By Zoltan Grossman

ITHER WAY, IT'S A TERRIFYING prospect. Scenario one: the Soviet hierarchy ordered the ill-fated experiment that precipitated the meltdown and subsequent explosion at Chernobyl's reactor four. Scenario two: plant supervisors initiated the step-by-step safety system shutdown that led to the worst accident in the history of nuclear power. As In These Times went to press, contradictory clouds of explanation still hung over Chernobyl, but the following details seem indisputable.

The purpose of the experiment, which began at 1:05 p.m. on April 25, was to determine how long turbine generators would run emergency equipment in case of a steam-flow loss from the reactor. Unit four's staff began running the reactor at very low power, something its safety systems would normally interpret as a shutdown if they hadn't been bypassed. First, they turned on the number 7 power turbine. Then, at 2:00 p.m., the emergency cooling system was deliberately disabled to prevent a shutdown. By 11:10 that night, the automatic control system was likewise disabled.

At 1:07 a.m., all eight circulation pumps were circulating steam for the turbine test, leaving less water available for cooling. The reactor power output began to vary wildly. The operators then disabled the alarm systems and pulled control rods out of the reactor's uranium core to keep it generating heat.

At 1:22 a.m., in what proved to be the fatal move, the operators reduced the water coolant to the core. A minute later, the reactor's power output shot up by a factor of seven. Thirty-six seconds later, the operators tried to reinsert control rods to tame the core and stifle the runaway chain reaction. Halfway down, the control rods halted, and a load bong was heard. It was only a matter of seconds before steam and hydrogen built up in the reactor. At 1:24 a.m. a steam explosion ripped the top off unit four, followed by a billowing fireball of burning hydrogen. The core's graphite liner quickly ignited, belching radioactive smoke high into the atmosphere. At least part of the reactor's uranium fuel source melted down

As dawn broke, police entered the area and washed the radioactive debris off the roads leading to the nuclear plant. Most residents near Chernobyl received radiation equivalent to 1,200 chest X-rays. On April 28, 135,000 people living in the 300 square miles surrounding the plant were evacuated.

Within days, cleanup teams entered the area to wash the contaminated buildings and to strip off the irradiated topsoil—replacing it with imported earth. The cleanup continued, but the reactor fire burned for 12 days, until it was doused by sand, lead and boron dumped from military helicopters. The blaze briefly re-ignited on May 23 and radiation levels in the center of the zone remain 2,500 times the normal levels.

In the Ukrainian capital of Kiev, 70 miles south of the plant, radiation levels were 80 times higher than normal a week after the disaster. Kiev is still waiting for autumn leaves to fall from its chestnut trees; when they do, they will be trucked off as radioactive water.

Death toll estimates disputed

The Soviets have predicted that 6,300 will die of cancer in coming years as a result of the Chernobyl disaster. They made their estimate at an International Atomic Energy Agency conference in Vienna last month, and also provided the above details in a "spirit of openness."

Interpretation of the data varied, however. Two Western delegates in Vienna originally suggested that between 26,000 and 40,000 people would die of cancer, nearly all within the western Soviet Union. But two days later, they backed down from those numbers, claiming that they had been based



OUR HEROIC TECHNICIANS HAVE MADE WHATEVER MINOR AND TRIVIAL ADJUSTMENTS WERE NECESSARY...

Venting the hot air from the winds of Chernobyl

on maximum radiation release figures, rather than average figures. Their new minimum was closer to the Soviet estimate: 26,000 became their new maximum.

Yet other scientists accused the two experts of minimizing Chernohyl's effects to protect nuclear power programs, pointing out that even the highest estimates did not take genetic defects into account. Some claimed the ratio that was used—one death for every 10,000 rems—was too low.

Dr. Robert Gale, the celebrated American bone-marrow specialist who treated Chernobyl victims, said that public health experts expect up to 75,000 cancer deaths worldwide. So far, Soviet officials say that 31 have died, far from the 2,000 deaths estimated in hysterical post-accident Western news reports. But with radiation exposure, short-term body counts are always ludicrously low. Not only do thyroid and other cancers have a long-term gestation period, but many potential victims may absorb fatal radiation doses from food grown in contaminated soil. (For a graphic depiction of genetic damage to plant life caused by the relatively minor accident at Three Mile Island, see photo on page four.)

