

I/M Solutions
List of Recommended Top Five EPA I/M Priorities
Submitted June 14, 2005
Revised July 7, 2005

Request

During the May 4, 2005, OBD Stakeholder conference call, Lee Cook, EPA OTAQ, asked that I/M Solutions send out a request for each state's I/M program's Top 5 issues that you would like EPA to address. The list can be about OBD-specific topics or other topics (e.g., look-up tables or federal fleets).

Also, if you could indicate the priority of the issue in some scope, that will help EPA develop a prioritization process. For example, how many vehicles are affected by the issue? OR Does the issue affect program viability?

Responses

EPA Region I States

Massachusetts DEP – Craig Woleader (same as STAPPA/ALAPCO request)

- 1) Maintain list of OBD problem vehicles (like Appendix D of current EPA OBD Guidance Document). Issues: readiness, communication with scan tools
- 2) Resolve OBD problem vehicles with manufacturers (i.e. force a recall, TSB, or exempt from EPA I&M OBD requirements)
- 3) Maintain OBD Vehicle Lookup Table (VLT) for all states to use (include comm. protocol to aide states in detecting inspection fraud)
- 4) OBD tampering/defeat devices - maintain list, evaluate devices, initiate enforcement actions as needed
- 5) Perform studies for future I&M OBD program guidance
 - Continue the High Mileage OBD vehicle study
 - Evaluate costs and effectiveness of repairs to old OBD vehicles with MIL on
 - Readiness issues - is allowing 1 or 2 monitors Not Ready okay?
 - KOEO/KOER, is this worth doing?

Connecticut DEP – Bill Menz (same as STAPPA/ALAPCO request)

- 1) How should states evaluate OBDII I/M programs?
- 2) What is EPA doing to thwart the use of sensor simulators and other means to get a tampered vehicle to pass an OBDII inspection?

- 3) It's clear there are additional benefits from combining OBDII and tailpipe tests, especially for older vehicles. How can states claim these benefits?
- 4) How does EPA enforce manufacturer compliance with OBDII requirements? Is there a difference for Cal LEV states vs. Tier 2 states?
- 5) What does the future hold for I/M programs?

Connecticut DMV – Greg Kelly (not included in STAPPA/ALAPCO request)

- 1) Contradiction on the readiness of CAT monitor on reinspections - 40CFR85.2222 suggests that the CAT monitor status should not be considered during a reinspection but, OBD guidance states that the CAT monitor needs to be ready to pass a reinspection if the initial failure involved a CAT related DTC.
- 2) What is EPA's interpretation of how many monitors are required to be ready for a retest after a failure and repair?
- 3) EPA should consider providing I/M Programs with updated vehicle lookup tables.

New Hampshire DES – Becky Ohler (same as STAPPA/ALAPCO request)

- 1) The FACA policy committee's final report made several recommendations that NH feels should be carried out. In particular we feel it is important that their direction to EPA to expand the high-mileage study to assess at least 100 vehicles per year (about twice the number of vehicles assessed in 2002) be carried out. As described in the Policy Workgroup report, this assessment should continue for at least the next five to ten years. The study should look at both chronologically aging vehicles, and newer vehicles as they reach over 100,000 miles. The Policy Workgroup suggested both EPA and the OBD Technical Workgroup should continue to review additional data from EPA the high-mileage studies and from operating state OBD I/M programs and EPA should share the results of this ongoing assessment with the States annually.

The assumption of the OBD Policy workgroup was that the OBD Technical Workgroup would continue to exist and operate as an EPA-led workgroup. While certain tasks could be contracted out to the private sector, notably the National OBD Clearinghouse, EPA must retain responsibility for the continued efforts to address the recommendations of the OBD FACA. The concern is that EPA will contract out all responsibility now, and in a couple of years may or may not continue to support that contract financially.

- 2) Continued technical support in identifying problem vehicles, and suggested solutions. In other words, continually update Appendix D and relay the information to states.
- 3) EPA must continue to strictly enforce OEM OBD requirements. We have been hearing of requests by OEMs to have states adjust their programs to allow for minor OEM non-compliance. This should not be requested of the states.
- 4) Outreach. EPA has done a good job developing outreach materials for use by the states. As the OBD program matures additional outreach materials will be needed, in particular outreach

to mechanics and dealers. We need them to be well informed not only about how to do the repairs, but also about the benefits of those repairs to the consumer so that their message to their customers is a positive one. When states are all using a common set of outreach materials the message is relayed more effectively. The only way this can continue to occur is if the core outreach materials continue to be developed and made available by EPA.

