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Regulation of Ocean Dumping after City of New York v. Environmental Protection Agency

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THE REGULATION OF OCEAN DUMPING AFTER
CITY OF NEW YORK v. ENVIRONMENTAL
PROTECTION AGENCY

John A. Guarascio*

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I. INTRODUCTION

The oceans cover 70% of the earth and have a total water surface of 140 million square miles. As an essential component of

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the environment, they contribute to the oxygen-carbon dioxide balance in the atmosphere, affect global climate, and provide a base for the earth's water supply. Since the advent of the industrial revolution, however, the oceans have served yet another function: waste disposal. In 1979 alone, over 100 million tons of waste were dumped into United States ocean waters.

The results of such dumping have been catastrophic. By 1970, one-fifth of the nation's commercial shellfish beds were closed due to shellfish found to contain hepatitis, polio virus, and other pathogens. Moreover, dumping has caused heavy fish kills, and has created lifeless zones in the sea.

Until recently, the practice of ocean dumping was largely unregulated. In the early 1970's, however, increases in both the quantity and toxicity of ocean dumped waste led to congressional concern. Recognizing the ocean as a valuable resource in need of protection, Congress passed the Marine Protection, Research and Sanctuaries Act of 1972 (MPRSA), also known as the Ocean Dumping Act, which provides for the comprehensive regulation of ocean dumping by the Environmental Protection Agency (EPA) and the Army Corps of Engineers.

Despite congressional recognition of the dangers of ocean dumping, the decade following the enactment of MPRSA has seen both an increase in the quantity of ocean dumped material and a major reassessment of the policy assumptions underlying MPRSA. Policy makers are beginning to recognize that, although ocean dumping poses severe threats to the marine environment, the impacts of alternative disposal options may be far worse.

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2 Id.
4 1970 Ocean Dumping Report, supra note 1, at 12.
8 See generally Spirer, The Ocean Dumping Deadline: Easing the Mandate Millstone, 11 FORDHAM URBAN L.J. 2.
policy approach, known as the multimedium method of waste management, has emerged. It assumes that the disposal of waste will impute some cost to society through damage to one or a combination of the three mediums: land, air, and water. Under the multimedium method, waste is deposited in the medium or mediums in which the smallest total cost to society will result.

The multimedium view is articulated in City of New York v. United States Environmental Protection Agency. In City of New York, the District Court for the Southern District of New York held that the regulations promulgated pursuant to the Ocean Dumping Act were defective because they precluded New York City's request to ocean dump without a proper consideration of both the environmental and economic impacts of each alternative disposal method available to New York City.

In response to this finding, the EPA is currently in the process of revising its regulations to conform to the instructions of the court. This Article will discuss the impact of City of New York and outline the EPA's current attempt to revise its regulations.

The Article will first discuss the nature and dangers of waste material and the feasibility of dumping waste material in the ocean. The Article will then trace the development of a national policy toward ocean dumping and the eventual enactment of MPRSA and its regulations. Judicial review of MPRSA in the City of New York decision will then be discussed. The final sections will outline and evaluate EPA proposals for revision of the current ocean dumping regulations.

II. THE NATURE AND DANGERS OF OCEAN DUMPED MATERIAL

The damage which a given contaminant may cause in an ecosystem varies according to the type, concentration, and the form in which it is introduced to the marine environment. Only approximately ten percent of the total volume of wastes entering the oceans is the result of direct ocean dumping. Although most

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11 Id. at 2-8.
13 Id. at 1099.
14 See infra text and notes at notes 248-97.
waste enters the ocean indirectly through means such as agricultural runoff, polluted streams, or outfall pipes, the ten percent that is dumped directly into the ocean is of special environmental concern because it contains extremely harmful or toxic waste.

Toxic chemicals may kill plants and animals. More commonly, however, organisms experience sublethal effects, which may include reduced vitality or growth, reproductive failure, and interference with sensory functions. Heavy metals and PCB's may create a risk of cancer in many forms of marine life. Since these compounds are not biodegradable, they remain in the marine environment for extremely long periods of time. Toxic substances tend to concentrate in lower organisms by entering through the gills, eventually accumulating in high concentrations. Predators who feed on such organisms incorporate increased amounts of toxic substances as such substances pass up the food chain, a process known as biomagnification. Since human food sources such as shellfish have a tendency to concen-

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16 Outfalls are pipes laid on the sea floor through which treated sewage is discharged directly to the marine environment. NACOA Report, supra note 10, at 45.


18 Any substance on earth can be toxic (lethal) if the concentration is great enough in the wrong environment. In ocean dumping practices the concern is with those materials which are toxic or lethal in the range of parts-per-million or less, such as heavy metals, DDT, and PCB's. O'Halloran, Ocean Dumping: Progress Toward A Rational Policy of Dredged Waste Disposal, 12 ENVTL L. 745, 751 (1981). See also Hearings on S. 1067 Before the Subcommittee on Oceans and Atmosphere of the Committee on Commerce, 93d Cong., 1st sess. 350 (1973).


20 Id.

21 Id. See also Radin, Concern Rises as Fish Cancers are Studied, Boston Sunday Globe, Feb. 26, 1984, at 1, 14.

22 1970 Ocean Dumping Report, supra note 1, at 13. This failure to biodegrade is known as persistence. Id.

23 NACOA Report, supra note 10, at 67. Some marine organisms, such as phytoplankton, extract nutrients directly from ocean waters and can store pollutants in concentrations from several hundred to several hundred thousand times the concentration of such pollutants in the environment. Testimony of B.H. Ketchum, Hearings on S. 2005 before the Subcomm. on Air and Water Pollution of the Senate Sub Comm. on Public Works, 91st Cong., 2d Sess., ser. 13 at 2294 (1970). This is particularly disturbing in light of the fact that phytoplankton initiate the entire food web of the ocean (all marine organisms feed on phytoplankton or organisms that feed on phytoplankton). Phytoplankton produce two-thirds of the oxygen in our atmosphere. Bakalian, Regulation and Control of United States Ocean Dumping: A Decade of Progress, An Appraisal for the Future, 8 HARV. ENVTL. L. REV. 199, 196 (1984).

trate heavy metals in their tissues there is a risk that human health may be affected.\textsuperscript{25}

Organic materials may pose equally serious environmental risks even if they are non-toxic. One risk results from the fact that the dumping of such materials may cause a dramatic shortage of oxygen in a given area of water. Oxygen is required for the decomposition of organic wastes. Thus, if waste loads are too heavy, oxygen levels may become so depleted that much less oxygen is available for marine organisms.\textsuperscript{26} Such organisms may eventually die, thereby altering the diversity of marine life.\textsuperscript{27}

Where such organic wastes accumulate, they may deplete the oxygen in an area long after the dumping of additional material has stopped.\textsuperscript{28} Organic wastes are also dangerous because they contain human pathogens such as hepatitis and polio virus.\textsuperscript{29} Such pathogens may be concentrated by marine organisms and returned to humans through the consumption of shellfish.\textsuperscript{30} Moreover, humans may become infected when exposed to pathogen contaminated waters through swimming and other aquatic sports.\textsuperscript{31}

Contaminants are usually ocean dumped in three forms: dredged materials, sewage sludge, and industrial waste.\textsuperscript{32} Dredged material is the sediment removed from rivers and other waterways in order to improve navigation.\textsuperscript{33} It represents the largest category of ocean dumped waste, and its composition varies depending on its origin.\textsuperscript{34} Roughly one-third of all dredge material is contaminated in some manner.\textsuperscript{35}

\textsuperscript{25} 1970 Ocean Dumping Report, supra note 1, at 16. Between 1953 and 1960, 111 persons near Minamata Bay, Japan were either killed or suffered serious neurological damage from eating fish containing five to twenty parts per million of methyl mercury. These people ate fish an average of one-half to three times per day. In the United States, fish containing five parts per million have been found. Lumsdaine, Ocean Dumping Regulation: An Overview, 5 Ecology L. Q. 753, 756 (1975). “[A] single meal [consisting of] an adult coho salmon often contains more [of certain carcinogens] than a person would get from a lifetime of being exposed [to the same pollutants] in drinking water.” Boston Sunday Globe, supra note 21, at 14, col. 4.

\textsuperscript{26} 1970 Ocean Dumping Report, supra note 1, at 14.

\textsuperscript{27} Id.

\textsuperscript{28} Id.

\textsuperscript{29} Id. at 16.

\textsuperscript{30} NACOA Report, supra note 10, at 56.

\textsuperscript{31} Id. at 57.

\textsuperscript{32} NACOA Report, supra note 10, at 44.

\textsuperscript{33} Id. at 46.

\textsuperscript{34} Id.

\textsuperscript{35} Id. at 47.
taminants commonly include toxic metals, synthetic organics (e.g. PCB’s), and organic matter.36

Sewage sludge is the solid material remaining after waste water treatment.37 It is the second largest quantity of ocean dumped material.38 Like dredged material, its chemical composition varies depending upon the processes employed by different waste treatment plants.39 Sludge is often contaminated with toxic materials such as PCB’s and a wide variety of pathogenic bacteria and viruses.40 Currently, the only site in United States coastal waters where sewage sludge is dumped is the New York Bight Apex, an area of water about 20 kilometers (km) east of the New Jersey coast and south of the Long Island coast.41 In 1980, roughly seven million tons of sewage sludge were ocean dumped.42 This quantity is expected to increase to seventeen million tons by 1987.43

The final category of pollutants dumped at sea is industrial waste. Before 1973, the quantity of industrial waste dumped at sea each year exceeded the amount of sewage sludge dumped annually.44 Since that time, however, the EPA has reduced industrial waste dumping to about one-seventeenth the amount of sewage sludge dumping.45 Like the other two categories of waste,36 Id. Even unpolluted dredge material can be harmful to the marine environment because of the volumes in which it is dumped. Uncontaminated dredge material, for example, often smothers organisms which live or reproduce on the sea bottom (benthic organisms). Lumsdaine, supra note 25, at 755.

