Approved September 19, 1988
Date

MINUTES OF THE House COMMITTEE ON Transportation.

The meeting was called to order by Rex Crowell at
Chairperson

1:30 ~~a~~p.m./p.m. on February 16, 1988 in room 519-S of the Capitol.

All members were present except: Representatives Dillon, Adam, Russell, Sallee, Lacey and Justice

Committee staff present:
Bruce Kinzie, Revisor of Statutes
Hank Avila, Legislative Research
Donna Mulligan, Committee Secretary

Conferees appearing before the committee:

Mr. Harley T. Duncan, Secretary of Revenue
Mr. Francis T. Bliss, Longton, Kansas
Mr. Ralph Hunt, National Solid Wastes Management Association

The meeting was called to order by Chairman Crowell, and the first order of business was a hearing on HB-2821 concerning the special fuels tax including penalties for failure to file and extension of the statute of limitations.

Mr. Harley T. Duncan, Secretary of Revenue, testified in support of HB-2821. (See Attachment 1)

Mr. Duncan said HB-2821 would amend K.S.A. 79-3480a of the Special Fuels Tax Act by increasing the penalty provision for delinquent special fuels taxes from 5% to 10% and by deleting the provision which authorizes the director of taxation discretion to waive interest assessed on delinquent special fuel taxes.

The hearing on HB-2821 ended.

The next order of business was a hearing on HB-2844 concerning a motor fuel tax exemption for refuse trucks. Mr. Francis T. Bliss, Longton, Kansas, testified in support of HB-2844. (See Attachment 2)

Mr. Bliss said that in 1984, the Motor Fuel Tax Audit Unit, Sales and Excise Tax Bureau, Kansas Department of Revenue granted a 35 percent exemption.

Mr. Bliss said tests of fuel useage by refuse vehicles clearly show whichever method of testing is used, on routes of less than 70 miles, the average non-road use is well above the 35 percent. (See Attachment 3)

Mr. Ralph Hunt, National Solid Wastes Management Association, testified in favor of HB-2844. (See Attachment 4)

Mr. Hunt pointed out that refuse trucks use a considerable amount of fuel in relationship to the actual miles of road used.

Secretary Harley Duncan commented on HB-2844 and said the issue is not exemption of fuel used off the road, but rather how it is claimed.

The hearing on HB-2844 was concluded.

The meeting was adjourned at 2:00 p.m.

Donald Rex Crowell

Donald Rex Crowell, Chairman

MEMORANDUM

TO: The Honorable Rex Crowell, Chairman
House Committee on Transportation

FROM: Harley T. Duncan, Secretary
Department of Revenue

DATE: February 16, 1988

RE: House Bill No. 2821

Thank you for the opportunity to appear before you today on House Bill No. 2821.

House Bill No. 2821 would amend K.S.A. 79-3480a of the Special Fuels Tax Act by increasing the penalty provision for delinquent special fuels taxes from 5% to 10% and by deleting the provision which authorizes the director of taxation discretion to waive interest assessed on delinquent special fuel taxes.

In addition, this legislation would add language which would authorize the director of taxation to enter into an agreement in writing with a taxpayer allowing for an extension of time to the statute of limitations for assessing special fuel taxes. This extension would also be available for extending the statute of limitations with respect to filing a claim for refund of special fuel taxes.

The Department supports House Bill No. 2821. With respect to the amendments of the penalty and interest provisions, these amendments will make the special fuel tax act consistent with the penalty and interest provisions contained in the sales and compensating tax acts. It is not only confusing to Department personnel but to taxpayers as well when there are varying rates of penalty for delinquent taxes and when some interest can be waived and other interest can not. This is an attempt to have some consistency between taxes administered by the Department.

As for the new provision for extending the statute of limitations, the current statute of limitations requires the Department to assess any special fuels tax within three years or the tax is lost. This new provision will provide the director of taxation with the authority to extend the statute of limitations when the taxpayer so agrees. This will allow the Department to continue with an audit even though the statute of limitations is drawing to a close. The language is identical to that found in the Kansas Retailers' Sales Tax Act at K.S.A. 79-3609.

Once again, the Department supports House Bill No. 2821. In addition, the Department would recommend identical amendments to the motor-vehicle fuel tax act, the LP-gas tax act and the interstate motor fuel user tax act. This will allow all of the motor fuel taxes to be treated in the same manner.

Thank you for the opportunity to appear before you on House Bill No. 2821. I would be glad to answer any questions.

Att. 1

Motor-Vehicle Fuels

K.S.A. 79-3410 starting with second paragraph:

The director may waive the requirement for monthly reports from licensed manufacturers, who are also licensed distributors, when all taxes accrued under either or both licenses or which might accrue are paid under the distributor license. All taxes imposed under the provisions of this act not paid as aforesaid on or before the twenty-fifth day of the month succeeding the calendar month in which the motor-vehicle fuels were received by the distributor, manufacturer or importer shall be deemed delinquent and shall bear interest at the rate per month or fraction thereof, prescribed by ~~K.S.A. 79-2968(a)~~ **subsection (a) of K.S.A. 79-2968, and amendments thereto,** from such due date until paid, and in addition thereto there is hereby imposed upon all amounts of such taxes remaining due and unpaid after such due date a penalty in the amount of ~~five percent~~ **10%** thereof, and shall be by the director added to and collected as a part of said taxes. If the distributor, manufacturer, or importer furnishes evidence to the director of taxation that the delinquency was due to causes beyond ~~his~~ **such person's** reasonable control, and if in the opinion of the director the delinquency was not the result of willful negligence of the distributor, manufacturer, or importer, the penalty ~~or interest or both~~ may be waived or reduced by the director.

K.S.A. 79-3415

Each distributor, manufacturer or importer and every dealer, shall maintain and keep, for a period of ~~two~~ **three** years, a full record or records of all motor-vehicle fuels received, used or sold and delivered within this state by such distributor, manufacturer or importer, together with invoices and bills of lading thereof, and such other pertinent papers as may be required by the director.

Except in the case of a fraudulent return or of failure to file a return, every deficiency shall be assessed under this act within three years after the last day of the next succeeding calendar month following the monthly period for which the amount is proposed to be determined or within three years after the return is filed, whichever period expires the later.

Before the expiration of time prescribed in this section for the assessment of additional tax, the director is authorized to enter into an agreement in writing with the taxpayer consenting to the extension of the periods of limitations for the assessment of tax, at any time prior to the expiration of the period of limitations. The period so agreed upon may be extended by subsequent agreements in writing made before the expiration of the period previously agreed upon.

L.P.-Gas

K.S.A. 79-3495 starting with second paragraph

Any tax imposed under the provisions of this act not paid as aforesaid on or before the twenty-fifth day of the month succeeding the calendar month in which the LP-gas was used shall be deemed delinquent and shall bear interest at the rate per month or fraction thereof, prescribed by ~~K.S.A. 79-2968(a)~~ **subsection (a) of K.S.A. 79-2968, and amendments thereto,** from such due date until paid, and in addition thereto there is hereby imposed upon all amounts of such taxes remaining due and unpaid after such due date a penalty in the amount of ~~five percent~~ **10%** thereof, and shall be by the director added to and collected as a part of said taxes. If the LP-gas user or LP-gas dealer furnishes evidence to the director of taxation that

the delinquency was due to causes beyond ~~his~~ **such** person's reasonable control, and if in the opinion of the director the delinquency was not the result of willful negligence of the LP-gas user or LP-gas dealer, the penalty ~~or interest or both~~ may be waived or reduced by the director.

