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Dr. Cynthia A. Znati
Docket Management Facility (M-30)
U.S. Department of Transportation
West Building Ground Floor, Room W12-140
1200 New Jersey Avenue SE
Washington, DC 20590-0001

VIA EMAIL

Re: Carriage of Conditionally Permitted Shale Gas Extraction Waste Water in Bulk Policy [Docket No. USCG-2013-0915]

Dear Dr. Znati:

These comments are filed on behalf of the Independent Petroleum Association of America, the Independent Oil & Gas Association of West Virginia, the Pennsylvania Independent Oil & Gas Association, the Kentucky Oil & Gas Association and the Ohio Oil and Gas Association of America (together, the “Independent Associations”) on the United States Coast Guard’s “Proposed Policy Letter: Carriage of Conditionally Permitted Shale Gas Extraction Waste Water in Bulk” (“Proposed Policy”). Collectively, these groups represent the thousands of independent oil and natural gas explorers and producers, as well as the service and supply industries that support their efforts, including barging companies that desire to barge “shale gas extraction waste water” (“SGEWW”) and will be most significantly affected by the Proposed Policy. Independent producers drill about 95 percent of American oil and natural gas wells, produce about 54 percent of American oil, and more than 85 percent of American natural gas. These significant contributions to our nation’s energy security should be encouraged and facilitated.

The Independent Associations appreciate the opportunity to comment on the Proposed Policy. The ability to barge SGEWW represents a “win-win” scenario for the environment and the industry and the Independent Associations support the Coast Guard’s efforts to formulate a policy that will enable such barging to occur. However, the Independent Associations do have a number of specific concerns with the Proposed Policy as elaborated on below, and request that the Coast Guard not rush to judgment simply to conclude the public review process for the sake of finalizing the policy. The Proposed Policy is appreciated, but certain issues discussed below need to be addressed so that barging of SGEWW in a safe and reasonable manner can occur.

Availability of the Proposed Policy was published in the *Federal Register* on October 30, 2013, providing a 30-day comment period that would conclude on November 29, 2013. 78 Fed. Reg. 64905 (Oct. 30, 2013). Although the *Federal Register* notice provided instructions on how to obtain the Proposed Policy from the federal government’s rulemaking docket, the docket had

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not yet been established and the Proposed Policy was not available from the docket on October 30, 2013. While I appreciate that you provided me the link to the Proposed Policy on the Coast Guard's website later in the day on October 30, 2013, as a practical matter the Proposed Policy was not available to the general public until sometime after the 30th. As a result in the delay of the Proposed Policy's availability, the intervening Thanksgiving holiday, and the need to assess the potential impact or benefit of the Proposed Policy to individual members of the Independent Associations, the Independent Associations requested additional time to submit comments on the Proposed Policy. Although no formal extension of the comment period was published in the *Federal Register*, we exchanged emails on November 21, 2013, confirming that comments submitted by December 6, 2013 would be accepted and responded to as if they were submitted on or prior to November 29, 2013.

The Independent Associations appreciate that the Proposed Policy is intended to facilitate the bargaining of SGEWW and the Coast Guard has stated that the "policy letter is not a regulation and is not binding on the regulated public." Proposed Policy at 2. Yet, the Independent Associations question the accuracy of this statement. The introductory paragraph, titled "Purpose," states that "[a] barge owner who has not been granted an endorsement or letter under 46 CFR 153.900(d), or who has not provided the information defined by this policy letter, or who has not complied with the additional requirements this policy letter describes, is prohibited from transporting SGEWW in bulk on that barge." *Id.* at 1. Moreover, although the "Discussion" section of the document suggests that the Coast Guard will be able to exercise discretion as to certain requirements that it "may" *impose*, the reality is that a barge owner must comply with the terms of the Proposed Policy in order to barge SGEWW. *Id.* at 3-4. The reality is that barge owners interested in transporting SGEWW are currently prohibited from doing so and that unless barge owners followed the Proposed Policy they cannot transport SGEWW.

