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July 26, 2016

ENTERED
Office of Proceedings
July 26, 2016
Part of
Public Record

Re: Docket No. EP 704 (Sub-No. 1) – REDACTED FOR PUBLIC FILE

Dear Ms. Brown:

Enclosed for filing in the referenced docket is a version of the Comments of Union Pacific Railroad Company from which Highly Confidential material has been redacted. This Redacted version can be placed on public file. We are separately filing under seal a version that contains the Highly Confidential material.

We understand the Association of American Railroads is filing a motion for a protective order to govern the submission and use of Highly Confidential material in this proceeding.

Please contact the undersigned if you have any questions.

Thank you for your assistance.

Sincerely,

/s/ Michael L. Rosenthal

Michael L. Rosenthal
*Counsel for Union Pacific
Railroad Company*

REDACTED – TO BE PLACED ON PUBLIC FILE

**BEFORE THE
SURFACE TRANSPORTATION BOARD**

Docket No. EP 704 (Sub-No. 1)

REVIEW OF COMMODITY, BOXCAR, AND TOFC/COFC EXEMPTIONS

COMMENTS OF UNION PACIFIC RAILROAD COMPANY

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July 26, 2016

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Verified Statement of Brad A. Thrasher

Verified Statement of Kevin M. Murphy

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Union Pacific Railroad Company submits these comments in response to the Notice of Proposed Rulemaking served March 23, 2016 (“NPRM”).¹ These comments explain why the Board should withdraw its proposal to revoke the existing class exemptions for (1) crushed or broken stone or rip rap; (2) hydraulic cement; (3) coke produced from coal, primary iron or steel products, and iron or steel scrap, wastes, or tailings. Our comments include the attached verified statements of Brad Thrasher, Vice President and General Manager of Industrial Products for Union Pacific (“Thrasher VS”), and Kevin Murphy, the George J. Stigler Distinguished Service Professor of Economics in the Booth School of Business and the Department of Economics at The University of Chicago (“Murphy VS”).

I. INTRODUCTION

The Board’s proposal disregards Congress’s command to exempt rail service from regulation to the “maximum extent” possible, and the complementary rule that exemptions may be revoked only to the extent regulation is “necessary” to address demonstrated abuse of market

¹ The Board extended the deadline for comments in a decision served May 6, 2016.

power or otherwise carry out the national rail transportation policy.² Under the statute, “[e]xemption analysis takes a broad-brush approach to analysis of the competitive environment as a whole and looks to the remedy of partial revocation to address specific competitive situations should that become necessary.”³ The NPRM does not find a single instance of market power abuse, much less explain why partial revocation would be an inadequate remedy if any abuse were shown. In addition, the Board’s near-exclusive reliance on R/VC ratios to justify re-regulation ignores Congress’s intent that the Board “examine all competitive transportation factors that restrain rail carriers’ actions and that affect the market for transportation of the particular commodity or type of service for which revocation has been requested.”⁴

We join in the comments of the Association of American Railroads, which explain in detail why the Board’s proposal is contrary to Congress’s mandates, as well as contrary to precedent and basic principles of administrative law.

Our separate comments focus on three issues:

First, we address transportation market conditions for the commodities at issue. Mr. Thrasher’s verified statement describes Union Pacific’s experience in the marketplace with these commodities and shows shippers continue to benefit from pervasive competition. We summarize his testimony in Part II.

² 49 U.S.C. §§ 10502(a), (d); *see also* H.R. Rep. No. 104-422, at 169 (1995) (“When considering a revocation request, the Board should continue to require demonstrated abuse of market power that can be remedied only by reimposition of regulation or that regulation is needed to carry out the national transportation policy.”).

³ *Santa Fe Southern Pacific Corp.—Control—SPT Co.*, 2 I.C.C.2d 709, 741 (1986); *see also* H.R. Rep. No. 96-1430, at 105 (1980) (“[T]he conferees expect . . . that the Commission will adopt a policy of reviewing carrier actions after the fact to correct abuses of market power.”).

⁴ H.R. Conf. Rep. 104-422, at 169.

Second, we address the Board’s near-exclusive reliance on R/VC ratios as the basis for its proposal. Dr. Murphy’s verified statement discusses the economic principles that should guide any consideration of whether rail transportation of commodities should be subject to regulatory oversight or exempt from regulation. Applying those principles in light of Union Pacific’s marketplace experience with the commodities at issue, Dr. Murphy finds no evidence that re-regulation is necessary. We summarize his testimony in Part III.

Third, we address the continued importance of commodity exemptions to advancing the Rail Transportation Policy.⁵ In particular, we explain how the commodity exemptions provide a critical channel for allowing competition and the demand for services to set reasonable rates, minimizing regulatory control over the rail transportation system, promoting a safe and efficient rail transportation system, and ensuring the continuation of a sound rail transportation system with effective competition among rail carriers and with other modes. We discuss this issue in Part IV.

II. SHIPPERS CONTINUE TO BENEFIT FROM PERVASIVE COMPETITION FOR TRANSPORTATION OF THE COMMODITIES AT ISSUE.

The Interstate Commerce Commission (“ICC”) exempted the commodities at issue from regulation based on findings that “there is a sufficiently competitive market for the transportation involved that regulatory protections are not needed.”⁶ The pervasive competition Union Pacific faced when the agency adopted the exemptions—competition from other railroads, trucks, and water carriers, as well as product and geographic competition—still exists and continues to protect shippers from abuse of market power.

⁵ See 49 U.S.C. § 10101.

⁶ *Rail Fuel Surcharges*, EP 661, slip op. at 13 (STB served Jan. 26, 2007) (rejecting partial revocation of class exemptions).

Even if conditions were different on other railroads (which they are not, as shown in the AAR's comments), wholesale revocation of exemptions would not be necessary. If a shipper of an exempt commodity believes it is subject to market power abuse, it can petition for partial revocation. But in the decades since the exemptions were adopted, shippers have almost never sought partial revocation. Union Pacific has experienced only one such request, a 1997 petition involving coke, and the Board denied the petition because it concluded that we "lack[ed] market dominance over the coke movements at issue."⁷ There is no evidence of any competitive abuse, much less problems justifying wholesale re-regulation.

Union Pacific recognizes that rates for the commodities at issue have increased, sometimes faster than system-average costs, as we reduced costs through investments that increased productivity and made rail service more attractive. If rates never increased faster than costs, we could not progress toward achieving market-based returns. Our progress toward that goal is not evidence of market power abuse. It shows we are fulfilling Congress's expectation that reliance on market forces would allow railroads to increase the value of the service we provide and better compete against trucks and other modes. Our customers are paying us rates that reflect the value we deliver.

The sections below discuss the highly competitive nature of the marketplace for the commodities at issue, drawing on our experience as described by Mr. Thrasher. We address each commodity group except coke. Union Pacific transports a very small fraction of coke that moves by rail.

⁷ *FMC Wyoming Corp. & FMC Corp. v. Union Pacific RR Co.*, 4 S.T.B. 699, 711 n.18 (2000). Notably, the Board allowed the shippers to pursue their rate complaint for coke shipments while their petition to revoke was pending, so the exemption's existence did not impede the shippers' ability to seek rate relief.

A. Crushed Stone Traffic Faces Pervasive Competition.

Competition in the marketplace for transporting crushed or broken stone or rip rap (“crushed stone”) is as pervasive as when the ICC exempted crushed stone from regulation in 1993. The basic marketplace characteristics remain unchanged: trucks dominate the market, and extensive rail, water, and geographic competition exists. Large quarry operations exist near most population centers, so crushed stone is readily available within trucking distance of construction projects. *See Thrasher VS* at 2. All crushed stone requires a truck haul to a project site, which gives trucks an advantage over railroads. *See id.* Even in Texas, Union Pacific’s largest destination state for crushed stone, trucks are dominant: we served only 14 of 225 active quarries, and we delivered just 11% of crushed stone sold or used in 2014. *See id.*

Union Pacific’s experience in Texas illustrates the highly competitive nature of the marketplace and how that competition benefits shippers. In Texas, we implemented a comprehensive program to increase the value we provide customers and reduce our own costs that we call “Rocktimization.” We invested in cars, locomotives, and facilities for moving crushed stone; developed rate structures that incentivize use of longer trains; facilitated customer expansions to accommodate longer trains; and enforced rapid unloading rules. *See id.* at 3. Since 2005, we have increased the average size of Southern Region rock trains from 60 cars to 90 cars, and we have decreased average unit train cycle-times from 7.77 days in 2005 to 5.49 days in 2015. *See id.* at 3-4. These efforts to improve efficiency and service are necessary because we compete with trucks, water carriers, or BNSF, and sometimes all three, everywhere we move crushed stone in Texas. *See id.* at 4.

In Texas (and elsewhere), much of the competition for transporting crushed stone is geographic competition. Producers can ship to multiple destinations served by different carriers, and receivers can obtain crushed stone from multiple sources served by different carriers. Union

Pacific often competes with trucks when a quarry we serve wants to compete with closer, truck-served quarries. *See id.* Geographic competition also plays a major role in competition with BNSF. Union Pacific and BNSF have access to some of the same quarries in Texas, including Texas Crushed Stone on the Georgetown Railroad, quarries on the Austin Western Railroad, and a new quarry in Medina, Texas. *See id.* at 4-5. However, Union Pacific and BNSF also compete in circumstances where we originate the crushed stone at different quarries and deliver the crushed stone to different distribution yards. *See id.* at 5-6. {{

}} *See id.* at 6.⁸ Union Pacific also faces significant geographic competition from water carriers. When we move crushed stone to distribution yards in Houston, Brownsville, and Corpus Christi, we are competing with movements of substantial volumes to those Gulf Coast destinations by water from Mexico. *See id.* at 7.

In the NPRM, the Board refers to allegations of reduced competition from a quarry operator, Texas Crushed Stone (“TCS”). *See* NPRM at 5. The Board should not credit TCS’s claims. TCS is located on a short line that connects with both Union Pacific and BNSF, and it ships the vast majority of its crushed stone by truck. *See* Thrasher VS at 8. TCS’s claim that its customers are captive to one railroad has no merit. TCS customers enjoy competition between Union Pacific and BNSF because they can ship to Union Pacific-served destination yards or nearby BNSF-served destination yards before delivery by truck. *See id.* TCS’s competitive options have not diminished over time, and when TCS ships via rail, it benefits from our pro-competitive efforts to improve efficiency and service in Texas. *See id.*

⁸ Material between double brackets is Highly Confidential and has been redacted from the public version of these comments.

In Texas and other states we serve, competition for transportation of crushed stone remains pervasive. We have responded to this competition by investing to improve efficiency and service, and by {{ }} To the extent our crushed stone business has become more profitable, the improvement reflects our successful competitive response to market forces—exactly the result deregulation was intended to foster.

B. Cement Traffic Faces Pervasive Competition.

Competition in the marketplace for transporting cement is as pervasive as when the ICC exempted cement from regulation in 1995. The basic marketplace characteristics remain unchanged: trucks dominate the market, and extensive rail, water, and geographic competition exists. The vast majority of cement moves directly from plants to customers by truck. *See Thrasher VS at 9.* Railroads are not a factor unless they can compete by moving cement to distribution terminals, from which cement subsequently moves to customers by truck. When railroads move cement to distribution terminals, they are competing with other railroads, trucks, and water carriers that move cement to distribution terminals, besides competing with trucks moving cement directly to customers. *See id.* at 10.

Union Pacific faces intense competition from trucks. Trucks dominate shorter-distance moves because they can deliver cement directly to the customer. *See id.* Their direct-service advantage allows trucks to remain competitive with rail for longer-distance movements, and we must price our services lower than trucks to offset the costs of the additional truck move from the terminal to the customer. *See id.* at 10-11.⁹ We also face intense competition from railroads,

⁹ In the NPRM, the Board cites a claim by the Portland Cement Association that truck transportation is not an economical mode of transport beyond 100 to 125 miles. *See NPRM at 10.* However, the Board has previously found that trucks could compete effectively for cement movements *at least twice as long.* *See Rail Gen. Exemption Auth.—Exemption of Hydraulic (continued...)*

particularly BNSF. In Texas, (our largest destination state for cement), California (our second largest destination state), Colorado, and elsewhere, Union Pacific and BNSF can originate cement from the same plants or import facilities. *See Thrasher VS* at 12. Union Pacific and BNSF also sometimes serve common distribution terminals. *See id.*

Much of the competition for transporting cement is geographic competition. Producers can ship to multiple destinations served by different carriers, and receivers can obtain cement from multiple sources served by different carriers. Union Pacific often competes with trucks when a producer we serve wants to compete with another producer that is moving cement by truck. *See id.* at 11. Producers also take advantage of truck competition through product swaps, where a producer with a plant further from a customer will arrange for a producer with a plant closer to a customer to provide the customer cement by truck instead of moving the cement to a distribution terminal by rail. *See id.*

Geographic competition plays a major role in competition between Union Pacific and BNSF. Union Pacific and BNSF frequently compete to move cement from different plants to different distribution terminals located within trucking distance of customers or project sites. *See id.* at 13. For example, we generally move cement to Houston from the San Antonio area, while BNSF moves cement to Houston from Ward Spur or Maryneal, Texas. We generally move cement to Dallas from plants in Texas, while BNSF also moves cement to Dallas from Oklahoma, and KCS moves cement to Dallas from Arkansas. *See id.* And, as with crushed stone,

Cement, EP 346 (Sub-No. 34), slip op. at 2 (STB served Dec. 17, 1996) (cement movements “within 200-250 miles of a market area” are “short enough to permit trucks to compete effectively”); *see also id.* at 3 (“[The South Dakota State Cement Plant Commission] recognizes that truck competition is a viable alternative for movements of less than 250 miles.”).

we also compete against other rail carriers {{ }} to locate distribution terminals on our lines. *See id.*

We also face geographic competition from barges and imports. More than 34% of cement moves to distribution terminals by barge or other water carriers. *See id.* at 13-14. As an example, we recently convinced a cement producer to shift traffic moving to {{ }} *See id.* at 14. Imports also effectively constrain rail rates, because most of the U.S. cement industry is now controlled by large, multi-national firms that own distribution terminals and can import cement they produce in Asia and Europe. *See id.*

In 1995, the ICC found “railroads face pervasive competition in the transportation of hydraulic cement” and specifically noted “evidence of extensive geographic competition, which inhibits the railroads from exercising market power.”¹⁰ Those same competitive forces continue to protect cement shippers from abuse of market power.

