

**COMMONWEALTH OF VIRGINIA**  
**DEPARTMENT OF ENVIRONMENTAL QUALITY**  
*Northern Virginia Regional Office*  
**Mobile Source Operations Section**

<b>OPERATIONAL ORDER</b>	<b>NUMBER</b>  2	<b>EFFECTIVE DATE:</b> January 19, 1993 <b>Revised:</b> January 13, 2009
<b>SUBJECT</b>  FIELD ACTIVITY PROCEDURES	<b>ORIGINATING UNIT</b>  MOBILE SOURCE OPERATIONS SECTION	

**I. INTRODUCTION:** Vehicle Emissions Compliance Officers (VECO) are charged with the responsibility of inspecting Vehicle Emissions Inspection Stations (EIS) and Certified Emissions Repair Facilities (CRF). The purpose of these inspections is to document and initiate steps to correct deficiencies observed during the course of the visit. These deficiencies may include problems with analyzer equipment, procedures, and/or licenses/permits/certifications. The purpose of this order is to establish guidelines for the inspection of Vehicle Emissions Inspection Stations and Certified Emissions Repair Facilities and the licensed/certified and non-licensed/certified personnel employed within. A Field Inspection applies to four (4) different permits/licenses/certifications and inspection procedures are conducted according to a differing set of criteria for each:

- Vehicle Emissions Inspection Stations (EIS)
- Certified Emissions Repair Facility (CRF)
- Licensed Vehicle Emissions Inspector (LEI)
- Certified Emissions Repair Technician (CRT)

**II. REQUIRED EQUIPMENT & SUPPLIES:** Prior to performing field activities, VECOs shall ensure that they are properly equipped and have sufficient supplies to perform all assigned tasks.

**A.** VECOs shall have the following items on their person:

1. Driver's License
2. DEQ Identification
3. Calculator (Optional)
4. Business Cards
5. Cell Phone
6. Pen & Pencil

**B.** VECOs shall ensure that their assigned state vehicle is equipped with the following:

1. Departmental audit gas and necessary attachments
2. Laptop computer, printer and power inverter
3. Vehicle Emissions Inspection Manual
4. Binoculars
5. "Voyager" state gas credit cards
6. Jumper cables and fire extinguisher (if equipped)
7. Flares
8. Gloves

9. Availability of the following forms:

- a) Analyzer Training Forms (Attachment 1)
- b) Application for Official Emissions Inspection Stations, MSOS 101 (Attachment 2)
- c) Emissions Inspection Station Pre-certification Worksheet, MSOS 601 (Attachment 3)
- d) Emissions Inspection Station Fact Sheet (Attachment 4)
- e) Application for Certified Emissions Repair Facility, MSOS 201 (Attachment 5)
- f) Certified Repair Facility Pre-certification Worksheet, MSOS 501 (Attachment 6)
- g) Certified Emissions Repair Facility Fact Sheet (Attachment 7)
- h) Application for Certified Emissions Repair Technician, MSOS 701 (Attachment 8)
- i) ASE Transcript Request Form (Attachment 9)
- j) Motor Vehicle Trip Log forms (Attachment 10)
- k) MSOS Monthly Fuel/Maintenance/Equipment Report form (Attachment 11)
- l) Emissions Inspector License Extension Request form, MSOS 1101 (Attachment 12)

**III. STATION INSPECTION PROCEDURES:** Inspections are conducted to ensure the facility's compliance with the Regulation for the Control of Motor Vehicle Emissions in the Northern Virginia Area (9 VAC 5 Chapter 91). Inspections shall be performed on each permitted emissions inspection station at least twice per year. Stations will be inspected for compliance with personnel, equipment, and facility requirements as directed by the Virginia Vehicle Emissions Inspection Manual.

**A. Field Inspection Report – Emissions Inspection Station:** The inspecting VECO will inspect each emissions inspection station for compliance with the regulations and, in particular, the criteria listed on the Field Inspection Report (FIR). This section describes the criteria for the inspection as laid out by the FIR.

1. **Date:** This section of the report normally defaults to the current date. Therefore, this field does not usually require an entry by the VECO.
2. **Inspection Type:** There are three types of inspections: "Regular", "Other" and "Gas Audit." The "Regular" type inspection is for the "twice-a-year" overt inspection for proper licenses, equipment, references, analyzer check (but not for a gas audit unless performed during the same visit as the full "regular" inspection), etc. The "Other" type inspection is for visits not associated with "Regular" inspection duties. A likely "Other" visit might consist of a station visit to gather information during the conduct of an investigation of a complaint (IOC), investigation of a violation (IOV) or a special inspection. The "Gas Audit" is used for the "twice-a-year" DEQ Span Gas Audit (See Appendix C).
3. **VECO:** This field identifies the VECO conducting the field inspection. The VECO's initials are selected from a list of values or may be typed in manually.
4. **Station:** The VECO enters the (4) digit emissions inspection station number, or types the first few letters of the station name in this field to bring up a list of values from which to select the appropriate facility.

5. **Field Inspection Report Entries:** The following fields are inspection items to be completed in accordance with the regulations and guidance provided below. Each item shall be assigned an “S” for “Satisfactory,” a “U” for “Unsatisfactory” or an “N” for “Not Applicable.”
- a) “Permit Properly Displayed” – Is the permit prominently displayed in an area that allows examination by the public? Is the permit current or has it expired? [Note: VECO’s are expected to keep up-to-date with their facilities, and to ensure timely renewals of permits.]
  - b) “Poster Properly Displayed” – Is the exterior poster mounted in a manner that renders it visible from the outside of the facility? Is it readable and properly mounted? (Note: sign posting may be subject to local ordinance.)
  - c) “Recordkeeping/Document Security” – Are waiver report forms, emissions repair data forms and associated repair receipts/service orders retained after the issuance of waivers? Have voided Vehicle Inspection Reports been stored in a secure manner? Are “Rejection From Testing” Forms available?
  - d) “Required Equipment/References” – Does the station have the following equipment available and in proper operating condition, if applicable?
    - i. Certified emissions analyzer system
    - ii. Approved calibration gases
    - iii. Hand tools to perform inspections
    - iv. Ventilation system for exhaust removal
    - v. Suitable non-reactive exhaust hoses (if necessary depending on system used)
    - vi. Current emissions control application guide (electronic is acceptable)
    - vii. Analyzer maintenance manual
    - viii. Certified thermometer
    - ix. Cooling fan system
    - x. Telephone
    - xi. Dedicated phone line for analyzer
    - xii. Approved paper for laser printer (8.5x11 inch 20 lb. bond paper)
  - e) “Emissions Inspection Manual” – Is the manual available to the emissions inspection personnel? Is it in serviceable condition and up-to-date including bulletins, printed analyzer E-mails, etc.?
  - f) “Inspector Licenses” – Do the emissions inspectors have their licenses? Are any of the licensed emissions inspectors nearing the expiration of their inspection license? Are their operator’s licenses valid?
  - g) “Calibration Gases” – Are the analyzer calibration gases of the proper concentrations and blend number? Are the Bureau of Automotive Repair (BAR) labels affixed to the calibration gases? Has the gas certification expired (i.e., the expiration date on the BAR label)?

- h) “Analyzer System” – Is the analyzer equipped and operating in accordance with 9 VAC 5-91-640 through 9 VAC 5-91-710 of the Emissions Inspection Manual? Is it the proper certified model? Is the correct software version installed? Is the station profile information correct (serial number, model, etc.)?
- i) “DEQ Span Gas Check” – If a gas calibration audit was performed, were the analyzer readings within the accepted tolerances for the gases introduced? Is the analyzer positioned out of direct sunlight? Is the ambient air thermometer positioned where it can monitor temperature in the vicinity of the analyzer platform?
- j) “Dynamometer” – Is the dynamometer being operated in a manner consistent with manufacturer recommendations? Does the wheel lift operate correctly? Are “in-ground” dynamometer issues such as pit ventilation and adequate water drainage addressed? Is it a certified model? Do the model and serial numbers of the installed unit match what appears on the station profile?
- k) “Inspection Area/Station Operation” – Does the inspection bay permit proper operation of analyzer and dynamometer equipment? Is there any other hydrocarbon emitting equipment in the inspection bay such as acetylene tanks, parts washers or used oil drums in close proximity to the analyzer? Are emissions inspection hours posted in accordance with regulations? Does the inspection bay arrangement permit the inspector to have access to equipment such as wheel chocks, tie-down restraints or other devices recommended for use by the analyzer dynamometer manufacturer? Does the arrangement of equipment permit proper placement of cooling fan for vehicles being inspected? Are there adequate provisions for exhaust gas removal?
- l) “Inspection Procedures” – Were all aspects of the emissions inspection process performed in accordance with 9 VAC 5-91-410 through 9 VAC 5-91-490 of the Enhanced Vehicle Emissions Inspection Manual? (Note: Although the inspecting VECO might not have the opportunity to observe an emissions inspection performed by licensed station personnel during the overt audit, an examination of inspection data, record retention and other observable indicators of emissions inspection performance can justify a determination of “S” or “U” for “Inspection Procedures.” In addition, VECOs should examine inspection records recorded to the vehicle inspection database using established and ad-hoc “Discoverer” queries as well as other web-based audit “trigger” programs and automated reporting programs.
- m) “Inspection Observed” – If the VECO was not able to observe an emissions inspection performed by the facility’s licensed inspection personnel, an entry of “N” is made. If an inspection was observed by the VECO, an entry of “S” or “U” is made depending on the performance of the inspection observed. An additional copy of the VIR for every VECO-observed inspection shall be printed for submission to the Mobile Source Program Manager (PM) to fulfill EPA reporting requirements.
  - i. An entry of “U” for “Inspection Observed” shall be accompanied by an entry of “U” for inspection procedure.

