

## (1) THE SOVIET AGONY OVER STATES' RIGHTS

than religious fundamentalism. In distant Siberia, Yakuts resent Moscow's refusal to allow natives to de-Russify their names in official documents.

**Applying palliatives.** The landmark implications of the Georgia disaster were clear in Gorbachev's face early this month as he returned from Cuba and Britain. Mindful of the nearly 100 who died in ethnic rioting in Armenia and Azerbaijan last year, he instantly dispatched Shevardnadze, former party boss of Georgia, to cool tensions. So serious was the situation when Shevardnadze arrived in Tbilisi that he postponed visits to East and West Germany. By last week, he was getting high marks for his calming influence, though he refused to withdraw troops and rejected local complaints that they provoked the confrontation. The wry joke in Moscow was that the Foreign Minister was establishing diplomatic links with the new Georgian nation.

In fact, Moscow acted to reassert command last week by naming Georgia's KGB chief to succeed the local party boss. But all such measures are only damage control. The Kremlin has yet to resolve the basic dilemma. By granting autonomy or independence, Gorbachev could find himself presiding over the dismemberment of the Soviet Union, hardly his vision for history. Yet if he stands against nationalist yearnings, he risks destruction of his benign image abroad, with serious foreign-policy implications, and permanent unrest in the republics. The prospect of more incidents like that in Tbilisi threatens appalling paralysis of *perestroika*, already in trouble, foreign reaction aside.

The absence of a broad policy is nonetheless consistent with Soviet inability to manage dissent. The Communist Party line is still by definition the one truth. Ideology dies hard, even, sometimes, in the pragmatic mind of Gorbachev. Nationalists were shocked last week by a decree fixing jail terms of three to 10 years for all who challenge central authority or "kindle interethnic and racial hostility." The law ostensibly showed greater tolerance for dissent. But skeptics could detect the odor of the bad old days in the fuzzy language. Without much stretching, it could send virtually any dissident to jail by official whim. It also seems to defy constitutional guarantees of free speech and the theoretical right of republics to secede. The current rubber-stamp parliament, to be replaced

by a more independent one in May, adopted the law without public discussion. Some Soviets had begun to hope Gorbachev was above such cynicism.

The official Soviet press also has lapsed into the worst pre-*glasnost* traditions, branding nationalists as "anti-Soviet," "extremist" and "adventurist." *Pravda* led the way, accusing demonstrators of opposition to *perestroika*. After initial prompt reporting of the Georgian clashes by the Soviet media, *glasnost* evaporated as the area was closed to foreign journalists, and tourists were shipped elsewhere.

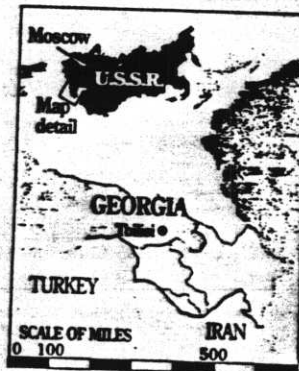
Much of the hard-line revival can be traced directly to Gorbachev. He infuriated Armenians after the deadly earthquake in December by attacking nationalists on television rather than focusing on the disaster. Last summer, at the peak of tension over Nagorno-Karabakh, he turned a televised government meeting in Moscow with regional leaders into a finger-wagging lecture. He has been equally uncompromising about nationalist movements in the Baltic States and the Ukraine. Perhaps sensing his weakness on that score, he toned

down his anger to call for common sense and unity in his message to Georgians. It may have been hard for him. Pressure from conservatives, in the republics as well as in Moscow, to crack down harder on nationalists and to slow reforms is growing. "The ethnic issue is a hammer Gorbachev's critics can hit him with," a Moscow journalist with ties to the leadership says.

Doubtless, Gorbachev would prefer to concentrate on economic reform, the visit to Moscow next month of Secretary of State James Baker and his own summit trip to China in mid-May. Instead, key aides were stuck in Tbilisi, and Gorbachev is said to be devoting much of his working day to the crisis.

Further liberalization, or at least clarification, for the republics may come from a special plenum of the Central Committee on ethnic issues in June. But it already has been delayed for more than a year. There has been no inkling of what it may produce. The delay is understandable at any rate. A senior U.S. analyst judges that "the barn door of nationalism is open, and it's going to be very hard to close it." Yet close it Gorbachev must, or it could become, along with the collapsing economy, the issue that destroys him. ■

by Jeff Trimble in Moscow



FROM THE CHRISTIAN SCIENCE MONITOR, APRIL 20, 1989

*The No. 4 reactor at the Soviet Union's Chernobyl power station exploded April 26, 1986. Last month, Rushworth M. Kidder had a highly unusual 'back door' tour of the site, accompanied by senior Soviet engineers who were there during the accident. This is the first of two reports.*

# Inside Chernobyl Today

## CHERNOBYL FACTS

■ After Chernobyl's No. 4 reactor accident, a total of 135,000 people (92,000 Ukrainian; 43,000 Byelorussian) were evacuated. People within a six-mile zone were evacuated 36 hours after the explosion. The remaining 18.6-mile danger zone was evacuated one week later. Pockets of contamination were found 300 miles north of the plant and within 200 miles of Moscow.