Vermont (1-5 same as STAPPA/ALAPCO request, doesn't include 2 additional items in STAPPA/ALAPCO request)

- 1) Updating/maintaining OBD IM Implementation Guidance on an on-going basis. That will also address many of the "detail" issues that have been raised (keyless ignition, hybrids, Canadian vehicles, revising readiness guidance to close certain existing loopholes, etc.)
- 2) Create and support a group or forum that includes EPA, CARB, vehicle and equipment manufacturers, I/M contractors, and I/M state people to help resolve technical issues and provide guidance to EPA and states.
- 3) CARB included a number of requirements in their last amendment of the OBDII reg designed to make OBD more useful for IM purposes. Vehicles are now providing data like:
 - number of warm-up cycles since codes cleared,
 - distance since codes cleared,
 - distance traveled since MIL illuminated,
 - VIN, CAL ID, CVN,

Provide guidance on the use of this data to help improve our OBD IM programs.

- 4) OBD IM for medium (and perhaps even eventually heavy) duty vehicles.
- 5) Enforcement efforts for tamper devices.

Rhode Island DEM – Joyce Fiore (not included in STAPPA/ALAPCO request)

- 1) Guidance needed for I/M programs in the future
- 2) I/M technical support committee to replace FACA
- 3) CAN Documentation
- 4) RI should begin to test vehicles that weigh 8500 lbs. or more.
- 5) Funding needed for the Weber State Clearing House

EPA Region II States

New Jersey DEP – Rob Schell (same as STAPPA/ALAPCO request)

- 1) Motor vehicle manufacturer accountability and enforcement

Hold vehicle manufacturers accountable. We need vehicle manufacturer recalls for vehicles with manufacturer defects that otherwise leave motorists and state testing programs without a solution for these problem vehicles. Also address and foster resolution of issues where vehicle manufacturer changes or designs render vehicles incompatible with existing inspection equipment or methods (e.g., Honda gas caps, BMW DLC covers).

2) National leadership of OBD issues

Place a much higher and sustained priority on supporting state/local I/M efforts – policy and technical – and provide strong national leadership for this program. The states need ongoing operational support for a complex technological program. This should include reinstating vehicle look-up table updates (including enhancements for OBD information) and updating OBD implementation documents on a continuous basis.

3) Future OBD inspection

Lead efforts to look ahead to the future of OBD (e.g., how to make it more customer friendly, OBD-only systems, self inspection kiosks, keyless ignition, etc.). Explain how to deal with new OBDIII specs (CARB rate-based monitors, etc.). Foster development of diesel OBD (including non-road), especially in light of new engine requirements.

4) OBD tampering and repair issues

Engage in enforcement efforts against manufacture and sale of OBD defeat devices. Advise states on what to look for to detect such devices. As more OBD vehicles age and are out of warranty, increased tampering, plus used and aftermarket part usage, is becoming more prevalent. OBD failure rates are climbing for aging and high mileage OBD vehicles. Advise states on problems and direct them toward training to fix more difficult OBD repairs. Advise states on repair assistance programs.

5) Program evaluation and SIP credits

Are IM240 to OBD comparisons valid or irrelevant? With tailpipe testing phasing down or out in many programs, the availability of quantitative emissions measurements for program evaluation is becoming more limited. Is RSD the most practical alternative or are there other options for quantitative program evaluation? The diminishing SIP credits in current/future EPA models for I/M programs represent that some programs may not be cost effective. As the cost effectiveness of I/M programs diminish, will I/M disappear as a mobile source emission reduction strategy? How might EPA handle backsliding on I/M commitments in light of reduced effectiveness? The states and EPA need to better understand theory versus reality in terms of what a practical I/M program should look like and how we can measure its effectiveness.

New York DEC – Joe Tuttle (1-4 same as, 5 different than STAPPA/ALAPCO request)

1) How will I/M and OBD be handled in the upcoming MOVES model. We know how difficult the transition to MOBILE 6 was particularly regarding I/M, and the early discussions of I/M relative to MOVES are not reassuring. This needs to be a high priority, and timely discussion item.

2) EPA Support of the OBD program. There are and will be number of technical issues still out there regarding OBD, such as keyless ignitions, non-communications, development of

Technical Service Bulletins and recalls, etc, as well as end of life issues. We need continued support by EPA on these issues. They have recently disbanded the FACA workgroup that was dealing with these type of issues, and it is not clear that they are planning on having technical support of this program be a high priority.

