

Appendix E:

Fleet Summaries

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Summary of Phone Meeting with B & B Trucking, Inc.

Phone meeting with Andrew Blackburn, Director of Equipment & Property, on 8/13/08.

- General fleet information:
 - 150-180 tractors coast to coast
 - 115 trailers (because use trailers from USPS pool some of the time)
 - primarily haul mail for USPS (85-90% of business)
 - trailer fleet comprised of approx 30% 48' and 70% 53' trailers
 - they generally keep their trailers about 12-13 years
 - generally keep tractors about 8-9 years (1.5 million miles), then sell them
 - generally do not operate in CA (purposely stay out of CA)
- Aerodynamic equipment:
 - have been using tank skirts on tractors since 1999 and seen decent results (benefits vary by speed of travel which varies by state)
 - have seen at least a 0.1 mpg savings at 65 mph
 - have not had any weather related problems with the tank skirts, even when travel to Seattle
 - Current Freight Wing equipment on trailers:
 - have been using the Freight Wing skirts on trailers for 1.5 years
 - 10 skirts, all on 53' trailers - the original aluminum product
 - Price: got grant for original purchases which made them very attractive
 - Installation: Freight Wing helped with installation & trained their people to install. Once trained, took one person about 2 hours per trailer
 - New Freight Wing equipment
 - just ordered 20 more, some for 48' trailers & some for 53' trailers (10 for new trailers & 10 for retrofits)
 - planning to purchase the polymer plastic version (can go lower to the ground)
 - Price: <\$1000 per trailer (not including installation)
 - Plan to install on entire fleet eventually (gradually, for cost reasons)
- Maintenance & Repair issues:
 - only one incident of damage due to driver error - driver drove into a snow bank
 - damage was easily repaired, everything remained intact & drivable, no road hazard
 - ordered replacement panels which arrived in 3 days and easily replaced them in shop

- no reported damage caused by snow - said less snow buildup under the trailer with the skirts than without them
- Fuel Economy:
 - tested two trailers on same route between So. Carolina and Florida, using same two drivers, over two month period. Then they changed trailers, kept everything else the same, and compared results
 - saw improvement in fuel economy - 0.3 mpg savings at 70 mph speeds
 - retested at lower speed and saw 0.1-0.14 mpg savings at 55-60 mph
 - base tractor fuel economy with single (raised) axle: 8-8.4 mpg, and with two live axles: 7.4-7.7 mpg
- Tires:
 - currently using some SmartWay approved duals & some single wides - not seeing a great difference (using Bridgestone, Michelin & Yokohama)
 - they are working with Michelin on single-wides

Summary of Telephone Meeting with Cascades Transport Inc. on 9/9/08

- Company/fleet information
 - Met with Alain Boutin, Directeur gestion des risques et conformite
 - Cascades is a major producer of paper, specializing in recycled content products
 - Fleet travels throughout Canada & into US, primarily to the Midwest and East (do not come to California directly – use subcontractors)
 - Fleet consists of 100 tractors & 550 trailers (mostly 53' & 48')
 - All but 12 of the trailers are dry vans
 - ~400 are 53' dry vans
 - Operate 2-, 3- and 4-axle trailers
 - Lifespan of tractors & trailers:
 - Keep tractors about 10-12 years
 - Long haul tractors travel about 160,000 miles per year
 - Local haul travel about 124,000 miles per year
 - Keep trailers about 10-15 years
 - After about 10 years use them as yard trailers or for short distance (~ 20 mile radius)
 - Average load weights:
 - 2-axle – 35,000 lbs
 - 3-axle – 70,000 lbs
 - 4-axle – 80,000 lbs
 - Cascades is SmartWay partner for the last 2-3 years (one of first Canadian companies to join)
- Aerodynamic Equipment

