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THE TRANS-ALASKA PIPELINE AND STRICT LIABILITY FOR OIL POLLUTION DAMAGE

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Federal authorization to build a trans-Alaska oil pipeline was the culmination of a long and frustrating battle in the courts and Congress. The primary conflict was between satisfying immediate and future energy needs and protecting property and the environment from damage. Congress, in favoring immediate and projected energy needs by enacting the Trans-Alaska Pipeline Authorization Act (Act),¹ may have subverted the environmental values established in the National Environmental Policy Act (NEPA).² The environmental dangers evolve not only from the construction of the pipeline, but also from the potential oil pollution caused by leakage and spillage.

This Note first examines the Trans-Alaska pipeline, its development and its potential environmental effects. Secondly, it discusses the strict liability provisions contained in the Trans-Alaska Pipeline Act for damage caused by oil pollution. Lastly, the Note examines traditional oil pollution remedies and proposes the adoption of a general rule of strict liability for all oil pollution damage caused by the transportation or storage of oil.

I. THE TRANS-ALASKA PIPELINE: JUDICIAL AND CONGRESSIONAL RESPONSE

In January 1968 Atlantic Richfield Company (ARCO) discovered a tremendous petroleum deposit at Prudhoe Bay, Alaska, on the North Slope of the Brooks Mountain Range. Every major oil company with leaseholdings on the North Slope rushed to explore the deposit.³ In September 1969 the oil companies submitted bids to the state for

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1. 43 U.S.C. §§ 1651-55 (Supp. III, 1973).

2. 42 U.S.C. §§ 4321-47 (1970).

3. In the mid-1960's before any commercial oil discoveries were made on the North Slope, B.P. (Standard Oil of Ohio), ARCO and Exxon paid 12 million dollars for state leases covering 90% of the Prudhoe Bay Reservoir in northern Alaska. N.Y. Times, Oct. 14, 1973, § 6 (Magazine), at 100 [hereinafter cited as N.Y. Times Mag.].

179 tracts of land totaling 450,000 acres.⁴ As a result of this single competitive sale of drilling rights on the North Slope, Alaska received over 900 million dollars.⁵

When subsequent drilling uncovered major reserves of crude oil preliminary studies were undertaken to determine the most desirable system for transporting the oil from the North Slope to primary markets in the lower forty-eight states. Interested oil companies considered the use of ice-breaking tankers to penetrate the Northwest Passage to the East Coast,⁶ railroad cars traveling to Prudhoe Bay via an extension of the Alaska Railroad,⁷ submarine tankers,⁸ a large diameter pipeline through Alaska and Canada into the Midwest,⁹ and a pipeline carrying oil through Alaska to one of several seaports for further shipments via tanker to the West Coast.¹⁰ In June 1969 the Trans-Alaska Pipeline System (TAPS), a group of oil companies with North Slope holdings,¹¹ applied to the Bureau of Land Manage-

4. See T. BROWN, OIL ON ICE 29 (1971).

5. Morehouse & Harrison, *State Government and Economic Development in Alaska*, in ALASKA PUBLIC POLICY 31 (G. Harrison ed. 1971) [hereinafter cited as ALASKA PUBLIC POLICY]. Alaska is expected to receive more than 300 million dollars per year from commercial oil production in the late 1970's. *Id.* For a discussion of the benefits to Alaska and its residents from petroleum development and pipeline construction see A. TUSSING, ALASKA PIPELINE REPORT 69-101 (1971); Tussing, *Oil and Alaska's Economy*, in ALASKA PUBLIC POLICY, *supra*, at 167-72; Norgaard, *Petroleum Development in Alaska: Prospects and Conflicts*, 12 NATURAL RESOURCES J. 83, 89-96 (1972).

6. In 1968 the Humble Oil and Refining Co. converted the *Manhattan*, a 115,000 ton tanker, into the world's most powerful icebreaker; it then plowed through the Arctic ice from the North Slope to the East. T. BROWN, *supra* note 4, at 86-87.

7. ALASKA PUBLIC POLICY, *supra* note 5, at 32.

8. *Id.*

9. Report by the Standard Oil Co. (Apr. 19, 1973), in *Hearings on H.R. 9130 Before the Subcomm. on Public Lands of the House Comm. on Interior and Insular Affairs*, 93d Cong., 1st Sess., pt. 1, at 328 (1973).

10. *Id.*

11. To deal effectively with problems that arose between the Department of the Interior and the State of Alaska, the oil companies dissolved TAPS and established the Alyeska Pipeline Service Co. as a single legal entity to build and operate the pipeline. The seven participating oil companies and their proportionate contributions to the pipeline's cost are: Standard Oil of Ohio 28.08%; Atlantic Richfield (ARCO), 28.08%; Exxon, 25.52%; Mobil, 8.68%; Phillips Petroleum, 3.32%; Union Oil, 3.32%; Amerada Hess, 3%. Loehwing, *Alaska's North Slope Oil Men Are Getting Ready to TAP Its Riches*, Barron's, Apr. 8, 1974, at 3 [hereinafter cited as Barron's].

ment for right-of-way permits¹² to build a pipeline and a haul road through Alaska to the ice-free port of Valdez.¹³

Concerned environmentalists viewed the project as an environmental and ecological nightmare and, following the enactment of NEPA¹⁴ in December 1969, challenged construction of the pipeline. In March 1970 two lawsuits were filed to enjoin the Secretary of the Interior from issuing permits for construction of the pipeline and the haul road.¹⁵ In April 1970 the district court granted preliminary injunctions on the ground that the three applications for permits, when

12. TAPS filed three applications: for a pipeline right-of-way, for a special land use permit for additional construction space, and for a haul road right-of-way. See 2 Y. YANNAKONE & B. COHEN, ENVIRONMENTAL RIGHTS AND REMEDIES 220 (1971) [hereinafter cited as ENVIRONMENTAL RIGHTS].

The TAPS applications for right-of-way permits (June 1969) lacked engineering details and failed to mention basic environmental problems. The Department of the Interior's Task Force responded with a long list of questions about the design of the pipeline and its environmental impact. See *Hearings on the Status of the Proposed Trans-Alaska Pipeline Before the Senate Comm. on Interior and Insular Affairs*, 91st Cong., 1st Sess., pt. 2, at 103ff (1969).

13. Initial plans were to extract 600,000 barrels of crude oil per day from the Prudhoe Bay field as soon as the Trans-Alaska pipeline began operation. (According to the present schedule, oil will begin to flow by the third or fourth quarter of 1977.) By 1980 the industry expects to use the full two million barrel per day capacity of the pipeline (about 700 million barrels per year). The official estimate of crude oil reserves in Prudhoe Bay is 10 to 15 billion barrels. See Norgaard, *supra* note 5, at 85; Barron's, *supra* note 11, at 3. See also TIME, Apr. 1, 1974, at 20, 23 (discussing plans for a giant trans-Canadian pipeline to carry natural gas from the North Slope into and throughout the United States).

With an initial capacity of 700,000 barrels per day, the original estimated cost of the TAPS project was 900 million dollars. As more became known about the size of the Prudhoe Bay reservoir, additional pumping stations added to the design raised the capacity to two million barrels per day and the cost to 1.5 billion dollars. In 1973 the cost soared to 3.6 billion dollars, with 500 million dollars attributable to design changes made in the interest of environmental safety. N.Y. Times Mag., *supra* note 3, at 92. The current official estimate by Alyeska Pipeline Service Co. is 4.5 billion dollars, and it is estimated that the cost may climb still higher. Barron's, *supra* note 11, at 3.

14. 42 U.S.C. §§ 4321-47 (1970).