- ii. VECOs shall endeavor to observe vehicle emissions inspection procedures when at all possible during the conduct of station inspections. If the facility employs more than one licensed emissions inspector, efforts shall be made to observe each inspector perform an inspection at least once per year. When inspections are observed, a notation shall be made in the “Remarks” section of the FIR that will indicate the name and identification number of the inspector(s) observed, along with any pertinent information related to the observation(s). Such items as incorrect or non-approved procedures observed, failure to conduct a portion(s) of the inspection in accordance with regulations and/or approved procedures(s), and any advice, suggestions or other compliance assistance offered or enforcement actions taken shall be noted.
  - iii. On a periodic basis, observed inspections shall be coded by the VECO in the vehicle inspection database, and copies of the VIRs will be forwarded to the Program Manager.
- n) “Other” – This field is for activities and criteria not covered by the categories above. This field might be entered as “S” or “U” depending on the situation. An “other” visit to an inspection facility might be part of an official complaint against an emissions inspection station.
  - o) Remarks: This field is for explanations of unsatisfactory results noted during the course of the inspection, or for other pertinent remarks reference the visit. Whenever a “U” appears in any of the fields above, an explanation of the finding must be entered in this section. VECOs are to ensure that the information recorded in the “Remarks” section of the field report is accurate. Remarks shall also describe an observed inspection(s) in accordance with Section 5.m. above.
  - p) Signee: The signee of the field report is derived from the “contact” database. The VECO can retrieve the contact person who will be receiving the FIR by entering the ID number of the contact person or by depressing the F9 key and searching by the last name. (Note: the signee must have a profile in the “contact” database. If no such profile exists, one must be created by the inspecting VECO prior to entering into the automated FIR program. Important: See Appendix A for CEDS Contact Instructions.) If an NOV is being issued (see below), the signee should be an owner or an authorized representative of the owner corporation or firm.
- B.** Field Inspection Report without Notice of Violation – If the field inspection did not result in a Notice of Violation (NOV) for the facility or inspector(s), the VECO will save the record by clicking on the “Disk” icon on the computer screen tool bar or by depressing the F10 key. The VECO can then click on “Print Field Report.” Once the field report has printed and the VECO has signed the report, he/she shall serve the signee with the completed field inspection report for signature.
- C.** Informal Actions and Notices of Violation – If the field inspection did result in an NOV for the facility or inspector(s), or an informal action is taken and/or resolved, the inspecting VECO saves the FIR as described above.

1. **Informal Action:** The first field documents the resolution of any informal actions addressed during the course of the inspection or visit. The VECO has two options for status of the informal action documented during that inspection/visit, and one additional option for informal actions resolved at a later date:
  - a) “Not Resolved” – This entry involves a discrepancy or issue that could not be resolved during the inspection/visit. For example: The inspection facility needs to update their copy of the emissions control systems application guide. A new guide will probably not be obtained while the VECO is present, but is ordered and expected to arrive in a short time. The VECO would select “Not Resolved,” a brief description of the Informal Action in the “note” field will be made, and the report will be saved. The VECO will ensure that this issue is addressed in a timely manner, preferably within ninety (90) days. If the IA is not resolved within 90 days, an NOV may be appropriate depending on circumstances.
  - b) “Resolved on Site” – This entry is used for discrepancies resolved or corrected during the course of the VECO’s inspection/visit. For example: The inspecting VECO determines that the analyzer is sitting in direct sunlight, and the analyzer is moved out of sunlight accordingly. This is an example of an informal action that was “Resolved on Site.” Select from the List of Values “Resolved on Site.” The “Resolved” box and date field will be automatically populated. Save the report.
  - c) Informal Action Previously Taken but Not Resolved, - and is NOW Resolved: The VECO will open the FIR record in which the original “Not Resolved” informal action was created and edit that report; a new FIR is not produced to resolve a prior informal action. Do NOT make any selection from the List of Values. Instead, just check the "Resolved" box. The date field will be automatically populated. Save the report. [NOTE: An informal action is either “Resolved on Site” or “Not Resolved.” An action that was “Not Resolved” is eventually resolved only by opening the original report containing the informal action, then clicking the “Resolved” box, and saving that original report with the change.]
  - d) An explanation for all informal actions shall also be made in the “Remarks” section of the FIR. An example might be “additional training or guidance,” but the term “informal action” is not used. [Note: For prior actions now being resolved, the “Remarks” field cannot be updated – only the “Resolved” box may be updated. For this reason and at the VECO’s discretion, a current FIR may be issued to document the resolution of a prior action, but in no case shall that current FIR be coded with any informal action related to the prior action.]
2. **Notice of Violation (NOV):** This section of the automated FIR has two sections for NOV. The first section is for alleged violations by the permit holder of the licensed emissions inspection station (EIS). The other is for alleged violations by the individually licensed emissions inspector(s) (LEI). Alleged non-compliance with established regulations and procedures could result in the issuance of an NOV to an LEI, an EIS or both. The party served with an NOV may choose to accept the alleged violations as cited (or deny the allegations but nevertheless wish to settle the matter) by checking the appropriate box, signing and then entering into negotiations with the supervising VECO for terms of probation, a letter of reprimand, a period of suspension, an equivalent civil

charge, a combination of these or a revocation of the license or permit. The party served may also choose to deny the allegation and request an administrative proceeding to decide the matter. Violations are to be processed according to their classification as “Minor” or “Major.” Once the cited party has checked the appropriate box and signed the NOV, the supervising VECO provides that party with a copy of the signed NOV and processes the original through MSOS. [NOTE: For guidance on the processing of NOVs and Enforcement Procedures, refer to Operational Order #13.]

- D. VECOs shall ensure that completed FIRs are routed to the appropriate personnel at the facility inspected and, when required, return signed copies of completed FIRs and NOVs in a timely manner to MSOS for processing as required. VECOs shall ensure that laptops are refreshed prior to submission of an FIR or NOV for processing.

#### IV. **CERTIFIED EMISSIONS REPAIR FACILITY INSPECTION PROCEDURES:**

Inspections are conducted to ensure compliance with the Regulation for the Control of Motor Vehicle Emissions in the Northern Virginia Area (9VAC 5 Chapter 91). Each Certified Emissions Repair Facility (CRF) shall be inspected at least once every calendar year. Facilities will be inspected for compliance with personnel, equipment and facility requirements as directed by the Virginia Vehicle Emissions Inspection Manual and the criteria as listed below.

- A. **Field Inspection Report – Certified Emissions Repair Facility:** The inspecting VECO will inspect each CRF for compliance with the regulations and, in particular, the criteria listed on the FIR. This section describes the criteria for the inspection as laid out by the FIR.
1. **Date:** this section of the report automatically defaults to the system date. This field does not require an entry by the inspecting VECO.
  2. **Inspection Type:** There are two types of inspection: “Regular” and “Other.” The “Regular” type inspection is for the annual inspection for proper licenses, equipment, references, analyzer calibration check, etc. The “Other” type inspection is for visits not associated with “Regular” inspection duties. A likely “Other” visit might consist of a station visit to gather information during the conduct of an IOC or an IOV.
  3. **VECO:** This field identifies the VECO conducting the field inspection. The VECO’s initials are selected from a list of values or may be typed in manually.
  4. **Station:** The VECO enters the (4) digit certified repair facility number, or types the first few letters of the station name in this field to bring up a list of values from which to select the appropriate facility.
  5. **Field Inspection Report Entries:** The following fields are inspection items to be completed in accordance with the regulations and guidance provided below. Each item shall receive an “S” for “Satisfactory,” a “U” for “Unsatisfactory” or an “N” for “Not Applicable.”
    - a) “Certificate Properly Displayed” – Is the certificate prominently displayed in an area that permits examination by the public? Is the certificate current or has it expired?

[Note: VECO's are expected to keep up-to-date with their facilities, and to ensure timely renewals of certifications.]

