



Nuclear Report *from* Taiwan

A Joint Publication of
The Anti-Nuclear Coalition for Taiwan
and The Asian Ecological Society

Volume 1

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Number 2

*

March/April, 1993

Orchid Island: Taiwan's Nuclear Dumpsite

A CASE OF ENVIRONMENTAL RACISM

by Chen Dan-ken, Jun-yi Lin and Pi-yao Lin

(This is the first of a two-part series on the Orchid Island nuclear waste site and its effects on the Yami people who live there. The articles in this issue will present an overview of the site and its history. In the next issue we will present the Yami people's reaction, the development of their anti-nuclear movement, and the future prospects of Taiwan's nuclear waste policy planning.)

Off the coast of southeast Taiwan lie two small islands which, although geographically and historically quite different, share one distinction. They are both places where Taiwan sends its undesirables. One of them, Green Island, is famous for its prison for political prisoners. The other, Orchid Island, is where Taiwan dumps its mid- and low-level nuclear waste.

Orchid Island, known as Lan Yu (in Mandarin) in Taiwan, lies 65 kilometers off Taiwan's southeast coast. It is the homeland of the Yami people, one of Taiwan's nine aboriginal tribes who lived in Taiwan for thousands of years before the Chinese settled here. The most isolated of Taiwan's aborigines, the Yami are also the only sea-faring people. They have no written language, only a small number of pictographs. The young generations today can communicate in Chinese and some have attained high levels of education in Taiwan. There are approximately 3300 people in the Yami tribe, about 2600 of which live on Orchid Island today. Many young people go to Taiwan, where work opportunities are more plentiful.

1. The Need for a Nuclear Dump

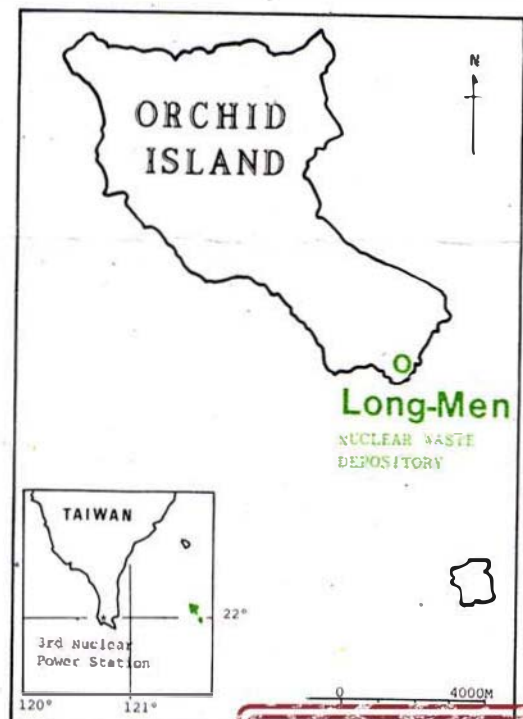
In the early 1970s, Taiwan's Atomic Energy Commission (AEC) convened a group of experts to examine various sites for a temporary storage facility for mid-level and low-level nuclear waste that would be produced by Taiwan's developing nuclear program. In 1974, this committee chose the Long Men (Dragon Gate) area on the southern tip of Orchid Island. A harbor was built in 1978, construction began on the depository site in 1980, and shipments began arriving in May of 1982. Since then, the site has been the depository for mid- and low-level nuclear waste from Taiwan's three nuclear power plants as well as nuclear research and medical centers. According to the AEC, over 82,000 containers, each weighing 55 kg, have been stored there to date. (The Orchid Island facility is only for mid-

and low-level radwaste. Taiwan's spent fuel radioactive waste is stored at the nuclear plants themselves.)

The reasons why Orchid Island was found suitable for a nuclear waste dumpsite were the following: size: the dumping site is 1 square km; isolation: no people lived within a 5-km radius of the site; geography: the Long Men area is surrounded on three sides by mountains and the other side faces the sea; safety of transportation: ships could dock near the facility; final treatment: convenient for dumping the processed low-level radioactive waste into the ocean. (Some people feel that this was the main reason for the choice of Orchid Island. Between Taiwan and the Philippines lies the Bashi Channel, with one of the deepest sea trenches in the world.)

