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SURFACE TRANSPORTATION BOARD

DECISION

STB Docket No. 42114

US MAGNESIUM, L.L.C.

v.

UNION PACIFIC RAILROAD COMPANY

The Board finds that the defendant railroad has market dominance over the two movements at issue and that the challenged rates for those movements are unreasonably high under the Three-Benchmark analysis. The railroad is directed to establish new rates that do not exceed the maximum reasonable rates prescribed herein and to pay reparations (with interest) to the shipper.

Decided: January 27, 2010

BY THE BOARD:

This is a rate dispute in which US Magnesium, L.L.C. (USM) has challenged whether the rates charged by Union Pacific Railroad Company (UP) are reasonable. UP has market dominance over the movements of chlorine by tank car at issue here—Rowley, UT to Eloy, AZ, and Rowley to Sahuarita, AZ. Using our simplified rate guidelines,¹ we have determined that the rates that UP is charging USM for those movements are unreasonably high. We will prescribe the maximum lawful rates at the levels produced by the Three-Benchmark formula, using USM's proposed comparison groups, adjusted by a 14.8% common carrier adjustment.² The resulting

¹ The Board's simplified procedures are set forth in Simplified Standards for Rail Rate Cases, STB Docket No. 646 (Sub-No. 1) (Simplified Standards) (STB served Sept. 5, 2007), aff'd sub nom. CSX Transp., Inc. v. STB, 568 F.3d 236 (D.C. Cir. 2009), and vacated in part on reh'g, CSX Transp., Inc. v. STB, 584 F.3d 1076 (D.C. Cir. 2009). USM has elected to utilize the Three-Benchmark method, under which the total available rate relief is limited to \$1 million over a 5-year period.

² UP designated this information as "highly confidential." While we attempt to avoid references to confidential or highly confidential information in Board decisions, the Board reserves the right to rely upon and disclose such information in decisions when necessary. In this case, we determined that we could not present our findings with respect to the common carrier adjustment without disclosing this information.

maximum lawful revenue-to-variable cost ratios (R/VCs) are 356% for the Eloy movement and 346% for the Sahuarita movement.

Once market dominance is established on the record, the outcome of a Three-Benchmark proceeding tends to turn on which party's comparison group is determined by the Board to be more similar to the issue traffic. The Board was forced here to choose from two unappealing comparison group offerings. UP submitted one comparison group that it used for both movements. UP's comparison group consists of 24 chlorine-only movements, 58% of which are rebilled movements. USM provided a comparison group for each of the issue movements, with 89 toxic inhalant (TIH) shipments in the Eloy movement comparison group and 162 TIH shipments in the Sahuarita movement comparison group. USM's comparison groups for the Eloy and Sahuarita movements, however, contain 79% and 88% anhydrous ammonia movements respectively, and only 4% and 1% chlorine movements respectively.

While neither of the parties offered comparison groups that were truly comparable to the issue traffic—chlorine-only, single-line movements—under the Three-Benchmark methodology, we must choose one party's offering over the other's. To help resolve the issue, we performed a quantitative analysis that focused on R/VC ratios for movements in UP's Waybill Sample data. That analysis showed that USM's comparison groups were more similar to the issue traffic than UP's comparison group. A review of UP's own comparison group corroborates our analysis showing that the inclusion of rebilled traffic significantly distorts the R/VC ratio. The adjusted R/VC ratio for UP's proposed group, isolated to the single-line movements, is 301%, which is nearly identical to the R/VC ratios submitted by USM for the Eloy and Sahuarita movements (304% and 298% respectively).

Finally, UP urges the Board to increase the maximum lawful rates it may charge USM to reflect the projected costs of complying with the new Positive Train Control (PTC) federal mandates. PTC is a federally mandated rail infrastructure upgrade, driven by safety concerns for toxic inhalant hazards (TIH) and passenger traffic, that UP and other rail carriers must complete by 2015. While we understand that the costs of PTC might be significant and that carriers might need to recover the additional costs from their customers in the future, the adjustment advocated by UP for PTC cannot be justified here. First, we generally do not require shippers to provide carriers a return on investments not yet made. See Simplified Standards, at 56. Further, UP has not demonstrated here that PTC investments are sufficiently defined such that UP can quantify its costs or fairly attribute those costs to USM's traffic. Finally, as UP makes the contemplated PTC investments, those expenditures will flow into our costing model, raising the variable costs of serving the issue traffic. There is an inevitable regulatory lag to that process, but fashioning an appropriate adjustment is too complex for the purposefully simple and cost-efficient Three-Benchmark process that USM elected to use in this case.

Based on the record presented, we prescribe the maximum reasonable rate levels for the two challenged movements, and reparations (with interest) are awarded to USM.

ISSUE TRAFFIC

USM is the only domestic producer of primary magnesium, which it extracts from the Great Salt Lake. As a co-product of its production process, USM generates chlorine gas, a TIH commodity. USM states that, previously, it vented most of its chlorine gas into the atmosphere, but is now prohibited from doing so by the U.S. Environmental Protection Agency. As a result, USM must now capture its chlorine gas, relying on UP to deliver USM's chlorine to its destination.

The two movements at issue comprise the transportation of chlorine in the form of a liquefied compressed gas (STCC 2812815) moving in UP single-line car service and using privately owned tanker cars. UP is charging \$13,396 per car for movements from Rowley to Eloy, and \$10,410 per car for shipments from Rowley to Sahuarita. Ultimately, in this Three-Benchmark analysis, both sides agree to use UP's actual loaded miles as well as the Board's indexing procedure from Oklahoma Gas & Electric Company v. Union Pacific, STB Docket No. 42111 (STB served July 24, 2009). According to UP, the actual loaded miles for the Eloy movement are 1,290 and the actual loaded miles for the Sahuarita movement are 1,250. The variable costs for the Eloy movement are \$2,549 and the variable costs for the Sahuarita movement are \$2,485. These variable costs were calculated using the parties' inputs, and the Board's Uniform Rail Costing System (URCS). The resulting revenue-to-variable cost ratio (R/VC) for the Eloy movement is 526%; the Sahuarita movement's R/VC ratio is 419%.³

PRELIMINARY MATTERS

On October 23, 2009, the United States Court of Appeals for the District of Columbia Circuit issued a decision reconsidering one aspect of its earlier decision, CSX Transp., Inc. v. STB, 568 F.3d 236 (D.C. Cir. 2009), that had affirmed the Board's decision in Simplified Standards. CSX Transp., Inc. v. STB, 584 F.3d 1076 (D.C. Cir. 2009) (CSX Transp. II). In its reconsideration decision, the court determined that the Board had not provided adequate notice of a provision in its final rule that allows the comparison group in Three-Benchmark cases to be drawn from 4 years of Waybill Sample data rather than the most recent year's data only. Therefore, the court vacated this aspect of Simplified Standards.

On November 3, 2009, the Board served a decision in this case asking the parties to confer and advise whether they agree to proceed with this case based on the record before us, despite the court's ruling in CSX Transp. II. On November 10, 2009, USM and UP filed a joint pleading stating that they agree to proceed. In accordance with the policy behind the Board's statutory mandate to provide methods for simplified, cost-effective rate dispute resolution, and because the parties do not object, the Board will decide this case on the record that the parties developed prior to the determination in CSX Transp. II.

³ USM has filed two other rate cases with the Board concerning its shipment of chlorine on UP lines, STB Docket Nos. 42115 and 42116, both of which employ the simplified stand-alone cost methodology from Simplified Standards. The issue movements in this proceeding are not part of those other two cases.

On September 22, 2009, the Fertilizer Institute, the American Chemistry Council, and the Chlorine Institute (collectively, Amicus Parties), submitted a joint motion to participate in this proceeding as amici curiae. The Amicus Parties state that they request to participate to address UP's suggested "other relevant factor" adjustment for Positive Train Control, arguing that it has broad rate ramifications for all TIH traffic. The Amicus Parties filed their reply to UP's opening evidence with their motion to participate. UP has not objected to the motion or reply. The Amicus Parties' motion will be granted and their reply will be accepted into the record.⁴

MARKET DOMINANCE

The Board can consider the reasonableness of a challenged rail rate only if the carrier has market dominance over the traffic involved. 49 U.S.C. 10707. Market dominance is "an absence of effective competition from other rail carriers or modes of transportation for the transportation to which a rate applies." 49 U.S.C. 10707(a). Where a railroad has market dominance, its transportation rate must be reasonable. 49 U.S.C. 10701(d)(1), 10702.

