



FALVEY INSURANCE GROUP

Falvey Foresight

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ProTecht Wind Project

Using Our Systems for Analysis

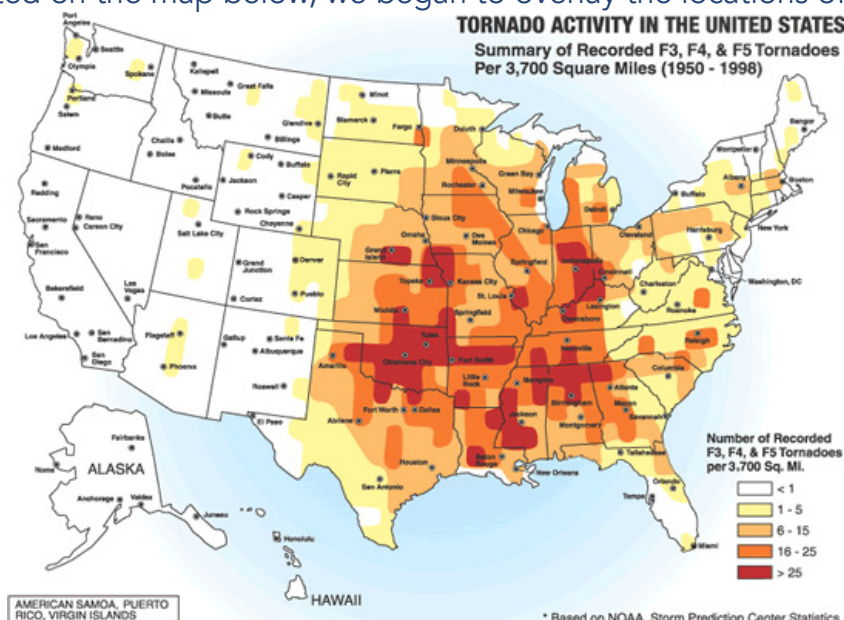


One of our largest loss prevention projects in 2020 was our aptly named, “Wind Project” in which we set out to utilize our proprietary system data in a real-world, and somewhat complex, application with multiple moving parts. Our vast network of assureds with scheduled locations throughout the United States and across the globe makes identifying all insured locations within specific target zones challenging. It has been a largely manual exercise in the past, but with our new capabilities provided by utilizing several new internal and external system platforms, we set out to highlight and identify locations within desired parameters in a more fluid, visual, and comprehensive way.

A top request from our underwriters was a more complete view of locations, limits, and risks.

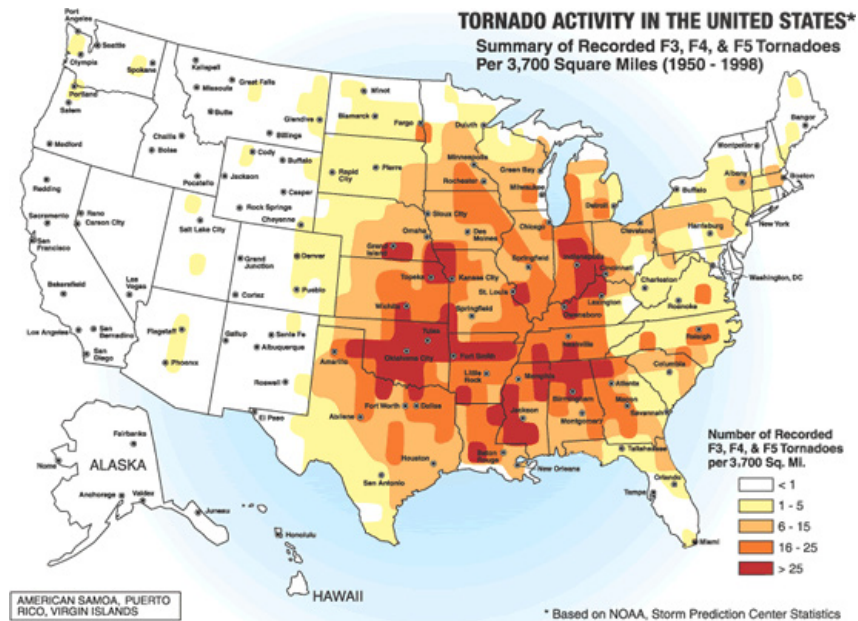
For our risk control and loss prevention purposes, this wind risk location project would be one of our most advanced and wide-reaching integrations of system data for a specific application yet.

