10-1-1971

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International Law—Disposal of Radioactive Wastes in the Oceans

In 1970 Thor Heyerdahl, the well-known explorer and ethnologist, made an experimental voyage over the sea in a papyrus boat. He reported frequent encounters with floating wastes in mid-ocean and noted that the waters in many areas were visibly polluted. As a result pollution of the high seas, as opposed to coastal waters and continental shelf areas, received some of the public attention that had been focused largely on urban airspace, inland rivers, and coastal shorelines. If thought of in terms of pollution at all, the fathomless depths of the oceans and their vast surface expanses—covering some seventy per cent of the earth—had generally been considered both as a possible alternative site for waste disposal and as somehow immune to the noxious effects such activity had worked on more visible areas.

Many sources of pollution by dumping in the high seas have been identified. Included among them are dredge spoils, sewage sludge, solid waste or garbage, industrial waste, unserviceable munitions, and construction or demolition debris. While all of these are significant in terms of amount and in varying degrees are harmful or toxic to marine life, hazardous to human health, and aesthetically unattractive, this note will focus on the disposal of radioactive waste, an even more dangerous cause of ocean pollution.

Although in 1960 the United States Atomic Energy Commission placed a moratorium on the issuance of new licenses for disposal of radioactive wastes in the ocean, the increasing world-wide potential use of nuclear energy for land-based power plants, submarines, surface vessels, airplanes, and space vehicles necessitates continued consideration of the problem of radioactive disposals at sea. Moreover, with the number of countries involved in nuclear activity growing rapidly, it is clear that the action of more than one nation is required if effective eradication of the pollution danger from ocean disposal of radioactive waste is to be achieved. Concerned public and scientific

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3 Radioactive wastes may be defined as "the liquid and solid wastes that result from processing of irradiated fuel elements, nuclear reactor operations, medical use of radioactive isotopes, and research activities, and from equipment and containment vessels which become radioactive by induction." Id.
4 Id. at 7.
groups throughout the world have proposed that their governments undertake a variety of multilateral treaties or individual initiatives. The effect of these recommendations, however, is to suggest that the ocean dumping of wastes at present would not violate customary international law. A consideration of that question is the major purpose of this note.

It has been maintained that the overriding policy which has inspired the customary regime of the high seas has been "the promotion of the most advantageous—that is, the most conserving and fully utilizing—peaceful use and development by all peoples of a great common resource ...." The elements of commonality and reciprocity seem to have been most important in this development, and it apparently was upon these foundation stones that the doctrine of freedom of the seas was built. Freedom of the seas is generally understood to be "a freedom of access, such that no single user can exclude others from participating directly and simultaneously in the same use." Expressed another way, the law of the sea "is based on the concept of common property ...." The principal legal justification which might be given by a nation for the use of the oceans for radioactive waste disposal, therefore, is that the said use is a lawful one under the doctrine of the freedom of the seas, perhaps with the stipulation that the precautions and safeguards dictated by existing scientific knowledge must be observed. In opposition it might be contended that contamination of the oceans by depositing radioactive elements therein violates the freedom of the seas by harming navigation and fishing and is, therefore, an absolutely impermissible use regardless of the safeguards adopted. Quite clearly, then, some test that balances the respective claims must be utilized, and it has been pertinently

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4Most theorists on the subject would undoubtedly consider the phrase "customary international law" redundant. As one author points out, "traditionally international law is customary law." D. O'CONNELL, 1 INTERNATIONAL LAW 4 (1965). It is used here to emphasize the distinction between formal agreements and national or supranational legislation on the one hand and rules of conduct which have evolved over a period of time to govern specific types of situations and have gained recognition through repetition and general acceptance—that is, "customary international law"—on the other. See id. at 3-36. Any further textual reference to "international law" is intended to denote "customary international law" unless otherwise specified.

4McDougal & Schlei, The Hydrogen Bomb Tests in Perspective: Lawful Measures for Security, 64 YALE L.J. 648, 657 (1955) [hereinafter cited as McDougal & Schlei]. The question of nuclear testing was been at least partially settled by the 1963 Test Ban Treaty; therefore, the problem of radioactive debris in the oceans as a result of nuclear testing is not considered herein.

