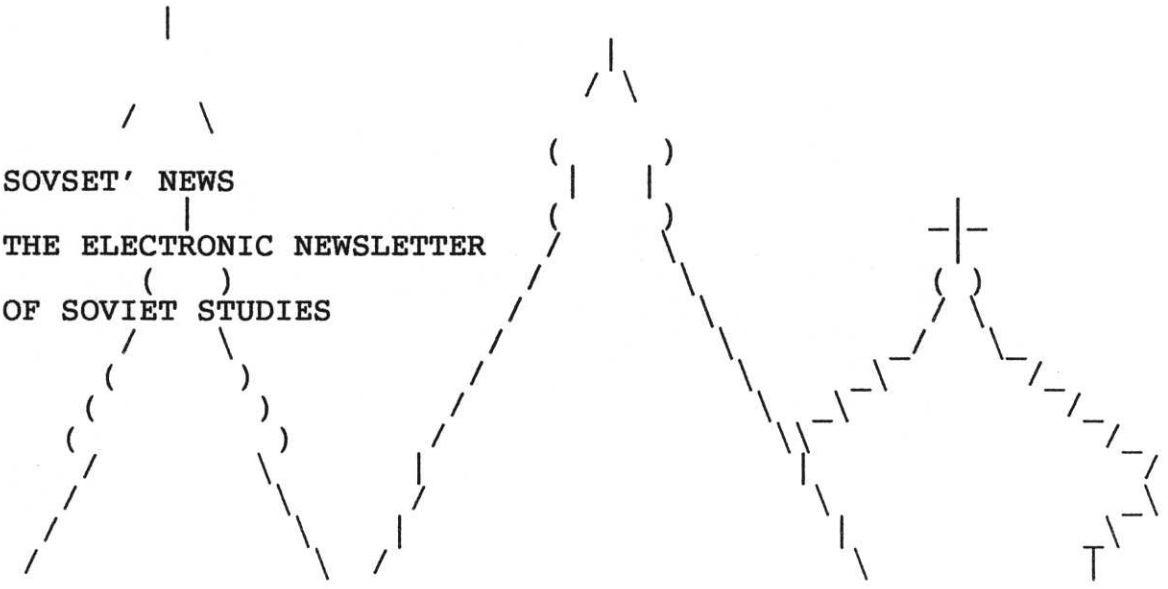
CHERNOBYL



CSIS Soviet Studies Program

VOLUME 5 NUMBER 1 January 10, 1989

NUCLEAR POWER, ECOLOGY AND THE PATRIOTIC OPPOSITION IN THE UKRAINIAN SSR: AN ANALYSIS OF A POST-CHERNOBYL TREND

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The past months have seen the culmination of a notable development in the history of nuclear power in the Ukrainian SSR, namely the emergence of a significant and eloqu ent opposition movement. It can be attributed both to the greater freedom to discuss the question under the atmosphere of gl asnost and to the aftermath of the April 1986 Chernobyl disaster, which is regarded in many intellectual circles in the republ ic as something akin to a professional "coverup" operation by Moscow-based scientists, and particularly by the Min istry of Nuclear Energy of the USSR, headed by Nikolai Lukonin, founded in July 1986.

In addition, the p ost-Chernobyl developments in the Ukrainian nuclear sphere cannot be divorced from a general concern for the ecology. While th e latter is part of a campaign quite clearly initiated in Moscow in late 1987, there have been specific Ukrainian problems that arguably are particularly severe and which have been neglected for long periods. For example, the degr ee of pollution in major industrial cities, of which Zaporozh'ye is said to be the worst example; and plans to construct a grandiose canal a la Ceausescu, linking the Dnieper River, the principal water supply of the Ukraine, with the Danube, ther eby cutting the former off from the Black Sea.