Soviet officials admit that their graphitemoderated reactor design played a role in the explosions. At the time of the accident 23 such reactors had been built, with four more planned. (Nineteen other Soviet reactors use pressurized water-the same design that failed at Three Mile Island. Two others are highly controversial fast breeders.) But it isn't as if the Soviets had no warning about power plant safety hazards. A seemingly prescient March 27 article in Kiev's Literaturna Ukraina described Chernobyl unit four: "...all the flaws in construction that are unhappily typical made themselves evident in the most extreme forms. Mikhail Gorbachov has used Chernobyl as an example in his drive toward greater technocratic efficiency and worker disci-

Some graphite-moderated reactors have since been shut down pending new safety measures. Officials now describe Chenobyl as a serious setback for their nuclear program—a stunning admission in light of the recent drop in oil prices. The Soviets had been hoping to conserve oil and natural gas—four-fifths of their foreign exchange dollar earmings—by using nuclear heat reactors near cities. Thus Chernobyl may turn out to be a Soviet economic disaster as well.

The Western nuclear industry has long envied the expanding Soviet nuclear industry. Cold warriors had interpreted this expansion as necessitating an "energy race" with the Soviets. In a 1978 radio broadcast on nuclear energy, Ronald Reagan alleged that the Soviets are "planning to outstrip us in the trackent arena" and this Western medicar power opponents are thus "unwitting victims of Soviet designs."

After the Chernobyl disaster, American officials tried to placate public fears, claiming that the Soviet plant lacked an American style concrete containment structure a claim later proven false. Yet even before it was, a New York Times poll showed that seven out of 10 Americans saw such a catastrophe as likely here.

Eastern bloc protests

In the months since the catastrophe, it has become evident that an anti-nuclear movement would be slow to develop in the Soviet bloc. Nonetheless, Poles demonstrated and signed petitions against the planned start-up of the Soviet-built Zarnowice plant. They joke sardonically that Polish-Soviet friendhip can be "measured" with a geiger counter.

The most dramatic example of resistance took place among a group of Soviet army reservists. Hundreds of Estonian men were ordered—some in the middle of the night—to help with decontaminating the evacuation zone. They worked 14-hour shifts in a highly irradiated environment with insufficient warer rations and suspect radiation protection. Mental stress was heaped upon physical danger, as the cleanup foremen routinely joked to the Estonian conscripts about their impending sterility.

In June, the weary Estonians were told that their Chernobyl duty had been extended four months. This last straw led to a long and bitter strike. According to the Estonian Communist Youth League daily paper Noorte Haal, most of the conscripts were then cent home.

A more blatantly political protest was staged by Moscow Trust Group, an independent peace group dedicated to building "detente from below" between Easterners and Westerners. Members held talks in Moscow with a delegation of West German Greens the week before the Chernobyl disaster. An open letter dated May 6 from the group read, ".. from now on, our anti-nuclear platform firmly includes the most negative attitude to nuclear power stations."

On August 3, a Liust Group member was detained, along with four Western anti-nuclear supporters, who were handing out leaflets on Chernobyl in Moscow. The protesters were released within an hour. (See article in next issue of In Theoretimes.) The Russian-language leaflets informed Muscovins in the protester was a least informed Muscovins in the protester was a least of the protester was a least of radiation hazards at U.S. nuclear weapons facilities. The leafletters held a sign reading "No More Hiroshimas—No More Chernobyls." Hundreds of the pamphlets—emblazoned with peace signs—were confiscated in five minutes at the entrance to Gorky Park.

Chemobyl's impact on nuclear power worldwide remains to be seen. According to Dr. Gale, the drifting radioactive cloud may give fatal cancer to as many as 35,000 people outside Soviet borders—mostly in Europe.

The political fallout has affected different countries in different ways, however. While strengthening nuclear opposition in Sweden and West Germany, it has barely dented the pro-nuclear monoliths in France and Czechslovakia. Perhaps Chernobyl's greatest effect outside the Soviet Union will be on Third World countries. Brazil has put its program on hold, while strikes and sabotage have prevented a Philippine reactor from starting up. Countries, such as Argentina, China and Cuba, which had been looking to the Soviets for nuclear assistance, may begin to question the wisdom of nuclear proliferation. It should be noted, however, that similar delays took place after Three Mile Island, only to be later forgotten. (After that accident, a Cuban nuclear official was quoted as saying that there was "no scrimping on protective measures" by the Soviets.)