37 1970 Ocean Dumping Report, supra note 1, at 5.
38 Bakalian, supra note 23, at 203.
39 NACOA Report, supra note 10, at 89. The sources of wastewater entering public waste treatment plants include residences, businesses, small industries and in some cases large businesses. Id. In a process called primary waste treatment, floatable materials are removed and solids are allowed to settle. The material which remains is called sludge. Id. at 44. The resulting sludge may also undergo secondary waste treatment in which bacteria is used to decompose dissolved and colloidal organic matter (the process is sometimes called digestion). Id. The bacterial debris become part of the sludge. Id.
40 Id.
41 Id. at 44. Since the enactment of MPRSA hundreds of dumpers have phased out their activities. Most of these dumpers, however, are small. All phase-outs prior to 1979 accounted for three percent of the volume dumped in 1978. Lahey, Ocean Dumping of Sewage Sludge: The Tide Turns From Protection to Management, 6 HARV. ENVT'L L. REV. 395, 410 (1982). Although New York City is the only site in which ocean dumping still takes place, the total amount of material that is ocean dumped each year is greater than it was before the enactment of MPRSA. See NACOA Report, supra note 10, at 89.
43 Id. at 11.
44 Bakalian, supra note 23, at 203.
45 Id.
the composition of industrial waste varies depending upon its origin.\(^46\) Refinery wastes, for example, usually contain toxic inorganic wastes such as cyanides and heavy metals, while pulp and paper mill wastes often contain toxic organic constituents.\(^47\) Although the quantity of industrial dumping has been reduced significantly, such dumping still poses serious threats to the marine environment, because such wastes are extremely toxic.\(^48\)

Although ocean dumping endangers the marine environment, it has many more advocates than it did a decade ago. In considering the arguments in favor of ocean dumping, it should be remembered that the scientific community is sharply divided on the effects of ocean dumping. While the traditional wisdom suggests a policy of caution, new approaches assert that ocean dumping may be relatively innocuous in some circumstances.

III. THE ARGUMENTS IN FAVOR OF OCEAN DUMPING

There are generally two arguments advanced in favor of ocean dumping. First, there is a growing recognition that the alternatives to ocean dumping may pose greater environmental risks than those incurred in ocean dumping.\(^49\) Second, many members of the scientific community believe that the oceans possess a tremendous capacity to assimilate waste.\(^50\) Each of these arguments will be considered in turn.

If the medium of water is not used for waste disposal, the mediums of land or air must then be used. There are currently three commercially feasible alternatives to disposing waste in the medium of ocean water: landfilling, landspreading, and incineration.\(^51\) Landfilling is a process which involves impounding waste in storage lagoons, basins or pits.\(^52\) Landspreading is the use of waste as fertilizer or soil conditioner.\(^53\) Incineration is simply the burning of the waste.

A major risk posed by the landbased alternatives is that groundwater may become polluted if contaminants leach through

\(^{47}\) Id.
\(^{48}\) Id.; see also Bakalian, supra note 23, at 203.
\(^{49}\) Id.; see also Lahey, supra note 41, at 417.
\(^{50}\) Id.; see also Guarino, Nelson & Almeida, Ocean Disposal as an Ultimate Disposal Method, 51 J. WATER POLLUTION CONTROL FED’N 773-82 (1979).
\(^{51}\) Id.
\(^{52}\) Id.
\(^{53}\) Id.
the soil.\textsuperscript{54} Furthermore, toxic metals from deposited waste are thought to accumulate in the soil.\textsuperscript{55} These metals may be subsequently absorbed by crops and introduced into the human food chain.\textsuperscript{56} The presence of persistent chemicals such as PCB's in sludge raises particular concern.\textsuperscript{57}

Although incineration is the most effective method of destroying extremely toxic wastes, it may pose risks to the environment because substances which are not completely destroyed may be released into the atmosphere in the form of gases.\textsuperscript{58} Ash produced in the incineration process also raises special environmental problems due to its tendency to concentrate heavy metals and disperse them into the atmosphere.\textsuperscript{59}

In light of the dangers imposed by these alternatives to ocean dumping, the second argument in favor of ocean dumping becomes attractive. Recent studies assert that the ocean's assimilative capability is much greater than previously suspected.\textsuperscript{60} This ability is illustrated by the speed with which some well studied dump sites have recovered after harmful dumping practices have been discontinued. For example, studies conducted after the City of Philadelphia ceased its dumping operations indicated that concentrations of bacteria and viruses in local shellfish dropped enough for the Food and Drug Administration to lift restrictions on shellfishing.\textsuperscript{61} Two researchers have gone as far as to assert that the dumping of raw sewage into the coastal waters of Brazil has been relatively acceptable.\textsuperscript{62} Their reports assert that the waters of the dump site tend to disperse waste over such a large area that little harm results.\textsuperscript{63}

\textsuperscript{54} NACOA Report, supra note 10, at 53.
\textsuperscript{55} Id.
\textsuperscript{56} Id. at 60.
\textsuperscript{57} Id. at 61.
\textsuperscript{58} Id. at 49.
\textsuperscript{59} Id. at 52. The hazard may be reduced, however, by installing high-efficiency particle collectors to trap the ash before it is dispersed.
\textsuperscript{61} Guarino, Nelson & Almeida, supra note 50, at 780.
\textsuperscript{62} Id.
\textsuperscript{63} Id. at 755.
The dangers of alternatives to ocean dumping and the ocean's apparent assimilative capabilities have given rise to a new environmental approach known as the multimedium method of waste management. The premise of this theory is that once waste is produced, it must be disposed through one of the three mediums: air, water or land. The theory acknowledges that disposal will necessarily impose some risk or cost to society, regardless of which method of disposal is employed. The total cost and the total risk to society may be minimized, however, by selecting the right medium or combination of mediums in which to dispose a given waste. For example, because of its dispersive currents and its tendency to act as a natural buffer, the ocean may be the best medium for the dispersal of extremely acidic wastes, even though some environmental damage is thereby incurred. Conversely, land burial may be more suitable than ocean dumping for highly radioactive wastes, because it is considered safer to contain rather than disperse such material. Through a wise choice of alternatives, the multimedium method emphasizes the management of wastes rather than simply its disposal.

Although the case for ocean dumping is compelling in many respects, it has emerged only recently. Ocean dumping legislation was initially designed at a time when a relatively ominous assessment of the effects of ocean dumping predominated. Such an outlook is reflected in the Council on Environmental Quality's 1970 Report to the President, entitled, "Ocean Dumping: A National Policy." This policy report provided the primary impetus for the enactment of the Ocean Dumping Act.

65 Id. at note 10, at 7-9.
66 Id. at 97.
67 Id. at 100.
69 NACOA Report, supra note 10, at 10.
IV. THE DEVELOPMENT OF A NATIONAL POLICY TOWARD OCEAN DUMPING

A. The CEQ Report of 1970

A report prepared and released by the Council on Environmental Quality (CEQ) in October of 1970, entitled “Ocean Dumping: A National Policy,” made an ominous assessment of the dangers of ocean dumping and recommended that Congress act to prevent the consequential harm to the environment.\(^7\)

The CEQ report found that many ocean-dumped wastes “are toxic to human and marine life, deplete oxygen necessary to maintain the marine ecosystem, reduce populations of fish and other economic resources, and damage aesthetic values.”\(^8\) The report also asserted that the Nation’s shellfish were found to contain such contaminants as mercury, cadmium, DDT, and infectious pathogens transmitted from organic waste, such as hepatitis and polio.\(^9\) The report further noted that one-fifth of United States commercial shellfish beds had been closed due to marine pollution, and estimated a resulting loss of sixty-three million dollars of seafood catch.\(^10\) The CEQ report reasoned that as more land disposal sites neared their capacity, the United States would see a sharp increase in the frequency of ocean dumping, and a corresponding adverse impact upon marine ecology.\(^11\)

The CEQ report recommended a comprehensive approach to control ocean dumping.\(^12\) Existing legislation was piecemeal. The Army Corps of Engineers, the Water Control Administration, and the Atomic Energy Commission each had authority over some small aspect of ocean dumping, but no single agency had the jurisdiction necessary to address the problem comprehensively.\(^13\) State control, even where stringent, was found to be incomplete because it was limited to within three miles of the United States.

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\(^7\) 1970 Ocean Dumping Report, supra note 1, at IV.
\(^8\) Id. at V.
\(^9\) Id. at 16.
\(^10\) Id. at 17.
\(^11\) Id. at V. The report cites higher water quality standards as another reason for this trend, reasoning that if industry cannot pollute streams they might turn to the relatively unprotected ocean as an alternative. Id.
\(^12\) Id. at 33.
\(^13\) Id. The Federal Water Quality Administration, the Atomic Energy Commission, and the Army Corps of Engineers were the federal agencies responsible for regulating aspects of ocean dumping. Id.
Consequently, the CEQ recommended both the enactment of strict measures to regulate the field of ocean dumping, and the designation of a single federal agency with the power to set standards and issue permits. As a matter of long-term policy, the report recommended that the dumping of material clearly identified as harmful to the marine environment should be stopped entirely. The CEQ stated that it was feasible to phase out ocean dumping completely and to recycle or dispose of all waste safely on land. As a final recommendation, the CEQ recognized ocean dumping as a global problem and suggested that the United States take the initiative and obtain the international cooperation necessary to control it.