We identified the separate risks banded wind zones in the US according to the information available from FEMA. Taking into account wind Zone IV, wind Zone III, and the Hurricane-Prone Region, as represented on the map below, we began to overlay the locations of scheduled facilities



ProTecht Wind Project

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in our system and decipher which category of wind risk they belonged to.

To gauge what level of detailed information we had on file for these facilities, we conducted a manual file search of each and every listed location that we insured within the three elevated wind risk zones. Notes were made on the level of detail and preparedness of each facility including security/response plans in place and COPE information.

Once the information was gathered and completed, we presented customized

reports to each Falvey underwriter on their book of business, potential exposure to wind risk events, and risk mitigation strategies to implement accordingly.

Through the utilization of our powerful analytics tools, and Falvey's dedication to serving as a proactive value-added loss prevention resource, we were able to provide this interactive ProTecht Wind Project for use of our underwriters and assureds.

For one particular assured in California, we worked directly with their broker and risk management team to develop a disaster preparedness plan that included contracting with a local vendor to supply emergency generators in the event of a power outage to their facility used to store high value, temperature-sensitive inventory. We researched several local vendors on behalf of the assured to assess their ability to provide portable generators on scene in the event of an emergency. Upon the assured's selection of the vendor, we worked with them to draft a guarantee contract with the vendor that generators would be made available to the assured in the event of a wide-spread power outage in the area.

Each solution is tailored to the problem and understanding the risk before an incident is key to Falvey's philosophy of providing solutions that make a difference.

Preparedness general guidelines:

- **Identify** all facilities that may be in danger of increased exposure to natural disasters.
- **Understand** the risk facing each facility based on its location, condition, and operations.
- **Establish** a comprehensive emergency response preparedness plan for any possible event.
- **Practice** running preparedness drills to familiarize staff and ensure effectiveness.
- **Update** your procedures often based on practice results feedback and new or changing information.



Potential Loss Situation for the M/V ONE APUS



On November 30, 2020, the containership M/V ONE APUS suffered a collapse of the container stacks onboard resulting in what is potentially one of the largest losses in container shipping operations outside of any total loss. Being such a recent and ongoing development, information continues to flood in, but the carrier has at this point confirmed that 1,816 containers have been lost overboard including 64 containers declared as dangerous goods shipments.

The 14,000 TEU vessel was on route from Yantian, China to Long Beach, California when it hit inclement weather. This was reported as wind force 4 on the Beaufort Wind Scale which typically is classified as 13 – 18 mph winds and 15-20 foot swells, however weather maps around the time of the incident indicate seas of up to 50 feet.

After the collapse of the stack due to rough seas, the Japanese flagged vessel abandoned its route and proceeded to sail to the nearby safe port of Kobe, Japan. The vessel is currently berthed at Kobe and undergoing operations to remove the damaged and collapsed containers. Because the container stacks have toppled, conventional unloading methods using gantry cranes are not possible for all the cargo, and other, slower and more difficult methods must be utilized. It is expected that the unloading process may take more than one month for all the containers to be carefully handled. Once the damaged containers are unloaded, they will be placed in the container yard at the port for inspection. Eric Newman, Senior Vice President of ProTecht Loss Prevention, says "We expect there will be a mix of outcomes – badly damaged containers/cargo may be disposed of locally; it may be possible to achieve some value by salvage sales; some cargo may be trans-loaded into sound containers and forwarded to destination, some containers may be undamaged and be suitable for on-carriage 'as is'."