- b) "Poster Properly Displayed" – Is the exterior identification poster mounted so that it is visible from the outside of the facility? Is it readable and properly mounted?  
(Note: sign posting may be subject to local ordinance.)
- c) "Supply of Repair Data Forms" – Does the station have an adequate supply of *legible* Emissions Repair Data Forms?
- d) "Record Keeping" – Are all applicable repair and certification related records maintained and available for inspection and/or audit?
- e) "CRT Certification" – Are all CRT certifications assigned to this Certified Repair Facility current? Have any of them expired?
- f) "CRT Performance" – Are all repairs being correctly recorded on the Emissions Repair Data Forms? Are the repairs appropriate with regard to the waiver process? Are the correct deductions taken for "shop fees," "environmental fees" and/or other similar non-emissions related items?
- g) "Required Equipment/References" – Does the station have the following equipment available and in serviceable condition?
  - i. Ammeter, DC
  - ii. Voltmeter, AC/DC
  - iii. Ohmmeter
  - iv. Tachometer
  - v. Fuel injection fuel pressure gauge
  - vi. Compression gauge
  - vii. Cylinder leak-down tester
  - viii. Vacuum pump with gauge
  - ix. Scan tools to extract trouble codes
  - x. OBD II capable scan tool for OBD II diagnosis & repairs (when required)
  - xi. Ready access to reference material to include all makes/models serviced
  - xii. (Optional but recommended: 4-Gas Emissions Analyzer, Oscilloscope, Timing Light w/Advance)
- h) "Emissions Inspection Manual" – Is the manual available to the certified repair facility personnel? Is it in serviceable condition and up-to-date including bulletins, etc.?
- i) "Other" – this field is for activities and criteria not covered by the categories above. This field might be entered as "S" or "U" depending on the situation.
- j) Remarks: This field is for explanations of unsatisfactory remarks noted during the course of the inspection, or for other pertinent remarks reference the visit. Whenever a "U" appears in any of the fields above, an explanation of the finding shall be

entered in this section. VECOs are to ensure that the information recorded in the “Remarks” section of the field report is accurate.

- k) Signee: the signee of the field report is derived from the “contact” database. The VECO can retrieve the contact person who will be receiving the FIR by entering the ID number of the contact person, typing the first few letters of the individual’s last name and pressing Tab or Enter, or depressing the F9 key and searching by the last name. (NOTE: the signee must have a profile in the “contact” database; if no such profile exists, one must be created by the inspecting VECO prior to entering into the automated FIR program. Important: See Appendix A for CEDS Contact Instructions.) If an NOV is being issued (see below), the signee should be an owner or an authorized representative of the owner corporation or firm.

**B.** Field Inspection Report without Notice of Violation – (Please refer to Section III.B. above)

**C.** Informal Actions and Notices of Violation – (Please refer to Section III.C. above)

**D.** VECOs shall ensure that completed FIRs are routed to the appropriate personnel at the facility inspected and, when required, return signed copies of completed FIRs and NOV to MSOS for processing as required.

**V. AUTOMATED FIELD REPORT PROBLEMS:** In cases where the automated FIR/NOV procedure is not operational, the VECO shall return to the office location to address the issue. The FIR/NOV may be completed at the office location and then delivered to the facility at a later time.

**VI. ACTIVITY REPORT PROCEDURES:**

**A.** VECOs shall complete the Activity Report functions on a daily basis for every normal business day. Additional information, such as state vehicle mileage, may be included at the VECO’s discretion in order to facilitate other required reporting, but at minimum this report shall include the following information:

1. VECO’s Name
2. Date
3. Arrival or beginning time
4. Activity with description
5. Location
6. Purpose (Enter description if not obvious by the Activity Code)
7. Departure or ending time

**B.** The first and last entries for “purpose” each day will normally be “Login” and “Logout,” respectively with a notation as to the location (i.e., “DEQ – NVRO/MSOPS,” “Home Office” or the field location where the VECO’s day began or ended). If the “location” is a permitted or certified facility, the facility name and identification number shall be recorded; if not, a description of the location including street address shall be recorded. Administrative time at the “Home Office” is acceptable in limited time frames either at the beginning or end of a work day (See Appendix B). VECOs shall also include lunch in the daily activity report when in the field (reporting of lunch activity is *not* required when in DEQ office locations).

C. VECOs shall use the following codes as the “purpose” of activities. Note that an FIR is required for any EIS, CRF or GA activity. Additional information shall also be recorded by the VECO as may be necessary to clarify the purpose of the activity (e.g., for an inspector certification, the inspector’s name and, if assigned, identification number).

- |           |   |
|-----------|---|
| 1. ADMIN  | Administrative Activities (include a description)                               |
| 2. EIS    | Emissions Inspection Station Audit (FIR Required)                               |
| 3. CRF    | Certified Emissions Repair Facility Audit (FIR Required)                        |
| 4. GA     | Analyzer Gas Audit (FIR Required)   |
| 5. FM     | Fuel/Maintenance  |
| 6. IO     | Inspection Observed (Include Insp. Name, ID# and pertinent info)                |
| 7. AP     | Analyzer Problem  |
| 8. IOV    | Investigation of Violation  |
| 9. IOC    | Investigation of Complaint  |
| 10. LU    | Lunch   |
| 11. IC    | Inspector Certification   |
| 12. LI    | Login   |
| 13. PW    | Pre-Certification Worksheet (Indicate whether for EIS, CRF or both)             |
| 14. LO    | Logout  |
| 15. SC    | Station/Facility Certification  |
| 16. RL    | Re-Issue Permit/Certificate/License/Certification to EIS/CRF/LEI/CRT            |
| 17. RA    | Record Audit (includes all queries and/or “trigger” audits)                     |
| 18. CVTS  | Covert Inspections  |
| 19. RO    | Remote Observation  |
| 20. DO    | Duty Officer  |
| 21. GCA   | Government Compliance Assistance  |
| 22. RI    | Referee Inspection  |
| 23. REP   | Reports (include a description)   |
| 24. FV    | Facility Visit for any visit other than as listed above (include a description) |
| 25. OTHER | Any activity not otherwise identified above (include a description).            |

Notes:

1. The “REP” activity includes work on reports of any kind (i.e., SIRs, memos, etc.) The entry shall include the facility ID, Log Number or name as appropriate.
2. The “EIS” and “CRF” activities shall include ONLY the actual, regular audits of such facilities, and an FIR must be associated with each such entry; a “GA” shall require an FIR whether for initial visit or a follow-up visit, and an FIR must be associated with each such entry.
3. FIRs are optional for all other categories depending on the nature of the activity.

D. VECOs shall maintain Daily Activity Reports in a current status by performing refreshes on a regular basis. Refreshes shall be performed at least once per week by close of business between Friday and the following Tuesday, and always prior to submission of an enforcement matter. VECOs may also maintain a Manual Daily Activity Report.

**VII. OTHER PROCEDURES:** In addition to regular Station Inspections and Special Inspections, other station visits may be necessary:

**A. Investigation of Complaint or Violation:** These investigations are performed to ascertain the validity of a complaint or an alleged violation(s). The procedures for performing an Investigation of Complaint are outlined in Operational Order #4. When conducting investigations, keep the following points (stated in Operation Order #1) in mind:

Always listen to all sides of an issue; do not assume anything; do not prejudge any situation, no matter how obvious it may appear; and gather all facts and investigate thoroughly before developing any conclusions.

Note: FIRs are optional during station visits to gather information regarding investigations of complaints or alleged violations. VECOs are encouraged to maintain a notebook to record information from investigations. [Note: Field notes are subject to FOIA and subpoena, so they should be factual with no opinions or unrelated matters expressed.] If the investigation reveals that a violation has occurred, and the officer's investigative report and recommendations for action have been approved, the FIR will be utilized to issue an NOV. (Refer to Operational Order #4 regarding investigation of complaints, and the schedule of penalties in Operational Order #13 to determine the appropriate action.)

**B. Inspector Certification:** When certifying an applicant who has successfully completed the emissions inspector course, the VECO must complete the certification section of the Vehicle Emissions Inspector License Application (MSOS 1001) to include verification of applicant's valid motor vehicle operator's license. In conjunction with evaluating the applicant's knowledge of program regulations, the VECO must observe the applicant demonstrate the ability and knowledge to conduct a proper vehicle emissions inspection and analyzer operation and maintenance. These include assessing the applicant's proficiency in reading underhood emissions decals and emissions control systems application guides, and properly determining and then visually inspecting manufacturer equipped emissions control systems. Applicants should demonstrate the following skills using various vehicles selected by the VECO administering the field certification procedures.

1. **GVWR Rating Label:** Applicants should demonstrate proficiency in finding the manufacturer's rating label for GVWR on a given vehicle submitted for an emissions inspection. Applicants should also know how to inspect vehicles that do not have an affixed GVWR rating either by decoding engine serial and/or vehicle identification numbers or by using default settings (3500 lbs.) for passenger vehicles determined to be under 6001 lbs. GVWR.
2. **Underhood Emissions Decal:** Applicants should be capable of finding and reading the Underhood Emissions Decal. Applicants should be able to find and explain the following information that appears on the Underhood Emissions Decal:
  - a) Engine Size
  - b) Model Year
  - c) OBDII, Federal, California, High-Altitude, or Combination Certification Statements.
  - d) Emissions Control Systems Abbreviations.
  - e) Vacuum Routing Diagram