There are two components to the Board's market dominance inquiry. The first component is quantitative. The statute establishes a conclusive presumption that a railroad does not have market dominance if the rate it charges produces revenues that are less than 180% of its variable costs⁵ of providing the service. 49 U.S.C. 10707(d)(1)(A). Thus, the 180% revenue-to-variable-cost (R/VC) ratio is the floor for regulatory scrutiny of rail rates. That statutory 180% R/VC level is also the floor for any rate relief. See Burlington N. R.R. v. STB, 114 F.3d 206, 210 (D.C. Cir. 1997).

If the quantitative threshold is met, the Board moves to the second component of its market dominance inquiry, a qualitative analysis. In this analysis, the Board determines whether there are any feasible transportation alternatives that could be used for the issue traffic. The Board considers both intramodal competition (from other railroads) and intermodal competition (from other modes of transportation such as trucks, barges, pipelines or transload arrangements). In the qualitative market dominance inquiry, the complainant bears the burden of establishing the absence of effective competition from other rail carriers or other modes of transportation for the traffic to which the challenged rate applies.⁶ Even where an alternative mode or modes of

⁴ The Board has accepted amicus briefs in other similar proceedings. See North America Freight Car Association v. BNSF Railway Company, STB Docket No. 42060 (Sub-No. 1) (STB served Aug. 2, 2005); Arizona Public Service Co. & PacifiCorp v. The Burlington Northern and Santa Fe Railway Company, STB Docket No. 41185 (STB served Oct. 14, 2003).

⁵ Variable costs are those railroad costs that vary with the level of output.

⁶ See 49 U.S.C. 10707; Government of the Territory of Guam v. Sea-Land Service, Inc., American President Lines, Ltd., and Matson Navigation Company, Inc., STB Docket No. WCC-101, slip op. at 5-6 (STB served Feb. 2, 2007) ("In rail cases, because a finding of market dominance is a threshold jurisdictional requirement, we place the burden of proof on the shipper to show that there is not effective competition.").

transportation exist, a complainant can establish market dominance by demonstrating that the alternate modes of transportation are not effectively constraining the carrier's ability to increase the rates of the issue traffic.⁷

Here, UP concedes that the R/VC ratios exceed the 180% threshold for both movements and that it could not prevail on the issue of whether there is qualitative evidence of effective competition for the issue movements under the Board's standards. See UP Answer at 4. We therefore find that UP has market dominance with respect to the Eloy and Sahuarita movements.

RATE REASONABLENESS STANDARDS

Under the Three-Benchmark approach, the reasonableness of the challenged rate is addressed by examining the R/VC ratio that is produced by the challenged rate in relation to three benchmark figures, each of which is also expressed in the form of a revenue to variable cost ratio. The first benchmark, the Revenue Shortfall Allocation Method (RSAM), measures the average markup over variable cost that the defendant railroad would need to charge all of its potentially captive traffic (traffic priced above the 180% R/VC level) in order for the railroad to earn adequate revenues as measured by the Board under 49 U.S.C. 10704(a)(2). The second benchmark, $R/VC_{>180}$, measures the average markup over variable cost currently earned by the defendant railroad on its potentially captive traffic. The third benchmark, the R/VC_{COMP} , is used to compare the markup being paid by the challenged traffic to the average markup assessed on other comparable potentially captive traffic.

Once the Board selects the appropriate comparison group for the R/VC_{COMP} benchmark(s), the R/VC ratio of each movement in the comparison group is multiplied by the ratio of $RSAM \div R/VC_{>180}$ to account for revenue adequacy. The mean and standard deviation of the resulting R/VC ratios (weighted in accordance with the appropriate sampling factors) are then calculated. If the challenged rate produces an R/VC ratio above a reasonable confidence interval around the estimate of the mean for the adjusted comparison group, it is presumed unreasonable and, absent any 'other relevant factors,' the maximum lawful rate is prescribed at that boundary level.

THREE-BENCHMARK ANALYSIS

A. R/VC_{COMP} Benchmark

1. Comparability Factors

The R/VC_{COMP} benchmark analysis uses the R/VC ratios of comparable traffic as evidence of the reasonable R/VC levels for traffic of that sort. Comparability is determined by reviewing a variety of factors, such as length of movement, commodity type, traffic densities of

⁷ See Market Dominance Determinations, 365 I.C.C. 118, 129 (1981) ("Effective competition for a firm providing a good or service means that there must be pressures on that firm to perform up to standards and at reasonable prices, or lose desirable business.").

the likely routes involved, and demand elasticity (although the comparison group need not have movements with identical demand). Movements with different cost characteristics may be included in the comparison group to allow the Board to determine the reasonable level of contribution to joint and common costs for a particular movement. The comparison group should consist of only captive traffic over which the carrier has market power, as the rates available to traffic with competitive alternatives would provide little evidence of the degree of permissible demand-based differential pricing needed to provide a reasonable return on the investment. Thus, no movements priced below the 180% R/VC level may be included in the comparison group.

2. Comparison Groups

USM, on opening, used the following criteria to develop its two comparison groups. Its comparison groups consist of TIH commodities, with the largest proportion of the moves consisting of anhydrous ammonia and a relatively small number of chlorine moves, which travel in private tank cars. USM Opening V.S. of Kim Hillenbrand Ex. KNH-4, Ex. KNH-5. The traffic at issue was excluded. Only UP single-line service, with no rebilled traffic, was included. Cross-border traffic to or from Mexico and Canada was excluded. Only traffic with an R/VC \geq 180% was included. Only moves with a loaded mile range of plus or minus 200 miles of the issue traffic's loaded miles were included. A mixture of common carrier and contract rates was used, with the overwhelming majority being contract moves. USM Opening V.S. of Kim Hillenbrand at 10-11. On reply, USM reports that it did not change any of these criteria, but USM agreed to accept UP's actual miles for the issue movements' calculation of variable costs, reporting that they were more accurate. USM Reply V.S. of Kim Hillenbrand at 7, 19-20. UP argues that USM did not select "like commodities," that tanker car capacities should be less than 22,000 gallons, that UP's mileage range is more appropriate, that rebilled movements should be included as they are not "non-defendant traffic," and that USM included a significant amount of traffic that is moved by and terminates on the San Pedro Railroad (SPROC), a short line railroad, and not UP. UP Reply at 8-23. SPROC operates some movements in USM's comparison groups under a handling agreement with UP. However, nothing in the Waybill Sample indicates that the movements are made under the handling agreement. UP argues that the R/VC results calculated using this type of handling agreement are not useful in Three-Benchmark cases as UP's system average variable costs are not reflective of UP's actual costs for those movements.

UP, on opening, used the following criteria to develop its comparison group. Its comparison group consists of only chlorine movements that travel in private tank cars with capacities of less than 22,000 gallons. Issue traffic was excluded. Only UP single-line service traffic was included, but with the majority consisting of rebilled traffic. Only traffic with an R/VC \geq 180% was included. Only moves with a loaded mile range of plus or minus 400 miles of the issue traffic's loaded miles were included. Only contract rates were used (although this is predetermined by the selection of the chlorine-only comparison group, as all chlorine moving on UP's system, except USM's traffic, moves by contract). UP Opening at 20-30. On reply, UP reported that it made one change to these criteria as it accepted USM's miles for the issue movement variable cost calculation to reduce differences between the parties, but that it did not alter the initial comparison group that it submitted. UP Reply at 22-23. USM argues that UP's comparison group contains too few movements (24), that a chlorine-only comparison group is

contrary to Simplified Standards, that UP's mileage band does not result in moves that are comparable in length to the issue moves, that UP's tanker car capacity limitation is too restrictive, and that rebilled movements should not be included. USM Reply at 8-14.

In sum, the parties agree on four comparability factors: R/VC_{>180}, private cars, inclusion of contract traffic, and no issue traffic. But they disagree on five other factors: the commodity group, whether rebilled movements should be allowed, the capacity of tank cars, the mileage bands for the length of haul, and whether traffic that is both moved by and terminates on SPROC should be included in the comparison group.

