

The End of the Line: Shutting Down Enbridge Line 5, Still a Pipedream?

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ABSTRACT

Michiganders view the Great Lakes as central to our livelihoods, our leisure, and our way of life, as the “Great Lakes State” imbues residents with a special sense of civic pride and public trust. So when Canadian energy transportation company Enbridge spilled over 800,000 gallons of Albertan tar sands oil into the Kalamazoo River in 2010, Michiganders, vowing not to repeat the mistakes of the past, asked whether it could happen again. Reviewing the state’s pipelines infrastructure in the wake of the spill, environmentalists made a startling discovery—an oil pipeline, Line 5, operated by the same company ran through the Straits of Mackinac at the very heart of the Great Lakes. Overnight, the sixty-four-year-old pipeline became a political lightning-rod in the tourism-based economy of Northern Michigan and a grassroots campaign began to “Shut Down Line 5.” But how? This Note examines whether pipeline safety laws offer a means of shutting down the aging pipeline. It argues that the safety laws themselves fail to offer an effective means for preventing a spill in the Great Lakes. The Note then examines two problems created by the pipeline safety laws: first, an asymmetrical information problem resulting from the lack of transparency of the pipeline safety regime; and second, an agency problem that grows out of the lack of accountability resulting from asymmetrical information. Finally, this Note argues in favor of the use of sunshine tactics as a remedy for both the information and accountability deficiencies of the pipeline safety laws and reviews timely bipartisan legislation that would compel greater transparency. Transparency would then either result in enhanced operational safety or compel the pipeline operator to shut the pipeline down.

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INTRODUCTION

Michigan claims the title of the “Great Lakes State.” It is bordered by Lake Superior, Lake Michigan, Lake Huron, and Lake Erie, totaling 3,200 miles of freshwater coastline, more than any other state. It is no surprise that Michigan citizens are naturally imbued with a deep commitment to clean waters.

On July 25, 2010, oil transmission Line 6B, operated by Canadian corporation Enbridge Energy Partners LP, ruptured. Over 800,000 gallons of heavy Canadian tar sands oil in transport from Alberta, Canada to refineries in the Eastern United States and Canada leaked out of pipes into adjoining wetlands, Talmadge Creek, and finally into the Kalamazoo River. Heroic cleanup efforts prevented the oil plume from reaching Lake Michigan. Cleanup costs to date, exacerbated by heavy solids that eventually sink to the river bottom rather than float, now exceed a billion dollars.

This unexpected disaster in Western Michigan has understandably raised concerns about the risks of a similar event elsewhere in the Great Lakes. Of particular concern is the Straits of Mackinac, where water flowing from Lake Michigan enters Lake Huron on its journey to Lake Erie, Lake Ontario, and the St. Lawrence River before reaching the Atlantic Ocean. The Straits of Mackinac is a five-mile-wide passage between Michigan’s Lower Peninsula and Upper Peninsula. Underneath the Straits, Enbridge Energy Partners LP operates a 64-year-old pipeline, Line 5, carrying petroleum products and natural gas from the production fields of the Western United States and Canada to refineries in Detroit, Michigan, Toledo, Ohio, and Sarnia, Ontario. Line 5, a pair of side-by-side 20-inch pipes, runs five miles along the bottom of the Straits, at a depth reaching a maximum of 270 feet. The transmission capacity of Line 5 is 540,000 barrels a day.

This Note uses the 2010 Kalamazoo River spill and ensuing public controversy over the Enbridge Line 5 pipeline to examine whether existing pipeline safety laws offer an effective means of preventing leaks or ruptures. This Note argues that the pipeline safety laws regulating oil pipelines are reactive instead of proactive; they do not effectively prevent oil spills but instead focus on compensating for the damages sustained by parties harmed when a spill occurs.¹ Laws regulating oil pipelines focus on safely facilitating delivery of petroleum products to market and offer inadequate means of preventing spills. These laws alone fail to offer a useful means for permanently shutting down aging pipelines absent application of political and market forces.

This Note describes the flexible design of pipeline safety laws, a scheme that incorporates information-based regulation and technology-based standards to accommodate the diverse circumstances of local conditions through risk-based and ambient-environment based standards.² The flexible design of these place-based standards, coupled with technology-based and information-based schemes, creates an opportunity for regulatory laxity. Industry-established, technology-based standards may reflect private interests and not the public interest in the environment. A lack of transparency by the industry, created by the use of confidential business information and national security law, produces an information problem that skews public perceptions of risk in favor of industry's preferences. Secrecy coupled with resource constraints creates a lack of accountability on the part of both industry and government that results in under-regulation and under-enforcement.

This Note argues that use of information producing "sunshine tactics" offer the best means of regulating and shutting down aging oil pipelines. Sunshine tactics produce information that increases both the safety of pipeline operations and political support for shutting down high-risk oil pipelines. Part II frames the discussion specifically against the background of the oil pipeline industry and genesis of the Enbridge Line 5 controversy. Part II and III then examines the leading Federal statutes and regulatory regime governing pipeline safety and discusses the criticism and failures of the agency charged with enforcing them.

1. ROBERT L. GLICKSMAN ET AL., ENVIRONMENTAL PROTECTION: LAW AND POLICY 79–80 (Chemerinsky et. al. eds., 7th ed. 2015) ("Several major statutes, chiefly laws dealing with spills and disposal of hazardous materials and oil, do utilize after-the-fact imposition of monetary liability both to pay for cleanups and discourage future mishandling of such wastes.").

2. Information-based schemes require regulated entities to prepare and make information public. Often such a scheme depends not on substantive regulation but on disclosure to manage the environment. Technology-based regulatory schemes either mandate a particular form of technology or determine what level of pollution or emission-level a source can accomplish through technological means. Still other technology based-standards require meeting common performance measures. Risk- or ambient-environment based standards require regulators to set standards for attaining a clean and safe environment. Once regulators determine the level of ambient pollution that poses an acceptable amount of risk, then regulators must determine how much pollution sources may generate before crossing that threshold. Sources contributing pollution must then meet the designated levels so that the ambient environment attains the specified level of cleanliness or risk. *Id.* at 80–82.

After examining the failure of Federal agency oversight of pipeline safety, Part IV examines how sunshine tactics emphasizing transparency surrounding pipeline information enhance operational safety and create political support for regulation. Part V provides an overview of recent legislative efforts to increase transparency. Finally, the Note concludes by arguing that the use of sunshine tactics offers a means of regulating oil pipelines in an era of regulatory laxity.

I. BACKGROUND

A. AN OVERVIEW OF THE OIL PIPELINE INDUSTRY

The Pipeline and Hazardous Materials Safety Administration (“PHMSA”),³ the federal agency authorized by statute to regulate pipeline safety and spill response, classifies pipelines into three categories: gathering pipelines, transmission pipelines, and distribution pipelines.⁴ PHMSA regulates all three categories of pipelines.⁵ However, intrastate pipelines and some gathering pipelines do not fall within the jurisdiction of PHMSA.⁶ PHMSA regulates both natural gas and “hazardous liquid” pipelines⁷, the latter of which

3. The Pipeline and Hazardous Material Safety Administration (PHMSA) was established by the Norman Y. Mineta Research and Special Programs Improvement Act of 2004, Pub. L. No. 108-426, 118 Stat. 2423 from several predecessor agencies such as the Research and Special Programs Administration. *See* Norman Y. Mineta Research and Special Programs Improvement Act of 2004, Pub. L. No. 108-426, 118 Stat. 2423 (codified as amended in scattered sections of 49 U.S.C.). PHMSA’s mission is to protect people and the environment by advancing the safe transportation of energy and other hazardous materials that are essential to our daily lives. To do this, the agency establishes national policy, sets and enforces standards, educates, and conducts research to prevent incidents. *Mission, Vision and Goals*, PIPELINE AND HAZARDOUS MATERIALS SAFETY ADMINISTRATION, <https://www.phmsa.dot.gov/about/mission> (last visited Oct. 21, 2017). The Office of Pipeline Safety is the component of the agency that administers the national regulatory program. *Office of Pipeline Safety*, PIPELINE AND HAZARDOUS MATERIALS SAFETY ADMINISTRATION, <https://www.phmsa.dot.gov/org/office-of-pipeline-safety> (last visited Oct. 21, 2017).

4. *General Pipeline FAQs*, PIPELINE AND HAZARDOUS MATERIALS SAFETY ADMINISTRATION (Jan. 23, 2013), <https://www.phmsa.dot.gov/faqs/general-pipeline-faqs> [hereinafter PHMSA GENERAL PIPELINE FAQs].

5. U.S. GOV’T ACCOUNTABILITY OFFICE, GAO-15-843T, DEPARTMENT OF TRANSPORTATION NEEDS TO COMPLETE REGULATORY, DATA, AND GUIDANCE EFFORTS 3 (Sept. 29, 2015) [hereinafter DOT NEEDS TO REGULATE]; PHMSA GENERAL PIPELINE FAQs, *supra* note 4. On October 13, 2015, PHMSA issued a Notice of Proposed Rulemaking (NPRM) with seven proposals for regulations, two of which proposed to extend federal safety regulation to all hazardous liquid gravity and gathering lines. Pipeline Safety: Safety of Hazardous Liquid Pipelines, 80 Fed. Reg. 61610 (proposed Oct. 13, 2015) (to be codified at 49 C.F.R. pt. 195), at 61611 [hereinafter Pipeline Safety Proposed Rules].

6. DOT NEEDS TO REGULATE, *supra* note 5.

7. 49 U.S.C. § 60101(a)(4)(A)–(C) (2016); *see also* PAUL W. PARFOMAK, CONG. RESEARCH SERV., RL41536, KEEPING AMERICA’S PIPELINES SAFE AND SECURE: KEY ISSUES FOR CONGRESS 1 (2013) (“Hazardous liquids primarily include crude oil, gasoline, jet fuel, diesel fuel, home heating oil, propane, and butane. Other hazardous liquids transported by pipeline include anhydrous ammonia, carbon dioxide, kerosene, liquefied ethylene, and some petrochemical feedstock.”). One cannot help but observe that PHMSA’s “hazardous liquids” nomenclature does not clearly describe, but rather obfuscates through vague and imprecise euphemism, the precise fuels transported by a hazardous liquid pipeline in terms a layperson would understand. *See e.g.*, George Orwell, *Politics and the English language* (1946), reprinted in THE COLLECTED ESSAYS, JOURNALISM, AND LETTERS OF GEORGE ORWELL 127, 136 (Sonia Orwell and Ian Angus eds. 1968) (“[P]olitical speech and writing

transport oil and other petroleum products.⁸

All three categories function as distinct components of the overall pipeline system. Gathering pipelines collect natural gas and hazardous liquids from production areas and transport these products to processing facilities for refining.⁹ Transmission pipelines then transport these refined products hundreds of miles to communities and large-volume users, such as factories or other refineries.¹⁰ Pumping stations along these transmission pipelines maintain product flow.¹¹ Finally, distribution pipelines generally only transport natural gas to residential, commercial, and industrial customers.¹²

All three categories vary in size and the pressure under which the pipelines operate. Gathering pipelines tend to have smaller diameters ranging from 2 to 12 inches and operate at lower pressures ranging from 5 to 800 pounds per square inch (PSI).¹³ Transmission pipelines range from 12 to 42 inches in diameter and operate at pressures ranging from 400 to 1440 psi.¹⁴ Distribution pipelines fall on the smaller side with some no more than 1-inch in diameter, operating at pressures ranging from 0.25 to 100 psi.¹⁵ The size and pressure of a pipeline factor into determining the capacity of a pipeline as well as the risk and impact of a leak or rupture of the pipeline. This Note focuses on Enbridge Lines 5 and 6B, both of which are transmission pipelines. This Note does not focus on the other two types of pipelines, as gathering pipelines have historically received less federal scrutiny, and distribution pipelines transport only natural gas.¹⁶

Recent reports estimated between 180,000 and 200,000 miles of hazardous liquid pipelines exist in the United States carrying 75% of the nation's crude oil and approximately 60% of refined petroleum products.¹⁷ Pipeline transportation

are largely the defense of the indefensible . . . Thus political language has to consist largely of euphemism, question begging and sheer cloudy vagueness.”); Robert Byrne, *Ambiguous Names, Titles Reign Across Our Obfuscation Nation*, TELEGRAPH-HERALD (Nov. 14, 2011), <https://0-search.proquest.com.gull.georgetown.edu/usnews/docview/903806501/B43DC56A193A4D7CPQ/1?accountid=36339>; Brent Snavelly & Alisa Priddle, *What's Wrong With Using Plain English?*, DETROIT FREE PRESS (June 17, 2014), <https://0-search.proquest.com.gull.georgetown.edu/usnews/printviewfile?accountid=36339>.

8. 49 U.S.C. § 60101(a)(5).

9. DOT NEEDS TO REGULATE, *supra* note 5, at 3.

10. *Id.* at 3–4.

11. *Id.* at 4.

12. *Id.*

13. *Id.* at 3. Gathering pipelines have begun increasing in size in recent years and these dimensions may continue to grow to sizes comparable to transmission lines. *Id.* at 8.

14. *Id.* at 4.

15. *Id.*

16. See DOT NEEDS TO REGULATE, *supra* note 5, at 4. *But see* Pipeline Safety Proposed Rules, *supra* note 3, at 61617 (demonstrating gathering pipelines are coming under increasing scrutiny).

17. See PARFOMAK, *supra* note 7, at 1; see also DOT NEEDS TO REGULATE, *supra* note 5, at 4. “Hazardous liquid pipeline” is a term of art the GAO used to refer to petroleum pipelines as opposed to strictly natural gas pipelines. DOT NEEDS TO REGULATE, *supra* note 5, at 4. Despite this impressive number of pipeline miles, a recent report by the Government Accountability Office found insufficient national pipeline capacity exists to transport crude oil. U.S. GOV'T ACCOUNTABILITY OFFICE, GAO-14-667, DEPARTMENT OF TRANSPORTATION IS

of petroleum-based products is much safer and more efficient than other modes of transportation such as rail, truck, and barge.¹⁸ Pipelines move more petroleum, but spills involve a larger quantity of oil. Conversely, rail, trucks, and barges move less petroleum but involve much smaller quantities of oil spilled at a higher frequency.¹⁹ Despite the higher spill frequency, environmentalists often focus on the more concentrated impact of pipeline spills rather than the cumulative effects of the many smaller spills from rail, truck, and barge sources because of resource constraints. Pipelines as stationary sources require fewer monitoring resources. Rail, truck, and barges are mobile sources and demand far greater resources to monitor.

A release of oil or other petroleum products into the environment poses a potentially significant risk to both petroleum producers and the public.²⁰ When pipelines leak or rupture, the releases occur in a single event and tend to involve significant quantities of oil.²¹ Releases either occur as leaks or ruptures, terms that denote the extent of the release into the environment.²² Leaks result in a slow release over a relatively small area, while ruptures results from an often sudden breach in a pipe.²³ Leaks frequently spill a smaller volume of petroleum products than ruptures; however, the amount spilled depends in part on the duration of the release. Ruptures occur less frequently but can have much larger consequences, as illustrated by the Line 6B spill.²⁴

B. PIPELINE SAFETY LAWS DID NOT PREVENT THE WORST INLAND OIL SPILL IN
U.S. HISTORY

“Okay, Well, I guess we can try it again. I guess there’s two choices here either consider it a leak, or try it again.” So observed the Control Center Operation Supervisor to the two other employees present in the Edmonton, Alberta control

TAKING ACTIONS TO ADDRESS RAIL SAFETY, BUT ADDITIONAL ACTIONS ARE NEEDED TO IMPROVE PIPELINE SAFETY (2014) [hereinafter MORE RAIL SAFETY]. Construction of larger and higher-pressure pipelines has increased in recent years with rising demand for pipeline capacity. DOT NEEDS TO REGULATE, *supra* note 5, at 7. That increased demand stems from new production methods such as hydraulic fracturing and increased production of Canadian tar sands oil from Alberta. GOVERNMENT ACCOUNTABILITY OFFICE, GAO-14-667, DEPARTMENT OF TRANSPORTATION IS TAKING ACTIONS TO ADDRESS RAIL SAFETY, BUT ADDITIONAL ACTIONS ARE NEEDED TO IMPROVE PIPELINE SAFETY 13–14 (2014).

18. PARFOMAK, *supra* note 7, at 1; DOT NEEDS TO REGULATE, *supra* note 5, at 4 (providing statistics on number of fatalities resulting from oil pipeline accidents and natural gas pipeline incidents).

19. Limited available pipeline capacity has also resulted in increased use of rail, truck, and barge to transport crude oil to refineries. MORE RAIL SAFETY, *supra* note 17.

20. DOT NEEDS TO REGULATE, *supra* note 5, at 4.

21. GLICKSMAN ET AL., *supra* note 1, at 12 (citing Mancur Olson in *The Logic of Collective Action* (1965)) (describing how high costs and small amounts of harms decrease the likelihood of pollution victims acting collectively in political or legal arenas).

22. DOT NEEDS TO REGULATE, *supra* note 5, at 4–5.

23. *Id.*

24. *Id.* at 5.

room on the evening of July 25, 2010.²⁵ All three employees worked for Enbridge, a Canadian energy delivery company that operates numerous U.S. oil pipelines. The Control Center Operation Supervisor, Shift Lead B1, and MBS Analyst B had just completed a planned shutdown of one of Enbridge's pipelines, Line 6B, after completing a hydrostatic pressure test.²⁶

After the test was complete, all three employees were confused because they were experiencing technical difficulties restarting the pipeline, with all three employees believing they needed to restore pressure to the pipeline.²⁷ Shift Lead B1 had initially identified the problem facing the control room as "column separation" at a point in the line in Marshall, Michigan, and, having started the pipeline, did not get any pressure in that area.²⁸ As Shift Lead B1 reported, the pressure in Marshall was four pounds, amounting to virtually zero.²⁹ MBS Analyst B attributed the reduced pressure to a hill in the vicinity and urged the control room to pump harder into the column separation.³⁰ Faced with the choice of treating the problem as a leak or ignoring the problem and taking the risk of trying to pump oil through the pipeline, the control room employees opted for the latter.

In one respect, the employees were right: the pipeline was not leaking. But in every other respect, they were sorely mistaken. The pipeline had in fact ruptured during the final stages of a planned shutdown of the pipeline, and the actions of the control room team would have momentous significance.³¹ No one would discover that the accident had occurred for over seventeen hours.³² The acts of the Control Room team made matters worse, contributing over 683,000 of the more than 843,444 gallons of Canadian tar sands crude spilled.³³ The rupture spilled the unrefined tar sands oil over a thirty-mile stretch of river.³⁴ The oil

25. NAT'L TRANSP. SAFETY BD., CONTROL ROOM AND SUPERVISORY CONTROL AND DATA ACQUISITION (SCADA) GROUP CHAIRMAN FACTUAL REPORT 12 (Apr. 10, 2010), <https://dms.nts.gov/pubdms/search/document.cfm?docID=366720&docketID=49814&mkey=76766> [hereinafter CONTROL ROOM RECORDINGS].

26. *Id.* at 8–14. Much like a person tests for leaks in a bicycle tire by pumping the tire up and monitoring whether the tire holds the air, the control room had filled the pipeline with liquid under greater than normal pressure to test whether the pipe leaked.

27. NAT'L TRANSP. SAFETY BD., PAR-12-01, ENBRIDGE INCORPORATED HAZARDOUS LIQUID PIPELINE RUPTURE AND RELEASE, MARSHALL, MICHIGAN 12–14 (2010), <https://www.nts.gov/investigations/AccidentReports/Reports/PAR1201.pdf> [hereinafter MARSHALL PIPELINE ACCIDENT REPORT]; CONTROL ROOM RECORDINGS, *supra* note 25, at 11–12.

28. CONTROL ROOM RECORDINGS, *supra* note 25, at 11.

29. *Id.*

30. *Id.*

31. MARSHALL PIPELINE ACCIDENT REPORT, *supra* note 27, at xii, 8, 82.

32. *Id.* at xii, xiii, 3, 5, 93, 114, 121.

33. *Id.* at 2, 56; see also Dan Egan, *Oil Pressure Builds in Great Lakes Region as New Pipelines Stall out West*, MILWAUKEE J. SENTINEL (Jan. 13, 2017), <http://projects.jsonline.com/news/2017/1/15/path-of-least-resistance.html>.