A. SGEWW is not defined in the Proposed Policy

The Proposed Policy purports to apply to "shale gas extraction waste water." Although the Proposed Policy contains a "Definitions" section, SGEWW is not defined. The "Background" section of the Proposed Policy states that:

SGEWW, also known as "frack water," is a by-product of drilling for natural gas using unconventional hydraulic fracturing (or "fracking") technology, which involves the injection of water, sand, and chemical additives. The sand remains in the well but a substantial portion of the injected fluid re-surfaces after the drilling and must be handled as SGEWW.

Id. at 2-3. In fact, SGEWW is not defined by any regulatory authority. Inferring that SGEWW is also known as "frack water" is inappropriate. It is not a phrase accepted or endorsed by the regulated community. The Independent Associations assume that the Coast Guard's Proposed Policy would apply to produced water, or what the Coast Guard in its own regulations and policies has referred to as "produced brine" or "drilling brine." Since the Proposed Policy fails to define the phrase SGEWW, the Independent Associations are unclear as to what the Proposed Policy is intended to regulate. For the remainder of these comments, the Independent Associations will refer to the phrase as "produced water" as generally understood and accepted

in the industry. Although not clearly stated, it appears that the Proposed Policy is directed at produced water from the Marcellus shale formation. *Id.* at 3 (*see* Subsection 7.c, referencing the “elevated” radioactive isotopes from Marcellus shale produced waters discussed in the United Geological Survey Scientific Investigations Report 2011-5135”). If the Proposed Policy is intended to apply to all produced water generated anywhere in the United States, then a) the Coast Guard should affirmatively state that and b) if the Proposed Policy is intended to apply only to produced water from the Marcellus shale formation, the Proposed Policy should state that and provide justification for differential treatment of produced water from the Marcellus shale formation.

Furthermore, the Independent Associations question whether the new term of SGEWW is necessary at all. Navigation and Vessel Inspection Circular 7-87 (titled “Guidance on Waterborne Transport of Oil Field Wastes”) is applicable, as it defines “oil field wastes” to include “produced brine or produced water.” If SGEWW, as referred to in the Proposed Policy, is sufficiently different than produced brine or produced water currently considered to be an “oil field waste”, then the Coast Guard should explain in the Proposed Policy how it is different and why it warrants differential treatment.

B. Hazardous Material does not mean Hazardous Waste

Another concern of the Independent Associations is the potential for confusion and unnecessary public concern that results from characterizing the produced water as a “hazardous material” for purposes of barge transportation. The same produced water the Coast Guard’s Proposed Policy seeks to regulate has been characterized by the Environmental Protection Agency as oil and gas exploration and production waste that is exempt from regulation as a “hazardous waste” under Subtitle C of the federal Resource Conservation and Recovery Act (“RCRA”). 42 U.S.C. § 6921. The Environmental Protection Agency has specifically stated that the transfer of this waste for transportation to disposal sites does not alter its exempted status under RCRA. The Proposed Policy should explicitly state that the Coast Guard’s characterization of the produced water as potentially “hazardous material” in no way affects the RCRA exemption.

C. Frequency and Scope of Analysis

Based on the Proposed Policy and discussions with Coast Guard, it appears the primary driver for the Proposed Policy is the potential for the produced water to contain radium-226 (“Ra-226”) and radium-228 (“Ra-228”). Ra-226 and Ra-228 are naturally occurring radioactive materials (“NORM”) found in certain produced water and are of limited concern or threat to humans or the environment. The survey and venting requirements of the Proposed Policy appear to be aimed at detecting health threats with “personnel, Coast Guard or otherwise” entering “into the barge” and venting of radon trapped in the head space of the barge or tank. The Independent Associations generally support such requirements as appropriate to protect barge personnel and Coast Guard employees that monitor barging operations.

However, the extensive “Analysis for Hazardous Materials Including Radioisotopes” (“Analysis”) required for every barge load of produced water is excessive and unwarranted. As

discussed in the previous paragraphs, it appears that the primary driver for the Proposed Policy is the R-226 and R-228 potentially present in produced water, which does not appear to be elevated or concentrated to the degree that it represents a threat to human health or the environment. Although the Proposed Policy indicates that the Commonwealth of Pennsylvania's Department of Environmental Protection Bureau of Waste Management Form 26R is included as an example only, the Proposed Policy requires produced water to be tested for at least the same 50 chemicals or characteristics that is required by Form 26R. No justification for such extensive testing is provided. If R-226 and R-228 are the Coast Guard's primary concern, why require 48 other chemicals or characteristics to be analyzed? And while the Proposed Policy cites Form 26R "solely to provide an example for the analysis requirements," it is relevant that Pennsylvania's Form 26R was developed in conjunction with an **annual** testing requirement—and is not required for every shipment. Completion of the form for every barge load is overly burdensome and simply unnecessary. The Independent Associations request that the Proposed Policy be revised to target the constituents of concern and reduce the scope and frequency of the Analysis.

