Written Statement of

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On behalf of Boston Common Asset Management, LLC

Oversight Hearing on
"Examining Deficiencies in Transparency at the Department of the Interior"

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Committee on Natural Resources
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Chairman Lamborn, Ranking Member Lowenthal and the members of the Subcommittee, thank you for inviting me to testify today. I will speak on the current state of voluntary transparency by the oil and gas industry regarding their onshore U.S. operations using hydraulic fracturing and the benefits from greater transparency for companies, investors and the communities where oil and gas companies operate.

I am currently a Managing Director and the Director of ESG (Environmental, Social and Governance) Research and Shareowner Engagement of Boston Common Asset Management, a sustainable and responsible investment management firm for institutional investors and high net worth individuals. On behalf of our clients we invest in the securities of diversified portfolios of U.S. and non-U.S. publicly traded companies including oil and gas companies. I have worked for my firm since our founding at the end of 2002 and I have worked in this field for over 25 years.

I am here to testify regarding voluntary oil and gas industry disclosure as a co-author of the 2015 report "Disclosing the Facts: Transparency and Risk in Hydraulic Fracturing." The third annual investor scorecard report from As You Sow, Boston Common Asset Management, and the Investor Environmental Health Network (IEHN) gauges how well oil and gas companies do in providing information so that investors can accurately assess how, or whether, these companies manage key risks of hydraulic fracturing operations (fracking), including the use of toxic chemicals, water consumption and water quality, waste management, air emissions, methane leakage, and community impacts. The criteria we use for the report – the questions we're asking of companies – are supported by investors globally. My written statement includes as an appendix the Executive Summary of the 2015 *Disclosing the Facts* report.

The *Disclosing the Facts* 2015 report covered 30 companies and found the vast majority – 70 percent –still largely do not rigorously disclose the impacts of their hydraulic fracturing operations on communities and the environment. We were encouraged by a handful of companies that have clearly risen to our challenge with the scorecard as we seek to trigger as IEHN's Richard Liroff says, a "race to the top." For example, BHP Billiton showed that strong transparency is possible by scoring a total of 32 out of 39 possible points versus our key performance indicators. Rounding out the top five companies were Hess (22 points), Apache (21), Noble Energy (19) and CONSOL Energy (19). Other companies also increased their public reporting despite low commodity prices hurting the industry. Also we would like to note that BHP Billiton ranked near the bottom of the 2013 scorecard. This confirms the view of some investors that at least some of the companies that are disclosure laggards may in fact have good policies, practices, and data systems in place, but are not revealing them.

One major finding from *Disclosing the Facts* is that several good practices are becoming more widespread. The five most widely reported indicators include: substituting pipelines for trucks to transport water for fracturing (23 companies); declaring a practice to use non-potable water instead of fresh water for fracturing whenever feasible (19 companies); avoiding use of diesel fuel in hydraulic fracturing fluids (16 companies); relying on independent third-party databases to screen potential contractors (16 companies); and linking compensation of senior management to health, safety, and environment metrics (15 companies).

But data on key metrics remain largely absent for most companies, making it difficult for investors and the public to assess and compare companies' performance. For the second year in a row, most companies failed to disclose their methane leakage rate or how often they monitor for leakage. In 2015, just five of 30 companies disclosed their methane emission rates from drilling and other operations. Not a single company reported establishing public methane emission reduction goals. Also lacking in most cases were companies reporting on how they handle community impacts and complaints.

Absent greater disclosure on things like methane, other air emissions, and growing concerns around induced seismicity, investors have no way of crediting those companies making meaningful efforts to adopt best practices and mitigate their impacts on communities and the environment.

I will now focus on two things:

- First, I will outline examples of oil and gas companies working to reduce and do a better job of reporting on risks … it's important to acknowledge where there has been progress … even if much more is needed.

- Second, I want to touch on investor engagements with companies and the benefits of increased transparency to companies.

What does that mean in practical terms?