3. Emissions Control Systems Application Guide: Applicants should be capable of using the guide as a secondary reference in instances where the underhood emissions decal is missing, unreadable, not clear as to emissions control equipment, or not applicable to the engine installed in the vehicle. Applicants should also understand the division between weight classes and be able to use the guide's "footnotes" to determine proper emissions control equipment requirements for a given vehicle.
4. Physically Locating Emissions Control Components: Applicants should be able to identify and explain the function of each of the following components/systems and explain the visual inspection criteria for each:
  - a) Positive Crankcase Ventilation System
  - b) Catalyst System
  - c) Air Injection System
  - d) Thermostatic Air Cleaner System
  - e) Exhaust Gas Recirculation System
  - f) Evaporative System
  - g) On-Board Diagnostic System/Connector
5. Program Coverage: Applicants should understand the criteria for selecting an appropriate test for a given vehicle subject to the emissions inspection. Because of the potential for vehicle damage, applicants shall also understand and be able to implement ASM dynamometer exclusions such as:
  - a) Vehicles that employ "full-time 4-wheel" or "all-wheel" drive that cannot be disengaged and operated under 2-wheel drive **shall not be inspected on the dynamometer**. The applicant is to be assessed for the ability to thoroughly examine each vehicle subject to the ASM dynamometer inspection to ensure that the vehicle is not equipped with "full-time 4-wheel" or "all-wheel" drive. The applicant should make this determination by examination of the vehicle shifter console and dashboard indicators, or available reference materials, to determine if such vehicles can be disengaged to run in 2-wheel drive. If the vehicle has a mechanical problem preventing 4WD disengagement to 2WD, the vehicle shall be rejected from testing in accordance with 9 VAC 5-91-420.C.3 and J.
  - b) For vehicles with "traction control" devices that automatically apply braking or reduce engine speed when wheel speed sensors sense wheel(s) traveling at differing speeds, the traction control system should be turned off prior to testing on the dynamometer. If it is determined that the vehicle drive train would be damaged because of non-disengageable traction control if tested on a dynamometer, the vehicle shall be tested using the 2 speed idle (TSI) test instead of ASM dynamometer testing.
6. Applicants should know which vehicles are subject to the emissions inspection program, including vehicles that are subject to OBDII testing and to the On-Road Emissions program.
7. Applicants should know that in cases of engine switches, the standards for the year of chassis are normally used because engine model years are rarely conclusively identified.

However, in those rare cases where a conclusively identified newer engine is installed in an older vehicle, the standards for the newer engine may apply. In these rare cases, the emissions inspection station shall contact MSOS for further assistance during the inspection of the modified vehicle. Applicants should also be aware that “kit cars” are inspected according to standards applicable to model year of the engine. Finally, applicants should also be aware of procedures for “replica vehicles.” (See Operational Order #10 for information on kit cars and replica vehicles.)

8. Applicants should be aware that they are to call MSOS in cases of questions, concerns, or disputes regarding the emissions inspection process, including and especially for cases where a vehicle does not appear to the inspector to be configured to meet typical federal (United States) emissions standards.

9. Inspection Test Fee - Applicants should know:

- a) The current maximum emissions inspection fee by law.
- b) The citizen is entitled to one free retest within fourteen (14) days of an initial emissions inspection failure at the original inspecting facility.
- c) If the original inspecting facility is unable to provide a free retest to any citizen, then in accordance with item “b” above, the emissions inspection fee shall be refunded to the citizen so that the retest may be undertaken elsewhere at no additional financial cost to the citizen.

10. Analyzer Maintenance and Quality Control – Applicants should know procedures for:

- a) Analyzer system calibration required every 72 hours
- b) Analyzer gas calibration
- c) Utilizing zero gas or zero air generators
- d) Utilizing high span gas
- e) Performing an analyzer sample system leak check
- f) Performing dynamometer coast-down checks
- g) Monitoring ambient inspection bay temperatures to ensure that they stay between 41 to 110 degrees F. for proper analyzer operation
- h) Ensuring that the analyzer platform is not operated in direct sunlight
- i) Analyzer printer maintenance
- j) Analyzer printer paper requirements: (white 8.5x11 inch 20-lbs. bond).

11. Pre-Inspection Safety Check – Applicants should know:

- a) This is a free (no charge) procedure.
- b) The intent is to identify vehicles that should not be tested because of deficiencies noted in the following areas:
  - i. Tires: (ASM and OBDII inspection procedures)
  - ii. Visible smoke
  - iii. Fluid leaks (creating a safety hazard or bias test results)
  - iv. Mechanical integrity (engine, brake or transmission problems or overheating)
  - v. Exhaust system leaks
  - vi. Missing fuel filler cap

- c) Rejection From Testing Form – proper completion, emissions inspector signature, and presentation to the citizen.

## 12. Inspection Procedures:

- a) Two Speed Idle (TSI) Testing:
  - i. Pre-inspection safety check (excluding tire condition)
  - ii. Exhaust ventilation system/hose use
  - iii. Data entry and use of the bar code scanner
  - iv. Repair Information:
    - 1. Date of Repair
    - 2. Certified Emissions Repair Facility ID Number
    - 3. Certified Emissions Repair Technician ID Number
    - 4. Repair codes: (S)erviced or (R)ecommended
    - 5. Dollar amount of emissions related repairs (emissions related repairs performed no earlier than sixty (60) days prior to the initial emissions inspection failure may be considered) to exclude the costs of non-emissions related items such as “shop” or “environmental” fees
  - v. Vehicle pre-conditioning
  - vi. Turning off all accessories
  - vii. Determination and then visual inspection of required emissions control systems
  - viii. Gas cap pressure test – ensure that applicants can locate and properly utilize the gas cap adapter application guide, understand that the vehicle must be turned off during the entire gas cap pressure test procedure, and ensure knowledge of the four gas cap pressure test questions:
    - 1. Was the gas cap replaced prior to starting the emissions test?
    - 2. Is the gas cap accessible? (if “no,” the emissions test is aborted)
    - 3. Is the gas cap removable? (if “no,” the emissions test is aborted)
    - 4. Does the gas cap fit a standard adapter? (if “no,” the pressure test is bypassed and the emissions test proceeds).
  - ix. Tachometer pick-up selection and placement
  - x. Sample probe placement/insertion as well as specific procedures for determining and properly inspecting dual exhaust equipped vehicles
  - xi. Curb idle and 2500 RPM sampling cycle
  - xii. Visible smoke inspection
  - xiii. Document printing & citizen advisement
  - xiv. Vehicle Inspection Report (VIR) error correction; VIR voiding procedures
  - xv. Record retention: Applicants should be aware that in the event of the issuance of a waiver, a copy of the waiver report must be retained at the emissions inspection station, along with a copy or original of the Emissions Repair Data Form and the emissions related repair receipt/work order/service order for a period of twelve months or until transferred to (or reviewed by) the department.
- b) Acceleration Simulation Mode (ASM) Testing (in addition to the above items as applicable):
  - i. Pre-inspection safety check (including tire condition)
  - ii. Mounting vehicle on dynamometer
  - iii. Use of vehicle restraints on dynamometer

- iv. Exhaust ventilation system/hose use
  - v. 15 and 25 mph driving cycle
- c) OBD II Testing (in addition to the above items as applicable):
- i. MIL bulb check
  - ii. DLC location
  - iii. Explanation of analyzer generated “Rejection from Testing” form
  - iv. Explanation of monitors and “not ready” condition
- d) “Confirmation Test” procedures (On-Road Emissions Program)
- i. If OBDII equipped, vehicle must pass OBDII *and* tailpipe test
  - ii. Inspector must observe ORE program NOV and enter correct information
  - iii. Inspector must understand that if the CT question is not asked, then it *is* a CT
13. Inspector applicants should know that they cannot, and should not attempt to, answer an inquiry as to whether any particular vehicle must have an emissions inspection, and to refer such questions to the DMV or DEQ for assistance.
- C. If the applicant has demonstrated the required proficiency to be licensed as an emissions inspector, the supervising VECO will create an electronic profile of the applicant’s personal information on the database. This profile shall be created only while the VECO’s computer is directly connected to the emissions inspection database (CEDSPROD), and not “off line.” Once this profile is created and is linked to the inspection station at which the applicant is employed, the record is saved and the supervising VECO prints a temporary license for the applicant. The newly certified emissions inspector’s application is completed by the supervising VECO and forwarded to the NRO Program Specialist (NPS) for filing and issuance by mail of a permanent inspector license card. If the applicant has failed to demonstrate the required proficiency for conducting proper emissions inspections and all related procedures, the supervising VECO will point out the areas of deficiency to the applicant, and the applicant will not be certified. The reverse side of the application shall be completed noting the applicant’s deficiencies for future reference. A return visit to repeat the field certification procedure shall be scheduled when the applicant has had sufficient time to address and overcome such deficiencies.
- D. Renewal of Inspector License Procedures: The NPS receives all the applications of those individuals meeting the requirements for re-licensing (Inspector License renewal). The NPS separates those individuals into the following categories: Fail, New and Reinstated, and Renewals.
1. Fail Category: A memorandum with all individual names listed is e-mailed to all VECOs, with a copy to the Mobile Source Technical Officer (MSTO). A hard copy is filed with applications attached.
  2. New and Reinstated: A memorandum with all individual names, sorted by VECO area, is e-mailed to all VECOs, with copy to the (MSTO). A hard copy is also made with applications and given to all VECOs for field certification to be done. When field certification is completed, VECOs update the new/reinstated inspector profiles and mail out the new licenses; the VECO then returns the applications to the NPS to set up new file folders and file the reinstated applications.

3. Renewals: A memorandum with all individual names, sorted by VECO area, is e-mailed to all VECOs, with copy to the MSTO.

E. Certified Repair Technician (CRT) Certification Procedures: The NPS will receive applications of those individuals meeting the requirements for certification as CRTs. The NPS will enter these applications into the database regardless whether they are new or renewal. A memorandum will be routed to the VECOs notifying them of this information. Certifications will be automatically printed and mailed, and the applications will be filed accordingly. (See Operational Order #3 for CRT qualification and other requirements.)