7Christy, Marine Resources and the Freedom of the Seas, 8 NAT. RES. J. 424 (1968).

observed that "the most relevant standard prescribed by customary international law is that of reasonableness."\(^9\)

In applying the test of reasonableness to the question of ocean disposal of radioactive waste, several factors would likely be considered: Weight would be accorded any scientific evidence as to the effect radioactive substances have on sea and human life, both directly and indirectly through contamination of food sources. The increase in production of nuclear wastes which would accompany any upsurge in the use of nuclear power must be considered as well as the lack of certitude concerning physical, chemical, and biological processes within the sea required in order to determine how much, if any, fission product can safely be introduced into the sea. Account must be taken of the fact that once wastes are deposited in the oceans, they are largely beyond human control, and whatever harmful effects might subsequently ensue cannot be prevented. Finally, due to the complex and subtle interdependencies within the ocean, it is possible that radioactive contamination might spread far beyond the area immediately affected; if so, then whatever one nation does in the oceans with respect to radioactive waste—including depositing such wastes in its own territorial waters—is of direct concern to all other nations.\(^10\)

To be balanced against the foregoing dangers are the considerable benefits derived from the many uses of nuclear energy which produce waste products requiring disposal. Furthermore, it might be argued that natural decay is common to all radioactive materials; that is, all radioisotopes ultimately reach a stage at which they are practically harmless. This decay process is measured in terms of half-lives.\(^11\) Confining the dumping of radioactive waste products to those isotopes with very limited half-lives arguably could significantly alter the danger of pollution. It might also be contended that the fact that certain radioactive materials have quite long half-lives may not be of overriding importance if their concentration in the waste materials is low or if the waste materials are introduced into an environment which would afford sufficient dilution.\(^12\)

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\(^9\)M. McDougal & W. Burke, The Public Order of the Oceans 772 (1962) [hereinafter cited as McDougal & Burke].

\(^10\)Id. at 852-53.

\(^11\)A half-life refers to the period of time required for the radiation emissions to be reduced by a factor of fifty percent; the half-lives of different radioisotopes vary from a fraction of a second to thousands of years. L. Hyden & W. Berman, International Control of Nuclear Maritime Activities 59-60 (1960) [hereinafter cited as Hyden & Berman].

\(^12\)Id. at 60.
The contention that radioactive waste dumping is completely unacceptable, therefore, would seem to rest on the assertion that no conceivable benefit from nuclear energy would justify the risk involved in ocean disposal, no matter how this risk might be reduced through the use of lead containers and short half-life materials, and no matter how costly the alternatives to ocean disposal might be. Such an argument probably would not prevail under the test of reasonableness ordinarily applied in international law. The past practice of nations, particularly the major nuclear powers, generally confirms such a deduction.¹

The conclusion that dumping radioactive wastes at sea does not violate international law is reinforced by the fact that there appear to have been almost no objections to specific disposal practices. Apart from the general position of the Soviet Union,¹⁴ there apparently has been only one instance of international protest with regard to the dumping of radioactive wastes.¹⁵

In addition to the almost total lack of protest, it has also been noted that "[n]o international tribunal has ever held a nation-state liable in

¹ Although the position of the United States seems to be changing or at least is being held in abeyance, see text accompanying note 4 supra and note 47 infra, France (as evidenced by repeated testing of nuclear devices) and Japan continue to pollute the oceans with radioactive wastes. HYDEMAN & BERMAN 72. Pursuant to legislation, the United Kingdom since 1952 has been employing a pipe-line to dispose of large quantities of low-level waste into the Irish Sea from the Atomic Energy Authority's Windscale Works. Id. at 67.

¹³The Soviet Union—a nation, it might be noted, with a very large land mass relative to population—insists that all sea disposal, even of low-level radioactive materials, is impermissible. Despite this position, however, Russia reportedly joined with other countries in a survey of an area in the North Atlantic Ocean for the purpose of finding a suitable dumping-ground. McDOUGAL & BURKE 861 n.49:

¹⁴In 1959 the government of Mexico objected through diplomatic channels to the proposed issuance of a license by the United States Atomic Energy Commission to a private disposal firm which wished to utilize a projected site in the Gulf of Mexico. The Mexican government was represented at, and participated in, the hearing before the hearing examiner. In re Industrial Waste Disposal Corp., AEC Docket No. 27-9 (1959) (intermediate decision of the hearing examiner), reported in 4 Hearings on Industrial Radioactive Waste Disposal before the Special Subcomm. on Radiation of the Jr. Comm. on Atomic Energy, 86th Cong., 1st Sess. 3046 (1959) [hereinafter cited as 1959 Hearings]. Apparently as a result of the Mexican position and domestic objections, the Department of State and the Atomic Energy Commission recommended that the license be denied, despite the judgment of the Atomic Energy Commission's scientists that the proposed disposal was safe and the fact that only limited amounts of low-level radioactive materials were to be dumped. HYDEMAN & BERMAN 305. See also McDOUGAL & BURKE 861. While the decision in this instance presumably was made with a view toward prevention of tension between neighboring countries, it nevertheless reflects some uncertainty about international law concerning the dumping of radioactive waste in the ocean and also the particular sensitivity of the nuclear issue.
damages for pollution of the sea, or declared the existence of a duty to desist." Absent a specific international agreement, moreover, it remains unclear whether any nation would have standing to enforce an unwritten obligation not to pollute. However, in The Trail Smelter Arbitration the United Nations Arbitral Commission did award damages to the state of Washington, on the claim of the United States, for injury to coastal waters resulting from pollution caused by noxious fumes emanating from a Canadian smelting plant. While this case might be applicable to a situation where a nation's coastal or territorial waters were damaged by pollution caused by dumping of radioactive wastes in the ocean, it clearly is not precedent for an action for damages occurring on the high seas. In the absence of international conventions dealing with the subject matter, therefore, an international decision-

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14McDougal & Schlei 690.

"The Trail Smelter Arbitration (United States v. Canada), Award of April 16, 1939, and March 11, 1941, 3 U.N.R.I.A.A. 1905. The tribunal held that "under the principles of international law . . . , no State has the right to use or permit the use of its territory in such a manner as to cause injury by fumes in or to the territory of another or the properties or persons therein, when the case is of serious consequence and the injury is established by clear and convincing evidence." Id. at 1965.

Even this determination would require an extension of the Smelter decision, which specifically applies to a nation's use of its own territory so as to cause damage to the territory of another. Id. It is interesting, however, to consider one decision of the United States Supreme Court cited by the Smelter tribunal, Id. at 1964. In New Jersey v. City of New York, 283 U.S. 473 (1931), an original suit in the Supreme Court, the plaintiff state sought an injunction against a public nuisance. The defendant city contended that the nuisance was not actionable since the waste involved was being dumped into the ocean and not within the waters of the United States, although pollution of New Jersey's beaches and waters subsequently ensued. The Supreme Court granted the injunction, holding that the situs of the acts creating the nuisance, whether within or without the United States, was of no importance. Id. at 481. The decision was based on the fact that the defendant was before the court and the property alleged to have been injured by such dumping was within the court's territorial jurisdiction. This apparently constitutes some authority for one nation gaining relief from pollution caused by another nation's dumping of wastes into the high seas or even into its own territorial waters. However, the Smelter rationale may limit relief to those situations where the plaintiff is able to establish clearly injury or potential injury to its territory. In addition, New Jersey involved an injunction, and thus could be distinguished from a suit for damages. It must also be noted that the decision was one of a national tribunal rather than an international one.

15See also-McDougal & Schlei 692. Initially it may be noted that the high seas are the territory of no nation. In addition, it may be pointed out that the Smelter decision is "limited to a factual situation where actual damage had already occurred." Hydeman & Berman 280. No international tribunal has ever considered a situation dealing with pollution as an abstract wrong, where no actual injury has resulted from the pollution, but where a substantial risk of such damage exists. Id. See also McDougal & Schlei 690. In New York v. New Jersey, 256 U.S. 296 (1921), New York sought to enjoin New Jersey from employing a proposed system of sewage disposal. Although the Supreme Court ultimately decided that the plaintiff "failed to show by . . . convincing evidence
maker who might be "confronted with competing claims with respect to pollution and freedom of navigation and fishing . . . [could] only resort to such sources as 'general principles of law recognized by civilized nations' [i.e., customary international law] and considerations 'ex aequo et bono [the test of reasonableness].""\textsuperscript{20}

It is evident, therefore, that little in the way of firm generalization can be gleaned from these considerations. It is clear that several of the leading nuclear powers believe that disposal of radioactive waste is a safe procedure when the requisite inquiries and precautions are taken. These nations have proceeded with disposal apparently on the assumption that under such circumstances it is a lawful use of the oceans under the doctrine of freedom of the seas. On the other hand, the uninhibited or unrestrained disposal of wastes as well as the placing of high-level wastes in the ocean as a part of a waste disposal program definitely are considered undesirable by the world-wide scientific community. It may reasonably be predicted that in the future these practices will be regarded as violative of international law.\textsuperscript{21} The carefully controlled dumping of radioactive wastes, on the other hand, presumably is not presently regarded as being violative of international law. This conclusion has prompted attempts by concerned governments to evolve proscriptions against radioactive waste disposal in the oceans on both regional and global levels.\textsuperscript{22}

