AMERICAN EXPLORATION & PRODUCTION COUNCIL

INDEPENDENT PETROLEUM ASSOCIATION OF AMERICA

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Mark Seltzer
Document Control Office (7407M)
Office of Pollution Prevention and Toxics
U.S. Environmental Protection Agency
1200 Pennsylvania Ave. NW
Washington, DC 20460-0001

Re: EPA-HQ-OPPT-2011-1019 (79 Fed. Reg. 28664, May 9, 2014)
EPA Rulemaking Under TSCA for Hydraulic Fracturing Chemicals is both Unnecessary and Duplicative Given Publicly Available Information and is Not Authorized by Statute

Dear Mr. Seltzer:

The American Exploration and Production Council ("AXPC") and Independent Petroleum Association of America ("IPAA") appreciate the opportunity to provide input and comment on the Environmental Protection Agency's ("EPA's") Advanced Notice of Proposed Rulemaking ("ANPR") under 40 CFR Chapter I, Subchapter R, under the Toxic Substances Control Act[1] ("TSCA") on Hydraulic Fracturing Chemicals and Mixtures, published May 19, 2014[2]. While the ANPR is broad in scope and in information requested, these comments will focus specifically on three specific areas: that (1) due to the availability of FracFocus and other authorities, there is no demonstrated necessity for EPA to use TSCA authority to acquire the information discussed in the ANPR, (2) without such necessity TSCA does not authorize new reporting requirements and (3) TSCA should not apply to the use of chemicals in fracturing because producers are not putting the products into commerce.

It is also the position of AXPC and IPAA that EPA has not yet conducted an appropriate gap analysis to demonstrate that information requested in the ANPR was not currently available. EPA should conduct such an analysis before promulgating any new rule under TSCA for hydraulic fracturing chemicals. These comments will concisely explain this position and respond directly to certain questions presented by EPA.

[1] 15 U.S.C. § 2601-2692
[2] 79 Fed. Reg. 28664

Background

AXPC is a national trade association representing 34 of America's largest and most active independent natural gas and crude oil exploration and production companies. AXPC's members are "independent" in that their operations are limited to the exploration for and the recovery of natural gas and crude oil. Moreover, its members operate autonomously, unlike their fully integrated counterparts, which operate in additional segments of the energy business, such as downstream refining and marketing. AXPC's members, driven by their unique position as large independent operators, are leaders in development and application of innovative and advanced technologies necessary to continue to explore for and recover crude oil and natural gas. Thanks to their position as industry technology leaders, they provide our nation with expanding domestic energy reserves at reasonable prices, developed in an environmentally responsible manner.

IPAA represents the thousands of independent oil and natural gas explorers and producers, as well as the service and supply industries that support their efforts, that will most directly be impacted by the proposed actions. Independent producers develop 95 percent of American oil and natural gas wells, produce 54 percent of American oil and produce 85 percent of American natural gas. IPAA is dedicated to ensuring a strong, viable American oil and natural gas industry, recognizing that an adequate and secure supply of energy is essential to the national economy.

Members of both organizations have substantial interest and expertise in both the hydraulic fracturing process, and the management of chemicals throughout the completion process. Both as pioneers of the process itself, and as investors in the research and development of the high-tech process, AXPC and IPAA member companies are pleased to provide valuable information to aid in EPA's decision process as EPA researches what data is currently available surrounding hydraulic fracturing chemicals. Given the preliminary stage of the ANPR, the associations will specifically focus on those sources of information to which EPA already has access, and how they can be used to satisfy the information requested in the ANPR. This information is vital to the conversation around TSCA for hydraulic fracturing chemicals, as it can assist EPA to satisfy its mandate to avoid unnecessary and duplicative requirements.

Role of TSCA and EPA Regulatory Authority

TSCA was promulgated to serve as a gap-filling statute to identify and control chemicals that were not otherwise regulated under other federal environmental statutes. Congress enacted TSCA with the intention that TSCA would generate the development of data and information by producers (i.e., manufactures, importers and processors – *not users*) of chemicals in commerce.

With respect to the thousands of chemicals prevalent in American commerce at the time of enactment, Congress directed EPA to require the testing and data collection requirements only be imposed on existing chemicals when certain conditions existed. Specifically, EPA could require test data on existing chemicals under Section 4 of TSCA if:

(1) the manufacture, processing, distribution, use or disposal of the chemical "may present an unreasonable risk;" or (2) the chemical is produced in very large volume and there is potential for a substantial quantity to be released into the environment or for substantial or significant human exposure.[3] EPA has not determined either of these to be the case, and has on multiple occasions confirmed the opposite:

> "In its review of incidents of drinking water well contamination believed to be associated with hydraulic fracturing, EPA found no confirmed cases that are linked to fracturing fluid injection … or subsequent underground movement of fracturing fluids."[4]
>
> "I'm not aware of any proven case where the fracking process itself affected water."[5]
>
> "There's nothing inherently dangerous in fracking that sound engineering practices can't accomplish."[6]

Moreover, Congress limited EPA's authority to regulate under TSCA to those instances when the risks created by chemicals in commerce cannot be reduced to a sufficient degree under another federal law, whether administered by the EPA or some other federal entity.[7]

