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United States Government Accountability Office
Washington, DC 20548

August 15, 2007

Congressional Requesters:

Subject: *Freight Railroads: Updated Information on Rates and Other Industry Trends*

Over 25 years ago, Congress transformed federal freight rail transportation policy. At that time, after almost 100 years of economic regulation, the railroad industry was in serious economic decline, with rising costs, losses, and bankruptcies. In response, Congress passed the Railroad Revitalization and Regulatory Reform Act of 1976 and the Staggers Rail Act of 1980. Together, these pieces of legislation substantially deregulated the railroad industry. In particular, the 1980 act encouraged greater reliance on competition to set rates and gave railroads increased freedom to price their services according to market conditions, including the freedom to use differential pricing—that is, to recover a greater proportion of their costs from rates charged to those shippers with a greater dependency on rail transportation. At the same time, the 1980 act anticipated that some shippers—commonly referred to as “captive shippers”—might not have competitive alternatives and gave the Interstate Commerce Commission (ICC), and later the Surface Transportation Board (STB), the authority to establish a process through which shippers could obtain relief from unreasonably high rates. This process establishes a threshold for rate relief, allowing a rate to be challenged if it produces revenue equal to or greater than 180 percent of the variable cost of transporting a shipment.

Since the passage of the Staggers Rail Act of 1980, we have issued several reports on the freight railroad industry. On October 6, 2006, we issued our most recent report,¹ in which we reported that industry rates and the rates for many commodities (e.g., coal and motor vehicles) had generally declined from 1985 through 2004. We also reported that freight railroad companies do not consistently report revenues raised from fuel surcharges. Some railroads report fuel surcharges as part of their general revenues, others categorize the surcharges separately as “miscellaneous revenue,” and still others may not report revenue collected from fuel surcharges at all. This inconsistent reporting led us to recommend that STB review its method of data collection to ensure that all freight railroads are consistently and accurately reporting all revenues collected from shippers. Furthermore, we reported that while it is difficult to determine precisely how many shippers are “captive” to a single Class I railroad, the percentage of traffic traveling at rates over 180 percent of revenue to

¹GAO, *Freight Railroads: Industry Health Has Improved, but Concerns about Competition and Capacity Should Be Addressed*, [GAO-07-94](#) (Washington, D.C.: Oct. 6, 2006).

variable cost (R/VC)—that is, the traffic STB regards as potentially captive—and the revenue generated from that traffic have declined. We also reported that traffic traveling substantially over the statutory threshold for rate relief (rates over 300 percent R/VC) has increased since 1985.

You asked us to update our October report using 2005 data, which became available after we issued our report. This report provides that update, including changes in industry and commodity rates, other costs to shippers (such as railcar ownership and miscellaneous revenue), and data on traffic traveling at rates equal to or greater than 180 percent R/VC. Also, we are providing additional information and analysis of these data—including rates, tonnage, and revenue from 1985 through 2005—in the form of an e-supplement, which can be viewed at [GAO-07-292SP](#).²

To update our October 2006 report, we examined STB's *Carload Waybill Sample*³ from 1985 through 2005 (the latest year for which data were available at the time of this review). This database includes information on rail rates across the industry and by commodity, as well as tonnage, federal regulation, and other statistics. STB disguises some revenues to avoid disclosing confidential business information to the public, but we obtained a version of the *Carload Waybill Sample* that does not disguise revenues. Data derived from this database have been aggregated at a level sufficient to protect confidentiality. We used rate indexes and average rates to measure rate changes over time. A rate index attempts to measure rate changes over time by holding constant the underlying collection of items that are shipped. For issues related to R/VC ratios, we used data from the *Carload Waybill Sample* to identify the specific revenues and variable costs and to compute R/VC ratios for the commodities and markets we examined. Using this information, we then identified those commodities and areas whose R/VC ratios were above or below the 180 percent R/VC level, as well as those areas above the 300 percent R/VC level.

