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The 1954 Shunkotsu Maru Expedition and American Atomic Secrecy

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Abstract

The 1954 dispatch of the Japanese research ship *Shunkotsu Maru* to investigate environmental contamination in the Pacific caused by American nuclear tests has taken a position of significance in determining the American government's motives in handling the *Fukuryu Maru* incident. This paper argues that American concerns over maintaining atomic secrecy have been overemphasized and that the American response to the voyage was positive and in line with the US government's stated belief that no lasting damage was being caused to the environment.

Keywords : *Shunkotsu Maru*, *Fukuryu Maru* incident, Bikini incident, US-Japan relations, health physics.

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I. Introduction

In May of 1954 the Japanese government dispatched the *Shunkotsu Maru*, a Fisheries Agency training vessel, to the Marshall Islands in response to growing public and industry concern over food safety and environmental contamination. These concerns followed the *Fukuryu Maru* incident, the accidental irradiation of a Japanese tuna ship by an American hydrogen bomb test on March 1, 1954. During the *Shunkotsu Maru*'s 50 day voyage it engaged in extensive research on the effects of American nuclear testing on marine life and the long distance dispersal of radioactive fallout.

This voyage has taken on a position of significance among academics and activists who emphasize the importance of “information management” and atomic secrecy to the governmental responses to the *Fukuryu Maru* incident. They emphasize the importance of the voyage as a “whistle blower” because the data it gathered showed that nuclear tests were causing environmental contamination far more extensive than the US Atomic Energy Commission (AEC) had acknowledged in its public statements. American opposition to the voyage has been taken as evidence that the US government had actually been aware of the true nature of the contamination, and actions taken at the time have been used to argue that concealing the effects of the tests was a goal of the American crisis management response. Other scholars who don't necessarily agree with those conclusions still view the voyage as inducing “tensions” between the two governments.¹⁾

This paper argues that these interpretations of the American attitude towards the *Shunkotsu Maru* and its effects on the larger *Fukuryu Maru* dispute are incorrect. The American government's reaction to the proposed investigation has been misinterpreted; officials in both the State Department and the AEC were receptive to the proposal. To the extent that concerns existed, they reflected not fears that American secrets would be exposed but rather more fundamental American doubts about the competence and politicization of the Japanese scientific community.

II. Background to the Expedition

On March 1, 1954 the Japanese tuna ship the *Fukuryu Maru* was irradiated by an American hydrogen bomb test performed at Bikini Atoll in the Marshall Islands. Following its return to its

1) Takahashi Hiroko, *Fuin Sareta Hiroshima, Nagasaki: Beikoku Jikken to Minkan Bouei Keikaku*, (Tokyo: Gaifusha, 2008), 178, Matthew Jones, *After Hiroshima: The United States, Race and Nuclear Weapons in Asia 1945-1965*, (Cambridge: Cambridge University Press, 2010), 220.

home port of Yaizu on March 14, its catch was unloaded and distributed throughout the country. Virtually all was recovered and destroyed once the nature of what had happened to the *Fukuryu Maru* became known, but some had already been sold or consumed. Fears about the safety of fish caught near the test area quickly spread throughout Japan, causing a dramatic fall in tuna prices.

To counter this “tuna panic” and reassure the public, the Japanese government established inspection stations at five ports which all deep sea fishing ships were required to visit upon their return to Japan. Any fish found to exceed a standard of 100 counts per minute (cpm) at a distance of 10 cm was declared unsuitable for human consumption and destroyed.

This was initially believed to be a temporary measure intended for those ships already at sea when the March 1 test took place; with the passage of time and the US government’s expansion of the impassable warning area surrounding the Marshall Islands, future contamination was thought unlikely. A week after the *Fukuryu Maru* incident had been publicized tuna fishes had begun to recover from the initial shock.²⁾

Hopes that the tuna panic would be short lived were dashed, however, by the arrival late on the 24th of the Koei Maru. Despite having been hundreds of miles to the southeast of Bikini at the time of the test, the ship was found to have a highly radioactive catch. As other contaminated ships arrived in the following weeks and it was discovered that the highest levels of radiation appeared to be coming from the affected fish’s internal organs rather than its exterior as would be expected, concern grew regarding the extent of the damage caused by American testing and the exact cause of contamination.

Unfortunately, this was a concern that the AEC was ill equipped to answer, as its past studies on environmental contamination only covered the immediate test area. An AEC official told the Operations Coordinating Board (OCB), the body in charge of American psychological strategy abroad, that it was felt there was little danger, but admitted that “tests will take 10 years to establish [that] as a scientific certainty.” Nevertheless, a statement on the issue was promised.³⁾

That statement was released by the Embassy on March 24. It reassured the public that “there is negligible hazard, if any, in the consumption of fish caught in the Pacific Ocean outside of the immediate test area.” It further claimed that “any radioactivity collected in the test area would become harmless within a few miles after being picked up by [ocean] currents and completely

2) Embassy Despatch No. 1371, “Seamen’s Union Delegation Protests Expansion of Atomic Radiation Danger Zone (April 2, 1954),” Central Decimal File 1950-1954 (711.5612/4-254), RG 59, US National Archives II, College Park, MD (NAII).

