

MERCURY SWITCH REMOVAL PROGRAM
2009 ANNUAL REPORT

Presented to
The Environmental Review Commission

October 1, 2009



HAZARDOUS WASTE SECTION

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This annual report is presented to the Environmental Review Commission pursuant to Article 9, G.S. 130A-310.57. The report covers the activities of the Mercury Switch Removal Program from July 1, 2008 through June 30, 2009.

I. OVERVIEW

Through Session Law 2005-384 [promulgated in House Bill 1136, enacted on September 13, 2005], further amended by Session Law 2007-142 [promulgated in House Bill 1758, enacted on June 29, 2007], the North Carolina Legislature has acted to reduce the amount of mercury entering our state's environment. As indicated in G.S. 130A-310.51, the purpose of this statute is to reduce the quantity of mercury released into the environment by removing mercury switches from "end-of-life" vehicles and by creating a removal, collection and recovery program for mercury switches that are removed from "end-of-life" vehicles in our state. Specifically, it is required that prior to crushing, shredding and smelting of "end-of-life" vehicles (which contain mercury switches for convenience lighting in the trunk and under the hood areas), all vehicle dismantlers, vehicle recyclers, vehicle crushers and/or vehicle scrap processors must remove, collect and recover the convenience lighting mercury switches contained in "end-of-life" vehicles prior to any crushing, shredding and smelting operations. In order to ensure compliance with these regulations, G.S. 130A-310.50 through .57, the department has created, under the management and direction of its Division of Waste Management's Hazardous Waste Section, the Mercury Switch Removal Program (MSR Program). The MSR Program is coordinated through the Hazardous Waste Section's Compliance Branch.

II. PROGRAM STAFFING

The MSR Program, as part of the Hazardous Waste Compliance Branch, has obligated resources to implement a statewide compliance and technical assistance program, and has provided resources for the administration of the reimbursement program.

- The MSR Program compliance program has implemented technical assistance and monitoring visits to initially introduce the program to those affected. MSR Program staff perform compliance monitoring to confirm inventory control, record-keeping and proper management of mercury switches under the provisions of "Universal Waste" rule requirements.
- The MSR Program has developed educational activities to disseminate program information statewide through on-site visits and consultations, presentations at vehicle processor association meetings, through local government outreach and through the Division of Waste Management's Web site.
- The MSR Program has developed Site Safety Plans for MSR Program employees to ensure their safety.

For fiscal 2008-2009, the program was comprised of field staff inspectors assigned to home duty stations, an administrative assistant and a program supervisor. For greater coverage and efficiency, the three and one-half positions are, on a part-time basis, spread among nine field inspectors, four supervisors and an administrative assistant. As previously stated, the Mercury Switch Removal Program resides solely within the Hazardous Waste Section's Compliance Branch. (See Attachment 1 for the Organization Chart)

III. NORTH CAROLINA'S MSR PROGRAM

The focus of North Carolina's Mercury Switch Removal Program is to direct/instruct all "end-of-life" vehicle recyclers to safely, and in an environmentally responsible manner, remove, collect, store and recycle, as "Universal Waste," all convenience lighting mercury switches contained in the "end-of-life" vehicles prior to any crushing, shredding and smelting operations and thus ensure compliance with these regulations and protection of North Carolina's environment.

By signing the Memorandum of Understanding (MOU) to establish the National Vehicle Mercury Switch Recovery Program (NVMSRP), North Carolina gained certain benefits under the national program which are available to our stakeholders and include the following.

The auto manufacturers, through End of Life Vehicle Solutions (ELVS), [a corporation formed by the auto manufacturers], provides the following to NVMSRP Participants, including vehicle dismantlers/recyclers, vehicle crushers or scrap processing facilities.

- Upon request (enrollment with ELVS) provide the program participants with educational materials regarding mercury switch removal, guidance on which vehicles contain mercury switches (including the make, year and model of these vehicles), instructions on how to locate, identify and remove mercury switches and any information unique to the particular state in which the mercury switch removal is taking place, including applicable state and federal regulatory requirements.
- Provide program participants with appropriate storage/shipping containers including applicable labeling and shipping documents necessary under state and federal regulations for the safe collection and shipment of the mercury switches.
- Arrange and pay for transportation of the mercury switches in a timely fashion from the vehicle dismantlers, scrap processing facilities or vehicle crushers to a qualified mercury retort facility that has the appropriate Resource Conservation and Recovery Act (RCRA) permits for management of the various shipments of mercury switches collected through the program.
- Arrange and pay for the proper recycling of the mercury switches by a qualified mercury retort facility or, when recycling is not feasible, arrange for the proper disposal of the mercury switches at a permitted disposal facility.
- Assume liability for the mercury collected and provide for appropriate indemnification, holding harmless participating vehicle dismantlers, scrap processing facilities, vehicle crushers and others removing switches through this program once mercury switches are collected by the ELVS contractor. Such assumption of liability shall not occur in the event that the vehicle dismantlers, scrap processing facilities, vehicle crushers or other participant fails to package the switches and/or assemblies in accordance with state law and ELVS requirements.

