Presentation before Stockton, CA City Council Concerning the Rail Industry

6/10/14
I recently moved to Stockton from Ohio to retire. But, my background makes this retirement difficult. Lately, headlines and news reporting have focused on multiple railroad calamities that should have been prevented. Cities in both the US and Canada have suffered the consequences of the disasters due to the neglect of needed improvements in equipment and regulations. Stockton could be next if we remain passive. We can join other cities like Albany, NY, Portland, OR, Vancouver, WA, Philadelphia, PA, and St. John's, NB and express our concerns over a lack of safety measures.

**Railroad Tank Cars: DOT-111s and CPC-1232s**

On occasion, train derailments and explosions have sent fireballs hundreds of feet into the air with containment and evacuation the only avenues for fire and hazmat officials. Options can be critically few. Of the 2000 train accidents per year, only a few erupt into catastrophes with loss of human life or grave environmental damage. For instance, the Lac Megantic, 2013 derailment in Quebec killed 47 people and destroyed a sizeable portion of the downtown. It is currently the fourth deadliest rail accident in Canadian history. In the same year of 2013, a derailment in Alabama spilled upwards to 750,000 gallons of crude oil into wetlands near Aliceville which remain polluted to this day. Genesee and Wyoming, the owners of the train, hurried the response to repair the tracks by burying much of the spilled crude oil. Waterkeeper Alliance, an environmental group, has detected crude beyond the containment area perilously flowing toward the Tombigbee River. Other derailments spilling crude oil or flammable liquids have recently occurred in North Dakota, New Jersey, Illinois, Ohio, Maryland, Wisconsin, and Virginia. A 2011 spill in Arcadia, Ohio released approximately 786,000 gallons of ethanol. Back in 2009, three people waiting at a railroad crossing in Cherry Valley, Illinois were seriously burned when ethanol leaked and caught fire. A fourth person was killed as she tried to exit her car and flee the disaster scene. In Canada other recent derailments have occurred in New Brunswick, Saskatchewan, and Alberta.

Much blame in the above disasters has been given to a nineteenth century technological tank car, model DOT-111, cynically referred to as the "Ford Pinto of railroad cars," that is unable to operate safely and efficiently in a twenty-first century economy. After the Cherry Valley derailment, the National Transportation Safety Board stated: "Clearly, the heads and shells of DOT-111 tank cars...can almost always be expected to breach in derailments that involve pileups or multiple car-to-car impacts." The rail industry, itself, has estimated the risk of leaking in derailments at 25%. Soon after, in 2009, the NTSB urged the
retrofitting of the DOT-111 cars. The recommendation has been ignored, placed on a slow burner, or criticized. On May 30, 2012, almost three years since the Cherry Valley breach, the following memo from the National Transportation Board was handed out: "The dynamic of the failure of the tank shell... that occurred in the Cherry Valley, Illinois incident is linked to one particular sill design. The FRA [Federal Railroad Administration], with assistance from PHMSA [Pipeline and Hazardous Materials Safety Administration] is conducting a research project with... the manufacturer of the rail tank car that failed... Based on the results of the project, PHMSA, the FRA and the tank car manufacturer will identify and evaluate design modifications that will prevent such a failure from reoccurring. Likewise, we plan to extend our evaluation to include other sill designs... PHMSA will work with the FRA to periodically update the NTSB on the progress..." On January 23, 2014, the NTSB recommended rerouting of trains to avoid transportation of hazardous materials through populated and other sensitive areas. By May 7, 2014, the FRA and PHMSA further recommended that "offerors and carriers of Bakken crude oil select and use the tank car designs with the highest level of integrity reasonably available within their fleet."