C. Steel And Scrap Steel Traffic Face Pervasive Competition.

Competition in the marketplace for transporting primary iron or steel products (“steel”) and iron or steel scrap, wastes, or tailings (“scrap steel”) is at least as pervasive as when the ICC exempted steel from regulation in 1993 and scrap steel from regulation in 1995. In a market already characterized by intense truck, rail, water, and geographic competition, increased production of steel by mini-mills has intensified competition by expanding sourcing options for steel and destinations options for scrap steel. *See Thrasher VS* at 18.

¹⁰ *Rail Gen. Exemption Auth.—Exemption of Hydraulic Cement*, EP 346 (Sub-No. 34), slip op. at 4-5 (ICC served July 26, 1995).

In Union Pacific's experience, truck competition is extensive. Most steel products move only a short distance from the mill. *See id.* at 16. Steel products we move over longer distances, such as pipe used for pipeline construction, pipe used in oil and gas exploration, and beams and structural steel used in the construction industry, often require transloading at one or both ends, which keeps truck competitive even for long-distance movements. *See id.* The NPRM suggests trucking becomes less viable when the length of haul exceeds 500 miles,¹¹ but in our experience, trucks regularly handle steel products over longer distances, so we have made substantial investments in unloading and storage facilities to compete with trucks. *See Thrasher VS* at 17. Steel products used in the auto industry often move long distances by truck to meet shippers' strict service requirements. *See id.* at 18. Also, mini-mills often produce small batches that are better suited to truck economics, especially given transloading costs. *See id.* at 18-19. Trucks also dominate the business of moving scrap steel to mini-mills, which were often built near sources of scrap. *See id.* at 19. We provide strong value for higher-volume movements of scrap steel, but if our pricing is not competitive, we are quickly displaced by trucks. *See id.* at 19-20.

Union Pacific also faces pervasive competition from other railroads, particularly BNSF and KCS. Much of our steel traffic originates on eastern railroads, so we compete with BNSF for most movements, especially those requiring transloading at destination. *See id.* at 20. As part of this competition, we have made substantial investments to develop a network of pipe transloading sites and a logistics management service. *See id.* at 20-21. Where Union Pacific and BNSF serve the same mini-mills, we compete for inbound movements of scrap steel and outbound movements of steel products. *See id.* at 21. Where one railroad or the other cannot

¹¹ *See NPRM* at 7 n.12.

directly access a mini-mill, we often compete using transloading. *See id.* KCS is also a major competitor for steel traffic, especially for auto industry traffic originating on eastern carriers and moving to Mexico. *See id.* at 22.

Finally, Union Pacific competes with barges and boats to transport steel. For example, auto industry shippers use barges to move steel on inland waterways through New Orleans to Brownsville, Texas, for trucking into Mexico. *See id.* at 20. We also face intense competition from imports. In 2015, imports accounted for approximately 25% of finished steel mill products consumed in the United States, and many of the final products produced using steel, including appliances, oil field pipeline products, and windmill towers, are imported from overseas and generally move by truck within the United States. *See id.* at 22. Our rates for steel and scrap steel are constrained by the very real prospect that the products we move will be displaced by products imported from overseas. *See id.* at 23.

III. ECONOMIC ANALYSIS DEMONSTRATES THE TRANSPORTATION MARKETPLACE FOR THE COMMODITIES AT ISSUE IS HIGHLY COMPETITIVE.

The Board failed to engage in a meaningful economic analysis of its proposal. Economic analysis of the marketplace constraints affecting railroad pricing and service demonstrates that competitive forces should be allowed to govern rail transportation of the commodities at issue. Dr. Murphy addresses these issues in his verified statement.

Dr. Murphy explains that the Board “should not revoke exemptions absent compelling evidence that conditions in the transportation industry have changed so fundamentally that re-regulation is necessary.” Murphy VS at 3. The ICC adopted the exemptions at issue “after carefully investigating market conditions and concluding that relying on market forces, rather than regulation, would more effectively insure the establishment of reasonable rates and create appropriate incentives for railroads to become more efficient and improve service for shippers.”

Id. And “[e]xperience in the rail industry and elsewhere teaches that relying on competitive market forces produces better economic outcomes than reliance on regulation.” *Id.*

Dr. Murphy warns against relying on changes in railroad rates or profitability to justify re-regulation. “Outcomes in competitive markets can vary in terms of prices, service levels and profitability across firms and geographic areas and over time.” *Id.* at 4. Allowing prices to vary in response to changes in supply and demand is critical. Market-based prices “serve to allocate capacity efficiently” by providing “incentives for customers to seek out the most efficient suppliers and for suppliers to invest to better serve customers.” *Id.* “[F]orcing down rates through regulation in periods when and locations where profits are relatively high will not allow markets to achieve efficient outcomes.” *Id.* This is especially true in network industries like railroading, “where many costs are shared and the benefits of investments and gains in operating efficiency may be realized at different times and differently across customers and over time.” *Id.* at 4-5.

Dr. Murphy expressly disagrees with the Board’s reliance on changes in R/VC ratios to justify re-regulation. “R/VC ratios are not reliable indicia of whether rates are constrained by competition.” *Id.* at 7. “[T]he Board’s costing system is too blunt an instrument to properly incorporate and accurately measure the true resource and opportunity costs that railroads incur when serving particular shippers.” *Id.* Moreover, the opportunity to increase margins is what drives railroads to become more efficient and provide higher-quality, more cost-effective serviced. If the consequence of earning higher margins is re-regulation, then railroads “will have reduced incentives to invest to improve service by reducing costs or increasing value provided to shippers,” which harms “all users of the rail network.” *Id.*

Dr. Murphy explains that any consideration of revoking the exemptions at issue should involve a rigorous examination of “all marketplace factors that motivate railroads to price

competitively, provide high quality service and invest to better serve their customers.” *Id.* Such marketplace factors include product and geographic competition, as well as intramodal and intermodal competition. *See id.* at 8. Geographic competition is particularly important when addressing “true commodities such as crushed stone, cement, iron and steel products and iron and steel scrap,” commodities for which “the ultimate consumer generally has no strong preferences over the identity of the supplier, and no preference for the particular origin point from which the commodity is sourced.” *Id.*

Dr. Murphy considers whether Union Pacific’s experience in competing for and serving its customers provides any evidence that re-regulation is necessary. He reviews Mr. Thrasher’s testimony, other information obtained from Union Pacific, and information obtained from other sources. *See id.* at 9-25. He explains that for each of the commodities at issue “the evidence shows that Union Pacific faces strong competition from a variety of sources—in some cases, from another railroad; generally from other modes of transportation (truck and water); and to a large extent from the ability of the ultimate consumer to source product from many different geographic areas and shippers to serve customers from multiple facilities.” *Id.* at 4.

Dr. Murphy finds “no economic evidence that would support revisiting and potentially eliminating the exemptions.” *Id.* at 25.

IV. THE COMMODITY EXEMPTIONS CONTINUE TO ADVANCE CONGRESS’S PROCOMPETITIVE, DEREGULATORY POLICIES.

The NPRM fails to address the harmful effects of revoking the commodity exemptions. When the Board sought comments on commodity exemptions in 2011, some shippers claimed the rationale for their existence disappeared once railroads were no longer required to bear the regulatory burden of filing tariffs. But if Congress cared only about reducing paperwork, it would have removed its deregulatory mandate when it eliminated tariff filings in the Interstate

Commerce Commission Termination Act (“ICCTA”) in 1995. Instead, Congress strengthened its mandate by *requiring* the Board to exempt rail service from regulation to the “maximum extent” possible. Congress strengthened its mandate because experience shows railroads and shippers both benefit from minimizing regulatory interference and maximizing reliance on market forces.

The commodity exemptions continue to provide important public benefits. *First*, the exemptions give railroads the same flexibility as other modes to adjust rate and service terms in response to changing marketplace conditions by removing the time constraint imposed by 49 U.S.C. § 11101(c). When cost or demand levels change, railroads can implement a market-based response without a regulatory lag. *Second*, the exemptions give railroads the same flexibility as other modes to manage their networks and allocate capacity by removing the common carrier obligation of § 11101(a). During surges or network disruptions, this allows railroads to preserve network fluidity and protect customers lacking modal options by deciding whether, where, and when to accept exempt traffic that does have options. *Third*, the exemptions minimize the likelihood railroads will face costly litigation to defend against meritless claims that rates or practices are “unreasonable,” and the likelihood Board-imposed outcomes will distort the operation of competitive marketplaces. The role commodity exemptions play in minimizing meritless litigation and maximizing reliance on competitive market forces has actually increased in importance since Congress enacted the ICCTA.

The role of commodity exemptions has increased in importance because in 1998 the Board eliminated consideration of geographic competition as a factor in determining market dominance in rate cases.¹² Geographic competition constrains the rates a carrier can charge a

¹² See *Mkt. Dominance Determinations—Prod. & Geographic Competition*, 3 S.T.B. 937 (1998).

shipper to move products to or from a market when the shipper can move products to or from a different market using alternative transportation. Since 1998, however, the Board will not consider evidence that alternative transportation constrains rates unless the transportation is “between *the same precise origin and destination* to which the challenged tariff rate applies.”¹³ That is, if two railroads directly serve the same origin but use different, exclusively served transloads to reach the same destination, the Board will not consider the alternative rail competition to determine whether it lacks jurisdiction over either railroad’s rate. Nor will the Board consider the competition provided by two railroads, or a railroad and trucks, that can move the same product to the same destination, where each competitor serves different origins.

The commodities at issue are subject to pervasive geographic competition. Origins and destinations are scattered across the country, and they are often served by only by truck or transloading. Geographic competition was a major factor in the decisions exempting the commodities from regulation in the first place.¹⁴ Mr. Thrasher and Dr. Murphy confirm that these commodities remain subject to extensive geographic competition. However, if the exemptions were revoked, geographic competition would play no role in rate regulation. Shippers with competitive, market-based rates could try to improve their position by seeking

¹³ *E.I. DuPont de Nemours & Co. v. Norfolk S. Ry.*, NOR 42125, slip op. at 22 (STB served Mar. 24, 2014) (emphasis added).

¹⁴ See, e.g., *Rail Gen. Exemption Auth.—Exemption of Hydraulic Cement*, EP 346 (Sub-No. 34), slip op. at 4-5 (ICC served July 26, 1995) (“AAR also submitted evidence of extensive geographic competition, which inhibits the railroads from exercising market power. If a railroad were to raise its rates to one shipper, either the shipper could send hydraulic cement to another market, or the receiver could buy its supply from another producer.”) (footnote omitted); *Rail Gen. Exemption Auth.—Exemption of Ferrous Recyclables*, EP 346 (Sub-No. 35), slip op. at 7 (ICC served May 16, 1995) (“Iron and steel scrap traffic appears to be extremely competitive from both an intramodal and geographic standpoint.”).

regulated rates.¹⁵ As discussed in Part III, substituting regulation for competitive marketplace outcomes risks distorting railroads' market-driven pricing and investment decisions, to the detriment of all users of the rail network and contrary to 49 U.S.C. § 10101(4). It would also be contrary to Congress's policies "to minimize the need for Federal regulatory control over the rail transportation system," "to allow, to the maximum extent possible, competition and the demand for services to establish reasonable rates for transportation by rail," and "to promote a safe and efficient rail transportation system."¹⁶ As long as the Board is unwilling to entertain evidence of product and geographic competition in rate cases, commodity exemptions will play a critical role in ensuring these factors receive appropriate consideration where the agency previously found such competition to be effective in protecting shippers from abuse of market power.

V. CONCLUSION

The Board should withdraw its proposal. Pervasive rail, truck, water, product, and geographic competition for the commodities at issue protect shippers from abuse of market power. The Board never engaged in a meaningful economic analysis of the transportation markets at issue. Moreover, the Board had no need to revisit the commodity exemptions. A shipper of an exempt commodity claiming market power abuse can always petition for a partial revocation of the exemption. The Board should allow the commodity exemptions to continue playing their important role in minimizing regulatory control over railroad rates, service, and investment where shippers are protected by marketplace competition.

¹⁵ *Cf. Ass'n of Am. R.R.s v. STB*, 306 F.3d 1108, 1111 (D.C. Cir. 2002) ("It is certainly plausible that some shippers would consider regulators' hands to be friendlier than invisible ones.").

¹⁶ 49 U.S.C. §§ 10101(1), (2) & (3).

Respectfully submitted,

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July 26, 2016

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**BEFORE THE
SURFACE TRANSPORTATION BOARD**

Docket No. EP 704 (Sub-No. 1)

REVIEW OF COMMODITY, BOXCAR, AND TOFC/COFC EXEMPTIONS

VERIFIED STATEMENT

OF

BRAD A. THRASHER

VERIFIED STATEMENT OF BRAD A. THRASHER

My name is Brad A. Thrasher. I am Vice President and General Manager for Industrial Products at Union Pacific Railroad Company, a position I have held since March 2012. I began my career with Union Pacific in 1988, and I have held a number of management positions in Union Pacific's Marketing and Sales Department and at Union Pacific subsidiaries. Before I was promoted to my current position, I served as Assistant Vice President and General Manager for Union Pacific Distribution Services, a Union Pacific subsidiary that develops multi-modal transportation solutions for customers.