Both the Eastern and Western nuclear industries have gotten themselves snared in Chernobyl's web. The more they try to limit discussion of its implications to rems, rads and reactor designs, the more they expose their haphazard decision-making process. The more they try to depoliticize nuclear power, the more they end up politicizing it. The irony of the new Soviet policy of "openness" is readily apparent. The more people hear of the worst nuclear plant accident in history, the less they want to be saddled with the dangers of nuclear power.

Zoltan Grossman is a Chicago-based freelance journalist who has visited nuclear communities from Hungary to the Philippines.

By Zoltán Grossman

T COULD HAPPEN "ONCE IN A MILLION years." That has always been the stated opinion of Soviet officials on the chances of a major accident in the 32-year-old Soviet nuclear power program. The official fantasy, however, has been shattered by the radioactive cloud that settled over Russia's Ukraine region, Scandinavia and much of Eastern Europe after a fire and possible meltdown at the Chernobyl plant near Kiev destroyed one of the Soviet Union's 46 operating reactors.

Prior to the self-described "disaster," Soviet officials based their optimism on their reactor designs. When asked if a Three Mile Island accident could happen in the USSR, Yuri Markov, the deputy chief of the Soyuzatomenergo agency said, "even if there were some problem at a Soviet station, it would not be fraught with such dangerous consequences because Soviet-designed steam generators can carry a far greater load of boiler water."

U.S. nuclear experts today echo Markov when asked if a Chernobyl catastrophe could happen in this country. They reply that most U.S. commercial reactor cores are moderated by water, not graphite, and have airtight concrete domes to contain radioactive leaks. There are two graphite reactors among the 99 nuclear power plants currently operating in the U.S. The only commercial graphite reactor, in Colorado, differs considerably from its Russian counterparts and supposedly poses less risk. The U.S. Energy Department also operates a graphite reactor in the state of Washington for military purposes. Regarding the potential for a major accident at such plants, the word from both Washington and Moscow has been unequivocal: it can happen over

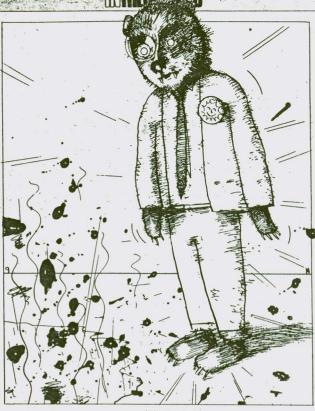
there, but not over here. Much as the Pentagon is trying to break the public's "Vietnam syndrome," the nuclear industry has been hoping to reverse a "Three Mile Island syndrome" that began with the nuclear accident at this Pennsylvania site in 1979. Chernobyl may be a major blow to these efforts. Neither U.S. nor Soviet reactors could survive an explosion or severe meltdown (in which radioactive steam ruptures through the ground around the reactor). The day after the Chernobyl accident was made public, nuclear industry stocks plummeted. Investors switched to grain and livestock futures during the furious trading sessions that immediately followed. Many analysts assumed the Soviets would need to augment their own agricultural stores due to the contamination of an area known for its farm and livestock production.

Chernobyl is one of the flagships of the Soviet nuclear industry. Its four reactors, commissioned between 1977 and 1983, provided one-seventh of the country's nuclear generating capacity, which makes up 11 percent of the total electrical grid.

History of Soviet accidents

The Soviets experienced their first nuclear disaster in 1957-the explosion of a military waste dump near Kyshtym in the Ural Mountains. According to emigré scientists Zhores Medvedev and Leo-Tumerman, the heavily-industrialized area was turned into a wasteland. The army destroyed houses in 30 evacuated villages to prevent their inhabitants from returning. At the time, local citizens complained that only Communist Party members were given radiation detection badges and choice relief supplies. Dangerous amounts of radiation apparently entered the food chain, causing damage to the environment. Some experts theorize this pattern after Kyshtym has begun again around Chernobyl, possibly spreading throughout the Ukraine and parts of Europe.

