

**A REPORT TO THE VIRGINIA GENERAL ASSEMBLY**

**WASTE TIRE PILE CLEANUPS IN VIRGINIA - 2004**

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**Virginia Department of Environmental Quality**

# **REPORT TO THE VIRGINIA GENERAL ASSEMBLY ON WASTE TIRE PILE CLEANUPS IN VIRGINIA - 2004**

## **EXECUTIVE SUMMARY**

### **Introduction**

Chapter 101 of the 2003 Acts of the Assembly included a provision that increased the Virginia tire recycling fee from \$0.50 to \$1.00 for a 3 year period, with all additional revenue dedicated for the removal and recycling of tires from waste tire piles. It also required the Virginia Department of Environmental Quality (DEQ) to submit a report by December 1 of each year to the Chairman of the Senate Committee on Agriculture, Conservation and Natural Resources and the Chairman of the House Committee on Agriculture, Chesapeake and Natural Resources on the use of these funds and the progress in cleaning up tire piles. This report is submitted to fulfill this requirement for 2004.

### **Large Pile Cleanups**

In 2004, DEQ undertook its most challenging tire pile cleanup to date: the Lee Farm pile in Caroline County. With 365,000 tires wedged in a deep, steep, and long ravine, a \$388,000 contract was needed to excavate the tires from the ravine. Processing and beneficially using these tires will increase the total cleanup cost of this pile to at least \$850,000. Also, the cleanup of 800,000 tires stored at the defunct Tire Recyclers, Inc. facility in Charles City County will cost around \$440,000. No other large piles are known to exist in Virginia at this time.

### **Small Pile Cleanups**

During the past two years, 46 smaller piles, containing almost 400,000 tires, have been remediated. In order to complete the cleanup of the remaining 342 known small piles, DEQ has initiated an entirely new strategy: "Clean Sweep." In November 2004, DEQ began the process to hire contractors to "sweep" clean five designated regions of the Commonwealth of all remaining tire piles. All contracts should be awarded by March 2005 and work is expected to be completed within 12 months.

### **Financial Management**

Through September 2004, the Waste Tire Trust Fund has accumulated \$2,554,485 dedicated to tire pile cleanups. DEQ has expended \$2,472,751, leaving a balance of \$81,734. The three-year funding increase is expected to provide sufficient funds to complete all remaining cleanups as planned.

# WASTE TIRE PILE CLEANUPS IN VIRGINIA - 2004

## I. Introduction

Accumulations of waste vehicular tires in Virginia can be traced back to the 1930s. Until the late 1980's, there were no laws or rules governing the creation of these waste tire piles. In fact, in the 1970s and 1980s, such piles were encouraged due to their petroleum content and the prospect of recycling for a profit. Neither potential materialized, however, leaving Virginia with over 1,000 piles containing over 20,000,000 tires.

DEQ's first (2003) annual Report to the General Assembly ([A Report to the Virginia General Assembly on Waste Tire Pile Cleanups in Virginia - 2003](#)) described the 1989 enactment of a \$0.50 fee on the retail sale of tires, with all revenue going into the Waste Tire Trust Fund (WTTF). It also discussed DEQ's plans for addressing both the 7,000,000 waste tires generated each year in Virginia ("current flow") and the more than 1,000 existing tire piles. DEQ's pile cleanup techniques included demonstration programs, regional processing and collection programs, cleanups by owners and the End User Reimbursement Program.

Though these cleanup techniques were successful, the statewide cleanup process would have taken at least an additional decade to complete at the existing funding levels. This fact, coupled with a large-scale fire at a pile in Roanoke County in 2002, resulted in the 2003 General Assembly increasing the tire recycling fee to \$1.00 for a three-year period, with all additional revenues dedicated to complete the pile cleanups.

The 2003 Report outlined a two-part DEQ strategy to complete all cleanups: one for the five remaining large tire piles (over 100,000 tires) and a second for the large number (388) of smaller piles. By November 2003, cleanups of four of the largest five piles were completed and the small pile strategy was initiated in October 2004.