F. Extension Procedures for Emissions Inspector Licenses & Repair Technician Certifications: (See Operational Order #3 for licensing/certification information and other requirements.)

1. An inspector's license may be extended for not more than three (3) months (9 VAC 5-91-380.E.) There must be justification "which the department deems adequate," and the request must be in writing. There may be situations where an extension is not justified, but as a general rule most will be approved. (One possible example of an unjustified extension would be the expiration of an inspector's driver's license, as this license is required in order to conduct emissions inspections. Most requests will probably be due to an inspector's inability to complete the required course of instruction before the license expires, and the extension may be granted whether or not the cause of this is the inspector's own procrastination.) Any written request will be evaluated and acted upon as long as there is sufficient information to do so; however, use of MSOS Form 1101 or the on-line extension request should be encouraged in order to maintain consistency and adequate documentation.

VECOs will obtain additional information when necessary. Requests for extension shall be acted upon in a timely manner. Upon approval, the VECO will initial and date the form, update the inspector's profile with the original expiration date and the new (extended) expiration date, and forward the request form to the NPS to be filed in the inspector's folder.

More than one extension may be granted to an inspector, but in no case shall any extension or combination of extensions exceed three (3) months from the date of the original expiration. As a general rule, the extension should be for the full 3 months.

The regulation also stipulates that the department may require a demonstration of the applicant's ability to perform an emissions inspection. Thus, a "field certification" may be required at the VECO's discretion prior to approval of the extension. In accordance with normal renewal procedure, a field certification may also be required prior to license renewal. Note: An applicant's final exam failure may preclude an extension, since such a failure would demonstrate an *inability* to perform emissions inspections.

2. A CRT's certification may be extended for not more than six (6) months if it is shown that the availability of training or equipment prevents recertification prior to expiration (9 VAC 5-91-560.E.). All such requests shall be acted upon in a timely manner.

A written request is not required for such extension, but VECOs shall prepare and file a notation in the technician's folder regarding any such extension. More than one extension may be granted to a technician, but in no case shall any extension exceed six (6) months from the date of the original expiration. As a general rule, the extension should be for the full 6 months.

Upon extension of a CRT's certification, the VECO will update the CRT's profile with the original expiration date and the new (extended) expiration date.

## LIST OF ATTACHMENTS

Appendix A: CEDS Contact Information Requirements

Appendix B: VECO Administrative Time Guidelines – Home Office Location

Appendix C: Analyzer Gas Audit

- 1) MSOS 901, Analyzer Training Form
- 2) MSOS 101, Application for Official Emissions Inspection Station
- 3) MSOS 601, Emissions Inspection Station Pre-Certification Worksheet
- 4) Emissions Inspection Station Fact Sheet
- 5) MSOS 201, Application for Official Certified Emissions Repair Facility
- 6) MSOS 501, Certified Emissions Repair Facility Pre-Certification Worksheet
- 7) Certified Emissions Repair Facility Fact Sheet
- 8) MSOS 701, Application for Certified Emissions Repair Technician
- 9) ASE Transcript Request Form (ASE form)
- 10) DEQ Motor Vehicle Trip Log
- 11) MSOS Monthly Fuel/Maintenance/Equipment Report
- 12) MSOS 1101, Emissions Inspector License Extension Request

**APPENDIX A CEDS Contact Screen: (Required Information in Red)**

**Last Name**

**Prefix/Suffix if known (i.e., Dr./Jr.)**

**First Name (& Middle Initial if known)**

**Title of Contact (i.e., President, Member, Owner, etc.)**

**“Org. Name” = Name of Owner Organization or Firm (Fill in Only if Contact is Associated with the Owner)**

**“Org. Unif” = Name of Facility (Station/Trade Name)**

**Any Relevant Comment necessary for this Contact**

**E-Mail Address (if known)**

**Phone Number**

**Select “Air Check” as the Purpose of the Contact from the Drop-Down Menu**

ALWAYS be sure to perform a thorough search before creating a contact to ensure that you are not creating a duplicate. If the contact already exists, be sure that it is actually the same person before linking to a facility or owner.

Whenever updating a facility, check contacts and update the information as necessary. The following are **mandatory** fields for contacts: Name, Title, Facility or Trade Name, Phone Number (usually the facility’s main number) and Purpose.

## **APPENDIX B**

### **VECO Administrative Time Guidelines – Home Office Location**

The following is intended to assist the VECO with daily activities that may include administrative time occurring at the home office location. Administrative tasks include phone calls, email, transcribing of notes, working on a Special Inspection or other investigative report(s), running various queries as part of an investigation or in preparation for a facility audit, or other similar tasks of an administrative nature. It is acknowledged that there is a higher level of efficiency by utilizing one's home location for certain tasks rather than driving long distances to and from the DEQ office location(s), or using the slower on-line connection speeds of the cellular telephone as a modem when in the field. In addition, the home location affords an environment that is much more conducive to safe and efficient work. But performing administrative tasks at the home location also places significant responsibilities on the VECO and consequently demands a high level of integrity. Administrative time at the home office location is acceptable therefore in accordance with the established DEQ Telework Policy and Agreement.

VECOs shall exercise the highest level of good judgment at all times when performing administrative tasks at the home location, and shall use such time sparingly and only as necessary to accommodate need and efficiency.

When beginning the workday in the field, the VECO shall be on duty in the field at the normal start time of the workday and shall record the login and the activity upon arrival at the field location. On such days, the VECO may end the work day at the home office location to perform normal administrative tasks.

When beginning the workday at the home office location, the VECO shall be on duty and performing work at the normal start time of the workday and shall record the login and activity immediately upon starting work. On such days, the VECO is normally expected to complete the workday in the field, working in the field until the normal end time of the workday.

If necessary and as circumstances dictate, the VECO may begin or end the workday at the DEQ office location (but must pay careful attention to avoid commuting in a state vehicle – see below).

These guidelines do not anticipate that a VECO will necessarily have administrative time at the home office location on every workday, but are instead meant to accommodate such work on an as needed basis. The Commonwealth of Virginia Standards of Conduct shall guide the VECO in the use of their time.

#### **General Note on Vehicle Use:**

State law prohibits commuting in a state vehicle. This means that there shall be no instances of a VECO using the state vehicle to drive to the office for the full workday. Nor shall a VECO schedule de minimis facility or other field visits to avoid a "technical commute." Rather, VECO's will strive to abide by both the letter and spirit of the law as much as possible. Occasional variances may be acceptable with notice to and approval of the Program Manager.

## **APPENDIX C**

### **Analyzer Gas Audit**

#### **I. General**

- A. Gas audits are performed on a semi-annual basis to assess the accuracy of the emissions analyzer. Various gases with known concentrations are introduced to the analyzer by the VECO and the readings are recorded into the database. If any analyzer readings are outside the acceptable tolerance, the analyzer will generate a report with the final result “fail” and the action “lockout.”
- B. A dedicated vehicle (audit van) is used by the VECO to perform the gas audit. The vehicle will be equipped with gas cylinders (gas set) containing the following mixes:
  - 1. ZERO
  - 2. LOW
  - 3. LOWMID
  - 4. HIGHMID
  - 5. HIGH
- C. A clipboard holding forms containing the concentrations, audit tolerances and gas set I.D. number will be kept in the vehicle. The audit van is also equipped with a delivery system to introduce the audit gases into the emissions analyzer exhaust probe, spare balloons for same, gloves and/or shop towels and a printer/inverter to be used with the VECO’s laptop computer. Each van is equipped with a weather station that is used to enter the weather parameters during the gas audit.

#### **II. Procedures**

- A. Position the audit van to facilitate a connection between the delivery system and the analyzer exhaust probe.
- B. Verify the expiration date and the concentrations of the station’s calibration gases.
- C. Select the “State Menu” on the analyzer.
- D. Enter your state VECO ID number and State password for the day into the analyzer.
- E. Select Gas Audit.
- F. Follow the analyzer prompts to perform the Gas Audit.
- G. If the analyzer fails the leak check or audit #2 of the gas audit process enter a brief description of the problem in the comments section and print a copy of the audit for the station representative with any problem areas circled.
- H. Print a copy of the gas audit form to place in the MSTO’s Gas Audit Reports file.

## **Appendix C, Continued**

- I. Exit the “State Menu” before leaving the analyzer system.
- J. Open a new emissions inspection station field inspection report and select Gas Audit for the Inspection Type. An “S” or “U” shall be entered in the Calibration Gases, Analyzer System and DEQ Span Gas Check categories. Enter “S”, “U”, or “N” for all other categories accordingly.
  1. If the analyzer failed the leak check or any portion of audit #1 an entry of “U” will be made for DEQ Span Gas Check. If the analyzer was calibrated or leak check repaired and the analyzer passed a subsequent audit then an entry of “S” will be made for Analyzer System leaving the “U” in the DEQ Span Gas Check field. A brief description explaining any “U” will be made in the remarks section. If the analyzer passed the audit on the first try an entry of “S” will be made for both Analyzer System and DEQ Span Gas Check.
  2. If the analyzer fails the gas audit and the problem could not be corrected, a “U” will be entered for both DEQ Span Gas Check and Analyzer. The station will be placed out of service until the analyzer has been repaired and DEQ has been notified. A field report will be printed for station personnel indicating the failure and including brief instructions on how they are to proceed.