Two other incidents followed in 1963: a nuclear submarine disaster in Gorky and a Moscow research lab accident. A breeder reactor on the Caspian Sea caught fire in 1974 and a power reactor had serious problems in 1981. Accidents have plagued Soviet-built reactors in Finland and Czechoslovakia. Reactor deals have also



Nuclear power's credibility meltdown

been negotiated with countries such as Cuba, India, Libya, Turkey and Iraq.

Despite this poor Soviet record, the American nuclear power industry can hardly strike an attitude of "safer-than-thou." Since 1960, there have been nuclear accidents in eight states, including Michigan, Alabama, New York and Pennsylvania, with Three Mile Island regarded as the most serious. Radioactive leaks have also been recorded in France, Britain, Japan and other countries. Chernobyl is the first such event that has reportedly led to mass evacuations.

The longstanding position of the Soviet Communist Party has been that nuclear power is safe when it's socialist. Without a profit mechanism, the reasoning goes, no incentive exists to cut corners on safety.

In the '60s, letters appeared in the Soviet press voicing concerns over radiation hazards, but engineers assured readers that reactors were safe. Another spate of nuclear safety articles in the '70s began asking questions that authorities felt they had to squelch. Controversies erupted on nuclear issues and a variety of other environmental questions—from river diversions to acid rain.

After Three Mile Island, Soviet authorities developed more sophisticated strategies to placate public fears. In an article in the Soviet central committee paper Kommunist, two prominent scientists endorsed the nuclear program but urged that plants be built in lesspopulated areas. The intellectual journal Literaturnaya Gazeta (April 11, 1979) called Three Mile Island a "scrious, major accident." On the same day, however, the state paper Izvestiya took a different view, claiming that "...essentially minor unfavorable consequences were depicted in an extremely exaggerated form." It claimed that the Western antinuclear movement was a tool of profithungry oil companies.

The *Izvestiya* treatment of Three Mile Island is especially interesting. When an American plant leaked radioactivity, the Soviet authorities minimized the effects to the

Soviet public. For two decades after the 1957 disaster at Kyshtym, the CIA first withheld evidence and later downplayed its significance. The two nuclear establishments seem eager to cover each other's tracks, feeling that any substantial criticism may cast doubt on all nuclear technology—whether "capitalist" or "socialist." When confronted with a real Soviet accident, U.S. authorities blame the "closed" Soviet society, much as Soviet officials blame Western accidents on profiteering. Yet the U.S. nuclear establishment would like to be as secretive as its Soviet counterpart.

Various official responses after the latest incident are no exception. According to sources at Argonne Labs, the Department of Energy slapped a gag order on all its employees and contractors in the wake of Chernobyl. A Chicago TV news anchor complained about the blackout, saying the media has gotten as much information from the Americans as from the Soviets. It seems reasonable to doubt whether the complete truth at Chernobyl will be known to the peoples of either country.

Uranium makes strange bedfellows

During this decades-long mutual cover-up, nuclear cooperation has grown between the Western and Eastern blocs. Nuclear energy was one of the few areas of Soviet-U.S. cooperation to survive the collapse of detente. It shouldn't be surprising that uranium creates strange bedfellows. In 1980, a shipment of South African-mined uranium, enriched in the Soviet Union and processed in West Germany, arrived at the Ginna nuclear plant in New York—which itself had an accident the next year. When it comes to uranium, Moscow has no qualms about striking deals with NATO countries or rightist regimes.

Given the parallels between Western and Eastern nuclear power programs, why has there been no visible antinuclear movement in the USSR? The obvious answer would be secrecy and repression, which certainly

play a part, particularly given the military role of nuclear power. But a similar atmosphere prevails in Eastern Europe and Third World nations, where antinuclear movements are growing. Some East Europeans are influenced by the Western Green movements, whose rallies are beamed across the border on television. The movement is most pronounced in East Germany, where dissidents have developed a socialist environmentalism. They have combined critiques of class structure, militarism and ecological destruction in both the Western and Eastern blocs.

The Czech dissident group Charter '77 has funnelled information on nuclear accidents to the Austrian movement. Hungarian fishermen and uranium miners have pointed to radiation poisoning from Soviet-built installations (Hungary has been dependent on electricity from Chernobyl). And in Poland, the military regime announced plans for the country's first nuclear plant only a month after sending tanks against the environmentally-minded Solidarity union.

