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Smart Strategies For Uncertain Times

Chemical shippers – and the transportation and logistics providers that serve them – have been on a wild ride during the past few years.

The 2009 recession sparked precipitous drops in shipment volumes. Then, when the economy began to pick up in 2010, volume surged again, wreaking havoc on capacity availability. So far in 2011, the state of the market seems to be a state of confusion. This one-two punch of volatility and uncertainty has created some interesting business challenges.

“The industry just experienced a few very unusual years,” says Glenn Riggs, senior vice president, North American logistics for Odyssey Logistics, a Danbury, Conn.-based asset-neutral multimodal chemical logistics provider.

“2009 was an incredibly bad year, and the volumes for chemicals fell off,” he explains. “In 2010, volumes came back out of nowhere – it may have just been inventory rebalancing – but trucking to support the skyrocketing demand wasn’t there. The industry quickly faced a capacity issue and pricing soared.”

“At the height of the recession,

companies were managing inventory very closely out of fear. None of our chemical shippers were able to give us a forecast; they had no clue what demand was going to be,” recalls Ed Hildebrandt, senior vice president of operations for ChemLogix, a leading provider of chemical industry transportation management services and technology headquartered in Blue Bell, Pa.

Today, Riggs notes, chemical

transportation companies are not sure what approach to take. Should they keep hiring drivers and adding assets to their fleets to keep up with current demand? Or should they be cautious in case the economy tanks once more, dragging chemical shipments downhill yet again?

“Companies are hedging and behaving cautiously,” Riggs says. “The industry is trying to find itself, determine what the future looks like, and set its priorities.”

Some chemical service providers are taking a glass-half-full approach.

“In late 2009, volumes returned to pre-recession levels,” says Jeff O’Connor, president and CEO of Morris, Ill.-based A&R Logistics



Chemical tank car load volumes dropped off during the economic downturn of the past few years, but have recently bounced back strong.

Inc., which comprises three operating entities: A&R Transport, A&R Packaging & Distribution, and A&R Global Logistics. The company is the country's leading service provider within the dry bulk resin plastic industry.

continued to stay strong. I see that as a positive economic sign.

"Also, chemical producers are beginning to open new plants within the United States – something that would not have happened two years ago," O'Connor says.

(ACC) also show reason for cautious optimism. Output of chemical products within the \$674-billion domestic chemical industry rose strongly during April 2011 (the most recent month for which numbers are available). Gains were made in production of plastic resins, synthetic rubber, man-made fibers, industrial gases, pharmaceuticals, consumer products, and adhesives and other specialties. Compared to April 2010, total chemical production in all U.S. regions was up 2.1 percent, the ACC notes.

Chemical producers are opening new U.S. plants, and total chemical production is up compared with 2010 – both positive economic signs.

"A&R Logistics was in the fortunate position at that time to acquire more tractors and trailers so we could support our customers' needs and meet their increased demand for capacity," he says. "The market continued recovering through late 2010, then started to level out to pre-recession volumes, but has

Dow Chemical Company, for example, recently announced that it will build new factories in Texas and on the Gulf Coast to increase ethylene and propylene production. The facilities are expected to open in 2015 and 2017, respectively.

The most recent numbers from the American Chemistry Council

If chemical producers return to business as usual, the chemical logistics industry can do the same. But a number of issues and challenges still have the industry on edge.

The Capacity Challenge

Securing over-the-road transportation capacity, for example, is a major concern for chemical



After establishing itself as a leading provider in the bulk plastic transportation market, A&R Logistics has expanded to serve shippers of dry, flowable, and liquid commodities – including chemicals – domestically and internationally.

companies. During the recession, many trucking companies serving the chemicals industry shed trucks and drivers to flex with the decreased demand and reduce operating costs, and they have not yet replenished those assets. Carriers may be hesitant to add trucks and drivers because of economic uncertainty, and others who want to ramp up may not have access to the capital to do so. The result? A tightening of capacity that has increased transportation costs and shifted the balance of power.

“During the recession, shippers put a lot of pricing pressure on carriers, but the dynamics of the market have changed,” says O’Connor. “Shippers recognize this and are working with carriers to ensure capacity going forward.

“From pricing consideration and minimum volume commitments to increased operational flexibility, shippers are taking proactive steps to ensure they are a customer of choice,” he explains.

Federal regulations may further aggravate the capacity crunch. In particular, many shippers and carriers are concerned about the effects of the Federal Motor Carrier Safety Administration’s (FMCSA) Comprehensive Safety Analysis (CSA) 2010, a program that alters how the federal government rates carriers and drivers on safety. While drivers’ safety records were previously wiped clean whenever they began a new job, under CSA, those records travel with the drivers – and can impact the safety ratings of the carriers they work for.