3) OCB Memorandum, “AEC Action on Japanese Fish Problem (March 17, 1954),” Japan (1) Sept 56-June 57 (2) folder, Box 46, OCB Central Files Series, White House Office: National Security Council Staff: Papers, 1948-1961, Dwight D. Eisenhower Presidential Library, Abilene, KS (DDE).

undetectable within 500 miles or less.”⁴⁾

Japanese scientists were divided on the question. While Japanese newspapers reported morbid predictions about a “Pacific desert” bereft of life, Hiyama Yoshio, professor of Marine Biology at Tokyo University and later head of the *Shunkotsu Maru* team’s Biology Section, wrote an editorial entitled “The Ignorant Fear of Radioactivity” in which he described the radiation caused by Pacific nuclear testing as being merely “a few drops of red ink spilled into a massive lake.”⁵⁾

It was in this context that the Japanese government began to examine the possibility of sending a research mission to the test area to conclusively determine the effects of American testing on the Japanese fishing industry.

III. Japanese Perceptions of the Expedition

Japanese motives in pursuing the mission were numerous, but the dominant governmental one was political: it was believed that the voyage’s results could be used to reassure the Japanese public as to fish safety and thereby reduce or eliminate the financial woes of the Japanese fishing industry and the political cost the Japanese government incurred by supporting the American test program.

This benefit was emphasized in the initial Japan Coast Guard Hydrographic Office explanation of the *Shunkotsu Maru* provided to the Foreign Ministry; noting the “undue level of credence being given to rumors without any scientific basis” circulating among the Japanese public, it argued that the proposed study would “sweep away” these “unnecessary concerns.”⁶⁾ This explanation was then repeated when Vice-Minister Okumura Katsuzo described the voyage in a letter to the American Embassy as “an effective and appropriate measure to allay the disquiet of the general public engendered by ... somewhat inaccurate press reports concerning the presence of radioactivity.”⁷⁾

In addition to these government views, at least some of the participating scientists expected similar results. When Hiyama wrote to Dr. Laura Donaldson of the University of Washington (an AEC contractor) to inform him of the proposed voyage, he explained that the proposed survey would have “more psychological meaning than scientific.” He believed it would reveal the exact

4) “Telegram No. 2106 from Dulles to American Embassy, Tokyo (March 23, 1954),” Central Decimal File 1950-1954 (711.5611/3-2254), RG 59, NAIL.

5) Hiyama Yoshio, “Houshanou ni Obieru ‘Muchi,’” *Asahi Shimbun*, April 19, 1954.

6) “Bikini Kanshou no Kaiyou Chousa ni tsuite (Irai) (April 4, 1954),” 6. *Shunkotsu Maru* Haken Kankei, C’4.2.1.5, Daigo *Fukuryu Maru* sono ta Bikini Genbaku Hisai Jiken Kankei Ikken, Reel No. C’-0002, Gaimushou Bunshoka Gaikou Shiryoukan (MOFA), 349.

7) “Letter from Okumura to Parsons (May 6, 1954)” 6. *Shunkotsu Maru* Haken Kankei, 355.

radioactive elements present in contaminated tuna, clarifying the maximum permissible dose and thereby confirming the fish's safety.⁸⁾ Hiyama was convinced that the existing 100 cpm standard was too low and that tuna, if eviscerated before consumption, were perfectly safe.⁹⁾

For those who believed that radiation from American testing was actually causing harm to Japanese fishing interests, the voyage could provide other benefits. In addition to providing scientific evidence establishing the exact nature of the damage caused, the voyage's findings could potentially strengthen the Japanese government's hand in its compensation negotiations with the US.

Hiyama also wrote in the above letter to Donaldson that he planned to propose that an AEC scientist be invited to join the voyage. Diet members also echoed the call for American cooperation in the voyage, expressing concern that American opposition would make it difficult for the expedition to engage in a full study.¹⁰⁾

Although no mention of American participation is made in the finalized plan for the expedition drawn up at a meeting held the next day, when the Fisheries Agency wrote to the Foreign Ministry to request American logistical assistance for the voyage (permission to stop at Guam or Marcus Island and replenishment of fresh water and food), it passed along an invitation for two Americans to participate.¹¹⁾

A Foreign Ministry official later gave three reasons for this invitation: first, as much of the voyage would be spent alongside areas under American control (the initial schedule assumed that the American test program would still be in progress at the time of the *Shunkotsu Maru*'s arrival), American participation would improve liaisons with any American officials encountered; second, the American scientists would be in a position to immediately corroborate or object to the Japanese findings; finally, there was a "political desire to give the appearance of cooperation in a scientific project." The importance of this final reason will be explored further on in this paper.¹²⁾

In addition to these practical and political motives, the scientists actually undertaking the study had another reason for wanting American participation: safety. A reporter who accompanied the research team described fears on the ship that it would be sunk by an American

8) "Letter from Hiyama to Donaldson (April 23, 1954)," NV27396, Department of Energy National Test Archives, Las Vegas, NV (NTA).

