applicable policies, procedures, Technical Bulletins, and this Regulation;

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

4.2.3 The 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 I/M Program Stations which only test their own vehicles);

4.2.4 The I/M Program Station has violated any provisions of this Regulation, or any Rule, Regulation, or Department policy properly promulgated for the operation of an I/M Program Station;

4.2.5 The I/M Program Station was not equipped as required by Section 7.0 of this Regulation;

4.2.6 The I/M Program Station is not operating from a location specified on the permit;

4.2.7 An official inspection was done by a non-certified inspector or a non-certified inspector has gained access to the official testing portion of the test equipment or a non-certified inspector signed a Certificate of Compliance;

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

4.2.9 The I/M Program Station denies access to a representative of the Department to conduct an audit or other necessary business during regular business hours;

4.2.10 An engine change verification form was completed and signed when, in fact, the engine block number was not verified by a Certified Emissions Inspector or other authorized personnel approved by the Department;

4.2.11 The I/M fee signage procedures are not followed as specified in Section 6.6; or

4.2.12 The I/M fee has been determined by the Department to be discriminatory in that different fees are assessed dependent upon vehicle ownership, vehicle make or model, owner residence, etc.

4.3 The Department may suspend, revoke, or deny the certificate of a Certified Emissions Inspector, subject to the Penalty Schedule in Appendix C, and require the surrender of this certificate upon showing that:

4.3.1 The Certified Emissions Inspector caused a Certificate of Compliance to be issued without an approved inspection being made;

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

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

4.3.4 Inspections were performed by the Certified Emissions Inspector, but not in accordance with applicable policies, procedures, Technical Bulletins, and this Regulation;

4.3.5 The Certified Emissions Inspector allowed a non-certified inspector to perform an official I/M test or gain access to the official testing portion of the test equipment;

4.3.6 The Certified Emissions Inspector signed an inspection form or certificate stating that he had performed the emissions test when, in fact, he did not; or

4.3.7 The Certified Emissions Inspector completed and signed an engine change verification form when in fact the engine block number was not verified.

4.4 The Department shall respond, according to the policies and procedures of the Department, to public complaints regarding the fairness and integrity of the 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, or regulation promulgated by the Department, unless expressly waived by this Regulation.

6.0 GENERAL PROVISIONS

Subject to the exceptions in Section 6.4 and pursuant to the schedule in Section 6.1, individuals with their primary residence in Cache County must register their motor vehicles in Cache County and motor vehicles (of model years 1969 and newer) that are or will be registered in Cache County, or operated from a facility within Cache County shall be subject to an emission inspection performed by an I/M Program Station or other entity approved by the Director. Owners of vehicles that meet the requirements of Section 6.2 or 6.3 shall comply with the inspection requirements regardless of the county of registration.

6.1 Beginning January 1, 2014 motor vehicles are subject to a biennial emissions inspection. Emissions inspections will be required in odd-numbered years for a vehicle with an odd-numbered model year. Emissions inspections will be required in even-numbered years for a vehicle with an even-numbered model year

6.1.1 A Certificate of Compliance, Certificate of Waiver, or evidence that the motor vehicle is exempt from the I/M Program requirements (as defined in Section 6.4) shall be presented to the Cache County Assessor or the Utah State Tax Commission as conditions precedent to registration or renewal of registration of a motor vehicle in odd-numbered years for a vehicle with an odd-numbered model year.

6.1.2 A Certificate of Compliance, Certificate of Waiver, or evidence that the motor vehicle is exempt from the I/M Program requirements (as defined in Section 6.4) shall be presented to the Cache County Assessor or the Utah State Tax Commission as conditions precedent to registration or renewal of registration of a motor vehicle in even-numbered years for a vehicle with an even-numbered model year.

6.1.3 The Air Pollution Control Fee shall be paid annually, as per Section 4.5 of Cache County Ordinance 2013-04, (see also Section 6.7 of this Regulation) as conditions precedent to registration or renewal of registration of a motor vehicle.

6.1.4 A Certificate of Compliance shall be valid for a period of time in accordance with 41-1a-205 Utah Code Annotated, 1953, as amended.

6.2 Publicly-Owned Vehicles. Owners of publicly-owned vehicles shall comply with the inspection program requirements. 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.

6.3 Vehicles of employees and/or students parked at a college or university that do not require registration in Cache County shall comply with the emissions testing requirements as authorized by 41-6a-1642(5)(a) Utah Code Annotated, 1953, as amended.

6.3.1 College or university parking areas that are metered or for which payment is required per use are not subject to the requirements in Section 6.3.

6.4 Vehicle Exemption. The following vehicles are exempt from these emissions testing requirements:

6.4.1 Any vehicle of model year 1968 or older;

6.4.2 All agricultural implements of husbandry and any motor vehicle that qualifies for an exemption as provided by 41-6a-1642(3) and 41-6a-1642(4) Utah Code Annotated, 1953, as amended;

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

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

6.4.5 Any vehicle that operates exclusively on electricity;

6.4.6 Any motor vehicle which qualifies for legislative exemptions;

6.4.7 Tactical military vehicles;

6.4.8 Any vintage vehicle as provided by 41-6a-1642(3) Utah Code Annotated, 1953, as amended;

6.4.9 Any custom vehicle as provided by 41-6a-1642(3) Utah Code Annotated, 1953, as amended;

6.4.10 Any vehicle that is less than six years old on January 1 based on the age of the vehicle as determined by the model year identified by the manufacturer;

6.4.11 Any diesel powered vehicle 1997 and older. These vehicles will be subject to a smoking vehicle program established by the Board; and

6.4.12 Any diesel powered vehicle with a GVW greater than 14,000 lbs. These vehicles will be subject to a smoking vehicle program established by the Board.

6.5 It shall be the responsibility of the Certified Emissions Inspector if a vehicle exempted from this Regulation by Section 6.4 of this Regulation is brought to the Certified Emissions Inspector for an official emission test to inform the owner/operator of the vehicle that the vehicle is not required to have an official emission inspection for vehicle registration purposes.

6.6 Official Signs.

6.6.1 All I/M Program Stations, except those 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 and approved by the Department;

6.6.2 The emission cutpoints, as referenced in Appendix B shall be posted in a conspicuous place on the station's premises;

6.6.3 The readiness requirements for an OBD test as referenced in Appendix D shall be posted in a conspicuous place on the station's premises;

6.6.4 The 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;

6.6.5 The free re-inspection policy as referenced in Section 9.6 shall be posted in a conspicuous place on the station's premises;

6.6.6 The signs required by Sections 6.6.1 through 6.6.5 shall be located so as to be easily in the public view.

6.7 Fees.

6.7.1 The fees assessed upon I/M Program Stations and Certified Emissions Inspectors shall be determined according to a fee schedule adopted by the Board. The fee schedule is referenced in Appendix A to this Regulation and may be amended by the Board as necessary.

6.7.2 An Air Pollution Control Fee is hereby assessed upon every motor vehicle registered in Cache County as per Section 4.5 of Cache County Ordinance 2013-04. The fee will be assessed annually at the time of registration of the vehicle.

6.7.2.1 This fee assessment is included upon all motorized vehicles including those that are exempted from the inspection requirements of this Regulation by Section 6.4 unless a separate fee is assessed on other motor vehicles by other Board of Health Regulations.

6.7.2.2 A motor vehicle that is exempt from the registration fee, and a commercial vehicle with an apportioned registration shall be exempt from this fee as per Section 41-1a-1223, Utah Code Annotated, 1953, as amended and Section 4.5.2 of Cache County Ordinance 2013-04.

6.7.3 I/M Program Stations may charge a fee for the required service. The fee may not exceed, for each vehicle inspected, the amount set by the Board and referenced in Appendix A of this Regulation.

6.7.3.1 The inspection fee pays for a complete inspection leading to a Certificate of Compliance or a failure. If a vehicle fails the inspection, the owner/operator is entitled to one free re-inspection if he returns to the I/M Program Station that performed the original inspection within fifteen (15) calendar days from the date of the initial inspection. The I/M Program Station shall extend the fifteen day free re-inspection to accommodate the vehicle owner/operator if the I/M Program Station is unable to schedule the retest of the vehicle within the fifteen day time period. The inspection fee shall be the same whether the vehicle passes or fails the emission test.

6.7.3.2 At the request of the Department, an I/M Program Station shall extend the free retest time for vehicle owners/operators who are unable to complete repairs because of the unavailability of parts to make the necessary repairs.

6.7.4 If a vehicle fails the inspection and is within the time and mileage requirements of the federal emissions warranty contained in section 207 of the Federal Clean Air Act, the Certified Emissions Inspector shall inform the owner/operator that he may qualify for warranty coverage of emission related repairs as provided by the vehicle manufacturer and mandated by the Federal Environmental Protection Agency (see 40 CFR Part 85, Subpart V).