As Vice President and General Manager for Industrial Products, I am responsible for managing Union Pacific's Industrial Products business unit. Union Pacific's Industrial Products business involves shipments of hundreds of commodities between thousands of shippers and receivers throughout North America, including shipments of the commodities covered by the class exemptions the Board proposes to revoke in its Notice of Proposed Rulemaking ("NPRM").

I am submitting this statement to describe our marketplace experience with the commodities covered by the class exemptions. In the sections below, I separately discuss (i) crushed or broken stone or rip rap; (ii) hydraulic cement; and (iii) primary iron or steel products, and iron or steel scrap, wastes, or tailings.¹ But while the details differ, our overall experience with each group is the same. We face pervasive competition from trucks and other railroads, shippers can send their products to a variety of destinations, and receivers often have the option of sourcing the product from a variety origins. To win and retain this business, we

¹ I do not discuss coke produced from coal. In 2014, we moved fewer than 1,500 carloads of coke, which appears to be less than 2% of coke transported by rail.

must provide quality service at rates that represent good value to our customers. If we tried to charge excessive rates, we would quickly lose business to other carriers.

I. CRUSHED OR BROKEN STONE OR RIP RAP (“CRUSHED STONE”)

Crushed stone transported by Union Pacific is primarily used as an ingredient in concrete for road and other construction projects. Compared with trucks, we move a very small volume of crushed stone. Most crushed stone moves by truck because it is mined from quarries spread all across the United States. Large quarry operations exist near most population centers, so crushed stone is readily available within trucking distance of construction projects. Also, all crushed stone requires a truck haul to a project site, so transporting crushed stone partially by rail adds handling costs that give all-truck moves an advantage. As a result, trucks offer competitive alternatives for all the crushed stone that can be shipped by rail.

In this statement, I focus on competition for transportation of crushed stone in Texas. Texas is by far our largest destination for crushed stone. However, even in Texas, we transport only a small share of crushed stone. In fact, most quarries are not even rail-served. According to 2014 U.S. Geological Survey data, Texas had 225 active quarries; we served 14 directly or via connecting short lines.² In 2014, Texas producers sold or used more than 167.5 million tons of crushed stone;³ we delivered almost 18.5 million tons, or barely 11%.⁴

² See http://minerals.usgs.gov/minerals/pubs/commodity/stone_crushed/myb1-2014-stonc.pdf (Table 16).

³ See *id.* (Table 4). U.S. Geological Survey data are reported in metric tons. Here and elsewhere in this statement, metric tons have been converted to short tons, since our data reflect short tons.

⁴ In California, our second largest destination state, we delivered approximately 7.7% of the crushed stone sold or used. Texas is by far our largest destination state, accounting for 68% of the crushed stone we delivered in 2014. Our next four largest destination states are California (13%), Oklahoma (6%), Louisiana (5%), and Colorado (2%).

In Texas, we are more competitive with trucks than in other states we serve. We have responded to strong demand for the transportation of crushed stone by investing and working closely with customers to provide efficient unit train service from quarries to distribution yards near population centers. By transporting unit trains of crushed stone to distribution yards located near major projects, we significantly reduce the distance trucks must travel to deliver crushed stone to project sites, and thus reduce overall transportation costs (as well as the impact of heavy-vehicle traffic on the roads and the environment). However, even when unit train service helps offset the advantages of all-truck service, we face intense competition from BNSF, which also serves all the major markets in Texas. We also must compete against water carriers, which transport imported crushed stone to Houston and other destinations on the Texas Gulf Coast.

Much of our competitive success flows from a program called “Rocktimization.” We embarked on the program in 2005. Before Rocktimization, our crushed stone fleet consisted of cars capable of carrying 100 tons of rock, we averaged about 60 cars per train, and we did not enforce rules requiring rapid unloading or keep our locomotives with the trains during unloading. To implement Rocktimization, we acquired cars capable of carrying 115 tons of rock, developed rate structures that incentivized use of longer trains, facilitated customer expansions to accommodate longer trains, enforced rapid unloading rules so we can keep power with the trains, and upgraded our southern rock locomotive fleet. We also upgraded our own facilities to accommodate longer trains. For example, we invested nearly \$6 million to improve our interchange with the Austin Western Railroad (“AWRR”), which provides Union Pacific and BNSF access to three large quarries, so we could interchange 100-car trains and stage two trains for interchange clear of our mainline.

Our rock trains in the Southern Region now average nearly 90 cars per train, make more efficient use of locomotives and cars, and provide faster, more reliable service for customers. We have reduced cycle times for unit trains from 7.77 days in 2005 to 5.49 days in 2015. This is a win/win situation for us and our customers—more efficient service for customers means lower costs for us. The cycle time improvement is particularly significant for customers that own their own cars. Faster cycle times mean they can move more rock with less equipment. These efforts have made us a much stronger competitor, whether we are battling for business against trucks, BNSF, water carriers, or all three.

Rail vs. Truck, and Rail vs. Truck Geographic Competition. In Texas (and elsewhere), Union Pacific often competes with truck when a particular quarry wants to penetrate a market that is too distant for that quarry to serve economically using trucks. Crushed stone has a high weight-to-value ratio, so transportation costs can be a significant portion of the delivered price. As a result, in some cases, quarries can take advantage of the larger shipment sizes that railroads provide. In these situations, however, the quarries and railroads are competing against other quarries located closer to the project site and using trucks.

As Union Pacific has become more efficient by offering larger shipment sizes and faster cycle times, we have become an even stronger competitor with truck for shorter-distance moves. For example, Union Pacific transports crushed stone to Dallas from Stringtown, Oklahoma, and Bridgeport and Perch Hill, Texas, in competition with trucks transporting crushed stone to Dallas from Bridgeport, Perch Hill, and quarries in other locations near Dallas (such as Ambrose, Rosser, and Cleburne). { {

}}⁵ We are finding that a number of “truck only” quarries are now interested in using rail to benefit from our ability to provide cost-effective transportation. There would be no reason for these quarries to invest millions of dollars in rail infrastructure if they did not expect to enjoy significant savings, greater market reach, and other competitive benefits from adding rail to their shipping options.

Rail vs. Rail, and Rail vs. Rail Geographic Competition. Quarries and railroads also compete against other quarry-railroad combinations. Quarries that have rail service are often served exclusively by one railroad, but there is almost always another quarry-railroad combination that can also compete for the business. As a result, when rail is a viable option, Union Pacific is not just competing against trucks, but against BNSF. For example, Union Pacific transports crushed stone to East Texas from quarries in Bridgeport and Perch Hill, Texas, and Butterfield and Drury Spur, Arkansas. BNSF can deliver crushed stone to East Texas from quarries in Oklahoma, as well as from Brownwood, Texas, and Sudduth, Texas (on the AWRR). (Trucks can also deliver crushed stone to East Texas from quarries in Mexia and Groesback, Texas.) Similarly, when we transport crushed stone to Dallas, we are competing against BNSF, which can deliver crushed stone to Dallas from quarries in Oklahoma and Brownwood, Texas.

Houston is a crushed stone destination that is different than most others in the country. Crushed stone is generally made from limestone, which is readily available in most parts of the United States. Houston is different, however, because it is further away from limestone sources than most other population centers. As a result, substantial quantities of crushed stone must be moved into the Houston area. This combination of demand and distance make rail more

⁵ Material between double brackets is Highly Confidential and has been redacted from the public version of this statement.

competitive with truck, at least for high volume movements. Union Pacific and BNSF compete vigorously for crushed stone moving to Houston, transporting crushed stone from quarries near San Antonio to distribution yards in Houston. Both railroads have access to quarries on the AWRR and the Georgetown Railroad, and both railroads serve multiple Houston-area distribution yards. Martin Marietta recently opened a new quarry in Medina, Texas, with rail access to Union Pacific and BNSF through a build-out to a Union Pacific line over which BNSF has trackage rights. Vulcan plans to open another new quarry near Medina, in Dunley, Texas, that will similarly have rail access to Union Pacific and BNSF.

We also compete against BNSF by working to site destinations yards on our lines at locations that minimize the costs of trucking the crushed stone to project sites. Most recently, we worked with Martin Marietta to site new Houston-area yards in New Caney and Bryan, Texas. We also worked with Lehigh Hanson to site a new Houston-area yard in Crosby, Texas, and a new Dallas-area yard in Midlothian, Texas. And we worked with Vulcan to site a new Houston-area yard in Waller, Texas.

We compete against BNSF (and carriers by other modes) {{
}}

For example, our Industrial Development team will assist customers in developing new facilities.

{{
}}

Our customers are also well positioned to spur competition between Union Pacific and BNSF. Over the past decade, the producers have become increasingly concentrated, expanding their portfolios of quarries and destination yards. This helps them ensure they can seek competitive bids. For example, Martin Marietta can ship crushed stone from its Union Pacific-

served quarries in Bridgeport, Texas, to Union Pacific-served yards in Dallas, or from its BNSF-served quarry in Mill Creek, Oklahoma, to BNSF-served yards in Dallas. Vulcan can ship crushed stone to Dallas from its BNSF-served quarry in Brownwood, Texas, {{

Martin Marietta can ship crushed stone from its Union Pacific-served quarries in the San Antonio area to Union Pacific-served yards in Houston, or from its BNSF-served quarry in Mill Creek to BNSF-served yards in Houston. Vulcan can ship crushed stone to Houston from its Union Pacific-served quarries in the San Antonio area, or from its BNSF-served quarry in Brownwood.

Rail vs. Water Geographic Competition. Union Pacific also competes with crushed stone moving by water. Crushed stone is shipped from Mexico and the Bahamas to the United States in bulk cargo vessels. In particular, Vulcan is part-owner of a quarry in the Mexican Yucatan, and it also owns several bulk cargo vessels. Vulcan ships a substantial amount of crushed stone to Texas by water. Most of the volume moves to Houston, but a substantial portion moves to Brownsville and Corpus Christi. Recently, a customer approached us with an opportunity {{

}} that otherwise would have moved by water.

We also recently provided a customer {{

}} where its competitor was planning to import crushed stone by water and truck the stone to the project site.

Issues Raised By Customers. The Board’s NPRM refers to complaints received in 2011 from a quarry operator, Texas Crushed Stone (“TCS”). TCS actually is an example of the strong competition that exists in the market and the general advantages trucks have over rail. TCS complained about reduced competition as a result of rail mergers, but TCS never lost

competition in a rail merger. TCS's quarry is located on the Georgetown Railroad ("GRR"), which connects with both Union Pacific and BNSF. Before 1988, GRR connected to Union Pacific and the Missouri-Kansas-Texas Railroad ("MKT"). When Union Pacific and MKT merged in 1998, GRR gained access to Southern Pacific Railroad ("SP"). When Union Pacific and SP merged in 1996, GRR gained access to BNSF. TCS always had, and continues to have, access to two Class I railroads. TCS was also wrong to claim that its customers are captive to one railroad. TCS' customers enjoy competition between Union Pacific and BNSF because they can ship to Union Pacific-served destination yards or nearby BNSF-served destination yards.

TCS also complained that there were not enough trucks or drivers to handle the volumes it had shipped in the past. However, trucks are placing more pressure on railroads than ever. Especially in Texas, driver availability has increased significantly as drilling operations have declined. TCS says on its website that it ships an average of 40,000 tons of rock a day using 1,500 trucks and 100 rail cars. One railcar is equivalent to about four trucks, so TCS claims to ship four times as much rock by truck as by rail. TCS plainly has non-rail transportation options.

{{

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In this proceeding, Granite Rock, a customer in the San Francisco Bay Area, complained about high R/VC ratios. Granite Rock faces unusual circumstances. Most of its movements traverse a line we sold to a commuter rail entity in 2005. We reserved rights to serve freight customers, but we must pay our share of maintenance costs, which are substantial because the line must now be maintained to commuter standards. Moreover, the portion of those costs attributable to Granite Rock are substantial, because crushed stone is very a heavy commodity (especially as compared with passenger traffic). These circumstances demonstrate one danger of

comparing rates to system-average costs: Union Pacific's costs to serve Granite Rock substantially exceed our system-average costs. In any event, Granite Rock's traffic is truck competitive: it generally moves to destinations approximately 50 to 85 miles from the quarries.

Summary. Our experience is that the marketplace for crushed stone is extremely competitive. Even in Texas, where we move relatively high volumes, trucks dominate the business. We also face vigorous competition from BNSF, and water carriers move crushed stone to Houston and other cities on the Texas Gulf Coast. We are responding to this strong competition, and the strong demand for transportation, by improving service and offering greater value to our customers. Customers are establishing new rail-served quarries and new destination yards, investing in and expanding existing rail served facilities, as well as investing significant new capital connecting traditional "truck only" quarries to rail. These are signs of a healthy, competitive market.

II. HYDRAULIC CEMENT

Cement transported by Union Pacific is primarily used as an ingredient in concrete for construction projects. Cement is produced at plants located near population centers across the United States. Most sales are made to ready mixed concrete producers, who mix the cement with aggregates and water to create concrete that is delivered to job sites via trucks commonly called cement mixers. According to 2013 data from the U.S. Geological Survey, the vast majority of cement moves directly from plants to customers by truck.⁶ Indeed, the Portland Cement Association's state-by-state cement industry maps show the locations of cement plants and

⁶ See http://minerals.usgs.gov/minerals/pubs/commodity/stone_crushed/myb1-2014-stonc.pdf (Table 10).

terminals relative to highways, not railroad lines.⁷ Rail becomes more competitive with truck for longer-distance, higher-volume movements from plants to distribution terminals. However, rail movements of cement to distribution terminals compete with truck movements directly to customers, and they also compete with cement moving to distribution terminals in trucks, barges, and boats.

Union Pacific faces intense competition for movements of cement. Trucks dominate most markets where we operate. Rail competition is also intense, with geographic competition playing a major role. Where Union Pacific provides exclusive service to plants or distribution facilities, we compete for business moving between other plants and distribution facilities served by BNSF. Geographic competition is also a significant factor in competing with barges and imports. All this competition constrains the rates we charge. According to the U.S. Geological Survey, U.S. cement production and imports totaled 102.3 million tons in 2015.⁸ We handled 7.8% of that amount.