**COMMONWEALTH of VIRGINIA**

**DEPARTMENT OF ENVIRONMENTAL QUALITY**

**NORTHERN REGIONAL OFFICE**

13901 Crown Court, Woodbridge, Virginia 22193-1453

(703) 583-3800 Fax (703) 583-3821

www.deq.virginia.gov

L. Preston Bryant, Jr.  
Secretary of Natural Resources

David K. Paylor  
Director

Thomas A. Faha  
Regional Director

**TO: EMISSIONS INSPECTION STATIONS**

**SUBJECT: ENHANCED EMISSIONS ANALYZER TRAINING**

Were your inspectors trained by the analyzer vendor on the use, maintenance, and operation of the complete analyzer system, including step by step procedures for performing two-speed idle, ASM-2 and OBDII inspections?

**YES [ ]**

**NO [ ]**

If **NO**, please contact the analyzer vendor to obtain the proper training and contact us when it is completed.

If **YES**, please fill in the following:

Date of training: \_\_\_\_\_ Hours of training: \_\_\_\_\_

Owner/Manager: \_\_\_\_\_  
(Please Print Full Name)

Signature: \_\_\_\_\_ Date: \_\_\_\_\_

Station Name: \_\_\_\_\_

DEPARTMENT OF ENVIRONMENTAL QUALITY

Northern Regional Office

Mobile Source Operations Section

13901 Crown Court

Woodbridge, Virginia 22193-1453



EIS I.D. # \_\_\_\_\_

APPLICATION FOR OFFICIAL EMISSIONS INSPECTION STATION

(PLEASE TYPE OR PRINT)

Application for (Check One): New Permit [ ] Permit Renewal [ ] Reinstatement [ ]

Facility or Trade Name: \_\_\_\_\_

Location: \_\_\_\_\_

City: \_\_\_\_\_ State: \_\_\_\_\_ Zip: \_\_\_\_\_ - \_\_\_\_\_

County: \_\_\_\_\_ Phone: \_\_\_\_\_

Fax: \_\_\_\_\_ E-mail: \_\_\_\_\_

Type of Facility (Check One): Repair Shop [ ] Service Station [ ] Fleet Station - Private [ ] Fleet Station - Government [ ] Dealer - New Cars [ ] Dealer - Used Cars [ ] OTHER [ ]

Type of Organization (Check One): Corporation [ ] LLC [ ] Partnership [ ] Individual [ ] Gov't [ ]

Organization or Owner Name: \_\_\_\_\_

Organization Address: \_\_\_\_\_

City: \_\_\_\_\_ State: \_\_\_\_\_ Zip: \_\_\_\_\_ - \_\_\_\_\_

Phone #: \_\_\_\_\_ Fax: \_\_\_\_\_

Do you presently employ a Virginia Licensed emissions inspector? YES [ ] NO [ ]

Inspector's Name: \_\_\_\_\_ Identification #: \_\_\_\_\_

Inspector's Name: \_\_\_\_\_ Identification #: \_\_\_\_\_

In accordance with the rules and regulations of the Department of Environmental Quality, emissions inspections shall be performed only by those individuals who are licensed as inspectors and approved for emissions testing by the Department.

Continue on Reverse Side

**COMPLETE THIS SECTION FOR NEW PERMIT ONLY**

1. Have you ever had an emissions inspection appointment? YES  NO   
If yes, under what name: \_\_\_\_\_ What city: \_\_\_\_\_
2. Have you ever been refused an emissions inspection appointment? YES  NO   
If yes, under what name: \_\_\_\_\_ What city: \_\_\_\_\_
3. Has this location ever been an official emissions inspection station? YES  NO   
If yes, under what name: \_\_\_\_\_

The necessary space, equipment and personnel will be provided and maintained in a manner satisfactory to the Department of Environmental Quality (DEQ). All owner(s)/managers, and official emissions inspectors will read and be thoroughly familiar with the instructions and regulations furnished for Official Emissions Inspection Stations and will abide by these regulations, and carefully inspect every vehicle presented for inspection. The operations of this facility will be conducted in strict accordance with the Air Pollution Control Law and the rules and regulations furnished by DEQ. The appointment of this facility, if made, may be suspended or revoked in accordance with the regulations, and will automatically be canceled if the station changes its ownership, name, or location.

**Are you in any way a manufacturer or distributor of emissions testing equipment?**

YES \* NO

\* (If yes, then you may not in any way, own, operate, or have any direct or indirect financial interest in an emissions inspection facility other than the leasing of or providing financing for equipment related to emissions testing.)

**Does your business conform with local zoning, use, or business licensing laws, ordinances or regulations as well as any applicable OSHA requirements?**

YES  NO

I (we) have read the requirements for appointment and agree to the conditions as stated.

Name: \_\_\_\_\_ Title: \_\_\_\_\_  
(Please Print Full Name) (President, or other duly authorized agent of the corporation in writing, Partner, Owner)

Signature: \_\_\_\_\_ Date: \_\_\_\_\_

Name: \_\_\_\_\_ Title: \_\_\_\_\_  
(Please Print Full Name) (President, or other duly authorized agent of the corporation in writing, Partner, Owner)

Signature: \_\_\_\_\_ Date: \_\_\_\_\_

If you have any questions, please call the Department of Environmental Quality at (703) 583-3900 or toll-free in Virginia at 1-800-275-3844

DEPARTMENT OF ENVIRONMENTAL QUALITY  
**NORTHERN REGIONAL OFFICE**  
**MOBILE SOURCE OPERATIONS SECTION**



**EMISSIONS INSPECTION STATION PRE-CERTIFICATION WORKSHEET**

**Station Name:** \_\_\_\_\_

**Station No.:** \_\_\_\_\_

**Address:** \_\_\_\_\_

**Date:** \_\_\_\_\_

	<b>S</b>	<b>U</b>
A. Adequate Facilities	<input type="checkbox"/>	<input type="checkbox"/>
B. Licensed Emissions Inspector(s)	<input type="checkbox"/>	<input type="checkbox"/>
C. Required Equipment & Materials	<input type="checkbox"/>	<input type="checkbox"/>
1. Certified analyzer system	<input type="checkbox"/>	<input type="checkbox"/>
2. Approved Calibration Gas	<input type="checkbox"/>	<input type="checkbox"/>
3. Hand tools to perform inspections	<input type="checkbox"/>	<input type="checkbox"/>
4. Suitable non-reactive exhaust hoses	<input type="checkbox"/>	<input type="checkbox"/>
5. Current application guide	<input type="checkbox"/>	<input type="checkbox"/>
6. Analyzer maintenance manual	<input type="checkbox"/>	<input type="checkbox"/>
7. Certified thermometer	<input type="checkbox"/>	<input type="checkbox"/>
8. Ventilation system	<input type="checkbox"/>	<input type="checkbox"/>
9. Cooling fan system	<input type="checkbox"/>	<input type="checkbox"/>
10. Emissions inspection regulations	<input type="checkbox"/>	<input type="checkbox"/>
11. Telephone	<input type="checkbox"/>	<input type="checkbox"/>
12. Dedicated phone line for analyzer	<input type="checkbox"/>	<input type="checkbox"/>
13. Approved paper for printer	<input type="checkbox"/>	<input type="checkbox"/>

**Analyzer Make:** Click to Select \_\_\_\_\_

**Model No.:** \_\_\_\_\_ **Version No.:** \_\_\_\_\_

**Serial No.:** \_\_\_\_\_

**Phone :** (    ) \_\_\_\_\_

**No. of Lanes:** \_\_\_\_\_

**Dynamometer Make:** Click to Select \_\_\_\_\_

**Model No.:** \_\_\_\_\_

**Serial No.:** \_\_\_\_\_

**Dyne Orientation:** Click to Select \_\_\_\_\_

**Remarks:**

**RECOMMENDATION**

by V.E.C. Officer: \_\_\_\_\_

*Approve*      *Disapprove*  
                     

**Final Action by:** \_\_\_\_\_ **Date:** \_\_\_\_\_



# EMISSIONS INSPECTION STATION FACT SHEET

## “AIR CHECK VIRGINIA”

Applicants for an Emissions Inspection Station permit must complete and submit an application (MSOS Form 101) to the Department of Environmental Quality (DEQ). This application must list a licensed emissions inspector employed by that station. Stations are not required to have a safety inspection permit to perform emissions inspections, although they may be permitted to perform both. Applicants seeking to perform safety and emissions inspections in the same service bay should contact the Virginia Department of State Police for approval prior to placing emissions inspection equipment in a licensed safety inspection bay.

### Required Equipment and Personnel

1. A Certified analyzer system with dynamometer.
2. Licensed Emissions Inspector employed on a “full-time” basis and able to perform emissions inspections during normal business hours. (Eight hour period between 8 a.m. – 6 p.m., M-F).
3. Calibration gases approved by the department and equipment for performing required calibrations.
4. Hand tools and equipment to perform proper inspections.
5. Current Emissions Control Systems Application Reference.
6. Analyzer manufacturer’s maintenance and calibration manual.
7. Certified thermometer reading in 1 degree increments.
8. Suitable non-reactive exhaust hoses or a ventilation system in accordance with 9 VAC 5-91-320.
9. Cooling fan system in accordance with 9 VAC 5-91-320.
10. Emissions Inspection Regulations (supplied by DEQ).
11. Telephone.
12. Dedicated phone line for analyzer system.
13. Approved paper for use in the analyzer system printer.
14. Reference material suitable for making a determination, as applicable, of the proper emissions test type to be administered. This may include the emissions inspection station having regular access to the internet.