- 3) Serious discussions about the appropriate levels of SIP credits for OBD, and a review of what happens to the tailpipe programs in the near future relative to the SIP.
- 4) We should think about whether we want to start to have discussions on Heavy Duty OBD.
- 5) EPA enforcement against the sale of OBD defeat devices.

EPA Region III States

Maryland DE – Mary Jane Rutkowski (same as STAPPA/ALAPCO request)

- 1) OBD CAN: Issues identified during vehicle certification need to be communicated to the state promptly, before these issues show up in the I/M lanes.
- 2) Aging/High Mileage OBD Vehicles: Provide guidance on the effects of high mileage and age on OBD systems, monitor readiness, repairability of certain DTCs, etc.
- 3) OBD Guidance Document: Need to update and maintain current information in the OBD guidance for I/M.
- 4) OBD Clearinghouse/OBD Technical Workgroup: Need to get the Weber State website updates finalized as soon as possible, and maintain funding and technical support over time; need to provide support for the I/M Solutions OBD Technical Work Group proposal.
- 5) MOVES Model: Need to address the implications of the MOVES model on the future of I/M programs.

Virginia DEQ – Rich Olin (same as STAPPA/ALAPCO request)

- 1) Virginia DEQ has analyzer software provisions to require a tailpipe test as well as an OBD test on pre-selected 1996+ OBDII vehicles. California is currently performing dual testing (OBDII and ASM) on all 1996+ OBDII vehicles and has proposed that there should be additional SIP credit for this. Can EPA work with CA, VA and other states to quantify the benefits of such dual testing?
- 2) Virginia DEQ understands that the new MOVES mobile model will not differentiate emissions benefits between the various tailpipe tests available to IM programs. It will be difficult to justify continuation of enhance tailpipe testing programs based on EPA modeled credits. Since pre-OBD vehicles may represent the majority of the “excess emissions” available for some years to come, this situation will certainly have adverse air quality impacts. In lieu of EPA establishing such credits in the mobile model, states will need clear guidance on

how to quantify emissions benefits from non-OBD testing methods, or from variations from the “recommended” OBD procedures such as tightening readiness requirements.

3) Although EPA has abolished the OBD Technical Work Group that functioned under the FACA Mobile Sources Technical Review Subcommittee, it appears that EPA intends to continue the forum and support functions that the work group provided to I/M programs through a combination of existing EPA staff and possible expansion of the role of the Weber State OBD clearinghouse (subject to additional EPA funding). Virginia DEQ supports this plan and hopes that EPA can provide the necessary funding to Weber State.

4) Virginia DEQ is concerned what will happen when OBD vehicles become very old, as opposed to having high mileage. It is possible that tailpipe testing could be more appropriate for such vehicles. State programs will need advice on evaluating options.

5) OBD-specific guidance is needed on how to conduct and submit the results of biennial evaluations to EPA as required by 40 CFR 51.353 (c) for all enhanced I/M programs.

Delaware DNREC– Phil Wheeler (not included in STAPPA/ALAPCO request)

1) Delaware is considering phasing out the tailpipe test if it can be demonstrated that OBD II provides the bulk of the emission reduction benefits in the I/M program. We strongly urge EPA to develop a new performance standard with OBD II included so we can evaluate if we can eliminate the tailpipe test and still meet the performance standard with OBD II only.

2) EPA needs to communicate to each I/M state which manufacturers are currently in some stage of enforcement action for not complying with OBD II standards and which make and model. In addition EPA needs to provide information as to which vehicles are being recalled for OBD II problems.

3) Could EPA clarify the guidance on not-ready monitors, i.e. allowing up to 2 for older models and only 1 for the newer models? If a vehicle fails for DTC whose monitor is still not ready after repair, and all other monitors are ready, how can the repair be confirmed at the time of the test? Should the vehicle be rejected until that “monitor” is ready so the vehicle repair can be confirmed?

Pennsylvania DEP – Arleen Shulman (1-3 same as, 4 different than STAPPA/ALAPCO request)

1) EPA muscle on automakers for fixes to their OBD systems when states discover problems and EPA muscle on OBD defeat devices.

2) Ensuring EPA and CARB work together, and work with the OEMs. The specific issue mentioned was CAN protocols, and that some connectors differ in the number of pins they have, making it difficult for inspection stations to just buy one piece of equipment to read them.