9) "Letter from Hiyama to Welander (April 12, 1954)," NV0057553, NTA.

10) "Hiyama to Donaldson (April 23, 1954)", House of Representatives Fisheries Committee, "Meeting No. 23 (April 17, 1954)," <http://kokkai.ndl.go.jp/SENTAKU/syugiin/019/0796/01904170796023a.html>.

11) "Bikini Suibaku Jikken no Gyogyou Nado ni Oyobosu Eikyoku ni kan suru Chousa Youkou (April, 24 1954)," 6. *Shunkotsu Maru* Haken Kankei, 359.

12) "Telegram No. 2912 from Allison to Secretary of State (May 25, 1954)," Central Decimal File 1950-1954 (711.5611/5-2554), RG 59. NAII.

torpedo somewhere in the Pacific, a story confirmed later by Miyake Yasuo, head of the study's Meteorological Section, who told of a scientist who was initially unable to sleep due to his fear.¹³⁾ By having an American scientist on board to act as a "hostage," these concerns could be put to rest.

Even among those who did not believe such fantastic rumors, there was a belief that the US government viewed the ship as an "unwelcome guest."¹⁴⁾ This assumption of American hostility was apparently not uncommon at the time; *Fukuryu Maru* crewman Oishi Matashichi reports hearing that the Fisheries Agency official in charge of the operation, Fujinaga Motosaku, was repeatedly called to the US Embassy and threatened as part of an attempt to prevent the voyage.¹⁵⁾

IV. American Participation

This idea that the US was opposed to the voyage is based on the premise that the American government was aware of the environmental contamination that was being caused, believed that contamination to be harmful, and opposed the investigation of the seas surrounding the testing area in order to prevent this information from becoming public. Takahashi Hiroko states this explicitly, while Maeda Tetsuo implies it through his description of the *Shunkotsu Maru* as a "whistle blower."¹⁶⁾

In truth, however, American officials had already extended an offer to aid Japanese research into the effects of nuclear testing on marine life even before the *Shunkotsu Maru's* dispatch to the Pacific had been contemplated.

As the extensive scientific aspects of the *Fukuryu Maru* incident became apparent, the decision was made to dispatch Merrill Eisenbud, Director of the AEC's Health and Safety Laboratory, to Tokyo to assist in the American response. Eisenbud had overseen safety preparations for the Bikini tests and pioneered studies into the dispersal of atmospheric fallout in the continental United States from the Nevada Proving Grounds.

On March 27, Eisenbud wrote to John C. Bugher, Director of the AEC's Division of Biology and Medicine (DBM), informing him that he had (with Bugher's prior knowledge) "communicated to [Kobayashi Rokuzo] the desire of the AEC to entertain proposals for research in ma-

13) Komano Kamakichi, Taniguchi Toshio, *Warera Suibaku no Umi e: Shunkotsu Maru Bikini Houkoku*, (Tokyo: Nihon Orimono, 1954), 12. Miyake Yasuo, *Shi no Hai to Tatakau Kagakusha*, (Tokyo: Iwanami Shinsho, 1972), 65.

14) Komano, 12.

15) Oishi Matashichi, *Kore dake wa Tsutaete Okitai: Bikini Jiken no Ura to Omote*, (Tokyo: Kamogawa, 2007), 49.

16) Takahashi, 160-161. Maeda Tetsuo, *Kakusareta Hibakusha*, (Tokyo: Gaifusha, 2005), 57.

rine biology.”¹⁷⁾ In his later overall report on the incident, Eisenbud further elaborated that the proposed studies were to be directed at the issue of “long range contamination of the Pacific.” Eisenbud’s report makes clear that he was not concerned about the likely findings of such a study; he found Japanese reports of contamination “very difficult to take seriously,” and stated his belief “that no significantly contaminated tuna [had] arrived in Japan except for the catch from the *Fukuryu Maru*.” Japanese concerns were “very similar” to those that had previously been encountered inside the United States, and should be addressed in a similar fashion.¹⁸⁾ Kobayashi did not pursue this offer of assistance and it is possible that he did not forward the offer on to other Japanese officials.¹⁹⁾

While the Japanese preparations for the *Shunkotsu Maru*’s voyage were ongoing and before the decision to invite American participation had been made, the April 22 draft of an “Outline Check List of US Government Actions to Offset Unfavorable Japanese Attitudes to the H-Bomb and Related Developments” prepared by the OCB’s Japan working group suggests having US scientists “participate in Japanese oceanographic survey of general test areas” and “invite Japanese scientists to participate in [a] US oceanographic survey of [the] area.”²⁰⁾ Given the purpose of the list, it is apparent that the members of the group felt that the proposed surveys would confirm prior AEC claims of safety and reassure the Japanese public. This suggestion was followed up on at the next meeting between the OCB working groups on Japan and Nuclear Energy, where it was decided that State and AEC should “consider internationalizing oceanographic surveys of the Pacific test area and organize multi-nation exchange of scientific data.”²¹⁾ The American government felt that research done on the Pacific would confirm the AEC’s earlier statements and prove that the claims appearing in Japanese newspapers were false.