Finally, TSCA vests EPA with authority to require recordkeeping, and other reporting requirements. TSCA section 8(a) gives EPA authority to require, by rulemaking, chemical manufacturers and processors to maintain records and submit to EPA reports about chemical substances and mixtures, as well as environmental and health data on those substances and mixtures. Additionally, TSCA section 8(d) authorizes EPA to require manufacturers, processors, and distributors of any chemical substance or mixture and persons who propose to manufacture, process, or distribute in commerce any chemical substance or mixture to submit health and safety studies to EPA. Clearly, the authority granted to EPA is limited in application to manufacturers, processors and distributors of chemicals in commerce and is not applicable to end users.[8]

[3] 15 U.S.C. § 2603(1)(A-B)
[4] Evaluation of Impacts to Underground Sources of Drinking Water by Hydraulic Fracturing of Coalbed Methane Reservoirs; National Study Final Report, Study Fact Sheet. EPA 816-F-04-017, 2004
[5] Lisa Jackson, before the U.S. Senate Committee on Environment and Public Works, 5/24/11
[6] Gina McCarthy, National Journal, 11/6/13
[7] 15 U.S.C. § 2608(a-b), (d)
[8] 15 U.S.C. § 2607(a), (d)

Relevant TSCA Definitions

EPA must follow several statutory requirements under TSCA when promulgating new rules or requests for information. Primarily, as mentioned in the ANPR, EPA "shall not require under [§8(a)] paragraph (2), any reporting which is unnecessary or duplicative."[9] Further, requests for information can only be made of certain classes of businesses and individuals, specifically manufacturers, processors, and distributors. Statutorily, several definitions are important to understanding the limits under which EPA must operate:

> ***Commerce*** is defined as "trade, traffic, transportation, or other commerce (A) between a place in a State, and any place outside of such State, or (B) which affects trade, traffic, transportation, or commerce described in (A)."[10]
>
> ***Distribute into commerce*** and ***Distribution into commerce*** are defined as "to sell, or the sale of, the substance, mixture, or article in commerce; to introduce or deliver for introduction into *commerce*, or the introduction or delivery for introduction into *commerce* of, the substance, mixture, or article; or to hold, or the holding of, the substance, mixture, article, or article after its introduction into *commerce*."[11]
>
> ***Processor*** is defined as "any person who processes a chemical substance or mixture," where ***processes*** is defined as, "the preparation of a chemical substance or mixture, after its manufacture, for *distribution in commerce* (A) in the same form or physical state as, or in a different form or physical state from that in which it was received by the person so preparing such substance or mixture, or (B) as part of an article containing the chemical substance or mixture.[12]

These definitions are vital to EPA's research and rule development process because TSCA §8(a) information requests can only be made of manufacturers or processors of the chemical substances in question, and TSCA §8(d) health and safety study requests can only be made of manufacturers and processors of the chemical substance in question, or those parties who distribute the chemical substance in question into commerce.

[9] 15 U.S.C. § 2607(a)(2)
[10] 15 U.S.C. § 2602(3)
[11] 15 U.S.C. § 2602(4)
[12] 15 U.S.C. § 2602(10)

Chemicals Currently Used in the Hydraulic Fracturing Process

A typical hydraulic fracturing completion is composed of greater than 98% water and sand, or some other proppant.[13] The remaining 0-2% of the mixture is made up of chemical additives, which change the chemical properties of the water being injected to allow for better propagation of fractures, better production of hydrocarbons, and protection for the well from scaling and bacteria. Chemicals used in hydraulic fracturing typically fall into one of several categories: Acids, Corrosion Inhibitors, Biocides, Breakers, Clay Stabilization Agents, Crosslinkers, Friction Reducers, Gels, Iron Control Agents, Non-Emmulsifiers, pH Adjustment, Proppants, Scale Inhibitors, and Surfactants. Each well does not require a chemical from each category, as chemical selection varies by basin and formation characteristics. The Ground Water Protection Council ("GWPC") provides descriptions on its website about what each of these categories of chemicals are used for[14]:

Additive	Purpose	Downhole Result
Acid	Helps dissolve minerals and initiate cracks in the rock	Reacts with minerals present in the formation to create salts, water, and carbon dioxide (neutralized)
Acid/Corrosion Inhibitor	Protects casing from corrosion	Bonds to metal surfaces (pipe) downhole. Any remaining product not bonded is broken down by micro-organisms and consumed or returned in produced water.
Biocide	Eliminates bacteria in the water that can cause corrosive by products	Reacts with micro-organisms that may be present in the treatment fluid and formation. These micro-organisms break down the product with a small amount of the product returning in produced water.
Base Carrier Fluid (water)	Create Fracture Geometry and Suspend Proppant	Some stays in formation while remainder returns with natural formation water as "produced water" (actual amounts returned vary from well to well)
Breaker	Allows a delayed break down of gels when required.	Reacts with the "crosslinker" and "gel" once in the formation making it easier for the fluid to flow to the borehole. Reaction produces ammonia and sulfate salts which are returned in produced water.
Clay and Shale Stabilization/control	Temporary or Permanent Clay Stabilizer to lock down clays in the shale structure	Reacts with clays in the formation through a sodium - potassium ion exchange. Reaction results in sodium chloride (table salt) which is returned in produced water. Also replaces binder salts like Calcium Chloride helping to keep the formation in tact as the Calcium Chloride dissolves.
Crosslinker	Maintains viscosity as temperature increases	Combines with the "breaker" in the formation to create salts that are returned in produced water
Friction Reducer	Reduces Friction effects over base water in pipe	Remains in the formation where temperature and exposure to the "breaker" allows it to be broken down and consumed by naturally occurring micro-organisms. A small amount returns with produced water.
Gel	Thickens the water in order to suspend the proppant	Combines with the "breaker" in the formation thus making it much easier for the fluid to flow to the borehole and return in produced water
Iron Control	Iron chelating agent that helps prevent precipitation of metal oxides	Reacts with minerals in the formation to create simple salts, carbon dioxide and water all of which are returned in produced water
Non-Emulsifier	Used to break or separate oil / water mixtures (emulsions)	Generally returned with produced water, but in some formations may enter the gas stream and return in the produced natural gas.
pH Adjusting Agent/Buffer	maintins the effectiveness of other additives such as crosslinkers	Reacts with acidic agents in the treatment fluid to maintain a neutral (non-acidic, non-alkaline) pH. Reaction results in mineral salts, water and carbon dioxide which is returned in produced water.
Propping Agent	Keeps Fractures Open allowing for hydrocarbon production	Stays in formation, embedded in fractures (used to "prop" fractures open)
Scale Inhibitor	Prevent Scale in Pipe and Formation	Product attaches to the formation downhole. The majority of product returns with produced water while remaining reacts with microorganisms that break down and consume the product.
Surfactant	Reduce Surface tension of the treatment fluid in the formation and helps improve fluid recovery from the well after the frac is completed	Some surfactants are made to react with the formation, some are designed to be returned with produced water, or, in some formations they may enter the gas stream and return in the produced natural gas.

Sources of Information

AXPC and IPAA understand that a large portion of the data EPA is interested in will be accessed by EPA through FracFocus, a chemical disclosure registry managed by the GWPC. Several members of AXPC and IPAA were vital to the development and implementation of FracFocus, using it to disclose chemicals used in the hydraulic fracturing process long before this disclosure was required by the states. Due to these voluntary efforts

[13] Department of Energy, National Energy Technology Laboratory. Modern Shale Gas Development in the United States: A Primer, April 2009 Pg. 62. Available at: http://energy.gov/sites/prod/files/2013/03/f0/ShaleGasPrimer_Online_4-2009.pdf

[14] Available at http://www.fracfocus.org/chemical-use/why-chemicals-are-used

and use of FracFocus by eighteen states[15] for chemical disclosure reporting, FracFocus contains over 70,000 wells that have been completed with hydraulic fracturing since 2011. These states, combined with New Mexico and Wyoming which also require public disclosure outside of FracFocus, account for 99% of current oil production from and 98% of gas production within the United States. AXPC and IPAA are unaware of other industries which are currently supplying such detailed and accessible chemical use information as is evidenced by the natural gas and crude oil exploration and production industry.

However, FracFocus is not the sole source of data that can be used to satisfy EPA's requests for information. Oil and Natural Gas operators, as well as other industries, are already required to maintain certain information about materials used and stored on site under the Emergency Planning and Community Right-to-Know Act ("EPCRA"). This act requires that Material Safety Data Sheets ("MSDS") are updated as necessary and stored on site to be provided to emergency personnel should the need arise. Also, if storage is above certain levels, copies of those MSDS sheets are provided to the State Emergency Response Commissions. There are both commercial, non-profit, and government organizations that store and organize these MSDS documents for research and review that could be used by EPA to learn more information about all additives used in the hydraulic fracturing process.

EPA itself is also conducting an extensive analysis of existing data on the chemical composition of hydraulic fracturing fluids as part of its hydraulic fracturing study. In September 2010, EPA issued information requests to nine hydraulic fracturing service companies seeking information on the identity and quantity of chemicals used in hydraulic fracturing fluid between 2005-2010.[16] EPA also analyzed detailed well files from nine oil and gas operators on 350 hydraulic fracturing operations,[17] and analyzed data from 12,173 well record posted to FracFocus in 2011 and 2012.[18] Appendix A to the Progress Report issued in 2012 contains tables with over 1,000 chemicals for which EPA is compiling chemical, physical, and toxicological properties. According to EPA, "the following information collected from the service companies is being assembled to identify the composition of different hydraulic fracturing fluid formulations and the factors that influence formulation composition:

- Chemical name,
- Chemical formula,
- Chemical Abstracts Service Registration Number (CASRN),
- Material Safety Data Sheets (MSDSs) for each fluid product,
- Concentration of each chemical in each fluid product,
- Manufacturer of each product and chemical,
- Prupose and use of each chemical in each fluid product.[19]

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[15] Chemical Disclosure via FracFocus is currently required in Alabama, Alaska, Arkansas, California, Colorado, Kansas, Louisiana, Mississippi, Montana, Nebraska, North Dakota, Ohio, Oklahoma, Pennsylvania, South Dakota, Texas, Utah, and West Virginia.

