

HAZARDOUS WASTE MANAGEMENT
2009 REPORT

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INTRODUCTION

The State of North Carolina requires that the Department of Environment and Natural Resources (DENR) develop a comprehensive hazardous waste management plan every two years. The first plan was completed in July 1, 1990; the latest plan was completed in 2008. Beginning Oct. 1, 2003, the Department was also required to make an annual report on the hazardous waste management plan per G.S.130A – 294(i). This report includes an evaluation of hazardous waste managed in North Carolina and identifies DENR's activities and recommendations in the following areas: improving hazardous waste management; cleaning up of hazardous waste; reducing the amount of waste generated; minimizing the amount of hazardous waste which must be disposed of; and maximizing resource recovery, reuse and conservation.

This report includes North Carolina data from the Environmental Protection Agency's (EPA) 2007 "Biennial Report of Hazardous Waste Generation" (2007 BR). Large Quantity Generators and Treatment, Storage, and Disposal Facilities are required to provide EPA with information about their waste management activities on a biennial basis. The official 2007 biennial report can be found at the following Web site: <http://www.epa.gov/epawaste/inforesources/data/br07/index.htm>.

NORTH CAROLINA HAZARDOUS WASTE SECTION

The Hazardous Waste Section was authorized by EPA in 1980 to implement the Resource Conservation and Recovery Act (RCRA) in North Carolina in lieu of the EPA. Continuing developments in the hazardous waste program nationwide have required the section to continually apply for authorization in program areas such as case development audits (criminal and administrative investigations), corrective action, and alternatives to permitting and emission monitoring, and changes to the definition of solid waste that will ensure the safe management of hazardous waste in North Carolina. The Hazardous Waste Section (HWS) is composed of three branches, the Compliance Branch, the Facility Management Branch and the Programs Branch, employing 45 employees. Collectively, the duties include, but are not limited to, the following areas:

- Regulating the management of hazardous waste by generators, transporters, treatment, storage, disposal and recycling facilities;
- Educating the hazardous waste community by providing technical assistance through individual consultations and seminars that encourage waste reduction, sound recycling, safe management practices and proper disposal (as a last resort);
- Issuing permits specifying requirements that each hazardous waste treatment, storage, recycling or disposal facility must meet;
- Providing a continuing compliance presence at commercial hazardous waste management facilities through the HWS Resident Inspector Program;
- Conducting compliance inspections and, in coordination with the North Carolina Office of the Attorney General, taking enforcement actions against violators;

- Requiring groundwater assessments, facility investigations and corrective measures at facilities where hazardous wastes have been released into the environment, and
- Ensuring section staff receive necessary training and professional development opportunities to continually improve their job performance.

Information on most of the activities above is captured in the national hazardous waste database, Resource Conservation and Recovery Act Information (RCRAInfo). The database is managed by the EPA, and most of the data is entered by authorized state programs. RCRAInfo contains comprehensive information on facilities that generate or manage hazardous waste in a state, as well as all the HWS's activities affecting these facilities. Data from RCRAInfo will be used to provide information to the Department's Facility Identification Template for the State database (FITS) and the Departmental Decision Support System (DSS).

To view regulatory information for specific hazardous waste sites, visit <http://www.epa.gov/enviro/>. For details about the N. C. Division of Waste Management and the Hazardous Waste Section, visit the Division's website <http://www.wastenotnc.org/>.

HAZARDOUS WASTE GENERATION, MANAGEMENT AND CLEANUP

In July 2009, EPA allowed states to correct the biennial report data for 2005 and 2007. For the calendar year 2007, the corrected data (due to waste not being reported until after the reporting cycle) showed that 433 Large Quantity Generators reported generating 96,009 tons of hazardous waste and the top 10 North Carolina hazardous waste facilities reported generating 58,368 tons of hazardous waste. The official biennial report data located at the Web site as listed on page 1 was not changed.

Although only Large Quantity Generators and Treatment, Storage, and Disposal Facilities are required to report their hazardous waste generation and management amounts, it is important to note that North Carolina also has 1,902 small quantity generators and 4,607 conditionally exempt small quantity generators.¹ These facilities are not required to report the amount of hazardous waste they generate because they are typically small businesses for whom periodic reporting could be overly burdensome. However, these facilities collectively generate a significant amount of hazardous waste that must be managed properly and in compliance with all applicable rules. Significant resources are devoted to compliance and enforcement activities, technical assistance and outreach at these facilities.

North Carolina has 27 facilities in the permitting workload universe and 62 facilities in the post-closure workload universe, of which all are permitted, under an order or other approved control for management or remediation of their hazardous waste. There are 107 facilities subject to RCRA Corrective Action. Progress in the Corrective Action

¹ Small Quantity Generators are defined as facilities that generate between 100 kg and 1,000 kg (220 lbs. to 2,200 lbs.) per calendar month. Conditionally Exempt Small Quantity Generators generate less than 100 kg (220 lbs.) per calendar month.

Program is tracked through environmental indicators of human exposure controlled, groundwater contamination controlled, remedy selected and remedy constructed. Currently, 100 percent of high priority corrective action sites have human exposures under control and 86 percent of high priority corrective action sites have groundwater migration under control. In addition 42 percent of the total corrective action universe has a remedy selected and 41 percent have a remedy constructed.

The Hazardous Waste Section's Compliance Branch implements an "outcome measures" process to document the effects of hazardous waste compliance and enforcement remediation efforts in achieving the Department's mission to protect and improve public health and the environment. During 2008 - 2009, Branch actions ensured the safe management of an estimated 102,700+ gallons and 143 tons of hazardous waste that otherwise may have been mismanaged. These measures also ensured that more than 345 individuals that could have been adversely impacted were protected against the effects of hazardous waste.² More than nine hazardous waste generator sites have been cleaned up with "no further action" achieved.