34. Various sources give different numbers for the quantity of oil spilled from the Line 6B rupture. Here, the figured used is that given by the National Transportation Safety Board (NTSB) in its report on the spill. Numbers vary as to the scope of the spill in terms of gallons spilled and miles contaminated. See SARA GOSMAN,

saturated the nearby wetlands and contaminated Talmadge Creek and the Kalamazoo River near Marshall, Michigan.³⁵ The rupture of Line 6B and the actions of the Enbridge control team caused the worst inland oil spill in U.S. history.³⁶

The defects in the Line 6B pipeline that ultimately led to the rupture had been detected during an in-line inspection conducted by Enbridge's integrity management program in 2005.³⁷ For nearly five years following the inspection, Enbridge's integrity management program failed to identify the 51.6-inch crack adjacent to a weld, as a threat to the pipeline.³⁸ A matter of days before the pipeline ruptured, Enbridge had asked PHMSA for an additional two-and-half year extension on top of the one-year extension already granted to decide whether to replace or repair sections of Line 6B.³⁹

On July 20, 2016, however, Enbridge entered into a consent decree with the United States Department of Justice. Enbridge would pay \$61 million in penalties under the Clean Water Act for spilling 843,444 gallons of Canadian tar sands oil in the Kalamazoo River and \$110 million to bolster safety operations across the Lakehead System, for a total of \$177 million in civil penalties.⁴⁰ This successful enforcement action concluded what is for now the largest, most toxic, and, at more than \$1.2 billion, the costliest onshore oil spill in U.S. history.⁴¹

C. ORIGINS OF THE ENBRIDGE LINE 5 PIPELINE AND CURRENT CONTROVERSY

The impact of Enbridge's Line 6B oil spill did not end with a consent decree. Instead, the 2010 Kalamazoo River spill spurred environmental activists and

AFTER THE MARSHALL SPILL: OIL PIPELINES IN THE GREAT LAKES REGION, NATIONAL WILDLIFE FEDERATION 2 (2012), [https://www.nwf.org/media/PDFs/Global-Warming/Tar-Sands/Oil_Pipelines_in_the_Great_Lakes_Region_Report_v3_\(2\).ashx](https://www.nwf.org/media/PDFs/Global-Warming/Tar-Sands/Oil_Pipelines_in_the_Great_Lakes_Region_Report_v3_(2).ashx); see also JEFF ALEXANDER & BETH WALLACE, NATIONAL WILDLIFE FEDERATION, SUNKEN HAZARD: AGING OIL PIPELINES BENEATH THE STRAITS OF MACKINAC AN EVER-PRESENT THREAT TO THE GREAT LAKES 7 (2012), https://www.nwf.org/pdf/Great-Lakes/NWF_SunkenHazard.pdf (claiming the spill contaminated 38 miles of the river).

35. MARSHALL PIPELINE ACCIDENT REPORT, *supra* note 27, at xii.

36. See *supra* text accompanying note 34.

37. MARSHALL PIPELINE ACCIDENT REPORT, *supra* note 27, at 87. Enbridge's integrity management program is responsible for ensuring the structural integrity of Enbridge's pipelines.

38. *Id.*

39. Ken Winter, *Enbridge Under the Straits*, DOME MAGAZINE (Jan. 17, 2014), <http://domemagazine.com/winter/kw011714> (citing House Committee on Transportation and Infrastructure Report).

40. Keith Goldberg, *Enbridge Pays \$177M To Settle Suit Over 2010 Pipeline Spills*, LAW360 (July 20, 2016), <https://www.law360.com/articles/819301/enbridge-pays-177m-to-settle-suit-over-2010-pipeline-spills>. Enbridge will also pay \$1 million in civil penalties for a smaller 2010 oil spill in Romeoville, Illinois from the Line 6A pipeline. *Id.*

41. *Id.*; KENNY BRUNO ET AL., ENBRIDGE OVER TROUBLED WATER REPORT: THE ENBRIDGE GXL SYSTEM'S THREAT TO THE GREAT LAKES, SIERRA CLUB 11 (2016), <https://www.sierraclub.org/sites/www.sierraclub.org/files/blog/Enbridge%20Over%20Troubled%20Water%20Report.pdf>. The Kalamazoo River oil spill at this juncture may cost closer to \$1,377,000,000 when considering both the costs along with the recent CWA penalties and mandatory upgrades. Compare Garret Ellison, *New Price Tag for Kalamazoo River Oil Spill Cleanup: Enbridge Says \$1.21 Billion*, MLIVE MEDIA GROUP (May 20, 2016), http://www.mlive.com/news/grand-rapids/index.ssf/2014/11/2010_oil_spill_cost_enbridge_1.html (reporting the \$1.21 billion cost of the spill cleanup) with Goldberg, *supra* note 40.

interest groups to assess whether other oil pipelines in the state could pose a similar spill risk. Environmental interest groups quickly identified the Enbridge Line 5 pipeline, running through the Straits of Mackinac, as posing a significant and similar risk to the environment as Line 6B had earlier that year.

Lakehead constructed and opened the future Enbridge Line 5 pipeline for business in 1953, long before most environmental laws even existed. Construction of the Enbridge Line 5 pipeline predated passage of the 1969 National Environmental Policy Act (NEPA) by sixteen years. Neither Enbridge nor the agencies responsible for various aspects of the pipeline therefore examined, measured, or considered at that time whether the pipeline would have a significant environmental impact. As with so many pipelines constructed in the 1950s, the Federal Government and State of Michigan gave Lakehead Systems a routine approval to build a pipeline through the Straits of Mackinac as part of a national energy infrastructure build-out.⁴² As with many other transnational pipelines, the pipeline would bring conventional light crude from Alberta, Canada to U.S. domestic markets.⁴³

Lakehead, the forerunner of Enbridge, negotiated an easement agreement leasing the lake bottom lands held in trust by the State of Michigan to build a pipeline that would transport petroleum and other products.⁴⁴ Rather than a single pipeline running across the lake bottom of Lake Michigan, Lakehead negotiated two parcels of bottom lands to accommodate two twenty-inch pipelines crossing the lake bottom.⁴⁵ The terms and conditions of the easement require the pipeline operator to:

follow the usual, necessary and proper procedures for the type of operation involved, and at all times shall exercise the due care of a reasonably prudent person for the safety and welfare of all persons and of all public and private property, shall comply with all laws of the State of Michigan and Federal Government⁴⁶

The easement further requires the pipeline operator to follow a set of minimum specifications, conditions, and requirements, including installation of automatic gas-operated shut-off valves on the north and south end of each line and supports

42. BRUNO, *supra* note 41, at 2.

43. *Id.*

44. See Straits of Mackinac Pipeline Easement, Conservation Commission of the State of Michigan to Lakehead Pipeline Company, Inc. (Apr. 23, 1953), http://mediad.publicbroadcasting.net/p/michigan/files/201409/1953-04-23_Lakehead_Pipe_Line_Company_Easement_through_the_Straits_of_Mackinac.pdf [hereinafter Straits of Mackinac Pipeline Easement]; see also Pollard v. Hagan, 44 U.S. 212 (1845) (holding that based on the equal footing doctrine new states hold the same rights to navigable waters and bottomlands the colonies did upon accession to the United States) and U.S. v. Gardner, 107 F.3d 1314 (9th Cir. 1997) (stating Pollard v. Hagan held the shores and bottomlands were reserved to the states).

45. Straits of Mackinac Pipeline Easement, *supra* note 44, at 2.

46. *Id.* at 3–4.

every seventy-five feet or less.⁴⁷

Apart from technical specifications, the easement agreement also required the operator to: (1) give the State timely notice of certain circumstances; (2) notify the State when filling the pipeline with oil or other products; (3) provide the State with timely notice should any break or leak develop; (4) give the State notice upon completion of any repairs or the scheduling of any tests so that State officials or representatives could attend the test; and (5) give the State sixty-days-notice before abandoning the pipeline.⁴⁸

The State could only terminate the easement under a demanding set of circumstances. The pipeline operator would not forfeit the easement merely by violating the terms and conditions of the easement agreement. Rather, the operator would have an opportunity to correct any breach of the terms of conditions within ninety days or when reasonably possible in the exercise of due diligence.⁴⁹ The pipeline operator would not forfeit the easement provided the company observed the terms and conditions, exercised due care, and did not act grossly negligent.⁵⁰ The easement agreement specified the operator must shut down the pipeline in the event of a break or a leak, but could resume operation after conducting a two-hour test showing the pipeline no longer leaked.⁵¹ Lakehead agreed to indemnify the State and maintain a “Comprehensive Bodily Injury and Property Damage Liability” insurance policy of at least \$1,000,000 covering any damages resulting from the pipeline.⁵²

Lakehead agreed to allow the State to inspect records of oil or other substances transported through the pipeline at reasonable times and submit inspection reports reviewing the condition of the automatic shut-off valves and metering stations.⁵³ The State also reserved the right to inspect the pipelines, appurtenances, and fixtures at all reasonable times and places.⁵⁴ It is not clear for present operations whether this means Enbridge must tell the State if the company uses the pipeline to move a product other than the light Canadian crude the line currently carries, such as more corrosive Canadian tar sands oil.⁵⁵

47. *Id.* at 5.

48. *Id.*

49. *Id.* at 7.

50. *See id.* Alternatively, the State could terminate the easement if Lakeland did not build the easement or effectively abandoned the easement, but neither of these provisions presently matters. *Id.* at 8.

51. *Id.* at 9.

52. *Id.* at 10.

53. *Id.*

54. *Id.* at 12.

55. Enbridge has repeatedly claimed Line 5 transports light crude oil and natural gas and has not ever and does not transport “heavy oil.” Brad Shamlal, *Guest commentary—Built to Last: Line 5 Meets or Exceeds Today’s Standards for New Pipelines*, PETOSKEY NEWS-REVIEW (Oct. 19, 2015), http://www.petoskeynews.com/news/opinion/guest-commentary-built-to-last-line-meets-or-exceeds-today/article_6aeea09a-2095-5c5c-812b-bdc45e23fc8d.html. But according to the National Wildlife Federation, “pipeline operators do not notify regulators, first responders or the public when product changes occur in a pipeline. Understanding the product running through a line

Serious questions have also arisen over the adequacy of the provisions for allowing the State to inspect the records of oil or other substances transported through the pipeline, since the State cannot perform analysis under existing law, but can only access the records in Enbridge offices.⁵⁶

The Enbridge Line 5 pipeline remains in use today, long past the pipeline's intended lifespan. Environmental interest groups characterize the aging pipeline as corroding, while Enbridge claims the pipeline can remain in use "indefinitely."⁵⁷ It did not take long before a coalition and broader constellation of loosely aligned Michigan businesses, Native American tribes, and environmental activists began calling on the State of Michigan and Federal Government to "shut down the flow of oil in Line 5."⁵⁸ Michigan elected officials of all political stripes have echoed the call of this coalition with even Michigan Attorney General Bill Schuette, an industry aligned conservative Republican, describing the pipeline's days as "numbered."⁵⁹

D. FACTORS DISTINGUISHING THE ENBRIDGE LINE 5 AND LINE 6B PIPELINES

Several factors distinguish Line 5 from Line 6B. Table 1 provides a side-by-side comparison of the distinguishing factors of the two pipelines.

TABLE 1.

SIDE BY SIDE COMPARISON OF LINE 6B AND LINE 5 RISK FACTORS AT A GLANCE

Factors	Line 6B	Line 5
Location	Wetlands, Talmadge Creek & Kalamazoo River	Straits of Mackinac and Lakes Michigan and Huron

when a release occurs is critical for any response." ALEXANDER & WALLACE, *supra* note 34, at 4, 13.

56. Mark Brush, *We're Still Waiting for Confirmation on the Health of Line 5 in the Straits of Mackinac*, MICHIGAN RADIO (Sept. 2, 2015), <http://michiganradio.org/post/were-still-waiting-confirmation-health-line-5-straits-mackinac> [hereinafter *We're Still Waiting*].

57. Garret Ellison, *Enbridge VP: Mackinac Pipeline Can Operate Indefinitely*, MLIVE MEDIA GROUP (June 09, 2016), http://www.mlive.com/news/index.ssf/2016/06/enbridge_line_5_inspection.html. Michigan Attorney General Bill Schuette has said he disagrees with Enbridge's assertion it can operate the line indefinitely and has described the pipeline's days as "numbered." Garret Ellison, *Schuette Repeats Mackinac Pipeline Tough Talk in Call for Experts*, MLIVE MEDIA GROUP (Feb. 1, 2016), http://www.mlive.com/news/index.ssf/2016/02/mackinac_pipeline_tough_talk_b.html [hereinafter *Schuette's Tough Talk*].

58. *See Campaign Supporters, OIL & WATER DON'T MIX*, <http://www.oilandwaterdontmix.org/supporters> (last visited Oct. 21, 2017).

59. Garret Ellison, *Report Calls for Heavy Crude Oil Ban in Straits of Mackinac Pipeline*, MLIVE MEDIA GROUP (July 14, 2015), http://www.mlive.com/news/grand-rapids/index.ssf/2015/07/report_calls_for_heavy_crude_o.html; *Schuette's Tough Talk*, *supra* note 57.

Factors	Line 6B	Line 5
Circumference	One Thirty Inch Pipe ⁶⁰	Two Twenty Inch Pipes ⁶¹
Original Pipe Wall Thickness	0.254 inches	0.812 inches ⁶²
Deepest Crack or Corrosion	0.213 inches (83.9%) ⁶³	0.3 inches (37%) & 0.333 inches (41%) ⁶⁴
Operating Pressure Daily Range	Not found.	0-300 pounds per square inch (PSI) ⁶⁵
Operating Pressure Daily Average	Not found.	150-200 pounds per square inch (PSI) ⁶⁶
Maximum Operating Pressure	624 pounds per square inch (PSIG) ⁶⁷	600 pounds per square inch (PSI) ⁶⁸

60. *Enbridge Incorporated Hazardous Liquid Pipeline Rupture and Release*, NAT'L TRANSP. SAFETY BD., <https://www.nts.gov/investigations/AccidentReports/Pages/PAR1201.aspx> (last visited Oct. 21, 2017) [hereinafter NAT'L TRANSP. SAFETY BD].

61. Line 5 generally has a thirty-inch diameter with the exception of the Straits of Mackinac where the line divides into two twenty-inch diameter pipes. *About Line 5*, ENBRIDGE (Oct. 15, 2017), <https://www.enbridge.com/projects-and-infrastructure/public-awareness/line-5-michigan/about-line-5>. The increased combined diameter of the two pipes should reduce the pressure under which the pipeline operates in the Straits. *See* Khan Academy Medicine, *Boyle's law, Physical Processes, MCAT, Khan Academy*, YOUTUBE, <https://www.youtube.com/watch?v=PIM4G3IZk5Y> (last visited Oct. 21, 2017).

62. Mark Brush, *Recently Released Enbridge Report Shows Areas of Corrosion Along Line 5*, MICHIGAN RADIO (Feb. 5, 2016), <http://michiganradio.org/post/recently-released-enbridge-report-shows-areas-corrosion-along-line-5> [hereinafter *Report Shows Corrosion*].

63. MARSHALL PIPELINE ACCIDENT REPORT, *supra* note 27, at 26.

64. *Report Shows Corrosion*, *supra* note 62.

65. *Enbridge Energy Line 5*, TIP OF THE MITT WATERSHED COUNCIL, <https://www.watershedcouncil.org/enbridge-energy-line-5.html> (last visited Oct. 15, 2017).

66. *Compare id.* (giving the average daily operating pressure as 200 psi) with Keith Matheny, *Enbridge critic: Pressure Test Shows Straits of Mackinac Underwater Oil Pipeline 'Robust'*, DETROIT FREE PRESS (June 13, 2017), <http://www.freep.com/story/news/2017/06/14/enbridge-critic-pressure-test-shows-straits-oil-pipeline-robust/393768001/> (reporting the average daily operating pressure as 150 psi).

67. MARSHALL PIPELINE ACCIDENT REPORT, *supra* note 27, at 20.

68. Straits of Mackinac Pipeline Easement, *supra* note 44, at 4; *see also* TIP OF THE MITT WATERSHED COUNCIL, *supra* note 65.

Factors	Line 6B	Line 5
Daily Volume ⁶⁹	11.9 million gallons per day ⁷⁰	23 million gallons per day ⁷¹
Design (Welding)	Longitudinal Seam & Girth Weld ⁷²	Girth Welds ⁷³
Design (Coating)	Polyethylene Tape ⁷⁴	Coal Tar Enamel & 2 Layers of Outer Fiberglass Wrap ⁷⁵
Valves	Operator Triggered Remote Valves ⁷⁶	Pressure Triggered Automatic Shutoff Valves ⁷⁷
Product	Diluted-bitumen (Dilbit)	Light Crude
Corrosiveness of Product	More Corrosive	Less Corrosive
Density of Product	Denser (Sinks)	Less Dense (Floats)

Line 5 transports approximately 23 million gallons of light crude oil and natural gas liquids through the Straits of Mackinac every day.⁷⁸ Line 5's two smaller pipelines are intended to reduce the potential volume of oil involved in a

69. This is not strictly an apples to apples comparison. The Enbridge Line 6B figure is the daily average given in the NTSB accident report. The Enbridge Line 5 figure on the other hand is the maximum amount of petroleum products transported daily.

70. MARSHALL PIPELINE ACCIDENT REPORT, *supra* note 27, at 1.

71. Bob Campbell, *A Cheat Sheet to the Enbridge Line 5 Controversy*, BRIDGE MAGAZINE (June 27, 2017), <http://www.bridgemi.com/public-sector/cheat-sheet-enbridge-line-5-controversy>.

72. NAT'L TRANSP. SAFETY BD., *supra* note 60.

73. See Garret Ellison, *Line 5 Defects Violate Easement, Allege Mackinac Oil Pipeline Critics*, MLIVE MEDIA GROUP (Apr. 13, 2016), http://www.mlive.com/news/index.ssf/2016/04/line_5_defects_corrosion_defects.html [hereinafter *Line 5 Defects Violate Easement*] (discussing the "girth welds" of Line 5); see also Garret Ellison, *Line 5 is Bent and Deformed Where Enbridge Wants to Anchor it*, MLIVE MEDIA GROUP (July 23, 2017) http://www.mlive.com/news/index.ssf/2017/07/line_5_bends_ovals.html [hereinafter *Bent Pipe*].

74. NAT'L TRANSP. SAFETY BD., *supra* note 60.

75. Garret Ellison, *Outer Wrap Coating Has Failed on Parts of Line 5, Enbridge Confirms*, MLIVE MEDIA GROUP (Mar. 14, 2017), http://www.mlive.com/news/index.ssf/2017/03/enbridge_line_5_delamination.html.

76. MARSHALL PIPELINE ACCIDENT REPORT, *supra* note 27, at 14.

77. Garret Ellison, *Line 5 Anchors Could be Installed in the Straits of Mackinac Next Week*, MLIVE MEDIA GROUP (Oct. 21, 2016), http://www.mlive.com/news/index.ssf/2016/10/line_5_anchors_could_be_instal.html [hereinafter *Line 5 Anchors*] (quoting Enbridge Line 5 operations manager Blake Olson explaining Line 5 utilizes pressure triggered automatic shutoff valves).

78. See, e.g., Keith Matheny, *Schutte: Enbridge Violating Straits Pipeline Easement*, DETROIT FREE PRESS

spill, since a leak or rupture might only impact one of the two lines. Line 5 also transports the less corrosive light crude oil and not the more corrosive heavy crude diluted-bitumen (dilbit) tar sands oil carried by the Line 6B pipeline. By carrying a less corrosive product, Line 5 may experience less corrosion and may therefore pose less of a risk of leaking or rupturing than Line 6B. Current reports estimate thirty to forty percent corrosion in the most heavily corroded segments of the pipeline.⁷⁹ Even though diluted bitumen did not contribute to the rupture of Line 6B, this distinguishing factor is relevant for the purposes of evaluating the risk posed by Line 5.⁸⁰

Structural differences also distinguish Line 5 from Line 6B. As shown in Table 1, Line 5 does not have either the polyethylene tape coating or horizontal seam design that respectively contributed to the external corrosion fatigue cracks that ultimately led to the rupture of Line 6B and contributed to the severity of the rupture.⁸¹ In other words, Line 6B literally burst at the seams, which ran along the length of the pipe. Line 5 on the other hand has girth-welded seams that run vertically around the entire circumference of the end of each pipe segment.⁸² Enbridge could therefore contend that Line 5 poses less of a risk of rupturing because of the vertical instead of horizontal seam design of the pipes.

Location is the single most important distinguishing factor between Enbridge Line 5 and Line 6B. Enbridge Line 6B ran close to wetlands, a creek, and the Kalamazoo River. But the significance of these tributaries that run into Lake Michigan pale in comparison to the environmental and cultural significance of the Straits of Mackinac to the State of Michigan.⁸³ Few areas of Michigan have

(August 3, 2016), <http://www.freep.com/story/news/local/michigan/2016/08/03/ag-bill-schuette-enbridge-violating-straits-pipeline-easement/88039662/>.

79. See, e.g., *Report Shows Corrosion*, *supra* note 62. As Mark Brush notes, pipeline regulations require immediate action only where metal loss is greater than eighty percent of wall thickness. *Id.* This regulation then presents just one example of the lax technology-based or performance-based standards discussed *infra* Part III.B.2 and Part IV.A.