[16] EPA, *Study of the Potential Impacts of Hydraulic Fracturing on Drinking Water Resources: Progress Report*, p. 39 (EPA 601/R-12/011, December 2012) (available at http://www2.epa.gov/hfstudy/study-potential-impacts-hydraulic-fracturing-drinking-water-resources-progress-report-0).

[17] *Id.* at 47-48.

[18] *Id.* at 58.

[19] Progress Report, p. 41.

From this data, EPA has indicated its intent to summarize:

- Formulations, products, and product functions;
- Products, chemicals in those products and concentrations, and manufacturers of each product;
- Number of products reported for a given product function and the frequency with which a product function is reported in the formulations data,
- Number of products and chemicals for each type of formulation, and
- Typical loadings for each group of products of a given product function and for each fluid formulation type.[20]

EPA has also identified nine sources of "authoritative information on chemicals used in hydraulic fracturing fluids," from which EPA has compiled a list of chemicals reported to be used in hydraulic fracturing fluids, against which it is also cross-referencing the information provided by the service companies, described above.[21] From this compiled list EPA has or plans to derive the physiochemical and toxicological properties of the chemistry.[22] According to the Progress Report,

> EPA is creating a Distributed Structure-Searchable Toxicity DSSTox) chemical inventory for chemicals reported to be used in hydraulic fracturing fluids…The hydraulic fracturing DSSTox chemical inventory will contain CASRNs, chemical names and synonyms, and structure data files (where available). The structure data files can be used with existing computer software to calculate physiochemical properties, as described in Chapter 6.[23]

Much of the work contemplated by the ANPR thus appears redundant to work EPA is already undertaking. At the very least, EPA's answer to its question posed in the ANPR of whether or not "information about the chemicals and mixtures used in hydraulic fracturing activities is provided to the public in a transparent fashion" should await the conclusion of EPA's own attempt to synthesize and publish such information.

Additionally, chemicals used in hydraulic fracturing operations are primarily chemicals used in many other industrial and consumer applications. As such, these chemicals are and have been subject to TSCA reporting and testing requirements at the chemical manufacturing and processing levels. In the ANPR, EPA has not demonstrated that the information currently available from manufacturers, importers, and processors under existing TSCA programs is insufficient to address questions relative to the health and safety of chemicals used in hydraulic fracturing.

[20] *Id.* at p. 42.
[21] *Id.* at 123-24.
[22] *Id.*
[23] *Id.* at 196.

Further, EPA could use data provided to the House Energy and Commerce Committee by many of the service companies involved in hydraulic fracturing.[24] This information outlines many of the chemicals used in the hydraulic fracturing process. Similar information requests could be made of the same service companies by EPA, should EPA determine that more information is required.

Collaboration with Other Entities

AXPC and IPAA are aware that EPA is just one of multiple government agencies and organizations that are studying hydraulic fracturing, both with respect to proposing new rules as well as understanding the efforts taken to ensure the resources is developed safely and responsibly. For example, the Department of Interior, under the Bureau of Land Management is currently in the development of regulations, and considering requiring the use of FracFocus for hydraulic fracturing chemical reporting on federal wells. The Department of Energy ("DOE") in conjunction with EPA is currently studying hydraulic fracturing chemical use and its potential impacts. AXPC and IPAA strongly encourage EPA to work more openly with the BLM and the DOE before proposing any new rules to ensure both that the data is not already currently available, but also to better understand what data, if any, is missing.

It is also important to note other groups that EPA has worked with in the past, namely the GWPC and the State Review of Oil and Natural Gas Environmental Regulations ("STRONGER"). These two organizations have been working on and studying hydraulic fracturing issues for over thirty years. Due to the research done by the GWPC and the state review process implemented by STRONGER, there is a great body of knowledge and expertise within both groups, which have worked with EPA in past rulemaking efforts. EPA should not neglect the opportunity to use this knowledge to help perform a gap analysis before undertaking rulemaking concerning hydraulic fracturing chemicals.

[24] Available online, see pages 13-30. http://democrats.energycommerce.house.gov/sites/default/files/documents/Hydraulic-Fracturing-Chemicals-2011-4-18.pdf

An Alternative Solution

AXPC and IPAA propose an alternative method for EPA to meet its stated goals in the TSCA ANPR without promulgating any new rules.

EPA's Intended Use of the Information

For §8(a), and implicitly for §8(d), EPA has laid out plans in its ANPR for how the data will be used. On page 14 of the ANPR EPA writes:

> *EPA expects that data obtained could be aggregated to provide a national list of the chemical substances and mixtures used in hydraulic fracturing, providing the Agency with the ability to determine which chemicals are used most frequently. For chemicals that have not been previously well-characterized in terms of their chemical, physical, and toxicological properties, EPA may conduct research to better understand these properties in order to perform a basic risk characterization.*

And on page 20:

> *Under an EPA-sponsored voluntary initiative, EPA could provide resources and recognition for companies committed to promoting and using safe and sustainable practices. Such a voluntary program could help companies meet corporate sustainability goals by providing the means to, and an objective measure of, environmental stewardship.*

AXPC and IPAA suggest an alternate methodology that could meet both of those goals without requiring a TSCA rulemaking from already available data sources. First, given the current ability to search FracFocus by Chemical Abstract Service ("CAS") number, EPA could select CAS numbers corresponding to chemicals of interest[25], and search for their use within a selected date range and state. These searches would return results for that CAS number and give a list of all the wells in which chemicals bearing that CAS number were used. Running this search on multiple chemicals could return results usable to categorize which chemicals are used most often in the hydraulic fracturing process. EPA has not demonstrated that these search capabilities would not address the stated objective of determining which chemicals were used most frequently. This process, using the tools provided in FracFocus, would grant EPA sufficient information and data to meet EPA's goals outlined in the ANPR, and is information currently available to EPA without a rulemaking under TSCA.