Truck vs. Rail, and Truck vs. Rail Geographic Competition. Union Pacific faces intense competition from trucks. Trucks are the dominant force for shorter-distance moves, and they also provide a competitive alternative for longer-distance, higher-volume movements, where railroads are often thought to have an advantage. For example, truck rates are falling, and we are seeing volume loss to truck for movements to distribution terminals in Houston. One customer recently told us {{

}} We are constantly at risk of losing volume to trucks on movements from Portland,

⁷ See <http://www.cement.org/government-affairs/cement-industry-by-state>.

⁸ See <http://minerals.usgs.gov/minerals/pubs/commodity/cement/mcs-2016-cemen.pdf>.

Colorado, to Denver. Similarly, we compete with trucks for cement moving from plants near Los Angeles to Las Vegas. When a shipper is choosing between moving cement to a customer through a rail-served distribution facility and serving a customer directly by truck, we must price our service substantially lower than trucks to offset the costs of the additional truck move from the terminal to the customer.

Trucks also provide geographic competition to rail. As with crushed stone, Union Pacific sometimes competes with truck when a cement producer we serve wants to penetrate a market that is too distant for our customer to serve economically using truck. That is, the efficiencies and value of service we provide creates competition in markets that might otherwise be dominated by a local producer. For example, until recently, Union Pacific moved cement from {{

}} Trucks also provide geographic competition by moving cement from plants we do not serve to destinations we serve, such as when they move cement from Lyons, Colorado, directly to customers in Denver, or cement from Lebec, California, directly to customers to Los Angeles.

Trucks also provide geographic competition through “product swaps.” That is, one producer will contract to supply cement for a project, then arrange for a competitor within trucking distance of the customer to provide the cement. {{

}}

Rail vs. Rail, and Rail vs. Rail Geographic Competition. Even when Union Pacific has advantages over trucks, we are subject to intense competition from other railroads, primarily BNSF. In all our major markets, BNSF competes with us through its own access to cement producers and distribution terminals. Whenever we quote rates for movements of cement, we are aware that the customer may be seeking a competing bid from BNSF, or that BNSF may be working with another producer that is competing against our customer for the same business.

In some instances, Union Pacific competes with BNSF by serving the same cement plant or the same destination terminal. In California, our second largest destination state for cement, both railroads can originate cement from Cemex in Victorville, CalPortland in Oro Grande, Leigh Southwest in Tehachapi, and Mitsubishi in Lucerne Valley. Both railroads can move the cement to the Bay Area, where we both serve a distribution terminal in Richmond; to Stockton, where we both can access distribution terminals on a short line, the Central California Traction Company; or to Sacramento, where we both can access terminals owned by Cemex. But Union Pacific and BNSF do not need to serve the same distribution terminals to compete. For example, {{

}}

Similarly, in Texas, our largest destination state for cement, both railroads can originate cement from Martin Marietta in Ward Spur, and Holcim in Midlothian, and move the cement to distribution terminals in Dallas and Houston. In Colorado, both railroads can originate cement from Holcim in Portland and GCC of America in Pueblo. In Washington, both railroads can originate cement from Ash Grove and Lafarge in Seattle. In Oregon, Union Pacific and BNSF recently competed for a movement from a jointly served {{

}}

More commonly, Union Pacific and BNSF do not serve the same plants or distribution terminals, but we compete to move cement to terminals within trucking distance of customers and/or project sites. For example, Union Pacific generally moves cement to Houston from plants we serve in the San Antonio area, while BNSF moves cement to Houston from Martin Marietta in Ward Spur, or Buzzi in Maryneal, Texas. This same form of competition occurs throughout the West. In the Dallas area, in addition to the dual-served plants mentioned above, we serve Ash Grove in Midlothian and Lehigh in Waco, BNSF serves Buzzi in Maryneal, and Holcim in Ada, Oklahoma, and KCS moves cement to Dallas from Ash Grove in Foreman, Arkansas. In California, in addition to the dual-served cement plants mentioned above, we serve two plants in Northern California and two plants in Southern California. In Colorado, in addition to the dual-served plants mentioned above, we move cement to Denver from a plant in Laramie, Wyoming, and BNSF moves cement to Denver from Lyons, Colorado.

Union Pacific and BNSF also compete to locate distribution terminals on their lines. For example, when a producer was planning to open a new terminal in {{

}}

Rail vs. Water Geographic Competition. A substantial amount of cement moves to distribution terminals by barge or other water carriers—more than 34% of total shipments in the

United States, according to 2013 data from the U.S. Geological Survey.⁹ Several large plants have river access, and there are import facilities on the Texas Gulf Coast near Houston and Corpus Christi, and on the West Coast in Seattle, Portland, the Bay Area, and Los Angeles.

Union Pacific competes vigorously against barges. For example, until recently, a producer used barges to ship cement from its {{

}}

Union Pacific also competes against imported cement. Most of the U.S. cement industry is now controlled by large multinational firms, such as LafargeHolcim, Cemex, Heidelberg Cement, and Buzzi. These companies have bought many of the large distribution terminals capable of importing cement they produce in Asia and Europe. Union Pacific's pricing on domestic movements is significantly constrained by the ability of these multinationals to import cement by water and move it to customers by truck.

Summary: Our experience is that the marketplace for cement is extremely competitive. Trucks dominate the business. They have a cost advantage over rail, which almost always requires a separate truck movement from a distribution terminal to the customer. We also face vigorous competition from BNSF, which serves cement plants and distribution terminals throughout the West. Finally, we compete against barges and water carriers that move cement by water to major markets on the Texas Gulf Coast and the West Coast.

⁹ See <http://minerals.usgs.gov/minerals/pubs/commodity/cement/myb1-2013-cemen.pdf> (Table 10).

III. PRIMARY IRON OR STEEL PRODUCTS (“STEEL”), AND IRON OR STEEL SCRAP, WASTES, OR TAILINGS (“SCRAP STEEL”)

Union Pacific’s steel and scrap steel business includes shipments of steel plate, sheet, and coil; shipments of manufactured steel products for the automotive, appliance, pipeline, and construction industries; and shipments of scrap steel to mini-mills that produce steel. Most of Union Pacific’s steel shipments originate on other carriers. Those carriers serve integrated steel mills (mills that produce steel from iron ore, limestone, and coke using blast furnaces) in the Great Lakes region. They also serve finishing plants that take steel from the mills and turn it into auto parts, pipes, beams and structural steel, and other products. Union Pacific’s scrap steel shipments originate at scrap yards and move short distances to mini-mills, which produce steel by melting scrap in an electric arc furnace. The U.S. Geological Survey reports that about 58 companies produce steel at approximately 110 mini-mills.¹⁰ We serve just 10 mini-mills.

Union Pacific faces intense truck, rail, barge and ship, and geographic competition for movements of steel and scrap steel. Trucks provide significant competition to rail. Steel and scrap steel movements often involve short hauls because mini-mills are typically located close to their sources of scrap and close to their customers. Even longer distance movements of steel often move by truck because (i) they would require a truck haul at one or both ends of any movement by rail, (ii) they are time-sensitive, or (iii) the shipment size is small. For longer-distance movements of steel in larger quantities, especially movements that are not time-sensitive, shippers often use truck-barge combinations—especially when using rail transportation would also involve a truck haul at both ends of the movement. Even when rail can compete, Union Pacific must compete with BNSF, and often KCS. Finally, Union Pacific must be mindful

¹⁰ See http://minerals.usgs.gov/minerals/pubs/commodity/iron_&_steel/mcs-2016-feste.pdf.

of competition from imported steel, particularly steel moving by ship to West Coast, Gulf Coast, and Mexican ports. As discussed below in more detail, these factors combine to limit our participation in the steel business and constrain the rates we charge. According to the U.S. Geological Survey, U.S. steel production and imports totaled 132.2 million tons in 2015.¹¹ We handled less than 6.6% of that amount. According to the U.S. Geological Survey, 86 million tons of scrap steel were produced or imported in 2015.¹² We handled less than 3.5% of that amount.

Truck Competition. Union Pacific faces intense competition from trucks for movements of steel and scrap steel. Many steel products move only a short distance from the mills. Lines of trucks leave each integrated steel mill every day. They carry plate, sheet, or coil steel to other facilities that will turn the steel into auto parts, appliances, pipes, construction material, and a wide variety of other products. Particularly with regard to mini-mills, outbound movements of steel products provide readily available backhauls for inbound trucks carrying scrap steel, and we struggle to match the backhaul efficiencies of trucks on shorter-haul rail moves.

In addition, a substantial percentage of the steel products that we handle require transloading at one end, and sometimes at both ends, of the movement. This keeps truck competitive with rail even for long-distance movements. For example, 100% of steel pipe used for pipeline construction must be hauled by truck at the destination: the end of the pipeline keeps changing, and you can get only so close by rail. Also, line pipe that moves by rail is often transloaded at destination. The same holds true for pipe used in oil and natural gas exploration, and for beams and structural steel used in the construction industry. Similarly, companies that manufacture farm implements, such as corn bins, using sheet and plate steel ultimately transport

¹¹ *See id.*

¹² *See* http://minerals.usgs.gov/minerals/pubs/commodity/iron_&_steel_scrap/mcs-2016-fescr.pdf.

the vast majority of finished products using truck. In the NPRM, the Board states that trucking becomes less viable when the length of haul exceeds 500 miles. In our experience, trucks regularly haul steel and steel scrap over greater distances, especially when rail shipments would require transloading, shipments are time sensitive, or quantities are small.

Union Pacific has made substantial investments to compete with truck for steel business. In 2013, Union Pacific invested \$14 million to create the Odessa Railport, which was specifically targeted to provide a rail-based alternative to help us compete for and convert to rail the thousands of trucks moving pipe and other commodities to the West Texas market. In the Houston area, Union Pacific invested millions of dollars in the Galena Park pipe yard, which serves as a pipe storage yard and processing facility for pipe inbound from both domestic and international pipe producers.

Union Pacific typically must provide truck-competitive rates and service to capture steel business. For example, we recently secured significant new business for line pipe moving from {{ }} an interstate natural gas pipeline. To win this business, we worked closely with {{ }} to identify appropriate unloading locations, establish dedicated and specialized 50-car unit trains that provided safe and efficient handling, and ensured that our rates, and the customer's total supply-chain costs, were competitive with the truck alternative. We also recently prevailed in bidding against a truck alternative for a new movement of imported steel coils from {{ }}
{{ }} To win this business, we had to develop a combination of direct service and transload alternatives with rates low enough to offset the advantages of truck movements. Often, however, the truck alternative wins. For example, we recently lost a joint-line movement of drill pipe from {{

}} Trucks bid aggressively for this movement, and rail was at a disadvantage because the pipe would have required transloading at origin. We also recently lost steel coil traffic moving from {{
}} because we could not match the combination of transit times and rates offered by our truck competition.

A substantial amount of the steel we handle moves from the Great Lakes region to Mexico for use in the auto industry. This traffic includes steel coils used to make hoods and fenders, and steel bars used to make frames, steering columns, and axles. Much of this is extremely time-sensitive business: customers must receive these products on a strict schedule, which allows trucks to compete with rail even for these long-distance moves. For example, companies ship steel coils from the Great Lakes region to automotive plants in Mexico. We offered significant discounts to the customers' truck rates for these movements (and, as discussed below, we still heavily compete with other railroads for these movements). Nevertheless, approximately half the volume continues to move over the road because we cannot always meet the 3-day to 4-day transit time requirements.

Trucks also provide significant competition for steel traffic moving from mini-mills. In the NPRM, the Board suggests that the steel industry's shift towards mini-mills may have increased railroad market power over steel. In fact, the opposite is true. As I noted above, U.S. Geological Survey data show 110 mini-mills in the U.S., compared with 11 integrated steel mills. Mini-mills are more geographically dispersed than integrated mills, and thus they are often located close to their customers, which makes truck an extremely competitive option. In addition, many of those customers are not rail-served, so they would have to transload any rail-shipped product. Mini-mills frequently produce small batches of specialty steel, and the small shipment

sizes are often better suited to the economics of truck transportation. Where we do handle traffic moving from mini-mills, truck competition constrains our rates, even for movements over longer distances. As just one example, when we proposed an increase on rates for movements of steel from {{

}} the customer bid out the movement, and we lost the business to truck. We have not been able to win the business back {{

Trucks also dominate the business of moving scrap steel to mini-mills. As I explained above, mini-mills often were built to be near sources of scrap, they often buy from a particular circle of local scrap dealers, and inbound truck movements of scrap also provide a very competitive source of available truck capacity for the outbound movements of steel. As a result, most scrap steel movements are well within range in which trucks are highly competitive with rail. If length of haul has increased for rail movements of scrap steel, it is because trucks have been capturing even more of the shorter movements along with the outbound movements of steel, and we have been unable to successfully compete at acceptable levels of return. And even for longer-distance moves, we must work hard to win business from truck. For example, we recently converted traffic that was moving by truck from {{

}} When Union Pacific handles scrap steel moving to a mini-mill, it is generally because we can use gondolas to move larger volumes more economically than trucks. However, if we tried to raise our rates above competitive levels, we would quickly be displaced

by trucks. For example, when we recently tried to raise some very low, non-compensatory rates on scrap steel moving from {{

}}

Barge-Truck Competition. Many steel companies have access to barge service and use a combination of barge and truck to compete with rail. I previously explained that trucks compete with rail for time-sensitive shipments to automotive industry customers in Mexico. However, a substantial share of steel moving to Mexico for the automotive industry that is *not* service-sensitive moves on the inland waterways through New Orleans and along the Gulf Coast to Brownsville, Texas. Once in Brownsville, the steel is stored in a warehouse and trucked into Mexico as needed. This combination of barge-truck service is another competitive force that constrains rates we charge for steel.