15. *Wilderness Soc'y v. Hickel*, 325 F. Supp. 422 (D.D.C. 1970) (suit by Friends of the Earth, Wilderness Society, and Environmental Defense Fund); *Allakaket v. Hickel*, Civil No. 706-70, 1 ENVIRONMENTAL L. RPTR. 65021 (D.D.C. 1970) (suit by Alaskan Natives for injunction against issuance of the haul road permit over land they were claiming in a land claim bill then pending before Congress). For a discussion of the Alaska land claim dispute see Block, *Alaskan Native Claims*, 4 NATURAL RESOURCES L. 223 (1971). The dispute was settled by the enactment of the Alaska Native Claims Settlement Act, 43 U.S.C. §§ 1601-24 (1971).

treated as a single application for a pipeline right-of-way, exceeded the width limitation established in section 28 of the Mineral Leasing Act of 1920.¹⁶ The court also found that the Department of the Interior had not complied with various procedural provisions of NEPA.¹⁷ Thereafter, in January 1971 the Secretary of the Interior submitted and circulated a preliminary environmental impact statement and held hearings in compliance with NEPA. Shortly after the issuance of a final environmental impact statement in March 1972,¹⁸ Secretary Morton announced his intention to approve the project.¹⁹

The district court then dissolved the preliminary injunction, ruling that the environmental impact statement complied with NEPA and that the requirements of the Mineral Leasing Act had been satisfied.²⁰ Plaintiff-environmentalists appealed this ruling emphasizing the Secretary's failure to give adequate consideration to alternatives to the proposed pipeline as required by NEPA.²¹

In *Wilderness Society v. Morton*²² the United States Court of Appeals for the District of Columbia reversed the district court ruling and enjoined the Secretary of the Interior from issuing the right-of-way for pipeline construction. The court held that the Secretary of

16. 41 Stat. 449, as amended, 30 U.S.C. § 185 (1970) (statute reproduced in pertinent part at note 27 *infra*); *Wilderness Soc'y v. Hickel*, 325 F. Supp. 422, 424 (D.D.C. 1970). The court issued preliminary injunctions against authorization of haul road permits and against the use of gravel from federal lands to build the road. The court ruled that the haul road and pipeline were one project and could not be separated for the purpose of compliance with NEPA. *Id.* at 424.

17. *Wilderness Soc'y v. Hickel*, 325 F. Supp. 422, 424 (1970). NEPA requires a detailed environmental impact statement on the proposed project, broad circulation of the statement, and review and public hearings by the Council on Environmental Quality. See generally 42 U.S.C. §§ 4321, 4332 (1970); 38 Fed. Reg. 20550 (1973); 36 Fed. Reg. 7724 (1971).

18. The Department of the Interior's initial environmental impact statement on the Trans-Alaska pipeline was 200 pages long and was considered so superficial that it was withdrawn in response to criticism from the press and Congress. *NATION*, June 11, 1973, at 748 [hereinafter cited as *NATION*]. The final environmental impact statement was 3500 pages long. *Id.*

19. *N.Y. Times*, May 12, 1972, at 1, col. 1.

20. *Wilderness Soc'y v. Morton*, 479 F.2d 842, 846 (D.C. Cir.), cert. denied, 411 U.S. 917 (1973); *N.Y. Times*, Aug. 16, 1972, at 11, col. 1.

21. Plaintiff's Brief on NEPA Issues, *Wilderness Soc'y v. Morton*, Civil Action No. 928-70, in *Hearings on H.R. 9130 Before the Subcomm. on Public Lands of the House Comm. on Interior and Insular Affairs*, 93d Cong., 1st Sess., pt. 2, at 996, 1047 (1973) [hereinafter cited as Plaintiff's Brief].

22. 479 F.2d 842 (D.C. Cir.), cert. denied, 411 U.S. 917 (1973).

the Interior had violated the Mineral Leasing Act of 1920 by issuing special use permits in excess of the width limitation and declared that the legislature, not the courts, must alter the right-of-way width limitation before permits could be issued.²³ The court declined to rule, however, on whether the Secretary had complied with the requirements of NEPA and on the adequacy of the final environmental impact statement. In light of the "contingency of legislative action modifying the Mineral Leasing Act so as to permit construction of the pipeline,"²⁴ the "NEPA issues . . . are not ripe for adjudication at the present time."²⁵

Congress responded in November 1973 with the enactment of the Trans-Alaska Pipeline Authorization Act.²⁶ Title I of the Act repealed the pipeline right-of-way restrictions of the Mineral Leasing Act²⁷ thereby eliminating the basis of the *Wilderness Society* decision.²⁸ Title II of the Act, authorizing the issuance of rights-of-way and construction of the pipeline,²⁹ was enacted "to permit the construc-

23. *Id.* at 892.

24. *Id.* at 890.

25. *Id.* at 889-90. "It is obvious the present litigation involves 'a lively conflict between antagonistic demands,' but we question whether resolution of the NEPA issues presented . . . will have any practical significance. To pass upon the issues in this context would be to decide a mere abstract question of law." *Id.* citing *Poe v. Ullman*, 367 U.S. 497, 528 (1961).

26. 43 U.S.C. §§ 1651-55 (Supp. III, 1973).

27. Compare Mineral Leasing Act of 1920 § 28(d), 30 U.S.C. § 185 (1970) (act prior to *Wilderness* decision), which provided in pertinent part:

Rights-of-way through the public lands . . . may be granted by the Secretary of the Interior for pipeline purposes for the transportation of oil or natural gas . . . , to the extent of the ground occupied by the said pipeline and twenty-five feet on each side of the same under such regulations and conditions as to survey, location, application, and use as may be prescribed by the Secretary. . . .

with 30 U.S.C. § 185 (Supp. III, 1973), amending § 28 of the Mineral Leasing Act of 1920: "(d) The width of a right-of-way shall not exceed fifty feet plus the ground occupied by the pipeline (that is, the pipe and related facilities) unless the Secretary or agency head finds . . . that in his judgment a wider right-of-way is necessary for operation and maintenance after construction, or to protect the environment or public safety."

28. S. REP. NO. 93-207, 93d Cong., 1st Sess. 12 (1973). Another report states: "The need for an amendment of the law is urgent. If the Nation's growing energy requirements are to be met and if the crippling fuel shortages increasingly being experienced are to be avoided, Federal legislation to provide the additional authority required by, and to eliminate the uncertainty that flows from, the court's decisions must be enacted." H.R. REP. NO. 93-414, 93d Cong., 1st Sess. 9 (1973) [hereinafter cited as H.R. REP. NO. 93-414].

29. 43 U.S.C. § 1652 (Supp. III, 1973).

tion of the proposed Trans-Alaskan Oil Pipeline without further delay."³⁰ The environmental issues were resolved by a congressional determination that the construction of the Trans-Alaska pipeline was in the national interest,³¹ and that the environmental impact statement prepared by the Department of the Interior complied with NEPA.³² The Act precludes further judicial review of any environmental challenges to the pipeline under NEPA.³³

30. H.R. REP. NO. 93-414, *supra* note 28, at 10-11. The Act states that the "purpose of this chapter is to insure that, because of the extensive governmental studies already made of this project and the national interest in early delivery of North Slope oil to domestic markets, the trans-Alaska oil pipeline be constructed promptly without further administrative or judicial delay or impediment." 43 U.S.C. § 1652(a) (Supp. III, 1973). Early development and delivery of Alaskan oil to domestic markets was also "in the national interest because of growing domestic shortages and increasing dependence upon insecure foreign sources." *Id.* § 1651(a).

31. H.R. REP. NO. 93-414, *supra* note 28, at 10-11; *see* note 30 *supra*.

32. *See* H.R. REP. NO. 93-414, *supra* note 28, at 14, 16-17. *See also* 43 U.S.C. §§ 1652(b), (d) (Supp. III, 1973).

33. Actions necessary for construction and completion of the Trans-Alaska pipeline were to be taken without further action under NEPA. 43 U.S.C. § 1652(d) (Supp. III, 1973). The Act further provides that litigation raising constitutional questions or challenging federal agency actions as *ultra vires* to Title II would be barred unless filed within 60 days of the action at issue. *Id.*

Congress could legitimately authorize construction of the Trans-Alaska pipeline, despite the failure of any court to determine the sufficiency of the final environmental impact statement. Congress has the constitutional power "to dispose of and make all needful rules and regulations respecting the territory or other property belonging to the United States." U.S. CONST. art IV, § 2, cl. 2. In *United States v. City & County of San Francisco*, 310 U.S. 16, *rehearing denied*, 310 U.S. 657 (1940), the Court explained that, under this clause "the power over public lands thus entrusted to Congress is without limitations. . . . Congress may constitutionally limit the disposition of the public domain to a manner consistent with its views of public policy." 310 U.S. at 29, 30. *See also* *Light v. United States*, 220 U.S. 523 (1911); *United States v. Gratiot*, 39 U.S. (14 Pet.) 526, 538 (1840).

