Advisory 2012–01 to remind shippers

SUMMARY: FRA is issuing Safety

personal information you provide. Using the search function of our docket web site, anyone can find and read the comments received into any of our dockets, including the name of the individual sending the comment (or signing the comment for an association, business, labor union, etc.). You may review DOT's complete Privacy Act Statement in the Federal Register published on April 11, 2000 (65 FR 19477-78).

Docket: To read background documents or comments received, go to http://www.regulations.gov at any time or to the Docket Management Facility in Room W12–140 of the West Building Ground Floor at 1200 New Iersev Avenue SE., Washington, DC, between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays.

FOR FURTHER INFORMATION CONTACT: Tyneka Thomas ARM-105, (202) 267-7626, FAA, Office of Rulemaking, 800 Independence Ave SW., Washington, DC 20591. This notice is published pursuant to 14 CFR 11.85.

Issued in Washington, DC, on April 20, 2102.

Brenda D. Courtney,

Acting Deputy Director, Office of Rulemaking.

PETITION FOR EXEMPTION

Docket No.: FAA–2012–0137 Petitioner: Landmark Aviation Section of 14 CFR Affected: 14 CFR §§ 135.293(a)(2) and (3), 135.293(b), 135.297, 135.329(b), 135.345(b) and 135.347

Description of Relief Sought: The relief sought would allow Landmark's wholly-owned subsidiary, Piedmont Aviation, to receive credit for aircraft specific training, testing, and checking by pilots while employed by Landmark Waukegan, another operating unit of Landmark Aviation. In addition the requested relief includes aircraftspecific initial new hire ground and flight training written, and oral tests, competency checks, and pilot in command instrument proficiency

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DEPARTMENT OF TRANSPORTATION

Federal Railroad Administration [Safety Advisory 2012-01]

Odorant Fade in Railroad Tank Cars

AGENCY: Federal Railroad Administration (FRA), Department of Transportation (DOT).

ACTION: Notice of Safety Advisory.

and consignees of railroad tank cars containing odorized liquefied petroleum gas (LPG), of the importance of taking actions to ensure that a sufficient level of odorant remains in the LPG throughout the entire transportation cycle. FRA is issuing this notice to raise awareness within the hazardous materials community, of the potential consequences of having LPG reach endusers as under-odorized or essentially non-odorized material due to the diminishment of the added odorant during the transportation cycle (commonly known as "odorant fade"). This safety advisory recommends that shippers and consignees of bulk quantities of odorized LPG review their existing LPG odorization standards and procedures, and take appropriate actions to guard against odorant fade in their shipments.

FOR FURTHER INFORMATION CONTACT: Kevin R. Blackwell, Railroad Safety Specialist, Hazardous Materials Division, Office of Safety Assurance and Compliance, FRA, 1200 New Jersey Avenue SE., Washington, DC 20590 (telephone: (202) 493-6315; email: Kevin.Blackwell@dot.gov); or Kurt Eichenlaub, Railroad Safety Specialist, Hazardous Materials Division, Office of Safety Assurance and Compliance, FRA, 1200 New Jersey Avenue SE., Washington, DC 20590 (telephone: (202) 493-6050; email:

Kurt.Eichenlaub@dot.gov).

SUPPLEMENTARY INFORMATION: DOT's Hazardous Materials Regulations (HMR), Title 49 Code of Federal Regulations (CFR) Parts 171-180, allow use of the proper shipping name, "liquefied petroleum gas" (or LPG), for a number of petroleum gases with properties similar to propane. Much of the LPG loaded and shipped in the United States by railroad tank car is from bulk suppliers to either industrial end-users or to "midstream" suppliers who then sell and redistribute the LPG to commercial, retail, and general public end-users. In 2010, LPG represented less than 9 percent of all loaded hazardous materials tank car shipments originating in the United States. Because LPG is a colorless and odorless gas, odorants are normally added to the material (with the exception of LPG being shipped to industrial end-users) in the liquid phase to enable human detection when its vaporized gases are released in the atmosphere. The majority of LPG produced for non-industrial uses is odorized by bulk providers of the material. The presence of LPG in the consumer supply chain, with either

diminished levels of odorant or no odorant present, represents significant safety risks. Absent sufficient odorization of the commodity, LPG leaks can go undetected and ignite.