3. Board Analysis

There are two pivotal issues regarding the selection of the comparison groups in this case. The first issue involves USM's decision to submit comparison groups that contain a very small number of chlorine shipments. Here, 79% to 88% of USM's comparison groups consist of anhydrous ammonia. Anhydrous ammonia and chlorine share the TIH designation, and the Federal Railroad Administration and the Pipeline and Hazardous Materials Safety Administration do not treat the transportation of chlorine differently from the transportation of any other TIH product.⁸ Of significance, however, the two commodities do not share the same relative demand characteristics,⁹ and there is some evidence that they may have dissimilar transportation risks.¹⁰

In support of its comparison groups, USM relied on our decision in E.I. DuPont De Nemours and Company v. CSX Transportation, Inc., STB Docket No. 42100 (STB served June 30, 2008) (DuPont). But the facts here are different for four reasons. First and foremost, the comparison groups selected in that case consisted mostly of chlorine traffic. Second, the defendant in that case provided the Board with comparison groups consisting of only movements that included a fuel surcharge, which the Board found improper. Id. at 9. Third, the defendant had acknowledged that it sets its rates for chlorine traffic based not on profit maximization, but

⁸ See 49 CFR Parts 172, 174, and 209.

⁹ The differences in demand elasticities were demonstrated by UP on rebuttal. See UP Rebuttal at 18-19 (showing that the Board's Waybill Sample data confirm that UP does not treat all TIH shipments as having the same demand elasticity because the average markup over variable costs for UP's chlorine traffic has been significantly higher than for UP's other TIH traffic in each year from 2004-2007).

¹⁰ According to a study by the U.S. Department of Energy, chlorine is significantly riskier to transport than anhydrous ammonia. See David F. Brown et al., U.S. Dep't of Energy, A National Risk Assessment for Selected Hazardous Materials in Transportation 179 (2001), available at, <http://www.osti.gov/bridge/basicsearch.jsp> (search for "776739") (finding that chlorine is responsible for 59% of the total fatality risk, and 58% of the total injury risk, associated with transporting TIH, as opposed to 26% and 15% respectively for anhydrous ammonia, even though the study data reflected significantly more shipments of anhydrous ammonia than chlorine).

rather on risk avoidance. *Id.* at 5. Finally, as noted above, there is evidence here of the differences in risk and demand between chlorine traffic and anhydrous ammonia. In DuPont, at 8, we concluded that, under the circumstances of that case, “a more appropriate comparison group should include all TIH shipments, rather than a narrowly tailored group of chlorine movements alone.” But that statement does not support a comparison group that has been narrowly tailored to almost exclusively anhydrous ammonia movements.

The second issue involves UP’s decision to submit a comparison group that is dominated by rebilled movements (rather than single-line movements).¹¹ USM argues that rebilled traffic should not be included because it has different cost of service characteristics than local movements. It argues that these lower costs result in higher R/VC ratios for rebilled movements. See USM Reply V.S. of Kim Hillenbrand at 12-13. USM further notes that rebilled movements are costed differently by URCS, that UP has not provided any explanation of how demand elasticity for joint-line, rebilled movements are sufficiently comparable to the issue movements, and that the removal of the rebilled movements from UP’s comparison group would lower the R/VC ratio of the group dramatically. USM Rebuttal at 21-22.

In response, UP maintains that the cost differences are irrelevant. The Three-Benchmark methodology, UP argues, compares markups over variable costs, and not variable costs themselves. UP notes that, according to Simplified Standards, movements with different cost characteristics can be included in a comparison group. UP claims that USM has not provided any reason why rebilled traffic cannot be used in the comparison groups. UP Rebuttal at 28-29.

We disagree. Simplified Standards states that there is no reason to presume, a priori, that R/VC ratios for different movement types should be different. Simplified Standards, at 17. In this case, however, USM has provided empirical evidence that the R/VC ratios for the rebilled movements in the UP comparison group are different from those for the single-line movements. USM Oral Argument Ex., Tr. 9A. Specifically, USM demonstrated that if we examine the R/VC levels for the single-line chlorine traffic in UP’s group, the average adjusted R/VC level (301%) is nearly identical to the levels advocated by USM. USM also revealed that the rebilled chlorine traffic that UP included has adjusted R/VC levels of 475%. In other words, USM correctly noted that its comparison groups provide essentially the same benchmark R/VC levels as the single-line, chlorine traffic in UP’s group. At no point during our oral argument did UP adequately respond to that claim, or explain how we could ignore the plain differences in its pricing of rebilled and single-line chlorine traffic. While Simplified Standards states that a party may argue for the inclusion of comparable movements with different cost characteristics, Simplified Standards, at 17, the rebilled movements proposed by UP in this case do not appear comparable

¹¹ Rebilled traffic is also known as “Rule 11” traffic, a reference to an accounting procedure under the Railway Accounting Rules promulgated by the Association of American Railroads’ accounting division where a shipper is billed separately by each involved rail carrier for traffic that is transported by more than one carrier. Policy Alternatives to Increase Competition in the Railroad Industry, STB Ex Parte No. 688, slip op. at 4 n.5 (STB served Apr. 14, 2009). Rebilled traffic is often priced differently than single-line, origin-to-destination movements.

to the issue traffic. The rates challenged by USM here involve movements with both an origin and a destination, while rebilled movements contain one, or neither, and at least one interchange.

This presents us with a choice between two imperfect groups. All else being equal, local single-line chlorine movements would be the preferable comparison group for the issue movements. However, neither party presented that comparison group. Rather, both parties chose relatively extreme comparison groups in their initial tenders. And while the deficiencies in each of the comparison groups were evident at opening, and either party could have strengthened its selection by adopting movements from the other's group(s), both parties stood rigidly behind their initial, deficient comparison group selections.¹²

To assist in the decision-making process, we performed our own quantitative analysis of the likely impact of these deficiencies.¹³

First, we explored the distortion in USM's comparison groups resulting from the scarcity of chlorine traffic. Using the UP Waybill Sample data that we provided the parties in this case, we calculated the average R/VC ratios for the four types of TIH commodities included by USM. This permitted us to estimate the impact of including non-chlorine movements in its comparison groups. For consistency, we restricted this calculation to include only local movements with a R/VC ratio above 180%. The data reveals that ethylene oxide movements had an average R/VC ratio 1% less than chlorine, hydrogen fluoride was 13% less than chlorine, and anhydrous ammonia was 19% less than chlorine. We then weighted these differences in R/VC ratios by the percentage of these commodities in each of USM's comparison groups, arriving at the following results:

Impact of Non-Chlorine TIH (Eloy)

Movement Type	Percent of Comparison Group	Impact	Weighted Impact
Chlorine Gas, Liquefied	4%	0%	0%
Ethylene Oxide	9%	-1%	0%
Hydrogen Fluoride Anhydrous	8%	-13%	-1%
Ammonia, Anhydrous	79%	-19%	-15%
Total	100%		-16%

¹² We acknowledge that the failure of either party to submit a comparison group more similar to the traffic at issue here is likely due to limitations in the number of comparable movements in the Waybill Sample. We plan to address the potential for a limited TIH sample size in a separate proceeding, by proposing a new rule that would require 100% reporting of toxic inhalation hazards in the Waybill Sample. Waybill Data Reporting for Toxic Inhalation Hazards, STB Ex Parte No. 385 (Sub-No. 7) (STB served Jan. 28, 2010) (TIH Waybill NPRM).

¹³ Our workpapers are available to the parties (but not the Amicus Parties) upon request.

Impact of Non-Chlorine TIH (Sahuarita) Group

Movement Type	Percent of Comparison Group	Impact	Weighted Impact
Chlorine Gas, Liquefied	1%	0%	0%
Ethylene Oxide	5%	-1%	0%
Hydrogen Fluoride Anhydrous	6%	-13%	-1%
Ammonia, Anhydrous	88%	-19%	-16%
Total	100%		-17%

This analysis suggests that including non-chlorine traffic understates USM's Eloy and Sahuarita comparison groups.

Using the same approach, we then turned to the distortion in UP's comparison group caused by the rebilled traffic. To begin, we again examined the 2004 to 2007 Waybill Sample and calculated the average R/VC ratio for all of the local single-line chlorine movements, with an R/VC ratio that exceeds 180%, to establish a baseline. We next determined that the average R/VC ratio of local rebilled chlorine movements was 31% more than for single-line movements. Finally, we weighted this difference in R/VC ratios by the percentage of local versus rebilled movements in UP's comparison group, arriving at the following result:

Impact of Rebilled Traffic

Movement Type	Percent of Comparison Group	Impact	Weighted Impact
Local, Chlorine	42%	0%	0%
Rebilled, Chlorine	58%	31%	18%
Total	100%		18%

Including rebilled traffic thus overstates UP's comparison group, which was used for both the Eloy and Sahuarita movements.

While neither an overstatement nor an understatement of the issue traffic in the comparison group is ideal, USM's understatements appear to be less than UP's overstatement. While there is a large difference between the impact from including rebilled traffic (31%) and focusing on anhydrous ammonium (19%), the weighted impact may not be "statistically significant." Notwithstanding, this analysis confirms what USM has advocated, which is the significant bias UP introduced when it included rebilled traffic in its comparison group.