**Plant location:** Republic of Ukraine, near the border of Byelorussia, 10 miles from 50-mile-long Kiev Reservoir on Dnieper River. Situated between two cities: Pripyat and Chernobyl.

**Size:** Four 1,000-megawatt reactors. The first was opened in 1979, last in 1983. Today, three of the four reactors at Chernobyl are back on line; the faulty fourth is sealed in concrete.

**By Rushworth M. Kidder**

Staff writer of The Christian Science Monitor

CHERNOBYL, USSR

**T**HE road to Chernobyl winds flat and narrow across the wide Ukrainian plain. This is farm country, the breadbasket of the Soviet Union. By late March, winter wheat is already sprouting into bright green carpets. In the distance, barn-size haystacks mound against the horizon. Closer to the road, massive feed lots stand ready for cattle. Here and there the fields give way to forests of red pines, their feet set among swampy hummocks or hidden in

dusty scrub. Planted in rows and hedged with white birches, they shelter the berries and mushrooms for which the region is famous - or was, until the No. 4 nuclear reactor exploded at Chernobyl April 26, 1986, in the largest radiation disaster in history.

Now and then the road, still miles from Chernobyl, runs between twin rows of stocky elms, bisecting villages of squat white houses. Their bright-blue trim, and an occasional red-painted metal roof, provide the only color in a gray-brown landscape. In unkempt yards, stacks of split firewood stand against the sheds. Clothes dry on the lines. Chickens peck along tall board fences. In ditches along the road, grandmothers in kerchiefs burn last year's leaves. Up on the pavement, old men on black bicycles and schoolchildren with satchels are passed by a rumble of heavy vehicles: Army buses, dump trucks, freight lorries, cranes, cement mixers, plying the 158 kilometers (98 miles) from the Ukrainian capital of Kiev to the power plant at Chernobyl.

Nowadays the road goes nowhere else: There is no through traffic. Thirty kilometers from Chernobyl, at a barrier guarded by uniformed militia, the traffic stops. Passengers leave their "clean" vans - authorized to travel through populated areas - and climb into the "dirty" ones that operate only inside the 30-kilometer radius of Chernobyl

known simply as "the zone."

Inside the zone, the landscape looks very much the same. In the villages, flowered curtains still hang in some of the windows. An occasional bucket lies waiting in a dooryard. On a low hillside, a cemetery of faded blue metal crosses nudges up against two wooden picnic tables in a small grove of trees.

Only one thing is missing: people. Three years ago, in a swirl of fright as news of the explosion took nearly 72 hours to trickle out through the closely held information grid of Soviet officialdom, 135,000 inhabitants were whisked from their homes in the zone. They fled so fast that dogs and cats were sometimes abandoned, left to blend with their feral ancestors in the surrounding woods. Villages that had endured for centuries now stand empty, awaiting the slow creep of the bulldozers that will eventually knock them flat and bury their remains. Acre after acre, mile by mile, the ghost towns stretch into ghost counties, ghost woods, ghost lands. Only along the road does humanity still move. Small red signs, bearing the familiar circular seal denoting a radiation

danger, are posted frequently along the road to warn passers-by away from the woods.

Even now, three years after a three-mile-high cloud of radioactive cesium 137 and iodine 131 spread toward Europe and gradually dissipated around the world, the road is washed daily by tank trucks with nozzles under their front bumpers. On the pavement, radiation is low. In the woods, the levels rise to 1 or 2 milliroentgens per hour. A person living there for a year would receive three times the allowable dose.

"It's a very sad picture," says Viktor Golubyov, the chief engineer and manager of Spetsatom, the Chernobyl-based emergency response team. Created in March 1988, Spetsatom is designed to deal with nuclear accidents - and with such natural disasters as last December's earthquake in Armenia. As he speaks, our mustard-yellow van whizzes past a vast junkyard of trucks and vans that, from constant close exposure to radiation, have grown too "hot" (radioactive) to use and are awaiting burial. He's seen it hun-

dreds of times before. It still moves him.

