

NUKE INFO TOKYO

Nov./Dec. 1989

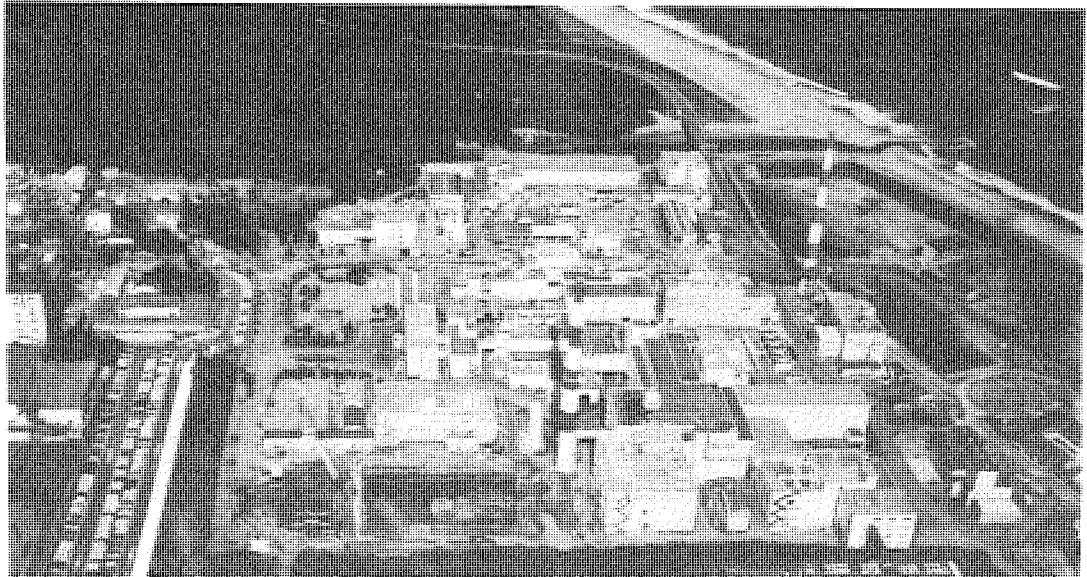
No.14

96 Citizens' Nuclear Information Center

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Iodine Leaks at Tokai Reprocessing Plant



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The Tokai Reprocessing Plant had to be stopped again immediately after resuming operation on September 27. Operation had been suspended for a year and three months to replace parts which frequently developed pinholes. Within a week of restarting, however, it was found that 70 million Bq of iodine-129, which has a half life of 16 million years had been released, and operation was stopped on October 4. A loosened valve is cited as the cause, and after this was fixed, the plant resumed operation on October 13. This is the second time since December 1985 that iodine-129 has leaked from the plant.

HLW Disposal Plans Come to Light

Plans to dispose of high-level nuclear waste in Japan have recently come to light.

At present, about 350 cubic meters of high-level liquid waste are stored in the tanks of the PNC (Power Reactor and Nuclear Fuel Development Corporation) reprocessing plant in Tokai-mura, Ibaragi Pref. But if the Tokai reprocessing plant continues to operate as planned and if the Rokkasho reprocessing plant starts up, this quantity will grow enormously.

The Atomic Energy Commission (AEC) plans to vitrify the waste and store it temporarily until it cools in about 30 to 50 years. For final disposal, they plan to bury it in geological layers several hundred meters below ground.

AEC Japan has set out the following schedule. In Phase I of the project, PNC would identify the most suitable layers for final disposal. In Phase II a high-level waste disposal corporation which is yet to be established would decide on an actual disposal site. In Phase III this would demonstrate the disposal technology at the site. And finally in Phase IV it would construct the repository and start operation.

