

Federal Advisory Committee Act  
Clean Air Act Advisory Committee  
**Mobile Sources Technical Review Subcommittee**

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Co-Chairs: Michael Walsh and Robert Sawyer      Designated Federal Official : Gregory Green

Minutes of the Subcommittee's Meeting on June 12, 2002  
Alexandria, Virginia  
**DRAFT** June 28, 2002

### **Introduction and Opening Remarks**

Michael Walsh (consultant) and Bob Sawyer (University of California at Berkeley) called the meeting to order at 9:00 a.m. and welcomed attendees. Packets were distributed to members and observers that included the meeting's agenda, handouts of presentations, a welcome message and background information for observers, the meeting evaluation form, information on the members of the Subcommittee, an MSTRS Workgroup organization chart, reports from the Workgroups, the MSTRS newsletter, and a meeting calendar.

Mr. Walsh reviewed business items for the meeting. The minutes for the February 13, 2002 meeting were accepted without revisions.

### **Presentations**

- Mitch Greenberg (EPA), standing in for Jim Blubaugh (EPA), gave the presentation "Voluntary Diesel Retrofit Program, Making Diesel Engines Cleaner." The presentation outlined the program and included the costs of retrofitting as well as the resulting emissions reductions. There are currently 84,000 retrofits around the U.S. Of those, 30% are installed or about to be installed, and 70% are commitments from fleet owners.

One question was raised regarding units of emissions reductions. The units are tons of pollutants over the lifetime of the project. There was also some discussion about the cost of retrofitting. Comparing PM control cost efficiency for various retrofit technologies, Mr. Greenberg presented a slide that showed the cost of PM control to be significantly lower for transit buses with PM filters than for compressed natural gas (CNG) conversions. A meeting participant asked how those costs were derived, noting that the comparison could be unfairly slanted against CNG conversion if the cost of purchasing new diesel buses is not included. Mr. Greenberg responded that the comparison shows what it would cost to switch from a fleet of pure diesel transit buses to CNG, including new buses and also dealing with infrastructure, vs. the purchase of new buses with PM filters.

Coralie Cooper (NESCAUM) mentioned that the Northeast is trying to negotiate purchasing arrangements for ultra-low sulfur diesel (ULSD) fuel, and she asked Mr. Greenberg how those negotiations would best be approached. Mr. Greenberg replied that a lot of hard work must be put into the process, and that fleet owners and refiners should be contacted to see who is interested in making these agreements. Greg Green (EPA) added that it can be difficult to find an interested refiner, although this could result in a significant reduction in fuel cost.

Steve Flint (NYDEC) inquired how EPA would handle banking and trading provisions for early introduction of ULSD. Mr. Greenberg answered that credits are limited at this time, but in 2005 credits will be available for fuel volume. Mr. Flint added that credits may be very attractive to States and may decrease the price of fuel by creating competition.

Andy Ginsburg (Oregon DEQ) commented that a speedy introduction of ULSD would be beneficial, but once fleet owners commit to the new technology, they must concern themselves with not only the cost of fuel but the consistency of its supply. He asked what EPA's position was regarding the application of existing technologies for older vehicles. Mr. Greenberg answered that EPA supports those types of technologies (such as catalytic converters).

Joseph Norbeck (University of California at Riverside) encouraged EPA to develop an information database to determine which technologies work on older vehicles using high-sulfur diesel, particularly with respect to construction equipment. For example, some older 2-stroke engines actually overpower filters, and when the filters fail the emissions are extremely high. Mr. Flint emphasized the necessity to examine every engine and every duty cycle. For example, some engines do not attain the exhaust temperatures required to effect significant emissions reductions. Mr. Greenberg acknowledged that all technologies don't work on all engines, and he confirmed that EPA is compiling an information database that will identify which technologies work with which types of engines.

Mr. Norbeck also requested that EPA define the emissions reduction standards that should be incorporated in SIPs. Mr. Greenberg replied that EPA is developing a percent emissions reduction associated with any given technology. These reductions will be translated to SIPs when they become available.

Mr. Norbeck cautioned that the issue of children's health effects from exposure to diesel exhaust is sensationalized by incorrectly referring to a "Good Morning America" story as a technical study.

- Lucie Audette (EPA) gave the presentation "Creating Innovation in Transportation Programs: The Commuter Choice Leadership Initiative." The Commuter Choice Leadership Initiative (CCLI) program (home page [www.commuterchoice.gov](http://www.commuterchoice.gov)) was designed to promote commuters' usage of mass transit, voluntary car pooling, etc., in order to decrease traffic

congestion and traffic-related air pollution. Employers may become registered partners in the program. By doing so, they offer several benefits to the participating employees, such as money toward van pool passes or the option to telecommute. Thousands of employers nationwide have already joined, and EPA expects 3.5 million participating employees by October of 2004. She stated that a goal of the program is to achieve market transformation, making this program a standard employee benefit.

