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## Russian Dumping in the Sea of Japan

### Keywords

Atomic Energy Law, Environmental Law, Nuclear Waste, War

# Russian Dumping in the Sea of Japan

STEVEN D. LAVINE\* \*\*

## I. PROBLEM

Governments worldwide manufacture significant amounts of radioactive waste.<sup>1</sup> The storage and disposal of such waste is a serious problem, however, and many governments have chosen to dump their nuclear wastes into the oceans rather than to build treatment and storage facilities. Since 1946, when the United States began dumping, at least one nuclear nation has been dumping radioactive wastes into the sea at any given time.<sup>2</sup> Although there is some support for the belief put forth by several nuclear nations — that the dumping of low-level radioactive waste into the oceans is both the safest and the most economic method of disposal<sup>3</sup> — few governments are willing to admit that they would even consider this option today due to the negative public perception of ocean dumping.<sup>4</sup> As a result, public rhetoric

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1. Britain alone is expected to produce 1,750,000 cubic meters of low and intermediate level radioactive waste by the year 2030, not including waste arising from military use. Candy Gourlay, *Environment: "Big Four" Nuclear Powers to Oppose Sea-Dumping Ban*, INTER PRESS SVC., Nov. 9, 1992 (available in) LEXIS, Nexis library, INPRES file.

2. David G. Spak, *The Need for a Ban on All Radioactive Waste Disposal in the Ocean*, 7 J. INT'L L. & BUS. 803, 817 (1986). The Russian Federation released a white paper in 1993 detailing the extensive dumping by Russia of nuclear material into the oceans through 1992. See Leyla Boulton, *Russia in Crisis: Navy Admits Dumping Nuclear Reactors at Sea*, FINANCIAL TIMES, Mar. 24, 1993, at 2; *Russia Admits It Dumped Waste From Nuclear Reactors at Sea for 30 Years*, BNA INTERNATIONAL ENVIRONMENT DAILY, Apr. 6, 1993 (available in) LEXIS, Nexis library, BNAIED file.

3. U.K. Agriculture Minister Gillian Shephard recently argued before Parliament that scientific studies showed controlled sea dumping of certain radioactive wastes caused no environmental harm and was, in fact, the "best practicable" environmental option. Pearl Marshall, *U.K., China agree to Abide by London Convention Sea Dump Ban*, NUCLEONICS WEEK, Feb. 24, 1994, at 14.

4. The U.K. chose to go along with the London Convention's ban on dumping low-level radioactive waste because "the weight of international opinion on this mat-

against nuclear dumping has reached new heights, while international elites have, concurrently, done all that they can to keep dumping options open for the future.

The Russian Federation's dumping of 237,000 gallons (900 tons) of low-level nuclear waste into the Sea of Japan in October 1993 seems to have changed this. It has long been an open secret that Russian ocean dumping has been commonplace for the past thirty years,<sup>5</sup> but Greenpeace's efforts to publicize the recent Russian dumping into prime Japanese fishing grounds exposed Russia to worldwide criticism and prompted a change in official Japanese and U.S. positions on the dumping of low-level nuclear waste.<sup>6</sup> This change of position, in turn, led to the passage of a resolution against nuclear dumping at the London Convention in November 1993, making the dumping of low-level nuclear waste a violation of the Convention for any countries which failed to file a timely objection.<sup>7</sup>

Although the official position of parties to the London Convention has changed dramatically since the Russian dumping, the actual desires and intentions of most parties have not changed. Regardless of national rhetoric, there continues to be no strong control intention to ban the dumping of low-level nuclear waste among parties to the London Convention. Today's expectations of effective elites towards nuclear dumping are virtually indistinguishable from those which existed before the Russian dumping operation. Nuclear nations including the United Kingdom, France, and Japan continue to wish that they could dump low-level waste at sea and are largely stopped from doing so only by the pressure of public opinion. Russia has been prevented from dumping only by an infusion of Japanese funds and not by any strong

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ter means that such dumping is not, in any event, a practical proposition." *Id.* The National Union of Seafarers, a British Trade Union, refused to follow government orders to dump the waste. See Robert C. Cowen, *U.S. Ocean Dumping of Low-Level A-Waste Not Likely, Despite Report*, CHRISTIAN SCIENCE MONITOR, July 25, 1984, at 5.; Stephanie Cooke, *London Convention Votes to Continue Ban on Radwaste Dumping at Sea*, NUCLEONICS WEEK, Oct. 3, 1985, at 7.

5. "The fact that the USSR actively littered the waters of the world's oceans with its radioactive wastes over a period of several decades was no secret to anyone . . . . The situation sometimes took an absurd turn. For example, in 1989, when instances of the burial of radioactive wastes in Northern and Far Eastern seas had long been an open secret . . . Soviet experts declared: 'The USSR has not dumped, is not dumping and does not plan to dump any radioactive wastes into the sea.'" Andrei Baiduzhy, *Safety: Another Ecological Secret is Revealed — The Continued Operation of the Russian Atomic Fleet is Unsafe*, NEZAVISIMAYA GAZETA, Apr. 3, 1993 reprinted in *Is Russia Still Dumping Nuclear Wastes at Sea?*, XLV CURRENT DIGEST OF THE POST-SOVIET PRESS 14, at 21, May 5, 1993.

6. See David E. Pitt, *U.S. to Press for Ban on Nuclear Dumping at Sea*, N.Y. TIMES, Nov. 2, 1993, at A5.

7. Russia is the only country which filed such an objection. See *Nuclear Waste: Russia Alone in Dumping Radioactive Waste in the Sea*, EUROPE ENERGY, March 4, 1994, (available in) LEXIS, Nexis library, EUREN file.

threat of sanctions on the part of the international community. Although the idea of a 'ban' on the dumping of low-level radioactive wastes makes for good rhetoric, a lack of enforcement provisions to punish violators,<sup>8</sup> in conjunction with the fact that the London Convention requires no true alteration in behavior on the part of any country but Russia (which has not agreed to abide by the ban), both indicate that the ban possesses little substance and that the ban will not constrain the behavior of effective elites if public opinion against the dumping of low-level radioactive waste softens in the future.

## II. FACTS

In mid-October of 1993, Boris Yeltsin took a long-postponed trip to Tokyo intending to promote goodwill between the Russian Federation and Japan. In Tokyo, Yeltsin responded to Japanese concerns about nuclear dumping at sea by signing a joint declaration with Japan's Prime Minister Morihiro Hosokawa stating that "[t]he ocean dumping of radioactive wastes raises a grave concern on a global scale, particularly due to its effects on the environment of the neighboring countries."<sup>9</sup> He agreed with Hosokawa that radioactive waste dumping is "an urgent issue" and promised to conduct a joint survey with Japan of nearby waters "as soon as possible, if not [by] October."<sup>10</sup>

Just as Yeltsin was signing this declaration, the Russian Navy tanker TNT-27 loaded 900 tons of radioactive waste, consisting mostly of low-radiation cleansing fluid and coolant used for servicing nuclear-powered submarines,<sup>11</sup> and headed for a site 341 miles west of Japan's island of Hokkaido and 120 miles southeast of Vladivostok,<sup>12</sup> intending to dump the material into the Sea of Japan.<sup>13</sup> Unbeknownst to Russia, the Greenpeace monitoring vessel *Pegasus* was waiting for them.<sup>14</sup> Greenpeace had predicted that Russia would soon dump in that area after reading a Russian government report stating that Russia would continue marine disposal of nuclear wastes until 1997. In anticipation of the Russian dumping, the Greenpeace ship left north-

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8. See Spak, *supra* note 2, at 820 on the London Convention's general lack of enforceability.

9. Joint Russian-Japanese Declaration of October 12 quoted in *Officials and Environmentalists Criticize Radioactive Waste Dumping*, UNITED PRESS INTERNATIONAL, Oct. 18, 1993, (available in) LEXIS, Nexis library, UPI file.

10. Naooki Usui, Russian Radwaste Dumping in Sea of Japan Mars Bilateral Entente, NUCLEONICS WEEK, Oct. 21, 1993, at 4.

11. Teresa Watanabe and Richard Boudreaux, *Russian Nuclear Waste Sparks Feud: Japan is Angry after Moscow Dumps Toxic Liquid in Nearby Waters*, LOS ANGELES TIMES, Oct. 19, 1993, at A7.

12. *Officials and Environmentalists Criticize Radioactive Waste Dumping*, UNITED PRESS INTERNATIONAL, Oct. 18, 1993, (available in) LEXIS, Nexis library, UPI file.

13. David E. Sanger, *Nuclear Material Dumped Off Japan*, NEW YORK TIMES, Oct. 19, 1993, at A1.

14. Usui, *supra* note 10.

ern Japan on October 7 and waited for the Russian vessel to appear; it finally did on October 16.<sup>15</sup>

Greenpeace followed TNT-27 until the ship began piping waste into the Sea of Japan at 8:00 A.M. Japanese time on the morning of October 17. The dumping continued for over twelve hours and was filmed by Greenpeace which monitored the dumping from a position about fifteen meters away. When the activists tried to approach the tanker on October 18 in order to more closely monitor the level of radiation, they were forced away with blasts from high-powered water hoses. Nevertheless, Greenpeace was able to monitor background radioactivity "10 to 70 times higher than natural background" radiation near the site of the dumping.<sup>16</sup>

News of the dumping led to public anger in Japan and extreme annoyance with Greenpeace in Russia. Japanese television networks began tracking the ship as soon as word of the dumping became public; soon, the networks were broadcasting pictures of the TNT-27 dumping liquid waste into the sea.<sup>17</sup> Fishermen near Hakodate, Hokkaido, a major maritime center near the site of the dumping which supplies much of Japan's squid, expressed fear about seafood contamination and a resulting potential consumer boycott.<sup>18</sup> Angry Japanese citizens began to protest outside of the Russian embassy.<sup>19</sup> On October 19, the day after Moscow acknowledged the dumping, Japan lodged a formal protest with Russia demanding that all such dumping be permanently stopped.<sup>20</sup>

"The Japanese people were shocked and outraged by this action and particularly so because it took place only days after President Yeltsin's visit," commented a senior Japanese Foreign Ministry official,<sup>21</sup> concluding that "[t]his incident really added to [the] distrust" between Japan and Russia long fostered by the Cold War.<sup>22</sup> The Japanese public seemed to agree. The *Mainichi Shimbun*, a major Japanese daily newspaper, wrote that the dumping exposed Moscow's "clear lack

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15. Emiko Terazono, *Making A Splash in Japan — Support for Greenpeace is Growing*, FINANCIAL TIMES, Nov. 24, 1993, at 17.

16. Usui, *supra* note 10.

17. Sanger, *supra* note 13.

18. *Id.* The Japanese are particularly sensitive to water purity, and in this case the dumping of nuclear waste in one of the country's main fishing areas revived memories of the Minamata poisoning case, which began in the late 1950s. In that case Chisso, a chemicals manufacturer, disposed of mercury refuse in the bay of Minamata on the island of Kyushu, contaminating fish and poisoning much of the local population. Terazono, *supra* note 15.