80. A misconception arose in early coverage of the Marshall spill that insinuated that the more corrosive diluted bitumen containing Canadian tar sands oil contributed to the rupture of the Line 6B pipeline. It did not. NTSB found internal corrosion of Line 6B did not contribute as a factor in this accident. MARSHALL PIPELINE ACCIDENT REPORT, *supra* note 27, at 118.

81. *Id.* at xii, 3, 24–25.

82. See *Line 5 Defects Violate Easement*, *supra* note 73; see also *Bent Pipe*, *supra* note 73.

83. The region figured prominently in the early history of Michigan as a frontier fur-trade and military outpost controlling the upper Great Lakes. See BRUCE CATTON, MICHIGAN: A BICENTENNIAL HISTORY 4, 11, 12, 15, 47, 55, 63, 66, 68, 115, 151, 152, 158, 191 (W.W. Norton & Company, Inc. 1976). A notable Civil War historian and Michigan native, Catton, in this history commissioned to celebrate the bicentennial of the United States, recounts the exploration of the Straits' area by French trapper Jean Nicolet and Etienne Brule and the mission of Father Pere Jacques Marquette at St. Ignace. Catton explains the Straits early role as an informal trading center where French voyageurs gathered with American Indians for annual rendezvous and as a strategic frontier outpost important in the geopolitics of the 17th and 18th century as a region that controlled access to the upper Great Lakes. The history describes the fall of British Fort Michilimackinac during the French and Indian War to an American Indian war-band who distracted British sentries with a lacrosse game, as well as the construction of British Fort Mackinac during the American Revolution. The British surrendered Fort Mackinac

the environmental and cultural significance of the Straits of Mackinac. Michigan Attorney General Bill Schuette has repeatedly stated that: “We [the State of Michigan] would not allow this pipeline to be placed in the Great Lakes today . . . The Great Lakes are Michigan’s crown jewel and we cannot tolerate an environmental disaster that would forever change them”⁸⁴ The Great Lakes generally contain 90% of the fresh water in the United States and 20% of the world’s fresh water supply, and the Straits join Lakes Michigan and Huron into a single hydraulic system.⁸⁵ No less than seven State parks dot the coast.⁸⁶

David J. Schwab, Ph.D., a University of Michigan Water Center research scientist with expertise in hydrodynamic modeling, called the Straits of Mackinac the “worst possible place” for an oil spill in the Great Lakes.⁸⁷ Dr. Schwab, a former division chief of the National Oceanic & Atmospheric Administration (NOAA) Great Lakes Environmental Research Laboratory, conducted a simulation modeling the potential impact of an oil spill from Line 5 in the Straits funded by the National Wildlife Federation.⁸⁸ Dr. Schwab’s research indicates that peak volumetric transport through the Straits can reach more than ten times the flow of the Niagara River.⁸⁹ Reports by Enbridge’s own diving crews confirm the

to the Americans at the close of the Revolution only to retake the fort during the opening days of the War of 1812. John Jacob Astor established a corporate headquarters of his fur-trading empire on Mackinac Island after the war. The region later emerged as a summer destination during the Victorian era and the Gilded Age after railroads constructed to carry copper and other mineral wealth from Mackinaw City began to carry tourists north. The State of Michigan constructed a suspension bridge, the Mackinac Bridge, across the Straits in 1957 to carry the I-75 highway north and connect the state’s two peninsulas. Mackinac Island, famous for the celebrated fudge and ban on cars, also hosts the Summer Residence of the Governor of Michigan. *See Mackinac Island*, PURE MICHIGAN, <https://www.michigan.org/city/mackinac-island#?c=44.4299;-85.1166;7&tid=358&page=0&pagesize=20&pagetitle=Mackinac%20Island> (last visited Oct. 8, 2017); *Mackinac Island Residence*, PURE MICHIGAN, http://www.michigan.gov/som/0,4669,7-192-29938_68915-171191—,00.html (last visited Oct. 8, 2017). Mackinac Island also hosts the Federal, State, and local political leadership of the state each year for the annual Mackinac Policy Conference put on by the Detroit Regional Chamber of Commerce. *Detroit Regional Chamber Releases 2017 Mackinac Policy Conference and To-Do List and Announces 2018 Conference Dates*, DETROIT REGIONAL CHAMBER (June 2, 2017), <http://www.detroitchamber.com/detroit-regional-chamber-releases-2017-mackinac-policy-conference-to-do-list-and-announces-2018-conference-dates/>.

84. *Schuette’s Tough Talk*, *supra* note 57.

85. ALEXANDER & WALLACE, *supra* note 34, at 2; DAVID J. SCHWAB, UNIVERSITY OF MICHIGAN WATER CENTER, STRAITS OF MACKINAC CONTAMINANT RELEASE SCENARIOS: FLOW VISUALIZATION AND TRACER SIMULATIONS 2 (May 16, 2014) (“Flow through the Straits can play an important role in water quality, contaminant transport, navigation, and ecological processes.”).

86. Mackinac Island State Park, Michilimackinac State Park, Fort Michilimackinac State Park, Wilderness State Park, Cheboygan State Park, Straits State Park, Father Marquette National Memorial, and the Mackinac State Forest Area. *Michigan’s Parks*, STATE PARKS, http://www.stateparks.com/michigan_parks_and_recreation_destinations.html (last visited Oct. 8, 2017).

87. Press Release, Univ. of Mich. Water Ctr., Straits of Mackinac ‘Worst Possible Place’ for a Great Lakes Oil Spill, U-M Researcher Concludes (July 10, 2014), <http://ns.umich.edu/new/releases/22284-straits-of-mackinac-worst-possible-place-for-a-great-lakes-oil-spill-u-m-researcher-concludes>.

88. *Dave Schwab*, UNIV. OF MICH. GRAHAM SUSTAINABILITY INST., <http://graham.umich.edu/users/djschwab> (last visited Oct. 8, 2017).

89. SCHWAB, *supra* note 85, at 2.

powerful currents in the Straits.⁹⁰ Because of this flow, the current in the Straits of Mackinac would carry any spilled oil far into the offshore areas in Northern Lake Michigan or the resort towns of Mackinac Island, Mackinac City, and adjacent Lake Huron shoreline within 20 days.⁹¹

Dr. Schwab conducted his detailed simulations of various spill scenarios and simulated a “worst case” scenario spill in the Straits in 2014. Enbridge has characterized the worst-case scenario presented in Dr. Schwab’s study as “flawed,” “inaccurate,” and “exaggerate[d].”⁹² However, Enbridge has produced its own contradictory worst-case projections. They initially assumed a worst-case discharge of 8,583 barrels, but later updated the figure to reflect a lower projection based on the operation of the automatic shutoff valves on both sides of the Straits, which activate within three minutes of a break.⁹³ Enbridge contends these valves would limit the worst-case scenario to 4,500 barrels of light crude.⁹⁴ This worst-case scenario assumes that the automatic shutoff valves function as intended, but sources point out that automatic and remote shutoff valves depend on adequate supervisory control and data acquisition (SCADA) systems.⁹⁵ And according to GAO, even if the valves work as intended, accidental (and presumably intentional) closures of automatic shutoff valves can result in decompression waves in a pipeline system and may cause a pipeline to rupture if operators cannot promptly reduce the flow of product.⁹⁶

II. OVERVIEW OF THE LAW

This part of the Note examines the adequacy of federal statutes governing pipeline safety as measured against the goal of preventing an oil spill in the Straits.⁹⁷ Environmental statutes often contain three statutory elements: goals,

90. Mark Brush, *Securing This Enbridge Pipeline is One of the Most Dangerous Jobs in the World*, MICH. RADIO (Sept. 5, 2014), <http://michiganradio.org/post/securing-enbridge-pipeline-one-most-dangerous-jobs-world>.

91. SCHWAB, *supra* note 85, at 7.

92. Brad Shamla, *Enbridge: ‘Alarmist’ U-M Study on a Straits of Mackinac Oil Spill is Inaccurate*, MLIVE MEDIA GROUP (May 2, 2016), http://www.mlive.com/opinion/index.ssf/2016/05/enbridge_alarmist_u-m_study_on.html.

93. LP ENVIRONMENT US, E4 STRAITS 2014 CLEAN-UP COST SUMMARY: QUESTIONS AND REQUESTS FOR INFORMATION TO ENBRIDGE REGARDING THE STRAITS PIPELINES (Jun. 4, 2014), http://www.michigan.gov/documents/ag/E4_Straits_2014_Clean-up_Cost_Summary_524140_7.pdf; Garret Ellison, *Line 5 Drill: Enbridge Blankets Straits of Mackinac With Spill Practice*, MLIVE MEDIA GROUP (Sept. 25, 2015), http://www.mlive.com/news/index.ssf/2015/09/enbridge_drill_coverage.html.

94. *Id.*

95. PARFOMAK, *supra* note 7, at 24.

96. U.S. GOV’T ACCOUNTABILITY OFFICE, GAO-13-168, PIPELINE SAFETY: BETTER DATA AND GUIDANCE NEEDED TO IMPROVE PIPELINE INCIDENT RESPONSE 26 (2013), <http://www.gao.gov/assets/660/651408.pdf>.

97. Congress first enacted a federal statute governing pipeline safety with the passage of The Natural Gas Pipeline Safety Act of 1968. They later extended this statute to cover oil pipelines in the Pipeline Safety Act of 1979, and subsequently amended these laws with passage of the Pipeline Safety Reauthorization Act of 1988, the Pipeline Safety Act of 1992, the Accountable Pipeline Safety and Partnership Act of 1996, the Pipeline Safety Improvement Act of 2002, the Pipeline Inspection, Protection, Enforcement, and Safety Act of 2006, and

triggers, and regulatory strategies or designs. Common goals of environmental statutes include creating or preserving a clean environment, protecting public health, fairness, and remedying damages.⁹⁸ Environmental statutes use a spectrum of risk-based thresholds (e.g. a no threshold risk) as regulatory triggers.⁹⁹ Environmental statutes also use a variety of regulatory designs or strategies.¹⁰⁰ Pipeline safety statutes principally use three strategies common in environmental law to regulate oil pipelines: technology-based standards, risk-based and ambient environment-based standards, and information-based standards.

Section A begins by comparing the goal of preventing an oil spill in the Straits to the purpose in the codified Statute. It then identifies a defining and silent ambiguity in the codified Statutes' purpose that raises threshold questions of whether the pipeline safety laws ought to be considered environmental laws at all. Confronting the ambiguous purpose of the Statute, Section B then discusses three of the strategies the Statute employs that best describe the regulatory scheme before concluding with observations about the regulatory regime.

A. FEDERAL PIPELINE SAFETY STATUTES HAVE A BROAD AND AMBIGUOUS PURPOSE

An initial question presented by the pipeline safety statutes is whether it is even appropriate to consider these statutes environmental as opposed to safety laws. Modern environmental laws often, though not always, depart from common law strategies of providing remedies after a harm has occurred.¹⁰¹ For example, a leading environmental law casebook points out that several statutes utilize after-the-fact imposition of monetary liability, both to pay for cleanups of spills, disposal of hazardous materials and oil, and to discourage future mishandling of such waste.¹⁰² However, most environmental laws share the goal of preventing or addressing risks before harms occur.¹⁰³

An analysis of whether the pipeline statutes offer an adequate means of preventing spills from leaks or ruptures of oil pipelines requires a determination of what purpose these statutes serve. The codified pipeline statute states its purpose as “to provide adequate protection against risks to life and property posed by pipeline transportation and pipeline facilities by improving the regula-

the Pipeline Safety, Regulatory Certainty, and Job Creation Act of 2011. Congress has codified all these statutes in 49 U.S.C. §§ 60101-60301 (2016). PIPELINE SAFETY TRUST, PIPELINE BRIEFING PAPER #4 1-2 (Sept. 2015), <http://pstrust.org/wp-content/uploads/2015/10/2015-PST-Briefing-Paper-04-StatutesRegs.pdf>.

98. GLICKSMAN ET AL., *supra* note 1, at 80–83.

99. *Id.*

100. *Id.* Statutes may use such as economic incentives and market-based strategies such as “cap-and-trade” strategies; technology based standards, technology forcing provisions, and technology mandates; risk- or ambient-environment-based standard setting; information-based schemes; liability-based schemes; phase-outs and prohibitions; constrained balancing standards; and cost-benefit-influenced standard settings. *Id.*

101. GLICKSMAN ET AL., *supra* note 1, at 79–80.

102. *Id.*

103. *Id.*

tory and enforcement authority of the Secretary of Transportation.”¹⁰⁴

The use of the ambiguous and indeterminate phrase “adequate protection against risks to life and property” does little to definitively answer what purpose this statute serves. The statute does not expound on what or how much protection is adequate. Nor does it clarify whose life and what property the statute is intended to protect. The statute also does not state whose property the statute protects. If read broadly, the statute intends to protect any and all property; however, the word “environment” does not appear. The statute does not explain how the Secretary of Transportation should allocate risks between pipeline owners and third parties when those parties have divergent, if not conflicting interests. It remains silent as to whether it protects property to ensure the safe delivery of petroleum to market or to protect the environment. Instead, what emerges is an ambiguous mandate as defining as the “contradictory” or “dueling” mandate of the National Park Service Organic Act of 1916.¹⁰⁵

Because these statutes do not clearly define an environmental purpose, they confer broad discretion to the Secretary of Transportation to define that purpose, subject to the constraints of the regulatory design and strategies contained elsewhere. To fully understand the Secretary’s authority, an analysis must therefore consider the regulatory design and strategies to determine whether other parts of these codified statutes cabin the Secretary’s discretion.

B. PIPELINE SAFETY STATUTES UTILIZE A VARIETY OF STRATEGIES FOUND IN ENVIRONMENTAL LAW

Sections 60101 to 60301 of Title 49 use three strategies found in environmental law: information-based, technology-based, and risk-and-ambient environment-based strategies.¹⁰⁶ These strategies operate within a framework that resembles both environmental and natural resource laws. Owners and operators submit proactive inspection and maintenance plans and reactive spill response plans to a federal regulatory agency for approval.¹⁰⁷ The statutes governing pipeline safety

104. 49 U.S.C. § 60102(a)(1).

105. National Park Service Organic Act of 1916, 16 U.S.C. § 1; *see also* Robin Winks, *The National Park Service Act of 1916: A Contradictory Mandate*, 74 DENV. U. L. REV. 575, 575-623 (1997), as reprinted in CHRISTINE A. KLEIN ET AL., *NATURAL RESOURCES LAW: A PLACE-BASED BOOK OF PROBLEMS AND CASES* 503-04 (2d ed. 2009). The National Park Service Organic Act of 1916 established the Service to conserve the scenery and the natural and historic objects and the wildlife therein, and to provide for the enjoyment of the same in such manner and by such means as will leave them unimpaired for the enjoyment of future generations. National Park Service Organic Act of 1916, 16 U.S.C. § 1. For more on the dueling mandate, *see generally* *NPS Organic Act*, U.S. DEPARTMENT OF JUSTICE, <https://www.justice.gov/enrd/nps-organic-act> (last accessed Oct. 21, 2017) and *Lesson Plan: Dueling Mandates*, NAT’L PARK SERV., <https://www.nps.gov/yell/learn/education/classrooms/duelingmandates.htm> (last accessed Oct. 21, 2017).

106. GLICKSMAN ET AL., *supra* note 1, at 80–83.

107. 49 U.S.C. § 60108(a)(2) (“If the Secretary or a State authority responsible for enforcing standards . . . decides that a plan . . . is inadequate for safe operation, the Secretary or authority shall require the person to revise the plan. Revision may be required only after giving notice and an opportunity for a hearing.”);

employ technology-based and information-based schemes that vary by inspection type and frequency based on the ambient-environment and risk-environment.¹⁰⁸ This scheme provides the regulatory agency and industry the flexibility to account for localized circumstances and conditions. The statutes therefore mirror federal land management laws that consider the importance of place and environmental laws that regulate through use of technology-based mandates and standards. But the statutes also require consideration of cost and benefits in setting standards and allocating risk.¹⁰⁹

1. Federal Pipeline Safety Laws Promulgated Under Commerce Clause Authority Create a Regulatory Floor

The regulation of pipeline safety occurs primarily at the federal level through the Pipeline and Hazardous Materials Safety Administration of the Department of Transportation (“PHMSA”).¹¹⁰ Federalism allocates the regulatory authority that governs oil pipelines between the Federal Government and state governments based on the subject matter and scope of the Commerce and Spending Clauses.¹¹¹ Federal pipeline safety laws and regulations create a regulatory floor by preempting less stringent state pipeline safety standards.¹¹² Only PHMSA, and not states, may set and enforce safety standards for interstate hazardous liquid pipelines.¹¹³ However, state governments may regulate intrastate pipelines with more strin-

49 U.S.C. § 60102(a)(2) (authorizing the Secretary to promulgate minimum safety standards for emergency plans and procedures); 49 U.S.C. § 60102(d)(5) (requiring operators maintain emergency response plans). PHMSA has authority to review spill response plans for onshore oil pipelines under 33 U.S.C. §§ 1231, 1321(j)(1)(C), (j)(5), and (j)(6). *See also* 49 § C.F.R. 194.119 (stating the submission and approval procedures for onshore oil pipeline response plans).

108. *See* 49 C.F.R. § 195.6 (defining criteria for determining whether a place qualifies as an “Unusually Sensitive Area” under the statute).

109. The Secretary in fact may only propose or issue a standard under this chapter only upon a reasoned determination that the benefits of an intended standard justify its costs. 49 U.S.C. § 60102(b)(5); *see also id.* § 60102(b)(2)(D)–(E) (requiring consideration of benefits and costs as factors in promulgating regulations).

110. *See* MICHIGAN PETROLEUM PIPELINE TASK FORCE, MICHIGAN PETROLEUM PIPELINE TASK FORCE REPORT 32 (July 2015), https://www.michigan.gov/documents/deq/M_Petroleum_Pipeline_Report_2015-10_reducedsize_494297_7.pdf [hereinafter TASK FORCE REPORT]; *see also* 49 U.S.C. § 60102(a)(1); DOT NEEDS TO REGULATE, *supra* note 5, at 1.

111. Congress exercised its powers under the Commerce Clause in legislating on pipeline safety. *See* 49 U.S.C. § 60101(a)(4)(A)–(B) (defining “hazardous liquids”); (5) (defining “hazardous liquid pipeline facility”); (7) (defining “interstate hazardous liquid pipeline facility”); (8) (defining “interstate or foreign commerce”); (10) (defining “intrastate hazardous liquid pipeline facility”); (22) (defining “transporting hazardous liquid” as affecting interstate or foreign commerce). Congress exercised its spending power, for instance, by authorizing PHMSA under 49 U.S.C. § 60107 to promulgate regulations for making federal grants to state pipeline safety programs. PHMSA’s grant-making authority under 49 C.F.R. § 198.11 authorizes the Administrator to pay up to eighty percent of the costs for the state to implement a safety program for intrastate pipelines or to act as an agent of PHMSA when regulating interstate pipelines.

112. 49 U.S.C. § 60104(c).

113. *Id.* (“A State authority may not adopt or continue in force safety standards for interstate pipeline facilities or interstate pipeline transportation.”); TASK FORCE REPORT, *supra* note 110, at 32.

gent standards, provided PHMSA certifies the state standards are at least as stringent as the federal standards.¹¹⁴ To date, only fourteen states have adopted legislation to pursue PHMSA certification to become the regulatory authority for intrastate hazardous liquid pipelines, and only five states have been certified.¹¹⁵

2. Pipeline Safety Statutes Establish Technology-Based Mandates and Standards

Codified pipeline safety statutes and regulations promulgated under these authorities impose certain technology-based mandates or standards on pipelines transporting petroleum products.¹¹⁶ A technology mandate requires agencies to determine what technology is best used to achieve a specific goal and then mandate its use.¹¹⁷ A technology-based standard, on the other hand, requires achieving the performance level of the benchmark group and may require little more than meeting common performance measures for the industry.¹¹⁸ A technology-based standard therefore allows for greater flexibility in attaining compliance.¹¹⁹

Codified pipeline safety statutes contain several technology-based standards, the creation of which are not wholly delegated to the agency. One technology-based standard that appears in the statute under section 60102(f) requires that replaced pipelines be able to accommodate the use of an instrumented internal inspection (or “smart pig”) device or inspection method at least as effective.¹²⁰ Another technology-based standard that appears in section 60102(j)(1)–(2) authorizes the Secretary to establish standards for emergency flow restricting devices such as remotely controlled valves, check valves, and other procedures, systems, and equipment to detect and locate hazardous liquid pipeline ruptures.¹²¹

In other provisions, the pipeline safety statutes delegate promulgation of technology-based standards to the agency. Section 60102(a)(2) authorizes the Secretary of Transportation to establish minimum standards for the design, installation, inspection, emergency plans and procedures, testing, construction, extension, operations, replacement, and maintenance of a pipeline by owners or operators.¹²² Section 60102(b)(1) requires that these minimum safety standards be practicable and designed to meet the need for safely transporting hazardous liquids and protecting the environment.¹²³ Section 60102(b)(2) further requires

114. 49 U.S.C. § 60105(b); TASK FORCE REPORT, *supra* note 110, at 32.

