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EXTRACTS FROM THE SOVIET PRESS ON THE SOVIET NORTH AND THE ANTARCTIC

October - November 1989

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Lay It On Thick But Make It Truthful

All northern peoples suffer from tuberculosis and 90% are afflicted with chronic lung diseases. Cancer is rampant on the Chukotka Peninsula. These ominous findings were cited recently in the newspaper "Nordnaya priroda" by USSR People's Deputy E. Usser and Doctor of Medical Sciences V. Lupandin. The title of their article was "Chernobyl on the Chukotka". The article's conclusion - "Northern people are paying for nuclear testing" - has been extremely disquieting for those northern residents who are still healthy. We decided to get involved. First of all, where does this information come from? It is no secret since the sources are indicated.

ENVIRONMENTAL PROTECTION

Give the People Back Clean Air

Alas, it has become commonplace to see smoke-belching enterprises which poison the water and the air, the majority of which do not have even the most elementary devices for cleaning air and wastes. Pulp and paper plant No. 2 of the "Kaliningradbumprom" Production Corporation alone discharges approximately 100,000 cubic meters of polluted effluents into the Baltic river Pregolya. Wastes discharged into the atmosphere exceed standards by a factor of five. The needed reconstruction is still under discussion. Meanwhile, what is needed is energetic action to give young people a tomorrow.

Trud

10 November 1989

Page 1 (full text)

Lay It On Thick But Make It Truthful

All northern peoples suffer from tuberculosis and 90% are afflicted with chronic lung diseases. Cancer is rampant on the Chukotsk Peninsula. These ominous findings were cited recently in the newspaper "Moskovskie novosti" by USSR People's Deputy E. Gaer and Doctor of Medical Sciences V. Lupandin. The title of their article was "Chernobyl on the Chukotka". The article's conclusion - "Northern people are paying for nuclear testing" - has been extremely disquieting for those northern residents who are still healthy. We decided to get involved. First of all, where does this information come from? It is no secret since the sources are indicated.

That virtually the entire population is suffering from cancer was reported to the authors of the article by the Chairman of a certain rural Soviet. Since his name is not given, we will leave these ghastly conclusions on the conscience of the anonymous interlocutor and will focus on better documented evidence.

The authors assert that the cause of this catastrophic situation is the elevated level of background radiation in the Chukotka. The background radiation is the result of nuclear tests conducted in the atmosphere in the Far North during the 1950's and 1960's. This information is said to derive from conclusions reached by the Leningrad Scientific Research Institute of Radiation Hygiene (LenNIIRG).

Well, associates of the institute did in fact visit Chukotka in the early 1970's and conducted selective studies. The northerners have not seen them since that time. And then, last year, the Leningrad institute once again recalled the studies. Why this all of a sudden? You need not look long for the answer: LenNIIRG had gone over to new methods of economic management and it needed self-financing injections. In their search for these, the institute's directors addressed a letter to the leaders of the autonomous Okrug, but the letter merely frightened them. We have seen this letter. In an effort to persuade the northern peoples to cooperate, the specialists laid it on thick, drawing on data collected many years ago.

And here is the opinion of those who have been working on the problems of northern peoples for a long time, and not just sporadically:

"There are discrepancies between your data and studies conducted by the Okrug hospital", notes Yu. Bulgakov, for example, chief physician of the Chukotsk Autonomous Okrug, in his response to the institute.

"How could there not be discrepancies," says Candidate of Medical Sciences A. Volkson, head of the Laboratory for the Ecology of Northern Peoples, which is under the Institute of Biological Problems of the North (IBPN). "The Leningrad scientists, and then the authors of this sensational publication, have cited results of my studies dating from the period 1959-1975."

Since that time, however, there has been a substantial improvement in the situation. In particular, according to data from the Laboratory of Human Genetics of IBPN, the average life span of northern peoples is now approaching 55 years. This leaves much to be desired, of course, but it is certainly not the 45 years mentioned in the article. The level of childhood mortality has also dropped significantly in recent years, but neither E. Gaer nor V. Lupandin contacted the Magadan scientists. They apparently only requested data which would confirm the article's main thesis, namely, that northern peoples are paying with their health and their very lives for the nuclear weapons tests carried out in our country.

It appears that even the Leningrad researchers themselves did not expect such a strong conclusion. Doctor of Medical Sciences P. Ramzaev, director of LenNIIIRG, writes: "While supporting the concern expressed in the article regarding the state

of health of local residents, I cannot help but notice the article's tendency toward repeated use of hyperbole. On a number of points, unfortunately, this has led to distortion of the facts of the matter."

The authors of the publications, notes the scientist, give distorted information regarding the sources of the elevated background radiation. After all, nuclear tests were not only conducted in our country, so why heap all of it on the USSR? Moreover, natural sources contribute equally to the increased radiation in the Far North.

"The institute's findings," continues P. Ramzaev, "do not confirm that all disease on the Chukotka is 'evidence for the effects of radiation'. This is a gross exaggeration. We are merely calling for research as to its role since this role is unknown... Disease among the native populations in all regions of the Far North is approximately twice the average for the USSR as a whole. The reason for this is unknown to us and needs to be studied."

Of course it needs to be studied, and nobody argues with this. Research by the radiology laboratory of the Oblast sanitation and epidemiological station confirms the following: the specific radioactivity of venison is much higher than that of beef or pork, but is a hundred times lower than the maximum permissible concentrations established by the USSR Ministry of Public Health (Minzdrav) for meat products. As for background gamma radiation on the Chukotka, it does not exceed naturally occurring levels and measures 15-20 microroentgens per hour, which is no higher than in many other regions of the country. Under these circumstances, to speak about the carcinogenic effects of radiation and to view radiation as the cause of all diseases is to stray from the truth.

"As early as the 1940's, when nuclear tests were not a consideration, Danishevskii, the founder of Soviet polar medicine, noted an elevated incidence of cancer of the esophagus among native residents of the North," says A. Wolfson. "At that time, the possible causes he cited for this were the alternation of hot and cold food and the eating of raw food."

One can also point to the findings of pre-revolutionary researchers. Descriptions have been left of terrible epidemics which devastated entire nomad encampments. It was at that time, too, that the first fears were manifested over the fate of northern peoples. Their extinction was predicted. Whether we wish to acknowledge it or not, it was Soviet power which saved the aboriginal peoples of the North from a tragic fate.

Even today the situation with the health of northerners and their life span is rather dramatic. But the figures used by the Magadan scientists and Physicians are much lower than those cited by E. Gaer and V. Lupandin. The incidence of tuberculosis among the native population is five times higher than the level for the Oblast as a whole, but this represents only a few percentage points - not the 100 percent claimed.

Scientists and medical workers should find the causes of increased disease among northern peoples on the basis of comprehensive and careful studies not only of social conditions but also of the particularities of the aboriginal people's organism and its genetic immune system. For this, the first requirement is an all encompassing, reliable data bank.

Unfortunately, creation of such a bank is still far off. Dozens of expeditions visit the Chukotka every year, but the problem is that they take the collected data with them and frequently do not share the results of their research with anyone. Somewhere back there, on the "mainland", based on the collected data numerous dissertations are defended and subject areas for scientific studies are identified, but none of this makes any difference to the Chukchi and Eskimos. Is it not time to accumulate the research results findings in the Far North where they are needed and to make them accessible to local medical personnel?

Concrete actions are extremely necessary today. They are needed to solve genuine problems and not invented ones. The issue is to improve the living standards of reindeer herders who spend the entire year in the tundra tending the herds of the State farms. The issue is to provide them with warm ethnic clothing and wholesome food. Much also remains to be done to improve medical services, and concern should be shown about development of hunting and fishing grounds. There currently is interest in a proposal to return northern peoples - within rational limits - to a traditional way of life, without walling them off, of course, from the achievements of civilization. People's deputies and scientists, including the esteemed Gaer and Lupandin, can make a contribution to solving these and many other acute problems, provided, of course, they heed their own call sounded in the article: what is needed is to move the discussion into the realm of

concrete action, the first step toward which should be openness and objectivity in the data. One can lay it on thick, but not so as to obscure the real picture.

Sotsialisticheskaya
industriya

10 November 1989

Page 3 (slightly
abridged)

MINERAL RESOURCES AND MINING

Above the Arctic Circle - a New Metallurgical Concern

The USSR Council of Ministers has supported a proposal from the workers' collectives of the Norilsk "Zavyaygin" Mining and Metallurgical Combine, the Lenin "Severonikel" and "Pechenganikel" combines, the Krasnoyarsk Plant of Non-Ferrous Metals, and the Olenegorsk Mechanical Plant regarding the establishment, on the basis of these enterprises, of a state concern to be known as "Norilskii nikel" - for the production of non-ferrous metals. Our correspondent reports on the battle over its establishment.

Ideas, as the ancients noted long ago, hover in the air. But in our complex and fast-paced times, it seems that ideas find it crowded even there. I remember a conversation of several years ago with the then general director of the Norilsk Mining and Metallurgical Combine B. Kolesnikov. We discussed a topic which, in those pre-perestroika days, seemed simply revolutionary. My interlocutor, an influential and respected person, had begun to talk about establishing a loose organization of firms (a concern) that would be based on the combine.

A year ago, following M.S. Gorbachev's visit to the Krasnoyarsk Krai, I heard from O. Shenin, First Secretary of the Krasnoyarsk Krai Party Committee, about a program to develop the Far North by way of a concern.

This past summer the present general director of the combine, A. Filatov, made an urgent flight to Moscow with a large group of specialists. I remind the readers that it was precisely at this

time that the Ministry of Non-Ferrous Metallurgy, to which the combine was directly subordinate, was abolished, and the structure of the newly created Ministry of Metallurgy was still under development. One could hardly find, it seems, a more convenient moment for achieving independence from the authority of the ministry.

With what did the people of Norilsk come to the capital? Well, first of all, they came with a passionate conviction that the "Norilskii nikel" concern - as it has been named - has every right to exist in the context of radical economic reform. The collectives of four other enterprises of this sector - the combines "Severonikel" and "Pechenganikel", the Olenegorsk Mechanical Plant and the Krasnoyarsk Non-Ferrous Metals Plant - have expressed their desire to join the concern. In one way or another, each of these enterprises is linked with Norilsk as part of a "technological chain". All of these enterprises are profitable. In the opinion of those who initiated the concern, this profitability can be managed if one knows precisely what portion of revenues will remain in the concern and what portion will be transferred to the State. And the earned revenues can be distributed according to the contribution of each, taking account, of course, of funds for development of the production and social infrastructure. In other words, a course has been set for full economic independence and a departure from ministerial dictates. As one of their arguments for the concern, the people of Norilsk have mentioned the fact that the Krasnoyarsk Non-Ferrous Metals Plant makes an annual profit of approximately 450 million rubles, of which 360 million rubles are handed over to the ministry. How can this be fair?

Those in favor of creating the concern wanted to have dealings only with the State, their financial relationship being based on established taxes. These people are convinced that all state orders, plans and other tasks should be entered on a separate line, and that the provision of materials should be the responsibility of the agencies possessing the resources. The concern, for its part, has taken on the responsibility of providing the country with non-ferrous metals and providing social support for the cities, territories and regions where its enterprises are located.

Once again I am speaking with O. Shenin, First Secretary of the Krasnoyarsk Krai Party Committee.

"I feel," he said, "that the decision of the workers' collectives to unite together in a concern is altogether proper. It makes sense, inasmuch as these enterprises are highly profitable, and they know how to apply profits to (economic) reproduction and how to develop the social sphere intelligently. I will give you a final example concerning the Krasnoyarsk Non-Ferrous Metals Plant. The collective long ago asked that we appeal to the federal government to permit our enterprise to receive its earnings from over-fulfillment of the plan in the form of hard currency. This could be used to purchase equipment so as to organize annual production of nearly 300 million rubles worth of consumer goods."

And so the question is almost resolved, and an agreement has even been reached with a foreign firm for construction of new production facilities, which is possible only within the framework of a concern. But not everyone was in favor of this new economic association.

Documents concerning the setting up of the "Norilskii nikel" State Concern were already in the hands of the government when the latter received a letter from V. Nikolaichuk, USSR People's Deputy. This deputy's particular opinion had the effect of a bomb blast in the region. He requested that the decision to create the concern be delayed, and his reasons deserve the most serious attention.

First of all, he expressed the fear that the concern was preserving its narrow sectoral orientation and that it was not including in its program solutions to the social problems which have accumulated in the Norilsk industrial region as a result of the intensive industrial activity of the Norilsk Mining and Metallurgical Combine. Secondly, in his opinion, the problem raised long ago of transferring the territory to full cost accountability and self-financing as a way of eliminating the accumulated social hardships had now been put aside in connection with the new plans for organizing a concern. And that is how things stood: on the one side, a group of people's deputies in favor of creating the concern, and on the other side the opinion of an "individual", who just happens to represent 126,000 voters. It was not so long ago that nobody would have argued over the idea. The matter probably would have been settled at some departmental level, the authorities would have made the decision, and the workers' collectives would have set about carrying it out without questioning. And

Yuri Rusanov does not exclude the possibility that the micro-particles or gold in the core samples may be the result of technogenic interference? For example, someone drops his wedding ring into the solution used to reduce pressure on the

this would have been "normal". Today there is a new norm: abandonment of behind-the-scenes decision-making, broad discussions of problems, and the clash of opinions rather than personalities.