3) A perennial issue (which I’ve been hearing for years and years) -- EPA support for VRT tables, which are lists of exceptional vehicles (failure to connect, etc.). EPA used to support this (contract with Sierra Research) but hasn’t for a while. States can’t seem to get together to figure out a joint state funding mechanism.

4) Of course, the underlying disappointment is the ever-diminishing credit in EPA's models for I/M programs while the statutory mandate remains. I know VA has some remote sensing data that indicates credit in M6 is underestimated, but I'm not sure they ever tried to push something with EPA. One problem is there isn't anyone in the IM game that doesn't have an agenda one way or another.

EPA Region IV States

Georgia DNR – Kent Pierce (same as STAPPA/ALAPCO request, doesn't include Sierra Research's seven questions)

1) The OBD Implementation Guidance document needs to be updated on a regular basis. It is understood by all stakeholders that this document would need to be revised from time to time to address future unknowns and issues. Thus, formal finalization of the guidance may not be needed, or the best thing to do. However, it must be an active living document from which EPA and I/M program managers work to continually develop. This guidance document needs to be of a quality such that it is the main source for which OBD programs are developed, operated and perfected.

- a. Update appendix D. Over the past 2 to 3 years, other vehicles have been identified as having difficulty with testing (readiness, communication, DTCs, MIL, etc.). EPA needs a person to devote their time to interfacing with I/M program managers to build a list of these proposed vehicles and query each program as to how they are handled. In some case, what's found needs to be taken to the OEMs for consideration of development of TSBs to correct problems found in the field by I/M programs.
- b. EPA needs to revisit the readiness monitor exemption criteria (1 not-ready for ≤ 2001 , 2 for >2001). With several years experience in OBD testing, EPA needs to investigate if this criteria is still sound. Some issues have been raised on whether or not a monitor associated with a DTC and subsequent repair should be allowed as an exempt monitor. Some have suggested that the CAT monitor should never be allowed as an exempt monitor.
- c. EPA needs to develop a list of vehicles that have known OBD communication issues and prescribe the remedy or the procedures to handle those vehicles. It should be noted that some of these issues would be related to section 3. below, but the guidance needs to address when it is a true vehicle issue and when it has been found to be a OBD software or scan tool issue perhaps with a particular equipment vendor.
- d. EPA needs to develop a list of vehicles that are prone to having DTCs set, but yet the MIL is not commanded ON. Or develop criteria or guidelines for avoiding this situation (i.e., prescribe software that doesn't query for DTCs unless the MIL is commanded ON).
- e. Guidance needs to be developed on how to properly OBD test "hybrid" vehicles (those where the inspector can't make the engine run in the test bay).

- f. Guidance needs to be developed on how to properly OBD test vehicles with keyless ignitions.
- g. Guidance needs to be developed on how I/M programs are to develop program evaluation reports, especially as it relates to OBD testing of vehicles.

2) EPA (in conjunction with CARB) needs to research and develop a list of all vehicles that have previously received an exemption(s) from OBD requirements. The list should include the details of those exemptions and their effect on OBD testing and prescribed/suggested methods of testing or handling these vehicles. Over the past couple of years, several vehicles have been identified by I/M programs and brought to EPA's and CARB's attention that clearly don't comply with OBD regulations. Usually after a little research, an exemption was identified. Many of these vehicles have failed the OBD test with no possible mechanism of repairing them. This really discredits the I/M program and puts the validity of the inspection in jeopardy. These vehicles need to be proactively identified by EPA and the information provided to I/M programs.

- a. If a process is not already in place to track these exemptions when new model year vehicles go through certification, then that is a priority to implement as well. This information needs to be made available to I/M program managers on a timely basis.
- b. EPA needs to take a leadership role in being the conduit between OEMs and I/M programs, and not leave it up to the OBD clearinghouse. The clearinghouse is a very effective tool, but it takes EPA to make the OEMs accountable and accessible. Currently, not all OEMs participate in the clearinghouse. In situations involving vehicles produced by these non-participants, EPA has to be the source that I/M program can turn to for interaction with these companies.

3) EPA needs to take a leadership role to interface with I/M equipment manufacturers (OBD scan tool provider and tailpipe emission analyzer providers). This is especially important for OBD testing software, since BAR certification is not provided (like there is for emission analyzer equipment). We suggest that EPA work with the Equipment and Tool Institute (ETI) to bring scan tool/software issues to light and resolution, and function as a conduit of information to I/M program managers. EPA needs to keep the CAN vehicle list updated with notes on related testing issues.