115. TASK FORCE REPORT, *supra* note 110, at 33.

116. *See generally* 49 C.F.R. Part 195; *see also* TASK FORCE REPORT, *supra* note 110, at 32.

117. GLICKSMAN ET AL., *supra* note 1, at 82.

118. *Id.*

119. *Id.*

120. 49 U.S.C. § 60102(f).

121. *Id.* § 60102(j)(1)–(2).

122. *Id.* § 60102(a)(2).

123. *Id.* § 60102(b)(1).

the Secretary to consider several other factors, including the relevant available hazardous liquid pipeline safety information, the appropriateness of the standard for the particular type of pipeline, the reasonableness of the standard, and the reasonably identifiable costs and benefits of compliance based on a risk assessment.¹²⁴

Regulations promulgated under section 60102(b) govern the design, materials, construction, pressure testing, operation and management, and corrosion control of the pipeline.¹²⁵ However, the Secretary has delegated the promulgation of many of the technical standards contained in these regulations to industry trade associations like the American Petroleum Institute, the American Society of Mechanical Engineers, and the American National Standards Institute.¹²⁶

3. Pipeline Safety Standards Vary Based on the Location of the Pipeline

Pipeline safety statutes employ a place-based strategy of regulating oil pipelines similar to the place-based approach found in federal land management statutes.¹²⁷ This approach requires the consideration of either risk or the ambient environment in setting standards for what constitutes an adequately clean or safe environment.¹²⁸ Sources then must meet specified levels of pollution so that the ambient environment will at least move toward a defined level of cleanliness or risk.¹²⁹ But measuring risk and what constitutes adequate protection of the ambient environment, within the parlance of the statute, can vary significantly with the nature of the affected property.¹³⁰ The statute then pairs this place-based approach with a technology-based approach. Pipelines in more sensitive locations must comply with enhanced technology-based standards or a combination

124. *Id.* § 60102(b)(2). The statute also requires the Secretary consider public comments. *Id.* The statute describes the necessary contents of the risk analysis that forms the basis of the analysis of costs and benefits at 49 U.S.C. § 60102(b)(3).

125. *See generally* 49 C.F.R. Part 195.

126. *See* 49 C.F.R. §§ 195.106 (adopting API tensile tests for measuring the “yield strength” input used in the formula for a pipeline’s internal design pressure), 195.307 (establishing pressure testing for aboveground breakout tanks), 195.116, 195.132(b)(1)–(4), 195.134, 195.205(b)(1)–(4), 195.207, 195.214(a), 195.222, 195.228, 195.264. Other trade associations such as ASME and ANSI also set pipeline standards. *See id.* §§ 195.106, 195.110, 195.118, 195.124, 195.214, 195.222(a). The regulation states the public may access or purchase the technology-based safety standards from the Pipelines and Hazardous Materials Safety Administration (PHMSA) and National Archives and Records Administration (NARA) as well as the respective industry associations. *See id.* § 195.3.

127. *See generally* Robin Winks, *The National Park Service Act of 1916: A Contradictory Mandate*, 74 DENV. U. L. REV. 575, 575–623 (1997), *as reprinted in* CHRISTINE A. KLEIN ET AL., NATURAL RESOURCES LAW: A PLACE-BASED BOOK OF PROBLEMS AND CASES 503–04 (2d ed. 2009).

128. GLICKSMAN ET AL., *supra* note 1, at 82.

129. *Id.*

130. *See* 49 U.S.C. §§ 60102(a)(1) (defining statute’s purpose as providing “adequate protection against risks to life and property”), 60102(b)(1), 60102(b)(2)(A)(iii), (E)–(F) (requiring the Secretary consider environmental information and perform a cost-benefit analysis of a proposed minimum safety standard based on a risk assessment), 60108(b)(1)(A), (E)–(G).

of technology-based and information-based standards, while pipelines in less sensitive locations receive less scrutiny.

This subsection will first discuss how federal regulations promulgated under 49 U.S.C. § 60102(a)(2) use risk- and ambient environment-based standards in determining acceptable safety standards. It then considers the role risk- and ambient environment-based standards play in determining the frequency and type of inspection and maintenance under 49 U.S.C. § 60108(b)(1)(A)–(I). Finally, this subsection will turn to examining the still more prominent role risk- and ambient environment-based standards play in the pipeline safety statutes’ place-based approach to regulating oil pipelines under the integrity management programs required by 49 U.S.C. 60109(a)–(f).

Regulations promulgated under section 60102(a)(2) use risk- and ambient environment-based standards in conjunction with technology-based mandates and standards to implement the authorized minimum safety standards.¹³¹ While section 60102(a)(2) does not expressly endorse using risk- and ambient environment-based standards, the broad scope of the section’s covered activities and focus on cost-benefit analysis encourages consideration of the risk- and ambient environment.¹³²

Federal regulations governing design and construction consider the risk and ambient environment in setting standards. Under federal regulations establishing design requirements, pipelines must be able to bear externalized loads based on localized conditions such as earthquakes, vibrations, thermal expansion, and contraction.¹³³ Offshore pipelines must be installed so that the top of the pipe is below the underwater natural bottom, unless stanchions or heavy concrete coating hold the pipeline in place.¹³⁴ Each side of a water crossing of more than 100 feet must have a shut-off valve.¹³⁵ Regulations governing design and construction of pipelines also impose standards that reflect judgment about what constitutes an acceptable level of risk in the ambient environment.

Risk-based and ambient environment-based standards play a more prominent role in the pipeline safety statute’s place-based approach to regulating oil pipelines under the statute’s inspection and maintenance plans required under 49 U.S.C. § 60108(a)–(b). The statute’s inspection and maintenance provisions found in 49 U.S.C. § 60108(b)(1)(A)–(I) vary the frequency, type of inspection, and testing required based on nine factors, four of which relate to pipeline

131. 49 U.S.C. §§ 60102(a)(1) (defining statute’s purpose as providing “adequate protection against risks to life and property”), 60102(a)(2)(B) (authorizing minimum safety standards for design, installation, inspection, emergency plans and procedures, testing, construction, extension, operation, replacement, and maintenance of pipelines); *id.* § 60102(b)(1), 60102(b)(2)(A)(iii), (E)–(F) (requiring the Secretary consider environmental information and perform a cost-benefit analysis of a proposed minimum safety standard based on a risk assessment).

132. *Id.*

133. 49 C.F.R. § 195.110.

134. *Id.* § 195.246.

135. *Id.* § 195.260(e).

location.¹³⁶ In assessing an inspection and maintenance plan, the Secretary must first assess the location of the pipeline. Second, the Secretary must take the climatic, geological, and seismic characteristics (including soil characteristics) and conditions of the area into account.¹³⁷ Third, the Secretary must examine the existing and projected population of the area.¹³⁸ Lastly, the Secretary must consider the proximity of the pipeline to any areas that are unusually sensitive to environmental damage.¹³⁹

The regulations promulgated under section 60108 authorize the Secretary to approve a manual submitted by the operator to the agency that prescribes procedures for maintenance, operations, and emergencies.¹⁴⁰ The manual must determine which pipeline facilities in the areas would require an immediate response by the operator to prevent hazards to the public if the facilities failed or malfunctioned.¹⁴¹ Federal regulations adopted under section 60108 then require operators to check variations from normal operation after an abnormal operation has ended at sufficient critical locations in the system to determine continued integrity and safe operation.¹⁴² Operators must maintain maps that identify pipeline locations and technical specification, operating records that reflect any discharges or abnormal operations, and records of any repairs.¹⁴³ Regulations require inspection of rights-of-ways at intervals not exceeding three weeks and inspection of crossings under navigable waters at intervals of no longer than five

136. 49 U.S.C. § 60108(b)(1)(A)–(D).

137. *Id.* §§ 60108(b)(1)(A), 60108(b)(1)(E).

138. *Id.* § 60108(b)(1)(F).

139. *Id.* § 60108(b)(1)(G). Unusually sensitive areas trigger 49 U.S.C. 60109. In determining whether an area is unusually sensitive to environmental damage, the Secretary must consider the definition contained in 49 U.S.C. § 60109(b) and 49 C.F.R. § 195.6. The Secretary may designate areas as unusually sensitive areas where a pipeline rupture would likely cause permanent or long-term environmental damage. 49 U.S.C. § 60109(b). The statute expressly includes only locations of drinking water and a variety of federally protected areas, but the use of the word “including” indicates Congress wished to provide a non-exhaustive list of unusually sensitive areas. Compare Office of the Legislative Counsel: U.S. House of Representatives, HOLC Guide to Legislative Drafting, http://legcounsel.house.gov/HOLC/Drafting_Legislation/Drafting_Guide.html#VIIA (explaining the term “includes” is not exclusive in legislative drafting), and OFFICE OF LEGISLATIVE COUNSEL, U.S. HOUSE OF REPRESENTATIVES, HOUSE LEGISLATIVE COUNSEL’S MANUAL ON DRAFTING STYLE 63 (104th Cong., 1995) (same), with OFFICE OF LEGISLATIVE COUNSEL, U.S. SENATE, LEGISLATIVE DRAFTING MANUAL 76 (1997) (same). Regulations promulgated under the statute, through specificity, narrow the scope of the statutory language to more definite categories of drinking water and federally protected areas. 49 C.F.R. § 195.6. The presence of a pipeline in an unusually sensitive area triggers more frequent and distinct types of testing. This risk- and ambient environment-based standard then has the effect of enhancing the scrutiny a pipeline receives based on its location. But the scope of the regulations may suggest that this provision of the statute protects these areas on the basis of scarcity. If the statute protects these areas on the basis of scarcity, this may pose a challenge for using an “unusually sensitive” designation to protect the Great Lakes because of the abundance of the freshwater supply at issue.

140. 49 C.F.R. § 195.402(b).

141. *Id.* § 195.402(c)(4).

142. *Id.* § 195.402(d)(2).

143. *Id.* § 195.404(a)–(c).

years.¹⁴⁴

Regulations promulgated under section 60108 also apply a place-based approach to govern testing of older hazardous liquid pipelines.¹⁴⁵ These regulations permit an operator to follow an alternative program using risk-based criteria for testing older hazardous liquid pipelines.¹⁴⁶ These regulations require an operator to assign a risk classification to each older hazardous liquid pipeline segment.¹⁴⁷ Operators must assign a risk classification for several risk indicators to reach an overall risk classification for the pipeline. Operators must consider location, product, volume, and probability indicators in determining a segment's risk classification.¹⁴⁸ Locations pose a greater risk under this regulation if they arise in environmentally sensitive or non-rural areas.¹⁴⁹

Risk- and ambient environment-based standards play a central role in the place-based approach used to trigger the integrity management programs required by 49 U.S.C. § 60109(a)–(f). Factors such as the size of an oil spill, rate of the spill, type of oil spilled, and location of the spill may affect the impact of an oil spill on a community or the environment.¹⁵⁰ Therefore operators must identify pipelines located in “high-consequence areas” where an incident would result in a greater impact on public safety or the environment and then mitigate these risks.¹⁵¹ Federal regulations under 49 U.S.C. § 60109 define “high consequence areas” as commercially navigable waterways, high population areas, other populated areas, and areas unusually sensitive to environmental damage.¹⁵² Section 60109 designates the Great Lakes as per se an unusually sensitive area.¹⁵³ These requirements comprise one part of a supplemental risk-based “integrity management” regulatory program.¹⁵⁴

Regulations require that operators implement a pipeline integrity management program in high consequence areas unless the operator can demonstrate by risk assessment that the pipeline could not affect the area.¹⁵⁵ An operator must develop an evolving written integrity management program after a baseline assessment plan that considers the risks posed by the pipeline, and that specifies the methods used to assess the pipeline.¹⁵⁶ An operator must complete a baseline

144. *Id.* § 195.412.

145. *Id.* § 195.303; *see also* Appendix B to Part 195.

146. *Id.* § 195.303.

147. *Id.* § 195.303(a).

148. *See id.* § 195.303(b)(1)–(4).

149. *Id.* § 195.303(b)(1)(i).

150. JONATHAN L. RAMSEUR, CONG. RESEARCH SERV., RL33705, OIL SPILLS: BACKGROUND AND GOVERNANCE 14 (2015), <https://fas.org/sgp/crs/misc/RL33705.pdf>.

151. 49 U.S.C. § 60109; 49 C.F.R. § 195.450; DOT NEEDS TO REGULATE, *supra* note 5, at 5.

152. 49 C.F.R. § 190.450.

153. *See* S. 2276, sec. 19; *see also* 49 U.S.C. § 60109(b).

154. DOT NEEDS TO REGULATE, *supra* note 5, at 5.

155. *See generally* 49 C.F.R. § 195.452(a)–(b).

156. *Compare* 49 C.F.R. § 195.452(f) (specifying the components of an integrity management program),

assessment plan and must assess the pipeline using an In-Line Inspection tool,¹⁵⁷ a pressure test,¹⁵⁸ an external corrosion direct assessment,¹⁵⁹ or other technology the operator demonstrates can provide an equivalent understanding of the pipeline's condition.¹⁶⁰ Place-based standards therefore trigger enhanced technology-based testing standards.

4. Pipeline Safety Statutes Regulate Oil Pipelines Through Information-Based Schemes

The third element of the pipeline safety statutes and regulations is the information-based approach. Under an information-based approach, governments or private actors must prepare and publicly disclose information about their environmental activities or impacts on the environment.¹⁶¹ Economists and market-oriented policymakers favor information-based schemes because this approach facilitates informed market choice by enabling market participants to bargain and assign the risks of pollution through contract.¹⁶²

An information-based approach is central to the minimum safety standards promulgated under 49 U.S.C. § 60102(a)(2).¹⁶³ For instance, risk assessments conducted under 49 U.S.C. § 60102(b) require the Secretary to consider the reasonably identifiable or estimated benefits and costs of implementing any regulations promulgated under this section.¹⁶⁴ The risk assessments required under 49 U.S.C. § 60102(b)(2) must identify options considered by the Secretary and costs and benefits associated with that proposed standard.¹⁶⁵ Risk assessments must contain an explanation of the reasons the Secretary selected a proposed standard over other options and an explanation of why the Secretary did not pursue such options.¹⁶⁶ The Secretary must also identify technical data or other information used in performing the risk assessment upon which the agency based its standard.¹⁶⁷ The agency must then make the basis of the safety and technology standards adopted under section 60102(a)(2) available to the pub-

with 49 C.F.R. § 195.452(c) (specifying the contents of a baseline assessment plan).

157. *Id.* § 195.591.

158. *Id.* § 195.300–.310.

159. *Id.* § 195.588.

160. *Id.* § 195.452(c)(i)(A)–(D).

161. GLICKSMAN ET AL., *supra* note 1, at 82.

162. *Id.* at 83.

163. Administrative agency rulemaking generally uses an information-based method of regulation as a means of regulating agency policymaking. See Paula J. Dalley, *The Use and Misuse of Disclosure as a Regulatory System*, 34 FLA. ST. U. L. REV. 1089, 1091 n.6 (2007) (citing RICHARD J. PIERCE, JR., ADMINISTRATIVE LAW TREATISE § 7.4, at 442 (4th ed. 2002)).

164. 49 U.S.C. § 60102(b)(2)(D)–(E).

165. *Id.* § 60102(b)(3)(A)–(B).

166. *Id.* § 60102(b)(3)(C).

167. *Id.* § 60102(b)(3)(D).

lic.¹⁶⁸ The statute also requires operators to maintain pipeline operation information.¹⁶⁹

An information-based approach also plays a role in the inspection and maintenance plans required under 49 U.S.C. § 60108.¹⁷⁰ Under section 60108(a)(1), a person owning or operating a hazardous liquid pipeline facility must carry out a current written plan for inspection and maintenance of each facility.¹⁷¹ The plan must be practicable, designed to meet the need for pipeline safety, and must include terms designed to enhance the ability to discover safety related conditions.¹⁷² The operator must maintain a copy of the plan at any office the Secretary considers appropriate.¹⁷³ The Secretary or state authority may request a plan of the operator under section 60117.¹⁷⁴ But this section does not require PHMSA to make this information public.¹⁷⁵ Section 60117 instead cross-references 18 U.S.C. § 1905, a statute that criminalizes disclosure of confidential information such as trade secrets by government employees, to penalize any public disclosure of this information.¹⁷⁶ Hence, the statute does not require disclosure by PHMSA and in fact penalizes disclosure of the confidential contents of an inspection and maintenance plan.

The Secretary may require the operator to submit its plan for approval through an agency adjudication.¹⁷⁷ The Secretary then evaluates the adequacy of the plan based on several factors: the relevant available pipeline safety information, the appropriateness of the plan for the particular kind of pipeline transportation or facility, the reasonableness of the plan, and the extent to which the plan will contribute to public safety and protect the environment.¹⁷⁸ If the Secretary finds the plan inadequate, the Secretary may require the operator to revise the plan, but only after giving the operator notice and an opportunity for a hearing.¹⁷⁹

PHMSA internal administrative procedures that govern enforcement of PHMSA regulations do not permit operators to withhold information from the agency, but may permit an operator to withhold information from the public.¹⁸⁰ While the agency may place all materials submitted by operators in response to a notice of probable violation on a publicly accessible website, an operator may seek

168. *Id.* § 60102(b)(4)(A)(ii).

169. *Id.* § 60102(d).

170. *Id.* § 60108(a) (“A copy of the plan shall be kept at any office of the person the Secretary of Transportation considers appropriate.”).

171. *Id.*

172. *Id.* § 60108(a)(2).

173. *Id.* § 60108(a)(1).

174. *Id.* § 60117.

175. *Id.* § 60108(a).

176. *Id.* § 60117(d).

177. 49 C.F.R. § 190.206.

178. 49 U.S.C. § 60108(a)(2).

179. *Id.*

180. *See* 49 C.F.R. § 190.343(b).

confidential treatment of any portion of the responsive materials submitted in an adjudicative hearing.¹⁸¹

PHMSA internal administrative procedures governing rulemakings also permit operators to ask the agency to treat information submitted as part of an application for a special permit or renewal as confidential commercial information.¹⁸² The operator need only submit a version of the document marked “confidential” and a redacted version of the document along with an explanation of why the information qualifies as confidential commercial information.¹⁸³ PHMSA then treats the submitted information as confidential unless and until the agency notifies the operator otherwise.¹⁸⁴

Pipeline operators can then withhold information from the public by classifying information as confidential commercial information in both PHMSA adjudications and rulemakings. The public may obtain access to some information designated as confidential that has been submitted as part of an agency rulemaking by filing a Freedom of Information Act (“FOIA”) request.¹⁸⁵ Filing a FOIA request triggers review of the designation of data as confidential by PHMSA.¹⁸⁶ PHMSA reviews requests for disclosure of the information under the criteria set out under FOIA, and notifies an operator in writing at least five days before the intended date of disclosure.¹⁸⁷ However, this information does not come into the agency’s possession unless an operator voluntarily discloses it as part of a rulemaking, or as a result of a PHMSA investigation and subsequent adjudication.¹⁸⁸

III. A BROAD MANDATE AND REGULATORY DESIGN PRODUCE LAX FEDERAL OVERSIGHT

One of the defining attributes of the pipeline safety statutes is the flexibility the scheme provides the regulatory agency and industry to regulate pipelines based on local circumstances and conditions. But regulatory flexibility in some contexts can produce regulatory laxity. Section A examines how a broad mandate and flexible regulatory design of the codified pipeline safety statutes produces laxity. This section first examines how place-based regulation coupled with industry established technology-based standards may produce laxity. These technology-based standards may reflect the private interests of industry and not the public interest in the environment. Section B then discusses how a lack of transparency

181. *Id.* § 190.208(e).

182. *Id.* § 190.343(a).

183. *Id.*

184. *Id.* § 190.343(b).

185. *Id.* § 190.343.

186. *Id.* § 190.343(b).

187. *Id.* § 190.343(b); *see also* 5 U.S.C. § 552.

188. *See id.* §§ 190.343 (covering rulemakings), 190.208(e) (covering adjudications).

created by the use of confidential business information and national security law creates an informational problem that skews public perceptions of risk in favor of industry's preferences. Secrecy then coupled with resource constraints creates a lack of accountability on part of both industry and government that results in under-enforcement.