Sovetskaya Rossiya
19 November 1989
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And so the meeting was held received, and an agreement has been reached between the firms for consideration of their difficulties, which is possible only by way of a concern. But no one can ignore the new economic situation.

Could the Earth's Belt of "Gold" Be Real

It appears that the hypothesis of certain dreamers that the Earth possesses a belt of olivine has an altogether realistic basis. At least, Mikhail Rusanov, Candidate of Geological-Mineralogical Sciences and acting Chief Geologist of the Kola Geological Prospecting Expedition for Super-Deep Drilling, believes it would be premature to discard this idea. He came to this conclusion after a careful analysis of a core sample brought up from a depth of 12 kilometers.

As already reported, reconstruction was begun on the Kola super-deep well after reaching the 12-kilometer mark. In particular, the drillers have had to correct the curvature of the shaft. This work is now drawing to a close, but it is precisely it that led to the conclusion that the process of ore formation, including the formation of precious metals, may still be underway inside our planet.

"In rock samples brought up during drilling of the new well shaft," relates M. Rusanov, "we discovered microfissures which had not been seen in these same rocks during the initial drilling. The most surprising fact is that these microfissures contained newly formed minerals including gold. This is why I feel it is realistic to suggest that denser concentrations of precious metals may exist in that portion of the Earth's crust which up to now was inaccessible to us."

Mikhail Rusanov does not exclude the possibility that the micro-particles of gold in the core samples may be the result of technogenic interference. For example, someone drops his wedding ring into the solution used to reduce pressure on the

bit of the drilling tool. The ring gets ground up and its particles settle into the microfissures which form in the granite during the drilling process. But none of the drillers had complained of losing a ring.

A new attack on the Earth's interior is to begin soon in the Kola region. As early as next year, the present borehole should reach the 13,000-meter mark.

It is possible that the Earth really possesses an olivine belt? What's wrong in dreaming about it...

Stroitel'naya gazeta

10 November 1989

Page 4 (Full text)

Hydrocarbon Deposit Discovered Near Tazovskii

The efforts of Tyumen geologists to study certain "white spots" at the boundary with Krasnoyarsk Krai have been crowned with success. The collective of the Tazovskii Oil and Gas Prospecting Expedition yesterday chalked up a new hydrocarbon deposit. During tests of a well drilled in the Arctic tundra, a natural gas and condensate gusher was struck at a depth of three kilometers.

Yu. Loganov, head of "Glavtyumengeologiya" reported to your TASS correspondent: "The yield of the well is 500,000 cubic meters per day. This has confirmed our predictions regarding the bright future of this northern province."

Year after year the Tyumen Oblast demonstrates its right to be called the country's principal energy raw material base. During the period since local geologists began intensive prospecting here, more than 400 oil and gas deposits have been discovered.

Sovetskaya Rossiya

7 November 1989

Page 2 (full text)

OIL AND GAS

Norilsk After the Blast

The consequences of the gas pipeline emergency that occurred on the night of November 15, 300 kilometers from Norilsk, are being directly felt by both the residents and the enterprises of the city.

The Norilsk Mining and Metallurgical Combine has reduced its output to a minimum. Reserve fuel is being used to heat homes, and still apartments are colder than usual. In a number of places the temperature does not rise above 12 degrees. As a result, classes have been cancelled in a number of schools. On the whole, the public has responded with understanding to what has happened, despite the fact that the cold weather in the North now stands at a crackling 40 degrees below zero.

As V. Borovkov, a spokesman for the "Norilskgazprom" Production Corporation, explained to your "Izvestiya" correspondent, the explosion occurred on a section directly linked to a compressor station, near a primary gas processing installation. The powerful explosion put out of service more than 40 kilometers of pipeline that feeds gas to heat and electric power stations of the Norilsk Industrial Region. What has made the situation more difficult, first of all, is that the explosion occurred at a gas pipeline junction, and this immediately put all three branches of the pipeline out of service. Secondly, at the moment of the explosion and afterwards, weather conditions at the scene of the emergency left much to be desired: the temperature stood at -41 degrees, with a wind speed of approximately 30 meters per second.

What caused the accident? The answer to this question will come from a State commission headed by L. Rafikov, deputy general director of the "Gazprom" Concern. But according to preliminary assessments by specialists, the probable cause may have been a sharp drop in temperature - from 4 to 41 degrees below zero. The specialists suggest that this caused cracks to appear in the line.

Work to restore the gas pipeline has not halted for a moment. The pipeline is now expected to be repaired as early as November 21, but a good deal of time will be required before the damaged facilities are fully restored.

Izvestiya
18 November 1989
Page 6 (full text)

New Approaches to the Riches of Tyumen

It has been more than a year and a half since the USSR Council of Ministers issued its decree concerning development of the petrochemical industry in Western Siberia, and still the debate continues in the newspapers and journals over whether or not petrochemical complexes should be built here. These complexes are supposed to utilize casing-head gas, which has been burned off in giant flares for a quarter of a century, to produce goods in great demand in virtually every sector of the national economy, and especially consumer goods.

Over this entire period the opinions of the two sides have remained diametrically opposed. Some insist that it would be better to collect this

casing-head gas and to pump it in a semi-fluid state over pipelines to Tatariya, Bashkiriya and the Volga region to existing petrochemical enterprises. There, it would be processed into plastics, rubber, film and other petrochemical products. But when an explosion occurred on one of these pipelines, the proponents of this viewpoint moderated their enthusiasm.

More extreme critics of the chemical industry in general expressed the opinion that no such enterprises should be built since this would be ecologically unsound, expensive, and would divert resources from the solution of social problems. One could cite the titles of articles and critical letters in certain central newspapers: "Yet Another 'Construction Project of the Century'?", "Where Are We Headed in Such a Hurry?", "A Giant on Stilts", etc.

On the other side is a large group of scientists from Western Siberia. After a thoughtful study of the situation on site, and after weighing all the pros and cons, they wrote a letter this autumn setting out their position in favor of developing the petrochemical industry in Western Siberia and requested USSR Minister N.V. Lemaev, through whose department the proposal to build the petrochemical complexes was channelled, to bring these matters to the attention of members of the USSR Supreme Soviet and the government of the country.

And how do the workers of Tyumen Oblast feel about these issues, which are of vital concern to them in particular? Residents from one of the largest cities of Western Siberia - Surgut - held a meeting and directed an appeal to the USSR Supreme Soviet. The title of the appeal, which was published in a local newspaper, is characteristic: "Please Build the Chemical Complex!" Also in that month

"Tyumenskaya Pravda" published an open letter to members of the USSR Supreme Soviet signed by sixteen scientists from Tyumen institutes. The authors were unanimous in their view that it was both practicable and sensible to decide in favor of creating a Tyumen petrochemical complex. At the same time they suggest that, for the short term, construction should be limited to only two petrochemical combines - in the cities of Surgut and Tobolsk - instead of five.

The trade union conference of the "Zapsibgidrostroy" [Western Siberia Hydroelectric Construction] Trust even sent a telegram to the USSR Supreme Soviet. In particular, the telegram says the following: "An extremely valuable raw material has been burning in the flares for twenty-five years. We feel that, with the transition to regional cost accountability, it is essential to develop in Western Siberia an ecologically clean petrochemical industry based on the most modern technology."

The Politburo of the Central Committee of the CPSU [Communist Party of the Soviet Union], having made a preliminary study of these and many other materials and documents concerning solutions to social problems, the work and life of workers in Western Siberia, and the comprehensive use of the region's valuable natural resources, heard a report on November 3 of this year from the USSR Council of Ministers concerning these matters.

Someone might wonder just why the Politburo of the Central Committee would interest itself in problems related to the more efficient development of natural resources and in the heated debates around the social and economical development of the region. After all, are these not political questions? Yes, it is precisely here that social and economic matters

are inextricably linked with political considerations. As in other major problems of life in the country, economics and politics are inseparable from one another. Indeed, a number of scientists and representatives of the public have expressed serious concern and doubt whether our economy can sustain now and in the near term the simultaneous construction of five petrochemical complexes at a total cost of approximately 41 billion rubles, as was originally planned.

Even before the problem was taken up by the Politburo, leading scientists of the USSR Academy of Sciences had expressed their opinion: Vice-Presidents O.M. Nefedov and V.A. Koptyug, and Academician-Secretary of the Division of Economics of the USSR Academy of Sciences A.G. Aganbegyan. In a letter addressed to the government, they reported that, given the present circumstances, the conversion of native hydrocarbons which currently are being burned up, into petrochemical and chemical products would not only be a means of accelerating the growth of the chemical industry nationwide but would also make it possible to economise on such a non-renewable natural resource as petroleum. In addition, these scientists also proposed the construction of only two complexes - one in Tobolsk and one in Surgut - during the 13th Five-Year Plan. In this case, the level of capital investment in basic production would amount to only 5.5 billion rubles, including 2.6 billion rubles in freely convertible currency (joint enterprises are being created). Moreover, it is extremely important that monies totalling 1.9 billion rubles be spent on development of an infra-structure and on solving social problems to improve people's lives. Technical-economic studies of the projects have shown that these monies could be recovered in

less than six years in the case of the Tobolsk complex and in seven years in the case of the Surgut complex. From an economic point of view, these time frames are quite normal.

In addressing the meeting of the Politburo of the Central Committee on behalf of the government, V.A. Durasov, First Deputy Chairman of the USSR State Planning Commission [Gosplan], put forward very weighty arguments in favor of developing the petrochemical industry in Western Siberia. What is needed to increase the pace of housing construction and social facilities, and to fill the market with consumer products - clothing, footwear, television sets, video tape recorders, automobiles and detergents - is to achieve accelerated development of a polymer chemistry. A single ton of light hydrocarbons from casing-head gas can be processed to produce 15,000 to 20,000 rubles worth of various consumer goods. The country, however, is capable of processing 4 to 6 million tons of this raw material each year, which would result in tens of billion of rubles worth of goods being produced.

For the moment, the USSR lags significantly behind a number of other countries in terms of the level of chemicalization of the national economy. Compared to the USA, for example, we produce 6 times less plastic, 3.5 times less man-made fibers, and almost 4 times less synthetic detergents. And it is no accident that we must import approximately 2.6 billion rubles worth of chemical products every year, including 600 million rubles worth of plastics. We burn our valuable petroleum raw material in flares and purchase products made from this same raw material. What is especially distressing is that our current imports of chemical goods alone require us to sell 40 million tons of oil abroad each year. Is this not absurd?

In order to assess the opinion of communists in Tyumen Oblast, M.S. Gorbachev invited G.P. Bogomyakov First Secretary of the Tyumen Oblast Committee of the CPSU, to speak at the Politburo meeting.

The question on the agenda for this meeting of the Politburo, the speaker said, is of vital importance for us Communists and for all workers of the Oblast. Indeed, the future of the region depends on its solution. When you visited us in September 1985, Mikhail Sergeyevich, you were already saying that the Western Siberian Oil and Gas Complex was entering a new phase of its development and that it should make the transition from a raw material to a processing orientation. It was precisely this that brought about the decisions which followed regarding construction of major petrochemical complexes in our region. The residents of numerous cities and towns took an active part in the debate of this question.

The current point of view in the Oblast, the speaker continued, is that we should not get carried away with megalomania. Considering the financial difficulties of the country, we should concentrate our resources on the most urgent projects of greatest need to the people. Unfortunately, as we debate, the flares are burning. Just since the recent major accident in Bashkiria and the suspension of operations on the Western Siberia - Urals - Volga product pipeline, over 2 million tons of gasoline fractions have continued to burn. There are proposals in the Oblast to establish enterprises in Surgut, Novyi Urengoi and Tobolsk which would process native hydrocarbons and produce such urgently required goods as polyethylene, polypropylene, polystyrene, etc. Construction of the first phase of these plants will require 5.5 billion rubles. These preliminary plans

conform to the recommendations of the USSR State Planning Commission. The people of Tyumen have not merely made proposals to the government but have already done much to actively develop the construction industry here, and to intensify the focus on building facilities to provide social and cultural amenities, training for specialists. . .

A recently established gas concern, reported L.D. Ryabev, Chairman of the USSR Council of Ministers' Department of the Fuel and Energy Complex, has begun operation. Demonstrating initiative, the concern was able to find an excellent foreign partner which will assist in providing equipment for the enterprise. The enterprise is being built near the Urengoi deposits and as early as 1993 will be providing the country with approximately 300,000 tons of polyethylene. And in the years to come, oil and gas-field workers will be involved in developing the petrochemical industry in the region. The raw material is due to be converted on site into finished products.

In supporting the Tyumen initiative, N.I. Ryzhkov remarked that our country cannot remain a raw material appendage of the West. Others buy our oil and gas at low world prices and use our raw material to produce the most varied goods, including leotards, and sell them to us at a huge profit. The social factor is also of considerable importance. Due to sharp reductions in the construction of pipelines in Western Siberia, major construction organizations are becoming available. They, too, will be working on the construction of the petrochemical complexes, so that the government's strategy to develop five petrochemical complexes is altogether justified.

Significant changes today is realized clearly today in connection with the current need to improve the economic and administrative independence of the regions.