Our last step was to examine the remaining differences between the comparison groups. USM's comparison groups are strengthened by the larger sample size and narrower mileage bands, which are more reasonable with respect to the length of haul than UP's mileage bands because they are closer to the two issue movements' actual miles. UP's group is strengthened by its limitation on tank capacity.

We must also resolve an issue regarding the inclusion of the SPROC short line movement. In its initial tender, USM unknowingly included traffic moved by SPROC pursuant to a handling agreement with UP. It did so because the Waybill Sample identified those movements as UP movements. We conclude that the complainant can rely on the information contained in the Waybill Sample as accurate. In situations like this, it is incumbent on the railroad to timely disclose handling agreements when it realizes that the complainant is proceeding based on false assumptions about the carrier's service.

In sum, based on our quantitative analysis and the residual differences between the groups, we find that USM's comparison groups provide the best evidence of a reasonable level of contribution to joint and common costs for the issue movements.

Our colleague, Commissioner Nottingham, has dissented from our decision to accept USM's comparison groups because they contain very little chlorine traffic. We understand his concerns. But based on this record, USM's comparison groups provide a better gauge of the proper comparison group. The traffic at issue constitutes single-line, chlorine movements. Yet UP submitted a comparison group containing 42% single-line traffic and 58% rebilled (i.e., interchanged) traffic. Single-line movements are different from rebilled movements. Single-line movements travel over a single carrier, and in this case an average distance of just over 1,000 miles. Rebilled traffic, on the other hand, is carried by multiple carriers with multiple interchanges and handoffs, and the total distance traveled by the commodity typically will be much longer. As such, the costs of transporting the commodity are different. Further, the markup over variable cost UP will charge for its portion of the total trip will not only be a function of the shipper's elasticity of demand for transportation, but also a function of UP's relative bargaining power compared with other carriers involved in the movement.

When we scrutinize UP's comparison group, the difference in the average adjusted R/VC ratios between single-line and rebilled movements is significant: 301% for single-line chlorine traffic in UP's comparison group compared to 475% for rebilled traffic in UP's comparison group. UP was unable to justify allowing rebilled traffic to skew its comparison group. Moreover, as USM stressed at our oral argument, its comparison groups actually provide R/VC levels nearly identical to the markups of the single-line, chlorine traffic in UP's group. The adjusted R/VC ratios submitted by USM for the Eloy and Sahuarita movements were 304% and 298%, compared to 301% for single-line, chlorine movements in UP's group.

Our colleague is also concerned that potential inaccuracies in how our costing model treats chlorine traffic have placed UP at a disadvantage. We believe that this concern is misplaced. To address differences in both demand elasticities and transportation risks, nothing prevented UP from providing a comparison group containing just single-line, chlorine movements, and excluding rebilled movements. We appreciate why it chose not to: it would have won the battle (the selection of the comparison group) and lost the war (the result would be the same as in this case). If UP had provided a comparison group of single-line, chlorine movements, the issue of how our costing model treats movements of chlorine would be largely irrelevant, because this is a comparison approach, and the issue movements and comparison movements would be treated similarly by our costing model. See Simplified Standards, at 17, 84

(noting that if one sought to adjust the costing model, similar movements would get similar adjustments, which could result in one cancelling out the other). As such, concerns with the potential risks of transporting chlorine cannot alone justify rejecting USM's groups when the average markups in those groups (298% and 304%) are practically identical to the markup over variable cost in UP's group for movements of chlorine in single-line service (301%).

In the end, it is our responsibility to select the better comparison group between those submitted by the parties in order to judge the reasonableness of the challenged rates. By design, these simplified standards anticipated that parties might attempt to push the envelope in their litigation strategies, but in so doing parties risk our selection of the opposing party's comparison group. Here, we agree with UP and our dissenting colleague that there are important differences between movements of chlorine and anhydrous ammonia, as illustrated by UP's evidence of the differences between the two groups. While that difference, as measured by the R/VC ratios in the broader Waybill Sample data, is significant (19%), a more pronounced difference is present between single-line and rebilled, chlorine traffic (31%). These simplified proceedings do not offer us a proper platform to explore why either discrepancy exists. But all of the quantitative evidence points toward accepting USM's groups over that proffered by UP. Given that: (1) UP's own comparison group shows average R/VC levels for single-line, chlorine movements that are practically identical to those from USM's groups; (2) the supplemental quantitative analysis we undertook of the relevant data confirms that the distortion from rebilled movements appears more significant; and (3) the residual differences between the parties' groups—such as the number of observations and the mileage bands—also favor USM's groups, it is our judgment that USM's submission (notwithstanding the relative lack of chlorine traffic) provides more reasonable comparison groups than one so sharply skewed by rebilled traffic.

B. RSAM and R/VC_{>180} Benchmarks

While the R/VC_{>180} benchmark measures the average markup over variable cost currently earned by the defendant railroad on all of its potentially captive traffic, the RSAM benchmark measures the average markup above variable cost that the carrier would need to charge its potentially captive traffic to meet its revenue needs. In accordance with Simplified Standards, as amended by Simplified Standards for Rail Rate Cases—Taxes in Revenue Shortfall Allocation Method, STB Ex Parte No. 646 (Sub-No. 2) (STB served on Nov. 21, 2008), the following formula is used to calculate RSAM:

$$\text{RSAM} = (\text{REV}_{>180} + \text{Adjusted REV}_{\text{short/overage}}) \div \text{VC}_{>180}$$

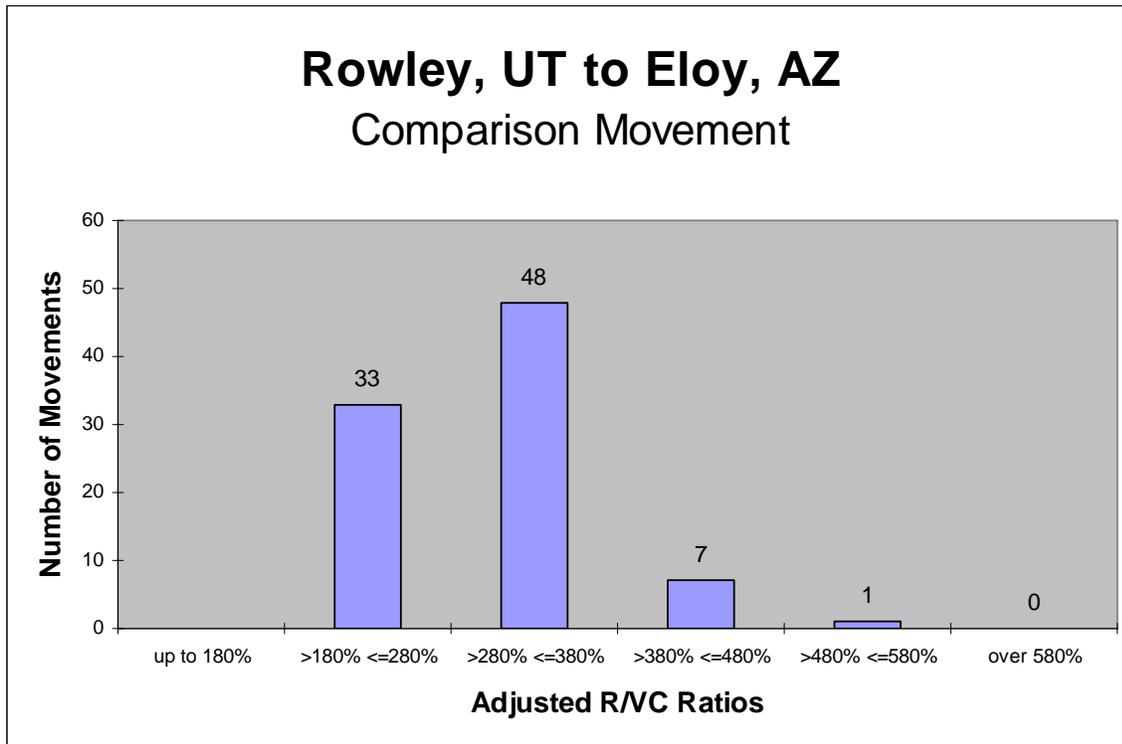
where REV_{>180} is an estimate of the total revenue earned by the carrier on potentially captive traffic, and VC_{>180} is an estimate of the total variable costs of the railroad to handle that traffic. (The confidential Waybill Sample is used to estimate these components.) To calculate RSAM, the carrier's revenue shortfall (or overage) as shown in the Board's annual revenue adequacy determination (REV_{short/overage}), adjusted for taxes, is added to (or subtracted from) the numerator. In the Three-Benchmark analysis, the ratio of the RSAM and R/VC_{>180} benchmarks is used to adjust the R/VC ratios of the selected comparison group. Thus, the relationship between the RSAM and R/VC_{>180} benchmarks serves as a revenue need adjustment factor, when applied to

comparison group movements, to reflect demand-based differential pricing principles. See Rate Guidelines—Non-Coal Proceedings, 1 S.T.B. 1004, 1042 (1996).

