



Report No. SR2005-08-02

## **AirCare Program Review – Phase 2**

prepared for:

**Greater Vancouver Transportation Authority**

August 22, 2005

prepared by:

Sierra Research, Inc.  
1801 J Street  
Sacramento, California 95814  
(916) 444-6666

Report No. SR2005-08-02

## **AIRCARE PROGRAM REVIEW – PHASE 2**

prepared for:

Greater Vancouver Transportation Authority

August 22, 2005

Principal authors:

Richard W. Joy  
Joe D. Roeschen  
Jeremy G. Heiken  
Thomas C. Austin

Sierra Research, Inc.  
1801 J Street  
Sacramento, CA 95814  
(916) 444-6666

## AIRCARE PROGRAM REVIEW – PHASE 2

### Introduction

British Columbia's AirCare vehicle emissions inspection and maintenance (I/M) program was initially implemented in September 1992. The program is aimed at reducing emissions from cars and light trucks in the Lower Fraser Valley, with these vehicles required to report for periodic testing either every year or every other year depending on vehicle model year and previous test results. By identifying and requiring the repair of vehicles with defective emission controls, AirCare assists motorists in properly maintaining their vehicles and provides significant reductions in regional air pollutant emissions.

AirCare was the first of the so-called enhanced I/M programs in North America. As a clear improvement over previous vehicle emissions inspection programs, it led the way in the implementation of numerous other enhanced I/M programs in the United States and Canada. Over the last 13 years, a number of independent reviews have concluded that AirCare continues to provide substantial air quality benefits in the upper range of those seen in other North American I/M programs.

A general program upgrade that was implemented in January 2001 included a more advanced IM240 test designed to accurately test the emissions performance of 1992 and newer vehicles. In addition, advisory electronic checks of the vehicle's computer system (referred to as the on-board diagnostic or OBD system) were initiated on 1998 and newer models to provide motorists with additional emissions performance information. The OBD system monitors vehicle performance during in-use operation and reports (stores) any trouble codes, which can be subsequently downloaded electronically to identify any problems with the emission control system.

With the August 31, 2006 expiration date of the current Envirotest Canada contract for operating AirCare rapidly approaching, it is important to decide what to do with the program at that time. Accordingly, the Greater Vancouver Transportation Authority (TransLink) commissioned a Phase 1 study that was primarily aimed at determining whether AirCare should be continued.

The Phase 1 report, completed in November 2004, concluded that a light-duty vehicle I/M program should be continued to the 2010-2015 period, in conjunction with periodic reviews and program improvements to maintain the existing high level of emission reductions. The Phase 1 study also revealed a need to better define the economics, program delivery, business arrangements, potential fee structure, and other elements of the future program. Phase 2 was envisioned as providing a detailed analysis of program alternatives and business viability as the basis for a decision regarding the exact scope and regulations of AirCare post August 2006. As such, it complements and builds on previous studies of the program's effectiveness and air quality benefits.

## Purpose of the Study

Consistent with the needs identified above, the Phase 2 study focused on developing the details of a proposed new program, including its scope, economic feasibility, delivery model, transitional arrangements, user fees, and other design elements. A comprehensive feasibility analysis was also completed, in which the potential new program and various associated details were examined from a variety of views, including technical, environmental, economic, and customer acceptability perspectives. The Phase 2 results are designed to provide the basis for a decision on what form the new AirCare program shall take.

An independent qualified consultant, Sierra Research (Sierra), was retained to complete the Phase 2 study. Sierra has over 20 years experience in the design and evaluation of I/M programs, and has served as a consultant on I/M issues to the U.S. Environmental Protection Agency, the California Air Resources Board, the California Bureau of Automotive Repair, and many other agencies in the United States, Canada and Australia. Sierra performed the following tasks related to the investigation of potential changes to the AirCare program and the implementation of those changes:

1. Development of an overall framework for evaluating possible program options;
2. Evaluation of trends in vehicle technology and I/M testing procedures;
3. Review of the current AirCare design and analysis of future options, including their estimated emissions reduction effectiveness and cost-effectiveness;
4. Analysis of the financial feasibility of selected program options;
5. Development of the business model for the new program; and
6. Analysis of the technical issues associated with making a transition from the current AirCare program to the new program and development of the recommended transition strategy.

## Recommended AirCare Design

The primary design changes that are believed to be most appropriate for the new AirCare program are summarized below.