- On Tractors: fuel tank fairings, cab fairing, aerodynamic mirrors, winter heaters
- On Trailers: currently using skirts – mostly Transtex Composite product
 - Originally tested 6 skirts for about 1 year, including Freight Wing (aluminum), Transtex skirt & a few months ago also tested a Laydon skirt
 - Tested with 2 dedicated runs with similar loads; monitored for 4-5 months, with and without skirts
 - Found Transtex product the best in winter & in case of accident (flexibility) & also wanted to support a Canadian company
 - Recently purchased 250 Transtex skirts, & have already installed 175 of them
 - Using skirts on 53' and 48' trailers; will be putting some on spread axle trailers and testing their effectiveness this fall
- Other devices have tried/tested in the past:
 - Strakes on side of trailer – did not find fuel economy improvement (in fact, saw a 1% increase in fuel consumption with them)
 - Boat tail in back, by Transtex – tried them a couple of years ago – worked well but did not expand use
 - Bubble on trailer back – tried them about 7-10 years ago when fuel economy was not so significant a factor
- Why have they been testing & using aerodynamic devices for as long as they have?
 - Fuel economy
 - Cascades is an environmental company (make 100% recycled content paper products & have been making them for some time) – all divisions are required to conserve energy
- Fuel Economy
 - Initially tested 5 skirts (Freight Wing & Transtex) on 2 dedicated runs with similar loads
 - Monitored for 4-5 months, with and without skirts (in fall, winter & spring)
 - Saw 5.8% fuel savings (regardless of brand)
 - Average fuel economy= 7.9 mpg (American)
- Driver reactions/comments:
 - Skirts result in less spray being created along the side of the trailer, which improves visibility in wet weather
 - Safety/stability
- Installation
 - Initially took 3 people an entire day to install
 - Now takes 4 people 2 ½ hours (32 hours for 4 trailers)

- Cost
 - Approximate cost \$1500-\$2000 (Canadian) for various skirts (would not state how much they paid for current skirts)
 - ROI: estimate about 1 ½ years because of 5:1 trailer:tractor ratio
- Maintenance/Damage
 - No damage to any of them at all (aluminum or composite)
 - No maintenance so far
 - Problems with steep loading docks and skirts?
 - Avoid using skirts where the incline is too steep – don't send them to those locations, or unload some other way
 - Found Transtex skirts the most pliable because they don't break easily & they rebound back into place after being bent
- Tires
 - Have been using low profile tires for many years
 - Do not use SmartWay approved tires because need more traction for winter road conditions
 - Also have 15 units with super singles
 - Believe they provide better fuel economy, but need special permit to use them in Quebec & the cost of the permit negates the savings due to fuel savings (reason why Quebec charges for the permit is because of additional road damage)
- Other fuel savings activities/devices:
 - Electronic speed control
 - Set pedal maximum speed at 108 km/hr
 - Set cruise control maximum speed at 105 km/hr
 - Control pedal use to less than 10% of the time
 - Battery operated refrigeration system (tried Webasto, then Red Tech)
 - Prevent idling (trucks shut down after 3 minutes of idling)

Summary of Telephone Meeting with Falcon Transport

Summary of phone meeting on 8/12/08 with Falcon Transport to discuss their experience with Freight Wing equipment. In attendance were Mark Guthrie (Director of Operations) and Jason Meyers (Fuel Analyst).

- Company/fleet details:
 - Headquartered in Youngstown, Ohio - operate primarily from Texas to the east coast
 - Fleet comprised of about 2600 trailers, and 1050 tractors (700 that they own plus 350 owner/operators)
 - almost all trailers are 53' box type, and no refers (only pull refers for Walmart on holidays)
 - Drivers include large proportion of trainees each year (train about 600/yr), who are hard on equipment