K.S.A. 79-3499 - add the following two paragraphs at the end of the present 79-3499

Except in the case of a fraudulent return or of failure to file a return, every deficiency shall be assessed under this act within three years after the last day of the next succeeding calendar month following the monthly period for which the amount is proposed to be determined or within three years after the return is filed, whichever period expires the later.

Before the expiration of time prescribed in this section for the assessment of additional tax or the filing of a claim for a refund, the director is authorized to enter into an agreement in writing with the taxpayer consenting to the extension of the periods of limitations for the assessment of tax or the filing of a claim for refund, at any time prior to the expiration of the period of limitations. The period so agreed upon may be extended by subsequent agreements in writing made before the expiration of the period previously agreed upon.

Interstate Motor Fuel

K.S.A. 79-34,111(c)

All taxes imposed under this act which are not paid as provided in this section shall be delinquent and shall bear interest at the rate per month or fraction thereof prescribed by ~~K.S.A. 79-2968(a)~~ **subsection (a) of K.S.A. 79-2968, and amendments thereto,** from the date due until paid, and in addition thereto there is hereby imposed upon all amounts of such taxes remaining due and unpaid after the due date a penalty in the amount of ~~five percent~~ **10%** thereof, and such interest and penalty shall be added to and collected as a part of such taxes.

K.S.A. 79-34,111(d)

If any interstate motor fuel user establishes by evidence satisfactory to the director that the failure to file a report and pay the tax, within the time prescribed, was due to ~~reasonable~~ causes **beyond such person's reasonable control,** and ~~was not intentional or willful~~ **if in the opinion of the director the delinquency was not the result of willful negligence of the interstate** motor fuel user, ~~the director may waive~~ the penalty ~~and interest~~ may be waived or reduced by the director ~~provided for by this section~~.

K.S.A. 79-34,113 add subsection (d) and (e)

(d) Except in the case of a fraudulent return or of failure to file a return, every deficiency shall be assessed under this act within three years after the last day of the next succeeding calendar month following the monthly period for which the amount is proposed to be determined or within three years after the return is filed, whichever period expires the later.

(e) Before the expiration of time prescribed in this section for the assessment of additional tax or the filing of a claim for a refund, the

director is authorized to enter into an agreement in writing with the taxpayer consenting to the extension of the periods of limitations for the assessment of tax or the filing of a claim for refund, at any time prior to the expiration of the period of limitations. The period so agreed upon may be extended by subsequent agreements in writing made before the expiration of the period previously agreed upon.

February 16, 1988

Mr. Chairman and Committee Members:

I want to thank you for allowing me the opportunity to appear before you today. I am F. E. Bliss of Longton, KS. I am a private hauler of Solid Waste and have the contracts to haul all of Elk and Greenwood counties. I wish to speak to HB 2844 which exempts waste haulers from 35 % of motor fuels tax.

In 1984, the Motor Fuel Tax Audit Unit, Sales and Excise Tax Bureau, Kansas Department of Revenue granted a 35% fuel tax exemption on refuse trucks. Late last fall the same department began disallowing the 35% exemption.

The packet with the results of tests of Fuel Usage by Refuse Vehicles has a lot of information. The two charts do a good job of summarizing the results. The charts clearly show whichever method of testing is used, on routes of less than 70 miles the average non-road use is well above the 35%.

We encourage you to vote in favor of HB 2844. Also, we encourage you to take whatever steps necessary to in insure that small operators can participate.

NSWMA

National Solid Wastes Management Association

FINAL RESULTS OF THE NATIONAL SOLID WASTES MANAGEMENT ASSOCIATION TESTS OF FUEL USAGE BY REFUSE VEHICLES

AUGUST 1, 1984

Attachment 3

1730 Rhode Island Ave., NW Suite 1000 Washington, DC 20036 (202) 659-4613

NSWMA

National Solid Wastes Management Association

FUEL TAX EXEMPTION FOR THE REFUSE INDUSTRY

State and federal fuel taxes are levied as user charges apportioning the cost of building and maintaining the nation's highways among those who use them. Over the past decade, there have been enormous increases in fuel taxed in every state and the federal diesel fuel tax has increased 275 percent from 4¢ a gallon to 15¢ a gallon specifically because Congress wanted to assess a greater share of the cost of maintaining our highway system on the trucking industry.

As an industry, we recognize both the value of well-maintained highways and our obligation to pay an equitable portion of the cost of their upkeep. We support prime reliance on fuel taxes on fuel consumed to power vehicles on public highways as the most equitable way to raise the monies necessary to build and maintain our highway system. Heavier vehicles and those logging more miles necessarily consume greater amounts of fuel and thus pay an appropriately larger share of the cost.

The Special Case for Refuse Vehicles

The waste industry consumes a considerable amount of fuel for purposes other than for propelling its vehicles on public highways. Fuel is used to power hydraulic functions associated with refuse collection and to run the truck while on the private property of commercial or industrial customers and at the disposal facility. Fuel is consumed during the operation of power take-off (PTO) units which activate all internal refuse vehicle hydraulic systems except brake systems. These systems raise, empty, and place containers, raise the body cover, compact the refuse, power the cart dumpers, power the container winch when installed, open the back of the truck prior to ejection, and eject the compacted refuse at the disposal facility. The PTO is driven by the truck's engine, consuming fuel that would otherwise be used to propel the truck on the highways. For some types of vehicles, more than half of the fuel is used to power the PTO. Additionally, as much as 90% of some refuse routes are run on private property, such as airports, industrial parks and the like. Refuse vehicles also expend considerable fuel off-highway in landfills or at resource recovery facilities. Refuse companies pay tax on fuel used to power the PTO and operate off-highway even though these uses are totally unrelated to fuel consumption to power the vehicle on public highways which is the purpose of the fuel tax in the first place.

1730 Rhode Island Ave., NW Suite 1000 Washington, DC 20036 (202) 659-4613

Fuel Tax Rebates

Many states have recognized the principle of exempting from fuel taxes those portions of fuel used for non-road purposes. Generally, farm and construction equipment enjoy total tax exemption because they do not use public highways at all; refuse and redimix concrete trucks have been accorded special consideration in many states due to the fact that a significant percentage of the fuel used in these vehicles is used for non-road purposes. Thirteen states have specifically granted exemptions for refuse vehicles ranging from 41% in Indiana down to 23% in California (the California program was put in place years ago and no longer accurately reflects amounts of fuel used for off-road purposes by modern refuse vehicles). In just the past several years, Florida, Kansas, and Virginia have enacted 35% rebates, North Carolina 33-1/3%, and Texas 30%. Earlier this year, Indiana established a 41% rebate.