We determined that the data used in this report were sufficiently reliable for the purpose of our review. However, during our work we noted anomalous tonnage data estimated by one carrier in 2005 for one commodity (miscellaneous mixed shipments, including intermodal shipments). This carrier reported a significant number of waybill records with a single tonnage value rather than the range of values reported by other carriers and by this carrier in years prior to 2005. This lack of variation caused us to question the reliability of these records and to work with STB officials to investigate further. STB officials stated that the anomaly resulted from a change this carrier instituted in its methodology for estimating the tonnage of certain railcars and that despite the lack of variation STB had no basis for believing these data were in error. STB provided us additional information on this new methodology; however, we remained concerned about the lack of conformity with the reporting practices of other railroads for similar movements. As a result, we explored with STB various

²GAO, *Freight Railroads: Electronic Supplement on Rates and Other Industry Trends, 1985-2005*, [GAO-07-292SP](#) (Washington, D.C.: August 15, 2007).

³The *Carload Waybill Sample* is a sample of railroad waybills (in general, documents prepared from bills of lading that authorize railroads to move shipments and collect freight charges); the sample contains information on rail rates.

options for handling these 2005 data, including excluding them from our analysis. However, we determined that because a significant number of waybill records would be excluded, excluding these data would dramatically understate the amount of overall industry tonnage. We also discussed with STB not reporting 2005 data for some of the records in question. However, STB believed that any such action to exclude selective data in this manner represented a significant distortion of the data. We therefore decided to include these 2005 data because despite the lack of variation in the reporting, the average tonnage transported is relatively consistent with prior year data and data reported by other carriers and thus, we believe, provides a more accurate estimate than would the alternatives of excluding or modifying these data. We conducted our review from October 2006 to June 2007 in accordance with generally accepted government auditing standards.

Results in Brief

In 2005, industry rail rates increased 7 percent over their 2004 levels, the largest annual increase over the past 20 years, outpacing the rate of inflation for only the second time in 20 years. Rates also increased for the commodities we reviewed—including such commodities as coal and grain. Freight railroad companies continued a 20-year trend of shifting other costs to shippers, including railcar ownership. Revenues railroads reported as miscellaneous revenue—a category that includes fuel surcharges—nearly tripled from \$633 million⁴ in 2004 to \$1.7 billion in 2005. While it remains difficult to precisely determine how many shippers are captive to a single Class I railroad because available proxy measures can overstate or understate captivity, 2005 data indicate that potentially captive traffic continued to drop. At the same time, traffic traveling at rates significantly above the threshold for rate relief increased in 2005.

Industry Rates Rose in 2005

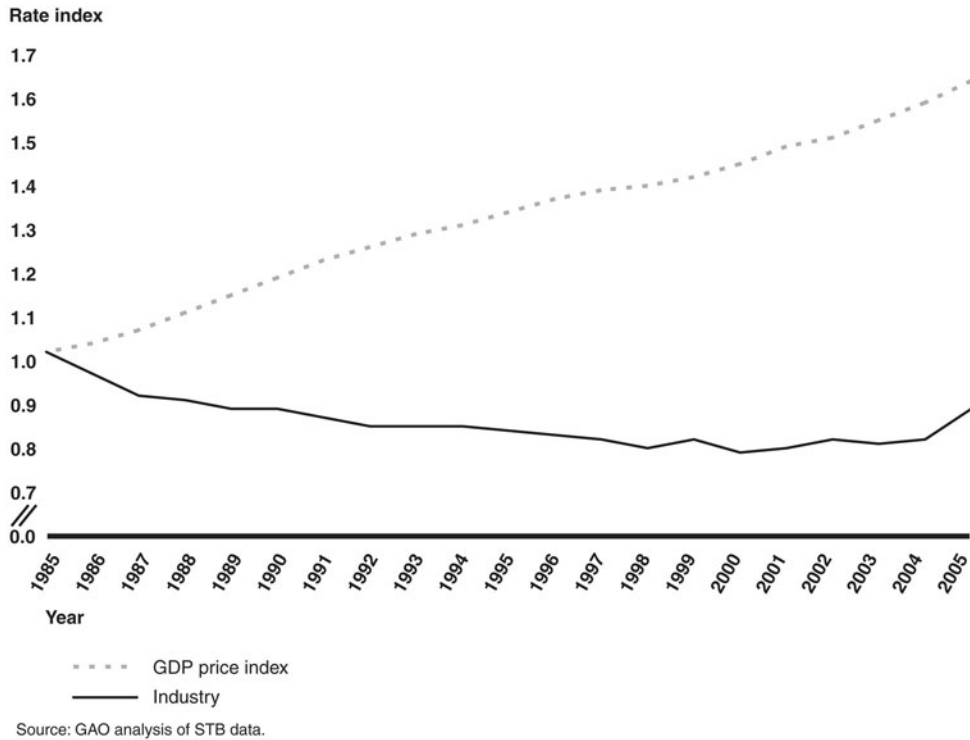
In 2005, industry rail rates rose 7 percent over their 2004 levels.⁵ This represents the largest annual increase in rates during the 20-year period from 1985 through 2005, and