- company currently spends \$60 million per year on diesel fuel (purchase ~ 1.8 million gallons/month)
 - company recently applied to be SmartWay Partner
- Falcon purchased 6 Freight Wing belly fairings in the Spring of 2006; 5 are still in use, and one is not because it was installed on a trailer that was retired.
 - no damage reported to any of the fairings over the two years, even with trainees
 - no maintenance issues - felt that drivers were more conscious of them and therefore more careful
 - tracked fuel savings during first 6 months of use (run 24/7): about 0.6 mpg improvement, or 10%
 - stopped tracking fuel costs when cost of fuel went down; now tracking again
 - other benefits of fairings:
 - tires wore less
 - tracking was more true
 - easier to handle on a windy day than without fairings
 - helped reduce overspray of tires during rain
- How use the fairings?
 - on long haul runs - avoid short term shuttles
 - speed set at 65 mph (feel no benefit until exceed 55 mph)
- Future use of fairings:
 - currently looking at a new technology manufactured by a CA company (Silver Eagle Mfg) out of San Jose. Contact person is Gary Gaussoin (503) 335-2114 (company actually located in Portland Oregon)
 - interested in their wakeboard on tail of trailer & skirts
 - using their wings now & seen a 15-20% improvement over the past month
 - haven't yet tested the wakeboard
 - probably will put Silver Eagle equipment on all long haul fleet
- Tires:
 - not in favor of super singles because:
 - cost (outweighs fuel savings)
 - breakdown/replacement difficulties
 - aggressive drivers
- Other ways to achieve fuel economy:
 - driver training - believe driver behavior has 30% influence on fuel economy
 - speed governing (set at 65 mph)
 - other aerodynamic modifications currently using:
 - run batwings on tractor
 - bring trailer as close to tractor as possible
- Additional questions to be answered (sent follow up email):

- was 10% improvement in fuel economy for skirts only, or with other modifications?
- why didn't they expand the use of the Freight Wing products if saved so much (10% of \$60 million)?
- why are they looking at the Silver Eagle, which they have barely tested, if their Freight Wing experience was so positive?

Summary of Telephone Meeting with Hiner Transport

Summary of Telephone Meeting with Paul James of Hiner Transport
August 21, 2008

- Company/fleet information
 - Company is a dry van carrier for over 41 years, located in Indiana
 - Primarily service the Midwest to the east coast, but also have some dedicated trucks that travel to California regularly (about twice a week)
 - Designated California fleet already equipped with skirts – all on 48' trailers (requested due to tight turns)
 - Fleet:
 - 200 tractors, 98% with sleeper cabs
 - 565 trailers (of the trailers, 545 are 53'ers, 20 are 48'ers)
 - Average age of tractors = 1.8 years (oldest in fleet is a 2004)
 - Average age of trailers = 3.6 years
 - Average annual miles driven:
 - Tractors: 135,000 mpy
 - Trailers: normal operation is 40,000-60,000 mpy
 - Just now working on becoming SmartWay certified, although have been doing a lot of the required improvements for awhile
- Aerodynamic Equipment
 - Have 15 Freight Wing skirts which got for half price (through a grant); have had them for approximately 2 years
 - All skirts are installed on dedicated long haul fleet on 48' trailers, because that dedicated fleet must negotiate
 - When first investigated skirts, considered Transtex Composite as well as Freight Wing, but decided Freight Wing was the better choice at the time
 - Tractor aerodynamic equipment
 - All have cab fairing, side fairings,
 - About half have tank fairings – due to cost (maintenance on tank fairings is expensive - \$400-\$600 to repair them, so lose benefit of fuel savings)
 - Have never used gap fairings or nose cones because not sure they “do the job”
 - Boat tails
 - Don't believe they are effective
 - Inefficient for loading & unloading

- Shippers/receivers who may load or unload may cause damage because they are not familiar with the equipment
- Future use of fairings – would love to install them on all trailers, but the cost of fuel is eating up capital so can't afford it at this time
- Fuel economy estimates
 - Fleet average is currently about 7 mpg (used to be 6.38-6.4 mpg), taking into account all improvements
 - Have seen a 0.2 mpg improvement due to skirts
 - Have seen a 0.4 mpg improvement due to super single tires
 - Idling restrictions add more improvement
 - Driver behavior major contributor – offer fuel conservation bonus to drivers who increase fuel economy & extra training to those who do not
- Other ways achieve fuel savings
 - Super singles on 75-80% of fleet
 - Aluminum wheels
 - Set truck speeds at 65 mph (reduced it from 68 mph 2 years ago)
 - 80% have idle control
- Installation
 - Freight Wing helped them install the skirts
 - Estimated it took about 8 hours or more to install on one trailer
 - Estimated it took 2-3 hours to install/replace a panel
- Costs
 - Would not specify an exact cost; first said skirts cost more than \$1500 per trailer, and later said costs were about \$1800-\$2000 per trailer
- Damage/Repair issues
 - They have had some damage problems and had to replace panels on three of the skirts
 - One situation was driver error
 - Most problems were associated with steep ramps, detours and construction zones
 - When there was damage, in one case the driver was able to return without any problems, while in the others they had to cut off the portion of the skirt with tin snips (because it was hanging/flapping) so that it would not cause damage
 - No problems with pieces flying off were experienced
 - Getting replacement panels was not a problem because Freight Wing gave them some extra panels
- Driver comments: initially drivers said the tractor and trailer handled better with the skirts
- Tires
 - Use super singles on 75-80% of trailer fleet – more fuel efficient
 - All other tires are low pro tires
 - Super singles primarily used on tractors, but they have been testing them on 50 trailers