Another unmentioned reason for selecting Orchid Island was that it was politically safer than most choices. An isolated aboriginal population ignorant of nuclear energy

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MESSAGE FROM THE PUBLISHER

The Plight of the Yami

by Jun-yi Lin, ANCT President

Orchid Island is to Taiwan what Taiwan is to the world. That is, Taiwan to the world is somewhat anonymous except that things are made in Taiwan of relatively low quality. Orchid Island is similarly unseen by most people on Taiwan. An island of spectacular beauty, it was chosen by the government to be Taiwan's nuclear dumpsite because of its isolation and the convenience that it provided no strong political opposition.

The Yami tribe who live on Orchid Island have been the subject of abuse and unjust impositions of economic, social and political practices. The development of tourism, the ludicrous proposal of making the island into a national park, and the disposal of nuclear waste on their island have all been done without consideration for the Yami people's desires or fundamental rights to choose their own lifestyle in their own homeland.

The deception of the Yami people regarding the nuclear waste site goes back nearly twenty years. In their story is revealed the true nature of the government's push for nuclearization in Taiwan. The people of Orchid Island are the victims of this deception, but in a similar way the people of Taiwan have been deceived about the nuclear industry for just as long.

Nuclear power must be viewed in the entirety of its production, from the mining of its fuel and the resources it consumes to the safety risks of its operation to the decommissioning of plants and disposal of its deadly waste products. In the latter two categories, nuclear power is particularly unsuitable for Taiwan because of its small size, fragile ecology and high population density. The solution of the government has been to force the highly dangerous waste products of Taiwan civilization onto the isolated Yami people of Orchid Island.

The Taiwan government, the people of Taiwan and the international community must recognize that the storage of nuclear waste on Orchid Island is the result of an untenable pro-nuclear policy, and is an unacceptable moral injustice against the Yami people.

1993 has been declared the International Year of the Indigenous Peoples. We wish to call the world's attention to the plight of the Yami, who, like aborigines the world over have had their land taken from them and their fundamental rights abused by what we call civilization. We hope that the international community will join us in protest against this form of environmental racism.



In the next several months, the government of Taiwan will be in contact with international companies bidding for the construction of Taiwan's fourth nuclear plant. This project, originally proposed in the early 1980s, was held up for many years by strong public opposition. Last year, it barely passed the approval of the national legislature. Now opposition to it is building again. Following Taiwan's first-ever full legislative elections last December, there is now strong support in the legislature to freeze the project's budget before any construction bids are accepted, and even to cancel the project altogether. Yet this opposition faces a strong and determined pro-nuclear government which controls most of the media in Taiwan. This is a critical time for the development of Taiwan's nuclear industry. We wish to call attention to the threat this proposed plant poses to Taiwan's environment and the safety of its people. International support would greatly increase our chances of stopping this threat. Please see the article on page eight for information on how to give Taiwan your support. ☉

TAIWAN'S NUCLEAR DUMPSITE (continued from page 1)

and modern political culture, the Yami knew nothing of atomic waste in the 1970s and were unprepared to fight against it if they had. The AEC kept them in the dark with lies and false promises about what they were constructing

(see the article on government deceit). The Yami were given no voice in the decision process, and became convenient victims of an authoritarian pro-nuclear policy.

The terrible irony of this situation is that the Yami, living so far from Taiwan island, have no access to the power produced by nuclear energy. And yet the waste produced by Taiwan's nuclearization is being forced upon them. It is affecting their environment, and their traditional lifestyle. The fishing grounds and farming areas that they used to use near the dumpsite are now avoided, and the people live with the fear that their food sources may become contaminated by radiation leakage. This and the knowledge that they have been deliberately tricked and exploited have an enormous psychological effect which colors their contact with Taiwan. A people who once lived a relatively carefree lifestyle, they now fear for their future on Orchid Island.