Indeed, in *Wilderness Soc'y v. Morton*, 479 F.2d 842, 891 (D.C. Cir.), *cert. denied*, 411 U.S. 917 (1973), the court of appeals specifically conceded Congress' power to regulate authorization for right-of-way and construction of the pipeline:

Congress, by enacting Section 28, allowed pipeline companies to use a certain amount of land to construct their pipelines. These companies have now come into court . . . and have said, "This is not enough land; give us more." We have no more power to grant their request . . . than we have the power to increase congressional appropriations to needy recipients. ". . . The power over the public land thus entrusted to Congress is without limitations. 'And it is not for the courts to say how that trust shall be administered. That is for Congress to determine.'" . . .

The jurisdictional restrictions on judicial review of agency actions are more troublesome. Congress possesses the power to limit the jurisdiction of inferior federal courts and state courts applying federal law. *See Lockerty v. Phillips*, 319

Concern was expressed that authorizing the Secretary to grant the rights-of-way without meeting NEPA standards creates a dangerous precedent for noncompliance with NEPA's mandate to consider significant alternatives to proposed federal actions.³⁴ Secretary Morton, however, contended that the Act should not be interpreted as precedent for exemptions from judicial review but as an "exceptional and practical solution" to meeting short-term energy needs.³⁵ The Secretary's contention, however, ignores the clear effect of the exemption. It is one thing for the Environmental Protection Agency to issue *temporary* exceptions permitting increased pollution to ease winter fuel shortages;³⁶ it is quite another to allow construction of a permanent Trans-Alaska pipeline that may have serious long-term adverse environmental effects. It is precisely such undertakings that demand full compliance with NEPA requirements if NEPA is to be "the most important and far-reaching environmental and conservation measure ever enacted by Congress."³⁷

By eliminating the need to consider alternatives to the Trans-Alaska pipeline, particularly the alternate trans-Canadian route,³⁸

U.S. 182, 187 (1943); *Cary v. Curtis*, 44 U.S. (3 How.) 236, 245 (1845). See generally H. HART & H. WECHSLER, *FEDERAL COURTS AND THE FEDERAL SYSTEM* 288-312 (1953); C. WRIGHT, *FEDERAL COURTS* 22-26 (3d ed. 1971); Eisenberg, *Congressional Authority to Restrict Lower Federal Court Jurisdiction*, 83 YALE L.J. 498 (1974). Congress, however, must not exercise its power to give, withhold or restrict jurisdiction "so as to deprive any person of life, liberty, or property without due process of law or to take private property without just compensation." *Battaglia v. General Motors Corp.*, 169 F.2d 254, 257 (2d Cir.), *cert. denied*, 335 U.S. 887 (1948), *quoted in*, *Faulkner v. Clifford*, 289 F. Supp. 895, 899 (E.D.N.Y. 1968).

Arguably, the jurisdictional limitations imposed in the Act constitute unconstitutional restrictions on the right of parties, aggrieved by the administrative action, to procedural due process in granting the pipeline rights-of-way. See H.R. REP. NO. 93-414, *supra* note 28, at 74-76. But see Dominick & Brody, *The Alaska Pipeline: Wilderness Society v. Morton and the Trans-Alaska Pipeline Authorization Act*, 23 AM. U.L. REV. 337, 366-70 (1973).

34. H.R. REP. NO. 93-414, *supra* note 28, at 69-70.

35. 4 ENVIRONMENT RPT. CURRENT DEVS. 574 (1973).

36. *Id.* at 1098, 1177; *cf.* Energy Supply and Environmental Coordination Act of 1974 § 3, 15 U.S.C. § 791, *amending* 42 U.S.C. § 1857, which amends the Clean Air Act to permit temporary suspension of emission limitations.

37. 115 CONG. REC. 40,616 (1969) (remarks of Senator Jackson in support of the passage of NEPA).

38. A major argument throughout the pipeline dispute has been the alleged failure of the Department to consider adequately the trans-Canadian route alternative. The trans-Canadian pipeline would cut across Canada, through the Mackenzie Delta and Edmonton, into Chicago and the Midwest. Proponents of this

Congress may have opened the door to further erosion of NEPA whenever sufficient political or economic pressure is applied.³⁹

II. THE PIPELINE AND THE ENVIRONMENT

Congress approved the Department of the Interior's final environmental impact statement and authorized the construction of the Trans-Alaska pipeline to guarantee a continuous domestic supply of oil to United States markets. In turn, in the face of potentially adverse environmental effects, Congress subordinated full consideration of the

route argue that it would be superior to an all-Alaskan route because it (1) would be subject to fewer environmental stresses and would avoid a zone of intense earthquake activity associated with the Trans-Alaskan route, (2) would be a more logical "common corridor" for combined oil and gas development in Alaska and Canada, (3) would avoid ocean pollution associated with port and terminal facilities that are part of the Trans-Alaskan system, (4) would deliver oil to the U.S. markets east of the Rocky Mountains, which are in short supply, rather than to the West Coast where oversupply caused by input from a trans-Alaskan pipeline could eventually produce a misallocation of natural resources, and (5) would be economically superior to a trans-Alaskan route. *See generally* Cicchetti, *The Wrong Route*, 15 ENVIRONMENT, June 1973, at 4; N.Y. Times Mag., *supra* note 3, at 99; *Hearings on H.R. 9130 Before the Subcomm. on Public Lands of the Comm. on Interior and Insular Affairs*, 93d Cong., 1st Sess., pt. 2, at 627, 659 (1973) (statements of S. David Freeman, Charles J. Cicchetti and Richard D. Nehring).

In a letter published in 245 HARPERS, Dec. 1972, at 8, Secretary Morton stated why he favored the Trans-Alaskan route: (1) environmental problems are present in both routes; (2) a trans-Alaskan route is shorter and crosses less permafrost area than a trans-Canadian route; (3) a trans-Alaskan pipeline would take three years to build, compared with five years for a trans-Canadian pipeline; (4) the West Coast can consume all of the oil transported by the Trans-Alaskan pipeline without displacing other domestically produced oil; (5) the trans-Canadian pipeline will add to the United States' balance of payments problems because it will be required to carry a significant percentage of Canadian owned oil, and it is not in the national interest to purchase Canadian oil at the expense of Alaskan oil that is available.

Secretary Morton also stated that the Canadian insistence of 51% ownership of the line would be "unacceptable from the point of view of our national interests." NEWSWEEK, Apr. 16, 1973, at 84.

39. *See* 119 CONG. REC. S12,805 (daily ed. July 9, 1973) (remarks of Senator Henry Jackson): "I am afraid . . . if we once establish such a precedent [of a congressional determination of adequacy of an environmental impact statement], that each Member of the Congress will ask and expect a legislative waiver of NEPA on his own special projects, and I do not want to open that door and establish that precedent." *See e.g.*, Energy Supply and Environmental Coordination Act of 1974 § 3, 15 U.S.C. § 791, amending 42 U.S.C. § 1857, allowing temporary suspension of emission limitations under the Clean Air Act and exempting EPA from filing environmental impact statements on any action taken under NEPA.

environmental issues. Despite full utilization of technical advances and the most stringent regulation, oil pollution damage to coastal and adjacent landowners is inevitable.⁴⁰

The central environmental concern is the potentially deleterious effects of transporting heated oil through 800 miles of Alaskan terrain and then by tanker to its West Coast market destination. Serious problems are presented by the project's possible effect on Alaskan permafrost,⁴¹ wildlife, tundra animals, vegetation and soil. Equally serious is the threat of oil pollution caused by pipeline leakage and vessel discharge.

A. The Permafrost Problem

Permafrost, covering 85 percent of Alaska, presents the most serious Arctic engineering problems. Attempts to contend with it have resulted in spectacular and costly failure.⁴² It is suggested that the Trans-Alaska pipeline, maintained at 158-176 degrees Fahrenheit, would thaw the surrounding permafrost, creating a "veritable quagmire incapable of supporting any structure whatsoever."⁴³ Such a geophysical result would obviously threaten the structural stability of the pipeline, which in turn could spill up to 90,000 barrels of oil in a single break.⁴⁴ Once the permafrost's natural equilibrium is upset, the thawing process may become self-perpetuating and impossible to reverse.⁴⁵

40. See Plaintiff's Brief, *supra* note 21, at 1064.

41. Permafrost is rock or soil material, with or without interior moisture or organic matter, that has remained below 32 degrees fahrenheit continuously for two or more years. Moxness, *The Long Pipe*, 12 ENVIRONMENT, Sept. 1970, at 18 [hereinafter cited as *The Long Pipe*].