Diminished or absent levels of LPG odorant has been determined to have been a contributing factor in incidents that have resulted in injuries and fatalities. For example, a July 30, 2010, incident occurred at a condominium construction site in Norfolk, MA, when a release of LPG from a leaking connection in the basement of a building under construction resulted in an explosion and fire. This incident resulted in one fatality and seven injuries. An investigation conducted by the Massachusetts Department of Fire Services, Division of Fire Safety, revealed that the LPG in the storage tanks at the construction site had virtually no odorant present, explaining why no one at the construction site reported smelling the LPG leak prior to the explosion. While the LPG involved in the Norfolk accident did not originate from a rail shipment, the investigation into the accident revealed that a large quantity of LPG—shipped via railroad tank car as odorized—had been delivered to commercial and retail endusers with either a diminished level of odorization or no odorization at all.

Odorization

The proper odorization of LPG is addressed by a combination of Federal and State laws and regulations, as well as by accepted industry standards and practices. In accordance with the applicable laws and regulations, LPG intended for use by non-industrial entities (e.g., commercial and retail entities, and the general public) is generally required to be odorized (or 'stenched") to enable the detection of any unintended release or leak of the gas. In the context of the rail transportation of LPG, the HMR require the odorization of LPG transported in cargo tanks and portable tanks, but not railroad tank cars. Specifically, 49 CFR 173.315(b)(1) provides that odorizing LPG shipments in cargo and portable tanks with 1.0 pound of ethyl mercaptan per 10,000 gallons of LPG, or the equivalent, is an acceptable form of odorization.¹ That section also provides an exception from the odorization requirement if odorization would be "harmful in the use or further processing of the [LPG], or if odorization will serve no useful purpose as a

¹Ethyl mercaptan is a colorless organic liquid with a low odor threshold of 0.4 parts per billion, thus making it easily detectable by persons with a normal sense of smell when injected at standard industry rates.

warning agent in such use or further processing." Essentially, this exception applies to LPG being transported to industrial end-users.

The Occupational Safety and Health Administration's requirements regarding the storage and handling of LPG found at 29 CFR 1910.110(b)(1) essentially mirror DOT's odorization requirements at 49 CFR 173.315(b)(1). In addition to these Federal regulations, the National Fire Protection Association (NFPA) has also established odorization standards that largely mirror the Federal requirements. See NFPA Standard 58, paragraph 1-4.1. In addition, most States have adopted laws, regulations, or codes that incorporate this NFPA standard. Further, it is standard industry practice to exceed the established regulatory minimums and add 1.5 pounds of ethyl mercaptan per 10,000 gallons of LPG in order to combat the effects of odorant fade should a release of material occur.

Odorant Fade

Under-odorization of railroad tank cars containing LPG is sometimes caused by the phenomenon commonly known as odorant fade. While LPG may be satisfactorily odorized in accordance with the above requirements at the source, there are circumstances that may cause the odorant added to the LPG to "fade" and render it virtually undetectable by a person's sense of smell. Typically, there are three different potential causes of odorant fade: oxidation, container condition, and gas quality.

This safety advisory focuses on recommendations to prevent odorant fade caused by oxidation and/or the condition of the LPG container. First, oxidation can cause odorant fade when the presence of rust in a tank car, or the subsequent formation of rust over time, as a result of the presence of oxygen and moisture, decreases the amount of odorant that is in the LPG in the tank due to a chemical reaction between the odorant and the oxidized (rusted) surface. The presence of rust causes mercaptans to oxidize into other compounds that have a different odor and lower intensity. Residual oxygen from air and moisture that may be in the container can increase the oxidation rate of rust or even cause new rust to form where previously none existed, exasperating the rate at which the odorant fades.

Next, the condition of the LPG container itself can also potentially cause odorant fade. An odorant can adsorb onto the metal surface of the container or even potentially be absorbed into the metal surface itself.

This process is most likely to occur when the container is new and has not previously contained odorized LPG. It can also occur when the inside of the container has been left open to the air while the container is out of service or after the container has been cleaned and purged (e.g., when a railroad tank car is cleaned and purged for repair or service at a tank car facility and then later placed back into LPG service).