1. For 1998 and newer models, making the initial pass/fail decision based only on a check of the OBD system. The existing IM240 test would be retained for 1992-1997 vehicles and the existing ASM test would be kept for pre-1992 vehicles.

2. Expanding the exemption of new vehicles to include the five newest model years for most vehicles to reduce program costs and improve consumer convenience without compromising program effectiveness.
3. Reducing the term of the next inspection contract from seven years to five years (2006-2011), and including another scheduled review of the program in 2009.
4. Reducing inspection fees by roughly 10%. This estimated reduction assumes that residual revenues from the current program are used to pay for the initial costs associated with the new program.

Implementation of the above changes is projected to provide increased longer-term emissions reductions relative to the current program while reducing the impact of the program on motorists whose vehicles are least likely to fail. All motorists whose vehicles undergo inspection will also benefit from lower inspection fees. The combined effect of the changes is an AirCare program that will continue to be one of the most cost-effective means to reduce air pollutant emissions in the Lower Fraser Valley. In addition, fewer motorists will be required to bring their vehicles in for inspection.

In addition to the key changes listed above, it is also important to mention what will not change. The same inspection centres will be used for the new program, with the possible exception of the Burnaby site if the property owner decides against renewing the lease for that property. An operating contractor and its inspectors will continue to inspect vehicles using the same basic test equipment. The inspection centres will be open the same hours. The testing process will remain nearly identical to motorists and take about the same amount of time to complete, unless it is possible for the contractor to speed up OBD testing on 1998 and newer vehicles. Motorists whose vehicles fail inspection will also continue to have access to a certified repair industry.

### Alternatives Evaluated

Maintaining much of the same consistency with the current program will minimize motorists' confusion over the new program and assure that its implementation proceeds on a seamless basis. While the recommended new program will look a lot like the current AirCare program, a wide range of potential program alternatives were evaluated but ultimately rejected. The following table lists the options and strategies that were examined.

As noted in the table, five potential primary program options—centralized testing, decentralized testing, centralized/decentralized hybrid testing, remote monitoring, and remote sensing—were evaluated. Additional test- and repair-related strategies that were assessed included further expansion of new-vehicle exemptions to the first seven model years, addition of heavier medium-duty vehicles to the program, more stringent waiver requirements for motorists and a repair subsidy program.

Program Options/Strategies	Perspectives				Overall Rating
	Practical	User	Environmental	Economic	
<b>Primary Program Options</b>					
1. Centralized Test Network <sup>1</sup> :					
A. Existing Centralized Network	++	○	○	+	+
B. Best Practices Centralized Network	++	○	+	+	+
C. Optimized Centralized Network	++	++	+	+	++
2. Decentralized Test Network	-	+	--	--	--
3. Hybrid Test Network:					
A. Centralized Tailpipe and Decentralized OBD Testing	--	--	-	--	--
B. Centralized Tailpipe Testing and Assisted-Serve OBD Kiosks	--	○	○	○	-
C. Centralized High Volume Testing and Decentralized Testing in Outlying Areas	--	-	-	-	-
D. Centralized High Volume Testing and Mobile Testing of Newer Fleet and Outlying Area Vehicles	○	○	+	○	+
4. Remote Monitoring of Newer Vehicles	×	+	++	○	×
5. Remote Sensing	×	+	--	-	×
<b>Vehicle Test Strategies (May Apply to Multiple Primary Options)</b>					
1. Self Serve OBD Kiosks for Newer Vehicles	--	+	+	+	-
2. Increased Model Year Exemptions	++	+	-	-	○
3. Addition of Medium Duty Vehicles	-	-	+	+	-
4. Tailpipe Test for Older OBD Vehicles	+	++	○	○	+
5. Modified Model Year Breakpoints	○	○	○	○	○
6. OBD+IM240 Testing on Newer Model Years	-	-	+	-	-
7. NOx Testing of Light-Duty Diesel Vehicles	○	-	+	-	○
8. Low or High Emitter Profiling	○	-	+	-	○
<b>Vehicle Repair Strategies (May Apply to Multiple Primary Options)</b>					
1. More Stringent Waiver Requirements	○	-	+	○	○
2. Limit Repairs to Certified Repair Shops	-	--	-	-	-
3. Public-Private Repair Partnership	○	-	+	○	○
4. More Stringent Repair Data Collection Requirements	-	--	○	○	-
5. Repair Subsidy Program	-	--	○	--	--
Rating Scale: ++ Strongly positive; + Positive; ○ Neutral; - Negative; -- Strongly Negative; × Not viable					

Sierra performed a feasibility assessment on each of the possible program elements that involved assigning ratings ranging from strongly positive to not viable in four separate evaluation areas—practical, user, environmental, and economic. An optimized centralized network was the only primary option to receive positive or strongly positive ratings in all four individual evaluation areas, and an overall rating of strongly positive.