Rail vs. Rail, and Rail vs. Rail Geographic Competition. Union Pacific's steel and scrap steel business is also subject to intense competition from other railroads, particularly BNSF and KCS. Approximately half of the steel we handle originates on other carriers, which means BNSF could readily supplant Union Pacific for most movements to points throughout the West. Because most steel products that we transport must be transloaded to reach their final destination, neither railroad needs direct access to a customer facility, or even the same transload facility, to compete for the business.

We compete against BNSF to transport line pipe used in all major pipeline projects in the West. We also compete to transport steel product used in oil and natural gas exploration, such as drill pipe, tubing, and casings for drill rigs. This competition occurs across multiple dimensions.

We compete through investments. For example, we have developed a network of more than 100 pipe transloading sites that reach more than 75% of the active oil and gas drilling

locations in the U.S. and align with pipeline projects underway in the West. We expended substantial resources to quickly expand our network of sites in response to rapidly rising demand (which has also rapidly declined due to low prices for oil and natural gas). We also compete based on service and enhance our value proposition to capture business from trucks. For example, working with Union Pacific Distribution Services, we developed Pipeline Express, a service that provides sophisticated and proactive logistics management of line pipe shipments that expedites transportation from the manufacturer to transloading sites for final delivery by truck. And, of course, we compete based on price. For example, we recently {{ }} on movements of drill pipe, tubing and casings from {{ }}

Union Pacific and BNSF compete in many other areas as well. For example, we recently bid on and lost a large movement of steel coils from {{ }} In addition, four of the ten mini-mills we serve are also served by BNSF, so we compete for inbound movements of scrap steel and outbound movements of steel. For example, we recently displaced BNSF on a significant movement of scrap steel from {{ }} At the six mini-mills we serve exclusively, our rates are constrained by competition from trucks and by our customers' ability to source similar products from among the 11 integrated mills or 104 other mini-mills scattered across the United States. We also compete with BNSF for business from mini-mills using transloading on the origin side. For example, we compete with BNSF to move steel coils produced at a BNSF-served plant in {{ }}

Additionally, as discussed above, a significant portion of our steel business involves shipments to Mexico for the automotive industry. For these movements, we not only compete against trucks and barge-truck service, but also against BNSF and KCS. In fact, while Union Pacific and BNSF participate in these movements as bridge carriers, serving neither the origin nor the destination, KCS provides competitive service from its connections with other carriers to the border crossing at Laredo, and then into Mexico, where it serves many of the destinations through its affiliate, Kansas City Southern de Mexico. For example, we recently retained a large movement of steel coils for the automotive industry from a supplier in {{
}}

As another example, we regained a large movement of steel coils for the automotive industry from {{
}}

Geographic Competition from Imports/Trucks. Finally, Union Pacific competes against imported steel products. According to 2015 U.S. Geological Survey data, imports accounted for approximately 25% of steel consumed in the United States.¹³ This includes steel from China, South Korea, Brazil, Russia, and other European and Asia sources that flows into West Coast and Gulf Coast ports and moves to its ultimate destination on trucks. Moreover, many of the final products produced using steel, including appliances, oil field pipeline products, and windmill towers are also imported from overseas and typically move by truck within the United States. When we move pipe for oil and gas exploration into Texas, we are competing with pipe that is

¹³ See http://minerals.usgs.gov/minerals/pubs/commodity/iron_&_steel/mcs-2016-feste.pdf.

imported into Houston. In addition, our movements of steel coils to Mexico for the automotive industry are threatened by imports from other countries into Mexico. According to International Trade Centre data, from 2011 to 2015, Mexican imports of steel coils from non-U.S. sources increased from 408,741 tons to 1,365,565 tons, while imports from U.S. sources fell from 882,653 tons to 871,242 tons.¹⁴ Union Pacific's rates for steel and scrap steel are constrained by the very real prospect that the products we move will be displaced by imported steel.

Summary: Our experience is that the marketplace for steel and steel scrap is extremely competitive. Trucks dominate the business because most hauls are short, involve small quantities, or require a truck haul at one or both ends of any movement by rail. Where we move steel or scrap steel by rail, we are almost always competing with truck, BNSF, or KCS, or steel or scrap steel sourced from an origin we do not serve, including imported steel flowing into the United States.

¹⁴ See <http://www.intracen.org/itc/market-info-tools/trade-statistics/>.

VERIFICATION

I, Brad A. Thrasher, declare under penalty of perjury that the foregoing statement is true and correct. Further, I certify that I am qualified and authorized to file this statement.

Executed on July 26, 2016.

/s/ Brad A. Thrasher

REDACTED – TO BE PLACED ON PUBLIC FILE

**BEFORE THE
SURFACE TRANSPORTATION BOARD**

REVIEW OF COMMODITY, BOXCAR, AND TOFC/COFC EXEMPTIONS

Docket No. EP 704 (Sub-No. 1)

VERIFIED STATEMENT OF

PROFESSOR KEVIN M. MURPHY

JULY 26, 2016

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I. ASSIGNMENT AND SUMMARY OF CONCLUSIONS

My name is Kevin M. Murphy. I am the George J. Stigler Distinguished Service Professor of Economics in the Booth School of Business and the Department of Economics at The University of Chicago, where I have taught since 1983.

I earned a doctorate degree in economics from The University of Chicago in 1986. I received my bachelor's degree, also in economics, from the University of California, Los Angeles, in 1981.

At The University of Chicago, I teach economics in both the Booth School of Business and the Department of Economics, and I am co-Chair of the Becker Friedman Institute for Research in Economics. I teach graduate level courses in microeconomics, price theory, empirical labor economics, and sports analytics. In these courses, I cover a wide range of topics, including the incentives that motivate firms and individuals, the operation of markets, the determinants of market prices, and the impacts of regulation and the legal system. Most of my teaching focuses on two things: how to use the tools of economics to understand the behavior of individuals, firms and markets; and how to apply economic analysis to data. My focus in both research and teaching has been on integrating economic principles and empirical analysis.

I have authored or co-authored more than 65 articles in a variety of areas in economics. Those articles have been published in leading scholarly and professional journals, including the *American Economic Review*, the *Journal of Law and Economics*, and the *Journal of Political Economy*.

I am a Fellow of the Econometric Society and a member of the American Academy of Arts and Sciences. In 1997, I was awarded the John Bates Clark Medal, which the American Economic Association awarded once every two years to an outstanding American economist under the age of forty. In 2005, I was named a MacArthur Fellow, an award that provides a five-year fellowship to individuals who show exceptional merit and promise for continued and enhanced creative work. Also in 2005, I was elected a Fellow of the Society of Labor Economists.

In addition to my positions at The University of Chicago, I am also a Senior Consultant to Charles River Associates ("CRA"), a consulting firm that specializes in the application of economics to law and regulatory matters. I have consulted on a variety of antitrust, intellectual property, fraud, and other matters involving economic and legal issues, such as damages, class

certification, mergers, labor practices, joint ventures, and allegations of anticompetitive exclusionary access, tying, price fixing, and price discrimination.

I have submitted testimony in Federal Court, the U.S. Senate, and to state regulatory bodies, and I have submitted expert reports in numerous cases. I have submitted testimony to the Surface Transportation Board (the “Board”) on behalf of Union Pacific Railroad Company (“Union Pacific”) and CSX Transportation, Inc., and I have testified before the Board on behalf of Union Pacific. I have also testified on behalf of the U.S. Federal Trade Commission, and I have consulted for the U.S. Department of Justice.

My opinions are based on the information available to me as of the date of this statement. My work is on-going, and I will continue to collect data and other information relevant to the issues and opinions that I discuss in this report. In particular, I will review and, if requested to do so, respond to comments submitted in this proceeding by other parties.

I have been asked by Union Pacific to explain the general economic principles that should guide the Board’s consideration of whether to revoke exemptions of certain commodities from regulation. More generally, I have been asked to describe the type of economic and empirical analysis that the Board should undertake when considering whether rail transportation of commodities should be subject to regulatory oversight or should be exempt from regulation.

In a Notice of Proposed Rulemaking (“NPRM”), the Board has asked in particular for comments on whether to “revoke the existing class exemptions under 49 C.F.R. Part 1039 for (1) crushed or broken stone or rip rap; (2) hydraulic cement; and (3) coke produced from coal, primary iron or steel products, and iron or steel scrap, wastes or tailings”¹ (collectively, the “subject commodities”). Currently, shippers of these and other exempt commodities cannot challenge a railroad’s rates or practices as unreasonable, or require that railroads comply with other provisions of the Interstate Commerce Commission Termination Act of 1995 (“ICCTA”), without first showing that their individual circumstances require a partial revocation of the exemptions. I understand that the Board is required by statute to exempt commodities from regulation where regulation “is not necessary to carry out the [rail] transportation policy” and is “not needed to protect shippers from the abuse of market power.”²

¹ *Review of Commodity, Boxcar, and TOFC/COFC Exemptions*, EP 704 (Sub-No. 1) (STB decided March 23, 2016) (“NPRM”).

² 49 U.S.C. § 10502(a).

In this report, I explain that economics can provide substantial guidance on whether to exempt commodities from regulation at both a general and product-specific level. I focus on exemptions as they affect rate regulation, but the same principles apply to exemption from other regulation.

As I explain below, absent evidence of a widespread and fundamental structural change in competitive conditions in the transportation industry, the Board should be extremely cautious when considering whether to revoke exemptions. The Board's predecessor agency, the Interstate Commerce Commission ("ICC"), adopted the exemptions at issue in this proceeding after carefully investigating market conditions and concluding that relying on market forces, rather than regulation, would more effectively insure the establishment of reasonable rates and create appropriate incentives for railroads to become more efficient and improve service for shippers. I understand that the ICC adopted the exemptions based on its evaluation of the marketplace generally, and not because it concluded that every individual shipper or particular shipment had multiple competitive transportation alternatives.

Experience in the rail industry and elsewhere teaches that relying on competitive market forces produces better economic outcomes than reliance on regulation. The Board should not revoke exemptions absent compelling evidence that conditions in the transportation industry have changed so fundamentally that re-regulation is necessary.

Shippers may claim that mergers between Class 1 railroads that occurred after deregulation constitute a structural change in the competitive environment that warrants removing these exemptions, because those mergers eliminated intramodal competition. However, those mergers were approved only after regulators carefully reviewed each merger proposal and imposed conditions granting trackage rights or requiring divestitures to competitors as they concluded was necessary to ensure the merger benefits could be achieved while preserving competition for shippers.³

³ See, e.g., *Central Power & Light Co. v. Southern Pacific et al.*, 1 S.T.B. 1059, 1071 n.18 (1996). ("When we have approved mergers, we have done so because we found that the public benefits produced by the merger outweighed any associated competitive harm. Moreover, when we found potential competitive harm, we mitigated it through our conditioning power."). For example, the Verified Statement of Union Pacific witness Brad A. Thrasher (Verified Statement of Brad A. Thrasher, July 26, 2016 (herein referred to as "Thrasher VS")) describes how the Board's merger conditions have ensured that Texas Crushed Stone continues to have access to two Class I railroads. Thrasher VS at 8. Mr. Thrasher also notes that BNSF will have access to two new rock quarries on Union Pacific's lines in Texas using trackage rights BNSF obtained in the Union Pacific/Southern Pacific merger. Thrasher VS at 6.

In regard to the specific commodities identified by the Board in the NPRM, I have been asked to consider whether Union Pacific's experience in competing for and serving its customers provides any evidence that re-regulation is justified.⁴ I conclude that, for each of the commodities, the evidence shows that Union Pacific faces strong competition from a variety of sources – in some cases, from another railroad; generally from other modes of transportation (truck and water); and to a large extent from the ability of the ultimate customers to source product from many different geographic areas and shippers to serve customers from multiple facilities. To better compete for customers, Union Pacific has invested heavily to upgrade and improve its track and other facilities and to purchase and maintain equipment for the benefit of its customers, and consequently has been successful in winning business in the face of strong competition. Revoking the exemptions would endanger Union Pacific's ability to respond to changing market conditions and would create uncertainty that would chill incentives for investment, for improving operational efficiency, and for parties to reach mutually agreeable arrangements for transportation services.

II. GENERAL PRINCIPLES FOR CONSIDERING REVOCATION OF EXEMPTIONS FROM RATE REGULATION

In competitive markets, prices are set by the forces of supply and demand and serve to allocate capacity efficiently. Market-determined prices provide incentives for customers to seek out the most efficient suppliers and for suppliers to invest to better serve customers. Because of the critical role that price and quality signals play in promoting economic efficiency, the Staggers Act and its implementation by the Board (and its predecessor, the ICC) focused on allowing the railroad industry to be disciplined by the same fundamental economic incentives that operate in competitive industries generally.

Outcomes in competitive markets can vary in terms of prices, service levels and profitability across firms and geographic areas and over time. Operations in some time periods and some geographic areas may be profitable while operations in others are not. As a general matter, forcing down rates through regulation in periods when and locations where profits are relatively high will not allow markets to achieve efficient outcomes. The problems associated with regulating rates are compounded in network industries, where many costs are shared and the

⁴ I do not discuss coke made from coal, because Union Pacific moves only a trivial amount of this commodity. *See Thrasher VS at 1, fn. 1.*

benefits of investments and gains in operating efficiency may be realized at different times and differentially across customers and over time. In a competitive network industry, rates and margins often will vary substantially at any point in time and over time because of the large amount of interaction among customers being served using shared assets.

Furthermore, when assets (such as double tracking, new rail yards, locomotives, etc.) are shared across multiple commodities and customers, higher margins on some traffic where the market permits will provide incentives to make additional investments, and those investments will result in greater competition, lower rates, and improved service for other commodities and customers served by the shared assets. When demand for transportation increases, higher margins provide incentives for railroads to make additional investments to help meet that demand. In such an environment, margins might appear to be high, even though prices reflect the operation of a competitive market. However, if regulation prevents prices from rising in response to demand, efficient investments will be deterred. And, if regulation deters investment for the higher margin business, other customers that would benefit from that additional investment in terms of improved service or pricing will be worse off as well. This is one of the important but hidden costs of regulation.