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Nuclear Report from Taiwan

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Taiwan's Nuclear Dumpsite *(continued from page 2)*

II. Racial "NIMBY"

The use of Orchid Island as a dumping ground for Taiwan's nuclear waste is the concept of NIMBY ("not in my back yard") on a national scale. Taiwan's nuclear program, a product of Taiwan's backwardly inefficient energy conservation policy, has little space on Taiwan to send its waste. So the waste which is the product of the people of Taiwan is being dumped on a small island tribe of some 3000 people who don't even have access to the benefits of nuclear power and who were tricked into believing that the new site would be something which would benefit their economy. This is more than another reckless step in the desperate push to nuclearize Taiwan; it is the colonialism of the late 20th century. The colonialism of the last century exploited the resources of the colonized peoples. The environmental colonialism on Orchid Island today means dumping the garbage of our civilization onto a minority people. It is racial discrimination in practice on a national level.

The nuclear waste depository is not the only example of the abuse of the Yami rights to their land and way of life. In the several decades after the Kuomintang came to Taiwan, a prison for severe criminals was operated by the Garrison Command, an internal police force under martial law. And today a more serious threat to their island looms in the government's plans to develop Orchid Island as Taiwan's fifth national park. Originally supposed to open in 1989, the park has been slowed by strong opposition from the Yami, who have never benefitted from the Tawanese-controlled tourist industry. The plan is to convert the whole island into a park, including an exhibition hall intended to publicize the safety of nuclear energy! Some Yami are sceptical about government claims that the project is to promote tourism; they believe the real purpose is to convince the Yami that they have no reason to worry about the safety of the nuclear waste dump. Another fear is that the government plans to limit access to the island under the jurisdiction of national park policy. As this issue was going to press, the Yami were holding protests in Taipei at the National Legislature and the Ministry of the Interior to protest against the proposed park.

The Yami people opposed to the nuclear waste site claim that it is an infringement on their rights and their way of life. Traditionally, the Yami have been a self-sufficient society, relying on agriculture (primarily taro), and fishing for their food. Now they feel these two food sources are threatened by leakage from the waste site. They are concerned about radiation in the soil and sea contaminating their food sources. Many of them are now scared to eat fish or seafood. Furthermore, they fear that the development of a national park will change their way of life forever. In the end, many are worried that they may not be able to stay on Orchid Island permanently. In the words of Chung Jia-shan, the Yami church elder, "We are concerned about our destiny and our existence as a race."

In April, 1990 at the first-ever Earth Day ceremony held in Taiwan, a Yami chieftain was invited to take the stage to speak about the plight of his people. Wearing full

traditional dress, he spoke in his native language translated into Chinese,

"There is no high culture, and there is no low culture. There are no high people, and there are no low people. We in this world are all the same. But Taiwan, by dumping its nuclear waste on our small island, is saying that the Yami are a lower people..."

Then he asked, "Do you know how Yami people act when they are angry?" What followed might be described as a dance of repressed anger, of grimaces, groans, stomping and thrashing gestures, a powerful expression of sadness and pain and fury at the injustice committed against his people. ☺

THE RADWASTE BUILD-UP

The Orchid Island radwaste storage site sits 50 meters from the sea and covers one square kilometer. It consists of a specialized pier, administrative buildings, an examination center, and 23 concrete storage trenches. These 23 trenches can accommodate 98,112 containers (over 82,000 have been transported already) and constitute the first of six planned construction phases in the Long Men facility. As originally planned, the total storage space would include another nearby location. Together, the two locations would accommodate 570,000 barrels, or over 31,000 tons of radioactive waste over a planned 50-year period. The government calls this a "temporary" dumpsite, which leads one to wonder how many human lifetimes would be required for it to be considered "permanent."

The first phase of 23 trenches will fill up in early 1994. The second phase, which had begun construction in 1990, was stopped partly because of protest from opposition groups and partly because the government-owned Taiwan Power Company (Taipower) and the AEC are in the process of re-evaluating nuclear waste disposal methods. However, Taipower announced in late February a change of plans. Instead of beginning to construct a new area (the second phase), they plan to begin construction of six new trenches in the original 23-trench area, a dangerous increase in the density of the stored radioactive materials. This appears to be a political runaround, to accommodate the need for more storage space and at the same time not break the Yami people's demand that construction on the second phase be halted.