The first State communications on the voyage occurred prior to the Japanese invitation to participate and reflected the negative influence that the failure to achieve medical cooperation in the treatment of the *Fukuryu Maru* crewmen weeks earlier had had on John Allison, the Ameri-

17) Kobayashi Rokuzo was chairman of the Atomic Bomb Injury Investigation Commission, the group designated to coordinate the medical treatment of the *Fukuryu Maru* crewmen. “Telegram No. 2331 from Allison to Secretary of State (March 27, 1954),” Central Decimal File 1950-1954 (711.5611/3-2754), RG 59, NAIL.

18) Merrill Eisenbud, “Contamination of the *Fukuryu Maru* and Associated Problems in Japan: Preliminary Report,” Incident – Japanese Fish – Fallout folder, Box 18, Records Relating to Fallout Monitoring and Studies, 1953-64, Division of Biology & Medicine, RG 326, NAIL.

19) No reference to this offer of assistance can be found in the Foreign Ministry documents presently available.

20) OCB, “Outline Check List of US Government Actions to Offset Unfavorable Japanese Attitudes to the H-Bomb and Related Developments,” April 22, 1954, Folder: Japan (1) Sept 56-June 57 (3), Box 46, OCB Central Files, WHO: NSC Staff Papers, 1948-61, DDEL. The memo predates any State-Embassy discussion of the *Shunkotsu Maru* voyage and the Japanese invitation to participate.

21) “Record of the Joint Meeting of the Working Group on Nuclear Energy and Related Matters and Working Group on NSC 125/2 and NSC 125/6 (Japan),” Japan (3) Sept 56-June 57 (2) folder, Box 46, OCB Central Files Series, White House Office: National Security Council Staff Papers, 1948-1961, DDEL.

can ambassador. When Acting Secretary of State W. Beddel Smith, having learned of the voyage from the Japanese press, asked for Allison's thoughts on offering experts or data to assist in the voyage, Allison replied that there would be "little to be gained by another offer of consultation or cooperation," citing the failure of the Japanese to accept either Eisenbud's earlier offer to Kobayashi or other standing offers of cooperation.²²⁾

This attitude shifted rapidly after the Japanese invitation was issued, however. Although Allison was still reticent about actual American participation in the survey itself, seeing "both advantages and disadvantages" therein and requesting the opinion of the AEC, he now stressed that it was "psychologically important we accommodate Japanese requests to [the] maximum extent possible."²³⁾

State officials in Washington did not share Allison's concerns, and enthusiastically endorsed participation. In a letter to the AEC's John A. Hall, Gerard C. Smith requested that the AEC provide an expert and gave four reasons that it was "highly desirable" that an American participate: 1. American participation would "give substance" to prior offers and encourage future joint efforts; 2. the risk of "exaggerated reports" by the Japanese scientists would be reduced; 3. the US would gain access to any "findings of value" ; and 4. it would help the voyage liaison with American officials.²⁴⁾ The OCB also endorsed cooperation, but only on an "observer" basis.²⁵⁾

The AEC's response to the proposal was initially divided; public information officials felt that "much could be gained," but faced opposition elsewhere. Significantly, Bugher was not in Washington and it was felt that he needed to participate in any discussion of the proposal; this delayed a final AEC decision.²⁶⁾

That decision was not made until May 12th, four days after the *Shunkotsu Maru's* initially scheduled departure. At a full meeting of the Commission, Bugher expressed concerns that due to the large number of Japanese reporters accompanying the survey that any "developments unfavorable to the US" would be given extensive publicity; in such a case the presence of an AEC representative could cause complications.

22) "Telegram No. 2352 from Smith to American Embassy, Tokyo (April 23, 1954)," Central Decimal File 1950-1954 (711.5611/4-2354), RG 59, NAIL. "Telegram No. 2620 from Allison to Secretary of State (April 26, 1954)," Central Decimal File 1950-1954 (711.5611/4-2654), RG 59, NAIL.

23) "Telegram No. 2688 from Allison to Secretary of State (May 1, 1954)," Central Decimal File 1950-1954 (711.5611/5-154), RG 59, NAIL.

24) "Memo from Smith to Hall (May 3, 1954)," 21-52d *Fukuryu Maru* 1954 1 folder, Box 422, Records Relating to Atomic Energy Matters 1944-63, Special Assistant to the Secretary for Energy and Outer Space, RG 59, NAIL.

25) "OCB Meeting Minutes (May 5, 1954)," OCB 337 Minutes (1) (4), Box 11, OCB Secretariat Series, White House Office: National Security Council Staff Papers, 1948-1961, DDEL.

