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222849

BEFORE THE
SURFACE TRANSPORTATION BOARD

STB EX PARTE 677 (SUB-No 1)
COMMON CARRIER OBLIGATION OF RAILROADS
TRANSPORTATION OF HAZARDOUS MATERIALS

TESTIMONY
OF
TERRA INDUSTRIES INC

Terra Industries Inc (Terra) is a leading international producer and marketer of nitrogen products. Terra was established in 1964 and began producing and marketing nitrogen products in 1966. Terra is a publicly traded U.S. company (NYSE symbol "TRA") with its corporate headquarters in Sioux City, Iowa. Terra is the largest U.S. producer of nitrogen fertilizers and is also a leading importer of nitrogen products to the U.S. The nitrogen products manufactured and imported by Terra are used industrially as a needed raw material and/or as a necessary reagent in their processes, but the primary use is as a fertilizer. Nitrogen fertilizers are essential to nourishing the crops that are used as feedstock in the production of biofuels, and most importantly, that feed a growing global population.



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We are pleased that the STB has recognized the importance of the railroads' common carrier obligation and is holding its second public hearing to hear testimony on the many issues that are involved with this obligation. Terra, as a major supplier of anhydrous ammonia (ammonia), is particularly concerned with the common carrier obligation as it applies to ammonia transportation by railroad. This issue not only affects Terra, but—if not properly resolved—will have devastating consequences on our food supply, energy supply, certain industrial production, clean air, and the overall economy.

I. Basic Uses for and Terra's Production and Sale of Anhydrous Ammonia

Ammonia is the simplest form of nitrogen fertilizer and the feedstock for the production of other nitrogen fertilizers, including urea, ammonium nitrate, and urea ammonium nitrate solutions (UAN). Ammonia is also a vital raw material to produce phosphate fertilizers. Ammonia is added to phosphate fertilizers to make their nutrients more readily available to the crops, resulting in a healthier, more efficient plant that is more tolerant of stress from severe weather conditions, and consequently, higher yields. The Fertilizer Institute's (TFI) testimony does a good job of identifying the benefits of ammonia in the production of grains for food, fiber, and biofuels, so it's probably not necessary for me to go into those details here.

Ammonia is also a vital raw material for many industrial applications and consumer products. Ammonia is used industrially as the raw material to produce blasting agents in the mining industry, as reagents to scrub emissions from coal and gas fired electrical generation plants and



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refineries, to produce certain pharmaceuticals, adhesives, feed supplements, personal care products, and nylon fibers. The facilities engaged in these industrial activities are commonly part of an integrated industrial complex and many are located inland, close to where the finished products are used.

Since 2002, ammonia has become vitally important to the environmental policy of our country. The Clean Air Act of 1990 mandated reduction of nitric oxide and sulfur dioxide emissions from electrical generation facilities, and ammonia is key to making those reductions possible. To effectively reduce nitric oxides from power plants, the ammonia molecule must be injected into the flue gas prior to its reaching a catalyst. When ammonia and nitric oxides are combined in the presence of a catalyst they react to form pure atmospheric nitrogen and pure water, with no harmful by-products. This use of ammonia continues to increase as environmental laws become more stringent and in many cases, force power generating facilities and refineries to consume ammonia year-round. *Please note that every ton of ammonia used in this manner removes nearly two tons of harmful nitric oxides from our atmosphere.*

Terra provides nitrogen products to all market sectors—agricultural and industrial. In 2007 Terra generated approximately 70% of its revenues from agriculture and the remaining 30% from industrial. Though Terra is primarily an agricultural company, our industrial business is vital to provide operational stability and reliable movement of our ammonia. In 2007 Terra produced approximately 3.1 million tons of anhydrous ammonia and imported another 0.8 million tons. Of this, 3.9 million tons of ammonia, Terra sold 1.9 million tons as merchant ammonia and



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upgraded the other two million tons into other nitrogen products for sale into agricultural and industrial markets. Over the last three years Terra has sold approximately 45% of its merchant ammonia into agricultural markets and 55% into industrial markets.