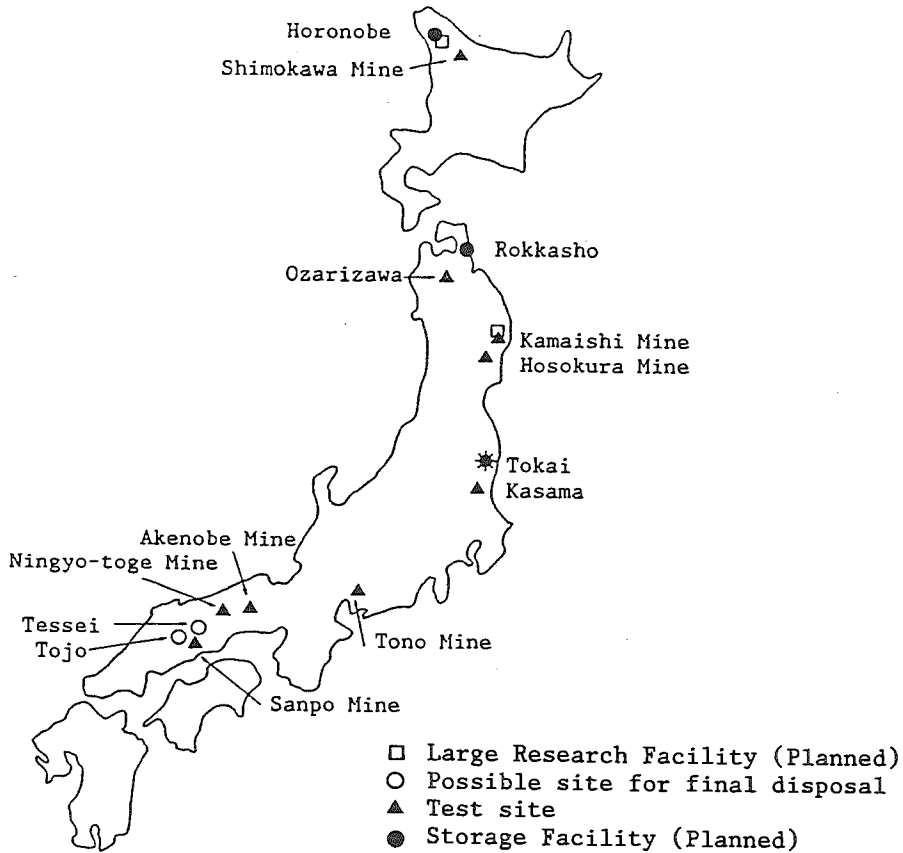
Phase I was completed in 1984 and a report was submitted stating that "Anywhere other than areas with unconsolidated rocks would be suitable." The project is now midway through Phase II, and approaching the stage of selecting the proposed repository site. Up to now PNC has been putting off the necessary R & D work for site selection. But Phase II is far behind schedule, and the new disposal corporation is still a long way from established.

A major task in Phase II is the construction of two large research facilities, which, AEC says, are needed to obtain basic

information for the selection of a repository site.

One of these is the "Environmental Engineering Laboratory" where various experiments with radioactive materials would be carried out. The other is the "Deep Underground Experimental Facility" where testing and development of the engineering technology for disposal would be carried out deep under ground without using radioactive substances. The plan to construct the two research facilities as well as an intermediate repository at Horonobe, Hokkaido was disclosed by PNC in April 1984. But until recently this plan has been put on ice because of opposition from the Hokkaido Government, surrounding cities and towns, and farmers' and fishermen's cooperatives. The Horonobe Town Council, eager to host the facilities, has organized a committee of local assembly members in the surrounding communities who are in favor of the plan. They aim to get approving resolutions from neighboring assemblies so that they can give the project the go-ahead. To counter this movement, the residents of Horonobe have demanded an auditing of the town budget as public funds are being used for this private organization. The dairy farmers in the neighboring town of Teshio have rallied against the plan with their tractors. It was disclosed only this October that Teshio port will be the landing port for the radioactive waste if the facilities are constructed in Horonobe.

Since the Horonobe project has not proceeded according to plan, the PNC decided this August (NIT No.13) to separate the "Deep Underground Experimental Station" and construct it in Kamaishi, Iwate Pref. Immediately after the plan was disclosed, local residents started to oppose it and collected signatures from more



than 90% of the people living near the planned site. More than 50% of Kamaishi city residents signed the petition calling for cancellation of the plan. The signatures were presented to the municipal government and as a result Nittetsu Mining, who had proposed to invite the facility, withdrew the plan on November 13.

This will certainly affect plans in Horonobe and Rakkasho, where a nuclear fuel cycle facility complex is being planned. At Rakkasho, it is planned to store wastes returning from Europe on a temporary basis, and an application for the construction of a storage facility has already been submitted.