Both the European Nuclear Energy Agency, which was established by the Council of the Organization for European Economic Cooperation in 1957, and the European Atomic Energy Community, which was created in 1957, have been engaged in the study of problems of radioactive waste disposal. Their efforts, however, have been directed primarily at the avoidance of damage to the waters and territory of . . . that the sewage . . . [would] create a public nuisance" or add to existing pollution, \textit{id.} at 312-13, it did consider the merits of the complaint alleging potential injury. Once again, however, the value of such precedent as an international adjudication is questionable. \textit{See Hydemann & Berman 280.}

\textsuperscript{20}McDougal & Schlei 691, \textit{citing I.C.J. Stat.} art. 38, ¶ ¶ 1(c).2.

\textsuperscript{21}For example, a special "committee of experts" working under the auspices of the International Atomic Energy Agency, see text accompanying note 35 \textit{infra}, came to the conclusion that the dumping of highly radioactive wastes could not "be recommended as an operational practice." \textit{International Atomic Energy Agency, Safety Series No. 5, Radioactive Waste Disposal into the Sea 77} (1961) [hereinafter cited as IAEA, Safety Series No. 5].

\textsuperscript{22}\textit{Hearings on Ocean Disposal of Unserviceable Chem. Munitions before the Subcomm. on Oceanography of the House Comm. on Merchant Marine and Fisheries, 91st Cong., ser. 91-31 at 125-29} (1970), lists the international agreements concerning pollution to which the United States is a party.
neighboring countries. The question of the disposal at sea of nuclear wastes seems to have been awaiting the results of attempts by international agencies to develop world-wide regulations.\textsuperscript{25}

Perhaps concern with this problem on an international level dates from 1956 when the International Law Commission (ILC)\textsuperscript{24} first considered the question of nuclear waste.\textsuperscript{25} However, at that time the discussion became entangled with the highly emotional problem of the testing of nuclear weapons at sea, and it was only with difficulty that the Commission was able to consider the disposal problem separately. The “Convention on the High Seas,”\textsuperscript{26} adopted from ILC drafts by the United Nations Conference on the Law of the Sea, reached no decision on the permissibility of nuclear weapons testing but continued an article apparently intended to be a statement of the principle that freedom of the sea is not absolute.\textsuperscript{27} It provided that:

The high seas being open to all nations, no State may validly purport to subject any part of them to its sovereignty. Freedom of the high seas is exercised under the conditions laid down by these articles and by the other rules of international law. It comprises, \textit{inter alia}, both for coastal and noncoastal states:

1) Freedom of navigation;
2) Freedom of fishing;
3) Freedom to lay submarine cables and pipelines;
4) Freedom to fly over the high seas.

These freedoms, \textit{and others which are recognized by the general principles of international law}, shall be exercised by all States with reasonable regard to the interests of other States in their exercise of the freedom of the high seas.\textsuperscript{28}

\textsuperscript{25}\textsc{HydeMAN & BERMAN 81.}\n\textsuperscript{24}The international Law Commission was established in 1947 by the General Assembly of the United Nations pursuant to Article 13 of its Charter, which provides for the encouragement of “the progressive development of international law and its codification.” U.N. Charter art. 13, ¶ 1(a).

\textsuperscript{25}The International Commission on Radiological Protection, a private group established in 1928, has consistently dealt with standards of permissible dosages and working procedures for the safe use of nuclear materials but has not advanced any specific proposals regarding radioactive waste disposal in the oceans. McDougal & Burke 864.


\textsuperscript{27}See McDougal & Burke 773.

\textsuperscript{28}Convention Art. 2.
It seems, therefore, that the Convention extended the reasonableness test to other "freedoms," which apparently would include nuclear testing and the dumping of radioactive waste.

The Convention also dealt specifically with the problem of radioactive waste disposal:

1. Every State shall take measures to prevent pollution of the seas from the dumping of radioactive waste, taking into account any standards and regulations which may be formulated by the competent international organizations.

