U.S. Department
of Transportation

1200 New Jersey Avenue, SE
Washington, DC 20590

**Pipeline and Hazardous
Materials Safety Administration**

August 11, 2022

Mr. Mark Zellman
BGC Engineering Inc.
600 12th Street
Suite 300
Golden, CO 80401

Dear Mr. Zellman:

In a letter to the Pipeline and Hazardous Materials Safety Administration (PHMSA), dated July 1, 2022, you requested an interpretation of the Federal pipeline safety regulations in 49 Code of Federal Regulations (CFR) Part 192 with respect to the § 192.917 requirements for operators identifying outside force damage to pipelines in high consequence areas.

You stated the 2004 edition of ASME B31.8S is incorporated by reference and approved for § 192.917 regarding protocols for addressing seismicity. Item "d" in ASME B31.8S, Section A9.2 states that "profile of ground acceleration near fault zones (greater than 0.2 g acceleration)" is a minimal data set that should be collected for each pipeline segment. However, no recommendation for a return period (e.g., 2475, 975, 475, etc.), spectral period (e.g., PGA, 0.1, etc.), or site class (760 m/s [B/C], 537 m/s [C), etc.) is provided. You asked which return period, spectral period, and site class are recommended by PHMSA.

PHMSA incorporated by reference the 2004 edition of ASME B31.8S standard and, as you stated in your request, the standard under Section A9.2(d) specifies, at a minimum, to collect several minimal data sets including, "(d) profile of ground acceleration near fault zones (greater than 0.2 g acceleration)." In addition, a review of the 2018 revision of the 2016 version of the ASME B31.8S shows the data collection requirement is the same as the 2004 edition for addressing seismicity.

The Federal pipeline safety regulations in § 192.935(a) state that "an operator must take additional measures beyond those already required by Part 192 to prevent a pipeline failure and to mitigate the consequences of a pipeline failure in a high consequence area." In addition, § 192.917(b) states "…At a minimum, an operator must gather and evaluate the set of data specified in Appendix A to ASME/ANSI B31.8S…." Therefore, the pipeline operator's procedures as well as the data composition collected and used for the assessment must be based upon pipeline operational, terrain, and environmental factors including treating seismicity as a time-independent threat per § 192.917(a).

Any considerations used in the operator's pipeline procedures for "return period, spectral period, and site class" must be based upon the operator's procedures to maintain pipeline safety through the implementation of assessment, mitigation, and reassessment procedures for the seismicity threat. As a minimum, an operator's procedures must meet the requirements in §§ 192.917, 192.935(a), (b)(2) and (c), 192.937, and 192.939.

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

Sincerely,

JOHN A GALE

Digitally signed by JOHN A GALE
Date: 2022.08.11 10:12:37 -04'00'

John A. Gale
Director, Office of Standards
and Rulemaking

BGC ENGINEERING INC.
AN APPLIED EARTH SCIENCES COMPANY
600 12th Street
Suite 300
Golden, Colorado 80401

July 1, 2022

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

Dear Mr. Gale,

Re: Formal interpretation request

Text within 49 CFR part 192.917 references ASME B31.8S regarding protocols for addressing seismicity. Item “d” in ASME B31.8S, Section A9.2 states that “*profile of ground acceleration near fault zones (greater than 0.2 g acceleration)*” is a minimal data set that should be collected for each pipeline segment. However, no recommendation for a return period (e.g. 2475, 975, 475, etc.), spectral period (e.g. PGA, 0.1, etc.), or site class (760 m/s [B/C], 537 m/s [C), etc.) is provided. Which return period, spectral period, and site class is recommend by the Pipeline and Hazardous Materials Safety Administration?

BGC ENGINEERING INC.
per:

Mark Zellman