Refuse Vehicles in Use

Current estimates indicated that rear-loading packer vehicles constitute about 55% of the industry; side loading vehicles about 15%; front loading about 15%; roll-off vehicles about 10%; and satellite vehicles including transfer trailers, etc., make up the remaining 5%. Thus, compactor trucks constitute about 85% of the fleet.

Metering

Constant fuel metering of refuse vehicles, except under test conditions, is not a practical method for determining off-road use. The meters are expensive and, given the rough terrain of landfills in particular, damage has been the rule. Use of meters on a permanent basis is not cost-effective due to labor necessary to record the data and difficulties in maintaining the meters under rugged operating conditions. Notwithstanding these problems, the National Solid Wastes Management Association has conducted a series of test runs using fuel meters. These tests were used to verify the test protocol described below. The test proved two things: first, the meters are expensive to operate, record, or maintain and, second, refuse vehicles utilize an average of 35-40% of the fuel they consume to power the PTO.

NSWMA Protocol and Test Results

Fifteen years ago, fuel taxes were a small proportion of what they are today. With the explosion of gasoline prices in the early-mid 70s and the consequent fuel conservation measures, the highway trust funds operated by federal and state governments began to feel the pinch. Congress and state legislators responded by enacting dramatic increases in fuel taxes. Unfortunately for the refuse industry, operational imperatives have prevented any substantial fuel economies. Because the trucks generally operate in stop-and-go local traffic and use such a substantial portion of the fuel to power the hydraulic

systems to load, compact, and eject their loads of solid waste, refuse vehicles average only about 3 miles per gallon fuel economy.

Lacking data to substantiate that portion of fuel used for off-road purposes, NSWMA, in 1980, developed a test protocol to determine non-road fuel usage and sponsored a limited number of fuel meter tests. The protocol was used for 37 test runs and fuel meters were used for 22 operating days. The test data was received from private hauling companies in various locations throughout the United States. The tests are divided into two separate groups. The first group is a series of 22 tests conducted with a HALDA on-board dual fuel/mileage recorder. This mileage recorder was set up to record fuel usage when the PTO was energized and also record total fuel usage. The second group of 37 tests used the NSWMA-developed protocol for determining total non-road usage by compactor vehicles.

Conclusion

Chart I clearly demonstrates that the normal refuse operation will result in about 50% of the fuel being used for non-road use for compactor trucks on a single load basis. Each truck will make two-three single runs per day of about 35-45 miles each. This will vary widely according to the local disposal situation.

Curve I clearly demonstrates that metered PTO fuel uses in the vicinity of 35-40%.

This documentation easily justifies a 35% fuel usage exemption on two-, three-, and four-axle single unit refuse trucks. The 35% represents the lower end of the refuse truck use spectrum. In fact, the industry is entitled to far more since the 35% figure represents only PTO usage and not the substantial amounts of additional fuel used while the vehicle is operating on private property.

Recommendation

The refuse industry should be granted a 35% fuel tax exemption for all single unit refuse trucks. Vehicle ownership be required to maintain documentation detailing the amounts of fuel issued to each vehicle.

NSWMA PROTOCOL TEST RESULTS

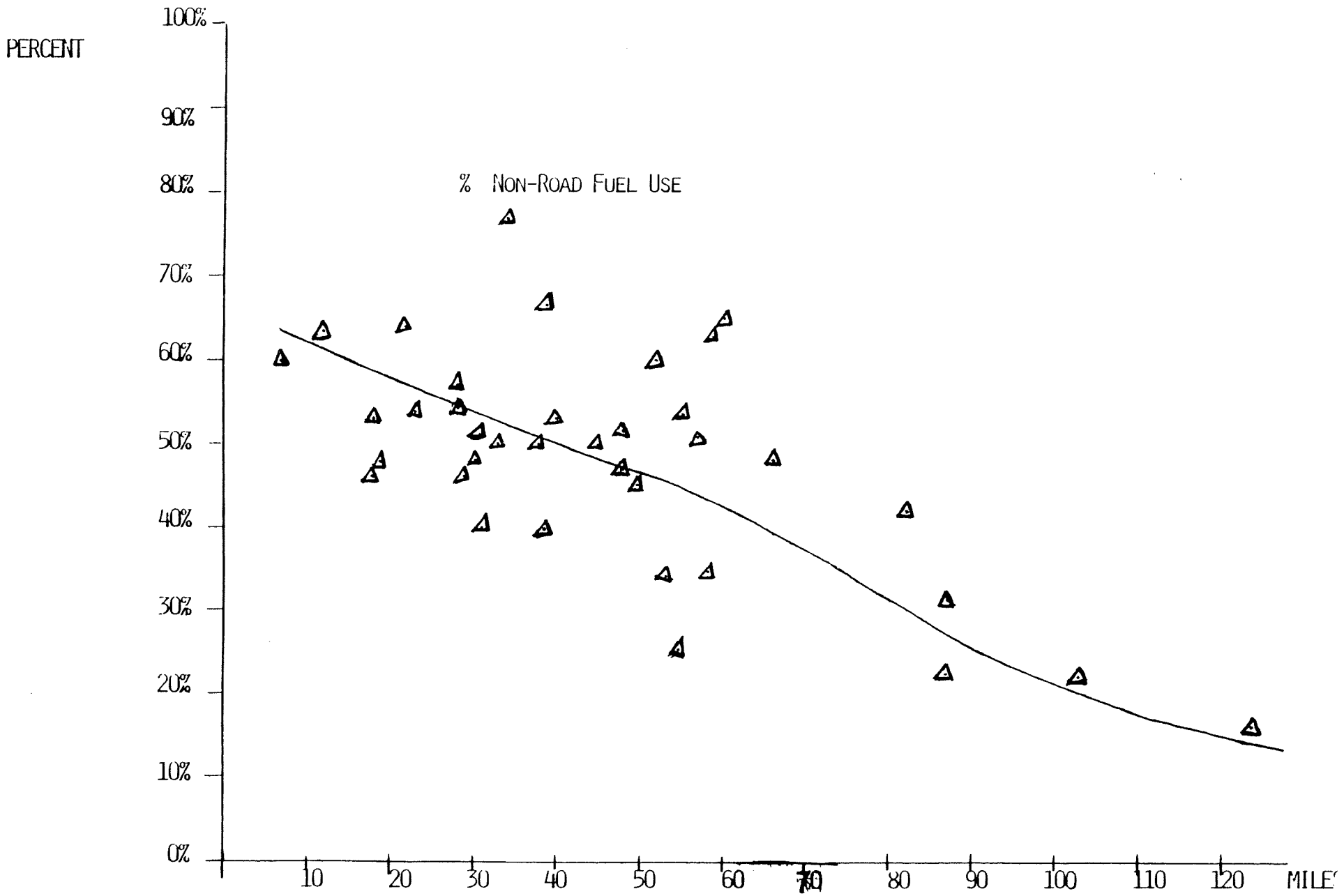
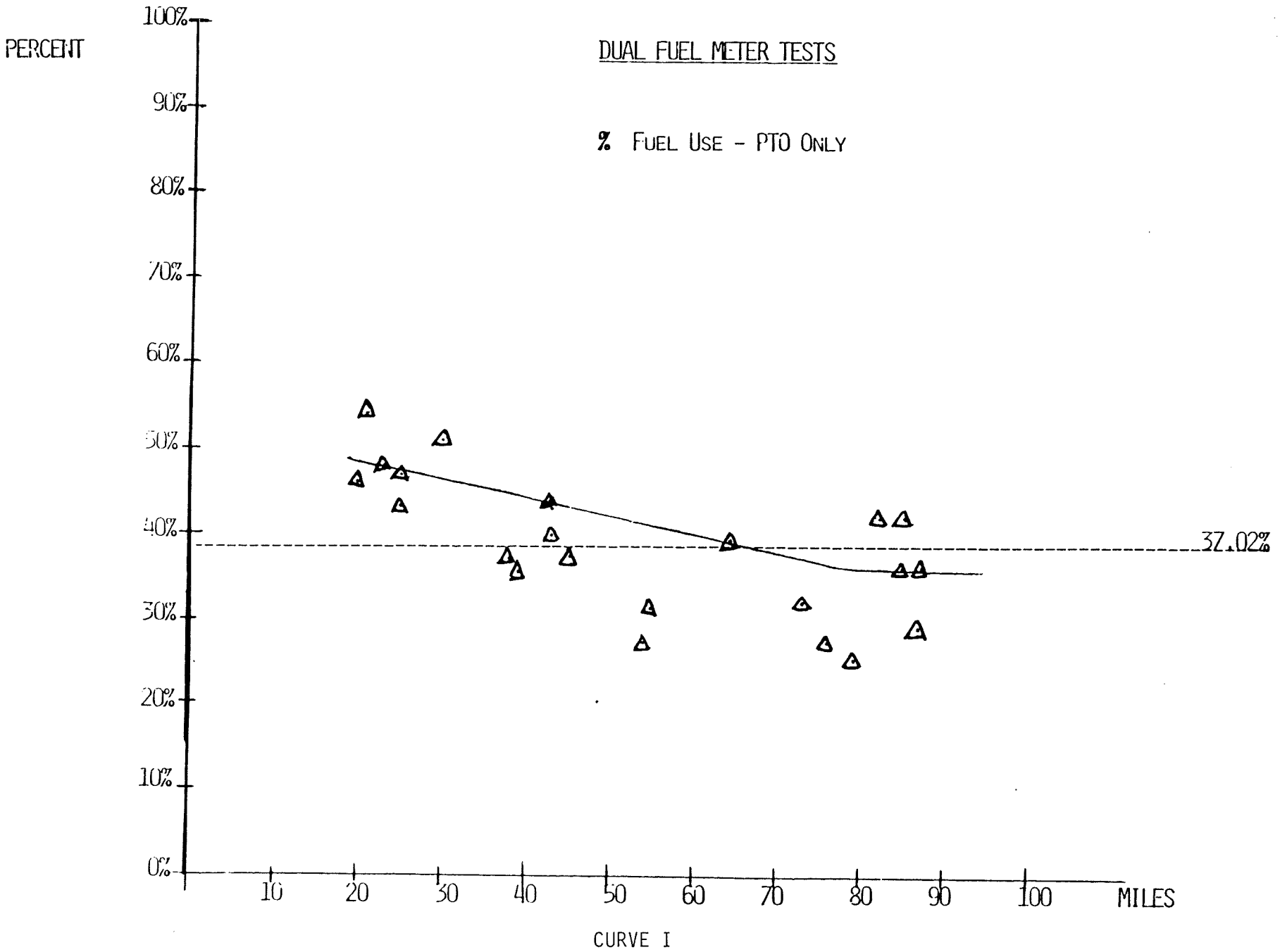


