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CONFLICTING THEORIES AT PLAY: CHEMICAL DISCLOSURE AND TRADE SECRETS IN THE NEW FEDERAL FRACKING REGULATION

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INTRODUCTION

Many environmental laws and policies rely on citizen participation in order to monitor industrial activity for possible adverse effects on the environment and public welfare as a whole.[1] Many environmental statutes mandate public disclosure of industrial chemical use to aid citizenry in its monitoring.[2] However, trade secret laws protect businesses from this exact type of public disclosure.[3] The purpose of trade secret laws is to protect information that can provide businesses with a competitive advantage in the marketplace because of its secrecy.[4] In fact, the inherent value of a trade secret is its confidentiality; the information is *not* readily available to the public. As the value of trade secrets in business increases, the more these two conflicting legal concepts will be forced to operate in tandem.

The controversy surrounding hydraulic fracturing (fracking) is a perfect example of this fundamental tension between environmental "right-to-know" policies and trade secret laws. Fracking is a process to

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[1] Hannah Wiseman, *Trade Secrets, Disclosure, and Dissent in a Fracturing Energy Revolution*, 111 COLUM. L. REV. SIDEBAR 1, (2011).

[2] *Id.*

[3] Michael A. Gollin, *Using Intellectual Property to Improve Environmental Protection*, 4 HARV. J. LAW & TECH. 193, 200 (1991).

[4] Ground Water Prot. Council & Interstate Oil and Gas Compact Comm'n, *Hydraulic Fracturing: The Process,* FRACFOCUS CHEMICAL DISCLOSURE REGISTRY, http://fracfocus.org/ (last visited Dec. 11, 2015) [hereinafter referred to as "FRACFOCUS WEBSITE"].

enable oil and gas that was previously determined inaccessible to now be extracted.[5] Water, sand, and chemicals are pumped under high pressure into a well bore causing rock formations to "fracture" releasing oil and gas. The chemicals used by companies in the process are unique fluid mixes designed for maximum efficiency and effectiveness in the fracking process.[6] Because of the research and investment involved in finding the most effective combination and proportion of chemicals in fracking fluids, many companies claim a legitimate commercial need to protect the formulas as trade secrets.[7] However, as fracking has increased, so has the public demand for information about the chemicals used in the process. In recent years, fracking has become a hotly debated issue due to concerns that the use of hazardous chemicals in the fracking process may have negative environmental and public health effects.[8] A recognized need for greater fracking regulation has surfaced, but has also been met with controversy.

Currently, there is no federal law regulating fracking. Instead, fracking is only regulated under state law. Public disclosure requirements vary widely from state-to-state.[9] Some states have no disclosure requirements at all.[10] Of the states that do, most have included trade secret exception provisions allowing oil and gas companies to refuse to disclose the chemicals they use in fracking.[11] More importantly, very few state laws that have trade secret exceptions also require that the company provide any substantiation that the trade secret is legitimate.[12] Without some kind of uniform factual substantiation requirement, what is to keep oil and gas companies from abusing trade secret exceptions?

A possible solution has emerged. In March of 2015, the Department of Interior's Bureau of Land Management (BLM) released the first important federal rules governing fracking on federal and tribal lands.[13] The law only affects approximately 100,000 oil and gas wells in the United States, but has already caused widespread concern among its op-

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[5] *Id.*

[6] Wiseman, *supra* note 1 at 6-7.

[7] *Id.* at 7.

[8] Eric Schalbs, *Legal Challenges to Fracking Regulation*, Regblog.org, PENN PROGRAM ON REGULATION (Aug. 18, 2015), http://www.regblog.org/2015/08/18/schlabs-fracking-regulation/.

[9] Matthew McFeeley, *The Disclosure Debates: The Regulatory Power Of An Informed Public: Vermont Law Review Thirteenth Annual Symposium Vermont Law School — September 27, 2013: Falling Through The Cracks: Public Information And The Patchwork Of Hydraulic Fracturing Disclosure Laws*, 38 VT. L. REV. 849, 872-875 (2014).

[10] *Id.* at 887.

[11] *Id.* at 887-888.

[12] *Id.*

[13] 80 FED. REG. 16128, 16128 (Mar. 26, 2015).

ponents.[14] Wyoming, Colorado, North Dakota, Utah, the Ute Indian Tribe, and two oil and gas industry organizations have filed claims for review of BLM's rules in the U.S. District Court of Wyoming.[15] The arguments that have transpired offer a clear perspective into the controversy surrounding chemical disclosure and trade secret exceptions.

Through analysis, it is apparent that BLM's new fracking rule should be uniformly adopted as a solution to the tension between disclosure requirements and trade secrets. Part I of this Note defines hydraulic fracturing and provides a history and background of the two conflicting theories: trade secrets and environmental "right-to-know" policies. Part II introduces the BLM's new federal regulation and examines how it has addressed conflicts between trade secrets and chemical disclosure. Part III discusses the current problems with fracking regulations, and addresses how trade secrets and chemical disclosure play a part in its controversy and why BLM's new regulation can be a solution. This Note concludes that BLM's new regulation is a much needed and effective compromise between the conflicting theories of trade secrets and chemical disclosure.

I. History and Background of Trade Secrets, Hydraulic Fracturing And Information Disclosures

Understanding the background and history of trade secrets and environmental right-to-know polices is essential to understanding how they conflict within the fracking industry. By understanding the ways in which they conflict, we are better situated to understand how to formulate a successful compromise. The purpose of this section is to discuss the basics of fracking, the reasons for trade secrets and public disclosure, and to clarify some of the advantages and disadvantages in their application.