Additional details on the feasibility assessment process as well as the individual evaluations that were performed are provided in a comprehensive technical appendix to this report. The separate technical volume also contains additional details regarding the recommended design features of the new AirCare program and the supporting reasons for those recommendations.

### AirCare Stakeholder Advisory Process

Information developed during the feasibility assessment was supplemented with comments received from an advisory committee of invited attendees that was formed by TransLink for the purpose of obtaining important input from stakeholders on the design of the new AirCare program. At their first workshop meeting on April 25, 2005, AirCare Stakeholder Advisory Committee participants were asked to provide input on three related perspectives—user, environmental, and operational. The combined (Sierra and stakeholder) evaluation results were then used to select the recommended primary option, and associated test and repair strategies.

Information on the recommended general conceptual design of the new program was subsequently presented to the Stakeholder Advisory Committee at a workshop on June 22, 2005. Participants were provided with an overview of the feedback gathered at the April 25 workshop and the conclusions that had been reached to date. Based on the April 25 input and Sierra's feasibility evaluation, the main elements of a proposed next phase of AirCare were prepared and presented to the Stakeholder Advisory Committee for comment. Resulting feedback from the participants was used to fine-tune the recommended program elements contained in the Phase 2 report.

### Additional Testing Recommendations

Associated test strategy recommendations for the new program are listed below. Additional details on these items are also included in the technical appendix.

AirCare Test Equipment and Facilities – The existing vehicle test systems generally appear to be in excellent shape and are expected to remain functional without excessive maintenance during the next contract period. Certain system components will require substantial refurbishment and maintenance, while some equipment (e.g., computer hardware) needs to be replaced and upgraded. Inspection centre roofs and heating/ventilation/air conditioning (HVAC) systems will also need significant replacement and

maintenance during the next contract period. The cost of these improvements was included in the financial modeling of potential future program options.

Test Type and Frequency – Annual ASM testing should be retained for pre-1992 model year gasoline-powered vehicles and biennial IM240 testing for 1992-1997 models. Biennial pass/fail OBD inspections should be implemented for 1998 and newer models, with backup IM240 testing on vehicles that cannot be OBD tested.

High Mileage Vehicles – Where possible, vehicles that accumulate high annual mileage should be tested within the new vehicle exemption period. For example, a new vehicle placed in service as a taxi could accumulate 300,000 km in five years before being tested for emissions. A shorter exemption interval is therefore recommended to detect emission problems on these vehicles.

OBD Issues – Based on current U.S. requirements, all 2008 and newer model year vehicles must use a new standardized OBD communication protocol (phase-in began with the 2003 model year). Since AirCare test equipment currently does not support this new protocol, OBD inspections will not be possible on these vehicles. Sierra recommends the current AirCare hardware be upgraded to support this new protocol to avoid testability issues.

Since OBD inspections are more comprehensive than tailpipe emission tests, it may be necessary in the future to have the oldest of the OBD-tested vehicles revert to a tailpipe inspection. This would allow minor malfunctions detected by the OBD system that are not significantly increasing emissions to be effectively ignored as long as the vehicle meets the appropriate tailpipe emission limits.

Additional OBD-related technical recommendations are described in detail in the technical appendix.

Fleet Testing – Consideration should be given to providing mobile OBD testing services to fleets with 1998 and newer vehicles if such a program is feasible and participants are willing to pay a test fee surcharge to fully offset the cost of the service. If implemented, interested fleets would be able to have required OBD testing performed at their facilities rather than taking their vehicles to the AirCare inspection centres.

Diesel Testing – AirCare should continue opacity testing on pre-1998 Diesel vehicles models using the IM147 dynamometer test. The results of scheduled pilot testing of NO<sub>x</sub> tailpipe emissions from Diesel vehicles should be used to decide whether to also implement this type of test on pre-1998 models. Consideration could also be given to subjecting 1998 and newer Diesel vehicles to the same pass/fail-only OBD test recommended for light-duty gasoline-powered vehicles instead of the current opacity test.

## Other Program Recommendations

In addition to the testing issues discussed above, Sierra evaluated a number of other program design features with the objective being to further maximize AirCare benefits. Recommendations regarding these elements are summarized below. Additional details on these items are also included in the technical appendix.