- But drivers complain that when they turn corners they have difficulty seeing the tires (being able to see the tires helps them to turn safely)
- Have had 5 flats with super singles on the road so far, and in all cases the situation was taken care of within 2 ½ hours (Michelin & Bridgestone have very good service)
 - With flats it is important to shut down the vehicle, so you don't damage the wheel
- Tire life:
 - 250,000-260,000 miles for drive tires
 - 110,000-115,000 miles for steer tires
- Use auto tire inflation system (some tires have lasted 320,000 miles due to tire monitoring & proper inflation) with all new tires
- Recaps:
 - Tractor drive tires: 1-2 recaps
 - Super singles: 1 recap only
 - Trailer tires: maximum 2 recaps
 - Cost to recap: approximately \$82 per tire

Additional comments (submitted in writing):

- how cost prohibitive this program is due to the number of trailers that would have to have the modification and most carriers would decide not to service California due to the costs. It would also cause customers to abandon the CA market and their customers due to carriers not willing or being able to run those lanes cost effectively.
- most of these devices are not cost effective and do not provide the savings unless the trucks are moving over 40/45 miles per hour.
- unless trailers travel more than 80,000 miles per year, the savings these devices create, never really materialize over a long period of time, perhaps 5 or more years.

Summary of Telephone Meeting with Hy-Vee Foods

9/9/08

- Company/Fleet information
 - Spoke with Jim Moore of Hy-Vee Foods
 - Company is a major food retailer headquartered in Iowa, serving a 7-state area in the Midwest
 - 232 retail outlets
 - 60% backhaul, and also some contract freight hauling
 - 125 tractors (all day cabs)
 - Average 142,000 miles/year
 - 275 trailers (all 53'ers)
 - 185 reefers
 - 90 dry vans
 - Average round trip = 408 miles
 - Many interstate trips, 800 loads/week

- 100-110 overnights (drivers stay in motels)
- Aerodynamic equipment
 - All tractors have aerodynamic modifications (side fairings, roof fairings)
 - Trailers:
 - Originally started testing 5 skirts last May
 - Using Silver Eagle skirts & air talons/strakes (on sides of trailer)
 - In July retrofitted 50 trailers with skirts & strakes
 - Benefits of Silver Eagle double walled skirts:
 - keep clearance to 20" to prevent damage with steep inclines
 - lightweight – all aluminum
 - Converted some tires to super singles
- Fuel economy:
 -
- Costs: paid about \$1900 per trailer
 - Estimated ROI: 9-12 months, with 2:1 trailer:tractor ratio (includes both skirts and strakes)
 - Cost to replace skirt panels: \$290 to replace 2 panels
- Other modifications to improve fuel economy:
 - Speed governing
 - Began 8/1/08 lowered maximum from 70 mph to 65 mph
 - Average speed 57 mph with speed governed at 70 mph
 - Average speed less than 56 mph with speed governed at 65 mph
- Tires
 - Began testing Michelin (X-1's) super singles about 3 years ago
 - Saw 0.24-0.25 mpg improvement in fuel economy with the tires

Summary of Telephone Meeting with Quest Global, Inc.