Gorbachov and Chernobyl

But the "closed society" is not the only reason for the lack of a Soviet movement. The Soviet education system reveres technology and has instilled blind faith in scientific "progress" among Soviet citizens. Lenin's electrification and Stalin's industrialization made a lasting impression.

Kenneth Bailes writes in his Technology and Society under Lenin and Stalin that "...the means—industrialization—came permanently to replace the end—egalitarian-ism—as it was originally expressed in the Bolshevik Revolution." Stalin used aviation feats in the '30s as later leaders used the space and nuclear programs to build political legitimacy.

political legitimacy.

By this process, the scientific/technical intelligentsia has slowly consolidated its power. By the '70s, about 80 percent of Politburo members had a higher bechased background, in contrast to the predominance of lawyers in Western politics. As pointed out by the Hungarian sociologist lván Szelényi and George Konrád in their book The Intellectuals on the Road to Class Power, it is the "technocracy" and its institutions that have the ear of the Kremlin. The citizens allowed to voice limited dissent are also technocrats-including nuclear physicists-who have little interest in the grievances of ordinary Soviets. These are the dissidents recognized by the West.

This is not the best atmosphere for an antinuclear movement. The society's structure preempts any questioning of decisions on nuclear technology. The only exceptions may have been the Soviets directly affected—nuclear workers and their communities, anti-authoritarian technocrats or national minorities who (like in the West) are affected by uranium mining.

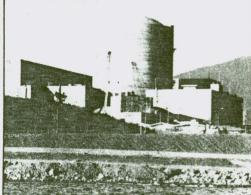
chemobyl couldn't have come at a worse time for Mikhail Gorbachov, the foremost advocate of technocratic power. Rapid technical growth—including electrical, thermal and military reactors—is absolutely essential to Gorbachov's economic revitalization program. Because a challenge to nuclear power is a challenge to Soviet state power, there has been no Soviet antinuclear movement to speak of. This is also the reason the movement that is certain to arise now will be considered fundamentally danger-

The long-term "danger" is that the Soviet people, with their instilled faith in nuclear power shattered, will begin to question the role of other technologies—from computers to strip mining to genetic engineering. Such a critique could extend to a questioning of technocratic power and decision-making. It could even begin to challenge the Promethean values, held in both East and West, that promote the human manipulation of nature—even the powers of the sun—for material ends. The winds of Chernobyl may blow over us yet.

Zoltán Grossman is a Chicago-based freelance journalist who has visited nuclear communities from the Philippines to Hungary,

Marcos and the Atom Besieged





ZOLTAN GROSSMAN

HILIPPINE RESOURCE CENTER

Some 25,000 Filipinos march in a 'people's strike' to protest a Westinghouse nuclear power plant.

MANILA

It is night on the highway north of Mariveles, an industrial and fishing town at the tip of the Bataan Peninsula, west of Manila. More than 5,000 residents, mostly women employed at the nearby Export Processing Zone, are carrying torches in a march. Bataan has seen many marches, particularly during strikes against the low wages and poor working conditions in the multinational industries of the Zone, but this one is different.

As the torchbearers wind their way up the coastal highway, the women begin chanting: "Anong sagot sa planta nukleyar? Welga, welga, welgang bayan!" ("What is the answer to the nuclear plant? Strike, strike, people's strike!")

This is the kick-off for a three-day general strike in June against the nearby Morong nuclear power plant. After fifteen years of controversy and delay, the reactor is being prepared to go on line. The core is to be loaded and the fuel tested within two months, and full-scale operations could begin as early as December.

During the march, local villagers applaud, hand out water, and join the ranks (which swell to 25,000). Fishermen set off firecrackers, while church bells ring in greeting. Alongside the usual

graffiti condemning the U.S.-MARCOS DICTATORSHIP, walls now carry such slogans as LAKAS NG BAYAN HINDI LAKAS NUKLEYAR (PEOPLE'S POWER NOT NUCLEAR POWER).

Heavily armed military personnel accompanied by a tank plow through the demonstration, and officers conduct body searches of thousands of marchers.

The general strike was considered 95 per cent successful, as barricades paralyzed transportation and business. Since the protest, more than twenty-five towers carrying power lines from the plant have been dynamited.