An important rationale for deregulation was to provide railroads assurance that they could compete without concern that improved financial performance would be punished by reregulation. Yet implicit in some of the claims that appear to have persuaded the Board to issue the NPRM is that improved performance by railroads in response to deregulation generally and to freedom from the threat of rate regulation for exempt commodities now justifies reimposing rate regulation on certain exempt commodities.

It would be inconsistent with principles of free markets for regulators to reinstitute rate regulation when railroads become more successful in competing for classes of commodities over which they were found to lack market power in the past, absent evidence of fundamental structural change.⁵ As with firms operating in the private sector generally, it is the prospect of

⁵ Indeed, even the threat that exemptions can be removed based on increased profitability for exempt commodities and others has significant adverse consequences. The “real options” economic literature on investment decisions explains that, “for capital investment opportunities[, t]he greater the uncertainty over the potential profitability of the investment, the greater the value of the opportunity and the greater the incentive to wait and to keep the opportunity alive rather than exercise it by investing at once...in the option view of investment, uncertainty is far more important and fundamental. A small increase in uncertainty (nondiversifiable or otherwise) can lead managers to delay some investments (those that involve the exercising of options, such as the construction of a factory).” *See*, A. K. Dixit and R. S. Pindyck, “The Options Approach to Capital Investment,” *Harvard Business Review*, May-June 1995, at

increased profits that motivates Union Pacific and other railroads to increase their efficiency, invest in opportunities to win new customers, and anticipate the needs of their existing customers.

Thus, just as we do not require unregulated industries to justify that they should continue to be unregulated, we should be very reluctant to require railroads to justify continued exemptions from regulation for commodities for which rates have been found to be constrained by intra- or intermodal competition or by product or geographic competition. Any policy based on a presumption that increased profitability – whether overall, on particular routes, or for service to particular customers – justifies potential reregulation will chill competition and investment, especially in an industry such as this where most investments are sunk (nonrecoupable) and require planning and execution over a long period of time, and it will punish railroads for becoming more efficient and providing more valuable service to shippers.

III. THE TYPE OF EVIDENCE REFERENCED IN THE NPRM IS NOT INFORMATIVE ABOUT WHETHER RAILROADS CAN ABUSE MARKET POWER FOR CERTAIN COMMODITIES

In its NPRM, the Board cites two primary types of evidence to justify revoking exemptions for five classes of commodities: (1) increases in average revenue to variable cost (“R/VC”) ratios and the proportion of traffic moved with an R/VC ratio above 180; and (2) claims by some shippers that they are subject to railroad market power. Neither type of evidence is informative about whether transportation markets have become less competitive, much less whether railroads are abusing market power.

A. The Board Should Not Rely on Changes in R/VC Ratios as Evidence of Market Power

In the NPRM, the Board claims that “an increased likelihood of railroad market power for each of these specific commodity groups ... is also supported by the fact that railroad waybill rate data for these commodities shows a substantial increase in revenue from potentially captive traffic (i.e., traffic with a revenue-to-variable cost (R/VC) ratio of more than 180%) over the last

110-111). *See*, also, R. Kellogg, “The Effect of Uncertainty on Investment: Evidence from Texas Oil Drilling,” 104(6) *American Economic Review* 1698 (2014), 1698 (“as uncertainty increases, real options theory tells us that the incentive to delay should grow stronger and the gap between the expected benefit and cost necessary to trigger investment should widen”).

22 years.”⁶ However, R/VC ratios are not reliable indicia of whether rates are constrained by competition. First, there is substantial evidence that the Board’s costing system is too blunt an instrument to properly incorporate and accurately measure the true resource and opportunity costs that railroads incur when serving particular shippers.⁷ Second, even putting that aside, the opportunity to increase markups over its variable cost provides the railroad with the motivation to become more efficient and improve service to customers. For example, when there are capacity bottlenecks due to unanticipated increases in demand for service in particular regions, on particular lines, or using certain types of rail cars, increasing margins serve to direct limited capacity to its highest valued use, while motivating railroads to increase their capacity in order to satisfy greater demand. When the consequence of higher average margins on exempt commodities is a risk that those commodities again will become subject to rate regulation, then the railroad will have reduced incentives to invest to improve service by reducing costs or increasing value provided to shippers. The end result will be to deprive all users of the rail network of the benefits of market-based rates, including safer and more efficient rail service, and to punish railroads for achieving efficiencies.

B. The Board Should Give Evidence of Use of Alternative Transportation Modes and Geographic/Production Competition Substantial Weight

The Board should not accept at face value the complaints of shippers looking to benefit from reregulation. In considering an issue as critical as revoking several class exemptions, the Board should rigorously analyze whether railroads face effective competition by examining all marketplace factors that motivate railroads to price competitively, provide high quality service and invest to better serve their customers. If analysis of the marketplace shows that, as a general matter, there is substantial direct and/or indirect competition to transport the commodity (or a substitute product) throughout the United States and that rail’s share overall is not high, then

⁶ NPRM, at 4.

⁷ In a 2015 report, the Transportation Research Board concluded that the “allocations, made by STB through use of its Uniform Railroad Costing System (URCS), are inevitably arbitrary and therefore cannot have a stable or meaningful connection to a shipment’s rate or to the level of market power possessed by the railroad. The fundamental problem lies with the law’s requirement that variable costs be allocated to shipments when most railroad costs are shared and not traceable to individual shipments.” *See*, Committee for a Study of Freight Rail Transportation and Regulation, “Modernizing Freight Rail Regulation,” Transportation Research Board of the National Academies (2015) at 3. Mr. Thrasher provides a specific example when he describes the special line maintenance costs associated with Union Pacific’s provision of service to Granite Rock, a shipper that recently filed comments in this proceeding. *See*, Thrasher VS at 8-9.

efficiency demands that the Board exempt the commodity from rate regulation.⁸ Given the high fixed costs of operating a railroad, and the relatively low variable costs per mile, I would expect that a railroad generally would bid aggressively and competitively for business that the railroad has the capacity to serve.

The clearest example of competition and lack of market dominance is when multiple railroads provide service between the same origin and destination. But competition also exists when origins and destinations can be served by both a single railroad and another transportation mode, which is why competition from other modes of transportation was an important factor in the ICC's decisions to classify the subject commodities and many others as exempt from rate regulation. The widespread availability (and use) of other modes of transport—water and truck—for transporting the commodity class meant that rates would be competitive whether or not there was evidence that a competing form of transportation was actually feasible for a particular shipment.

For true commodities such as crushed stone, cement, and iron and steel products and iron and steel scrap, the ultimate customer generally has no strong preferences over the identity of the supplier, and no preference for the particular origin point from which the commodity is sourced. Competition occurs based on delivered cost and delivery quality, including time and dependability of delivery.⁹ This means, for example, that there often will be substantial geographic competition to serve customers, and that railroads will not have market power even if a particular origin – e.g., a particular quarry – is served by only a single railroad and neither truck nor water transport is economical. In such situations, the railroad is constrained to offer competitive rates by the need to ensure that the shipper can compete and win business against products delivered from other quarries that are served by other carriers.

Product and geographic competition, which played important roles in demonstrating competitive constraints on rail rates for the subject commodities when the ICC approved the

⁸ Especially in light of the ability of shippers to seek partial revocations of exemptions, the Board should not focus on margins or on particular shipments or shippers, but instead on overall competitive conditions in the marketplace. Regulation is costly to economic efficiency, because it interferes with market signals and the incentives of buyers and sellers to negotiate mutually advantageous contract terms, and it induces customers to expend resources and focus on appealing to regulators rather than negotiating through the marketplace.

⁹ A customer will be willing to pay more (on a delivered basis) for a commodity if that reduces the customer's costs more generally. Thus, enabling quick turnaround of customer-owned equipment allows a shipper to own fewer cars, and so the shipper will be willing to pay a higher delivered price than it would for deliveries that have slower turnaround times.

exemptions, remains a critical factor in understanding why the exemptions remain economically justified and efficient. Even though the Board subsequently decided not to consider evidence of product and geographic competition when an individual shipper challenges rates on nonexempt traffic on specific routes, the existence of such competition is a critical reason why railroads do not have market power over the subject commodities.¹⁰ In fact, given that the Board will not consider geographic and product competition when evaluating a shipper's market dominance claim during rate challenges for non-exempt commodities, it is essential that this important element of competition is given strong weight in any decision about whether to subject a commodity to rate regulation at all. Under current Board policy, a decision to reregulate a commodity cannot be corrected by consideration of the competitive constraints imposed by product and geographic competition in individual cases.

Competitive markets can yield a variety of different rates and service terms. I would not expect that competition would force prices to or near marginal or variable cost in an industry with high fixed costs, such as the railroad industry, or that the rates charged by railroads that face strong and effective competition will be the same (relative to cost per mile or on some other metric) everywhere that competition is present. It is not surprising that some shippers will identify situations where their options are limited and/or rail rates are relatively high, but such situations are not inconsistent with competition. A variety of outcomes (and margins) will arise under competition based on the competitive strategies that firms choose to adopt, and the railroad industry is far from unique in this regard. When alternative modes of transportation – in addition to intermodal, geographic and product competition – provide substantial and widespread constraints on railroads' pricing and service, it is likely to be better for shippers and for economic efficiency generally to allow competition to work without regulatory interference, even if the outcome varies across individual customers.

IV. UNION PACIFIC'S CRUSHED STONE BUSINESS

Based on my review of documents and data from Union Pacific, the Verified Statement of Brad A. Thrasher ("Thrasher VS"), and my understanding of the marketplace, I see no basis for revoking the exemption for transportation of crushed stone. In this section of my Statement, I

¹⁰ See, *Market Dominance Determinations—Product and Geographic Competition*, S.T.B. Ex. Parte No. 627, (decided July 1, 1999), referencing *Market Dominance Determinations—Product & Geographic Competition*, 3 S.T.B. 937 (1998).

explain why, just as the Board concluded when it exempted crushed stone from regulation, Union Pacific's pricing of crushed stone traffic is constrained by inter- and intramodal competition, by the ability of shippers to source stone from many different origins (quarries), and by the ability of the ultimate customer to obtain stone from many different shippers and locations.

The majority of Union Pacific's crushed stone business is in Texas. Union Pacific transports crushed stone (directly or via connecting short line) from 14 quarries to distribution centers, from which stone then is delivered by truck largely for use in concrete, which in turn is largely used for road construction.¹¹ Road construction, and thus demand for crushed stone, has been strong in Texas.

An important way in which Union Pacific's investment over more than a decade has benefited quarry owners is through improved rail infrastructure. Union Pacific has invested heavily in the Southern Region – spending a total of over \$5 billion between 2009 and 2015 to renew and expand the infrastructure.¹² This investment has benefited shippers of other commodities in this region as well. {{

¹¹ Thrasher VS at 2.

¹² Data from Union Pacific show that 63.8 percent of its main line miles in its Southern Region are in Texas.

}}¹³

Union Pacific’s investment, and investments by its customers, have enabled increased use of longer and more efficient trains, which has improved service and enabled customers to save costs. Through use of unit trains – which contain 90 or 100 cars – and the use of higher capacity rail cars, cycle time for delivery from quarries to distribution centers has been reduced. The average days per cycle for these unit trains declined from 7.77 days in 2005 to 5.49 days in 2015.¹⁴ This is precisely the type of efficiency gain that deregulation was intended to promote – cooperative investments by railroads and their customers that benefit both and result in gains against other modes of transport or other sources of the commodity.

The availability of transportation alternatives is acknowledged (perhaps inadvertently) by Texas Crushed Stone (“TCS”), one of the shippers that filed comments with the Board in 2011 requesting revocation of the exemption for crushed stone. TCS explains on its website that it operates a “world class” quarry, which is “[l]ocated at Georgetown, Texas, just 30 miles north of Austin ...*directly adjacent to Interstate Highway 35 providing excellent access for trucks.*”¹⁵

¹³ Material between double brackets is Highly Confidential and has been redacted from the public version of this statement.

¹⁴ See Thrasher VS at 4.

¹⁵ “Map & Directions”, Texas Crushed Stone Company, <http://www.texascrushedstoneco.com/contact-us/map-directions/> (visited on 7/22/2016) (emphasis added). While TCS complained in its 2011 comments that there was a shortage of truck capacity, Mr. Thrasher explains that decline in oil and gas drilling has increased driver availability. Thrasher VS at 8. This demonstrates how relying on a claim of a constraint on other shipping modes, which may be short-lived, is not a reliable basis for considering revocation of an exemption for a commodity, since supply and

TCS explains that the quarry (“the state’s largest”) also “is served by the Georgetown Railroad Company, a short line carrier that *connects with both the Union Pacific and Burlington Northern Santa Fe Railroads*. Every day, an average of 40,000 tons of rock is quarried at Texas Crushed Stone. Fifteen hundred trucks and 100 rail cars then ship the stone to construction jobs in Central and East Texas.”¹⁶ Thus, TCS’s quarry can supply construction jobs over a wide geographic area using trucks and two railroads for delivery, exactly the type of competitive options that appear to have motivated the ICC to exempt crushed stone from regulation in 1993.¹⁷

TCS also acknowledges the benefit it received from improved service resulting from Union Pacific’s investments. According to TCS, “[u]nit trains are an efficient way to move rock over a railroad” because they save time and enable more productive use of railcars and locomotives.¹⁸ TCS acknowledges that Union Pacific created incentives to switch to unit trains through a program that Union Pacific calls Rocktimization.¹⁹

Union Pacific launched the Rocktimization program in 2005 in response to a surge in demand from customers that caused congestion in Texas and other states. Union Pacific recognized that trains and cars were smaller than was optimal to serve the growing demand, and that limits of its infrastructure and suboptimal operating practices resulted in slow train unloading.²⁰ The goal of the program – to move more product in fewer trains using longer trains and larger cars typically unloaded within 24 hours – was achieved. Despite these improvements

competitive conditions generally can change rapidly especially when demand is volatile and/or growing. *See also* “Freight Rates Push Lower as Truck Capacity Outweighs Demand,” Wall Street Journal, June 7, 2016.