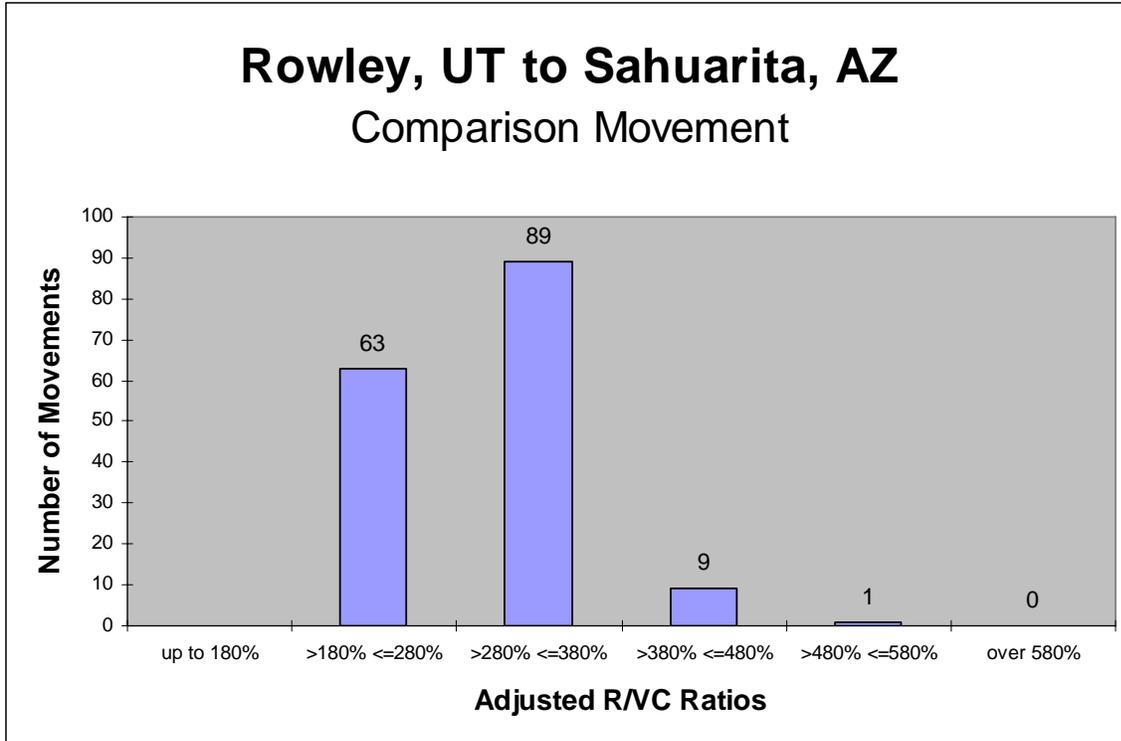
The RSAM and $R/VC_{>180}$ benchmarks are published annually by the Board. In this case, the parties used the benchmark figures for UP for the years 2004 through 2007, which were published in Simplified Standards for Rail Rate Cases—2007 RSAM and $R/VC_{>180}$ Calculations, STB Ex Parte No. 689 (STB served May 12, 2009). Both parties ask us to modify those published figures in this case, which we address below in our discussion on “other relevant factors.”

C. Rate Reasonableness Presumption

Having selected USM’s comparison groups through the final-tender process described above, each movement in the comparison groups is adjusted by the ratio of $RSAM \div R/VC_{>180}$ (the “revenue need adjustment factor”).¹⁴ The adjusted R/VC ratios of the comparison groups are illustrated below.



¹⁴ In this case, $RSAM \div R/VC_{>180}$ equals 1.41.



For the next step in the analysis, the mean and standard deviation of the adjusted R/VC ratios are calculated for the comparison groups (weighted in accordance with the proper sampling factors). In this case, the mean R/VC ratio of the 89 movements in the adjusted comparison group for the Eloy movement is 304% and the mean R/VC ratio for the 162 movements in the adjusted comparison group for the Sahuarita movement is 298%. The standard deviations, respectively, are 0.47 and 0.41.

Using the mean (R/VC_{COMP}) and standard deviation (S) of the adjusted comparison groups, along with the number of movements in the comparison groups (n), the upper boundary of a reasonable confidence interval around the estimate of the mean is derived as follows:¹⁵

$$\text{upper boundary} = R/VC_{COMP} + t_{n-1} \times (S \div (n-1)^{1/2})$$

This confidence interval is a function of the number of movements in the comparison groups and the standard deviation of those adjusted R/VC ratios. In this case, the upper boundaries are

¹⁵ This formula for a confidence interval around a mean can be found in most statistics textbooks. A “one-sided” hypothesis test is used, such that there is 90% confidence as to whether the challenged rate exceeds a reasonable norm. A 90% confidence interval is a standard level of confidence used in statistical analysis. The parameter t_{n-1} will range from 3.078 to 1.28 depending on the number of movements in the comparison group. See Simplified Standards, at 21 n.30. In this case, the parameter t_{n-1} equals 1.29 for the Eloy movement and 1.29 for the Sahuarita movement.

311% R/VC for the Eloy movement and 302% R/VC for the Sahuarita movement. The Eloy movement R/VC ratio (526%) is above this boundary; hence, it is presumed unreasonable. The other challenged rate, the Sahuarita movement, has an R/VC ratio (419%) which is also above this boundary, and therefore, also presumed unreasonable. Absent any “other relevant factors,” the maximum reasonable rates would be prescribed at the above-described upper boundaries.¹⁶

D. Other Relevant Factors

Under the Three-Benchmark method, either party may submit evidence of “other relevant factors” to demonstrate that the maximum lawful rate should be adjusted higher or lower. Parties are required to quantify the impact of these “other relevant factors” on the maximum lawful rate, and the proponent bears the burden of proof of demonstrating that any upward or downward adjustment is proper. Simplified Standards, at 22, 77. In this case, both parties introduced evidence of “other relevant factors” that they argue should lower (according to USM) or raise (according to UP) the maximum lawful rate level. We reject all but one of the parties’ proposals for adjusting the maximum reasonable rate level in this case. We will grant UP’s request to adjust the rate level to account for differences here between contract and tariff traffic. As discussed below, we limit the basis for this adjustment to the circumstances of this proceeding.

1. USM’s Other Relevant Factor Argument

USM argues that UP’s TIH pricing strategy causes shippers of that product group to pay a disproportionately large share of UP’s total revenues, meaning that UP’s potentially captive TIH traffic has a greater markup than other potentially captive non-TIH traffic. USM Opening at 20. USM asks that the Board modify its $R/VC_{>180}$ for UP, currently calculated using the total revenue earned by UP on all of its potentially captive traffic, by including only UP’s potentially captive TIH traffic. USM’s proposed modification, referred to as the “TIH $R/VC_{>180}$ benchmark,” results in a reduction to the revenue need adjustment ratio ($RSAM \div R/VC_{>180}$), thus lowering the maximum reasonable rate level. USM Opening at 20-21.

We reject USM’s proposal to modify the revenue need adjustment factor for two reasons. First, it is inconsistent with Simplified Standards. After careful consideration, we ruled that parties could not narrow the $R/VC_{>180}$ benchmark as the R/VC_{COMP} benchmark accounts for the tailoring of the process to the issue traffic. Simplified Standards, at 82.

¹⁶ We applaud USM for employing the Board’s publicly available Three-Benchmark model for calculating the upper boundary in small rate cases. After selecting a comparison group and loading seven input “fields” from our unmasked Waybill Sample, provided to parties after a complaint is filed, a shipper can quickly determine what the upper boundary will be for a given issue movement and a given comparison group. The only other data requirements for this analysis are the railroad four-year average RSAM and $R/VC_{>180}$ figures, produced annually by the Board, and the issue movement R/VC ratios.

UP failed to comply with our request (see Director Gardner’s letter to Outside Counsel, dated June 5, 2009) and did not use the Board’s model.