NORTH CAROLINA HAZARDOUS WASTE REDUCTION INITIATIVES

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A. Commitment to Hazardous Waste Minimization

The Hazardous Waste Section continues to work with EPA Region 4 to solicit participants in the National Partnership for Environmental Priorities. This voluntary program fosters partnerships between government and industry to reduce hazardous waste -- especially waste containing any of the 30 chemicals known to be highly toxic. Partners who make significant progress in waste reduction receive national recognition for their achievements.

The North Carolina Hazardous Waste Section has also committed to the following:

- 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);
- Supporting intervention projects to reduce/eliminate the presence of priority chemicals via partnerships with other agencies and

² These estimates are based on the amount of hazardous waste being improperly managed at the time of the facility inspection and the number of potentially exposed employees.

- Ensuring that generators continue to develop programs to minimize or reduce the volume and quantity or toxicity of hazardous waste by requiring hazardous waste generators to complete an annual waste minimization questionnaire.

B. Environmental Stewardship Initiative

The DENR Environmental Stewardship Initiative promotes and encourages superior environmental performance by North Carolina's regulated community. This voluntary program stimulates the development and implementation of programs that use pollution prevention and innovative approaches to meet and exceed regulatory requirements. There are three levels of participation. "Environmental Partners" is for organizations interested in developing a systematic approach to improving their environmental performance. The "Rising Steward" level is designed for those organizations that have a mature environmental management program. The "Environmental Steward" level is for organizations that already display a commitment to exemplary environmental performance beyond what is required by law. All participants must set environmental performance goals that include pollution prevention and are required to report annually on progress towards these goals and net pollution reductions.

The Environmental Stewardship Program not only recognizes outstanding environmental performance at the "Steward" level, but provides encouragement and assistance to foster improved environmental performance by North Carolina organizations. Coaches (technical staff) are assigned to each participant to provide technical assistance on pollution prevention and develop an environmental management system. Networking opportunities allow participants to learn from each other and share success stories. This program seeks to reduce the impact on the environment beyond measures required by any permit or rule, producing a better environment, conserving natural resources and resulting in long-term economic benefits.

For more information about the program, visit <http://www.p2pays.org/es/>.

C. Mercury Switch Removal

The Hazardous Waste Section implements a program that requires the removal and recycling of mercury-containing convenience light switches from scrap automobiles known as "end of life" vehicles. Initially enacted in 2005 and revised and updated in 2007 by the General Assembly, this program requires auto recyclers and scrap metal processors to remove the mercury switches before the vehicles are crushed, shredded, and recycled into the manufacture of steel. The vehicle recyclers and scrap metal processors receive \$5 for each switch that is removed, collected, and sent for recycling. Removal of the switches prior to recycling greatly reduces mercury emissions during the steel-making process. Since 2007, 134,317 mercury switches have been removed. Mercury switches from all states are sent to an EQ Michigan facility and EQ sends the mercury switches to a retorting facility. Through the North Carolina Mercury Switch Removal Program, 295.5 pounds of mercury were prevented from entering the

environment. For further information and details of North Carolina's Mercury Switch Removal Program see the Mercury Switch Annual Report.

D. North Carolina School Chemical Cleanout and Maintenance Project

On Oct. 1, 2006 the Hazardous Waste Section received a grant from EPA for a pilot program to remove chemicals from public schools in North Carolina and to provide technical assistance, training and educational guidance on proper chemical management. This grant will conclude in December 2009. Training materials were developed for school personnel in progressive laboratory chemical management, GreenChemistry, MicroChemistry and other preventive approaches for future chemical management. Workshops have been promoted in strategic locations in the state to allow for the best attendance. In addition to the numerous presentations and workshops held previously, HWS personnel conducted a presentation to 16 teachers at a workshop held at Western Carolina University's Center for Science and Math Education on Nov. 11, 2008. An additional workshop is planned at East Carolina University in November 2009.

Financial assistance was provided to eight schools for the removal of chemicals in 2009. Since the inception of this program, financial assistance provided by the grant has resulted in the removal of 6,973 pounds of hazardous waste chemicals. An additional 2,670 pounds of other dangerous chemicals have been removed from nineteen schools. The HWS will continue to promote safe school laboratories by providing technical assistance in the areas of safe storage practices, Green and MicroScale chemistry information, and inventory procedures.

E. Other Activities

The HWS 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 on hazardous waste regulations and the expectations of hazardous waste inspectors;
- Continuing to seek EPA authorization to maintain the Hazardous Waste Section's authority to implement newly promulgated regulations and standards;
- Improving the quality of hazardous waste data for hazardous waste trend analysis and sound decision-making;
- Participating in EPA's rulemaking projects such as those involving standards for the recycling of used industrial rags and wipes, revisions to the regulatory standards for materials that are recycled, revisions to the universal waste rule to add pharmaceuticals and other regulatory proposals;

- Implementing the provisions of Session Law 2007-107 (House Bill 36) that created additional notification and regulatory requirements for commercial Treatment, Storage, and Disposal Facilities. This includes changes to 15A NCAC 13A .0116 that incorporate a factor that considers the population density surrounding commercial Treatment, Storage, and Disposal Facilities in determining inspection frequency;
- Establishing hazardous waste transfer facility requirements to 15A NCAC 13A .0108(a). The proposed amendments to Rule .0108(a)(1) will incorporate existing requirements from G.S. 130A-295.05 for registration, notification, and records retention. The proposed amendments to Rule .0108(a)(1) and (2) will incorporate requirements for general standards for security, preparedness and prevention, contingency and emergency, and management of containers; and