

**REPORT OF THE
VIRGINIA DEPARTMENT OF TRANSPORTATION ON**

**A STUDY OF OIL AND ANTIFREEZE
COLLECTION CENTERS IN VIRGINIA**

**TO THE GOVERNOR AND
THE GENERAL ASSEMBLY OF VIRGINIA**



HOUSE DOCUMENT NO. 35

**COMMONWEALTH OF VIRGINIA
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PREFACE

House Bills 380 and 1463 were presented by Delegate R. Creigh Deeds, et al., at the 1994 and 1993 General Assembly Sessions, respectively, which approved both initiatives. The bills were assigned to the Virginia Department of Transportation's (VDOT) Equipment and Maintenance Divisions and required coordination with the Department of Environmental Quality (DEQ).

The primary division for the demonstration project established by House Bill 1463 was the Maintenance Division, which is lead by Mr. A. V. Bailey, II, State Maintenance Engineer. Field managers directly involved with this project included Mr. R. L. Moore, Staunton District Administrator, Mr. P. R. Epperly, District Maintenance Engineer, and Mr. J. W. White, Jr., Lexington Resident Engineer. VDOT coordinated with Delegate Deeds on this project as well as with several employees of DEQ, primarily Mr. Harry E. Gregori, Jr. and Ms. Kathy Frahm.

The primary division for the statewide survey of recycling facilities initiated by House Bill 380 was the Equipment Division, which is lead by Mr. E. W. Potter, State Equipment Engineer. The survey results were written by Mr. W. B. Hope of the Equipment Division in coordination with Ms. Nancy Williams of the Department of Environmental Quality. The combined report for both house bills was coordinated and written by Mr. R. D. Kardian of the Maintenance Division.

Hearty acknowledgements are extended to Mr. White for his full and outstanding cooperation in the Bath County project. A special mention is also extended to Ms. Brenda L. Tollett of Valvoline, Inc., Mr. Vernon Moore of VDOT's Fiscal Division, and Mr. Jim Hayes of the Attorney General's Office for their valuable assistance in securing the used motor oil recycling contract.

EXECUTIVE SUMMARY

This report details the results of two recycling initiatives: (1) the operations of a demonstration project in Bath County to accept and recycle used motor oil and used antifreeze from the public and (2) the statewide survey of all jurisdictions in the Commonwealth to determine which areas do not have recycling facilities.

The Bath County project resulted in the receipt of 210 gallons of used motor oil and 12 gallons of used antifreeze from the public during FY 1993-94. Two local commercial dealers who accept and recycle used motor oil from the public, however, received approximately 200 gallons *per month*. The public's low participation in the state project was based on three reasons: (1) the public appeared to want to go to a more convenient location, (2) the public appeared to wish the option of making purchases in addition to the deposit of used motor materials, and (3) the public is accustomed to going to commercial businesses to recycle material rather than governmental facilities. These comments from the public were obtained from informal conversations during the recycling operations and from general telephone conversations made to the residency.

HB 1463 authorized \$20,000 from Bath County's secondary construction allocation for the demonstration project. Actual expenditures in FY 1993-94 were less than \$12,000. HB 380, which was enacted in 1994, extended the operations of the Bath County project through June 30, 1995.

The statewide recycling survey of jurisdictions, which was initiated by HB 380, revealed that 42 localities do not have facilities to collect used motor oil and 114 localities do not have facilities to collect used antifreeze. Because of VDOT's interest in and support of recycling programs, the State Equipment Engineer will canvas the transportation managers in the affected areas that do not have motor oil collection facilities. This additional study will assess advantages and disadvantages of a recycling program at the local level. The study will also seriously weigh the costs and benefits with the context of the overall statewide transportation needs and resources.

VDOT is currently depleting its supply of antifreeze that needs to be replaced periodically. State vehicles are using a permanent antifreeze that only requires an additive every few years to restore rust and corrosion inhibitors. Because of the low participation of the public in recycling antifreeze at the Bath County site and VDOT's initiative of using permanent antifreeze, it is not recommended that a statewide antifreeze recycling program be implemented.