In concluding the meeting, M.S. Gorbachev said that at the present time it would be appropriate and economically advantageous to avoid dissipating financial and labor resources on simultaneous construction of five complexes. A general acceleration of work on the first phase - complexes in Tobolsk, Surgut and Novyi Urengoi - would be preferable. When these start to produce hard currency, then a portion of this money could be directed toward development of other complexes and cities in Western Siberia. But the main thing is to explain to our workers that all of this is being done in the interests of the workers of Western Siberia and of the entire country, and in the interests of regional cost-accountability. And we should not only explain but also actively accelerate solutions for all the social problems of Tyumen Oblast. When people sense a real concern for them, they will work even better.

Immediately following the Politburo meeting, your correspondent spoke with V.A. Durasov, who had made an information presentation to the Politburo. He said:

"What struck me was the businesslike, constructive and attentive atmosphere of the meeting. At the same time, a spirit of debate reigned in the hall. Also, the level of debate and mutual respect was exceptionally high. At all turns in the debate, the interests of human beings formed the background of attention at all times. This produced a very strong impression on me since I was addressing the Politburo meeting for the first time.

Pravda

10 November 1989

Page 2 (full text)

SCIENCE

Second Wind for Siberian Science

For a long time, Siberia developed much more rapidly than the economy of the country as a whole. The extraction and refining of oil and natural gas, the introduction of new technology and the intensive development of machine building are the 'calling card' of today's Siberia. Historically, its powerful scientific potential has been a kind of catalyst for the industrial-economic, social and cultural processes evolving here. However, in recent years a number of problems have accumulated in Siberian science which are having a negative impact on the rate of development for the entire region. The concept for the development of the USSR Academy of Sciences' Siberian Branch should help to give Siberian science a second wind.

In his address, Academician V.A. Koptyug, Chairman of the Siberian Branch of the USSR Academy of Sciences, noted that the important and ever-increasing role of the eastern regions in the economy of our country is widely known. Intensive development of these regions calls for thorough scientific grounding and accompaniment. A decisive step in developing the required scientific potential within Siberia has taken in 1957 when it was agreed to create the Siberian Branch of the USSR Academy of Sciences as a complex of separate regional scientific centres closely linked to a system of higher education. The experience of the Siberian branch in organizing the Far Eastern and Urals branches of the USSR Academy of Sciences served to further the development of academic science in those nationally important regions of the Russian Federation. The significance of these steps is realized clearly today in connection with the current need to improve the economic and administrative independence of the regions.

Thanks to the constant support of Party and Soviet organs at both the national and local levels, in recent years the Siberian Branch has developed a substantial resource base, so that today it has a significant scientific and manpower potential. In the six scientific centres of the Branch located in Novosibirsk, Krasnoyarsk, Tomsk, Irkutsk, Ulan-Ude and Yakutsk, and at other points in Siberia, there are 62 scientific research and technological design organizations in operation, employing 85 members of the USSR Academy of Sciences, 800 doctors of science and 5,300 candidates of science. They have to their credit a large number of basic research discoveries, technical and production solutions that have won international recognition, as well as applied research solutions implemented in the interests of the region within the framework of the "Sibir" program. More than 600 major solutions have been proposed for implementation in the national economy during the current Five-year Plan.

Much has been done overall to develop science and train specialists in Siberia. However, neither the national government, the government of the Russian Federation, nor we ourselves are satisfied today with the degree to which science impacts on the development of the national economy or on the economy and culture of the Siberian regions and Russia as a whole.

A thorough discussion of the problems and ways of developing Siberian science took place in September, 1988, when M.S. Gorbachev met with scientists, Party, Soviet and administrative leaders at the Siberian Branch's Krasnoyarsk Scientific Centre. In the course of that meeting both complimentary remarks and serious criticisms were directed at the Siberian Branch for shortcomings in

providing a firm basis for planning large-scale economic and social development of Siberian regions, and for inadequate use of accumulated scientific potential in terms of its practical implementation. The broad exchange of opinions that took place emphasised the need and mapped out the guidelines for a new cycle of development for the Siberian Branch. The elaboration of these guidelines by the USSR Academy of Sciences, in cooperation with the USSR State Committee for Science and Technology, the USSR State Committee for Public Education, the USSR State Planning Commission and the RSFSR Council of Ministers, made it possible to formulate a general concept and detailed plans for development of the Siberian Branch up to the year 2005.

To improve the operational effectiveness of all of the Branch's components in terms of the final result, that is in terms of the pace and scope of implementation of scientific achievements, together with further development of diverse existing forms of interaction with the national economy, a decision was taken in favor of rapid growth in our own design and experimental production base. This will make it possible not only to bring [scientific] developments to a level accessible to industry but also to provide small-series production of goods so as to determine the potential market both within the country and outside its borders.

Today, there are nine technological design organizations operating within the Branch. These organizations are fairly strong in the area of personnel, but, unfortunately, they lack adequate production facilities. Experimental plants are in operation in Novosibirsk, Berdsk and Irkutsk, and a number of engineering and technical centres have been created. Production cooperation with foreign

partners is underway, and one may hope that this will stimulate development in the Russian Federation of a network of comparatively small enterprises. These enterprises would produce research-intensive goods which rely on "high technology" and which will close the gap, so characteristic of our country, between "big" science and "big" industry.

Serious attention is being paid to planning the utilization of capacities resulting from the conversion of defence sectors in industry. A number of major Branch developments (technology for obtaining ultra-dispersed diamonds, a series of highly effective catalysts, and others) are already in industrial implementation. For this reason, we should not limit ourselves to partial solutions: what is needed are programs for large-scale interaction between academic science and restructured sectors. A joint proposal by the Siberian Branch and the USSR Ministry of the Nuclear Power Industry concerning organization of an Eastern Scientific Production Complex "Mikroelektronika" could serve as a model. The purpose of the complex would be to develop and produce extremely pure substances and microelectronic components based on advanced materials, as well as automatic design systems and equipment for producing integrated circuits, computer hardware, instruments and robotic systems. Realization of this proposal is important not only from the point of view of accelerating the utilization of the existing scientific surplus but also as a step on the road to instituting competitive elements in this most important sphere of scientific and technical progress.

Plans call for further growth in the role of the Siberian Branch in formulating scientifically sound regional development forecasts and plans based

on the potential for scientific and technological progress. Systematic research into problems associated with comprehensive development of natural resources, with power and resource conservation, with ecology, and with balanced development of productive forces in Siberia should serve as a foundation for formulating and implementing an integrated scientific, technical and social policy for this most important region of the country. This will require more efficient integration of academic, sectoral and higher school science within the framework of the comprehensive regional scientific research program "Sibir", and could be achieved by giving its sub-programs a stronger target orientation and by simultaneously resolving the issue of financing the program from the RSFSR Council of Ministers' Central Fund, which is being created through contributions from ministries and agencies whose enterprises operate within Siberia.

The rapid development of productive forces in Siberia has shown that the Branch lacks the adequate potential in certain spheres for providing advanced scientific support for developing a number of important national economic complexes. The need has arisen to develop scientific centres in Tyumen (with a mandate to develop a petrochemical and natural gas complex and to solve problems of the North), in Kemerovo (a coal and coal-chemical orientation) and in Omsk (machine building orientation).

Simultaneously, existing scientific centres should expand research into problems associated with ecology, wood chemistry and the processing of raw materials, materials science, and with a number of other areas important to the region which have not received adequate development in previous years.

Additional steps should be taken to expand and intensify research into the social sciences, which are especially important at the current stage in the development of Soviet society. Attention should be focused on generalizing historical experience from the economic, social and cultural development of Siberia, on developing northern peoples within the framework of scientific and technical progress, and on studying and planning measures to preserve the cultural heritage of the peoples of Siberia.

While examining ways to accelerate practical implementation of the Siberian Branch's scientific reserve and expand its participation in the solution of regional problems, one must remember that the main factor determining the success and effectiveness of its work is the scope and calibre of the basic research being conducted. The comprehensiveness of the scientific centres inherent in the organization of the Branch enables it to make a substantial contribution to developing numerous high-priority scientific subject areas, specially interdisciplinary ones. Despite the economic difficulties facing the country, ways must be found to increase budgetary financing for basic research. After all, it is precisely this research which holds the key to technical and technological solutions which would revolutionize public production. At the same time, steps are being outlined to utilize reserves to improve productivity among scientific workers. Plans call for further improvement to the target program approach in the work of collectives, for reequipping the Branch's institutions with modern devices and instrumentation, for rapid development of information technologies, for increased independence and mobility for creative personnel, and for establishing an environment of competition.

In order to make possible a prompt utilization of reserves and to lend greater flexibility to organizational structures, the Siberian Branch (and the USSR Academy of Sciences as a whole) must be given the right to make independent decisions to transform, where necessary, large multi-profile institutes into associations of independent scientific institutions enjoying the rights of juridical person and possessing common services for establishing, maintaining and disbanding scientific research and design organizations subject to the availability of resources.

An important approach to increasing the calibre of basic research is to develop new forms of cooperation between scientists at the national and international level. These would provide for lengthy direct contact within the framework of specific scientific projects. Plans are also underway to develop national research centres (geo-solar physics, and closed ecological systems) and international research centres based on institutes which currently occupy leading positions in world science. In particular, work is quite advanced on organizing a Baikal International Centre for Ecological Research and a joint USSR-West German tomography centre.

New forms of integration in the realm of basic research simultaneously open interesting possibilities for training highly skilled workers. In this connection, a new approach is emerging in developing an effective system of interaction between academic science and higher education. This system has taken hold in the scientific centres of Siberia in recent years.

The issue of recruiting additional scientific personnel in Siberia is an acute one. The Branch is facing the necessity of accelerating

development in the engineering infrastructure of its scientific centres as well as in its sociocultural and housing base. What characterizes the Branch's scientific centres is that the administration of the centres is developed by the Branch itself. Eighty to ninety percent of assigned targets for construction and installation work is being met. For housing construction the figure is 100%. The list of those in need of housing (approximately 12,000 people) is not growing shorter, however. Solving this and other rapidly developing social problems at the scientific centres is not possible within the framework of allocated capital investments. Here the Branch is in need of substantial assistance.

Academician G.I. Marchuk, President of the USSR Academy of Sciences, spoke to the Politburo of the CC CPSU during the discussion of the foregoing address.

"Following Academician Koptyug's speech, Mikhail Sergeevich Gorbachev approached me and suggested that I express my opinion. I worked in the Siberian Branch for many years, and directed it during my last years there, so that the problems raised in the speech are known to me at first hand.

"I remarked that much of the work of Siberian scientists is on a high international level, and in certain spheres it is at the forefront. One must not forget that in the eastern part of the country the Siberian branch grew extremely fast, and it is a unique structural component of our scientific organization. Its distinguishing feature is that Siberian scientists not only conduct basic research, but themselves play an active role in the practical implementation of the results achieved.

"The rapid development of the Siberian Branch owes much to its specially designed system for training personnel. Novosibirsk University had virtually no permanent teachers. Courses were conducted by associates of scientific research institutes, and they taught a living form of science. Afterwards, the students did their practical work with these same teachers. The result was a natural and very fruitful synthesis of science and education. In time, and in response to a proposal by Academician M.A. Lavrentev, Founder-President of Academy City, a school of physics and mathematics, with a dormitory, was established to work with gifted youngsters. Talented school-children from all over Siberia and the Far East were selected to come here on the basis of an olympiad. Instruction was given by lecturers and professors. This system of identifying and encouraging talent made it possible to develop rather quickly a stable and high-quality scientific potential in the eastern part of the country.

"But time passes, and those new forms of scientific organization, its links with production and its [system of] personnel training which were developed here have now become the norm and are themselves in need of being transformed in order to meet the demands of the time. In particular, I noted that the Branch has achieved good results in such spheres as microelectronics, optical electronic equipment, and computer software. These must be supported and developed in every possible way. Based on these results, it would be altogether possible to establish a new microelectronics center in the eastern portion of the country. We need to develop science-intensive research and production, and this could be done in close contact with sectors of the national economy.

"In developing natural and applied research one must not forget about the social sciences. This area of the Siberian Branch's activity requires very close attention. I have in mind, first of all, philosophy, history, culture, and international relations. Without an ongoing understanding of the processes occurring in science and society, progress will be difficult.

"I also shared my concern regarding development of the infrastructure for Academy City: construction of housing, dormitories, and social and cultural facilities. Today, unfortunately, a natural development of scientific potential in the Siberian Branch is being held back by a lack of such facilities. I hope that these concerns will be taken into account and will assist in the formulation of more detailed plans for development of the Siberian Branch."

"Guri Ivanovich, could you speak about the atmosphere that characterizes Politburo meetings?"

"Very business-like, attentive, and imbued with a spirit of good will. Each problem is discussed for as long as required. For example, last Friday we worked from 1:00 pm to 5:00 pm on little more than three agenda items. I recall that previously, in the pre-perestroika period, an item frequently took 10-15 minutes. Decisions were more often confirmed than discussed. Today's Politburo meetings are characterized by a spirit of debate and differences of opinion. For example, the conversation about the development of the Siberian Branch grew into a discussion of our economy's unreceptiveness to the achievements of scientific and technical progress. Academician N.P. Laverov, Chairman of the State Committee on Science and

Technology, shared his thoughts on how to create a system of economic levers so as to interest enterprises in being more innovative. And there were other interesting views. I have had occasion to be at virtually all of the Politburo meetings dealing with the development of science and scientific and technical progress, and its regular meetings in its current form constitute a sort of intellectual focal point for perestroika. In addition, I especially want to point out that the problems of scientific and technical progress and of the life of science and of its creative participants have become subjects of continuous and intensive interest for the Politburo."