[25] CAS numbers can either be identified on the FracFocus website, or at a third party CAS number registry.

EPA's Statutory Authority under TSCA §8(a)

EPA asks a series of questions in the ANPR, with regard to how reporting of chemical information should be done under a new TSCA rulemaking. However, from the questions it contains and contextual information provided above, it is clear that EPA has not yet considered whether EPA is permitted to promulgate such rules under TSCA. AXPC and IPAA suggest that due to the unnecessary and duplicative nature of the discussed reported elements under the published ANPR, EPA is prohibited from promulgating rules requiring disclosure of that information. Further, given the definitions provided above, EPA does not have authority to promulgate rules on operators, or even most service companies for chemicals used during the hydraulic fracturing process.

The TSCA ANPR Suggests Requesting Information that is Already Available to EPA, or Information that is Not Permitted by TSCA to be Requested

Under TSCA, before promulgating new rules EPA must first find that the new information requests are neither duplicative nor unnecessary. As these comments will show, the mechanisms and disclosures described in the ANPR would be both duplicative and unnecessary.

First, as established above, each of the goals and end uses of the data EPA describes are able to be met without a TSCA rulemaking. TSCA §8(a)(2)(A-G)[26] lists seven types of information EPA is permitted to request, and currently, there is no information within that list that is not already available to the public and to EPA for the chemicals in question. To illustrate this further, EPA lists potential information that would be requested under §8(a) on pages 14 and 15 of the ANPR. Among them, the company information (#1), hydraulic fracturing fluid composition (#4), production type (#5), and the number of wells in which a certain chemical is used (#6) are all currently available at FracFocus.org. EPA is also extrapolating such information itself in the context of the hydraulic fracturing study, utilizing extensive historical data provided by companies as well as from FracFocus itself. AXPC and IPAA suggest that if, after reviewing EPA's own work in this regard, EPA determines that even more information is needed, EPA should work with the GWPC to access the information, or access the information through the public registry's sophisticated search function.

The steps involved in preparing chemicals on-site before downhole injection (#2), and for reuse or recycling (#3) can be found within research that is also publicly available, but it is first important to consider the data EPA is authorized by statute to request under TSCA §8(a). Information on steps involved in preparing chemicals for their use is not within the listed elements EPA is permitted to request[27]. However, in the interest of providing EPA

[26] 15 U.S.C. § 2607(a)(2)(A-G)

[27] The Administrator may require under paragraph (1) maintenance of records and reporting with respect to the following insofar as known to the person making the report or insofar as reasonably ascertainable:

public sources of information which contain the specific data requested, AXPC and IPAA direct EPA to refer to AXPC's "Real Facts About Fracture Stimulation," API's "Hydraulic Fracturing Operations" series, EPA's "Evaluation of Impacts to Underground Sources of Drinking Water by Hydraulic Fracturing of Coalbed Methane Reservoirs Study," or to specific service company publications such as those by Halliburton or Baker Hughes. Indeed, textbooks about the mechanics and technical considerations for designing hydraulic fracturing operations can be purchased from the companies online.[28] These listed references are but a few of the readily available documents which specifically describe the steps in the hydraulic fracturing process.

Existing data concerning the human health and environmental effects of the chemical substances or mixtures can be found in summary form on the MSDS or Safety Data Sheets (SDS) available for each of the chemicals or products used in the hydraulic fracturing process. This human and environmental impact information is listed even when individual components of chemical products are protected by trade secret. These MSDS are typically made available on service company websites, and are always available on-site during hydraulic fracturing. This labeling is required under OSHA's Hazard Communication Standard.[29] Many of these MSDS are also available on commercial databases, and would certainly be available upon request by the service companies which prepared them.

The Information Requested is Already Available to EPA Without TSCA Rulemaking, Therefore TSCA Rulemaking is Unnecessary and Duplicative.

As mentioned in the ANPR, EPA "shall not require under [§8(a)] paragraph (2), any reporting which is unnecessary or duplicative."[30] Reporting of information that is already reported elsewhere, and available to EPA is clearly unnecessary. With each portion of that information publicly available currently, as shown above, EPA is specifically prohibited from rulemaking that requires the reporting of such information.