26) Memo from Brown to Bugher, May 5, 1954. ON 408187, Department of Energy OpenNet System (ON), <https://www.osti.gov/opennet/>. "Minutes of the Meeting of the Castle Ad Hoc Committee (May 7, 1954)," 21-52d *Fukuryu Maru* 1954 1 folder, Box 422, Records Relating to Atomic Energy Matters 1944-63, Special Assistant to the Secretary for Energy and Outer Space, RG 59, NAIL.

This opinion was not endorsed by any of the AEC commissioners, however, who all felt for various reasons that an AEC representative should participate: State had requested AEC participation and they were the most knowledgeable about the potential diplomatic consequences; participation would allow the AEC to set any “unfounded allegations” resulting from the voyage in their “true light” and limit their damage; finally, there was a belief voiced that the AEC should participate in any “valid attempt to explore questions of this kind” and show its willingness to “offer assistance in any reasonable project.”

Significantly, Eisenbud was present at this same meeting and had informed the attendants immediately prior to this discussion that he was now “certain that some contamination had occurred” outside of the *Fukuryu Maru*’s catch.²⁷⁾ The AEC decision to participate was made despite this knowledge.

The only major source of resistance to cooperation came from the Navy, which was unwilling to allow the *Shunkotsu Maru* to stop at either Guam or the Marcus Islands because of more conventional security concerns. State intervention ultimately led to Navy acceptance of Japanese access to Wake Island, though this issue would not be completely settled until May 11th. A State official was highly critical of the initial Navy response, concluding that they were “very suspicious of the Japanese, largely I think because of wartime resentment... this problem is going to be with us for a long time.”²⁸⁾

On May 12th the AEC informed State that W.R. Boss of the DBM and Lauren Donaldson would participate and requested that the voyage be delayed to allow them to board in Tokyo.²⁹⁾ When Japanese reluctance to further delay the *Shunkotsu Maru*’s departure became apparent, it was decided that the AEC experts would first come to Tokyo for a background briefing on the *Fukuryu Maru* incident and afterwards rendezvous with the ship as it resupplied at Wake.

From the beginning State Department officials in general and Allison in particular had viewed the *Shunkotsu Maru* as a doorway to greater Japanese cooperation. This is made most clear in the correspondence condemning what State saw as unreasonableness on the part of the Navy.

In pressing the acting Secretary of State to intervene with the Navy, Robert McClurkin, Deputy Director of the State Department’s Northeast Asia section, emphasized that the invitation was “one of the few instances of cooperation shown by the Japanese” during the *Fukuryu Maru* incident and that failure to accommodate the request would further exacerbate relations and

27) “Atomic Energy Commission Meeting No. 984 (May 12, 1954),” AEC Meeting Minutes folder, A1 19 Minutes of the Meetings of the AEC, Box 7, RG 326, NAIL.

28) “Letter from McClurkin to Parsons (May 19, 1954),” Folder: Subject Files: S.4.1 *Fukuryu Maru* Incident (Lucky Dragon), Box 2, A1 5413 Bureau of East Asian and Pacific Affairs, Country Director for Japan: Subject Files, 1960-75, RG 59, NAIL.

29) “Telegram No. 2510 from Dulles to Embassy (May 12, 1954),” Central Decimal File 1950-1954 (711.5611/5-854), RG 59, NAIL.

“undoubtedly discourage any further efforts towards cooperation.”³⁰⁾

When the issue of resupply and port access remained unresolved, Allison summarized what he now saw as the greater importance of the voyage: “Regardless of our justifiable annoyance [at] Japanese non-cooperation to date, we must not lose sight of [the] fact [that] every Japanese considers his compatriots were innocent victims of US experiments conducted on [the] high seas. If we can meet Japanese needs re: [the] *SHUNKOTSU MARU*, it may provide [an] impetus to [the] quick settlement [of] other aspects [of the] *FUKURYU MARU* case.”³¹⁾

The above preparations for American participation would, however, come undone when the AEC announced on May 13 that its 1954 test series had finished. With a lifting of the danger area believed imminent (this would come on the 21st), the Japanese team moved up the ship’s departure to May 15. This earlier departure would allow the scientists to measure radiation levels within the former danger area as quickly as possible, but it also had the effect of throwing off Boss and Donaldson’s arrangements to meet the ship in Wake; the *Shunkotsu Maru* was now scheduled to leave Wake immediately after the AEC experts’ arrival in Tokyo, making any rendezvous difficult.