Referring to near-term growth projections presented for CCLI, one meeting participant pointed out that the projected NOx emission reductions were not linear with respect to numbers of participating employees. Ms. Audette explained that the first employers to participate in the program have achieved relatively low NOx emission reductions because they were already close to meeting the standards of excellence, and the remaining employers should see greater improvements.

Bob Schaefer (BP Global Fuels Technology) noted that voluntary programs are not enforceable, and he asked if there would be an audit of States that claim SIP credits for the CCLI program. Another meeting participant asked how to quantify benefits as the basis for generating SIP credits for these transportation plans. Ms. Audette replied that there is a model available for States to generate credits for their SIPs. She said that if States choose to implement this program as part of an emissions reduction strategy and they fall short in their expectations, it is the State's responsibility to come up with another alternative. She also said that employers would be obligated to report to CCLI annually. There is no disincentive to the employer if the emission reduction is not realized. Ms. Cooper noted that a few States have passed complementary packages to Commuter Choice, and she asked Ms. Audette what some of those additional benefits are. Ms. Audette replied that in Maryland, a 50% credit is given to employers who provide transit passes. In Massachusetts, employees can deduct the cost of transit passes from their State income tax.

Paul Rasmussen (EPA) stated that it was very important to get all 10 Regions involved in this program, as well as the military, DOT offices and FHWA. Ms. Audette agreed, saying that DOT and FHWA actually aid in signing up federal agencies, while EPA focuses on private businesses. She added that there is a long list of organizations to target, and she is optimistic about the work ahead.

Richard Gibbs (NYSDEC) commented that in order to achieve market transformation, the program will have to target small businesses and freelancers. He asked what aspects of the program could apply to them. Ms. Audette replied that telecommuting is already in place for many businesses, and that most freelancers work out of their homes. However, she agreed that a small business strategy should be fully developed as resources become available.

Mr. Gibbs also asked if existing programs would allow States to obtain credits, such as for New York's extensive subway system. New York currently has the lowest number of cars per capita in the country. Ms. Audette replied that EPA is aware that many programs to decrease commuter traffic already exist, and they will not discount that as the program progresses.

Mr. Gibbs commented that by decreasing commuter traffic on highways, there will be an induced demand; travelers will notice the ease of travel and begin filling the holes created by the commuter program. Ms. Audette replied that from the States' point of view, they will be able to save money by building fewer roads since the existing roads will be able to handle the decreased amount of traffic. She added that even a small change has an impact, and that also applies to episodic events.

Mr. Ginsburg asked whether an employer might get credit for providing a satellite office. Ms. Audette replied that EPA would consider allowing a satellite office to count as a secondary benefit. Mr. Ginsburg also asked if the program would eventually encompass recreational trips as well as work-related commuting. Ms. Audette replied that programs were not in place for recreational travel yet, but she noted that work-related transit passes are valid at any time of day.

- Bob Doyle (EPA) gave the presentation "EPA's SmartWay Fleets Overview." The program is a voluntary partnership with private and public heavy-duty fleets, engine and vehicle manufacturers, governments, truck stops, and providers of goods and services. EPA has developed draft performance measures and solicited comments from fleet owners. These measures include demonstrating a reduction in CO<sub>2</sub>, PM, and NO<sub>x</sub> emissions, committing a certain percentage of goods to be shipped by SmartWay fleets, performing engine certifications, and providing truck stop electrification (TSE) devices. He explained that TSE provides the trucker access to heat, air conditioning, television, and internet access without the need to idle the truck engine for extended periods. Mr. Doyle summarized potential CO<sub>2</sub> reductions by 2010 as well as strategies to achieve an annual 3% reduction.

Mr. Doyle clarified that one of the partnership's listed potential incentives, CMAQ, is the Congestion Mitigation Air Quality Act, described by DOT at a recent Albany conference. Mr. Doyle indicated that CMAQ funding should be available for a TSE project. EPA is looking to develop performance standards and to allow SIP credits for program users.

- Christi Poirier (EPA) gave the presentation "Green Vehicle Guide, An Important Consumer Tool." This guide can be found on the web at <http://www.epa.gov/greenvehicles>. The website was designed to educate consumers about the link between transportation and the environment. Through this site, consumers can compare vehicles manufactured in 2000 or later for fuel economy and emissions. The website assigns vehicles a score on an absolute 0-10 scale based on these characteristics, to allow comparison of classes and model years of vehicles against

each other. The website also rates vehicles on a relative scale against other vehicles of the same class (for example, among midsize cars).