7.0 PERMIT REQUIREMENTS OF THE VEHICLE EMISSIONS I/M PROGRAM STATION

7.1 Permit Required.

7.1.1 No person shall in any way represent any place as an official I/M Program Station unless the station is operated under a valid permit issued by the Department.

7.1.2 The Department is authorized to issue or deny permits for I/M Program Stations.

7.1.3 No permit for any official 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 I/M Program Station.

7.1.4 The permit shall be posted in a conspicuous place within public view on the premises.

7.1.5 Application for an I/M Program Station permit shall be made to the Department upon a form provided by the Department. No permit shall be issued unless the Department finds that the facilities, tools, and equipment of the applicant comply with the requirements of this Regulation and that competent personnel, certified under the provisions of Section 8.0, are employed and will be available to make inspections, and the operation thereof will be properly conducted in accordance with this Regulation.

7.1.5.1 An I/M Program Station shall notify the Department and cease any emission testing if the station does not have a Certified Emissions Inspector employed;

7.1.5.2 An I/M Program Station shall notify the Department upon termination and/or resignation of any Certified Emissions Inspector employed by the station;

7.1.5.3 An I/M Program Station shall comply with all the terms stated in the permit application and all the requirements of this Regulation;

7.1.5.4 As a condition for permitting test and repair I/M Program Stations, the station will keep and maintain all necessary tools and resources needed to effectively repair vehicles that fail an emissions test;

7.1.5.5 As a condition for permitting test only I/M Program Stations, the station will notify the vehicle owner/operator that the facility is a test only facility and will not provide repairs, prior to any official emissions test;

7.1.5.6 An I/M Program Station shall have a building with a suitable exhaust extraction system; and

7.1.5.7 An I/M Program Station shall provide a dedicated internet connection for the Certified Testing Equipment.

7.2 Permit Duration and Renewal

7.2.1 The permit for I/M Program Stations shall be issued annually and shall expire on the last day of the month, one year from the month of issue. The permit shall be renewable sixty days prior to the date of expiration.

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

7.3 I/M Program Station to hold Department Harmless

7.3.1 In making application for a permit or for its renewal, such action shall constitute a declaration by the applicant that the Department shall be held harmless from liability incurred due to action or inaction of I/M Program Station's owners or their employees.

7.4 An I/M Program Station shall be kept in good repair and in a safe condition for inspection purposes free of obstructions and hazards.

8.0 TRAINING AND CERTIFICATION OF INSPECTORS

8.1 Certified Emissions Inspector Certification Required.

8.1.1 No person shall perform any part of the inspection for the issuance of a Certificate of Compliance unless the person possesses a valid Certified Emissions Inspector Certification issued by the Department.

8.1.2 Applications for a Certified Emissions Inspector Certification shall be made upon an application form prescribed by the Department. No certification shall be issued unless:

8.1.2.1 The applicant has shown adequate competence by successfully completing the written and practical portions

of the Certified Emissions Inspector Certification requirements as specified in this Regulation; and

8.1.2.2 The applicant has paid the required permit fees as set by the Board and referenced in Appendix A of this Regulation.

8.1.3 An applicant shall comply with all of the terms stated in the application and with all the requirements of this Regulation.

8.1.4 An applicant shall complete a Department approved training course and shall demonstrate knowledge and skill in the performance of emission testing and use of the test equipment. Such knowledge and skill shall be shown by passing at minimum:

8.1.4.1 Operation and purposes of emission control systems;

8.1.4.2 Inspection procedures as outlined in this Regulation and prompted by the test equipment;

8.1.4.3 Operation of the Certified Testing Equipment including the performance of gas calibration and leak check;

8.1.4.4 The provisions of Section 207(b) warranty provisions of the Federal Clean Air Act, and other federal warranties;

8.1.4.5 The provisions of this Regulation and other applicable Department policies and procedures; and

8.1.4.6 A performance qualification test including but not limited to the following:

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

(b) Demonstration of skill in proper use, care, maintenance, calibration, and leak testing of the Certified Testing Equipment;

(c) Demonstration of ability to conduct the inspection; and

(d) Demonstration of ability to accurately enter data in the test equipment.

8.1.5 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 equally qualified person approved by the Department.

8.1.6 The Department shall issue a Certified Emissions Inspector Certificate to an applicant upon successful completion of the requirements of this section.

8.1.7 The Certified Emissions Inspector Certificates are and remain the property of the Department, only their use and the license they represent is tendered.

8.1.8 Certified Emissions Inspector Certifications shall not be transferred from one person to another person.

8.2 Recertification Requirements for Certified Emissions Inspectors

8.2.1 The Department may renew certifications for an existing Certified Emissions Inspector after a properly completed renewal form is submitted, reviewed, and approved, the recertification requirements have been completed, the fees are paid and the Certified Emissions Inspector has complied with this Regulation.

8.2.2 Certified Emissions Inspectors shall be required to recertify annually. Failure to recertify shall result in suspension or revocation of the Certification as described in this Regulation.

8.2.3 Certified Emissions Inspectors shall complete a Department approved refresher course every 2 years. Applicants for recertification shall complete a Department approved refresher course no more than sixty days prior to the date of expiration. Applicants shall demonstrate knowledge and skill in the performance of emission testing and use of the test equipment.

8.3 Certification Expiration

8.3.1 The Certified Emissions Inspector Certification shall be issued annually and shall expire on the last day of the month one year from the month of issue. The certification shall be renewable sixty days prior to the date of expiration.

8.3.2 It is the responsibility of the Certified Emissions Inspector to pursue the renewal of the Certification.

8.4 Certified Emissions Inspector Certification Suspension and Revocation

8.4.1 Certified Emissions Inspector Certifications may be suspended or revoked by the Department for violations of this Regulation.

8.4.2 Suspension or revocation of Certified Emissions Inspector Certifications shall follow the provisions of Appendix C of this Regulation.

9.0 INSPECTION PROCEDURE

9.1 The official emissions inspection shall be solely performed by a Certified Emissions Inspector at an I/M Program Station and Department approved inspection procedures are to be followed.

9.2 The Certified Emissions Inspector 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 inspection test equipment.

9.2.1 The Certified Emissions Inspector shall verify the owner's name and address and enter this information into the test equipment. The Certified Emissions Inspector shall determine and enter the county in which the vehicle is registered.

9.2.2 The Certified Emissions Inspector 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 test equipment.

9.3 A complete official test must be performed any time an inspection is requested. Do not perform any part of the inspection without initiating an official test on the test equipment.

9.4 The Certified Emissions Inspector shall perform the official vehicle emissions test using the proper testing procedure:

9.4.1 All gasoline, and natural gas powered light-duty (8,500 lbs or less) OBDII compliant vehicles, model year 1996 and newer shall be tested as specified in Appendix D, OBDII Test Procedures.

9.4.2 All gasoline and natural gas powered vehicles model year 1995 and older shall be tested as specified in Appendix D, Two-Speed Idle Test Procedures.

9.4.3 All gasoline and natural gas powered vehicles model year 1996 to 2007 with a GVW greater than 8,500 lbs shall be tested as specified in Appendix D, Two-Speed Idle Test Procedures.

9.4.4 All gasoline and natural gas powered vehicles model year 2008 and newer with a GVW greater than 8,500 lbs and GVW less than 14,000 lbs shall be tested as specified in Appendix D, OBDII Test Procedures.

9.4.5 All gasoline and natural gas powered vehicles model year 2008 and newer with a GVW greater than 14,000 lbs shall be tested as specified in Appendix D, Two-Speed Idle Test Procedures.

9.4.6 All diesel powered vehicles model year 1998 and newer shall be tested as specified in Appendix D, Diesel Test Procedures.