The "Introduction" section of this report identifies the specifics of House Bills 1463 and 380. The "Overall Results" section details the individual results for each house bill, including non-recycling localities broken down by government type for HB 380 and paragraphs on analyses, costs, and coordination for HB 1463. The "Conclusions" section reports overall statements for recycling programs including VDOT's initiative to conduct an additional study to assess recycling programs for used motor oil at the local level.

INTRODUCTION

This report contains the results of House Bills 1463 and 380 for the recycling of used motor oil and used antifreeze from public citizens within the Commonwealth of Virginia.

House Bill 1463

VDOT with the cooperation of the DEQ's Waste Division [formally the Department of Waste Management] shall conduct a demonstration project in Bath County for the collection of used motor oil and used motor vehicle antifreeze from the general public. The project will run from July 1, 1993, to June 30, 1994. Funds were provided from Bath County's secondary construction allocation and were not to exceed \$20,000.

House Bill 380

VDOT with the cooperation of DEQ shall survey the counties, cities, and towns of the Commonwealth to determine in which localities no commercial facility for the collection of used motor oil and motor vehicle antifreeze exists. In addition, the demonstration project in Bath County is extended through June 30, 1995. Funds for the Bath County project will not exceed \$20,000 annually.

OVERALL RESULTS

This section details the results of both House Bill 380 initiating a statewide survey of all jurisdictions that do not have recycling facilities and House Bill 1463 establishing a demonstration recycling project in Bath County.

Results of HB 380

A letter was sent to 157 Local Recycling Coordinators for every county, city, and town in the Commonwealth requesting whether or not commercial facilities for the collection of used motor oil and used antifreeze existed in their jurisdiction. Of this total, 134 jurisdictions responded (85.3%).

Forty-two jurisdictions do not have facilities for the collection of used motor oil and 114 localities do not have facilities for the collection of used antifreeze. The localities are broken down by type of government as follows:

	<u>No Motor Oil Facility</u>	<u>No Antifreeze Facility</u>
Counties	28	71
Cities	11	23
Towns	3	20
Total	42	114

A copy of House Bill 380 is shown in Appendix A. The 42 localities that do not have commercial or public facilities for the collection of used motor oil are identified in Appendix B. The 114 localities that do not have commercial or public facilities for the collection of used antifreeze are listed in Appendix C. All 157 jurisdictions that were surveyed and the results of each survey are shown in Appendix D.

Administrative costs expended by DEQ and VDOT for the statewide survey totaled \$1,151. These costs included expenditures for the drafting of letters and survey questionnaires for two mailings, review and analysis of completed survey forms, and the development of a database with programs, and spreadsheets.

Results of HB 1463 (FY 1993-94)

Gallons Recycled

The demonstration project in Bath County is located at the Millboro Maintenance Area Headquarters. VDOT's Lexington Residency reported a total of 209.5 gallons of used motor oil received from the public and recycled during the period July 1, 1993 through June 30, 1994. For comparative purposes, two Advance Auto Parts stores within the area (Covington and Lexington) received an estimated 200 gallons per month of used motor oil from the general public, or approximately 2,400 gallons during this same period. [Note: The Advance Auto Parts store in Covington is currently being renovated, but will reopen.]

The recycling project received a total of 11.5 gallons of used antifreeze from the public during FY 1993-94.

It should be noted that VDOT is phasing out supplies of antifreeze that need to be replaced periodically. VDOT is currently using a permanent antifreeze called Nalcool coolant that only requires an additive every few years to restore rust and corrosion inhibitors.

Analyses

A review of the entire operations was conducted, including the used motor oil contract with Valvoline, the used antifreeze contract with Safety Klean, transportation and pickup procedures of the material, and the quality control and inspection process. The working relationship with Valvoline was very good. The used antifreeze received from the public was recycled with VDOT's recycling contract with Safety Klean. No major problems in either the used oil or used antifreeze operations occurred.