The matter was com pounded in the Fall of 1988 by a mysterious illness in the city of Chernovtsy in the Bukovinian region of the western Ukraine. Here, over 130 children were hospitalized in Kiev, Leningrad and Moscow as a result of a debilitating nervous disease that ca used hair loss. It has affected mainly lighter- haired children. Following the onset of symptoms--for example, the children were said to have experienced nightmares--the local authorities waited approximately six weeks before any major actio n was taken. The result was at least two major demonstrations in the city in November and December 1988, with so-cal led "hooliganism" in evidence at both (two Soviet policemen were hospitalized after attacks by demonstrators). The citizens ar e anxious because aside from exposure to a rare metallic element called thallium, no cause has been found for the hair loss. Improperly stored chemicals, military factories violating ecological laws or depositions in the city dump are believed to be likely causes.

The affair of the Chernovtsy children has elicited numerous articles in both the all-Union and Ukrainian press. I ndeed, nothing can be so calculated to arouse the wrath of citizens as the sight of unfortunate children, bald and hel pless, being treated in distant hospitals. It brought to mind at once Moscow's Hospital No. 6 in the late spring and summer of 1986, when Soviet firemen and first-aid workers were being treated for severe radiation burns after the Chernobyl tragedy. Fo r a second time, there appeared to be an almost inexplicable delay in taking action. Ukrainian Health Minister, Anatolii Rom anenko, a controversial figure in Kiev, was once again on the scene. A Chernovtsy scientist whom I was able to interview on a re cent visit to the Ukraine commented cynically that Romanenko would doubtless insist that in Chernovtsy, the children's hair would now grow even better than before (a reference to his 1987 statement that the health of children from the evacuated zone of Chernobyl today is even better than before the accident).

However, it has be en on the topic of nuclear power specifically that what can be termed a "patriotic opposition movement" has emerged in the rep ublic. What are the roots of this development? First, there is the stark fact that the Chernobyl station itself has remained i n service, following its startup once again only five months after the major accident. The extent of local f eeling against the continuing operation of the station was evident at two 1988 demonstrations in Kiev, the first on April 26, 1988, on the second anniversary of the disaster, and the second on November 13 (about which more below). In the spring of 1987 , at what was described as the first public meeting in the Ukraine on the question of nuclear power development (in f act, it consisted exclusively of scientists), a massive majority of those present, led by the late academician A.M. Grodzinsky , voted against the completion of the third stage of the Chernobyl plant's development: units 5 and 6, RBMK-1000 reactors.

The main arguments advanced at the meeting against the extension of the plant were the lack of basic r equirements, such as a shortage of water and land, and the fact that those required

to build and operate such structures had a lread y endured enough trials after the accident. However, only eight months after this meeting, Chernobyl's unit 3, which had remai ned shut down since the accident, was restarted without any such discussion or analysis. It should be borne in mind, of course , that the Ukrainian meeting of scientists had no legal powers over Chernobyl 5 and 6. Nevertheless, work on those two reacto rs was immediately suspended after the meeting, giving an impression that the Moscow ministry was paying attention to their co ncerns . But by December, the situation appeared to have been reversed. Radiation levels at unit 3 were still significantly higher th an the natural background and higher also than around the uncompleted building of unit 5.

Second, the Soviet nuclear power program appeared to many Ukrainians to be unbalanced in that a significantly larger than warranted proportion o f nuclear plant capacity was to be located in the Ukrainian SSR. Thus although the republic possesses less than 3 percent of S oviet territory, and 18 percent of Soviet population, nuclear plants already represented 34 percent of all-Unio n nuclear plant capacity. By the year 2000, whereas the proportion of electricity generated at nuclear plants was scheduled to rise to 30 percent in the Soviet Union as a whole, in the Ukraine, the figure was 60 percent. In addition, there were disturbing new developments: a plant was almost ready for service in what appeared to be a dangerous seismic zone in the Kerch peninsula of the Crimea; and a station was being built, again on the Dnieper, in a beautiful and famous historic al area, the seat of the former Ukrainian Hetman state, in the Chigirin area of Cherkassy Oblast. The groundwork for the latte r was reportedly being prepared even before the station had been researched by the USSR Academy of Sciences and approved by th e Ministry of Power and Electrification of the USSR.