“CSA 2010 extends safety compliance and accountability to the driver level, which is important,” says O’Connor. “This is a great program, but it’s a real game-changer for our industry.

“Previously, if drivers were terminated because of safety violations, they could easily get a job with another trucking company that same

day. Now, with CSA 2010 and the new level of visibility, drivers with poor safety records will have a hard time getting hired.”

That could mean a driver shortage – experts estimate CSA 2010 could eliminate up to eight percent of the driver workforce – which would increase the tightening of capacity.

“At a time when we need more capacity – and the critical path to capacity is hiring more drivers – carriers will be wary of hiring any driver who will hurt safety ratings,” Riggs explains. “Also, some drivers who don’t want to be measured under

commercial truck drivers to complete all driving within a 14-hour workday, and to complete all on-duty work-related activities within 13 hours to allow for at least a one-hour break. It also leaves open for comment whether drivers should be limited to 10 or 11 hours of daily driving time, although FMCSA currently favors a 10-hour limit,” according to an FMCSA press release.

“The fear that these new HOS limits will take some drive time away is causing the market to hedge in case it will cause a capacity problem,” says Riggs.



Optimodal, a wholly-owned affiliate of Odyssey Logistics & Technology, specializes in the door-to-door, multi-modal transportation of ISO tank containers and related services, throughout North America, focusing on the specialty chemical and process industries.

these new rules are leaving the industry. So while CSA 2010 is being implemented in the name of safety, it is causing some capacity hedging.”

In addition, updates to the FMCSA’s Hours-of-Service (HOS) regulations – which limit when and how long commercial motor vehicle drivers may drive – are giving pause to some chemical transportation providers.

“The new proposal, which will be finalized in July 2011, would require

Working Through Rising Costs: Mode Selection

This lack of capacity has meant an increase in transportation rates – a concern for chemical shippers who are also dealing with the consequences of surging oil prices.

“Right now, chemical shippers are reeling from the double whammy of increased carrier costs driven by a lack of capacity, and the huge increase in fuel surcharges,” says ChemLogix’s Hildebrandt. “They are



Bulk transport carriers are still not sure what effect the FMCSA's Hours-of-Service rules and the CSA 2010 safety program will have on operations and capacity.

scrambling to reduce their costs."

For many chemical providers, reducing costs may mean switching to different modes of transportation. With crude oil prices hovering at the \$100-per-barrel mark, intermodal and rail transportation have been gaining favor among chemical shippers.

"Our intermodal business has grown 50 percent in the past 24 months," says Hildebrandt. "As oil prices go up, companies look at alternate means of shipping to reduce costs. Using intermodal, shippers can get their freight covered at a lower cost."

Rail and ocean options are also helping chemical shippers reduce costs. CG Railway, for example, offers a cost-effective alternate transportation mode for chemical

producers shipping goods to and from Mexico. The shortline railroad, a subsidiary of International Shipholding Corporation, provides a rail-ferry service that transports railcars to and from Mobile, Ala., and the chemical industry-heavy port city of Coatzacoalcos in Mexico.

The service provides cost-effective solutions in several ways. "Our route is 900 miles by sea, as opposed to more than 1,400 miles from the eastern United States to southern Mexico via the traditional Mexican-U.S. border crossings," says George Nahas, vice president of sales and marketing for CG Railway. "Also, the frequency and consistency of our service allows companies to better manage inventory levels and reduce costs."

In addition, the quick turnaround

time CG Railway's service provides allows customers to reduce the amount of leased equipment they need to expend capital on.

"The quicker we can turn our customers' private equipment around, the fewer railcars they require to support a particular business," Nahas says. "Also, while the railcars are on our vessels, they are stationary, so there is less wear and tear on the equipment."

Working Through Rising Costs: Technology

For other chemical shippers, technology is the key to reducing transportation and logistics costs. Transportation management systems (TMS), in particular, can provide chemical companies the visibility they need to manage logistics

The Chemical Supply Chain: Putting Safety First

Safety is serious business for the chemicals industry. Because of the nature of its products, the industry needs to be more vigilant than most industries in making sure goods are not spilled or tampered with during transit. Over the past decade, various legislations, actions, and initiatives have helped to improve the industry's safety and security practices. But chemical producers, carriers, and logistics companies are not letting up when it comes to putting safety first.

"Safety and security standards are tightened year after year in the chemical industry," says Glenn Riggs, senior vice president, North American logistics for Odyssey Logistics, a Danbury, Conn.-based multimodal chemical logistics provider. But Riggs feels there is still a gap between government and industry when it comes to communicating about security threats.

"If Homeland Security, the FBI, or the Transportation Security Administration see a threat, that information is not usually relayed to the trucking companies. There isn't a great deal of communication," he says.