Costs

An allocation not to exceed \$20,000 annually was authorized for the demonstration project in Bath County. The total costs for FY 1993-94 were:

Planning and Development	\$ 6,083.46
DEQ--Division of Waste	1,051.00
Building & Concrete Pad	2,712.77
Operations (12 months)	2,033.52
Total Costs	\$11,880.75

The total costs included planning and administrative expenses for DEQ's Waste Division and VDOT's Central Office that were absorbed by the respective agencies and not included in Bath County's secondary construction allocation.

Coordination

Representatives from VDOT and DEQ met on several occasions to discuss the planning and implementation processes, including a field inspection of the project prior to July 1, 1993. Delegate R. Creigh Deeds and Mr. J. W. White, Jr., VDOT's Resident Engineer in Lexington, met on several occasions to discuss the project and its progress. VDOT's Maintenance and Equipment Divisions also coordinated project results with DEQ and the Lexington Residency.

Operational Procedures

Although the following operational procedures are written using the generic term "used motor oil", the procedures are the same whether the material is used motor oil or used anti-freeze:

Upon arrival at the project site, the general public is asked to sign a "Used Oil Log" (see Appendix E) that identifies the name and address of the citizen. The citizen also records on the log the name brand of the oil and the number of gallons that are turned in for recycling. The data from the log book can be used to determine local demographics so that analyses can be made as to which areas of the region are using the recycling site. If necessary, a trail can also be determined to identify properly the source of any contamination of suspicious containers or material.

VDOT's Fiscal Assistant will obtain the used motor oil from the citizen and carry it to the containment recycling shed. The shed is located behind the fenced area headquarters lot and measures approximately 11 feet x 13 feet. It was constructed with a concrete pad to house a 175-gallon tank for the used motor oil and a 55-gallon barrel for the used motor vehicle antifreeze. A second 55-gallon barrel is reserved to handle any unusual and unanticipated volumes of used motor oil. Usually, the citizen will bring the used material in a five-gallon container.

The citizen stands behind the fence and can watch the Fiscal Assistant as he carries the used material to the containment shed. The Fiscal Assistant slowly pours the used oil into the recycling tank and at the same time performs a quality check by inspecting the fluid to ensure it has the appearance and fluency of oil.

The container is then returned to the citizen.

Reasons for Low Participation

We believe there were three reasons for low participation.

First, there were two commercial vendors (Advance Auto Parts) located within a 25-mile radius of the Bath County site. Each received approximately 200 gallons of used motor oil from the public each month. The public appeared to want to go to a more convenient location.

Second, the public appeared to take used oil to a commercial destination in order to usually make a purchase when they deposit the used oil. These purchases might not occur if the oil were to be taken to state facilities. It was also generally concluded that VDOT should not compete with the private sector.

Third, the public was accustomed to going to the commercial businesses to deposit used motor oil. They are not used to visiting VDOT facilities to recycle used motor oil.

Tort Liability

Finally, we still have concerns for potential tort liability issues in the event of an oil spill. In addition, the disposal costs could increase significantly if the used material contains contraband substances because the used motor materials would then become hazardous wastes.

CONCLUSIONS

It was generally concluded that consideration should be given to discontinuing the recycling of used antifreeze due to the overall lack of interest by the public and VDOT's initiative to use permanent antifreeze in their vehicles.

If the General Assembly wishes to approve the receipt of used motor oil from the public on a larger basis, the program should be encouraged only in rural areas of the state where no commercial services are available to recycle oil. This recommendation is made because of the potential for unfair competition with the private sector. We would also recommend that the funding of this recycling program be made through each county's construction budget similar to the pilot program. The recycling of used motor oil is a viable part of current businesses. If a statewide program was approved to collect and

recycle used oil at state facilities, it should be implemented in areas of the state that have no commercial recycling facilities readily available to the public.

