



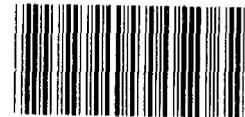
COMPTROLLER GENERAL OF THE UNITED STATES
WASHINGTON D.C. 20548

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B-202929

NOVEMBER 5, 1981

The Honorable Walter B. Jones
Chairman, Committee on Merchant
Marine and Fisheries
House of Representatives



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Dear Mr. Chairman:

Subject: Comments on H.R. 1720, a bill to establish
a task force to study past radioactive
waste ocean dumpsites

Your letter of April 3, 1981, requested our views and recommendations on H.R. 1720, a bill to establish a task force to study the environmental and health impacts of past radioactive waste ocean dumping practices. This letter contains our overall views and recommendations. Comments on specific portions of the proposed bill are included as enclosure I.

The bill proposes establishing a seven agency task force to (1) identify ocean dumpsites and the nature of radioactive wastes dumped into the ocean prior to 1970 including the type of containment used and the date and method of dumping, (2) make a preliminary assessment of the adverse environmental and public health effects, and (3) develop a comprehensive plan for monitoring such wastes and to project and assess the short- and long-term adverse environmental and health impacts of the waste.

As directed by your office, we delayed commenting on H.R. 1720 until the completion of our recent evaluation of issues surrounding past ocean dumping of radioactive wastes. The evaluation, which was requested by Senator William V. Roth, Jr., addressed most of the same issues covered in the proposed bill. Specifically it addressed the

- adequacy of Federal efforts to identify the extent and locations of radioactive wastes dumped by the U.S. Government and private industry;
- effectiveness of Federal efforts to assure that the nuclear materials which have been dumped into the

oceans pose no environmental or public safety hazard;
and

--extent of Federal efforts to assure any future ocean
dumping is done safely and in a way that is environmen-
tally acceptable.

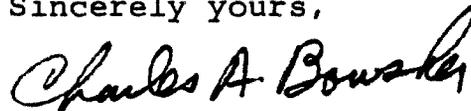
Consequently, this work forms the principal basis for our comments
on the proposed bill.

Based on the results of our evaluation, we cannot support
the need for the proposed legislation. We believe that although
detailed information on the nature and extent of past ocean dump-
ing does not exist, the deficiencies in the available data are
not a key factor in determining the environmental or public
health hazards that might exist. In fact, we found the over-
whelming amount of evidence now available shows that neither
an environmental nor public health hazard exists as a result of
past ocean dumping practices. Throughout our work on this
issue, we identified only one source contending that such hazards
exist, but even in this one instance the supporting evidence
was questioned within the scientific community. Consequently,
based on the lack of evidence substantiating the presence of an
environmental or public health problem stemming from the
past ocean disposal of low-level radioactive wastes, we do not
believe that past ocean dumping of radioactive waste constitutes
a serious health or environmental hazard.

Our detailed comments are presented in the enclosure to
this letter.

Also, we will provide you with a copy of our report, entitled
"The Hazards of Past Low-Level Radioactive Waste Ocean Dumping
Have Been Overemphasized," as soon as it is released by Senator
Roth.

Sincerely yours,



Comptroller General
of the United States

Enclosure

SPECIFIC COMMENTS ON HOUSE BILL 1720SECTION 2

This portion of the bill establishes an interagency task force consisting of representatives from seven Federal agencies. It also prescribes the chairmanship of the task force and directs the participating agencies to supply whatever administrative and technical support services are needed for the effective functioning of the task force.

We question the need for such a task force since a larger, interagency committee consisting of representatives from 12 Federal agencies 1/ already exists. Significantly, the 12-member interagency committee includes 6 of the 7 agencies proposed in this bill. The Department of State, which would be represented on the proposed task force, is not represented on the interagency committee because it does not fund ocean pollution research, development, or monitoring activities.

The interagency committee, called the Interagency Committee on Ocean Pollution Research, Development and Monitoring, is charged with developing a comprehensive 5-year plan for Federal involvement in these activities. The plan is required under the National Ocean Pollution Research and Development and Monitoring Planning Act of 1978--Public Law 95-273.