Doug Greenhaus (NADA) asked about the rating methodology. Ms. Poirier noted that the website includes an explanation of the rating system. She acknowledged that users are not currently able to do a relative comparison across model years.

Ms. Poirier forestalled a common question by stating that the basis of the Green Vehicles Guide emissions data is legally certified data rather than in-use or I/M data. A comment was made that in-use or I/M data would be helpful and in some cases, more accurate, as vehicles age differently. A suggestion was also made to include recall information on the site.

- Coralie Cooper gave the presentation “NESCAUM Voluntary Mobile Source Emission Reduction Initiatives.” She summarized the concept of Clean Air Communities (CAC), which focuses on environmental justice communities and is designed to harmonize environmental justice and emissions trading interests to improve air quality through market-based approaches. The first projects began in 2001, and new partnerships will begin in 2003. She summarized several projects, including: truck stop electrification at Hunt's Point; a solar array project at an industrial center in Brooklyn; an aftermarket diesel retrofitting project with Waste Management (to also include a CNG solution in the long term); the implementation of ULSD fuel in New York City's Department of Sanitation; and a diesel emission reduction project for the school bus fleet in Norwich, CT. Smoke testing projects have also been implemented near high-capacity terminals.

Mr. Walsh asked Ms. Cooper for any guidance with respect to the concern about a reliable supply of ULSD fuel. Ms. Cooper suggested locating near suppliers with the larger terminals. Mr. Flint noted that because of the NTA commitment, Sprague has lined up numerous supplies.

Mr. Greenberg asked whether there is the opportunity to use catalytic converters taken off buses and was told there are hundreds of them in New York available for reuse.

- Dennis Smith (DOE) and Chris Saricks (Argonne National Labs) gave the presentation “Alternative Fuel Vehicles.” Mr. Smith outlined alternative fuel options, the federal government's alternative fuel policy, and the voluntary National Clean Cities Program (home page [www.cities.doe.gov](http://www.cities.doe.gov)). To participate in the Clean Cities Program, a city signs a memorandum of understanding. Participating cities (most of the original ones were in nonattainment areas) have lots of providers and lots of partnerships. Mr. Smith emphasized the potential of the program for niche markets like transit buses and UPS trucks. Mr. Saricks followed up with the importance of the Voluntary Mobile Source Emissions Reductions (VMSEP) program to generate emission reduction credits, as a key facet in the evolution of mobile source regulations.

- Allen Schaeffer (Diesel Technology Forum) gave the presentation “Getting a Customer Focus: Considerations for Voluntary Programs.” He gave an overview of the potential participants in voluntary programs, possible incentive options, and levels of program participation. He emphasized the importance of a customer focus for all voluntary programs.
- Lori Stewart gave an update from the OBD Policy Workgroup. The group is dealing with two main issues: conflict of interest, and the lack of overlap between tailpipe test and on-board diagnostics (OBD) test failures.

Kelly Brown (Ford) commented on the conflict of interest issue. Since dealers do warranty work at a substantial profit from the manufacturer, he does not see how a conflict of interest (concern that dealers wouldn't fail their own products) could exist. Ms. Stewart replied that the Policy Workgroup is divided on this issue; some members argue that there is no conflict, but some are concerned about contracts between dealers and manufacturers.

Mr. Rodgers voiced a concern about high mileage vehicles. If OBD is the only tool available in the future, how will older vehicles with high mileage be tested? Ms. Stewart replied that issues such as this will be addressed and the policy workgroup is likely to make recommendations for additional analysis by the OBD Technical Workgroup. She added that the group does have a few years to decide on a course of action. However, Mr. Walsh commented that States must start transitioning to OBD now and will need answers in the very near future, that this is a crucial policy decision for end-of-life, high-emissions vehicles. John Cabaniss (AIAM) and Mr. Brown commented on the lack of overlap between I/M tests and OBD tests. Ms. Stewart replied that the lack of overlap demonstrates a discontinuity between the tests. Mr. Kelly Brown noted that for OBD, the misfire detector must be set at a level lower than that which would damage the catalyst, so a tolerable level of misfire is necessary. Reg Modlin (DaimlerChrysler) stated his support of OBD as the I/M of the future and suggested maintaining a tailpipe test as a backup. He agreed that the customer convenience of OBD will be a wonderful advantage but noted it will be challenging to fully implement OBD, especially for high-mileage vehicles. Mr. Ginsburg added that the cost to run a tailpipe program is three times higher than an OBD program, so it may be infeasible to keep tailpipe tests for more than comparison study purposes. Ms. Cooper said Northeast States were currently committed to not longer than 7 more years of tailpipe testing in their I/M program contracts.