The assessment of sites for the final repository is being carried out under a cloak of secrecy. But the sites mentioned above are sure to be at the top of the list.

Inspections of the features of the base rock are being conducted in various parts of the country. In Tono, Gifu Pref. and Ningyo-toge, Okayama Pref. where there are uranium mines, they are conducting so-called "natural analog" research to observe the behavior of radionuclides in the rocks using the natural radioactive nuclides originating from uranium ores. These places can also be considered candidate sites.

In Okayama prefecture, there have been moves to site the high-level repository in Ningyo-toge (Kamisaibara Village) or Aratoyama, and the local people are trying to pass prefectural ordinance rejecting radioactive waste (see page 8). With the PNC's search for a repository site, opposition movements are popping up everywhere and gaining in strength. □

Anti-Nuclear Activities Mount in October and November

Every October, anti-nuclear activities mount as the utility companies and the government center their public relations activities around October 26, "nuclear power day." Twenty-six years ago on that day nuclear electricity was first generated in Japan and nuclear power day was declared the following year.

This year a variety of activities took place throughout Japan. In some places lectures, rallies, and demonstrations were held, while in others there were photo exhibitions and festival-type rallies with plays and music.

The utility companies have judged that the anti-nuclear movement is running out of steam, but this is not the case. Compared with the national rally in April, 1987, which drew as many as 20,000 people from all over Japan, the gatherings this October may have seemed small, but this doesn't mean the movement itself is slowing down. Rather it is spreading throughout Japan, even to some conservative areas where citizens' movements had never existed before. Especially in places designated by the utility companies as possible sites for high-level waste storage, opposition is mounting to form a new wave in the anti-nuke movement.

Meanwhile a rally was held on November 11 in Aomori, close to where a reprocessing plant, a uranium enrichment plant, a low-level waste disposal facility and a high-level waste storage plant are planned. This rally against the nuclear fuel cycle facility was the first occasion when different organizations with different political views have joined forces. Farmers, labor unions, co-ops, and citizens' groups held a panel discussion to find the best way to become politically effective. The

prefectural governor comes up for election in 1991, and it is now a major priority to get rid of the current pro-nuclear governor and elect one who would scrap plans for the nuclear fuel cycle facility altogether. Some people suggested recalling the current governor without waiting for the next election, but no consensus could be obtained from the audience. Everyone agreed, however, to go on fighting until the plan is dropped entirely.

The next day, November 12, there was a rally and demonstration in Rokkasho-mura where the facility is actually planned. The election for village mayor is coming up in December. Mr. Takanashi, who heads the Group to Protect Fishing Grounds from Nuclear Fuel Facilities" is running for mayor and about 300 supporters who attended the rally demonstrated in the village street, asking villagers to vote for him. Takanashi has opposed the facility from the start and worked hard to halt it.

The current pro-facility mayor, Mr. Furukawa, is running for a fifth term, and a third candidate, Mr. Tsuchida, is a member of the village assembly. If elected, Tsuchida says he would freeze construction of the reprocessing plant, but he represents local dairy farmers and has strongly supported the facility in the past, so his freeze policy is undoubtedly an empty promise. The utility companies, knowing the strength of the anti-nuclear movement, may be helping him behind the scenes. At this stage it is difficult to predict which of the three candidates will be elected. Opponents of nuclear power throughout Japan are supporting Takanashi and trying to help him in every possible way. □

One Million Signature Drive Starts in Korea

A nationwide drive began in Korea at the end of September to collect 1 million signatures against the construction of two new PWR plants (KN11 and 12) in Yeong-gwang. The campaign was launched by various anti-nuke and environmental groups in Korea, in response to a declaration issued by 100 prominent figures. The declaration demands that the Korean Electric Power Company and the Government suspend construction plans for KN11 and 12 and give access to all information about nuclear power plants.

The recent growth of anti-nuclear awareness is largely due to a number of worrisome reports in the news media concerning the state of health of workers in Korean nuclear plants. In addition, the new plants have aroused special concern because the decision to purchase PWRs from Combustion Engineering is suspected to have been influenced by bribery involving the family of the former president Joen Du Hwan.

The Korea Anti-Pollution Movement Association, which plays a leading role in the Korean anti-nuke movement, seeks to cooperate with groups in other countries and is asking for signatures to be collected abroad.