The CEQ report later provided the impetus and basis for the most comprehensive ocean dumping statute in the world: The Marine Protection, Research, and Sanctuaries Act.

B. The Marine Protection, Research, and Sanctuaries Act

1. The 1972 Act

Relying in great measure on the recommendations set forth in the 1970 CEQ report on ocean dumping, Congress enacted the Marine Protection, Research and Sanctuaries Act on October 23, 1972 (MPRSA). In enacting the legislation, Congress stated that the purposes of the Act were: (1) to regulate, as much as possible, all disposal of wastes in ocean waters; and (2) to limit strictly the dumping into ocean waters of any material which would adversely affect human health and the environment.

Pursuant to this goal, MPRSA prohibits all forms of dumping except in the limited circumstances which warrant the issuance of a dumping permit. Under the Act, such permits may only be issued when the EPA administrator determines that the dump-
ing will "not unreasonably degrade or endanger human health, welfare or amenities or the marine environment, ecological systems or economic potentialities." The burden of proving a lack of impact for the purpose of obtaining a permit lies with the applicant.

The Act further provides for joint regulation of ocean dumping by the EPA and the Army Corps of Engineers. It authorizes the EPA to issue permits for the dumping of all materials except dredge spoils. Dredge spoil permits are issued by the Army Corps of Engineers on the basis of criteria established by the EPA.

Under Title I of MPRSA, the EPA is required to consider nine factors specified in section 102(a) of the Act in establishing the criteria which it uses to review applications for ocean dumping permits:

(A) the need for the proposed dumping; (B) the effect of such dumping on human health and welfare, including economic, aesthetic, and recreational values; (C) the effect of such dumping on fisheries resources, plankton, fish, shellfish, wildlife, shorelines and beaches; (D) the effect of such dumping on marine ecosystems; (E) the persistence and permanence of the effects of the dumping; (F) the effect of dumping particular volumes and concentrations of such materials; (G) appropriate locations, and methods of disposal or recycling, including land based alternatives and the probable impact of requiring use of such alternate locations or methods upon considerations affecting the public interest; (H) the effect on alternate uses of oceans, such as scientific study, fishing, and living resource exploitation, and non-living resource exploitation; and (I) in designating recommended sites, the administrator shall utilize wherever feasible locations beyond the edge of the Continental Shelf.

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93 Id.
In addition to these nine factors which the EPA is required to consider in establishing criteria for reviewing permit applications, section 102(a) affords the EPA discretion to consider additional factors of its own choosing.\(^94\)

The EPA’s jurisdiction under MPRSA extends to an area up to three miles from the coast known as the territorial sea.\(^95\) The dumping of all waste within that three-mile limit, whether foreign or domestic in origin, is prohibited unless authorized by permit.\(^96\) In addition, the Act extends jurisdiction to an area up to an additional twelve miles beyond the three-mile limit for all material originating within the United States by prohibiting the transportation of any material through the twelve mile area (known as the contiguous zone) for the purpose of dumping it into ocean waters without a permit.\(^97\) Thus the Act has a total jurisdiction of fifteen miles from the United States coast.

Structurally, MPRSA is arranged in three titles. Title I involves the regulatory provisions previously discussed.\(^98\) Title II authorizes the Secretary of Commerce, in conjunction with the Coast Guard and the EPA, to develop an extensive program for researching and monitoring the effects of permitted dumping activities.\(^99\) Title III of the Act authorizes the Secretary of Commerce to designate as marine sanctuaries those areas of the “oceans, coastal and other waters which he finds necessary to preserve or restore for their conservation, recreational, or aesthetic values.”\(^100\)

Since MPRSA’s original enactment, Congress has amended the statute on two occasions. One amendment was enacted in 1974 to incorporate an international treaty known as the International Convention on the Prevention of Marine Pollution by Dumping of Waste (The London Dumping Convention).\(^101\) In 1977 MPRSA was

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\(^{94}\) Id.


\(^{96}\) Id. The twelve mile area is known as the contiguous zone. It is that area “contiguous with the territorial sea extending to a line twelve nautical miles seaward from the base line from which the territorial sea is measured.” 33 U.S.C. § 1411(b)(1) (1982). See Convention on the Territorial Sea and the Contiguous Zone, 15 U.S.T. 1606, T.I.A.S. No. 5639.


again amended to impose a statutory deadline to end the dumping of harmful sewage sludge. Since each of these amendments radically altered the effect of the original Act, each will be discussed separately.

2. The London Dumping Convention

While ocean dumping legislation was being introduced in Congress in the early seventies, the United States began to seek an international agreement on the regulation of ocean dumping through the United Nations Conference on the Human Environment. In June of 1971, the United States submitted to that conference a draft ocean dumping treaty similar to the legislation pending before Congress.

During November, 1972, an 80-nation conference met in London and developed the text of the International Convention on the Prevention of Marine Pollution by Dumping of Wastes (London Dumping Convention). This international treaty was signed immediately by twenty-seven nations, including the United States. At present, fifty-two nations have signed the agreement. The Convention requires each member nation to regulate the ocean dumping of substances being carried from its shores or substances transported from foreign shores by means of a member nation’s ship.

The agreement groups waste materials into three categories, each of which are governed by one of the Convention’s three

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102 Id.
104 S. REP. NO. 726, 93rd Cong., 2d Sess., reprinted in 1974 U.S. CODE & AD. NEWS 468, 470. MPRSA was actually drafted in anticipation of the Convention. See Pub. L. 92-532, supra note 85, at § 109 (provision authorizing the Secretary of State to seek international cooperation in advancement of the purpose of MPRSA). See generally Duncan, supra note 103.
105 S. REP. NO. 726, supra note 104, at 470.
106 Id.
107 Id.
109 London Dumping Convention, supra note 103, at VII.
annexes. Annex I contains a "blacklist" of substances that are absolutely banned in all but "trace" concentrations.\textsuperscript{110} These include mercury, cadmium and their compounds, organohalogen compounds such as DDT and PCB's, persistent plastics, oil, high level radioactive wastes and chemical and biological warfare agents.\textsuperscript{111} Annex II specifies certain substances which may not be dumped in the ocean unless authorized by a special permit. These substances include heavy metals, lead, copper, zinc, cyanides, fluorides, waste containers and other bulky wastes that could obstruct fishing or navigation, and medium and low level radioactive waste.\textsuperscript{112} All substances not listed in Annexes I and II may be dumped under a general permit, provided that the applicant complied with special technical considerations found in Annex III.\textsuperscript{113} These considerations include the quantity of the substance to be dumped, its composition, form, physical and chemical properties, toxicity, persistence, characteristics for accumulation and biotransformation, susceptibility to physical and chemical change in the marine environment, the probability of tainting marine life, as well as characteristics of the dumping site.\textsuperscript{114}

There are great similarities between MPRSA and the Convention. When Congress amended MPRSA in 1974 to incorporate the Convention, the only changes that were necessary to bring MPRSA into complete conformity with the treaty were: (1) the addition of a jurisdictional basis over material dumped in the contiguous zone; (2) the extension of the EPA regulatory authority to include oil taken on board a vessel or aircraft for the purpose of dumping; and (3) the addition of a provision to section 102(a)\textsuperscript{115} requiring the administrator to adhere to the terms of the Convention when promulgating criteria for reviewing permit applications under that section.\textsuperscript{116} Where the requirements of the

\textsuperscript{110} Id. at art. IV, V, VI and Annex I. Article V provides an exception to the Annex I prohibition in emergencies in posing unacceptable risk relating to human health and admitting no other feasible solution. Two other exceptions to the prohibition appear in Annex I itself which states that the Annex does not apply to: (1) substances which are rapidly rendered harmless by physical, chemical or biological processes of the sea and (2) trace contaminants. Both of these, however, are subject to the provisions of Annexes II and III where appropriate.

\textsuperscript{111} Id. at Annex I.

\textsuperscript{112} Id. at Annex II.

\textsuperscript{113} Id. at art. IV.

\textsuperscript{114} Id. at Annex III.

\textsuperscript{115} See infra text at note 238.

\textsuperscript{116} S. REP. NO. 726, supra note 104, at 471.
Convention are stricter than those of MPRSA, the EPA administrator is explicitly required to adhere to the requirements of the Convention.\textsuperscript{117}

3. The 1977 Amendment to MPRSA: A Deadline for the Cessation of Ocean Dumping

In promulgating regulations to implement MPRSA, the EPA sought to eliminate the ocean dumping of all sewage sludge by December 31, 1981. In 1977 Congress amended MPRSA to impose a statutory deadline of December 31, 1981 for the cessation of sludge dumping, thus adding congressional force to the agency's regulations.\textsuperscript{118} The amendment would seem to work an absolute prohibition upon the ocean dumping of all sewage sludge. However, the following provision, which defines the term sewage sludge, poses a possible qualification:

For the purposes of this section the term sewage sludge means any solid, semisolid or liquid waste generated by a municipal wastewater treatment plant the ocean dumping of which may unreasonably degrade or endanger human health, welfare, marine environment, ecological systems or economic potentialities.\textsuperscript{119}

This provision raises the question of whether the 1977 amendment imposes an absolute prohibition of ocean dumping after the deadline as the EPA initially intended. If Congress did not intend to impose an absolute deadline, why did it enact the amendment? If Congress intended to impose an absolute deadline, why did it add a definition of sewage sludge which included language that might exempt reasonable sludge dumping?