The remainder of this report addresses DEQ's tire pile cleanup activities for October 2003 through September 2004.

## II. Cleanup Initiatives for 2004

### A. Strategies for Large Piles

After the 2002 tire pile fire in Roanoke County, DEQ created the "Big Five Plan" to address the five remaining large piles, each of which contained at least 100,000 tires. These piles had the greatest potential to cause significant environmental damage if they caught fire. The strategy was to increase the End User Reimbursement payment amount for tires from these piles and supplement it with site access improvement contracts as

needed. This strategy led to the successful cleanup of the Slaughter pile in Washington County, the Crewe pile in Charles City County, the Stables pile in Nottoway County and the Hardy pile in Chesterfield County. Remaining was the Lee Farm pile in Caroline County, the most challenging pile cleanup ever undertaken by DEQ.

During 2004, DEQ attempted numerous strategies to clean up the Lee Farm pile. This pile contained an estimated 365,000 tires located in a deep (70'), steep (60% slopes), long (400') ravine that empties directly into the Mattaponi River. Local governments, non-profit associations, and the military (Fort AP Hill and U.S. Army Corps of Engineers) were not able to provide sufficient support to aid DEQ's regular cleanup techniques. Accordingly, DEQ had to hire a private contractor to remove the tires from the ravine. Through competitive bidding, REMAC America, Inc. of Potomac, MD was awarded a \$388,000 contract for removal; through September 2004, \$275,000 had been spent. After removal, processing the tires for beneficial end use will push the total cost to over \$850,000. Cleanup will be completed by the end of 2004.

In addition to the Lee Farm site, a sixth large tire pile cleanup was undertaken in 2004. Tire Recyclers, Inc. (TRI), a waste tire processing company located in Charles City County, closed its doors in March 2004, leaving a pile estimated at 750,000 tires. The size of the pile became a concern to neighbors, and state and local emergency officials. Through enforcement actions by DEQ, TRI agreed to a state funded cleanup of its property and to reimburse the Waste Tire Trust Fund for the full cost. Legislation passed in 2003 allows the Commonwealth to place a lien on this property if the state costs are not reimbursed by TRI. DEQ is preparing for this possibility. Through competitive bidding, Emanuel Tire of Virginia was selected to conduct the cleanup. Through September 2004, Emanuel removed and processed 618,000 tires from this site at a cost of \$340,000. This cleanup was expected to be completed by the end of November 2004.

#### Large Pile Summary

2003	4 piles cleaned up	1,625,945 tires	\$1,323,950 expended
2004	2 cleanups underway	618,000 tires	\$ 615,000 expended
2005	No large pile cleanups anticipated		

#### B. Strategies for Small Piles

DEQ's 2003 Report to the General Assembly detailed a new strategy to cleanup small piles, many of which are challenging due to terrain and large percentage of tires on rims. Their relative small size failed to attract cleanup contractors due to poor economies of scale.

The initial 2004 strategy was to encourage all in-state fixed-based waste tire processors to accept tires delivered by tire pile owners at no charge (DEQ's End User Reimbursement payment only). All processors agreed, and only charged fees for oversized tires or tires on rims. Next, DEQ sent letters to all 388 tire pile owners,

encouraging them to utilize this option. Some property owners responded and took action to have their tire piles cleaned up.

This effort was moderately successful. Seven of the 10 processors received some tires through the effort. In 2004, 36 piles containing 369,000 tires were cleaned up. In order to make substantial progress in cleaning up the remaining 342 known tire piles, a new strategy was needed. See Section III below.