Summary of Meeting on 8/18/08 with Quest Global Shop Foreman, Mike McFarland. The company is located in Georgia

- Fleet information
 - Company has more than 150 tractors and about 238 trailers – all are 53' reefers
 - Their current tractors are all fully aerodynamic; all are sleepers
 - Mostly had Freightliner Columbia, but now switching to Volvo
 - Their tractors average 25,000-30,000 miles per month (use team drivers)
 - Trailers made by Wabash
 - Keep their trailers about 3-4 years, then sell them (try to keep everything within warranty)

- Plan to remove the skirts and re-install on new trailers when upgrade
- Aerodynamic equipment
 - Began installing Laydon trailer skirts at the end of 2007
 - 75% of all their trailers are currently installed with skirts
 - Their skirts are comprised of 8-10 panels per side
 - Continuing to retrofit about 3 trailers per week
 - Only use Laydon product, and not sure why the company owner selected them over Freight Wing or others
 - Down side of skirts:
 - Adds 200-250 lbs to the load
 - CA bridge law requires them to set their skirts and axles to comply with CA, rather than having to remove the skirts to bridge out when get to CA
- Estimated fuel savings
 - When initially tested the product, saw savings of about 1/8 mile per gallon (12.5%)
- Maintenance/Repair issues
 - Have not experienced many problems with the skirts – estimated about 5 problems since installation, some of them due to driver error
 - Minimal damage to the skirts, where nothing became detached, and driver was able to secure the skirts until they could get to a repair facility
 - Repaired by replacing panels
 - Winter – some drivers complain about some ice buildup, but they say they can just kick it off
- Costs: \$1400-\$1500 per trailer
- Benefits of skirts:
 - Fuel savings
 - Driver feedback indicates vehicles track better in the wind with skirts
 - No benefits to refer seen with skirting
- Tires
 - Do not use low rolling resistance tires – only regular, low pro tires. They looked at SmartWay approved tires, but since they lease their tractor tires from Bridgestone, they only pay for miles driven
 - Looked at super singles, but have not been convinced that the benefits outweigh the costs
 - Have changed from 14 ply to 16 ply tires
 - Recap the trailer tires
 - Recaps cost them about \$94 per tire
 - They have been using auto inflation on their tires for more than 2 years; pros & cons of them:
 - Pro: improved tire maintenance, but

- Con: sometimes drivers continue driving on them when they should stop – resulting in more damage
- Steer tires get between 120,000 & 200,000 miles

Summary of Telephone Meeting with Twin City Transportation, Inc.

Staff met by telephone with Herb Martin, President of Twin City Transportation on 9/3/08

- Company/fleet information:
 - Headquartered in Little Rock, Arkansas, operate in all 48 states
 - Defines his company as a “small carrier”
 - 65 trucks: 40 pulling dry vans & 25 pulling flat beds
 - All sleeper cabs
 - Ratio of trailers to tractors:
 - Dry vans 3:1
 - Flat beds: 1:1
 - Drivers: ½ are independent owner-operators; ½ are company employees
 - Average age of tractors 5 years (only purchase used – currently looking at 2006’s)
 - Average age of trailers: 7 years (always buy new)
 - Currently applying to be a SmartWay member
- Aerodynamic devices:
 - Purchased 20 Freight Wing skirts 2 years ago – pleased with them and plan to purchase more – will put on new trailers
 - Have the original aluminum devices
 - Had not investigated the newer, plastic skirts
 - Also tried Air Tabs – did not see any benefit with them
- Costs of skirts: approximately \$2000 for the aluminum skirts
- ROI: estimated less than 3 years
- Fuel economy:
 - Average fuel economy 6.6 mpg
 - Have seen a 0.1-0.2 mpg improvement with the skirts
 - Use engine governing, mostly at 65 mph (& 5 @ 70 mph)
- Damage/Maintenance:
 - He did not have exact damage data, but estimated that at least 5 of the skirts had gotten damaged to the point of needing to replace a panel
 - Sometimes damage could be easily repaired
 - Twice the damage to the skirts was severe enough that the driver worried that friction might cause a piece to break off, so they stopped to repair it before proceeding
 - Reasons for damage: (some driver error, some unavoidable accidents)
 - ½ the time the driver hit something on the road