The waste stored on Orchid Island is considered of mid-level and low-level radioactivity. This is somewhat of a misnomer, for its potential danger is very high to life forms exposed to it. The radiation level of this waste goes up to 200 millirems/hr. In comparison, the highest level recorded at Min Sheng Villa, a severely irradiated housing structure in Taipei, is just 51 millirems/hr. And elements within the stored waste have half-lives as long as 10,000 years. ☺

From "Fish Cannery" to "Temporary" A SAD HISTORY OF GOVERNMENT DECEIT

The history of the Orchid Island nuclear waste depository is fraught with governmental deception of the Yami people. In the mid-1970s, when plans were being made for the facility, representatives from the Atomic Energy Council (AEC) approached the Orchid Island Yami district commissioner, who was illiterate. He was told that the government was going to build a fish cannery on the Long Men site and would he please sign on the paper here? He did so, and for some years the government kept up this deception, even during construction. The people were told they could sell their surplus fish to the cannery. Eventually, people in the Yami church discovered the truth from reading news reports. Even then, the Yami had little idea what nuclear waste was and what dangers it presented. By the time they became more knowledgeable, the site was



A tour group from Taiwan visiting the Orchid Island radwaste storage site.

constructed and operating.

The KMT government has never been open with the public about the nuclear waste site operation on Orchid Island. On government maps and publications through the mid-80s, the Long Men area was classified only as a "Special Enterprise Zone." As with other nuclear issues, the government has exerted pressure on scholars not to report on the site. An example is a report written in 1984 by Chang, Lung-sheng and Thomas McHenry on government policy on Orchid Island. Mr. Chang today is the director of Taiwan's Environmental Protection Agency and in 1984 was director-general of the Ministry of Interior's Construction and Planning Division. The 55-page report, which includes detailed information on various government projects on Orchid Island, does not include a single word about the nuclear waste site, which is the single biggest government project on the island. Chang's report was written two years after the waste site began operation and over six years after construction began. From reading their report, one would have no idea that such a site existed.

The government propaganda takes many forms. The Taitung-Orchid Island Newsletter ("Tung Lan Tong Hsun") is published in the city of Taitung by the AEC. It is designed to pacify the locals' fears of nuclear power, and is packed with articles about advancements in nuclear safety,

nuclear programs in other countries, lottery tickets, cartoons, childrens' games - but very little solid information about the Orchid Island waste site. Another medium is the "nuclear waste computer information station," recently set up in Taipei to allow the public to monitor the handling of waste. But as one scientist said, it's "garbage in, garbage out." The government also wields strong influence over the media. An example came on Earth Day, 1990, when a Yami chieftain spoke at the festivities in Taipei attended by 50,000 people. His speech was the only part of the entire show omitted from the TV broadcast.

One of the most startling types of propaganda is indicative of the lax safety standards inherent in Taiwan's nuclear program. Taipower allows tours of the Orchid Island dumpsite and even invites school groups from Taiwan to come visit the site. According to UN International Atomic Energy Agency safety standards, visitors to a radioactive waste depository must wear radiation-protective clothing. But not in Taiwan. Kuo Jian-ping, a Presbyterian missionary and one of the Yami anti-nuclear leaders, comments, "They don't care about your personal safety when you go inside. They just want you to come inside because they want to show you there's no danger here. But we on Lanyu all know now that it's very dangerous."

The term "temporary" is also a deception. Taipower and the AEC's "temporary" plan is for a 50-year storage period, totaling over 31,000 tons of radioactive waste. The final destination of this waste was wishfully intended by the Atomic Energy Commission to be the deep-sea trench south of Taiwan. Such dumping has since been declared illegal by international law. Taipower presently claims it will move the accumulated containers of radwaste to another site but to do so would be extremely expensive. Unless the Yami and Taiwan's anti-nuclear groups are successful in their demands, it appears that the radwaste will remain buried on Orchid Island. ☹

NEWS BULLETIN

Taiwan to Get Uranium from Canada Through the U.S.

OTTAWA - Canada has signed a deal with the U.S. which allows it to sell uranium to Taiwan. Under an agreement signed in early March, Canadian uranium will be enriched and made into fuel in the United States and then shipped to Taiwan for use in nuclear reactors.

"The agreement was a prerequisite for direct uranium trade since the sales require a government-to-government agreement, and this is a possibility that doesn't exist because of (Canada's) one-China policy," said David Murphy, a spokesman with the Canadian Department of External Affairs.