There are existing industry procedures that can passivate (or treat) the interior surface of an LPG container in order to render the surface inactive so that the odorant will not be diminished through oxidation or adsorption/ absorption. Also, there are several methods available to detect whether there are adequate amounts of odorant in LPG at any given point. The simplest, and most often used method, is a "sniff test" where a person uses their sense of smell to detect the presence of odorant. The person performing a sniff test should have a normal sense of smell, uncompromised by such factors as olfactory fatigue, sinus congestion, allergies, head colds, smoking, or the recent use of alcohol or drugs. Colorimetric tube testing and the gas chromatography test method provide more quantitative methods to measure the concentration of the odorant in LPG. The colorimetric tube, or stain tube, test method measures the concentration of odorant by pulling a measured amount of LPG through a hermetically sealed glass tube containing a detecting reagent. The odorant causes a chemical reaction resulting in a color change of the tube material. The quantity of odorant can be measured by reading the concentration of the odorant from the calibration scale that is marked on the tube. The gas chromatography test method is the most accurate method because it separates the various components of the LPG and odorant for identification. However, this method is costly and requires sending LPG samples to a location that has the proper equipment and trained personnel to perform these tests.

Railroad Tank Cars

At present, while DOT's regulation discussed above contains an odorization requirement for LPG transported in cargo and portable tank containers, there is no comparable DOT regulation regarding the transportation of LPG transported in railroad tank cars. FRA is currently reviewing this situation to determine if further action is warranted. During routine inspections at facilities that receive railroad tank cars loaded with LPG, FRA is obtaining data on the LPG odorization testing procedures

being used by industry. FRA is also collecting data on the number of LPG shipments that are received yearly, the number of these shipments that are shipped as odorized versus nonodorized, and the number of odorized shipments received that failed odorization testing or were identified as having insufficient odorant.

As noted above, there are currently Federal regulations, State laws, and accepted industry standards and testing methods in place to ensure proper LPG odorization. FRA encourages industry members to comply with all applicable requirements and standards. In order to help prevent odorant fade incidents involving LPG transported by railroad tank car, and to facilitate compliance with existing requirements and standards, this safety advisory makes several recommendations below.

Recommended Action: In an effort to encourage industry members to take actions to ensure that a sufficient level of odorant remains in odorized LPG shipped via railroad tank car throughout the entire transportation cycle, FRA recommends that:

- 1. Facilities that load, offer, receive, or offload railroad tank cars containing LPG review their procedures to ensure they are adequate to address the issue of "odorant fade" and its various potential causes, and that those procedures ensure that tank car shipments of odorized LPG are odorized to meet applicable regulatory and industry requirements and maintain sufficient levels of odorant throughout the entire transportation cycle. Such procedures should ensure quantitative testing methods are used to measure the amount of odorant in LPG.
- 2. Facilities that load odorized LPG into railroad tank cars have adequate procedures in place to identify if a tank car received for loading of odorized LPG has been out of LPG product service for any extended length of time, is coming from a tank car repair or cleaning facility, or has been subjected to any condition that could lead to corrosion of the tank
- 3. Facilities that load odorized LPG into railroad tank cars inspect, to the degree possible, railcars they receive for signs of oxidation or corrosion, which can lead to the loss of odorant.
- 4. Facilities that load odorized LPG into tank cars take any other corrective actions needed to ensure sufficient levels of odorization remain in the shipment throughout the entire transportation cycle, such as increasing the amount of odorant injected into the LPG, if necessary.

FRA encourages industry members to take actions consistent with the

preceding recommendations, and to take other complementary actions to help ensure the safety of the Nation's citizens and railroads. FRA may modify this Safety Advisory 2012-01, issue additional safety advisories, or take other appropriate actions necessary to ensure the highest level of safety on the Nation's railroads, including pursuing other corrective measures under its regulatory authority.

Issued in Washington, DC, on April 9, 2012.

Robert C. Lauby,

Acting Associate Administrator for Railroad Safety/Chief Safety Officer.

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BILLING CODE 4910-06-P

DEPARTMENT OF TRANSPORTATION

National Highway Traffic Safety Administration

Petition for Exemption From the Federal Motor Vehicle Motor Theft Prevention Standard: TESLA

AGENCY: National Highway Traffic Safety Administration (NHTSA), Department of Transportation (DOT). **ACTION:** Grant of petition for exemption.

SUMMARY: This document grants in full the petition of Tesla Motors Inc's. (Tesla) for an exemption of the Model S vehicle line in accordance with 49 CFR Part 543, Exemption from the Theft Prevention Standard. This petition is granted, because the agency has determined that the antitheft device to be placed on the line as standard equipment is likely to be as effective in reducing and deterring motor vehicle theft as compliance with the partsmarking requirements of the Theft Prevention Standard 49 CFR Part 541, Federal Motor Vehicle Theft Prevention Standard. Tesla requested confidential treatment for specific information in its petition. The agency granted Tesla's request for confidential treatment by a letter dated December 5, 2011.