In this regard, the State Equipment Engineer is extending the study of statewide jurisdictions that do not have recycling facilities for used motor oil. VDOT field managers in the affected districts and residencies will be asked for additional information. This additional information includes a request to identify advantages and disadvantages of establishing a public recycling program for their areas. The results of this survey will be weighed seriously with the costs and benefits of overall transportation needs and resources.

Appendix A

VIRGINIA ACTS OF ASSEMBLY -- 1994 SESSION

CHAPTER 419

An Act to amend and reenact § 10.1-1425.8 of the Code of Virginia, relating to oil and antifreeze collection centers.

[H 380]

Approved April 7, 1994

Be it enacted by the General Assembly of Virginia:

1. That § 10.1-1425.8 of the Code of Virginia is amended and reenacted as follows:

§ 10.1-1425.8. Department of Transportation; authority and duty.

The Department of Transportation is authorized to conduct recycling research projects, including the establishment of demonstration projects which use recycled products in highway construction and maintenance. Such projects may include by way of example and not by limitation the use of ground rubber from used tires or glass for road surfacing, resurfacing and sub-base materials, as well as the use of plastic or mixed plastic materials for ground or guard rail posts, right-of-way fence posts and sign supports.

The Department of Transportation shall periodically review and revise its bid procedures and specifications to encourage the use of products and materials with recycled content in its construction and maintenance programs.

The Department of Transportation with the cooperation of the Department of Waste Management shall conduct a demonstration project at one of the Department of Transportation's maintenance area offices in the County of Bath, subject to such conditions as may be determined by the Commonwealth Transportation Commissioner, for the collection of used motor oil and motor vehicle antifreeze from the general public. The used motor oil and motor vehicle antifreeze that are collected shall be recycled or otherwise disposed of in accordance with programs and plans developed by the Department of Waste Management under § 10.1-1425.6. Funds for this project will be provided from the selected county's Secondary Road construction allocations, not to exceed \$20,000 annually. This demonstration project will run from July 1, 1993, to June 30, ~~1994~~ 1995. *The Department of Transportation, with the cooperation of the Department of Environmental Quality, shall survey the counties, cities and towns of the Commonwealth to determine in which localities no commercial facility for the collection of used motor oil and motor vehicle antifreeze exists.* The study will be completed and results reported to the 1995 Session of the General Assembly.

Appendix B

JURISDICTIONS IN VIRGINIA WITH NO MOTOR OIL COLLECTION

	PRIVATE	PUBLIC
APPOMATTOX COUNTY	U	N
AUGUSTA COUNTY	N	N
BATH COUNTY	N	N
BEDFORD COUNTY	N	N
BERRYVILLE TOWN	N	N
BLAND COUNTY	N	N
BRUNSWICK COUNTY	N	N
BUCHANAN COUNTY	N	N
CHARLES CITY COUNTY	N	N
CHARLOTTE COUNTY	N	N
CLARKE COUNTY	N	N
CRAIG COUNTY	N	N
DICKENSON COUNTY	N	N
EMPORIA CITY	N	N
FLUVANNA COUNTY	N	N
GRAYSON COUNTY	N	N
HALIFAX TOWN	U	N
HIGHLAND COUNTY	N	N
JARRATT TOWN	U	N
KING WILLIAM COUNTY	N	N
LANCASTER COUNTY	N	N
LEE COUNTY	U	N
MANASSAS CITY	U	N
MARTINSVILLE CITY	N	N
MATHEWS COUNTY	N	N
MIDDLESEX COUNTY	U	N
NELSON COUNTY	N	N
NEW KENT COUNTY	N	N
NORTHUMBERLAND COUNTY	N	N
NORTON CITY	U	N
NOTTOWAY COUNTY	N	N
POWHATAN COUNTY	N	N
PURCELLVILLE TOWN	U	N
WASHINGTON TOWN	N	N
RICHMOND COUNTY	N	N
ROUND HILL TOWN	N	N
BRIDGEWATER TOWN	U	N
SURRY COUNTY	N	N
BLUEFIELD TOWN	N	N
WEST POINT TOWN	N	N
WISE TOWN	N	N
WYTHE COUNTY	N	N