A trim, ruggedly handsome man, Viktor seems like a reluctant hero out of a forgotten Hemingway story. He was at Chernobyl that April night when, at 1:24 a.m., two loud explosions blew the roof apart above the No. 4 reactor as plant employees were conducting a risky and unauthorized test. The blast scattered chunks of radioactive graphite across the roof: Near the plant's red-and-white-striped central stack, radiation levels reached 10,000 roentgens per hour. The few radio-controlled tractors available at the time, called into service to scrape debris off the roof, were worthless: The intense radioactivity destroyed their electronics. In the end, Viktor and his colleagues had to send out men - 3,500 of them, each working on the roof for no longer than one minute - to accomplish the initial containment of the radiation. There was no clothing that would have protected them: Even 15 millimeters of lead could hardly have tamed the intensity. When their minute was up, they came inside, washed, changed clothes, and left Chernobyl. How long be-

fore they could work another minute? we ask. Five years, says Viktor. That minute was their contribution.

In those grisly late spring weeks of 1986, Viktor stayed to help organize the cleanup, taking doses of radiation beyond anything considered safe. Later, after three months in rehabilitation in which his skin turned black and peeled off, he returned to Chernobyl, an Order of Lenin medal in his drawer and a headful of experience that only a handful of humans have ever amassed and that even he doesn't like to talk about.

We're still 10 kilometers from the reactor when the van pulls up to a padlocked gate. We troop into a suite of rooms in a commandeered apartment block and change into the khaki uniforms of heavy drill that are the hallmark of the Chernobyl team. They have such cachet, we're told, that they sell on the streets of Kiev for 100 rubles (\$167 at the official exchange rate).

Donning black, thick-soled shoes and colored felt berets, we return to the van. Soon we're winding through the deserted streets of the 800-year-old city of Chernobyl. The name, an almost unbelievable irony, means "Wormwood," the Biblical name given to the great star in the book of Revelation (8:10-11) that fell from heaven "burning as it were a lamp" when the third angel sounded his trumpet. According to St. John's apocalyptic vision, that star poisoned one-third of the Earth's waters, "and many men died of the waters, because they were made bitter."

We drive past apple trees whose fruit buds, ripens, and falls with no one wanting to pick it. For two years after the accident, we're told, song-birds were not heard in the region - a special tragedy for the Ukrainians, some of whose folk music incorporates whistled imitations of bird songs. Only now are the birds returning.

Official figures say that, following the accident at Chernobyl, at least 31 people died and another 237 were hospitalized with radiation sickness. Viktor talks about 36 dead. No one talks about the numbers still in danger, although those evacuated from the zone were registered so they can be monitored. But signs of further devastation - which Soviet figures put at \$14.4 billion - are clearly visible when our van stops a half mile from the reactor complex amid a forest of electrical pylons. Reactors 1, 2, and 3 are still operating. The wires above us chatter with electricity - part of the quotient of electrical power that still flows from the nation's 56 reactors. But work has permanently stopped on Reactors 5 and 6, under construction here when the accident occurred. Their cooling towers, partly finished, stand like abandoned vol-

canoes. Nearby, 12 construction cranes puncture the skyline. Too hot to use, they will stand there until they are disassembled and buried - or rust and collapse.

But the focus of vision here is the No. 4 reactor. In the months following the blast, the Soviets built three cement plants nearby. Then, boxing the damaged reactor inside high concrete walls, they pumped 2,000 tons of concrete a day over the top until the box was full. The cement trucks themselves, drawing up close to the box, could work only a month before becoming so radioactive that they had to be buried. The box, now covered with a gambrel

roof of black metal, is aptly called "the sarcophagus."

Stretching westward from the sarcophagus for about a mile, where the wind was blowing that April night three years ago, is a vast expanse of open land, sparsely planted with a low, weedy ground cover. The thick forest of pines that once stood here, says Viktor, turned red and died. They were cut down and buried, along with the remains of some 40 maintenance buildings. All that's left on this dusty plain is a tiny flag-decked graveyard with two dead pines. One has an unusually fat limb thrusting out horizontally about 10 feet above the ground, used by the Nazis during World War II to hang members of the Ukrainian resistance. It was left standing when the forest was cut as a wartime monument.

Back in the van, we cross a bridge into Pripyat, once home to more than 30,000 workers associated with the power plant. Like military bases everywhere, it is laid out in a neat grid of streets. Along them, dozens of five-story

apartment blocks stand peeling and empty, the porch of each unit painted a different pastel shade. Sunlight shines through deserted rooms from windows on the back sides. We pass a corner store, behind whose grimy plate-glass windows stand heaps of abandoned television sets. A lamppost near a crosswalk still sports a triangular international traffic sign with the silhouettes of two tots: Children Playing. Except for some crows circling the pines at the end of the street, our van is the only moving thing in sight.