#### Small Pile Summary

2003	10 piles completed	31,100 tires	\$ 25,575 expended
2004	36 piles completed	369,800 tires	\$369,128 expended
2005	342 piles remaining	1,600,000 tires	Cost to be determined

### **III. CLEAN SWEEP 2004-2006**

DEQ's goal is to cleanup all remaining piles by 2006. Early in 2004, DEQ staff conferred with several other states and the concept of a contracted, large-scale cleanup effort materialized. Contractors with previous experience would be retained to clean up all tire piles in one locality and then move to neighboring localities until all piles in a designated region of the state had been cleaned up.

Before this initiative could begin, new procedures were needed. First, DEQ's statewide 1994 Waste Tire Management Plan had to be amended to authorize this type of effort. Next, the "Clean Sweep" Program Plan was developed that outlined the operating procedures of the program to guide DEQ staff in implementing the new program. The Clean Sweep plan is shown in Attachment 1.

At the time of the preparation of this report, the implementation of Clean Sweep had just begun. The Commonwealth has been divided into five regions to lower overall costs and to encourage participation and competition. Competitive bidding was undertaken first for the Piedmont Region of DEQ, which includes the Richmond-Petersburg metropolitan area. Future bids will cover the Northern, Tidewater, Central/Valley and Southwestern regions. Contractors are to be selected for all regions by March 2005, and with a 12-month period of performance, all remaining tire piles are expected to be cleaned up no later than March 2006.

### **IV. FINANCIAL MANAGEMENT**

#### **A. Income**

\$2,554,485 in additional revenue for tire pile cleanups has been credited to the Waste Tire Trust Fund through September 2004. By statute, all of this money is to be spent only on cleaning up waste tire piles in the Commonwealth.

B. Expenses and Fund Balance

\$2,472,751 was spent on tire pile removal work through September 30, 2004, leaving a balance of \$81,734 in the tire pile cleanup portion of the Waste Tire Trust Fund.

The additional tire recycling fee revenue will flow into the Waste Tire Trust Fund through October 2006, and is expected to provide sufficient funds to complete all remaining cleanups as planned.

## ATTACHMENT 1

### DEQ's "CLEAN SWEEP" Program

#### A Program to Cleanup All Remaining Waste Tire Piles in Virginia

##### **A. Executive Summary**

The Virginia Department of Environmental Quality will implement a statewide program to rid Virginia of the 342 waste tire piles remaining in Virginia. Titled "Clean Sweep", the program will begin in late-2004 in DEQ's Piedmont Region and will expand to all areas of the state by early- 2005. The work will be accomplished by contractors.

All work will be completed within approximately 18 months and shall cost several million dollars, all to be paid from the Waste Tire Trust Fund. No cost recovery will be undertaken, as the piles included are only those "grandfathered" (created before 1993) or created by illegal dumping activities without the "knowledge or consent" of the property owner ("certified piles"). All other tire piles are the responsibility of the property owner, who must manage his tires according to DEQ regulations, with DEQ taking compliance and enforcement actions, if needed.

##### **B. Introduction**

Since 1993, DEQ has been addressing the issue of waste tire piles through the Virginia Waste Tire Management Plan, a multi-year program that also addresses the management of over 7 million "current flow" tires each year. A state-wide survey in 1993 identified over 750 waste tire piles, which has since increased to 1,088 due to the discovery of piles missed in the 1993 survey and the identification of piles which have been illegally dumped without the property owner's knowledge or consent. Only these piles are eligible for cleanup assistance under this DEQ program. All others are the responsibility of those who created them, as governed both by Virginia statute and the Virginia Solid Waste Management Regulations.

Various efforts under the Plan have been responsible for the cleanup of almost 750 waste tire piles since 1993. These methods include demonstrations programs, regional tire collection and processing programs and the End User Reimbursement Program. Many have been cleaned up by the owner without any state assistance. In total, these efforts eliminated over 17,000,000 tires.