It should be noted, here, that the NTSB has known of the dangers of the DOT-111s at least since 1991. The Forum News Service reports that the NTSB has been asking regulators "to weed the DOT-111 out of flammable liquids for more than two decades." According to Popular Science, "Rail operators have known for decades that technological fixes could prevent rail disasters... but they have been dragging their feet because those fixes are expensive and complicated." As another example of the disregard for urgency by the oil industry, Andy Lipow, president of Lipow Oil Associates, has speculated that after 2013 and especially the Lynchburg derailment, "there might be a greater emphasis in getting those regulations implemented sooner." Today, approximately 92,000 DOT-111s are still in use for flammable liquids including the very combustible crude oil from the Bakken fields of North Dakota, Montana, and Canada.

This process of discussion, recommendation, discussion, research, evaluation, re-evaluation, and updating is not isolated. On August 20, 1969, two Penn Central trains collided killing four and injuring forty-three. At the time, the NTSB recommended implementation of Positive Train Control (PTC) systems which monitor the location and movement of trains. In September of 2008, the PTC system had not been installed when twenty-five train passengers were killed and one hundred and two injured in Chatsworth, California. Congress passed the Rail Safety Improvement Act before the end of the year. What this act did was require
implementation of PTC systems by 2015 on freight trains carrying toxic and hazardous materials. By May of 2014, the FRA had exempted 10,000 miles of regional track from the PTC mandate such as the short lines controlled or jointly controlled by Koch Industries with several railroads suggesting they might not be able to meet the 2015 deadline. So far, the cost of delaying has been an additional sixty-five lives and eleven hundred injuries. Presently, a bill in Congress asking for a seven year extension of the moratorium is under review having the support of Secretary Anthony Foxx. Apparently, the wait will be fifty-three years and counting!

The newer CPC-1232 tank cars do not address all the critical problems of the older cars such as bottom outlets and relief valves which can be sheared off. Furthermore, the newer CPC-1232 cars, according to the Association of American Railroads and the American Short Line and Regional Railroad Association, "are assumed to have high-flow capacity pressure relief devices and the jacketed CPC-1232 car is assumed to have thermal protection." (Italics are mine.) They also predict that jacketed cars "will survive at least 521 minutes in a pool fire." In the Casselton, North Dakota accident as well as a Columbus, Ohio spill, pool fires caused "postaccident" fires in which explosions occurred after the initial accident placing fire and hazmat officials in further danger. The Alabama wetlands disaster near Aliceville burned from Thursday into Saturday. The Lynchburg, Virginia fire, in which 15,000 to 25,000 gallons of oil spilled into the James River and caught fire, exceeded the 521 minutes. At least one tanker that caught fire in the Lynchburg conflagration was a CPC-1232 model. It is important to note that the jacketed CPC-1232 cars have been tested for puncture resistance using a square 6x6 inch rod at a speed of 25 mi/hr when trains can travel 40 mi/hr. (The Lynchburg train operated by CSX was going only 24 mi/hr.) The training for emergency responders in Albany, NY to respond to oil train derailments involved only three or four tank cars. Albany sheriff, Craig Apple, has stated that in any larger derailment, "there's going to be mayhem." Minimal safety tests invite doubt and the integrity of jacketed CPC-1232 is jeopardized when intermixed with DOT-111s.

Disfunction

Secretary of Transportation, Anthony Foxx, has publicly stated that, "We have an infrastructure deficit in this country." This has been recognized by the NTSB. It has also been acknowledged that the FRA does not have the capacity to sufficiently monitor increased crude oil transport or the capacity to "examine the broader risks associated with the transport of crude oil across multiple states and
through highly populated regions." Governmental agencies "cannot meet the needs of a growing country and a growing economy by simply maintaining our current level of efforts." This evaluation is partially based on the increase of crude oil car loads from 2009 to 2014 of 10,840 car loads to over 400,000 in 2014. By the end of 2015, there will be an estimated 84% increase of oil tank car use with antique and flawed tank cars in operation. On May 14, 2014, Secretary Foxx forcefully stated that there is need for an "entirely new tanker car."