Third, despite the atmosphere of glasnost, not only did plans for Ukrainian nuclear power plants appear to be going ahead ever more irrationally despite the manifested protests of the public, but the Ukrainian party leaders appeared to be endorsing whatever the Moscow-based ministry decreed. The Ukrainian party hierarchy under Vladimir Shcherbitsky has proved one of the more imperv ious to what has been described as the "Gorbachev revolution." At the time of writing, the Second Party Secretary, Al eksandr Titarenko, had just been removed from office (December 12, 1988), a sign that things may at last be changing. But Shch erbitsky remains the last Brezhnev appointee in the CC CPSU Politburo. In Kiev, even in official circles, he ca n hardly be described as popular, and on the subject of nuclear power, he has appeared to all but ignore the growing concerns of Ukrainian citizens.

As a result of the lack of action at the higher party level, the Ukrainian Union of Writers began in 1987 to take up the mantle of opposition to nuclear power. Its organ, the weekly newspaper "Literaturna Ukraina", has a long tradition of uncovering defects in the building work at nuclear power plants, i ncluding the now famous article about the Chernobyl plant published one month before the disaster, by the Pripyat newspaper ed itor and poetess, Lyubov Kovalevs'ka. The main spokespersons

were all writers: Oles' Honchar, Boris Oliinyk, Yurii Shcherbak. They drew attention first of all to the ostensible expansion of nuclear power in the republic without due regard for the environment. They sent a delegation to the Chigirin plant at the behest of local residents who were said to be worried about the project. They clashed swords repeatedly with what they saw as a stubborn and ignorant Ministry of Nuclear Energy in Moscow that callously put into operation its plans without consulting the local public.

By early 1988, the literati, assisted by several academicians, penned a furious attack on a proposed expansion of three Ukrainian nuclear plants--South Ukraine, Khm elnitsky and Rovno--above their officially designated maximum size. The critique, which declared that the M inistry of Nuclear Power was in need of perestroika, was published in a January issue of "Literaturna Ukraina". Thenceforth, m atters rose quickly to a crescendo that peaked with writer Oliinyk's impassioned speech at the 19th Party Conferen ce in Moscow, at which he demanded that a thoroughgoing review be held of the entire Ukrainian nuclear energy program, pending which the program should be completely halted.

A fourth reason for the development of opposition to nuclear power in the republic has been the posthumously published memoirs of Valerii Legasov, formerly First Deputy Chairman o f the Kurchatov Institute of Atomic Energy of the USSR Academy of Sciences, until his suicide on April 27, 1988, just after the second Chernobyl anniversary. Legasov had been the main Soviet spokesperson and chairman of the Soviet delegat ion to the International Atomic Energy Agency in Vienna in August 1986, at which the causes of the accident were revealed by the Soviet side. Between that time and early 1988, he had been one of the most outspoken proponents of nuclear power develo pment in the Soviet Union, especially in terms of its assured safety.

However, for three weeks, little was known outside Moscow about his suicide. On May 20, when "Pravda" published his memoirs, the impact on all t he USSR, and perhaps in the Ukrainian SSR in particular, was profound. For Legasov refuted virtually every statement he had made for the past two years. Not only was the Soviet graphite-moderated reactor still unsafe in its design, h e wrote, but it could never be made safe. He alluded to improperly trained operators still in charge at Soviet nuclear p lants and to the basic failure of the industry to learn the lessons of Chernobyl. To the Ukrainian opposition, here was confi rmation of its deepest fears from an unimpeachable source. Pro-nuclear power scientists were becoming increasingly isolated.

Over the past six months, there have been more important developments at individ ual Ukrainian nuclear plants. We will examine them briefly in turn, but to put them in perspective, a list of all Ukrainian pl ants, both in operation and planned, with their planned capacity, as far as is known, in parentheses is provided below:

1. Chernobyl (Kiev Oblast), 3,000 megawatts (3,000)
2. Rovno (Rovno Oblast), 1,800 mw (2,800)
3. South Ukraine (Nikolaev Oblast), 2,000 mw (6-8,000)
4. Zaporozh'ye (Zaporozh'ye Oblast), 5,000 mw (6,000)a
5. Khmelnits ky (Khmeln itsky Oblast), 1,000 mw (4,000)
6. Crimea (Kerch Oblast) (under review)
7. Chigirin (Chigirin Oblast) (under review)
8. Odessa (Odessa City), abandoned.
9. Khar'kov (Khar'kov City), abandoned.
10. Kiev (Kiev City), abandoned.
11. Desna (Chernigov Oblast), not known.