9.5 Retesting Procedures

9.5.1 If the vehicle fails the initial emissions inspection, the owner/operator shall have fifteen calendar days in which to have repairs or adjustments made and return the vehicle to the I/M Program Station that performed the initial inspection for one (1) free re-inspection. In order to be in compliance, the vehicle that failed the initial test shall meet the following conditions:

9.5.1.1 The vehicle is re-tested; and

9.5.1.2 The vehicle emissions levels are the same or less than the applicable cutpoint standards.

9.6 Certificate of Waiver

9.6.1 A Certificate of Waiver may be issued for 1969 to 1989 model year vehicles if all of the following requirements are met:

9.6.1.1 Air pollution control devices identified in the emission decal are in place and operable on the vehicle. If the decal is missing, at a minimum, the catalytic converter, PCV System, and AIR system 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 Certificate of Waiver is granted; and

9.6.1.2 The vehicle continues to exceed applicable cutpoint standards after $200.00 of acceptable emissions related repairs have been performed. Proof of repair costs shall be provided for the vehicle to the Department in the form of an itemized bill, invoice, work order, manifest, or statement in which emissions related parts are specifically identified. If repairs are made by someone with ASE L1, ASE A8, or another certification approved by the Department, the cost of labor may be included in the $200.00

9.6.2 A Certificate of Waiver may be issued for 1990 through 1995 model year vehicles if all of the following requirements are met:

9.6.2.1 Air pollution control devices identified in the emission decal are in place and operable on the vehicle. If the decal is missing, at a minimum, the AIR System, catalytic converter, EGR System, Evaporative Control System, PCV System, and gas tank cap 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 Certificate of Waiver is granted; and

9.6.2.2 The vehicle continues to exceed applicable cutpoint standards after $200.00 of acceptable emissions related repairs have been performed. Proof of repair costs shall be provided for the vehicle to the Department in the form of an itemized bill, invoice, work order, manifest, or statement in which emissions related parts are specifically identified. If repairs are made by someone with ASE L1, ASE A8, or another certification approved by the Department, the cost of labor may be included in the $200.00

9.6.3 A Certificate of Waiver may be issued for 1996 and newer model year vehicles if all of the following requirements are met:

9.6.3.1 Air pollution control devices identified in the emission decal 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 Certificate of Waiver is granted; and

9.6.3.2 At least $200.00 has been spent on acceptable emissions related repair costs for that specific vehicle, and if proof of repair costs for that specific vehicle have been provided to the Department in the form of an itemized bill, invoice, work order, manifest, or statement in which emissions related parts are specifically identified. If repairs are made by someone with ASE L1, ASE A8, or another certification approved by the Department, the cost of labor may be included in the $200.00

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

9.6.4 As used in Sections 9.6.1, 9.6.2, and 9.6.3, acceptable emissions related repairs:

9.6.4.1 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, and procedures, and/or repairs to the evaporation vapor recovery system;

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

9.6.4.3 Does not include the fee paid for the test;

9.6.4.4 Does not include costs associated with the repairs or replacements 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;

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

9.6.4.6 Refers to repairs, maintenance, and diagnostic evaluations done in accordance with manufacturer's specifications, to the extent that the purpose is to reduce emissions.

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

9.6.6 Certificates of Waiver shall only be issued by the Department unless the Department 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.

9.6.7 Prior to referring the owner/operator to the Department for determining waiver eligibility, the I/M Program Station and the Certified Emissions Inspector shall verify that the repair and eligibility requirements of this Section have been met.

9.6.8 A Certificate of Waiver shall only be issued once to any vehicle that qualifies, throughout the lifetime of the vehicle.

10.0 ENGINE SWITCHING

10.1 Engine switching shall be allowed only in accordance with EPA policy.

10.2 Vehicles not meeting the requirements of Section 10.0 shall be deemed as tampered and are not eligible for a Certificate of Waiver, unless they are restored to the original engine and emission control configuration.

11.0 SPECIFICATIONS FOR CERTIFIED TESTING EQUIPMENT AND CALIBRATION GASES

11.1 Approval of Certified Testing Equipment

11.1.1 Certified Testing Equipment shall meet the specifications as detailed in Appendix E.

11.1.2 It shall be illegal for any person to modify the hardware or software of approved emissions test equipment without written application and formal approval by the Department.

11.1.3 It shall be illegal for any person to gain access to any Department controlled portions of an approved test equipment without approval by the Department.

11.2 Calibration Gases

11.2.1 General: The approved vendor shall, on request, supply at a reasonable cost to the I/M Program Station, calibration gases approved by the Department. The approved vendor shall have approved, full calibration gas containers installed and operational at the time of delivery. The Department shall establish necessary procedures for approving calibration gases.

11.2.2 Calibration Gas Blends: The calibration gases supplied to any I/M Program Station shall conform to the specifications of the Department as specified in Appendix E. All calibration gases shall meet all Federal requirements for the emissions warranty coverage. Only gas blends supplied by Department approved blenders shall be used to calibrate official Analyzers.

11.3 Warranty and Maintenance Requirements

11.3.1 It shall be the responsibility of the I/M Program Station to obtain warranty coverage for testing equipment supplied by the approved vendor. Coverage requirements will be determined by the Department.

11.3.2 The testing equipment 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 Department.

11.4 Gas Calibration and Leak Check:

Gas calibrations and leak checks shall be performed in accordance with the schedule referenced in Appendix E.

12.0 QUALITY ASSURANCE

12.1 A quarterly inspection and audit shall be made by a representative of the Department to verify compliance with this Regulation for each I/M Program Station.

12.1.2 During the time of the inspection and audit by the Department, the Department representative shall have exclusive access to the test equipment.

12.1.3 Required tools and equipment as noted in Section 7.1.5, shall be kept at the I/M Program Station at all times and shall be available for inspection by the Department at any time the inspection station is open for business.

12.2 An annual covert inspection and audit shall be made by a representative of the Department to verify compliance with this Regulation for each I/M Program Station.

12.3 The Department may increase the frequency of inspections and audits for I/M Program Stations and/or Certified Emissions Inspectors if the Department receives information of a violation of this Regulation.

12.4 The Department shall regularly monitor I/M Program Stations and/or Certified Emissions Inspectors through inspection records and/or technology integrated into the Certified Test Equipment.

13.0 CUTPOINT STANDARDS FOR MOTOR VEHICLES EXHAUST GASES

In order to obtain a valid emissions Certificate of Compliance, exhaust emissions from a motor vehicle subject to an biennial exhaust gas emission inspection shall not exceed the

maximum concentrations for carbon monoxide (CO) and hydrocarbons (HC) as specified in Appendix B.

14.0 DISCIPLINARY PENALTIES AND RIGHT TO APPEAL

14.1 When the Department, or its representative(s), receives information of a violation of any regulation contained herein which may result in a permit denial, revocation, or suspension, the Department shall notify the affected entity, in writing, informing the entity of the violation and penalties to be enforced. The affected entity may request a hearing within ten calendar days of the Department giving notice of the potential permit denial, revocation, or suspension. Only a written request for a hearing shall be honored by the Department. No appeal may be made on a formal warning.

14.1.1 In considering the appropriate administrative action to be taken as indicated in Appendix C, the Director shall consider the following:

14.1.1.1 whether the violation was unintentional or careless;

14.1.1.2 the frequency of the violation or violations;

14.1.1.3 the audit and covert audit history of the I/M Program Station and the Certified Emissions Inspector;

14.1.1.4 whether the fault lies with the I/M Program Station or the Certified Emissions Inspector.

14.1.2 After consideration of the factors in Section 14.1.1 the Director may take appropriate administrative action as indicated in Appendix C against either the I/M Program Station, the Certified Emissions Inspector, or both.

14.2 Appeals Hearing Procedure:

14.2.1 An appeals hearing shall be held at the request of the affected entity in order to determine the accuracy of information obtained by the Department and whether there are mitigating factors which would justify a reduction of the imposed penalties.

14.2.2 The requesting party may bring to the hearing any witnesses and any evidence believed to be pertinent to the disciplinary action.

14.2.3 The appeal shall be heard by the Vehicle Inspection and Maintenance Appeal Board, hereafter I/M Board, consisting of at least three persons, who are not employees of Bear River Health Department, appointed by the Board. The I/M Board shall have the discretion to determine which witnesses shall be heard and what evidence is relevant.

14.2.4 Violations determined to be intentional or flagrant shall result in the maximum enforcement of the penalty schedule pursuant to Appendix C.

14.2.5 In considering whether to reduce a penalty indicated by Appendix C, the I/M Board and the Department shall consider the following:

14.2.5.1 whether the violation was unintentional or careless;

14.2.5.2 the frequency of the violation or violations;

14.2.5.3 the audit and covert audit history of the I/M Program Station and the Certified Emissions Inspector;

14.2.5.4 whether the fault lies with the I/M Program Station, the Certified Emissions Inspector, or both.

14.3 Written notice of the final determination of the I/M Board, including the I/M Board's finding under Section 14.2.5, shall be made within ten calendar days after the conclusion of the appeals hearing.

15.0 PENALTY

15.1 Any person who is found guilty of violating any of the provisions of this Regulation, either by failing to do those acts required herein or by doing a prohibited act, shall be guilty of a class B misdemeanor pursuant to Section 26A-1-123, Utah Code Annotated, 1953, as amended. If a person is found guilty of a subsequent similar violation within two years, he shall be guilty of a class A misdemeanor pursuant to Section 26A-1-123, Utah Code Annotated, 1953, as amended.

15.2 Each day such violation is committed or permitted to continue shall constitute a separate violation.

15.3 The county attorney may initiate legal action, civil or criminal, requested by the Department to abate any condition that exists in violation of this Regulation.

15.4 In addition to other penalties imposed by a court of competent jurisdictions, any person(s) found guilty of violating any of this Regulation shall be liable for all expenses incurred by the Department.