CHART I


PERCENT
DUAL FUEL METER TESTS
% Fuel Use - PTO Only
100%
90%
80%
70%
60%
50%
40%
30%
20%
10%
0%
37.02%
10
20
30
40
50
60
70
80
90
100
MILES

CURVE I

TEST PROCEDURE TO DETERMINE PTO AND OFF-ROAD FUEL USE IN REFUSE TRUCKS

The following test procedures are designed to provide information to calculate "PTO and off the road fuel use" by refuse trucks. The information will be used to show state officials that road tax deductions are necessary for refuse trucks because much of their fuel usage is "non-road" use. Evaluated test results will be maintained in NSWMA offices. The evaluated information will be provided to members as required for use in the various state programs. We have shown in several states that the controls built into the test such as accurately taking measurements, one half load on the check run, mileage, etc., are sufficiently rigorous to convince officials that the test represents actual conditions.

Conceptually, the fuel usage is determined by making two controlled runs over essentially the same route during the same time of day, recording the fuel used and mileage travelled for each run. The first run is a packing run in which the refuse is collected in the normal fashion. The results characterize PTO use, off road fuel use and all of the non-road usages of fuel. The second run is designed to simulate fuel use of an average refuse truck driven over the same route in the same traffic conditions, but with no packing (PTO usage) or travel through private alleys and other private property. The results characterize road use by the truck. The difference between the two runs is the fuel used which should be non-taxable.

The truck route selected should be representative of conditions in your business. Thus, if curbside pick-up is normal, then such a route should be selected. Where possible, we also need the weight of the truck emptied, half full, and full for background use. The following data elements and steps are required in conducting the test program:

<u>Packing Run</u>

1. Select the route that will result in a full load being delivered to the landfill, transfer station, or incinerator.

2. Brief the crew on the purpose of the test.

3. Top off the fuel tank. Read the mileage. (Please fill in odometer readings).

4. Direct the truck to proceed along its normal collection route, pick up and dump the load, and return directly to the base area.

5. Refill the fuel tank. Read the amount of fuel used and read the mileage. This represents the fuel used and mileage of an actual packing operation.

Control Run

6. Using the same truck, collect sufficient refuse to fill the body one half full. Return to the same fuel station that you did for the packing run and top off the fuel tank. Read the mileage.

   (NOTE: Filling the truck half full for the control run represents an average load that the truck experiences over the entire route. This is important to determine the average fuel used over the route when not packing).

7. Direct the truck to retrace the original route, (the packing run), keeping to the main roads wherever possible. Do not retrace pick-ups into dead-end alleys and alleys in general unless a significant detour could thereby be avoided. Running parallel to an alley system on the main road is acceptable. Proceed from the start, through the route, to the unloading point and return to the base area without actually unloading. Stay out of the landfill, etc., in this case.

8. Top off the fuel tank. Read the amount of fuel used and read the mileage. This represents the fuel used and the distance travelled on the check run.

9. The percent of off-road fuel used will be calculated as: fuel used in steps 1-5 MINUS FUEL USED IN STEPS 7-8 DIVIDED BY FUEL USED IN STEPS 1-5.

INFORMATION REQUESTED

Trucks fill tanks at_____(home base, at landfill, etc. where the truck is fueled).