Also speaking at the Politburo meeting on the topic under discussion were comrades G.A. Yagodin and V.A. Medvedev. M.S. Gorbachev, in summarising the discussions, emphasized that the [Politburo] resolution should clearly enunciate the political approach and formulate a general concept, but that all the rest should be handed over to the USSR Council of Ministers for the taking of concrete decisions.

Pravda

8 November 1989

Page 3 (full text)

SOCIOLOGICAL ISSUES

Becoming familiar with the Komi Language

Courses have begun in 40 daycare centers of Syktyvkar to teach the Komi language to children of various nationalities. The goal is to have the children acquire skills in conversational speech. The courses are taught on a volunteer basis with the agreement of parents.

Mini-museums and ethnic cultural rooms have been opened in numerous pre-school institutions in the city. These facilities house exhibits of folk art, needlework and clothing collections.

Sovetskaya Rossiya

6 November 1989

Page 4 (full text)

Why Women Specialists Have Difficulty Finding Work in Norilsk

Elizaveta Mutovina makes no secret of her economic interests: she came to Norilsk in the hope of earning money and establishing her life. A chemist by profession, she is not without work of course, and she found a job in engineering. In September of last year, after several years of employment, she was discharged in connection with a reduction in personnel. Since that time she has been unable to find work.

Unfortunately, this sort of situation is no exception for women in this arctic city. It is actually rather typical. Can a solution be found?

Yes it can, the specialists answer, if one looks hard for one. Norilsk was originally created as a mono-industrial centre of the country's non-ferrous metallurgical industry. The most respected and widely found trades here -cutter, metallurgist, foundry worker - are far from being female dominated. The general planners of the city and the combine have allocated supporting roles to the weaker sex - timekeepers, rate setters, housekeepers, . . .

Thanks to the planners' "efforts", women specialists with a higher or middle specialized education have been forced to stand in line for jobs in their specialty.

The situation became particularly difficult after the Norilsk Mining and Metallurgical Combine made the transition to being self-supporting. This event was preceded by a reduction in the number of administrative and office workers.

Thus, the situation is clear enough. But what about the future?

"Our organization," reports R. Kareva, director of the city employment centre, "currently has a short list of trades for women. What do the city's enterprises require today? 96 cleaning women, 60 plasterers-house painters, 20 road workers, 22 wardens, 9 cloakroom attendants. . . You'll agree that not every specialist with a diploma is going to go for this sort of work. What's more, from the point of view of the State, it would be extremely wasteful and economically unsound to use them in these jobs. But we are unable to offer any other work to our clients. Under current legislation," Raisa Konstantinovna continues, "following discharge from their previous employment specialists have the

Arcotic city have not been on a large scale, they have nonetheless borne fruit. The number of women specialists looking for work is no longer on the increase, but the number is still quite high -

right to seek a new job within two months without loss of privileges. We have the right to grant them one more month, but only if our employment centre cannot find work for them.

Common sense would suggest that if there is no work in one region, a person should seek work elsewhere. But here we encounter a substantial "however".

First of all, far from every family is willing to leave Norilsk merely to find work for a second member of the family. But current standards - the quality of life here is rather high - and supplies are quite good. The housing problem is being solved successfully, and a network of institutions is developing to offer social and everyday services.

But even if someone wishes to leave here, it would not be so simple to do so. The majority of Norilsk residents have reserved apartments on the "mainland".

The "women's issue" has become so acute that local Party, Soviet and administrative leaders have been forced to make its solution one of their prime goals.

There is no shortage of possible solutions being put forward. Above all, the creation in this Arctic city of an enterprise to produce warm clothing for northern residents. The demand for a "northern variety" of such goods would be extremely high since not enough of them are being produced in the country.

One possibility would be to identify workplaces where women could work part of a day or part of a week. This would also succeed in providing additional employment for certain numbers of women workers. Negotiations are underway with a light industry enterprise in Krasnoyarsk to open a branch in this arctic city.

Certain concrete steps are also being taken in Norilsk. For example, the Technical Supervisory Service of the city's leading enterprise - the mining and metallurgical combine - has decided to pay veteran workers of the combine moving to the "mainland" a monetary compensation for giving up their apartments. The payments vary from 7,000 to 13,000 roubles, depending on the size of the apartments. Many of those who have already accumulated the necessary "northern qualifying time" for pensions and other benefits are now showing a desire to move to the "mainland". As a result, new job openings are appearing, including those for women. Long before the government had adopted the document increasing maternity leave for women, the Norils'k Combine had taken the same decision.

Although the actions undertaken in this Arctic city have not been on a large scale, they have nonetheless borne fruit. The number of women specialists looking for work is no longer on the increase, but the number is still quite high -

3,000. Clearly, this issue has not been finally settled. What is needed from the City Soviet is a plan for a comprehensive program for the city's social development that takes into account all of its growth factors.

Ekonomicheskaya gazeta

November 1989

Page 20 (full text)

TRANSPORT - AIR

New Air Route Syktyvkar-Tashkent

Yet another straight line has appeared on the air route map of the Komi Civil Aviation Administration: Syktyvkar--Tashkent. With a stop along the way in Ufa, a comfortable Tu-134 airliner is bringing passengers from the northern republic to the capital of fraternal Uzbekistan in only five and a half hours.

Sovetskaya Rossiya

19 November 1989

Page 2 (full text)

Substantial Investments Needed to Improve Flight Safety at Chukotka Airports

A year ago an acquaintance of mine, a Chukotka resident, made an almost round-the-world journey to reach - Alaska. He had discovered relatives there who had invited him for a visit. Of course, it was very interesting to be in America, and especially to meet with your own kin, but . . . My acquaintance is far from being a millionaire and lives exclusively from his work. His expenses for this journey, however, were so great that I don't believe he has finished settling his debts to this day.

"Here's Alaska," he bubbled, jabbing his finger at the map. "Our ancestors used to visit each other on skis, but I can't imagine going there again. Such expenses!"

This is a person who is far from aviation, except as a regular passenger. But then, how can you live on Chukotka without aviation? And so when I explained to him that the reason for this roundabout journey was that the level of flight safety does not meet standards for international flights, he was unpleasantly surprised: "Well, we fly. Are our lives cheap or something?"

Alas, this is just what I was writing about in the newspaper piece entitled "Safety on the Scales of Economics, or What Price Does Aeroflot Put on Our Lives" ("Vozdushnyi transport", No. 84, 13-07-1989). When flying, our passengers are insured for 1,000 rubles, whereas Americans are insured for an average of 300,000 dollars. Equally different are the standards for flight safety support, for air traffic control, navigational and communication aids, airport facilities, and so forth.

However, the economic advantages of air links between airports of the Soviet Far East and Alaska are very tempting for both sides. Also alluring are proposals from the government of the USA to establish international routes in the future via the Far East to the countries of Southeast Asia - Japan, Korea, Singapore, Viet Nam, Malaysia, Indonesia, China, India and others. The advantage for our neighbors is the possibility of shortening the distance and time and thereby saving money, fuel, and aircraft resources. For us the advantage is the possibility of earning revenues from aerial navigational support.

There is just one thing missing: to bring our technical equipment for ensuring flight safety up to international standards. On October 2, at the airport of Providenie Bay, a Soviet-American meeting

was held to discuss the setting up of air links between the Soviet Far East and Alaska. V Shelkovnikov, head of the Main Administration for Air Traffic Control and also of the Soviet delegation, related that the group of American technical experts was given the opportunity to familiarize themselves with the equipment at airports and flight control centers in Providenie, Anadyr, Magadan and Khabarovsk.

Together they reached the conclusion that it would not be possible to open international air routes in this region, given the existing level of flight safety. Ground facilities are poor, especially in Providenie and Anadyr. But it would not be logically or economically sound to entirely reject this idea. The absolutely essential organizational and technical measures will require considerable expenditures. At Anadyr airport the glide path guidance system on the main approach has exhausted its usefulness and has been removed from service. A new system is required. A secondary radar complex still needs to be installed here. In emergency situations the airport's heating plant are houses, and while on the job aviators experience shortages of heat, water and electricity. Three diesel generators require immediate replacement, not to speak of the need to build airport buildings in Anadyr and Providenie, platforms and aircraft parking sites, and to train specialists in English and in the rules for international transportation.

According to the most modest estimates, reconstruction and building of production facilities by means of self-financing will cost Anadyr no less than one million rubles in capital investments.

I appreciate that this information will hardly come as a consolation to my acquaintance from Chukotka. He knows better than we, who live here in the capital, what the pace of building and reconstruction is in the North. And where is Anadyr going to get this kind of money?

The Ministry of Civil Aviation turned for assistance to representatives of the Khabarovsk and Primore Krai executive committees, the Council of People's Deputies, and the Magadan Oblast [Committee] holding out the great prospects for economic, social and cultural development of the regions through which the international routes would pass.

In view of our present system for handling international accounts whereby hard currency gains are turned over to government agencies far removed from the needs of these regions, I must confess I find it difficult to imagine what advantage a Krai or oblast could obtain for itself. And especially since the airports and the entire complex of ground facilities for supporting international flights belong to these same agencies, and not to the local soviets. What this means is that, in order to sincerely interest local authorities, the system must clearly be changed.

It is no secret that the shortest route from America to the countries of Southeast Asia is an advantage not restricted just to the government which grants its air space. And foreign airlines are especially interested in flight safety. Why not attract their money to solving the problem?

Proposals call for discussing these issues at talks scheduled for November. They include, in particular, modernizing the air navigation structure for countries of the Pacific region, providing modern technical navigational and communications aids for international air routes over the territory of the USSR, arranging training periods in English-speaking countries for Soviet aviation workers, and other matters. The Memorandum of Agreement adopted by specialists of the USSR Ministry of Civil Aviation and the United States Federal Aviation Administration noted that a major role in achieving mutual goals would be the exchange of air traffic controllers, pilots, electronics engineers and other aviation specialists between the USSR and other countries, including the USA, which participate in international transportation.

Discussions to be held in Moscow with the American side will study issues of air traffic control, communications and meteorological support for international flights. This is all the more important since neighboring Alaska, which seemed so far away to my acquaintance following his "round-the-world trip", has actually come closer to us in time. In 10 months there have been 17 flights to Anadyr and 68 to Providenie Bay.

What also causes concern is the fact that the problem raised in the article "Safety on the Scales of Economics, Or What Price Does Aeroflot Put On Our Lives", which is tied to an urgent need to insure our country's air space, has been ignored by those on whom the solution depends. And this includes the Main Economics Administration. I feel it would not be out of place to mention that the level of air traffic has grown by a factor of 1.7, on the trans-Asiatic route and by a factor of 2.2 on the

trans-Siberian route in the time since the government of the USSR granted foreign airlines the right to make non-stop flights over our territory. And the number of near collisions with foreign aircraft has amounted to 17% over the past five years.

Air space costs dearly everywhere in the world. It would be good if we, too, finally began to understand this. But the river of hard currency will not flow from the air unless rubles are invested in equipping the "ground". Up to now there has been the illusion that we could improve the level of flight safety merely by means of directives, by hardening demands, and by intensifying political education activities without spending on modern navigational equipment for air routes or on creating normal working conditions for aviation personnel and for passenger service. This is short-sighted, at the very least.

Vozdushnyi transport
October 31, 1989
Page 3 (full text)

Deltaplanes Over the Tundra

Two motorized deltaplanes are being tested in Yakutsk. They are designed for use under specific tundra conditions.

The take-off weight of this two-meter deltaplane is 2 centners. Its take-off run does not exceed 30 meters, and it can develop a flight speed of up to 80 kilometers [per hour].

This deltaplane for the Arctic was conceived and designed and has now been put into production by the highly skilled personnel of the Leningrad Aviation Centre of Independent Technical Creativity "Aerokompyuter". It is a maneuverable and ecologically safe means of transportation which can be used effectively to organize the shooting of wolves and to search for reindeer which have strayed from the herd.

The cost of the machine is 11,000 rubles. Reindeer farming enterprises of Yakutiya have placed an initial order for 30 of them.

Trud

7 November 1989

Page 1 (full text)

Flight Safety at Novyi Urengoi Airport Endangered

(Or How an Airport Became "Hostage" to a Tractor Diesel)

As of the first of November, the Novyi Urengoi air travel agency is halting the sale of airplane tickets for the Tu-154 and Tu-134. This decision will undoubtedly be unpopular in a city from which nearly half a million air passengers fly every year. Nevertheless, V. Smiganovskii, commander of the local aviation enterprise, is prepared to close the airport to Class 1 aircraft. Why?

"We cannot guarantee the safety of these flights," explained Vladimir Vyacheslavovich. "The airport power supply has already been operating for nine years on a temporary basis and is getting worse

by the day. According to specifications, we should only be accepting "Tupolevs" occasionally, although, in fact, there are more than 20 of them per day in the summer and 11 - 12 in the winter. No responsible person could ever dare to assert that we could operate under the conditions in which we currently operate. Both I and the workers' collective are tired of walking a tightrope. We have already had an incident where all the lights on the runway went out during a takeoff, and nearly two hundred lives were saved only by the skills of the crew of a Tu-154."