II. Terra and Rail Transportation of Anhydrous Ammonia

Terra operates six nitrogen manufacturing complexes in North America that were built between 1950 and 1980. All of these facilities were strategically built to be serviced by rail, as they all originate on Tier I railroads and each plant's upgrading capacity has evolved to meet the optimal demand of the regional markets they serve. The certainty of reasonably priced rail service was then and is now assured by the common carrier obligation. This being the case, only two of Terra's six facilities can upgrade 95% or more of the ammonia they produce. The other four facilities can upgrade a maximum of just 65% of their ammonia production. When these plants operate at capacity, there is simply no other viable outlet other than the rail system for getting this product into the marketplace. It may seem that a solution might be to produce less ammonia, but we can reduce production only to a rather small degree without incurring significant economic hardship. An ammonia plant becomes less energy efficient at lower operating rates and it's difficult to keep it operating at all at less than 70% of capacity. Just as railroads need velocity for efficient operations, these facilities need high operating rates to minimize fix costs and maximize energy efficiencies.



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From 2000 through 2005, 26 nitrogen production facilities permanently closed in the United States. These facilities closed either because they were inefficient or because they lacked *strategic distribution capabilities for their product markets*. Those that have survived have done so primarily because of the rail infrastructure that they were built upon. By 2007, the U.S. was receiving approximately 55% of its nitrogen needs for grain and industrial applications from production facilities in North America, while 45% was imported from offshore—from the same countries we depend on for our oil. If a ruling were to be put in place that would impede the common carrier obligation for TIH, most of the remaining facilities would be in jeopardy of closure due to the inability to move the ammonia to the marketplace.

Terra ships nitrogen products by all modes—barge, truck, rail, pipeline and ocean-going vessel. In 2007 Terra shipped over 3.7 million tons of nitrogen products by rail, over 45% of our total North American sales. Terra's total spend on rail in 2007 exceeded \$135 million. Of this total Terra shipped approximately 550,000 tons of ammonia by rail or 14% of our total rail shipments. Terra's total spend on ammonia was in excess of \$40 million or nearly 30% of the total dollars spent on rail. This ammonia rail spend is nearly double from 2004. Only two of Terra's facilities have access to barge and pipeline for ammonia transportation. Currently the pipelines are running near capacity, so Terra depends heavily on rail and truck transportation to distribute its nitrogen products. If rail ammonia was unavailable 3 of Terra's facilities would be in jeopardy of closure. This would reduce the North American produced nitrogen by over 1.2 million tons. Terra estimates that it would cost approximately \$1 billion to upgrade the ammonia that we currently ship by rail, not including the needed infrastructure in the marketplace to handle the



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output Let's remember, as a publicly traded company, any capital expenditures for capital must have an acceptable rate of return for approval. This would equate to 50% of Terra's total revenue in 2007 and much greater than the net income over the last 10 years

Many of the 3.7 million tons of product we ship by rail are not hazardous materials. However, anhydrous ammonia, the basic building block for all nitrogen fertilizers, is a toxic inhalation hazard (TIH) material. Due to this TIH classification, the future feasibility of transporting ammonia by rail has come into question. In particular, escalating rail freight rates, challenges to the railroad's common carrier obligation, liability concerns, railcar design and mandatory private track infrastructure upgrades are all issues that have arisen in recent years.

Please bear in mind that I'm speaking today solely on behalf of Terra, but there are several other U.S. companies in similar situations.

A. Importance of Rail Transportation of Anhydrous Ammonia to Terra's Agricultural Customers

In 2007 Terra serviced more than 125 agricultural customers—dealers who sell direct to thousands of farmers—with ammonia that was either shipped directly to the customer by rail or by truck through an ammonia terminal that can only be replenished by rail. The amount of ammonia supplied to these customers was approximately 2,500 shipments or 200,000 tons. This produced the equivalent of 320 million bushels of corn.



