HAZARDOUS WASTE MANAGEMENT

FY 2011-2012 REPORT

North Carolina Department of Environment and Natural Resources

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INTRODUCTION

This annual report describes the activities of North Carolina's Hazardous Waste Management Program, Resident Inspector Program and Mercury Switch Removal Program from July 1, 2011 through June 30, 2012. It is prepared pursuant to N.C.G.S. 130A-294(i) and is presented to the General Assembly and its Fiscal Research Division, the Senate Appropriations Subcommittee on Natural and Economic Resources, the House Appropriations Subcommittee on Natural and Economic Resources, and the Environmental Review Commission.

HAZARDOUS WASTE MANAGEMENT PROGRAM

North Carolina's Department of Environment and Natural Resources (DENR) has been authorized to implement the federal hazardous waste regulatory program in lieu of the Environmental Protection Agency (EPA) since 1980. Federal authorization is the process by which EPA delegates primary program implementation and enforcement responsibility to states, while maintaining an oversight role to ensure national consistency. The federal program, established under the Resource Conservation and Recovery Act (RCRA), regulates the generation, transportation, treatment, storage, disposal, and recycling of hazardous waste. The program also governs the environmental remediation of hazardous waste treatment, storage, and disposal facilities that have been contaminated by prior waste management activities. The North Carolina hazardous waste program is implemented by the Hazardous Waste Section (HWS) within DENR's Division of Waste Management.

HAZARDOUS WASTE GENERATION, MANAGEMENT, AND REMEDIATION

Generation

"Hazardous waste" is defined as industrial material destined for disposal that is ignitable, corrosive, reactive and/or toxic and thus poses a risk to human health and the environment if improperly managed.

In 2011, the latest year for which comprehensive data are available, 497 North Carolina Large Quantity Generators[1] reported generating 81,816 tons of hazardous waste. This represents an increase of approximately 10,053 tons over the amount generated in 2009, a 14% increase. The top ten generators reported generating 54,474 tons, or 67% of the total. North Carolina ranks 28th among the states in the amount of hazardous waste generated and ranks 7th in the number of generators that reported generating waste.

In 2011, there were 2,398 Small Quantity Generators[2] located in North Carolina, as well

[1] Large Quantity Generators are defined as facilities that generate 1,000 kg or more of hazardous waste per month, or 1 kg or more of acutely hazardous waste per month.

[2] Small quantity generators are facilities that generate between 100 and 1,000 kg of hazardous waste per month.

as several thousand Conditionally Exempt Small Quantity Generators[3]. Such generators are subject to reduced reporting and regulatory requirements because they are often small businesses for whom periodic reporting could be overly burdensome and because the amounts of waste generated at each individual site are less likely to present significant risks to human health and the environment. However, these facilities collectively generate a significant amount of hazardous waste that must be managed properly and in compliance with applicable rules. Significant resources are devoted to technical assistance, outreach, and compliance activities at these facilities.

Management

The 44 industrial facilities in North Carolina that manage hazardous waste through treatment and/or storage reported managing 93,905 tons of hazardous waste during 2011, which placed North Carolina 31st among the states in the number of tons managed. It is important to note that one facility reported one-time management of 82,205 tons of contaminated groundwater from a surface impoundment, which significantly increased the total amount of waste that was managed in the state that year. In addition, North Carolina's ten commercial hazardous waste management facilities received and processed 93,151 tons of hazardous waste from offsite. Additional and more detailed information on hazardous waste generation and management in North Carolina can be found at http://www.epa.gov/epawaste/inforesources/data/br11/index.htm

Remediation

The program continues to make significant progress in overseeing the remediation of contamination at permitted hazardous waste management facilities. The national goal is for final remedies to be constructed and fully operational at 95 percent of these facilities by 2020, although this does not necessarily mean remediation will have been fully completed.

Seventy-nine active hazardous waste treatment, storage and disposal facilities are located in North Carolina. Each facility is governed by a permit, an enforceable order, or another operational control mechanism for management and/or remediation of hazardous waste. There are 91 facilities subject to the RCRA Corrective Action Program; that program addresses remediation of environmental contamination located at permitted hazardous waste facilities.

The Hazardous Waste program tracks the progress of remediation at these sites using four environmental indicators: 1) human exposure controlled, 2) groundwater contamination controlled, 3) cleanup remedy selected and 4) cleanup remedy constructed. The national goal is for 95% of these facilities to meet all four environmental indicators by October 1, 2020. Currently in North Carolina, 85% of the facilities have human exposures controlled, 79% have groundwater contamination

[3] Conditionally Exempt Small Quantity Generators generate hazardous waste at a rate less than 100 kg per month.

controlled, 55% have a remedy selected and 53% have a remedy constructed.

