



P.O. BOX 3282  
Farmington Hills, MI. 48333-3292

March 11, 2013

Arkansas Department of Environmental Quality  
Attention: Ms. Teresa Marks, Director  
Mercury Switch Removal Program  
5301 Northshore Drive  
North Little Rock, AR 72118-5315

Subject: End of Life Vehicle Solutions Corporation Annual Manufacturers' Implementation Report

Dear Ms. Marks,

Arkansas's Code Title 8, Chapter 9, Subchapter 8-9-607 (Mercury Switch Removal Act of 2005) requires vehicle manufacturers to annually report on the implementation of a mercury minimization plan including:

- the number of mercury-added switches collected
- a description of the mercury switch capture rate achieved
- the number of end-of-life vehicles containing mercury switches
- the number of end-of-life vehicles processed for recycling
- a description of how mercury switches were managed
- a description of additional actions that may be implemented to improve the mercury minimization plans in the event that the required capture rate is not achieved
- a description of the amounts paid to cover the costs of implementing the mercury minimization plan
- steps being taken by manufacturers to design vehicles and components for recycling

This report is provided by End of Life Vehicle Solutions Corporation on behalf of its member automotive companies. The participating members of ELVS are: Chrysler Group LLC; Ford Motor Company; Mack Trucks Inc; Mercedes-Benz USA, LLC; Mitsubishi Motors North America, Inc; Navistar, Inc.; Nissan North America, Inc; PACCAR, Inc; Porsche Cars North America Inc.; Subaru of America, Inc; Toyota Motor Sales USA, Inc.; Volkswagen Group of America, Inc; Volvo Cars of North America; and Volvo Trucks North America. This report also includes switches from the former MLC (old GM).

### **Mercury Switches Collected**

For the reporting period of March 1, 2012 through February 28, 2013, a total of 5,781 mercury switches were delivered to the ELVS recycling contractor from Arkansas dismantlers, yielding 12.7 pounds of recovered mercury. Switches were submitted by 25 dismantlers during the period.

Overall, a total of 34,249 mercury switches have been submitted by Arkansas dismantlers, yielding 75.4 pounds of recovered mercury. There are 247 registered dismantlers in Arkansas, 84 of which have submitted switches since the program began.

## **Mercury Switch Capture Rate**

A total of 6,838 switches were recovered in calendar year 2012. The estimated number of switches available for recovery in Arkansas during 2012 was 32,000, resulting in a 2012 capture rate of 21.4%.

## **Vehicle / Switch Estimates**

ELVS uses the National Vehicle Mercury Switch Recovery Program (NVMSRP) Switch Retirement Model ([www.elvsolutions.org/model.html](http://www.elvsolutions.org/model.html)) approved by the U.S. EPA and program partners to estimate mercury switch populations. The model was developed to identify switch populations and estimate mercury switch retirement rates through 2017. Therefore, the model focuses on mercury switch counts rather than vehicle counts.

The model estimates that the national total number of mercury switches historically manufactured in vehicles to be 169,185,000. Most of the vehicles containing these switches have already been scrapped, with an estimated 11,797,000 switches remaining in today's national fleet for collection through 2017. Arkansas's portion of these switches remaining for collection through 2017 is estimated to be 121,000.

For reference, the number of mercury switches that were available nationally for recovery in 2012 was estimated to be 3,138,000 units. In Arkansas 32,000 switches were available for recovery in 2012.

For your convenience, regularly updated collection information is available through our contractor's (Environmental Quality) website, <http://www.eqonline.com/services/ELVS-Mercury-Switch-Recovery-Program/annual-report.asp?year=all>, portions of which are now downloadable into Excel. This web-based data tracking system is part of ELVS' commitment to data accessibility, and will be available at least until 2017.

## **Mercury Switch Management**

Mercury switches received by ELVS are generally managed as follows:

- Dismantlers remove the switches, extract and place the mercury pellets in the collection buckets that are provided. ABS assemblies with multiple mercury pellets are returned as units.
- Once the buckets are full, the dismantler contacts EQ Industrial Services, Inc. which pays for the shipping of the buckets to their facility in Michigan.
- EQ records the number of mercury pellets and enters them into its database. The pellets are then sent to a retorting facility where the mercury is recycled.

## **Additional Actions**

The goal of ELVS and NVMSRP is to maximize the participation rate, monitor results, and make on-going program improvements as needed to increase the number of switches returned to ELVS. These organizations jointly pursued actions to increase the number of participants in the program and the number of switches recovered. In 2012, actions included:

- Steel and recycling industries continued to minimize the presence of mercury in auto shred by working with their upstream suppliers and others in the supply chain to assure participation with ELVS in state mercury switch collection efforts.
- Throughout the year, ELVS participated in a number of other regional and national automotive recycling conventions, some of which were attended by Arkansas recyclers. In 2013, ELVS will continue to attend these kinds of events.

In 2011, ELVS launched two special studies to increase our understanding of actual mercury switch availability. These studies examined how many potential vehicles with switches enter or leave a state's recycling population to be processed, or sold as whole, salvage, parts, or junk vehicles. The studies also attempted to determine if the number of switches assumed by the ELVS switch availability model is accurate, and if not, identify and address discrepancies in the original model assumptions to estimate a more accurate switch population. These studies were completed in 2012 and the findings may be applied to switch population estimates for Arkansas, possibly leading to adjusted capture rates that indicate greater success in collections than previously calculated. Revisions to the model are now being considered by the NVMSRP.

ELVS also asked the U.S. Environmental Protection Agency to participate in a joint mailing in 2012 to all companies registered in the program, encouraging their continued participation and switch collections. EPA agreed to the mailing and to the draft language provided, but stopped short of providing a signature for the letter, likely due to more pressing matters. We will push forward to conduct this mailing in 2013.

### **Program Costs**

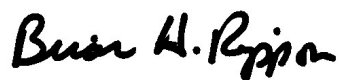
- Bucket Shipment \$ 926
- Recycling Fees \$ 1,690
- Bounty \$26,690
- State Fees \$ 5,338
- Website/Educational Material \$ 1,500
- Travel/Personnel/Overhead \$ 5,778

### **Design for Recyclability**

The policies regarding design for recyclability being implemented by manufacturers are described in the attachment, "Automotive Recycling Industry: Environmentally Friendly, Market Driven, and Sustainable." Additionally, the participating members of ELVS manage restricted substances through the International Material Database System (IMDS). Information concerning this system can be viewed at: <http://www.mdssystem.com>.

If you have any questions or comments regarding this report, please contact me at [brelvs@yahoo.com](mailto:brelvs@yahoo.com) or 248-477-7357.

Sincerely,



Brian Rippon  
End of Life Vehicle Solutions  
Project Manager

Attachment