- Apache has a goal of sourcing safer fracking chemicals based on EPA's "Safer Choice" program. Apache has also reduced chemical use by roughly 30-40 percent.
- Southwestern Energy reduced its fresh water use by 15 percent between 2012 and 2014. The company has a goal of being fresh water neutral by 2016, meaning it will replace or offset the use of the fresh water it uses.
- Southwestern Energy has organized Our Nation's Energy Future (ONE Future) Coalition, which will be developing methane emission reduction goals between 2016 and 2018. This group also has been joined by Apache, BHP Billiton, and Hess.
- Hess established a goal for transporting 25% of its water in North Dakota by pipeline and ended up transporting 43% of it. This eliminated more than 40,000 water hauling truck trips.
- Anadarko established a community response line in Colorado. The most frequent complaints, usually resolved within a week, related to noise, communication, property damage, and light.

That's a quick look at some recent progress. Now, I'd like to turn to shareowner engagement with oil and gas companies and the benefits of increased transparency to companies.

The truth is that institutional investors have been pressing oil and gas companies since 2009 for greater disclosure of their risk management practices related to hydraulic fracturing operations. In 2015, investors engaged over two dozen companies, and filed approximately 10 shareholder proposals on these issues. Investors have filed over 40 shareholder proposals related to hydraulic fracturing since 2009 gaining on average over 30% votes in favor.

We know that investor meetings and shareholder proposals have led to improved disclosures at many of the companies. Also regulators in some states have required oil and gas operators to use platforms like FracFocus.org to report their chemicals used for hydraulic fracturing for new wells.

Shareowner engagements benefited company standings in our scorecard, particularly with leaders such as BHP Billiton, Apache, Noble, Anadarko, and Southwestern.

All good, we welcome this outcome and it's an important driver of our work. But again, these are very narrow successes industry wide.

In fact, most of the subsequent disclosure from shareowner engagement is narrative and qualitative in form, while quantifiable data are lacking.

And therein lies the problem for investors. They need real data to figure out risks and what those risks mean to their long-term holdings.

The oil and gas industry's hydraulic fracturing operations are under intense scrutiny for potential harm to neighboring communities and the environment -- from air and water pollution to increased noise, traffic, and crime.

If companies are not tracking these potential problems, and being transparent, it is difficult to demonstrate to investors, regulators, or the public that the problems are being avoided or resolved.

We believe that greater transparency can help companies and the industry allay these fears and protect their social license to operate and may lead to positive reratings by investors. The maxim of "what gets measured, gets managed" applies to transparency related to hydraulic fracturing operations. A commitment to greater transparency and public reporting may help companies better manage their environmental and stakeholder engagement practices that can reduce costs and boost local community support.

And that's why investors care. Hidden risks may lead to reputational damage, regulatory crackdowns, and litigation – all or any one of which can be crippling to the future prospects of companies.

That concludes my testimony. Thank you, Mr. Chairman and Members for your invitation and your time this morning. I would be happy to answer any questions.

See next page for Executive Summary of *Disclosing the Facts 2015*.

Appendix

Prepared for U.S. House Committee on Natural Resources, Subcommittee on Energy and Mineral Resources

Disclosing the Facts: Transparency and Risk in Hydraulic Fracturing, 2015

Full Report – disclosingthefacts.org

A collaborative project of As You Sow, Boston Common Asset Management, and the Investor Environmental Health Network. Authors: Richard Liroff, Investor Environmental Health Network; Danielle Fugere, As You Sow; Steven Heim, Boston Common Asset Management, LLC, published December 2015.

EXECUTIVE SUMMARY

Disclosing the Facts 2015 is the fourth in a series of investor reports intended to promote improved operating practices among oil and gas companies engaged in horizontal drilling and hydraulic fracturing. Hydraulic fracturing operations often use toxic chemicals and high volumes of water, release significant levels of greenhouse gases and other pollutants, and have the potential to adversely impact local communities when not properly managed. These issues translate into financial risks to companies and shareholders in the form of fines, regulations, or threats to companies' social license to operate.