In conjunction with information supplied through ELVS, North Carolina's MSR Program staff gathered and prepared guidance documents detailing the removal and recycling/disposal of the mercury switches used for convenience lighting. These documents are available on the Division of Waste Management's Web site (<http://www.wastenotnc.org>) under the Mercury Switch Program link and include, in part, the following:

- manufacturers instructions for locating and safely removing mercury switches/devices
- instructions to vehicle recyclers for identifying the content (mercury or steel ball) of switches whose contents may be unknown (when in doubt, the switch is assumed to contain mercury)

- a safe and environmentally responsible method for storage and final recycling/disposal of the mercury switches/devices (including certain function switches presumed to contain mercury), and mercury spill cleanup procedures
- ELVS enrollment information
- forms for the required record keeping and reporting
- procedures for payment of the switch “bounty” (\$5 / switch)
- vehicle marking instructions
- the disposal procedure for recycling the mercury switches as “Universal Waste”

Reports gathered through ELVS are tabulated by MSR Program staff to evaluate North Carolina’s switch capture rate. This determines our program’s effectiveness, as measured by having a capture rate of at least 90 percent of the “national capture rate.”

To facilitate compliance by the vehicle recyclers and in an effort to achieve our goal, vehicle recyclers/dismantlers have the option of filing reports electronically through the Internet or by standard mail. The uniform design of the ELVS provided services for switch collection, transportation and recycling, simplifies the mercury switch removal process and recycler reimbursement.

While the MSR Program statute only regulates convenience mercury lighting switches (hood and trunk lighting), the MSR Program does encourage the vehicle recyclers to remove the Anti-Lock Braking System (ABS) g-force (gravity detection) mercury switches found in a limited number of automobiles. In addition, the MSR Program has included other educational information, on the DWM Web site, regarding “Universal Waste” such as information on used fluorescent lamps since mercury is also used in these products.

IV. SUBJECT FACILITIES

All vehicle dismantlers/recyclers, vehicle crushers, or scrap processing facilities who process six or more vehicles for the purpose of salvage must remove the mercury-containing convenience lighting switches prior to crushing, shredding or smelting of those vehicles. To participate in North Carolina’s Mercury Switch Removal Program’s reimbursement process, vehicle dismantlers/recyclers, vehicle crushers, or scrap processing facilities must register with ELVS and with the North Carolina MSRP office. This is accomplished by sending a completed post card to ELVS and a completed tax identification registration form to the state MSRP office. Currently, there are 363 facilities registered with ELVS as part of the North Carolina Mercury Switch Removal Program.

V. FACILITY ASSESSMENTS

During fiscal 2008-2009, MSRP inspectors conducted 570 inspections and visited more than 500 facilities throughout North Carolina’s 100 counties. The site visits were intended to evaluate whether the facility was subject to the law and to acquaint those facility operators who are subject to the law with the legislative requirements. Additional compliance assistance was given by the inspectors, as needed, regarding other RCRA and Clean Water Act (CWA) regulated requirements.

VI. ENFORCEMENT & COMPLIANCE

In general, the vehicle dismantlers/recyclers, vehicle crushers, or scrap processing facilities are cooperative and have rapidly responded with corrective action in most cases when recommendations were made or minor deficiencies were cited. If minor deficiencies are not corrected in a timely and uniform response resulting in a

return to compliance, a more severe enforcement action is taken, such as a Notice of Violation (NOV) or a Compliance Order (CO) with administrative penalty.

No Compliance Orders, Notices of Violations or Warning Letters were issued during the period between July 1, 2008 and June 30, 2009.