- a. Associated with this is the issue of some vehicle OEMs not complying with the federal regulations for encrypting the VIN on the bar-code for their vehicles. This needs to be resolved and a recall or TSB issued to get defective bar-codes replaced.

4) EPA needs to conduct further studies or determine how to use existing data from I/M programs to develop and legitimize the MOVES model. Currently, MOVES does not show any emissions difference or benefit between a biennial or annual I/M program (How about a triennial cycle, or longer? When does a difference show up?). It also shows no emissions benefit or difference between the various I/M tests (curb idle vs. OBD). These issues need further investigation. The argument was voiced that OBD equipped vehicles are so robust that when

there is an emissions related problem, the emissions increase is minimal. However, this assumes the problem is repaired (at some point) and not allowed to propagate into more extreme emissions problems (like contaminating the CAT). Remote sensing in non-I/M areas indicates that many repairs are only pursued by the owner because of I/M programs. EPA needs to continue to conduct and fund studies to ensure situations are clearly understood before determinations are made, or policies are set.

5) Tampering and defeat devices. This is a very important and disturbing issue, but is listed last because it is handled by EPA's Office of Enforcement and Compliance Assurance (OECA). The first four issues are things that fall under the oversight of OTAQ, and are things that OTAQ (or their predecessor) have performed or provided in the past to I/M programs.

- a. OBD defeat devices such as O2 simulators do more than allow the owner to override the system. Often these devices are used when an owner has added "performance" components that were intended only for off-road use. This undoubtedly causes excess emissions and the defeat device is used to mask the problem. However, there is a greater risk associated with the marketing of these devices. That is when the less than honest repair shops are not able to make effective repairs or when a used car dealers tries to sell a vehicle with the MIL on. As OBD vehicles get older and more difficult to repair, or the cost to properly repair them is no longer economical compared to the resale value of the vehicle, then these defeat devices are a very attractive workaround. OECA needs to do more than just send out a "208" letter. Until an example is made by pursuing an actual enforcement case against manufacturers of these devices, the devices will remain on the market with increased availability.
- b. Inferior after-market replacement catalytic converters are also of great concern to nonattainment areas. Many OEM CATs are replaced as a first effort to extinguish a MIL or when a vehicle fails the OBD I/M test. Typically, replacement CATs are vastly inferior to the robust OEM CATs. OECA needs to provide more oversight of the after-market manufacturers of emissions equipment to ensure effective replacement parts are being supplied by non-OEM vendors. A vehicle equipped with an inferior CAT and O2 simulators is a combination that will lead to very high excess emissions. And, the problems will be totally transparent to the OBD system, the motorist/buyer, and the OBD I/M test.

North Carolina DENR – Brian Phillips (1-2 same as, 3-5 different than STAPPA/ALAPCO request)

- 1) Guidance on I/M testing of government vehicles (postal and GSA).
- 2) Guidance on I/M testing of vehicles on military bases.
- 3) Revising the annual reporting requirements within I/M 40 CFR 51 to make it more reflective for OBD testing rather than tailpipe emissions testing.
- 4) Guidance on I/M OBD program effectiveness evaluations.

- 5) Heavy duty and diesel OBD.

EPA Region V States

Ohio EPA – Glenn Luksik (same as STAPPA/ALAPCO request)

- 1) Reassign reduction values of I/M and Certification in Mobile6 (and MOVES). Certification should only receive the amount of reductions it does, if and only if an I/M program exists. The motoring public will not maintain their vehicles without an I/M program in place. When this occurs, the certification amount is false.
- 2) USEPA should fund the Sierra tables for all states (or charge us a pro-rated amount) and keep it current.
- 3) Better oversight and coordination of the central information point (in this case the OBD Clearinghouse). All things OBD should reside there, with USEPA oversight. For example the exemption list for readiness and communication issues, CAN, problem cars in setting readiness, etc.
- 4) Mandate more functions of I/M programs. Waivers, exemptions, extensions and repair caps are allowed to be manipulated by the states. This leads to too great of variance and bastardized of programs. As an example; repair waiver amounts vary from none to whatever it takes to repair the vehicle.
- 5) Greater state input on the functionality of MOVES. Some of the simplification and streamlining may be so for the programmers, but not the modelers or administrators using it.