To achieve the national goal of 95% of the facilities having a remedy constructed by EPA federal fiscal year 2020, the Hazardous Waste Program has established the following goals:

	EPA FFY-12	EPA FFY-14	EPA FFY-16	EPA FFY-18	EPA FFY-20
Human Exposures Controlled	91%	95%	96%	96%	97%
Groundwater Contamination Controlled	82%	87%	94%	96%	97%
Remedy Selected	58%	68%	76%	85%	95%
Remedy Constructed	56%	62%	73%	84%	95%

COMPLIANCE AND ENFORCEMENT

The Hazardous Waste Program is responsible for implementing inspection, compliance and enforcement activities. The environmental benefits achieved through compliance and enforcement activities are identified each year in order to measure the overall success of the program in meeting environmental goals. During fiscal year FY 2011-12, the program's actions ensured the safe management of an estimated 3,645 gallons and 12 tons of hazardous waste that otherwise might have been mismanaged and resulted in harm to human health or the environment. These measures ensured that more than 106 individuals that could have been adversely impacted were protected against the potentially adverse effects of hazardous waste.

INFORMATION MANAGEMENT

Comprehensive information about North Carolina's hazardous waste facilities is entered and stored in the national hazardous waste database known as Resource Conservation and Recovery Act Information (RCRAInfo). This database was developed jointly by EPA and the states and is managed by the EPA. RCRAInfo contains comprehensive information on facilities that generate and/or manage hazardous waste in the state, as well as all the HWS's activities affecting these facilities. To view regulatory information for specific hazardous waste sites located in North Carolina, visit http://www.epa.gov/enviro/. For details about the Division of Waste Management and its Hazardous Waste Program, visit the division's website: http://portal.ncdenr.org/web/wm/.

HAZARDOUS WASTE REDUCTION INITIATIVES

The Hazardous Waste Program promotes waste minimization and recycling throughout the program. Some of these activities include:

- incorporating pollution prevention training (based on targeted priority chemical waste streams) into annual generator workshops, industry meetings and enforcement settlement negotiations,

- reviewing facility requests for alternative management practices for hazardous waste (use/reuse, substitution, reclassification and delisting), and

- supporting intervention projects to reduce/eliminate the presence of priority chemicals via partnerships with other agencies

HAZARDOUS WASTE PROGRAM DEVELOPMENT

The Hazardous Waste Program will continue to support safe hazardous waste management in North Carolina by:

- supporting opportunities for waste minimization and recycling and supporting annual generator workshops that help educate the largest generators about hazardous waste regulations and the expectations of hazardous waste inspectors,

- continuing to seek EPA authorization to maintain the North Carolina program's authority to implement the federal program,

- improving the quality of hazardous waste data for hazardous waste trend analysis and sound decision-making, and

- participating in EPA rulemaking projects. Examples include potential requirements for large and small generators to re-notify of hazardous waste activity, establishing standards for episodic generators, requiring labeling for small and large quantities stored in central accumulation areas and satellite areas, and other proposals as they are developed.

HAZARDOUS WASTE PROGRAM EXPENDITURES July 1, 2011 – June 30, 2012

Revenue	
Receipts	$1,107,849.62
Appropriations	--
Federal	$1,875,076.39
Purchased Services	
Receipts	$218,992.14
Appropriations	$7,724.67
Federal	$261,493.21
Supplies	
Receipts	$8,713.74
Appropriations	--
Federal	$6,624.16
Other Expenses & Adjustments	
Receipts	$4,631.04
Appropriations	--
Federal	$101,293.01
Property Plant & Equipment	
Receipts	$412.41
Appropriations	--
Federal	$11,121.02
Intergovernmental Transfer Federal	
Receipts	$10,204.23
Appropriations	--
Federal	$9,401.96
Total	***$3,623,537.60***

Total Receipts (Hazardous Waste Fees)	
Transfer from 2387	$1,350,803.18
Federal	$2,264,278.76
Rebate Amount (Federal)	$730.99
Total Federal	$2,265,009.75
Appropriations	$7,559.67
Rebate Amount (Appropriations)	$165.00
Total Appropriations	$7,724.67
Total Receipts	***$3,623,537.60***

HAZARDOUS WASTE FEES COLLECTED July 1, 2011 – June 30, 2012

Fund 2387 (Hazardous Waste Fees)