VII. FUNDING & EXPENSES

The Mercury Switch Removal Program is funded by fees collected as part of the N.C. Department Of Transportation (DOT) application for certificate of vehicle title fee. One dollar of the \$40-per-vehicle title fee is placed in the Mercury Switch Removal Account in the N.C. Department of Environment and Natural Resources. The fiscal 2008-2009 projected budget was approximately \$761,000, which included a reimbursement budget of \$418,500 (83,700 switches). [Reimbursement paid to the vehicle dismantlers/recyclers, vehicle crushers, or scrap processing facilities, for removal of the mercury switches with proper recovery and disposal, is \$5 per switch.] The program's total operating costs for fiscal 2008-2009 were \$733,000, which includes switch reimbursements totaling \$395,300.

VIII. SUMMARY

Through the efforts of the MSR Program staff, North Carolina currently ranks seventh in the nation with respect to the number of participating facilities removing and disposing of mercury switches as part of the national ELVS Program.

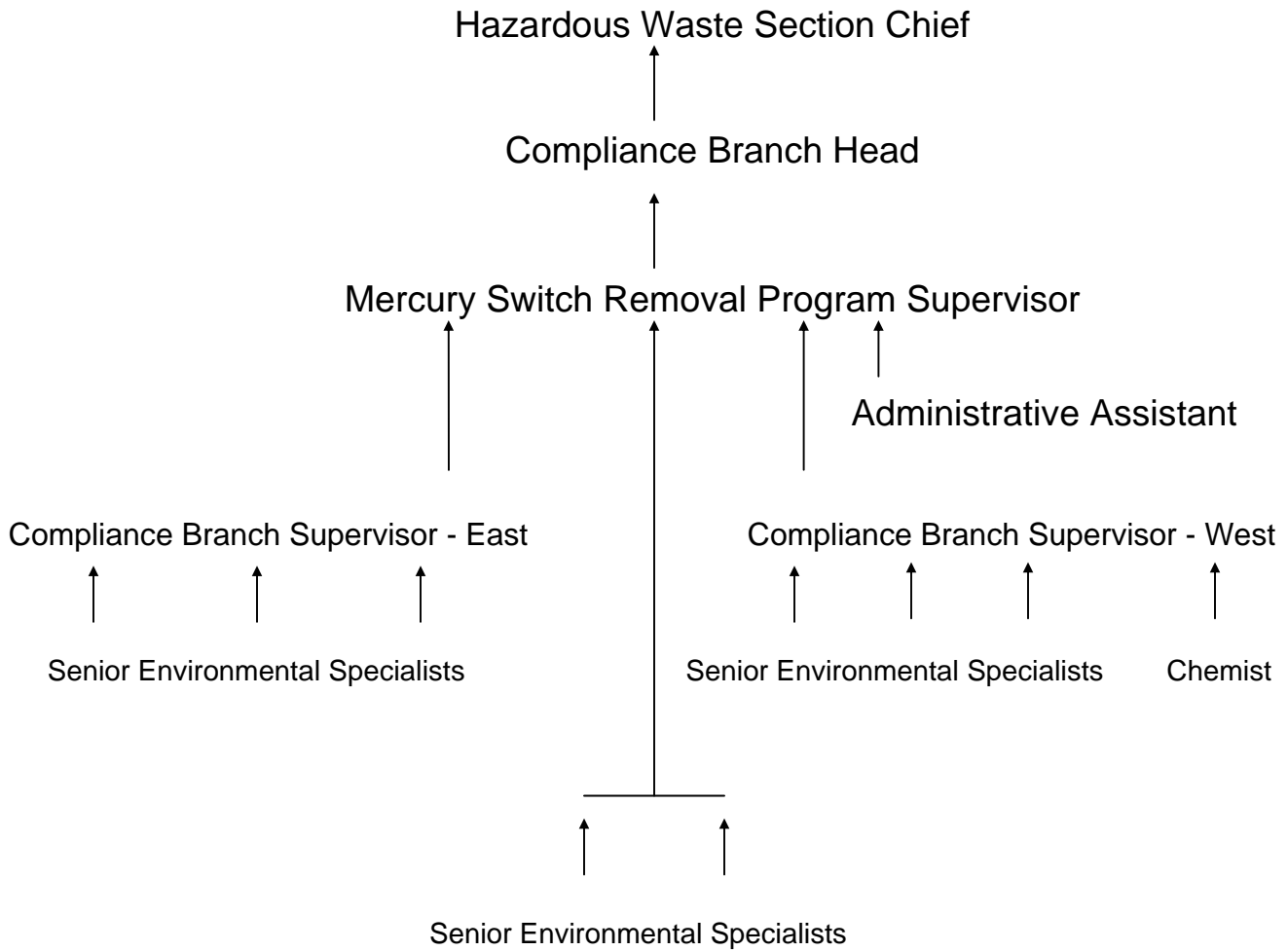
In our second year (July 1, 2008 to June 30, 2009), those participating in North Carolina's MSR Program, removed, collected and shipped for recycling/disposal, 81,863 automotive convenience lighting mercury switches. For the same time period, the National MSR Program removed a total of 1,098,202 mercury switches (which includes North Carolina's 81,863). The number of automotive mercury switches available nationally for fiscal 2008-2009 was approximately 3,650,272, and for North Carolina the number of automotive mercury switches available is approximately 94,660. The ratio of the number of switches removed to the number of switches available expressed as a percentage is, for the U.S., 30.09 percent and for North Carolina is 86.48 percent. The NC MSR Program goal is to achieve at least 90 percent of the national ratio. North Carolina has achieved 281 percent of the national performance ratio. For fiscal 2008-2009, North Carolina ranked No.1 in mercury switch removal efficiency and ranked third in total number of mercury switches removed.