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The rail industry has suggested that farmers replace ammonia with a non-hazardous fertilizer material such as UAN or urea. It would have taken approximately 520,000 tons of UAN (5,200 shipments) or 360,000 tons of urea (3,600 shipments) to deliver the amount of nitrogen in this quantity of ammonia. In the current agricultural environment neither quantity of urea or UAN is easily available to make such a switch. Furthermore, it would take more than \$200 million of capital and 2.5 to 3.5 years to engineer, design and install more upgrading capacity at a current nitrogen facility to produce such quantities of UAN or urea. This does not include the additional infrastructure necessary to store and handle these materials. We must also remember that not all facilities have the capability to add such upgrades as they may have limited land, water, and/or rail expansion capabilities. Another very important fact is that it costs more to upgrade ammonia into other sources of nitrogen, causing an increase in nitrogen prices to our customers and eventually the end-users of the products—farmers.

If we were to attempt to ship this quantity of ammonia by truck instead of rail, it would equate to an increase of 10,000 truckloads with two-thirds of it being delivered in a three-week window in the spring and one-third of it in a three-week window in the fall. There simply are not enough trucks, other equipment, and personnel to make this possible.

B. Importance of Rail Transportation of Ammonia to Terra's Industrial Customers

In 2007 Terra serviced more than 60 industrial customers with ammonia that was shipped directly to their sites to be used as a chemical intermediate or as a reagent to clean nitric oxide.



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emissions. The average distance that Terra ships rail ammonia to its industrial customers is more than 700 miles. Most of these customers fall into three categories:

- **Mining Services**—Most of the facilities that produce blasting materials for mines are located near the mining areas that they serve. These facilities cannot substitute another form of nitrogen for ammonia. Terra sells more than 125,000 tons of rail ammonia to these customers. 130,000 tons produces enough blasting agents to mine more than 180 million tons of coal. These facilities are regulated and have very stringent safety policies for handling ammonia, as well as their upgraded products. These facilities have no alternative to ammonia.
- **Power Generation**—specifically, coal and natural gas fired generating facilities. These facilities require the use of ammonia as a reagent to mix with flue gas to remove nitric oxides (NOx). Beginning in 2001 many of our coal plants started building storage and handling facilities for ammonia, as it is the cheapest source of nitrogen and it is the ammonia molecule itself that is needed to create the reaction that scrubs harmful emissions. Other products such as urea or aqua ammonia (ammonia hydroxide) can be used, but they require much greater storage capacity and much greater volume due to their lower nitrogen content. These facilities have stringent safety policies and Terra has worked directly with them to provide help with training, handling, and storage. The cost associated with converting facility feed systems from ammonia to an alternative form of nitrogen product is in the 10's of millions of dollars per location in addition to the rail



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track infrastructure improvements and freight costs associated with handling three times the shipments of products in to these facilities

- **Other** Nylons, pharmaceuticals, resins, refineries—These customers are generally located in large industrial complexes inland where their upgraded products can be handed off for further upgrading into consumable products. These facilities were built around a rail receiving infrastructure and have no alternative to ammonia.

Terra has worked with other TFI members to craft a liability program that we have presented to Class I railroads for consideration. Terra is optimistic that this initial TFI proposal can develop into a business solution that meets the needs of both railroads and ammonia shippers. Over the last three years Terra has seen rail rates for ammonia shipments to some destinations increase by as much as 300% and has experienced permit and special train service requirements on at least one shortline. Terra has installed additional rail siding to avoid exorbitant demurrage charges as historically available leased storage track is no longer available for empty TIH car storage. Terra continues to retire pre-1989 cars and replace them with cars that meet current standards at a significant cost. In addition, our inability to predict the design and cost of the future DOT railcar continues to add uncertainty to the long-term costs for rail delivered ammonia. The anticipated costs associated with this new DOT railcar standard not only include more expensive railcars, but will also include extensive railroad and shipper infrastructure improvements necessary to accommodate 286,000-pound railcars versus the current 263,000 weight. Any plans for development of new facilities or expansions to existing facilities that would depend on ammonia



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as a raw material or reagent have a greater hurdle to overcome to generate the ROI necessary for new projects. By having an agreeable liability program and continuation of the common carrier obligation, Terra believes cost stability and ammonia supply chain predictability would be restored, enabling businesses to make sound decisions.