Based on a regulatory impotence, the best the FRA and the PHMSA can do is issue an advisory (no. 2014-01) recommending the use of tank cars with "the highest level of integrity" to ship the Bakken crude. It must be remembered that the NTSB and its committees and subcommittees, etc. have "no regulatory or enforcement powers." Deborah Hersman, upon her retirement from the NTSB, reminded the public of that. The NTSB only holds "hearings and forums to find out why and how accidents happen," and that the board then issues "recommendations to prevent the next accident." Just prior to her resignation, she had testified before a Senate panel that the DOT-111s "create an unacceptable risk." At the same time, Sen. Charles Schumer of New York called the DOT-111 tank cars ticking time bombs!

The Secretary of Transportation can authorize revisions should such revisions be in the public interest and consistent with safety regulations. The Secretary can "issue an order against a railroad requiring it to eliminate any unsafe condition or practice which creates an emergency involving a hazard of death or injury. Such emergency orders are not subject to the rulemaking provisions requiring a hearing prior to the issuance of the order." Such action by the Secretary, though, does not seem forthcoming.

Citing the dramatic increase of Bakken crude oil traffic by the NTSB, a concomitant increase in monitoring has not occurred. The GAO has noted that only 1% of the railroad infrastructure in the US is examined by the FRA every year." There is, now, a disconnect between the oil and rail industries concerning who is responsible for the increase in recent derailments. Contrary to NTSB designation of Bakken crude as very combustible, the North Dakota Petroleum Council and the American Fuel and Petrochemical Manufacturers have stated that the Bakken crude is no more flammable or explosive than regular "sweet" crude. This is based on research that has compared characteristics of the Bakken crude such as vapor pressure, flashpoint, average initial boiling point and API gravity, etc. to other crude oils from other parts of the country. The problem, says the NDPC, is to be found with "the rail the crude is transported on" and that efforts
toward preventing future accidents should focus on maintenance, staff training, and train speeds. In reply, CSX Railroad has stated that the Bakken crude has a lower flash point (temperature at which it catches fire) at 72 degrees which is lower "than most other crudes" and that its vapors can travel further before reaching an ignition source.

Matt Rose, the executive chairman of Burlington Northern Santa Fe, a recent addition to Warren Buffett's Berkshire Hathaway, has carefully heeded the NDPC's advice. "Rose said the railroad has learned from the [Casselton, ND] disaster and has done such things as decreased train speeds in some areas and increased inspections. The railroad also announced in February that it would voluntarily purchase a fleet of 5,000 strengthened tank cars to improve safety for hazardous materials shipments. The company said it hoped to accelerate the transition to a new generation of safer tank cars and give manufacturers a head start in designing them as federal officials consider changes to the current standards." Together with Union Pacific, Burlington Northern Santa Fe has tracks through Stockton.

The North Dakota Petroleum Council has publicly opposed the purchase of new tank cars. Kari Cutting, the NDPC's vice president, has stated that she doubts the "extra steel [the jacketed tank cars] is going to prevent those breaches." She also offered other numbers suggesting the newer, stronger DOT-111s have 14% less capacity and will require "hundreds more trains to make up the lost volume, actually increasing the risk of accidents." (Presently, the minimum plate thickness is 11.1 mm or 7/16 inch.)

Cornell University's Community and Regional Development Institute has commented that the FRA's responsibilities "have been defined very narrowly" because of the growing disparity. The FRA "is understaffed, slow to move, and reactive; it carries out activities such as safety checks, rather than developing and implementing performance-oriented regulation. As a consequence, some risks emanating from crude oil transport are not effectively monitored, others are not regulated at all." At the end of August, 2013, the PHMSA and FRA announced a new action plan that included unannounced spot inspections and the sampling and monitoring of the movement and classification of crude oil within and out of the oil fields throughout the US.