- ½ the time damage caused by going over a high center (docks, railroad tracks)
 - Solution: train drivers to be more careful & avoid circumstances with extreme conditions
 - Weather/snow concerns: have driven the skirts through winter conditions & have never had a problem with snow
- Installation:
 - Freight Wing did 15 of the installations, Twin City did 5
 - Freight Wing can install them in about 2 ½ person hours
- Driver reactions to skirts:
 - Owner-operators like the skirts because they save fuel
 - Employee operators also like the skirts
 - Some have commented that they feel more stable in a crosswind
- Tires:
 - Just a few months ago began using low rolling resistance (LRR) tires on 3 trailers
 - Plan to convert all tractors & trailers to LRR tires
 - Will not try super singles because heard from other fleets about problems with repairs, and most of his loads are time sensitive
 - Tire life:
 - Tractor tires: 70,000-150,000 miles
 - Trailer tires: 15-24 months (track age, not mileage) – estimate at least 80,000 miles

Summary of Telephone Meeting with Normandin Transit

9/3/08

- Staff spoke by telephone with Daniel Pascau, Fleet Manager
- Company information
 - General freight company for 20 years
 - Located near Montreal
 - Company is not a SmartWay partner – has been doing SmartWay approved modifications before SmartWay was developed, but they have not been pleased with how EPA/SmartWay handles things
 - As a company, want to utilize as many aerodynamic devices as possible to maximize fuel economy
- Fleet:
 - 255 tractors – entire fleet are Kenworth
 - Have 8 new T660's (SmartWay certified)
 - 500 trailers
 - 50 reefers
 - 65 heated trailers
 - 385 53' dry vans
 - Lifespan:
 - Keep tractors 4-4 ½ years

- Miles per year on tractors: ~135,000
 - Keep trailers 10-12 years (some even longer)
 - Miles per year on trailers: ~80,000-95,000
 - Miles per year on reefers: 125,000
- Fuel economy:
 - Average mileage for fleet: 7.3 mpg (although some get 8.4 mpg)
 - Fuel economy achieved with skirts:
 - 5%-6% with aluminum skirts on reefers
 - 7%-8% (sometimes 10%) with new reefers & new skirts
 - Strategies for improving fuel economy:
 - Aerodynamic on tractors
 - Low rolling resistance tires (have been buying according to rolling resistance for a long time) & super single tires
 - Lightweight rims
 - Nitrogen inflated tires
 - Skirts
 - Proactive driver training and follow up
 - Speed governed to not exceed 65 mph
 - APU's
- Trailer aerodynamics:
 - History:
 - First tried un-named front end modification that didn't work
 - Began prototyping to build their own devices
 - Began using Freight Wing skirts in July 2007
 - Began with 10 skirts, now have ordered 30 more
 - First priority is to install skirts on all reefers, then on box-type trailers
 - Freight Wing products used:
 - 1st used Low Rider – aluminum with 6" rubber at the bottom for flexibility
 - Now using/ordering Aeroflex Belly Fairing – called it “the most perfect product” – put the first one in 2 months ago
 - Transtex Composite skirt:
 - Have one in fleet
 - Considered a “good product,” but does not like the rigidity at the bottom (results in scraping of the bottom causing damage)
 - AT Dynamics Boat Tail – never tried it but has strong concern about safety & possible damage to it when backing up
- Installation
 - Freight Wing did initial installations & trained their people to do them
 - Initially took Normandin staff 5 ½ hours & 4 people
 - Expect it will take 2 people 2 ½ hours
 - Plan to purchase new trailers already spec'd with skirts (trailers from Manac & reefers from Great Dane & Utility)

- Cost to have dealer install skirts: \$500-\$600 Canadian
- Maintenance/Damage:
 - Freight Wing aluminum skirts: lost one rivet, but otherwise no damage, even during winter
 - New plastic skirt: did a test where bent the material at a 75 degree angle & left it for ½ hour, then when released, it bounced right back to its original configuration
 - When asked how they deal with steep inclines, reported that they train their drivers to take it slow and see the skirts working
- Costs:
 - Skirts: **CONFIDENTIAL**
 - Tires: recently bought 80 new tires with nitrogen inflation - \$1000 each
 - Rims: recently bought 80 aluminum wheels - \$450 each
- Driver comments about skirts:
 - Claim to feel the difference with skirts
 - Follow straighter
 - Smoother ride

Less resistance/eliminates cross wind effects

Summary of Telephone Meeting with J. B. Hunt Transport Services, Inc.