### Test Procedure varies according to vehicle

Subject vehicles and inspection type/procedure *	2 Speed Idle	ASM2	Visual Inspection of emissions Components	Gas Cap Pressure Test	Visible Smoke	OBD II
1996 and newer OBD II equipped cars and light trucks			✓	✓	✓	✓
Most 1981 and newer < 8501 pounds Gross Vehicle Weight Rating		✓	✓	✓	✓	
1980 and older, and all GVWR 8,501-10,000 pounds	✓		✓	✓	✓	

\* Vehicles 25 model years or older as of January 1 of each year will not be inspected. (Exception: 1968 to current model year vehicles are subject to a remote sensing program, some of which may be directed to an emissions inspection station by DEQ for a follow-up emissions inspection.)

#### State Tax Credit Incentive

Emissions Inspection Station owners are eligible for a Virginia state income or gross receipts tax credit in the amount of 20% of the purchase or lease price paid for a certified emissions analyzer system. This credit is available for stations located in or contiguous to the Northern Virginia Program Area. See your tax or financial advisor or the Virginia Department of Taxation for details.

**THE ANALYZER SYSTEM:** The analyzer consists of a PC based emissions analyzer utilizing a BAR 97 type infrared bench and a dynamometer (dyne). The analyzer is designed to measure concentrations of hydrocarbons (HC), carbon monoxide (CO), and nitric oxide (NO). The analyzer performs the two speed idle test which measures HC and CO at curb idle and 2500 RPM, and the ASM2 test which measures HC, CO, and NO at 15 and 25 miles per hour on a dyne. The dyne is controlled by the analyzer and is automatically loaded for appropriate settings once the analyzer has read and decoded the vehicle information. The analyzer system also includes adapters and programmed procedures for testing the integrity of the fuel filler cap. The analyzer will be equipped with software and hardware to enable it to be connected to the appropriate vehicles to inspect OBDII systems. The analyzer is equipped with a modem that transmits vehicle information and inspection results to DEQ and the Department of Motor Vehicles (DMV).

The modem also permits stations to instantly receive bulletins and other emissions inspection related information as they are developed. Special features include non-intrusive tachometer attachments and hand-held bar code scanners for ease and accuracy of entering vehicle and inspection information.

Analyzer options offered by most vendors also include optional hard disk drives for third party vehicle diagnostic and repair information or other business related software. The diagnostic feature(s) may prove useful for a facility that performs repairs as a Certified Emissions Repair Facility.

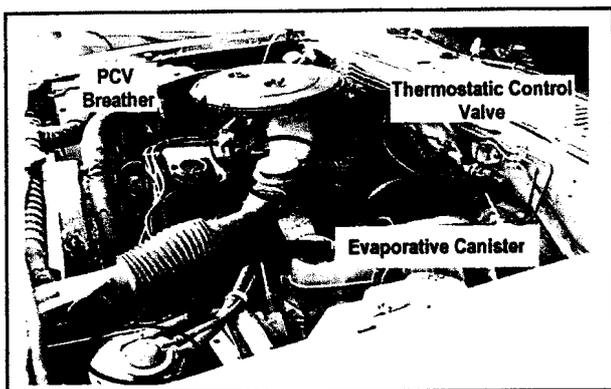
**EMISSIONS INSPECTION STATION RESPONSIBILITIES:** Emissions Inspection Stations may charge no more than the maximum allowable fee (ref. Code of Virginia §46.2-1182) for an emissions inspection, and must provide one free retest within fourteen calendar days of the initial emissions inspection failure at that station.

Emissions Inspection Stations will inspect vehicles manufactured or designated by the manufacturer as a model year manufactured in a calendar year less than twenty-five calendar years prior to January 1 of the present calendar year, and that have a GVWR of up to 10,000 pounds. These vehicle owners will be prompted by the DMV to obtain an emissions inspection biennially. Most 1981 to 1995 model year vehicles up to 8500 pounds GVWR will be tested on the dyne using the ASM2 test procedure. Most 1996 and later model year vehicles equipped with OBDII, up to 10,000 lbs., will be inspected with OBDII inspection procedures. All other vehicles will receive a two-speed idle test using the analyzer, but not the dyne.

#### Visually Inspected Systems

- Positive Crankcase Ventilation System (PCV)
- Thermostatic Air Cleaner System (TAC)
- Catalytic Converter System (CAT)
- Air Injection System (AIS)
- Evaporative System (EVAP)
- Exhaust Gas Recirculation System (EGR)

A pre-inspection safety check will be performed on all vehicles that are submitted for an emissions inspection. This non-chargeable procedure assesses the vehicle for any safety problems that would prevent the vehicle from being tested safely or properly on state approved equipment. Vehicles with a gas cap that is missing or that cannot be removed, with an exhaust leak, exhibiting visible smoke, leaking fluids, or any other drive train, mechanical, braking problem, or that are overheated will be rejected from emissions testing. Vehicles with inappropriately sized tires, or tires with exposed cords, cuts, or bubbles, or with visible tread indicators, will be rejected from ASM testing. Most vehicles will be tested for evaporative system integrity using a functional gas cap pressure test, and will be visually inspected for selected manufacturer-installed emissions control systems. All vehicles will be visually inspected for visible smoke at the tailpipe and engine crankcase. 1997 and newer diesel powered light duty OBD II equipped vehicles will also be required to have the OBDII inspection.



Production vehicles will be inspected according to standards applicable to the model year of the chassis or engine whichever is newer. Kit cars will be inspected according to standards applicable to the year of the engine. Vehicles that are specially modified to run on alternative fuels, such as propane or natural gas, and gasoline (dual fueled) will be inspected under gasoline power. Dedicated alternatively fueled vehicles, as well as motorcycles and 1996 and older diesels are exempt.

**EMISSIONS INSPECTORS:** The quality of the emissions inspection process relies on the proficiency of the emissions inspector. It is for this reason that all individuals who seek

licensing as an emissions inspector must successfully complete the Emissions Inspector's Course (AUT-225) offered at Northern Virginia Community College (NVCC), and must maintain a valid vehicle operator's permit. For more information about course schedules and tuition, call NVCC at (703) 323-3000 or visit <http://www.nv.cc.va.us/>.

**FOR ADDITIONAL INFORMATION:** The Mobile Source Operations Section (MSOS) stands ready to assist applicants or any interested parties with any aspects about the vehicle emissions inspection program, "Air Chec' Virginia." Please call MSOS at (703) 583-3900 or toll-free in Virginia 1-800-275-3844, or visit <http://www.deq.state.va.us/mobile/homepage.html>.

DEPARTMENT OF ENVIRONMENTAL QUALITY

Northern Regional Office

Mobile Source Operations Section

13901 Crown Court

Woodbridge, Virginia 22193-1453



APPLICATION FOR OFFICIAL VIRGINIA CERTIFIED EMISSIONS REPAIR FACILITY

(PLEASE TYPE OR PRINT WITH BLACK INK)

Application for (Check One): New Certification [ ] Certification Renewal [ ] Reinstatement [ ]

Facility or Trade Name: \_\_\_\_\_

Location: \_\_\_\_\_

City: \_\_\_\_\_ State: \_\_\_\_\_ Zip: \_\_\_\_\_ - \_\_\_\_\_

County: \_\_\_\_\_ Phone: \_\_\_\_\_

Fax: \_\_\_\_\_ E-mail: \_\_\_\_\_

Type of Facility (Check One): Repair Shop [ ] Service Station [ ] Fleet Station - Private [ ]

Fleet Station - Government [ ] Dealer - New Cars [ ] Dealer - Used Cars [ ] OTHER [ ]

List make(s) of vehicle(s) only if the facility repairs specific make(s): \_\_\_\_\_

Type of Organization (Check One): Corporation [ ] LLC [ ] Partnership [ ] Individual [ ] Gov't [ ]

Organization or Owner Name: \_\_\_\_\_

Organization Address: \_\_\_\_\_

City: \_\_\_\_\_ State: \_\_\_\_\_ Zip: \_\_\_\_\_ - \_\_\_\_\_

Phone #: \_\_\_\_\_ Fax: \_\_\_\_\_

Emissions Inspection Station number if applicable: \_\_\_\_\_

Do you presently employ a Virginia Certified emissions repair technician: YES [ ] NO [ ]