A spokesperson for W.K. Webster had this to say about the extent of observable physical damage to the containers onboard: "It can be seen that there are 22 bays on deck of which 16 have collapsed to both port and starboard, leaving only 6 intact / partially intact. With 20 rows of containers per bay and with stack heights of between 6 and 8 containers, we anticipate that approximately 2,250 containers have been lost overboard or damaged. It will also be noted that the vast majority appear to be 40-foot units and therefore equivalent to approximately 4,500 TEU."

What comes next will be a process of claims, surveys, and communications between involved parties. No cargo was intentionally sacrificed in order to save the ship, so in the case of general average

Potential Loss Situation for the M/V ONE APUS *continued*

(GA), containers lost overboard should not be included in GA payout. This will spare insured parties the lengthy process of GA claims and allow assureds to receive the appropriate claims settlements as fast as possible and be made whole so as to resume business. No GA claim has been made by the vessel as of the time of writing, however costs associated with a GA claim would include the following: deviation costs to Japan, fuel, wages, provisions, port of refuge costs, discharging costs, storage costs and some on-forwarding costs.

As of January 8, 2021, a total of 232 containers have been discharged from the vessel and staged ashore. As of this writing, it is considered likely that under deck containers will not be off-loaded from the vessel at all, and on-deck containers will require several more weeks until they can be discharged.

This recent incident involving the ONE APUS highlights the increased hazards involved with shipping cargo via containerized ocean freight, especially with the recent increase in the size and capacity of these cellular container vessels, referred to as ultra-large container vessels (ULCVs).

The industry has seen the size and capacity of these ULCVs continue grow over the past 10 years which has resulted in greater accumulation of risk and exposure on a per vessel basis. The incident involving the ONE APUS occurred nearly one month after another ONE vessel (ONE Aquila), which is the same size and capacity as the ONE Apus, lost more than 100 containers overboard during heavy weather while traveling the same route. Other notable incidents involving ULCVs losing containers overboard during heavy weather include the MSC ZOE which lost ~350 overboard during heavy weather while navigating in the North Sea in January 2019. Just last week, the vessel EVER Liberal lost ~36 containers overboard with another ~21 damaged on deck while encountering heavy weather off the coast of Japan.

These incidents continue to draw attention to the lashing and securing methods utilized onboard these ULCVs and what other loss prevention measures can be taken to mitigate risk to these containerized cargoes when heavy weather is encountered at sea. One issue that will be scrutinized closely during the ONE APUS investigation is whether the vessel strictly followed the vessel's cargo securing manual (CSM) which provides guidance on the proper stowage and securing of cargo. Under the 1974 SOLAS Convention, cargo units and cargo transport units (e.g containers) are required to be loaded, stowed and secured throughout the voyage in accordance with a CSM approved by the Flag State Administration and drawn up to a standard at least equivalent to the guidelines developed by the International Maritime Organization (IMO).



Supply Chain Security

Mexico



ProTect Risk Solutions works very closely with several industry organizations that track cargo theft trends and statistics. One such organization is the British Standards Institute (BSI), who report that cargo theft was on the rise in 2019 and in recent years. That came to a dramatic halt at the beginning of 2020 with the coronavirus pandemic and all of its impacts on the global supply chain, but with a recovering market, industry experts warn of a resurgence in cargo theft and a possible targeting of COVID-19 vaccines and treatments.

The Transported Asset Protection Association (TAPA), another organization very familiar to Falvey, has warned that transportation related crimes have already begun to rebound, and we will likely see a spike in numbers as the industry returns to more normal operations.

The fallout from the coronavirus uncovered many significant issues and a lack of preparedness in the supply chain across countries and industries. This has left organized crime, industry insiders, and opportunists looking for ways to take advantage.

Organized and highly specialized groups of sophisticated cargo criminals pose a huge threat throughout many parts of the world. Criminal cargo theft gangs in Mexico for example take advantage of the current situation. The goods that they can obtain through illegal means are lucrative and fairly low risk targets. The threat of violent crimes, hijackings, theft from unsecured lots, and supply chain corruption are all major areas of concern for operations in the country.