The U.S. has a bilateral nuclear agreement with Taiwan, and will verify the Canadian uranium is used in accordance with U.S. and international regulations.

THE YAMI:

Fighting to Save Their Culture

The Yami people are one of nine aboriginal tribes that lived in Taiwan long before the Chinese began arriving some four hundred years ago. Of Proto-Malay origin, they migrated to Taiwan from the northern Philippines around 3000 B.C. Today the Yami still retain language similarities to peoples of the Batan Islands in the northern Philippines.

For geographical and political reasons, the Yami have historically been the most isolated of Taiwan's aboriginal tribes. During the Japanese occupation of Taiwan from 1895 to the end of World War II, the Japanese designated Orchid Island as a cultural reserve and strictly restricted access to those conducting anthropological research (some scholars say their purpose was to study the Yami culture as a model to understand the peoples of southeast Asia whom the Japanese were planning to colonize). After World War II, Orchid Island became isolated again. When the Kuomintang (KMT) Nationalists took over in 1949, their policy for many years was to limit Taiwanese people from going out to sea. So until thirty years ago, the Yami had very little contact with Taiwan or modern society at all. The one exception was religion. Canadian missionaries arrived in 1949 and today most Yami are Christians, divided between Catholic and Presbyterian. In the 1960s, the KMT government began to take a larger role in the lives of the Yami with the introduction of mandatory primary schooling in Mandarin Chinese and later the construction of public housing. At this time, tourism began to take hold and has slowly increased ever since.

The transition to a modern lifestyle has not been wholly welcomed by the Yami people. Things like formal schooling were seen by them as having little practical use. As late as 1970, many Yami refused to send their children to school or found excuses to keep them out. At that time, less than ten Yami students were studying in Taiwan, which to them was akin to going abroad. The government-built concrete housing structures stood empty, because the Yami refused to move into them. Visitors to the island in the late 60s could communicate only with the very few Yami who spoke Mandarin. The second language was Japanese, while the younger generations spoke only Yami.

Today, of course, much of that is changed. Education has improved, although many Yami still lack interest and the quality of schools lags behind those on Taiwan. Yami youths interested in education go to Taiwan for high school. Other Yami leave for Taiwan to find work opportunities. Many Yami now live in the government-built apartment blocks. Hotels, stores, an airport and other businesses have opened for the tourist trade. But 95% of this business is owned by Taiwanese. Few of the benefits of tourism have gone to the Yami people, another reason why the proposed national park holds little attraction for them.

To the Yami, the transformation that has come to their island has been that of a foreign culture. In this context, their battle against the nuclear waste site and the proposed national park has been remarkable. With backs to the wall, they have made a heroic effort to educate themselves and adapt to the political culture of a society much different from their own. Kuo Jian-ping, a Yami Presbyterian missionary and one of their anti-nuclear leaders, is an example. While a student in Taipei, he read numerous books and articles on nuclear power and radioactive waste. He and other students returned to Orchid Island and in turn

educated their people. From these origins came their anti-nuclear movement.

In Taiwan, which was named *Ilha Formosa* (Beautiful Isle) in 1557 by early Portuguese explorers, there are few places more striking than Orchid Island. Much of its 45 square kilometers is mountainous, and their steep green slopes vividly contrast with the blue sea. The island's isolation has created a unique ecology. Of the 850 plant species, 25 exist only on Orchid Island.

The Yami live in six villages around the island, and green taro fields surround the villages. Their houses are traditionally built below ground level to provide protection from the strong winds and typhoons which strike the island.

Many aspects of the Yami culture are communal, including agriculture, fishing, construction and sharing of food. Agriculture is performed by women, while children are left with fathers or grandfathers. Men do the fishing and cooking.

The sea has a major influence on Yami culture. Their most treasured seafood is the flying fish, for which they fish in elaborately constructed and painted canoes. Boatbuilding is a communal undertaking, and includes many rituals. Preparations for building and launching a boat are begun three years in advance. Other Yami superstitions include rules for the kinds and sizes of fish which men, women and children of different ages can eat. Elaborate rituals are performed before the beginning of each fishing season.