19. Watanabe and Boudreaux, *supra* note 11.

20. Usui, *supra* note 10.

21. Quoted in Tim Johnson, *Russian Nuclear Dumping Deepens Japanese Mistrust*, JAPAN ECONOMIC NEWSWIRE, Oct. 23, 1993, (available in) LEXIS, Nexis library, JEN file.

22. *Id.*

of environmental awareness;" the Asahi Shimbun called the dumping "a poorly timed act of bad faith."<sup>23</sup> "No sooner had an agreement been reached between the Japanese and Russian leaders to set up a working committee to study the problem than the Russians kicked dirt in our faces."<sup>24</sup>

Russian officials seemed genuinely surprised by the intensity of Japan's reaction. It had been well known, after all, that the Russians were dumping radioactive waste at sea, especially after the release of a Russian "white paper" early in 1993 detailing the dumping abuses of the former Soviet state and noting that the Russian Federation intended to continue the Soviet tradition of dumping radioactive waste.<sup>25</sup> The Russians had told Japan that they wanted Japanese help in creating a \$100-million fund for the processing and storage of Russian radioactive waste as early as May, 1993,<sup>26</sup> and had been absolutely clear that dumping would have to continue until Russia could afford to build processing and storage facilities.<sup>27</sup> The dumping issue had, therefore, been a major point of contention during President Yeltsin's visit to Japan. Although Hosokawa had asked Yeltsin to refrain from dumping, Yeltsin had been unwilling to agree to do so.<sup>28</sup>

The Russians therefore, assumed that Japan was prepared for and expected Russian dumping of liquid radioactive wastes at some point. Moscow had specifically warned Tokyo that dumping would continue until at least 1997,<sup>29</sup> had notified the International Atomic Energy Agency (IAEA) of the dumping in advance<sup>30</sup> (although Russia failed to warn either the International Maritime Organization or the London Convention),<sup>31</sup> and had made no attempt to keep the dumping operation secret. The New York Times noted:

[t]he Russian dumping action on Sunday was carried out with a brazenness that made it seem almost routine. By sending the load

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23. *Id.*

24. *Id.*

25. See Guy Chazan, *Russia Reveals Details of Nuclear Dumping*, UPI, April 2, 1993, available in LEXIS, Nexis world library, UPI file. See also *Russia Admits It Dumped Waste from Nuclear Reactors at Sea for 30 Years*, BNA INTERNATIONAL ENVIRONMENT DAILY, April 6, 1993, available in LEXIS, Nexis world library, Allnws file.

26. Naoaki Usui, *Russia Won't Stop Sea Dumping but Supplies Details to Tokyo*, NUCLEONICS WEEK, May 20, 1993, at 17.

27. Baiduzhy, *supra* note 5, at 22.

28. Usui, *supra* note 10. "I asked him to stop, but there was no agreement to stop," said Hosokawa. Wantanabe and Boudreaux, *supra* note 11.

29. *Id.* See also Baiduzhy, *supra* note 27.

30. *Russia Poised to Dump Nuclear Waste Again Wednesday*, JAPAN ECONOMIC NEWSWIRE, Oct. 19, 1993, available in LEXIS, Nexis world library, Allnws file.

31. Vanora Bennett, *Ignoring Protests, Russia Plans More Nuclear Dumping*, REUTER EUROPEAN BUSINESS REPORT, Oct. 19, 1993, available in LEXIS, Nexis world library, Allnws file.

into the Sea of Japan the Russian navy must have known it would be spotted. Its cargo was clearly marked with nuclear symbols, and it began dumping the radioactive waste water from a pipe in broad daylight.<sup>32</sup>

The Russians saw the dumping as a necessary evil. Russia generates an estimated 5,000 tons of low-level liquid radioactive waste each year simply as a byproduct of dismantling its antiquated submarine fleet and significantly more as a result of its many other nuclear operations.<sup>33</sup> Adequate storage processing facilities to deal effectively with this waste simply do not exist in the Russian Far East;<sup>34</sup> building costs would be prohibitive. Until Russia could find money to build storage and treatment facilities — a low priority at the moment, given the unhealthy state of the Russian economy — the Russians intended to store the waste in offshore tankers and dump it as necessary.

By October, 1993, the need to dump had become urgent. Both TNT-27 and the tanker TNT-5, which were being used to store low-level radioactive waste, were completely full.<sup>35</sup> Furthermore, both tankers were in extremely dilapidated condition. TNT-5, which had been decommissioned in 1992, was "practically falling apart"<sup>36</sup> and was in such bad condition that it could not even be towed without posing the risk of an accident.<sup>37</sup> One of the old vessels storing liquid radioactive waste at Vladivostok was reported to have a hole in it "that might pose a threat in bad weather."<sup>38</sup> Due to the extraordinarily poor condition of the Russian storage facilities, the Russian Ministry of Environmental Protection approved the dumping operation as "the lesser of two evils"<sup>39</sup> for fear that one of the vessels would otherwise

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32. Sanger, *supra* note 13.

33. *Japan to Study Emergency Provisions to Help Russia with Nuclear Waste Storage*, KYODO NEWS SERVICE, Dec. 21, 1993 excerpted in BBC SUMMARY OF WORLD BROADCASTS, Dec. 24, 1993, available in LEXIS, Nexis world library, Allnws file.

34. As of late 1993 there was not a single processing plant for liquid radioactive waste in the Russian Far East. *Press Conference by RF Environment Minister Viktor Danilov-Danilyan and Federal Employment Service Chief Fyodor Prokopov on the Results of RF Government Meeting*, OFFICIAL KREMLIN INTERNATIONAL NEWS BROADCAST, Oct. 21, 1993, available in LEXIS, Nexis world library, Allnws file, [hereinafter *October Press Conference*].

35. Both tankers were "filled to the brim" with liquid radioactive waste. Inspectorate Chairman Yuri Vishnevsky quoted in Tatiana Smolyakova, *Well, It Is Really Very Harmless Waste*, ROSSIISKAYA GAZETA excerpted in RUSSIAN PRESS DIGEST, Oct. 20, 1993, available in LEXIS, Nexis world library, Allnws file.

36. V. Ignatenko and V. Maslakov, *The Problem of Radioactive Waste in Maritime Kray is not Going to be Solved on a Populist Wave*, KRASNOYE ZNAMYA, Apr. 16, 1994, excerpted in *Dumping Into Sea Seen as Only Option for Radioactive Waste in Far East*, BBC SUMMARY OF WORLD BROADCASTS, Apr. 29, 1994, available in LEXIS, Nexis world library, Allnws file.

37. *October Press Conference*, *supra* note 34.

38. *Japan to Study Emergency Provisions to Help Russia with Nuclear Waste Storage*, *supra* note 33.

39. Smolyakova, *supra* note 35.



release its waste into the harbor, where it would be concentrated and pose a real danger to Russian citizens.<sup>40</sup>

Because Russian officials took the dumping operation for granted as routine, expected, and necessary, they were perplexed by the strong Japanese reaction and annoyed with Greenpeace for turning what they saw as a fairly harmless operation into an international incident.<sup>41</sup> In the days following the dumping, Russian officials defended their actions to the press. "I understand the concern of our Japanese neighbors[;] however, international agreements do not ban the dumping of low toxic waste in the sea," argued Valery Damilyan, head of the Russian fleet's chemical operations. [In addition,] [w]e have no facilities to process the waste . . . .<sup>42</sup> Russia maintained the official position that it had the right to continue dumping and announced that an additional 800 cubic metres of radioactive liquid waste would be dumped into the Sea of Japan between October 20 and November 15, 1993.<sup>43</sup>

The Japanese were concerned enough by the possibility of a second dumping that they took strong steps to prevent its occurrence, circumventing normal diplomatic channels and holding out the prospect of significant financial incentive for the Russians not to dump. The Los Angeles Times reported:

[a]fter twice calling in the Russian ambassador and getting no satisfaction, Japanese Foreign Minister Tsutomu Hata took the unusual step Wednesday of telephoning his Russian counterpart, Andrei V. Kozyrev, to press for a commitment to stop the dumping. According to an account of their 20-minute conversation in the Russian newspaper *Izvestia*, Hata indicated that Japan is willing to

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40. "[I]t is simply absolutely real that there could be an accident at that tanker [TNT-5] because its hull is practically fully worn out. In that case all the liquefied radioactive waste inside it would be in the sea, inside a harbor, not on the high seas where the depth is great, but in the harbor . . . . The dumping was necessary . . . to prevent a far more serious accident involving TNT-5 in the harbor." *October Press Conference*, *supra* note 34.

41. Russian Federation Environmental Minister Viktor Danilov-Danilyan expressed his annoyance at Greenpeace in a press conference soon after the dumping: "I have some complaints about Greenpeace . . . . Firstly, Greenpeace is . . . trying to annoy as many people as they can. [I]t sets sail or goes on foot without any permission . . . in order to provoke a clash with the law enforcement agencies. I don't understand why they are doing it . . . . [I]n the final analysis it produces no result. All this has a negative effect on the validity of those proposals which it puts forward." *Press Conference by Viktor Danilov-Danilyan and Yuri Yarov, Candidates for the State Duma from the Political Bloc Vybor Rossii (Russia's Choice) on Russian Federation Environmental Problems*, OFFICIAL KREMLIN INTERNATIONAL NEWS BROADCAST, Nov. 22, 1993 [hereinafter *November Press Conference*], available in LEXIS, Nexis world library, Allnws file.

42. *Russia Poised to Dump Nuclear Waste Again Wednesday*, *supra* note 30.

43. *Id.*; Hugo Gurdon, *Russia Defies Protests to Dump Atom Waste at Sea*, DAILY TELEGRAPH, Oct. 19, 1993, at 16, available in LEXIS, Nexis world library, Allnws file.

help solve Moscow's waste disposal problem and Kozyrev agreed to relay Japan's concerns to Yeltsin.<sup>44</sup>

Although he indicated that Japan might be willing to help Russia financially, Hata also made clear that a second dumping would be taken very seriously by Tokyo. Hata demanded that Russia cancel its plans to dump the second load of waste,<sup>45</sup> warning that "[i]f Russia goes ahead with its reported plan of another dumping . . . the foundation of a new Japan-Russia relationship built by President Yeltsin's visit will crumble."<sup>46</sup> American officials also called publicly for a halt to the dumping, and Secretary of State Warren Christopher made it clear that he would press Japan's case if the matter was not soon resolved.<sup>47</sup>

On October 20, the day after the conversation between Hata and Kozyrev, the Russians modified their position. Russian Federation Environment Minister Viktor Danilov-Danilyan announced at a press conference that Prime Minister Chernomyrdin had called off the second dumping operation for the moment so there would be no more threat of dumping "in the immediate future."<sup>48</sup> Other spokesmen indicated, however, that the decision not to go ahead with the dumping was only "a temporary measure" and that dumping would "likely be resumed within a year."<sup>49</sup> Clearly connected to all Russian discussion of future dumping was the question of whether, and how much, financial assistance would be forthcoming from foreign countries for the building of processing and storage facilities for Russian nuclear waste in the Far East. Danilov-Danilyan coupled his announcement of the suspension of nuclear dumping with an appeal for foreign financial help to speed construction of a nuclear waste processing plant and said that, if building such a plant would take more than eighteen months, the Russian navy might be forced to resume sea dumping.<sup>50</sup> He also an-

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44. Richard Boudreaux, *Russia Calls Off Nuclear Dumping In Sea*, LOS ANGELES TIMES, October 22, 1993, at A6.