Currently, North Carolina remains No.1 in the nation in effectively removing mercury from automobile steel scrap. Since the start of operation on July 1, 2007, North Carolina MSR Program participants have prevented more than 235 pounds of mercury (from more than 115,000 switches) from being released into our environment.

ATTACHMENTS

ATTACHMENT 1

ORGANIZATIONAL CHART



ATTACHMENT 2

STATE	Number of Participants	Total Pounds Mercury Recovered	Total Number of Switches Available	Total Switches Recovered	Percent of Switches Removed
2008 -2009 US Total	7669	2416.05	3650272	1098202	30.09
Alabama	40	12.99	79127	5905	7.46
Alaska	5	0.57	10286	258	2.51
Arizona	50	15.27	60183	6944	11.54
Arkansas	226	7.64	34807	3472	9.98
California	488	507.52	367825	230692	62.72
Colorado	71	47.36	62520	21529	34.44
Connecticut	38	14.64	42994	6654	15.48
Delaware	21	3.58	8934	1628	18.22
Florida	261	105.92	192455	48148	25.02
Georgia	101	33.18	108213	15082	13.94
Hawaii	15	1	10808	453	4.19
Idaho	51	3.14	23236	1430	6.15
Illinois	373	82.31	168645	37414	22.19
Indiana	422	74.77	110565	33988	30.74
Iowa	370	38.19	64113	17356	27.07
Kansas	54	4.88	44055	2221	5.04
Kentucky	60	21.86	65057	9940	15.28
Louisiana	305	5.11	58283	2323	3.99
Maryland	80	18.94	54520	8607	15.79
Massachusetts	224	76.36	70250	34709	49.41
Michigan	155	99.16	180346	45070	24.99
Minnesota	227	115.35	77067	52430	68.03
Mississippi	67	12.54	33003	5701	17.27
Missouri	148	26.72	81830	12148	14.85
Montana	62	4	18371	1821	9.91
Nebraska	30	30.73	30930	13968	45.16
Nevada	14	13.43	15286	6105	39.94
New Hampshire	50	7.3	20245	3317	16.38
New Jersey	182	31.72	106807	14417	13.50
New Mexico	43	7.11	26875	3232	12.03
New York	513	216.95	178236	98611	55.33
North Carolina	363	180.1	94660	81863	86.48
North Dakota	14	5.21	15712	2370	15.08
Ohio	260	91.13	187019	41424	22.15
Oklahoma	55	3.61	57301	1637	2.86
Oregon	79	16.38	50793	7445	14.66
Pennsylvania	227	60.2	163192	27365	16.77
Rhode Island	75	12.8	7917	5817	73.47
South Carolina	72	11.36	50925	5162	10.14
South Dakota	27	3.53	17120	1602	9.36
Tennessee	83	29.94	78123	13611	17.42
Texas	707	74.36	217361	33800	15.55
Utah	113	30.83	27450	14012	51.05
Vermont	67	2.9	7362	1316	17.88
Virginia	249	42.07	88210	19126	21.68
Washington	207	69.66	75595	31665	41.89
West Virginia	30	3.09	31348	1406	4.49
Wisconsin	270	131.74	81331	59881	73.63
Wyoming	24	0.27	10861	123	1.13