Following the maxim of "what gets measured, gets managed", this report encourages oil and gas companies to increase disclosure about their use of current best practices to minimize the environmental risks and community impacts of their "fracking" activities. Disclosure of best management practices and associated key performance indicators is the primary means by which investors gauge how companies are managing the business risks associated with their environmental and community impacts. Disclosure helps both investors and other stakeholders determine whether companies have the systems in place to minimize the community and environmental risks of their operations.

This 2015 scorecard benchmarks the public disclosures of 30 companies on 39 key performance indicators. It distinguishes companies disclosing more about practices and impacts from those disclosing less. The scorecard assesses five areas of environmental, social, and governance metrics emphasizing, on a play-by-play basis, quantitative disclosures for: (1) Toxic chemicals; (2) Water and waste management; (3) Air emissions; (4) Community impacts; and (5) Management accountability.[1] It relies solely on publicly available information companies provide on their websites or in corporate financial statements or other reports linked from their websites.

This year, the report card has been compiled amidst a dramatic contraction of well drilling and completion activities and enormous financial write-offs. In this operating environment, companies might be tempted to slow disclosure efforts and perhaps even cut corners on best practices. However, this year's scorecard results show that corporate disclosure efforts have increased among a core group of industry disclosure leaders and even some companies that have been disclosure laggards. Companies continue to pursue operating innovations that not only save money but also yield environmental benefits. These include, for example, substituting pipelines for trucks to move water and waste water, enhancing leak detection and repair efforts, and using less, but safer and more cost-effective chemicals.

Yet, while progress has been made, much more remains to be done. For instance, the industry as a whole must improve its localized disclosures since companies' social license to operate is often determined by local concerns and perceptions of corporate responsiveness. Local impacts can include land and water use, air and water pollution, and nuisances such as noise, light pollution, traffic, and road damage. Progress must also continue on issues such as reducing chemical toxicity, setting goals for reducing methane and other air emissions, and identifying local community concerns and company responses.

(1) Play-by-play disclosure refers to a company reporting the distinct operational practices and impacts that are occurring at each play in which a company is operating, as distinct from reporting at an aggregate level such as company- or country-wide. 'Play-by-play' is a short-hand way of referring to appropriate localized reporting since impacts and social license controversies are most important at the local level.

KEY FINDINGS

1. **BHP Billiton stands out as the disclosure leader.** BHP Billiton scored 32 out of a possible 39 points. BHP Billiton's disclosure scores follow a trajectory that investors hope a growing number of companies will emulate. The company ranked near the bottom of the industry in disclosure in the 2013 edition of *Disclosing the Facts*, raced to the top in 2014, and further outdistanced even other improving companies in 2015. Through its score, the company demonstrates that it has been putting systems in place to track data and increase disclosures. Its swift ascent from the bottom of the 2013 scorecard confirms investors' view that at least some of the companies that are disclosure laggards may in fact have good policies, practices, and data systems in place, but are not revealing them. BHP Billiton's website features a case study of its fracturing operations, written to the *Disclosing the Facts* scorecard outline and addressing investor concerns in a concise, readily accessible manner.

2. **Hess, Apache, Noble Energy, and CONSOL Energy comprise a core of disclosure leadership companies outpacing the rest of the industry, with Southwestern Energy, Anadarko Petroleum, QEP Resources, and EQT slightly behind.** Hess, Apache, and Noble built on their leadership positions from 2014, disclosing information for about half of the scorecard indicators. CONSOL nearly quadrupled its 2014 score, largely by securing third-party certification for

compliance with the best practice standards of the Center for Sustainable Shale Development (CSSD). Many of its standards match scorecard practices. Southwestern Energy, following in BHP Billiton's path, moved from near the bottom of the scorecard to join the leadership group. The company accomplished this leap by incorporating the scorecard in the development of its inaugural corporate sustainability report. By nearly doubling its score in 2015, Anadarko narrowed its gap with the leaders. QEP Resources, like Southwestern Energy, significantly improved its score, moving up from near the bottom of the industry in 2014. EQT's score dropped slightly from 2014 but the company remains ahead of most of the industry.