"In other words, this is a kind of ultimatum?"

"No. This is a decision made necessary by the pressure of circumstances. An administrative commission verifying our preparedness for the fall and winter season has just completed its work in Novyi Urengoi. While there were no substantial criticisms of our other facilities, the power service was said to be totally unprepared.

"To make the picture clearer, let me recall the events of last summer when a conference of the enterprise's workers' collective appealed to V. Voskoboinikov, USSR People's Deputy and Deputy Chairman of the Supreme Soviet's Commission on Information Sciences, Transport and Communications. As a result, a high commission visited us and upheld our complaints to the builders. A plan of action was drawn up - I can no longer tell you how many of these we've had - but this one, like the previous ones, has remained essentially unfulfilled. As before, we sometimes use a tractor diesel to supply power to our electronic equipment for flight support. Aviators understand the risk that this poses. . ."

"So, are you saying that the knot was drawn so tight that there was no other way to cut it?"

"One could say that no such knot even existed. Minor problems have remained uncorrected because the contractor - Construction and Installation Unit No. 700 of the Urengoigazstroi Trust - simply did not have time for it, apparently because for ten years now, despite everything, we have been "taking up our posts" and keeping the flights going. There remained at most one and a half to two weeks of work on the power supply: to complete construction and implementation of four transformer substations, and to provide a reliable link between the external substation and our distribution point. But, judging from the current topsy-turvy state of our allied enterprises, they simply are unable to cope with this."

"Does this mean that you will be closing the airport to the 'Tupolevs'?"

"If nothing changes, yes, and I am certain that the collective supports me in this, despite the direct losses which we will be suffering. It seems that we have no other way out."

This "Novyi Urengoi" issue is not new in our newspaper. The first time we dealt with it was as early as 1982 ("Successes and Long-Standing Problems", No. 60 of 20 May). "It appears that the residents of Novyi Urengoi will have to get by for yet another winter," the article asserted. In fact, they have had to get by for another seven years, and it is precisely this circumstance which has compelled Smiganovskii to take a decision which will be painful both for the city and for the aviation enterprise. This decision is hardly likely to generate enthusiasm

on the part of city officials, the Tyumen Administration, or the Ministry of Civil Aviation [MGA]. But isn't he right in saying that it is no longer possible to walk a tightrope?

Let us note that the commander is not making any other demands, despite the fact that the temporary passenger service building, designed for 40 passengers per hour, "digests" up to 600 on occasion. The collective does not have a single main building in the city nor a single space in a daycare centre. The issue here is not social problems, and not even the level of services. The issue is flight safety, the most fundamental principle of civil aviation. It is incomprehensible, given our powerful system for monitoring civil aviation and given the existence of the USSR 'Gosavianadzor' [State Aviation Inspectorate] that V. Smiganovskii has been the only person to take this step.

Vozdushnyi transport

31 October 1989

Page 1 (slightly abridged)

TRANSPORT - WATER

Nuclear - Powered "Sevmorput" Completes Maiden Voyage

The nuclear-powered barge carrier "Sevmorput" has tied up at the port of Murmansk. Nine months ago, without stopping at its port of registry, it set off on its first voyage to the Far East. Since then it has completed eight voyages, five of them to Viet Nam and Korea. For successful operation, the barge carrier requires a full load and long-distance shipments. With this goal in mind, negotiations are now being conducted with a number of foreign firms regarding use of the "Sevmorput" in international shipping during the winter. Experience has shown that it behaves more surely in the ice than do ships of the SA-15 series operating in the Arctic. And as for long-distance transport and visits to foreign ports there should not be any obstacles since this nuclear-powered ship complies fully with requirements of the International Atomic Energy Commission.

Following completion of scheduled repairs, the barge carrier will be heading for the Far East.

Vodnyi transport
5 November 1989
Page 3 (full text)

River Workers "Invade" Black Sea Region

Lena River workers are scattered over thousands of kilometers in the Far North. They live and work under extremely difficult climatic

conditions on the rivers Yana, Indigirka and Kolyma, in central Yakutiya, and in the northern Irkutsk Oblast. One should also mention their work in the Laptev and Eastern Siberian seas. Naturally, there are many acute social problems facing the collective of the Lena United Steamship Line [LОРР], which numbers nearly 30,000 people.

Recently LОРР, its enterprises, and the basin committee of the river workers' trade union have embarked upon a series of measures to improve the social well-being of fleet and shore workers. We discussed this subject with V. Mineevyi, head of the steamship line.

Q. "Vyacheslav Aleksandrovich, what for you is the most important aspect of this work?

A. "Everything, I would say. We need to provide normal recreation for the children of river workers, give each family an apartment or home, create subsidiary [farming] plots. . . I could give you a long list. Actually, in the social sphere there are no minor issues.

"Nevertheless, following lengthy deliberation and discussions we have defined two main approaches. The first I would call the traditional approach - this one virtually all steamship lines are engaged in. For example, we have sharply accelerated construction of housing on a self-financing basis. Facilities of this type have gone up in the port cities of Osetrovo and Zyryanka, in the Alekseevsk and Zhatai maintenance and operation bases, in Yakutsk, and in other locations. In so doing, our enterprises are themselves creating genuine construction industry bases. After all, where are the people of Zyryanka, who live on the 'edge of the

'world' on the remote and isolated Kolyma River, going to get everything they need? So they put up housing and production facilities using their own materials, form close ties with other collectives, make purchases and exchanges. Others do the same thing. River workers produce all types of building panels and structures, and procure timber in the far-off taiga themselves.

"We have taken a similar approach to working out the Food Program. A network of small subsidiary farms has been established in the Basin. At the port of Belya Gora, on the Indigirka River, we are raising 180 pigs. There is also a hothouse there. In the port of Nizhneyansk on the Arctic Yana River a herd of cattle is being cared for, and there is pig farming at Peledui and Zhatai. We have two large state farms (sovkhozy) - the Osetrovo and Kirensk. These are large enterprises which produce vegetables, meat, potatoes and milk. This year we organized a new sovkhоз - "Troitskii", located not far from the port of Olekminsk. A harvest of potatoes and vegetables has already been gathered there. Next year we will also set up a pig farm for 1,000 head, build hothouses and increase the cattle herd to 1,000. We will build a school and a heating plant, and will establish a solid livestock farming collective. I should also point out that a portion of our rural facilities belong to the Lena Workers' Supply Administration and a portion to the steamship line."

Q. "Some steamship line workers have recently begun making increasingly frequent business trips to the South. Have they taken a fancy to the Kuban River?"

A. "For us, developing fully in the North is rather difficult. Animal feed is a problem, and the long and harsh winters create many obstacles. What's more, production costs turn out to be extremely high. We have come to understand that social problems must be solved in a comprehensive manner, which is why we have begun visiting Krasnodar Krai frequently. To put it bluntly, our northern river task force has landed near the Black Sea coast. We have begun setting up steamship line branches in the South. We have taken out a 25-year lease on one division of the "Oktyabrskii" Sovkhoz, which is located not far from Armavir. Using this as a base, we have begun creating our own farm. There we will be able to keep up to 2,000 head of cattle and up to 1,000 pigs. In addition, 300 hectares of arable land have been set aside. There is a huge pond there. We have already been promised that it will be put in order and stocked with fish and fish fry will also enable us to establish a farm for 20,000 ducks.

All of this work was begun in October. We feel we can organize the sovkhоз by the beginning of the year so that we can make timely purchases of cattle, common and silver carp fry, and yearlings. There, too, we will be building a brick factory jointly with "Oktyabrskii", all of the production from which will go to the Lena Basin. We have our own refrigerated freight cars and could use the railroad. But of course, we cannot get by without leasing aircraft as well. I should point out that, regardless of transportation costs, we will be selling these products at State prices or, at the most, slightly higher. Our river workers will be getting fresh and canned vegetables and fruits. This year already we succeeded in canning quite a lot of fruit and berries in the Kuban region, and all of this will go to Yakutiya.

The people of the Kuban region have generally received us well. They understand the difficulties of the Far North. And the steamship line, for its part, has promised to finance a number of facilities on various farms, and we plan to establish joint enterprises. There is but one goal - to obtain as much food as possible in the South to provide to the Lena River workers."

Q. "A housing cooperative, the 'Rechnik', has been created in the Basin. There has been a lot of talk about it and many people are trying to get in there. What's happening?"

A. "We are obliged to think not only about filling the plates of the river workers but also about housing. In Yakutiya, beyond the Arctic Circle, building houses is very difficult and expensive. On the other hand, people have spent 20 years and more working under harsh climatic conditions, and they cannot leave there since they have no place to live. For this reason, we concluded an agreement with the 'Kavkaz' collective farm in Novokubansk Raion and they have allotted us 100 plots of 1,200 square meters each. This is in the large village of Krasnoe Pole, which has approximately 1,500 residents. We have decided to put up 100 cottages there so that our veteran workers can move to this pleasant region."

Q. "And under what conditions?"

A. "Only veteran workers who have at least 20 years of service in our basin are accepted for the 'Rechnik'. The essential condition is that when they move they transfer their northern apartment to the enterprise. This way, our waiting line moves ahead. Each cottage costs 40,000 roubles. First, the

cooperative shareholder puts down a quarter of the cost, and then he is given 10-15 years to pay another 10,000. The enterprise covers the remaining half of the cost. Indeed, there are many people wanting to join the cooperative, and the screening of applicants is strict. Already, 1,340 cubic meters of round wood have been transported to the site, and we will begin construction this year. Our wood, our bricks. Together with the sovkhоз, we will build a brick factory."

Q. "Vyacheslav Aleksandrovich, I appreciate that you could speak at length and in detail about the business arrangements and massive plans for developing your branches in the Krasnodar Krai. But tell us: is everything restricted to the Kuban region?"

A. "No, we have also penetrated the Kherson Oblast, Pitsunda, and we already have real results here. In the Kherson region there is a port city called Skadovsk. The Minmorflot [Ministry of the Maritime Fleet] had come up with the idea of building a large sanatorium at this point on the Black Sea coast. We decided to join this distinguished company and asked K. Matskyavichyus, Chairman of the Central Committee of the Sectoral Trade Union, to support us. He assisted us. What should we build there? Next to the future sanatorium stands a city hospital. They would give it to us on condition that the steamship line puts up a new hospital at another location. We will re-outfit the building as our own sanatorium, and it will become part of a general complex. We and the maritime workers will have a common treatment center, dining hall and other facilities. The decision has been made to build the second phase of dormitory, physicocultural and health facilities right on the seashore."

Q. "Who will do the building?"

A. "The Ministry of the Maritime Fleet has decreed the formation of the 'Skadovskmorstroi' Administration, whose supply base is currently under development. As a result, the Lena River workers will get a sanatorium in the South with 110-120 places. But this is not all. A decision has also been made to build a residential complex there to house 5,000 families. Maritime and river workers who have completed 15 to 20 years of service in the North will be able to resettle in Skadovsk. They merely need to surrender their northern apartment. Plans call for the creation in November of an association of those participating in the building of the complex. This time, in addition to finances, the Lena River workers must allocate and ship timber. Already, a land site has been measured off, two concrete units are being erected, and an apartment house for the construction administration is being built. According to the agreement, we are manufacturing furniture for our own facilities. The Minrechflot [Ministry of the River Fleet] has given its approval to manufacture a portion of the metal falsework for monolithic housing construction at other enterprises. I believe that things will go smoothly.

"And now about Pitsunda. An agreement has been reached with a guest house association to allocate 320 family and individual passes to LОРР. Of these, 120 are earmarked for this fall and 200 for next fall. The main thing, however, is that we have gone a long way to solving the problem of health improvement for the children of river workers. A Pioneer camp has been in operation for two years already in the Gagra Raion of Abkhaziya. The camp was built on the grounds of a secondary school. In

1988 only a single visit was made there, but now there are two, totalling 500 people. We did a major renovation of the building, and built a dining room. Now the children will be able to holiday by the warm sea over a period of ten years.

"I want to point out that all the workers' collectives of the Basin's enterprises are participating in one form or another in this great work. And the benefits they receive depend on their contribution to creating the southern outposts of the steamship line. People understand that everything is now in their hands and that they must work as hard as possible. There is no other way for us to alleviate the current social problems."

Vodnyi transport

10 November 1989

Page 2 (slightly abridged)

"They Made us a Gift of A Steamship. . ."

This was the title of a letter published on May 25th. Chief radiologist of Magadan Oblast G. Khalatov shared his misgivings about the use of the nuclear powered "Sevmorput".

I. Alekseev, Deputy Minister of the Shipbuilding Industry of the USSR [Minssudprom], addressed a response to the editors in which he said: "Minsudprom has examined the newspaper article 'They Presented Us with a Steamship. . .' The author's letter contained a number of inaccurate statements. For example, he reports that even diesel-electric barge carriers, which are less expensive than the "Sevmorput" barge carrier, are unprofitable. In fact, unprofitability is not a feature of barge carriers of this series.