The legislative history behind the amendment does not clarify

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To the extent that he may do so without relaxing the requirements of this subchapter (Title I of MPRSA as amended), the administrator, in establishing or revising such criteria, shall apply the standards and criteria binding upon the United States under the Convention including the Annexes.
\textsuperscript{118} 33 U.S.C. § 1412a(a) (1982). The section provides:
The Administrator of the Environmental Protection Agency (hereinafter referred to in the section as the Administrator) shall end the dumping of sewage sludge into ocean waters or into waters described in this section ... as soon as possible after the date of enactment of this section, but in no case may the administrator issue any permit, or any renewal thereof (under Title I of the Marine Protection Research and Sanctuaries Act of 1972) which authorizes any such dumping after December 31, 1981.
\textsuperscript{119} 33 U.S.C. § 1412a(b) (1982).
\end{flushleft}
these issues because legislators seem to have had varied reasons for passing the amendment. First, in the summer of 1976 there was a large fish kill in the mid-Atlantic Ocean from Long Island to Delaware. In the same summer, the beaches of Long Island had to be closed for health reasons when large amounts of waste material washed ashore. Both these events were attributed to ocean dumping and consequently raised congressional concern.\textsuperscript{120} Second, Congress displayed some dissatisfaction with the EPA's leniency in issuing certain kinds of permits for materials which did not fully meet the EPA's own criteria.\textsuperscript{121} Finally, some legislators expressed the intent to end ocean dumping entirely.\textsuperscript{122} These varied motivations later proved to be a major obstacle to the EPA in interpreting MPRSA and in promulgating regulations pursuant to the amended statute.

\textit{C. The Current Ocean Dumping Regulations}\textsuperscript{123}

The current ocean dumping regulations designate five classes of permits to regulate different types and amounts of waste material: general permits, special permits, interim permits, emergency permits and research permits.\textsuperscript{124} General permits are issued for the disposal of small quantities of non-toxic materials.\textsuperscript{125} The EPA issues special permits for the dumping of all materials that are not covered by a general permit and would not unreasonably degrade the environment "because of either the concentrations or conditions" in which they would be dumped.\textsuperscript{126} The greatest concentration of a toxic or detrimental substance for which dumping is allowed under a special permit—"the limiting permissible


\textsuperscript{121} Id. at 3264. See infra text at notes 172-74.


\textsuperscript{123} 40 C.F.R. §§ 220-230 (1979). The EPA originally enforced MPRSA by a direct application of the factors listed in § 102(a) of the Act. It did this as an interim measure until it could formulate formal criteria. See Interim Regulations Governing Transportation for Dumping of Material in Ocean Waters, 33 Fed. Reg. 8727 (1973). The formal regulations were issued on October 15, 1973 and they established the basic permit system still in current use. See Final Regulations and Criteria on Ocean Dumping, 38 Fed. Reg. 26, 610-21 (1973), (codified at 40 C.F.R. §§ 220-230 (1974)). These regulations were revised again in 1977 to adopt recent advances in marine science as a part of the permit evaluation process. With minor revisions the 1977 regulations are still in effect.

\textsuperscript{124} 40 C.F.R. § 220.3 (1982).

\textsuperscript{125} 40 C.F.R. § 220.3(a) (1982).

\textsuperscript{126} 40 C.F.R. § 220.3(b) (1982).
concentration"—is determined by a laboratory test. Substances which do not qualify for a general or a special permit might be granted an interim permit at the discretion of the administrator. In order to qualify for an interim permit, however, the applicant must agree to a plan to either eliminate the discharge entirely or to bring it within the parameters of a general or special permit. All interim permits expire one year from the date on which they were issued. The issuance of a new interim permit is tied to the completion of phases of the applicant's plan. The applicant is required to show progress and commitment to the plan in order to obtain a new interim permit after the old one has expired.

The remaining two categories of permits, emergency permits and research permits, are issued only in narrowly defined circumstances. An emergency permit can only be obtained where there is "demonstrated to exist an emergency requiring the dumping of such material which poses an unacceptable risk relating to human health and admits no other feasible solution." Research permits can be issued by the administrator only where he determines that the scientific merit of a proposed project studying the impact of hazardous materials on the marine environment outweighs the potential damage which might occur from the dumping.

The regulations contain criteria to be used in deciding which type of permit should be issued. In establishing this criteria the EPA reviewed the factors it is required to consider under section 102(a) of MPRSA as well as considerations of the EPA's own choosing. Because section 102(a) grants the EPA discretion to consider additional factors in establishing criteria, the EPA's criteria reflect but are not identical to the section 102(a) factors.

The EPA's criteria consist of seven subparts, which are used to

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127 40 C.F.R. § 227.27 (1982).
128 40 C.F.R. § 227.3(d) (1982).
129 Id.
130 Id.
131 40 C.F.R. § 227.3(c). In such situations, the Secretary of State must be notified, and he in turn must notify other member nations of the London Convention as required by the provisions of the Convention. Id. See London Dumping Convention, supra note 103, at art. V 2A.
132 40 C.F.R. § 227.3(e) (1982).
evaluate a given application in two stages.\textsuperscript{135} In the first stage, the EPA must evaluate the environmental impact of the proposed dumping.\textsuperscript{136} Pursuant to subpart B, technicians make an assessment of environmental impact through the use of laboratory tests in which live organisms are exposed to water collected from the proposed dumpsite (bioassay tests).\textsuperscript{137} Subpart B is a threshold test. Materials which fail to meet the requirements of subpart B are determined to “unreasonably degrade the marine environment” and can qualify only for an interim permit (which requires a commitment to phasing out the dumping practice).\textsuperscript{138} Subpart B also designates certain materials, which are prohibited except in trace concentrations (section 227.6) and certain substances which are absolutely prohibited (section 227.5).\textsuperscript{139} If the proposed dumping meets the standards of subpart B, the application enters the second stage of the process where the EPA must determine whether the requirements of subparts C, D, and E are met.\textsuperscript{140} Under subpart C the need of the applicant for the proposed dumping is determined.\textsuperscript{141} Evaluation of the application under subpart D determines the impact of the proposed dumping on aesthetic, recreational and economic values.\textsuperscript{142} Finally, subpart E determines the impact of the proposed dumping on other uses of the ocean.\textsuperscript{143} If the requirements of C, D, or E are not met, the permit application will be denied.\textsuperscript{144}

Even if an applicant fails to satisfy the requirements of subpart B initially, an interim permit may still be issued for the material.\textsuperscript{145} An interim permit allows the dumping of unacceptable material on an interim basis as efforts are made to either phase out the dumping or bring the waste into conformity with the ocean dumping criteria.\textsuperscript{146} In order to obtain an interim permit an applicant must develop a plan which would eventually eliminate the ocean disposal of the waste or bring the waste into compliance

\textsuperscript{135} See 40 C.F.R. §§ 227.2, 227.3 (1982).
\textsuperscript{136} 40 C.F.R. § 227.2 (1982).
\textsuperscript{137} 40 C.F.R. § 227.6(c) (1982).
\textsuperscript{138} 40 C.F.R. § 227.3 (1982).
\textsuperscript{139} See 40 C.F.R. § 227.5 (1982).
\textsuperscript{141} Id. § 227.14.
\textsuperscript{142} Id. § 227.17.
\textsuperscript{143} Id. § 227.20.
\textsuperscript{144} Id. § 227.2.
\textsuperscript{145} Id. §§ 227.2(b) and 227.3.
\textsuperscript{146} Id. § 227.23.
\textsuperscript{147} Id.
with the requirements for a general or specific permit. In addition, the applicant must meet the following three requirements: (1) the material proposed for dumping must not contain prohibited substances in greater than trace amounts; (2) the applicant must show that there is a need to dump in accord with subpart C and there are no available alternatives for disposal; and (3) the need of the applicant to ocean dump (subpart C) must be of greater significance to the public interest than the potential for adverse effect on an aesthetic, recreational or economic values, or on other uses of the ocean as determined by subparts D and E.

Under these current regulations applications which fail subpart B are determined to “unreasonably harm” the environment and can only qualify for interim permits. Because materials are determined to “unreasonably harm” the environment under subpart B before MPRSA factors such as the availability of alternatives or the need to ocean dump have been considered, subpart B has been said to result in a “conclusive presumption of unreasonable harm.” If subpart B does in fact result in such a presumption, then the EPA regulations could be said to undermine congressional intent by precluding a full consideration of the factors which the EPA is required to consider under MPRSA. Whether subpart B creates a conclusive presumption is addressed in City of New York v. United States Environmental Protection Agency.

V. JUDICIAL REVIEW OF MPRSA: CITY OF NEW YORK v. EPA

Since the early 1900’s the City of New York has been dumping various forms of waste into an area located off the coast of New York and New Jersey, known as the New York Bight Apex. It is currently the only ocean dumping site in the United States. The Bight provides a final repository for approximately seven million wet tons of sludge each year.