⁴Dollar amounts in this update will not have exactly the same value as those we reported in October 2006. For our October report, 2004 was the most recent year for which data were available and we adjusted price levels for all years to 2004 levels. Because we use 2005 data for this update, we adjusted price levels to 2005 levels.

⁵We constructed rate indexes to examine trends in rail rates over the 1985 through 2005 period. These indexes define traffic patterns for a given commodity in terms of census region to census region flows of that commodity, and we calculated the average revenue per ton-mile for each of these traffic flows. The index is calculated as the weighted average of these traffic flows in each year, expressed as a percentage of the value for 1985, where the weights reflect the traffic patterns in 2005. By fixing the weights as of one period of time, we attempted to measure pure price changes rather than calculating the average revenue per ton-mile in each year. Over time, changes in traffic patterns could result in a substitution of lower priced traffic for higher priced traffic, or vice versa, so that a decrease in average revenue per ton-mile might partly reflect this change in traffic patterns. The rate index for the overall industry was defined similarly, except that the traffic pattern bundle was defined in terms of broad commodity, census region of origin, and mileage block categories. For comparison, we also present the price index for gross domestic product over this period.

outpaced changes to inflation—5 percent in 2005. Despite this increase, rates for 2005 remain below their 1985 levels. Because the set of rail rate indexes we used to examine trends in rail rates over time does not account for inflation we also included the price index for the gross domestic product (GDP) in figure 1. While rate increases in 2005 outpaced inflation for just the second time since 1985, over the long term, rate increases have lagged behind inflation rates.