15.5 A Penalty Schedule for permit warning, suspension, or revocation is adopted as Appendix A and may be amended by the Board as the Board deems necessary to accomplish the purposes of this Regulation.

16.0 SEVERABILITY

If any provision, clause, sentence, or paragraph of this Regulation 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 Regulation. The valid part of any clause, sentence, or paragraph of this Regulation shall be given independence from the invalid provisions or application and to this end the provisions of this Regulation are hereby declared to be severable.

17.0 EFFECTIVE DATE

This Regulation shall become effective on May 9, 2013 as adopted by the Bear River Board of Health.

M. Nyman Hellon

Appendix A

Fee Schedule

Permitting of an official I/M Program Station	$250.00
Annual Renewal of I/M Program Station	$50.00
Expired I/M Program Station Renewal	$75.00
I/M Program Station Re-location	$75.00
Permitting of a Certified Emissions Inspector	$25.00
Renewal of Certified Emissions Inspector	$15.00
Expired Certified Emissions Inspector Renewal	$25.00
Official Station Sign	Cost
APC Fee for 12 month registration	$3.00
APC Fee for 6 month registration	$2.25
Emissions Inspection Fee – OBD Test	$15.00
Emissions Inspection Fee – TSI and Tampering	$20.00

APPENDIX B

BEAR RIVER HEALTH DEPARTMENT
EMISSION STANDARDS
CUTPOINTS

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 cutpoints is January 1, 2014.

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
1981-1995	1.2	220
1996 and newer	N/A – OBD II	N/A – OBD II

HEAVY DUTY TRUCKS AND VANS
1978 AND OLDER 6,001 AND OVER GVWR
1979 AND NEWER OVER 8,500 GVWR
MAXIMUM CONCENTRATION STANDARDS

1968-1969	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 determination is contained in the analyzer specifications provided by the approved vendor.

NOTE: These should be considered as "cutpoints" 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 "cutpoints."

APPENDIX C – PENALTY SCHEDULE

Violation (resets after 2 years of no similar violations unless revoked)	**1st Occurrence**	**2nd Occurrence**	**3rd Occurrence**	**4th Occurrence**
Failure to inspect or substituting a vehicle other than the vehicle on the test record *(intentional pass)*	Tech: 180 day suspension and mandatory retraining	Tech: Revocation of permit for up to 5 years		
	Station: 180 day suspension	Station: 270 day suspension	Station: Revocation of inspection station permit for up to 5 years	
Passing a failing vehicle or recording pass for tampering on a tampered vehicle *(gross negligence)*	Tech: 30 day suspension and mandatory retraining	Tech: 60 day suspension and mandatory retraining	Tech: Revocation of permit for up to 5 years	
	Station: 15 day suspension	Station: 30 day suspension	Station: 60 day suspension	Station: Revocation of permit for up to 5 years
Falsifying an inspection record or emissions certificate or Failing a passing vehicle *(intentional)*	Tech: 180 day suspension and mandatory retraining	Tech: Revocation of permit for up to 5 years		
	Station: 180 day suspension	Station: 270 day suspension	Station: Revocation of inspection station permit for up to 5 years	
Non-certified person performing test *(gross negligence table)*	Tech: 60 day suspension	Tech: 180 day suspension	Tech: Revocation of permit for up to 5 years	
	Station: 60 day suspension	Station: 180 day suspension	Station: Revocation of inspection station permit for up to 5 years	
Inaccurate or incomplete data entry *(incompetence)*	Tech: Formal warning and mandatory retraining	Tech: 30 day suspension and mandatory retraining	Tech: 90 day suspension and mandatory retraining	Tech: Revocation of permit for up to 5 years
	Station: Formal warning	Station: 15 day suspension	Station: 45 day suspension	Station: Revocation of inspection station permit for up to 5 years
Failure to follow proper test procedures *(incompentence)*	Tech: Formal warning and mandatory retraining	Tech: 30 day suspension and mandatory retraining	Tech: 90 day suspension and mandatory retraining	Tech: Revocation of permit for up to 5 years
	Station: Formal warning	Station: 15 day suspension	Station: 45 day suspension	Station: Revocation of inspection station permit for up to 5 years

Appendix D – Test Procedures

OBDII Test Procedures

On-Board Diagnostics (OBD) is the monitoring and fault detection/notification process of the Powertrain Control Module (PCM) related to the vehicle's emission control system and powertrain operation on 1996 and newer model year vehicles. When an emissions control malfunction is detected, a dashboard light illuminates, displaying one of the following: "Check Engine," "Service Engine Soon," or the international engine symbol. If the OBD system detects a problem that may cause vehicle emission to exceed applicable federal standards, the Malfunction Indicator Light (MIL) is illuminated and the appropriate diagnostic trouble code (DTC) and engine operating conditions will be stored in PCM memory.

1.0 Locate the Diagnostic Link Connector (DLC) on the vehicle being tested. Connect the vehicle to the test equipment.

1.1 If the DLC is missing, has been tampered with, or is otherwise inoperable, the vehicle fails the test and shall be repaired.

1.2 If the DLC is unaccessible, the problem must be remedied before the test can continue.

2.0 Turn the ignition switch to the off position for at least 30 seconds.

3.0 Visually examine the instrument panel to determine if the malfunction indicator light (MIL) illuminates, at least briefly, when the ignition key is turned to the "key on, engine off" (KOEO) position. Enter your visual inspection result into the test equipment.

3.1 If the MIL does not illuminate, the vehicle fails the test and must be repaired.

4.0 Turn the ignition switch to the off position for at least 30 seconds.

5.0 Start the engine so the vehicle is in the "key on, engine running" (KOER) condition and follow the test equipment screen prompts until the test is complete.

6.0 For 1996-2000 model year vehicles two (2) not ready flags are allowed for a passing test. For 2001 and newer vehicles one (1) not ready flag is allowed. If the not ready status exceeds these numbers the vehicle must be driven additional miles until readiness monitors are set "ready" or repairs have been made allowing readiness flags to set ready.

7.0 If the MIL is commanded on while the engine is running, regardless of Diagnostic Trouble Codes (DTC's), the vehicle will fail the test and will require repairs.

8.0 Certain vehicles have been determined by the EPA to be OBDII deficient. The test equipment software will maintain a list of these vehicles and perform a modified OBDII test.

9.0 A Certificate of Compliance will be issued if the vehicle meets the requirements established in this section.

Two-Speed Idle (TSI) Test Procedures

During a two-speed idle test, the Analyzer measures the tailpipe exhaust emissions of a vehicle while the vehicle idles at both high and low speed. The Analyzer tests vehicles for carbon dioxide in addition to hydrocarbons and carbon monoxide. The two-speed idle test comprises two phases: (1) high speed test (2200-2800 RPMs) for the first phase of the emissions test; then, (2) tested at idle (350-1100 RPMs).

1.0 The Certified Emissions Inspector shall not inspect or test any motor vehicle with a mechanical condition which may cause injury to inspection personnel or damage to the inspection 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.

2.0 Prepare the Analyzer for testing as specified by the manufacturer.

3.0 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.

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

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

6.0 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.

7.0 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 adapter.

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

9.0 With the tachometer properly attached, the vehicle shall be tested by following the screen prompts, answering questions, and entering required data. 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 provided by the approved vendor.

10.0 The Certified Emissions Inspector shall verify the presence of a gas cap and enter the information into the Analyzer.

11.0 Certain vehicles cannot be tested in the high speed (2200-2800 RPM) mode. The test equipment software will maintain a list of these vehicles and perform a modified test.

12.0 A Certificate of Compliance shall be issued if the vehicle emissions levels are the same as or less than the applicable cutpoint standards as referenced in Appendix B, and the vehicle has a gas cap present.

Diesel Powered Vehicles Test Procedures

1.0 All diesel powered vehicles 2007 and newer shall be tested in accordance with the following procedure:

1.1 Locate the Diagnostic Link Connector (DLC) on the vehicle being tested. Connect the vehicle to the test equipment.

1.1.1 If the DLC is missing, has been tampered with, or is otherwise inoperable, the vehicle fails the test and shall be repaired.

1.1.2 If the DLC is unaccessible, the problem must be remedied before the test can continue.

1.2 Turn the ignition switch to the off position for at least 30 seconds.

1.3 Visually examine the instrument panel to determine if the malfunction indicator light (MIL) illuminates, at least briefly, when the ignition key is turned to the "key on, engine off" (KOEO) position. Enter your visual inspection result into the test equipment.

1.3.1 If the MIL does not illuminate, the vehicle fails the test and must be repaired.

1.4 Turn the ignition switch to the off position for at least 30 seconds.

1.5 Start the engine so the vehicle is in the "key on, engine running" (KOER) condition and follow the test equipment screen prompts until the test is complete.