Odyssey has been working to rectify that. In April 2011, the company held its annual industry conference with chemical transportation carriers and adopted safety as the meeting's theme, inviting Intelligent Transportation Society of America and Homeland Security officials to attend.

Chemical shippers have to "position themselves to have the right systems and processes in place to stay ahead of the curve on new security procedures," Riggs notes. "Also, when selecting logistics and transportation providers, chemical companies must screen safety records and only select the best of the market."

Chemical shippers may also consider using alternate transport modes and routes because of safety concerns, says George Nahas, vice president of sales and marketing for CG Railway, which provides a rail-ferry service that transports railcars for chemical producers shipping goods between Mobile, Ala., and Coatzacoalcos, Mexico. This alternative to the traditional cross-border land route to Mexico provides a safety benefit as shippers' products are "secure on an ocean vessel, instead of rolling through metro areas, for a large portion of the supply chain route," Nahas explains.

The advent of the Federal Motor Carrier Safety Administration's (FMCSA) Comprehensive Safety Analysis (CSA) 2010 program

has pushed the safety stakes higher for transportation providers serving the chemicals industry. CSA 2010 is a major federal safety compliance and enforcement initiative aimed at reducing commercial truck crashes, injuries, and fatalities. It increases motor freight carriers' accountability and responsibility through greater measurement, intervention, safety evaluation, and information technology.

"Shippers have always measured carriers based on safety levels, but now, with CSA 2010, they have a level of real-time visibility to carrier safety information that they've never had before. As soon as shippers see a change in one of their carrier's safety measurements, they immediately ask for an explanation," says Jeff O'Connor, president and CEO of Morris, Ill.-based A&R Logistics Inc., whose division, A&R Transport, won the 2010 National Tank Truck Carriers' Competitive Safety Contest.

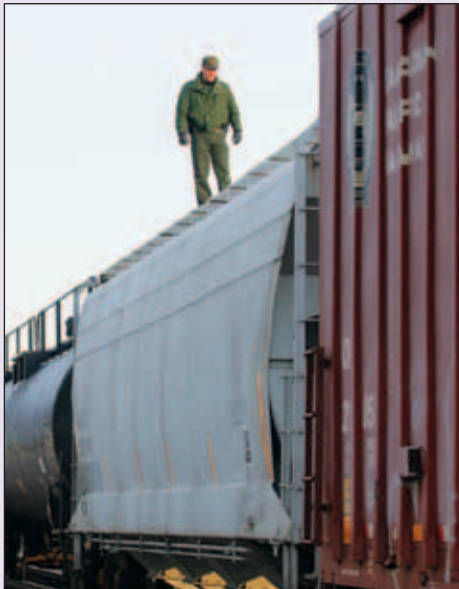
"Safety is of paramount importance to us and to our chemical shippers," O'Connor adds. A&R utilizes a methodical process of hiring and training truck drivers to ensure maximum safety. The company also takes time to engage drivers in its culture of safety, bringing them into the A&R corporate offices during the initial training process to have lunch with senior executives and learn about the company's commitment to safety.

"Drivers need to understand that safety comes first for us—for our clients and for our employees. We want them to know they need to keep themselves safe and communicate any unsafe conditions they see when making pick-ups or deliveries so we can address it with our shippers," O'Connor explains.

A&R has also been proactive about installing electronic on-board recorders in all its vehicles. (An FMCSA-proposed rule that would require electronic on-board recorders for all interstate commercial truck and bus companies is currently pending.) The devices track the number of hours a driver has been on duty, serving as an electronic version of drivers' traditional paper logs.

"The technology offers some great safety benefits and protection for our drivers," O'Connor says. "These devices ultimately reduce their risk and ours."

"Attention to safety isn't just something shippers and the government demand from our industry," he adds. "It's fundamentally the right thing to do."



Security threats and safety standards are of increasing concern to chemical shippers and service providers.

with an eye toward efficiency and cost-effectiveness.

“A TMS provides the granular detail that helps chemical shippers make decisions on how to man-

SAP, the ERP of choice for many chemical shippers. The company also offers network design using the IBM iLog toolset. For ChemLogix, using a trusted partner such as IBM, whose

translates to chemical companies,” Hildebrandt says.

In many cases, chemical companies lag behind industries such as consumer product goods in terms of technology adoption. So for Hildebrandt, who says his firm often “drags chemical customers into the use of technology,” a solution like the one ChemLogix offers, which is utilized by other industries, is already ahead of the game.

“If our TMS were designed purely for the chemical industry, it would need to play catch-up with other solutions,” he explains. “Instead, we brainstorm with IBM on how and where other verticals are using technology. Then we plan with our chemical companies so we can give

More than ever, chemical shippers rely on 3PLs to help steer them through everyday challenges such as rising costs and new technology implementations.

age the supply chain in the face of rising costs,” says Hildebrandt of ChemLogix.

