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March 11, 2019

Susan Speake  
Trust Fund Manager  
Assessment & Remediation; Office of Land Resources  
Arkansas Department of Environmental Quality  
5301 Northshore Drive  
North Little Rock, AR 72118-5317

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

Dear Ms. Speake,

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: FCA US LLC (formerly 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 Car USA, LLC; 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, 2018 through February 28, 2019, a total of 1,903 mercury switches were delivered to the ELVS recycling contractor from Arkansas dismantlers, yielding 4.2 pounds of recovered mercury. Switches were submitted by 21 dismantlers during the period.

Overall, a total of 57,464 mercury switches have been submitted by Arkansas dismantlers, yielding 126.4 pounds of recovered mercury. There are 261 registered dismantlers in Arkansas, 104 of which have submitted switches since the program began.

## **Mercury Switch Capture Rate**

A total of 2,218 switches were recovered in calendar year 2018. The estimated number of switches available for recovery in Arkansas during 2018 was 17,000, resulting in a 2018 capture rate of 13.04%.

## **Vehicle / Switch Estimates**

ELVS uses the National Vehicle Mercury Switch Recovery Program (NVMSRP) Switch Retirement Model ([http://elvsolutions.org/wp-content/uploads/2018/06/NVMSRP\\_Switch\\_Retirement\\_Model\\_V3\\_Feb\\_14-1.xls](http://elvsolutions.org/wp-content/uploads/2018/06/NVMSRP_Switch_Retirement_Model_V3_Feb_14-1.xls)) approved by the U.S. EPA and program partners to estimate mercury switch populations. The model was originally developed to identify switch populations and estimate mercury switch retirement rates through 2017. The model was recently updated to extend estimates through 2021. 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 1,418,000 switches available in today's national fleet for collection in 2019. Arkansas's portion of these switches for collection in 2019 is estimated to be 15,000.

For reference, the number of mercury switches that were available nationally for recovery in 2018 was estimated to be 1,631,000 units. In Arkansas 17,000 switches were available for recovery in 2018.

For your convenience, regularly updated collection information is available through our contractor's (US Ecology) website (<http://www.usecology.com/services/ELVS-Mercury-Switch-Recovery-Program/annual-report.asp?year=all>), portions of which are downloadable into Excel. This web-based data tracking system is part of ELVS' commitment to data accessibility, and will be available through 2021.

## **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 US Ecology which pays for the shipping of the buckets to their facility in Michigan.
- US Ecology 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 program improvements as needed to increase the number of switches returned to ELVS.

- In 2018 ELVS participated in national automotive recycling events, some of which were attended by Arkansas recyclers. In 2019, ELVS will continue to attend major events to encourage recycler participation and mercury switch collection.
- As reported last year, and based on a mutual desire to maintain nationwide recovery of automotive mercury switches, auto and steel manufacturers entered into an agreement to continue the ELVS program past the expiration of the National Vehicle Mercury Switch Recovery Program (December 31, 2017). The ELVS program has been extended through December 31, 2021. The services and program support currently provided by ELVS will continue during the extension of the program.

**Program Costs**

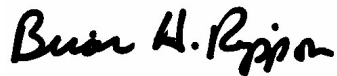
- Bucket Shipment \$ 1,058
- Recycling Fees \$ 1,994
- Bounty \$ 5,080
- State Fees \$ 1,323
- Website/Educational Material \$ 1,200
- Travel/Personnel/Overhead \$ 3,600

**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" (latest version). Additionally, the participating members of ELVS manage restricted substances through the International Material Data System (IMDS). Information concerning this system can be viewed at: [www.mdsystem.com](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  
Associate Administrative Director

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