Second, USM's approach is flawed. The relationship between $R/VC_{>180}$ and RSAM reflects whether the carrier is revenue inadequate; adjusting either benchmark impermissibly affects this metric. More specifically, USM's proposed TIH $R/VC_{>180}$ is higher than the $R/VC_{>180}$ for all of the potentially captive traffic on UP, yet the RSAM benchmark is unchanged. Thus, substituting USM's proposed "TIH $R/VC_{>180}$ " in place of $R/VC_{>180}$ in the denominator of the revenue need adjustment ratio would artificially lower the ratio, and, by extension, the maximum reasonable rate that UP may charge. Allowing focused adjustments like this would lead to absurd results. For example, a party could submit that the $R/VC_{>180}$ should be modified for a commodity to a level that exceeds RSAM for the carrier's captive traffic—resulting in a value for the revenue need adjustment factor below 1 even where the railroad is revenue inadequate over that time span. This result would drive a revenue inadequate carrier further away from adequacy. A similarly absurd result could occur on the other end of the spectrum where a carrier is revenue adequate. In that case, the adjustment is designed to lower the comparison group's R/VC levels because the carrier in those circumstances is already earning sufficient revenue from potentially captive traffic. Yet, if we permitted the adjustment advocated by USM, future defendant carriers could themselves try to narrow just the $R/VC_{>180}$ benchmark to produce a revenue need adjustment factor greater than 1, which would increase the R/VC levels in the comparison group.

In short, we specifically rejected this proposal in Simplified Standards, and will not reconsider that decision here.

2. UP's Other Relevant Factor Arguments

UP advances two "other relevant factors." UP Opening at 55-63. The first is an adjustment to account for UP's projected costs associated with installing PTC. The second is a common carrier adjustment to reflect UP's assertion of higher costs and uncertainty associated with tariff traffic relative to contract traffic.

PTC Adjustment. UP claims that it is entitled to recover the costs it will incur for installing PTC to handle TIH traffic, and that these costs are not reflected in the Waybill Sample data due to regulatory lag. UP argues that the time period for the data upon which this case relies (2004-2007) does not reflect the changed market conditions for chlorine and the PTC costs for TIH traffic that current rates include. UP proposes two different options to address PTC and this alleged deficiency in the data.¹⁷ As the first step for either option, UP employs a discounted cash

¹⁷ In the first approach (Revenue Need Alternative), UP asks the Board to modify both the RSAM and $R/VC_{>180}$ benchmarks based on UP's view that they do not reflect UP's need for additional revenue to cover the cost of PTC. This UP-generated multiplier is then applied to the comparison group movements as a replacement for the Board's revenue need adjustment ratio. In the second approach (Revenue Supplement Alternative), which UP contends is more straightforward than its first approach and results in a per car-mile "TIH supplement," UP multiplies the number of loaded miles for each issue movement by a "TIH supplement" and adds the results to the presumed maximum reasonable rate.

flow (DCF) model,¹⁸ similar to what is used in stand-alone cost cases, to estimate that UP should recover additional revenue (base year 2009) annually to provide for a return on and return of its investment in PTC. UP then allocates its annualized PTC revenue requirement between TIH and passenger traffic.

USM argues that there is significant uncertainty associated with the timing and overall scope of UP's potential PTC investment, and also in knowing which shippers will realize the benefits of that investment. USM Reply at 18-22. USM also claims that UP's use of a DCF model in a Three-Benchmark case is an egregious example of "SAC-creep" that serves to unnecessarily increase the costs associated with bringing a Three-Benchmark case.¹⁹ The Amicus Parties argue that an adjustment for PTC investment is unnecessary because UP's rates are sufficient to recover these investment costs, and that any adjustment would be premature at this stage. In addition, the Amicus Parties state that the adjustment is incomplete and must be rejected. The Amicus Parties further argue that the Board's rate prescription accounts for regulatory lag. Amicus Parties Reply at 3-12.

We decline to accept UP's proposal to resolve the significant policy issue of PTC investment in a Three-Benchmark case. First, the Board does not require a shipper to provide the carrier with a return on an investment the carrier has not yet made. Simplified Standards, at 56. Second, there is a great deal of uncertainty surrounding PTC investment, and UP has not sufficiently demonstrated the precise amounts that could be reasonably ascribed to USM's traffic or that USM's traffic has realized advantages from any PTC related upgrades. Furthermore, accounting for the PTC investment is an issue too complex to resolve in a Three-Benchmark proceeding. Even if the costs could be captured effectively and efficiently distributed on a movement-by-movement basis, the same numbers would then need to be backed out of the R/VC ratio, adding a further complicating step.²⁰ The Three-Benchmark methodology represents the smallest and simplest type of rate case in the Board's toolbox, and it must remain relatively straightforward and inexpensive to have any value. See Simplified Standards, at 22, 77.

¹⁸ Mechanically, estimated costs to install PTC were disaggregated by UP into Board accounts, such as road property and signals, and then run through a DCF model. UP started with a version of the DCF model used in previous stand-alone cases but then made three changes to the model: (1) to allow for recovery of investment while the investment is taking place; (2) to allow for negative tax breaks; and (3) to eliminate interest during construction. UP Opening at 55-61.

¹⁹ USM Reply at 24 V.S. of Tom O'Connor at 16 ("Even if the development of a 'PTC annualized-revenue requirement' as proposed by UP was appropriate, its development falls outside the scope of the Three-Benchmark case for a number of reasons.").

²⁰ As the PTC investments are made, the costs will flow into our costing model and then into the rate prescription. To avoid a double count, we would need to find some way to remove those costs from our cost model, a massively complex project well beyond the scope of these simplified rate proceedings.

Common Carrier Adjustment. UP's suggested common carrier adjustment is designed to account for differences between tariff and contract rates. UP asserts that common carrier rates are, on average, higher than contract rates and that this markup should be applied to the issue traffic.

USM argues that this markup is inappropriate, that USM should not be penalized by the fact that most TIH on UP's lines now moves by contract, and that the general premise is not supported by the data. USM claims that UP calculated the common carrier adjustment incorrectly, as it did not take into account factors such as volume. USM offers an alternative, lower weighted average markup (using carloads). USM Reply V.S. of Kim Hillenbrand at 22-23. USM concludes, however, that to determine this markup properly would require a special study that is beyond the scope of a Three-Benchmark case as it is unduly burdensome on all parties. USM Reply at 25-27.

Ideally, the Board would not accept a common carrier adjustment. The Board determined in Simplified Standards that contract movements, while not favored, can be appropriate for inclusion in a comparison group. Simplified Standards, at 83. The proportion of contract to tariff traffic, and the disparity in rates between contract and tariff movements are factors to be considered in choosing the comparison group. Id. A relevant factor in adjusting the maximum reasonable rate should pertain to a matter unaccounted for elsewhere. Applying an adjustment based on a factor represented in the comparison group composition adds an unwanted layer of complexity to the Three-Benchmark process.

In this case, however, we find good reason to accept the common carrier adjustment. There are relatively few tariff movements in the Waybill Sample provided to the parties (only 11 of the 505 total single-line chlorine movements moved under tariff). As a result, it is not surprising that the parties provided, with one exception in each of USM's comparison groups, selections of contract-only traffic. UP observed, and the Board agrees, that contract rates can in some instances be lower than tariff rates for a number of reasons (for instance, shippers in certain settings could negotiate indemnity or volume assurances with the carrier in exchange for a better rate).

In Three-Benchmark cases, it is not our goal to create incentives against contracting by private parties in the rail industry. Providing a prescribed tariff rate at contract levels could discourage railroads from offering lower rates, for fear those lower contract rates would be used in rate cases without adequate consideration. Similarly, it could discourage certain parties from pursuing good faith negotiations, hoping instead to receive the lower contract rate as part of a tariff rate case.

We will make UP's requested common carrier adjustment because of the unavailability of sufficient tariff movements in the Waybill Sample released to the parties. Based upon the argument of the parties and the evidence presented, we are persuaded that UP's 14.8% contract adjustment is more representative of the markup on tariff traffic over contract movements than USM's proposed 2.9% adjustment. UP asserts that its common carrier adjustment is conservative. Our examination of the Waybill Sample—looking at the difference in markup between tariff and contract movements of all TIH movements—confirms that assertion. We

agree that USM understates the importance of contracts to the movements at issue here by weighting its adjustment by carload. This places greater weight on coal and grain and other heavy-haul traffic that has little in common with the movements at issue here. We will therefore use UP's "other relevant factor" common carrier adjustment of 14.8%.