2. All states shall cooperate with the competent international organizations in taking measures for the prevention of pollution of the seas or air space above, resulting from any activities with radioactive materials or other harmful agents.\(^{29}\)

The commentators' opinion seems to be that these general declarations were no more than admonishments to nations to cooperate in resolving the specific problems and that no enforceable duty or obligation was created.\(^{30}\)

In addition to the Convention, the Conference adopted a resolution recommending that the International Atomic Energy Agency (IAEA)\(^{31}\) take whatever action is necessary to prevent pollution of the sea by radioactive materials.\(^{32}\) The IAEA, charged generally with seeking "to accelerate and enlarge the contribution of atomic energy to peace, health and prosperity throughout the world,"\(^{33}\) established a panel of experts to study the problem of the disposal of radioactive wastes into the

\(^{29}\)Id. Art. 25.


\(^{31}\)The IAEA was established at a 1956 United Nations conference in New York. The Agency's Statute was drawn up and signed at the conference.

\(^{32}\)The resolution stated in part that

[...the International Atomic Energy Agency, in consultation with existing groups and established organs having acknowledged competence in the field of radiological protection, should pursue whatever studies and take whatever action is necessary to assist States in controlling the discharge or release of radioactive materials to the sea, in promulgating standards, and in drawing up internationally acceptable regulations to prevent pollution of the sea by radioactive material in amounts which would adversely affect man and his marine resources.]

ocean. Included among the panel’s goals is the preparation of recommendations which might form the basis for an international agreement concerning, among other things, the establishment of criteria for evaluating proposed dumping sites, registration of disposals, and monitoring disposed wastes.

In conjunction with its stated purpose, the panel published an extensive report dealing with the discharge of radioactive wastes into the hydrosphere. A major conclusion of the panel’s study was that although the production of radioactive waste is unavoidable, “the release into the sea of highly-radioactive [material] . . . cannot be recommended as an operational practice.” The panel also concluded, however, that “wastes of low and intermediate activity may safely be disposed of into the sea under controlled and specified conditions.”

To increase the safety of such disposals, the IAEA made several recommendations, including the maintenance by the IAEA of a registry of disposal sites, utilization of current International Commission of Radiological Protection studies to evaluate the suitability of proposed waste disposals, standardization of monitoring techniques, and international collaboration to review continuously the problems connected with radioactive waste disposal into the sea. Although most of these suggestions have been adopted by the IAEA in its own code of procedure, they nevertheless are bindingly imposed upon a country only when it is the recipient of installations or fissionable materials from the IAEA.

Two international conventions which bear on the problem of radioactive waste disposal have been drafted under the auspices of the

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34 The panel, established in 1959, is composed of scientists from several nations and of observers from the United Nations Educational, Scientific and Cultural Organization; the World Health Organization; and the Food and Agriculture Organization.

35 Testimony of D.W. Pritchard, 1959 Hearings 2882.

36 The report, published in the IAEA’s SAFETY SERIES, was issued in two parts, which dealt respectively with the disposal of radioactive waste into the sea and into fresh water areas. See IAEA, SAFETY SERIES No. 5, and IAEA, SAFETY SERIES No. 10, DISPOSAL OF RADIOACTIVE WASTE INTO FRESH WATER (1963). In this SAFETY SERIES the IAEA continues to present reports on various aspects of nuclear waste control. See, e.g., IAEA, SAFETY SERIES No. 6, REGULATIONS FOR THE TRANSPORT OF RADIOACTIVE MATERIALS (1965), and SAFETY SERIES No. 16, MANUAL ON ENVIRONMENTAL MONITORING IN NORMAL OPERATION (1966).

37 IAEA, SAFETY SERIES No. 5, at 77.

38 Id.

39 See note 25 supra.

40 IAEA, SAFETY SERIES No. 5 at 77-79.

The first of these is the 1962 Brussels Convention on the Liability of Operators of Nuclear Ships. Essentially, the Brussels Convention provides that the operator of a nuclear ship is "absolutely liable for any nuclear damage upon proof that such damage has been caused by a nuclear incident involving the nuclear fuel of, or radioactive products or waste produced in, such ship."

The second convention is the 1963 Vienna Convention on Civil Liability for Nuclear Damage. It imposes absolute liability upon the operator of a nuclear installation for nuclear damage upon proof that such damage was caused by a nuclear incident in the installation or involved nuclear material coming from or originating in the installation. While other articles made it clear that neither of these conventions would be applicable to vessels transporting radioactive wastes for disposal or to damage caused by radioactive pollution of the sea, it is nonetheless significant that the concept of absolute liability has been applied to the question of nuclear incidents. This formulation clearly could be applied in an international agreement concerning damage caused by the dumping of radioactive waste into the sea.