A. What Are Trade Secrets And Why Should We Care?

A trade secret is generally defined as "a formula, process, device, or other business information that is kept confidential to maintain an advantage over competitors[.]"[16] Trade secrecy has always played an important part in business, but legislators were slow to develop specific laws gov-

[14] Coral Davenport, *New Federal Rules Are Set for Fracking*, N.Y. Times (Mar. 20, 2015), http://www.nytimes.com/2015/03/21/us/politics/obama-administration-unveils-federal-fracking-regulations.html?_r=2

[15] Memorandum in Support of Motion for Preliminary Injunction, Indep. Petroleum Ass'n of America v. Jewell, No. 15-cv-41-SWS (D. Wyo. Mar. 15, 2015), ECF No. 13.

[16] *Trade Secret*, Black's Law Dictionary (10th ed. 2014).

erning trade secrets until the last few decades.[17] Trade secret regulation developed as a common law doctrine within tort law, and was first defined in Restatement (First) of Torts in 1939.[18] As a tort, trade secrets have traditionally fallen under state jurisdiction. The Uniform Trade Secrets Act (UTSA), in an effort to establish uniformity in trade secret protection due to its importance in interstate commerce, was approved and recommended for enactment in all the states in 1985.[19] To date, 48 states have adopted a version of the UTSA.[20] The UTSA clarified the tort definition by requiring that what can be considered trade secret information must; "(1) derive[ ] independent economic value, actual or potential, from not being generally known or readily ascertainable by others who can obtain economic value from its disclosure or use, and (2) is the subject of reasonable efforts, under the circumstances, to maintain its secrecy."[21] Federal trade secret protection is provided in the Federal Trade Secrets Act.[22] Under the Federal Trade Secrets Act, an officer or employee of any U.S. government agency can be fined or imprisoned, and removed from office or employment, for disclosing confidential information to any extent not authorized by law.[23]

Trade secret laws have increased in importance because of the value of trade secrets in today's market. Litigation for trade secret infringement has escalated in the past decade and awards for damages are increasing.[24] Although difficult to assess due to their confidential nature, the value of trade secrets to a company's portfolio is high and has increased dramatically, along with other types of intellectual property, in the last two decades. In 1975, the intangible property of the top 500 companies listed on the S&P 500 comprised only 17 percent of a companies' total value.[25] But in 1996, it skyrocketed to 68 percent, and then increased even further to 81 percent in 2009.[26] If trade secret valuation is even a fraction of total intangible property, trade secrets constitute a substantial percentage of the value of today's top companies. The definition of what is considered

[17] David S. Almeling, *Seven Reasons Why Trade Secrets Are Increasingly Important*, 27 Berkeley Tech. L.J 1092, 1092 (2012).

[18] Michael A. Gollin, *Using Intellectual Property To Improve Environmental Protection*, 4 Harv. J. Law & Tech. 193, 199 (1991); Restatement (First) of Torts § 757 (1939).

[19] Unif. Trade Secrets Act § 1 (1986)(4)(ii).

[20] The only states that have not yet adopted the UTSA are New York and Massachusetts.

[21] Unif. Trade Secrets Act §1 (1986)(4)(ii).

[22] 18 U.S.C. § 1905 (2015).

[23] *Id.*

[24] Almeling, *supra* note 17 at 1093.

[25] The Standard & Poor's 500 Index (S&P 500) is a stock market index based on the top 500 market-capitalized companies that have common stock listed on NYSE or NASDAQ stock exchanges.

[26] Almeling, *supra* note 17 at 1093.

a trade secret has always been flexible and broad, but is becoming more so as claims involving trade secrets and infringement are moving through the courts.

One of the reasons for the escalation and expansion of trade secret laws is changes in work environments. Whereas the earlier generations of today's workforce considered employment as being a life-long connection to a single company, newer generations do not feel the same level of job security, and value different ideals such as mobility and entrepreneurism instead of loyalty.[27] This, along with the ease of data sharing capabilities in today's technology (e.g., flash drives that hold TBs of data, or cloud storage), creates work environments where trade secrets are no longer as secure as they were before. Employees who are granted access to trade secrets within one company too often move and use that knowledge in a competitor's company.[28]

Less security and higher valuation has led companies to fiercely protect their trade secrets. As a result, companies try to label anything that can fall within the broad and flexible trade secret laws, as "trade secrets." Ostensibly, this also leads to a greater number of companies trying to avoid disclosure laws associated with those "trade secrets" by misusing trade secret exceptions. As the potential misuse of trade secret exceptions rise, restrictions on how and when they are used becomes increasingly more important as a way to protect the public. This is never more apparent than in the contentious world of hydraulic fracturing.

Fracking is one of the most heavily debated topics in the U.S. today. On the one hand, there are plenty of incentives to develop our nation's resources. Less reliance on foreign oil and gas is desirable, as is providing cheaper gas to the public. On the other hand, the increase in fracking has caused environmental and public health concerns regarding the chemicals used in the process, especially when the chemicals themselves are designated as trade secrets and not disclosed to the public. But first, we must understand what fracking is and how this process creates a tension between trade secrets and information disclosure.