For its chemical customers seeking a TMS, ChemLogix offers an IBM solution that easily integrates with

experience crosses many industry verticals, made more sense than developing a chemical-focused specialized application in-house.

“The capability already existed in IBM’s solution, and it easily



As oil prices continue to rise, many chemical providers and shippers are turning to alternate transportation methods, such as rail and intermodal, to help reduce costs.

them a vision of where they should be down the road.”

Some chemical shippers, however, favor a proprietary, specialized system such as the one offered by Odyssey Logistics. The company’s supply chain software package, *Odyssey Global Logistics Platform*, provides global visibility into chemical shippers’ supply chain activities, and supports all transport modes and shipping scenarios typically employed by global chemical or process manufacturers.

“Our state-of-the-art systems offer deep capability in key modes such as tank truck, and can help properly manage hazmat transportation to help ensure compliance and safe transport,” Riggs explains.

“We continually make significant investments in our technology, focusing on the logistics needs of chemical and process manufacturers,” he adds, noting that the solution helps chemical producers manage everything from cargo planning to tendering, shipment visibility and configurable event management, freight audit and payment, and management reporting. Odyssey’s system also offers seamless integration, with a single interface to all carriers and other key parties in a chemical producer’s supply chain, such as carrier portals and U.S. Customs and Border Protection. These aspects have helped Odyssey meet customers’ increasing demand for supply chain visibility.

The industry has lagged a bit when it comes to communicating electronically up and down the supply chain, but chemical shippers are starting to realize the benefits of automation and visibility.

“The marketplace is beginning to demand services such as real-time freight tracking and tracing,” says Riggs. “In the past year, we’ve seen a huge emphasis from our client base.” The data is critical for chemical shippers looking to analyze and quantify factors such as the on-time

performance of their carriers, he adds.

Some challenges remain in achieving those capabilities, however. “Some carriers serving the chemical industry do not have the infrastructure necessary to provide this type of electronic information and communication,” Riggs explains. “Bulk and heavy freight carriers have varying degrees of sophistication in their networks, and to have true visibility throughout an entire shipping network, all carriers involved will need those capabilities.”

3PLs to the Rescue

All the issues and challenges swirling around the chemical industry have put the need for knowledgeable logistics partners at a premium. Chemical shippers depend on their third-party logistics providers (3PLs) – perhaps more now than ever – to help steer them through the uncertainty, rising costs, and technological challenges they face while conducting business every day.

“With the downturn of 2009 and subsequent recovery underway, many companies are looking to their 3PLs for the technology, resources, expertise, and capacity to efficiently manage the increased flow of goods and material within their supply chains,” notes O’Connor of A&R Logistics.

Thus, even in uncertain economic times, 3PLs serving the chemicals sector are seeing an uptick in the number of companies that are outsourcing supply chain management. “We’ve seen significant growth in that area for a variety of reasons,” says Hildebrandt, who reports that ChemLogix has experienced compound annual growth of 30 percent in the past five years.

“First, companies are looking to vary their costs,” he explains. “They are taking fixed costs, such as running a logistics department, and outsourcing them. This makes them variable costs, because volume fluctuations affect how much they pay

the service provider.

“Another big draw for outsourcing to a 3PL right now is the fact that chemical shippers are having difficulty getting their freight covered,” he adds. “So they come to 3PLs for assistance. We have more leverage with carriers than a single shipper does; and we have the market knowledge to determine which carriers have capacity, and in which lanes.”

Third-party logistics providers can also help chemical shippers examine their supply chains and find opportunities for cost savings that may be overlooked. One example is reducing expedited shipping costs. With the inventory issues that chemical producers recently experienced, many have reverted to overusing expedited shipping to deliver orders on-time for their customers, Hildebrandt reports.

“We help clients whose expedited shipments have increased exponentially work backward from the shipment timeframe and engage in better planning,” he explains. “We advise them to consolidate more – converting LTL into truckload, for example – and to use other transportation modes such as intermodal to better manage costs and inventory flow.”

But while the tough climate of today’s chemical market has created good opportunities for chemical logistics providers, it hasn’t been smooth sailing.

“We have never had to provide this level of flexibility to drive value for clients,” Hildebrandt says, noting that ChemLogix’s wide range of services has helped it be flexible in delivering what chemical shippers need as the market fluxes and changes.

Odyssey’s Riggs concurs. “We’ve had to speed up our processes to stay in tune with daily and weekly chemical market trends,” he says. “We’ve learned to be agile and fast in adjusting our supply chain to stay ahead of trends and protect our customer base.”

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