1.6 If the vehicle has 1 or more monitors "not ready", follow the attached flowchart to determine whether the readiness check will be marked as pass or fail.

1.7 If the MIL is commanded on while the engine is running, regardless of Diagnostic Trouble Codes (DTC's), the vehicle will fail the test and will require repairs.

1.8 Certain vehicles have been determined by the EPA to be OBDII deficient. The test equipment software will maintain a list of these vehicles and perform a modified OBDII test.

1.9 A Certificate of Compliance will be issued if the vehicle meets the requirements established in this section.

2.0 All diesel powered vehicles 1998-2006 shall be subject to a visual anti-tampering inspection. The air pollution control devices identified in the emission decal shall be in place and apparently operable on the vehicle. If the decal is missing the vehicle owner/operator shall have the decal replaced before the inspection can continue.

2.1 The devices listed on the decal must be present and apparently operable to pass the emission inspection.

2.2 If the OBD II system is identified in the emission decal, the procedure in Section 1.1 through 1.5 shall be followed.

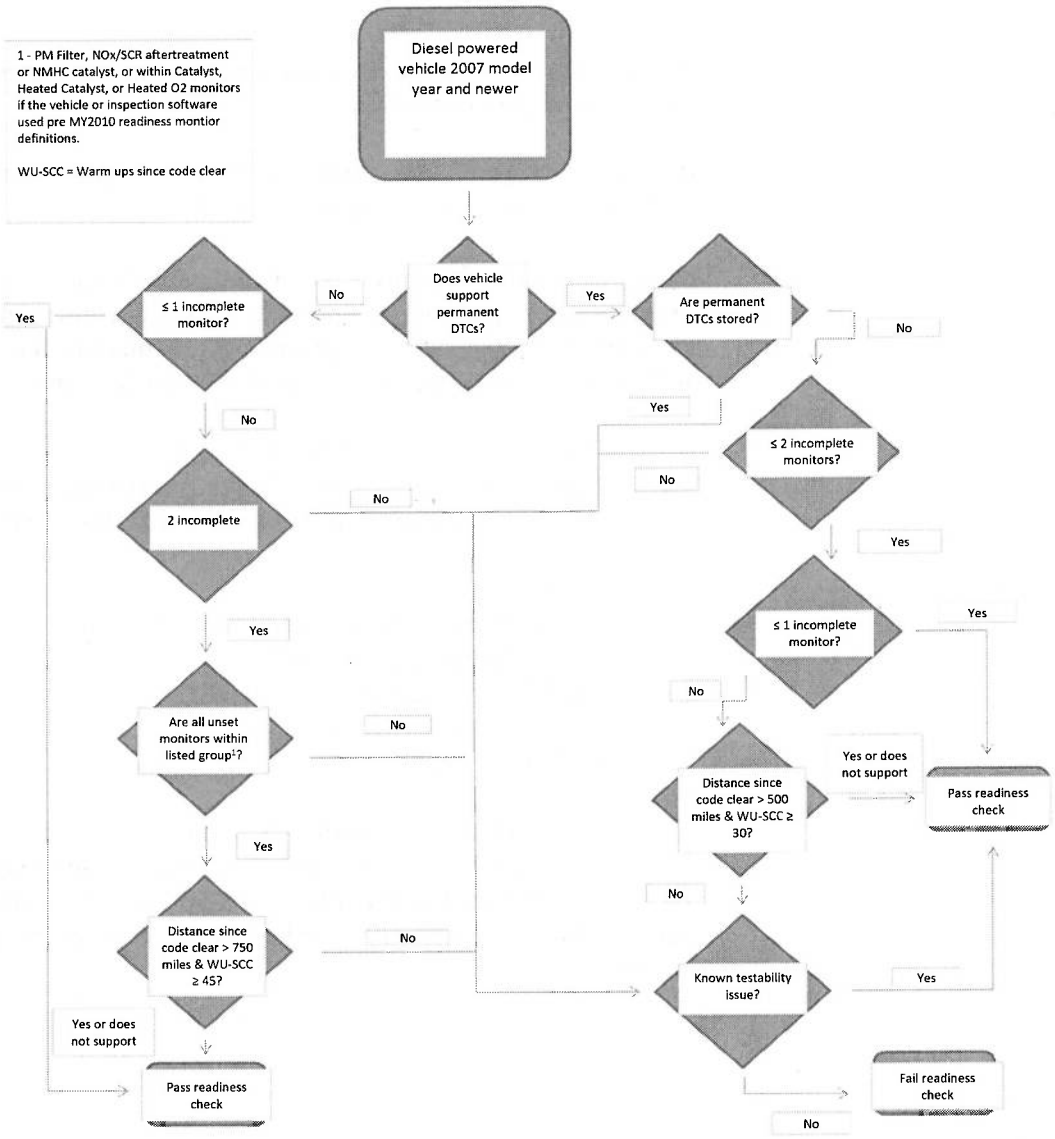
2.3 If the decal is missing and is no longer available for replacement the vehicle owner/operator shall provide written documentation to the Department stating such. Approved documentation shall come from an authorized dealer or manufacturer of the vehicle in question.

2.3.1 If the emissions decal is missing and the vehicle meets the requirements of Section 2.3, the following emissions control devices should be present and apparently operable if factory equipped:

Catalyst;
Exhaust Gas Recirculation System (EGR);
Diesel Particulate System (DPF);
Air Injection Reaction System (AIR);
Urea System (SCR); and
OBD II System.

2.4 A Certificate of Compliance shall be issued if the emissions control devices are in place and apparently operable. An inspection of the OBD II system as referenced in Section 2.2 shall be for informational purposes only and will not determine whether a vehicle passes or fails the emission inspection.

Diesel Readiness Check Flowchart



Appendix E - Technical Specifications and Calibration Gas

1.0 GENERAL

This appendix contains specifications for Emission Inspection System Contractors (hereafter, Contractors) to design Testing Equipment to be used in the Cache County Vehicle Emissions Inspection and Maintenance Program (hereafter, I/M Program). Testing Equipment to be used in the I/M Program must be capable of performing consistent Two-Speed Idle (TSI), and On-Board Diagnostics (OBD) emissions inspections.

1.1 Design Goals

Testing Equipment must be designed and constructed to provide reliable and accurate service in the automotive service environment and have a useful life of at least five years. The software must be designed for maximum operational simplicity and be capable of providing emissions readings or codes that can be used for vehicle diagnostics. A manual, non-test mode should be available to perform vehicle diagnostics. The software must prevent users from clearing Diagnostic Trouble Codes, changing readiness status, or performing other actions that could change the results of an official emissions test. In addition, the Testing Equipment must include security measures that will prevent unauthorized modifications to the software or inspection data, record unauthorized entry, also known as tampering, and prevent subsequent inspections when tampering is detected.

These technical specifications contain the minimum requirements for Testing Equipment used to perform emissions inspections in the I/M Program. Contractors may include additional items with approval from the Bear River Health Department (hereafter, the Department).

1.1.1 Identification Data

A nameplate including the following information must be permanently affixed to the housing of the Testing Equipment:

- Name and address of manufacturer;
- Model description;
- Serial number; and
- Date of assembly.

In addition, the Contractor shall affix a label to the housing of the Testing Equipment that contains a toll-free telephone number for customer service. This telephone number must also be displayed on error messages that recommend the need for service by the manufacturer.

The Testing Equipment must also electronically display:

- Nameplate data;
- Testing Equipment number; and
- Propane Equivalency Factor (PEF).

1.2 Manuals

All Testing Equipment sold or leased by the Contractor must be provided with a current copy of a manual that contains, at a minimum, operating instructions, maintenance instructions, and initial startup instructions. The manual may be provided in an electronic format and should be accessible from the Testing Equipment.

1.3 Certification Requirements

The Contractor shall submit a letter to the Department stating that the Testing Equipment model sold or leased by the Contractor or its authorized representatives satisfies all design and performance criteria described in these specifications. Unless otherwise specified, a copy of the software documentation listed below must be submitted to the Department as part of the certification application. The documentation must include, at a minimum, the following:

- Complete program listing(s);
- Functional specifications;
- Functional flowcharts of the software;
- Example inputs and outputs from all processes;
- Detailed interface information on system components including the identification of protocol and output specifications; and
- File layouts.

To ensure proper maintenance of all Testing Equipment, a full description of the Contractor's service procedures and policies, sample contracts, warranties, and extended service agreements must be provided as part of the certification application. The Contractor shall provide a training plan to the Department that will be used to conduct certification training of potential inspectors on the use of the Testing Equipment. The Contractor shall supply to the Department and maintain at least one piece of Testing Equipment.