42. See T. BROWN, *supra* note 4, at 58. "The stresses and strains induced by the freezing, thawing, and heaving of permafrost soils subjected to unexpected temperature changes turned railroads into roller coasters and bridges into jigsaw puzzles." *The Long Pipe*, *supra* note 41, at 18. The 400 mile "Hickel Highway" from Fairbanks to the Arctic Ocean was built through permafrost to enable passage of trucks carrying drilling equipment to the North Slope. The original cost, estimated at \$125,000, soon reached 1 million dollars. The road was so poorly constructed that after the first winter it was completely impassable. NATION, *supra* note 18, at 747. See generally T. BROWN, *supra* note 4, at 39-46.

43. Lachenbruch, *Some Estimates of the Thermal Effects of a Heated Pipeline in Permafrost*, quoted in *The Long Pipe*, *supra* note 41, at 18, 21. Lachenbruch estimates that a pipeline 48 inches in diameter, buried six feet deep in permafrost and heated to 176 degrees Fahrenheit would thaw a cylindrical region around the pipeline 20 to 30 feet in diameter in a few years. *Id.* at 21.

44. N.Y. Times Mag., *supra* note 3, at 90.

45. *The Long Pipe*, *supra* note 41, at 21.

The Department of the Interior suggests several methods to reduce the risk of permafrost degradation: construction of nearly one-half the pipeline above ground in certain areas; utilization of gravel pads to protect the permafrost from construction activity; and general project supervision by the federal government.⁴⁶ Yet the elevated portion of the pipeline may result in a "combined barrier effect" disturbing the migration of caribou, moose and mountain sheep. Such a barrier could prevent these animals from reaching calving and grazing grounds and result in population reduction.⁴⁷

B. Earthquakes

The southern two-thirds of the Trans-Alaska pipeline route traverses several major fault zones and seismically active regions.⁴⁸ The pipeline will cross three faults along which two dozen significant earthquakes have been reported in this century.⁴⁹ Only ten years ago a major earthquake in southern Alaska caused a tidal wave that destroyed the old town of Valdez, the pipeline's proposed terminal.⁵⁰ The seismically active regions would have been largely circumvented by a trans-Canadian route.⁵¹

Surface faulting creates a major risk of pipeline rupture. Since one mile of pipeline will contain 500,000 gallons of hot oil,⁵² even one

46. Note, *Evolving Judicial Standards Under the National Environmental Policy Act and the Challenge of the Alaska Pipeline*, 81 YALE L.J. 1592, 1614 (1972) (setting forth Department of the Interior Environmental Stipulations).

47. Plaintiff's Brief, *supra* note 21, at 1014 (4 Final Impact Statement (FIS) 157-161). See also Weeden & Klein, *Wildlife and Oil: A Survey of Critical Issues in Alaska*, in ALASKA PUBLIC POLICY, *supra* note 5, at 242. Wild animals may also be threatened by wet areas underlain by permafrost, which may produce a mire that would trap animals attempting to cross it. *Id.* at 243. See generally Letter from A. Smith (President, General Counsel of National Parks and Conservation Assoc.) to Hon. J. Melcher (Chairman Subcomm. on Public Lands), June 7, 1973, in *Hearings on H.R. 9130 Before the Subcomm. on Public Lands of the Comm. on Interior and Insular Affairs*, 93d Cong., 1st Sess., pt. 2, at 768-69 (1973) (stating that with respect to the caribou migration problem, among others, the Canadian route is superior to the Alaskan route).

To mitigate migration disruption, the pipeline builders will provide caribou crossings by dipping the line under the tundra at intervals; refrigeration stations will be set up at those points to keep the ground artificially frozen and to prevent the line from thawing the permafrost. Barron's, *supra* note 11, at 24.

48. Plaintiff's Brief, *supra* note 21, at 1015 (3 FIS 20).

49. NATION, *supra* note 18, at 749.

50. *Id.*

51. See note 38 *supra*.

52. *The Long Pipe*, *supra* note 41, at 16.

such rupture would cause extensive damage. Despite the creation of a cutoff valve system to halt the flow of oil in the event of a break,⁵³ delay in operation and drainage could cause substantial pollution.⁵⁴ Moreover, the use of dispersants and detergents to remove spilled oil from terrestrial surfaces can be extremely destructive to vegetation and marine life.⁵⁵ Other clean-up methods, such as booms and suction devices, have proven ineffective.⁵⁶

C. Marine Impact of Oil Spills

After the oil is pumped through the pipeline from Prudhoe Bay to the port of Valdez, it will be transferred to tankers for transportation to West Coast refineries in Washington and California. Tanker transportation creates the added threat of oil spills, and spills in arctic waters are especially problematic since oil disperses more slowly in cold water.⁵⁷

53. In addition to the cutoff valve system, the Department of the Interior attempts to minimize the danger from seismically active areas by requiring (1) that the pipeline be able to withstand large scale earthquakes "where technically feasible", (2) that Alyeska satisfy federal officials "that all recognizable or reasonably inferable faults or fault zones along the alignment have been identified and delineated", and (3) that the pipeline be constructed to withstand a minimum of two feet of horizontal or vertical set off. Note, *Evolving Judicial Standards Under the National Environmental Policy Act and the Challenge of the Alaska Pipeline*, *supra* note 46, at 1617.

To mitigate pipeline rupture from earthquake hazards, Alyeska will lay the pipeline in a zig-zag pattern, allowing it to stretch horizontally. Also, the pipe itself will be made of a special ductile steel, capable of bending or wrinkling without cracking. Barron's, *supra* note 11, at 24.

54. In the event of a pipeline rupture, 14,000 barrels of oil could leak out during the time required for a pump station shutdown and valve closure. After shutdown and closure up to 50,000 additional barrels of oil could drain from the pipeline at some locations. With smaller leaks, 750 barrels of oil could be lost every day without being detected. NATION, *supra* note 18, at 749.

55. See Comment, *Oil Pollution of the Sea*, 10 HARV. INT'L L.J. 316, 355-56 (1969). In the Torrey Canyon disaster, note 58 *infra*, studies showed that oil accounted for destruction of 30% of the plankton, while detergents used in attempting to dissipate the oil killed off 95% of the remaining plankton along the British Coast. W. ROSS, OIL POLLUTION AS AN INTERNATIONAL PROBLEM 9 (1973) [hereinafter cited as W. Ross]. The toxicity of detergents has been sufficiently established to compel the President's Panel on Oil Spills to recommend that their use be strictly limited. First Report of the President's Panel on Oil Spills, The Oil Spill Problem 11 (1969) (Office of Science and Technology).

56. See Bergman, *No Fault Liability for Oil Pollution Damage*, 5 J. MARITIME L. 1, 4 (1973). See also N.Y. Times, Mar. 13, 1970, at 22, col. 2.

57. Bergman, *supra* note 56, at 7 n.30.

The Department of the Interior estimates that in an average year as much as 140,000 barrels of oil may be spilled into West Coast waters as a result of tanker casualties.⁵⁸ Additional quantities would likely be pumped into ocean waters during tank cleanup operations;⁵⁹ and there could be a chronic pollution of Prince William Sound caused by continual discharge of oil from a ballast treatment plant at the port of Valdez.⁶⁰ Oil tanker traffic is expected to increase significantly when the pipeline is built. North Slope oil will add about 70 tanker calls per year in Puget Sound when pipeline operations begin further increasing the threat of oil pollution.⁶¹

The most obvious and immediate effect of oil spills on the marine environment is the destruction of birds and fish.⁶² Over 25,000 birds

58. Plaintiff's Brief, *supra* note 21, at 10 (4 FIS 474). It is estimated that the Alyeska Pipeline Service Company's fleet would have an average of 1.69 collisions or groundings each year. NATION, *supra* note 18, at 749.

In the March 1967 wreck of the supertanker Torrey Canyon nearly one-half of the 118,000 tons of the tanker's crude oil cargo was released, contaminating the coast of Great Britain and France and destroying innumerable fish and fowl. See generally E. COWAN, OIL AND WATER: THE TORREY CANYON DISASTER (1968); Nanda, *The "Torrey Canyon" Disaster: Some Legal Aspects*, 44 DENVER L.J. 400 (1967); Nanda & Stiles, *Offshore Oil Spills: An Evaluation of Recent United States Responses*, 7 SAN DIEGO L. REV. 519 (1970).