45. Gillian Tett and William Dawkins, *Russia Bows to Japan Pressure on Dumping*, FINANCIAL TIMES, Oct. 22, 1993, at 4.

46. Satoshi Isaka, *Government Changes Tack on Dumping; Russian Action Leads Tokyo to Urge Ban on Sea-Dumping*, NIKKEI WEEKLY, Oct. 25, 1993, available in LEXIS, Nexis world library, Allnws file.

47. Boudreaux, *supra*, note 44.

48. *October Press Conference*, *supra* note 34.

49. *Russia Abandons Second Operation to Dump Nuclear Waste*, AGENCE FRANCE PRESSE, Oct. 21, 1993, available in LEXIS, Nexis world library, Allnws file.

50. Craig R. Whitney, *Russia Halts Nuclear Waste Dumping In Sea*, N.Y. TIMES, Oct. 22, 1993, at A9. *See also*, Danilov-Danilyan said:

"We hope for assistance from other countries in the implementation of this project. The statement made by the Japanese Foreign Ministry recently about the dumping promises such cooperation and such technical and financial assistance to Russia. I am convinced that other countries will also take part in resolving this problem . . . I hope that the Russian government will find a solution . . . It will depend on the speed of construction of facilities for processing liquid radioactive

nounced the departure of Atomic Energy Minister Viktor Mikhailov to Tokyo "to discuss the question of the participation of the Japanese side in the construction of a plant to process liquid radioactive waste in the Far East."<sup>51</sup>

In Japan, Minister Mikhailov engaged in negotiations to divert a \$100 million fund, previously pledged by Japan for the purpose of helping Russia dismantle its nuclear weapons, to finance a new agenda. The Russians wanted a portion of the fund to be immediately disbursed and used to build processing and storage facilities for radioactive waste.<sup>52</sup> Japan's hesitation was largely a result of its concern that the funds might be used to bolster Russian military forces instead of helping to reduce excess nuclear waste produced by dismantling those forces.<sup>53</sup>

Although the financial issues were not resolved during his visit, Minister Mikhailov apologized to the Japanese in Tokyo and promised that the Russian Federation would never again dump in the Sea of Japan.<sup>54</sup> He refused to promise that Russian dumping of nuclear waste would stop entirely, however, and speculation remained that Russia would simply begin dumping future waste into the Pacific or Arctic Ocean instead.<sup>55</sup>

Shortly after Mikhailov's visit to Tokyo on November 1, 1993, the Japanese reversed a long standing policy designed to keep open the possibility for future dumping by announcing that Japan would now support an international ban on the dumping of radioactive waste at sea.<sup>56</sup> Two days later, America followed suit.<sup>57</sup>

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waste in the Far East and in northern Russia whether or not waste will be dumped into the sea in the future. If these facilities are built quickly, it will probably allow to prevent [sic] the dumping of waste. If it takes, for instance, a year and a half to build such facilities, Russia will be compelled to dump more waste into the sea." *October Press Conference, supra* note 34.

51. *October Press Conference, supra* note 34.

52. See Usui, *supra* note 10; David Ljunggren, *Russia Suspends Nuclear Dumping Off Japan*, REUTER WORLD SERVICE, Oct. 21, 1993, available in LEXIS, Nexis library, REUWLD file; Tett and Dawkins, *supra* note 45.

53. Marjorie Sun, *Japan to Help Russia With Nuclear Waste Problem*, NATIONAL PUBLIC RADIO, Oct. 28, 1993, transcript #1284-5, available in LEXIS, News library, Script file.

54. Naoaki Usui, *Mikhailov, In Tokyo, Pledges No More Waste Dumping In Japan Sea*, NUCLEONICS WEEK, Oct. 28, 1993, at 10; *Russia Not To Dump Again In Japan Sea*, REUTER WORLD SERVICE, Oct. 26, 1993, (available in) LEXIS, Nexis library REUWLD file.

55. Sun, *supra* note 53.

56. *Eda Rules Out Sea Dumping Option for Radioactive Waste*, KYODO NEWS SERVICE, Nov. 1, 1993, available in LEXIS, Nexis world library, Allnws file.

57. *Statement by White House Press Secretary On Radioactive Waste*, U.S. NEWswire, Nov. 3, 1993, available in LEXIS, News library, Arcnws file; See also Pitt, *supra* note 6, at 45.

### III. CONFLICTING CONCEPTIONS OF LAWFULNESS

The facts of this incident have never been disputed by the parties involved. Legal claims relating to the Russian dumping operation have, however, come into conflict. Russia claims that its dumping operation was legal and in accordance with the terms of the London Convention. Japan and the United States have never pressed the Russians strongly on this point, in part because neither the United States nor Japan had advocated the passage of strong laws against the dumping of low-level nuclear waste before this incident occurred and were, therefore, in no position to criticize Russia as a 'lawbreaker' without appearing hypocritical.<sup>58</sup> Greenpeace, in contrast, has long stood for the proposition that the dumping of any nuclear waste at sea is illegal — a claim which Russia strongly disputes — and has forcefully argued that Russia's dumping was a violation of the London Convention.

In considering the legality of Russia's actions, two separate issues must be considered: 1) the legality of the dumping itself and 2) the question of whether Russia followed proper procedures prior to dumping. These issues must be considered separately below.

#### A. *Legality of the Dumping*

Beginning in the early 1980s, Greenpeace began a concerted high-profile campaign against the dumping of low and intermediate level radioactive waste at sea<sup>59</sup> which helped lead to the passage of a "voluntary" moratorium against the dumping of such waste at the Seventh Consultative Meeting of the London Dumping Convention.<sup>60</sup> The moratorium, in place since 1983, was explicitly enacted both because of "a growing body of public opinion with regard to the dumping of radioactive substances" and a lack of "current knowledge" as to the effects of such dumping. The moratorium called for the suspension of all dumping of radioactive materials at sea pending the presentation of a final report detailing the environmental effects of such dumping.<sup>61</sup>

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58. See *Greenpeace Charges G-7 With "Hypocrisy" Over Stand on Nuclear Waste Dumping at Sea*, BNA INTERNATIONAL ENVIRONMENT DAILY, June 23, 1993 (noting that Japan helped lead opposition to a permanent ban on radioactive waste dumping at sea, and that Japanese concern over Soviet dumping was hypocritical due to its stark contrast with Japan's intention to dump its own nuclear waste into the Pacific).

59. Nicholas Schoon, *UK Holds Out On Dumping: Britain Facing Isolation As Negotiators Move Towards International Deal*, THE INDEPENDENT (London), Nov. 12, 1993, available in LEXIS, Nexis world library, Allnws file.

60. *Id.*; Daniel Suman, *Regulation of Ocean Dumping by the European Economic Community*, 18 ECOLOGY L.Q. 559, 597 (1991).

61. See Resolution LDC.14(7), *Disposal of Radioactive Wastes and Other Radioactive Matter at Sea* (LDC 7/12, annex 3), reprinted in *International Maritime Organization, THE LONDON DUMPING CONVENTION: THE FIRST DECADE AND BEYOND* 207 (1991).

That report, issued in 1985, proved inconclusive, and the London Dumping Convention passed a second resolution to indefinitely continue the voluntary moratorium until "an informed judgment" about the safety of nuclear dumping could be made and further studies could be completed.<sup>62</sup> However, it was signed by neither Japan nor Russia,<sup>63</sup> and its voluntary nature was emphasized in statements made by both the U.S. and the U.K. on the final day of the convention.<sup>64</sup> The 1985 moratorium was scheduled to officially expire at the Sixteenth meeting of the London Convention, beginning November 8, 1993, when the results of new studies would be presented.<sup>65</sup>

Although the ban was generally accepted and observed by member countries, it was always clear that the moratorium was not legally binding.<sup>66</sup> Furthermore, as the Russian White Paper of 1993 established, Russia blatantly disregarded the ban since its inception, pretending to observe it while in fact secretly dumping massive amounts of nuclear wastes into the oceans.<sup>67</sup>

Nevertheless, Greenpeace's first allegations against Russia focused largely upon the breach of these voluntary moratoria. Joshua Handler, a Greenpeace activist and research coordinator, argued that the voluntary ban was as binding under international law as was the treaty itself.<sup>68</sup> During Minister Viktor Danilov-Danilyan's press conference of October 21, 1993, Handler and Danilov-Danilyan testily disputed the point:

Handler: We express indignation with the Russian government's illegal actions.

Danilov-Danilyan: Which law has been broken? Can you tell me?

Handler: Obligations under international treaties.

Danilov-Danilyan: Can you show them to me?

Handler: The London Convention to which you are a signatory.

Danilov-Danilyan: The London Convention contains nothing about low-activity liquid radioactive waste. You should not invent anything for the London Convention, saying that it allegedly contains things it does not contain. It has nothing of the kind.

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62. Stephanie Cooke, *London Convention Votes to Continue Ban on Radwaste Dumping at Sea*, NUCLEONICS WEEK, Oct. 3, 1985, at 7. See Resolution LDC.21(9), *Dumping of Radioactive Wastes at Sea* (LDC 9/12, annex 4), reprinted in *International Maritime Organization*, *supra* note 61 at 208.

63. Tett and Dawkins, *supra* note 45.

64. Cooke, *supra* note 62.

65. *Greenpeace Says U.S. Opposition to Sea Dumping of Radioactive Waste is Victory for Environment*, U.S. NEWSWIRE, Nov. 3, 1993.

66. *Ban Widened, Though Four Key Nations Vote "No"*, NUCLEAR NEWS, Dec. 1990, at 78.

67. See Chazan, *supra* note 25. See also note 5, *supra*.

68. Boudreaux, *supra*, note 44.

Moderator: (cutting in) Let us not continue this dispute. We are pressed for time, sorry.<sup>69</sup>

In both this press conference and a second on November 22, 1993, Danilov-Danilyan continued to maintain that Russia's actions had not violated the terms of the London Convention. As he argued in the November conference:

Russia could have broken its commitments only if it had been a participant to a voluntary moratorium on dumping. And Russia never joined it . . .<sup>70</sup>

## B. *Violation of Proper Procedure*

### 1. Failure to Notify the IMO

Russia notified the IAEA of its intent to dump 1,700 tons of low-level nuclear waste into the Sea of Japan on October 9th, over a week before the dumping took place.<sup>71</sup> This seems to have been the result of some confusion. Russian officials seem to have believed that they possessed an obligation to notify the IAEA prior to dumping. As Minister Danilov-Danilyan explained: "Russia was supposed to . . . inform the IAEA . . . under Article 7 of the London Convention on Dumping . . . We have done that."<sup>72</sup>

In fact, it is Article 6 — not Article 7 — of the London Dumping Convention which obligates contracting parties to notify the International Maritime Organization — not the IAEA — of their dumping operations.<sup>73</sup> Notification of the IAEA instead of the IMO is a clear violation of the London Convention.