In the midst of near-famine and civil war in some provinces, President Ferdinand Marcos is shelling out up to \$2.6 billion for the nuclear power plant. The reactor, one of four the Westinghouse Corporation has slated for the Philippines, is close to the U.S. military bases at Subic Bay and Clark Air Field, with power lines running directly to them.

To Filipinos, the Morong plant has come to symbolize the dangers of nuclear power. It sits near an active volcano and astride an earthquake fault. In case of an accident, the prevailing winds would blow radioactive contaminants toward the sprawling capital of Manila.

In Morong, nuclear power and military repression go hand in hand. To clear the site in the 1970s, the government forcibly evicted residents from their land; such evictions continue to this day. Between 1979 and 1981, the military assassinated four activists. One, a construction worker at the site, was found dead in a septic tank.

"The four persons were killed directly from their association with work against the plant," says Elmo Menapat of the Nuclear-Free Philippines Coalition. "It kind of dampened the spirits of the people in Morong. Instead of getting people to react in a much more militant manner, it caused fear in them."

The Coalition is a largely urban-based, middle-class organization. It includes in its ranks a network of women's groups called GABRIELA, which organized a 40,000-strong march from Manila to Morong last October. After trying a centralized form of organization, the Coalition opted for self-reliant autonomous groups of workers, peasants, professionals, and fishermen in Bataan.

Antinuclear activists in the developed countries often assume that workers are too concerned with their own immediate economic survival to rally against atomic power. Yet

in Bataan, women who earn the equivalent of thirty cents an hour making clothes for Barbie dolls, and fishermen who cannot compete with corporate trawlers, have joined the campaign against the Morong plant.

"The struggle of Filipinos should be led by workers," says Ed Capuyoc of the Bataan Labor Alliance, the first regional workers' organization in the country. "If we don't open the fight against the nuclear plant, the people won't move."

Workers have carried out massive sabotage within the plant, rerouting wiring, cutting cables, wrecking vehicles, and destroying a turbine by blasting sand into its lubricant.

"This is how we show the people where we stand," grins a truck driver at the site. "With all the defects done by the Filipinos, the plant will be able to operate for two months at most."

"We are desperate," says one Bataan organizer. "We do not want nuclear waste for a quarter-million years. Marcos says he'll build the plant by all means possible. We say we will stop it by all means possible."

-ZOLTÁN GROSSMAN

(Zoltán Grossman, an antinuclear activist and free-lance journalist in Chicago, recently returned from the Philippines.)

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Nuclear power in the people's power in the Philippines

"People's power not nuclear power"

The situation in the Philippines is nearing crisis point. As President Marcos' brutal military dictatorship is being increasingly challenged, and the president's health is worsening, the threat of US military intervention grows. As Zoltan Grossman reported last issue (PN 2248) there has been a series of general strikes, and trade unions and opposition parties have been making alliances to oppose, and ultimately replace, the regime. In this article Zoltan Grossman, writing from Manila, reports on nonviolent (from a general strike to sabotage) against a nuclear reactor, and explains why for Filippino workers the struggles against nuclear power and military oppression are inseparable. At the time of going to press we had not received an update on the situation, but we hope to be covering the struggles of the Filippino people on our news pages.

It is night in Mariveles, an industrial and fishing town at the tip of the Bataan Peninsula west of Manila. Over 1,000 residents, mostly women employed at the nearby Export Processing Zone, are lighting torches for a march. Mariveles has seen many marches and rallies, particularly during strikes against the low wages and poor conditions in the multinational industries. But this march is different.

As the torches dramatically wind their way to the central churchyard, the women begin chanting "Anong sagot sa planta nukleyar? Welga, welga, welgangbayan!" ("What is the answer to the nuclear plant? Strike, strike, people's strike!"). This march is preparation for a Bataan three-day general strike (welgang bayan) against the nearby Morong nuclear power plant. After 15 years of controversy and delay, the core loading and partial testing of the reactor fuel is due within one month after the strike, with full scale operations possibly as early as December.

The anti-nuclear general strike on June 18-20 follows a similar strike last December 10, when 95% of the province's transport and business halted. Now with a door-to-door outreach campaign in the slums, the organisers feel they can paralyze the province, as well as block the road to the nuclear plant. Alongside the usual graffiti against the "US —Marcos Dictatorship", a walls now proclaim "Lakas ng bayan hindi lakas nukleyar" ("People's power not nuclear power").