To be clear, we find that this adjustment is appropriate in this case because of the scarcity of comparable tariff movements in the Waybill Sample. For future cases, this deficiency should be alleviated by the expansion of disseminated data proposed in TIH Waybill NPRM. Thus, in future cases, we will remain reluctant to adjust for contract traffic, or any other factor that could be accounted for in the comparison group selection, unless the data available severely constrains the selection of movements exhibiting that factor, as it does here.

As defined above, the unadjusted upper boundaries are 311% R/VC for the Eloy movement and 302% R/VC for the Sahuarita movement. Adjusting the 14.8% common carrier factor by the percentage of contract movements in the Eloy comparison group (98.9%), and the Sahuarita comparison group (99.4%), and applying it to the upper boundaries, results in adjusted upper boundaries of 356% for the Eloy movement and 346% for the Sahuarita movement. Both challenged rates have R/VC ratios above the adjusted upper boundaries, and are presumed unreasonable. Therefore, the maximum reasonable rates will be prescribed at the adjusted levels.

E. Maximum Rate Determination

UP has carried its burden of demonstrating a common carrier "other relevant factor" to adjust the presumptive maximum lawful rates. Therefore, we will prescribe the maximum lawful rates at the levels produced by the Three-Benchmark formula, adjusted by a 14.8% common carrier adjustment, which in this case result in R/VC ratios of not more than 356% for the Eloy movement, and 346% for the Sahuarita movement. The variable cost of these challenged movements must be calculated in accordance with Simplified Standards, at 26, 84 (with no movement-specific adjustments to URCS).²¹

UP is ordered to reimburse USM for amounts previously collected above the prescribed levels, together with interest to be calculated in accordance with 49 CFR 1141. UP is also ordered to establish and maintain rates for the Eloy and Sahuarita movements that do not exceed the maximum reasonable rate levels prescribed in this decision. UP must update the rate prescriptions quarterly in accordance with Oklahoma Gas & Electric Company v. Union Pacific, STB Docket No. 42111, at 11 (STB served July 24, 2009).

The record does not provide the data needed to calculate the total amount of reparations due to the shipper for past shipments. Following our standard practice in such circumstances, the parties are to calculate the total amount of reparations and interest due in accordance with this decision. If they cannot agree, the parties should bring the dispute to our attention for prompt resolution.

²¹ For purposes of calculating the variable cost of the issue movements, we use actual mileage.

F. Limit on Relief

Cases that proceed under the Three-Benchmark method are limited to \$1 million in total rate relief over a 5-year period. Simplified Standards, at 26-33. USM asks the Board to increase the available limit of relief in this particular case from \$1 million to \$2 million. USM Opening at 22-25. USM notes that, in Simplified Standards, the Board specifically stated that it would consider the possibility of extending the amount of rate relief, because railroads facing a potential challenge to common carrier rates could try to manipulate the Three-Benchmark methodology. USM argues that UP, aware that it might be susceptible to a rate challenge, raised its rates to make the Three-Benchmark methodology less attractive, because the \$1 million rate relief would be used up more quickly. USM also argues that the rate levels are part of a de-marketing strategy. Finally, USM argues that the discrepancy in the prices between the two movements, despite the similar distance of the movements, shows that UP is “gaming” the system and the Board should raise the relief limits as a result. UP denies that its motivation in setting these rates are as USM claims and asks that the Board deny USM’s request to raise the rate relief limit. UP Reply at 36-41.

The Board is not persuaded by USM’s argument to extend the limits of relief. In Simplified Standards, at 33, the Board stated that it would raise the limits of relief on a case-by-case basis if a carrier improperly raises rates to force a shipper to use a more expensive methodology, but we do not find conclusive evidence on the record that UP has engaged in this activity.

This rate relief limit applies to the difference between the challenged rate and the maximum lawful rate, whether in the form of reparations, a rate prescription, or a combination of the two. Accordingly, the rate prescription set forth in this decision will automatically terminate once USM has received \$1 million of relief. (The length of the prescription may be less than 5 years if the limit on relief is reached in a shorter time.) USM may not file another complaint against the same inflation-adjusted rate for the remainder of the 5-year period. The period of rate relief shall run for no more than 5 years beginning March 3, 2009, the date USM began shipping under the tariffs at issue. USM Opening at 5.

This action will not significantly affect either the quality of the human environment or the conservation of energy resources.

It is ordered:

1. Amicus Parties’ motion to participate in this proceeding as amici curiae is granted.
2. Amicus Parties’ Reply to UP’s opening evidence is accepted to the record.
3. Defendant shall, within 60 days, establish and maintain rates for the Eloy and Sahuarita movements, for the applicable period as described herein, that do not exceed the maximum reasonable rates prescribed by this decision.

4. Defendant shall pay reparations and interest, in accordance with this decision, for all shipments moving after the expiration of the contract between the parties and prior to the establishment of the reasonable rates pursuant to paragraph 3.

5. This decision is effective on the date of service.

By the Board, Chairman Elliott, Vice Chairman Mulvey, and Commissioner Nottingham. Commissioner Nottingham dissented with a separate expression.

COMMISSIONER NOTTINGHAM, dissenting:

I respectfully dissent from the majority's decision. This case involves challenges by US Magnesium, LLC (USM) to freight rail rates charged by the Union Pacific Railroad (UP) for the transportation of chlorine—one of the most dangerous of all “toxic inhalation hazard” (TIH) commodities. At issue is the reasonableness of two UP rates—\$13,396 per car for a 1,290 mile movement and \$10,410 per car for a 1,250 mile movement. From a risk management perspective, chlorine is at the high risk end of the spectrum of TIH commodities. UP is required by the statutory common carrier obligation to provide rail service to USM on reasonable request.

By way of background, UP enters this case at what I view as a significant procedural disadvantage due to possible imprecision in the data relied upon by the Board to examine the cost characteristics of transporting chlorine and, in turn, the reasonableness of the freight rail rates charged by UP. The expedited, small rate dispute resolution process chosen by USM in this case and commonly known as the “Three-Benchmark” process relies upon data found in the Board's Waybill Sample as costed by the Board's Uniform Rail Costing System (URCS). Unfortunately, URCS allocates costs on a system-average basis, and does not attribute any unique cost characteristics to the transportation of TIH, including especially dangerous TIH such as chlorine. Risk management, special handling, and insurance costs, for example, would seem to me to be integral and necessary components of the overall cost of transporting chlorine, but those costs presently are not specifically attributed to those movements.

The Board has been aware of this potential data weakness for more than a year. On January 5, 2009, the Board published a formal request for public comments on whether and how to modify URCS to permit it to allocate more precisely unique operating costs that may be associated with the transportation of hazardous materials. See Class I Railroad Accounting and Financial Reporting—Transportation of Hazardous Materials, STB Ex Parte No. 681 (STB served Jan. 5, 2009). Even if such a proceeding were not to result in any proposal to specifically allocate costs among different types of TIH, a more precise attribution of costs between TIH movements and non-TIH movements in general might affect the R/VC ratios of certain TIH movements enough to cause them to fall below our 180% R/VC jurisdictional threshold. This possibility makes the current weakness in URCS' allocation of cost to TIH movements highly

relevant to rate cases involving TIH. Although the Board is undertaking a comprehensive review of URCS in anticipation of reporting to Congress by May 30, 2010 on possible options for updating URCS, see S. Rep. No. 111-69, at 108-09 (2009), I believe that we need to quickly address the specific weakness in URCS, first highlighted in Ex Parte 681, that may be shaping the outcome of pending and anticipated cases involving TIH.²²

Despite UP's procedural disadvantage described above, the complainant shipper, USM, bears the burden of proving that the challenged rail rates are unreasonable. In an effort to contain litigation costs and expedite smaller rate dispute cases, the Board developed and refined the Three-Benchmark process that USM chose to employ here. Under the Three-Benchmark methodology, the complainant shipper and defendant railroad each present a comparison group of traffic that is comparable to the actual traffic at issue in the dispute. The Board is required to select one or the other comparison group and then, in sum, determine whether the R/VC ratio of the issue movement is sufficiently close to the mean R/VC ratio (adjusted for revenue adequacy) of the selected comparison group.²³ Thus, as the majority notes, Three-Benchmark cases tend to turn on which of the two tendered comparison groups the Board concludes is more similar to the issue traffic.