"Also inaccurate is the author's claim that, in addition to the crew, a large group of shipbuilders participated in the first voyage of the "Sevmorput", and that the latter worked feverishly to eliminate numerous shortcomings [in its construction]. On the ship's first voyage there was not a single representative of the shipbuilding firm. Other than the crew, there were only a small number of specialists on board - scientists and designers, whose task it was to study the ship's behavior and its equipment under actual operating conditions. None of them, of course, eliminated any shortcomings. Moreover, there were no such shortcomings, as one can see from the acceptance certificate signed by an expert commission of the USSR Minmorflot [Ministry of the Maritime Fleet].

"The author's reasoning about the dangerous consequences that would occur if the explosive substances being transported in lead-lined containers were to explode was not based on the actual state of affairs. It is prohibited to transport dangerous and explosive substances on barge carriers.

"In indicating that only two nuclear-powered cargo ships had been built in the world and that both of them had already been written off, the author is not reporting the actual situation regarding the use of atomic energy on ocean-going ships. As matter of fact, up to now there have been eight nuclear-powered ships of a civilian classification built in the world, including two experimental ones - the cargo and passenger ship "Savanna" in 1962 in the USA and the cargo ship "Otto Hahn" in 1973 in the Federal Republic of Germany. These ships were in operation for a long period of time. They visited numerous ports in many countries of the world and ended their service upon completion of their program of experimental activities.

Since the author's conclusions and proposals in the letter are based on the inaccurate premises cited above, the USSR Minsudprom would like to request that the editors publish an article which reports in an unbiased and well substantiated way about the reliability and safety of the "Sevmorput" barge carrier. Such an article could be prepared by associates of the Krylov Central Scientific Research Institute or by the 'Baltsudoproekt' Central Design Bureau."

And that was the lengthy response. But just how sound is this rebuttal of the newspaper story?

Let us begin with economics. In April of this year a conference under the chairmanship of I. Orlov, head of the Scientific and Technical Branch of USSR Minmorflot, was held in Vladivostok on the question of the development of the barge carrier system. A clear statement was made at the conference concerning the negative economic results from operation of the diesel-electric barge carrier "Aleksei Kosygin". And no less clear was the conclusion about future enormous losses from operation of the "Sevmorput".

It was noted at the conference that operation of the nuclear-powered barge carrier had revealed very substantial problems, of which three in particular must be mentioned. Firstly, the actual freight level under suitable applications of the nuclear-powered vessel has turned out to be less than that cited in the project estimate. Secondly, the natural navigation conditions of the Far Eastern Basin eliminate many ports from the barge carrier's operational system. Thirdly, due to its technical characteristics, the "Sevmorput" has proven to be less well suited for operation under the difficult

conditions of far eastern and northern seas. On difficult routes in the Arctic it requires icebreaker assistance. And that is why the chief task today, as emphasized in the report, "is to organize the operation of the 'Sevmorput' to achieve minimal losses for the sector and for the national economy."

"We in the Far East think alike on this complicated issue: they gave us the barge carriers and we should use them to greatest effect," says V. Miskov, head of the Far Eastern Maritime Steamship Line [DVMP]. "All the more so since there are some positive aspects to this. They have freed up a portion of the scarce fleet tonnage from northern routes. The use of lighters to ship freight to Petropavlovsk-Kamchatskii eliminates the need to build a thirteenth container wharf at a cost of approximately 60 million rubles. The system of handling freight in Arctic ports and docking sites has also been made simpler." Other alternatives for using barge carriers are also being looked into.

Everything is more complicated with the nuclear-powered vessel. Calculations indicate that the losses from its utilization this year in freight shipment (for seven months of operation) will amount to 11 - 12 million rubles. In the future, when it is used for the entire navigational season, the losses will add up to 15 - 16 million rubles per year. These forecasts are being confirmed in actual operations: the 6-month results show that the "Sevmorput" has revenues of 3.2 million rubles and expenses of 7.8 million.

To put it bluntly, this is a strange form of economics: the more the ship operates, the greater are the losses it generates. It is like a microcosm of our entire system of cost management.

The nuclear vessel's heavy losses result first and foremost from its prime cost. Its construction cost the public 168 million rubles. This figure also determines the size of the amortization deductions - 13 million per year. The Murmansk Maritime Steamship Line, to which the "Sevmorput" is assigned, is carrying these for the time being. But there are increasingly vocal demands to enlist the aid of the government, as happened with the "Otto Hahn", which, although it belonged to a private firm, was sustained by subsidies from the government of West Germany. This attitude once again vividly illustrates the gangsterism of our government agencies: first, without asking anyone, they put their hands in the taxpayers' pocket in order to create a nuclear monster, and then they want the same taxpayer to bear the expense of its operation.

Moreover, the figure of 168 million raises some questions. The "Sevmorput" and the "Aleksei Kosygin" are practically identical in size, displacement and tonnage of freight carried. Even their lines are identical. The latter, however, costs 60 million. Why such a difference? Can it be that one nuclear engine costs over 100 million rubles more than two diesel engines? And why was the "Sevmorput" built at the Kerch works practically from scratch instead of at the Kherson facilities where the "Kosygin" was built, where some experience had been accumulated and a base had been created? Were the expenses of creating the production base and solving the plant's social problems added to the prime cost of the barge carrier?

So far, in speaking about the economics of the "Sevmorput", I haven't touched on the plans to use it to carry containers. This plan is altogether disastrous for our ports. For example, using the

nuclear vessel to deliver three times as many containers as usual to Magadan is certain to paralyze the transport link, will increase the turnover time of the containers, and will cause them to be overstocked. The ricochet from this will hit the Vostochnyi port immediately. The force of this blow is eloquently reflected by a ship put into service in the steamship line and humorously named "Mel's Binomial" after the acting head of the lighter branch. Its fines alone for late delivery of containers will exceed 3 million rubles for the year!

Fortunately, we can only speak about the container plan in the subjunctive now. Public protests and press publications have at last forced the nuclear vessel's owners to reject its use as a container carrier and to return to the lighter alternative: with a lighter, at least, you can see what cargo is being loaded. What's more, in theory there is no need to use inland waterways and to tie up at dock.

However, the "Sevmorput" cannot meet these expectations either. The fact is that certain design characteristics of the ship prevent it from operating on external waterways and in the open sea, for which barge carriers are actually designed. The folding metal frame on the stern, down which the lighters descend, prevent the use of the sole propeller screw. (On the "Kosygin", we should point out, there are two, and the lighters slip between them). The nuclear vessel thus becomes an uncontrollable toy, floating at the mercy of the waves. Once, when the "Sevmorput" was loaded and standing in the Gulf of Amur, with swells of no more than one and a half meters, the vessel's captain V. Smirnov asserted in a radiogram to the Central Committee of the Communist Party of the Soviet Union, the USSR Council of

Ministers' and other agencies: "Due to the design characteristics of the ship, I consider operation in open waters dangerous. . . Creating the risk of an emergency at sea with a nuclear vessel is unacceptable." And the captain requested that he go to an inland roadstead at Vladivostok. Who knows the capabilities of a ship better than the captain?

Compared to this "design characteristic" which, according to the specialists, reduces the navigation season by 50%, the 200 citations of flaws and unfinished work seem the merest trifles. And this despite the fact that, in its response, Minsudprom asserts that there was no unfinished work on the ship because the certificate of acceptance says no. So, should we react to the situation the way Kozma Prutkov suggests: "if the elephant's cage has a sign that reads 'buffalo', don't believe your eyes?"

"Our sectoral thinkers have apparently decided to use the "Sevmorput" as a model to show the world how not to do things," says N. Dronov, chief technologist of the Port Service of the Far Eastern Maritime Steamship Line [DVMP]. "Our steamship line is simply choking for lack of packet boats, which are both convenient and extremely effective in operation. But instead of them they make us a 'gift' of unprofitable giants which are seriously threatening to disrupt the entire economy of our enterprises. As if in mockery of our 'farsighted' technical policies, a Japanese cargo ship with wind propulsion recently visited the port of Nakhodka. Just put that beside the nuclear-powered 'Sevmorput' for comparison!"

Finally, I asked V. Miskov, head of the steamship line, what they would do if the people of Murmansk, who have also begun to count their kopecks, were to stop paying the annual multi-million ruble dues for the upkeep of the nuclear-powered vessel.

"We would, of course, immediately give up the 'Sevmorput'," responded Viktor Mikhailovich.

Clearly, this sort of "gift horse" is in no way better than a Trojan one.

Sotsialisticheskaya
industriya

14 November 1989

Page 3 (Slightly abridged)

Will the "Taimyr" See the Taimyr?

(Local People Are Demanding That the New Nuclear-powered Icebreaker Be Prevented From Entering the Yenisei River... Specialists Contend There's Nothing to Worry About...)

Ministry of Defense of the USSR
by
V. Ivanov
(Aboard the nuclear-powered icebreaker "Taimyr")
(Kara Sea)

While proceeding at 7 knots a strengthened ice-class diesel-engined vessel displacing over 26,000 tons collided with the nuclear-powered icebreaker "Taimyr." The ship was struck in the side in the vicinity of its reactor. Sheets of high tensile steel were torn apart and crumpled... But the safety enclosures and shell of the steam-generating plant were not damaged. The "heart" of the icebreaker had been reliably protected.

(Beep) It was not while at sea that I had occasion to witness the accident, but on a television screen in the cabin of N. Krylov, captain of the "Taymyr."

Finnish specialists, embodying in metal a joint project with the USSR, paid special attention to the reliable protection not only of those parts of the ship which are in direct contact with ice, but also of the sides in the region of the central compartment. This was not by accident. The Chernobyl' catastrophe graphically illustrated what can happen when reliability and safety are overlooked. Damage reports from the world's fleet have forced even more rigid requirements on the new icebreaker with its nuclear propulsion plant: "Taimyr, even in the event of the most serious collision, must stay afloat and its central compartment must remain insulated from the outside world.

If one is to believe the video film I saw of mock-up tests, then the goal has been achieved. Yet even after this, in discussions with crew members and

edit specialists, I tried to call their words into question. I demanded not only figures, but also concrete examples proving the complete environmental and radiation safety of the new ship.

The introduction of year-round navigation in the western region of the Northern Sea Route called for the creation of a fundamentally new generation of transports. Thus appeared the family of "Noril'sk"-type strengthened ice-class diesel-engined ships. To the assistance of the nuclear-powered ships "Lenin," "Arktika," and "Sibir'" operating in the high latitudes came the icebreaker "Rossiya." The "Sovetskii Soyuz" will soon start work here. Still to come are the two new 75,000 hp ships "Oktyabr'skaya Revolyutsiya" and "Ural."

Even in the most ringing frost, diesel-engined ships continually ply between Murmansk and Dudinka with cargo destined for the Noril'sk Mining and Metallurgical Combine and the Taimyr Autonomous Okrug.

But whereas ships are adequately provided with icebreakers on the sea leg of their runs, it's a different story on the rivers. First runs in the Yenisei Basin have already shown that beginning in January "Kapitan Sorokin" -type icebreakers are working here at the limit of their potential. Their power (a little over 20,000 hp) is insufficient for speedy and reliable escorting of ships.

It was then that specialists first began talking about the need to build new shallow-draught nuclear-powered icebreakers for Siberian rivers. The first of these, the "Taimyr," entered service with the Murmansk Marine Steamship Line on 30 June 1989. A nuclear-powered icebreaker "Taimyr" conforms to the requirements placed on nuclear-powered ships.

The Taimyr Okrug Committee of the CPSU, the Executive Committee of the Okrug Soviet of People's Deputies and the editorial office of "Sovetskii Taimyr" are being besieged by letters, telephone calls and people... The public is demanding that the scheduled November entry of the "Taimyr" into Yenisei waters be called off. Northerners are questioning the advisability of using such a powerful icebreaker, with an on-board nuclear reactor, on this river.

What concerns them most of all? To begin with, where are the safety guarantees for the peninsula's inhabitants and fragile environment? Secondly, there is the question of radiation monitoring. Thirdly, what effect will the "Taimyr" have on the Yenisei's fish stocks and harbour quays? And lastly, how will a transportation link be provided between settlements situated on different sides of the river?

Undoubtedly, serious questions have been raised. Public opinion cannot be ignored. Especially since the incident involving the nuclear-powered lash-carrier "Sevmorput," which for a long time could not call at far eastern ports, is on everyone's mind. Many are frightened by the prospect of living next door to a functioning reactor.

Opponents of the "Taimyr" are not even convinced by the fact that for three decades nuclear-powered icebreakers have been regularly making calls at the port of the Dikson settlement, which lies within the autonomous okrug. Even children have grown accustomed to them here.

"We even ran into public opposition in Tallinn, where we had gone from Leningrad to do special work unrelated to the reactor," comments A.

Zyuganov, senior marine engineer of the "Taimyr." "The residents of this city persistently demanded the removal of this nuclear-powered icebreaker from the roadstead. Only after visits to the ship by news reporters and representatives of the public did passions subside. And now we're faced with Dudinka's protest..."

"Are the concerns well-founded? Unquestionably. A nuclear ship is not a pleasure yacht with sails. But, it seems, things must be viewed realistically. I am convinced that there is a future for atomic energy and that it must not be off handedly rejected."