A. PLACE-BASED REGULATION COUPLED WITH TECHNOLOGY-BASED STANDARDS
PRODUCES LAXITY

The inspection and maintenance scheme of sections 60102, 60108, and 60109 couples place-based regulation that considers environmental sensitivity with uniform technology-based standards to create a flexible regulatory scheme.¹⁸⁹ This regulatory flexibility accommodates the desire of industry for regulatory uniformity in technological standards. A pipeline designed to protect the most vulnerable parcel of land would be overprotective and inefficient when implemented in an area that would not be subject to lasting damage in the event of a spill. Conversely, a pipeline designed to protect the least vulnerable parcel of land hazards irreversible and permanent damage to a sensitive environment. This scheme then sets a design standard for pipelines without reference to place and then sets technology-based performance standards sensitive to the local environment—governing not the pipeline, but its performance.

But while regulatory flexibility has many desirable attributes, flexibility also creates an undesirable risk that industry might convert this flexibility into laxity through participation in government regulation. Four models of industry participation in government regulation exist and turn on the scope of industry involvement in either writing or enforcing government regulations.¹⁹⁰ Under the first model, a government agency traditionally writes and enforces regulations.¹⁹¹ Under the second model, government agencies contract with industry to establish the standards and the government agency focuses on enforcement.¹⁹² A third model has government writing regulations but private industry enforcing the standards, and a fourth model has industry both writing and enforcing the regulations.¹⁹³

Regulations promulgated under section 60102(a)(2) draw on all four of these models, though most heavily upon the fourth model of industry self-regulation.¹⁹⁴ For

189. Other scholars have scrutinized the limits of flexible regulation more generally. See, e.g., Mark Seidenfeld, *Empowering Stakeholders: Limits on Collaboration as the Basis for Flexible Regulation*, 41 WM & MARY L. REV. 411 (2000).

190. Sidney A. Shapiro, *Outsourcing Government Regulation*, 53 DUKE L.J. 389, 400–04 (2003).

191. *Id.* at 400; see also Kenneth A. Bramberger, *Regulation as Delegation: Private Firms, Decisionmaking, and Accountability in the Administrative State*, 56 DUKE L.J. 377, 386 (2006).

192. Shapiro, *supra* note 190, at 401–02.

193. *Id.* at 402–04.

194. It bears mentioning here what is meant when this Note uses the term “self-regulation” outside of the

example, pipeline operator submission of inspection and maintenance plans and integrity management programs involve industry in both writing and enforcing plans that comply with federal pipeline regulations. Industry execution and self-reporting of inspection results along with integrity management programs more closely resembles the third model, though, because the inspections and programs receive federal oversight and must comply with government standards. Other regulations promulgated under section 60102(a)(2) draw more heavily on the second model, with industry trade associations writing the regulations enforced by PHMSA.¹⁹⁵

Industry self-regulation is not intrinsically undesirable.¹⁹⁶ Recently, several scholars have criticized the “one-size-fits-all” approach of the traditional “command-and-control” model as too blunt an instrument for regulation of diverse contextual factors.¹⁹⁷ Self-regulation works especially well where, as here, voluntary compliance with regulatory standards can reduce the compensation a private party may need to pay when sued in tort or contract actions.¹⁹⁸ Incorporating industry technical standards may reduce the transaction costs and resource demands on administrative agencies.¹⁹⁹ An agency, for instance, may want to use a private entity to write a safety standard because that entity has access to specialized information at a lower cost.²⁰⁰ A close alignment between the

discussion of the four models of regulation proposed by Sidney A. Shapiro. Shapiro has devised four conceptual models of regulation that offer a useful terminology for describing where particular regulations fall along the regulatory spectrum between traditional agency- and self-regulation. This Note outside of the discussion of the four models uses the term “self-regulation” loosely to refer to the pipeline safety regulatory scheme. While not the pure and conceptual self-regulation used by Shapiro, the scheme has many features of self-regulation, and falls closer along the regulatory spectrum to self-regulation than traditional agency regulation. *See id.* at 430-31 (2003). Other commentators insist that even enforced self-regulation ultimately rests on external monitoring by auditors, government, or other third parties. *See Bramberger, supra* note 191, at 462.

195. *See* 49 C.F.R. §§ 195.106 (adopting API tensile tests for measuring the “yield strength” input used in the formula for a pipeline’s internal design pressure), 195.307 (establishing pressure testing for aboveground breakout tanks), 195.116, 195.132(b)(1)–(4), 195.134, 195.205(b)(1)–(4), 195.207, 195.214(a), 195.222, 195.228, 195.264. Other trade associations such as ASME and ANSI also set pipeline standards. *See* 49 C.F.R. §§ 195.106, 195.110, 195.118, 195.124, 195.214, 195.222(a). The regulation states the public may access or purchase the technology-based safety standards from PHMSA and National Archives and Records Administration (NARA) as well as the respective industry associations. *See* 49 C.F.R. § 195.3.

196. In Section B of Part IV, this note will consider the problem of information asymmetries in efficiently allocating risk between market participants and how this can result in market failure. Such information asymmetries between regulated firms and administrative agencies offer one of the most important justifications for employing delegation and self-regulation in the first place. *See Bramberger, supra* note 191, at 399.

197. *See, e.g., Bramberger, supra* note 191, at 387, n.17 (2006) (citing Cass Sunstein, *Administrative Substance*, 40 DUKE L.J. 607, 627 (1991)); Dalley, *supra* note 163, at 1092.

198. Shapiro, *supra* note 190, at 428. Indeed, oil spill liability more closely resembles the common law system of after the fact liability. *See GLICKSMAN ET AL., supra* note 1. It is also not clear this system will produce the full measure of legal liability Congress intended. *See Shapiro, supra* note 190, at 428.

199. Shapiro, *supra* note 190 (describing the role of transaction costs in agency choices about whether to “buy or make” regulation and why a public agency might “buy” private regulation).

200. *Id.* at 408; *see also* Bramberger, *supra* note 191, at 387 (“[R]egulators have neither the resources nor the vantage to attain the granular knowledge necessary to combat risk within individual companies . . .”). These

interests of a private party and a regulatory agency can similarly create incentives that minimize the costs of opportunistic behavior by the private party and lead to more efficient regulation.²⁰¹ Using a private party's employees to enforce these standards does not open the door to regulatory laxity where inspections do not require discretionary judgment calls.²⁰²

Incorporating industry standards also opens the door to regulatory laxity and may result in undesirable consequences from both the agency and public's perspective.²⁰³ Scholars refer to these consequences as the transaction costs of an agency's reliance on private parties.²⁰⁴ One such familiar transaction cost that may result from relying on private parties to self-regulate is the possibility of a principal-agent problem.²⁰⁵ A business in pursuit of its own self-interests would pursue policies that maximize profit, which may conflict with the agency's goal of pipeline safety.²⁰⁶ So whether the regulations promulgated by industry actually reflect and accomplish the agency's goals turns on the opportunistic behavior of a private party in pursuit of its self-interest.²⁰⁷ Where the goals of the industry and agency do not align, reliance on private standard-setting organizations creates an opportunity for the private party to engage in self-dealing and write regulations favoring their interests over those of the agency.²⁰⁸

Other transaction costs from relying on private parties to self-regulate in either rulemaking or enforcement may be that the reliance may stifle the agency developing the extensive expertise required to write the standards themselves.²⁰⁹ An agency may find mustering political support to rewrite standards difficult where a politically powerful industry supports self-regulation.²¹⁰ Constituencies in financially valuable industries will invest more in political donations, lobbying, and legal strategies that protect their entrenched interests.²¹¹

information asymmetries between regulated firms and administrative agencies offer one of the most compelling justifications for employing delegation and self-regulation in the first place. *Id.* at 399.

201. Shapiro, *supra* note 190, at 405.

202. *Id.* at 417. But this may not remain true for roles such as an integrity management program employee that require discretionary judgments. A risk also exists that private sector employees may as profit seeking actors cut corners in enforcing regulations. *Id.* at 419.

203. Delegation raises accountability concerns. Bramberger, *supra* note 191, at 384.

204. Shapiro, *supra* note 190, at 404.

205. *Id.* at 406; *see also* Bramberger, *supra* note 191, at 402 (“[B]road discretion creates the possibility that the exercise of power will respond to private, rather than public, priorities.”). Bramberger points out that firms remain particularly responsive to influences other than the interests of the regulator-principal in the regulatory relationship such as the behavior of competitors, consumers, and market pressures. *Id.* at 399. The effectiveness of these other third-party influences in encouraging corporate compliance bolsters the case for transparency as this note will show in Part V when discussing how disclosure improves political accountability and efficiently allocates risk through insurance markets.

206. Shapiro, *supra* note 190, at 404.

207. *Id.*

208. *Id.* at 406.

209. *Id.* at 411.

210. *Id.*

211. *Id.*

Nowhere is this opportunity for laxity more readily observable than in the technical standards authorized by 49 U.S.C. § 60102(a)(2). Section 60102(a)(2) generally authorizes the Secretary of Transportation to establish minimum standards for all aspects of pipeline safety.²¹² Many of the standards promulgated under this statute incorporate by reference technical standards established by industry trade associations such as the American Petroleum Institute, American Society of Mechanical Engineers, and the American National Standards Institute.²¹³ Here, PHMSA adopts the second model of contracting with industry to establish the standards that the agency will enforce.²¹⁴ Industry's involvement in writing these regulations may so heavily influence enforcement that the scheme borders on self-regulation.

The ultimate efficacy of this regime may turn on how closely the interests of private parties such as Enbridge align with those of a regulatory agency like PHMSA. The goals of the agency then assume greater importance in determining the efficacy of the regime. Where the agency has the goal of safely operating pipelines, the adoption of safety as an explicit purpose assumes greater importance. The indeterminacy of the purpose discussed *supra* Part II, Section A then means that the goals of the agency and industry may closely align in many cases. But where Congress or the Secretary identify the goal of safety more closely with the environmental sensitivity of the location of a pipeline, those interests may diverge, and reliance on private parties may not produce effective outcomes from the agency's perspective.²¹⁵

B. LACK OF TRANSPARENCY CREATES AN INFORMATION PROBLEM

This section discusses the information problems that result from the shortcomings of the information-based regulatory scheme of the pipeline safety laws. It argues that the information-based regulatory scheme created by the pipeline safety laws is inadequate, and instead results in a lack of transparency that creates an information problem. Information flaws and uncertainties often arise in environmental law. These uncertainties result both in spite of the best efforts of humans and sometimes as a result of those best efforts. This section considers how the pipeline safety laws create information asymmetries that perpetuate information flaws and uncertainties. This section first discusses how information asymmetries create information externalities that environmental laws employ

212. 49 U.S.C. § 60102(a)(2).

213. See 49 C.F.R. §§ 195.106 (adopting API tensile tests for measuring the "yield strength" input used in the formula for a pipeline's internal design pressure), 195.307 (establishing pressure testing for aboveground breakout tanks), 195.116, 195.132(b)(1)–(4), 195.134, 195.205(b)(1)–(4), 195.207, 195.214(a), 195.222, 195.228, 195.264. Other trade associations such as ASME and ANSI also set pipeline standards. See 49 C.F.R. §§ 195.106, 195.110, 195.118, 195.124, 195.214, 195.222(a).

214. See Shapiro, *supra* note 190, at 401–02.

215. See *id.* at 406.

information-based schemes to remedy, and then it examines the specific statutory and regulatory provisions that create information asymmetries.

1. Information Asymmetries Perpetuate Information Flaws and Uncertainties

In the earlier discussion of the information-based regulatory strategies, this Note observed that economists and market-oriented policymakers prefer this method of regulation because it facilitates informed market choices.²¹⁶ Markets exist to facilitate bargaining between buyers and sellers, where bargaining necessarily involves the allocation of harms and benefits. Efficient market-based allocation of these harms and benefits depend on market participants having perfect information.²¹⁷ Economists often define externalities as a human-made and un-bargained for harm or benefit.²¹⁸ Externalities therefore often arise where parties fail to allocate harms and benefits as a result of incomplete information.²¹⁹ Information flaws and uncertainties result in inefficient allocations of risk between parties. Environmental laws aim to either prevent pollution or compensate its victims for suffering these externalities: un-bargained for environmental harms.²²⁰

Information flaws and uncertainties encompass a broad variety of deficiencies that may arise for any number of reasons. They may, for instance, encompass flaws or uncertainties in scientific models or social science research. Polluters may not know who or what is harmed by their pollution, and may not fully understand the pathways through which a pollutant enters the environment. Polluters may also not fully know or be able to predict the impact of the pollutant on the environment. Scientific complexity and uncertainty further compounds this informational problem.²²¹

However, not all information flaws and uncertainties result from scientific complexity or uncertainty. Information flaws and uncertainties can result from an information asymmetry between polluters and regulators, and may result in an information asymmetry with market participants. Asymmetrical information exists where one party to an economic transaction possesses greater material knowledge than the other party. Specialization and division of knowledge in society produces asymmetrical information in the context of economic transactions. Asymmetrical information creates value when market participants are able

216. See GLICKSMAN ET AL., *supra* note 1, at 83.

217. *Id.* at 11–12.

218. *Id.* An un-bargained for human-made harm would constitute a negative externality while an un-bargained for human-made benefit would constitute a positive externality.

219. See Wendy E. Wagner, *Commons Ignorance: The Failure of Environmental Law to Produce Needed Information on Health and the Environment*, 53 DUKE L. J. 1619, 1632 (2004) (“Although it is rarely noticed, ignorance regarding the harm that private actors are causing health and the environment is just another external cost of their activities that they are able to pass on to society”).

220. GLICKSMAN ET AL., *supra* note 1, at 11–12.

221. *Id.*

to specialize and produce high quality goods and services more cheaply.²²² But where one party possesses verifiable information in a transaction and does not disclose that information to a second party, the second party should view that as a signal that the first party views that information as unfavorable to the first party's interests.²²³

Information asymmetries can result in three distinct market allocation problems: the "Lemons Problem," adverse selection, or moral hazard.²²⁴ A Lemons Problem arises where a market participant has asymmetrical information regarding the value of a good or service.²²⁵ Adverse selection results where one party in a negotiation has relevant information the other party lacks, which may result in less informed market participants. Less informed market participants may make worse decisions and forge inefficient agreements.²²⁶ Moral hazard refers to the risk that a market participant has not exercised good faith in bargaining, provided misleading information about assets or liabilities, or has an incentive to take unusual risks to earn a profit.²²⁷ Moral hazard arises where one party to a transaction has the opportunity to take on more risk and taking this risk negatively affects the other party.²²⁸

Information asymmetry presents a risk of all three of these allocation problems in the context of Line 5. The State of Michigan may end up with a Lemons Problem if Enbridge does not disclose the defects of the pipeline to the State through the course of their ongoing relationship. The State could then overvalue the pipeline by agreeing to bear the risk of a spill. Adverse selection may also result where Enbridge and the State make worse decisions and forge inefficient agreements when Enbridge does not disclose the risk to the State. Thus, the value of the deal for the State deteriorates compared to the full universe of deals available, and the State has a more difficult time distinguishing the optimal use for the Straits of Mackinac.

A moral hazard similarly exists where Enbridge has an incentive to take unusual risks to earn a profit. Because Enbridge does not need to maintain an insurance policy that covers its liability and the State bears the risk of an oil spill, a moral hazard exists. Enbridge, excused from liability, may mislead the State

222. *Asymmetric Information*, INVESTOPEDIA, <http://www.investopedia.com/terms/a/asymmetricinformation.asp> (last visited Oct. 10, 2017). Information asymmetries between regulated firms and administrative agencies constitute one of the most important justifications for employing delegation and self-regulation. Bramberger, *supra* note 191, at 399.

223. Dalley, *supra* note 163, at 1116.

224. *Asymmetric Information*, *supra* note 222; see *Lemons Problem*, INVESTOPEDIA, <http://www.investopedia.com/terms/l/lemons-problem.asp> (last visited Oct. 10, 2017).

225. See *Lemons Problem*, *supra* note 224.

226. *Adverse Selection*, INVESTOPEDIA, <http://www.investopedia.com/terms/a/adverseselection.asp> (last visited Oct. 10, 2017).

227. *Moral Hazard*, INVESTOPEDIA, <http://www.investopedia.com/terms/m/moralhazard.asp?ad=dirN&qo=investopediaSiteSearch&qsrc=0&o=40186> (last visited Oct. 10, 2017).

228. *Id.*

and even risk a spill to operate the pipeline for as long as possible to maximize its profit. On the other hand, requiring Enbridge to maintain an insurance policy that could cover the cost of the spill does not necessarily eliminate this moral hazard because insurance often enables a party to take on more risk that may negatively affect either the insurer or the state.

Information flaws and uncertainties may arise from the informational asymmetries created by the intentional resistance of polluters to documenting and disseminating information about the environmental harms caused by their activities and products.²²⁹ Polluters have a natural inclination to remain ignorant of environmental harms or to conceal and contest the disclosure of information about these harms.²³⁰ Rational choice theory understands that a party who inflicts an invisible and costly harm on others has little incentive to document or take responsibility for the harms.²³¹ Rational choice theory further predicts that polluters would dedicate resources to concealing and contesting disclosure of any incriminating information or research the polluter assembles regarding environmental harms.²³² Polluters not only resist production of potentially incriminating information about environmental harms, but also invest in discrediting public research against such harms.²³³ Much of the scientific information environmental regulation requires still is therefore missing.²³⁴

2. Pipeline Safety Laws Create Information Asymmetries that Inefficiently Allocate Risk

Building on information recounted *infra* in section B.4 of Part III, this subsection discusses and describes the shortcomings of the information-based schemes under 49 U.S.C. § 60102 and 49 U.S.C. § 60108 as a defining feature of the pipeline safety statutes that create and perpetuate information asymmetries that inefficiently allocate risk and undermine accountability.

Section 60102 confers general authority to the Secretary to promulgate minimum safety standards for a broad range of activities such as design, installation, inspection, emergency plans and procedures, testing, construction, extension, operations, replacement, and maintenance of a pipeline by owners or operators.²³⁵ But of these activities, only inspection, emergency plans and

229. Wagner, *supra* note 219, at 1622. Wagner criticizes many of the leading scholars and environmental economists for presuming the ready availability of information needed to set regulations and for failing to consider the possibility that those externalizing environmental harms may enjoy and conceal superior information. *Id.* at n.5.

230. *Id.* at 1620, 1622 (applying the reasoning of rational choice theory in criminal law to environmental law).

231. *Id.* at 1622.

232. *Id.*

233. *Id.* at 1619.

234. *Id.* at 1623–24.

235. 49 U.S.C. § 60102(a)(2).

procedures, testing, and maintenance use information-based schemes for ongoing regulation. Even then, periodic rulemakings employing risk assessments do not offer much in the way of an opportunity to use information-based approaches to regulate.²³⁶ Such risk assessments focus on the implications of a proposed rule for a “particular type” of pipeline transportation or facility. Use of the word “type” indicates that risk assessments categorize pipelines and generalize about the implications of proposed rules. So while section 60102 uses an information-based scheme by requiring risk assessments when promulgating minimum safety standards, it employs only an attenuated information-based scheme, divorced of much practical use in a regulatory setting that relies so heavily on a place-based approach.

Even if a risk assessment contained useful information, internal PHMSA rulemaking procedures may frustrate public disclosure of such information and therefore undermine the limited information-based regulatory scheme created by section 60102. PHMSA procedures authorize the agency to disclose voluntarily shared information in connection with a rulemaking to the public, unless the commenter asks the agency keep the information confidential. The agency then treats the information as confidential, provided the commenter sends a redacted copy along with the original document marked “confidential” as well as a document containing explanations of why the redacted information is confidential. If the agency determines the information is not confidential, it must inform the commenter after reviewing the request under the criteria set out in FOIA, 5 U.S.C. § 552, and after reviewing Department of Transportation consultation procedures.²³⁷ PHMSA regulations also give commenters at least five days advance notice of any decision to disclose information submitted as confidential which confers a tremendous strategic advantage by giving the commenter an opportunity to get out in front of a disclosure.²³⁸

The information-based scheme found in section 60108 has much more regulatory utility. Section 60108 requires operators to prepare written inspection and maintenance plans for their pipelines, and to keep copies of these plans in any office the Secretary considers appropriate. This section also authorizes the Secretary to require operators submit these plans for approval. The scheme requires the Secretary to determine the adequacy of each

236. While agency rulemakings under the APA reflect an information-based regulatory strategy, this approach offers only infrequent opportunities to obtain information and more often reflect the impact of rules on the national network of pipelines instead of individual lines. *See* Dalley, *supra* note 163, at 1091 n.6.

237. 49 C.F.R. § 190.343(b); *see also* 49 C.F.R. § 7.29.