Over the last two years Terra has invested over \$5 million to upgrade and expand rail tracks to have adequate storage track for our TIH cars and other hazardous material cars, rather than using offsite railroad lease track. It had been standard practice to lease extra space from the railroads to store railcars that were temporarily not needed. The industry would pay an annual fee for such service. In 2006 many of the railroads eliminated storage for TIH railcars (empty or full) on their subleased track or instituted lease rates for TIH cars that made it prohibitive. Originally, Terra struggled with such measures, but through discussions with our carriers, it became clear that Terra was much more capable of managing this issue than the railroads were with our dedicated and experienced plant personnel. However, Terra is fortunate, as the company owned enough suitable land to manage the expansion of track. This is not the case for many of our customers, terminals, and possibly other nitrogen manufacturers.

III. Safety, Security, and Costs Associated with Ammonia Transportation

The AAR has stated, and Terra agrees, that rail transportation of hazardous materials—including anhydrous ammonia—is the safest mode for moving these materials. For Terra to convert its ammonia shipments from rail to truck would be a staggering undertaking, both logistically and economically. It would take over 27,500 truck shipments averaging a round trip distance of over



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1,300 miles We estimate that the additional cost associated with truck freight over our current cost would exceed \$70 million annually, more than Terra's net income for the years of 2000 through 2006 combined

Terra takes safety and our environment very seriously We have a dedicated EHS manager at each facility Their role is to document policies and procedures, stay up to date with all regulations, provide training for inspection, handling, and loading of hazardous materials, and to ensure that each person is provided with specialized protective equipment. These costs are incorporated into Terra's overall EHS program and a specific breakdown is difficult to define. Since 2006 Terra has used two full-time employees and one consultant to work with our industrial clients and leased terminal operators on safe handling and proper procedures for loading, unloading, and storing ammonia Terra, along with the many other members of TFI, was instrumental in writing the accepted practices of approved safe handling of TIH document

IV. STB's Jurisdiction Over Railroad Common Carrier and Safe Transportation of Hazardous Materials

Laws dating as far back as 1920 codified the common law obligations of railroads and this obligation has been reiterated over the years both by Congress and in the courts It has been determined that a railroad cannot deny service just because it is inconvenient or unprofitable The public need for rail transportation of hazardous materials defines the boundaries of the common carrier obligation Any attempt to narrow the common carrier obligation would be directly contrary to public safety



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Case law has also rejected safety arguments by the railroads as grounds to narrow the common carrier obligation. Public interest in transporting hazardous materials and the fact that rail transportation is the safest mode for transporting these materials have prevailed.

Terra believes that the STB has extremely limited authority to narrow the railroad common carrier obligation to haul hazardous materials and that the STB may not exercise its authority in a way that adversely impacts the safe transportation of hazardous materials.

In conclusion I want to thank you for the opportunity to testify on this extremely important matter. Terra understands the concerns of the railroads pertaining to the potential risk associated with transporting TIH by rail and has attempted to work with them to make our industry safer. Terra, however, believes that the STB cannot and should not take any action that would allow the railroads to continue to impede the movement of TIH by rail. Any proposal that shifts liability from carriers to shippers when the accident and release occurred only at the fault of the railroad is unacceptable. This would be equal to the FAA releasing airlines from liability from a crash due to maintenance or equipment issues. Would you feel safer flying an airplane under those conditions? I doubt any of us would. I believe that the economic incentives of our current fault-based tort system encourages greater safety measures and that tinkering with that system by



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imposing liability limits jeopardizes overall safety. Every business in the nitrogen supply chain, including transporters, has risks, but as a rule they do not have insurance for a total catastrophic event.

Although the STB must not take any action to narrow or eliminate the common carrier obligation to haul hazardous materials, Terra believes that the STB can facilitate a negotiated business or political solution to railroad liability concerns that will not jeopardize public safety.

Sincerely,

A handwritten signature in black ink that reads "Joseph D. Gresler". The signature is written in a cursive, flowing style.

Joseph D. Gresler
Sr. Vice President, Commercial Operations
Terra Industries Inc