Orchid Island first appeared in Chinese literature in 1723 as Red Head Island. It was renamed by the KMT in 1946 because of the many orchids grown there, although few exist today. It is at the southeastern tip of the island, an area called Long Men (Dragon Gate), where the Yami ancestors first arrived at Orchid Island. For this reason, the Yami view Long Men as a sacred place. And it is here where the Kuomintang government in 1974 chose to locate Taiwan's nuclear waste dumpsite. ☺



Containers of radioactive waste being unloaded on Orchid Island.

Safety Hazards to the Orchid Island Environment and the Yami People

The actual safety record of the Orchid Island nuclear waste site is unclear. From its beginnings, management of the site was the responsibility of the Atomic Energy Council (AEC). The AEC, which is supposed to be a regulatory watchdog for Taiwan's nuclear projects, was operating the dumpsite and had no outside agency to supervise their operations. To avoid conflict of interest, the management was shifted in 1990 to Taipower, the operator of the nuclear power plants; the AEC now ostensibly plays a regulatory role. Perhaps because of the conflict of interest, safety records prior to 1990 are difficult to obtain and it is hard to estimate the amount of radiation leakage or other hazards to the environment created by the facility.

It was reported that in February of 1991 radioactive material was found in the waste water sediment collection pool at the storage site. Waste water from the dumpsite passes through the pool, which is used to absorb possible radiation in the water before it is released into the sea. It was found that the soil of the pool was contaminated, just eight months after the pool had been constructed. Before that no pool existed to filter the water.

This discovery intensified the fears of the Yami and others that contaminated waste water from the dumpsite was allowed to flow into the sea. They wondered, if radioactivity was discovered in only the first eight months of the pool's operation, how much contamination was passed into the sea in the previous eight years of the dumpsite's existence?

Several natural factors make the Orchid Island dumpsite potentially hazardous. Orchid Island sits on an earthquake fault line, and a strong quake could damage the storage

trenches or create tidal waves. Typhoons often hit the island. Furthermore, the average annual temperature on the island is 26 degrees Celsius, and the average humidity is 90%, the highest in the Taiwan area. These factors increase the likelihood of corrosion of the waste containers.

To the Yami people, the waste site presents a great threat to their livelihood and their peaceful way of life. A people who live off the sea, they no longer can trust that the seafood they eat isn't contaminated. The waters off Long Men were a prime fishing ground, but the Yami don't dare to fish there anymore. Nor do they grow crops anymore at the southern end of the island where the storage site is located. Wang Rong Chi, a Yami Presbyterian clergyman, says, "The area has become like a cemetery. Orchid Island is so small already. If people can't go to that area to grow crops and fish, it makes it harder to survive."

The people report a higher rate of health problems among children than existed before the site opened. The Yami have requested that the AEC hire specialists from outside Taiwan to research the effects on the ecology of Orchid Island and the health of the people. The AEC agreed to do so, but in the end backed down. So far, no systematic survey of the people's health has been done. The Yami point out that the effects of radiation exposure often don't show up for decades. One of their demands to the government, in addition to the removal of the storage site, is that the government provide long-term cancer insurance for the inhabitants of the island. ☺

Taiwan Irradiated Steel Exported to America

According to a report by American researcher Anthony Lamastra, Taiwan exported a batch of irradiated steel products to the United States in 1984. Investigations showed that the metal was contaminated with Cobalt-60, used in certain measuring devices. Radiation levels were between 10 and 20 milli-curies.

The ten cases of irradiated steel found in Taiwan since last July were all produced in 1983 and 1984, the exact time period in which this batch was exported to America. This leads people to wonder how great is the extent of the radioactive pollution in Taiwan and the variety of types of steel that may have been irradiated.

In the same year, when the International Commercial Bank of China's dormitory building in Taipei was discovered to be radioactively contaminated, the government branches involved covertly handled the case and kept it from the public to avoid influencing Taiwan's steel exports. According to the American report, Taiwan had already exported this batch of contaminated steel. This brings to question: did the government know the shipment might be contaminated?