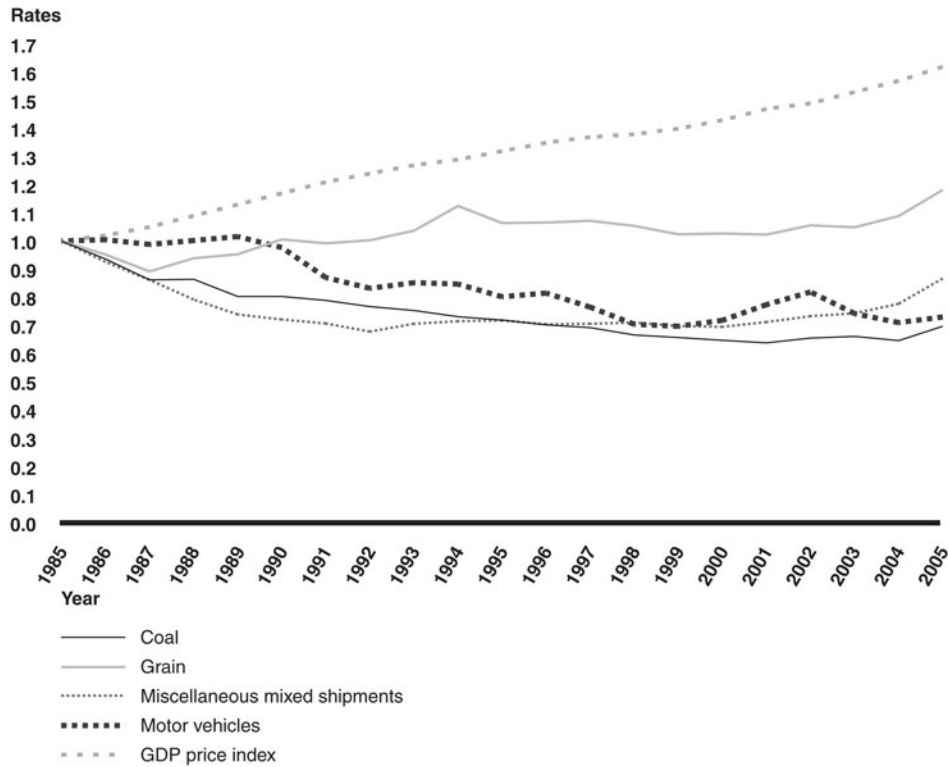
Figure 1: Trends in Industry Rail Rates, 1985-2005



While Generally Declining over the Long Term, Rates for Several Commodities Have Increased in Recent Years

Similar to overall industry trends, rates for individual commodities have increased. In 2005, rates increased for all 13 commodities that we reviewed. Despite this increase, 2005 rates for several commodities remain lower than in 1985. In 2005, the largest rate increase (for fireboard and paperboard) exceeded 12 percent, while the smallest increase (for motor vehicles) was about 2 percent. Figure 2 depicts rate changes for coal, grain, miscellaneous mixed shipments, and motor vehicles from 1985 through 2005.

Figure 2: Rate Changes for Coal, Grain, Miscellaneous Mixed Shipments, and Motor Vehicles, 1985-2005

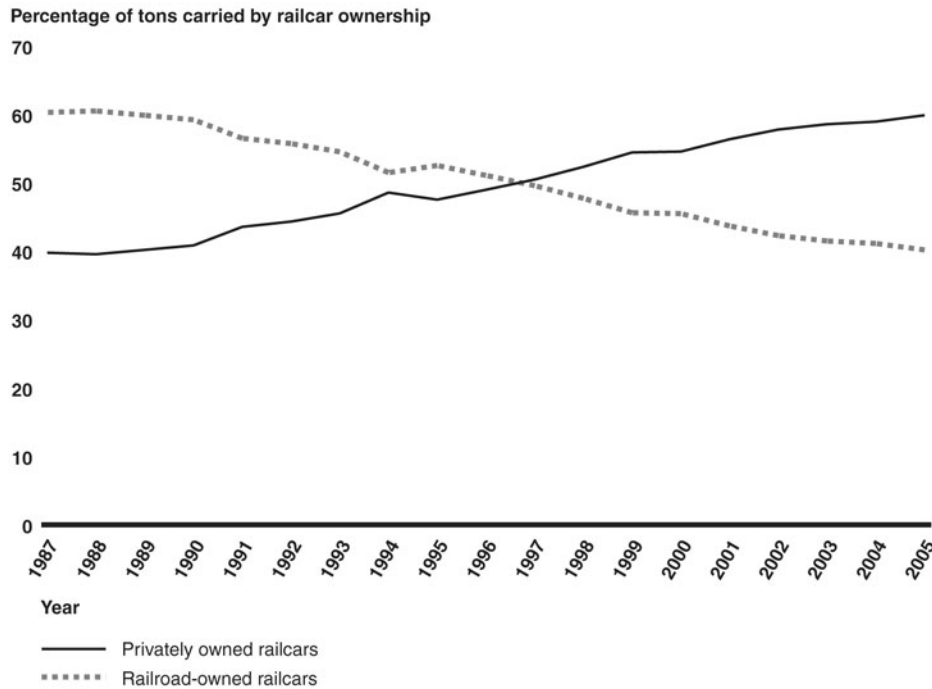


Source: GAO analysis of STB data.