Repair Industry Performance – OBD test results provide substantially improved information on what is wrong with a failed vehicle. However, motorists and the repair industry need to understand how to use this information to maintain, diagnose, and repair the vehicle. Applicable recommendations include the following:

1. Implementation of changes in the current certification process for Certified AirCare repair facilities. Repair facilities will enter into a voluntary performance contract with Pacific Vehicle Testing Technologies (PVTT)\* in which they will agree to provide effective OBD repairs and to stand behind the quality of their work (i.e., performing all of the recommended repairs would result in a re-inspection pass). The result will be better quality repairs resulting in greater and longer lasting emission reductions.
2. Possible elimination of the repair cost ceiling for the 1998 model year so that all vehicles subject to pass/fail OBD testing have identical repair cost limits.
3. Analysis of recorded OBD diagnostic trouble codes along with other repair data to provide further insight into the most common types of vehicle failures and repairs.
4. Survey of the existing level of OBD diagnostic and repair capabilities in the industry, and, if the survey results indicate a need for more training, developing advanced OBD diagnostic and repair training classes that would be required for shops entering into voluntary performance contracts with PVTT.
5. Joint PVTT/repair industry development of a general conceptual approach to OBD repairs that includes addressing the need for OBD diagnostics, full OBD repairs, and setting of readiness monitors after repair.
6. Better education of motorists about illuminated MILs and the desirability of getting repairs performed on a vehicle when the dashboard light first comes on, rather than waiting for the next AirCare inspection.
7. Possibly offering of diagnostic scans of illuminated MILs to motorists through the AirCare Research Centre.

Program Compliance – In addition to repair industry performance, other factors affecting the repair of failing vehicles in AirCare include potential inspection fraud and improper

---

\* TransLink subsidiary PVTT is the entity responsible for administering the AirCare program.

vehicle registration/licensing. No instances of AirCare inspection fraud, in which the inspector and motorist collude to get a vehicle to pass program requirements by somehow falsifying test results, have been documented and this does not appear to be a compliance problem. Nonetheless, PVTT may want to investigate enhanced monitoring of inspector performance as a further check on this issue. Three recommendations have also been developed for tightening the vehicle registration and licensing process to better assure compliance with AirCare requirements:

1. All vehicles (except the newest model years exempt from testing) should be required to pass AirCare before they can initially register inside the program area, regardless of whether they are from outside of the program area or province.
2. Vehicles registered in the AirCare area should be required to pass an inspection before they can be re-registered in an out-of-area rating territory unless additional proof of a household move is provided.
3. Registration changes that increase the gross vehicle weight (GVW) to above 5000 kg should be verified by checking that the vehicle identification number (VIN) is consistent with the change.

Program Evaluation – An important element of the new AirCare program will involve assessing its effectiveness in reducing motor vehicle emissions on an ongoing basis. Recommendations regarding this program element include the following:

1. Continued preparation of evaluations of AirCare program effectiveness. Full program evaluations should be performed on at least a biennial basis. Somewhat less rigorous annual evaluations are also recommended.
2. Collection and analysis of a random sample of full-duration IM240 test data, which should include vehicles subject to OBD and ASM testing and should remain a primary element of future AirCare evaluations. Since actual emissions from OBD vehicles will not be routinely measured, this random sampling will (a) allow these vehicles to be included in overall assessments of AirCare benefits; (b) provide a means for identifying potential problem vehicles that are high IM240 emitters but pass the OBD test; and (c) track trends in the emissions rates of aging OBD vehicles versus their failure rates.
3. Analysis of collected OBD data on a frequent basis. These results can be compared over time to track the program's OBD performance and also to results available from other programs to assess AirCare's relative performance.
4. Possible additional analyses aimed at better monitoring and identification of test and equipment performance anomalies.

5. Revision of the existing methodology for estimating AirCare benefits to more accurately reflect the impact of the program in reducing emissions during all modes of vehicle operation.

Equipment Quality Assurance – Since tailpipe testing will be continued for pre-1998 models using the existing test systems, existing calibration, maintenance, and auditing procedures should be used to assure the continued accuracy of these test systems. Additional quality assurance activities that are recommended for the new program include more proactive equipment performance tracking and preventative maintenance, thorough initial testing of OBD test performance prior to program implementation, and ongoing OBD test system audits once the program has been implemented.