¹⁶ *Ibid.*

¹⁷ *Rail General Exemption Authority – Petition of AAR to Exempt Rail Transportation of Selected Commodity Groups*, EP 346 (Sub-No. 29) (ICC decided September 17, 1993).

¹⁸ “Unit Trains”, Texas Crushed Stone Company, <http://www.texascrushedstoneco.com/unit-trains/> (visited 7/20/16).

¹⁹ *Ibid.*

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in rail service, the majority of crushed stone transported in Texas and throughout the United States is transported by truck.²¹

Martin Marietta is one of Union Pacific's largest customers for shipping crushed stone. Martin Marietta explains that it "uses its ability to distribute materials over long distances by rail and water to further expand its [aggregates] operations."²² Five of Martin Marietta's stone quarries in Texas are served by Union Pacific (one of those also is served by BNSF). According to Martin Marietta, its New Braunfels and Beckmann rail-connected quarries in Texas "have been among the [Southwest Division's Central Texas Aggregates] district's most profitable," and both are served by Union Pacific.²³ Martin Marietta has made a major investment over the past decade in a new quarry at Medina Texas, including building a rail connection to Union Pacific's rail line.²⁴ The Medina quarry will supply 10 million tons or more of aggregates²⁵ to support "south Texas, Houston and beyond."²⁶

Martin Marietta's transportation network provides it with options both for where it obtains and where it sells aggregates: "the long-haul transportation network can diversify market risk for locations that engage in long-haul transportation of their aggregates products. Many locations serve both a local market and transport products via rail and/ or water to be sold in other markets. The risk of a downturn in one market may be somewhat mitigated by other markets served by the location."²⁷ For the same reason, Martin Marietta's diversification enables it to avoid dependence on any particular transportation option to any particular location.

While rail has increased in importance for Martin Marietta, it still accounts for a small fraction of total shipments. According to Martin Marietta, "[a] significant percentage of the Company's aggregates shipments continue to be moved by rail or water through a distribution

²¹ Thrasher VS at 2.

²² Martin Marietta Materials Inc., Form 10-K, 2015, at 4.

²³ See *Martin Marietta | About Us | Company News*, July 28, 2015 (<http://www.martinmarietta.com/aboutus/companynews/medinarockrailprogressreport/>).

²⁴ Thrasher VS at 6. Although Union Pacific owns the rail line, BNSF has trackage rights as a result of merger conditions associated with Union Pacific's acquisition of Southern Pacific. Thus, this quarry could be served by both Union Pacific and BNSF.

²⁵ Martin Marietta Materials Inc., Form 10-K, 2015, at 9.

²⁶ *Martin Marietta | About Us | Company News*, "Rockin' & Railin'", April 12, 2016, <http://www.martinmarietta.com/about-us/company-news/rockin-railin/>

²⁷ Martin Marietta Materials Inc., Form 10-K, 2015 at 60.

yard network. In 1994, 93% of the Company's aggregates shipments were moved by truck, the rest by rail. In contrast, in 2015, the originating mode of transportation for the Company's aggregates shipments was 75% by truck, 21% by rail, and 4% by water," and "the development of deep-water and rail distribution yards continues to be a key component of the Company's strategic growth plan."²⁸ The company further explained that its "management expects the multiple transportation modes that have been developed with various rail carriers and via deep-water ships should provide the Company with the flexibility to effectively serve customers in the southeastern and southwestern regions of the United States."²⁹

Vulcan Materials Company ("VMC") also acknowledges that it has multiple transportation options for aggregates, including importing from Mexico to serve Texas. VCM imports a substantial amount of aggregates by water from the Yucatan, where it owns a quarry, into Texas.³⁰ And VCM (through its Southwest Gulf Railroad subsidiary) plans to construct a rail connection to Union Pacific for a new quarry at Dunlay (Medina), which is approximately six miles from Martin Marietta's new Medina quarry.³¹ According to VCM, "Vulcan Materials Company is poised to further invest in the Medina Quarry to build a state-of-the-art facility. Leveraging the County's unique access to transportation infrastructure, *including Union Pacific Railroad and U.S. Route 90*, The Medina Quarry is strategically located to serve the growing Texas economy."³²

²⁸ Martin Marietta Materials Inc., Form 10-K, 2015 at 8.

²⁹ Martin Marietta Materials Inc., Form 10-K, 2015 at 10.

³⁰ Thrasher VS at 7. "Vulcan's quarry produces a full range of construction aggregates and environmental stone that are transported on oceangoing, self-unloading vessels to markets along the U.S. Gulf Coast and South Atlantic Coast from Brownsville, Texas to Jacksonville, Florida." See, "Vulcan Materials Company Resumes Full Production and Shipments from Yucatan Quarry Following Hurricane Dean", BusinessWire, August 23, 2007, <http://www.businesswire.com/news/home/20070823005910/en/Vulcan-Materials-Company-Resumes-Full-Production-Shipments>. "Calica [VCM's "largest construction aggregates facility in North America"] ships construction aggregates through every major port in the Gulf of Mexico and Atlantic Coast of Florida, including Mobile, Houston, New Orleans, Tampa and Jacksonville. Aggregates are shipped by three Vulcan owned self-unloading, Panamax-class cargo ships. These massive vessels carry the equivalent of 2,500 truckloads of crushed stone per ship from the deep-water harbor in Playa del Carmen, which the company built in 1988." See, "Vulcan's Voyage South", Birmingham Business Alliance, February 6, 2014, <https://birminghambusinessalliance.com/news/vulcans-voyage-south/>.

³¹ Thrasher VS at 6. Although Union Pacific owns the rail line, BNSF has trackage rights as a result of merger conditions associated with Union Pacific's acquisition of Southern Pacific. Thus, this quarry will have access to both Union Pacific and BNSF.

³² See, "The Medina Quarry", Vulcan Material Company, <http://vulcanmedinaquarry.com/#thequarry> (emphasis added). According to a 2/4/2015 article, "Southwest Gulf Railroad Co., a subsidiary of Vulcan Materials, says it's moving ahead with long-delayed construction of a new rail line in Medina County to link a Vulcan quarry there *with*

The new quarries at Medina are two of the recent decisions by crushed stone shippers to locate facilities on Union Pacific.³³ The presence of BNSF, whether it can serve the same quarry or a different one in the area, means that the railroads will compete by offering attractive rates and terms in order to win business. The willingness of crushed stone shippers to invest in new facilities where there is rail service demonstrates that Union Pacific's service is competitive and attractive.

While the bulk of the railcars used for transporting crushed stone in Texas are supplied by shippers, Union Pacific supplies about 20 percent of the aggregates gondolas as swing capacity that it makes available to shippers when needed. This is a benefit to Union Pacific's customers. Union Pacific explained in 2011 in a request for financing to purchase 150 efficient aggregate gondolas that { {

} }³⁴ A similar explanation was offered for a request for capital authority to purchase an additional 200 aggregate gondolas later in 2011.³⁵

These gondolas supplemented the 280 aggregate gondolas that Union Pacific purchased in 2006. Having these system cars available makes Union Pacific more attractive to smaller producers, who otherwise use trucks. They also help Union Pacific win business from larger

existing Union Pacific tracks beside U.S. 90 in Dunlay. The U.S. Surface Transportation Board granted SGRR permission in 2008 to build and operate a "common carrier" rail line, which means it will be available for use by other shippers along its path... The new line should begin operating in late 2017, primarily hauling limestone from the 1,700-acre quarry where, until now, rock has been mined and crushed on site but not shipped. *Medina County officials have said they prefer seeing the rock moved by rail rather than trucked over county roads.*" See, "Work finally will start on rail line to Medina County quarry", San Antonio Express-News, February 4, 2015, <http://www.expressnews.com/news/local/article/Work-finally-starting-on-rail-line-to-Medina-6062811.php> (emphasis added).

³³ Thrasher VS at 6-7.

³⁴ *Union Pacific Railroad AFE, Chief Financial Officer, Acquire 150 Aggregate Gondolas* (2011).

³⁵ *Union Pacific Railroad AFE, President of the Railroad, Acquire 200 Aggregate Gondolas* (2011).

customers or producers located on short lines connecting to other Class I railroads by assuring them that equipment will be available if they win large contracts.

Intramodal competition (through geographic competition) is strong in Texas, because the major consuming areas for crushed stone can be served by multiple quarries located on different rail lines, as Mr. Thrasher explains.³⁶ Thus, for example, customers can ship into Dallas, Houston, and East Texas from quarries located on Union Pacific lines or from other quarries located on BNSF lines.³⁷

In summary, Union Pacific's crushed stone business is largely in Texas – a large and growing consuming market. In Texas, Union Pacific competes against BNSF, trucks, and aggregate imported by water from Mexico. Union Pacific has invested heavily in improving service to its customers to eliminate capacity constraints and enable customers to load and unload more efficiently. The consequence has been that Union Pacific's customers can compete over longer distances, both giving them more areas where they can sell their products and enhancing competition against product sourced from other producing areas transported by train and other transportation modes.

V. UNION PACIFIC'S HYDRAULIC CEMENT BUSINESS

Based on my review of information from Union Pacific and my understanding of the marketplace, I see no economic basis for revoking the exemption for hydraulic cement. In this section of my Statement, I explain that Union Pacific's pricing to transport hydraulic cement is constrained by competition from rail, truck, and water and by direct and indirect (geographic) competition.

According to the Portland Cement Association, there currently are 107 cement plants in 36 states, of which 55 plants are located in states where Union Pacific operates. I understand that Union Pacific can originate cement at 35 plants in 15 of the states that it reaches.

Most cement is used by ready-mix concrete producers, which supply concrete to construction sites. As with crushed stone, rail is competitive with truck over long distances for shipments from plants to distribution centers, from which the stone then is delivered to customers by truck. Even though truck service is not economical over the longest distances

³⁶ See Thrasher VS at 5-7.

³⁷ *Ibid.*

served by rail, trucks can compete for the same business by sourcing from closer plants or from terminals served by other railroads, or by delivering to closer destinations. Because of the costs to transload cement from rail to truck at distribution centers, direct truck shipments from plants to an ultimate customer's site have a cost advantage over substantial distances.

Data reported by the United States Geological Survey show that rail accounts for a relatively small share of cement shipments. In 2013, the most recent year for which data are available, virtually all shipments to customers – whether directly from a plant or from a terminal – were made by truck. Rail has a larger share of shipments from plants to terminals, but rail accounts for less than half of such shipments. Barge and boat shipments also are important for shipments from plants to terminals. Overall, only 20 percent of tonnage leaving cement plants is transported by rail, with truck accounting for 68 percent and water 12 percent. As the USGS reports, “it remains evident that the dominant transportation method for sales to final customers continued to be by truck. Deliveries, especially waterborne, from plants to terminals appear to have fallen significantly but likely reflect greater reliance by some terminals on imported cement rather than domestic sourcing.”³⁸

³⁸ U.S. Geological Survey Minerals Yearbook, 2013 [Advance Release], at 16.4. The table above appears to be limited to domestic shipments and to exclude imports directly to terminals, which would further reduce the fraction of consumption transported by rail. According to the U.S. Geological Survey Minerals Yearbook, 2013 [Advance Release], Table 1, shipments from mills and terminals total 81.7 million metric tons in 2013.

Shipments of Portland Cement in the United States, by Type of Carrier^{1,2}
(Thousand metric tons)

Type of Carrier	Plant to terminal		Plant to customer		Terminal to customer		Total to customers ⁴
	In bulk	In bags ³	In bulk	In bags ³	In bulk	In bags ³	
2012:							
Railroad	12,100	3	1,060	--	107	6	1,170
Truck	3,540	170	39,200	811	34,600	432	75,000
Barge and boat	9,020	--	185	--	2	--	187
Total ⁴	24,600	173	40,400	811	34,700	437	76,400 ⁵
2013:							
Railroad	11,500	42	1,440	--	249	6	1,700
Truck	3,680	151	41,500	858	34,900	351	77,600
Barge and boat	7,910	--	159	17	17	--	193
Total ⁴	23,100	193	43,100	875	35,200	357	79,500 ⁵

Notes and Sources:

U.S. Geological Survey Minerals Yearbook, 2013 [Advance Release], Table 10, p. 16.17.

-- Indicates a zero.

[1] Includes imported cement and cement made from imported clinker. Excludes Puerto Rico.

[2] Data are rounded to no more than three significant digits.

[3] Includes packages, bags, and supersacks.

[4] May not add to totals shown because of independent rounding.

[5] Shipments are based on an annual survey of plants and importers; may differ from totals in U.S. Geological Survey Minerals Yearbook's table 9, which are based on consolidated monthly data.

2013 Share of Portland Cement Shipments in Bulk from Plant, by Type of Carrier^{1,2}
(Thousand metric tons)

Type of Carrier	Plant to terminal	Plant to customer	Total from plant	Carrier % of total
Railroad	11,500	1,440	12,940	20%
Truck	3,680	41,500	45,180	68%
Barge and boat	7,910	159	8,069	12%
Total ^{3,4}	23,100	43,100	66,200	100%

Notes and Sources:

See, U.S. Geological Survey Minerals Yearbook, 2013 [Advance Release], Table 10, p. 16.17.

[1] Includes United States imported cement and cement made from imported clinker. Excludes Puerto Rico.

[2] Data are rounded to no more than three significant digits.

[3] May not add to totals shown because of independent rounding.

[4] Shipments are based on an annual survey of plants and importers; may differ from totals in U.S. Geological Survey Minerals Yearbook's table 9, which are based on consolidated monthly data.