1.3.1 Escrow of Software

The Contractor must submit a letter of corporate authorization agreeing to place software source codes and other pertinent technical information in an escrow placement approved by the Department. The Contractor shall contract with the approved escrow company and provide the Department with a copy of the contract including the Department as a beneficiary. Certification of the Testing Equipment will not be valid until this condition has been met.

The Contractor must place in escrow the most recent version of the Testing Equipment software, including but not limited to, the actual software code and related materials

used to meet this specification. The software will be turned over to the Department only if the Contractor defaults or cannot ensure continued performance of the contract.

In the event that the software is transferred, the Department shall protect it from public dissemination and commercial usage to the extent required by law. The software may be used, maintained, and updated by the Department, or its assignee, to support the I/M Program. At a minimum, the Department shall:

- Limit source code access to parties necessary to maintain and update the analyzers;
- Require all parties to sign a non-disclosure agreement before obtaining access to the code; and
- Grant no license permitting an entity to use any part of the codes for any commercial purpose other than to update and operate the analyzers.

The Department is not interested in the disclosure of proprietary information or the detailed inner workings of the software. However, it is essential that the software, schematics, and drawings be available in case the Contractor defaults.

As a prerequisite to certification, the Contractor shall furnish a performance bond to the Department. This bond must be in a form approved by the Department, executed as a surety by a bonding company authorized to do business in the State of Utah, and signed by a licensed resident agent. The performance bond must be for $250,000 and must remain valid for the entire time period that the Contractor participates in the I/M Program. The performance bond must cover all Testing Equipment that is certified to conduct emissions inspections in the I/M Program.

The performance bond may be used by the Department at any time if the Contractor is in default of the requirements of these specifications, including but not limited, to the following "Events of Default":

A. The Contractor fails to remedy a breach of covenant, representation, or warranty required by these specifications within thirty (30) days after written notice of such breach has been given to the Contractor by the Department;
B. The Contractor makes a general assignment for the benefit of creditors, admits in writing its inability to pay debts as they mature, institutes proceedings to be adjudicated upon voluntary bankruptcy, consents to the filing of a bankruptcy proceeding against it, files a petition or answer or consent seeking reorganization, readjustment, arrangement, composition, or similar relief under federal bankruptcy or any other similar applicable law(s), consents to the filing of any such petition, consents to the appointment of a receiver, liquidator, trustee, or assignee in bankruptcy or insolvency of the manufacturer or a substantial part of its property, or takes action to further any of these purposes; or
C. A court of competent jurisdiction enters a decree or order adjudging the Contractor as bankrupt or insolvent, or approving a properly filed petition seeking

reorganization, readjustment, arrangement, composition, or similar relief for the Contractor under the federal bankruptcy or any other similar applicable law(s), and such decree or order is not discharged or stayed continuously for a period of sixty (60) days; or a decree or order of a court of competent jurisdiction for the appointment of a receiver, liquidator, trustee or assignee in bankruptcy or insolvency of the manufacturer or of a substantial part of its property, or for the liquidation of its affairs, is entered, and such decree or order is not discharged or stayed continuously for a period of sixty (60) days; or any substantial part of the property of the Contractor is sequestered or attached and is not returned to the Contractor or released from such attachment within sixty (60) days thereafter.

To require performance by the surety under the performance bond, the Department shall give written notice of the event of default to the Contractor, specifying the date upon which the surety performance must begin.

The Director or his designee shall release the performance bond once it is determined that the Contractor has satisfactorily completed its obligations in accordance with the terms of these specifications, or at an earlier date, if it is determined by the Director to be in the best interest of the Department.

1.4 Warranty Coverage and Extended Service Agreements

A written warranty coverage agreement, signed by an authorized representative of the Contractor and the I/M Program Station, which provides a complete description of coverage for all systems and components and all Contractor provided services listed below in Contractor Provided Services, must accompany the sale or lease of each unit of Testing Equipment.

The original manufacturer's warranty must be a minimum of one year from the date of purchase. An extended warranty service agreement must be available to the Testing Equipment owner upon the expiration of the manufacturer's original warranty period. Cost disclosures of consumable inventory items and extended warranty service agreements with detailed descriptions of coverage must be available to all Testing Equipment owners.

The cost of extended warranty service agreements must be identified in the Contractor's response to the RFP

1.5 Contractor Provided Services

A Contractor-authorized repair technician is a Testing Equipment service technician that is authorized by the Contractor to perform service on their fleet of Testing Equipment. Only Contractor-authorized repair technicians may access the secure areas on the Testing Equipment.

The Contractor-authorized repair technician shall perform a gas calibration prior to returning an Analyzer to service whenever a component of the emissions measurement system is repaired or replaced. Similarly, the Contractor-authorized repair technician shall perform a leak check each

time the Analyzer's sample line is broken and repaired. Contractor-authorized repair technicians shall have software driven menu options or other acceptable method that records the transfer of inspection station, inspector information, and other data from one unit of Testing Equipment to another without manual inputs or the transfer of previous data.

The Department may require the Contractor to conduct on-site or laboratory testing of the Testing Equipment in order to document continued compliance. The Contractor shall supply the I/M Program Station a temporary replacement unit of Testing Equipment that meets the I/M Program requirements if a unit of Testing Equipment is removed from the I/M Program Station for repair or testing. The Contractor shall be responsible for any costs incurred under this requirement.

The Contractor shall correct software features that do not meet these specifications to the satisfaction of the Department. The enhancement of operational software must be specified by the Department and be designed to update through the internet. Unless authorized by the Department, software enhancements must be available for beta testing within 120 days of commencement of a software update contract and receipt of an updated Testing Equipment specification. The Contractor shall not modify any existing Testing Equipment software without obtaining approval from the Department.

The Contractor shall be responsible for training Department officials responsible for oversight of the I/M Program, including but not be limited to, the instruction on all operational, maintenance, and quality control features of the Testing Equipment sampling system, full access to and use of inspection, audit, and calibration menus, and optional programs offered to inspectors. This training must be conducted at the Contractor's expense as a condition of certification, and upon written request by the Department.

The Contractor shall provide the following services to the I/M Program Station as part of any sale, lease, or loan of Testing Equipment:

- Delivery, installation, calibration, and verification of the proper operating condition of the Testing Equipment;
- Two extra sample filters with each TSI Analyzer, and an additional printer cartridge or a certificate redeemable for a printer cartridge for all Testing Equipment;
- A minimum of two hours operation and maintenance training to the owners and operators for each unit of Testing Equipment purchased or leased.

The Contractor shall provide the following services to the I/M Program Station as part of the manufacturer's original warranty and thereafter as a portion of the extended warranty service agreement.

- Full systems support and repair, including temporary provision of units of equal quality and specification;

- Quarterly examination, calibration, and routine maintenance of Analyzer and sampling systems on the TSI Analyzers. Annual examination must be required on the OBD portion of the Testing Equipment.
- On-site service response by a Contractor-authorized repair technician within one business day (Saturday shall be considered a business day), excluding Sundays, national/state holidays (New Year's Day, Martin Luther King, Jr. Day, President's Day, Memorial Day, Independence Day, Pioneer Day, Labor Day, Veteran's Day, Thanksgiving, and Christmas), and other days the purchaser's business might be closed, of a request from the I/M Program Station. The names, toll free telephone number(s), and service facility addresses of the Contractor's representatives responsible for Equipment service must be provided to the I/M Program Station. All system repairs, component replacements, and/or Testing Equipment adjustments, including reset of quality control lockout systems, must be accomplished on-site within a minimum average response time of 8 business hours after a service request has been initiated. If the completion of this work is not possible within this time period, Testing Equipment of equal quality and specifications must be provided until the malfunctioning unit is properly repaired and returned to service.

1.6 Electronic Transmission Security

The Testing Equipment shall utilize a standard protocol encryption method for communications with the host incorporating error detection and not incorporating error correction. The Testing Equipment shall utilize bitsum checking for all messages.

1.7 Tamper Resistance

The controlled access design must be the responsibility of the Contractor, but all security measures must be submitted to the Department for approval. The Testing Equipment operators, Department personnel, and field representatives authorized by the Contractor shall be prevented from creating or changing any inspection results, programs, or data contained on the Testing Equipment. The Contractor shall use appropriate software and hardware provisions to protect I/M files and programs. The file and program protection may consist of mechanical systems in combination with electronic and software systems. The protection features must prevent access to the secured portions of the hard disk containing I/M programs and inspection data. The control key or its functional equivalent, which gives access to the operating system (OS), must not be activated except through the use of a password on the audit menu. The password must be chosen by the Department at the time of certification testing. Other security or protection alternatives may be proposed by the Contractor for approval by the Department.