This mistake, whether made honestly or not, may help to explain why the Russian dumping took Japan, and the world, by surprise. The IAEA failed to act upon the Russian letter, or even notify others of its existence, until after the dumping had taken place.<sup>74</sup> Greenpeace

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69. *October Press Conference*, *supra* note 34.

70. *November Press Conference*, *supra* note 41.

71. Sanger, *supra* note 13.

72. *November Press Conference*, *supra* note 41.

73. Article VI(4) of the Convention states that "Each Contracting Party, directly or through a Secretariat . . . shall report to the Organization . . . the information specified . . ." The London Dumping Convention, *reprinted in* International Maritime Organization, *supra* note 61 at 11. The Organization was defined at the first meeting of Contracting Parties in London from 17 to 19 December 1975 as the Inter-Governmental Maritime Consultative Organization (IMCO), whose name was changed on 21 May 1982 to the International Maritime Organization (IMO). *Id.* at 56; 115.

74. Gamini Seneviratne, *IAEA Accused of Supporting Russian Radwaste Dumping*, NUCLEONICS WEEK, Nov. 11, 1993, at 14. These accusations were contained in a 31-paragraph statement addressed to the 16th meeting of contracting parties to the London Convention.

strongly lamented both the Russian mistake and the IAEA's failure to correct it. In November, Greenpeace accused the "IAEA of dereliction of duty, incompetence, and even 'support' of" the dumping due to its failure to notify the IMO or other contracting parties as soon as they learned of the Russians' intent to dump.<sup>75</sup>

In an attempt to defend itself, the IAEA issued an aide-memoire to "clarify and correct certain misunderstandings" as to its role under the Convention. Representatives of the IAEA argued that they had done nothing wrong since Russia "should have told the IMO, not us . . . [and] we have no obligation to circulate the information."<sup>76</sup> Privately, however, senior IAEA officials admitted that a 19 day response time to the Russian letter was too long. "[W]e drew up the rules for the Convention (in IAEA Safety Series No. 78, 1986) and we should have told them, pronto, that they were not playing by them."<sup>77</sup>

## 2. Issuance of a Special Permit

Whenever a contracting party to the London Convention dumps waste or other matter at sea, it is required first to obtain a permit for the dumping.<sup>78</sup> Article VI of the convention provides that each contracting party must designate an appropriate authority for the granting of such permits.<sup>79</sup>

There seems to be some confusion within Russia as to which organization is the proper authority to notify in the event of a planned dumping. This may be because until recently the official Soviet position on nuclear dumping was as follows: "The USSR has not dumped, is not dumping and does not plan to dump any radioactive wastes into the sea."<sup>80</sup> In the past, Russian dumping plans have been drawn up by the government but not officially endorsed due to Russia's public acceptance of the London Convention.<sup>81</sup>

It is not surprising that the Russian Federal Nuclear and Radiation Safety Inspectorate argued that the Russian dumping into the Sea of Japan had been illegal because the wrong Russian agency had given permission for the dumping. Shortly after the dumping, Inspectorate Chairman Yuri Vishnevsky told Rossiiskaya Gazeta that all "operations of this kind" must be coordinated with the Inspectorate. In this case, however, the Inspectorate was never notified. Instead, the Russian navy dumped the waste at sea after asking for, and receiving,

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75. *Id.*

76. *Id.*

77. *Id.*

78. International Maritime Organization, *supra* note 61, at 76.

79. *Id.* at 10, 76.

80. Baiduzhy, *supra* note 5, at 21.

81. Smolyakova, *supra* note 35.

permission from the Ministry of Environmental Protection.<sup>82</sup> Vishnevsky therefore, argued that the dumping had been illegal and that the Ministry of Environmental Protection had taken "a great responsibility" upon itself for allowing the dumping to take place.<sup>83</sup>

### 3. Improper Packaging

Even without regard to the voluntary moratorium on dumping low-level radioactive wastes at sea, such wastes are included in Annex II (the "grey list") of the London Convention, and may, therefore, be dumped at sea only under certain conditions. One requirement prescribes that substances listed in Annex II must be dumped using "special care."<sup>84</sup>

It has become clear from recent discussions among contracting parties to the London Convention that such care may imply the use of certain dumping procedures and techniques which can mitigate the potentially harmful effects of Annex II substances.<sup>85</sup> One such procedure is packaging the waste. Therefore, as IAEA Director General Hans Blix wrote in a letter to Russian Minister Danilov-Danilyan, although the dumping of "packaged" liquid radioactive waste is not prohibited, the dumping of "unpackaged" liquid radioactive waste is not allowed.<sup>86</sup>

The Russian waste was not "packaged" in any way, but was simply poured out beneath the TNT-27's propeller so as to be mixed more quickly with seawater.<sup>87</sup> The manner of the Russian dumping was, therefore, in violation of the London Convention.

### C. Conclusions

Russia and Greenpeace proffer conflicting claims as to the legality of the Russian dumping operation. Russia has argued for its legality, while Greenpeace claims that the dumping was an unjustified and illegal act. Greenpeace is undoubtedly correct in its assertion that the operation was not "legal" under the London Convention. However, all aspects of the convention which were clearly violated, including Russia's failure to notify the IMO of its intention to dump, its possible failure to ask the correct agency to issue a special permit, and its failure to properly package the waste, are procedural in nature; the errors made may be easily corrected for in future decisions to dump low-level radioactive waste. More important is the question of whether Russia

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82. *Id.*

83. *Id.*

84. International Maritime Organization, *supra* note 61, at 71.

85. *Id.*

86. Seneviratne, *supra* note 74.

87. Smolyakova, *supra* note 35.



may legally dump such waste when proper procedure has been observed. As regards this question, Russia seems justified in its assertion that the dumping, *per se*, did not contravene its obligations under the London Convention.

#### IV. PREVIOUSLY EXISTING NORMS REGARDING THE DUMPING OF LOW-LEVEL RADIOACTIVE WASTE

Whatever the "legality" or "illegality" of Russia's dumping, it is telling that no international body ever formally determined whether Russia had violated the terms of the London Convention; no sanctions — or even threats of sanctions — were ever brought. This may, in part, be due to the "toothlessness" of the London Convention. The Convention is notorious for its lack of provision for enforcement. As one commentator notes:

Perhaps the major reason that . . . the LDC . . . [has] not been effective is that [it] lack[s] enforcement provisions to punish violators. There is little recourse for contracting parties . . . to stop a nation or its industry from violating the treaties. The only viable options are direct appeals on a nation-to-nation or nation-to-industry basis . . . [T]hese appeals are not always successful.<sup>88</sup>

Indeed, Russia had earlier flouted the terms of the London Convention and gotten away with it. In May 1992, well over a year before the dumping in the Sea of Japan, Soviet dumping in clear violation of the London Convention was disclosed to the world. The *New York Times* wrote:

The 1972 London Convention on ocean dumping outlawed the [recently disclosed Russian dumping practices] . . . but [Russian] officials said there was no remedy other than international pressure to disclose and perhaps clean up the worst sites . . .<sup>89</sup>

This lack of enforcement is characteristic of both the London Convention and the norms guiding the international elites who established it, many of whom wish to keep ocean dumping available as a possible future option. History demonstrates that when dumping has been stopped in the past, this result has not usually been as a result of an international agreement.<sup>90</sup> Further, those treaties which have been

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88. Spak, *supra* note 2, at 820.

89. Patrick E. Tyler, *Soviets' Secret Nuclear Dumping Causes Worry for Arctic Waters*, N.Y. TIMES, May 4, 1992, at A1.

90. Spak, *supra* note 2 at 819. The United States, for instance, suspended dumping in 1970 in large part in reaction the Council on Environmental Quality report on ocean dumping, which noted that radioactive waste dumping at sea was not as economical as other methods of disposal. And the Netherlands stopped dumping radioactive waste at sea solely in response to public opinion. One Dutch government official noted: "[t]his ministry is convinced that ocean dumping is a safe disposal for wastes. But it is clear that our society does not want ocean dumping." *Id.* at 819-20.

agreed upon have sometimes been violated by international elites without a second thought.

#### A. *Brief History of Dumping*

Since 1946, when the United States began dumping radioactive wastes off the northeastern Atlantic coastline and in the Gulf of Mexico, at least one nation has been disposing of its radioactive wastes at sea at any given time.<sup>91</sup> Many nations viewed ocean dumping as both a politically and economically viable option for the disposal of wastes. When the London Dumping Convention, as it was then known, was signed in 1972, a majority of scientists still believed that the oceans had an "assimilative capacity" to receive virtually limitless amounts of wastes without causing significant damage to marine ecosystems.<sup>92</sup> Given these attitudes towards dumping on the part of international elites and scientists, it is not surprising that the London Dumping Convention was labeled a "dumpers club" by its critics who argued that it existed to block dumping regulation rather than strengthen environmentally protective measures.<sup>93</sup> Some critics claim that this "dumpers club" image resulted in a lack of interest in attending or joining the Convention by countries not directly concerned with ocean dumping techniques.<sup>94</sup>

Most nations with nuclear power stations and nuclear weapons continued to look to the oceans as a prime disposal site for nuclear wastes until the 1980s.<sup>95</sup> Until then, the "dumping of low and intermediate-grade radioactive waste at sea was quite routine by states with nuclear power industries and/or nuclear weapons;"<sup>96</sup> even landlocked Switzerland hired ships to haul nuclear waste into the North-east Atlantic.<sup>97</sup> It was not until Greenpeace's campaign began to raise public awareness in the early 1980s and until the London Dumping Convention imposed its 1983 "voluntary" moratorium in response, that many countries began to change their dumping practices. Since then, large-scale dumping has ceased among most Contracting Parties to the Convention.<sup>98</sup> Nevertheless, it was not until 1992, at the 15th Consultative Meeting of the London Dumping Convention, that the Contracting Parties voted to drop "Dumping" from the Convention's name in

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91. *Id.* at 817.

92. Greenpeace, *Comments On Amendments to the Convention and its Annexes*, Nov. 8, 1993. (submitted by Greenpeace International to the 16th Consultative Meeting of the London Convention) (hereinafter *Greenpeace Comments*) (on file with author).

93. Gourlay, *supra* note 1.

94. *Greenpeace Comments supra* note 92.

95. Schoon, *supra* note 59.

96. *Editorial: Nuclear Waste*, IRISH TIMES, Nov. 15, 1993, at 13.

97. Schoon, *supra* note 59.

98. *Editorial: Nuclear Waste, supra* note 96.

order to make it clear that "dumping" is not a preferred option for waste management.<sup>99</sup>

Neither the Convention's name nor its edicts have always proven sufficient to alter the behavior of effective international elites, however. The permissive attitude towards dumping in which the Convention was founded remains present in the actions and attitudes of several nuclear powers who are Contracting Parties.