The scheduling change caused American suspicions about Japanese sincerity to resurface and a reevaluation of the decision to participate. McClurkin noted the changes “may reflect Japanese unwillingness to cooperate on this research expedition” and asked for the Embassy’s opinion on participation. Allison described the Japanese attitude towards American participation as “passive acceptance” rather than “active desire” and stated that participation should now depend on the expedition’s perceived scientific value.³²⁾ In response the AEC advised that the decision to participate had been based solely on the political value that State placed on the voyage and that the proposed survey was not “of sufficient scientific importance … for [Boss and Donaldson] to join the expedition in view of all the difficulties imposed by the Japanese.”³³⁾

In consultations held with MOFA officials after Boss and Donaldson’s arrival in Tokyo, Nakagawa stated that with the change in schedule and lack of amenities on the ship, the Japanese government “could not urge acceptance” of the invitation to participate and that AEC participation was not necessary. After consulting with Allison, the AEC scientists decided not to partici-

30) “Memo from Spiegel to Murphy (May 5, 1954),” Folder: 21-52d *Fukuryu Maru* 1954 1, Box 422, A1 3008-B Special Assistant to the Secretary for Energy and Outer Space: Records Relating to Atomic Energy Matters, 1944-63, RG 59, NAIL.

31) “Telegram No. 2803 from Allison to Secretary of State (May 14, 1954),” Central Decimal File 1950-1954 (711.5611/5-1454), RG 59, NAIL.

32) “Telegram No. 2579 from McClurkin to Embassy, (May 20, 1954),” Central Decimal File 1950-1954 (711.5611/5-2054), RG 59, NAIL. “Telegram No. 2874 from Allison to Secretary of State (May 21, 1954),” Central Decimal File 1950-1954 (711.5611/5-2154), RG 59, NAIL.

33) “Telegram No. 2590 from Dulles to Embassy (May 21, 1954),” Central Decimal File 1950-1954 (711.5611/5-2154), RG 59, NAIL. In addition to the scheduling change, the Japanese had also notified the US that only one scientist onboard the *Shunkotsu Maru* was a fluent English speaker and that the AEC scientists would have to provide their own provisions.

pate in the survey.³⁴⁾

V. Allison's Testimony

A week after the United States decided not to participate, Allison arrived in Washington to help prepare for Prime Minister Yoshida's planned June visit to the United States. During his time in Washington, Allison testified about the *Fukuryu Maru* incident before the US Congress' Joint Committee on Atomic Energy. The following exchange concerning the *Shunkotsu Maru* took place during that testimony:

Senator Bricker: Is there any continuing damage to the fishing [around the test area]?

Mr. Allison: They are making a survey of it at the present time. The Japanese, themselves, have sent out a ship to make a scientific survey with some of their scientists on board. Our people say that there should not be any continuing damage. The Japanese do not know. This ship will return sometime around the first of July. That is why I would like to settle this thing before the ship comes back.³⁵⁾

Allison had spoken earlier in his testimony of his hope to resolve the compensation issue by offering the Japanese a \$750,000 lump-sum payment, a proposal that Takahashi Hiroko has, in light of the above statement by Allison, interpreted to be an attempt "to secure a bilateral governmental settlement and establish a *fait accompli* before the Japanese survey could reveal the extent of the damage caused."³⁶⁾ This interpretation is unlikely to be correct, however. As shown above, American officials did not express any concern about maintaining atomic secrets or preventing damage caused by testing from becoming public in any of their internal discussions on the *Shunkotsu Maru*, and Allison himself had pushed for American cooperation.

Allison's statement should be viewed in the context of the long-standing negotiations over compensation, not as a new, stand-alone proposal. The immediate trigger for his \$750,000 offer was a conversation held with Japanese Foreign Minister Okazaki immediately before Allison's departure for Washington in which the former stated that he "was certain [that] payment of

34) "Telegram No. 2912 from Allison to Secretary of State (May 25, 1954)," Central Decimal File 1950-1954 (711.5611/5-2554), RG 59, NAI.

35) "Japanese Fishermen Incident (June 17, 1954)," JCAE#4092 Executive Session Transcript June 17, 1954 - Japanese Fisherman Incident folder, Box 17, RG 128, NAI, p.17.

36) Takahashi, 178.

300 million yen (\$833,333) would completely settle the matter to everyone's satisfaction."³⁷⁾ Given that context, how should Allison's goal of ending the dispute "before the ship comes back" be understood?

Allison's desire to resolve the issue prior to the *Shunkotsu Maru's* return reflected his hope to avoid the addition of an uncertain element to the negotiation process. While he had never expressed doubts about the AEC's assertions of atomic safety, he *had* repeatedly voiced suspicion about the motives and conclusions of Japanese scientists. By meeting Okazaki's proposal prior to the return of the ship, he could avoid what he saw as unnecessary complications.

VI. Findings and Reactions

As originally planned, the mission of 67 scientists from a variety of universities and Japanese government scientific organizations were to board the *Shunkotsu Maru*, a 588 ton, 1500 HP ship used by the Fisheries Agency as a training vessel, and complete an approximately two-month, 9000 nautical mile long investigation of the radioactive status of the air, water, and marine life in the areas surrounding the American warning area. The ship was to follow a zig-zag path circling around the area, stopping to take samples at various distances. With the lifting of the American warning area, this course was altered. Under the new course, the ship circles around the eastern edge of the warning area before turning and surveying the seas immediately surrounding Bikini and the American testing grounds.