The Contractor shall, at a minimum, develop tamper resistant features to prevent unauthorized access through the Testing Equipment cabinet. Micro switches, keyed and software controlled locks, and software algorithms requiring the use of an access code must all be used where appropriate. Any unauthorized access to the secured areas of the Testing Equipment must be detected, even when the power is off. A software lockout algorithm must be activated should

tampering occur, which would abort any existing inspection sequence and prevent further inspections until the lockout is cleared by a field representative authorized by the Department. The Contractor shall develop a system to allow Contractor-authorized repair technicians to clear tamper lockouts only during authorized service calls. The lockout system must be designed so that it can be activated from the audit menu by Department personnel. The Contractor may use keyed locks on the cabinet doors to secure the disk drives as long as the locks are built-in and can be changed by authorized personnel should a security problem be identified. A software controlled solenoid lock may also be used on the secured drive door of the Testing Equipment. The solenoid lock may be used instead of or in addition to any key or combination lock that may be provided. The Testing Equipment software must control the solenoid lock and unlatch the doors in response to authorized requests from the audit menu while maintaining the appropriate levels of security.

A tamper file must be created that includes the date, time, type, and location of the tamper lockout, date and time the lockout was cleared, and who cleared the lockout. The tamper lockout type and location must be accessible only through the lockout function of the Testing Equipment's audit menu.

Access to the compact disc drive (CD), if applicable, must be available to I/M Program Station personnel at all times. However, access to the BIOS, I/M related programs, and data must be secured separate from the CD and additional drives. The Contractor shall provide a security method approved by the Department for the CD drive(s) to prevent unauthorized reads, writes, and executable. However, the Contractor may offer Testing Equipment with additional disk drives that can run optional software application programs.

The Testing Equipment must prevent Contractor-authorized repair technicians from performing the following, except in a manner approved by the Department:

- Clearing a state lockout;
- Clearing a lockout for a failed three-day gas calibration or leak check;
- Adding, deleting, or modifying test data;
- Adding, deleting, or modifying I/M Program Station information or an Certified Emissions Inspector's license number; and
- Altering the calibration gas bottle values.

1.8 Automated Inspection Process Software and Displays

The inspection process, data collection, and quality control features of the Testing Equipment must be automated as much as possible. The software must automatically select the emission standards for the vehicle from an internal reference table. Vehicle identification information must be derived from a database accessed over a real time data system to the Testing Equipment. Access to the Vehicle Identification Database (VID) shall be accomplished by entry of the vehicle identification number (VIN) in its entirety. Provisions must be made for manual entry of data for vehicles not in the reference files of the Testing Equipment. The Contractor in

consultation with the Department shall customize how the emission testing results are displayed on the Testing Equipment and on the approved paperwork provided to the owner of the vehicle.

2.0 HARDWARE REQUIREMENTS

2.1 Overview

The hardware requirements for the Analyzer must meet or exceed specifications as published by the California Bureau of Automotive Repair (BAR) and contained in the "BAR-97 EMISSIONS INSPECTION SYSTEM SPECIFICATIONS" (BAR-97), dated May 1996, except where reference is made to ASM testing and NOx gas measurement requirements. The Analyzer may include all amendments made to the BAR-97 hardware specifications to present date. Each Analyzer shall be equipped with Bar Code Scanner, Engine Revolutions per Minute Detection System and Real-Time Inspection Testing Monitoring System.

2.2 Accessing the OBD System

The Testing Equipment must include hardware and software necessary to access the on-board computer systems on all model-year 1996 and newer gasoline and natural gas powered vehicles. The Testing Equipment must also be able to access the on-board computer system on all model years 2007 and newer diesel powered vehicles. The equipment design and operation of the Testing Equipment must meet the federal requirements contained in Title 40 of the Code of Federal Regulations (CFR), Chapters 85.2207-2231 and the recommended practices regarding OBD inspections contained in the J1962, J1978 and J1979 published by the Society of Automotive Engineers (SAE). The Testing Equipment must be able to connect to the vehicle's OBD connector and access, at a minimum, the following OBD data:

- Service modes: $01, $03, $07, $09, $0A

At a minimum, the Testing Equipment must also be capable of communicating with all OBD vehicles that use the following communications protocols:

- International Organization for Standardization (ISO) 9141;
- Variable pulse width (VPW) as defined in the SAE's J1850;
- Pulse width modulation (PWM) as defined in the SAE's J1850;
- Keyword protocol 2000 (KWP); and
- Controller area network (CAN) as defined in the ISO 15765-4.3:2001.

The OBD interrogation process must be fully integrated into the Testing Equipment, automated, and require no inspector intervention to collect and record the OBD data retrieved via the OBD connector link. No separate interface may be used.

2.3 OBD Inspection Equipment

The OBD inspection Equipment apply only to the OBD communication components, which must meet all federal requirements contained in 40 CFR §§85.2207 - 85.2231 and recommended practices contained in the J1962, J1978, and J1979 published by the SAE. The Equipment must meet criteria contained in the EPA's guidance document, "Performing Onboard Diagnostic System Checks as Part of a Vehicle Inspection and Maintenance Program" (EPA, 2001) or EPA's applicable update to this document.

2.4 Bar Code Scanner

The bar code scanner must be able to read a one-dimensional (1-D) and a two-dimensional (2-D) bar code through a windshield and use visible laser diode technology or an equivalent approved by the Department. The bar code scanner must not be able to read Universal Product Code (UPC) 1-D bar codes. The bar code scanner must be able to withstand multiple drops to concrete covering a distance of at least 4 feet and be environmentally sealed to withstand the normal operating conditions of an automotive service environment.

2.5 Engine Revolutions per Minute Detection

Testing Equipment must be equipped with a tachometer, or equivalent software and hardware necessary to detect engine RPM from the original equipment manufacturer (OEM) ignition technologies in use at the time of certification. Possible updates may be required to enable future ignition systems to be monitored for engine RPM. A software "HELP" screen must be available to help the Certified Emissions Inspector locate an RPM signal. The cable-type connection must be at least 25 feet long (measured from the front of the Testing Equipment).

Based on the vehicle identification information available to the Certified Emissions Inspector, the Testing Equipment must display messages indicating when the vehicle under inspection requires a specific type or method of the tachometer pick-up connection. A digital display tachometer must be displayed to measure engine speed. For TSI Analyzers, RPM readings must be recorded on a second-by-second basis for the 10 second or 5 second period that is used to determine the pass or fail status of the TSI emissions inspection, respectively. The tachometer operation must use one of the following means:

- Radio frequency-type transmitter/receiver that requires no direct vehicle connection and can detect engine RPM on vehicles using distributorless ignition systems (DIS);
- Cable-type connection capable of detecting engine RPM of current OEM ignition technology;
- Battery/accessory power connection; or
- Cable-type connection capable of detecting engine RPM via the OBD port.

During the official inspection process the Testing Equipment must prompt the Certified Emissions Inspector to shut the engine off while connecting the cable-type RPM connection. The RPM bypass function must be made available when the live engine RPM is displayed for the first

time. If the RPM cannot be obtained, the Certified Emissions Inspector shall be allowed to bypass the RPM. The Certified Emissions Inspector must simultaneously strike at least two keys to activate the RPM bypass. The bypass function must no longer be available once the emission inspection has begun.

The Certified Emissions Inspector may use the previously listed methods for 1996 and newer model-year vehicles if the OBD port is unable to detect engine RPM. Tachometer performance must be no less than a 0.5 second RPM response time with an accuracy of +/-3 percent of actual RPM.

2.6 Real-Time Inspection Testing Monitoring System

All approved Testing Equipment conducting official emission testing shall be equipped with video capturing equipment. An I/M Program Station will be in violation if the video capturing equipment is not properly maintained or installed and capturing images of each inspection. If video equipment is not fully operational, the I/M Program Station must contact the Contractor immediately for repair or replacement.

2.7 Inspection Restrictions Based on Current Calibrations

The Analyzer must:

- prevent TSI emissions inspections if the leak check has not passed in the last 24 hours;
- prevent TSI emissions inspections if the gas calibration has not passed in the last 72 hours;

The Testing Equipment must display appropriate error messages that indicate when a leak check or other calibration is needed to allow TSI inspections to be performed.

2.8 Running Changes and Other Hardware Modifications

Changes to design characteristics, component specifications, or any other modifications to the Testing Equipment hardware must be approved by the Department. The Contractor is responsible for confirming that such changes will have no detrimental effect on performance of the Testing Equipment. The Department may require testing at approved beta test sites prior to the release of the modifications.

All proposed hardware modifications must be thoroughly tested by a third-party before being submitted to the Department, and be accompanied by a cover letter containing the following information:

- Description of all of the proposed modifications to be performed, a parts list, and the installation instructions for the Contractor-authorized repair technician;
- Test data and an engineering evaluation regarding the effects of the proposed modification(s) on the performance and reliability of the Testing Equipment for any modifications to the bench or sample system;

- Timeline showing timeframe in which the modifications are expected to occur and the number of existing units of Testing Equipment that will be updated;
- Description of any special procedures that are needed to perform the hardware modifications; and
- Documentation for any software update that would be required for the proposed hardware modifications.