B. What Is Fracking?

Fracking is the "use of fluid and material to create or restore small fractures in a formation in order to stimulate production from new and existing oil and gas wells."[29] Fracking is not the drilling itself, but rather an extraction process once the drilling has been completed. Once the well

[27] *Id.* at 1102.
[28] *Id.*
[29] FracFocus Website, *supra* note 4 at "Hydraulic Fracturing: The Process."

has been prepared, a high-pressure water mixture is injected into the well and directed at the shale rock to "fracture" it, subsequently releasing the gas inside.[30] The released gas is then recaptured through the well head. The water mixture, called flowback, is flushed back up to the surface.[31] The water mixture used per well consists of water, chemicals, and proppant agents like sand.[32] A single fracking project, or "frack," may use eight million gallons of water or more and four million pounds of proppant.[33] The chemicals make up only about 0.05 to 2 percent of the total fracking fluid.[34] However, when added to a six million gallon frack, which is not uncommon, it calculates to 30,000 to 120,000 gallons of chemicals that are used each time a well is fracked, and wells can be refracked multiple times.[35]

Up to 600 different types of chemicals are known to be used in the high-pressure water mixture, although each mixture typically only uses about a dozen or so.[36] Many of these chemicals are known to be toxic, and their use varies greatly in type and proportion.[37] With each well and shale formation, operators encounter special issues that require research and investment to obtain the most effective chemical formula to use.[38] Once discovered, these unique formulas become very valuable when kept confidential, giving the oil and gas company a competitive edge against other companies. Under the UTSA definition of trade secret, fracking fluids do constitute trade secrets.[39] A fracking fluid is a "formula" and is "information that is kept confidential to maintain an advantage over competitors" that has an "independent economic value."[40] Because many fracking fluids are considered trade secrets, companies can hide behind trade secret provisions that allow them to segregate or altogether exclude its formulas from environmental regulations. This is especially antagonistic because many environmental regulations are effective largely because of their public "right-to-know" provisions.

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[30] Well prepping, including cement casing is outside the scope of this article. *See* FracFocus Website for more details.

[31] FracFocus Website, *supra* note 4 at "Hydraulic Fracturing: The Process."

[32] *Id.*

[33] McFeeley, *supra* note 9 at 841.

[34] *Id.* at 851.

[35] *Id.* at 852.

[36] Mike Soraghan, *Groundtruthing Academy Award Nominee 'Gasland'*, The New York Times (Feb. 24, 2011), http://www.nytimes.com/gwire/2011/02/24/24greenwire-groundtruthing-academy-award-nominee-gasland-33228.html?pagewanted=all.

[37] Wiseman, *supra* note 1 at 6.

[38] *Id.* at 6-7.

[39] Unif. Trade Secrets Act § 1 (1986)(4)(i), (ii).

[40] Michael A. Gollin, *Using Intellectual Property To Improve Environmental Protection*, 4 Harv. J. Law & Tec 193 at 200 (1991).

C. "Right-To-Know" Acts: The Purpose and Theory Behind Information Disclosure to the Public

The modern concept of disclosure and public access of information started in the 1960s, along with medical consent laws, and consumer warranties and labeling laws.[41] One such statute, the Freedom of Information Act (FOIA), was enacted in 1966 by Congress to provide any person access to any documents held by the federal government, with some listed exceptions.[42] Like medical consent laws, and consumer warranties and labeling laws, one of the main goals of FOIA is to enhance the democratic process and increase participation through transparency.[43]

Environmental laws have built upon the same premise and purpose of laws like FOIA to much success. By encompassing information disclosure, or "right-to-know" programs, environmental laws have taken an effective step towards better environmental enforcement. The philosophy behind information disclosure provisions is that by educating and informing communities about public health and environmental concerns, citizens are empowered to take more active roles in addressing possible threats to their communities.[44] Greater citizen involvement increases the public awareness and scrutiny behind a company's usage of hazardous chemicals.

Moreover, environmental regulatory agencies often work best by collecting, interpreting, and reporting information to the public.[45] Environmental law embraces the concept that environmental management works best when its processes are not "unitary, top-down or exclusively expert."[46] Although expert resources should be used, environmental quality is best improved when there is active participation by the citizenry of the affected community.[47] As such, many environmental laws that establish information-based regulatory strategies that include reporting and disclosure requirements, have been proven to work and have become an essential part of many new laws, both state and federal.[48]

In order to have a successful public disclosure law, information that is disclosed must be readily accessible and useable to the public. However, it also needs to include a mechanism for protecting trade secrets,

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[41] Mary L. Lyndon, 1 Environmental Law Practice Guide (Matthew Bender), ch 4, Information Disclosure and Access § 4.01. at 226 (Last updated Nov. 9, 2015).

[42] 5 U.S.C. § 552 (2015).

[43] Lyndon, *supra* note 41 at 226.

[44] *Id.* at 226.

[45] *Id.*

[46] *Id.* at 226-27.

[47] *Id.* at 226.

[48] *Id.* at 227.

but one that requires substantiation that a true trade secret exists before the exception is allowed. Further, for a law to be successful, it must include provisions that hold companies that use chemicals accountable for any problems that may arise from their use.

II. A New Federal Regulation

In March of 2015, the Bureau of Land Management (BLM) released the first federal rule directly regulating hydraulic fracturing. BLM is the administrator for over 245 million acres of federally-owned land and tribal lands.[49] Most of the land under BLM's management is concentrated in 12 western states.[50] In addition, BLM manages over 700 million acres of sub-surface mineral estates comprised of both federal and non-federal lands.[51] This section provides an overview of the Rule, and reviews specific provisions concerning chemical disclosure requirements and trade secret exemption rules.

