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March 12, 2010

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; Daimler EAPP Americas; Ford Motor Company; Motors Liquidation Company (formerly General Motors Corporation); Mack Trucks Inc; 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; and Volvo Trucks North America.

### **Mercury Switches Collected**

For the reporting period of March 1, 2009 through February 28, 2010, a total of 4,356 mercury switches were delivered to the ELVS recycling contractor from Arkansas dismantlers, yielding 9.6 pounds of recovered mercury. Switches were submitted by 28 dismantlers during the period.

Overall, a total of 13,591 mercury switches have been submitted by Arkansas dismantlers, yielding 29.9 pounds of recovered mercury. There are 233 registered dismantlers in Arkansas, 45 of which have submitted switches since the program began.

## **Mercury Switch Capture Rate**

A total of 3,570 switches were recovered in calendar year 2009. The estimated number of switches available for recovery in Arkansas during 2009 was 38,000, resulting in a 2009 capture rate of 9.4%.

## **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 reports that the estimated 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 22,008,000 switches remaining in today's national fleet for collection through 2017. Arkansas's portion of these switches remaining for collection through 2017 is estimated at 225,000. According to the model, the number of mercury switches that were available nationally for recovery in 2009 was estimated to be 3,734,000 units. In Arkansas, 38,000 switches were available for recovery in 2009.

In 2009, the Model was updated. Version 1 of the model made an adjustment for exports based on older (non-current) export data. A new, current source of export was found and has been incorporated into the new Version 2 of the model. Additionally, Version 1 did not allow adjustments for economic recessions when the vehicle retirement rate decreases. Version 2 allows for such adjustments.

The model will be reviewed annually and incorporate the most recent export data as well as data regarding the size of the recession adjustment. If the economy is in a recession, then the total switches available for collection will be adjusted down by 9.4% unless additional data indicate this adjustment should change. If there is no recession, no downward 'recession adjustment' will be made to the data.

Information about the number of mercury switches recovered, the total amount of mercury processed, and a listing of participating dismantlers in Arkansas is available through the ELVS website, [www.elvsolutions.org](http://www.elvsolutions.org) with linkage to our contractor's website, <http://www.eqonline.com/services/ELVS-Mercury-Switch-Recovery-Program/annual-report.asp?year=all>. Information is updated daily as additional switches are received by our contractor, and is available for downloading into Excel for your convenience. These web-based data tracking systems are 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 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 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 the 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 a variety of actions to increase the number of participants in the program and the number of switches recovered. In 2009, including:

- The Automotive Recyclers Association continued to perform outreach to its auto recycling members across the country to familiarize them with the mercury switch program and to urge their active participation.
- Steelmakers continued steps 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.
- ELVS staffed display booths and gave presentations at numerous recycling conventions and trade shows across the country to encourage active participation in mercury switch collection programs. Recyclers from many states, including Arkansas attended these events.
- The National Highway Transportation Safety Administration's *Car Allowance Rebate System* ("Cash for Clunkers") program increased the number of recycling companies participating in the switch program. The availability of additional scrapped vehicles from the Cash for Clunkers program may result in an increase in recovered switches even though the economic recession has slowed the overall scrappage rate of vehicles nationwide. (Active membership in the ELVS program was mandatory for recyclers to be included in the Cash for Clunkers program.)

### **Program Costs**

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|--------------------------------|----------|
| • Bucket Shipment              | \$ 2,285 |
| • Recycling Fees               | \$ 1,145 |
| • Bounty                       | \$17,850 |
| • State Fees                   | \$ 3,570 |
| • Website/Educational Material | \$ 2,000 |
| • Travel/Personnel/Overhead    | \$10,000 |

### **Design for Recyclability**

Over this calendar year, select ELVS member companies will be launching new vehicles with mercury-free versions of high intensity discharge headlamps and navigation system screens. All ELVS members are working with suppliers to develop mercury-free components and will implement them as alternative technologies become feasible.

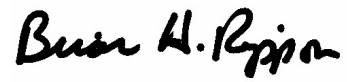
The policies being implemented are described in Attachment A, "Automotive Recycling: Your Car's Afterlife" as well as in Attachment B, "Vehicle Recycling Partnership Milestones." Additionally, the participating members of ELVS manage restricted substances through the International Material Database System (IMDS). Information concerning this system can be viewed at: [http://www.mdsystem.com/html/en/home\\_en.htm](http://www.mdsystem.com/html/en/home_en.htm).

### **Conclusion**

Going forward, NVMSRP member organizations will continue to pursue additional outreach efforts to scrap recycling facilities and vehicle recyclers in Arkansas and provide them with the necessary materials to remove mercury switches.

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,

A handwritten signature in black ink that reads "Brian H. Rippon". The signature is written in a cursive, slightly slanted style.

Brian Rippon  
End of Life Vehicle Solutions  
Project Manager

Attachments