As a result of a collision of two oil tankers in January 1971, approximately 840,000 gallons of oil spilled into San Francisco Bay. Immediate clean-up operations resulted in recovery of some 411,000 gallons of oil; the bulk of the oil floated out to sea forming an enormous 50 mile oil slick. Another tanker ran aground in fog and light snow on January 23, 1971, at the mouth of New Haven Harbor, spilling 385,000 gallons of oil into Long Island Sound. See *Recent Developments in the Law of the Seas II: A Synopsis*, 8 SAN DIEGO L. REV. 658, 666-67 (1971).

59. Experts foresee that a total of 613,000 barrels of oil will be spilled each year from tanker collisions, illegal tank cleanings at sea, and accidental discharges in port and at sea. This is the equivalent of twelve major collisions. NATION, *supra* note 18, at 749.

60. An estimated twelve barrels of oil will be pumped into upper Prince William Sound every day from tanker deballasting. Weeden & Klein, *supra* note 47, at 245. For a discussion of common deballasting and cleanup practices see Comment, *Oil Pollution of the Sea*, *supra* note 55, at 319-20.

61. W. Ross, *supra* note 55, at 217. Congress enacted the Ports and Waterways Safety Act of 1972, 46 U.S.C. §§ 391(a), 1221-27 (Supp. III, 1973), to establish for all United States vessels, or vessels entering the navigable waters of the United States, comprehensive minimum standards of design, construction, alteration, repair, maintenance and operation to prevent or mitigate the hazards of tanker discharge to life, property and the marine environment. The Ports and Waterways Safety Act applies to all vessels that have on board oil cargo of any kind. *Id.* § 391(a) (2) (B).

62. The pipeline, in addition to the tankers, threatens the marine environment. As a result of the pipeline's proximity to several streams, biologists fear that large

were killed as a result of the Torrey Canyon disaster,⁶³ 10,000 died after a spill from an unidentified source in Alaska's Kodiak Islands area,⁶⁴ and thousands of dead birds were found onshore after spills at Santa Barbara.⁶⁵ Moreover, oil spills are almost certain to result in damage to coastal and adjacent property owners, with resulting commercial and recreational losses.⁶⁶

III. SECTION 1653:

STRICT LIABILITY REMEDY FOR OIL POLLUTION CLAIMANTS

The Trans-Alaska Authorization Act imposes a standard of strict liability on the owners of the pipeline right-of-way for all injuries and damages incurred in connection with or resulting from activities along or near the right-of-way.⁶⁷ Further, owners and operators of oil tankers carrying Alaskan oil transported through the pipeline are strictly liable for damages to all injured parties resulting from oil spillage pollution.⁶⁸ Congress recognized that unless the costs of oil pollution are regarded as an element of the cost of delivery of oil to

amounts of silt may enter these streams to the detriment of grayling and salmon populations. Weeden & Klein, *supra* note 47, at 243. Also, bed scour and bank erosion at stream crossings can rupture the pipeline, Plaintiff's Brief, *supra* note 21, at 1016 (1 FIS Summary Sheet), spilling tons of oil into these streams. *See* W. Ross, *supra* note 55, at 8.

63. *See* note 58 *supra*.

64. Baldwin, *Public Policy on Oil: An Ecological Perspective*, 1 *ECOLOGY* L.Q. 245, 262 (1971).

65. *Id.* *See generally* A. NASH, D. MANN & P. OLSEN, *OIL POLLUTION AND THE PUBLIC INTEREST: A STUDY OF THE SANTA BARBARA OIL SPILL* 21-27 (1972); Baldwin, *The Santa Barbara Oil Spill*, 42 *U. COLO. L. REV.* 33 (1970).

66. The effect of major catastrophic oil spills on fish, water fowl, wildlife, and the quality of our waters and beaches, is all too apparent. . . . Shellfish have been found to contain a variety of pathogens; pollution has closed a portion of the world's commercial shellfish beds; beaches and bays have been closed to bathers and other recreational use; lifeless zones have been created in the marine environment; there have been heavy kills of fish and other organisms; and an identifiable portion of the marine Eco system has been profoundly changed.

S. REP. NO. 92-724, in 2 *U.S. CODE CONG. & AD. NEWS* 2768, 2769 (1972) (Ports and Waterways Safety Act of 1972).

67. 43 *U.S.C.* § 1653 (Supp. III, 1973).

68. *Id.* Strict liability under the Act ceases when the oil has first been brought ashore at a port under the jurisdiction of the United States. *Id.* § 1653(b)(7). Strict liability is imposed because "existing maritime law would not provide adequate compensation to all victims, including residents of Canada, in the event of the kind of catastrophe which might occur." *CONG. REP. NO. 93-624*, 93d Cong., 1st Sess. 8 (1973).

the market, they would fall unfairly on Alaskan citizens or others living in the vicinity.⁶⁹

Damages caused by an act of war, the negligence of a governmental unit, or the damaged party are not covered by the strict liability provisions.⁷⁰ There being no exemption for acts of God, the holder of the pipeline right-of-way and the vessel operator or owner will be strictly liable for damage by earthquakes or tidal waves.⁷¹

The holder of the pipeline right-of-way may be strictly liable up to 50,000,000 dollars for any one incident. Ordinary rules of negligence determine his liability for damages in excess of that amount.⁷² The vessel owner and operator may be strictly liable for the first 14,000,000 dollars in damages arising from any one incident.⁷³ The Trans-Alaska Pipeline Liability Fund, consisting of money collected by the pipeline operator from the owner of the oil at a fee of five cents per barrel,⁷⁴ is subject to claims up to the 100,000,000 dollar maximum liability.⁷⁵ Furthermore, the polluter is responsible for the expense of controlling and removing the pollutant.⁷⁶

69. H.R. REP. NO. 93-414, *supra* note 28, at 18.

70. 43 U.S.C. §§ 1653(a)(1), (c)(2) (Supp. III, 1973).

71. Release of defendant from strict liability for an act of God traditionally is based on the premise that the act was an unforeseeable intervening force of nature. *See, e.g., Eikland v. Casey*, 266 F. 821, 824 (9th Cir.), *cert. denied*, 254 U.S. 652 (1920): "[A]ct of God, in its legal sense, applies only to events in nature so extraordinary that the history of climatic variations and other conditions in the particular locality affords no reasonable warning of them." The possibility and effects of earthquake and tidal wave occurrence were thoroughly examined in the Department of the Interior's environmental impact statements and are thus foreseeable natural occurrences in Alaska and the Arctic. *But see* Alaska Department of Environmental Compensation Act, ALASKA STAT. § 46.03.822(1)(D) (Cum. Supp. 1973) (relieving defendant from strict liability if he can prove an act of God, defined as an "act of nature which is unforeseeable in kind or degree," *id.* § 46.03.826(1)).

72. 43 U.S.C. § 1653(a)(2) (Supp. III, 1973).

73. *Id.* § 1653(c)(3).

74. *Id.* §§ 1653(c)(4)-(6). The Fund, administered by right-of-way holders, consists of 100 million dollars. In *Portland Pipe Line Corp. v. Environmental Improvement Comm'n*, 307 A.2d 1, 14-26 (Me.), *appeal dismissed*, 414 U.S. 1035 (1973), the court upheld the constitutionality of Maine's Coastal Conveyance Act of 1970, which imposes an annual license fee of one-half cent per barrel on operators of oil terminal facilities receiving shipments of oil by sea.

For a discussion of the benefits of an International Fund for Compensation for Oil Pollution Damage see W. Ross, *supra* note 55, at 186-88.

75. 43 U.S.C. §§ 1653(c)(1), (3) (Supp. III, 1973).

76. *Id.* § 1653(b). If the holder fails to remove the pollutant adequately, the Secretary, in cooperation with other agencies or the holder, can accomplish the control and removal at the holder's expense. Under § 1653(c)(1), the vessel owner and Fund are liable for clean up costs as part of the damages.

The Act also requires a right-of-way holder to provide emergency subsistence and other aid to affected persons and local organizations pending the ultimate determination of their pollution claim against the holder.⁷⁷ This special "no fault" liability affords a means of providing food, water and medical aid should a disaster occur during construction of the pipeline that cannot adequately be met by a right to sue for damages.⁷⁸

IV. OIL POLLUTION LIABILITY: THE NEED FOR STRICT LIABILITY

While the Trans-Alaska Pipeline Act imposes strict liability solely on those associated with the transportation of Alaskan oil through the pipeline and aboard tankers, the Act sets the stage for the imposition of strict liability for damages resulting from all oil transport by pipeline or tanker from any location.