Railroads Continued to Shift Costs to Shippers

In 2005, freight railroad companies continued a 20-year trend of shifting other costs to shippers. With the addition of the 2005 data, our analysis shows a 20 percent shift in railcar ownership (measured in tons carried) since 1987. In 1987, railcars owned by freight railroad companies moved 60 percent of tons carried. In 2005, they moved 40 percent of tons carried, meaning that freight railroad company railcars no longer carry the majority of tonnage (see fig. 3).

Figure 3: Tonnage Carried by Railcar Ownership, 1987-2005



Source: GAO analysis of STB data.

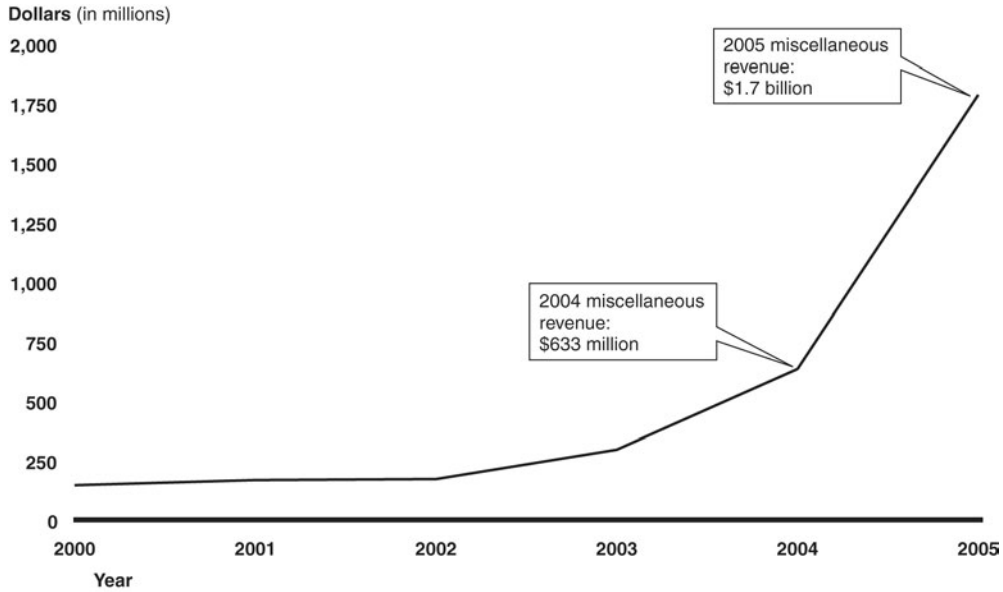
Reported Miscellaneous Revenue, Including Fuel Surcharges, Nearly Tripled in 2005

In 2005, the amount of industry revenue reported as miscellaneous nearly tripled over 2004 levels, rising from about \$633 million to over \$1.7 billion (see fig. 4). This miscellaneous revenue includes some fuel surcharges⁶ and other charges for providing rail service. In 2004, miscellaneous revenue accounted for 1.5 percent of freight railroad revenue reported, while in 2005 this percentage had risen to 3.7 percent. Also, in 2005, 20 percent of all tonnage moved in the United States generated miscellaneous revenue. STB has proposed to more closely track and otherwise monitor revenues associated with fuel surcharges, but it is too soon to tell whether STB's proposal will affect the reporting and tracking of miscellaneous revenue in the *Carload Waybill Sample*.⁷

⁶Fuel surcharges are associated with recouping the cost of fuel. How fuel surcharges are calculated varies among Class I railroads because some use a mileage-based system while others use a percentage of the base rate.