A. Overview of the Rule

In 2010, BLM started working on a new fracking rule in response to the "growing public concern about the rapid expansion of complex hydraulic fracture."[52] The public comment period for the 2013 Proposed Rule ended on August 23, 2013, with more than 1.5 million comments from individuals and groups.[53] BLM "reviewed these comments based on thoughtful analysis and robust dialogue" and constructed a rule that is more "protective than the previous proposed rules and current regulations."[54] On March 26, 2015, BLM's new rule was finalized (the "Rule"), and set to become effective on June 24, 2015. The goals of the Rule were designed to ensure that: 1) the wells are properly constructed to protect water supplies; 2) the fluid that flows back to the surface is managed in an environmentally responsible way; and 3) the public is provided disclosure of the chemicals used in hydraulic fracturing fluids.

According to BLM, "nearly 36 million acres of Federal land are under lease for potential oil and gas development in 33 states."[55] As of

[49] The U.S. Department of the Interior, Bureau of Land Management, *The Bureau of Land Management: Who We Are*, *What We Do*, Blm.gov, http://www.blm.gov/wo/st/en/info/About_BLM.html (Last Accessed Dec. 11, 2015).

[50] *Id.*

[51] *Id.* at "Subsurface."

[52] 80 Fed. Reg. 16128, 16128. (Mar. 26, 2015).

[53] *Id.*

[54] *Id.*

[55] *Id.* at 16129.

June 30, 2014, BLM reports that there are approximately 47,000 active oil and gas leases on public lands and about 95,000 wells.[56] The Rule applies to all oil and gas operations on public lands, and tribal lands. Included are "split estate lands;" lands where the surface is owned by a private entity, but the sub-surface mineral estate is owned by the federal government.[57]

B. Language of the Rule

The most important parts of the Rule that relate to chemical disclosure and trade secrets address several areas: operator accountability, disclosure, the trade secret exceptions and its substantiation requirements, third party trade secret holders, BLM's retained authority, and the maintenance of records.

1. Operator Accountability

Under the Rule, the operator must submit the information to an authorized officer within 30 days after the completion of the last stage of hydraulic fracturing operations for each well.[58] The information can be submitted through a database like FracFocus, an oil and gas industry disclosure website,[59] but it must be certified by the operator that the "information is both timely filed and correct, and certify compliance with applicable law as required by [the trade secret exemption section] using FracFocus.org or another BLM-designated database."[60] The operator is responsible for the information that is submitted, whether it is submitted by a contractor or agent.[61] This requirement adds a level of accountability to the decisions made by operators.

2. Disclosure

The operator is required to submit the "total water volume used, and a description of the base fluid and each additive in the hydraulic fracturing fluid, including the trade name, supplier, purpose, ingredients, Chemical Abstract Service Number (CAS), maximum ingredient concentration in additive (percent by mass), and maximum ingredient concentration in

[56] *Id.*
[57] *Id.*
[58] 43 C.F.R. § 3162.3-3(i).
[59] See *infra* notes 120-128, and accompanying text for further discussion of FracFocus.org.
[60] 43 C.F.R. § 3162.3-3(i).
[61] *Id.*

hydraulic fracturing fluid (percent by mass)."[62] The purpose of this level of detail is to ensure that the chemical information that is disclosed is adequate enough to aid BLM in its management and to inform the public as to what hazardous chemicals may be used and in what concentration.

3. Trade Secret Exceptions

Any information that is not deemed to be a trade secret will "have waived any right to protect from public disclosure information"[63] This ensures that unless a legitimate trade secret exists, all information will be subject to public disclosure. If "the owner of the information claims to be exempt from public disclosure and [the information] is withheld from the BLM, a corporate officer, managing partner, or sole proprietor of the operator must sign and the operator must submit an affidavit[.]"[64] This is important because it makes the operator just as accountable for the trade secret as is the owner of the information.

The affidavits must: identify the owner of the withheld information;[65] identify the Federal statute or regulation that prohibits disclosure;[66] and, "affirm that the operator has been provided the withheld information from the owner of the information and is maintaining records of the withheld information, or that the operator has access and will maintain access to the withheld information held by the owner of the information."[67] This last part of the provision is a good compromise between protecting trade secret information, and making it available in case of an emergency. The owner of the trade secret does not have to actually provide the information, which allows the owner protection. Instead, the operator has to certify that they have access to it, and that they must maintain that access. This holds the operator accountable for providing the trade secret information if needed.

The rest of the trade secret substantiation provisions required in the affidavits echo the definition of a trade secret: the information is not publicly available;[68] the information is not required to be publicly disclosed under any law;[69] "the owner of the information is in actual competition and identifies competitors or others that could use the withheld information to cause the owner of the information substantial competi-

[62] 43 C.F.R. § 3162.3-3(i)(1).
[63] 43 C.F.R. § 3162.3-3(i).
[64] 43 C.F.R. § 3162.3-3(i).
[65] 43 C.F.R. § 3162.3-3(j)(1)(i).
[66] 43 C.F.R. § 3162.3-3(j)(1)(ii).
[67] 43 C.F.R § 3162.3-3(j)(1)(iii).
[68] 43 C.F.R. § 3162.3-3(j)(1)(iv).
[69] 43 C.F.R. § 3162.3-3(j)(1)(v).

tive harm[,];"[70] and, "the information is not readily apparent through reverse engineering with publicly available information."[71]

4. Third Parties

The Rule provides that, "if the operator relies upon information from third parties, such as the owner of the withheld information, to make the affirmations [under the trade secret exemption] of this section, the operator must provide a written affidavit from the third party that sets forth the relied-upon information."[72] This further solidifies the importance of the operator role and the operator's ultimate accountability for the fracking process.