Until, that is, we round a corner and approach a large apartment block obviously still in use.

(2) INSIDE CHERNOBYL TODAY

This, Viktor explains, houses some of the 850-member Spetsatom force. Working 15-day shifts at Chernobyl, they then retreat out of the zone for 15 days, usually to Kiev or Moscow. Joining them in the zone on similar shifts are the 2,500 workers at the power plant, the 4,000 employees of Kombinat (the industrial consortium charged with cleaning up the area), and some 3,000 military personnel - small hives of human activity in a barren land.

Before entering the building, we rinse our shoes in a shallow pan by the door. Then we follow Viktor through a maze of drab stairways and corridors to a suite of rooms that stands in almost surreal contrast to the world outside: Rich paneling, red cloth wall covering, a large portrait of Mikhail Gorbachev above the desk, and a long polished table set about with bottles of mineral water, orange soda, and the ever-present Pepsi-Cola. Though the weather is cool, someone turns on a wall-mounted air conditioner.

This is the office of Yuri Samoilenko, head of Spetsatom, Viktor's boss. A pleasant-faced, middle-aged man with a wife and son in Kiev, he too was at

Chernobyl when it blew. He had spoken with us two days earlier in Kiev, so today's briefing is short. A flip chart shows some of the 54 different robotic vehicles now being designed by Spetsatom - vehicles he now knows they needed at the time.

"We're very young, we have many problems," he explains. "We need American experience." There is a feeling of urgency - of working against time, economics, and international mistrust - to prepare his country to cope more adroitly with such an accident, should it happen again.

And could it happen again?

Grigory Nadjarnich, the tall, youthful radiochemist who directs scientific research at Spetsatom, points out that in the 30 years that nuclear reactors have been in operation throughout the world, there have been 155 accidents. Most have been minor, and most have been contained. "Will there be another Chernobyl-size accident?" we ask. "The probability is one every 10 years," he replies. He says it with a slight shrug, as though to indicate that math, not human opinion, is talking. That's why he works here, he says: What he does matters in ways that mere laboratory work never could. "This is not academy," he says in slightly broken English. "We have a living job here."

It's a job that demands, and rewards, an entrepreneurial spirit. As a result, the zone is a kind of free space, carved out of the heart of a nation renowned for its red tape. In ways almost unknown in Soviet society, Yuri and Viktor and their colleagues are laws unto themselves. Well-educated men, combinations of

astronaut and cowboy, they are the Green Berets, the Delta Force, the Special Operations Team of the Soviet Union. "Bureaucracy," says Viktor with a slight smile, "doesn't get in the way here." Case in point: Our visit. On a Sunday night, after watching a videotape of the cleanup operation at Yuri's apartment in Kiev, we asked whether we might visit Chernobyl - eight American nonspecialists, with only the introduction of close mutual friends for entree. Yuri agreed. Wheels began to turn. By Tuesday morning, the Ministry of Nuclear Energy in Moscow had flashed its green light. That afternoon we were at Chernobyl.

Why the quick agreement? Because one thing is clear above all: The Soviets want their story told. They want the world to know about the cleanup, the heroism, the tragedy, the regret at their three-day silence when it happened, and their newfound determination to share more information. Chernobyl has changed, probably forever, the face of nuclear power in the Soviet Union. Before the reactor blew, there were robust plans for an expansion of nuclear power - up from

the current 11.5 percent of the nation's electricity production to 21 percent by the end of the present five-year plan in 1990. (Comparable figures are 19.6 percent for the United States, almost 30 percent for Japan, and more than 70 percent for France.) Before it blew, too, there was only a fledgling environmental movement in the Soviet Union. That movement has steadily strengthened. It has already mustered enough public opinion to force the abandonment of partly constructed reactors at Chigirin, in the Ukraine, and in the southern Russian city of Krasnodar. Last September, some 20,000 Lithuanian protesters held hands in a circle around the half-built Ignalina nuclear power plant at Drukshay Lake, eventually forcing authorities to end construction. Yuri himself has close friends among the anti-nuclear crowd. He does not much like nuclear power.

Along the road to Chernobyl, however, the impact is of a different sort - less political, more immediate. Now that the land is empty, wolves are more common here. So are fish. Viktor, slipping into Spanish (he once spent three years in Cuba in the military), talks about fishing in the nearby woodland streams. A rare grin lights his face as he holds up his hands to describe a two-foot-long fish. Can you eat them? someone asks. "¡Sí, sí!" he replies, explaining that the moving water flushes the radiation out of the streams. The only problem is getting to the fishing holes through the still-hot forests. No one asks whether Viktor worries about taking the extra doses of radiation involved in a woodland trek. No one has to.