Note: Odessa, Khar'kov and Kiev were to have been cogenerational nuclear power and heating stations. With the exception of the RBMK-1000 reactors at Chernobyl', all reactors operational or being built in the Ukraine are VVER (water-pressurized) reactors.

a. The startup of unit 5 at Zaporozh'ye was said to be imminent at the time of writing.

In September 1988, following widespread petitions by local residents with almost o ne quarter of a million signatures, a Commission of the USSR Academy of Sciences, headed by Vice-President, Evgenii Velikhov, was sent to investigate the safety of the Crimean nuclear plant, the first reactor of which was close to com pletion. Velikhov's initial report was that the zone was so dangerous that it would have been a crime to have brought the reactor into service. The Commission discovered that the seismicity in the region was much higher than anticipated. By Novemb er, it was revealed that whereas the initial investigators planning the station in the 1970s had declared the probability of a n earthquake to be once in 10,000 years, a historical study conducted by the Commission had uncovered numer ous examples of such earthquakes throughout history, including a major one as recently as 1927. During the period of Turkish rule over this region, for example, the Turks had built earthquake-resistant fortifications to their castles, indicating tha t they were aware of the danger that the builders of the nuclear power plant were proposing to ignore. The vast majority of th ose on the Commission are said to strongly oppose going ahead with the Crimean plant.

At two other stati ons there have been strong recent protests. Personnel involved in the actual construction of reactors at Zaporozh'ye have expr essed doubt about the wisdom of this grandiose project. Almost quietly, in the aftermath of Chernobyl, this water-pressurized-reactor based plant is approaching completion, even though the first reactor there was brought on- stream o nly in 1984. A flowline production method has been introduced with standardized units that evidently has enabled the simu ltaneous construction of reactors. Resources and manpower have been poured into the plant's city, Energodar, in an effort to c omplete the 6,000-megawatt project by December 1989. There are widespread fears about the safety of such a hug e plant in a heavily industrialized region.

At South Ukraine, a major debate is in pla ce. The nuclear power plant, based on the South Bug River in Nikolaev Oblast, is being built in conjunction with three hydroel ectric stations, all in one unit. As if this were not grandiose enough, plans are afoot to raise the projected ultimate capacity of the plant from a scheduled 4,000 to 8,000 megawatts. A senior engineer at the plant, V. Bilodid, wrot e an impassioned letter to the Kiev newspaper "Robitnycha hazeta" in mid-October 1988, in which he described the environme ntal damage that the proposed scheme would cause. He maintained that the flow-off reservoirs from the nuclear plant at Konstan tinovka and Tashlits'ke are already becoming overheated with an adverse impact on animal life therein. He felt that the completion of the entire "energy complex" would cause irreversible damage to the South Bug, which is also being used for the cooling pond of the Khmelnitsky nuclear power plant further north.

Bilodid's letter w as supported by both the Nikolaev Oblast party organization and government. Both the latter have, it is reported, sent regular petitions to the USSR Council of Ministers, the all-Union and Ukrainian Academies of Sciences, and the Ukrainian Nature Prote ction Committee. They requested the cessation of all work on the South Bug, pending an investigation of experts. They strong ly oppose putting into action the "stage three" of the South Ukraine nuclear plant (units 5 and 6), andquestion the viabili ty of stage two (units 3 and 4). In response, the planners of the complex, from the Hydro Planning Institute in Khar'kov, sub ordinated to the USSR Ministry of Power and Electrification, sent "Robitnycha hazeta" a 22-page response, in which they denied that damage would be caused to the South Bug River, and that they had violated any ecological laws.