238. 49 C.F.R. § 190.343(b). A variety of strategies exist. A commenter might inoculate against disclosure by preemptively disclosing and taking credit for doing so, or might prepare their public relations strategy and supporting material to influence coverage of the disclosure. A commenter can for instance help initially explain the disclosure to media outlets and explain the significance of the disclosure in a light favorable to themselves; they might contextualize the disclosure by providing supplemental information not found in the disclosure; or they might recruit trusted authorities on the subject of the disclosure to validate their message.

inspection and maintenance plan, and the frequency and type of proposed inspection and testing on a case-by-case basis.²³⁹ The approvals require disclosure of pipeline information specific to each pipeline, such as location, technical specifications, contents, operating pressure, site-specific conditions, existing and projected population, other pipelines in the area, frequency of leaks, and other factors.²⁴⁰

However, the shortcoming of the information-based scheme found in section 60108 is not the scope of the information collected, but the scope public disclosure. The operator must maintain copies of the plan, not the Secretary, and is required to maintain inspection records so that the Secretary can determine whether the operator is complying with the laws.²⁴¹ But sections 60108 and 60117 only require disclosure to the Secretary and do not require disclosure to the broader public.²⁴² In fact, disclosure of information obtained by a government officer in relation to a confidential matter under these laws exposes the officer to criminal liability.²⁴³ The Secretary may require an operator to revise an inspection and maintenance plan but only after giving the operator notice and an opportunity for a hearing.²⁴⁴ The agency then conducts a hearing to determine whether an operator must amend a proposed plan or procedures under 49 C.F.R. § 190.206.²⁴⁵ An operator may seek confidential treatment of information submitted in response to such an enforcement action under 49 C.F.R. § 190.208.²⁴⁶

The ability to seek confidential treatment of information submitted to PHMSA then creates both an information asymmetry and an externality that undermines efficient allocation of risk, because pipeline operators may possess information the agency and public may not. Private parties can more easily realize their self-interests where asymmetrical information exists.²⁴⁷ For instance, an operator may possess superior information about risks associated with their activities and may elect to conceal this information.²⁴⁸ Section 60117 requires the operator to maintain records, make reports, and provide information required by the Secretary to determine compliance. But the statute does not specify how the Secretary is supposed to ascertain

239. 49 U.S.C. § 60108(b).

240. *Id.* § 60108(b)(2)(A)–(I).

241. *Compare* 49 U.S.C. § 60108(a)(1), *with* 49 U.S.C. § 60117(b)(1).

242. *Compare* 49 U.S.C. § 60108(a)(1), *with* 49 U.S.C. § 60117(b)(2).

243. 49 U.S.C. § 60117(d) (cross-referencing 18 U.S.C. § 1905).

244. *Id.* § 60108(a)(2).

245. 49 C.F.R. § 190.206(a).

246. It is not entirely clear under what statutory authority the PHMSA has promulgated this specific provision of the regulation. The agency cites the Pipeline Safety, Regulatory Certainty, and Job Creation Act of 2011 as the statutory basis for promulgating revised pipeline regulations in Pipeline Safety: Administrative Procedures; Updates and Technical Corrections, 78 Fed. Reg. 58910 (Sept. 25, 2013). But that statute does not directly address the intersection of pipeline inspection and maintenance plans and FOIA requests.

247. Shapiro, *supra* note 190, at 408.

248. Wagner, *supra* note 219, at 1641.

compliance with that provision other than by entry and inspection. A “command-and-control” style of regulatory enforcement like entry and inspection may not always uncover information the operator possesses about the risks posed by a pipeline.

The operator may disclose information to the agency in a piecemeal fashion, satisfying the technical disclosure requirements but failing to identify safety risks. A regulatory agency with competing demands and priorities might not dedicate or possess the resources necessary to discern the significance of such information.²⁴⁹ The agency then may not assemble this information in a way that identifies the potential risk.²⁵⁰ Private markets often offer a means of discerning the significance of information of this sort because an inefficient allocation of risk creates a business risk or opportunity for insurance. But private markets may not possess this information if the information is confidential and the contract for the easement only requires the operator to maintain an insurance policy of up to a specific amount, possibly well below the actual liability. While this situation might seem improbable, the failure of PHMSA to identify safety risks and the failure of private insurance markets to uncover such risks closely reflects the circumstances of Line 6B and Line 5.

The failure of an operator to disclose the full social cost of their pipeline operations creates an externality where the informational asymmetry creates an information flaw or uncertainty.²⁵¹ This information flaw or uncertainty creates an externality in the form of the social costs of identifying and measuring the externality.²⁵² This externality creates a social cost most theorists often ignore by assuming perfect information.²⁵³ It can then bring about two other externalities in the form of damages to society, and thereby the costs needed by society to engage in the collective action required to address the problem.²⁵⁴ With these externalities present, the market will not be able to efficiently allocate the risk of pipeline operations. Externality theory on the other hand supports requiring actors to internalize the costs of both researching the externality and the externality itself.²⁵⁵

249. See Shapiro, *supra* note 190, at 405 (discussing the concept of “bounded rationality” where a transaction takes place under conditions of uncertainty where a private party may exploit an information advantage to take actions in its self-interest to the detriment of the agency’s interests).

250. Various scholars discuss this problem of “bounded rationality” as one of the challenges inherent in regulation. Rational choice theory models examine the behavior of individuals with perfect or sufficient information about their preferences where real individuals possess at best “bounded rationality” constrained by the limits of both the human mind and practicality. Humans therefore develop unconscious cognitive shortcuts called biases or heuristics to make sense of new situations even in the absence of complete information. Bramberger, *supra* note 191, at 410–11.

251. Wagner, *supra* note 219, at 1632 n.33.

252. *Id.*

253. *Id.*

254. *Id.*

255. *Id.* at 1632.

An operator may resist documenting these externalities (e.g. the adverse risks their pipelines pose to society) for several reasons.²⁵⁶ Private actors will contribute substantially to advancements in public knowledge where the research promises to simultaneously produce private gains.²⁵⁷ However, no equivalent incentives for private actors to contribute exists where, as here, the research focuses on the adverse effects of human activities on health or the environment.²⁵⁸ Research into adverse effects instead creates the opposite set of incentives for private actors that generate adverse effects unknown either to themselves or to the general public.²⁵⁹

C. RESOURCE CONSTRAINTS AND LACK OF ACCOUNTABILITY PRODUCES UNDER ENFORCEMENT

The prior section details how pipeline safety laws draw upon industry self-regulation to create a flexible regulatory scheme, but how in doing so they open the door to a principal-agent problem. This section details how those same laws produce a lack of accountability that results in under enforcement. It begins with a brief discussion of the history of the PHMSA's record as a regulator to highlight the existence of the principal-agent problem before discussing how the lack of accountability of PHMSA reflects a conscious design by Congress. This section argues that Congress, in delegating broad discretion to the Secretary of Transportation, intended to create an independent and unaccountable regulator captured by design.

1. Agency Origins of the Lack of Accountability

Since Congress created the Office of Pipeline Safety within the Pipelines and Hazardous Materials Safety Administration, the agency has had a poor record as a regulator in the view of oversight agencies and independent watchdogs.²⁶⁰ As early as 1978, the GAO reported that OPS had weak enforcement, inaccurate records, and ineffective rules. In 2000, a GAO report criticized the agency for its weak enforcement and unwillingness to work with states. More recently, the NTSB in a report on the probable cause of the 2010 Enbridge Line 6B spill in Marshall, Michigan, attributed the spill to “[o]rganizational [f]ailures and [w]eak

256. *Id.* at 1632–39 (explaining actors will generally resist documenting the adverse consequences of their activities and products); *see also* Bramberger, *supra* note 191, at 432–33 (explaining how often unwritten routines are largely insulated from external review thereby creating undocumented risks).

257. Wagner, *supra* note 219, at 1631.

258. *Id.*

259. *Id.*

260. *See, e.g., A Brief History of Federal Pipeline Safety Laws*, PIPELINE SAFETY TRUST (citing CAROL M. PARKER, *The Pipeline Industry Meets Grief Unimaginable: Congress Reacts with the Pipeline Safety Improvement Act of 2002*, 44 NAT. RESOURCES J. 243 (2004)), <http://pstrust.org/about-pipelines/1/regulators-regulations/a-brief-history-of-federal-pipeline-safety-laws/>.

[r]egulations.”²⁶¹ CRS similarly cited an August 30, 2011 NTSB incident report as support for concluding PHMSA’s weak enforcement and monitoring of state oversight programs have resulted in a lack of effective Federal oversight and state oversight.²⁶²

The organizational failures and weak regulations attributed to PHMSA result at least in part from agency capture. Agency capture has long caused or contributed to regulatory failures.²⁶³ Agency capture occurs where an interest group has developed such a close relationship with the regulated industry that a principal-agent problem arises, and the regulator begins to serve the interests of industry instead of the public.²⁶⁴

Organizational failures and weak regulations also result from a dearth of regulatory capacity. Regulatory capacity requires an agency to possess a clearly-defined and coordinated mission, adequate funding, regulatory staff who possess or can obtain expertise and who understand the regulated businesses, and internal controls that ensure regulators do not develop too close of a relationship with regulated entities.²⁶⁵ A dearth of regulatory capacity often coincides with agency capture because insufficient regulatory capacity forces regulators to rely more heavily on the regulated entity for expertise. In short, agency capture is often a symptom of inadequate regulatory capacity.

PHMSA’s organizational failures and weak regulations result from just such a dearth of regulatory capacity. PHMSA suffers from historically inadequate funding and retention of inspection staff.²⁶⁶ Staffing shortfalls occur because industry hires away agency engineering talent.²⁶⁷ PHMSA is therefore not usually staffed with a full complement of inspectors.²⁶⁸ NTSB’s report on the Enbridge Line 6B pipeline oil spill highlighted that PHMSA has just one and a half staffers allocated to review spill response plans for 450 facilities, well below the number of staff allocated by EPA and the Coast Guard for similar programs.²⁶⁹

261. NAT’L TRANSP. SAFETY BD., *supra* note 60.

262. *See* PARFOMAK, *supra* note 7, at 14–15.

263. Lawrence G. Baxter, *Understanding Regulatory Capture: An Academic Perspective from the United States*, in *THE MAKING OF GOOD FINANCIAL REGULATION: TOWARDS A POLICY RESPONSE TO REGULATORY CAPTURE* 32 (Stefano Pagliari, ed., 2012).

264. *See, e.g., id.* (explaining how industry capture of financial regulators has been used to understand the regulatory failures that contributed to the 2008 Financial Crisis).

265. *Id.* at 35.

266. PARFOMAK, *supra* note 7, at 17.

267. *Id.* at 17–18.

268. *Id.*

269. MARSHALL PIPELINE ACCIDENT REPORT, *supra* note 27, at 112.

2. Congressional Origins of the Lack of Accountability

When designing a law, Congress attempts to ensure agencies implement the legislation in a manner consistent with legislative preferences.²⁷⁰ Congress understands that delegating broad policy discretion to agencies creates an increased risk of a principal-agent problem.²⁷¹ Delegation to an agency creates a principal-agent relationship that fosters independence and encourages arbitrary and unreflective governance.²⁷² In other words, independence comes at the expense of accountability, since both are flip sides of the same coin.²⁷³ The insulation from accountability that results from agency independence can serve an important purpose where exercised by competent and well-intentioned decision-makers;²⁷⁴ however, these principal-agent problems in turn create measurement and governance costs.²⁷⁵ Therefore, in designing regulatory schemes, Congress should minimize transaction costs associated with implementing a given policy measured against the costs of a legislator's reelection.²⁷⁶

Congress intended to confer broad discretion and independence on PHMSA because the agency regulates the lawful activities of oil pipeline companies.²⁷⁷ These companies often engage in unpopular and ultrahazardous activities that attract criticism, disapproval, press attention, political attention, and even policy change.²⁷⁸ So when Congress needed to design a regulatory scheme to govern this industry, the regulation followed the path of least resistance. They conferred considerable independence on the agency so that its administrators could make difficult and unpopular decisions—decisions about pipeline safety that might invite all the aforementioned negative attention should the administrator make a mistake that results in a costly and unpopular oil spill.²⁷⁹

IV. SUNSHINE TACTICS AS A SOLUTION TO LAX FEDERAL OVERSIGHT

Thus, secrecy creates a risk of asymmetrical information that could result in adverse selection or moral hazard in environmental decision-making. But what

270. Shapiro, *supra* note 190, at 397.

271. *Id.* at 397–98.

272. Bramberger, *supra* note 191, at 402.

273. Frederick Schauer, *The Mixed Blessings of Financial Transparency*, 31 *YALE J. ON REG.* 809, 820 (2014).

274. *See id.* at 814, 820–21.

275. Shapiro, *supra* note 190, at 397.

276. *Id.* at 398.

277. *Cf.* Schauer, *supra* note 273, at 813–814, 820–21 (positing that, in the regulation of lawful financial activities, there are contexts where Congress could reasonably conclude that the benefits of increased independence outweigh the benefits of increased transparency).

278. *See id.* at 814 (noting that increased transparency makes it difficult to carry out such “disapproved activities”).

279. *Cf. id.* at 814, 820–21, 823 (discussing the advantages and disadvantages of transparency in financial regulation and comparing different Congressional approaches to balancing transparency and independence in different areas of financial regulation).

happens when secrecy is itself a policy objective? Enbridge Line 5 highlights the tension between the competing policy objectives of secrecy and disclosure of pipeline information and how these objectives inform public perceptions of risk and influence public involvement. As one scholar of risk analysis and environmental policy has eloquently observed, “under conditions of secrecy, the people that hold power over the secret have great narrative advantage [W]hen secrecy is combined with the absence of environmental and health surveillance, the public opinion and politics favor the development of hazardous technologies.”²⁸⁰ Part IV argues that today, much as in Justice Louis Brandeis’s time, “[s]unlight is said to be the best of disinfectants; electric light the most efficient policeman,”²⁸¹ and that, in the case of Line 5, efforts to enhance transparency may offer an alternative to lax Federal oversight by the PHMSA.

A. SECRECY AND THE PROBLEM OF OVERSIGHT IN THE PIPELINE REGULATORY REGIME

A chorus of voices all claim that the limited public access to information such as the Enbridge Line 5 inspection records creates an obstacle to performing a meaningful assessment of the risks of a spill posed by the pipeline. Attorney Sara Gosman of the National Wildlife Federation in *After the Marshall Spill: Oil Pipelines in the Great Lakes Region* may have been one of the first stakeholders to observe how pipeline laws limit both public involvement and public access to information.²⁸² Other voices citing limited public access to information as a problem has grown to range from the State of Michigan and news media to environmental interest groups like For Love Of Water (FLOW), Sierra Club Michigan Chapter, and the National Wildlife Federation. Subsequent media coverage steadily drew public attention to the lack of public access and independent verification of Enbridge claims about the safety of the Line 5 pipeline. As Mark Brush of National Public Radio affiliate Michigan Radio reported in October 2014, “[h]ere’s what we don’t know: We can’t see specific documentation that backs up Enbridge’s claim that the pipeline is safe.”²⁸³

280. John P. Wargo, Tweedy-Ordway Professor of Env'tl. Health and Political Sci., Yale Univ., Lecture 3—Nuclear Experiments in EVST 255: Environmental Politics and Law (Jan. 19, 2010), <http://oyc.yale.edu/environmental-studies/evst-255/lecture-3>.

281. LOUIS D. BRANDEIS, *OTHER PEOPLE’S MONEY AND HOW THE BANKERS USE IT* 92 (Augustus M. Kelley 1986) (1914). The preceding sentence reads “Publicity is justly commended as a remedy for social and industrial diseases” and underscores the role of the news media in bringing to light immoral conduct, unethical conduct, or violations of law. *Id.* Brandeis’s quotation inspired the designation of public transparency laws as “sunshine” laws. Schauer, *supra* note 273.

282. Sara Gosman, *Why We Should Pay Attention to Oil Pipelines*, NAT’L WILDLIFE FED’N BLOG (April 30, 2012), <http://blog.nwf.org/2012/04/why-we-should-pay-attention-to-oil-pipelines/>.

283. Mark Brush, *What’s the Status of the Old Oil Pipeline Under Lake Michigan? We Need More Information to Know.*, MICHIGAN RADIO (Oct. 9, 2014), <http://michiganradio.org/post/whats-status-old-oil-pipeline-under-lake-michigan-we-need-more-information-know#stream/0> [hereinafter *What’s the Status?*].

1. PHMSA Would Not Comment on What Inspections Reveal About the Condition of the Enbridge Line 5 Pipeline, and, Even if the Agency Had Commented, the Public Could Not Independently Review and Evaluate Agency Conclusions

When Michigan Radio sought comment from PHMSA on its fall 2014 news report on the condition of the Line 5 pipeline, the agency initially directed the station to file a Freedom of Information Act (FOIA) request for documents confirming the condition of the pipeline.²⁸⁴ Activists, attorneys, and reporters initially sought these documents, only to learn inspection records are actually kept by the companies, not PHMSA, which makes the records exempt from FOIA requests.²⁸⁵ PHMSA does not retain pipeline data and instead inspects records and documents kept by a pipeline company such as Enbridge.²⁸⁶ When reporters for Michigan Radio pressed the agency for an assessment of the present safety condition of Enbridge Line 5, PHMSA stonewalled with what the reporters described as a “pat response.”²⁸⁷

Even if PHMSA had offered an opinion on the condition of the Line 5 pipeline, PHMSA has a less-than-stellar record of conducting effective inspections that detect corrosion and damage to pipelines and prompting corrective action. The NTSB report on the Marshall, Michigan Enbridge Line 6B oil spill in 2010 found PHMSA’s oversight of pipeline integrity management programs ineffective.²⁸⁸ The report pointed to a 2005 Enbridge engineering assessment that had found six crack-like defects of lengths ranging from 9.3 to 51.6 inches.²⁸⁹ Those defects would ultimately lead to the 2010 rupture of Line 6B.²⁹⁰ But for five years following that assessment, Enbridge failed to identify the 51.6-inch crack feature adjacent to a weld in the pipe as a threat to the pipeline.²⁹¹ Even then, only a few days before the pipeline ruptured, Enbridge had asked PHMSA for an additional two-and-half year extension on top of the one-year extension already granted to decide whether to replace or repair the cracked sections of Line 6B.²⁹²

284. *Id.*

285. Email from Timothy Butters, Acting Administrator, Pipeline and Hazardous Materials Safety Administration, to Mark Brush, Michigan Radio (Oct. 29, 2014), http://mediad.publicbroadcasting.net/p/michigan/files/styles/x_large/public/201507/Brush_FOIA.jpg; *see also We’re Still Waiting*, *supra* note 56.

286. *We’re Still Waiting*, *supra* note 56.

287. *Id.*

288. NAT’L TRANSP. SAFETY BD., *supra* note 60.

289. *Id.*

290. MARSHALL PIPELINE ACCIDENT REPORT, *supra* note 27, at 87.

291. *Id.* at 87.

292. Winter, *supra* note 39 (citing House Committee on Transportation and Infrastructure Report).

2. Enbridge's Stated Reasons for Refusing to Release Data Confirming the Integrity of the Line 5 Pipeline do not Withstand Scrutiny

Despite assurances by Enbridge that the Line 5 pipeline remains in good condition, no independent source could verify the company's claims because the company has not made the inspection reports and data documenting the condition of the pipeline public.²⁹³ Enbridge repeatedly refused to release data confirming the integrity of the Line 5 pipeline citing confidential business information, complexity of the data, and national security concerns. Enbridge Vice President of U.S. operations Brad Shamla declined to share information confirming the condition of the pipeline, telling Michigan Radio in fall of 2014:

It'd be equivalent to handing somebody an EKG strip on heart monitoring You know, you can do all kinds of things by looking at the ups and downs, but at the end of the day, unless you know what you're looking at, it's very difficult to read some of the data.²⁹⁴

Enbridge subsequently reiterated this claim when meeting with state task force officials in August 2015.²⁹⁵ Both Michigan Radio and the State of Michigan eventually refuted this empty claim by pointing out that either party could retain independent experts to evaluate the data from the "smart pig" Inline Inspection Tools.²⁹⁶ Enbridge similarly cited the Homeland Security Act as a reason for withholding Inline Inspection Tool records from independent review,²⁹⁷ as laws exempt pipelines like Line 5 from disclosing inspection reports on national security grounds.²⁹⁸ But Andy Buchsbaum of the National Wildlife Federation refuted the predicate of Enbridge's national security claim, explaining, "[t]here are plenty of maps that show where those pipelines are."²⁹⁹

Existing scholarship has called into question the use of the "confidential business information" designation as a basis for exempting information about environmental harms from public disclosure.³⁰⁰ Industry has routinely over-classified information as confidential business information in the interest of protecting information not only from competitors but also from public scrutiny.³⁰¹ Over-classification increases costs for others to obtain the information and impedes public agencies from accessing the supposedly confidential information.³⁰² While many argue such practices help industry avoid unduly burdensome

293. ALEXANDER & WALLACE, *supra* note 34, at 4.

294. *What's the Status?*, *supra* note 283.

