

Frequently Asked Questions

Regarding Use of the EPA Remote Sensing I/M Credit Utility

NOTE: The full user guide for the RSD utility is contained in the file RSDUTIL.PDF, which is an Adobe Acrobat Portable Document Format (PDF) file contained in RSDUTIL.ZIP. If you do not yet have the free Acrobat Reader software to view/print this file, you can download it from the Adobe web site: www.adobe.com. If you do not have internet access, then you can get it by dial-in modem from the TTN Bulletin Board (919-541-5742) in the System Utilities area.

What do I need to know in order to estimate additional credits for my remote sensing program that is used in conjunction with my periodic I/M program?

The credit will depend on the scope and details of the proposed remote sensing program. You will have to specify information on how vehicles will be identified for repair using remote sensing. The utility accepts program design inputs that commit to a level of effort based on the number of valid measurements performed, the number of unique vehicles measured, or the number of vehicles identified and confirmed as emission failures. You will also need to know the CO emission cutpoint that is planned to be used to identify vehicles for confirmatory testing.

We don't have an I/M program. Can I estimate the benefit of an RSD program using the utility for this situation?

Yes. One option allows the utility to generate benefits for a RSD program even if there is no pre-existing periodic I/M program in place for the entire vehicle fleet. However, it is assumed that the failed RSD vehicles will receive a confirmatory I/M test at a designated station, get repaired, and return to the station for an I/M retest. The special remote sensing credits are then used in the MOBILE5 model as though there were an I/M program for those vehicles failing RSD in order to calculate the remote sensing program benefits.

We intend to use remote sensing readings to identify vehicles to be exempted from our periodic I/M program. How do I model that?

The use of remote sensing devices to exempt clean vehicles from your periodic I/M program is useful to increase public acceptance and the cost benefit of I/M. However, using RSD in this manner will not increase your I/M credit. The utility does not have an adjustment for the use of remote sensing readings to exempt vehicles from a periodic I/M program. EPA will work on criteria to optimize the use of remote sensing to exempt vehicles from the periodic I/M program.

We intend to use remote sensing to measure HC (and/or NOX) emissions. How do I model that?

The RSD utility currently estimates the HC, CO, and NOX emission impact of identification of vehicles using remote sensing concentration readings of carbon monoxide (CO). The CO emission measurements are the most developed and have the most data available. Additional capabilities to obtain HC or NOX impacts when identifying vehicles based on HC or NOX RSD concentrations will need to be added as the information becomes available.

How does one determine how much additional benefit my remote sensing program adds to my periodic inspection program?

The utility generates new credits for the combined periodic inspection program with the remote sensing option described by the user. The remote sensing program benefits are handled as an increment to the existing I/M program. Multiple MOBILE5 model runs, with and without the new credits, will be needed to determine the incremental (additional) benefits of the remote sensing portion of the inspection program.

I have an annual I/M program. How do I model the benefits of a remote sensing program?

The current remote sensing benefit methodology bases the additional emission reductions on the assumption that the vehicles identified by the remote sensing program undergo an increase in their periodic inspection frequency. Since MOBILE5 only estimates emission benefits up to an annual frequency for a test-only program, there is currently no estimate for the benefits of frequencies greater than annual. As a result, the utility cannot estimate the potential benefits of adding a remote sensing program to an existing annual I/M program. The utility will account for vehicles identified by the remote sensing program which are diverted to inspection stations that are more stringent (such as using an IM240 test procedure) than the periodic I/M program, even for an annual frequency. Thus, some credit is given for adding RSD to an annual I/M program with a significant test-and-repair discount where the vehicles failing RSD receive a more stringent confirmatory I/M test.

How does the utility handle the increased vehicle owner compliance with the periodic I/M program expected with the addition of the remote sensing program?

The utility makes no assumptions about the compliance with the I/M program. There is an input in the MOBILE5 model which allows the user to specify the compliance rate for the program. If increased compliance is expected or measured, that effect can be entered directly into the MOBILE5 model run.

How does the technique of requiring multiple remote sensing readings at different times affect the estimated benefits?

The current default values used to determine the benefits of remote sensing options do not account for the effects of multiple readings. The data necessary to make those adjustments were not yet available and the methodology to use such information has not been investigated. This information is now becoming available and EPA plans to modify the RSD utility either before or when MOBILE6 is released.

What is the relationship between this guidance and the National Highway System Designation Act?

The National Highway System Designation Act provides for an 18-month evaluation of each I/M program to determine if the I/M program is as effective overall as the good faith estimate made earlier. The good faith estimate for program effectiveness is focused on estimating the emission reduction loss or discount for test-and-repair I/M programs. Having an estimate of this discount is needed to estimate Remote Sensing Credits for test-and-repair I/M programs. Remote sensing itself though can be one component of an I/M program to be evaluated under the National Highway System Designation Act.