After the enactment of MPRSA, such dumping took place under a series of interim permits issued by the EPA upon the condition that New York City would implement an alternate plan for dis-

147 Id. §§ 227.2(b) and 227.3.
149 Id.
150 Spier, supra note 8, at 10.
151 NACOA Report, supra note 10, at 44.
posal of its waste on land by December 31, 1981 in accordance with the 1977 amendment.\textsuperscript{154} Pursuant to this agreement, New York City developed a short term plan which involved composting its sludge and landspreading it on various sites throughout the City.\textsuperscript{155} If this plan had been implemented, it might have cost over two hundred million dollars.\textsuperscript{156} Moreover, because of the limited amount of land available for this purpose, the useful life of such an operation may have been only about eight years.\textsuperscript{157} After this period, the City might have had to design and implement another, longer-term plan, at considerable cost.\textsuperscript{158} The City had reservations about the cost of its alternatives and on several occasions before the 1981 deadline, it petitioned the EPA for renewal of its permit past the 1981 deadline.\textsuperscript{159} In support of its petition, the City attempted to offer evidence to prove that the cessation of dumping in the Apex would not result in an appreciable improvement in the marine environment.\textsuperscript{160} The City asserted that the harm caused to the environment by its dumping practices was negligible in light of the damage caused by the larger quantity of contaminants entering the area through outfall pipes which discharge their waste into the Hudson River.\textsuperscript{161} The City also offered to prove that the alternative disposal plan would cause more harm to the land and to human health than ocean dumping would cause to the marine environment.\textsuperscript{162} The EPA, however, claimed that the 1977 amendment to MPRSA absolutely prohibited the dumping of harmful sludge after December 31, 1981 and therefore denied the City’s petition without hearing any of its evidence.\textsuperscript{163} The City subsequently brought suit to compel the EPA to consider its evidence.\textsuperscript{164}

Before the District Court for the Southern District of New York, the City contended that in enacting the 1981 deadline, Congress only intended to prohibit dumping which “unreasonably degraded the marine environment.”\textsuperscript{165} It further asserted that the rea-

\begin{footnotesize}
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\item \textsuperscript{154} 543 F. Supp at 1085.
\item \textsuperscript{155} Id.
\item \textsuperscript{156} Id. at 1086.
\item \textsuperscript{157} Id.
\item \textsuperscript{158} Id.
\item \textsuperscript{159} Id.
\item \textsuperscript{160} Id.
\item \textsuperscript{161} Id.
\item \textsuperscript{162} Id.
\item \textsuperscript{163} Id.
\item \textsuperscript{164} Id.
\item \textsuperscript{165} Id.
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sonableness of the dumping could be determined by the EPA only after full consideration of both the economic and environmental costs imposed by the City's available alternatives. The City argued that section 102(a) of MPRSA required the EPA to consider such factors in determining the reasonableness of the dumping.

The EPA countered that the 1977 amendment was an absolute ban on ocean dumping after the 1981 deadline and that the factors were therefore not applicable. The EPA also asserted that MPRSA required the agency to consider such factors only in promulgating criteria for the issuance of permits. It argued that MPRSA did not require the EPA to apply these factors to each individual permit application.

The court, in City of New York, interpreted the 1981 deadline to prohibit only dumping which unreasonably degraded the environment. The court reasoned that had Congress intended a flat prohibition of all ocean dumping, the existing provision defining sludge would have been unnecessary; Congress simply would have defined sewage sludge as the product of municipal wastewater treatment. In adopting this interpretation the court pointed to the legislative history of the 1977 amendment, which suggested that Congress enacted the amendment because it believed that the EPA had been excessively lenient in authorizing continued dumping under interim permits. The court relied on a House report, which states concern that the EPA had fallen into the practice of issuing these permits liberally on a showing of the applicant's financial hardship or of good faith to phase out ocean dumping. On this basis, the court concluded that Congress, by enacting the 1977 amendment, intended to stop the EPA from issuing permits for the dumping of material which violated the EPA's own criteria. The opinion, therefore, viewed the amendment as a reaffirmation of the overall purpose of MPRSA to stop all ocean dumping that causes unreasonable harm to the environment.

The court further held that "reasonableness" for the purpose of

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166 Id.
167 Id.
168 Id.
169 Id.
170 Id. at 1109.
171 Id. at 1110.
172 Id. at 1110, 1111.
173 Id.
174 Id.
applying the 1981 deadline could only be defined by the EPA by balancing the factors of section 102(a). The opinion recognized that during this process, the EPA is afforded considerable discretion both in assigning weight to various factors and in considering additional ones. The court emphasized, however, that at no time may the EPA omit any factor entirely. Because the court held that it is impermissible to omit any section 102(a) factor in determining whether to issue a permit, it concluded that the current regulations were defective in several respects.

What the court found most objectionable was that under the current regulations, materials which fail to meet the standards of subpart B are termed "unreasonably harmful" solely on the basis of environmental impact considerations. Because this determination is made without a full consideration of section 102(a) factors, such as the need of the applicant for the proposed dumping and the effects of alternatives, the City of New York court concluded that subpart B of the current regulations thus creates a conclusive presumption of unreasonable harm, which is impermissible under section 102.

The court found two other defects in the EPA's regulations based on requirements which the court inferred from MPRSA. The first is a cost evaluation requirement which the court derived from the section 102(a) factor requiring the EPA to consider the need for ocean dumping. The EPA's position in the City of New York case was that the technology existed to end all ocean dumping after the December, 1981 deadline. Under this view, New York City did not have sufficient need to ocean dump in light of the harsh environmental impact of its proposed dumping. While the court conceded that the technology to end New York City's ocean dumping may be feasible if enough money were spent on a given project, it found that the costs of alternatives are a limitation on their availability. Apparently subscribing to the unstated proposition that need is greater where alternatives are less available, the court concluded that, "absent proof of intolerable

\[175\] Id. at 1089.
\[176\] Id. at 1098.
\[177\] Id. at 1092.
\[178\] Id. at 1099.
\[179\] See Id. at 1099-1100.
\[180\] See Id. at 1099-1108.
\[181\] Id. at 1103.
\[182\] Id. at 1104.
\[183\] Id.
damage, cost is necessarily a relevant element" which must be considered under section 102(a) of MPRSA.184

The second requirement derived from MPRSA by the court concerns alternatives. The court observed that the EPA subjected New York City's proposed dumping to a high level of scrutiny under the environmental impact criteria of subpart B; yet in contrast, the EPA conducted only cursory tests to determine the suitability of landbased alternatives.185 Judge Sofaer found that under MPRSA, the same level of scrutiny used to evaluate the dangers of ocean dumping must be used in evaluating the dangers of alternatives.186 Accordingly, the court held that the EPA's failure to engage in such scrutiny was arbitrary and capricious.187

In rendering its decision, the court made no determination as to whether New York City's proposed dumping was, in fact, unreasonably harmful.188 Rather, the court held that the EPA was required to consider the evidence offered by New York City, and that the EPA must revise its regulations to remove the invalid presumption of harm created by subpart B.189

Judge Sofaer's decision in City of New York has been praised as a reasonable approach to ocean dumping legislation and severely criticized as an unjustifiable interference with the broad degree of discretion afforded the EPA by Congress in implementing MPRSA.190 In any event, the decision has been influential. The EPA has chosen not to appeal the City of New York decision, and the agency is currently in the process of revising its regulations to comply with the court's holding.

It can be argued that City of New York has limited precedential value. Close analysis of the opinion demonstrates that if new regulations are promulgated in order to comply with City of New York, they would be susceptible to a number of new challenges to their validity.

184 Id.
185 Id. at 1107.
186 Id. at 1105-08.
187 Id. at 1108.
188 Id. at 1115.
189 Id. at 1115, 1099.
A. The "Unreasonable Presumption of Subpart B"

There are two valid reasons for questioning the court's finding of an "unreasonable presumption" in subpart B. First, this view contradicts prior case law. Second, the court's reasoning and holding with respect to subpart B is in many ways ambiguous and contradictory.

In *National Wildlife Federation v. Costle*, the validity of the EPA's regulations were challenged on the grounds that certain section 102 factors were not applied to dredged waste material during the permit application process. In *Costle*, the D.C. Circuit held that the EPA did not have to include literally the section 102(a) factors in its criteria. Accordingly, the language of Chief Judge J. Skelly Wright's opinion sharply contradicts *City of New York'*s holding that in reviewing applications for dumping permits, "the EPA must establish criteria that lead the agency to consider the statutory factors on a case by case basis." The circuit court asserted:

> We hold today that the administrator is not required to include in the criteria, in any literal sense, the evaluation factors listed in the Act or the Convention. Rather, he will have satisfied the requirements of Section 102(a), by considering those factors, by taking them into account when he establishes criteria .... [Upon consideration of the factors], he may rationally conclude that the evaluation factors require certain criteria for one kind of waste and other criteria for another (emphasis added).

It is clear that the *Costle* decision does not require the EPA to use section 102(a) factors in reviewing individual applications for ocean dumping; rather, it only requires the section 102(a) factors be considered in establishing criteria.

It is important to note that the *Costle* court applied this rule and obtained the result that dredged material was not different enough from non-dredged material to warrant different treatment. The court could have disposed of the case by requiring that the same section 102(a) factors be applied in regulating all materials, yet it was careful to set out a general rule which

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193 Id. at 135.
194 543 F. Supp. at 1089.
195 629 F.2d at 135.
196 Id.
preserved the EPA’s discretion to regulate different materials differently. Judge Sofaer only applied the Costle holding as it regarded the disparate treatment of dredged as opposed to non-dredged material.197 The Costle decision should not be limited to this narrow issue, however, because the Costle court was careful to focus its analysis on the more general issue of whether the EPA was bound to apply each factor in every regulatory decision.198

There is ample statutory support for preserving wide agency discretion. Section 102(a) of MPRSA provides that in establishing ocean dumping criteria “the [EPA] Administrator shall consider but not be limited in his consideration to the [section 102(a) factors].”199 In establishing criteria, therefore, the agency may use additional factors of its own choosing. If the section 102(a) factors were meant to be balanced (as Judge Sofaer agrees they should be200), then the EPA may tilt the balance in a certain direction by considering additional factors. The issue of environmental impact, for the sake of argument, could determine whether a permit is granted if the agency were to add additional factors which are protective of the environment.