### Transition Strategy

The transition to the new AirCare program will be greatly facilitated by the relatively narrow scope of recommended changes from the current program. Nonetheless, there are a number of key elements to ensuring a smooth and seamless transition, as noted below. These elements are discussed in more detail in the technical appendix.

Financial Viability – As noted above, test fees of roughly 10% less than the current amounts for annual ASM tests and biennial IM240/OBD tests are projected for the new program. These projections assume continuation of the current pricing policy in which annual tests are one-half the cost of biennial tests, thus providing similar charges on an annual basis for all motorists participating in AirCare. Although other fee structures are possible, they are not recommended given general public acceptance of the current fee structure and pricing policy. The projections also reflect the result of averaging total projected costs and test volumes over a recommended five-year, four-month contract period that would expire on December 31, 2011. The projected test fees are designed to generate sufficient revenue to fund both test contractor and PVTTC costs during this period, thus ensuring the financial viability of the new program.

While actual fees will need to be negotiated with the test contractor, they are generally expected to match these projections. In advance of those negotiations it is recommended that the TransLink Board be asked to approve specific test fees limits, with a separate subsequent Board approval required for any fees above these levels. This would provide TransLink and PVTTC staff with flexibility in the contractor negotiations, but also deliver the clear message that fees (including PVTTC's share) need to be kept at or below the approved amounts if at all possible.

Public Communications – It is critical that the public and other stakeholders understand how any changes associated with the new program will affect their vehicle inspection and repair responsibilities and experiences. Based on this objective, the recommended public communications strategy for the new program addresses key communications issues, objectives, key audiences, key messages, overall communication strategy, and

communications tactics and materials. Recommendations on each of these items are included in the technical appendix.

Legislative/Regulatory Changes – This is a critical transition item, since any time required to obtain regulatory and/or legislative amendments must be factored into the implementation schedule for the new program. There are three types of AirCare changes included in the new program that may require legislative or regulatory amendments:

1. *Motor Vehicle Fee* – Under Item 13 of the Motor Vehicle Fees Regulation (B.C. Reg. 334/91), \$47 and \$23 are currently specified for an initial transient test of a 1992 and newer vehicle and all other tests, respectively. This will need to be updated to reflect the revised test fees for the new program.
2. *Emissions Standards* – Switching 1998 and newer vehicles to pass/fail OBD testing may or may not fit within the limitations of existing statutes and regulations. The preferred approach is to implement a pass/fail OBD test under existing legislative and regulatory authority for inspection of emission control devices. If regulatory amendments are required, legislative amendments may still not be needed provided existing law does not preclude standards that specify the existence of certain conditions related to the status of the OBD system. If OBD status is not a valid reason for failure under existing law, legislative amendments will be needed to provide full authority for pass/fail OBD inspections. This least-preferred approach is expected to take at least one year to accomplish. A legal review of this issue has been initiated by PVTT.
3. *Motor Vehicle Exemptions* – Expansion of the exemption of new vehicles from the first three to the first five model years will require a regulatory change. Either a two- or three-year exemption for taxicabs would also need to be addressed in the regulations, as would requiring them to come in for annual inspections regardless of their age or the test type to which they are subject.

Contractor Selection/Negotiations – Given that continuation of a contractor-run delivery method is recommended for the new AirCare program, a key transition element is how to select that contractor. TransLink owns the current AirCare test hardware, so these assets would be available to another contractor, but does not own or hold the leases to the existing inspection centres. While a new contractor would have to provide replacement inspection software, and hire personnel to staff the test lanes and manage its AirCare operations, these are not insurmountable issues compared to the very significant challenge that would be involved in acquiring replacement inspection facilities.

It is considered unlikely that any new contractor would be willing to enter the marketplace for a program that may potentially end in 2011 and for which there are no fixed facilities in place. This view is supported by Oregon's 2002 experience in considering the replacement of its existing state-run inspection program with a contractor-operated program. Although five private contractors expressed initial interest,

all but one declined to submit an actual proposal due to issues such as the inability to offer a competitive price and concern about working in a union environment. The only contractor (the parent corporation of Envirotest Canada) that ended up submitting a proposal was the one who had developed the inspection software being used by Oregon, and the state ultimately decided to continue the existing program in its current form.