Upon the *Shunkotsu Maru's* return to Tokyo on July 5, a brief summary of its findings was issued by the Fisheries Agency.³⁸⁾ Although both the scientists involved and the Japanese government had promised prompt release of the voyage's data and findings, this brief statement, which primarily concerned itself with assuring fishermen that certain areas of the Pacific were safe, would be the only formal information provided for roughly a year. Other findings were made public in newspaper articles and in Diet testimony, however.

The voyage had four significant findings:

First, detectable radioactive contamination of the environment was far more widespread than had been publicly acknowledged by the AEC. Significant levels of radiation were observed in the air, sea water, rain, and marine life of the area surveyed at a distance up to five hundred kilometers from the American warning area.

37) "Telegram No. 2960 from Allison to Secretary of State (May 31, 1954)," Central Decimal File 1950-1954 (211.9441/5-3154), RG 59, NAIL.

38) Fisheries Agency, "Shunkotsu Maru Chousa Kekka Gaiyou (July 5, 1954)," 1. Daigo *Fukuryu Maru* Hisai Jikken Ippan, C' 4.2.1.5, Daigo *Fukuryu Maru* sono ta Bikini Genbaku Hisai Jiken Kankei Ikken, Reel No. C'-0002, MOFA, 441.

Second, the cause of the widespread contamination of marine life outside the warning area was established. Rather than being directly affected by radioactive fallout, tuna and other large fish were being contaminated via the food chain. Instead of dispersing naturally, radioactivity became concentrated as contaminated plankton were consumed by fish which were then consumed by other, larger fish. These findings explain why the highest level of radioactivity had been found in the internal organs of fish disposed of in Japan and why radioactivity was found in fish like tuna that swam at relatively deep depths.

Third, despite high levels of radioactivity in their internal organs, very little radiation was detected in the muscle tissue of affected fish. This fact had been previously argued by Hiyama when he called for fish to be eviscerated prior to inspection.

Finally, the majority of the radioactive contamination in fish was found to have been caused by isotope Zinc-65.

The most immediate impact the voyage's findings had was on tuna inspections. On July 19, the inspection standard for tuna was relaxed. Rather than immediately declaring any fish measuring over 100 cpm to be inedible, such fish were now to be eviscerated and then inspected a second time.³⁹⁾ This relaxation should have led to a reduction in the number of fish destroyed, given the voyage's confirmation that the internal organs of the fish were the most heavily contaminated. However, the number of fish found to be contaminated continued to rise in the following months. Nevertheless, this change was viewed by the fishing industry as the first good news in months.⁴⁰⁾

In the long term, the most significant aspect of the findings was that it helped to provide an excuse for the Japanese government's ending of tuna inspections on December 28. On December 23, four days before the decision to end the inspections, the Food Sanitation Panel of the Welfare Ministry's Atomic Bomb Effect Research Commission (ABERC) released a statement giving three reasons that eating tuna was safe: first, the level of radioactivity in inspected fish had been decreasing and even among contaminated fish the level of radioactivity found within muscle tissue was extremely small; second, the majority of the radioactivity in contaminated fish was caused by Zinc, and very little Strontium-90 was found; third, only 0.5% of all fish inspected surpassed the 100 cpm standard, a rate which meant that regular consumption of fish would not cause the MPL to be exceeded.⁴¹⁾ The statements regarding the level of radioactivity in muscle tissue and

39) "Daigo *Fukuryu Maru* Kanja Kaigou no Shinryou Shochi ni Kan suru Ken (January 25, 1955)," 4. Genbaku Higai Taisaku ni Kan suru Chousa Kenkyu Renraku Kyougikai, Reel No. C-0002, MOFA, 405.

40) Miura-shi, *Bikini Jiken Miura no Kiroku*, (Miura: Miura-shi, 1996), 72.

41) Genbaku Higai Taisaku Kyougikai Shokuhin Eisei Bukai, "Bukaicho Happyou (December 12, 1954)," 4. Genbaku Higai Taisaku ni Kan suru Chousa Kenkyu Renraku Kyougikai, 296.

the presence of Zinc were derived from the *Shunkotsu Maru's* findings. The cabinet explanation for its decision to end inspections copied this ABERC statement verbatim.

VII. American Response to Findings

The initial American response to the *Shunkotsu Maru's* findings was muted. On July 7 AEC Chairman Lewis Strauss asked for a report on the voyage's findings. The report that was given a week later concluded that the findings "do not seem out of line with what we already know." This report, based on a summary of Japanese public statements and newspaper accounts of the voyage provided by Allison, also noted that the actual data gathered by the voyage was not yet available, however.⁴²⁾

The incomplete nature of the information available did not prevent the US Government from making use of the voyage's findings for public relations. In the following months AEC and State public information officers made use of the voyage when responding to letters from private American citizens concerned about the reports of contamination coming out of Japan, claiming that "as a result of tests conducted by the Japanese government in the waters surrounding the test area, the Japanese people have learned that many of the rumors concerning extensive contamination of fish, ocean currents, air, crops and rain were entirely without foundation."⁴³⁾

