IPAA Position – Much of America’s expansion of its crude oil production has relied on rail transportation due to limited pipelines between some production areas and refinery markets. Since 2008, the United States has seen an increase in crude oil production of over 170 percent with the state of North Dakota seeing over 600 percent growth. Over this same time period, U.S. crude oil transportation by rail has increased from 9,500 carloads in 2008 to nearly 500,000 carloads in 2014.

The Independent Petroleum Association of America (IPAA) supports the safe development and movement of crude oil and the regulatory efforts to achieve that goal. IPAA also supports the efforts of the transportation industry to assure its rail network is maintained and improved to manage new volumes of crude oil. IPAA recognizes that industry and state and federal regulators continue to take steps to assure that America’s growth in crude oil production is safely transported to its marketplace.

High-Profiled Derailments and Safety Concerns About Rail Transport of Crude Oil Are Driving Regulatory Actions – Rail incidents are rare but significant when they occur. According to the American Association of Railroads (AAR) 99.997 percent of all hazardous materials rail shipments, including crude oil, arrive at their destination without incident. Less than a dozen U.S. crude oil rail incidents have occurred since the dramatic increase in crude rail transport. However, accidents like the one in Lac-Mégantic, Canada – despite its unique circumstances – drive government regulators to double down on rail transportation protections.

What is the risk? – Crude oil, like gasoline and other hydrocarbons, is flammable. The U.S. Department of Transportation classifies crude oil as a Class 3 material – the designation for flammable liquids. Allegations have been made that some of the newly produced U.S. crude oils are more volatile than historically produced oil – notably Bakken crude oil, which is more extensively transported by rail because of its location relative to its refinery marketplaces. Higher volatility could make the crude oil explosive.

However, analyses by the Pipeline and Hazardous Materials Safety Administration (PHMSA), Transport Canada, the American Fuel & Petrochemical Manufacturers (AFPM) and the North Dakota Petroleum Council (NDPC) have consistently concluded that Bakken crude oil is consistent with other light crude oils. When properly managed, Bakken crude is no more explosive.

How is Crude Oil Managed? – Measures are in place and under development at both the production and transportation stages for crude oil to ensure its safe management:

- **Production and Stabilization** – Crude oil produced at the wellhead contains “light ends” which are dissolved hydrocarbons that are normally gases such as butane, ethane and propane. “Stabilization” is the process of removing these light ends from crude oil. Field treating and stabilization of crude oil immediately follows production. Produced oil flows to a separator where the gases, crude oil, and water undergo initial separation. Each product goes to separate storage and management. Crude oil flows to a heater treater for further stabilization. Afterwards, it is sent to a terminal or transloading facility to be loaded into a rail car for shipment.

  As of April 1, 2015, the North Dakota Industrial Commission requires crude oil to be stabilized to a vapor pressure of 13.7 pounds/square inch (psi) – 1.0 psi below what is considered as a stable vapor pressure. This action is designed to assure that concerns about the explosiveness of Bakken crude oil are resolved.
**Transportation** – Currently, U.S. crude oil is transported in two types of rail cars – DOT 111 and CPC 1232. Since October 2011, only CPC-1232 cars can be purchased. These rail cars have served crude oil transportation needs well, with very few incidents of structural failure. Nevertheless, PHMSA is considering requiring a more durable rail car (DOT-117) that would have thicker walls and stronger tank heads. Industry believes that a shift to the DOT-117 is feasible, although it will require more rail cars to ship the same volumes of crude on more or longer trains because the cars are heavier and hold less volume. The pivotal challenge will be creating a transition period that allows for the construction of new cars and the phase out of the existing fleet without limiting the capacity to transport U.S. crude oil to its markets.

**Are New Rail Cars Enough to Prevent Rail Accidents?** – Any credible effort to enhance rail safety must also address track integrity and human error. According to a December 2014 presentation by the DOT’s Railroad Safety Advisory Committee, human error and track issues were the primary causes in over 60 percent of derailments in 2013. These are the most significant opportunities for improving crude by rail safety. Recently, PHMSA ordered mandatory speed restrictions for certain trains hauling crude oil and ethanol through urban areas. However, PHMSA’s proposed rule on new rail cars would not require more inspection equipment, increase inspection frequency, hire more inspectors or replace any track. IPAA welcomes the opportunity to improve standards to develop and deploy a more modern tank car fleet and further stabilize crude oil for safe transport. If these efforts prevent even a single derailment, they will be worthwhile. However, IPAA remains concerned that no consideration has been given to addressing what it believes is the single most important factor – accident prevention.

**What Should the Federal Government Do?** – PHMSA’s action to address rail car requirements is an appropriate federal responsibility, but, conversely, requirements to condition crude oil before shipment must reside with the state regulators. These regulators best understand the unique circumstances of crude oil production in their states.