Federal statutes holding the polluter strictly liable to the federal government for cleanup costs have no effect on liability for damage to public and private parties from discharges of oil.⁷⁹ Moreover, traditional common law remedies for oil pollution damage are inadequate to protect injured parties because of the difficulties in proving a case against the polluter. Only a standard of strict liability can insure adequate protection.

Legal commentators have considered oil transport an ultrahazardous activity, warranting imposition of strict liability for pollution dam-

77. *Id.* § 1653(a) (4).

78. H.R. REP. NO. 93-414, *supra* note 28, at 17-18. Section 1653(a)(1) also gives the natives the option to sue in court or agree to arbitration under Alaska's arbitration law, which is a much less expensive proceeding. *Id.* at 18.

79. *E.g.*, Water Quality Improvement Act of 1970, 33 U.S.C. §§ 1152, 1155-56, 1158, 1160-75 (1970). State strict liability statutes differ with respect to protection. *E.g.*, Alaska Department of Environmental Compensation Act, ALASKA STAT. §§ 46.03.822-824 (Cum. Supp. 1973) (strict liability for the discharge of hazardous substances, including damages for injury or loss to persons, property, income, means of producing income, and loss of economic benefit); Florida Oil Spill Prevention & Pollution Control Act, FLA. STAT. §§ 376.011-12 (1974) (strict liability to state for oil discharge); Maine Oil Discharge Prevention & Pollution Control Act, ME. REV. STAT. ANN. tit. 38 §§ 541, 552 (Supp. 1973) (strict liability to state for oil pollution damage); Maryland Water Resources Law, MD. ANN. CODE art. 96A, § 29BC (1974) ("The person responsible for the oil spillage shall be liable to any other person for any damage to his real or personal property directly caused by the spillage"); *see Askew v. American Waterways Operators, Inc.*, 411 U.S. 325, *rehearing denied*, 412 U.S. 933 (1973) (Florida law upheld against federal pre-emption challenges); *Portland Pipe Line Corp. v. Environmental Improvement Comm'n*, 307 A.2d 1 (Me.), *appeal dismissed*, 414 U.S. 1035 (1973).

ages.⁸⁰ Nevertheless, recovery for oil pollution damage in courts of common and maritime law is generally based on traditional common law concepts of trespass, nuisance and negligence.⁸¹

A. Common Law Remedies

Under traditional rules, plaintiff has the burden of proving negligence or intentionally inflicted harm in order to recover for damage resulting from oil discharge under a trespass theory. Since trespass liability requires an actual physical invasion of the property,⁸² recovery may be denied to non-beachfront owners for loss of business due to polluted beaches.⁸³

Nuisance⁸⁴ connotes a continuing or recurring interference with a real property interest over a considerable period of time.⁸⁵ Therefore, recovery under this theory may be unavailable to claimants whose damages arise from a single instance of a vessel's discharge of oil.⁸⁶

80. See, e.g., T. POST, PRIVATE COMPENSATION FOR INJURIES SUSTAINED BY THE DISCHARGE OF OIL FROM VESSELS ON THE NAVIGABLE WATERS OF THE UNITED STATES (1972) (Sea Grant Tech. Bull. No. 22) [hereinafter cited as T. POST]; W. ROSS, *supra* note 55, at 186-88; Avins, *Absolute Liability for Oil Spillage*, 36 BROOKLYN L. REV. 359 (1970); Bergman, *No Fault Liability for Oil Pollution Damage*, 5 J. MARITIME L. 1 (1973); Mendelsohn, *Maritime Liability for Oil Pollution — Domestic and International Law*, 38 GEO. WASH. L. REV. 1 (1969); Shutler, *Pollution of the Sea by Oil*, 7 HOUSTON L. REV. 415 (1970); Sweeney, *Oil Pollution of the Oceans*, 37 FORDHAM L. REV. 155 (1968).

81. An owner may also incur liability by operating an unseaworthy vessel, i.e. one not reasonably fit for its intended use. The owner's duty to furnish a seaworthy ship is absolute and completely independent of his duty, under a negligence theory, to exercise reasonable care. Cf. *Usner v. Luckenbach Overseas Corp.*, 400 U.S. 494 (1971); *Mitchell v. Trawler Racer Inc.*, 362 U.S. 539 (1960). But see *Maryland v. Amerada Hess Corp.*, 350 F. Supp. 1060 (D. Md. 1972).

82. W. PROSSER, *HANDBOOK OF THE LAW OF TORTS* 594 (4th ed. 1971).

83. Shutler, *supra* note 80, at 435.

84. A nuisance may be public or private. A public nuisance causes inconvenience or damage to the public at large and is subject to criminal prosecution. A private nuisance is an interference with the use and enjoyment of property of an individual or a few persons and is actionable for either abatement or damages, or both. See generally ENVIRONMENTAL RIGHTS, *supra* note 12, at 82-88. The Supreme Court has recently recognized a federal common law of nuisance to abate air and water pollution. *Illinois v. City of Milwaukee*, 406 U.S. 91 (1972).

85. *Maryland v. Amerada Hess Corp.*, 350 F. Supp. 1060, 1068 (D. Md. 1972).

86. Compare *id.* (single oil spill in navigable waters did not amount to common law nuisance), with *A. NASH et. al.*, *supra* note 65, at 88 ("a state forum undoubtedly could find sufficient 'continuity' in over 500 days of spill . . . to constitute a public nuisance."). See also T. POST, *supra* note 80, at 31.

A nuisance action is available when the polluter's activity interferes with plaintiff's use and enjoyment of the land⁸⁷ and therefore is appropriate, as is trespass, for the beachfront owner damaged by discharged oil,⁸⁸ or the riparian owner whose rights are similarly impaired.⁸⁹ Nuisance, like trespass, may be of little value, however, to the non-beachfront owner seeking to recover business profits lost as a result of an oil spill.⁹⁰ Furthermore, recovery for nuisance may depend on plaintiff's ability to prove that he has been injured in some special way not suffered by the general public.⁹¹

Negligence, the principal vehicle for recovering damages caused by oil pollution, places a particularly onerous burden of proof on injured parties to show a breach of the duty of care by owners or operators of tankers.⁹² The injured party's greatest problem may be proving the existence of the actual cause of the damage⁹³ if he resides near busy shipping lanes,⁹⁴ or the proximate cause (foreseeability)⁹⁵ of the

87. *District of Columbia v. Totten*, 5 F.2d 374, 380 (D.D.C.), *cert. denied*, 269 U.S. 562 (1925); *RESTATEMENT OF TORTS* § 832 (1939).

88. T. Post, *supra* note 80, at 32.

89. *E.g.*, *Petition of New Jersey Barging Corp.*, 168 F. Supp. 925 (S.D.N.Y. 1958). *But cf.* *Oppen v. Aetna Insurance Co.*, 485 F.2d 252 (9th Cir. 1973).

90. T. Post, *supra* note 80, at 32. In *Burgess v. M/V Tamano*, 370 F. Supp. 247 (S.D. Me. 1973), commercial fishermen and clam diggers, alleging interference with their public right to fish and dig clams, were entitled to sue parties responsible for oil spillage into Casco Bay, while businessmen in the bay area, claiming loss of customers from pollution of the coastal waters, were denied such an action. The former alleged a direct interference with a public right while the latter did not. *Id.* at 250-51.

91. *See Burgess v. M/V Tamano*, 370 F. Supp. 247 (S.D. Me. 1973).

92. *See Avins, supra* note 80, at 366. The vessel manufacturer may be at fault for negligent construction of one of the vessel's crucial components, or it may be that the vessel operator breached his duty of due care by omitting to keep a proper lookout.

93. *See Salaky v. Atlas Tank Processing Corp.*, 120 F. Supp. 225 (S.D.N.Y.), *rev'd sub nom. Salaky v. The Atlas Barge No. 3*, 208 F.2d 174 (2d Cir. 1953); *cf. Davis v. Cities Service Oil Co.*, 420 F.2d 1278 (10th Cir. 1970). *But see California v. S.S. Bournemouth*, 318 F. Supp. 839 (C.D. Calif. 1970) (although the State failed to produce evidence of the actual cause of the harbor spill, conditions of wind and tide combined with expert chemical analysis of the oil indicated defendant vessel was the source).