⁷On January 25, 2007 STB finalized rules stating that it was an unreasonable practice for freight railroads to compute fuel surcharges as a percentage of the base rate, as well as “double dipping”—i.e., applying to the same traffic both a fuel surcharge and a rate increase based on a cost index that includes a fuel cost component. STB has proposed rules for railroads to report revenues raised from fuel surcharges, but these have not yet been finalized.

Figure 4: Miscellaneous Revenue Tracked in Carload Waybill Sample, 2000-2005



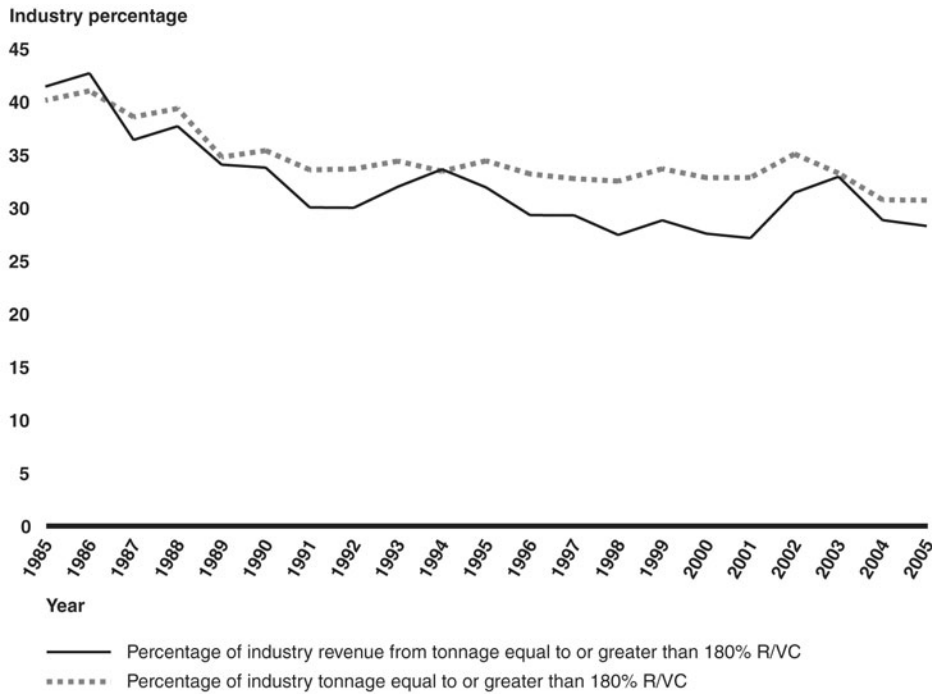
Source: GAO analysis of STB data.

Captive Shippers Remain Difficult to Identify, but Some Measures Indicate Captivity Is Dropping in the Railroad Industry

It remains difficult to determine precisely how many shippers are captive to one railroad because the proxy measures that provide the best indication can overstate or understate captivity. One measure of potential captivity—traffic traveling at rates equal to or greater than 180 percent R/VC—is part of the statutory threshold for bringing a rate relief case before STB.⁸ STB regards traffic at or above this threshold as “potentially captive.” Like other measures, R/VC levels can understate or overstate captivity. In 2005, industry revenue generated by traffic traveling at rates over 180 percent R/VC dropped by roughly half a percent. Tonnage traveling at rates over 180 percent R/VC dropped by a smaller percentage. This continued the generally downward trend since 1985 (see fig. 5).

⁸Another condition for bringing a rate relief case before STB is a railroad not facing effective competition from other rail carriers or other modes of transportation.

Figure 5: Tonnage and Revenue Generated from Traffic Traveling at Rates Equal to or Greater than 180 Percent R/VC, 1985-2005



Source: GAO analysis of STB data.

Amount of Potentially Captive Traffic Traveling at Levels Substantially above the Threshold for Rate Relief Increased in 2005.