In addition to being unnecessary, requiring the information above to be reported under TSCA 8(a) would also be duplicative. As discussed above, it is already a regulatory

(A) The common or trade name, the chemical identity, and molecular structure of each chemical substance or mixture for which such a report is required.
(B) The categories or proposed categories of use of each such substance or mixture.
(C) The total amount of each substance and mixture manufactured or processed, reasonable estimates of the total amount to be manufactured or processed, the amount manufactured or processed for each of its categories of use, and reasonable estimates of the amount to be manufactured or processed for each of its categories of use or proposed categories of use.
(D) A description of the byproducts resulting from the manufacture, processing, use, or disposal of each such substance or mixture.
(E) All existing data concerning the environmental and health effects of such substance or mixture.
(F) The number of individuals exposed, and reasonable estimates of the number who will be exposed, to such substance or mixture in their places of employment and the duration of such exposure.
(G) In the initial report under paragraph (1) on such substance or mixture, the manner or method of its disposal, and in any subsequent report on such substance or mixture, any change in such manner or method.

[28] *See*, *e.g.*, http://www.shopbakerhughes.com/training/books/modern-fracturing.html.
[29] 29 C.F.R. §1910.1200
[30] 15 U.S.C. § 2607(a)(2)

requirement in eighteen states to publicly disclose hydraulic fracturing chemical data to FracFocus, and public disclosure is also required in two other states[31] that utilize a state-maintained data system. These reports, therefore, in each of these states, already are required of operators, and requiring operators or service companies to report this information separately to EPA would be duplicative for all companies currently reporting under these state regulations.

Additional reporting of information on chemicals used in hydraulic fracturing operations would also be duplicative in the context of TSCA reporting. For example, if a manufacturer of a chemical is required to test and report information on the chemical at the manufacturing level, reporting at the same information about the chemical at the production site would produce no new information and merely duplicate the information already available to EPA.

Oil and Natural Gas Operators and Service Providers are Generally not Processors or Manufacturers Under TSCA, and EPA is not Permitted to Request Reports from them

Under TSCA, EPA is only permitted to require reports from those entities that are manufacturing or processing the chemicals in question. The TSCA definition of manufacturer includes the plain English definition of manufacture, and adds the act of importing into the United States. The definition of processor contains even more specificity and nuance. Specifically, the definition of processor under TSCA requires that those chemical substances or mixtures be processed for distribution in commerce. In the ANPR, EPA has mischaracterized the activities in on-site preparation of hydraulic fracturing fluid prior to injection as "processing". The definition of "processing" is not applicable to blending of purchased chemicals and chemical mixtures with a carrier fluid (generally water) and proppant (generally sand) to prepare the hydraulic fracture fluids.

During hydraulic fracturing, chemicals and chemical products are typically brought on site in their raw form, as purchased from a chemical manufacturer, and then blended just before and during the pressurized pumping process. This prevents waste of chemicals and allows engineers to specifically tailor the chemical mixtures to the formations which are under stimulation. This also reduces the degradation of the chemicals. Additionally some chemicals are designed to work in pairs, in tandem, or in sequence, and cannot be mixed before pumping without completely negating their purpose.

Operators and service companies in this typical hydraulic fracturing scenario are the end users of the chemical products, not processors. Given that the chemicals are generally not prepared until at the jobsite, whether they are prepared by an operator or a service company, they are not after that point distributed into commerce. Because these chemicals are not distributed into commerce after their on-site preparation, operators and service companies involved in the mixing of chemicals at a hydraulic fracturing site are not processors according to the definition under TSCA. Therefore TSCA §8(a) and TSCA §8(d) requests cannot be made of operators or service companies based on the activity of mixing

[31] New Mexico and Wyoming

hydraulic fracturing chemicals on site. TSCA, with respect to hydraulic fracturing chemicals, only authorizes EPA to request information under §8(a) and §8(d) from manufacturers of the individual chemicals then sold to operators and/or service companies for use in hydraulic fracturing.

Response to Petitioner Allegations

Environmental petitioners make representations in the petition to EPA for action under TSCA and in their comments submitted to the docket for this regulatory action that are grossly inaccurate. An addendum is attached to these comments that correct some of the more egregious allegations made by petitioners.

Environmental Stewardship and Transparency

AXPC and IPAA member companies are committed to the safe and responsible development of natural resources, and to continuous improvement in technology surrounding oil and natural gas development. While hydraulic fracturing has been addressed by EPA publications and media outlets in the last several years, it is certainly not a new technology. Much positive attention has been drawn to hydraulic fracturing as well – the combination of hydraulic fracturing and horizontal drilling has provided the United States with a steady source of affordable, reliable, American energy. This enhanced energy availability has created jobs, bolstered local economies, encouraged manufacturing to return to the U.S., reduced the nation's carbon dioxide emissions, generated taxes and income sources for working families, and improved its influence in foreign relations. This increased use of hydraulic fracturing is the result of decades of research and development into proper well construction techniques, proper chemical management practices, and complex reservoir properties – much of this research being performed by companies which are members of AXPC and IPAA. This research is not simply targeted to increase production, but also to ensure the interest of health and safety of employees and landowners, and for the protection of environmental resources.

This research has come with it a commensurate dedication to transparency in member company operations, both for public consumption of information, and for assisting states in drafting regulation that ensure the practices used by all operators promote safety and environmental stewardship. It is with this dedication to transparency that AXPC and IPAA members supported voluntary hydraulic fracturing chemical disclosure through FracFocus, and continue to support improvements to the FracFocus registry to aid in searchability and information delivery. AXPC and IPAA in the same spirit of transparency will devote resources facilitate better understanding of chemicals used in the hydraulic fracturing process, but as shown above, TSCA is not the appropriate mechanism by which EPA should gather data used to support that better understanding.