94. Sweeney, *supra* note 80, at 166.

95. *Overseas Tankship (U.K.) Ltd. v. The Miller S.S. Co.* [1966] 3 W.L.R. 498 (C.A.); *Overseas Tankship (U.K.) Ltd. v. Morts Dock & Engineering Co. Ltd.* L.R. [1961] A.C. 388; *see Sunray Mid-Continent Oil Co. v. Tisdale*, 366 P.2d 614 (Okla. 1961).

damage, particularly if he is a non-beachfront owner.⁹⁶ Furthermore, the shipowner or operator generally has sole access to the evidence concerning the oil discharge.⁹⁷ As a result of the difficulties facing the injured property owner, litigation may be so lengthy, expensive and complex that the injured party will be forced to absorb his own loss.

The same problems of proving fault for pollution by vessel discharge are present in pipeline leaks or bursts that pollute the surrounding property.⁹⁸ While most courts apply traditional negligence principles to impose liability for damages caused by leaks from oil and gas pipelines or storage tanks,⁹⁹ some jurisdictions hold polluters absolutely liable under various legal theories.¹⁰⁰ When subterranean waters are

96. Shutler, *supra* note 80, at 435.

97. When only shipowners or operators have access to needed information, a possible vehicle for recovery is *res ipsa loquitur*, which usually requires that (1) an oil spill of that type would not ordinarily occur unless someone had been negligent, (2) at the time of the injury the specific instrumentality is in the *exclusive* control of the party charged, (3) the injured party was not negligent, and (4) defendant has access to the evidence and plaintiff does not. *See* 2 F. HARPER & F. JAMES, *TORTS* §§ 19.6-9 (1956); J. WIGMORE, *EVIDENCE* 2509 (3d ed. 1940). *Compare* *California v. S.S. Bournemouth*, 318 F. Supp. 839 (C.D. Calif. 1970), *with* *Bianchini v. Humble Pipe Line Co.*, 3 ENVIRONMENTAL L. RPTR. 20385 (5th Cir. 1973).

98. Fault may be with the manufacturer of the pipeline, or with those who constructed the pipeline or planned its route. A defect could exist in the pump station mechanism or in the automatic shut off valve system or the negligence may lie entirely with the pump station operator.

99. *Maier v. Cities Service Pipeline Co.*, 286 F.2d 313 (10th Cir. 1960) (applying Kansas law); *Todd v. The Prairie Pipe Line Co.*, 108 Kan. 485, 196 P. 623 (1921); *Sohio Petroleum Co. v. Duke*, 313 Ky. 498, 232 S.W.2d 348 (1950); *Shelley v. Ozark Pipe Line Corp.*, 327 Mo. 238, 37 S.W.2d 518 (1931); *McMurry v. The Prairie Oil & Gas Co.*, 159 Mo. App. 623, 141 S.W. 463 (1911); *Meddock v. National Transit Co.*, 105 Pa. Super. 553, 161 A. 628 (1932); *Scurlock Oil Co. v. Roberts*, 370 S.W.2d 755 (Tex. Civ. App. 1963). The duty New Mexico Pipe Line Co. v. McIntyre, 430 S.W.2d 569 (Tex. Civ. App. 1968); *Scurlock Oil Co. v. Roberts*, 370 S.W.2d 755 (Tex. Civ. App. 1963). The duty of care imposed by the courts on the pipeline owner or operator includes the duty to make reasonable inspections of the pipeline and right-of-way. Weekly aerial inspections of gas or oil pipelines or rights-of-way is accepted as standard practice by pipeline companies. *See* *Phillips Pipe Line Co. v. Razo*, 420 S.W.2d 691 (Tex. Civ. App. 1967).

100. Many courts impose absolute liability using a nuisance theory. *Helms v. The Eastern Kansas Oil Co.*, 102 Kan. 164, 169 P. 208 (1917); *Hauck v. Tide Water Pipe Line Co.*, 153 Pa. 366, 26 A. 644 (1893); *Texas & Pac. Ry. Co. v. O'Mahoney*, 60 S.W. 902 (Tex. Civ. App. 1900). *See generally* Annot., 75 A.L.R. 1325 (1931).

Other courts apply the doctrine of *Rylands v. Fletcher*, L.R. 3 H.L. 330 (1868),

polluted by oil or gas escaping from pipelines, courts have repeatedly held the owner or operator absolutely liable.¹⁰¹

B. *Oil Transport as an Ultrahazardous Activity*

The significant risks involved in the construction, maintenance and operation of pipelines, and in the transportation of oil by tanker, lead to the conclusion that these *ultrahazardous* activities warrant the imposition of strict liability for the damage they cause.

The potential harm from oil pollution is typically associated with the oil transport business and is thus calculable and reasonably insurable.¹⁰² Since such damages are foreseeable when the hazardous

which states that a person who, for his own purposes, brings on his lands and collects and keeps there anything likely to do mischief if it escapes, must keep it at his peril, and that he is *prima facie* liable for all damages that are the natural consequences of its escape. *See Helms v. The Eastern Kansas Oil Co.*, 102 Kan. 164, 169 P. 208 (1917); *Hauck v. Tide Water Pipe Line Co.*, 153 Pa. 366, 26 A. 644 (1893); *Texas Co. v. Earles*, 164 S.W. 28 (Tex. Civ. App. 1914); *Texas Co. v. Giddings*, 148 S.W. 1142 (Tex. Civ. App. 1912). *But see King v. Columbian Carbon Co.*, 152 F.2d 636 (5th Cir. 1945); *Turner v. Big Lake Oil Co.*, 128 Tex. 155, 96 S.W.2d 221 (1936).

Other theories of liability are assumption of liability by the grantee in easement agreements, *e.g.*, *Transcontinental Gas Pipe Line Corp. v. Myrick*, 61 So. 2d 475 (Miss. 1951); *Premier Petroleum Co. v. Box*, 255 S.W.2d 298 (Tex. Civ. App. 1953); nuisance per se statutes, *e.g.*, LA. CIV. CODE ANN. art. 667 (West 1952); *see Diagle v. Continental Oil Co.*, 277 F. Supp. 875 (W.D. La. 1967); *Atlantic Pipe Line Co. v. Dredge Philadelphia*, 247 F. Supp. 857 (E.D. Pa. 1965), *aff'd*, 366 F.2d 780 (3d Cir. 1966), or ultrahazardous activity, *McLane v. Northwest Natural Gas Co.*, 255 Ore. 324, 467 P.2d 635 (1970) (storage of liquified natural gas in aboveground tank in a settled area held an abnormally dangerous activity giving rise to strict liability for death of workman working on tank); *see Luthringer v. Moore*, 31 Cal. 2d 489, 190 P.2d 1 (1948).

101. *E.g.*, *Sussex Land & Live Stock Co. v. Midwest Refining Co.*, 294 F. 597 (8th Cir. 1923); *Helms v. Eastern Kansas Oil Co.*, 102 Kan. 164, 169 P. 208 (1917); *Texas Co. v. Giddings*, 148 S.W. 1142 (Tex. Civ. App. 1912). *But see Kennedy v. Brandenburg*, 470 S.W.2d 789 (Tex. Civ. App. 1971).

Liability, absent proof of negligence, has also been approved for damage resulting from harmful gases or fumes arising in connection with oil refineries, tanks and pipelines. *See, e.g.*, *Great N. Refining Co. v. Lutes*, 190 Ky. 451, 227 S.W. 795 (1921); *Morgan v. High Penn Oil Co.*, 238 N.C. 185, 77 S.E.2d 682 (1953); *Vautier v. Atlantic Refining Co.*, 231 Pa. 8, 79 A. 814 (1911); *Gulf Oil Corp. v. Vestal*, 231 S.W.2d 523 (Tex. Civ. App. 1950), *aff'd*, 149 Tex. 487, 235 S.W.2d 440 (1951).

102. *See A. EHRENZWEIG, NEGLIGENCE WITHOUT FAULT* 56 (1951).

