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(unsigned version for web)
April 18, 2019

Mark D. Marini, Secretary
Department of Public Utilities
One South Station, Fifth Floor
Boston, MA 02110

Sent by email to: dpu.efiling@mass.gov; laurie.e.weisman@mass.gov

RE: D.P.U. 19-34, submitted by American Council of Engineering
Companies of Massachusetts

Dear Mr. Marini,

On behalf of the board of the American Council of Engineering Companies of
Massachusetts (ACEC/MA), I am submitting some comments in response to
D.P.U. 19-34.

ACEC/MA is the business association of engineering and land surveying firms
in Massachusetts. Our firms design the public and private infrastructure that
contributes to the economic vitality and quality of life here in the
Commonwealth. We have 120 member firms employing about 7,000 people in
the Commonwealth, including engineers, land surveyors, and other
professionals focused on public and private infrastructure.

Here are our comments:

**I. Scope of the work or services that could pose a material risk to
public safety:**

These regulations should cover, as a minimum, projects such as gas
main replacements or extensions within or crossing public or private rights-of-
way including installations on bridges and using trenchless technology
methods (horizontal directional drilling, jack & bore, etc.), gas service
replacements or installations if 2-inch in nominal diameter or greater, large
volume customer meter sets if the meter size is 4-inch in nominal diameter or
greater, district regulator and relief valve stations, city gate stations,
compressor stations, and cathodic protection systems. Other work that should
be covered includes the annual regulator and relief valve capacity calculations

review for pressure limiting and regulating stations in accordance with 49 CFR 192.739.

II. Scope of documents that should bear a professional engineer's stamp:

Design drawings, calculations, reports, and project specific procedures prepared for any of the above listed types of projects should bear a professional engineer's stamp. This does not include a construction contractor's means and methods.

Engineering Instruments of Service should bear a professional engineer's stamp. 250 CMR § 2.09 defines Instruments of Service as "any document or medium memorializing the professional service or creative work of engineering and land surveying involving the special education, training, and experience of the nature required for registration as a Professional Engineer or Professional Land Survey." We believe this definition might be overbroad since it could include, among other things, preliminary engineering documents, not issued for construction documents, or engineering calculations. ACEC/MA suggests a more precise definition for Instruments of Service, i.e. "Instruments of Service include the final drawings, plans, specifications, plats, reports, and project specific procedures prepared by, or under the Direct Charge and Supervision of, a registered Professional Engineer. Instruments of Service do not include interim drawings, plans, specifications, plats and reports or drawings, plans, specifications, plats and reports that are marked "preliminary," "not for construction," "for plan check only," or "for review only.""

III. Role of the professional engineer with regard to this work or services:

The professional engineer should be in responsible charge for the design projects assigned and that will bear his/her stamp. This includes Instruments of Service prepared by gas company personnel under the direct supervision of the professional engineer.

A professional engineer shall apply his or her engineering education, training and experience in personally creating gas pipeline engineering Instruments of Service or in exercising direct charge and supervision in the creation of gas pipeline engineering Instruments of Service per 250 CMR § 5.04.

IV. Compatibility with the federal minimum safety standards (49 C.F.R. Part 192):

These regulations should cover, as a minimum, the design of gas utility systems that fall under the jurisdiction of the Pipeline & Hazardous Material Safety Administration (PHMSA) under 49 CFR Part 192 and Massachusetts DPU under 220 CMR 101.00. See response to first item above.

V. Application of the regulations to work or services started prior to the regulations' effective date:

The regulations should be applicable to work or services started on or after the effective date. We do not believe the regulations should be applied retroactively. Retroactive application would force a professional engineer to stamp Instruments of Service that the engineer did not personally create or did not have direct charge and supervision in the creation of in violation of 250 CMR §§ 5.03(3) and (5). While under 250 CMR § 5.03(4) a professional engineer can adopt the work of another engineer, that engineer must perform “a detailed and thoroughly documented review.” Under such circumstances, the regulations would not apply retroactively since the engineer would not be adopting past engineering work as his or her own but would be exercising his or her independent engineering judgment going forward.

VI. Availability of professional engineers to perform the work that the regulations would require them to complete and how their availability could affect the completion of necessary work:

Regionally there appears to be adequate professional engineers available from A/E firms to perform the work that the regulations would require. The availability should have little impact

on the completion of necessary work, but will likely require gas companies to plan further ahead and use different contracting methods such as on-call engineering and consulting services with A/E firms to minimize the impact on project schedules.

For work done in-house at a utility, the utility engineering department would need to ensure that at least one professional engineer with applicable training and experience is designated to be in direct charge and supervision of the creation of all Instruments of Service developed by that engineering department or would need to contract with external consulting engineering firms that would perform this work.