Although thirty cases of irradiated steel products have been discovered abroad, the more than ten cases in Taiwan

are far more serious because the cases discovered abroad were disposed of immediately. Because in Taiwan there was no detection system in place, the contaminated metal was used to construct buildings, which residents have been living in for the last nine years. ☺

(translated from the Liberty Times newspaper, Feb. 2, 1993)

ANNOUNCEMENT

Nuclear Hotlines

Taiwan Power Co. has installed four toll-free telephone lines for the public to call for information on nuclear power operations. People can call for general information on nuclear energy, as well as specific questions about the latest conditions at the three nuclear plants, such as maintenance, scrams and other abnormalities.

The four numbers are as follows:

1. Taipower's Nuclear Power Division: 080-231782
2. Nuclear plant #1: 080-291070
3. Nuclear plant #2: 080-306029
4. Nuclear plant #3: 080-889001

For international callers:

Taiwan Power Co. headquarters: 886-2-365-1234

IN THE NEWS

EVENTS

Representatives from France and U.S. in Taiwan to Discuss Plant #4

United States Nuclear Regulatory Commission chairman Ivon Seiling accepted an invitation from Taiwan's Atomic Energy Council to visit Taiwan in mid-January for three days. The purpose ostensibly was to understand Taiwan's nuclear safety control. Seiling denied that his visit had any connection with the bidding for construction of Taiwan's fourth nuclear plant, but observers suspected otherwise, especially after he visited the Ministry of Economic Affairs. Because of his visit, the invitation for bids was postponed for one week, opening January 22.

In December of last year, U.S. trade representative Carla Hills was here, the first Cabinet-level meeting between the two countries in many years. Hills also discussed nuclear issues with officials while in Taiwan.

French officials also have been in Taiwan in recent months to discuss the contracts available for the construction of the fourth nuclear plant.

"119 Save Yen Liao" Demonstration Kicks Off 1993 Anti-Nuke Movement

On January 19, the Taiwan Environmental Protection Union (TEPU) invited newly-elected members of the national Legislature to take part in a demonstration against the construction of the 4th nuclear plant in Yen Liao, Yi Lan County. (The date and name of the event is symbolic because "119" is the number for emergency phone calls used in Taiwan.)

Legislators and members of TEPU agreed that they would devote full efforts in 1993 to freezing the budget of the proposed fourth nuclear plant before bids can be accepted and construction begins.

The impressive showing by the opposition Democratic Progressive Party (DPP) in the legislative elections at the end of last year has altered the composition of the Legislature. Opposition members now occupy one-third of the total seats. They and anti-nuclear members of the ruling KMT may combine to make a majority which can halt plans for the fourth nuclear plant.

Anti-Nuclear Protests By Local Governments

The local government of Hengchun in southern Taiwan, where the third nuclear plant is located, has organized a joint "Victims Frontline Association" with the local governments of other areas where nuclear plants are located. A January 16 report in the Liberty Morning News said that the Hengchun government had issued a bulletin to the other "nuclear" districts calling public attention to the harm caused by the construction and operation of the nuclear plants. The bulletin pointed out various impacts the nuclear plant has had on the Hengchun area and the surrounding Kenting National Park, including the diversion of enormous amounts of groundwater from farming areas,

the bleaching death of coral and the disappearance of many species of tropical fish around the seaside power plant, and the network of high-pressure electrical towers in the area.

ANNOUNCEMENTS

EPA Director Speaks Against Nuclear Power

In a visit to the Legislature's Internal Affairs Council on March 11, Director of Taiwan's Environmental Protection Agency Chang Lung-sheng for the first time revealed his personal viewpoint that natural gas electricity generation should replace nuclear power.

During further questioning, legislator Chen Wan-jen suggested that the EPA install radiation detectors at the air pollution detection stations around the island. Chang said that under the present range of operations that would be impossible, but he would be willing to consider it in the future.

Legislator Hsieh Chang-ting additionally urged Chang to use his authority to bring the environmental impact estimates of the fourth nuclear plant under EPA jurisdiction, until sooner or later the AEC will be forced to cancel the whole project.

New System to Address Nuclear Plant Woes

Installation of a NT\$8.6 million (US\$330,000) monitoring and diagnostic system at the Chinshan Nuclear Plant No. 1 in northern Taipei county to determine the cause of the plant's inefficient power production and the source of energy losses will be completed in June, the Atomic Energy Council (AEC) announced on February 15.