3. **Most of the industry—70 percent of the companies assessed—continue to leave investors substantially in the dark about their policies, practices, and impacts, especially on a quantitative play-by-play basis.** These companies disclose from zero to 28% on the scorecard indicators. Some companies that scaled back on reporting, or failed to update their disclosures, lost points. Some companies have good quantitative disclosures for individual shale plays, or informative narrative disclosures across their entire operations, but fail to provide sufficient, quantitative, play-by-play disclosure for each of their major plays. Carrizo Oil & Gas, Continental Resources, and Whiting Petroleum are the lowest scorers, with Carrizo earning zero points.

4. **Broad policies, not play-by-play quantitative performance metrics, remain the most commonly reported indicators.** The scorecard includes a mix of quantitative indicators and non-quantitative best practice indicators. Since the initial scorecard in 2013, scores have increased by five or more points on about 40% of the original indicators, primarily the non-quantitative ones. The five most widely reported indicators include: substituting pipelines for trucks to transport water for fracturing (23 companies); declaring a practice to use non-potable water instead of fresh water for fracturing whenever feasible (19 companies); avoiding use of diesel fuel in hydraulic fracturing fluids (16 companies); relying on independent third-party databases to screen potential contractors (16 companies); and linking compensation of senior management to health, safety, and environment metrics (15 companies). The three most significant scoring changes on indicators between 2014 and 2015 were for: play-by-play reporting of the types of water sources used for fracturing activities (from 1 to 6 companies); percentages of wastewater reused for fracturing (from 2 to 7); and addressing naturally occurring radioactive materials (NORMs) (from 6 to 12).

CONCLUSIONS

The rising scores of leadership companies, a trend that began with the second edition of *Disclosing the Facts* in 2014, show that, at least for a segment of the oil and gas industry, the scorecard is having its desired effect of triggering a "race to the top" in improved disclosure.

As the scoring leader, BHP Billiton has demonstrated that companies can tell their story concisely and in a fashion readily accessible to investors and other stakeholders. Such information is critical to investors who seek clear data on which to base investment decisions, especially in an industry that is facing tremendous challenges, including the most basic challenge of retaining a social license to operate. Through this scorecard, investors seek to encourage the entire industry to implement current best management practices, to report on those practices, and to provide quantitative indicators of success in reducing impacts.

While significant improvement in reporting has been seen in a handful of companies, 70 percent of the companies assessed still score below 28 percent on scorecard indicators. Companies continue to miss opportunities to address issues of public concern that feature prominently in media reports and activist advocacy critical of the industry. These issues include, for example, use of diesel fuel in fracturing fluids, radioactive waste, and induced seismicity (earthquakes). Diesel fuel does not appear to be widely used in fracturing fluids, yet many companies are silent on whether they have a policy to avoid it. Naturally occurring radioactive material waste has surfaced as an issue, especially in Pennsylvania and North Dakota, but few companies discuss straightforward procedures for reducing radioactivity risks. Additionally, while companies increasingly acknowledge induced seismicity as a risk, they often fail to discuss the specific steps they are taking to manage the hazard.

The failure of the majority of the largest oil and gas companies to either adopt current best management practices or to report on their adoption is a continuing challenge requiring ongoing engagement by investors.

RECOMMENDATIONS

Companies should report data associated with their operational impacts using quantitative metrics, on a play-by-play basis, in order for investors to be able to rigorously assess company practices. In particular:

1. Companies should disclose their leak detection and repair programs for methane emissions, providing information on program scope (percentage of facilities/assets covered), technologies deployed, frequency of inspection, and results.

2. Companies should develop systems to track community concerns and corporate responses and provide such information to senior management, corporate boards of directors, investors, and other stakeholders.