The City of New York actually attempted to recognize the wide degree of discretion afforded by MPRSA. 201 Yet it curtailed agency discretion by determining that subpart B was invalid.202 By attempting to both recognize agency discretion and curtail it at the same time, City of New York employs ambiguous language and appears contradictory. For example, the court held that, “...the EPA must establish criteria that lead the agency to consider all of the statutory factors on a case by case basis.”203 The opinion, however, allows the omission of certain factors:

The EPA may lawfully adopt criteria, instead of relying directly upon the factors described in the Act, and the criteria may permit the EPA reasonably to treat some factors as inapplicable in specified situations. Nothing in the Act requires that the EPA engage in a comprehensive balancing of the factors in deciding every permit application.204

197 543 F. Supp. at 1092.
198 629 F.2d at 135.
200 543 F. Supp. at 1089.
201 See infra text at notes 204-05.
202 543 F. Supp. at 1103.
203 Id. at 1089.
204 Id. at 1098.
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Under this logic, as long as the section 102(a) factors were considered by the EPA in establishing the criteria, the EPA may omit section 102(a) factors in certain cases. Another portion of the opinion states this explicitly:

To comply with the Act, the EPA must have undertaken an informed balancing process at least in its formulation of criteria, if the agency is to be allowed to dispense with such a balancing process in the case-by-case application of the criteria.205

The proposition that the EPA is required to consider the section 102(a) factors only in establishing the regulations was precisely the EPA’s position in City of New York.206 It is quite unclear why the court initially rejected the EPA’s position only to adopt it later in the opinion. If the EPA is free to consider section 102(a) and omit factors, why was subpart B invalid? When is it impermissible to omit factors? Which factors is it permissible to omit?

The City of New York court eventually announces a standard which ameliorates some of the opinion’s ambiguities and attempts to answer these questions. This standard however is itself ambiguous, and offers no clear rule to delineate the limit of the EPA’s discretion. The standard is as follows:

\[\ldots\] neither the statutory language nor the legislative history supports the view that the EPA may use its authority in such a manner as to allow it to exclude any factor whose consideration is necessary for rational decision making.207

The limit, therefore, which the court placed on the EPA’s discretion is that it may only omit those section 102(a) factors from its final criteria which are not necessary for rational decision making. At first glance this appears to be the arbitrary and capricious standard of section 706(A)208 of the Administrative Procedure Act (APA).209 The court’s use of the “necessary for rational decision-making” standard, however, indicates that this standard is much more complicated than that of the APA. Moreover, close scrutiny reveals that the court’s standard accorded much less

205 Id. at 1099.
206 Id. at 1092.
207 Id.
209 “The reviewing court shall \ldots (2) hold unlawful and set aside agency action, findings, and conclusions found to be \ldots (A) arbitrary, capricious, an abuse of discretion, or otherwise not in accordance with law.” 5 U.S.C. § 706(A) (1982).
discretion to the EPA than the arbitrary and capricious standard
deems appropriate.

**B. The Court’s Standard of Review**

Since the regulations the EPA promulgated pursuant to MPRSA are informal rulemaking under the APA, the arbitrary
and capricious standard of review applies.\(^{210}\) Under this standard, the scope of judicial review is limited to an inquiry of whether the agency decision was based on consideration of the relevant factors and whether the agency committed a clear error of judgment.\(^{211}\) In ocean dumping cases, this standard has been narrowly applied.\(^ {212}\)

In *Bergen County Utilities Authority v. United States Environmental Protection Agency*,\(^{213}\) for example, the United States District Court for the District of New Jersey found that the EPA’s denial of Bergen County’s interim ocean dumping permit was neither arbitrary nor capricious.\(^ {214}\) In doing so, the court joined a number of well-cited opinions for the proposition that the court must not substitute its judgment for that of an agency authorized to exercise rulemaking functions in an area where the agency possesses a unique expertise.\(^ {215}\) The court must affirm the agency’s decision if there was a rational basis for it.\(^ {216}\) In another ocean dumping case, *National Wildlife Association v. Benn*,\(^ {217}\) the District Court of the Southern District of New York used the same narrow scope of review to find that the pooling of certain bioassay tests under the ocean dumping regulations was permissible.\(^ {218}\)


\(^{212}\) Manatee County v. Gorsuch, 554 F. Supp. 778, 782 (D.D.C. 1982). Bergen County Utilities Authority v. United States Environmental Protection Agency, 507 F. Supp. 780, 784 (D.N.J. 1981); National Wildlife Federation v. Benn, 491 F. Supp. 1234, 1245 (S.D.N.Y. 1980). In National Wildlife Federation v. Benn the court upheld certain EPA bioassay tests used to administer MPRSA. The court said that a narrow scope of review was appropriate and stated, “The interpretation of an agency that not only promulgated the regulation but is also responsible for its administration is entitled to great respect.” *Id.* at 1245.

\(^{213}\) 507 F. Supp. 780.

\(^{214}\) *Id.* at 784.


\(^{216}\) *Id.*

\(^{217}\) 491 F. Supp. 1234.

\(^{218}\) *Id.* at 1248.
Scientific data was introduced by the National Wildlife Federation to indicate otherwise, but the court deferred to data supplied by the EPA and the Army Corps of Engineers because of their expertise in the field. As previously mentioned, the D.C. Circuit in *Costle* was especially careful to preserve agency discretion even though the court’s holding was adverse to the Army Corps of Engineers.

On the basis of these precedents it can be forcefully argued that *City of New York* exceeded its scope of review when holding that subpart B creates an unreasonable presumption. *City of New York* found the presumption of subpart B to be unreasonable for two reasons: (1) the bioassay tests were done in a laboratory and therefore do not “take into account ... [the proposed dumping’s] effect upon the area in which it is to take place,” and (2) “the quality of the existing site and its surrounding area could not be expected to improve significantly, even if sludge dumping were terminated.” As to the bioassay tests, it is reasonable to assume that the agency has gained considerable expertise in conducting them. Deference should be allowed the agency in accord with *Bergen County Utilities Authority* and *National Wildlife Federation v. Benn,* and *Costle.* With respect to the projected improvement of the dumping area, it is not necessarily irrational to attempt the restoration of an area that appears to be hopelessly contaminated. If unreasonable degradation must be equated with additional degradation at a given dumpsite, MPRSA would have little or no effect on areas of the ocean already heavily polluted such as the New York Bight. Did Congress shape such a limited role for MPRSA? Nothing in the language or the legislative history of the statute suggests that Congress was willing to exempt heavily polluted areas of the ocean from the statute.

In effect, the court’s decision in *City of New York* substitutes a cost-benefit analysis for the EPA’s scientific and environmentally protective procedures. This is evident in the court’s holding that

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219 *Id.*

220 See supra text at notes 197-98.

221 See 543 F. Supp. 1099-1102.

222 *Id.*

223 507 F. Supp. at 784.

224 491 F. Supp. at 1245.

225 629 F.2d at 135; see supra text at notes 195-198.

226 Anderson, supra note 191, at 20.

227 *Id.*

228 Bakalian, supra note 23, at 222.
it was arbitrary and capricious for the EPA to protect the ocean regardless of the cost.\textsuperscript{229} It is arguable that this holding also exceeds the permissible standard of review. Although MPRSA does not require the EPA to consider cost in connection with applications for ocean dumping permits, the court derives a cost requirement from section 102(a) which compels the agency to consider the need for the proposed dumping.\textsuperscript{230} The court’s logic seems to be that where the cost of alternatives are greater, the need for the proposed dumping is greater.\textsuperscript{231} Even if the need requirement of MPRSA does require the EPA to consider cost, the court’s holding is nonetheless problematical. There are many different ways to evaluate cost. The court used a method that might be termed an incremental cost-benefit analysis. Judge Sofaer noted that New York City’s alternative imposed a capital cost of $125 million and an annual operating cost of $12 to $15 million.\textsuperscript{232} The court compared this relatively large expenditure to the three million it had cost New York City to ocean dump.\textsuperscript{233} Because the court found that the improvement in the New York Bight was not worth the incremental expenditure over the cost of ocean dumping, it found the EPA’s decision to be arbitrary and capricious.\textsuperscript{234} Arguably, this holding is not valid since no provision of MPRSA requires the EPA to compare the incremental cost of alternatives to benefits. If it was at all proper within the arbitrary and capricious standard of review for the court to derive a cost requirement, it should have examined the economic feasibility of alternatives.\textsuperscript{235} Such an analysis would simply entail an inquiry into whether enough money is available to implement a given

\textsuperscript{229} 543 F. Supp. at 1105.
\textsuperscript{230} Id. at 1103.
\textsuperscript{231} Id.
\textsuperscript{232} Id. at 1104-05.
\textsuperscript{233} Id.
\textsuperscript{234} Id. at 1105.
\textsuperscript{235} See American Textile Manufacturers Institute v. Donovan, 452 U.S. 490 (1982). There the United States Supreme Court clearly rejected the imposition of a cost-benefit analysis upon an administrative agency unless it is explicitly required by Congress. In Donovan representatives of the cotton industry challenged certain safety standards implemented under the Occupational Safety and Health Act (OSHA). Nowhere within OSHA did there explicitly appear language requiring OSHA to consider the cost imposed by the Standards. The Act merely required that safety measures and standards promulgated by the agency be “feasible.” The Court found that, “When Congress has intended that an agency engage in cost-benefit analysis, it has clearly indicated such intent on the face of the statute,” Id. at 510. It is therefore highly questionable whether the kind of cost-benefit analysis advocated by the City of New York is required by EPA under MPRSA.
project. An economic feasibility requirement might be justified under the arbitrary and capricious standard on the grounds that an alternative cannot rationally be considered at all unless enough money is available to implement it. An incremental cost-benefit analysis, on the other hand, is not warranted by the arbitrary and capricious standard because it is not necessarily irrational to spend sums which are quite large in relation to the cost of ocean dumping. Expensive ocean dumping alternatives might be considered necessary in order to force technological solutions. The development of technological solutions is in fact part of the legislative intent of MPRSA. In contrast to the economic feasibility analysis, the incremental cost-benefit analysis is likely to discourage the development of technological solutions. This is because ocean dumping is likely to be favored whenever an incremental cost-benefit analysis is conducted; until technology progresses, ocean dumping will be much cheaper than any other alternative.

