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Attachment No. 2

INITIAL STATEMENT OF REASONS

CALIFORNIA CODE OF REGULATIONS

TITLE 8: Chapter 4, Subchapter 1, Sections 451 and 527, and the Scope and Application of Article 7 of the Unfired Pressure Vessel Safety Orders

Liquefied Natural Gas

SUMMARY

The existing statement of scope and application found at the beginning of Article 7 of the Unfired Pressure Vessel Safety Orders has created substantial confusion among the regulated public as to whether the provisions of Article 7 apply to mobile liquid natural gas refueling operations. Specifically, the language of Section 451 and the introductory language of Article 7 contain wording that create a substantial question as to whether the provisions of Article 7, specifically Section 527, are intended to apply to the delivery of natural gas from LNG refueling trucks into LNG-powered vehicles or storage vessels or systems. This is because Section 451 and the introductory language of Article 7 suggest that the Unfired Pressure Vessel Safety Orders and Article 7 do not apply to operations to which regulations enforced by the California Highway Patrol apply. Section 935 of Title 13 of the California Code of Regulations contains provisions applicable to vehicles equipped with LNG fuel systems, including a requirement that the vehicles be equipped with methane gas detection systems.

This clarity issue was brought to the Division's attention by an inquiry from the City of Los Angeles in which the City expressed confusion over whether Section 527 was intended to apply to mobile liquid natural gas refueling operations. The inquiry was made because of the City's plans to establish fueling operations involving the dispensing of LNG from mobile supply trucks as well as from stationary tanks. The Division has on occasion advised the public that Article 7, including Section 527, applies to mobile liquid natural gas refueling operations. The proposed amendments to Section 451 and the introductory language to Article 7 will resolve the clarity issue by making it clear that Article 7 does apply to these LNG delivery operations.

In addition, it was brought to the Division's attention by the City of Los Angeles that Section 527 requires the odorization of natural gas. The requirement for odorization exists because natural gas has no odor and can exist in hazardous concentrations that go undetected because of its odorless quality. Odorization renders natural gas readily detectable in low concentrations by the human sense of smell.

While it is not feasible at this time to odorize LNG, the extreme explosive and flammable nature of LNG makes it imperative that a means exist to warn those present of the existence of LNG leaks. The proposed amendment to Section 527 will fill this gap by requiring that LNG delivery operations take place while methane gas detection systems are in operation, thus providing a safe alternative to the odorization requirement.

SPECIFIC PURPOSE AND FACTUAL BASIS OF PROPOSED ACTION

Section 451. Unfired Pressure Vessels Not Subject to These Safety Orders.

Section 451(c)

Existing Section 451 specifies those unfired pressure vessels that are not subject to the Unfired Pressure Vessel Safety Orders. Section 451(c) specifies, "Natural gas vessels and installations and air brake tanks subject to the jurisdiction and inspection of the Public Utilities Commission, the Department of Transportation, or the Highway Patrol." In order to eliminate inconsistencies between this section and the proposed amendments to Article 7, an amendment is proposed to Section 451(c) to make it clear that its exclusions do not apply to Article 7 of these Orders. It is also proposed to revise "Highway Patrol" to read, "Department of the California Highway Patrol." The proposed amendments are necessary to provide clarity and harmony within existing regulations.

Article 7. Compressed and Liquefied Natural Gas System.

The existing scope and application of Article 7 states that the provisions of Article 7 apply to the storage, dispensing and use of natural gas as a motor fuel except in vehicles that are licensed to travel on highways, for which the standards of the California Highway Patrol apply. It is proposed to replace the phrase, "except in vehicles that are licensed to travel on highways, for which the standards of the California Highway Patrol apply" with "but do not apply to the storage or use of natural gas on public roads and highways." The proposed revision is necessary to clarify that Article 7 applies generally to the storage, dispensing and use of natural gas as a motor fuel, but specifically does not apply to the storage or use of natural gas on public roads or highways.

Section 527. Control of Products in Tanks and Cylinders.

Existing Section 527 addresses minimizing natural gas contaminants so as to prevent adverse effects on storage and utilization equipment and the odorization of natural gas for detection purposes. It is proposed to reformat this section, consistent with other sections contained in these Orders, into 3 subsections: (a) General, (b) Compressed Natural Gas, and (c) Liquefied Natural Gas. The existing ordorization requirement in existing subsection (b) is proposed to apply to Compressed Natural Gas only since, due to its chemical properties, odorization of LNG is not feasible. It is also proposed to revise the phrase, "1/5 the lower limit of flammability" with "20 percent of the lower explosive limit", with regard to the concentration of gas in air that must be detectable, to be consistent with current industry terminology. And, new subsection (c) is

proposed which will address the monitoring and warning of methane gas leaks with regard to the delivery and storage of LNG as follows:

(c) Liquefied Natural Gas.
The delivery of LNG into any vessel or system covered by these Orders shall be subject to monitoring by a methane gas detection system, as follows:
(1) Each methane gas detection system required by this section shall provide a warning when a methane gas concentration exceeding 20 percent of the lower explosive limit is detected. The warning shall be plainly audible and visible to those within the zone of potential exposure to fire or explosion of the vessel, system, or delivery operation.
(2) Where LNG is delivered into a vessel or system that is part of a motor vehicle, the methane gas detection system shall function continuously during the course of the delivery operation so that methane leaks exceeding 20 percent of the lower explosive limit will be detected in the immediate vicinity of the operation.
(3) Where LNG is delivered to any other vessel or system covered by these Orders, the methane gas detection system shall function continuously during the course of the delivery operation so that methane gas leaks exceeding 20 percent of the lower explosive limit will be detected in the immediate vicinity of the operation and the entire vessel or system into which the LNG is delivered. After delivery is completed, the methane gas detection system shall be operated continuously in the immediate vicinity of the entire vessel or system into which the LNG was delivered for as long as the vessel or system contains LNG.
(4) Nothing in this section is intended to supercede or alter the applicable requirements of 13 CCR Section 935.

The proposed amendments will require that a methane gas detection system be provided in the immediate vicinity of an LNG dispensing operation and storage vessel/system and is necessary to ensure that methane gas leaks are detected and that personnel working within the vicinity of such operations/systems are appropriately alerted.

DOCUMENTS RELIED UPON

None.

REASONABLE ALTERNATIVES THAT WOULD LESSEN ADVERSE ECONOMIC IMPACT ON SMALL BUSINESSES

No reasonable alternatives were identified by the Board and no reasonable alternatives identified by the Board or otherwise brought to its attention would lessen the impact on small businesses.

SPECIFIC TECHNOLOGY OR EQUIPMENT

A methane gas detection system will be required to sense methane gas in airborne concentrations exceeding 20 percent of the lower limit of flammability. The methane sensors will be sufficient to detect a methane leak in the immediate vicinity of the LNG operation, vessel, or system. The methane gas detection system will provide an audible and visual alarm to those employees within the zone of potential exposure to fire or explosion.

COST ESTIMATES OF PROPOSED ACTION

Costs or Savings to State Agencies

No costs or savings to state agencies will result as a consequence of the proposed action.

Impact on Housing Costs

The Board has made an initial determination that this proposal will not significantly affect housing costs.

Impact on Businesses

The Board has made an initial determination that this proposal will not result in a significant, statewide adverse economic impact directly affecting businesses, including the ability of California businesses to compete with businesses in other states.

The proposed changes to section 527 codify practices already implemented by the effected businesses within the state. The cost of not implementing the proposed changes, the risk of explosions and fires, far outweighs whatever minor costs may be incurred by businesses currently not complying with the general practices of the industry.

Cost Impact on Private Persons or Businesses

The Board is not aware of any cost impact that a representative private person or business would necessarily incur in reasonable compliance with the proposed action.

Costs or Savings in Federal Funding to the State

The proposal will not result in costs or savings in federal funding to the state.

Costs or Savings to Local Agencies or School Districts Required to be Reimbursed

No costs to local agencies or school districts are required to be reimbursed. See explanation under “Determination of Mandate.”

Other Nondiscretionary Costs or Savings Imposed on Local Agencies

This proposal does not impose nondiscretionary costs or savings on local agencies.

DETERMINATION OF MANDATE

The Occupational Safety and Health Standards Board has determined that the proposed regulations do not impose a local mandate. Reimbursement by the state is not required pursuant to Part 7 (commencing with Section 17500) of Division 4 of the Government Code because the proposed amendments will not require local agencies or school districts to incur additional costs in complying with the proposal. Furthermore, these regulations do not constitute a "new program or higher level of service of an existing program within the meaning of Section 6 of Article XIII B of the California Constitution."

The California Supreme Court has established that a "program" within the meaning of Section 6 of Article XIII B of the California Constitution is one which carries out the governmental function of providing services to the public, or which, to implement a state policy, imposes unique requirements on local governments and does not apply generally to all residents and entities in the state. (County of Los Angeles v. State of California (1987) 43 Cal.3d 46.)

These proposed regulations do not require local agencies to carry out the governmental function of providing services to the public. Rather, the regulations require local agencies to take certain steps to ensure the safety and health of their own employees only. Moreover, these proposed regulations do not in any way require local agencies to administer the California Occupational Safety and Health program. (See City of Anaheim v. State of California (1987) 189 Cal.App.3d 1478.)

These proposed regulations do not impose unique requirements on local governments. All employers - state, local and private - will be required to comply with the prescribed standards.

EFFECT ON SMALL BUSINESSES

The Board has determined that the proposed amendments may affect small businesses.

ASSESSMENT

The adoption of the proposed amendments to these regulations will neither create nor eliminate jobs in the State of California nor result in the elimination of existing businesses or create or expand businesses in the State of California.

ALTERNATIVES THAT WOULD AFFECT PRIVATE PERSONS

No reasonable alternatives have been identified by the Board or have otherwise been identified and brought to its attention that would be more effective in carrying out the purpose for which the action is proposed or would be as effective and less burdensome to affected private persons than the proposed action.