Technician's Name: \_\_\_\_\_ Identification #: \_\_\_\_\_

Technician's Name: \_\_\_\_\_ Identification #: \_\_\_\_\_

Continue on Reverse Side

**NORTHERN REGIONAL OFFICE  
MOBILE SOURCE OPERATIONS SECTION**



**CERTIFIED EMISSIONS REPAIR FACILITY PRE-CERTIFICATION WORKSHEET**

**Facility Name:** \_\_\_\_\_ **Facility No.:** \_\_\_\_\_

**Address:** \_\_\_\_\_ **Date:** \_\_\_\_\_

- |   | <b>S</b>                 | <b>U</b>                 |
|---|--------------------------|--------------------------|
| A. Certified Repair Technician(s)   | <input type="checkbox"/> | <input type="checkbox"/> |
| B. Required Equipment & Materials<br>(Either individual components or complete system)  |                          |                          |
| 1. Ammeter, DC  | <input type="checkbox"/> | <input type="checkbox"/> |
| 2. Ohmmeter   | <input type="checkbox"/> | <input type="checkbox"/> |
| 3. Voltmeter, AC/DC   | <input type="checkbox"/> | <input type="checkbox"/> |
| 4. Tachometer   | <input type="checkbox"/> | <input type="checkbox"/> |
| 5. Fuel injection fuel pressure gauge & adapters  | <input type="checkbox"/> | <input type="checkbox"/> |
| 6. Compression gauge  | <input type="checkbox"/> | <input type="checkbox"/> |
| 7. Cylinder leak down tester  | <input type="checkbox"/> | <input type="checkbox"/> |
| 8. Vacuum pump with gauge   | <input type="checkbox"/> | <input type="checkbox"/> |
| 9. Scan tool(s) or other provisions to extract computer<br>fault codes from vehicles equipped with exhaust gas<br>oxygen sensor and malfunction indicator light | <input type="checkbox"/> | <input type="checkbox"/> |
| 10. OBD scan tool designed to interface with OBD vehicles<br>meeting the requirements of 40 CFR 85.2231   | <input type="checkbox"/> | <input type="checkbox"/> |
| 11. Reference material to include all<br>makes/models serviced (manual or electronic form)  | <input type="checkbox"/> | <input type="checkbox"/> |
| C. Proof of business ownership, articles of incorporation,<br>partnership agreements, lease agreements.   | <input type="checkbox"/> | <input type="checkbox"/> |

Remarks: \_\_\_\_\_

**RECOMMENDATION**

*Approve*  *Disapprove*

By V.E.C. Officer: \_\_\_\_\_

Final Action by: \_\_\_\_\_ Date: \_\_\_\_\_



**“AIR CHECK VIRGINIA”  
CERTIFIED EMISSIONS REPAIR FACILITY  
FACT SHEET**

Version 4.0

January 2009

Virginia Certified Emissions Repair Facilities are an essential element in the reduction of vehicle emissions in Northern Virginia. In order for the expense of service and repairs to be applied towards an emissions inspection waiver, they must have been performed at a Virginia Certified Emissions Repair Facility (CRF) and have been done by (or supervised/approved by) a Virginia Certified Emissions Repair Technician (CRT) employed at that facility. This ensures that emissions related repairs are performed by persons with the proper training and expertise, at facilities that are equipped with the necessary up-to-date equipment and reference materials to properly perform diagnostic and repair functions. (Repairs may be performed by anyone and are not restricted in any way as long as such repairs result in an emissions inspection “pass.” However, any such repairs will not count towards an emissions inspection waiver if the vehicle continues to fail.)

**Qualifications for Certification**

1. Any facility that desires to be a Virginia CRF must submit an application for certification, and must meet all of the requirements regarding personnel, equipment, tools and reference materials (see below). Any repair facility located in Virginia meeting the general requirements of 9 VAC 5 Chapter 91, Part VII may be certified. Facilities need not be a safety or an emissions inspection station in order to be certified to perform emissions repairs.
2. The CRF certification is valid for up to three (3) years from the month of approval. There are no fees for application or certification.
3. The CRF must maintain all qualifications, including employment of at least one CRT on duty during posted emissions repair facility hours. All CRFs and CRTs are subject to repair effectiveness monitoring by the department, and may be required to update or refresh their training based on such results.

**Analyzer System and Other Diagnosis & Repair Requirements (Minimum)**

1. **“General” Repair Facilities (facilities servicing all makes of vehicles):**
  - Tools, equipment and current reference materials for all makes of vehicles subject to the vehicle emissions inspection program.
2. **Facilities that limit service to specific makes of vehicles (some dealers or specialty shops):**

Tools, equipment and current reference materials for all makes of vehicles that are serviced by that facility and that are subject to the vehicle emissions inspection program. Facilities that restrict their repairs in this way must itemize the repair restrictions the facility's application for certification. Special Note: repairs to vehicles for which a facility is not certified cannot qualify towards an emissions inspection waiver. It is important for CRFs to fully inform their customers of any such restrictions on their certification.

## Tools and Equipment Required for All CRFs

1. (Optional\*) Analyzer System: At minimum, a 4-Gas Emissions Analyzer capable of measuring HC, CO, CO<sub>2</sub> and O<sub>2</sub>, properly maintained and calibrated in accordance with the manufacturer's instructions. All repair grade analyzers are subject to accuracy audits by DEQ. (Emissions inspection stations may use their certified emissions analyzer system as their repair analyzer.)
2. (Optional\*) Oscilloscope or other automotive analyzer capable of displaying ignition patterns, cylinder power contributions, emissions control component generated waveforms, and injection patterns.
3. Ammeter, DC.
4. Ohmmeter.
5. Voltmeter, AC/DC.
6. Tachometer.
7. Fuel Pressure Gauge capable of fuel injection diagnosis.
8. (Optional\*) Ignition Timing Light with Advance capability.
9. Compression Test Gauge and Cylinder Leak-Down Tester.
10. Vacuum Pump with Gauge for applying simulated manifold vacuum to emissions control devices.
11. Scan Tools, and sufficient equipment to allow the extraction of computer fault codes from any vehicle being repaired that is equipped with an O<sub>2</sub> sensor and a Malfunction Indicator Light or is OBD II equipped.
12. Reference material (emissions control systems application guides and emissions related repair guides) to aid in the diagnosis and repair of failed vehicles and to assist in the interpretation of fault codes. This may be in manual or electronic form.

\* Facilities that do not have items marked as "optional" are certified only for OBDII repairs.

### Additional Information

Facilities may obtain an application from the Department of Environmental Quality, or from a DEQ compliance officer. Application forms may also be downloaded in "pdf" format from the "Air Check Virginia" web pages at <http://www.deq.virginia.gov/mobile/>. Mail completed applications to: Department of Environmental Quality, Mobile Source Operations Section, 13901 Crown Court, Woodbridge, VA 22193-1453

A DEQ compliance officer will visit the facility to perform a preliminary check of required equipment and personnel. Certification will be issued when all requirements have been met. For assistance or additional information, please contact the Mobile Source Operations Section at (703) 583-3900 or toll-free in Virginia at 1-800-275-3844.

Certified Emissions  
Repair  
Facility



This facility has met the requirements of a Virginia Certified Emissions Repair Facility. All repairs performed in quality for a vehicle emissions inspection must be approved by a Certified Emissions Repair Technician at a Certified Emissions Repair Facility.



CRF Poster





National Institute for  
**AUTOMOTIVE SERVICE EXCELLENCE**

**TRANSCRIPT REQUEST FORM FOR  
THE VIRGINIA DEPARTMENT OF ENVIRONMENTAL QUALITY**

To obtain a verified listing of the ASE certifications that you currently hold, fill out the form below. One copy will be sent to you, and one copy will be sent to the DEQ Mobile Source Operations Section, 13901 Crown Court, Woodbridge, VA 22193-1453.

---

(Technician's Name)

---

(ASE ID. Number)

---

(Street Address)

---

(City) (State) (Zip Code)

---

(Technician's Signature)

Technician: Mail this completed request form with a check or money order for \$5.00 to:

*ASE Transcript Service  
National Institute for  
AUTOMOTIVE SERVICE EXCELLENCE  
101 Blue Seal Drive SE Suite 101  
Leesburg VA 20175-5646*

If you have any questions regarding this request, please contact customer service at 703-669-6600, or call the Virginia Department of Environmental Quality at 703-583-3900 (toll-free in Virginia at 1-800-275-3844).





**COMMONWEALTH OF VIRGINIA**  
**DEPARTMENT OF ENVIRONMENTAL QUALITY**  
*Northern Regional Office*  
**Mobile Source Operations Section**

***INSPECTOR LICENSE EXTENSION REQUEST***  
[Please Print]

Name: \_\_\_\_\_ ID#: \_\_\_\_\_

Street: \_\_\_\_\_ Lic. Exp. Date: \_\_\_\_\_

City, State, Zip: \_\_\_\_\_

Home Phone: \_\_\_\_\_ Work Phone: \_\_\_\_\_

Employed by: \_\_\_\_\_ Station ID#: \_\_\_\_\_

Use the space below to describe why re-licensing requirement(s) cannot be met prior to your original license expiration date. If you have registered for an inspector class, include information on class registration (campus, section number and starting date).


NOTE: If approved, your emissions inspector license will be extended for a maximum of ninety (90) days from the date of original expiration; no extensions beyond ninety (90) days are permitted for any reason. Upon expiration of your license, original or extended, you must cease performing emissions inspections until such time as your license has been renewed. Field certification may be required prior to extension approval and/or for license renewal.

\_\_\_\_\_  
Inspector's Signature

\_\_\_\_\_  
Date

[Do not Write Below This Line]

\_\_\_\_\_  
VECO Initials

\_\_\_\_\_  
Date

\_\_\_\_\_  
Original Exp. Date

\_\_\_\_\_  
New Exp. Date