Beginning Cash Balance	$1,114,820.58
Receipts	
Fees	$1,554,262.42
Cost Recovery	$5,770.46
Accounts Receivable Interest	$11.93
Total Receipts	**$1,560,044.81**
Expenditures	
Transfer to Hazardous Waste Program	$1,350,802.19
Transfer to Network Data IT Project	$124,000.00
Transfer to Holcomb Creosote Site	$65,411.84
Total Expenditures	**$1,540,214.03**
Ending Cash Balance 6/30/2012	***$1,134,651.36***

RESIDENT INSPECTOR PROGRAM

SUMMARY

The Resident Inspector Program was established "... to enhance the ability of the department to protect the public health and the environment by providing the department with the authority and resources necessary to maintain a rigorous inspection and enforcement program at commercial hazardous waste facilities" (G.S. 130A-295.02(f)). During FY 2011-12 the program was comprised of three resident inspectors, one administrative assistant, and one (half- time) program supervisor. The Hazardous Waste Program monitors all aspects of the commercial hazardous waste facilities and assures compliance with laws and rules administered by DENR. The program may also include enforcement of laws or rules administered by any other state agency through a memorandum of agreement.

During FY 2011-2012, the Resident Inspector Program staff conducted a total of 489 multimedia inspections at the state's ten commercial hazardous waste facilities. This performance exceeded the statute-mandated minimum of 456 inspections. (See Attachment A for details.)

PROGRAM FUNDING

The Resident Inspector Program is intended to be funded solely by fees collected from the commercial facilities (G.S. 130A-295.02(h)). These fees are based upon each facility's category ranking and the volume (tons) of hazardous waste received. For FY 2011-12, facility ranking fees totaled $263,000 and tonnage fees equaled $40,000. Hazardous waste tonnage received decreased 7.5% over the previous year as shown in Attachment A.

The FY 2011-12 budget was developed using anticipated revenues from Resident Inspector Program fees of approximately $311,000. The actual Resident Inspector Program receipts totaled $303,000, and the Resident Inspector Program expenses were held to $277,000.

PROGRAM RESULTS

During the past fiscal year, the program achieved an overall compliance rate of 99.4%. Inspectors issued three notices of deficiency to correct compliance issues over this time period. Resident Inspectors also offer compliance assistance routinely during the site visits. Since the inspectors visit these facilities frequently, they become familiar with the operations of each facility and can easily identify trouble areas and work with that facility towards a permanent solution. If a facility begins to have compliance problems, the inspector reviews these problem areas during each visit to keep the facility's compliance awareness high. Inspectors communicate frequently with facility management and front-line workers to clarify permit conditions and current regulatory requirements, the reasons for the requirements, and the potential health and environmental risks associated with noncompliance.

The staff also consistently seeks new approaches and implements new initiatives to ensure that commercial hazardous waste facilities can continue to operate in a way that protects public health and the environment. Of recent importance, staff has worked with the commercial facilities to maintain compliance in the current weak economy. The economic downturn has forced many hazardous waste facilities to operate with fewer staff and sometimes lesser-trained staff, both of which can lead to noncompliance. In this climate, frequent and thorough inspections and continuous communication with facility management and staff remain critical to maintaining a high level of compliance.

MERCURY SWITCH REMOVAL PROGRAM

SUMMARY

The Mercury Switch Removal Program has been operating for seven years within the Division of Waste Management. The program continues to inspect the end-of-life vehicle dismantling, crushing and shredding facilities throughout the state. For FY 2011-12, the Mercury Switch Removal Program operated with a staff equivalent to three and one-half positions supplied by the Hazardous Waste Program. The program's operating budget is funded by fees collected as a portion of the N. C. Department of Transportation (DOT) application for certificate of vehicle title fee. The program's total operating costs were $613,950, which includes switch reimbursements ($5.00 per mercury switch removed and recycled/disposed as Resource Conservation and Recovery Act (RCRA) "Universal Waste") totaling $302,100 to the dismantlers, crushers and shredders. Program staff conducted 313 inspections at 244 covered facilities for compliance with state and federal RCRA regulations; two Notices of Violation, two Notices of Deficiency, five Warning Letters and four verbal warnings were issued.

PROGRAM DESCRIPTION

The purpose of the program 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 those switches. Specifically, the law requires all vehicle dismantlers, vehicle recyclers, vehicle crushers and/or vehicle scrap processors to remove, collect, and recover mercury switches contained in "end-of-life" vehicles prior to crushing, shredding or smelting the vehicles.[4] To ensure compliance with requirements set out in G.S. 130A-310.50 through 310.57, the Division of Waste Management created the Mercury Switch Removal Program (MSR Program).