Mr. Choi Yul, one of the chairpersons of the Anti-Pollution Movement Association, says: "What is important is to let the Korean people know that foreigners are also concerned about nuclear plants in our country."

A solidarity signature collection campaign started in Japan in October.

Contact: Korea Anti-Pollution
Movement Association
114-1 Doneui-Dong,
Jongro-ku,
Seoul, Korea 110-330
Phone: 2-743-8840



Women Marching in Seoul

KEPCO Indicted for Negligence

The Korean Science and Technology Agency has had KEPCO indicted by the District Prosecutor's Office on suspicion of violating the atomic law, reports the November 11 issue of the Korean daily newspaper "Hanguk Ilbo."

According to the article, KEPCO neglected to carry out necessary safety inspections of nuclear power plants more than 50 times last year, fearing that the inspections might make power supply unstable during the general election (Apr.) and Olympic Games (Sept.-Oct.).

This suggests that KEPCO's neglect of safety is so serious that even the extremely pro-nuclear government agency can no longer turn a blind eye. □

Meaningless Dispute over Plutonium Shipment

The issue of the shipment of plutonium from Europe, scheduled to start in 1992 or later, was taken up in the Diet recently. The Japanese government intends to transport plutonium extracted in Europe back to Japan by sea, but the problem is how the ship will be guarded all the way from Europe to Japan.

The government has proposed to send its Maritime Safety Agency (MSA) patrol boats as guards, but US Congressmen have expressed concern that the MSA vessels will not provide adequate security. They were even criticized as "toy boats" in an article in the Washington Post last February. In fact, none of the MSA vessels is capable of cruising 17,000 nautical miles nonstop, so a new ship will have to be constructed to fulfil the conditions laid down for plutonium transport. Such a ship would cost more than 20 billion yen (\$140 million) and take 2 years to build. Some tough politicians in the ruling Liberal Democratic Party say the government should use the destroyers of the Self Defense Force rather than waste money on building an expensive coast guard cutter.

On October 5 the Prime Minister, in response to a question in the Diet, said the government will study the possibility of sending the Self Defense Forces abroad on non-military missions. Immediately afterwards, the Self Defense Agency Director General J. Matsumoto told the press that the prime minister's remarks were to indicate the possibility of using SDF vessels to escort the plutonium loaded freighter.

This remark immediately sparked off a bitter debate among agencies, politicians and citizens, not to mention Japan's Asian neighbors. Japan has a Constitution which prohibits sending its Self Defense

Forces overseas, as this could be interpreted as military action. For the SDF to escort the plutonium shipment would therefore be an infringement of the Constitution. Accordingly, the government had to offer reassurances on October 11 that Japan will not use the Defense Force for plutonium shipments. The Director General of the Self Defense Agency had to withdraw his former remarks on October 17. Furthermore, on October 20, the government proposed to allocate an initial 5 billion yen from this year's supplementary budget to build a new vessel carrying more arms and capable of cruising 17,000 nautical miles non-stop from Europe to Japan.

This is because time is running out. They need the plutonium back by 1992 when Monju (FBR) is to start trial operation and at least 2 years are needed to build the new vessel. Also the government was afraid of stimulating further anti-nuclear sentiment by touching off another controversy over the question of military deployment.

But the dispute really has no meaning at all for the Japanese people, because there has been no discussion of what these plutonium shipments will entail. What should really be discussed are the dangers of extracting vast amounts of plutonium from spent fuel will pose to our society. The Citizens' Nuclear Information Center made an announcement on November 2 through the media appealing for the cancellation of any plutonium shipments whatsoever. It states that plutonium would pose serious hazard to future generations and would also need strict controls which would violate civil rights, while no meaningful use for plutonium is conceivable for the foreseeable future. □