VII. How the regulations should apply to emergency work:

The regulations should not impact the ability to respond to emergency work. Professional engineers should be consulted and used to expedite the response. We do not think the regulations should make a distinction between emergency and non-emergency engineering work. In each case a professional engineer is required to assess the circumstances and exercise his or her professional judgment consistent with the standard of care.

With respect to pipeline operations, the regulations could require that operations establish written procedures similar to 49 CFR § 192.615.

VIII. Limitations on the potential liability that professional engineers could face for the work that regulations would require them to complete:

Monetary or insurance limit limitations of liability are usually a contract negotiation issue between engineering firms and their clients. In some states, clients may circumvent a limitation of liability provision in a contract naming the engineering firm as a party by joining the engineer who stamped the Instruments of Service in a lawsuit. Under such circumstances, it would be the engineer who stamped the gas line Instruments of Service who is named in the lawsuit. This issue was remedied by the Florida legislature in 2013 when it enacted a statute wherein a design

professional employed by an engineering firm is exempted from individual liability resulting from negligence provided certain prominent contract language is added to the contract.

Specifically, F.S.A. § 558.0035 provides:

- (1) A design professional employed by a business entity or an agent of the business entity is not individually liable for damages resulting from negligence occurring within the course and scope of a professional services contract if:
 - (a) The contract is made between the business entity and a claimant or with another entity for the provision of professional services to the claimant;
 - (b) The contract does not name as a party to the contract the individual employee or agent who will perform the professional services;
 - (c) The contract includes a prominent statement, in uppercase font that is at least 5 point sizes larger than the rest of the text, that, pursuant to this section, an individual employee or agent may not be held individually liable for negligence;
 - (d) The business entity maintains any professional liability insurance required under the contract; and
 - (e) Any damages are solely economic in nature and the damages do not extend to personal injuries or property not subject to the contract.
- (2) As used in this section, the term “business entity” means any corporation, limited liability company, partnership, limited partnership, proprietorship, firm, enterprise, franchise, association, self-employed individual, or trust, whether fictitiously named or not, doing business in this state.

ACEC/MA advocates a similar protection for individual engineers.

IX. Use of a professional engineer’s stamp on generic or standard plans:

Standard or typical details or designs can exist with appropriate notes stating that they need to be checked for applicability with the specific project requirements. These standard or

typical details or designs should only be stamped as a part of the specific project drawing package.

This comment addresses “generic or standard plans” in the context of Instruments of Service using our proposed definition above. Use of a professional engineer’s stamp is addressed in 250 CMR § 5.03. Under 250 CMR § 5.03(3):

A Registrant shall affix his or her seal only to Instruments of Service produced by the Registrant personally or under the Registrant's Direct Charge and Supervision, except as provided in 250 CMR 5.03(4).

Under 250 CMR § 5.03(4):

A Registrant may review and adopt work started by or under another Registrant's Direct Charge and Supervision provided the adopting Registrant has performed a detailed and thoroughly documented review and will assume complete responsibility for the work of that previous Registrant.

There is no exception for generic or standard plans; nor is it our position that there should be. In other words, a professional engineer who affixes his or her stamp to any plan should have a thorough engineering understanding of what that plan represents or the engineering design concept that the plan is intended to achieve.

X. Incorporation of the regulations into operations and maintenance procedures (49 C.F.R. § 192.605):

The regulations do not need to be incorporated into the development, review and revisions to operations and maintenance procedures required under 49 CFR 192.605 since the majority of the gas utilities have experienced personnel in-house that can perform this work. A management of change process should be required that mandates the process for the review and approvals across applicable departments within a gas utility including their gas engineering

department. Gas utilities that don't have the internal resources to perform this work then will still have the option to outsource this work.

XI. Development of guidelines for operational activities (49 C.F.R. Part 192):

If not already in place, gas utilities need to develop standard operating procedures to ensure that construction plans not only meet these regulations but also include a review by all affected internal stakeholders. A management of change process to deal with design changes that occur during construction should also be developed by gas utilities.

XII. How the regulations could work or conflict with other regulations:

These regulations should not have a conflict with other regulations and should not substantially change the current project execution work flow. The intent of the regulation is to provide better oversight on the design of gas utility systems to minimize the risk to the health and welfare of the public.

For the most part, we believe the utility regulations would work with other regulations. Most notably, gas pipeline engineering Instruments of Service would need to be stamped by the engineer who personally created them or under whose direct charge and supervision they were created.

We welcome the opportunity to discuss the issues raised D.P.U. 19-34 to improve public safety for the Commonwealth's natural gas infrastructure. Thank you for your consideration. For more information, please contact Abbie Goodman, agoodman@engineers.org or 617-305-4112.

Sincerely yours,

(signed version filed with DPU)

Abbie R. Goodman
ACEC/MA Executive Director

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