### 1. Russia

"[N]ot a single reasonable individual will say that the dumping of liquid radioactive waste into the sea, into the ocean, is a norm," explained Minister Danilov-Danilyan shortly after the Russian dumping.<sup>100</sup> Nevertheless, dumping radioactive waste into the ocean has long been Russia's standard operating procedure. The fact that the USSR dumped a significant amount of radioactive waste over the past few decades has been common knowledge for years. But due to the extraordinary secrecy surrounding Soviet dumping operations and the refusal of the Soviets to admit to dumping anything at all, the precise extent of Russian dumping has long been impossible to ascertain.<sup>101</sup>

The international community's patience with this state of affairs ran out in 1991 when Greenpeace released a report and rough map of radioactive burials in the Northern seas based on its own information, thereby shocking the world public and causing an international furor. A consultative conference of the London Convention's contracting parties demanded that the USSR provide information on all instances of dumping of radioactive wastes.<sup>102</sup> In 1992, the USSR dissolved and London Convention signatories repeated their demand, this time in the form of a thinly veiled ultimatum. In October 1992 Boris Yeltsin established a government commission headed by Aleksei Yablokov whose report became the basis of the "White Paper" released on April 2, 1993, which detailed Soviet dumping over the years.<sup>103</sup>

The White Paper noted that the USSR started dumping in 1959 when 600 cubic meters of liquid radioactive wastes were poured from a Soviet atomic submarine into the White Sea. From then on, the USSR continued dumping substantial amounts of radioactive wastes into the oceans every year. After the London Convention came into force in 1972, the USSR, while both limiting and denying the extent of its

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99. *Greenpeace Comments supra* note 92.

100. *October Press Conference, supra* note 34.

101. *Baiduzhy, supra* note 5, at 21.

102. *Id.*

103. *Id.* See also *supra* notes 25 and 67.

dumping, deliberately continued to violate nearly all of the Convention's provisions.<sup>104</sup>

Nezavisimaya Gazeta noted in 1993 that "the 'organized' burial of radioactive wastes [by the Russian Federation] . . . is continuing right up to the present."<sup>105</sup> In 1992 alone seven instances of dumping were recorded, the most significant of which was the sinking of a tanker containing solid radioactive wastes somewhere in the Sea of Japan.<sup>106</sup> It should, therefore, be clear that when Minister Danilov-Danilyan claims that dumping is not a Russian norm, he is speaking about Russian ideals and not about Russian practice. As TASS recently reported, "dumping is a commonplace event" in Russia.<sup>107</sup>

## 2. The United Kingdom

Of those nations which, unlike the USSR, have historically reported their dumping of low-level radioactive waste to the London Convention as required, the United Kingdom has always been a particularly heavy dumper. A 1985 report noted that Britain's waste constituted ninety percent of all disposals then allowed.<sup>108</sup> It should, therefore, come as no surprise that Britain has historically fought against any restrictions on the dumping of waste, and has frequently ignored, or has tried to ignore, the London Dumping Convention's regulations.

Britain continued to dump low-level radioactive waste into the Northern Atlantic after the adoption of the London Dumping Convention, and the British government would not conduct the obligatory impact studies or grant the necessary permits which the Convention required.<sup>109</sup> British dumping failed to stop in 1982 after the European Parliament adopted a resolution urging the cessation of radioactive waste dumping in the northeastern Atlantic; nor did it stop after the London Dumping Convention imposed its two-year moratorium on the dumping of radioactive waste at sea in 1983.<sup>110</sup>

When the British finally did stop dumping in 1985, they did not do so because of the moratorium. Britain had decided to ignore the resolution against dumping passed by the London Convention, but the British seamen's union — the National Union of Seafarers — forced compliance by refusing to handle Britain's radioactive waste.<sup>111</sup>

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104. Baiduzhy, *supra* note 5, at 21.

105. *Id.*, at 22.

106. *Id.*, at 22.

107. *Second Dumping to Take Place before November*, TASS, Oct. 20, 1993.

108. Michael Wise, *Nuclear-Dumping*, REUTERS, Sept. 20, 1985.

109. Spak, *supra* note 2, at 819.

110. *Id.* See also notes 59-65 and accompanying text.

111. Wise, *supra* note 108; Cowen, *supra* note 4.

Perhaps because of an upcoming need to decommission and dispose of old nuclear submarines and power stations within the next two decades, both Britain and France have fought hard to retain the legal right to dump in recent years.<sup>112</sup> In September 1992, at the Convention on Marine Pollution in Paris, both countries lobbied to ensure that a moratorium on dumping radioactive waste into the northeast Atlantic would last for only 15 years;<sup>113</sup> Both nations have fought to prevent the London Convention from extending their 10 year moratorium on dumping into a permanent one. The Intergovernmental Panel of Experts on Radioactive Waste Disposal at Sea, an expert panel established by the London Convention in 1985 to study and advise on this matter, found itself unable to reach consensus after eight years of study due largely to British and French efforts to keep ocean dumping available as a future option.<sup>114</sup>

### 3. Japan

Between 1955 and 1969, Japan dumped 1,650 drums of low-level radioactive waste into the Pacific ocean.<sup>115</sup> The Japanese government stopped dumping radioactive waste at sea in 1969 but has seriously considered resuming the practice as recently as 1993. Japan has remained reluctant to eliminate the option of nuclear dumping altogether due to possible implications for future nuclear energy use.<sup>116</sup>

In 1980, Japan sent four officials to a South Pacific Islands summit meeting on Guam in an attempt to persuade participants of the safety of Japan's plan to dump low-level radioactive waste into the waters near the Pacific Islands.<sup>117</sup> The Japanese government intended to dump 10,000 drums of cemented radioactive waste into the South Pacific beginning in 1981 and to begin "full-scale dumping" in 1982.<sup>118</sup> The plan met strong opposition from South Pacific countries, which adopted a resolution demanding Japan's "unconditional" cancellation of its dumping plans; ultimately Japanese dumping was put off due to international pressure.<sup>119</sup>

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112. Amanda Brown, *Britain to Fight Nuclear Sea Dumping Ban*, PRESS ASSOCIATION NEWSFILE, Nov. 30, 1992.

113. *Id.*; Bronwen Maddox, *UK Fights Ban on Dumping*, FINANCIAL TIMES, Nov. 9, 1992.

114. *International Panel Fails to Reach Agreement on Ocean Dumping*, BNA INTERNATIONAL ENVIRONMENT DAILY, July 19, 1993.

115. Terazono, *supra* note 15.

116. *Japan Not to Dump Radioactive Waste Into Sea*, JAPAN ECONOMIC NEWSWIRE, Nov. 2, 1993.

117. *Japan Set to Dissuade S. Pacific Leaders From Opposing Radioactive Waste Dumping*, JJI PRESS TICKER SERVICE, Aug. 6, 1980.

118. *Id.*

119. *Japan Decided to Join NEA's Surveillance System for Radioactive Waste*, JJI PRESS TICKER SERVICE, July 17, 1981; *Pacific Is. Leaders Call for Japan's Cancellation of Radioactive Waste Dumping*, JJI PRESS TICKER SERVICE, Sept. 3, 1981. See

During the mid-1980's, shortly after the passage of the London Dumping Convention's moratorium on nuclear dumping, the Japanese government once again attempted to clear the way for dumping operations in the South Pacific. In 1984, Japanese Prime Minister Yasuhiro Nakasone held talks with the leaders of Australia, New Zealand, Fiji, and Papua New Guinea and "shelved" dumping plans due to these countries' opposition.<sup>120</sup> In 1985, Nakasone told leaders of the same nations that he would "freeze the plan until [he] obtain[ed] their understanding."<sup>121</sup> The Japanese hoped that they would soon be able to dump in the Pacific region<sup>122</sup> but pacified Pacific Island nations by assuming that Japan would not "force the region to undertake the job of nuclear waste disposal."<sup>123</sup> Nevertheless, Japan had again made plans to dump in the region, and was stopped only after a group of northern Mariana Islanders visited Japan with petitions supporting their cause.<sup>124</sup>

The persistent Japanese desire to resume dumping is clearly in contradiction with their strong condemnation of Russian dumping over the years. In July 1993, shortly before the Russian dumping in the Sea of Japan, a Greenpeace representative noted that Japan was "'anxious' to dump radioactive waste in the Pacific" and that "Japanese representatives at the London Convention actively were promoting the resumption of dumping."<sup>125</sup> This desire to dump was clearly in sharp contrast with contemporaneous Japanese condemnations of Russian dumping as "immoral" and as "a crime against mankind."<sup>126</sup>

Although it abides by the terms of the London Convention, Japan continues to dump significant amounts of low-level radioactive waste at sea. Japan's forty-six nuclear power plants release 1,020 billion tons of radioactive coolant into the sea each year.<sup>127</sup> Although the water is sufficiently dilute to fall within acceptable international standards,<sup>128</sup>

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also Cowen, *supra* note 4, noting that "Japan last year dropped plans to deposit 92 million liters (22 million gallons) of low-level waste in the Pacific Ocean, bowing to opposition from inhabitants of the Mariana Islands."

120. *Nakasone Prudent About Nuclear Waste Dumping in Pacific*, JAPAN ECONOMIC NEWSWIRE, Dec. 28, 1984.

121. *Nakasone to Stress Need for Pacific Cooperation During Oceanian Tour*, JLI PRESS TICKER SERVICE, Jan. 7, 1985.

122. *Japan to Shelve Idea of Ocean Dumping of Nuclear Waste*, JAPAN ECONOMIC NEWSWIRE, Jan. 7, 1985.

123. *Id.*

124. *Islanders Appeal Against Radioactive Waste-Dumping Plan*, JAPAN ECONOMIC NEWSWIRE, March 1, 1986.

125. *International Panel Fails to Reach Agreement on Ocean Dumping*, *supra* note 114.

126. *Id.* See also *Greenpeace Charges G-7 With "Hypocrisy" Over Stand on Nuclear Waste Dumping at Sea*, *supra* note 58.

127. Terazono, *supra* note 15:

128. Before being released into the sea, waste water from Japanese nuclear power plants is diluted to bring its radiation level down to a level lower than 1/40 of that

and although Japan releases the coolant into its own internal waters and not into the high seas, the sheer volume of fluid released results in an estimated 100 curies of radioactive tritium entering the oceans each year.<sup>129</sup> With this record, it should come as no surprise that the International Herald Tribune reported shortly after the Russian dumping:

Japan is in no position to indulge in righteous indignation. The chief of the Science and Technology Agency, Satsuki Eda, has admitted that Tokyo Electric Power Co. dumps 10 times more radioactive waste each year into the Sea of Japan than the amount that the Russians got rid of after Mr. Yeltsin's visit.<sup>130</sup>

#### V. OUTCOME AND INTERNATIONAL APPRAISAL

Non-nuclear countries have been fighting to extend the London Convention's "temporary" dumping moratorium into a permanent ban since long before the Russian dumping of October 1993. A Danish proposal to make the ban permanent was defeated in 1992 by a group of nuclear states including the United States, Britain, Japan, and France,<sup>131</sup> all of which have historically been opposed to a ban,<sup>132</sup> though it was understood at the time that the possibility of a ban would be raised again after the completion of an environmental impact report due in 1993.<sup>133</sup>

The Russian dumping of October 1993, just weeks before the sixteenth meeting of the London Convention, brought out the long-simmering controversy more quickly than anticipated. Public awareness of the dumping caused both Japan and the United States to reverse their long-held positions against a permanent ban in moves which each country presented as a major shift in policy.<sup>134</sup>

Neither of these shifts in policy were as bold as they appeared, however, as they required neither the United States nor Japan to change its behavior in any way. Shortly after the Japanese announcement, a Russian spokesman noted:

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set by international standards. Nevertheless, critics have noted that Japanese waste water contains tritium, a radioactive substance which can be particularly harmful to humans if it enters the food chain. Suvendrini Kakuchi, *Japan-Environment: Greens Welcome Shift in Nuclear Policy*, INTER PRESS SERVICE, Nov. 12, 1993.