In response to growing pressure from environmentalists and ecologists, and in the absence of formal international action, many governments have taken individual initiatives. For example, in the United States the Council on Environmental Quality, noting that the amount of oceanic dumping by private and public agencies has quadrupled in the last twenty-one years, recommended legislation completely banning the disposal of all toxic materials, including radioactive wastes, into the sea. An interesting legal aspect is the
Council’s suggestion that the authority for controlling ocean pollution be based not on the United States’ sovereignty over coastal waters, but on the federal government’s power over American citizens leaving a port with a commodity. In this case the commodity would be waste products, and the effect apparently would be to empower Congress to prohibit dumping by United States citizens on the high seas as well as in coastal waters.

While the action recommended by regional and domestic agencies such as the Council on Environmental Quality may assist in controlling the pollution of the ocean from the dumping of radioactive and other waste, it seems clear that an international solution is required for a global problem. International standards such as those promulgated by the IAEA, whether comprised of total proscriptions or limitations based on the reasonableness test, must be maintained. A system for determining liability and imposing sanctions must be developed. Such a system might be effected through a convention granting to a United Nations agency, presumably the IAEA, the responsibility for issuing licenses for any dumping activity considered permissible, and for the monitoring and recording of disposals for which licenses had been granted. The agency also should have the authority to impose penalties for violation of its standards. Moreover, in the event that damage results from occurrences in packaging the waste, transporting it, placing it in the ocean, or from subsequent events connected with the deposit, strict liability should be imposed either on the operator of the installation which was the source of the waste or on the depositor. Furthermore, the agency should have the authority either to settle disputes or to refer them for international adjudication.

There naturally remains the problem of securing the assent of all nations to a convention such as that described in the preceding paragraph. It is to be hoped that in such a situation where the interests of all nations are at stake, the concert of interest will provide the necessary impetus for compliance. The compelled or voluntary

investigations indicated the existence of interim alternatives to ocean dumping and that future technological advances and new methods of recycling should greatly decrease pressures for ocean disposal. at 29. The Council also suggests as a major conclusion of their study that “a program of phasing out all forms of ocean dumping and prohibiting new sources is feasible without greatly increased costs.”

*Id.* at 33.

The 1972 United Nations Conference on the Human Environment to be held in Stockholm would provide an excellent opportunity to meet this urgent need.
cooperation of all will be essential if the pollution caused by the dumping of wastes in the ocean is to be dealt with effectively and comprehensively.

JOSEPH R. JOHN

International Law—Oil Spills and Their Legal Ramifications

Historically, man has demonstrated an unfortunate tendency to become the victim of his own technological achievements. Nowhere has this inability to cope with progress been more apparent than in the exploitation and shipment of oil. Although oil is the lifeblood of our industrialized society, it has the potential to devastate both the ecology and the economy. This realization has recently exploded in the context of increasing domestic and international concern in the wake of the Torrey Canyon incident and the blowout in the Santa Barbara Channel. Although the issues have been brought into sharp focus by these events, practical solutions are not yet available. At best, these tragedies have only served to point out the painful inadequacy of existing legislative and conventional authority in the area of oil spills and their legal ramifications.

THE EXTENT OF THE THREAT

The events surrounding the sinking of the Torrey Canyon in March, 1967, supplied much of the impetus for the present level of public concern. The problem of oil pollution, however, is neither new nor limited to such spectacular events. Reports date back to 1754, when the Russians added another "first" to their long series of exploits by becoming the first to pollute the sea with oil.¹ In that case a portion of the Caspian Sea off Baku was defiled by the leakage of a quantity of bulk oil cargo in wooden bottoms. Even before industry's conversion from steam to oil—the point at which many commentators believe oil pollution became a major concern²—domestic legislation seeking to counteract the threat was already in existence.³ Nevertheless, it took two

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¹Stubbs, Oil Pollution: Penalty and Damage Aspects, 16 U.S.N. JAG J. 140 (1962).
²Nanda, The "Torrey Canyon" Disaster: Some Legal Aspects, 44 DENVER L.J. 400, 406 (1967) [hereinafter cited as Nanda].
³E.g., Act of Aug. 5, 1886, ch. 929, § 3, 24 Stat. 329. Even though the Act did not specifically prohibit the dumping of oil in New York harbor, subsequent laws with similar wording have been construed to prohibit such discharges. See The S.S. Nea Hellis, 116 F.2d 803, 806 (2d Cir. 1941).