Wisconsin DNR – Muhammed Islam (same as STAPPA/ALAPCO request)

- 1) Higher sustained priority on supporting state/local I/M efforts (policy and technical) by Providing strong national leadership for this program through a central workgroup and clearinghouse as proposed by Weber State University and presented to the USEPA at the recent I/M solutions conference in San Antonio, Texas.
- 2) Identify a “go-to” person for I/M questions and issues
- 3) Lead efforts to look ahead to the future of OBD (I/M) testing, including:
 - The impact of MOVES model
 - OBD program evaluation
 - Updating OBD/IM implementation guidance document on a continuous basis
- 4) Improve the EPA facilitated state/local I/M calls and ensure timely follow-up on all issues and questions raised.
- 5) Hold vehicle manufacturers accountable

EPA Region VI States

Louisiana DEQ – Daryl Williams (not included in STAPPA/ALAPCO request)

- 1) Is there still a need for on-road testing for an OBD Program?
- 2) What is the most efficient and least costly method of accomplishing repair effectiveness?
- 3) How to perform a program evaluation for OBD only programs?
- 4) Can EPA develop training materials for inspectors?
- 5) Can EPA keep up with vehicle manufacturers about known problems (readiness, communication, CAN; recalls, TSBs, etc.)?

Texas CEQ – Bob Wierzowiecki (same as STAPPA/ALAPCO request)

- 1) Acceleration Simulation Mode (ASM) Test Standards
Emissions test standards are needed for model year 2003 and newer vehicles. EPA issued the last Vehicle Lookup Table (VLT) in 1999 through Sierra Research which included vehicle test standards and vehicle specification up to model year 1999 vehicles. With the onset of On Board Diagnostic testing, EPA no longer provides the VLT but informed states that they could acquire updates from Sierra Research independently. The VLT is needed to provide the proper ASM emissions test standards for vehicles unable to test using OBD and transition to a tailpipe test.
- 2) Vehicle Information
For model year 2003 and newer vehicles, vehicle specifications such as make, model, model year, engine size, number of cylinders, transmission type, vehicle type, and body type are needed. The information is necessary to standardize data entry for the lane inspectors to conduct emissions tests in the program.
- 3) On Board Diagnostics (OBD) Data
OBD information for model year 1996 and newer vehicles is needed to identify which readiness monitors are supported, Parameter Identification (PID) Count, Powertrain Control Module (PCM) data, and communications protocol. This information is used to detect potential fraudulent OBD emissions inspections.
- 4) Program Evaluation
Need EPA to finalize the "Draft Guidance on Use of In-Program Data for Evaluation of I/M Program Performance" dated August 2001. In meeting program evaluation requirements, EPA staff suggests that I/M programs follow one or more of the three available guidance documents. However, the most preferred guidance of the three is still in draft.
- 5) Improved Technical Guidance
A knowledgeable EPA I/M specialist should be designated that can confer with I/M program administrators on unique testing issues (i.e. keyless ignition vehicles, hybrid vehicles, and future technology advances on vehicles

EPA Region VII States

Missouri DNR – Haskins Hobson (not included in STAPPA/ALAPCO request)

1) More Public I/M Support

Conduct a public campaign regarding clean air and importance of I/M (even if only OBDII related); example: Click it or Ticket campaign. Better, more consistent coordination/communication between EPA OTAQ and EPA Regional Office I/M staff. Develop national training for technicians specific to I/M / OBD / Vehicle emissions.

2) I/M “Extra” Credit

- Tailpipe I/M testing for pre-1996 model year vehicles
- Heavy Duty I/M
- Diesel I/M
- Rejecting vehicles for any unset readiness monitors

3) OBD Technical Workgroup

- Investigate OBD problems and develop solutions to be shared with all I/M jurisdictions
- Investigate I/M-indicated vehicle recalls
- Create data table of valid PIDs & VIDs (states usually develop individually as part of their enforcement process)
- Create data table of 1996 and newer vehicles that are not OBD II-tested for various reasons (location of DLC primarily)

4) Government Fleets

Help enforcing the compliance of federal government fleets (GSA, USPS, US Military) with state I/M requirements

5) MOBILE/MOVES modeling

Create and distribute Default I/M control MOBILE (and MOVES) files for the enhanced and basic I/M performance standards for the calendar years that attainment is required (based on nonattainment status) (2009, 2012, etc.)

EPA Region VIII States

Salt Lake County, Utah DOH – Richard Valentine (not included in STAPPA/ALAPCO request)

1) Allowing non certified engines into the US (mostly Japanese) which then, eventually find their way in to US cars and because they are not OBD compliant find their way to us.