The oil companies know that they are taking a calculated risk in transporting oil by these means, and that the potential damages to be caused by oil spills are great. . . . The oil companies are willing to take this risk, because of the financial benefits they will get from exploration of the North Slope oil resources. If they are to reap the benefits, they must also be required to pay

activity begins,¹⁰³ liability to injured parties is merely a cost of doing business. Oil production and transportation are financed through heavily insured, global corporations who are better able to absorb and distribute the costs of pollution than are plaintiffs in the typical common law action against polluters. Rather than falling unfairly on certain individuals, risk distribution among all oil users would cause less economic dislocation.¹⁰⁴

Transport of oil by pipelines and tankers involves an enormous risk of harm that cannot be eliminated by the exercise of reasonable care. The potential for damage from spilled oil is great. Because relatively few persons are engaged in these activities, they are not a matter of common usage.¹⁰⁵ Transportation of oil through and to populated ports or cities, where both pipeline and vessel discharge of oil could create substantial damage, make the activities inappropriate to the place where they are carried on. Moreover, the potential oil

the price of a disastrous oil spill. . . . [T]he fact that [the pipeline holder or tanker owner] is responsible for transporting the oil to begin with means that he has provided the conditions under which the oil spill can occur, and thus should be absolutely liable for damages.

119 CONG. REC. S13,668 (Daily ed. July 17, 1973).

103. A. EHRENZWEIG, *supra* note 102, at 50. But see *Bianchini v. Humble Pipe Line Co.*, 3 ENVIRONMENTAL L. RPTR. 20385 (5th Cir. 1973) (pipeline company not strictly liable for damage to oyster reefs resulting from an oil spill caused by a vessel's accidental rupture of an underseas pipeline when the damage did not result from any negligence by defendant in the placement, maintenance or operation of the pipeline but was caused solely by the unforeseeable intervening force of an unknown marine vessel).

104. See W. Ross, *supra* note 55, at 186. "The cost of an injury and the loss of time or health may be an overwhelming misfortune to the person injured, and a needless one, for the risk of injury can be insured by the manufacturer and distributed among the public as a cost of doing business." *Escola v. Coca Cola Bottling Co.*, 24 Cal. 2d 453, 462, 150 P.2d 436, 441 (1944) (Traynor, J., concurring); cf. *Seely v. White Motor Co.*, 63 Cal. 2d 9, 403 P.2d 145, 45 Cal. Rptr. 17 (1965). See generally Calabresi, *Some Thoughts on Risk Distribution and the Law of Torts*, 70 YALE L.J. 499 (1961); Freezer, *Capacity to Bear Loss as a Factor in the Decision of Certain Types of Tort Cases*, 78 U. PA. L. REV. 805 (1930); Freezer, *Social Justice in the Field of Torts*, 11 MINN. L. REV. 313 (1927); Morris, *Hazardous Enterprises and Risk Bearing Capacity*, 61 YALE L.J. 1172 (1952).

105. An activity is a "matter of common usage" if it is "customarily carried on by the great mass of mankind or by many people in the community." RESTATEMENT (SECOND) OF TORTS § 520, comment *d* (Tent. Draft No. 10, 1964). In excluding oil wells from this definition, the Institute states, ". . . the very nature of oil lands and the essential interest of the public in the production of oil require that oil wells be drilled, but the dangers incident thereto are characteristic of oil lands and not lands in general." *Id.*

pollution damage from oil pipelines and tankers is foreseeable in light of the numerous mishaps in the past. In sum, the hazards of oil transport indicate that this activity contains inherently abnormal risks sufficient to make it ultrahazardous under the Restatement of Torts definition.¹⁰⁶

Under a strict liability standard, injured fishermen and property owners would be relieved of their burden of proving fault on the part of the oil polluter and would be required to prove only that the oil

106. See RESTATEMENT OF TORTS § 519 (1939). THE RESTATEMENT (SECOND) OF TORTS establishes six criteria for an abnormally dangerous activity: (1) the activity involves a high degree of risk of some harm to the person, land or chattels of others, (2) the gravity of the harm that may result from it is likely to be great, (3) the risk cannot be eliminated by the exercise of reasonable care, (4) the activity is not a matter of common usage, (5) the activity is inappropriate to the place where it is carried on, and (6) the value of the activity to the community. RESTATEMENT (SECOND) OF TORTS §§ 519 & 520 (Tent. Draft No. 10, 1964). RESTATEMENT OF TORTS § 520, comment c (1939), includes drilling an oil well as an ultrahazardous activity because "there's always a chance that in drilling an oil well a gusher will be struck which . . . will do serious harm to the lower lands in the vicinity." The Institute expressed no opinion as to whether the construction and use of a large tank or artificial reservoir in which a large body of fluid is collected is or is not an ultrahazardous activity. But see RESTATEMENT (SECOND) OF TORTS § 520, Note 3 (Tent. Draft No. 10, 1964) (storage of gasoline or other inflammable liquid in populated area a matter of strict liability). See also *McLane v. Northwest Natural Gas Co.*, 255 Ore. 324, 327, 467 P.2d 635, 637 (1970). A number of conditions and activities have been considered abnormally dangerous by imposing unreasonable risks to the community. *E.g.*, *Britton v. Harrison Constr. Co.*, 87 F. Supp. 405 (S.D.W. Va. 1950) (storage of explosives); *Luthringer v. Moore*, 31 Cal. 2d 489, 190 P.2d 1 (1948) (fumigation); *Green v. General Petroleum Corp.*, 205 Cal. 328, 270 P. 952 (1928) (drilling oil wells or operating refineries in thickly settled communities); *Sachs v. Chait*, 281 Minn. 540, 162 N.W.2d 243 (1968) (pile driving); *Banks v. Maxwell*, 205 N.C. 233, 171 S.E. 70 (1933) (keeping a dangerous animal); *McLane v. Northwest Natural Gas Co.*, 255 Ore. 324, 467 P.2d 635 (1970) (liquefied gas stored in tank in populated area); *Loe v. Lenhardt*, 277 Ore. 242, 362 P.2d 312 (1961) (crop dusting); *Rylands v. Fletcher*, L.R. 3 H.L. 330 (1868) (water collected in quantity in a dangerous place or allowed to percolate). In view of the courts' decisions in the above cases, it has been forcefully asserted that the transport of oil is an abnormally dangerous activity:

The bringing of large quantities of oil onto the ocean, although a normal and useful economic activity, is fraught with special risk in case of damage to the tanker. There is no difference in principle between the storage of large quantities of water on the land and the storage of large quantities of oil on the sea. If either escapes, it can cause harm. There is also no difference in essence with the confinement of dangerous animals. Surely unchecked oil in the sea can be more expensive to catch and confine than a wild animal which has escaped its captors. The same thing can be said of escaping fire or debris and shock from blasting. The spray from an airplane doing crop dusting and escaping oil is also quite close.

Avins, supra note 80, at 366.

spill caused the damage to their property. The imposition of strict liability on vessel owners and operators may not only encourage greater care on their part but also the improvement of ship and pipeline construction and design. Faced with higher insurance premiums resulting from the higher risks insured, strict liability would provide a strong incentive for oil companies to discover, develop and deploy vessels and pipelines that would operate safely.¹⁰⁷

CONCLUSION

Major oil companies have begun constructing the Trans-Alaska pipeline. Billions of barrels of oil will be transported from northern oil fields to the southern coast of Alaska, then by vessel to the domestic markets on the West Coast. Undoubtedly, as our energy needs increase, so too will the number of oil pipelines and terminal facilities necessary to accommodate the increasing production and transport of oil. This development will in turn increase the potential for environmental and property damage caused by oil pollution, whether from leakage, discharge or catastrophe. The situation is precisely that contemplated by Congress when it passed legislation providing administrative and judicial review of major projects entailing environmental risks. Such review was to consider all possible adverse environmental and ecological effects from the construction and operation of these projects and examine alternatives to those actions that might reduce the adverse risks and effects. Nevertheless, Congress, which has imposed these requirements in the National Environmental Policy Act, limited their application in the Trans-Alaska Pipeline Authorization Act. Whether Congress will limit the application of NEPA whenever it determines that immediate energy needs outweigh the need for a thorough examination of the environmental aspects of the actions remains to be seen.

Although the Trans-Alaska Pipeline Authorization Act limits permissible environmental inquiry, it may effectively protect and compensate public and private parties for injuries resulting from oil pollution. The strict liability provision of the Act is essential to meet the threat of recurring oil spills, and the resulting lawsuits for millions of dollars in property damage. Such damage, however, is probable whenever oil is transported. It is therefore appropriate to reassess the remedies available to a party injured by this inherently dangerous

107. See Bergman, *supra* note 80, at 38.

activity. The strict liability remedy is especially necessary in view of impending hazardous U. S. offshore oil drilling in which the same threats of pollution prevail. Since the common law remedies for oil pollution are no longer adequate to meet modern day circumstances, a standard of strict liability is essential for the protection of injured parties.