The first plan, issued in August 1979, covers fiscal years 1979 through 1983 and identifies national needs and problems relating to ocean pollution and establishes the order in which such needs should be met and problems solved. Accordingly, the Committee has already considered past ocean dumping of radioactive wastes in its deliberations and will consider it as part of its routine, biennial update process. Consequently, it appears to us that the creation of a special task force to study the radioactive waste ocean dumping issue would essentially duplicate the responsibilities and the work of the interagency committee on a smaller scale.

1/The 12 agencies comprising the interagency committee are the Departments of Agriculture, Commerce, Defense, Energy, Health and Human Services, Interior and Transportation, the Environmental Protection Agency, the National Aeronautics and Space Administration, the National Science Foundation, the Nuclear Regulatory Commission, and the Council on Environmental Quality.

SECTION 3

This portion of the bill assigns three general functions to the task force: (1) prepare an inventory of past radioactive waste ocean dumpsites, (2) assess the preliminary, adverse environmental and public health effects of past dumping activities, and (3) develop a comprehensive plan for continuous dumpsite monitoring and projecting short-term and long-term environmental and health impacts. Moreover, in preparing the inventory, the proposed bill would require the task force to determine--for each site--the nature of the waste dumped, its origin, packaging, and date and method of dumping. With regard to the comprehensive monitoring plan, the task force would track the migration of nuclear materials through the marine environment and food chain as well as the decay of the containers in which waste was dumped.

However, our work in this area showed that there is no need for legislation calling for an inventory of past ocean dumpsites or an assessment of the environmental and public health hazards posed by past radioactive waste ocean disposal. This is especially true because the task force for the most part would be duplicating work that has already been done. The following analysis highlights the evidence we collected in support of this position.

Inventory of past dumpsites
is now being done by EPA

As part of its regulatory responsibilities under the Marine Protection, Research and Sanctuaries Act of 1972 (P.L. 92-532), EPA is now piecing together information from a variety of Federal and private sources in an effort to inventory the extent, amounts, and locations of past radioactive ocean dumpsites. We reviewed the adequacy of EPA's efforts in this area as part of our recently completed work for Senator Roth. In doing so, we contacted all of the Federal agencies known to have had a role in prior dumping activities as well as former employees of those agencies from the period when ocean dumping occurred. We found only general references to the nature and location of wastes dumped at sea; detailed records were simply not kept. Under these circumstances, the possibility of a full accounting of past ocean dumping activities being constructed from what few and incomplete records exist in Federal archives and storage facilities is virtually impossible. In our judgment, the existing records are sufficient to characterize the magnitude of past dumping activities and to identify the major dumpsites but nothing more.

So far, from the limited information that is available, EPA has developed information indicating that about 90,000

containers with an estimated total radioactivity of 94,600 curies ^{1/} were dumped off the Atlantic and Pacific Coasts. Over 80 percent of the radioactivity was dumped off the eastern seaboard, about 95 percent of it at two sites roughly 120 and 200 miles southeast of Sandy Hook, New Jersey in water between 1,800 and 3,800 meters deep. Of the wastes dumped off the western seaboard, about 99 percent of the radioactivity was dumped at the Farallon Islands site, roughly 50 miles west of San Francisco, California. The site covers an area estimated to be as large as 500 square miles and is between 896 and 1,700 meters deep.

In view of the scarcity of detailed, documented data in this area and the fact that for about the past year EPA has been collecting what information does exist, we see little need for legislation requiring a task force that would do essentially the same thing EPA has been doing. More importantly, however, we found that the deficiencies in the available data have little impact in determining whether the wastes present potential environmental or public health consequences.

Assessment of environmental
and health hazards of past ocean
dumping has already been done

Over the past two decades, several public and private institutions have studied the issue of past radioactive waste ocean dumping activities, and to date no evidence has surfaced indicating that any significant environmental or health hazard exists. For example, in 1971, the National Academy of Sciences issued a report that, among other things, contained an analysis of the ocean dumping issue. This report, entitled "Radioactivity in the Marine Environment," is regarded by many scientists as the single most definitive work in the area. In the report, the Academy found no evidence that past and present policies and practices governing radioactive waste disposal in the sea jeopardized man or any marine species or ecosystem.