Respectfully submitted,

V. Bruce Thompson
President
American Exploration & Production Council

Lee Fuller
Vice President of Government Affairs
Independent Petroleum Association of America

EWG Submits Flawed Assertions to EPA about HF Disclosure

In June of this year, the Environmental Working Group – a group that opposes U.S. oil and natural gas development – submitted comments to the U.S. Environmental Protection Agency regarding the Toxic Substances Control Act, more specifically the Agency's advanced notice of proposed rulemaking on chemicals and mixtures used in hydraulic fracturing (Docket ID: EPA-HQ-OPPT-2011-1019). EWG encourages EPA to propose changes to require American companies to report fluids used during hydraulic fracturing directly to the agency, but EWG also called for additional EPA mandates on U.S. oil and natural gas producers. Not only would these additional requirements impose new costs on independent producers in the United States, but the assertions that EWG uses to justify its requests do not hold up to scrutiny. Below is a quick review of the claims made by EWG.

CLAIMS

CLAIM: *"We [EWG] have advocated for greater oversight of fracking at the federal and state levels and for strong public right-to-know provisions."* (p. 1)

FACT: EWG is defining itself as merely a watchdog group that supports additional oversight, but the reality is that EWG does not support hydraulic fracturing at all. In fact, EWG signed a petition, alongside dozens of other anti-fracking groups in California, supporting a halt to hydraulic fracturing entirely[32]. By suggesting it merely wants stronger oversight, EWG is concealing the fact that it does not want hydraulic fracturing to occur. Its call for costly and prohibitive regulations must be understood in that context.

CLAIM: *"EPA knew as early as 1987 that fracking fluids of unknown composition from a natural gas well had contaminated drinking water in West Virginia – evidence that fracking fluids are capable of migrating from oil and gas wells to underground drinking water supplies. However, the agency said nothing of this finding when Congress considered, and subsequently passed, the Energy Policy Act of 2005, which exempted fracking from virtually all provisions of the federal Safe Drinking Water Act."* (p. 2)

FACT: The 1987 case mentioned is far more complex than what EWG described, and it does not demonstrate that fracturing fluids "are capable of migrating from oil and gas wells to underground drinking water supplies." The case refers to a well drilled in Jackson County, W.V., in 1982, and EWG's citation is its own report from 2011[33], in which one of EWG's lawyers actually concedes "it is unclear" how fracturing fluids could have migrated to drinking water zone in question. The EWG report also referenced a West Virginia-based laboratory that was commissioned to investigate the incident, which "did not conclude that hydraulic fracturing caused the contamination," according to EWG. Further, EWG admitted in its press release[34] that "it is possible that another stage of the drilling process [and not hydraulic fracturing] caused the problem."

[32] http://frackfreecali.org/images/FFC-Supporters_upd5-20-14.pdf
[33] http://www.ewg.org/research/cracks-facade
[34] http://www.ewg.org/news/news-releases/2011/08/03/epa-report-fracking-contaminated-drinking-water

Meanwhile, Ted Streit, then the deputy director of inspector and enforcement for West Virginia's Department of Energy, wrote[35] in 1987 that the water well in question was drilled into a formation called the Pittsburg sand, which itself had been a source of oil and natural gas production for years. According to Streit:

> *"At the time the permit was issued concerning this well, the Division [of Oil and Gas] had no knowledge that the Pittsburg sand was a fresh water source. This is because in certain areas oil and gas is produced from the Pittsburg."*

Streit added that, once the Division of Oil and Gas discovered this formation was being tapped for drinking water, the state "required every well drilled in the area to have casing cemented up over the Pittsburg sand." Clearly, this was not a case of fracturing fluids migrating from depth up into drinking water, contrary to EWG's claims and suggestions.

As for the 1987 report referenced by EWG, it was authored by a well-known opponent of oil and natural gas production, Carla Greathouse. Ms. Greathouse had issued the report as part of her effort to convince EPA to regulate activities and components of development for which it had no authority, such as defining drill cuttings and produced water as "hazardous wastes." EPA disagreed with Ms. Greathouse's assertions, and issued a report to Congress in December 1987[36] concluding that such additional regulation was "unnecessary" and "impractical" because existing federal laws "provide sufficient legal authority to handle most problems posed by oil and gas wastes within their purview."