Council researcher Chou Kuang-hui said they had come up with the idea of developing the system mainly because of the huge amounts of electricity being lost daily due to the low efficiency of the generators. Supervisors estimated that the plant lost more than NT\$1 billion (US\$40 million) each year due to inefficiency. (from *The China News*, 2/16/93)

NUCLEAR PLANT ACCIDENTS

New Year's Eve Scram

The AEC reported a scram in the No. 1 reactor at the 2nd nuclear plant on December 31, 1992. AEC officials said the scram was due to human error. The operator in charge had moved the electricity supply lever to the wrong position in response to a warning signal, thereby causing a short circuit and the scram.

The #2 Plant also experienced a scram on December 13.

Two Scrams in Five Days at Plant #3

Within five days in early February, the first reactor at the Hengchun #3 nuclear plant suffered two scrams. Both incidents were caused by human operator error. The AEC has requested an investigative report from Taipower on the cause of the errors. ⊕

Movement Building Steam to Stop the Fourth Nuclear Plant

Anti-nuclear organizations in Taiwan have joined together to try to freeze the budget for Taiwan's proposed fourth nuclear power plant. At present, bids are being accepted from international companies for construction of the plant, to be located at Yen Liao in northern Taiwan. The plant was approved by the legislature late last year after being blocked for many years by strong public opposition.

On March 8, representatives from the Anti-Nuclear Coalition for Taiwan, the Taiwan Environmental Protection Union and numerous other environmental organizations met with legislators to request a motion to block the project. All legislators of the opposition Democratic Progressive Party (DPP), which controls one-third of the seats in the national legislature, have pledged to give their full efforts to freezing the budget and stopping the construction bidding process. The DPP has set up a nine-member task force to supervise the freezing effort.

In addition, the anti-nuclear groups are planning a large-scale demonstration against the nuclear plant, to be held in early April. Organizers expect it to be the largest anti-nuclear demonstration ever held in Taiwan.

At this critical moment in the further nuclearization of this small island, Taiwan desperately needs the support of all its citizens and of the international community. The time to stop the construction of this fourth nuclear plant is now, before it is begun.

We urgently request that all individuals and organizations who are interested in protecting Taiwan's environment and the integrity of its democratic process immediately write to the following parties. In specific, we

urge that you demand that the bidding process for the fourth nuclear plant be halted and plans for construction be terminated.

Please send your opinions to the following parties:

Mr. Chen Shui-bian
1F, No. 11-1, Lane 105
Hang Chou South Road, Sec. 1
Taipei, TAIWAN
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(Chen Shui-bian is the leader of the opposition anti-nuclear movement in the national legislature. Your voices from abroad can support the opposition in gathering votes to freeze the budget.)

International recognition is particularly important to Taiwan because of its size and political status. Therefore, a widespread international mailing campaign can have a large impact on political decisions here. Please lend us your support. ☉

SPECIAL REPORT:

Damaged Turbine Blades Cause Seven-Week Shutdown At Plant #1

A major defect was discovered in the generators at the #1 Chin Shan nuclear plant in late November last year, shutting down power production for nearly seven weeks. During maintenance on one of the plant's two generators, engineers discovered cracks in the giant turbine blades. Investigation led to further discoveries. Both reactors were shut down, and a total of 23 defective blades were found. Officials from Westinghouse, the manufacturer of the turbines, came from the U.S. to investigate. But neither the Taiwan Power Company nor Westinghouse was able to trace the reason for the cracks' appearance.

Taipower replaced the defective blades with spare parts. But because the investigators were unable to isolate the problem's origin, the plant will have to shut down operations every four months to undergo maintenance and

repair of defective parts. The maintenance period will take two weeks each time. The next repair period is scheduled for April.

AEC officials admitted that they were very lucky that the damaged blades did not cause a serious accident. They feel this may have been the same problem which caused the fire at the No. 3 plant in 1985. Worldwide, this is the fourth incidence of this problem. Many nuclear experts in Taiwan feel that Westinghouse should be held responsible for the damage and urged Taipower to demand compensation, but Westinghouse claimed that there was no evidence to show that the damaged blades were caused by a manufacturing defect. ☉

This publication is made possible by the generous contribution of Dr. H.C. Liu. AICT thanks him for his concern for the environment of Taiwan.

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