"As far as the reactor on our icebreaker is concerned, it cannot be compared with those of nuclear power plants. It is fundamentally different, and a catastrophe similar to that which occurred at Chernobyl' could never take place aboard our ship. But even in the event of an emergency situation, our reactor would shut down automatically: this is its salient feature. Besides, automation ensures multiple protection against malfunction. I cannot understand why the public, in objecting to the atom, does not take this into account. Without a doubt, I would not have worked for 30 years on nuclear ships had there been the slightest danger here. Yet families came to Tallinn to live aboard our icebreaker, which had taken on the appearance of a floating kindergarten."

Nor can one fail to heed the opinion of A. Sinyayev, the Murmansk Marine Steamship Line's chief engineer for nuclear power plants. He headed the State Commission which accepted the "Taimyr's" reactor compartment at the Baltic plant in Leningrad. He is convinced that the "Taimyr" conforms to the requirements placed on nuclear-powered ships.

Until recently, everything which concerned ships was a matter of secrecy. Hence the gossip, tales, suppositions... Seamen confessed to me that only one or two years ago they could not even have imagined a journalist entering the central compartment. But here we have a dosimeter-toting V. Ishin, radiation safety service supervisor, asking us to don our white gowns. Finally, a few minutes later, the two massive steel doors of the connecting lock automatically open before us. A functioning nuclear reactor stares at us from below.

"This room should give Taimyr residents no cause for concern," remarks Valentin Vasilyevich. "It is reliably insulated not only from the outside, but also from all the icebreaker's compartments. The compartment's containment envelope is capable of withstanding an internal pressure of two atmospheres. Should a mishap occur with the reactor, and the pipes of the first contour are ruptured, no radioactive release would occur. Of course radiation doses in this room are somewhat higher, the dosimeter now showing two milliroentgens per hour. What is this? For comparison: in a single year, each person on Earth receives 100-150 milliroentgens of its natural background radiation. But in an X-ray room one may, in some instances, sustain a dosage equal to what we receive in 10-15 years of work. Our norm is 5 roentgens per year."

Waste. Liquid wastes are collected and stored in special containers on the icebreaker. On reaching Murmansk, they are turned over to the technical repair facility "Atomflot." There, nuclear fuel in the reactor is recharged under the strictest supervision. In the central compartment there is not one opening through which radioactive water could leave the ship.

I wish to comment separately on gas emissions. The space of the central compartment is ventilated, and this air passes to the atmosphere via the main mast. We are constantly doing radiation monitoring of these emissions. They have a slight specific activity, but I can responsibly declare that it is extremely low and fully complies with the sanitary standards and requirements set by the International Atomic Energy Agency.

If you find it difficult to believe me, I'll cite one graphic example. When the icebreaker left the Baltic for Murmansk, we came under the close scrutiny of Swedes, Danes and Norwegians. Their helicopters and aircraft regularly flew past the "Taimyr". The "Greens" surrounded us in their cutters and yachts, taking air and water samples... We received no complaints."

"Still, what would happen in the event of a mishap with the reactor?," I ask my guide.

"Nothing. Automatic equipment would completely block off this room. It would stop air emission and silence the reactor. We would not restrict the presence of personnel at any time even at the central control platform, which is three bulkheads from here; watch will be kept in the usual manner."

"Year-round navigation in the western region of the arctic became a reality only with the arrival on the Northern Sea Route of nuclear powered icebreakers," remarks V. Podol'nyi, supervisor of the fleet operation directorate of the Murmansk Marine Steamship Line. "For ten years now the Noril'sk Mining and Metallurgical Combine has experienced no problems with the shipment of its products to the

"mainland" in the winter months. During all these years, diesel-propelled ice-breakers have maintained year-round navigation in the mouth of Yenisei River, from Yenisei Gulf to Dudinka. These ships are expensive and difficult to operate. We have been forced to use two "Kapitan Sorokin" -class icebreakers on the sea route to escort one ship. Each one of them gobbles up 100 tons of fuel per day. You can understand that there is no provision hear for bunkering, especially in the polar night at 50 degrees of frost. Every ton of fuel is shipped from the "mainland". In other words, instead of payload, ships are forced to transport fuel from Murmansk for the needs of icebreakers. This is why we attach high hopes to the "Taimyr," since one charging will suffice for 3-4 years of operation."

"As for how the "Taimyr" will affect the river's fish stocks," interjects N. Krylov, the Captain, "I think science must draw its own conclusion. For my part, I can assure you that the channel behind us will not be 50 metres in width, as some "experts" in Dudinka are claiming, but only 30 metres, which is 5 metres wider than with the "Kapitan Sorokin." Also of no small importance is the fact that with a power of 50,000 hp, the "Taimyr," as a rule, will operate freely and easily in the Yenisei when escorting a ship along the river. We, in contrast to our predecessors, will not have to break up to 7-9 parallel channels for winter.

"And lastly, as a captain who has worked for many years on transports and who has often been in Dudinka, I can state with certainty that the fears of local residents concerning the "Taimyr's" capability of negotiating shallow sections of the river are also groundless. The icebreaker was designed and built with these depths in mind. Our minimum draught is

only 8 m 10 cm, while there are transports operating here with draughts of 9 m and even more. But should the "Taimyr" perchance run aground (an extraordinary event), the 2-m-high double bottom would prevent water from entering the central compartment."

As a separate question for seamen, the newspaper "Sovetskii Taimyr" singled out the problem of providing reliable transportation links between riversides. The channel is indeed a serious barrier. What is the solution? There is no unequivocal answer. I think we must make maximum use of the experience gained in past years when diesel-electric icebreakers plied the Yenisei. It would evidently also be worthwhile to consider the example of the Baltic. There, even before the erection of a dam in the Gulf of Finland, ice served as the transportation link with Kronstadt, and a pontoon crossing was thrown over the channel. And seamen knew that at such a time they should not proceed along the route.

And so, passions are mounting around the "Taimyr's" presence in the Taimyr.

"I think these feelings are based on three main factors," remarks V. Sokolenko, the icebreaker's chief physicist. "The first, and Dudinka folk will forgive me for this, is their ignorance of nuclear physics. Alas, a school program will not suffice here. Secondly, there is the reasonable fear of possible danger, which is supported by the same ignorance. The third factor is the popularity of the subject. Here, I wish to stress that the "Taimyr" is the first icebreaker built since Chernobyl': an event that has left its mark on the ship. The most incredible emergency situations have been foreseen by designers. Even the coincidence of

two major accidents has in some instances been examined. All this has been described by specialists and worked out by those who sit behind the reactor's control console. The icebreaker's margin of safety is immense. These are not simply words. We invite all interested persons to come aboard. Let people then make their decision...

Vodnyi transport

17 October 1989

Page 3 (Slightly abridged)

What Sort of Threat is the "Taimyr"?

A. Zolotkov, USSR People's Deputy and chemical engineer of the "Imaidra" floating technology base, has flown out to visit residents of the Taimyr Peninsula. He has had to interrupt his special industrial and deputy's duties for the Murmansk Maritime Steamship Line due to the fears of local residents regarding the arrival at Dudinka of the new nuclear-powered icebreaker "Taimyr". A. Zolotkov, a specialist with direct responsibility for the safety of nuclear facilities, has a great deal of information at his disposal and is prepared to share it with the residents of the Krai.

Vodnyi transport

5 November 1989

Page 1 (full text)

Murmansk Marine Steamship Line Celebrates Its
Fiftieth Anniversary

It is difficult to be objective when assessing a collective with which one has grown over years of joint work and experiences. And should someone find this story to be somewhat biased, he should understand that the fleet and the people about which I speak today really do merit warm words.

I first encountered the North upon graduating from S.O. Makarov School of Advanced Naval Engineering in Leningrad. After that it was half a year of practical training with the Northern Fleet as a warrant officer. I recall how I was astonished by the harsh beauty of the Arctic, where the black snow-covered crags framed the southern edge of the Arctic Ocean, where the dearth of winter colours gave way to the multitude of colours of a spectacular arctic autumn. Phenologists claim that the notion of summer exists here only on the calendar, and according to phenological signs, a late and long spring immediately gives way to a stormy and short autumn. But that's only in Murmansk and on the Kola Peninsula. The sea lanes stretch even further north, into the boundless kingdom of ice and bitter cold.

Later on I had occasion, while working in the USSR Ministry of the Merchant Marine, to be in these parts. But the short business trips, which were more akin to ceremonial outings, offered little in the way of an understanding of Murmansk's specific character. Perhaps that explains why I became so excited when my superiors said: "Go and take charge of the Murmansk Marine Steamship Line."

Relatively young among others both in the USSR and internationally, it was already famous throughout the world, having contributed for over four decades to the history of navigation and shipbuilding an entire galaxy of names and unprecedented and heroic episodes. Ponomarev, Sorokin, Belousov... The "Ob," "Lena," "Fedor Litke..." The first nuclear-powered icebreaker in the world, the "Lenin," which initiated the only civilian fleet in the world... The icebreaker "Arktika" of the North Pole...

Pick up any book, it seems, on the development of the Northern Sea Route and the history of the steamship line itself, give it a shake, and from it will rain such words as "first, for the first time, only most powerful, record, unprecedented, unique," etc. How could I fail to be excited, heading off to work in the North, in a city reeking so much of the ocean, like none other than Vladivostok herself!

Here the legends and stories about arctic captains and feats at sea live on in the names of streets and ships, in the homes of old residents, because the apprentices of Sorokin and Belousov - who themselves have become part of history - still work in the fleet. Boris Makarovich Sokolov, Hero of Socialist Labour, devoted 30 years of his life to his nuclear-powered icebreaker "Lenin," and carried on the captain's work of Pavel Akimovich Ponomarev. The apprentices of Sokolov himself have already earned their first grey hairs and awards on the navigation bridges. Boris Makarovich is light-heartedly yet respectfully known as the "Patriarch." As is Ivan Pavlovich Lopatin, who has worked 40 years with the steamship line, and who has come to know the Arctic inside out during his many years of service as

captain and lastly as deputy director of the steamship line. He and another of the patriarchs, Nikolai Ivanovich Utkin, who recently assumed the post of Chief Engineer, helped me get acquainted with the enterprise and its collective. Wonderful specialists, selflessly devoted to the sea and to the North.

My Moscow colleagues once asked: "Well, what's this special character of Murmansk all about?" "People," was my answer. I still believe this to be so. Just as there are things which are peculiar to a given people, so our seamen for the most part stand out for their established attitude to duty and to various phenomena. Self-interest, laziness, envy and gossip are looked down upon here. Sometimes one is astounded by the way they endure everyday misfortunes. Today many say that we are indebted to the countryside: I say we are no less indebted to our seaman. He has merited a more attentive attitude to himself. And those good changes, about which I will speak a little later on, instill confidence that social justice will be restored.

Indeed, people are the steamship line's chief resource. They include 19 Heros of the Soviet Union, 8 Heros of Socialist Labour, 7 State Prize winners, 16 distinguished transport workers of the RSFSR. Altogether, 30 renowned seamen are immortalized in the names of icebreakers and transports; 11 ships have been granted government awards.

In 1964, when a regular commercial line was established between European and Canadian ports, and which went down in history as the "Arctic Line," a good tradition was born, that of presenting the

"Golden Cane" award to the captain of the ship which was first to arrive in Montreal in the New Year. Since then this honour has been conferred on Hero of Socialist Labour A. Pineshaninov, M. Sis'kov, R. Igritskii, E. Kurpi, S. Pustovoyt and Yu. Kovalenko.

I think that both the high degree of professionalism of northern seamen and their extremely conscientious attitude to work grew from a tradition originating in the peculiar atmosphere of coastal life. The first settlers to arrive on the shores of the Barents and White Seas were noted for their great tenacity, their love of life, if you like, and their penchant for work. Without these qualities they simply would not have survived. And whereas it is said that idleness is the mother of vice, one might also say that work is the father of virtue. It was under harsh conditions, when it simultaneously became both a necessity and a requirement, that the coastal dweller's high moral ideal and moral code were developed. And even without glancing into distant history (many documentary and artistic works have been written about how northern sea routes were developed) one will see that the descendants of the ancient northern coastal settlers constituted the backbone of the Murmansk Marine Steamship Line from the day its inception. On the other hand, the Murman Coast was visited by top-class specialists - navigators and research scientists who had received their training in the institutions of higher learning of St. Petersburg - people of high culture and noble heart. A fine fusion, which indicates that the Murmansk Marine Steamship Line has a very noteworthy lineage.

The steamship line dates from 1939. On September 22, by decision of the Economic Council of the USSR Council of People's Commissars, and on the basis of Order No. 239 of People's Commissar of the Merchant Marine of the USSR, the dry-cargo "mini-steamers" "Msta," "Unzha," "Vishera," "Shelom'," "Andre Marti," "Spartak," "Kama," "Vytegra," "Sura," "Proletarii" and the cargo-passenger ships "Gertsen," "Subbotnik," "Sosnovets" were handed over to Murmanites from the Baltic and Northern Marine Steamship Lines. In 1941, the fleet already numbered 38 ships.

The history of the steamship line began...with the war. The Soviet-Finnish War broke out in November, 1939, and the ships of the newborn fleet were immediately reassigned for use as military transports. Shortly after this, the Great Patriotic War broke out, and some vessels were put under military command, with captains becoming commanders.