129. Kazuki Yoshikawa, *End to Sea-Dumping Seen as Hollow Victory: London Pledge Leaves Russian Issue Still Unresolved*, NIKKEI WEEKLY, Dec. 27, 1993, at 24.

130. Mark J. Valencia, *Make the Sea of Japan a Model of Environmental Partnership*, INT'L HERALD TRIBUNE, Dec. 31, 1993.

131. Brown, *supra* note 112.

132. See, *Statement by White House Press Secretary on Radioactive Waste*, *supra* note 57.

133. *Parties to LDC Treaty Draw Closer to Permanent Ban on Sea Disposals*, BNA INTERNATIONAL ENVIRONMENTAL DAILY, Nov. 20, 1992.

134. See *supra* notes 56 and 57.

As to the statement made by Japan . . . [i]f it comprises refraining from dumping radioactive waste from . . . Japanese power stations, in that case it is naturally a new and major initiative. But if it is a matter of just not dumping in the seas of those waste [sic] which are formed as the result of the operation of nuclear reactors on ships, well, Japan is actually observing this moratorium . . . . In that case there is nothing new in it.<sup>135</sup>

As the Japanese initiative did not cover water used to cool nuclear power plants, it did not require any change in Japanese behavior. As it turns out, even the Japanese commitment not to dump was not as firm as it first seemed. A December, 1993, article reveals that Japan's decision to cease dumping low-level radioactive waste at sea was made only "on condition that the policy could be altered if the situation drastically changes in the future."<sup>136</sup> One high-ranking Japanese official wondered whether "Japan, by yielding to pressure, gave the impression it had changed its atomic energy policy."<sup>137</sup>

Similarly, although a Clinton administration official argued that the United States' decision to press for a permanent moratorium on nuclear dumping was "a pretty significant departure from the past,"<sup>138</sup> the move did not require America to alter its behavior in the slightest. Granted, the United States Navy has long opposed the idea of a comprehensive ban and the Defense Department pressed the Clinton Administration hard for a flexible moratorium with provisions allowing parties to withdraw at any time,<sup>139</sup> but both the Defense Department and the Navy eventually gave in as the debate was largely moot in practical terms. The United States has not disposed of low-level waste in the oceans since 1970, after publication of a report which noted that dumping of radioactive waste at sea was not as economical as other forms of radioactive waste disposal.<sup>140</sup> By 1972, the Ocean Dumping Act had been passed, prohibiting the dumping of radioactive waste at sea without a joint resolution from Congress.<sup>141</sup> Since then, Congress has never given permission for the dumping of radioactive waste.<sup>142</sup> Therefore, as Representative Torkildsen argued on the floor of the House in support of a permanent ban on the dumping of low-

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135. *Press Briefing by Russian Federation Foreign Ministry*, OFFICIAL KREMLIN INT'L NEWS BROADCAST, Nov. 2, 1993.

136. Yoshikawa, *supra* note 129.

137. *Id.*

138. Pitt, *supra* note 6.

139. *Id.*

140. Spak, *supra* note 2, at 819.

141. See *Administration to Call for Global Ban on Dumping of Low-Level Waste in Oceans*, BNA NAT'L ENV'T DAILY, Nov. 4, 1993.

142. 140 CONG. REC. H3807 (Daily ed. May 23, 1994) (statement of Rep. Torkildsen).



level radioactive waste: "[a permanent ban] will not change the way that the United States does business."<sup>143</sup>

#### A. *The Sixteenth Meeting of the London Convention*

Although neither the United States nor the Japanese had to take more than a purely symbolic step in promising not to dump, their shift in position had a significant effect upon the London Convention. It clearly signaled that the balance of power had shifted in favor of a permanent ban, and isolated the United Kingdom and France as the two major Western powers still in opposition.<sup>144</sup>

When the convention met, the United Kingdom and France pushed for the passage of an alternative amendment which would have extended the ban on dumping by fifteen years instead of imposing a permanent ban.<sup>145</sup> By such a compromise, the UK and France would have given up nothing. As noted earlier, both had already committed to a fifteen year moratorium at the regional Convention for the Protection of the Marine Environment of the North East Atlantic.<sup>146</sup> The proposed compromise would simply have brought their obligations under the London Convention in line with already established commitments. The passage of this alternative amendment was rejected by Contracting Parties to the Convention.

The Russian Federation proposed an amendment which would have made the permanent ban on dumping radioactive wastes at sea applicable to Russia only after December 31, 1995. Russia argued that due to a shortage of storage and disposal facilities for radioactive waste, it would simply be unable to stop dumping before that date, and could not abide by the terms of any ban which called for a cessation of Russian dumping any sooner.<sup>147</sup> Nevertheless, the Russian amendment was also rejected.<sup>148</sup>

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143. *Id.*

144. See generally, *Statement by White House Press Secretary on Radioactive Waste*, *supra* note 57.

145. Report of the Sixteenth Consultative Meeting of Contracting Parties to the Convention on the Prevention of Marine Pollution by Dumping of Wastes and other Matter, 4.36-37, Dec. 15, 1993 [hereinafter *Convention Report*]; *World Wide Ban On Waste Dumping At Sea 'Major Leap Forward' Says Greenpeace*, Greenpeace Press Release, Nov. 12, 1993 [hereinafter *Greenpeace Press Release*].

146. See note 113, *supra*, and accompanying text. See also *Environment Minister Announces Ban on Sea Disposal of Radioactive Waste*, BNA INT'L ENV'T DAILY, Jan. 5, 1994. (noting that "the [proposed] compromise was in line with a 15-year moratorium agreed to under the September 1992 Convention . . . [which] allows countries to continue dumping radioactive waste after the moratorium expires provided that no safer disposal options can be found.")

147. *Convention Report*, *supra* note 145 at 4.47.

148. *Convention Report*, *supra* note 145 at 4.39; *Greenpeace Press Release* *supra* note 145.

Ultimately, the permanent ban won the necessary two-thirds vote needed, and was passed by the Convention. Thirtyseven countries voted in favor of the ban, none opposed it, and Belgium, China, France, the United Kingdom, and the Russian Federation abstained.<sup>149</sup> It was agreed that the ban would be reviewed by the Convention in 25 years in light of new scientific evidence.<sup>150</sup>

After passage of the ban, countries were given 100 days within which they could submit a "declaration of non-acceptance" to the Convention.<sup>151</sup> Submission of such a declaration would exempt any objecting country from being legally bound by the ban, allowing them to effectively "opt out" of the anti-dumping requirement.<sup>152</sup>

After the vote, several delegations urged the Russian Federation to accept the ban and stop dumping radioactive waste at sea. A few offered assistance to the Russian delegation in helping them to overcome their financial difficulties.<sup>153</sup> The Japanese delegation, in particular, expressed interest in helping Russia to stop dumping, and after stressing that the Russian Federation was primarily responsible for the management and disposal of its own radioactive waste, expressed its readiness to "explore the possibilities of extending support to the efforts of the Russian Federation with a view to resolving remaining difficulties that it may encounter with the issue of radioactive waste disposal."<sup>154</sup>

The American delegation was less sensitive to Russian needs. United States Representative David A. Colson rejected the Russian position that Russia would have to resume dumping at sea without immediate financial assistance from other nations, arguing:

Those that would use nuclear power — be it for civilian or military purposes — . . . must understand that it is their responsibility to deal adequately and safely with waste and other materials associated with this use. It is a cost of doing business, and if you cannot bear the cost, you should not be in the business. We cannot accept that it is for others to bear the cost, either in terms of risks and costs of environmental degradation or in terms of the financial costs associated with storage . . . We recognize that Russia has severe economic difficulties, but the Russian navy maintains and operates its nuclear fleet at substantial cost — and there is money to do this. The Russian Government chooses to spend enormous sums of money on new nuclear vessels — and there is money to do this. To then say there is no money for adequate storage and pro-

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149. *Convention Report, supra* note 145 at 4.41; *London Convention Votes Permanent Ban on Ocean Dumping of Radioactive*, AGENCE FRANCE PRESSE, Nov. 12, 1993.

150. AGENCE FRANCE PRESSE, *supra* note 149.

151. BNA NAT'L ENV'T DAILY, *supra* note 141.

152. *Id.*

153. *Convention Report, supra* note 145 at 5.24.

154. *Id.* at 5.25.

cessing facilities — this cannot be so . . . You will not convince me — and you will not convince the American people — that if the Russian Government so chose, it could not reallocate its priorities and immediately build and quickly have in place adequate storage and processing facilities. It is a simple issue of . . . priorities.<sup>155</sup>

### B. *General Acceptance of the Permanent Moratorium*

It was generally expected that both Britain and France would file declarations of non-acceptance within 100 days of the Convention in order to exempt themselves from the ban against dumping.<sup>156</sup> To the surprise of most observers, both countries failed to file declarations, choosing to accept the ban instead.

France was the first to announce a formal acceptance of the ban. In what Greenpeace France called “a 180 degree turn in the government’s original position,” French Environment Minister Michel Barnier announced on December 20, 1993 the French decision to accept the total ban on dumping of radioactive waste required by the London Convention.<sup>157</sup> On the same day officials from the Ministry of the Environment released a statement saying that French willingness to adhere to the ban “conforms with the will of Prime Minister Balladur to conduct an energetic policy respectful of the environment.”<sup>158</sup>

The French decision was surprising, in part, because it was made much earlier than necessary — well before the end of the 100 day waiting period. But in another respect it was less surprising. The French had not dumped — or tried to — in years, and France had sufficient land-disposal options available for waste disposal.<sup>159</sup> At the London Convention the French, while fighting the proposed ban, nevertheless, stated that their objection was “opposition in principle — and I emphasize that this is in principle . . .” to the idea of ruling out a potential waste disposal option without sound scientific evidence.<sup>160</sup>

The British, unlike the French, did wait until the very last moment to accept the ban; and British opposition was clearly more than just “opposition in principle.” The difference between the British and French positions may have been due to the differing needs of the two

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155. David A. Colson, *Russia’s Radioactive Waste Disposal: A Matter of Grave Concern, Address to the Parties to the London Convention (Nov. 10, 1993)*, in DEPT ST. DISPATCH, Nov. 22, 1993, at 807. See also *Convention Report*, supra note 145 at 5.30-32; David E. Pitt, *Nations Back Ban on Atomic Dumping*, N.Y. TIMES, Nov. 13, 1993, Sec. 1, at 7.155.