There have been two recent high-profile incidents involving theft of pharmaceuticals from hospitals and pharmacies that are not necessarily indicative of increased frequency of theft but do illustrate the scale and nature of the threat.

Mexico has seen widespread theft of pharmaceuticals from a range of sources, including hospitals, pharmacies, and even supply chains to some extent. The trend is perhaps most prominently highlighted by two recent theft incidents. One involves thieves breaking into a warehouse and stealing about 38,000 doses of medications used to treat cancer. The other involves theft of over 10,000 flu vaccines from a truck in transit. These and other high-profile thefts have led to public concerns over shortages of medications and specifically COVID-19 vaccine distribution, despite the government's reiterations that this is not an issue.

Pharmaceutical theft in Mexico has on average represented about 4% of all thefts in the country according to the research from the BSI, but with a highly anticipated and valuable commodity such as the COVID-19 vaccine being distributed, we could see an increase in targeted and aggressive attacks on the supply chain.

In the large 38,000 dose theft specifically, 10-15 armed men arrived at a warehouse in a district of Mexico City, forcibly restrained and locked up warehouse workers, and stole the cancer treatments designed specifically for children.

These treatments were specifically targeted because Mexico is currently in a widespread shortage of expensive high-end drugs to treat chronic diseases, and the cartels and criminal organizations see this as an opportunity to steal the drugs and resell them on the black market netting millions in profits and further strengthening their criminal organizations.

As a result of this current environment, we recommend the highest levels of security planning and risk mitigation procedures when operating in Mexico, particularly in high-risk areas, and with targeted commodities. The ProTecht Loss Prevention department offers consultative services to guide our assureds through industry recognized best practices and customized transportation solutions. Some recommended standard security countermeasures are route planning risk assessments, recommended toll roads, daylight hours travel, caravan transport, vetting of logistic service providers, C-TPAT certified carriers, Free and Secure Trade (FAST) certified drivers, and multi-tiered security protocols including GPS active monitoring among other recommended actions.

As a practical example, we recently worked with two of our assureds that manufacture and distribute theft-attractive goods in and out of Mexico to review their supply chain programs and assist with implementing appropriate security countermeasures to mitigate risk to their products during transit. These engagements included conducting shipping lane risk assessments using the most up-to-date industry trends and statistics related to cargo theft within Mexico. As a result of the risk assessments conducted, we were able to assist each assured to implement varying layers of security appropriate for the assessed threat level for their respective shipping programs.

One assured was moving their goods into Mexico City via both road and rail from the port of Lazaro Cardenas while the other assured was transporting goods, via road, from Guadalajara to the U.S. through the Laredo, TX border crossing. While the risk level along each of these shipping lanes is rated as "severe", each required different countermeasures to effectively mitigate risk of theft (particularly hijacking) during transit. In each case, we were able to connect the assured with supply chain security service providers that offer specialized services appropriate for the assessed threat level along each route, including control tower GPS monitoring, truck telematic integration, specially-trained security escorts (armed and unarmed) and armored vehicles. In addition, we worked with our assureds to implement appropriate escalation procedures, data security programs, security awareness training and in-transit contingency action plans. Not only should assureds strictly adhere to the list of best practices, but a tailored approach from a knowledgeable and experienced source must be taken for proper precautions.



Cold-Chain Distribution of the COVID-19 Vaccine



2020 has been a year that has both challenged and put a spotlight on the global supply chain. Many products from prescription medications to food to consumer goods have seen disrupted service, however the biggest challenge yet is still to come in the form of wide-spread distribution of the multiple COVID-19 vaccines throughout the world. In our bi-weekly Loss Prevention Bulletins which are distributed internally within Falvey, we have been discussing topics on vaccine development and distribution since the early days of quarantine. There are important issues at play – to name a few: countries directly contracting drug manufacturers for anticipated future supply of any potential treatment; manufacture of supporting goods such as glass vials, rubber stoppers, and syringes needed to administer the drugs; cargo carrying capacity and distribution models to reach potentially billions of patients; and drug component material sourcing and the international disputes around the issue.