Truck Description (check one):

Rear Loader_____ Gas or Diesel_____
Side Loader_____ Gas or Diesel_____
Front Loader_____ Gas or Diesel_____

Truck Manufacturer and Model:_____
_____. Year_____

Body Manufacturer and Model:_____
_____. Year_____

Cubic Yard Capacity:_____

Compactor Power System, Type and Location:_____

_____

Engine Type and Model:_____

Transmission Type and Model:_____

Packing Run:

Fuel Used (gallons to nearest tenth) Steps 1-5, (packing run)_____

Odometer Readings: Start_____ End_____

Mileage Travelled: (Steps 1-5)_____

Control Run:

Fuel Used (gallons to nearest tenth) steps 7-8, control run:_____

Odometer Reading: Start_____ End_____

Mileage Travelled (Steps 7-8)_____

Percent off Road Useage: (Step 9) (Fuel used Packing Run)-(Fuel used Control Run)=_____%

Where possible: Weight of truck empty_____
Weight of truck half full_____
Weight of truck full_____
Small Street map showing route (s) taken. Mileage from last pick-up point to landfill_____

State: Florida

City: Ft. Lauderdale

TYPE OF VEHICLE: Diesel Side Loader

ROUTE: Residential

PACKING TEST RUN: 33.4 miles using 13.1 gallons fuel

COMPARISON TEST RUN: 35.9 miles using 6.4 gallons fuel

NON-ROAD FUEL USAGE: 50.0 %

State: Florida

City: Ft. Lauderdale

TYPE OF VEHICLE: Diesel Side Loader

POUTE: Residential

PACKING TEST RUN: 28.8 miles using 16.2 gallons fuel

COMPARISON TEST RUN: 30.2 miles using 8.7 gallons fuel

NON-ROAD FUEL USAGE: 46.3 %

State: Indiana

City: Kokomo

TYPE OF VEHICLE: Gas Side Loader

ROUTE: Residential

PACKING TEST RUN: 57.9 miles using 30. gallons fuel

COMPARISON TEST RUN: 54.7 miles using 11.0 gallons fuel

NON-ROAD FUEL USAGE: 63.3 %

State: Indiana

City: Sellersburg

TYPE OF VEHICLE: Rear Loader

ROUTE: Residential

PACKING TEST RUN: 17.4 miles using 12 gallons fuel

COMPARISON TEST RUN: 18.1 miles using 6 gallons fuel

NON-ROAD FUEL USAGE: 50 %

State: Indiana

City: Sellersburg

TYPE OF VEHICLE: Diesel Rear Loader

ROUTE: Commercial

PACKING TEST RUN: 68 miles using 18.2 gallons fuel

COMPARISON TEST RUN: 49 miles using 7.9 gallons fuel

NON-ROAD FUEL USAGE: 57 %

State:

City:

TYPE OF VEHICLE:

ROUTE:

PACKING TEST RUN: miles using gallons fuel

COMPARISON TEST RUN: miles using gallons fuel

NON-ROAD FUEL USAGE: _____ %

State: Indiana

City: Kokomo

TYPE OF VEHICLE: Diesel Front Loader

ROUTE: Commercial

PACKING TEST RUN: 28.0 miles using 12.0 gallons fuel

COMPARISON TEST RUN: 18.0 miles using 5.4 gallons fuel

NON-ROAD FUEL USAGE: 55 %

State: Indiana

City: Muncie

TYPE OF VEHICLE: Diesel Front Loader

ROUTE: Commercial

PACKING TEST RUN: 48 miles using 17.7 gallons fuel

COMPARISON TEST RUN: 36 miles using 8.5 gallons fuel

NON-ROAD FUEL USAGE: 51.9 %

State: Kentucky

City: Louisville

TYPE OF VEHICLE: Diesel Rear Loader

ROUTE: Residential

PACKING TEST RUN: 38.5 miles using 10 gallons fuel

COMPARISON TEST RUN: 35.8 miles using 6 gallons fuel

NON-ROAD FUEL USAGE: 40 %

State: Massachusetts

City: Longmeadow

TYPE OF VEHICLE: Diesel RearLoader

ROUTE: Residential

PACKING TEST RUN: 28.0 miles using 7.0 gallons fuel

COMPARISON TEST RUN: 28.0 miles using 3.0 gallons fuel

NON-ROAD FUEL USAGE: 57.0 %

State: Michigan

City: Ann Arbor

TYPE OF VEHICLE: Diesel RearLoader

POUTE: Residential

PACKING TEST RUN: 33.9 miles using 17.0 gallons fuel

COMPARISON TEST RUN: 33.1 miles usirg 4.0 gallons fuel

NON-ROAD FUEL USAGE: 77.0 %

State: Michigan

City: Ann Arbor

TYPE OF VEHICLE: Diesel SideLoader

ROUTE: Residential

PACKING TEST RUN: 57.2 miles using 19.0 gallons fuel

COMPARISON TEST RUN: 50.5 miles using 9.0 gallons fuel

NON-ROAD FUEL USAGE: 53.0 %

State: Michigan

City: Ann Arbor

TYPE OF VEHICLE: Diesel Front Loader

ROUTE: Commercial

PACKING TEST RUN: 22.9 miles using 9.4 gallons fuel

COMPARISON TEST RUN: 16.3 miles using 4.3 gallons fuel

NON-ROAD FUEL USAGE: 54 %

State: Michigan

City: Lansing

TYPE OF VEHICLE: Diesel Front Loader

ROUTE: Commercial

PACKING TEST RUN: 19 miles using 6.6 gallons fuel

COMPARISON TEST RUN: 17 miles using 3.4 gallons fuel

NON-ROAD FUEL USAGE: 48 %

State: Michigan

City: Lansing

TYPE OF VEHICLE: Diesel Front Loader

ROUTE: Commercial

PACKING TEST RUN: 18 miles using 8.2 gallons fuel

COMPARISON TEST RUN: 14 miles using 4.4 gallons fuel

NON-ROAD FUEL USAGE: 46 %

State: Missouri

City: Florissant

TYPE OF VEHICLE: Gas Rearloader

ROUTE: Residential

PACKING TEST RUN: 30 miles using 15.5 gallons fuel

COMPARISON TEST RUN: 27 miles using 8.1 gallons fuel

NON-ROAD FUEL USAGE: 48 %

State: Missouri

City: Florissant

TYPE OF VEHICLE: Diesel Frontloader

ROUTE: Commercial

PACKING TEST RUN: 59 miles using 20.0 gallons fuel

COMPARISON TEST RUN: 52 miles using 7.0 gallons fuel

NON-ROAD FUEL USAGE: 65 %

State: Missouri

City: Florissant

TYPE OF VEHICLE: Gas Rearloader

ROUTE: Residential

PACKING TEST RUN: 31 miles using 17.9 gallons fuel

COMPARISON TEST RUN: 30 miles using 10.7 gallons fuel

NON-ROAD FUEL USAGE: 40 %

State: New York
City: Henrietta
TYPE OF VEHICLE: Diesel Rear Loader
ROUTE: Residential
PACKING TEST RUN: 72 miles using 27.0 gallons fuel
COMPARISON TEST RUN: 63 miles using 18.2 gallons fuel
NON-ROAD FUEL USAGE: 32.6 %