LEGEND U=UNKNOWN
N=NO COMMERCIAL COLLECTION OF MOTOR OIL

UNKNOWN MAY INDICATE THAT A SURVEY HAS NOT RECEIVED FROM THIS JURISDICTION

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JURISDICTIONS IN VIRGINIA WITH NO COMMERCIAL ANTIFREEZE COLLECTION

ACCOMACK COUNTY	N
RIVANNA SOLID WASTE AUTH	N
ALLEGHANY HIGHLANDS	N
AMHERST COUNTY	N
APPOMATTOX COUNTY	U
ARLINGTON COUNTY	N
AUGUSTA COUNTY	N
BEDFORD COUNTY	N
BEDFORD CITY	N
BERRYVILLE TOWN	N
BLAND COUNTY	N
BRUNSWICK COUNTY	N
BUCHANAN COUNTY	N
BUCKINGHAM COUNTY	N
BUENA VISTA CITY	N
CAMPBELL COUNTY	U
CAROLINE COUNTY	N
CHARLES CITY COUNTY	N
CHARLOTTE COUNTY	N
CLARKE COUNTY	N
COLONIAL HEIGHTS CITY	U
CRAIG COUNTY	N
DANVILLE CITY	N
DAYTON TOWN	N
DICKENSON COUNTY	N
DINWIDDIE COUNTY	U
EMPORIA CITY	N
FLOYD TOWN	N
FLUVANNA COUNTY	N
FRANKLIN CITY	N
FRANKLIN COUNTY	N
FREDERICKSBURG CITY	N
GALAX CITY	N
GILES COUNTY	N
GLOUCESTER COUNTY	N
GRAYSON COUNTY	N
GREENE COUNTY	N
GREENSVILLE COUNTY	N
HALIFAX COUNTY	U
HALIFAX TOWN	U
ASHLAND TOWN	N
HARRISONBURG CITY	U
HERNDON TOWN	N
HIGHLAND COUNTY	N
ISLE OF WIGHT COUNTY	U
JAMES CITY COUNTY	N
JARRATT TOWN	U
KING GEORGE COUNTY	U
KING WILLIAM COUNTY	N
LANCASTER COUNTY	N
LEE COUNTY	U
LOUDOUN COUNTY	N
LOUISA COUNTY	N
LOUISA TOWN	N
LUNENBURG COUNTY	N
LYNCHBURG CITY	N

LEGEND U=UNKNOWN

N=NO COMMERCIAL COLLECTION OF ANTIFREEZE

UNKNOWN MAY INDICATE THAT A SURVEY WAS NOT RECEIVED FROM THIS JURISDICTION

JURISDICTIONS IN VIRGINIA WITH NO COMMERCIAL ANTIFREEZE COLLECTION

MADISON COUNTY	N
MANASSAS CITY	U
MARTINSVILLE CITY	N
MATHEWS COUNTY	N
MECKLENBURG COUNTY	N
MIDDLESEX COUNTY	U
NELSON COUNTY	N
NEW KENT COUNTY	N
NORTHAMPTON COUNTY	N
NORTHUMBERLAND COUNTY	N
NORTON CITY	U
NOTTOWAY COUNTY	N
ORANGE COUNTY	U
PAGE COUNTY	N
PATRICK COUNTY	N
PETERSBURG CITY	N
PITTSYLVANIA COUNTY	N
PORTSMOUTH CITY	U
POWHATAN COUNTY	N
PRINCE EDWARD COUNTY	N
FARMVILLE TOWN	N
PRINCE GEORGE COUNTY	N
PURCELLVILLE TOWN	U
NEW RIVER RESOURCE AUTH	N
WASHINGTON TOWN	N
RICHMOND CITY	N
RICHMOND COUNTY	N
ROANOKE CITY	N
ROCKBRIDGE COUNTY	N
ROUND HILL TOWN	N
ROCKINGHAM COUNTY	N
BRIDGEWATER TOWN	U
RUSSELL COUNTY	N
SALEM CITY	N
SCOTT COUNTY	N
SHENANDOAH COUNTY	U
SOUTHAMPTON COUNTY	N
SOUTH BOSTON CITY	N
STAFFORD COUNTY	N
STAUNTON CITY	N
SURRY COUNTY	N
TAZEWELL COUNTY	U
BLUEFIELD TOWN	N
VINTON TOWN	N
VIRGINIA BEACH CITY	N
WARREN COUNTY	N
FRONT ROYAL TOWN	N
WASHINGTON COUNTY	N
WESTMORELAND COUNTY	U
COLONIAL BEACH TOWN	N
WEST POINT TOWN	N
WILLIAMSBURG CITY	N
WINCHESTER CITY	N
WISE COUNTY	N
COEBURN TOWN	N
WISE TOWN	N