In recent months, with several promising vaccines in reach, the discussion has shifted increasingly from vaccine development to real-world vaccine distribution. Logistics operators have been in a race to build and procure the necessary equipment for future anticipated demands on their capacity with several large logistics companies building giant cold-storage facilities or “freezer farms” in preparation of being asked to handle and transport millions of doses of the vaccine around the world at ultra-low temperatures of -80C to -20C.

Both the Pfizer and Moderna vaccines which have been the first FDA approved and scheduled for administration to the public are within that range requiring -70C and -20C transportation, respectively. Although this has been the prevailing narrative of vaccine development and required cold-chain transportation, some industry experts have begun to speak out for alternative temperature requirements that will not pose the same burden on logistics providers and medical facilities to build networks around the world for ultra-cold freezer storage.

“Anyone who knows just a little bit about the pharmaceutical industry understands that the hastily communicated temperatures between -20C and -80C are precautions that companies must take until they have valid data on the storage life of their products also at higher temperatures,” stated Wolfgang Albeck, CEO of German pharma logistics specialist Trans-o-flex in a recent article.

His statements made back in October seem to have played out with reports from the end of

Cold-Chain Distribution of the COVID-19 Vaccine *continued*

December of nearly 2 million doses of an unconfirmed COVID-19 vaccine being transported from Zurich, Switzerland to Sao Paulo, Brazil at 2C to 8C. The shipment was carried in 10 Envirotainer RAP e-2 containers via Swiss International Air Lines at normal refrigerated temperatures. It is speculated that was the CanSino Biologics vaccine developed in China, but there are other vaccines in development which meet the same temperature handling requirements.

This is of extreme importance because of the added strains on the supply chain ultra-low temperature shipments pose. This is particularly the case in less developed countries. Because of the multi-phase treatment nature of the majority of vaccines in development currently, it is theorized that 10 billion doses will need to be delivered globally. A study by DHL and McKinsey estimates that only 2.5 billion people in approximately 25 developed countries would have access to the vaccine at such controlled temperatures with the existing cold-chain infrastructure. This poses significant risk to global stability and effective inoculation against the disease.

The US government has already contracted the purchase of 100 million doses of Pfizer's novel mRNA vaccine with an option for 500 million additional doses. Pfizer will manage the distribution of its vaccine on its own rather than through the U.S. government's designated coordinator. McKesson has been tasked as the central distributor for COVID vaccines and related supplies, and most companies plan on delivering their goods to McKesson distribution centers where they will arrange the delivery to the designated administration points. Pfizer however is utilizing a "just-in-time" distribution plan where they will ship treatments directly using their designated transportation providers. This will add another element to the supply chain, and possibly more complexity as just-in-time delivery can be more susceptible to disruption in operations, but also would take less freezer space by reducing the stock on hand at the end point of administration which is predicted to be one of the limiting factors in vaccine distribution.

As we are still in the very early stages of vaccine distribution with multiple treatments all having their own intricacies, it is imperative that companies are diligent and proactive to manage the distribution of these highly valuable and sought after vaccines. We suggest that manufacturers take a lead role in the management of the process by conducting risk-based assessments of their supply chains and work with qualified logistics and transportation service providers that are able to provide services aligned with good distribution practices (GDP guidelines), as well as security procedures and protocols that are aligned with recognized industry best practices.

We have worked closely with our industry contacts that are intimately involved with Operation Warp Speed, which is the public-private partnership, initiated by the U.S. government to facilitate and accelerate the development, manufacturing, and distribution of COVID-19 vaccines, therapeutics, and diagnostics. Through these relationships, we have been able to assist our assureds involved in the manufacturing and distribution of the COVID-19 vaccine, therapies, and related supplies to build robust supply chain programs to ensure uninterrupted and safe delivery to their customers and end users.

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