Mr. Modlin also said that the big issue would be how to challenge the public with high-mileage vehicles to fix their emissions problems. He pointed out that many people ignore the problems. Ms. Stewart agreed, saying that the group should implement a policy for too many OBD failures.

Mr. Norbeck noted that not all vehicles are gross emitters, that many are on the line between passing and failing. Ms. Stewart acknowledged that this "point in time" issue is a good one, and data has shown that the OBD light often illuminates shortly after a tailpipe failure (more overlap over time). Mr. Norbeck emphasized the importance of educating mechanics on these issues.

A discussion was held regarding the need for accuracy in use of terminology with respect to "maintenance" vs. "repair." Mr. Gibbs pointed out that maintenance keeps the vehicle in a state of readiness, while repair is what happens after the vehicle is broken. It would be more appropriate to call our I/M programs inspection and *repair* programs. OBD is a maintenance device in the truest sense, in that it catches potential problems in vehicles. However, as Mike Rodgers (Georgia Tech) pointed out, there has been some debate that States will not be able to regulate a program that requires vehicles to be repaired if they have only demonstrated potential emissions with no actual standards violation. Mr. Walsh said that it is not cost-effective to require repair for potential problems unless EPA can quantify the foregone emissions to demonstrate whether OBD repairs are cost-effective..

- Dennis Johnson (EPA) gave an update from the Heavy-Duty In-Use Workgroup. He presented the revised draft charter, and summarized the two task groups that will be formed to examine what opacity tests exist as well as other tests for heavy-duty vehicles.

## **Wrap-Up**

The next MSTRS meeting will be held on October 16, 2002, near Detroit, MI. Mr. Sawyer stated that the MSTRS is soliciting agenda items from members. At the next meeting, the Subcommittee will address I/M programs, State reports, and fuels for heavy-duty vehicles. They will also review the report from another active CAAAC Subcommittee, the Clean Diesel Independent Review Panel, which should be available in late September. The full CAAAC will recharter in November 2002.

The meeting adjourned at approximately 3:00 p.m.

Attachments:

List of attendees (members and alternates; speakers; staff; and observers)

## Attendees

### Members and Alternates

Name	Affiliation
Kelly Brown	Ford Motor Co.
Robert Brown	Ford Motor Co.
John Cabiniss	Association of International Automobile Manufacturers, Inc.
Steve Flint	NYSDEC
Jerry Gallagher	J. Gallagher & Associates
Richard Gibbs	NYSDEC
Andy Ginsburg	Oregon DEQ
John Johnson	Michigan Technological University
David McIntosh	NRDC
Reg Modlin	DaimlerChrysler
Joseph Norbeck	University of California at Riverside
Paul Rasmussen	U.S. EPA
Mike Rodgers	Georgia Institute of Technology, Air Quality Laboratory
Bob Sawyer, co-chair	University of California at Berkeley
Bob Schaefer	BP Global Fuels Technology
Mike Walsh, co-chair	consultant



**Attendees (cont'd)**

Speakers

<b>Name</b>	<b>Affiliation</b>
Lucie Audette	U.S. EPA
Coralie Cooper	NESCAUM
Bob Doyle	U.S. EPA
Mitchell Greenberg	U.S. EPA
Dennis Johnson	U.S. EPA
Christi Poirier	U.S. EPA
Chris Saricks	Argonne National Laboratories
Allen Schaeffer	Diesel Technology Forum
Dennis Smith	U.S. DOE

Staff

<b>Name</b>	<b>Affiliation</b>
Kathy Boyer	EC/R, Inc. (EPA contractor)
Gregory Green	U.S. EPA
Cheryl Hogan	U.S. EPA
Lisa Sutton	EC/R, Inc. (EPA contractor)
Trina Vallion	U.S. EPA

**Attendees (cont'd)**

Observers

<b>Name</b>	<b>Affiliation</b>
Andy Bastien	Environment Canada
Carol Burelle	Environment Canada
Harry Diegel	Ford Motor Co.
Susan Field	Toyota Technical Center
Chuck Freed	consultant
Ed Gardetto	U.S. EPA
Doug Greenhaus	National Automobile Dealers Association (NADA)
Kilian Bach Kogle	VLS, law office of Adele Abrams on behalf of ASSE
Doug Lawson	NREL
Peter Lidiak	API
Bob Maxwell	consultant
Gitanjali Murthy	Hogan & Hartson
Michael Osborne	U.S. Navy, Naval Sea Systems Command
Vincent Porcaro	Parsons
John Reese	Shell Oil Products US
Ichiro Sakai	American Honda Motor Co.
Lawrence Smith	Southwest Research Institute (SWRI)
Matt Thornton	NREL
Andy Vaichekauskas	Mitsubishi Motors R&D of America
Katie Watson	Parsons
Rob Wilson	Sensors, Inc.