5. BLM Retained Authority

The BLM has retained a great deal of authority to decide whether a trade secret exception is legitimate. BLM "may require any operator to submit to the BLM any withheld information, and any information relevant to a claim that withheld information is exempt from public disclosure."[73] The Rule further explains that "[i]f the BLM determines that the information submitted [under the trade secret exemption] is not exempt from disclosure, the BLM will make the information available to the public after providing the operator and owner of the information with no fewer than 10 business days' notice of the BLM's determination."[74] This provision may be effective or ineffective. It will largely depend on the politics and personalities of the decision-makers at BLM. But it does aid public disclosure, and helps shape the intent of the Rule as a public "right-to-know" policy, by making disclosure a default proposition.

6. Maintaining Records

The operator must maintain records of the withheld information until BLM's approval of a final abandonment notice, or six years after completion on Indian lands, or seven years after completion on Federal lands.[75] This is an important provision because it addresses the necessity of being able to track possible long-term effects of chemicals on the environment. Lastly, "[t]he operator will be deemed to be maintaining the

[70] 43 C.F.R. § 3162.3-3(j)(1)(vi).
[71] 43 C.F.R. § 3162.3-3(j)(1)(viii).
[72] 43 C.F.R. § 3162.3-3(j)(2).
[73] 43 C.F.R. § 3162.3-3(j)(3).
[74] 43 C.F.R. § 3162.3-3(j)(4).
[75] 43 C.F.R. § 3162.3-3(j)(5).

records if it can promptly provide the complete and accurate information to BLM, even if the information is in the custody of its owner."[76] Once again, this emphasizes the importance of protecting trade secrets, but maintaining access to them if an emergency arises.

These provisions are essential to any successful attempt at addressing the issues between trade secrets and public "right-to-know" policies within the fracking controversy. This next section explores how fracking has been regulated, why it is so important that we have a federal regulation, and why BLM's new rule is effective in combatting possible misuse or abuse of trade secret exceptions.

III. Problems With Fracking Chemical Formula Regulations as They are and how BLM's new Rule Applies Solutions

A. The Loopholes of Federal Fracking Regulations

Before the release of BLM's new regulation, fracking has only been regulated by the states. The EPA, as a federal agency, would appear to be the most logical regulatory agency for fracking because its mission is to "protect human health and the environment."[77] The EPA even claims that its purpose is to ensure that environmental protection is an integral consideration in U.S. policies concerning natural resources, human health, and energy.[78] The problem is that when it comes to fracking, the EPA has been systematically excluded. There are two prominent statutes that would seem to give the EPA authority to require companies engaged in fracking to disclose the chemicals used in their operations: the Emergency and Planning Right-to-Know Act (EPRCA), and the Safe Drinking Water Act (SDWA).

While the EPRCA contains chemical disclosure requirements, it only incidentally applies to fracking operations. Under the EPRCA, the EPA publishes the Toxics Release Inventory (TRI), a disclosure list that records two categories of chemicals as they are managed, released or transferred to other locations.[79] Under the broadest category determined by facility type, oil and gas facilities *do not* need to submit information to TRI.[80] Fracking facilities could also be required to report under the

[76] 43 C.F.R. § 3162.3-3(j)(5).

[77] United States Environmental Protection Agency, *Our Mission and What We Do*, http://www.epa.gov/aboutepa/our-mission-and-what-we-do (last visited Mar. 23, 2016).

[78] *Id.*

[79] McFeeley, *supra* note 9 at 857.

[80] *Id.* at 857.

second category of chemical disclosure used for particularly hazardous chemicals. However, reporting is only triggered if the chemicals are released and the release has exceeded the allowable threshold for that chemical.[81] Typical fracking operations may have several hazardous chemicals within their fracking formulas, but each chemical individually may not exceed the allowable threshold, so reporting rarely occurs under the EPCRA.[82]

The EPA has some authority to act under the Safe Drinking Water Act (SDWA) if there is a spill or an accident caused by fracking that affects drinking water, but it does not directly regulate fracking.[83] Critics claim that in fact, "the oil and gas industry is the only industry in America that the EPA allows to inject known hazardous materials – unchecked – directly into or adjacent to underground drinking water supplies."[84] This is because of what has been coined the Halliburton Loophole. The name is believed to have originated through then-Vice President Dick Cheney's 2001 Energy Task Force.[85]

Since fracking is not specifically mentioned in the SWDA, in order for the EPA to regulate it, it has to be defined as something under the SWDA's purview. The SDWA does have a provision regulating an "underground injection" which is defined as "the subsurface emplacement of fluids by well injection."[86] In 1997, the Eleventh Circuit clarified that "underground injection" under the SDWA did in fact include fracking. The court's ruling caused the EPA to initiate a study into the possible contamination of water supply through the fracking process.[87] However, when the 2004 study was released, the EPA concluded that fracking posed little or no threat to underground drinking water sources unless diesel fuel was used.[88] This was all the legitimacy needed for Cheney's Energy Task Force to take action.

In July of 2005, at the recommendation of the Energy Task Force, Congress passed the Energy Policy Act (EPAct), which made all fracking fluids, except for diesel fuels, exempt from the definition of "underground injection" under the SWDA.[89] Without a definition within the

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[81] *Id.*

[82] *Id.*

[83] 5-11A Treatise on Environmental Law § 11A.02.

[84] *The Halliburton Loophole*, Earthworks, https://www.earthworksaction.org/issues/detail/inadequate_regulation_of_hydraulic_fracturing#.VlIRd8uFNZc (last visited Dec. 11, 2015).