NUCLEAR TECHNOLOGY DUMP

The Morong plant has become world famous for the blatant danger it poses to the Filipino people. The reactor is one of four planned by Westinghouse, the same contractor which built the Three-Mile Island plant, and is modelled on a plant in Puerto Rico that was never constructed because of popular protest. With the defeat or delaying of so many nuclear plants in the US, firms such as Westinghouse have found it necessary to accelerate their "dumping" of nuclear technology in the Third World. Lower construction costs, weaker safety and tax regulations, and authoritarian governments guarantee enormous profits. In the midst of near famine and civil war in some provinces, President Marcos is shelling out up to 2.6 billion dollars for the plant.

The plant is close not only to the Export Processing Zone, but to US military bases at Subic Bay and Clark Air Field, with power lines running directly to them. One organiser asked, "Why did they build the plant in Bataan, and not elsewhere?" Nerertheless, most local people blame Marcos rather than the US for the plant, which sits not only near an active volcano but on an earthquake fault. In case of accident, the prevailing winds would be towards Manila.

In Morong, nuclear power and military repression go hand-in hand. A series of forced evictions initially cleared the site in the 1970s, and still continue. In 1979-81, four activists were summarily executed by the military. One, a construction worker at the site, was found dead in a septic tank. "The four persons were killed directly because of their association with work against the plant", said Elmo Menapat of the Nuclear-Free Philippines Coalition (NFPC). "It kind of dampened the spirits of the people in Morong. Instead of getting people to react in a much more militant manner, it caused fear in them instead."

MARINES TIGHTEN HOLD

Since 1982, a huge force of Philippine Marines, the Constabulary, Central Intelligence and Civilian Home Defence Force has tightened its hold on the area. What was the strongest movement in Bataan, carrying our protests and noise barrages, then became the weakest, and many guerrillas with the New People's Army(NPA) surrendered in the town. At the site itself, the Nuclear Security Guard has cordoned off a restricted area, shooting at least one fishing boat out of the water. Elsewhere in Bataan, militarisation has been stepped up-at another torch parade the same night, plainclothes security personnel fired M-16s at the ground. (Militarisation also is rampant near the sites of other energy projects, such as a series of dams planned in a tribal area of Northern Luzon.)

IMPERIALIST SYMBOL

"For me personally, the plant is a symbol of imperialism" said Sr Aida Velasquez of the Philippines Federation for Environmental Concern, a member group of NFPC, "What more tangible example is there?" Velasquez has promoted a Third World

perspective on environmentalism, in which the multinational perpetrators of deforestation, erosion and contamination are clearly identified. She emphasised how workers and peasants have historically fought destructive projects in Bataan, such as a copper smelter, and would fight a coal plant as hard as a nuclear plant.

MASSIVE BASED MOVEMENT

The NFPC is a largely urban based, middle class organisation. Also in its ranks are women's organisations which organised a 40,000 strong march from Manilato Morong in October 1984, which was joined by local people. After trying a centralised form of organisation, the NFPC decided to start self reliant autonomous groups among the workers, peasants, professionals and fisher-people of Bataan, which has resulted in an enormous mass base for the movement. "Other Third World movements can learn from us", said Elmo Manapat of NFPC. "We will be distinguished from other antinuclear movements because of the Third World setting, because of our being a neocolony in which a revolution is taking place... the anti-nuclear movement is just a minute part of the liberation movement. We have a role to play, and we have to play that role within the context of the revolutionary atmosphere."

Each sector of the Nuclear Free Bataan Movement has its perspective on the plant. Fisherpeople oppose it because of the radioactive and thermal pollution they say it would cause, or at least the public perception that their fish would be contaminated. They already report that a red



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ooze from chemicals at the site has killed some fish. Peasants say the plant will lower the fresh water table, and a leak would forever ruin their rice crop. Workers in nearby barrios also fear an accident, and some are even selling property.

WORKERS TAKE LEADING ROLE

Why is the working class taking such a leading role against the nuclear plant? Anti-nuclear activists in the developed countries often assume that workers are too concerned with their own immediate economic survival to be concerned woth nuclear issues. Yet in Bataan, women who make the equivalent of 80p an hour making clothes for Barbie dolls, or fisherpeople who cannot compete with corporate trawlers, take time out to stop a nuclear reactor. "The struggle of Filipinos should be led by the workers. If we don't open the fight against the nuclear plant, the people won't move", said Ed Capuyoc of the Alyansang mga Manggagawa sa Bataan/Bataan Labor Alliance (AMBA-BALA), the first regional workers' alliance in the country.