LEGEND U=UNKNOWN

N=NO COMMERCIAL COLLECTION OF ANTIFREEZE

UNKNOWN MAY INDICATE THAT A SURVEY WAS NOT RECEIVED FROM THIS JURISDICTION

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JURISDICTIONS IN VIRGINIA WITH NO COMMERCIAL ANTIFREEZE COLLECTION

WYTHE COUNTY	N
YORK COUNTY	N

LEGEND U=UNKNOWN
N=NO COMMERCIAL COLLECTION OF ANTIFREEZE

UNKNOWN MAY INDICATE THAT A SURVEY WAS NOT RECEIVED FROM THIS JURISDICTION

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RESULTS FROM VDOT & DEQ SURVEY ON MOTOR OIL AND ANTIFREEZE COLLECTION

LOCALITY	PRIVATE MOTOR OIL	PRIVATE ANTIFREEZE	PUBLIC MOTOR OIL	PUBLIC ANTIFREEZE
ACCOMACK COUNTY	Y	N	Y	N
RIVANNA SOLID WASTE AUTH	Y	N	N	N
ALEXANDRIA CITY	Y	Y	Y	N
ALLEGHANY HIGHLANDS	Y	N	N	N
AMELIA COUNTY	Y	Y	N	N
AMHERST COUNTY	Y	N	N	N
APPOMATTOX COUNTY	U	U	N	N
ARLINGTON COUNTY	Y	N	N	N
AUGUSTA COUNTY	N	N	N	N
BATH COUNTY	N	N	N	Y
BEDFORD COUNTY	N	N	N	N
BEDFORD CITY	Y	N	N	N
BERRYVILLE TOWN	N	N	N	N
BLACKSBURG TOWN	Y	Y	Y	N
BLAND COUNTY	N	N	N	N
BOTETOURT COUNTY	Y	Y	N	N
BRISTOL CITY	Y	Y	N	N
BRUNSWICK COUNTY	N	N	N	N
BUCHANAN COUNTY	N	N	N	N
BUCKINGHAM COUNTY	Y	N	N	N
BUENA VISTA CITY	Y	N	N	N
CAMPBELL COUNTY	Y	U	Y	N
CAROLINE COUNTY	N	N	Y	N
CARROLL COUNTY	Y	Y	N	N
CHARLES CITY COUNTY	N	N	N	N
CHARLOTTE COUNTY	N	N	N	N
CHESAPEAKE CITY	Y	Y	Y	N
CHESTERFIELD COUNTY	U	U	Y	Y
CLARKE COUNTY	N	N	N	N
COLONIAL HEIGHTS CITY	Y	U	N	N
CRAIG COUNTY	N	N	N	N
CULPEPER COUNTY	Y	Y	Y	N
CUMBERLAND COUNTY	Y	Y	N	N
DANVILLE CITY	Y	N	N	N
DAYTON TOWN	Y	N	Y	N
DICKENSON COUNTY	N	N	N	N
DINWIDDIE COUNTY	U	U	Y	N
EMPORIA CITY	N	N	N	N
ESSEX COUNTY	Y	Y	N	N
FAIRFAX CITY	Y	Y	Y	N
FAIRFAX COUNTY	Y	N	Y	Y
FALLS CHURCH CITY	Y	Y	N	N
FAUQUIER COUNTY	Y	N	Y	Y
FLOYD COUNTY	Y	N	Y	Y
FLOYD TOWN	Y	N	N	N
FLUVANNA COUNTY	N	N	N	N
FRANKLIN CITY	Y	N	N	N
FRANKLIN COUNTY	Y	N	N	N
FREDERICK COUNTY	Y	Y	Y	N
MIDDLETOWN TOWN	Y	Y	N	N
FREDERICKSBURG CITY	Y	N	Y	N
GALAX CITY	Y	N	N	N
GILES COUNTY	Y	N	Y	N
GLOUCESTER COUNTY	Y	N	Y	N
GOOCHLAND COUNTY	Y	Y	N	N
GRAYSON COUNTY	N	N	N	N
GREENE COUNTY	Y	N	Y	N
GREENSVILLE COUNTY	Y	N	N	N
HALIFAX COUNTY	U	U	Y	N