While traffic traveling at rates over 180 percent R/VC declined in 2005, traffic traveling at rates substantially over the threshold for rate relief increased. In 2005, traffic traveling at rates over 300 percent R/VC increased. This increase followed declines in 2003 and 2004 but continued a general upward trend since 1985 (see fig. 6).

Figure 6: Tonnage Traveling at Rates over 300 Percent R/VC, 1985-2005



Source: GAO analysis of STB data.

Concluding Observations

Data for 2005 confirm the trends and findings we reported and support the recommendations we made in October 2006. The 2005 data provide more definitive evidence that after a period of decline, rates are increasing in the freight rail industry as a whole as well as across a range of commodities. Moreover, the continued increases in traffic at higher thresholds shown in the 2005 data affirm our (1) conclusions that STB has the statutory authority and access to information to conduct a rigorous analysis of competition in the freight rail industry that would rely on more than sample data and (2) recommendation that STB undertake such an analysis to determine whether rail rates in selected markets reflect justified and reasonable pricing practices or an abuse of market power by the railroads. Finally, the continued increase in the amount of miscellaneous revenue reported in 2005 lends further support for our recommendation that STB review its method of data collection to ensure data are accurately and consistently reported.

Agency Comments

We provided a draft of this report to STB and DOT for review and comment. STB provided written comments, which are reproduced in the enclosure to this letter. STB generally agreed with our updated assessment of the freight railroad industry. However, STB suggested that we present our findings on rates using inflation-adjusted measures in order to provide context. As in our October report, we developed and used a set of rail rate indexes to examine trends in rail rates over the 1985 through 2005 period that account for changes in traffic patterns over time but do not account for inflation. To account for inflation, we included the price index for the gross domestic product in our analysis (see figures 1 and 2).

STB also stated that it intends to implement our recommendation that it undertake a rigorous analysis of competition in the freight railroad industry. STB stated that it has identified funding not available at the time of our October report that it intends to use to solicit proposals from analysts with no connection to the freight railroad industry or STB proceedings to conduct such a study. While we commend STB for taking this action, it remains to be seen whether these analysts would have STB's statutory authority and sufficient access to information to determine whether rail rates in selected markets reflect justified and reasonable pricing practices or an abuse of market power by the railroads.

STB also stated that it has taken action to address our recommendation that it review its method of data collection to ensure that all freight railroads are consistently and accurately reporting all revenues collected from shippers. In January 2007, STB finalized rules requiring, among other things, that carrier fuel surcharges be based on factors directly affecting the amount of fuel consumed. Furthermore, STB stated it is in the process of finalizing new reporting requirements for fuel surcharges. We recognize STB's action in this area and modified our report to reflect these actions; however, STB has yet to finalize and implement standardized reporting of fuel surcharges. Furthermore, revenues other than fuel surcharges are included in reported miscellaneous revenues. Thus it remains for STB to review its method of data collection to ensure that all freight railroads are consistently and accurately reporting all revenues.

DOT provided us with e-mail comments on the draft from the Federal Railroad Administration (FRA). Like STB, FRA suggested that we recognize STB's new rules regarding how carriers can calculate fuel surcharges. FRA provided additional technical comments that we have incorporated as appropriate.

If you or your staffs have any questions about this report, please contact me at (202) 512-2834 or heckerj@gao.gov. Contact points for our Offices of Congressional Relations and Public Affairs may be found on the last page of this report. Key contributors to this report were Steve Cohen (Assistant Director), Steve Brown, Matt Cail, and John Mingus.

A handwritten signature in black ink, appearing to read "JayEtta Z. Hecker". The signature is fluid and cursive, with a long horizontal stroke extending to the right.