State: New York
City: Irondequoit
TYPE OF VEHICLE: Diesel Rear Loader
ROUTE: Residential
PACKING TEST RUN: 21.4 miles using 11.0 gallons fuel
COMPARISON TEST RUN: 20.7 miles using 4.0 gallons fuel
NON-ROAD FUEL USAGE: 63.6 %

State: New York
City: Irondequoit
TYPE OF VEHICLE: Diesel Rear Loader
ROUTE: Residential
PACKING TEST RUN: 21.5 miles using 14.0 gallons fuel
COMPARISON TEST RUN: 21.1 miles using 3.5 gallons fuel
NON-ROAD FUEL USAGE: 82.1 %

State: New York
City: Manaronek
TYPE OF VEHICLE: Diesel Rear Loader
ROUTE: Residential
PACKING TEST RUN: 50 miles using 13 gallons fuel
COMPARISON TEST RUN: 50 miles using 6 gallons fuel
NON-ROAD FUEL USAGE: 54 %

State: New York
City: Manaronek
TYPE OF VEHICLE: Diesel Front Loader
ROUTE: Commercial
PACKING TEST RUN: 106 miles using 32 gallons fuel
COMPARISON TEST RUN: 106 miles using 21 gallons fuel
NON-ROAD FUEL USAGE: 34.3 %

State:
City:
TYPE OF VEHICLE:
ROUTE:
PACKING TEST RUN: miles using gallons fuel
COMPARISON TEST RUN: miles using gallons fuel
NON-ROAD FUEL USAGE: _____ %

State: New York

City: Hopewell Jct

TYPE OF VEHICLE: Diesel Rear Loader

ROUTE: Residential

PACKING TEST RUN: 31 miles using 28 gallons fuel

COMPARISON TEST RUN: 27 miles using 12 gallons fuel

NON-ROAD FUEL USAGE: 57 %

State:

City:

TYPE OF VEHICLE:

ROUTE:

PACKING TEST RUN: miles using gallons fuel

COMPARISON TEST RUN: miles using gallons fuel

NON-ROAD FUEL USAGE: _____ %

State:

City:

TYPE OF VEHICLE:

ROUTE:

PACKING TEST RUN: miles using gallons fuel

COMPARISON TEST RUN: miles using gallons fuel

NON-ROAD FUEL USAGE: _____ %

State: New York

City: Buffalo

TYPE OF VEHICLE: Diesel Front Loader

ROUTE: Commercial

PACKING TEST RUN: 57 miles using 20 gallons fuel

COMPARISON TEST RUN: 56 miles using 13 gallons fuel

NON-ROAD FUEL USAGE: 35 %

State: New York

City: East Rochester

TYPE OF VEHICLE: Diesel Rear Loader

POUTE: Residential

PACKING TEST RUN: 52 miles using 15 gallons fuel

COMPARISON TEST RUN: 52 miles using 5.9 gallons fuel

NON-ROAD FUEL USAGE: 60 %

State: New York

City: East Rochester

TYPE OF VEHICLE: Diesel Front Loader

ROUTE: Commercial

PACKING TEST RUN: 39 miles using 15 gallons fuel

COMPARISON TEST RUN: 36 miles using 5 gallons fuel

NON-ROAD FUEL USAGE: 67 %

State: New York
City: Great Neck

TYPE OF VEHICLE: Diesel Rearloader
ROUTE: Residential
PACKING TEST RUN: 22 miles using 8.4 gallons fuel
COMPARISON TEST RUN: 19 miles using 3 gallons fuel
NON-ROAD FUEL USAGE: 643 %

State: New York
City: Kenmore

TYPE OF VEHICLE: Diesel Front Loader
ROUTE: Commercial
PACKING TEST RUN: 55 miles using 15 gallons fuel
COMPARISON TEST RUN: 40 miles using 7 gallons fuel
NON-ROAD FUEL USAGE: 53 %

State: New York
City: Kenmore

TYPE OF VEHICLE: Diesel Front Loader
ROUTE: Commercial
PACKING TEST RUN: 87 miles using 18 gallons fuel
COMPARISON TEST RUN: 82 miles using 14 gallons fuel
NON-ROAD FUEL USAGE: 22 %

State: New York

City: Kenmore

TYPE OF VEHICLE: Diesel FrontLoader

ROUTE: Commercial

PACKING TEST RUN: 48 miles using 11.4 gallons fuel

COMPARISON TEST RUN: 40 miles using 6.3 gallons fuel

NON-ROAD FUEL USAGE: 45 %

State: New York

City: Kenmore

TYPE OF VEHICLE: Diesel FrontLoader

ROUTE: Commercial

PACKING TEST RUN: 55 miles using 12 gallons fuel

COMPARISON TEST RUN: 50 miles using 9 gallons fuel

NON-ROAD FUEL USAGE: 25 %

State: New York

City: Kenmore

TYPE OF VEHICLE: Diesel FrontLoader

ROUTE: Commercial

PACKING TEST RUN: 55 miles using 12 gallons fuel

COMPARISON TEST RUN: 37 miles using 8 gallons fuel

NON-ROAD FUEL USAGE: 33.3 %

State: New York
City: Model City
TYPE OF VEHICLE: Diesel Front Loader
ROUTE: Commercial
PACKING TEST RUN: 82.2 miles using 27.7 gallons fuel
COMPARISON TEST RUN: 77.1 miles using 18 gallons fuel
NON-ROAD FUEL USAGE: 42.2 %

State: New York
City: New Hyde Park
TYPE OF VEHICLE: Diesel Rear Loader
ROUTE: Residential
PACKING TEST RUN: 53 miles using 20.4 gallons fuel
COMPARISON TEST RUN: 48 miles using 13.3 gallons fuel
NON-ROAD FUEL USAGE: 34 %

State: New York
City: New Hyde Park
TYPE OF VEHICLE: Diesel Front Loader
ROUTE: Commercial
PACKING TEST RUN: 44.9 miles using 20.9 gallons fuel
COMPARISON TEST RUN: 39 miles using 10.8 gallons fuel
NON-ROAD FUEL USAGE: 50 %