[85] *Id.*; Dick Cheney was CEO of Halliburton before becoming Vice President of the United States.

[86] Safe Drinking Water Act of 1974, § 1421(d)(1), 42 U.S.C. § 300(h)(d)(1) (2005).

[87] *Legal Envtl. Assistance Found. v. U.S. E.P.A.*, 118 F.3d 1467, 1478 (11th Cir. 1997).

[88] 5-11A Treatise on Environmental Law § 11A.02 at 2.

[89] *Id.*

SWDA, the EPA cannot require the majority of oil and gas companies to disclose the chemical composition of their fracking fluids at the federal level.[90] Further, in draft guidance issued in 2012, the EPA uses a narrow definition for diesel fuel, and admits that it applies to less than two percent of fracking activities, as of 2011.[91] The Halliburton Loophole has effectively staved off the most obvious way to enforce the chemical disclosure of fracking fluids – through the EPA.

In 2013, members of the Senate did attempt to close the Halliburton Loophole.[92] The Fracturing Responsibility and Awareness of Chemicals Act (FRAC Act) was introduced to Congress, but was never enacted.[93] FRAC Act would have deleted the exemption for fracking in SDWA and require that public disclosure of fracking chemicals be nationwide.[94] As it stands presently, the regulation of fracturing has been reserved entirely for the states.

B. The Problems With State Fracking Regulations

States have a vested interest in both the benefits and risks associated with fracking. So what is wrong with the States regulating fracking? State regulations governing fracking operations are very disjointed and create even larger loopholes. Without federal regulation it is impossible to determine the total number of states where fracking occurs.[95] It is believed that as of 2005, fracking occurs in more than 30 states.[96] About one-third of those states have no fracking chemical disclosure rules at all.[97] Of the remaining states that do have chemical disclosure requirements, very few involve disclosure prior to fracking, or notification to the local community.[98] States that require post-fracking reporting are varied as to what time period after completion the information is required to be disclosed. Louisiana requires that the information be disclosed 20 days after fracking completion.[99] West Virginia allows 90 days. Indiana requires that the information be disclosed immediately upon completion,

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[90] *Id.*

[91] Underground Injection Control Program Guidance #84, 77 Fed. Reg. 27,451-02, 27,453 (May 10, 2012).

[92] *S. 1135 (113th): FRAC Act*, GovTrack, https://www.govtrack.us/congress/bills/113/s1135 (last visited Dec. 23, 2015).

[93] Fracking Responsibility and Awareness of Chemicals Act (FRAC Act), S. 1135, 113th Cong. (2013).

[94] *Id.*

[95] McFeeley, *supra* note 9 at 859.

[96] *Id.*

[97] *Id.* at 850.

[98] *Id.*

[99] *Id.* at 875.

but has no enforceable point within the rule to determine when that is exactly.[100]

Most states that have post-fracking chemical disclosure requirements, also have trade secret exceptions that require little, if any, factual substantiation that the trade secret claim is legitimate.[101] "Of twenty-two states with fracking chemical disclosure rules, only four require any factual justification to be provided when making a claim of trade secret: Arkansas, California, Illinois, and Wyoming."[102] In emergencies, trade secret information, depending on the state, may be disclosed to certain professionals. But even here there is a wide variance. Five states will disclose trade secret information only to health professionals and not emergency responders.[103] Seven states will disclose trade secret information to health professionals or emergency responders, but are limited by what circumstances this information may be disclosed.[104] Ten states, including Wyoming, North Dakota, and Utah, provide no access to trade secret information to either emergency responders or health professionals.[105]

The ability to access the data from chemical disclosure in a useable way is also problematic. The Internet is now a uniquely suited tool that may be utilized to generate public awareness of environmental and public health concerns. How the data is presented to the public through the Internet can have a profound effect on its usability. States vary on how reporting data is collected, stored and managed, and its accessibility to the public.[106] "The benefits of public disclosure are unlikely to accrue unless the information is available when it is needed and in a form that facilitates its use and interpretation."[107] The most important indicator of the usability of data is its ability to be searched and aggregated; the data must be searchable, sortable, and machine-readable.[108] Many state websites that do disclose fracking data create hurdles to the effective use of it. Researchers, regulators, or the public in general, may have access, but in the present format of the data disclosed, it is nearly useless.[109] For example, five states provide records only in image format.[110] For this data to be analyzed in any meaningful way, all the information would

[100] *Id.*
[101] McFeeley, *supra* note 9 at 850.
[102] *Id.* at 887.
[103] *Id.* at 897.
[104] *Id.*
[105] *Id.*
[106] McFeeley, *supra* note 9 at 862.
[107] *Id.*
[108] *Id.* at 864.
[109] *Id.* at 865.
[110] *Id.*

have to be re-entered into a database manually. Some states have problems with search navigation or user-friendly interface issues.[111] Databases could be set up to search in any number of ways that are troublesome. For example, some states only provide searches based on well identification numbers or geographical information like field, township, and range that the public is unlikely to know.[112] If there is the ability to search by county location, it often only identifies the latitude and longitude of where the well is situated.[113] Until data is disclosed and presented in a useful way, the benefits of public right-to-know policies have very little value.