In fact, in its evaluation of human radiation exposure, the Academy found the disposal of low level radioactive waste in packages to be a much less significant source of artificial radioactive material than worldwide fallout and the chronic discharge of low-level waste from operating reactors and fuel processing plants.

^{1/}A curie is an amount of radioactivity equivalent to a gram of radium.

Since then, the EPA has studied the issue at some length, and its findings parallel the results of the National Academy of Sciences' report. For example, the EPA has found that

- concentrations of radioactive materials in the fish it has collected at the dumpsite compare with the range of concentrations found in similar species where no dumping has occurred;
- levels of radioactivity are so low that their sources, either fallout or ocean dumping, are indistinguishable;
- based on an annual consumption of 45 pounds of the fish from EPA's dumpsite samples, human consumption of such fish would yield an annual dose which is approximately 1,000 times lower than the dose from radionuclides occurring normally within the human body; and
- water soluble radioactive materials are being dispersed and diluted to insignificant levels, while plutonium, which tends to behave as an insoluble particulate, settles rapidly to the ocean floor where it appears to be entrapped by sediments.

Further, in 1978, the National Oceanographic and Atmospheric Administration (NOAA) sponsored a scientific workshop to develop a comprehensive statement on the problems facing ocean pollution and to identify programs to solve them. At this workshop, the scientists concluded that

"* * * The management of releases of artificial radionuclides into the environment is a classic case of using scientific information to minimize losses or restrictions on the use of environmental resources. Soon after production of nuclear energy began, the question was asked: What amounts of artificial radionuclides can be accommodated in the marine system without danger to public health, marine ecosystems, or marine organisms? With the minimal information available in the 1950s guidelines for acceptable levels were formulated; they were modified as better and more complete data became available. Monitoring and surveillance programs provided descriptions and then predictions of the distribution of radionuclides in the oceans. To date, no impacts on human health have been documented; no effects harmful to marine organisms are known, even at the sites of large discharges * * *."

Further, in doing our work on this issue we interviewed over 30 scientists knowledgeable in areas such as radiation health, oceanography, and marine biology. In addition, we met with several public interest and environmental organizations that have been involved in this issue. However, despite our efforts,

we could identify only one university researcher contending the existence of environmental or public health problems from past ocean dumping activities. Significantly, however, even in that one instance the research evidence in support of this position was questioned by the scientists we contacted in doing our review.

Ironically, perhaps the most revealing piece of evidence we obtained during our review was from the Oceanic Society. In response to public concerns about low-level waste dumping off the coast of California, the Oceanic Society, which is dedicated to maintaining the environmental integrity of the ocean, assembled a group of scientists to review implications for the environment, health, and safety surrounding the ocean disposal of radioactive wastes. The group of scientists, called the Ad Hoc Scientific Committee on Ocean Dumping of Radioactive Waste, was knowledgeable in the areas of radiation health, toxic wastes, and oceanography. According to a top official of the Society, members of the Ad Hoc Committee have been vigorously opposed to dumping radioactive wastes in the ocean and set out to prove that a problem existed but did not succeed. As a result, in its October 1980 report ^{1/} the Committee concluded that there is no evidence of a serious present or future threat to aquatic or human health either at the Farallon Islands site or at the Atlantic sites where the largest portion of the waste was dumped. In fact, they thought EPA should concentrate more on other non-nuclear waste materials that have been disposed of in the ocean, such as heavy metals and other toxic materials.

Consequently, we see no real need for the proposed legislation at this time, since, in our judgement, the task force would be mandated to pursue an issue that prevailing scientific evidence and opinion have essentially dismissed.

^{1/}"Summary Report of the Ad Hoc Scientific Advisory Committee on Ocean Dumping of Radioactive Wastes," The Oceanic Society, Western Offices and Research and Policy Group, October 7, 1980, p. 1.