State: New York

City: New Hyde Park

TYPE OF VEHICLE: Diesel Frontloader

ROUTE: Commercial

PACKING TEST RUN: 38.5 miles using 13.9 gallons fuel

COMPARISON TEST RUN: 31.2 miles using 6.9 gallons fuel

NON-ROAD FUEL USAGE: 50 %

State: New York

City: Parma

TYPE OF VEHICLE: Diesel Rear Loader

ROUTE: Residential

PACKING TEST RUN: 66 miles using 29.1 gallons fuel

COMPARISON TEST RUN: 63 miles using 15.2 gallons fuel

NON-ROAD FUEL USAGE: 48 %

State: Ohio

City: Kettering

TYPE OF VEHICLE: Diesel Sideloader

ROUTE: Residential

PACKING TEST RUN: 6.7 miles using 3.0 gallons fuel

COMPARISON TEST RUN: 6.7 miles using 1.2 gallons fuel

NON-ROAD FUEL USAGE: 60 %

State: Ohio

City: Miamisburg

TYPE OF VEHICLE: Diesel SideLoader

ROUTE: Residential

PACKING TEST RUN: 30.3 miles using 10.0 gallons fuel

COMPARISON TEST RUN: 30.3 miles using 4.9 gallons fuel

NON-ROAD FUEL USAGE: 51 %

State: Ohio

City: Moraine

TYPE OF VEHICLE: Diesel SideLoader

ROUTE: Residential

PACKING TEST RUN: 17.8 miles using 7.5 gallons fuel

COMPARISON TEST RUN: 18 miles using 3.5 gallons fuel

NON-ROAD FUEL USAGE: 53.3 %

State: Ohio

City: Moraine

TYPE OF VEHICLE: Diesel SideLoader

ROUTE: Residential

PACKING TEST RUN: 12.6 miles using 5.5 gallons fuel

COMPARISON TEST RUN: 12.4 miles using 2.0 gallons fuel

NON-ROAD FUEL USAGE: 63.6 %

State: Ohio

City: Wooster

TYPE OF VEHICLE: Diesel Sidloader

ROUTE: Residential

PACKING TEST RUN: 87.2 miles using 16 gallons fuel

COMPARISON TEST RUN: 87.2 miles using 11 gallons fuel

NON-ROAD FUEL USAGE: 31.2 %

State: Ohio

City: Wooster

TYPE OF VEHICLE: Gas Sidloader

ROUTE: Residential

PACKING TEST RUN: 123 miles using 23 gallons fuel

COMPARISON TEST RUN: 122 miles usirg 19.3 gallons fuel

NON-ROAD FUEL USAGE: 16.0 %

State: South Dakota

City: Rapid City

TYPE OF VEHICLE: Gas Rearloader

ROUTE: Residential

PACKING TEST RUN: 40 miles using 18.8 gallons fuel

COMPARISON TEST RUN: 39 miles using 8.7 gallons fuel

NON-ROAD FUEL USAGE: 53.7 %

State: Virginia

City: Chatham

TYPE OF VEHICLE: Diesel FrontLoader

ROUTE: Commercial

PACKING TEST RUN: 113 miles using 18 gallons fuel

COMPARISON TEST RUN: 106 miles using 14 gallons fuel

NON-ROAD FUEL USAGE: 22.2 %

State: Wisconsin

City: Manitowac

TYPE OF VEHICLE: Diesel RearLoader

ROUTE: Residential

PACKING TEST RUN: 49.3 miles using 21.8 gallons fuel

COMPARISON TEST RUN: 50.2 miles using 12.5 gallons fuel

NON-ROAD FUEL USAGE: 42.6 %

State:

City:

TYPE OF VEHICLE:

ROUTE:

PACKING TEST RUN: miles using gallons fuel

COMPARISON TEST RUN: miles using gallons fuel

NON-ROAD FUEL USAGE: _____ %

NSWMA

National Solid Wastes Management Association

STATE TAX FUEL REBATES

STATE	YEAR ENACTED	REBATE	METER/ DOCUMENTATION	LEGISLATION/ ADMIN. RULE
CA	1971	23%	X	
CO	1977	25%	X	LEGISLATION
FL	1980	35%		LEGISLATION
IA	1987	30%	X	ADMIN. RULE
IL	1977	25%		ADMIN. RULE
IN	1982	41%		LEGISLATION
KS	1984	35%	X	ADMIN. RULE
MD	1986	25%	X	LEGISLATION
MO	1985	30%		LEGISLATION
NC	1982	33%		LEGISLATION
OR	1977	25%	X	ADMIN. RULE
TX	1984	30%		ADMIN. RULE
VA	1985	35%	X	LEGISLATION
WA	1983	25%	X	

APRIL, 1987

1730 Rhode Island Ave., NW Suite 1000 Washington, DC 20036 (202) 659-4613

	JULY '86 ##4	AUGUST '86 ##4	SEPT '86 ##4	OCT '86 ##4
TOTAL MILES	964.000	1,176.000	1,060.000	1,169.000
FUEL/MONTH	541.100	614.000	507.700	517.300
LBS. DUMPED	172,660	191,520	153,490	144,630
TIMES DUMPE	14.000	15.000	13.000	13.000
LBS/LOAD	12,332.857	12,768.000	11,806.923	11,125.385
MPG	1.782	1.915	2.088	2.260
FUEL/DAY	28.479	29.238	33.847	28.739
LBS/CUST	49.219	49.694	57.790	43.006
MILES/DAY	50.737	56.000	70.667	64.944
CUST/MILE	3.639	3.277	2.506	2.877
FUEL COST	345.492	446.685	355.136	355.282
$FUEL/MILE	0.350	0.380	0.335	0.304
$FUEL/CUST	0.098	0.116	0.134	0.106
DUMP COST	301.000	322.500	279.500	279.500
$DUMP/CUST	0.086	0.084	0.105	0.083
$DUMP/TON	3.487	3.368	3.642	3.865

	JULY '86 ##9	AUGUST '86 ##9	SEPT '86 ##9	OCT '86 ##9
TOTAL MILES	877.000	745.000	936.000	884.000
FUEL/MONTH	337.000	285.000	306.000	303.000
LBS. DUMPED	377,140	347,190	332,942	303,300
TIMES DUMPE	21.000	19.000	19.000	19.000
LBS/LOAD	17,959.048	18,273.158	17,523.263	15,963.158
MPG	2.602	2.614	3.059	2.917
FUEL/DAY	14.652	13.571	13.909	13.174
LBS/CUST	53.021	53.014	48.726	43.131
MILES/DAY	38.130	35.476	42.545	38.435
CUST/MILE	8.111	8.791	7.300	7.955
FUEL COST	215.343	211.755	221.544	217.403
$FUEL/MILE	0.246	0.284	0.237	0.246
$FUEL/CUST	0.030	0.032	0.032	0.031
DUMP COST	451.500	408.500	408.500	408.500
$DUMP/CUST	0.063	0.062	0.060	0.058
$DUMP/TON	2.394	2.353	2.454	2.694

	JULY '86 ##10	AUGUST '86 ##10	SEPT '86 ##10	OCT '86 ##10
TOTAL MILES	0.000	0.000	0.000	0.000
FUEL/MONTH	492.000	448.000	400.000	416.000
LBS. DUMPED	588,120	561,400	548,060	422,380
TIMES DUMPE	31.000	28.000	28.000	24.000
LBS/LOAD	18,971.613	20,050.000	19,573.571	17,599.167
MPG	0.000	0.000	0.000	0.000
FUEL/DAY	21.391	21.333	18.182	19.810
LBS/CUST	59.191	61.944	57.048	46.801
MILES/DAY	0.000	0.000	0.000	0.000
CUST/MILE	0.000	0.000	0.000	0.000
FUEL COST	314.388	332.864	289.600	298.480
$FUEL/MILE	0.000	0.000	0.000	0.000
$FUEL/CUST	0.032	0.037	0.030	0.033
DUMP COST	875.750	791.000	791.000	678.000
$DUMP/CUST	0.088	0.087	0.082	0.075
$DUMP/TON	2.978	2.818	2.887	3.210