However, the editorial board of "Robitnycha hazeta" was so contemptuous of the response that they refuted it point by poi nt after publishing its main points. Even party officials of one of the reactor units, it pointed out, had expresse d their concern. Moreover, it was now outdated, the editors felt, to use arguments in favor of such schemes like shortage of w ater and electricity in a region. The planners should be more concerned with energy saving and economizing on wate r usage. In fact, they continued, if the planners have nothing more original to say, then the debate might as well end there. The response was a sign that the newspaper regarded opposition to the project as overwhelmingly strong. A comparison was made between the planners of the South Ukraine complex and planners of the now defunct Danube-Dnieper Canal, which was abandoned after a series of attacks in this same newspaper, and following an investigation by the USSR Academy of Sciences.

On November 13, in Kiev, an official demonstration called "Ecology and Us" was held in the center of Kiev . Among its organizers were the ecological groups "Zelenyi svit" (Green World) and Noosfera, and the Hromada (Society) student organization from the University of Kiev. Speakers included writers such as Shcherbak and Dmytro Pavlychko, the Moscow acad emician F. Ya. Shipunov, and members of the Ukrainian Helsinki Union, such as O. Shevchenko and I. Makar. The speakers focused heavily on the development of nuclear power in the republic, the

failure of the Shcherbitsky leadership to attend to public demands, and the need to establish a Popular Front to Promote Perestroika in the Ukrainian SSR (the Fron t was officially founded two weeks later). It thus combined ecological and political demands.

Indeed, the attack on nuclear power has assumed patriotic overtones. Shipunov made reference to the dangerous reduction in the ozone layers arou nd Kiev. Other speakers focused on the desire to save Ukrainian land from destruction: "Ukraine is living inside a nuclear reactor." The need to abandon construction at the Crimean and Chigirin stations was stressed by several speakers, as was the desire to shut down the Chernobyl' plant permanently. There were about 10,000 in attendance at the de monstration, including party officials and government members--although there was no one from the Kiev party hierarchy in att endance. Nevertheless, a significant representation of Ukrainian society was making known its feelings about the ecologi cal situation in the republic and about nuclear power in particular.

One concern is that there is no decisionma king authority on this question at the republican level. Yet not all are in agreement that a decentralization of authority in this area to the republics would be beneficial. One official commented to me that this would be a retrogressive step because i t would not make a significant difference. He implied that in the Ukrainian case at least, Kiev would simpl y comply with Moscow's wishes. Yet, he believed, there were already the makings of a democratic process on the question of nuc lear power development in the public protests that were taking place across the country. Such protests are healthy, he stated, because they show that those living in the vicinity of a nuclear plant are becoming involved in the decision on whether that plant s hould be completed.

The statement seemed at the time, and even more so upon reflection, to overlook a fundamental flaw, nam ely that a public demonstration or protest hardly constitutes a key role in making the initial decisions. To date, the Ministr y of Nuclear Power in Moscow has either manifested disdain toward the protestors for their "unscientific out look" or has quietly shelved plans for new reactors in the hope that the opposition will expend its momentum. Aside from the t ragic Valerii Legasov, one would be hard pressed to think of a single conciliatory statement on the issue from a high-l evel official involved in the planning and operation of nuclear power plants toward those who are making the protests. Rather, scientists are furiously debating the pros and cons of alternative energy sources, such as solar and wind energy, and the pos sibility of raising the output of coal, oil and natural gas significantly over the remainder of the 12th Plan period in order to compensate for "lost" electricity generation at nuclear power plants that will not come into service as scheduled.

I n the Ukrainian SSR, the situation remains particularly volatile because the opposition is coming almos t exclusively from below the party leadership (in contrast to the opposition to the Armenian and Lithuanian plants, for exampl e). Although the

Ukrainian public is generally opposed to the nuclear power program, Ukrainian society is divided between w hat is perceived as an "oldstyle" party leadership reminiscent and indeed founded in the Brezhnev period and those who wish to promote what they perceive as Mikhail Gorbachev's policies in the sphere of nuclear energy. The latter have on their side many Ukrainian academicians, and a large majority of intellectuals, writers, newspapers and media personalities . In 1989, they are likely to become increasingly formidable.

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