

ELVS end of life vehicle solutions

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

March 10, 2009

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 LLC; Daimler EAPP Americas; Ford Motor Company; 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, 2008 through February 28, 2009, a total of 5,238 mercury switches were delivered to the ELVS recycling contractor from Arkansas dismantlers, yielding 11.5 pounds of recovered mercury. Switches were submitted by 19 dismantlers during the period.

Overall, a total of 9,235 mercury switches have been submitted by Arkansas dismantlers, yielding 20.3 pounds of recovered mercury. There are 225 registered dismantlers in Arkansas, 25 of which have submitted switches since the program began.

Mercury Switch Capture Rate

A total of 5,056 switches were recovered in calendar year 2008. The estimated number of switches available for recovery in Arkansas during 2008 was 38,000, resulting in a 2008 capture rate of 13.3%.

Vehicle / Switch Estimates

ELVS uses the National Vehicle Mercury Switch Recovery Program (NVMSRP) Switch Retirement Model (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 25,742,000 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 263,000.

Earlier this year, 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 data has since been 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.

According to the model, the number of mercury switches that were available nationally for recovery in 2008 was estimated to be 3,780,000 units. In Arkansas, 38,000 switches were available for recovery in 2008.

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 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. As mentioned above, the NVMSRP Switch Retirement Model is available at www.elvsolutions.org/model.html. 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

ELVS and the NVMSRP have taken a variety of additional actions to increase the number of participants in the program and the number of switches recovered. In 2008, ELVS produced a laminated reference card that contains detailed photos of mercury switches that should be collected in order to assist dismantler identification of mercury switches. The reference card has been well received and was mailed to all dismantlers. Also in 2008, ELVS and the Arkansas Department of Environmental Quality participated in a successful seminar in Arkansas sponsored by Nucor Steel. The workshop was designed to familiarize dismantlers with the Arkansas program and related aspects of the NVMSRP program and encourage participation and switch collection.

In June 2008, ELVS and NVMSRP took part in the "Race to the Future" – 2008 Four state Recyclers Expo in Hot Springs. Educational materials were distributed and a number of Arkansas recyclers joined the program during the Expo.

Throughout the year, NVMSRP member organizations continued to focus the second year of the program on ways to grow participation and switch collection. Actions taken included:

- The Automotive Recyclers Association performed outreach to its auto recycling members across the country to familiarize them with the mercury switch program and to urge their active participation.
- Steelmakers took 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.
- EPA implemented the Electric Arc Furnace rules in June and designated participation in the NVMSRP as a means of compliance for companies operating EAFs that produce steel from auto scrap. Participation of suppliers is tracked through the ELVS database, and as such, the collection program is part of the EAF compliance process. This market mechanism drives participation in the ELVS program, resulting in switch removal being a standard business practice along with the draining of fluids, battery removal, and the many other tasks completed to properly prepare a vehicle hulk prior to crushing.

The goal of both 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.

Program Costs

• Bucket Shipment	\$11,541
• Recycling Fees	\$ 873
• Bounty	\$26,926
• State Fees	\$ 5,056
• Website/Educational Material	\$ 2,969
• Travel/Personnel/Overhead	\$12,217

Design for Recyclability

Over the upcoming 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.

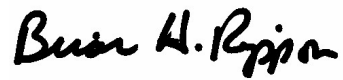
The policies being implemented are described in Attachment A, "Automotive Recycling: Your Car's Afterlife" as well as in Attachment B, "Vehicle Recycling Partnership Milestones." Additionally, the participating members of ELVS manage restricted substances through the International Material Database System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

Conclusion

Going forward, NVMSRP member organizations will continue to develop 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 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