The "either/or" nature of the comparison group selection was designed to encourage the two parties to submit reasonable groups that closely correlate with the actual traffic at issue. Unfortunately, the parties here each submitted comparison groups with cost characteristics that significantly deviate from those of the issue traffic. The parties seem to be intent on testing the outer boundaries of what might qualify as an acceptable comparison group, rather than adhering to the spirit of the Three-Benchmark process and seeking middle ground in an effort at reaching a reasonable and expedited outcome. The result here is that the Board is required to choose between two flawed and, in some respects, unrepresentative comparison groups. The integrity of the Board's dispute resolution process would be better protected in cases such as this if the parties were promptly directed to submit new traffic comparison groups that more closely resemble the traffic at issue. To accept two intentionally distorted traffic groups renders the Board a prisoner of the parties' submissions.

USM's litigation tactics in developing its comparison group could alternately be described as high risk or disqualifying. USM submitted comparison groups for the two challenged routes that were, respectively, 99% and 96% comprised of non-chlorine traffic. In

²² Additionally, we are today beginning a new rulemaking proceeding in which we propose to modify our waybill data collection procedures to require reporting of 100% of TIH movements in the Waybill Sample. See Waybill Data Reporting for Toxic Inhalation Hazards, STB Ex Parte No. 385 (Sub-No. 7) (STB served Jan. 28, 2010). I support this proposal, but note that it also highlights the limitations in the data currently available.

²³ To be more precise, the issue movement's R/VC ratio is compared against the upper bound of a reasonable "confidence interval" around the mean R/VC ratio of the comparison group. If the issue movement's R/VC ratio is above that upper bound, the rate is presumed unreasonable. Also, the parties are permitted to argue that the maximum lawful rate should be adjusted higher or lower based on "other relevant factors."

my view, the near-absence of chlorine makes those groups significantly different from those DuPont offered in E.I. DuPont de Nemours and Co. v. CSX Transportation, STB Docket No. 42100 (served June 30, 2008), a case involving three movements of chlorine. There, DuPont's comparison groups consisted of 55%, 62%, and 72% chlorine—a stark contrast to the 1% and 4% chlorine presence in USM's comparison groups in this case. This weakness in USM's comparison groups is exacerbated by the increased dangers and attendant costs of transporting chlorine compared with the other components of USM's comparison group, primarily anhydrous ammonia. As the majority notes, chlorine and anhydrous ammonia do not share the same relative demand characteristics, and the U.S. Department of Energy has determined that “chlorine is significantly riskier to transport than anhydrous ammonia.” Majority Opinion, slip op. at 7 and n.10.

The majority seems to recognize the weakness of USM's comparison groups but determined that UP's comparison group is even more distorted due to its inclusion of significant quantities of “rebilled” chlorine traffic—traffic that is handled by more than one railroad and where a rail customer is billed separately by each railroad involved in the movement. When captured in the Board's Waybill Sample, rebilled traffic appears to be consistently less costly for railroads to handle than single-line movements, thereby producing relatively higher R/VC ratios than comparable single-line movements. UP appears to have attempted to distort its comparison group by building it with 58% of the traffic consisting of rebilled chlorine movements. The distorting effects of the rebilled traffic is a serious flaw in UP's comparison group and would in many cases perhaps be a fatal flaw. Here however, in stark contrast to USM's almost total exclusion of chlorine from its comparison groups, UP developed a single comparison group for both challenged movements consisting of 24 chlorine-only movements. The fact that UP proffers a comparison group comprised entirely of the commodity that is the basis for the rate challenge demonstrates, in my view, that UP at least made some attempt to comply with the spirit of the Three Benchmark process. I find that, qualitatively, UP's group of all-chlorine movements, including rebilled traffic, is preferable to groups that include almost no chlorine whatsoever.

Rather than choosing between USM's proffered groups and UP's group based on their respective qualitative characteristics, the majority tries to quantify, in a way not specifically contemplated in our Three-Benchmark methodology, the distortive effect on USM's comparison groups caused by the overwhelming predominance of non-chlorine movements as compared with the distortive effect on UP's group caused by the inclusion of some rebilled chlorine movements. In the end, even this analysis produces only the slimmest of differences, with USM's two groups showing a 16% and 17% understatement and UP's showing an 18% overstatement. The majority acknowledges that the results of this quantitative analysis—a mere 1% and 2% difference in the degree of distortion between USM's groups and UP's—“may not be ‘statistically significant.’” Majority Opinion, slip op. at 10. Thus, my colleagues appear to recognize that the very small difference between the distortive effect on USM's groups and that on UP's group may well be within a margin of error. In my view, this analysis fails to produce the type of clear and

convincing data required to be the primary determinant of the outcome of a million-dollar dispute.²⁴

The acknowledged differences between the transportation risks and demand characteristics of chlorine and anhydrous ammonia provide a reasonable basis for giving some credence to the “distortion” in USM’s comparison groups caused by the difference between the R/VC ratios for chlorine and anhydrous ammonia. I am not confident, however, that we have enough of an understanding of the reasons for the apparent difference between the R/VC ratios of single-line vs. rebilled chlorine movements to take at face value the full effect of the “distortion” in UP’s comparison group that the majority relies upon, particularly when the resulting differences between the groups are so slim.²⁵

Even if I were to conclude that the qualitative differences (i.e., difference in commodity mix, rebilled movements, etc.) between the parties’ comparison groups make the groups equally flawed, the narrowness (and likely statistical insignificance) of the result of the majority’s quantitative analysis would prevent me from relying on that analysis to break the tie. Unfortunately for USM, it bears the burden of convincing the Board that it has presented the stronger case. Merely matching wits and litigation tactics with UP in an effort to test the extreme

²⁴ The majority also notes the 31% difference between the average R/VC ratios of single-line chlorine vs. rebilled chlorine, as compared with the 19% difference between the average R/VC ratios of anhydrous ammonia and chlorine, in the Waybill Sample. See Majority Opinion, slip op. at 10, 12. In my view, however, the majority’s reliance on those figures is misplaced; the more valid comparison results from weighting those figures according to the composition of the comparison groups the parties have chosen to present to us. Doing so results in figures discussed above: 16% and 17% distortion in USM’s groups and 18% in UP’s. Nor am I persuaded by the majority’s comparison of the average R/VC ratio of only the single-line chlorine movements in UP’s group with the R/VC ratios of USM’s anhydrous ammonia-dominated groups. See, e.g., Majority Opinion, slip op. at 2. In this case, both sides introduced distortions (indeed, stripping away the non-chlorine movements in USM’s groups, the resulting average adjusted R/VC ratios for just the chlorine movements in USM’s groups are 370% and 312%—both higher than the average R/VC ratio of UP’s single-line chlorine movements). In the end, our task is to compare the groups that are actually presented to us. Here, the majority’s quantitative analysis of the distortions present in each group produces a result that shows no statistically significant difference.

²⁵ I might have been willing to give more weight to the majority’s quantitative analysis had there been an opportunity for the parties themselves to have input into its application before today. While I recognize the need for the Board to be able to exercise its expertise on a case-by-case basis as needed to resolve the issues before it, I believe it would have been preferable, in this case, had the parties been able to comment on and react to this approach prior to our issuing today’s decision, such as at oral argument, rather than having to resort to seeking reconsideration later, with the attendant shift in burden and standard of review.

bounds of the Three Benchmark process is not enough to meet the complainant's burden in this case. Therefore, I am compelled to find that USM failed to meet its burden.²⁶

I regret that the usefulness of the Board's expedited rate dispute resolution process as applied to TIH commodities has been called into question by this case and by the current limitations in the Board's URCS and Waybill Sample data. We need to address these limitations promptly, through the pending proceedings I have mentioned, or face the prospect of more cases where we recognize data inadequacies, allow litigants to take advantage of those limitations, pick a winner and wait for appeal or legislative correction. I urge the Board to promptly correct these data problems so we can fully realize our shared objective of providing a meaningful, affordable and expedited rate relief process.

In the meantime, I respectfully dissent.

²⁶ I note that we have pending before us two other cases in which USM challenges the reasonableness of rates for movements of chlorine by UP from Rowley, UT to destinations in California, Utah and Nevada. See US Magnesium, L.L.C. v. Union Pac. R.R. Co., STB Docket No. 42115 (complaint filed June 25, 2009); US Magnesium, L.L.C. v. Union Pac. R.R. Co., STB Docket No. 42116 (complaint filed Oct. 9, 2009). In both cases, USM has chosen to proceed under our Simplified-SAC methodology, which, unlike the Three-Benchmark methodology, is not based on a choice between comparison groups of traffic offered by the parties, but rather is a simplified version of our full stand-alone cost procedures, which are based on the principles of Constrained Market Pricing. As such, Simplified-SAC is a more robust methodology that is intended to produce a more accurate assessment of rate reasonableness.