A RESPONSE OF 'U' MAY INDICATE THAT A SURVEY WAS NOT RETURNED

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RESULTS FROM VDO & DEQ SURVEY ON MOTOR OIL AND ANTI-FREEZE COLLECTION

HALIFAX TOWN	U	U	N	N
HAMPTON CITY	Y	Y	Y	N
HANOVER COUNTY	Y	Y	Y	N
ASHLAND TOWN	Y	N	N	N
HARRISONBURG CITY	Y	U	Y	N
HENRICO COUNTY	Y	Y	Y	Y
HENRY COUNTY	Y	Y	N	N
HERNDON TOWN	Y	N	N	N
HIGHLAND COUNTY	N	N	N	N
HOPEWELL CITY	Y	Y	Y	N
ISLE OF WIGHT COUNTY	U	U	Y	N
JAMES CITY COUNTY	Y	N	Y	N
JARRATT TOWN	U	U	N	N
KING & QUEEN COUNTY	Y	Y	N	N
KING GEORGE COUNTY	Y	U	Y	N
KING WILLIAM COUNTY	N	N	N	N
LANCASTER COUNTY	N	N	N	N
LEE COUNTY	U	U	N	N
LEESBURG TOWN	Y	Y	N	N
LOUDOUN COUNTY	Y	N	Y	N
LOUISA COUNTY	U	N	Y	N
LOUISA TOWN	N	N	Y	N
LUNEBURG COUNTY	N	N	Y	N
LYNCHBURG CITY	Y	N	Y	N
MADISON COUNTY	Y	N	Y	N
MANASSAS CITY	U	U	N	N
MANASSAS PARK CITY	Y	Y	Y	N
MARTINSVILLE CITY	N	N	N	N
MATHEWS COUNTY	N	N	N	N
MECKLENBURG COUNTY	Y	N	N	N
MIDDLESEX COUNTY	U	U	N	N
MONTGOMERY COUNTY	Y	Y	Y	Y
CHRISTIANSBURG TOWN	Y	Y	N	N
NELSON COUNTY	N	N	N	N
NEW KENT COUNTY	N	N	N	N
NEWPORT NEWS CITY	Y	Y	N	N
NORFOLK CITY	Y	Y	N	Y
NORTHAMPTON COUNTY	N	N	Y	N
NORTHUMBERLAND COUNTY	N	N	N	N
NORTON CITY	U	U	N	N
NOTTOWAY COUNTY	N	N	N	N
ORANGE COUNTY	U	U	Y	N
ORANGE TOWN	Y	Y	N	N
PAGE COUNTY	Y	N	Y	N
PATRICK COUNTY	N	N	Y	N
PETERSBURG CITY	Y	N	N	N
PITTSYLVANIA COUNTY	Y	N	N	N
POQUOSON CITY	Y	Y	Y	N
PORTSMOUTH CITY	Y	U	N	N
POWhatan COUNTY	N	N	N	N
PRINCE EDWARD COUNTY	Y	N	N	N
FARMVILLE TOWN	Y	N	N	N
PRINCE GEORGE COUNTY	Y	N	Y	N
PRINCE WILLIAM COUNTY	Y	N	Y	Y
PURCELLVILLE TOWN	U	U	N	N
NEW RIVER RESOURCE AUTH	Y	N	N	N
RAPPAHANNOCK COUNTY	Y	Y	Y	N
WASHINGTON TOWN	N	N	N	N
RICHMOND CITY	Y	N	N	N
RICHMOND COUNTY	N	N	N	N
ROANOKE CITY	Y	N	N	N