2) Allowing sale of test tubes that look like converters

3) Allowing sale of O2 simulators and other defeat devices

4) Evaluating the impact of using a tailpipe test on 96 and 97 model years instead of OBD. Emissions reductions, Customer convenience, Etc.

Utah County, Utah BAQ – Steve Alder (not included in STAPPA/ALAPCO request)

1) I'd like to know why the EPA refuses to give any kind of meaningful credit for diesel programs?

Weber County, Utah – Barre Draper (not included in STAPPA/ALAPCO request)

1) We need some sort of credit for testing diesel vehicles. Our politicians are on the verge of doing away with our diesel testing programs because EPA will not give credit for them. With all the studies that have been done on health risks of diesel exhaust fumes, we can't allow dirty; diesel vehicles to affect our children.

2) EPA requires that states do a covert program to catch dishonest inspectors. With 96 and newer OBDII vehicles becoming the predominant vehicle, how do we perform an effective covert on these vehicles? The vehicle doesn't have to be warmed up to perform the test, there is no visual tampering of emission devices, and accessory items don't need to be turned off. What could an IM inspector possibly do wrong while performing an OBDII inspection?

Utah DEQ– Bill Colbert (not included in STAPPA/ALAPCO request)

1) Quantifying realistic program effectiveness using existing I/M in-use data.

2) Integrate in-use I/M program data into MOBILE and MOVES models.

3) Establish viable alternative to the terminated OBD FACA steering committee to address existing and future OBD implementation issues.

4) Initiate proactive enforcement against aftermarket OBD "cheat" devices.

EPA Region IX States

California BAR – Dave Amlin (not included in STAPPA/ALAPCO request)

1) Provide a clear and concise documentation for all of the I/M rules in a single document. Provide references to all of the current rules. The hodgepodge of rules, amendments make it very difficult to look up requirements and be able to determine what the current rules are and which ones have been superseded. The target is also difficult to define. The changes to the rules over the years and the "flexibility" rules make it hard to tell what is required and what is a recommendation. It seems there should be a target and if you apply the flexibility rules, you should be able to add up the tons and determine what was required (e.g. number of tons) and be able to compare that to the reductions that would be achieved with the flexibility options selected.

2) Uniform application and enforcement of rules. It appears each region applies and enforces the rules differently. This adds to the confusion of what is required and what is just a recommendation.

3) Support for programs to provide uniform reference for testing, such as up-to-date OBD problem vehicles list and VLT.

4) Make the MOBILE model more reality based. If the data is not available to support an assumption, set a date by which fact based data will be used to update the model. Set up a peer review process to approve assumption based model figures. Go back and fix the model when current data shows that the original analysis or assumptions do not agree.

5) ARB testing has shown that the cheap aftermarket CATs are much less effective than the original CATs and not near as effective as OBD II grade aftermarket CATs. All other aftermarket emission control parts are required to be as effective as the OEM. CATs appear to be the only exception. I/M programs go through a lot of effort and expense identifying high emitting vehicles, only to have a clean-for-a-day CAT installed. EPA should amend or eliminate the rules that allow these junk CATs to be sold or installed in vehicles. CA plans to change the CA rules, however, it will be problematic if the others continue to be sold in the other 49 states. This should be covered under the effort to harmonize CA and Federal rules.

Nevada DMV – Lloyd Nelson and Nevada DEP – Sig Jaunarajs (same as STAPPA/ALAPCO request)

1) The use of programmers on OBD vehicles. These devices download the factory programming for storage in a hand held device and then upload a performance program. The vehicle runs on this performance program until time for an emission test at which time the owner plugs the device back into the OBD port and downloads and stores the performance program and uploads the factory programming. This was called to our attention by a customer who's monitors were unset. When we asked if the battery had been disconnected prior to the emission test he advised us that the only thing that had been done was the program change. I found several websites offering these devices. No mention is made of any compliance or lack of compliance with any emission regulation.

2) The use of OBD simulators. These devices simulate a normal signal, lets say from an O2 sensor, that a PCM would like to see. These O2 sensors monitor catalyst efficiency. The problem is the device, usually a catalytic converter, has been removed. Since we do not do a visual inspection on OBD vehicles this goes undetected. These devices are available on the internet and at Summit Performance Parts.