Important Incidents at Nuclear Plants

(Jan.-Aug. 1988)

date	plant	short description of event
13. 1	Fukushima I-6	filter fire in turbine building
1. 2	Hamaoka 1	failure of two recirculation pumps; reactor manually stopped
4. 3	Tsuruga 2	automatic shutdown due to operational error
6. 3	Tsuruga 1	manual shutdown due to recirculation pump failure
18. 3	Fukushima II-1	manual shutdown due to temperature rise in recirculation pump motor
30. 3	Takahama 2	power drop due to valve malfunction in secondary coolant line
31. 3	Ohi 1	primary coolant pump vane bolts found damaged during inspection, similar damage found afterwards in most PWRs
22. 5	Hamaoka 2	leakage in ECCS drain piping; 17 workers exposed to contaminated water
24. 5	Ohi 1	5 workers exposed to radioactive water due to malfunctioning of containment spray during inspection
6. 6	Genkai 1	leakage in residual heat removal piping
22. 6	PNC Tokai	worker's finger contaminated by plutonium
23. 6	Ohi 1	thinning of incore neutron detector guide tubes and control rod cladding found during inspection
24. 6	Takahama 4	rise of radioactivity level in primary coolant observed
27. 6	Fugen	automatic shutdown due to turbine condenser vacuum leakage during test operation
30. 6	Tokai 1	difficulty in fuel replacement; reactor manually shut down
11. 7	Shimane 2	erroneous connection of power lines found immediately after first start up; reactor manually shut down
20. 7	Ohi 1	rise of radioactivity level in primary coolant observed
24. 7	Fukushima I-3	primary coolant leakage due to crack in recirculation pipe; reactor manually stopped
25. 7	Mihama 3	leak in feed water line, power reduced
1. 8	Takahama 1	thinning and expansion of control rod and neutron detector guide tube claddings found during inspection
3. 8	Fukushima II-2	malfunction of main steam valve; power reduced for repair
12. 8	Hamaoka 2	manual shutdown due to recirculation pump seal leakage
15. 8	Takahama 3	holes in two fuel rods found during inspection
17. 8	Takahama 2	release of radioactivity to air due to crack in steam generator tube; reactor manually stopped
22. 8	PNC Tokai	7 workers exposed to plutonium

ANTI-NUKE GROUPS ACTIVE AROUND JAPAN

Society for a Prefectural Ordinance —No Radioactive Garbage in Okayama!

The mountains of Okayama and Hiroshima prefectures are a granite plateau, and this granite has been marked as an underground disposal site for high-level radioactive wastes. The Power Reactor and Nuclear Fuel Development Corporation (PNC) has mining rights in 70 locations throughout this region, and land is being purchased by nuclear-related industries and brokers.

It is known that Kamisaibara Village in Okayama Prefecture, the site of an experimental uranium enrichment plant, has put in a bid to PNC by saying that it would like to cooperate with "anything related to the nuclear fuel cycle."

For these reasons we anti-nuclear power groups in Okayama Prefecture gathered and decided to form the "Society for a Prefectural Ordinance -- No Radioactive Garbage in Okayama!" Our aim is to pass an ordinance which will not allow radioactive wastes to be brought into Okayama Prefecture.

This June we petitioned the prefectural assembly, but our appeal was shelved for "further discussion." The Governor too offers only vague assurances that "We won't allow the construction of any facilities which give prefectural citizens cause for alarm." We have decided to seek the passage of a prefectural ordinance through a direct demand as provided by the Local Government Law.

With neither an organization nor money, we made a broad appeal for support to everyone, whether conservative or progressive, saying that "If radioactive wastes are brought in, each and every citizen

of Okayama Prefecture will be affected." We were apprehensive of getting involved in a movement for a direct demand but we prepared for several months before launching the "Society for a Prefectural Ordinance" on October 1.

Activities began with encouragement from many supporters both within and without the prefecture, but we foresee an arduous campaign. The prefectural assembly has an overwhelming predominance of conservative members, and in seeking passage of the ordinance we will have to collect the maximum possible number of signatures from the 1,400,000 voters.

Though we are nervous at the thought of the campaign, we must not allow ourselves to be stopped by any difficulty. Nuclear wastes must be carefully managed above ground by those who produced them; they should never be forced upon depopulated regions in exchange for a cash booty.