Building railroad tank cars is a multi-billion dollar industry. This has not gone unnoticed. In February of this year, Vertex Rail Manufacturing was formed to make the CPC-1232 tank cars. Carl Icahn invested heavily into American Railcar
Industries and Warren Buffett acquired Union Tank Car. Greenbrier Companies has a 1.54 billion dollar backlog, well under Trinity Industries 5.1 billion. The oil industry, represented by Valero and Phillips 66 is purchasing tankers. With all this urgency to cash in, the American Association of Railroads is reminding the public of its "strong safety record, coupled with the industry's culture of safety" that is "among the many reasons the federal government requires railroads to transport hazardous materials." While the rail industry is frantically supplying crude to refineries and the government is acknowledging its infrastructure inability to monitor the transportation by the railroads, how is the public supposed to feel safe considering the recent increase in explosive rail derailments? Why should the public trust the rail industry's "culture of safety?" When Greenbrier Companies announced its "tank car of the future" in February of 2014, why did Secretary Foxx state three months later in May that we needed an "entirely new tank car? Disconnect?

**Intent**

Intent is an important concept. For instance, Congress intended that the Interstate Commerce Commission Termination Act of 1995 (ICCTA) and the Federal Railroad Safety Act of 1970 (FRSA) symbiotically coexist. "While the Surface Transportation Board must adhere to federal policies encouraging 'safe and suitable working conditions in the railroad industry,'...there is no evidence that Congress intended for the Surface Transportation Board to supplant the Federal Railroad Administration's authority over rail safety under the FRSA." Back in 1893 when the Railroad Safety Appliance Act was passed, the Interstate Commerce Commission was only six years old. The RSAC sought to protect railroad breakmen whose deaths and loss of fingers were common. Its passage was necessary due to the variance between states' regulations which made implementation of safety regulations difficult for interstate rail carriers. Its passage also did not seek to interfere with interstate commerce or "create an undue burden" for commerce, only the implementation for a safer environment in which railroad breakmen could work, something the rail industry could not fathom to do. For consideration in its passage was the public outcry and demand for safety. Today, a uniform set of rules throughout cities and towns in the US prescribing safe transport of hazardous materials may need a similar outcry, a "social license."

Keeping in mind the concept of intent, the American Association of Railroad's 2013 statement that "dedication to safety is demonstrated in many ways" and that this dedication is the "top priority" of the industry has resulted in 2012 being their safest year on record on top of a string of continuously improving years.
"stretching back decades." Accordingly, this is interpreted to mean that the freight railroads "are uniquely qualified to quickly, efficiently and safely move crude oil from oil fields to refineries throughout the United States." This does seem a bit awkward, though, when one interprets the North Dakota Petroleum Council's less than sincere emphasis on safety, especially when one adds the death rate of North Dakota's oil workers. It is six times the national average. In 2013, the FRA and the PHMSA noted that although the number of railroad accidents and derailments did actually diminish, the number and type of accidents involving the Bakken crude increased! Oops! Upon research, the FRA's Safety Fact Sheet stating its "approach to oversight and enforcement is effective" seems to be outdated. Also, its "safety culture" appears to mimic the American Association of Railroad's own "culture of safety" and contradicts Secretary Foxx's "infrastructure deficit" and the GAO's own investigation noted above.

Various litigations based on interpretations of the Federal Railroad Safety Act and the National Environmental Policy Act to implement local and state regulations on the rail industry have foundered in courts although a state "is permitted to adopt additional or more stringent standards than the federal standards if the state rule...is necessary to eliminate or reduce local safety hazards". In the various litigations concerning local regulations, the symbiosis between the Federal Railroad Administration and the Federal Railroad Safety Act flounders. Cornell's Institute has suggested a couple strategies to sidestep the fed's regulations:

1) "Governments can calculate and publicize the costs associated with providing safety and emergency response services to the shippers and railroads -- essentially unfunded mandates imposed on local and state government. These costs should be borne by the shippers and carriers."