DATES: The exemption granted by this notice is effective beginning with the 2012 model year (MY).

FOR FURTHER INFORMATION CONTACT: Ms. Carlita Ballard, Office of International Policy, Fuel Economy and Consumer Standards, NHTSA, W43-439, 1200 New Jersey Avenue SE., Washington, DC 20590. Ms. Ballard's phone number is (202) 366-5222. Her fax number is (202) 493-2990.

SUPPLEMENTARY INFORMATION: In a petition dated October 24, 2011, Tesla requested an exemption from the partsmarking requirements of the theft

prevention standard (49 CFR Part 541) for the Model S vehicle line beginning with MY 2012. The petition requested an exemption from parts-marking pursuant to 49 CFR part 543, Exemption from Vehicle Theft Prevention Standard, based on the installation of an antitheft device as standard equipment for the entire vehicle line.

Under § 543.5(a), a manufacturer may petition NHTSA to grant an exemption for one vehicle line per model year. In its petition, Tesla provided a detailed description and diagram of the identity, design and location of the components of the antitheft device for the Model S vehicle line. Tesla will install a passive, transponder-based, electronic engine immobilizer device as standard equipment on its Model S vehicle line beginning with MY 2012. Key components of the antitheft device include an engine immobilizer, security controller, gateway function, drive inverter and a passive entry transponder (PET). Tesla stated that its immobilizer device, which will be installed beginning with its MY 2012 vehicle line, will be an upgraded version with a more robust design than the antitheft device already installed as standard equipment on its MYs 2008-2011 Tesla roadsters. Tesla stated that the new design of its immobilizer device will have enhanced communications between components, prevent tampering and also provide additional features to enhance its overall effectiveness.

In addition to Tesla's immobilizer device, an audible alarm (horn) will be incorporated as standard equipment, but no visual feature will be provided with the alarm system. Tesla stated that its alarm system will activate with any unauthorized attempt to break in the front and rear cargo areas. Tesla also stated that any unauthorized entry without the correct PET will trigger the audible alarm. Tesla stated that its antitheft device has a two-step activation process with a vehicle code query being conducted at each stage. The first stage allows access to the vehicle when an authorization cycle occurs between the PET and the Security Controller as long as the PET is in close proximity to the car and the driver either pushes the lock/unlock button on the key fob, pushes the exterior door handle to activate the handle sensors or inserts a hand into the handle to trigger the latch release. During the second stage, vehicle operation will be enabled when the driver has depressed the brake pedal and moves the gear selection stalk to drive or reverse. When one of these actions is performed, the security

controller will poll to verify if the appropriate PET is inside the vehicle. Upon location of the PET, the security controller will run an authentication cycle with the key confirming the correct PET is being used inside the vehicle. Tesla stated that once authentication is successful, the security controller initiates an encrypted message through the gateway enabling the drive inverter to receive the encrypted message which then processes the message generating an encrypted response posting the message back to the security controller. If the encrypted exchange yields a result that meets the security code's expectations of the security controller, the correct exchange will authorize the drive inverter to deactivate immobilization allowing the vehicle to be driven under its own power. Tesla stated that if the results are not correct and there is no response to the drive inverter from the security controller, the vehicle will remain immobilized and the drive inverter will retry the exchange until there is a proper response or it times out. Tesla's submission is considered a complete petition as required by 49 CFR 543.7 in that it meets the general requirements contained in 543.5 and the specific content requirements of 543.6.

Tesla stated that the immobilizer functions will ensure maximum theft protection when the immobilizer is active, the vehicle is off and the doors are locked. Tesla stated that it will incorporate an additional security measure that performs when the car is unlocked and immobilization is deactivated. Specifically, immobilization will reactivate when there are no user inputs to the vehicle within a programmed period of time. Tesla stated that any attempt to operate the vehicle without performing and completing each task, will render the vehicle inoperable.

In addressing the specific content requirements of 543.6, Tesla provided information on the reliability and durability of its proposed device. To ensure reliability and durability of the device, Tesla conducted tests based on its own specified standards. Tesla provided a detailed list of the test conducted and stated that it believes that its device is reliable and durable because it complied with its own specific design standards. Additionally, Tesla stated that it has incorporated other measures of ensuring reliability and durability of the device. Those measures include the inaccessible location of all immobilizer device components within the passenger compartment of the vehicle or their containment in other vehicle