Moreover, pursuing a full RFP process could mean that as many as 12 months would be needed to implement the new program following TransLink Board approval of its design if a different contractor is selected. Since the current contract ends on August 31, 2006, there will not be sufficient time to obtain Board approval for the new program design and complete the implementation process prior to this date if a different contractor was to be considered. It is therefore recommended that TransLink should, as was the case with the current contract, forego the RFP process and negotiate a new contract with the existing contractor. This approach will minimize the risk in switching to the new program and avoid any delay in transitioning to the program. It will also further assure that the “look and feel” of the AirCare program remains very similar to the public.

Specific strategies for negotiating with the current contractor are not included in this public report. In general, however, the following recommendations are provided:

1. The contractor should be required to adequately justify all costs. The cost projections developed as part of this Phase 2 study can be used as a benchmark against which to compare contractor costs and proposed test fees.
2. TransLink should retain an experienced consultant to assist in the contract negotiations, in order to enable an independent review of the contractor’s costs by a party that is familiar with the I/M industry.
3. Additional items to be negotiated should include (a) possible changes in program operations that the contractor may propose to streamline operations and reduce costs; (b) other potential value-added test elements; (c) method and cost of providing mobile OBD testing services to interested fleets; (d) possible transfer of public communications responsibility and funding from the test contractor to TransLink; (e) possible in-lane advertising at the AirCare inspection centres; (f) possible transfer of inspection centre leases to TransLink; (g) supplantation fee; (h) software licensing; and (i) liquidated damages.

Funding Issues – The AirCare program is self-funded; i.e., the test fees charged to motorists are designed to cover all program costs. Conservative assumptions have been used to minimize the possibility of a future revenue shortfall and the resulting likelihood of such an occurrence is considered fairly remote depending on the final test fee that is negotiated with the contractor.

During the current contract period, test fees were actually reduced by \$1/test for both the annual ASM and biennial IM240 tests. This reduction was made to offset the

accumulation of greater revenues that occurred due to higher than projected test volumes. Even with this reduction, a residual amount of roughly \$3 million is currently projected at the end of the existing contract.

Given the projected residual, it is recommended that this balance be used to fund initial capital and other costs for the new program, which are projected to amount to approximately \$2.1 million. This funding approach was assumed in the development of the inspection fee projections (roughly 10% lower than current fees) that were described previously.

Transition Schedule –The following recommended timeline has been developed working backwards from the ultimate implementation date of the new program on September 1, 2006:

<u>No.</u>	<u>Activity</u>	<u>Months Prior to Implementation</u>
1	Obtain Board approval of Phase 2 report and recommendations, and preliminary approval of test fees for new program	12
2	Initiate legislative changes (if required)	12
3	Perform fleet survey of interest in mobile OBD testing	8
4	Begin contract negotiations with contractor	7
5	Initiate regulation changes	6
6	Begin to draft voluntary station performance contract for OBD repairs	6
7	Agree on test fees and other contract terms with contractor	5
8	Obtain Board approval of contract terms, including if test fee adjustments are required from preliminary Board approval	4
9	Sign contract and provide contractor with Notice to Proceed	4
10	Begin signups for station performance contracts	4
11	Contact fleets to identify and sign up those interested in mobile OBD testing services	3
12	Begin public communication announcements for new program	1
13	New program design implementation	0

With the exception of the possible need for legislative changes, all pre-implementation activities should be able to be accomplished within eight months following Board approval of the Phase 2 report and recommendations. Implementation of the AirCare design changes that are appropriate to introduce during the calendar year (including lower inspection fees) would occur on September 1, 2006, concurrent with the beginning date of the new contract. Other changes such as the increase in the model year exemption period are recommended to occur on January 1, 2007, since implementation at the beginning of the calendar year would ensure uniform and equal treatment of all affected vehicles, and be less confusing to motorists.

End of Next Contract Period – The new contract would expire on December 31, 2011. It is recommended that another review of the AirCare program be initiated in 2009, with

study results to be completed by the end of that year. This would provide a two-year lead-time prior to the expiration of the next contract for dealing with such potential issues as outright program termination, conversion to one or more fundamentally different types of OBD testing (e.g., self-serve kiosks or remote monitoring), etc. Additional issues that should be included in this “mid-term” review of the next program include:

- Pilot OBD testing of self-serve kiosks and/or remote monitoring to provide a Vancouver-specific evaluation of the performance and public acceptance of this technology;
- Review of AirCare OBD results versus those seen in other programs to evaluate the relative performance of the program;
- Review of the success of voluntary station performance contracts for OBD repairs;
- Review of program revenues versus expenditures to determine if any interim test fee adjustment is needed prior to the end of the contract period; and
- Other evaluation elements similar to those included in the current project.

###