This initial optimistic view of the voyages findings changed to concern after Merrill Eisenbud was provided with some of the *Shunkotsu Maru's* raw data by Miyake Yasuo at the US-Japan Radiobiological Conference held in November. Eisenbud felt that "the radioactivity present [was] not dangerous, however, it [was] fairly high." For this reason Eisenbud decided to request that an American scientific investigation be made to confirm the *Shunkotsu Maru's* findings. Spiegel agreed that "we should get all the information that we can."⁴⁴⁾

The requests passed on to the Navy acknowledged the potential seriousness of the data while continuing to deemphasize the health risk: "it presents us with the possibility that large masses of the equatorial and Kuroshio currents may continue to be radioactive in amounts which do not necessarily constitute a health hazard but which are certainly high enough to attract the attention of Japanese scientists."⁴⁵⁾ The AEC continued to assert that no harmful contamination of the

42) Bugher to Snapp, "Japanese Expedition to the Pacific Proving Grounds Area (July 12, 1954)," Medicine, Health, and Safety - Radiation folder, Box 163, A1 67B-1 Office of the Secretary - General Correspondence 1951-58, RG 326, NAIL.

43) "Letter from Cook to Gallagher (August 3, 1954)," Central Decimal File 1950-1954 (711.5611/7-954), RG 59, NAIL, "Letter from Cook to Auchenbach (November 15, 1954)," Central Decimal File 1950-1954 (894.245/9-2754), RG 59, NAIL.

44) George C. Spiegel, "Memorandum for the Files (January, 25, 1955), NARA 21-52e Country File Japan General 1955 2 folder, Box 505, A1 3008-A Special Assistant to the Secretary for Atomic Energy Matters- General Records 1944-52, RG 59, NAIL.

45) "Letter from Cook to Carney (January 31, 1955)," Enclosure I, "AEC 730/14 Debris from Castle (February 4, 1955)," ON

seas around the testing area was taking place, but had become sensitive to the potential political significance of such an issue:

“It is vitally important to the Commission’s scientific program and to the future use of the Pacific Proving Grounds to assess the possibility [that radioactivity is entering the Kuroshio current] … important political consequences might ensue regardless of the fact that the activity is not considered to be harmful to health.”⁴⁶⁾

Approved by the Navy, the survey mission (dubbed “Project Troll”) took place from February 25 to May 3, 1955 on the Roger B. Taney, a US Coast Guard cutter. The operation, which collected samples from the Marshall Islands to Okinawa, ultimately concluded that “widespread low-level activity was found in sea water, plankton and fish samples, but none of the levels was high enough to caused concern as a possible health hazard.”⁴⁷⁾

VIII. Conclusion

Ultimately, the *Shunkotsu Maru* expedition played only a secondary role in the *Fukuryu Maru* incident; the compensation negotiations and scientific disputes that had characterized the dispute since the previous March continued in the months following the return of the vessel. Its findings were not published until after the incident had been resolved; as such it would become a factor in the emerging nuclear testing ban debate, but its only direct influence on the incident was to help provide the basis for the Japanese government’s final ending of tuna inspections.

Takahashi Hiroko, who has undertaken the most thorough recent studies of the *Fukuryu Maru* incident and the *Shunkotsu Maru* expedition, has emphasized the importance of “information revealing the extensive radioactive contamination and the serious effects of radiation on the human body” in the *Fukuryu Maru* incident, and the US and Japanese government’s goals of using “a political settlement” (compensation) and “an end to the tuna inspections” as a means of preventing that “information” from continuing to cause damage.⁴⁸⁾ A full analysis of this argument is beyond the scope of this study, but the primary data available does not support it as far as is applicable to the *Shunkotsu Maru*.

American officials viewed the expedition favorably, as a possible gateway to improved US-

410465, ON.

46) “Letter from Cook to Richmond (February 3, 1955),” Enclosure III, AEC 730/14, ON 410465, ON.

47) “Operation Troll: Joint Preliminary Report”, NTA 407862, NTA.

48) Takahashi, 178.

Japanese cooperation on other aspects of the *Fukuryu Maru* incident. The expedition itself was not viewed as being of any great significance in and of itself. The American internal discussions of the *Shunkotsu Maru* do not appear concerned with maintaining secrecy or show any steps taken against it or to minimize the impact of its findings. Rather than revealing that they were aware of widespread environmental contamination, they would seem to suggest that American officials were telling what they believed to be the truth when they announced that American nuclear tests were not causing lasting harm. This conclusion is further underlined by the Operation Troll investigation. When presented with credible evidence that their findings were wrong, the AEC engaged in further study of the issue rather than attempting a cover-up. Although the validity of the Troll findings can be debated, the AEC reaction, made immediately after the conclusion of compensation negotiations in January 1955, would appear to be in stark contrast to what would be expected of an organization attempting to prevent further discussion of the environmental contamination issue.