Imports of cement into Texas come from several countries. In 2013, Houston/Galveston was the largest importing customs district, importing 1.1 million metric tons of hydraulic cement

and clinker, or about 16 percent of the 7.2 million metric tons imported into the United States in 2013.³⁹ Total portland cement shipments to final customers in Southern Texas were 7.35 million metric tons.⁴⁰ Thus, imports into Houston accounted for about 15 percent of total shipments in that area.

Union Pacific's experience in competing to serve cement customers is similar to its experience serving its crushed stone customers (indeed, many of its largest cement customers are also among its largest customers for crushed stone).

In Texas (which accounts for {{ }} of Union Pacific's cement business) and elsewhere, many of Union Pacific's customers have access to both Union Pacific and BNSF. For example, Martin Marietta's cement plant in Midlothian, Texas, is dual served. According to Martin Marietta, "Texas and California accounted for 73% and 27% of the Cement business' net sales, respectively, in 2015... The Cement business is benefitting from continued strength in the Texas markets, where current demand exceeds local supply, a trend that is expected to continue for the near future. The Cement business sold cement to customers in 13 states and Mexico. Truck and rail transportation modes represent 97% and 3%, respectively, of total tons shipped in 2015."⁴¹

As Mr. Thrasher has explained in detail in his Verified Statement, Union Pacific encounters competition from rail, truck and water throughout the United States:⁴²

1. Competition against other railroads, primarily BNSF, which serves Texas and the Western United States. This competition occurs both for business at the same plant (e.g., in California, where both railroads can serve four of the nine plants and can move cement to various consuming areas within California) as well as when the railroads serve different plants but can deliver to the same consuming areas. In Texas, both Union Pacific and BNSF can serve Martin Marietta's Ward Spur plant and Holcim's Midlothian plant. In addition, Union Pacific serves the Houston area from plants near San Antonio, while BNSF serves Houston from Ward Spur (which is nearer to Dallas) and from Maryneal, Texas, which is near Abilene. Union Pacific serves the Dallas area from many areas in Texas (Midlothian, Ward Spur, and Waco),

³⁹ U.S. Geological Survey 2013 Minerals Yearbook, Cement [Advance Release], Tables 17 and 18.

⁴⁰ U.S. Geological Survey 2013 Minerals Yearbook, Cement [Advance Release], Table 9.

⁴¹ Martin Marietta Materials Inc., Form 10-K, 2015 at 12.

⁴² Thrasher VS at 10-14.

while BNSF serves Dallas from Ward Spur, as well as from Maryneal and from Oklahoma, and KCS serves Dallas from Arkansas. Similar direct and indirect competition occurs in California.⁴³

2. Competition against truck: As the chart above shows, the destination for rail shipments typically is a terminal, from which cement is trucked to the ultimate customer. Thus, rail is attractive only when its advantage in lower average cost per mile compensates for the additional handling costs associated with movement through a terminal, rather than trucking directly to the customer. This means that there can be geographic competition between cement shipped by rail from plants hundreds of miles from the consuming area in different directions and cement from other plants located closer to the consuming area and shipped directly to the site by truck. Again, exclusive reliance of some plants on rail for long-distance shipments to some consuming areas need not reflect lack of truck competition, but simply the ability of rail to enable supply from distant cement plants to areas otherwise served only by truck. Mr. Thrasher described how he must meet competition from truck throughout the area that Union Pacific serves, both for direct shipments and to meet geographic competition. For example, I understand that {{
}}⁴⁴

3. Competition against water shipments and imports: As shown above, 34 percent of cement delivered to terminals is delivered by barge or ship. Union Pacific has competed against water-borne alternatives to win business that had been moving by barge from {{
}}⁴⁵

Finally, it is important to understand the complexity of pricing by railroads in areas such as Texas, where the same rail infrastructure is utilized for shipment of many different commodities. Cement, which Union Pacific typically transports in relatively short (40-60 car) trains, is a relatively unattractive commodity for Union Pacific to deliver when there are alternative uses for capacity on its system that use longer trains. Union Pacific realizes cost savings from operating unit trains of 100 cars or more. Thus, cement shippers have to compete with shippers of other commodities – even the same suppliers shipping products like crushed

⁴³ Thrasher VS at 12.

⁴⁴ Thrasher VS at 11.

⁴⁵ Thrasher VS at 14.

stone – for the limited available capacity when economic conditions are strong. Competitive forces will operate to insure that capacity is allocated efficiently – to its highest valued use – and cement companies will be able to compete for scarce capacity only if they value rail service sufficiently that they can outbid alternative uses. The result may be rising or higher rates relative to variable costs, which provides the appropriate price signals for Union Pacific to continue to invest in infrastructure (as it did with Rocktimization) and for alternative sources of supply and shipping modes to win business in competition with railroads. This is how competition operates.

VI. UNION PACIFIC’S SCRAP STEEL AND STEEL PRODUCTS BUSINESS

A. Scrap Steel

In 1995, the Interstate Commerce Commission determined that “competitive market forces ensure competitive rate levels for the rail transportation of [iron and steel scrap]. Intermodal competition with trucks and barges, and intramodal competition with other railroads exist in many markets. Exceptionally strong geographic competition also exists, which further inhibits the railroads from exercising market power. Geographic competition occurs because these commodities, particularly iron and steel scrap, are produced and consumed throughout the United States. If a railroad were to raise its rates to one shipper, either the shipper could send the recyclables to another market, or the receiver could secure its supply from another shipper, or both situations could occur.”⁴⁶ As my review of Mr. Thrasher’s Statement and other evidence shows, this remains true.

Steel scrap is the raw material used by steel mini-mills. Those mills melt the scrap in electric arc furnaces and convert it into finished steel products. The typical length of movement for steel scrap is relatively short because mini-mills intentionally locate close to both input sources and facilities that use the steel products that the mills manufacture. All locations that Union Pacific serves are accessible by truck. As Mr. Thrasher explains, truck is economical over relatively long distances because of its comparative advantage in eliminating transloading in cases where a truck movement would be necessary at one or both ends of the rail shipment, and when shipments are time-sensitive and/or shipment size is small.⁴⁷ Scrap is shipped on Union

⁴⁶ See *Rail General Exemption Authority – Exemption of Ferrous Recyclables* Ex Parte No. 346 (Sub-No. 35) (ICC decided April 28, 1995) at 5.

⁴⁷ Thrasher VS at 15, 16-17.

Pacific in manifest service to 10 U.S. mini-mills in Arkansas, Colorado, Illinois, Nebraska, Oregon, Texas and Utah. Of these, four also are served by BNSF.⁴⁸

Three of the mini-mills served by Union Pacific are owned by Nucor Steel. In a sustainability study that it performed in 2009, Nucor acknowledged that it has many transportation alternatives:

Scrap metal is gathered, processed and transported largely to Nucor mills by truck, rail and river barge by Nucor's subsidiary, DJJ. Finished steel is transported to the customer and, at end of life, is recycled as scrap metal and returned to a Nucor mill. Typically, scrap metal going to a Nucor bar mill is transported an average of 80 miles by truck or 304 miles by river barge.⁴⁹

A 1999 article described how the steel industry has committed to water shipments for scrap to give them transportation options:

[W]ater shipping of scrap materials—especially barge shipping—has undergone a quiet revolution. One driver behind this revolution has been the burgeoning mini-mill industry. Many of these scrap-fed mills have located on or within close proximity of inland waterways so they have the option to receive scrap by water, rail, or truck, offering flexibility to both shipper and receiver. Among its advantages, water shipping is generally one of the most economical transportation modes—and in today's difficult scrap market, every way to cut costs is worth consideration. Plus, while shipping by water is slower than shipping by truck or rail, barges can carry much more cargo than those modes and reach an impressive number of destinations throughout the country...If you're shipping scrap within the United States, you can choose truck, rail, barge, or a combination of those three... By locating near inland ports, the minimill steelmaking industry has established a long-term commitment to use the river system for receiving scrap and shipping finished steel.⁵⁰

While none of the mini-mills that Union Pacific serves is served by barge, I understand that some mini-mills served by Union Pacific compete with other mini-mills that can source their scrap from barges, which constrains rail rates.

There are many examples of the various sources of competition that Union Pacific faces in competing for scrap steel business. For example,

⁴⁸ Thrasher VS at 21.

⁴⁹ Nucor Sustainability Report 2009, http://www.nucor.com/sustainability/2009/download/Nucor_SustainabilityReport09.pdf (at 42).

⁵⁰ "Scrap Ahoy!" Scrap Articles, published by ISRI, May/June 1999, <http://www.isri.org/news-publications/scrap-magazine/scrap-articles/scrap-ahoy!#.V3666PkrLIU>.

- Union Pacific recently displaced BNSF volume on a significant movement of scrap from {{ }}⁵¹
- Union Pacific recently attempted to increase rates (that were very low) for shipments of scrap from {{ }}⁵²
- Scrap from {{ }} moved by truck. Union Pacific converted the business from truck to rail by {{ }}⁵³

B. Iron and Steel Products

Similarly, I find no evidence to support revoking the exemption for iron and steel products. Union Pacific moves several different types of iron and steel products, including steel plate, sheet, and coil and manufactured steel products for many industries. Truck is a strong competitor for moving steel products. For example, much of the pipe volume that Union Pacific and other railroads handle requires truck movement on one end, creating incentives for shippers to use truck for the complete movement and avoid transloading.

A large portion of Union Pacific’s steel business is shipping steel coils to auto manufacturing plants in Mexico from integrated steel plants in the Midwest. Union Pacific generally is a bridge carrier on these shipments – neither originating nor terminating the shipment, but instead interchanging with other railroads on both ends.⁵⁴ Shippers generally have alternative rail routings – with origins dual served and destinations or Mexican crossings served by KCS, BNSF and Union Pacific.

In his Statement, Mr. Thrasher provides many examples of the competition that Union Pacific faces for steel products business, including direct competition from rail, truck and barge (or a combination of truck and barge) and geographic competition from rail and imported steel, including:

⁵¹ Thrasher VS at 21.

⁵² Thrasher VS at 20.

⁵³ Thrasher VS at 19-20.

⁵⁴ Thrasher VS at 22.

• Steel coil: About half the shipments of steel coil by companies with plants in the Great Lakes to Mexican automotive plants are made by truck, which is economical in competition with Union Pacific's and other railroads' service and with barge shipments on the inland waterways, because trucks deliver more quickly and consistently.⁵⁵ By developing a combination of direct service and transload alternatives that could offset the advantages of truck, Union Pacific recently won a bid against truck to move imported steel coils from {{
}}⁵⁶ Union Pacific bid with {{

}}⁵⁷ In another competitive opportunity, Union Pacific recently lost steel coil traffic moving from {{
}} because of the transit time/rate combination offered by truck.⁵⁸

• Pipe: All steel pipe used in pipeline construction must be trucked to the destination, and destinations change as the pipeline is constructed. Consequently, through-truck movements from plant to ultimate customers save on transloading costs, compared with use of rail for part of the shipment. Union Pacific recently won business to transport line pipe from {{

}}⁵⁹ Union Pacific also invested \$14 million in the Odessa Railport to provide shippers of pipe and other commodities direct rail access to the West Texas market and thereby compete with truck.⁶⁰ Union Pacific competes with BNSF to transport line pipe used in pipeline projects in the Western United States, both through rate competition and by investing to improve service by developing a network of pipe transloading sites that reach more than 75 percent of U.S. active oil and gas drilling locations.⁶¹ Union Pacific also competes with other rail options, for example {{

⁵⁵ Thrasher VS at 18.

⁵⁶ Thrasher VS at 17-18.

⁵⁷ Thrasher VS at 22.

⁵⁸ Thrasher VS at 18.

⁵⁹ Thrasher VS at 17.

⁶⁰ Thrasher VS at 17.

⁶¹ Thrasher VS at 20-21.

}} on movements of drill pipe and other products from {{
}}⁶²

- Other steel products: As Mr. Thrasher explains, mini-mills often supply specialty steel products in small batches that lend themselves to truck transportation.⁶³ And truck is competitive for long distances – in response to an attempt to raise rates, Union Pacific lost business to trucks on movements of steel from a mini-mill in {{
}}

- Imports: Union Pacific competes against imported finished steel products consumed in the United States; pipe for oil and gas exploration imported directly into Houston; and steel coils imported into Mexico for use in Mexican automobile manufacturing plants.⁶⁵ These are all forms of geographic or product competition.

VII. CONCLUSION

Both as a matter of economic efficiency generally and more specifically based on my review of competitive constraints on Union Pacific, I find no economic evidence that would support revisiting and potentially eliminating the exemptions on the subject commodities. Indeed, for each of the commodities I have discussed, Union Pacific faces a wide range of direct and indirect competition from other modes of transportation and from the ability of producing and consuming customers to source to and from alternative locations. These types of commodities are precisely those where economics tells us class exemption is most effective. For commodities such as these where neither producers nor consumers of the commodity have a strong preference over the identity of the shipper, competition for a given route is often indirect. This is precisely the type of competition that the Board has decided may be inefficient to analyze on a case by case basis and therefore needs to be handled with a commodity exemption.

The Board's limited resources would not be well spent by re-regulating commodities for which pricing of the vast majority of traffic is effectively constrained by competition. Competition and consumers would not be well served by depriving railroads of the assurance

⁶² Thrasher VS at 21.

⁶³ Thrasher VS at 18-19.

⁶⁴ Thrasher VS at 19.

⁶⁵ Thrasher VS at 22-23.

that they can invest and compete without fearing regulatory interference should they succeed in reducing costs, becoming more efficient and providing customers with more highly valued service.

VERIFICATION

I, Kevin M Murphy, declare under penalty of perjury that the foregoing statement is true and correct. Further, I certify that I am qualified and authorized to file this statement.

Executed on July 26, 2016.

/s/ Kevin M. Murphy