156. Schoon, supra note 59.

157. *Ban on Dumping of Radioactive Waste at Sea to be Instituted, France Announces*, BNA INT’L ENV’T DAILY, Dec. 28, 1993.

158. *Id.*

159. *Id.*

160. *Convention Report*, supra note 145, at 4.46.

countries in the coming years. In England, large steam generators from the first-generation Magnox nuclear reactors are due to be taken out of service over the course of the next fifteen years, and as most are on coastal sites, it would be significantly less expensive to load them on barges and tow them into the ocean for dumping than it would be to cut them up for disposal on land.<sup>161</sup> Britain also wants to retain the option of dumping 17 decommissioned nuclear submarines which are all expected to be out of service by the end of the century.<sup>162</sup>

Whether for these or other reasons, the British have tried to make a strong scientific case in favor of dumping low-level radioactive waste at sea. British officials have argued that studies indicate that ocean dumping may be the best practicable environmental option for some categories of low and intermediate level radioactive wastes. Agriculture Minister Gillian Shephard released a statement to Parliament in February 1994 noting that "scientific evidence shows that dumping at sea, carried out under controlled conditions, causes no harm to the marine environment and poses no threat to human health,"<sup>163</sup> and British officials at the London Convention argued that "[i]t would be irresponsible to foreclose that option [of dumping] now when alternatives could be more damaging."<sup>164</sup>

At the Convention, the British argued that, compared to the nine billion tons of uranium already present in the world's oceans, any radioactive material that man might dump would be insignificant in comparison.<sup>165</sup> In addition, they claimed that burying wastes at sea would be safer than land-based disposal because it would remove the wastes from people to a place where their radioactivity would seep out slowly enough to cause no harm.<sup>166</sup> Both of these arguments were rejected by the Convention.

The British formally accepted the ban just days before the amendments were due to take effect on February 21, and made clear that they were doing so for political, not scientific, reasons.<sup>167</sup> On February 17, Minister Shephard released a statement which said that al-

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161. Tom Wilkie, *Sea Dumping of Radioactive Waste Banned; Britain Abstains in Vote by 42 Nations*, THE INDEPENDENT, Feb. 18, 1994, Home News Page, at 7.

162. Nicholas Schoon, *UK Bows to Ban on Dumping N-Waste at Sea*, THE INDEPENDENT, Feb. 18, 1994, Pol. Pol'y Page, at 6.

163. *Britain Goes Along with Nuclear Ocean Waste Ban*, REUTERS WORLD SERVICE, Feb. 18, 1994.

164. Wilkie, *supra* note 161.

165. *Dumping Policy Is All At Sea*, THE INDEPENDENT, Nov. 15, 1993 Comment Page, at 15. Others argue against this view, noting that the British argument ignores the central question of what effect additional man-made (as opposed to naturally occurring) materials might have on the ocean environment. See Spak, *supra* note 2, at 805.

166. THE INDEPENDENT, *supra* note 165.

167. Marshall, *supra* note 3.

though controlled ocean dumping of radioactive wastes was both safe and practical, "the U.K. recognizes that the weight of international opinion on this matter means that such dumping is not, in any event, a practical proposition. We have, therefore, decided to accept the ban."<sup>168</sup> This was a wise political move for Britain. One newspaper noted that, since both England and France are bound not to dump for fifteen years anyhow, and as the London Convention's "permanent" ban will be reviewed and possibly reconsidered in 25 years, "withdrawing from the London Dumping Convention's radioactive-waste agreement would bring international unpopularity for no immediate gain."<sup>169</sup>

Along with Britain and France, Belgium and China also agreed to accept the ban.<sup>170</sup> Only Russia officially registered its declaration of non-acceptance with the International Maritime Organization before the end of the 100 day deadline,<sup>171</sup> arguing that it would need to continue dumping radioactive wastes at sea until at least 1996.<sup>172</sup>

### C. *Ongoing Russian Japanese Negotiations*

Although the Russian Federation did not then, and has not yet, accepted the London Convention's ban on dumping, neither has Russia dumped nuclear waste at sea since the October 1993 incident in the Sea of Japan. This can be attributed to financial negotiations between Russia and Japan which have been ongoing since before the Russian dumping.

As noted, *infra*, Russia has been trying to convince the Japanese to create a fund for the processing and storage of radioactive wastes since at least May 1993,<sup>173</sup> and did not carry out a planned second dumping in the Sea of Japan due, at least in part, to Japanese promises of financial aid.<sup>174</sup> Russian press releases and conferences following the dumping explicitly linked the cessation of future dumping to foreign financial assistance, and threatened that without such assistance Russia would resume dumping.<sup>175</sup> Russia continued to press for foreign aid during the London Convention of 1993, indicating once

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168. REUTERS WORLD SERVICE, *supra* note 163.

169. Wilkie, *supra* note 161.

170. *China, Britain, Belgium Accept Nuclear Waste Dumping Ban*, L.A. TIMES, Feb. 19, 1994, Foreign Desk, at 11; Marshall, *supra* note 3.

171. *Russia Opts Out of Int'l Ban on Nuclear Waste Sea Dumping*, JAPAN ECON. NEWSWIRE, Feb. 21, 1994.

172. Bronwen Maddox and Tony Walker, *UK and China Join Ban on Dumping Nuclear Waste at Sea*, FINANCIAL TIMES, Feb. 19, 1994, at 1.

173. See *infra* note 26 and accompanying text.

174. See *supra* notes 43 and 44.

175. See *supra* notes 48-53.

again that without immediate foreign assistance they might be forced to dump again.<sup>176</sup>

Although the Japanese have continued to hold out the promise of financial assistance to Russia since the Convention, negotiations between Japan and Russia have gone absolutely nowhere. A complicated dance has been under way between the Federal Russian Government, the local government of Primorsky Territory in the Russian Far East, and Japan. The same steps have been taken time and again with supreme incompetence and minor variation: Russia threatens to dump into the Sea of Japan, a financial arrangement is struck, Russia holds off from dumping, and the deal falls through. The pattern continues to this day.

During the Russo-Japanese talks of December 1993, just following the Convention, the Chief Radiologist of the Russian Navy expressed his belief that the Navy would request permission from the government to dump radioactive waste into the Sea of Japan within a few weeks.<sup>177</sup> Immediately thereafter Japan announced that it would study the possibility of providing Russia with a used chemical tanker<sup>178</sup> sufficient to hold enough radioactive waste to halt Russian dumping for two years.<sup>179</sup> The study commenced, and Japan soon offered Russia a 6,800 ton Panamanian-registered chemical tanker; but in mid-January Russia rejected the offer,<sup>180</sup> claiming that the tanker would not be able to withstand the severe cold of the Russian Far East, and that the deck was not thick enough to protect the crew from radiation poisoning.<sup>181</sup>

Moscow instead suggested an alternative plan to build land-based disposal facilities in Vladivostok, and asked Japan for financial assistance.<sup>182</sup> By early February the Japanese government announced that it had "substantially decided" to give Russia millions of dollars to pay for building the storage and disposal facilities,<sup>183</sup> and TASS reported that the Russian Finance Ministry would decide by mid-February whether to allocate the funds needed to build the treatment plants.<sup>184</sup>

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176. See *supra* notes 153-55 and accompanying text.

177. *Itar-Tass News Digest of December 21*, TASS, DEC. 21, 1993.

178. *Japan to Study Provision of Chemical Tanker to Russia*, JAPAN ECONOMIC NEWSWIRE, Dec. 21, 1993.

179. Vyacheslav Bantin, *Japan and Russia Cooperate to Prevent Further Nuke Dumping*, TASS, Dec. 21, 1993; *Japan May Provide Chemical Tanker for Russia*, UNITED PRESS INT'L, Dec. 21, 1993; Vladimir Kutakhov, *Consultations on the Dumping of Nuclear Waste*, TASS, Dec. 21, 1993.

180. *Japan to help Russia Pay for Building N-Waste Plant*, DAILY YOMIURI, Feb. 6, 1994.

181. *Id.*; *Japan, Russia Won't Use Tanker to Store Waste*, JAPAN ENERGY SCAN, Feb. 7, 1994.

182. DAILY YOMIURI, *supra* note 180.

183. *Id.*

184. Mikhail Karlov, *Russian Navy Waits for Money to Buy Waste Treatment*

Russia decided to allocate the money, but it never became available because Parliament did not approve the Federal budget.<sup>185</sup> Unsurprisingly, by February's end Russian authorities were again arguing that "if facilities for recycling liquid radioactive waste is [sic] not built . . . within the next two months, Russia will possibly have to dump this waste in the Sea of Japan again in order to avert an ecological disaster."<sup>186</sup> On March 14, Valery Damilyan, the chief of the Pacific Fleet's chemical service, told TASS that Russia might dump in the Sea of Japan in May "unless foreign countries, including Japan, provide financial help with building facilities to use and store liquid radioactive waste."<sup>187</sup>

Just a few days later, on March 18, 1994, Russian Deputy Foreign Minister Aleksandr Panov denied the statements offered by the Pacific Fleet. Panov told the press that "[b]ecause the construction of facilities to store liquid nuclear waste will be completed by the end of April with Japan's assistance, there will be no need for the moment to resume dumping."<sup>188</sup>

But Panov's claims were powerfully countered by a statement issued on March 24 by the Administration of Primorsky Territory in the Russian Far East. The Administration said that the Russian ban on dumping nuclear waste into the Sea of Japan had aggravated the ecological situation in the territory, and complained that the Federal government had done nothing to speed the promised Japanese grant despite repeated local pleas.<sup>189</sup> The local government threatened to dump liquid radioactive waste into the Sea of Japan within one week without an immediate infusion of cash from Moscow for waste storage and utilization. "Moscow's continued inaction forces the local authorities to act independently and allow a waste discharge from the TNT-5 tanker, which is overfilled with waste and needs emergency repairs."<sup>190</sup>

The urgent need to dump felt by residents of Primorsky Territory was understandable: their economy would be strongly affected by an inability to dispose of Russian waste. A local article from Krasnoye Znamya, in Vladivostok, explains:

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*Plants*, TASS, Feb. 3, 1994.

185. Veronika Romanenkova, *Russia to Treat Radioactive Waste with Japan's Help*, TASS, June 20, 1994. See also *Russian Pacific Fleet Wants Japanese Aid to Deal with Nuclear Waste*, BBC SUMMARY OF WORLD BROADCASTS, March 17, 1994.

186. Veronika Romanenkova, *Russian Government Faces Two Options on Waste Disposal*, TASS, Feb. 24, 1994.

187. BBC SUMMARY, *supra* note 185.

188. *Russia Says Further Nuclear Waste Dumping Unnecessary*, JAPAN ECONOMIC NEWSWIRE, March 18, 1994.

189. Valeriya Sycheva and Denis Demkin, *Russian Peace Atom Again Threatens Sea of Japan*, RUSSIAN PRESS DIGEST, March 25, 1994.