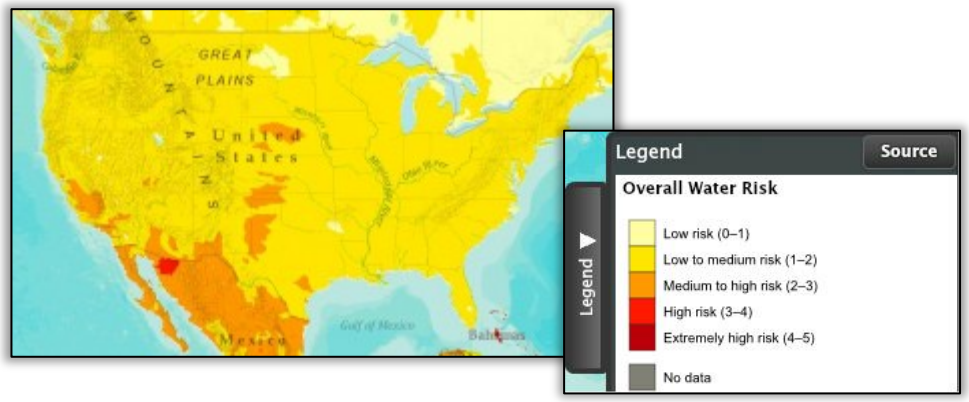
In other words, the 1987 report was similar to EWG's most recent comments to EPA, in that both were part of an effort to expand EPA control over U.S. oil and natural gas production.

CLAIM: *"An analysis by the Ceres investor network of the information provided to FracFocus.org estimates that 97 billion gallons of water were used in fracking operations between January 2011 and May 2013…. According to Ceres, more than 36 percent of wells treated in that period overlay regions that the U.S. Geological Survey says are experiencing groundwater depletion. More than half of the wells reported to FracFocus in that period were in areas experiencing drought. In California and Colorado, more than 95 percent of the wells reported in that period were in areas rated by the World Resources Institute as regions of "high" or "extremely high" water stress."* (p. 4-5)

FACT: The Ceres report relied on the "Aqueduct" mapping tool from the World Resources Institute, which, according to Ceres, reveals "significant long-term water sourcing risks" in areas where onshore oil and natural gas production is occurring.

But Ceres concealed the fact that WRI's own measure of "overall water risk" for the oil and natural gas production industry is actually "low to medium" over the vast majority of the United States, with only a few areas of "medium to high." Here's a map pulled from the same mapping tool on which Ceres claimed to have based its report:

[35] http://energyindepth.org/wp-content/uploads/2011/07/WV-17.pdf
[36] http://www.epa.gov/solidwaste/nonhaz/industrial/special/oil/530sw88003a.pdf



As further cataloged on Energy In Depth's website[37], the overall water risk is considerably higher for electric power, food & beverage, textiles, agriculture, semiconductors, and virtually any other industry. Notably, the water risk for some of the most prolific shale plays in the country – Barnett in Texas, Haynesville in Louisiana, Fayetteville in Arkansas, and Marcellus in Pennsylvania – are classified as only "low to medium risk." A portion of the prolific Bakken Shale in North Dakota is actually classified as the lowest risk possible. Although EWG cites Ceres as claiming Colorado development is occurring in "high" or "extremely high" water stress areas, the data from WRI tell a completely different story.

Finally, it's worth noting: Ceres is described as an "investor network," but its members include anti-fracking groups such as the Sierra Club, Friends of the Earth, and the Rainforest Action Network.

CLAIM: *"[A]* Bloomberg *investigation found that more than half of new wells treated in the last 10 months of 2011 in Texas, Oklahoma, and Montana were not listed in FracFocus, and that more than 90 percent of the companies that drilled new wells in that period did not list any wells on FracFocus."* (p. 5)

FACT: EWG's use of Texas, Oklahoma, and Montana is curious, because all three of those states have adopted rules since 2011 to mandate disclosure of fracturing fluids, including the use of FracFocus. The Texas requirement went into effect in February 2012 (state regulators approved them in December 2011), and the Oklahoma law went into effect in May 2012. Montana's disclosure requirement actually went into force in August 2011, but the law requires companies to use either FracFocus or report the fluid composition directly to the Montana Oil and Gas Board. The Environmental Defense Fund praised Montana's law, saying the state "is helping to answer the questions of how this [disclosure] can be done most effectively."

Thus, EWG's claim regarding well disclosure is based on out of date data, and is attempting to identify a problem that does not exist.

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37 http://energyindepth.org/national/anti-fracking-activists-suits-make-more-misleading-water-claims/

CLAIM: *"Disclosure and public notice of planned well treatment and the chemicals to be used should be made* before *a well is fracked [sic] or otherwise treated."* (p. 6)

FACT: Mandating fluid disclosure prior to fracturing is based upon the flawed assumption that well servicing companies have a "ready mix" that is used at the well site. In reality, the specific mixtures of fracturing fluids can change up to and even during the fracturing process, depending on how the geological conditions react to certain treatments. Thus, requiring disclosure before treatment could result in an incomplete list of additives used, or a list that includes all additives that may (or may not) be used. The former would defeat the purpose of disclosure, and the latter would open producers and service companies up to any number of allegations, based on substances that they did not even use. It is also possible, given the risk of liability, that the list of potential additives to be used would be so long as to be meaningless.

In short, disclosure prior to fracturing activities would result in less accuracy, not more.

CONCLUSION

The Environmental Working Group, in its efforts to restrict hydraulic fracturing, certainly would like to see the EPA expand its oversight on U.S. oil and natural gas production activities. These new mandates would impose considerable costs, and thus result in less domestically-produced oil and natural gas. Independent producers are willing participants in the discussion over how much regulation should apply to the industry, but imposing new regulations based on flimsy talking points and baseless assertions is a recipe for fewer American jobs, less energy, and a weaker economy.