



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

March 20, 2014

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, 2013 through February 28, 2014, a total of 6,986 mercury switches were delivered to the ELVS recycling contractor from Arkansas dismantlers, yielding 15.4 pounds of recovered mercury. Switches were submitted by 26 dismantlers during the period.

Overall, a total of 41,235 mercury switches have been submitted by Arkansas dismantlers, yielding 90.7 pounds of recovered mercury. There are 247 registered dismantlers in Arkansas, 82 of which have submitted switches since the program began.

## **Mercury Switch Capture Rate**

A total of 5,976 switches were recovered in calendar year 2013. The estimated number of switches available for recovery in Arkansas during 2013 was 29,000, resulting in a 2013 capture rate of 20.6%.

## **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 8,925,000 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 92,000.

For reference, the number of mercury switches that were available nationally for recovery in 2013 was estimated to be 2,872,000 units. In Arkansas 29,000 switches were available for recovery in 2013.

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.

Throughout 2013, ELVS participated in a number of regional and national automotive recycling conventions, some of which were attended by Arkansas recyclers. In 2014, ELVS will continue to attend these kinds of events, including the June, 2014 AADRA Convention in Hot Springs, to encourage recycler participation and mercury switch collection.

NVMSRP member organizations have scheduled full-program review meetings the first half of 2014 to discuss the overall progress of automotive mercury switch collections in the U.S. including a review of which collection program features have proven to be most effective. The group will also consider possible additional steps to enhance switch collections such as renewed outreach and communications to recyclers, and the role switch collections could play in complying with certain federal air quality rules.

### **Program Costs**

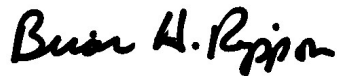
- Bucket Shipment \$ 1,075
- Recycling Fees \$ 2,108
- Bounty \$32,040
- State Fees \$ 6,408
- Website/Educational Material \$ 1,200
- Travel/Personnel/Overhead \$ 5,598

### **Design for Recyclability**

The policies regarding design for recyclability being implemented by automotive 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.mdsystem.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:

"Automotive Recycling Industry: Environmentally Friendly, Market Driven, and Sustainable."