C. The London Dumping Convention

One of the most disturbing aspects of City of New York is that neither the EPA nor the court considered the applicability of the London Dumping Convention. This failure to consider the Convention is surprising in view of the fact that the Convention has been incorporated by MPRSA and thereby possesses the full force and effect of domestic law.238 City of New York contradicts the Convention since high concentrations of certain blacklisted substances were a major reason that New York City's sludge failed the bioassay tests of subpart B.239 As mentioned earlier, Annex I of the Convention contains a "blacklist" of substances which are banned from ocean dumping.

237 See Bick & Kamlet, supra note 191, at 10034. The authors assert that: Because the costs of ocean dumping are often so low, and because the environmental impacts of ocean dumping are still so speculative, the adoption of the type of balancing test propounded by Judge Soffeier is tantamount to a government sanctioned preference for ocean disposal.

Id.
239 15 Env't Rep Cas. (BNA) 1965, 1979 (S.D.N.Y. 1981). "The City's sludge has been found unacceptable because of concentrations of mercury and other heavy metals in excess of those specified in Subpart B." Id.
in all but "trace concentrations." While the term "trace concentration" was originally vague in both the Convention and MPRSA, recent developments suggest that it was not intended to be defined as an exception that swallows the rule. At the 1978 annual meeting of consulting parties to the Convention, guidelines were adopted which provide more precise definitions of "trace contaminants" and specifically include bioassays of the type used by the EPA as an appropriate test procedure. Because the Annex I list was intended as an absolute prohibition, and New York City's sludge contained some of the Annex I materials in greater than trace amounts, the EPA's environmental impact criteria should not have been judged arbitrary and capricious. This is especially clear in view of the fact that the London Dumping Convention prohibits the dumping of Annex I materials without regard to the need to dump, availability of alternatives, or costs and impacts of land-based disposal.

VI. THE PROMULGATION OF NEW REGULATIONS

Discussion of the City of New York opinion reveals many potential conflicts which the EPA must attempt to resolve in promulgating new regulations. If the EPA publishes regulations allowing ocean dumping because of cost or need, the EPA may violate Annex I of the London Dumping Convention. If the EPA prohibits Annex I substances, the prohibition may be judged arbitrary and capricious under the standards of the City of New York. Interim permits have been useful in forcing technology and in phasing out ocean dumping in several cities, but dicta in

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240 See supra text at notes 110-14.
243 See supra text at notes 238-42.
244 Id.
City of New York indicate that the 1981 deadline is a congressional expression of dissatisfaction with the EPA's use of interim permits.\textsuperscript{246} In light of the court's holding in City of New York, which was critical of the presumption of subpart B, a question is raised as to whether the EPA may weigh the section 102(a) factors and write regulations which create presumptions or whether EPA is required to use every section 102(a) factor to evaluate every application. The City of New York court indicated that it is not necessary to use a case-by-case evaluation in every instance, yet it invalidated the presumption of subpart B on controversial grounds and set no clear rule indicating the kinds of presumptions that are permissible.\textsuperscript{247}

At the time of this Article, no version of the EPA's new regulations have been published in the Federal Register for public comment. The EPA, however, has been drafting versions of the regulations and debating internally over the kind of regulatory scheme that should be published. From this internal debate two proposals have been drafted: one by the Office of Water; and another by the Office of Policy and Resource Management. Although many more versions are likely to be drafted before a proposal is adopted, these proposals offer some insight into the difficulties faced by the EPA in the informal rulemaking process.

A. The Office of Water Draft Proposal

The draft proposal of the Office of Water for the revision of the ocean dumping regulations\textsuperscript{248} attempts to correct some of the defects in the current regulations that were noted by Judge Sofaer in New York City v. EPA. The proposal would remove the presumption of subpart B by ceasing to use it as a threshold test.\textsuperscript{249} Instead, the EPA could determine that a material unrea-
reasonably degrades the environment only upon consideration of criteria which reflect all of the section 102(a) factors.\textsuperscript{250}

One of the most significant changes suggested by the Office of Water proposal is the elimination of interim permits.\textsuperscript{251} The new criteria would allow the issuance of special permits in many situations where interim permits are currently granted.\textsuperscript{252} However, a special permit would be issued only if the dumping was found not to "unreasonably degrade" the marine environment when fully considered in light of the proposed criteria.\textsuperscript{253} After the elimination of interim permits, no permit in the EPA regulations would be conditioned on a promise to phase out ocean dumping.

Addressing the issue of the 1981 deadline, the proposal states that ocean dumping would not be absolutely prohibited.\textsuperscript{254} Dumping could still take place pursuant to a validly issued permit. The other possible source of an absolute prohibition to ocean dumping, the London Dumping Convention's so-called "blacklist" (Annex I Materials), would also be interpreted in a less restrictive manner.\textsuperscript{255} Under Annex I of the Convention, certain substances can only be dumped in trace concentrations.\textsuperscript{256} The current regulations, in contrast, specify that some Annex I substances may not be dumped in any concentration.\textsuperscript{257} The Office of Water proposal would eliminate Annex I substances from the category of absolutely prohibited substances and add those items to the category of material prohibited in all but trace concentrations.\textsuperscript{258}

The Office of Water proposal would also require a more detailed consideration of alternatives to ocean dumping than is required by the current EPA regulations. The assessment of alternatives would be made on a case-by-case basis, and would require the

\textsuperscript{250} Materials which fail to meet B, D, or E may still qualify for a permit but a greater showing of need under subpart C would have to be made than if the material initially met the requirements of B, D, or E. \textit{Id.} at 11.

\textsuperscript{251} \textit{Id.} at 13 \S 220.3.

\textsuperscript{252} \textit{Id.} \S 220.3(b).

\textsuperscript{253} \textit{Id.} \S 220.3(b).

\textsuperscript{254} \textit{Id.} \S 220.3.

\textsuperscript{255} See generally \textit{Id.} at 16.

\textsuperscript{256} London Dumping Convention, \textit{supra} note 103, at Annex I.

\textsuperscript{257} 40 C.F.R. \S 227.6(a)(5) (1982). The Annex I substances which are absolutely prohibited under the EPA's current regulations are carcinogens, mutagens and teratogens. Office of Water proposal, \textit{supra} note 248 at 16.

\textsuperscript{258} Office of Water proposal, \textit{supra} note 248 at 16.
EPA to consider the feasibility, environmental acceptability, and human health impacts of such alternative disposal methods. In contrast to the dictate of City of New York, which treats cost as an element of need, the Office of Water proposal would treat the cost of alternative programs as an element of the feasibility of such programs. The mere fact that an option costs more than ocean disposal will not by itself be considered a valid reason for selecting ocean dumping over other alternatives. Finally, the proposal states that in order to be considered viable, the option must be available at a reasonable cost, and must be both technically feasible and environmentally sound.

B. The Office of Policy and Resource Management Proposal

The draft proposal offered by the Office of Policy and Resource Management (OPRM) represents an entirely new approach to ocean dumping regulation. The OPRM proposal would classify all water materials into two classes on the basis of agency experience. Class I materials would consist of all materials with which the EPA has had extensive experience. Class II material would consist of those materials with which the EPA has had limited experience. The premise to the approach is that any form of waste management involves some degree of risk. The agency must therefore assess the risks of various disposal options and balance one risk against another in making its decision. Because it is harder to identify risks where available information is limited, the OPRM proposal would require the EPA to use special caution and give separate treatment to Class II materials. A greater showing of need (under subpart C) would be required before the dumping of Class II materials would be permitted.

Environmental impact criteria would also be used to create

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259 Id. at 10.
260 Id.
261 Id. cf. 543 F. Supp. 1084, 1104-05. (City of New York's cost-benefit analysis).
262 Id.
263 Office of Policy and Resource Management Proposal for Revision of Ocean Dumping Regulations (unpublished) (August 1983) [hereinafter OPRM Proposal]. Like the Office of Water, the Office of Policy and Resource Management (OPRM) is an internal department of the EPA. OPRM's proposal is part of the notice and comment rulemaking process.
264 Id. at 8.
265 Id. at 20.
266 Id. at 14.
267 Id. at 13.
strong presumptions as to the suitability of a Class II material for ocean dumping. Under the OPRM proposal, permits would only be issued when the applicant could clearly demonstrate either that the impact of dumping a particular material at a specified site is innocuous or that the risks to the marine environment, on balance, are preferable to the potential consequences associated with the use of available alternatives.