The hostilities in the North may be seen as battles for sea routes. The vessels of the steamship line made many important deliveries in these years, under fire of enemy aviation; surrounded by Hitler's U-boats and torpedo salvos; amidst the numerous mines placed along the route. By the end of the war, only 3 ships remained active. Hundreds of seamen had lost their lives.

Murmanites can boast of many feats. These include the fighting epic of the steamer "Staryi Bol'shevik," under the command of I. Afanas'ev, which moved with the PQ-16 convoy, as well as the feat of arms of the "A. Sibiryakov," which entered into unequal combat with the fascist raider "Admiral Sheer." Many heroic episodes of the Great Patriotic War have been recounted in books about the history of the Kola Region.

After the war, a fundamentally new period in the development of the Arctic and the Antarctic began with the addition to the fleet in the 1950s of "Lena"-type strengthened ice-class diesel-engined ships. Suffice it to recall that the "Ob'," a vessel of the same class completed 19 antarctic runs. And a decade later, the "Lenin," the first nuclear-powered icebreaker, made its debut on the world maritime stage. Today the nuclear fleet is additionally complemented by the "Arktika," "Sibir" and "Rossiya." The "Taimyr" recently set out on its first voyage, the nuclear-powered lash-carrier "Sevmorput" has begun operation, and soon the fleet will be supplemented by the icebreakers "Vaigach" and the "Sovetskii Soyuz."

The two expeditions to the North Pole by the "Arktika" in 1977 and the "Sibir'" in 1987 were not simply demonstrations of what was possible. During the expeditions, important experiments and scientific research were carried out. These served as a foundation for the formation of a new technical policy in the field of modern shipbuilding and for the improvement of transportation and technological schemes for the delivery of cargo between the rapidly developing regions of the Soviet North and the Far East, and between the ports of Western Europe and Japan.

Nor is it possible to imagine today's Northern Sea Route without the new generation of diesel-propelled icebreakers, such as the "Kapitan Sorokin," "Kapitan Nikolayev," "Murmansk" and "Kiev," which are reliably operating not only in inner basins, but also in the poorly accessible regions of the Arctic.

Also befitting these heros are the transports, without which it would have been difficult to master year-round navigation in the high latitudes. What sorts of pennants - those representing ports in Asia, Africa, America, Europe - will one see on some ships? The steamship line's boundaries now extend thousands of miles - as far as the Taimyr.

Qualitative improvement of the fleet has gone ahead together with an increase in traffic volume and an expansion of forms of service. As before, the main accent is on work in the Arctic, however international maritime traffic is growing as well, and the appearance of new and comfortable motor ships has meant a major improvement in the servicing of our coastline. All these factors, to which I would also add our specialists' increased skill, accumulated experience and creative approach to work, have made it possible, in my opinion, for enterprises to make a fairly painless transition to cost accounting in January 1987 and to effect substantial change. For the achievement of outstanding results in All-Union socialist competition the Murmansk Marine Steamship Line was twice - in 1987 and 1988 - awarded the Challenge Red Banner of the CPSU Central Committee, the USSR Council of Ministers, the All-Union Central Trade Union Council and the Central Committee of the Leninist Young Communist League. In 1989 its name was put on the All-Union Board of Honour at the Exhibition of Soviet National Economic Achievements.

The target for increased labour productivity, for example in relation to the 1987 plan, was exceeded by a little over 5%. Last year we received over 21 million rubles in extra-plan profit and since the beginning of the current year all indices appear healthy.

To back up my statement that our specialists are typified by their creative attitude to work, I will give three examples. Savings from the introduction of new equipment and advanced technology last year totalled 2,690,000 rubles. The selection of optimal shipboard power unit operation and the introduction of technical procedures have resulted in a saving to the fleet of 7,000 tons of equivalent fuel. Inventors and innovators yielded an additional 276,000 rubles of extra-plan profit to the steamship line and the State.

Northern sailing casts varying forms of human character, however the quality of the fusion of professional and moral properties will be invariably high. I remember being on the diesel-engined ship "Tiksi" in February 1986 as it sailed from Dudinka to Murmansk during the most difficult escort period. I saw for myself how they earn their arctic "bread" in arctic night refusing to release ships' masters from their locators, fifty below zero cold, and people unloading the contents of cargo holds in the open air. Pleasant memories remain from my contact back then with Captain Al'fred Fedorovich Zagorskii. One could tell that he was held in deep respect by the crew. And his first mate was Lyudmila Anatolyevna Tibryayeva.

Now there's a story! As a girl she vowed to become a sailor. In due course she appealed to the Minister, who granted her permission to be enrolled in a naval school. She worked her way up from sailor to captain. The recent selection of Tibryayeva to take charge of the first commercial run from the Federal Republic of Germany to Japan via the Northern Sea Route was not meant as window dressing. She is truly an excellent captain, who moreover is well acquainted with the diesel-engined ship "Tiksi" as is Zagorskii himself, with whom she received her training.

Forever ingrained in my memory is the epic of 1987, when the nuclear-powered vessel "Sibir" rushed to the aid of winterers stranded on the scientific drifting station SP-29 [North Pole-29]. The ice floe was thawing rapidly and beginning to crumble. To the last hour there was no assurance that we would make it to the edge and evacuate people and costly equipment. We did! We then "screwed" the "Severnyi Polyus" onto its geographic position, dropped off the winterers at Dikson, took on new ones and opened up another station.

The fiftieth anniversary of the Murmansk Marine Steamship Line has come at a crucial moment in the life of our country. I can give the assurance that the Line has sufficient reserves to contribute its share to the cause of economic restructuring. We are not short of intelligent and conscientious people, and the North is a perfect place for testing and tempering human character.

Vodnyi transport

3 October 1989

Page 2 (abridged)

Computer on a Motorship

The All-Union Corporation "Sudoimport" has concluded a contract with the Austrian firm "Korneiburg" [spelling uncertain (Tr,)] for construction of 10 computerized class A-1 motor/vessels for the Northern Maritime Steamship Line. This series incorporates all of the most modern advances in international shipbuilding.

These ships operate without the usual crew members in the engine room and in the central control room. Equipment from a number of Western European countries is used in the construction of these ships, but all the basic components, including the engines, are manufactured in the Soviet Union. Overall control of production processes of ships of this class is performed by an integrated computerized microprocessor system using a keyboard and display monitors. The crew will also have at their disposal personal computers using automated control system programs to control the ship.

Sovetskaya Rossiya
4 November 1989
Page 3 (full text)

Faulty Automated Control Systems Installed on Ships Due to Shortage of Currency

The debate which has unfolded on the pages of the newspaper concerning automation on ships of the Soviet fleet has brought to light fundamental problems standing squarely before maritime workers. I am certain that no electromechanic can be found who does not have a complaint to make to the "Avrora" Scientific Production Association (NPO). There is no commission which can pass judgment on the quality and reliability of automated control systems like actual experience, the sea and seamen.

I will mention certain flaws in goods produced by the "Avrora" NPO detected on ships of the Northern Maritime Steamship Line. The "Shipka" system contains very unreliable P2K button-type switches and UPIIK units, and the VMP-Ch block

contains a modulator so complex that it cannot be rebuilt. The TSP3003 thermal resistors for controlling the temperature of exhaust gases broke down during their first year of operation, after which the USSR Registry raised the question of removing the automation classification from ships on which they were installed.

In the "Grom" remote automated control system the programs correspond less and less to reality the longer they operate since there is a lack of thermal stability in the phase generator. On all ships, comparators based on thyristors with simplified circuits have been replaced by comparators of our own design.

The use of microswitches in the control mechanism reduces their reliability to zero. And it surely would have been possible for "Avrora" NPO to use transistors in the design of all of the "Grom" remote control system components, which would have made it possible to eliminate the huge number of relays and to improve the reliability of the system as a whole. And so on with everything. But it is also understandable since "Avrora" is not in a position independently to develop any slightly advanced equipment. Apparently it was required to make the widest possible use of solutions developed by the USSR Ministry of Instrument Building, adapting them to maritime conditions, rather than solutions developed by specialized enterprises.

Today, steamship lines require substantial aid in equipping newly built ships with modern automation equipment. One could cite a number of documents which oblige us to order ships that meet a modern international standard. Everything looks beautiful, but only on paper. What in fact happens?

Nothing good, I dare say, and I will cite a number of examples. A contract to build Austrian timber carriers for the Northern Maritime Steamship Line, which was approved by our bureaucracy nearly a year and a half ago, has finally been signed. As a result, seamen will be pumping ballast by hand and using a depth rod to measure tank levels. Automating this process would lead to "increased costs" for the project. "Sudoimport" is trying to cram in as much clearly obsolete Soviet equipment as possible, forgetting the simple truth: a miser pays twice. But while "Sudoimport" is miserly, it will be up to the steamship line to pay in the future for all of its oversights by modernizing the obsolete Soviet equipment.

There are additional plans for us to obtain Romanian timber carriers of automation class A-2. But what kind of automation can it be if it is based on obsolete components and if the size of the crew is reduced to 25?

An entirely different situation results when one installs modern microprocessor-based automation on ships. The size of the crew can immediately be reduced, the length of cabling can be significantly shortened, and the number of spare parts for electronic devices is reduced. Working with ships of this type also makes it possible to think of reducing operating expenditures.

All attempts to obtain hard currency for centralized acquisition of automation equipment have been unsuccessful. But it is we, after all, who earn this currency, and we intend to earn it even more effectively by utilizing highly automated ships. What is the solution? I think we need to look at the possibility of having the steamship lines themselves

outfit ships with automation equipment by allowing the lines to retain a portion of the currency they earn. In addition to everything else, this would create healthy competition for Soviet manufacturers of automation equipment. In this connection, we are also very optimistic about a joint enterprise. But this is a matter for the future, whereas the problem must be solved today, and without delay.

Vodnyi transport

14 November 1989

Page 2 (slightly abridged)

MISCELLANEOUS

Association of Soviet Polar Workers Formed

"I have heard that an Association of Soviet Polar Workers is now being formed. What is the purpose of this organization, and who can be a member?"

(Signed) V. Ilin
Murmansk

The decision to create the Association of Soviet Polar Workers was taken at an institutional conference. Participating in the work of this conference were representatives from virtually all ministries and agencies active in regions of the Arctic and Antarctic. These included the Ministry of the Maritime Fleet, the Ministry of Civil Aviation, the Ministry for Construction of Petroleum and Natural Gas Installations, the State Committee for Hydrometeorology (Goskomgidromet SSSR), the Main Administration of Geodesy and Cartography, the RSFSR State Construction Committee, the Main Administration of the Diamond and Gold Industry, the "Arktikugol" (Arctic Coal) Production Corporation, the "Arktikstroi" (Arctic Construction) Trust, and others.

The working conditions for people in various occupations in the Arctic and Antarctic are extreme, and an abundance of problems have now accumulated among Polar workers. However, administrative estrangement and other barriers frequently stand in the way of finding solutions to these problems. It is precisely the goal of the Associations to consolidate the efforts and the financial, intellectual and organizational resources of its

members to solve such urgent social and everyday issues as, for example, providing housing and medical services, supplying fresh fruit and vegetables the year-round, and organizing normal healthful vacations. Priority will be given to ecology. The Association plans to develop international ties and to organize effective cooperation with foreign colleagues.

The Association of Soviet Polar Workers has already officially registered and has been granted the rights of juridical person. Preparations are now underway for the first meeting of polar workers, which is set to take place at the beginning of the new year. An organizational committee has been set up, headed by A. N. Chilingarov, Hero of the Soviet Union and Deputy Chairman of Goskomgidromet. Representatives of the Far Eastern, Murmansk, and Northern maritime steamship lines, and the Yakutsk Production Corporation of Maritime Transport are also participating actively in the work of the organizing committee.

Registration of the association's institutional members continues. Any enterprise, organization or institution located in the Arctic or Antarctic may join. The charter also provides for individual membership. Branches of the Association are being established at various locations, including Leningrad, Murmansk and Tiksi.

A Polar Commerce Bank, which will subsidize the solution of institutional tasks, is also being created under the Association. Plans call for issuing shares and commercial papers.

For information on all matters pertaining to the organization of the Association of Soviet Polar Workers and membership in it, write to the following address: Moscow, per. Pavlika Morozova, 12, Goskomgidromet SSSR.

Vodnyi transport
10 November 1989
Page 3 (full text)

Coal Exports Earn Currency for Construction of Diagnostic Centre at Yakutsk

During the current navigation season, the Lena United Steamship Line concluded an agreement on coal shipment with a joint Soviet-British enterprise known as "Pharus". Ship's crews have transported 80,000 tons of coal from the port of Zyryanka on the Kolyma River, and an equal amount from a mine at Dzhebariki-Khaya. All of these shipments were brought to the port of Osetrovo, where they were stored and are now being shipped to their destinations.

According to the agreement with "Pharus", delivery of this cargo is to be paid for in hard currency. The Lena River workers are applying this hard currency to financing the construction of a diagnostic centre in Yakutsk. It should be noted that the medical equipment for the centre is already arriving in Yakutsk through the port of Osetrovo. The equipment is being shipped by the Austrian firm "Polenski" - Zollne" [spelling uncertain (Tr.)]. In this way, the workers' collective of the Lena Steamship Line is making its contribution to creating the first diagnostic centre in the Far North. River workers will also be treated in this medical facility.

Vodnyi transport
25 November 1989
Page 3 (full text)



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