295. *We're Still Waiting*, *supra* note 56.

296. *Id.*

297. *What's the Status?*, *supra* note 283.

298. Wagner, *supra* note 219, at 1709–10.

299. *What's the Status?*, *supra* note 283.

300. Wagner, *supra* note 219, at 1699–1705.

301. *Id.* at 1702.

302. *Id.* at 1702–03.

justifications for classification, claiming confidential business information in this context may thwart the public's interest in monitoring the risk posed by the Line 5 pipeline.³⁰³

Nor does claiming national security necessarily justify Enbridge's withholding information regarding the pipeline. Enbridge cited the Homeland Security Act as a justification for not disclosing information about the Line 5 pipeline.³⁰⁴ The Homeland Security Act allows the owner of a facility to claim information voluntarily submitted to the government qualifies as "critical infrastructure information."³⁰⁵ Regulations promulgated under the Act then not only bar federal agencies from sharing the critical infrastructure information with the public, but also prevent federal and state agencies from using the information to regulate or take enforcement action.³⁰⁶ While this provision of the Homeland Security Act encourages disclosure of infrastructure vulnerabilities, the provision detracts from public safety by diminishing public scrutiny of pipeline operations.³⁰⁷ One scholar has even described the Homeland Security Act as offering the greatest opportunity for abuse by "regulated parties to . . . prevent public disclosure and even regulatory use of unfavorable information by claiming that the information presents national security risks."³⁰⁸

As recently as March 24, 2016, Enbridge had not released the inspection report information to the State of Michigan despite two years of persistent pressure by the State, environmental interest groups, and news media.³⁰⁹ During those two years, Enbridge transported approximately 16,790,000,000 gallons of natural gas and light crude through the Straits of Mackinac.³¹⁰ Enbridge finally released the inspection reports and data from the company's Inline Inspection Tool to Michigan in April 2016, which the state in turn released to the public on May 13, 2016.³¹¹ The reports revealed the easternmost pipeline had 141 corrosion features, the deepest of which had corroded 37% of the pipeline, affecting 10% of the metal spools.³¹² The reports further revealed the westernmost pipeline had 294 corrosion features along 17% of the metal spools with 41% corrosion in the deepest of these features.³¹³ Enbridge noted that the government allows pipelines to operate with corrosion features penetrating depths of up to 80% of the wall of

303. *Id.* at 1704.

304. *What's the Status?*, *supra* note 283.

305. Wagner, *supra* note 219, at 1710.

306. *Id.*

307. *Id.* at 1710 n.318.

308. *Id.* at 1709.

309. Mark Brush, *3 Things to Note From the Enbridge Documents Released today*, MICHIGAN RADIO (May 13, 2016), <http://michiganradio.org/post/3-things-note-enbridge-documents-released-today> [hereinafter *3 Things*].

310. This is a rough estimate based on the reported pipeline capacity multiplied by the number of days in two years. This figure therefore does not purport to represent an exact accounting and may vary considerably.

311. *3 Things*, *supra* note 309.

312. *Id.*

313. *Id.*

the pipe.³¹⁴

But correctly interpreting pipeline data is challenging and inspections do not always consider the interplay between corrosion and other elements such as cracks, design defects, and design elements like horizontal seams.³¹⁵ For example, the internal surface of Line 6B had no apparent corrosion.³¹⁶ The external wall of Line 6B on the other hand had preexisting cracks that extended 83.9% of the original wall thickness and were accompanied by evidence of black oxide consistent with oxidation in an oxygen-poor environment.³¹⁷ While the internal inline inspection did identify these weaknesses, Enbridge used more stringent safety margins for internal corrosion than for the external cracking that resulted in the eventual rupture.³¹⁸ It is therefore not terribly reassuring that the corrosion is only 37% and 41% respectively and physical inspection of the pipeline exterior may yield further insights in assessing the risk.

3. Enbridge's Resistance to Disclosing Pipeline Inspection Data May Have Stemmed from Concerns About Negotiations Over Pending or Forthcoming Litigation, and Highlights the Tension Between Conflicting Legal Priorities

Recent revelations that Enbridge violated the terms of the 1953 easement, requiring supports not more than seventy-five feet apart, call into question the company's good faith, and highlight how competing legal duties can complicate disclosure.³¹⁹ Enbridge officials publicly claim to have discovered the lack of properly spaced supports during biennial underwater inspections of the pipeline in June 2016.³²⁰ But Sierra Club Michigan Chapter Chairman David Holtz points out that a recent \$177 million settlement between Enbridge and U.S. Department of Justice suggests otherwise.³²¹ Holtz told the Detroit Free Press, "[i]f negotiations with federal officials on settlement were occurring over years, the inclusion of pipeline supports indicate some knowledge of an issue there before June."³²² The timing of the revelations suggest a compelling reason for Enbridge not to publicly disclose inspection records, where these records would prove detrimental to ongoing legal negotiations and obligations. However, the availability of independent review by trusted third parties instead of public disclosure underscores that alternatives for the public to assess risk exist, and can do so without

314. *Id.*

315. MARSHALL PIPELINE ACCIDENT REPORT, *supra* note 27, at xii-xiii, 70-71; Carol M. Parker, *The Pipeline Industry Meets Grief Unimaginable: Congress Reacts with the Pipeline Safety Improvement Act of 2002*, 44 NAT. RESOURCES J. 243, 254 (2004) ("Smart pigs' detect some, but not all, defects in a pipeline.").

316. MARSHALL PIPELINE ACCIDENT REPORT, *supra* note 27, at 24.

317. *Id.* at 25-26.

318. *Id.* at 88.

319. Matheny, *supra* note 78.

320. *Id.*

321. *Id.*

322. *Id.*

further complicating Enbridge's legal affairs.

4. Enbridge's Continued Resistance Suggests the Company May Not Want to Disclose Pipeline Inspection Records for the Unstated Political Reason that Public Involvement May Shift Public Perceptions of the Risks Involved in Pipeline Operation

Enbridge has had a savvy public relations strategy allowing for a gradual and controlled release of information on Line 5 to the public. Enbridge has employed stall tactics, demonstrations, and touted technological prowess to frame media coverage of the Line 5 pipeline. Enbridge's safety demonstrations and spill response exercises eerily resemble those performed by Chairman James Schlesinger of the Atomic Energy Commission ("AEC") in the middle of the last century.³²³ But unlike the AEC demonstration tests, the implied assertion Enbridge makes through demonstrations is that the pipeline is hazardous, and the company is prepared in the event of a leak or a rupture.³²⁴

Enbridge touts the automatic shutoff valves on either end of the Straits of Mackinac as a technological safeguard that mitigates the risk of a potential spill to 4,500 barrels of petroleum products.³²⁵ Indeed, Oak Ridge National Laboratory released a safety study of remotely controlled and automatic pipeline shutoff valves like these in 2012.³²⁶ The study concluded that such valves may mitigate potential fire damage from a "guillotine-type" break and subsequent fire (if detected within 15 minutes), and mitigate socioeconomic and environmental damage resulting from a release that does not ignite.³²⁷ But at least one pipeline expert has indicated these systems only function properly with supervisory control and data acquisition systems ("SCADA") like the one operating the Enbridge control room during the Line 6B spill.³²⁸ It is therefore not entirely clear whether the automatic shutoff valves combined with SCADA and leak detection systems would have prevented the Marshall oil spill or would prevent a spill under a comparable situation in the Straits of Mackinac. Enbridge also originally installed automatic pipeline shutoff valves when the pipeline opened in the 1950s as a condition of the State granting the easement.³²⁹ It's not clear

323. See GEORGE FISHER, EVIDENCE 392, 393–96 (Robert C. Clark et al. eds., 3d ed. 2013).

324. See *id.* ("Schlesinger . . . wanted to assert that the blast site was safe. That communicative intent is the essence of an assertion.").

325. Compare *Line 5 Anchors*, *supra* note 77 with Garret Ellison, *Line 5 Contractor Fired by State was Doing Federal Work for Enbridge*, MLIVE MEDIA GROUP (June 22, 2017), http://www.mlive.com/news/index.ssf/2017/06/dnv_enbridge_line_5_study_coi.html [hereinafter *Line 5 Contractor Fired by State*] (explaining that Enbridge bases its worst-case spill scenario on the presence of automatic shutoff valves on both sides of the Straits).

326. PARFOMAK, *supra* note 7, at 23.

327. *Id.*

328. *Id.* at 24.

329. Straits of Mackinac Pipeline Easement, *supra* note 44, at 5.

whether Enbridge has updated those valves since the pipeline's installation.

While automatic shutoff valves, SCADA, and leak detection systems may have benefits, many stakeholders such as the Department of Transportation most value how these technologies improve public perceptions of pipeline safety and control.³³⁰ William M. Nugent, a representative of the National Association of Regulatory Utility Commissioners, similarly testified to the Senate Energy and Natural Resources Committee in May of 2001. He told the Committee, "the main impediment to siting energy infrastructure is the great difficulty getting public acceptance for needed facilities."³³¹

5. The Limitations of Automatic Shutoff Valves Reveal Enbridge has Consistently Underestimated the Risk of a Spill by Assuming a Best Worst-Case Spill Scenario

Enbridge has previously criticized the University of Michigan ("UM") study by David J. Schwab, Ph.D., regarding the impacts of a worst-case spill scenario on the Straits of Mackinac.³³² Enbridge believes that UM overestimated the volume of crude oil that might result from a spill by failing to consider the shutoff safety valves on both sides of the Straits cutting off flow from the pipeline within three minutes of a drop in pressure.³³³ As a result, Enbridge assumes that the automatic shutoff valves would limit a worst-case spill scenario to 4,950 barrels.³³⁴ However, Enbridge had previously projected the worst-case spill scenario as 8,500 barrels before installing the automatic shutoff valves.³³⁵ Thus, in the event that the automatic shutoff valves fail to operate as intended, a worst-case spill scenario might be worse than Enbridge has projected.³³⁶

6. Enbridge Also has a History of Downplaying the Risks Associated with the Pipeline, as Evidenced by the Discovery of Ovalization and Anticorrosion Coating "Holidays"

Several recent disclosures highlight Enbridge's history of downplaying the risks associated with the Line 5 pipeline. A review of inspection records has identified that the western segment of the Line 5 pipeline is bent in five places and ovalized in two places.³³⁷ Enbridge has not been able to identify what caused the

330. PARFOMAK, *supra* note 7, at 24.

331. *Id.* at 25.

332. Shamlal, *supra* note 92.

333. *Id.*

334. Garret Ellison, *\$1 Billion Cleanup Cost Estimated for a Winter Mackinac Straits Oil Spill*, MLIVE MEDIA GROUP (May 13, 2016), http://www.mlive.com/news/index.ssf/2016/05/mackinac_straits_spill_cost.html. To the credit of all parties, the worst-case spill scenarios assume a winter spill. *See id.*

335. *Id.*

336. *See id.*

337. *Bent Pipe*, *supra* note 73.

anomalies.³³⁸ Both anomalies appeared in 2013 and 2016 in-line inspection reports on the pipeline. Those same reports show that both ovalizations worsened slightly since 2013.³³⁹ Both bending and ovalization raise concerns that a pipeline may bend further or buckle in the future, but hydrostatic pressure tests like those conducted by Enbridge this year could also “reinflate” the misshapen area.

Enbridge also has a history of downplaying risks associated with the pipeline as hypothetical that have in fact been borne out. For instance, Enbridge has recently downplayed concerns disclosed to EPA in a federal Biota Investigation Work Plan required as part of the Line 6B settlement agreement that up to seventeen “holiday” locations could exist on Line 5 pipeline.³⁴⁰ A “holiday” refers to an area where a pipeline has lost all of the anticorrosion coating that protects the pipeline from external corrosion.³⁴¹ A third party environmental interest group, the Tip of the Mitt Watershed, initially discovered the public disclosure and brought it to light.³⁴² Enbridge spokesman Ryan Duffy responded by referring to the holiday areas as “hypothetical,” stressing that Enbridge did not know of any actual holidays.³⁴³ While technically correct, Enbridge did know of the possibility, or more appropriately the risk, that such a holiday existed and had identified areas where such holidays might exist and had not highlighted this information to the state.³⁴⁴

Enbridge later downplayed the risks posed by such holidays at a March 2017 meeting of the Michigan Pipeline Safety Advisory Task Force.³⁴⁵ Enbridge characterized the delamination of the outer wrap surrounding the pipeline as the pipeline’s anticorrosion features “working as designed” when presenting on the delamination controversy to the task force.³⁴⁶ Enbridge stated that the federal work plan had mischaracterized the coating delamination as “holidays” and stressed that the inner wrap and coal tar enamel may still remain in place.³⁴⁷ Enbridge stated that the outer wrap would not be something the company would usually repair and stated this amounted to perhaps 0.1 percent of their system, which prompted one state regulator to state that “any percent [of delamination]

338. *Id.*

339. One segment has ovalized by 5.7 percent in 2016 from 5.45 percent in 2013 and the other segment has ovalized by 9.2 percent in 2016 from 8.8 percent in 2013. *Id.*

340. Garret Ellison, *Anti-Corrosion Failures in Enbridge Line 5 Plan Prompts New Questions*, MLIVE MEDIA GROUP (Feb. 20, 2017), http://www.mlive.com/news/index.ssf/2017/02/enbridge_line_5_holidays.html.

341. *Id.*

342. *Id.*

343. *Id.*

344. *Id.*

345. Garret Ellison, *Outer Wrap Coating has Failed on Parts of Line 5, Enbridge Confirms*, MLIVE MEDIA GROUP (Mar. 14, 2017), http://www.mlive.com/news/index.ssf/2017/03/enbridge_line_5_delamination.html.

346. *Id.*

347. *Id.*

above zero is not good.”³⁴⁸ Far from alleviating public concerns, Enbridge’s presentation prompted calls for further analysis.³⁴⁹

When Enbridge conducted inspections later in the summer, the company confirmed that two, potentially three, of the areas identified in the federal work plan were in fact entirely missing the protective coating that keeps the pipeline from corroding. The company attributed the coating loss to prior work replacing the anchors that keep the pipeline in place. Enbridge downplayed the coating loss by emphasizing that one spot was “Band-Aid” sized. Enbridge’s disclosure led one state regulator, DEQ director and former BP official Heidi Grether, to call the situation “unacceptable.”³⁵⁰ Subsequent inspections revealed that the initial description of the “holidays” provided by Enbridge were larger than the “Band Aid” sized areas described by Enbridge, further undermining the company’s credibility.³⁵¹ The company’s efforts to downplay the risks seem especially disconcerting based on the company’s history of non-compliance with the easement agreement and history of spills along the pipeline route.³⁵²

7. Efforts to Solve the Information Problem and Ascertain the Scope of Risk Have Run into Agency Problems

Responding to advocate’s calls for an independent assessment of the risk Line 5 posed, Enbridge and the State of Michigan reached an agreement whereby Enbridge agreed to pay \$3.6 million to perform an independent risk assessment and alternatives analysis of Line 5.³⁵³ Enbridge put the money into escrow and

348. *Id.*

349. *Id.*

350. Garret Ellison, *Line 5 Bare Metal Exposed in Coating Gaps, Enbridge Confirms*, MLIVE MEDIA GROUP (Aug. 30, 2017), http://www.mlive.com/news/index.ssf/2017/08/line_5_coating_bare_metal.html.

351. Garret Ellison, *Inspections Show Line 5 Coating gaps Larger than Disclosed*, MLIVE MEDIA GROUP (Sept. 14, 2017), http://www.mlive.com/news/index.ssf/2017/09/line_5_coating_inspection.html.

352. Compare Garret Ellison, *Enbridge was Violating Line 5 Easement for Years, Documents Show*, MLIVE MEDIA GROUP (June 2, 2017), http://www.mlive.com/news/index.ssf/2017/06/line_5_unsupported_spans.html, and *Bent Pipe*, *supra* note 73 (“Enbridge documents that surfaced this year show the company only got serious about fixing erosion under Line 5 in 2001 after allowing many unsupported spans greater than 75-feet to go unchecked for years.”), with Garret Ellison, *Enbridge Line 5 has Spilled at Least 1.1M Gallons in Past 50 Years*, MLIVE MEDIA GROUP (Apr. 26, 2017), http://www.mlive.com/news/index.ssf/2017/04/enbridge_line_5_spill_history.html. Both stories seem to somewhat refute the characterization of Jason Hayes of the conservative Mackinac Center for Public Policy. Hayes distinguished Enbridge’s response to the Line 5 controversy from Volkswagen’s “indefensible” “Emissionsgate” episode. Hayes highlights Enbridge did not intentionally circumvent government regulation and followed the rules. “When corporate actors deliberately avoid regulatory requirements and endanger essential resources,” Hayes opines, “they deserve to be held publicly accountable.” Jason Hayes, *Enbridge, Regulations Worked as They Should Have—So why the Line 5 Fuss?*, MLIVE MEDIA GROUP (Aug. 31, 2016), http://www.mlive.com/opinion/index.ssf/2016/08/enbridge_regulations_worked_as.html.

353. TASK FORCE REPORT, *supra* note 110, at 49-50, 55; Paul Egan, *Enbridge to Pay \$3.6M to Assess Line 5 Spill Risk*, DETROIT FREE PRESS (July 12, 2016), <http://www.freep.com/story/news/local/michigan/2016/07/12/enbridge-pay-study-pipeline-spill-risk/86979174/> [hereinafter *Enbridge to Pay \$3.6M*]; Chad Livengood and Jim Lynch, *Calls for Impartial Study of Mackinac Pipelines Mount*, MLIVE MEDIA GROUP (June 16, 2016), <http://www>.

agreed to pay for the study regardless of the findings.³⁵⁴ This agreement followed after PHMSA released a study concluding the pipelines showed no signs of external or internal corrosion.³⁵⁵ Enbridge had touted the study, but critics pointed out that the study was based solely on data provided by Enbridge and its contractors.³⁵⁶ National Wildlife Federation pipeline consultant Beth Wallace summed up the asymmetrical informational and agency problems this study presented when she described the study as, “pretty much the fox guarding the henhouse scenario.”³⁵⁷ Even Republican Attorney General Bill Schuette, a close ally of the oil industry, brought a healthy skepticism to the PHMSA report and stressed the need for a truly independent assessment by paraphrasing Reagan’s cautious approach to nuclear disarmament and stating his position as, “[t]rust but verify.”³⁵⁸

The state ultimately contracted with Dynamic Risk Assessment Systems to perform an alternatives analysis and with Det Norske Veritas to conduct an independent risk analysis and determine the potential financial risk of a worst-case spill.³⁵⁹ The scope of these analyses closely mirrored the information-based regulatory approach of a traditional NEPA analysis. But agency issues presented themselves almost immediately. Enbridge spokesman Ryan Duffy telegraphed Enbridge’s approval of the selection when congratulating the state for “select-[ing] independent companies that understand energy infrastructure, and the important role pipelines play in delivering energy as well as protecting the environment.”³⁶⁰ The agreement with the state also gave Enbridge at least five days to review the report before it would become public.³⁶¹

The Request for Proposals (RFPs) used in the bid process that led to the selection of Dynamic Risk Assessment Systems and Det Norske Veritas attempted to address any agency issues that might arise from an actual or apparent conflict of interest by requiring disclosure.³⁶² The RFP required bidders to demonstrate they possessed sufficient qualified personnel with the expertise required to efficiently and capably perform the scope of work, and to disclose any prior, current, or anticipated future relationships that could create an actual or apparent conflict.³⁶³

detroitnews.com/story/news/politics/2016/06/16/calls-impartial-study-mackinac-pipelines-mount/86016286/ [hereinafter *Calls for Impartial Study*].

354. *Id.*

355. *Calls for Impartial Study*, *supra* note 353.

356. *Id.*

357. *Id.*

358. *Id.*

359. *Enbridge to Pay \$3.6M*, *supra* note 353.

360. *Id.*

361. *Id.*

362. *See Requests for Information and Proposals, Independent Risk Analysis for the Straits Pipelines*, MICHIGAN PIPELINE SAFETY ADVISOR BOARD (Feb. 2016), <https://mipetroleumpipelines.com/resources-reports>.