D. DOT Regulations

While clearly concerned with the level of radioactivity in the produced water, the Proposed Policy misconstrues the radioactivity concentration and consignment activity "limits" established by the Department of Transportation ("DOT") at 49 C.F.R. § 173.436. 49 C.F.R. Part 173 establishes general requirements for shipments of hazardous materials, and Subpart I establishes requirements for the packaging and transportation of Class 7 (radioactive) materials. "Radioactive Materials" are defined as "any material containing radionuclides where **both** the activity concentration and the total activity in the consignment **exceed** the values specified in the table in § 173.436 or values derived according to the instructions in § 173.433." 49 C.F.R. § 173.403 (emphasis added). Section 173.436 is entitled "Exempt material activity concentrations and exempt consignment activity limits for radionuclides" and includes a table of values for the concentration and consignment activity limits. If the concentration or consignment activity limit is below the threshold set in the table, the material is not considered radioactive material and not subject to 49 C.F.R. Part 173.

The Proposed Policy uses the thresholds contained in § 173.436 as a ceiling, prohibiting shipping materials with levels above **either** of the limits, instead of the way the DOT intended—as a floor, below which no regulation is required. The Proposed Policy incorporates additional stringency by prohibiting barging if either the concentration or the consignment activity level is exceeded, while the DOT regulations require that **both** limits be exceeded before the regulations become applicable. *Id.* The Proposed Policy also ignores an explicit statement in the "scope" or applicability section of Subpart I that the regulations do not apply to materials containing NORM unless the activity concentration exceeds the values specified in 40 C.F.R. § 173.436 by ten. *Id.* § 173.401(b)(4).

Also, unlike the DOT regulations, which establish shipping requirements for materials that exceed both values in 40 C.F.R. § 173.436, the Proposed Policy would prohibit barging of the material entirely. While it has been suggested that the barge owner should reduce the volume in the barge or dilute the produced water, neither option is realistic, feasible or necessary. The thresholds for Ra-226 and Ra-228 established in 40 C.F.R. § 173.436 support the conclusion that

produced water with concentrations below those levels should not be regulated as hazardous materials. The Proposed Policy assumes just the opposite—that any produced water with concentrations below the threshold is assumed to be hazardous and any barge loads that exceed the thresholds are prohibited entirely.


E. Effect of proposed concentration levels

Finally, the “Sample Calculations for Maximum Allowed Volume” included in Enclosure 3 raise concerns that the Coast Guard may be underestimating the true impact of the Proposed Policy on the ability to barge produced water. As the calculations in example 1 and 2 of the enclosure demonstrate, the concentration of Ra-226 (or Ra-228) will have a dramatic impact on the volume of produced water that can be shipped: with an assumed Ra-226 concentration of 150 pCi/l, a barge owner could ship 28,571 barrels (well above the maximum capacity of the barge); but with an assumed Ra-226 concentration of 550 pCi/l, the maximum volume drops to 2279 barrels. The Proposed Policy characterizes the 550 pCi/L as a “high” radium concentration without elaborating on the basis for this characterization. Publicly available data suggest 550 pCi/L is not necessarily “high.” At some point, the allowed volume becomes so small that it will not be economical to ship via barge (*e.g.*, if the barge can only be filled less than a quarter of the way full).

F. Conclusion

The Independent Associations request that the Coast Guard address the issues raised above and revise the Proposed Policy accordingly. The Independent Associations and their individual members value the ability to ship produced water by barge and are deeply concerned that the Proposed Policy will make barging of the material uneconomical. The Independent Associations hope to work with the Coast Guard to craft a policy that is protective of human health and the environment while also beneficial to the industry.

Respectfully,



James D. Elliott

On Behalf of the Independent Associations

cc: Docket No. USCG-2013-0915
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