



U.S. Department  
of Transportation  
**Pipeline and Hazardous  
Materials Safety  
Administration**

1200 New Jersey Avenue, SE  
Washington, DC 20590

July 11, 2023

Mr. Lex De Groot  
Civil Engineer  
CH-IV International  
11700 Katy Freeway  
Suite 1350  
Houston, TX 77079

Dear Mr. De Groot:

In a letter to the Pipeline and Hazardous Materials Safety Administration (PHMSA), dated March 27, 2023, you requested an interpretation of the Federal pipeline safety regulations in 49 Code of Federal Regulations (CFR) Part 193 with respect to the applicability of §§ 193.2013 and 193.2067 to wind forces design for an LNG facility.

You stated that the requirement to follow ASCE/SEI 7-05, “Minimum Design Loads for Buildings and Other Structures” 2005 edition (including supplement No. 1 and Errata), (ASCE/SEI 7-05 or ASCE 7-05) only applies to shop fabricated containers of LNG or other hazardous fluids with a capacity of not more than 70,000 gallons. You asked whether the § 193.2067(b)(2) wind forces requirement can be determined by applying the edition of ASCE/SEI 7 incorporated by reference in the State Building Code enforced at the time of the design and construction of such facilities. You stated this is supported by the January 5, 2015, amendment to § 193.2067(b)(1)<sup>1</sup> that removes the “-05” edition from this requirement, allowing that a current edition of ASCE/SEI 7 could also be followed for § 193.2067(b).

Under § 193.2067(b)(1), ASCE 7-05 is the incorporated by reference standard. No other standard may be used for § 193.2067(b)(1). Section 193.2013(d)(1) specifically incorporates the 2005 edition of ASCE/SEI 7-05, and the 2015 final rule your letter references did not change or update the incorporated by reference standard.

As to the remaining question in your inquiry, under § 193.2067(b)(2), there is no standard incorporated by reference. Rather, the wind forces at a location of the specific facility must be based on the wind speeds established in either §§ 193.2067(b)(2)(i) or (b)(2)(ii).

---

<sup>1</sup> 80 Fed. Reg. 168 (Jan. 5, 2015).

However, you may use the edition of ASCE/SEI 7 required by the State's building code enforced at the time of the design and construction of such facilities to assist in determining the wind forces, only if the wind forces are calculated based on the wind speeds equal to or greater than those determined under §§ 193.2067(b)(2)(i) or (b)(2)(ii). Please note that PHMSA reviews structural calculations on a case-by-case basis to verify proper application of load equations and factors.

If we can be of further assistance, please contact Tewabe Asebe at 202-366-5523.

Sincerely,

John A. Gale  
Director, Office of Standards  
and Rulemaking



**Contact Name:** Lex de Groot  
**Title:** Civil Engineer  
**Direct Line:** 713-267-5563  
**Direct Email:** ldegroot@ch-iv.com

CH-IV International  
11700 Katy Freeway, Suite 1350  
Houston, TX 77079 USA  
www.CH-IV.com

March 27, 2023

Mr. John A. Gale  
Director, Office of Standards and Rulemaking  
Office of Pipeline Safety (PHP-30)  
Pipeline and Hazardous Materials Safety Administration  
U.S. Department of Transportation  
1200 New Jersey Avenue, S.E.  
Washington, D.C. 20590-0001

**Title 49 of the Code of Federal Regulations Interpretation of Part 193 Subpart B, Section 193.2067.**

Dear Mr. Gale,

This letter is a formal request for written interpretation of the referenced section of Title 49 of the Code of Federal Regulations Part 193. This interpretation is requested to clarify the design code requirements to comply with §193.2013 and §193.2067.

**§193.2067** states:

*(b) The wind forces at the location of the specific facility must be based on one of the following:*

*(1) For shop fabricated containers of LNG or other hazardous fluids with a capacity of not more than 70,000 gallons, applicable wind load data in ASCE/SEI 7 (**incorporated by reference, see § 193.2013**).*

*(2) For all other LNG facilities:*

*(i) An assumed sustained wind velocity of not less than 150 miles per hour, unless the Administrator finds a lower velocity is justified by adequate supportive data; or*

*(ii) The most critical combination of wind velocity and duration, with respect to the effect on the structure, having a probability of exceedance in a 50-year period of 0.5 percent or less, if adequate wind data are available and the probabilistic methodology is reliable*

*[[45 FR 9203](#), Feb. 11, 1980, as amended by Amdt. 193-1, [45 FR 57419](#), Aug. 28, 1980; [58 FR 14522](#), Mar. 18, 1993; Amdt. 193-16, [63 FR 37505](#), July 13, 1998; Amdt. 193-17, [65 FR 10959](#), Mar. 1, 2000; Amdt. 193-19, [71 FR 33409](#), June 9, 2006; Amdt. 193-22, [75 FR 48604](#), Aug. 11, 2010; Amdt. 193-25, [80 FR 183](#), Jan. 5, 2015]*



**§193.2013** states:

*(a) This part prescribes standards, or portions thereof, incorporated by reference into this part with the approval of the Director of the Federal Register in 5 U.S.C. 552(a) and 1 CFR part 51. The materials listed in this section have the full force of law. To enforce any edition other than that specified in this section, PHMSA must publish a notice of change in the Federal Register.*

*(d) American Society of Civil Engineers (ASCE), 1801 Alexander Bell Drive, Reston, VA 20191, (800) 548-2723, 703 295-6300 (international), Web site: <http://www.asce.org>.*

*(1) ASCE/SEI 7-05, "Minimum Design Loads for Buildings and Other Structures" 2005 edition (including supplement No. 1 and Errata), (ASCE/SEI 7-05), **IBR approved for § 193.2067(b)**.*

Therefore, the requirement to follow ASCE/SEI 7-05 to determine wind forces apply only to §193.2067(b)(1), shop fabricated containers of LNG or other hazardous fluids with a capacity of not more than 70,000 gallons.

For all other LNG facilities, per §193.2067(b)(2), ASCE/SEI 7-05 is not incorporated by reference and wind forces must be based on §193.2067(b)(2)(i) or §193.2067(b)(2)(ii). Therefore, for LNG facilities included in §193.2067(b)(2), it is understood that wind forces can be determined by applying §193.2067(b)(2)(i) or §193.2067(b)(2)(ii) with the edition of ASCE/SEI 7 incorporated by reference in the State Building Code enforced at the time of the design and construction of such facilities.

This is supported by the January 5<sup>th</sup>, 2015 amendment to §193.2067(b)(1) published in the Federal Register 80 FR 183, and referenced in §193.2067, that removes the "-05" edition from this requirement, allowing that a current edition of ASCE/SEI 7 could also be followed for §193.2067(b)(1).

**§193.2067 amendment as published in the Federal Register 80 FR 183 (Amdt. 193-25, 80 FR 183, Jan. 5, 2015):**

*37. Amend §193.2067 paragraph (b)(1) by removing the term "ASCE/SEI 7-05" and adding in its place the term "ASCE/SEI 7".*

We would like to confirm that to comply with §193.2067(b)(2), wind forces can be determined by applying §193.2067(b)(2)(i) or §193.2067(b)(2)(ii) with the edition of ASCE/SEI 7 incorporated by reference in the State Building Code enforced at the time of the design and construction of such facilities.

Looking forward to your feedback, I am available for future discussions as needed. Thank you for handling this matter and I look forward to hearing from you soon.

Sincerely,

**LEX DE GROOT**  
Civil Engineer