Att. 4

	JULY '86 ##11	AUGUST '86 ##11	SEPT '86 ##11	OCT '86 ##11
TOTAL MILES	1,081.000	1,000.000	1,045.000	1,060.000
FUEL/MONTH	433.000	435.000	423.000	420.000
LBS. DUMPED	349,770	337,590	307,450	274,790
TIMES DUMPE	23.000	22.000	21.000	19.000
LBS/LOAD	15,207.391	15,345.000	14,640.476	14,462.632
MPG	2.497	2.299	2.470	2.524
FUEL/DAY	18.826	20.714	19.227	18.261
LBS/CUST	62.325	65.361	55.839	47.607
MILES/DAY	47.000	47.619	47.500	46.087
CUST/MILE	5.191	5.165	5.269	5.445
FUEL COST	276.687	323.205	306.252	301.350
$FUEL/MILE	0.256	0.323	0.293	0.284
$FUEL/CUST	0.049	0.063	0.056	0.052
DUMP COST	494.500	473.000	451.500	408.500
$DUMP/CUST	0.088	0.092	0.082	0.071
$DUMP/TON	2.828	2.802	2.937	2.973

	JULY '86 ##12	AUGUST '86 ##12	SEPT '86 ##12	OCT '86 ##12
TOTAL MILES	1,029.000	728.000	939.000	1,049.000
FUEL/MONTH	496.500	216.000	268.000	336.000
LBS. DUMPED	295,020	177,120	168,200	210,500
TIMES DUMPE	12.000	8.000	8.000	10.000
LBS/LOAD	24,585.000	22,140.000	21,025.000	21,050.000
MPG	2.073	3.370	3.504	3.122
FUEL/DAY	22.568	16.615	15.765	16.800
LBS/CUST	71.921	74.545	53.841	58.262
MILES/DAY	46.773	56.000	55.235	52.450
CUST/MILE	3.986	3.264	3.327	3.444
FUEL COST	317.264	160.488	194.032	241.080
$FUEL/MILE	0.308	0.220	0.207	0.230
$FUEL/CUST	0.077	0.068	0.062	0.067
DUMP COST	339.000	226.000	226.000	282.500
$DUMP/CUST	0.083	0.095	0.072	0.078
$DUMP/TON	2.298	2.552	2.687	2.684

	JULY '86 ##14	AUGUST '86 ##14	SEPT '86 ##14	OCT '86 ##14
TOTAL MILES	1,925.000	1,688.000	1,655.000	1,954.000
FUEL/MONTH	901.100	711.000	646.700	815.100
LBS. DUMPED	244,120	250,640	270,010	216,560
TIMES DUMPE	25.000	25.000	26.000	23.000
LBS/LOAD	9,764.800	10,025.600	10,385.000	9,415.652
MPG	2.136	2.374	2.559	2.397
FUEL/DAY	39.178	35.550	30.795	38.814
LBS/CUST	51.874	60.381	62.171	58.231
MILES/DAY	83.696	84.400	78.810	93.048
CUST/MILE	2.445	2.459	2.624	1.903
FUEL COST	575.352	517.253	452.367	559.811
$FUEL/MILE	0.299	0.306	0.273	0.286
$FUEL/CUST	0.122	0.125	0.104	0.151
DUMP COST	537.500	537.500	559.000	494.500
$DUMP/CUST	0.114	0.129	0.129	0.133
$DUMP/TON	4.404	4.289	4.141	4.567

	JULY '86 ##15	AUGUST '86 ##15	SEPT '86 ##15	OCT '86 ##15
TOTAL MILES	0.000	0.000	0.000	0.000
FUEL/MONTH	372.000	332.000	351.000	279.000
LBS. DUMPED	392,880	396,020	368,360	273,020
TIMES DUMPE	18.000	16.000	16.000	13.000
LBS/LOAD	21,826.667	24,751.250	23,022.500	21,001.538
MPG	0.000	0.000	0.000	0.000
FUEL/DAY	16.174	15.810	16.714	13.950
LBS/CUST	53.042	59.329	55.260	43.558
MILES/DAY	0.000	0.000	0.000	0.000
CUST/MILE	0.000	0.000	0.000	0.000
FUEL COST	237.708	246.676	254.124	200.183
$FUEL/MILE	0.000	0.000	0.000	0.000
$FUEL/CUST	0.032	0.037	0.038	0.032
DUMP COST	756.000	672.000	672.000	546.000
$DUMP/CUST	0.102	0.101	0.101	0.087
$DUMP/TON	3.849	3.394	3.649	4.000

	JULY '86 ##16	AUGUST '86 ##16	SEPT '86 ##16	OCT '86 ##16
TOTAL MILES	1,451.000	1,254.000	1,334.000	1,434.000
FUEL/MONTH	440.400	420.000	433.000	468.000
LBS. DUMPED	440,900	443,290	407,120	369,866
TIMES DUMPE	29.000	26.000	25.000	24.000
LBS/LOAD	15,203.448	17,049.615	16,284.800	15,411.083
MPG	3.295	2.986	3.081	3.064
FUEL/DAY	19.148	20.000	20.619	20.348
LBS/CUST	64.038	69.733	63.424	53.487
MILES/DAY	63.087	59.714	63.524	62.348
CUST/MILE	4.745	5.069	4.812	4.822
FUEL COST	281.416	312.060	313.492	335.790
$FUEL/MILE	0.194	0.249	0.235	0.234
$FUEL/CUST	0.041	0.049	0.049	0.049
DUMP COST	623.500	559.000	537.500	516.000
$DUMP/CUST	0.091	0.088	0.084	0.075
$DUMP/TON	2.828	2.522	2.640	2.790

	JULY '86 ##17	AUGUST '86 ##17	SEPT '86 ##17	OCT '86 ##17
TOTAL MILES	1,515.000	1,290.000	1,111.000	1,430.000
FUEL/MONTH	446.000	351.000	366.000	398.000
LBS. DUMPED	341,370	287,460	317,370	241,910
TIMES DUMPE	18.000	16.000	18.000	17.000
LBS/LOAD	18,965.000	17,966.250	17,631.667	14,230.000
MPG	3.397	3.675	3.036	3.593
FUEL/DAY	20.273	18.474	17.429	18.952
LBS/CUST	81.086	79.059	79.821	60.057
MILES/DAY	68.864	67.895	52.905	68.095
CUST/MILE	2.779	2.819	3.579	2.817
FUEL COST	284.994	260.793	264.984	285.565
$FUEL/MILE	0.188	0.202	0.239	0.200
$FUEL/CUST	0.068	0.072	0.067	0.071
DUMP COST	387.000	344.000	387.000	365.500
$DUMP/CUST	0.092	0.095	0.097	0.091
$DUMP/TON	2.267	2.393	2.439	3.022