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GOVERNMENT NOT LISTENING

AMBA-BALA has organised about 80% of the workers in the Zone, stood firm against the pro-government "yellow unions", and talked about instituting forms of workers' self management. It also does not see a regional welgang bayan as enough. The June strike is one step towards a national welgang bayan in late 1985 or early 1986, in which the nuclear plant would be a top issue. "What is the use of working on these issues if we're all dead?" said Capuyoc. Public hearings are not going to get anywhere—the government isn't listening. The people themselves have the final decision." Perhaps the question should not be why workers lead the anti-nuclear movement in the Philippines, but why they do not in the developed countries.

Nearly all the information on hazards within the plant comes from the workers inside, as well as about 20 engineers and a





A fishing village near the Morong nuclear plant, on the Bataan peninsula.

few in management. Organisers have learned of a crack in the reactor vessel, a collapsed condensate tank, a spring under the core, and rats chewing on wires in the control room. The majority of workers from the province, and of those in the "third-class" skill category, are against the plant; but the severe economic crisis forces them to take one of the few available jobs. After seeing a Westinghouse slideshow on the effects of radiation, one worker realised that "building a nuclear plant is harmful, especially for the children. But I had no choice, otherwise it was no salary."

WORKERS FEAR FOR SAFETY

Three strikes over economic issues have hit the plant, but many workers also fear for their own safety. At least seven have died in accidents during the construction, and three have reportedly already been exposed to radiation. Workers are not given the radiation detection badges which are mandatory for management. Any dissenter faces a network of company and military informers, and possible firing (as happened to one who sang the national anthem over the loudspeaker system), imprisonment or execution. Some workers have wanted to quit, but are urged by activists to stay in—it is better to have anti-nuclear or neutral workers in the plant than pro-nuclear workers.

GO SLOWS AND SABOTAGE

Besides giving out information, how do such workers reconcile their sentiments with their stated need for a salary? "Easy," said one former electrical worker, "you create a defect, fix the defect, and then create another one. That way you slow the operations and prolong your job at the same time." Workers have carried out massive sabotage within the plant—rerouting wiring; cutting cables; wrecking vehicles, automatic doors and TV cameras; and destroying a turbine by blasting sand into its lubricant.

"This is how we show to the people where we stand," grinned a site truck driver, "with all the defects done by the Filipinos, the plant will be able to operate two months at the most." If the plant closes, the workers will go back to fishing or farming, or get a job in the Middle East with their new skill credentials.

Naturally, with this state of affairs, the management does not trust the workers. "My supervisor told me he was afraid to fire me," said the electrical worker, "because he thought I'd destroy the plant." Only Americans are allowed near the uranium itself, perhaps mindful of an incident in Virginia where two workers protesting at hazards spread a harmless powder on the core, rendering it useless.

ANTI-NUCLEAR GUERILLAS

Sabotage becomes less likely, however, as construction contracts end and lowerskilled workers leave. Ultimately, most of the activists say, if anti-nuclear action by workers inside and outside the plant fails, the responsibility for stopping the plant will be shifted to the NPA, the armed wing of the Communist Party of the Philippines. Already on May 31, the NPA carried out its first anti-nuclear action, when 40 guerrillas raided a camp and burned equipment used in building power lines to Pampanga province, site of Clark. No injuries were reported. In a May interview with this reporter, NPA leader Conrado Balweg, who previously has fought the dam project in the north, said "Nuclear power is inhuman".

INSTALLATIONS VULNERABLE

The Nuclear Security Guard is clearly gearing for an all-out attack on the site. The government brought in an early shipment of US-processed uranium in August 1984, reportedly to prevent the kinds of explosive assaults that have rocked nuclear power plants in France, Spain and South Africa. The popular NPA would not endanger the population by going near the reactor or fuel handling building, but other strategic installations on the enormous site remain vulnerable. One Bataan organiser summed up the prevailing sentiment in the movement: "We are desperate We do not want nuclear waste for a quarter of a million years. Marcos says he'll build the plant by all means possible."

ZOLTAN GROSSMAN