During FY 2011-12, MSR program inspectors conducted a total of 313 inspections, visiting more than 244 facilities throughout the state. The site visits are to evaluate whether the facility is subject to the law and to acquaint those facility operators who are subject to the law with the legislated requirements. Additional compliance assistance

[4] The mercury switches control the convenience lighting in the vehicle trunk and under the hood.

was given by the inspectors as needed regarding the MSR Program and other RCRA and Clean Water Act regulated requirements.

In accordance with the National Vehicle Mercury Switch Removal Program (NVMSRP), North Carolina's MSR Program receives support from End-of-Life Vehicle Solutions (ELVS), a corporation formed by and representing the major automobile manufacturers. ELVS provides the following support to North Carolina's vehicle dismantlers/recyclers, vehicle crushers, and scrap processing facilities:

- Educational materials regarding mercury switch removal, guidance on which vehicles contain mercury switches, instructions on how to locate, identify and remove Mercury Switches.
- US DOT appropriate storage/shipping containers, including applicable labeling and shipping documents necessary for the shipment of the mercury switches.
- Transportation of the mercury switches in a timely fashion to a RCRA permitted mercury recycling/disposal facility.
- Recycling of the mercury switches by a qualified mercury retort facility or, when recycling is not feasible, the proper disposal of the mercury switches at a RCRA permitted disposal facility.
- Indemnification from liability for participating vehicle dismantlers, scrap processing facilities, vehicle crushers and others, removing switches through this program once mercury switches are collected by the ELVS contractor.

When the switches are removed from the vehicles, they are placed in the supplied DOT container, which is labeled to identify it as containing "Universal Waste – Mercury Containing Equipment" and the date on which the first switch was placed in the container. When the container is full (with a maximum of 454 switches per container) or the date on the container approaches one year, the container is shipped to the ELVS contracted receiving facility (shipping is paid for by ELVS). ELVS continues to provide new containers/supplies as needed.

PROGRAM FUNDING

The MSR Program is funded by fees collected as part of the DOT fee for application of vehicle title certificate. One dollar of each $40-per-vehicle title fee is placed in the Mercury Pollution Prevention Fund in DENR. Under GS 130A-310.54(b)(1) and (b1), the Mercury Pollution Prevention Fund, in part, reimburses the MSR Program for: (a) five dollars ($5.00) for each mercury switch, paid to a vehicle crusher, vehicle dismantler, vehicle recycler, or scrap vehicle processing facility, for each switch removed and sent to the destination facility in accordance with the NVMSRP for recycling or disposal and (b) costs incurred by the department in administering the program. Operationally, the funding provides for three and one-half full-time equivalent positions, travel and equipment expenses and mercury switch removal reimbursement payments. FY 2011-12 revenues were approximately $1,105,000. Reimbursement paid to the vehicle

dismantlers/recyclers, vehicle crushers, or scrap processing facilities, for removal of the mercury switches with proper recovery and disposal ($5.00 per switch) totaled $302,100 and administrative costs totaled $311,850. Total MSR Program costs for FY 2010-11 equaled $613,950. Additional inter-government transfers totaled $600,726 yielding a net decrease of $109,400 in the fund balance for the year.

PROGRAM RESULTS

The effectiveness of the MSR Program is measured by the mercury recovery performance ratio which is calculated by dividing the number of mercury switches received by the ELVS contractor from North Carolina for the period of the fiscal year, by the number of mercury switches available for removal in North Carolina for that same time period. The same calculations are made to determine the total national switch collection and availability. The results are stated as a percentage.

For the fiscal year 2011-2012, 46,285 mercury switches (managed as “Universal Waste”) were received by the ELVS contractor from North Carolina vehicle dismantlers/recyclers, vehicle crushers, and scrap processing facilities. This year’s MSR Program performance ratio is 54.13%. The national performance ratio achieved for that period is 22.42%. (Full tabulated results are shown on Attachment B.)

NATIONAL PROGRAM RANKING

During FY 2011-12, North Carolina ranked first in the nation with respect to mercury switch collection efficiency, third in the nation for total number of mercury switches collected and fifth in the nation with respect to the number of participating salvage facilities. Since the start of the program, more than 718 pounds of mercury (from more than 326,650 switches) have been prevented from being released to the environment.