C. How The Blm Rule is a Step in The Right Direction in Solving Regulatory Problems

The BLM Rule is the first step in solving the problems created by varying state regulations and federal loopholes. It may be the first federal regulation that directly regulates fracking, but it only legally affects federal and tribal lands under the control of the BLM, a small portion relative to the total private hydraulic fracturing projects thought to be in operation in the nation.[114] So how can this Rule that has such a limited application create cohesion and close loopholes? The reason lies in the perception of what the Rule may mean for other fracking regulations. The Obama Administration and Interior Secretary Sally Jewell are hoping the Rule will become the de facto standard. In an interview about the Rule, Jewell says that while the Rule only impacts public lands, "'there are a number of states where these may be the only regulations they have.' The onus for creating further rules, she said, 'must now be taken up in statehouses and boardrooms across the county.'"[115] Some oil and gas industry attorneys claim that the Rule can help bolster future claims for both environmentalists and industry.[116] The oil and gas industry can use the Rule as proof of the federal government's position that the risks of unconventional drilling can, in fact, be mitigated.[117] Environmentalists can use the Rule as a benchmark to pressure state regulators into enhanc-

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[111] *Id.*

[112] *Id.*

[113] FracFocus Website, *supra* note 4.

[114] *See* 80 Fed. Reg. 16128, 16128. (Mar. 26, 2015); FracFocus Website, *supra* note 4.

[115] Davenport, *supra* note 14.

[116] Ellen M. Gilmer, *Federal fracking rule pelted with lawsuits; more on the way*, E&E Publishing, LLC, http://www.eenews.net/stories/1060015895/print.

[117] *Id.*

ing their current laws if inadequate.[118] Further, the Rule may also spur future challenges to industry trade secret claims.[119]

Additionally, the Rule recognizes the Internet as the most useful way to publicly disclose information and has adopted, as well as recommends, websites that have shown some strides forward in the access and usability of chemical disclosure when it comes to fracking. Fracfocus .org, is the recommended site proposed by the rule. It was created as a voluntary chemical disclosure site for the oil and gas industry to address public concerns about fracking.[120] Managed by the Ground Water Protection Council and the Interstate Oil and Gas Compact Commission, its stated mission is "to provide the public access to reported chemicals used for hydraulic fracturing within their area."[121]

As with everything related to fracking, Fracfocus.org is not without its critics. Environmentalists have criticized the reliance of states' regulations on Fracfocus.org, especially because it is a site created by the oil and gas industry.[122] A Harvard study addressed Fracfocus.org and concluded that "it fails as a regulatory compliance tool."[123] Because of the possible long-term effects of chemicals, disclosure records are only effective if they can be accessed when needed. As a private website, Fracfocus.org could be taken down at any time and is not regulated like a government agency. There are no audit trails, and there is little recourse from public agencies if data is lost, corrupted, or inaccurate.[124] Nevertheless, Fracfocus.org has been incorporated into 23 states' disclosure rules as the primary or sole location for reporting fracking chemical information.[125]

In anticipation of the problems mentioned, BLM entered into a Memorandum of Understanding with Fracfocus.org before the Rule came into effect.[126] FracFocus 3.0 claims to expand the public's ability to search records, improve data accuracy, and allow "machine-readable" formatted extractions of the data, all designed to enhance the public's

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[118] *Id.*

[119] *Id.*

[120] FRACFOCUS WEBSITE, *supra* note 4 at "Home."

[121] *Id.* at "Welcome."

[122] Davenport, *supra* note 14.

[123] Mike Soraghan, *Hydraulic Fracturing: FracFocus officials defend against Harvard criticism*, E&E PUBLISHING, LLC (April 23, 2015).

[124] FRACFOCUS WEBSITE, *supra* note 4 at "Terms of Use."

[125] *Id.* at "Homepage."

[126] Amanda Stark, *The Administration's New Fracking Rule Has a Few Catches*, THE CENTER FOR EFFECTIVE GOVERNMENT (March 23, 2015), http://www.foreffectivegov.org/blog/administrations-new-fracking-rule-has-few-catches.

usability of the site.[127] BLM will also keep its own copies of the disclosed information so that no data will be lost as a result of unexpected website closures.[128]

D. What About Environmental and Public Health Concerns?

In recent years, there has been a proliferation of oil and gas drilling in the U.S. largely due to advancements in hydraulic fracturing. It is estimated that about 1.1 million oil and gas wells are actively producing.[129] As of November 2015, Fracfocus.org, lists 106,132 registered hydraulically fractured wells.[130] Hydraulic fracturing is an exceedingly effective process, increasing the rate at which wells produce often by hundreds of percent.[131] However, there is ongoing controversy about fracking, and no consensus has been reached between states, oil and gas industry, and environmental groups. The oil and gas industry claim that fracking is lowering consumer gas bills, stimulating job growth, and moving the U.S. towards energy independence.[132] Some state and local governments actively encourage fracking, touting these benefits. Others, along with environmental groups, express a growing concern about the environmental effects and public health.[133]

In New York, a seven-year study about the possible effects of fracking have led regulators to place a ban on all fracking. New York officials took the view that because the effects of fracking on water, air, and soil, and public health are inconsistent, the possible risk was not worth it.[134] In contrast, the state of Pennsylvania has embraced fracking as an economic boom, since it, along with New York, Ohio, and West Virginia, is situated atop the impressive Marcellus Shale, a huge source of oil and gas.[135] But recent studies conducted about Pennsylvania residents may prove New York's concerns were well-founded. For example, one study showed that Pennsylvania residents living closer to wells had increased

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[127] Fracfocus Website, *supra* note 4 at "2/26/2015 Major Improvements to FracFocus Announced."

[128] Stark, *supra* note 126.

[129] Matt Kelso, *Over 1.1 Million Active Oil and Gas Wells in the U.S.,* Fractracker Alliance (Mar. 4, 2014), http://www.fractracker.org/2014/03/active-gas-and-oil-wells-in-us/.