3. Companies not using diesel or BTEX chemicals in their fracturing fluids should disclose this, and companies not relying on their own toxicity scoring systems should

draw on those of their principal chemical suppliers to report progress in reducing toxicity of fracturing fluids.

4. Naturally occurring radioactive material waste has been a high-profile issue, especially in Pennsylvania and North Dakota. Companies operating in those states in particular should disclose what steps, if any, they take to measure, track, and assure appropriate disposal of contaminated materials.

5. Seismicity has been a high-profile issue in Oklahoma, Texas, Arkansas, and Ohio. Companies operating in those states in particular should disclose what steps they take, consistent with and beyond applicable state regulations, to reduce the risk of inducing seismic events, including implementing precautionary practices for their own drilling, completion, and disposal operations and assuring sound practices by their waste disposal contractors.

6. Companies should employ a wide range of tools for avoiding groundwater contamination, including assessing and monitoring adjacent wells, identifying existing faults and fractures, and testing ground water before and after drilling to further reduce the potential for contamination and to detect and remedy any contamination that does occur.

In addition to enhancing their reporting,

7. Companies should link executive compensation to corporate performance on health, safety, and environmental indicators, and should incorporate metrics beyond the injury and spill data which are most commonly relied on in such linked compensation systems. Additional metrics might include, for example, measures to reduce companies' environmental impact, such as implementation of leak detection and repair programs and progress towards greenhouse gas reduction goals.

8. Government agencies and the oil and gas industry should work together to develop more systematic research and data on the human health effects (including worker health) of hydraulic fracturing operations. This might follow the model of the U.S. government and the automobile industry agreeing on creation of the Health Effects Institute to produce credible, broadly accepted research on the health effects of air pollution.

The complete ranking of the 30 companies is as follows:

COMPANY* **SCORE (OUT OF POSSIBLE 39 POINTS)****

Company and Ticker Symbol	2015 Score	2014 Score
BHP Billiton Ltd. (BHP)	32	18
Hess Corp. (HES)	21	17
Apache Corp. (APA)	20	13
Noble Energy, Inc. (NBL)	19	13
CONSOL Energy Inc. (CNX)	19	5
Southwestern Energy Co. (SWN)	16	2
Anadarko Petroleum Corp. (APC)	15	8
QEP Resources, Inc. (QEP)	15	1
EQT Corp. (EQT)	14	16
ConocoPhillips Corp. (COP)	11	5
Range Resources Corp. (RRC)	11	9
Royal Dutch Shell plc (RDS)	11	9
Occidental Petroleum Corp. (OXY)	10	7
Penn Virginia Corp. (PVA)	10	9
BP plc (BP)	8	6
Cabot Oil & Gas Corp. (COG)	8	8
Encana Corp. (ECA)	8	15
EOG Resources, Inc. (EOG)	8	9
Exco Resources, Inc. (XCO)	7	7
Devon Energy Corp. (DVN)	7	5
Newfield Exploration Co. (NFX)	6	4
Chesapeake Energy Corp. (CHK)	4	7
Chevron Corp. (CVX)	4	6
Exxon Mobil Corp. (XOM)	4	5
Pioneer Natural Resources Co.* (PXD)	3	--
Ultra Petroleum Corp. (UPL)	3	9
WPX Energy, Inc. (WPX)	3	3
Continental Resources, Inc. (CLR)	2	2
Whiting Petroleum Corp. (WLL)	2	3
Carrizo Oil & Gas, Inc. (CRZO)	0	0

*For the 2015 scorecard, Pioneer Natural Resources was substituted for Talisman Energy, Inc., which was acquired by Repsol, S.A.
**2014's scorecard had a total of 35 possible points.

The three most significant scoring changes on indicators between 2014 and 2015 were for: play-by-play reporting of the types of water sources used for fracturing activities (from one to six companies); percentages of wastewater reused for fracturing (from two to seven); and addressing naturally occurring radioactive materials (NORMs) (from six to 12).