Environmental impact would only create a presumption against Class II materials since the agency has had the least experience with them. For both classes of materials, however, environmental impact would only be one of a broad range of factors used to make a decision. The OPRM presumably believes that enough of the section 102(a) factors enter the application process at an early enough stage to remove the possibility of a conclusive presumption of unreasonable harm.

Although the OPRM proposal seeks to remedy the presumption of subpart B in accordance with the City of New York decision, it retains the interim permits which the court spoke of unfavorably. Unlike the Office of Water proposal, which would abolish interim permits entirely, the OPRM proposal would use them widely. The criteria for issuing such permits, however, would differ considerably from the current regulations. Promises to phase out ocean dumping would no longer be a condition precedent to the issuance of an interim permit. The interim permit would merely be subject to a greater degree of monitoring than special permits. Moreover, no interim permit would be issued for materials which unreasonably degrade the environment, thus removing any possible objection to the EPA's practice of issuing interim permits for material which violated its own criteria.

For purposes of applying the OPRM proposed regulations, unreasonable degradation would be defined as: "... irreparable harm to the area affected by the proposed dumping which will substantially persist after cessation of dumping; or adverse con-

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26 Id. at 14.
26 Id. at 15.
27 Id. at 9.
27 Id. The "broad range" of factors are essentially subparts B, C, D and E of the current regulations. See Id. 24-29 (entitled Summary of Specific Changes to be made).
28 Id. at 25, 27.
29 Id.
30 Id.
31 Id.
32 Id.
33 Id.
sequences to biological resources, human health and welfare, and amenities which on balance exceed those consequences associated with the use of available alternatives.

This definition of "unreasonable harm" would allow the EPA to eliminate certain materials at the outset of the application evaluation process on the basis of the quantities in which the material is to be dumped, the persistence of the material in the marine environment, or the sensitivity of the surrounding area. The OPRM proposal states, for example, that the EPA might deny a permit for a waste containing substantial quantities of organohalogen solely on the basis of the persistence of these quantities in marine waters. The proposal further states that the dumping of some materials may be permitted on the basis of laboratory tests. The OPRM predicts, however, that most materials will fall somewhere in between the two extremes and undergo complete consideration of the EPA criteria.

In assessing need under the OPRM proposal, the EPA would examine: (1) the physical availability or technical feasibility of options; and (2) whether options are available at a reasonable incremental cost commensurate with the total cost of ocean dumping. Under the incremental cost concept, the incremental cost of an alternative above the cost of ocean dumping would be calculated first. This cost would then be weighed against the losses caused by ocean dumping to commercially-valued marine resources. If estimated commercial losses are found to approximate the incremental cost of the alternative disposal option, then the costs of the alternative would be deemed reasonable. If a substantial difference between the economic cost of damage to the marine environment and the incremental cost of the alternative remains, potential losses to non-commercial resources affected by ocean dumping such as aesthetic and recreational values would then be considered.

The OPRM qualifies its incremental cost analysis by stating

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277 Id. at 17.
278 Id. at 18.
279 Id.
280 Id.
281 Id.
282 Id. at 13.
283 Id. at 23.
284 Id.
285 Id.
286 Id. at 24.
that it is not intended as cost-benefit requirement, but rather as a rule of reason to be used in evaluating alternatives.\textsuperscript{297} Moreover, the proposal states that only where a large cost differential exists could the agency state with confidence that incremental costs are not reasonable in light of the total costs of ocean dumping.\textsuperscript{298}

C. Analysis of the Proposals

In designating two classes of material on the basis of agency experience, the OPRM proposal recognizes a major problem facing the EPA in regulating ocean dumping: choices must often be made on the basis of imperfect technical knowledge of the impacts of ocean dumping. Where questions involved in the promulgation of standards are on the frontiers of scientific knowledge, administrative agencies enjoy broad discretion in attempting to formulate solutions.\textsuperscript{299} The reason for such discretion is that such decisions are essentially policy judgments and, therefore, a court should only inquire in order to negate the dangers of arbitrariness and irrationality in the formation of rules for general application in the future.\textsuperscript{300}

By separating familiar and unfamiliar materials, the OPRM proposal in effect regulates according to the amount of discretion which they are afforded. Since Class II materials present a greater challenge to current scientific knowledge, it is arguable that the EPA has the discretion to require a greater showing of need for such materials.

The Office of Water proposal takes a different approach to agency discretion. The proposal was apparently designed to make a direct application of the statutory factors. It seeks to remove any form of a presumption such as that created under the OPRM proposal in the case of Class II materials. Clearly, either proposal makes a reasonable interpretation of City of New York. The court stated repeatedly that the Act does not require the EPA to balance the factors or to assign a specific weight to any of the factors in reviewing applications for permits.\textsuperscript{301} On the other hand, City of New York invalidated a presumption that resulted from this pro-

\begin{footnotes}
\item[297] Id. at 23.
\item[298] Id. at 24.
\item[299] Industrial Union Dept., AFL-CIO v. Hodgson, 499 F.2d 467 (1974) (the setting of safe levels of exposure to cotton dust under OSHA).
\item[300] Id. at 469.
\item[301] See supra text at notes 204-05.
\end{footnotes}
Moreover, the court suggested that section 102(a) factors may only be omitted under special circumstances. These facts seem to suggest that the agency's discretion is indeed restricted. In any case, given the ambiguity of City of New York, it is apparent that the OPRM proposal is wise to assert the greatest amount of agency discretion for those materials which the EPA has the greatest legal right and public duty to regulate.

A second difference between the proposals is that the OPRM proposal asserts a greater degree of agency discretion than the Office of Water proposal in regard to the London Dumping Convention. The Office of Water proposal seeks to remove any conflicts between the Convention and City of New York by changing the regulation of Annex I substances from an absolute prohibition to a prohibition of Annex I substances present above "trace concentrations." The change would make the regulations read exactly the same as the Convention.

The Office of Water proposal, however, might result in an exception from the Annex I blacklist if the term "trace concentration" is interpreted generously. In contrast to the Office of Water proposal, the OPRM proposal retains the class of strictly prohibited substances and firmly asserts that other materials may be banned in the regulations without a full consideration of section 102(a) factors. Again, the differences in the proposals result from City of New York's ambiguous position on the permissibility of omitting section 102(a) factors. Arguably either proposal makes a valid interpretation of City of New York, as the court said it was permissible to omit factors in certain circumstances, but was not clear as to what those circumstances were. Clearly, the OPRM proposal is truer to the spirit of the Convention, since Annex I substances were meant to be banned without regard to other factors. Despite the City of New York, an exception to the blacklist of Annex I would violate both domestic and international law.

The final difference between the two proposals is their treatment of cost. The Office of Water proposal examines the economic feasibility of alternatives, whereas the OPRM proposal uses an incremental cost-benefit analysis. This is the one area in which

292 See supra text at notes 206-09.
293 Id.
294 See supra text at notes 238-42.
295 Id.
296 See supra text at notes 192-209.
the Office of Water assumes more agency discretion than the OPRM proposal. As discussed earlier, there may be more support under the arbitrary and capricious standard for an economic feasibility analysis than an incremental cost-benefit analysis. It is indeed arguable that MPRSA is a protective statute intended to be completely blind to cost. It should be noted, however, that the OPRM proposal's cost analysis appears to be more liberal than City of New York's cost analysis since it compels the consideration of many non-economic factors. Nonetheless, the approach adopted by the OPRM proposal may be subject to considerable controversy due to the practical problem of reducing unquantifiable environmental damage into terms of dollars and cents.

VII. CONCLUSION

In 1970, the Council on Environmental Quality warned the nation of the dangers of ocean dumping and recommended swift congressional action to avoid harm to both human and marine life. Congress responded by enacting the Marine Protection Research and Sanctuaries Act which contains strict provisions for the protection of the marine environment. Although the judiciary has generally upheld a protective interpretation of MPRSA, a federal district court's decision in City of New York has called for a much more lax administration of the Act.

City of New York has the potential to set a dangerous precedent for the future of ocean dumping. The principles of law contained therein could easily be applied beyond the context of sewage sludge dumping and thus permit the dumping of a large array of toxic industrial wastes. The court's cost-benefit analysis is particularly disturbing, since the economic cost of ocean dumping is usually much lower than the cost of ocean dumping alternatives, and the environmental impacts of ocean dumping are still so speculative. Since the City of New York decision, the cities of Washington, D.C.; Boston; Jacksonville, Florida; San Francisco; San Diego; Seattle; and Philadelphia (a city that had already ceased ocean dumping in November 1980) have all indicated that they will consider the possibility of ocean dumping in the future. Moreover, the implications of the City of New York decision extend beyond the national level due to the EPA's failure to invoke

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297 See supra text at notes 228-37.
298 Bakalian, supra note 23, at 253; Bick & Kamlet, supra note 191, at 10035.
the London Dumping Convention. The United States can not expect to persuade other countries to take the Convention seriously if it refuses to do so itself. Indeed, industrial nations with a great population density, such as Japan and the United Kingdom, already have considerable impetus to dispose of toxic wastes in their coastal waters.

The EPA's failure to appeal the City of New York decision struck a great blow to the efforts of the United States to offer global leadership in protecting marine resources. In repromulgating the ocean dumping regulations the agency now has a second opportunity to properly fulfill its congressional mandate. The choices facing the EPA in this process mark a turning point in United States ocean dumping policy. The new regulations can turn that policy toward virtually unrestricted ocean dumping or toward a program of reasoned waste management. The welfare of future generations demands that the agency's choice be a wise one.

289 Id.
300 Id.