JayEtta Z. Hecker
Director, Physical Infrastructure Issue

List of Congressional Requesters

The Honorable Daniel K. Inouye
Chairman
Committee on Commerce, Science, and Transportation
United States Senate

The Honorable Byron Dorgan
United States Senate

The Honorable Frank Lautenberg
United States Senate

The Honorable Trent Lott
United States Senate

The Honorable John McCain
United States Senate

The Honorable Mark Pryor
United States Senate

The Honorable Gordon Smith
United States Senate



Office of the Chairman

Surface Transportation Board
Washington, D.C. 20423-0001

June 25, 2007

Ms. JayEtta Z. Hecker
Director
Physical Infrastructure Issues
Government Accountability Office
441 G Street, NW
Washington, DC 20548

Dear Ms. Hecker:

The Surface Transportation Board has received the draft version of the Government Accountability Office (GAO) report entitled *Freight Railroads: Updated Information on Rates and Other Industry Trends*, (GAO-07-291R).

We have reviewed the draft and are submitting the agency's formal comments which are attached. If you have any questions, please contact William Huneke, Associate Director and Chief Economist, at 202-245-0325.

We appreciate the opportunity to work with you on this matter.

Sincerely,

A handwritten signature in black ink, appearing to read "C. D. Nottingham".

Charles D. Nottingham

Enclosure

cc: Steve Cohen, Assistant Director, GAO
Matt Cail, Analyst-in-Charge, GAO
Vice Chairman Buttrey
Commissioner Mulvey
Associate Director, William Huneke

Comments of the Surface Transportation Board

**“Freight Railroads: Updated Information on Rates and Other Industry Trends”
(GAO-07-291R)**

June 25, 2007

The STB welcomes the opportunity to comment upon GAO’s update of last October’s major study of the freight railroad industry. Significantly, GAO’s findings demonstrate that despite an up tick in 2005 general industry rates remain at or below 1985 levels even in nominal terms (Figure 1). Moreover, for each of the four major categories of rail traffic separately tracked by GAO (coal, grain, motor vehicles, and miscellaneous mixed shipments), rates have not kept pace with inflation (Figure 2).

We suggest that to present its findings in context GAO use inflation-adjusted measures. For example, although GAO reports that rates for shipments of motor vehicles increased 2% in 2005, those rates actually fell when adjusted for the 5% inflation rate that GAO reports in 2005. Furthermore, the general industry rate increase of 7% in 2005 was modest when compared to the 5% inflation rate. Moreover, the report notes that 2005 was only the second year since 1985 that the general industry rate increases exceeded inflation.

GAO repeats its previous recommendations that STB undertake a rigorous analysis of competition in the freight railroad industry and review its fuel surcharge reporting processes. While the STB’s staff resources remain constrained, the STB has identified funding (not available at the time of GAO’s initial report) to conduct a study responsive to GAO’s recommendation. We intend to solicit proposals from analysts with no ties to the railroad industry or connection to any recent STB proceedings for a fixed-price contract to conduct an appropriate study.

no ties to the railroad industry or connection to any recent STB proceedings for a fixed-price contract to conduct an appropriate study.

Concerning GAO's other recommendation to the STB regarding data collection, prior to GAO's October report the Board had already taken action to address concerns related to railroad fuel surcharges. In August 2006, we proposed measures, finalized in January 2007, requiring, among other things, that if a carrier chooses to use a fuel surcharge program, the fuel surcharge must be based upon attributes of a movement that directly affect the amount of fuel consumed. We are now in the process of finalizing new reporting requirements, also first noticed for comment in August 2006, that will provide more accurate and timely data on the revenue collected through fuel surcharges and the amount of fuel cost increases absorbed by the railroads themselves.

The new fuel surcharge reports should provide "accurately and consistently reported" data, as called for by GAO, on each Class I railroad's fuel surcharge program. As GAO notes, a fuel surcharge imposed on an individual shipment is not separately identified in the Waybill Sample, but rather may be grouped with other "miscellaneous" revenues. Once we are able to assess the impact of the recent reforms on how fuel surcharges are imposed and reported, we will be in a better position to weigh the potential benefits and burdens of revisiting how data are reported for the Waybill Sample on individual movements.

The STB will remain vigilant in monitoring the railroad industry and will take such actions as necessary and appropriate to protect the public interest.

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