Our direct demand movement consists mainly in collecting signatures during the short two-month period coming after the House of Representatives election expected to take place soon, but we believe that if the opposition movement covers the entire prefecture, we can stop the advance of the nuclear garbage project. Our movement stems from the simple desire to protect life and nature, and we hope to give it everything we have for success and no regrets. □





Dead Fish Found off Nuclear Power Plant

A massive number of dead fish were found floating off the Ikata Nuclear Power Plant on two occasions in early October and November. There have been massive deaths of fish off the plant every other year since 1981 when the Ikata 2 began trial operation. The utility company claims that there is no causal relationship between the deaths of the fish and the heated water effluent from the power plant but, in addition to its higher temperature, the effluent contains radioactivity, detergents, chlorine and toxic chemicals. Domestic waste water containing a large volume of organic material is also mixed in with the effluent. There is no question that this effluent severely distorts the biota and damages the ecosystem.

Japan Reluctant to Cut CO₂

Ignoring the risk of international isolation, both Japan and the US voted against setting targets for the emission of carbon dioxide (CO₂) at the international conference on global warming held on November 7 in Noordwijk, Netherlands. It was natural for Japan to take such a stance, as the Japanese power industry plans to add coal, liquid natural gas (LNG) and oil power plants to its grid.

This demonstrates the irony that an increase in the number of nuclear plants will not mean any

decrease in the number of plants. There are two main reasons: firstly, since it is difficult for nuclear power plants to achieve load following, additional thermal power plants have to be built alongside them, and secondly, if there is an accident that requires the shutdown of all the reactors at one site, or all reactors of the same type thermal power plants will have to be available in reserve.

Japanese Nuclear Industry Heading for Third World Markets

Japanese reactor manufacturers are now looking to exports, as prospects for obtaining domestic orders recede. Two such plans have recently been reported in the papers.

Mitsubishi Heavy Industries (MHI) is said to have developed a reactor, the MS-300, with a power output of 300 megawatts, to be sold to China and Indonesia. This type of reactor has accumulator tanks (50atm) and big gravity fall type tanks around its pressurized reactor vessel to feed the water into the core in the event of an emergency, with no need to resort to manual operation. This type of reactor is called an "Ultimate Safety Reactor" or "Simplified Light Water Reactor" and is being developed by many manufacturers around the world including Toshiba Corp. (TOSBWR 900 P). However none of these reactors have gone beyond the concept design stage.

Meanwhile it is reported that the Central Research Institute of

the Electric Power Industry (CRIEPI), a research institute serving the electric companies, and Toshiba Corporation, are considering a major project to "green" the Sahel (southwest part of Sahara desert) in Africa with FBRs. They intend to irrigate this expanding desert with fresh water produced from seawater by small nuclear reactors with a total output level of 2,500 megawatts. The project is unrealistic, as it would require an enormous investment of over one trillion yen (7 billion US\$), but it does show how desperate the industry is to survive.

Annual Safety Report Issued

The Nuclear Safety Commission's Annual Nuclear Safety Report, issued on October 20, features recent nuclear accidents in Japan. These include accidents in the recirculation pump of BWRs, damage to the steam generator tubes of PWRs, problems of aging and human errors. But its basic stance is that there has never been a serious accident, nor will there be in the future. "The commission is not a safety committee, but rather a safety campaign committee," was the reaction of even the most conservative media.

Major Design Revision for LLW Storage Facility

On October 27, Japan Nuclear Fuel Industries, Inc. (JNFI) submitted to the Science & Technology Agency a revised construction application license for the low-level radioactive waste disposal facility it plans to build in Rokkashomura, Aomori prefecture. The new application makes major changes to the initial design. According to the application the JNFI submitted in April, 1988, a concrete pit was to be dug in the earth above the bedrock and the waste to be buried in the pit. In the revised plan, the pit is to be dug in the bedrock. This is a drastic change, requiring a totally new application, and demonstrates the incompleteness of the original design. Due to the change, construction will be delayed more than one year, and disposal is unlikely to start before April, '92.

The reason for the change is to decrease the likelihood of the pit being penetrated by underground water. The JNFI were unable to ignore residents' concern over possible contamination of the underground water system. If water penetrates into the pit, it will be contaminated with radioactivity, flow back into the underground water and contaminate the whole system.

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NUKE INFO TOKYO is a bi-monthly newsletter which aims to provide foreign friends with up-to-date information on the Japanese nuclear industry, as well as on the movements against this industry in Japan. Please write to us for subscription (subscription rate: supporting subscriber \$40/year, subscriber \$20/year). We would also appreciate receiving information and newsletters from groups abroad in exchange for this newsletter.

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