2.9 Exhaust Gas Analysis Equipment Specifications

This section defines the requirements for the components needed to determine the concentrations of the exhaust gases during the TSI inspections.

2.9.1 Measured Gases

The Analyzer must measure hydrocarbons (HC) as hexane in parts per million (ppm), carbon monoxide (CO), carbon dioxide (CO_2), and oxygen (O_2) in percent. The Analyzer must have a digital display for vehicle engine speed and exhaust concentrations of HC, CO, CO_2, and O_2 and must be capable of measuring exhaust concentrations of HC, CO, CO_2, and O_2 at a minimum sample rate of twice per second.

2.9.2 Warm-up Conditions

The Analyzer must reach stability within 30 minutes from startup at 35 degrees Fahrenheit (°F). The Analyzer must be considered warmed-up when the internal verifications are complete and the zero and span readings for HC, CO, CO_2, and O_2 have stabilized within the allowable accuracy values for five minutes without adjustment. If stabilization has not been reached within an allotted time frame, then the Analyzer must prevent TSI inspection sequences and display a message instructing the Certified Emissions Inspector to call for service. Functional operation of the gas sampling system must remain disabled through an internal lockout until the instrument meets stability and warm-up requirements.

2.9.3 Sampling System Components

A) General:

The sampling system must extract exhaust gas from a subject vehicle, remove particulate matter and aerosols from the sampled gas, drain the condensed water from the sample if necessary, and deliver the resultant gas sample to the Analyzer's sensors for analysis. The sampling system must, at a minimum, consist of a tailpipe probe, flexible sample line, continuously draining water removal system, particulate trap, sample pump, and flow control components. Provisions must be made for the introduction of zero air and calibration gases. Materials that are in contact with the gases sampled must not contaminate or change the composition of the gases to be

analyzed, including gases from vehicles not fueled by gasoline. The system must be designed to be corrosion-resistant and to withstand vehicle exhaust.

B) Sample Probe and Hose Criteria:

Sample hose must be 25 feet in length with a tolerance of +/- 0.5 feet when measured from the front of the Analyzer cabinet. The hose must be composed of non-kinking material that will not be affected by or react to the exhaust gases.

Sample hose and probe provided with each Analyzer must withstand exhaust gas temperatures at the probe tip of up to 1,100°F for 10 minutes. Use of dissimilar metals with thermal expansion factors of more than 5 percent must not be used in either the construction of probes or connectors.

A positive means of retention must be incorporated to prevent the probe from slipping out of the tailpipe when in use.

A thermally insulated securely attached hand grip must be provided on the probe to ensure easy probe insertion using one hand.

The probe must be designed so that the tip extends 16 inches into the tailpipe and at least 10 inches into the vehicle's exhaust.

The probe tip must be shielded to avoid inadvertent debris collection and sealed to prevent any sample dilution when it is inserted into the tailpipe. Use of a tailpipe extension is permitted as long as the extension does not change the exhaust back pressure by more than +/- 1 inch of water pressure.

A straight probe tip must be provided that is bent less than 15 degrees, made of stainless steel solid-wall tubing with a 3/16 inch outside diameter, and designed so the connector between the removable probe tip and the rigid portion of tubing is up inside the tailpipe at least three inches to reduce the effects of any leak that might occur.

A probe tip cap suitable for performing a leak check must be provided if the vacuum decay method for performing a leak check is used. Otherwise, all hoses and connectors that are necessary to perform a leak check must be provided.

The sample system must include equipment necessary to inspect vehicles equipped with dual exhaust pipes. The flow in each leg of the dual exhaust probe sample system must be equal.

C) Particulate Filter and Water Trap:

- The particulate filter must be capable of trapping 97 percent of all particulates and aerosols five microns or larger;
- The filter must not absorb or adsorb HC;

- The filter housing must be transparent to allow the operator to observe the filter's condition without removing the housing. The filter must be removable and reliably seal after replacement;
- The water trap must be sized to remove exhaust sample water from vehicles fueled with, or a combination of gasoline, propane, compressed natural gas (CNG), oxygenated fuels, and alternative fuels. The filter bowl, filter, and housing must not react to these fuels or the vehicle's exhaust gases. The condensed water must be continuously and sufficiently drained from the water trap's bowl to prevent condensation in the sample system or in the optical bench's sample cell; and
- Incorporate a back-purge system.

D) Low Flow Indicator:

The Analyzer must lockout official TSI inspections when the sample flow is below the acceptable level. The Analyzer's sample system must be equipped with a flow meter or equivalent device that detects sample flow degradation. The Analyzer must display a low flow condition message when flow rate causes the measurement error for any gas to exceed 3 percent of the gas value used for calibration or audit or causes the analyzer response time to exceed 13 seconds to 90 percent of a step change in input, whichever is less. The sample vacuum may be continuously monitored to detect a low flow condition as an alternative.

E) Analyzer lockout:

The Analyzer must lockout official TSI inspections when the sample flow is below the acceptable level. The Analyzer's sample system must be equipped with a flow meter or equivalent device that must indicate when sample flow degradation for any gas other than NO causes:

- The measurement error to exceed 3 percent of the gas value used for checking; or
- The Analyzer response time to exceed 13 seconds for a 90 percent step change in input.

The sample vacuum may be continuously monitored to detect a low flow condition as an alternative.

3.0 Analyzer Requirements

3.1 Gas Calibration

A) General:

The Analyzer must automatically require and successfully pass a leak check and a gas calibration for HC, CO, CO_2, and O_2 by a method that is approved by the Department. The Analyzer must not allow an error of more than 2 percent of the readings using the high and low range span gases

for TSI inspections. The Analyzer must automatically prohibit the performance of the tailpipe portion of the vehicle emissions inspection when readings exceed the 2 percent error tolerance. The Analyzer channels must be adjusted to the center of the allowable tolerance range as a result of the gas calibration procedure.

The standard gases to be used to calibrate and audit the Analyzer must meet the requirements in the Federal Clean Air Act, §207(b) and described in Subpart W of Part 85 of Chapter I, Title 40 of the CFR. All standard gases purchased by the I/M Program Station for use in the Analyzer must conform to the requirements established by the BAR for emissions inspection analyzer calibration gases and the National Institute of Standards and Technology (NIST).

B) Gas Calibration Procedure:

- The Analyzer must maintain accuracy between gas calibrations taking into account all errors, including noise, repeatability, drift, linearity, temperature, and barometric pressure;
- The Analyzer must automatically require a zero gas calibration and a high and low range gas calibration for HC, CO, CO_2, and O_2, where applicable. The Analyzer must record the gas reading data prior to the adjustment and other data pertinent to control charting Analyzer performance;
- The gas calibration must be accomplished by the following method: Calibration gases that meet the requirements of Section 3.1: Calibration Gases for TSI Analyzers must be introduced into the calibration port of the Analyzer. The pressure in the sample cell must be the same with the calibration gas flowing as with the sample flowing during an inspection. Once the pressure is the same, the Analyzer must perform a zero gas calibration and a leak check. The leak check must ensure that the entire sample system does not leak.

3.2 Calibration Gases for TSI Analyzers

The following gases must be used for the two-point calibration and audit.

A) Low Range Calibration Gas

HC = 200 ppm propane

CO = 0.5 percent

CO_2 = 6.0 percent

O_2 = Shop Air

N_2 = Balance 99.99 percent pure

B) High Range Calibration Gas

HC = 3200 ppm propane

CO = 8.0 percent

CO_2 = 12.0 percent

O_2= Shop Air

N_2 = Balance 99.99 percent pure

3.3 Dilution

The flow rate of the Analyzer must not cause more than 10 percent dilution during sampling of vehicle exhaust gases from a 1.6 liter engine at normal idle. Ten percent dilution is defined as a sample of 90 percent exhaust and 10 percent ambient air.

3.4 Calibration Prompts and Gas Usage

The Analyzer must display prompts to guide the inspector through the gas calibration procedure in a manner that minimizes the amount of gas used. The Analyzer must be designed to keep the loss of calibration gas to less than 0.5 liter in 24 hours when the valve on the calibration gas bottle is left open.

3.5 Propane Equivalency Factor

The value of the PEF must range from 0.490 to 0.540 and be displayed in a manner acceptable to the Department for each gas audit and gas calibration point. If an optical bench must be replaced in the field, then the Contractor-authorized repair technician must change any external labels to correspond to the PEF of the new bench. The Analyzer must incorporate an algorithm relating PEF to HC concentration. Corrections to the PEF must be made automatically and the corrected PEF value must range from 0.470 to 0.560.