ATTACHMENT A

Commercial Hazardous Waste Facilities' Data FY 2011-2012

COMMERCIAL FACILITY	Facility Ranking	Minimum # of Inspections	Actual # Inspections Conducted	HW Tons Received FY2011-12	HW Tons Received FY 2010-11	Notices of Deficiency Issued	Notices of Violation Issued	Compliance Orders Issued
CLEAN HARBORS	**3**	72	73	3,442.74	4,570.42	0	0	0
DETREX	**2**	48	53	907.76	661.99	0	0	0
DART**	**3**	72	75	89.02	361.77	0	0	0
ECOFLO	**3**	72	78	2,850.50	3,031.54	2	0	0
NEXEO SOLUTIONS*	**2**	48	50	1,816.06	1,934.05	0	0	0
SK-ARCHDALE	**1**	24	28	164.17	172.89	0	0	0
SK-CHARLOTTE	**1**	24	28	80.75	154.63	1	0	0
SK-RALEIGH	**1**	24	26	98.8	152.3	0	0	0
SK-ST. PAULS	**1**	24	27	96.91	121.13	0	0	0
VEOLIA E. S.	**2**	48	51	1,815.77	1,136.47	0	0	0
TOTAL		**456**	**489**	**11,362.48**	**12,297.19**	**3**	**0**	**0**

* Formerly Ashland Distribution

** Formerly Heritage Environmental Service

ATTACHMENT B

[State-by-State Comparison of MSR Program Effectiveness]

STATE	Number of Participants	Total lbs. Mercury Recovered	Estimated Number of Switches Available	Total Switches Recovered	Percent of Switches Removed
***2011 -2012* US**	**9,575**	**1,465.32**	**3,271,000**	**721,680**	**22.06**
Alabama	92	4.64	75,500	10,969	14.53
Alaska	15	0	9,000	67	0.74
Arizona	79	15.31	51,500	9,636	18.71
Arkansas	246	16.70	33,500	8,490	25.34
California	566	272.39	311,500	107,930	34.65
Colorado	82	53.37	46,000	18,961	41.22
Connecticut	58	10.67	40,000	2,862	7.16
Delaware	29	1.35	8,500	1,578	18.56
Florida	361	58.65	146,000	27,462	18.81
Georgia	167	7.37	89,000	16,905	18.99
Hawaii	20	0	8,000	0	0
Idaho	61	7.83	21,000	2,271	10.81
Illinois	418	82.68	159,000	53,142	33.42
Indiana	469	65.95	99,000	26,380	26.65
Iowa	352	32.22	56,500	18,927	33.50
Kansas	88	8.14	41,000	4,123	10.06
Kentucky	116	16.04	60,500	17,568	29.04
Louisiana	325	2.05	53,500	5,364	10.03
Maine	91	10.27	18,500	4,666	25.22
Maryland	158	15.62	46,000	13,213	28.72
Massachusetts	195	36.55	59,000	12,405	21.03
Michigan	294	68.71	167,000	20,708	12.40
Minnesota	270	106.71	62,500	30,744	49.19
Mississippi	83	3.16	30,500	6,724	22.05
Missouri	212	15.29	76,000	12,716	16.73
Montana	77	5.40	17,500	2,922	16.70
Nebraska	44	3.74	28,500	3,471	12.18
Nevada	31	2.49	18,000	599	3.33
New Hampshire	67	4.83	17,500	1,549	8.85
New Jersey	202	21.68	101,000	19,927	19.73
New Mexico	58	6.50	24,500	2,661	10.86
New York	555	47.72	183,500	23,373	12.74
North Carolina	**450**	**100.34**	**85,500**	**40,508**	**47.38**
North Dakota	33	2.05	14,500	4,178	28.81
Ohio	345	39.51	166,500	30,776	18.48
Oklahoma	99	4.51	52,500	2,022	3.85
Oregon	106	15.47	47,500	6,084	12.81
Pennsylvania	338	15.77	147,500	10,010	6.79
Rhode Island	76	7.79	9,500	3,793	39.93
South Carolina	131	8.31	44,500	8,287	18.62
South Dakota	34	6.24	15,500	1,733	11.18
Tennessee	142	16.90	74,000	23,056	31.16
Texas	822	74.99	182,000	29,179	16.03
Utah	134	22.08	23,000	7,112	30.92
Vermont	70	0.80	6,500	338	5.20
Virginia	289	33.70	73,000	15,045	20.61
Washington	248	61.35	63,000	26,942	42.77
West Virginia	47	2.24	26,000	32	0.12
Wisconsin	302	55.99	72,500	24,242	33.44
Wyoming	27	0.54	8,500	30	0.35