190. *Id.*

One would think that we still have . . . six months to . . . create[] new capacities for utilization or storage of LRW . . . We do not have this margin, because 170 tonnes of LRW is clearly not enough to fulfil the current year's state programme for ship repair and utilization. Not only will an important state defence order not be fulfilled, but also a great number of Bolshoy Kamen residents will be left without work . . . [W]e have a dilemma: either bring the plants to a standstill and limit the activities of the Russian navy, or violate the Government ban and carry out unauthorized dumping of LRW in the Sea of Japan . . . The former option is simply impossible. This leaves the latter — dumping into the sea.<sup>191</sup>

Japanese papers blamed the Russian Federal Government for the confusion, noting that "Russia has failed to respond to Japan's proposal to help it build the storage facility."<sup>192</sup> But before long, after still more meetings between Russian and Japanese officials, a new Russo-Japanese agreement was announced. In early June, Japan and Russia announced plans to build a disposal plant for liquid nuclear waste near Vladivostok, to be funded by a 70 million dollar Japanese grant.<sup>193</sup> The plant was to be completed by the end of 1994, although sources warned that the project might be held up by "apparent differences between Moscow and Vladivostok authorities about the nature of the plant."<sup>194</sup> Local authorities in Vladivostok agreed not to pour any liquid radioactive waste into the Sea of Japan before the end of the year.<sup>195</sup>

By late June the details had been hammered out, and Japan had signed an agreement committing itself to provide funds for a floating treatment installation for low and intermediate level radioactive waste in the Russian Far East.<sup>196</sup> It was agreed that the contractors would be decided upon through an international tender.<sup>197</sup> The only potential trouble spot related to the "apparent differences between Moscow and Vladivostok" mentioned earlier. One newspaper noted that "the

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191. V. Ignatenko, *Dumping Into Sea Seen As Only Option for Radioactive Waste in Far East*, KRASNOYE ZNAMYA, Apr. 16, 1994 excerpted in BBC SUMMARY OF WORLD BROADCASTS, April 29, 1994.

192. *Russia May Resume Nuclear Waste Dumping Next Month*, JAPAN ECONOMIC NEWswire, April 3, 1994.

193. *Japan, Russia to Build Nuclear Waste Disposal Plant*, JAPAN ECONOMIC NEWswire, June 2, 1994.

194. *Id.*

195. *Russian-Japanese Commission Considers options for Recycling Nuclear Waste*, IZVESTIYA, May 11, 1994 excerpted in BBC SUMMARY OF WORLD BROADCASTS, June 3, 1994

196. Romanenkova, *supra* note 185; *Japan to Help Russia Build N. Waste Facilities*, JIJI PRESS TICKER SERVICE, June 20, 1994.

197. JIJI PRESS TICKER SERVICE, *supra* note 196; *Russia, Japan Agree on Nuclear Waste Disposal Plant*, JAPAN ECONOMIC NEWswire, June 23, 1994.



signing of an agreement on the construction has been delayed because of Russian domestic reasons . . . <sup>198</sup>

In October bids were solicited to build the project by a Japanese-Russian joint committee.<sup>199</sup> The committee called for the picking of a successful bidder towards the end of the year,<sup>200</sup> and met again in Tokyo in January 1995 to "button down" the deal.<sup>201</sup> At that meeting, an unidentified British consulting firm presented an evaluation of the different tender offers. But before a bidder could be chosen, "sudden and additional demands" from Russia brought the meeting to an abrupt close. A senior Japanese Foreign Ministry official said: "they suddenly added fresh demands, and the meeting had to be broken off. We seem to have to start from scratch again. They are simply inconsistent."<sup>202</sup>

A better explanation may be that of another unidentified British consulting firm: "The Russians may have found a contender not of their liking in a better position."<sup>203</sup> The government refused to identify the bidders<sup>204</sup>

By February 1995, virtually nothing constructive had been done to improve the situation in Vladivostok since the Russian dumping incident. As TASS reported:

[The 1993 dumping] was prompted by an emergency: the tankers used for storage of liquid waste were full and threatened with a disaster. As of today, the situation has not changed radically, except that a Russian-made pilot plant has been put into operation, which is currently processes [sic] 0.5 liters of liquid radioactive waste per hour. If the plant proves to be effective, it will be expanded.<sup>205</sup>

Purification of 0.5 liters of radioactive waste per hour was not sufficient to meet Russian needs, and talks between Russia and Japan began again in March 1995.<sup>206</sup> The talks, held in Moscow, began with an examination of applications from seven international consortiums offering to build processing installations in the Russian Far East. Great care was taken to preserve the anonymity of the

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198. JJI PRESS TICKER SERVICE, *supra* note 196.

199. *Japan, Russia Solicit Bids for Nuclear Disposal Barge*, JAPAN ECONOMIC NEWswire, Oct. 14, 1994.

200. *Id.*

201. *Last-Minute Demands Stall Japan Aid to Russian LLW Tank Project*, NUCLEONICS WEEK, Jan. 19, 1995.

202. *Id.*

203. *Id.*

204. *Id.*

205. Veronika Romanenkova, *Russia Not To Dump Nuclear Waste and Reactors Into Seas*, TASS, Feb. 22, 1995.

206. Ivan Zakharchenko, *Russia and Japan Open Talks on Radioactive Waste*, TASS, March 21, 1995.

bidder; all companies submitting applications were code-named so that they might be considered anonymously.<sup>207</sup>

As of this writing, no bidder has yet been chosen. Russian sources indicated in July 1995 that "delays in executing the tender are connected with the different approaches to this problem on the part of the local authorities and the Russian Atomic Energy Ministry. So it looks as if the utilization facility will not be built so soon."<sup>208</sup> In particular, Russian nuclear specialists local to the Russian Far East have commented that "Russian factories and plants must participate in the construction work of the radioactive waste utilization unit . . . [and] Russian research institutes could contribute greatly to the design . . ."<sup>209</sup>

Because nothing has been done to solve the problem, Russian authorities have stated as recently as July 1995 that authorities in the Russian Far East may soon decide to once again dump liquid radioactive waste into the Sea of Japan. As was the case in October 1993, the tankers in the harbor are "filled to the brim" and remain unable to adequately and safely store the waste they are holding.<sup>210</sup>

#### VI. AUTHOR'S APPRAISAL AND ANALYSIS

From a distance, the Russian Federation's dumping of low-level nuclear waste into the Sea of Japan in October 1993 appears to have changed international law by leading to significant changes in the London Convention and a "permanent ban" on the dumping of low-level waste at sea. In reality, little has changed. It was easy for the United States and Japan to take a stand against dumping, since neither country was forced to change their behavior in any way. But neither country has shown a willingness to take any steps which are more than purely symbolic: Japan continues to pour ten times more radioactivity than the Russians dumped into its own internal waters each year, and anti-dumping legislation introduced into the United States Congress in November 1993 has yet to be passed.<sup>211</sup>

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207. *Id.*

208. Natalia Gorodetskaya, *Radioactive Waste May Again Wind Up In Sea of Japan*, RUSSIAN PRESS DIGEST, July 17, 1995.

209. *Id.*

210. *Id.*

211. Terri Hohler, Legislative Assistant to Curt Weldon (R-PA), who introduced The Ocean Radioactive Dumping Ban Act of 1995 (HR 1154) says that the previous bill died for lack of time, but that this one will become law. Interview with Terri Hohler, June 30, 1995. Nevertheless, several bills introduced to bring United States domestic law into line with its obligations under the London Convention by instituting a permanent ban on the dumping of low-level radioactive waste have failed to get through Congress. See 139 CONG. REC. E 2744 (Nov. 2, 1993) (statement of Rep. Weldon); 1993 H. CON. RES 177 (Nov. 8, 1993); 141 CONG. REC. H 5461 (May 23, 1995).

Other nuclear nations, such as the UK, France, and Belgium, have accepted the ban with extreme reluctance. Britain made it absolutely clear that it stopped dumping only because international opinion has made dumping impractical for the moment. Britain has disregarded the London Convention's anti-dumping law in the past, and with a pressing need to dump reactors and submarines becoming more urgent every day, may choose to disregard it again in the future when obligations under other treaties have ended. As for Russia, the true "target" of the ban, it has refused to sign and has been prevented from dumping only by the promise of Japanese funds. At this date, those funds have not been used to build storage or processing facilities, and the Russian situation remains as urgent as it was in 1993, with Russia threatening to dump nuclear wastes into the Sea of Japan again at any moment.

The fact that the Convention carries no threat of sanctions, and that dumping has occurred in the past with blatant disregard for the Convention's dictates, indicates that there is not sufficient control intention behind the ban to maintain it in the face of significant opposition. Countries have paid lip-service to the problem of nuclear dumping since the Russian incident, expecting the Japanese — who would be most effected by another Russian dumping operation — to shoulder the costs of preventing the Russians from dumping. Should Japanese money fail to prevent additional dumping in the future, however, it seems unlikely that other countries will feel strongly enough about this issue to bring anything stronger than rhetoric into play — especially if stronger measures would come at any cost to themselves.

It may be worthwhile to consider the questions which this analysis raises. When some poor nation chooses, at some point in the future, to dump its low-level radioactive waste into the oceans, how will international elites respond? Not all neighboring countries will be as wealthy, or as subject to manipulation, as the Japanese, and it seems likely that mere invocation of the London Convention will prove insufficient to prevent future dumping. It also seems unlikely that wealthy elites will wish to subsidize poorer countries in order to keep them from dumping in some remote corner of the world.

This analysis seems particularly resonant given that studies conducted immediately after the dumping,<sup>212</sup> six-months afterwards,<sup>213</sup> and over a year and a half afterwards,<sup>214</sup> all concluded that the Rus-

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212. *Radiation Levels Normal in Japan Sea*, DAILY YOMIURI, Oct., 26, 1993.

213. *Expedition Team Finds No Radiation in Sea of Japan*, JAPAN ECONOMIC NEWSWIRE, April 15, 1994; Nikolai Geronin, *Russian Wastes Have Not Raised Radiation in Sea of Japan*, TASS, April 18, 1994.

214. *No Radiation Found from Russian Nuclear Dumping*, AGENCE FRANCE PRESS, July 26, 1995; Vyacheslav Bantin, *Russia's Radioactive Waste Dumping Into Sea Harmless*, TASS, July 26, 1995; *Radiation Levels Normal In Sea of Japan*, MAINICHI

sian dumping had not measurably raised radiation levels in the Sea of Japan. If small amounts of dumping have such minimal effects, how likely is it that wealthy elites who privately wish to reopen the possibility of ocean dumping will act forcefully to prevent such dumping in the future?

If, as this author does, we conclude that the current state of affairs is insufficient to prevent future dumping from occurring, we must then begin to think seriously about how and whether to prevent such dumping from taking place. If poor countries find that dumping low-level nuclear waste into the oceans is the only disposal option they can afford and begin dumping, how will wealthier nations respond? This is the question we must consider.

There are many ways in which nations may choose to reasonably allocate access to the oceans. Wealthier countries may decide to subsidize poorer ones to a certain extent in order to prevent some dumping, or nations may come up with some other system to ensure that only limited dumping takes place. But until such a system has been arrived at and agreed to, the question of how to dispose of low-level nuclear waste remains to be decided. Declaring the problem solved by invoking the words of the London Convention simply will not suffice.