3) We would like some guidance from the EPA on how to deal with model year 1996 and 1997 vehicles that have OBD testability issues. For example a 1996 Mitsubishi that resets its monitors to incomplete whenever we do a bulb check. Mitsubishi has been less then helpful. After talking to the dealer and a factory rep we still have no response or repair. This problem also seems to occur with Kia, Hyundai and Subaru.

4) We need guidance on how to test hybrid vehicles. Honda Insight and Civic Hybrids do not seem to pose any unusual problems. We have not tested any hybrid Accords yet. The 2004 Prius has been tested and did not continue to run until the test was complete. After 45 minutes of trying to complete a test the batteries were finally weak enough for the engine to run long enough to complete the test. We have received a service tip from Lexus advising that if we put the ignition key in the on position then depress the accelerator pedal 2 times with the shifter in park, then depress the accelerator 2 times with the shifter in neutral, then depress the accelerator 2 times with the shifter in park once again and turn the ignition key to start all within 60 seconds we will be in the emission test mode. If all the manufacturers have different means of putting the

hybrid vehicles they produce into an emission test mode how are the states and inspectors going to keep up?

5) Clearing codes and retesting the vehicle before the monitor that has tripped the code has had an opportunity to run. This results in a vehicle passing that should have failed and been repaired. Inspectors in the field say they do this because they feel bad for the customer or they do not want to try to repair a system that they do not understand or they feel it would take too much time to diagnose and repair the problem correctly. They feel this may result in the loss of a customer.

In addition to technical issues, NDEP has questions about the future of I/M-OBDII from a larger, programmatic perspective. Does EPA envision a continued, major role for I/M-OBDII programs in the control of mobile source emissions in non-attainment areas? Does EPA value test and repair programs and will they continue to support state implementation efforts? States are under increasing pressure from local interests to eliminate or water down I/M programs and air quality planners want to be certain that EPA continues to view I/M programs as central to keeping vehicles in good repair and running clean.

EPA Region X States

Alaska DEC – Mary Parker (same as STAPPA/ALAPCO request)

- 1) Tampering assistance; aftermarket defeat devices are prolific and readily available. What can be done to 1) make it harder for tampering to occur, make it harder to sell or buy defeat devices, make it easier to detect defeat devices, and/or make it easier to prosecute the sale or use of defeat devices?
- 2) High mileage OBD vehicles (EPA's in-use study); is the cost of repairs for older OBD vehicles reasonable compared with non-OBD vehicles and do those repairs that are required to turn off the MIL provide an emissions benefit?
- 3) CAN non-communicating vehicles; it would be useful to provide a tracking log of non-communicating vehicles from various programs and includes reasons for communication problem with found and also the fixes when they are found.

Oregon DEQ– Ted Kotsakis (same as STAPPA/ALAPCO request)

- 1) EPA should coordinate with states that conduct enhanced emissions tests (IM240, BAR31, and ASM) to perform back to back testing of the enhanced emissions test and OBD to determine which the vehicle classes commonly pass the OBD test and also fail the enhanced emissions test.
- 2) EPA should conduct studies of the vehicle classes identified in item 1 above to determine if there is a manufacturer's defect in the vehicles. If there is a defect EPA should initiate recall on those vehicles which do not meet OBD requirements for emissions detection.
- 3) EPA should make available to all IM programs the full description of vehicle class and OBD defects found in items 1 and 2 above.

- 4) EPA should act as a clearing house for any information about individuals or businesses that are selling means to defeat the OBD test. EPA should investigate this fraud, impose severe penalties and distribute this information to all IM programs.
- 5) EPA should act as a clearinghouse for any OBD testing problems and should continue to make recommendations to IM programs regarding testing process for these special vehicles and for general testing procedures.

Washington DEC – Phyllis Baas (not included in STAPPA/ALAPCO request)

- 1) EPA should facilitate state/local I/M calls and ensure timely follow up on all issues and questions raised and continue to financially support the Weber State OBD clearinghouse
- 2) EPA should take an active role in holding manufacturers accountable.
- 3) EPA should align MOVES model with requirements for I/M, and SIP credits and build in emissions benefits between the various tailpipe tests available to IM programs
- 4) EPA should provide vehicle look-up tables updates.
- 5) EPA should have resources available to answer I/M questions and issues

States without I/M Solutions Responses

Maine, District of Columbia (see STAPPA/ALAPCO response), Kentucky, South Carolina, Illinois (see STAPPA/ALAPCO response), Indiana, Colorado (see STAPPA/ALAPCO response), Arizona (see STAPPA/ALAPCO response)