2) "States can examine whether commercial insurance carried by the railroads and ports is sufficient to cover potential liabilities from accidents. If all costs are not covered by private insurance, they constitute a redistribution of risk and liability to the public sector. If states insist that all costs must be covered, shippers and carriers will have to take action to align risks with commercial insurance requirements." (It should be kept in mind that the Montreal, Maine and Atlantic Railroad declared bankruptcy after the Lac Megantic disaster. Bankruptcy is a strategic weapon in the rail industry's arsenal.)

In New York and Washington, state reviews have stalled plans to increase oil flow capacity at railroad hubs. California is currently reviewing its regulations while eight new oil train terminals are scheduled to be built in the state. The Quinault
Indian Nation is appealing terminal plans in Washington based on land treaty rights. In Albany, NY, the Canadian Pacific Railroad was fined $5,000 for not immediately notifying officials about an oil train derailment. The county executive has stated that the next delay in reporting derailments will result in confinement in jail.

Canada has very recently mandated a three year phaseout of the antiquated DOT-111 tank cars. In the US, the Department of Transportation has enacted a voluntary phaseout. Fred Millar, an environmental consultant, has criticized the accompanying provision to disclose to state and county emergency management officials the routing, volume, and frequency of crude oil shipments. It is "not a serious effort to get the information out to the public." He further warns that these disclosures will fall into the industry's "black-hole process." This appears to be the case as Stockton's fire chief, Jeff Piechura, has confirmed: "Specifically, the railways do not share the real-time information on hazardous transports of materials through the communities." He furthermore states that trains with fewer than 35 tank cars, or approximately 1,000,000 gallons, do not need to notify communities. Phillip Musegaas, director of Riverkeeper, an environmental group, suggests that, "Without a mandatory requirement and a strict time line, it doesn't do the job." Senator Kirsten Gillibrand has called for a permanent ban on inferior tank cars such as the DOT-111s stating "we cannot rely on voluntary industry action." As an example, California's Office of Emergency Services has criticized BNSF's reluctance to share information about its crude oil shipments in the state. BNSF maintains such information is a trade secret and should be restricted to fire responders only. According to Kelly Huston, deputy director of the Office of Emergency Services, "We aren't convinced that the information we were provided meets the intent of the (federal Department of Transportation's) emergency order [earlier this year]."

Social license is defined in this presentation as the public or community giving acceptance and approval to a rule or regulation. It may be measured by the amount and/or intensity of support. We see social license at the very beginning of the constitution: "We the people. . ." It does not say: "We the rail industry. . ." or "...in order to form a more profitable oil industry..." It also does not say: "We the lobbied representatives. . ." Social license is a dynamic intent that seeks to safeguard life, the most basic right. Should that rule or regulation break down, then the public has a right and common good duty to fix it. This license is rooted, above all, in safety and its enforcement. Once new regulations, criteria, standards, etc. have been established, then additional rules and regulations may need be imposed. Burlington Northern Santa Fe's self-regulated, slower speeds imposed a
precedent on the industry which opened further change. This precedent is also inerminating in that the rail industry recognizes its own regulations are unsafe. But, it should be emphasized that the rail industry should be the regulated, not the regulators! Old, antiquated and lobbied rules imposed by corporate greed and upheld by a myopic bureaucracy should be abandoned. Communities can then set uniform laws based on safety.

Therefore, I urge the following be enacted for the people of Stockton:

1) A ban on all DOT-111s within city limits beginning immediately or no later than the end of the year.

2) A surcharge on all DOT-111s carrying flammable liquids through Stockton until the ban is enacted which should be given to emergency agencies.

3) Trains using the newer CPC-1232s to travel no faster than five mi/hr within city limits.

4) Trains cannot tie-up traffic for longer than ten minutes.

5) Companies and owners of DOT-111s that do not abide by these regulations be subject to both severe fines and criminal prosecution.