A RESPONSE OF 'U' MAY INDICATE THAT A SURVEY WAS NOT RETURNED

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RESULTS FROM VDOT & DEC SURVEY ON MOTOR OIL AND ANTIFREEZE COLLECTION

ROANOKE COUNTY	Y	Y	Y	N
ROCKBRIDGE COUNTY	Y	N	N	N
ROUND HILL TOWN	N	N	N	N
ROCKINGHAM COUNTY	Y	N	N	N
BRIDGEWATER TOWN	U	U	N	N
RUSSELL COUNTY	Y	N	Y	N
SALEM CITY	Y	N	N	N
SCOTT COUNTY	N	N	Y	N
SHENANDOAH COUNTY	U	U	Y	N
SMYTH COUNTY	Y	Y	Y	N
SOUTHAMPTON COUNTY	Y	N	Y	N
SOUTH BOSTON CITY	Y	N	N	N
SPOTSYLVANIA COUNTY	Y	Y	Y	Y
STAFFORD COUNTY	T	N	Y	N
STAUNTON CITY	Y	N	N	N
SUFFOLK CITY	Y	Y	N	N
SURRY COUNTY	N	N	N	N
SUSSEX COUNTY	Y	Y	N	N
TAZEWELL COUNTY	Y	U	Y	N
BLUEFIELD TOWN	N	N	N	N
VIENNA TOWN	Y	U	Y	Y
VINTON TOWN	Y	N	N	N
VIRGINIA BEACH CITY	Y	N	N	N
WARREN COUNTY	Y	N	Y	N
FRONT ROYAL TOWN	Y	N	Y	N
WASHINGTON COUNTY	Y	N	Y	N
WAYNESBORO CITY	Y	Y	Y	N
WESTMORELAND COUNTY	U	U	Y	N
COLONIAL BEACH TOWN	Y	N	Y	N
WEST POINT TOWN	N	N	N	N
WILLIAMSBURG CITY	Y	N	N	N
WINCHESTER CITY	Y	N	Y	N
WISE COUNTY	Y	N	N	N
COEBURN TOWN	Y	N	N	N
WISE TOWN	N	N	N	N
WYTHE COUNTY	N	N	N	N
YORK COUNTY	Y	N	Y	N

TOTAL NUMBER OF LOCAL GOVERNMENTS SURVEYED 157

Appendix E

USED OIL LOG

Store Number: _____



ACCEPTABLE OIL

Motor Oil.
Hydraulic Oils.
Transmission Fluids.

UNACCEPTABLE FLUIDS

Solvents. Paint & Lacquer Thinners. Paints & Varnishes.
Gasoline. Insecticides. Household Chemicals.
Anti-Freeze. Any mix of unacceptable materials with acceptable oil.

By signing this log, I certify that the materials submitted consist entirely of "acceptable oil" which was removed from a motor vehicle without charge.

199 Date	Name FIRST / M.I. / LAST	Address NUMBER / STREET	City CITY / STATE	Zip Code	Oil Brand	# of Gals Turned In

NOTE: You can abbreviate the brand turned in by using the following letters
 V=Valvoline, P=Pennzoil, QS=Quaker State, T/H=Texaco-Havoline, M=Mobil, C=Castrol