363. *Id.*

The state's bid process ultimately failed to overcome these agency problems, as alleged conflicts of interest issues arose in connection with both the risk assessment and alternatives analysis. First, Det Norske Veritas reported to the State of Michigan that the company had a potential conflict of interest that arose during the course of its work on the risk assessment.³⁶⁴ The State of Michigan subsequently fired Det Norske Veritas when a principal consultant used the same person modeling spills to model the state Line 5 study who had begun a different study for Enbridge relating to the 2016 civil settlement with the Department of Justice. The conflict came the month before the planned release of the risk assessment.³⁶⁵

Allegations arose more recently that the companion risk assessment and alternatives analysis performed by Dynamic Risk Assessment Systems had been tainted by a conflict of interest. DeSmog, a British Columbia-based blog site, recently published a report claiming the leader of the Line 5 alternatives analysis, James Mihell, simultaneously led a risk assessment of an Enbridge pipeline project for the Minnesota Department of Commerce.³⁶⁶ Dynamic Risk Assessment Systems, however, argued the consultant had completed all work on the State of Michigan study before accepting the State of Minnesota assignment.³⁶⁷ As of Nov. 2017, the State of Michigan had not fired Dynamic Risk Assessment Systems. Instead, the state's regulatory agencies roundly criticized the contractor's risk assessment and alternatives analysis for failing to consider a broad enough range of worst-case spill impacts, and failing to consider how long the pipeline can reasonably operate without replacement.³⁶⁸

The timing of the Det Norske Veritas firing may delay the studies until 2018 or later, either creating or averting an inconvenient campaign issue for an Attorney General running for Governor, and either enabling or denying the public the chance to weigh in on the pipeline.³⁶⁹ But the state has begun a substitute risk assessment and time will tell whether those charged with the assessment can deliver before Election Day 2018.³⁷⁰

B. DEFINING SUNSHINE TACTICS AS BOTH A METHOD OF ADVOCACY AND SYSTEM OF REGULATION

Sunshine tactics usually describe a method of advocacy, not a system of regulation. But this method of advocacy closely mirrors an information-based

364. *Line 5 Contractor Fired by State*, *supra* note 325.

365. *Id.*

366. Garret Ellison, *Blog Alleges Line 5 Contractor Conflicted by Other Enbridge Project*, MLIVE MEDIA GROUP (July 12, 2017), http://www.mlive.com/news/index.ssf/2017/07/desmog_enbridge_line_5_report.html.

367. *Id.*

368. Garret Ellison, *Line 5 Study Needs Major Revision, say State Agencies*, MLIVE MEDIA GROUP (Aug. 7, 2017), http://www.mlive.com/news/index.ssf/2017/08/deq_dnr_mae_line_5.html.

369. BILL SCHUETTE FOR GOVERNOR, <https://billschuetter.com> (last visited Oct. 22, 2017).

370. Garret Ellison, *Michigan Tech Expert to Lead New Enbridge Line 5 Risk Analysis*, MLIVE MEDIA GROUP (Sept. 18, 2017), http://www.mlive.com/news/index.ssf/2017/09/line_5_risk_report_redo.html.

regulatory scheme. Information-based schemes operate on the basis of disclosure and transparency. Sunshine tactics similarly rely on the power of disclosure and transparency to encourage better decision-making. This section draws on the considerable literature on information based disclosure and transparency regulatory schemes. Thus, this section uses these otherwise distinct terms interchangeably for the purposes of this section alone.

Some commentators propose a useful three prong approach for analyzing adoption of an information-based disclosure system: first, the analysis requires identifying the problem with the market; second, the analysis requires identifying the market failures responsible for the problem; and third, the analysis requires identifying the appropriate way to fix that market failure.³⁷¹

The term “sunshine tactics” derives from the famous quotation *supra* by Justice Brandeis and refers to the use mandatory disclosure requirements as a means of information-based regulation. Brandeis meant that transparency would curb the malfeasance and illegality easier accomplished in secret than in the open.³⁷² Transparency thereby deters undesirable conduct, especially principal-agent problems.³⁷³ Such transparency does not intend to alter the outcome of decisions, only to improve the decision-making process.³⁷⁴ However, transparency also makes a range of legal but unpopular activities more difficult because the accountability that improves decision-making comes at the expense of agency and firm independence.³⁷⁵

Information-producing sunshine tactics that promote transparency politically appeals to those with a market-based orientation because disclosure addresses the market failures discussed in Part III.B while preserving other desirable features of the market.³⁷⁶ As with self-regulation, three factors determine the suitability and success of disclosure-based systems.³⁷⁷ First, the party disclosing information first must have a stake in the success of the regime.³⁷⁸ Second, the regulated entity must receive some benefit from disclosure.³⁷⁹ Third, a disclosure based system must target an organized and committed user group who can use the information.³⁸⁰

Regulation based on disclosure has many of the same benefits as self-regulation; most notably, requiring less subject matter expertise on the part of the

371. See Dalley, *supra* note 163, at 1129, n.280, n.282 (citing STEPHEN BREYER, REGULATION AND ITS REFORM 34–35 (1982); Thomas A. Lambert, *Avoiding Regulatory Mismatch in the Workplace: An Informational Approach to Workplace Safety Regulation*, 82 NEB. L. REV. 1006, 1013–14, 1032–33 (2004)).

372. Schauer, *supra* note 273, at 813.

373. See Dalley, *supra* note 163, at 1096.

374. *Id.* at 1110.

375. Schauer, *supra* note 273, at 813, 820.

376. Dalley, *supra* note 163, at 1093.

377. *Id.* at 1128.

378. *Id.*

379. *Id.*

380. *Id.*

agency charged with oversight.³⁸¹ Such regulation requires identifying desirable and undesirable behaviors, revealing them to be beneficial or harmful, showing that the proposed regulation will have the desired effect on the behavior, and proving that the costs do not outweigh the benefits.³⁸² Information-based regulation operates through disclosure and transparency, leaving decisions about behavior to the third party targets of disclosure, which in the case of Enbridge Line 5 are the voting public and insurers.³⁸³

However, the effectiveness of sunshine tactics in creating an information-based regulatory scheme requires disclosure of salient information directed at the appropriate decision-maker and the appropriate decision.³⁸⁴ Disclosure systems generally require a highly developed and relatively efficient market that employs informational intermediaries in a context where decision-makers often seek out professional advice.³⁸⁵ These systems require intermediaries because disclosure systems often do not directly inform the public who do not have the time or expertise required to make use of the available information.³⁸⁶

Instead, disclosure systems depend on intermediaries. As with financial markets, two types of intermediaries play the role of informational and financial intermediaries in the case of oil pipeline regulation.³⁸⁷ In this case, interest groups and insurers constitute the intermediaries best situated to process this information for public consumption.³⁸⁸ These information intermediaries select, analyze, and distribute a more concise version of the salient disclosed information.³⁸⁹ In the case of voting, public interest groups select, analyze, and distribute this information in the political marketplace, thereby facilitating accountability in representative democracy. Insurers select, analyze, and distribute this information and price through competitive insurance markets. The following subsections will examine how each of those intermediaries can offer a solution to the deficiencies of pipeline safety laws using the three-part approach discussed in this section.

1. Disclosure of the Risks Associated with Line 5 Uses Transparency as a Political Solution to the Agency Problem That Arises in Pipeline Safety Regulation

Disclosure of risks associated with Enbridge's Line 5 can use information as a signal for a non-price mechanism in ways that influence political processes and political

381. *Id.* at 1092.

382. *Id.*

383. *Id.*

384. *Id.* at 1091, 1117.

385. *Id.* at 1090.

386. *See id.* at 1101.

387. *See id.*

388. *See id.* at 1101.

389. *See id.* at 1102.

markets and facilitate accountability in a representative democracy.³⁹⁰ Informational asymmetries can cause market participants to demand compensatory premiums and diminish the price-setting function of a political market or even result in market failure.³⁹¹ An increased cost in the market for political representation reduces the amount of accountability voters purchase in the political system. Disclosure on the other hand reduces the cost of accountability. Moreover, information asymmetries between the principal in a democratic relationship (the voting public) and the agent (the elected official) can also create a risk that an agent will take advantage of disparities in knowledge and the representative relationship in order to engage in self-dealing. Disclosure laws intend to deter this undesirable conduct by addressing classic principal-agent problems such as conflicts of interest and self-dealing.³⁹²

The political process operates based on the effect of the information on a firm or official's reputation.³⁹³ Firms often rely on the goodwill of consumers, employees, and the government to operate.³⁹⁴ So, too, elected officials rely on the goodwill of voters to obtain reelection.³⁹⁵ Disclosure schemes do not directly inform the public in most cases, as members of the public do not have the time or expertise to evaluate the information.³⁹⁶ As national political pollster Celinda Lake has remarked, "[w]e should realize that the average family in America spends five minutes a week on politics."³⁹⁷ So instead interest groups become the informational intermediaries who signal to voters the salience of the information.³⁹⁸ Disclosure can deter undesirable conduct especially principal-agent problems by holding decision makers more accountable to the public, media, and other decision makers.³⁹⁹ The effectiveness of disclosure necessarily depends on sufficiently large and committed interest groups serving as informational intermediaries and using the information in the political process to mobilize members to take political action on the basis of the disclosed information.⁴⁰⁰ But disclosure schemes can solve agency problems when concerned interest groups use information in the political sphere to hold both Enbridge and public officials accountable.⁴⁰¹

390. See *id.* 1122–23. While Dalley likes to treat this as a non-market mechanism, treating politics as something separate and apart from a market and market-forces seems like a mistake. Public officials and institutions in a constitutional democracy like the United States operate within a political marketplace.

391. See *id.* at 1094.

392. See *id.* at 1096.

393. See THE FEDERALIST NO. 51 (Alexander Hamilton) ("A dependence on the people is, no doubt, the primary control on the government"). This principle extends to the private acts of special interests taken under the color of government authority.

394. Dalley, *supra* note 163, at 1122.

395. See THE FEDERALIST NO. 51, *supra* note 393.

396. See Dalley, *supra* note 163, at 1101.

397. *Quotes*, KNIGHT CHAIR IN POLITICAL REPORTING, PROFESSOR CHARLOTTE GRIMES, SYRACUSE UNIVERSITY, http://knightpoliticalreporting.syr.edu/?page_id=17 (last visited Oct. 7, 2017).

398. See Dalley, *supra* note 163, at 1108, 1125.

399. Schauer, *supra* note 273, at 820.

400. Dalley, *supra* note 163, at 1123.

401. See, e.g., *id.* at 1123.

2. Disclosure of the Risks Posed by Line 5 Minimizes Information Asymmetries and Enables the State to Employ Insurance Markets to More Effectively Regulate Risk

After dealing with the necessary agency issues as a predicate, sunshine tactics can solve the market's failure to assign an appropriate price to the risk of an oil spill in the Straits of Mackinac. A lack of information can result in a market failure where the lack of information prevents market participants from pricing risk.⁴⁰² Pricing risk is one of the essential functions of markets generally—and insurance markets specifically.⁴⁰³ Disclosure improves the ability of market participants to assess and price risk, because the most efficient allocation of resources will occur when the information is sufficient, reliable, and timely for the purposes of allocating those resources.⁴⁰⁴ Disclosure systems accomplish this goal by reducing information asymmetries in an existing market or changing an entity's behavior.⁴⁰⁵ These systems then provide information to insurers who possess a preexisting need for the information, and reduce the costs of information used in gauging risk.⁴⁰⁶

As noted earlier, the easement contract with Enbridge currently only requires the company to carry \$1 million in liability insurance. Enbridge claims their general umbrella policy would cover the costs of any oil spill; however, insurers may not efficiently price the risk posed by the pipeline without fuller disclosure because, as Enbridge has repeatedly shown, the company has a tendency of downplaying the risk of a worst-case spill in the Straits of Mackinac.⁴⁰⁷

V. FROM BUILDING A CASE TO CREATING A PREDICATE TO REGULATE

While the use of sunshine tactics has the benefit of enhancing the overall safety of pipeline operations, these activities may create an opportunity not only to shut down the Enbridge Line 5 pipeline, but to regulate oil pipelines more effectively. This part examines how a combined litigation and advocacy approach may ultimately succeed in preventing an oil spill. An out-and-out grassroots campaign may create a policy window allowing federal officials to revisit pipeline regulation. This part will argue that in this context, litigation may serve as a vehicle for

402. *See id.* at n.119.

403. *See id.* at 1094.

404. *See id.*

405. *See id.* at 1108.

406. *See id.* at 1108–09.

407. *See* TASK FORCE REPORT, *supra* note 110, at 46 (“In sum, Enbridge appears to have offered conflicting, incomplete, and inadequately supported estimates of its total liability under the Easement. Moreover, Enbridge’s estimates cannot be considered completely objective as long as it has an economic incentive to underestimate the magnitude of a spill and the resulting liability.”); *see also* Garret Ellison, *Enbridge Slammed for Information Gaps in Straits Oil Pipeline Report*, MLIVE MEDIA GROUP (July 14, 2015), http://www.mlive.com/news/grand-rapids/index.ssf/2015/07/enbridge_slammed_for_informati.html.

legislation and Michigan may serve as a model for this approach.

Environmental groups can simultaneously pursue multiple avenues of advocacy ranging from litigation to legislative activity in concert. Litigation, unlike legislative reform, has the benefit of concluding in a definite result and may constitute a more cost-effective and efficient use of environmental group resources. A definite result can produce a non-negotiable legally binding order. Litigation may result in greater public disclosure and scrutiny of inspection records by expert witnesses or independent reviewers through the discovery and pre-trial deposition process. Litigation can distinguish the inadequacies of law to solve a problem and create a predicate for regulatory activity. Litigation can also draw attention to any public disclosure and new information as well as highlight the inadequacies of law.

Litigating these environmental statutes also has a necessary predicate step: notice and comment rulemakings. Environmental groups need a record upon which to sue the federal and state governments. Notice and comment rulemakings offer an opportunity for environmental groups to organize and build a membership base. This same membership base can serve the added purpose of filing public comments that form the administrative record upon which to challenge the federal and state governments and pressuring for regulation. Members can pressure administrative agencies to promulgate rules and legislators to pass legislation.

This approach has produced results. In spite of frequent characterizations as a “do-nothing” body locked in gridlock, a flurry of bipartisan legislation introduced in Congress last term culminated in the Protecting our Infrastructure of Pipelines and Enhancing Safety Act (“SAFE PIPES Act”) of 2016.⁴⁰⁸ The Act reauthorized the gas and hazardous liquid pipeline programs of the Department of Transportation and culminated in revisions to the Pipeline Safety Act classifying the Great Lakes as an environmentally sensitive “high consequence” area.⁴⁰⁹ Designation as an environmentally sensitive and high density population area under section 60109 matters within the Pipeline Safety Act because this factor influences the type and frequency of inspection a pipeline must undergo under § 60108(b)(1)(G).⁴¹⁰ The legislation therefore increases the inspection and maintenance requirements that specifically apply to the Enbridge Line 5 Pipeline.

Considering the passage of the SAFE PIPES Act, this approach then seems to mobilize the bipartisan support necessary to produce results.⁴¹¹ No Michigan

408. See Garret Ellison, *Congress Passes Bill Ratcheting up Mackinac Pipeline Safety Rules*, MLIVE MEDIA GROUP (June 15, 2016), http://www.mlive.com/news/index.ssf/2016/06/congress_passes_bill_ratchetin.html [hereinafter *Mackinac Pipeline Safety Rules*].

409. 49 U.S.C. §§ 60109(b), (g).

410. See 49 U.S.C. § 60108(b)(1)(G); see also *id.* § 60109.

411. See *Mackinac Pipeline Safety Rules*, *supra* note 408. Members of the Michigan delegation played important roles in securing both changes to the law and passage of this legislation. U.S. Senator Gary Peters (D-MI) introduced the Pipeline Improvement and Preventing Spills Act of 2015 on September 24, 2015 well

politician wants to be labeled as putting oil companies before the Great Lakes in the Great Lakes State. As the Trump Administration plans to approve more pipeline projects in coming years, a policy window for broader lawmaking may emerge as environmental groups bring more lawsuits and build memberships through rulemakings. Other regions may want to mirror Michigan's approach.

What form might reform take? The Preserve Our Lakes and Keep Our Environment Safe Act of 2017 ("The Act") pending in the House sponsored by Representatives David Trott (R-MI-11) and Debbie Dingell (D-MI-12) indicates bipartisan interest legislating on the topic remains.⁴¹² The bill directs the Secretary of Transportation to conduct a study to determine the economic and environmental risks to the Great Lakes of spills or leaks of oil or other hazardous liquids in the Straits of Mackinac from the onshore underwater pipeline facilities within the Straits within twelve months of enactment.⁴¹³ The study must meet the content requirements of an environmental impact statement, examine potential impacts, and perform an assessment of spill responses, and requires a supplemental study by PHMSA evaluating the condition and structural integrity of the pipeline.⁴¹⁴ The Act directs the Administrator of PHMSA to terminate the operation of the pipeline if the Administrator determines that the pipeline poses a sufficient risk of hazard to life, property, or the environment to necessitate termination.⁴¹⁵

This Act has a couple notable attributes. It directs the Administrator to perform a study and make a determination, which may involve both opportunities for public comment and provide an opportunity for litigation.⁴¹⁶ Both actions may then help bring new information to light and aid environmental groups in the use of sunshine tactics in oversight. The Act has also assumed greater importance and offers the promise of a federal backstop since the state had to dismiss a contractor performing a similar state required risk assessment for an undisclosed conflict of interest.⁴¹⁷

The Act is narrowly written and benefits from favorable politics. It has a narrow scope tailored to the concerns of the affected communities, and focuses

before signing on as a cosponsor of U.S. Senator Deb Fischer's (R-NE) SAFE PIPES Act introduced on November 10, 2015. Senator Peters' legislation doubtless influenced the eventual passage of the legislation along with House companion bills sponsored by House Energy and Commerce Chairman Fred Upton (R-MI-6) and Rep. Candice Miller (R-MI-10). Compare S. 2080, Pipeline Improvement and Preventing Spills Act of 2015 with H.R. 5050, Pipeline Safety Act of 2016 and H.R. 5078, Great Lakes Pipeline Safety Act of 2016.

412. H.R. 458, 115th Cong. (2017). Representative Jack Bergman (R-MI-1), who represents the Northern Michigan communities through which the pipeline passes, subsequently signed on as a cosponsor of the bill on January 23, 2017.

413. H.R. 458 § 3(a).

414. *Id.* § 3(c).

415. *Id.* § 3(d).

416. *See id.* § 3.

417. *Line 5 Contractor Fired by State*, *supra* note 325.

solely on Line 5 thus minimizing opposition apart from Enbridge and Enbridge clients.⁴¹⁸ The Act delegates responsibility for the decision over whether to shut down the pipeline to the Administrator of PHMSA.⁴¹⁹ By delegating responsibility to the Administrator, the Act shifts accountability for the pipeline from Congress to PHMSA. The Act then is smart politics even if a modest approach to dealing with the public controversy over the Line 5 pipeline.

While a laudable effort on the part of the legislators, the concern remains that this legislation may not ultimately succeed in preventing a spill by shutting down Line 5 in time. It is not clear from the Act whether the Administrator can choose to draw on reports by industry or environmental groups. It seems likely the Administrator would weigh reports submitted by industry more heavily than any submitted by environmental groups because aforementioned information disparities exist. As a regulated entity regularly dealing with PHMSA, Enbridge will also have a more sophisticated relationship with the captured agency, which may influence the analysis. The Act gives the Administrator a whole year to perform the study and reach a determination, which, while eminently reasonable by Washington standards, triggers concern of delay. The danger exists that environmental groups may push for this legislation and in a year's time find themselves right back where they started without anything to show for a year's worth of inactivity.

Despite these potential drawbacks, the Preserve Our Lakes and Keep Our Environment Safe Act offers a potential solution to the ongoing public controversy over Enbridge Line 5. If nothing else, the Act meaningfully supplements the existing efforts of environmental groups and state regulators to obtain more information on the pipeline. The Act therefore temporarily increases oversight of the pipeline through sunshine tactics.⁴²⁰ Broader reform may need to wait until the Trump Administration approves more pipeline projects. When that happens, opportunities may arise because of increased litigation and grassroots advocacy for broader changes to the regulatory regime governing pipelines.

CONCLUSION

Since assuming office, President Trump has signed executive orders and memorandum reviving two major oil pipeline projects, the Dakota Access and Keystone XL pipeline projects.⁴²¹ Both projects remain tremendously controversial and may give rise to local opposition in communities along the route of those

418. See H.R. 458 § 2(10).

419. See *id.* § 3(d).

420. *Id.* § 3(b).

421. Peter Baker and Coral Davenport, *Trump Revives Keystone Pipeline Rejected by Obama*, N.Y. TIMES (Jan. 24, 2017), https://www.nytimes.com/2017/01/24/us/politics/keystone-dakota-pipeline-trump.html?_r=0.

pipelines. Still more pipeline projects may follow. This Note and the struggle over the Enbridge Line 5 pipeline could offer a guidepost for how environmentalists might approach regulating pipelines in an era of regulatory laxity. Environmental groups and other stakeholders can use sunshine tactics as a means of enforcement under lax regulatory regimes. Litigation over pipelines can serve as a vehicle for building grassroots support and lay the groundwork for legislative reform. While change may not happen tomorrow, affected communities may want to consider mirroring the approach of their colleagues in Michigan and use sunshine tactics and litigation as vehicles for environmental enforcement and legislation.