[130] Fracfocus Website, *supra* note 4 at "Home."

[131] *Id.* at "Hydraulic Fracturing: The Process."

[132] Schalbs*, supra* note 8.

[133] *Id.*

[134] Fracking Responsibility and Awareness of Chemicals Act (FRAC Act), S. 1135, 113th Cong. (2013).

[135] Freeman Klopott, *N.Y. Officially Bans Fracking with Release of Seven-Year Study*, Bloomberg Business (June 29, 2015, 12:16 PM PDT), http://www.bloomberg.com/news/articles/2015-06-29/n-y-officially-bans-fracking-with-release-of-seven-year-study.

hospital admissions to cardiology units than those who lived farther away.[136] Another study linked low birth weight in newborns to how close their mothers lived to wells.[137] Although these studies only provide correlations as opposed to cause and effect relationships, they are merely the first peer-reviewed studies of the potential health effects of fracking.[138]

The biggest, and most obvious fear surrounding fracking is that it contaminates groundwater and surface water. There have been instances throughout the country that make this a legitimate concern. For example, in Colorado, 84,000 gallons of fracking fluid sprayed out of a well in Windsor for more than 30 hours after a mechanical failure.[139] Although the operators claim that they cleaned up the spill, it is uncertain if the leak has contaminated the groundwater, or what other long-term effects might have occurred.[140] Supporters of fracking claim that this type of leak is rare, and absent accidents like these, fracking is no more dangerous than conventional drilling.[141]

In another incident, a fire broke out at a Halliburton fracking site in Ohio causing thousands of gallons of toxic chemicals to spill into a tributary of the Ohio River that supplies drinking water for millions of residents.[142] An estimate of over 70,000 fish died as a result of the chemicals spilled.[143] Under Ohio state law, chemicals designated as trade secrets do not need to be disclosed unless there is an emergency.[144] However, Halliburton is only required to disclose the trade secret information to emergency responders and the EPA, or its state counterpart, Ohio EPA, who are forbidden from disclosing it to the public.[145] Local water agencies, area residents, and the private experts that were hired to monitor the water contamination, were never given this proprietary informa-

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[136] Don Sapatkin, *Pa. Studies Link Fracking with Health Problems*, THE PHILADELPHIA INQUIRER (July 15, 2015, 7:17 PM), http://www.philly.com/philly/health/20150116_Pa__studies_link_fracking_with_health_problems.html.

[137] *Id.*

[138] *Id.*

[139] Bruce Finley, *Big fracking fluid spill near Windsor is cleaned up, company says*, THE DENVER POST (Feb. 14, 2013, 7:18 PM MST), http://www.denverpost.com/ci_22593942/big-fracking-fluid-spill-near-windsor-is-cleaned.

[140] *Id.*

[141] *Pros and cons of fracking*, SCIENTIFIC ALLIANCE, http://www.scientific-alliance.org/scientific-alliance-newsletter/pros-and-cons-fracking (last visited Dec.11, 2015).

[142] Mariah Blake, *Halliburton Fracking Spill Mystery: What Chemicals Polluted an Ohio Waterway?*, MOTHER JONES (July 24, 2014, 9:28 AM EDT), http://www.motherjones.com/politics/2014/07/halliburton-ohio-river-spill-fracking.

[143] *Id.*

[144] *Id.*

[145] *Id.*

tion.[146] Though Ohio state officials say that the chemicals are so diluted now that the water is again safe to drink, critics acknowledge that without knowing what chemicals are in the water, the drinking water utility, and others who are monitoring the river, cannot determine if the levels present are indeed safe.[147]

Through regulation, BLM's Rule solves many of these concerns. The Rule will get the right information, to the right people, at the right time. Possible long-term effects of fracking chemicals on groundwater used in wells can be tracked more efficiently because the operators are required to maintain records of any withheld information for six to seven years after the fracking has been completed. Additionally, the Rule requires that the operator provide the records to the BLM "promptly" when requested, even if the records are in the custody of the trade secret holder. This will assist emergency responders by giving them access to the full spectrum of chemicals used, should a chemical spill or other such emergencies surrounding the fracking process arise. No more *guessing* about what chemicals have been spilled. No more *hoping* that surface water is safe, because the right people have not been informed about the chemicals that might be present. Plus, BLM's retained authority will enable BLM to make the decision as to whether the operators or third parties have made a legitimate trade secret claim. BLM can decide whether more substantiation is necessary or if a legitimate trade secret *does not* exist and publicly disclose the information. Operators will be held accountable for the information they submit for themselves, and on account of third party trade secret holders.

IV. Conclusion

The controversy surrounding fracking has been the genesis of BLM's regulation. The fundamental tension between environmental "right-to-know" policies and trade secret laws have borne a much needed compromise within the Rule. Operators are now required to disclose the chemicals used in their fracking fluids. If they want to be exempt from disclosure, they have to certify that they (or a third party) have a legitimate trade secret exemption, and provide factual substantiation in the form of affidavits or other materials. The Rule's factual substantiation requirement will keep oil and gas companies from abusing trade secret exceptions and operators have to maintain, or have access to, the trade secret information in case it is required.

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[146] *Id.*

[147] Blake, *supra* note 142.

Although many states have recognized a public policy concern regarding fracking, and have even created legislation, the inconsistent application across jurisdictions has created problems. BLM's Rule is a successful compromise between two conflict concepts, and is a step in the right direction for future fracking regulation.