Below is a summary of yesterday's (8/6/08) phone meeting with J.B. Hunt. In attendance from their end were: Gary Whicker (Sr. VP Engineering), Craig Harper (COO), Heather Matthews, and Christy Noland.

- JB Hunt owns a fleet of just under 25,000 53-foot trailers, as well as over 35,000 intermodal containers
- Their business model is comprised of four different types of services:
 - regular over-the-road services
 - dedicated contract services
 - intermodal services
 - non-asset brokerage services (where they typically contract with other trucking companies)
- To date, they have only tested two trailers with SmartWay aerodynamic devices (fairings), which they received a few months ago (Freight Wing products).
 - Their experience with the two existing devices has not been positive, since one was delivered damaged. In addition, their maintenance staff are resistant to the new technology.
 - They are already purchasing low rolling resistance tires
 - They are considering testing a new technology offered by Adamworks (adamworksinc.com), out of Denver. That product is designed to lower the bottom of the fairing closer to the road when traveling at higher speeds. Estimated price: \$1995-\$2699 (turnkey).

- Attendees seemed supportive of the Heavy Duty Greenhouse Gas Emission Reduction Measure
 - They felt that holding shippers/receivers accountable is a logical and effective way to achieve compliance
 - They also felt that accountability would also be achieved by only holding shippers (and not receivers) accountable, since the major receivers are shippers as well
 - They had some concerns that brokers might not always be held responsible, since in most transactions brokers are not on the bill of lading (although J.B. Hunt is). They expressed concern that some shippers might get brokers' licenses to avoid responsibility for compliance
- Despite their support for this measure, they felt that it would increase the costs of tractors and trailers to the industry, which would lend further support to their intermodal services, which would become even more attractive to customers
 - They no longer send over-the-road trucks to California from east of the Rockies (only by rail)
 - Their average dray distance in California is 49 miles

Summary of In-Person Meeting with Conway Freight

On July 14, 2008, ARB staff met with Randal Mullett and Mike Grima of Conway. Also in attendance was Mike Tunnel of ATA. The main points they communicated to us were:

* Conway has already taken measures to save fuel: reduced governed speed for all their trucks and using low rolling resistance tires in all of their Conway Truckload vehicles. They have a business relationship with Laydon Composites (aerodynamic components manufacturer) and have been testing their products.

* They have 10,000 box-type trailers that travel throughout the U.S. About 10% of their business is in California. They currently don't keep track of which trailers come to California and would have to retrofit a substantial portion of their trailers to meet the California requirements

* They stated that retrofitting with skirts does not result in a good return over investment. Four years ago, 400 new Conway trailers were outfitted with skirts. The fleet was pretty much dedicated, driving only between a few locations. Even so, virtually all skirts suffered road damage and needed to be frequently replaced. About a year ago, when they acquired CFI, the fleet was no longer dedicated to a few locations and traveled to different locations nationwide. That was when they decided not to continue and have been taking the skirts off, based on the following results:

- The skirts were being damaged and required high maintenance/repair costs. Snow was piling onto the skirts, increasing trailer weight. Snow and ice also change the air flow, reducing effectiveness. They had to replace the skirts when the skirts were damaged, increasing costs. Note that they tested the older generation of skirts and not the more flexible ones that may be more durable and

less prone to easily damage. They have plans to test the new skirts.

- The trucks with skirts were being stopped at the border for inspection, causing delays.
- The skirts were damaged by curbs on tight turns and entering customer docks in older city areas.
- The trailers with skirts could not be lifted to put on train cars and used in intermodal operations.
- They stated that they observed fuel economy benefits of 0.2 mi/gal at high speed (over 60 mph) operation. Assuming 6 mi/gal, the skirts increased fuel economy by about 3 percent at high speeds. They did not get the 6 percent benefit they were expecting and there is no benefit at speeds below 45 mph making the net increase in fuel economy much smaller than the 3% received at high speeds.

Conway requested that we reconsider the trailer requirements and look at real-world versus test track or lab data on the technology fuel economy benefits. Also, they requested that we consider a longer phase-in for trailer retrofits because the cost of retrofitting their trailers is high and will not provide the return over investment to offset the cost. They also asked us to provide flexibilities for those companies with the highest SmartWay environmental performance score.