##### **C. New Resources**

As productive as these efforts have been, 342 piles remain. Due to concerns over tire piles fires (such as the massive Roanoke County tire fire in 2002) and diseases such

as West Nile virus, the 2003 General Assembly increased the state retail tire recycling fee from \$0.50 to \$1.00 per tire on July 1, 2003, for a period of 3 years. All additional proceeds were designated for tire pile cleanups only. In order to complete the job, DEQ has designed “Clean Sweep”, a contracted cleanup of all remaining piles within specific geographic areas. This technique can be implemented expeditiously and can address all piles in a given geographic area, unlike all previous cleanup activities.

#### **D. Clean Sweep Procedures**

Clean Sweep will be performed in 5 geographic Areas of Virginia, to give more contractors the opportunity to participate and to minimize the cost of transportation, as compared to one statewide contract. The first Area to be undertaken will be DEQ’s Piedmont Region, which covers the Richmond-Petersburg metropolitan areas and the rural areas south to the North Carolina border and north to the Northern Neck. See Appendix A for a map of DEQ’s regional borders.

DEQ will contract for this Area 1 first, to test all program procedures, to determine the interest of contractors, to test locality-by-locality logistics and to monitor field activities. Once deemed successful, contractors will be selected for the four remaining Areas.

The Clean Sweep Areas will be:

1. Piedmont Regional area
2. Northern Regional area
3. Tidewater Regional area
4. Valley and South Central Regional areas
5. West Central and Southwestern Regional areas

Clean Sweep will be a “turn key” service: going out to the pile location, retrieving and transporting the tires back to a processing facility permitted by DEQ or its counterpart if in another state and then guaranteeing a beneficial end use.

Each Area has a Waste Tire Pile Database of all piles in that Area. See Appendix A. In addition to the pile location and estimate number of tires, each pile record contains information on the types of tires in the pile, the percentage on rims, access and terrain conditions, all of which enable participants to gauge the difficulty, and thus the costs, of cleaning up all piles in the area. In each Area, some piles located in adverse terrain may be subject to a separate retrieval effort (similar to the current effort at Lee Farm in Caroline County) before Clean Sweep begins. Generally, the parameters are steep terrain (greater than 45 degree slope) or poor access (pathways may need to be constructed). These sites will be determined before the bid process.



A mandatory pre-bid conference will be conducted in each Area to allow potential contractors to see a sampling of tire piles, or all the piles if they so request, in the Area.

Before a contractor can enter private property to perform work paid for by the State of Virginia, the property owner must give his written consent. DEQ has developed a Site Access Agreement for such purpose. DEQ staff will secure these signed Agreements before contractor work can begin. Persons refusing to sign a Site Access Agreement will not be served under Clean Sweep and may be subject to compliance and enforcement actions for improper management of solid wastes. The Agreement, included as Appendix B, is modeled after the once used by the Petroleum Storage Tank Program within DEQ.

#### **D. Financial Considerations**

The cost of Clean Sweep is estimated at \$3,000,000. This is in addition to the \$1,200,000 already spent on cleanups since July 2003 and \$1,200,000 for the current contracted cleanups at the Tire Recyclers, Inc. pile in Charles City County (DEQ pile # 036-053) and the Lee Farm pile (#033-050) in Caroline County. However, the extra revenue provided by the General Assembly should cover all of these costs, unless costs escalate significantly, many additional eligible piles are discovered or retrieval costs become significant. Staff will continually monitor the situation to insure that expenses do not exceed revenue.

#### **E. Staffing**

The staff of the Division of Environmental Enhancement -Waste Tire, Recycling and Litter Prevention Section- will provide the staffing to conduct or/and coordinate the activities of Clean Sweep. Staff of each DEQ regional office will be called on to secure access agreements and to monitor some cleanups. Regular communications between the DEE staff and the regional offices will allow as much lead-time as is possible to avoid disrupting regional office staffing.

#### **F. Schedule**

Area 1 services should begin in November 2004 and be completed within 12 months. If the Area 2 can begin in December, 2004 with the other 3 Areas beginning 1 month apart, the entire project can begin by March, 2005 and conclude by March, 2006. Of course, external factors, most notably weather, contractor capability and end use markets, could all affect this schedule negatively.